

# Enterprise Visualization and Transformations using Labnaf

## EA GLOBAL SUMMIT

The e-Conference For the Global EA  
Community



1 - 5 June 2020 | Global

# EA Global Summit 2020

June 1st to 5th | Connect with World's Prolific Sparx EA Practitioners

## Enterprise Visualization and Transformation using Labnaf

Labnaf is an innovative and highly automated solution for enterprise visualization and transformation. It seamlessly unifies numerous standards and best practices

### Alain De Preter

Founder, Labnaf



2nd June



PDT 06.00  
CET 15.00  
AEST 23.00



60 Min

[eaglobalsummit.com](http://eaglobalsummit.com)



**Prolaborate**

# Presenters

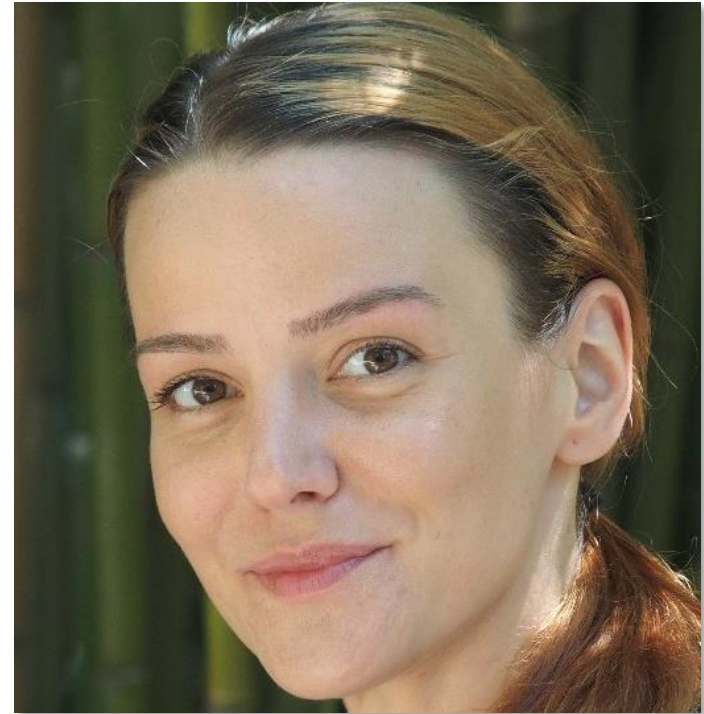


Alain De Preter  
Labnaf Founder

<https://www.linkedin.com/in/alain-de-preter/>



[alain.depreter@Labnaf.one](mailto:alain.depreter@Labnaf.one)



Orsolya Nemeth  
Sparx Services Central Europe

<https://www.linkedin.com/in/orsolya-nemeth-04b68514a/>



Integrated

# Merged Standards & Best Practices

IT4IT™

TOGAF®

SAFe®

Gartner  
EA Stage Planning



ISO/IEC/IEEE 42010

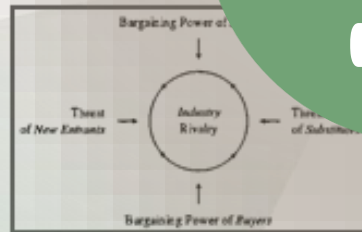


Systems Semantics

ARCHIMATE®



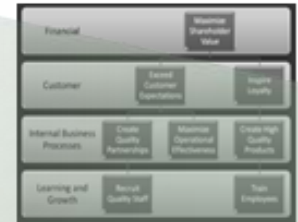
PEST(EL)



Porter's Five  
Forces Analysis



Business Model  
Generation



Strategy Map &  
Balanced Scorecard

# Unified Disciplines

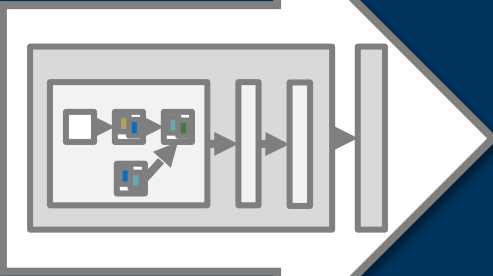
**Enterprise  
Architecture**

**Strategy**

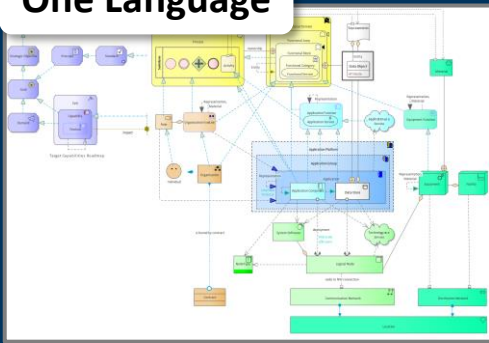
**1**

**Solution  
Architecture**

## One Transformation Process



## One Language

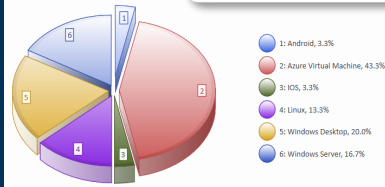


## One Shared Database



## Software

A detailed software architecture and deployment diagram. It shows a 'Sales' section with categories like B2B Sales, B2C Sales, and B2I Sales. Below this is a 'Sales Channel' section with a grid of application tiles. To the right, there are 'Car Fleet' and 'CRM' sections, each with a cloud icon and associated services like 'XYZ Car Fleet as a Service' and 'CRM (using iaaS)'. A central 'One Software' label is overlaid on the diagram.



A screenshot of a spreadsheet with columns labeled with letters A through Z and rows labeled with letters A through Z. The cells contain various text entries, likely representing a list of software components or configurations.

Powered by

**ENTERPRISE ARCHITECT**  
SPARX SYSTEMS

# Agenda

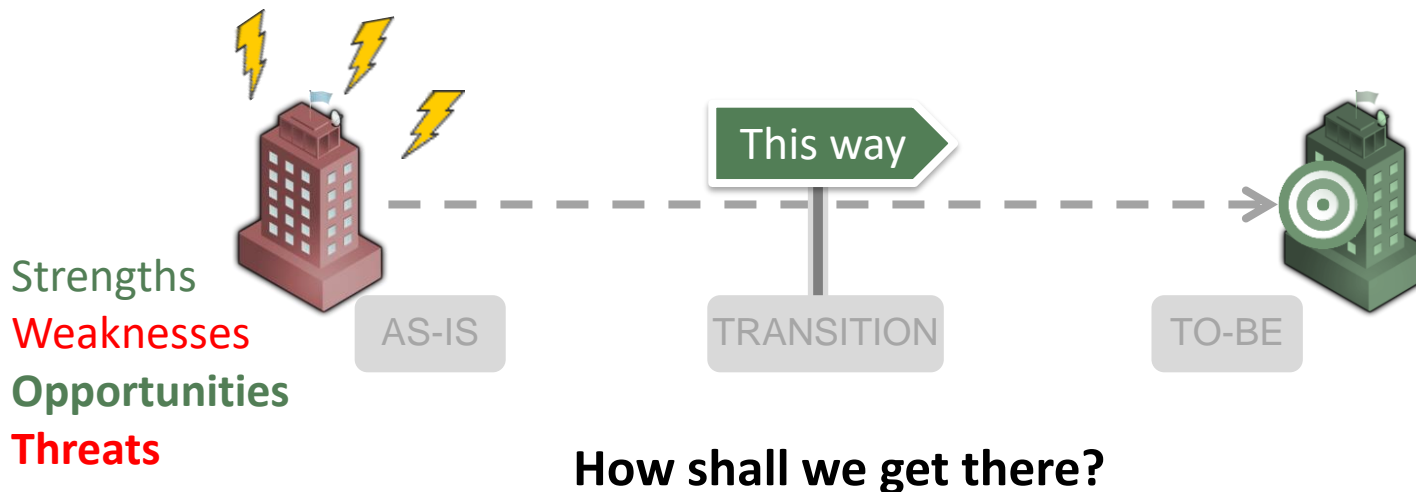
1. Transformation Challenges
2. Framework Overview
3. Tools

# General Challenge for Strategy and Enterprise Architecture

Identify and drive the required changes to the organization's business and IT

Where are we today?

Where do we want to be in the future?





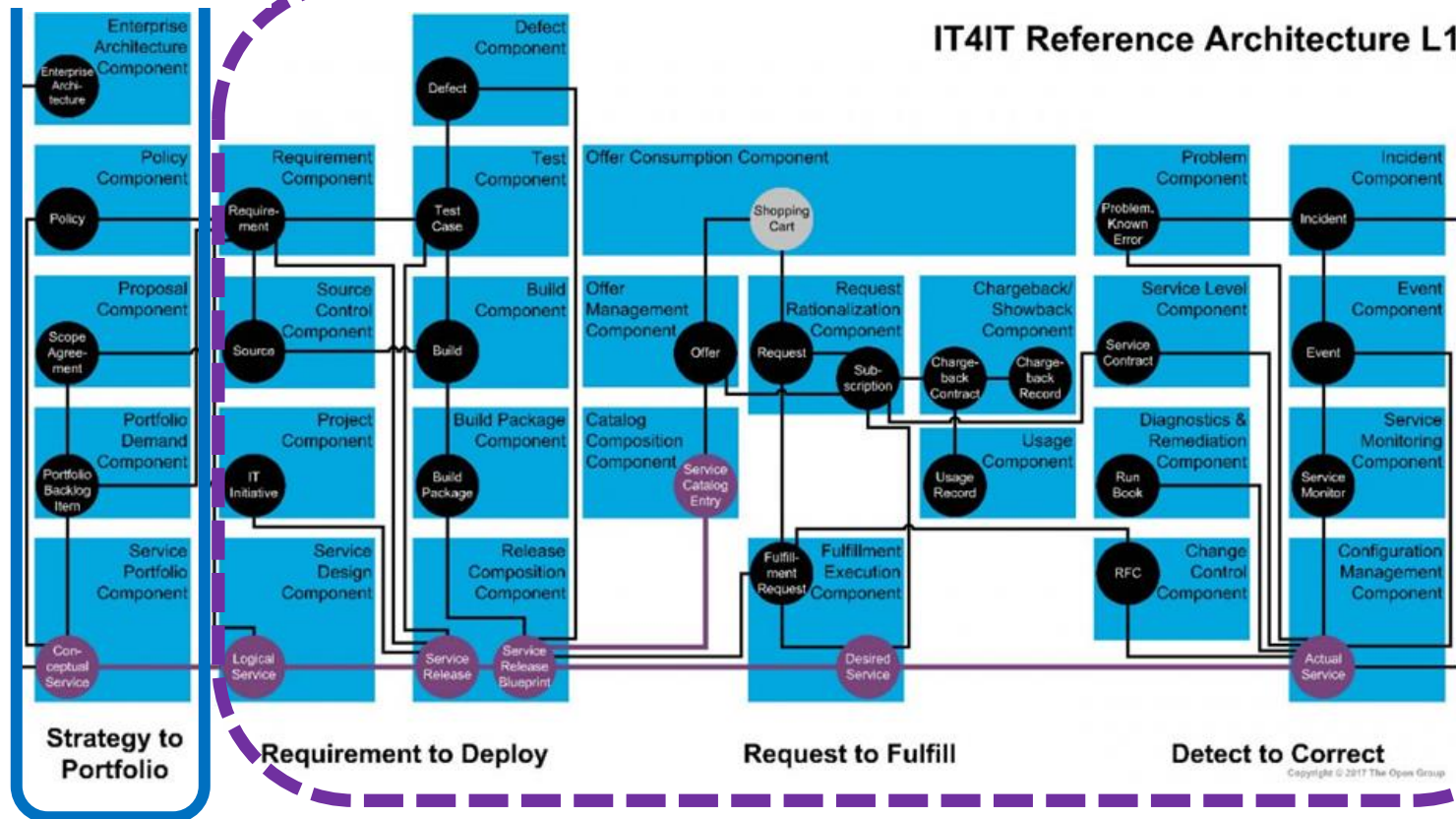
# Specific Challenges at the Belgian Railways

- 1) Supporting outsourcing decisions +
- 2) Migrating Applications +
- 3) Delivering Solutions



SNBC

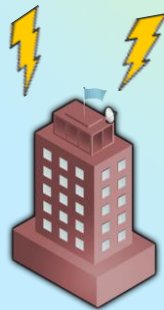
## Outsourced



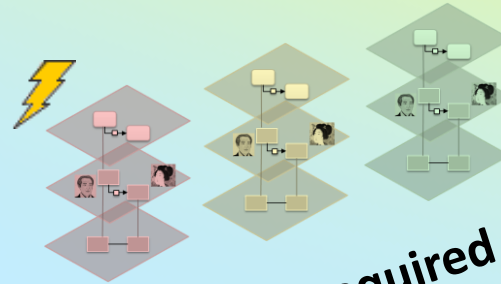
# Decisions Require Enterprise Visibility and Traceability

Strategy & Architecture Lens

Where are we today?



