



Clean and sustainable migration from DOORS 9 to DOORS Next Generation

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- > RE&RM Methods and Concepts
 - > Data-Exchange with ReqIF and OSLC
 - > DNG-Interfaces and Automation
 - > Data Migration
 - > Global Configuration Management in DNG
 - > DOORS Server Security
-
- > Since 2002 in automotive domain in the area of requirements engineering

REQUISIS GmbH

- > Based in Germany
- > Focus on tool based Requirements Management
- > Many tools and addons for DOORS 9
 - > Document Generation, Data Exchange, Data Synchronization, Work Offline, DNG Migration
 - > DOORS Security Proxy
- > Growing List of Tools for DNG
 - > Data exchange automation
 - > DOORS9-DNG-Synchronization
- > Tools for ReqIF
- > Many happy customers
 - > Most customers are in the automotive domain



Agenda

- > Short Introduction
 - > Migration Basics
 - > Data Analysis
 - > Migration Preparation
 - > Performing the Migration
-
- > Topic is complex
 - > Time is limited, so topics are kept short.

If you would like to get the presentation or have detailed questions, email me!

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Clean and sustainable migration from DOORS 9 to DOORS Next Generation

Migration Basics

Important Differences DOORS and DNG (relevant for migration)

	DNG	DOORS
Structure	Project Areas -> Components -> Folders -> Modules / Collections	Projects & Folders -> Modules
Artifact types	Multiple artifact types different attribute-sets	Only one type of objects per Module „User-Made“ Object Type by setting attribute value All objects share attribute-set
Attribute / Type Definition	Component-Wide	Module-Wide
Text Formatting	Only in Primary Text	In all Text and String attributes
Binary data	Embedded Artifacts Saved binary directly Only in Primary Text	Embedded OLE-Objects Saved as OLE in RTF In all Text Attributes
Links	Different link types	Link types by using different named link modules

Types of Migration – By Size

- > **Big Bang Migration**
 - > Migrate the whole database at the same time
- > **Project-Wise Migration**
 - > Migrate a project when the project is ready to shift to DNG
 - > Migrate related projects only if necessary (e.g. as a Shadow-Migration)
- > **Module-Wise Migration**
 - > Migrate single Modules when the content is required
- > **Shadow-Migration**
 - > Migrate data that is supposed to stay read-only in DNG

Types of Migration – By Type

Type	Steps	Consequences	Technology
Migrate as-it-is	<ul style="list-style-type: none"> Just migrate 	<ul style="list-style-type: none"> Duplicated Types and attributes 	ReqIF Migiz (better Results, but one-time only)
Align data types before migration	<ul style="list-style-type: none"> Adjust the data types that they are equal Ensure enumeration attributes share the same values Add RDF-URIs to all attributes and types 	<ul style="list-style-type: none"> Modified Data in DOORS Mostly clean data types in DNG Risk of duplication in some cases Data in DNG more or less 1:1 from DOORS 	
Align data types after migration	<ul style="list-style-type: none"> Adjust the data types in DNG after Migration (nearly impossible!) 	<ul style="list-style-type: none"> Nearly impossible to reach a clean data type model in DNG Data in DNG more or less 1:1 from DOORS 	
Map, Transform & Migrate	<ul style="list-style-type: none"> Create data model in DNG first Map data types and enum values from DOORS to DNG Select attributes to be merged 	<ul style="list-style-type: none"> Clean data type model Depending on Tool: Data ready to use in DNG 	3 rd Party Tools

Focus of this session

- > Project-Wise-Migration with Shadow-Migration of related content
- > Usage of “Map, Transform & Migrate” with a rule-based mapping

