



# Transforming an Architecture Practice

Chris Palmann  
Design Transformation Lead  
Lloyds Banking Group  
[Chris.Palmann@lloydsbanking.com](mailto:Chris.Palmann@lloydsbanking.com)

Peter Eeles  
FSS Industry Lead  
IBM Rational Worldwide Tiger Team  
[peter.eeles@uk.ibm.com](mailto:peter.eeles@uk.ibm.com)

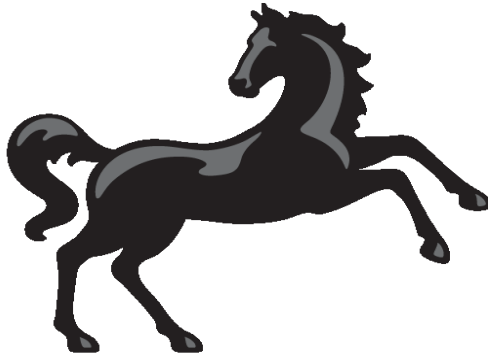
**Innovate2013**  
The IBM Technical Summit

# Agenda

- Background to the Architecture Practice
- Industry Input
- From Theory to Practice
- Summary

# About Lloyds Banking Group

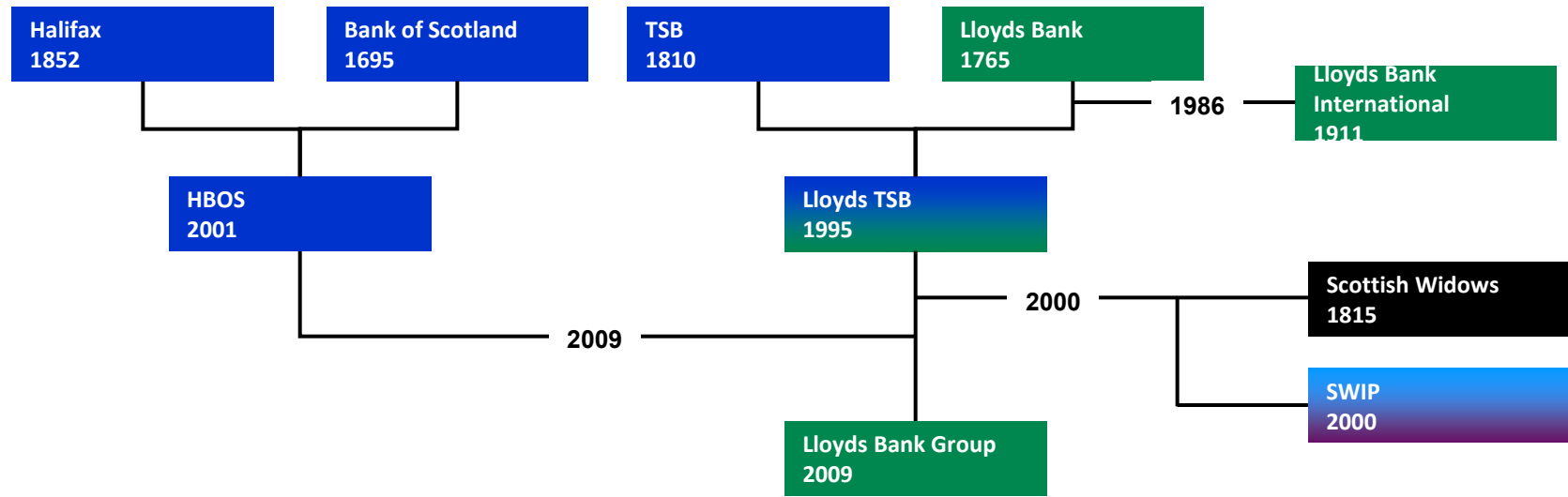
# LLOYDS BANKING GROUP



- Lloyds Banking Group is the UK's largest Bank
- 30m Customers
- 100,000 Employees
- UK's leading provider of current accounts, savings, personal loans, credit cards & mortgages
- Brands include Lloyds TSB, Bank of Scotland, Halifax, Scottish Widows, Cheltenham & Gloucester

# Company History

- Lloyds Banking Group has been created from a series of mergers and acquisitions....



... which created a complex legacy of IT applications, data and infrastructure

# Transformation Roadmap

Use professional industry tools and methods to deliver high quality designs fast

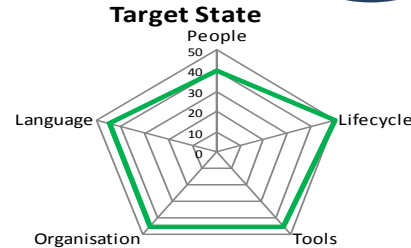
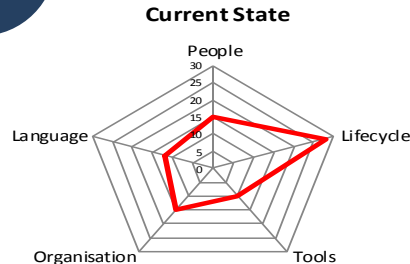
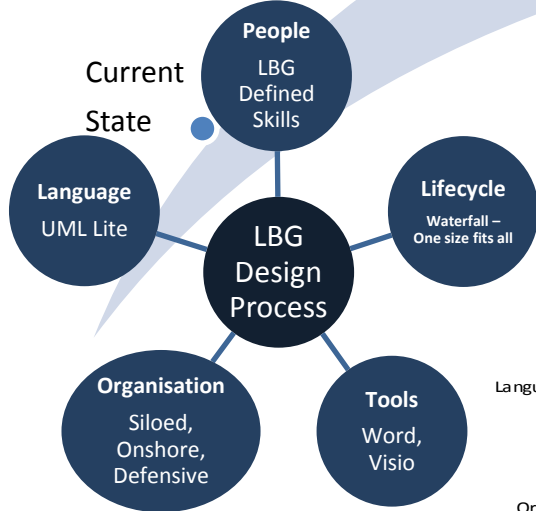
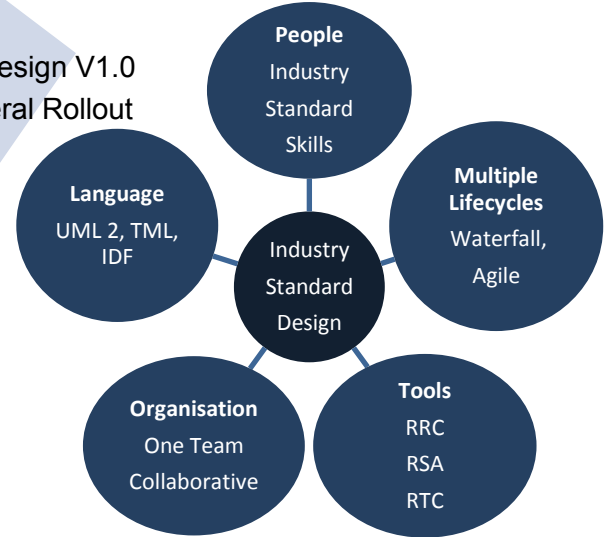
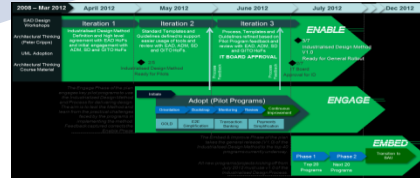
Target State

