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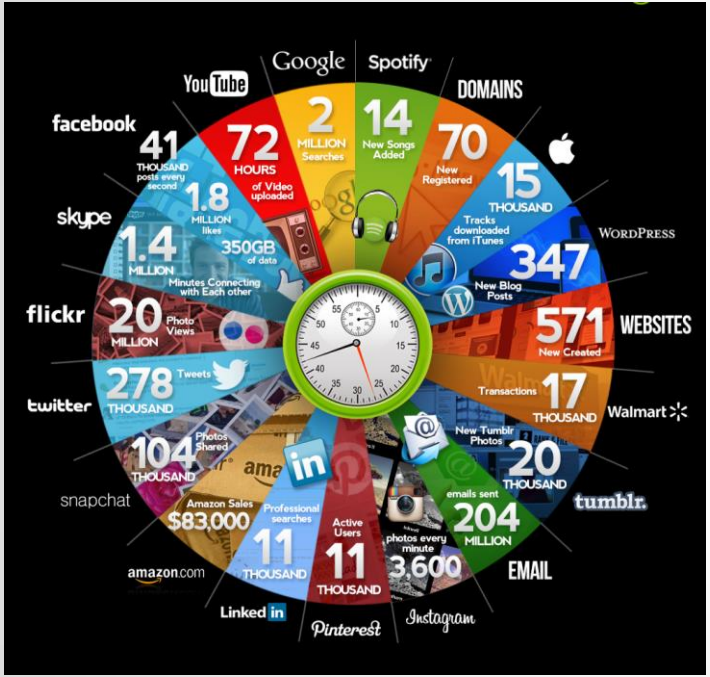
The Governance of Enterprise Information and Information Technology

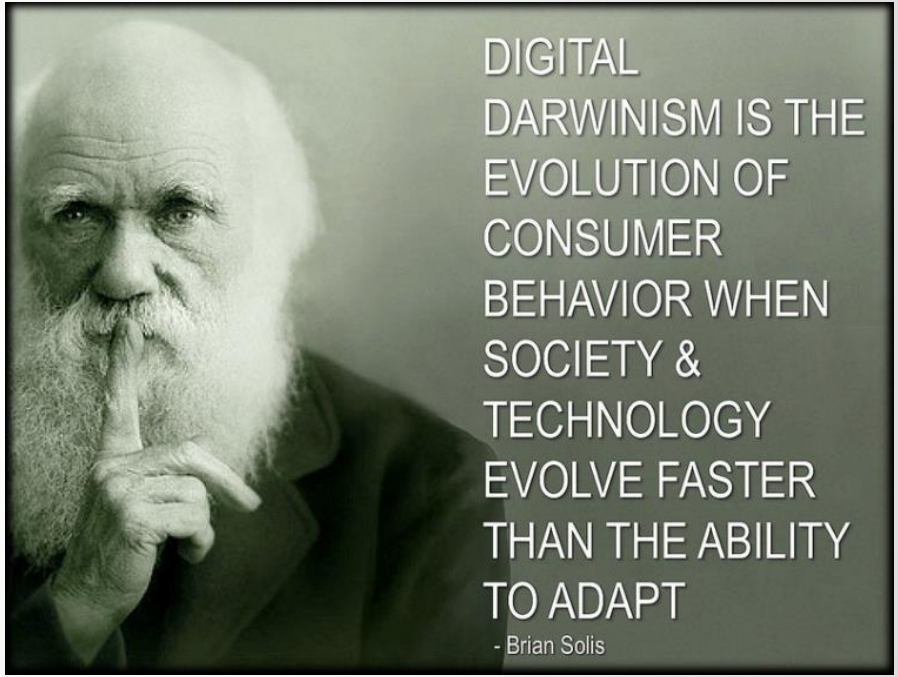
Challenges and Approaches

Dr. Ronald Hale Ph.D., CISM
ISACA
Chief Knowledge Officer

Accelerated Change – Accelerated Information Risk



http://blog.qmee.com/qmee-online-in-60-seconds/



http://www.briansolis.com/tag/digital-darwinism/

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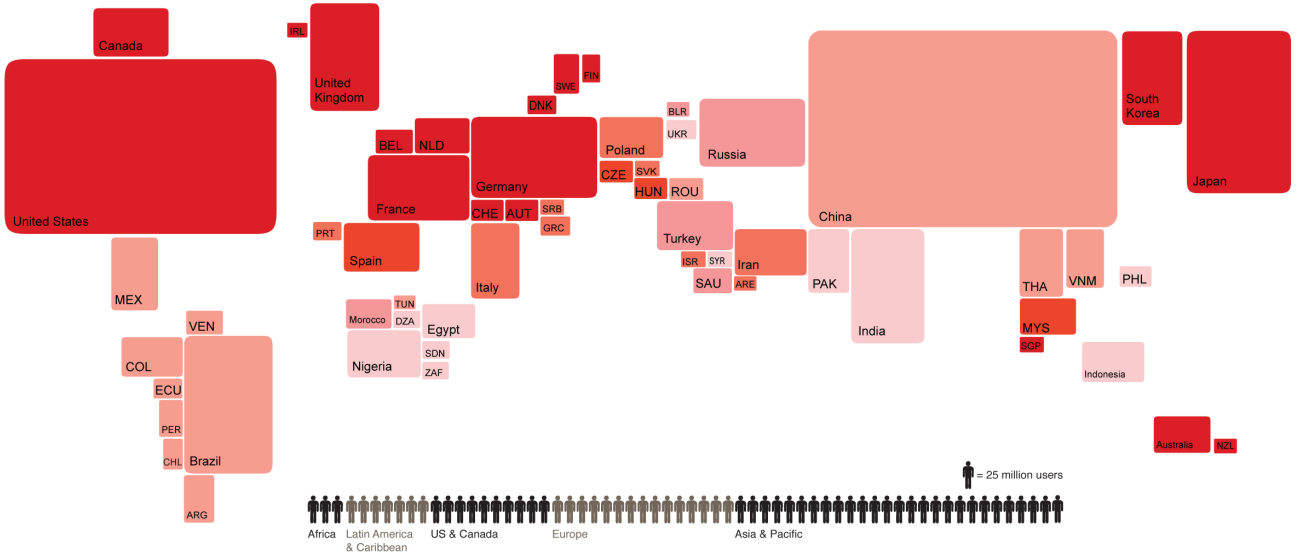
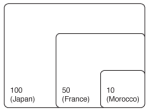
Expanding Internet – 2008 Perspective



Total number of Internet users (in millions), 2008



Internet penetration (% population)

- Under 20%
- 20% - 40%
- 41% - 50%
- 51% - 60%
- Over 60%

Internet Penetration

Visualization and analysis by Dr Mark Graham, Scott A. Hale and Monica Stephens in collaboration with Dr Corinne M. Flick and the Convoco Foundation.

