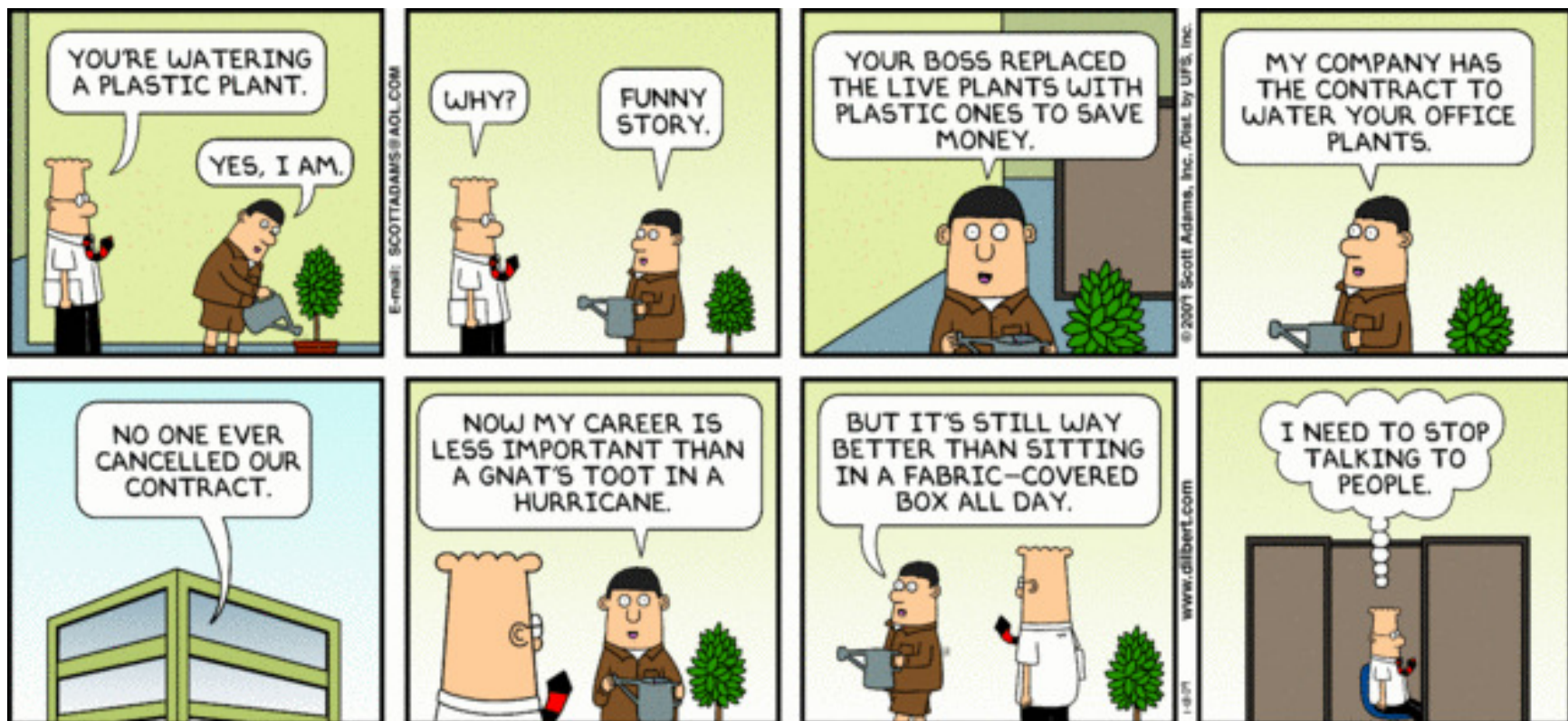


# Coherency Management and the Future of Enterprise Architecture

*John Götze, International President, Association of Enterprise Architects*  
aEAassociation.org

# Holistic Enterprise Architecture and the Role of "Business "



# Holistic EA? More than business-IT alignment

## Aligning ducks

*Get your ducks in a row!*



Tom Kearney, in Doucet et al (2009)

[CoherencyManagement.org](http://CoherencyManagement.org)

**Gary Doucet, John Gøtze, Pallab Saha, Scott Bernard**

# **Coherency Management**

**– Architecting the Enterprise for  
Alignment, Agility and Assurance**

International Enterprise Architecture Institute,  
2009

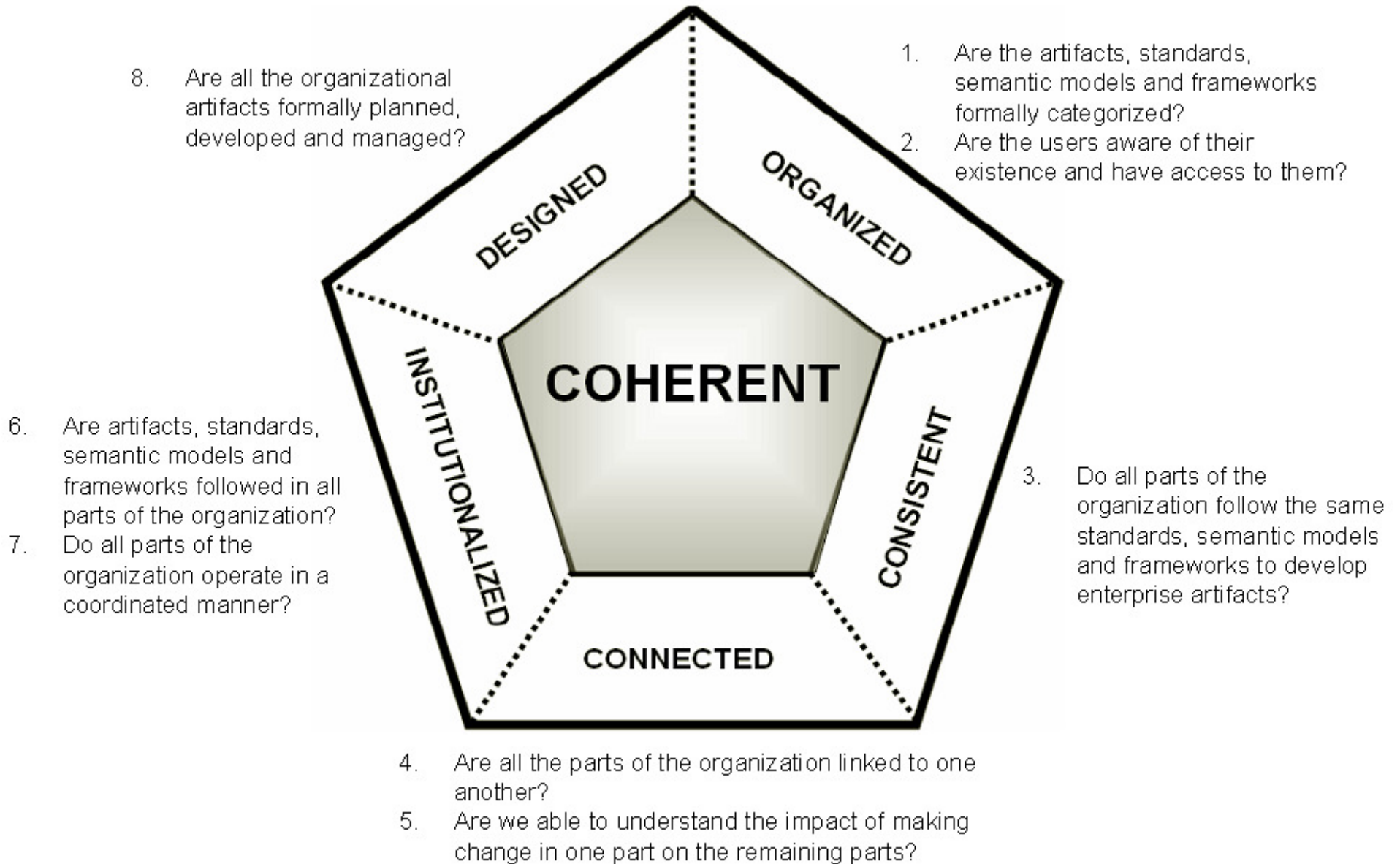
***You can't manage  
what you can't see***