What are the required changes?  
What is the planning of those changes?



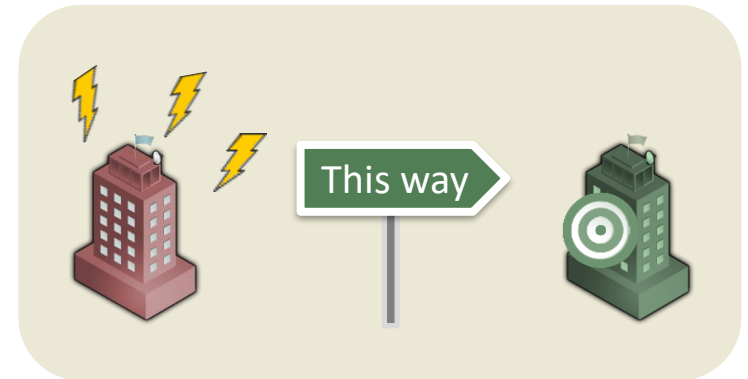
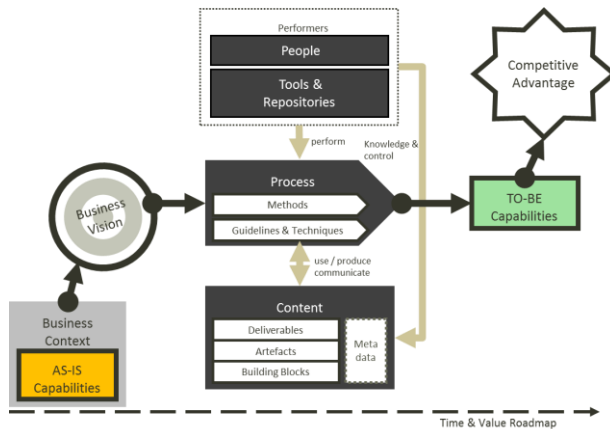
Where do we want to be in the future?

AS-IS

TRANSITION

TO-BE

# We need a **Framework** as a vehicle to Effectively **Drive Transformations**



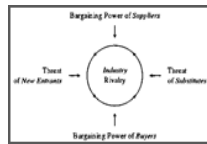
**A Framework**

**for**

**Driving Transformations**



# Why don't we use existing frameworks? I mean Strategy & Architecture Standards?



Porter's Five Forces Analysis



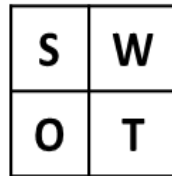
Business Model Generation



Balanced Scorecard



PEST(EL)



TOGAF®



Strategy Map



ISO/IEC/IEEE 42010



ARCHIMATE®

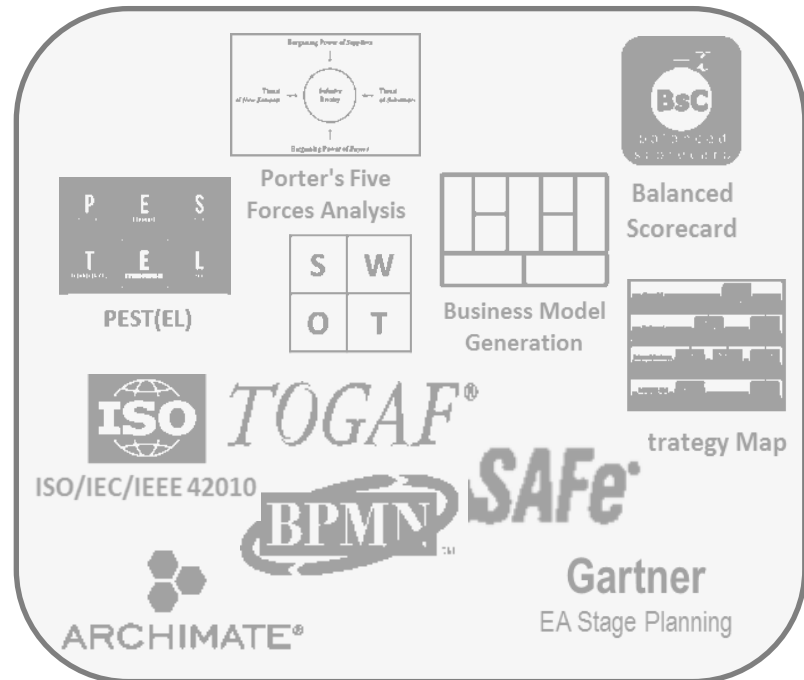


Gartner  
EA Stage Planning

# strategy & Architecture Standards?

OK, but how can we use these standards?

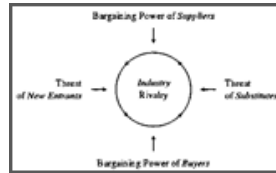
together?



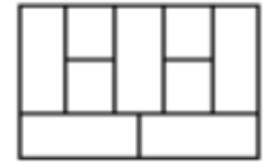
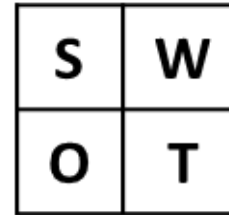
# Common Process



PEST(EL)



Porter's Five Forces Analysis



Business Model Generation

~~Common Meaning~~



Strategy Map

Balanced Scorecard

~~Precision~~

~~Precision~~

TOGAF

SAFE

Gartner  
EA Stage Planning

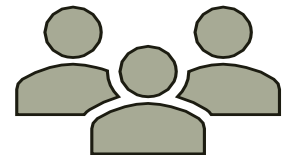
~~Common Terminology~~



~~Precision~~



# Cross-discipline collaboration is not easy !



# Agenda

1. Transformation Challenges

2. Framework Overview

3. Tools



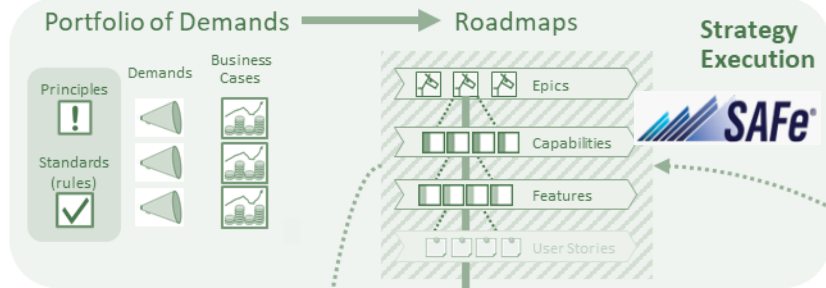
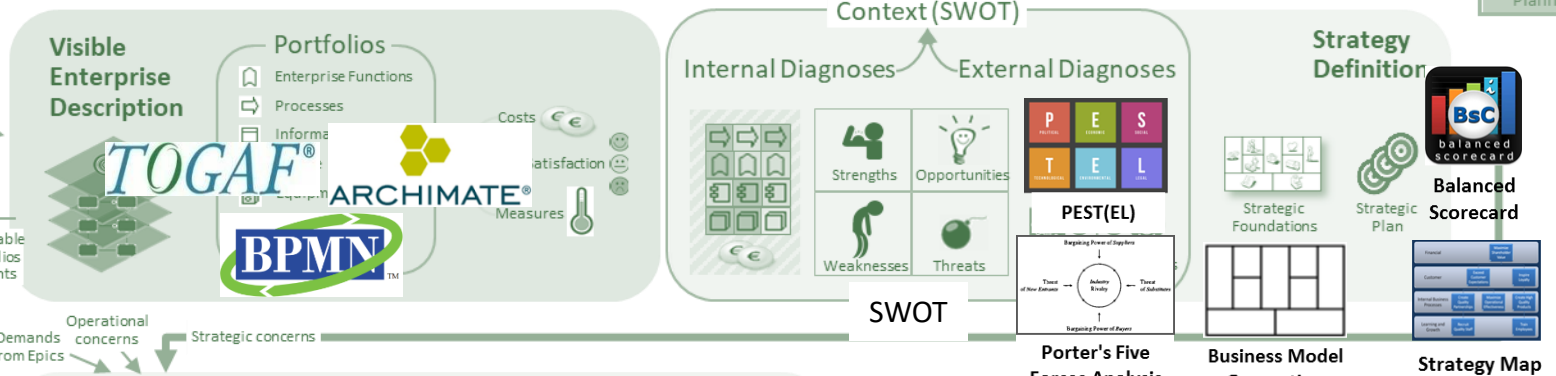


ISO/IEC/IEEE 42010

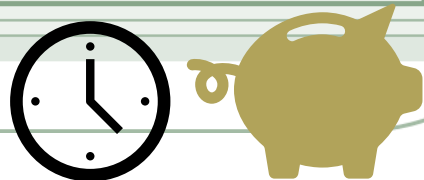
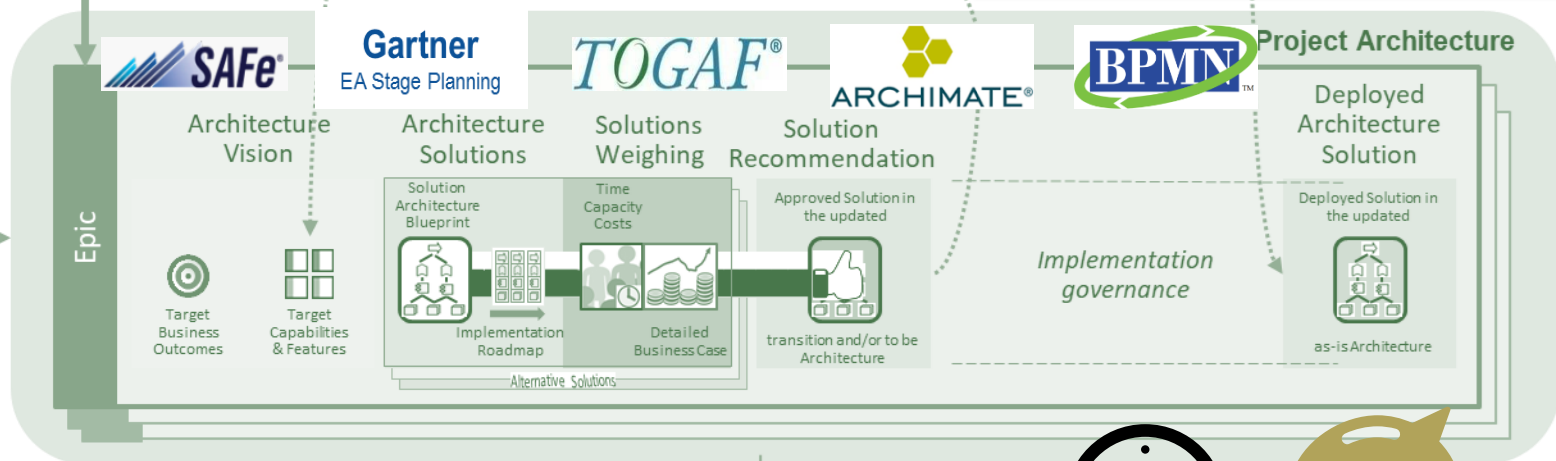
# Drive Changes to the Operating Platform