This map and other visualizations can be found on the OII visualization website at http://www.oii.ox.ac.uk/vis/

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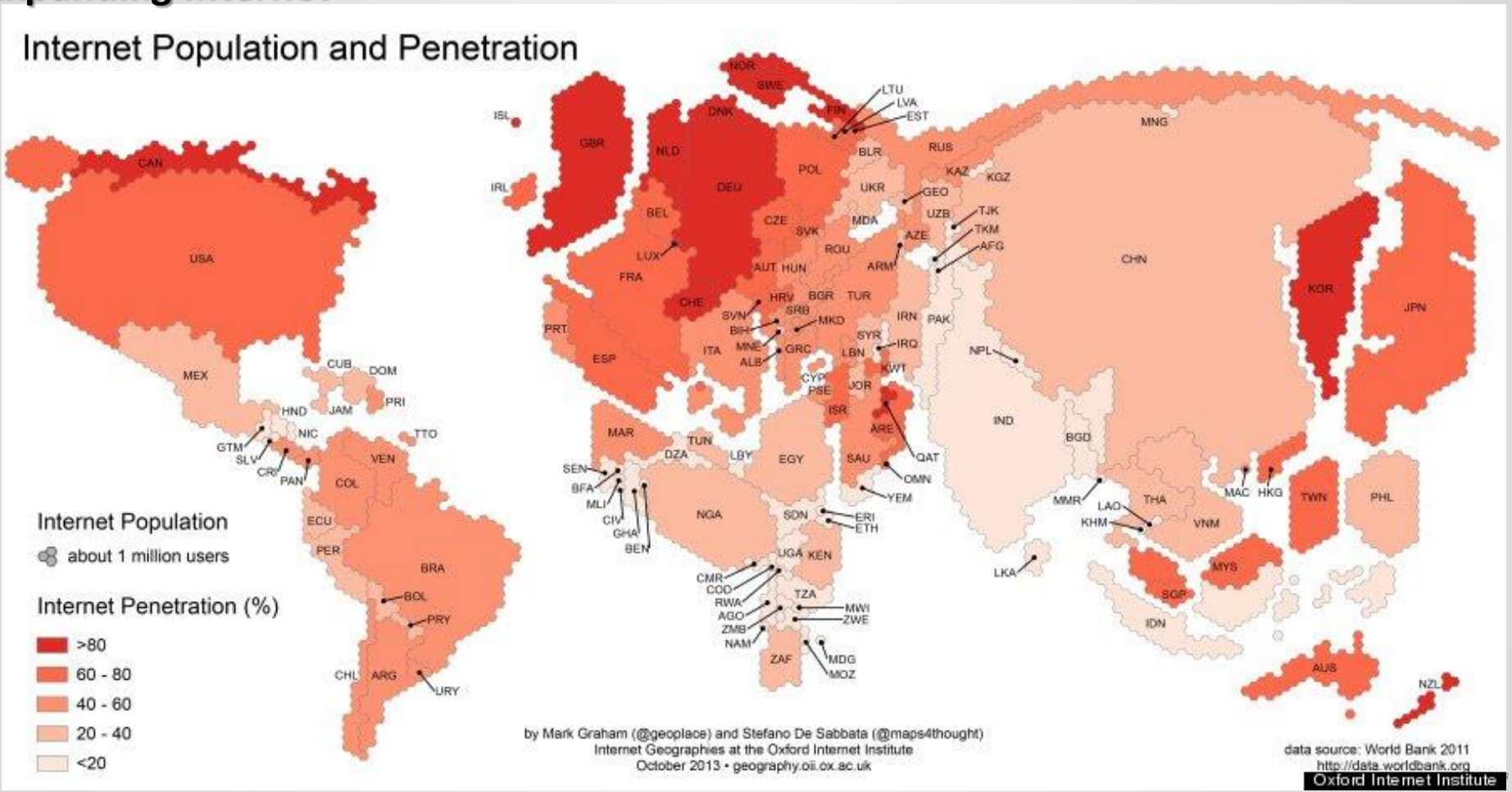
Expanding Internet



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Gartner Nexus of Forces

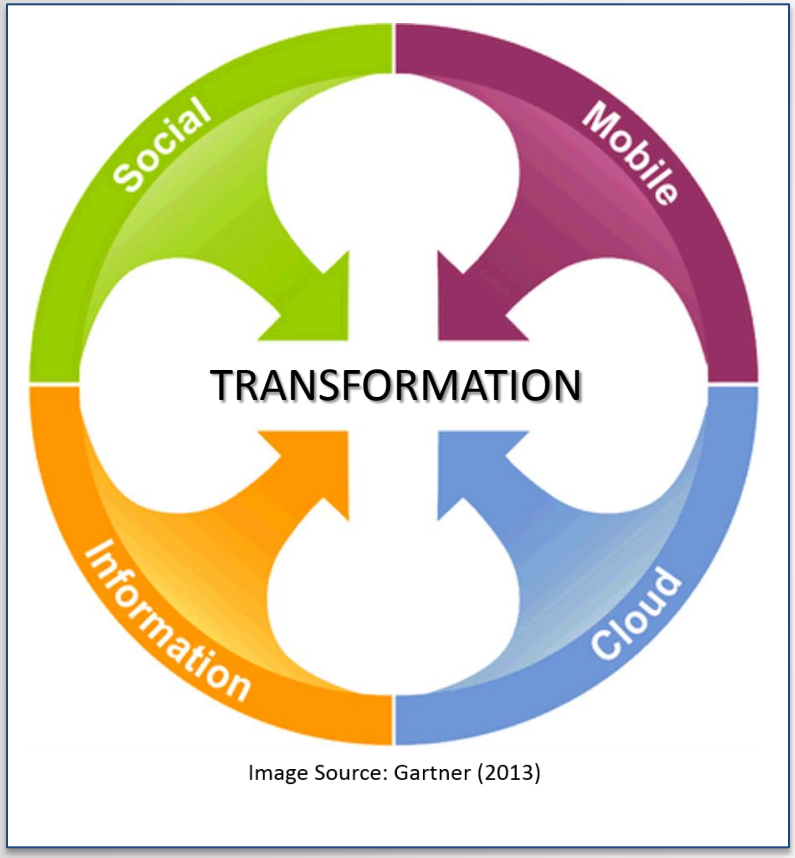

Image Source: Gartner (2013)

