



IBM Software Group

Using TOGAF™ 9 as a Tool's Common Metamodel

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Rational software

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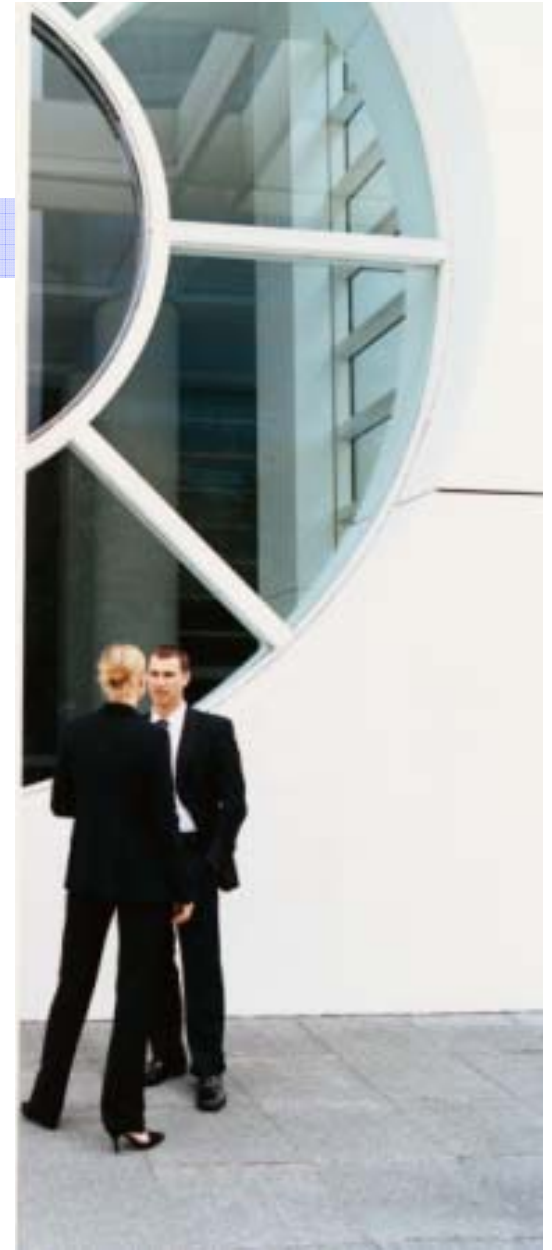


Innovation for a smarter planet

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Agenda

- History of System Architect
- New Requirements
- TOGAF 9 Metamodel & Extensions
- Summary

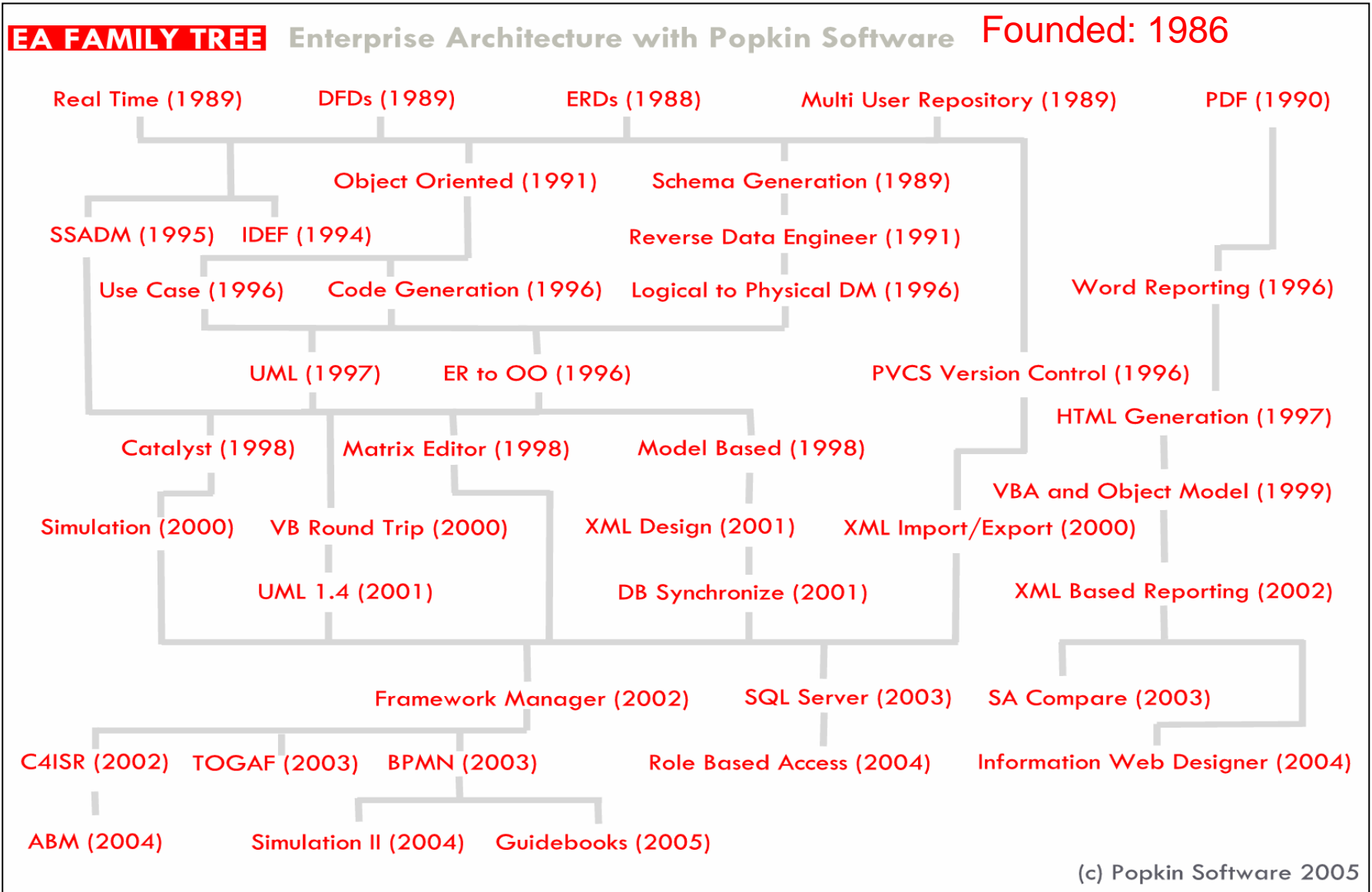


History of System Architect

- Popkin Software – System Architect
 - ▶ Founded in 1986
 - ▶ Acquired by Telelogic in 2006
 - ▶ Telelogic acquired by IBM in 2008

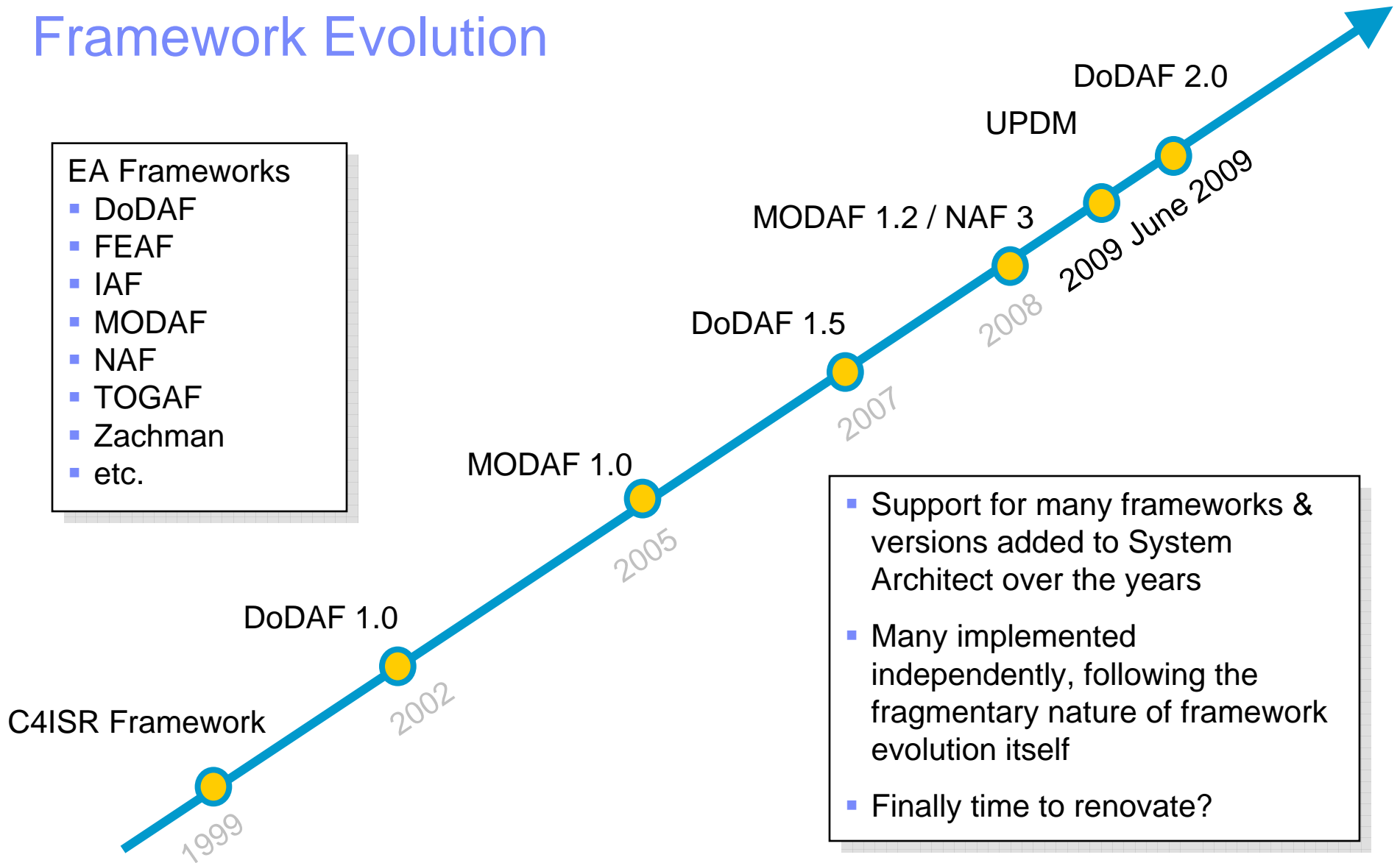
- Steady addition of new features and frameworks over many years