Legend

- Envisoning
- Architecture
- Planning



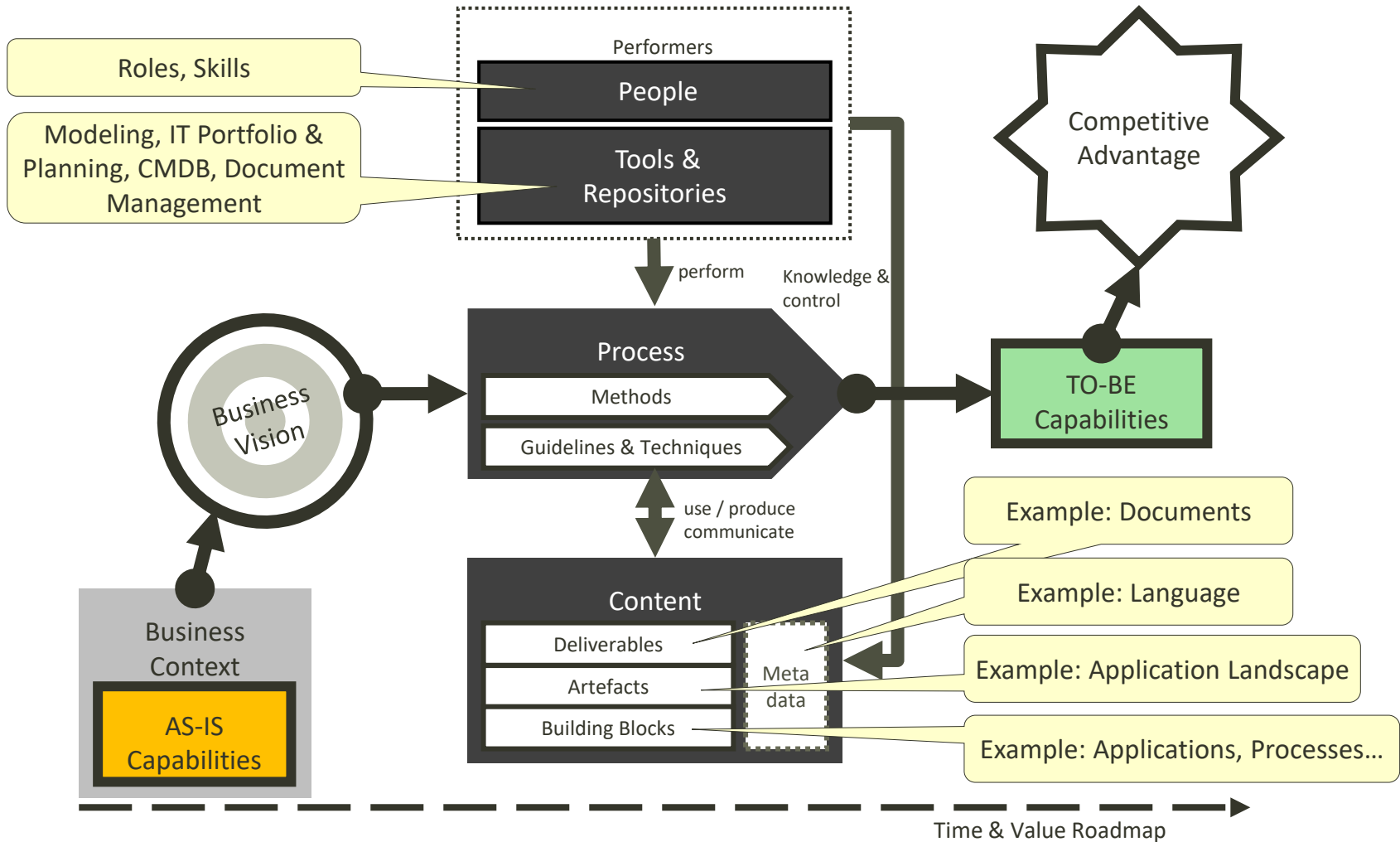
**Merged Standards and Best Practices**



Architecture Solution Contents

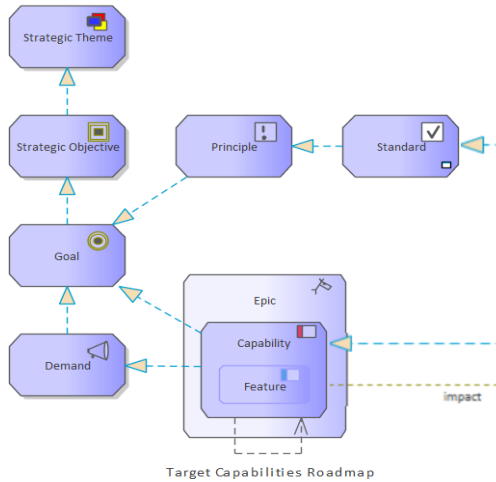
Re-useable Portfolios Contents

# All In One Architecture Framework

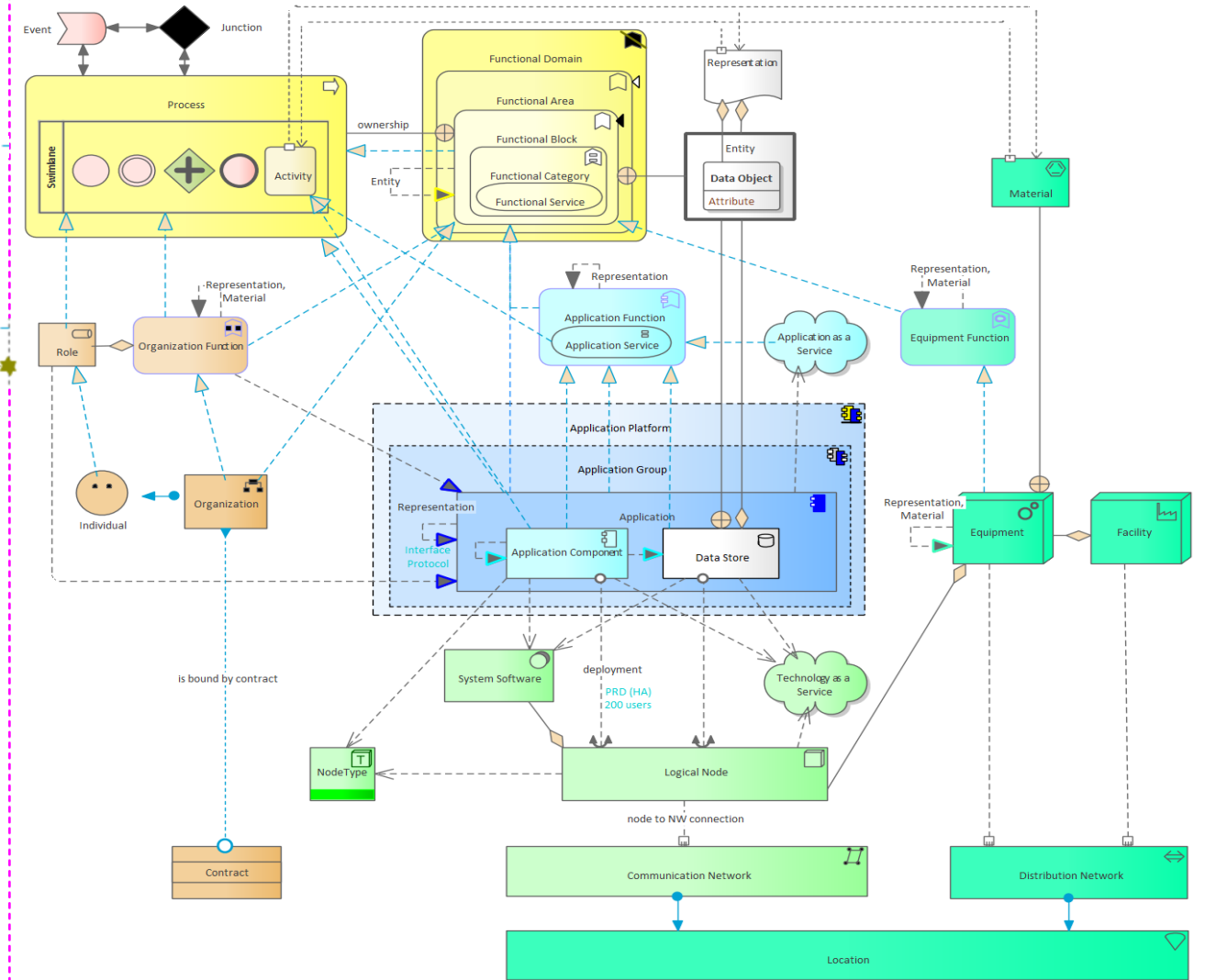


# One Common Language Eases Collaboration Between Many Different Roles

## VISION



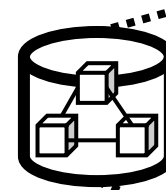
## OPERATING MODEL



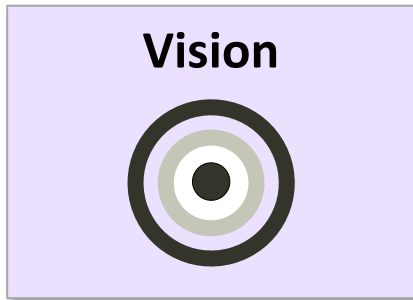
*A subset of the modeling language elements and connectors*

You can navigate and zoom-into the metamodel details on-line...

