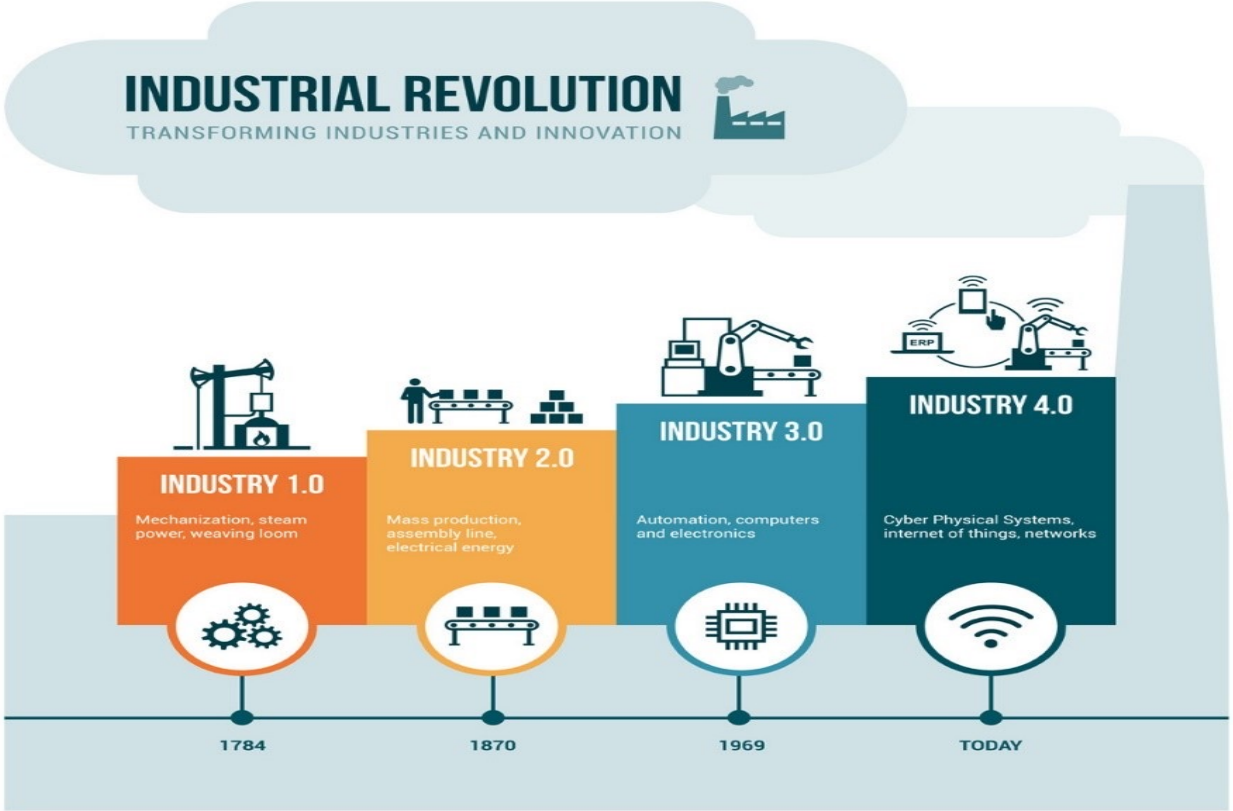
INFORMATION SYSTEMS GOVERNANCE

Section 1

AGENDA

Industrial Revolutions	Current world scenario	A new logic to govern IS
Implement the IS Governance	Maturity	Management fundametals

4TH INDUSTRIAL REVOLUTION



CURRENT WORLD SCENARIO

Let's start by understanding what the current global scenario is.

Why?

Because the issues we are going to deal with are typical of extremely complex environments where it is never immediate to give an answer.
(complex questions are often followed by equally complex answers)

The aim is to rationalize and simplifyneeds and the Information System.

CURRENT WORLD SCENARIO

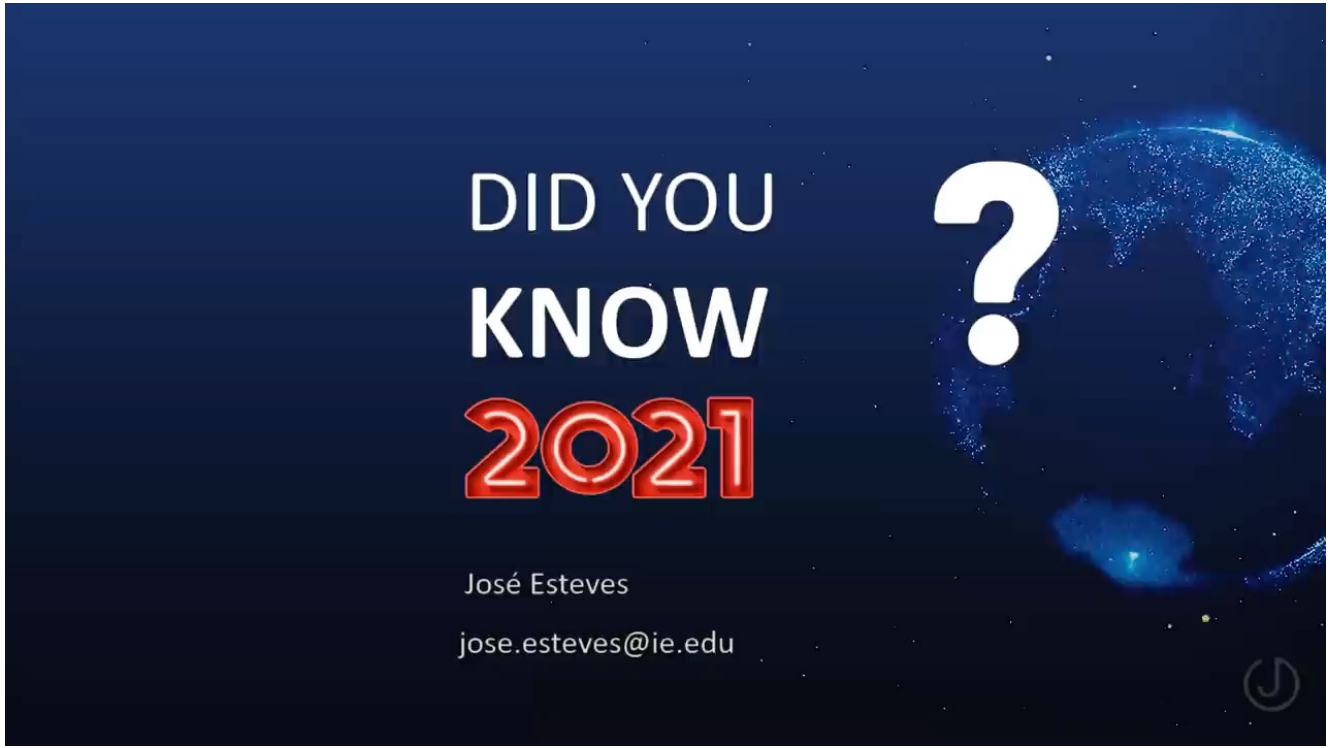
The business context

- Dynamism and complexity as structural elements
- Scenarios not definable a priori
- New forms of business
- Collapse of the myth of planning as an antidote to complexity
- Multiple actors involved (e.g. shareholders, stakeholders, globalization ...)
- Management not ready to define requirements and operationally describe "strong" choices
- Digital economy (IT as a productive factor)
- Permanence of a gap between company needs and the Information System