**Target State**

3<sup>rd</sup> July 2012

Industrialised Design V1.0  
Ready for General Rollout

Industrialised Design 3E Plan



# Benefit Levers being Exercised

## Business Benefits

Faster

Cheaper

Better

## IT Enablers

Collaboration

Standardisation

Reuse

Visibility and  
Transparency

Impact Analysis

# Scope of Industrialised Design

Business	GITO	EAD	ADM
<i>Rational Transformation Programme</i>			
Setting Business Vision Defining Requirements Defining Business Process Changes	Requirements Gathering Creating Business Requirements Creating Solution Requirements	Identifying key architectural elements Concurrent consideration of functionality, infrastructure, data and security Deriving solution elements from (and tracing elements to) the defined requirements Communicating the architecture to stakeholders Producing and consuming reusable assets Architectural governance	Detailed Design Build Test
			SD Physical Design

# Agenda

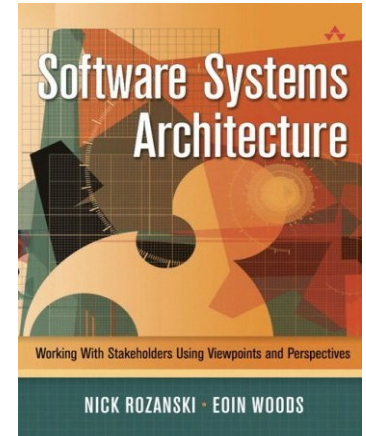
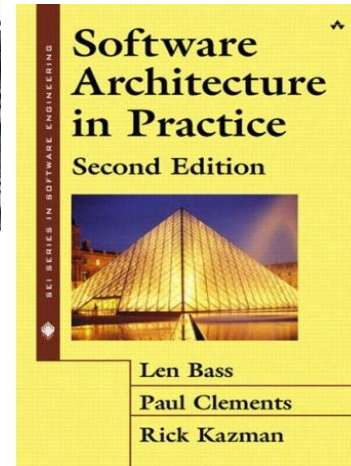
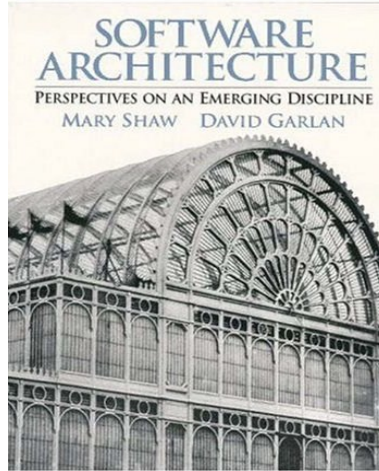
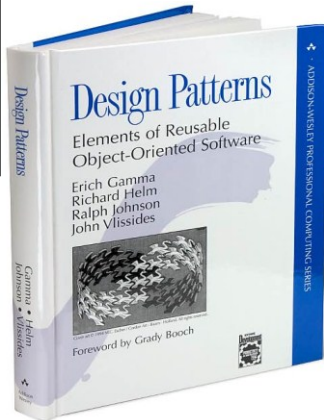
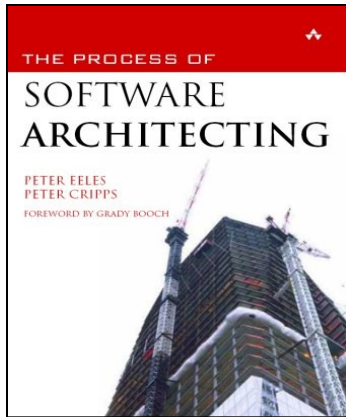
- Background to the Architecture Practice
- **Industry Input**
- From Theory to Practice
- Summary



# Inspiration

*“If I have seen further it is only by standing on the shoulders of giants”*

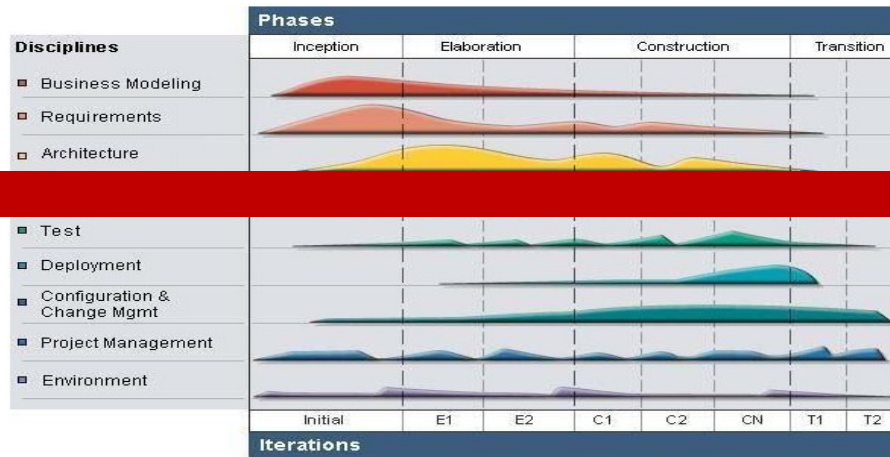
Sir Isaac Newton, letter to Robert Hooke, 15<sup>th</sup> February 1676



# Rational Unified Process

The Rational Unified Process (RUP) is an iterative software development process framework. RUP is not a single concrete prescriptive process, but rather an adaptable process framework, intended to be tailored by organisations and software project teams that will select the elements of the process that are appropriate for their needs.

The Industrialised Design Method is based on elements of RUP, tailored to suit the Group's requirements.



The RUP has a project life cycle consisting of **four phases**.

- These phases provide a focus for the **iterations** that are an inherent part of the project lifecycle
- Each phase has a key objective and an associated milestone that denotes the objective being accomplished.