# The model repository is organized into 3 main sections...

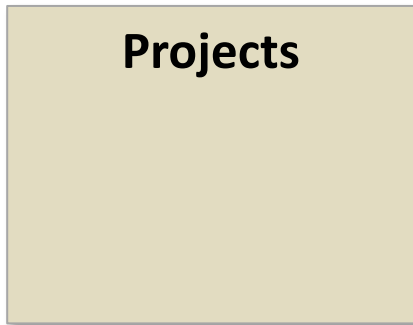


- ! Vision
- ! Visible Enterprise
- ! Projects

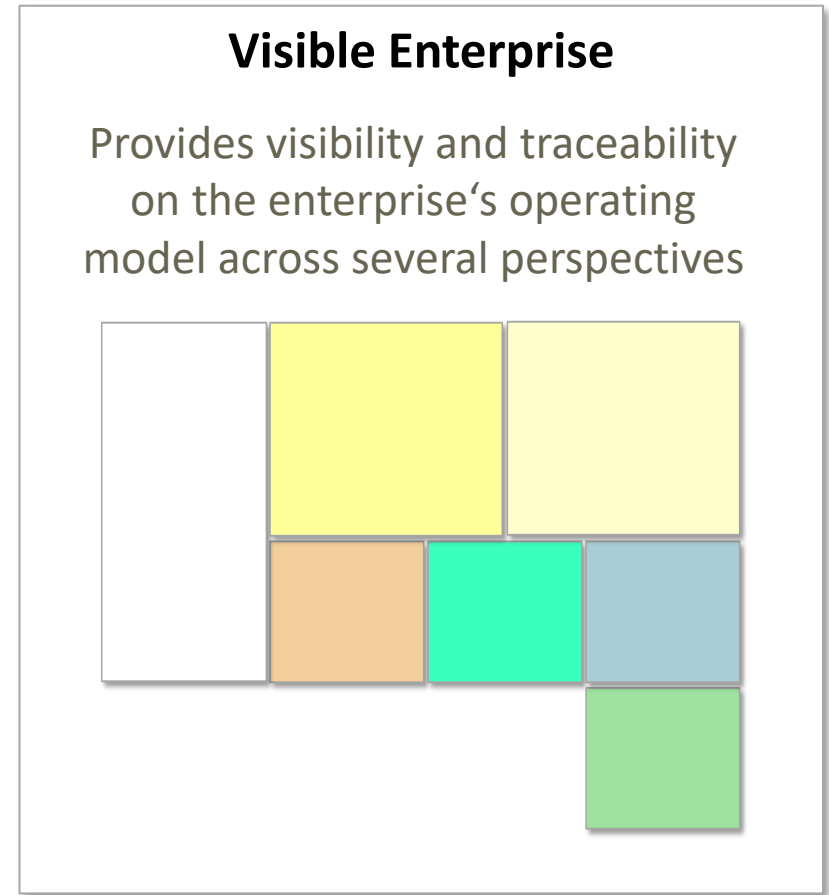


Changes to the enterprise are envisioned

↑ Projects/epics realize vision

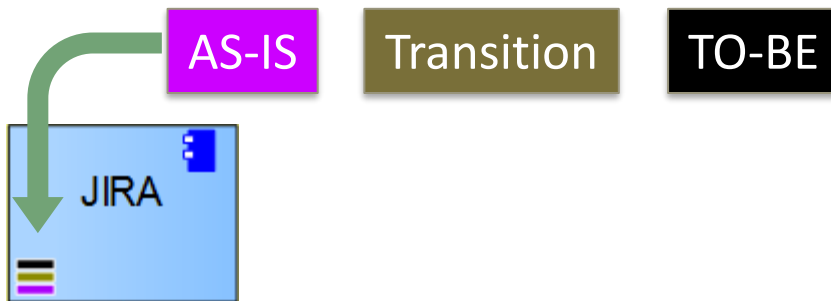
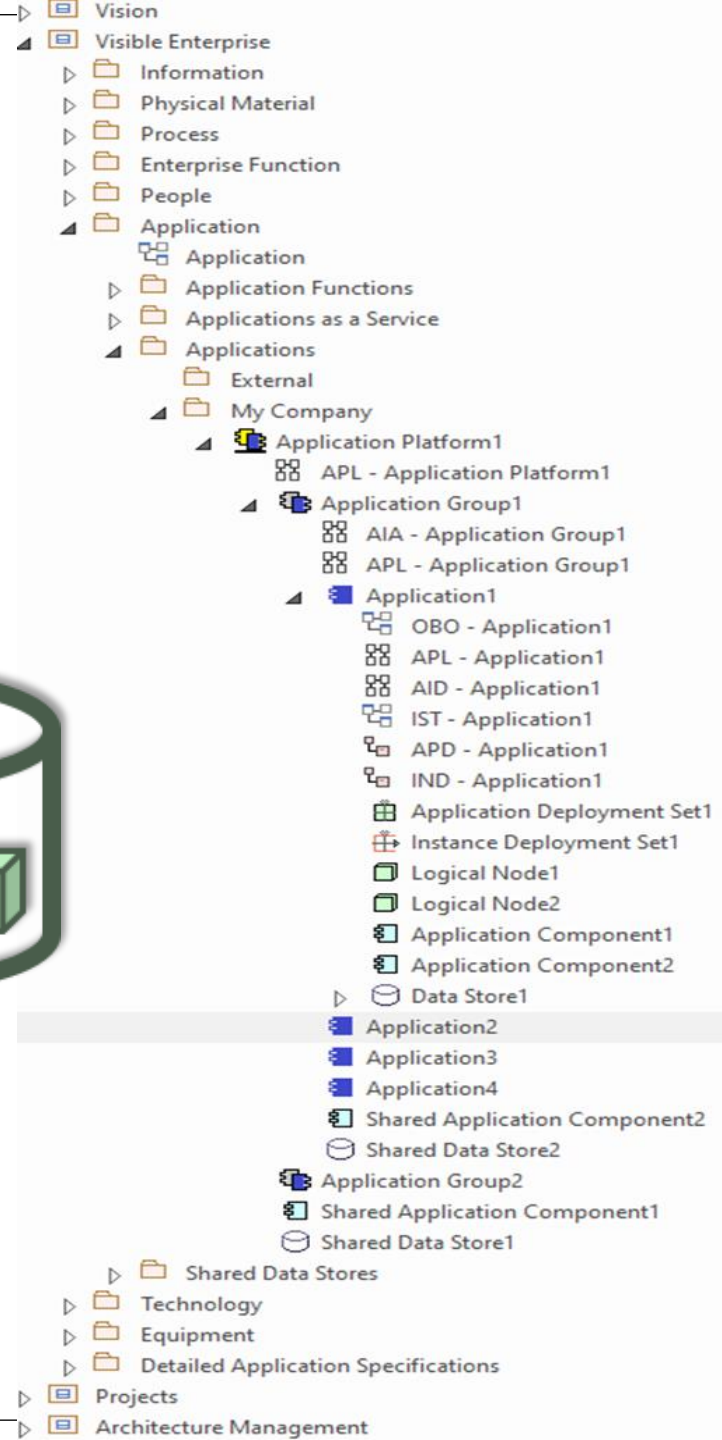
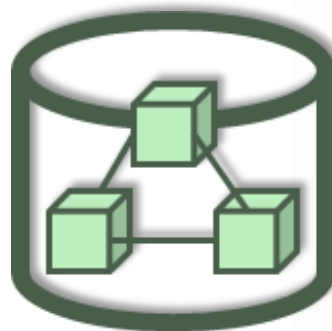


Projects/Epics change the enterprise following vision



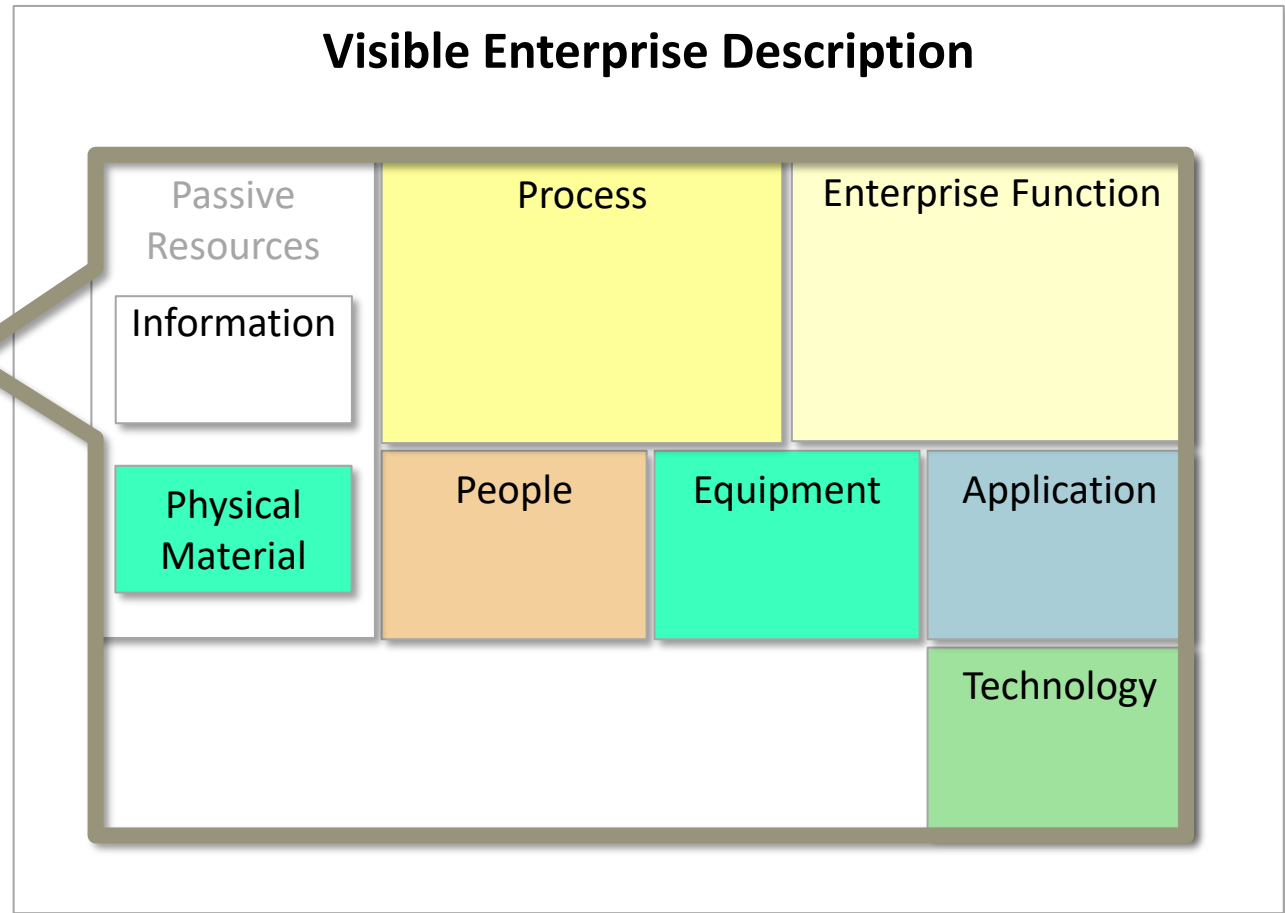
# Repository structure

Already prepared  
for you

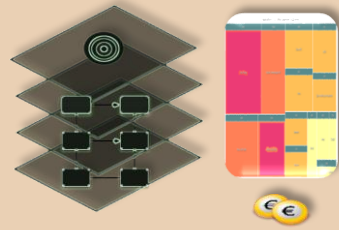


# The Visible Enterprise Portfolios folders represent architecture perspectives

**Architecture Perspectives**



Enterprise Visualization

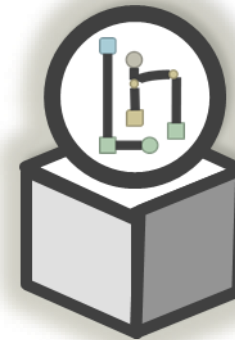


Strategy Definition

Strategy Execution

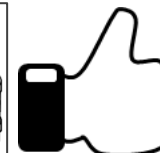
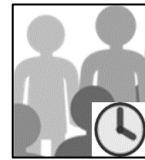
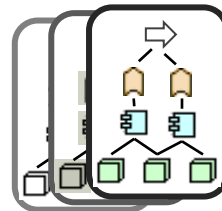
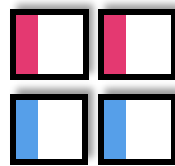


