



GESTS483 – GESTH510

IT Governance - Session 1

Digital transformation Drivers

Georges Ataya

CISA, CGEIT, CISA, CISSP, MSCS, LSG

Professor, Solvay Brussels School of Economics and Management
Academic Director, IT Management Education
Managing Partner, ICT Control NV



Solvay Executive Education

Career Development

for Managers

General Management & Leadership

- Accelerated Management Programme (FR/EN)
- Executive Master in Management
- Executive Programme en Management et Philosophies
- Gestion de conflits et négociation
- Coaching d'équipe
- Change Management
- Thought Leadership for Expert
- Executive Programme en Mindful Leadership
- Beyond Traditional Outsourcing

Finance & Tax

- Executive Master in Finance
- Finance for Non-Financial Managers (FR/EN)
- Executive Master en Gestion Fiscale

Specific Industries

- Executive Programme en Immobilier
- Executive Mastère en Management des Institutions de Santé et de Soins
- Executive Master in International Association Management

Marketing & Sales

- Executive Master in Marketing, in a digital world
- Executive Programme in Digital Communication
- Executive Programme in Retail and Consumer Goods Distribution

MBA

- Solvay Executive MBA

IT Education

- IT Management Education
- Information Security Management



Executive Education in Information
Security Management

Executive Education in IT Management



Executive Master in IT Management

Executive Programme in

- . CIO Practices
- . CIO Leadership
- . IT Business Agility
- . Enterprise and IT Architecture
- . IT Sourcing
- . IT Management Consulting



Executive
Education in IT
Management



Executive Master in Information
Risk and Cybersecurity

Executive Programme in

- . Security Governance
- . Information Security
- . Cybersecurity

Executive Education in Information Security Management



Lectured tracks and modules

S – track
Info Security

**S1 – Information
Security Management**

**S2 – IT Security
Practices**

**S3 – Cybersecurity
Workshop**

G – track
IT Governance

**G1 – The CIO
Foundation**

**G2 – IT Governance
Workshop**

**G3 – IT Risk and Legal
concerns**

M – track
IT Management

**M1 – Applications
Build and Management**

**M2 – IT Services and
Run Management**

**M3 – IT Sourcing
Management**

B – track
Business Agility

**B1 – Enterprise
Strategy and
Architecture**

**B2 – Business
Transformation**

**B3 – Digital Agility and
Innovation**

A – track
Activating skills

**A1 – IT Finance and
Portfolio Management**

**A2 – Soft Skills for IT
professionals**

**A3 – Building Expert
Opinion**

Monday
Track-S

Thursday
Track-G

Wednesday
Track-M

Tuesday
Track-B

Monday
Track-A

Participants Responsibilities (2011-2016)



- CIO / IT Manager
- Consultant / Auditor
- IT Projects / Architects
- Operations / Infrastructure
- Security Manager
- Executive
- Other
- Business process

Participants Sector (2011-2016)



- IT services
- Consulting
- Public Services
- Banking / Insurance
- NGO
- Pharmaceutical / Chemical
- Manufacturing
- Services
- Telecom
- Other



SeCloud research Security-driven engineering of Cloud-based Applications



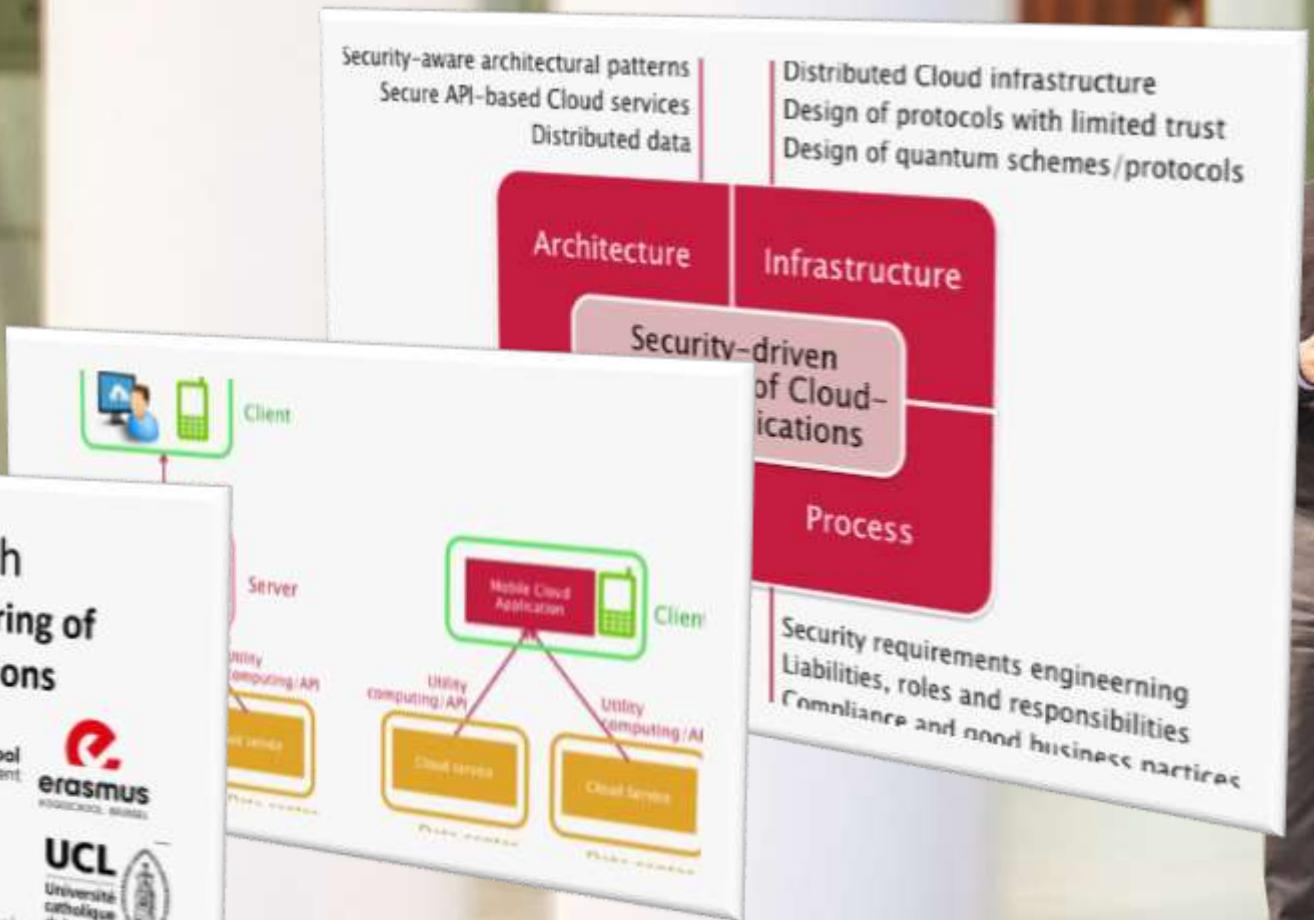
Solvay Brussels School
Economics & Management



Vrije Universiteit Brussel



UCL
Université catholique de Louvain

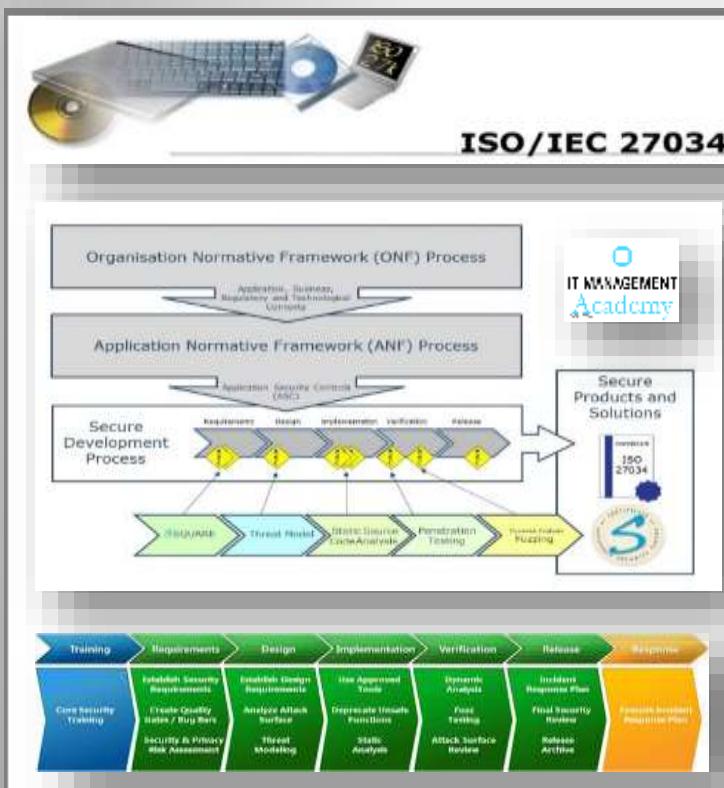


Secure Application Development

secappdev.org



Alain Cieslik: One of the first Belgian certified trainer



SecAppDev 2016
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Great speaker lineup | Latest news | Tweets

Tom Van Cutsem (@tomvanCutsem) 12 Feb
Will talk about ISO/IEC 27034 at SecAppDev in March
secappdev2016.tuechel.be/evenementen/secappdev@tomvanCutsem

SecAppDev (@SecAppDev) 12 Feb
Our lab should have been March 8th, not 7th. The @owasp.be meeting with @owaspbe and @dawatelk is on March 26th, folks.

Tom Van Cutsem (@tomvanCutsem) 12 Feb
Will be speaking at Belgian OWASP chapter meeting on recent developments in application security. Date: 26th March, location: Antwerp, info: secappdev.be/talks

SecAppDev (@SecAppDev) 11 Feb
Tweet to @SecAppDev

Founded in 2005 by Johan Peeters and Georges Ataya

Partners:

Solvay Brussels School
Economics & Management

KU LEUVEN

Affiliated organizations:

OWASP
Open Web Application Security Project

NESSUS

iMinds



CYBERSECURITY NEXUS (CSX) is a new program designed by ISACA to provide cybersecurity professionals with a single, comprehensive source for performance-based certification, networking, professional membership, training, and education.

ICT Control SA has been designated as an ISACA Authorized Training Organization to deliver Cybersecurity Nexus (CSX) trainings in Europe, Middle-East and Asia.



CERTIFIED ISO27001 LEAD AUDITOR

CERTIFIED ISO 27001 LEAD IMPLEMENTER

CERTIFIED ISO 27005 RISK MANAGER

CERTIFIED ISO 20000 LEAD AUDITOR

CERTIFIED ISO 20000 LEAD AUDITOR

CERTIFIED ISO 27005 RISK MANAGER

CERTIFIED LEAD SCADA SECURITY PROFESSIONAL

CERTIFIED LEAD SECURITY INCIDENT PROFESSIONAL

The collage includes:

- NITROXIS** logo with three blue circles above the word.
- IT MANAGEMENT Academy** logo with a blue square icon and the text "Asbl-vzw" below it.
- A banner for the **PECB Management Academy** featuring a red calendar icon, a computer monitor, and the text "Management Academy are proud to organize the PECB Certified Implementer Course in Belgium".
- Information about the **PECB Certified Security Lead Implementer Course** held in June 2016, September 2016, and October 2016, with certification and exam included.
- Details about the course being held in Dutch, English, or French depending on registrations.
- Contact information: www.ictc.eu/training and practical details at training@ictc.eu or +32 2 340 32 00.

IT Governance

Course structure

Gests483 – GESTH510 Course structure (draft)

		Session title	Description	Case pre-reading	
1	16 Feb	Digital transformation drivers	Three domains of excellence are needed to succeed a digital transformation		
2	23 Feb	Business and IT Strategy and IT Architecture	Business strategy impact IT Strategy and IT Architecture	Architect your business not just IT	
3	2 March	Skills for the Information Age	Presentation of IT skills through SFIA plus a discussion on various IT activities	TOP Performing CIOs in the Digital ERA	
4	9 March	Portfolio, program and Project management	Description of projects and programs. The principles of project management. Portfolio management. Project phases and Critical Success factors.	Demand Shaping: The IT Unit's New Passion	ission
5	16 March	Governance and cascading strategy	Introduction to IT Governance and the cascading goals of business and IT. Concepts of governance and management domains and introduction to IT processes.	Directing Digital Innovation at Pepsico	
6	23 March	IT Processes and IT Maturity enablers	Illustration of the governance of a large EU-wide project	Succeeding at digital requires more infrastructure	
7	30 March	Development activities and Agile development	Application development life cycle and agile methods. Elements of acceptance and operations	Demand Shaping: Changing The conversation about IT	rsation
8	20 April	IT Value management	Principles of IT finances management and business case development for IT investments and services.	The CIO as a venture capitalist	
9	27 April	Information Security risk and Application security	From Enterprise risk trough IT and Information Security risks. The risk assessment a mitigations activities process. Basics of Software security.		
10	4 May	Information Security management and Data Privacy	Principles of Information and IT security. The activities of the CISO and Cybersecurity management with the five domains of protection.	Belgian Cybersecurity coalition: Incident Management Guide	nt
11	11 May	Sourcing management	Principles of sourcing and categories of IT Sourcing. Elements of sourcing phases and Critical Success factors.		
12	18 May	Examination session			

