THE A-SQUARE TECHNOLOGY GROUP & NASCENT APPLIED METHODS AND ENDEAVOR'S ONESIMUS EQUATIONS AS THE PRINCIPLE PARTS OF ENGLISH SPEECH INVOLVING MASLOW'S HIERARCHY OF NEEDS AS WELL AS CAESAR'S EIGHT COMMENTARIES AS A SERIES OF MATRIXED IDEOLOGIES ENGAGED IN GLOBAL SOCIOECONOMIC MARKETING WARFARE AGAINST ALL HUMAN DISEASES

The Socioeconomic Base Equations for the Individualized Global Free Market Fusion of Information

For the first time in the history of mankind. The road representing financial security, which leads toward the Commanding Heights of global market economies, is no longer solely paved with the words, concepts & ideas of Privatization. But is additionally forged upon the creation of individualized innovative global free-market entrepreneurial business model & search engine technologies. Whose, patentable genetic-based consultative Planning & Design Approaches (PDAs) are interconnected, evolvable & user specific through personalizing internet content by way of the following grammatic formula(s); Whereas, the constant sum value of [A^2, G^2, G^2, G^2, L^2, M^2, PA^2, T^3 & T^3] equals the measured quantitative significance of any number(s), letter(s), word(s), concept(s), idea(s), genomic sequence(s) or method(s) used to describe the existence or processes of a person(s), place(s) or thing(s), both currently known or unknown. Which, are also supplanted within the driving forces [E] behind the Meaning of Life [M], the Tree of Life [T], and of course Quality of Life [Q] issues. Whereas, the Process is the genomic facilitation of single & multiple number, letter or word, strategies or tactics that simultaneously accommodate systemic personal or organizational management, from a single point of origin, throughout the following distributed infrastructural linguistic resources involving the Human Language System (HLS) as a whole;

BY WILLIAM EARL FIELDS (GCNO)

SPOR

(ANMESCL^2 RDWEF)

ALPHA NUMEROUS
MAXIMUS
EGREGIOUS SUMMA
CUM LAUDE

A_2

(ANMESCL^2 EL NEGRO)

ALPHA NUMEROUS
MAXIMA
EGREGIA SUMMA
CUM LAUDE

X_3

(ANMESCL^2 QUO VADIS)

ALPHA NUMEROUS
MAXIMUS
EGREGION SUMMA
CUM LAUDE

(ANMESCL^2 EL NEGRO)

ALPHA NUMEROUS MAXIMA
EGREGIA SUMMA CUM LAUDE

NAME's Approaches Toward a Cure for Various Diseases

Imagine this. A broad-based technology, that through the **Human Genome** (genetics), provides its users the ability to transform their varied existence into a **Search Engine** (Intranet), through **Virtual Laboratory** & **Internet Technologies** (i.e., **VPN**/**GPN**/**VRN**-**LAN**/**WAN**/**GAN** procedures & technologies). This in turn, converts & facilitates **all** Internet content into a customized platform that is user specific. **Specifically**, imagine your own genome or genetic profile being used to encode a personal **Encyclopedia** or **Library** of **Medical** & **Financial** information from **distributed** Internet resources. In the case of health related issues, this technology could possibly lay the foundation for you or your doctor to quickly find a cure for **whatever** currently ails you, including **Cancer**. **For instance**, it is quite possible through today's technologies, to first diagnose the genetic profile of anyone's tumorous cancer cells. Then, through an additional process. Combine the efforts of NAME's technology-base, with that of blood clotting technologies distributed across the globe. The possibility of which, is the development of a tailor-maid cancer treating magic bullet. **That is, the development of genetic-based blood clotting pathogens that will only activate within the walls of the cancerous Tumor(s) itself, essentially cutting off its blood supply. In effect, causing the tumor to have a stroke & die, while unaffecting normal healthy cells, veins, arteries or organs**. Overall, this possibility will render the tumor(s) inert, when & wherever it may form within the **Human Body**. **Therefore**, if there exists financial or medical information technologies out there within the digital realm related to your own unique experiences or genetic profile, that can assists you or your love ones with quality-of-life issues? We have the **ISP**/**ASP**/**GSP** technology-base to facilitate the ends to that means.

(ANMESCL^2 EL NEGRO)

ALPHA NUMEROUS MAXIMA
EGREGIA SUMMA CUM LAUDE

Press Release

"STRATEGIC EDUCATIONAL & EMPLOYMENT RELATED SYSTEMS DEVELOPMENT EMPOWERS COMPUTERS & NETWORKS WITH HUMAN-LIKE DECISION-MAKING CAPABILITIES THROUGH VIRTUAL BIOLOGICAL CLONING, EVOLVING NOVEL ORGANIZATIONAL FORMS & E-COMMERCE SOLUTIONS WITHIN AN ENVIRONMENT OF THE WORLD'S FIRST AUTONOMOUS GENETIC INTERNET-BASED OPERATING SYSTEM."

The California inventors, founders and proprietors of **Nascent Applied Methods & Endeavors (NAME)** have developed an internal genetic-based **I**nternet/**D**istributed **O**perating **S**ystem **A**rchitecture (IBOS/DOSA) and **D**istributed **A**bstract **L**ife/**I**ntegrated **A**utonomous **O**ffice **A**pplication (DALP/IAOA) that automates the adaptive qualities of strategic autonomous software systems, **e-commerce solutions** and work-related educational development. NAME's autonomous office applications and **internet-based operating systems**, when combined, will also provide generic computer operations and networking systems with self-ruling decision-making capabilities which replicates managerial thought & employee interactions. This goal is achieved through a process of applying the scientific and **sequential algorithms** of human **genes** & **chromosomes** into compressed multiple **neural networks** of tactical and strategic **evolving organizational forms**. The basic premise of this process, is to provide NAME's customer-base and its subcontractors with a systems program that will create a **virtual R&D laboratory** within the confine of its own engineering functions. Whereas, the objective is the autonomous research, development, and distribution of cutting-edge business processes and software technologies through **e-commerce solutions**. This technology's secondary premise, consists of having its communication aspects surf the internet for those new technologies related to its own **organic procedures**, and then automatically incorporating those technologies into a process of upgrading its own internal systems. Therefore, providing a user with a form of business **object-oriented** technology that far-out competes **any** latent or mainstream **operating system** & office application on a minute-to-minute bases.

STRATEGIC EDUCATIONAL & EMPLOYMENT RELATED SYSTEMS DEVELOPMENT also implements a number of biological processes for the analogous purposes of manufacturing information through cutting-edge **mathematics** and **logistical** computer operations. This operational procedure consists of planning, developing, integrating and implementing the ideological, structural and physical qualifications or characteristics of "**model workers, managerial staff members** and their **organizational structure**," as defined by NAME's investigative profile, the **Thomas Registry Guides**, and the **Dictionary of Occupational Titles**. The architectural framework of this program shall then, by the current language skills of **modeled business personnel**, and as circumscribed by previous or modern **dictionaries**, **thesauruses**, & other **reference materials**, develop artificial or real-time scenarios in **virtual reality** that will aid business owners, managers & employees in resolving those problems related to their day-to-day functional operations in a matter of minutes, instead of hours, if not days.

STRATEGIC EDUCATIONAL & EMPLOYMENT RELATED SYSTEMS DEVELOPMENT also utilizes **strategic managerial principles** to further perpetuate its **autonomous agents and structures** through the synthesis and execution of the following administrative grammatical criteria, which are **morale/cohesion**, **power/authority**, **norms/standards** and **goals/objectives**. Furthermore, through a **SYSTEMS MATRIX and SOLUTION FRAMEWORK**, this grammatical criteria will also assists the autonomous agents (DALP), autonomous structures (EWA), modeled personnel (KWS) and organizations (DOSA) in predicting how certain individuals, groups, ventures and various functions will perform under tenaciously predicated conditions and events. The costs associated with employing and implementing the systems development & educational program of NAME are **tax deductible** for **clients** (pub. 970), **investors** (pub. 550), **investment groups** (pub. 550), **network contractors** (pub. 535), **subcontractors** (pub. 535), **virtual host or internet service providers** (pub. 535), and **property owners** whose properties are exclusively delegated toward this network to facilitate its services (pub. 544 & 550). The original systems design is currently being presented to a number of purchasers, proposers & vendors by the inventor/owner over the Internet. Additionally, the program is currently available for developmental leasing to information manufacturers, marketers, contractors, subcontractors, and virtual host or Internet service providers.

The following is a list of just a few design features and procedural advantages involved in acquiring the software end of STRATEGIC EDUCATIONAL & EMPLOYMENT RELATED SYSTEMS DEVELOPMENT:

STRATEGIC EDUCATIONAL & EMPLOYMENT RELATED SYSTEMS DEVELOPMENT
An exciting new MRP/ERP and Distributed Artificial Life Program (DALP) with over 4 billion variations

DESIGN ADVANTAGES:

- The ability to analyze & predict the future end-results of a problem, function or action by inputting the data from an investigative profile into a virtual reality **MRP**/**ERP** and DOSA/IAOA setting.

- The ability to analyze & predict the future actions and decisions of one's competitors, by inputting the data from an investigative profile into a virtual reality **MRP**/**ERP** and DOSA/IAOA setting, and then running artificial scenarios against the competitor(s) and applying the desired results to real-time scenarios.
- The ability to have a cutting-edge advantage over any competitive operation in the areas of business or employee management and marketing.
- The ability of lawyers, prosecutors & judges to confidentially forecast the outcome of pending legal cases through infusing an autonomous DOSA/IAOA investigative profile into the jury selection process (i.e., **analytical netmapping**).
- The ability to assist lawyers, prosecutors & judges in automatically structuring case documents by having NAME's internet-based platform and autonomous structures search legal information databases.
- The ability to incorporate over 58 separate self-replicating autonomous support applications into a single internet-based **operating system**.
- The ability to additionally incorporate over 100 personalized forward and backward chaining, grammatical and mathematic, word and whole document search engines into a single internet-based matrix.
- The ability to create over 4 billion Thomas Registry and DOT skill-based Smartphone applications from a single generic internet-based platform.
- The ability for a user to combine & use any number of textbooks, procedural manuals & novels to develop sub-routines (procedural scripts) as a form of network, organizational and procedural implementation.
- The ability for a subscriber to deduct the cost of this network's technologies and its educational services from local, state and federal taxation.
- The ability of a network provider (subcontractor) to circumvent property taxation of those lands used exclusively to support the services of this network.

DESIGN FEATURES:

- An unlimited number of precise, strategic and tactical programming variations associated with enterprise resource planning.
- A programming format whose grammatical structuring system mimics human thought and behavioral patterns within a virtual enterprise, for the purposes of information manufacturing and human resource planning.
- A programming format that can automatically develop an individual autonomous enterprise work architecture for over 50 million separate businesses.
- A programming format that incorporates the Dictionary of Occupational Titles and the Thomas Registry as a base for developing & integrating over 4 billion interactive autonomous internet-based operating systems.
- A programming format that can automatically improve or upgrade its own software procedures by first analyzing itself through a systems performance evaluation, and then restructuring its internal operating methodologies by searching the Internet for new technology options.
- A programming format that can additionally create a virtual intranet, whose sole function is to mimic portions the Internet for the purposes of developing and maintaining a secure perimeter for DOSA and IAOA semantics.

DEVELOPMENT:

- Product and services designs are completed. Educational services are now available through online registration. Working EWA and DALP prototypes are currently under development for Internet publication and online distribution.

TARGET MARKETS:

- Individuals, groups, inter-groups, business systems, social systems & larger social systems located in the U.S. and worldwide................**3,925** or more.

ESTIMATED YEARLY MARKET SHARES:

- The combined minimal revenue projections for the first five (5) years under Plans 1 - 10 are $42,059,350; for 2020, $615,946,968; for 2021, $615,946,968; for 2022, $615,946,968; for 2023, and by the year 2024, $615,946,968 or approximately $2,505,847,222 in distributed income or revenue at the end of the initial educational or service cycle of NAME and the A-Square Technology Group.

MARKETING OUTLETS:

- Manufacturers of computer & software systems
- Distributors of computer & software systems
- Business brokers
- Business development firms
- Consultants & consulting firms
- Databanking or data warehousing firms
- Educational institutions
- Individual counseling firms
- Management firms
- Marketing firms
- Virtual host or Internet service providers
- Seminar brokers
- Social development firms or institutions
- Software programming firms
- Tax preparers

SIC CODES:

- 7372

(ANMESCL^2 EL NEGRO)

ALPHA NUMEROUS MAXIMA
EGREGIA SUMMA CUM LAUDE

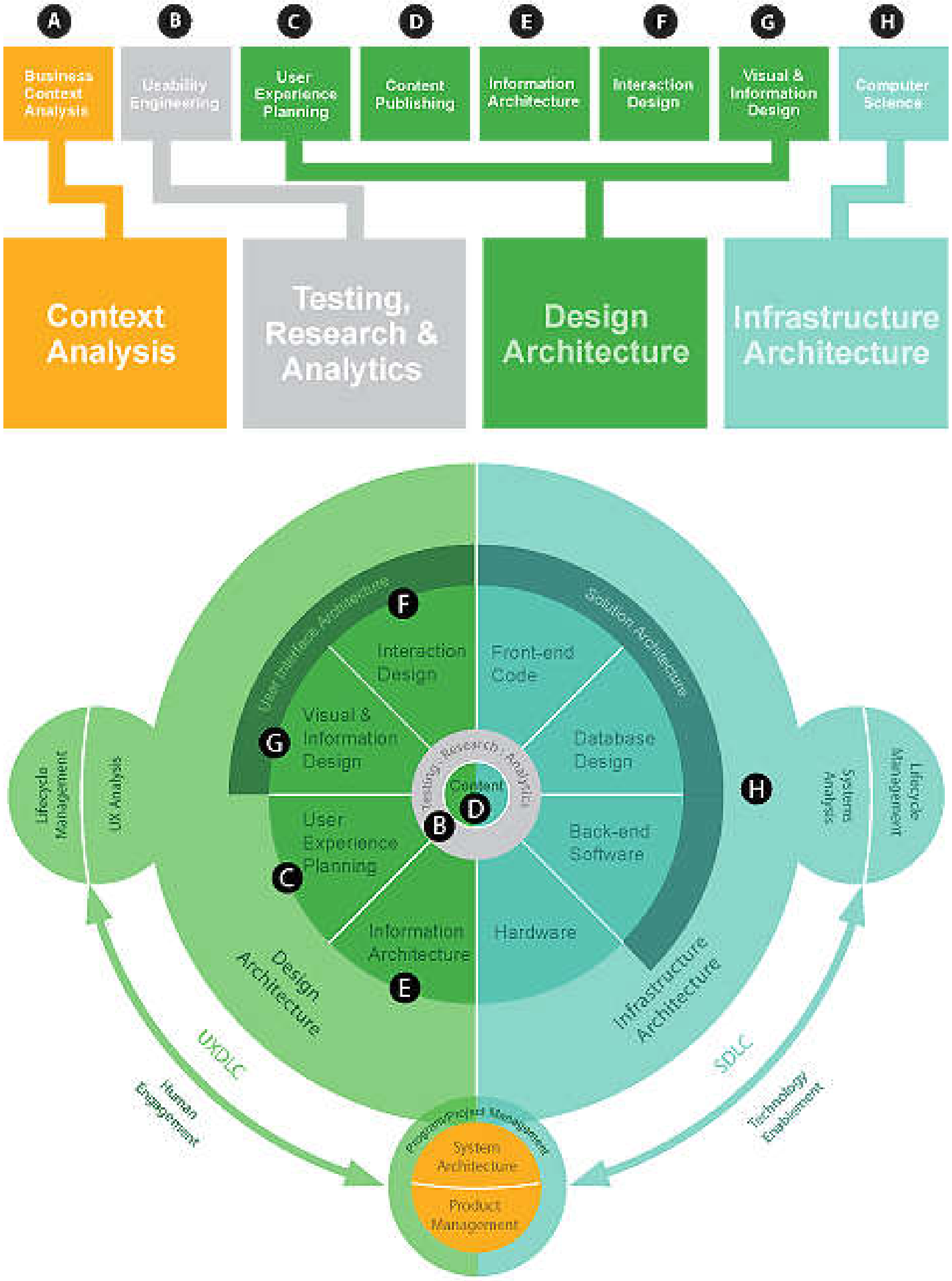
Patent Your Own Genome

The personnel at NAME have developed a process of imprinting the presence & conditions of the human mind & body into the digital realm. This process consists of applying the human genome or genetics towards those words, concepts & ideas, used to describe the psychological & physical traits of both mind & body, as they relate to each other and the environment on a day-to-day basis, through **G**enomic **H**ierarchical **O**perating **S**ystem **T**echnologies (**GHOST**).

Once we have supplied you with the outline of a free patentable version of our technologies, we will then begin the processes of using your actual and/or virtual genetic profiles to: **(1)** Encrypt the information contained within our computer networks with strategic & tactical firewalls. "No more expensive & time consuming upgrades of current viral software programs." Especially, since computer viruses now & in the future will have to know both of our encrypted genetic profiles at a given point in time, in order to invade & violate our computer networks; **(2)** Establish a foundation for you to apply for a patent of a genetically specified version of our technologies, upon which your own genome will become your exclusive property. "Therefore, no doctor, pharmaceutical, research institution or industry can ever take your genetic profile to make money with it without first paying you royalties." Especially, since your genetic profile will once again become your own exclusive property, with all traditional rights afforded; **(3)** Establish with our free technologies a foundation for you as a third-party developer, to acquire an income of untold sums of money, by creating unique programming variations for & within our subscriber and advertising-base. Revenues for third-party developers usually range from $250K - $10M for varied projects. **Revenues acquired depend upon your skill level(s), and the overall size of NAME's subscriber-base usage or variations requested at the time**.

NAME's **GHOST** technologies include an autonomous Internet Based Operating System, Distributed Artificial Life Program & Integrated Autonomous Office Application (i.e., Word, Spreadsheets, Database, Internet COM System, Web Page/Site Developer, Game Configurations, Autonomous Agent Technologies, Job Related Planning & Design Configuration Technologies, etc.). The basic premise of NAME's technologies is to provide for our subscriber & advertising base, new processes & procedures that will accommodate better overall strategic or tactical management & **NEW MARKET** implementation of their products & services.

Additionally, this same technology, once individualized, can be used to vastly improve the day-to-day computer use for yourself and your family members as well. **For example**, let's say that upon receiving a medical examination, you or a family member, are told that there now exists a serious medical problem. Well, with NAME's technology-base, you will no longer have to involve yourselves with time consuming manual keyword searches, looking through traditional portals for information related to the newly discovered medical problem(s) & its treatment strategy(ies) over the Internet. In other words, just simply have yourself or doctor download the medical report, or any document for that matter, into your genetically based encryption database or computer. Then, watch as the combined efforts of our technologies obtain in seconds, and on a **24/7/365** bases, only that relevant information located throughout the entire Internet, that pertains to you and your family's abilities to acquire knowledge about **support groups**, **cutting-edge clinical studies** & **experimental drugs** or **treatment strategies** for those quality-of-life issues regarding yourself or your family members. Additionally, through our virtual lab technologies, your genetic profile may be used to discover never before developed cutting-edge solutions to your own medical problem(s) in virtual reality. Which in turn could be presented to the medical industry for profit. Registration is required for secured access and network order process management.


A
B
C
D
E
F
G
H
Business Context Analysis
Usability Engineering
User Experience Planning
Content Publishing
Information Architecture
Interaction Design
Visual & Information Design
Computer Science
Context Analysis
Testing, Research & Analytics
Design Architecture
Infrastructure Architecture
User Interface Architecture
Solution Architecture
Interaction Design
Front-end Code
Visual & Information Design
Database Design
Testing · Research · Analytics
Content
User Experience Planning
Back-end Software
Information Architecture
Hardware
Lifecycle Management
UX Analysis
Systems Analysis
Lifecycle Management
Design Architecture
Infrastructure Architecture
UXDLC
SDLC
Human Engagement
Technology Enablement
Program/Project Management
System Architecture
Product Management

(ANMESCL^2 EL NEGRO)

ALPHA NUMEROUS MAXIMA
EGREGIA SUMMA CUM LAUDE

The Abstract Tutorial for Transforming Human Beings (GJC) into Corporate Search Engines and Procreative Business Models Valued at $3,125,847,222 Each

1. **Initially**, double-click on X^3 within the Word document of the same title. This will take you to another word file titled **DaVinci's Code**. Within the DaVinci's Code document are a series of links that will begin the processes of a **Conceptual Map** for **Solution Providers** that will first take you to the **Cancer Document**. The Cancer document is a Word file that describes the medical or biological analogies involved with NAME's technology bases. This analogy in particular describes a categorical listing of the effort involved with personalizing internet content, in order to implement problem-solving measures of effectiveness, in the pursuit of a medical emergency. Like for instance, a diagnosis of cancer, or any other medical ailment and/or financial concerns.

2. **Secondly**, the next link within the DaVinci's Code document is **X** Square. This alphabet symbolizes the mathematical equation defining a phenomenon or the unknown, but in this case it represents a Word document titled the **Procedural Guidelines**. The Procedural Guidelines document is a graphical example of a customized relationship-based procedural hierarchy that involves implementing the tenets of historical documents or global market-based economies into **International Technology Bases**. This process, in and of itself, utilizes approximately 11,664 strategic & tactical operations as procedural countermeasures within the boundaries of problem solving measures of effectiveness by initially overlapping its 4-piece structure with that of the 4-part managerial process areas of the **PDA** worksheet. Then, as an **Economic Procedural Guideline**, with that of **CPDA** Sections, **A1 – A4**. While additionally, as an **Autonomous Economic Procedural Guideline**, becoming reflective of the tactical elements within **CPDA** Sections, **B1 – E4**.

3. **Third**, this profile also establishes a systems wide feed-back link with a similar document that combines **Religious** & **Government** based **Free-Markets Economies** into a platform for developing & implementing strategic or tactical **Militaristic Analogies** with that of the guiding logistical principles of **Situation**, **Business** or **Social Management** through **Economic Concepts**. Additionally, within the DaVinci's Code document rest a listing of approximately 20 hierarchical worksheets that are incorporated into the **20-Component** outline involved with Pursuing the Planning & Design Approach through approximately **36 Economic Autonomous Adaptive Agent** (AAA) technologies, housed within the **Planning & Design Worksheet** itself.

4. **Furthermore**, within the Procedural Guidelines document is the Symbol (^{3}). This number represents approximately **324** distributed websites & interconnections, subdivided into three distinctive categories, from which, the 108 components of **Quintilian: Institutio Oratoria** are interwoven as instructional subject matter, synonymous with each subcomponent within each of those areas listed below (i.e., 3 x 108 = 324);

   A. **The Meaning of Life issues** (**Strategic & Tactical Studies**). [M]
   B. **The Tree of Life issues** (**Educational** or **Procedural Hierarchies**). [T]
   C. **The Quality of Life issues** (**Economic** or **Political Foundations**). [Q]

   The core function of these websites is to provide objective information used by the NAME network to upgrade its technology bases 24/7/365, as institutional policies that facilitates the educational needs, or living standards of its client base.

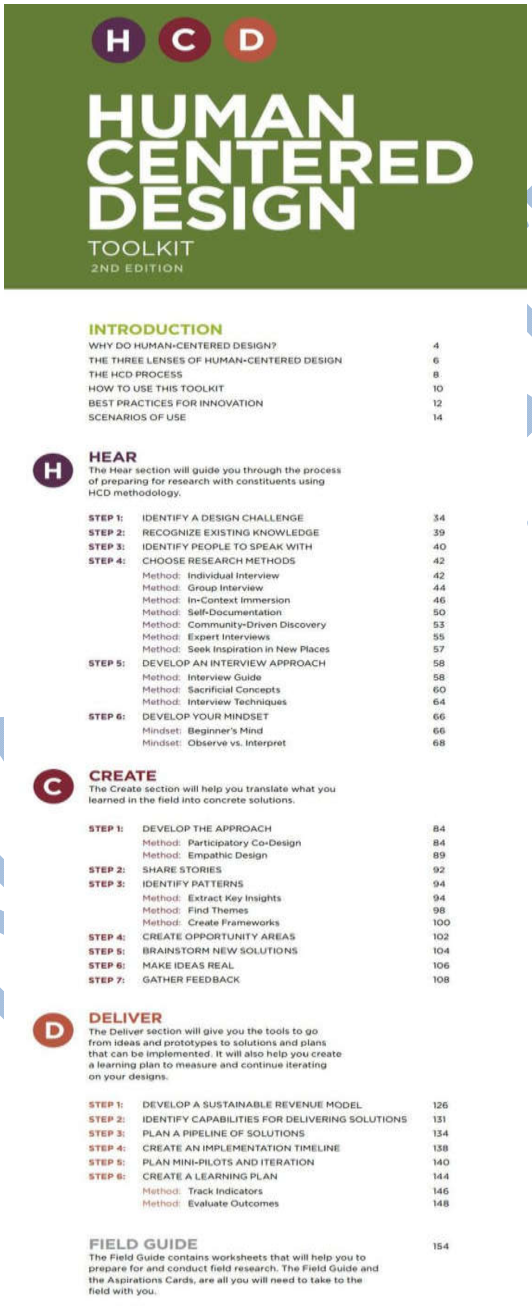
5. **Fifth**, the symbol **RW** represents inputted **R**eal **W**orld issues or information that is segregated into the Principle Parts of English Speech (PPES). This process will lay the foundation for approximately **9** distinct formulas representing the PPES, to first que the Global Economy, the world-wide-web on behalf of the individual user, and then personalize that content by establishing a synonymous relationship with the type & format of inputted information, while generating knowledge through a series of five phase strategic procedural guidelines as outlined in the Planning & Design Worksheet.

6. **Moreover**, the symbol **EH^{2}** also represents those same nine formulas of the principle parts of english speech system of thought (PPES), as it involves strategic operations or academic ideologies being implemented into the **9** distinct sections of the **Planning & Design Approach** (**PDA**) worksheet. Whereas, there primary function in this area is to segment & integrate inputted information from web blogs or the world-wide-web itself into an **E**ducational **H**ierarchy. This will achieve a means of communicating varied ideas, across multiple platforms or disciplines, while facilitating disperse reading skills within the boundaries of a single minded effort as outlined within the document titled, the **Procedural Configuration & Interpretation**. As well as the files titled the **Systems Integration**, and **Appendix – D** of the conceptual mapping of this network's technical ideologies.

7. **Additionally**, the symbol **QM^{2}** of the **X^{3}** equation, as a representation of **Q**uality **M**easures or the **Standard of Living**, utilizes an additional set of PPES formulas as a means of facilitating the generation of abstract knowledge, by establishing a connection with other tactical operations components & subcomponents of the **X^{3}** equation itself. This goal is achieved through the processes of overlapping the nine formulas with that of the varied sections of the **Consultative Planning & Design Approach** (**CPDA**) worksheet, and that of the nine subcomponents within the **Method Structures** themselves. In other words, every time all nine principle parts of English speech are employed in the processes of conveying tactical ideas, autonomous **Macro** & **Microeconomic** market-based methods are then created as means of simultaneously implementing strategic & tactical operations within multiple environments, across multiple platforms or technology bases from any single point of origin, through any workstation or telephone keypad system, from anywhere on Earth.

8. **Finally**, within the **CPDA** worksheet are sections **A1 – A4**. This area is representative of a 4-dimensional **Strategic**/**Tactical Grid** or **Consul Cube** of amino acid sequencing, as formulated through the varying **Chemical Ratios** inputted as encoded strategic thought, or overlapping key **Atomic Elements** from within the principle components of the PDA worksheet itself. This **Thermoeconomic Method** is intuitive of the **15** categories within the Japanese Kamasutra **96** sexual positions, as an analogous means of using a combination of PDA & CPDA 48 cellular matrixes to gauge the standard of living involving the human condition at the grass roots level. Once combined with a portrait of **15 Roman Emperors** overlapping each amino acid or letter within CPDA Sections, **AAA-AAT**, this reciprocal technique will provide a means from which strategic thought simultaneously reflective of **Egyptian**, **Greek**, **Roman** & **American** financial history, and numerous **Operational Stratagems**, shall become resource material for modern **Socioeconomic** principles involving **Global Market Forces** or **Economic Expansionism In Five Parts**. While the remaining Sections, **B1 – E4**, facilitates the **80** variations or subcomponents within the files titled **Global – 3 & 4**, as they involve their tactical elements & approaches toward problem solving measures of effectiveness through a genetic matrix, as well as the **80** subcomponents of **Appendix – L** that facilitate **Parallel Virtual Machine** (PVM) systems self-awareness in five steps. Foremost, every dimensional element

within this section of the CPDA worksheet (AAA-EYY) is interconnected to each website symbolic of the **324** URL addresses listed as **X^3** (e.g., **80 x 4** + **4** = **324** simultaneous interconnections). Once these **Managerial Interconnections** are brought to bear, then the **Global Financial Projections** reflective of the **Combined Market Totals**, become feasible as a template for **11,664** **Procreative** **Business Models** to facilitate some **3,927** customers each through varied technologies, on behalf of **45** million or more businesses worldwide.



H C D

HUMAN CENTERED DESIGN

TOOLKIT

2ND EDITION

INTRODUCTION

WHY DO HUMAN-CENTERED DESIGN? 4
THE THREE LENSES OF HUMAN-CENTERED DESIGN 6
THE HCD PROCESS 8
HOW TO USE THIS TOOLKIT 10
BEST PRACTICES FOR INNOVATION 12
SCENARIOS OF USE 14

HEAR

The Hear section will guide you through the process of preparing for research with constituents using HCD methodology.

STEP 1: IDENTIFY A DESIGN CHALLENGE 34
STEP 2: RECOGNIZE EXISTING KNOWLEDGE 39
STEP 3: IDENTIFY PEOPLE TO SPEAK WITH 40
STEP 4: CHOOSE RESEARCH METHODS 42
  Method: Individual Interview 42
  Method: Group Interview 44
  Method: In-Context Immersion 46
  Method: Self-Documentation 50
  Method: Community-Driven Discovery 53
  Method: Expert Interviews 55
  Method: Seek Inspiration in New Places 57
STEP 5: DEVELOP AN INTERVIEW APPROACH 58
  Method: Interview Guide 58
  Method: Sacrificial Concepts 60
  Method: Interview Techniques 64
STEP 6: DEVELOP YOUR MINDSET 66
  Mindset: Beginner's Mind 66
  Mindset: Observe vs. Interpret 68

CREATE

The Create section will help you translate what you learned in the field into concrete solutions.

STEP 1: DEVELOP THE APPROACH 84
  Method: Participatory Co-Design 84
  Method: Empathic Design 89
STEP 2: SHARE STORIES 92
STEP 3: IDENTIFY PATTERNS 94
  Method: Extract Key Insights 94
  Method: Find Themes 98
  Method: Create Frameworks 100
STEP 4: CREATE OPPORTUNITY AREAS 102
STEP 5: BRAINSTORM NEW SOLUTIONS 104
STEP 6: MAKE IDEAS REAL 106
STEP 7: GATHER FEEDBACK 108

DELIVER

The Deliver section will give you the tools to go from ideas and prototypes to solutions and plans that can be implemented. It will also help you create a learning plan to measure and continue iterating on your designs.

STEP 1: DEVELOP A SUSTAINABLE REVENUE MODEL 126
STEP 2: IDENTIFY CAPABILITIES FOR DELIVERING SOLUTIONS 131
STEP 3: PLAN A PIPELINE OF SOLUTIONS 134
STEP 4: CREATE AN IMPLEMENTATION TIMELINE 138
STEP 5: PLAN MINI-PILOTS AND ITERATION 140
STEP 6: CREATE A LEARNING PLAN 144
  Method: Track Indicators 146
  Method: Evaluate Outcomes 148

FIELD GUIDE 154

The Field Guide contains worksheets that will help you to prepare for and conduct field research. The Field Guide and the Aspirations Cards, are all you will need to take to the field with you.

Database Ranges for Analytical Netmapping Sections One and Two

1. **Who?**

- Name(s):
- Date(s) of Birth(s):
- Place(s) of Birth(s):
- SSN(s):
- DLN(s):
- VLN(s):
- VIN(s):
- Type of Residence(s):
- Current Home Phone Number(s):
- Previous Home Phone Number(s):
- Type of Business(es):
- Current Business Phone Number(s):
- Previous Business Phone Number(s):
- Current Home Address(es):
- Previous Home Address(es):
- Current Business Address(es):
- Previous Business Address(es):
- BLN(s):
- EIN(s):
- Physical Characteristics:
    - Individual(s):
    - Group(s):
    - Inter-Group(s):
    - Social System(s):
    - Larger-Social System(s):
- Physiological Genealogic Structure(s):
- Current Physical Characteristics of Functional Duties:
- Current Genealogical Characteristics of Functional Duties:
- Previous Physical Characteristics of Functional Duties:
- Previous Genealogical Characteristics of Functional Duties:
- Forecasted Physical Characteristics of Functional Duties:
- Forecasted Genealogical Characteristics of Functional Duties:
- Current Physical Classification(s) of Functional Duties:
- Current Genealogical Classification(s) of Functional Duties:
- Previous Physical Classification(s) of Functional Duties:
- Previous Genealogical Classification(s) of Functional Duties:
- Forecasted Physical Classification(s) of Functional Duties:
- Forecasted Genealogical Classification(s) of Functional Duties:

2. **What?**

- Race:
- Creed:
- Color:
- Nationality(ies):
- Ethnicity(ies):

- Sex:
- Hair:
- Eye(s):
- Height:
- Weight:
- Previous Marital Status:
- Current Marital Status:
- Previous Sexual Preferences:
- Current Sexual Preferences:
- Current Language Skills:
- Linguistic Profiles:
- Previous Religion:
- Current Religion:
- Religious Profile:
- Previous Education:
- Current Education:
- Educational Profile:
- Previous Psychological Profile:
- Current Psychological Profile:
- Forecasted Psychological Profile:
- Previous Economic Profile:
- Current Economic Profile:
- Forecasted Economic Profile:
- Previous Sociological Profile:
- Current Sociological Profile:
- Forecasted Sociological Profile:

3. When?

- Date(s) of Action(s) Committed:
- Date(s) when Support Personnel were Introduced into Action(s) Committed:
- Date(s) when Support Personnel Committed Action(s):
- Date(s) of Documents Involved in Action(s) Committed:
- Date(s) of when Action(s) Committed were Completed:

4. Where?

- Previous Location(s) of Action(s) Committed:
- Current Location(s) of Action(s) Committed:
- Location of Individuals in Support of Action(s) Committed:
- Subject(s) of Action(s) Committed:
- Investigative Profile(s) of Subject(s) of Action(s) Committed:
- Opinions of Subject(s) of Action(s) Committed:

5. How?

- Action(s) Committed:
- Action(s) Committed with Whom:
- Source or History of Actions(s) Committed:
- Previous Results of Action(s) Committed:
- Current Results of Action(s) Committed:
- Alphanumeric Definitions & Methods of Action(s) Committed:
- Alphanumeric Impact of Action(s) Committed:

- Legal Definitions & Methods of Action(s) Committed:
- Legal Impact of Action(s) Committed:
- Psychological Definitions & Methods of Action(s) Committed:
- Psychological Impact of Action(s) Committed:
- Physiological Definitions & Methods of Action(s) Committed:
- Physiological Impact of Action(s) Committed:
- Sociological Definitions & Methods of Action(s) Committed:
- Sociological Impact of Action(s) Committed:
- Economic Definitions & Methods of Action(s) Committed:
- Economic Impact of Action(s) Committed:
- Forecasted Integrated Results of Current Action(s) Committed:

6. Why?

- Ideological Reasons for Previous Action(s) Committed:
- Physiological Reasons for Previous Action(s) Committed:
- Economic Reasons for Previous Action(s) Committed:
- Sociological Reasons for Previous Action(s) Committed:
- Ideological Reasons for Current Action(s) Committed:
- Physiological Reasons for Current Action(s) Committed:
- Economic Reasons for Current Action(s) Committed:
- Sociological Reasons for Current Action(s) Committed:

7. Tactical Enterprise Work Architectures and Autonomous Programs used in Profile

- Autonomous Programs used in Profile:
- Sources and Performance History of Autonomous Programs used in Profile:
- Legal Position of Autonomous Programs used in Profile:
- Documentary Dispensation of Autonomous Programs used in Profile:
- Tactical Enterprise Work Architectures used in Profile:
- Sources and Performance History of Tactical Enterprise Work Architectures used in Profile:
- Legal Position of Tactical Enterprise Work Architectures used in Profile:
- Documentary Dispensation of Tactical Enterprise Work Architectures used in Profile:
- Tactical Enterprise Work Architectures and Autonomous Programs Ranking Prior to Investigative Profile:
- Tactical Enterprise Work Architectures and Autonomous Programs Ranking During Investigative Profile:
- Tactical Enterprise Work Architectures and Autonomous Programs Ranking After Investigative Profile:
- Legal Position of Enterprise Work Architectures and Autonomous Programs Prior to Investigative Profile:
- Legal Position of Enterprise Work Architectures and Autonomous Programs During Investigative Profile:
- Legal Position of Enterprise Work Architectures and Autonomous Programs After Investigative Profile:

8. Internal/External Personnel and Political Tactics used in Profile

- Internal/External Personnel used in Profile:
- Sources and History of Internal/External Personnel used in Profile:
- Legal Position of Internal/External Personnel used in Profile:
- Economic Dispensation of Internal/External Personnel used in Profile:
- Political Tactics used in Profile:

- Sources and History of Political Tactics used in Profile:
- Legal Position of Political Tactics used in Profile:
- Economic Dispensation of Political Tactics used in Profile:
- Network Configuration Prior to Investigative Profile:
- Network Configuration During Investigative Profile:
- Network Configuration After Investigative Profile:
- Legal Position of Network Prior to Investigative Profile:
- Legal Position of Network During Investigative Profile:
- Legal Position of Network After Investigative Profile:

9. Basis for Investigative Profiling

- Examination of Power Bases:
- Barriers to Entry into Certain Fields:
- Causes of Social Intercourse:
- Causes of Economic Conflicts:
- Causes of Legal Conflicts:
- Causes of Social Conflicts:
- Causes of Political Conflicts:
- Causes of Personal Conflicts:
- Causes of Racial Conflicts:
- Religious Conflicts:
- Basis for Human Interactions:
- Classification Theories:
- Bibliographic Theories:
- Structural Analysis Theories:
- Infrastructural Development:
- Educational Examination(s):
- Religious Examination(s):
- Strategic Anthropology:

10. The premise for NAME's investigative processes is to obtain a review of the history, objectives, operation, and merits of strategies & tactics that are prone to the need for an exhaustive investigation. This review process serves several purposes. It serves to describe the many functions that the existing internal operating systems can perform, thereby demonstrating the potential breath of applications for NAME's future investigative profiles and expert operating systems. It also illustrates the strategic development procedures discussed in **Appendix - D**, which are organized by the type of grammatic and tactical analysis they perform. NAME's informational demographics and expert procedural manuals are illustrated by the following list of their potential uses within a focused educational environment developed by the GCNO at NAME:

- Aiding DOT database drafting by testing a textual draft against a set of related strategic-databases and linguistic standards, and having the computer system(s) make the appropriate suggestions;
- Researching expert DOT databases on the basis of a statement of facts or concepts (strategic or grammatic retrieval as opposed to the current key word searches);
- Generating ideas and advising a user of the arguments (program functions) for and against documented situations and also how to weaken or strengthen the arguments (program functions) in a particular set circumstances or skills;
- Advising a user on strategy and tactics in procedure or structural negotiations;
- Evaluating a situation as to settlement (final analyses) or strategic value;
- Evaluating procedural consistencies with prior decisions of a proposed administrative decision in discretionary areas;
- Aiding in the document drafting of contracts, wills, and other documents by testing for the consistency with existing laws, personal and social policies, and linguistic standards;

- Assisting decision making in which little or no discretion is involved;
- Planning transactions such as business mergers, with tax and other strategic information by presenting alternative scenarios and identifying their legal or structural consequences;
- Predicting the consequences of proposed legislation, policies, draft contracts, wills, situations, etc.;
- Finding legal or strategic authorities which are consistent or inconsistent with proposed laws or consciences;
- Evaluating the effectiveness of existing procedures, laws or rules and identifying the procedures, laws or rules which may need to be modified;
- Training and disseminating information on related concepts or skills;
- Interviewing clients for information relevant to the identification of the nature of their strategic or procedural problems;
- Informing client systems of the consequences of particular acts, in order to enable their subordinates to know the reality of their proposed or past acts, and if communication with an expert is required, to obtain a complete answer;
- Preserving institutional and instructional expertise;
- Reviewing conceptual or strategic database systems against new rules or situations, and modifying them to keep them activated and current;
- Identifying clients whose educational affairs may have been affected by changes in the network, so that a subcontractor can determine whether to contact a client regarding the change(s).

The primary application areas for NAME's investigative profile & document development processes include strategic management, organizational management, monitoring data flow, conceptual or legal interpretation, and document or report generation for the purposes of structural or strategic investigations.

11. Organizational and operational systems for infrastructural management

a. The Personal Systems Training Solutions:
  - Application Development (la.);
  - Database (2a.);
  - DOS, OS/2, OS/400 (3a.);
  - Windows & Windows NT (4a.);
  - Programming Languages (5a.);
  - Transaction Processing (6a.);
  - End User Applications (IV. & V.);
  - Hardware Operations (7a.);

b. The Midrange Training Solutions:
  - Application Development (lb.);
  - Database (2b.);
  - Office Applications (7b.);
  - AIX/UNIX (4b.);
  - OS1400 (3b.);
  - Programming Languages (5b.);
  - Transaction Processing (6b.);

c. The Mainframe Training Solutions:
  - Application Development (le.);
  - Database (2c.);
  - MVS, VM, VSE (3c.);
  - Programming Languages (5c.);
  - Storage Management (4c.);
  - Transaction Processing (6c.);
  - Hardware Operations (7c.);

d. The Client/Server, Networking & Object Technology Training Solutions:
  - Client/Server (ld.);
  - Distributed Databases (2d.);

  - Internetworking (3d.);
  - Local Area Networking (4d.);
  - Network Management (5d.);
  - Voice Applications (6d.);
  - Object Technology (7d.);

e. The Business & Personal Development Training Solutions:

  - Business Management (4e.);
  - Financial Skills (3e.);
  - Industry Applications (2e.);
  - Personal Effectiveness (le.);
  - Project Management (5e.);
  - Total Quality Management (7e.);
  - Sales Training (6e.);

12. End product lines of investigative solution frameworks

- Intercommunicative autonomous software applications and platforms:
- Organizational and personnel procedural or policy manuals:
- Computational Intelligence in Industrial Engineering:
- Consumer Product Design:
- Economic Engineering & Cost Estimation:
- Facilities Design & Location:
- Information Systems:
- Maintenance Engineering and Management:
- Materials Handling:
- Performance Analysis & Simulation:
- Production Systems Design, Planning and Control:
- Productivity & Business Strategies:
- Project Management:
- Technology Management & Transfer:
- Total Quality Management & Quality Technology:
- Work Measurement & Methods Engineering:
- Industrial Ergonomics & Safety:
- Applied Operations Research:
- CAD/CAM:
- Other Topics of Interest in the Business Engineering Fields:

(ANMESCL^2 EL NEGRO)

ALPHA NUMEROUS MAXIMA
EGREGIA SUMMA CUM LAUDE

The ERSD Call to Action Formula(s) on Behalf of Caesar's 10th Legion within Global Socioeconomic Thought

$$G^3 \left(S = \frac{P^3}{C}\right)$$

The Formula System's Principle Components Through the Concepts of Economics Today

For the first time in the history of mankind. The road representing financial security, which leads toward the **Commanding Heights** of global market economies, is no longer solely paved with the words, concepts & ideas of **Privatization**. But is additionally forged upon the creation of individualized innovative global free-market entrepreneurial business model & search engine technologies. Whose, patentable genetic-based consultative Planning & Design Approaches (PDAs) are interconnected, evolvable & user specific through personalizing internet content by way of the following grammatic formula(s); Whereas, the constant sum value of [**A^2**, **G^2**, **G^2**, **G^2**, **L^2**, **M^2**, **PA^2**, **T^3** & **T^3**] equals the measured quantitative significance of any number(s), letter(s), word(s), concept(s), idea(s), genomic sequence(s) or method(s) used to describe the existence or **processes** of a person(s), place(s) or thing(s), both currently known or unknown. Which, are also supplanted within the driving forces [**E**] behind the **M**eaning of Life [**M**], the **T**ree of Life [**T**], and of course **Quality of Life** [**Q**] issues. Whereas, the **Process** is the genomic facilitation of single & multiple number, letter or word, strategies or tactics that simultaneously accommodate systemic personal or organizational management, from a single point of origin, throughout the following distributed infrastructural linguistic resources involving the **Human Language System** (HLS) as a whole;

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9. http://www.calvert-henderson.com/ *** Indicators
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13. http://www.halogensoftware.com/index.php Performance Appraisals
14. http://www.promantek.com/home_page/web/index.html *** Software
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19. http://www.interviso.com/personality_profiles.htm Leadership Qualities
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(ANMESCL^2 EL NEGRO)

ALPHA NUMEROUS MAXIMA
EGREGIA SUMMA CUM LAUDE

THE ONESIMUS EQUATIONS PROCEDURAL CONFIGURATION & INTERPRETATIONS INVOLVING MASLOW's HIERARCHY OF NEEDS

$$X^3\left(RW=\frac{EH^2}{QM}\right)$$

Homo Economicus Universal

The Socioeconomic Base Equations for the Individualized Global Free Market Fusion of Information

For the first time in the history of mankind. The road representing financial security, which leads toward the **Commanding Heights** of global market economies, is no longer solely paved with the words, concepts & ideas of **Privatization**. But is additionally forged upon the creation of individualized innovative global free-market entrepreneurial business model & search engine technologies. Whose, patentable genetic-based consultative Planning & Design Approaches (PDAs) are interconnected, evolvable & user specific through personalizing internet content by way of the following grammatic formula(s); Whereas, the constant sum value of [$\mathbf{A^2}$, $\mathbf{G^2}$, $\mathbf{G^2}$, $\mathbf{G^2}$, $\mathbf{L^2}$, $\mathbf{M^2}$, $\mathbf{PA^2}$, $\mathbf{T^3}$ & $\mathbf{T^3}$] equals the measured quantitative significance of any number(s), letter(s), word(s), concept(s), idea(s), genomic sequence(s) or method(s) used to describe the existence or **processes** of a person(s), place(s) or thing(s), both currently known or unknown. Which, are also supplanted within the driving forces [**E**] behind the **M**eaning of Life [**M**], the **T**ree of Life [**T**], and of course **Q**uality of Life [**Q**] issues. Whereas, the **Process** is the genomic facilitation of single & multiple number, letter or word, strategies or tactics that simultaneously accommodate systemic personal or organizational management, from a single point of origin, throughout the following distributed infrastructural linguistic resources involving the **Human Language System** (HLS) as a whole;

$$A^{2}\ \left(E=\frac{CM^{2}}{MC}\right)$$

Homo Sapiens (Archaic)

$$C^{3}\ \left(P=\frac{D^{3}}{A}\right)$$

Homo Economicus Universal Tactical

$$G^{2}\ \left(E=\frac{NT^{2}}{OT}\right)$$

Australopithecus Africanus

$$G^{2}\ \left(M=\frac{L^{2}}{A}\right)$$

Homo Erectus

$$G^{2}\ \left(S=\frac{L^{2}}{A}\right)$$

Homo Sapiens (Neanderthal)

$$G^3\ \left(S= \frac{P}{C}^{3}\right)$$

Homo Economicus Universal Synchronized

(The Theory of Universal Economic Relativity)

$$L^2\ \left(E= \frac{I}{V}^{2}\right)$$

Australopithecus Afarensis

$$M^2\ \left(E= \frac{T}{Q}^{2}\right)$$

Australopithecus Robustus

$$PA^2\ \left(MC= \frac{NS^2}{GO}\right)$$

Australopithecus Boisei

$$P^3\ \left(E= \frac{D}{A}^{3}\right)$$

Homo Economicus Universal Strategic

$$T^3 \quad \left(C = \frac{UL^2}{LL}\right)$$

Homo Sapiens (Modern)

$$T^3 \quad \left(L = \frac{I^2}{V}\right)$$

Homo Habilis

Economics Today

PART 1: Introduction

1. The Nature of Economics
2. Scarcity and the World of Trade-Offs
3. Demand and Supply
4. Extensions of Demand and Supply Analysis
5. Public Spending and Public Choice
6. Funding the Public Sector

PART 2: Introduction to Macroeconomics and Economic Growth

7. The Macroeconomy: Unemployment, Inflation, and Deflation
8. Measuring the Economy's Performance
9. Global Economic Growth and Development

PART 3: Real GDP Determination and Fiscal Policy

10. Real GDP and the Price Level in the Long Run
11. Classical and Keynesian Macro Analyses
12. Consumption, Real GDP, and the Multiplier
13. Fiscal Policy
14. Deficit Spending and the Public Debt

PART 4: Money, Stabilization, and Growth

15. Money, Banking, and Central Banking
16. Domestic and International Dimensions of Monetary Policy
17. Stabilization in an Integrated World Economy
18. Policies and Prospects for Global Economic Growth

PART 5: Dimensions of Microeconomics

19. Demand and Supply Elasticity
20. Consumer Choice
21. Rents, Profits, and the Financial Environment of Business

PART 6: Market Structure, Resource Allocation, and Regulation

22. The Firm: Cost and Output Determination
23. Perfect Competition
24. Monopoly
25. Monopolistic Competition
26. Oligopoly and Strategic Behavior
27. Regulation and Antitrust Policy in a Globalized Economy

PART 7: Labor Resources and the Environment

28. The Labor Market: Demand, Supply, and Outsourcing
29. Unions and Labor Market Monopoly Power
30. Income, Poverty, and Health Care
31. Environmental Economics

PART 8: Global Economics

32. Comparative Advantage and the Open Economy
33. Exchange Rates and the Balance of Payments

(ANMESCL^2 EL NEGRO)

ALPHA NUMEROUS MAXIMA
EGREGIA SUMMA CUM LAUDE

$$A^{2} \left(E = \frac{CM^{2}}{MC}\right)$$

Homo Sapiens (Archaic)

1. Where **A**^{2} = the letter **A** used as a word (adjective) in a sentence, is defined by other words in a dictionary, that in turn are defined by other words, so forth & so forth, until the letter **A** as an **A**pplication or **A**pproach represents all the words defined in any english dictionary translated into other languages. In other words, the letter **A** represents entire words, concepts & ideas used to describe a set of circumstances within the human language system.
2. Where **E** = the **E**nergetic forces within the **E**nvironment or **E**conomies that are influenced by;
3. **CM**^{2} which equals the description of the cost of goods & services, squared by;
4. **MC**^{2} that defines the amount of goods & services available within the global market place. This entire formula and its list of interrelated subcomponents functions as individual **adjectives** in a sentence for the purposes of systems integration.

$$C^3 \left(P=\frac{D^3}{A}\right)$$

Homo Economicus Universal Tactical

1. Where **C^3** = the influences of Fiduciary Tactics, a Financial consensus of the human condition
2. Where **P** = the **P**lanning, **P**romotion, **P**rocedural **A**pplication(s) or **P**erformance **A**ppraisal techniques involving people, places or things and;
3. **D^3** which equals those **N**orms/**S**tandards that **D**efine strategic Economic operations that are based upon or influenced by,
4. **A^3** that represents the letter **A** used as a word (adjective) in a sentence, is defined by other words in a dictionary, that in turn are defined by other words, so forth & so forth, until the letter **A** as an **A**pplication or **A**pproach represents all the words defined in any English dictionary translated into other languages. In other words, the letter **A** represents entire words, concepts & ideas used to describe a set of circumstances within the human language system that defines those **transitive** or **intransitive** "**Do**" operations within in a snap shot in time for the purposes of monetary systems integration.

$$G^2 \left(E=\frac{NT^2}{OT}\right)$$

Australopithecus Africanus

1. Where **G^2** = the influences of the Word of **G**od, a **G**lobal consensus of the human condition, or the mathematical equation of the **G**roup ordering & development of good & services on earth (e.g., Manufacturing resource planning – MRP/ERP).
2. Where **E** = the planet **E**arth, spiritual **E**volution or **E**conomies that are influenced by;
3. **NT^2** which equals the influences of the New **T**estament on organizational behavior (OD) and,
4. Where **OT^2** that represents the influences of the **O**ld **T**estament on individual behavior patterns. This entire formula and its list of interrelated subcomponents functions as individual **prepositional** words in a sentence for the purposes of systems integration.

$$G^{2}\left(M=\frac{L^{2}}{A}\right)$$

Homo Erectus

1. Where **G^2** = the influences of the GHOST technology base IBOS[DOSA/DALP/IAOA].
2. Where **M** = the **M**eaning of Life definitions of the human condition on earth that are influenced by;
3. **L^2** which equals the formula representing the Human **L**anguage System of strategic operations that are based upon or influenced by;
4. **A^2** that represents the tactical function of the entire formula listed as A^2, etc above. This entire formula and its list of interrelated subcomponents functions as individual **nouns** in a sentence for the purposes of systems integration.

$$G^{2}\left(S=\frac{L^{2}}{A}\right)$$

Homo Sapiens (Neanderthal)

1. Where **G^2** = the application of the contents of the **G**enomic matrix upon words, concepts, ideas or search engine protocols.
2. Where **S** = the genomic sequence of words, concepts or ideas that define the human condition on earth that are influenced by;
3. **L^2** which equals the formula representing the Human **L**anguage System of strategic operations that are based upon or influenced by;
4. **A^2** that represents the tactical operations of the entire formula listed as A^2, etc above. This entire formula and its list of interrelated subcomponents functions as individual **pronouns** in a sentence for the purposes of systems integration.

$$G^3 \left(S= \frac{P^3}{C}\right)$$

Homo Economicus Universal Synchronized
(**The Theory of Universal Economic Relativity**)

1. Where **G^3** = the application of the The Formula System's Principle Components Through the Principles of Economics Today; The 300 Global Economies; and the various formulas as initially influenced by X^3 strategies carrying the weight of all 324 tactical components.
2. Where **S^3** = the genomic sequence of words, concepts or ideas that define the human condition on earth that are influenced by;
3. **P^3** which equals the **P**lanning, **P**romotion, **P**rocedural **A**pplication(s) or **P**erformance **A**ppraisal techniques involving people, places or things that are based upon or influenced by;
4. **C^3** that represents the influences of Fiduciary Tactics, a Financial consensus of the human condition.

$$L^2 \left(E= \frac{I^2}{V}\right)$$

Australopithecus Afarensis

1. Where **L^2** = the entire Human **L**anguage System that defines the human condition, and;
2. Where **E** = the procedural **E**lements of words, concepts or ideas that define the economic condition that are influenced by;
3. **I^2** which equals the Investment of strategic operations that are based upon or influenced by;
4. **V^2** that represents the **V**alued System of human beings involved in tactical operations. This entire formula and its list of interrelated subcomponents functions as individual **verbs** in a sentence for the purposes of systems integration.

$$M^2 \left(E = \frac{T^2}{Q}\right)$$

Australopithecus Robustus

1. Where **M**^{2} = the Meaning of Life that defines the human condition, and;
2. Where **E** = the procedural **E**lements of words, concepts or ideas that define the economic condition that are influenced by;
3. **T**^{2} which equals the **T**ree of Life issues (Educational Hierarchies) involving the strategic operations that are based upon or influenced by;
4. **Q**^{2} that represents the **Q**uality of Life issues involving human beings actively implementing tactical operations. This entire formula and its list of interrelated subcomponents functions as individual **adverbs** in a sentence for the purposes of systems integration.

$$PA^2 \left(MC = \frac{NS^2}{GO}\right)$$

Australopithecus Boisei

1. Where **PA**^{2} = the **P**ower/**A**uthority, **P**roblem **A**nalysis, **P**rocedural **A**pplication(s) or **P**erformance **A**ppraisal techniques involving people, places or things and;
2. Where **MC** = the Morale or Cohesive nature of values, words, concepts or ideas that define the elemental, genetic, molecular or economic conditions that are influenced by;
3. **NS**^{2} which equals the **N**orms/**S**tandards involving the strategic operations that are based upon or influenced by;
4. **GO**^{2} that represents the **G**oals & **O**bjectives involving human beings actively engaged in tactical operations. This entire formula and its list of interrelated subcomponents functions as individual **transitive** or **intransitive verbs** in a sentence for the purposes of systems integration.

$$P^3 \left(E = \frac{D^3}{A}\right)$$

Homo Economicus Universal Strategic

1. Where $\mathbf{P}^3$ = the **P**lanning, **P**romotion, **P**rocedural **A**pplication(s) or **P**erformance **A**ppraisal techniques involving people, places or things and;
2. Where **E** = the **E**volutionary nature of values, words, concepts or ideas that define the elemental, genetic, molecular or economic conditions that are influenced by;
3. $\mathbf{D}^3$ which equals those **N**orms/**S**tandards that **D**efine strategic **E**conomic operations that are based upon or influenced by;
4. $\mathbf{A}^3$ the letter **A** used as a word (adjective) in a sentence, is defined by other words in a dictionary, that in turn are defined by other words, so forth & so forth, until the letter **A** as an **A**pplication or **A**pproach represents all the words defined in any English dictionary translated into other languages. In other words, the letter **A** represents entire words, concepts & ideas used to describe a set of circumstances within the human language system that defines those **transitive** or **intransitive** "**Do**" operations within in a snap shot in time for the purposes of monetary systems integration.

$$T^3 \left(C = \frac{UL^2}{LL}\right)$$

Homo Sapiens (Modern)

1. Where $\mathbf{T}^3$ = the Systems **T**ransformation, **T**ranslation, **T**ransfiguration & **T**ransaction involving the activities of people, places or things and;
2. Where **C** = the Chromosomal elements or **C**ountermeasures taken through the use of words, concepts or ideas that define the environmental, evolvable or economic conditions that are influenced by;
3. $\mathbf{UL}^2$ which equals the **U**pper **L**evel organizational strategic operations that are based upon or influenced by;
4. $\mathbf{LL}^2$ that represents the **L**ower **L**evel activities involving human beings actively engaged in tactical operations. This entire formula and its list of interrelated subcomponents functions as individual **conjunctions** in a sentence for the purposes of systems integration.

$$T^{3} \ \left(L = \frac{I^{2}}{V}\right)$$

Homo Habilis

1. Where **T**^{3} = the techniques of **P**roblem Analysis, **P**otential **P**roblem **A**nalysis & the **D**ecision **A**nalysis of people, places or things and;
2. Where **L** = the **L**anguage of words, concepts or ideas that define the elemental or economic condition described through the Problem Format of which is influenced by;
3. **I**^{2} which equals the personal or global **I**nterests involving the strategic operations that are based upon or influenced by;
4. **V**^{2} that represents the personal or global **V**alue System involving human beings actively engaged in tactical operations. This entire formula and its list of interrelated subcomponents functions as individual **interjections** in a sentence for the purposes of systems integration.

Investor's Costs and Benefits

A.1. Executive Summary (A²)
1.1. Project Promoters and Authorities
1.2. Object of Analysis
1.2.1. Project Name
1.2.2. Brief Description of the Project
1.2.2.1. Sector
1.2.2.2. Location
1.2.2.3. Area(s) Impacted by the Project (regional, national, international.)
1.3. Promoter's Objectives
1.4. Previous Experiences with Similar Projects
1.5. Brief Description of the Appraisal Report
1.5.1. Authors of this Report
1.5.2. Scope of the Report. Ties to other Projects.
1.5.3. Methodology of the Project Analysis.
1.6. Main Results of the Analysis
1.6.1. Financial Returns
1.6.2. Economic Returns
1.6.3. Impact on Employment
1.6.4. Environmental Impact
1.6.5. Other Results

A.2. Socio-economic context (G²[S])
2.1. Main Elements of the Socio-economic Context
2.1.1. Territorial and Environmental Aspects
2.1.2. Demographics
2.1.3. Socio-cultural Elements
2.1.4. Economic Aspects
2.2. Institutional and Political Aspects
2.2.1. General Political Outlook.
2.2.2. Sources of Financing (specify if loans or grants); Additional Funds (ERDF, EIB, CF, ESF, etc.); national authorities (central governments, regions, others); private individuals
2.2.3. Financial Coverage on the part of the aforementioned sources
2.2.4. Administrative and Procedural Obligations; Decision-making Authorities for the Project; Territorial Planning Obligations; licenses/permits; requirements for licenses and incentives.
2.2.5. Expected times for: licenses/permits; licenses/incentive to pay.

A.3. Supply of and Demand for the Project's Outputs (G²[M])
3.1. Potential Demand Expectations
3.1.1. Needs the Project Meets within a Set Period of Time
3.1.2. Current and Future Trends in Demand
3.1.3. Demand Breakdown by Consumer Type
3.1.4. Means of Purchase or Distribution
3.1.5. Specific Market Research: Results
3.2. Competition
3.2.1. Supply Features of Similar Outputs
3.2.2. Competitive Structure, if existing or can be forecasted
3.2.3. Success Factors
3.3. Proposed Strategy

3.3.1. Outputs
3.3.2. Prices
3.3.3. Promotion
3.3.4. Distribution
3.3.5. Marketing
3.4. Estimate on the Percentage of Potential Use
3.4.1. Sales Forecasts for the Project
3.4.2. Market shares, coverage of the shares of various needs
3.4.3. Forecasting hypothesis and techniques

A.4. Technological Alternatives and Production Plan ($T^{3[C]}$)

4.1. Description of Significant Technological Alternatives
4.2. Selection of Appropriate Technology
4.3. Buildings and Plants
4.4. Physical Inputs for Production
4.5. Personnel Requirements
4.6. Energy Requirements
4.7. Technology Providers
4.8. Investment Costs
4.8.1. Planning and Know-how
4.8.2. Buildings
4.8.3. Machinery
4.9. Production Plan over the Project Time Horizon
4.10. Combined Output Supply
4.11. Production Organization

A.5. Human Resources (PA^2)

5.1. Organizational Diagram
5.2. List of Personnel and Salary Parameters
5.2.1. Managers
5.2.2. Office Workers
5.2.3. Technicians
5.2.4. Manual Workers
5.3. External Services
5.3.1. Administrative Staff
5.3.2. Technicians
5.3.3. Other
5.4. Hiring Procedures
5.5. Training Procedures
5.6. Annual Costs (before and after project start-up)

A.6. Location (L^2)

6.1. Ideal Requirements for the Location
6.2. Alternative Options
6.3. Choice of Site and its Characteristics
6.3.1. Climatic Conditions, Environmental Aspects (if relevant)
6.3.2. Site or Territory
6.3.3. Transport and Communications
6.3.4. Water and Electricity Provisioning
6.3.5. Waste Disposal
6.3.6. Government Regulations
6.3.7. Policies of the Local Authorities

6.3.8. Description of the Pre-chosen Site (details in the Appendix)
6.4. Cost of Land and Site Preparation
6.5. Site Availability
6.6. Infrastructure Requirements

A.7. Implementation (M^2)
7.1. Analysis of Construction/Start-up Times (project cycle)
7.1.1. Selection of Management Group for the Project
7.1.2. Definition of Information System
7.1.3. Negotiations for the Purchase of Know-how and Machinery
7.1.4. Building Planning and Contract Scheduling
7.1.5. Financing Negotiations
7.1.6. Acquisition of Land and Licenses
7.1.7. Organizational Structure
7.1.8. Staff Hiring
7.1.9. Personnel Hiring and Training
7.1.10. Supply Agreements
7.1.11. Distribution Agreements
7.2. Bar Graph (or PERT chart) of the main phases
7.3. Main Information on Execution Times to consider in the Financial Analysis

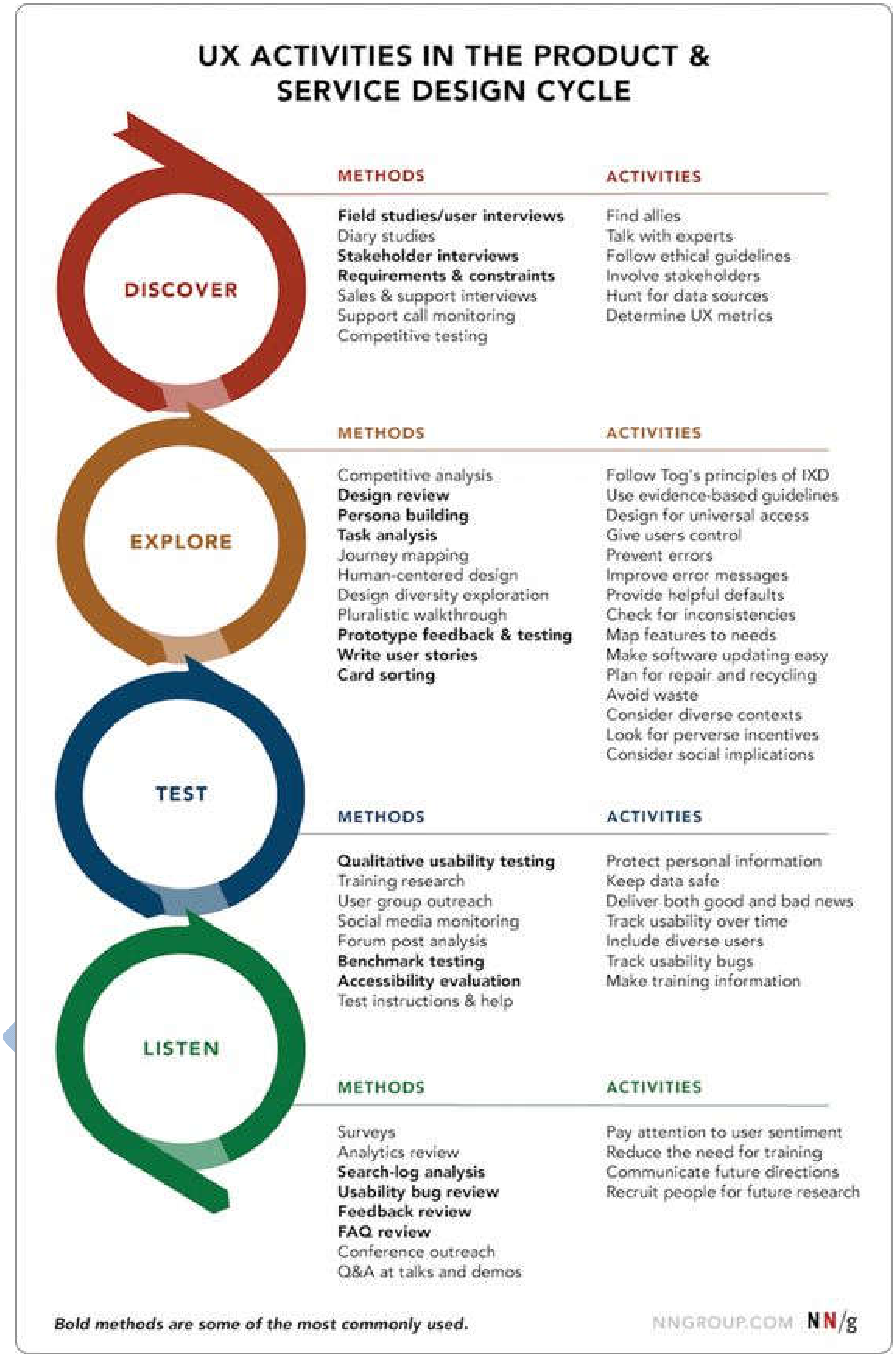
A.8. Financial Analysis ($T^{3[L]}$)
8.1. Basic Assumptions of the Financial Analysis
8.1.1. Time Horizon
8.1.2. Prices of Productive Factors and Project Outputs
8.1.3. Real Financial Discount Rate
8.2. Fixed Investments
8.3. Expenses before Production (Goodwill)
8.4. Working Capital
8.5. Total Investment
8.6. Operating Revenue and Costs
8.7. Sources of Financing
8.8. Financial Plan (a table showing cash flow for each year)
8.9. Balance Sheet (assets and liabilities)
8.10. Profit and Loss Account
8.11. Determining the Net Cash Flow
8.11.1. Net Flow to Calculate the Total Return on the Investment (investments in the total project)
8.11.2. Net Flow to Calculate the Return on Shareholders' Equity or Funded Capital (public/private)
8.12. Net Present Value/Internal Rate of Return

A.9. Socio-economic Cost-Benefit Analysis ($G^{2[E]}$)
9.1. Accounting and Discount Unit for the Cost-Benefit Analysis
9.2. Social Cost Analysis
9.2.1. Output Price Distortions
9.2.2. Salary Distortions
9.2.3. Fiscal Aspects
9.2.4. External Costs
9.2.5. Non-monetary Costs, including Environmental Aspects
9.3. Analysis of social benefits
9.3.1. Output Price Distortions
9.3.2. Social Benefits from Increased Employment
9.3.3. Fiscal Aspects

9.3.4. External Benefits
9.3.5. Non-monetary Benefits, including Environmental Aspects
9.4. Economic Rate of Return or Net Present Value of the Project in Monetary Terms
9.5. Additional Appraisal Criteria
9.5.1. Presentation of Results in terms of General Objectives of Global Economic Policies
9.5.2. Increase in GLOBAL ECONOMY Social Income
9.5.3. Reduction in the Disparities with regard to per capita GDP between global economic regions
9.5.4. Increase in Employment
9.5.5. Improvement in the Quality of the Environment
9.5.6. Other Objectives of the Commission, Regional and National Authorities

A.10. Risk Analysis (X^3)

10.1. Defining the Critical Variables with the help of the Sensitivity Analysis
10.1.1. Supply/Demand Variables
10.1.2. Output Variables
10.1.3. Human Resources
10.1.4. Time and Implementation Variables
10.1.5. Financial Variables
10.1.6. Economic Variables
10.2. Best and Worst Case Scenario Simulation
10.3. Risk Assessment
10.4. Risk Mitigation and Management



UX ACTIVITIES IN THE PRODUCT & SERVICE DESIGN CYCLE

DISCOVER

METHODS	ACTIVITIES
Field studies/user interviews	Find allies
Diary studies	Talk with experts
Stakeholder interviews	Follow ethical guidelines
Requirements & constraints	Involve stakeholders
Sales & support interviews	Hunt for data sources
Support call monitoring	Determine UX metrics
Competitive testing	

EXPLORE

METHODS	ACTIVITIES
Competitive analysis	Follow Tog's principles of IXD
Design review	Use evidence-based guidelines
Persona building	Design for universal access
Task analysis	Give users control
Journey mapping	Prevent errors
Human-centered design	Improve error messages
Design diversity exploration	Provide helpful defaults
Pluralistic walkthrough	Check for inconsistencies
Prototype feedback & testing	Map features to needs
Write user stories	Make software updating easy
Card sorting	Plan for repair and recycling
	Avoid waste
	Consider diverse contexts
	Look for perverse incentives
	Consider social implications

TEST

METHODS	ACTIVITIES
Qualitative usability testing	Protect personal information
Training research	Keep data safe
User group outreach	Deliver both good and bad news
Social media monitoring	Track usability over time
Forum post analysis	Include diverse users
Benchmark testing	Track usability bugs
Accessibility evaluation	Make training information
Test instructions & help	

LISTEN

METHODS	ACTIVITIES
Surveys	Pay attention to user sentiment
Analytics review	Reduce the need for training
Search-log analysis	Communicate future directions
Usability bug review	Recruit people for future research
Feedback review	
FAQ review	
Conference outreach	
Q&A at talks and demos	

Bold methods are some of the most commonly used.

NNGROUP.COM NN/g

(ANMESCL^2 EL NEGRO)

ALPHA NUMEROUS MAXIMA
EGREGIA SUMMA CUM LAUDE

$$A^{2}\ \left(E=\frac{CM^{2}}{MC}\right)$$

Homo Sapiens (Archaic)

A. The Network Affiliation: The Chief Organizational Officer of Education & Systems Development (**COOESD**) Phase - 3
B. The Principle Part of English Speech: Adjective(s)
C. The Strategic & Tactical Component: The IAOA Interface Protocols
D. The Method Structure Components: The Data Analysis – *Software Engineering Tools and Methods/System Evolution Initiative* – TNPFP Teaching, Learning, and Assessment Methods (General)
E. The Laboratory Component: The Project Operations Involving Exploratory Test
F. The Virtual Laboratory Component: Professional Societies
G. The TCP/IP Division: Banyan Vines
H. The Operational Determination: Physiological
I. The Genetic Predisposition: The Planning & Design Approaches Subordinate to Genetic-Based Methodical Issues Involving GSDBCPDA Phase - 3

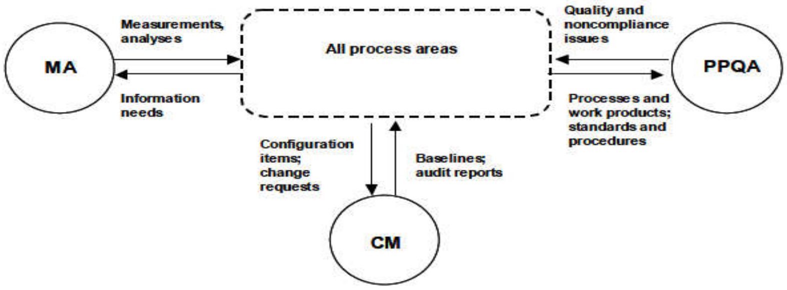

MA
Measurements, analyses
Information needs
All process areas
Quality and noncompliance issues
PPQA
Processes and work products; standards and procedures
Configuration items; change requests
Baselines; audit reports
CM

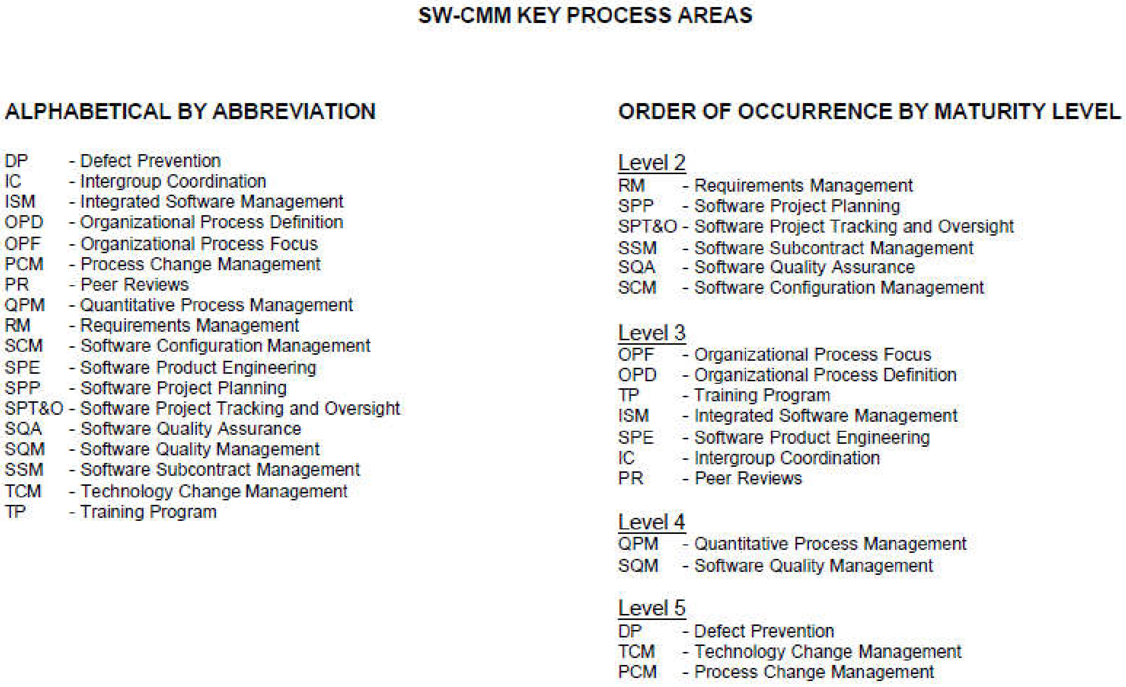
Figure 7: Basic Support Process Areas [FM102.HDA105.HDB102.T104]

$G^2\ (E=\frac{NT^2}{OT})$

Australopithecus Africanus

DRAFT

A. The Network Affiliation: The Chief Accounting Officer of Network Implementation (**CAONI**) Specifying & Implementing Solutions
B. The Principle Part of English Speech: Preposition(s)
C. The Strategic & Tactical Component: EGIOMMP [**M**], IGIMMP [**T**] & OGIBMMP [**Q**]
D. The Method Structure Components: The Development & Implementation of Standards – *Software Configuration Management/Organization* – TNPFP Educational Technology/E-Learning
E. The Laboratory Component: The Project Interpretation & Design of a Prototype Involving Project Operations
F. The Virtual Laboratory Component: Education & Training
G. The TCP/IP Division: AppleTalk
H. The Operational Determination: Psychological
I. The Genetic Predisposition: The Planning & Design Post Project Evaluation Involving **Morale/Cohesion**, and the Planning & Design Approaches Subordinate to Genetic-Based Environmental Outputs Involving the **Q**uality of Life



SW-CMM KEY PROCESS AREAS

ALPHABETICAL BY ABBREVIATION

DP	- Defect Prevention
IC	- Intergroup Coordination
ISM	- Integrated Software Management
OPD	- Organizational Process Definition
OPF	- Organizational Process Focus
PCM	- Process Change Management
PR	- Peer Reviews
QPM	- Quantitative Process Management
RM	- Requirements Management
SCM	- Software Configuration Management
SPE	- Software Product Engineering
SPP	- Software Project Planning
SPT&O	- Software Project Tracking and Oversight
SQA	- Software Quality Assurance
SQM	- Software Quality Management
SSM	- Software Subcontract Management
TCM	- Technology Change Management
TP	- Training Program

ORDER OF OCCURRENCE BY MATURITY LEVEL

Level 2

RM	- Requirements Management
SPP	- Software Project Planning
SPT&O	- Software Project Tracking and Oversight
SSM	- Software Subcontract Management
SQA	- Software Quality Assurance
SCM	- Software Configuration Management

Level 3

OPF	- Organizational Process Focus
OPD	- Organizational Process Definition
TP	- Training Program
ISM	- Integrated Software Management
SPE	- Software Product Engineering
IC	- Intergroup Coordination
PR	- Peer Reviews

Level 4

QPM	- Quantitative Process Management
SQM	- Software Quality Management

Level 5

DP	- Defect Prevention
TCM	- Technology Change Management
PCM	- Process Change Management

$G^2 (M= \frac{L^2}{A})$

Homo Erectus

A. The Network Affiliation: The Chief Administrator of Network Operations (**CANO**) Phase - 2
B. The Principle Part of English Speech: Noun(s)
C. The Strategic & Tactical Component: GHOST Technologies
D. The Method Structure Components: The Preliminary Design – *Software Design/Technologies* – TNPFP Professionalism of Teaching (General)
E. The Laboratory Component: The Analysis of Results Involving Project Operations
F. The Virtual Laboratory Component: Licensing Boards
G. The TCP/IP Division: XNS Xerox Network System
H. The Operational Determination: Organizational Strategies & Subordinate Tactical Operations Development
I. The Genetic Predisposition: The Planning & Design Approaches Subordinate to Genetic-Based Methodical Issues Involving GSDBCPDA Phase - 2, and the Planning & Design Approaches Subordinate to Genetic-Based Environmental Inputs Involving the **M**eaning of Life

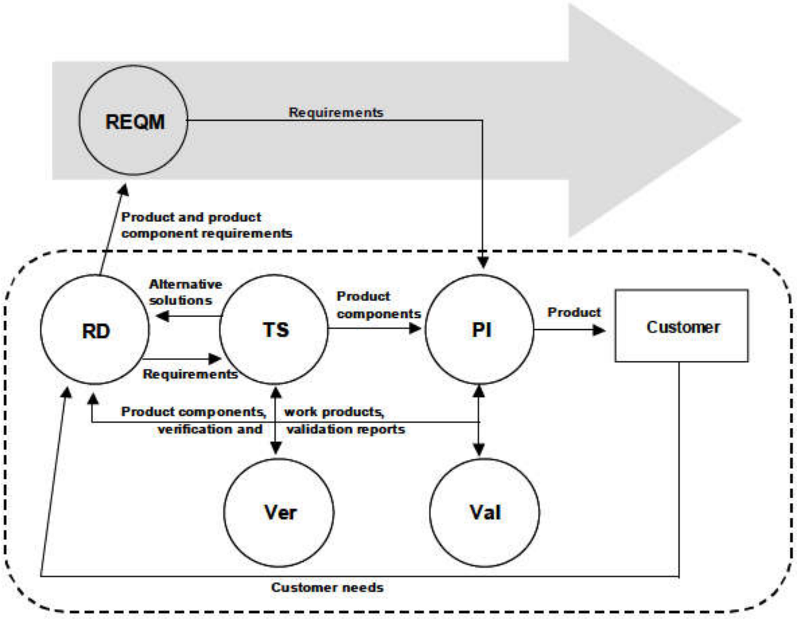

REQM
Requirements
Product and product component requirements
Alternative solutions
RD
TS
Requirements
Product components
PI
Product
Customer
Product components, work products, verification and validation reports
Ver
Val
Customer needs

Figure 6: Engineering Process Areas [FM102.HDA104.HDB102.T106]

s

$G^2 (S=\frac{L^2}{A})$

Homo Sapiens (Neanderthal)

DRAFT

- **A.** The Network Affiliation: The Chief Logistics Officer of Network Support (**CLONS**) Phase - 4
- **B.** The Principle Part of English Speech: Pronoun(s)
- **C.** The Strategic & Tactical Component: The Genetic Array(s)
- **D.** The Method Structure Components: The Data Conversion & Implementation – *Software Engineering Process/Software* – TNPFP Outcomes of Education (General)
- **E.** The Laboratory Component: The Production of Standards Involving Project Operations
- **F.** The Virtual Laboratory Component: Professional Development
- **G.** The TCP/IP Division: DECnet Phase IV
- **H.** The Operational Determination: Genomic Sequence Database Consultative Planning & Design Approaches (**GSDBCPDA**)
- **I.** The Genetic Predisposition: The Planning & Design Approaches Subordinate to Genetic-Based Methodical Issues Involving GSDBCPDA Phases - 4, and the Planning & Design Approaches Subordinate to Genetic-Based Computer Matrixes Involving the Tree of Life

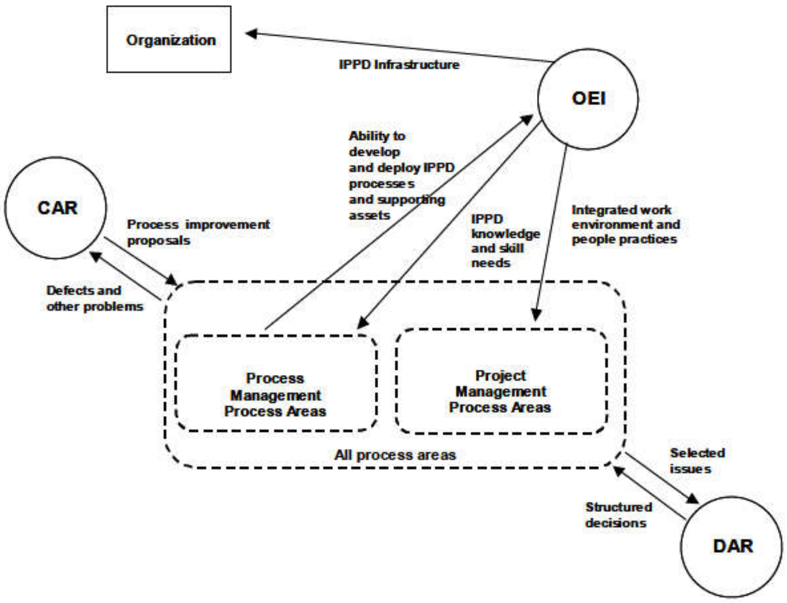

Organization
IPPD Infrastructure
OEI
Ability to develop and deploy IPPD processes and supporting assets
CAR
Process improvement proposals
IPPD knowledge and skill needs
Integrated work environment and people practices
Defects and other problems
Process Management Process Areas
Project Management Process Areas
All process areas
Selected issues
Structured decisions
DAR

Figure 8: Advanced Support Process Areas [FM102.HDA105.HDB103.T105]

$$L^2\ \left(E=\frac{I}{V}^{2}\right)$$

Australopithecus Afarensis

DRAFT

A. The Network Affiliation: The Chief Information Officer of Systems & Network Development (**CIOSND**) Pursuing the Planning & Design Strategy
B. The Principle Part of English Speech: Verb(s)
C. The Strategic & Tactical Component: The Mathematical Formulae
D. The Method Structure Components: The Detailed Design & Testing – *Software Testing/Systems Engineering* – TNPFP Key and Subject Based Skills (General)
E. The Laboratory Component: The Project Planning & Field Test of the Prototype Involving Project Operations
F. The Virtual Laboratory Component: Enterprise HRP Management
G. The TCP/IP Division: ISO
H. The Operational Determination: Philosophical
I. The Genetic Predisposition: The Planning & Design Project Development Involving **Norms/Standards**

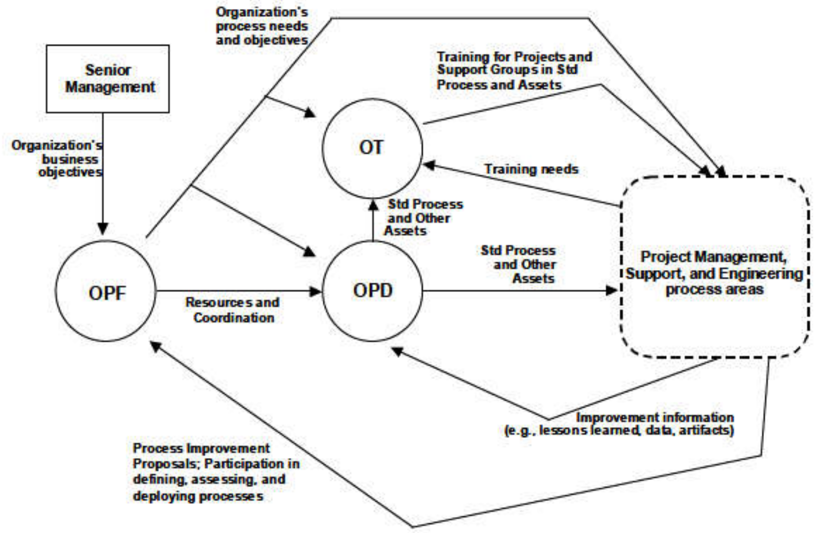

Organization's process needs and objectives
Senior Management
Training for Projects and Support Groups in Std Process and Assets
Organization's business objectives
OT
Training needs
Std Process and Other Assets
Std Process and Other Assets
Project Management, Support, and Engineering process areas
OPF
Resources and Coordination
OPD
Improvement information (e.g., lessons learned, data, artifacts)
Process Improvement Proposals; Participation in defining, assessing, and deploying processes

Figure 2: Basic Process Management Process Areas

[FM102.HDA102.HDB102.T103]

$$M^2\left(E=\frac{T^2}{Q}\right)$$

Australopithecus Robustus

A. The Network Affiliation: The Chief Intelligence Officer of Network Security & Special Operations (**CIONSSO**) Information & Knowledge
B. The Principle Part of English Speech: Adverb(s)
C. The Strategic & Tactical Component: The Words, Concepts & Fields of Human Activities
D. The Method Structure Components: Data Gathering – *Software Engineering Management/Project* – TNPFP Planning & Preparation (General)
E. The Laboratory Component: The Project Definition & Literature Review Involving Project Operations
F. The Virtual Laboratory Component: The Other Fields Upon Which Software Engineering Based Knowledge Relies (SWEBOK)
G. The TCP/IP Division: TCP/IP – UPD/IP
H. The Operational Determination: Sociological
I. The Genetic Predisposition: The Planning & Design Project Initiation Involving **Power/Authority**

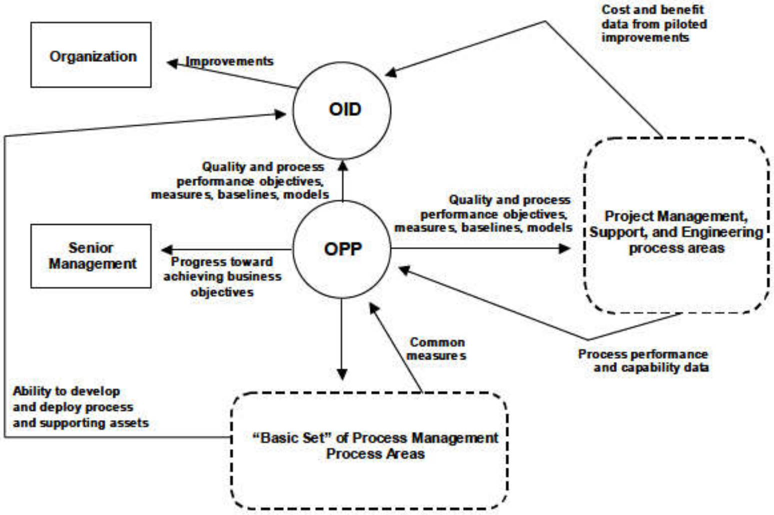

Organization
Improvements
OID
Cost and benefit data from piloted improvements
Quality and process performance objectives, measures, baselines, models
Quality and process performance objectives, measures, baselines, models
Project Management, Support, and Engineering process areas
Senior Management
Progress toward achieving business objectives
OPP
Common measures
Process performance and capability data
Ability to develop and deploy process and supporting assets
"Basic Set" of Process Management Process Areas

Figure 3: Advanced Process Management Process Areas

[FM102.HDA102.HDB103.T105]

$PA^2 \ (MC=\frac{NS^2}{GO})$

Australopithecus Boisei

A. The Network Affiliation: The Entire Strategic & Tactical Operations or Organizational Development of the NAME Network as a Whole Arranging for Continuing Change and Improvement
B. The Principle Part of English Speech: Intransitive and/or Transitive Verb(s)
C. The Strategic & Tactical Component: The Protocols Involved with Engineering or Manufacturing Information, Developing Methodic Pre-determined Educational Hierarchies, and Implementing Operational Phases within a Consultative Planning & Design Approach
D. The Method Structure Components: The Post-Implementation Evaluation – *Software Maintenance/Legacy System* – TNPFP Key Skills (General)
E. The Laboratory Component: The Virtual Laboratory Components
F. The Virtual Laboratory Component: The Laboratory Components
G. The TCP/IP Division: The Strategic & Tactical Efforts Involving the Seven Dimensional Layers of Autonomous Agent Operational Protocols
H. The Operational Determination: Physiological & the Application of the Group Ordering & Development (**GOD**) and/or Managerial Applied Numerical Formula Systems (**MAN**)
I. The Genetic Predisposition: The Simultaneous Effort of those Strategic & Tactical Planning & Design Project Implementation Goals/Objective Issues Involving the Usabilities of Power/Authority, Morale/Cohesion, Norms/Standards, & Goals/Objectives within the Virtual Chromosomal Development of Biographic Lifeforms

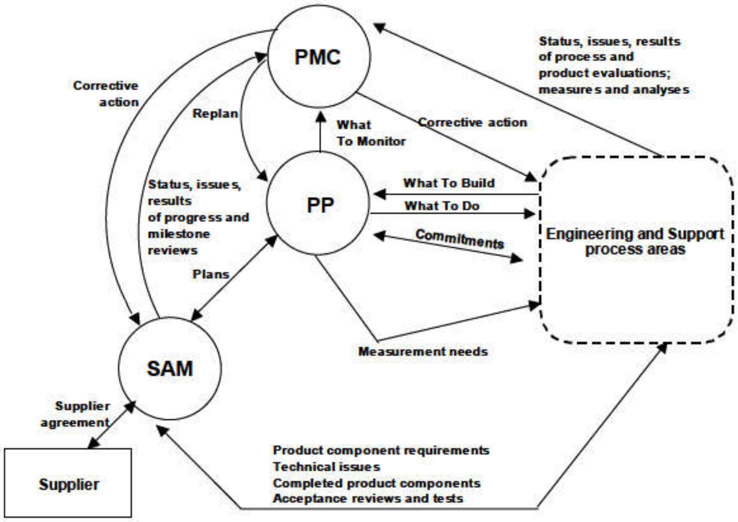

PMC
Status, issues, results of process and product evaluations; measures and analyses
Corrective action
Replan
What To Monitor
Corrective action
Status, issues, results of progress and milestone reviews
PP
What To Build
What To Do
Commitments
Engineering and Support process areas
Plans
Measurement needs
SAM
Supplier agreement
Supplier
Product component requirements
Technical issues
Completed product components
Acceptance reviews and tests

Figure 4: Basic Project Management Process Areas

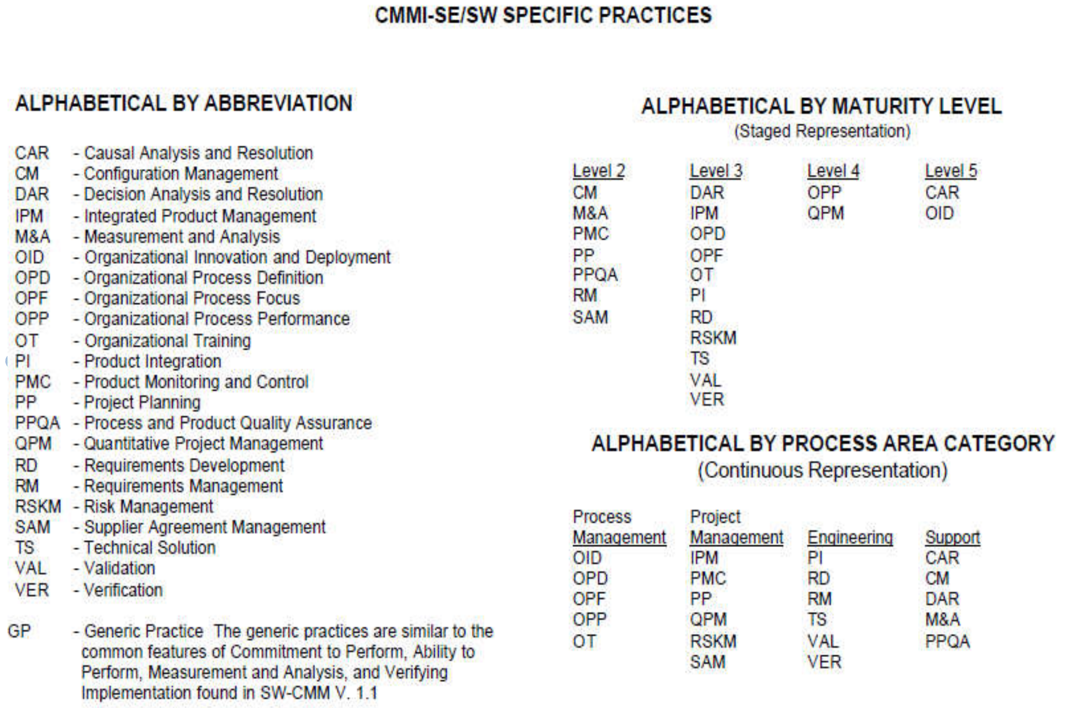
[FM102.HDA103.HDB102.T104]

T^3 $(C=\frac{UL^2}{LL})$

Homo Sapiens (Modern)

A. The Network Affiliation: The Board of Network Representatives (**BNR**) Phase - 5
B. The Principle Part of English Speech: Conjunction(s)
C. The Strategic & Tactical Component: The Upper & Lower Level Change Components Involving Chromosomal Development & Implementation
D. The Method Structure Components: The Development & Implementation of the Data Integrity and Quality Assurance Program – *Software Quality/System Evolution Initiative* – TNPFP Approaches to Learning & Teaching (General)
E. The Laboratory Component: The Exploratory Research Framework
F. The Virtual Laboratory Component: The IBOS [DOSA/DALP/IAOA] Configuration
G. The TCP/IP Division: Novell Netware
H. The Operational Determination: Chromosomal Development (CE)
I. The Genetic Predisposition: The Planning & Design Approaches Subordinate to Genetic-Based Methodical Issues Involving GSDBCPDA Phase - 5

DRAFT



CMMI-SE/SW SPECIFIC PRACTICES

ALPHABETICAL BY ABBREVIATION

CAR	- Causal Analysis and Resolution
CM	- Configuration Management
DAR	- Decision Analysis and Resolution
IPM	- Integrated Product Management
M&A	- Measurement and Analysis
OID	- Organizational Innovation and Deployment
OPD	- Organizational Process Definition
OPF	- Organizational Process Focus
OPP	- Organizational Process Performance
OT	- Organizational Training
PI	- Product Integration
PMC	- Product Monitoring and Control
PP	- Project Planning
PPQA	- Process and Product Quality Assurance
QPM	- Quantitative Project Management
RD	- Requirements Development
RM	- Requirements Management
RSKM	- Risk Management
SAM	- Supplier Agreement Management
TS	- Technical Solution
VAL	- Validation
VER	- Verification

GP - Generic Practice The generic practices are similar to the common features of Commitment to Perform, Ability to Perform, Measurement and Analysis, and Verifying Implementation found in SW-CMM V. 1.1

ALPHABETICAL BY MATURITY LEVEL

(Staged Representation)

Level 2	Level 3	Level 4	Level 5
CM	DAR	OPP	CAR
M&A	IPM	QPM	OID
PMC	OPD		
PP	OPF		
PPQA	OT		
RM	PI		
SAM	RD		
	RSKM		
	TS		
	VAL		
	VER		

ALPHABETICAL BY PROCESS AREA CATEGORY

(Continuous Representation)

Process Management	Project Management	Engineering	Support
OID	IPM	PI	CAR
OPD	PMC	RD	CM
OPF	PP	RM	DAR
OPP	QPM	TS	M&A
OT	RSKM	VAL	PPQA
	SAM	VER	

$T^3 \; (L=\frac{I^2}{V})$

Homo Habilis

DRAFT

- **A.** The Network Affiliation: The General Contractor of Network Operations (**GCNO**) Phase - 1
- **B.** The Principle Part of English Speech: Interjection(s)
- **C.** The Strategic & Tactical Component: **T**he **M**eaning of Life, **T**he **T**ree of Life & **T**he **Q**uality of Life Issues
- **D.** The Method Structure Components: The Problem Analysis & Definition – *Software Requirements/Target System* – TNPFP Approaches to Assessment (General)
- **E.** The Laboratory Component: The Interpretation Context, Extrapolation of Results & Further Work Involving Project Interpretation
- **F.** The Virtual Laboratory Component: T – (**M**) Problem Analysis, T – (**T**) Decision Analysis & T – (**Q**) Potential Problem Analysis
- **G.** The TCP/IP Division: IBM Protocols
- **H.** The Operational Determination: The Problem Format Involving the Planning & Design Approaches
- **I.** The Genetic Predisposition: The Planning & Design Approaches Subordinate to Genetic-Based Methodical Issues Involving GSDBCPDA Phases - 1

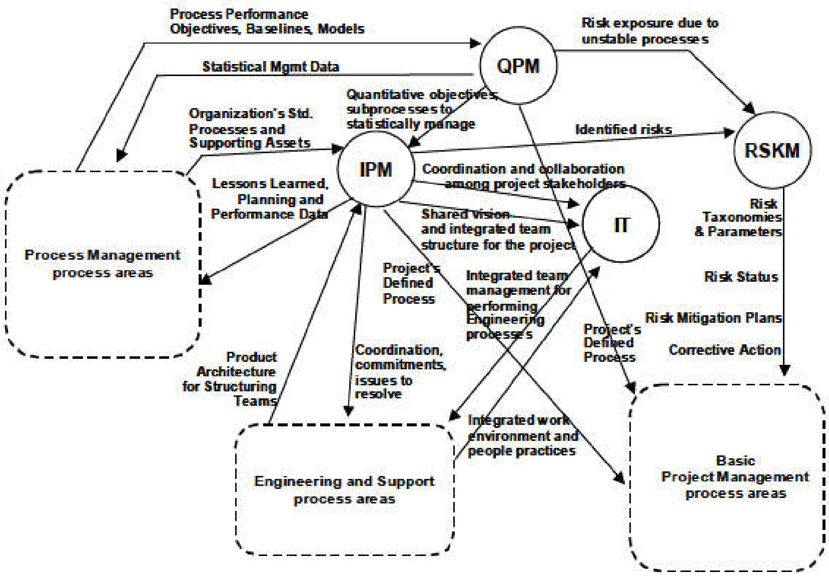

Process Performance
Objectives, Baselines, Models
Statistical Mgmt Data
QPM
Risk exposure due to
unstable processes
Quantitative objectives,
subprocesses to
statistically manage
Organization's Std.
Processes and
Supporting Assets
Identified risks
RSKM
IPM
Coordination and collaboration
among project stakeholders
Lessons Learned,
Planning and
Performance Data
Shared vision
and integrated team
structure for the project
IT
Risk
Taxonomies
& Parameters
Process Management
process areas
Project's
Defined
Process
Integrated team
management for
performing
Engineering
processes
Risk Status
Risk Mitigation Plans
Project's
Defined
Process
Corrective Action
Product
Architecture
for Structuring
Teams
Coordination,
commitments,
issues to
resolve
Integrated work
environment and
people practices
Engineering and Support
process areas
Basic
Project Management
process areas

Figure 5: Advanced Project Management Process Areas

[FM102.HDA103.HDB103.T105]

The Build Plan or Objectives

(The Organizational Method Structure for Building Mission or Goal Statements)

A. Environmental Scanning (Matrix Element – Environment)

1. Social and political trends
  a. Demographics
  b. Moral Values
  c. Education
  d. Regulatory Pressures

2. Capital markets analysis
  a. Capital Asset Pricing Model
  b. Capital Structure
  c. Ask How Estimate
  d. Value Analysis

3. Macroeconomic trends
  a. Systematic Risk
  b. Value Curve for Signal
  c. Value Chain and/or Stream
  d. Economics of Scale

4. Industry structure studies
  a. Industrial Organization
  b. Industry Capacity
  c. Industry Importance Graph
  d. Industry Segment
  e. Industry Structure
  f. Industry Life Cycle

5. Competitor analyses
  a. Competitive Force
  b. Competitor Configuration
  c. Competitive Strategy
  d. Competitive Position

B. Developing and Modifying a Corporate Strategy (Matrix Element – Purpose)

1. Corporate goals
  a. Corporate Culture
  b. Corporate Stakes
  c. Corporate Strategy
  d. Corporate Brands

2. Concept of fit
  a. Concept of Assembly
  b. Concept of Management

  - **c.** Organizational Structure
  - **d.** Integrating System

3. Concept of assembly
  - **a.** Organizational Hierarchy
  - **b.** Measurement Systems
  - **c.** Incentive Systems
  - **d.** Planning Hierarchy
  - **e.** Planning Process
  - **f.** Resource Allocation Process

4. Concept of management
  - **a.** Differentiation Strategy
  - **b.** Functional Areas of Fit
  - **c.** Entry and Mobility Barriers
  - **d.** Formula Fit

C. Establishing Different Goals for Business Units (Alternatives) (Matrix Element – Outputs)

1. Identity business units (Segmentations)
  - **a.** Buyer Groups
  - **b.** Business Cycle Profiling
  - **c.** Business Plan and Policy
  - **d.** Business Interrelationships

2. Assess contributions to information and for economic values
  - **a.** Business Systems Analysis
  - **b.** Cost of Capital
  - **c.** Financial Leverage
  - **d.** Capital Structure

3. Alternative or subroutine goals for business units
  - **a.** Strategic Leverage
  - **b.** Shared Experience
  - **c.** Strategic Business Unit(s)
  - **d.** Strategic Beachhead

D. Developing Competitive Strategies for Business Units (Matrix Element – Physical Catalysts)

1. Identify current strategy (Reverse implied assumptions)
  - **a.** Required Return
  - **b.** Operating Policies
  - **c.** Competence Profile
  - **d.** Strategic Audit

2. Generate alternative strategies (Analyze environment industry structure's intra-industry structure)
  - **a.** Buyer Power
  - **b.** Supplier Power
  - **c.** Relative Costs, Prices and Utility

    d. Fix-To-Value Added Ratios

3. Select optimal strategy and determine operating policies to carry out
    a. Build Plan
    b. Operating Leverage
    c. Operating Unit
    d. Operations Research

E. Reviewing Competitive Strategies (Matrix Element – Inputs)

1. Consistency test
    a. Critical Path Method
    b. Cost Analysis
    c. Price to Performance Ratio
    d. Input-Output Analysis

2. Contribution to economic and/or informational values
    a. Decision-Making Process
    b. Decision-Making Unit(s)
    c. Decision Trees
    d. Value System and/or Chains

3. Ongoing monitoring
    a. Structural Analysis
    b. Structural Factor
    c. Critical Path Methods
    d. Value Chain for System

4. Reports
    a. Linkage
    b. Market Signal
    c. Measurement System
    d. Mission Statement(s)

F. Resource Allocation (Matrix Element – Sequence)

1. Financial resources
    a. Capital Intensity
    b. Capital Structure
    c. Cash Flow
    d. Cash Trap

2. Human resources
    a. Employees
    b. Sub-contractors
    c. Consultants
    d. Labor Organizations

3. Information resources
    a. Information Brokers

   - **b.** Governmental Sources
   - **c.** Written Materials (Books and/or Database Hard-copies)
   - **d.** Media Systems (News or News Associations)

G. Determining Incentives (Matrix Element – Human Agents)

1. Set performance measures
   - **a.** Measurement System
   - **b.** Management Through Objectives
   - **c.** Game Grid
   - **d.** Gap-Based Planning

2. Evaluate performance measures
   - **a.** Cost Dynamics
   - **b.** Growth Value Leverage Matrix
   - **c.** PIMS Program
   - **d.** Gaming

H. Monitoring Implementation (Matrix Element – Information Aids)

1. Software procedures
   - **a.** Regression Analysis
   - **b.** Seven-8 Framework
   - **c.** Strategic Condition Matrix
   - **d.** Strategy Audit
   - **e.** Uniqueness Driver
   - **f.** Systematic Risk
   - **g.** Unsystematic Risk
   - **h.** Value Added Advantage for Analysis
   - **i.** Planning and Design
   - **j.** @ Functioning
   - **k.** Macro Structuring
   - **l.** Problem Formatting

2. Grids, matrixes and flow chart systems
   - **a.** Brainiac
   - **b.** Pie Structures (5 Area Phases)
   - **c.** Bar Charts (Report Structure)
   - **d.** Decision Flow Chart Grid
   - **e.** Consultation Grid
   - **f.** Strategic Condition Matrix
   - **g.** Pie Structures (Report Structure)
   - **h.** Brainiac Wave Length Flow Charts
   - **i.** 5 Area Phase Bar Charts
   - **j.** Macro Flow Chart System
   - **k.** Legends
   - **l.** Total System's Integrated Color Chart Systems
   - **m.** CAD Systems

n. CAM Systems
o. Anatomy Charts and Diagrams

Summary

The charts, diagrams and procedural formats shown in this part of Appendix F, are designed and formatted for use by the Technical Support Units of Nascent Applied Methods & Endeavors in order to provide the System Matrix of this system with a structure, by-which all processes and procedures can be verified as to it's accuracy and form of implementation

(ANMESCL^2 EL NEGRO)

ALPHA NUMEROUS MAXIMA
EGREGIA SUMMA CUM LAUDE

$$A^{2}\ \left(E=\frac{CM^{2}}{MC}\right)$$

Homo Sapiens (Archaic)

A. The Network Affiliation: The Chief Organizational Officer of Education & Systems Development (**COOESD**) Phase - 3 **[ATG]**
B. The Principle Part of English Speech: Adjective(s) **[GCC]**
C. The Strategic & Tactical Component: The IAOA Interface Protocols **[GGT]**
D. The Method Structure Components: The Data Analysis – *Software Engineering Tools and Methods/System Evolution Initiative* – TNPFP Teaching, Learning, and Assessment Methods (General) **[CAG]**
E. The Laboratory Component: The Project Operations Involving Exploratory Test **[TTA]**
F. The Virtual Laboratory Component: Professional Societies **[ATC]**
G. The TCP/IP Division: Banyan Vines **[GAA]**
H. The Operational Determination: Physiological **[TGC]**
I. The Genetic Predisposition: The Planning & Design Approaches Subordinate to Genetic-Based Methodical Issues Involving GSDBCPDA Phase - 3

$$G^2 \left(E=\frac{NT^2}{OT}\right)$$

Australopithecus Africanus

A. The Network Affiliation: The Chief Accounting Officer of Network Implementation (**CAONI**) Specifying and Implementing Solutions **[GTA]**
B. The Principle Part of English Speech: Preposition(s) **[CGG]**
C. The Strategic & Tactical Component: EGIOMMP [**M**], IGIMMP [**T**] & OGIBMMP [**Q**] **[AGT]**
D. The Method Structure Components: The Development & Implementation of Standards – *Software Configuration Management/Organization* – TNPFP Educational Technology/E-Learning **[GGC]**
E. The Laboratory Component: The Project Interpretation & Design of a Prototype Involving Project Operations **[CGT]**
F. The Virtual Laboratory Component: Education & Training **[GTG]**
G. The TCP/IP Division: AppleTalk **[ATT]**
H. The Operational Determination: Psychological **[GTC]**
I. The Genetic Predisposition: The Planning & Design Post Project Evaluation Involving **Morale/Cohesion**, and the Planning & Design Approaches Subordinate to Genetic-Based Environmental Outputs Involving the **Q**uality of Life

$$G^2 \left(M=\frac{L^2}{A}\right)$$

Homo Erectus

A. The Network Affiliation: The Chief Administrator of Network Operations (**CANO**) Phase - 2 **[CCT]**
B. The Principle Part of English Speech: Noun(s) **[AGG]**
C. The Strategic & Tactical Component: GHOST Technologies **[ACG]**
D. The Method Structure Components: The Preliminary Design – *Software Design/Technologies* – TNPFP Professionalism of Teaching (General) **[GAC]**
E. The Laboratory Component: The Analysis of Results Involving Project Operations **[TCA]**
F. The Virtual Laboratory Component: Licensing Boards **[GCA]**
G. The TCP/IP Division: XNS Xerox Network System **[GTT]**

H. The Operational Determination: Organizational Strategies & Subordinate Tactical Operations Development **[AGC]**

I. The Genetic Predisposition: The Planning & Design Approaches Subordinate to Genetic-Based Methodical Issues Involving GSDBCPDA Phase - 2, and the Planning & Design Approaches Subordinate to Genetic-Based Environmental Inputs Involving the **M**eaning of Life

$$G^2\ (S=\frac{L^2}{A})$$

Homo Sapiens (Neanderthal)

A. The Network Affiliation: The Chief Logistics Officer of Network Support (**CLONS**) Phase - 4 **[CAC]**

B. The Principle Part of English Speech: Pronoun(s) **[AAA]**

C. The Strategic & Tactical Component: The Genetic Arrays **[CGC]**

D. The Method Structure Components: The Data Conversion & Implementation – *Software Engineering Process/Software* – TNPFP Outcomes of Education (General) **[AGA]**

E. The Laboratory Component: The Production of Standards Involving Project Operations **[TCG]**

F. The Virtual Laboratory Component: Professional Development **[CCG]**

G. The TCP/IP Division: DECnet Phase IV **[GGG]**

H. The Operational Determination: Genomic Sequence Database Consultative Planning & Design Approaches (**GSDBCPDA**) **[GGA]**

I. The Genetic Predisposition: The Planning & Design Approaches Subordinate to Genetic-Based Methodical Issues Involving GSDBCPDA Phases - 4, and the Planning & Design Approaches Subordinate to Genetic-Based Computer Matrixes Involving the **T**ree of Life

$$L^2\ (E=\frac{I^2}{V})$$

Australopithecus Afarensis

A. The Network Affiliation: The Chief Information Officer of Systems & Network Development (**CIOSND**) Pursuing the Planning & Design Strategy **[TAT]**

