Driving Business Transformation with EA

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EAM06

Agenda

- Context, definitions and relationships

- Structure, content and tools

- Adoption patterns

- Summary & conclusions

Agenda

- Context, definitions and relationships – *why does BPM need EA, and EA need BPM?*

- Structure, content and tools – *how do we think these things through?*

- Adoption patterns – *where do we start?*

- Summary & conclusions – *We need to "do the right things right"!*

Agenda

Context, definitions and relationships – *why does BPM need EA, and EA need BPM?*

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Let me tell you a story, about my self-build DiY project…

- Strategy: "*We're going to have the finest bathroom!*"

- Planning: "*It'll cost this much, and give us all we need*"

- Design: "*It'll look like this – let's go build it*"

- Development: "*Here you are…*"

- Deployment: "*…Bingo! Oh dear…*"

- Architecture: "*understanding the parts within the whole*"

- Enterprise Architecture: *architecture of the enterprise*

- Understanding the enterprise's architecture leads to better planning and better delivery
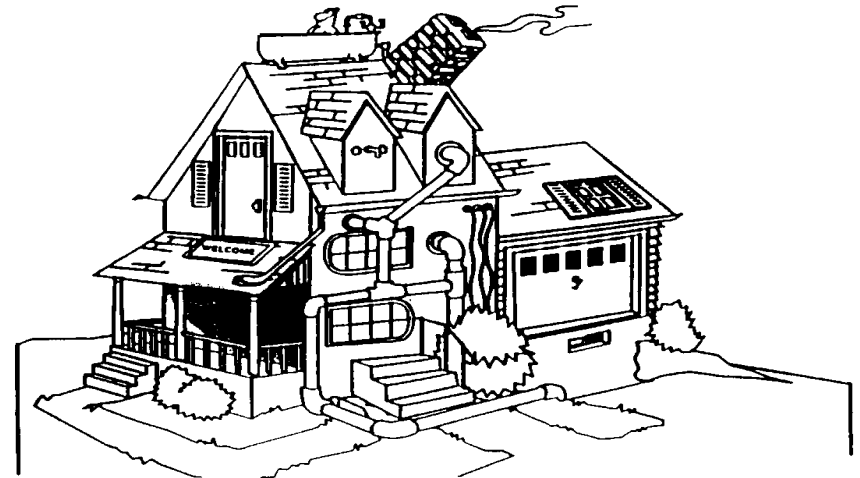
So what's that got to do with Business Process Management? (What is BPM? What is EA? Or SOA?)

- **Business Process Management:**
  "*A solution delivery discipline, based on SOA practices, that drives business agility, efficiency and optimization around organizational concerns and measurable business objectives*"

  ▶ Business optimization and IT responsiveness via process definition, analysis, customization and deployment

    ▪ *"The right organizational resources doing the right things"*

    > *"We need to approach the bathroom the right way!"*

- **Service Oriented Architecture:**
  "*An architectural style for business and IT that enables flexibility and improved time to market for integrated solutions*"

  ▶ Agile and aligned business and IT design and delivery

    ▪ "*The right solutions supporting the right time to market*"

    > *"We need to build it the right way"*

- **Enterprise Architecture:**
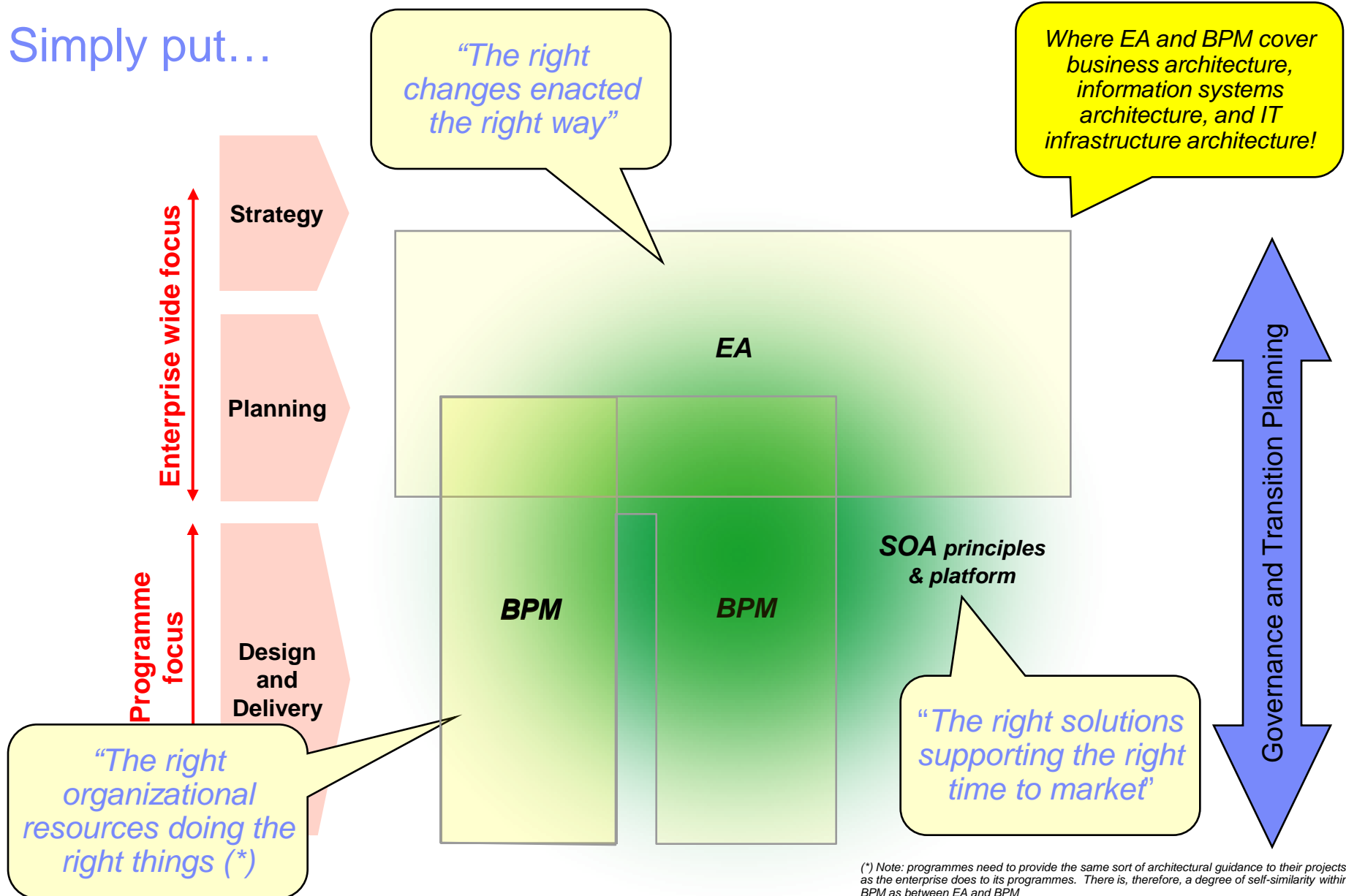 "*An architectural discipline that merges strategic business and IT objectives with opportunities for change and governs the resulting change initiatives*"

  ▶ Driving portfolio planning in a strategic context and directing change toward common enterprise goals

    ▪ "*The right changes enacted the right way*"

    > *"It needs to fit in with the rest of the house!!!"*

Simply put…

Strategy

Planning

Design and Delivery

Enterprise wide focus

Programme focus

"The right changes enacted the right way"

Where EA and BPM cover business architecture, information systems architecture, and IT infrastructure architecture!