***You can't manage well  
what you can't see  
coherently.***

# Innovation - Coherency - Efficiency

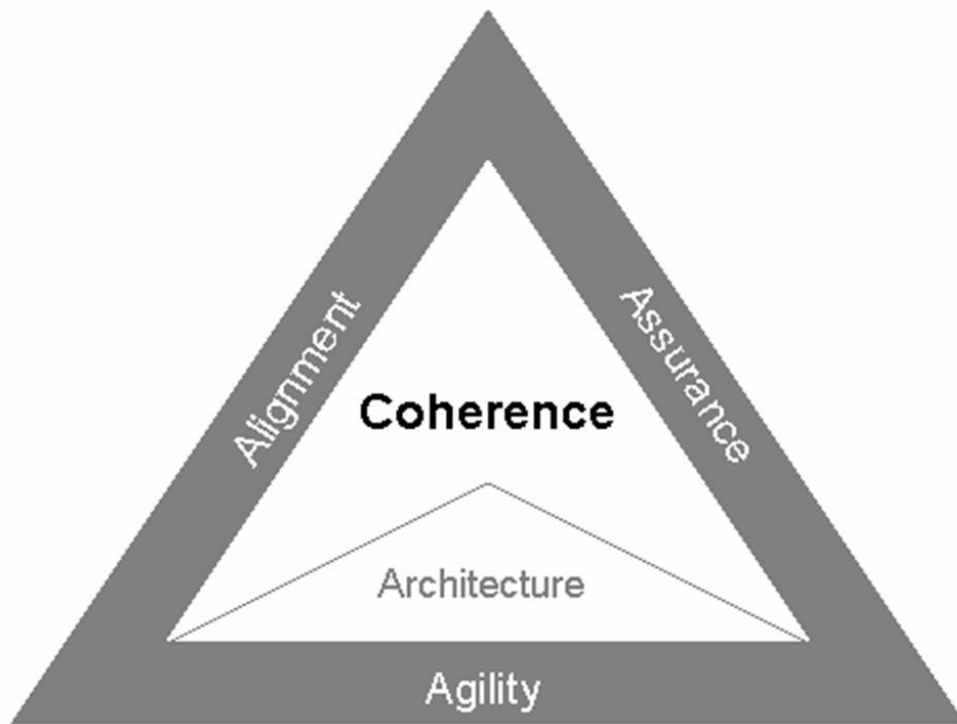
Doucet, Gøtze, Saha, Bernard (2009)

# Coherent?





# Architecting for Coherence

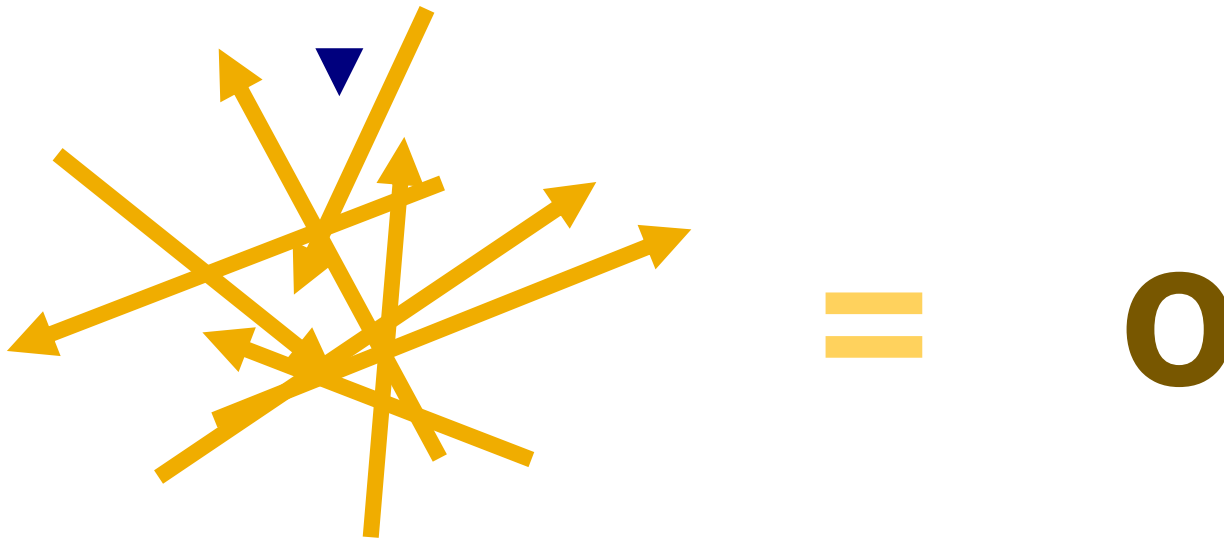


“Alignment, agility and assurance are not achieved through building and running systems ... they are engineering derived characteristics ...

Enterprise engineering derived characteristics.”

John Zachman (in Doucet et al)

# Alignment



***“Remember Your Vector Math!”***

Alignment = “the ability of the organization to operate as ONE by working towards a common shared vision supported by a well orchestrated set of strategies and actions”. (Doucet et al, 2009)

# Agility



Agility = “the ability of the organization to respond to and manage change”. (Doucet et al, 2009)

# Assurance



Assurance = “the ability of the organization to establish and institutionalize (internalize) practices that ensure fulfillment of organizational goals and achievement of outcomes”

# Three aspects of coherency

- Coherent Rules for Descriptions
- Coherent Descriptions
- Coherent Enterprise

# Coherent Rules for Descriptions

- A common language for the enterprise
- The 'Just Enough Rules' principle
- Rules can be constricting, so every effort must be made to ensure that each rule is really needed, not for the sake of coherency, but because the added coherency must deliver some value to the enterprise.

