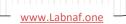
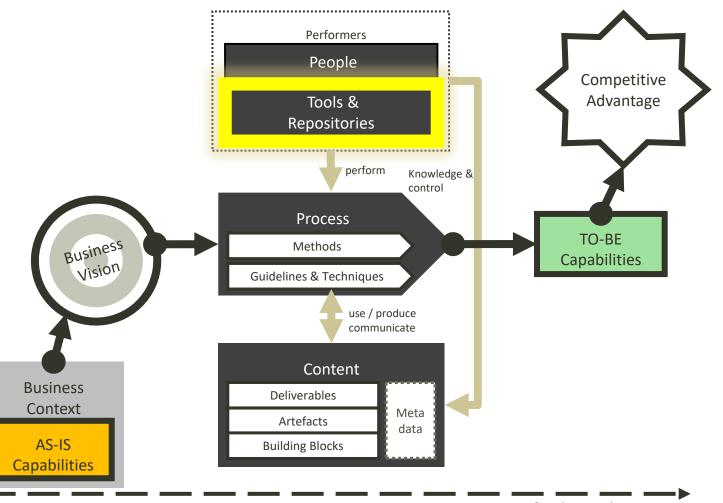


Unified Framework for Driving Transformations

Tools & Repository



Tools & Repositories



Time & Value Roadmap





EA Tools: State of the Industry (ct'd)

- EA tools are very expensive
- Focus is typically Modeling OR IT portfolio management
- Poor metamodel semantics. Hard to adapt the metamodel if the model is already there
- Limited number of skills for each tool
- Limited Modeling continuum across levels of details
- They do not articulate any end to end process from strategy down to portfolio



Tool: How we resolved...



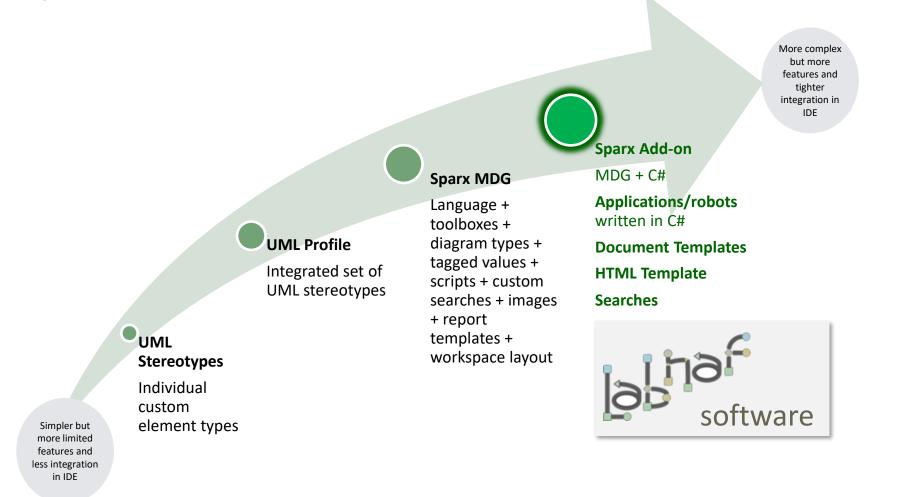
- Select a Modeling tool that is
 - Affordable
 - Reliable, scalable and secure
 - Very flexible, extensible, easy to configure and to integrate
 - Most common in the industry (750 K licenses worldwide)
 - Known by the largest number of modelers
- Integrate our language, a dynamic metamodel, diagram types and toolboxes in Sparx
- Define an Architecture Repository Organization
- Develop our Architecture Repository Guidance & Content Web Site
- Create robots (document and diagram generation, model validation, value calculation...)



Sparx EA Software Development Kit (SDK)

Enables multiple levels of modeling solution development and integration

Higher level of integration = more work



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Functional

Labnaf is a **unified solution for driving transformations** (all architecture roles, strategy, security)

- Unified transformation process, modeling language, metamodel, repository, and tools
- Instant framework Customization
- Tools leverages the Sparx Systems development platform
- Ready to go



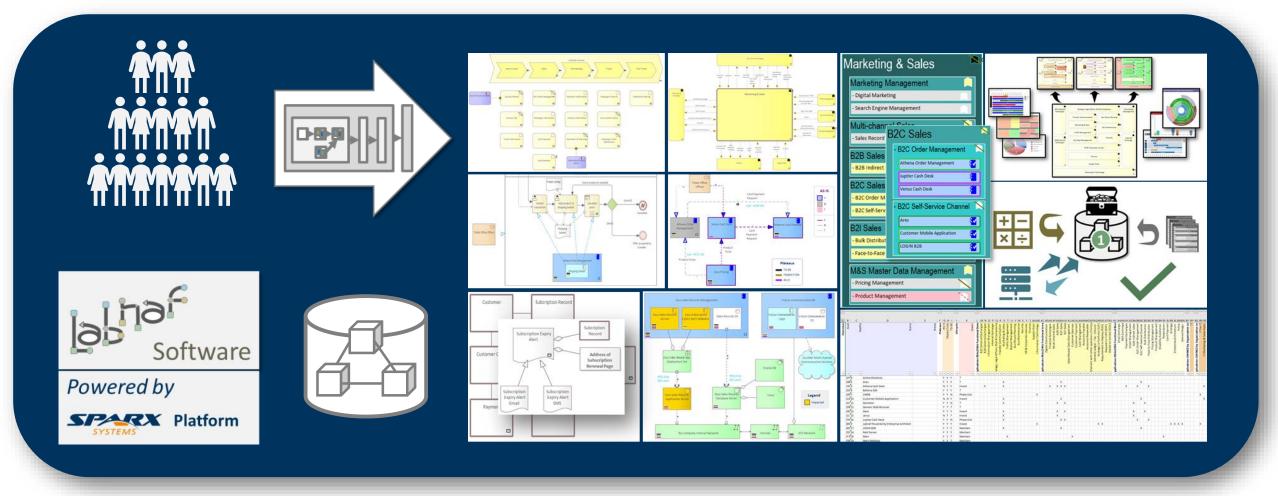


Sparx Systems provides a **technical platform** for **collaborative modeling and visualization**

- Reliable, scalable and secure; Very flexible, extensible, easy to configure and to integrate
- 1 million+ licenses worldwide; Known by the largest number of modelers

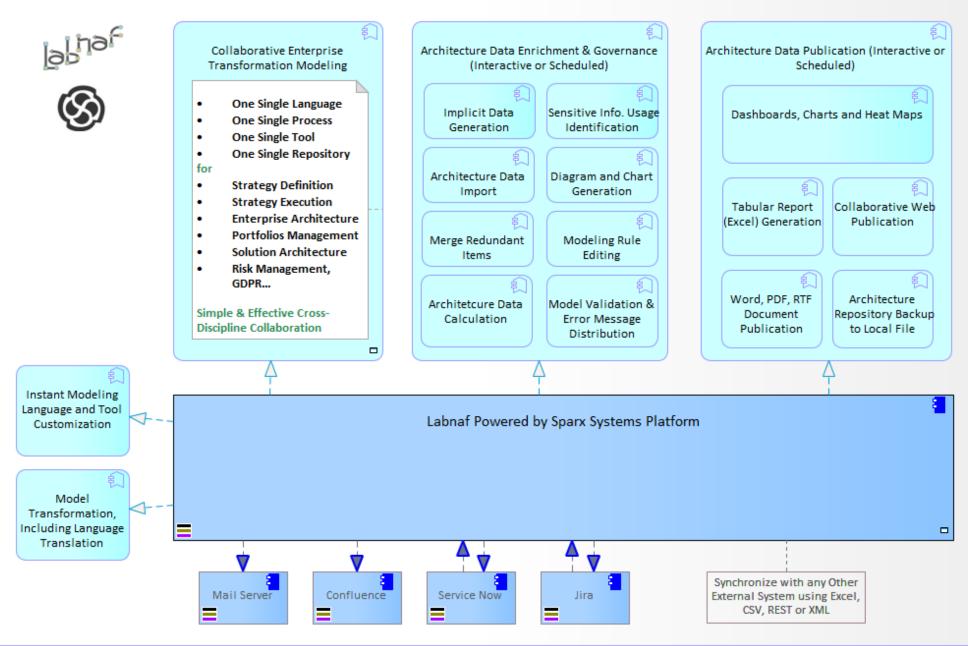


Labnaf Software Features





Collaborative Enterprise Visualization and Transformation From Strategy Down to the Code