B. The Principle Part of English Speech: Verb(s) **[CTT]**

C. The Strategic & Tactical Component: The Mathematical Formulae **[AAG]**
D. The Method Structure Components: The Detailed Design & Testing – *Software Testing/Systems Engineering* – TNPFP Key and Subject Based Skills (General) **[TGA]**
E. The Laboratory Component: The Project Planning & Field Test of the Prototype Involving Project Operations **[TGT]**
F. The Virtual Laboratory Component: Enterprise HRP Management **[CTC]**
G. The TCP/IP Division: ISO **[CCC]**
H. The Operational Determination: Philosophical **[TAC]**
I. The Genetic Predisposition: The Planning & Design Project Development Involving **Norms/Standards**

$$M^2 \left(E = \frac{T^2}{Q}\right)$$

Australopithecus Robustus

A. The Network Affiliation: The Chief Intelligence Officer of Network Security & Special Operations (**CIONSSO**) Information & Knowledge **[GAT]**
B. The Principle Part of English Speech: Adverb(s) **[TAA]**
C. The Strategic & Tactical Component: The Words, Concepts & Fields of Human Activities **[CCA]**
D. The Method Structure Components: Data Gathering – *Software Engineering Management/Project* – TNPFP Planning & Preparation (General) **[ATA]**
E. The Laboratory Component: The Project Definition & Literature Review Involving Project Operations **[AAC]**
F. The Virtual Laboratory Component: The Other Fields Upon Which Software Engineering Based Knowledge Relies (SWEBOK) **[ACA]**
G. The TCP/IP Division: TCP/IP – UPD/IP **[TGG]**
H. The Operational Determination: Sociological **[TCT]**
I. The Genetic Predisposition: The Planning & Design Project Initiation Involving **Power/Authority**

$$PA^{2}\ \left(MC=\frac{NS^{2}}{GO}\right)$$

Australopithecus Boisei

A. The Network Affiliation: The Entire Strategic & Tactical Operations or Organizational Development of the NAME Network as a Whole Arranging for Continuing Change and Improvement **[TTT]**
B. The Principle Part of English Speech: Intransitive and/or Transitive Verb(s) **[TTT]**
C. The Strategic & Tactical Component: The Protocols Involved with Engineering or Manufacturing Information, Developing Methodic Pre-determined Educational Hierarchies, and Implementing Operational Phases within a Consultative Planning & Design Approach **[TTT]**
D. The Method Structure Components: The Post-Implementation Evaluation – *Software Maintenance/Legacy System* – TNPFP Key Skills (General) **[TTT]**
E. The Laboratory Component: The Virtual Laboratory Components **[TTT]**
F. The Virtual Laboratory Component: The Laboratory Components **[TTT]**
G. The TCP/IP Division: The Strategic & Tactical Efforts Involving the Seven Dimensional Layers of Autonomous Agent Operational Protocols **[TTT]**
H. The Operational Determination: The Application of the Group Ordering & Development (**GOD**) and/or Managerial Applied Numerical Formula System (**MAN**) **[TTT]**
I. The Genetic Predisposition: The Simultaneous Effort of those Strategic & Tactical Planning & Design Project Implementation **Goals/Objective** Issues Involving the Usabilities of Power/Authority, Morale/Cohesion, Norms/Standards, & Goals/Objectives within the Virtual Chromosomal Development of Biographic Lifeforms **[TTT]**

$$T^{3}\ \left(C=\frac{UL^{2}}{LL}\right)$$

Homo Sapiens (Modern)

A. The Network Affiliation: The Board of Network Representatives (**BNR**) Phase - 5 **[GCT]**
B. The Principle Part of English Speech: Conjunction(s) **[CAA]**
C. The Strategic & Tactical Component: The Upper & Lower Level Change Components Involving Chromosomal Development & Implementation **[CAT]**

D. The Method Structure Components: The Development & Implementation of the Data Integrity and Quality Assurance Program – *Software Quality/System Evolution Initiative* – TNPFP Approaches to Learning & Teaching (General) **[CTA]**
E. The Laboratory Component: The Exploratory Research Framework **[CTG]**
F. The Virtual Laboratory Component: The IBOS [DOSA/DALP/IAOA] Configuration **[CGA]**
G. The TCP/IP Division: Novell Netware **[ACC]**
H. The Operational Determination: Chromosomal Development (CE) **[GCG]**
I. The Genetic Predisposition: The Planning & Design Approaches Subordinate to Genetic-Based Methodical Issues Involving GSDBCPDA Phase - 5

$$T^3\ \left(L = \frac{I^2}{V}\right)$$

Homo Habilis

A. The Network Affiliation: The General Contractor of Network Operations (**GCNO**) Phase - 1 **[TAG]**
B. The Principle Part of English Speech: Interjection(s) **[TTT]**
C. The Strategic & Tactical Component: **T**he **M**eaning of Life, **T**he **T**ree of Life & **T**he **Q**uality of Life Issues **[AAT]**
D. The Method Structure Components: The Problem Analysis & Definition – *Software Requirements/Target System* – TNPFP Approaches to Assessment (General) **[TTG]**
E. The Laboratory Component: The Interpretation Context, Extrapolation of Results & Further Work Involving Project Interpretation **[GAG]**
F. The Virtual Laboratory Component: T – (**M**) Problem Analysis, T – (**T**) Decision Analysis & T – (**Q**) Potential Problem Analysis **[TTC]**
G. The TCP/IP Division: IBM Protocols **[TCC]**
H. The Operational Determination: The Problem Format Involving the Planning & Design Approaches **[ACT]**
I. The Genetic Predisposition: The Planning & Design Approaches Subordinate to Genetic-Based Methodical Issues Involving GSDBCPDA Phase - 1

The Genetic Foundation for the Relationship Between Words, Concepts and Search Engine Protocols within a P&D Effort

(The Genetic Hierarchical Classification of Words, Concepts, Ideas & Search Engine Protocols)

1) Actions
   a. Class of 1-6 **[TTT]**
   b. Cognitive 7-43 **[TTC$_A$]**
   c. Communicative 44-79 **[TTA]**
   d. General 80-143 **[TTG]**
   e. Motion 144-154 **[TCT]**
   f. Physical 155-226 **[TCC]**

2) Causes
   a. Abstract 227-246 **[TCA]**
   b. Physical 247-255 **[TCG]**

3) Fields of Human Activity [A1]
   a. Agriculture 256-257 **[TAT]**
   b. The Arts 258-264 **[TAC]**
   c. Communications 265-283 **[TAA]**
   d. Education 284-290 **[TAG]**
   e. Entertainment 291-293 **[TGT]**
   f. Family 294-296 **[TGC]**
   g. Government and Politics 297-300 **[TGA]**
   h. Health 301-315 **[TGG]**
   i. Legal 316-318 **[CTT]**
   j. Military 319-321 **[CTC]**
   k. Monetary and Financial Affairs 322-345 **[CTA]**
   l. Professions 346-361 **[CTG]**
   m. Recreation 362-365 **[CCT]**
   n. Religious 366-369 **[CCC]**
   o. Sex and Reproduction 370-374 **[CCA]**
   p. Social Interactions 375-387 **[CCG]**

4) Life Forms
   a. Being 388-392 **[CAT]**
   b. Beings, Animal 393-399 **[CAC]**
   c. General Characteristics 400-410 **[CAA]**
   d. Humans 411-423 **[CAG]**
   e. Plants 424-430 **[CGT]**

5) Objects
   a. Articles, Physical 431-435 **[CGC]**
   b. Atmosphere 436 **[CGA]**
   c. Buildings, Furnishings, & Possessions 437-448 **[CGG]**
   d. Clothing 449-452 **[ATT]**
   e. Food and Drink 453-461 **[ATC]**
   f. Machines 462-463 **[ATA]**
   g. Matter, Conditions of 464-470 **[ATG]**

h. Matter, Divisions of 471-478 **[ACT]**
i. Matter, Qualities of 479-490 **[ACC]**
j. Tools 491-499 **[ACA]**
k. Transportation 500-505 **[ACG]**

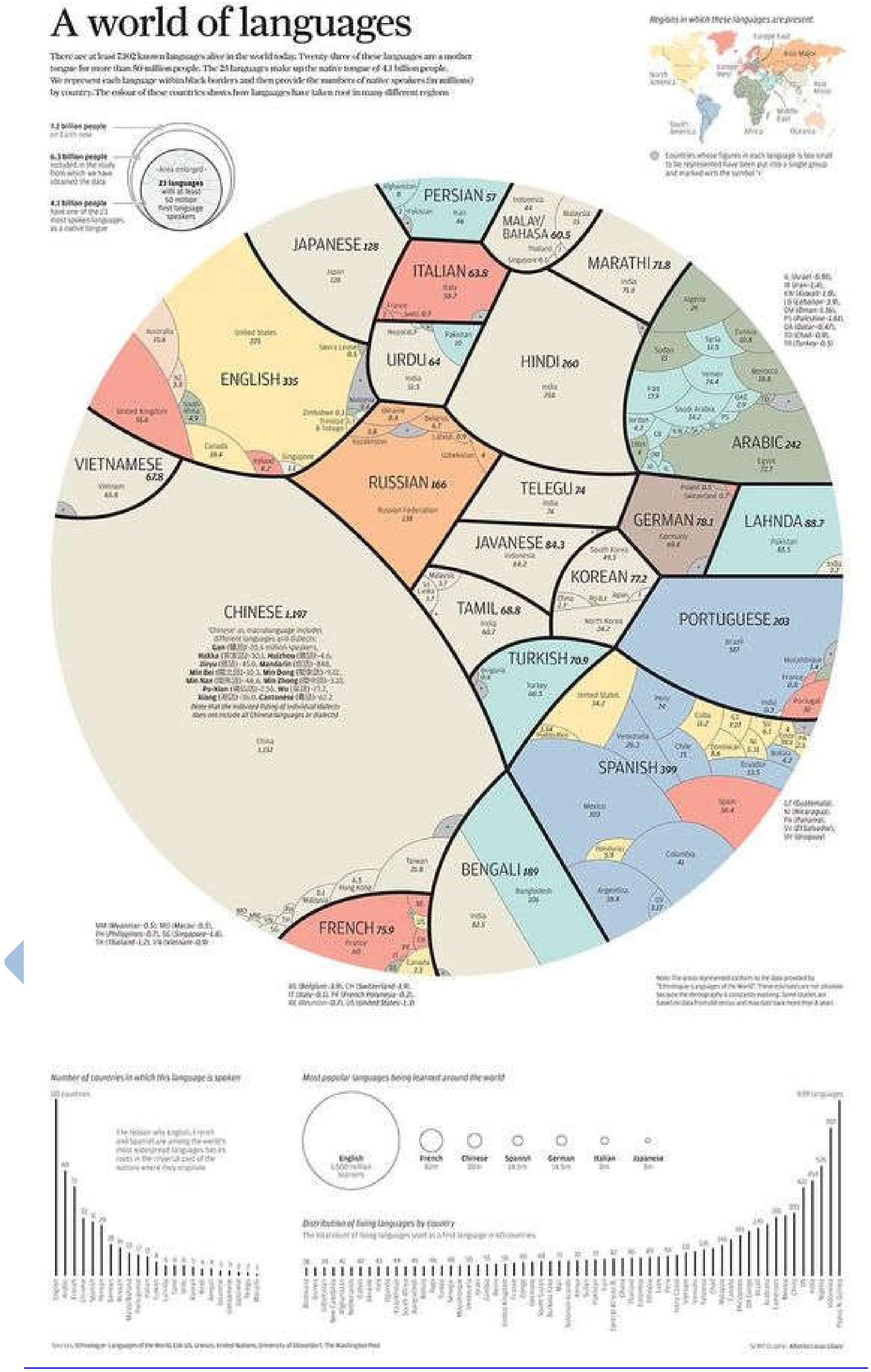
6) The Planet(s)
a. Geography 506-513 **[AAT]**
b. Habitats 514-517 **[AAC]**
c. Natural Resources 518-522 **[AAA]**
d. Weather 523-525 **[AAG]**

7) Qualities
a. Abstract 526-559 **[AGT]**
b. Comparative 560-574 **[AGC]**
c. Physical 575-588 **[AGA]**

8) Senses
a. Aspects of Perception 589 **[AGG]**
b. Auditory 590-596 **[GTT]**
c. Olfactory 597-601 **[GTC]**
d. Tactile 602-611 **[GTA]**
e. Tasting 612-615 **[GTG]**
f. Visual 616-628 **[GCT]**

9) States
a. Abstract 629-657 **[GCC]**
b. Cognitive 658-661 **[TTC$_B$]**
c. Comparative 662-670 **[GCA]**
d. Of Being 671-694 **[GCG]**
e. Of Change 695-702 **[GAT]**
f. Of Need or Achievement 703-710 **[GAC]**
g. Physical 711-731 **[GAA]**
h. Spatial 732-758 **[GAG]**

10) Weights and Measures
a. Mathematics 759-767 **[GGT]**
b. Quantifiers 768-793 **[GGC]**
c. Time 794-820 **[GGA]**
d. Wholeness or Division 821-834 **[GGG]**


A world of languages
PERSIAN 57
MALAY/ BAHASA 60.5
JAPANESE 128
ITALIAN 63.5
MARATHI 71.8
URDU 64
HINDI 260
ENGLISH 335
ARABIC 242
VIETNAMESE 67.8
RUSSIAN 166
TELEGU 74
GERMAN 78.1
LAHNDA 88.7
JAVANESE 84.3
KOREAN 77.2
CHINESE 1,197
TAMIL 68.8
PORTUGUESE 203
TURKISH 70.9
SPANISH 399
BENGALI 189
FRENCH 75.9

Orizzonti Nuovi linguaggi

Sopra le righe
di Giuseppe Remuzzi

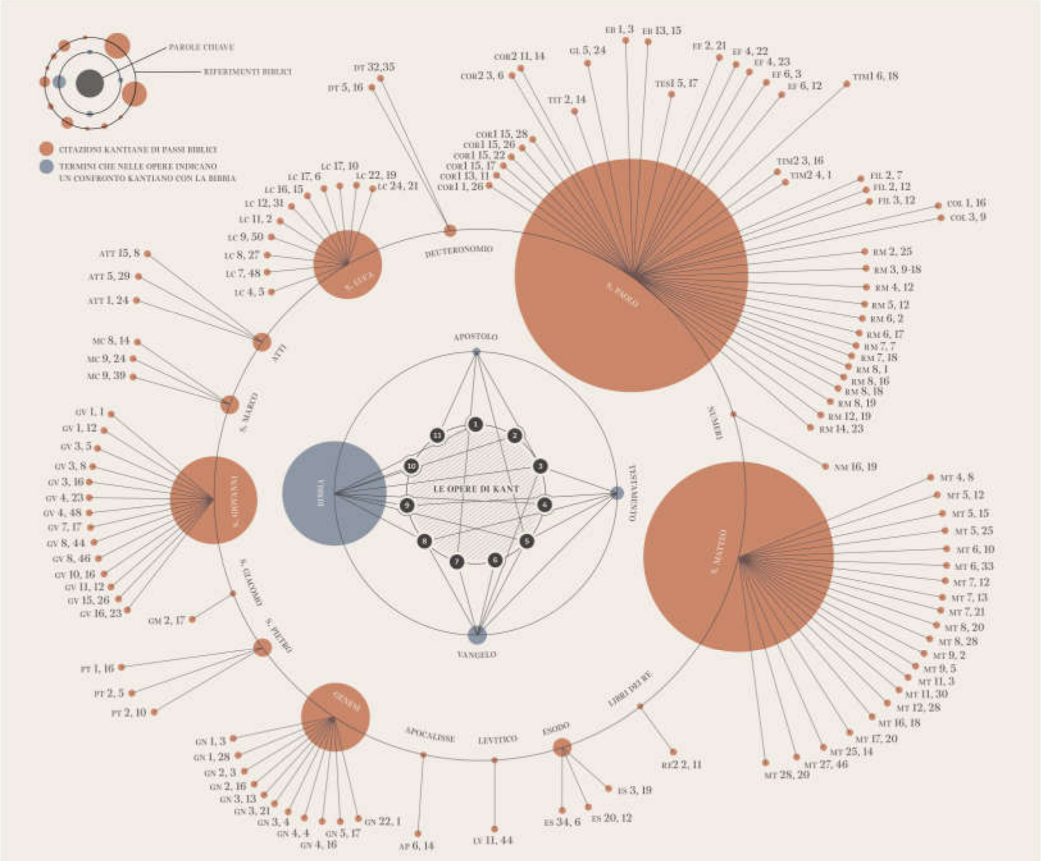
Jobs e l'altra medicina

Jobs il tumore l'ha scoperto con una Tac fatta per altre ragioni. I medici volevano operarlo subito, lui s'è affidato a dieta vegana, erbe, agopuntura. Forse aveva ragione — 4 volte su 10 questi tumori danno piccole metastasi fin dall'inizio — forse no. Tanti, operati subito, guariscono. Nemmeno l'uomo dell'innovazione, del rigore, della cura dei particolari ha resistito al fascino dell'«altra» medicina. Che certe volte fa male.

Fede e ragione

Il filosofo tedesco è considerato il punto più alto dell'Illuminismo. Ma la sua produzione è ricca di riferimenti ai testi sacri. A cominciare da San Paolo

Il debito di Kant con la Bibbia



I TESTI DI KANT PRESI IN ESAME

RELIGIOSI
- ❶ L'UNICO ARGOMENTO POSSIBILE PER UNA DIMOSTRAZIONE DELL'ESISTENZA DI DIO
- ❷ INIZIO CONGETTURALE DELLA STORIA DEGLI UOMINI
- ❸ LA RELIGIONE NEI LIMITI DELLA SEMPLICE RAGIONE
- ❹ LA FINE DI TUTTE LE COSE
- ❺ LO SCONTRO DELLE FACOLTÀ

MORALI
- ❻ LA FONDAZIONE DELLA METAFISICA DEI COSTUMI
- ❼ CRITICA DELLA RAGION PRATICA
- ❽ LA METAFISICA DEI COSTUMI
- ❾ L'ANTROPOLOGIA DAL PUNTO DI VISTA PRAGMATICO

POLITICI
- ❿ IDEA PER UNA STORIA UNIVERSALE DAL PUNTO DI VISTA COSMOPOLITICO
- ⓫ PER LA PACE PERPETUA

di **LUCA VALZESI**

Fede e ragione hanno conosciuto nell'Illuminismo le più vive fasi del loro scontro immortale. O si pensa o si crede, e chi crede senza pensare rischia di rimanere intrappolato in un oscuro stato di minorità. Così professavano molti audaci esponenti del pensiero illuminato, figli di una modernità che aveva conosciuto il piano inclinato di Galileo e la mela newtoniana. Il nuovo modo di pensare, il nuovo metodo, doveva così ergersi a garante della scienza e abbattere col metodo matematico i castelli metafisici che tanto avevano fruttato al tentacolare soglio pontificio.

Immanuel Kant (1724-1804) è considerato il punto più alto dell'Illuminismo, chiave di volta nell'arco evolutivo del pensiero occidentale. Eppure la visualizzazione qui riportata mostra dei dati inaspettati. Il grafico vuole essere la rappresentazione di un lavoro di ricerca storiografica sulle fonti, che ha fatto emergere quanto sia profondo e significativo il debito kantiano con il Testo Sacro. La Bibbia, la fonte di sapere dogmatica per eccellenza, mostra qui il suo imponente contributo nel libero pensiero di Kant (di cui è appena uscita una biografia per Il Mulino a cura di Manfred Kuehn).

Il grafico è stato costruito nella figura di tre cerchi concentrici, il primo dei quali indica le opere prese in esame, collegandole al secondo dove vengono indicati i termini che in queste tradiscono un confronto con i testi sacri; il cerchio più esterno indica poi le specifiche sezioni bibliche citate da Kant indicandone i versetti. Ogni cerchio è costruito con un diametro direttamente proporzionale al numero di ricorrenze, rendendo infine evidente la maestosa presenza dell'epistolario paolino nel corpus kantiano. Numeri e ricorrenze, dati raccolti e catalogati ci mostrano così la vivacità dello scontro tra fede e ragione. Un conflitto, questo, che non vuole un vincitore, ma che cerca nella sua stessa potenza il principio del progresso e del sapere. Una realtà come questa ci dimostra che un pensiero, per quanto libero e forte, non rinnega la fede ma la interroga e la indaga, come una vicenda umana figlia della speranza e fonte di conoscenza.

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DensityDesign Lab

La visualizzazione dati in alto è a cura del DensityDesign Lab del Politecnico di Milano, dipartimento Indaco. Il laboratorio di ricerca — guidato da Paolo Ciuccarelli — opera nel campo della visualizzazione di dati e informazioni come strumento di supporto alle decisioni e alla ricerca, con particolare attenzione alla complessità dei fenomeni sociali. Il progetto di questa settimana è a cura di Valerio Pellegrini e Giorgio Caviglia

Orizzonti Nuovi linguaggi

Sopra le righe
di Giuseppe Remuzzi

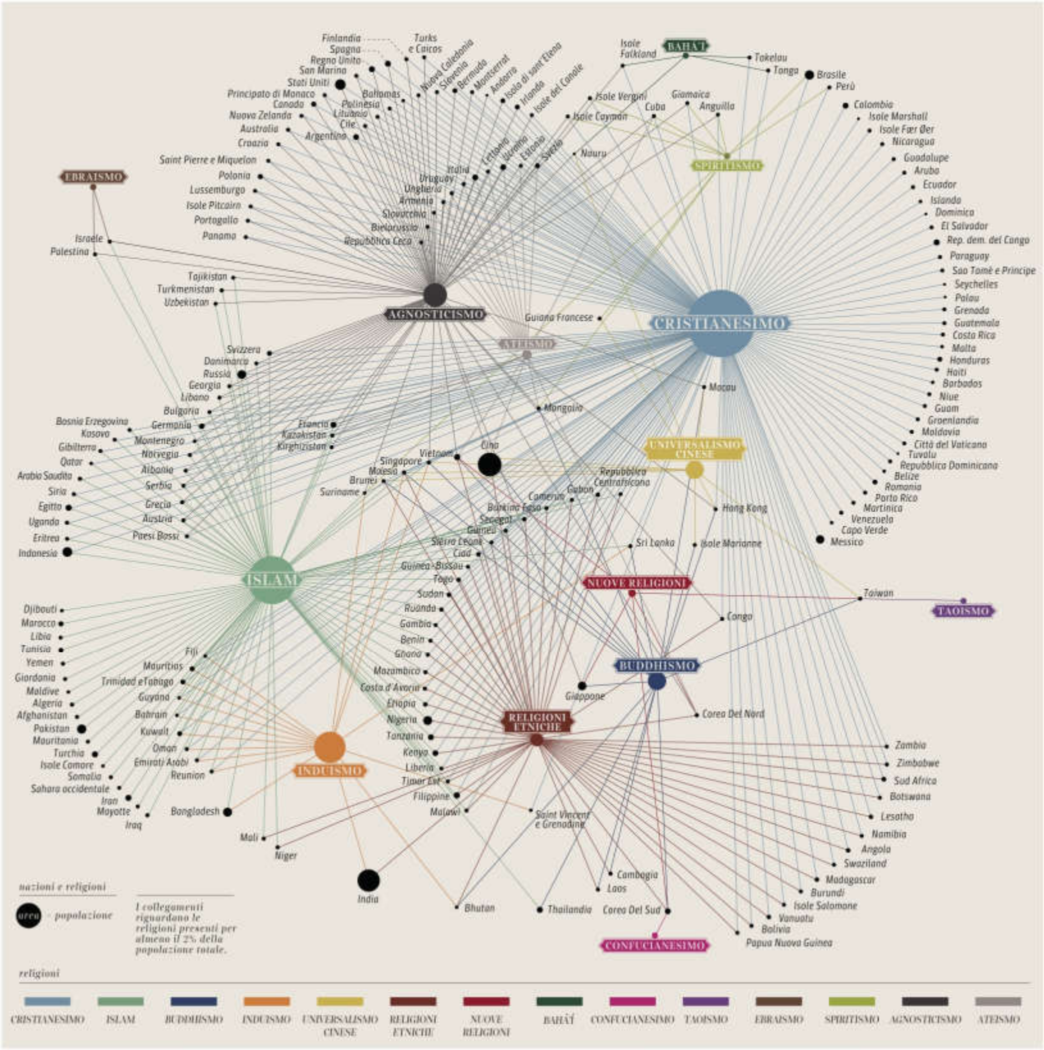
Il medico siriano

C'era un uomo, una volta, Bashar al-Assad, voleva essere medico. Ha studiato a Londra (Moorfields Hospital). Ai tempi dell'Università s'era impegnato a tutelare la salute dell'uomo, com'è per tutti i medici. Oggi Assad uccide i suoi concittadini, 5 mila finora. I medici, tutti, di tutto il mondo, ne dovrebbero essere indignati e ricordargli pubblicamente in ogni occasione che chi si è formato per curare e guarire, almeno non dovrebbe uccidere.

Visual data

Le globalizzazione e i nuovi media mescolano le religioni sul pianeta. Nuovi predicatori cristiani e islamici escono dai confini tradizionali. Ma la vera sfida è la convivenza

Il meticciato è spirituale


Finlandia
Spagna
Regno Unito
San Marino
Stati Uniti
Principato di Monaco
Canada
Nuova Zelanda
Australia
Croazia
Turks e Caicos
Nuova Caledonia
Slovenia
Bermuda
Montserrat
Andorra
Isola di sant Elena
Irlanda
Isole del Canale
Bahamas
Polinesia
Lituania
Cile
Argentina
Saint Pierre e Miquelon
Polonia
Lussemburgo
Isole Pitcairn
Portogallo
Panama
Italia
Lettonia
Ucraina
Estonia
Svezia
Uruguay
Ungheria
Armenia
Slovacchia
Bielorussia
Repubblica Ceca
EBRAISMO
Israele
Palestina
Tajikistan
Turkmenistan
Uzbekistan
AGNOSTICISMO
ATEISMO
Guiana Francese
Isole Falkland
BAHÁ'Í
Tokelau
Tonga
Brasile
Perù
Isole Vergini
Isole Cayman
Giamaica
Cuba
Anguilla
Nauru
SPIRITISMO
Colombia
Isole Marshall
Isole Fær Øer
Nicaragua
Guadalupe
Aruba
Ecuador
Islanda
Dominica
El Salvador
Rep. dem. del Congo
Paraguay
Sao Tomè e Principe
Seychelles
Palau
Grenada
Guatemala
Costa Rica
Malta
Honduras
Haiti
Barbados
Niue
Guam
Groenlandia
Moldavia
Città del Vaticano
Tuvalu
Repubblica Dominicana
Belize
Romania
Porto Rico
Martinica
Venezuela
Capo Verde
Messico
CRISTIANESIMO
Macau
Mongolia
UNIVERSALISMO CINESE
Repubblica Centrafricana
Gabon
Camerun
Hong Kong
Sri Lanka
Isole Marianne
Svizzera
Danimarca
Russia
Georgia
Libano
Bulgaria
Bosnia Erzegovina
Kosovo
Gibilterra
Qatar
Arabia Saudita
Siria
Egitto
Uganda
Eritrea
Indonesia
Germania
Montenegro
Norvegia
Albania
Serbia
Grecia
Austria
Paesi Bassi
Francia
Kazakistan
Kirghizistan
Vietnam
Cina
Singapore
Malesia
Brunei
Suriname
Burkina Faso
Senegal
Guinea
Sierra Leone
Ciad
Guinea-Bissau
Togo
Sudan
Ruanda
Gambia
Benin
Ghana
Mozambico
Costa d'Avorio
Etiopia
Nigeria
Tanzania
Kenya
Liberia
Timor Est
Filippine
Malawi
ISLAM
Djibouti
Marocco
Libia
Tunisia
Yemen
Giordania
Maldive
Algeria
Afghanistan
Pakistan
Mauritania
Turchia
Isole Comore
Somalia
Sahara occidentale
Iran
Mayotte
Iraq
Fiji
Mauritius
Trinidad eTobago
Guyana
Bahrain
Kuwait
Oman
Emirati Arabi
Reunion
Bangladesh
INDUISMO
Mali
Niger
India
Bhutan
NUOVE RELIGIONI
Taiwan
TAOISMO
Congo
BUDDHISMO
Giappone
Corea Del Nord
RELIGIONI ETNICHE
Saint Vincent e Grenadine
Cambogia
Laos
Thailandia
Corea Del Sud
CONFUCIANESIMO
Zambia
Zimbabwe
Sud Africa
Botswana
Lesotho
Namibia
Angola
Swaziland
Madagascar
Burundi
Isole Salomone
Vanuatu
Bolivia
Papua Nuova Guinea
nazioni e religioni
area = popolazione
I collegamenti riguardano le religioni presenti per almeno il 2% della popolazione totale.
religioni
CRISTIANESIMO
ISLAM
BUDDHISMO
INDUISMO
UNIVERSALISMO CINESE
RELIGIONI ETNICHE
NUOVE RELIGIONI
BAHÁ'Í
CONFUCIANESIMO
TAOISMO
EBRAISMO
SPIRITISMO
AGNOSTICISMO
ATEISMO

di **LUIGI ACCATTOLI**

L'era globale mescola le fedi sul pianeta. Migranti e rifugiati portano l'islam in Europa, buddismo e induismo vanno per il mondo con le schiere sovrabbondanti dei cinesi e degli indiani, operai e colf che vengono dalle Filippine e dall'India immettono il cristianesimo nell'Arabia Saudita e nei Paesi del Golfo da sempre a esso refrattari. Il cristianesimo indebolito dalla secolarizzazione ma favorito da Internet e dalla televisione — l'islam è ancora nemico delle immagini — penetra come lievito in ogni cultura.

Ne viene una mescolanza delle religioni sconosciuta a ogni altra epoca. L'inedito meticciato delle fedi spingerà tutto il mondo verso il modello statunitense di tolleranza e di viva concorrenza. È verosimile che anche il nascondimento che esse vivono oggi in Europa — proibizione di indossare simboli religiosi, loro sparizione dai «luoghi pubblici», le «radici cristiane» che non vengono nominate — stia per finire.

La visibilità della preghiera musulmana provoca quella cristiana a tornare sulla scena pubblica. Più specificamente provoca il cristianesimo europeo a rifarsi missionario, se avrà la forza di scuotersi dalla «stanchezza» e dal «tedio», per usare le parole con le quali l'ha pungolato ultimamente Papa Ratzinger che ha invece lodato la «gioia» espansiva dei cristiani dell'Africa che sono quelli che più vanno nelle chiese la domenica.

È verosimile che il meticciato favorirà la diffusione di un cristianesimo non più coloniale in Asia. Spinte dalla globalizzazione dell'economia, India e Cina allenteranno la loro avversione alle religioni «straniere». L'Asia che nei secoli ha trasformato l'islam — diluendone la matrice araba — domani modificherà il cristianesimo facendolo meno dottrinale e organizzato.

Nel competitivo meticciato planetario che si affaccia all'orizzonte la sfida per l'ebraismo — che non è una fede missionaria — potrebbe essere quella dell'irrigidimento identitario. Il cristianesimo è minacciato dalla deriva settaria: i movimenti neo-pentecostali stanno già numericamente prevalendo sulle Chiese storiche. Per l'islam la prova delle prove viene dall'immagine della donna che in campo aperto non sarà più velata.

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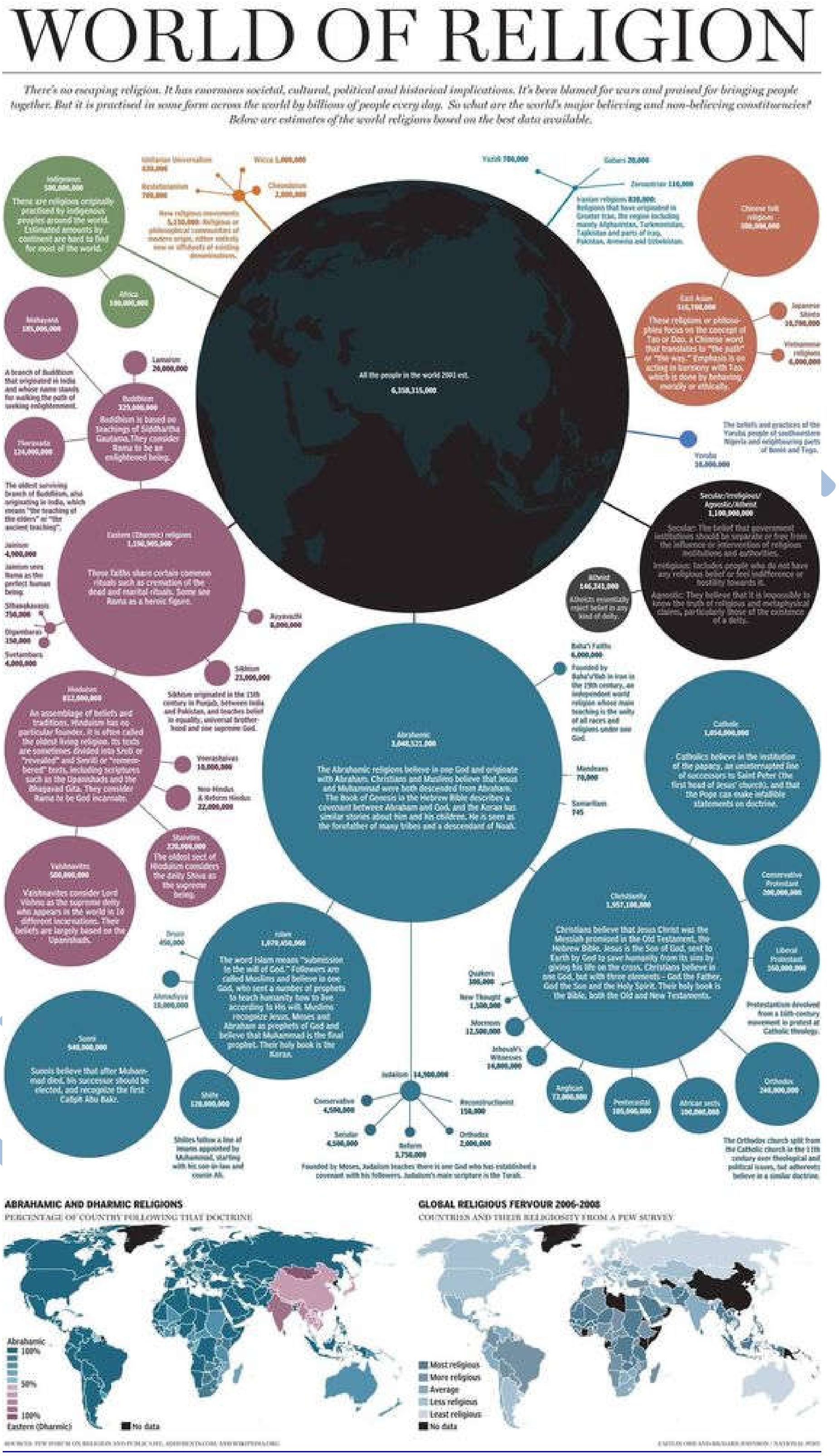
DensityDesign Lab

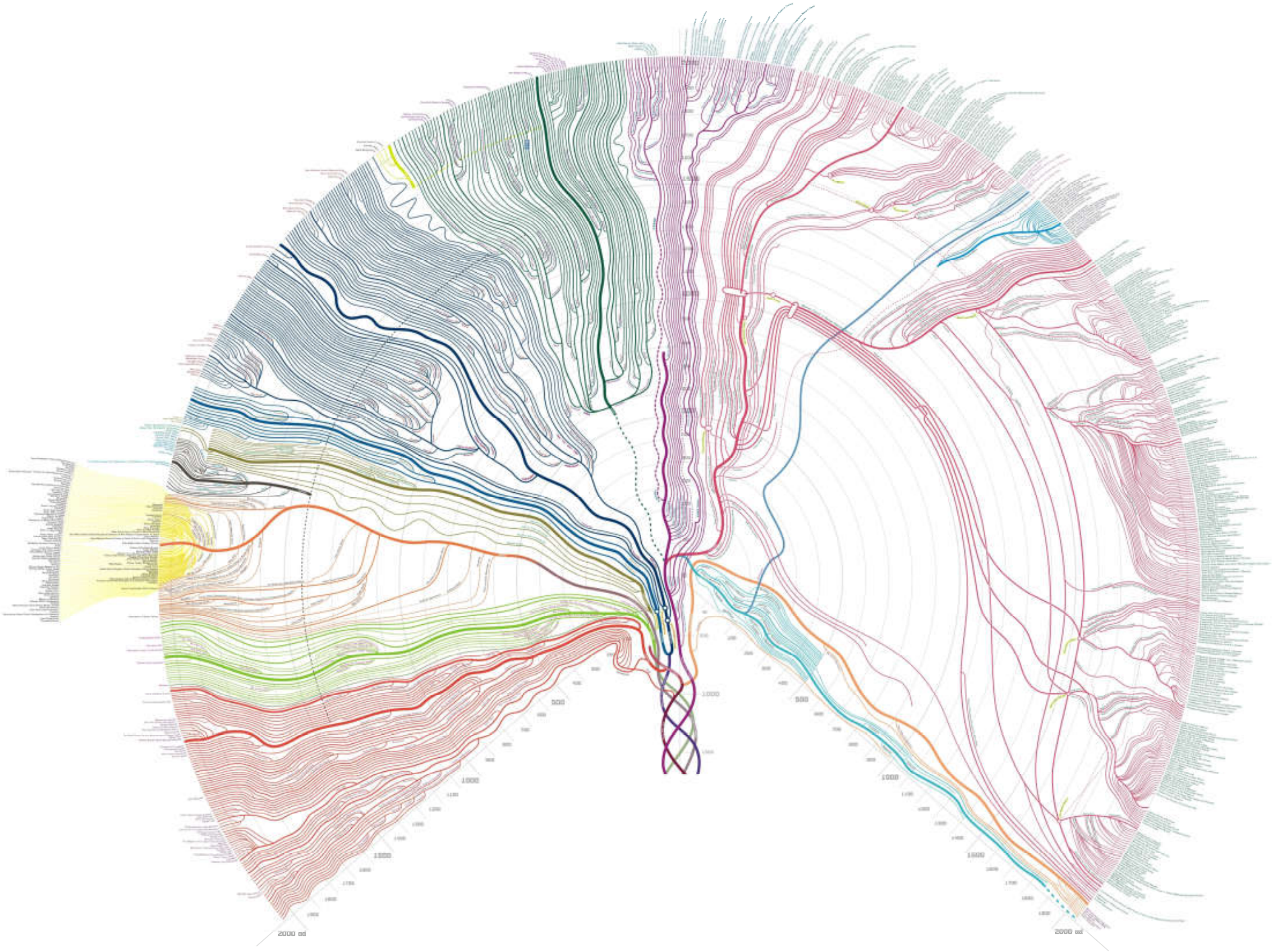
La visualizzazione dati è a cura del DensityDesign Lab del Politecnico di Milano guidato da Paolo Ciuccarelli. La realizzazione di questa settimana è di Giorgio Caviglia, Federica Bardelli, Gabriele Colombo, Carlo De Gaetano



WORLD OF RELIGION

There's no escaping religion. It has enormous societal, cultural, political and historical implications. It's been blamed for wars and praised for bringing people together. But it is practised in some form across the world by billions of people every day. So what are the world's major believing and non-believing constituencies? Below are estimates of the world religions based on the best data available.

ABRAHAMIC AND DHARMIC RELIGIONS
PERCENTAGE OF COUNTRY FOLLOWING THAT DOCTRINE
Abrahamic
100%
50%
100%
Eastern (Dharmic)
No data
GLOBAL RELIGIOUS FERVOUR 2006-2008
COUNTRIES AND THEIR RELIGIOSITY FROM A PEW SURVEY
Most religious
More religious
Average
Less religious
Least religious
No data


500
1000
1500
2000 ad
1000
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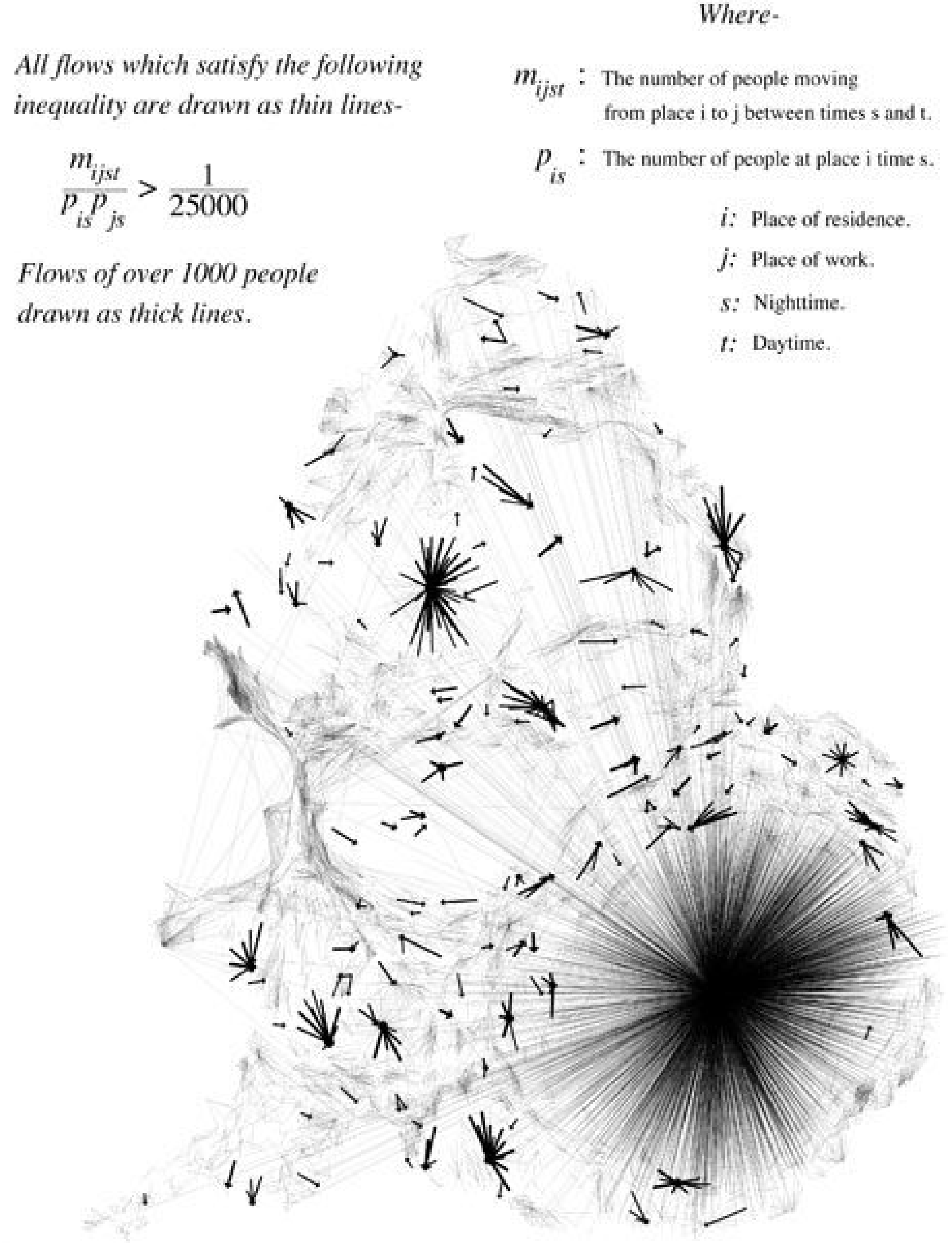
2000 ad

Daily Commuting Flows Between English and Welsh Wards in 1981.



All flows which satisfy the following inequality are drawn as thin lines-

$$\frac{m_{ijst}}{p_{is}p_{js}} > \frac{1}{25000}$$

Flows of over 1000 people drawn as thick lines.

Where-

m_{ijst} : The number of people moving from place i to j between times s and t.

p_{is} : The number of people at place i time s.

i: Place of residence.

j: Place of work.

s: Nighttime.

t: Daytime.

The Method Structure

Preliminary
1. Develop preliminary project plan and schedule for Phase 1
2. Management review and approval
3. Assign staff, review plan and schedule

A. Problem Analysis and Definition

1. Schedule and perform initial data gathering
    - interviews
    - observation of operations
    - documentation collection
    - questionnaires
    - research

2. Perform initial data analysis
    - identify and verify problems
    - determine organization's information and data needs
    - determine scope or requirements, limitations and constraints

3. **Prepare Design Requirements Statement (DRS)**

4. Presentation of (DRS) to management

5. Management review and direction/approval

6. Identify alternative approaches and complete feasibility analysis for each

7. Prepare **Design Proposal**

8. Presentation to management

9. Management review and decision

10. Prepare expanded **Project Plan** and **Schedule (PPS)** for the alternative approach authorized by management

B. Data Gathering

1. Schedule and perform expanded data gathering in areas identified by initial data gathering

2. Organized data and identify to facilitate analysis

3. Complete **Data Element Description Sheet** for each data element identified

4. Collect information on requirements for decision-making, operational directives, and reports (both formal and informal)

5. Prepare **Inventory** of **Existing Data Elements**

6. Prepare **Inventory** of **Existing Reporting Requirements**

7. Perform supplemental data gathering as needed

8. Present inventories to management for review

9. Management review and direction/approval

C. Data Analysis

1. Working with the inventories of elements and reports and using classification analysis work sheets, classify each individual data element by
   -type: controlling, reporting, and supporting
   -use: generic grouping, i.e., descriptive, computational, and quantitative -reports: managerial, operational, and recordkeeping
   -timeliness: operational, transitory, archival, and historical
   -system requirements: size, data retention, updating, maintenance, response requirements, and security -logical/functional relationships with other data
   -current format and media
   -name, **synonym,** and definitions

2. Prepare **Master Classification Lists** of data elements

3. Prepare **Performance Requirements** and **Characteristics Lists**

4. Review findings with management

5. Management direction/approval

D. Development and Implementation of Standards

1. Identify and organize the contents of the standards manual

2. Define and incorporate the Administrative and Environmental Standards

3. Develop and incorporate the method standard, for the Data Definition Control System (DDCS)

4. Assemble current data element definitions in a Corporate Glossary

5. Review Glossary and DDCS with management

6. Management direction/approval

7. Train all users in Standards, DDCS, and Corporate Glossary

8. Implement DDCS, Corporate Glossary, and CDB Standards

9. Continue to improve and complete Corporate Glossary

E. Development and Implementation of the Data Integrity and Quality Assurance Program

1. Determine organizational or functional component responsible for the integrity and contents of
   every data element

2. Establish program, plan and schedule for cleaning up all currently existing files

3. Develop **Methods** for **Auditing Data Element Content** and **Quality**

4. Functional management establishes reliability parameters for each data element

5. Establish data audit management report requirements

6. Present program to all affected managers and top management

7. Management review and direction/approval

8. Institute program and commence cleanups and audits

F. Preliminary Design

1. Develop logical design alternatives based upon data classifications

2. Develop logical design alternatives based upon system and functional requirements

3. Develop physical design alternatives based upon
   - -file structures
   - -access methods
   - -available hardware
   - -available software

4. Perform trade-off analysis between various design alternatives

5. Prepare **Trade-off Analysis Report**

6. Management review, decision and direction

7. Prepare **Detailed Design Project Plan** and **Schedule**

8. Management review and direction/approval

G. Detailed Design and Testing

1. Prepare the detailed **Design Specifications** for the optimum design approved by management in the previous Phase

2. Management review and direction/approval of the detailed design

3. Prepare **Test Plan** and necessary **Test Data** to test specifications and processes

4. Management review and direction/approval of test plan
5. Perform test and evaluate results
6. Management review and direction/approval of test results
7. Modification and retest as necessary

H. Data Conversion and Implementation

1. Develop **Conversion Plan** and **Schedule**
2. Management review and direction/approval
3. Conduct training as necessary
4. Convert data and establish new database
5. Maintain converted data
6. When data conversion is complete, implement operations
7. Management review, direction/approval of conversion and implementation

I. Post-implementation Evaluation

1. Plan and staff for the Post-implementation Evaluation study
2. Conduct the study
3. Prepare the Study Report and present Study Report to management
4. Management review and direction
5. Development phase terminates. Routine maintenance and support begins

(ANMESCL^2 EL NEGRO)

ALPHA NUMEROUS MAXIMA
EGREGIA SUMMA CUM LAUDE

The Systems Development Programs

http://sern.ucalgary.ca/CAG/publications/survey-abm.htm

A. Accounting Software for GOD & MAN Systems

1. http://www.findaccountingsoftware.com/software/ ***
2. http://www.sysprousa.com/
3. http://tunes.org/Review/OSes.html OS
4. http://tunes.org/index.html TUNES
5. http://www.cs.washington.edu/research/projects/spin/www/ SPIN
6. http://www.cse.ogi.edu/DISC/projects/synthetix/related.html Adaptive OS
7. http://www.enterpriselogix.com/
8. http://www.research.microsoft.com/research/dtg/ Microsoft
9. http://einstein.cs.uri.edu/research/rtsorac/pubs/RTCO_OMG.html COBRA
10. http://www.ram.org/ramblings/dream/cellasos.html Self-Replicative OSes
11. http://www.scinet-corp.com/associates/index.htm?istp.htm~index2 ******* SCiNET
12. http://www.oalj.dol.gov/libdot.htm DOT
13. http://application.biz/directory/Top/Computers/Software/Accounting/5461
14. http://www.scs-mag.com/Buyers-Guide/ Supply Chain

B. Genetic Analysis Software

1. http://linkage.rockefeller.edu/soft/list.html A-F
2. http://linkage.rockefeller.edu/soft/list2.html G-L
3. http://linkage.rockefeller.edu/soft/list3.html M-P
4. http://linkage.rockefeller.edu/soft/list4.html Q-X
5. http://hpcio.cit.nih.gov/index.html *** Graphical Association Prototype - Linkage
6. http://www.critcon.com/ccipublic/products/products.php3
7. http://docs.appliedbiosystems.com/pebiodocs/00103536.pdf
8. http://www.zi.ku.dk/eunet/Pages/gensoft.html
9. http://www.cato.com/biotech/bio-software.html *** Library

10. http://www.mcdb.ucla.edu/Research/Lin/links/sequence_analysis/
11. http://www.mbg.cornell.edu/aquadro/software.html *** Plato
12. http://www.dnastar.com/web/r4.php ***
13. http://www.foresight.org/Conferences/MNT6/Papers/Hall/

C. Decision Analysis Software

1. http://www.palisade.com/html/decisiontools_suite.asp?OVRAW=genetic%20analysis%20software&OVKEY=decision%20support%20software&OVMTC=standard
2. http://www.treeage.com/
3. http://faculty.fuqua.duke.edu/daweb/dasw.htm ***
4. http://www.odportal.com/OD/whatisod.htm
5. http://www.pitt.edu/AFShome/d/r/druzdzel/public/html/is2130/
6. http://www.ornl.gov/sci/techresources/Human_Genome/posters/chromosome/chooser.shtml Disease Chromosomes
7. http://www.paramind.net/parathry.html
8. http://www.Galorath.com **** SEI & SEBK
9. http://www.palisade.com/html/decision_analysis_software.asp ***
10. http://www.knowledgestorm.com/search/keyword/Analysis%20Tools/iickwd/Analysis%20Tools Library
11. http://www.johnsaunders.com/guides/decision.htm
12. http://www.salford-systems.com/cart.php Genome Research

D. Linkage Software

1. http://nmwebsite.iso.com/default.asp?id=1 *** Netmap
2. http://cmap.ihmc.us/ *** Concept Mapping
3. http://www.lmsweb.com/
4. http://www.smartdraw.com/specials/mindmapping.asp?id=2388
5. http://users.edte.utwente.nl/lanzing/cm_home.htm
6. http://www2.smarttech.com/st/en-US/Products/SMART+Ideas/
7. http://www.coco.co.uk/
8. http://www.mindjet.com/us/
9. http://www.banxia.com/demain.html
10. http://www.graphic.org/concept.html ***
11. http://www.schoolnet.edu.mo/general/biology/temp/cmap/cmapguid.html
12. http://www.socialresearchmethods.net/mapping/mapping.htm *** Social Methods
13. http://uts.cc.utexas.edu/~best/html/learning/concept.htm

E. Autonomous Agent Software

1. http://www.msci.memphis.edu/%7Efranklin/AgentProg.html
2. http://agents.umbc.edu/ ***
3. http://www.agent-software.com.au/shared/home/ ***
4. http://csdl.computer.org/comp/proceedings/apsec/2000/0915/00/09150480abs.htm
5. http://www.agtivity.com/agusage.htm
6. http://www.insead.fr/Encyclopedia/ComputerSciences/Agents/ ***

7. http://csdl.computer.org/comp/proceedings/iciis/1999/0446/00/04460630abs.htm
8. http://search2.computer.org/advanced/Advanced_Result.jsp
9. http://www-2.cs.cmu.edu/~softagents/
10. http://www.jamesodell.com/aose2002
11. http://lcs.www.media.mit.edu/people/lieber/Lieberary/Letizia/AIA/AIA.html Interface
12. http://www.multiagent.com/multiagent-bookmarks.html Library
13. http://www.codeproject.com/useritems/metaagent.asp ***
14. http://students.csci.unt.edu/~croberts/5250/project/agent_programming.html
15. http://www.insead.fr/Encyclopedia/ComputerSciences/AI/aLife.htm

F. Grammatic Development Software

1. http://www.multites.com/ *** Thesaurus
2. http://www.gesis.org/en/software/textpack/index.htm *** Classification
3. http://www.cogsci.princeton.edu/~wn/ *** WordNet
4. http://www.sil.org/linguistics/computing.html#programming *** Library
5. http://www.lpl.univ-aix.fr/projects/multext/LSD/LSD2.html
6. http://www.iamtheibos.com/2003/EINNS.html
7. http://www.fernuni-hagen.de/IT/wrtp99/wrtp99-noframes.html
8. http://ai.bpa.arizona.edu/papers/chinese93/chinese93.html#144 ***
9. http://www.cul.co.uk/software/istruct.htm
10. http://www.masterfreelancer.com/wsstore/ps001.html *** Screen Writing
11. http://www.masterfreelancer.com/ *****
12. http://www.writersupercenter.com/stylewriter/ ***** Style Writer
13. http://www.intranetjournal.com/features/critknow-1.shtml

G. Virtual Organizations & Enterprise Work Architectures

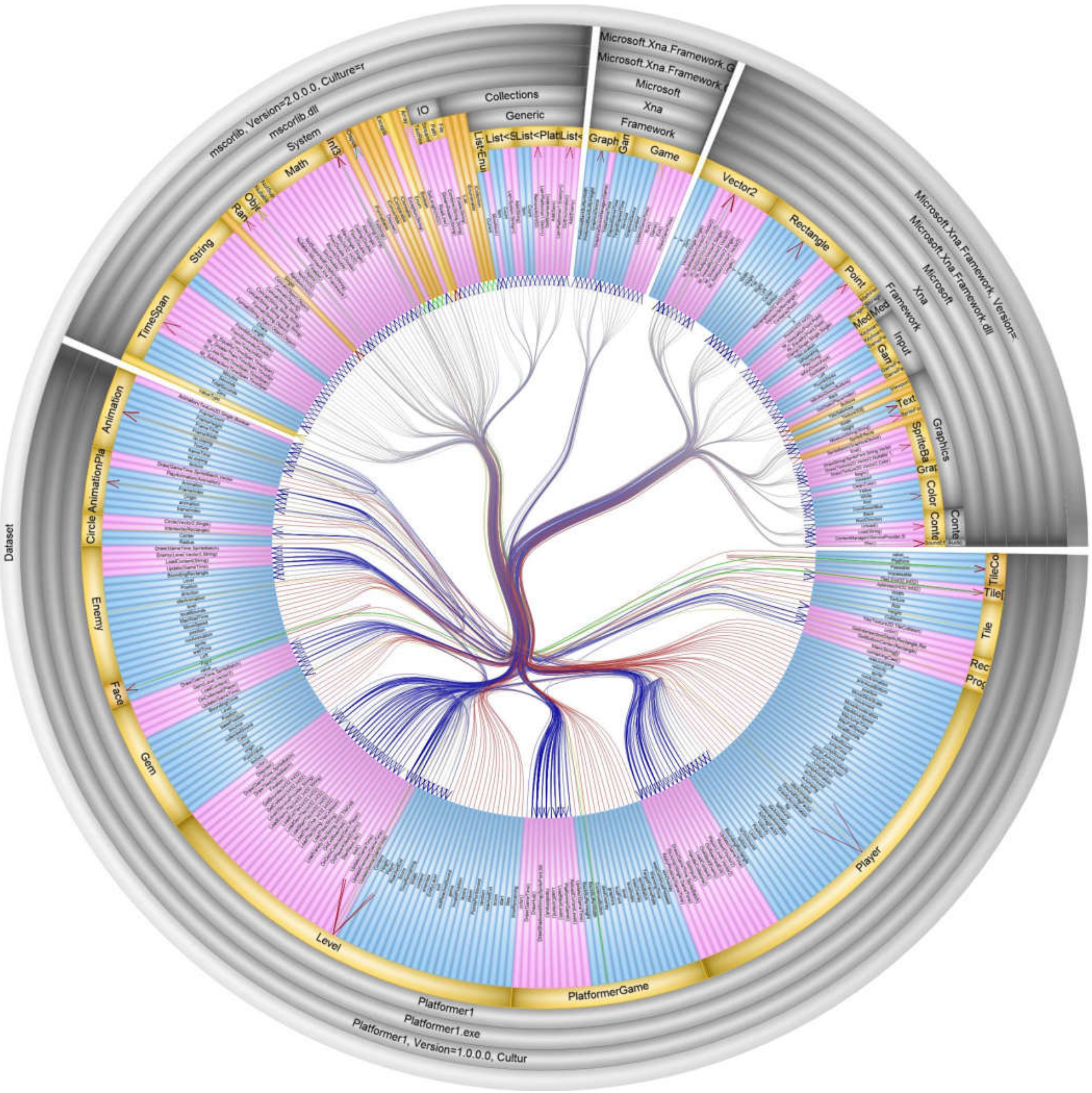
1. http://www.ascusc.org/jcmc/vol3/issue4/ahuja.html
2. http://www.skyrme.com/insights/2virtorg.htm
3. http://www.seanet.com/~daveg/ ***
4. http://www.epmac.com/product/overview.html ***
5. http://www.hfv-speyer.de/rei/PUBLica/engl/VIRORGA.HTM
6. http://www.levels-of-excellence.com/
7. http://www.msu.edu/~prestons/virtual.html
8. http://virtual-organization.net/
9. http://www.hitl.washington.edu/projects/knowledge_base/meta.html ***
10. http://www.cis.udel.edu/~wchen/livrosemingles.html
11. http://www.econ.iastate.edu/tesfatsi/tnghome.htm
12. http://ccs.mit.edu/papers/CCSWP185.html ***
13. http://www.icohere.com/product_features.htm ***
14. http://www.knowledgeability.biz/weblearning/default.htm Distant Learning
15. http://www.intranetjournal.com/features/buildsmall-1.shtml
16. http://icl-server.ucsd.edu/%7Ekirsh/Articles/CoopBuildings/published-version.html
17. http://www.insead.fr/CALT/Encyclopedia/ComputerSciences/Groupware/Workflow/ ***

H. Virtual Reality & Laboratory Software

1. http://www.netdevgroup.com/netlab/overview.htm
2. http://www.cs.purdue.edu/research/cse/softlab/softlab.html ***
3. http://www.wiley.com/legacy/compbooks/catalog/12708-6.htm
4. http://virtuallab.tu-freiberg.de/ ***
5. http://www.cs.purdue.edu/research/cse/softlab/softlab-vlabs/softlab-framework/softlab_report/report.html
6. http://preadme.bmdrc.org/preadme/index.php Drugs
7. http://www.buyya.com/papers/vlab-drug-design.pdf *** Drugs
8. http://www.buyya.com/vlab/ *** Drugs
9. http://www.rspa.com/spi/CASE.html#webe CASE
10. http://www.qucis.queensu.ca/Software-Engineering/vendor.html#+1%20Software%20Engineering CASE Vendor List
11. http://www.qucis.queensu.ca/Software-Engineering/tools.html CASE Tools
12. http://www.attieurope.com/ *** ASE
13. http://www.insead.fr/Encyclopedia/ComputerSciences/VR/vr.htm *** Library

I. Evolutionary Software Programs

1. http://www.kumo.com/~david/SimBioSys/
2. http://www.thehealthcarenet.com/softwdir.htm ***
3. http://www.cepr.org/pubs/new-dps/dplist.asp?dpno=3516
4. http://ideas.repec.org/p/wop/mitccs/207.html
5. http://www.availl.com/2003/prod/AReplicate.htm *** Replicative
6. http://www.webscapeworldwide.com/s_r.htm Websites
7. http://www.cebase.org:444/fc-md/proposals/isese2002/isese2002.pdf
8. http://www.genetix.com/productpages/Software/Qsoftdatatracking.htm
9. http://www.mhulme.net/papers/clayasp.html
10. http://www.commandcom.com/virus/goodvir.html Viruses
11. http://www.cs.bgu.ac.il/~sipper/selfrep/
12. http://www2.umassd.edu/SWPI/1docs/SPResearch.html Research Sites
13. http://homepages.feis.herts.ac.uk/~comqcln/EN/evoindiv/evoindiv.html
14. http://www3.ca.com/securityadvisor/virusinfo/default.aspx Viruses
15. http://www.cert.org/other_sources/viruses.html#III *** Viruses
16. http://www.howstuffworks.com/virus.htm ***
17. http://www.kaspersky.ch/avpve/findex.stm ***
18. http://www.viruslist.com/eng/viruslist.html *** Virus Encyclopedia
19. http://dir.yahoo.com/computers_and_internet/security_and_encryption/viruses_and_worms/
20. http://vil.nai.com/vil/default.asp
21. http://www.sophos.com/virusinfo/analyses/
22. http://www.smallbiztechtalk.com/links/computer_viruses.htm
23. http://www.worldhistory.com/wiki/C/Computer-Virus.htm ***** How to Write
24. http://www.wias.net/Papers/virus_ew.html Warfare
25. http://www.hackerscatalog.com/Products/Virus
26. http://search.yahoo.com/search?p=virus+source+codes&ei=UTF-8&fr=FP-tab-web-t&n=20&fl=0&x=wrt


mscorlib, Version=2.0.0.0, Culture=r
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System
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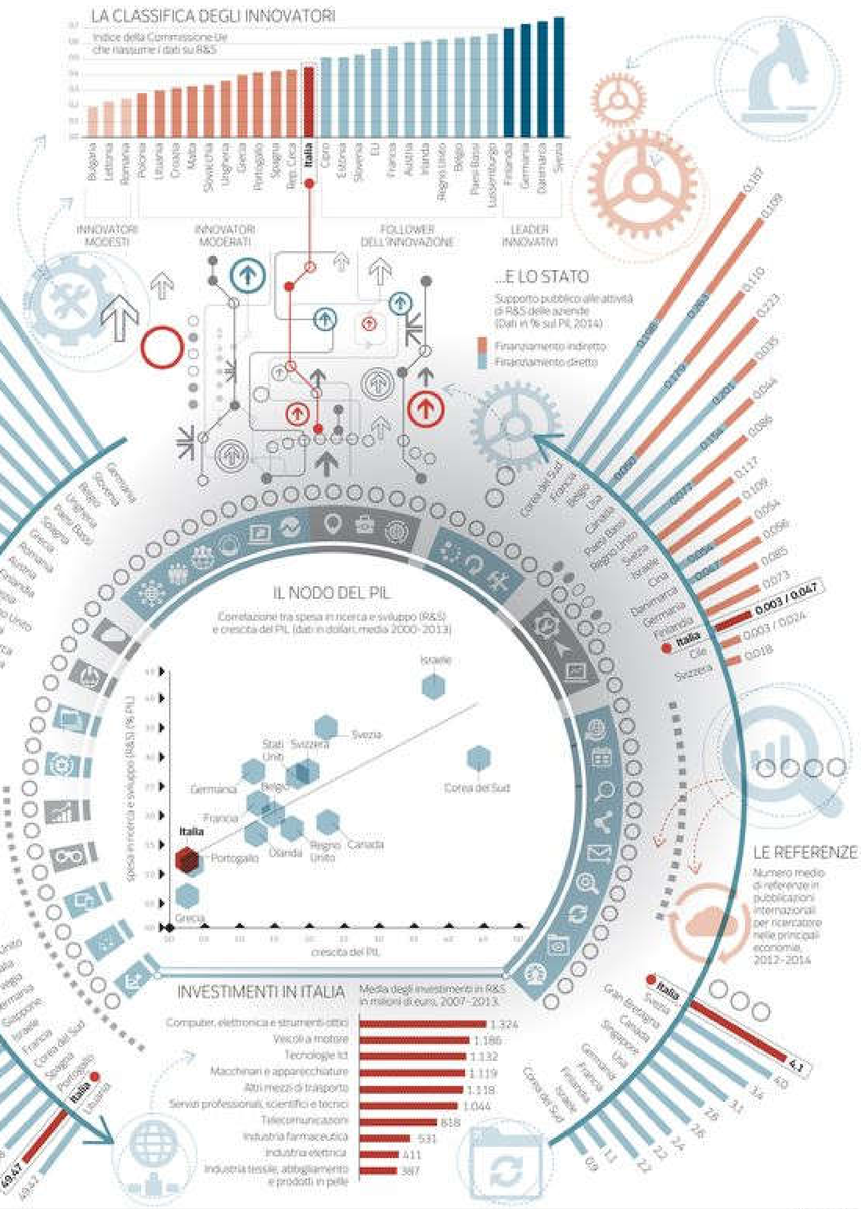
Ran
String
TimeSpan
IO
Collections
Generic
List<Enu
List<S
List<Plat
List<
Microsoft.Xna.Framework.G
Microsoft.Xna.Framework.G
Microsoft
Xna
Framework
Graph
Gam
Game
Microsoft.Xna.Framework, Version=
Microsoft.Xna.Framework.dll
Microsoft
Xna
Framework
Vector2
Rectangle
Point
Med
Med
Input
Gam
Text
SpriteBa
Graphics
Grap
Color
Conte
Conte
TileCo
Tile[
Tile
Rec
Prog
Player
PlatformerGame
Level
Platformer1
Platformer1.exe
Platformer1, Version=1.0.0.0, Cultur
Gem
Face
Enemy
Circle
AnimationPla
Animation
Dataset

Lo scenario e i dettagli

C'è una correlazione tra investimenti in ricerca e sviluppo, cultura dell'innovazione e crescita del Prodotto interno lordo. L'Italia fatica però a mantenere alti gli standard se paragonati a quelli degli altri Paesi europei. Siamo innovatori moderati e ora serve un colpo di reni

R&S=ricerca e sviluppo



Fonte: The European House - Ambrosetti

Corriere della Sera

Il post Expo

Quei 15 milioni che devono attirare i finanziatori esteri

Il progetto del governo per il dopo Expo che dovrebbe fare da trampolino per il rilancio della ricerca nazionale ha catalizzato le voci del fare. La strategia è buona: la capitalizzazione del successo dell'esposizione milanese deve essere scaricata a terra senza perdersi in inutili rivoli di rimpianti. Il segnale è utile non solo alla città (dove dà contenuti alle candidature post-Pisapia) ma anche al premier Renzi che deve smarcarsi dal pantano della Capitale. L'idea di affidare la regia all'Istituto italiano di tecnologia di Genova, poi, è forse stata la ciliegina sulla torta: se fosse stato scelto uno dei pure eccellenti poli universitari meneghini sarebbe scoppiato un canovaccio da «parenti serpenti» tra gelosie e rivendicazioni. Ci sarà modo e tempo per raccogliere le forze dei «locali». Peraltro l'Iit ha notevoli punti di forza, non ultimo quello del diffuso utilizzo della lingua inglese in aggiunta al livello professionale di «guru» come il direttore della iCub Facility Giorgio Metta sulla robotica e il *senior researcher* Vittorio Pellegrini sul grafene. I giovani cervelli europei ed extraeuropei che dovranno decidere Milano piuttosto che Barcellona, Berlino, Londra o Tel Aviv guarderanno a questo prima di investire nel proprio futuro. Dunque: network, equilibri e capitale umano. Gli ingredienti ci sono tutti. O quasi. Se andiamo a guardare le altre esperienze estere c'è sempre lo «sterco del diavolo», il denaro, senza il quale all'area verrà a mancare l'appoggio delle grandi aziende (per ora si parla di 15 milioni l'anno per dieci anni). Certo, i fondi sono «sempre quelli e sono sempre più esigui», come aveva detto al *Corriere* il rettore della Bicocca, Cristina Messa. Ma questo problema ha una soluzione: Londra per alimentare i settori su cui vuole puntare, come il biotech, ha lanciato attraverso il sindaco Boris Johnson un fondo da 10 miliardi di sterline per il *life sciences*. E per alimentarlo è pronto a defiscalizzare recuperando in investimenti ciò che non prenderà in tasse. Se si vuole un polo di successo, bisognerà posizionarlo sul risiko internazionale e sfidare i competitor. *(m.sid.)*

msideri@corriere.it

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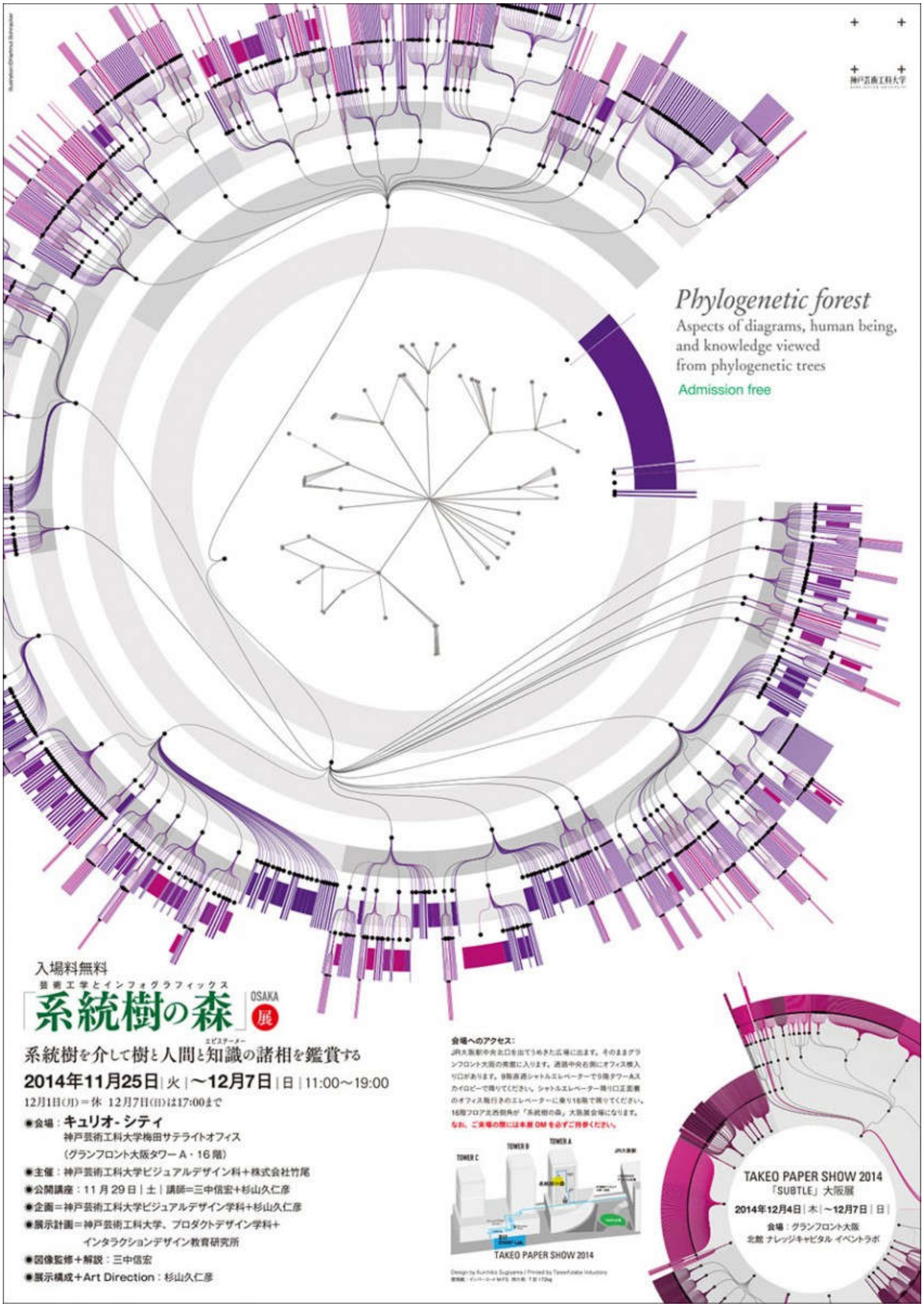


Phylogenetic forest

Aspects of diagrams, human being,
and knowledge viewed
from phylogenetic trees

Admission free

入場料無料

芸術工学とインフォグラフィックス

「系統樹の森」OSAKA 展

系統樹を介して樹と人間と知識（エピステーメー）の諸相を鑑賞する

2014年11月25日｜火｜**〜12月7日**｜日｜11:00〜19:00

12月1日(月)＝休　12月7日(日)は17:00まで

- ●会場：**キュリオ-シティ**
  神戸芸術工科大学梅田サテライトオフィス
  （グランフロント大阪タワーA・16階）
- ●主催：神戸芸術工科大学ビジュアルデザイン科＋株式会社竹尾
- ●公開講座：11月29日｜土｜講師＝三中信宏＋杉山久仁彦
- ●企画＝神戸芸術工科大学ビジュアルデザイン学科＋杉山久仁彦
- ●展示計画＝神戸芸術工科大学、プロダクトデザイン学科＋
  インタラクションデザイン教育研究所
- ●図像監修＋解説：三中信宏
- ●展示構成＋Art Direction：杉山久仁彦

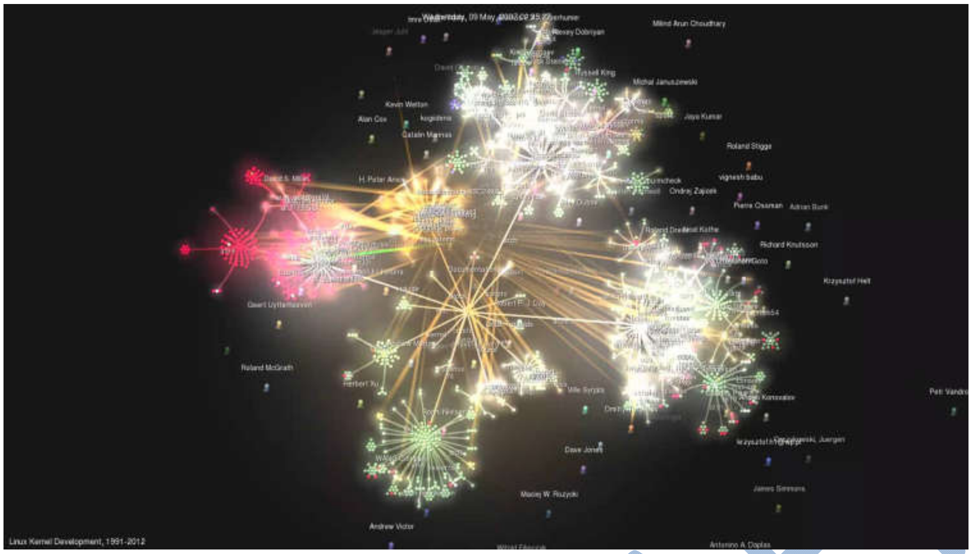
会場へのアクセス：

JR大阪駅中央北口を出てうめきた広場に出ます。そのままグランフロント大阪の南館に入ります。通路中央右側にオフィス棟入り口があります。9階直通シャトルエレベーターで9階タワーAスカイロビーで降りてください。シャトルエレベーター降り口正面奥のオフィス階行きのエレベーターに乗り16階で降りてください。16階フロア北西側角が「系統樹の森」大阪展会場になります。

なお、ご来場の際には本展DMを必ずご持参ください。

TAKEO PAPER SHOW 2014

TAKEO PAPER SHOW 2014
「SUBTLE」大阪展
2014年12月4日｜木｜〜12月7日｜日｜
会場：グランフロント大阪
北館 ナレッジキャピタル イベントラボ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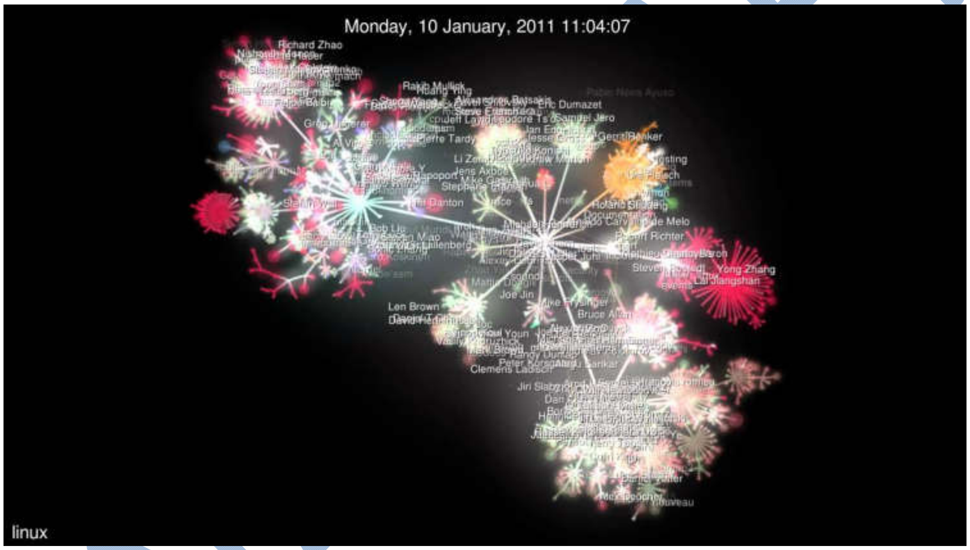
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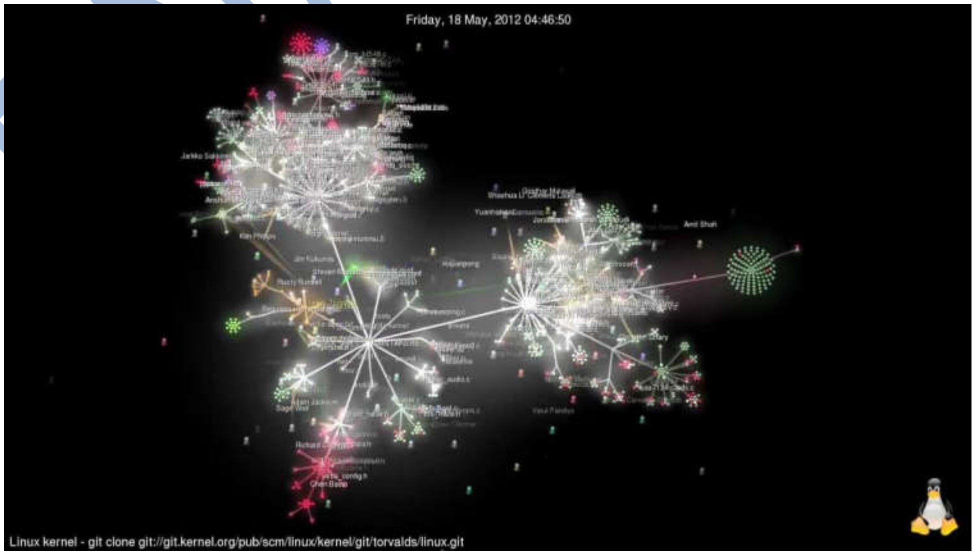
linux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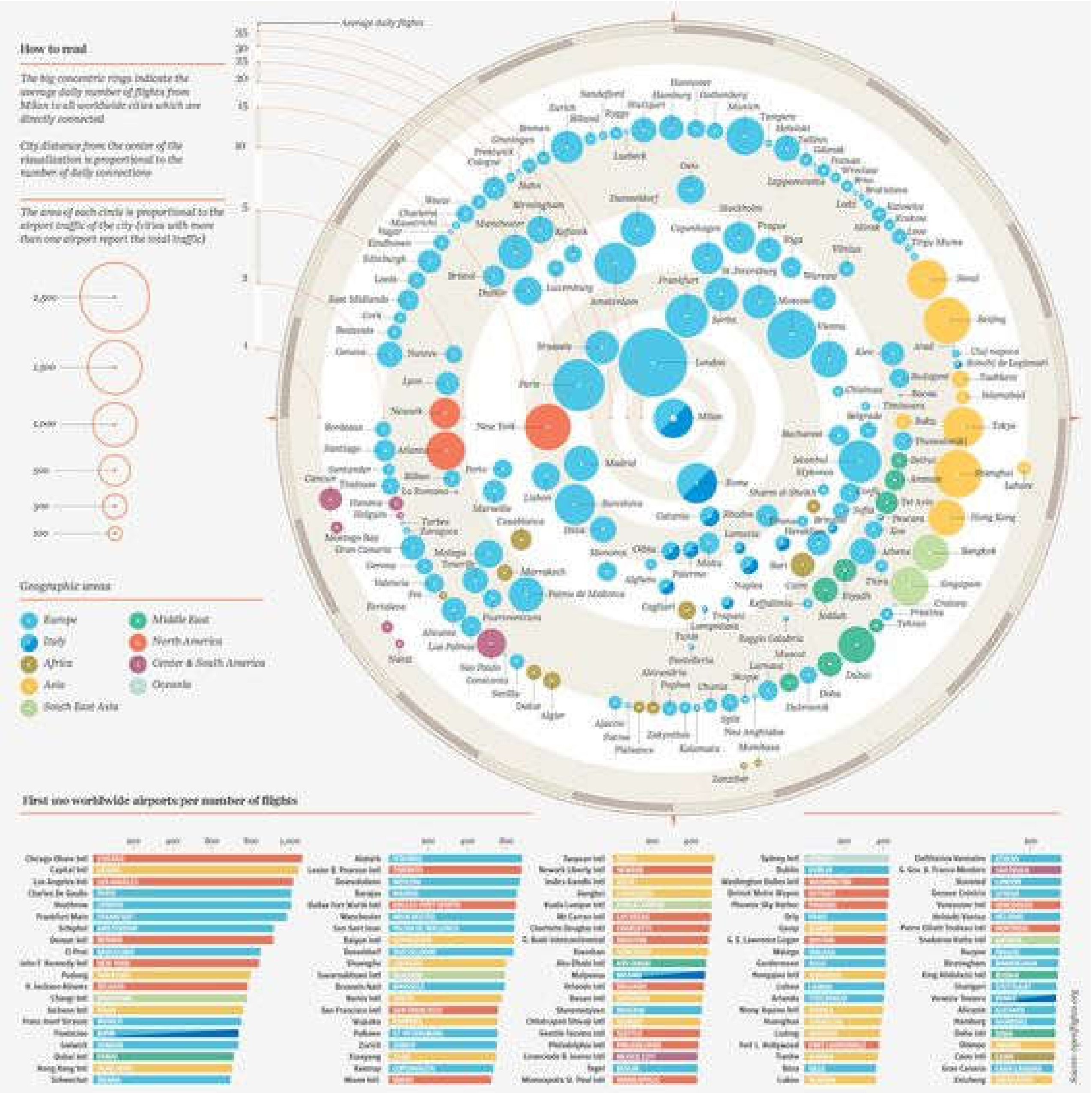
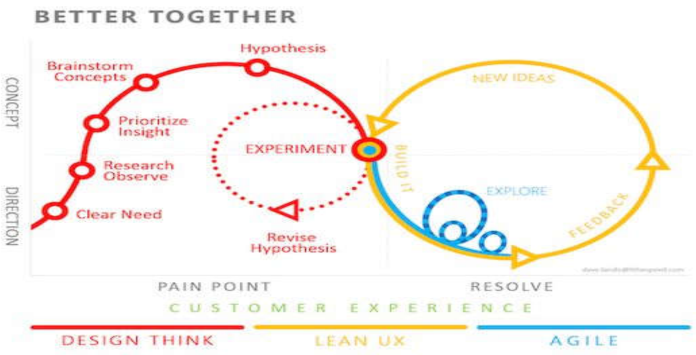
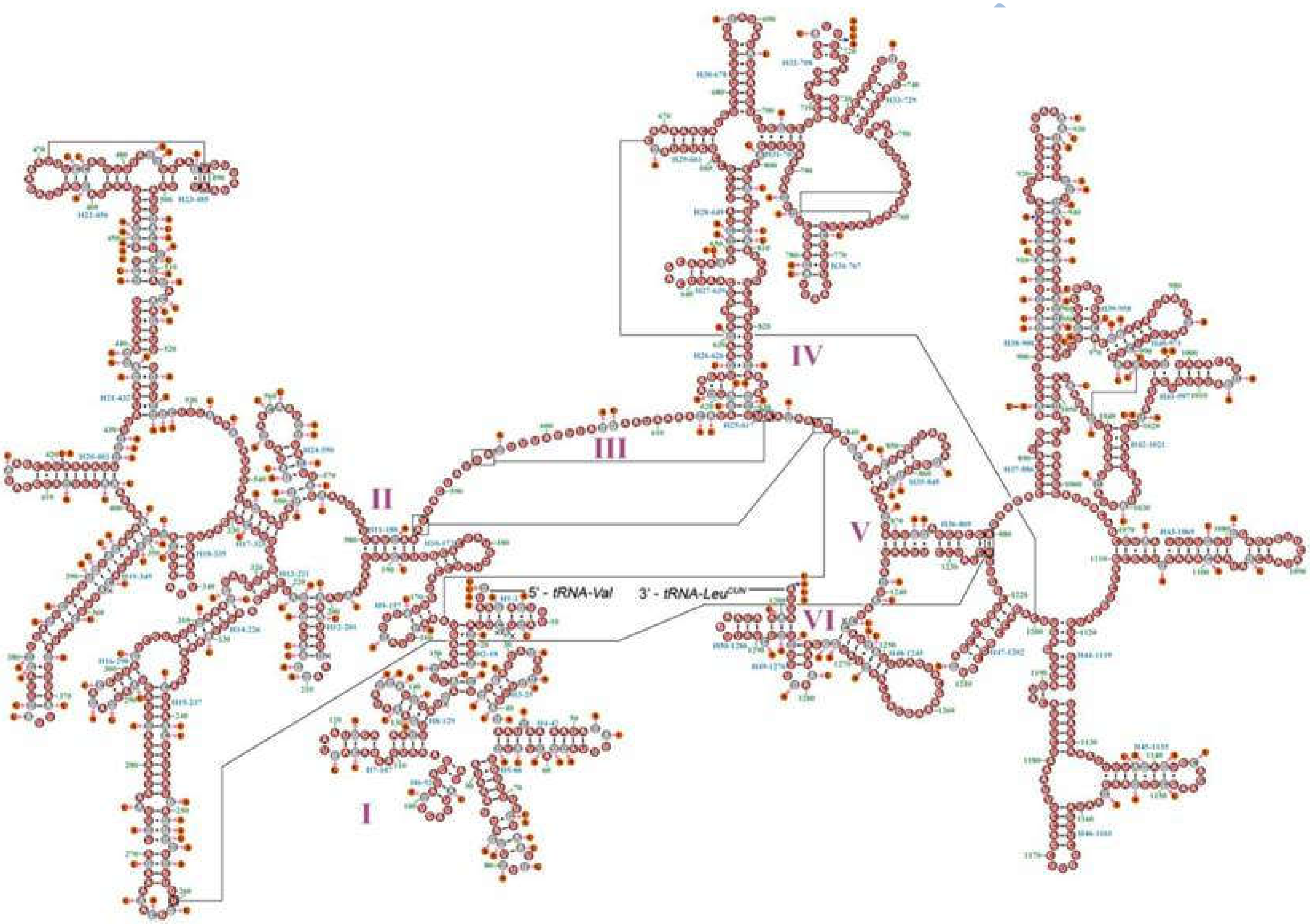

How to read
The big concentric rings indicate the average daily number of flights from Milan to all worldwide cities which are directly connected
City distance from the center of the visualization is proportional to the number of daily connections
The area of each circle is proportional to the airport traffic of the city (cities with more than one airport report the total traffic)
Average daily flights
Geographic areas
Europe
Italy
Africa
Asia
South East Asia
Middle East
North America
Center & South America
Oceania
Milan
London
Paris
New York
Madrid
Rome
Frankfurt
Amsterdam
First 100 worldwide airports per number of flights


BETTER TOGETHER
CONCEPT
DIRECTION
Brainstorm Concepts
Hypothesis
Prioritize Insight
Research Observe
Clear Need
EXPERIMENT
Revise Hypothesis
NEW IDEAS
BUILD IT
EXPLORE
FEEDBACK
PAIN POINT
RESOLVE
CUSTOMER EXPERIENCE
DESIGN THINK
LEAN UX
AGILE


IV
III
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5' - tRNA-Val
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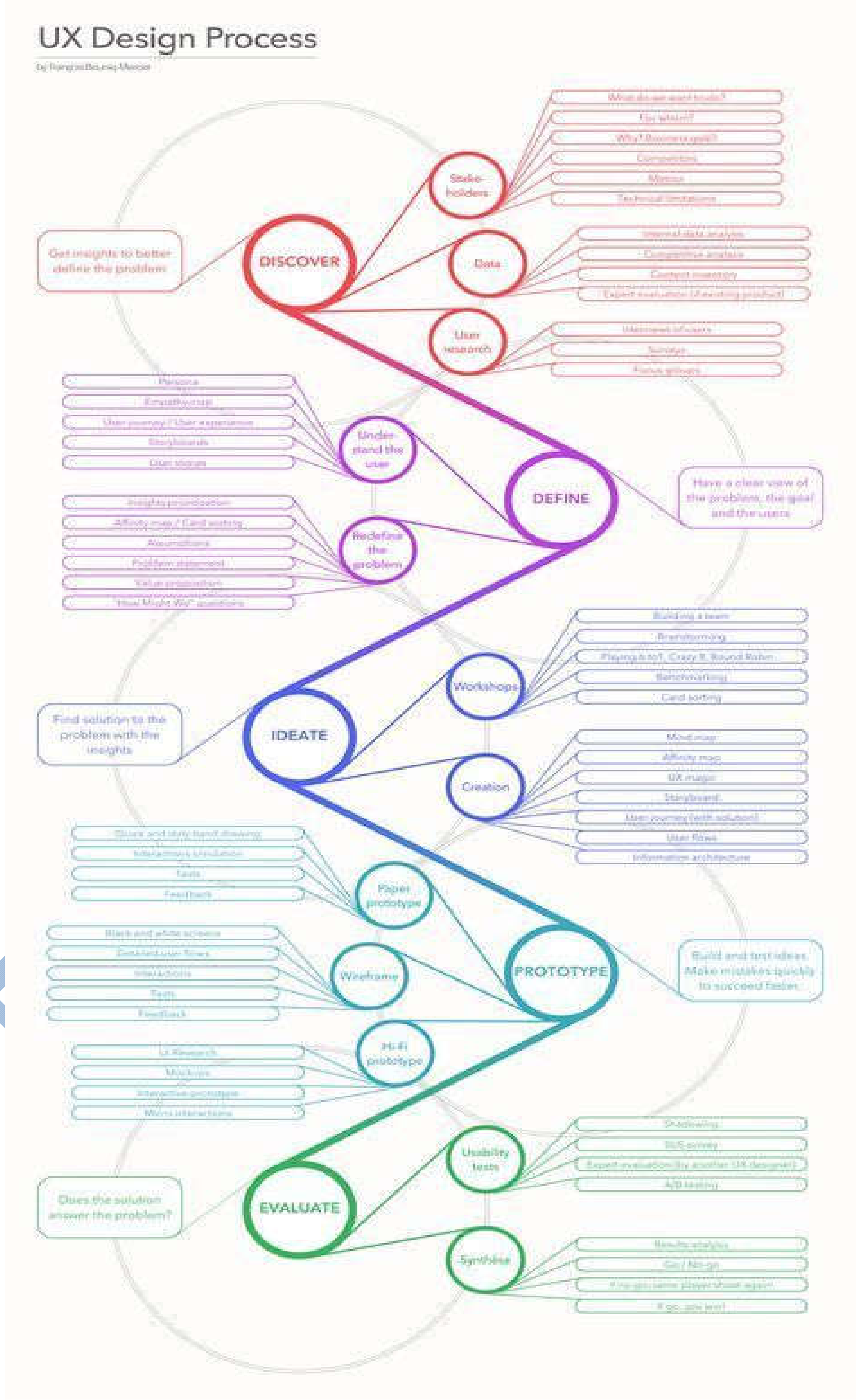

UX Design Process
Get insights to better define the problem
DISCOVER
Stake-holders
What do we want to do?
For whom?
Why? Business goal?
Competition
Metrics
Technical limitations
Data
Internal data analysis
Competitive analysis
Content inventory
Expert evaluation (if existing product)
User research
Interviews of users
Surveys
Focus groups
Persona
Empathy map
User journey / User experience
Storyboards
User stories
Under-stand the user
DEFINE
Have a clear view of the problem, the goal and the users
Insights prioritization
Affinity map / Card sorting
Assumptions
Problem statement
Value proposition
"How Might We" questions
Redefine the problem
Building a team
Brainstorming
Playing 6 to1, Crazy 8, Round Robin
Benchmarking
Card sorting
Workshops
Find solution to the problem with the insights
IDEATE
Creation
Mind map
Affinity map
UX maps
Storyboard
User journey (with solution)
User flows
Information architecture
Quick and dirty hand drawing
Interactions simulation
Tests
Feedback
Paper prototype
Black and white screens
Detailed user flows
Interactions
Tests
Feedback
Wireframe
PROTOTYPE
Build and test ideas. Make mistakes quickly to succeed faster.
Hi-Fi prototype
UI Research
Mockups
Interactive prototype
Micro interactions
Usability tests
Shadowing
SUS survey
Expert evaluation (by another UX designer)
A/B testing
Does the solution answer the problem?
EVALUATE
Synthese
Results analysis
Go / No-go
If no-go: same player shoot again
If go: you win!

(ANMESCL2 EL NEGRO)

ALPHA NUMEROUS MAXIMA
EGREGIA SUMMA CUM LAUDE

Focal Points for Creating over 48 Million New Jobs

THE 5 Phase Operational Interface OR Educational Subsets FOR PERSONALIZING SMARTPHONE APPLICATIONS & VBULLITEN FORUM TRENDS (484)

Employment Related Educational Taxonomy Phase One: Educational Development

1 Employment Educational Development (A2 Academic Practice; Curriculum Development; Course Development; Project Development; Module Development) (A2TECHGRP)
  - **1.1 Employment Planning and Preparation** (NAME)
    - **1.1.1 Employment Needs Analysis** (NAME)
    - **1.1.2 Employment Feasibility Studies** (A2TECHGRP)

- **1.1.3**
  - **1.1.4 Employment Pilot Projects** (A2 Pilot Programs) A2TECHGRP
  - **1.1.5 Employment Exemplars** (NAME)
    - **1.1.4.1** Case Studies (A2TECHGRP)
    - **1.1.4.2** Real Life Examples (NAME)
    - **1.1.4.3** Illustrations (NAME)
- **1.2 Employment Instructional Design** (A2 Course Design; Research Design; Module Design) (A2TECHGRP)
- **1.3 Employment Approaches to Teaching** (A2 Educational Strategies; Teaching Strategies; Instructional Strategies; Pedagogy; Pedagogies; Modes of Teaching) (NAME) (A2TECHGRP uses Educational Strategies)
  - **1.3.1 Employment Constructivism** (NAME)
    - **1.3.1.1** Scaffolding (NAME) *See also under: Approaches to Learning - Task-based Learning*
  - **1.3.2 EmploymentDialogic** (NAME)
  - **1.3.3 Employment Didacticism** (A2TECHGRP)
  - **1.3.4 Employment Student Centered Learning** (A2 Learner Centered Curriculum; Student Centered Curriculum) (NAME) (A2TECHGRP uses Learner Centered Curriculum)
  - **1.3.5 Employment Resource Based Learning** (A2TECHGRP)
- **1.4 Employment Teaching and Learning Methods** (A2 Teaching Methods; Instructional Procedures; Strategies of Instruction; Teaching Techniques) (NAME) (A2TECHGRP uses Teaching Methods)
  - **1.4.1 Employment Demonstrations** (A2TECHGRP)
  - **1.4.2 Employment Discussion** (A2TECHGRP)
    - **1.4.2.1** Dialogue (A2 One-to-One Discussion) (NAME)
      - **1.4.2.1.1** Peer Dialogue (NAME)
      - **1.4.2.1.2** Student Tutor Dialogue (A2 Student Teacher Dialogue) NAME
  - **1.4.3 Employment Drills: Practice** (A2 Repetition) (A2TECHGRP)
  - **1.4.4 Employment Experiments** (A2 Experimentation) (A2TECHGRP)
  - **1.4.5 Employment Field Work** (A2 Field Studies; Field Class) (NAME) (A2TECHGRP uses Field Studies)
  - **1.4.6 Employment Group Work** (A2 Group Instruction; Group Teaching) (A2TECHGRP)
    - **1.4.6.1** Small Group Teaching (A2 Small Group Instruction) (A2TECHGRP)
  - **1.4.7 Employment Lectures** (NAME) (A2TECHGRP uses Lecture-Method)
  - **1.4.8 Employment Mentoring** (A2 Mentors; Mentorship) (NAME) (A2TECHGRP uses Mentoring)
  - **1.4.9 Employment Peer Teaching** (A2 Peer Tutoring; Peer Instruction) (A2TECHGRP)
  - **1.4.10 Employment Presentations** (NAME)
  - **1.4.11 Employment Seminars** (A2TECHGRP)
  - **1.4.12 Employment Tutorials** (A2TECHGRP)
  - **1.4.13 Employment Work Experience** (A2 Employment Experience) (A2TECHGRP)

1.4.13.1 Placement (A2 Internship) (A2TECHGRP)

1.4.13.2 Secondments (A2TECHGRP)

1.4.14 Employment Workshops (A2TECHGRP)

1.5 Employment Educational Environments (NAME)

1.5.1 Employment Electronic Classrooms (A2 Automated Classroom) (A2TECHGRP)

1.5.1.1 Virtual Learning Environments (A2 VLEs; Online Learning Environments; Learning Management Systems; Collaborative Learning Software; Hypertext Learning Environments) (NAME) *See also under Educational Technology – Virtual Learning Environments*

1.5.1.1.1 Managed Learning Environments (A2 MLEs) (NAME) *See also under Educational Technology – Virtual Learning Environments*

1.5.1.2 Web Based Teaching (A2 Online Learning; Online Tutorials; Teletutoring) (NAME) *See also under Educational Technology*

1.5.2 Employment Flexible Learning

1.5.2.1 Open Learning (A2 Open Education) (NAME) (A2TECHGRP uses Open Education)

1.5.2.2 Distance Learning (A2 Distance Education) (NAME) (A2TECHGRP uses Distance Education)

1.5.2.2.1 Paper Based (NAME)

1.5.2.2.2 Electronic (NAME)

1.5.2.2.2.1 Online (NAME)

1.5.2.2.3 Mixed Mode (NAME)

1.5.2.3 Lifelong Learning (A2 Continuous Learning; Education Permanente; Lifelong Education; Permanent Education; Recurrent Education) (A2TECHGRP)

1.5.3 Employment Laboratories (A2TECHGRP)

1.5.4 Employment Summer Schools (A2 Summer Sessions) (A2TECHGRP)

1.6 Employment Approaches to Learning (A2 Learning Styles) (A2TECHGRP)

1.6.1 Employment Surface Learning (NAME)

1.6.2 Employment Deep Learning (NAME)

1.6.3 Employment Experiential Learning (A2 Action Learning; Active Learning; Activity Learning; Community Experience; Experience Based Education; Home Experience; Prior Experiential Learning) (A2TECHGRP)

1.6.4 Employment Collaborative Learning (NAME)

1.6.5 Employment Cooperative Learning (A2TECHGRP)

1.6.6 Employment Discovery Learning (A2TECHGRP)

1.6.7 Employment Discussion-Led Learning (NAME)

1.6.8 Employment Self-Paced Learning (NAME)

1.6.9 Employment Task Based Learning (NAME)

1.6.9.1 Scaffolding (NAME) *See also under Constructivism*

- **1.6.10 Employment Vicarious Learning** (NAME)
  - **1.6.10.1** Answer Gardens (NAME)
- **1.7 Employment Outcomes of Education** (A2 Educational Outcomes; Instructional Outcomes; Learner Outcomes; Student Outcomes; Results of Education) (A2TECHGRP)
  - **1.7.1 Employment Skills** (A2 Competencies; Key Skills; Basic Skills) (A2TECHGRP)
    - **1.7.1.1** Communication Skills (A2TECHGRP)
      - **1.7.1.1.1** Writing Skills (A2TECHGRP)
      - **1.7.1.1.2** Reading Skills (A2TECHGRP)
      - **1.7.1.1.3** Speech Skills (A2 Speaking Skills) A2TECHGRP
      - **1.7.1.1.4** Listening Skills (A2TECHGRP)
      - **1.7.1.1.5** Non-Verbal Communication (A2TECHGRP)
    - **1.7.1.2** Decision Making Skills (A2TECHGRP)
    - **1.7.1.3** Information Literacy (NAME)
    - **1.7.1.4** Job Skills (A2 Employable Skills; Job Behaviors; Marketable Skills; Vocational Skills) (A2TECHGRP)
    - **1.7.1.5** Numeracy (A2TECHGRP)
    - **1.7.1.6** Problem Solving Skills (NAME)
    - **1.7.1.7** Research Skills (A2TECHGRP)
    - **1.7.1.8** Study Skills (A2TECHGRP)
    - **1.7.1.9** Teaching Skills (A2TECHGRP)
    - **1.7.1.10** Technological Literacy (A2TECHGRP)
      - **1.7.1.10.1** Computer Literacy (A2 IT Literacy; C&IT Literacy; ICT Literacy; IT Skills; Computer Skills) A2TECHGRP
    - **1.7.1.11** Thinking Skills (A2TECHGRP)
    - **1.7.1.12** Transferable Skills (NAME)
  - **1.7.2 Employment Knowledge** (NAME)
  - **1.7.3 Employment Understanding** (A2 Comprehension) (NAME) (A2TECHGRP uses Comprehension)
  - **1.7.4 Employment Attitudes** (A2TECHGRP)
  - **1.7.5 Employment Values** (A2TECHGRP)
  - **1.7.6 Employment Creativity** (A2TECHGRP)
  - **1.7.7 Employment Research** (A2TECHGRP)
    - **1.7.7.1** Action Research (A2TECHGRP)
- **1.8 Employment Assessment** (A2 Student Assessment; Educational Measurement; Student Evaluation) (A2TECHGRP)
  - **1.8.1 Employment Types of Assessment** (NAME)
    - **1.8.1.1** Formative Assessment (NAME)
    - **1.8.1.2** Summative Assessment (NAME)

    - **1.8.1.3** Peer Assessment (NAME)
    - **1.8.1.4** Self-Assessment (NAME)
    - **1.8.1.5** Continuous Assessment (A2TECHGRP)
  - **1.8.2 Employment Assessment Tasks** (NAME)
    - **1.8.2.1** Theses (A2TECHGRP)
    - **1.8.2.2** Dissertations(A2TECHGRP)
    - **1.8.2.3** Essays (A2TECHGRP)
    - **1.8.2.4** Diaries (A2 Journals) A2TECHGRP
    - **1.8.2.5** Learning Logs (NAME)
    - **1.8.2.6** Oral Presentations (NAME)
    - **1.8.2.7** Poster Presentations (NAME)
    - **1.8.2.8** Portfolios (NAME)
    - **1.8.2.9** Reports (A2TECHGRP)
    - **1.8.2.10** Examinations (A2 Exams; Tests) (A2TECHGRP)
      - **1.8.2.10.1** Question Types (NAME)
        - **1.8.2.10.1.1** Multiple Choice Questions (A2Multichoice Tests, Multiple Choice Tests, and MCQs) (NAME)
        - **1.8.2.10.1.2** Yes/No Questions (NAME)
        - **1.8.2.10.1.3** True/False Questions (NAME)
        - **1.8.2.10.1.4** Free Text Response (A2 Essay Tests) NAME
      - **1.8.2.10.2** Examination Types (NAME)
        - **1.8.2.10.2.1** Open Book Examinations (A2 Open Book Tests) (A2TECHGRP)
        - **1.8.2.10.2.2** Oral Tests (A2 Oral Examinations) (A2TECHGRP)
        - **1.8.2.10.2.3** Practical Examinations (NAME)
- **1.9 Employment Evaluation** (A2 Reflective Practice) (A2TECHGRP)
  - **1.9.1 Employment Evaluation Criteria** (A2TECHGRP)
    - **1.9.1.1** Performance Indicators (A2TECHGRP)
    - **1.9.1.2** Adaptability (NAME)
    - **1.9.1.3** Interactivity (NAME)
    - **1.9.1.4** Reliability (A2TECHGRP)
    - **1.9.1.5** Validity (A2TECHGRP)
    - **1.9.1.6** Efficiency (A2TECHGRP)
    - **1.9.1.7** Cost-Effectiveness (A2TECHGRP)
    - **1.9.1.8** Good Practice (NAME)
    - **1.9.1.9** Best Practice (NAME)

1.9.1.10 Benchmarking (NAME)
1.9.1.11 Outcomes of Education (A2TECHGRP)
1.9.2 Employment Types of Evaluation (A2 Evaluation Methodology; Analysis; Evaluation Designs; Evaluation Procedures; Evaluation Techniques) A2TECHGRP
1.9.2.1 Formative Evaluation (A2 Process Evaluation) (A2TECHGRP)
1.9.2.2 Summative Evaluation (A2 Product Evaluation) (A2TECHGRP)
1.9.2.3 Qualitative Evaluation (NAME)
1.9.2.4 Quantitative Evaluation (NAME)
1.9.2.4.1 Statistical Analysis (A2 Comparative Statistics; Statistical Methods; Statistical Processes) (A2TECHGRP)
1.9.3 Employment Evaluation Methods (NAME)
1.9.3.1 Check Lists (A2TECHGRP)
1.9.3.2 Concept Maps (A2 Concept Mapping; Mind Mapping) (NAME)
1.9.3.3 Confidence Logs (NAME)
1.9.3.4 Experiments (A2 Experimentation) A2TECHGRP
1.9.3.5 Focus Groups (NAME)
1.9.3.6 Interviews (A2 Interviewing) (A2TECHGRP)
1.9.3.7 Nominal Group Technique (NAME)
1.9.3.8 Observation (NAME)
1.9.3.9 Pretests-Posttests (A2 Post Testing; Pre-tests) (A2TECHGRP)
1.9.3.10 Questionnaires (A2TECHGRP)
1.9.3.11 Sample Selection (NAME)
1.9.3.12 System Log Data (NAME)
1.9.3.13 Trials (NAME)
1.9.3.14 Iterations (NAME)

Employment Related Educational Taxonomy Phase Two: Educational Technology

2 Employment Educational Technology (A2 Instructional Technology; Computer Aided Learning; Computer Aided Teaching; Computer Aided Instruction; CAL; CAI; CIT; C&IT; ICT) (A2TECHGRP)

2.1 Employment Computer Mediated Communication (A2 CMC) (NAME)
2.1.1 Employment Netiquette (A2 E-Mail Etiquette; Web Etiquette; Internet Etiquette) (NAME)
2.1.2 Employment Moderating Skills (A2 E-Moderation; Moderation) (NAME)

2.1.3 Employment Synchronous Communication (A2 Synchronous Collaboration Tools) (NAME)

2.1.3.1 Internet Chat (A2 Internet Relay Chat; IRC; CompuServe; Instant Messaging) (NAME)

2.1.3.2 Audio Conferencing (NAME)

2.1.3.3 Videoconferencing (NAME)

2.1.3.3.1 ISDN Videoconferencing (NAME)

2.1.3.3.2 ATM Videoconferencing (NAME)

2.1.3.3.3 Desktop Videoconferencing (NAME)

2.1.3.4 Shared Whiteboard (A2Whiteboarding; Shared Notebook) (NAME)

2.1.3.5 Application Sharing (NAME)

2.1.3.5.1 Shared Document (NAME)

2.1.3.5.2 Shared Browsing (A2 Group Browsing) (NAME)

2.1.4 Employment Asynchronous Communication (A2 Asynchronous Learning Networks; ALNs; Asynchronous Collaboration Tools) (NAME)

2.1.4.1 Email (A2 Electronic Mail; E-mail; Text Based Conferencing) (NAME) (A2TECHGRP uses Electronic Mail)

2.1.4.1.1 Mailing Lists (A2 Discussion Lists; Listserve; Mailbase) (NAME)

2.1.4.1.2 Bulletin Boards (A2 Discussion Forums; Discussion Boards) (NAME)

2.1.4.1.3 Newsgroups (A2 Usenet) (NAME)

2.2 Employment Virtual Learning Environments (A2 Online Learning Environment; Hypertext Learning Environment; VLEs; Learning Management Systems; Collaborative Learning Software) (NAME) *See also under Educational Development-Educational Environments*

2.2.1 Employment Virtual Laboratories (NAME)

2.2.2 Employment Virtual Design Studios (NAME)

2.2.3 Employment Managed Learning Environments (A2 MLEs) (NAME) *See also under Educational Development – Educational Environments*

2.3 Employment GroupWare (A2 Groupware) (NAME)

2.4 Employment Courseware (A2 Educational Software) (NAME) (A2TECHGRP uses Educational Software)

2.5 Employment Computer Aided Assessment (A2 Computer Aided Testing; Computer Assisted Assessment; CAA; Computer Based Assessment) (NAME) (A2TECHGRP uses Computer Assisted Testing)

2.5.1 Employment Online Tests (A2 Online Quizzes; Online Examinations) (NAME)

2.6 Employment Computer Modeling (NAME)

2.7 Employment Computer Simulation (A2TECHGRP)

2.7.1 Employment Interactive Simulation (NAME)

2.7.2 Employment Collaborative Simulation (NAME)

2.7.3 Employment Microworlds (NAME)

2.7.4 Employment Virtual Reality (NAME)
2.8 Employment Computer Networks (A2TECHGRP)
2.8.1 EmploymentTelnet (NAME)
2.8.2 Employment Intranets (NAME)
2.8.3 Employment Local Area Networks (A2 LANs) (A2TECHGRP)
2.8.4 Employment Metropolitan Area Networks (A2 MANs) (NAME)
2.8.5 Employment Wide Area Networks (A2TECHGRP)
2.9 Employment Internet (A2 World Wide Web; WWW) (NAME)
2.9.1 Employment Internet Searching (A2 Internet Browsing; Web Browsing; Web Searching; Internet Surfing; Web Surfing) (NAME)
2.9.1.1 Web Browsers (A2 Internet Explorer; Netscape) (NAME)
2.9.1.2 Internet Search Engines (A2 Web Guides) (NAME)
2.9.2 Employment Internet Resources (A2 Web Resources) (NAME)
2.9.2.1 Subject Gateways (A2 Subject Portals) (NAME)
2.9.2.2 Digital Libraries (A2 Online Libraries; Digital Resource Centers; Online Resource Centers) (NAME)
2.9.2.3 Databases (A2TECHGRP)
2.9.2.4 Library Catalogues (A2 Online Library Catalogues) A2TECHGRP
2.9.2.5 Web Sites (A2 Websites) (NAME)
2.9.2.6 FAQs (A2 Frequently Asked Questions) (NAME)
2.9.2.7 Answer Gardens (NAME)
2.9.3 Employment Web Site Production (A2 Website Production; Web Production; Web Page Production) (NAME)
2.9.3.1 Web Authoring (NAME)
2.9.3.1.1 HTML (NAME)
2.9.3.1.2 HTML Editors (NAME)
2.9.3.3.2.1 WYSIWIG Editors (NAME)
2.9.3.3.2.2 Text Editors (NAME)
2.9.3.1.3 JavaScript (NAME)
2.9.3.1.4 Java (NAME)
2.9.3.3.4.1 Java Applets (NAME)
2.9.3.2 Web Design (A2 Web Site Design; Website Design; Computer Graphics; Graphic Design) (NAME)
2.9.3.3 Web Publishing (A2 Internet Publishing; FTP) (NAME)
2.10 Employment Educational Multimedia (A2 Educational Media; Instructional Media; Mechanical Teaching Aids) (NAME) (A2TECHGRP uses Educational Media)
2.10.1 Employment Video (NAME)
2.10.2 Employment CD-ROM (NAME)