# Coherent Descriptions

- Coherent descriptions as enablers
- Aligning Vision, Strategy, and Design

# Coherent Enterprise

- Coherent operation and execution.
  - **Alignment** is very mature because the rules allow descriptions to be compared for alignment and adjusted accordingly.
  - **Agility** is achieved because of designs are coherent, which includes a developed understanding and practice of loose coupling by design instead of tight coupling by accident.
  - **Assurance** is gained through an ability to not only have all the information but also, through coherency, have the information provide real knowledge.



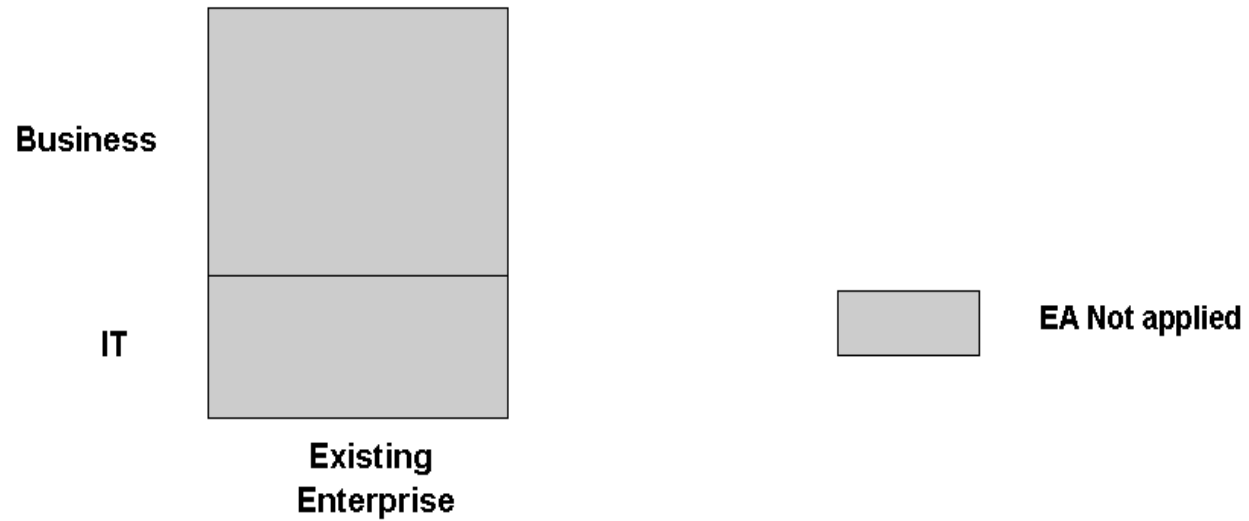
# EA ?

- Everything Aligned
- Enabled Agility
- Embedded Assurance

# Defining EA

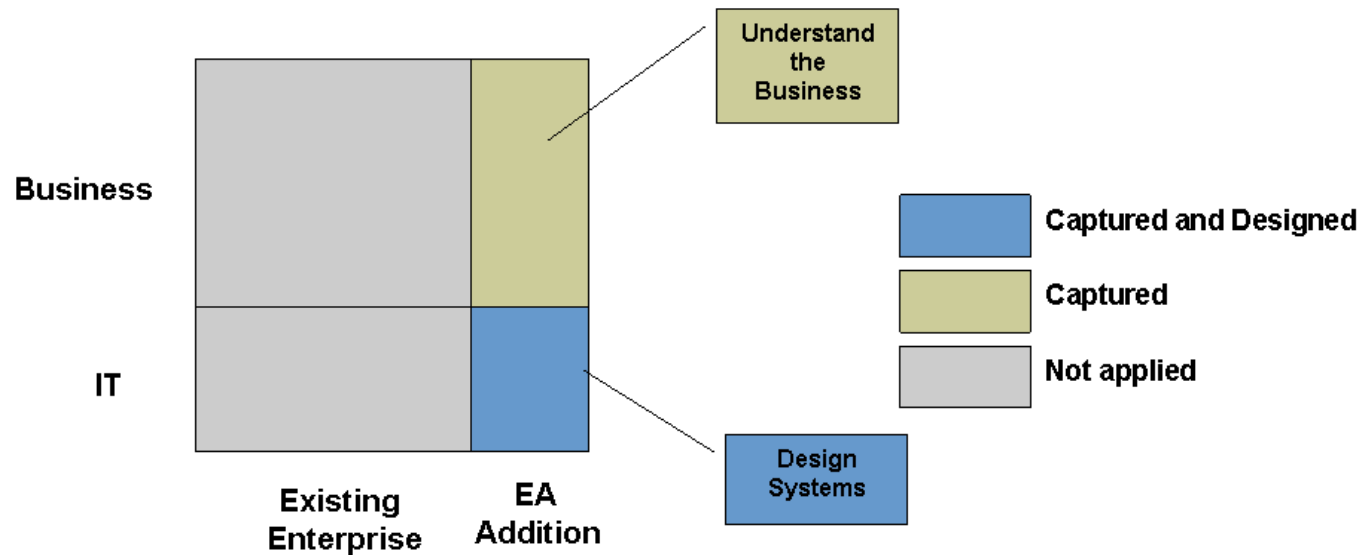
- ***Enterprise Architecture is the inherent design and management approach essential for organizational coherence leading to alignment, agility and assurance.***