[h

On Premise or **Cloud SaaS**



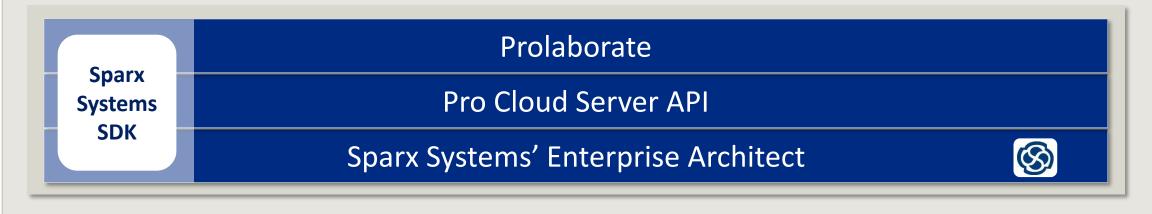
Instant Platform Customizations

Enterprise Transformation Platform

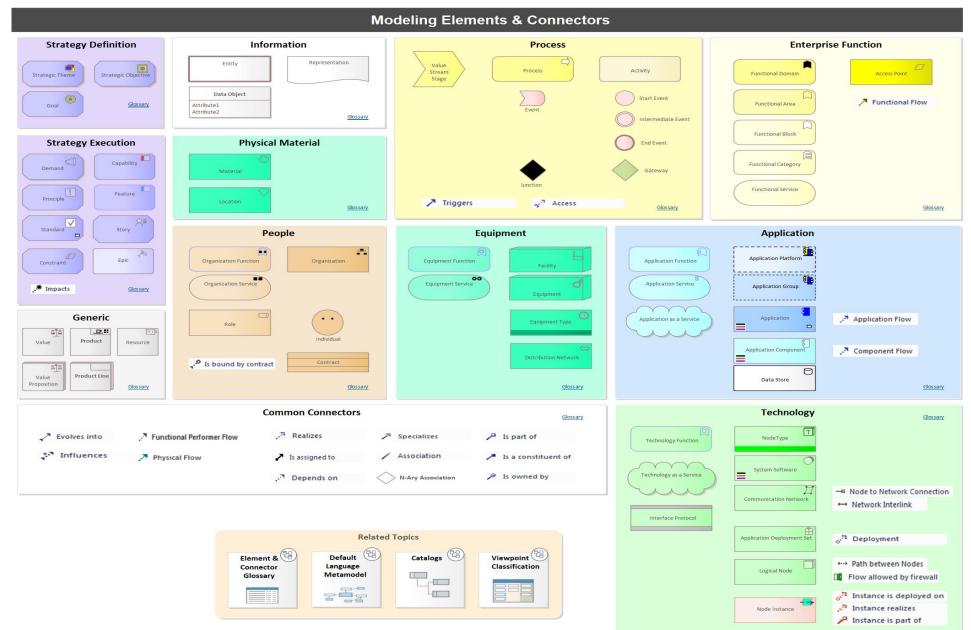
Architecture, Strategy, Integrated Portfolios, Information Risk, Incident and Unavailability Governance

Productivity Tools

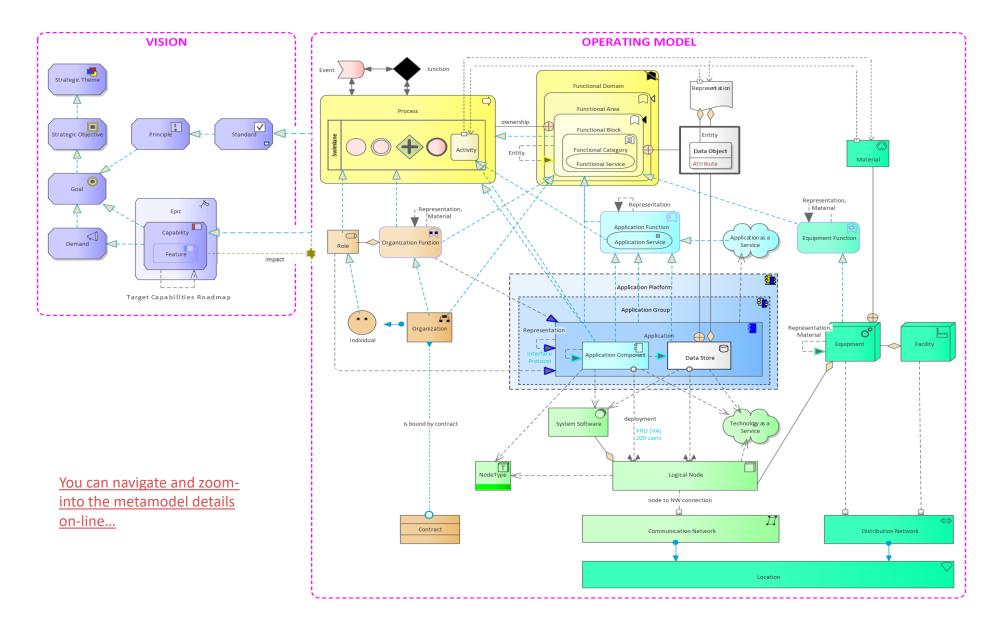
automates 90% of your modeling, validation, integration, data enrichment, reporting and charting tasks