Framework Evolution

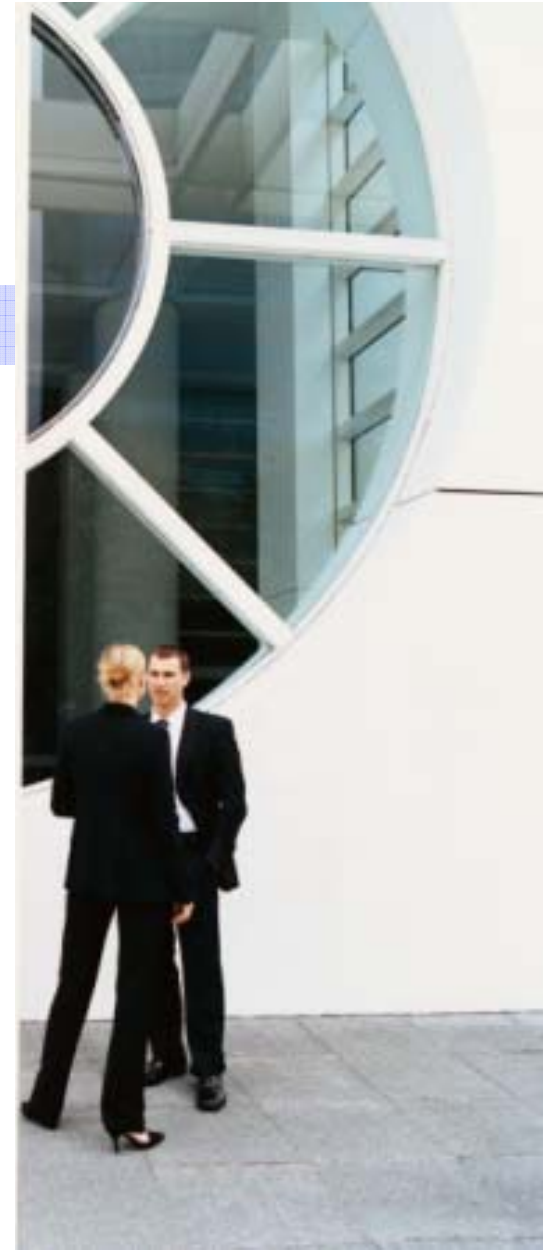
- EA Frameworks
- DoDAF
 - FEAF
 - IAF
 - MODAF
 - NAF
 - TOGAF
 - Zachman
 - etc.



- Support for many frameworks & versions added to System Architect over the years
- Many implemented independently, following the fragmentary nature of framework evolution itself
- Finally time to renovate?

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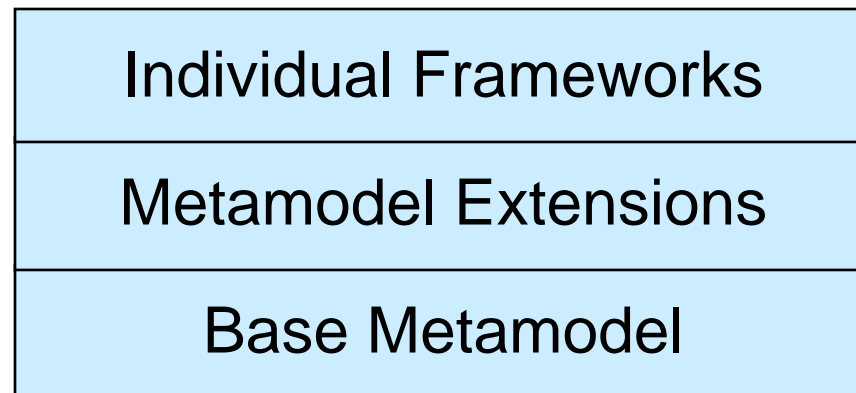
New Requirements: The Usual Suspects

- Feature requests from customers
- New techniques / diagrams to support
- New releases of EA frameworks
 - ▶ DoDAF 2, TOGAF 9, etc.
- New frameworks to support such as UPDM and the IBM EA Method's framework



New Requirements: A Common Metamodel

- To make framework support more efficient, we'd like to map our supported frameworks to a common metamodel
- The TOGAF 9 Metamodel is broad in scope, open, extensible
- We expect other frameworks to broaden



New Requirements: Fitting into Big Blue

- Software Group: A broad portfolio of tools & runtimes related to EA
 - ▶ DB2, Data Architect, Cognos Business Intelligence & Reporting
 - ▶ Collaboration such as Instant Messaging, Notes, Web Conferences
 - ▶ Tools for application development, change & configuration management, requirements management, portfolio management
 - ▶ Operations tools such as managed deployment, discovery, CMDB
 - ▶ Application servers, BPM tools & runtimes

- Servers & Systems

- IBM Corporate IT, Business Transformation / CIO

- Global Services organization
 - ▶ Includes a strong EA practice in Strategy & Change organization