EA

BPM

BPM

SOA *principles & platform*

Governance and Transition Planning

"The right organizational resources doing the right things (*)"

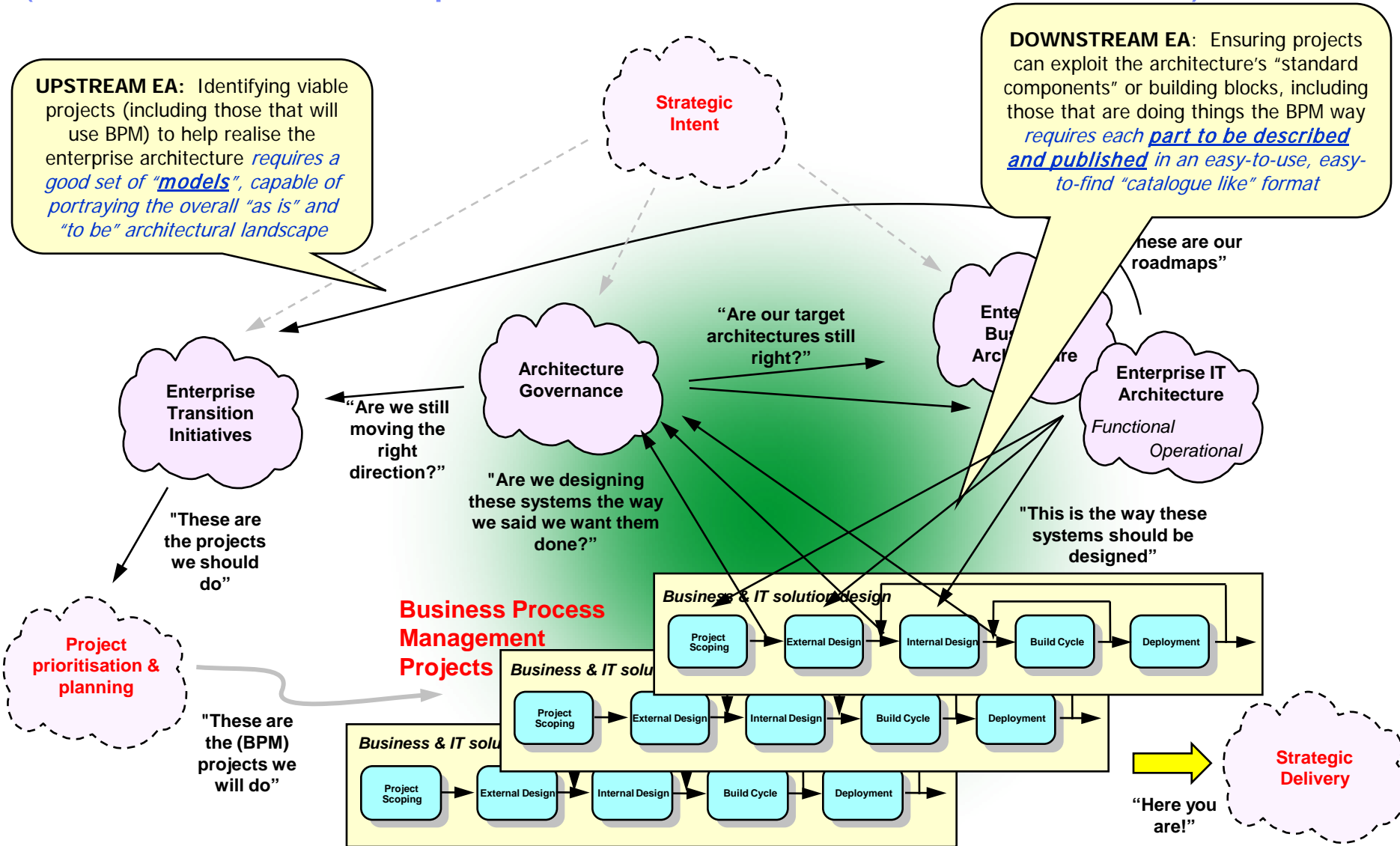*"The right solutions supporting the right time to market"*

(*) Note: programmes need to provide the same sort of architectural guidance to their projects as the enterprise does to its programmes. There is, therefore, a degree of self-similarity within BPM as between EA and BPM

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Or, more completely, architecture enables organisations to "*do the right things right*"

Strategic Intent

Smart Strategy

SOA *principles & platform*

"Do the right things"

The Enterprise's Architecture

Smart Design, Development, Delivery

"These are the projects we should do"

Smart Planning

"Do things right"

Business Process Management Projects

Project Prioritisation & planning

"These are the projects we will do"

| Project Scoping | External Design | Internal Design | Build Cycle | Deployment |

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| Project Scoping | External Design | Internal Design | Build Cycle | Deployment |

Deployment & Delivery

"Here you are!"

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(Which we *could* explore further – on another occasion!)

UPSTREAM EA: Identifying viable projects (including those that will use BPM) to help realise the enterprise architecture *requires a good set of "*__models__*", capable of portraying the overall "as is" and "to be" architectural landscape*

DOWNSTREAM EA: Ensuring projects can exploit the architecture's "standard components" or building blocks, including those that are doing things the BPM way *requires each __part to be described and published__ in an easy-to-use, easy-to-find "catalogue like" format*

Strategic Intent

"hese are our roadmaps"

"Are our target architectures still right?"

Ente Bu Arch re

Enterprise IT Architecture

Functional

Operational

Architecture Governance

Enterprise Transition Initiatives

"Are we still moving the right direction?"

"Are we designing these systems the way we said we want them done?"

"This is the way these systems should be designed"

"These are the projects we should do"

Project prioritisation & planning

"These are the (BPM) projects we will do"

Business Process Management Projects

Business & IT solution design

| Project Scoping | External Design | Internal Design | Build Cycle | Deployment |

Business & IT solu

| Project Scoping | External Design | Internal Design | Build Cycle | Deployment |

Business & IT solu

| Project Scoping | External Design | Internal Design | Build Cycle | Deployment |

Strategic Delivery

"Here you are!"

Agenda

- Context, definitions and relationships

  Structure, content and tools – *how do we think these things through?*

- Adoption patterns

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So how do we do it? How _should_ we do it? Firstly, by recognising two aspects of "architecture"

- **(1) There are two styles of Architect behaviour**
  - Those who take a <u>holistic, wide approach</u>, wanting to define, explore, adjust and analyse from all points of view
    - "_I need to see/work on something of everything_"
  - Those who have a <u>detailed, specialised focus</u> on some aspect, whether this be in terms of requirements, or functional structure, or operational deployment etc.
    - "_I need to see/work on everything of something_"

  - In some contexts these two styles are distinguished as:
    - Architects – think of the whole thing in a holistic way
    - Designers – focus their specialised skills on a specific aspect or part of the thing

- **(2) There are two sorts of content, for BOTH styles of behaviour**
  - System[1] Modelling - describing the requirements on, and design of a <u>specific</u> target business system
  - Patterns, principles and building blocks – "<u>best practice</u>" guidance that constrains these models

- We're recognising that our tools can/should serve the needs of both communities, across both sorts of content.
  - Architecture tooling (such as System Architect) supports those architecturally focused and "_need something of everything_"
  - Specialised tooling (such as WBM, RSA and RAM) support those with a solution design focus and "_need everything of something_"