## Mapping RUP to the Industrialised Design Method

- **Disciplines** are organised by logical coherence
  - *The Industrial Design Method covers the **Analysis and Design** discipline.*
- **Phases** are organised by timeframe:
  - *Most of the work for the Industrial Design Method will be done in the **Inception** and **Elaboration** Phases*
  - *Some work could also happen in the other phases if change requests or defects have to be respected*
  - *The significant milestone for the Industrial Design Process is the “**lifecycle architecture milestone**” at the end of the elaboration phase as one of its most significant demands is a stable architecture.*

# Summary of Best Practices

## Rational

Consider all elements of a development ecosystem

Implement a center of excellence

Plan improvements around capabilities

Adopt capabilities incrementally

Embrace principles of organizational change

## Kotter

Establish a sense of urgency

Create the guiding coalition

Develop a vision and strategy

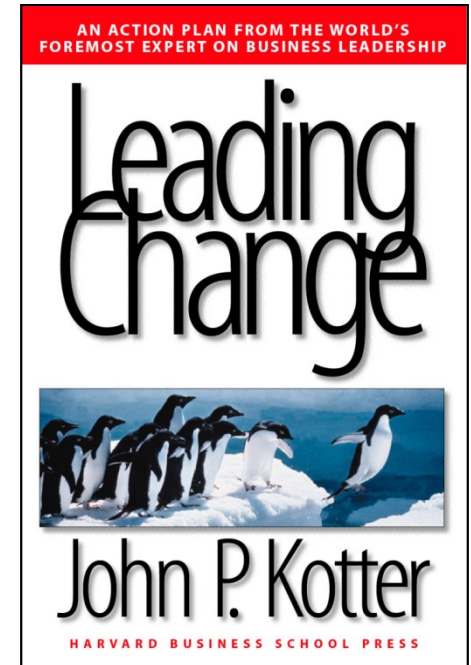
Communicate the change vision

Empower employees for broad-based action

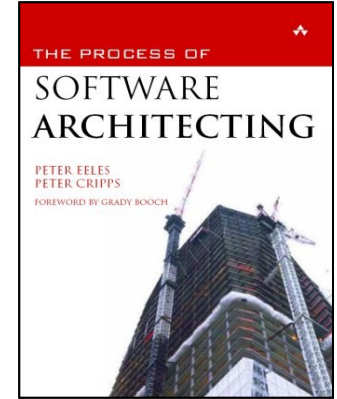
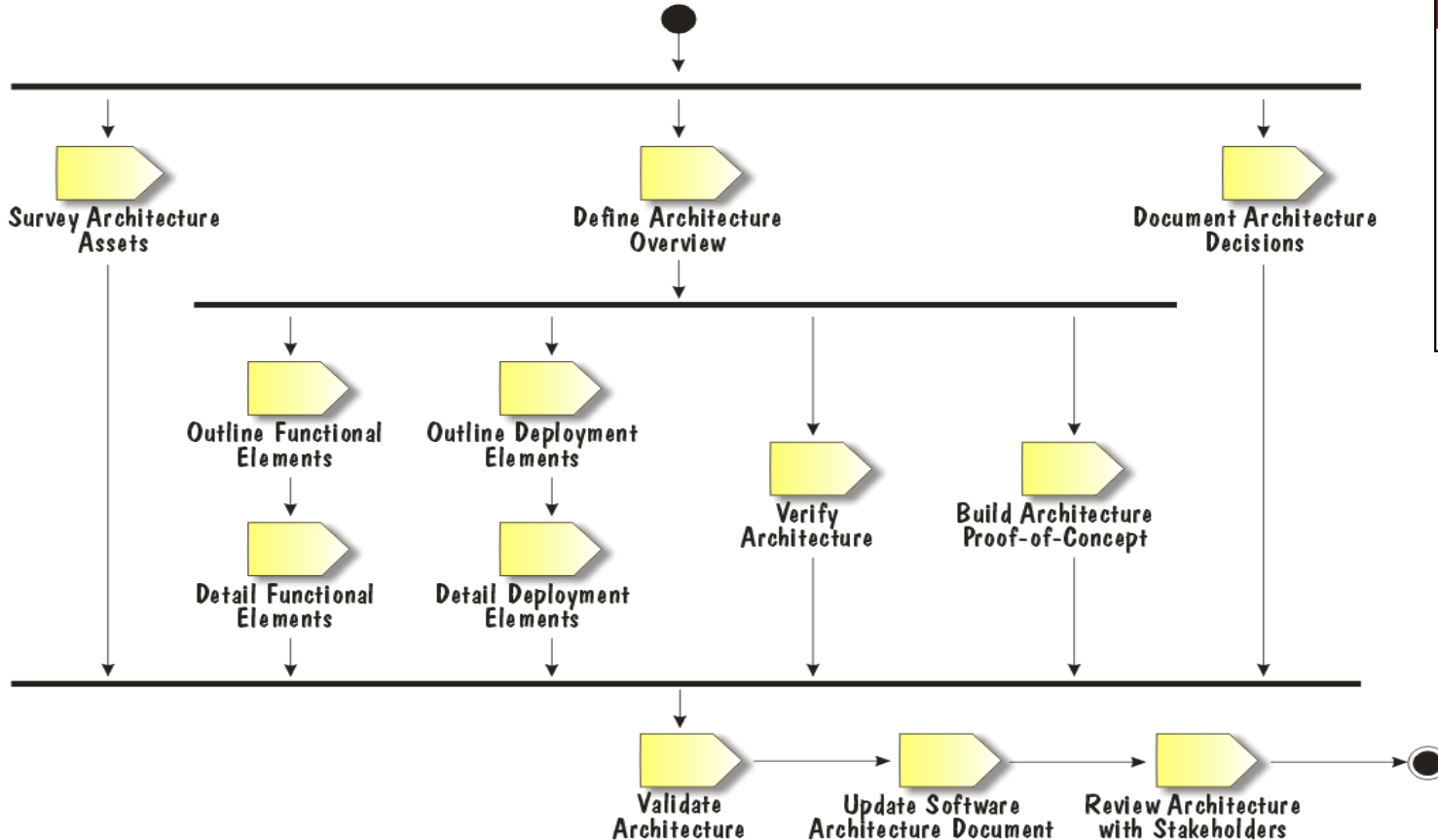
Generate short-term wins