Information Management

Lotus software

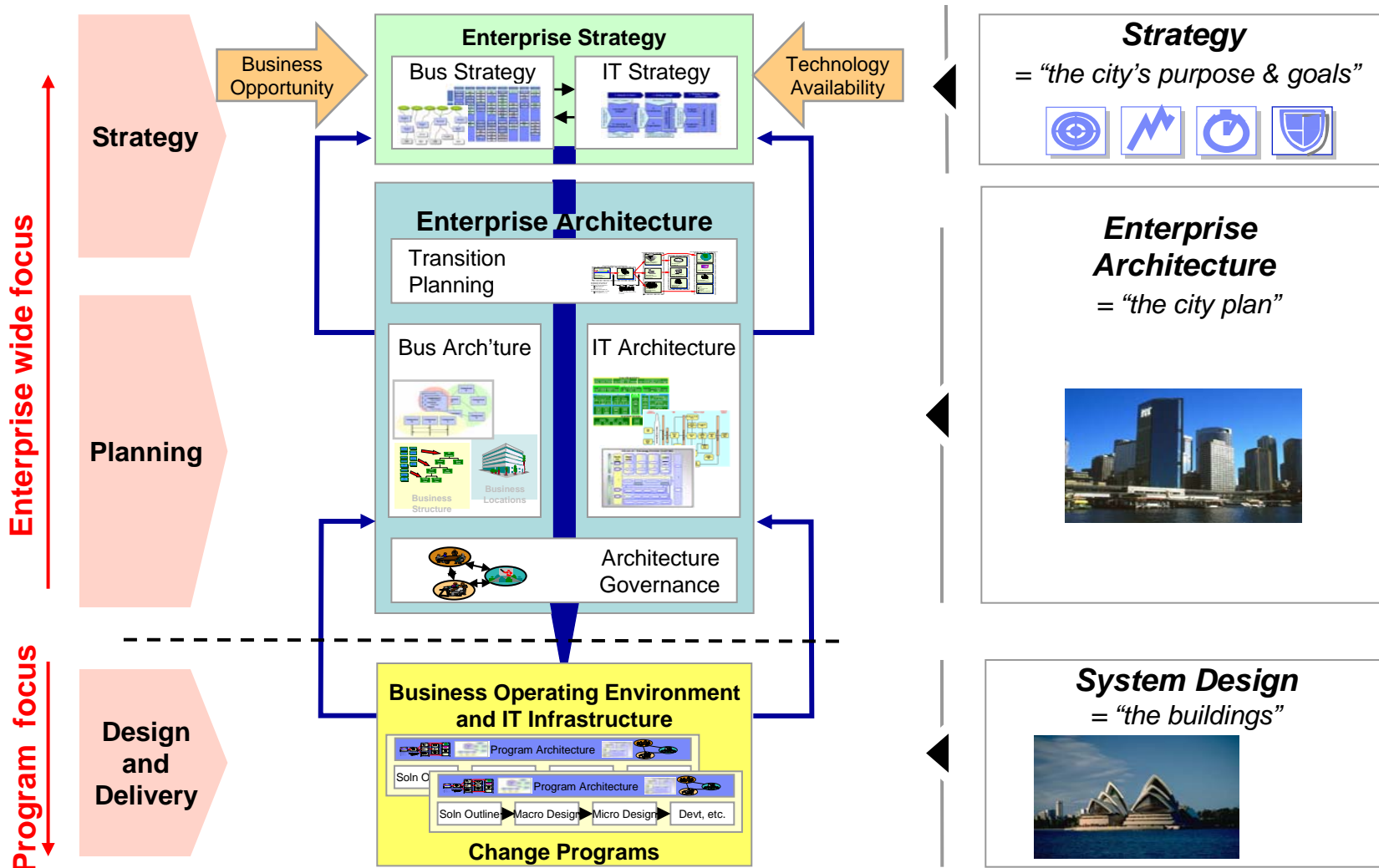
Rational software

Tivoli software

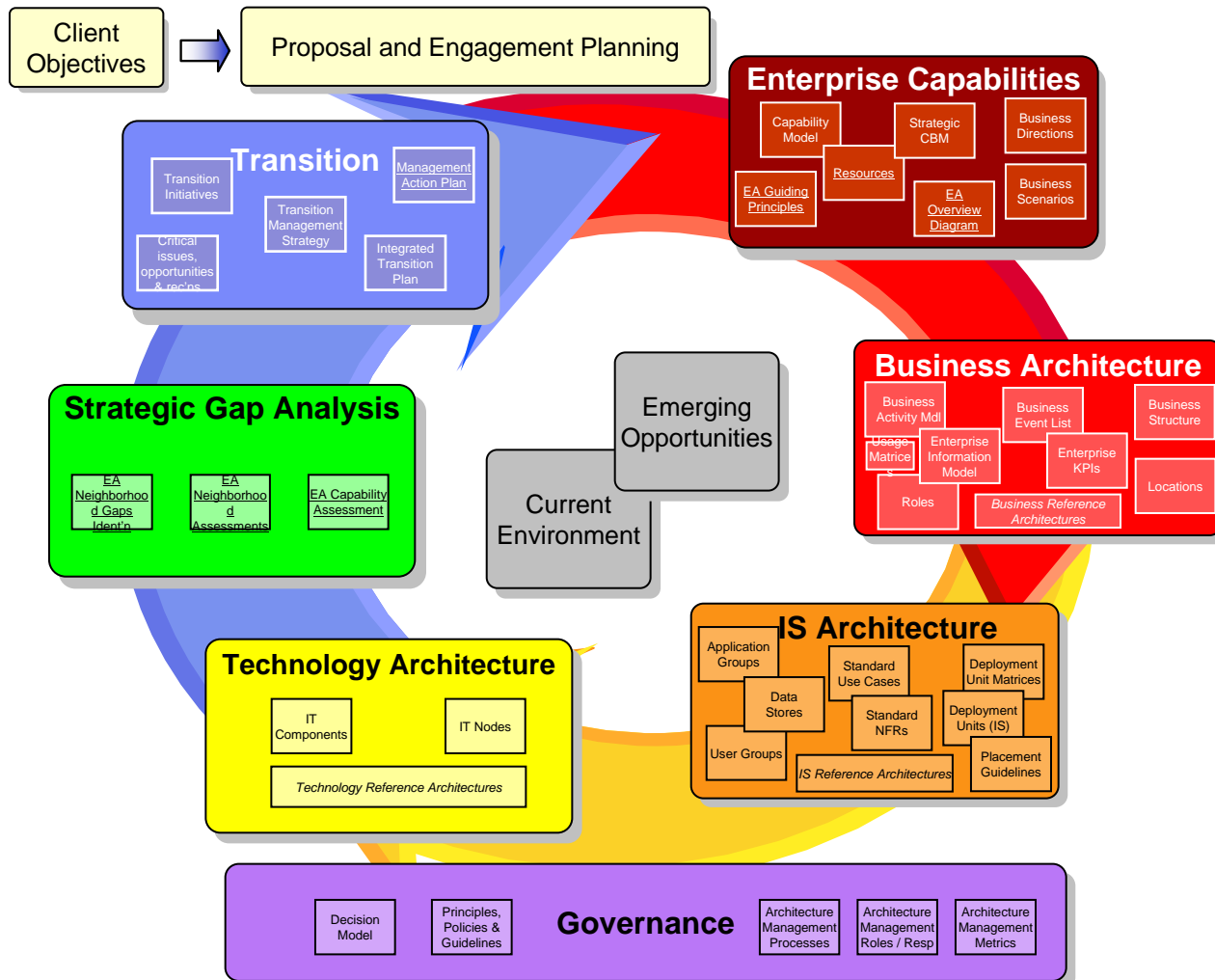
WebSphere software



IBM EA Method: Context



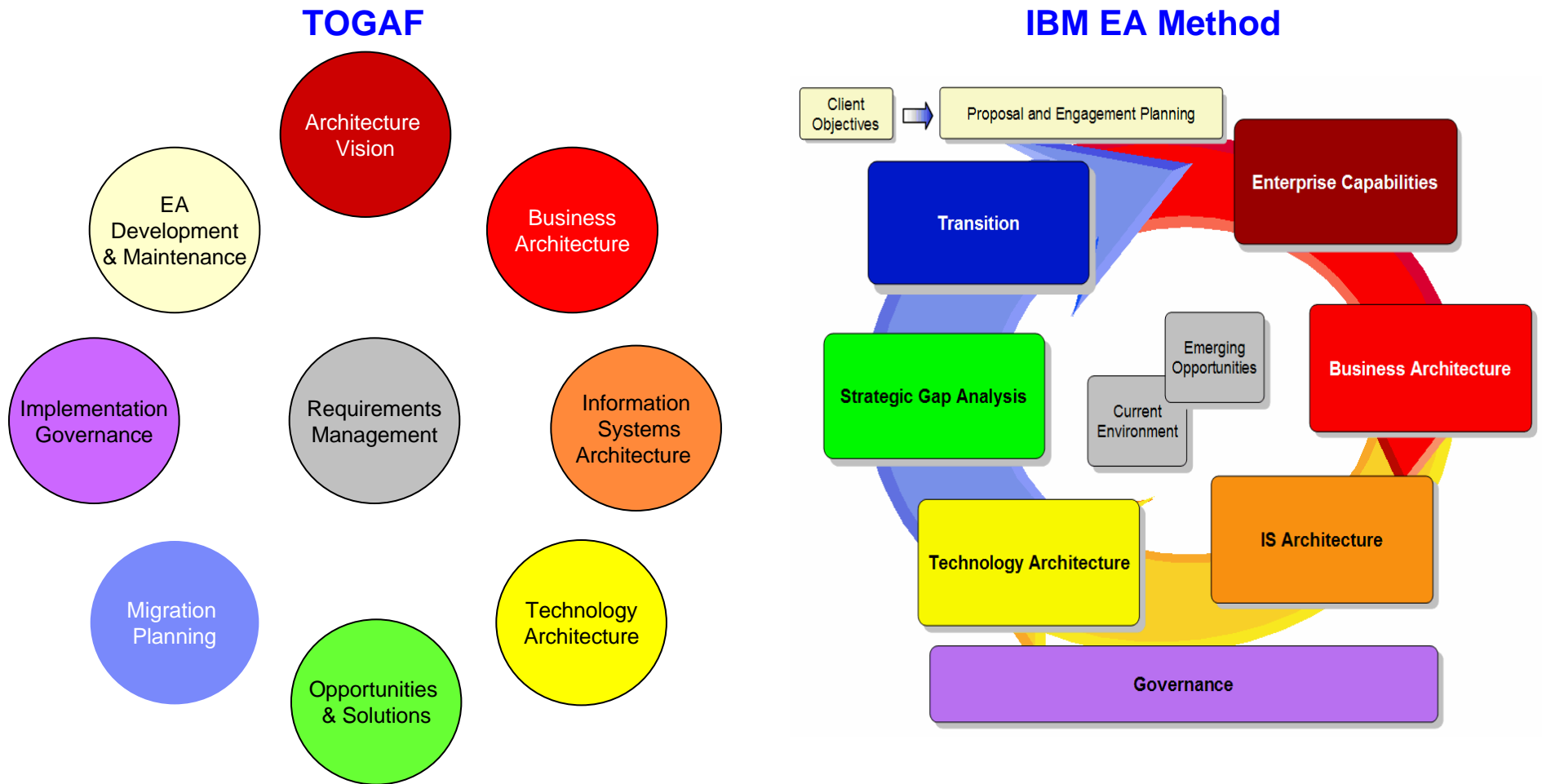
The IBM EA Method



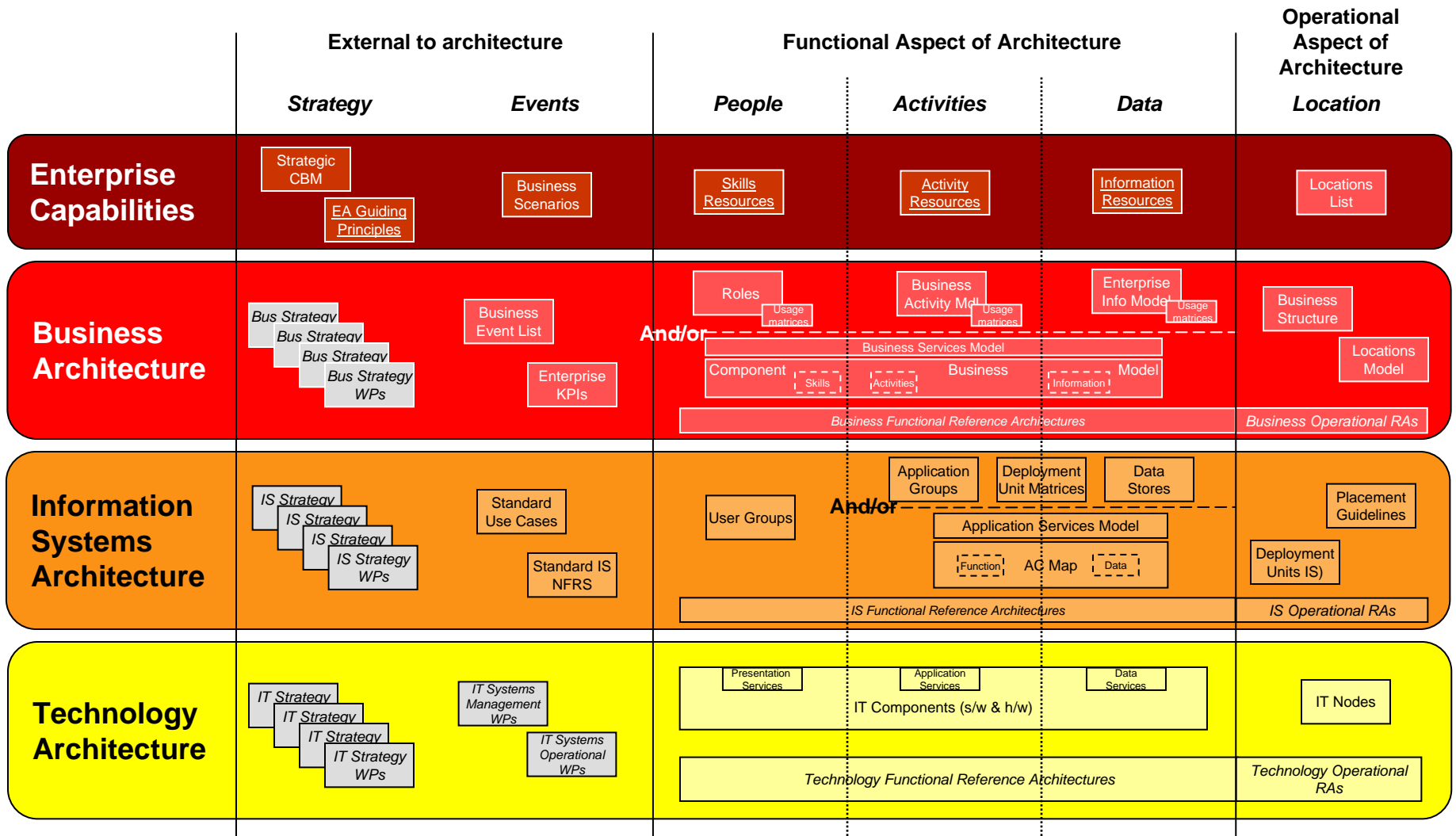
- Centered on a client engagement model
- Contributed to early TOGAF versions