Enterprise Architecture

Business Process Management

1: "system" embraces Business and IT parts

These notions map onto a neat "mental model"…

	Solving specific business problems (system modelling)	Providing/using architectural guidance for solving business problems using IT ("Patterns, principles and building blocks")	
Those who need holistic architectural thinking ("*something of everything*")			
Those who focus on specialised architectural thinking ("*everything of something*")			
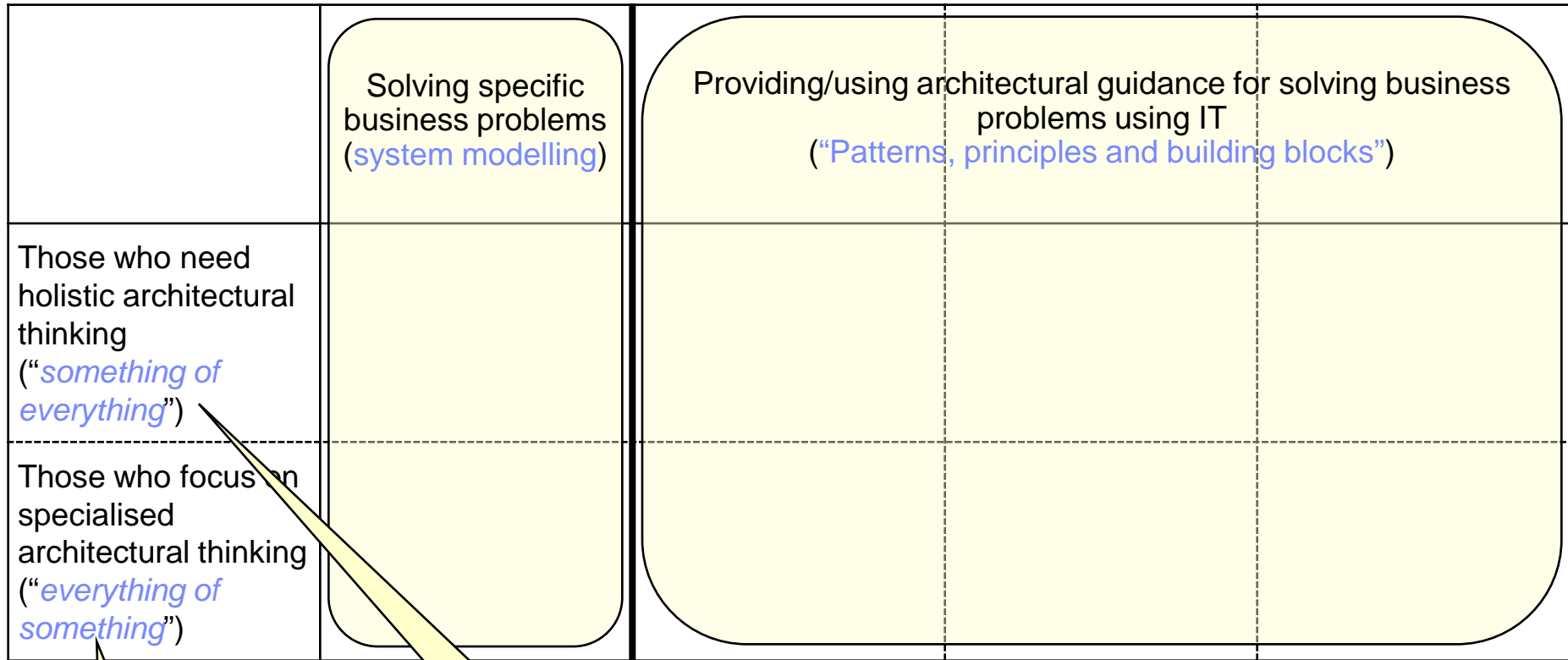
Business Process Management

Enterprise Architecture

(Key note: this mental model covers <u>all</u> aspects of architecture - *business architecture*, *information systems architecture*, and *IT infrastructure architecture*!)
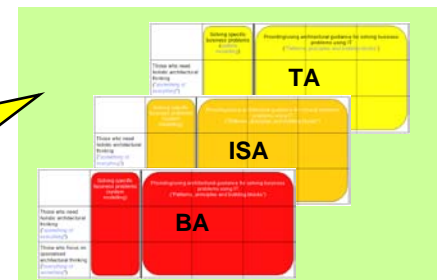
This acts as a backdrop to the two sorts of work products used by both Enterprise and Solution Architects…

Source: IBM's EA Method education

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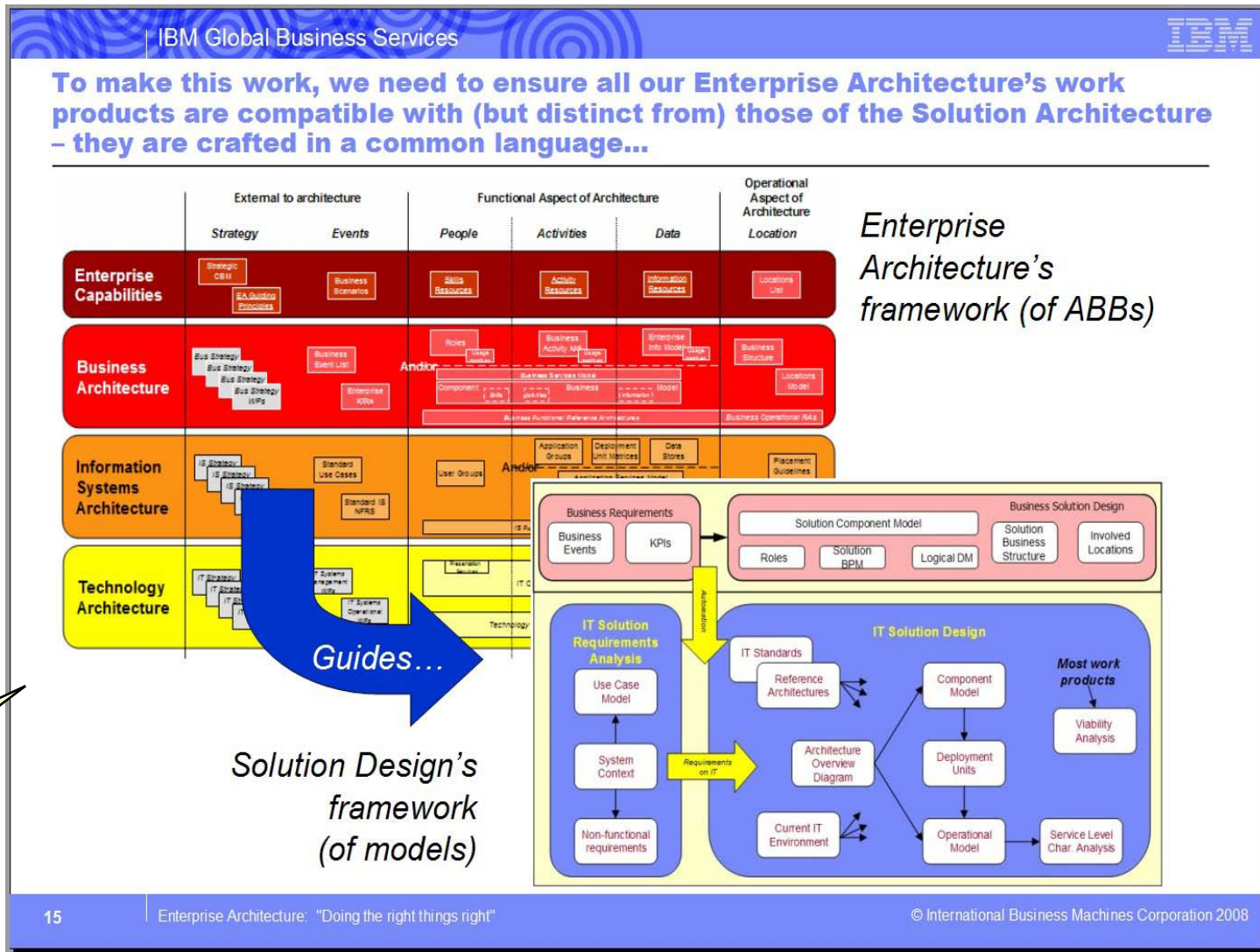
(Who are found across all of IBM's divisions)

For example, those used by IBM's own Architect Profession
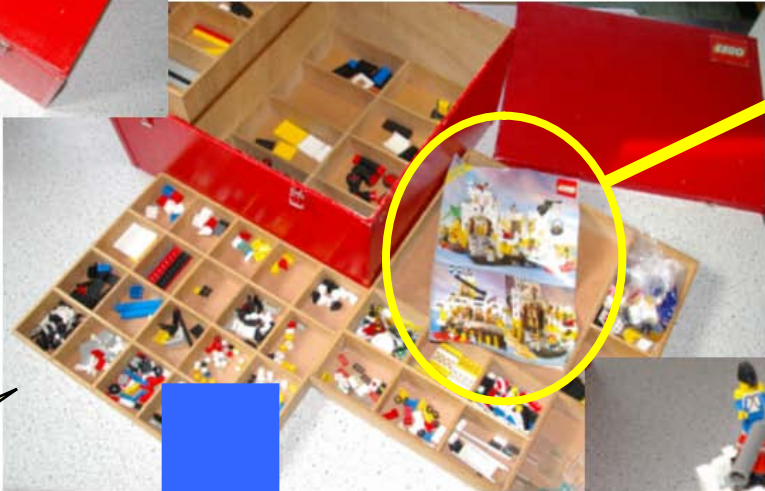
(Best analogy ever – LEGO®!!!!!)