Consolidate gains and produce more change

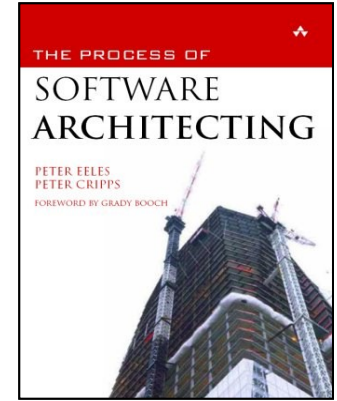
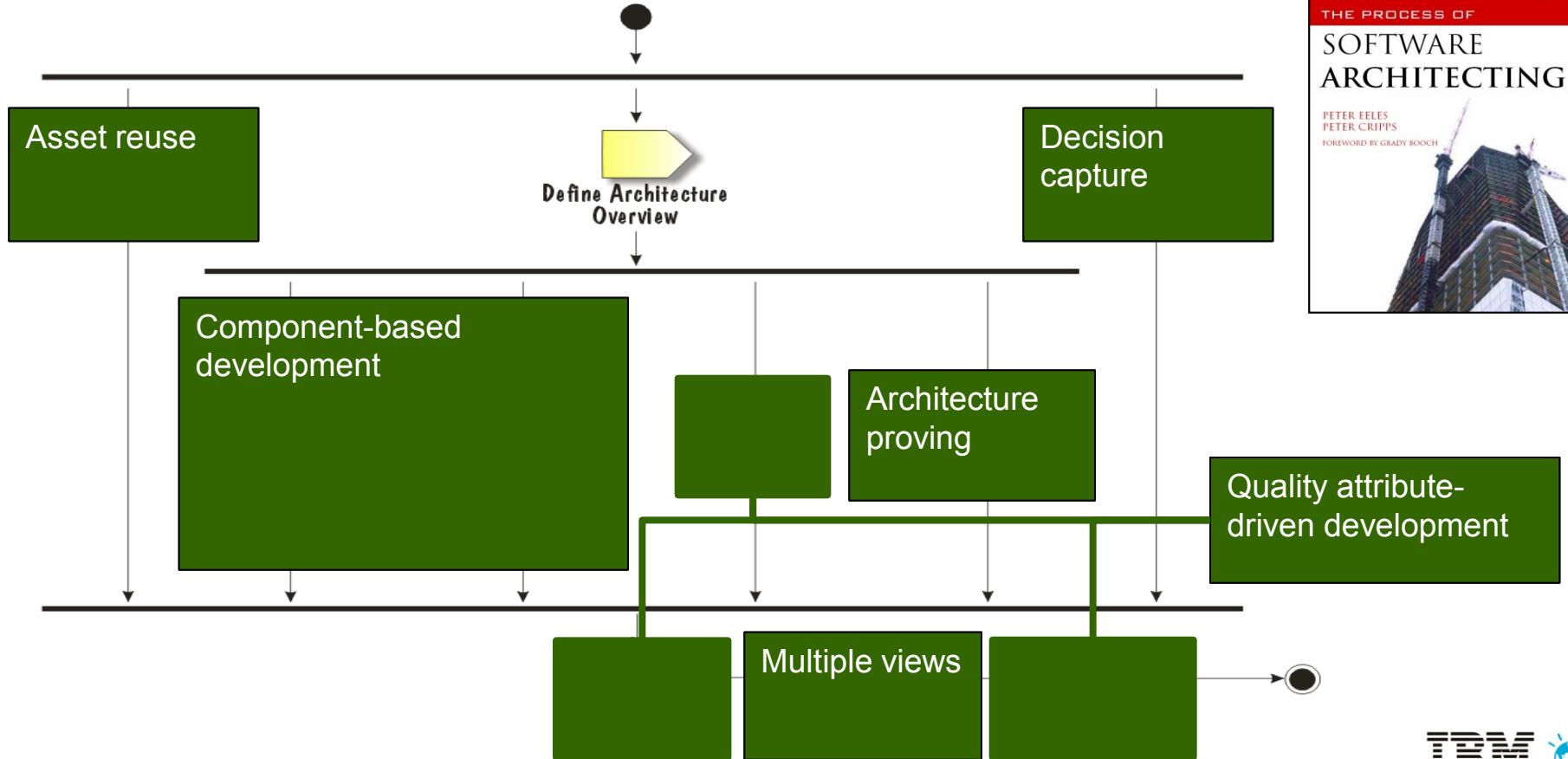
Anchor new approaches in the culture