The nexus of forces describes the convergence and mutual reinforcement of four interdependent trends: social interaction, mobility, cloud, and information. The forces combine to empower individuals as they interact with each other and their information through well-designed ubiquitous technology.

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Nexus of Forces - Social

http://ignitordigital.com/small-business-social-media/

Social becomes the focal point for engagement

- Important source of news
- Increasing personal interaction on a massive scale
- Enabling greater political awareness and organization
- Fostering literacy
- Changing dynamics of marketing

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Nexus of Forces - Mobile

Mobile becomes the focal point of technology change

- Breaches digital divide
- Drives business / social change
- Enhances public policy debate
- Restructures personal communication
- Point of technical convergence

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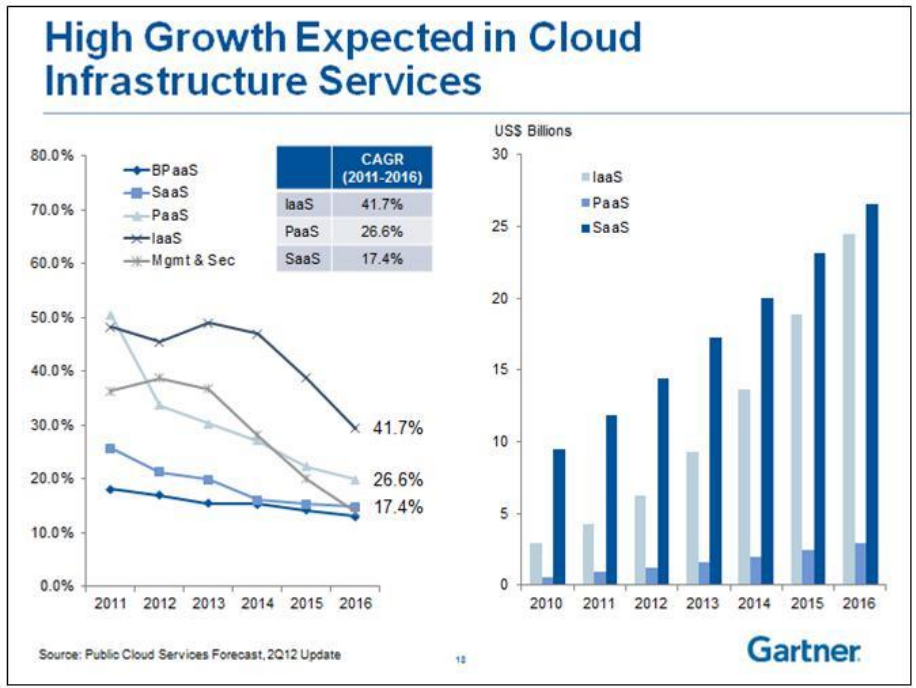
Nexus of Forces – Cloud Computing



Evolving Information Infrastructure

- Separates information from private infrastructures
- Enables Big Data
- Democratization of information and information utilities
- Accelerates innovation

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Transformations - Internet of Everything

http://www.xerafy.com/blog/executives-believe-the-internet-of-things-to-become-the-next-big-thing/

The Internet of Things will become the Internet of Everything resulting in:

- Smarter devices
- Interconnected devices
- Increased knowledge and insight
- Enhanced capabilities

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Transformations – Proliferation of Information

https://ipad.redlands.qld.edu.au/content/rationale

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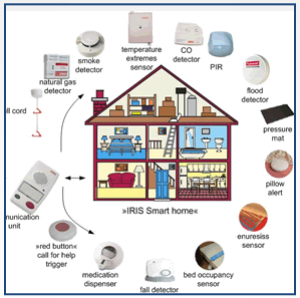
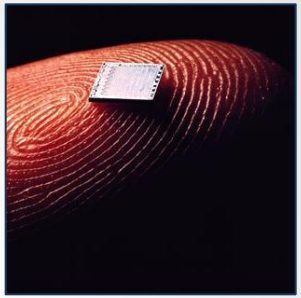
Transformations – Innovation and Change

Wind Power

Autonomous Cars



Smart Homes



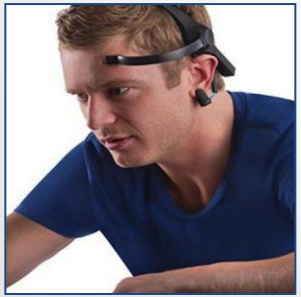
Digital Dust

Drones

Technology Transformations

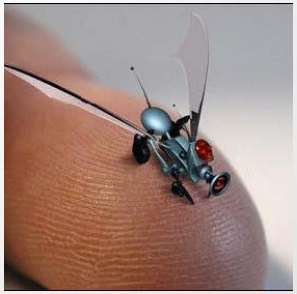
Wearable Technology

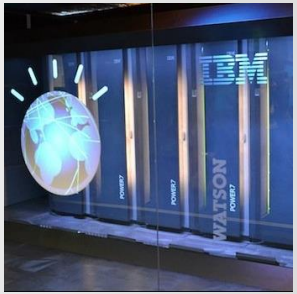
Mind Control of Devices



Robotics

Drones





IBM Watson

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Consequences – Increased Opportunities or Increased Threats

http://aodynamics.com/our-services/

By 2016 there will be 3 billion internet users globally – almost half of the world's population. The internet economy will reach $4.2 trillion in the G-20 economies.