Cases reading

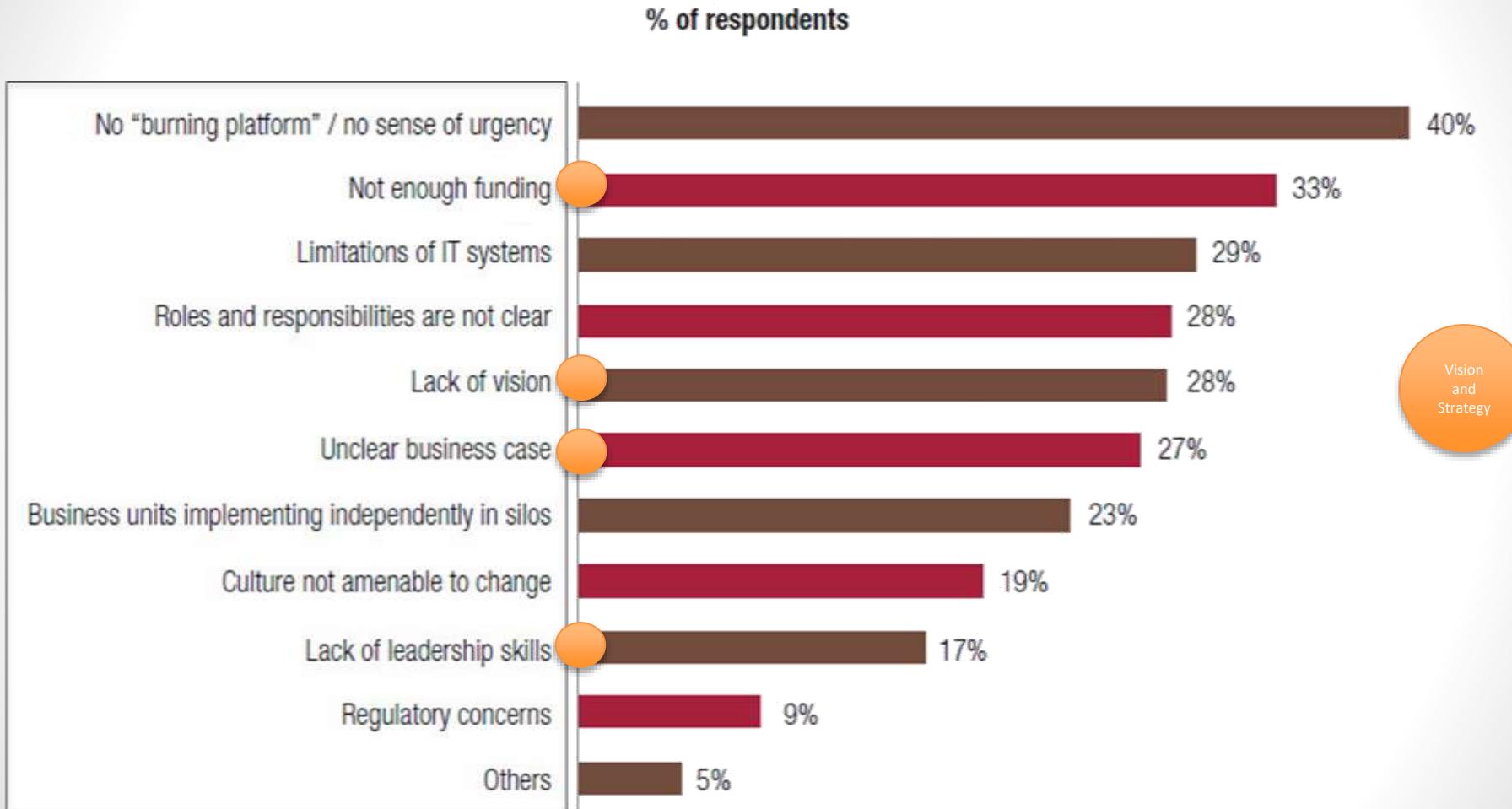
Students are required to read the case before coming to the course. The case shall be briefly discussed and the discussed topics may be addressed by some exam questions.

Reading and understanding the case is required. No need to understand all case details provided the complete picture and the global message are understood.

A wide-angle photograph of a large lecture hall or conference room. The room is filled with rows of people seated in dark chairs, facing a stage on the left. A large projection screen on the stage displays a presentation slide with various text and graphics. The ceiling is dark with a grid of rectangular light fixtures. The overall atmosphere is that of a formal event or lecture.

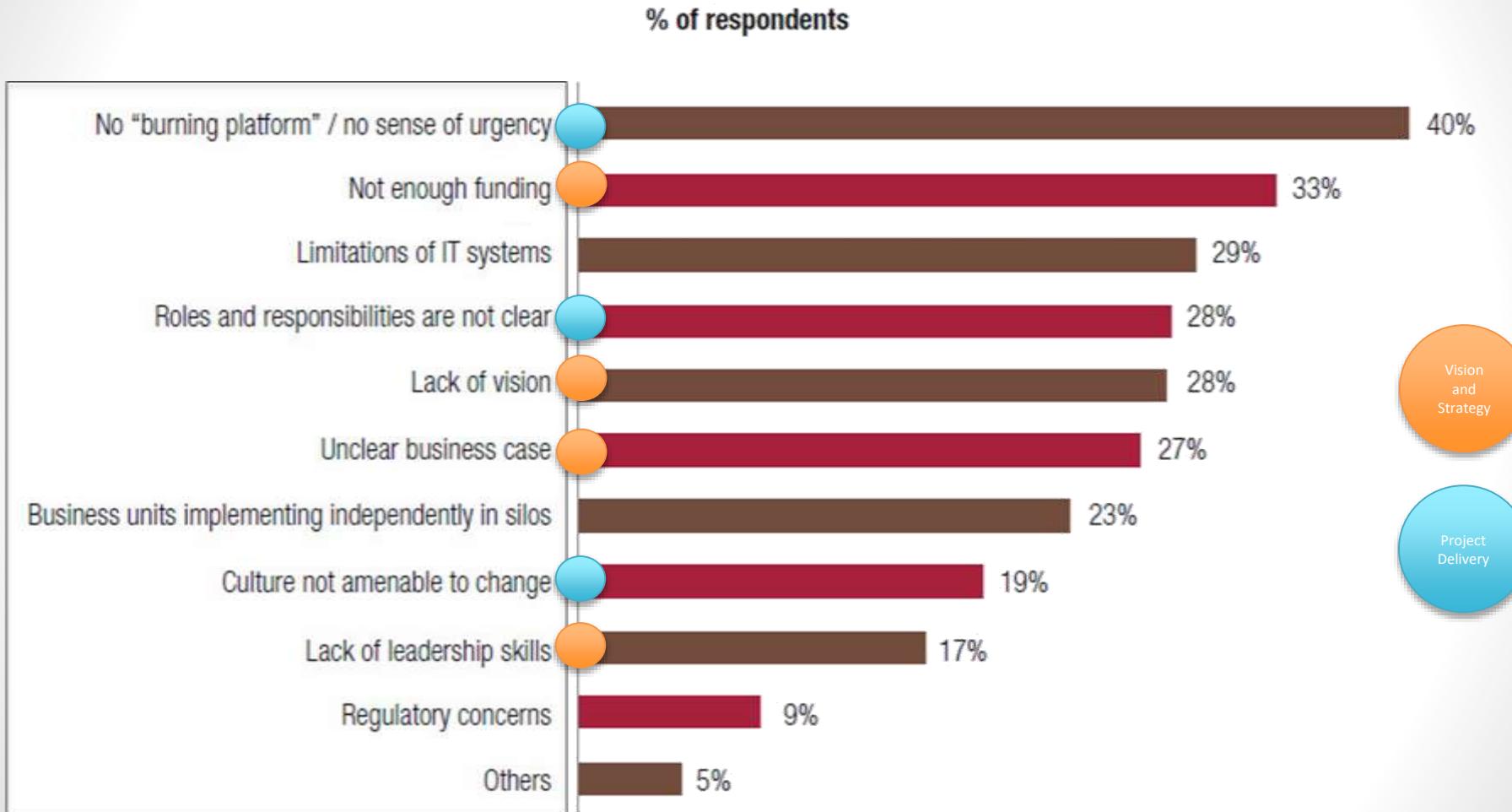
Digital Transformation

Organizational Barriers to Digital Transformation



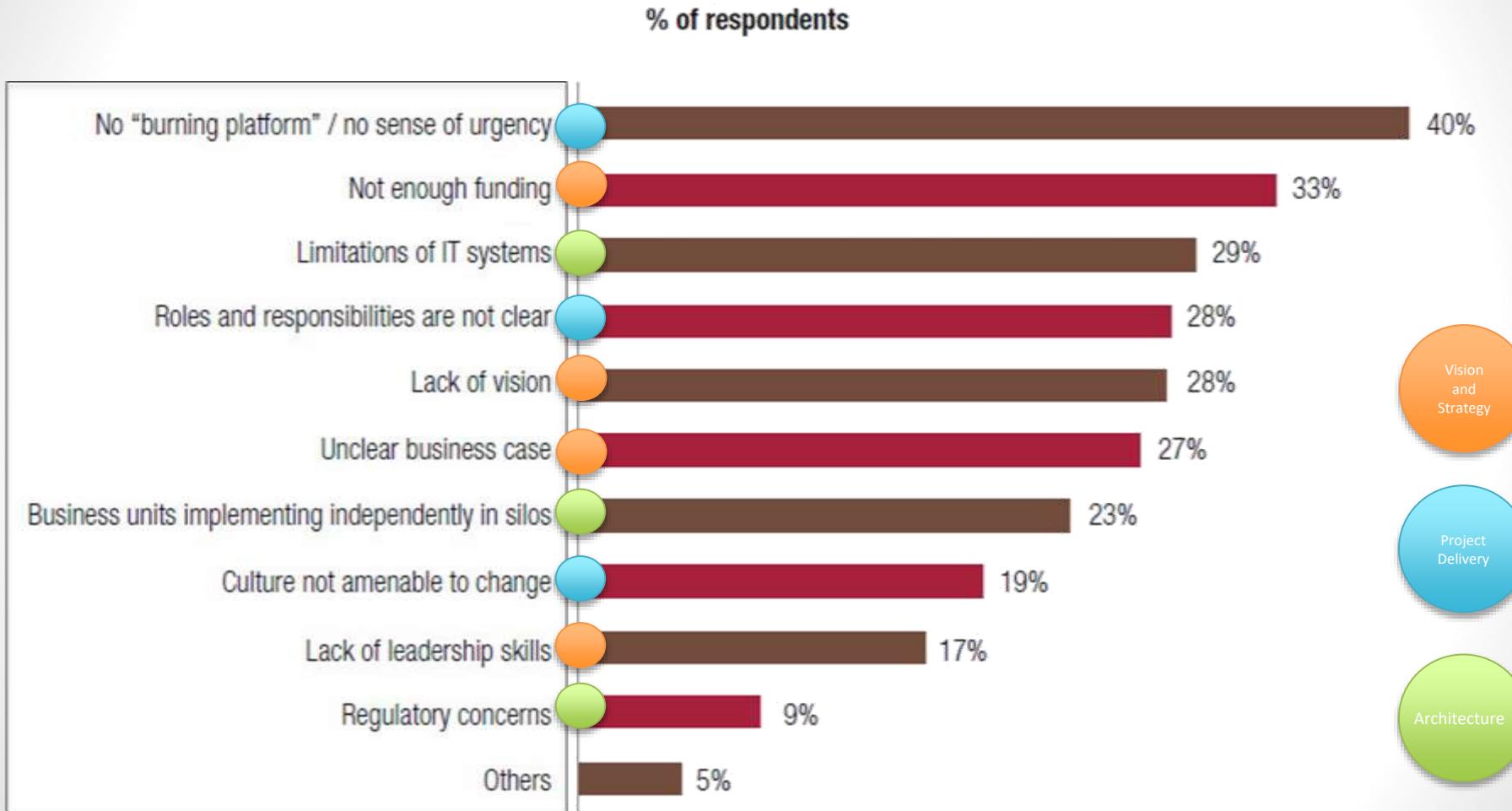
Source: Capgemini Consulting and MIT Sloan Management Review,
"Embracing Digital Technology: A New Strategic Imperative", October 2013

Organizational Barriers to Digital Transformation



Source: Capgemini Consulting and MIT Sloan Management Review,
"Embracing Digital Technology: A New Strategic Imperative", October 2013

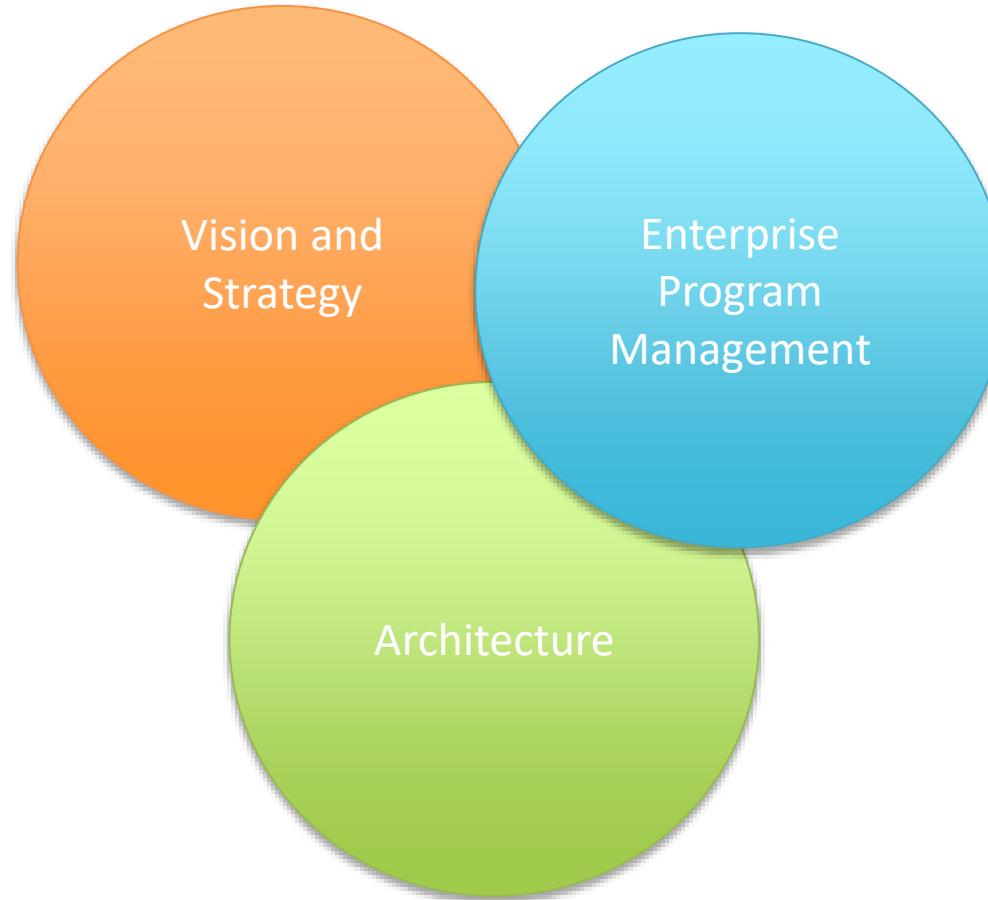
Organizational Barriers to Digital Transformation