# Can you Spot the Innovation Enablers?



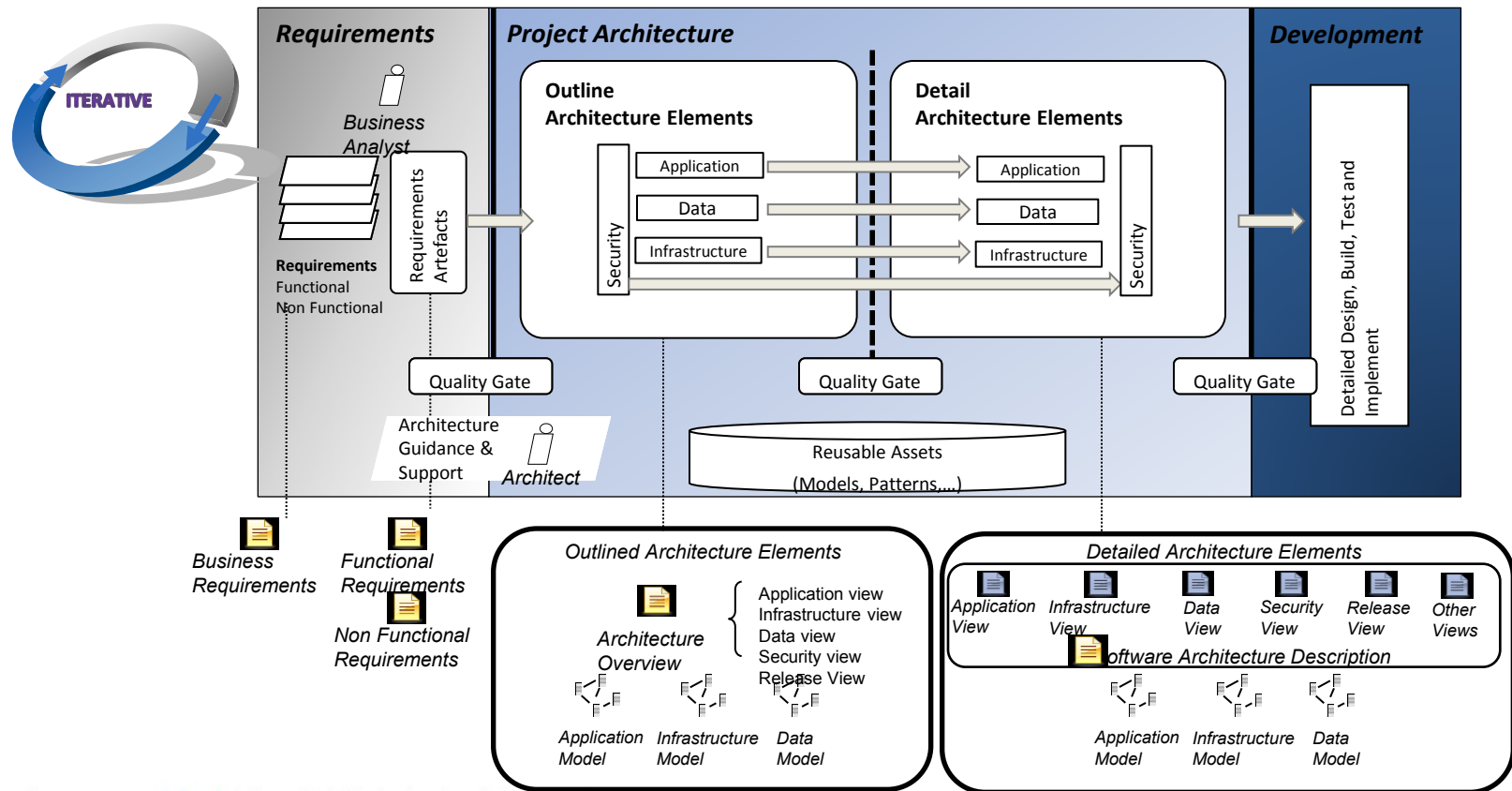
# Proven Architecture Practices



# Agenda

- Background to the Architecture Practice
- Industry Input
- From Theory to Practice
- Summary

# Industrialised Design Method Overview

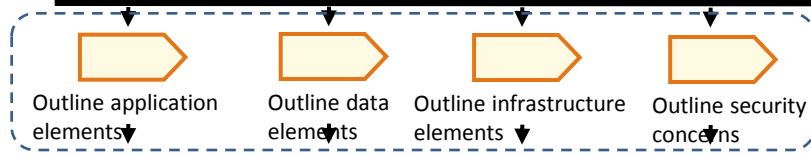


# Architecture Method within the Architecture Practice

## Outline Architecture Elements



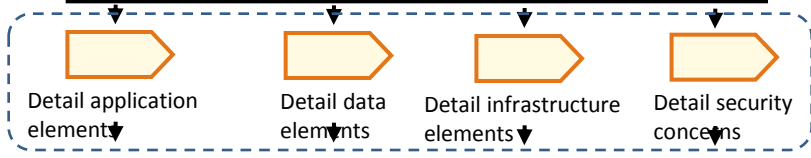
Elaborate requirements



## Detail Architecture Elements



Define architecture overview



Verify architecture

Build architecture proof-of-concept

Document architecture decisions

Survey architecture assets

Validate architecture

Update software architecture description

Review architecture with stakeholders

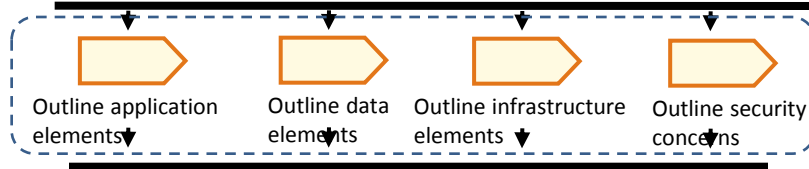


# Method extended into Application Development

## Outline Architecture Elements



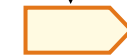
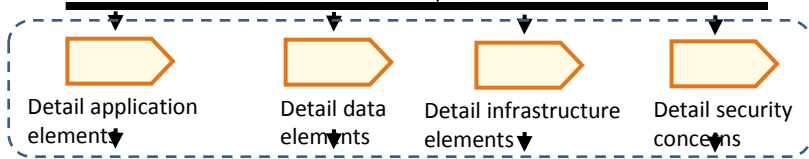
Elaborate requirements



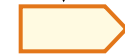
## Detail Architecture Elements



Define architecture overview



Verify architecture



Build architecture proof-of-concept



Document architecture decisions



Survey architecture assets



Validate architecture



Update software architecture description



Review architecture with stakeholders



Detail Interface Realisations (Batch, API, Services)



Detail Data elements



Review Security Concerns

Cross Platform Design

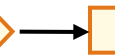
Cross Platform Design focuses on the Physical representation of Logical High Level Architecture. Public interfaces, APIs and Batch interfaces are described in detail. Security Concerns are reviewed for impact to individual platform applications