One Single Modeling Language & Terminology

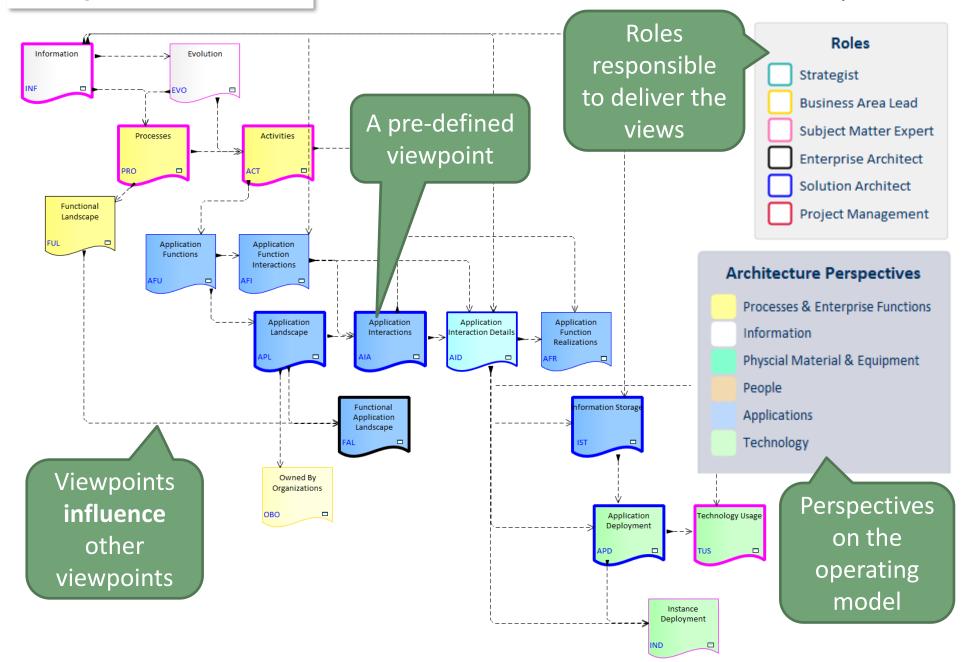


A subset of the language Metamodel



Viewpoints Level 3/3

Focus on IT Solution Architecture Viewpoints

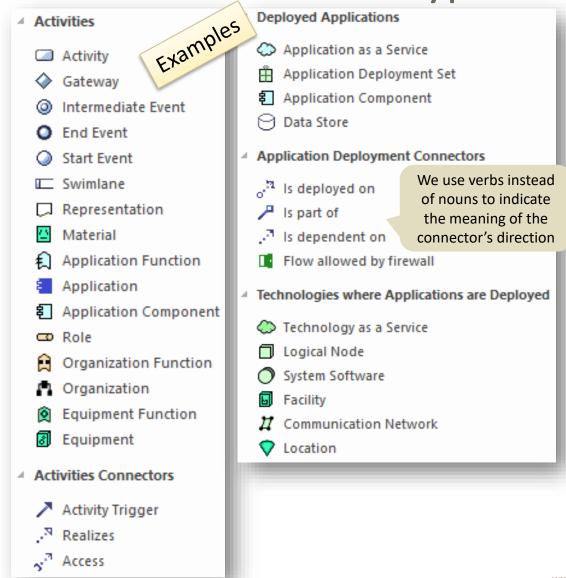


(h)

Each type of architecture view has its toolbox with element and connector types

Elements & Connectors

- Some are inspired by standards
- Some are proprietary



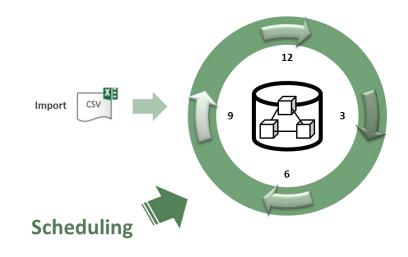
New elements with properties

Code m AS-IS 1 ISITION D TO-BE H Α В vision Note Nan SAN -**• • • •** 1 Type Stereotype 2 Component LABN_Application Active Directory 4 Y Y Y ? Ares YYY 3 Component LABN_Application ? LABN_Application Athena Cash Desk NYY Invest 4 Component ? LABN_Application Bellona ESB YYY 5 Component CMDB Y Y N Phase Out 6 Component LABN_Application 7 Component LABN_Application **Customer Mobile Application** 10 N N Y Invest 8 Component LABN_Application Demeter 11 Y Y N ? 12 ? ? ? ? ? LABN_Application 9 Component Generic Web Browser LABN_Application 13 Y Y Y Invest 10 Component Hera 15 N ? ? Invest 11 Component LABN_Application Janus Jupiter Cash Desk 16 Y Y N Phase Out 12 Component LABN_Application 9 Y Y Y Invest 13 Component LABN_Application Labnaf Powered by Enterprise Architect 14 Component LABN_Application LOGIN B2B 17 Y Y Y Maintain

Import

Properties of existing elements

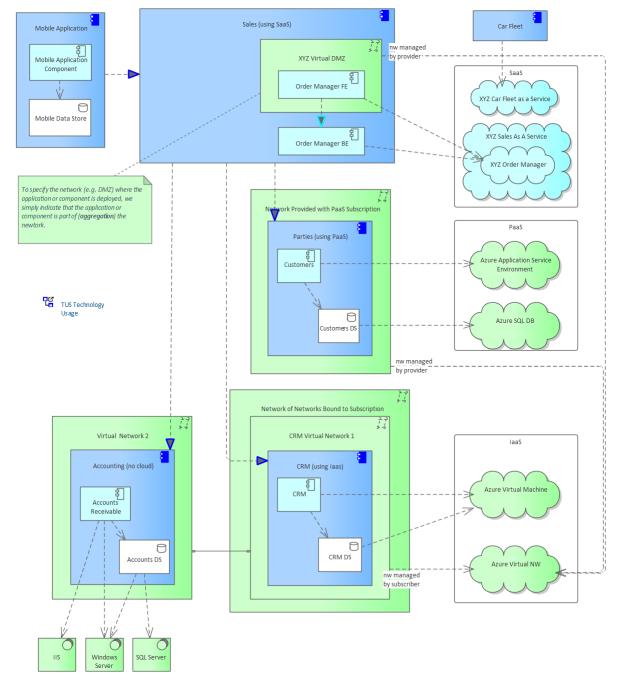
		Scheduled or On demand			D	E
1	Guid		Criticality	Nb Users	Pct Unavailable	TCO
2	{3F9A5A7C-60C5-4e	38-B107-F7BB64C1DAC6}	M	150	0	120
3	{5B0A6CBE-AD19-43	a2-A142-F0974464E0A9}	L	20	8	430
4	{78169A07-6AE7-48a	9-A2A7-FB048F78F998}	н	62	0	1250
5	{D67EC76A-23D7-45	12-82C9-E5B2ED50A8C2}	М	62	0	69
6	{3908BC63-B69A-4e	db-B29B-81D1344168FC}	М	5	2	258
7	{C4C33055-6CE7-4ea	e-ABB3-F68EDB82A4FA}	М	1600	0	5
8	{2316C3F0-D4F5-439	1-AFB1-6F0CBFE3ACE5}	М	20	5	545
9	{3906D4EE-6470-4f74	4-A706-DA9A6CC19E8D}	М	130	0	62
10	{3E048B62-B905-41e	c-8464-7CDC36594294}	М	8	10	867





Model

- Cloud Computing
- Ecosystems
- IoT
- GDPR
- AI
- ...

