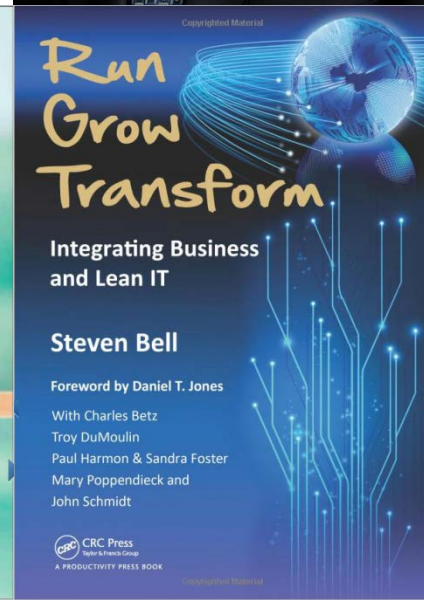
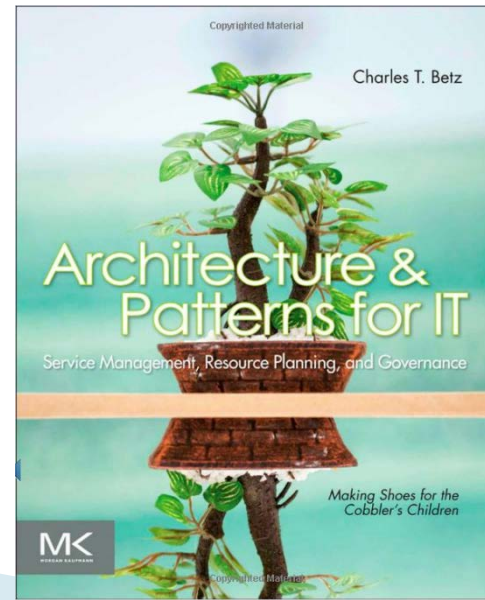


Enterprise Architecture for the "Business of IT"

Charles Betz
Enterprise Architect & Author

Speaker bio

- ▶ Charlie Betz is Director of Technical Strategy (aka Chief Architect) for a major US telecom and ecommerce hosting provider, currently assigned to one of the largest US retailers.
- ▶ Previously he was Research Director at Enterprise Management Associates. His EMA responsibilities included IT portfolio management, IT financial management, software asset management, service desks and ITSM suites, and the concept of “ERP for IT.”
- ▶ Prior to that, he spent 6 years at Wells Fargo as Enterprise Architect and VP for IT Portfolio Management and Systems Management. He has held architect and application manager positions for Best Buy, Target, and Accenture, specializing in IT management systems, ERP, enterprise application integration, data architecture, and configuration management.
- ▶ He is the author of the recent 2nd edition of *Architecture and Patterns for IT: Service Management, Resource Planning, and Governance (Making Shoes for the Cobbler's Children)*, and a co-author with Steve Bell's of the recent *Run Grow Transform: Integrating Business and Lean IT*.
- ▶ Charlie lives in Minneapolis, Minnesota with his wife Sue and son Keane.

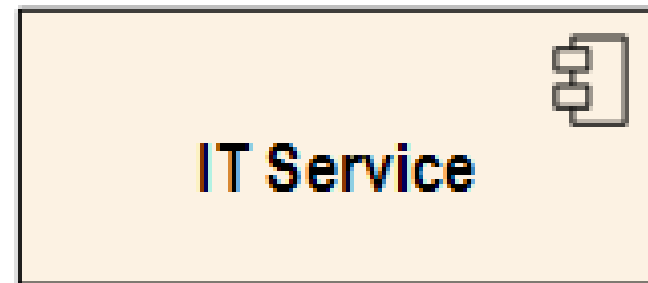
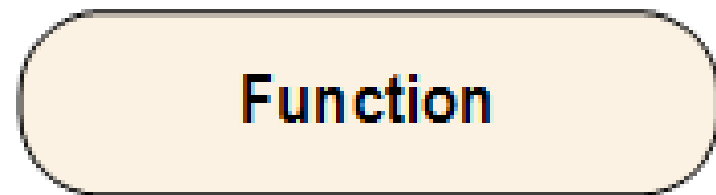
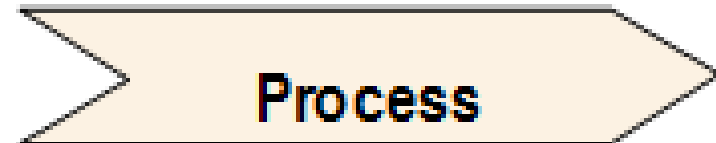
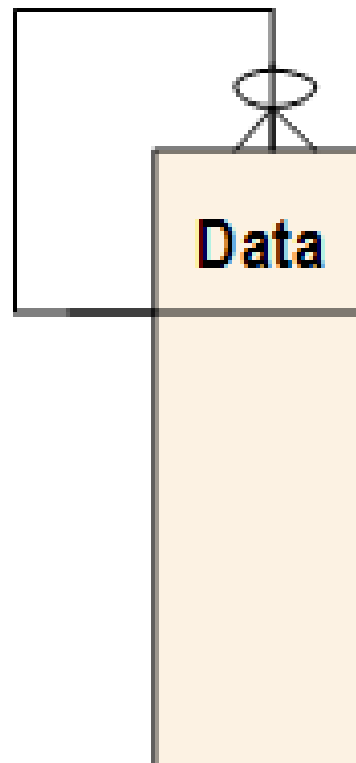


What we will cover

- ▶ A formal enterprise architecture for IT management, including process, function, data, and systems models
- ▶ Characteristic "design patterns" seen in organizing large scale IT management capabilities
- ▶ Defining and distinguishing a true Lean IT process model from older functional representations of IT such as ITIL
- ▶ Continuous improvement for IT management, and why a sound IT management data architecture is so important