Logical Design



Physical Design

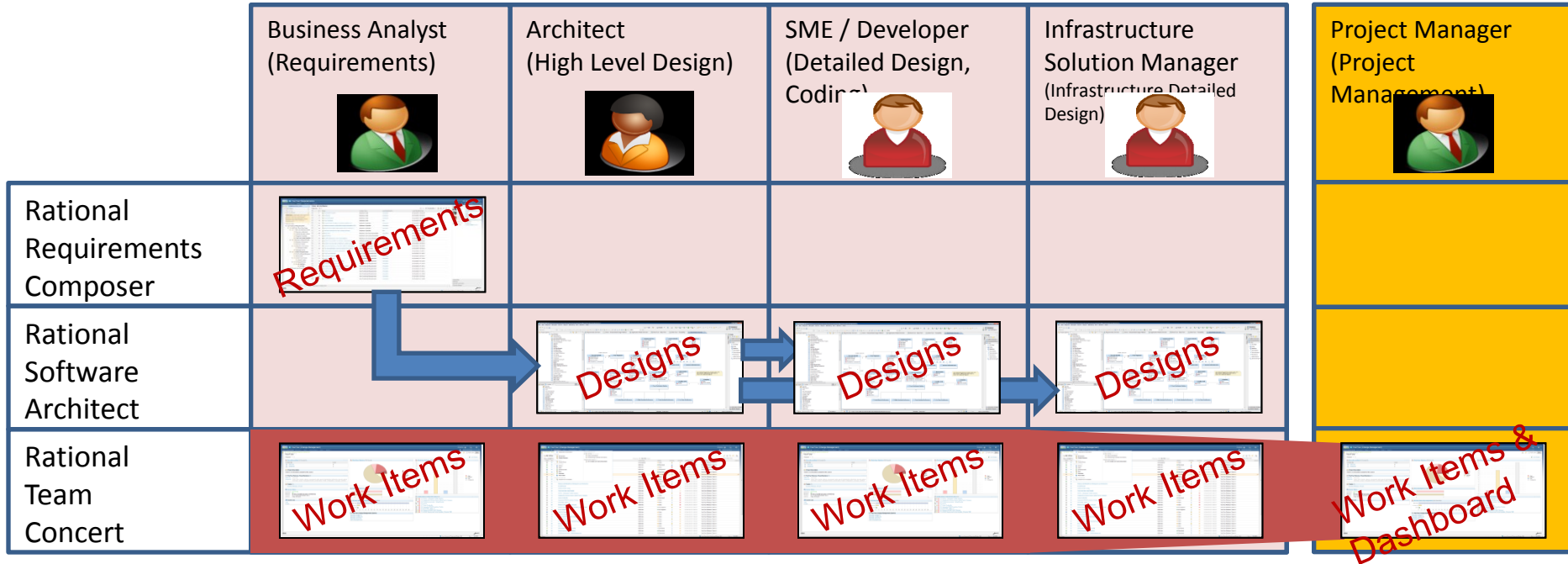


Review architecture with stakeholders

Platform Specific Design

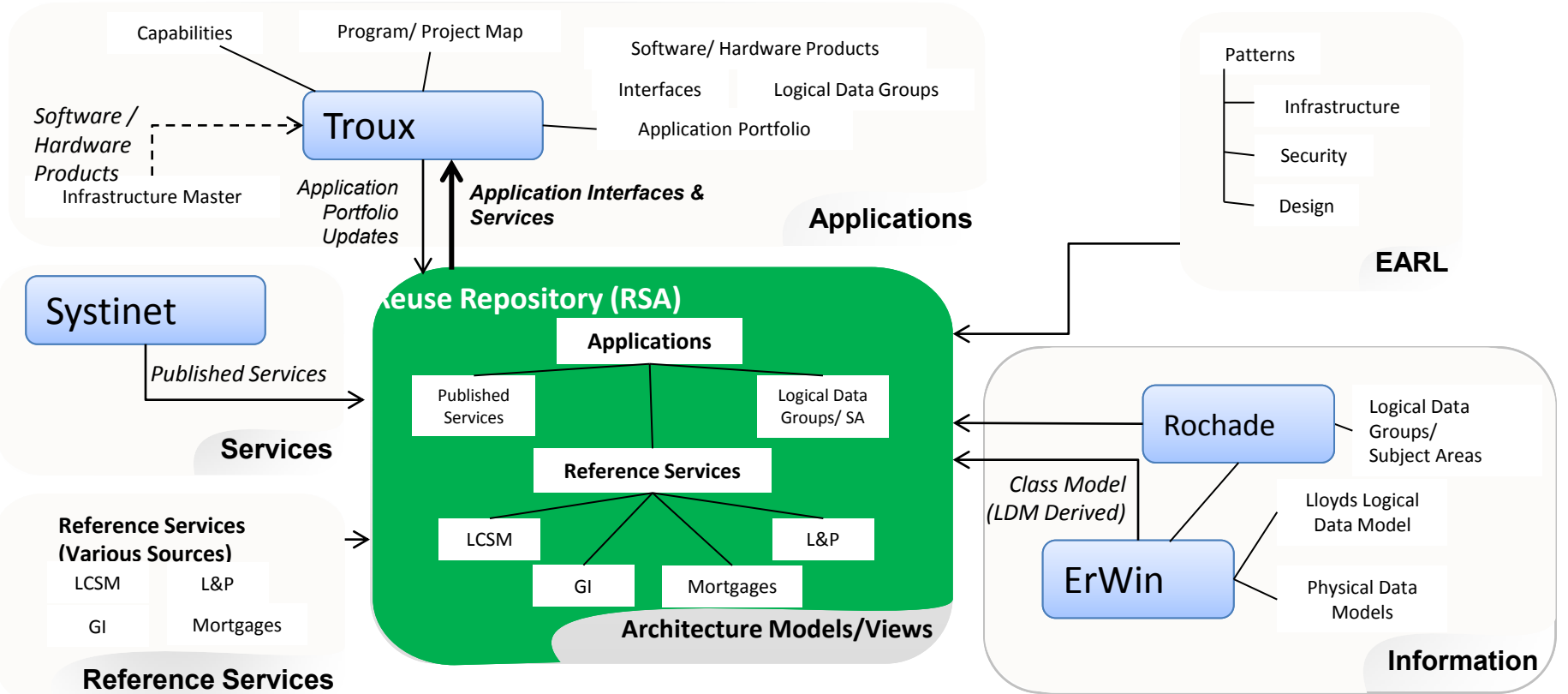


# Target Tools Architecture

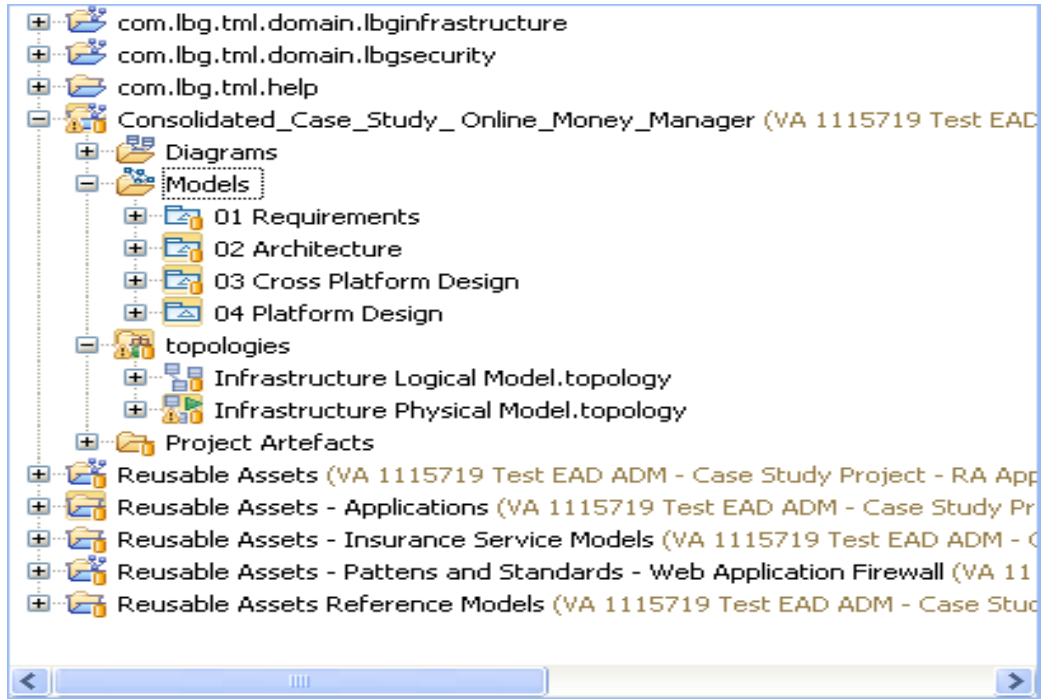


# Reuse Architecture

## Information Ownership and Control



# Overall RSA Project Structure



## 01 Requirements

- Functional and Non Functional requirements and use cases are represented in this folder. These requirements are represented as components imported from RRC.