Mapping IBM's EA Framework onto TOGAF

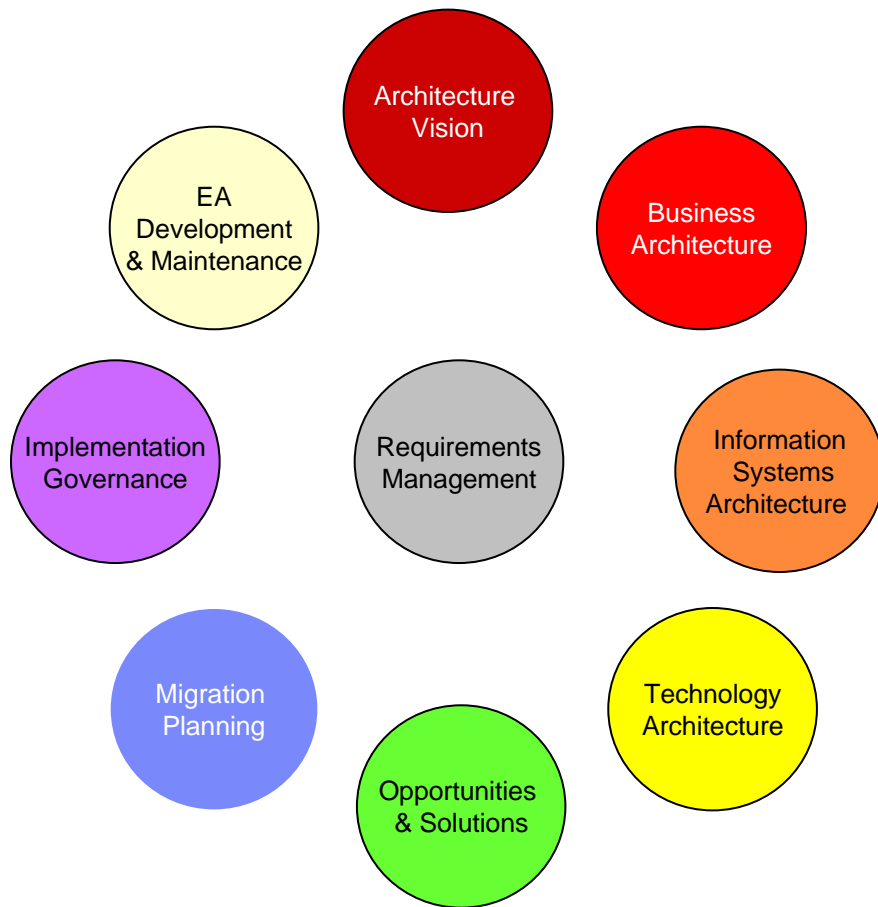


The IBM EA Framework

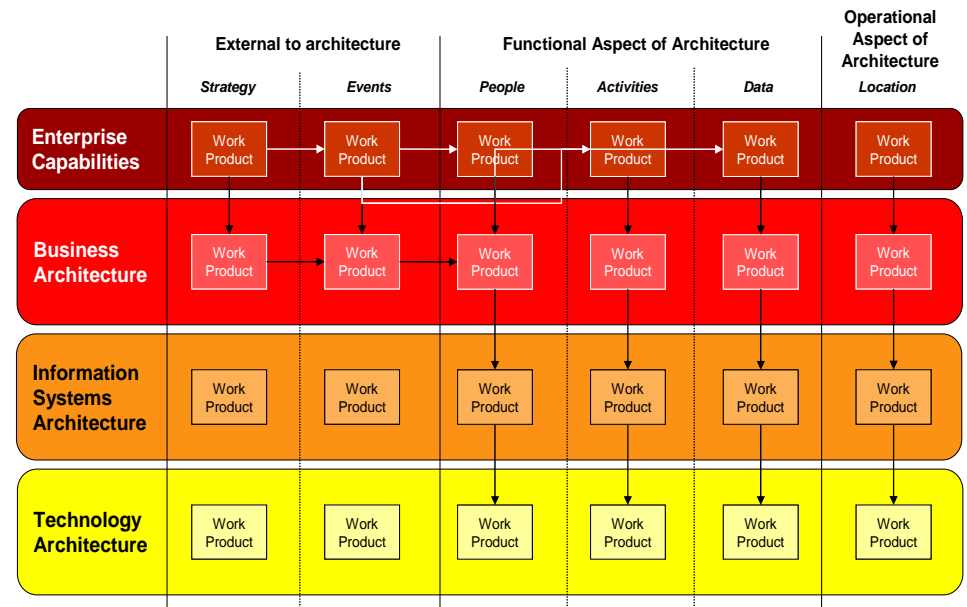


Mapping IBM's EA Framework onto TOGAF

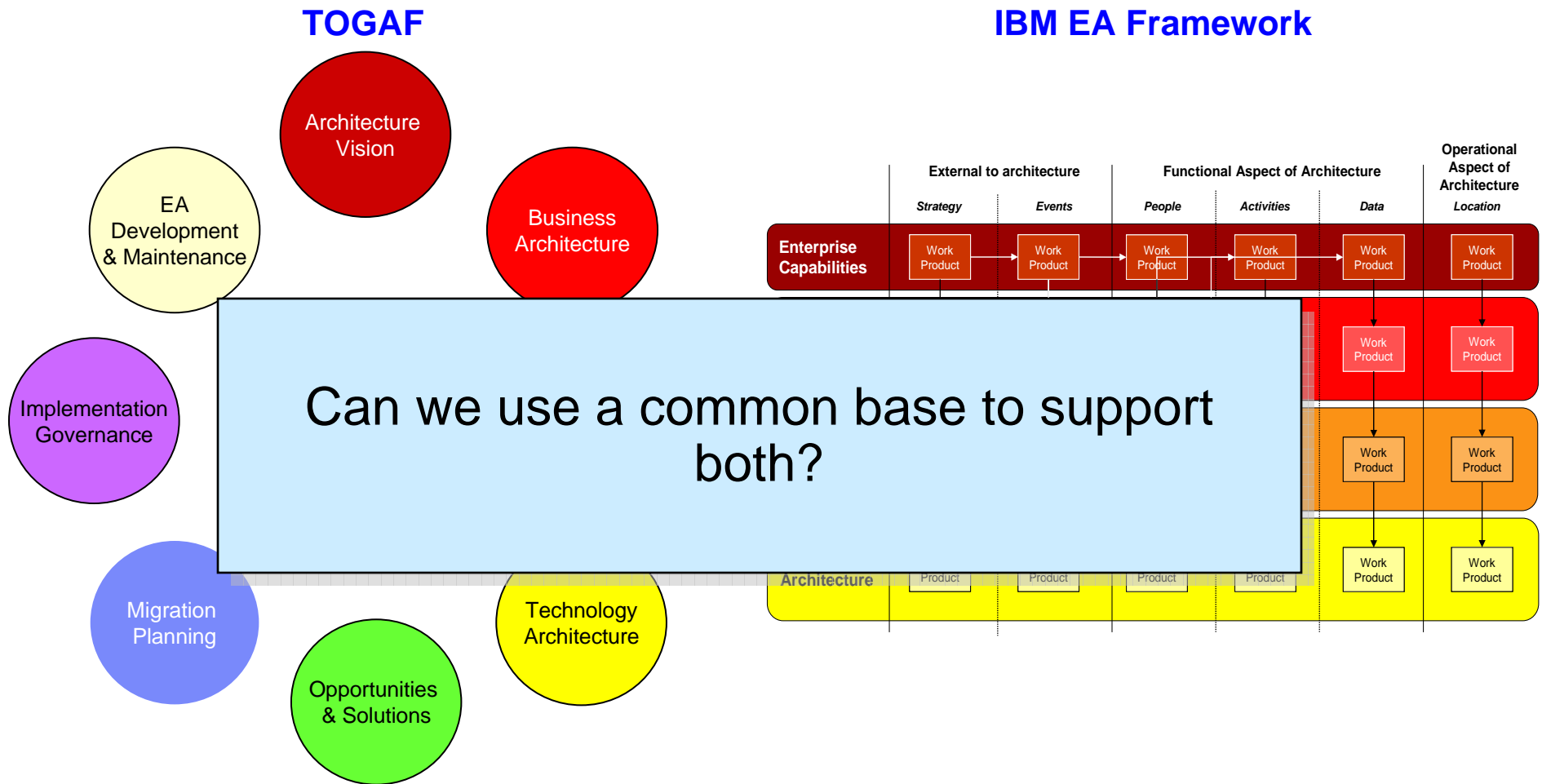
TOGAF



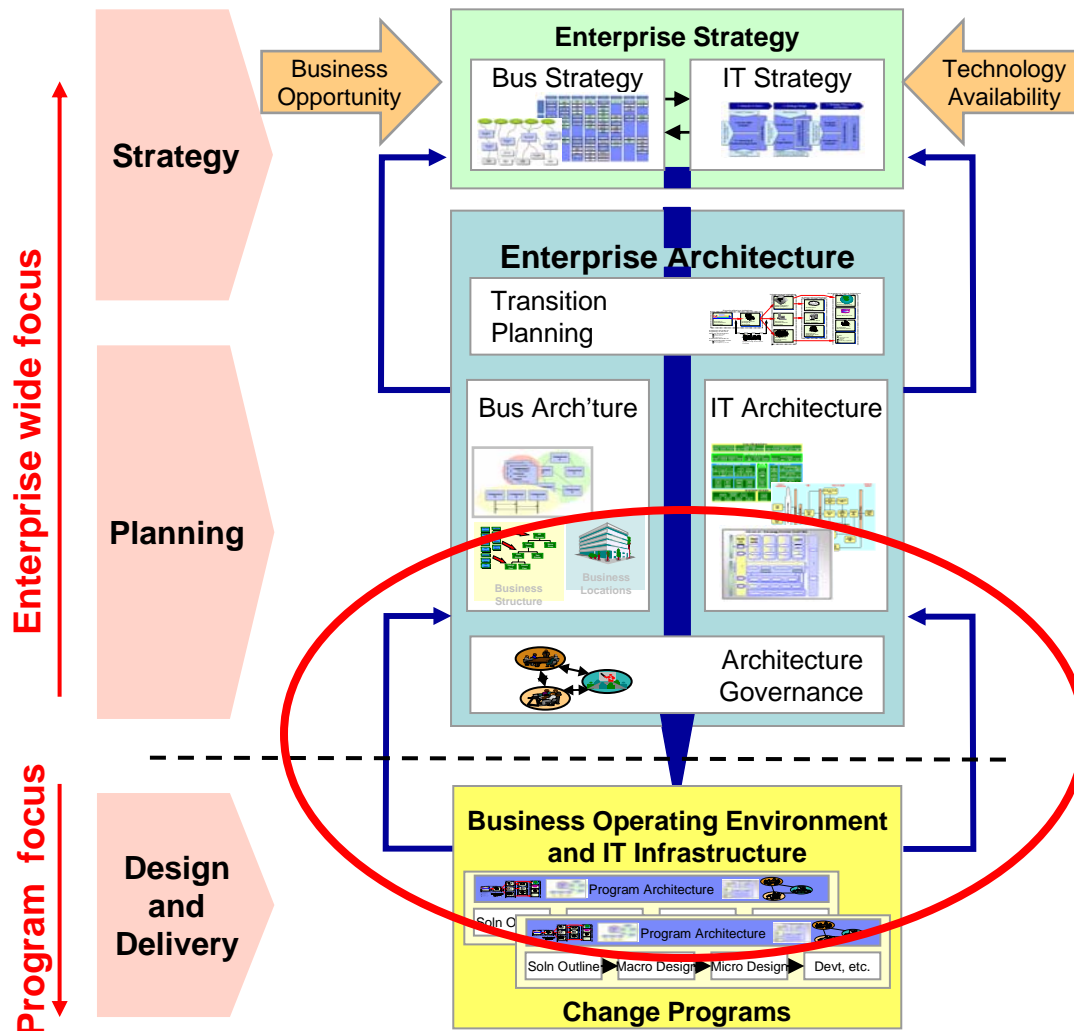
IBM EA Framework