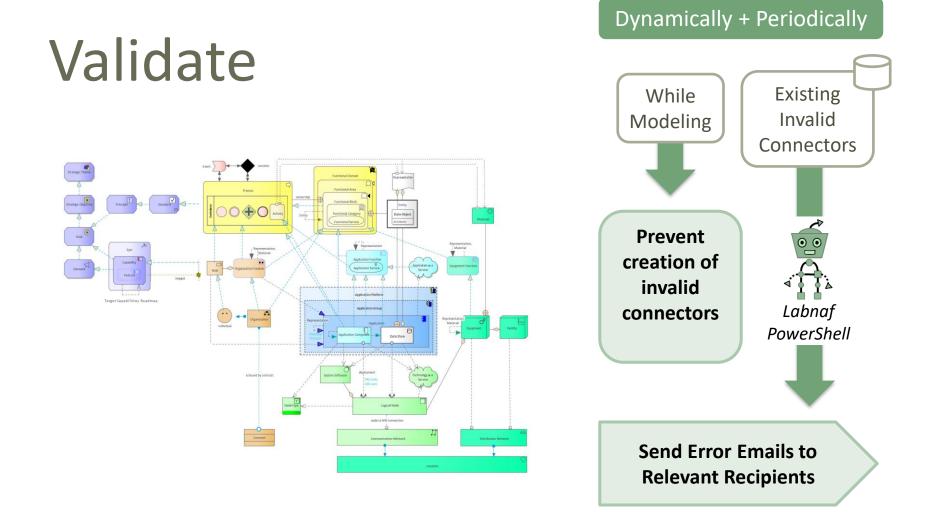


Calculate

Model your value calculations

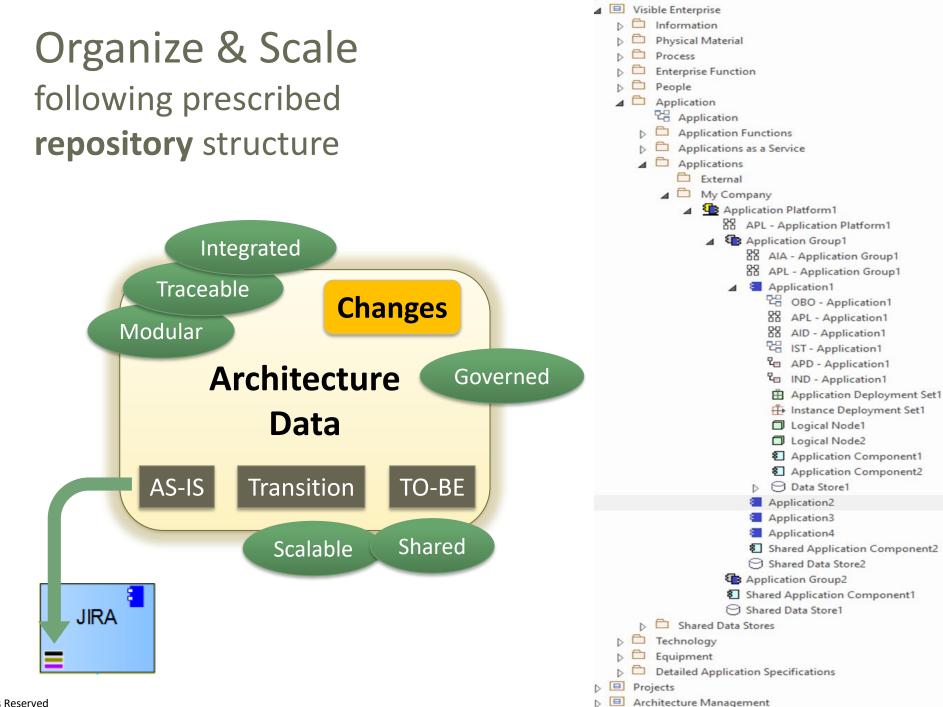
New Diagram	×
Package : Controlled Element Values Giant Parent : Application Values Control	
Diagram : Application Values Control	Auto
Туре	
All Perspectives Diagram Types:	Toolbox
Select From:	1001007
Tabular Report Template Design	
Labnaf - Vision Controlled Element Values	- Search
լի Labnaf - Information	
լի Labnaf - Physical Material	✓ Value Control
ኪ Labnaf - Process	
h Labnaf - Enterprise Function	<u> </u>
h Labraf - People	 Initial Value Calculation
ក្រុ Labnaf - Application ក្រុ Labnaf - Technology	
h Labraf - Equipment Controlled Element Values Diagram	Periodial Value Calculation
上 Labnaf - Configuration	· ·
h Labnaf - Common	
	OK Cancel Help
	OK Cancel Help





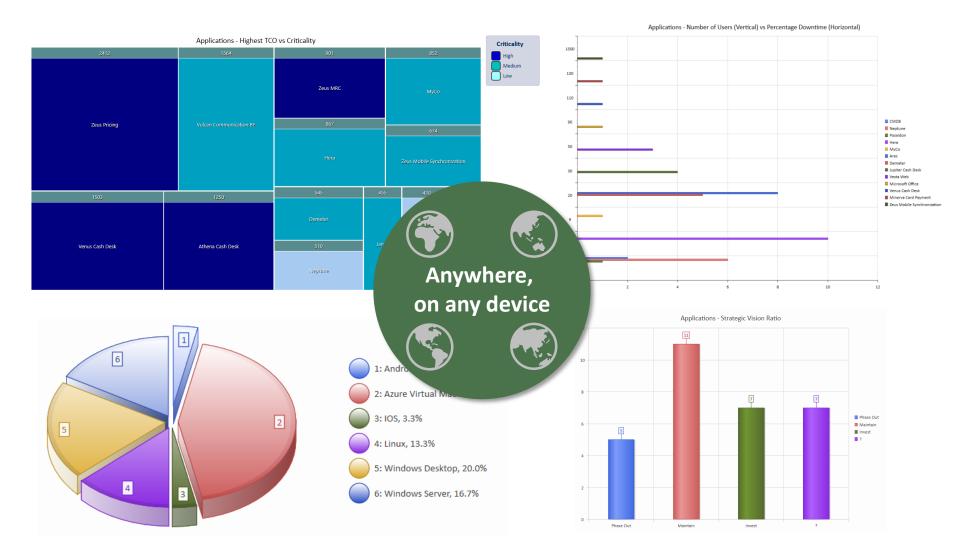
The language metamodel is used both for documentation & automatic model validation





Vision

Check Out your Real-time Dashboards and Take Decisions



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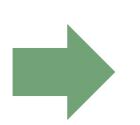
(h)

Generate diagrams

Scheduled or On demand

Real navigable model elements (automatically resized following context)

Sales	List of applications supporting the domain.	Legend for Business Functions
Dales	'Application Name'	Differentiator = ?
B2B Sales	Ares Athena Cash Desk	=Y
- B2B Indirect Sales	Customer Mobile Application	= N
B2C Sales	Demeter Hera	Externalized = Y Entirely externalized
	Janus	= P d Partially externalized
- B2C Order Management	Jupiter Cash Desk	= N Not externalized (default)
- B2C Pricing Management	LOGIN B2B Neptune	
- B2C Self-Service Channel	Venus Cash Desk	Nb of Applications / Business function
B2I Sales	Zeus Common Pricing	0
- Bulk Distribution		2 or more
- Face-to-Face Distribution		List of other Functional Domain diagram(s) as hyperlink(s)
Sales Channel		



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



Generate Word, RTF and PDF documents

Scheduled or On demand

Templates are provided

Table of Contents

1.1	Business	
1.2	Information	5
1.3	Application	
1.4	Technology	
1.5	Security	

Enterprise Architecture

Architecture Principles

Alain De Preter Author: Date/Time Generated: Version:

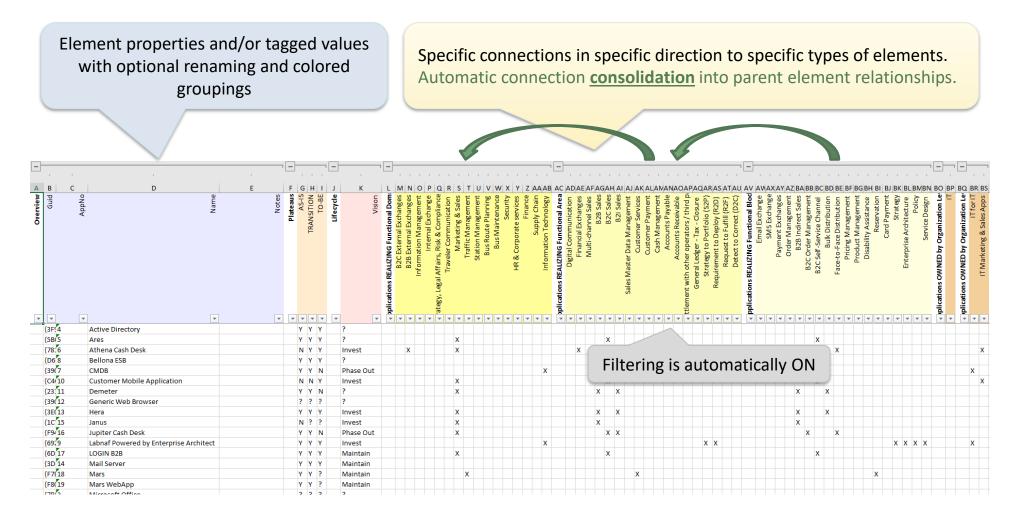
2017-03-02

1.0

Generate Tabular Reports (Excel/CSV)