Capabilities Roadmaps

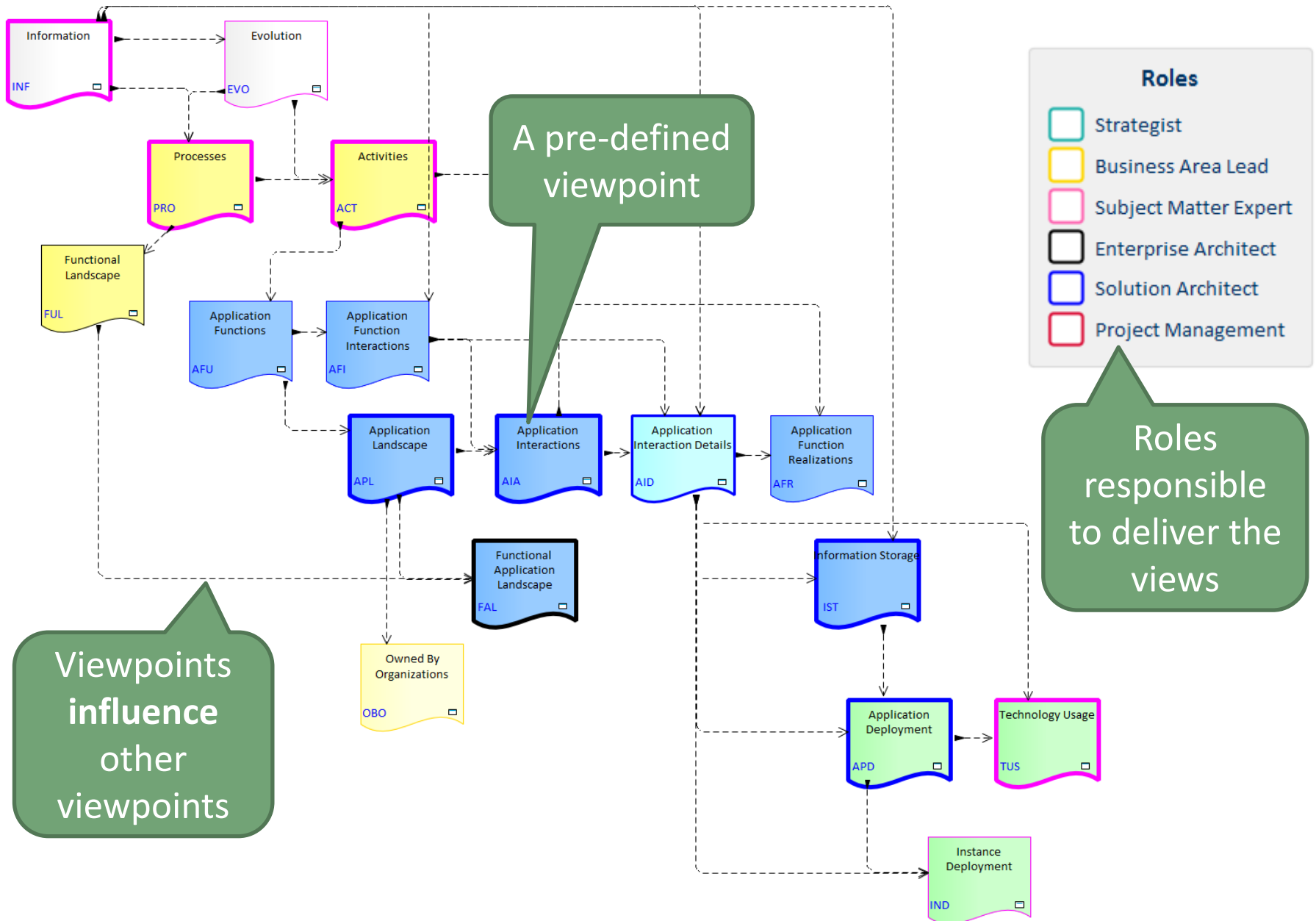


Project Architecture

Epic

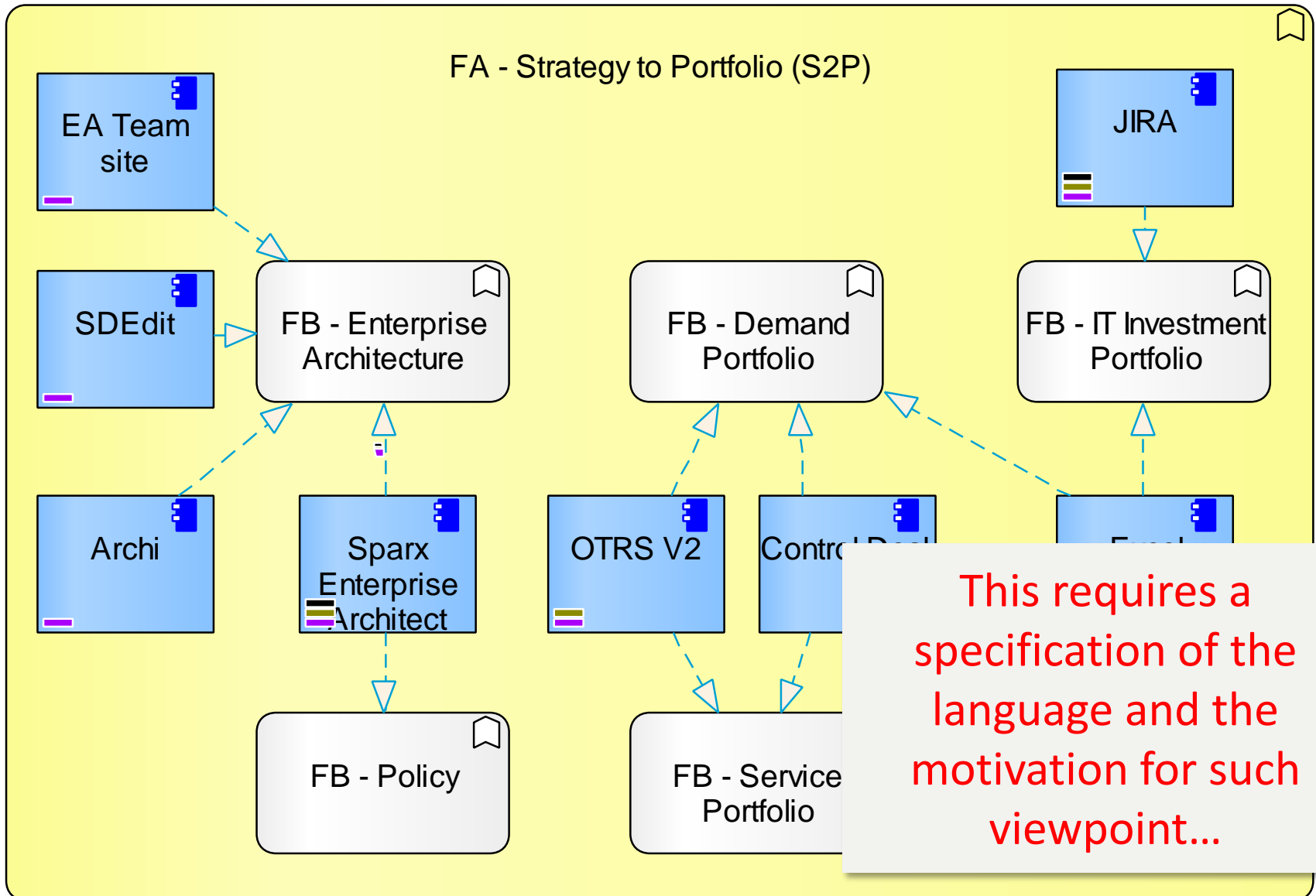


# Focus on IT Solution Architecture Viewpoints

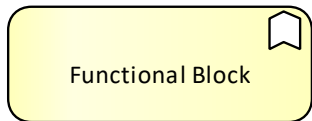




# Sample “Functional Application Landscape” View



# Prescriptive language for “Functional Application Landscape” views



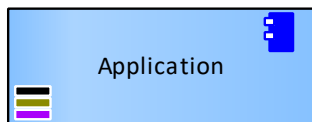
A Functional Block is a level 3 business function that belongs to some functional area.

The granularity and scope of a Functional Block is defined by identifying

- some homogenous set of information that the Functional Block is mastering
- a group of activities that fulfill the purpose of the functional block, that belong to some processes of same nature and that produce and use the information mastered by that Functional Block

*A business function is a behavior element that groups behavior based on a chosen set of criteria e.g. required business resources and/or skills, competencies, knowledge, etc.*

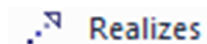
Inspired by Archimate



An application

- Is a self-contained unit of functionality as perceived by end-users
- Can be clearly mapped to some functional blocks
- Has its own specific set of application attribute values
- Is used by and billable to one or several Organizations
- Is owned by a single Organization
- Can be part of an Application Platform or an Application Group
- Encapsulates Applications Components and Application Interfaces
- Can exist at one or many specific points in time called "plateaus". Possible plateaus are AS-IS, TRANSITION and TO-BE.

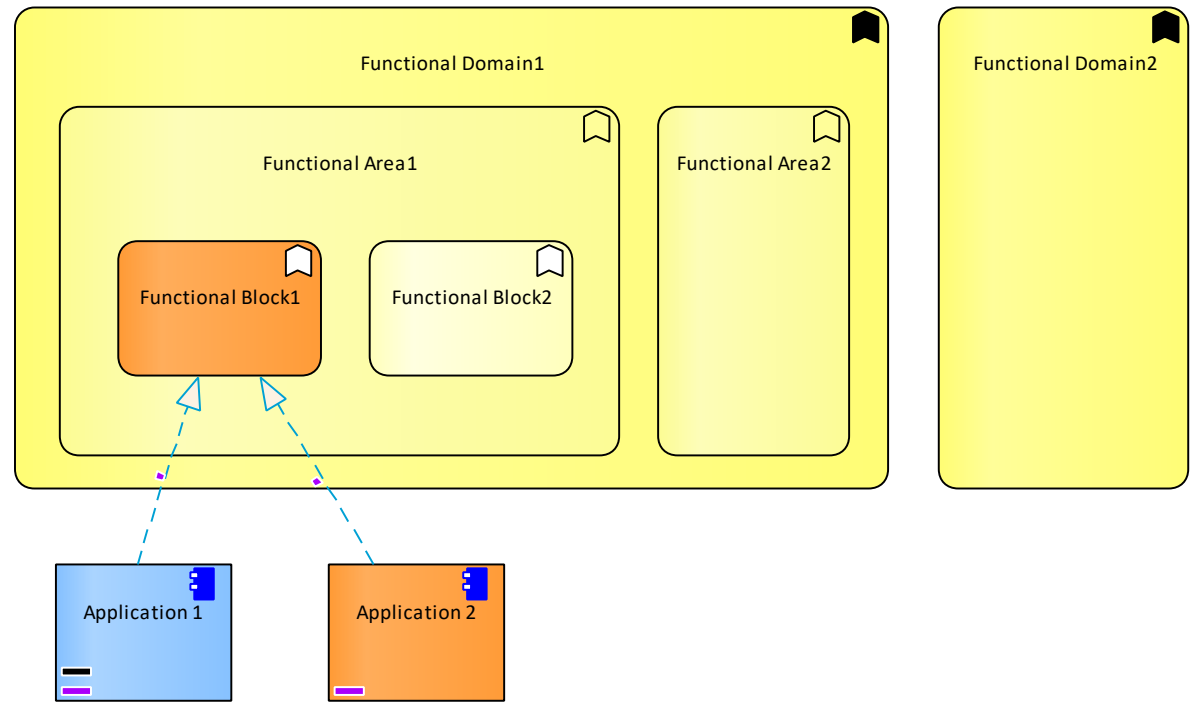
The name of an application component should preferably be a noun.