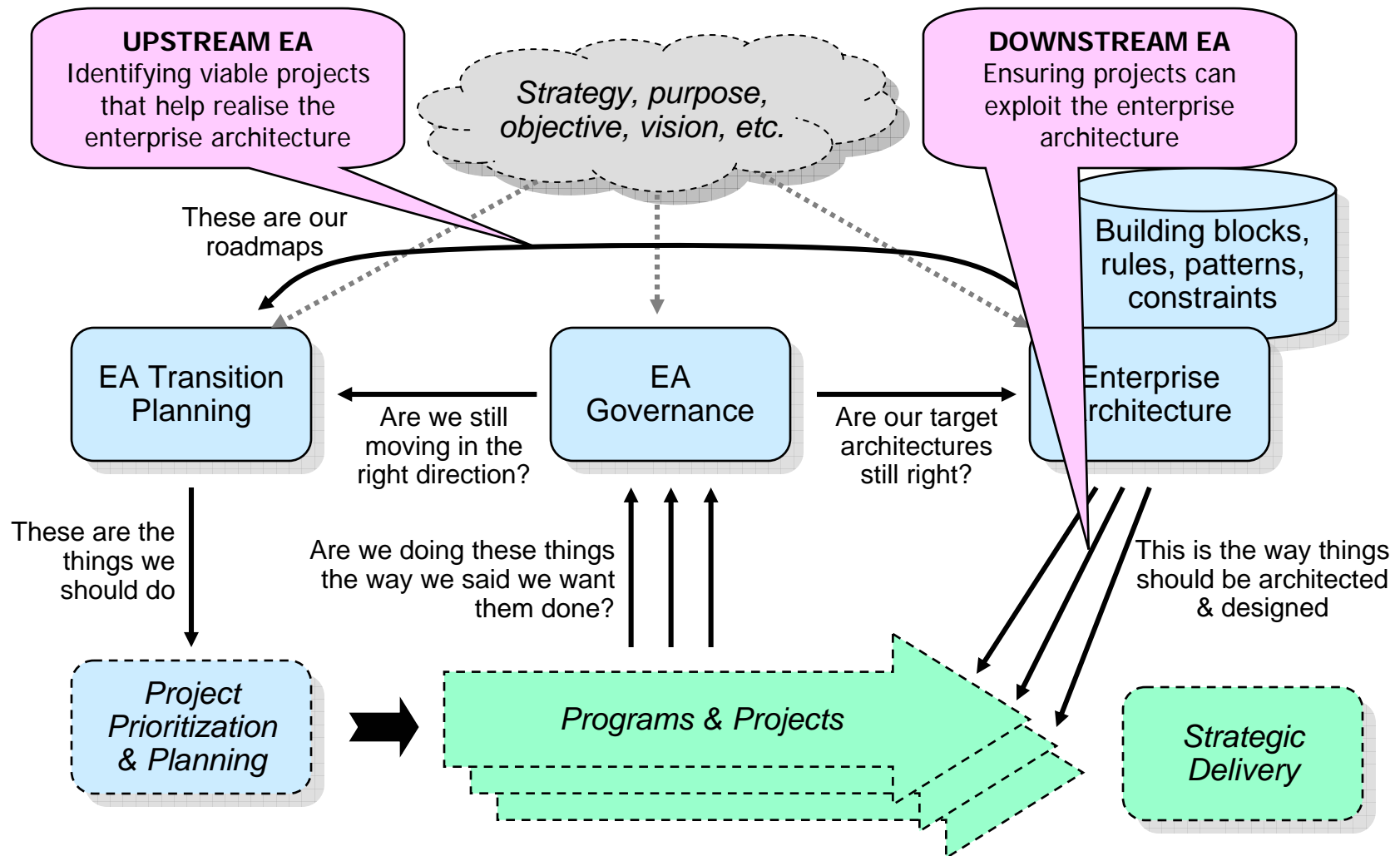
Mapping IBM's EA Framework onto TOGAF



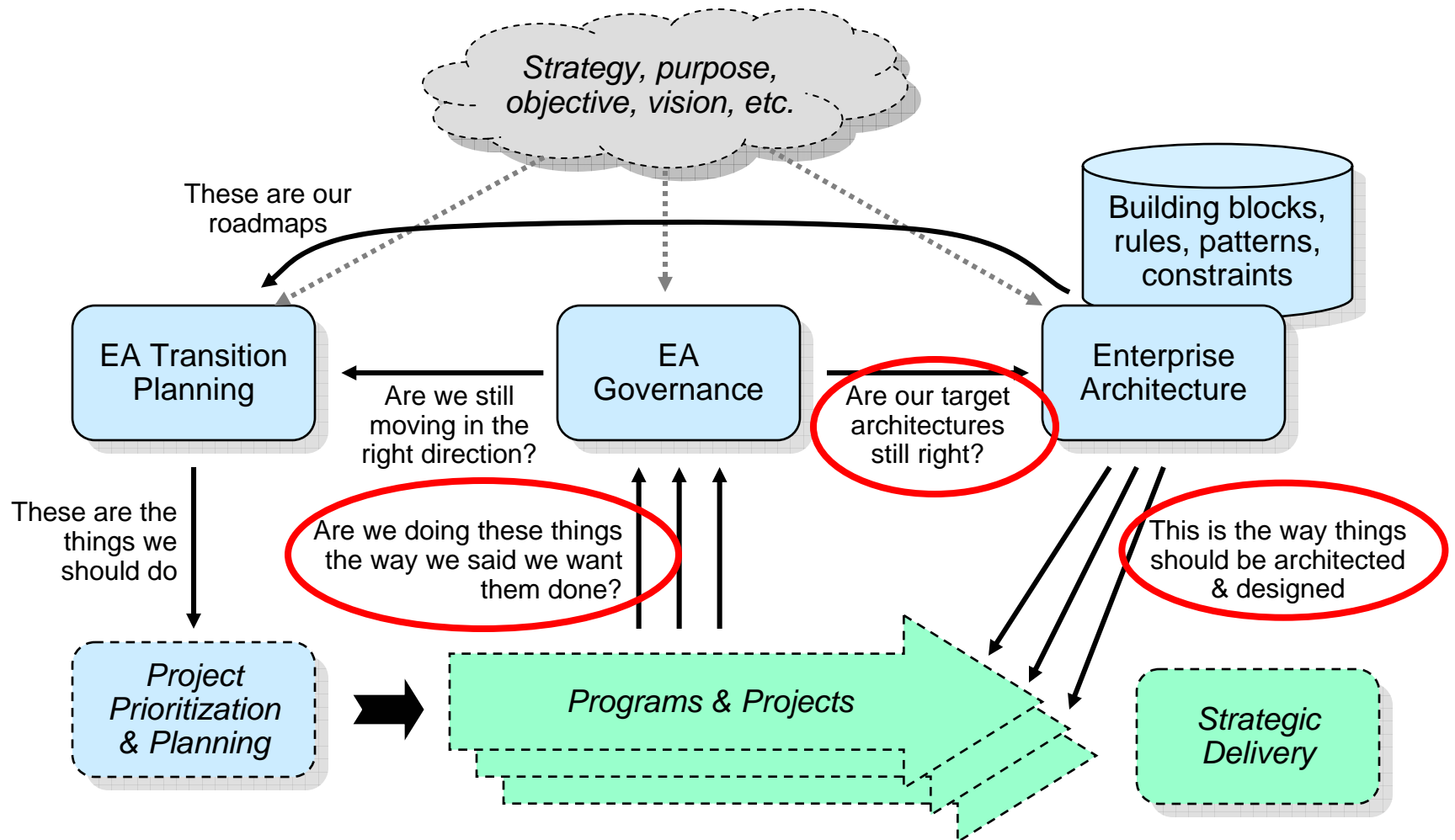
Connection of EA to Change Programs and Operations



The EA Lifecycle



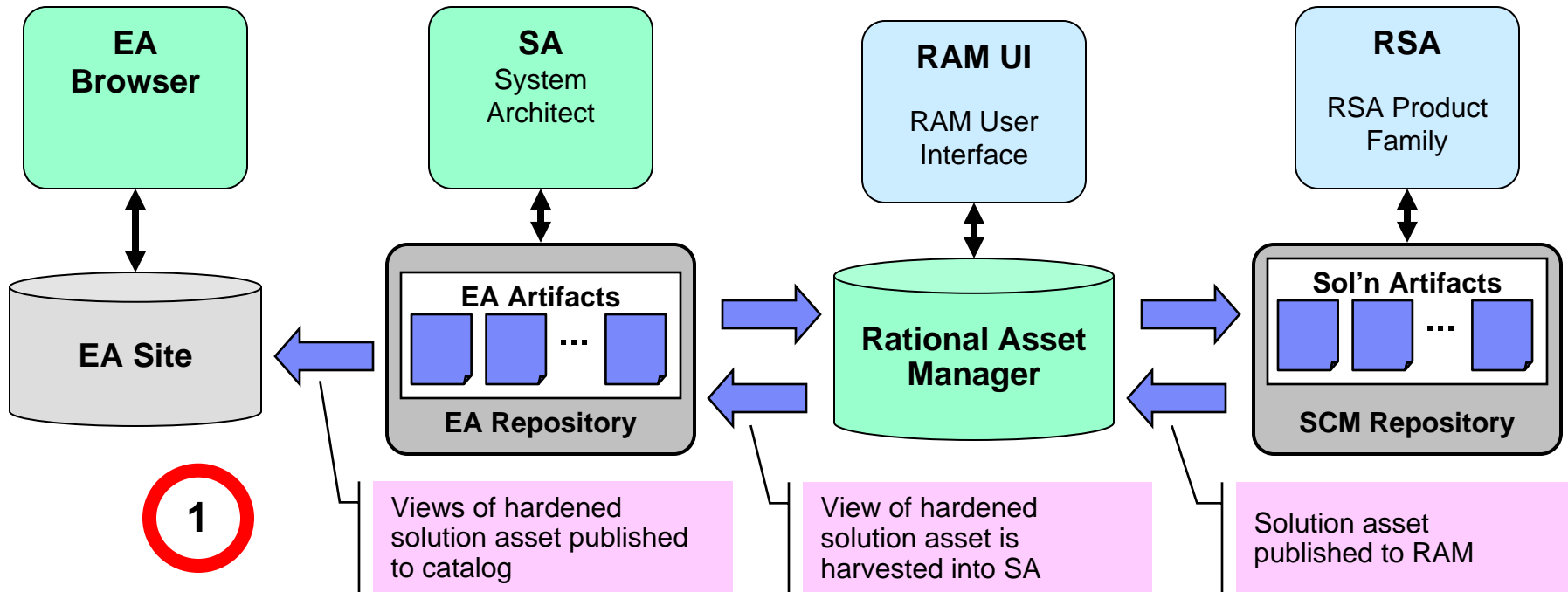
The EA must be a partnership with the Solution teams