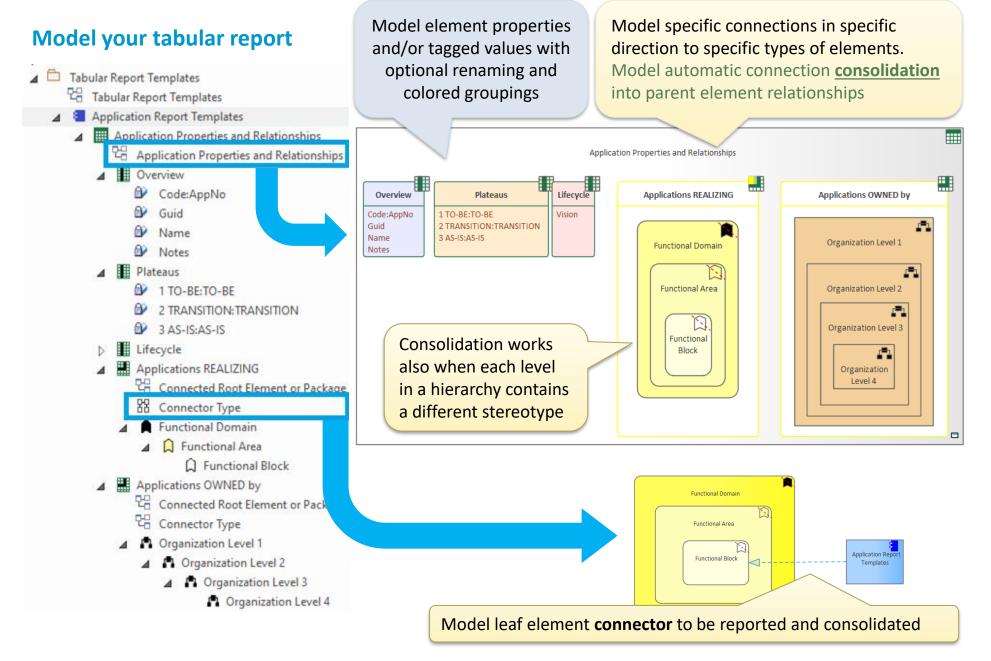
Scheduled or On demand

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



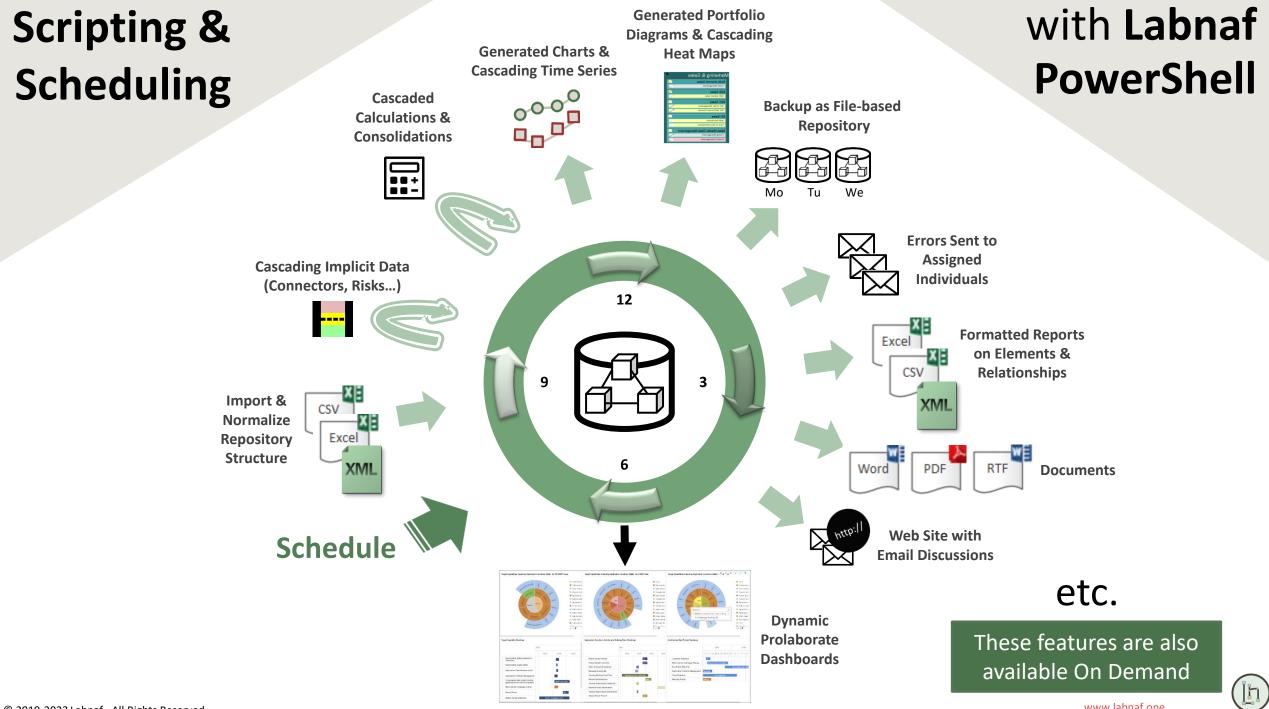


Generate Tabular Report (cont.)





[h



Labnaf PowerShell

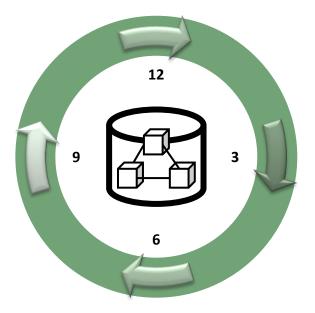
• Configure & Test in the UI

- Script
- Schedule



Commands **AutoConnectorsDelete** AutoConnectorsGenerate BackupToFile CalculateTaggedValues ClonePackage CreatePackage ExportToXmi GenerateCharts GenerateDiagrams GenerateDoc **GenerateHTML** GenerateImplicitData GenerateTabularReports ImportConnections ImportFromXmi ImportTabularReport MoveElementsToCalculatedParent MoveElementsToPackage MovePackagesToPackage Renameltem ScheduleCommand SetDiagramProperty SetProperty SqlExportToCsv Validate 25

Scripting & Scheduling

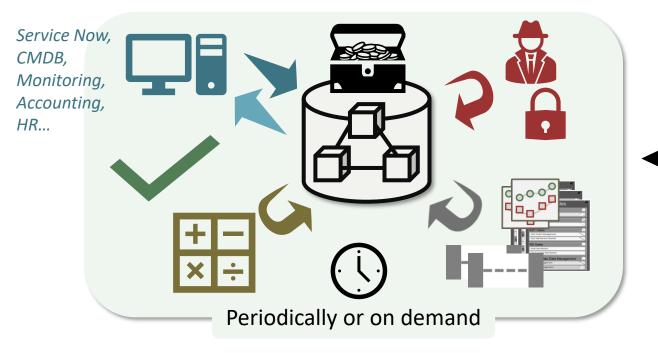




Data Enrichment & Distribution

Data is Automatically Enriched...