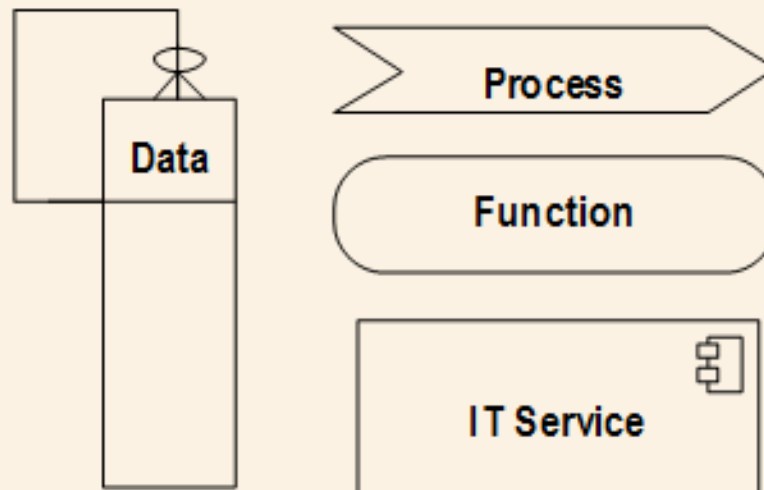


EA primitives

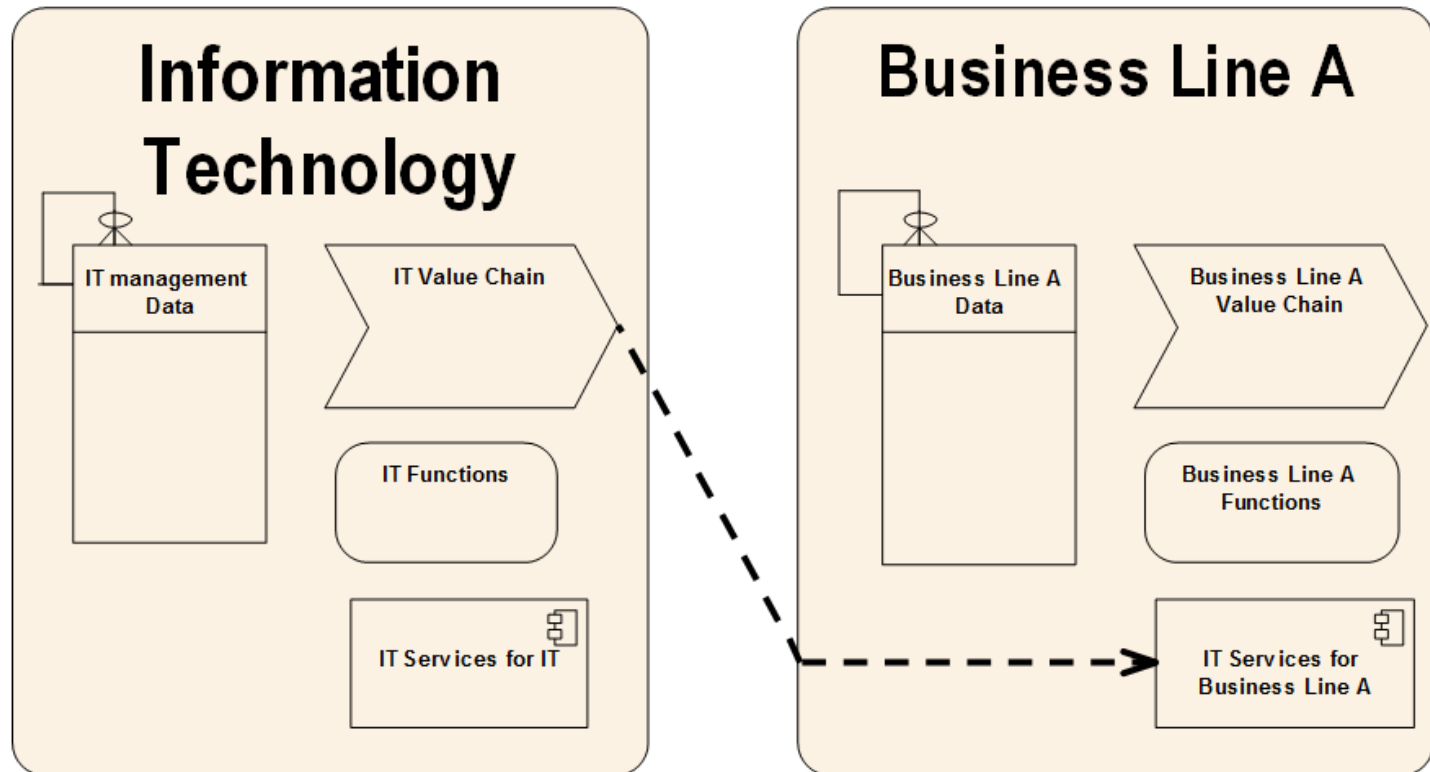


Business architecture

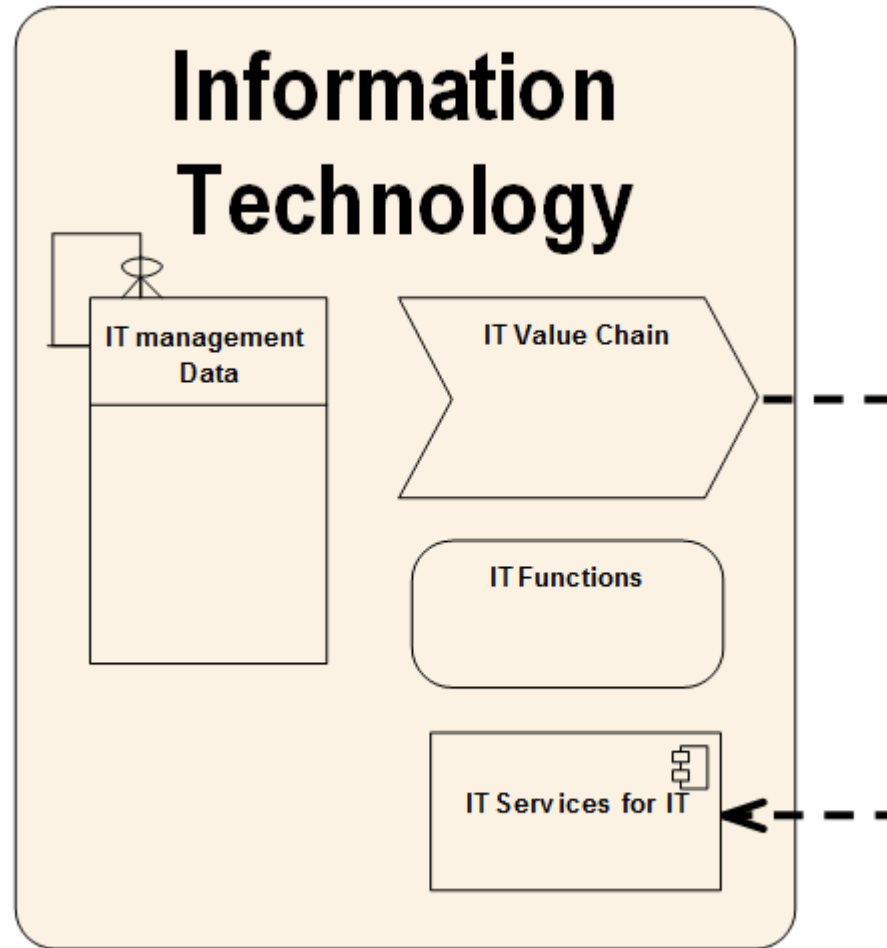
Business Line A



IT support for business



The business of IT



The IT Lifecycles



The diagram illustrates the IT Lifecycles as a series of nested, horizontal arrows pointing to the right. The outermost arrow is light blue and contains the text 'Service lifecycle'. Inside it are four smaller arrows, each a different color and containing specific lifecycle names: light blue for 'Application service lifecycle', light purple for 'Infrastructure service lifecycle', light orange for 'Asset lifecycle', and light pink for 'Technology product lifecycle'. The arrows are stacked vertically, with the 'Service lifecycle' arrow at the bottom and the 'Application service lifecycle' arrow at the top.