Consequences for company information systems

- There is not enough time to activate cycles of revision and modification of the information system that are consistent with company times
- The changing pace of business scenarios give little space to management processes of information systems that are strongly oriented towards planning
- It is necessary to design information systems with a high degree of "self-adaptation" to changed business conditions
- This result can only be achieved thanks to a radical paradigm shift in information systems and their management

CURRENT WORLD SCENARIO



DID YOU KNOW 2021 https://youtu.be/fbcMPGyPr8k

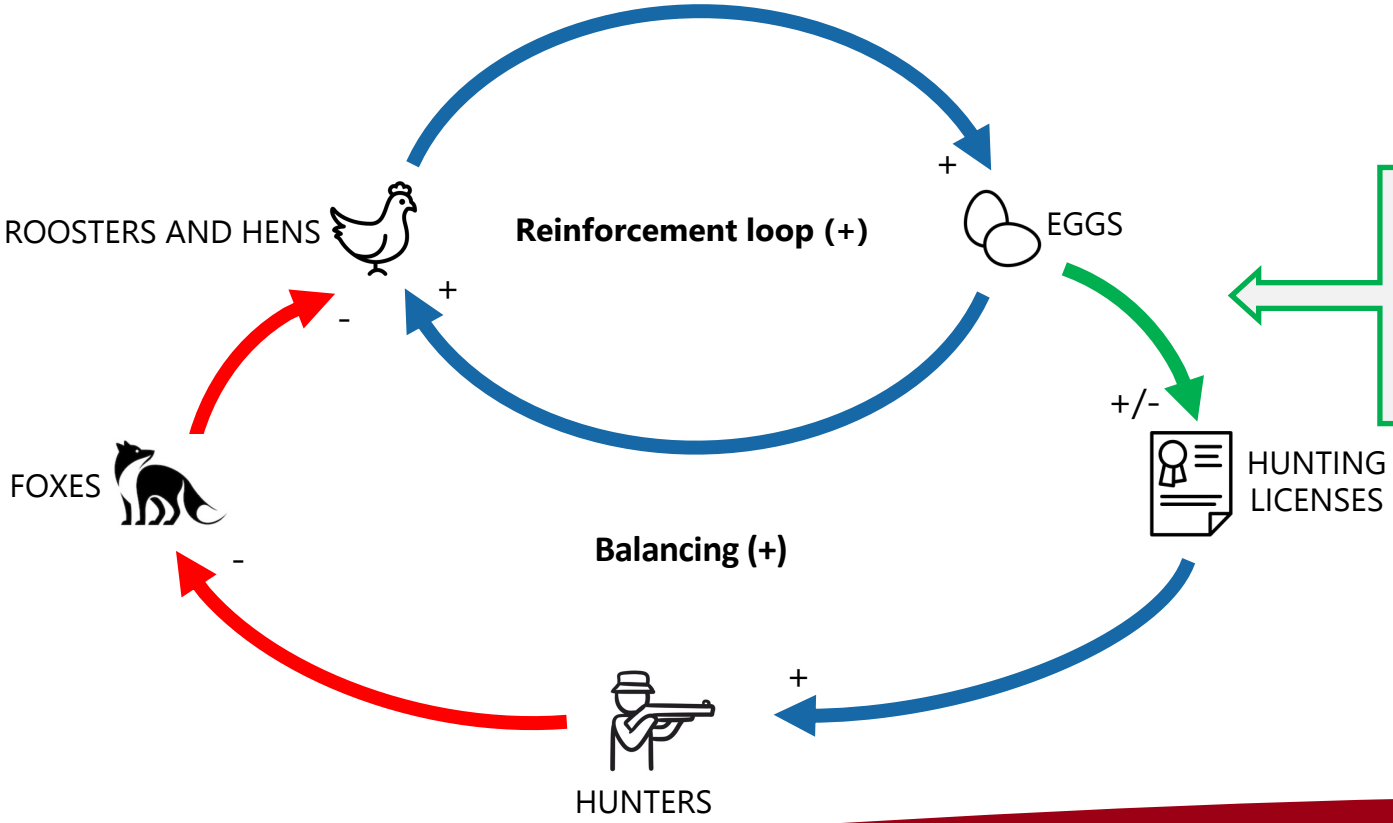
A NEW LOGIC TO GOVERN IS

The new paradigm

The logics:
- from instructions to visions
- from cures to vaccines

A NEW LOGIC TO GOVERN IS

Business Dynamics example



Control relationship

By changing the relationship, the whole system is affected

The new paradigm

- Less planning and more accountability
- Less budget and more cost-effectiveness
- The «Information Systems» (IS) faces a radical change
- More adaptation systems and fewer synthetic performance indicators
- From managing IS to setting the conditions for their correct development (IS governance logic)

A NEW LOGIC TO GOVERN IS

The new paradigm

The identification and pursuit of a new way of conceiving and managing Company Information Systems shifts attention to the issue of how to continuously obtain a (reasonable) consistency between the Information System and the Company in a context of cost effectiveness

from Management to Governance of Company Information Systems

A NEW LOGIC TO GOVERN IS

What is the Governance of Information Systems (IS Governance)?

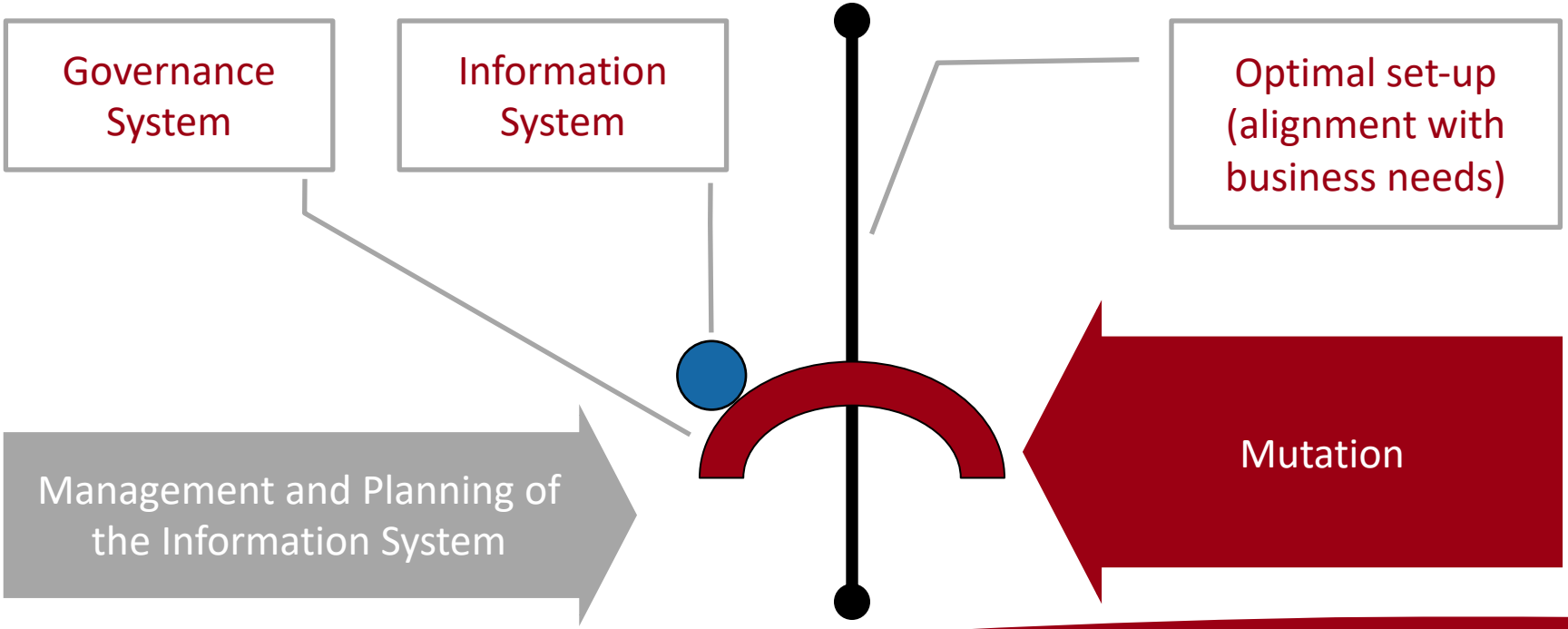
... is a set of logics and tools aimed at creating a structural set-up and a governance context of the Company Information System that make it constantly consistent with the business needs in environments characterized by a high level of complexity