If it were a national economy it would rank in the world's top five, behind only the US, China, Japan, and India, and ahead of Germany.

Across the G-20 it already amounted to 4.1% of the GDP or $2.3 trillion in 2010.

Boston Consulting Group

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Consequences – Increased Opportunities or Increased Threats

The global cost of cybercrime is estimated to be between $300 billion to $1 trillion. This includes:

- Loss of intellectual property
- Opportunity cost
- Security costs
- Reputational damage

Center for Strategic and International Studies

http://www.businessinsurance.com/apps/pbcsi.dll/storyimage/CB/20140115/NEWS06/140119908/AR/0/risk-management-information-systems.jpg

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Need – Enterprise Governance of Information and Information Technology

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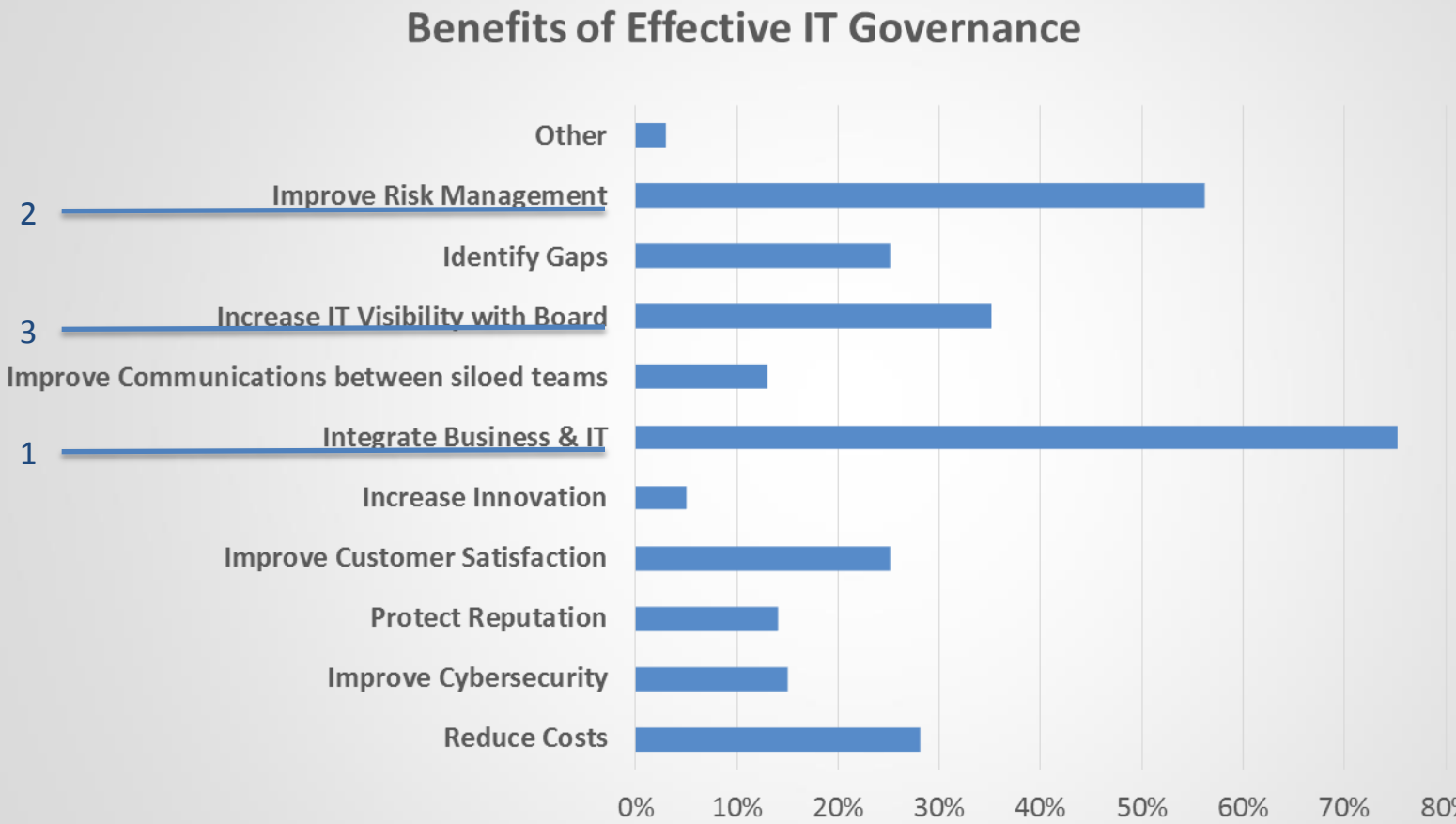
COBIT and the Governance of Information and Information Technology