Application service lifecycle

Infrastructure service lifecycle

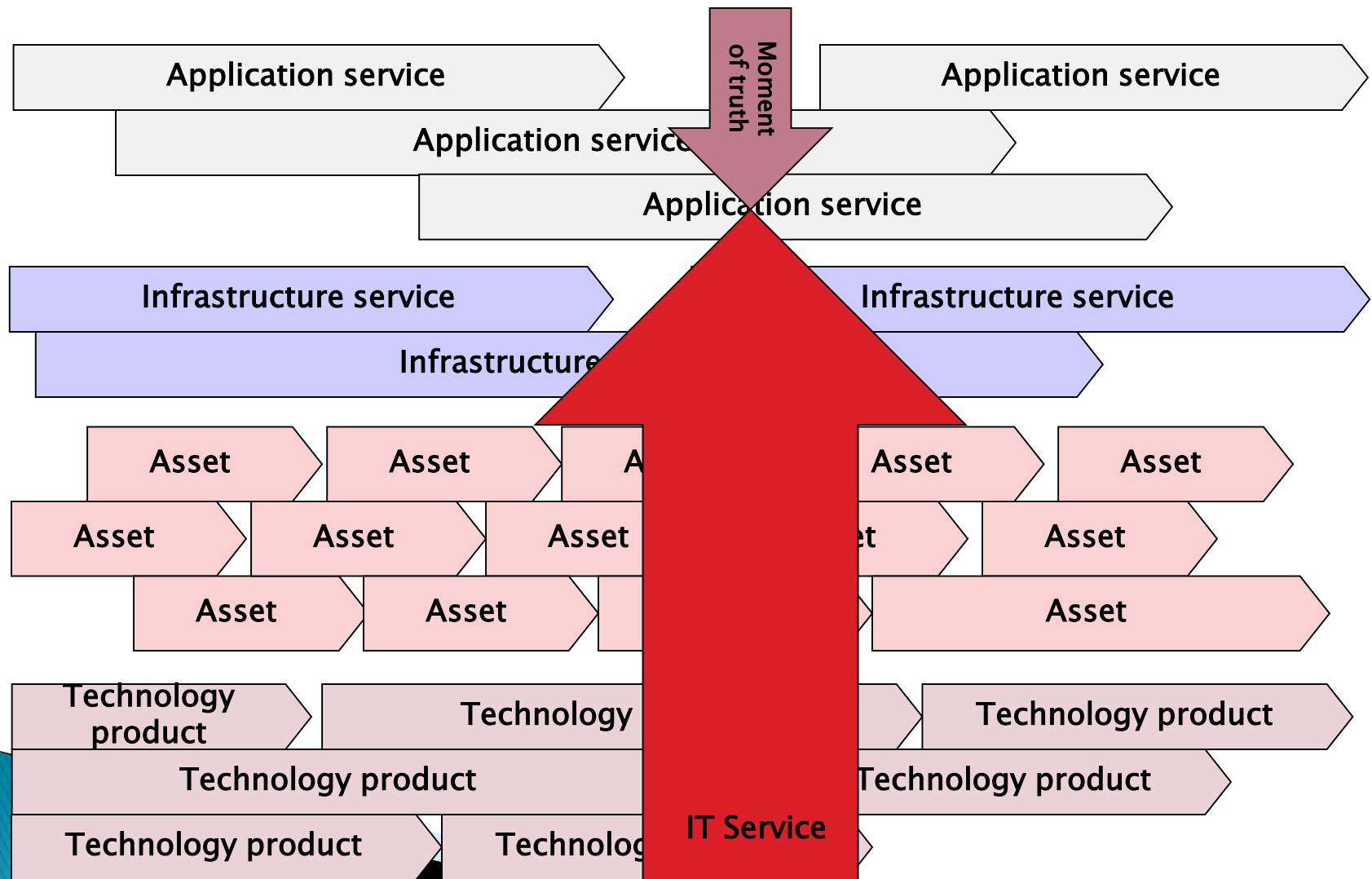
Asset lifecycle

Technology product lifecycle

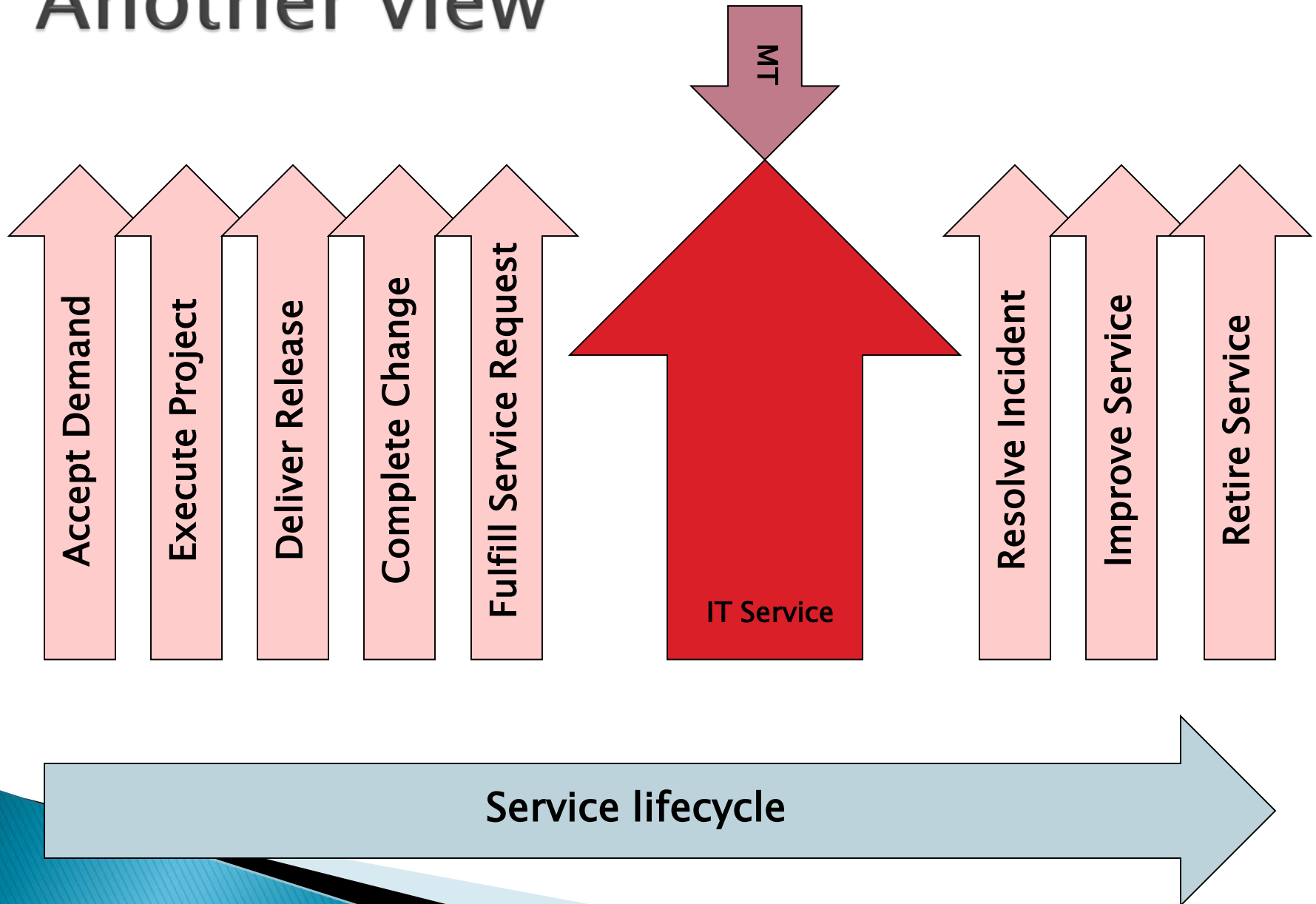
Service lifecycle

But isn't it all about the service?

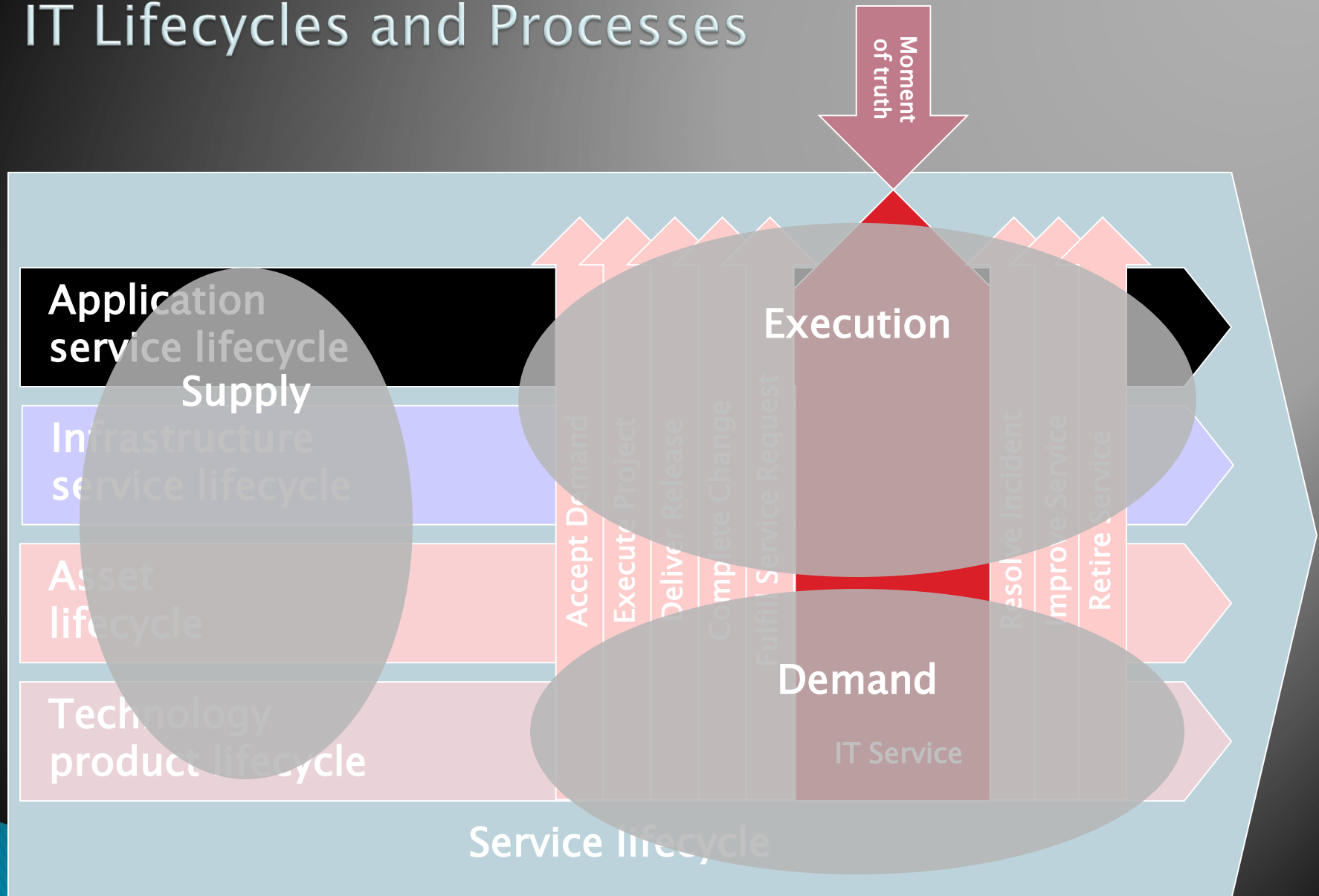
- ▶ *The IT lifecycles all have lives of their own... they are loosely coupled. This is both advantageous and painful. Dynamic, chaotic interactions.*