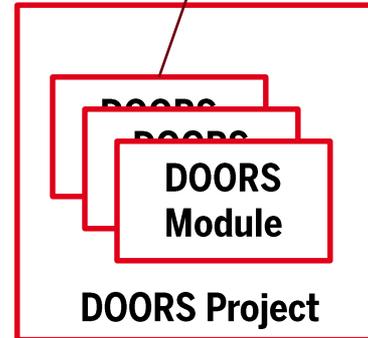
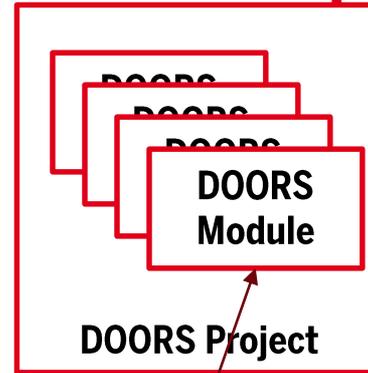
- > **Reasons:**
 - > Our Customers have big databases and many users (1000+) -> “Big Bang Migration” not possible
 - > Pragmatic approach with best results in data quality and user experience
 - > We think this is the most sustainable and cleanest migration approach

- > **Created tools to support this approach:**
 - > DOORS Attribute Analyzer
 - > requisis_MiX

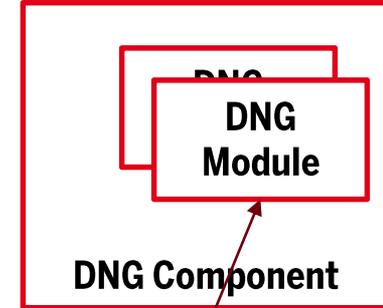
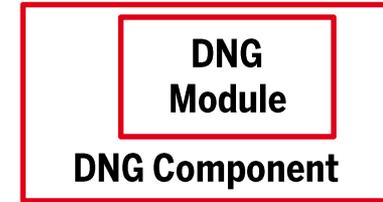
- > **Prerequisites:**
 - > Existing Data Types and DNG Modules in DNG
 - > Mapping Rules to automate mapping

Project-Wise Migration with Shadow-Copies

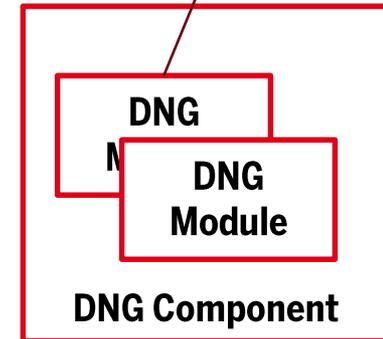
- > Create DNG Components based on a Template
- > Create DNG Modules to define the migration target
- > Map modules and data types
- > Migrate data into the DNG Modules
- > Migrate Links
- > Switch Shadow-Copies and migrated content read only
- > Update Shadow-Copies regularly