EA: Making the Developers' Lives Easier

2

Vision: Developer finds desired solution asset in EA browser and drags it into her project. Behind the scenes, full asset is extracted from RAM and placed in selected project



1

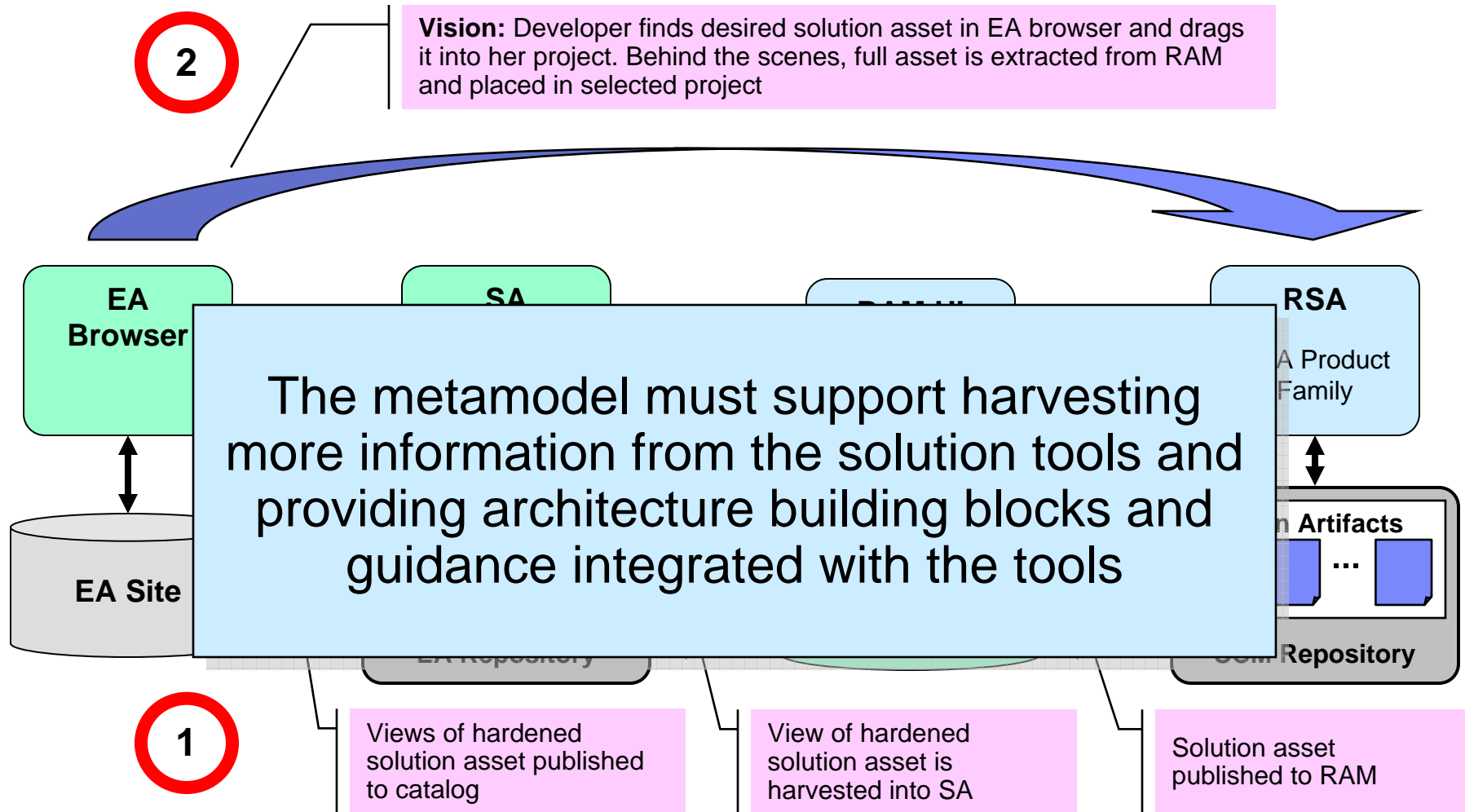
Views of hardened solution asset published to catalog