- **2.10.3 Employment DVD** (A2 Digital Video Discs) (NAME)
- **2.10.4 Employment Educational Broadcasting** (A2TECHGRP)
  - **2.10.4.1** Radio Broadcasting (NAME)
  - **2.10.4.2** Television Broadcasting (NAME)
  - **2.10.4.3** Satellite Broadcasting (NAME)
  - **2.10.4.4** Webcasting (A2 Web Broadcasting) (NAME)
- **2.10.5 Employment Streaming Media** (NAME)
  - **2.10.5.1** Streaming Audio (NAME)
  - **2.10.5.2** Streaming Video (NAME)

2.11 Employment Human Computer Interaction (A2 Human Computer Interface; Man Machine Systems; HCI) (A2TECHGRP)

2.12 Employment Accessibility (A2 Web Accessibility; Disabled Access) (NAME)

2.13 Employment Embedding Technology (A2 Integrating Technology) (NAME)

2.14 Employment Legal and Ethical Issues (NAME)

- **2.14.1 Employment Privacy** (A2TECHGRP)
- **2.14.2 Employment Intellectual Property** (A2 Ownership of Ideas; Intellectual Property Rights; IPR) (A2TECHGRP)
  - **2.14.2.1** Copyright (A2 Copyrights) (A2TECHGRP)
  - **2.14.2.2** Conditions of Use (NAME)
  - **2.14.2.3** Data Protection (A2TECHGRP)

2.15 Employment Standards (A2TECHGRP)

- **2.15.1 Employment Metadata** (NAME)
  - **2.15.1.1** Dublin Core (NAME)
  - **2.15.1.2** IMS (NAME)
  - **2.15.1.3** Controlled Vocabularies (A2 Taxonomies; Thesauri; Subject Headings; Classification Schemes) (NAME)

2.16 Employment Software Packages (A2 Computer Programs) (NAME)

- **2.16.1 Employment Computer Mediated Communication** (A2 CMC)
  - **2.16.1.1** CU-See Me
  - **2.16.1.2** Hyper News
  - **2.16.1.3** ICQ
  - **2.16.1.4** NetMeeting
  - **2.16.1.5** PowerPoint
  - **2.16.1.6** ProShare
  - **2.16.1.7** Web Board

2.16.2 **EmploymentVirtual Learning Environments** (A2 Online Learning Environment; Hypertext Learning Environment; VLEs; Learning Management Systems; Collaborative Learning Software)
  - **2.16.2.1** Blackboard
  - **2.16.2.2** Clyde Virtual University (A2 CVU)
  - **2.16.2.3** Colloquia
  - **2.16.2.4** Co Mentor
  - **2.16.2.5** COSE
  - **2.16.2.6** First Class
  - **2.16.2.7** Fretwell-Downing
  - **2.16.2.8** Lotus Learning Space
  - **2.16.2.9** Merlin
  - **2.16.2.10** M tutor
  - **2.16.2.11** PIONEER
  - **2.16.2.12** Tool Book
  - **2.16.2.13** Top Class
  - **2.16.2.14** Web Course in a Box
  - **2.16.2.15** WebCT
  - **2.16.2.16** Virtual Learning Space
  - **2.16.2.17** Virtual-U

2.16.3 **Employment Computer Aided Assessment** (A2 Computer Aided Testing; Computer Assisted Assessment; CAA; Computer Based Assessment) (NAME) (A2TECHGRP uses Computer Assisted Testing)
  - **2.16.3.1** CASTLE
  - **2.16.3.2** Clyde Virtual University Assessment Engine (A2 CVU Test Wizard)
  - **2.16.3.3** EQL Interactive Assessor
  - **2.16.3.4** Hot Potatoes
  - **2.16.3.5** Miranda (A2 CVU Assessment Engine)
  - **2.16.3.6** Question Mark (A2QuestionMark Perception; Question Mark Designer)
  - **2.16.3.7** TRIADS
  - **2.16.3.8** Web MCQ
  - **2.16.3.9** Web Test
  - **2.16.3.10** Win Asks Professional
  - **2.16.3.11** WWW Assign

2.16.4 **Employment Groupware**
  - **2.16.4.1** BSCW
  - **2.16.4.2** Yahoo Clubs

- **2.16.5 Employment Web Site Production** (A2 Web Editors, HTML Editors, WYSIWYG Editors)
  - **2.16.5.1** CourseBuilder (A2CourseBuilder for Dreamweaver)
  - **2.16.5.2** DreamWeaver
  - **2.16.5.3** Netscape Composer
  - **2.16.5.4** FrontPage
  - **2.16.5.5** Hotmetal Pro
  - **2.16.5.6** Pagemill
- **2.16.6 Employment Multimedia Authoring**
  - **2.16.6.1** Authorware
  - **2.16.6.2** Director
  - **2.16.6.3** Flash
- **2.16.7 Employment Simulations**
  - **2.16.7.1** Learning Landscapes
  - **2.16.7.2** Multi-Verse
- **2.16.8 Employment Graphic Design** (A2 Computer Graphics)
  - **2.16.8.1** Corel Xara
  - **2.16.8.2** Illustrator
  - **2.16.8.3** Paint Shop Pro
  - **2.16.8.4** Photoshop

Employment Related Educational Taxonomy Phase Three: Academic Management

- **3 Employment Academic Management**
  - **3.1Employment Financial Management** (A2 Money Management) (NAME) (A2TECHGRP uses Money Management)
    - **3.1.1 Employment Financial Policy** (A2 Fiscal Policy) (A2TECHGRP)
    - **3.1.2 Employment Financial Support** (A2 Funding; Economic Support; Financing)
      - **3.1.2.1** Fund-Raising(A2TECHGRP)
        - **3.1.2.1.1** Grants (A2 Subsidies) (A2TECHGRP)
    - **3.1.3 Employment Accounting** (A2TECHGRP)
    - **3.1.4 Employment Budgeting** (A2 Budgets; Budgetary Control) (A2TECHGRP)
  - **3.2 Employment Planning** (A2TECHGRP)
    - **3.2.1 Employment Accreditation** (A2TECHGRP)
    - **3.2.2 Employment Quality Assurance** (A2 QAA) (A2TECHGRP)
  - **3.3 Employment Personnel Management** (A2 Human Resources; Human Resource Management) (A2TECHGRP)

3.3.1 Employment Recruitment (A2TECHGRP)

3.3.2 Employment Selection (A2TECHGRP)

3.3.3 Employment Contracts (A2TECHGRP)

3.3.4 Employment Induction (A2TECHGRP)

3.3.5 Employment Training (A2TECHGRP)

3.3.6 Employment Motivation (A2TECHGRP)

3.3.7 Employment Team Building (NAME)

3.3.8 Employment Supervision (A2TECHGRP)

3.3.9 Employment Performance Appraisal (A2 Personnel Evaluation; Staff Evaluation) (NAME) (A2TECHGRP uses Personnel Evaluation)

3.3.10 EmploymentStaff Development (A2TECHGRP)

3.3.11 EmploymentGrievance Procedures (A2TECHGRP)

3.3.12 EmploymentDisciplinary Procedures (NAME)

3.3.13 EmploymentEqual Opportunities (A2 Employment Discrimination; Equal Employment; Social Exclusion; Job Discrimination) A2TECHGRP

3.3.13.1 Gender(A2 Sex) (NAME) (A2TECHGRP uses Sex)

3.3.13.2 Race **(**A2TECHGRP)

3.3.13.3 Ethnicity(A2TECHGRP)

3.3.13.4 Nationality(NAME)

3.3.13.5 Disabilities(A2TECHGRP)

3.3.13.6 Social Class(A2TECHGRP)

3.3.13.7 Religion(A2TECHGRP)

3.3.13.8 Sexual Orientation(A2 Sexuality; Sexual Preference; Sexual Identity) (NAME)

3.3.13.9 Harassment(NAME)

3.3.14 Employment Communication (A2TECHGRP)

3.3.15 Employment Industrial Relations (A2 Employee Relations;Labor Relations) (NAME) (A2TECHGRP uses Labor Relations)

3.3.16 Employment Investors in People (A2 IIP) (NAME)

3.4 Employment Professional Development

3.4.1 Employment Courses (A2TECHGRP)

3.4.2 Employment Conferences (A2TECHGRP)

3.4.3 Employment Mentors (A2TECHGRP) *See also under Educational Development – Teaching and Learning Methods*

3.4.4 Employment Qualifications (A2TECHGRP)

3.4.4.1 Degrees (A2TECHGRP)

3.4.5 Employment Professional Associations (A2TECHGRP)
  3.4.5.1 Professional Recognition (A2 Professional Status) A2TECHGRP
3.4.6 Employment Portfolios (NAME)
3.4.7 Employment Research (A2TECHGRP) *See also under Educational Development – Outcomes of Education)*
3.4.8 Employment Publication (NAME)
  3.4.8.1 Peer Reviewed Publication (A2 Refereed Publications) (NAME) (A2TECHGRP uses Peer Evaluation)
3.4.9 Employment (A2 Jobs) (A2TECHGRP)
  3.4.9.1 Job Search Methods (A2TECHGRP)
  3.4.9.2 Curriculum Vitae (A2 Resume; CV) (NAME) (A2TECHGRP uses Resume)
  3.4.9.3 Job Application (A2TECHGRP)
  3.4.9.4 Employment Interviews (A2 Job Interviews) (A2TECHGRP)
  3.4.9.5 Career Planning (A2TECHGRP)
  3.4.9.6 Career Development (A2TECHGRP)
3.4.10 Employment Secondments(A2TECHGRP)
3.4.11 Employment Sabbaticals (A2 Study Leave) (NAME) (A2TECHGRP uses Study Leave)
3.4.12 Employment Personal Development (NAME) (A2TECHGRP uses Individual Development)
3.5 Employment Project Management (NAME)
  3.5.1 Employment Project Planning (NAME)
  3.5.2 Employment Project Design (NAME) (A2TECHGRP uses Programmed Design)
  3.5.3 Employment Project Development (NAME) (A2TECHGRP uses Programmed Development)
  3.5.4 Employment Project Evaluation (NAME) (A2TECHGRP uses Programmed Evaluation)
3.6 Employment Consultancy (A2 Consultants) (NAME) (A2TECHGRP uses Consultants)

Employment Related Educational Taxonomy Phase Four: Resource Types One & Two

4 Employment Resource Types
  4.1 Employment Bibliographies (A2 Reading Lists; Book Lists; Booklists; Literature Reviews; Resource Lists) (A2TECHGRP)
  4.2 Employment Case Studies (A2TECHGRP)
  4.3 Employment FAQs (A2 Frequently Asked Questions) (NAME)
  4.4 Employment Glossaries (A2 Word Lists; Lexicons; Dictionaries; Vocabularies; Terminologies) (A2TECHGRP)
  4.5 Employment Handouts (NAME)
  4.6 Questionnaires (A2TECHGRP)
  4.7 Employment Tests (A2 Quizzes; Examinations) (A2TECHGRP)

4.8 Employment Graphics (A2 Graphic Images; Pictures; Diagrams; Illustrations) (NAME)
  4.8.1 Employment Animations (NAME)
4.9 Employment Multimedia (NAME)
4.10 Employment Interactions (NAME)

Employment Related Educational Taxonomy Phase Five: Subject

5 Employment Subjects (A2 Academic Discipline)
  5.1 Generalities (Dewey)
    5.1.1 Employment Bibliography (Dewey)
    5.1.2 Employment Library Science (A2 Information Science) (Dewey)
    5.1.3 Employment Encyclopedias(NAME)
    5.1.4 Employment Unassigned (Dewey)
    5.1.5 Employment Magazines (Dewey)
    5.1.6 Employment Museums (Dewey)
    5.1.7 Employment Journalism (Dewey)
    5.1.8 Employment General Collections (Dewey)
    5.1.9 Employment Manuscripts, Rare Books (Dewey)
  5.2 Employment in Philosophy (Dewey)
    5.2.1 Employment in General Philosophy (NAME)
    5.2.2 Employment in Metaphysics (Dewey)
    5.2.3 Employment in Epistemology (Dewey)
    5.2.4 Employment in Specific Philosophies (Dewey)
    5.2.5 Employment in Logic (Dewey)
    5.2.6 Employment Ethics (Dewey)
    5.2.7 Employment in Ancient Philosophy (Dewey)
    5.2.8 Employment in Modern Philosophy (Dewey)
  5.3 Employment in Religion (A2 Divinity) (Dewey)
    5.3.1 Employment in Religion (Dewey)
    5.3.2 Employment in Theology (NAME)
    5.3.3 Employment in the Bible (Dewey)
    5.3.4 Employment in Christian Church History (Dewey)
    5.3.5 Employment in Christian Denominations (Dewey)
    5.3.6 Employment in Other Religions (Dewey)

- **5.4 Employment Social Science** (Dewey)
  - **5.4.1 Employment Sociology** (A2 Social Science) (NAME)
  - **5.4.2 Employment Political Science** (A2 Politics) (Dewey)
  - **5.4.3 Employment Economics** (Dewey)
  - **5.4.4 Employment Law** (Dewey)
  - **5.4.5 Employment Public Administration** (Dewey)
  - **5.4.6 Employment Social Work** (A2 Social services) (NAME)
  - **5.4.7 Employment Education** (Dewey)
  - **5.4.8 Employment Psychology** (NAME)
  - **5.4.9 Employment Marketing** (A2 Commerce) (NAME)
  - **5.4.10 Employment Ethnology** (A2 Customs; Folklore) (NAME)
- **5.5 Employment Language** (Dewey)
  - **5.5.1 Employment Language** (Dewey)
  - **5.5.2 Employment Linguistics** (Dewey)
  - **5.5.3 Employment English** (Dewey)
  - **5.5.4 Employment in German** (Dewey)
  - **5.5.5 Employment in French** (Dewey)
  - **5.5.6 Employment in Italian, Romanian** (Dewey)
  - **5.5.7 Employment in Spanish, Portuguese** (Dewey)
  - **5.5.8 Employment in Latin** (Dewey)
  - **5.5.9 Employment in Classical Greek** (Dewey)
  - **5.5.10 Employment in Other Languages** (Dewey)
- **5.6 Employment Science** (Dewey)
  - **5.6.1 Employment Science** (Dewey)
  - **5.6.2 Employment Mathematics** (A2Maths) (Dewey)
  - **5.6.3 Employment Statistics** (NAME)
  - **5.6.4 Employment Astronomy** (Dewey)
  - **5.6.5 Employment Physics** (Dewey)
  - **5.6.6 Employment Chemistry** (Dewey)
  - **5.6.7 Employment Earth Sciences** (A2 Geology) (Dewey)
  - **5.6.8 Employment Paleontology**(NAME)
  - **5.6.9 Employment Biosciences** (A2 Life Sciences; Biology) (NAME)
  - **5.6.10 Employment Botany** (Dewey)
  - **5.6.11 Employment Zoology**(Dewey)
- **5.7 Employment Technology** (Dewey)

- **5.7.1 Employment Computer Science** (A2 Computing) (NAME)
- **5.7.2 Employment Medicine** (Dewey)
- **5.7.3 Employment Engineering** (Dewey)
- **5.7.4 Employment Agriculture** (A2 Agricultural Science) (Dewey)
- **5.7.5 Employment Management** (A2 Management Science) (Dewey)
- **5.7.6 Employment Chemical engineering** (Dewey)
- **5.7.7 Employment Manufacturing** (Dewey)
- **5.7.8 Employment in Specific Industries** (Dewey)
- **5.7.9 Employment Related Buildings** (Dewey)

5.8 Arts (Dewey)

- **5.8.1 Arts, Entertainment** (Dewey)
- **5.8.2 Civic and Landscape Art** (Dewey)
- **5.8.3 Architecture** (Dewey)
- **5.8.4 Plastic Arts, Sculpture** (Dewey)
- **5.8.5 Drawing, Decorative Arts** (Dewey)
- **5.8.6 Painting** (Dewey)
- **5.8.7 Graphic Arts, Printmaking** (Dewey)
- **5.8.8 Photography** (Dewey)
- **5.8.9 Music** (Dewey)
- **5.8.10Performing Arts**(NAME)

5.9 Literature of Employment(Dewey)

- **5.9.1 Literature** (Dewey)
- **5.9.2 American** (Dewey)
- **5.9.3 English** (Dewey)
- **5.9.4 German** (Dewey)
- **5.9.5 French** (Dewey)
- **5.9.6 Italian, Romanian** (Dewey)
- **5.9.7 Spanish, Portuguese** (Dewey)
- **5.9.8 Latin** (Dewey)
- **5.9.9 Classical Greek** (Dewey)
- **5.9.10 Other Literatures** (Dewey)

5.10 Employment History (Dewey)

- **5.10.1 Employment Geography and History** (Dewey)
- **5.10.2 Employment Geography and Travel** (Dewey)
- **5.10.3 Employment Biography, Genealogy** (Dewey)

5.10.4 Employment History of the Ancient World (Dewey)
5.10.5 Employment Archaeology (NAME)
5.10.6 Employment History of Europe (Dewey)
5.10.7 Employment History of Asia (Dewey)
5.10.8 Employment History of Africa (Dewey)
5.10.9 Employment History of North America (Dewey)
5.10.10 Employment History of South America (Dewey)
5.10.11 Employment History of Other Areas (Dewey)

Reference Description:

DOT for Windows assists job seekers, employers, educational and training institutions, researchers and others by detailing tasks performed, educational requirements, and skills needed for more than **12,000** types of jobs.

It is the complete, 1,300-page, 2-volume DOT, with a retrieval program that enables you to search easily and quickly using words or numbers on any of the **28,800** job titles.

You can click for groups and click a group to go to successive levels of subgroupings.

Search the DOT index using any alphanumeric string to locate job(s) by DOT code or a portion of one, or to find the code for any job title containing a word, phrase or portion of a word of your choice.

You can also browse, copy, paste, and output information to any Windows document or to a printer.

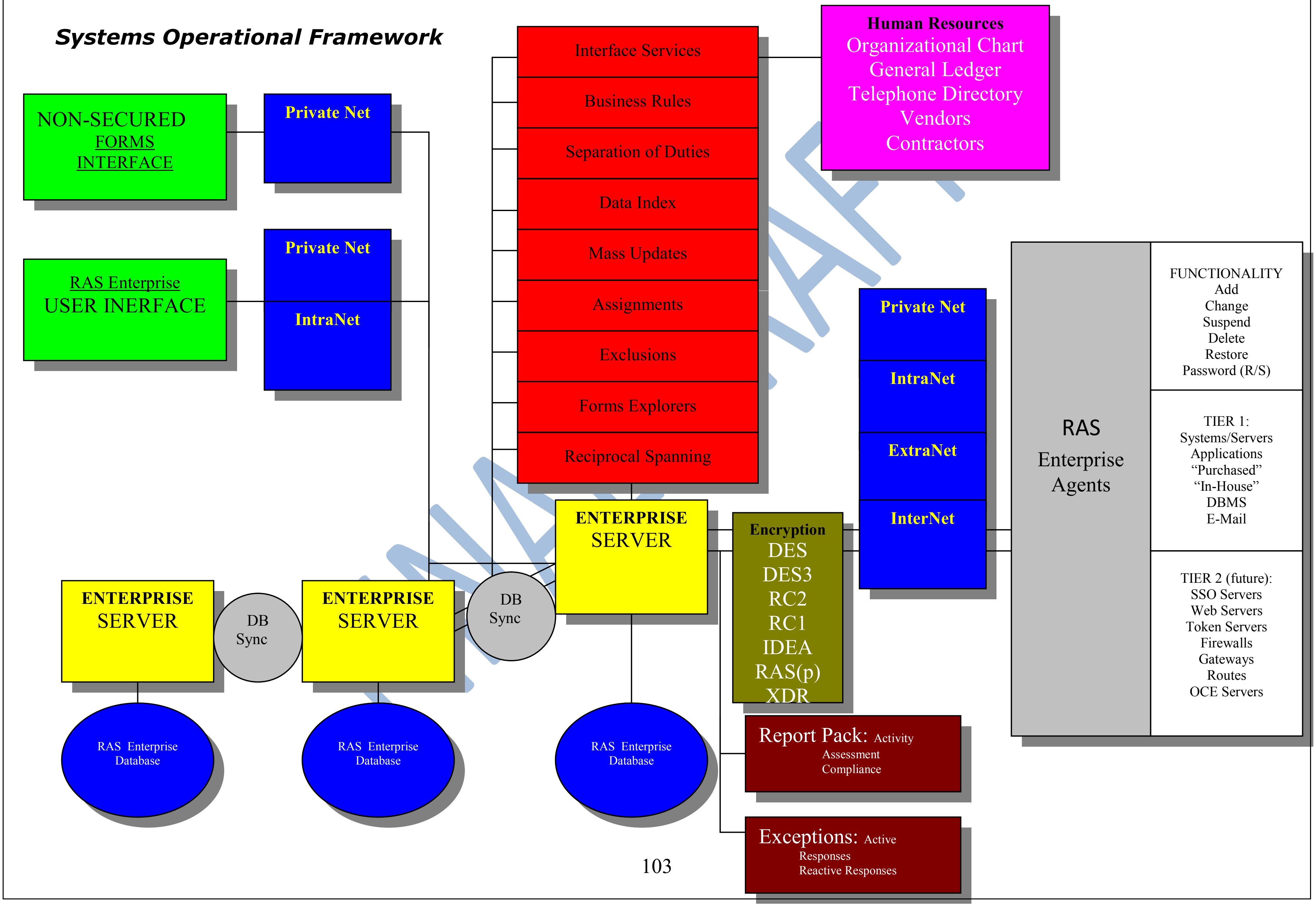
SMARTPHONE APPLICATION DEVELOPERS FOR INDIVIDUAL SYSTEMS DEVELOPMENT

1. **IDEVS**@ http://www.idevs.com/?gclid=CKCFquyz66kCFQ5EgwodElilZg
2. **AVENUESOCIAL**@http://www.avenuesocial.com/portfolio.html&http://www.avenuesocial.com/mob-app.php *****
3. **Bianor** @ http://www.bianor.com/mobile-application-development/
4. **Fuzz Productions @** http://fuzzproductions.com/mobile/?_kk=mobile%20app%20developer&_kt=4c110d61-af85-4714-820f-dabd53708bc0&gclid=CJr6-au466kCFakaQgodIndPYw
5. **Mutual Mobile @** http://www.mutualmobile.com/clients/
6. **JLOOP** @ http://www.jloop.com/?gclid=CKXNwNW566kCFRxrgwodZAM0Xw
7. **SourceBits @** http://www.sourcebits.com/services
8. **Mobi-People @** http://www.mobi-people.com/services.html
9. **Iammobileapps @** http://www.iammobileapps.com/mobile-services.html
10. **MUBALOO @** http://mubaloo.com/

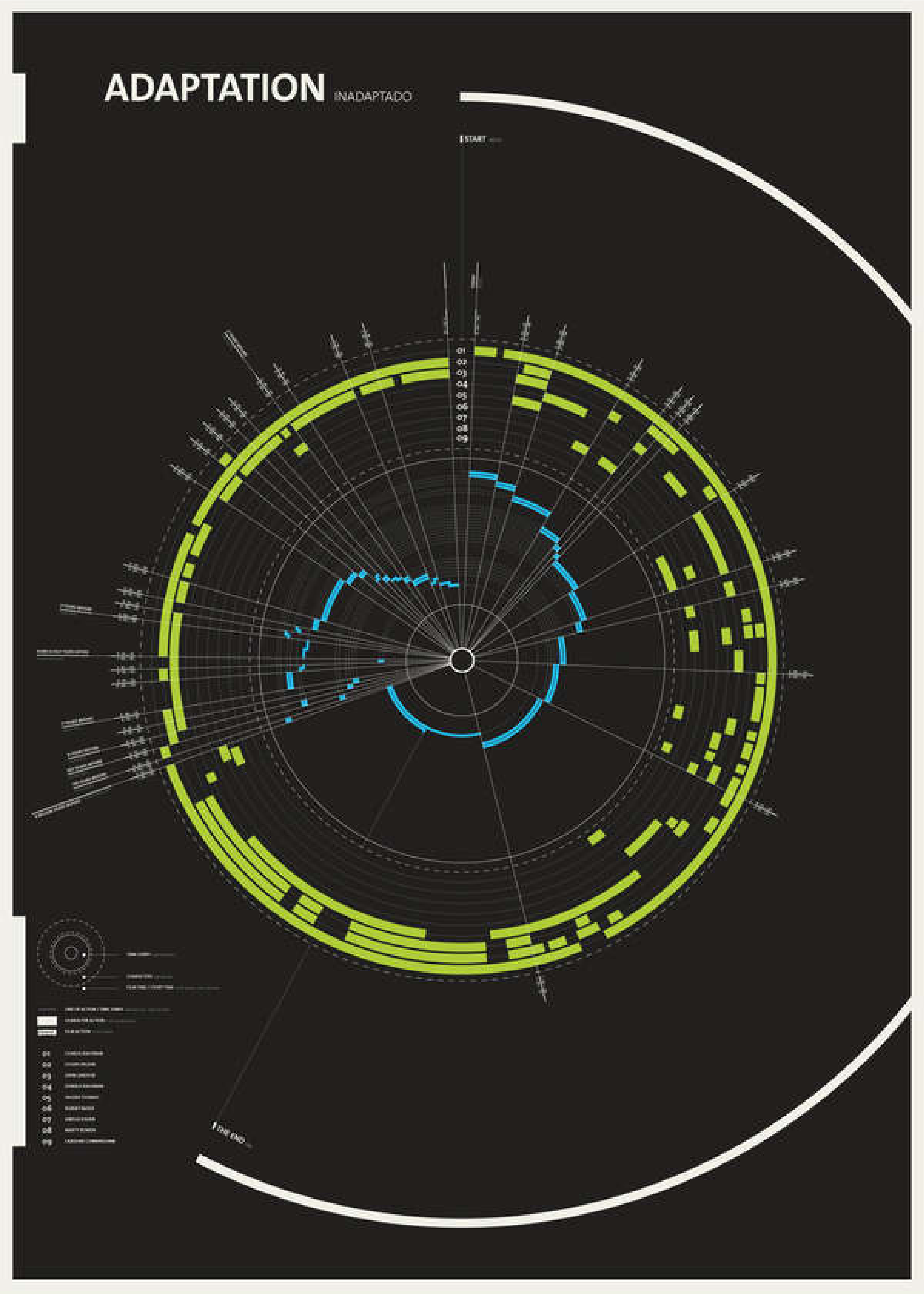
SMARTPHONE APPLICATIONS FOR INDIVIDUAL SYSTEMS DEVELOPMENT

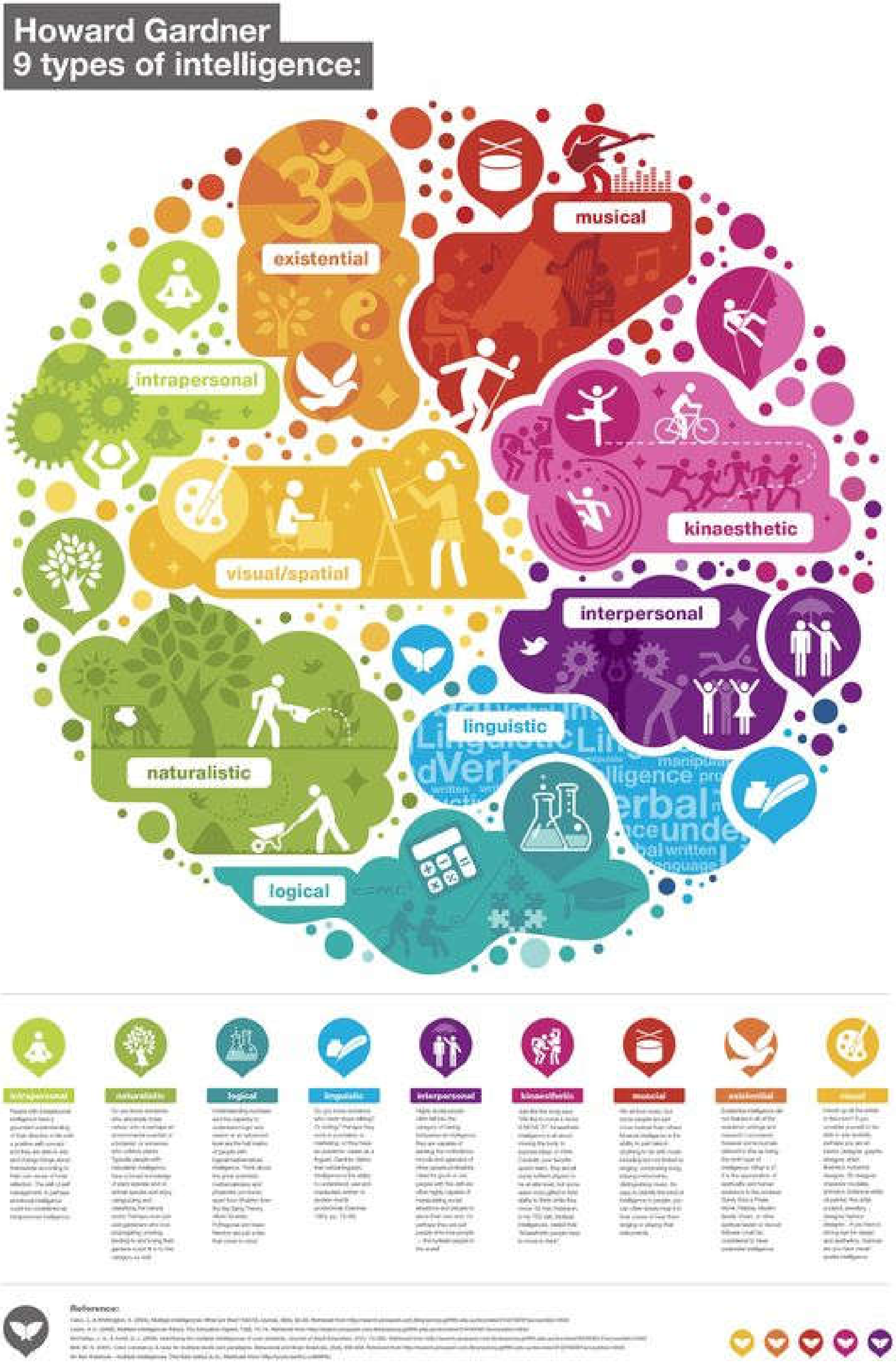
1. **VIRTUAL EMPLOYEE DEVELOPMENT** @ http://virtualemployees.com/outsourcing_LSL_with_VirtualEmployee.php *****
2. **LINDEN SCRIPTING LANGUAGE@**http://wiki.secondlife.com/wiki/LSL_Portal
3. **LINDEN SCRIPTING GUIDE** @https://wiki.internet2.edu/confluence/download/attachments/16291/Linden+Scripting+Language+Guide.html
4. **VBULLETIN DEVELOPMENT** @http://www.centiplex.com/?q=node/113
5. **ADVERTISING REPRESENTATIVES** @ http://www.bannerspace.com/publisher/site_representation.htm *****

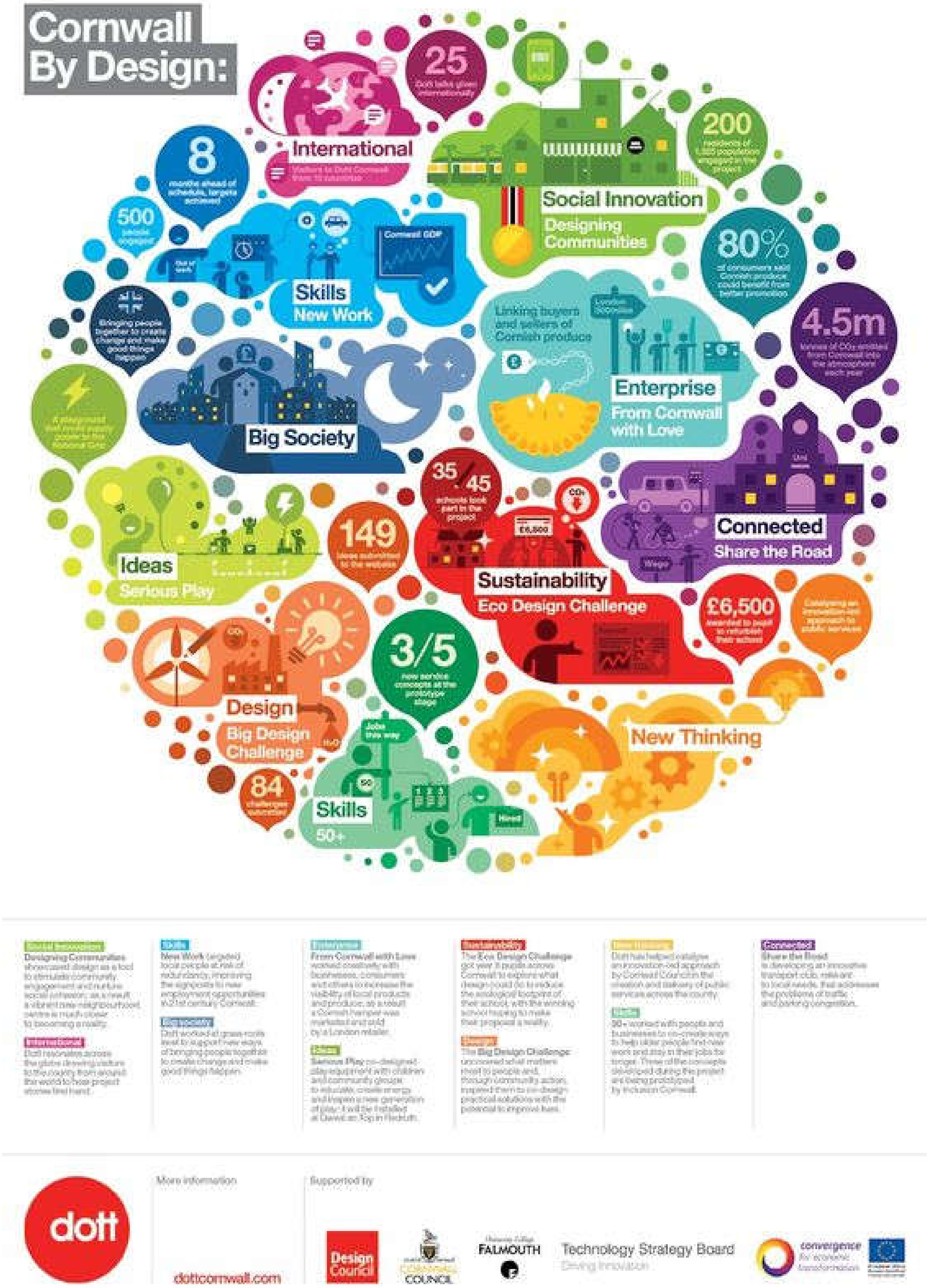
Systems Operational Framework



Human Resources
Organizational Chart
General Ledger
Telephone Directory
Vendors
Contractors
Interface Services
Business Rules
Separation of Duties
Data Index
Mass Updates
Assignments
Exclusions
Forms Explorers
Reciprocal Spanning
NON-SECURED
FORMS
INTERFACE
Private Net
RAS Enterprise
USER INERFACE
Private Net
IntraNet
Private Net
IntraNet
ExtraNet
InterNet
RAS
Enterprise
Agents
FUNCTIONALITY
Add
Change
Suspend
Delete
Restore
Password (R/S)
TIER 1:
Systems/Servers
Applications
“Purchased”
“In-House”
DBMS
E-Mail
TIER 2 (future):
SSO Servers
Web Servers
Token Servers
Firewalls
Gateways
Routes
OCE Servers
ENTERPRISE
SERVER
Encryption
DES
DES3
RC2
RC1
IDEA
RAS(p)
XDR
ENTERPRISE
SERVER
DB
Sync
ENTERPRISE
SERVER
DB
Sync
RAS Enterprise
Database
RAS Enterprise
Database
RAS Enterprise
Database
Report Pack: Activity
Assessment
Compliance
Exceptions: Active
Responses
Reactive Responses


ADAPTATION
INADAPTADO
START
01
02
03
04
05
06
07
08
09
THE END


Howard Gardner
9 types of intelligence:
existential
musical
intrapersonal
kinaesthetic
visual/spatial
interpersonal
linguistic
naturalistic
logical
intrapersonal
naturalistic
logical
linguistic
interpersonal
kinaesthetic
musical
existential
visual
Reference:


Cornwall
By Design:
25
Dott talks given internationally
International
Visitors to Dott Cornwall from 15 countries
8
months ahead of schedule, targets achieved
500
people engaged
Skills
New Work
Cornwall GDP
Bringing people together to create change and make good things happen
Big Society
A playground that could supply power to the National Grid
Social Innovation
Designing Communities
200
residents of 1,500 population engaged in the project
80%
of consumers said Cornish produce could benefit from better promotion
Linking buyers and sellers of Cornish produce
Enterprise
From Cornwall with Love
4.5m
tonnes of CO₂ emitted from Cornwall into the atmosphere each year
35/45
schools took part in the project
149
ideas submitted to the website
Ideas
Serious Play
Sustainability
Eco Design Challenge
£6,500
Connected
Share the Road
Wego
£6,500
awarded to pupil to refurbish their school
Catalysing an innovation-led approach to public services
3/5
new service concepts at the prototype stage
Design
Big Design Challenge
CO₂
H₂O
Jobs this way
Skills
50+
Hired
84
challenges submitted
New Thinking

Social Innovation
Designing Communities showcased design as a tool to stimulate community engagement and nurture social cohesion; as a result a vibrant new neighbourhood centre is much closer to becoming a reality.

International
Dott resonates across the globe drawing visitors to the county from around the world to hear project stories first hand.

Skills
New Work targeted local people at risk of redundancy, improving the signposts to new employment opportunities in 21st century Cornwall.

Big Society
Dott worked at grass-roots level to support new ways of bringing people together to create change and make good things happen.

Enterprise
From Cornwall with Love worked creatively with businesses, consumers and others to increase the visibility of local products and produce; as a result a Cornish hamper was marketed and sold by a London retailer.

Ideas
Serious Play co-designed play equipment with children and community groups to educate, create energy and inspire a new generation of play; it will be installed at Gweal an Top in Redruth.

Sustainability
The Eco Design Challenge got year 8 pupils across Cornwall to explore what design could do to reduce the ecological footprint of their school, with the winning school hoping to make their proposal a reality.

Design
The **Big Design Challenge** uncovered what matters most to people and, through community action, inspired them to co-design practical solutions with the potential to improve lives.

New Thinking
Dott has helped catalyse an innovation-led approach by Cornwall Council in the creation and delivery of public services across the county.

Skills
50+ worked with people and businesses to co-create ways to help older people find new work and stay in their jobs for longer. Three of the concepts developed during the project are being prototyped by Inclusion Cornwall.

Connected
Share the Road is developing an innovative transport club, relevant to local needs, that addresses the problems of traffic and parking congestion.

dott

More information
dottcornwall.com

Supported by
Design Council
Cornwall Council
University College Falmouth
Technology Strategy Board
Driving Innovation
convergence for economic transformation

(ANMESCL^2 EL NEGRO)

ALPHA NUMEROUS MAXIMA
EGREGIA SUMMA CUM LAUDE

THE ONESIMUS EQUATIONS PROCEDURAL CONFIGURATION & INTERPRETATIONS FOR GENETIC-BASED CONSULTATIVE PLANNING & DESIGN APPROACHES

$$X^{3}\left(RW=\frac{EH^{2}}{QM}\right)$$

Homo Economicus Universal

THE OVERALL TECHNICAL GOAL & OBJECTIVES OF THE 9 PRINCIPLE PARTS OF ENGLISH SPEECH FORMULA SYSTEMS INVOLVING THE IBOS [DOSA/DALP/IAOA] TECHNOLOGY BASE

$$L^{2}\left(E=\frac{I^{2}}{V}\right)$$

Pursuing the Planning & Design Strategy (CPDA Norms & Standards Issues)

1. First, to simultaneously change the worded or ideological reflection of abstract thoughts or policies, as well as real-time descriptions, into different distributed or multiple levels of comprehension. Whether or not they are defined in the past, present or future tense.

2. Second, to establish a synonymous relationship with definitive principles, and those words, concepts & ideas used to engineer software, systems, internet & societal issues or programs through CASE technologies.
3. Third, to transform biological entities into biographic, database or library technologies. Then, to transform these biological & biographic terms or descriptions into virtual human beings or other entities within virtual environments or societies. The immediate goal of which, is to achieve the ability to predict futuristic outcomes involving man, machine & the real-time environment as a whole.
4. Fourth, to simultaneously implement those organizational policies involving problem-solving measures of effectiveness into specific educational hierarchies, or subordinate distributed environments, across multiple levels of the comprehensive thought process.
5. Finally, to facilitate an accurate or acceptable level of global market prediction & manipulation through the application of genetics into the previous areas by way of the addition & use of a consultative matrix.

THE INFUSION OF 9 ENNEAGRAMIC PRINCIPLE PARTS OF ENGLISH SPEECH PATTERNS INTO THE GLOBAL DRIVERS OF STRATEGIC & TACTICAL INNOVATIONS INVOLVING MASLOW's HIERARCHY OF NEEDS

De Imperatoribus Romanis

$$G^2 \left(E= \frac{NT^2}{OT}\right)$$

Specifying & Implementing Solutions (CPDA Morale & Cohesion Issues)

1. The **12** Tribes of the Body of Israel (The Driving Principles of Judaism)
   I. **Pronouns** – [$G^{2(S)}$]
2. The **12** Apostles of the Body of Christ (The Structural Foundation of Christianity)
   I. **Adverbs** – [M^2]
3. The **12** Commanding Principles of the Body of Mohammed (The **12** Concepts, Traditions & Steps of Islam)
   I. **Adjectives** – [$G^{2(M)}$]
4. The **12** Regions of the Human Body Involving the Fields of Human Activities (The DOT)
   I. **Nouns** – [A^2]
5. The **12** Districts of the U.S. Federal Reserve System (The Commanding Heights of Banking)
   I. **Interjections** – [$T^{3(I)}$]
6. The **12** Global Economic Drivers of Strategic & Tactical Innovations (Statistic & Logistical Operations)
   I. **Prepositions** – [$G^{2(E)}$]
7. The **12** NPMIS Members of the Board of Network Representatives (NAME & A-Square Technologies)
   I. **Conjunctions** – [$T^{3(C)}$]
8. The **12** Method Structures of Strategic & Tactical Operations (The Planning & Design Approaches)
   I. **Verbs** – [L^2]

THE CAPABILITY MATURITY MODEL INTEGRATION-INTEGRATED PRODUCT & PROCESS DESIGN STAGED (CMMI-IPPD STAGED)

9. The **12** Sections of the Human Biological Existence (The Biochemical Response Systems) – **[PA^2]**
   I. The **Transitive/Intransitive Verbs** involving **Norms/Standards** (The Philosophical Approaches)
10. The **12** Components of the Economic Intelligence Network News Service (Evolving OD) – **[PA^2]**
    I. The **Transitive/Intransitive Verbs** involving **Power/Authority** (The Sociological Approaches)
11. The **12** Components of Employment Related Software Development (Semantic CASE Development) – **[PA^2]**
    I. The **Transitive/Intransitive Verbs** involving **Goals/Objectives** (The Physiological Approaches)
12. The **12** Components of the Change Equation (The Infused Genetic Prototyping) – **[PA^2]**
    I. The **Transitive/Intransitive Verbs** involving **Morale/Cohesion** (The Psychological Approaches)

THE ALPHANUMERIC OR MATHEMATICAL CONFIGURATION OF GRAMMATIC INTERPRETATIONS INVOLVING PEOPLE WITHIN PROBLEM SOLVING MEASURES OF EFFECTIVENESS THAT HOUSES THE TOTAL CONSULTATIVE PLANNING & DESIGN APPROACHES

$$PA^2 \left(MC = \frac{NS^2}{GO}\right)$$

Involving People or Arranging for Continuing Change & Improvement (CPDA Goals & Objective Issues)

[TTT] – [ADM]

The Genetic Consultative Interpretation of the Alphanumeric or Mathematical Configurations

[ADM] – [SLF]

The Chemical or Elemental Representation of the Consultative Genetic Interpretations

The previous formulae & genetic components use an interrelated framework by which procedural thought can be expressed within numerous fronts of the following representations:

1. Systems Transformation/Biographical Methods/Power & Authority/Sociological Issues
2. Systems Translation/Biochemical Methods/Morale & Cohesion/Psychological Issues
3. Systems Transfiguration/Biomechanical Methods/Norms & Standards/Philosophical Issues
4. Systems Transaction/Biological Methods/Goal & Objectives/Physiological Issues

All nine formulas represent the 9 principle parts of English speech, of which, are implemented into supporting or facilitating a series of procedures that use the human genome to customize internet content. Additionally, this same process simultaneously supports a means from which the words, concepts & ideas that express or defines the particulars of the human condition are jointly transformed into virtual and/or real-time systems & internet technologies.

Overall, these mathematical equations function as a central nervous system for definitive words, concepts & ideas. Whereby, a synonymous relationship is established between the managerial principles of problem solving measures of effectiveness within educational hierarchies, and that of change or risk management within novel organizational forms. Moreover, this approach toward systems development shall facilitate management's ability to instantly infuse strategic or tactical policies & technology bases throughout hierarchal or collaborative businesses within the distributed environment of the global economy.

Furthermore, the 9 mathematical equations of NAME (i.e., the A-Square Technology Group) use genetics to facilitate the simultaneous manipulation & implementation of approximately **11,664 Strategic & Tactical Operations** behind each & every word, concept or idea involved in the application of problem solving measures of effectiveness, housed within a consultative planning & design approach or environment consisting of human or social values.

Overall, this process will establish a means by which those strategic & tactical issues involving varied entities, will have the words, concepts & ideas used to describe their mental or physical existence transformed into a virtual private network (i.e., autonomous agent platforms). This in turn, will establish a functional search engine that personalizes internet content into organizational and/or personal user-friendly guidelines, consisting of those 5-phases involved with organizational development thru the principles change and risk management. Finally, this goal & objective is achieved through infusing the 9 mathematical equations into the nine principal subcomponents of a Method Structure, whose number as a whole is approximately 12, one for each major region consisting of biological lifeforms or strategic & tactical bodies of information.

THE SYMBIOTIC LEVELS WITHIN THE GLOBAL DRIVERS OF STRATEGIC & TACTICAL INNOVATIONS INVOLVING THE HUMAN GENOME

$$M^{2}\left(E=\frac{T^{2}}{Q}\right)$$

Information & Knowledge (CPDA Power & Authority Issues)

THE SYMBIOTIC RELATIONSHIP BETWEEN WORDS, CONCEPTS OR IDEAS & THE SOFTWARE ENGINEERING BODY OF KNOWLEDGE

1. The Entry Fields of Human Activities Involving the Strategic & Tactical Usabilities of Risk or Change Management (**TML**) [Linguistic Construction Methods of the Straw MAN Version]
    a. Words – TTT (QMT, AOS & ASOS) [a.]
    b. Clauses & Phrases – CPDA (Genetic Grammar) [g.]
    c. Sentences – CMMI-IPPD (Continuous) [e.]
    d. Paragraphs – SWEBOK (Problem Format) [i.]
    e. Chapters – CPDA (Interventions) [h.]
    f. Books – SEIMPH (References) [c.]
    g. Contracts – ACCI (SEBK) [d.]
    h. Policies – ERF (Usabilities) [b.]

   - i. Strategies & Tactics – TMM (DOT Databases) [f.]

2. The Consultative Planning & Design Approaches Operational Doctrine of Genetic Grammar (**TTL**) [The Visual Construction Methods of the Iron MAN Version]
   - a. Strategic Operations (The Philosophical Approaches Involving the **Norms/Standard** Issues of Genetic Grammar)
   - b. Organizational Development (The Sociological Approaches Involving the **Power/Authority** Issues of Genetic Grammar)
   - c. Change Management (The Psychological Approaches Involving the **Morale/Cohesion** Issues of Genetic Grammar)
   - d. Tactical Operations (The Physiological Approaches Involving the **Goals/Objective** Issues of Genetic Grammar)

3. Software Engineering Body of Knowledge & the Software Engineering Initiative (**TQL**) [The Formal Construction Methods of the Stone MAN Version]
   - a. The Virtual Laboratory Technology Bases
   - b. The Exploratory Research Framework
   - c. The SEIMPH Organizational Proposals
   - d. The SEBK Educational Programs & Textbooks
   - e. The MAN Versions within the IBOS [DOSA/DALP/IAOA] Platforms
   - f. The Capability Maturity Model Integration-Integrated Product & Process Design (CMMI-IPPD Continuous)
   - g. The Theories, Models & Methods of Management
   - h. The Problem Format within the Arrangement for Continual Change & Improvement (ACCI)
   - i. The CPDA Format for Genetic Grammar

THE SYMBIOTIC UNIFICATION SEQUENCES WITHIN THE GLOBAL DRIVERS OF STRATEGIC & TACTICAL INNOVATIONS OR INTERVENTIONS

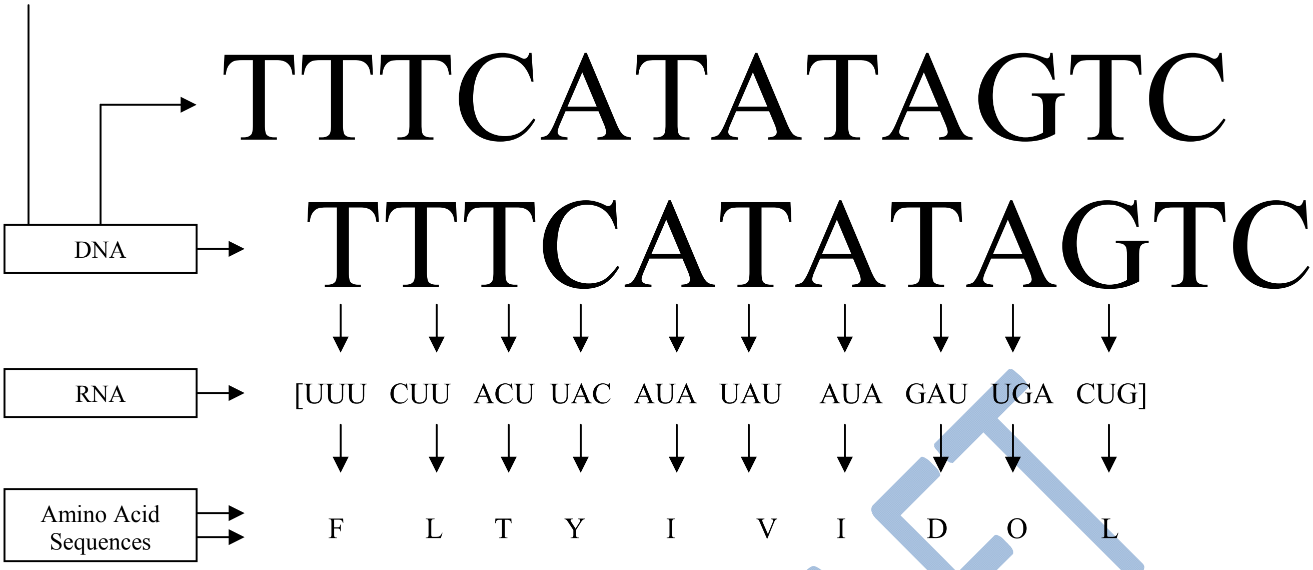
$$T^3 \;\left(L = \frac{I^2}{V}\right)$$

Individual CPDA Involving Phase - 1

TML SEQUENCES (5’->3’)

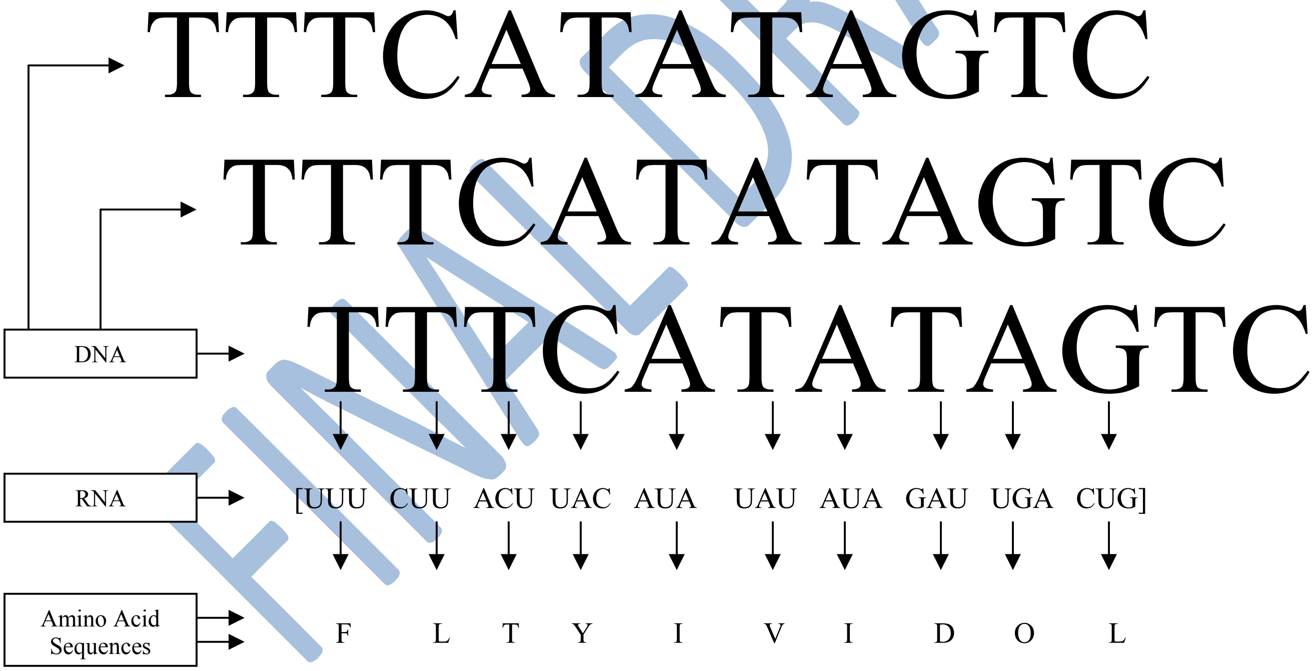
DNA Sequences Representing Problem Analysis (**PA**)

↱ TTTCATATAGTC


TTTCATATAGTC
DNA
TTTCATATAGTC
RNA
[UUU CUU ACU UAC AUA UAU AUA GAU UGA CUG]
Amino Acid Sequences
F L T Y I V I D O L

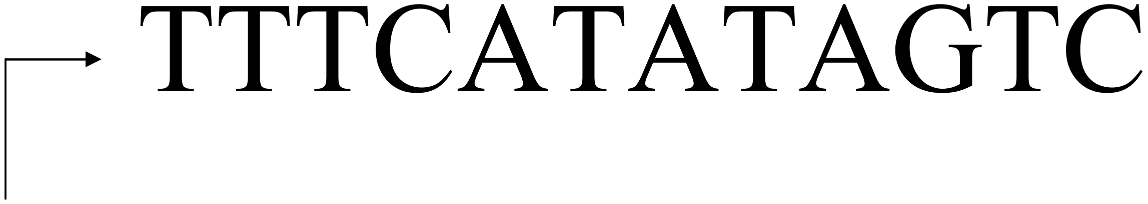
TTL SEQUENCES (3'<-5')

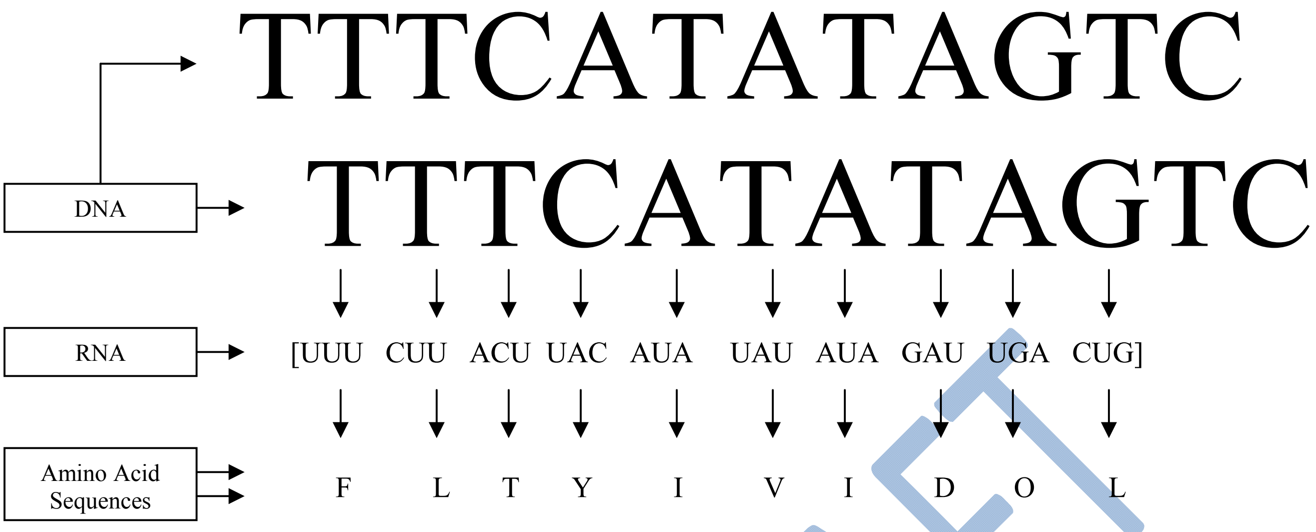
DNA Sequences Representing Decision Analysis (**DA**)


TTTCATATAGTC
TTTCATATAGTC
DNA
TTTCATATAGTC
RNA
[UUU CUU ACU UAC AUA UAU AUA GAU UGA CUG]
Amino Acid Sequences
F L T Y I V I D O L

TQL SEQUENCES (5'->3')

DNA Sequences Representing Potential Problem Analysis (**PPA**)

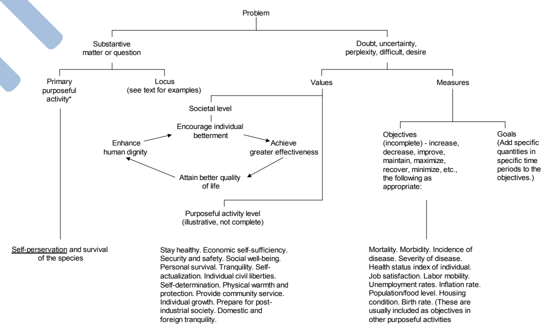

TTTCATATAGTC


TTTCATATAGTC
TTTCATATAGTC
DNA
RNA
[UUU CUU ACU UAC AUA UAU AUA GAU UGA CUG]
Amino Acid Sequences
F L T Y I V I D O L

Final Sequencing for CPDA Document Structuring

F L T Y I V I D O L
F L T Y I V I D O L
F L T Y I V I D O L

THE PROBLEM FORMAT INVOLVING THE USABILITIES FRAMEWORK


Problem
Substantive matter or question
Doubt, uncertainty, perplexity, difficult, desire
Primary purposeful activity*
Locus (see text for examples)
Values
Measures
Societal level
Encourage individual betterment
Enhance human dignity
Achieve greater effectiveness
Attain better quality of life
Purposeful activity level (illustrative, not complete)
Objectives (incomplete) - increase, decrease, improve, maintain, maximize, recover, minimize, etc., the following as appropriate:
Goals (Add specific quantities in specific time periods to the objectives.)
Self-perservation and survival of the species
Stay healthy. Economic self-sufficiency. Security and safety. Social well-being. Personal survival. Tranquility. Self-actualization. Individual civil liberties. Self-determination. Physical warmth and protection. Provide community service. Individual growth. Prepare for post-industrial society. Domestic and foreign tranquility.
Mortality. Morbidity. Incidence of disease. Severity of disease. Health status index of individual. Job satisfaction. Labor mobility. Unemployment rates. Inflation rate. Population/food level. Housing condition. Birth rate. (These are usually included as objectives in other purposeful activities

THE INTERVENTIVE OPERATIONAL DESCRIPTIONS OF THE GHOST TECHNOLOGY BASE IBOS [DOSA/DALP/IAOA]

$$G^2 \left(M = \frac{L^2}{A}\right)$$

Group CPDA Involving Phase - 2

1. **IBOS** – An **I**nternet **B**ased **O**perating **S**ystem is a distributed operating system technology form, that just as a traditional operating system allocates CPU resources in stand-alone systems or workstations, it facilitates the same technological means within CPUs or systems located in local-area-networks throughout multiple wide-area-networks across the globe. The focal point of this technology also manipulates text, documents or information in a similar fashion in order to facilitate the overall objective of implementing problem solving measures of effectiveness within a host of platforms or business environments. [EINNS Links, **VL**, Sociological Methods Involving **Power/Authority** Issues] – Group Ordering & Development (**GOD**)

2. **DOSA** – A **D**istributed **O**perating **S**ystems **A**rchitecture facilitates the organizational ability to overlap the structural divisions of the NAME network, with that of the developmental sections involved with TCP/IP Protocols, Trillium Network Designs, and the formulas representing the Principle Parts of English Speech. The goal of which, is to institute an infrastructure that will upgrade the overall functionality of the NAME network as a whole within virtual & real-time scenarios 60/60/24/7/365. [RAS Model, **RT**, Psychological Methods Involving **Morale/Cohesion** Issues] – Group Ordering Logic (**GOL**)

3. **DALP** – **D**istributed **A**bstract **L**ife **P**rograms is a technological framework that establishes a platform by which definitive norms & operational standards, i.e., DOT database systems & managerial text or protocols, facilitates the implementation of individual & societal-based models. These models support computer generated artificial scenarios used to induce problem-solving measures of effectiveness within over 4 billion ideological, procedural or societal environments. [EWA Models, **ERF**, Philosophical Methods Involving **Norms/Standards** or Value-Based Issues] – Managerial Alphanumeric Creation (**MAN**)

4. **IAOA** – The **I**ntegrated **A**utonomous **O**ffice **A**pplication is the means by which the foundation to input & output strategic or tactical information throughout the Internet consists of a representation and base pairing of 23-25 virtual chromosomes within an IDEAL cellular format. These virtual chromosomes function as barcodes housing condensed data streams within a cellular snap shot in time, or a planning & design approaches 48 cell mode of implementing problem-solving measures of effectiveness within virtual or real-time environments. Each 48 cellular planning & design matrix is interconnected with a 64 cellular genetic matrix, as well as a 20 cell consultative grid that are used collectively to process internet content into knowledge through traditional forms of search engine technologies. This format facilitates a means for personalizing the content of varied websites through library sciences. In closing, the 48 cells of a planning & design matrix overlap key components of the 64 cellular genetic matrix in order to facilitate a means, by which genetics is used to autonomously create synonymous relationships with people, places & things through words, concepts & ideas. While, the remaining 16 genetic cells represent & are infused into the 16 sections of the 5 Phase planning & design search engine protocols (SEP). [EINNS Net map, **CPDA**, Physiological Methods Involving **Goals/Objectives** & Strategic or Tactical Usabilities] – Manufacturing/Enterprise Resource Planning (**MRP**/**ERP**)

THE PROCEDURAL HIERARCHY WITHIN THE GLOBAL DRIVERS OF STRATEGIC & TACTICAL INNOVATIONS OR INTERVENTIONS

$$A^{2}\ \left(E=\frac{CM^{2}}{MC}\right)$$

Inter-Group CPDA Involving Phase - 3

The **Q**uality **M**easures **T**axonomies Issues Involving **T**he **M**eaning of **L**ife (**QMT**)

1. Reference Materials (EINNS) **TML**
    a. Personalized Encyclopedias (Grammatic Synonymous Relationships)
    b. Organizational Related Procedural Strategies (Operational Documentation)
    c. Employee Related Procedural Tactics (Technological Thesauruses)
    d. Biographic & Autobiographic References (Method Structuring)
    e. Screenplays (Organizational, Political & Procedural Scenarios)
    f. Internet Resources (Legal Scenarios)
    g. Enterprise & Manufacturing Resource Planning (Logistic & Statistical Analysis)

The **A**pplications used to **S**upport **O**perational **S**ystems Involving the Issues of **T**he **T**ree of **L**ife (**ASOS**)

2. The Thomas Registry Guides of Organizational or Business Classifications (EWA) **TTL**
    a. Information Manufacturing
        I. Databanking (MRP & ERP Frameworks)
        II. Storage Area Networks (SAN)
        III. Parallel Virtual Machines (PVM)
        IV. Virtual Private Network (VPN)
        V. Individual Based Models (ALF)
        VI. Social Based Models (VRN)
        VII. Economic Based Models (AAA)
    b. Local Area Networks
        I. Virtual Laboratory Technology (VLT)
        II. Exploratory Research Framework (ERF)
        III. Trillium Network Guidelines (TNG)
        IV. Random Access Server (IVR)
        V. Software Engineering Based Knowledge (SEBK)
        VI. Software Engineering Initiative (SEI)
    c. Distributed or Wide Area Networks
        I. Quality Measures Taxonomies (QMT)
        II. Applications used to Support Operational Systems (ASOS)
        III. Applications used in Operational Systems (AOS)

The **A**pplications used in **O**perational **S**ystems Involving the Issues of **T**he **Q**uality **L**ife (**AOS**)

3. The Dictionary of Occupational Titles Job Descriptions (EINNS Links) **TQL**
    a. Performance Appraisals (Strategic & Tactical Operations)
    b. Physiological Settings (Biological Suffix Trees)
    c. Psychological Settings (Personality Profiles)
    d. Philosophical Settings (Silent Weapons for Quiet Wars)

e. Sociological Settings (Commanding Heights)
f. Consultative Interventions (Consul Cube)
g. Planning & Design Approaches (P&D Matrixes)

THE INTERVENTIONAL STRATEGIC & TACTICAL INTERPRETATIONS OF THE IBOS [DOSA/DALP/IAOA] GHOST TECHNOLOGY BASE

$$G^2 \left(S = \frac{L^2}{A}\right)$$

Social System CPDA Involving Phase - 4

1. The Biographical Interpretation of Operational Hierarchies – Computer Aided Design (CAD) The **Power/Authority** P&D Matrix (The Sociological Approaches)
   a. Tactical & Strategic Operational Focal Points
      I. Individual(s) – Person(s), Place(s) or Thing(s)
      II. Group(s) – Community(ies)
      III. Intergroup(s) – State(s)
      IV. Social System(s) – Nation(s)
      V. Larger Social System(s) – Global Entities or Economies/G8 Members
   b. Educational Hierarchies/Taxonomies

2. The Biochemical Interpretation of the Consultative Planning & Design Approaches – Amino Acid Sequencing (AAA/HDR) The **Morale/Cohesion** P&D Matrix (The Psychological Approaches)
   a. The Consultative Interventions
      I. Theory
      II. Catalytic
      III. Confrontational
      IV. Prescriptive
      V. Acceptant
   b. Situation Development
      I. The consultative interventions involving 115 random chemical elements, whose sequences begin with those of the structural atomic issues related to industry designation(s) and/or influences.
      II. Using chemical sequencing to represent the integrated association of consultative interventions.
      III. The individual atomic letters, when associated with the lettering of other atomic elements, will randomly choose an intervention & vise versa.

3. The Biomechanical Interpretation of Operational Phases – Computer Aided Manufacturing (CAM) The **Norms/Standards** P&D Matrix (The Philosophical Approaches)
   a. The Economic Intelligence Network News Service (EINNS)
      I. Analytical Netmapping
   b. The Economic Intelligence Network News Service Links (EINNS Links)
      I. Conceptual Mapping
   c. The Change Equation/Chromosomal Development (CE/CD)

        I. Genetic Mapping
    d. The Employment Related Software Development (ERSD)
        I. Procedural or Structural Mapping
    e. The Cranial Nervous System (Peripheral [HRP]/Autonomic [ERP])
        I. Biological Analogies (Gray's Anatomy)
        II. The Diagnostic & Statistical Manual of Mental Disorders (DSM IV)
        III. Physician's Desk Reference (PDR)

4. The Biological Interpretation of Operational Transactions – Strategic & Tactical Theories, Models & Methods (TMM) The **Goals/Objectives** P&D Matrix (The Physiological Approaches)
    a. The Consultative Approaches
        I. Strategic Operations Phases 1-5/Consultative Grid
    b. The Planning & Design Approaches
        I. Tactical Operations Phases 1-5/Planning & Design Worksheet
    c. The Planning & Design Genetic Matrix
        I. Search Engine Protocol Phases 1-5/Change Equation/Chromosomal Development
    d. The Approaches Involving Computer Aided Software Engineering
        I. Excel Software Engineering Phases 1-5/Integrated Autonomous Office Application

THE **IDEAL** CELLULAR RELATIONSHIP WITHIN THE GLOBAL DRIVERS OF STRATEGIC & TACTICAL INNOVATIONS OR INTERVENTIONS

$$T^3 \ \left(C = \frac{UL^2}{LL}\right)$$

Larger Social System CPDA Involving Phase - 5

1. The **3** Sections Involving the **M**eaning of Life, the **T**ree of Life & **Q**uality of Life Issues within the Alphanumerical Grammatic Formula Systems (**MTQ**) – [**A**^{2}]
    a. The **3** Letters Representing the Human Genome
    b. The **3** Letters Representing the Amino Acid Sequences
    c. The **3** Letters Representing the Atomic Elements
    d. The **3** Letters Housed within each Cell of the CPDA Consul Cube
    e. The **3** Core Sections of each Grammatic Formula
        I. Past, Present & Future Tenses
    f. The **3** Sections of the Integrated Framework
    g. The **3** Sections of the Change Equation Format
    h. The **3** Core Sections of the Integrated Autonomous Office Application
    i. The **3** Core Sections of the IBOS Virtual Laboratory Configuration (VL)
    j. The **3** Areas Concerning PSP, TSP & CMM Structuring
    k. The **3** Core Sections of the Problem Format (Problem Analysis **PA**, Decision Analysis **DA** & Potential Problem Analysis **PPA**)
    l. The **3** Components of the Procedural Hierarchy
    m. The **3** Versions of MAN within the Educational Environment of Software Engineering
2. The **4** Areas of Individual, Group, Intergroup, Social System (Business Entities), & Larger Social Systems (Local, State & Federal, National or International Entities) – [**PA**^{2}]
    a. The **4** Upper Level Components of the Planning & Design Approach Worksheet (WS)

  b. The **4** Managerial Components within Consultative Interventions
  c. The **4** Managerial Components of Capability Maturity Model Integration-Integrated Product & Process Design Staged (CMMI-IPPD Continuous)
  d. The **4** Managerial Components of Software-Capability Maturity Model (SW-CMM)
  e. The **4** Managerial Components of the GHOST Technology Format IBOS[DOSA/DALP/IAOA]
  f. The **4** Managerial Components of Strategic & Tactical Usabilities
  g. The **4** Managerial Components of Genetic Based Grammatic Development
  h. The **4** Managerial Components of Exploratory Research Framework (ERF)
  i. The **4** Managerial Components of the Economic Intelligence Network News Service Links and the development of Search Engine Protocols (SEP)
  j. The **4** Managerial Components within the **9** Principle Parts of English Speech Formula Systems
  k. The **4** Managerial Components of Management Based Methods, Models & Theories
  l. The **4** Managerial Components of the Comprehensive Formula Language Systems within the development of Genetic Grammar
  m. The **4** Managerial Components of Genetic Cellular Displacement within the Virtual Laboratory & ERF environments
  n. The **4** Structural/Educational Components of an Enterprise Work Architecture (EWA)

3. The **5** Phase Components of an IDEAL Cell or Snap Shot in Time (PERT- Quality Measures) – [$\mathbf{T}^{3(I)}$]
  a. The **5** Components of Software Capability Maturity Model (SW-CMM) and the People Capability Maturity Model (P-CMM)
  b. The **5** Components of the Capability Maturity Model Integration-Integrated Product & Process Design Staged (CMMI-IPPD Staged)
  c. The **5** Components Involving Quality Measures Taxonomies (QMT)
    I. The **12** Components Involved with the Applications used in Operational Systems (AOS)
    II. The **12** Components Involving the Applications used to Support Operational Systems (ASOS)
  d. The **5** Components of Risk Management (RM)
  e. The **5** Components of Change Management (CM)
  f. The **5** Software Initiating, Diagnosing, Establishing, Acting & Leveraging Components (IDEAL)
  g. The **5** Divisions of the Problem Format within the Planning & Design Approach (PF)
  h. The **5** Operational Phases of the Consultative Planning & Design Approach (CPDA)
  i. The **5** Structural Hemispheres of the Human Brain
    I. The **12** Components of the Cranial Nervous System (CNS)

4. The **9** Grammatic Formulas Representing the Principle Parts of English Speech – [$\mathbf{G}^{2(E)}$]
  a. The **9** Principle Parts of English Speech
  b. The **9** Components of the Enneagram Personality Traits
  c. The **9** Components of Maslow's Hierarchy of Needs
  d. The **9** Virtual Laboratory Components
  e. The **9** Random Access Server Components
  f. The **9** Exploratory Research Framework Components
  g. The **9** Matrix Elements of a Planning & Design Approach
  h. The **9** Divisions of the NAME Network
  i. The **9** Divisions of TCP/IP Protocols
  j. The **9** Infused Components of the Capability Maturity Model Integration-Integrated Product & Process Design (CMMI-IPPD)
  k. The **9** Sections used to Express the Educational Taxonomies of Geological Studies
  l. The **9** Components of Software Engineering Based Knowledge (SEBK)
  m. The **9** Components of Software Engineering Initiative (SEI)
  n. The **9** Subcomponents within each Method Structure
  o. The **9** Global Information Drivers of Strategic & Tactical Innovation

5. The **20** Letters Representing the Amino Acid Sequences – [$\mathbf{G}^{2(S)}$]
  a. The **20** Sets of Grammatic Stem Cells (**4** Areas x **5** Phases & Structural Interventions of the Consultative Planning & Design Approaches)
  b. The **20** Initial Cell Grid of the Consul Cube

I. The **20** Planning & Design Procedural Guidelines
II. The **1 - 18/24** Components of the Capability Maturity Model Integration-Integrated Product & Process Design (CMMI-IPPD)
III. The **20** Components of the Integrated Framework
IV. The **1 - 18/24** Mechanics of English Grammar
V. The **20** Chemical Industry Categories
VI. The **1 - 18** Atomic Elemental Sections
VII. The **20** Components Related to the Structure of the Grammatic Genome
6. The **48** Cell Planning & Design Matrix – [$\mathbf{T}^{3(C)}$]
a. The **48** Laws of Power
b. The **23/46** Chromosomal Pairs (CMMI-IPPD Continuous & Staged)
I. The Change Equation (Change Management of Individual & Organizational Models)
II. The Development of Chromosomal Elements (Strategical & Tactical Operations)
c. The **48** Matrix Search Engines (Strategic Development)
I. The Forward Chaining Sequences (Organizational Development & Enterprise or Manufacturing Resource Planning Systems)
d. The **48** Matrix Search Engines (Tactical Development)
I. The Backward Chaining Sequences (Change or Risk Management Systems)
e. The **192** Search Engine Components (The Autonomous Development of **IDEAS**)
I. The **3** Part Processors (Formula Components) **Power/Authority**
II. The **4** Part Processors (Managerial Terminology) **Norms/Standards**
III. The **5** Phase Components (Procedural Steps or Structural Hemispheres) **Goals/Objectives**
IV. The **12** Method Structures (Regional Development) **Morale/Cohesion**
f. The **192** Planning & Design Sections (The Autonomous Development of **CONCEPTS**)
I. The **48** Planning & Design Cellular Issues Involving **Power/Authority**
II. The **48** Planning & Design Cellular Issues Involving **Morale/Cohesion**
III. The **48** Planning & Design Cellular Issues Involving **Norms/Standards**
IV. The **48** Planning & Design Cellular Issues Involving **Goals/Objectives**
g. The **192** Letters of the Human Genetic Matrix (The Autonomous Development of **WORDS**)
I. The **64** Cells Representative of **Words**, **Concepts** & **Ideas** or Search Engine Protocols (SEP)
h. The **384** MTQ Websites (Evolving Novel Organizational Forms)
7. The **64** Cell Genetic Matrix – [$\mathbf{L}^{2}$]
a. The Collateral Genetic Cells representing the **16** sections of the 5 Phases covering the Planning & Design Approaches
I. The **48** Primary Genetic Cells used within a Planning & Design Matrix
b. The **64** Matrix Sections of the Magna Carter
c. The **65** SEBK Matrix Procedural Components
d. The **96** Duel Matrix Chapters of the IRS Tax Code
8. The Doctrine of Managerial Interest – [$\mathbf{M}^{2}$]
a. The Procedural Definitions
I. The Dictionary of Occupational Titles (DOT)
b. The Organizational Determination
I. The Thomas Registry Guides
c. The Consultative Interventions of the Planning & Design Approach
d. The Theories, Models & Methods of Managerial Words, Concepts and Ideas
e. The Words, Concepts and Ideas about People, Places & Things
9. The Procedural Examples within the Planning & Design Matrix or Change Equation – [$\mathbf{G}^{2(M)}$]
a. Purpose $\mathbf{T}^{3}$
I. Fundamental/Identify/Initiating/Need Satisfaction
II. Values/Analyze/Diagnosing/Performance
III. Measures/Track/Establishing/Maintenance
IV. Control/Control/Acting/Adaptive
V. Interface/Communicate/Leveraging/Organizational
VI. Future/Plan/Manage the Software Process Improvement Program/Individual
b. Inputs $\mathbf{M}^{2}$
I. Fundamental/Identify/Initiating/Need Satisfaction

    II. Values/Analyze/Diagnosing/Performance
    III. Measures/Track/Establishing/Maintenance
    IV. Control/Control/Acting/Adaptive
    V. Interface/Communicate/Leveraging/Organizational
    VI. Future/Plan/Manage the Software Process Improvement Program/Individual

c. Outputs $\mathbf{A}^2$
    I. Fundamental/Identify/Initiating/Need Satisfaction
    II. Values/Analyze/Diagnosing/Performance
    III. Measures/Track/Establishing/Maintenance
    IV. Control/Control/Acting/Adaptive
    V. Interface/Communicate/Leveraging/Organizational
    VI. Future/Plan/Manage the Software Process Improvement Program/Individual

d. Sequence $\mathbf{G}^2$
    I. Fundamental/Identify/Initiating/Need Satisfaction
    II. Values/Analyze/Diagnosing/Performance
    III. Measures/Track/Establishing/Maintenance
    IV. Control/Control/Acting/Adaptive
    V. Interface/Communicate/Leveraging/Organizational
    VI. Future/Plan/Manage the Software Process Improvement Program/Individual

e. Environment $\mathbf{G}^2$
    I. Fundamental/Identify/Initiating/Need Satisfaction
    II. Values/Analyze/Diagnosing/Performance
    III. Measures/Track/Establishing/Maintenance
    IV. Control/Control/Acting/Adaptive
    V. Interface/Communicate/Leveraging/Organizational
    VI. Future/Plan/Manage the Software Process Improvement Program/Individual

f. Human Aids $\mathbf{T}^3$
    I. Fundamental/Identify/Initiating/Need Satisfaction
    II. Values/Analyze/Diagnosing/Performance
    III. Measures/Track/Establishing/Maintenance
    IV. Control/Control/Acting/Adaptive
    V. Interface/Communicate/Leveraging/Organizational
    VI. Future/Plan/Manage the Software Process Improvement Program/Individual

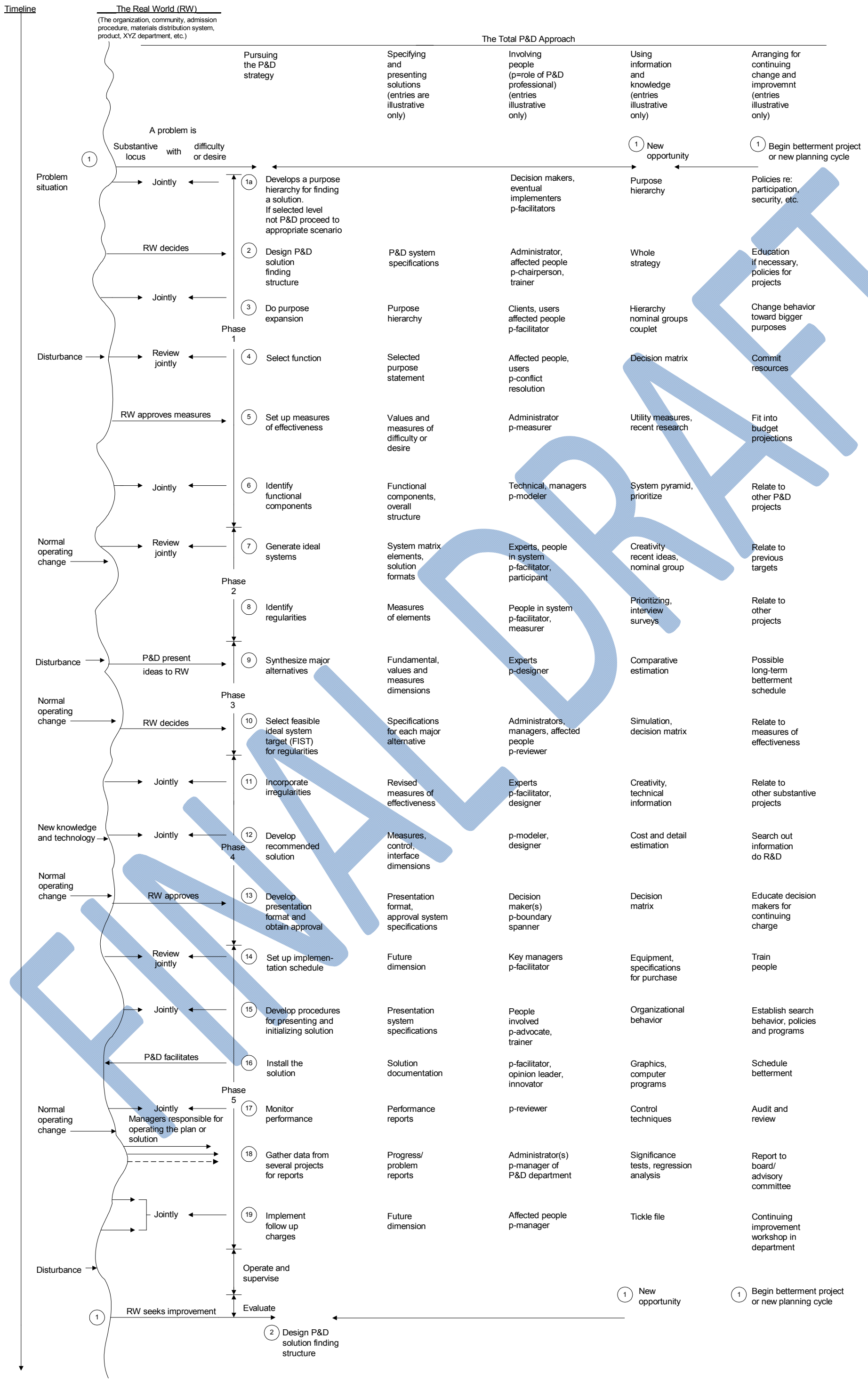
g. Physical Catalysts $\mathbf{G}^2$
    I. Fundamental/Identify/Initiating/Need Satisfaction
    II. Values/Analyze/Diagnosing/Performance
    III. Measures/Track/Establishing/Maintenance
    IV. Control/Control/Acting/Adaptive
    V. Interface/Communicate/Leveraging/Organizational
    VI. Future/Plan/Manage the Software Process Improvement Program/Individual

h. Information Aids $\mathbf{L}^2$
    I. Fundamental/Identify/Initiating/Need Satisfaction
    II. Values/Analyze/Diagnosing/Performance
    III. Measures/Track/Establishing/Maintenance
    IV. Control/Control/Acting/Adaptive
    V. Interface/Communicate/Leveraging/Organizational
    VI. Future/Plan/Manage the Software Process Improvement Program/Individual

i. Transitive Verbiage $\mathbf{PA}^2$
    I. Strategic & Tactical Usabilities

	Fundamental: Basic or Physical, Characteristics- What, How, Where, or Who **(GROUP FORMAT)**	Values: Motivating Beliefs, Global Desires, Ethics, Moral Matters **(NORMS/STANDARDS)**	Measures: Objectives (Criteria, Merit and Worth Factors), Goals (How Much, When, Rates, Performance Specifications) **(GOALS/OBJECTIVES)**	Control: How to Evaluate and Modify Element or System as it Operates **(POWER/AUTHORITY)**	Interface: Relation of all Dimensions to other Systems or Elements **(MORALE/COHESION)**	Future: Planned Changes and Research Needs for all Dimensions
Purpose: mission, aim, need, primary concern, focus						
Inputs: people, things, information to start the sequence						
Outputs: desired (achieves purpose) and undesired outcomes from sequence						
Sequence: steps for processing inputs, flow, layout, unit operations						
Environment: physical & attitudinal, organization, setting, etc.						
Human agents: skills, personnel, rewards, responsibilities, etc.						
Physical catalysts: equipment, facilities, etc.						
Information aids: books, instructions, etc.						

The PDA Worksheet for the 5 – Phase Operational Biographic Imprinting of Julius Caesar as an Economic Footprint


Timeline
The Real World (RW)
(The organization, community, admission procedure, materials distribution system, product, XYZ department, etc.)
The Total P&D Approach
A problem is
①
Substantive locus
with
difficulty or desire
① New opportunity
① Begin betterment project or new planning cycle
Disturbance
Operate and supervise
Evaluate
①
RW seeks improvement
① New opportunity
① Begin betterment project or new planning cycle
② Design P&D solution finding structure

Real World		Phase	Step	Pursuing the P&D strategy	Specifying and presenting solutions (entries are illustrative only)	Involving people (p=role of P&D professional) (entries illustrative only)	Using information and knowledge (entries illustrative only)	Arranging for continuing change and improvemnt (entries illustrative only)
Problem situation	Jointly	Phase 1	1a	Develops a purpose hierarchy for finding a solution. If selected level not P&D proceed to appropriate scenario		Decision makers, eventual implementers p-facilitators	Purpose hierarchy	Policies re: participation, security, etc.
	RW decides		2	Design P&D solution finding structure	P&D system specifications	Administrator, affected people p-chairperson, trainer	Whole strategy	Education if necessary, policies for projects
	Jointly		3	Do purpose expansion	Purpose hierarchy	Clients, users affected people p-facilitator	Hierarchy nominal groups couplet	Change behavior toward bigger purposes
Disturbance	Review jointly		4	Select function	Selected purpose statement	Affected people, users p-conflict resolution	Decision matrix	Commit resources
	RW approves measures		5	Set up measures of effectiveness	Values and measures of difficulty or desire	Administrator p-measurer	Utility measures, recent research	Fit into budget projections
	Jointly		6	Identify functional components	Functional components, overall structure	Technical, managers p-modeler	System pyramid, prioritize	Relate to other P&D projects
Normal operating change	Review jointly	Phase 2	7	Generate ideal systems	System matrix elements, solution formats	Experts, people in system p-facilitator, participant	Creativity recent ideas, nominal group	Relate to previous targets
			8	Identify regularities	Measures of elements	People in system p-facilitator, measurer	Prioritizing, interview surveys	Relate to other projects
Disturbance	P&D present ideas to RW	Phase 3	9	Synthesize major alternatives	Fundamental, values and measures dimensions	Experts p-designer	Comparative estimation	Possible long-term betterment schedule
Normal operating change	RW decides		10	Select feasible ideal system target (FIST) for regularities	Specifications for each major alternative	Administrators, managers, affected people p-reviewer	Simulation, decision matrix	Relate to measures of effectiveness
	Jointly	Phase 4	11	Incorporate irregularities	Revised measures of effectiveness	Experts p-facilitator, designer	Creativity, technical information	Relate to other substantive projects
New knowledge and technology	Jointly		12	Develop recommended solution	Measures, control, interface dimensions	p-modeler, designer	Cost and detail estimation	Search out information do R&D
Normal operating change	RW approves		13	Develop presentation format and obtain approval	Presentation format, approval system specifications	Decision maker(s) p-boundary spanner	Decision matrix	Educate decision makers for continuing charge
	Review jointly	Phase 5	14	Set up implementation schedule	Future dimension	Key managers p-facilitator	Equipment, specifications for purchase	Train people
	Jointly		15	Develop procedures for presenting and initializing solution	Presentation system specifications	People involved p-advocate, trainer	Organizational behavior	Establish search behavior, policies and programs
	P&D facilitates		16	Install the solution	Solution documentation	p-facilitator, opinion leader, innovator	Graphics, computer programs	Schedule betterment
Normal operating change	Jointly Managers responsible for operating the plan or solution		17	Monitor performance	Performance reports	p-reviewer	Control techniques	Audit and review
			18	Gather data from several projects for reports	Progress/ problem reports	Administrator(s) p-manager of P&D department	Significance tests, regression analysis	Report to board/ advisory committee
	Jointly		19	Implement follow up charges	Future dimension	Affected people p-manager	Tickle file	Continuing improvement workshop in department

The Pursuit of a Financial Perspective Involving the Implementation of DaVinci's Procrative Business Modeling of Global Market Economies

(An Economist's Mindset from an Integrated Listing of over **600** World Economists into a Single Equation)

1. **An Economic Outline for the Procreative Modeling of Global Markets within a Planning & Design Approach (PDA) Worksheet for Monetary Operational Grand Strategies**:

   A. The Descriptive Procedural Mindset of an **Economist**/**Broker** as a Firm Utilizing over **(600)** Historical Economists, as a Single Minded Autonomous Economic Function, within a PDA Worksheet (i.e., **X^3** the **Neuroeconomic Procedural Guidelines**);

      I. The Ancient and Modern History of Economic or Monetary Thought as **Phase One** within the **P**lanning & **D**esign **A**pproach Worksheet.

      II. The Economic Theories within **(4)** Managerial Categories & **(117)** Overlapping Financial Subcategories as **Phase Two** within the **P**lanning & **D**esign **A**pproach Worksheet.

      III. Evolutionary and Institutional Economics as the New Mainstream within **Phase Three** of the **P**lanning & **D**esign **A**pproaches.

      IV. Behavioral Economics within **(4)** Managerial Categories & **(24)** Subcategories Involving the **(24)** Points of the **C**hange **E**quation utilizing **C**hromosomal **D**evelopment within **Phase Four** of the **P**lanning & **D**esign **A**pproach Worksheet.

      V. The **(5)** Point Outline of Cognitive Biases, Involving the **(43)** Categories of Behavioral Finance within the **(48)** Types of Economic Systems, or the **(40)** Categories of Economic Indicators encompassing **Phase Five** of the **P**lanning & **D**esign **A**pproach Worksheet;

         (a.) The **(20)** Step List of Financial Topics within the Pursuing the Planning & Design Strategy (**PPDS**) Column of the PDA Worksheet. **[**Vertical Inter-Changeable Rotation (VIR) Involving **Norms/Standards** or **DALP** Technologies**]**

         (b.) The **(18)** Step List of Financial Services Companies within the Specifying & Implementing Solutions (**SIS**) Column of the PDA Worksheet. **[**Vertical Inter-Changeable Rotation (VIR) Involving **Morale/Cohesion** or **DOSA** Technologies**]**

         (c.) The **(18)** Step List of Important Publications In Economics within the Information & Knowledge (**I&K**) Column of the PDA Worksheet. **[**Vertical Inter-Changeable Rotation (VIR) Involving **Power/Authority** Issues or **IBOS** Technologies**]**

         (d.) The **(20)** Step List of Economic Topics within the Arranging for Continuous Change & Improvement (**ACCI**) Column of the PDA Worksheet. **[**Vertical Inter-Changeable Rotation (VIR) Involving **Goals/Objectives** or **IAOA** Technologies**]**

   B. The Conceptual Implementation of **(165)** Accounting Topics within all **(144)** Sections of the Global Information Drivers of Strategic & Tactical Innovations (GIDSTI), as well as the **(21)** Major Categories of Financial Markets Involving **(36)** Economic Adaptive Autonomous Agents;

      I. The **(15/10)** Point Assignment of Marketing Structures & Pricing within IT Investments, and a Political/Religious Enterprise Work Architecture.

II. The **(4)** Areas of a Political Media or Das Kapital as a Source for Market-Based Ideological **Counter-Measures** within the **(4)** Approaches of the Grammatic Genome.
III. The **(6)** Dimensions of Marketing for a Consultative Planning & Design Approach (CPDA) Stratagem Matrix, Sections **A – E**.
IV. The List of Basic Economic Topics Representing the **(9)** PPES Formula System for a PDA Matrix.
V. The List of Behavioral Economics Representing the **(9)** PPES Formula System for a CPDA Matrix.
VI. The List of Financial Services Involving the **(9)** PPES Formula System for the Solution Framework Matrix.
VII. The List of **(11)** Marketing Topics Representing Employment Related Software Development (ERSD).
VIII. The **(12)** Methods of Financial Services Involving Market Generation.
IX. The **(12)** Part Mechanism for Autonomous Agent Formatting.

2. **An Economic Outline for the Procreative Modeling of Global Markets within a Consultative Planning & Design Approach (CPDA) Worksheet for Monetary Operational Grand Tactics**:

A. The Descriptive Operational Policy-Based Mindset of a **Financier/Broker** as an Individual Utilizing a List of **(81)** Scholarly Journals In Economics, as **Morale** or **Cohesive** Tactics in Specifying & Implementing Solutions within a Consultative Planning & Design Approach (CPDA) Worksheet (i.e., X^3 the **Autonomous Economic Procedural Guidelines**). **[**Vertical Inter-Changeable **Clockwise** Rotation (VIR)**]**
B. The List of **(100)** International Trade Topics as a Means of Engaging in **Power** or **Authority** Issues within the Tactical Methods Involving the Consultative Planning & Design Approaches (CPDA) Worksheet. **[**Vertical Inter-Changeable **Counter-Clockwise** Rotation (VIR)**]**
C. The **(4/115)** Categories of Financial Services as a Means of Engaging in **Norms** or **Standards** within the Tactical Approaches Involving the Consultative Planning & Design Approaches (CPDA) Worksheet. **[**Vertical Inter-Changeable **Clockwise** Rotation (VIR)**]**
D. The **(21/121)** Categories of Markets as a Means of Engaging in **Goals** or **Objectives** within the Tactical Methods Involving the Consultative Planning & Design Approaches (CPDA) Worksheet. **[**Vertical Inter-Changeable **Counter-Clockwise** Rotation (VIR)**]**
I. The **(288)** Categories of Economics by Geographical Locations, Overlapping all **(324)** Components within the Tactical Areas of the CPDA Worksheet as Stationary Elements.
II. The **(53)** Tactical Matrix Categories of Economies by Continents within the CPDA Worksheet.
III. The **(46)** Stationary Strategic Components of the CPDA Worksheet, Sections A-1 to A-4.

3. **The Socioeconomic Base Equation(s) for the Individualized Global Free Market Fusion of Information**:

$$X^3 \left(RW = \frac{EH^2}{QM} \right)$$

Homo Economicus Universal

The Consul Cube Genomic Configurations for Establishing Genetic-Based Concepts within a Consultative P&D Effort

A Roman Emperor's Consul Mindset as 16 Separate Emperors Function as One In Reference to the GIDSTI Economic Principles Involving Julius Caesar as a Point of Origin for Modern Commercial Expansionism

1. **A-1 ^A^**
2. A-1-1 ^AAA^
3. A-1-2 ^AAF^
4. A-1-3 ^AAK^
5. A-1-4 ^AAP^
6. A-1-5 ^AAT^
7. **A-2 ^C^**
8. A-2-1 ^ACC^
9. A-2-2 ^ACG^
10. A-2-3 ^ACL^
11. A-2-4 ^ACQ^
12. A-2-5 ^ACV^
13. **A-3 ^D^**
14. A-3-1 ^ADD^
15. A-3-2 ^ADH^
16. A-3-3 ^ADM^
17. A-3-4 ^ADR^
18. A-3-5 ^ADW^
19. **A-4 ^E^**
20. A-4-1 ^AEE^
21. A-4-2 ^AEI^
22. A-4-3 ^AEN^
23. A-4-4 ^AES^
24. A-4-5 ^AEY^
25. **B-1 ^F^**
26. B-1-1 ^BFA^
27. B-1-2 ^BFF^
28. B-1-3 ^BFK^
29. B-1-4 ^BFP^
30. B-1-5 ^BFT^
31. **B-2 ^G^**
32. B-2-1 ^BGC^
33. B-2-2 ^BGG^
34. B-2-3 ^BGL^
35. B-2-4 ^BGQ^
36. B-2-5 ^BGV^
37. **B-3 ^H^**
38. B-3-1 ^BHD^
39. B-3-2 ^BHH^
40. B-3-3 ^BHM^
41. B-3-4 ^BHR^
42. B-3-5 ^BHW^
43. **B-4 ^I^**
44. B-4-1 ^BIE^
45. B-4-2 ^BII^
46. B-4-3 ^BIN^
47. B-4-4 ^BIS^
48. B-4-5 ^BIY^
49. **C-1 ^K^**
50. C-1-1 ^CKA^
51. C-1-2 ^CKF^
52. C-1-3 ^CKK^
53. C-1-4 ^CKP^
54. C-1-5 ^CKT^
55. **C-2 ^L^**
56. C-2-1 ^CLC^
57. C-2-2 ^CLG^
58. C-2-3 ^CLL^
59. C-2-4 ^CLQ^
60. C-2-5 ^CLV^

C-3 ^M^
62. C-3-1 ^CMD^
63. C-3-2 ^CMH^
64. C-3-3 ^CMM^
65. C-3-4 ^CMR^
66. C-3-5 ^CMW^
67. **C-4 ^N^**
68. C-4-1 ^CNE^
69. C-4-2 ^CNI^
70. C-4-3 ^CNN^
71. C-4-4 ^CNS^
72. C-4-5 ^CNY^
73. **D-1 ^P^**
74. D-1-1 ^DPA^
75. D-1-2 ^DPF^
76. D-1-3 ^DPK^
77. D-1-4 ^DPP^
78. D-1-5 ^DPT^
79. **D-2 ^Q^**
80. D-2-1 ^DQC^
81. D-2-2 ^DQG^
82. D-2-3 ^DQL^
83. D-2-4 ^DQQ^
84. D-2-5 ^DQV^
85. **D-3 ^R^**
86. D-3-1 ^DRD^
87. D-3-2 ^DRH^
88. D-3-3 ^DRM^
89. D-3-4 ^DRR^
90. D-3-5 ^DRW^
91. **D-4 ^S^**
92. D-4-1 ^DSE^
93. D-4-2 ^DSI^
94. D-4-3 ^DSN^
95. D-4-4 ^DSS^
96. D-4-5 ^DSY^
97. **E-1 ^T^**
98. E-1-1 ^ETA^
99. E-1-2 ^ETF^
100. E-1-3 ^ETK^
101. E-1-4 ^ETP^
102. E-1-5 ^ETT^
103. **E-2 ^V^**
104. E-2-1 ^EVC^
105. E-2-2 ^EVG^
106. E-2-3 ^EVL^
107. E-2-4 ^EVQ^
108. E-2-5 ^EVV^
109. **E-3 ^W^**
110. E-3-1 ^EWD^
111. E-3-2 ^EWH^
112. E-3-3 ^EWM^
113. E-3-4 ^EWR^
114. E-3-5 ^EWW^
115. **E-4 ^Y^**
116. E-4-1 ^EYE^
117. E-4-2 ^EYI^
118. E-4-3 ^EYN^
119. E-4-4 ^EYS^
120. E-4-5 ^EYY^

The 80 Structural Elements of Strategic & Tactical Operations Involving the Principles of the 48 Laws of Power within the 20 Economic Profiles **(P/A)**

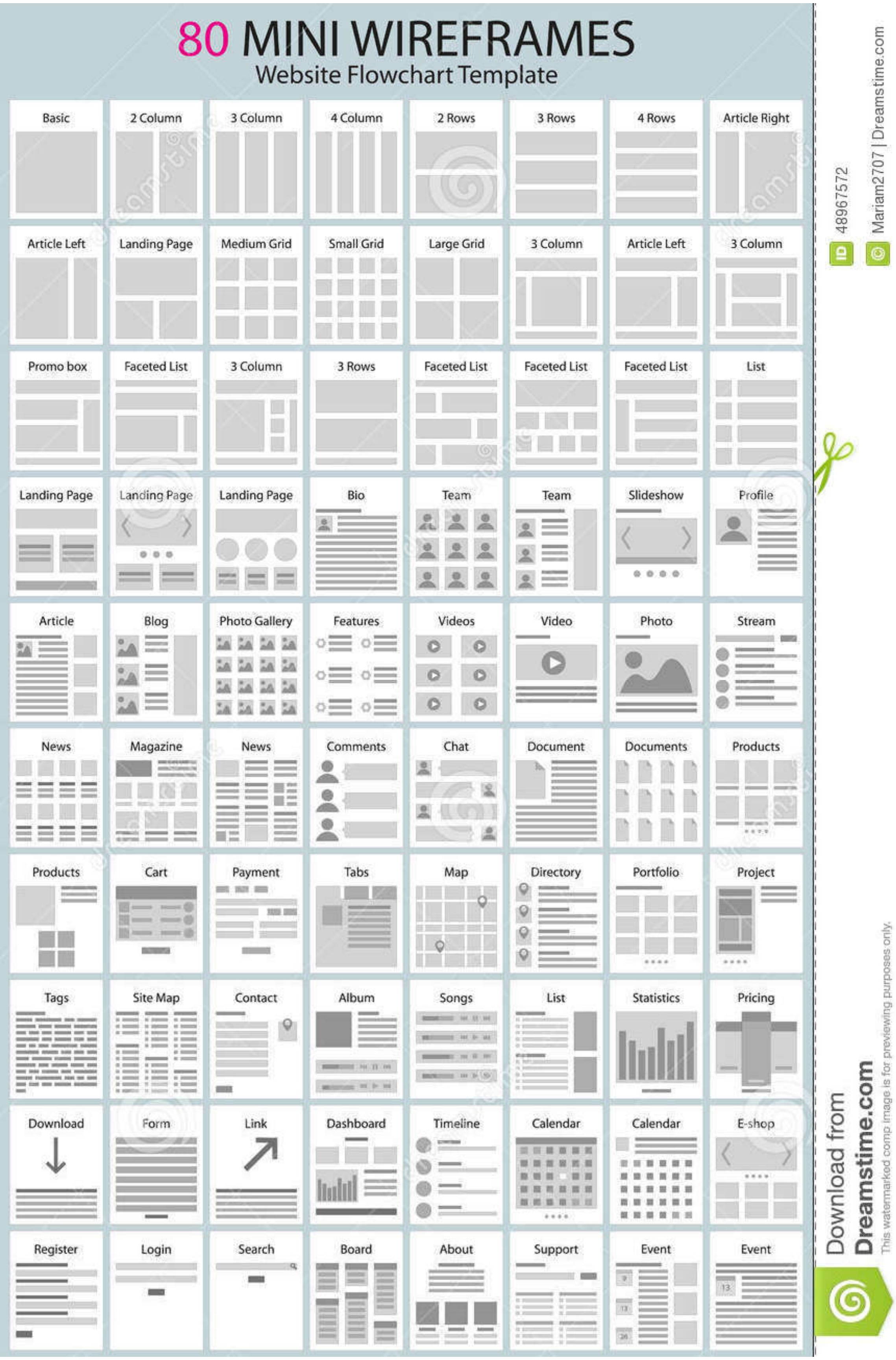
The 81 Sections of Strategic & Tactical Operations Involving the Principles of the Solution Framework within the 20 Relevant Terms of Government **(M/C)**

The 84 Sections of Rambam within Strategic & Tactical Operations Involving the Governmental Principles & Systems within the 20 Classes of Government **(N/S)**

The 80 Legions of Roman Strategic & Tactical Operations Involving the Economic Principles & Systems within the 20 Attributes of Government **(G/O)**

The Alpha, Beta, Charlie, Delta & Echo 24 Chromosomal Base Pairings for the Upper & Lower Level Change Equation Components of the 24 Books within the Torah Shebiksav

DRAFT


80 MINI WIREFRAMES
Website Flowchart Template
Basic
2 Column
3 Column
4 Column
2 Rows
3 Rows
4 Rows
Article Right
Article Left
Landing Page
Medium Grid
Small Grid
Large Grid
3 Column
Article Left
3 Column
Promo box
Faceted List
3 Column
3 Rows
Faceted List
Faceted List
Faceted List
List
Landing Page
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Landing Page
Bio
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Team
Slideshow
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Blog
Photo Gallery
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Videos
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Magazine
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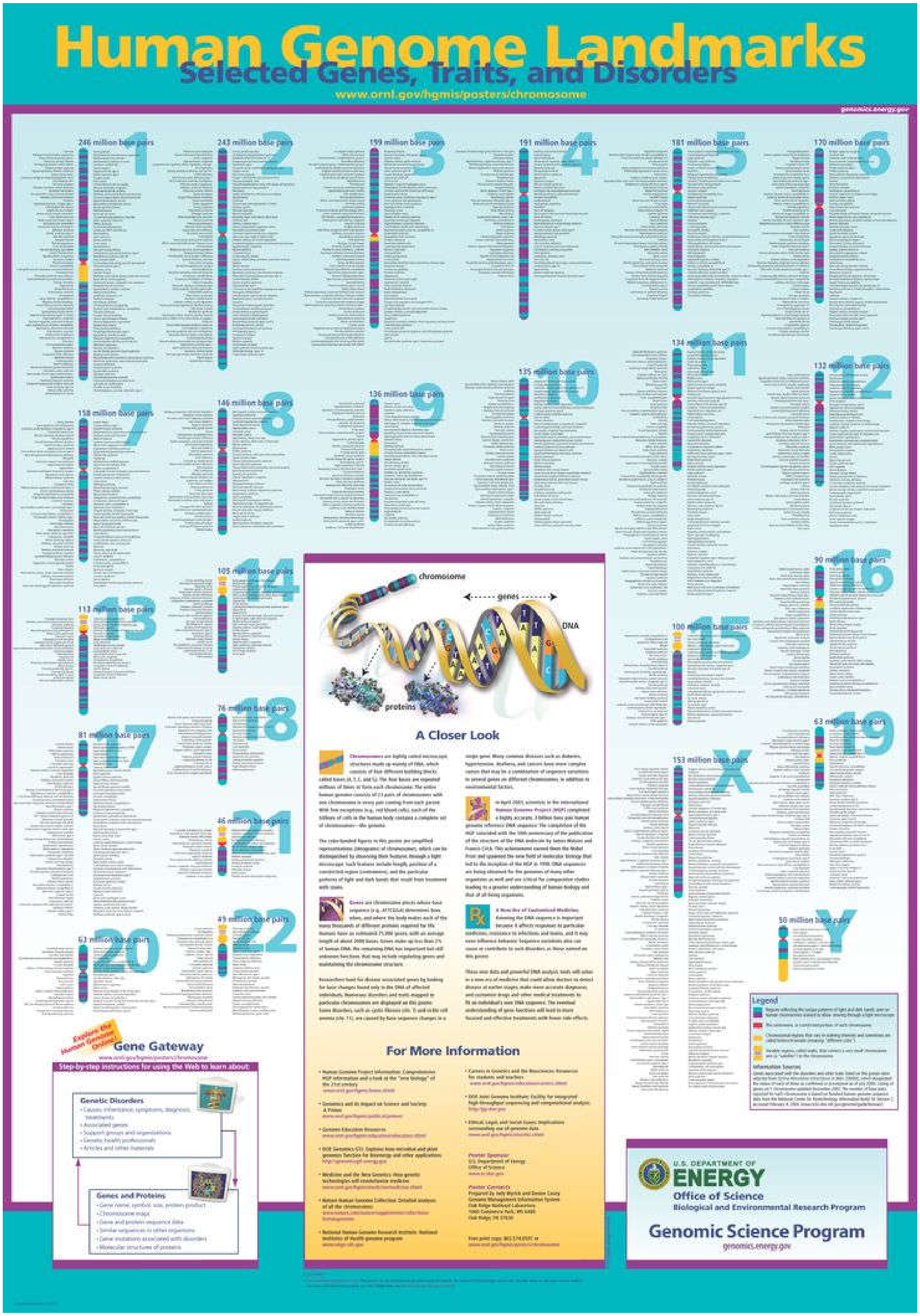

Human Genome Landmarks

Selected Genes, Traits, and Disorders

www.ornl.gov/hgmis/posters/chromosome

genomics.energy.gov

246 million base pairs
1
243 million base pairs
2
199 million base pairs
3
191 million base pairs
4
181 million base pairs
5
170 million base pairs
6
158 million base pairs
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146 million base pairs
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136 million base pairs
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135 million base pairs
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134 million base pairs
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132 million base pairs
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113 million base pairs
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105 million base pairs
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100 million base pairs
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90 million base pairs
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63 million base pairs
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63 million base pairs
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46 million base pairs
21
49 million base pairs
22
153 million base pairs
X
50 million base pairs
Y
chromosome
genes
DNA
proteins

A Closer Look

For More Information

Legend

Information Sources

Explore the Human Genome Online!