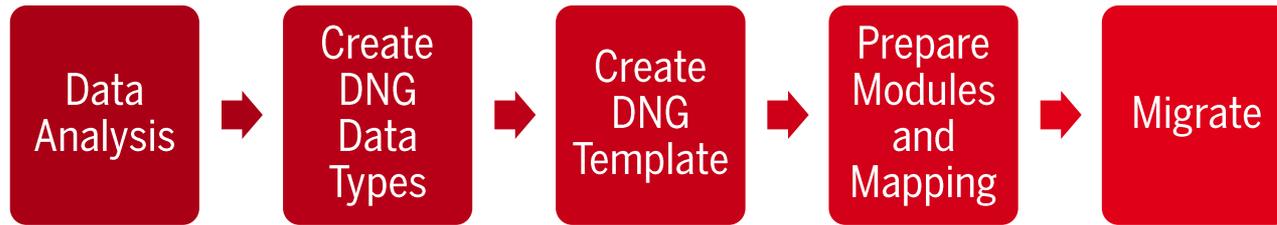


Link



Link





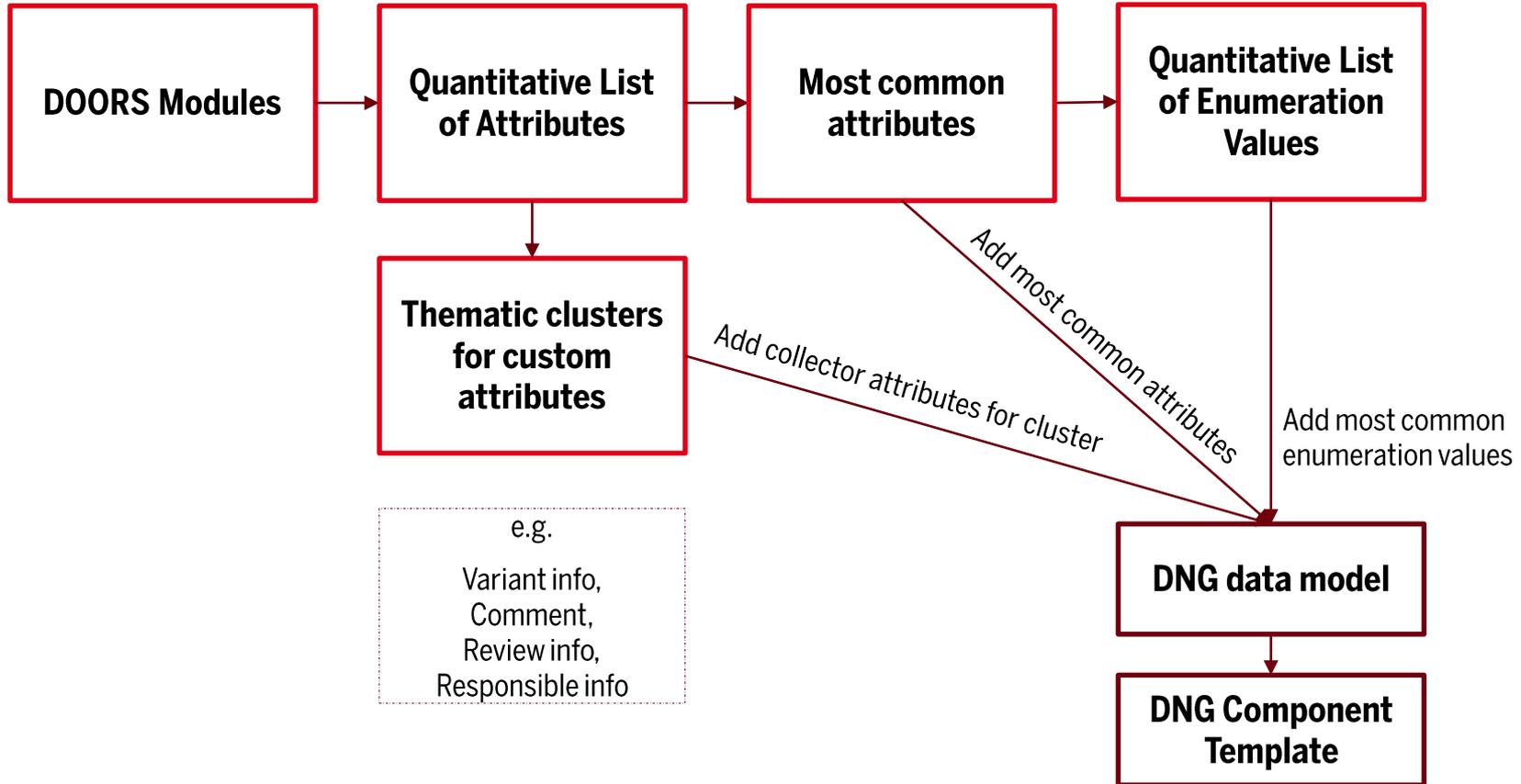
Workflow for Map, Transform & Migrate



Clean and sustainable migration from DOORS 9 to DOORS Next Generation

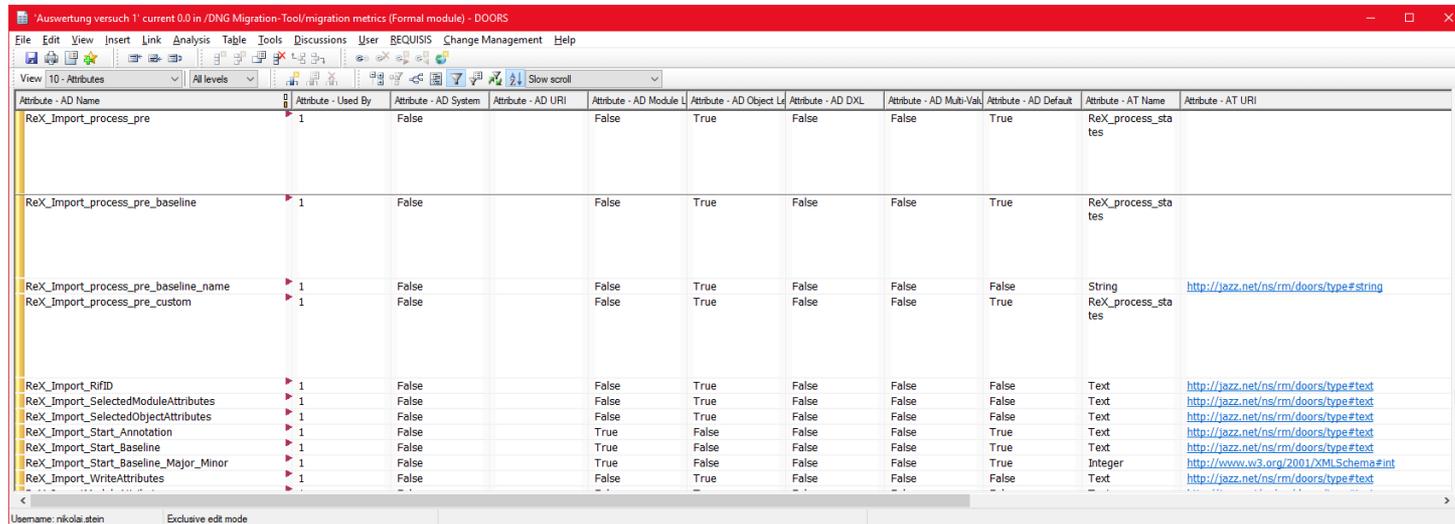
Data Analysis

Data analysis for defining the DNG data type model



Tools for Data Analysis: DOORS Built-In Migration Metrics

- > Select projects and modules
- > Report is created as a DOORS Module
- > Counts Objects, Pictures, OLEs, Tables...
- > Analyzes Attributes
 - > Each equal attribute is listed and counted with links to the modules and a list of enum values if applicable



The screenshot shows a software window titled "Auswertung versuch 1' current 0.0 in /DNG Migration-Tool/migration metrics (Formal module) - DOORS". The window displays a table with the following columns: Attribute - AD Name, Attribute - Used By, Attribute - AD System, Attribute - AD URI, Attribute - AD Module, Attribute - AD Object, Attribute - AD DXL, Attribute - AD Multi-Val, Attribute - AD Default, Attribute - AT Name, and Attribute - AT URI. The table lists various attributes such as ReX_Import_process_pre, ReX_Import_process_pre_baseline, and ReX_Import_RIFID, along with their respective values and links to their definitions.