# No EA?



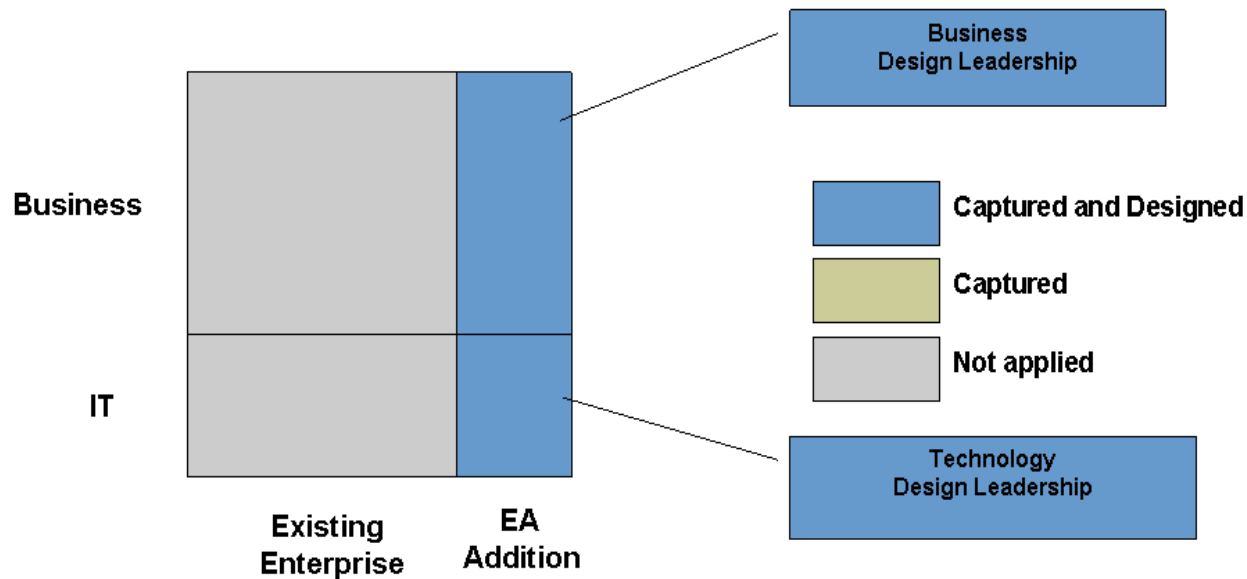
# Foundation Architecture

- **Aligning Business and IT**



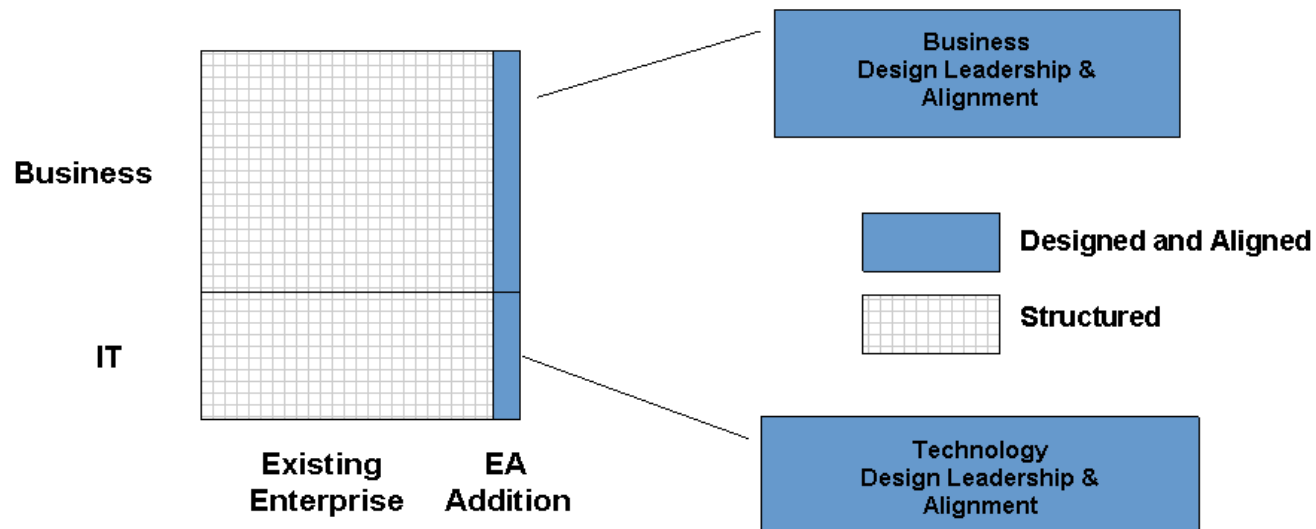
# Extended Architecture

- Driving Business Transformation



# Embedded Architecture

- For Designing and Managing the Enterprise



	Foundation Architecture	Extended Architecture	Embedded Architecture
<b>Strategic Drivers</b> (Why do we do it?)	<ul style="list-style-type: none"> <li>➔ Technology and business standardization</li> <li>➔ Systems engineering</li> <li>➔ IT asset utilization</li> </ul>	<ul style="list-style-type: none"> <li>➔ Business transformation</li> <li>➔ Product / service leadership</li> <li>➔ Business agility</li> <li>➔ Enterprise engineering</li> </ul>	<ul style="list-style-type: none"> <li>➔ Enterprise design &amp; management</li> <li>➔ Enabled agility</li> <li>➔ Service oriented enterprise</li> <li>➔ Ubiquity</li> </ul>
<b>Locus of Control</b> (Who leads the programme?)	<ul style="list-style-type: none"> <li>➔ CIO / IT Organization</li> </ul>	<ul style="list-style-type: none"> <li>➔ CXO involved during change</li> <li>➔ Business architects / process owners</li> </ul>	<ul style="list-style-type: none"> <li>➔ CXO involved all the time</li> </ul>
<b>Critical Management Innovation</b> (How is it accomplished?)	<ul style="list-style-type: none"> <li>➔ Architecture by compliance</li> <li>➔ Replacement approach</li> <li>➔ Flexible programme intensity and cope</li> <li>➔ Project oriented</li> </ul>	<ul style="list-style-type: none"> <li>➔ Enterprise business architecture</li> <li>➔ Organizational improvements</li> <li>➔ Architecture by push with extraneous processes</li> <li>➔ Actionable architecture</li> </ul>	<ul style="list-style-type: none"> <li>➔ Organic design</li> <li>➔ Architecture by pull with intrinsic processes</li> <li>➔ Architecture is everyone's job</li> <li>➔ Management DNA</li> <li>➔ Outcome driven</li> </ul>
<b>Key Governance Mechanisms</b> (What is used to accomplish?)	<ul style="list-style-type: none"> <li>➔ Specialized EA team</li> <li>➔ Project business cases</li> <li>➔ Architecture review board</li> <li>➔ Led by CIO</li> </ul>	<ul style="list-style-type: none"> <li>➔ Cross-institutional governance</li> <li>➔ Value based tracking</li> <li>➔ Business leadership in IT projects</li> <li>➔ Led by CXO</li> </ul>	<ul style="list-style-type: none"> <li>➔ Diffused architecture team</li> <li>➔ Enterprise architecture by stealth</li> <li>➔ Context neutrality</li> <li>➔ Led by CXO, but not separately</li> </ul>
<b>Programme Metrics</b> (How is it measured?)	<ul style="list-style-type: none"> <li>➔ Cost efficiency</li> <li>➔ IT responsiveness</li> <li>➔ IT risk management</li> <li>➔ Business-IT alignment</li> </ul>	<ul style="list-style-type: none"> <li>➔ Time to market</li> <li>➔ Business responsiveness</li> <li>➔ Strategic alignment</li> <li>➔ Coherency in IT and non-IT space</li> </ul>	<ul style="list-style-type: none"> <li>➔ Aligned organization</li> <li>➔ Decision capability</li> <li>➔ Shared delivery</li> <li>➔ Comprehensive service excellence</li> </ul>
<b>Benefits &amp; Outcomes</b> (What do we get?)	<ul style="list-style-type: none"> <li>➔ Shared technology platforms</li> <li>➔ Economies of scale</li> <li>➔ Better systems design</li> </ul>	<ul style="list-style-type: none"> <li>➔ Shared business platforms</li> <li>➔ Business value of IT</li> <li>➔ Better information governance</li> </ul>	<ul style="list-style-type: none"> <li>➔ Better corporate governance</li> <li>➔ Deeper engagement</li> <li>➔ Coherent enterprise</li> <li>➔ Unnoticeable EA effort</li> </ul>