Gene Gateway

Step-by-step instructions for using the Web to learn about:

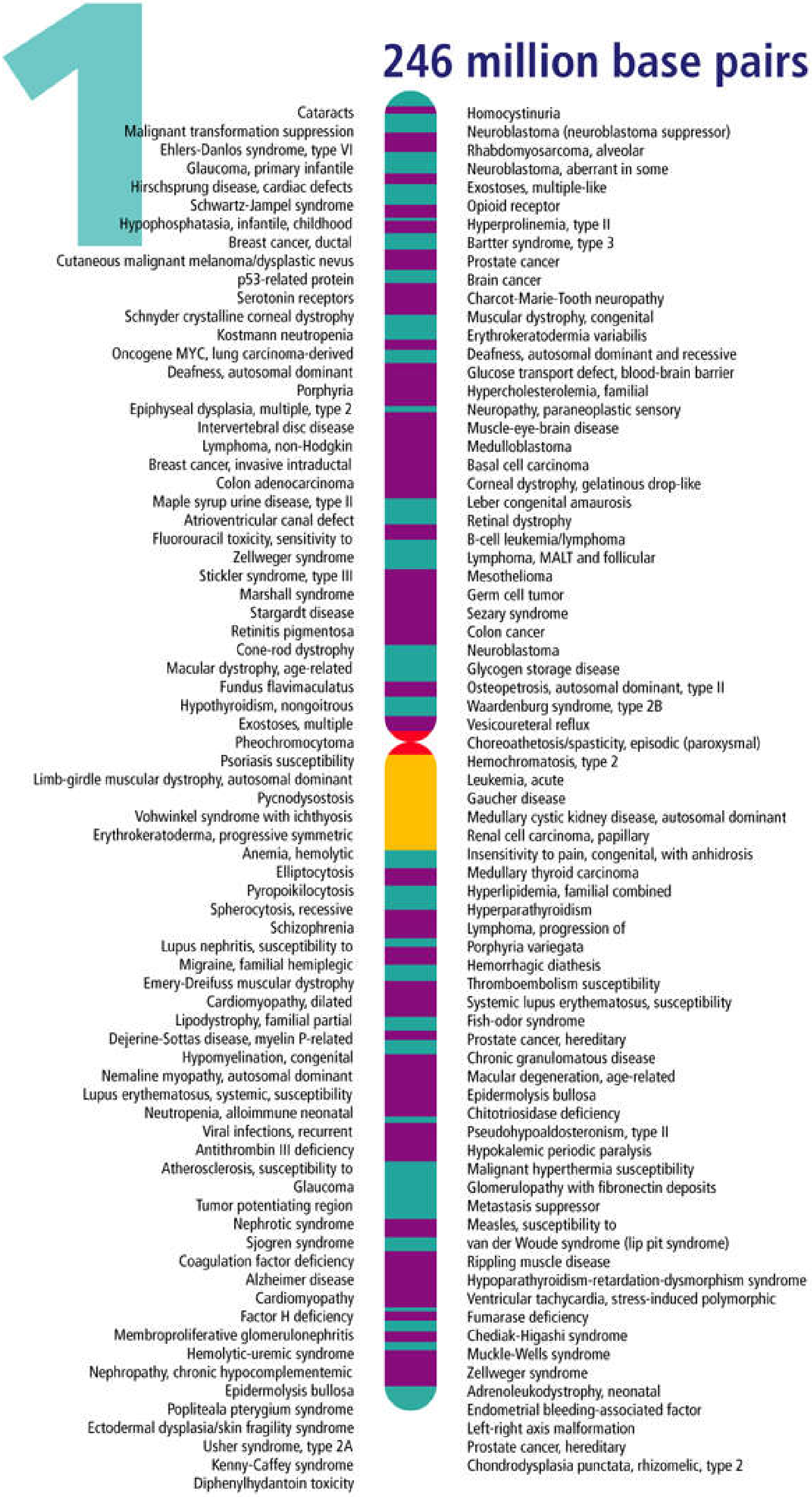
Genetic Disorders
- Causes, inheritance, symptoms, diagnosis, treatments
- Associated genes
- Support groups and organizations
- Genetic health professionals
- Articles and other materials

Genes and Proteins
- Gene name, symbol, size, protein product
- Chromosome maps
- Gene and protein sequence data
- Similar sequences in other organisms
- Gene mutations associated with disorders
- Molecular structure of proteins

U.S. DEPARTMENT OF
ENERGY
Office of Science
Biological and Environmental Research Program

Genomic Science Program
genomics.energy.gov

Alpha Chromosomes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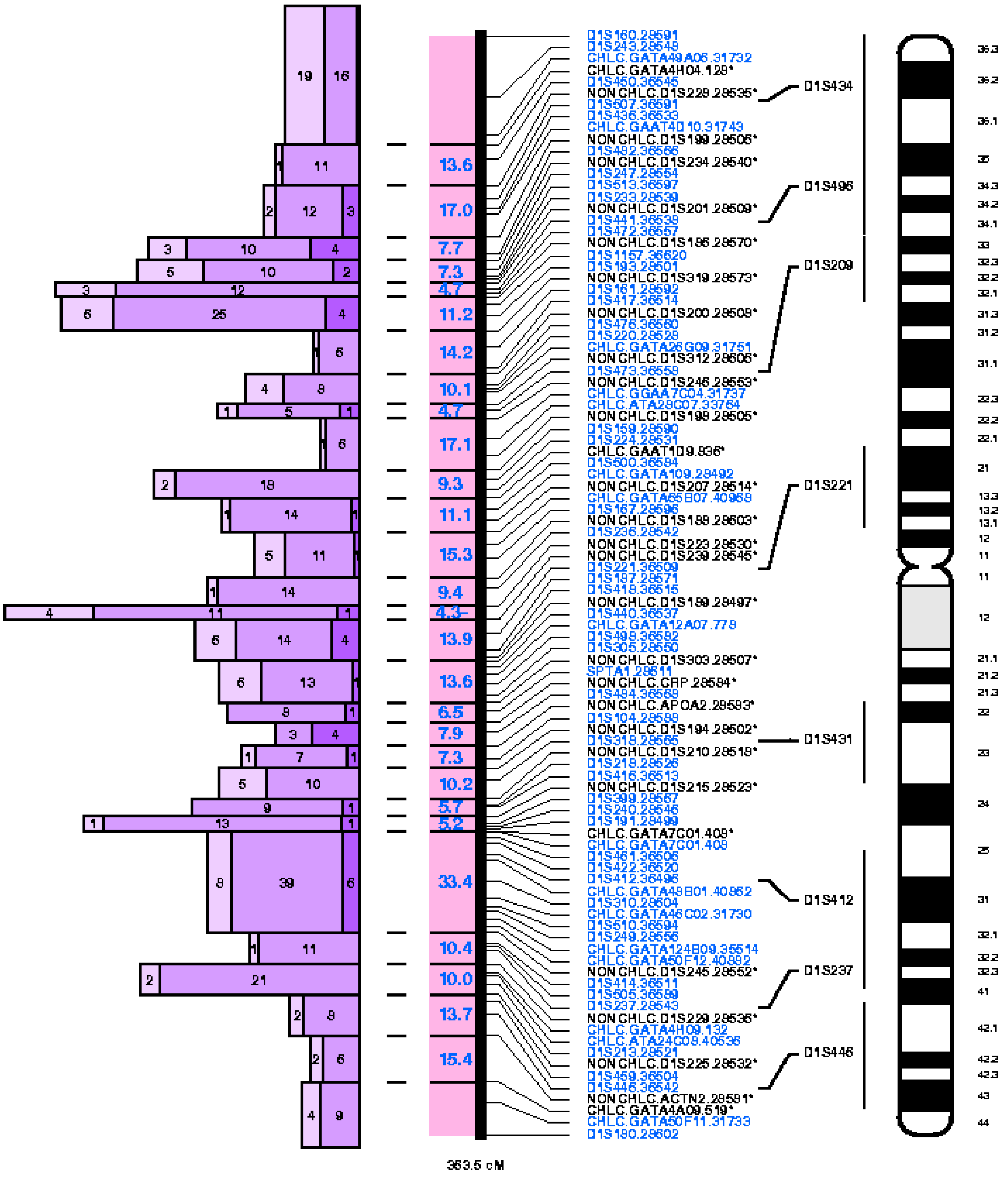
246 million base pairs
Cataracts
Malignant transformation suppression
Ehlers-Danlos syndrome, type VI
Glaucoma, primary infantile
Hirschsprung disease, cardiac defects
Schwartz-Jampel syndrome
Hypophosphatasia, infantile, childhood
Breast cancer, ductal
Cutaneous malignant melanoma/dysplastic nevus
p53-related protein
Serotonin receptors
Schnyder crystalline corneal dystrophy
Kostmann neutropenia
Oncogene MYC, lung carcinoma-derived
Deafness, autosomal dominant
Porphyria
Epiphyseal dysplasia, multiple, type 2
Intervertebral disc disease
Lymphoma, non-Hodgkin
Breast cancer, invasive intraductal
Colon adenocarcinoma
Maple syrup urine disease, type II
Atrioventricular canal defect
Fluorouracil toxicity, sensitivity to
Zellweger syndrome
Stickler syndrome, type III
Marshall syndrome
Stargardt disease
Retinitis pigmentosa
Cone-rod dystrophy
Macular dystrophy, age-related
Fundus flavimaculatus
Hypothyroidism, nongoitrous
Exostoses, multiple
Pheochromocytoma
Psoriasis susceptibility
Limb-girdle muscular dystrophy, autosomal dominant
Pycnodysostosis
Vohwinkel syndrome with ichthyosis
Erythrokeratoderma, progressive symmetric
Anemia, hemolytic
Elliptocytosis
Pyropoikilocytosis
Spherocytosis, recessive
Schizophrenia
Lupus nephritis, susceptibility to
Migraine, familial hemiplegic
Emery-Dreifuss muscular dystrophy
Cardiomyopathy, dilated
Lipodystrophy, familial partial
Dejerine-Sottas disease, myelin P-related
Hypomyelination, congenital
Nemaline myopathy, autosomal dominant
Lupus erythematosus, systemic, susceptibility
Neutropenia, alloimmune neonatal
Viral infections, recurrent
Antithrombin III deficiency
Atherosclerosis, susceptibility to
Glaucoma
Tumor potentiating region
Nephrotic syndrome
Sjogren syndrome
Coagulation factor deficiency
Alzheimer disease
Cardiomyopathy
Factor H deficiency
Membroproliferative glomerulonephritis
Hemolytic-uremic syndrome
Nephropathy, chronic hypocomplementemic
Epidermolysis bullosa
Popliteala pterygium syndrome
Ectodermal dysplasia/skin fragility syndrome
Usher syndrome, type 2A
Kenny-Caffey syndrome
Diphenylhydantoin toxicity
Homocystinuria
Neuroblastoma (neuroblastoma suppressor)
Rhabdomyosarcoma, alveolar
Neuroblastoma, aberrant in some
Exostoses, multiple-like
Opioid receptor
Hyperprolinemia, type II
Bartter syndrome, type 3
Prostate cancer
Brain cancer
Charcot-Marie-Tooth neuropathy
Muscular dystrophy, congenital
Erythrokeratodermia variabilis
Deafness, autosomal dominant and recessive
Glucose transport defect, blood-brain barrier
Hypercholesterolemia, familial
Neuropathy, paraneoplastic sensory
Muscle-eye-brain disease
Medulloblastoma
Basal cell carcinoma
Corneal dystrophy, gelatinous drop-like
Leber congenital amaurosis
Retinal dystrophy
B-cell leukemia/lymphoma
Lymphoma, MALT and follicular
Mesothelioma
Germ cell tumor
Sezary syndrome
Colon cancer
Neuroblastoma
Glycogen storage disease
Osteopetrosis, autosomal dominant, type II
Waardenburg syndrome, type 2B
Vesicoureteral reflux
Choreoathetosis/spasticity, episodic (paroxysmal)
Hemochromatosis, type 2
Leukemia, acute
Gaucher disease
Medullary cystic kidney disease, autosomal dominant
Renal cell carcinoma, papillary
Insensitivity to pain, congenital, with anhidrosis
Medullary thyroid carcinoma
Hyperlipidemia, familial combined
Hyperparathyroidism
Lymphoma, progression of
Porphyria variegata
Hemorrhagic diathesis
Thromboembolism susceptibility
Systemic lupus erythematosus, susceptibility
Fish-odor syndrome
Prostate cancer, hereditary
Chronic granulomatous disease
Macular degeneration, age-related
Epidermolysis bullosa
Chitotriosidase deficiency
Pseudohypoaldosteronism, type II
Hypokalemic periodic paralysis
Malignant hyperthermia susceptibility
Glomerulopathy with fibronectin deposits
Metastasis suppressor
Measles, susceptibility to
van der Woude syndrome (lip pit syndrome)
Rippling muscle disease
Hypoparathyroidism-retardation-dysmorphism syndrome
Ventricular tachycardia, stress-induced polymorphic
Fumarase deficiency
Chediak-Higashi syndrome
Muckle-Wells syndrome
Zellweger syndrome
Adrenoleukodystrophy, neonatal
Endometrial bleeding-associated factor
Left-right axis malformation
Prostate cancer, hereditary
Chondrodysplasia punctata, rhizomelic, type 2

Beta Chromosomes

Chromosome 1
Version v8c7 Integrated Marker Map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13.6
6.5
7.9
7.3
10.2
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5.2
33.4
10.4
10.0
13.7
15.4
363.5 cM
D1S160.28591
D1S243.28549
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CHLC.GATA4H04.129*
D1S450.36545
NON CHLC.D1S228.28535*
D1S507.36591
D1S436.36533
CHLC.GAAT4D10.31743
NON CHLC.D1S199.28505*
D1S492.36566
NON CHLC.D1S234.28540*
D1S247.28554
D1S513.36597
D1S233.28539
NON CHLC.D1S201.28509*
D1S441.36539
D1S472.36557
NON CHLC.D1S186.28570*
D1S1157.36620
D1S193.28501
NON CHLC.D1S319.28573*
D1S161.28592
D1S417.36514
NON CHLC.D1S200.28509*
D1S476.36560
D1S220.28529
CHLC.GATA26G09.31751
NON CHLC.D1S312.28606*
D1S473.36559
NON CHLC.D1S246.28553*
CHLC.GGAA7C04.31737
CHLC.ATA29C07.33764
NON CHLC.D1S199.28505*
D1S159.28590
D1S224.28531
CHLC.GAAT1D9.836*
D1S500.36594
CHLC.GATA109.28492
NON CHLC.D1S207.28514*
CHLC.GATA65B07.40969
D1S167.28596
NON CHLC.D1S188.28603*
D1S236.28542
NON CHLC.D1S223.28530*
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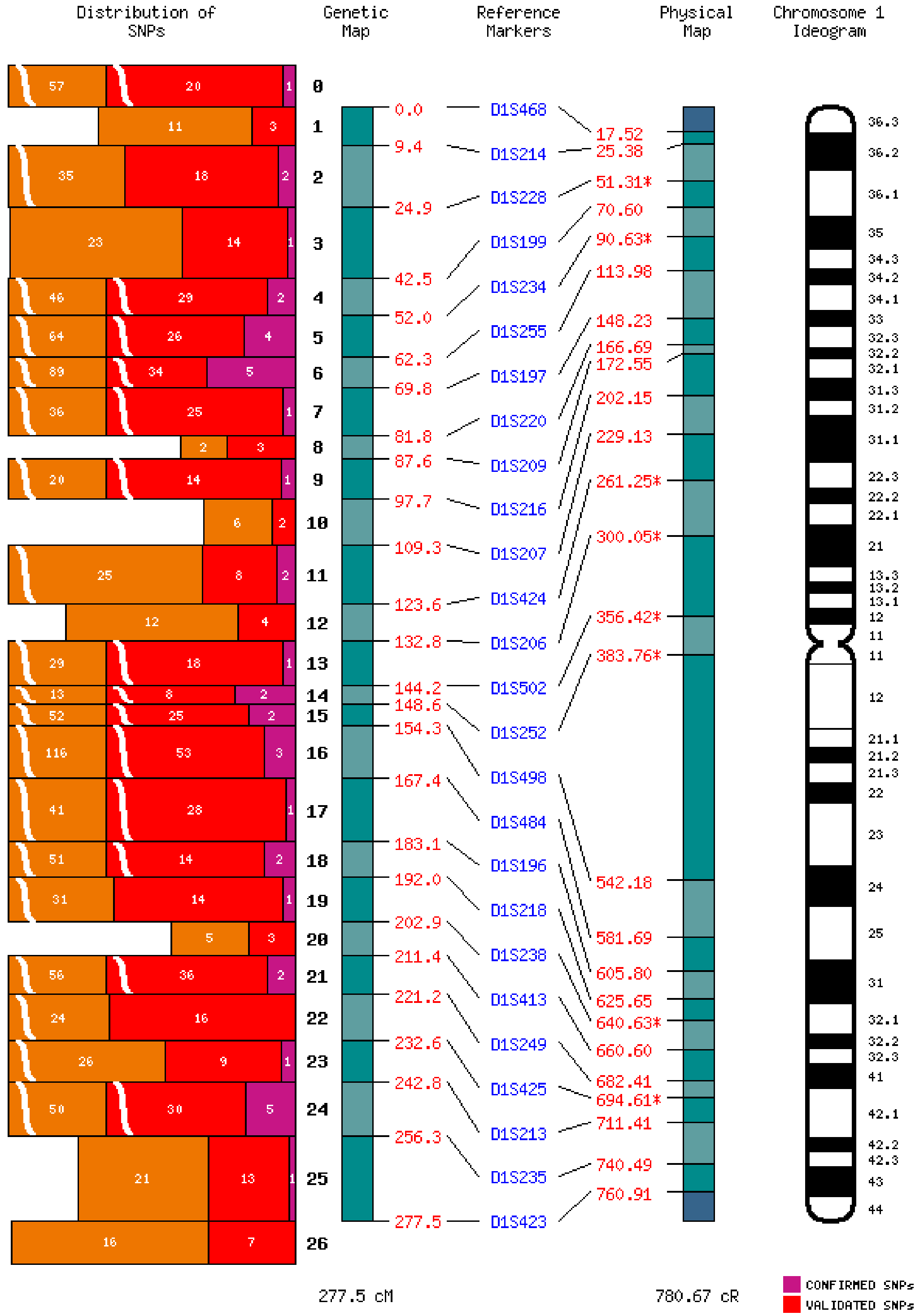
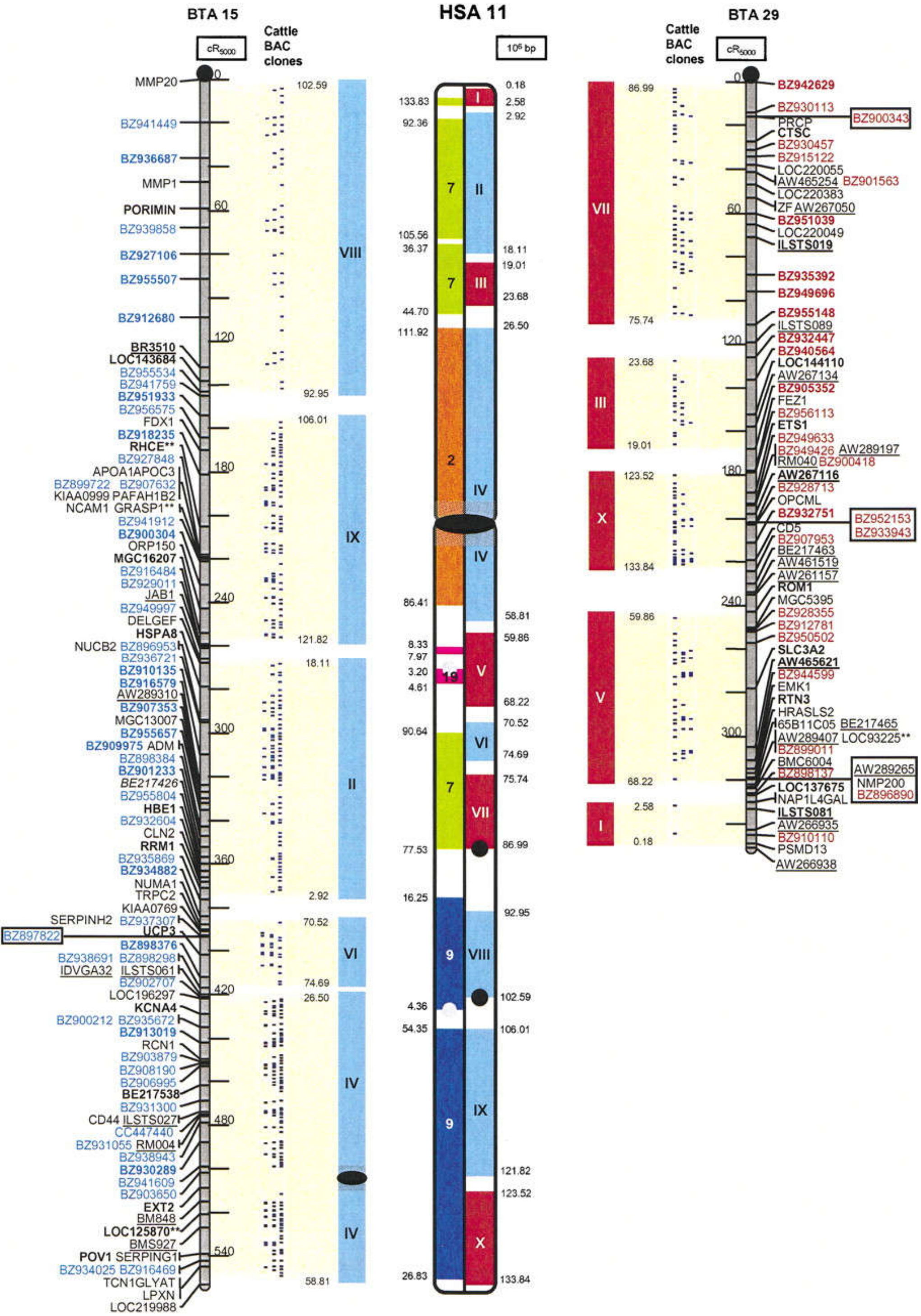
Charlie Chromosomes



NIH/NCI/DCEG/LPG 2001

Delta Chromosomes



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IV
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10⁶ bp
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III
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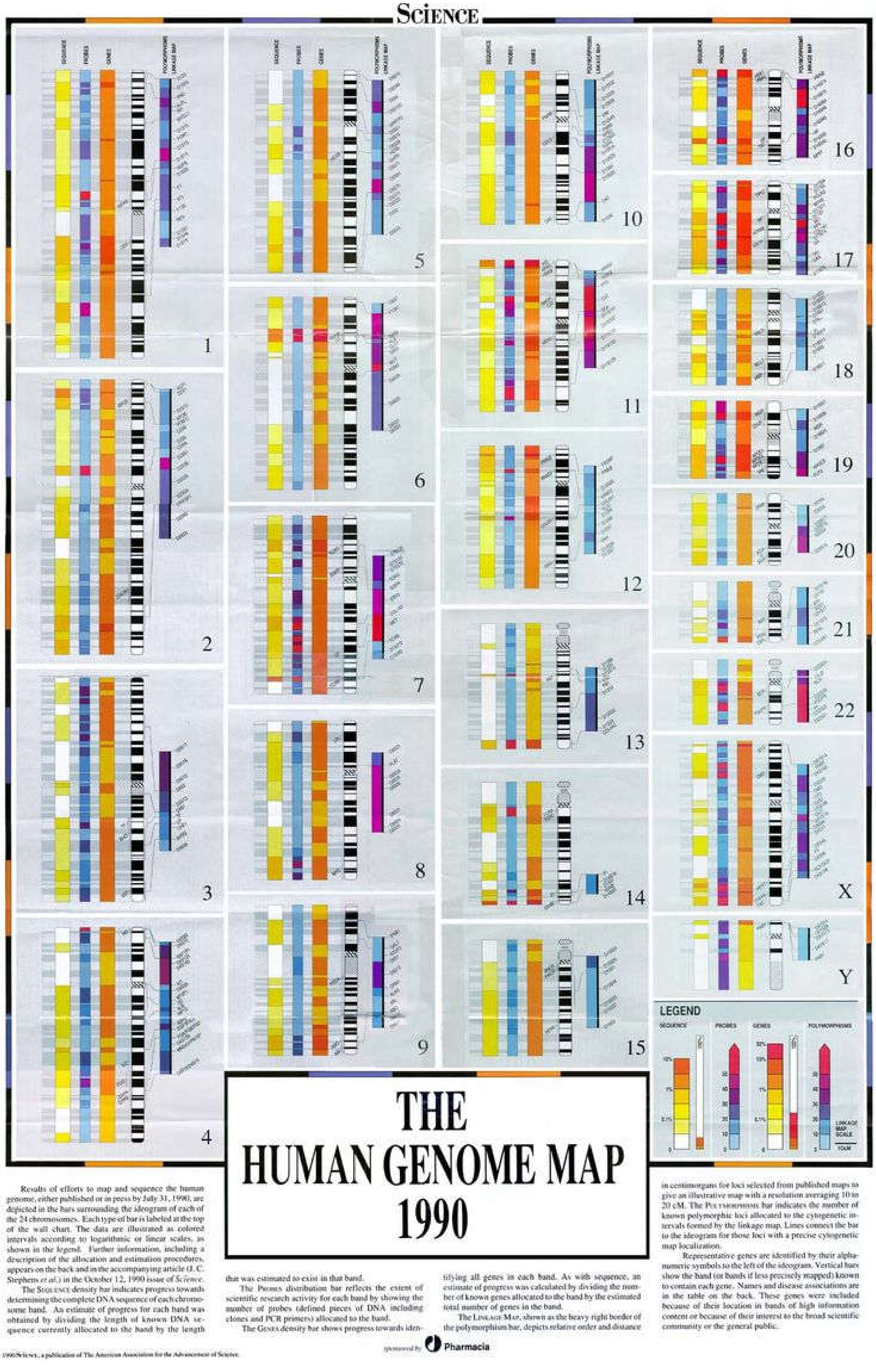


THE HUMAN GENOME MAP 1990

Results of efforts to map and sequence the human genome, either published or in press by July 31, 1990, are depicted in the bars surrounding the ideogram of each of the 24 chromosomes. Each type of bar is labeled at the top of the wall chart. The data are illustrated as colored intervals according to logarithmic or linear scales, as shown in the legend. Further information, including a description of the allocation and estimation procedures, appears on the back and in the accompanying article (J. C. Stephens *et al.*) in the October 12, 1990 issue of *Science*.

The SEQUENCE density bar indicates progress towards determining the complete DNA sequence of each chromosome band. An estimate of progress for each band was obtained by dividing the length of known DNA sequence currently allocated to the band by the length that was estimated to exist in that band.

The PROBES distribution bar reflects the extent of scientific research activity for each band by showing the number of probes (defined pieces of DNA including clones and PCR primers) allocated to the band.

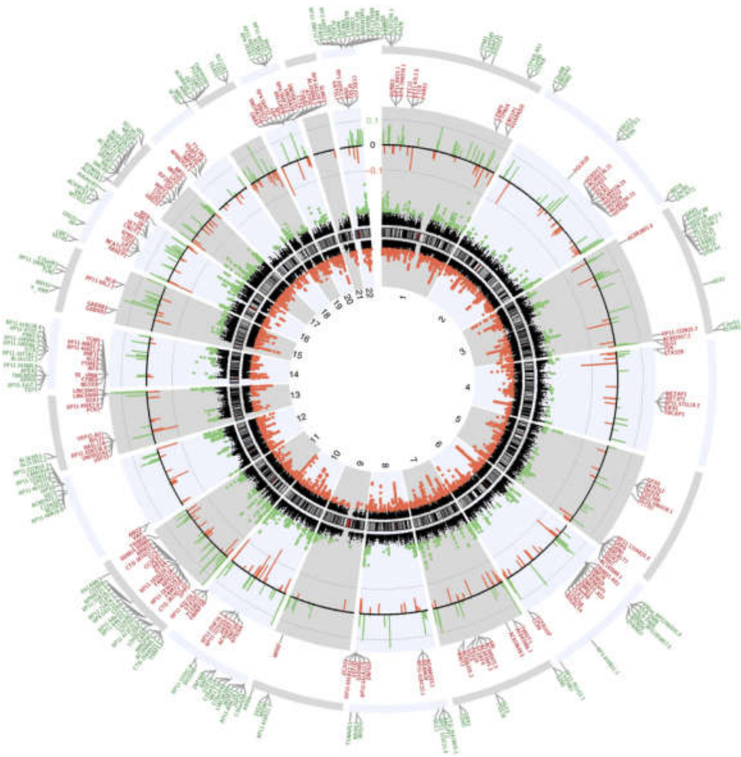
The GENES density bar shows progress towards identifying all genes in each band. As with sequence, an estimate of progress was calculated by dividing the number of known genes allocated to the band by the estimated total number of genes in the band.

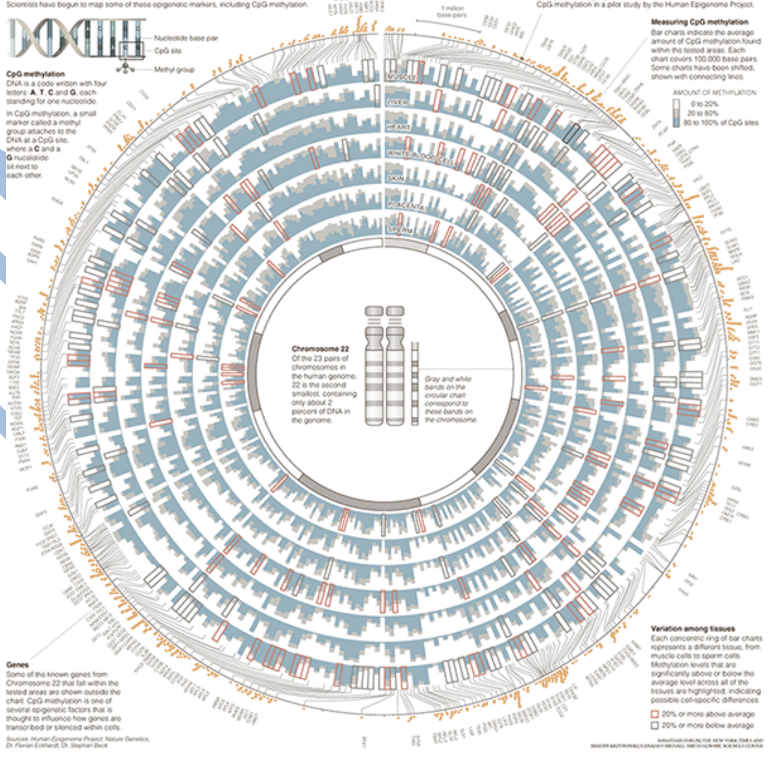
The LINKAGE MAP, shown as the heavy right border of the polymorphism bar, depicts relative order and distance in centimorgans for loci selected from published maps to give an illustrative map with a resolution averaging 10 to 20 cM. The POLYMORPHISMS bar indicates the number of known polymorphic loci allocated to the cytogenetic intervals formed by the linkage map. Lines connect the bar to the ideogram for those loci with a precise cytogenetic map localization.

Representative genes are identified by their alphanumeric symbols to the left of the ideogram. Vertical bars show the band (or bands if less precisely mapped) known to contain each gene. Names and disease associations are in the table on the back. These genes were included because of their location in bands of high information content or because of their interest to the broad scientific community or the general public.

1990 SCIENCE, a publication of The American Association for the Advancement of Science.

sponsored by Pharmacia





Mapping the Epigenome

DNA contains the genetic blueprint for all human cells, but the reading and execution of the blueprint inside each cell is controlled in part by chemical markers attached to the DNA. Scientists have begun to map some of these epigenetic markers, including CpG methylation.

CpG methylation

DNA is a code written with four letters: **A**, **T**, **C** and **G**, each standing for one nucleotide.

In CpG methylation, a small marker called a methyl group attaches to the DNA at a CpG site, where a **C** and a **G** nucleotide sit next to each other.

Reading the chart

The outer ring represents 35 million base pairs in Chromosome 22. Orange marks highlight areas of the chromosome that were tested for CpG methylation in a pilot study by the Human Epigenome Project.

Measuring CpG methylation

Bar charts indicate the average amount of CpG methylation found within the tested areas. Each chart covers 100,000 base pairs. Some charts have been shifted, shown with connecting lines.

Chromosome 22

Of the 23 pairs of chromosomes in the human genome, 22 is the second smallest, containing only about 2 percent of DNA in the genome.

Gray and white bands on the circular chart correspond to these bands on the chromosome.

Genes

Some of the known genes from Chromosome 22 that fall within the tested areas are shown outside the chart. CpG methylation is one of several epigenetic factors that is thought to influence how genes are transcribed or silenced within cells.

Variation among tissues

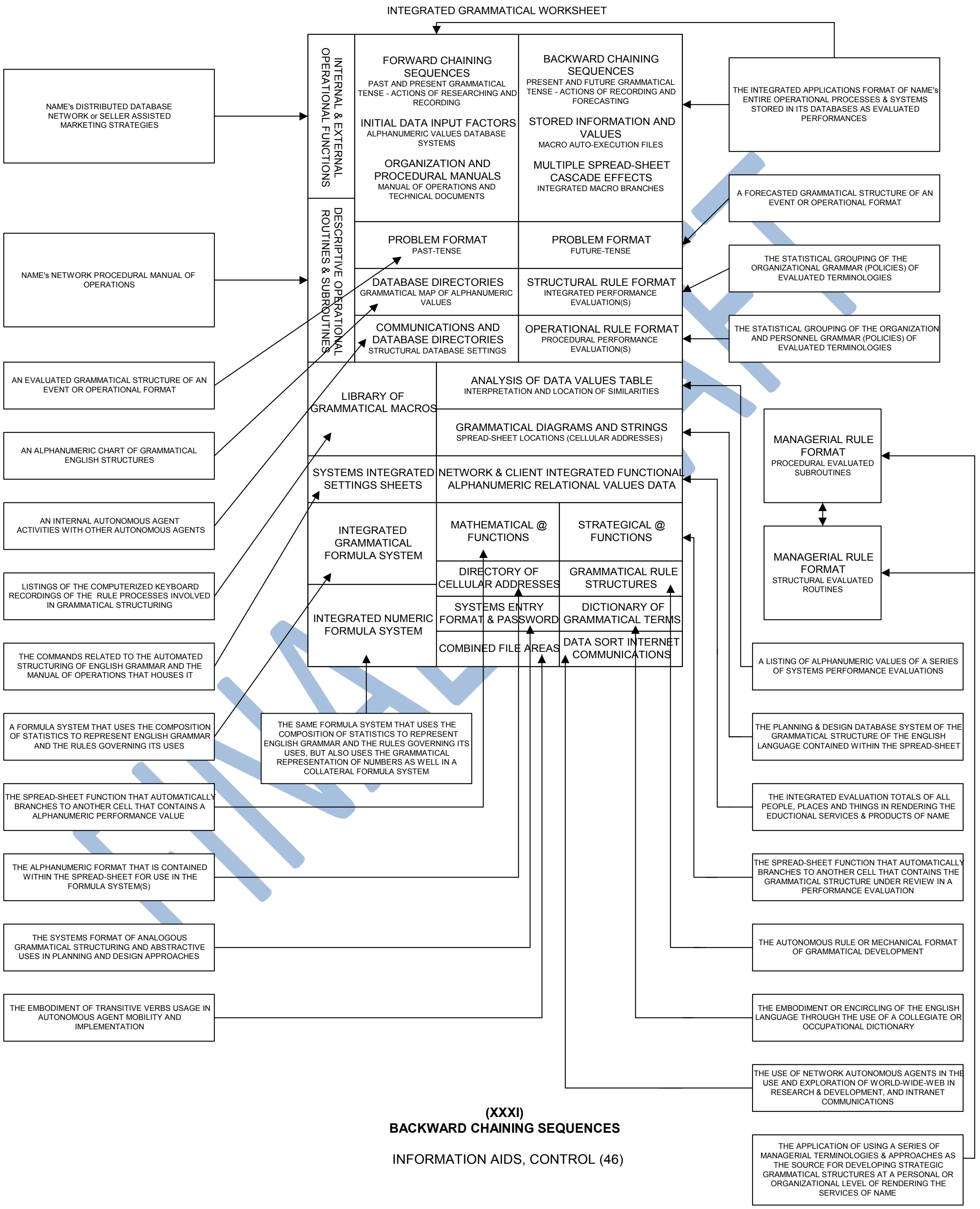
Each concentric ring of bar charts represents a different tissue, from muscle cells to sperm cells. Methylation levels that are significantly above or below the average level across all of the tissues are highlighted, indicating possible cell-specific differences.

Sources: Human Epigenome Project; Nature Genetics; Dr. Florian Eckhardt, Dr. Stephan Beck

JONATHAN CORUM/THE NEW YORK TIMES AND MARTIN KRZYWINSKI/CANADA'S MICHAEL SMITH GENOME SCIENCES CENTRE

Nucleotide base pair
CpG site
Methyl group
1 million base pairs
MUSCLE
LIVER
HEART
WHITE BLOOD CELLS
SKIN
PLACENTA
SPERM
AMOUNT OF METHYLATION
0 to 20%
20 to 80%
80 to 100% of CpG sites
☐ 20% or more above average
☐ 20% or more below average

THE AUTONOMOUS AGENT WORKSHEET of INTERNAL PROCESSES, SYSTEMS
and
CHART OF PROCEDURES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INTERNAL & EXTERNAL OPERATIONAL FUNCTIONS
DESCRIPTIVE OPERATIONAL ROUTINES & SUBROUTINES
FORWARD CHAINING SEQUENCES
PAST AND PRESENT GRAMMATICAL TENSE - ACTIONS OF RESEARCHING AND RECORDING
INITIAL DATA INPUT FACTORS
ALPHANUMERIC VALUES DATABASE SYSTEMS
ORGANIZATION AND PROCEDURAL MANUALS
MANUAL OF OPERATIONS AND TECHNICAL DOCUMENTS
BACKWARD CHAINING SEQUENCES
PRESENT AND FUTURE GRAMMATICAL TENSE - ACTIONS OF RECORDING AND FORECASTING
STORED INFORMATION AND VALUES
MACRO AUTO-EXECUTION FILES
MULTIPLE SPREAD-SHEET CASCADE EFFECTS
INTEGRATED MACRO BRANCHES
PROBLEM FORMAT
PAST-TENSE
PROBLEM FORMAT
FUTURE-TENSE
DATABASE DIRECTORIES
GRAMMATICAL MAP OF ALPHANUMERIC VALUES
STRUCTURAL RULE FORMAT
INTEGRATED PERFORMANCE EVALUATION(S)
COMMUNICATIONS AND DATABASE DIRECTORIES
STRUCTURAL DATABASE SETTINGS
OPERATIONAL RULE FORMAT
PROCEDURAL PERFORMANCE EVALUATION(S)
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GRAMMATICAL DIAGRAMS AND STRINGS
SPREAD-SHEET LOCATIONS (CELLULAR ADDRESSES)
SYSTEMS INTEGRATED SETTINGS SHEETS
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MATHEMATICAL @ FUNCTIONS
STRATEGICAL @ FUNCTIONS
DIRECTORY OF CELLULAR ADDRESSES
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DATA SORT INTERNET COMMUNICATIONS
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THE SPREAD-SHEET FUNCTION THAT AUTOMATICALLY BRANCHES TO ANOTHER CELL THAT CONTAINS A ALPHANUMERIC PERFORMANCE VALUE
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THE EMBODIMENT OF TRANSITIVE VERBS USAGE IN AUTONOMOUS AGENT MOBILITY AND IMPLEMENTATION
THE INTEGRATED APPLICATIONS FORMAT OF NAME's ENTIRE OPERATIONAL PROCESSES & SYSTEMS STORED IN ITS DATABASES AS EVALUATED PERFORMANCES
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PROCEDURAL EVALUATED SUBROUTINES
MANAGERIAL RULE FORMAT
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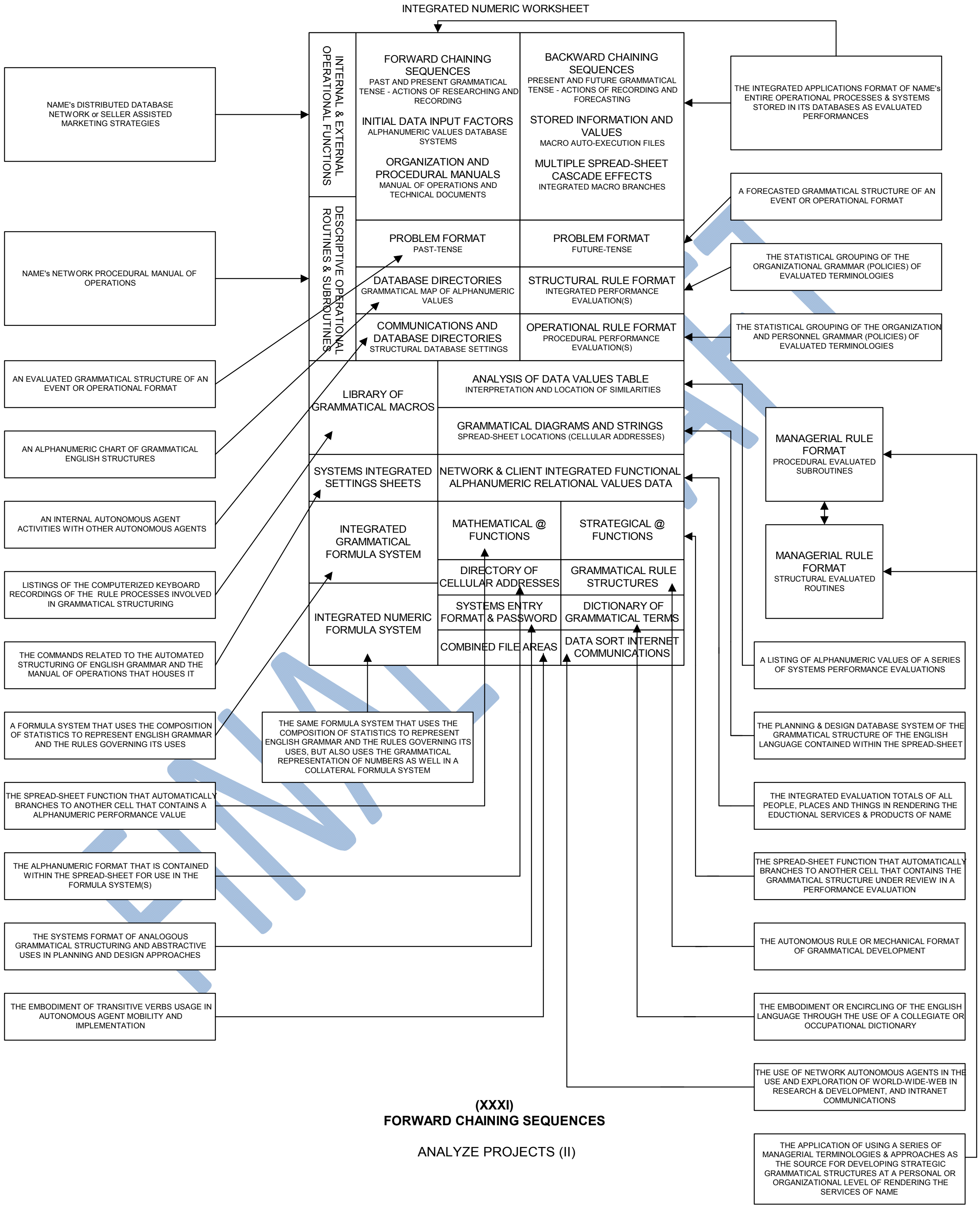
FINAL

(XXXI)
BACKWARD CHAINING SEQUENCES

INFORMATION AIDS, CONTROL (46)

THE AUTONOMOUS AGENT WORKSHEET of INTERNAL PROCESSES, SYSTEMS
and
CHART OF PROCEDURES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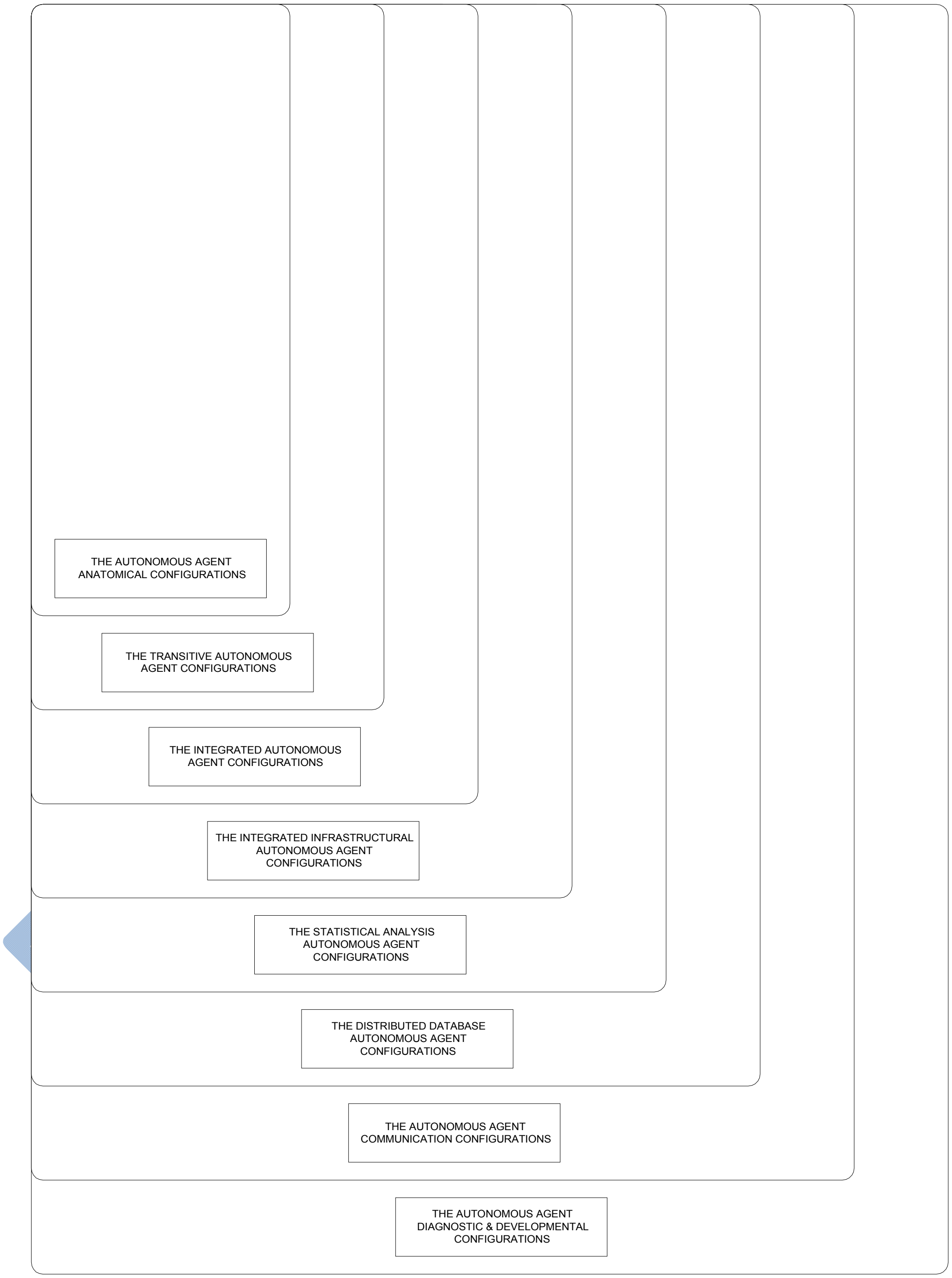
FINAL

(XXXI)
FORWARD CHAINING SEQUENCES

ANALYZE PROJECTS (II)

THE INTEGRATED AUTONOMOUS AGENT FORMULA SHEETS, SYSTEMS
and
CHART OF PROCEDURES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THE TRANSITIVE AUTONOMOUS AGENT CONFIGURATIONS
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THE INTEGRATED INFRASTRUCTURAL AUTONOMOUS AGENT CONFIGURATIONS
THE STATISTICAL ANALYSIS AUTONOMOUS AGENT CONFIGURATIONS
THE DISTRIBUTED DATABASE AUTONOMOUS AGENT CONFIGURATIONS
THE AUTONOMOUS AGENT COMMUNICATION CONFIGURATIONS
THE AUTONOMOUS AGENT DIAGNOSTIC & DEVELOPMENTAL CONFIGURATIONS

(XXXV)
BACKWARD CHAINING SEQUENCES

PURPOSE, FUTURE (6)

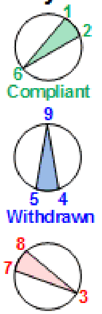
The Enneagram

Personal Growth Tool

black italics – avoidance
underline – need

With Arrow – Stress
Against Arrow – Growth

Karen Horney
Social Style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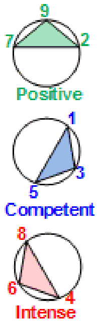
5
4
Withdrawn
8
7
3
Aggressive

Harmonic
Demeanor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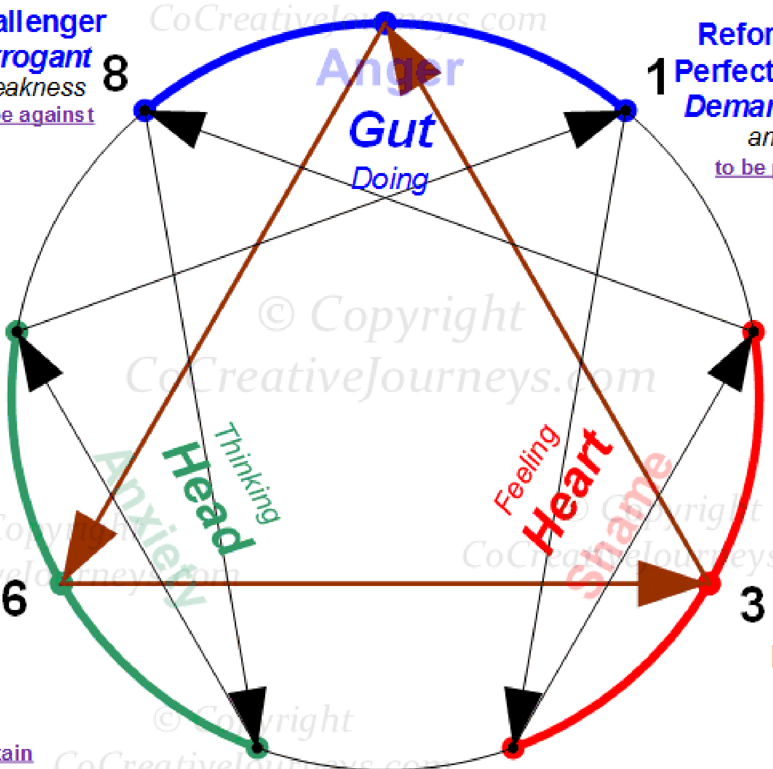
7
2
Positive
1
5
3
Competent
8
6
4
Intense


9
1
2
3
4
5
6
7
8
Anger
Gut
Doing
Thinking
Head
Anxiety
Feeling
Heart
Shame

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9
Peacemaker
Mediator
Slothful
conflict
to be indolent

1
Reformer
Perfectionist
Demanding
anger
to be perfect

2
Nurturer
Connector
Manipulator
own needs
to be needed

3
Achiever
Performer
Deceitful
failure
to succeed

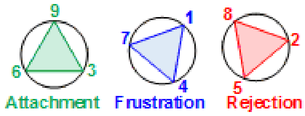
4
Artist
Individualist
Envious
ordinariness
to be special

5
Thinker
Observer
Stingy
emptiness
to perceive

6
Loyalist
Skeptic
Fearful
deviance
to be secure/certain

7
Fun
Adventurer
Over-Indulgent
being limited
to avoid pain

8
Maverick
Challenger
Arrogant
weakness
to be against


9
6
3
Attachment
1
7
4
Frustration
8
2
5
Rejection

Object Relations
Belinda Gore

Instincts *(subtypes)*
- Sexual (one-on-one)
- Self-Preservation
- Social

For Further Study
- 9Types.com
- EnneagramInstitute.com
- CoCreativeJourneys.com/enneagram/nine-types

The Enneagram Made Easy
by Renee Baron & Elizabeth Wagele
The Wisdom of the Enneagram
by Don Richard Riso and Russ Hudson
Discovering the Enneagram
by Richard Rohr and Andreas Ebert

Professional Organizations
- InternationalEnneagram.org
- IEAColorado.org

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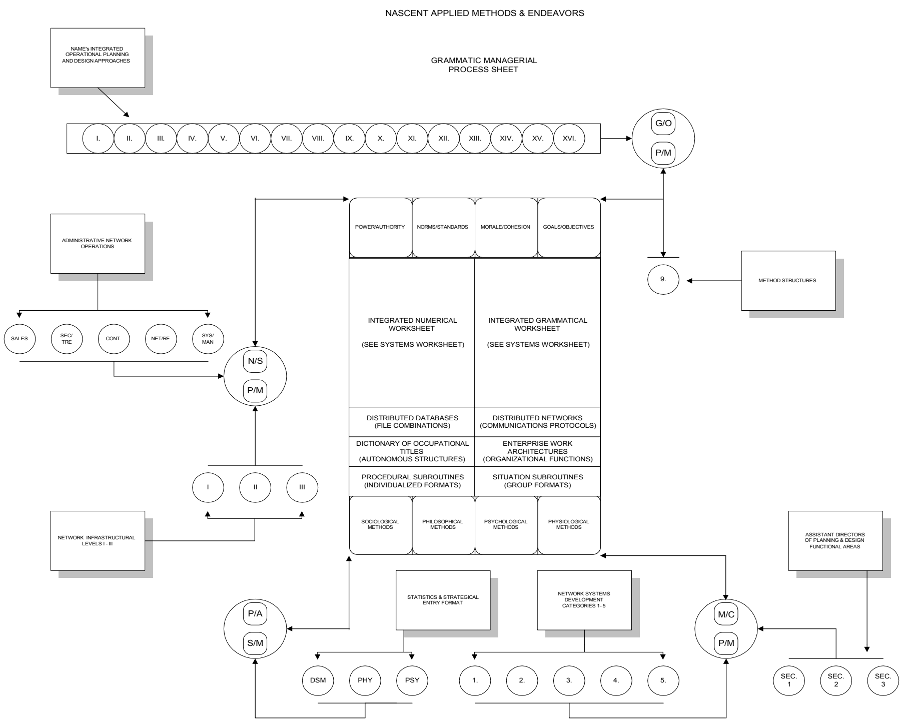
CoCreativeJourneys.com
Paul Paiva
Enneagram Instructor & Evangelist
Paul@CoCreativeJourneys.com

THE AUTONOMOUS AGENT TIMELINE PERFORMANCE, MEASURING, PROCESS SYSTEMS
and
CHART OF PROCEDURES

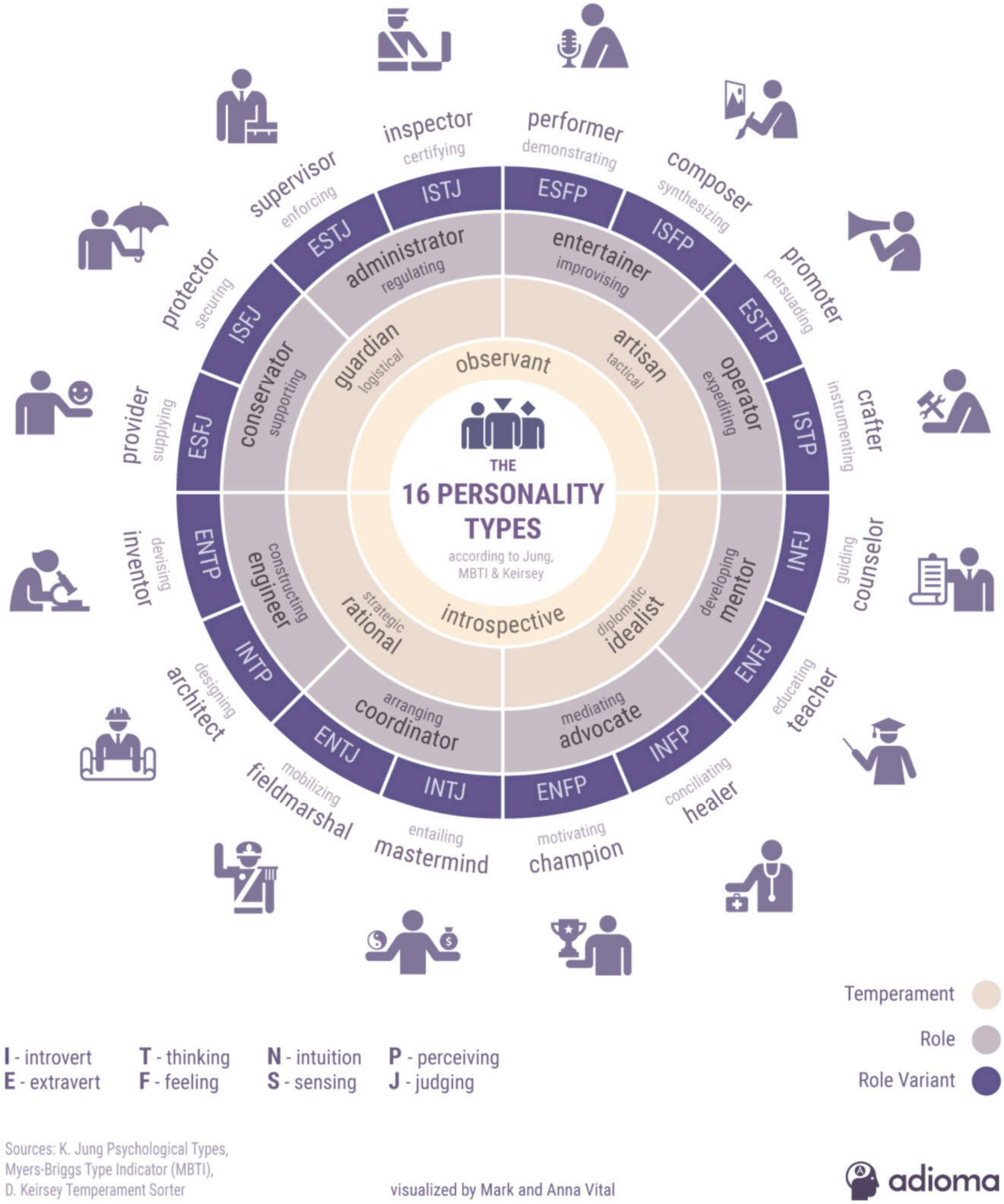
AUTONOMOUS AGENT DATABASE STRUCTURE

INDIVIDUAL DEVELOPMENT FORMAT				ORGANIZATIONAL DEVELOPMENT FORMAT			
AAAC	TAAC	IAAC	IIAAC	AAAC	TAAC	IAAC	IIAAC
SAAAC	DDAAC	AACC	AADDC	SAAAC	DDAAC	AACC	AADDC

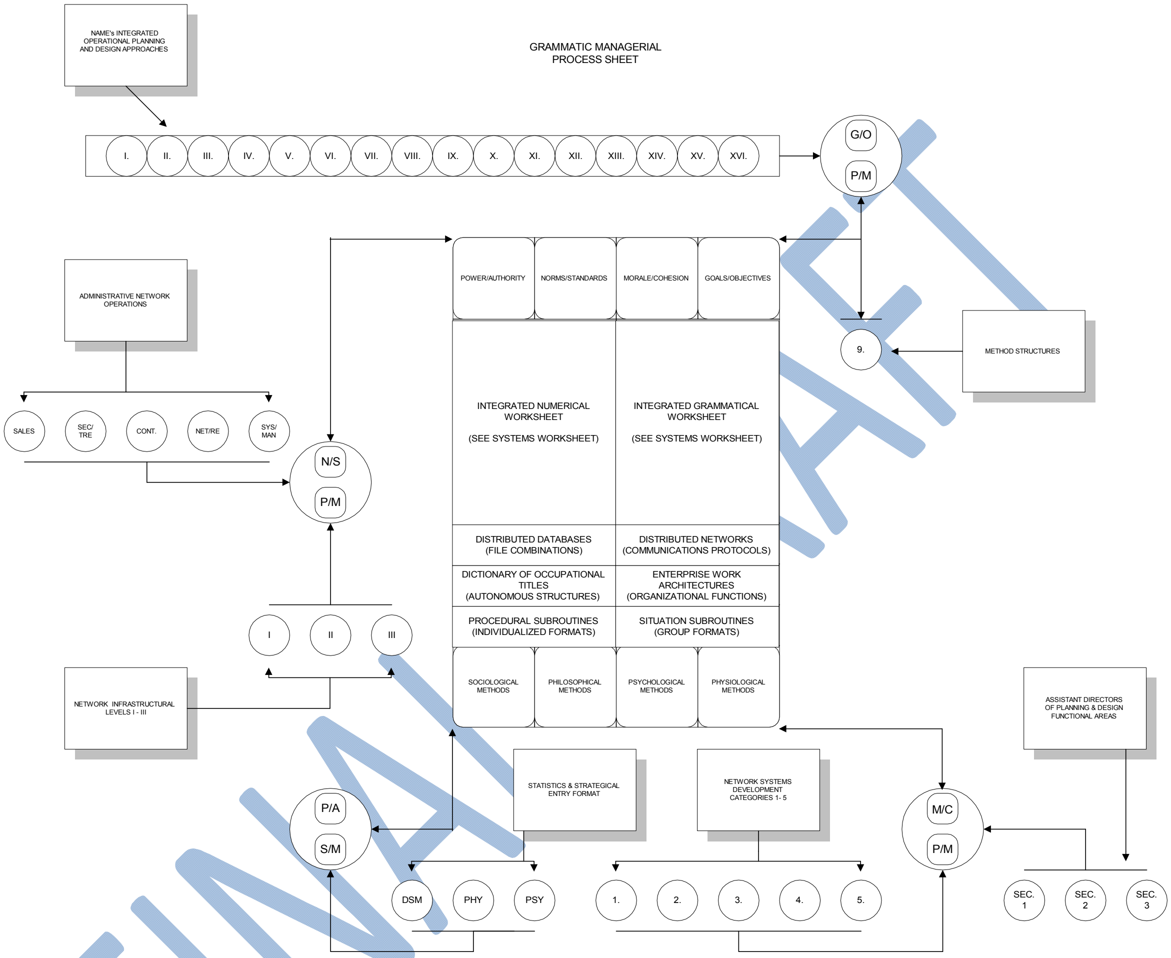

NASCENT APPLIED METHODS & ENDEAVORS
GRAMMATIC MANAGERIAL PROCESS SHEET
NAME's INTEGRATED OPERATIONAL PLANNING AND DESIGN APPROACHES
I.
II.
III.
IV.
V.
VI.
VII.
VIII.
IX.
X.
XI.
XII.
XIII.
XIV.
XV.
XVI.
G/O
P/M
ADMINISTRATIVE NETWORK OPERATIONS
SALES
SEC/ TRE
CONT.
NET/RE
SYS/ MAN
N/S
P/M
POWER/AUTHORITY
NORMS/STANDARDS
MORALE/COHESION
GOALS/OBJECTIVES
INTEGRATED NUMERICAL WORKSHEET
(SEE SYSTEMS WORKSHEET)
INTEGRATED GRAMMATICAL WORKSHEET
(SEE SYSTEMS WORKSHEET)
DISTRIBUTED DATABASES (FILE COMBINATIONS)
DISTRIBUTED NETWORKS (COMMUNICATIONS PROTOCOLS)
DICTIONARY OF OCCUPATIONAL TITLES (AUTONOMOUS STRUCTURES)
ENTERPRISE WORK ARCHITECTURES (ORGANIZATIONAL FUNCTIONS)
PROCEDURAL SUBROUTINES (INDIVIDUALIZED FORMATS)
SITUATION SUBROUTINES (GROUP FORMATS)
SOCIOLOGICAL METHODS
PHILOSOPHICAL METHODS
PSYCHOLOGICAL METHODS
PHYSIOLOGICAL METHODS
9.
METHOD STRUCTURES
I
II
III
NETWORK INFRASTRUCTURAL LEVELS I - III
ASSISTANT DIRECTORS OF PLANNING & DESIGN FUNCTIONAL AREAS
STATISTICS & STRATEGICAL ENTRY FORMAT
NETWORK SYSTEMS DEVELOPMENT CATEGORIES 1- 5
P/A
S/M
M/C
P/M
DSM
PHY
PSY
1.
2.
3.
4.
5.
SEC. 1
SEC. 2
SEC. 3

(XXXIII)
BACKWARD CHAINING SEQUENCES

INFORMATION AIDS, MEASURES (45)


THE
16 PERSONALITY TYPES
according to Jung, MBTI & Keirsey
observant
introspective
guardian
logistical
artisan
tactical
rational
strategic
idealist
diplomatic
administrator
regulating
entertainer
improvising
operator
expediting
mentor
developing
advocate
mediating
coordinator
arranging
engineer
constructing
conservator
supporting
ISTJ
ESFP
ISFP
ESTP
ISTP
INFJ
ENFJ
INFP
ENFP
INTJ
ENTJ
INTP
ENTP
ESFJ
ISFJ
ESTJ
inspector
certifying
performer
demonstrating
composer
synthesizing
promoter
persuading
crafter
instrumenting
counselor
guiding
teacher
educating
healer
conciliating
champion
motivating
mastermind
entailing
fieldmarshal
mobilizing
architect
designing
inventor
devising
provider
supplying
protector
securing
supervisor
enforcing
Temperament
Role
Role Variant
I - introvert
E - extravert
T - thinking
F - feeling
N - intuition
S - sensing
P - perceiving
J - judging
Sources: K. Jung Psychological Types,
Myers-Briggs Type Indicator (MBTI),
D. Keirsey Temperament Sorter
visualized by Mark and Anna Vital
adioma

THE AUTONOMOUS AGENT MANAGERIAL PROCESSES SHEET, SYSTEMS
and
CHART OF PROCEDURES


NAME's INTEGRATED OPERATIONAL PLANNING AND DESIGN APPROACHES
GRAMMATIC MANAGERIAL PROCESS SHEET
I.
II.
III.
IV.
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VI.
VII.
VIII.
IX.
X.
XI.
XII.
XIII.
XIV.
XV.
XVI.
G/O
P/M
ADMINISTRATIVE NETWORK OPERATIONS
SALES
SEC/ TRE
CONT.
NET/RE
SYS/ MAN
N/S
P/M
POWER/AUTHORITY
NORMS/STANDARDS
MORALE/COHESION
GOALS/OBJECTIVES
9.
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INTEGRATED NUMERICAL WORKSHEET (SEE SYSTEMS WORKSHEET)
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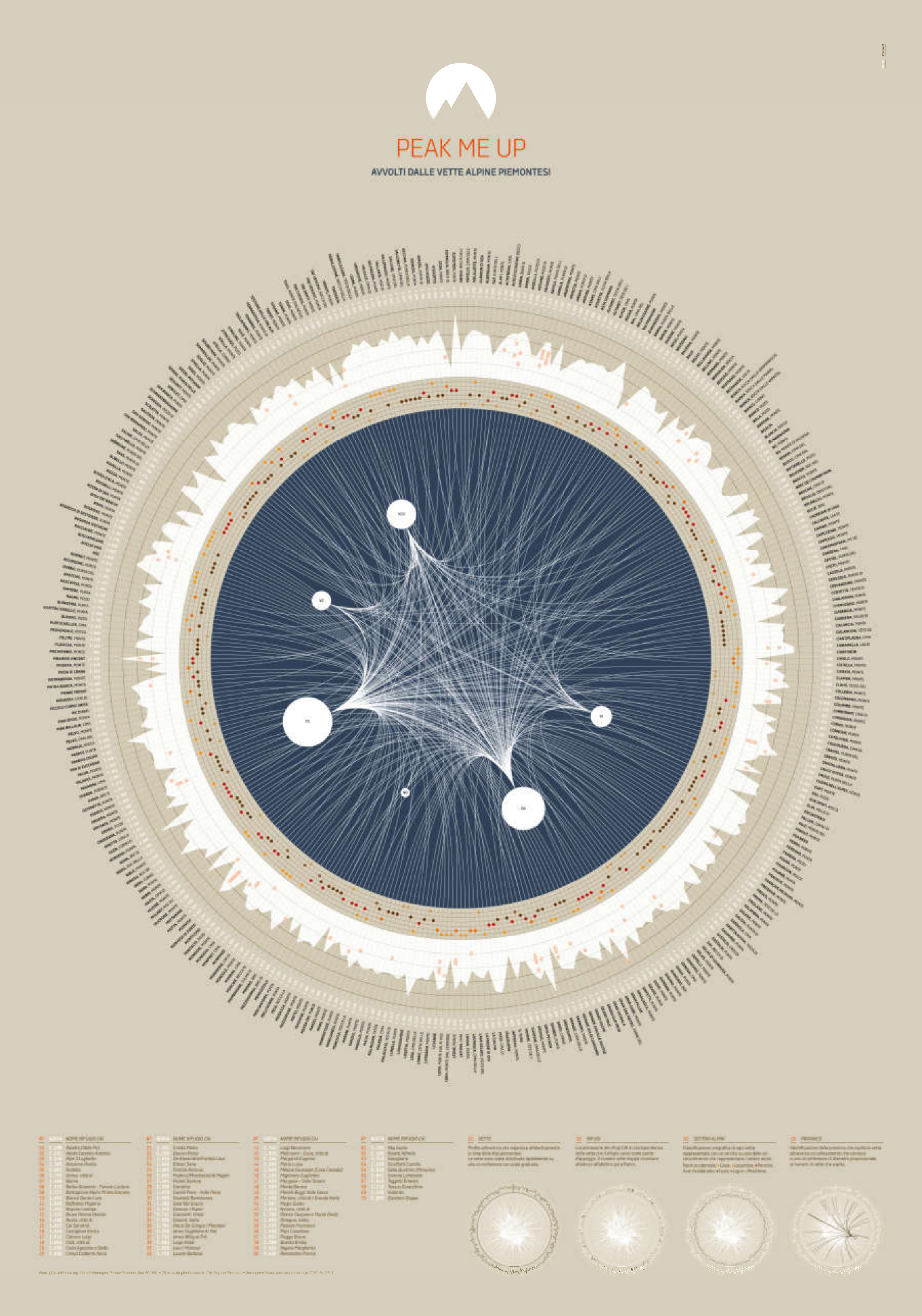
PROCEDURAL SUBROUTINES (INDIVIDUALIZED FORMATS)
SITUATION SUBROUTINES (GROUP FORMATS)
I
II
III
NETWORK INFRASTRUCTURAL LEVELS I - III
SOCIOLOGICAL METHODS
PHILOSOPHICAL METHODS
PSYCHOLOGICAL METHODS
PHYSIOLOGICAL METHODS
ASSISTANT DIRECTORS OF PLANNING & DESIGN FUNCTIONAL AREAS
STATISTICS & STRATEGICAL ENTRY FORMAT
NETWORK SYSTEMS DEVELOPMENT CATEGORIES 1- 5
P/A
S/M
M/C
P/M
DSM
PHY
PSY
1.
2.
3.
4.
5.
SEC. 1
SEC. 2
SEC. 3

(XXXII)
FORWARD CHAINING SEQUENCES

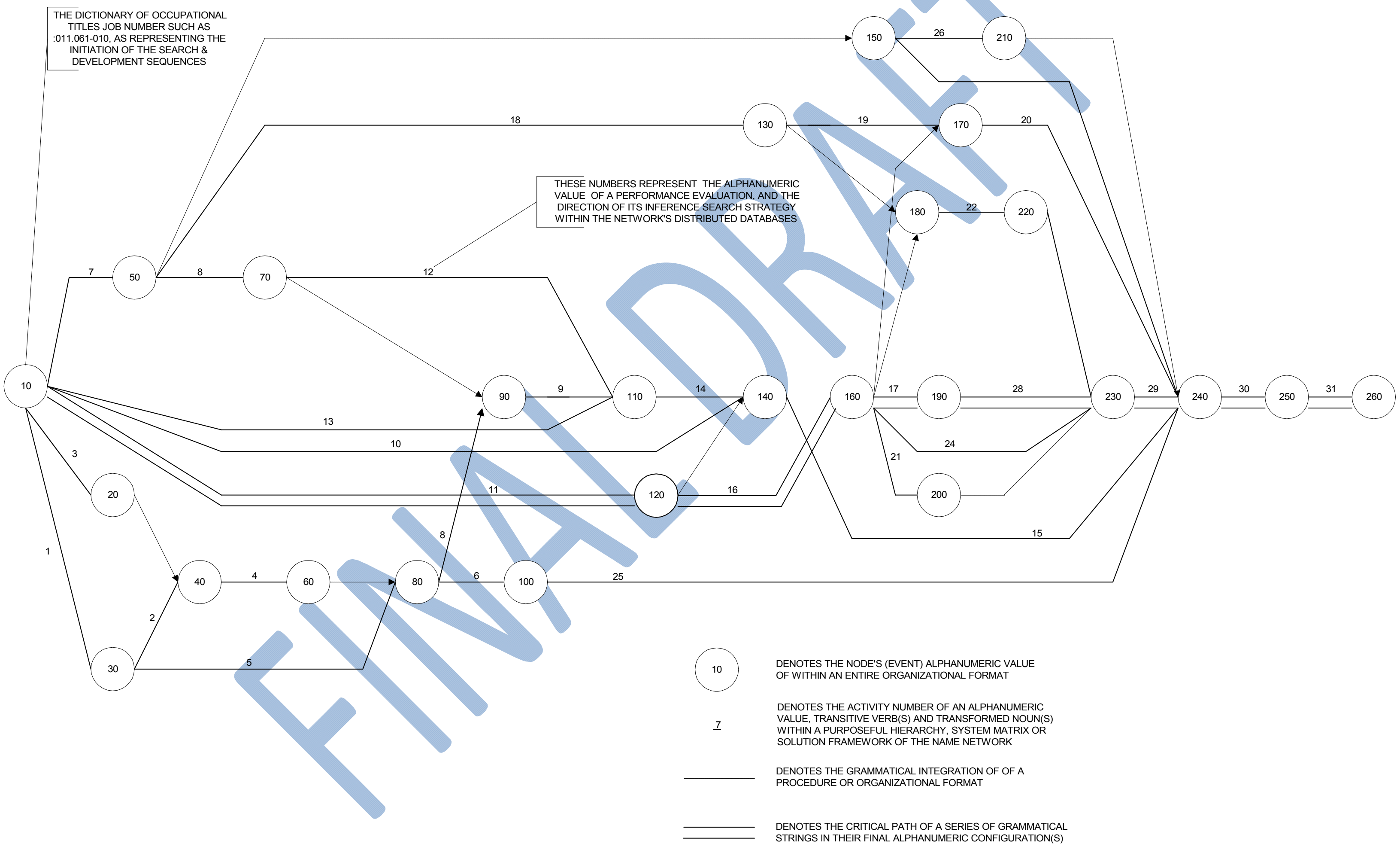
IDENTIFY MANAGEMENT STYLES (V)


PEAK ME UP
AVVOLTI DALLE VETTE ALPINE PIEMONTESI

///

NASCENT APPLIED METHODS & ENDEAVORS

THE PROCEDURAL MAP OF GRAMMATICAL DEVELOPMENT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31

THE DICTIONARY OF OCCUPATIONAL TITLES JOB NUMBER SUCH AS :011.061-010, AS REPRESENTING THE INITIATION OF THE SEARCH & DEVELOPMENT SEQUENCES

THESE NUMBERS REPRESENT THE ALPHANUMERIC VALUE OF A PERFORMANCE EVALUATION, AND THE DIRECTION OF ITS INFERENCE SEARCH STRATEGY WITHIN THE NETWORK'S DISTRIBUTED DATABASES

10 DENOTES THE NODE'S (EVENT) ALPHANUMERIC VALUE OF WITHIN AN ENTIRE ORGANIZATIONAL FORMAT

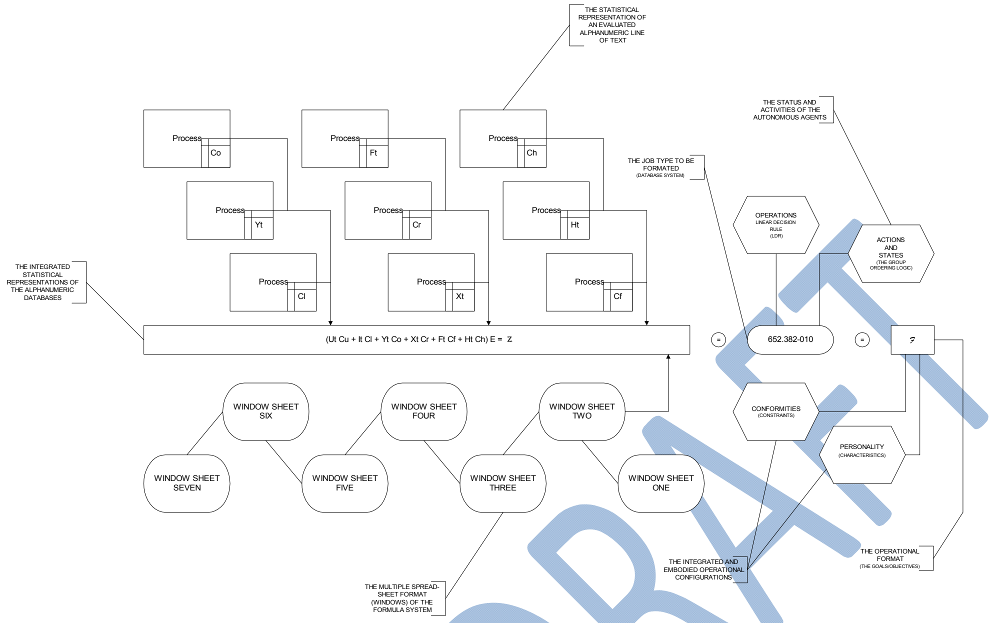
7 DENOTES THE ACTIVITY NUMBER OF AN ALPHANUMERIC VALUE, TRANSITIVE VERB(S) AND TRANSFORMED NOUN(S) WITHIN A PURPOSEFUL HIERARCHY, SYSTEM MATRIX OR SOLUTION FRAMEWORK OF THE NAME NETWORK

DENOTES THE GRAMMATICAL INTEGRATION OF OF A PROCEDURE OR ORGANIZATIONAL FORMAT

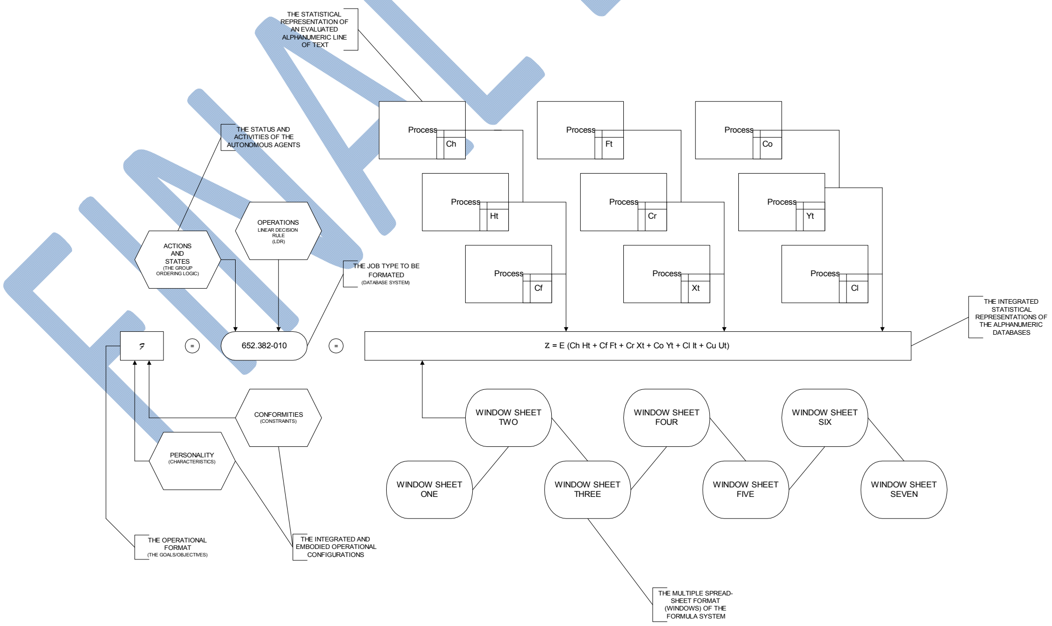
DENOTES THE CRITICAL PATH OF A SERIES OF GRAMMATICAL STRINGS IN THEIR FINAL ALPHANUMERIC CONFIGURATION(S)

NASCENT APPLIED METHODS & ENDEAVORS

THE STATISTICAL ALPHANUMERIC FORMULA FORMAT

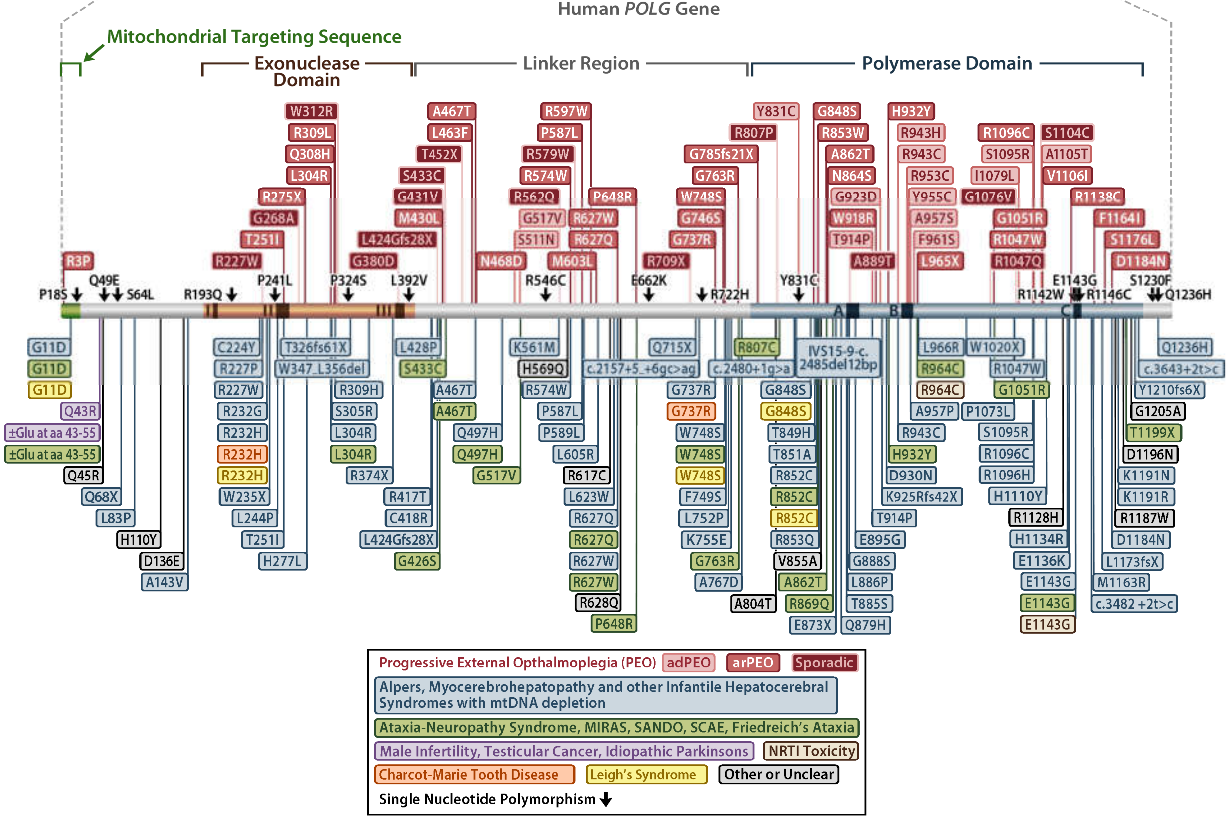

THE STATISTICAL REPRESENTATION OF AN EVALUATED ALPHANUMERIC LINE OF TEXT
THE STATUS AND ACTIVITIES OF THE AUTONOMOUS AGENTS
Process Co
Process Ft
Process Ch
THE JOB TYPE TO BE FORMATED (DATABASE SYSTEM)
Process Yt
Process Cr
Process Ht
OPERATIONS LINEAR DECISION RULE (LDR)
ACTIONS AND STATES (THE GROUP ORDERING LOGIC)
THE INTEGRATED STATISTICAL REPRESENTATIONS OF THE ALPHANUMERIC DATABASES
Process Cl
Process Xt
Process Cf
(Ut Cu + It Cl + Yt Co + Xt Cr + Ft Cf + Ht Ch) E = Z
=
652.382-010
=
WINDOW SHEET SIX
WINDOW SHEET FOUR
WINDOW SHEET TWO
CONFORMITIES (CONSTRAINTS)
PERSONALITY (CHARACTERISTICS)
WINDOW SHEET SEVEN
WINDOW SHEET FIVE
WINDOW SHEET THREE
WINDOW SHEET ONE
THE INTEGRATED AND EMBODIED OPERATIONAL CONFIGURATIONS
THE OPERATIONAL FORMAT (THE GOALS/OBJECTIVES)
THE MULTIPLE SPREAD-SHEET FORMAT (WINDOWS) OF THE FORMULA SYSTEM

THE BACKWARD CHAINING SEQUENCES
(THE ANATOMICAL REPRESENTATION OF THE PERIPHEAL NERVOUS SYSTEM)


THE STATISTICAL REPRESENTATION OF AN EVALUATED ALPHANUMERIC LINE OF TEXT
Process Ch
Process Ft
Process Co
THE STATUS AND ACTIVITIES OF THE AUTONOMOUS AGENTS
Process Ht
Process Cr
Process Yt
OPERATIONS LINEAR DECISION RULE (LDR)
ACTIONS AND STATES (THE GROUP ORDERING LOGIC)
THE JOB TYPE TO BE FORMATED (DATABASE SYSTEM)
Process Cf
Process Xt
Process Cl
THE INTEGRATED STATISTICAL REPRESENTATIONS OF THE ALPHANUMERIC DATABASES
=
652.382-010
=
Z = E (Ch Ht + Cf Ft + Cr Xt + Co Yt + Cl It + Cu Ut)
CONFORMITIES (CONSTRAINTS)
WINDOW SHEET TWO
WINDOW SHEET FOUR
WINDOW SHEET SIX
PERSONALITY (CHARACTERISTICS)
WINDOW SHEET ONE
WINDOW SHEET THREE
WINDOW SHEET FIVE
WINDOW SHEET SEVEN
THE OPERATIONAL FORMAT (THE GOALS/OBJECTIVES)
THE INTEGRATED AND EMBODIED OPERATIONAL CONFIGURATIONS
THE MULTIPLE SPREAD-SHEET FORMAT (WINDOWS) OF THE FORMULA SYSTEM

THE FORWARD CHAINING SEQUENCES
(THE ANATOMICAL REPRESENTATION OF THE AUTONOMIC NERVOUS SYSTEM)

Mutations in DNA Polymerase γ (*POLG*)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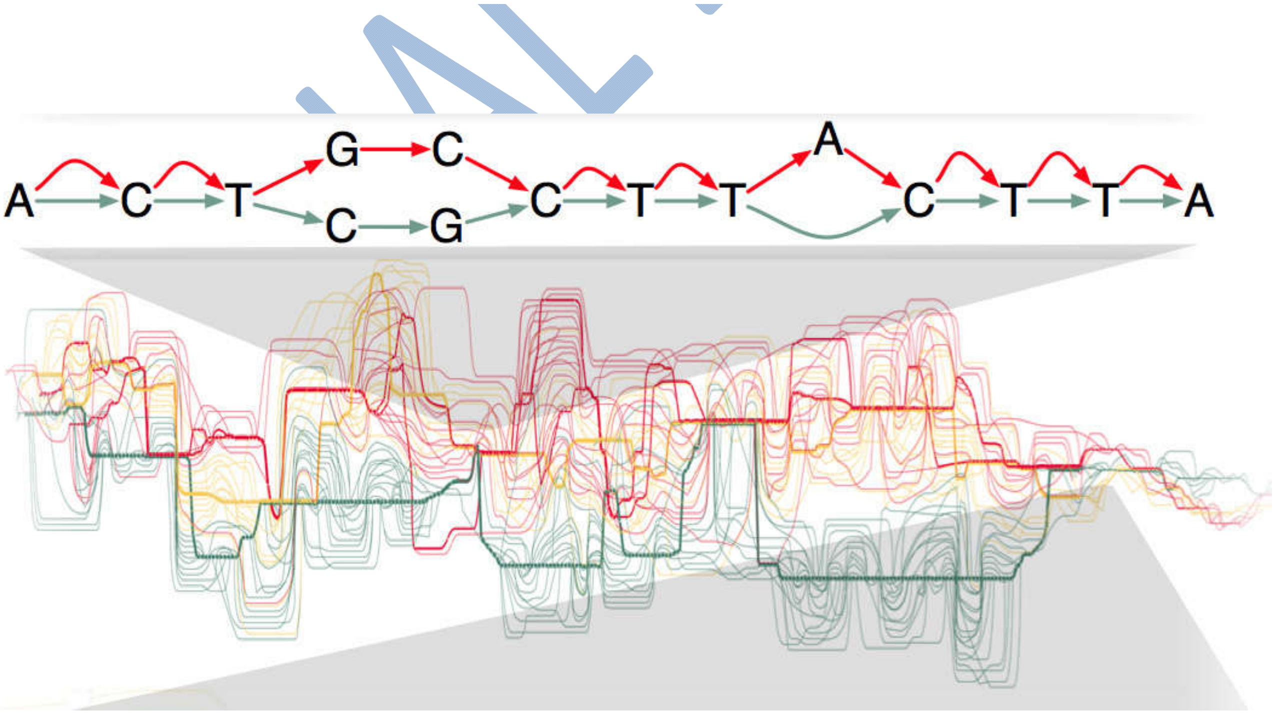
22
23
Human POLG Gene
Mitochondrial Targeting Sequence
Exonuclease Domain
Linker Region
Polymerase Domain
W312R
R309L
Q308H
L304R
R275X
G268A
T251I
R227W
R3P
A467T
L463F
T452X
S433C
G431V
M430L
L424Gfs28X
G380D
R597W
P587L
R579W
R574W
R562Q
G517V
S511N
N468D
P648R
R627W
R627Q
M603L
R709X
Y831C
R807P
G785fs21X
G763R
W748S
G746S
G737R
G848S
R853W
A862T
N864S
G923D
W918R
T914P
A889T
H932Y
R943H
R943C
R953C
Y955C
A957S
F961S
L965X
R1096C
S1095R
I1079L
G1076V
G1051R
R1047W
R1047Q
S1104C
A1105T
V1106I
R1138C
F1164I
S1176L
D1184N
P18S
Q49E
S64L
R193Q
P241L
P324S
L392V
R546C
E662K
R722H
Y831C
E1143G
R1142W
R1146C
S1230F
Q1236H
A
B
C
G11D
G11D
G11D
Q43R
±Glu at aa 43-55
±Glu at aa 43-55
Q45R
Q68X
L83P
H110Y
D136E
A143V
C224Y
R227P
R227W
R232G
R232H
R232H
R232H
W235X
L244P
T251I
H277L
T326fs61X
W347_L356del
R309H
S305R
L304R
L304R
R374X
R417T
C418R
L424Gfs28X
G426S
L428P
S433C
A467T
A467T
Q497H
Q497H
G517V
K561M
H569Q
R574W
P587L
P589L
L605R
R617C
L623W
R627Q
R627Q
R627W
R627W
R628Q
P648R
c.2157+5_+6gc>ag
Q715X
G737R
G737R
W748S
W748S
W748S
F749S
L752P
K755E
G763R
A767D
A804T
c.2480+1g>a
R807C
G848S
G848S
T849H
T851A
R852C
R852C
R852C
R853Q
V855A
A862T
R869Q
E873X
IVS15-9-c. 2485del12bp
L966R
R964C
R964C
A957P
R943C
H932Y
D930N
K925Rfs42X
T914P
E895G
G888S
L886P
T885S
Q879H
W1020X
R1047W
G1051R
P1073L
S1095R
R1096C
R1096H
H1110Y
R1128H
H1134R
E1136K
E1143G
E1143G
E1143G
Q1236H
c.3643+2t>c
Y1210fs6X
G1205A
T1199X
D1196N
K1191N
K1191R
R1187W
D1184N
L1173fsX
M1163R
c.3482 +2t>c
Progressive External Opthalmoplegia (PEO)
adPEO
arPEO
Sporadic
Alpers, Myocerebrohepatopathy and other Infantile Hepatocerebral Syndromes with mtDNA depletion
Ataxia-Neuropathy Syndrome, MIRAS, SANDO, SCAE, Friedreich's Ataxia
Male Infertility, Testicular Cancer, Idiopathic Parkinsons
NRTI Toxicity
Charcot-Marie Tooth Disease
Leigh's Syndrome
Other or Unclear
Single Nucleotide Polymorphism ↓


A
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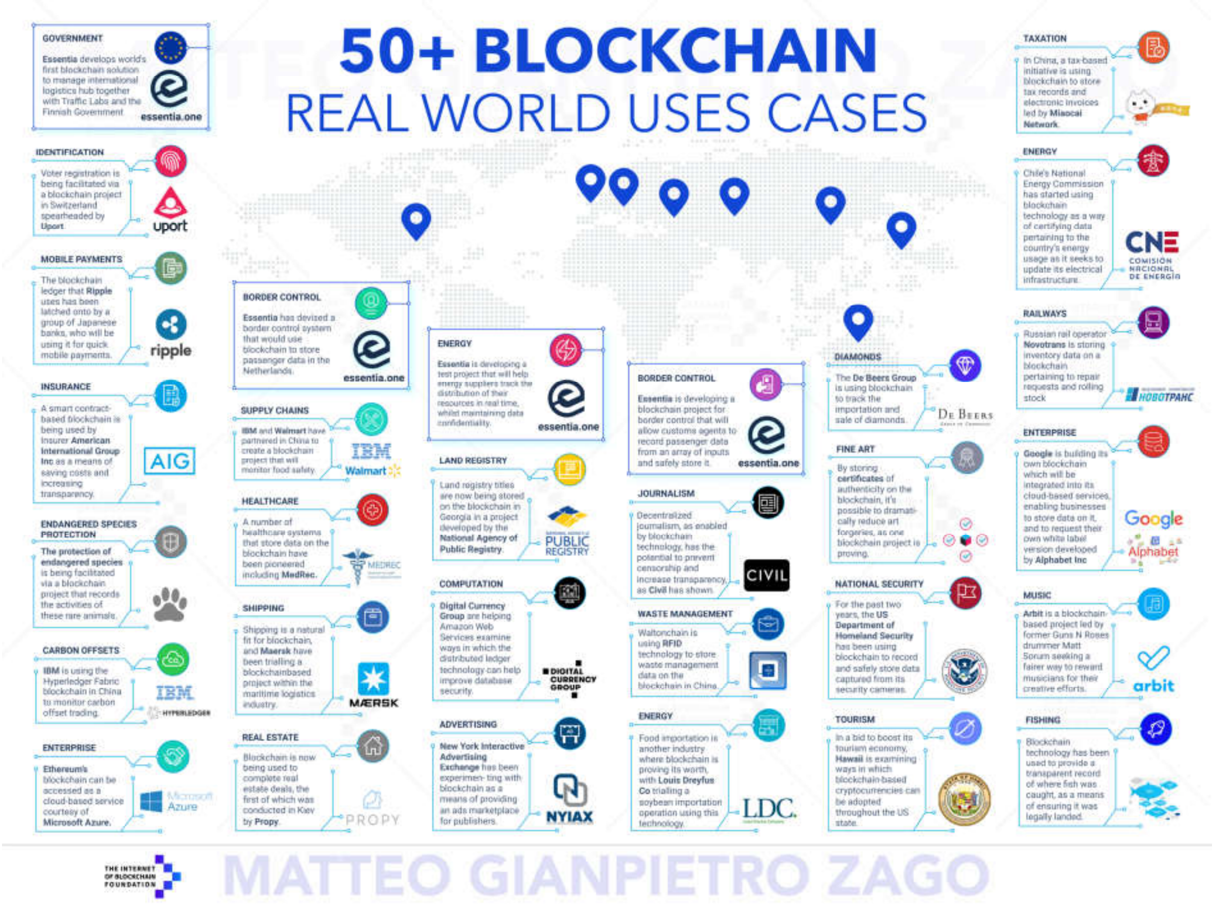


50+ BLOCKCHAIN
REAL WORLD USES CASES

GOVERNMENT

Essentia develops world's first blockchain solution to manage international logistics hub together with Traffic Labs and the Finnish Government

IDENTIFICATION

Voter registration is being facilitated via a blockchain project in Switzerland spearheaded by **Uport**

MOBILE PAYMENTS

The blockchain ledger that **Ripple** uses has been latched onto by a group of Japanese banks, who will be using it for quick mobile payments.

INSURANCE

A smart contract-based blockchain is being used by insurer **American International Group Inc** as a means of saving costs and increasing transparency.

ENDANGERED SPECIES PROTECTION

The protection of endangered species is being facilitated via a blockchain project that records the activities of these rare animals.

CARBON OFFSETS

IBM is using the Hyperledger Fabric blockchain in China to monitor carbon offset trading.

ENTERPRISE

Ethereum's blockchain can be accessed as a cloud-based service courtesy of **Microsoft Azure.**

BORDER CONTROL

Essentia has devised a border control system that would use blockchain to store passenger data in the Netherlands.

SUPPLY CHAINS

IBM and **Walmart** have partnered in China to create a blockchain project that will monitor food safety.

HEALTHCARE

A number of healthcare systems that store data on the blockchain have been pioneered including **MedRec.**

SHIPPING

Shipping is a natural fit for blockchain, and **Maersk** have been trialling a blockchainbased project within the maritime logistics industry.

REAL ESTATE

Blockchain is now being used to complete real estate deals, the first of which was conducted in Kiev by **Propy**.

ENERGY

Essentia is developing a test project that will help energy suppliers track the distribution of their resources in real time, whilst maintaining data confidentiality.

LAND REGISTRY

Land registry titles are now being stored on the blockchain in Georgia in a project developed by the **National Agency of Public Registry**.

COMPUTATION

Digital Currency Group are helping Amazon Web Services examine ways in which the distributed ledger technology can help improve database security.

ADVERTISING

New York Interactive Advertising Exchange has been experimen- ting with blockchain as a means of providing an ads marketplace for publishers.

BORDER CONTROL

Essentia is developing a blockchain project for border control that will allow customs agents to record passenger data from an array of inputs and safely store it.

JOURNALISM

Decentralized journalism, as enabled by blockchain technology, has the potential to prevent censorship and increase transparency, as **Civil** has shown.

WASTE MANAGEMENT

Waltonchain is using **RFID** technology to store waste management data on the blockchain in China.

ENERGY

Food importation is another industry where blockchain is proving its worth, with **Louis Dreyfus Co** trialling a soybean importation operation using this technology.

DIAMONDS

The **De Beers Group** is using blockchain to track the importation and sale of diamonds.

FINE ART

By storing **certificates** of authenticity on the blockchain, it's possible to dramatically reduce art forgeries, as one blockchain project is proving.

NATIONAL SECURITY

For the past two years, the **US Department of Homeland Security** has been using blockchain to record and safely store data captured from its security cameras.

TOURISM

In a bid to boost its tourism economy, **Hawaii** is examining ways in which blockchain-based cryptocurrencies can be adopted throughout the US state.

TAXATION

In China, a tax-based initiative is using blockchain to store tax records and electronic invoices led by **Miaocai Network**.

ENERGY

Chile's National Energy Commission has started using blockchain technology as a way of certifying data pertaining to the country's energy usage as it seeks to update its electrical infrastructure.

RAILWAYS

Russian rail operator **Novotrans** is storing inventory data on a blockchain pertaining to repair requests and rolling stock

ENTERPRISE

Google is building its own blockchain which will be integrated into its cloud-based services, enabling businesses to store data on it, and to request their own white label version developed by **Alphabet Inc**

MUSIC

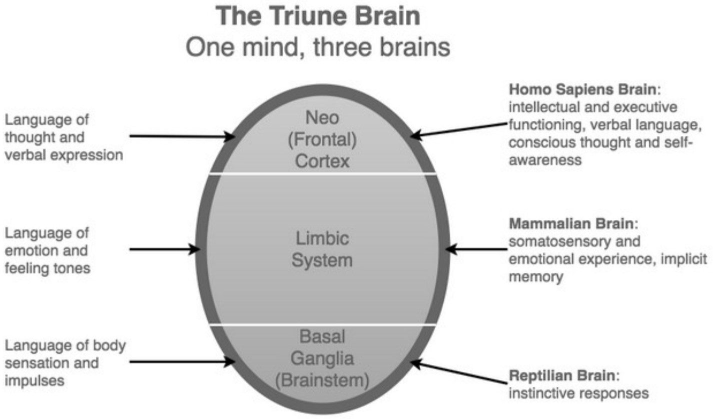
Arbit is a blockchain-based project led by former Guns N Roses drummer Matt Sorum seeking a fairer way to reward musicians for their creative efforts.

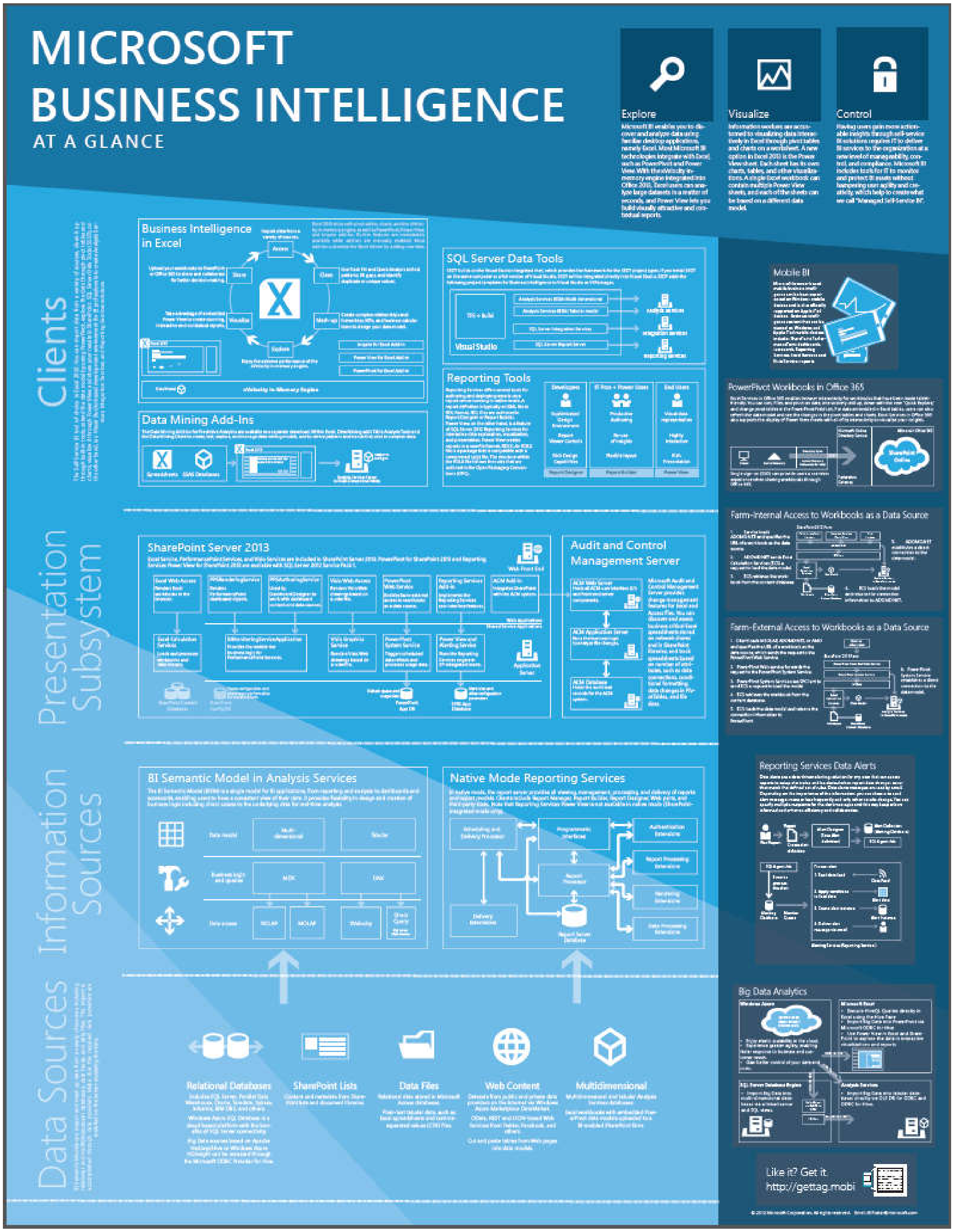
FISHING

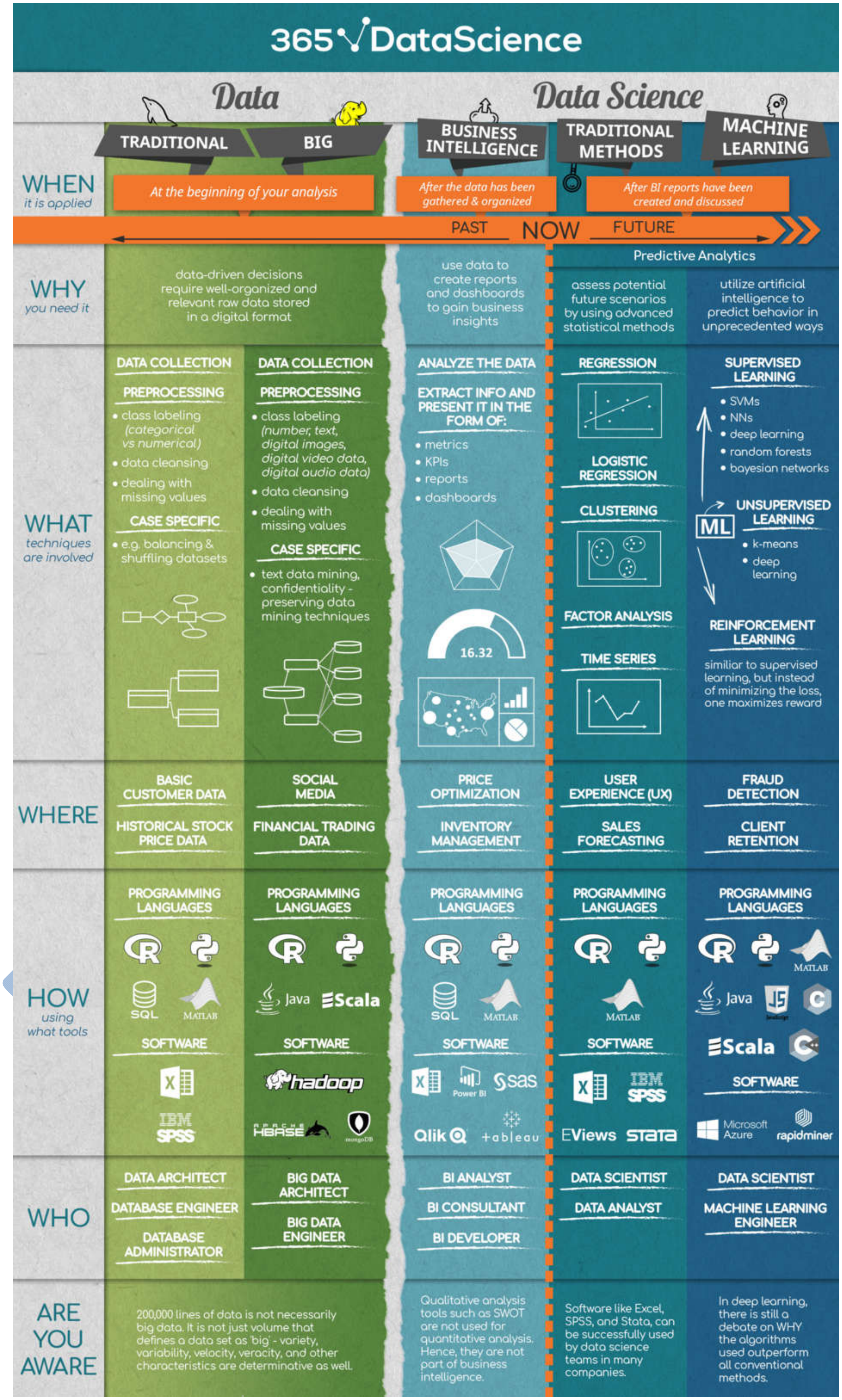
Blockchain technology has been used to provide a transparent record of where fish was caught, as a means of ensuring it was legally landed.