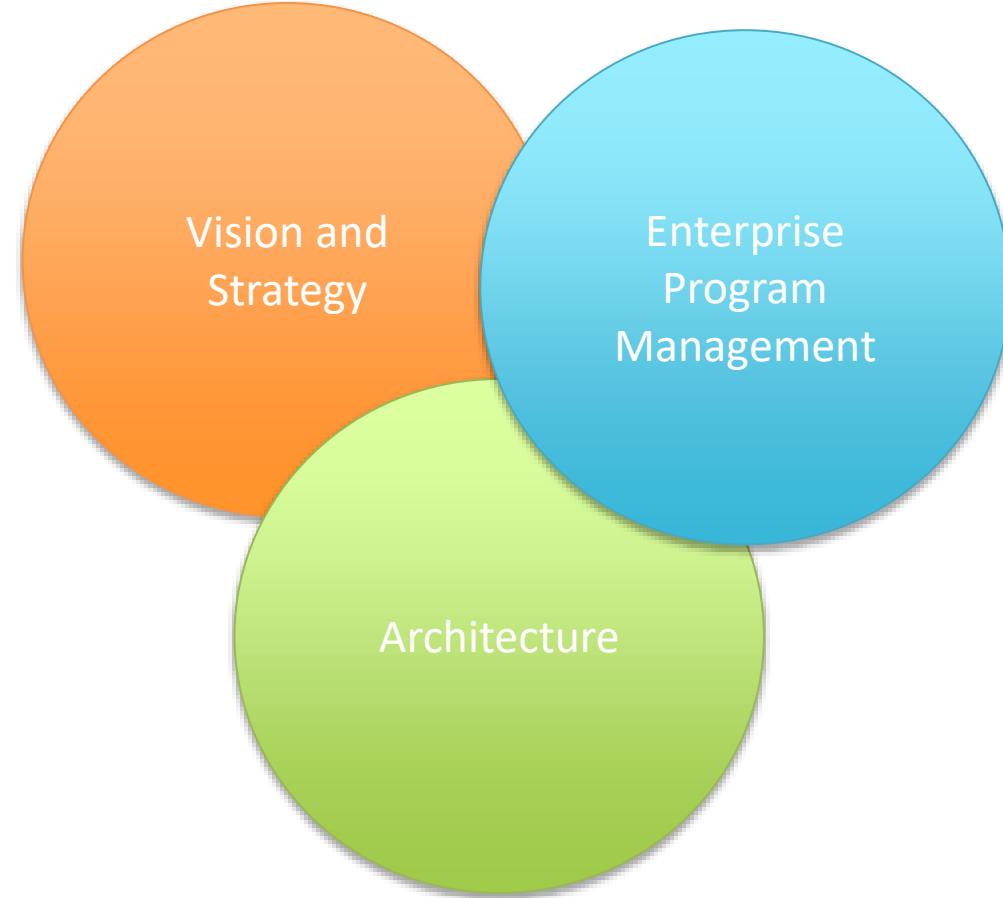
Source: Capgemini Consulting and MIT Sloan Management Review,
"Embracing Digital Technology: A New Strategic Imperative", October 2013