Attribute - AD Name	Attribute - Used By	Attribute - AD System	Attribute - AD URI	Attribute - AD Module	Attribute - AD Object	Attribute - AD DXL	Attribute - AD Multi-Val	Attribute - AD Default	Attribute - AT Name	Attribute - AT URI
ReX_Import_process_pre	1	False		False	True	False	False	True	ReX_process_states	
ReX_Import_process_pre_baseline	1	False		False	True	False	False	True	ReX_process_states	
ReX_Import_process_pre_baseline_name	1	False		False	True	False	False	False	String	http://jazz.net/ns/rm/doors/type#string
ReX_Import_process_pre_custom	1	False		False	True	False	False	True	ReX_process_states	
ReX_Import_RIFID	1	False		False	True	False	False	False	Text	http://jazz.net/ns/rm/doors/type#text
ReX_Import_SelectedModuleAttributes	1	False		False	True	False	False	False	Text	http://jazz.net/ns/rm/doors/type#text
ReX_Import_SelectedObjectAttributes	1	False		False	True	False	False	False	Text	http://jazz.net/ns/rm/doors/type#text
ReX_Import_Start_Annotation	1	False		True	False	False	True	True	Text	http://jazz.net/ns/rm/doors/type#text
ReX_Import_Start_Baseline	1	False		True	False	False	False	True	Text	http://jazz.net/ns/rm/doors/type#text
ReX_Import_Start_Baseline_Major_Minor	1	False		True	False	False	False	True	Integer	http://www.w3.org/2001/XMLSchema#int
ReX_Import_WriteAttributes	1	False		False	True	False	False	False	Text	http://jazz.net/ns/rm/doors/type#text