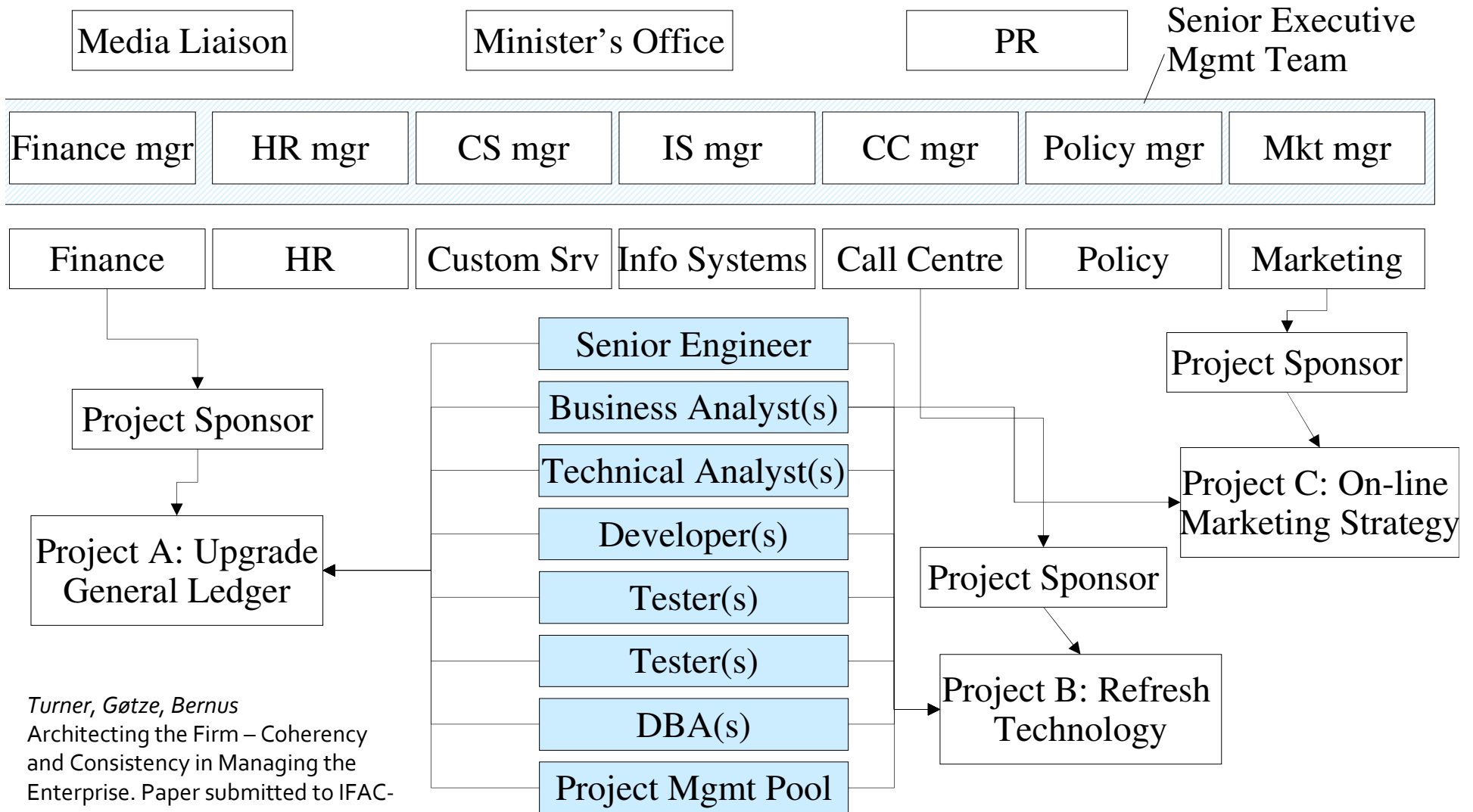
# Syngenta

Aspect	EA Group in 2003	EA Group in 2008	EA Group in 2012?
<b>Primary Architecture skills</b>	- Technical	- Technical / Business	- Technical /Business / Behavioral
<b>Source of new skills</b>	- Internal development from a IS technical background	- Internal development from a business facing IS background - Strategic recruitment	- Internal development from a business background - Strategic recruitment - Supplier base
<b>Architecture roles</b>	- Single role in an dedicated EA organization	- Multiple roles in an dedicated EA organization	- Multiple roles in multiple organization groups
<b>Governance (focus)</b>	- Technical Infrastructure	- Technical Infrastructure, Applications	- Technical Infrastructure, Applications, Information , Process
<b>Communication</b>	- Top-Down cascade	- Targeted	- Targeted but also viral, marketing
<b>Architecture Process</b>	- Developed in-house	- Based on TOGAF	- Agreed industry standard
<b>Documentation</b>	- Word, <u>Visio</u> , PowerPoint	- Word, <u>Visio</u> ., PowerPoint, multiple EA and BPM Tools	- Harmonized BPM & EA Tool set
<b>Collaboration approaches</b>	- Loose community within the company using eMail	- Loose community within the company using <u>SharePoint</u>	- Structured network within and external to the company using public infrastructure
<b>Architecture Scope (focus)</b>	- 1 year time horizon - Global Infrastructure - Physical, Technical abstraction levels	- 5 year time horizons, - Global Infrastructure, Applications - Physical, Technical, Logical abstraction levels	- 10 year time horizons - Global Applications, Global Information, Global Processes - Logical, Conceptual abstraction levels