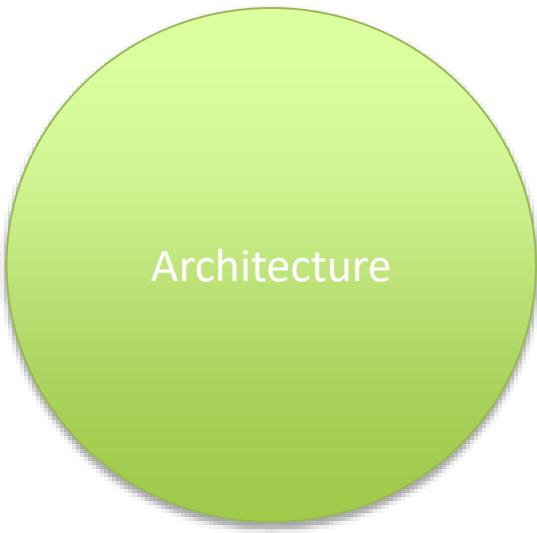
Managing Enterprise Architecture

Transformation Excellence



Value derives from the synergy of three complimentary disciplines





Architecture

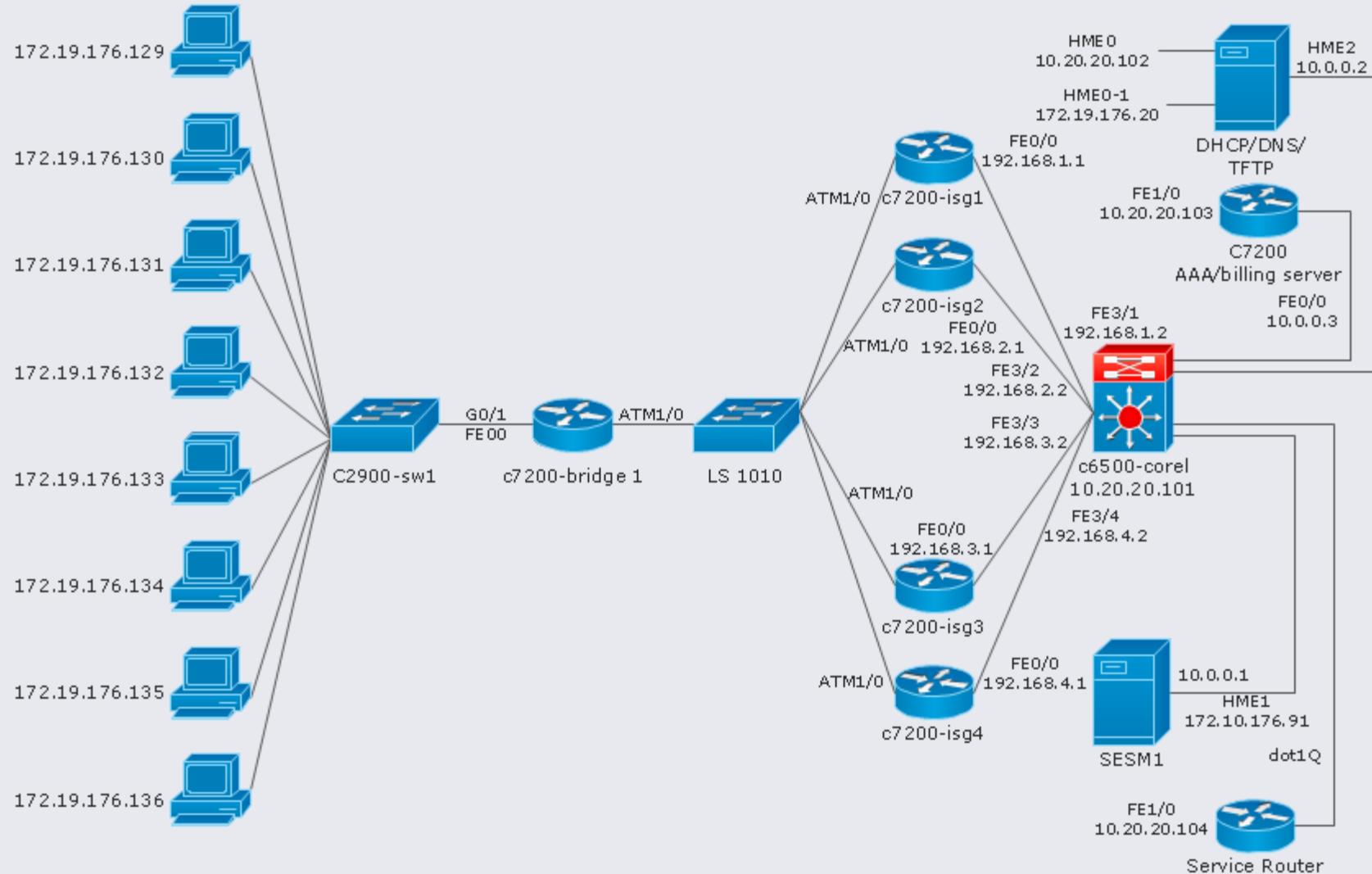
Components of Enterprise Architecture

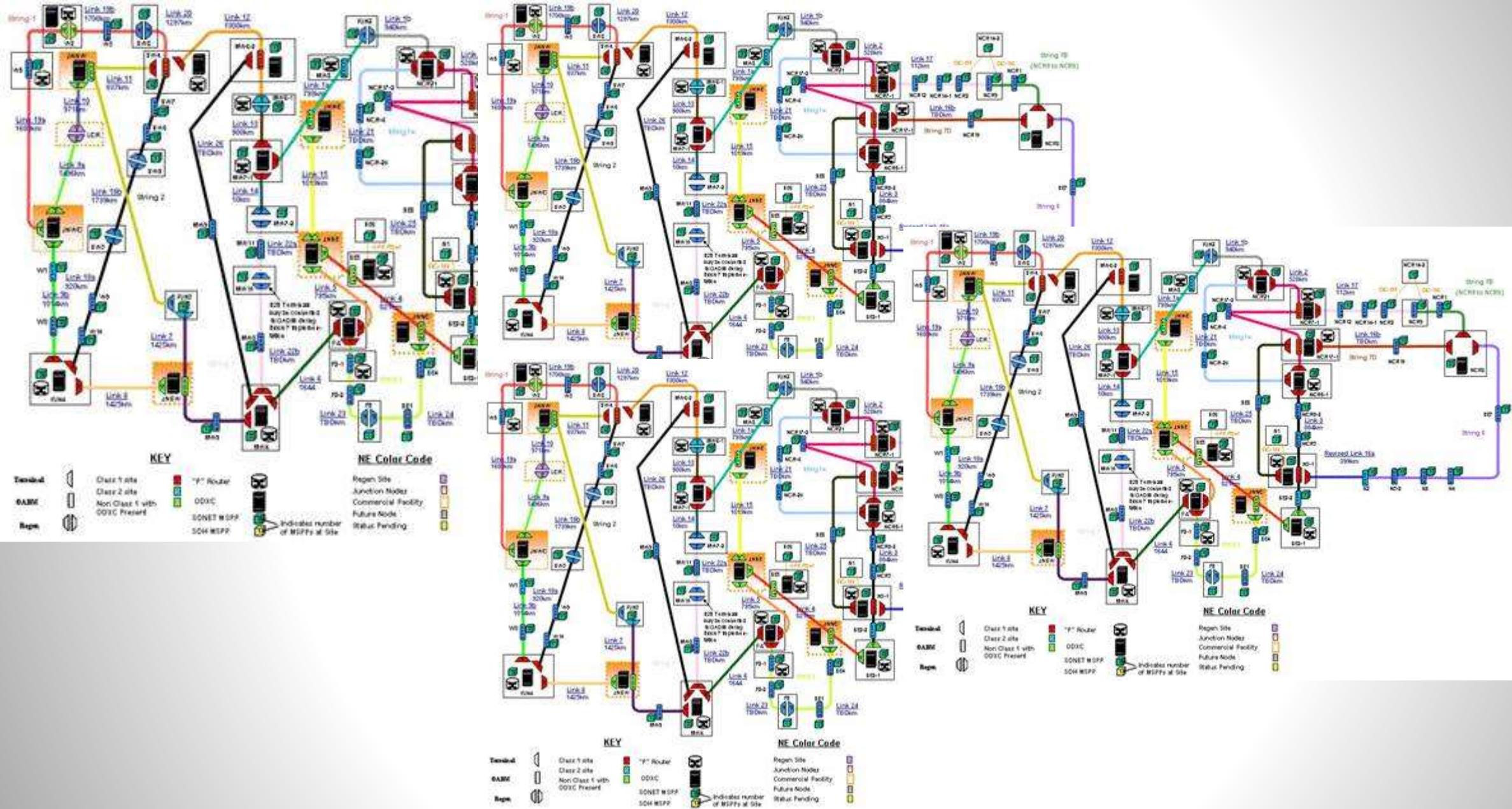


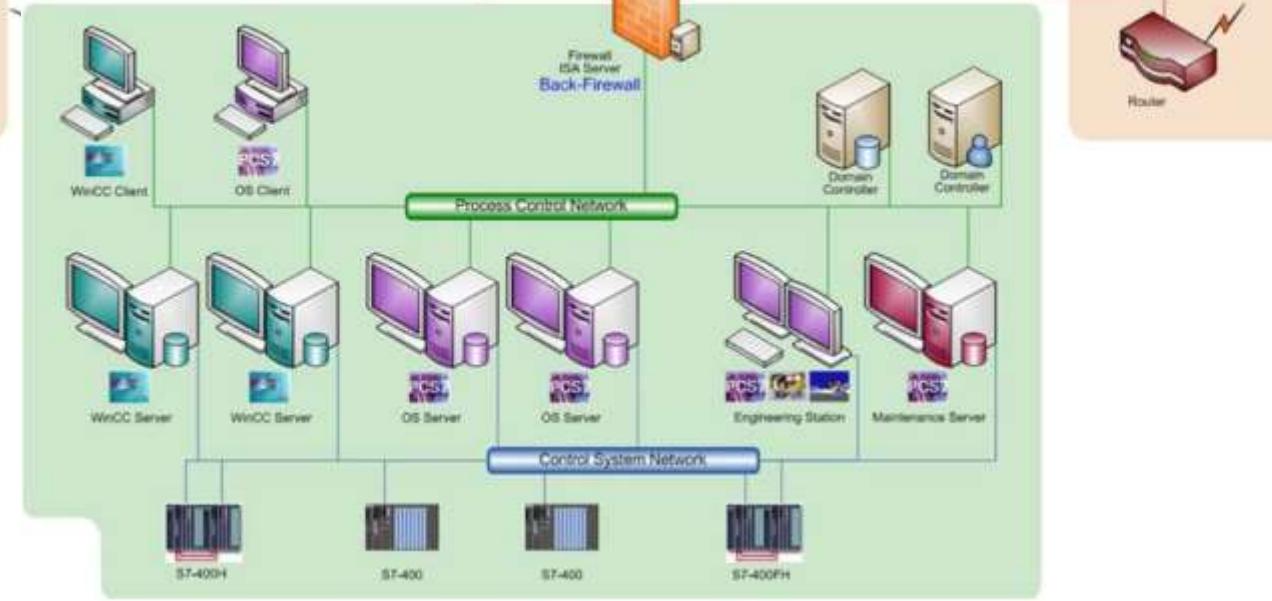
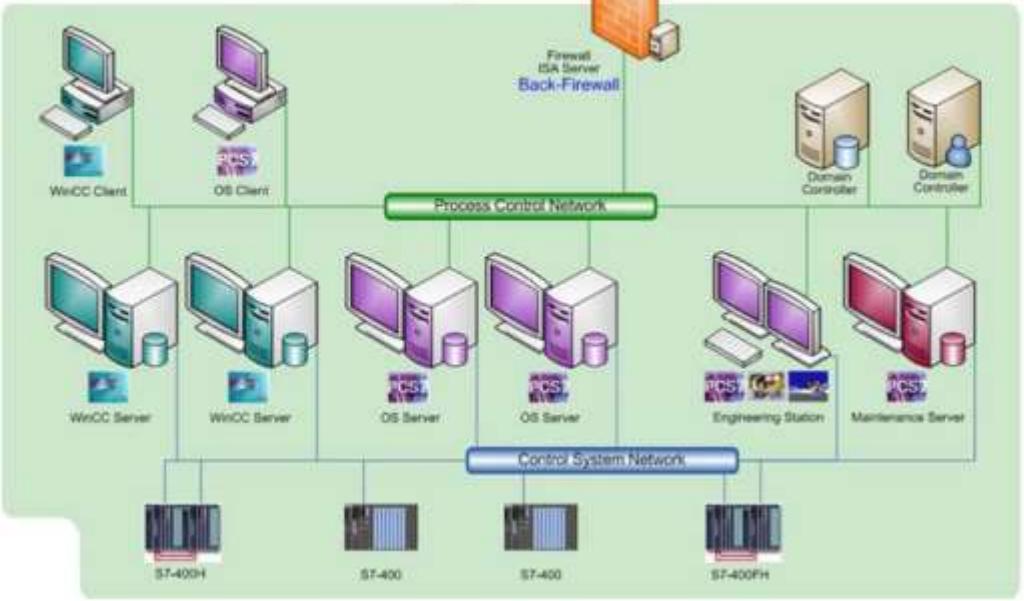
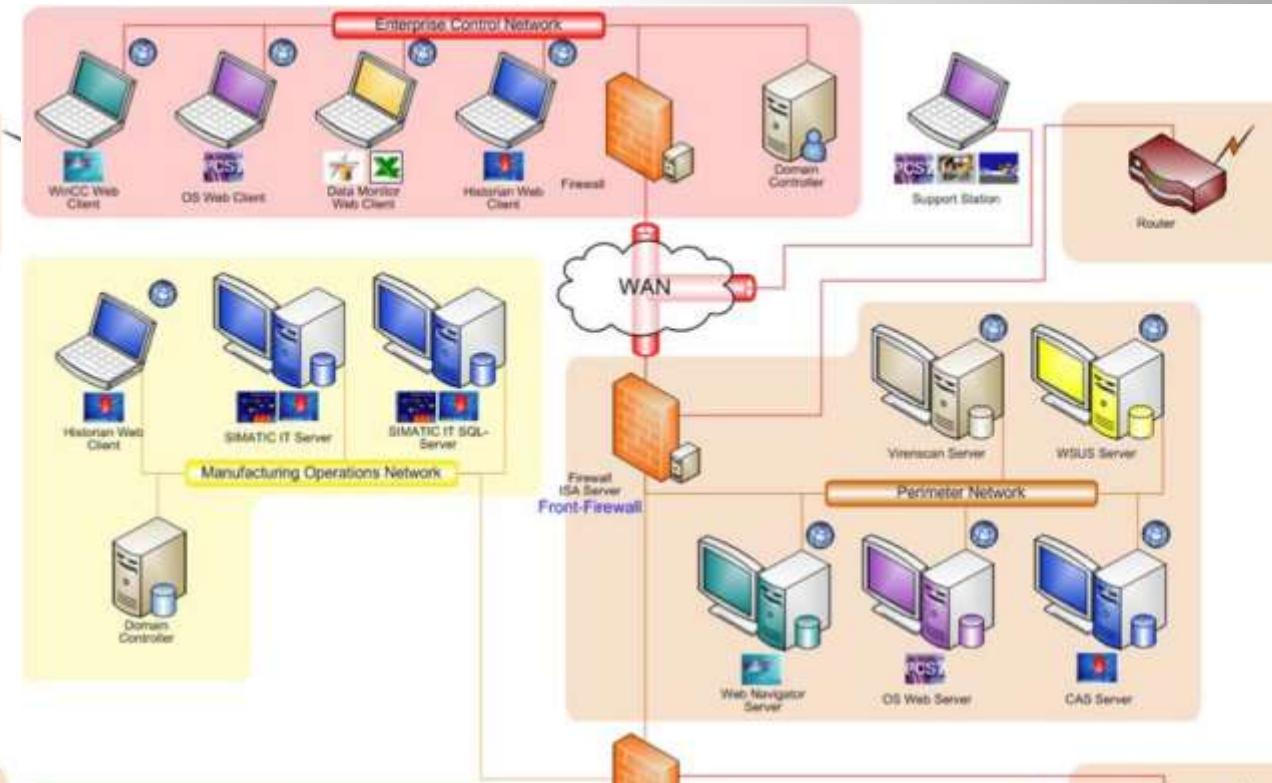
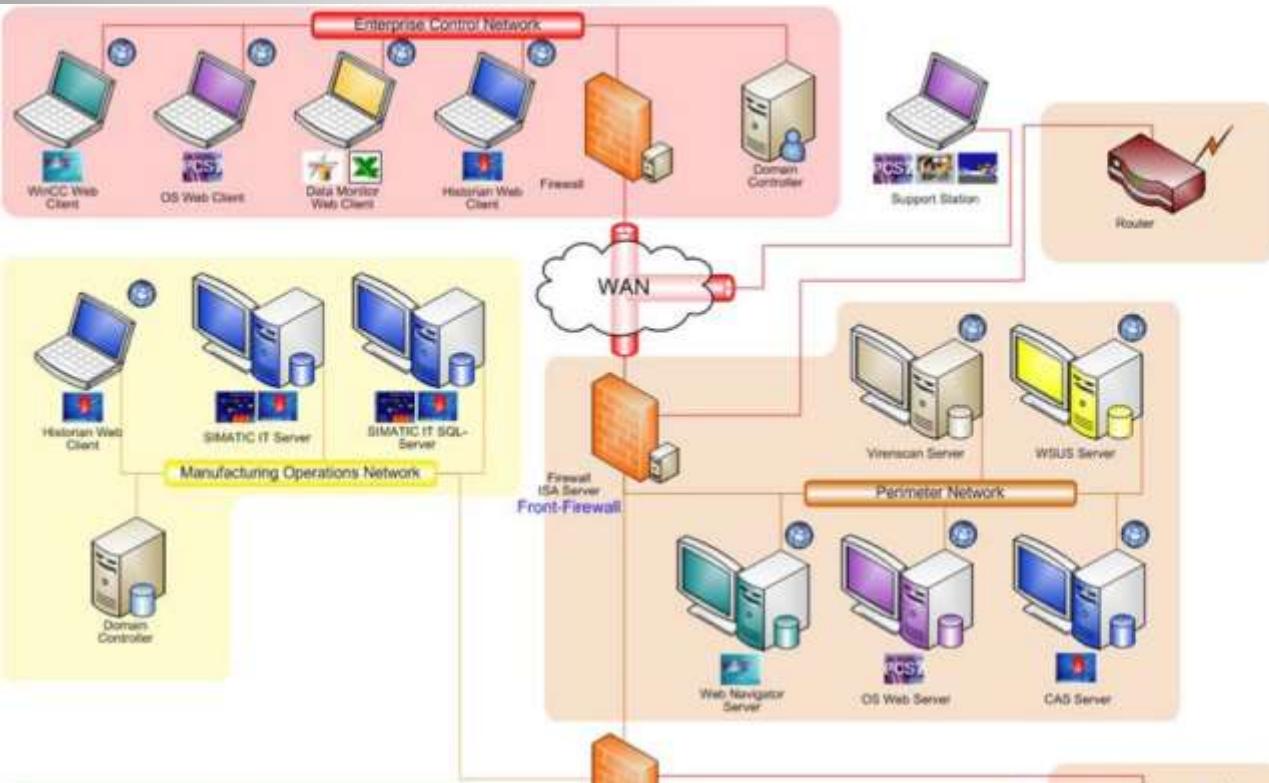


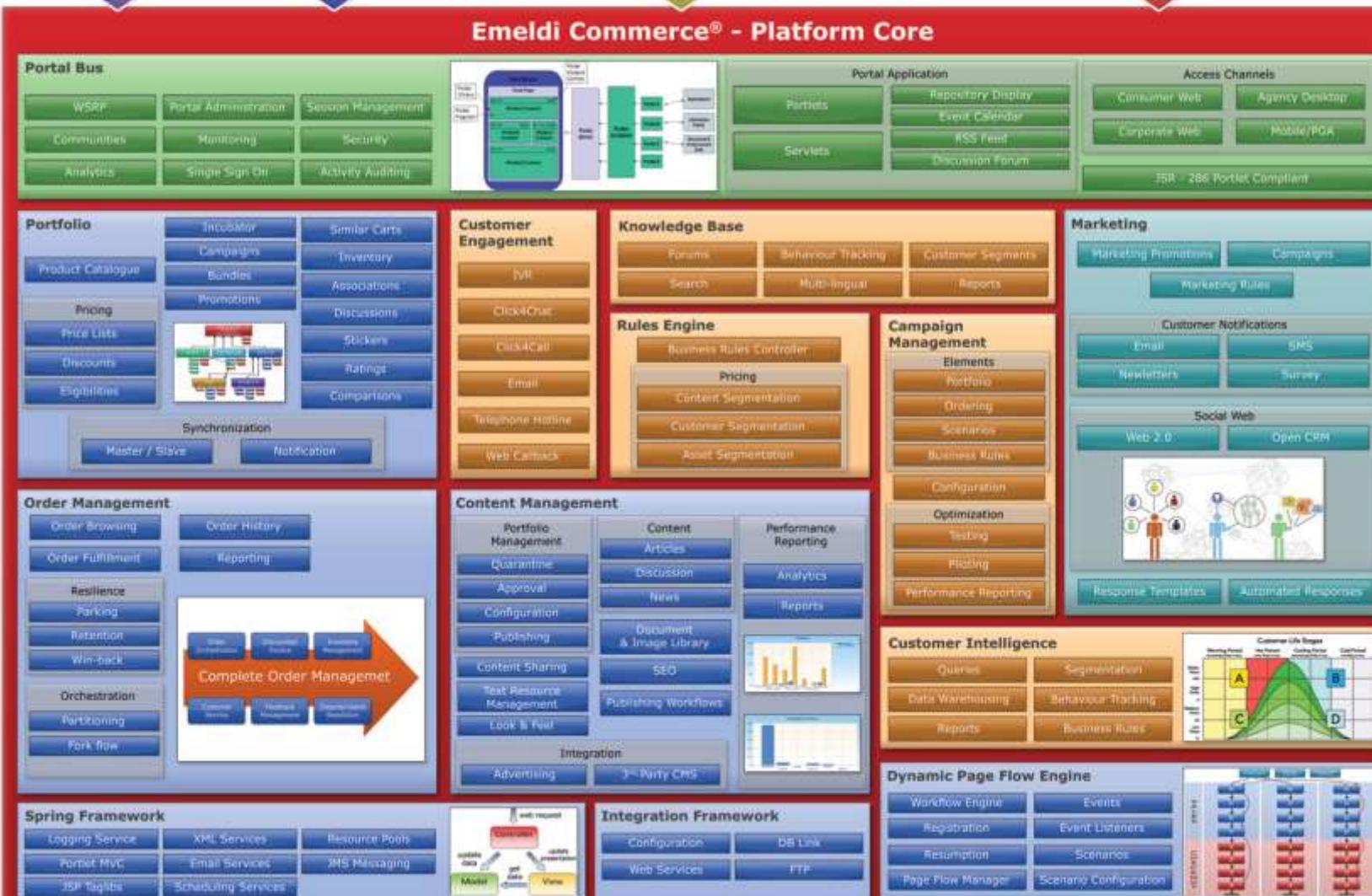
**More complex and
sophisticated
information systems**