View of hardened solution asset is harvested into SA

Solution asset published to RAM

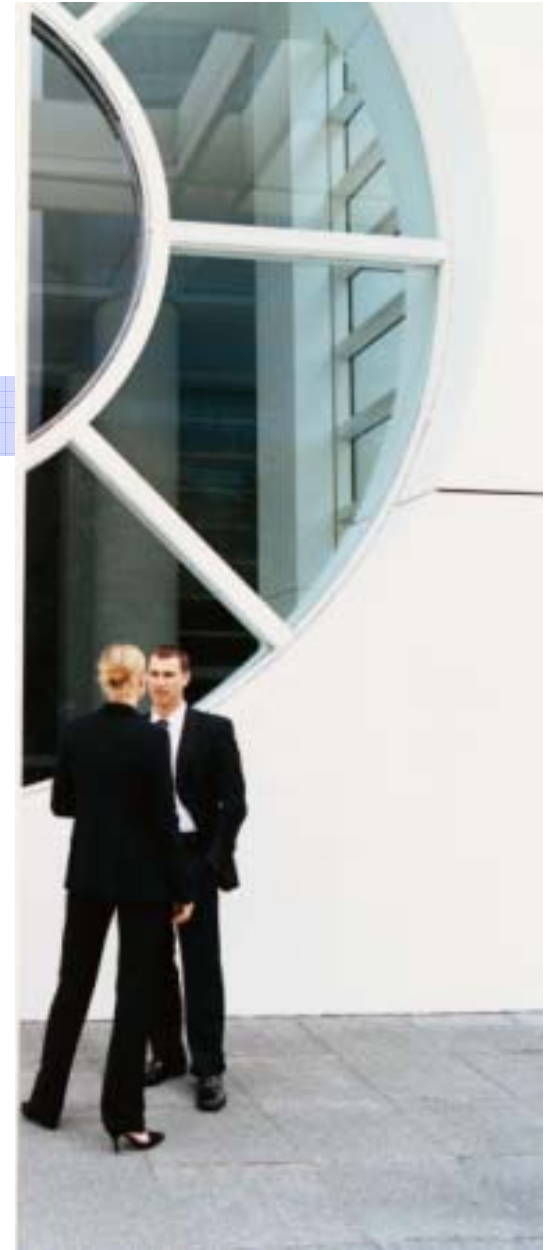


EA: Making the Developers' Lives Easier

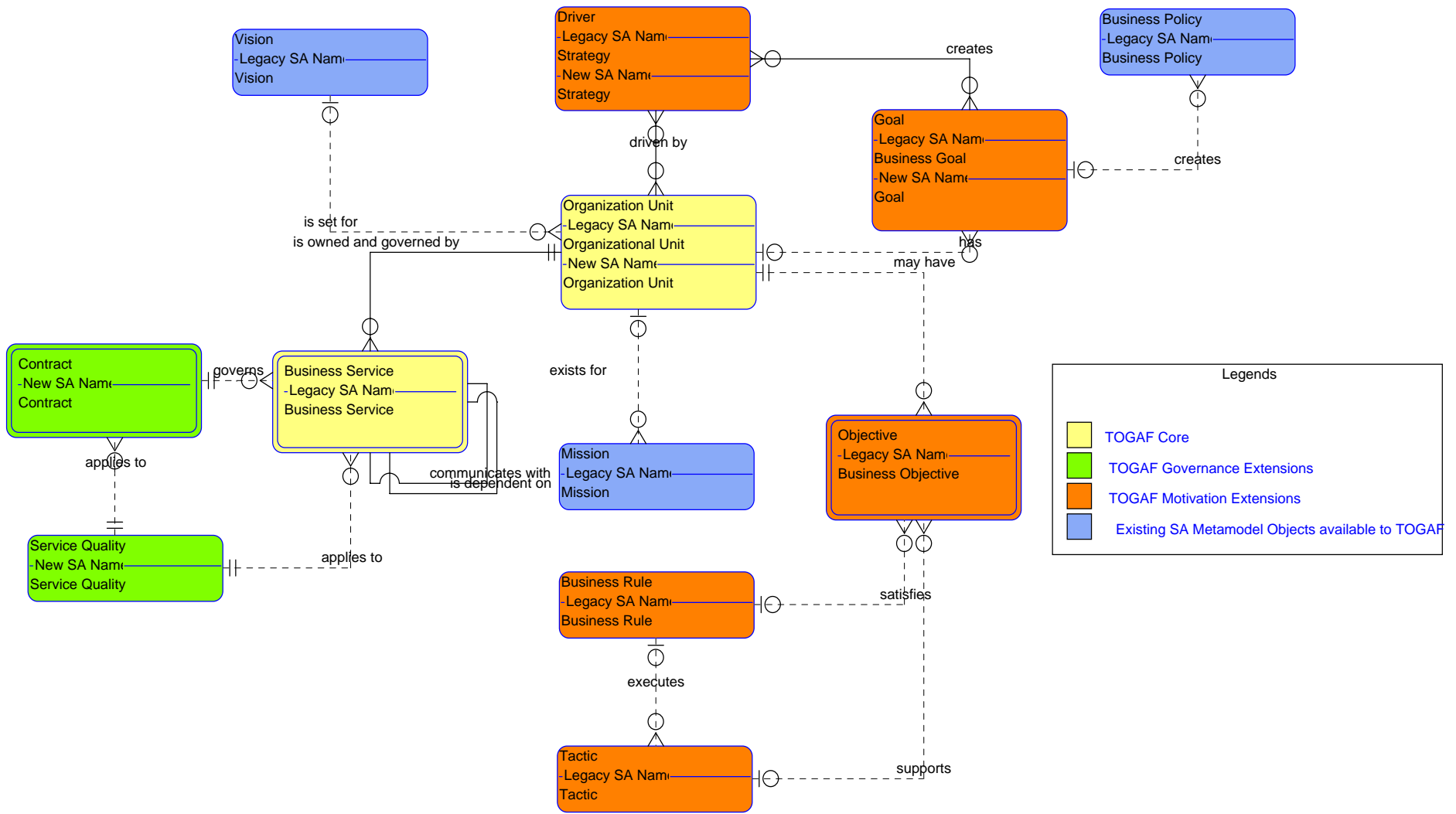


Agenda

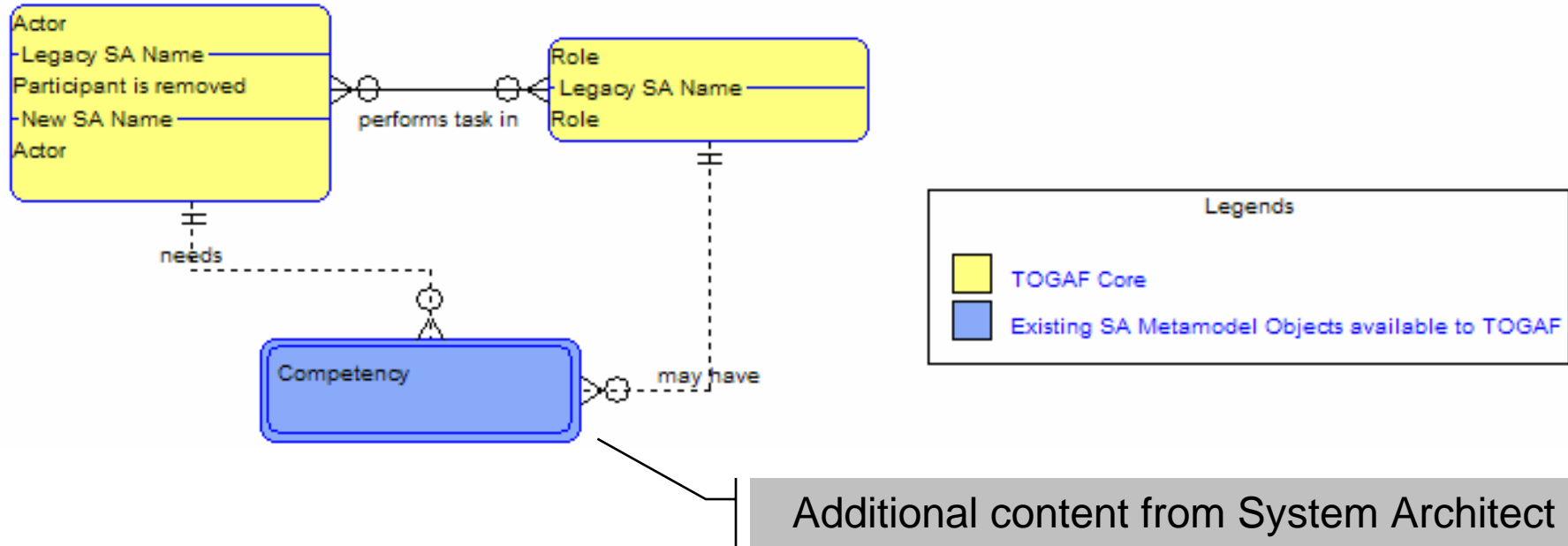
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TOGAF 9 Metamodel – Motivation Extension