Tools for Data Analysis: DOORS Attribute Analyzer

- > Analyzes and Counts
 - > Existing Attributes and their types
 - > Per “Object Type“: attributes with values
 - > Enum attributes with possible values
- > Data Extraction to be used in Excel as Pivot tables
 - > Sorted Lists
 - > Double-Click on all numbers opens a list of corresponding modules
- > Merged data types stored as Attribute and Type Definitions in a DOORS-Module

The screenshot shows the 'DOORS Attribute Analyzer - DOORS' application window. It is divided into several sections:

- Analysis settings:**
 - Attribute used for artifact type mapping:
 - Type used for artifact type mapping:
 - Regex to identify relevant modules:
 - Regex to identify attributes to skip:
- Output file settings:**
 - File name for attribute analysis:
 - File name for attribute usage analysis:
 - File name for enum values analysis:
- Settings for Template Modules:**
 - Project where modules are created:
 - Default module name:
- Options:**
 - Create Template Modules
 - Delete Template Modules before
 - Only use attributes in default view
 - Append to existing analysis files
 - Create Attribute Usage Statistics

At the bottom right, there are two buttons: 'Start Analysis' and 'Close'.

Tools for Data Analysis: DOORS Attribute Analyzer

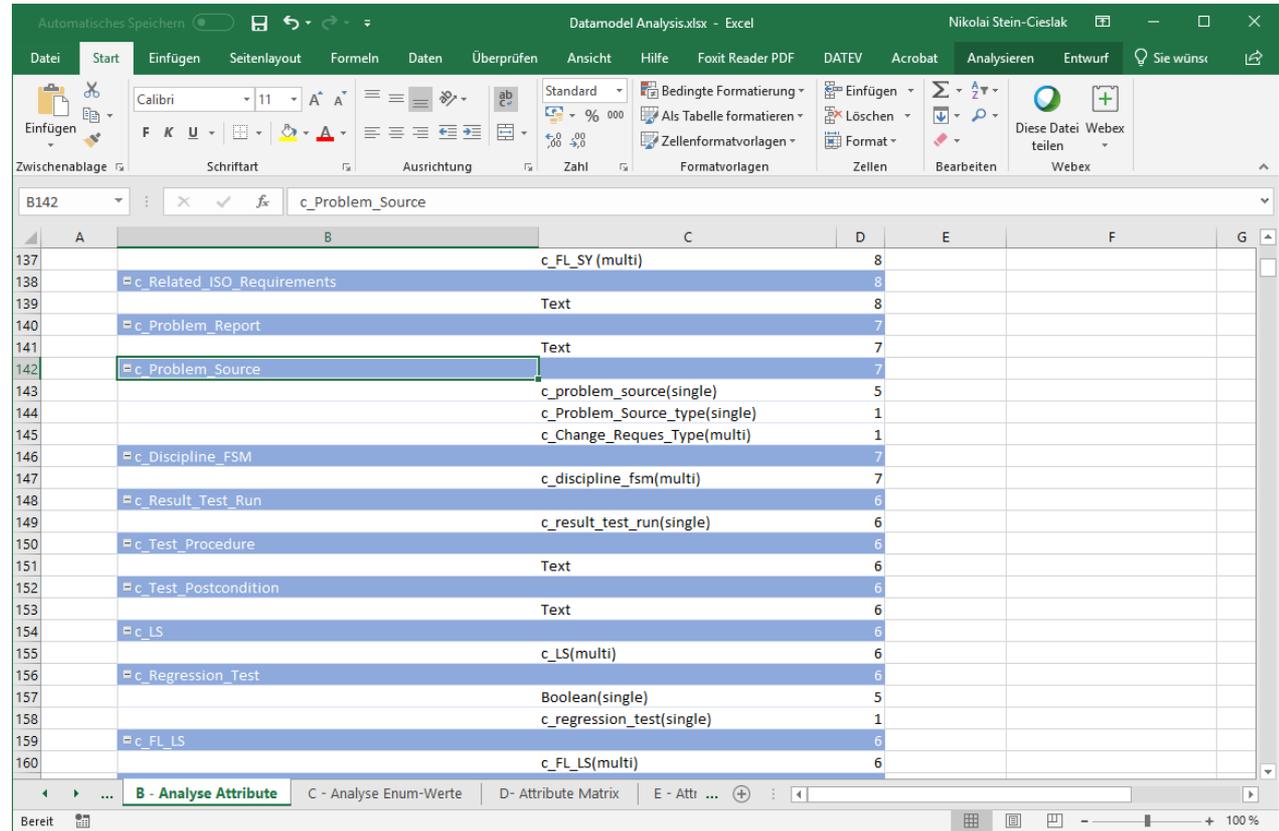
- > Attribute Usage per “Object Type”
- > To derive artifact types
- > Double-Click on numbers shows list of modules