Department - 12 Network

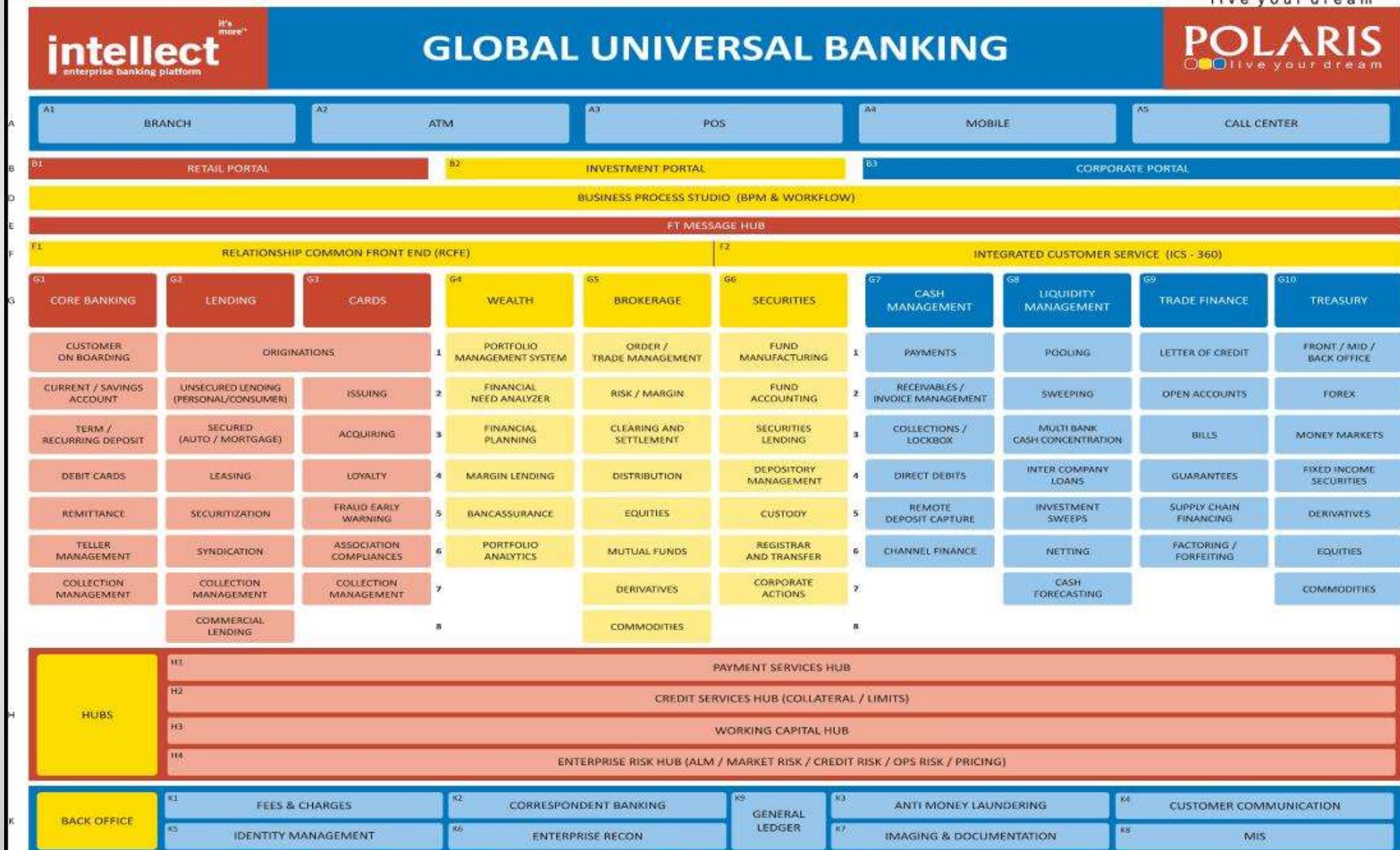




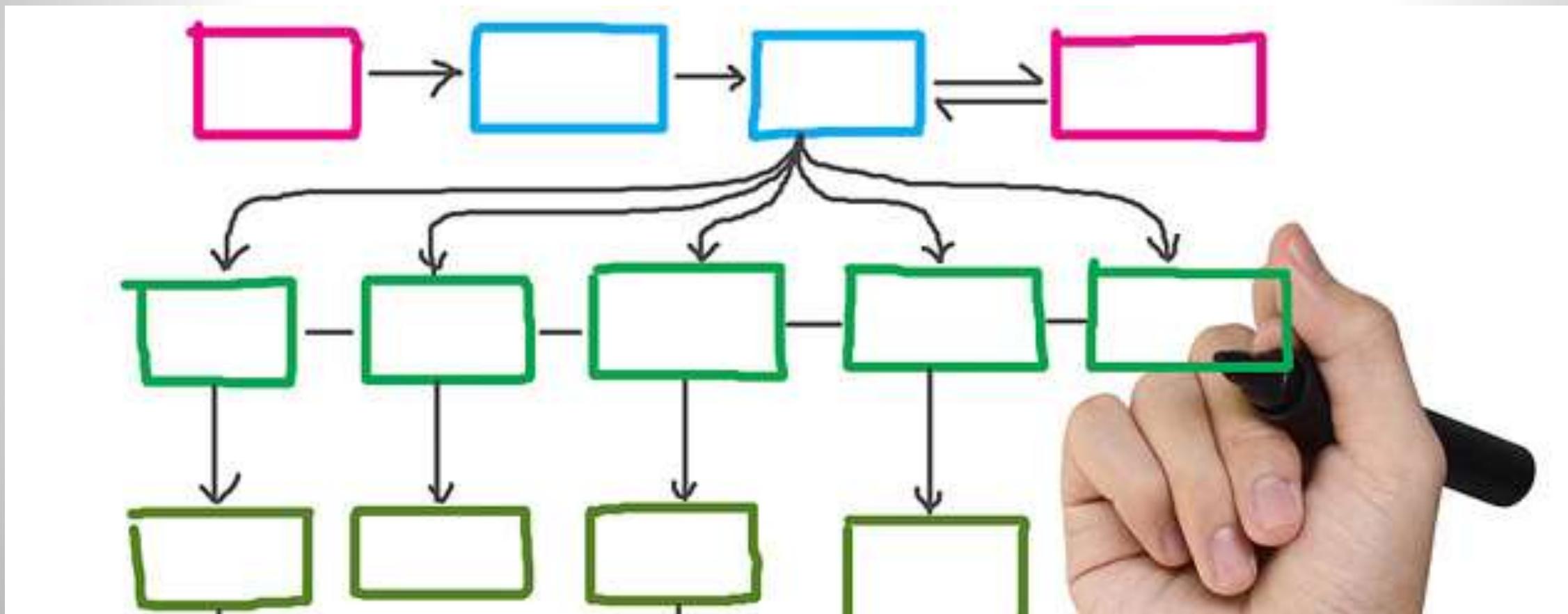




Intellect Suite - Business Services Framework

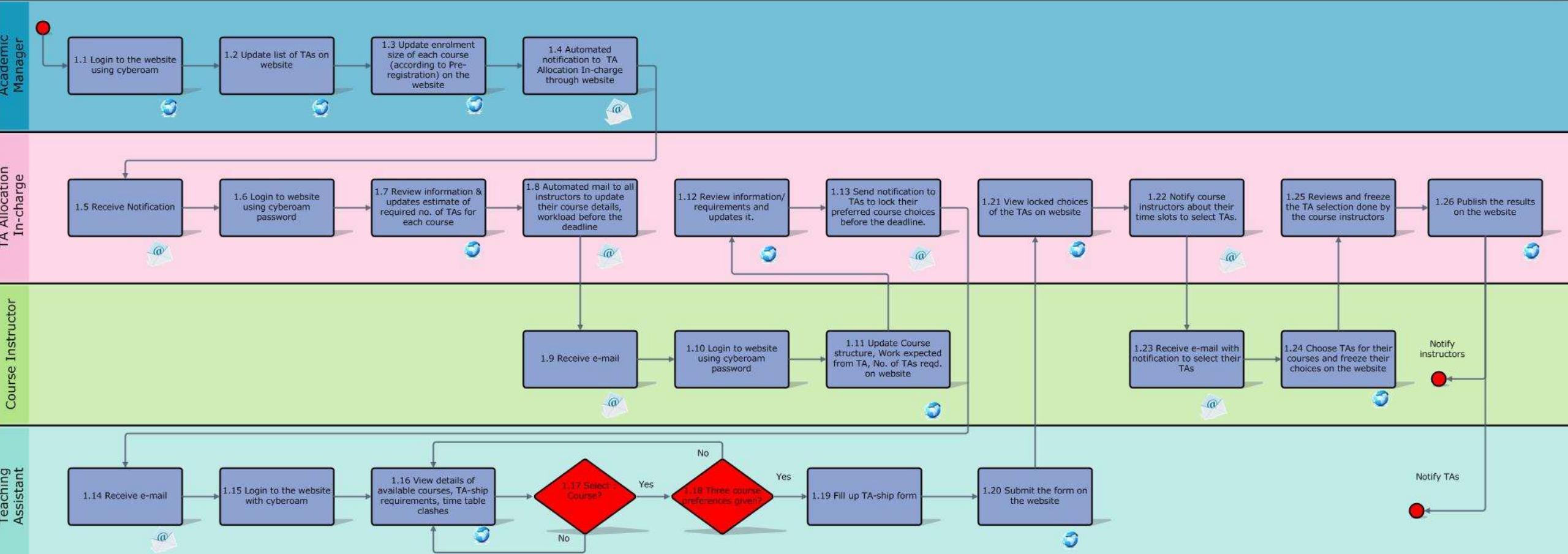


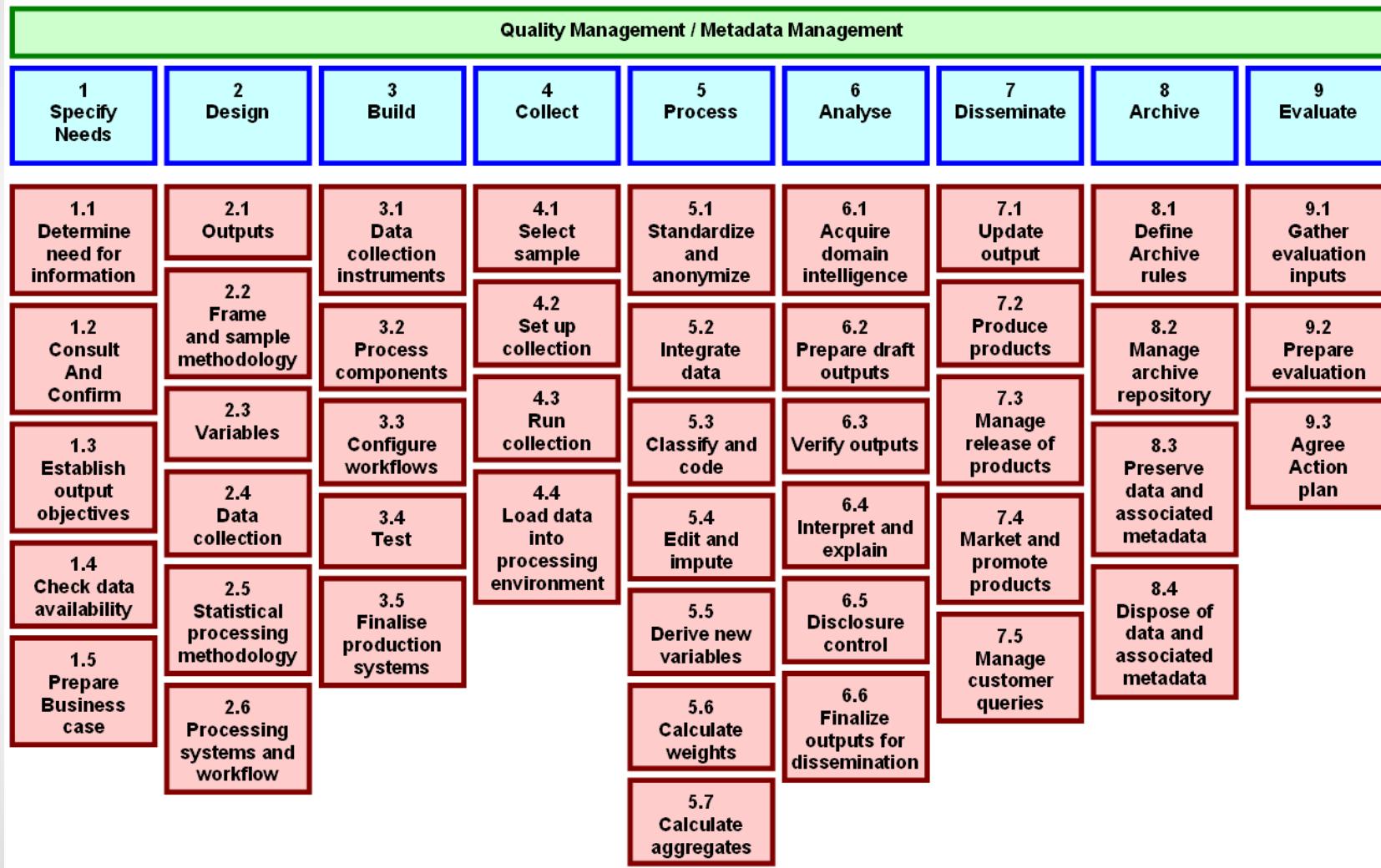
Data architecture

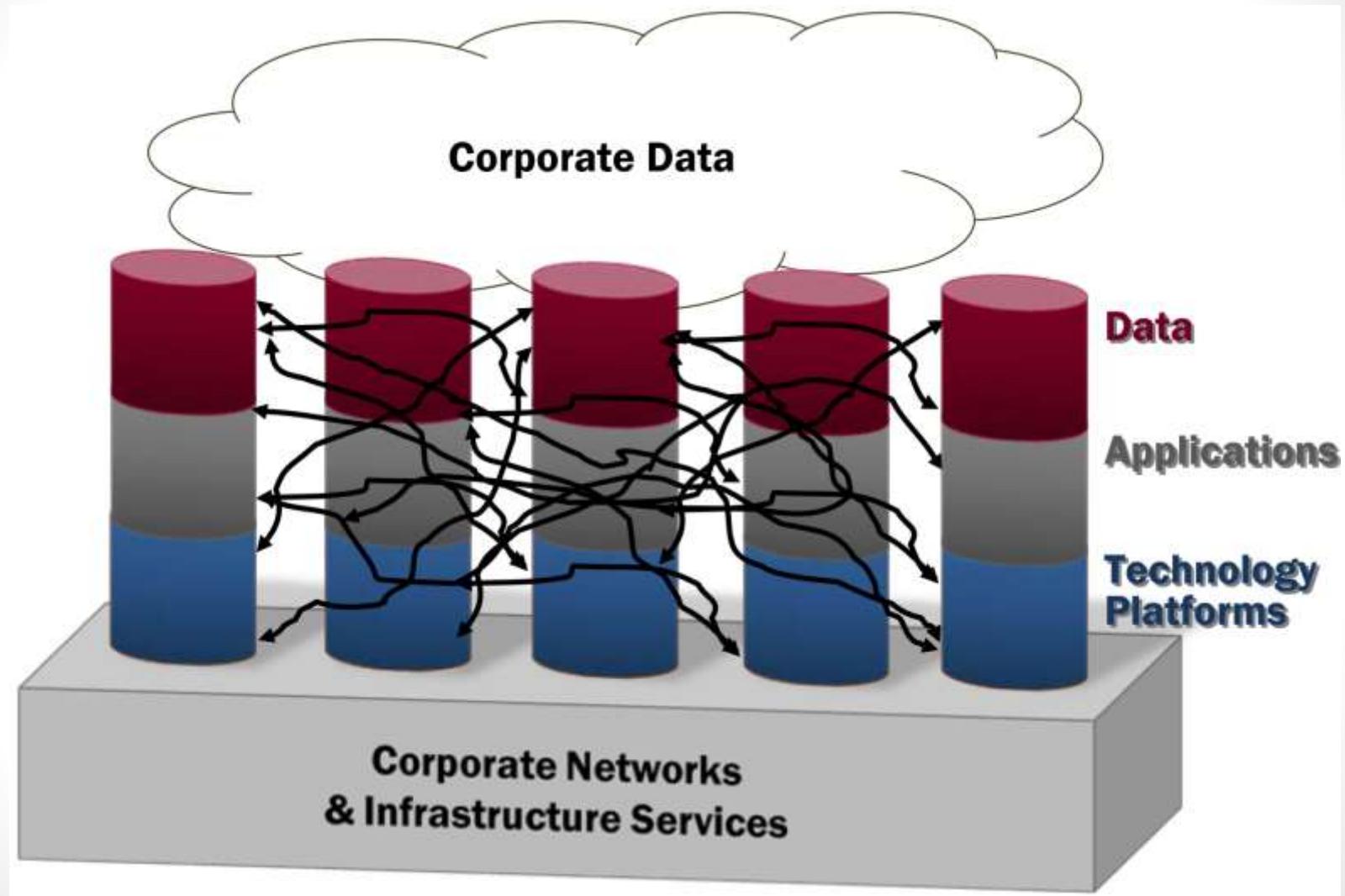


Business Process Model, smarTAlloc!