Hungerford

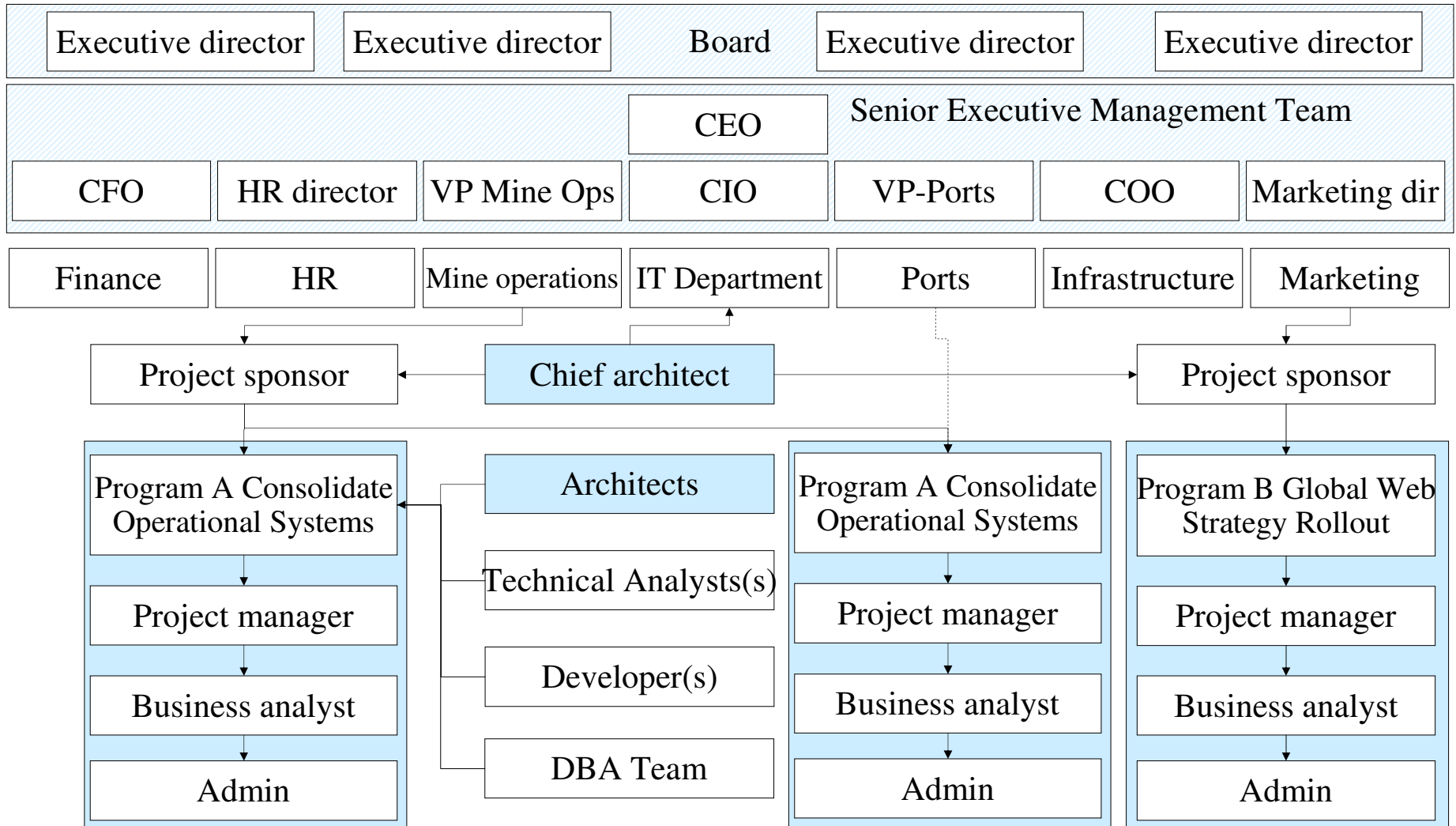


# Architecture as a Cost Centre

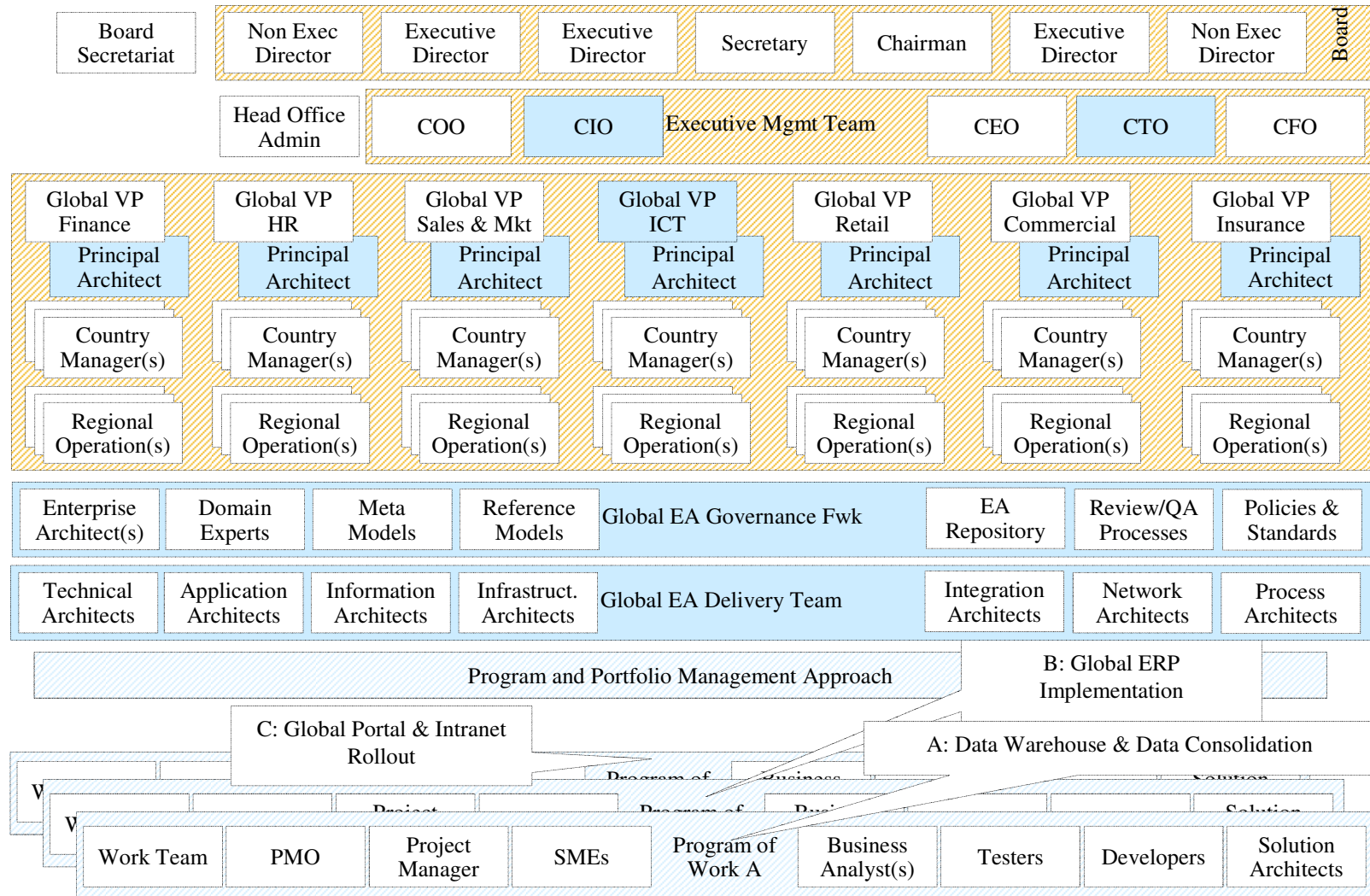


Turner, Götze, Bernus  
 Architecting the Firm – Coherency  
 and Consistency in Managing the  
 Enterprise. Paper submitted to IFAC-  
 IFIP EI2N'2009