- Import data from different sources
- Validate & normalize the repository content
- Cascade calculation
- Generate implicit data, connectors, diagrams & charts
- Generate 360° analysis of sensitive data usage & risks
- Export to other systems and repositories

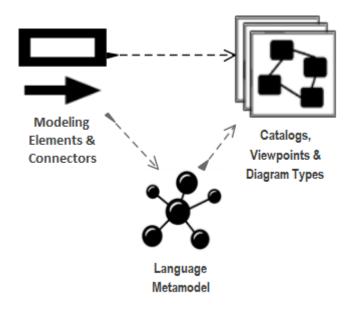


and Presented in Dashboards & Reports

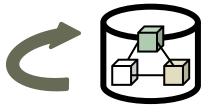


Labnaf Framework Customization

 Customize the language following your organization requirements



2. Adapt existing repository content





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Labnaf Customization Tools => Categories of Customization	Labnaf AddIn: Instant Metamodel Manager	Labnaf Addin: Instant Metadata Manager	Customization Workbench
Metamodel		etamodel expresse stored in the produ	
Select active metamodel (standard, customized standard, or user-defined metamodel)	Y		
Add/Delete connectors to a metamodel	Y		
Upgrade standard metamodel to a new version of Labnaf, while keeping your own customizations	Y		
Generate documentation/diagram about your metamodel customization	Y		
Element Dreportion			
Element Properties Create custom property types		Y	Y
Upgrade properties to a new version of Labnaf		•	1
and keep/restore your own customizations		Y	
Rename/Delete property types		Y	Y
Synchronize property sets in existing elements		All props	MDG props
Add custom properties to the Tags Tab		Ŷ	N
Add Labnaf Properties to the Element Tab		N	MDG-defined
Create named property groups		N	MDG-defined
Connector Properties			
Create custom connector properties		N	MDG-defined
Elements and Connectors			
Add/Delete element and connector types		N	MDG-defined
Toolboxes and Diagram Types/Viewpoints			
Add/Update/Delete Toolboxes		N	MDG-defined
Add/Update/Delete Diagram Types/Viewpoints		N	MDG-defined
Change Shapes		N	MDG-defined
Change Icons		Ν	MDG-defined

Labnaf provides two options for language customization

1. Instant Metamodel Manager and the Instant Metadata Manager

The **Instant Metamodel Manager** and the **Instant Metadata Manager** are provided by the Labnaf AddIn i.e. directly in the modeling environment. Using these tools, you can

- use the standard built-in metamodel, customize it, or create your own user-defined metamodel from scratch,
- visualize, create, rename, delete and synchronize element properties,
- automatically merge new versions of Labnaf with your own metamodel and metadata (properties) customizations.

2. Customize the Labnaf MDG Using the Customization Workbench

This is used for advanced customizations.

The **Customization Workbench** is used for customizing the Labnaf MDG including, properties/tagged values, element types, connector types, toolboxes, diagram types, and metamodel (still using the Labnaf end user language itself).

To activate this customization mode, start the Customization Workbench, and select the "Load MDG from Files" option. *This overrides the above features on* (1).

In this case Labnaf still automatically merges the new Labnaf metamodel version with your own customizations, since Labnaf metamodels are entirely controlled by Labnaf.

But for the other parts of the language specifications, which are defined in the MDG, you need to rely on Sparx tools.



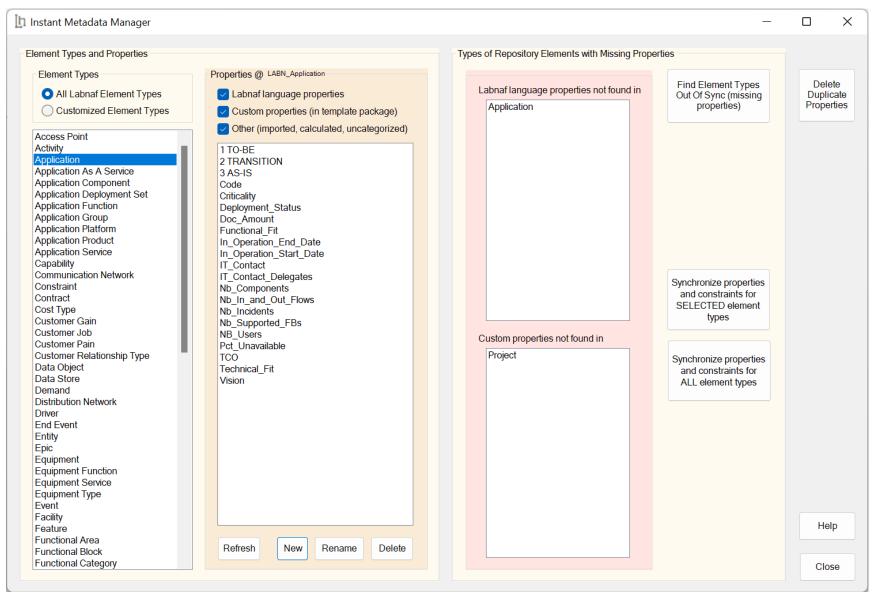
Instant Metamodel Manager

Customization from the Labnaf Add-In

h Instant Metamodel Manager		— C) X
Load MDG from: AddIn			
Active Metamodel Standard Metamodel Stored In the Labnaf Software (not custo Custom Metamodel Commit Last Changes	mized)		
Custom Metamodels In Repository	Build No In Rep	oo: 050	
Customized Standard Metamodel Edit	New Build No:		
Generate Customization Documentation Diagram	Upgrade	e Options	
Elements & Connectors in Standard Language Metamodel			
O User-Defined Metamodel			
Elements and Connectors in User-Defined Language Metamodel			
		Help	Close

h Upgrade the Standard Metamodel	_		×
Use this form for upgrading the star stored in the repository to the version sto			dln
Upgrade Options			
Create a baseline before the upgrade	Select All	Clear All	
Import the new version of the standard metamodel			
 Restore your standard metamodel customizations Generate a diagram documenting your standard m 	etamodel custor	nizations	
Upgrade	Help	Clos	Ð
Upgrade Status			

Instant Metadata Manager (for element properties) Customization from the Labnaf Add-In





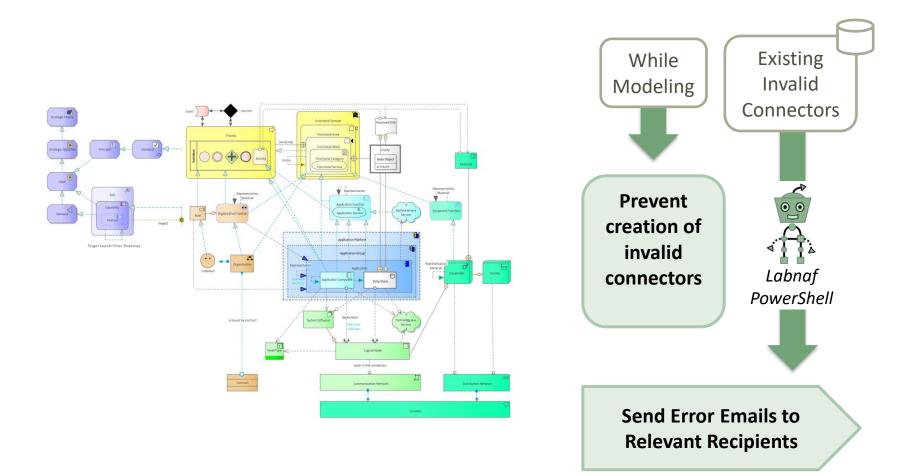
Advanced customizations of the modeling language (MDG) using the Labnaf Customization Workbench