The Governance Logic

- The Information System is configured and managed in such a way as to "naturally" tend to provide good performance
- We renounce to anticipate single phenomena, we try to make the Information System structurally adequate to a complex environment
- Theories and ideas as tools for guiding action and not as the antithesis to doing
- (theory-> practice and not theory vs practice)

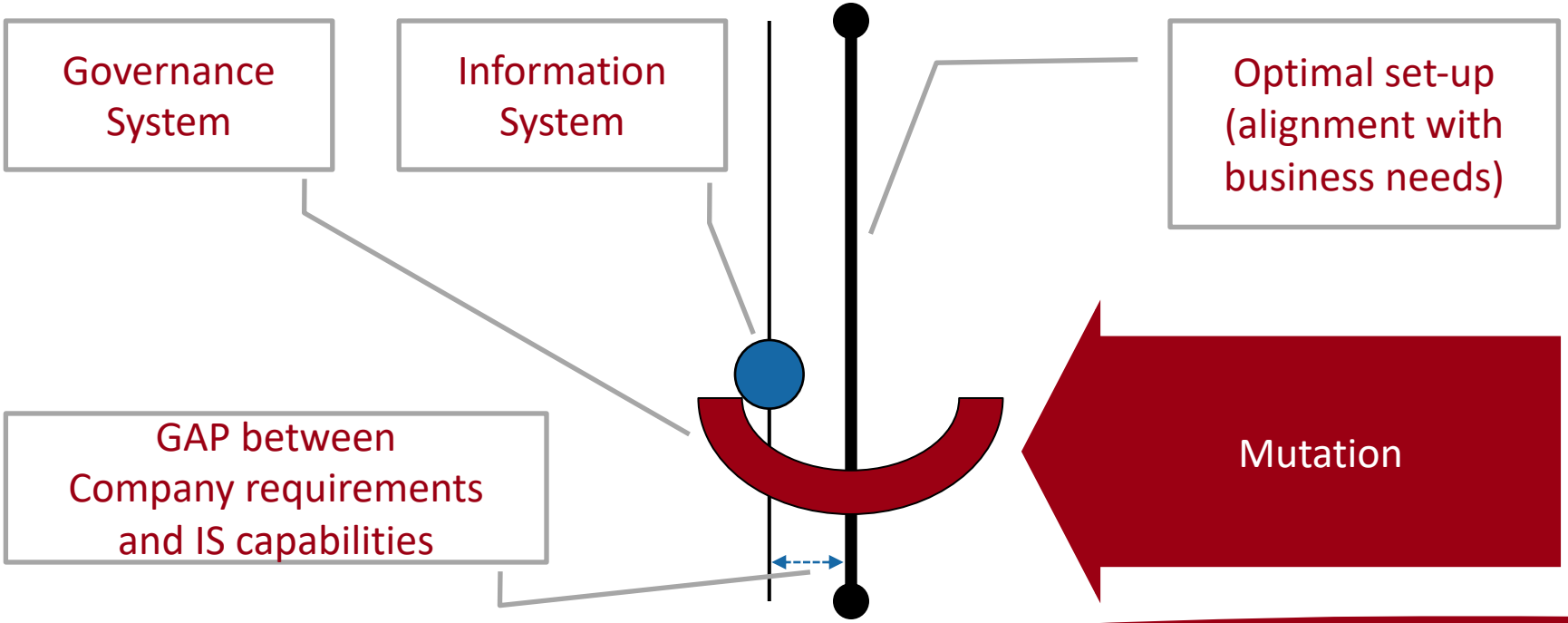
A NEW LOGIC TO GOVERN IS

The «traditional» logic

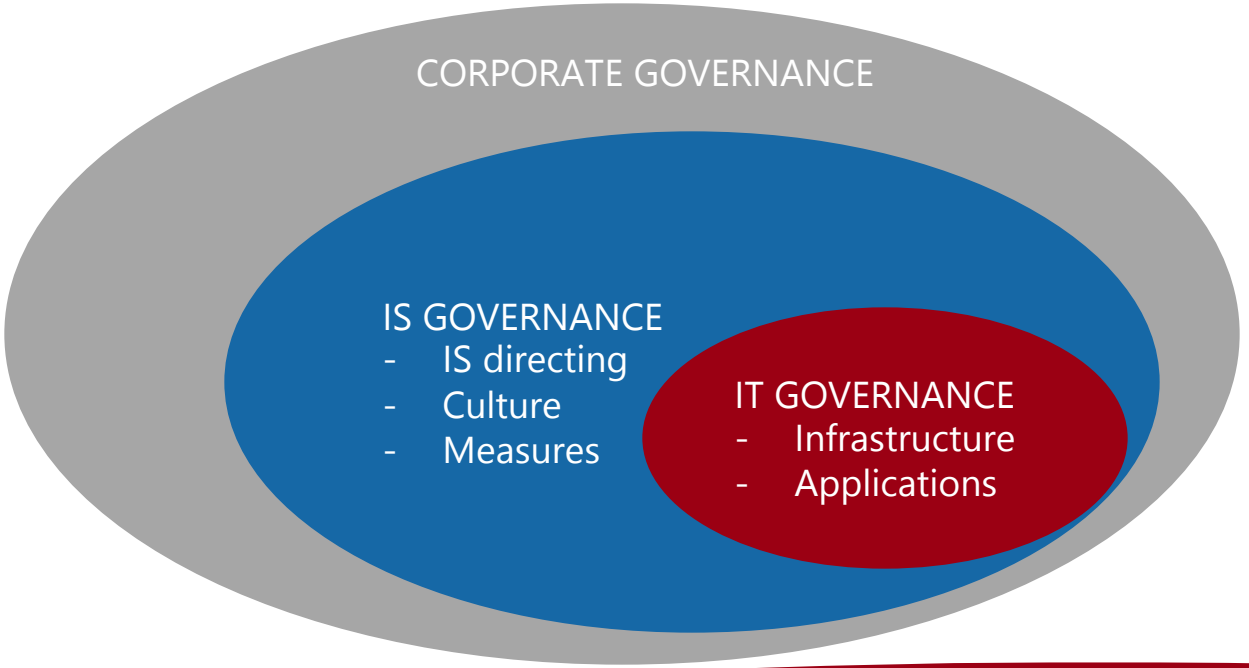


A NEW LOGIC TO GOVERN IS

The «new» logic



«Corporate Governance» vs «IS Governance» vs «IT Governance»