Source: Ian's childrens' LEGO® box and models

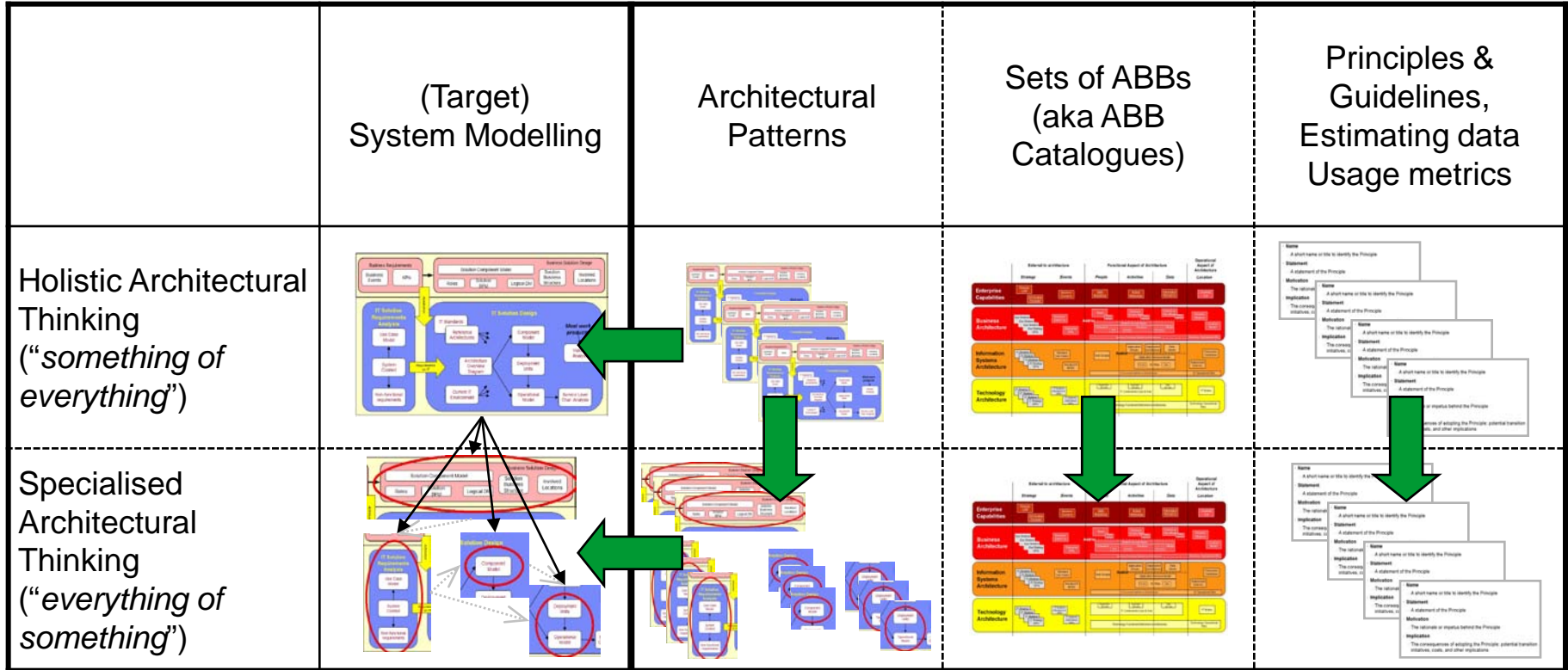Ian's Lego® box

Lego®'s pattern

Instructions …

Ian's box's compartments & trays full of Lego®'s ABBs

Used to build…

Ian's children's model

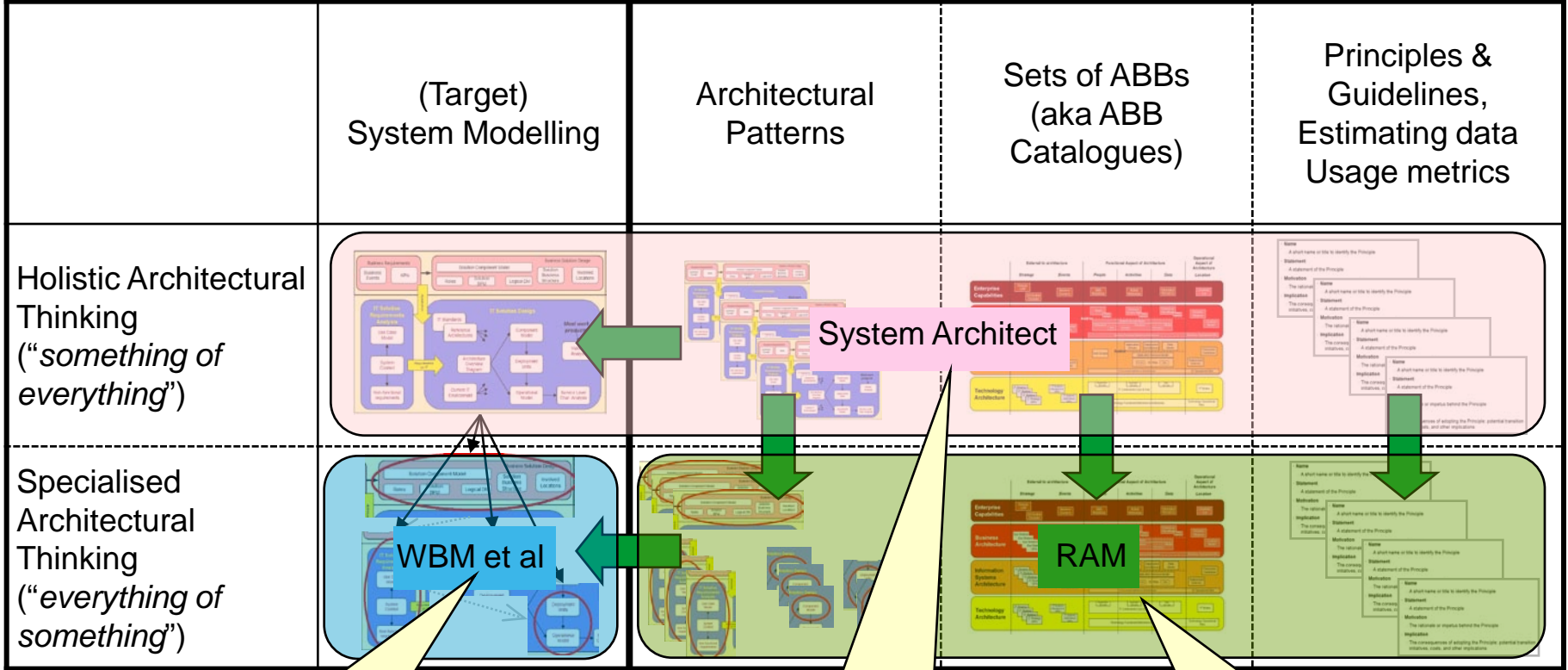# …To highlight how BOTH types of WP are used across both Enterprise and Solution Architect communities

	(Target) System Modelling	Architectural Patterns	Sets of ABBs (aka ABB Catalogues)	Principles & Guidelines, Estimating data Usage metrics
Holistic Architectural Thinking ("*something of everything*")				
Specialised Architectural Thinking ("*everything of something*")				

Business & IT work products documenting a specific business system's requirements and solution design

Business & IT work products documenting "best practice" patterns required or requested to be used when defining a specific system's requirements and design

Business and IT work products documenting the "elemental things" and their principles of use that are required or requested to be used when defining a specific system's requirements and design

(Therefore enabling us to position IBM's tooling portfolio in support of these differing requirements)

	(Target) System Modelling	Architectural Patterns	Sets of ABBs (aka ABB Catalogues)	Principles & Guidelines, Estimating data Usage metrics
Holistic Architectural Thinking ("*something of everything*")			System Architect	
Specialised Architectural Thinking ("*everything of something*")	WBM et al		RAM	

WBM, RSA, ReqPro: specialised tools for those who wish to focus on some aspect of the system

System Architect: tool of choice for those who wish to model the whole system, to some degree