## 02 Architecture

- EAD completes the Architecture Description in this folder
- Models (Application, Data), Views, Topologies and Requirements Realisations are created.

## 03 Cross Platform Design

- The design activity in this folder is the first level of collaboration between EAD, ADM in Level 4 with confidence.

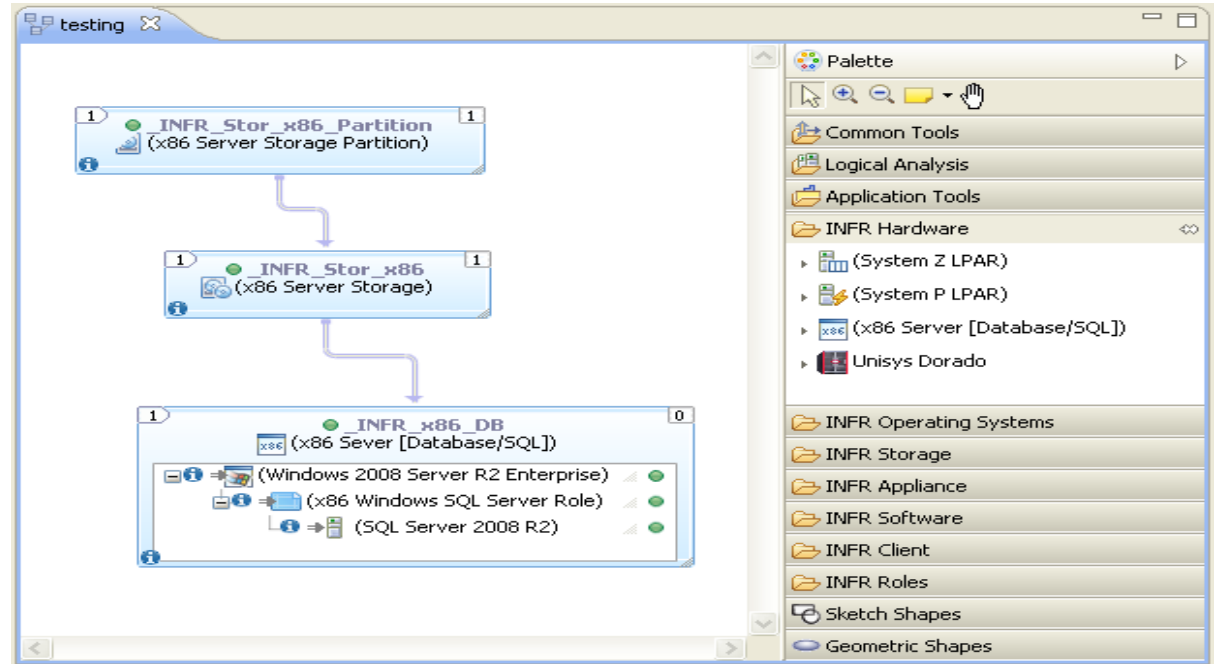
## 04 Platform <Name> Design

- Designs activity completed by the Platform on the basis of the agreements made in the collaborative design work in Level 3 – Cross Platform Design

# Topology Modelling Language (TML)

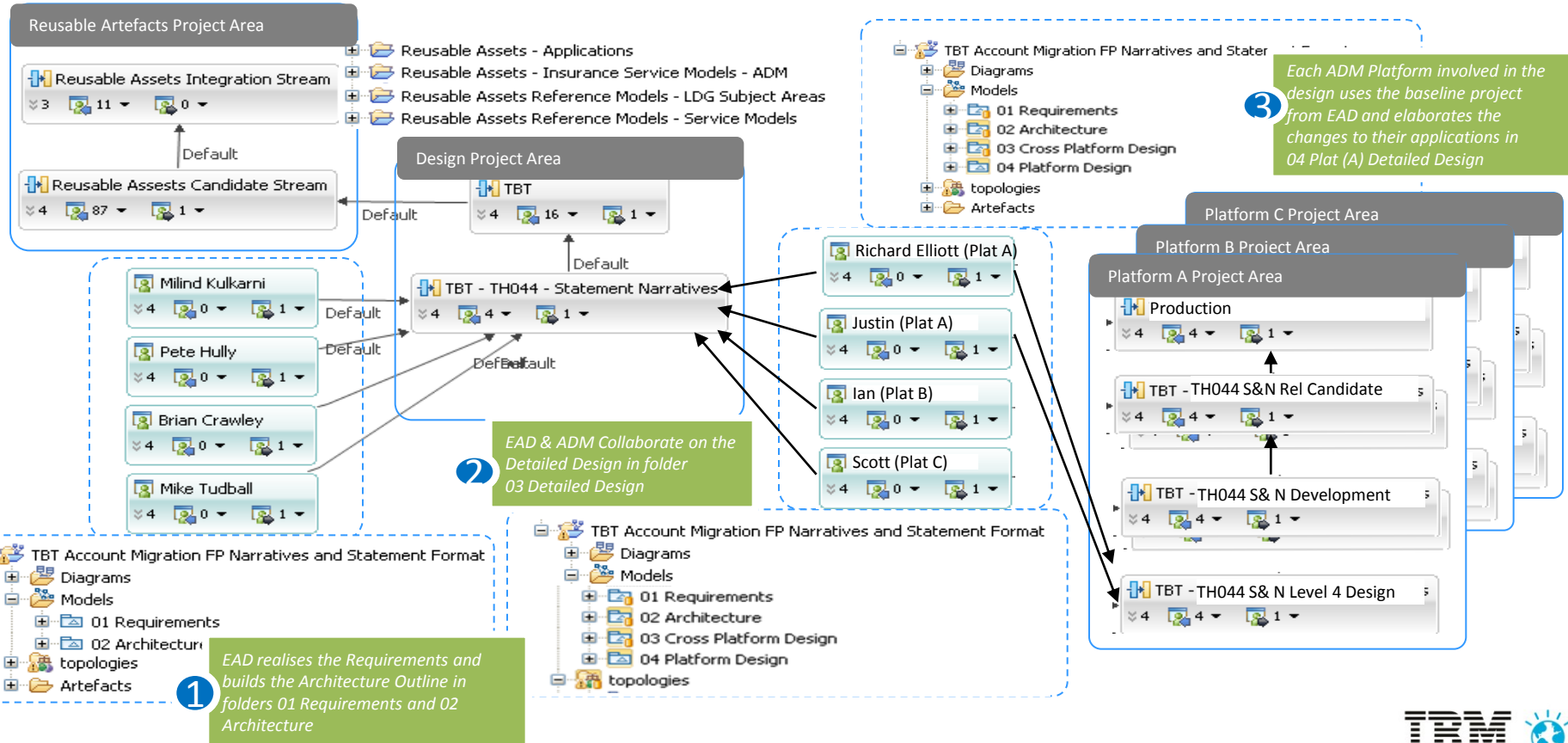
Applied through RSA Deployment Planning and Automation (DP & A)