THE INTERNET OF BLOCKCHAIN FOUNDATION

MATTEO GIANPIETRO ZAGO


The Triune Brain
One mind, three brains
Language of thought and verbal expression
Language of emotion and feeling tones
Language of body sensation and impulses
Neo (Frontal) Cortex
Limbic System
Basal Ganglia (Brainstem)
Homo Sapiens Brain: intellectual and executive functioning, verbal language, conscious thought and self-awareness
Mammalian Brain: somatosensory and emotional experience, implicit memory
Reptilian Brain: instinctive responses


MICROSOFT BUSINESS INTELLIGENCE
AT A GLANCE
Explore
Visualize
Control
Clients
Business Intelligence in Excel
SQL Server Data Tools
Visual Studio
Reporting Tools
Data Mining Add-Ins
Mobile BI
PowerPivot Workbooks in Office 365
Presentation Subsystem
SharePoint Server 2013
Audit and Control Management Server
Farm-Internal Access to Workbooks as a Data Source
Farm-External Access to Workbooks as a Data Source
Information Sources
BI Semantic Model in Analysis Services
Native Mode Reporting Services
Reporting Services Data Alerts
Data Sources
Relational Databases
SharePoint Lists
Data Files
Web Content
Multidimensional
Big Data Analytics
Like it? Get it.
http://gettag.mobi

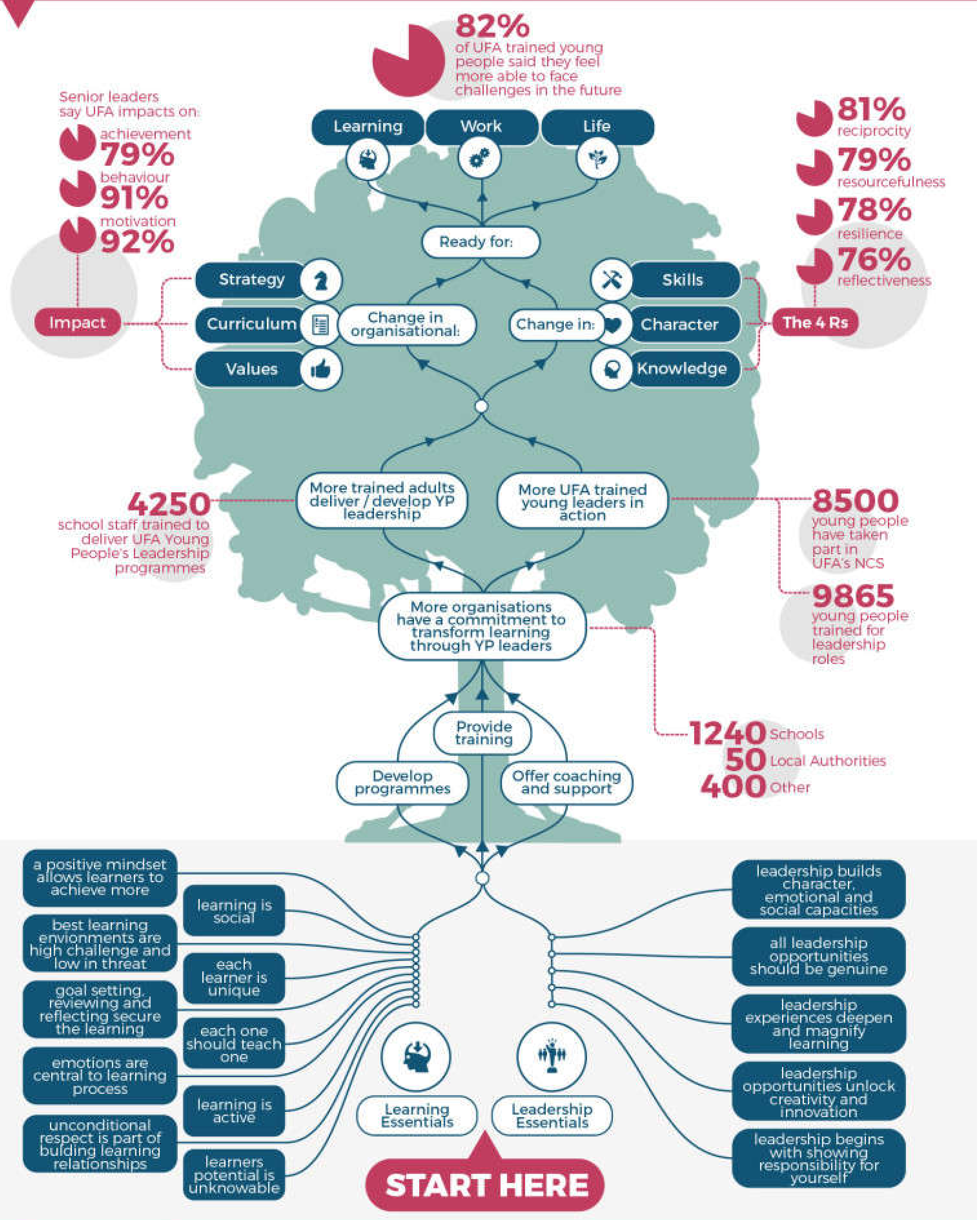


365√DataScience

	Data		Data Science		
	TRADITIONAL	BIG	BUSINESS INTELLIGENCE	TRADITIONAL METHODS	MACHINE LEARNING
WHEN *it is applied*	*At the beginning of your analysis*		*After the data has been gathered & organized*	*After BI reports have been created and discussed*	
	PAST		NOW	FUTURE	
				Predictive Analytics	
WHY *you need it*	data-driven decisions require well-organized and relevant raw data stored in a digital format		use data to create reports and dashboards to gain business insights	assess potential future scenarios by using advanced statistical methods	utilize artificial intelligence to predict behavior in unprecedented ways
WHAT *techniques are involved*	**DATA COLLECTION** **PREPROCESSING** • class labeling *(categorical vs numerical)* • data cleansing • dealing with missing values **CASE SPECIFIC** • e.g. balancing & shuffling datasets	**DATA COLLECTION** **PREPROCESSING** • class labeling *(number, text, digital images, digital video data, digital audio data)* • data cleansing • dealing with missing values **CASE SPECIFIC** • text data mining, confidentiality - preserving data mining techniques	**ANALYZE THE DATA** **EXTRACT INFO AND PRESENT IT IN THE FORM OF:** • metrics • KPIs • reports • dashboards 16.32	**REGRESSION** **LOGISTIC REGRESSION** **CLUSTERING** **FACTOR ANALYSIS** **TIME SERIES**	**SUPERVISED LEARNING** • SVMs • NNs • deep learning • random forests • bayesian networks ML **UNSUPERVISED LEARNING** • k-means • deep learning **REINFORCEMENT LEARNING** similiar to supervised learning, but instead of minimizing the loss, one maximizes reward
WHERE	BASIC CUSTOMER DATA HISTORICAL STOCK PRICE DATA	SOCIAL MEDIA FINANCIAL TRADING DATA	PRICE OPTIMIZATION INVENTORY MANAGEMENT	USER EXPERIENCE (UX) SALES FORECASTING	FRAUD DETECTION CLIENT RETENTION
HOW *using what tools*	**PROGRAMMING LANGUAGES** R SQL MATLAB **SOFTWARE** X IBM SPSS	**PROGRAMMING LANGUAGES** R Java Scala **SOFTWARE** hadoop APACHE HBASE mongoDB	**PROGRAMMING LANGUAGES** R SQL MATLAB **SOFTWARE** X Power BI sas Qlik + a b l e a u	**PROGRAMMING LANGUAGES** R MATLAB **SOFTWARE** X IBM SPSS EViews stata	**PROGRAMMING LANGUAGES** R MATLAB Java JS C Scala C **SOFTWARE** Microsoft Azure rapidminer
WHO	DATA ARCHITECT DATABASE ENGINEER DATABASE ADMINISTRATOR	BIG DATA ARCHITECT BIG DATA ENGINEER	BI ANALYST BI CONSULTANT BI DEVELOPER	DATA SCIENTIST DATA ANALYST	DATA SCIENTIST MACHINE LEARNING ENGINEER
ARE YOU AWARE	200,000 lines of data is not necessarily big data. It is not just volume that defines a data set as 'big' - variety, variability, velocity, veracity, and other characteristics are determinative as well.		Qualitative analysis tools such as SWOT are not used for quantitative analysis. Hence, they are not part of business intelligence.	Software like Excel, SPSS, and Stata, can be successfully used by data science teams in many companies.	In deep learning, there is still a debate on WHY the algorithms used outperform all conventional methods.

Theory of Change

UFA
Transforming Learning through Leadership



82% of UFA trained young people said they feel more able to face challenges in the future

Senior leaders say UFA impacts on:
achievement **79%**
behaviour **91%**
motivation **92%**

Impact

81% reciprocity
79% resourcefulness
78% resilience
76% reflectiveness

The 4 Rs

Learning
Work
Life

Ready for:

Change in organisational:
- Strategy
- Curriculum
- Values

Change in:
- Skills
- Character
- Knowledge

More trained adults deliver / develop YP leadership

More UFA trained young leaders in action

4250 school staff trained to deliver UFA Young People's Leadership programmes

8500 young people have taken part in UFA's NCS

9865 young people trained for leadership roles

More organisations have a commitment to transform learning through YP leaders

1240 Schools
50 Local Authorities
400 Other

Develop programmes

Provide training

Offer coaching and support

Learning Essentials
- a positive mindset allows learners to achieve more
- learning is social
- best learning envionments are high challenge and low in threat
- each learner is unique
- goal setting, reviewing and reflecting secure the learning
- each one should teach one
- emotions are central to learning process
- learning is active
- unconditional respect is part of bulding learning relationships
- learners potential is unknowable

Leadership Essentials
- leadership builds character, emotional and social capacities
- all leadership opportunities should be genuine
- leadership experiences deepen and magnify learning
- leadership opportunities unlock creativity and innovation
- leadership begins with showing responsibility for yourself

START HERE

ufa.org.uk
ufa@ufa.org.uk
facebook.com/UFANational
@ufaorg

UFA

(ANMESCL2 EL NEGRO)

ALPHA NUMEROUS MAXIMA
EGREGIA SUMMA CUM LAUDE

Software Engineering and Information Manufacturing Procedural Hierarchy Support Documentation

Section One – Introduction (5’-> 3')

Executive Summary
Press Release
DNA Mapping & Virtual Intelligence

Section Two – Project Overview (3' <- 5')

Carnegie Mellon’s Procedural & Organizational Development Proposals within NAME’s IBOS [DOSA/DALP/IAOA] Technology & Marketing Bases

Mathematical/Formula-Based Technology Development

(Project Operation)

1. Software Development Using VDM >
2. Spiral Development >
3. Attribute-Based Architectural Styles (ABAS) >
4. Evolutionary Co-Word Analysis >
5. Steps in an Architecture Tradeoff Analysis Method Quality Attribute Models and Analysis (ATAM) >
6. **Taxonomy of Coordination Mechanisms Used in Real-Time Software Based on Domain Analysis***
7. Analysis of Input-Output Paradigms for Real-Time Systems >
8. Real-Time Locking Protocol >

9. Design Specifications for Adaptive Real-Time Systems (**SMARTS**) ≥
10. Browsers for Distributed Systems Universal Paradigm or Siren's Song ≥
11. Establishing a Software Measurement Process ≥
12. Goal-Driven Software Measurement--A Guidebook ≥
13. Formal Verification of Programs ≥
14. Coming Attractions in Software Architecture ≥

Distributed Technological Fulfillment

(Project Planning)

1. Training Guidelines for a Software Organization ≥
2. Personal Process in Software Engineering ≥
3. Analysis of a Software Maintenance System: A CASE Study ≥
4. Guide to CASE Adoption ≥
5. Tool Integration and Environment Architectures ≥
6. Tool Interface Technology ≥
7. Approaches to Legacy System Evolution ≥
8. Architecture for Evolvable Industrial Computing ≥
9. Architecture-Based Development (ATAM) ≥
10. Serpent Dialogue Model ≥
11. Studying Software Architecture Through Design Spaces and Rules ≥
12. Design Space and Design Rules for User Interface Software Architecture ≥
13. **User Interface Technology Survey***
14. Classification and Bibliography of Software Prototyping ≥
15. Software Process Modeling ≥
16. Models of Software Evolution Life Cycle and Process ≥
17. Classifying Software Design Methods ≥
18. COTS Activity Framework ≥
19. Manager's Checklist for Validating Software Cost and Schedule Estimates ≥
20. Cleanroom Software Engineering Reference Model ≥
21. Cleanroom Software Engineering Implementation ≥
22. Formal Specification of Software ≥
23. Software Engineering ≥
24. Component-Based Software Engineering ≥
25. Reverse-Engineering Environment Framework ≥
26. Reengineering: An Engineering Problem ≥
27. Experiment Planning for Software Development: Redevelopment Experiment ≥
28. Reuse-Based Software Development ≥
29. Guide to the Assessment of Software Development Methods ≥
30. Establishing a Software Measurement Process ≥
31. Software Quality Measurement: A Framework for Counting Problems and Defects ≥
32. PSM ≥
33. Software Metrics ≥
34. Unit Analysis and Testing ≥
35. Study in Software Maintenance ≥

Operational Development as Guided through PERT Systems

(P&D Purposeful Hierarchies Involving People)

1. **IDEAL, A User's Guide*** **(5' -> 3')**
2. IDEAL (SAIF) Definition >
3. Capability Maturity Model Relationships >

2. CMM(SM)-Based Appraisal for Internal Process Improvement (CBA IPI) Method Description >
3. CMM Appraisal Framework, Version 1_0 >
4. Maturity Questionnaire >
5. Documentation in Architectural Layers >
6. ABDM >
7. Capability Maturity Model Relationships (SE-CMM) >
8. SE-CMM >
9. Requirements Management into Organizations >
10. CMMI & SW-CMM Mapping >
11. Software Engineering Process Group Guide >

Organizational Fulfillment

(Project Definitions)

1. SCE >
2. SCE Supplier Selection >
3. CMMI-SE-SW-IPPD, V1_02, Staged >
    a. SM & CMM >
4. CMMI-SE-SW-IPPD, V1_02, Continuous >
    a. 1999 Survey of High Maturity Organizations >
    b. SA-CMM[R] >
    c. Software Acquisition Risk Management >
    d. Software Acquisition Process Maturity Questionnaire >
5. Guidelines for Developing a Product Line Concept of Operations >
6. **C4 Software Technology Reference Guide***
7. Requirements Management into Organizations >
8. PSP[SM] >
9. TSP[SM] >
10. People Capability Maturity Model (P-CMM) >
11. People CMM(R)-Based Assessment Method Description >
12. STR >
13. Technology and Adoption of Software Process Automation >
14. Staff-hours and Reporting Schedule >
15. SEI Strategic Plan 1997 >

DRAFT

Foundation for Strategical/Tactical Autonomous Security Profiles

(Project Interpretation)

1. **Handbook for Computer Security Incident Response Teams (CSIRTs)***
2. Software Safety >
3. SRE Method Description >
4. SRE Method Description Notebook >
5. TRM Team Risk Management >
6. Laws (Intellectual Property Protection for Software) >

Section Three – Laboratory or Software Engineering Support Documents

(5’-> 3')

A. Employment Related Software Development:

1. Individual, Group, Inter-group, Organization and Larger Social System Development – Consultative Intervention Matrix and SEI Documents.
2. The Dictionary of Occupational Titles and Thomas Registry Guide – Autonomous or Collaborative Agent Formatting and Enterprise Work Architectural Design Technologies (i.e., **DALP** (**3' <- 5'**)).
    - 2a. The Solution Framework for Strategic Development – NAME’s Sequential Application of its overall processes and procedures within the Human Genome Environment.
    - 2b. The Statement of Operations – The Planning & Design Approach toward NAME’s employee development.
    - 2c. The Strategic Programming Format – The Operational Environments.
3. The Planning & Design Approach – Distributed Grammatical Database Structure and Analytical Netmapping Technologies (i.e., **IAOA** (**5' -> 3'**)).
    - 3a. The Systems Matrix – The Application of Human Genetics towards Words, Phrases, Sentences, etc.
    - 3b. The Description of Operational Duties – The Sequential Application of Human Genetics toward NAME’s Ideals, Concepts or Procedural Tasks.
    - 3c. The Biological Programming Format – The Initialization of Environmental Virtual Biological Cloning.
4. The Method Structure – Guide to the Software Engineering Body of Knowledge (i.e., **DOSA** (**5' -> 3'**)).***
5. The Manufacturing Planning and Control Structure – Evolving Novel Organizational Forms through Genetic Algorithms.
6. The Group Ordering Logic – MRP/ERP Systems Development.
7. The Formula Format – The Operational Guidelines for Autonomous Agent(s) Procedural Implementation.
    - 7a. The Systems Matrix – The Application of Human Genetics towards Search Engine Protocols and Document Analysis.
    - 7a1. The Description of Operational Duties – The Sequential Application of Human Genetics toward NAME’s customer Ideals, Concepts or Procedural Tasks.

    - 7a2. The Biological Programming Format – The Initialization of Individual, Group, Inter-group, Organization and Larger Social System Virtual Biological Cloning.
    - 7b. The Solution Framework for Strategic Development – NAME's Sequential Application of Proteins within the Human Genome.
    - 7b1. The Statement of Operations – The Planning & Design Approach toward NAME's customer development.
    - 7b2. The Strategic Programming Format – The ROOT System.
8. The Strategic Programming Charts – The Level-by-Level Inference from Large-Scale Gene Expression Data.
9. The Phase-to-Phase Operational Format – Project Control through a Computer Associate Procedural Model.
10. The Systems Architecture – The TOVE Architectural Model.
11. Employment Related Systems Development – IBOS/DALP/DOSA Replicative Templates.

B. Exhibits

1. **Traditional Marketing Strategies**
2. **NAME's Marketing Strategies**

* Lead Documents
≥ Go Support Documents

All Things In A Box

An example of two complementary strands of DNA would be:

(5' -> 3') **ATGGAATTCTCGCTC** (Coding, sense strand) **?**
(3' <- 5') **TACCTTAAGAGCGAG** (Template, antisense strand) **.**

(5' -> 3') **AUGGAAUUCUCGCUC** (mRNA made from Template strand) **!**

Integrated Cross-the-Board Infrastructural Framework for NAME's Internet-Based Operating Systems

IBOS [DOSA/DALP/IAOA]

(Virtual or real-time internet, evolving inter-operable, interactive, multi-tasking/multiple application environments)

Evolving Generic Inter-Operable MT/MA Platforms (5'-> 3')

1. **Words, Ideas, and Concepts** (Grammatical, Mathematical or Alphanumeric Formulas)
2. **Technological Innovations** (**Sociological**, **Philosophical**, **Psychological** & **Physiological**)
3. **Global Environment** (Educational, Strategical, Tactical, Financial and Logistical Market Forces)

Individual Generic Interactive MT/MA Platforms (3' <- 5')

4. **High Level Managers** (Definitive **P/A** DOT Occupations and Educational Procedures)
5. **Middle Level Managers** (Definitive **N/S** DOT Occupations and Strategical Procedures)
6. **Low Level Managers** (Definitive **M/C** DOT Occupations and Tactical Procedures)
7. **Worker Level Employee** (Definitive **G/O** DOT Occupations and Logistical Procedures)

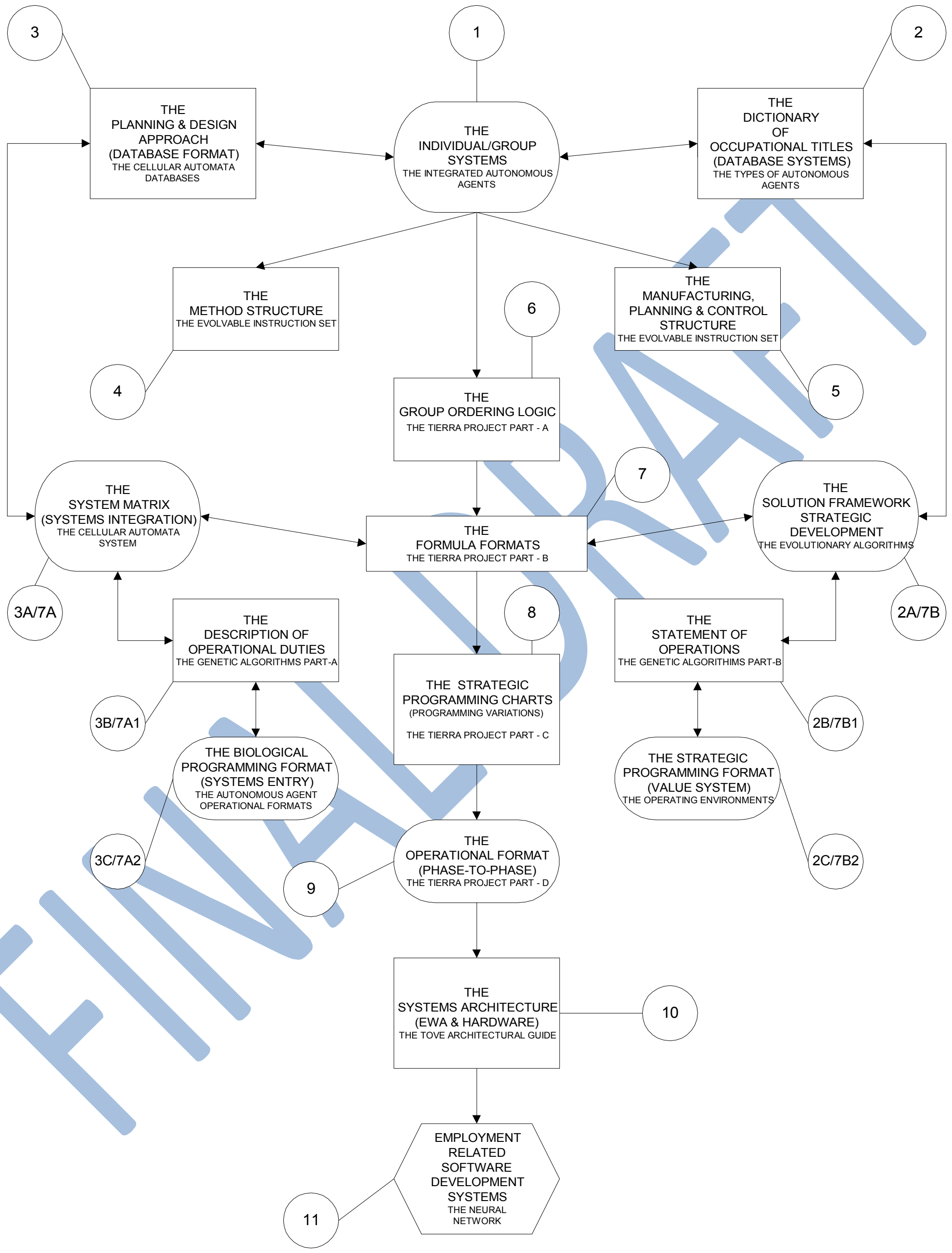
Organizational Generic Internet-Based MT/MA Platforms (5'-> 3')

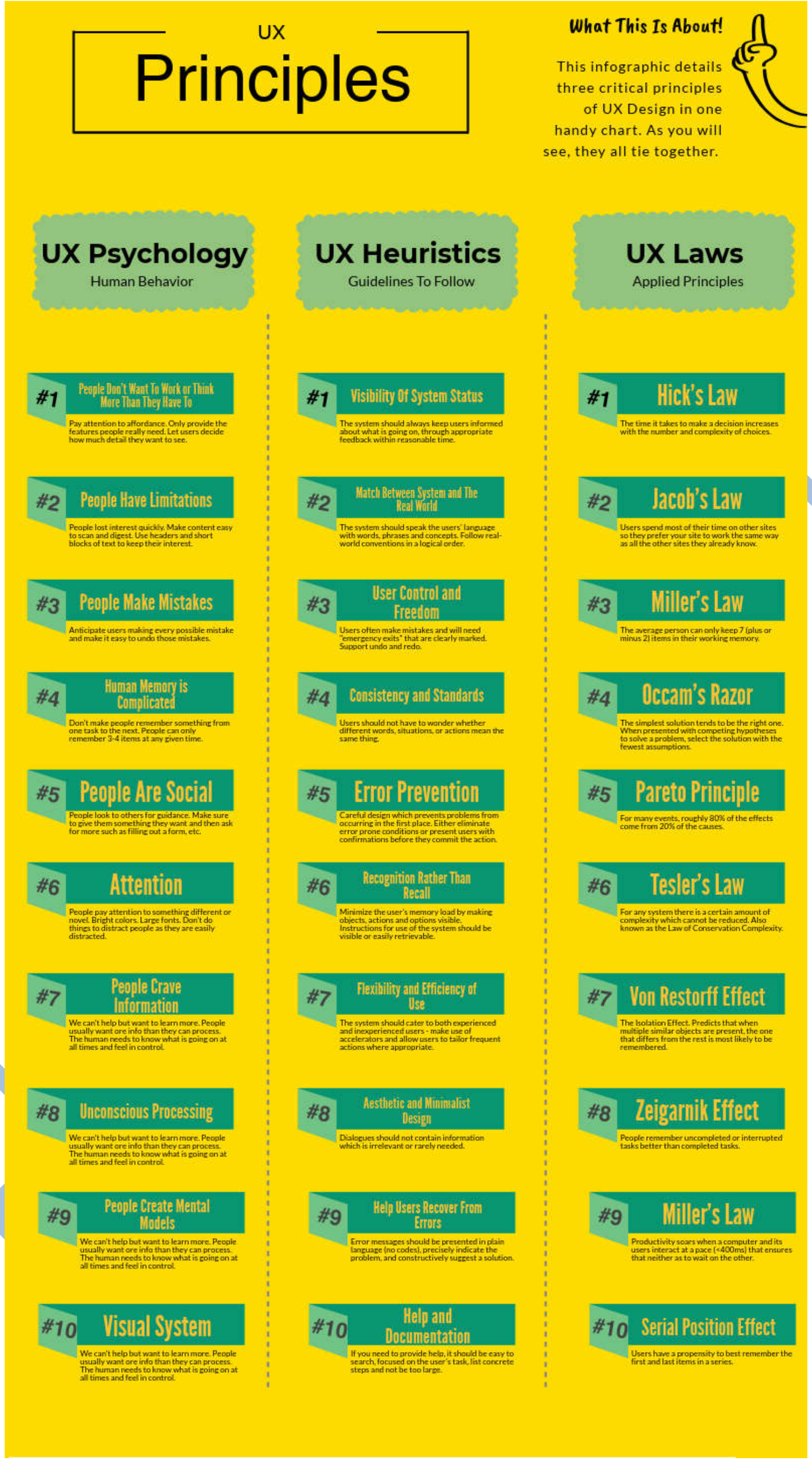
8. **Governmental Institutions** (International, Federal & State Constitutional, Regulatory and Judicial Based Entities)
9. **Financial Institutions** (Banking, Monetary Markets and Investment Brokerage Firms)
10. **Law Firms** (International, Governmental, Corporate, Criminal, Torts, Family Law, etc.)
11. **Law Enforcement or Intelligence Organizations** (Legal or Investigative Entities)
12. **Scientific Organizations** (Academic, Technical or Medical Research & Development Firms)
13. **Educational Institutions** (Academic, Professional, Occupational or Technical Entities)
14. **Institutional Foundations** (Academic, Charitable, Non-profit or Research Associations)
15. **Religious Organizations or Foundations** (Judaic, Christian, Islamic, Buddhist, Hindu, etc.)
16. **Business Ownership Structures** (Sole Proprietor, Partnership, Joint Venture or Corporation)
17. **Business Operational Classifications** (Financial, Educational, Internet, Manufacturer, Importer, Exporter, Distributor, Wholesaler, Retailer, R&D, R&D Joint Venture and Administrative Based)
18. **Business Infrastructures** (Industrial, Hierarchical or Distributed Managerial Resources)
19. **Organizational Policies** (Structural, Financial and Operational ERP/MRP Procedures)

(5' -> 3')

NASCENT APPLIED METHODS & ENDEAVORS

EMPLOYMENT RELATED SOFTWARE DEVELOPMENT GUIDE


1
2
3
THE PLANNING & DESIGN APPROACH (DATABASE FORMAT)
THE CELLULAR AUTOMATA DATABASES
THE INDIVIDUAL/GROUP SYSTEMS
THE INTEGRATED AUTONOMOUS AGENTS
THE DICTIONARY OF OCCUPATIONAL TITLES (DATABASE SYSTEMS)
THE TYPES OF AUTONOMOUS AGENTS
THE METHOD STRUCTURE
THE EVOLVABLE INSTRUCTION SET
6
THE MANUFACTURING, PLANNING & CONTROL STRUCTURE
THE EVOLVABLE INSTRUCTION SET
4
THE GROUP ORDERING LOGIC
THE TIERRA PROJECT PART - A
5
7
THE SYSTEM MATRIX (SYSTEMS INTEGRATION)
THE CELLULAR AUTOMATA SYSTEM
THE FORMULA FORMATS
THE TIERRA PROJECT PART - B
THE SOLUTION FRAMEWORK STRATEGIC DEVELOPMENT
THE EVOLUTIONARY ALGORITHMS
3A/7A
8
2A/7B
THE DESCRIPTION OF OPERATIONAL DUTIES
THE GENETIC ALGORITHMS PART-A
THE STATEMENT OF OPERATIONS
THE GENETIC ALGORITHMS PART-B
THE STRATEGIC PROGRAMMING CHARTS
(PROGRAMMING VARIATIONS)
THE TIERRA PROJECT PART - C
3B/7A1
2B/7B1
THE BIOLOGICAL PROGRAMMING FORMAT (SYSTEMS ENTRY)
THE AUTONOMOUS AGENT OPERATIONAL FORMATS
THE STRATEGIC PROGRAMMING FORMAT (VALUE SYSTEM)
THE OPERATING ENVIRONMENTS
3C/7A2
THE OPERATIONAL FORMAT (PHASE-TO-PHASE)
THE TIERRA PROJECT PART - D
9
2C/7B2
THE SYSTEMS ARCHITECTURE (EWA & HARDWARE)
THE TOVE ARCHITECTURAL GUIDE
10
EMPLOYMENT RELATED SOFTWARE DEVELOPMENT SYSTEMS
THE NEURAL NETWORK
11



UX
Principles

What This Is About!

This infographic details three critical principles of UX Design in one handy chart. As you will see, they all tie together.

UX Psychology
Human Behavior

#1 People Don't Want To Work or Think More Than They Have To
Pay attention to affordance. Only provide the features people really need. Let users decide how much detail they want to see.

#2 People Have Limitations
People lost interest quickly. Make content easy to scan and digest. Use headers and short blocks of text to keep their interest.

#3 People Make Mistakes
Anticipate users making every possible mistake and make it easy to undo those mistakes.

#4 Human Memory is Complicated
Don't make people remember something from one task to the next. People can only remember 3-4 items at any given time.

#5 People Are Social
People look to others for guidance. Make sure to give them something they want and then ask for more such as filling out a form, etc.

#6 Attention
People pay attention to something different or novel. Bright colors. Large fonts. Don't do things to distract people as they are easily distracted.

#7 People Crave Information
We can't help but want to learn more. People usually want ore info than they can process. The human needs to know what is going on at all times and feel in control.

#8 Unconscious Processing
We can't help but want to learn more. People usually want ore info than they can process. The human needs to know what is going on at all times and feel in control.

#9 People Create Mental Models
We can't help but want to learn more. People usually want ore info than they can process. The human needs to know what is going on at all times and feel in control.

#10 Visual System
We can't help but want to learn more. People usually want ore info than they can process. The human needs to know what is going on at all times and feel in control.

UX Heuristics
Guidelines To Follow

#1 Visibility Of System Status
The system should always keep users informed about what is going on, through appropriate feedback within reasonable time.

#2 Match Between System and The Real World
The system should speak the users' language with words, phrases and concepts. Follow real-world conventions in a logical order.

#3 User Control and Freedom
Users often make mistakes and will need "emergency exits" that are clearly marked. Support undo and redo.

#4 Consistency and Standards
Users should not have to wonder whether different words, situations, or actions mean the same thing.

#5 Error Prevention
Careful design which prevents problems from occurring in the first place. Either eliminate error prone conditions or present users with confirmations before they commit the action.

#6 Recognition Rather Than Recall
Minimize the user's memory load by making objects, actions and options visible. Instructions for use of the system should be visible or easily retrievable.

#7 Flexibility and Efficiency of Use
The system should cater to both experienced and inexperienced users - make use of accelerators and allow users to tailor frequent actions where appropriate.

#8 Aesthetic and Minimalist Design
Dialogues should not contain information which is irrelevant or rarely needed.

#9 Help Users Recover From Errors
Error messages should be presented in plain language (no codes), precisely indicate the problem, and constructively suggest a solution.

#10 Help and Documentation
If you need to provide help, it should be easy to search, focused on the user's task, list concrete steps and not be too large.

UX Laws
Applied Principles

#1 Hick's Law
The time it takes to make a decision increases with the number and complexity of choices.

#2 Jacob's Law
Users spend most of their time on other sites so they prefer your site to work the same way as all the other sites they already know.

#3 Miller's Law
The average person can only keep 7 (plus or minus 2) items in their working memory.

#4 Occam's Razor
The simplest solution tends to be the right one. When presented with competing hypotheses to solve a problem, select the solution with the fewest assumptions.

#5 Pareto Principle
For many events, roughly 80% of the effects come from 20% of the causes.

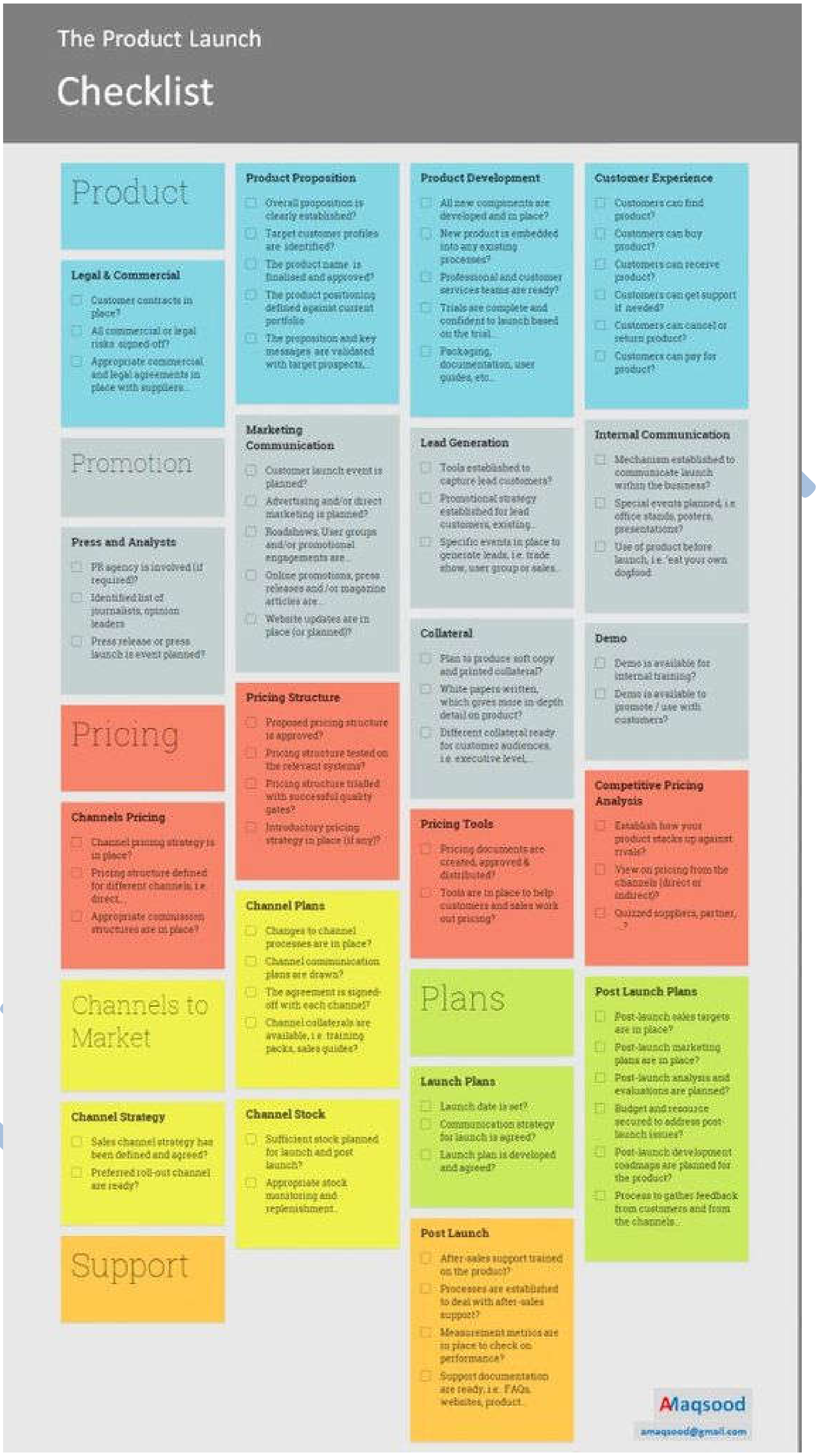
#6 Tesler's Law
For any system there is a certain amount of complexity which cannot be reduced. Also known as the Law of Conservation Complexity.

#7 Von Restorff Effect
The Isolation Effect. Predicts that when multiple similar objects are present, the one that differs from the rest is most likely to be remembered.

#8 Zeigarnik Effect
People remember uncompleted or interrupted tasks better than completed tasks.

#9 Miller's Law
Productivity soars when a computer and its users interact at a pace (<400ms) that ensures that neither as to wait on the other.

#10 Serial Position Effect
Users have a propensity to best remember the first and last items in a series.



The Product Launch

Checklist

Product

Legal & Commercial

- ☐ Customer contracts in place?
- ☐ All commercial or legal risks signed-off?
- ☐ Appropriate commercial and legal agreements in place with suppliers…

Promotion

Press and Analysts

- ☐ PR agency is involved (if required)?
- ☐ Identified list of journalists, opinion leaders
- ☐ Press release or press launch is event planned?

Pricing

Channels Pricing

- ☐ Channel pricing strategy is in place?
- ☐ Pricing structure defined for different channels, i.e. direct…
- ☐ Appropriate commission structures are in place?

Channels to Market

Channel Strategy

- ☐ Sales channel strategy has been defined and agreed?
- ☐ Preferred roll-out channel are ready?

Support

Product Proposition

- ☐ Overall proposition is clearly established?
- ☐ Target customer profiles are identified?
- ☐ The product name is finalised and approved?
- ☐ The product positioning defined against current portfolio
- ☐ The proposition and key messages are validated with target prospects…

Marketing Communication

- ☐ Customer launch event is planned?
- ☐ Advertising and/or direct marketing is planned?
- ☐ Roadshows, User groups and/or promotional engagements are…
- ☐ Online promotions, press releases and /or magazine articles are…
- ☐ Website updates are in place (or planned)?

Pricing Structure

- ☐ Proposed pricing structure is approved?
- ☐ Pricing structure tested on the relevant systems?
- ☐ Pricing structure trialled with successful quality gates?
- ☐ Introductory pricing strategy in place (if any)?

Channel Plans

- ☐ Changes to channel processes are in place?
- ☐ Channel communication plans are drawn?
- ☐ The agreement is signed-off with each channel?
- ☐ Channel collaterals are available, i.e. training packs, sales guides?

Channel Stock

- ☐ Sufficient stock planned for launch and post launch?
- ☐ Appropriate stock monitoring and replenishment…

Product Development

- ☐ All new components are developed and in place?
- ☐ New product is embedded into any existing processes?
- ☐ Professional and customer services teams are ready?
- ☐ Trials are complete and confident to launch based on the trial…
- ☐ Packaging, documentation, user guides, etc…

Lead Generation

- ☐ Tools established to capture lead customers?
- ☐ Promotional strategy established for lead customers, existing…
- ☐ Specific events in place to generate leads, i.e. trade show, user group or sales…

Collateral

- ☐ Plan to produce soft copy and printed collateral?
- ☐ White papers written, which gives more in-depth detail on product?
- ☐ Different collateral ready for customer audiences, i.e. executive level,…

Pricing Tools

- ☐ Pricing documents are created, approved & distributed?
- ☐ Tools are in place to help customers and sales work out pricing?

Plans

Launch Plans

- ☐ Launch date is set?
- ☐ Communication strategy for launch is agreed?
- ☐ Launch plan is developed and agreed?

Post Launch

- ☐ After-sales support trained on the product?
- ☐ Processes are established to deal with after-sales support?
- ☐ Measurement metrics are in place to check on performance?
- ☐ Support documentation are ready, i.e. FAQs, websites, product…

Customer Experience

- ☐ Customers can find product?
- ☐ Customers can buy product?
- ☐ Customers can receive product?
- ☐ Customers can get support if needed?
- ☐ Customers can cancel or return product?
- ☐ Customers can pay for product?

Internal Communication

- ☐ Mechanism established to communicate launch within the business?
- ☐ Special events planned, i.e. office stands, posters, presentations?
- ☐ Use of product before launch, i.e. "eat your own dogfood

Demo

- ☐ Demo is available for internal training?
- ☐ Demo is available to promote / use with customers?

Competitive Pricing Analysis

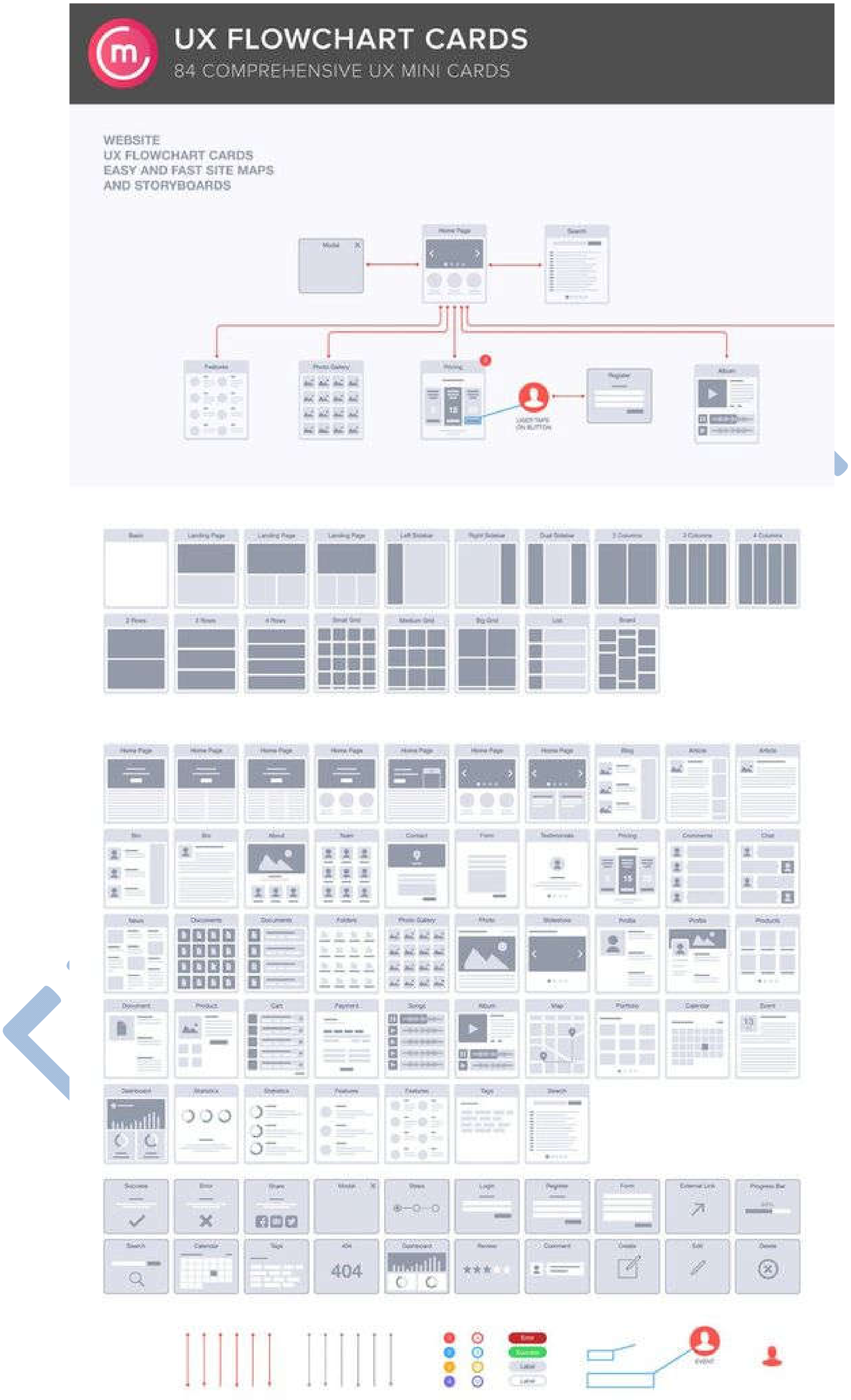
- ☐ Establish how your product stacks up against rivals?
- ☐ View on pricing from the channels (direct or indirect)?
- ☐ Quizzed suppliers, partner, …?

Post Launch Plans

- ☐ Post-launch sales targets are in place?
- ☐ Post-launch marketing plans are in place?
- ☐ Post-launch analysis and evaluations are planned?
- ☐ Budget and resource secured to address post launch issues?
- ☐ Post-launch development roadmaps are planned for the product?
- ☐ Process to gather feedback from customers and from the channels…

Amaqsood

amaqsood@gmail.com


UX FLOWCHART CARDS
84 COMPREHENSIVE UX MINI CARDS
WEBSITE
UX FLOWCHART CARDS
EASY AND FAST SITE MAPS
AND STORYBOARDS
404

The InterFACE or Whole Body Effect

(The Spinal Nerve Pathways)

1. Word Processing **{The ARMS-HANDS}** Strategic or Tactical Writings*
2. Databases **{The HEAD-InterFACE}** Grammatical Storage & Manipulation
3. Spread-Sheet **{The GENDER-MALE/FEMALE}** Mathematical Storage & Manipulation
4. Graphics **{The TORSO-MAJOR INTERNAL ORGANS}** Visual or Physical Representations
5. Communications **{The LEGS-FEET}** Strategic or Tactical Evolution*

6. Print-Graph **{The INTERNET-VISUAL InterFACE}**

7. Services **{NAME}**

The InterFACE Senses of Cranial Pathways Into Chromosomal Implementation & Evolution

(The Cranial Nerve Pathways & Special Senses)

1. The Eyes (Sight/Optical Devices)
2. The Ears (Hearing/Listening Devices)
3. The Nose (Smell/Odor Detection Devices)
4. The Mouth (Taste or Audio/Speaking Devices)
5. The Skin (Touch/Analysis or Consensus Devices)

The Virtual Machine Cerebral InterFACE Processes

1. GSDBCPDA Operational Phase – One** (The Hind-brain or Rhombencephalon)
2. GSDBCPDA Operational Phase – Two** (The Mid-brain or Mesencephalon)
3. GSDBCPDA Operational Phase – Three** (The Fore-brain or Prosencephalon)
4. GSDBCPDA Operational Phase – Four** (The Meninges of the Brain and Medulla Spinalis)
5. GSDBCPDA Operational Phase – Five** (Pathways from the Brain to the Spinal Cord)

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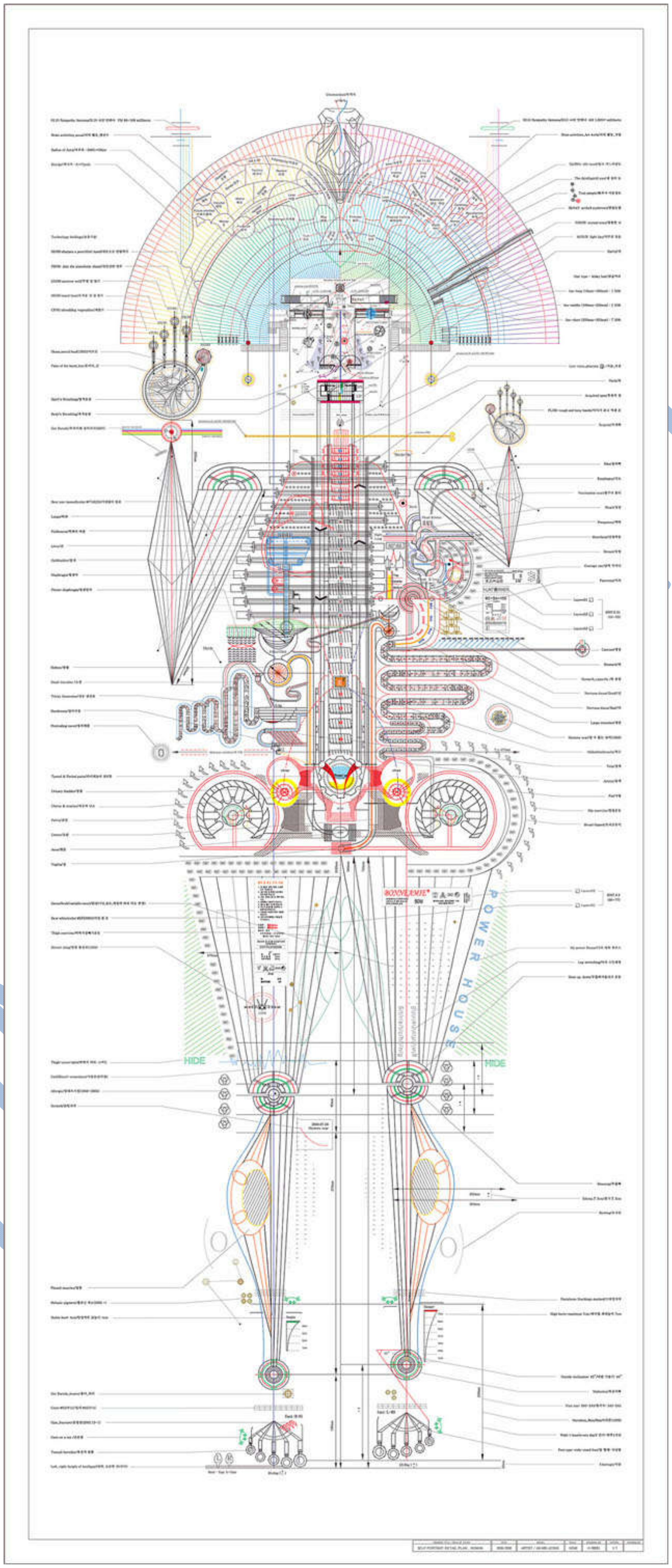
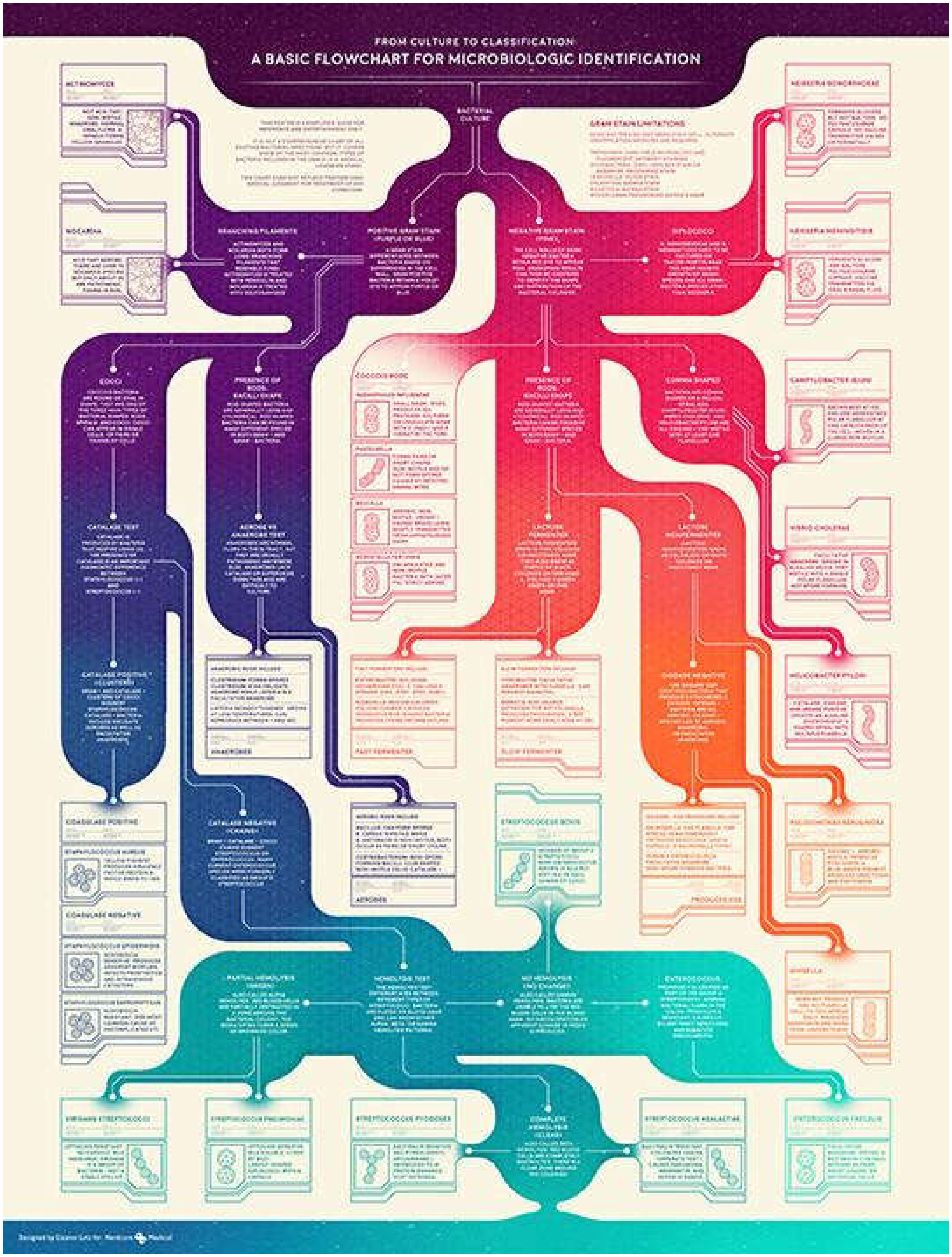
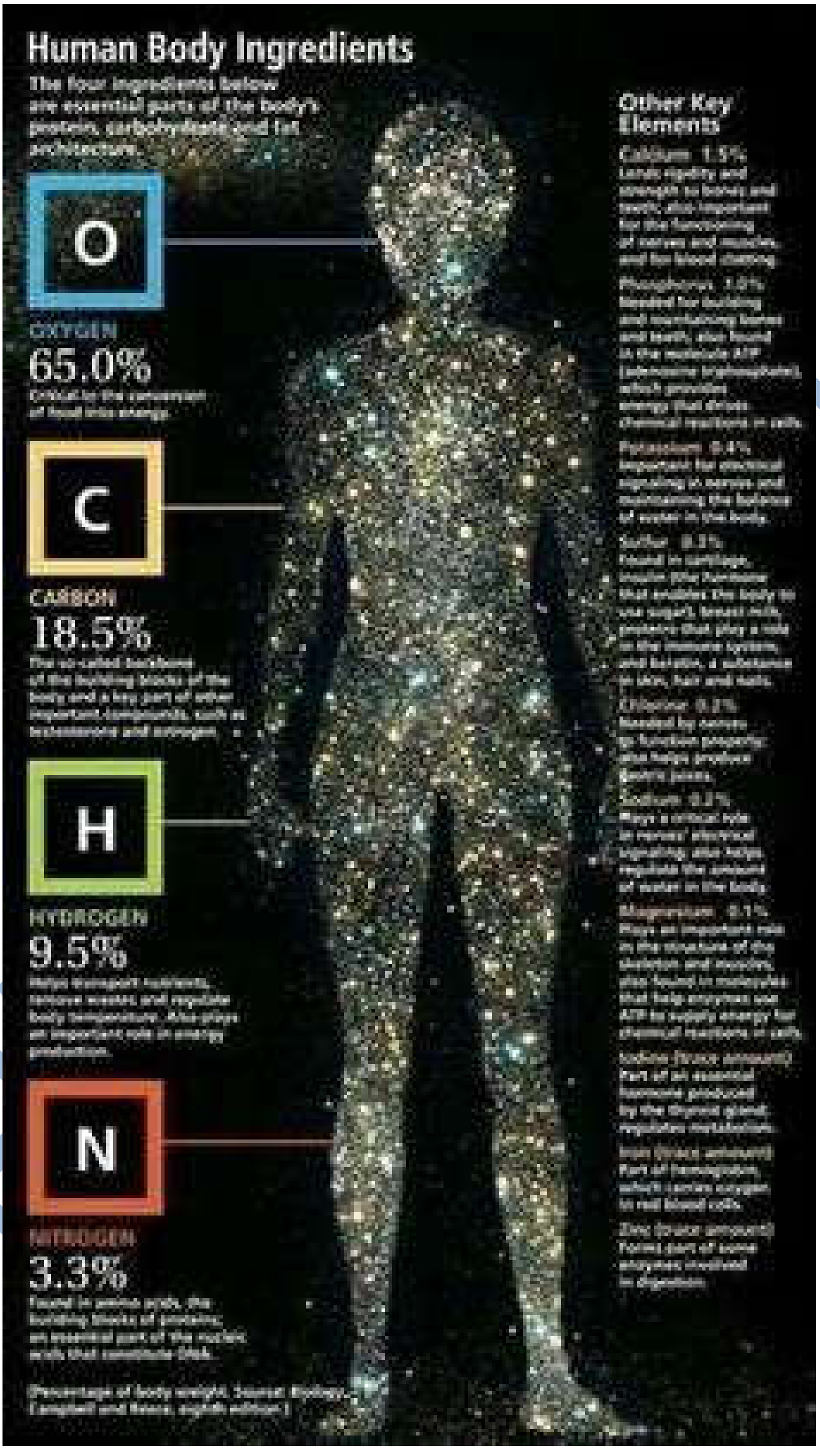
*Sign Language/Dancing

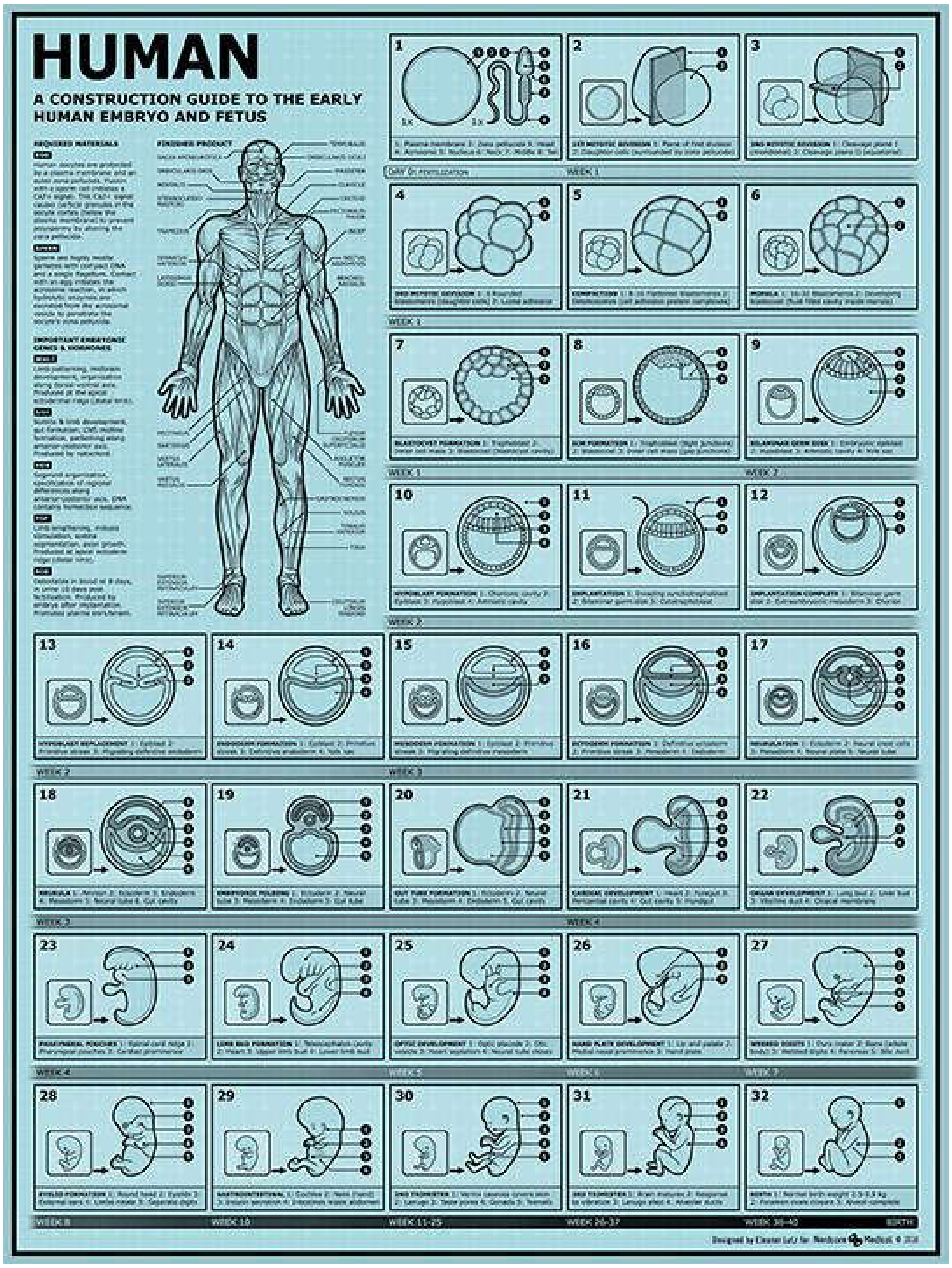
**Genetic Sequence Database-Consultative Planning & Design Approach (GSDBCPDA)


POWER HOUSE
HIDE
HIDE


FROM CULTURE TO CLASSIFICATION:
A BASIC FLOWCHART FOR MICROBIOLOGIC IDENTIFICATION
BACTERIAL CULTURE
GRAM STAIN LIMITATIONS
BRANCHING FILAMENTS
POSITIVE GRAM STAIN (PURPLE OR BLUE)
NEGATIVE GRAM STAIN (PINK)
DIPLOCOCCI
NOCARDIA
COCCI
PRESENCE OF RODS (BACILLI SHAPE)
COCCOID RODS
COMMA SHAPED
VIBRIO CHOLERAE
CATALASE TEST
LACTOSE FERMENTER
FAST FERMENTER
SLOW FERMENTER
ANAEROBES
AEROBES
COAGULASE POSITIVE
COAGULASE NEGATIVE
STREPTOCOCCUS BOVIS
HEMOLYSIS TEST
PARTIAL HEMOLYSIS
NO HEMOLYSIS (NO CHANGE)
ENTEROCOCCUS
COMPLETE HEMOLYSIS
STREPTOCOCCUS PNEUMONIAE
STREPTOCOCCUS PYOGENES
STREPTOCOCCUS AGALACTIAE


Human Body Ingredients
O
OXYGEN
65.0%
C
CARBON
18.5%
H
HYDROGEN
9.5%
N
NITROGEN
3.3%
Other Key Elements
Calcium 1.5%
Phosphorus 1.0%
Potassium 0.4%
Sulfur 0.3%
Chlorine 0.2%
Sodium 0.2%
Magnesium 0.1%
Iodine (trace amount)
Iron (trace amount)
Zinc (trace amount)

(Percentage of body weight. Source: Biology, Campbell and Reece, eighth edition.)

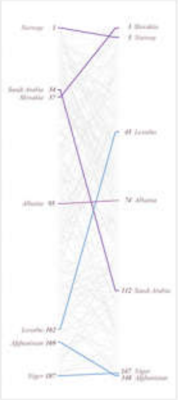

HUMAN
A CONSTRUCTION GUIDE TO THE EARLY HUMAN EMBRYO AND FETUS
REQUIRED MATERIALS
FINISHED PRODUCT
IMPORTANT EMBRYONIC GENES & HORMONES
DAY 0: FERTILIZATION
WEEK 1
WEEK 2
WEEK 3
WEEK 4
WEEK 5
WEEK 6
WEEK 7
WEEK 8
WEEK 10
WEEK 11-25
WEEK 26-37
WEEK 38-40
BIRTH
Designed by Eleanor Lutz for: Nerdcore Medical © 2016

The Gender Development Index

created by STUDIO TEXP

There are 148 countries in total on the GDI (Gender Development Index). Women outlive men in almost every country. Women even outlive men by more then 5 years in 42% of these countries. There are more women then men in the world. Russion Federation and other former Soviet states have the greatest percentages of women: above 53% of their population is female (the life expectancy difference here is even more then 10 years). Women's GNI (Gross National Income) is however lower then men's in all countries. In fact, in almost 30% of these countries women have a GNI less then half of men's GNI. In 110 countries (that's 75 %) women go to school for a shorter period of time then men (mean years of schooling).
Although countries might be on top of HDI (Human Development Index), this doesn't evindently mean they also do well when it comes to the GDI.

Countries, although on the HDI, which due to missing or uncomplete data have no ranking on GDI are for that matter not visualized.
Sources: Gender-related Development Index, http://hdr.undp.org/en/content/table-5-gender-related-development-index-gdi
No Ceilings data set / DEMINDEX. http://noceilings.org/about/
Population, female (% of total), http://data.worldbank.org/indicator/SP.POP.TOTL.FE.ZS



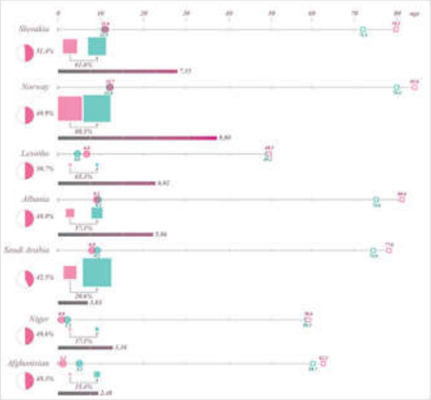
female percentage of population
GNI
female
male
percentage of
democracy index

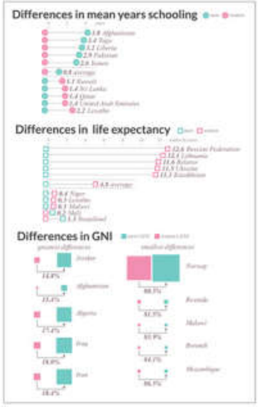
Differences in HDI and GDI ranking

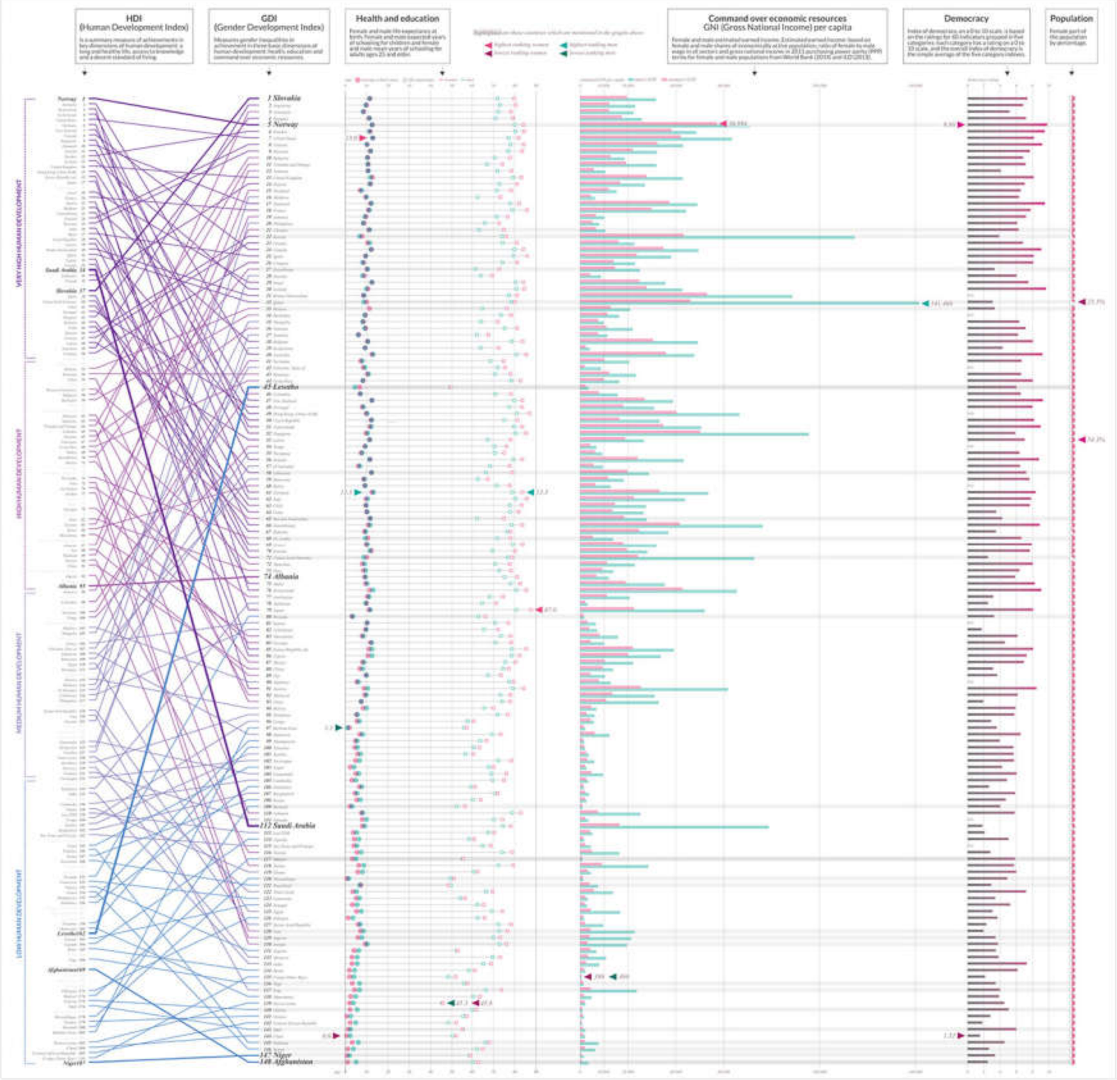
Several conditions can cause a country to do better or worse, or even much better or worse on GDI. There's much correspondence to be found in the overall classification of higher and lower development countries. However history, health, economics, freedom of all sorts, security, laws (the level of democracy), culture, education, religion and / or other convictions, and not to mention wars, they all influence the levels of equality in rights and development. Bear in mind that on the whole people in the less developed countries live shorter then in higher developed countries, so a higher GDI ranking doesn't always mean better life condititons.

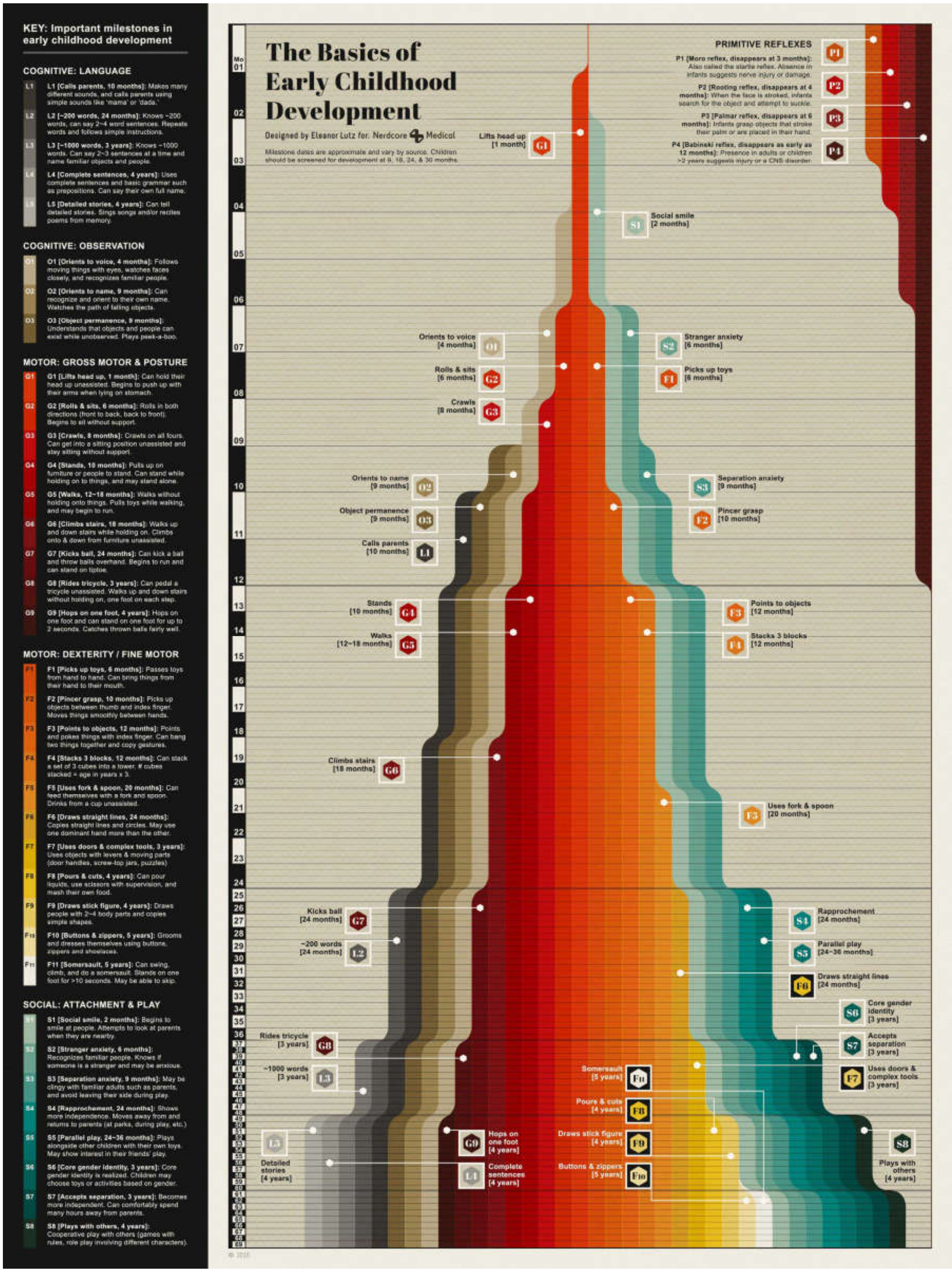
Comparing countries

In which country are you (as a woman) better of living? Comparing very high with very low ranks is easy, you'd choose high (like Norway) but what if the GDI rank is okay but life expectancy on the other hand very low (like Lesotho), or if the HDI rank is okay but the GDI is very unequal and there's little / no democracy (like Saudi Arabia)?
These are just some extremes, but what are the most important conditions? What if you were able to choose? Are you going to choose for wealth, for more equality or for a longer life? Check/ compare all countries in the graph below.









The Basics of Early Childhood Development

Designed by Eleanor Lutz for. Nerdcore Medical

Milestone dates are approximate and vary by source. Children should be screened for development at 9, 18, 24, & 30 months.

KEY: Important milestones in early childhood development

COGNITIVE: LANGUAGE

L1 [Calls parents, 10 months]: Makes many different sounds, and calls parents using simple sounds like 'mama' or 'dada.'

L2 [~200 words, 24 months]: Knows ~200 words, can say 2–4 word sentences. Repeats words and follows simple instructions.

L3 [~1000 words, 3 years]: Knows ~1000 words. Can say 2–3 sentences at a time and name familiar objects and people.

L4 [Complete sentences, 4 years]: Uses complete sentences and basic grammar such as prepositions. Can say their own full name.

L5 [Detailed stories, 4 years]: Can tell detailed stories. Sings songs and/or recites poems from memory.

COGNITIVE: OBSERVATION

O1 [Orients to voice, 4 months]: Follows moving things with eyes, watches faces closely, and recognizes familiar people.

O2 [Orients to name, 9 months]: Can recognize and orient to their own name. Watches the path of falling objects.

O3 [Object permanence, 9 months]: Understands that objects and people can exist while unobserved. Plays peek-a-boo.

MOTOR: GROSS MOTOR & POSTURE

G1 [Lifts head up, 1 month]: Can hold their head up unassisted. Begins to push up with their arms when lying on stomach.

G2 [Rolls & sits, 6 months]: Rolls in both directions (front to back, back to front). Begins to sit without support.

G3 [Crawls, 8 months]: Crawls on all fours. Can get into a sitting position unassisted and stay sitting without support.

G4 [Stands, 10 months]: Pulls up on furniture or people to stand. Can stand while holding on to things, and may stand alone.

G5 [Walks, 12–18 months]: Walks without holding onto things. Pulls toys while walking, and may begin to run.

G6 [Climbs stairs, 18 months]: Walks up and down stairs while holding on. Climbs onto & down from furniture unassisted.

G7 [Kicks ball, 24 months]: Can kick a ball and throw balls overhand. Begins to run and can stand on tiptoe.

G8 [Rides tricycle, 3 years]: Can pedal a tricycle unassisted. Walks up and down stairs without holding on, one foot on each step.

G9 [Hops on one foot, 4 years]: Hops on one foot and can stand on one foot for up to 2 seconds. Catches thrown balls fairly well.

MOTOR: DEXTERITY / FINE MOTOR

F1 [Picks up toys, 6 months]: Passes toys from hand to hand. Can bring things from their hand to their mouth.

F2 [Pincer grasp, 10 months]: Picks up objects between thumb and index finger. Moves things smoothly between hands.

F3 [Points to objects, 12 months]: Points and pokes things with index finger. Can bang two things together and copy gestures.

F4 [Stacks 3 blocks, 12 months]: Can stack a set of 3 cubes into a tower. # cubes stacked = age in years x 3.

F5 [Uses fork & spoon, 20 months]: Can feed themselves with a fork and spoon. Drinks from a cup unassisted.

F6 [Draws straight lines, 24 months]: Copies straight lines and circles. May use one dominant hand more than the other.

F7 [Uses doors & complex tools, 3 years]: Uses objects with levers & moving parts (door handles, screw-top jars, puzzles).

F8 [Pours & cuts, 4 years]: Can pour liquids, use scissors with supervision, and mash their own food.

F9 [Draws stick figure, 4 years]: Draws people with 2–4 body parts and copies simple shapes.

F10 [Buttons & zippers, 5 years]: Grooms and dresses themselves using buttons, zippers and shoelaces.

F11 [Somersault, 5 years]: Can swing, climb, and do a somersault. Stands on one foot for >10 seconds. May be able to skip.

SOCIAL: ATTACHMENT & PLAY

S1 [Social smile, 2 months]: Begins to smile at people. Attempts to look at parents when they are nearby.

S2 [Stranger anxiety, 6 months]: Recognizes familiar people. Knows if someone is a stranger and may be anxious.

S3 [Separation anxiety, 9 months]: May be clingy with familiar adults such as parents, and avoid leaving their side during play.

S4 [Rapprochement, 24 months]: Shows more independence. Moves away from and returns to parents (at parks, during play, etc.)

S5 [Parallel play, 24–36 months]: Plays alongside other children with their own toys. May show interest in their friends' play.

S6 [Core gender identity, 3 years]: Core gender identity is realized. Children may choose toys or activities based on gender.

S7 [Accepts separation, 3 years]: Becomes more independent. Can comfortably spend many hours away from parents.

S8 [Plays with others, 4 years]: Cooperative play with others (games with rules, role play involving different characters).

PRIMITIVE REFLEXES

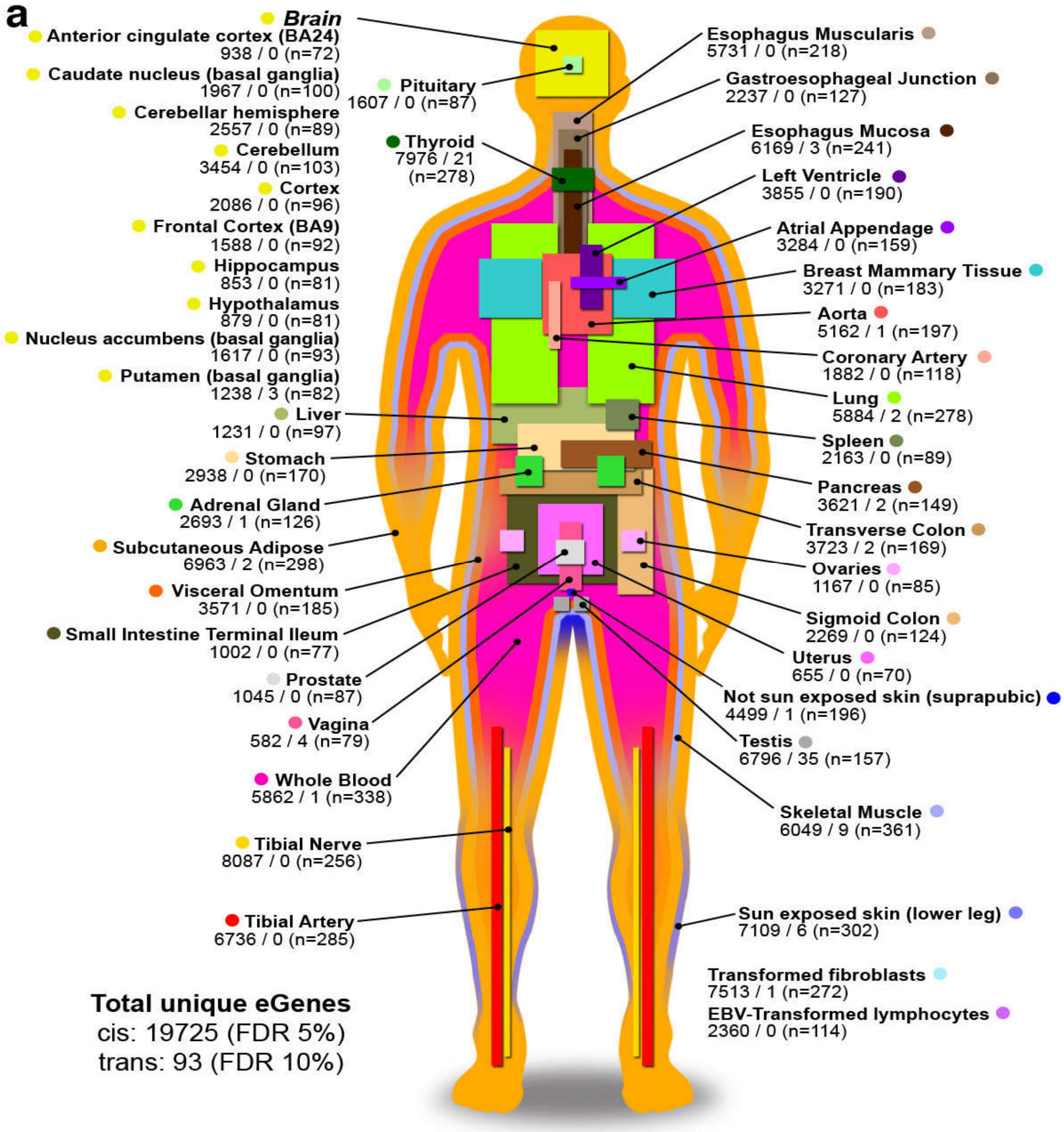
P1 [Moro reflex, disappears at 3 months]: Also called the startle reflex. Absence in infants suggests nerve injury or damage.

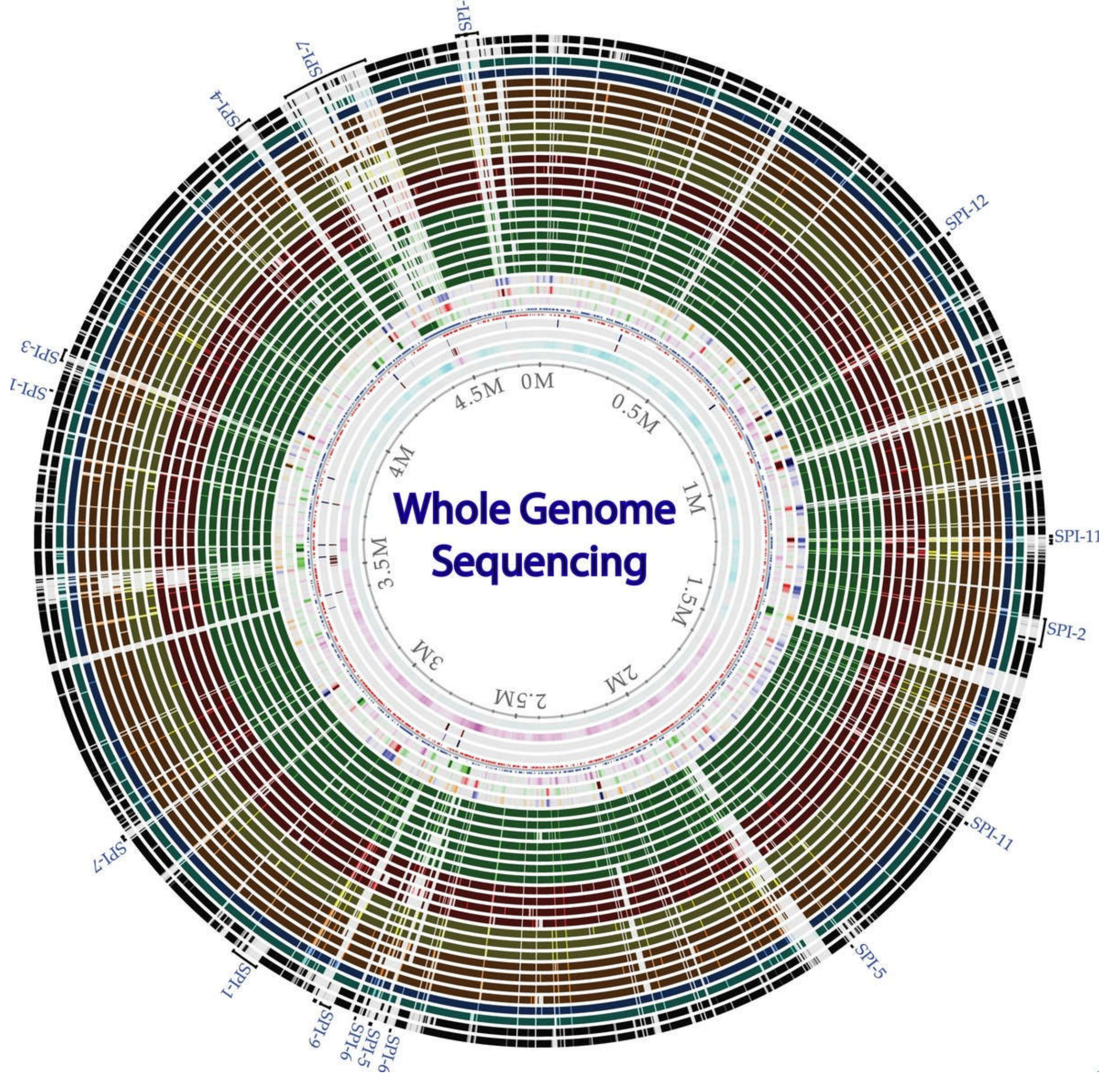
P2 [Rooting reflex, disappears at 4 months]: When the face is stroked, infants search for the object and attempt to suckle.

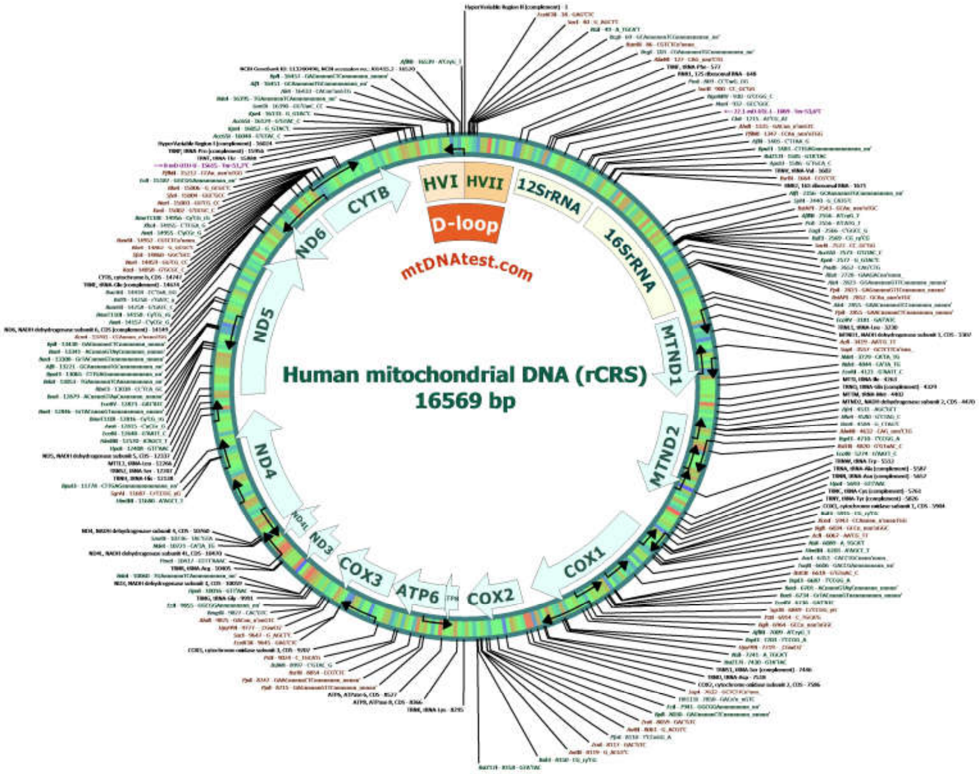
P3 [Palmar reflex, disappears at 6 months]: Infants grasp objects that stroke their palm or are placed in their hand.

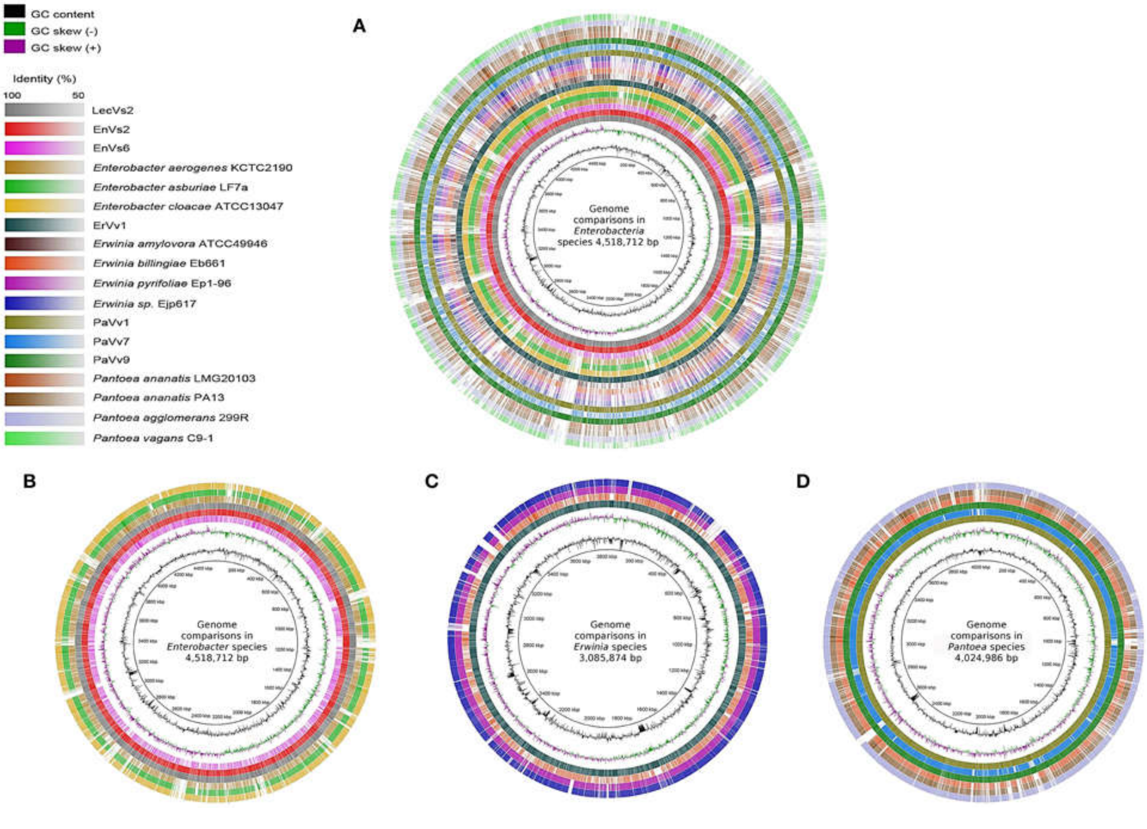
P4 [Babinski reflex, disappears as early as 12 months]: Presence in adults or children >2 years suggests injury or a CNS disorder.

Mo
P1
P2
P3
P4
Lifts head up [1 month] G1
Social smile [2 months] S1
Orients to voice [4 months] O1
Stranger anxiety [6 months] S2
Rolls & sits [6 months] G2
Picks up toys [6 months] F1
Crawls [8 months] G3
Orients to name [9 months] O2
Separation anxiety [9 months] S3
Object permanence [9 months] O3
Pincer grasp [10 months] F2
Calls parents [10 months] L1
Stands [10 months] G4
Points to objects [12 months] F3
Walks [12–18 months] G5
Stacks 3 blocks [12 months] F4
Climbs stairs [18 months] G6
Uses fork & spoon [20 months] F5
Kicks ball [24 months] G7
Rapprochement [24 months] S4
~200 words [24 months] L2
Parallel play [24–36 months] S5
Draws straight lines [24 months] F6
Core gender identity [3 years] S6
Rides tricycle [3 years] G8
Accepts separation [3 years] S7
~1000 words [3 years] L3
Uses doors & complex tools [3 years] F7
Somersault [5 years] F11
Pours & cuts [4 years] F8
Detailed stories [4 years] L5
Hops on one foot [4 years] G9
Draws stick figure [4 years] F9
Plays with others [4 years] S8
Complete sentences [4 years] L4
Buttons & zippers [5 years] F10


a
Brain
Anterior cingulate cortex (BA24)
938 / 0 (n=72)
Caudate nucleus (basal ganglia)
1967 / 0 (n=100)
Cerebellar hemisphere
2557 / 0 (n=89)
Cerebellum
3454 / 0 (n=103)
Cortex
2086 / 0 (n=96)
Frontal Cortex (BA9)
1588 / 0 (n=92)
Hippocampus
853 / 0 (n=81)
Hypothalamus
879 / 0 (n=81)
Nucleus accumbens (basal ganglia)
1617 / 0 (n=93)
Putamen (basal ganglia)
1238 / 3 (n=82)
Liver
1231 / 0 (n=97)
Stomach
2938 / 0 (n=170)
Adrenal Gland
2693 / 1 (n=126)
Subcutaneous Adipose
6963 / 2 (n=298)
Visceral Omentum
3571 / 0 (n=185)
Small Intestine Terminal Ileum
1002 / 0 (n=77)
Prostate
1045 / 0 (n=87)
Vagina
582 / 4 (n=79)
Whole Blood
5862 / 1 (n=338)
Tibial Nerve
8087 / 0 (n=256)
Tibial Artery
6736 / 0 (n=285)
Pituitary
1607 / 0 (n=87)
Thyroid
7976 / 21
(n=278)
Esophagus Muscularis
5731 / 0 (n=218)
Gastroesophageal Junction
2237 / 0 (n=127)
Esophagus Mucosa
6169 / 3 (n=241)
Left Ventricle
3855 / 0 (n=190)
Atrial Appendage
3284 / 0 (n=159)
Breast Mammary Tissue
3271 / 0 (n=183)
Aorta
5162 / 1 (n=197)
Coronary Artery
1882 / 0 (n=118)
Lung
5884 / 2 (n=278)
Spleen
2163 / 0 (n=89)
Pancreas
3621 / 2 (n=149)
Transverse Colon
3723 / 2 (n=169)
Ovaries
1167 / 0 (n=85)
Sigmoid Colon
2269 / 0 (n=124)
Uterus
655 / 0 (n=70)
Not sun exposed skin (suprapubic)
4499 / 1 (n=196)
Testis
6796 / 35 (n=157)
Skeletal Muscle
6049 / 9 (n=361)
Sun exposed skin (lower leg)
7109 / 6 (n=302)
Transformed fibroblasts
7513 / 1 (n=272)
EBV-Transformed lymphocytes
2360 / 0 (n=114)
Total unique eGenes
cis: 19725 (FDR 5%)
trans: 93 (FDR 10%)


Whole Genome Sequencing
0M
0.5M
1M
1.5M
2M
2.5M
3M
3.5M
4M
4.5M
SPI-10
SPI-7
SPI-4
SPI-3
SPI-1
SPI-12
SPI-11
SPI-2
SPI-11
SPI-5
SPI-7
SPI-1
SPI-9
SPI-6
SPI-5
SPI-6


Human mitochondrial DNA (rCRS)
16569 bp
mtDNAtest.com
D-loop
HVI
HVII
12SrRNA
16SrRNA
MTND1
MTND2
COX1
COX2
ATP6
COX3
ND3
ND4L
ND4
ND5
ND6
CYTB


GC content
GC skew (-)
GC skew (+)
Identity (%)
100
50
LecVs2
EnVs2
EnVs6
Enterobacter aerogenes KCTC2190
Enterobacter asburiae LF7a
Enterobacter cloacae ATCC13047
ErVv1
Erwinia amylovora ATCC49946
Erwinia billingiae Eb661
Erwinia pyrifoliae Ep1-96
Erwinia sp. Ejp617
PaVv1
PaVv7
PaVv9
Pantoea ananatis LMG20103
Pantoea ananatis PA13
Pantoea agglomerans 299R
Pantoea vagans C9-1
A
Genome comparisons in Enterobacteria species 4,518,712 bp
B
Genome comparisons in Enterobacter species 4,518,712 bp
C
Genome comparisons in Erwinia species 3,085,874 bp
D
Genome comparisons in Pantoea species 4,024,986 bp

Codons Found In DNA

		Second Position of Codon					
		T	**C**	**A**	**G**		
First Position	**T**	TTT Phe [F] TTC Phe [F] TTA Leu [L] TTG Leu [L]	TCT Ser [S] TCC Ser [S] TCA Ser [S] TCG Ser [S]	TAT Tyr [Y] TAC Tyr [Y] TAA *Ter* [end] TAG *Ter* [end]	TGT Cys [C] TGC Cys [C] TGA *Ter* [end] TGG Trp [W]	**T** **C** **A** **G**	**Third Position**
	C	CTT Leu [L] CTC Leu [L] CTA Leu [L] CTG Leu [L]	CCT Pro [P] CCC Pro [P] CCA Pro [P] CCG Pro [P]	CAT His [H] CAC His [H] CAA Gln [Q] CAG Gln [Q]	CGT Arg [R] CGC Arg [R] CGA Arg [R] CGG Arg [R]	**T** **C** **A** **G**	
	A	ATT Ile [I] ATC Ile [I] ATA Ile [I] ATG Met [M]	ACT Thr [T] ACC Thr [T] ACA Thr [T] ACG Thr [T]	AAT Asn [N] AAC Asn [N] AAA Lys [K] AAG Lys [K]	AGT Ser [S] AGC Ser [S] AGA Arg [R] AGG Arg [R]	**T** **C** **A** **G**	
	G	GTT Val [V] GTC Val [V] GTA Val [V] GTG Val [V]	GCT Ala [A] GCC Ala [A] GCA Ala [A] GCG Ala [A]	GAT Asp [D] GAC Asp [D] GAA Glu [E] GAG Glu [E]	GGT Gly [G] GGC Gly [G] GGA Gly [G] GGG Gly [G]	**T** **C** **A** **G**	

Codons Found In Messenger RNA

		Second Position									
		U		C		A		G			
First Position	U	UUU	Phe	UCU	Ser	UAU	Tyr	UGU	Cys	U	Third Position
		UUC		UCC		UAC		UGC		C	
		UUA	Leu	UCA		UAA	Stop	UGA	Stop	A	
		UUG		UCG		UAG	Stop	UGG	Trp	G	
	C	CUU	Leu	CCU	Pro	CAU	His	CGU	Arg	U	
		CUC		CCC		CAC		CGC		C	
		CUA		CCA		CAA	Gln	CGA		A	
		CUG		CCG		CAG		CGG		G	
	A	AUU	Ile	ACU	Thr	AAU	Asn	AGU	Ser	U	
		AUC		ACC		AAC		AGC		C	
		AUA		ACA		AAA	Lys	AGA	Arg	A	
		AUG	Met (start)	ACG		AAG		AGG		G	
	G	GUU	Val	GCU	Ala	GAU	Asp	GGU	Gly	U	
		GUC		GCC		GAC		GGC		C	
		GUA		GCA		GAA	Glu	GGA		A	
		GUG		GCG		GAG		GGG		G	

An explanation of the Genetic Code: DNA is a two-stranded molecule. Each strand is a polynucleotide composed of **A** (adenosine), **T** (thymidine), **C** (cytidine), and **G** (guanosine) residues polymerized by "dehydration" synthesis in linear chains with specific sequences. Each strand has polarity, such that the 5'-hydroxyl (or 5'-phospho) group of the first nucleotide begins the strand and the 3'-hydroxyl group of the final nucleotide ends the strand; accordingly, we say that this strand runs 5' to 3' ("*Five prime to three prime*") . It is also essential to know that the two strands of DNA run *antiparallel* such that one strand runs 5' -> 3' while the other one runs 3' -> 5'. At each nucleotide residue along the double-stranded DNA molecule, the nucleotides are complementary. That is, **A** forms two hydrogen-bonds with **T**; **C** forms three hydrogen bonds with **G**. In most cases the two-stranded, antiparallel, complementary DNA molecule folds to form a helical structure which resembles a spiral staircase. This is the reason why DNA has been referred to as the "Double Helix".

One strand of DNA holds the information that codes for various genes; this strand is often called the template strand or antisense strand (containing anticodons). The other, and complementary, strand is called the coding strand or sense strand (containing codons). Since mRNA is made from the template strand, it has the same information as the coding strand. The table above refers to triplet nucleotide codons along the sequence of the coding or sense strand of DNA as it runs 5' -> 3'; the code for the mRNA would be identical but for the fact that RNA contains **U** (uridine) rather than **T**.

An example of two complementary strands of DNA would be:

(5' -> 3') **ATGGAATTCTCGCTC** (Coding, sense strand)
(3' <- 5') **TACCTTAAGAGCGAG** (Template, antisense strand)

(5' -> 3') **AUGGAAUUCUCGCUC** (mRNA made from Template strand)

Since amino acid residues of proteins are specified as triplet codons, the protein sequence made from the above example would be Met-Glu-Phe-Ser-Leu... (MEFSL...).

Practically, codons are "decoded" by transfer RNAs (tRNA) which interact with a ribosome-bound messenger RNA (mRNA) containing the coding sequence. There are 64 different tRNAs, each of which has an anticodon loop (used to recognize codons in the mRNA). 61 of these have a bound amino acyl residue; the appropriate "charged" tRNA binds to the respective next codon in the mRNA and the ribosome catalyzes the transfer of the amino acid from the tRNA to the growing (nascent) protein/polypeptide chain. The remaining 3 codons are used for "punctuation"; that is, they signal the termination (the end) of the growing polypeptide chain.

Lastly, the Genetic Code in the table above has also been called "The Universal Genetic Code". It is known as "universal", because it is used by all known organisms as a code for DNA, mRNA, and tRNA. The universality of the genetic code encompases animals (including humans), plants, fungi, archaea, bacteria, and viruses. However, all rules have their exceptions, and such is the case with the Genetic Code; small variations in the code exist in mitochondria and certain microbes. Nonetheless, it should be emphasized that these variances represent only a small fraction of known cases, and that the Genetic Code applies quite broadly, certainly to all known nuclear genes.

Codon Tables

	Third Position			
First & Second Position	A	C	G	U
AA	Lys	Asn	Lys	Asn
AC	Thr	Thr	Thr	Thr
AG	Arg	Ser	Arg	Ser
AU	Ile	Ile	MET	Ile
CA	Gln	His	Gln	His
CC	Pro	Pro	Pro	Pro
CG	Arg	Arg	Arg	Arg
CU	Leu	Leu	Leu	Leu
GA	Glu	Asp	Glu	Asp
GC	Ala	Ala	Ala	Ala
GG	Gly	Gly	Gly	Gly
GU	Val	Val	Val	Val
UA	.	Tyr	.	Tyr
UC	Ser	Ser	Ser	Ser
UG	.	Cys	Trp	Cys
UU	Leu	Phe	Leu	Phe

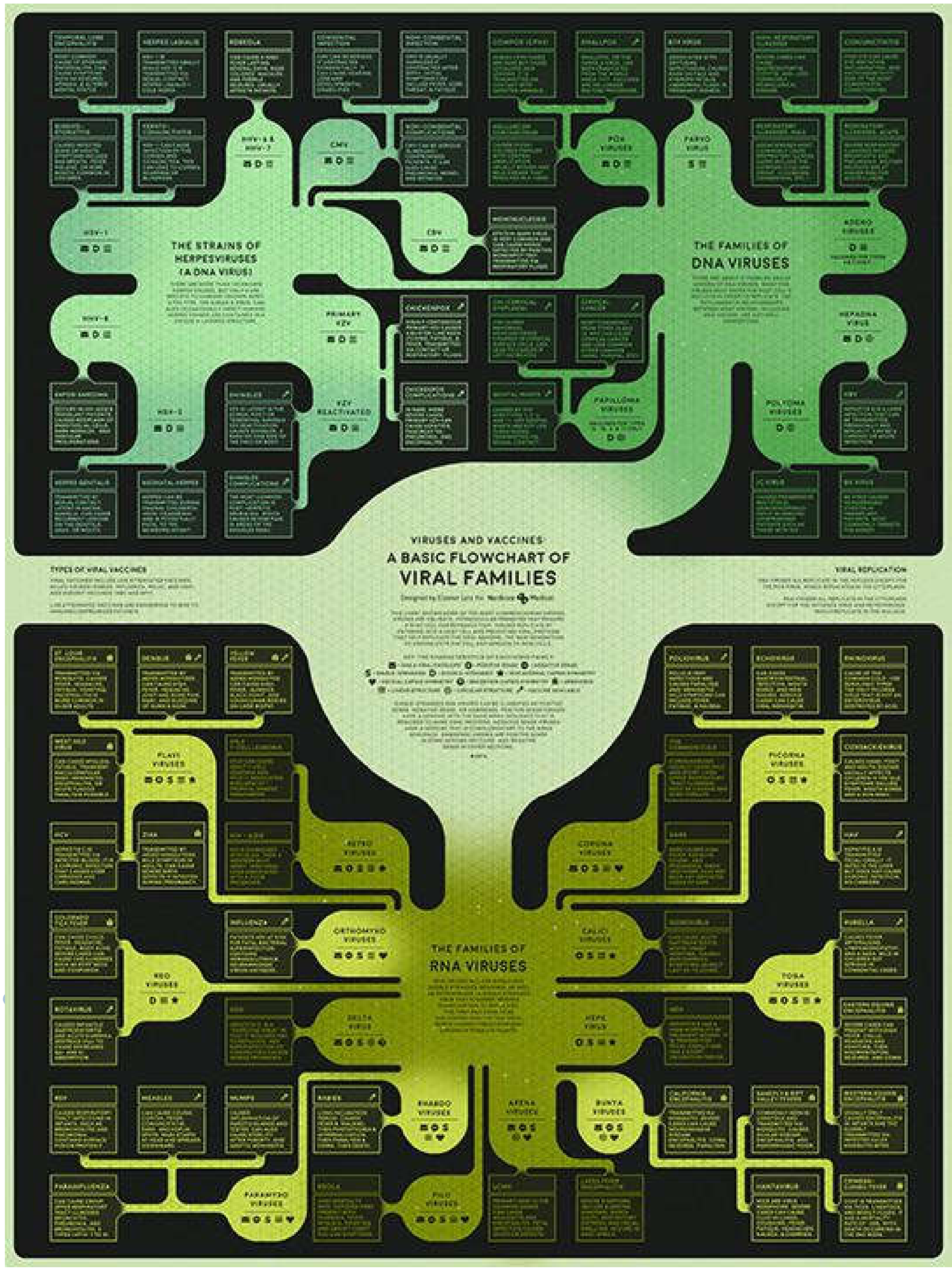
Another way to look at this is:

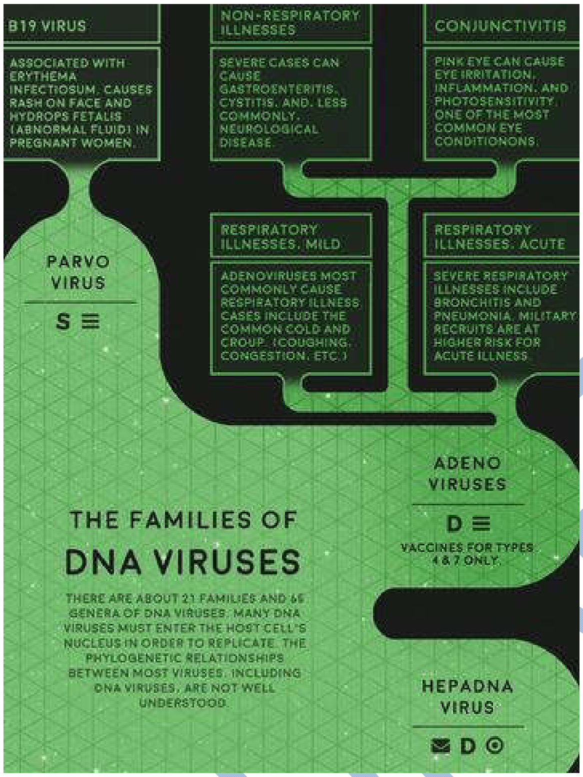
NAME	3 Letter Abbreviation	1 Letter Abbreviation		DNA codons for each Amino Acids
Alanine	Ala	1.	A	GCA,GCC,GCG,GCU
Cysteine	Cys	3.	C	UGC,UGU
Aspartic Acid	Asp	4.	D	GAC,GAU
Glutamic Acid	Glu	5.	E	GAA,GAG
Phenylalanine	Phe	6.	F	UUC,UUU
Glycine	Gly	7.	G	GGA,GGC,GGG,GGU
Histidine	His	8.	H	CAC,CAU
Isoleucine	Ile	9.	I	AUA,AUC,AUU
Lysine	Lys	11.	K	AAA,AAG
Leucine	Leu	12.	L	UUA,UUG,CUA,CUC,CUG,CUU
Methionine	Met	13.	M	AUG
Asparagine	Asn	14.	N	AAC,AAU
Proline	Pro	16.	P	CCA,CCC,CCG,CCU
Glutamine	Gln	17.	Q	CAA,CAG
Arginine	Arg	18.	R	CGA,CGC,CGG,CGU
Serine	Ser	19.	S	UCA,UCC,UCG,UCU,AGC,AGU
Threonine	Thr	20.	T	ACA,ACC,ACG,ACU
Valine	Val	22.	V	GUA,GUC,GUG,GUU
Tryptophan	Trp	23.	W	UGG
Tyrosine	Tyr	25.	Y	UAC,UAU
Stop Codons			.	UAA,UAG,UGA – B(2)J(10)O(15)U(21) Z(26)

An example of the multiple combinations of DNA possible for a single peptide is an example of spelling my first name (without a termination codon):

So to code for 'MARK' there would be 16 combinations, other sequences of 4 letters would vary in the number of possibilities based on the number of codons that could code for a single amino acid. Some amino acids have up to 6 codons that will be translated into a single Amino Acid.

M A R K MET Ala Arg Lys	M A R K MET Ala Arg Lys	M A R K MET Ala Arg Lys	M A R K MET Ala Arg Lys
AUG-GCU-AGA-AAG	AUG-GCU-AGG-AAG	AUG-GCU-AGA-AAA	AUG-GCU-AGG-AAA
AUG-GCG-AGA-AAG	AUG-GCG-AGG-AAG	AUG-GCG-AGA-AAA	AUG-GCG-AGG-AAA
AUG-GCC-AGA-AAG	AUG-GCC-AGG-AAG	AUG-GCC-AGA-AAA	AUG-GCC-AGG-AAA
AUG-GCA-AGA-AAG	AUG-GCA-AGG-AAG	AUG-GCA-AGA-AAA	AUG-GCA-AGG-AAA


VIRUSES AND VACCINES
A BASIC FLOWCHART OF
VIRAL FAMILIES
THE STRAINS OF HERPESVIRUSES (A DNA VIRUS)
THE FAMILIES OF DNA VIRUSES
THE FAMILIES OF RNA VIRUSES
TYPES OF VIRAL VACCINES
VIRAL REPLICATION
HERPES LABIALIS
ROSEOLA
MONONUCLEOSIS
CHICKENPOX
SHINGLES
KAPOSI SARCOMA
HERPES GENITALIS
NEONATAL HERPES
SMALLPOX
CONJUNCTIVITIS
HHV-1
HHV-2
HHV-6 & HHV-7
HHV-8
CMV
EBV
PRIMARY VZV
VZV REACTIVATED
POX VIRUSES
PARVO VIRUS
ADENO VIRUSES
HEPADNA VIRUS
PAPILLOMA VIRUSES
POLYOMA VIRUSES
JC VIRUS
BK VIRUS
FLAVI VIRUSES
RETRO VIRUSES
ORTHOMYXO VIRUSES
REO VIRUSES
DELTA VIRUS
RHABDO VIRUSES
ARENA VIRUSES
BUNYA VIRUSES
FILO VIRUSES
PARAMYXO VIRUSES
PICORNA VIRUSES
CORONA VIRUSES
CALICI VIRUSES
TOGA VIRUSES
HEPE VIRUS
DENGUE
WEST NILE VIRUS
ZIKA
INFLUENZA
ROTAVIRUS
MEASLES
MUMPS
RABIES
PARAINFLUENZA
POLIOVIRUS
RHINOVIRUS
COXSACKIEVIRUS
HAV
RUBELLA
HANTAVIRUS
CALIFORNIA ENCEPHALITIS


B19 VIRUS
NON-RESPIRATORY ILLNESSES
CONJUNCTIVITIS
PARVO VIRUS
S ≡
RESPIRATORY ILLNESSES, MILD
RESPIRATORY ILLNESSES, ACUTE
ADENO VIRUSES
D ≡
HEPADNA VIRUS
✉ D ⊙

ASSOCIATED WITH ERYTHEMA INFECTIOSUM. CAUSES RASH ON FACE AND HYDROPS FETALIS (ABNORMAL FLUID) IN PREGNANT WOMEN.

SEVERE CASES CAN CAUSE GASTROENTERITIS, CYSTITIS, AND, LESS COMMONLY, NEUROLOGICAL DISEASE.

PINK EYE CAN CAUSE EYE IRRITATION, INFLAMMATION, AND PHOTOSENSITIVITY. ONE OF THE MOST COMMON EYE CONDITIONONS.

ADENOVIRUSES MOST COMMONLY CAUSE RESPIRATORY ILLNESS. CASES INCLUDE THE COMMON COLD AND CROUP. (COUGHING, CONGESTION, ETC.)