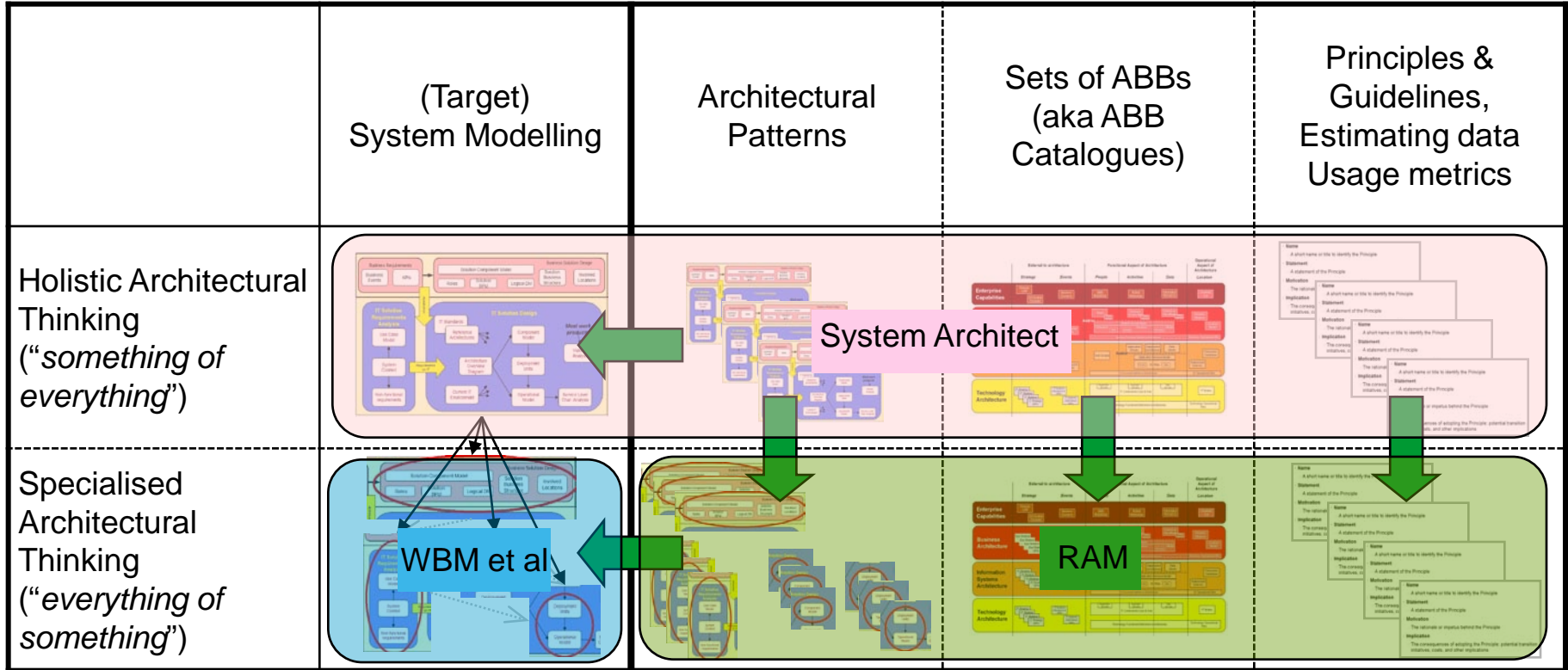*Rational Asset Manager: acting as the repository of architectural assets (as well as work in process)*

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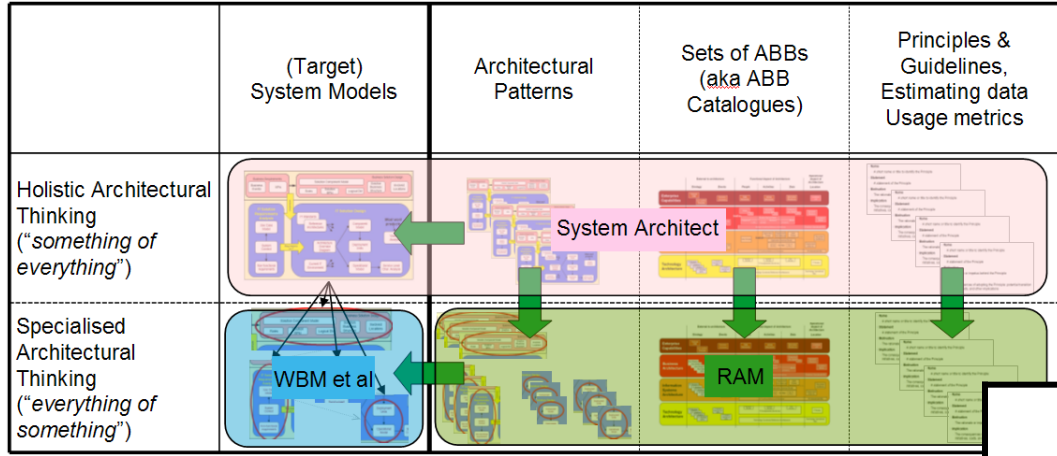 Adoption patterns – *where do we start?*

- Summary & conclusions

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So where do we start? Is success predicated on doing all of this? **NO!**

	(Target) System Modelling	Architectural Patterns	Sets of ABBs (aka ABB Catalogues)	Principles & Guidelines, Estimating data Usage metrics
Holistic Architectural Thinking ("*something of everything*")			System Architect	
Specialised Architectural Thinking ("*everything of something*")	WBM et al		RAM	

- We need to simplify this mental model a little, in order to draw out some key considerations…

Re-factoring this diagram gives a better landscape on which to discuss potential entry points (step 1)
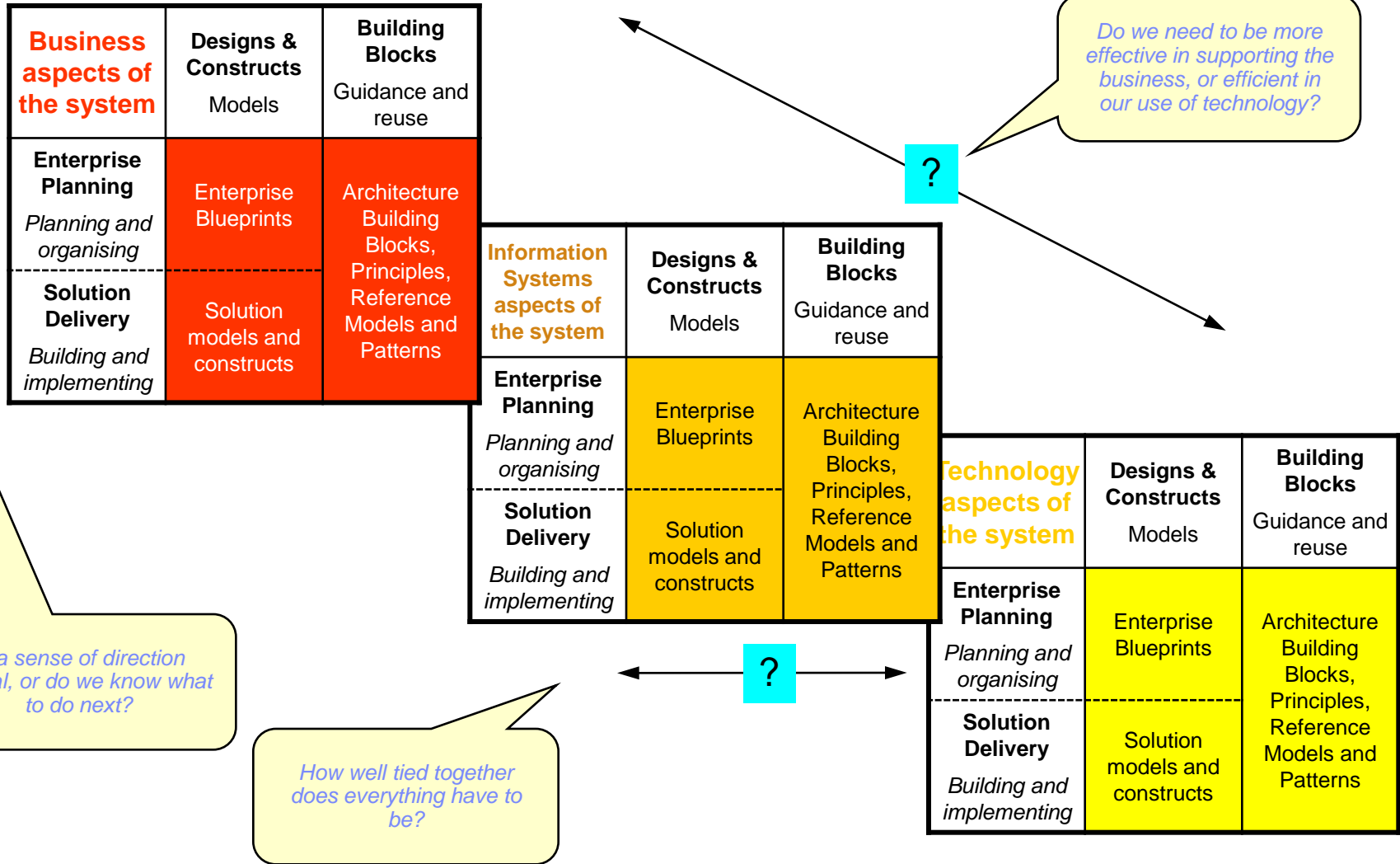