A **Realization** relationship indicates which concrete entities (“how”) realize which abstract entities (“what”). The realization relationship is used in a business operational sense (e.g., a role realizes a swim-lane of activities), but also in an IT context (e.g., an application realizes a functional block).

Inspired by UML & Archimate

# Motivation for creating “Functional Application Landscape” views



## This answers the following questions

When used as part of the **Visible Enterprise Description**

- Which **applications** support which **functional blocks**?

When used as part of a **Project Architecture**

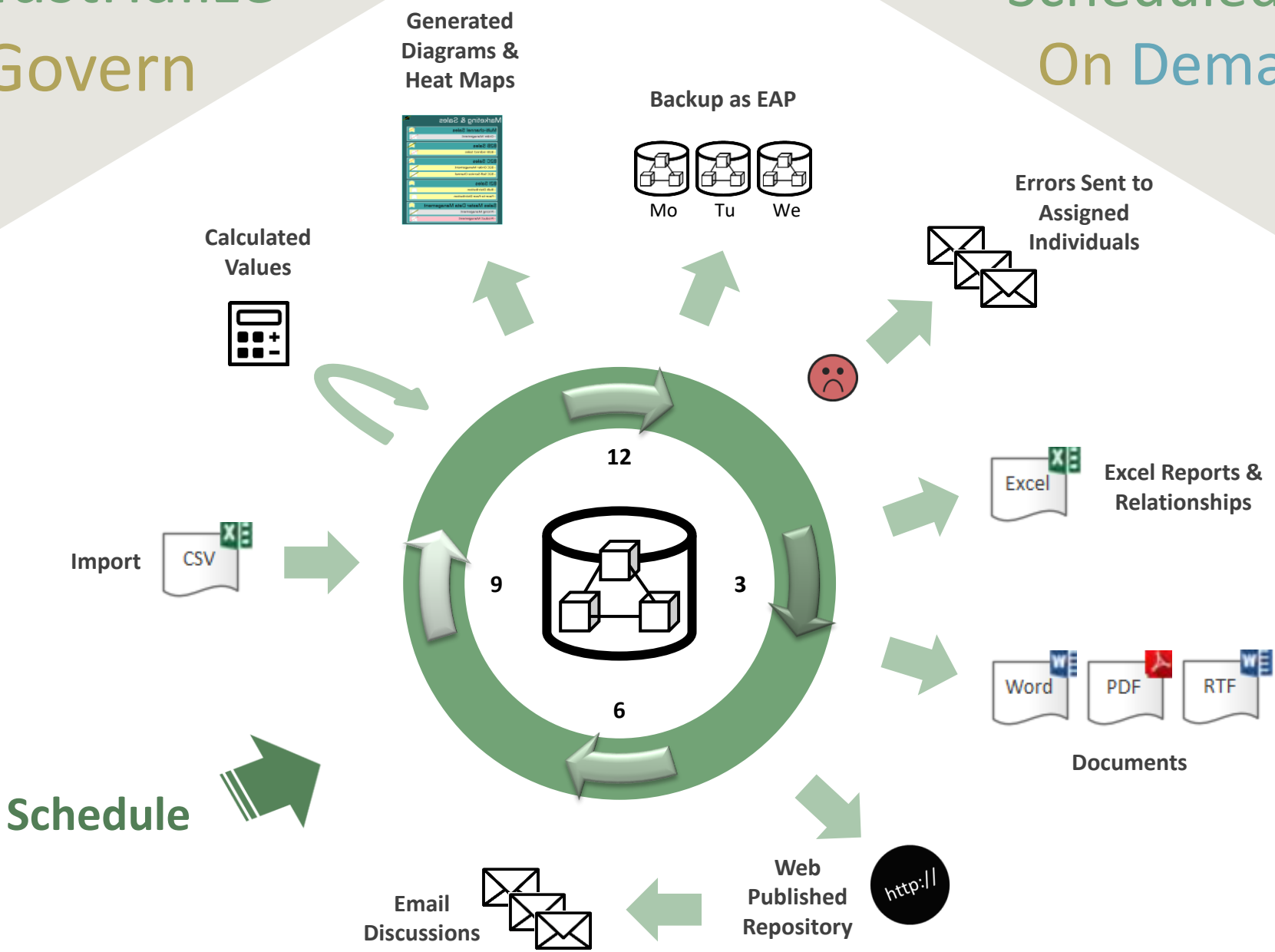
- Which **applications** are/will automate the **functional blocks** inside the scope of this project?

# Agenda

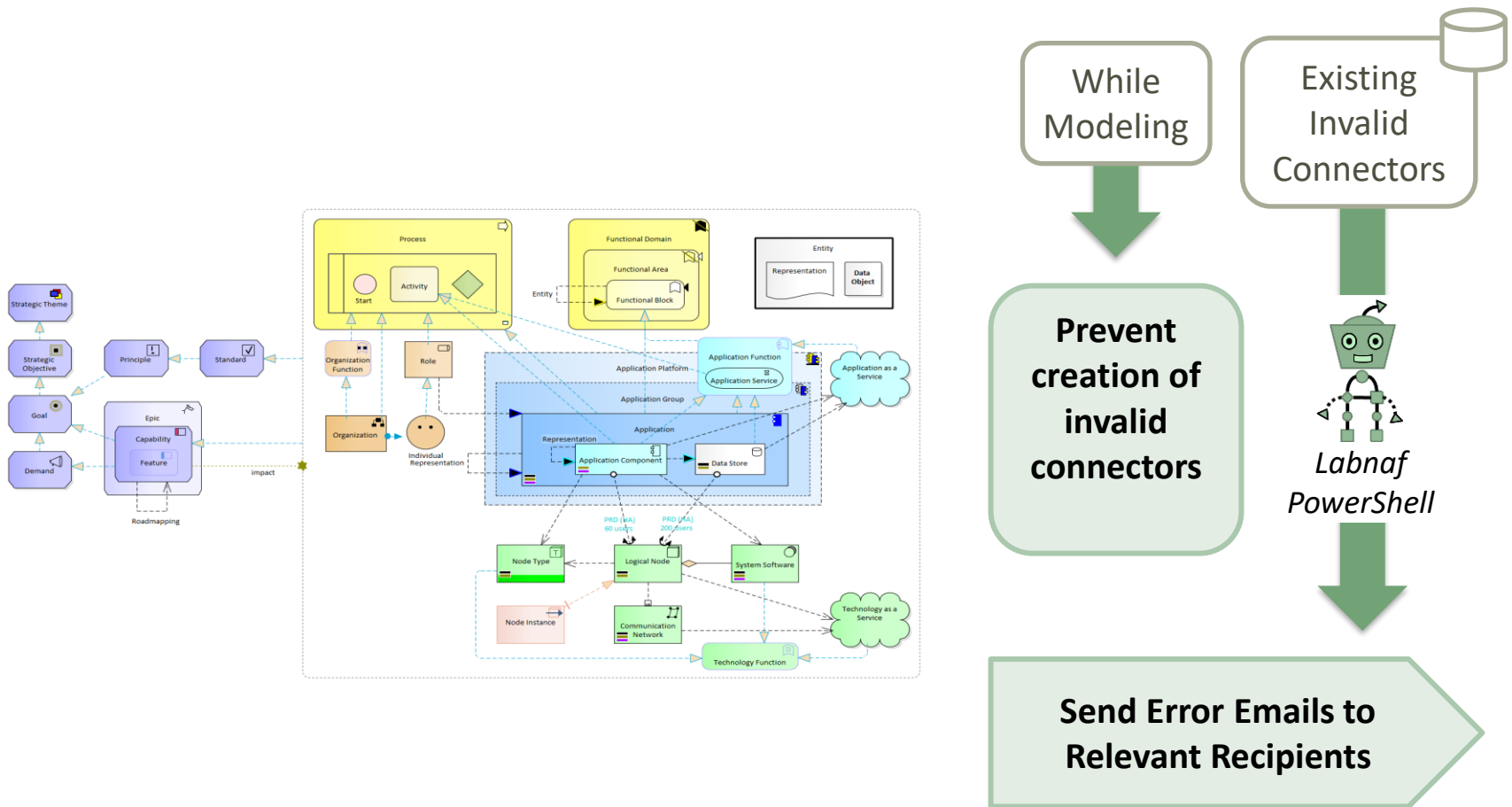
1. Transformation Challenges
2. Framework Overview
3. Tools

# Industrialize & Govern

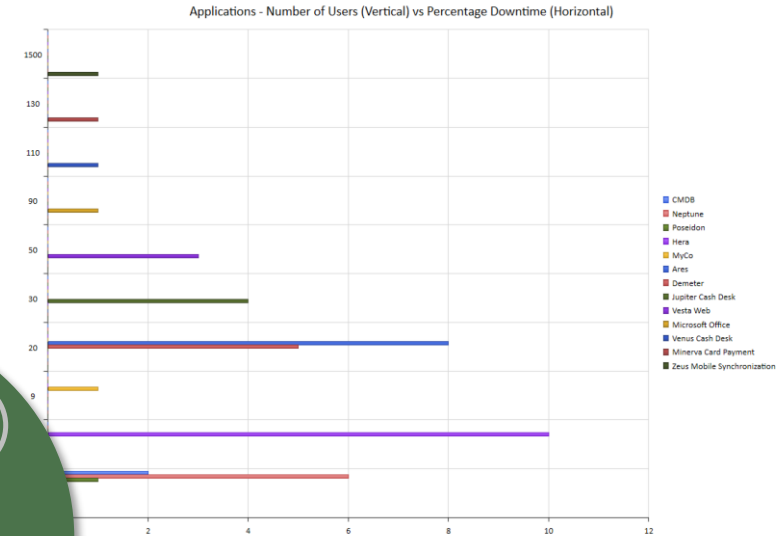
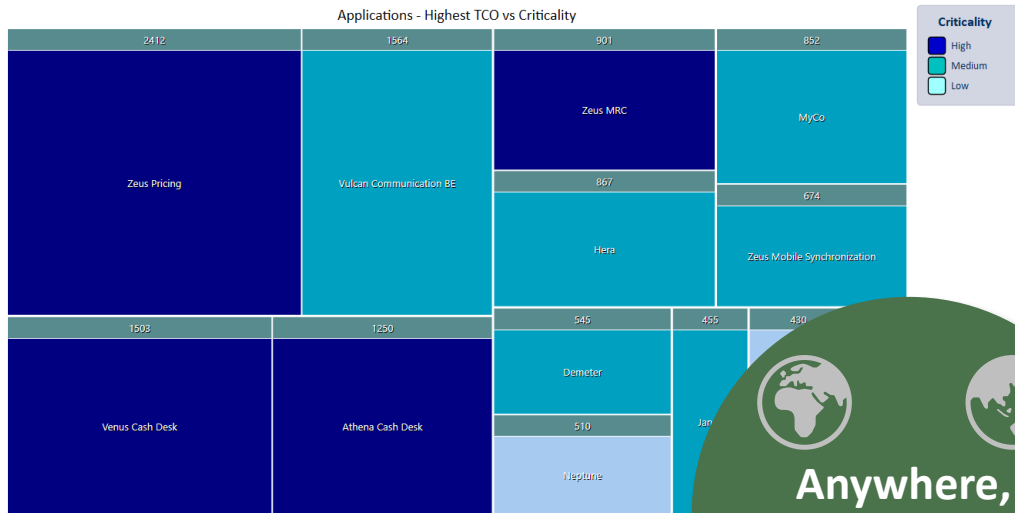
# Scheduled or On Demand