ISACA 2014 Global COBIT 5 Governance Study

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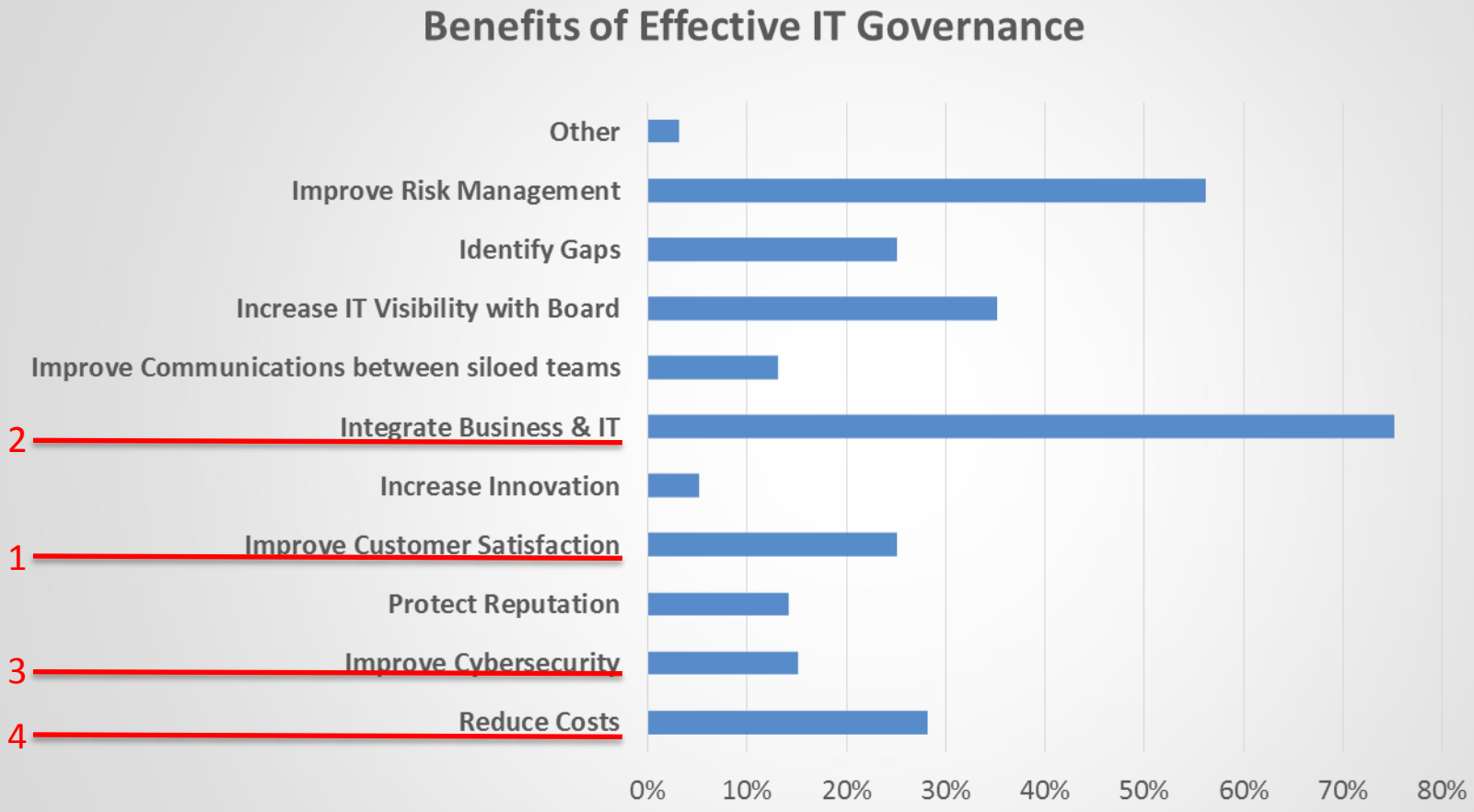
COBIT and the Governance of Information and Information Technology



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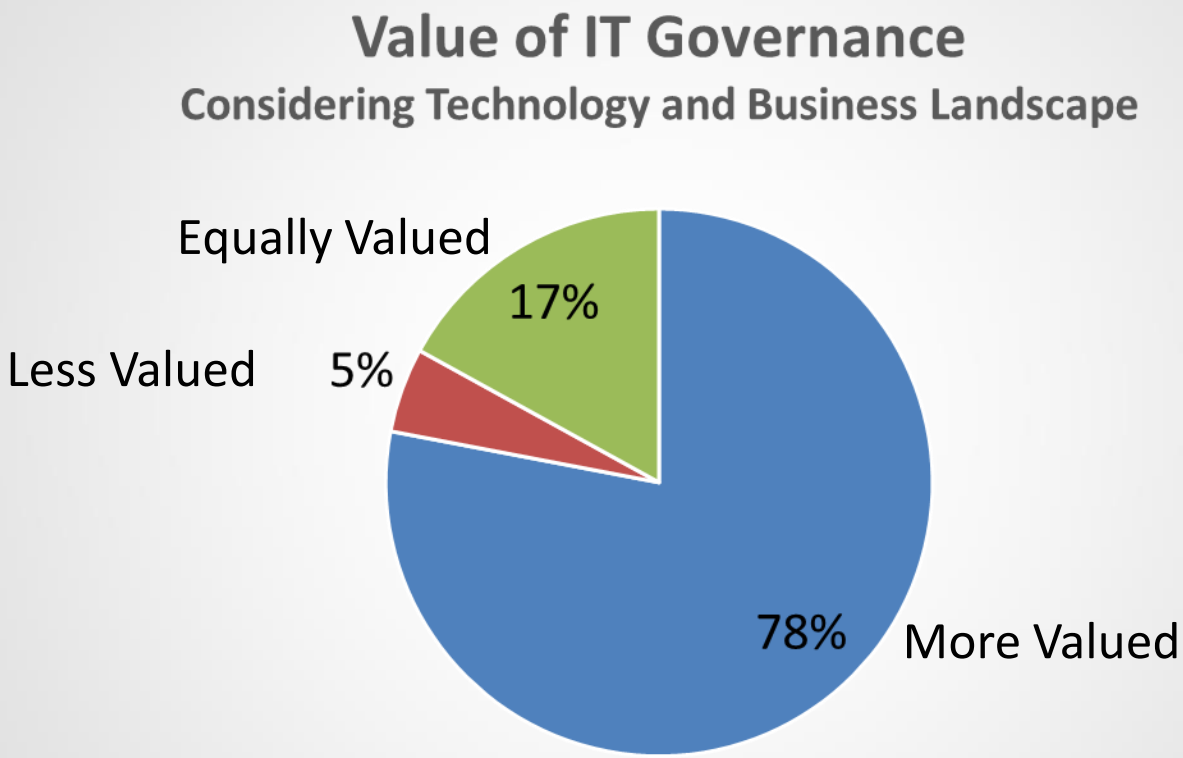
COBIT and the Governance of Information and Information Technology



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COBIT and the Governance of Information and Information Technology

Primary Business Reason for Using COBIT

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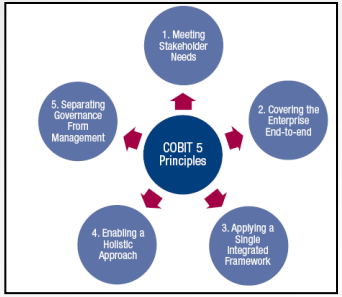
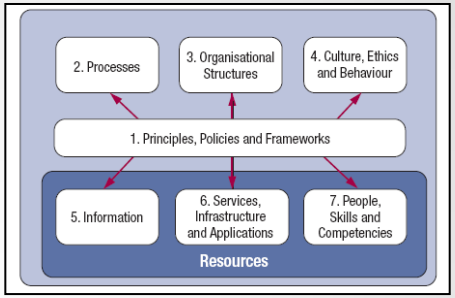
COBIT 5 – Enterprise Governance of Information and Information Technology