	(Target) System Models	Architectural Patterns	Sets of ABBs (aka ABB Catalogues)	Principles & Guidelines, Estimating data Usage metrics
Holistic Architectural Thinking ("*something of everything*")		System Architect		
Specialised Architectural Thinking ("*everything of something*")	WBM et al		RAM	

"*Designs & Constructs*"

"*Building Blocks* (Guidance & best practice)"

Step 1: Simplification into a "2 by 2"…

"The System" (business & IT)	Designs & Constructs Modelling	Building Blocks Guidance and reuse
Enterprise Planning *Planning and organising*	Enterprise Blueprints	Architecture Building Blocks, Principles,
Solution Delivery *Building and implementing*	Solution models and constructs	Reference Models and Patterns

Re-factoring this diagram gives a better landscape on which to discuss potential entry points (step 2)

Business aspects of the system	**Designs & Constructs** Models	**Building Blocks** Guidance and reuse
Enterprise Planning *Planning and organising*	Enterprise Blueprints	Architecture Building Blocks, Principles, Reference Models and Patterns
Solution Delivery *Building and implementing*	Solution models and constructs	

Information Systems aspects of the system	**Designs & Constructs** Models	**Building Blocks** Guidance and reuse
Enterprise Planning *Planning and organising*	Enterprise Blueprints	Architecture Building Blocks, Principles, Reference Models and Patterns
Solution Delivery *Building and implementing*	Solution models and constructs	

Technology aspects of the system	**Designs & Constructs** Models	**Building Blocks** Guidance and reuse
Enterprise Planning *Planning and organising*	Enterprise Blueprints	Architecture Building Blocks, Principles, Reference Models and Patterns
Solution Delivery *Building and implementing*	Solution models and constructs	

Step 2: Expansion front-to-back into the "levels" of architecture

The "business level" aspects of the enterprise/system, whether supported by IT or not

Those parts of IT that are directly related to the business

Those parts of IT that "keep things going"

There is no one "perfect approach" – it all depends. (Although a sense of the end goal is always useful!)

Business aspects of the system

Business aspects of the system	Designs & Constructs Models	Building Blocks Guidance and reuse
Enterprise Planning *Planning and organising*	Enterprise Blueprints	Architecture Building Blocks, Principles, Reference Models and Patterns
Solution Delivery *Building and implementing*	Solution models and constructs	

Information Systems aspects of the system

Information Systems aspects of the system	Designs & Constructs Models	Building Blocks Guidance and reuse
Enterprise Planning *Planning and organising*	Enterprise Blueprints	Architecture Building Blocks, Principles, Reference Models and Patterns
Solution Delivery *Building and implementing*	Solution models and constructs	

Technology aspects of the system

Technology aspects of the system	Designs & Constructs Models	Building Blocks Guidance and reuse
Enterprise Planning *Planning and organising*	Enterprise Blueprints	Architecture Building Blocks, Principles, Reference Models and Patterns
Solution Delivery *Building and implementing*	Solution models and constructs	

?

Do we need to be more effective in supporting the business, or efficient in our use of technology?

Is a sense of direction critical, or do we know what to do next?

How well tied together does everything have to be?

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There is no one "perfect approach" – it all depends. (Although a sense of the end goal is always useful!)

- Detailed discussions are presented in the recent whitepaper "*Leveraging SOA, BPM and EA for Strategic Business and IT Alignment*"

"The alignment of business and IT… is one of the most important topics on today's enterprise agenda. The compelling promise of SOA, Business Process Management and Enterprise Architecture individually… accelerate that alignment. However… even greater value can be gained through the convergence of all three"

Convergence of SOA, BPM and EA – Supporting Strategic Business and IT Alignment

Rational software
WebSphere software

Leveraging SOA, BPM and EA for Strategic Business and IT Alignment

Version 1.05

November, 2008

Claus Torp Jensen, SOA Foundation
Ian Charters, Rational EA
Jim Amsden, Rational EA
Scott Darlington, Rational EA
Martin Owen, Telelogic
Eric Herness, WebSphere BPM
Pablo Irassar, WebSphere BPM

http://www.ibm.com/developerworks/websphere/bpmjournal/0812_jensen/0812_jensen.html

Pattern: SOA IT Solution Platform
"*IT Development efficiency, agility, reuse and maintainability*"

- Exploiting SOA within solution contexts, using a service registry to capture and promote reuse of appropriate IT centric building blocks

  ▸ *Longer term, a sense of direction may follow from these service maps (eg via SOMA), laying out the desired structure of services across the enterprise*
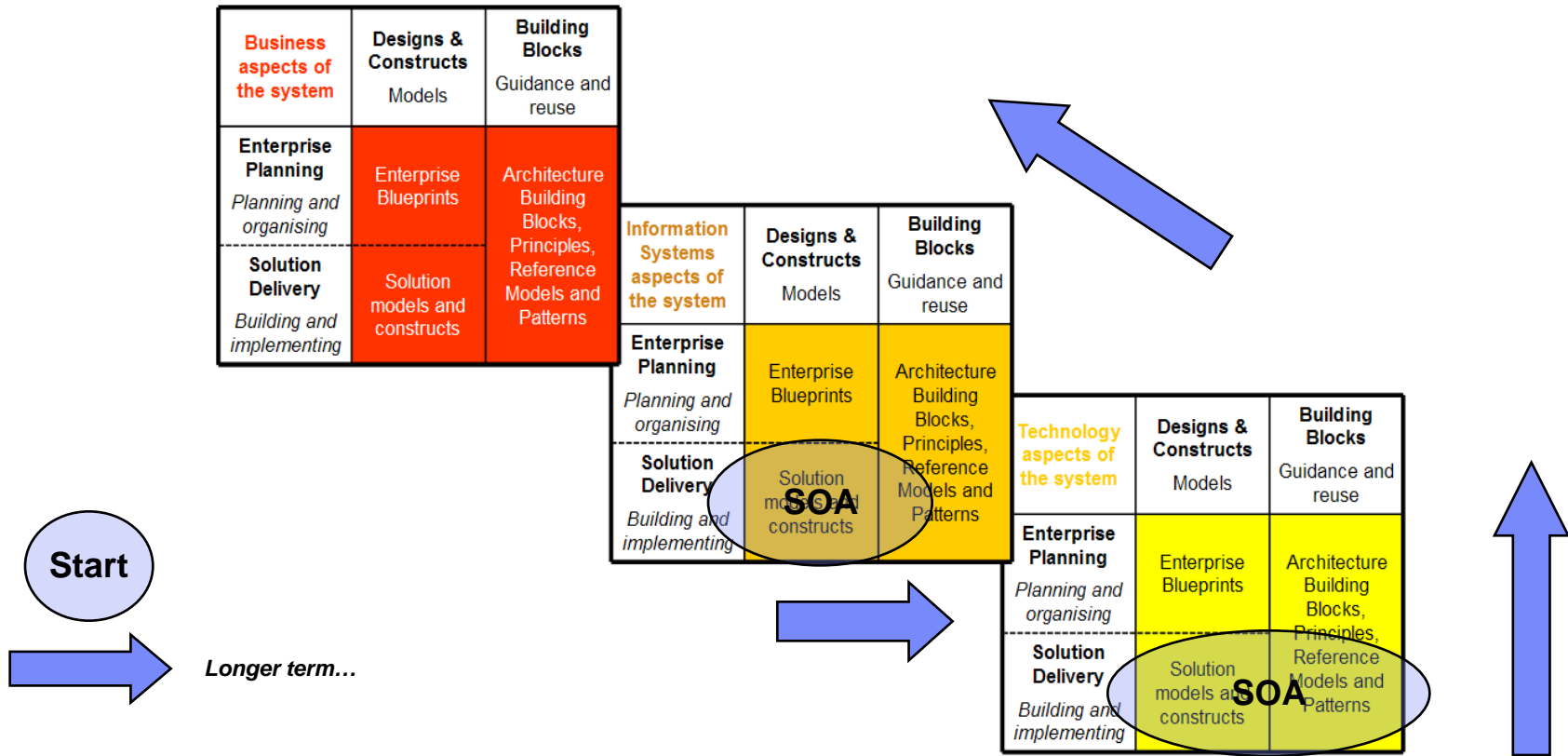
Pattern: SOA based BPM
"*Business optimisation & agility through SOA*"