Actors, Roles, and Competencies



In this case, we have an existing metamodel element in System Architect, Competency, that is blended into the TOGAF Core metamodel



Actor / Role Matrix

Welcome Guide		Actor to Role		
Actor to Competency		Actor to Role	Role to Competency	
Role	Actor	Harbour Inn Front Desk	Harbour Industries Security Personnel	Harbour Inn Booking Clerk
Account Computer 1				
Accounts Clerk				
Booking Coordinator				X
Conference Organizer	X			
Customer				
Customer Services Rep				
Receptionist	X			
Receptionist 1	X			
Receptionist 2	X			
Sales Clerk				
Sales Person				X
Security Guard			X	

- The Actor / Role matrix shows which roles map to which actors (people in this case)

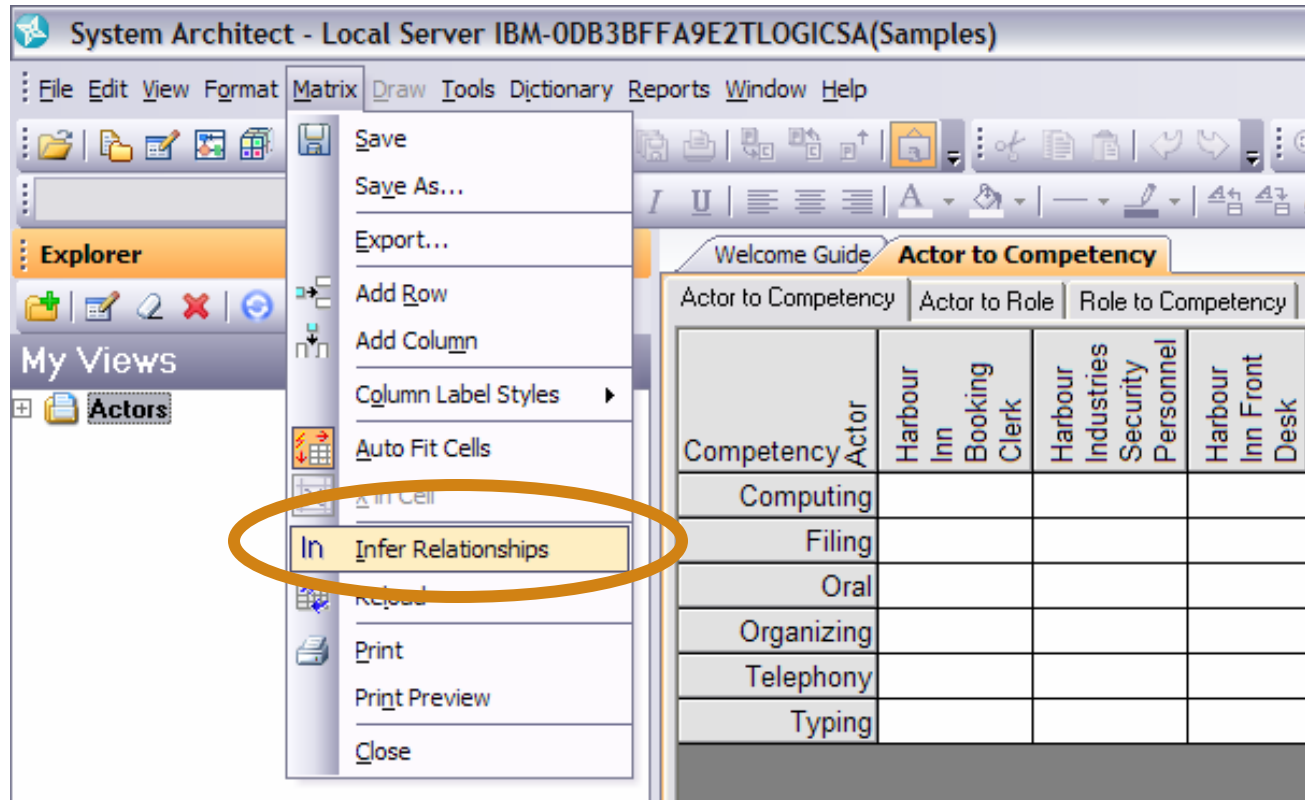


Role to Competency Matrix

Welcome Guide		Role to Competency											
Actor to Competency		Actor to Role					Role to Competency						
Competency	Role	Account Computer 1	Accounts Clerk	Booking Coordinator	Conference Organizer	Customer	Customer Services Rep	Receptionist	Receptionist 1	Receptionist 2	Sales Clerk	Sales Person	Security Guard
Computing			X	X									
Filing			X	X							X		
Oral				X	X		X					X	
Organizing			X	X	X		X						
Telephony			X				X				X	X	
Typing			X	X	X						X	X	

- The Role / Competency matrix shows which roles map to which competencies

Inferring Relationships – Request



The screenshot shows the IBM System Architect interface. The 'Matrix' menu is open, and the 'Infer Relationships' option is highlighted with a yellow circle. The main window displays a matrix titled 'Actor to Competency' with the following data:

Competency	Actor	Harbour Inn Booking Clerk	Harbour Industries Security Personnel	Harbour Inn Front Desk
Computing				
Filing				
Oral				
Organizing				
Telephony				
Typing				

- Now we can infer relationships from this information



Inferring Relationships – Result

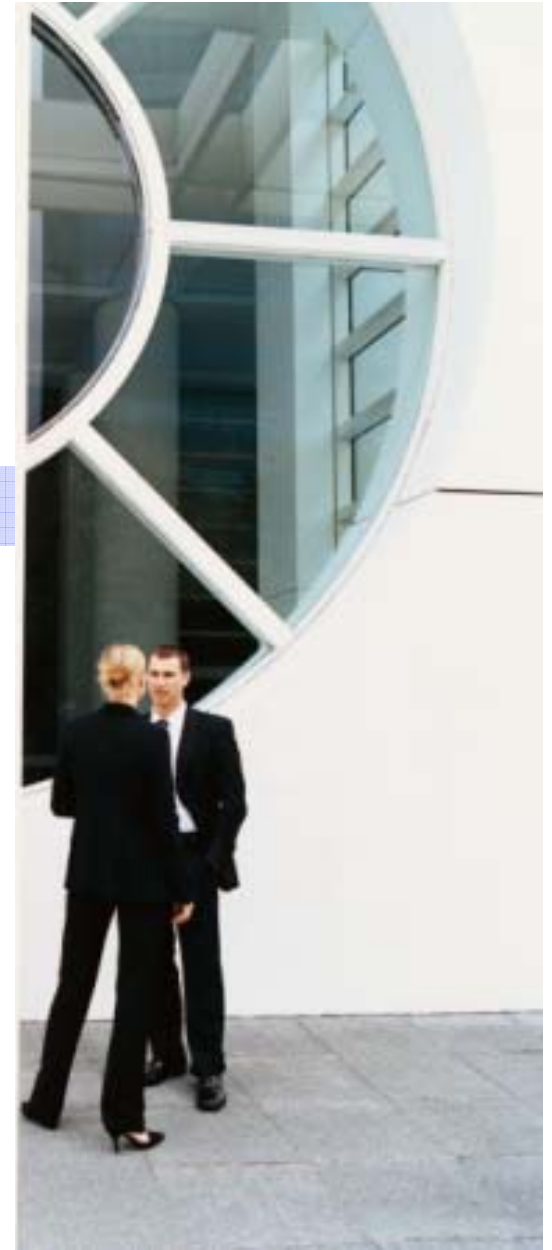
Welcome Guide		Actor to Competency		
Actor to Competency		Actor to Role	Role to Competency	
Competency	Actor	Harbour Inn Booking Clerk	Harbour Industries Security Personnel	Harbour Inn Front Desk
Computing		X		
Filing		X		
Oral		X		X
Organizing		X		X
Telephony		X		
Typing		X		X

- Now we can see the competencies each actor must have



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Summary



- System Architect around for a long time
 - ▶ Support for many EA frameworks has been added, mostly independently
 - ▶ Looking for development efficiencies in supporting EA frameworks
- We're now part of IBM
 - ▶ A broad portfolio of tools in IBM can enhance EA through harvesting and using EA
 - ▶ IBM EA Method to support, connects to change programs, operations
- Desire for a common metamodel
 - ▶ TOGAF 9 metamodel is broad in scope, open and extensible
 - ▶ We can use the extension mechanism to support existing SA concepts and new concepts not in the TOGAF 9 metamodel
- To avoid ivory tower syndrome, make the EA helpful to the change programs and ensure the metamodel can support the vitality process and tool integrations
- We still have work to do on our prototype, but so far it's very promising





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