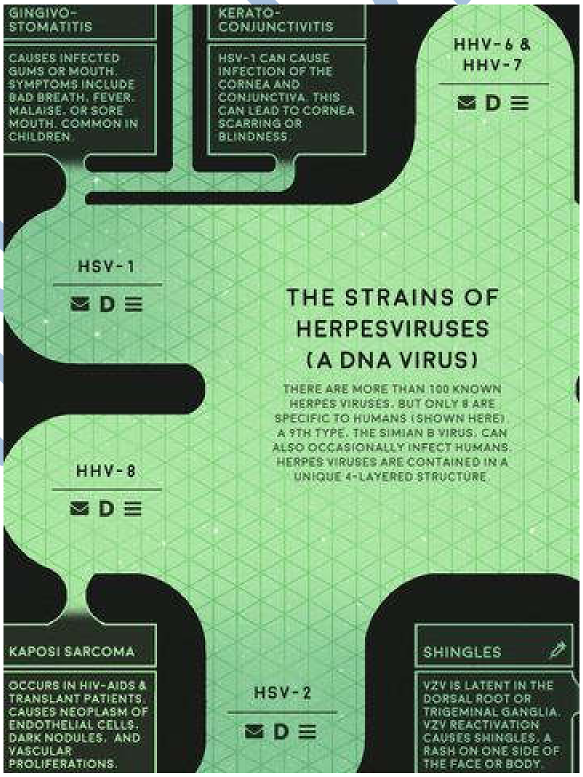
SEVERE RESPIRATORY ILLNESSES INCLUDE BRONCHITIS AND PNEUMONIA. MILITARY RECRUITS ARE AT HIGHER RISK FOR ACUTE ILLNESS.

VACCINES FOR TYPES 4 & 7 ONLY.

THE FAMILIES OF

DNA VIRUSES

THERE ARE ABOUT 21 FAMILIES AND 65 GENERA OF DNA VIRUSES. MANY DNA VIRUSES MUST ENTER THE HOST CELL'S NUCLEUS IN ORDER TO REPLICATE. THE PHYLOGENETIC RELATIONSHIPS BETWEEN MOST VIRUSES, INCLUDING DNA VIRUSES, ARE NOT WELL UNDERSTOOD.


GINGIVO-STOMATITIS
KERATO-CONJUNCTIVITIS
HHV-6 & HHV-7
✉ D ≡
HSV-1
✉ D ≡
HHV-8
✉ D ≡
KAPOSI SARCOMA
HSV-2
✉ D ≡
SHINGLES

CAUSES INFECTED GUMS OR MOUTH. SYMPTOMS INCLUDE BAD BREATH, FEVER, MALAISE, OR SORE MOUTH. COMMON IN CHILDREN.

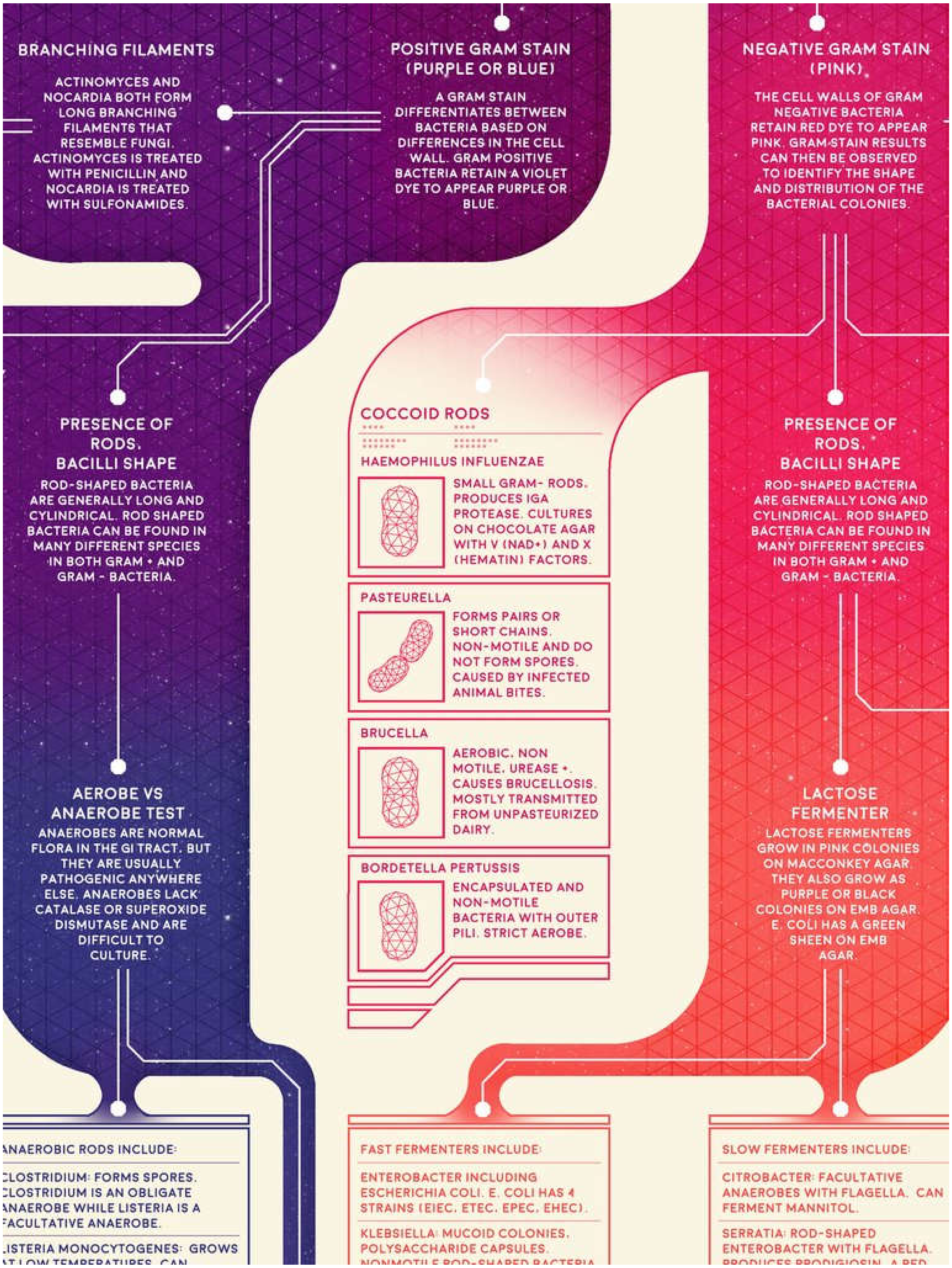
HSV-1 CAN CAUSE INFECTION OF THE CORNEA AND CONJUNCTIVA. THIS CAN LEAD TO CORNEA SCARRING OR BLINDNESS.

THE STRAINS OF HERPESVIRUSES (A DNA VIRUS)

THERE ARE MORE THAN 100 KNOWN HERPES VIRUSES, BUT ONLY 8 ARE SPECIFIC TO HUMANS (SHOWN HERE). A 9TH TYPE, THE SIMIAN B VIRUS, CAN ALSO OCCASIONALLY INFECT HUMANS. HERPES VIRUSES ARE CONTAINED IN A UNIQUE 4-LAYERED STRUCTURE.

OCCURS IN HIV-AIDS & TRANSLANT PATIENTS. CAUSES NEOPLASM OF ENDOTHELIAL CELLS, DARK NODULES, AND VASCULAR PROLIFERATIONS.

VZV IS LATENT IN THE DORSAL ROOT OR TRIGEMINAL GANGLIA. VZV REACTIVATION CAUSES SHINGLES, A RASH ON ONE SIDE OF THE FACE OR BODY.



BRANCHING FILAMENTS

ACTINOMYCES AND NOCARDIA BOTH FORM LONG BRANCHING FILAMENTS THAT RESEMBLE FUNGI. ACTINOMYCES IS TREATED WITH PENICILLIN AND NOCARDIA IS TREATED WITH SULFONAMIDES.

POSITIVE GRAM STAIN (PURPLE OR BLUE)

A GRAM STAIN DIFFERENTIATES BETWEEN BACTERIA BASED ON DIFFERENCES IN THE CELL WALL. GRAM POSITIVE BACTERIA RETAIN A VIOLET DYE TO APPEAR PURPLE OR BLUE.

NEGATIVE GRAM STAIN (PINK)

THE CELL WALLS OF GRAM NEGATIVE BACTERIA RETAIN RED DYE TO APPEAR PINK. GRAM STAIN RESULTS CAN THEN BE OBSERVED TO IDENTIFY THE SHAPE AND DISTRIBUTION OF THE BACTERIAL COLONIES.

PRESENCE OF RODS, BACILLI SHAPE

ROD-SHAPED BACTERIA ARE GENERALLY LONG AND CYLINDRICAL. ROD SHAPED BACTERIA CAN BE FOUND IN MANY DIFFERENT SPECIES IN BOTH GRAM + AND GRAM - BACTERIA.

COCCOID RODS

HAEMOPHILUS INFLUENZAE

SMALL GRAM- RODS. PRODUCES IGA PROTEASE. CULTURES ON CHOCOLATE AGAR WITH V (NAD+) AND X (HEMATIN) FACTORS.

PASTEURELLA

FORMS PAIRS OR SHORT CHAINS. NON-MOTILE AND DO NOT FORM SPORES. CAUSED BY INFECTED ANIMAL BITES.

BRUCELLA

AEROBIC, NON MOTILE, UREASE +. CAUSES BRUCELLOSIS. MOSTLY TRANSMITTED FROM UNPASTEURIZED DAIRY.

BORDETELLA PERTUSSIS

ENCAPSULATED AND NON-MOTILE BACTERIA WITH OUTER PILI. STRICT AEROBE.

PRESENCE OF RODS, BACILLI SHAPE

ROD-SHAPED BACTERIA ARE GENERALLY LONG AND CYLINDRICAL. ROD SHAPED BACTERIA CAN BE FOUND IN MANY DIFFERENT SPECIES IN BOTH GRAM + AND GRAM - BACTERIA.

AEROBE VS ANAEROBE TEST

ANAEROBES ARE NORMAL FLORA IN THE GI TRACT, BUT THEY ARE USUALLY PATHOGENIC ANYWHERE ELSE. ANAEROBES LACK CATALASE OR SUPEROXIDE DISMUTASE AND ARE DIFFICULT TO CULTURE.

LACTOSE FERMENTER

LACTOSE FERMENTERS GROW IN PINK COLONIES ON MACCONKEY AGAR. THEY ALSO GROW AS PURPLE OR BLACK COLONIES ON EMB AGAR. E. COLI HAS A GREEN SHEEN ON EMB AGAR.

ANAEROBIC RODS INCLUDE:

CLOSTRIDIUM: FORMS SPORES. CLOSTRIDIUM IS AN OBLIGATE ANAEROBE WHILE LISTERIA IS A FACULTATIVE ANAEROBE.

LISTERIA MONOCYTOGENES: GROWS AT LOW TEMPERATURES. CAN

FAST FERMENTERS INCLUDE:

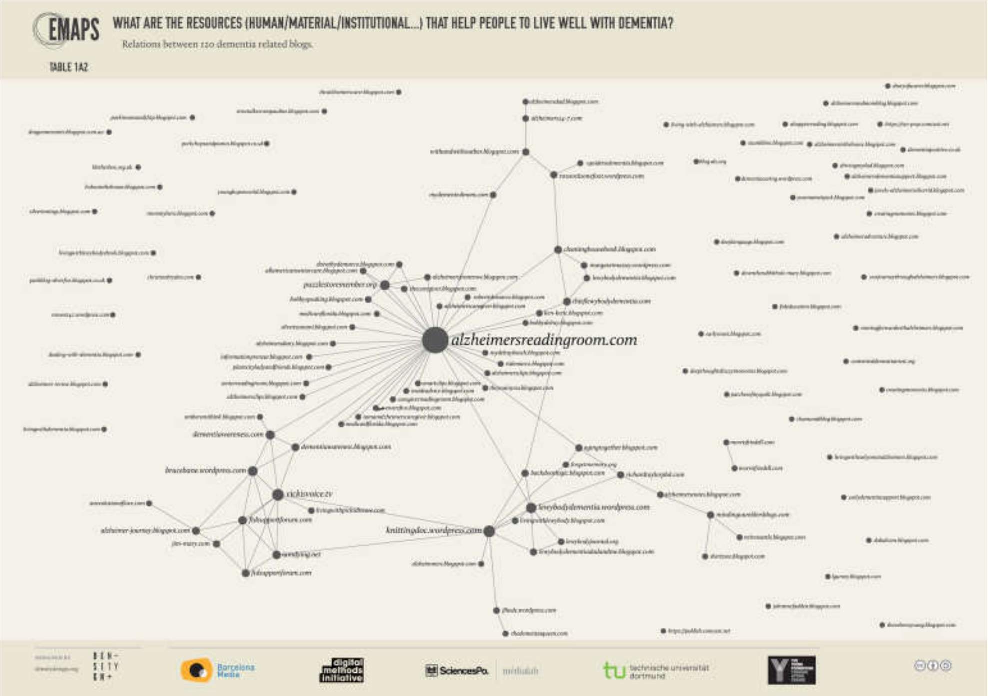
ENTEROBACTER INCLUDING ESCHERICHIA COLI. E. COLI HAS 4 STRAINS (EIEC, ETEC, EPEC, EHEC).

KLEBSIELLA: MUCOID COLONIES, POLYSACCHARIDE CAPSULES. NONMOTILE ROD-SHAPED BACTERIA

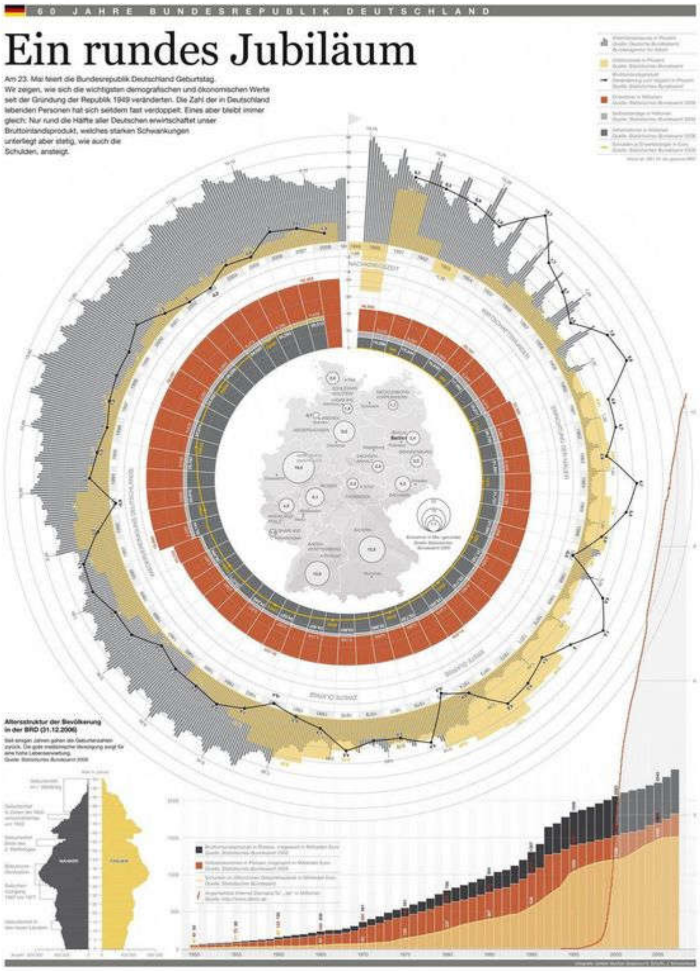
SLOW FERMENTERS INCLUDE:

CITROBACTER: FACULTATIVE ANAEROBES WITH FLAGELLA. CAN FERMENT MANNITOL.

SERRATIA: ROD-SHAPED ENTEROBACTER WITH FLAGELLA. PRODUCES PRODIGIOSIN, A RED



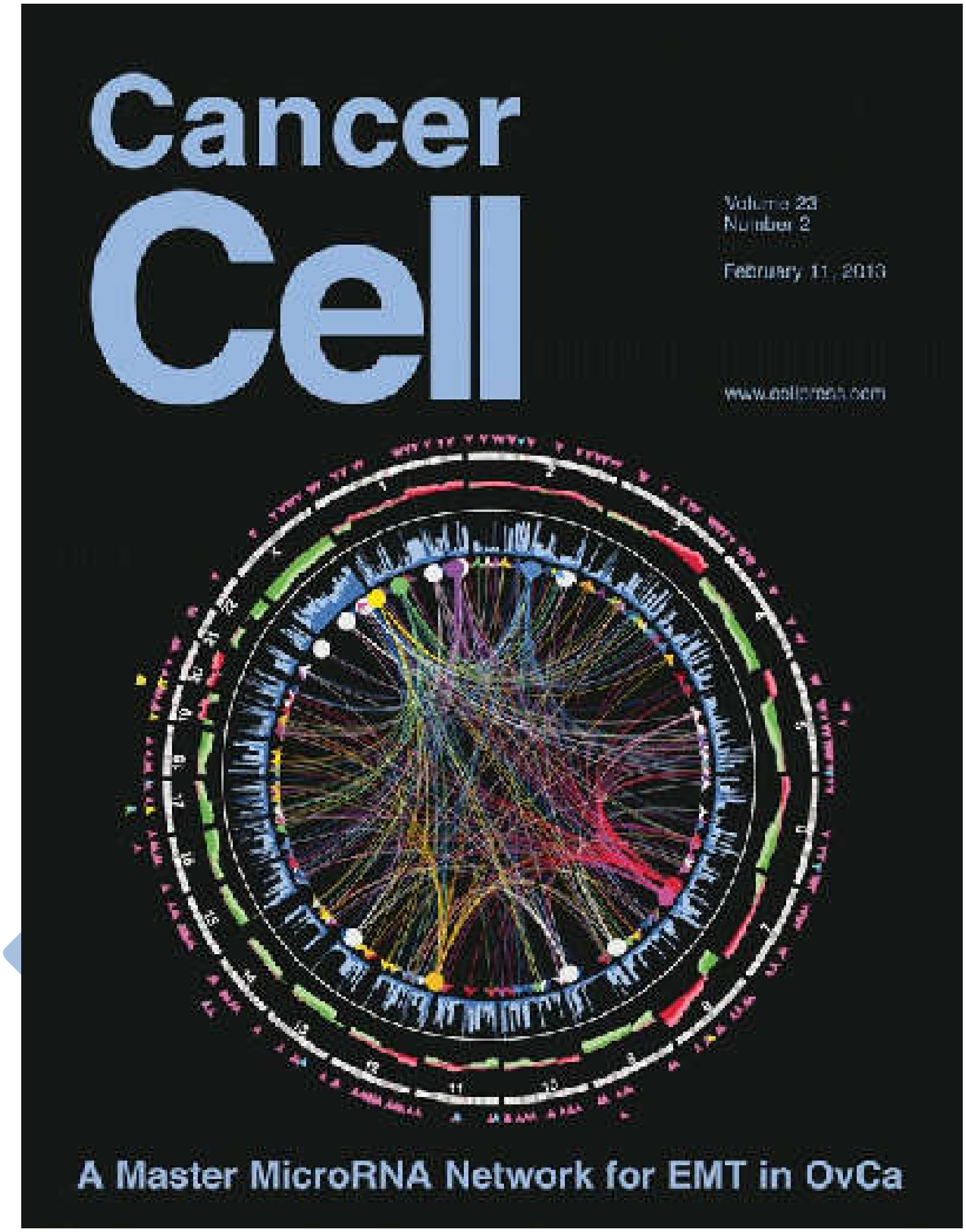
EMAPS
WHAT ARE THE RESOURCES (HUMAN/MATERIAL/INSTITUTIONAL...) THAT HELP PEOPLE TO LIVE WELL WITH DEMENTIA?
Relations between 120 dementia related blogs.
TABLE 1A2
alzheimersreadingroom.com
dementiawareness.com
vickisvoice.tv
knittingdoc.wordpress.com
lewybodydementia.wordpress.com
puzzlestoremember.org
digital methods initiative
SciencesPo.
technische universität dortmund

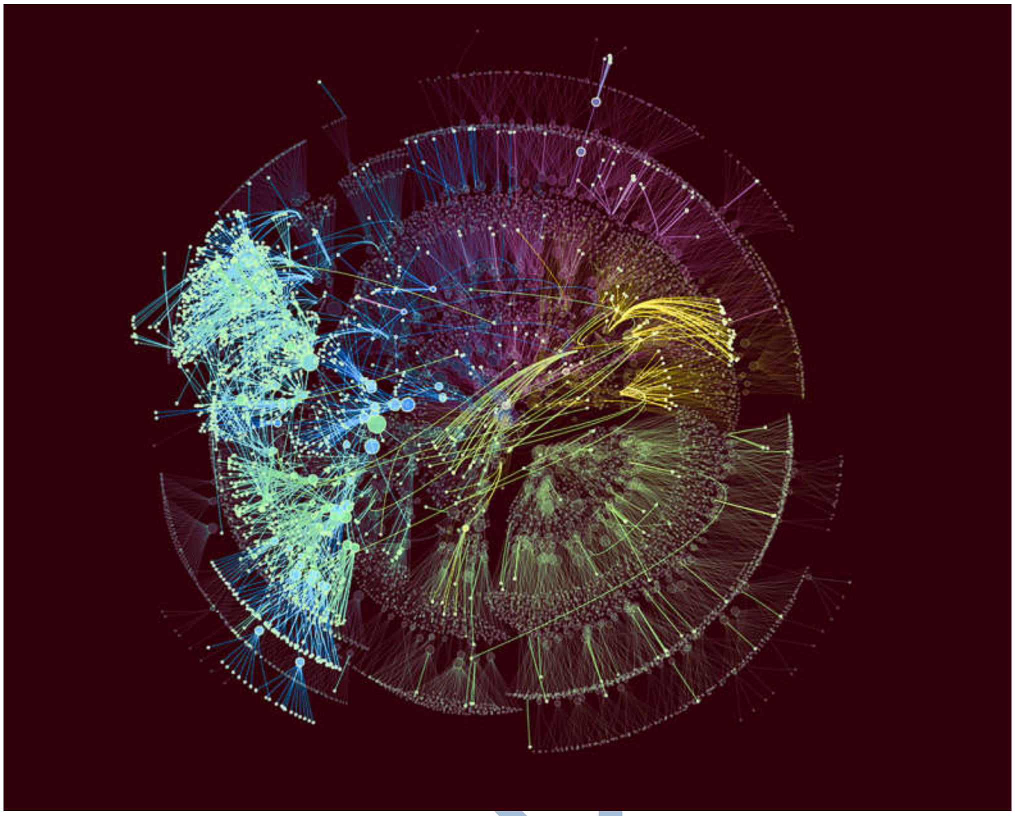


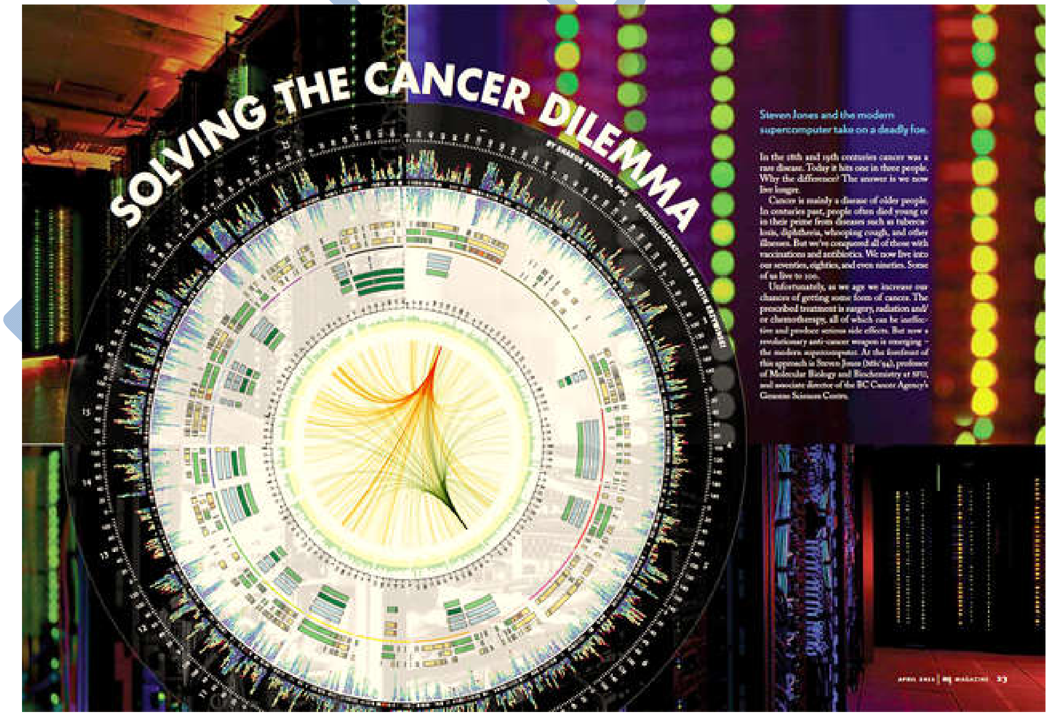
Ein rundes Jubiläum

Am 23. Mai feiert die Bundesrepublik Deutschland Geburtstag. Wir zeigen, wie sich die wichtigsten demografischen und ökonomischen Werte seit der Gründung der Republik 1949 veränderten. Die Zahl der in Deutschland lebenden Personen hat sich seitdem fast verdoppelt. Eines aber bleibt immer gleich: Nur rund die Hälfte aller Deutschen erwirtschaftet unser Bruttoinlandsprodukt, welches starken Schwankungen unterliegt aber stetig, wie auch die Schulden, ansteigt.

Altersstruktur der Bevölkerung in der BRD (31.12.2006)


Cancer Cell
Volume 23
Number 2
February 11, 2013
www.cellpress.com
A Master MicroRNA Network for EMT in OvCa





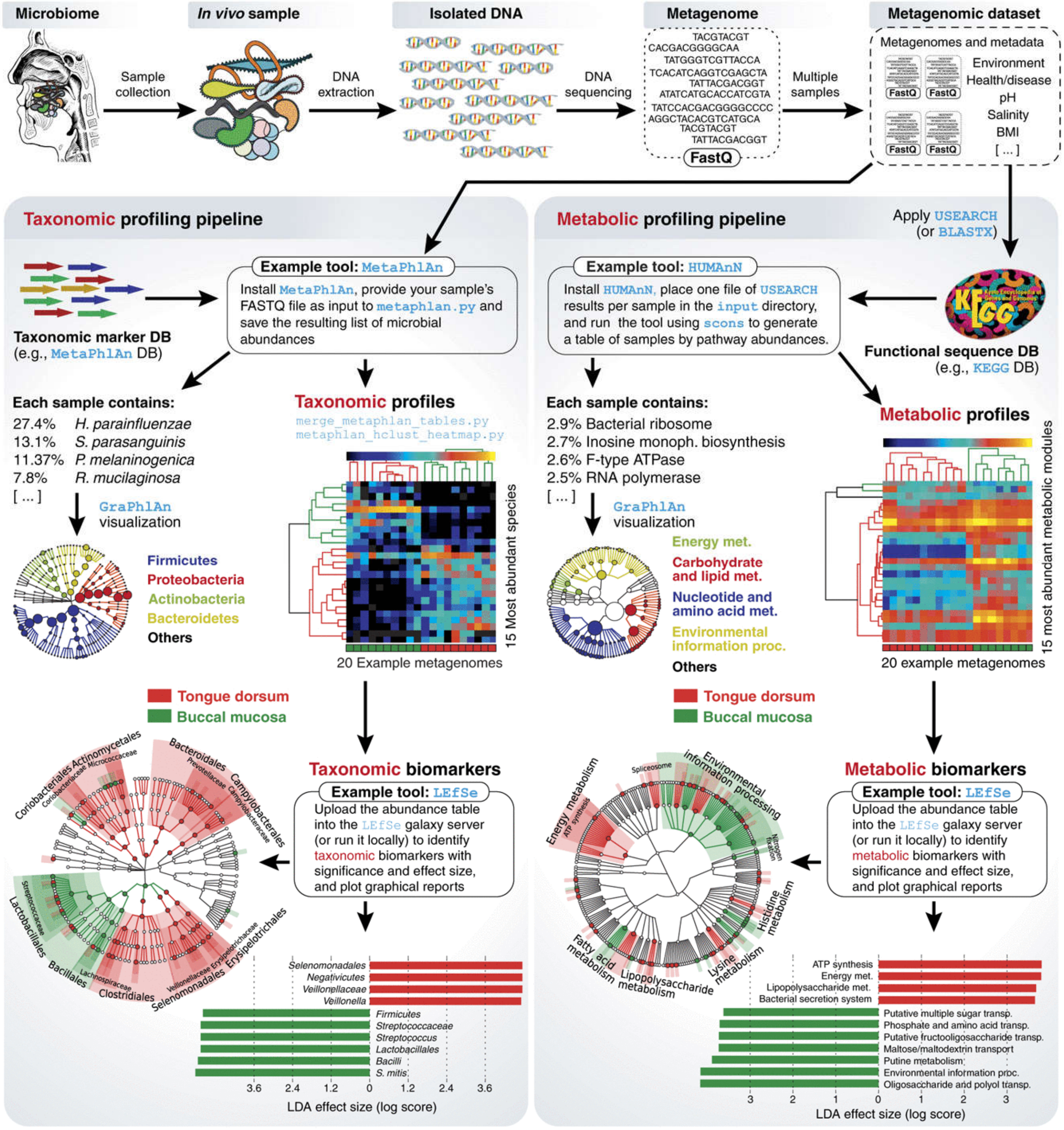
SOLVING THE CANCER DILEMMA

Steven Jones and the modern supercomputer take on a deadly foe.

In the 18th and 19th centuries cancer was a rare disease. Today it hits one in three people. Why the difference? The answer is we now live longer.

Cancer is mainly a disease of older people. In centuries past, people often died young or in their prime from diseases such as tuberculosis, diphtheria, whooping cough, and other illnesses. But we've conquered all of those with vaccinations and antibiotics. We now live into our seventies, eighties, and even nineties. Some of us live to 100.

Unfortunately, as we age we increase our chances of getting some form of cancer. The prescribed treatment is surgery, radiation and/or chemotherapy, all of which can be ineffective and produce serious side effects. But now a revolutionary anti-cancer weapon is emerging – the modern supercomputer. At the forefront of this approach is Steven Jones (MSc'94), professor of Molecular Biology and Biochemistry at SFU, and associate director of the BC Cancer Agency's Genome Sciences Centre.


Microbiome
Sample collection
In vivo sample
DNA extraction
Isolated DNA
DNA sequencing
Metagenome
TACGTACGT
CACGACGGGGCAA
TATGGGTCGTTACCA
TCACATCAGGTCGAGCTA
TATTACGACGGT
ATATCATGCACCATCGTA
TATCCACGACGGGGCCCC
AGGCTACACGTCATGCA
TACGTACGT
TATTACGACGGT
FastQ
Multiple samples
Metagenomic dataset
Metagenomes and metadata
FastQ
FastQ
FastQ
FastQ
Environment
Health/disease
pH
Salinity
BMI
[...]
Taxonomic profiling pipeline
Metabolic profiling pipeline
Apply USEARCH
(or BLASTX)
Example tool: MetaPhlAn
Taxonomic marker DB
(e.g., MetaPhlAn DB)
Example tool: HUMAnN
Functional sequence DB
(e.g., KEGG DB)
Each sample contains:
Taxonomic profiles
merge_metaphlan_tables.py
metaphlan_hclust_heatmap.py
15 Most abundant species
20 Example metagenomes
GraPhlAn
visualization
Firmicutes
Proteobacteria
Actinobacteria
Bacteroidetes
Others
Each sample contains:
Metabolic profiles
15 most abundant metabolic modules
20 example metagenomes
GraPhlAn
visualization
Energy met.
Carbohydrate and lipid met.
Nucleotide and amino acid met.
Environmental information proc.
Others
🟥 Tongue dorsum
🟩 Buccal mucosa
🟥 Tongue dorsum
🟩 Buccal mucosa
Coriobacteriales
Coriobacteriaceae
Actinomycetales
Micrococcaceae
Bacteroidales
Prevotellaceae
Campylobacterales
Campylobacteraceae
Streptococcaceae
Lactobacillales
Bacillales
Lachnospiraceae
Clostridiales
Selenomonadales
Veillonellaceae
Erysipelotrichaceae
Erysipelotrichales
Taxonomic biomarkers
Example tool: LEfSe
Selenomonadales
Negativicutes
Veillonellaceae
Veillonella
Firmicutes
Streptococcaceae
Streptococcus
Lactobacillales
Bacilli
S. mitis
3.6
2.4
1.2
0
1.2
2.4
3.6
LDA effect size (log score)
Energy metabolism
ATP synthesis
Spliceosome
Environmental information processing
Nitrogen fixation
Histidine metabolism
Lysine metabolism
Lipopolysaccharide metabolism
Fatty acid metabolism
Metabolic biomarkers
Example tool: LEfSe
ATP synthesis
Energy met.
Lipopolysaccharide met.
Bacterial secretion system
Putative multiple sugar transp.
Phosphate and amino acid transp.
Putative fructooligosaccharide transp.
Maltose/maltodextrin transport
Putine metabolism
Environmental information proc.
Oligosaccharide and polyol transp.
3
2
1
0
1
2
3
LDA effect size (log score)

Install `MetaPhlAn`, provide your sample's FASTQ file as input to `metaphlan.py` and save the resulting list of microbial abundances

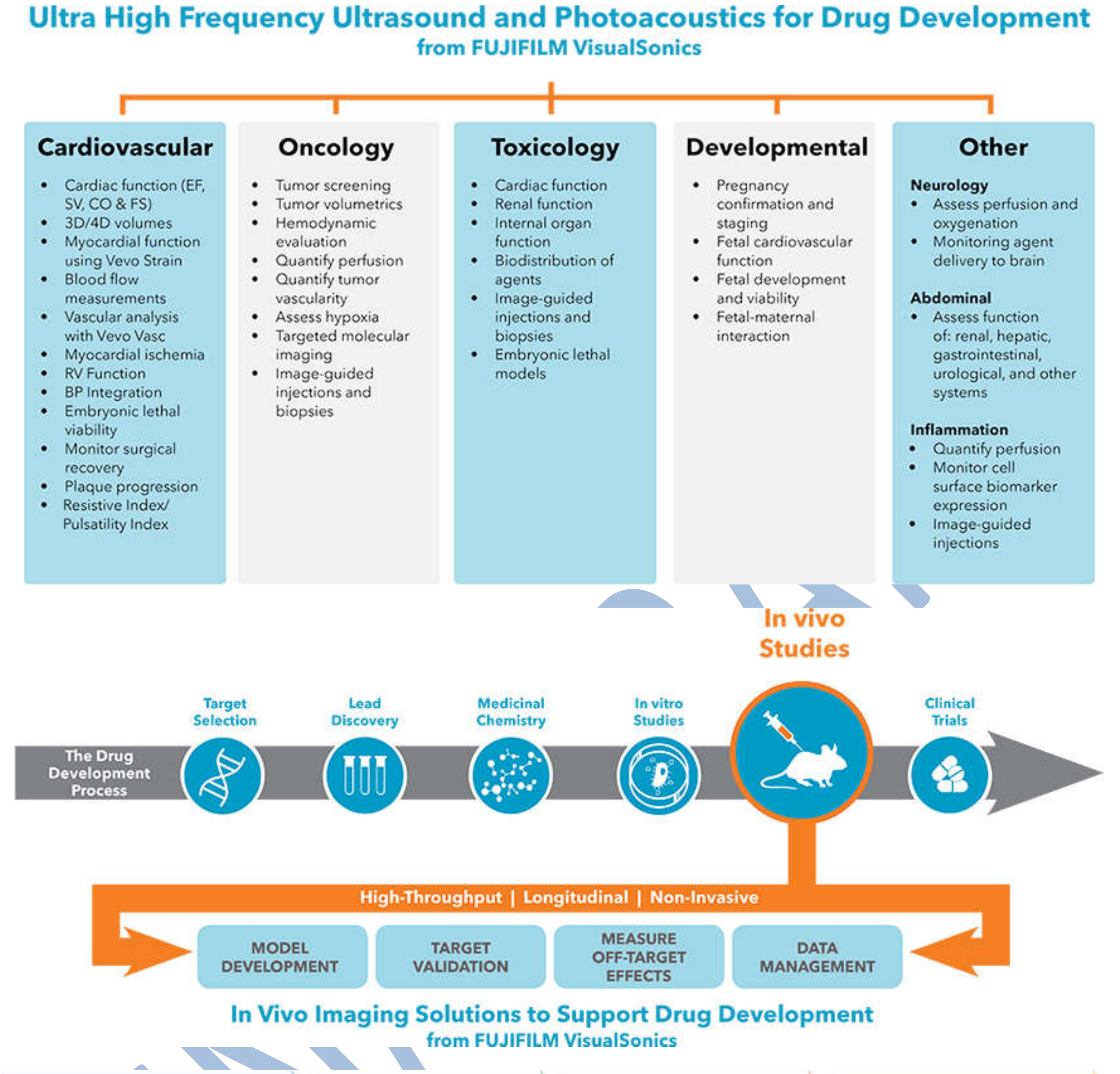
27.4% *H. parainfluenzae*
13.1% *S. parasanguinis*
11.37% *P. melaninogenica*
7.8% *R. mucilaginosa*
[...]

Install `HUMAnN`, place one file of `USEARCH` results per sample in the `input` directory, and run the tool using `scons` to generate a table of samples by pathway abundances.

2.9% Bacterial ribosome
2.7% Inosine monoph. biosynthesis
2.6% F-type ATPase
2.5% RNA polymerase
[...]

Upload the abundance table into the `LEfSe` galaxy server (or run it locally) to identify taxonomic biomarkers with significance and effect size, and plot graphical reports

Upload the abundance table into the `LEfSe` galaxy server (or run it locally) to identify metabolic biomarkers with significance and effect size, and plot graphical reports



Ultra High Frequency Ultrasound and Photoacoustics for Drug Development

from FUJIFILM VisualSonics

Cardiovascular

- Cardiac function (EF, SV, CO & FS)
- 3D/4D volumes
- Myocardial function using Vevo Strain
- Blood flow measurements
- Vascular analysis with Vevo Vasc
- Myocardial ischemia
- RV Function
- BP Integration
- Embryonic lethal viability
- Monitor surgical recovery
- Plaque progression
- Resistive Index/ Pulsatility Index

Oncology

- Tumor screening
- Tumor volumetrics
- Hemodynamic evaluation
- Quantify perfusion
- Quantify tumor vascularity
- Assess hypoxia
- Targeted molecular imaging
- Image-guided injections and biopsies

Toxicology

- Cardiac function
- Renal function
- Internal organ function
- Biodistribution of agents
- Image-guided injections and biopsies
- Embryonic lethal models

Developmental

- Pregnancy confirmation and staging
- Fetal cardiovascular function
- Fetal development and viability
- Fetal-maternal interaction

Other

Neurology

- Assess perfusion and oxygenation
- Monitoring agent delivery to brain

Abdominal

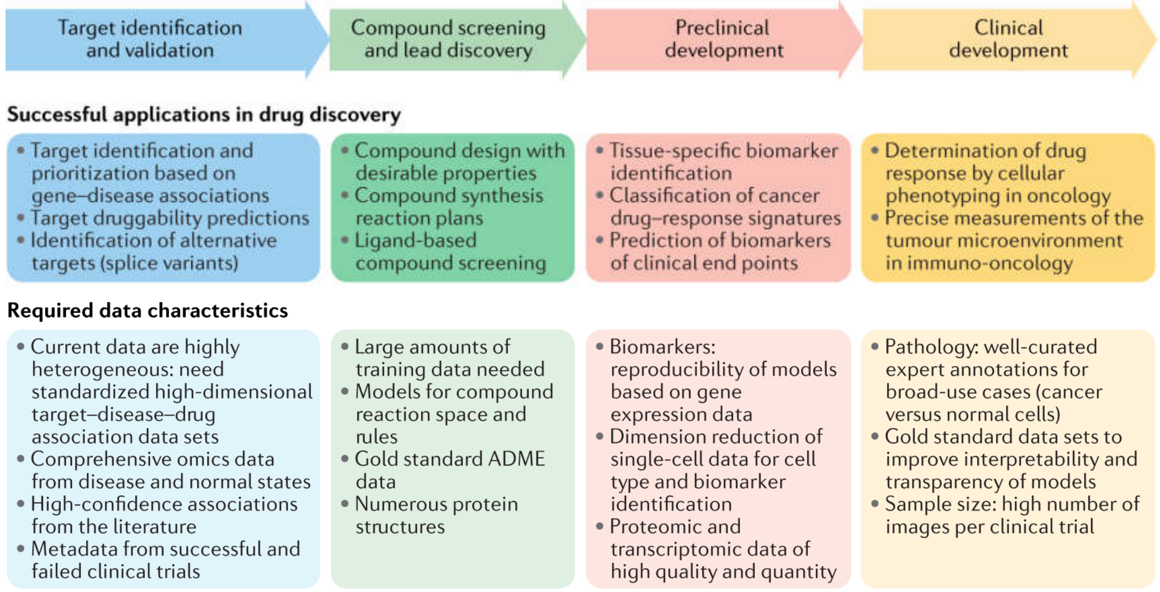
- Assess function of: renal, hepatic, gastrointestinal, urological, and other systems

Inflammation

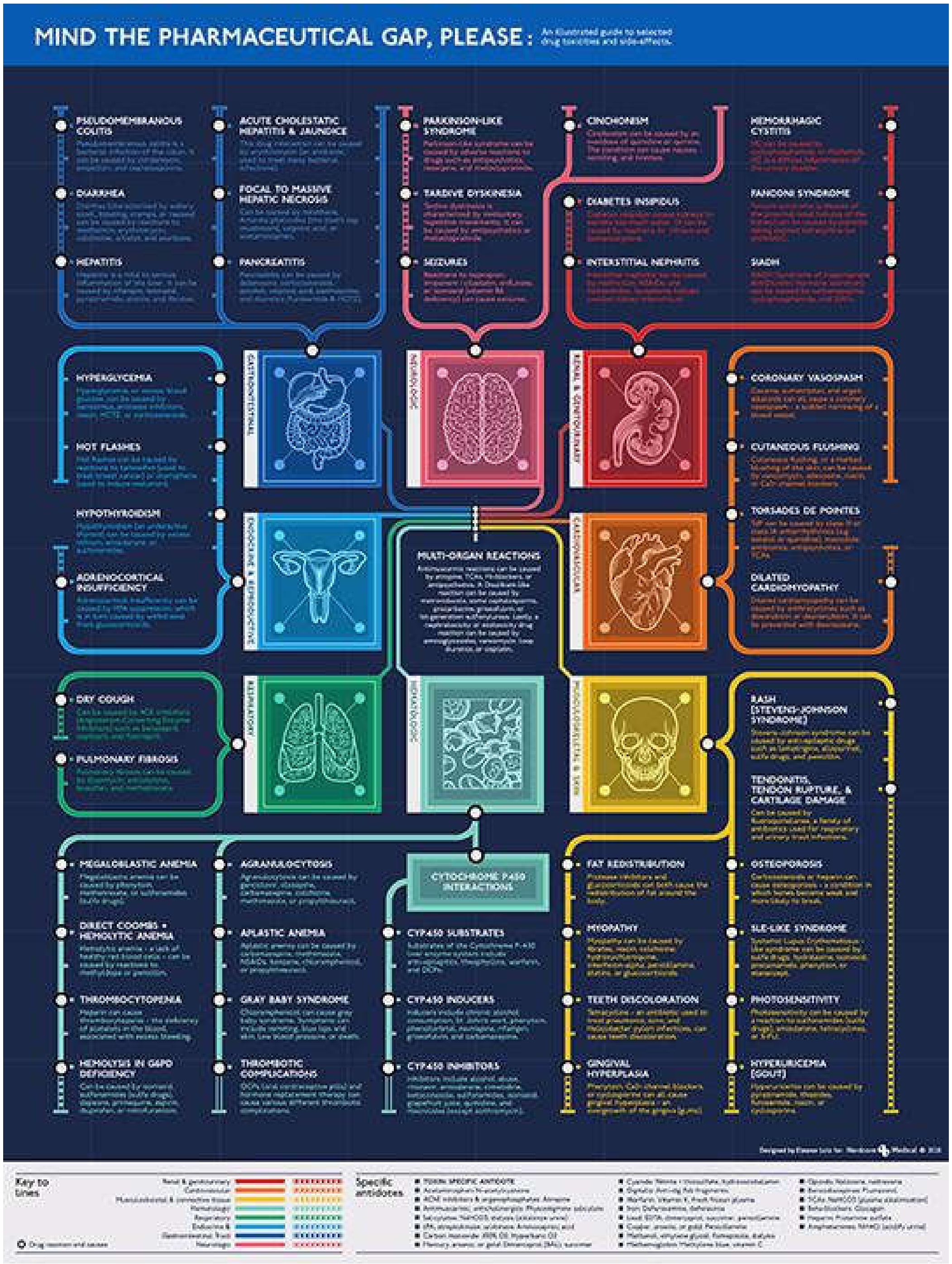
- Quantify perfusion
- Monitor cell surface biomarker expression
- Image-guided injections

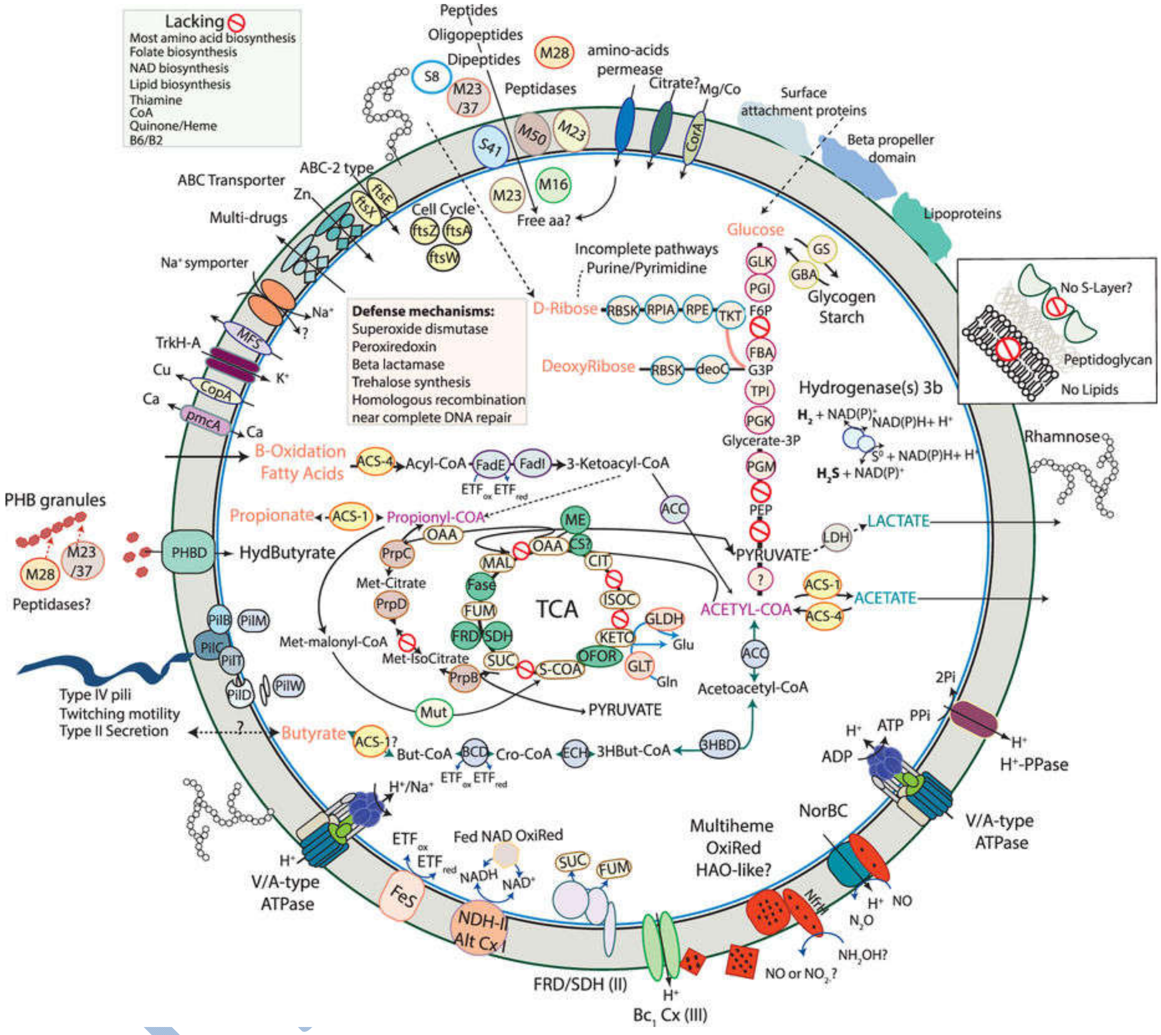
In Vivo Imaging Solutions to Support Drug Development

from FUJIFILM VisualSonics

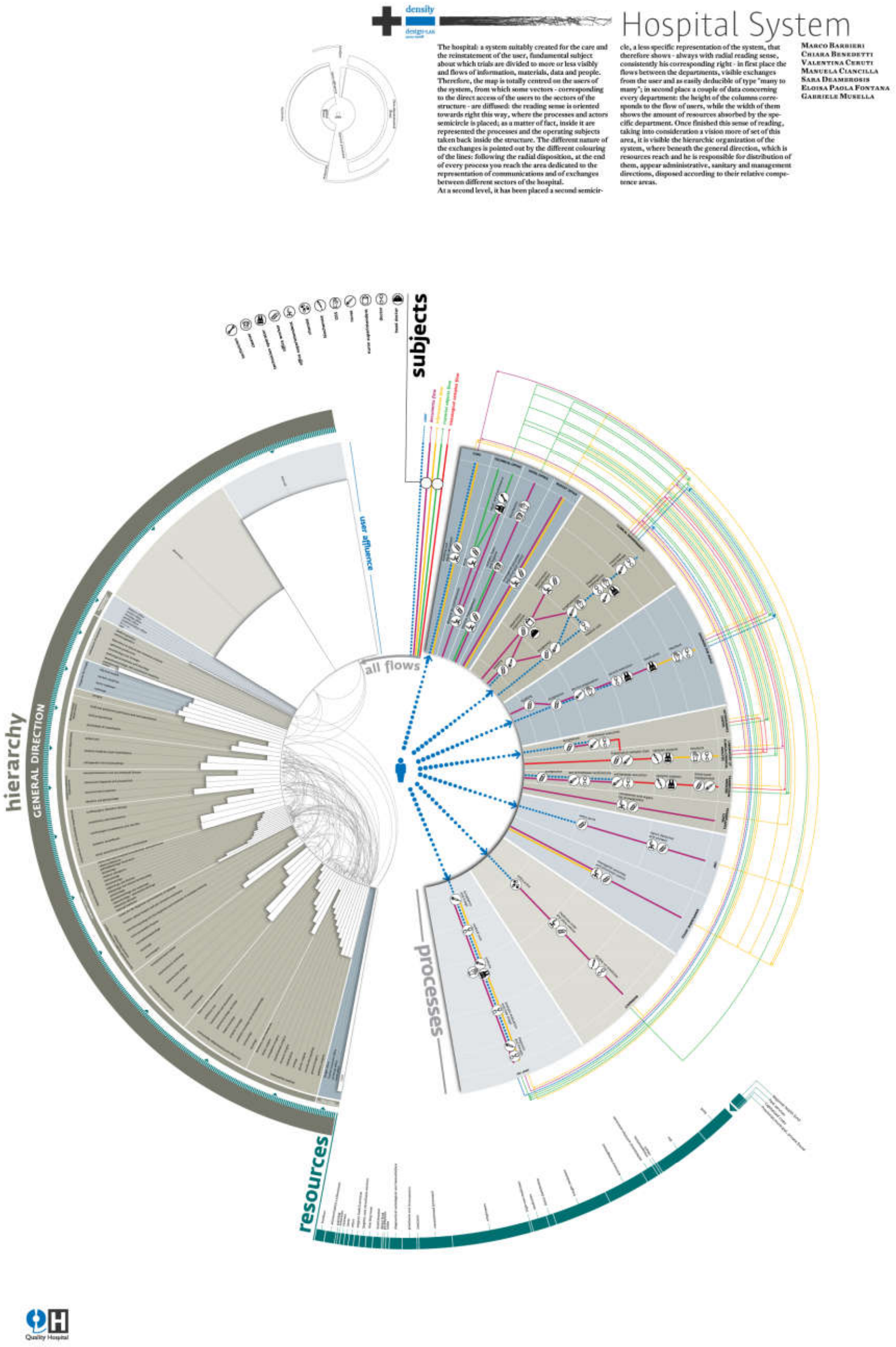


	Target identification and validation	Compound screening and lead discovery	Preclinical development	Clinical development
Successful applications in drug discovery	• Target identification and prioritization based on gene–disease associations • Target druggability predictions • Identification of alternative targets (splice variants)	• Compound design with desirable properties • Compound synthesis reaction plans • Ligand-based compound screening	• Tissue-specific biomarker identification • Classification of cancer drug–response signatures • Prediction of biomarkers of clinical end points	• Determination of drug response by cellular phenotyping in oncology • Precise measurements of the tumour microenvironment in immuno-oncology
Required data characteristics	• Current data are highly heterogeneous: need standardized high-dimensional target–disease–drug association data sets • Comprehensive omics data from disease and normal states • High-confidence associations from the literature • Metadata from successful and failed clinical trials	• Large amounts of training data needed • Models for compound reaction space and rules • Gold standard ADME data • Numerous protein structures	• Biomarkers: reproducibility of models based on gene expression data • Dimension reduction of single-cell data for cell type and biomarker identification • Proteomic and transcriptomic data of high quality and quantity	• Pathology: well-curated expert annotations for broad-use cases (cancer versus normal cells) • Gold standard data sets to improve interpretability and transparency of models • Sample size: high number of images per clinical trial


MIND THE PHARMACEUTICAL GAP, PLEASE:
An illustrated guide to selected drug toxicities and side-effects.
PSEUDOMEMBRANOUS COLITIS
DIARRHEA
HEPATITIS
ACUTE CHOLESTATIC HEPATITIS & JAUNDICE
FOCAL TO MASSIVE HEPATIC NECROSIS
PANCREATITIS
PARKINSON-LIKE SYNDROME
TARDIVE DYSKINESIA
SEIZURES
CINCHONISM
DIABETES INSIPIDUS
INTERSTITIAL NEPHRITIS
HEMORRHAGIC CYSTITIS
FANCONI SYNDROME
SIADH
HYPERGLYCEMIA
HOT FLASHES
GASTROINTESTINAL
NEUROLOGIC
RENAL & GENITOURINARY
CORONARY VASOSPASM
CUTANEOUS FLUSHING
HYPOTHYROIDISM
ADRENOCORTICAL INSUFFICIENCY
ENDOCRINE & REPRODUCTIVE
MULTI-ORGAN REACTIONS
CARDIOVASCULAR
TORSADES DE POINTES
DILATED CARDIOMYOPATHY
DRY COUGH
PULMONARY FIBROSIS
RESPIRATORY
HEMATOLOGIC
MUSCULOSKELETAL & SKIN
RASH (STEVENS-JOHNSON SYNDROME)
TENDONITIS, TENDON RUPTURE, & CARTILAGE DAMAGE
MEGALOBLASTIC ANEMIA
DIRECT COOMBS + HEMOLYTIC ANEMIA
THROMBOCYTOPENIA
HEMOLYSIS IN G6PD DEFICIENCY
AGRANULOCYTOSIS
APLASTIC ANEMIA
GRAY BABY SYNDROME
THROMBOTIC COMPLICATIONS
CYTOCHROME P-450 INTERACTIONS
CYP450 SUBSTRATES
CYP450 INDUCERS
CYP450 INHIBITORS
FAT REDISTRIBUTION
MYOPATHY
TEETH DISCOLORATION
GINGIVAL HYPERPLASIA
OSTEOPOROSIS
SLE-LIKE SYNDROME
PHOTOSENSITIVITY
HYPERURICEMIA (GOUT)
Key to lines
Specific antidotes


Lacking
Most amino acid biosynthesis
Folate biosynthesis
NAD biosynthesis
Lipid biosynthesis
Thiamine
CoA
Quinone/Heme
B6/B2
Peptides
Oligopeptides
Dipeptides
S8
M23 /37
Peptidases
M28
amino-acids permease
Citrate?
Mg/Co
Surface attachment proteins
Beta propeller domain
Lipoproteins
S41
M50
M23
CorA
M16
M23
Free aa?
ABC-2 type
ABC Transporter
Zn
Multi-drugs
ftsE
ftsX
Cell Cycle
ftsZ
ftsA
ftsW
Na⁺ symporter
Na⁺
?
MFS
TrkH-A
K⁺
Cu
CopA
Ca
pmcA
Ca
Defense mechanisms:
Superoxide dismutase
Peroxiredoxin
Beta lactamase
Trehalose synthesis
Homologous recombination
near complete DNA repair
Incomplete pathways
Purine/Pyrimidine
D-Ribose
RBSK
RPIA
RPE
TKT
DeoxyRibose
RBSK
deoC
Glucose
GLK
PGI
F6P
FBA
G3P
TPI
PGK
Glycerate-3P
PGM
PEP
PYRUVATE
GS
GBA
Glycogen
Starch
No S-Layer?
Peptidoglycan
No Lipids
Hydrogenase(s) 3b
H₂ + NAD(P)⁺ NAD(P)H+ H⁺
S⁰ + NAD(P)H+ H⁺
H₂S + NAD(P)⁺
Rhamnose
B-Oxidation
Fatty Acids
ACS-4
Acyl-CoA
FadE
FadI
3-Ketoacyl-CoA
ETF ox ETF red
ACC
PHB granules
M28
M23 /37
Peptidases?
PHBD
HydButyrate
Propionate
ACS-1
Propionyl-COA
OAA
PrpC
Met-Citrate
PrpD
Met-malonyl-CoA
Met-IsoCitrate
PrpB
Mut
ME
OAA
CS?
MAL
CIT
Fase
ISOC
FUM
TCA
FRD
SDH
KETO
GLDH
Glu
SUC
S-COA
OFOR
GLT
Gln
PYRUVATE
LDH
LACTATE
?
ACETYL-COA
ACS-1
ACS-4
ACETATE
ACC
Acetoacetyl-CoA
PilB
PilM
PilC
PilT
PilD
PilW
Type IV pili
Twitching motility
Type II Secretion
?
Butyrate
ACS-1?
But-CoA
BCD
Cro-CoA
ECH
3HBut-CoA
3HBD
ETF ox ETF red
2Pi
PPi
H⁺
H⁺-PPase
H⁺
ATP
ADP
V/A-type ATPase
H⁺/Na⁺
H⁺
V/A-type ATPase
ETF ox
ETF red
Fed NAD OxiRed
NADH
NAD⁺
FeS
NDH-II
Alt Cx I
SUC
FUM
FRD/SDH (II)
H⁺
Bc₁ Cx (III)
Multiheme OxiRed HAO-like?
NrfH
NH₂OH?
NO or NO₂ ?
NorBC
H⁺
NO
N₂O

59 CLASSIC RESEARCH STUDIES IN MEDICINE

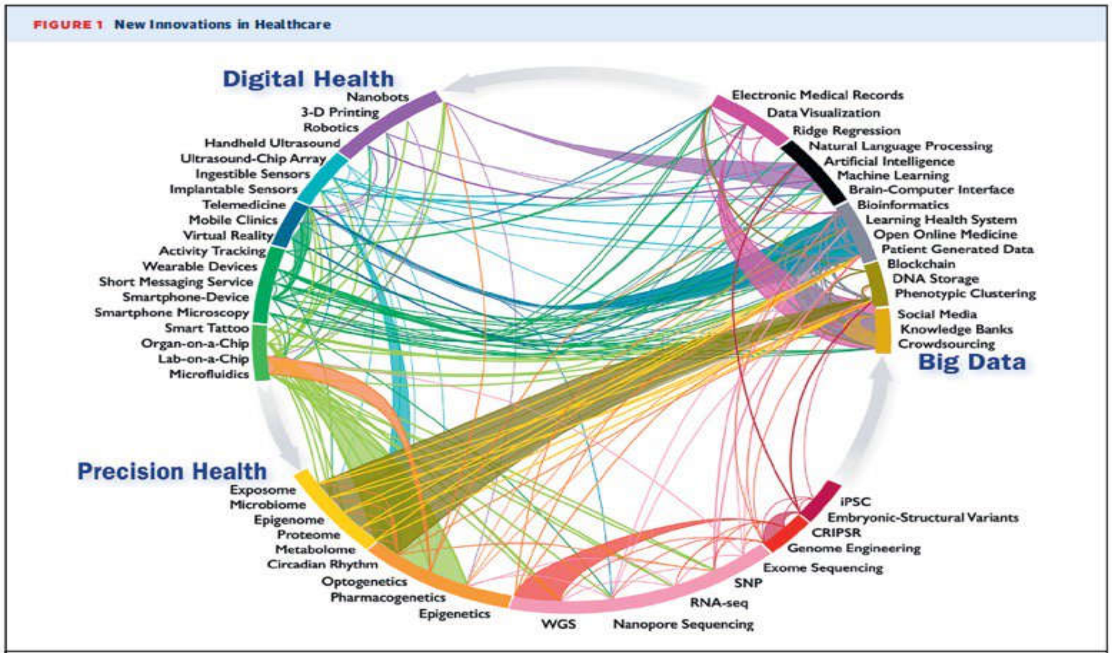


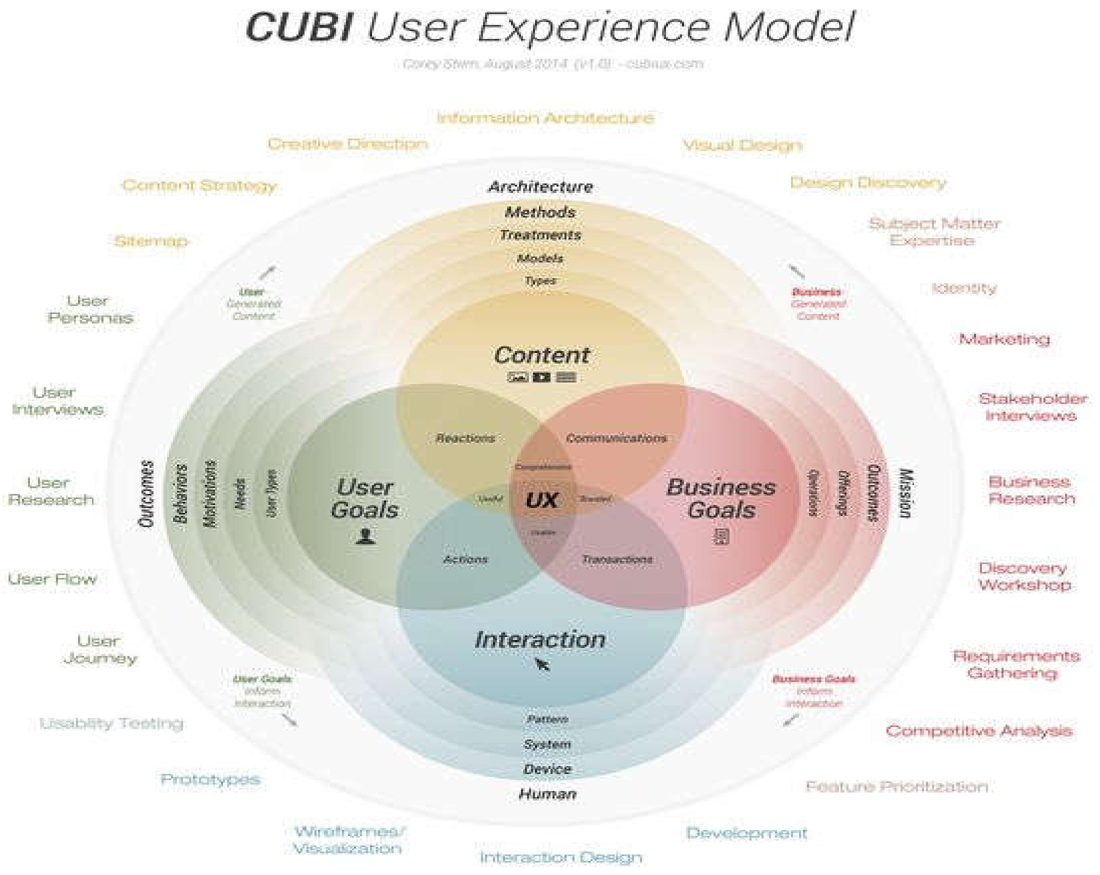
Hospital System

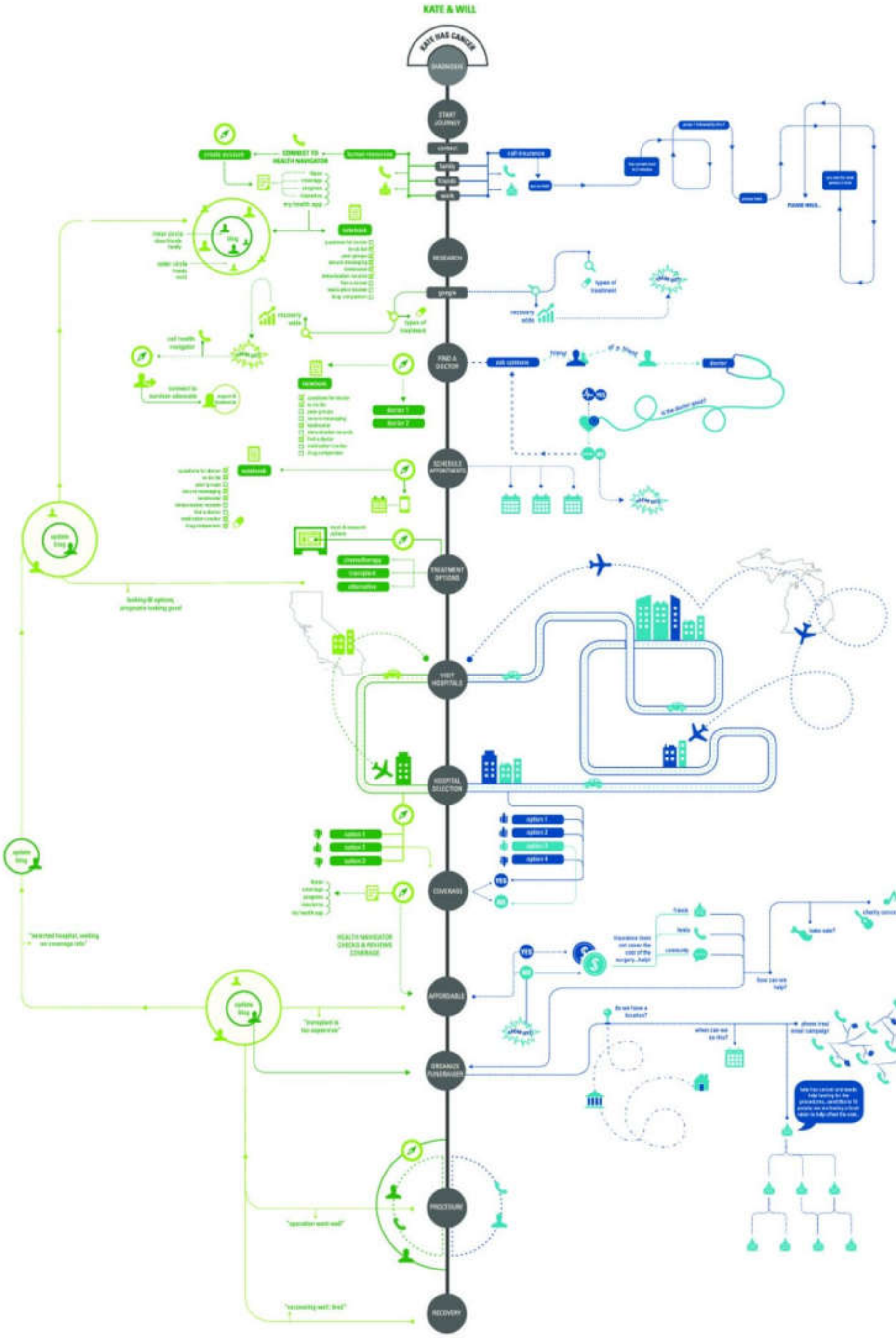
The hospital: a system suitably created for the care and the reinstatement of the user, fundamental subject about which trials are divided to more or less visibly and flows of information, materials, data and people. Therefore, the map is totally centred on the users of the system, from which some vectors - corresponding to the direct access of the users to the sectors of the structure - are diffused: the reading sense is oriented towards right this way, where the processes and actors semicircle is placed; as a matter of fact, inside it are represented the processes and the operating subjects taken back inside the structure. The different nature of the exchanges is pointed out by the different colouring of the lines: following the radial disposition, at the end of every process you reach the area dedicated to the representation of communications and of exchanges between different sectors of the hospital.
At a second level, it has been placed a second semicircle, a less specific representation of the system, that therefore shows - always with radial reading sense, consistently his corresponding right - in first place the flows between the departments, visible exchanges from the user and as easily deducible of type "many to many"; in second place a couple of data concerning every department: the height of the columns corresponds to the flow of users, while the width of them shows the amount of resources absorbed by the specific department. Once finished this sense of reading, taking into consideration a vision more of set of this area, it is visible the hierarchic organization of the system, where beneath the general direction, which is resources reach and he is responsible for distribution of them, appear administrative, sanitary and management directions, disposed according to their relative competence areas.

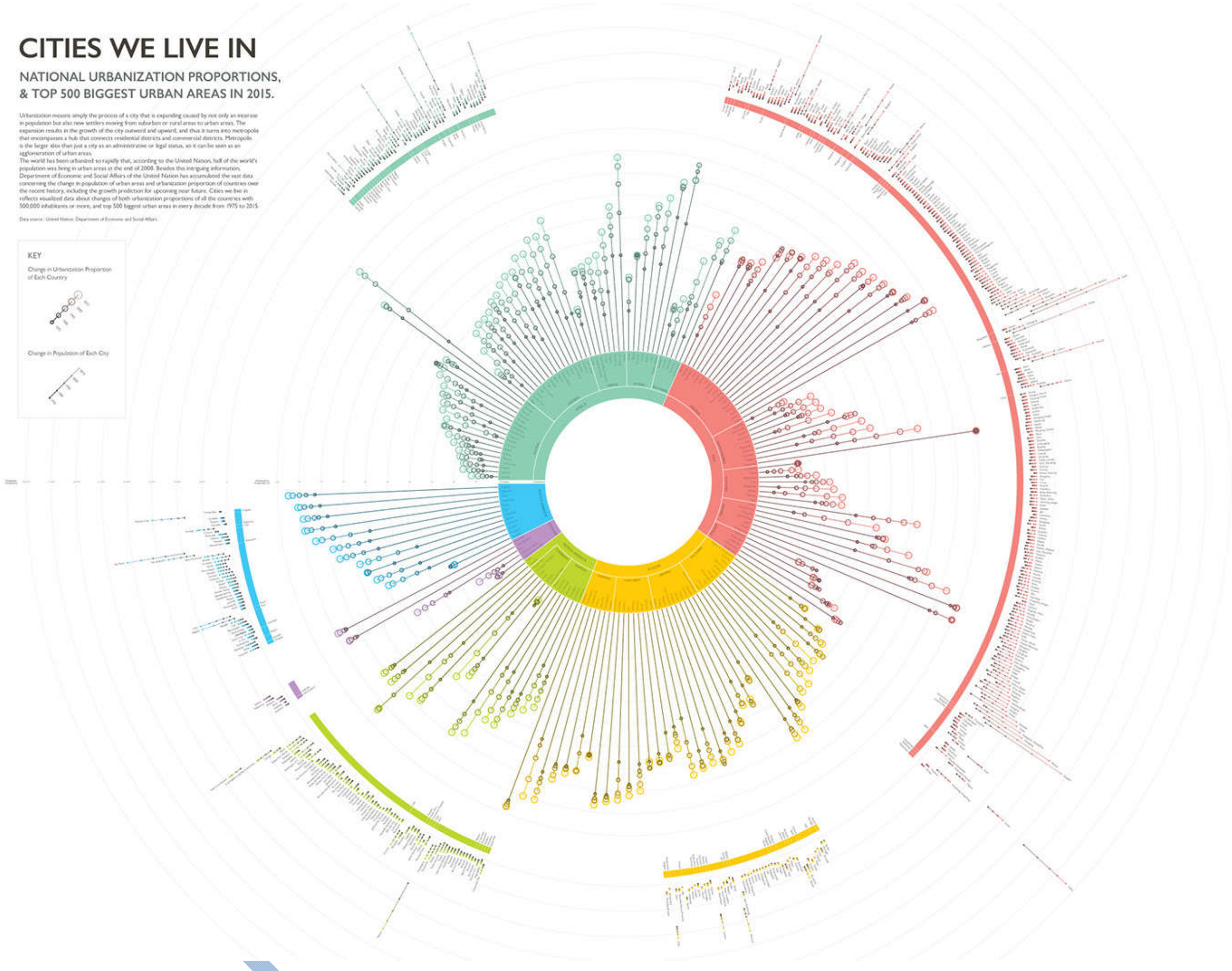
Marco Barbieri
Chiara Benedetti
Valentina Ceruti
Manuela Ciancilla
Sara Deamerosis
Eloisa Paola Fontana
Gabriele Musella

FIGURE 1 **New Innovations in Healthcare**


Digital Health
Nanobots
3-D Printing
Robotics
Handheld Ultrasound
Ultrasound-Chip Array
Ingestible Sensors
Implantable Sensors
Telemedicine
Mobile Clinics
Virtual Reality
Activity Tracking
Wearable Devices
Short Messaging Service
Smartphone-Device
Smartphone Microscopy
Smart Tattoo
Organ-on-a-Chip
Lab-on-a-Chip
Microfluidics
Electronic Medical Records
Data Visualization
Ridge Regression
Natural Language Processing
Artificial Intelligence
Machine Learning
Brain-Computer Interface
Bioinformatics
Learning Health System
Open Online Medicine
Patient Generated Data
Blockchain
DNA Storage
Phenotypic Clustering
Social Media
Knowledge Banks
Crowdsourcing
Big Data
Precision Health
Exposome
Microbiome
Epigenome
Proteome
Metabolome
Circadian Rhythm
Optogenetics
Pharmacogenetics
Epigenetics
WGS
Nanopore Sequencing
RNA-seq
SNP
Exome Sequencing
Genome Engineering
CRIPSR
Embryonic-Structural Variants
iPSC


CUBI User Experience Model
Corey Stern, August 2014 (v1.0) - cubiux.com
Information Architecture
Creative Direction
Visual Design
Content Strategy
Design Discovery
Sitemap
Subject Matter Expertise
Identity
User Personas
Marketing
User Interviews
Stakeholder Interviews
User Research
Business Research
User Flow
Discovery Workshop
User Journey
Requirements Gathering
Usability Testing
Competitive Analysis
Prototypes
Feature Prioritization
Wireframes/ Visualization
Development
Interaction Design
Architecture
Methods
Treatments
Models
Types
User Generated Content
Business Generated Content
Content
Reactions
Communications
Comprehension
Outcomes
Behaviors
Motivations
Needs
User Types
User Goals
Useful
UX
Branded
Usable
Business Goals
Operations
Offerings
Outcomes
Mission
Actions
Transactions
Interaction
User Goals inform Interaction
Business Goals inform Interaction
Pattern
System
Device
Human


KATE & WILL
KATE HAS CANCER
DIAGNOSIS
START JOURNEY
contact
family
friends
work
human resources
CONNECT TO HEALTH NAVIGATOR
create account
call insurance
PLEASE HOLD...
my health app
notebook
blog
RESEARCH
google
types of treatment
recovery odds
call health navigator
connect to survivor advocate
FIND A DOCTOR
ask someone
of a friend
doctor
is the doctor good?
doctor 1
doctor 2
SCHEDULE APPOINTMENTS
update blog
TREATMENT OPTIONS
chemotherapy
transplant
alternative
looking @ options, prognosis looking good
VISIT HOSPITALS
HOSPITAL SELECTION
option 1
option 2
option 3
option 4
COVERAGE
YES
NO
HEALTH NAVIGATOR CHECKS & REVIEWS COVERAGE
"selected hospital, waiting on coverage info"
AFFORDABLE
friends
family
community
how can we help?
bake sale?
charity concert?
"transplant is too expensive"
ORGANIZE FUNDRAISER
do we have a location?
when can we do this?
phone tree/ email campaign
PROCEDURE
"operation went well"
RECOVERY
"recovering well; tired"



CITIES WE LIVE IN

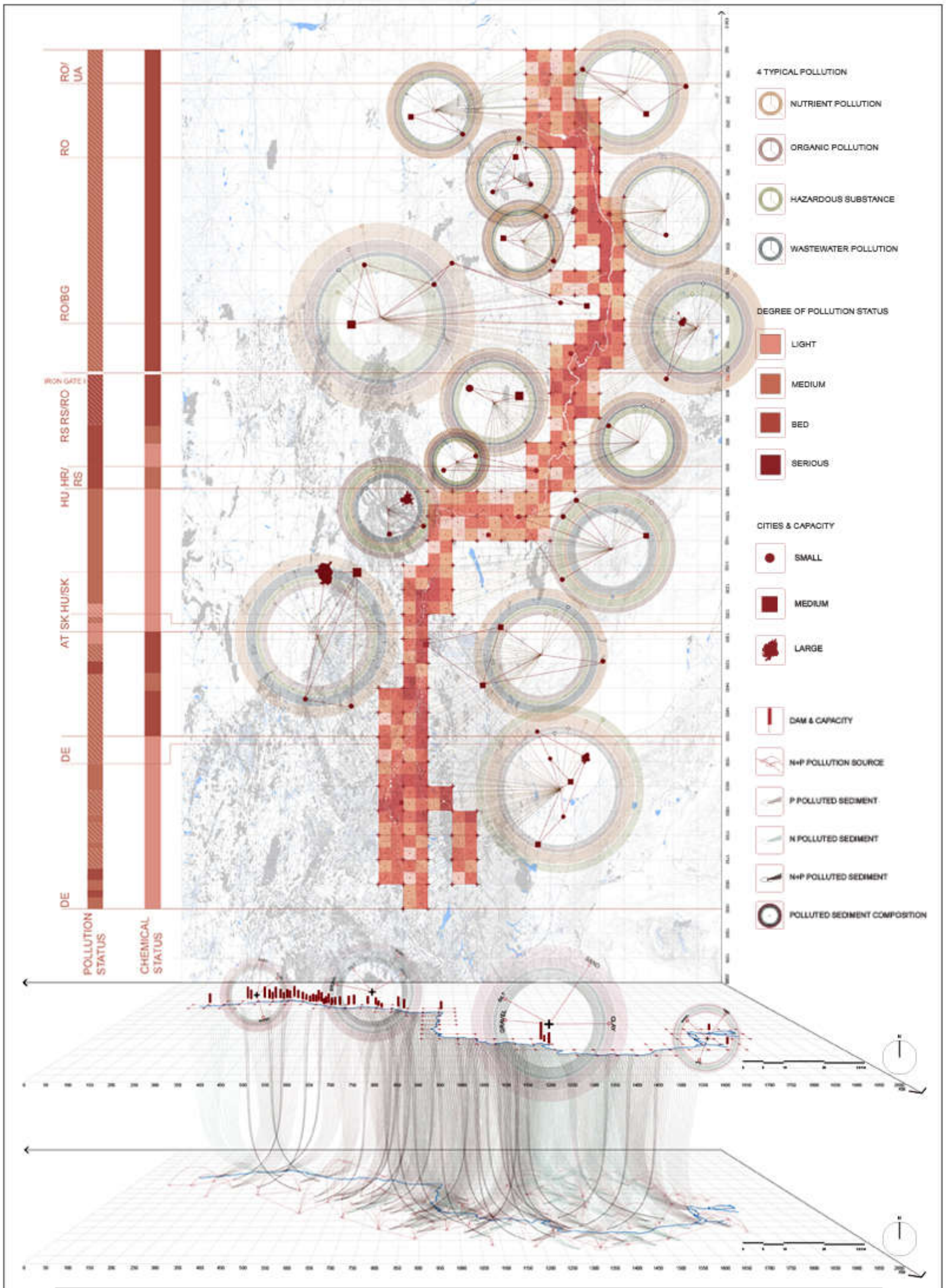
NATIONAL URBANIZATION PROPORTIONS,
& TOP 500 BIGGEST URBAN AREAS IN 2015.

Urbanization means simply the process of a city that is expanding caused by not only an increase in population but also new settlers moving from suburban or rural areas to urban areas. The expansion results in the growth of the city outward and upward, and thus it turns into metropole that encompasses a hub that connects residential districts and commercial districts. Metropole is the larger idea than just a city as an administrative or legal status, so it can be seen as an agglomeration of urban areas.

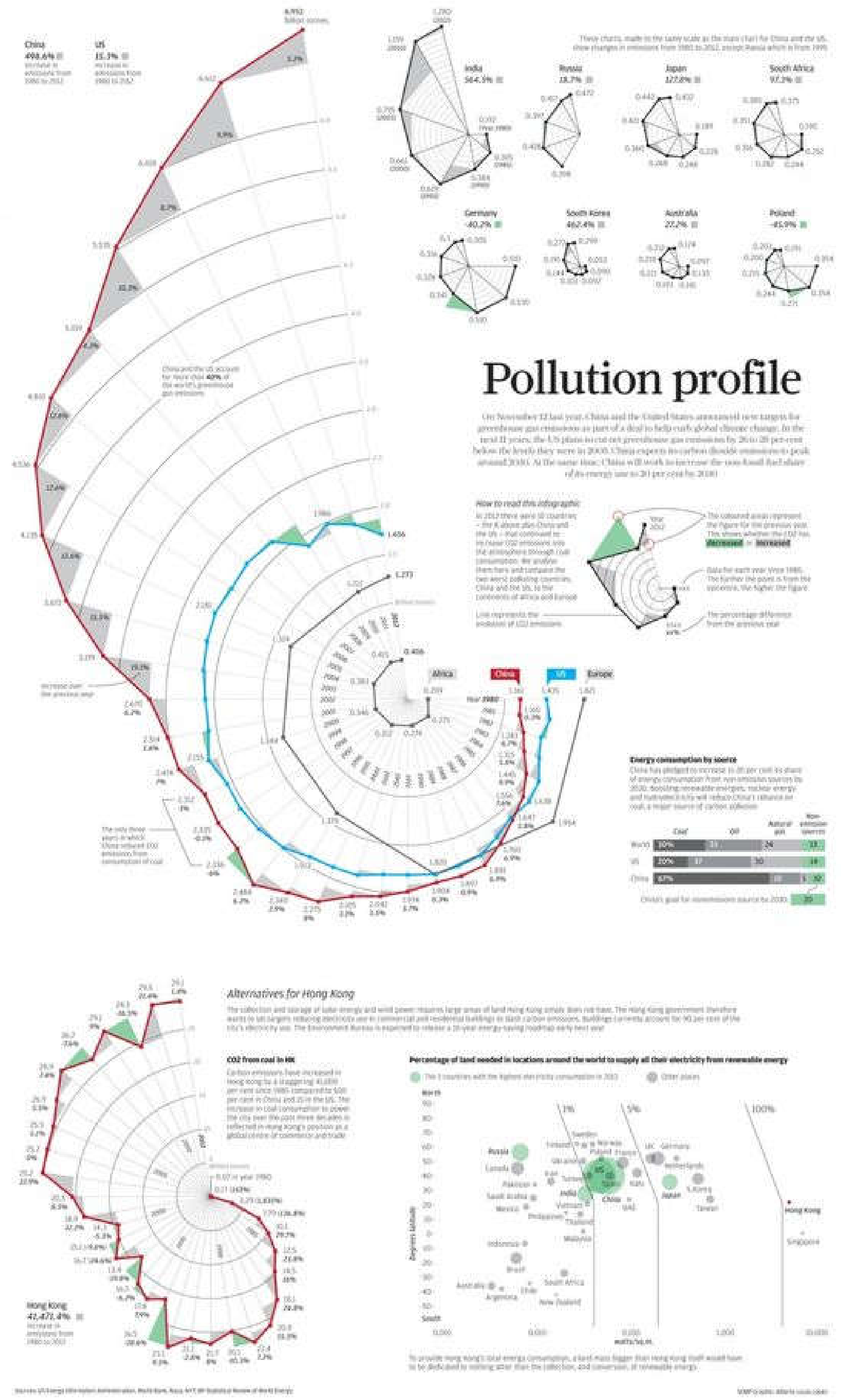
The world has been urbanized so rapidly that, according to the United Nation, half of the world's population was living in urban areas at the end of 2008. Besides this intriguing information, Department of Economic and Social Affairs of the United Nation has accumulated the vast data concerning the change in population of urban areas and urbanization proportion of countries over the recent history, including the growth prediction for upcoming near future. Cities we live in reflects visualized data about changes of both urbanization proportions of all the countries with 500,000 inhabitants or more, and top 500 biggest urban areas in every decade from 1975 to 2015.

Data source : United Nation, Department of Economic and Social Affairs

KEY
Change in Urbanization Proportion of Each Country
Change in Population of Each City


RO/ UA
RO
RO/BG
IRON GATE I
RS RS/RO
HU HR/ RS
AT SK HU/SK
DE
DE
POLLUTION STATUS
CHEMICAL STATUS
4 TYPICAL POLLUTION
NUTRIENT POLLUTION
ORGANIC POLLUTION
HAZARDOUS SUBSTANCE
WASTEWATER POLLUTION
DEGREE OF POLLUTION STATUS
LIGHT
MEDIUM
BED
SERIOUS
CITIES & CAPACITY
SMALL
MEDIUM
LARGE
DAM & CAPACITY
N+P POLLUTION SOURCE
P POLLUTED SEDIMENT
N POLLUTED SEDIMENT
N+P POLLUTED SEDIMENT
POLLUTED SEDIMENT COMPOSITION
GRAVEL
CLAY
N

TEREITORIAL FORMATION



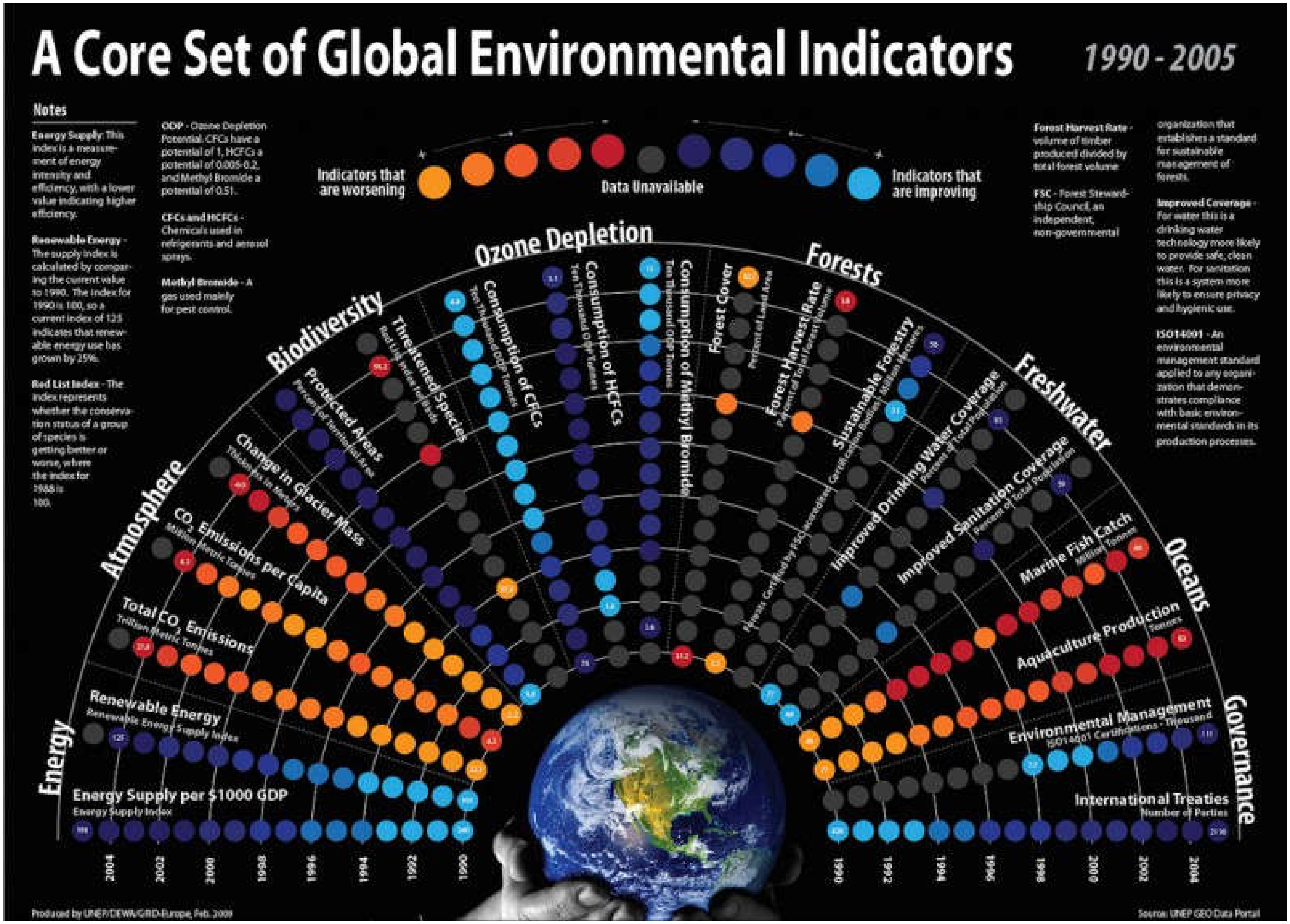
Pollution profile

On November 12 last year, China and the United States announced new targets for greenhouse gas emissions as part of a deal to help curb global climate change. In the next 11 years, the US plans to cut net greenhouse gas emissions by 26 to 28 per cent below the levels they were in 2005. China expects its carbon dioxide emissions to peak around 2030. At the same time, China will work to increase the non-fossil fuel share of its energy use to 20 per cent by 2030.

Alternatives for Hong Kong

The collection and storage of solar energy and wind power requires large areas of land Hong Kong simply does not have. The Hong Kong government therefore wants to set targets reducing electricity use in commercial and residential buildings to slash carbon emissions. Buildings currently account for 90 per cent of the city's electricity use. The Environment Bureau is expected to release a 20-year energy-saving roadmap early next year.

China
US
India
Russia
Japan
South Africa
Germany
South Korea
Australia
Poland
How to read this infographic
Africa
China
US
Europe
Year 1980
Energy consumption by source
Coal
Oil
Natural gas
Non-emission sources
World
US
China
CO2 from coal in HK
Percentage of land needed in locations around the world to supply all their electricity from renewable energy
1%
5%
100%
North
South
Degrees latitude
Russia
Canada
India
China
Japan
Hong Kong
Singapore
Brazil
Australia
Argentina
South Africa
New Zealand
Hong Kong



A Core Set of Global Environmental Indicators

1990 - 2005

Notes

Energy Supply: This index is a measurement of energy intensity and efficiency, with a lower value indicating higher efficiency.

Renewable Energy - The supply index is calculated by comparing the current value to 1990. The index for 1990 is 100, so a current index of 125 indicates that renewable energy use has grown by 25%.

Red List Index - The index represents whether the conservation status of a group of species is getting better or worse, where the index for 1988 is 100.

ODP - Ozone Depletion Potential. CFCs have a potential of 1, HCFCs a potential of 0.005-0.2, and Methyl Bromide a potential of 0.51.

CFCs and HCFCs - Chemicals used in refrigerants and aerosol sprays.

Methyl Bromide - A gas used mainly for pest control.

Forest Harvest Rate - volume of timber produced divided by total forest volume.

FSC - Forest Stewardship Council, an independent, non-governmental organization that establishes a standard for sustainable management of forests.

Improved Coverage - For water this is a drinking water technology more likely to provide safe, clean water. For sanitation this is a system more likely to ensure privacy and hygienic use.

ISO14001 - An environmental management standard applied to any organization that demonstrates compliance with basic environmental standards in its production processes.

Indicators that are worsening
Data Unavailable
Indicators that are improving
Energy
Energy Supply per $1000 GDP
Energy Supply Index
Renewable Energy
Renewable Energy Supply Index
Atmosphere
Total CO2 Emissions
Trillion Metric Tonnes
CO2 Emissions per Capita
Million Metric Tonnes
Change in Glacier Mass
Thickness in Meters
Biodiversity
Protected Areas
Percent of Territorial Area
Threatened Species
Red List Index for Birds
Ozone Depletion
Consumption of CFCs
Ten Thousand ODP Tonnes
Consumption of HCFCs
Ten Thousand ODP Tonnes
Consumption of Methyl Bromide
Ten Thousand ODP Tonnes
Forests
Forest Cover
Percent of Land Area
Forest Harvest Rate
Percent of Total Forest Volume
Sustainable Forestry
Forests Certified by FSC
Freshwater
Improved Drinking Water Coverage
Percent of Total Population
Improved Sanitation Coverage
Percent of Total Population
Oceans
Marine Fish Catch
Million Tonnes
Aquaculture Production
Tonnes
Governance
Environmental Management
ISO14001 Certifications - Thousand
International Treaties
Number of Parties
2004
2002
2000
1998
1996
1994
1992
1990
1990
1992
1994
1996
1998
2000
2002
2004

Produced by UNEP/DEWA/GRID-Europe, Feb. 2009

Source: UNEP GEO Data Portal

Infrastructure Investing

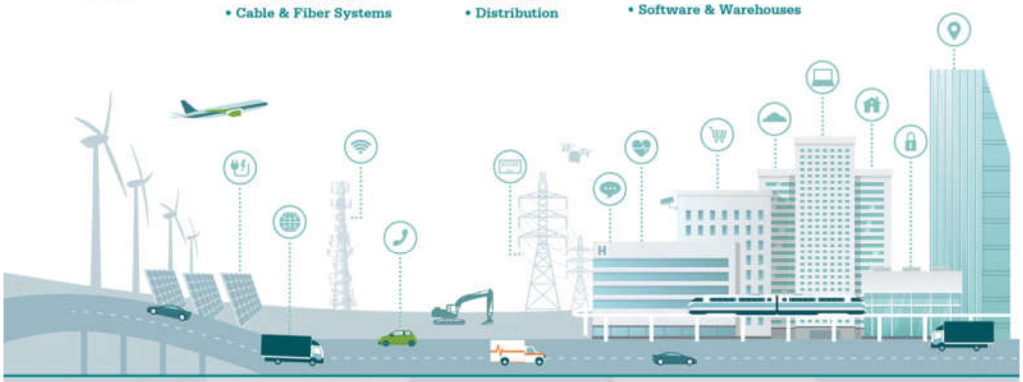
Utilities
- Electric
- Gas
- Water

Global Communications
- Telecom Providers
- Mobile Towers
- Cable & Fiber Systems

Energy Infrastructure
- Wind & Solar Farms
- Oil & Gas
- Distribution

Transportation & Logistics
- Trains, Planes, Trucks, Barges, Ships
- Software & Warehouses

Enablers
- Products & Services for the Infrastructure Industries

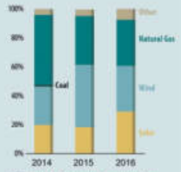


Utilities

IF ALL US light vehicles were ELECTRIC

=25% increase in Electricity Demand[1]

Share of US New Electric Generation by Fuel Type[2]

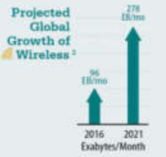


Wind and solar power accounted for more than 60% of new electricity generation in 2015 and 2016.

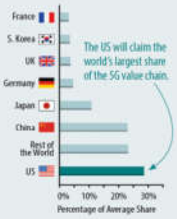
GROWTH DRIVERS
- Electric Vehicles
- Growth of US Renewables
- Abundance of US Oil & Gas
- Smart Grid Technology

Global Communications

Projected Global Growth of Wireless[3]



5G Value Chain R&D & Capex Forecast[4] 2020–2035

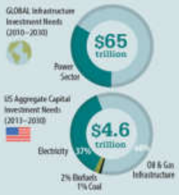


The US will claim the world's largest share of the 5G value chain.

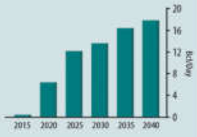
GROWTH DRIVERS
- Explosive growth of 5G
- IoT and its impact on e-commerce

Energy Infrastructure

Infrastructure Capital Investment Needs[5]



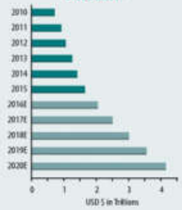
Projected Net US LNG Exports[6]



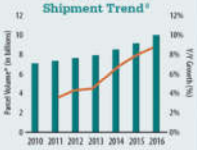
GROWTH DRIVERS
- Need for increased electric transmission
- Need for more O&G transmission
- Need to upgrade aging infrastructure

Transportation & Logistics

Global e-Commerce Sales Forecast[7]



Rising US Parcel Shipment Trend[8]



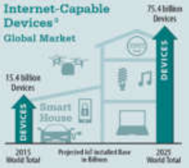
* Combines USPS domestic shipping and packaging services volume, FedEx calendar year domestic package volumes and USPS domestic package volumes.

GROWTH DRIVERS
- Smart warehouses
- e-Commerce boom
- Cloud-based logistics-as-a-service
- Delivery disruptors and innovators

Enablers

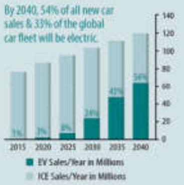
Growth of Internet-Capable Devices[9]

Global Market



Rising Global EV Light-Duty Vehicle Sales[10]

By 2040, 54% of all new car sales & 33% of the global car fleet will be electric.



GROWTH DRIVERS
- Big Data
- 5G & IoT
- Increased automation of everything

Miller/Howard INVESTMENTS

Sources:
1 Rocky Mountain Institute.
2 US Federal Regulatory Commission.
3 Cisco VNI Global IP Traffic Forecast, 2016–2021.
4 IHS, 2017.
5 McKinsey Global Institute Analysis; US Chamber of Commerce; Citi Research.
6 EIA, AEO 2016; JTC.
7 eMarketer, Prologis Research.
8 Kleiner Perkins.
9 IHS, 2016.
10 Bloomberg New Energy Finance.

INVESTMENT PRODUCTS: ARE NOT FDIC INSURED • MAY LOSE VALUE • ARE NOT BANK GUARANTEED

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All investments carry a certain degree of risk, including possible loss of principal. It is important to note that there are risks inherent in any investment and there can be no assurance that any asset class will provide positive performance over any period of time.

Any investment returns—past, hypothetical, or otherwise—are not indicative of future performance and none should be implied.

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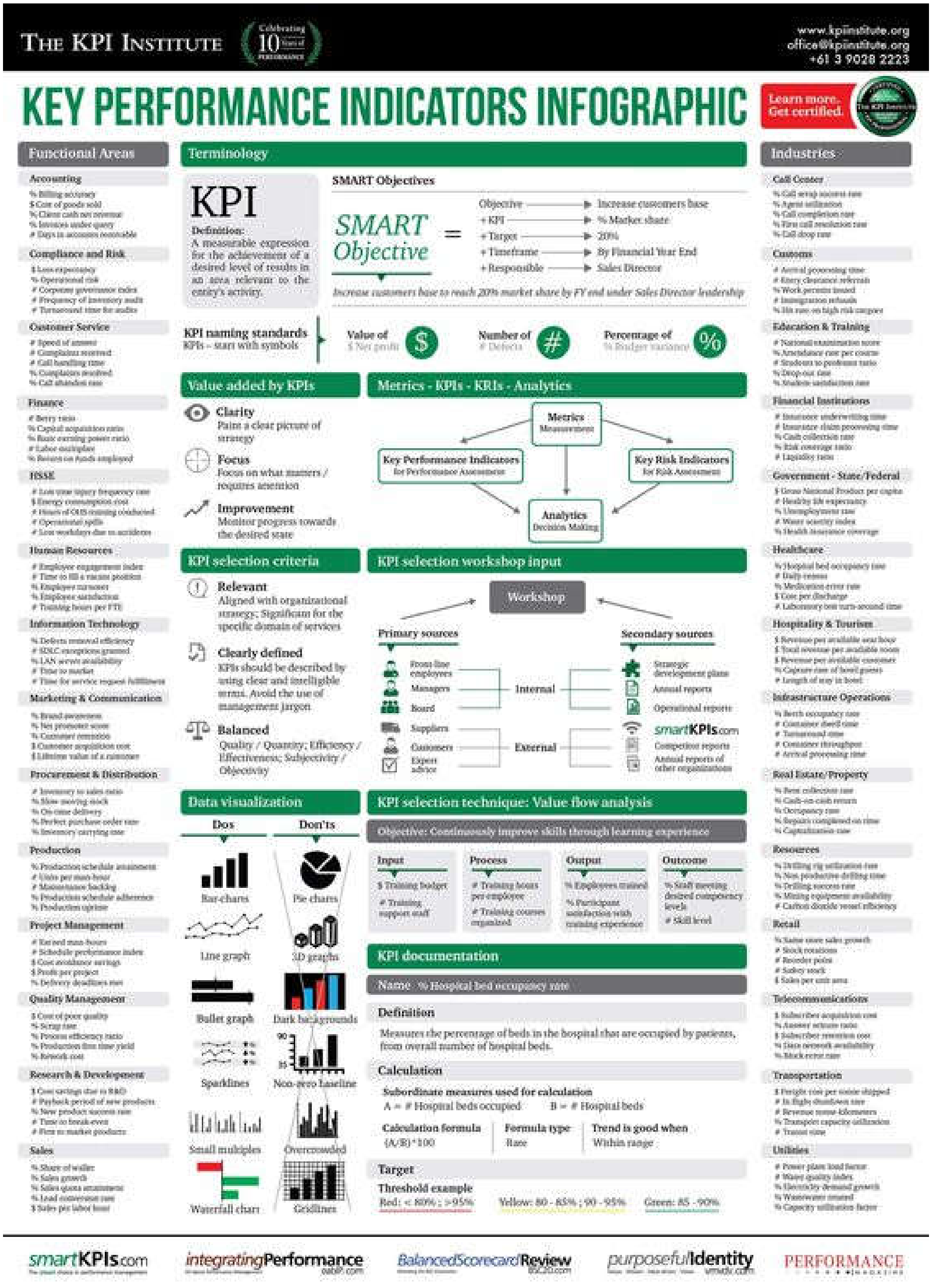

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Celebrating 10 Years of Performance

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office@kpiinstitute.org
+61 3 9028 2223

KEY PERFORMANCE INDICATORS INFOGRAPHIC

Learn more. Get certified.

Functional Areas

Accounting
- % Billing accuracy
- $ Cost of goods sold
- % Claims cash net revenue
- % Invoices under query
- # Days in accounts receivable

Compliance and Risk
- $ Loss expectancy
- % Operational risk
- # Corporate governance index
- # Frequency of inventory audit
- # Turnaround time for audits

Customer Service
- # Speed of answer
- # Complaints received
- # Call handling time
- % Complaints resolved
- % Call abandon rate

Finance
- # Berry ratio
- % Capital acquisition ratio
- % Basic earning power ratio
- # Labor multiplier
- % Return on funds employed

HSSE
- # Lost time injury frequency rate
- $ Energy consumption cost
- # Hours of OHS training conducted
- # Operational spills
- # Lost workdays due to accidents

Human Resources
- # Employee engagement index
- # Time to fill a vacant position
- % Employee turnover
- % Employee satisfaction
- # Training hours per FTE

Information Technology
- % Defects removal efficiency
- # SDLC exceptions granted
- % LAN server availability
- # Time to market
- # Time for service request fulfillment

Marketing & Communication
- % Brand awareness
- % Net promoter score
- % Customer retention
- $ Customer acquisition cost
- $ Lifetime value of a customer

Procurement & Distribution
- # Inventory to sales ratio
- % Slow moving stock
- % On-time delivery
- % Perfect purchase order rate
- % Inventory carrying rate

Production
- % Production schedule attainment
- # Units per man-hour
- # Maintenance backlog
- % Production schedule adherence
- % Production uptime

Project Management
- # Earned man-hours
- # Schedule performance index
- $ Cost avoidance savings
- $ Profit per project
- % Delivery deadlines met

Quality Management
- $ Cost of poor quality
- % Scrap rate
- % Process efficiency ratio
- % Production first time yield
- % Rework cost

Research & Development
- $ Cost savings due to R&D
- # Payback period of new products
- % New product success rate
- # Time to break-even
- # First to market products

Sales
- % Share of wallet
- % Sales growth
- % Sales quota attainment
- % Lead conversion rate
- $ Sales per labor hour

Terminology

KPI

Definition:
A measurable expression for the achievement of a desired level of results in an area relevant to the entity's activity.

SMART Objectives

SMART Objective =
Objective → Increase customers base
+ KPI → % Market share
+ Target → 20%
+ Timeframe → By Financial Year End
+ Responsible → Sales Director

Increase customers base to reach 20% market share by FY end under Sales Director leadership

KPI naming standards
KPIs – start with symbols

Value of $ Net profit $
Number of # Defects #
Percentage of % Budget variance %

Value added by KPIs

Clarity
Paint a clear picture of strategy

Focus
Focus on what matters / requires attention

Improvement
Monitor progress towards the desired state

Metrics - KPIs - KRIs - Analytics

Metrics
Measurement

Key Performance Indicators
for Performance Assessment

Key Risk Indicators
for Risk Assessment

Analytics
Decision Making

KPI selection criteria

Relevant
Aligned with organizational strategy; Significant for the specific domain of services

Clearly defined
KPIs should be described by using clear and intelligible terms. Avoid the use of management jargon

Balanced
Quality / Quantity; Efficiency / Effectiveness; Subjectivity / Objectivity

KPI selection workshop input

Workshop

Primary sources
- Front-line employees
- Managers
- Board
- Suppliers
- Customers
- Expert advice

Internal

External

Secondary sources
- Strategic development plans
- Annual reports
- Operational reports
- smartKPIs.com
- Competition reports
- Annual reports of other organizations

Data visualization

Dos	Don'ts
Bar-charts	Pie charts
Line graph	3D graphs
Bullet graph	Dark backgrounds
Sparklines	Non-zero baseline
Small multiples	Overcrowded
Waterfall chart	Gridlines

KPI selection technique: Value flow analysis

Objective: Continuously improve skills through learning experience

Input	Process	Output	Outcome
$ Training budget # Training support staff	# Training hours per employee # Training courses organized	% Employees trained % Participant satisfaction with training experience	% Staff meeting desired competency levels # Skill level

KPI documentation

Name % Hospital bed occupancy rate

Definition

Measures the percentage of beds in the hospital that are occupied by patients, from overall number of hospital beds.

Calculation

Subordinate measures used for calculation
A = # Hospital beds occupied B = # Hospital beds

Calculation formula	Formula type	Trend is good when
(A/B)*100	Rate	Within range

Target

Threshold example
Red: < 80% ; > 95% Yellow: 80 - 85% ; 90 - 95% Green: 85 - 90%

Industries

Call Center
- % Call setup success rate
- % Agent utilization
- % Call completion rate
- % First call resolution rate
- % Call drop rate

Customs
- # Arrival processing time
- # Entry clearance referrals
- % Work permits issued
- # Immigration refusals
- % Hit rate on high risk cargoes

Education & Training
- # National examination score
- % Attendance rate per course
- # Students to professor ratio
- % Drop-out rate
- % Student satisfaction rate

Financial Institutions
- # Insurance underwriting time
- # Insurance claim processing time
- % Cash collection rate
- % Risk coverage ratio
- # Liquidity ratio

Government - State/Federal
- $ Gross National Product per capita
- # Healthy life expectancy
- % Unemployment rate
- # Water scarcity index
- % Health insurance coverage

Healthcare
- % Hospital bed occupancy rate
- # Daily census
- % Medication error rate
- $ Cost per discharge
- # Laboratory test turn-around time

Hospitality & Tourism
- $ Revenue per available seat hour
- $ Total revenue per available room
- $ Revenue per available customer
- % Capture rate of hotel guests
- # Length of stay in hotel

Infrastructure Operations
- % Berth occupancy rate
- # Container dwell time
- # Turnaround time
- # Container throughput
- # Arrival processing time

Real Estate/Property
- % Rent collection rate
- % Cash-on-cash return
- % Occupancy rate
- % Repairs completed on time
- % Capitalization rate

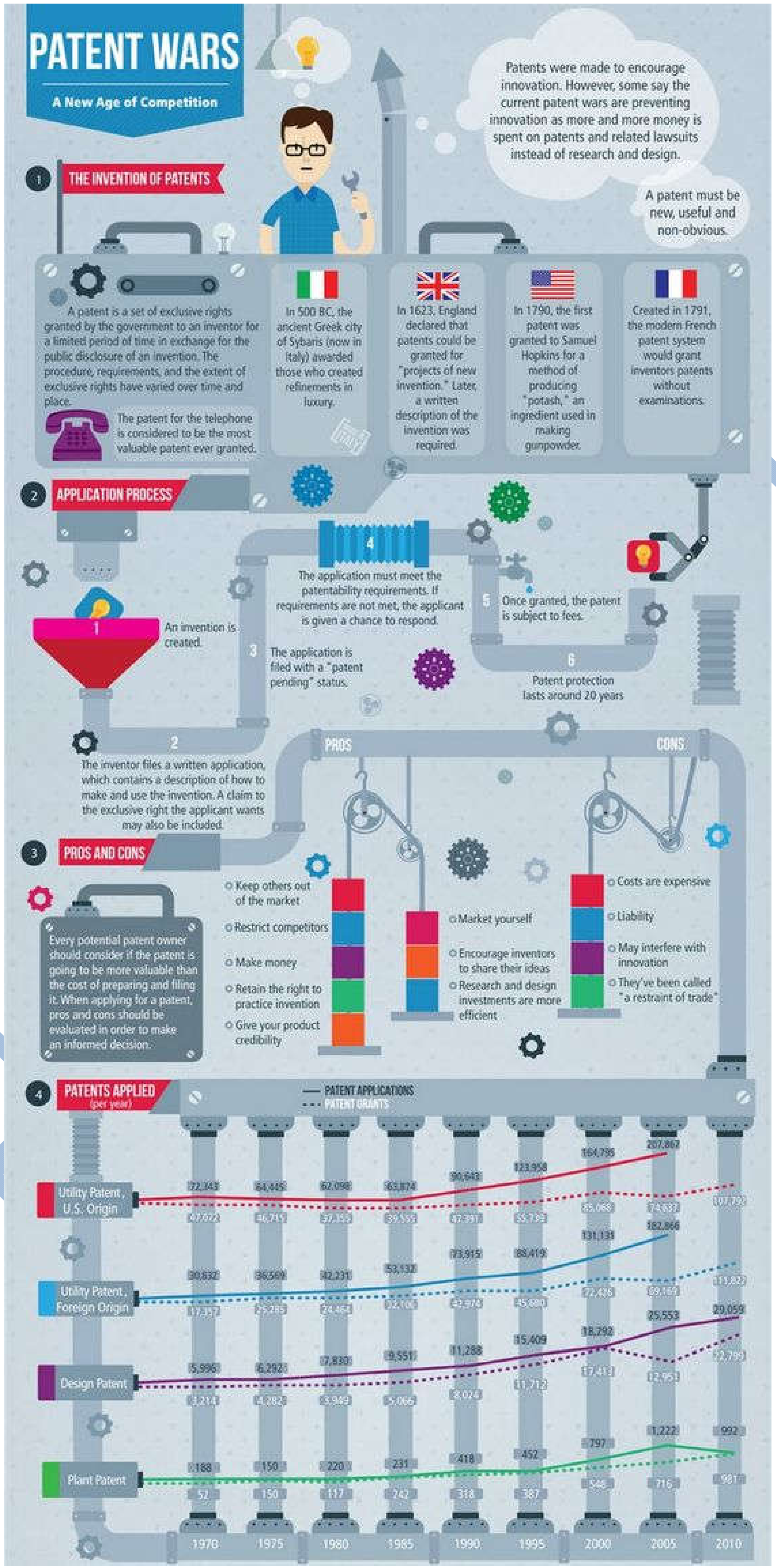
Resources
- % Drilling rig utilization rate
- % Non productive drilling time
- % Drilling success rate
- % Mining equipment availability
- # Carbon dioxide vessel efficiency

Retail
- % Same store sales growth
- # Stock rotations
- # Reorder point
- # Safety stock
- $ Sales per unit area

Telecommunications
- $ Subscriber acquisition cost
- % Answer seizure ratio
- $ Subscriber retention cost
- % Data network availability
- % Block error rate

Transportation
- $ Freight cost per tonne shipped
- # In flight shutdown rate
- # Revenue tonne-kilometers
- % Transport capacity utilization
- # Transit time

Utilities
- # Power plant load factor
- # Water quality index
- % Electricity demand growth
- % Wastewater treated
- % Capacity utilization factor



PATENT WARS

A New Age of Competition

Patents were made to encourage innovation. However, some say the current patent wars are preventing innovation as more and more money is spent on patents and related lawsuits instead of research and design.