Labnaf Customization Workbench			
ave Reload Load MDG from:	es 🜑 AddIn		
Software Development Lifecycle Environ	ment		
Development folder:	C:\A\LT\SparxDev\Distributed\Labnaf\Environments\1_Dev	Select Folder	
Testing configuration folder:	C:\A\LT\SparxDev\Distributed\Labnaf\Environments\2_Test	Select Folder	Activ
Production configuration folder:	H:\Tools\LabnafConfig	Select Folder	Activ
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	
		Time Last Changed	
		Time Last Changed	
MDG Development Edit MDG Source Model (EAP)	C:\A\LT\SparxDev\Distributed\Labnaf\Environments\1_Dev\Labnaf_Custom	2019-03-05 12:50:36	
Edit MDG Deployment File (MTS)		2019-03-05 12:50:36	
MDG Development Edit MDG Source Model (EAP) Edit MDG Deployment File (MTS) Generate MDG => Testing MDG Testing Activate Testing Configuration Open Testing Repository	C:\A\LT\SparxDev\Distributed\Labnaf\Environments\1_Dev\Labnaf_Custom	2019-03-05 12:50:36 2019-03-05 11:24:02 2019-03-05 11:59:12	
MDG Development Edit MDG Source Model (EAP) Edit MDG Deployment File (MTS) Generate MDG => Testing MDG Testing Activate Testing Configuration Open Testing Repository Copy MDG from Testing => Production Configuring Production	C:\A\LT\SparxDev\Distributed\Labnaf\Environments\1_Dev\Labnaf_Custom C:\A\LT\SparxDev\Distributed\Labnaf\Environments\1_Dev\Labnaf_Custom C:\A\LT\SparxDev\Distributed\Labnaf\Environments\2_Test\Labnaf_Custom	2019-03-05 12:50:36 2019-03-05 11:24:02 2019-03-05 11:59:12	
MDG Development Edit MDG Source Model (EAP) Edit MDG Deployment File (MTS) Generate MDG => Testing MDG Testing Activate Testing Configuration Open Testing Repository Copy MDG from Testing => Production	C:\A\LT\SparxDev\Distributed\Labnaf\Environments\1_Dev\Labnaf_Custom C:\A\LT\SparxDev\Distributed\Labnaf\Environments\1_Dev\Labnaf_Custom C:\A\LT\SparxDev\Distributed\Labnaf\Environments\2_Test\Labnaf_Custon C:\A\LT\SparxDev\Distributed\Labnaf\Environments\2_Test\Labnaf_Test_Re	2019-03-05 12:50:36 2019-03-05 11:24:02 2019-03-05 11:59:12 2019-03-05 11:59:12	

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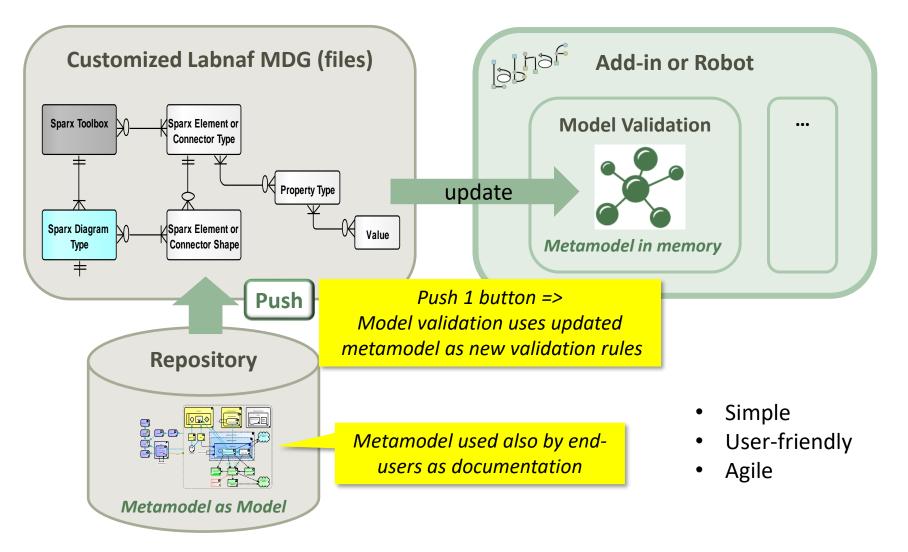
Ih.

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



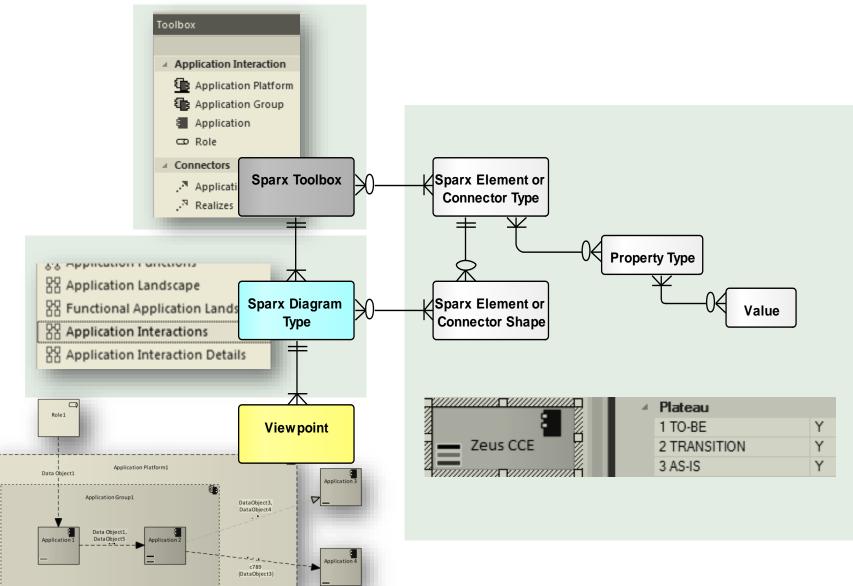


The default metamodel (stored in the Labnaf Addin and used for validation) can be very easily updated





Other items that can be designed and configured by using the Customization Workbench



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Transform any language...



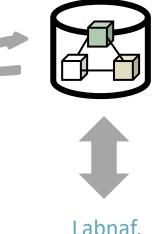


... in any direction



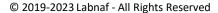
One **Single** Strategy & Architecture Modeling **Language** You are never locked in Labnaf ! The Language Transformer adapts ANY language in any existing repository content

- Change Element Type
- Change Connector Type
- Change Diagram Type
- Change Diagram Types defined in Csv
- Tagged Value Rename
- Tagged Value Delete

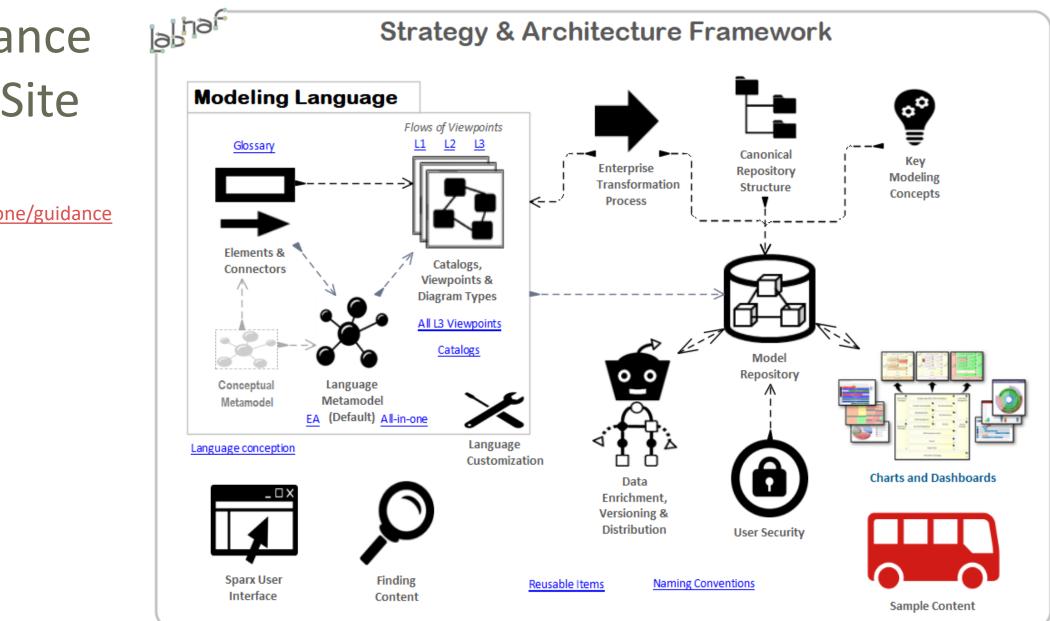


Labnaf, ArchiMate, BPMN, SysML, UML, SOMF,

ANY language







Guidance Web Site

www.labnaf.one/guidance

(h)