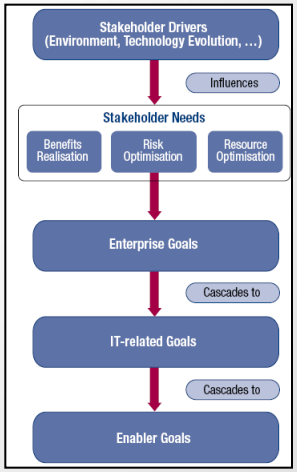


Core Principles

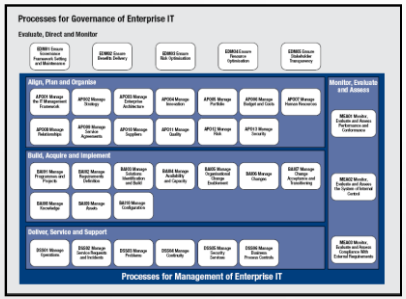


Systemic Enablers

Goals Cascade



Management Processes



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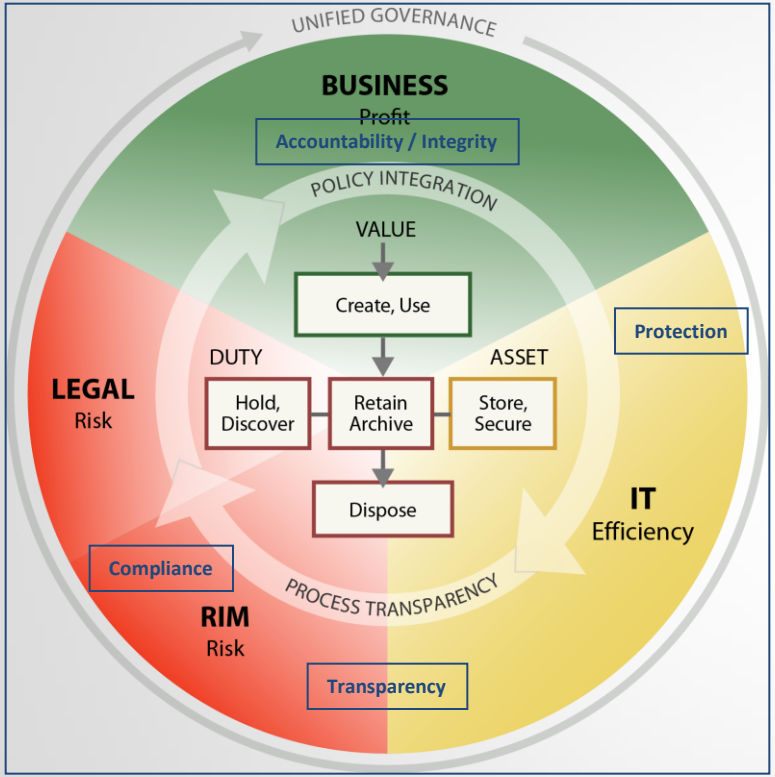
Addressing Information Governance



Information governance is the specification of decision rights and an accountability framework to encourage desirable behavior in the valuation, creation, storage, use, archival and deletion of information. It includes the processes, roles, standards and metrics that ensure the effective and efficient use of information in enabling an organization to achieve its goals. (Gartner)

http://www.edrm.net/resources/edrm-white-paper-series/igrm-garp

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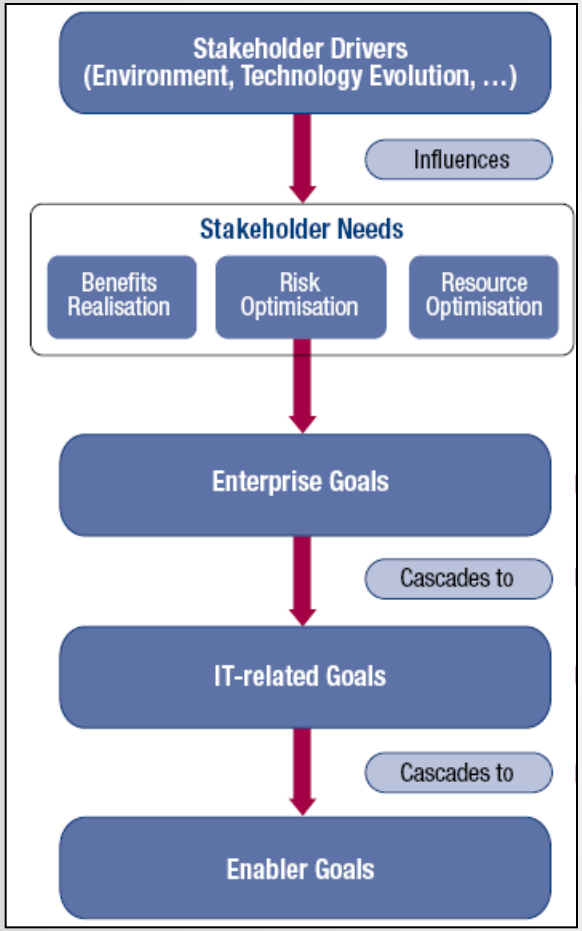
COBIT5 – Stakeholders and Enterprise Goals for Information Governance



Stakeholders and Stakeholder Goals

- Owners, Users, Custodians
- Regulators, Compliance, Enforcement Agencies
- Shareholders
- Suppliers and Partners

Enterprise Goals

- Effective decision making
- Effective management of the enterprise
- Manage cost of information
- Effectively manage information resources and information life cycle
- Ensure information quality
- Meet business and regulatory requirements
- Provide access based on legitimate need
- Maintain those records that are necessary
- Satisfy regulatory and legal requirements