Another view



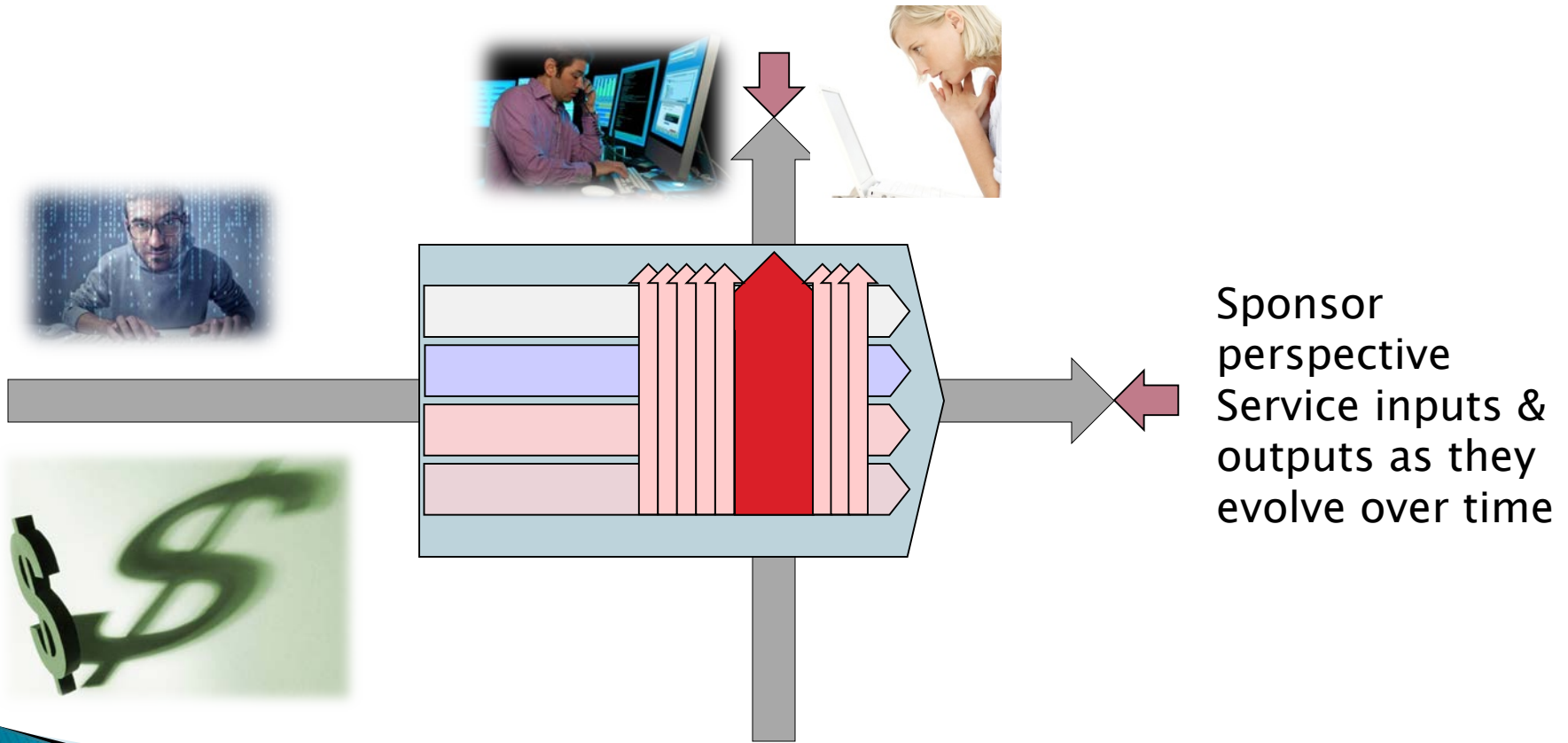
IT Lifecycles and Processes



The 2 axes of IT value

User perspective

Includes individuals, business
services/capabilities/processes



What can we measure?

Business
performance

User perception

Security
Breaches

Data quality

Sponsor perception

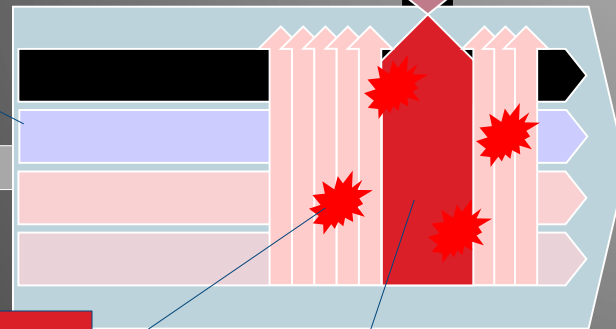
Inputs

Sponsor
willingness to pay!