- With customised palette

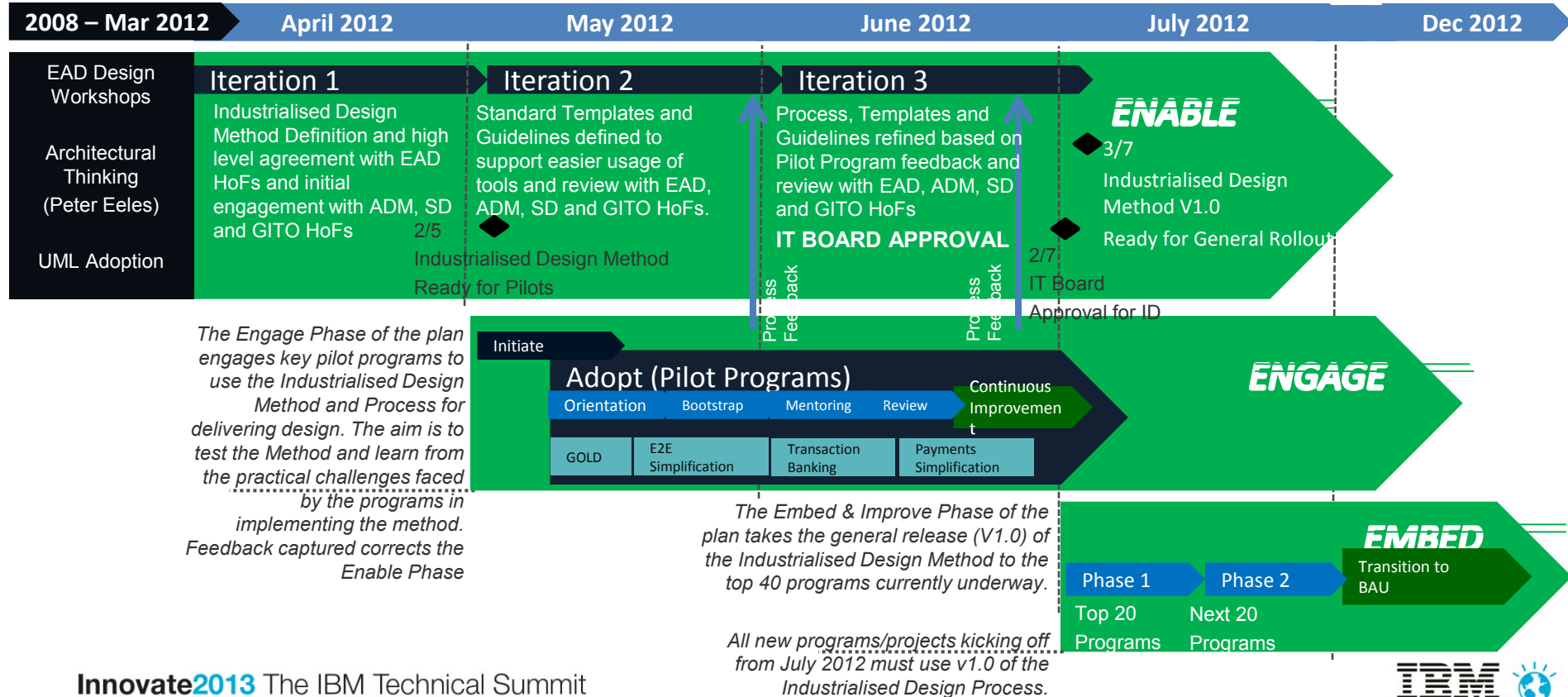


# Q. How and Where do EAD and ADM Collaborate RTC Project Structures

Cross Platform design completes in the EAD Design Project Area before Platform Design progress in the Platform Project Areas



# Industrialised Design Method 3E Plan



# Road shows





# Agenda

- Background to the Architecture Practice
- Industry Input
- From Theory to Practice
- Summary

# Summary

- IBM perspective
  - Adoption of architecture best practice
  - Embracing principles of organizational change
  - An opportunity to bring experiences from an engagement of this scale to the broader community
- Lloyds Banking Group perspective
  - A thought-through case study that exemplifies the method is key
  - There is a real opportunity to “codify” patterns of practice
  - People-related change is the most difficult aspect of transformation

# Questions



# Thank You

© Copyright IBM Corporation 2013. All rights reserved. The information contained in these materials is provided for informational purposes only, and is provided AS IS without warranty of any kind, express or implied. IBM shall not be responsible for any damages arising out of the use of, or otherwise related to, these materials. Nothing contained in these materials is intended to, nor shall have the effect of, creating any warranties or representations from IBM or its suppliers or licensors, or altering the terms and conditions of the applicable license agreement governing the use of IBM software. References in these materials to IBM products, programs, or services do not imply that they will be available in all countries in which IBM operates. Product release dates and/or capabilities referenced in these materials may change at any time at IBM's sole discretion based on market opportunities or other factors, and are not intended to be a commitment to future product or feature availability in any way. IBM, the IBM logo, Rational, the Rational logo, Telelogic, the Telelogic logo, and other IBM products and services are trademarks of the International Business Machines Corporation, in the United States, other countries or both. Other company, product, or service names may be trademarks or service marks of others.

2013





# Innovate2013

The IBM Technical Summit