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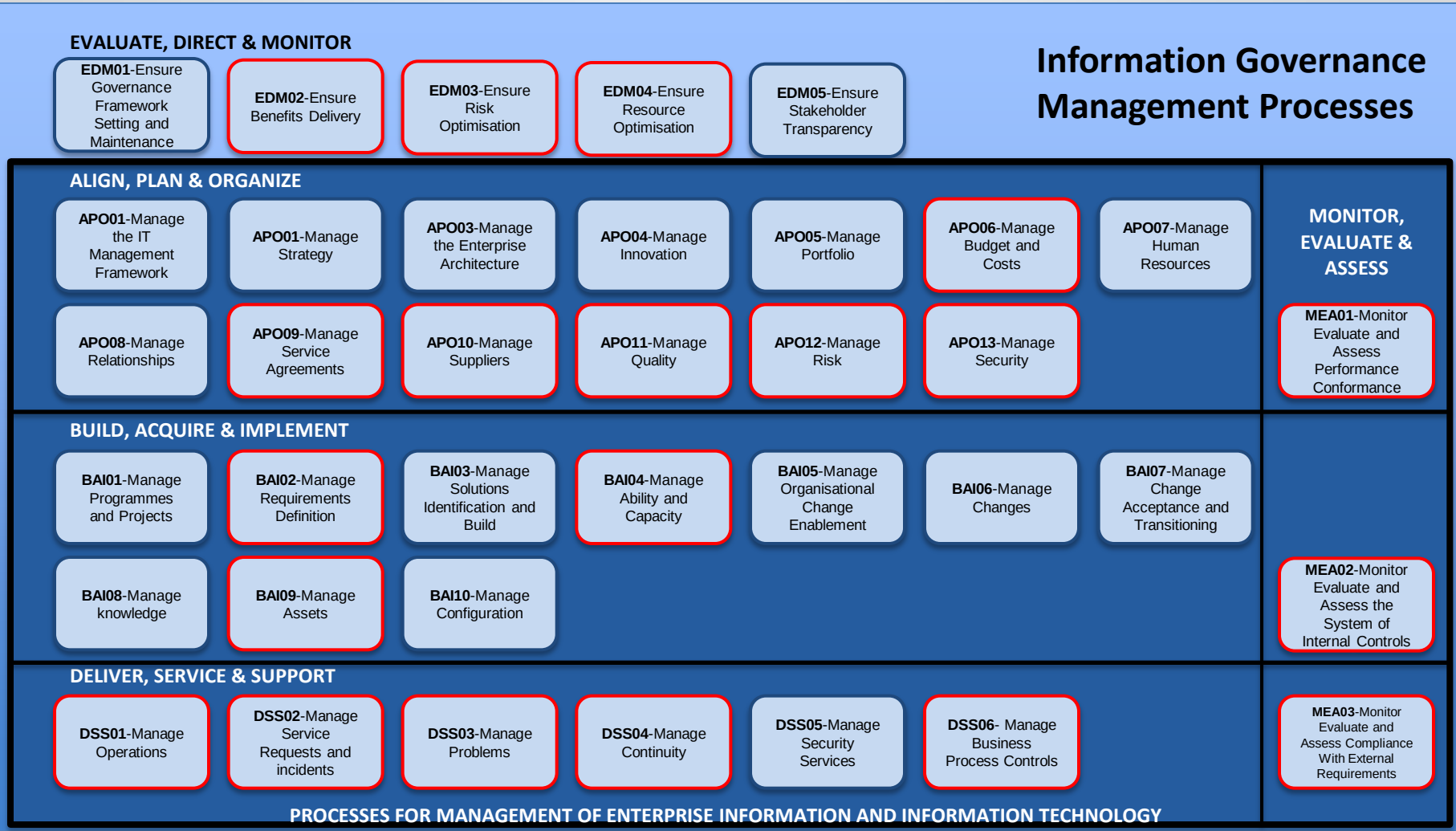
Information Governance Management Processes



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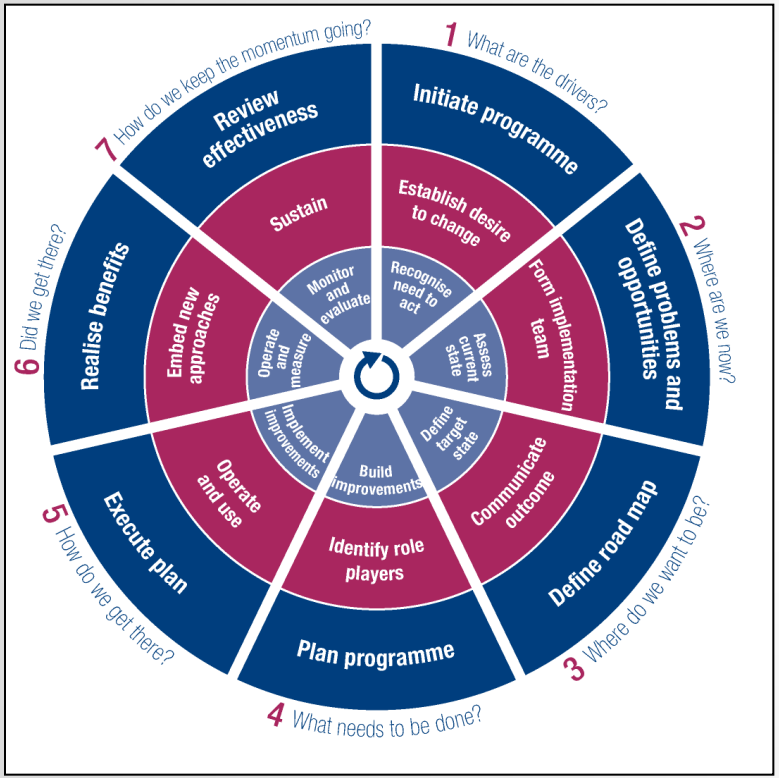
COBIT5 – Enterprise Governance of Emerging Technologies



- **Governance** ensures that enterprise objectives are achieved by **evaluating** stakeholder needs, conditions and options; setting **direction** through prioritisation and decision making; and **monitoring** performance, compliance and progress against agreed-on direction and objectives **(EDM).**
- **Management plans, builds, runs** and **monitors** activities in alignment with the direction set by the governance body to achieve the enterprise objectives **(PBRM).**