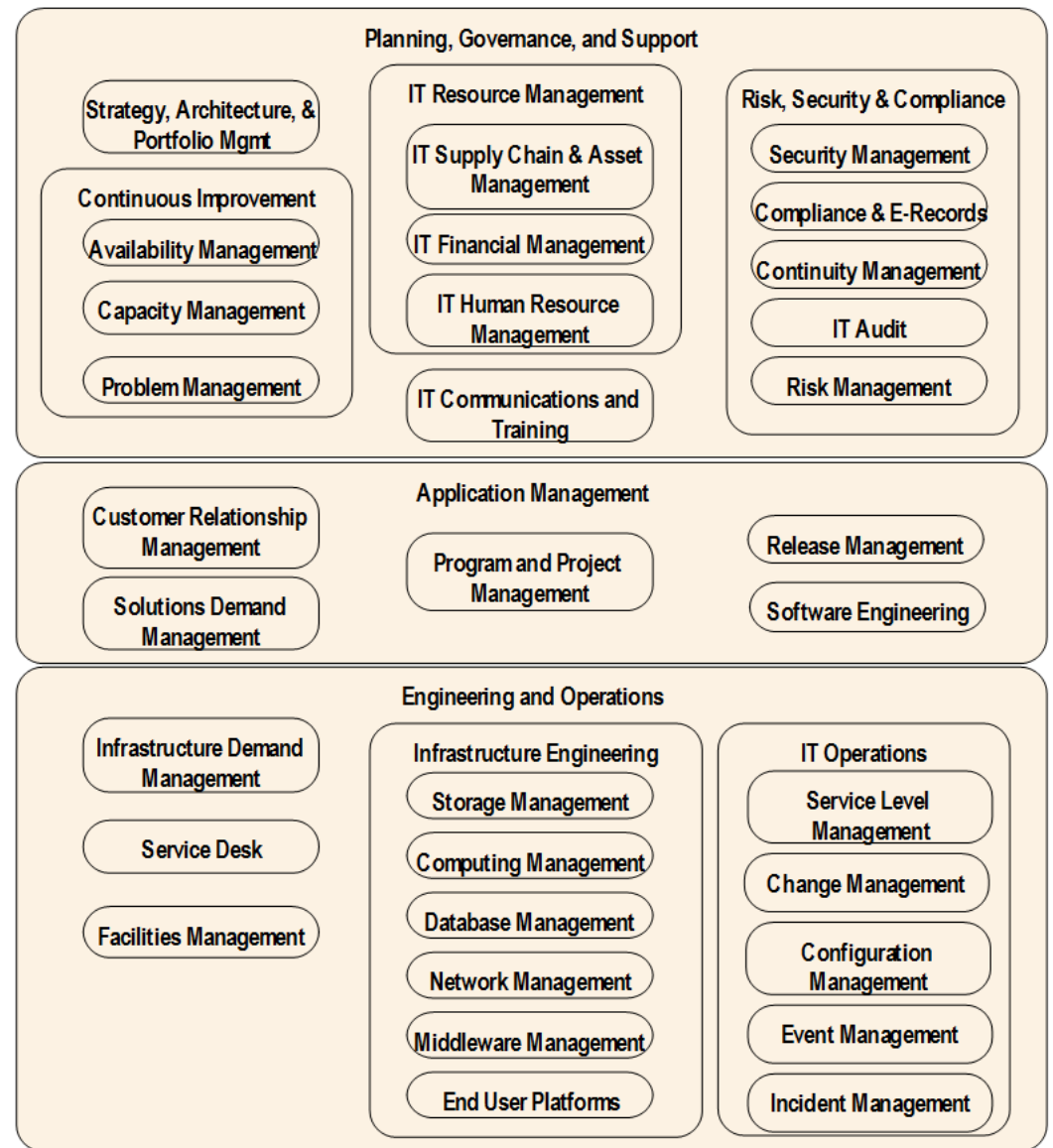
Constraints &
rework

Lifecycle value

Execution &
delivery

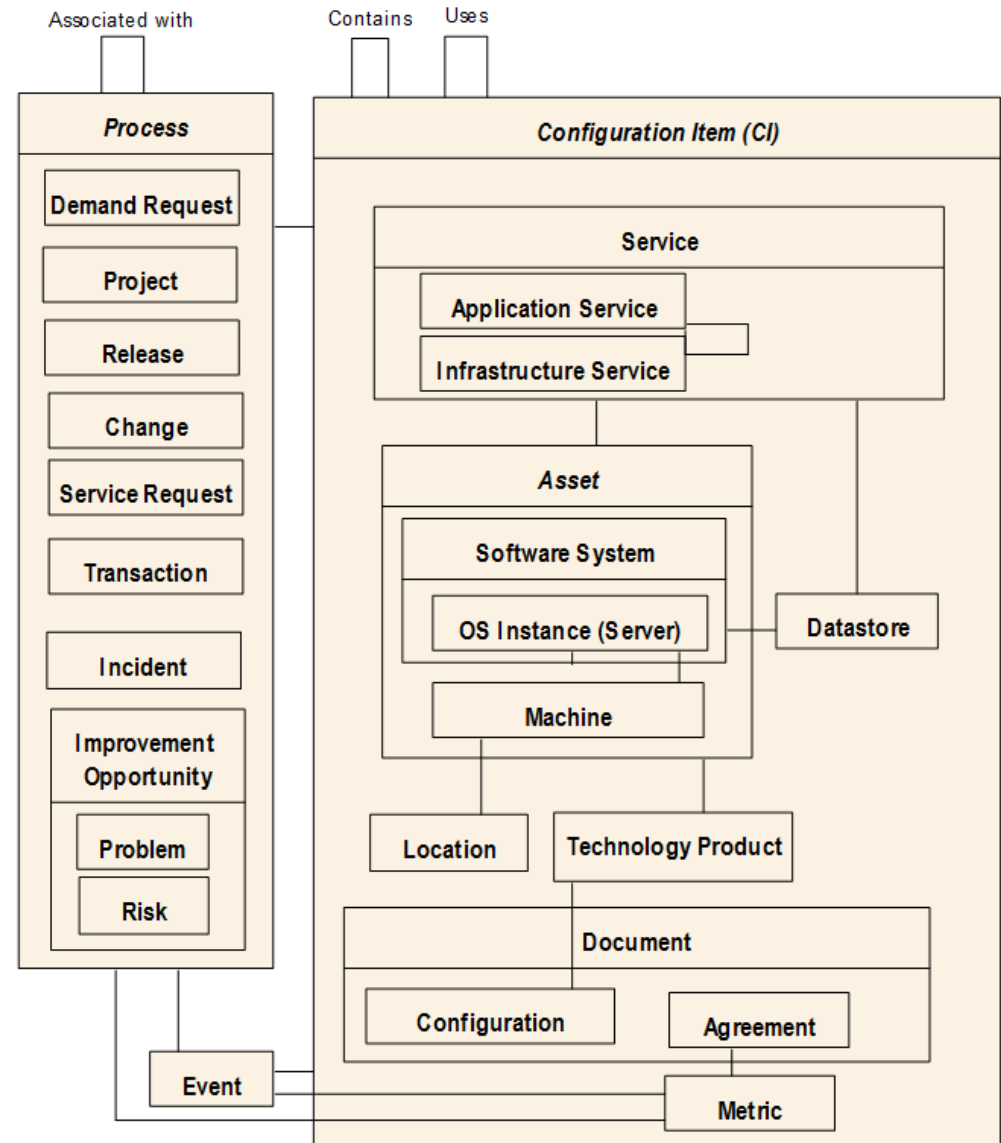


Functional view

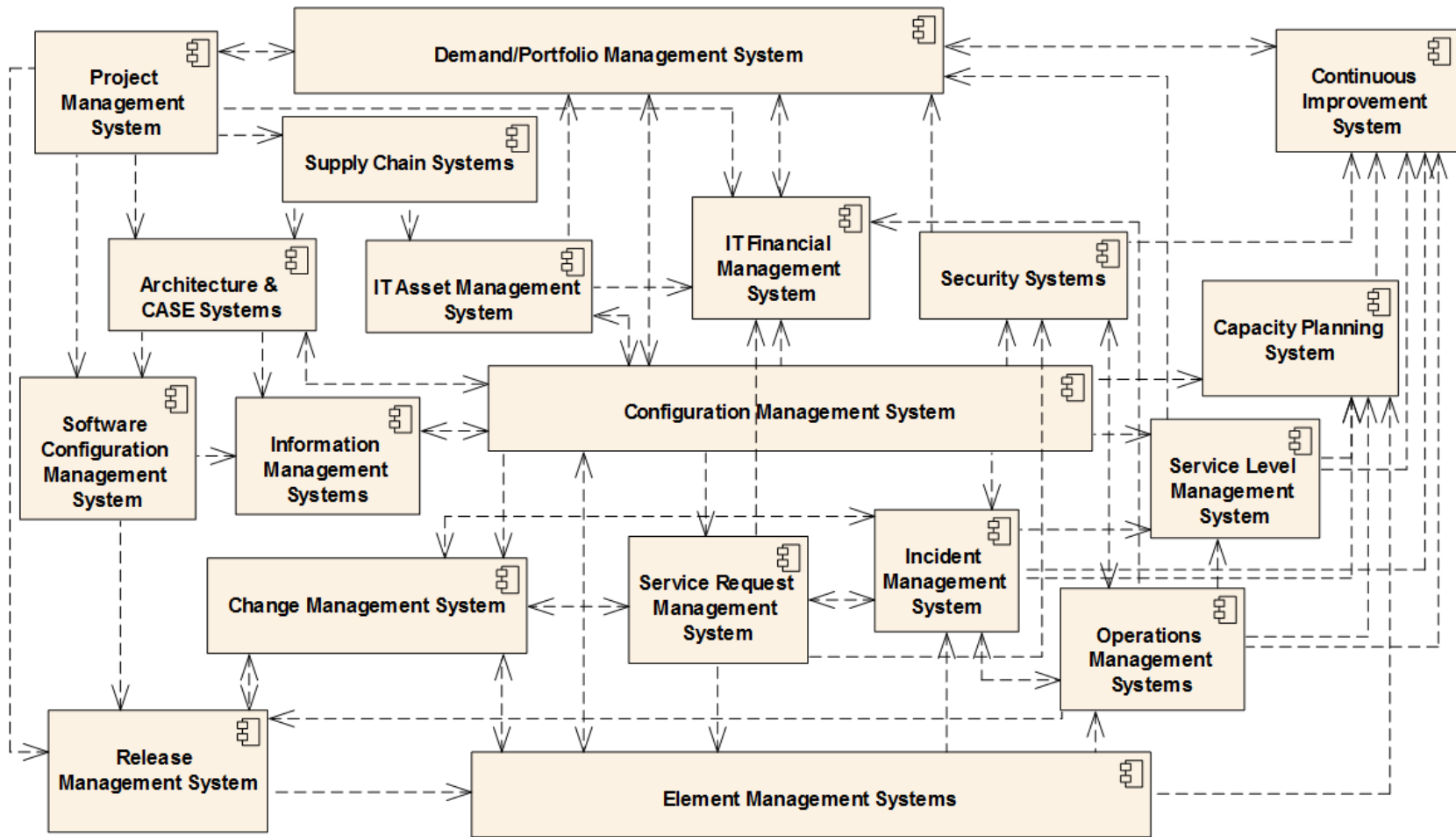


Master data management for IT

- ▶ In order to designate systems of record, you need a conceptual model
 - Or at the very least a listing of subject areas, but entities are more precise



The IT Management Systems



Not all system interactions are shown. In particular the demand/portfolio system and the information management systems (IT data warehouse, knowledge management, and metadata) may interact with any other system.

Matrixing

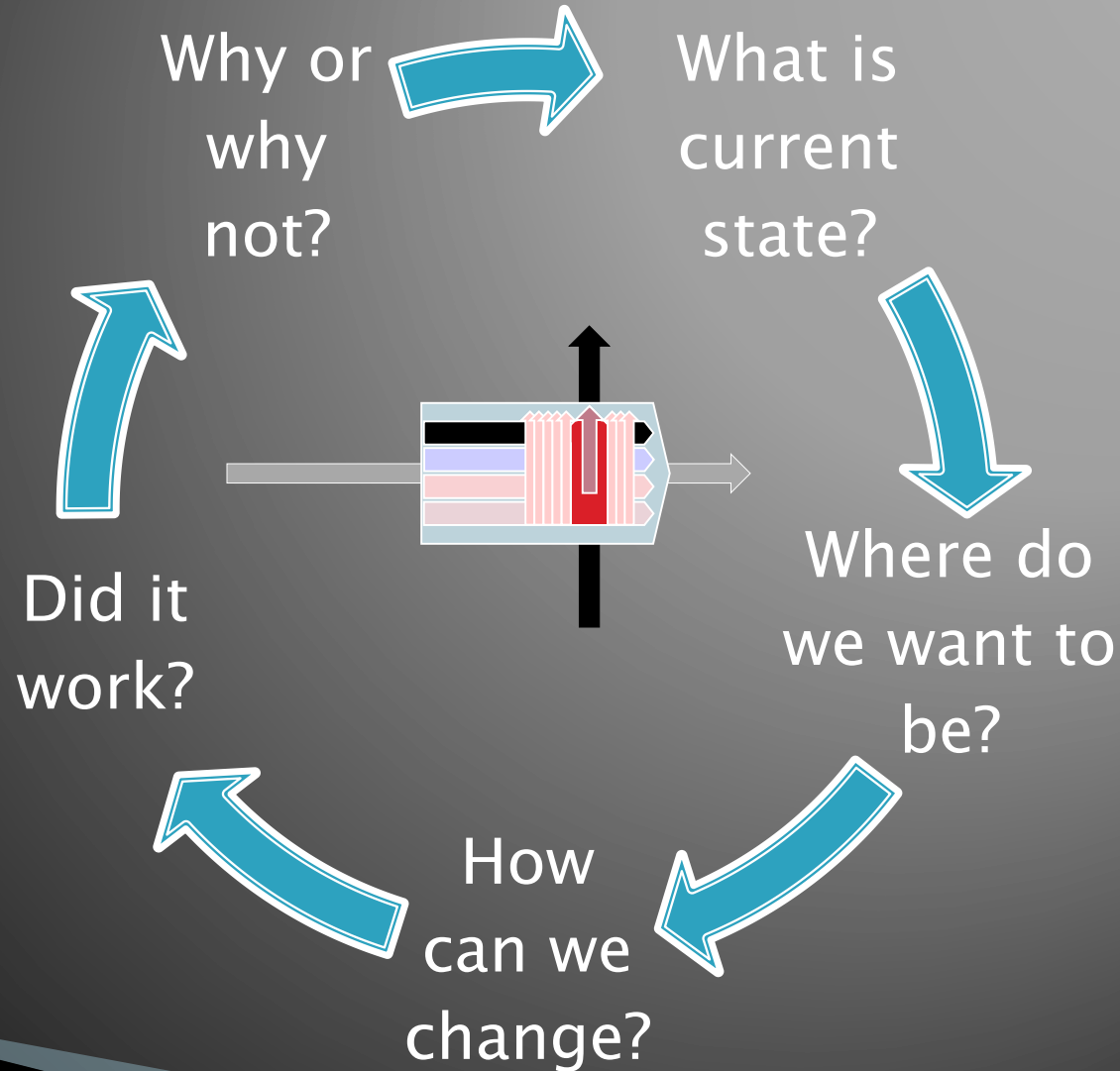
	Change Management	Service Desk	Event Management	Incident Management	Service Level Management
Fulfill Service Request					
Restore Service		X		X	X
Improve Service					

SOR matrix

(Create/Use/Aggregate)

	Agreement	Application	Asset	Change	Configuration	Configuration Item	Datastore	Demand Request	Document	Event	Host	Improvement Opportunity	Incident	Infrastructure Service	Location	Machine	Metadata	Metric	Problem	Process	Project	Release	Risk	Service	Service Request	Software System	Technology Product	Transaction
Architecture/ CASE Systems		C				C	C													C				C		C	C	C