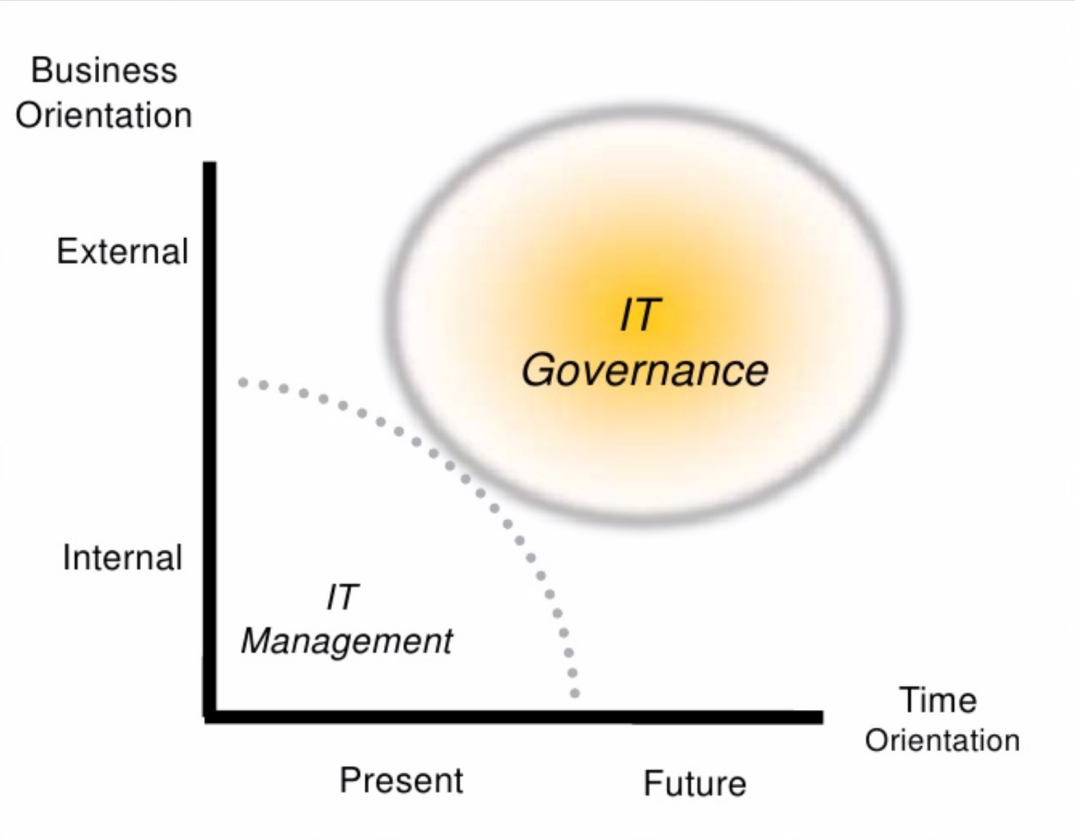


A NEW LOGIC TO GOVERN IS

GOVERNANCE

MANAGEMENT

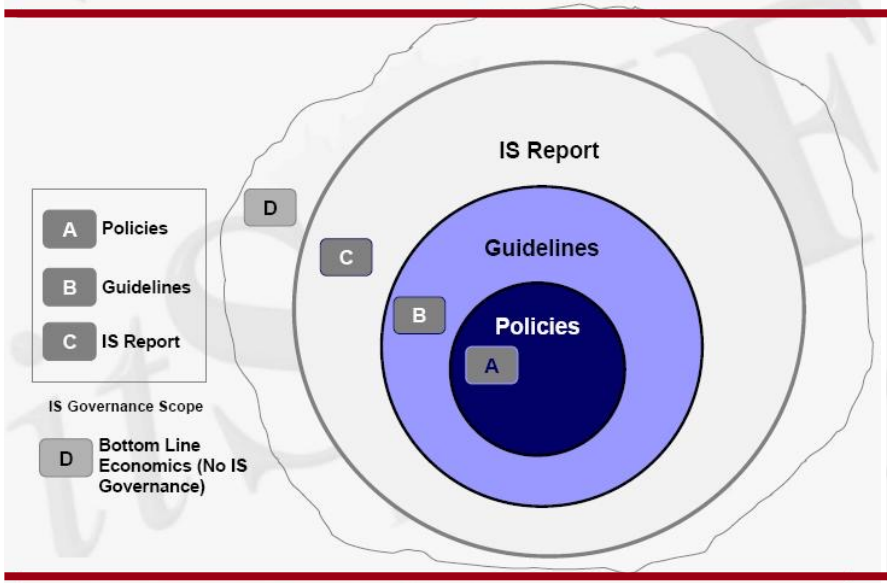
A NEW LOGIC TO GOVERN IS



IMPLEMENT THE IS GOVERNANCE

- Within an articulated system (group of companies or complex companies) it is necessary to think of different degrees and methods of applying the IS governance system
- The diffusion and applicability of an IS Governance system must be modulated by taking into account some factors:
  - Level of integration in the group (financial vs industrial only)
  - Homogeneity level of the business system
  - Company life cycle (own or with respect to the Group)
  - Corporate governance and results measurement system
  - Areas of managerial independence
- Depending on these characteristics, each company / area is assigned to a different "IS Governance Layer"
- The differentiation may also take place at the level of individual aspects of IS Governance

The Reference Model



	A	B	..
IT Infrastructure	P	G	R
Application Portfolio	P	G	R
Alignment Systems: IT Service and Projects	P	P	G
Alignment Systems: Organization and Rules	P	R	P
Project Management	P	P	G
Human Resources and Culture	P	G	R
Measurement Systems and Reporting	P	R	P

P: Policy

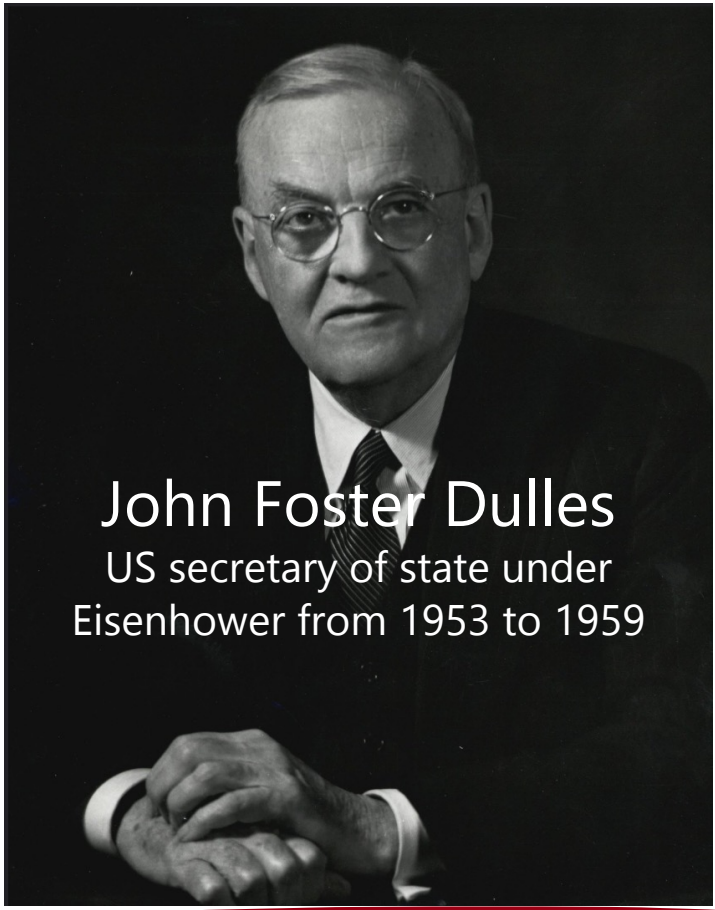
G: Guideline

R: IS Report

MATURITY

MATURITY

"The measure of success is not whether you have a tough problem to deal with, but whether it's the same problem you had last year."