A patent must be new, useful and non-obvious.

1 THE INVENTION OF PATENTS

A patent is a set of exclusive rights granted by the government to an inventor for a limited period of time in exchange for the public disclosure of an invention. The procedure, requirements, and the extent of exclusive rights have varied over time and place.

The patent for the telephone is considered to be the most valuable patent ever granted.

In 500 BC, the ancient Greek city of Sybaris (now in Italy) awarded those who created refinements in luxury.

In 1623, England declared that patents could be granted for "projects of new invention." Later, a written description of the invention was required.

In 1790, the first patent was granted to Samuel Hopkins for a method of producing "potash," an ingredient used in making gunpowder.

Created in 1791, the modern French patent system would grant inventors patents without examinations.

2 APPLICATION PROCESS

1 An invention is created.

2 The inventor files a written application, which contains a description of how to make and use the invention. A claim to the exclusive right the applicant wants may also be included.

3 The application is filed with a "patent pending" status.

4 The application must meet the patentability requirements. If requirements are not met, the applicant is given a chance to respond.

5 Once granted, the patent is subject to fees.

6 Patent protection lasts around 20 years

3 PROS AND CONS

Every potential patent owner should consider if the patent is going to be more valuable than the cost of preparing and filing it. When applying for a patent, pros and cons should be evaluated in order to make an informed decision.

PROS

- Keep others out of the market
- Restrict competitors
- Make money
- Retain the right to practice invention
- Give your product credibility
- Market yourself
- Encourage inventors to share their ideas
- Research and design investments are more efficient

CONS

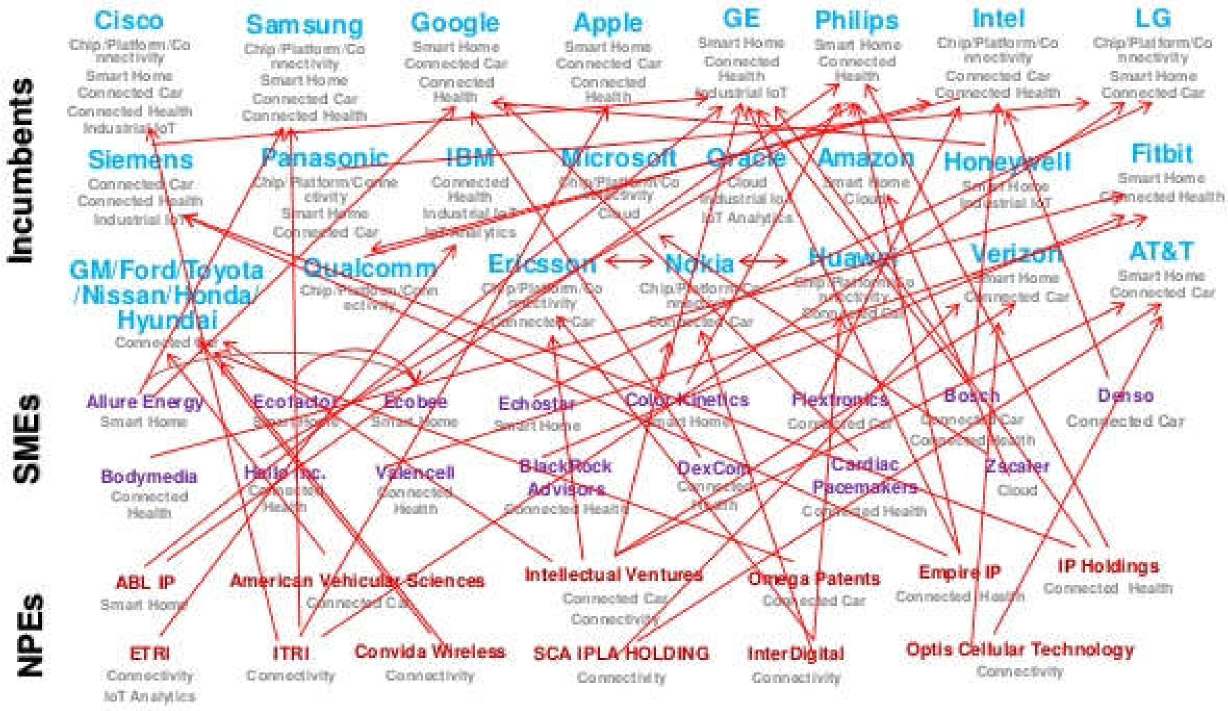
- Costs are expensive
- Liability
- May interfere with innovation
- They've been called "a restraint of trade"

4 PATENTS APPLIED

(per year)

— PATENT APPLICATIONS
- - - PATENT GRANTS
Utility Patent, U.S. Origin
72,343
64,445
62,098
63,874
90,643
123,958
164,795
207,867
47,077
46,715
37,355
39,555
47,391
55,739
85,068
74,637
107,792
Utility Patent, Foreign Origin
30,632
36,569
42,231
53,132
73,915
88,419
131,131
182,866
17,357
25,285
24,464
32,106
42,974
45,680
72,426
69,169
111,822
Design Patent
5,996
6,292
7,830
9,551
11,288
15,409
18,292
25,553
29,059
3,214
4,282
3,949
5,066
8,024
11,712
17,413
12,951
22,799
Plant Patent
188
150
220
231
418
452
797
1,222
992
52
150
117
242
318
387
548
716
981
1970
1975
1980
1985
1990
1995
2000
2005
2010

Internet of things (IoT) Patent Wars 2020 Scenarios Infographics


Incumbents
Cisco
Chip/Platform/Connectivity
Smart Home
Connected Car
Connected Health
Industrial IoT
Samsung
Chip/Platform/Connectivity
Smart Home
Connected Car
Connected Health
Google
Smart Home
Connected Car
Connected Health
Apple
Smart Home
Connected Car
Connected Health
GE
Smart Home
Connected Health
Industrial IoT
Philips
Smart Home
Connected Health
Intel
Chip/Platform/Connectivity
Connected Car
Connected Health
LG
Chip/Platform/Connectivity
Smart Home
Connected Car
Siemens
Connected Car
Connected Health
Industrial IoT
Panasonic
Chip/Platform/Connectivity
Smart Home
Connected Car
IBM
Connected Health
Industrial IoT
IoT Analytics
Microsoft
Chip/Platform/Connectivity
Cloud
Oracle
Cloud
Industrial IoT
IoT Analytics
Amazon
Smart Home
Cloud
Honeywell
Smart Home
Industrial IoT
Fitbit
Smart Home
Connected Health
GM/Ford/Toyota/Nissan/Honda/Hyundai
Connected Car
Qualcomm
Chip/Platform/Connectivity
Ericsson
Chip/Platform/Connectivity
Connected Car
Nokia
Chip/Platform/Connectivity
Connected Car
Huawei
Chip/Platform/Connectivity
Connected Car
Verizon
Smart Home
Connected Car
AT&T
Smart Home
Connected Car
SMEs
Allure Energy
Smart Home
Ecofactor
Smart Home
Ecobee
Smart Home
Echostar
Smart Home
Color Kinetics
Smart Home
Flextronics
Connected Car
Bosch
Connected Car
Connected Health
Denso
Connected Car
Bodymedia
Connected Health
Hello Inc.
Connected Health
Valencell
Connected Health
BlackRock Advisors
Connected Health
DexCom
Connected Health
Cardiac Pacemakers
Connected Health
Zscaler
Cloud
NPEs
ABL IP
Smart Home
American Vehicular Sciences
Connected Car
Intellectual Ventures
Connected Car
Connectivity
Omega Patents
Connected Car
Empire IP
Connected Health
IP Holdings
Connected Health
ETRI
Connectivity
IoT Analytics
ITRI
Connectivity
Convida Wireless
Connectivity
SCA IPLA HOLDING
Connectivity
InterDigital
Connectivity
Optis Cellular Technology
Connectivity

Refs

Internet of Things (IoT) Patent Landscape and Innovation Leadership 4Q 2015
Internet of Things (IoT) Patent Disputes Risk Assessment
Post-Smartphone (Wearable & IoT Devices) Patent Wars Started: How To Prepare?

Alex G. Lee (alexglee@techipm.com) ©2016 TechIPm, LLC All Rights Reserved http://www.techipm.com/

The Genetic and Molecular Socioeconomic Applications of Procreative Game Theorems

Demonstrating how common Card and Board Games are used to simultaneously convey the numerical analogies involved in the application of Procreatively Modeling Global Market Economies within modern times of monetary thought are as follows;

Ground Zero - Domino Tile Double Blank/The starting point at the roll of the Dice/The Thirty-Six Stratagems of Global Economic Marketing Warfare

Dice - Domino Tile Blank One/The Thirty-Six Stratagems Chapter 1: **Winning Stratagems** of Global Economic Marketing Warfare

Dominoes - Domino Tile Blank Two/The Thirty-Six Stratagems Chapter 6: **Defeat Stratagems** of Global Economic Marketing Warfare

Backgammon - Domino Tile Blank Three/The Thirty-Six Stratagems Chapter 5: **Proximate Stratagems** of Global Economic Marketing Warfare

Chess - Domino Tile Blank Four/The Thirty-Six Stratagems Chapter 3: **Attacking Stratagems** of Global Economic Marketing Warfare

Checkers - Domino Tile Blank Five/The Thirty-Six Stratagems Chapter 4: **Chaos Stratagems** of Economic Marketing Warfare

Poker - Domino Tile Blank Six/The Thirty-Six Stratagems Chapter 2: **Enemy Dealing Stratagems** of Economic Marketing Warfare

And sometimes on occasion the **Card Game** **21** or **Blackjack**, as in the analogy of using a deck of cards to track the movements of the **G-20** Major Economies as their activities relates to or overlaps and moves both horizontally and vertically through the PDA & CPDA worksheet's **Static Processes** numbering 1-20.

The abstract stratagems and tactics involved in the **Procreative Modeling of Global Economies** will initiate a twofold series of events. ***First*** of these events consists of the simultaneous application of several common board games. Their unique numerical structures establishes a relationship with the sequential arrangements within the documents relevant to the conceptual mapping of those technologies used by this educational network to personalize internet content on behalf of the general populous. The technologies referenced both as an internal systems process, as well as a platform to deliver real-time real-world technology bases & educational services on the fly are a culmination of over 35 years of research & development to accomplish that very end through associative analogies.

Initially, the first point of entry into this application consists of obtaining a set of common dice. The Dice, or as in this case the #2, referencing those strategies & tactics in question whose numerical count is 1 - 6 for each dice. Each dice is also used to represent the initiation of two 6 Dimensional Regions within two distinct 48/48 Cellular Matrices as they engage in the simultaneous game play involving the development of numerous economic stratagems & tactics (e.g., **48+48=96**). One **DNA** Matrix for the Planning & Design Approaches (PDA), and another **RNA** Matrix for the Consultative Planning & Design Approaches (CPDA). Within each dimension there are approximately 8 Elemental Cells or Build Objectives. Whereas, each element then becomes representative of 8 PPES Formulas used to establish synonymous grammatic relationships through XML or **Thesauri Programs**. It is at this point where the stated needs of individuals, groups, inter-groups, and that of a regional or global economic perspective are influenced by the introduction of Genetic Thought, New Ideas or Technologies.

All the while during this process the ninth formula PA^2, and it's **4** Major Corresponding Components, infuses itself into the 4 Minor Subdivisions within the structures of the rest of the formulas themselves as a whole. Namely, it's components of systems management titled; Power/Authority (PA^2), Morale/Cohesion (M/C^2), Norms/Standards (N/S^2) and Goals/Objectives (G/O^2). Whereas, each PPES formula is jointly applied toward both strategic and tactical economic thought or marketing warfare stratagems through the 6 dimensional regions of the 36 Chinese Stratagems of War. This operational analogy also establishes a connection with the 36 subject matters related to the Physiological Settings of rendering problem solving measures of effectiveness through academic thought.

Remember, that when on each and every occasion that all 9 principle parts of english speech are used to convey information or knowledge through any medium, a single Method is then executed to a total of twelve methods representing the 12 major regions of the Human Body, as each method contains 9 Subcategories that overlap the 9 major processing components of both the PDA & CPDA worksheets, combined in an effort to accomplish those set goals established in the Dictionary of Occupational Titles. Upon this action, when you multiply 9x9 you get 81 feedback interconnections that feed directly into the 81 subcomponents of those formulas listed in the word file titled Global - 3. While a similar document listed as Global - 4, attaches a search engine based Genetic Matrix to the processes of personalizing Internet content, as this technique incorporates **Roget's Conceptual Thesaurus**. Therefore, product and service development strategies move as a tactics, and marketing warfare tactics move as strategies within the **Realms** of product and services R&D.

As the dice are rolled, a player has a choice of which dice & its corresponding numerical count shall represent a particular PDA or CPDA matrix dimension. In other words, if dice (**1**) rolls a 3 then that number would represent PDA strategic dimension labeled as **Measure**. Generally, as in measures taken in relation to matrix elements or cells (1.) Purpose, (2.) Inputs, (3.) Outputs, (4.) Sequence, (5.) Environment, (6.) Human or Autonomous Agents, (7.) Physical Catalysts, and finally (8.) Information Aids. If for instance, dice (**2**) rolls a 5 then it's corresponding CPDA tactical dimension label would be **Interface**, as in user interface or network interconnections. This dimension's cellular relationships would be similar to the ones referencing the Measures dimension mentioned above, therefore at this point it's subject matter bares no repeating. Once the stage has been set the dice then become an integral part of the game of Backgammon and Dominoes. For example, the game of Backgammon contains a set of dice and 15 chips that rotate counter-clockwise according to player position over the game board's 24 points. In our case, the 15 chips referencing the 15 Emperors of Rome from Augustus to Constantine I, minus one emperor who is represented by the actual player or players involved in the game.

At this point our internal systems programs utilizes the Backgammon game board's 24 points to overlap the 24 sections of the word files titled, the **Chromosomal Matrix** and **Autonomous Agent OS Feeds**. These documents represent a process of infusing the game of Backgammon with both PDA/CPDA 48 cellular matrices, as they in turn establish an interconnected causal relationship with the 24 chapters of the book **Caesar: Life Of A Colossus**. Next, the following series of events involves overlapping the 24 books of the **Torah** as an evidentiary economic footprint in the efforts against Racism and Anti-Semitism. While additionally, overlapping the 24 focal points of CPDA sections - A1-A4, B1-B4, C1-C4, D1-D4, and E1-E4 consecutively, as well as their corresponding interconnected overlapping relationship with the Procreative Worksheet's Financial Elements. As each set of 24 CPDA focal points totaling 5 processes filters through the entire sequences of events. These events then become reflective of the **16 Genetic Stages** involved with infusing over 96 (i.e., 48 forward and 48 backward chaining) matrixed search engines into a single minded effort (e.g., as in the five phases of the PDA worksheet or the 5 major Hemispheres of the human brain, as they in turn relates to the 5 component Mindset of Caesar, or any other Persons, Places or Things within the Marketing Warfare of human history). It is also at this point that the number 16 lends relevance towards the direction of incorporating 16 Roman Legions as Economic Standards under the marketing warfare auspices of numerous strategies and tactics. Case in point, the initial set of 16 Roman Legions from the Early Empire as 16 Roman Emperors. The secondary set of Early Empire Legions as the 16 Genetic Stages. The third set of legions, Legio I - Legio XXX as CPDA sections - AAF-AAT, ACG-ACV, ADH-ADW and AEI-AEY. While the final set of 16 Roman Legions represents CPDA sections, B1 - E4 as each of their individual internal five phases facilitates over 400 Roman Generals, whose individual mindset is maintained through 5 poker cards in a game of Texas Hold'em.

Similarly, during this same series of events the game of Dominoes comes into play by way of having it's game rules and numerical pips implemented as matching tactics or counter-measures to the sum total of each roll of the Dice at the start and heart of this analogous procreative game play. In other words, if the sum total of the roll of the dice is 1 and 1 or craps, then a player has a choice between playing the tile listed as Blank 2 or Double 1s as the spinner. This in turn initiates a counter-move whose actions determines a corresponding counter counter-move in and of itself, with the clear objective being the random selection of approximately 36 AAA approaches toward manipulating all six games as a whole. For instance, domino tile 5/2 representing those Economic Adaptive Autonomous Agents (AAA) involved in PDA Phase - 5, Process Area - 2, Implementing and Specifying Solutions. Or in the case of the CPDA worksheet sections - A2, Phase - One. Once the Domino tiles are evenly dispersed into 14 tiles, then each tile becomes the focal point of the 14 procedural elements and dimensions of both PDA & CPDA genetic matrices.

The following steps stands in recognition of several facts or approaches at this point, and they are; (**1**) That the Dice as such are used to strategize a board game in particular called Backgammon. (**2**) That the game of Backgammon consists of the counter-clockwise rotation of 15 chips or references to the 15 Emperors of Rome. Plus, one as such representing an individual player engaged in the thoughts and actions of a particular Ancient Roman Emperor playing the game. All the while having their internal 12 descriptive Methods as **Global Information Drivers of Strategic & Tactical Innovations** (GIDSTI) move across the 6 points within 4 core Managerial Sections of the Backgammon game board (i.e., P/A, M/C, N/S and G/O). (**3**) That the 4 core managerial sections of the game of Backgammon, while being attached to a 24 focal point Chromosomal Matrix, is additionally comprised of the 4 initial process areas of the word files called; The Procedural (4 Vertical *PDA* Process Areas Down), Economic (*CPDA* sections - AAF-AEY), and Autonomous Economic Procedural Guidelines (*CPDA* Sections, B1-E4), or to simply put it the mathematical equation $\mathbf{X}^3$. These files list and categorizes approximately 81 subjects according to their numerical layout under the PPES formula, as representative of those numerous processes engaged in personalizing Internet content, all the while integrating over 300 variety of books that support the development of Strategic and Tactical Setup Features according to the numeric outline of a book's written subject matter.

The ***Second*** of these events broadens into the implementation of the games Checkers and Chess. Even if you're already familiar with the game board layouts for both Checkers and Chess, let me remind you that their game boards are similar in that they each contain 64 squares. As in the 64 cells of both the PDA/DNA & CPDA mRNA or tRNA genetic matrices combined. Also, 8 PDA strategic PPES Formulas X 8 CPDA tactical PPES Formulas = a 64 point observational and operational layout (i.e., Checkers as strategic & Chess as tactical operations matrixed). Once a visualization of this blueprint is perceived then one need only take the 5 or more cards dealt him or her, and apply these cards laced with 48 (**64-16=48**) genetic codons upon each checker or chess piece as they are played during the course of game play. Whereas, each suite of cards represents the 4 areas of systems management P/A, M/C, N/S and G/O. Remember, that each game piece in this case, other than the one considered actually in play, represents approximately 15 Roman Emperors engaged in the simultaneous application of both Checkers as an operational strategy, and Chess as a series of tactical processes. When you consider the importance of the numbers 4x16=64, then can begin to see how this particular setup provides this network with the ability to use common game play analogies to teach global markets participants how to model global economies. Simply put, 16 Roman Emperors, Checkers or Chess pieces, plus the 48 frontal cells of the game board referencing the 48 chapters of a book titled Hannibal, equals a total of 64 possible scenarios through the game play stratagems of Checkers and/or Chess.

Henceforward, whenever a game piece in Checkers or Chess is moved from it's original starting point genetic sequences are initiated, whereas a series of 20 amino acid progressions stand in recognition of the 5x4 PPES procedural layout of both PDA and CPDA worksheets. For example, their are 2 teams in a baseball game consisting of 9 players, whereas each team attempts to score the most points by rounding 4 bases. There are 9 possible winning hands in a game of Poker utilizing 4 suites of cards in a deck consisting of 52 (4 A's - 52=48) playing cards numerically sequenced 1-10. There are 2 teams in a game of basketball consisting of 5 players each attempting to outscore their opponents by making the most baskets. Then under the auspices of the numerous Card Games in the world. The amount of players involved equates into the same Domino game sequence mentioned above. And the list just goes on and on infinitum. Finally, the numerical relationships in life in general brings about the following meaning in this network's attempts at facilitating the health and well being of All Mankind:

The number (**1**) means a single person, place or thing consisting of 12 internal or external methods.

The number (**2**) means a strategic and/or tactical relationship with a person, place or thing consisting of 12 internal or external methods.

The number (**3**) means a three dimensional relationship with a person, place or thing consisting of 12 internal or external methods. As in the mathematical equation $\mathbf{X}^3$.

The number (**4**) means the four areas of systems management Power/Authority (**P/A**), Morale/Cohesion (**M/C**), Norms/Standards (**N/S**) and Goals/Objectives (**G/O**) as they relate to the combined technology platforms; **P/A** - Internet-Based Operating Systems (IBOS), **M/C** - Distributive Operating System Architectures (DOSA), **N/S** - Distributed Abstract Life Programs (DALP) and the **G/O** - Integrated Autonomous Office Applications (IAOA). The number 4 also means PDA vertical columns; Pursuing the P&D Strategy (**N/S**), Specifying & Presenting Solutions (**M/C**), Information Aids (**P/A**), and finally Arranging for Continual Change & Improvement (**G/O**). The number 4 additionally means PDA process area, Involving People, as it relates to CPDA strategic sections - A1 (**N/S**), A2 (**M/C**), A3 (**P/A**) and A4 (**G/O**) consecutively. Moreover, the number 4 corresponds with CPDA tactical sections - [B1-B4, C1-C4, D1-D4 and E1-E4] successively as established interconnections with 80 Economic Legions. The 80 Economic Legions are comprised of the 1-20 point, 5-Phase 36 AAA stratagems processed across all 4 areas of management within the PDA worksheet vertical layout, from which 144 core strategies coexist through a genetic matrix with the Global Information Drivers of Strategic & Tactical Innovations (e.g., **3** initial genetic sequences x **16** cells, codons or roman emperors = **48**. The **48** set of genetic sequences as codons or cells x **3** genetic sequences each = **144**. Also, **36** AAAs that are infused into a 1-20 point Integrated Framework x **4** Areas of Management within a PDA's perspective = **144**). Once an analogous operational blueprint of the 80 legions of Ancient

Rome is formulated as CPDA sections - [B1-B4, C1-C4, D1-D4 and E1-E4], and as subcomponents to those formulas listed within documents Global - 3 & 4 as they are further multiplied by **144** matrixed stratagems, this format shall produce approximately 11,664 Academic Standards of Fiduciary Principles. An Academic Standard consists of 3,927 technology approaches divided into 45M Businesses Worldwide which produces the number 11,465. This total then overlaps the number 11,664 which now represents 11,465 Solution Providers, each one potentially generating approximately $3.2B over a period of 5 years more or less.

The number (**5**) means the 5 phases of both the PDA and CPDA worksheets. The 5 major Hemispheres of the human brain, as it in turn relates to the 5 component Mindset of Caesar, or any other Persons, Places or Things within the Marketing Warfare of human history).

The number (**6**) means the 6 dimensions of Dominoes, and that of the PDA or CPDA 48 cell matrices. The 6 Orders or Sedarim of the Mishna and it's corresponding 63 Tractates, as it relates to the 64 cells of both DNA and RNA genetic matrices, as well as the 64 sections of Building a Guide to an Engineering Body of Knowledge.

The number (**7**) means the 7 Continents of a global economic perspective or the 7 candlestick Menorah. The 7 Articles of the United States Constitution as the 7 Kings of Rome, and the 7 hierarchical layers within the Sniffer's Guide to Network Protocols.

The number (**8**) means the 8 Principle Parts of English Speech (PPES) formula system as it relates to the (**9th**) PPES formula PA^2, as well as the 8x8 layout of both the board games Checkers and Chess. The ninth formula infuses the concepts of it's subroutines into each of it's component PPES predecessors, whereas $PA^2 = \mathbf{G}^2$, $MC^2 = \mathbf{E}$, $NS^2 = \mathbf{NT}^2$ and $GO^2 = \mathbf{OT}^2$. This process continues until all formulas are interconnected as the one into the single (**10th**) formula $\mathbf{X}^3$, whose structure carries all 9 formula through it's layout 4 times over giving rise to approximately 36 AAAs. Remember, that these formulas also convert themselves into the 9 major regions of both the PDA and CPDA worksheets, as well as the 9 subcategories of each Method totaling 12.

The number (**9**) means the 9 Principle Parts of English Speech formula system that is all inclusive of it's defined numerical relationships mentioned throughout this website.

The number (**10**) means Caesar's 10th Legion (i.e., $\mathbf{X}^3$) as a simultaneous Republican and Democratic representation of the 300 global economies by way of the following; Since the operational mindset of Gaius Julius Caesar is a combined PDA and CPDA 5 - Phase approach toward implementing problem solving measures of effectiveness through fiduciary concepts, the format of CPDA sections - A1 thru E4 in their entirety establishes on behalf of this network, a means by which the 300 CPDA components [**A-1-1/^AAA^** thru **E-4-5/^EYY^]** becomes a series of rotational elements within the Procreative Worksheet. The effects of which is the foundation of a mobile economic expeditionary force of wealth and opportunities through a series of global monetary perspectives. Moreover, this process once it is embodied along the these guidelines by simply multiplying the 300 economic representatives by as many as their 12 or more members, shall produce approximately 3,927 technology approaches that will be the foundation to influence global markets through static cutting-edge innovations.

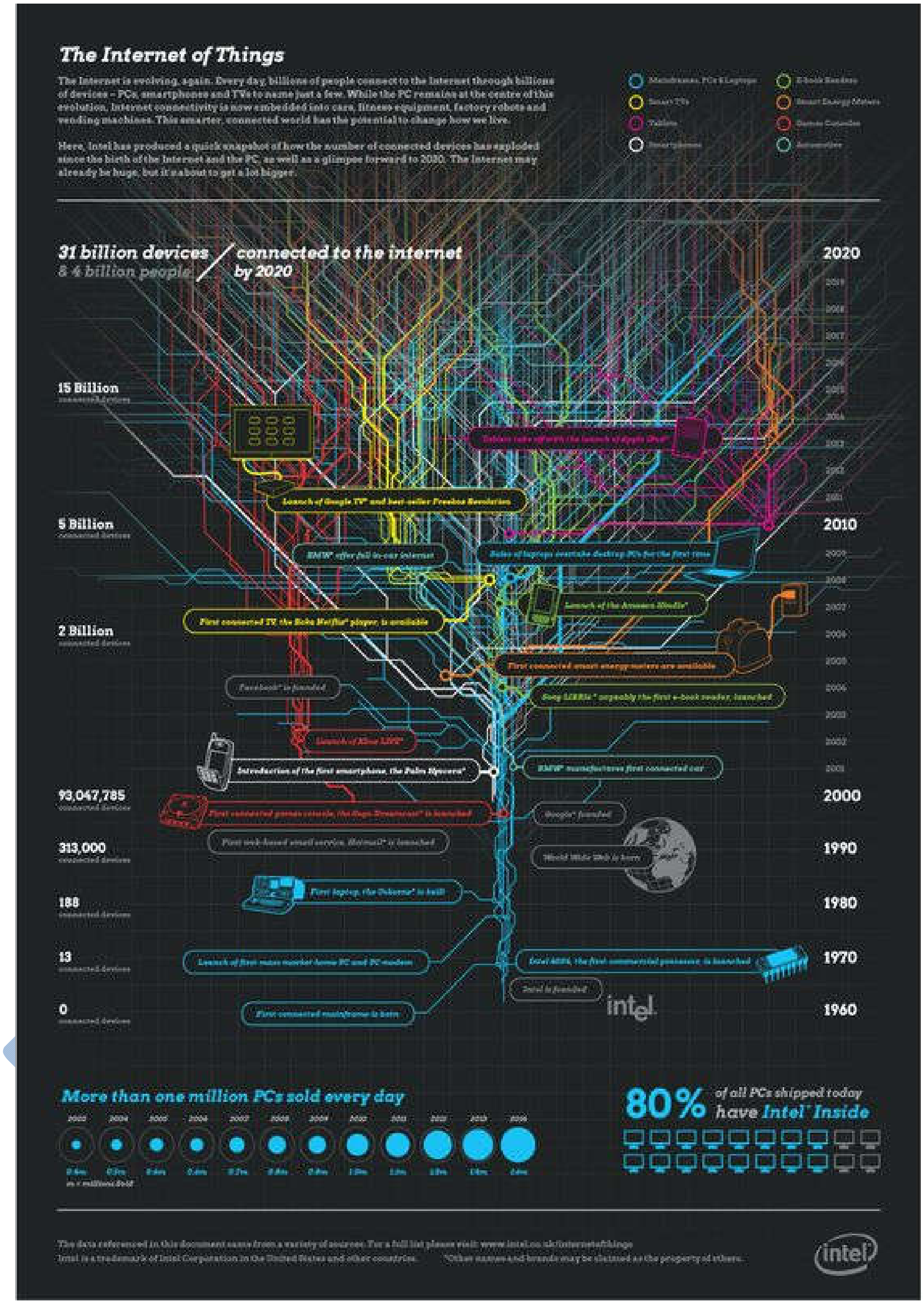
The number (**11**) means Employment Related Software Development (ERSD) as an overlap to 12 methods.

The number (**12**) means the twelve Global Information Drivers of Strategic and Tactical Innovations (**GIDSTI**), whose individual members when multiplied 12 times equals 144 Operational Grand Stratagems. It also means the 12 major regions of the Human Body. The 12 Apostles of the Body of Jesus Christ. The 12 Tribes of Israel. The combination of the Ten Commandments in the Old Testament with that of the Two Commandments in the New Testament, equals the embodiment of Mohammed. Since the nature of the very existence of Islam, and that of each & every Moslem is founded upon the combination of the two Testaments as a whole. In other words, 3x12=36 and 4x36=144.

The number (**13**) means the embodiment of the very nature of an individual person, place or thing referencing their 12 members (e.g., 1+12=13). This number also represents the incorporation of the 13 chapters of Sun Tzu's the Art of War.

The number (**14**) means the 14 topics that are the core issues of both PDA and CPDA cellular matrices (i.e., 6 Dimensions + 8 Elements). The 14 subjects related to the analogies of Special Ops in Marketing Warfare strategies and tactics. The 14 Books of Rambam's 613 Mitzvots. And so on, and so on until a player of the Procreative Modeling of a Global Economic Perspective achieves the ability to integrate, and as a single minded entity, move all of the principles and processes mentioned as an Economic Procedural Guideline through the principles and actions of human sexuality or simple game play.

NOW DO YOU SEE WHAT THE UNIVERSE IS SEEING?



The Internet of Things

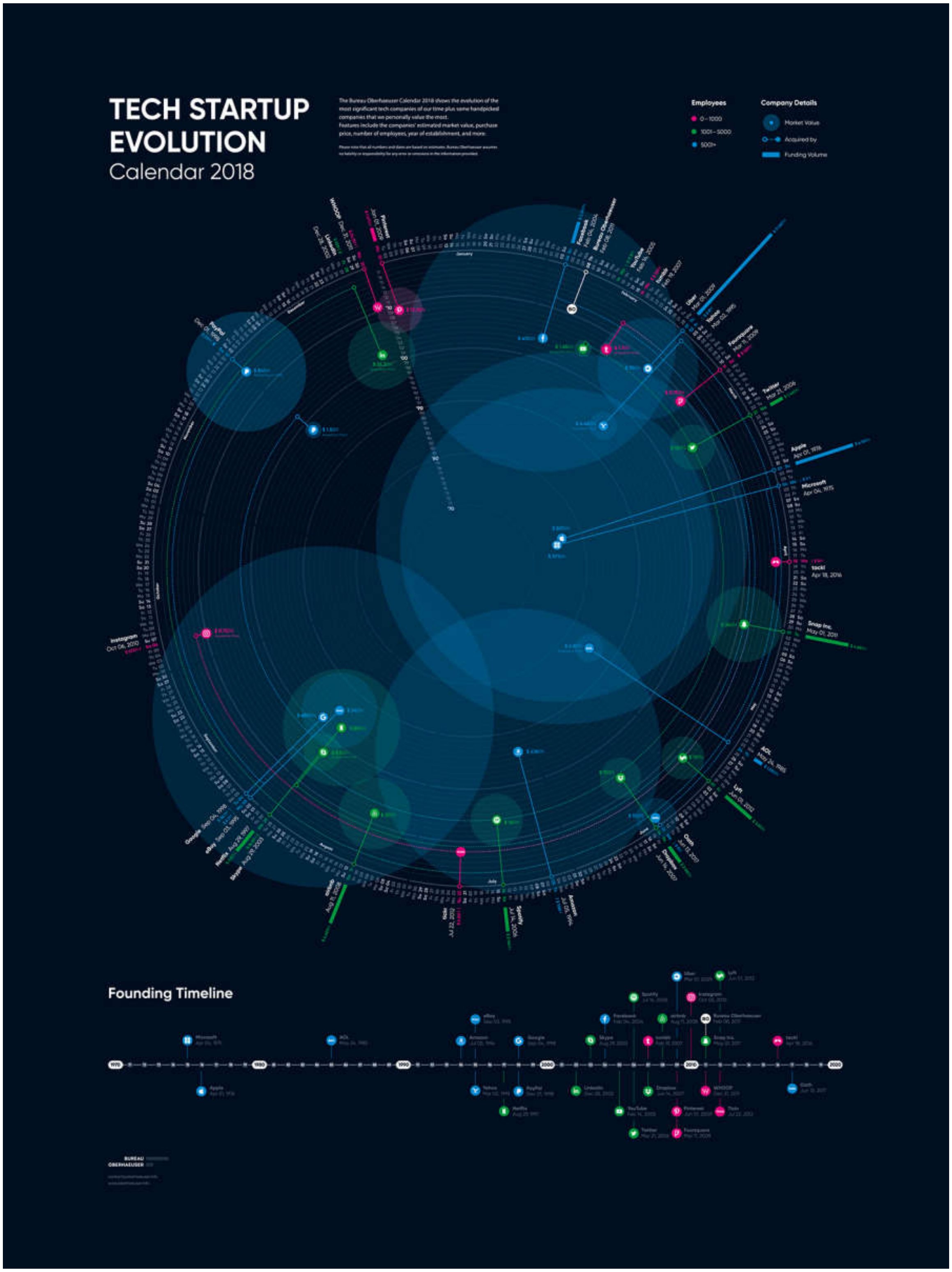
The Internet is evolving, again. Every day, billions of people connect to the Internet through billions of devices – PCs, smartphones and TVs to name just a few. While the PC remains at the centre of this evolution, Internet connectivity is now embedded into cars, fitness equipment, factory robots and vending machines. This smarter, connected world has the potential to change how we live.

Here, Intel has produced a quick snapshot of how the number of connected devices has exploded since the birth of the Internet and the PC, as well as a glimpse forward to 2020. The Internet may already be huge, but it's about to get a lot bigger.

Mainframes, PCs & Laptops
Smart TVs
Tablets
Smartphones
E-book Readers
Smart Energy Meters
Games Consoles
Automotive
31 billion devices / connected to the internet
& 4 billion people / by 2020
15 Billion connected devices
5 Billion connected devices
2 Billion connected devices
93,047,785 connected devices
313,000 connected devices
188 connected devices
13 connected devices
0 connected devices
2020
2010
2000
1990
1980
1970
1960
Tablets take off with the launch of Apple iPad*
Launch of Google TV* and best-seller Freeview Revolution
BMW* offer full in-car internet
Sales of laptops overtake desktop PCs for the first time
Launch of the Amazon Kindle*
First connected TV, the Roku Netflix* player, is available
First connected smart energy meters are available
Facebook* is founded
Sony LIBRIe* arguably the first e-book reader, launched
Launch of Xbox LIVE*
Introduction of the first smartphone, the Palm Kyocera*
BMW* manufactures first connected car
First connected games console, the Sega Dreamcast* is launched
Google* founded
First web-based email service, Hotmail* is launched
World Wide Web is born
First laptop, the Osborne* is built
Launch of first mass market home PC and PC modem
Intel 4004, the first commercial processor, is launched
Intel is founded
intel
First connected mainframe is born
More than one million PCs sold every day
m = millions Sold
80% of all PCs shipped today have Intel* Inside

The data referenced in this document came from a variety of sources. For a full list please visit: www.intel.co.uk/internetofthings

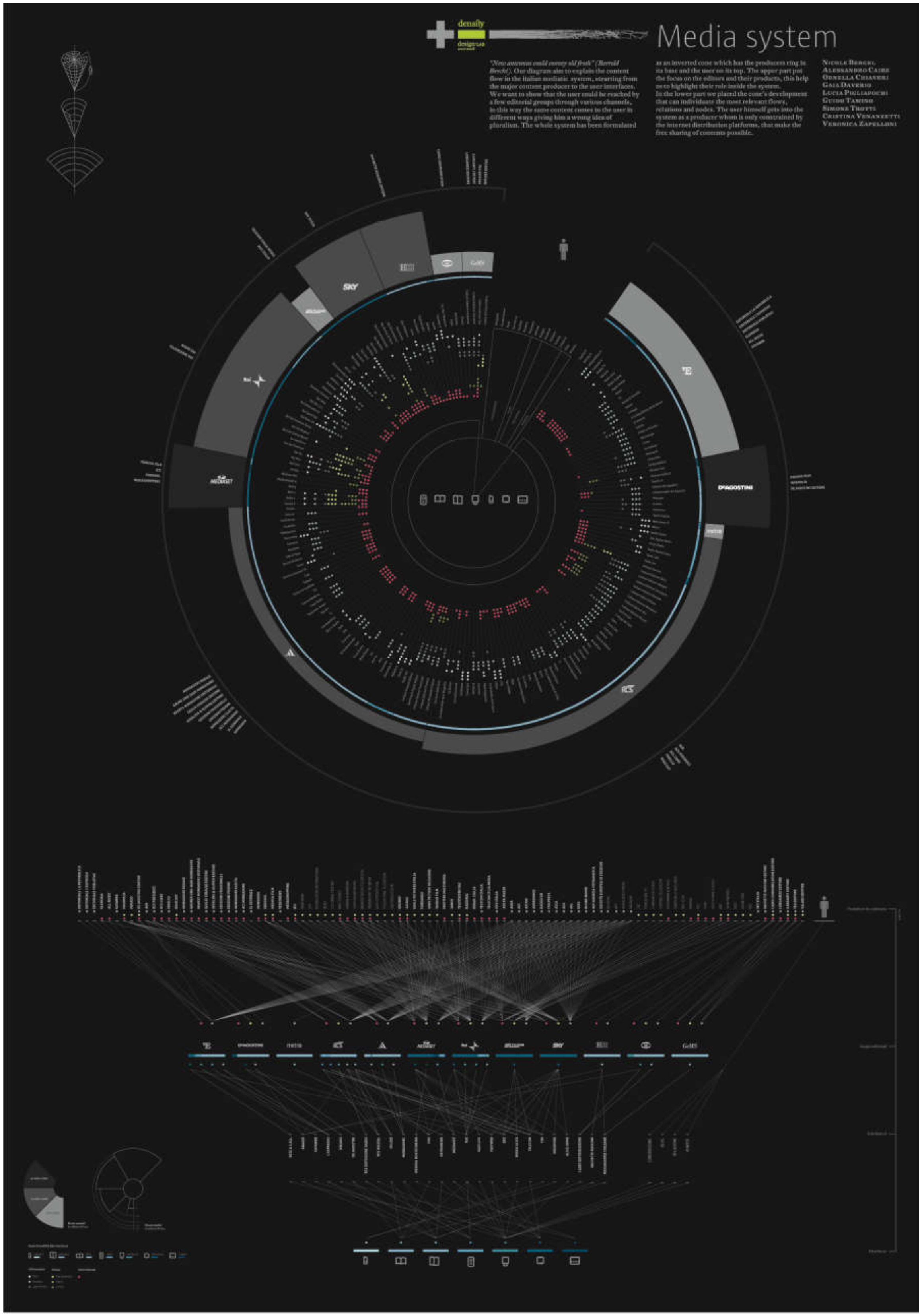
Intel is a trademark of Intel Corporation in the United States and other countries. *Other names and brands may be claimed as the property of others.



TECH STARTUP EVOLUTION

Calendar 2018

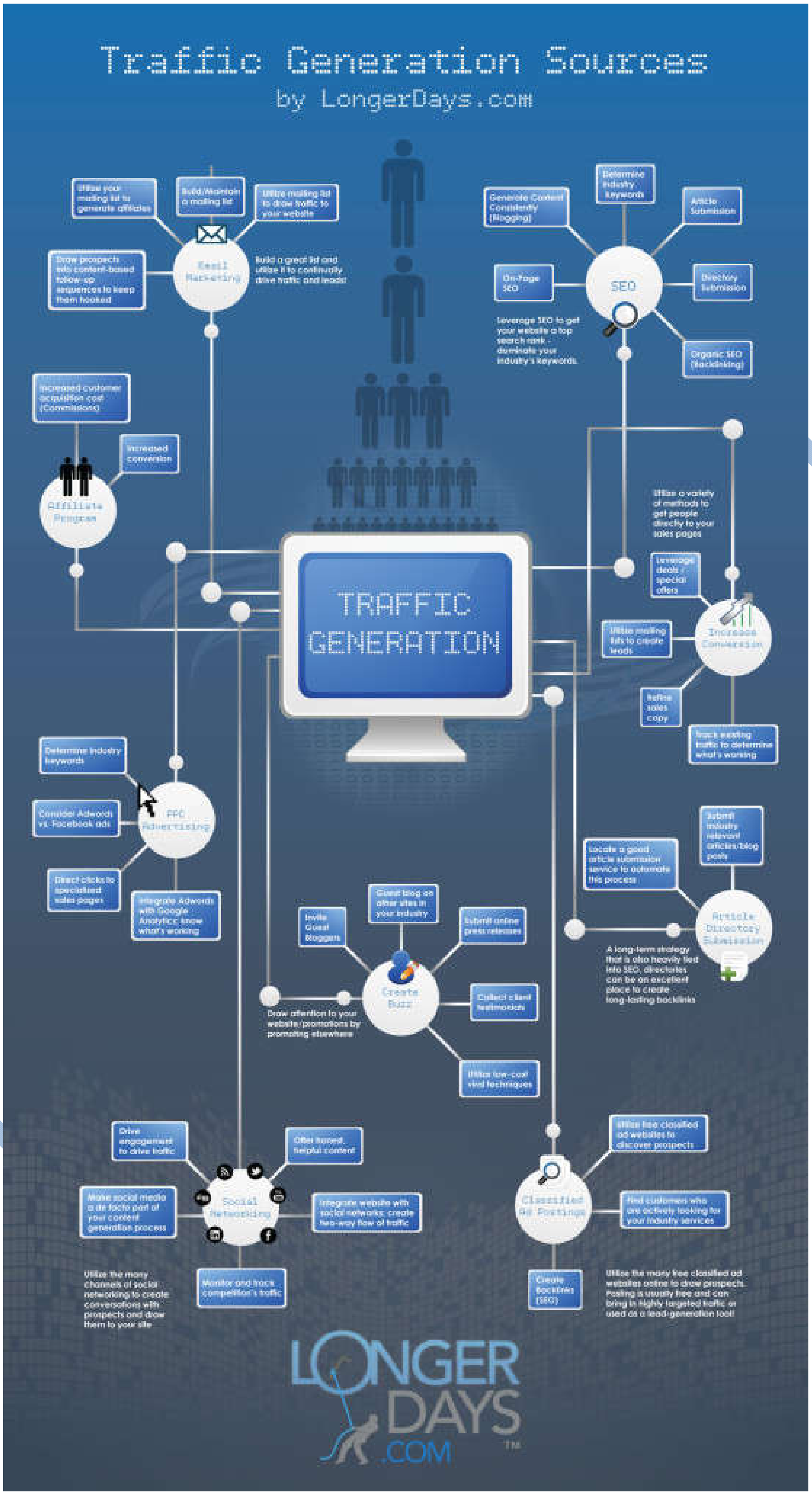
The Bureau Oberhaeuser Calendar 2018 shows the evolution of the most significant tech companies of our time plus some handpicked companies that we personally value the most.
Features include the companies' estimated market value, purchase price, number of employees, year of establishment, and more.

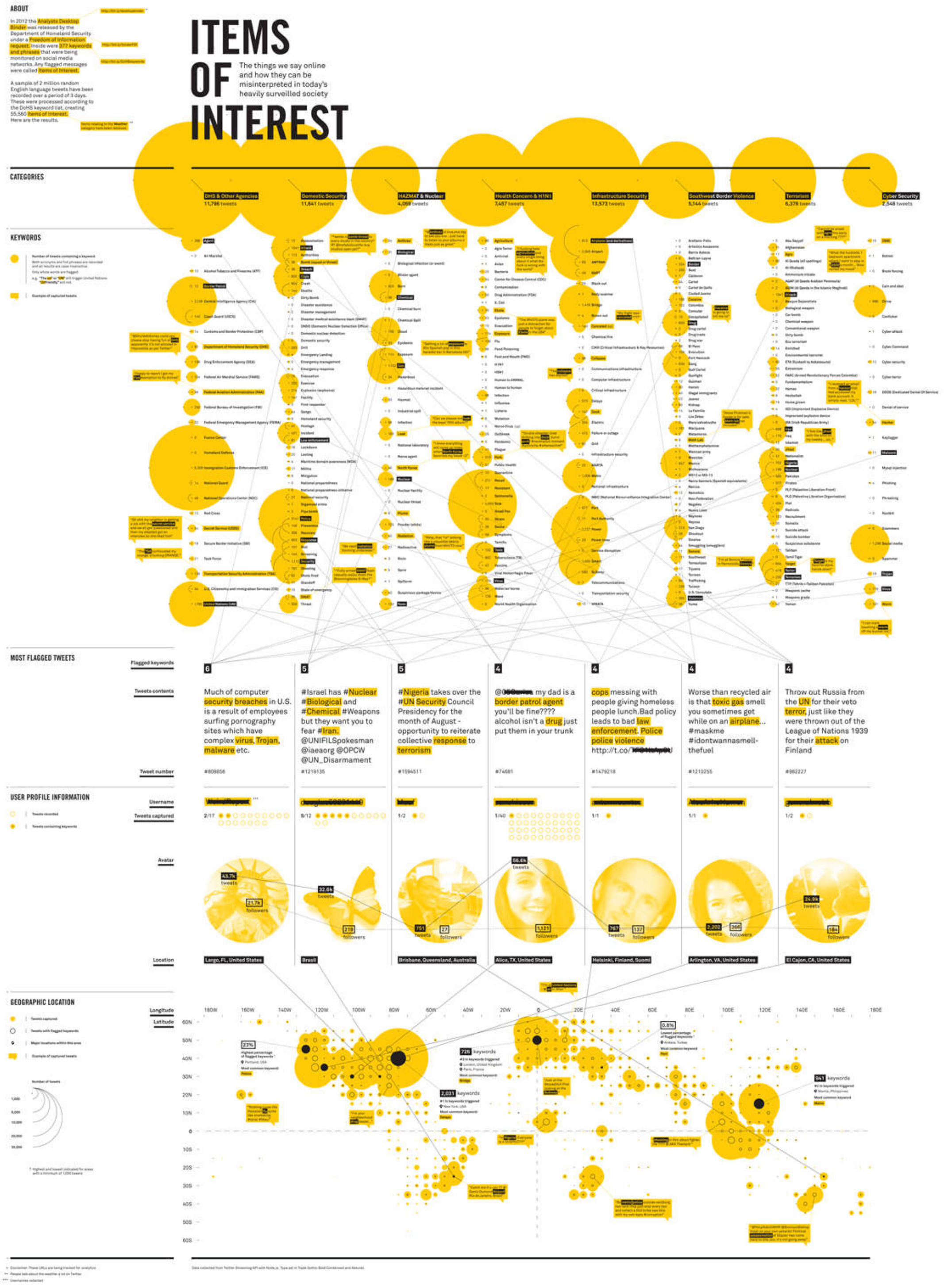


Media system

"New antennas could convey old froth" (Bertold Brecht). Our diagram aim to explain the content flow in the italian mediatic system, strarting from the major content producer to the user interfaces. We want to show that the user could be reached by a few editorial groups through various channels, in this way the same content comes to the user in different ways giving him a wrong idea of pluralism. The whole system has been formulated as an inverted cone which has the producers ring in its base and the user on its top. The upper part put the focus on the editors and their products, this help us to highlight their role inside the system. In the lower part we placed the cone's development that can individuate the most relevant flows, relations and nodes. The user himself gets into the system as a producer whom is only constrained by the internet distribution platforms, that make the free sharing of contents possible.

Nicole Bergel
Alessandro Caire
Ornella Chiaveri
Gaia Daverio
Lucia Pigliapochi
Guido Tamino
Simone Trotti
Cristina Venanzetti
Veronica Zapelloni


Traffic Generation Sources
by LongerDays.com
Utilize your mailing list to generate affiliates
Build/Maintain a mailing list
Utilize mailing list to draw traffic to your website
Draw prospects into content-based follow-up sequences to keep them hooked
Email Marketing
Build a great list and utilize it to continually drive traffic and leads!
Increased customer acquisition cost (Commissions)
Increased conversion
Affiliate Program
Generate Content Consistently (Blogging)
Determine Industry Keywords
Article Submission
On-Page SEO
SEO
Directory Submission
Leverage SEO to get your website a top search rank - dominate your industry's keywords.
Organic SEO (Backlinking)
Utilize a variety of methods to get people directly to your sales pages
Leverage deals / special offers
Utilize mailing lists to create leads
Increase Conversion
Refine sales copy
Track existing traffic to determine what's working
TRAFFIC GENERATION
Determine industry keywords
Consider Adwords vs. Facebook ads
PPC Advertising
Direct clicks to specialized sales pages
Integrate Adwords with Google Analytics; know what's working
Invite Guest Bloggers
Guest blog on other sites in your industry
Submit online press releases
Create Buzz
Collect client testimonials
Draw attention to your website/promotions by promoting elsewhere
Utilize low-cost viral techniques
Locate a good article submission service to automate this process
Submit industry relevant articles/blog posts
Article Directory Submission
A long-term strategy that is also heavily tied into SEO, directories can be an excellent place to create long-lasting backlinks
Drive engagement to drive traffic
Offer honest, helpful content
Make social media a de facto part of your content generation process
Social Networking
Integrate website with social networks; create two-way flow of traffic
Utilize the many channels of social networking to create conversations with prospects and draw them to your site
Monitor and track competition's traffic
Utilize free classified ad websites to discover prospects
Classified Ad Postings
Find customers who are actively looking for your industry services
Create Backlinks (SEO)
Utilize the many free classified ad websites online to draw prospects. Posting is usually free and can bring in highly targeted traffic or used as a lead-generation tool!
LONGER DAYS .COM ™



ABOUT

In 2012 the Analysts Desktop Binder was released by the Department of Homeland Security under a Freedom of Information request. Inside were 377 keywords and phrases that were being monitored on social media networks. Any flagged messages were called Items of Interest.

A sample of 2 million random English language tweets have been recorded over a period of 3 days. These were processed according to the DoHS keyword list, creating 55,560 Items of Interest. Here are the results.

ITEMS OF INTEREST

The things we say online and how they can be misinterpreted in today's heavily surveilled society

CATEGORIES

DHS & Other Agencies 11,796 tweets
Domestic Security 11,641 tweets
HAZMAT & Nuclear 4,069 tweets
Health Concern & H1N1 7,457 tweets
Infrastructure Security 13,573 tweets
Southwest Border Violence 5,144 tweets
Terrorism 6,376 tweets
Cyber Security 2,548 tweets

KEYWORDS

MOST FLAGGED TWEETS

Flagged keywords	Tweets contents	Tweet number	Username	Tweets captured	Avatar	Location
6	Much of computer security breaches in U.S. is a result of employees surfing pornography sites which have complex virus, Trojan, malware etc.	#808856	[redacted] ***	2/17	43.7k tweets 21.7k followers	Largo, FL, United States
5	#Israel has #Nuclear #Biological and #Chemical #Weapons but they want you to fear #Iran. @UNIFILSpokesman @iaeaorg @OPCW @UN_Disarmament	#1219135	[redacted]	5/12	32.6k tweets 219 followers	Brasil
5	#Nigeria takes over the #UN Security Council Presidency for the month of August - opportunity to reiterate collective response to terrorism	#1594511	[redacted]	1/2	751 tweets 27 followers	Brisbane, Queensland, Australia
4	@[redacted] my dad is a border patrol agent you'll be fine???? alcohol isn't a drug just put them in your trunk	#74681	[redacted]	1/40	56.6k tweets 1,121 followers	Alice, TX, United States
4	cops messing with people giving homeless people lunch.Bad policy leads to bad law enforcement. Police police violence http://t.co/[redacted]	#1479218	[redacted]	1/1	767 tweets 137 followers	Helsinki, Finland, Suomi
4	Worse than recycled air is that toxic gas smell you sometimes get while on an airplane... #maskme #idontwannasmell-thefuel	#1210255	[redacted]	1/1	2,202 tweets 368 followers	Arlington, VA, United States
4	Throw out Russia from the UN for their veto terror, just like they were thrown out of the League of Nations 1939 for their attack on Finland	#982227	[redacted]	1/2	24.9k tweets 184 followers	El Cajon, CA, United States

USER PROFILE INFORMATION

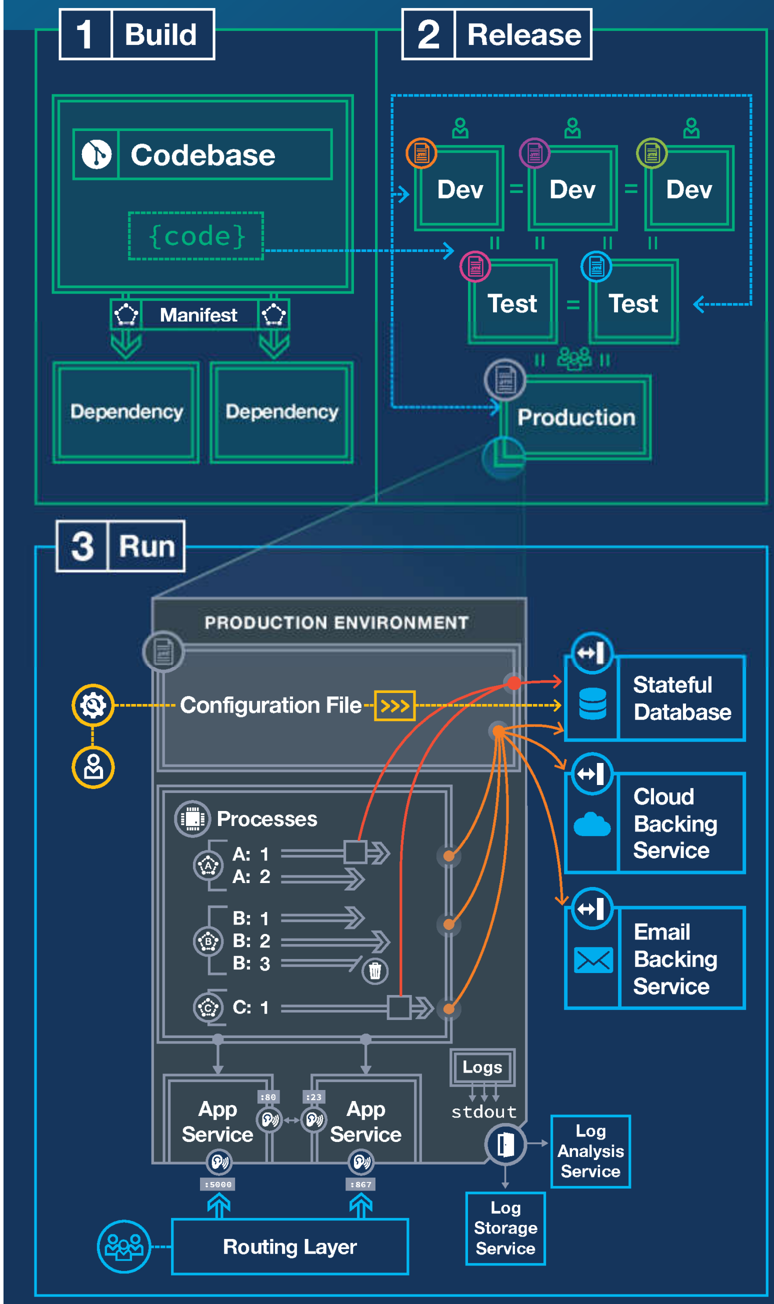
Tweets recorded
Tweets containing keywords

GEOGRAPHIC LOCATION

Tweets captured
Tweets with flagged keywords
Major locations within this area
Example of captured tweets
Number of tweets
1,000
5,000
10,000
20,000
30,000
Longitude
Latitude
180W 160W 140W 120W 100W 80W 60W 40W 20W 0 20E 40E 60E 80E 100E 120E 140E 160E 180E
60N 50N 40N 30N 20N 10N 0 10S 20S 30S 40S 50S 60S
23%
Highest percentage of flagged keywords
Portland, USA
726 keywords
2,031 keywords
0.8%
Lowest percentage of flagged keywords
Ankara, Turkey
941 keywords
Manila, Philippines

The 12-Factor App

Modern web applications run in heterogeneous environments, scale elastically, update frequently, and depend on independently deployed backing services. Modern application architectures and development practices must be designed accordingly. The PaaS-masters at Heroku summarized lessons learned from building hundreds of cloud-native applications into the twelve factors visualized below.



1 Build
Codebase
{code}
Manifest
Dependency
Dependency
2 Release
Dev
=
Dev
=
Dev
Test
=
Test
Production
3 Run
PRODUCTION ENVIRONMENT
Configuration File
>>>
Stateful Database
Cloud Backing Service
Email Backing Service
Processes
A: 1
A: 2
B: 1
B: 2
B: 3
C: 1
Logs
stdout
:80
:23
App Service
App Service
:5000
:867
Routing Layer
Log Analysis Service
Log Storage Service

the 12 factors

Codebase
One codebase, many deploys, strict version control

Dependencies
Explicitly declare and isolate dependencies

Configuration
Store config in each deploy environment, preferably using environmental variables

Backing Services
Treat backing services as resources (neutral as to local vs. third-party) located via config

Build, Release, Run
Strictly separate build, release, and run; never change code at runtime

Processes
Keep all processes stateless and share-nothing; store state (with other persistent data) in a stateful backing service

Port Binding
Bind every service to a port and listen on that port; don't rely on runtime server injection

Concurrency
Distinguish process types (e.g. web, background worker, utility) and scale each type independently

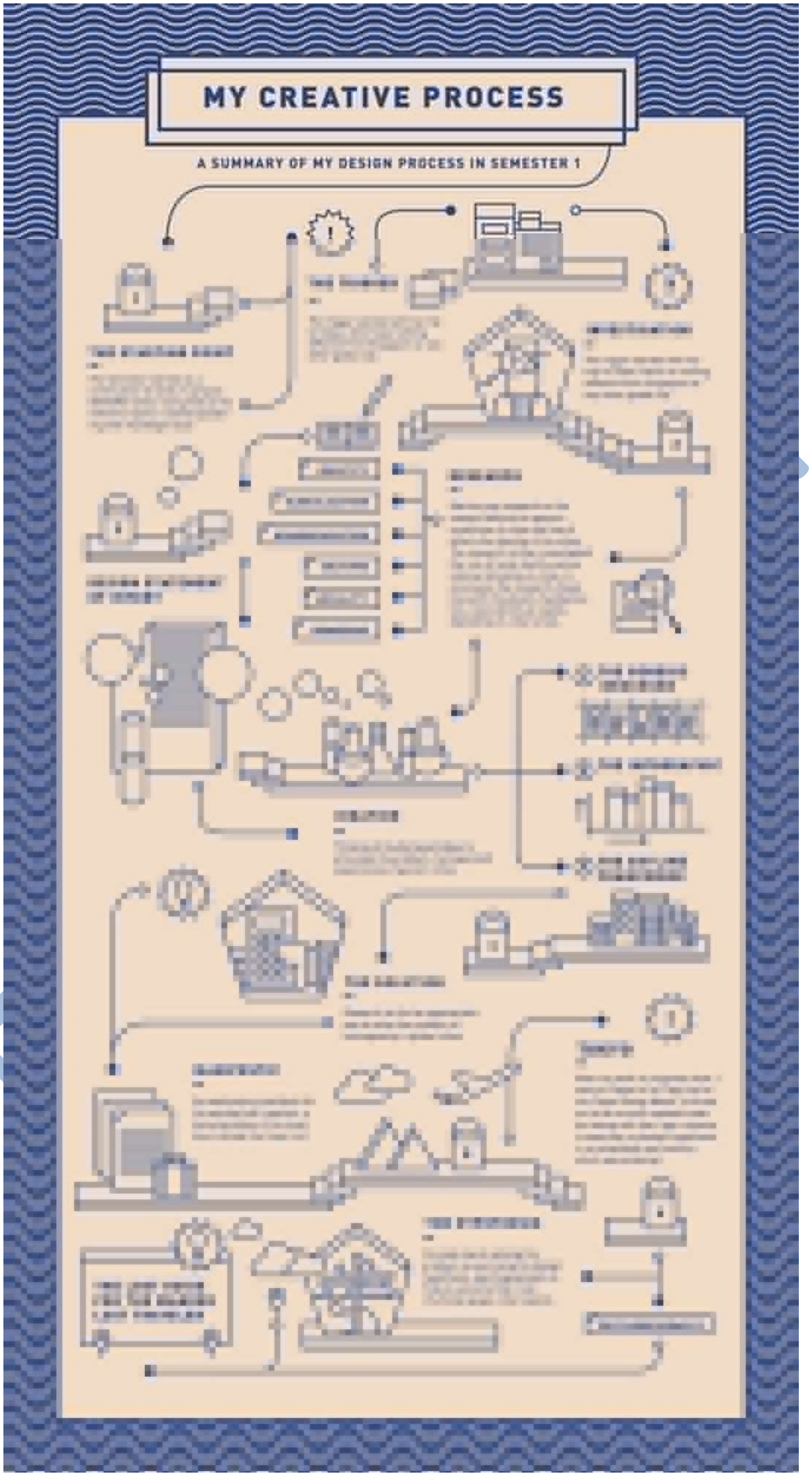
Disposability
Make processes start up quickly (<4s from launch to ready) and shut down safely (for web process: stop listening, finish current requests, exit; for worker process: return current job to work queue)

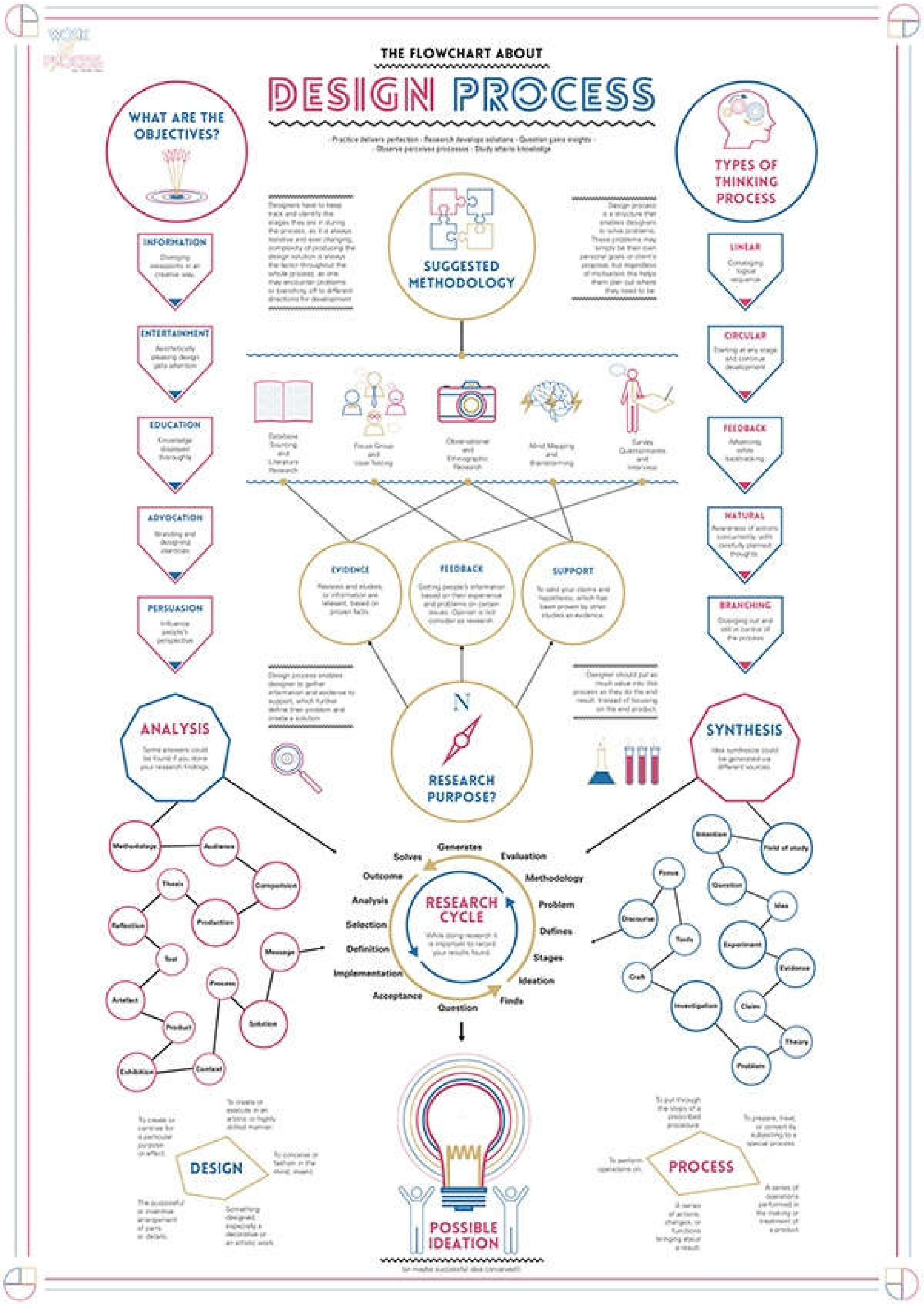
Dev/Prod Parity
Maximize dev/prod parity by minimizing gaps in time (between deploys: hours), personnel (authors=deployers), and environment (use adapters for backing services)

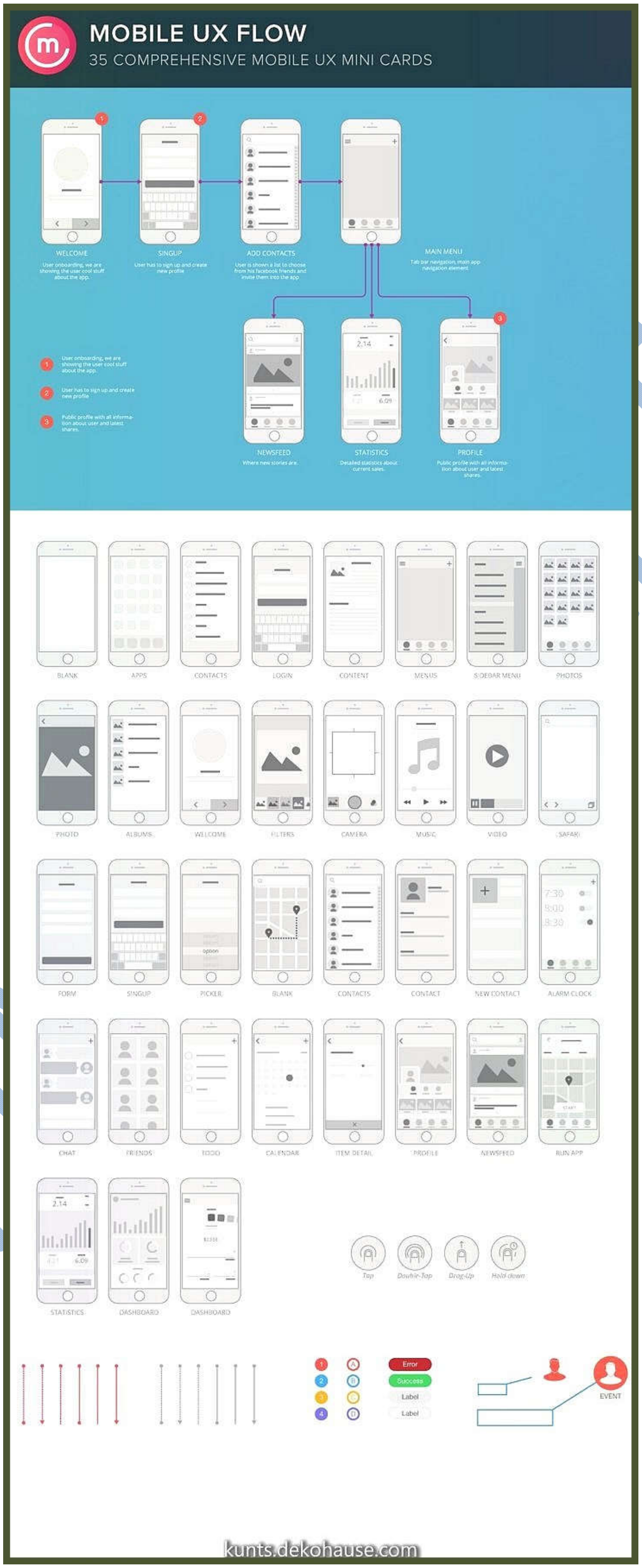
Logs
Log by writing all output streams to stdout; rout streams using non-app services

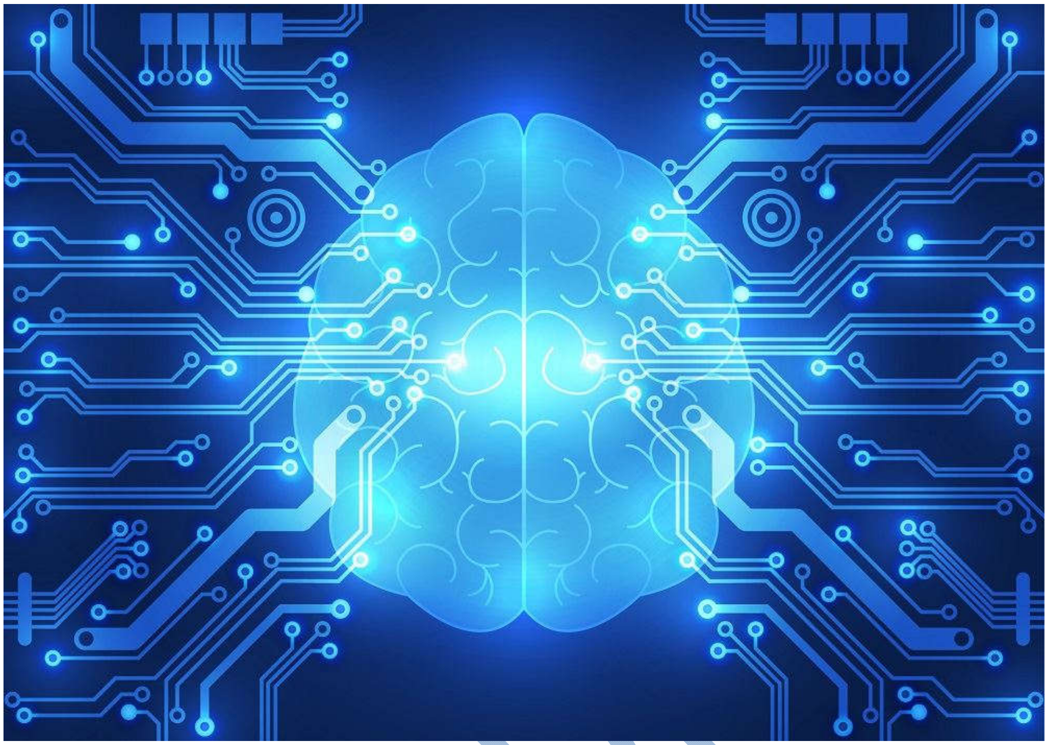
Admin Processes
Run one-off/admin processes (db migration, REPL , one-time scripts) in same environment as normal processes

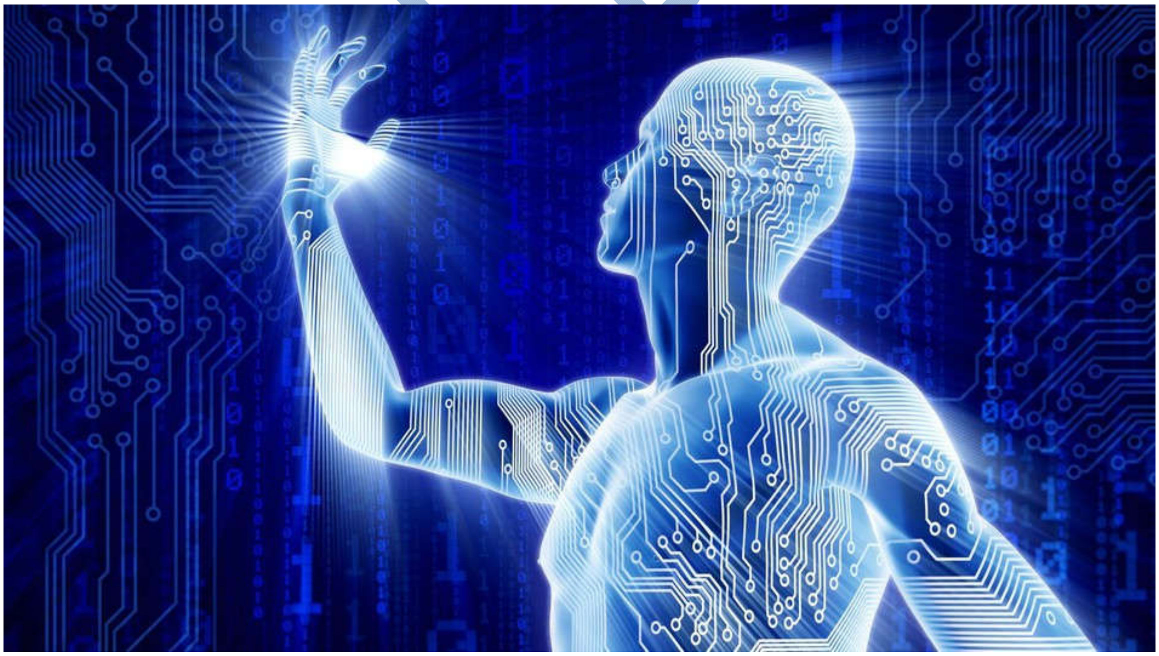
CREATED BY DZONE.COM

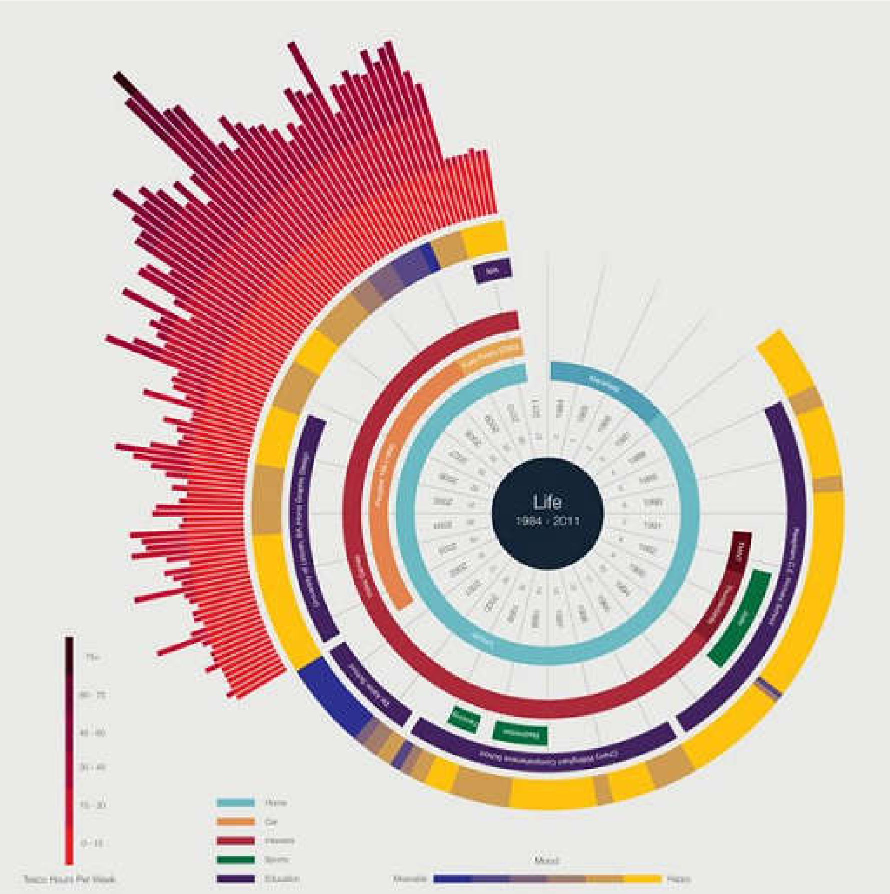

MY CREATIVE PROCESS
A SUMMARY OF MY DESIGN PROCESS IN SEMESTER 1

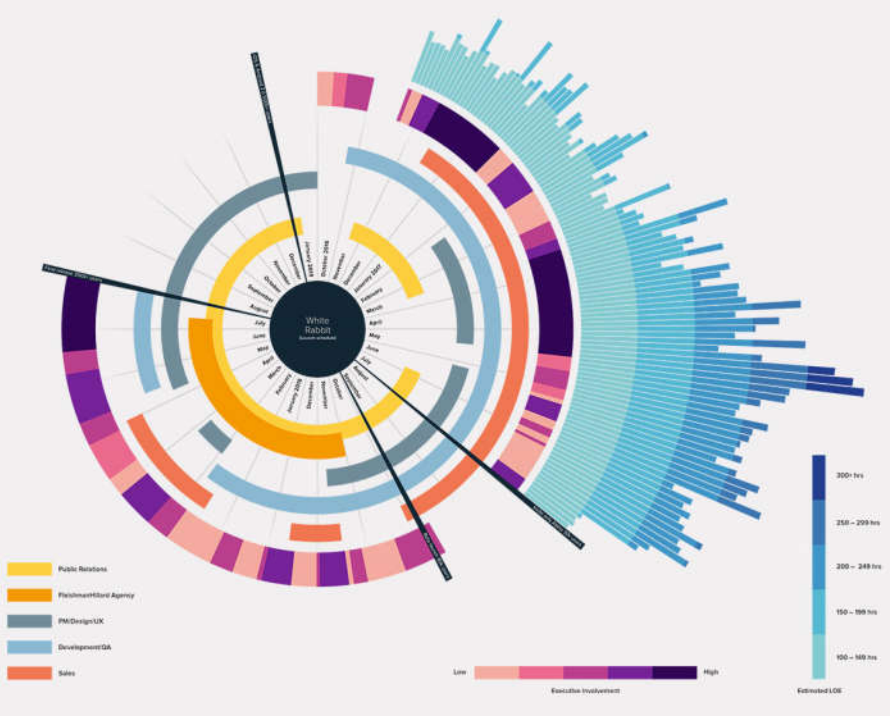

THE FLOWCHART ABOUT
DESIGN PROCESS
WHAT ARE THE OBJECTIVES?
INFORMATION
ENTERTAINMENT
EDUCATION
ADVOCATION
PERSUASION
SUGGESTED METHODOLOGY
TYPES OF THINKING PROCESS
LINEAR
CIRCULAR
FEEDBACK
NATURAL
BRANCHING
EVIDENCE
FEEDBACK
SUPPORT
ANALYSIS
RESEARCH PURPOSE?
SYNTHESIS
Methodology
Audience
Thesis
Composition
Reflection
Production
Test
Message
Process
Artefact
Product
Solution
Exhibition
Context
Generates
Solves
Evaluation
Outcome
Methodology
Analysis
Problem
Selection
Defines
Definition
Stages
Implementation
Ideation
Acceptance
Finds
Question
RESEARCH CYCLE
Intention
Field of study
Focus
Question
Idea
Discourse
Tools
Experiment
Evidence
Craft
Investigation
Claim
Theory
Problem
DESIGN
PROCESS
POSSIBLE IDEATION

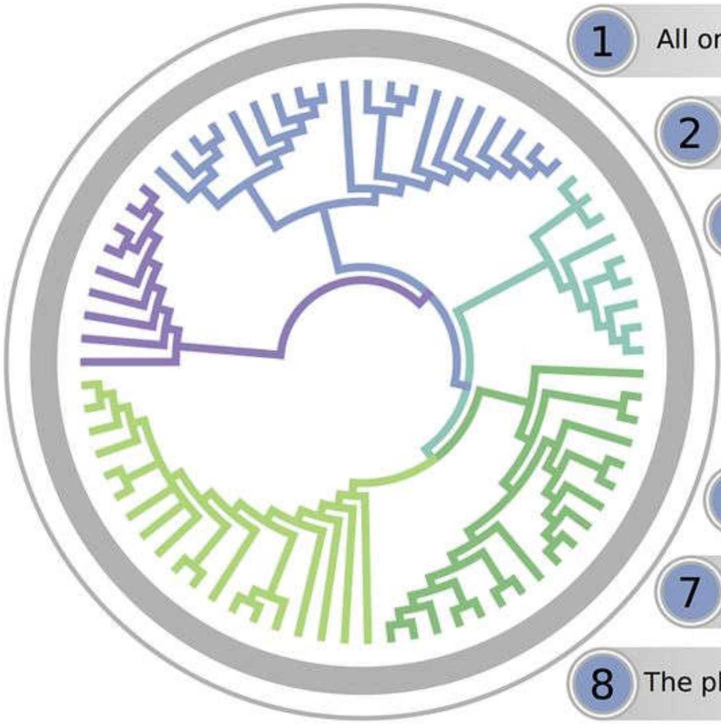

MOBILE UX FLOW
35 COMPREHENSIVE MOBILE UX MINI CARDS
WELCOME
User onboarding, we are showing the user cool stuff about the app.
SINGUP
User has to sign up and create new profile
ADD CONTACTS
User is shown a list to choose from his facebook friends and invite them into the app.
MAIN MENU
Tab bar navigation, main app navigation element
NEWSFEED
Where new stories are.
STATISTICS
Detailed statistics about current sales.
PROFILE
Public profile with all information about user and latest shares.
1 User onboarding, we are showing the user cool stuff about the app.
2 User has to sign up and create new profile
3 Public profile with all information about user and latest shares.
BLANK
APPS
CONTACTS
LOGIN
CONTENT
MENUS
SIDEBAR MENU
PHOTOS
PHOTO
ALBUMS
WELCOME
FILTERS
CAMERA
MUSIC
VIDEO
SAFARI
FORM
SINGUP
PICKER
BLANK
CONTACTS
CONTACT
NEW CONTACT
ALARM CLOCK
CHAT
FRIENDS
TODO
CALENDAR
ITEM DETAIL
PROFILE
NEWSFEED
RUN APP
STATISTICS
DASHBOARD
DASHBOARD
Tap
Double-Tap
Drag-Up
Hold down
Error
Success
Label
Label
EVENT
kunts.dekohause.com



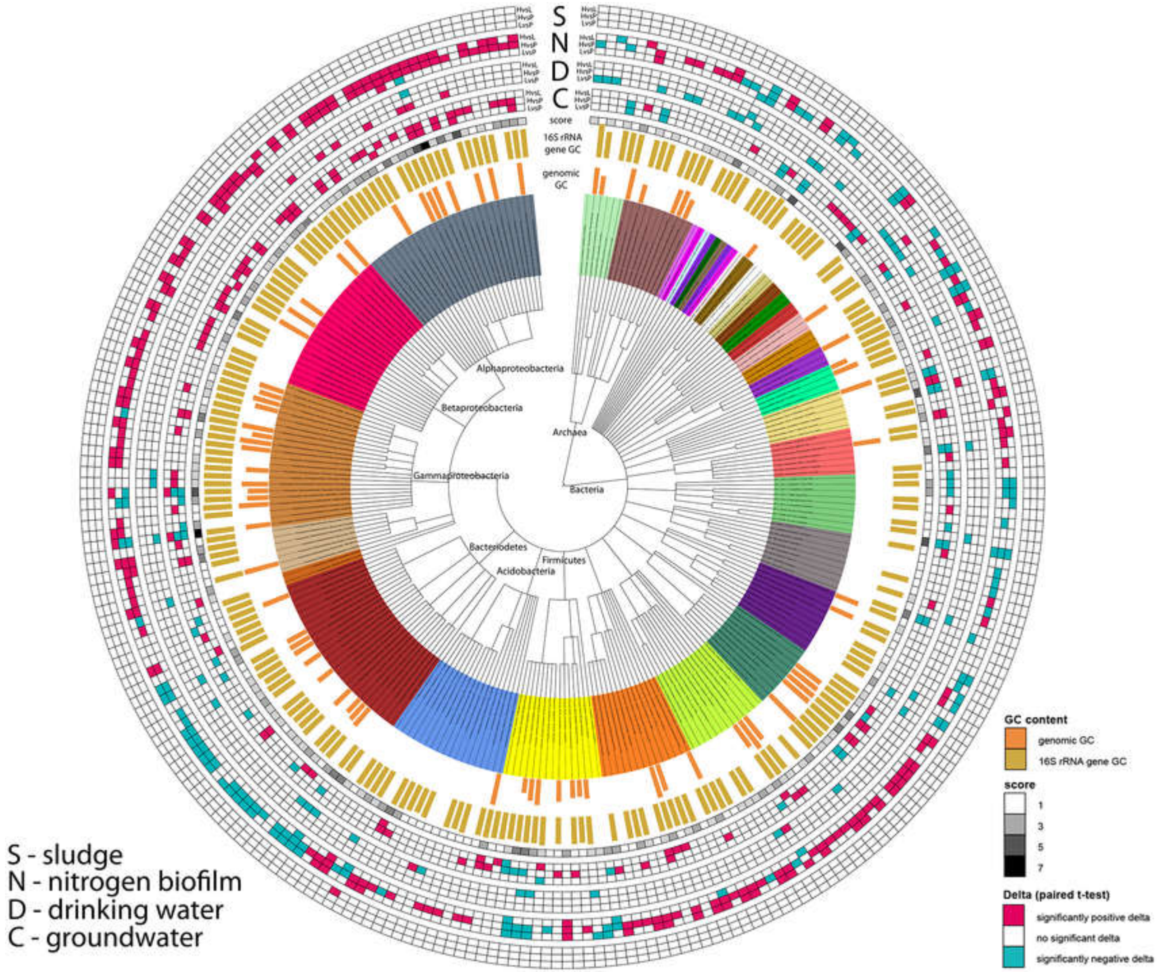



Life
1984 - 2011
75+
60 - 75
45 - 60
30 - 45
15 - 30
0 - 15
Tesco Hours Per Week
Home
Car
Interests
Sports
Education
Mood
Miserable
Happy

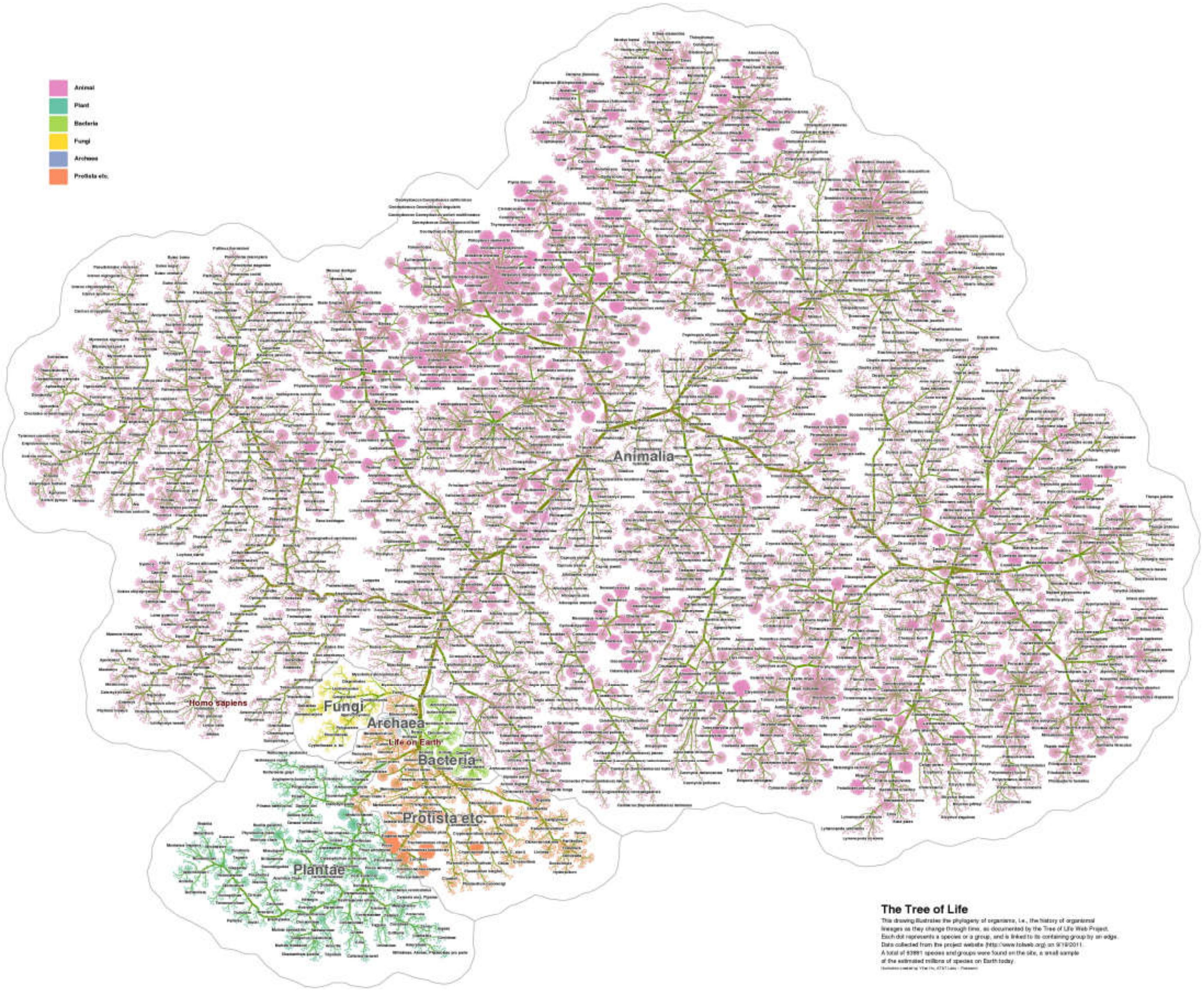

White
Rabbit
Public Relations
FleishmanHillard Agency
PM/Design/UK
Development/QA
Sales
Low
High
Executive Involvement
300+ hrs
250 – 299 hrs
200 – 249 hrs
150 – 199 hrs
100 – 149 hrs
Estimated LOE



1. All organisms are connected by a universal phylogenetic tree.
2. Evolution generates nested hierarchical relationships.
3. Ingroup selection depends on the phylogenetic question.
4. Outgroup roots the tree so that time direction is known.
5. Species members evolve as a unit due to gene flow.
6. Speciation is the genetic isolation of lineages.
7. Multiple speciation events result in nested relationships portrayed by a tree.
8. The phylogenetic pattern may be recovered by the analysis of biological variation.



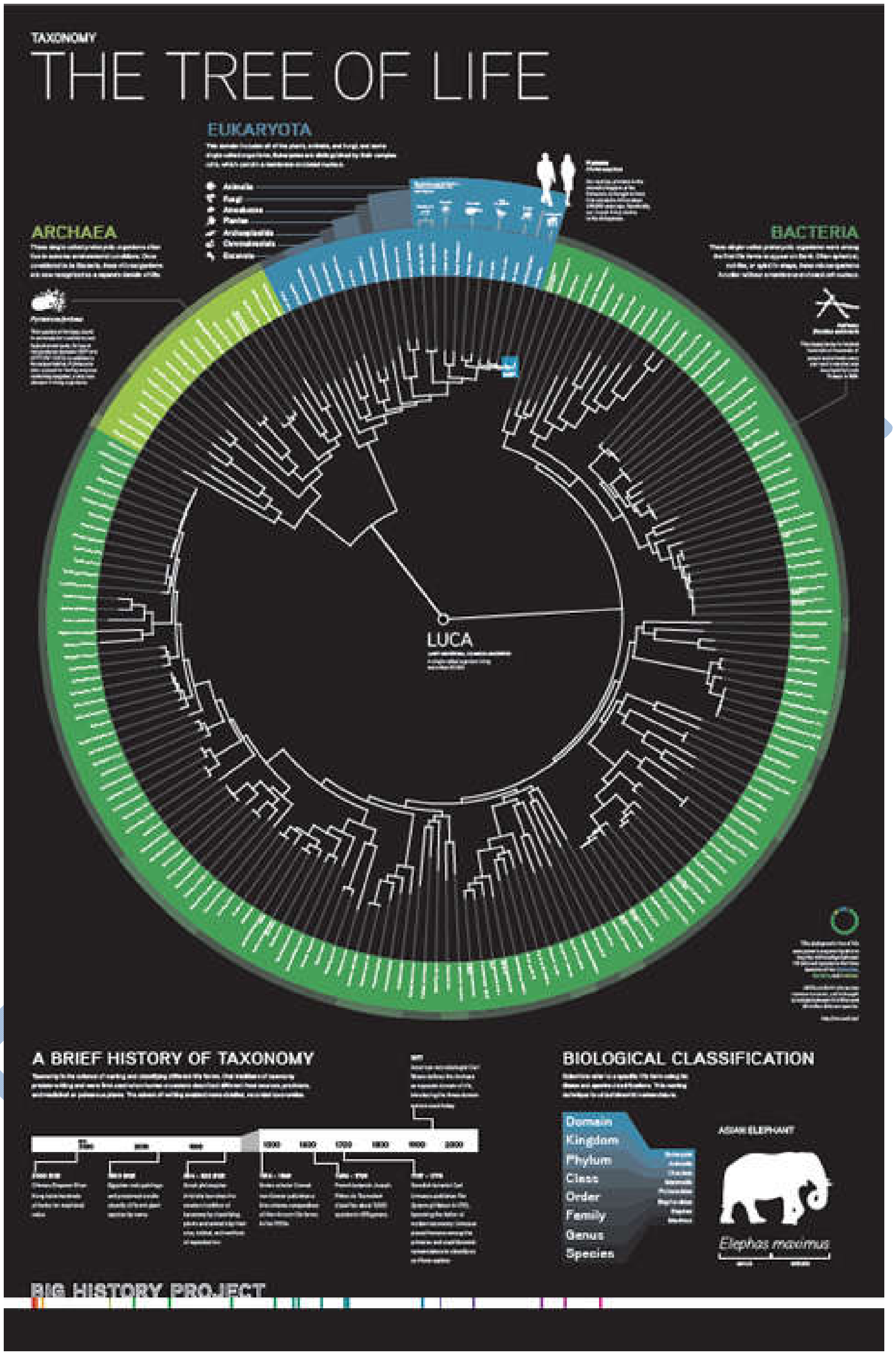
S
N
D
C
HvsL
HvsP
LvsP
score
16S rRNA gene GC
genomic GC
Alphaproteobacteria
Betaproteobacteria
Gammaproteobacteria
Bacteroidetes
Acidobacteria
Firmicutes
Archaea
Bacteria
GC content
genomic GC
16S rRNA gene GC
score
1
3
5
7
Delta (paired t-test)
significantly positive delta
no significant delta
significantly negative delta
S - sludge
N - nitrogen biofilm
D - drinking water
C - groundwater


🟪 Animal
🟩 Plant
🟩 Bacteria
🟨 Fungi
🟦 Archaea
🟧 Protista etc.
Animalia
Homo sapiens
Fungi
Archaea
Life on Earth
Bacteria
Protista etc.
Plantae

The Tree of Life

This drawing illustrates the phylogeny of organisms, i.e., the history of organismal lineages as they change through time, as documented by the Tree of Life Web Project. Each dot represents a species or a group, and is linked to its containing group by an edge. Data collected from the project website (http://www.tolweb.org) on 9/19/2011. A total of 93891 species and groups were found on the site, a small sample of the estimated millions of species on Earth today.

Illustration created by Yifan Hu, AT&T Labs – Research



TAXONOMY

THE TREE OF LIFE

EUKARYOTA

Animalia
Fungi
Amoebozoa
Plantae
Archaeplastida
Chromalveolata
Excavata

ARCHAEA

BACTERIA

LUCA

A BRIEF HISTORY OF TAXONOMY

1500 1600 1700 1800 1900 2000

BIOLOGICAL CLASSIFICATION

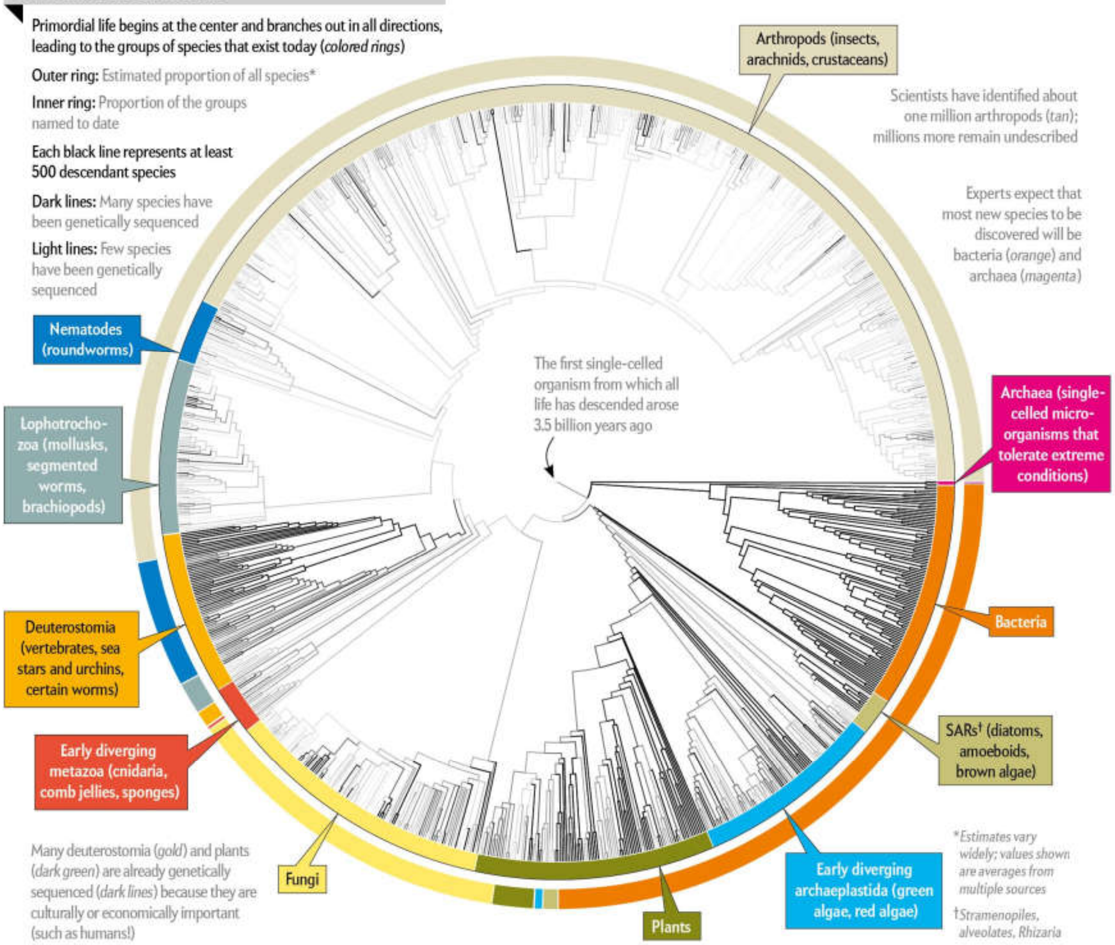
Domain
Kingdom
Phylum
Class
Order
Family
Genus
Species

ASIAN ELEPHANT

Elephas maximus

BIG HISTORY PROJECT

How to Read the Circle of Life



Primordial life begins at the center and branches out in all directions, leading to the groups of species that exist today (*colored rings*)

Outer ring: Estimated proportion of all species*

Inner ring: Proportion of the groups named to date

Each black line represents at least 500 descendant species

Dark lines: Many species have been genetically sequenced

Light lines: Few species have been genetically sequenced

Scientists have identified about one million arthropods (*tan*); millions more remain undescribed

Experts expect that most new species to be discovered will be bacteria (*orange*) and archaea (*magenta*)

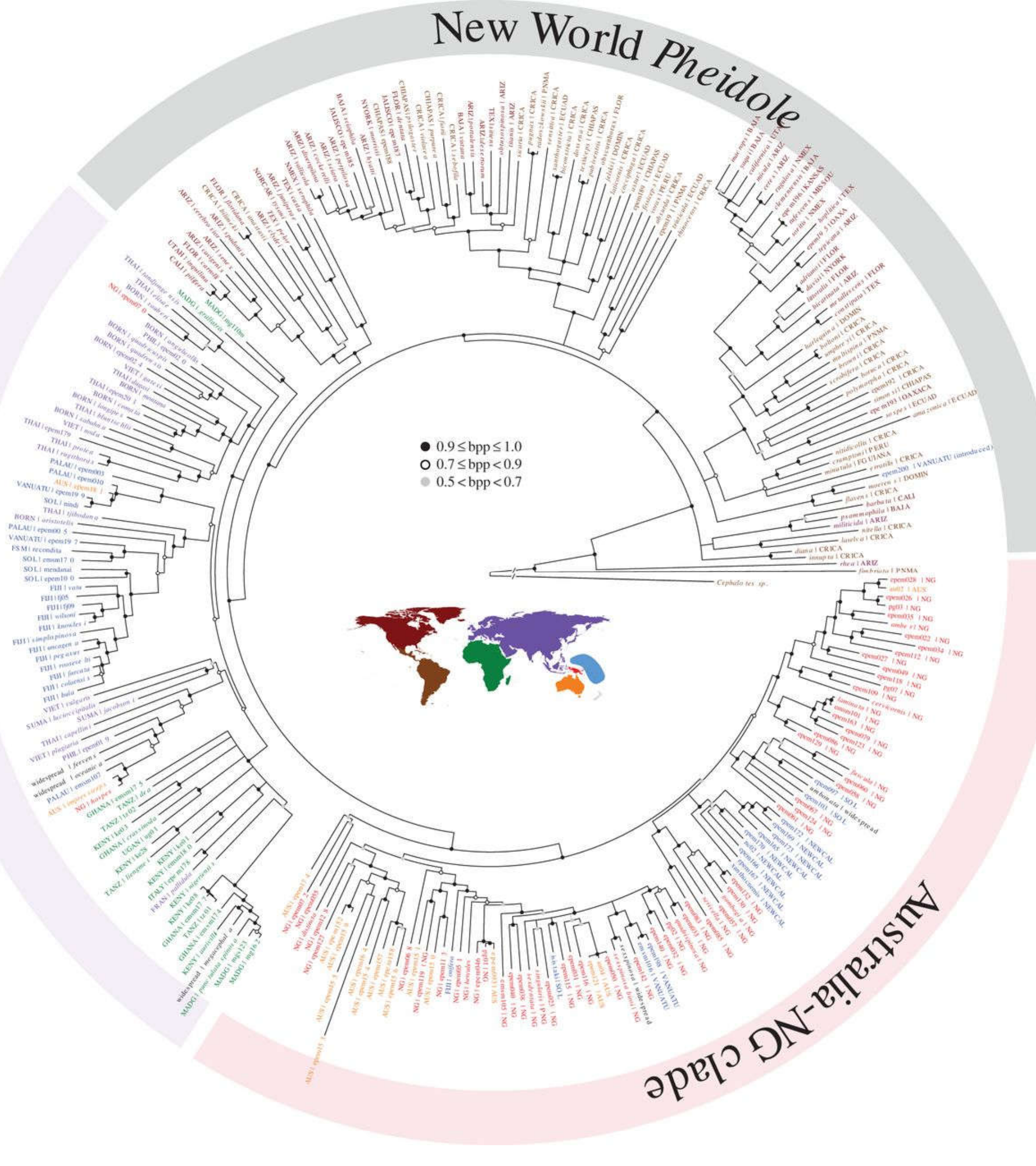
The first single-celled organism from which all life has descended arose 3.5 billion years ago

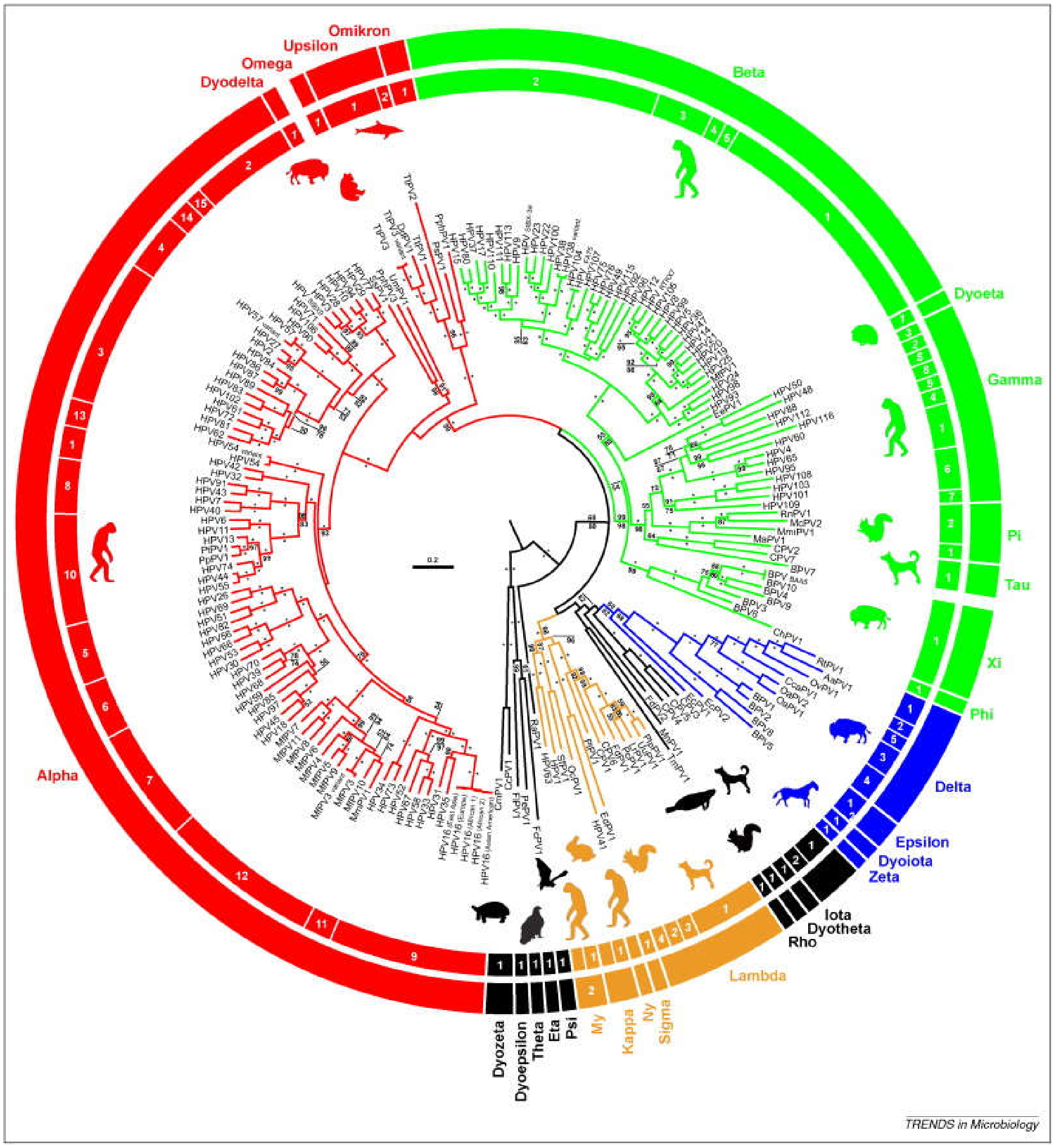
Many deuterostomia (*gold*) and plants (*dark green*) are already genetically sequenced (*dark lines*) because they are culturally or economically important (such as humans!)