(IT) Asset Management System	C		C	U		C		U			C			U	C	C									U	C	C	
Capacity Planning System			U			U	U			U	U	C	U	U	U	U			U				U	U		U	U	U
Change Management System		U	U	C	U	U	U	U			U	U	U	U	U	U			U		U	U	U	U	C	U	U	
Configuration Management System	U	C	C		C	C	C				C			C	C	C						U	U	C		C	C	
Continuous Improvement System								C				C							C				C					
Demand/Portfolio Management System	U	C	A	A		U	A	C		A	A	C	A	C	U	A			A	U	C	A	U	C	C	A	U	A
Element Management Systems		U	U	U	C	C	C			C	C		U	U	C	C				C						C		C
(IT) Financial Management System	U	U	U					U			U			U	U	U					U			U	U	U	U	U
Incident Management System	U	U	U	U	U	U	U	C		U	U	C	C	U	U	U			C					U	C	U	U	
Information Management Systems	A	U	A	A	A	A	A	A		A	A	A	A	U	U	A		C	A	U	U	A	U	U	A	A	U	A
Operations Management System		U		U		U	U			C	U		C	U	U	U			U			U		U		U		U
Project Management System		U		U		U	U	U						U							C	C		U				
Release Management System		U		U		U	U				U		U								U	C				C	U	
Security Management Systems	U	U		U		U	U			U	U		U	U	U	U			U			U	C	U		U	U	
Service Level Management System	C	U				U	U			U	U	C	U	U								U		U				U
Service Request Management System	U	U	U	U		U	U	C			U		U	U	U	U					U	U	U	U	C	U	U	
Software Configuration Management System		U	U			U	U															U				C	U	
Supply Chain Systems	C		C	U		C					C				C	C					U				U		C	