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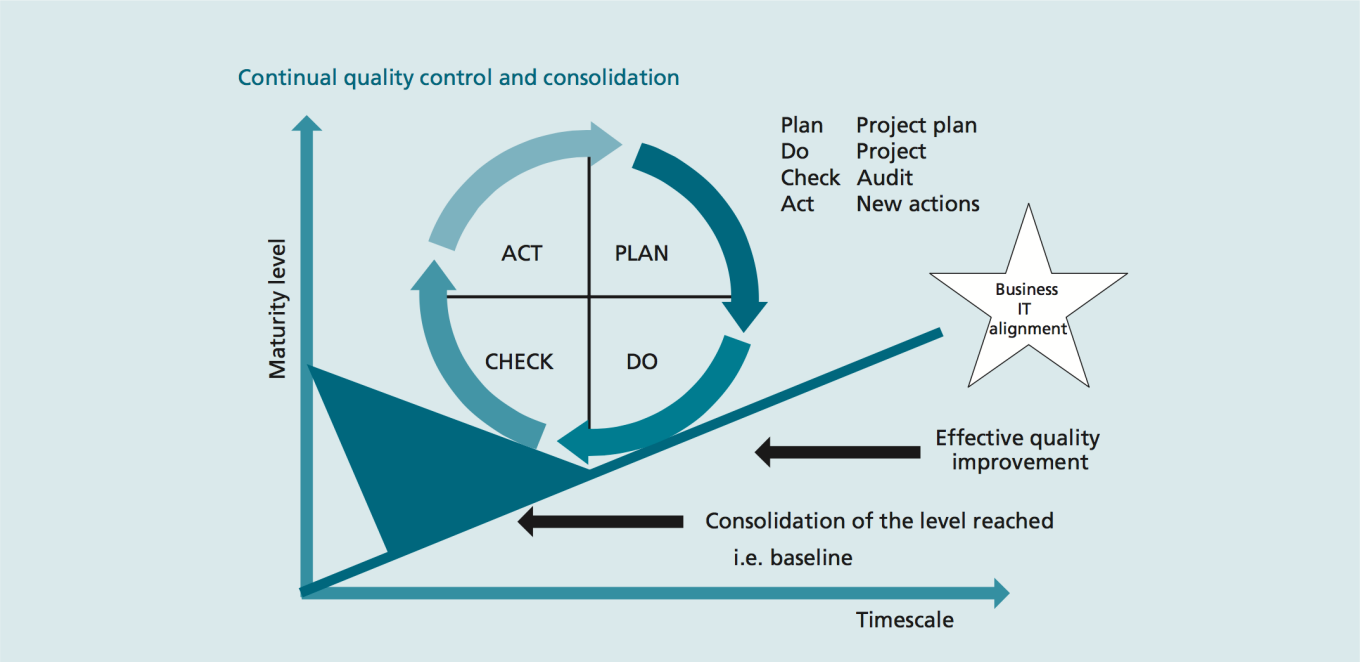
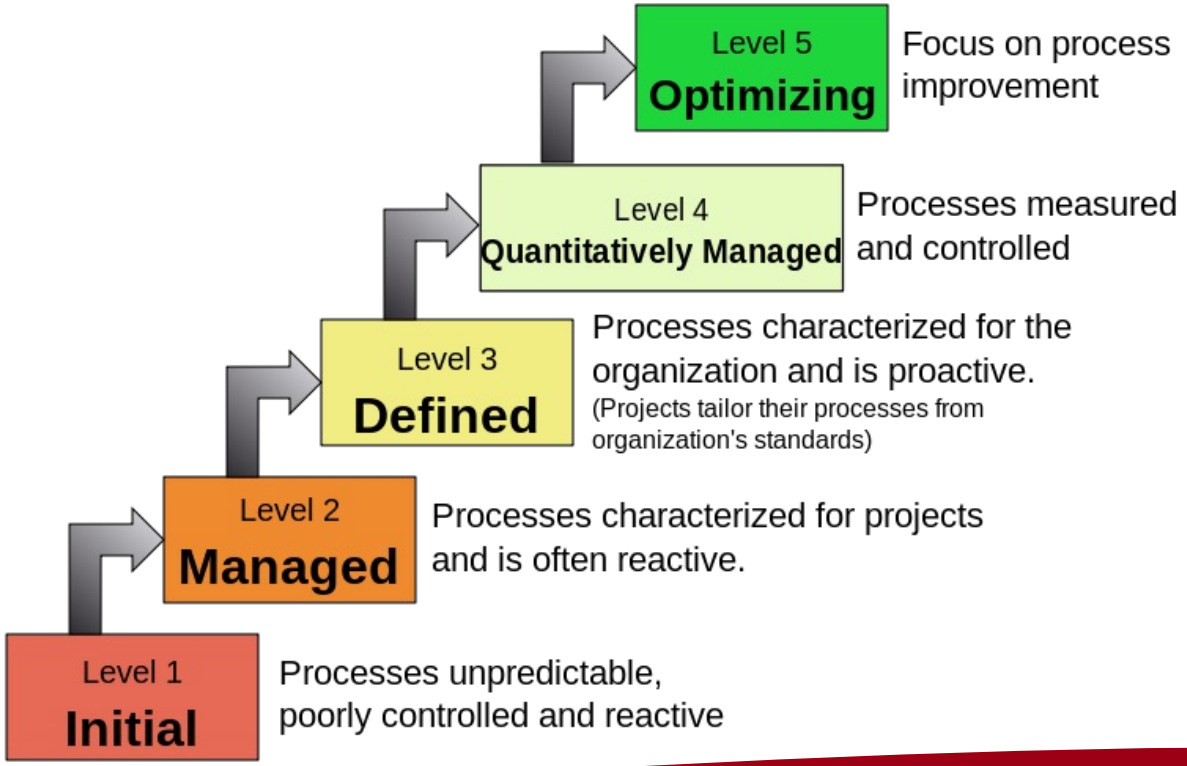