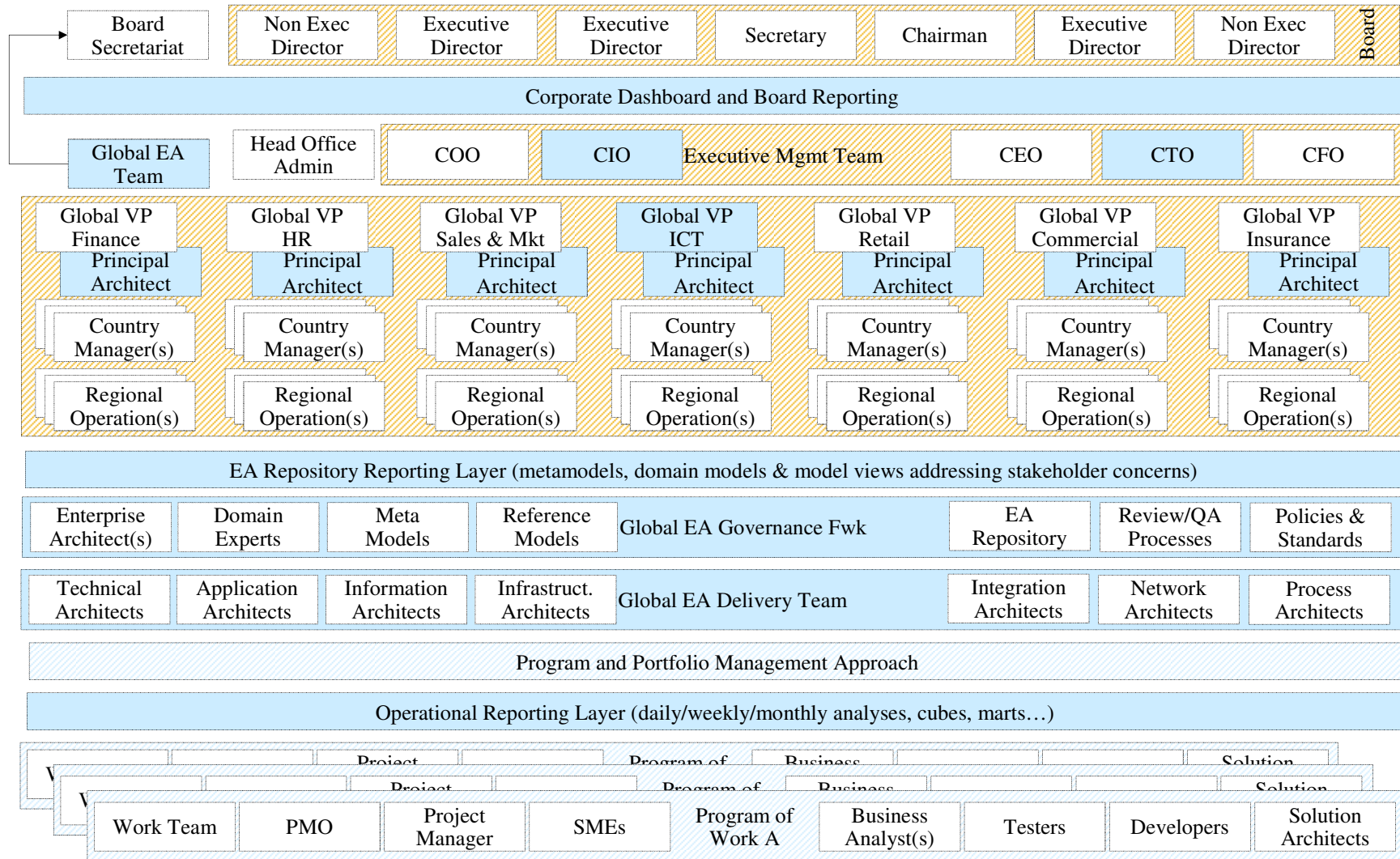
# Architecture as an Asset



# Architecture as a Service



# Pervasive Architecture



# EA Program Maturity

EA Program Maturity Level 1	EA Program Maturity Level 2	EA Program Maturity Level 3	EA Program Maturity Level 4	EA Program Maturity Level 5
No Formalized Architecture	Foundational Architecture	Extended Architecture	Embedded Architecture	Balanced Architecture
<p>Maturity Level 1 is the 'default' level for all enterprises that do not have an established EA program and/or documented architecture.</p>	<p>At Maturity Level 2, the 'foundational' elements of the EA are being put in place. EA is documented for the entire enterprise in its current and future states. The focus is on well-architected, well-designed IT systems with enterprise-level alignment, efficiency, and interoperability. Accordingly, EA at this level is very IT-centric, and for many people the EA would be viewed as a data and technology architecture, except that it is being implemented at the enterprise level. This perspective does help to leverage concepts such as federated patterns, but under-delivers from an enterprise-wide strategy and business perspective. Also, the value of EA is measured according to the success of IT investments.</p>	<p>At Maturity Level 3, the architecture is 'extended' to focus on engineering an entire enterprise from an integrated strategy, business, &amp; technology perspective. To support this, approaches and tools are developed to provide standardized, repeatable methods for describing the enterprise in all dimensions - beyond just the IT perspective. Whereas foundation EA used architecture methods and tools to capture business requirements in order to design IT systems, the Extended EA approach uses architecture methods and tools to capture strategic goals and related business requirements in order to design the enterprise.</p>	<p>At Maturity Level 4, EA tools, methods, and models become 'embedded' in the normal (usually existing) processes of the day. Rather than relying on processes and people extraneous to the business programs (and their processes), the architecture is produced by the processes themselves. In this way the architecture is organic and is renewed on an ongoing basis as a natural outcome of normal business processes.</p>	<p>At Maturity Level 5, the elements of architecture at the three previous levels are 'balanced' and are all working synergistically to optimize EA completeness, consistency, and utilization. In so doing, the EA helps the organization to be more agile and competitive as various future operating scenarios are envisioned on an ongoing basis and appropriate courses of action are chosen and implemented in ways that effectively mitigate risk and help to manage change, innovation, and continuous improvement</p>