Continuous improvement



From continuous improvement to data management

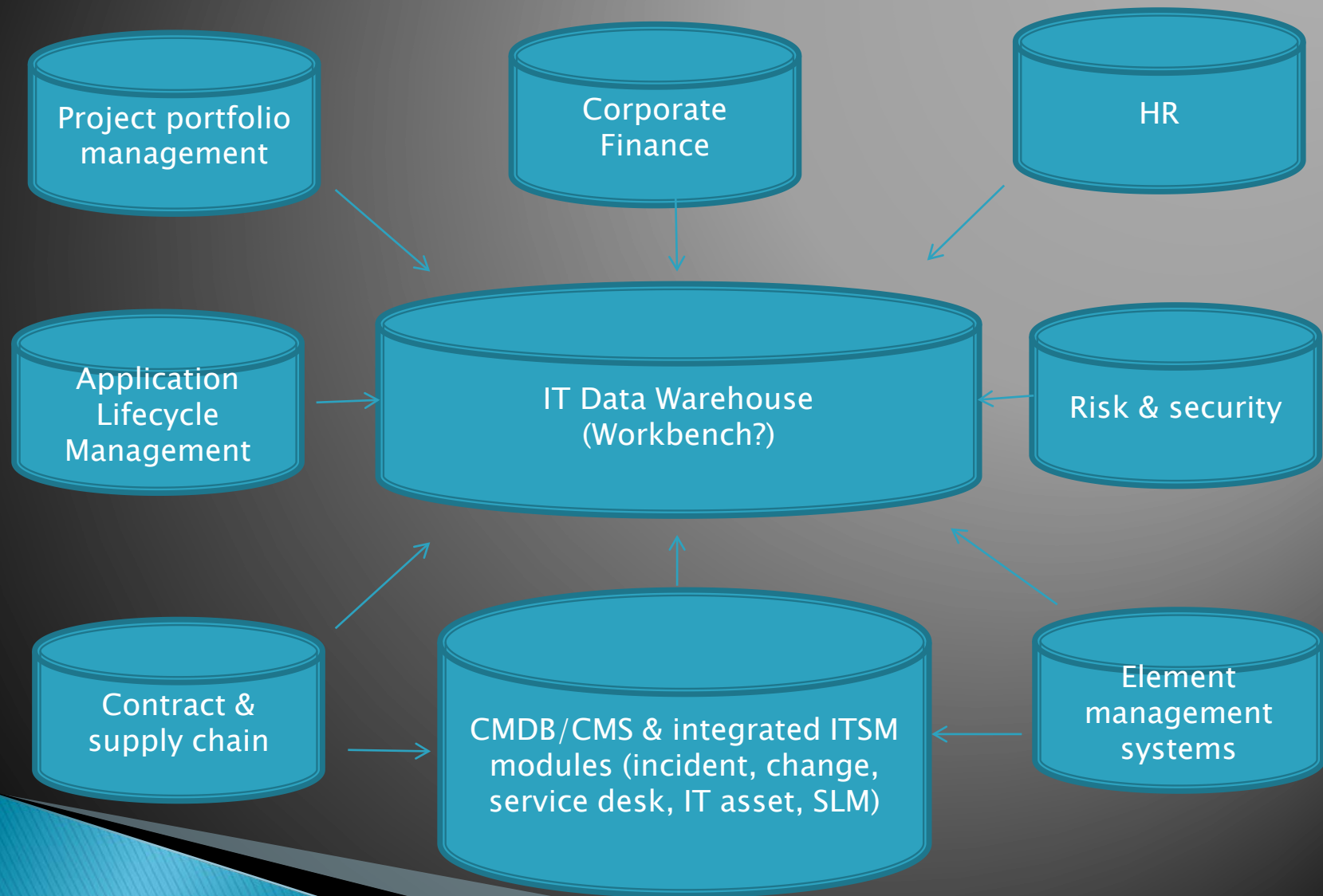
- ▶ Data quality is flip side of process quality
- ▶ The Five Whys



- Why was there a mismatch on that server record?
 - Why was the serial # different in the Fixed Asset system?
 - Why was it manually typed into the Fixed Asset system from a paper invoice?
 - Why can't the vendor send us the serial #s electronically?
 - What if we send them a block of OUR asset ID #s?
- ▶ Develop & test a hypothesis for fixing
- ▶ Measure if it did anything and *show the trend*
- ▶ Repeat as needed