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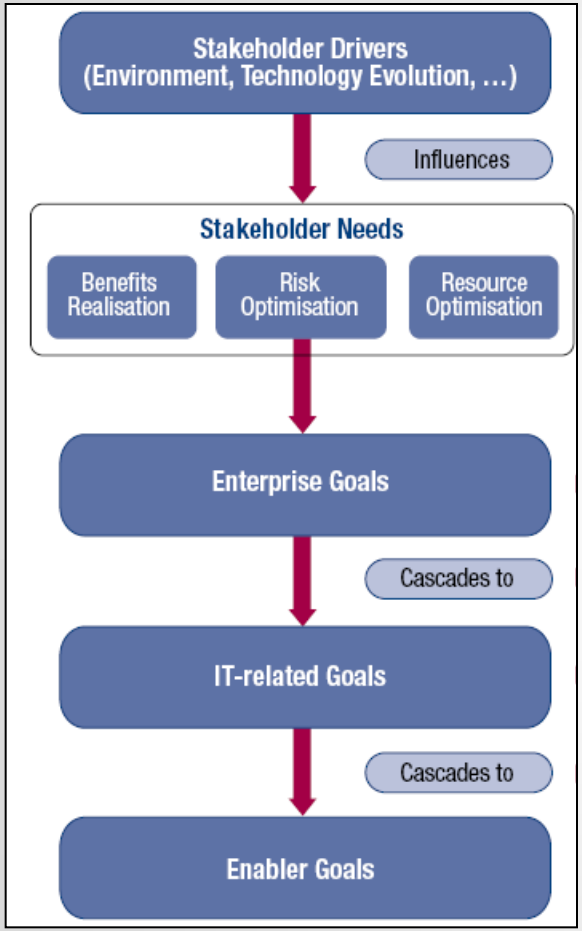
COBIT5 – Stakeholders and Enterprise Goals for Emerging Technologies



Stakeholders and Stakeholder Goals

- Shareholders, Board of Directors, Senior Executives
- Business Development, Finance, Marketing, Personnel
- Technology Organization, Technology Providers
- Research Organizations, Patent Holders
- Suppliers and Partners
- Regulators, Compliance, Enforcement Agencies

Enterprise Goals

- Enter new markets with new products
- Anticipate customer needs
- Replace under-performing products
- Increase customer loyalty
- Accelerate revenue growth
- Create new opportunities for business development
- Make investments for market growth
- Reduce opportunities for market competition

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Emerging Technology Management Processes

EVALUATE, DIRECT & MONITOR

- **EDM01**-Ensure Governance Framework Setting and Maintenance
- **EDM02**-Ensure Benefits Delivery
- **EDM03**-Ensure Risk Optimisation
- **EDM04**-Ensure Resource Optimisation
- **EDM05**-Ensure Stakeholder Transparency

ALIGN, PLAN & ORGANIZE

- **APO01**-Manage the IT Management Framework
- **APO01**-Manage Strategy
- **APO03**-Manage the Enterprise Architecture
- **APO04**-Manage Innovation
- **APO05**-Manage Portfolio
- **APO06**-Manage Budget and Costs
- **APO07**-Manage Human Resources
- **APO08**-Manage Relationships
- **APO09**-Manage Service Agreements
- **APO10**-Manage Suppliers
- **APO11**-Manage Quality
- **APO12**-Manage Risk
- **APO13**-Manage Security

BUILD, ACQUIRE & IMPLEMENT

- **BAI01**-Manage Programmes and Projects
- **BAI02**-Manage Requirements Definition
- **BAI03**-Manage Solutions Identification and Build
- **BAI04**-Manage Ability and Capacity
- **BAI05**-Manage Organisational Change Enablement
- **BAI06**-Manage Changes
- **BAI07**-Manage Change Acceptance and Transitioning
- **BAI08**-Manage knowledge
- **BAI09**-Manage Assets
- **BAI10**-Manage Configuration

DELIVER, SERVICE & SUPPORT

- **DSS01**-Manage Operations
- **DSS02**-Manage Service Requests and incidents
- **DSS03**-Manage Problems
- **DSS04**-Manage Continuity
- **DSS05**-Manage Security Services
- **DSS06**- Manage Business Process Controls

MONITOR, EVALUATE & ASSESS

- **MEA01**-Monitor Evaluate and Assess Performance Conformance
- **MEA02**-Monitor Evaluate and Assess the System of Internal Controls
- **MEA03**-Monitor Evaluate and Assess Compliance With External Requirements

PROCESSES FOR MANAGEMENT OF ENTERPRISE INFORMATION AND INFORMATION TECHNOLOGY

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Accelerated Change – Accelerated Need for Governance

http://www.ciklum.com/category/high-tech-trends/

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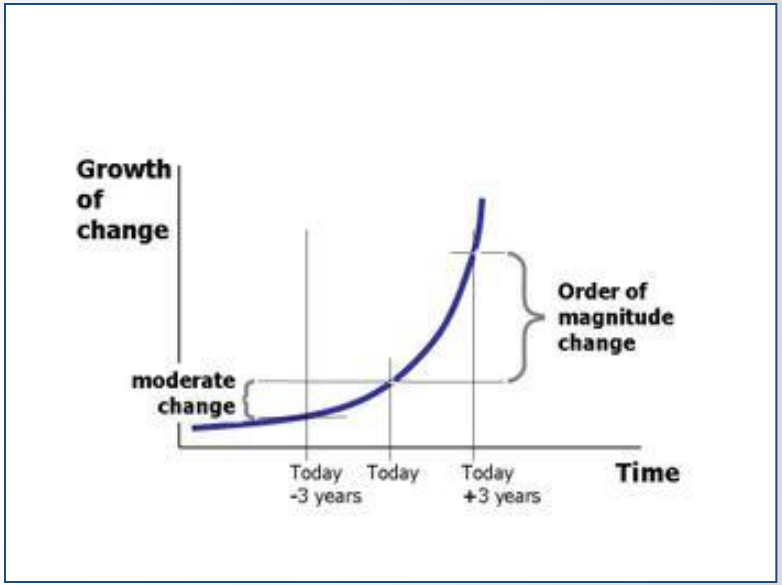
http://www.astrocafe.ro/blog/category/dezvoltare-personala/



http://ic-pod.typepad.com/design_at_the_edge/images/2007/08/22/sarnoffmetcalfereed_2.jpg

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