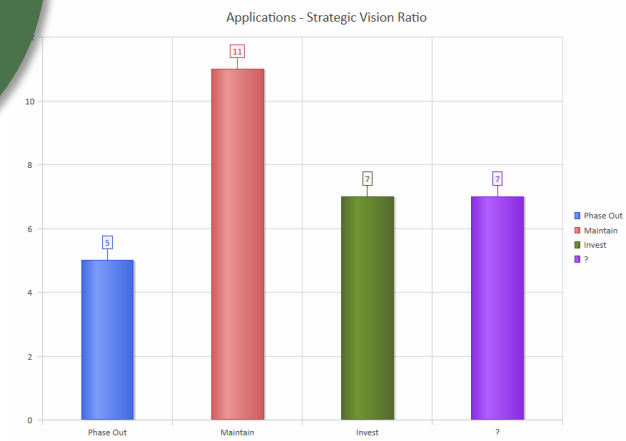
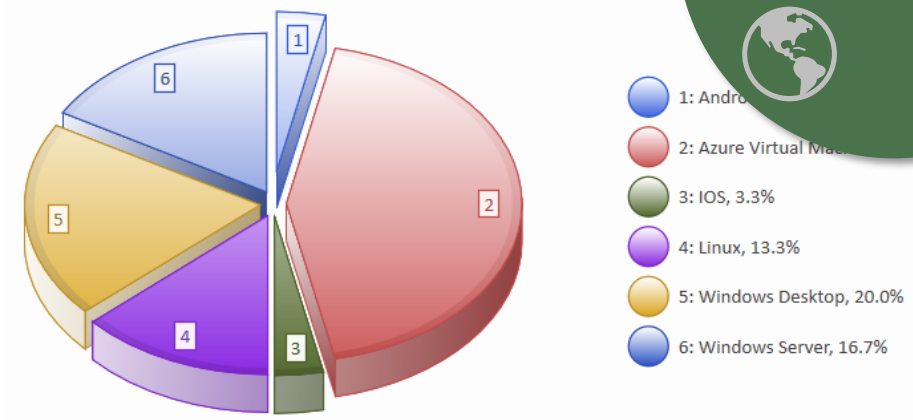
# The Language Metamodel is used both for documentation & automatic model validation



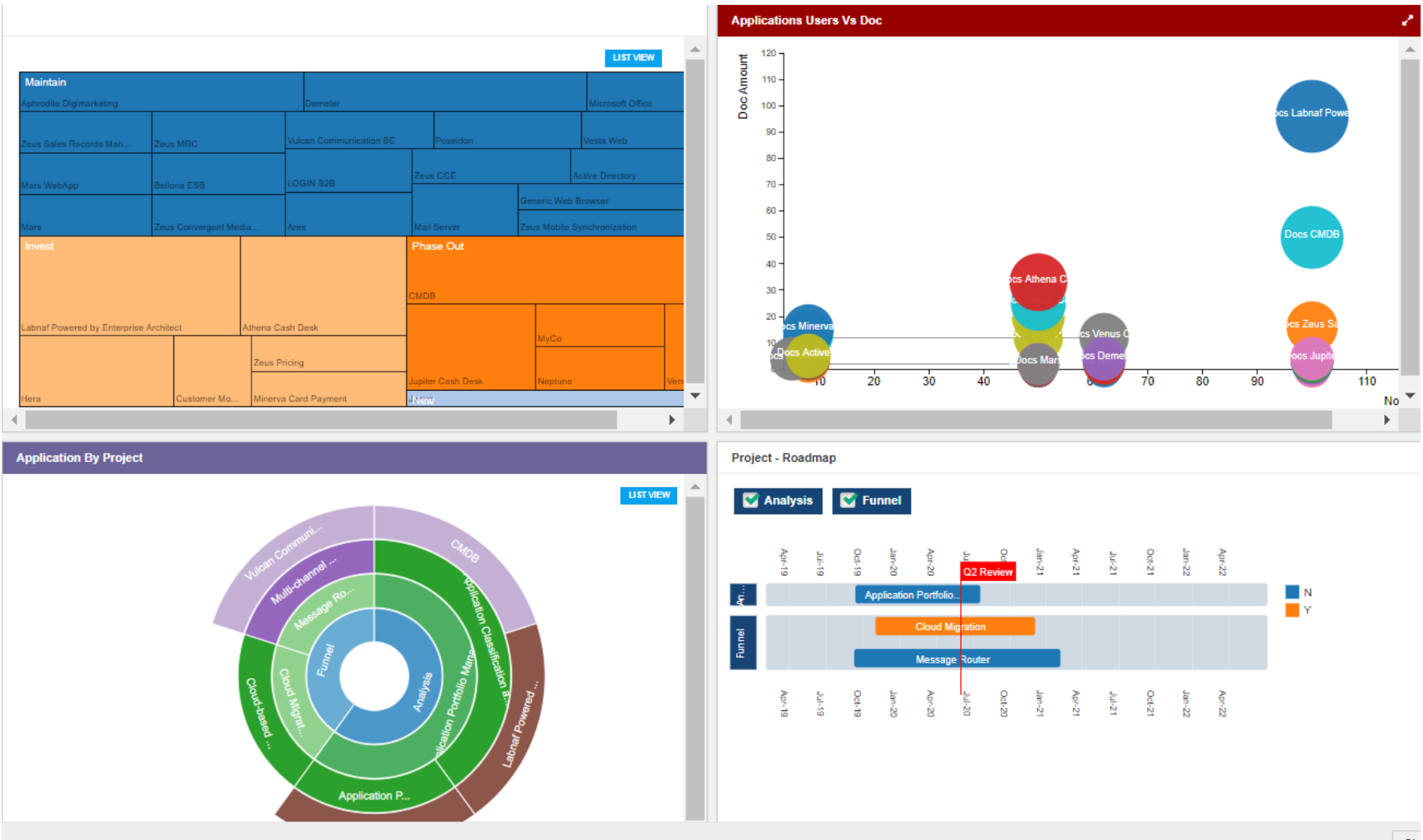
# Check Out your Real-time Dashboards and Take Decisions



Anywhere,  
on any device



# Prolaborate Option: C-Level Enterprise Visualization and Navigation





# Generate diagrams

Scheduled or On demand

Real navigable model elements  
(automatically resized following context)

The screenshot displays a software interface for generating diagrams. On the left, a hierarchical tree structure is shown under the heading 'Sales'. It includes categories like B2B Sales, B2C Sales, B2I Sales, and Sales Channel, each with sub-items. A green arrow points from the text 'Real navigable model elements' to a small icon in the top right corner of the diagram area. To the right of the diagram is a panel titled 'List of applications supporting the domain.' containing a table with application names. Further right is a 'Legend for Business Functions' panel with a table defining differentiators and externalization levels. Below the legend is a 'Nb of Applications / Business function' legend with color-coded boxes for 0, 1, and 2 or more applications. At the bottom right, there is a link to 'List of other Functional Domain diagram(s) as hyperlink(s)' and a small icon labeled 'EUI\_Sales'.

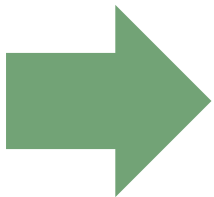
List of applications supporting the domain.	
'Application Name'	
Ares	
Athena Cash Desk	
Customer Mobile Application	
Demeter	
Hera	
Janus	
Jupiter Cash Desk	
LOGIN B2B	
Neptune	
Venus Cash Desk	
Zeus Common Pricing	

Legend for Business Functions	
Differentiator = ?	
= Y	
= N	
Externalized = Y	Entirely externalized
= P	Partially externalized
= N	Not externalized (default)

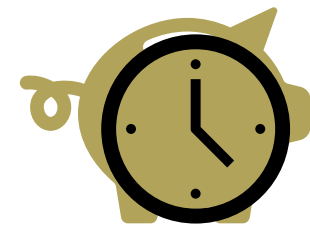
Nb of Applications / Business function	
	0
	1
	2 or more

[List of other Functional Domain diagram\(s\) as hyperlink\(s\)](#)

EUI\_Sales



- Time Savings
- Cost savings
- Diagram completeness
- Consistent diagram layout



# Generate Tabular Reports (Excel/CSV)

Scheduled or On demand

Reported collection of elements (e.g. applications) and relationships selected following any kind of rule

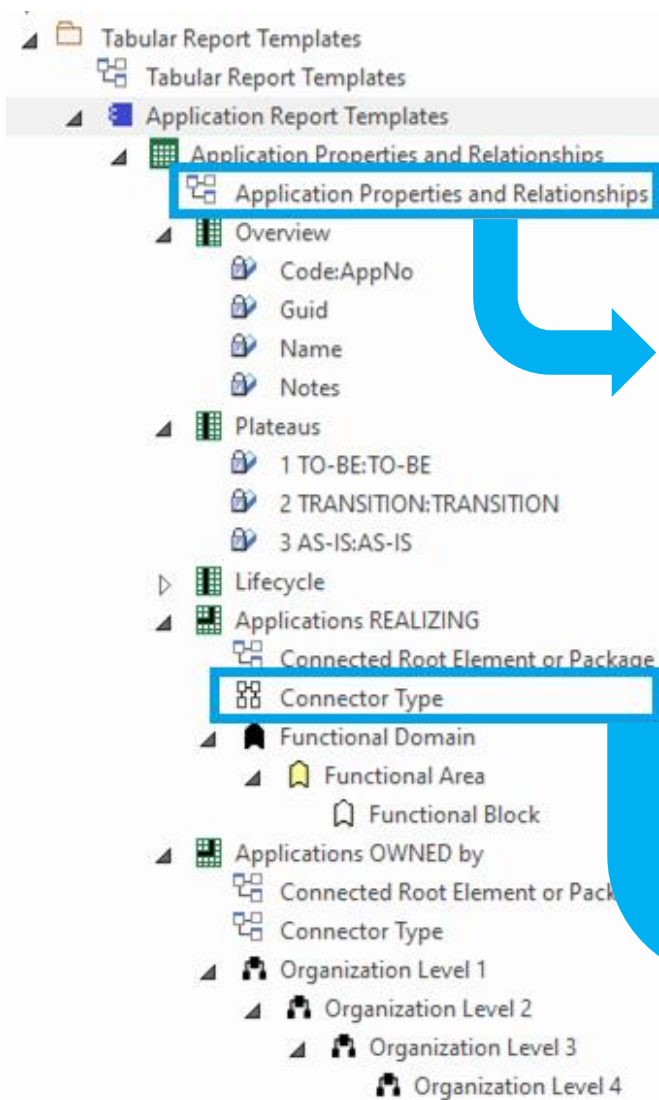
Element properties and/or tagged values with optional renaming and colored groupings

Specific connections in specific direction to specific types of elements.  
Automatic connection **consolidation** into parent element relationships.