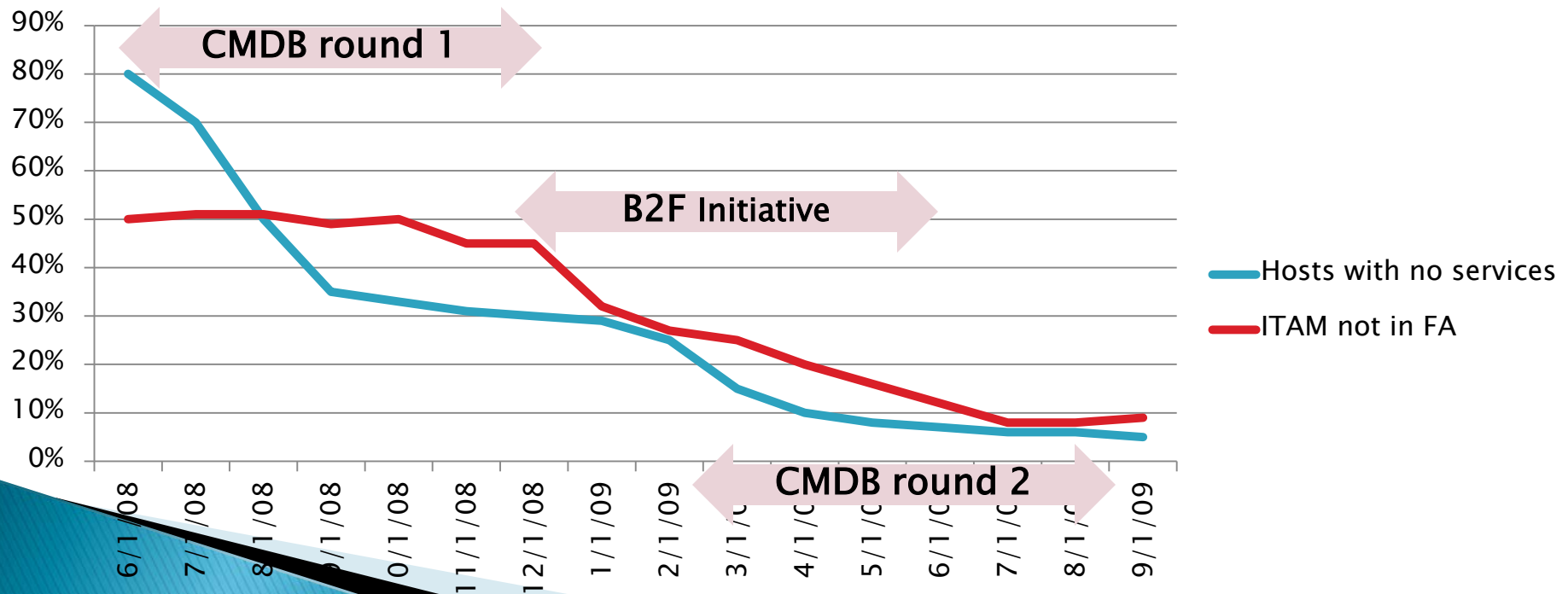


IT data management architecture



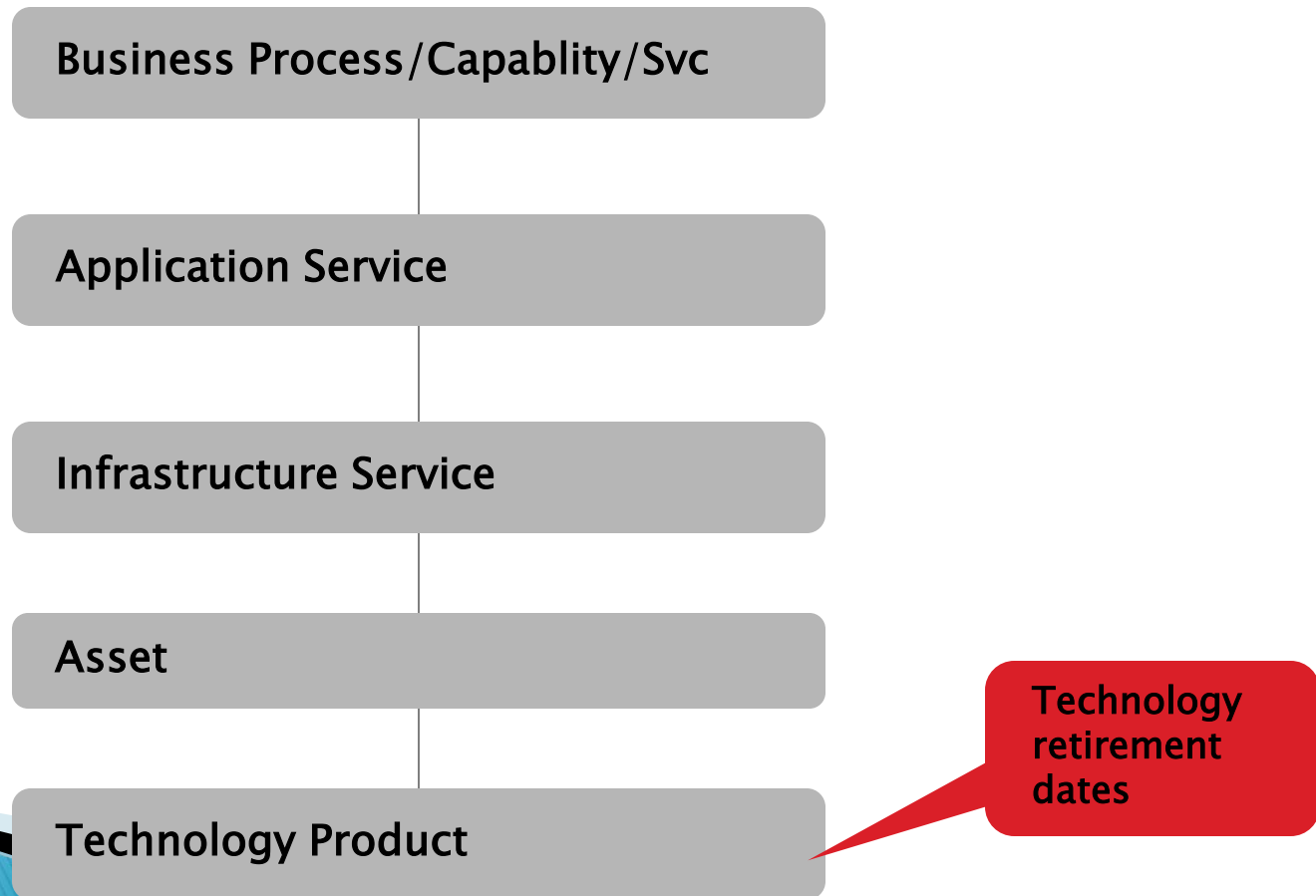
Trending

- ▶ “Measure if the effort did anything...”
- ▶ History is a must if you want to continuously improve!
- ▶ Without it, all you have is a snapshot
- ▶ Drives nontrivial requirements in the data architecture



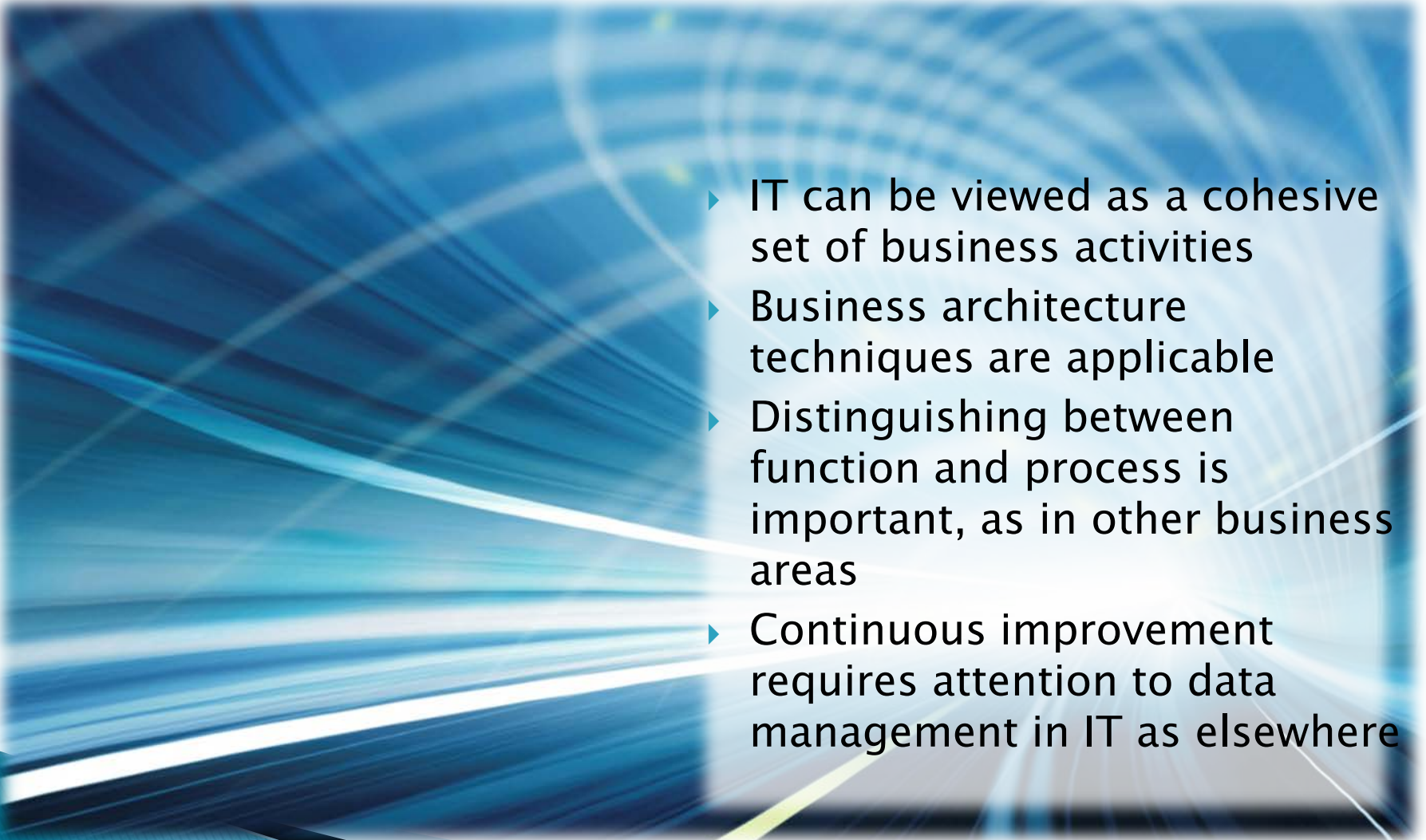
Obsolescence risk model – a high maturity use case

- ▶ Brings all four lifecycles and the business architecture together
- ▶ Dependencies, dependencies





Conclusions

- 
- ▶ IT can be viewed as a cohesive set of business activities
 - ▶ Business architecture techniques are applicable
 - ▶ Distinguishing between function and process is important, as in other business areas
 - ▶ Continuous improvement requires attention to data management in IT as elsewhere