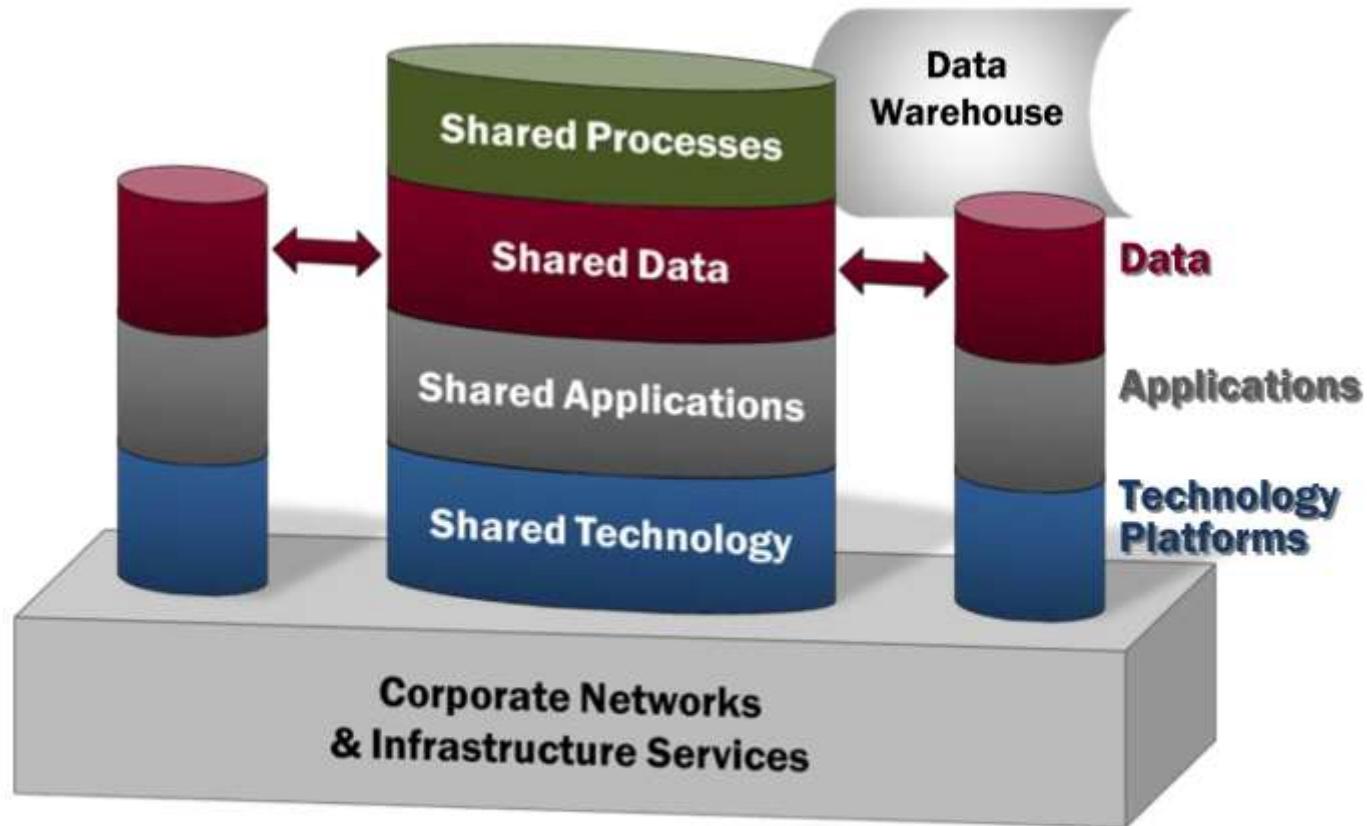
Allocation Process







Source: Enterprise Architecture As Strategy – J. Ross, P. Weill, D. Robertson

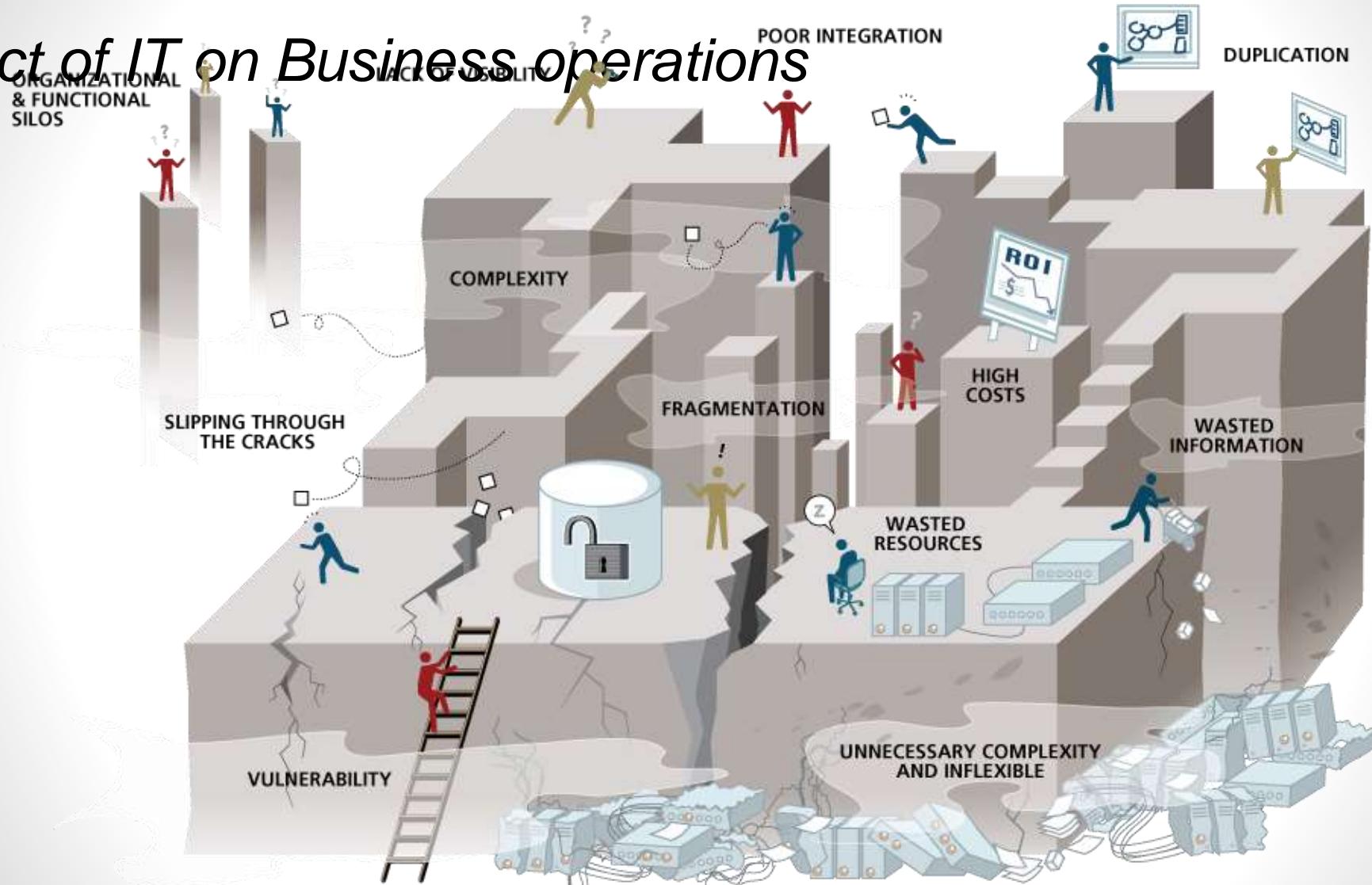


A digitized platform is a coherent set of standardized business processes along with supporting infrastructure, applications, and data, intended to ensure the quality and predictability of core transactions.

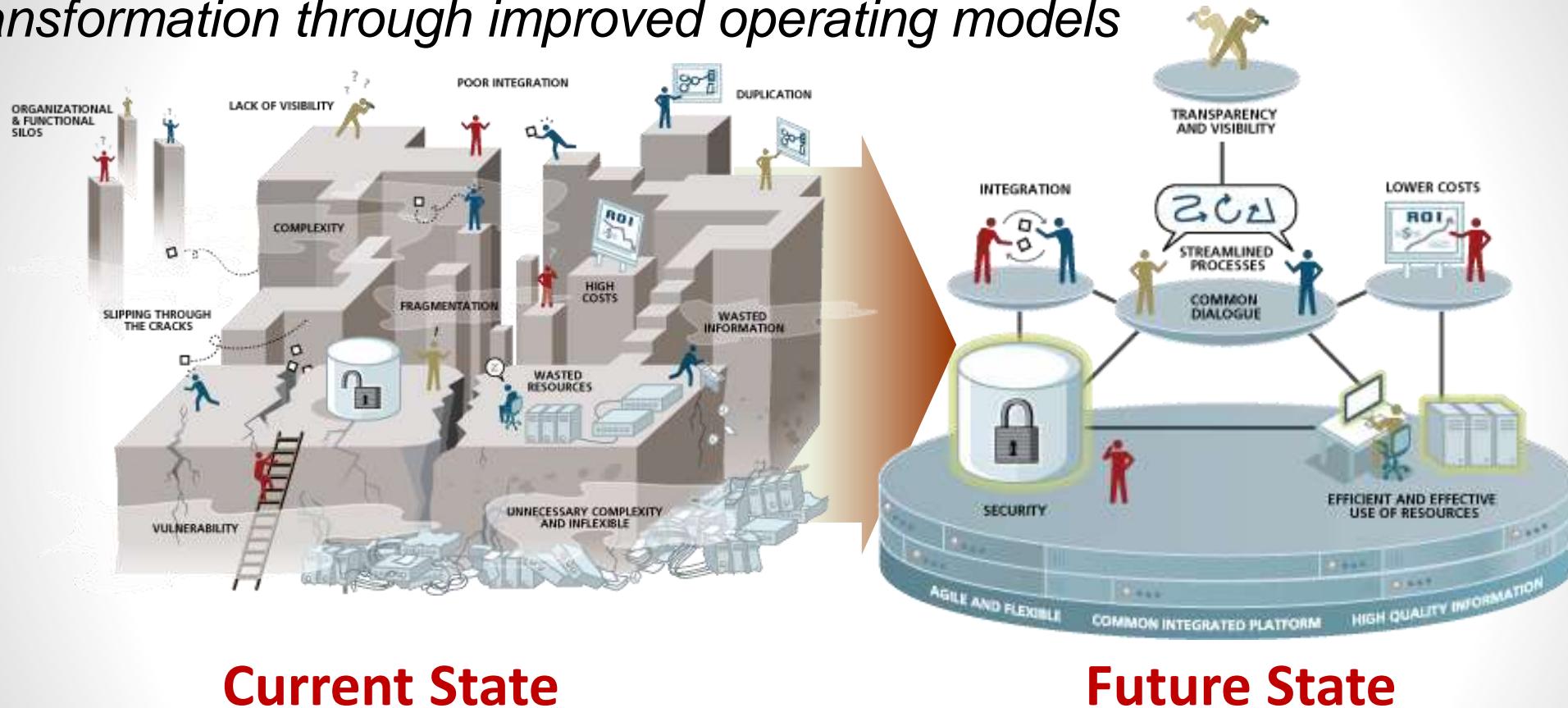
Components of Enterprise Architecture



Impact of IT on Business operations



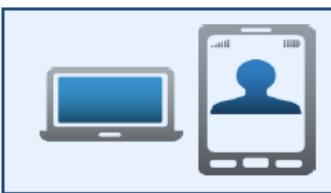
Transformation through improved operating models



Current State

Future State

Some Architecture Challenges



Provide Access To All Applications & Data Through **Mobile Devices**.



Use **Agile Development** To Build New Customer-Centric Applications.



Build A **Data Lake** To Deliver Greater Insight In Real Time.

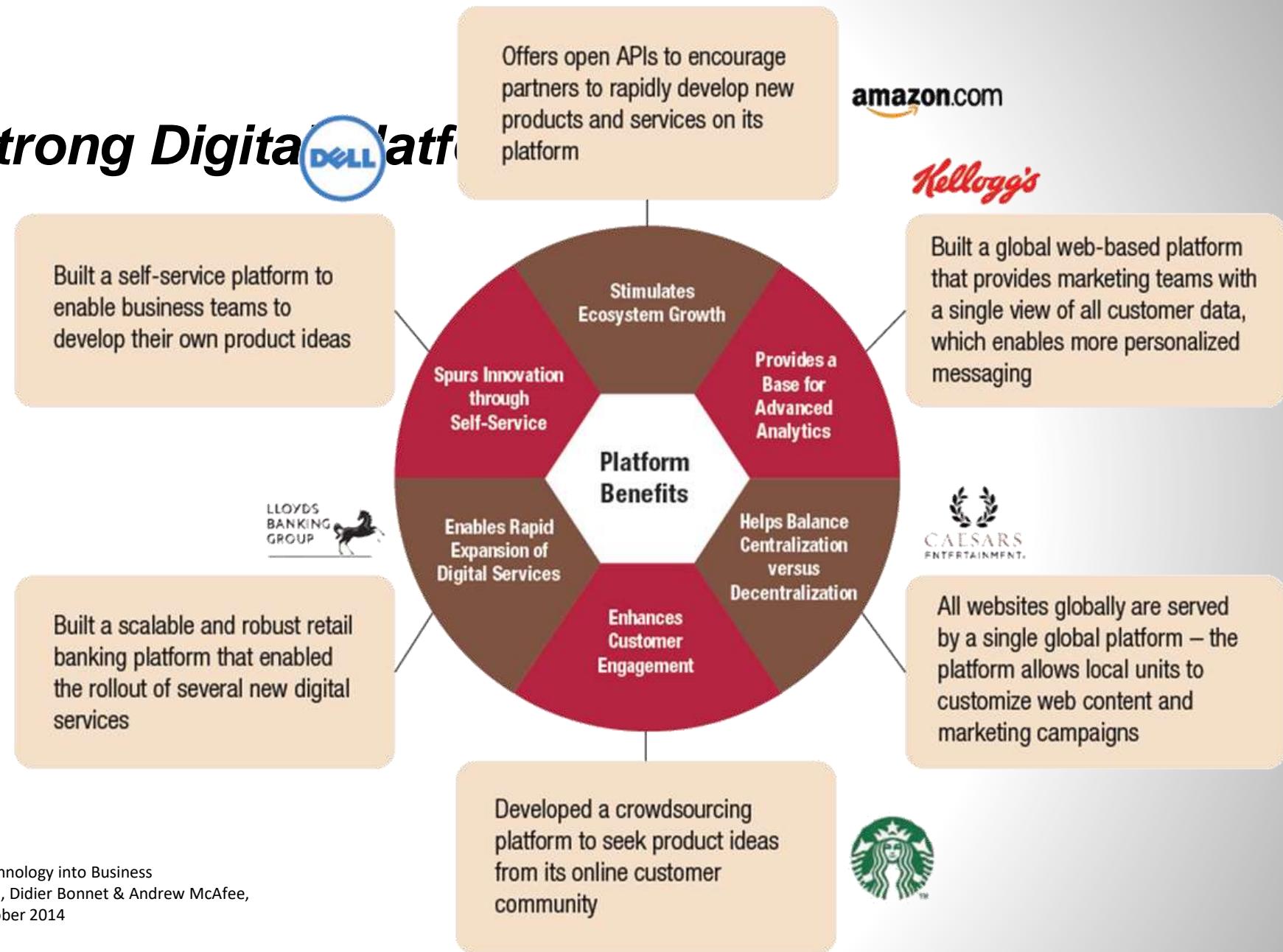


Move To A **Software-Defined Data Center** Infrastructure and Expand It To a Hybrid Cloud.