Bernard & Grasso

# The Enterprise Architecture Audit Model (EA2M)

Enterprise Architecture Audit Model (EA2M)					
Maturity Level	Level 1	Level 2	Level 3	Level 4	Level 5
	No Formalized Architecture	Foundational Architecture (General Indicators)	Extended Architecture (General Indicators)	Embedded Architecture (General Indicators)	Balanced Architecture (General Indicators)
<b>Audit Category #1: Completeness</b>					
Governance	Default initial level	EA Governance process selected	Governance initial implementation	Governance full implementation	Ongoing integration with management processes
Methodology		EA Methodology steps selected	Methodology initial implementation	Methodology full implementation	Methodology repeatable and steps optimized
Framework		EA Framework design selected	Framework initial implementation	Framework full implementation	Framework design optimized
Artifacts		EA Artifact set selected	Artifact initial implementation	Artifact full implementation	Artifacts used to support planning/decision-making
Tools / Repository		EA Tools & Repository selected	Tool & Repository initial implementation	Tool & Repository full implementation	Tool use & Repository design optimized
Best Practices		Best Practices selected	Best Practices initial implementation	Best Practices full implementation	Ongoing integration of Best Practices
<b>Audit Category #2: Consistency</b>					
Program	Default initial level	EA program approved	EA program initial implementation	EA program full implementation	EA program optimized
Policy		EA policies selected	EA policy initial implementation	EA policy full implementation	EA policy optimized
Resources		EA resources identified	EA resource requirements met	EA resources fully utilized	EA resources optimized
Training		EA training requirements identified	EA training initial implementation	EA training full implementation	EA training optimized
<b>Audit Category #3: Utilization</b>					
Strategic Value	Default initial level	Strategic goals & metrics identified	Strategic goals & business svcs mapped	Strategic goal attainment supported by the EA	Strategic goal attainment optimized via the EA
Business Value		Business services & requirements identified	Business requirements and IT solutions mapped	Future business service scenarios established	Business services optimized via the EA
Technology Value		Current technology solutions identified	Future technology solutions refined	Future technology scenarios established	Technology use optimized via the EA
Risk & Security Management		Risk & security areas identified	Risk & security solution initial implementation	Risk & security solution full implementation	Risk mitigation optimized via the EA
Coherency		Coherency goals & metrics identified	Coherency goals initially met	Coherency goals fully met	Coherency optimized via the EA

Bernard &  
Grasso

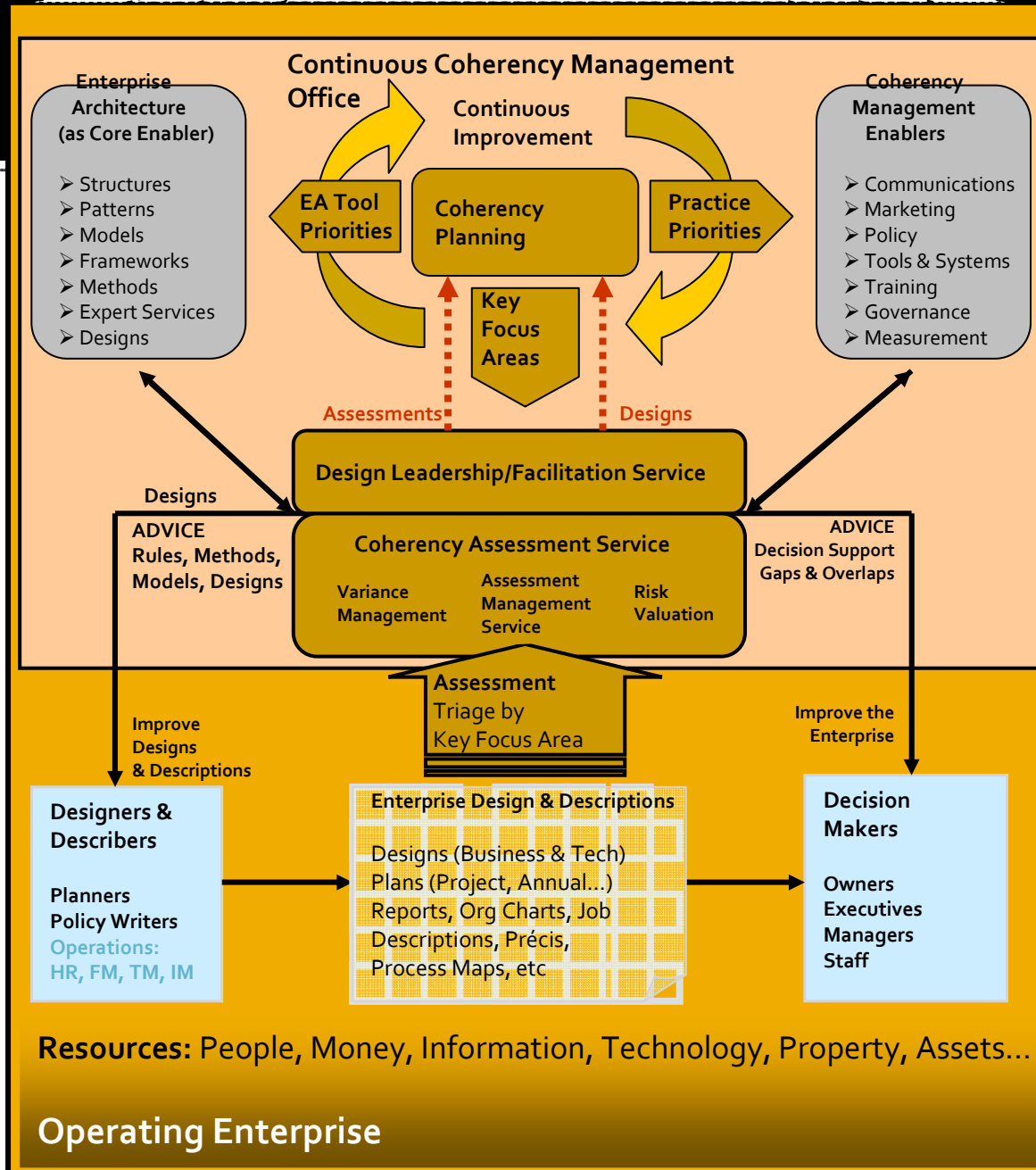
# Assess Readiness

Does the EA Community of Practice believe:

- That most of the EA already exists (implicit and explicitly)?
- That unstructured or malformed EA is still EA?
- That Implicit Architects write most of the EA and need to be supported in the creation of their process artefacts?
- That business architecture can be done as part of foundation EA?
- That EA still provides a valuable design and design facilitation service within the context of Coherency Management?

Observers – Stakeholders – Partne

Coherent View



Generic Coherency Management Operation Framework

Generic CoMOF v1.0

Doucet et al (2009)



# Coherency Management Assessment Levels

Absent

Introduced

Encouraged

Instituted

Optimized

Innovating

Doucet, Gøtze,  
Saha, Bernard

# Research

- IFAC-IFIP EI2N 2009  
4th International Workshop on Enterprise Integration, Interoperability and Networking  
November 3rd-4th, Vilamoura, Portugal
- IFIP WG 5.12 Workshop, 14-16 December, Bled, Slovenia.
- ICEIMT'2010. International Conference on Enterprise Integration and Modeling Technology. Probably Copenhagen (Summer)

**Imagine ... a day when  
enterprises were coherent  
and nobody noticed.**