- Business (end to end) process analysis embracing service oriented (building block) thinking as "1st class" aspects of Solution Delivery's System Architecture

  - *Longer term, a sense of direction may follow via the identification of enterprise wide business services, together with corresponding IT services*
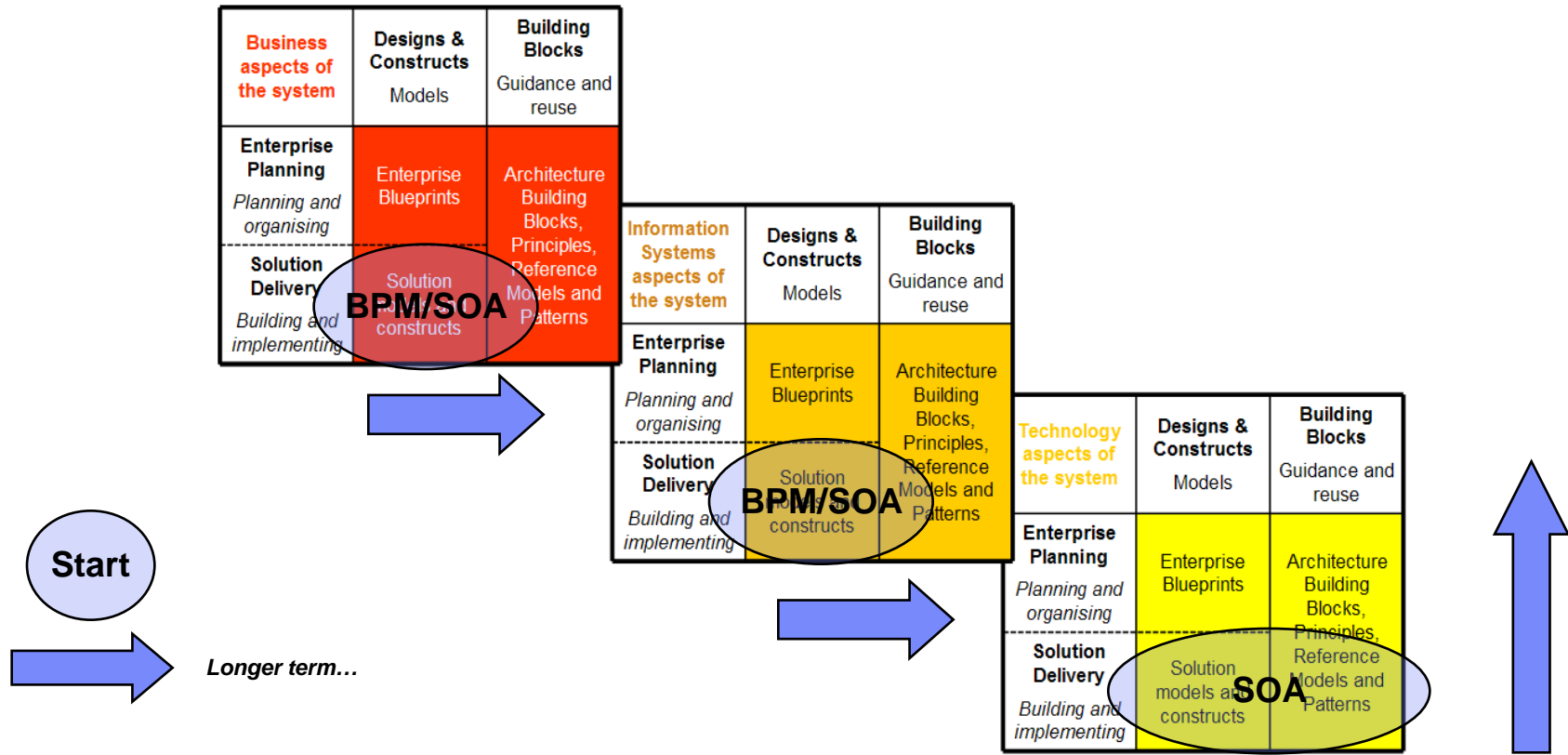
Pattern: Business Architecture
"*Aligning business systems with strategic direction and objectives*"

- Business structure analysis (systems and building blocks), identifying the strategic service oriented business "blueprints" (eg via IBM's Component Business Modelling)

  - *Longer term, extending into the IT domains (completing the EA) to ensure a rigorous connection between BA & ITA, and therefore improved ability to deliver the right solutions*

Start

Longer term…
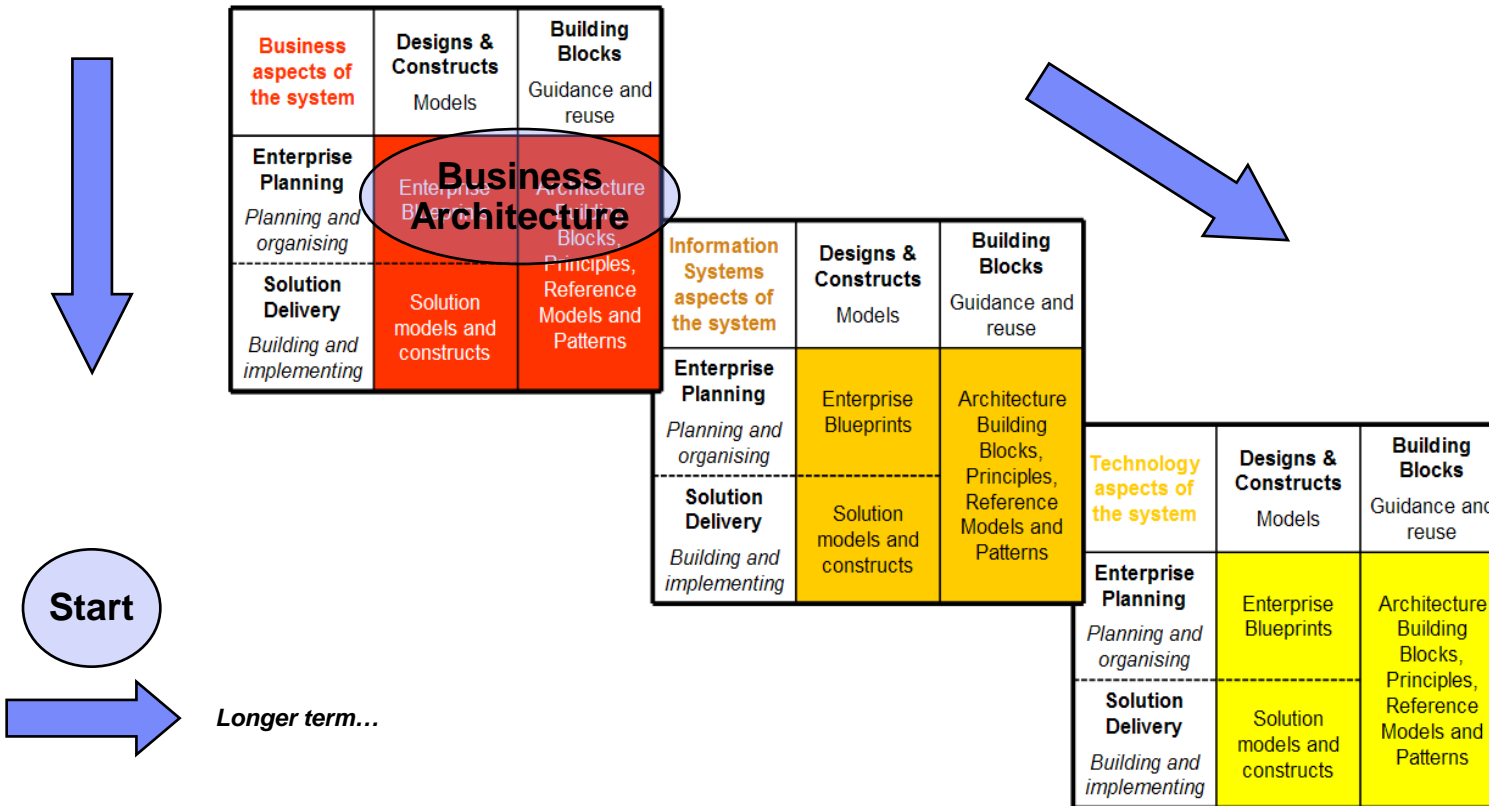
Pattern: Enterprise Architecture
Aligning business & IT systems with strategic direction & objectives