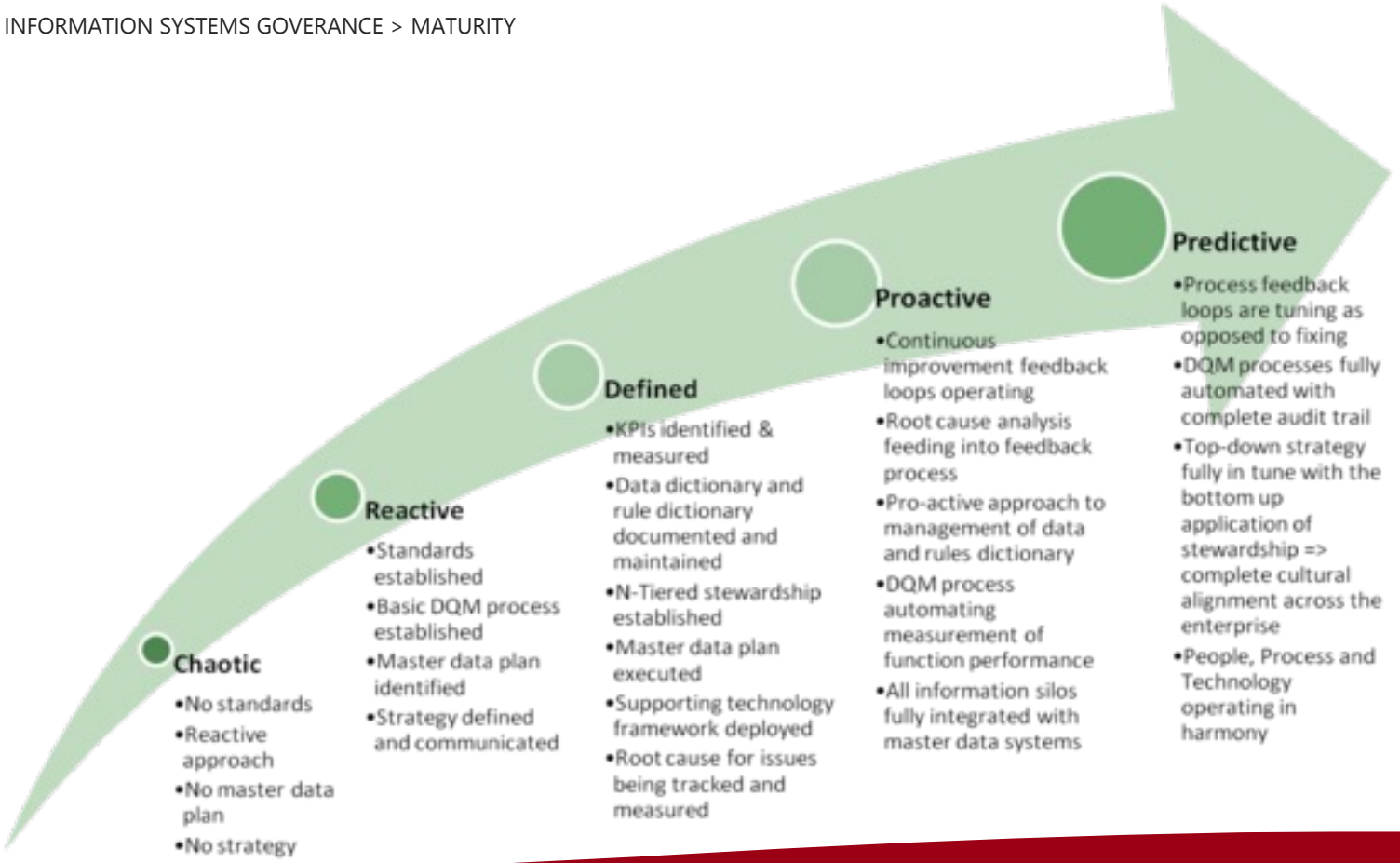
MATURITY

CMMI SM

Characteristics of the Maturity levels



MATURITY


Chaotic
•No standards
•Reactive approach
•No master data plan
•No strategy
Reactive
•Standards established
•Basic DQM process established
•Master data plan identified
•Strategy defined and communicated
Defined
•KPIs identified & measured
•Data dictionary and rule dictionary documented and maintained
•N-Tiered stewardship established
•Master data plan executed
•Supporting technology framework deployed
•Root cause for issues being tracked and measured
Proactive
•Continuous improvement feedback loops operating
•Root cause analysis feeding into feedback process
•Pro-active approach to management of data and rules dictionary
•DQM process automating measurement of function performance
•All information silos fully integrated with master data systems
Predictive
•Process feedback loops are tuning as opposed to fixing
•DQM processes fully automated with complete audit trail
•Top-down strategy fully in tune with the bottom up application of stewardship => complete cultural alignment across the enterprise
•People, Process and Technology operating in harmony

MATURITY


Chaotic
Ad hoc
Notifications via user calls
No centralized help desk
No infrastructure management
0
Reactive
Component view
Firefighting
Alert & event monitoring
Formalized incident reporting
Siloed responsibility for technology
1
Proactive
Workload view
Predict, prevent performance problems
Trending
Availability management
Standardized toolset across technologies
2
Service
Service view
Monitor & report on services
Service level agreements
Scenario-based capacity planning
Influence usage through chargeback
3
Value
Business process view
Link IT services to business processes
Report in business terms
Measure process efficiency & effectiveness
Weigh costs against benefits & risks
Continuous service improvement
4

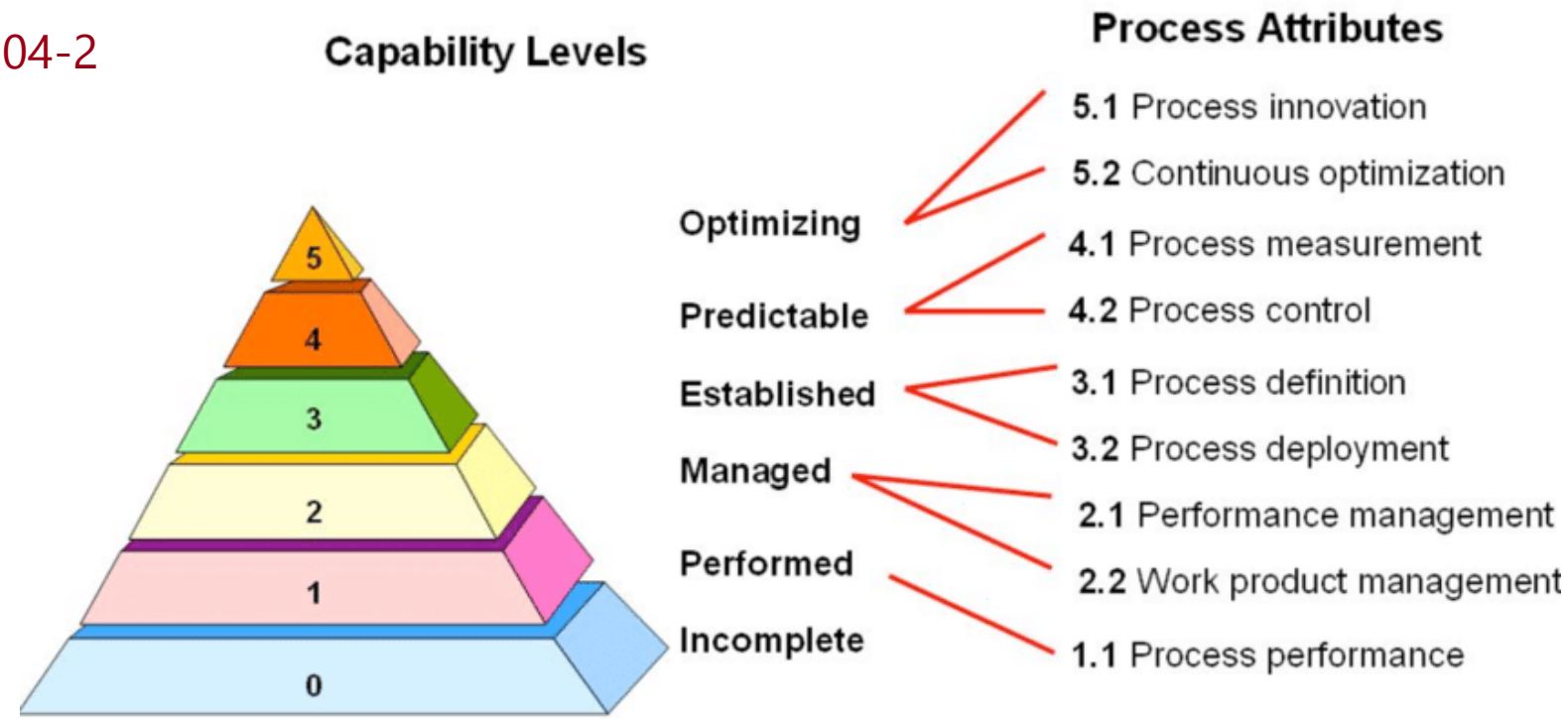
GARTNER'S OPINION

A 60,000 ft View of Gartner's Product Support Maturity Scale Version 2...