Arthropods (insects, arachnids, crustaceans)
Nematodes (roundworms)
Lophotrochozoa (mollusks, segmented worms, brachiopods)
Deuterostomia (vertebrates, sea stars and urchins, certain worms)
Early diverging metazoa (cnidaria, comb jellies, sponges)
Fungi
Plants
Early diverging archaeplastida (green algae, red algae)
SARs† (diatoms, amoeboids, brown algae)
Bacteria
Archaea (single-celled microorganisms that tolerate extreme conditions)

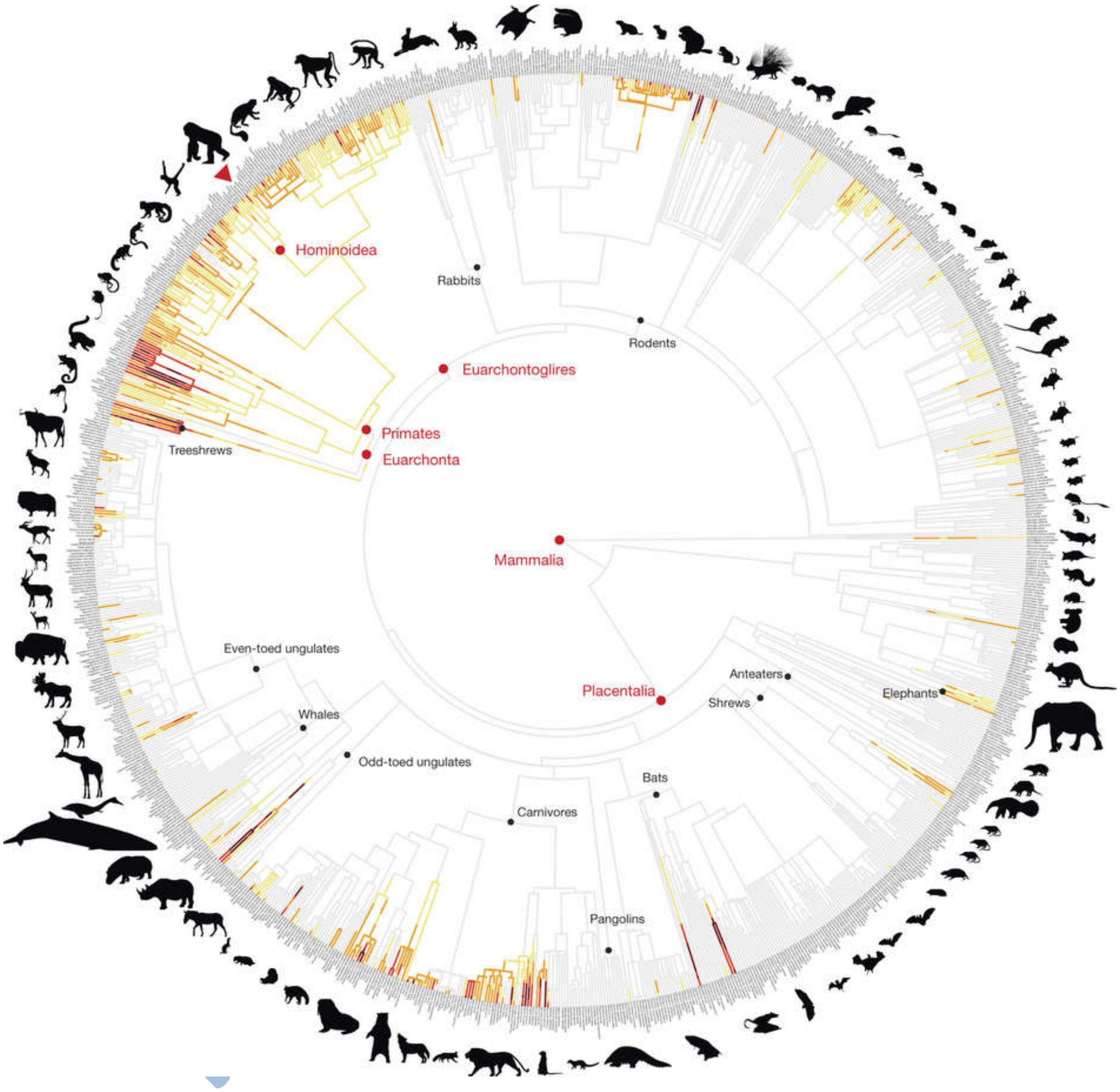
*Estimates vary widely; values shown are averages from multiple sources

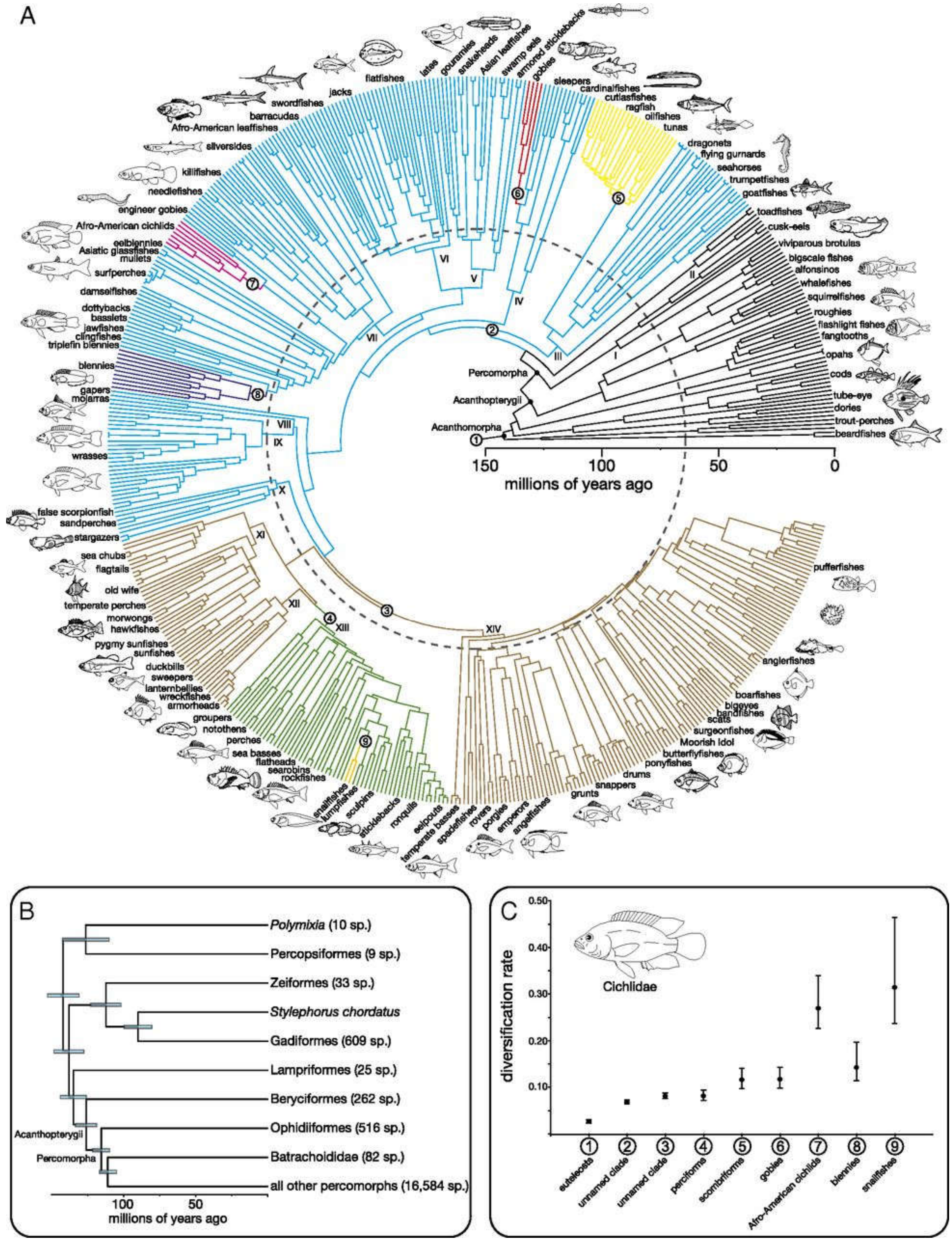
†Stramenopiles, alveolates, Rhizaria

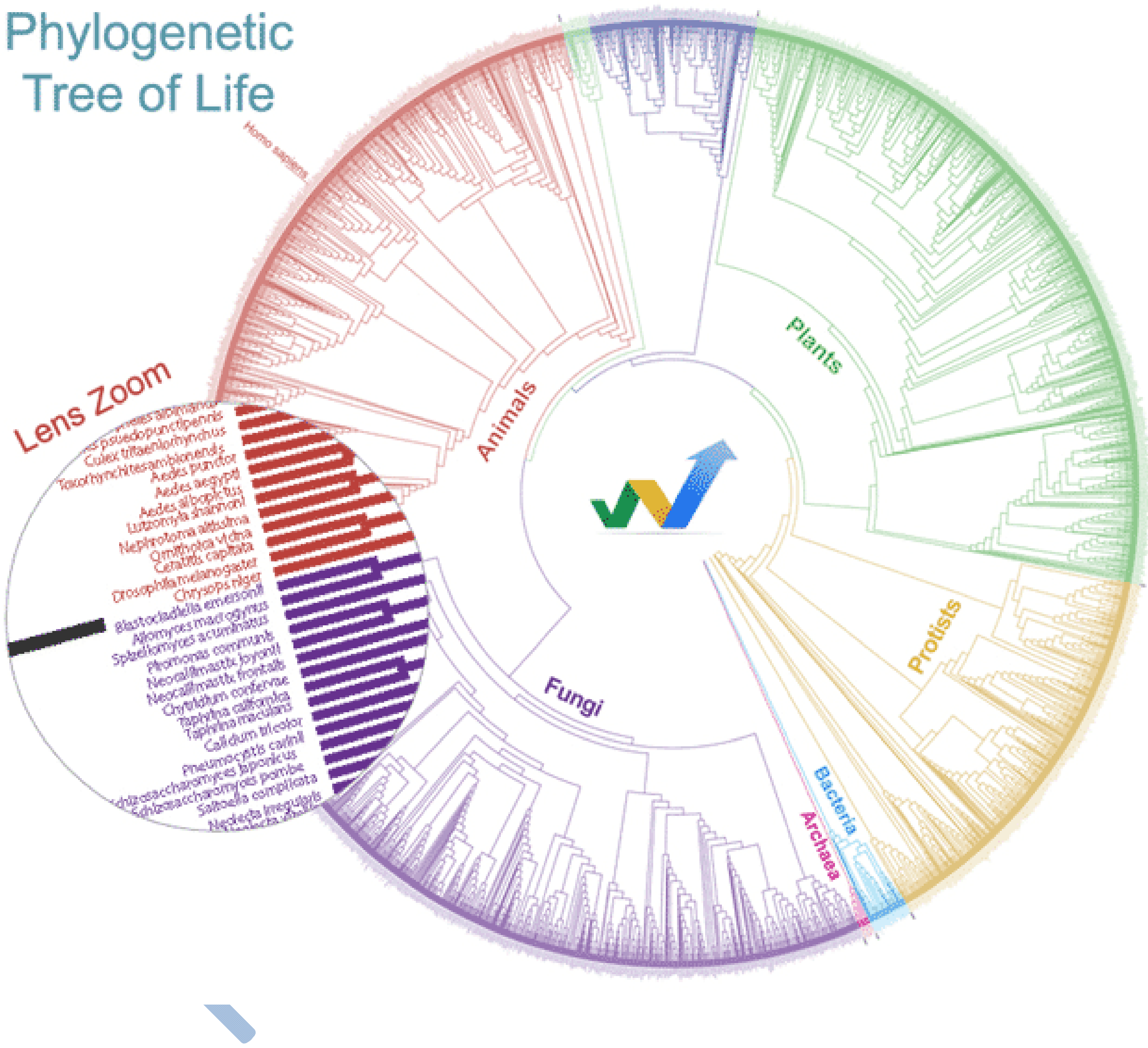

New World *Pheidole*
Asia-Africa clade
Australia-NG clade
● 0.9 ≤ bpp ≤ 1.0
○ 0.7 ≤ bpp < 0.9
● 0.5 < bpp < 0.7
Cephalotes sp.

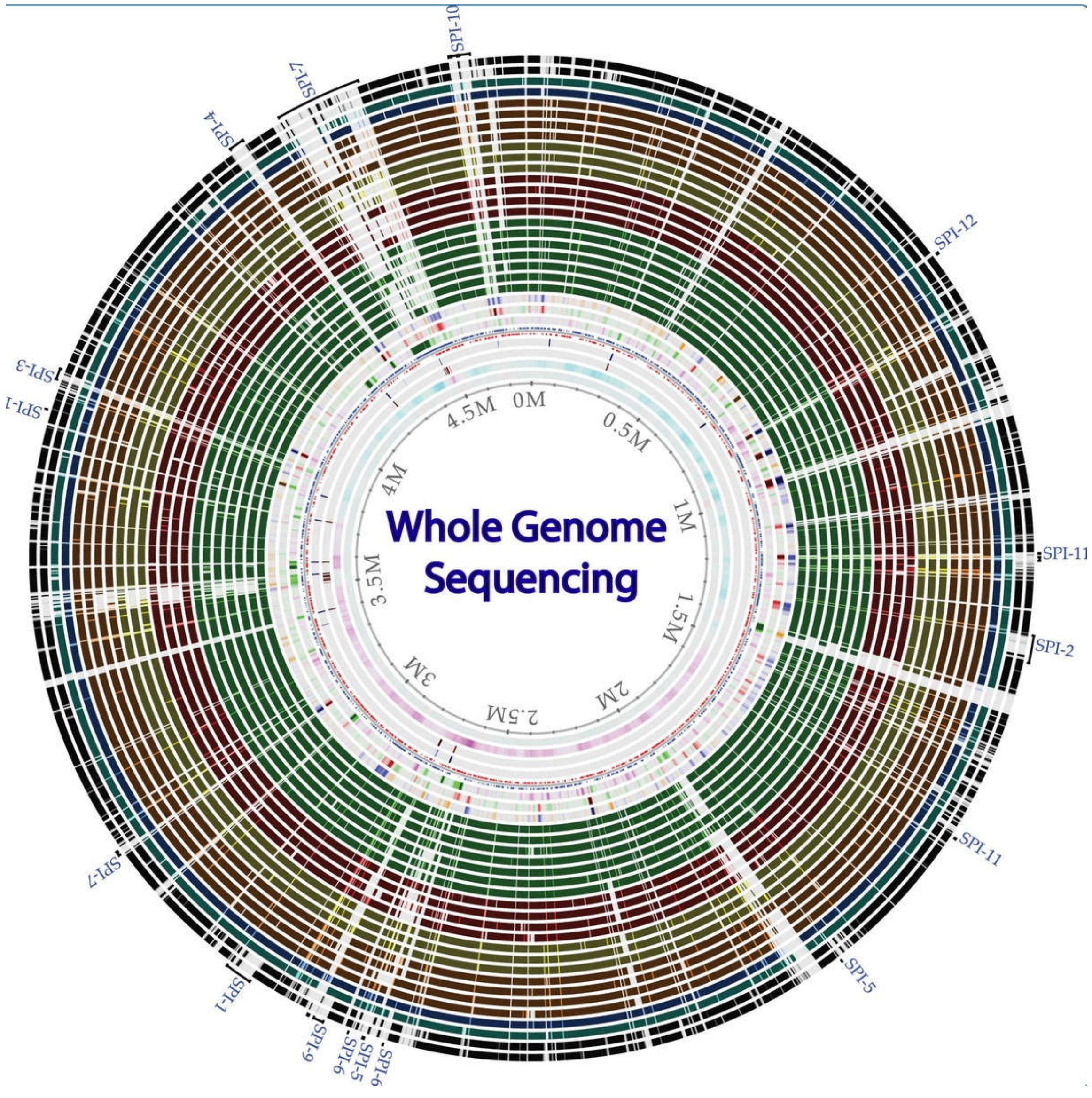

Omikron
Upsilon
Omega
Dyodelta
Beta
Dyoeta
Gamma
Pi
Tau
Xi
Phi
Delta
Epsilon
Dyoiota
Zeta
Iota
Dyotheta
Rho
Lambda
Sigma
Ny
Kappa
My
Psi
Eta
Theta
Dyoepsilon
Dyozeta
Alpha
0.2

TRENDS in Microbiology


Hominoidea
Rabbits
Rodents
Euarchontoglires
Primates
Euarchonta
Treeshrews
Mammalia
Even-toed ungulates
Whales
Odd-toed ungulates
Carnivores
Bats
Placentalia
Anteaters
Shrews
Elephants
Pangolins

A
flatfishes
lates
gouramies
snakeheads
Asian leaffishes
swamp eels
armored sticklebacks
gobies
sleepers
cardinalfishes
cutlasfishes
ragfish
oilfishes
tunas
dragonets
flying gurnards
seahorses
trumpetfishes
goatfishes
toadfishes
cusk-eels
viviparous brotulas
bigscale fishes
alfonsinos
whalefishes
squirrelfishes
roughies
flashlight fishes
fangtooths
opahs
cods
tube-eye
dories
trout-perches
beardfishes
jacks
swordfishes
barracudas
Afro-American leaffishes
silversides
killifishes
needlefishes
engineer gobies
Afro-American cichlids
eelblennies
Asiatic glassfishes
mullets
surfperches
damselfishes
dottybacks
basslets
jawfishes
clingfishes
triplefin blennies
blennies
gapers
mojarras
wrasses
false scorpionfish
sandperches
stargazers
sea chubs
flagtails
old wife
temperate perches
morwongs
hawkfishes
pygmy sunfishes
sunfishes
duckbills
sweepers
lanternbellies
wreckfishes
armorheads
groupers
notothens
perches
sea basses
flatheads
searobins
rockfishes
snailfishes
lumpfishes
sculpins
sticklebacks
ronquils
eelpouts
temperate basses
spadefishes
rovers
porgies
emperors
angelfishes
grunts
snappers
drums
ponyfishes
butterflyfishes
Moorish Idol
surgeonfishes
scats
bandfishes
bigeyes
boarfishes
anglerfishes
pufferfishes
Percomorpha
Acanthopterygii
Acanthomorpha
I
II
III
IV
V
VI
VII
VIII
IX
X
XI
XII
XIII
XIV
①
②
③
④
⑤
⑥
⑦
⑧
⑨
150
100
50
0
millions of years ago
B
Polymixia (10 sp.)
Percopsiformes (9 sp.)
Zeiformes (33 sp.)
Stylephorus chordatus
Gadiformes (609 sp.)
Lampriformes (25 sp.)
Beryciformes (262 sp.)
Ophidiiformes (516 sp.)
Batrachoididae (82 sp.)
all other percomorphs (16,584 sp.)
Acanthopterygii
Percomorpha
100
50
millions of years ago
C
Cichlidae
diversification rate
0.50
0.40
0.30
0.20
0.10
① euteleosts
② unnamed clade
③ unnamed clade
④ perciformes
⑤ scombriformes
⑥ gobies
⑦ Afro-American cichlids
⑧ blennies
⑨ snailfishes

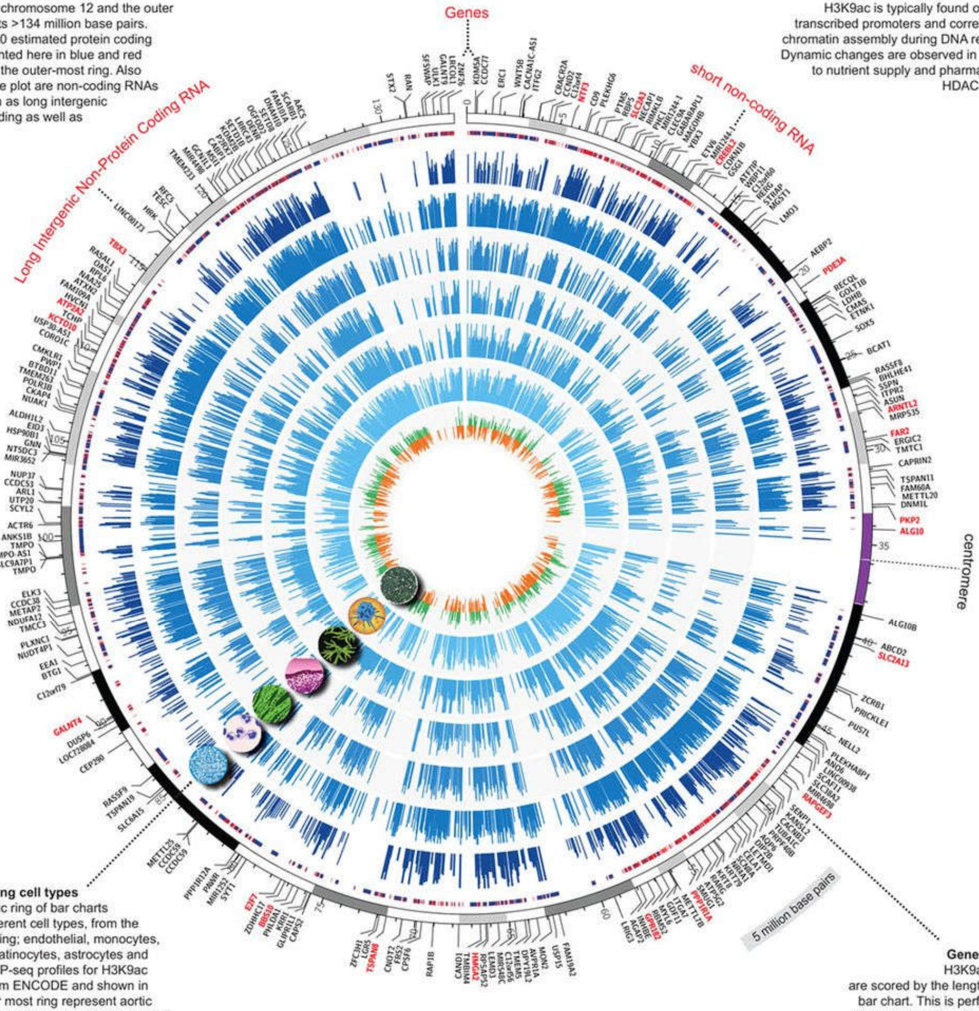

Phylogenetic Tree of Life
Homo sapiens
Lens Zoom
Animals
Plants
Fungi
Protists
Bacteria
Archaea
Culex tritaeniorhynchus
Toxorhynchites amboinensis
Aedes punctor
Aedes aegypti
Aedes albopictus
Lutzomyia shannoni
Nephrotoma altissima
Ornithoica vicina
Ceratitis capitata
Drosophila melanogaster
Chrysops niger
Blastocladiella emersonii
Allomyces macrogynus
Spizellomyces acuminatus
Piromonas communis
Neocallimastix joyonii
Neocallimastix frontalis
Chytridium confervae
Taphrina californica
Taphrina maculans
Calicium tricolor
Pneumocystis carinii
Schizosaccharomyces japonicus
Schizosaccharomyces pombe
Saitoella complicata
Neolecta irregularis


SPI-10
SPI-7
SPI-4
SPI-12
SPI-3
SPI-1
SPI-11
SPI-2
SPI-11
SPI-5
SPI-7
SPI-1
SPI-9
SPI-6
SPI-5
SPI-6
0M
0.5M
1M
1.5M
2M
2.5M
3M
3.5M
4M
4.5M
Whole Genome Sequencing

Mapping human cell types

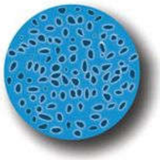
Reading the circos plot
Shown here is chromosome 12 and the outer rings represents >134 million base pairs. There are 1,200 estimated protein coding genes represented here in blue and red outlines inside the outer-most ring. Also indicated on the plot are non-coding RNAs (ncRNAs) such as long intergenic non-protein coding as well as short ncRNAs

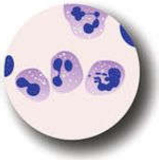
Histone H3 lysine 9 acetylation
H3K9ac is typically found on actively transcribed promoters and correlated with chromatin assembly during DNA replication. Dynamic changes are observed in response to nutrient supply and pharmacological HDAC inhibition



Variation among cell types
Each concentric ring of bar charts represents different cell types, from the outer to inner ring; endothelial, monocytes, myoblasts, keratinocytes, astrocytes and stem cells. ChIP-seq profiles for H3K9ac are derived from ENCODE and shown in blue. The inner most ring represent aortic endothelial cells showing acetylation (green) and deacetylation (orange) conferred by pharmacological HDAC inhibition

Gene patterns
H3K9ac signals are scored by the length of each bar chart. This is performed by Chromatin ImmunoPrecipitation combined with next generation sequencing (ChIP-seq)


umbilical vein endothelial


monocyte

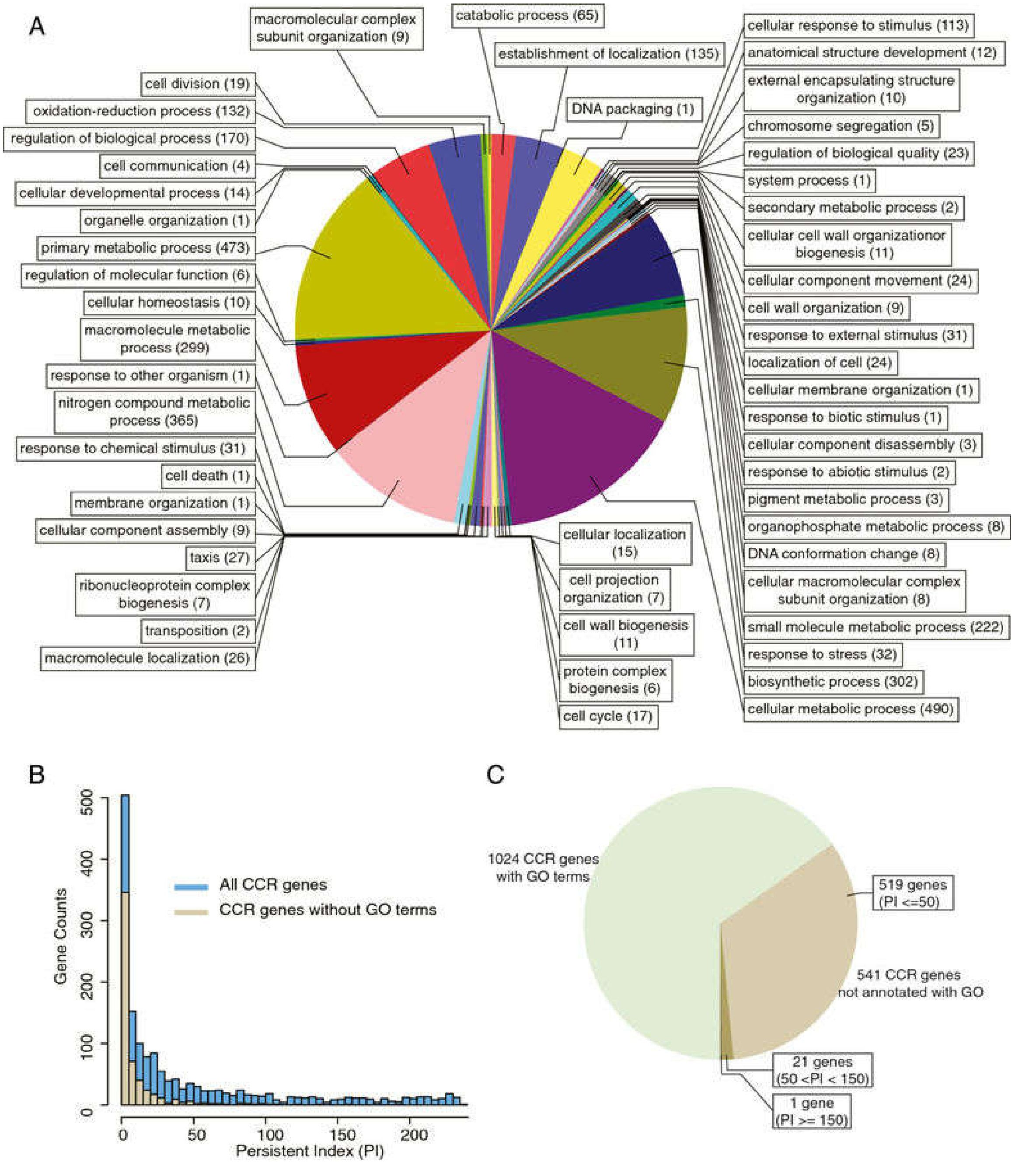
skeletal muscle myoblast

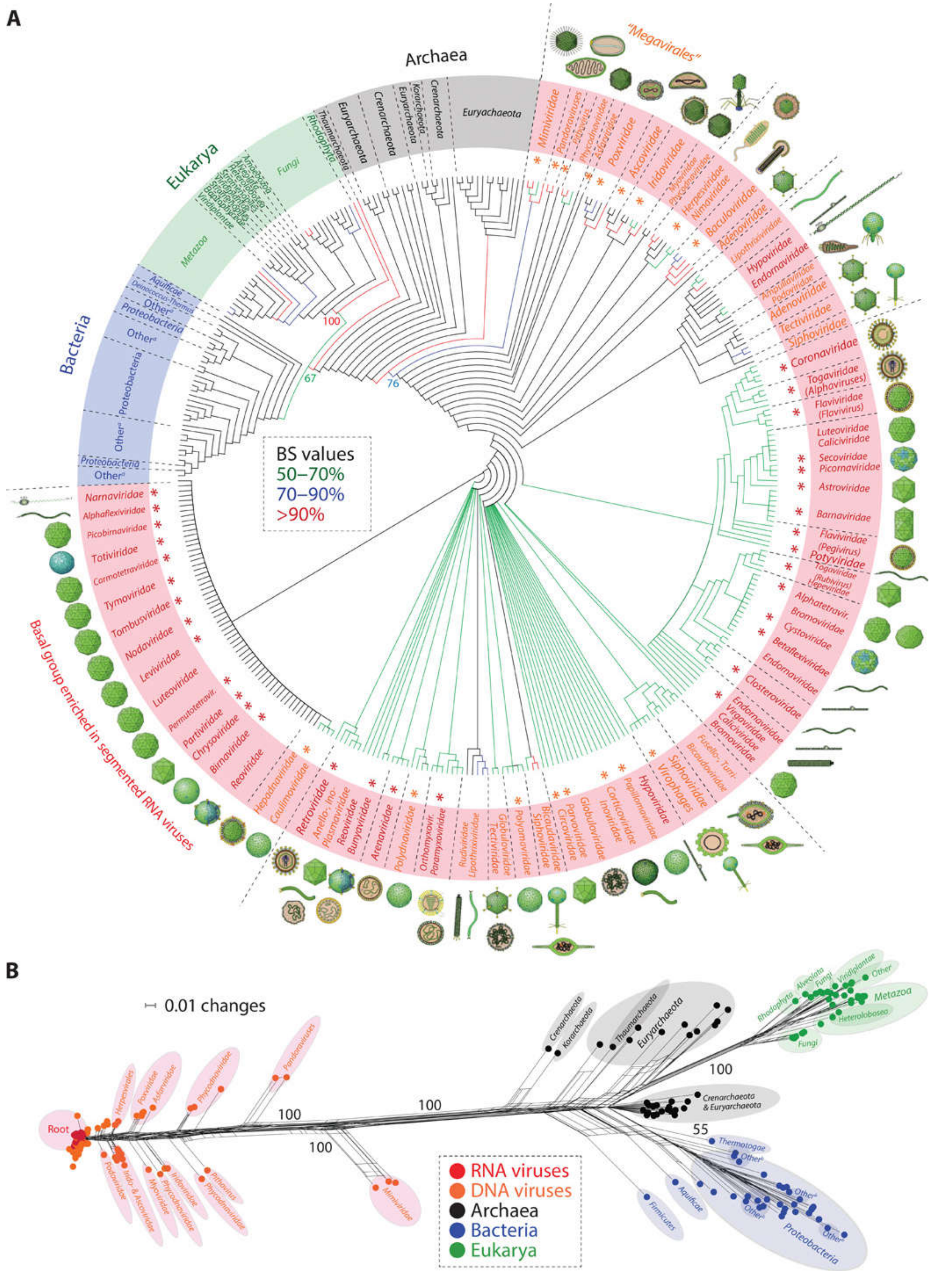
epidermal keratinocyte

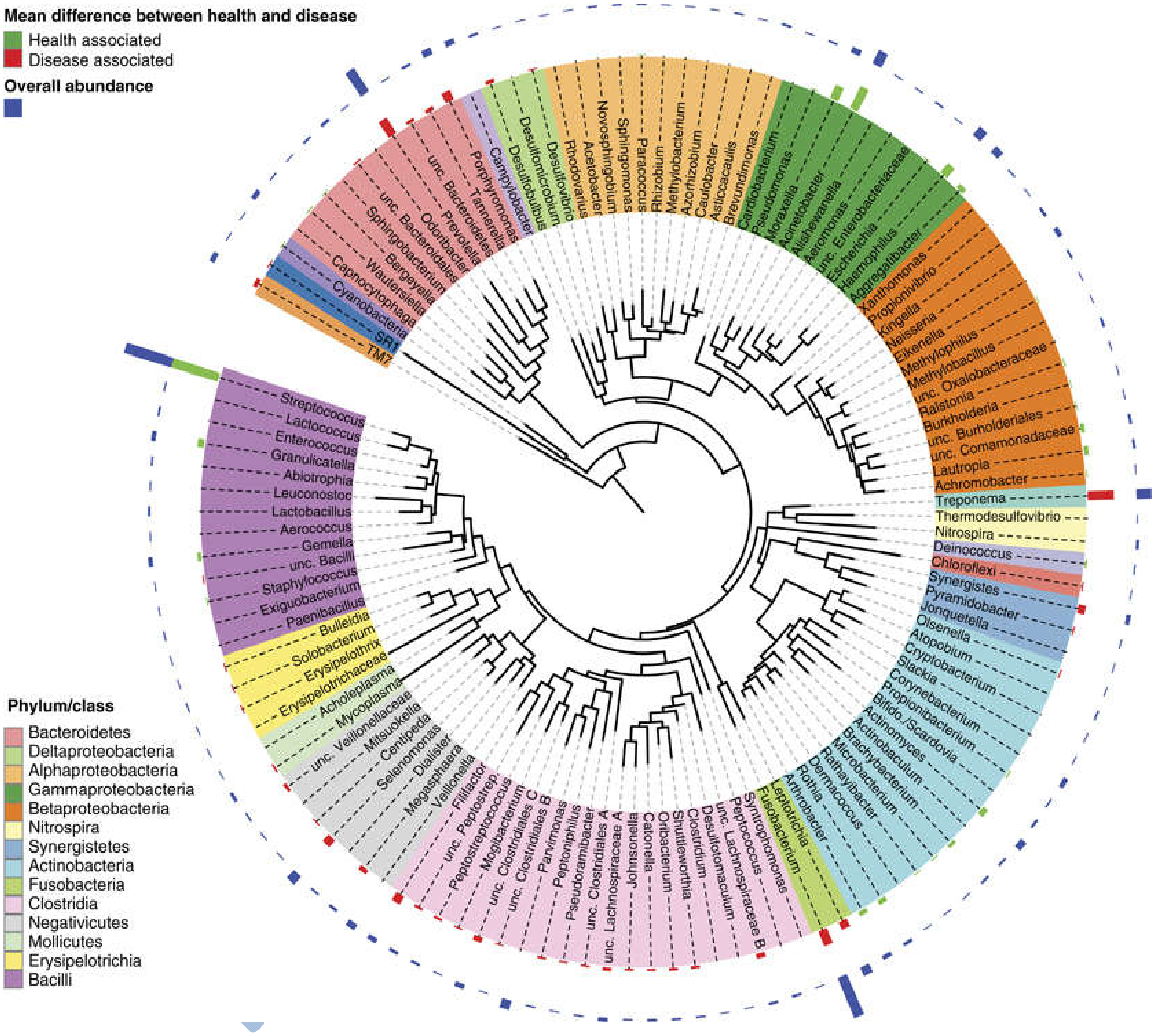
astrocyte

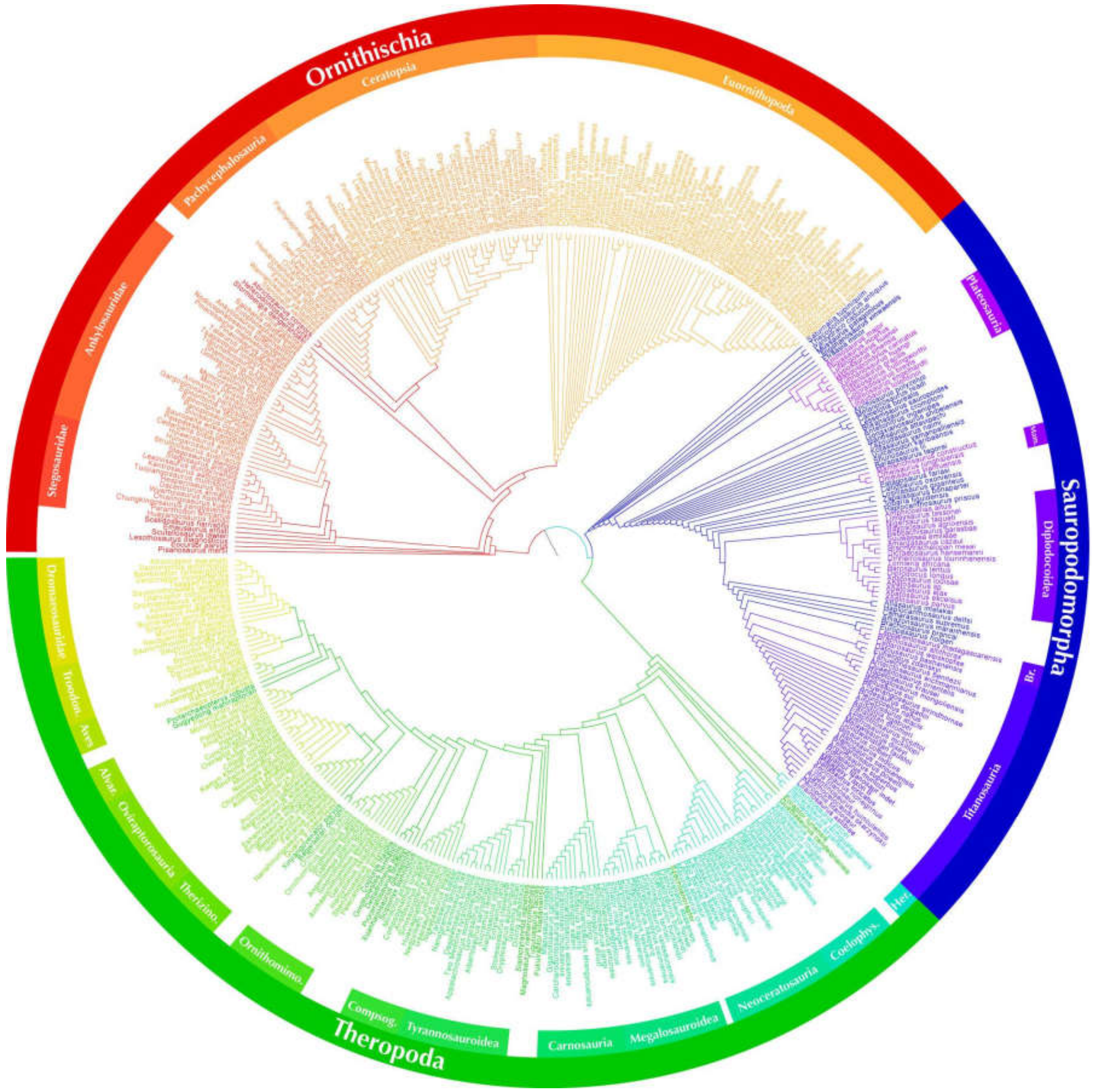
embryonic stem

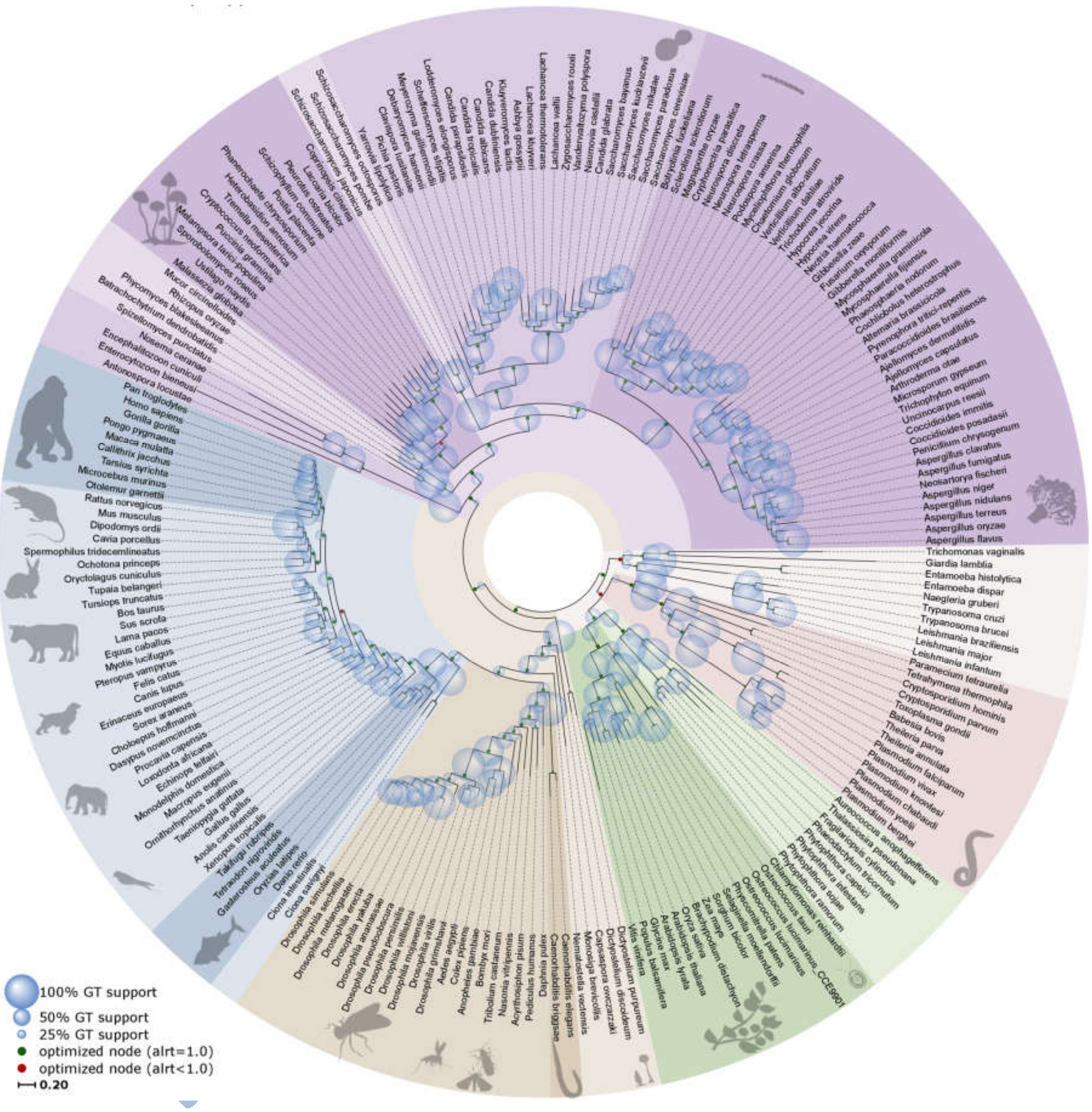
aortic endothelial

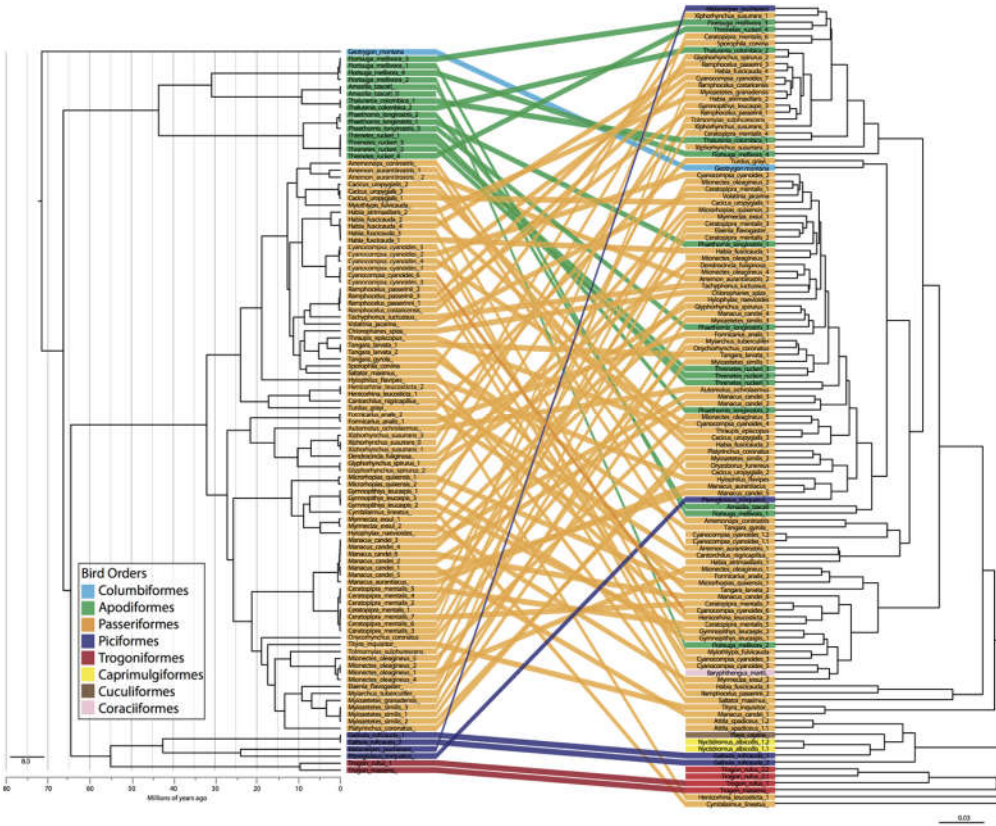
A
macromolecular complex subunit organization (9)
catabolic process (65)
establishment of localization (135)
DNA packaging (1)
cell division (19)
oxidation-reduction process (132)
regulation of biological process (170)
cell communication (4)
cellular developmental process (14)
organelle organization (1)
primary metabolic process (473)
regulation of molecular function (6)
cellular homeostasis (10)
macromolecule metabolic process (299)
response to other organism (1)
nitrogen compound metabolic process (365)
response to chemical stimulus (31)
cell death (1)
membrane organization (1)
cellular component assembly (9)
taxis (27)
ribonucleoprotein complex biogenesis (7)
transposition (2)
macromolecule localization (26)
cellular localization (15)
cell projection organization (7)
cell wall biogenesis (11)
protein complex biogenesis (6)
cell cycle (17)
cellular response to stimulus (113)
anatomical structure development (12)
external encapsulating structure organization (10)
chromosome segregation (5)
regulation of biological quality (23)
system process (1)
secondary metabolic process (2)
cellular cell wall organizationor biogenesis (11)
cellular component movement (24)
cell wall organization (9)
response to external stimulus (31)
localization of cell (24)
cellular membrane organization (1)
response to biotic stimulus (1)
cellular component disassembly (3)
response to abiotic stimulus (2)
pigment metabolic process (3)
organophosphate metabolic process (8)
DNA conformation change (8)
cellular macromolecular complex subunit organization (8)
small molecule metabolic process (222)
response to stress (32)
biosynthetic process (302)
cellular metabolic process (490)
B
Gene Counts
0
100
200
300
400
500
All CCR genes
CCR genes without GO terms
0
50
100
150
200
Persistent Index (PI)
C
1024 CCR genes with GO terms
519 genes (PI <=50)
541 CCR genes not annotated with GO
21 genes (50 <PI < 150)
1 gene (PI >= 150)

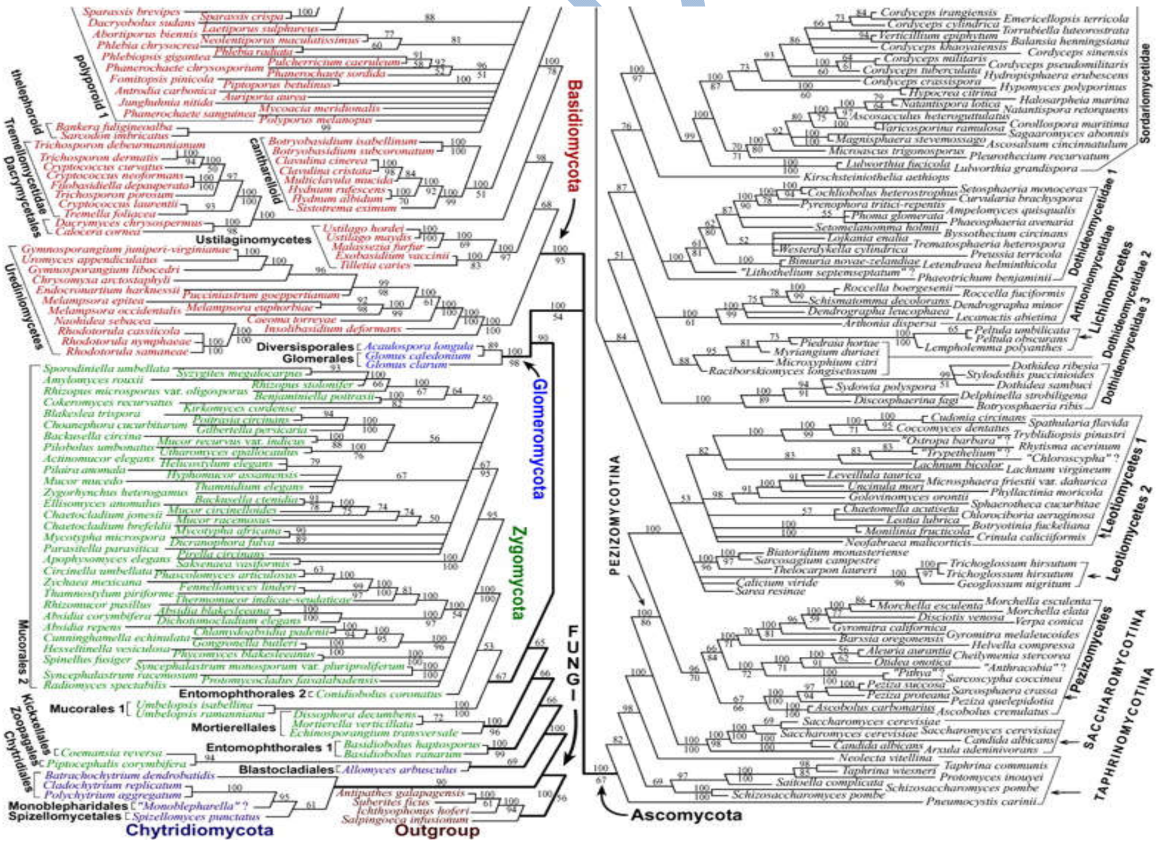
A
Archaea
Euryachaeota
Crenarchaeota
Korarchaeota
Euryarchaeota
Thaumarchaeota
Rhodophyta
Eukarya
Fungi
Metazoa
Viridiplantae
Bacteria
Aquificae
Deinococcus-Thermus
Other
Proteobacteria
Other
"Megavirales"
Mimiviridae
Pandoraviruses
Phycodnaviridae
Poxviridae
Ascoviridae
Iridoviridae
Myoviridae
Phycodnaviridae
Herpesviridae
Nimaviridae
Baculoviridae
Adenoviridae
Lipothrixviridae
Hypoviridae
Endornaviridae
Ampullaviridae
Podoviridae
Adenoviridae
Tectiviridae
Siphoviridae
Coronaviridae
Togaviridae (Alphaviruses)
Flaviviridae (Flavivirus)
Luteoviridae
Caliciviridae
Secoviridae
Picornaviridae
Astroviridae
Barnaviridae
Flaviviridae (Pegivirus)
Potyviridae
Togaviridae (Rubivirus)
Hepeviridae
Alphatetravir.
Bromoviridae
Cystoviridae
Betaflexiviridae
Endornaviridae
Closteroviridae
Endornaviridae
Virgaviridae
Caliciviridae
Bromoviridae
Fuselloviridae
Bicaudaviridae
Siphoviridae
Virophages
Hypoviridae
Papillomaviridae
Corticoviridae
Inoviridae
Globuloviridae
Parvoviridae
Circoviridae
Bicaudaviridae
Siphoviridae
Polyomaviridae
Globuloviridae
Tectiviridae
Rudiviridae
Lipothrixviridae
Orthomyxovir.
Paramyxoviridae
Polydnaviridae
Arenaviridae
Bunyaviridae
Reoviridae
Plasmaviridae
Anello-, Ino
Retroviridae
Caulimoviridae
Hepadnaviridae
Reoviridae
Birnaviridae
Chrysoviridae
Partiviridae
Permutotetravir.
Luteoviridae
Leviviridae
Nodaviridae
Tombusviridae
Tymoviridae
Carmotetraviridae
Totiviridae
Picobirnaviridae
Alphaflexiviridae
Narnaviridae
Basal group enriched in segmented RNA viruses
100
67
76
BS values
50–70%
70–90%
>90%
B
0.01 changes
Root
Herpesvirales
Poxviridae
Asfarviridae
Phycodnaviridae
Pandoraviruses
Podoviridae
Irido- & Ascoviridae
Myoviridae
Iridoviridae
Phycodnaviridae
Pithovirus
Phycodnaviridae
Mimiviridae
100
100
100
Crenarchaeota
Korarchaeota
Thaumarchaeota
Euryarchaeota
Crenarchaeota & Euryarchaeota
100
Rhodophyta
Alveolata
Fungi
Viridiplantae
Other
Metazoa
Heterolobosea
Fungi
55
Thermotogae
Other
Firmicutes
Aquificae
Other
Other
Proteobacteria
Other
RNA viruses
DNA viruses
Archaea
Bacteria
Eukarya

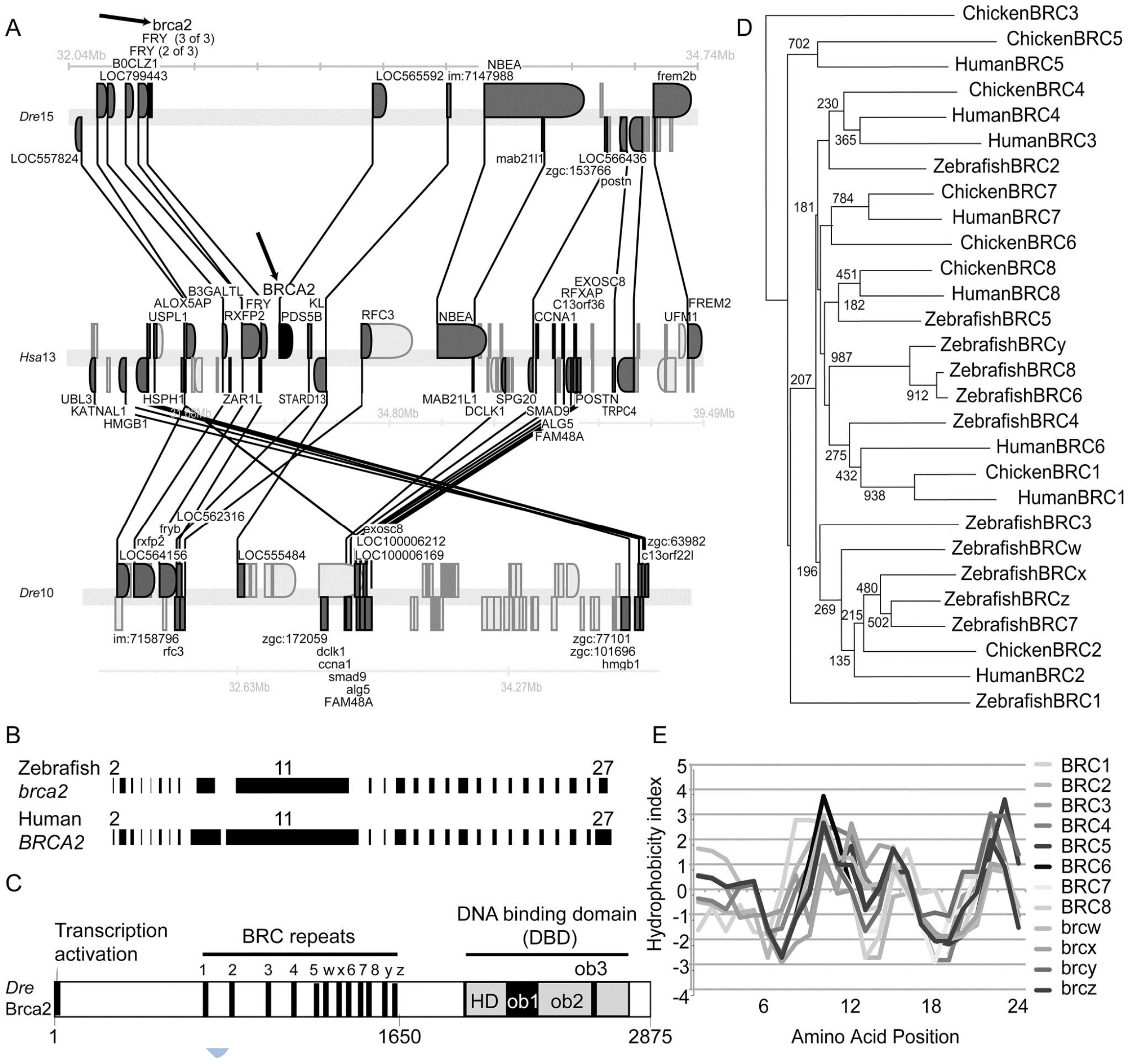

Mean difference between health and disease
Health associated
Disease associated
Overall abundance
Phylum/class
Bacteroidetes
Deltaproteobacteria
Alphaproteobacteria
Gammaproteobacteria
Betaproteobacteria
Nitrospira
Synergistetes
Actinobacteria
Fusobacteria
Clostridia
Negativicutes
Mollicutes
Erysipelotrichia
Bacilli
TM7
SR1
Cyanobacteria
Capnocytophaga
Wautersiella
Bergeyella
Sphingobacterium
unc. Bacteroidales
Odoribacter
Prevotella
unc. Bacteroidetes
Tannerella
Porphyromonas
Campylobacter
Desulfobulbus
Desulfomicrobium
Desulfovibrio
Rhodovarius
Acetobacter
Novosphingobium
Sphingomonas
Paracoccus
Rhizobium
Methylobacterium
Azorhizobium
Caulobacter
Asticcacaulis
Brevundimonas
Cardiobacterium
Pseudomonas
Moraxella
Acinetobacter
Shewanella
Aeromonas
unc. Enterobacteriaceae
Escherichia
Haemophilus
Aggregatibacter
Xanthomonas
Propionivibrio
Kingella
Neisseria
Eikenella
Methylophilus
Methylobacillus
unc. Oxalobacteraceae
Ralstonia
Burkholderia
unc. Burholderiales
unc. Comamonadaceae
Lautropia
Achromobacter
Treponema
Thermodesulfovibrio
Nitrospira
Deinococcus
Chloroflexi
Synergistes
Pyramidobacter
Jonquetella
Olsenella
Atopobium
Cryptobacterium
Slackia
Corynebacterium
Propionibacterium
Bifido./Scardovia
Actinomyces
Actinobaculum
Brachybacterium
Microbacterium
Rathayibacter
Dermacoccus
Rothia
Arthrobacter
Leptotrichia
Fusobacterium
Syntrophomonas
Peptococcus
unc. Lachnospiraceae B
Desulfotomaculum
Clostridium
Shuttleworthia
Oribacterium
Catonella
Johnsonella
unc. Lachnospiraceae A
unc. Clostridiales A
Pseudoramibacter
Peptoniphilus
Parvimonas
unc. Clostridiales B
unc. Clostridiales C
Mogibacterium
Peptostreptococcus
unc. Peptostrep.
Filifactor
Veillonella
Megasphaera
Dialister
Selenomonas
Centipeda
Mitsuokella
unc. Veillonellaceae
Mycoplasma
Acholeplasma
Erysipelotrichaceae
Erysipelothrix
Solobacterium
Bulleidia
Paenibacillus
Exiguobacterium
Staphylococcus
unc. Bacilli
Gemella
Aerococcus
Lactobacillus
Leuconostoc
Abiotrophia
Granulicatella
Enterococcus
Lactococcus
Streptococcus

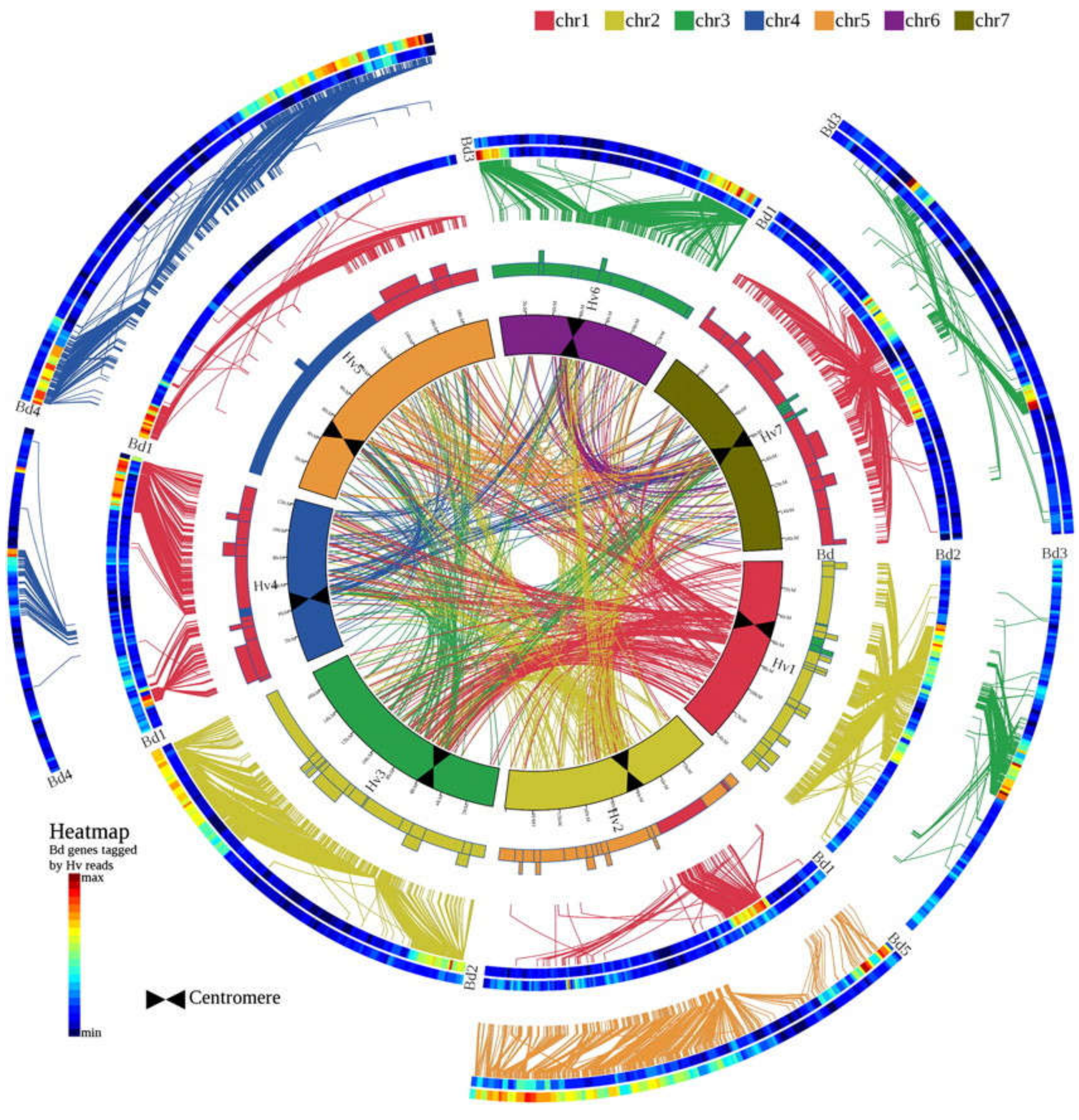

Ornithischia
Ceratopsia
Euornithopoda
Pachycephalosauria
Ankylosauridae
Stegosauridae
Sauropodomorpha
Plateosauria
Mas.
Diplodocoidea
Br.
Titanosauria
Her.
Coelophys.
Neoceratosauria
Megalosauroidea
Carnosauria
Tyrannosauroidea
Compsog.
Theropoda
Ornithomimo.
Therizino.
Oviraptorosauria
Alvar.
Aves
Troodon.
Dromaeosauridae


Schizosaccharomyces japonicus
Schizosaccharomyces pombe
Schizosaccharomyces octosporus
Yarrowia lipolytica
Pichia pastoris
Clavispora lusitaniae
Debaryomyces hansenii
Meyerozyma guilliermondii
Scheffersomyces stipitis
Lodderomyces elongisporus
Candida parapsilosis
Candida tropicalis
Candida albicans
Candida dubliniensis
Kluyveromyces lactis
Ashbya gossypii
Lachancea kluyveri
Lachancea thermotolerans
Lachancea waltii
Zygosaccharomyces rouxii
Vanderwaltozyma polyspora
Naumovia castellii
Candida glabrata
Saccharomyces bayanus
Saccharomyces mikatae
Saccharomyces kudriavzevii
Saccharomyces paradoxus
Saccharomyces cerevisiae
Botrytis fuckeliana
Sclerotinia sclerotiorum
Magnaporthe oryzae
Cryphonectria parasitica
Neurospora discreta
Neurospora tetrasperma
Neurospora crassa
Podospora anserina
Myceliophthora thermophila
Chaetomium globosum
Verticillium albo-atrum
Verticillium dahliae
Trichoderma atroviride
Hypocrea virens
Hypocrea jecorina
Nectria haematococca
Gibberella zeae
Fusarium oxysporum
Gibberella moniliformis
Mycosphaerella graminicola
Mycosphaerella fijiensis
Phaeosphaeria nodorum
Cochliobolus heterostrophus
Alternaria brassicicola
Pyrenophora tritici-repentis
Paracoccidioides brasiliensis
Ajellomyces dermatitidis
Ajellomyces capsulatus
Arthroderma otae
Microsporum gypseum
Trichophyton equinum
Uncinocarpus reesii
Coccidioides immitis
Coccidioides posadasii
Penicillium chrysogenum
Aspergillus clavatus
Aspergillus fumigatus
Neosartorya fischeri
Aspergillus niger
Aspergillus nidulans
Aspergillus terreus
Aspergillus oryzae
Aspergillus flavus
Trichomonas vaginalis
Giardia lamblia
Entamoeba histolytica
Entamoeba dispar
Naegleria gruberi
Trypanosoma cruzi
Trypanosoma brucei
Leishmania braziliensis
Leishmania major
Leishmania infantum
Paramecium tetraurelia
Tetrahymena thermophila
Cryptosporidium hominis
Cryptosporidium parvum
Toxoplasma gondii
Babesia bovis
Theileria parva
Theileria annulata
Plasmodium falciparum
Plasmodium vivax
Plasmodium knowlesi
Plasmodium chabaudi
Plasmodium yoelii
Plasmodium berghei
Aureococcus anophagefferens
Thalassiosira pseudonana
Fragilariopsis cylindrus
Phaeodactylum tricornutum
Phytophthora capsici
Phytophthora infestans
Phytophthora sojae
Phytophthora ramorum
Chlamydomonas reinhardtii
Micromonas pusillus_CCE9901
Ostreococcus lucimarinus
Ostreococcus tauri
Physcomitrella patens
Selaginella moellendorffii
Sorghum bicolor
Zea mays
Brachypodium distachyon
Oryza sativa
Arabidopsis lyrata
Arabidopsis thaliana
Glycine max
Populus balsamifera
Vitis vinifera
Dictyostelium purpureum
Dictyostelium discoideum
Capsaspora owczarzaki
Monosiga brevicollis
Nematostella vectensis
Caenorhabditis briggsae
Caenorhabditis elegans
Daphnia pulex
Pediculus humanus
Acyrthosiphon pisum
Nasonia vitripennis
Tribolium castaneum
Bombyx mori
Anopheles gambiae
Culex pipiens
Aedes aegypti
Drosophila grimshawi
Drosophila virilis
Drosophila mojavensis
Drosophila willistoni
Drosophila persimilis
Drosophila pseudoobscura
Drosophila ananassae
Drosophila yakuba
Drosophila erecta
Drosophila melanogaster
Drosophila sechellia
Drosophila simulans
Ciona savignyi
Ciona intestinalis
Danio rerio
Oryzias latipes
Gasterosteus aculeatus
Tetraodon nigroviridis
Takifugu rubripes
Xenopus tropicalis
Anolis carolinensis
Gallus gallus
Taeniopygia guttata
Ornithorhynchus anatinus
Macropus eugenii
Monodelphis domestica
Echinops telfairi
Loxodonta africana
Procavia capensis
Dasypus novemcinctus
Choloepus hoffmanni
Sorex araneus
Erinaceus europaeus
Canis lupus
Felis catus
Pteropus vampyrus
Myotis lucifugus
Equus caballus
Lama pacos
Sus scrofa
Bos taurus
Tursiops truncatus
Tupaia belangeri
Oryctolagus cuniculus
Ochotona princeps
Spermophilus tridecemlineatus
Cavia porcellus
Dipodomys ordii
Mus musculus
Rattus norvegicus
Otolemur garnettii
Microcebus murinus
Tarsius syrichta
Callithrix jacchus
Macaca mulatta
Pongo pygmaeus
Gorilla gorilla
Homo sapiens
Pan troglodytes
Antonospora locustae
Enterocytozoon bieneusi
Encephalitozoon cuniculi
Nosema ceranae
Spizellomyces punctatus
Batrachochytrium dendrobatidis
Phycomyces blakesleeanus
Rhizopus oryzae
Mucor circinelloides
Malassezia globosa
Ustilago maydis
Sporobolomyces roseus
Melampsora laricis-populina
Puccinia graminis
Cryptococcus neoformans
Tremella mesenterica
Heterobasidion annosum
Phanerochaete chrysosporium
Schizophyllum commune
Postia placenta
Pleurotus ostreatus
Laccaria bicolor
Coprinopsis cinerea
100% GT support
50% GT support
25% GT support
● optimized node (alrt=1.0)
● optimized node (alrt<1.0)
0.20


Bird Orders
🟦 Columbiformes
🟩 Apodiformes
🟧 Passeriformes
🟦 Piciformes
🟥 Trogoniformes
🟨 Caprimulgiformes
🟫 Cuculiformes
🟪 Coraciiformes
80
70
60
50
40
30
20
10
0
Millions of years ago
0.03


Basidiomycota
polyporoid
thelephoroid
Tremellomycetidae
Dacrymycetales
cantharelloid
Ustilaginomycetes
Urediniomycetes
Diversisporales
Glomerales
Glomeromycota
Zygomycota
Mucorales 2
Entomophthorales 2
Mucorales 1
Mortierellales
Kickxellales
Zoopagales
Chytridiales
Entomophthorales 1
Blastocladiales
Monoblepharidales
Spizellomycetales
Chytridiomycota
Outgroup
FUNGI
Sordariomycetidae
Dothideomycetidae 1
Arthoniomycetidae
Dothideomycetidae 2
Lichinomycetes
Dothideomycetidae 3
Leotiomycetes 1
Leotiomycetes 2
Pezizomycetes
PEZIZOMYCOTINA
SACCHAROMYCOTINA
TAPHRINOMYCOTINA
Ascomycota


A
brca2
FRY (3 of 3)
FRY (2 of 3)
B0CLZ1
LOC799443
32.04Mb
34.74Mb
LOC565592
im:7147988
NBEA
frem2b
Dre15
LOC557824
mab21l1
zgc:153766
LOC566436
postn
BRCA2
B3GALTL
ALOX5AP
USPL1
RXFP2
FRY
PDS5B
KL
RFC3
NBEA
EXOSC8
RFXAP
C13orf36
CCNA1
FREM2
UFM1
Hsa13
UBL3
KATNAL1
HMGB1
HSPH1
ZAR1L
STARD13
MAB21L1
DCLK1
SPG20
SMAD9
ALG5
FAM48A
POSTN
TRPC4
34.80Mb
39.49Mb
LOC562316
fryb
rxfp2
LOC564156
LOC555484
exosc8
LOC100006212
LOC100006169
zgc:63982
c13orf22l
Dre10
im:7158796
rfc3
zgc:172059
dclk1
ccna1
smad9
alg5
FAM48A
zgc:77101
zgc:101696
hmgb1
32.63Mb
34.27Mb
B
Zebrafish
brca2
Human
BRCA2
2
11
27
C
Transcription activation
BRC repeats
DNA binding domain (DBD)
1 2 3 4 5 w x 6 7 8 y z
ob3
Dre
Brca2
HD
ob1
ob2
1
1650
2875
D
ChickenBRC3
702
ChickenBRC5
HumanBRC5
230
ChickenBRC4
HumanBRC4
365
HumanBRC3
ZebrafishBRC2
784
ChickenBRC7
181
HumanBRC7
ChickenBRC6
451
ChickenBRC8
182
HumanBRC8
ZebrafishBRC5
ZebrafishBRCy
987
ZebrafishBRC8
207
912
ZebrafishBRC6
ZebrafishBRC4
HumanBRC6
275
ChickenBRC1
432
938
HumanBRC1
ZebrafishBRC3
ZebrafishBRCw
196
ZebrafishBRCx
480
ZebrafishBRCz
269
215
502
ZebrafishBRC7
ChickenBRC2
135
HumanBRC2
ZebrafishBRC1
E
Hydrophobicity index
5
4
3
2
1
0
-1
-2
-3
-4
6
12
18
24
Amino Acid Position
BRC1
BRC2
BRC3
BRC4
BRC5
BRC6
BRC7
BRC8
brcw
brcx
brcy
brcz



🟥chr1 🟨chr2 🟩chr3 🟦chr4 🟧chr5 🟪chr6 🟫chr7
Hv1
Hv2
Hv3
Hv4
Hv5
Hv6
Hv7
Bd
Bd1
Bd2
Bd3
Bd4
Bd5
Heatmap
Bd genes tagged
by Hv reads
max
min
Centromere

Le tappe

Le tipologie

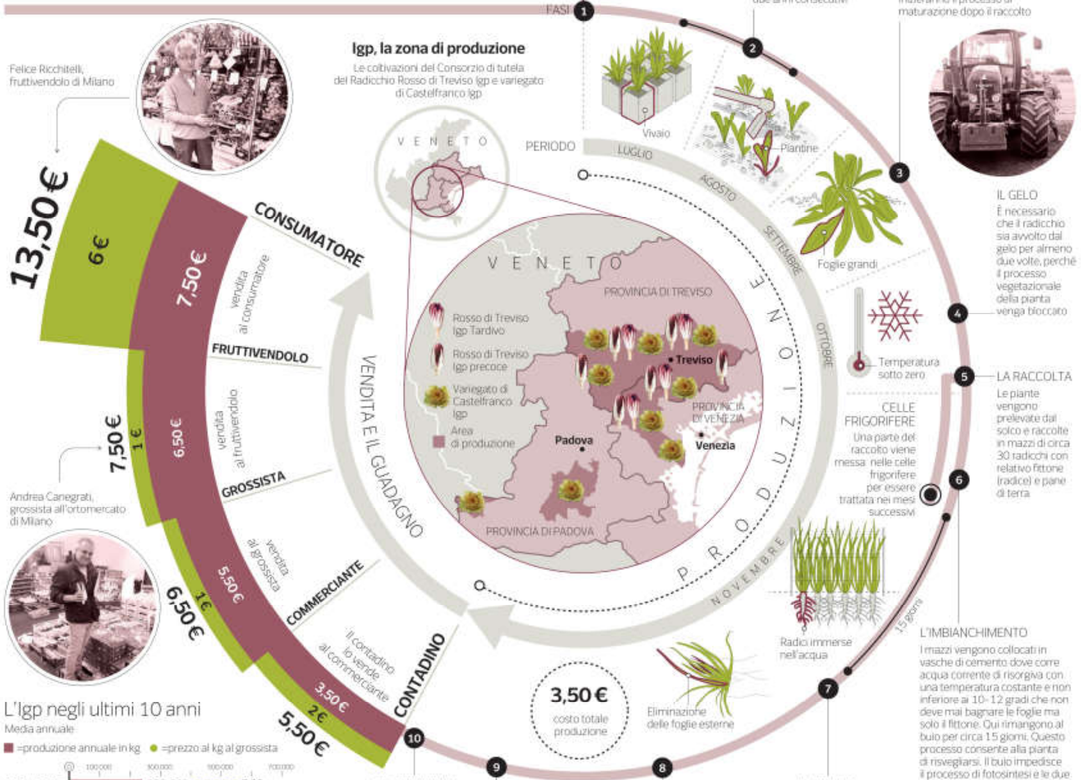
Il termine Igp (Indicazione geografica protetta) indica un marchio di origine attribuito dall'Ue a quei prodotti agricoli e alimentari di una determinata area geografica. Chi produce Igp deve attenersi a rigide regole produttive stabilite nel disciplinare di produzione

Igp	**Radicchio di Verona Igp**	**Radicchio di Chioggia Igp**	**RADICCHIO ROSSO DI TREVISO IGP TARDIVO**	**Radicchio Rosso di Treviso Igp precoce**	**Radicchio Variegato di Castelfranco Igp**
Non Igp	Radicchio semilungo	Radicchio tondo	Radicchio tardivo o Radicchio tosso tardivo	Radicchio lungo	Radicchio variegato

La produzione del radicchio rosso di Treviso tardivo

- 🟥 X = Costo
- 🟩 X = Ricavo
- X = **Prezzo di vendita**

È un prodotto ortofrutticolo italiano. È l'unica cicoria che arriva solo in parte dal campo. Matura dopo il raccolto in vasche di acqua di risorgiva.
Ecco tutte le diverse fasi, dalla semina al consumatore


FASI
1
2
3
4
5
6
7
8
9
10
13,50€
6€
7,50€
CONSUMATORE
vendita al consumatore
FRUTTIVENDOLO
7,50€
1€
6,50€
vendita al fruttivendolo
GROSSISTA
6,50€
1€
5,50€
vendita al grossista
COMMERCIANTE
5,50€
2€
3,50€
Il contadino lo vende al commerciante
CONTADINO
VENDITA E IL GUADAGNO
VENETO
V E N E T O
PROVINCIA DI TREVISO
Treviso
PROVINCIA DI VENEZIA
Venezia
Padova
PROVINCIA DI PADOVA
Rosso di Treviso Igp Tardivo
Rosso di Treviso Igp precoce
Variegato di Castelfranco Igp
Area di produzione
PERIODO
LUGLIO
AGOSTO
SETTEMBRE
OTTOBRE
NOVEMBRE
P R O D U Z I O N E
Vivaio
Piantine
Fogile grandi
Temperatura sotto zero
Radici immerse nell'acqua
15 giorni
Eliminazione delle foglie esterne
3,50 €
costo totale produzione

Felice Ricchitelli, fruttivendolo di Milano

Andrea Canegrati, grossista all'ortomercato di Milano

Igp, la zona di produzione

Le coltivazioni del Consorzio di tutela del Radicchio Rosso di Treviso Igp e variegato di Castelfranco Igp

LA SEMINA
Ai primi di luglio, con la luna calante, si procede alla semina che avviene ache in vivaio

PIANTUMAZIONE
Le piantine vengono messe a dimora in un terreno a rotazione. Lo stesso campo accoglie il radicchio per due anni consecutivi

IN CAMPO
I campi si presentano come distese verdi e, fino a che restano nella terra, le piante risultano praticamente immangiabili. Inizieranno il processo di maturazione dopo il raccolto

IL GELO
È necessario che il radicchio sia avvolto dal gelo per almeno due volte, perché il processo vegetazionale della pianta venga bloccato

LA RACCOLTA
Le piante vengono prelevate dal solco e raccolte in mazzi di circa 30 radicchi con relativo fittone (radice) e pane di terra

CELLE FRIGORIFERE
Una parte del raccolto viene messa nelle celle frigorifere per essere trattata nei mesi successivi

L'IMBIANCHIMENTO
I mazzi vengono collocati in vasche di cemento dove corre acqua corrente di risorgiva con una temperatura costante e non inferiore ai 10-12 gradi che non deve mai bagnare le foglie ma solo il fittone. Qui rimangono al buio per circa 15 giorni. Questo processo consente alla pianta di risvegliarsi. Il buio impedisce il processo di fotosintesi e le due settimane sono sufficienti per permettere che il nuovo cuore della cicoria rinasca (sotto, nelle foto, il contadino Paolo Franchetto)

LA PULIZIA
Vengono eliminate manualmente tutte le ultime foglie esterne con un coltello e pulito il fittone

LAVAGGIO
I cuori rossi vengono puliti nell'acqua di risorgiva

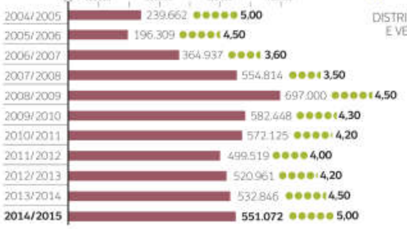
CONFEZIONAMENTO
Pianta per pianta manualmente

DISTRIBUZIONE E VENDITA

L'Igp negli ultimi 10 anni

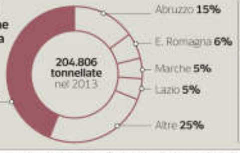
Media annuale

🟥 =produzione annuale in kg ● =prezzo al kg al grossista

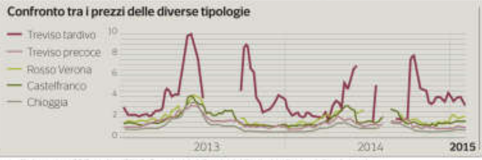


I numeri

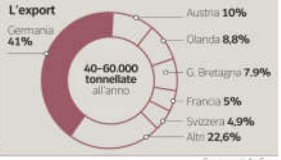
La produzione totale in Italia



Confronto tra i prezzi delle diverse tipologie

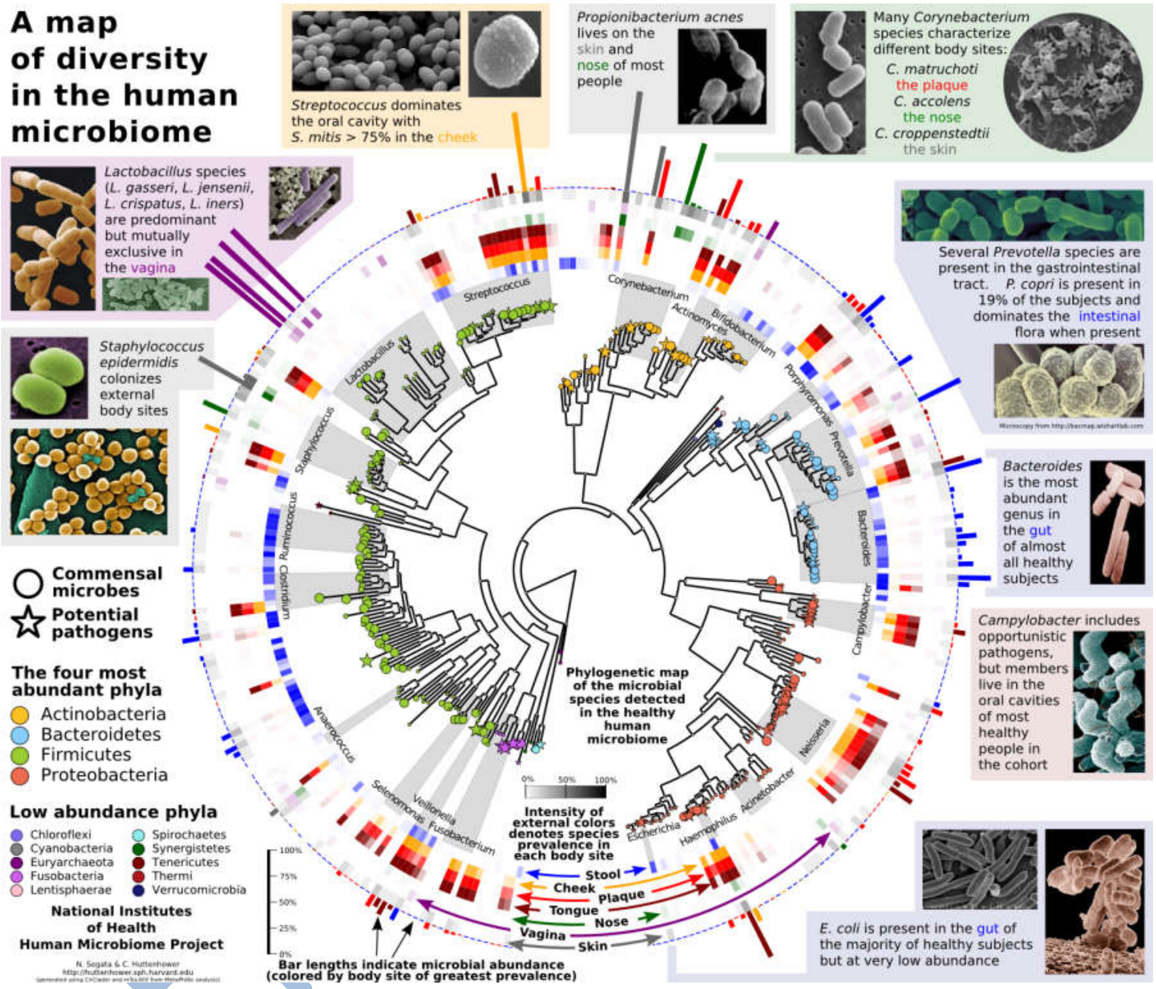


L'export



Fonti: elaborazioni e stime Ismea su dati Istat, Regione Veneto -Veneto Agricoltura - Elaborazioni CSO su dati ISTAT-Consorzio di Tutela del Radicchio Rosso di Treviso Igp

Corriere della Sera



A map of diversity in the human microbiome

Streptococcus dominates the oral cavity with *S. mitis* > 75% in the cheek

Propionibacterium acnes lives on the skin and nose of most people

Many *Corynebacterium* species characterize different body sites:
C. matruchoti the plaque
C. accolens the nose
C. croppenstedtii the skin

Lactobacillus species (*L. gasseri*, *L. jensenii*, *L. crispatus*, *L. iners*) are predominant but mutually exclusive in the vagina

Several *Prevotella* species are present in the gastrointestinal tract. *P. copri* is present in 19% of the subjects and dominates the intestinal flora when present

Staphylococcus epidermidis colonizes external body sites

Bacteroides is the most abundant genus in the gut of almost all healthy subjects

Campylobacter includes opportunistic pathogens, but members live in the oral cavities of most healthy people in the cohort

E. coli is present in the gut of the majority of healthy subjects but at very low abundance

○ Commensal microbes
☆ Potential pathogens

The four most abundant phyla

- ● Actinobacteria
- ● Bacteroidetes
- ● Firmicutes
- ● Proteobacteria

Low abundance phyla

- ● Chloroflexi
- ● Cyanobacteria
- ● Euryarchaeota
- ● Fusobacteria
- ● Lentisphaerae
- ● Spirochaetes
- ● Synergistetes
- ● Tenericutes
- ● Thermi
- ● Verrucomicrobia

Phylogenetic map of the microbial species detected in the healthy human microbiome

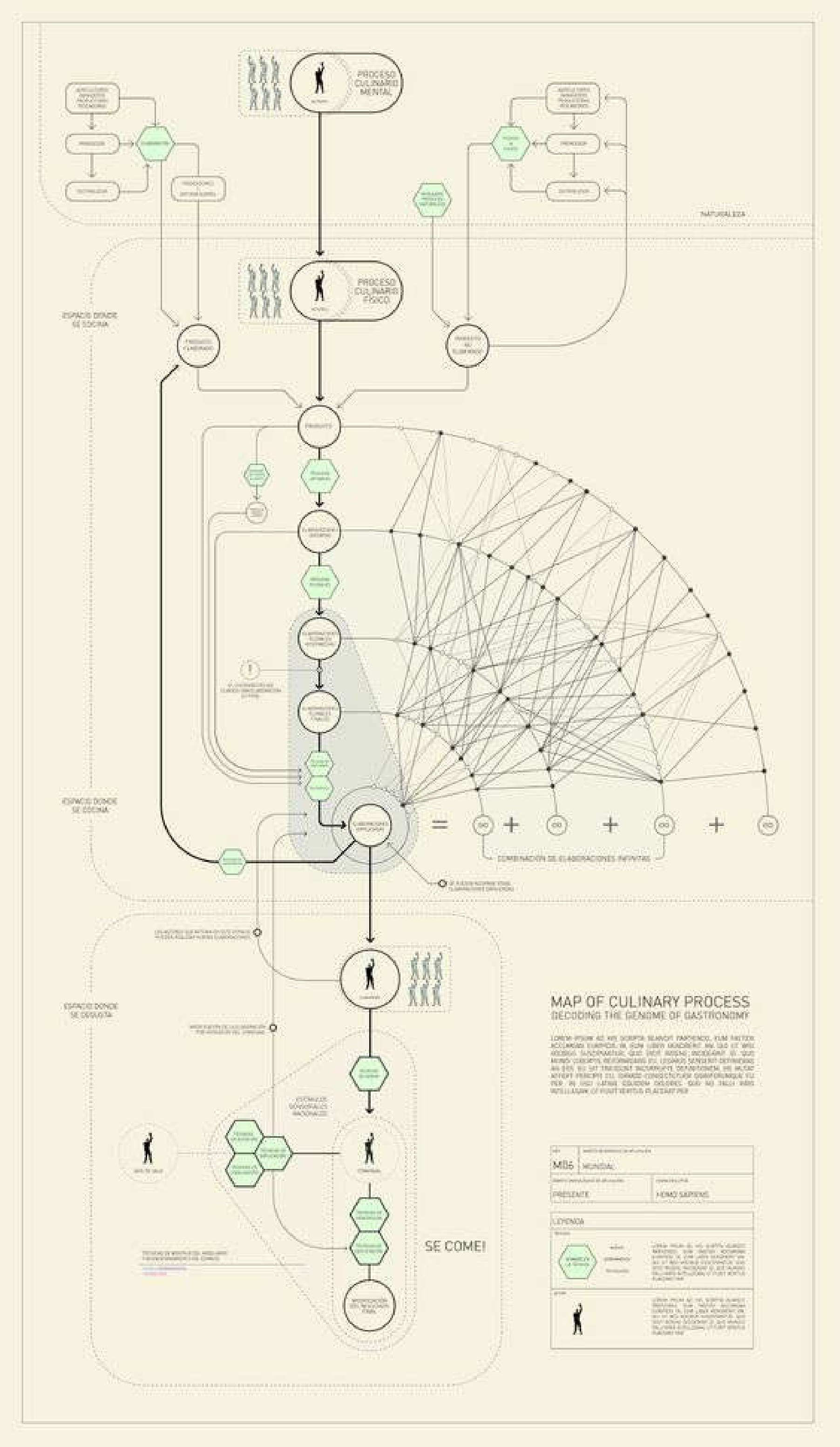
Intensity of external colors denotes species prevalence in each body site

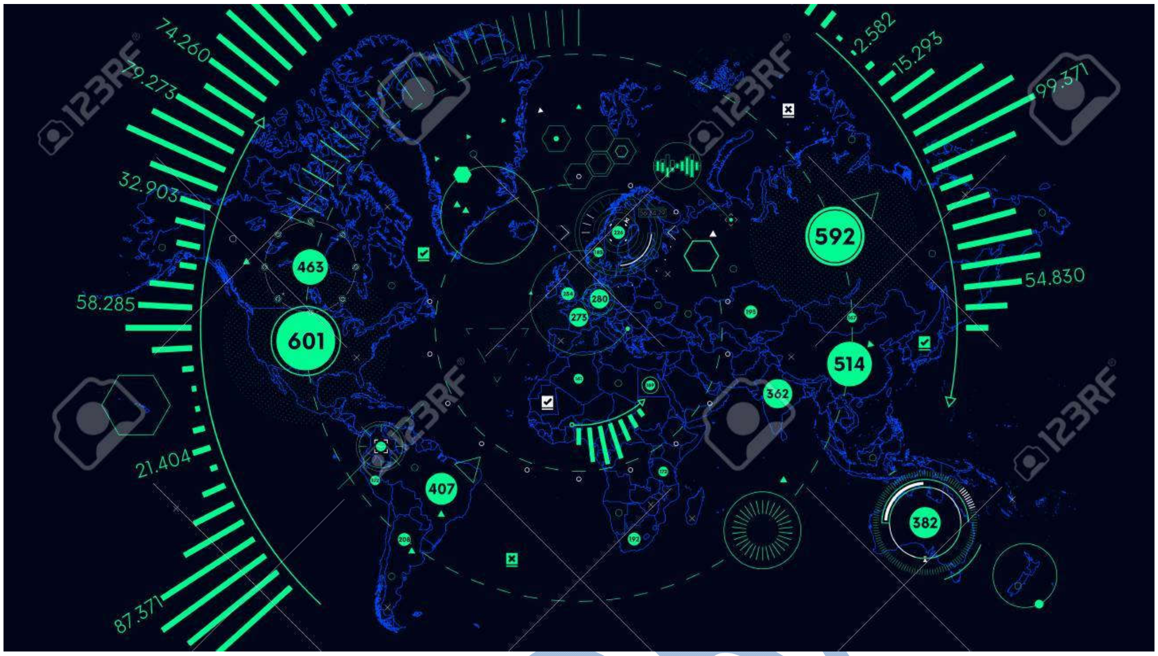
Bar lengths indicate microbial abundance (colored by body site of greatest prevalence)

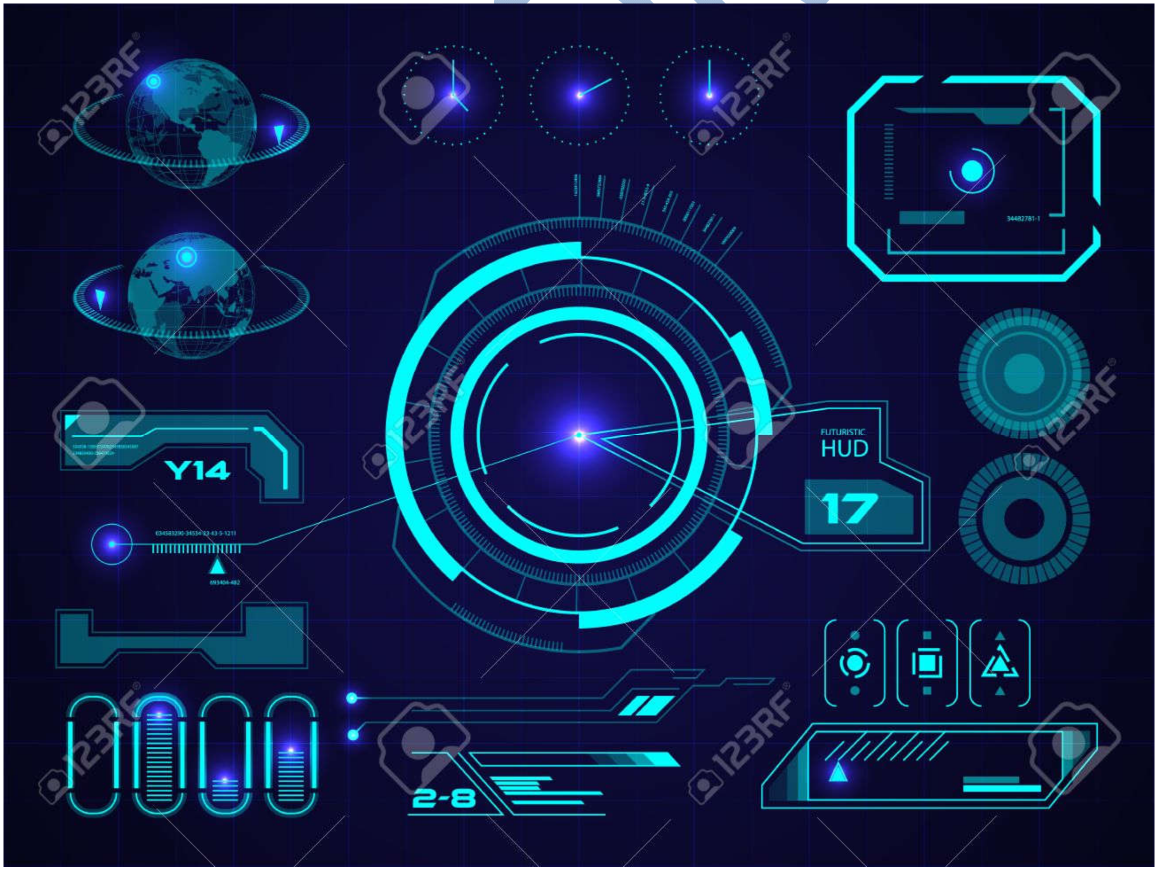
National Institutes of Health Human Microbiome Project

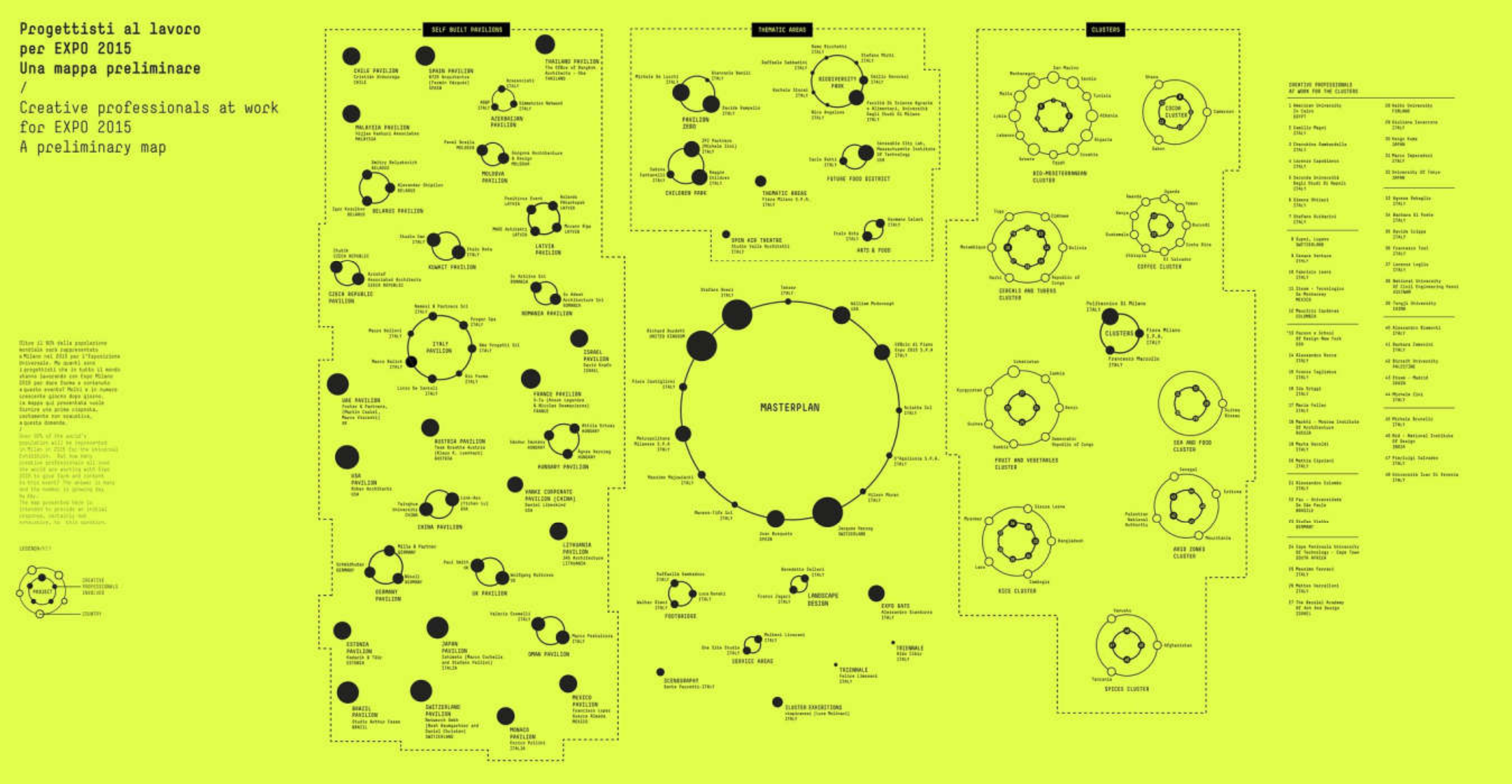
N. Segata & C. Huttenhower
http://huttenhower.sph.harvard.edu

Streptococcus
Corynebacterium
Actinomyces
Bifidobacterium
Porphyromonas
Prevotella
Bacteroides
Campylobacter
Neisseria
Acinetobacter
Haemophilus
Escherichia
Fusobacterium
Veillonella
Selenomonas
Anaerococcus
Clostridium
Ruminococcus
Staphylococcus
Lactobacillus
0%
50%
100%
Stool
Cheek
Plaque
Tongue
Nose
Vagina
Skin
100%
75%
50%
25%
0%
Microscopy from http://bacmap.wishartlab.com


PROCESO CULINARIO MENTAL
NATURALEZA
PROCESO CULINARIO FÍSICO
ESPACIO DONDE SE COCINA
ESPACIO DONDE SE COCINA
COMBINACIÓN DE ELABORACIONES INFINITAS
ESPACIO DONDE SE DEGUSTA
ESTÍMULOS SENSORIALES RACIONALES
SE COME!
MAP OF CULINARY PROCESS
DECODING THE GENOME OF GASTRONOMY
M06
MUNDIAL
PRESENTE
HOMO SAPIENS
LEYENDA

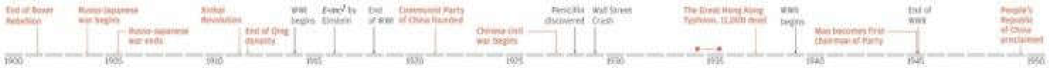

74.260
79.273
32.903
58.285
21.404
87.371
2.582
15.293
99.371
54.830
592
463
601
514
362
407
382


Y14
FUTURISTIC
HUD
17
2-8



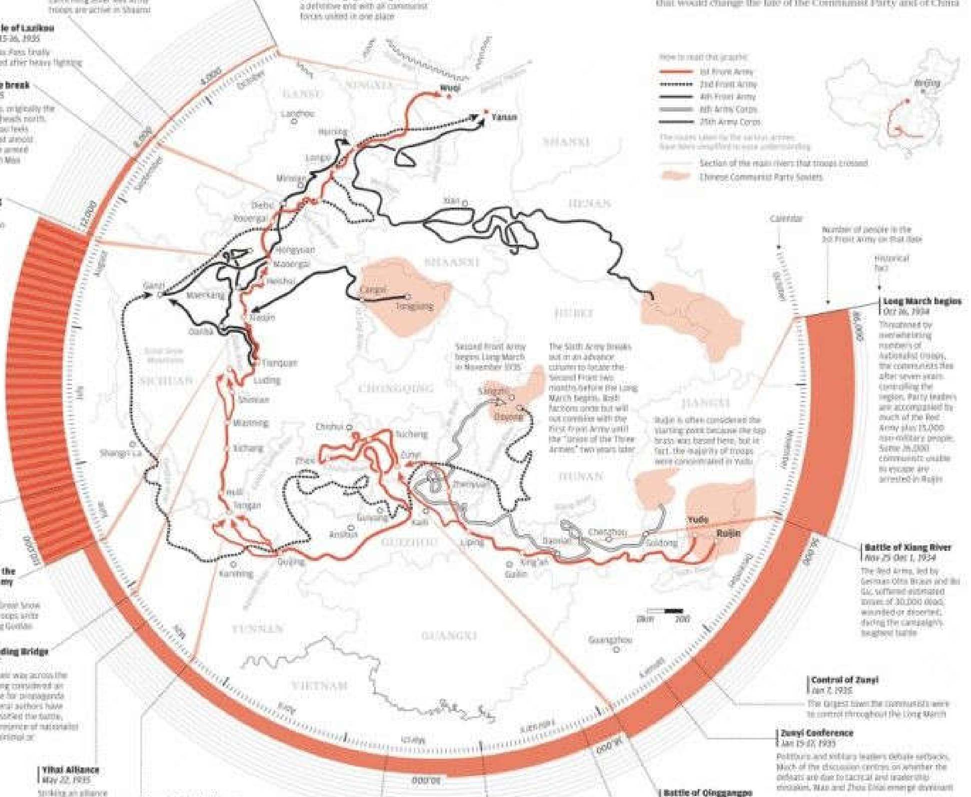
Historical context

Key: ● Long March | *Historical events around the world* | Chinese historical events


End of Boxer Rebellion
Russo-Japanese war begins
Russo-Japanese war ends
Xinhai Revolution
End of Qing dynasty
WWI begins
E=mc² by Einstein
End of WWI
Communist Party of China founded
Chinese civil war begins
Penicillin discovered
Wall Street Crash
The Great Hong Kong Typhoon, 11,000 dead
WWII begins
Mao becomes first chairman of Party
End of WWII
People's Republic of China proclaimed
1900
1905
1910
1915
1920
1925
1930
1935
1940
1945
1950

The Long March

In 1931 the communists established the Soviet Republic of China in the mountainous area of Jiangxi province. Three years later, surrounded and harassed by Kuomintang forces led by Generalissimo Chiang Kai-shek, the communist leaders decided to mobilise the Red Army and take flight, thus beginning a journey that would change the fate of the Communist Party and of China


How to read this graphic
1st Front Army
2nd Front Army
4th Front Army
6th Army Corps
25th Army Corps
The routes taken by the various armies have been simplified to ease understanding
Section of the main rivers that troops crossed
Chinese Communist Party Soviets
Beijing
Calendar
Number of people in the 1st Front Army on that date
Historical fact
October
November
December
January
February
March
April
May
June
July
August
September
86,000
56,000
36,000
30,000
12,000
8,000
4,000
GANSU
NINGXIA
SHAANXI
SHANXI
HENAN
HUBEI
SICHUAN
CHONGQING
HUNAN
JIANGXI
GUIZHOU
YUNNAN
GUANGXI
VIETNAM
Great Snow Mountains
Wuqi
Yanan
Lanzhou
Huining
Longxi
Minxian
Diebu
Ruoergai
Hongyuan
Maoergai
Heishui
Ganzi
Maerkang
Xiaojin
Danba
Tianquan
Luding
Shimian
Mianning
Xichang
Huili
Tongan
Shangri-La
Kunming
Qujing
Anshun
Guiyang
Kaili
Zunyi
Tucheng
Chishui
Zhenyuan
Sangzhi
Dayong
Xian
Cangxi
Tongjiang
Liping
Daoxian
Chenzhou
Yudu
Ruijin
Xing'an
Guilin
Guangzhou
Yudu
Xindi
Second Front Army begins Long March in November 1935
The Sixth Army breaks out in an advance column to locate the Second Front two months before the Long March begins. Both factions unite but will not combine with the First Front Army until the "Union of the Three Armies" two years later
Ruijin is often considered the starting point because the top brass was based here, but in fact, the majority of troops were concentrated in Yudu
0km
200

End of the Long March
Oct 19, 1935
Approximately 4,000 of the original 86,000 survive to complete the Long March

Union of the Three Armies
Oct 22, 1936
After nearly a year, He Long's Second Front Army arrives in Bao'an, bringing the Long March to a definitive end with all communist forces united in one place

Shaanxi Soviet
Sep 21, 1935
First Front Army soldiers find newspapers in Hadapu confirming other Red Army troops are active in Shaanxi

Battle of Lazikou
Sep 15-16, 1935
Lazikou Pass finally secured after heavy fighting

Definitive break
Sep 9, 1935
Mao's group, originally the First Army, heads north. Zhang Guotao feels betrayed and almost provokes an armed conflict with Mao

Maoergai Meeting
Aug 20, 1935
The march divides into two columns with neither leader able to agree how to execute travel plans

Meeting leaders
Jun 26, 1935
With both leaders together for the first time since 1923 they combine, continuing north through the Tibetan highlands of western Sichuan

Encounter with the Fourth Front Army
Jun 12, 1935
After crossing the Great Snow Mountains Mao's troops unite with those of Zhang Guotao

Battle of Luding Bridge
May 29, 1935
Troops fight their way across the Dadu River. Long considered an immense battle for propaganda purposes, several authors have recently demystified the battle, claiming the presence of nationalist soldiers was minimal or nonexistent

Yihai Alliance
May 22, 1935
Striking an alliance with the Yi clan against the Lohang clan, the Red Army is able to reach the Dadu River

Crossing Jinsha River
May 9, 1935
Over seven days and nights the Red Army makes use of seven boats to cross the river Jinsha ("Golden Sands"). They continue north in search of Zhang Guotao's Fourth Army

Crossing Chishui River
Mar 21-22, 1935

Zunyi is retaken
Feb 28, 1935

Zhaxi Meeting
Feb 5, 1935
Bo Gu hands over his power as senior Communist Party leader for Mao and his supporters to assume command

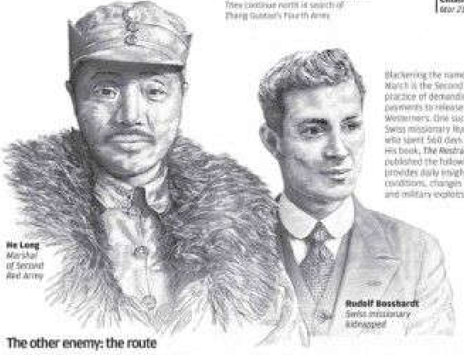
Battle of Qinggangpo
Jan 28, 1935
Leaving Zunyi the Red Army suffers heavy losses trying to avoid nationalist troops and local warlords. Between January and April, they cross the Chishui River four times

Zunyi Conference
Jan 15-17, 1935
Politburo and military leaders debate setbacks. Much of the discussion centres on whether the defeats are due to tactical and leadership mistakes. Mao and Zhou Enlai emerge dominant

Control of Zunyi
Jan 7, 1935
The largest town the communists were to control throughout the Long March

Battle of Xiang River
Nov 25-Dec 1, 1934
The Red Army, led by German Otto Braun and Bo Gu, suffered estimated losses of 30,000 dead, wounded or deserted, during the campaign's toughest battle

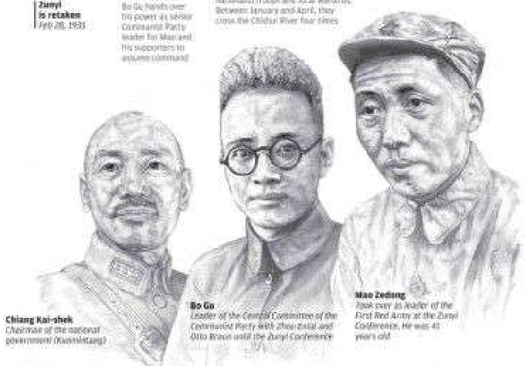
Long March begins
Oct 16, 1934
Threatened by overwhelming numbers of Nationalist troops, the communists flee after seven years controlling the region. Party leaders are accompanied by much of the Red Army plus 15,000 non-military people. Some 16,000 communists unable to escape are arrested in Ruijin



Blackening the name of the Long March is the Second Red Army's practice of demanding ransom payments to release kidnapped Westerners. One such victim was Swiss missionary Rudolf Bosshardt who spent 560 days in captivity. His book, *The Restraining Hand*, published the following year, provides daily insights into conditions, changes to ideology and military exploits

He Long
Marshal of Second Red Army

Rudolf Bosshardt
Swiss missionary kidnapped



Chiang Kai-shek
Chairman of the national government (Kuomintang)

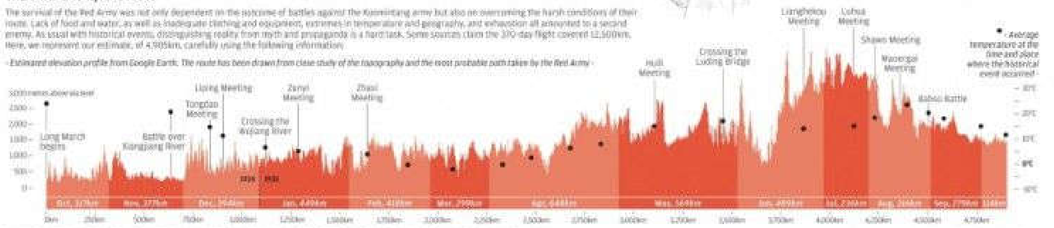
Bo Gu
Leader of the Central Committee of the Communist Party with Zhou Enlai and Otto Braun until the Zunyi Conference

Mao Zedong
Took over as leader of the First Red Army at the Zunyi Conference. He was 41 years old

The other enemy: the route

The survival of the Red Army was not only dependent on the outcome of battles against the Kuomintang army but also on overcoming the harsh conditions of their route. Lack of food and water, as well as inadequate clothing and equipment, extremes in temperature and geography, and exhaustion all amounted to a second enemy. As usual with historical events, distinguishing reality from myth and propaganda is a hard task. Some sources claim the 370-day flight covered 12,500km. Here, we represent our estimate, of 4,905km, carefully using the following information:

- Estimated elevation profile from Google Earth. The route has been drawn from close study of the topography and the most probable path taken by the Red Army -



Sources: *The Long March* by Yeun Shawen, *China: An Intimate Look at the Past and Present* by A. Paul & B. Paul, San José State University, SCMP research. Picture text: Darren Long

SCMP Graphic: Alberto Lucas López

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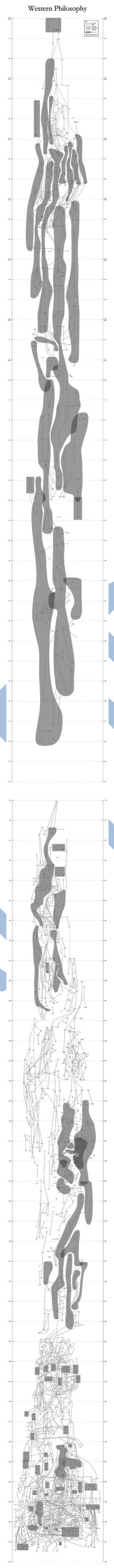
Western Philosophy