jab af

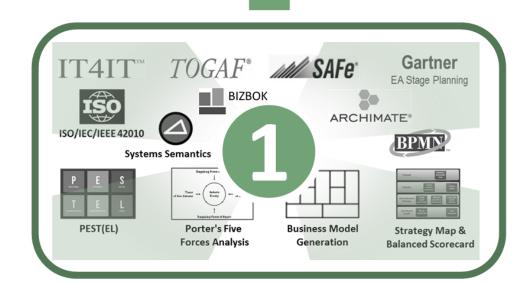
Aarketing & Sales -----lappar Software Powered by All in one SPARX Platform Out of the Actionable box

All in one and

Unified Framework for

Driving transformations

Actionable out of the box



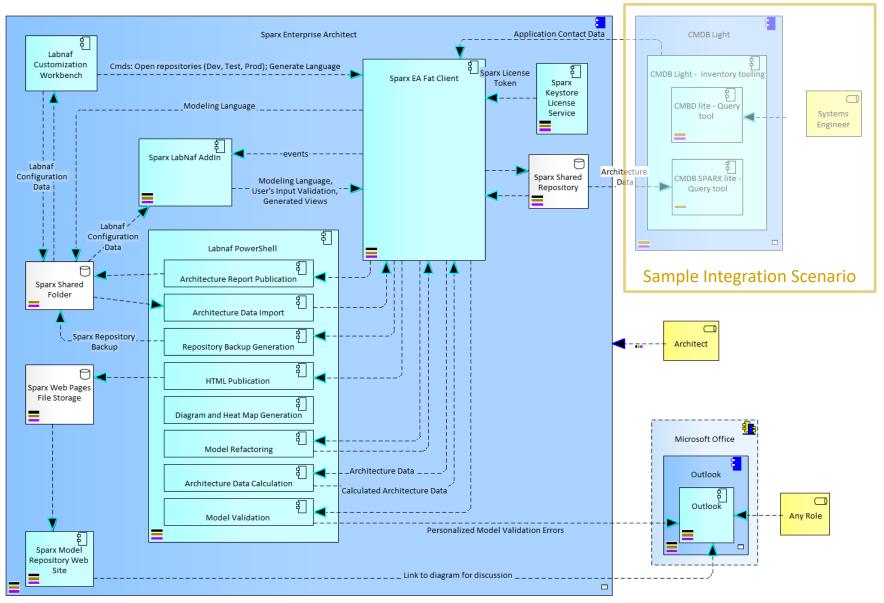
(<u>[</u>])

BACKUP SLIDES

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Sparx in the Application Portfolio



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Sparx EA - What's in the box

Many model repository options

- Local Microsoft Access database
- Shared database: SQL Server, MySQL, Oracle...
- Possible version control: Subversion, CVS, TFS...

Many languages & Toolboxes

- (Too) Many languages
- No integration of standards
- Scope / domain-specific
- Switch between many complex toolboxes

Sparx SDK

- Tailoring the tool for an organization
 - Language
 - o IDE
 - document generation
 - web publication
 - o ...

What users don't want

Built-in Toolboxes				
Use Case	XML Schema	GoF Patterns		
Class	Documentation	ICONIX		
Object	Test Domain	LieberLieber AUTOSAR Engineer		
Composite	Dashboard	MindMapping		
Communication	XMLTransform	NIEM		
Interaction	ArcGIS	ODM		
Timing	ArchiMate	Project Management		
State	ArchiMate2	RiskTaxonomy		
Activity		SOMF 2.1		
Component	BPMN 1.1	SPEM		
Deployment	BPMN 2.0	User Interface - Simple		
Profile	BPMN 1.0	SoaML		
Metamodel	UML Standard Profile	Strategic Modeling		
metanioder	Business Rule Model	UMM 2.0 Profile		
Analysis	CodeEngineering	UPCC 2.0		
Business Modeling	Data Flow Diagrams	UPCC 3.0		
Custom	Data Modeling	UBL Model Management		
Requirements	Entity Relationship Diagram	WebModeling		
Maintenance	Eriksson-Penker Extensions	Whiteboard		
User Interface	GML	User Interface - Win32		
WSDL	GRA-UML	Wireframing		



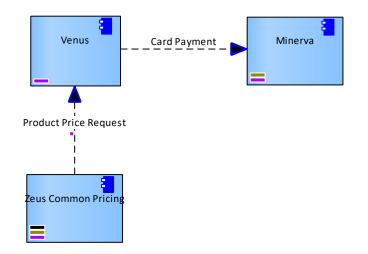
Diagram Types

What we want

When you select New diagram / ... the following list of Labnaf perspectives and diagram types appears

Select From:	Application Functions
h Labnaf - Vision h Labnaf - Information h Labnaf - Physical Material h Labnaf - Process h Labnaf - Process h Labnaf - Enterprise Function h Labnaf - People h Labnaf - Application h Labnaf - Technology h Labnaf - Equipment h Labnaf - Configuration	 Application Function Interactions Application Function Realizations Application Landscape Application Interactions Application Interaction Details Application Deployment Instance Deployment Technology Usage Information Storage
իլ Labnaf - Common	Application Interaction Diagram

A Labnaf diagram type addresses a specific strategy or architecture viewpoint





Toolboxes

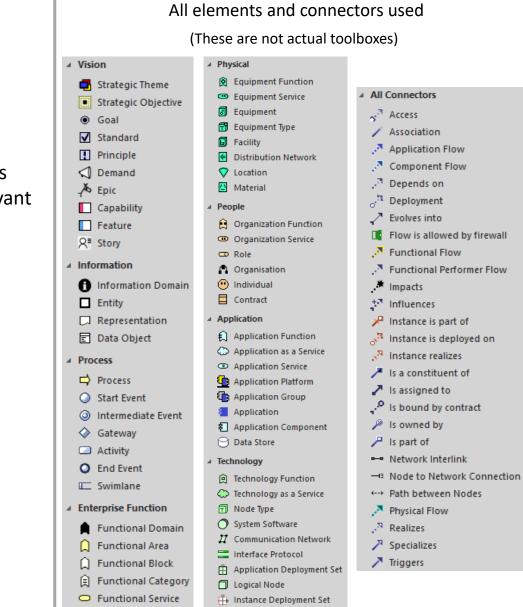
What we want

Each diagram type has its own toolbox.

Each diagram-specific toolbox only contains the elements and connectors that are relevant to this diagram type.

> Toolbox for the diagram type "Application Interactions"

- Application Interaction
 - Application
 - 🗢 Role
 - Organization Function
 - Organization
- A Application Interaction Connectors
 - Application Flow
 - 🖓 Depends on



A Node Instance

Access Point