Use **Adaptive, Data-Driven Security** To Rapidly Respond To Emerging Threats.

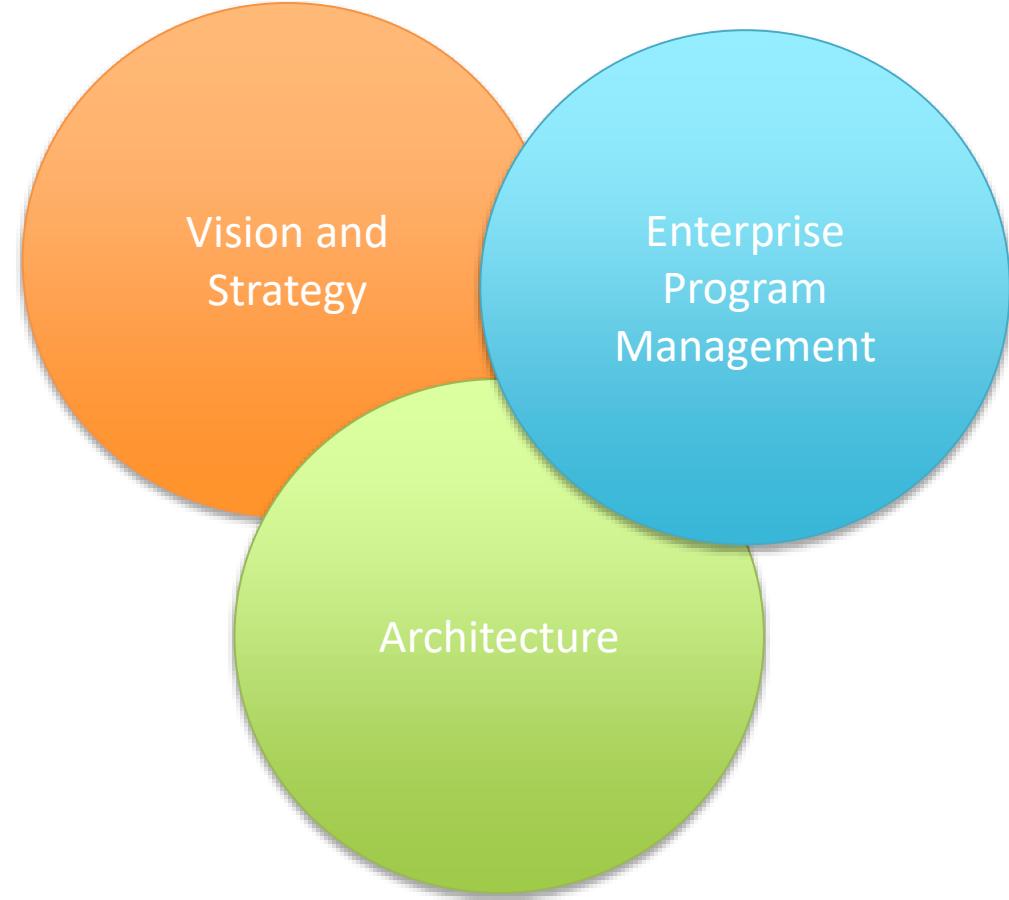
Benefits of a Strong Digital Platform



Source: "Leading Digital: Turning Technology into Business Transformation", George Westerman, Didier Bonnet & Andrew McAfee, Harvard Business Review Press, October 2014

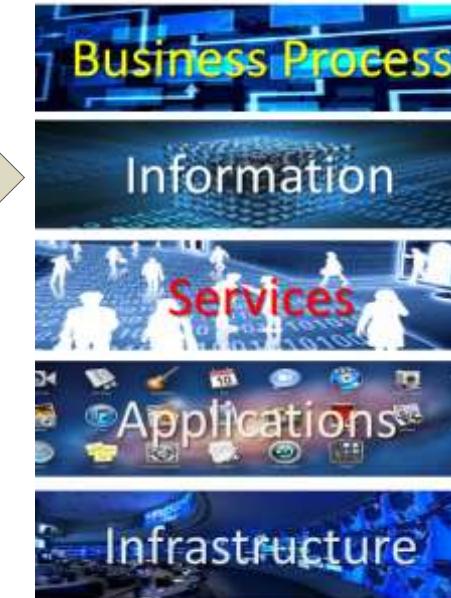
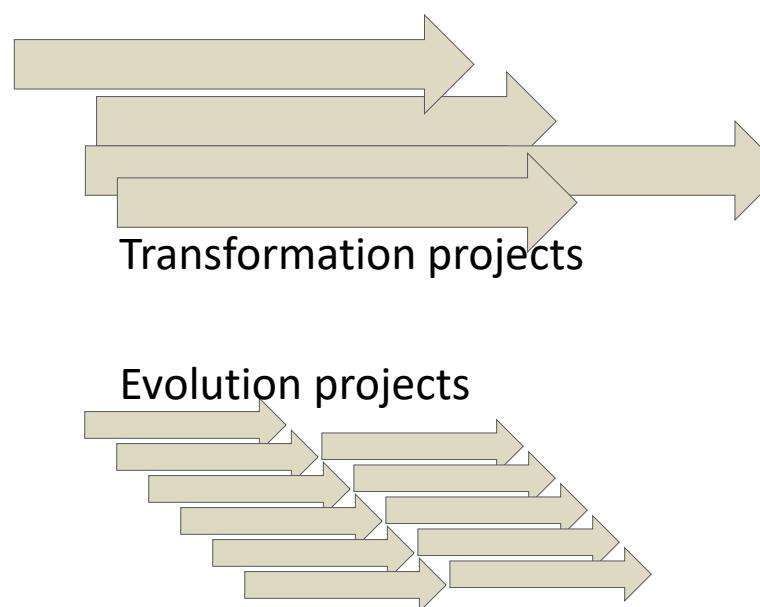
Program management and Agility

A wide-angle photograph of a large lecture hall or conference room. The room is filled with rows of people seated in dark chairs, facing a stage on the left. A large projection screen is visible on the stage, displaying a presentation slide. The ceiling is dark with a grid of rectangular light fixtures. The overall atmosphere is that of a formal event or lecture.





Enterprise
Program
Management



The typical transformation challenge

*Long standing set of **unfulfilled** requirements*

*Huge **amount** of stakeholders to please*

*Very strong **divide** between business and operations*

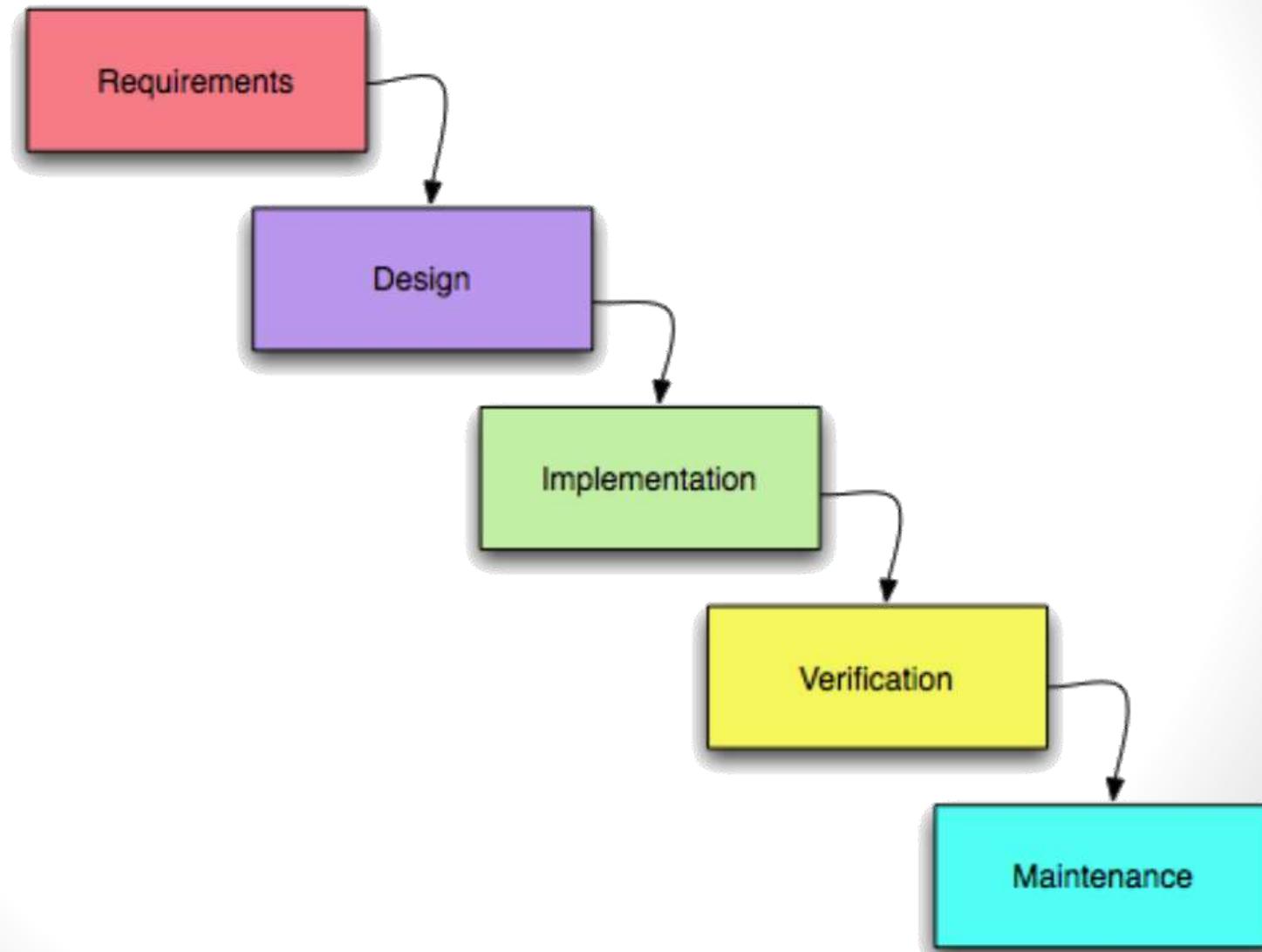
*FNAO culture (*Failure is Not An Option*)*

No track record in innovation

Standards seen as non-commercial



Waterfall Model: Big Design Up Front





“the use of existing capabilities
to rapidly generate new business
value while limiting cost and
risks”

Agility

“Ability of firms to sense
environmental changes and to
react to them in a timely and
readily matter”

Agility paradox :

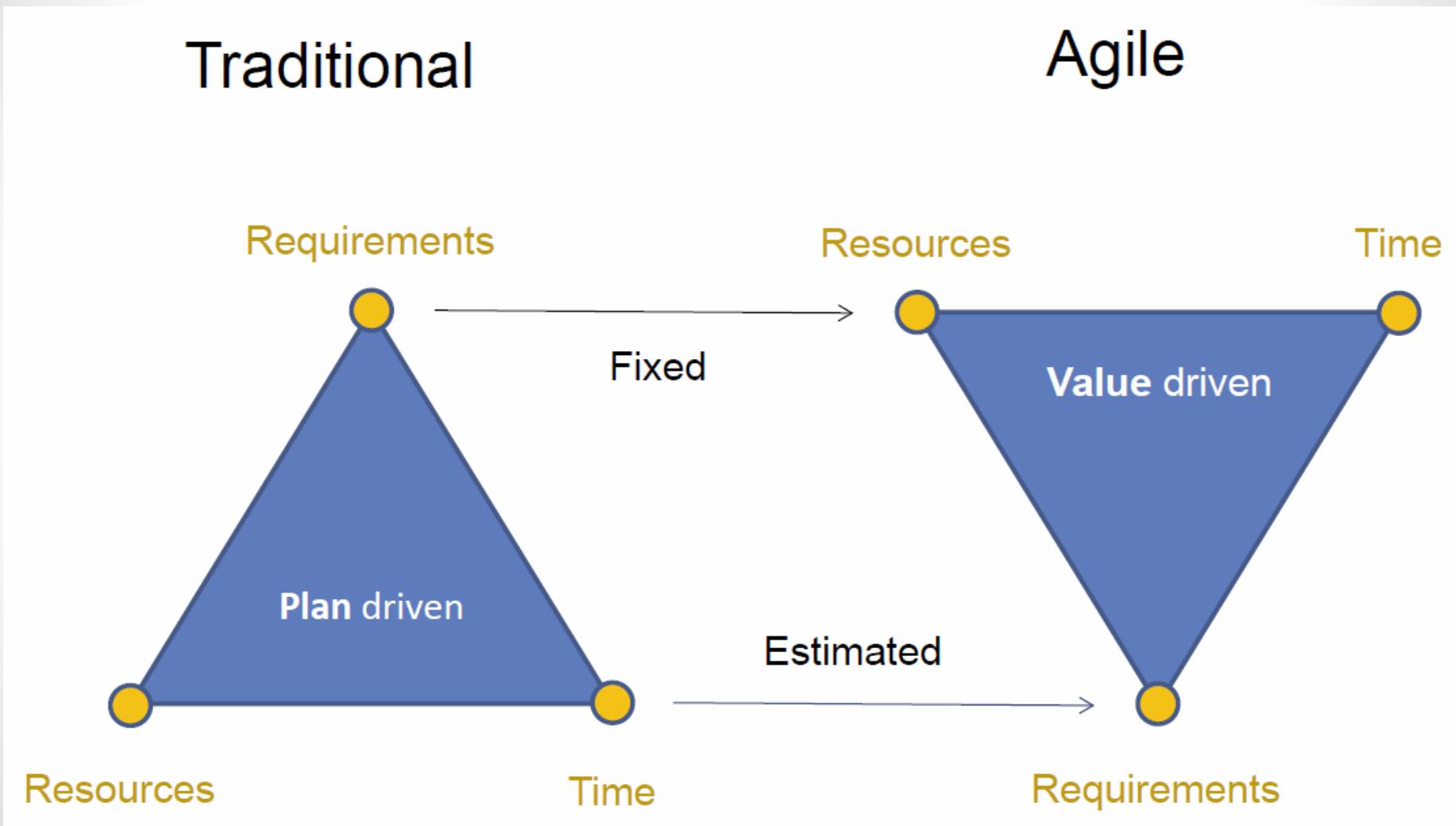
Higher agility in firms with more digitized and standardized business process and platform



AGILITY

Traditional

Agile



A Manifesto for Business Agility



Clear operating model – how will we grow?
Leadership setting vision and building capabilities
Simple and clear Governance — strong core then innovate at edge
Portfolio management
Mature and modular enterprise architecture
More IT savvy—set of practices and competencies that drive more business value
(including agility) for each dollar invested

Failed Agility at a leading European Enterprise

A Strategic initiative led the organisation to convert all major transformation programs to using the Agile methodology.