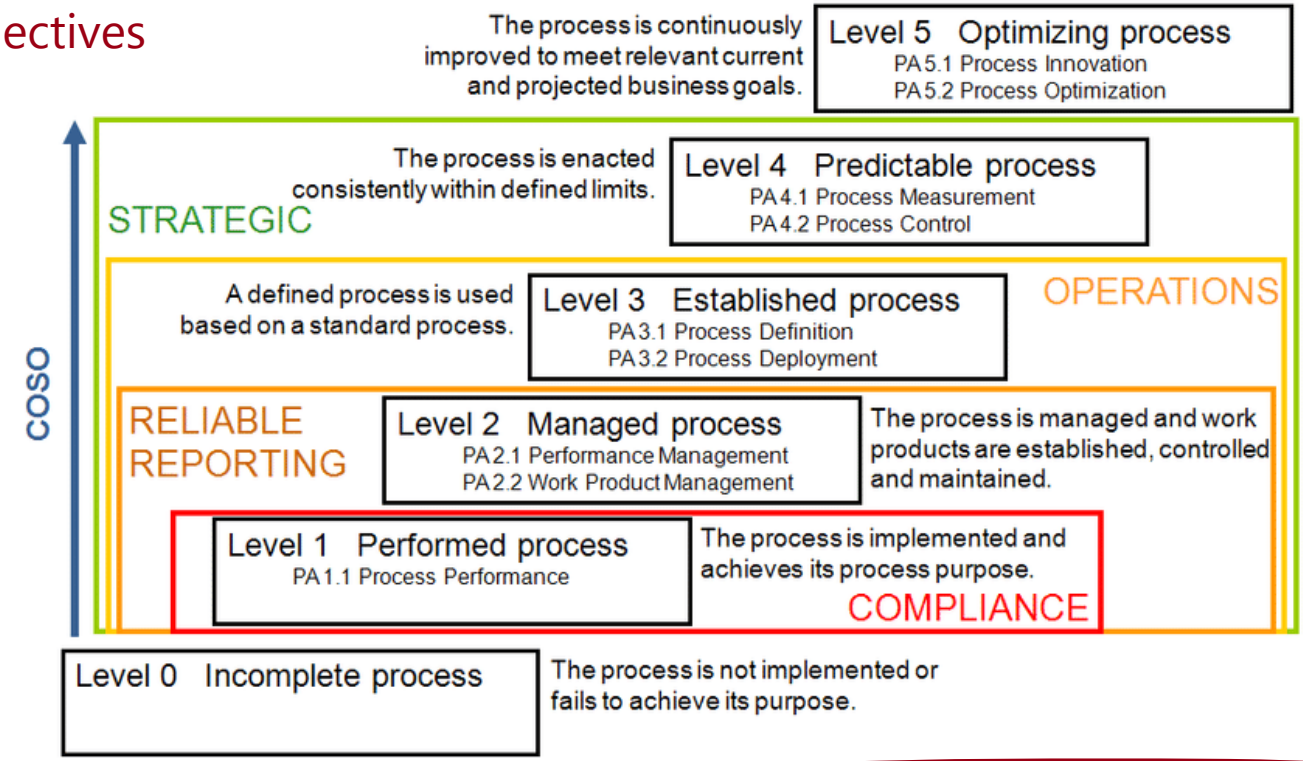
	Reactive	Proactive	Predictive	Pre-emptive
Customer Experience	Experiences happen	Experiences are considered	Experiences are deliberately created	Experiences are optimized
Content Provisioning	Content is an afterthought (if it is thought about at all)	Content confounds critics	Content creates value	Compelling content becomes compulsory
Issue Remediation	It breaks; we fix it (hopefully)	We make it less likely to break	We ensure it doesn't break	We break it on purpose if it needs to be broken
Issue Prevention	Prevention is seen as impractical	Prevention is considered theoretically possible	Prevention is a reality	Unplanned outages are extremely rare
Governance & Visibility	Chaotic and noisy	Data enables control	Risk mitigation and transparency	Information overload becomes wisdom
Product Value Extraction	The product is the value	Support value is incrementally additive	Value is more than the sum of its parts	Support becomes a product value multiplier
Cost Optimization	Support is seen as a tax	Support is the technical insurance premium	Support spending seen to reduce overall costs	Support identifies saving and growth opportunities