Guid	AppNo	Name	Notes	AS-JS	TRANSITION	TO-BE	Lifecycle	Vision	Applications REALIZING Functional Dom	Applications REALIZING Functional Area	Applications REALIZING Functional Bloc
{3F:4	Active Directory			Y	Y	Y	?				
{5B:5	Ares			Y	Y	Y	?				
{78:6	Athena Cash Desk			N	Y	Y	Invest		X		
{D6:8	Bellona ESB			Y	Y	Y	?				
{39:7	CMDB			Y	Y	N	Phase Out			X	
{C4:10	Customer Mobile Application			N	N	Y	Invest				
{23:11	Demeter			Y	Y	N	?				
{39:12	Generic Web Browser			?	?	?	?				
{3E:13	Hera			Y	Y	Y	Invest		X		
{1C:15	Janus			N	?	?	Invest			X	
{F9:16	Jupiter Cash Desk			Y	Y	N	Phase Out		X		
{69:9	Labnaf Powered by Enterprise Architect			Y	Y	Y	Invest			X	
{6D:17	LOGIN B2B			Y	Y	Y	Maintain				
{3D:14	Mail Server			Y	Y	Y	Maintain				
{F7:18	Mars			Y	Y	?	Maintain		X		
{F8:19	Mars WebApp			Y	Y	?	Maintain				

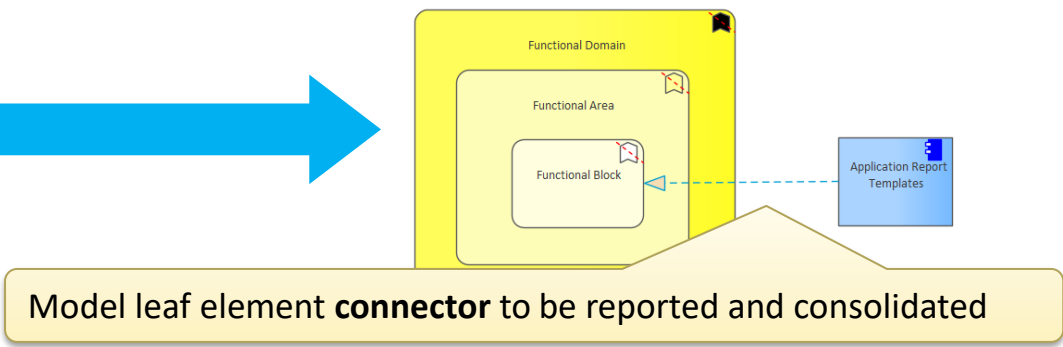
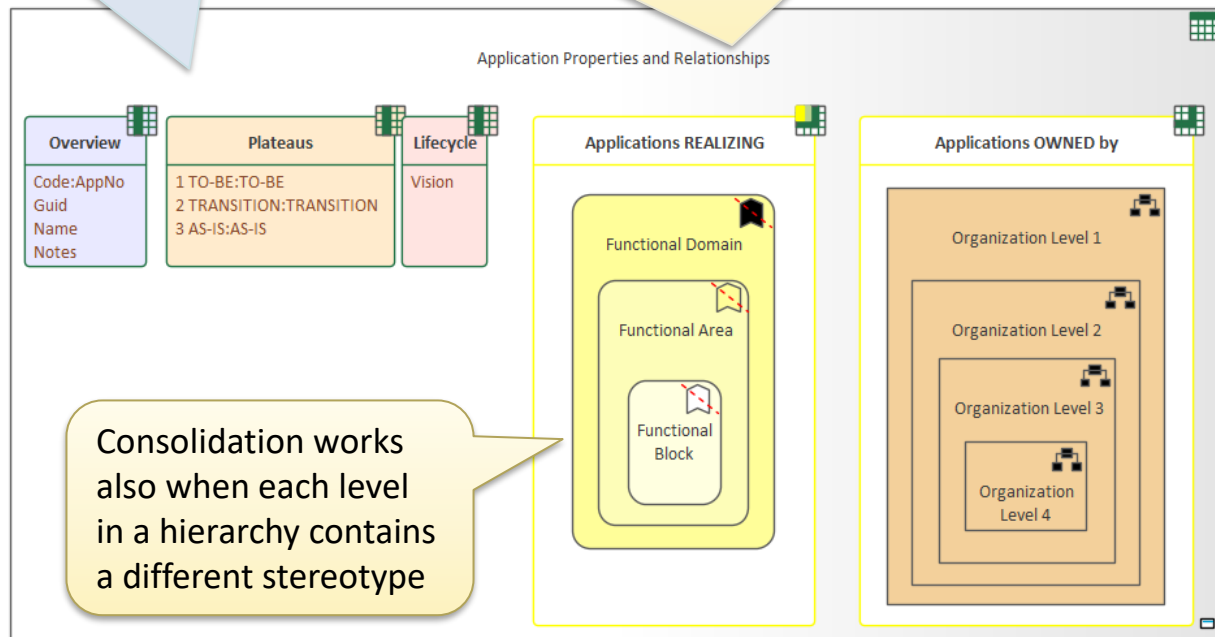
Filtering is automatically ON

## Model your tabular report



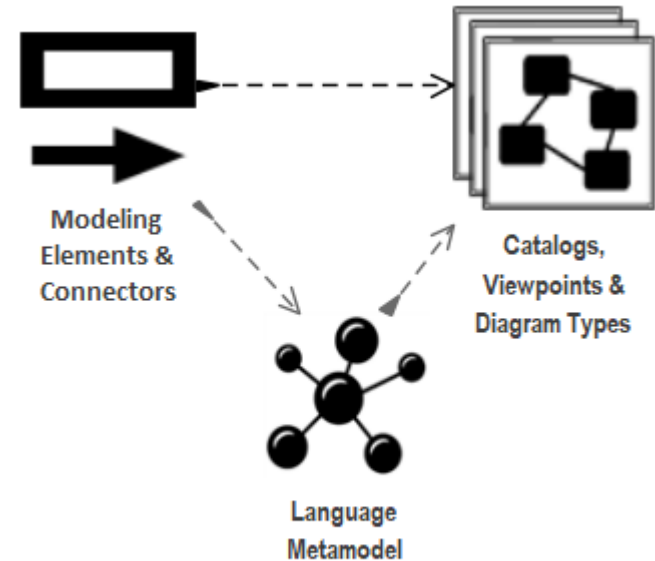
Model element properties and/or tagged values with optional renaming and colored groupings

Model specific connections in specific direction to specific types of elements. Model automatic connection **consolidation** into parent element relationships

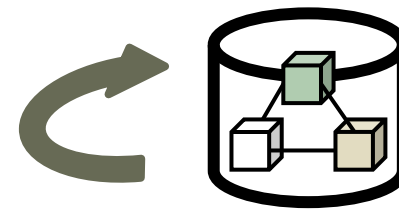


# Labnaf Customization Steps

1. Customize the language following your organization requirements



2. Adapt existing repository content



# The Customization Workbench guides you throughout the **Language customization** lifecycle

The screenshot shows the Labnaf Customization Workbench interface. At the top, there are buttons for 'Save' and 'Reload', and a 'Load MDG from:' section with radio buttons for 'Files' (selected) and 'AddIn'. An 'About' button is in the top right corner.

**Software Development Lifecycle Environment**

- Development folder: C:\ALT\SparxDev\Distributed\Labnaf\Environments\1\_Dev [Select Folder]
- Testing configuration folder: C:\ALT\SparxDev\Distributed\Labnaf\Environments\2\_Test [Select Folder] [Activate]
- Production configuration folder: H:\Tools\LabnafConfig [Select Folder] [Activate]

**Active Runtime Configuration on this PC: PROD**

- Load MDG file from folder: H:\Tools\LabnafConfig
- MDG file expected in this folder: H:\Tools\LabnafConfig\Labnaf\_Custom\_MDG.xml (2019-03-05 11:59:12)
- Connectors Definition used (always from PROD): H:\Tools\LabnafConfig\Labnaf\_Custom\_QuickLinks.xml (2019-03-04 17:36:25)

**Software Development Lifecycle** Time Last Changed

**MDG Development**

- Edit MDG Source Model (EAP) C:\ALT\SparxDev\Distributed\Labnaf\Environments\1\_Dev\Labnaf\_Custom (2019-03-05 12:50:36)
- Edit MDG Deployment File (MTS) C:\ALT\SparxDev\Distributed\Labnaf\Environments\1\_Dev\Labnaf\_Custom (2019-03-05 11:24:02)
- Generate MDG => Testing**

**MDG Testing**

- Activate Testing Configuration** C:\ALT\SparxDev\Distributed\Labnaf\Environments\2\_Test\Labnaf\_Custom (2019-03-05 11:59:12)
- Open Testing Repository C:\ALT\SparxDev\Distributed\Labnaf\Environments\2\_Test\Labnaf\_Test\_Re (2019-03-05 11:41:16)
- Copy MDG from Testing => Production**

**Configuring Production**

- Activate Production Configuration** H:\Tools\LabnafConfig\Labnaf\_Custom\_MDG.xml (2019-03-05 11:59:12)
- Open Production Repository & Edit Metamodel H:\Tools\LabnafConfig\Labnaf\_Prod\_Repository.eap (2019-02-28 18:01:07)
- Generate Connectors Definition => Production** H:\Tools\LabnafConfig\Labnaf\_Custom\_QuickLinks.xml (2019-03-04 17:36:25)



# *Straight through collaboration with a single language from idea to software in production*

**We play many different roles, but...**

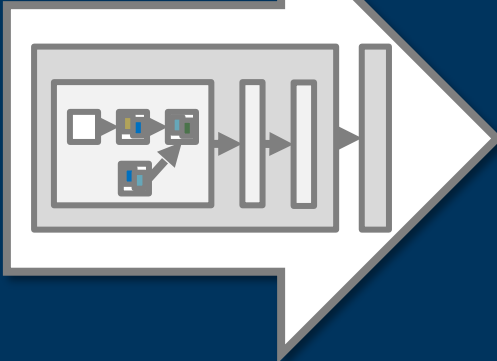
We speak the same language

We share the same information in the same repository

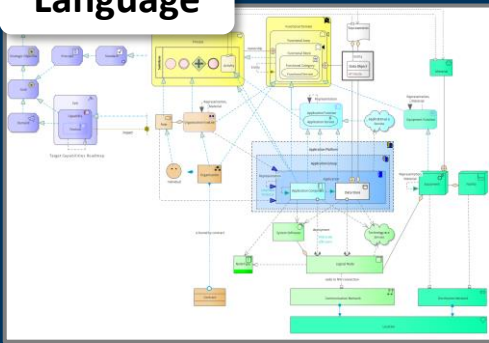
We follow the same process and we use the same tool

**We collaborate effectively**

## Transformation Process



## Language



## Shared Repository



All in one



Actionable

Powered by



Column	Row	Content
...	...	...



Powered by



[www.sparxsystems.eu](http://www.sparxsystems.eu)

Request a Demo & Educational material

[www.Labnaf.one](http://www.Labnaf.one)

Thank you!