Many transformation programs could not be adequately converted. Employees and subcontractors culture was not ready yet. Tools were not adjusted.

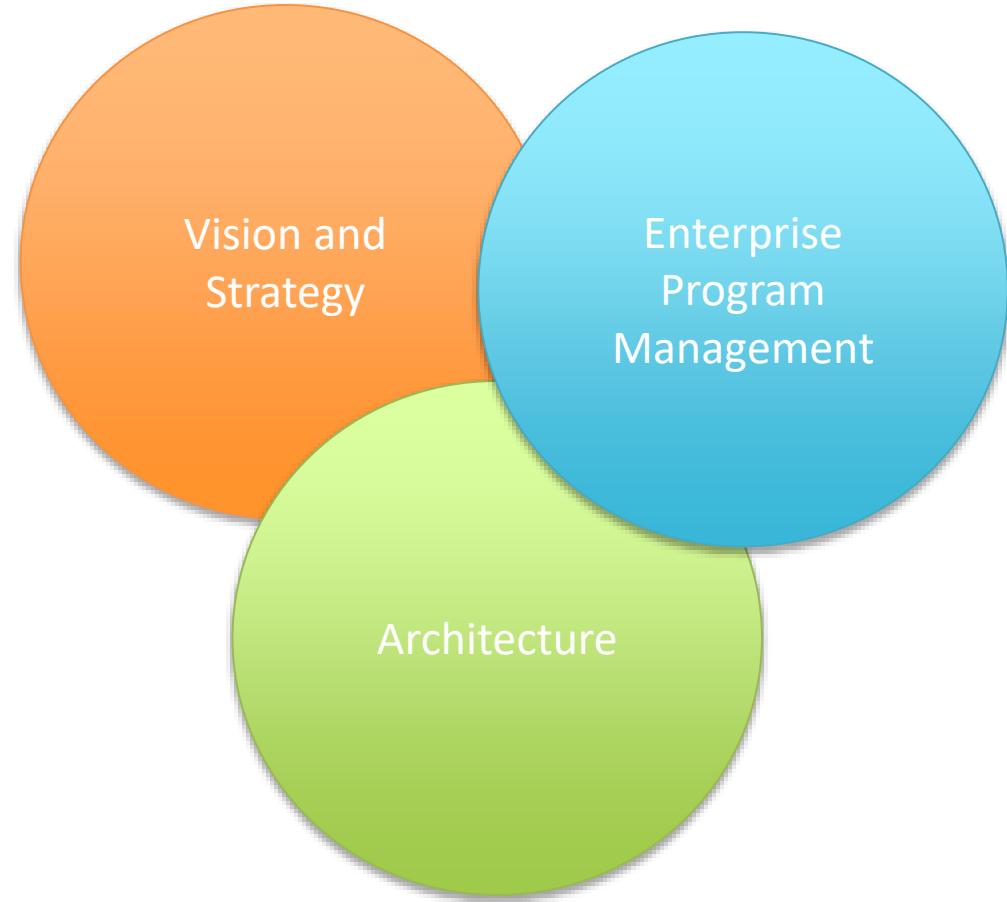
Two years later the bank withdrew the initiative and went back to traditional development methods.

The initiative resulted in a major loss of time-to-market, budget, effort and opportunities.



A wide-angle photograph of a large lecture hall or conference room. The room is filled with rows of people seated in dark-colored chairs, facing a stage area on the left. A large projection screen is visible on the stage, displaying a blue-toned image. The ceiling is dark with a grid of rectangular fluorescent light fixtures. The overall atmosphere is that of a formal presentation or lecture.

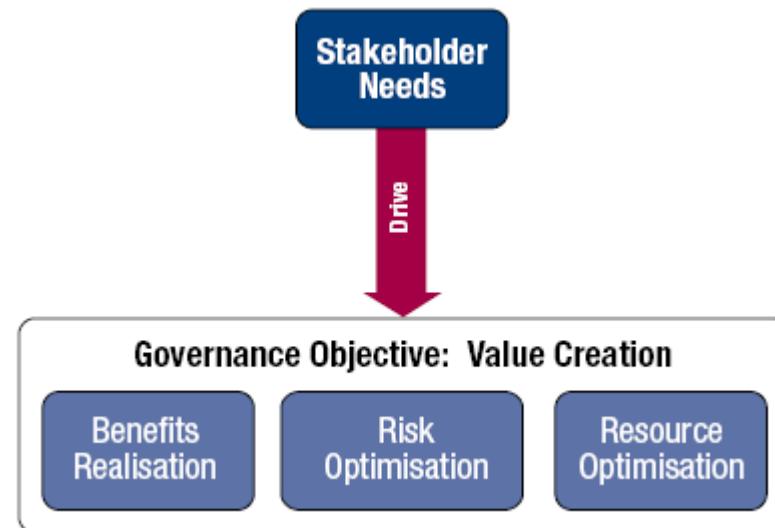
Vision and Strategy





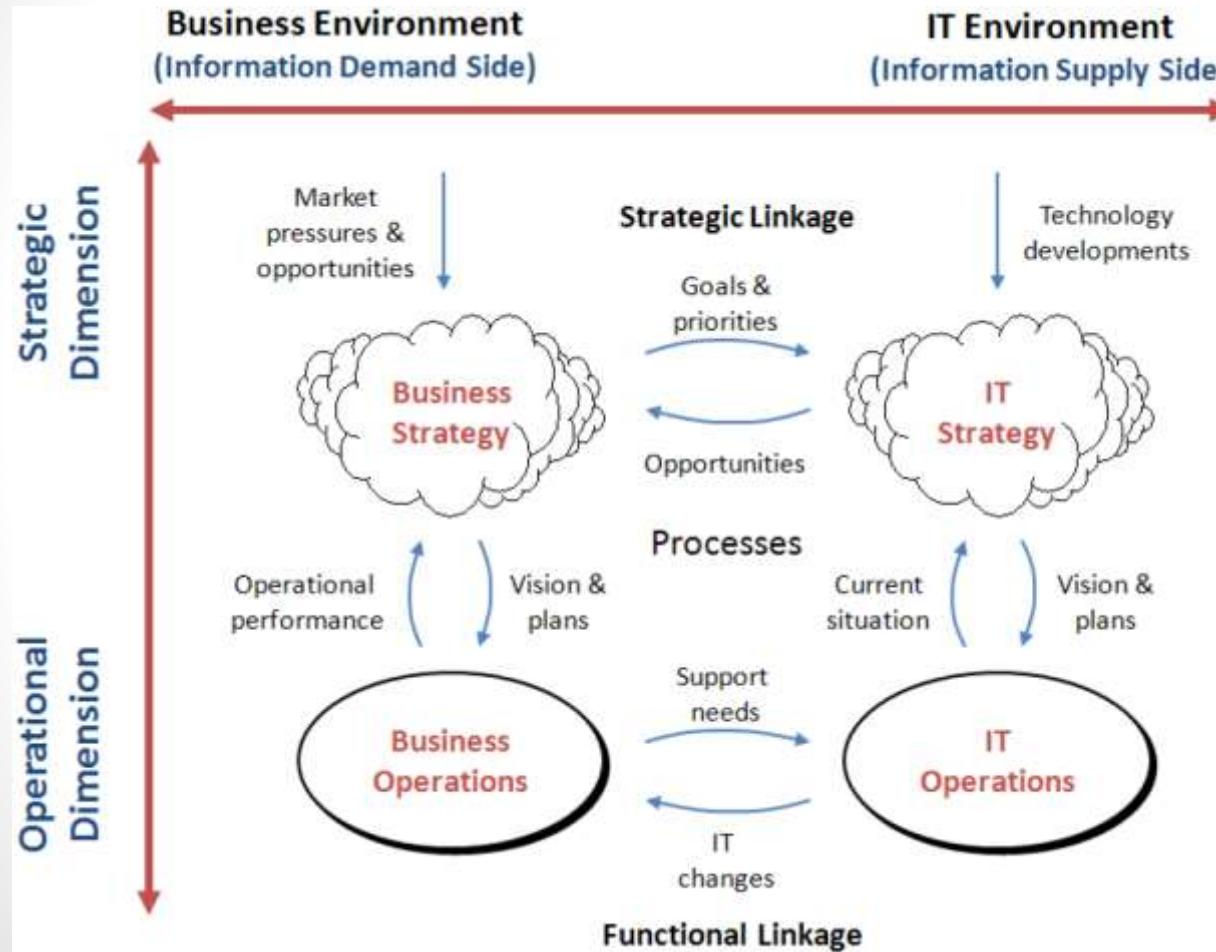
Vision and
Strategy

Governance Drivers





Linkages of Business and IT Strategies and Operations



ENABLING AGILITY:



Type of Agility	Strategic Objective
Business Efficiency Agility <ul style="list-style-type: none">▪ Continuous improvement▪ Scalability	Exploit capabilities to improve efficiency, security, reliability
Business Model Agility <ul style="list-style-type: none">▪ Organizational redesign/restructuring▪ New business processes	Exploit capabilities to enter new markets, open new channels, respond to new customer, partner, and regulatory demands
New Product Agility	Exploit capabilities to develop and launch new products
Boundary Spanning Agility <ul style="list-style-type: none">▪ Acquisitions▪ Partnerships	Exploit capabilities to grow profitably through acquisitions or partnerships



*Key concepts and major
landmarks in IT Governance
research*

Executives nurture
high expectations
from business
transformation
projects

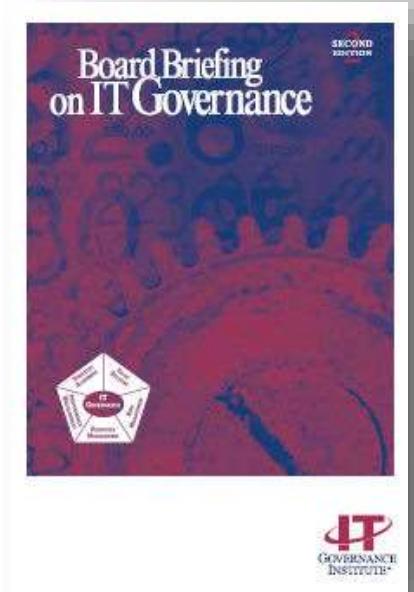


Definition

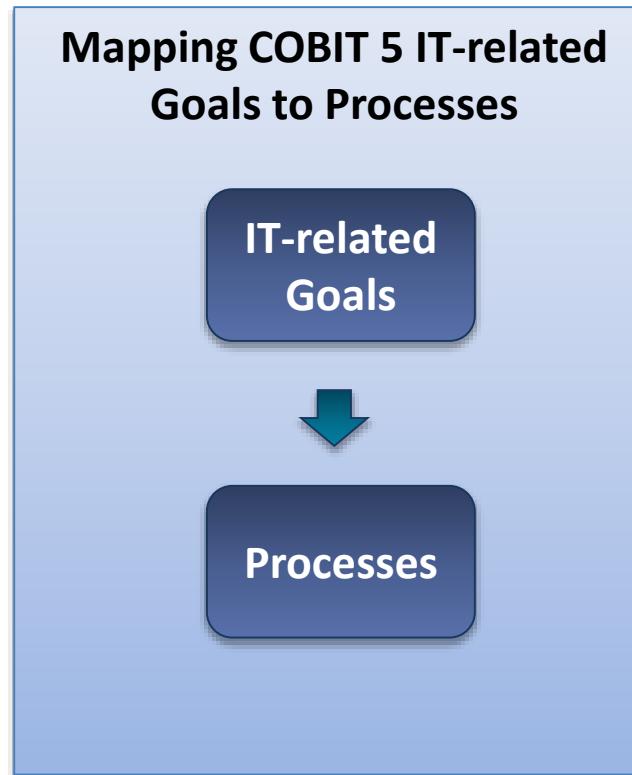
“IT governance is the responsibility of the board of directors and executive management.

It is an integral part of enterprise governance and consists of the leadership and organisational structures and processes that ensure that the organisation’s IT sustains and extends the organisation’s strategies and objectives.”

– Board Briefing on IT Governance, 2nd edition (ISACA



Goal Cascade method



From management questions, to Enterprise Goals, to IT Goals, to IT Processes

Three decades of researches on IT Governance

Ordered in logical sequence, NOT chronologically

Major landmarks include:

- *The definition of IT Governance (1999)*
- *The Concept of IT Processes as a model to manage IT activities (1992)*
- *The concept of maturity (2004) and enablers (2012)*
- *The value governance of IT enabled investments (2008)*
- *The governance of IT risks (2013)*
- *Business benefit Realisation model (2014)*
- *The role of the Information Security manager (2003)*
- *Information Security governance using COBIT (2011)*
- *Cybersecurity management (2014)*
- *Various Cybersecurity publications, Advanced Persistent Threats and the NIST implementation model (2015)*

A photograph of a large lecture hall or auditorium. The perspective is from the back of the room, looking towards the front where a large screen displays a presentation slide. The room is filled with rows of students sitting in tiered seating. The ceiling has a grid of rectangular light fixtures. The overall atmosphere is that of a typical university lecture.

Sample cases highlighting the effectiveness of key concepts

Case Study: Architectural complexity of a merge operation

Seven years after the merge of two commercial banks, both organizations continued to possess two parallel data centers with virtually two IT Departments.

Eventually, a TO-BE IT organization was conceived based on COBIT description of domains and processes and detailed RACI charts (Responsible, Accountable, Communicated and Informed).

The team also identified new essential activities that were not previously carried out.



Case Study: Problematic Outsourcing of a 24/7 Internet activity

An Internet banking provider relied on one of the largest worldwide IT services company for its 24/7 client operations.

Services to clients suffered two major interruptions of 3 and 18 hours respectively.

A comprehensive investigation based on COBIT highlighted major shortcomings both on the client and on the supplier level.



Case study: Building an ambitious platform

A leading Financial Services organization launched two strategic projects aimed at changing the landscape of bank clearing activities on a full continent level in an outsourcing to two major systems integrators.

When projects were eventually abandoned many years later, findings highlighted absence of essential processes including the oversight of the supplier as COBIT 5 would recommend.





Georges Ataya - gataya@solvay.edu – solvay.edu/it