Gartner

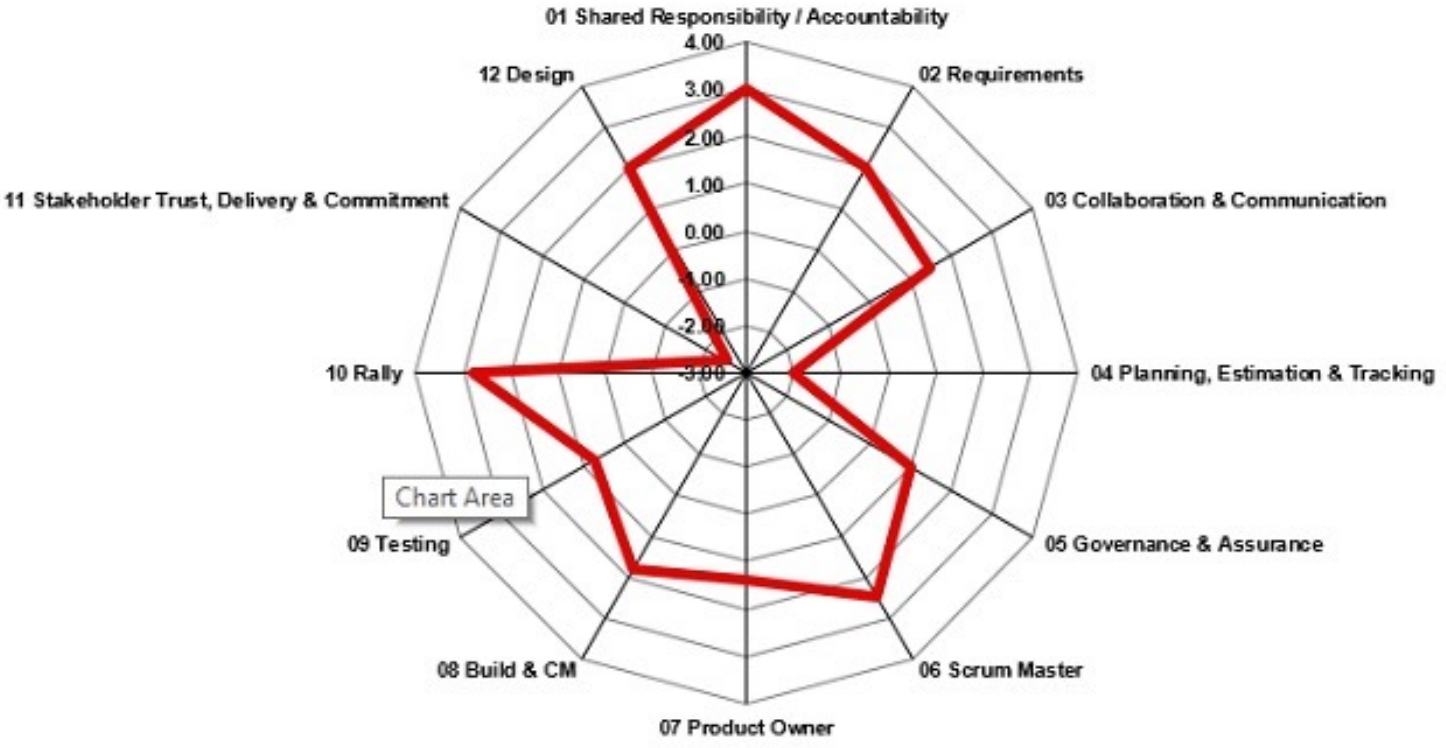
ISO/IEC 15504-2



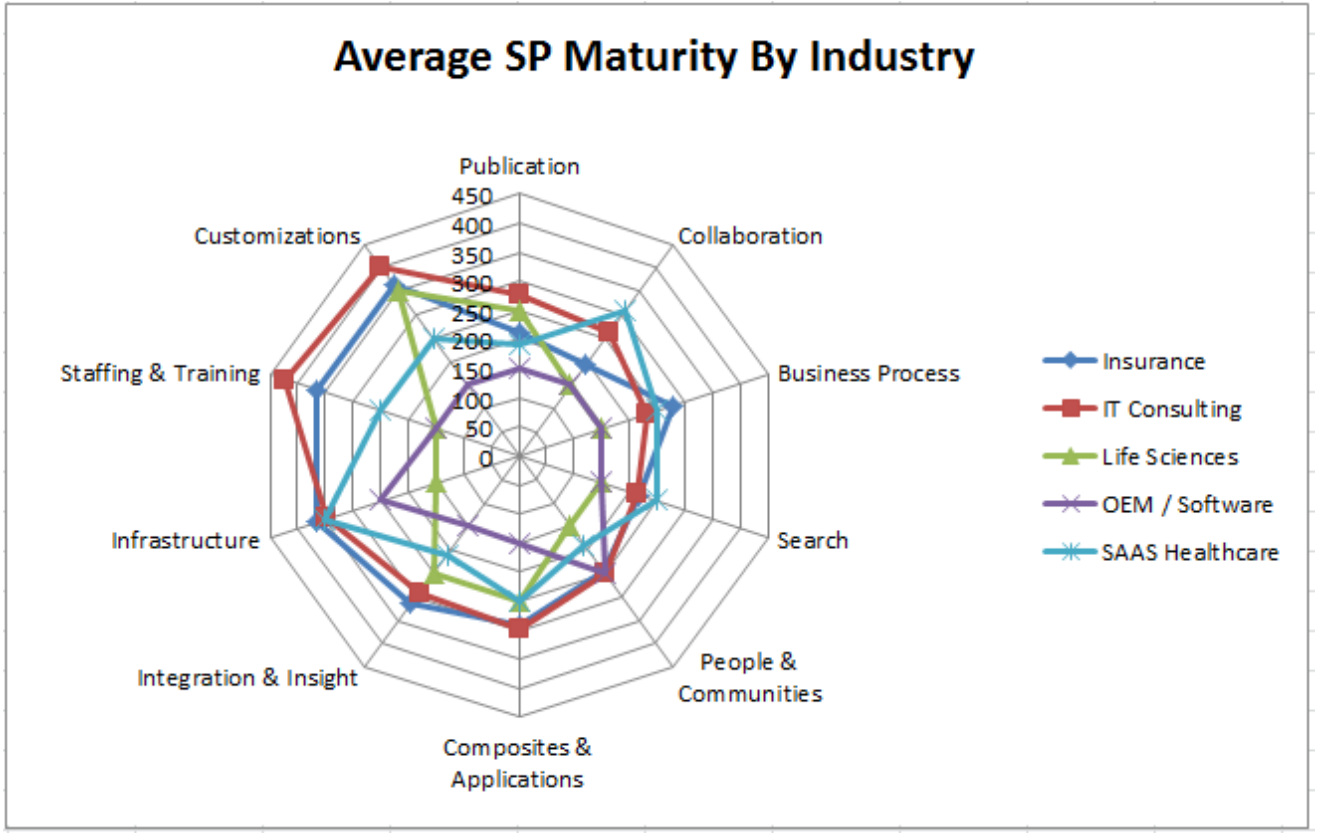
ISO 15504 to COSO Objectives



KIVIAT DIAGRAM

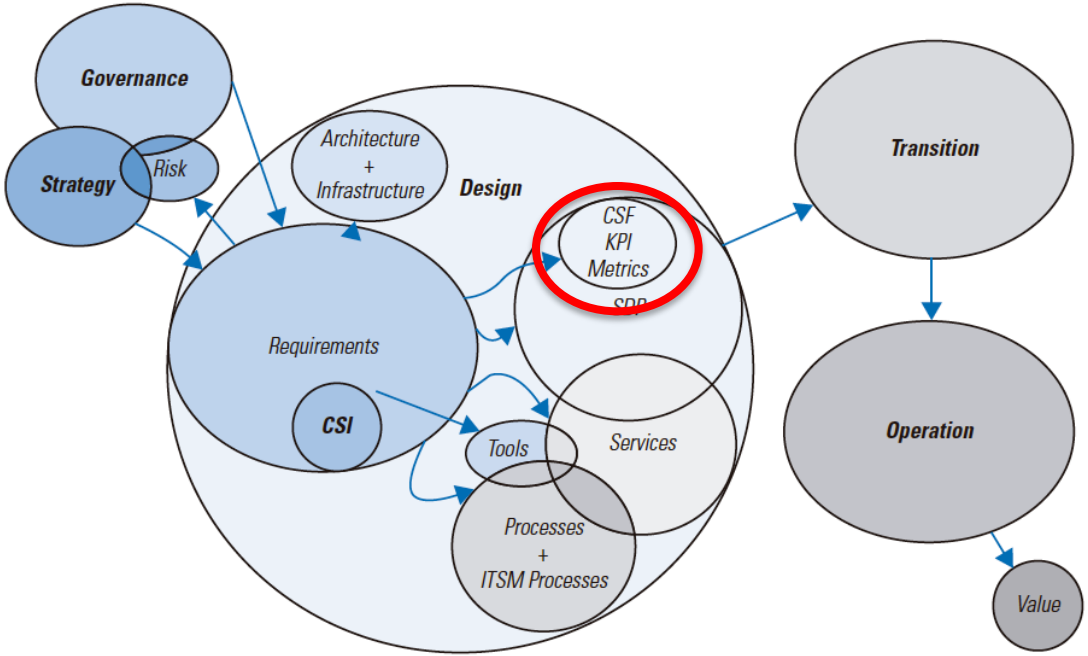


Ability to represent confrontation



The problem of measuring maturity

Metrics for Service Management



Maturity through training

- It is no longer possible to think of being professionals in your own sector by making use only of your own experience
- Need for training
- Efficiency and Effectiveness in Service Management => ITIL
- Think about the efficiency margins achievable in Project management!

MATURITY


If you think it's expensive
to hire a professional to do the job, wait until
you hire an amateur
Red Adair
American Oil Firefighter

For the world of work of the 21st century, in addition to knowing how to do a job, it is necessary:

- **Work ethic**: being responsible without the need for someone to control you
- **Problem Solving**: knowing how to go forward even when faced with problems
- **Communication skills**: the world of work is related to service
- **Teamwork**: one-man-bands no longer exist

source: Confindustria Study Center

MANAGEMENT FUNDAMETALS

Management depends on (Yes/No), (On, Off), (1,0)

The ability to say yes or no based on a specific information and in a specific situation/condition.

The rest is an extra supporting capabilities.

MANAGEMENT FUNDAMETALS