- Business and IT structure analysis, identifying and planning for the delivery of strategic service oriented business (e.g. CBM) and IT "blueprints"

  - *Longer term, extending into guiding and governing the design of solution delivery's system architectures, "doing the right things right"*
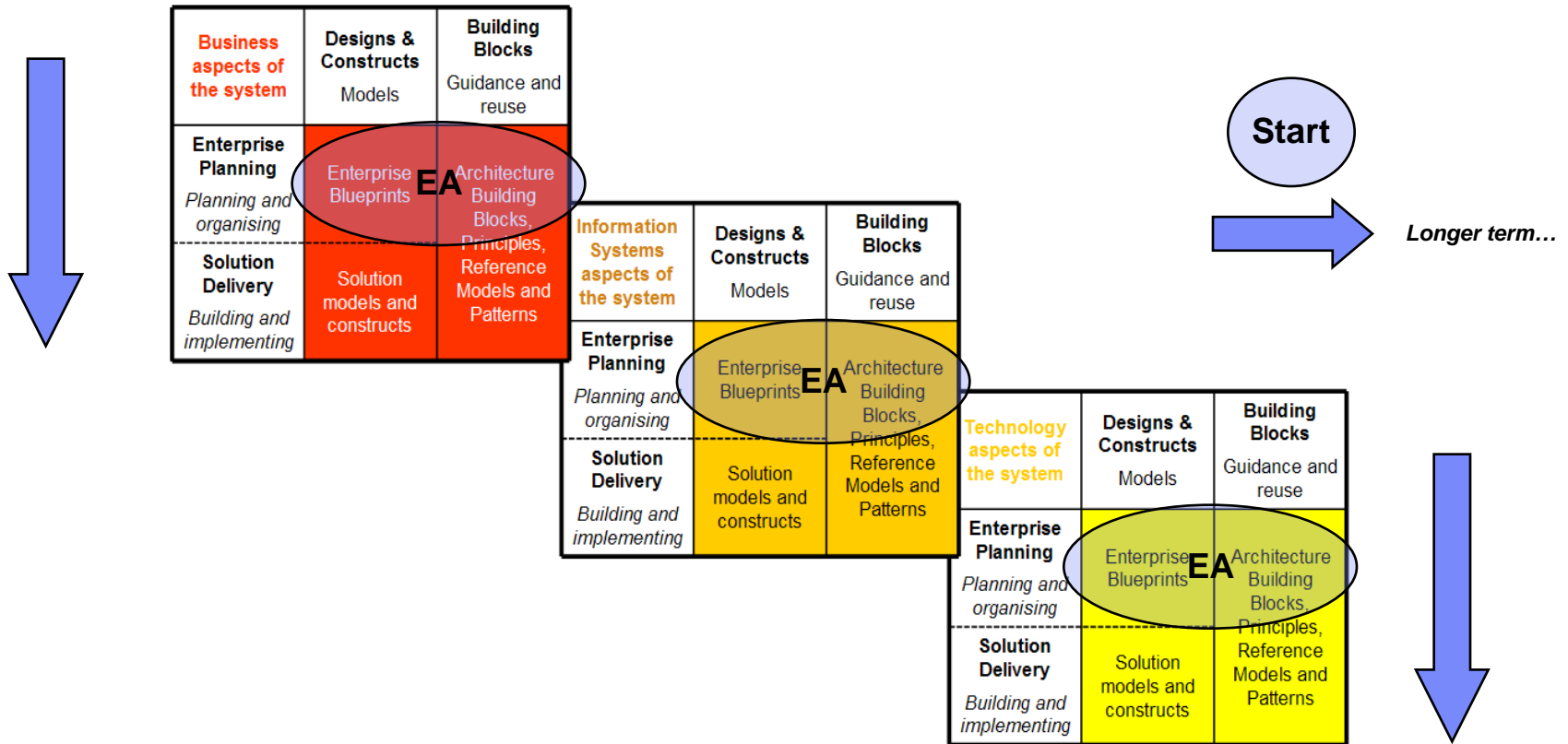
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Summary & conclusions – *We need to "do the right things right"*

EA + BPM: 1+1 = 3, particularly if we exploit SOA!

- **EA**'s holistic, enterprise wide "*something of everything*" approach allows enterprises to "*do the right things*"
    - the right way for all aspects and all parts of the enterprise – including BPM

- **BPM**'s focused, process centric "*everything of something*" emphasis allows enterprises to "*do these sorts of things right*"
    - including the right balance between human and automated processes

- And **SOA**'s building block style facilitates both, particularly in their drive to connect the worlds of business and IT

- All supported by a set of thinking models and tools that bind all architects together, whether they be Enterprise, Solution, Business or IT

- Delivered using one or more approaches that can fit an enterprise's "as is" as well as "to be" states of architectural maturity
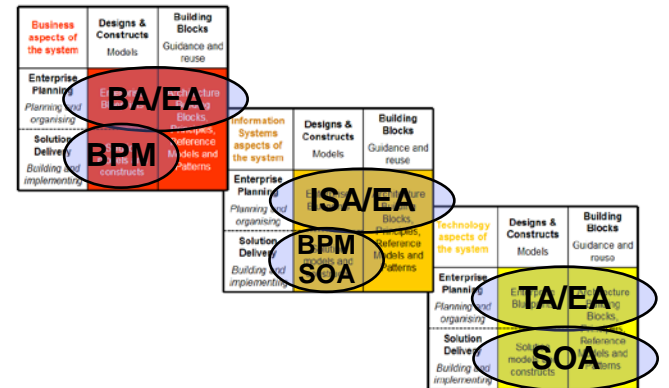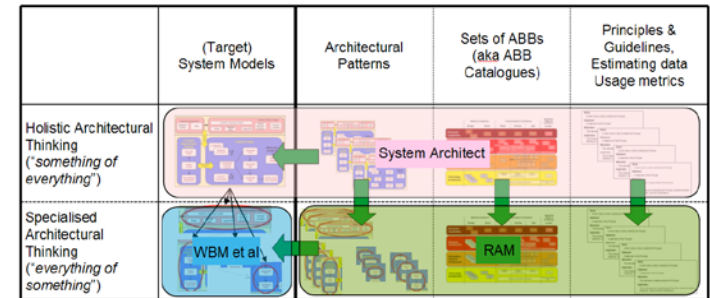
(*) Recall the self similarity of projects within a BPM programme and BPM to EA – i.e. there is a need for "something of everything" within the focus of a BPM/SOA programme

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