The screenshot shows an Excel spreadsheet titled 'Datamodel Analysis.xlsx' with the 'Daten' tab selected. The spreadsheet displays a table of attribute usage data for the object type 'functional_requirement'. The table has columns A through G. Column A contains the attribute name, column B contains a count, column C contains another count, and column D contains a third count. The 'functional_requirement' row is highlighted with a green border, and a double-click action is shown on the number 36626 in column C, which has triggered a list of modules to appear in column D.

	A	B	C	D	E	F	G
177		PictureNum	4	838			
178		c_SWSC_fault_reaction_time_max	3	641			
179		p_HW_Review_Result	3	429			
180		c_DOORSUserName	1	56			
181		functional_requirement	36626	164840			
182		Created By	2101	6569			
183		Last Modified By	2101	6569			
184		Created On	2101	6569			
185		Last Modified On	2101	6569			
186		Absolute Number	2101	6569			
187		c_This_is_a	2101	6569			
188		c_Maturity	1877	5953			
189		Object Text	1805	6569			
190		c_SIL	1765	5870			
191		c_Release	1680	5870			
192		c_Variant	1650	5507			
193		c_Discipline	1488	5590			
194		c_Test_Severity	1390	5870			
195		c_Implementation_Status	1298	4310			
196		p_Verification_Method	1261	4333			
197		c_Verification_Method	1126	5825			
198		p_Customer_relevant	1031	2180			
199		c_FL_SW	941	3656			
200		c_Review_Comment	872	4926			

Tools for Data Analysis: DOORS Attribute Analyzer

- > Types per Attribute
- > Separated for single and multi enum attributes
- > To derive attributes and types
- > Double-Click on numbers shows list of modules



The screenshot shows the DOORS Attribute Analyzer tool interface. The main window displays a list of attributes and their types, organized in a table format. The table has columns for attribute names and their corresponding types. The attribute 'c_Problem_Source' is highlighted in blue, and its type is 'Text'. The table also shows other attributes like 'c_FL_SY (multi)', 'c_Related_ISO_Requirements', 'c_Problem_Report', 'c_Problem_Source', 'c_problem_source(single)', 'c_Problem_Source_type(single)', 'c_Change_Reques_Type(multi)', 'c_Discipline_FSM', 'c_discipline_fsm(multi)', 'c_Result_Test_Run', 'c_result_test_run(single)', 'c_Test_Procedure', 'c_Test_Postcondition', 'c_LS', 'c_LS(multi)', 'c_Regression_Test', 'Boolean(single)', 'c_regression_test(single)', 'c_FL_LS', and 'c_FL_LS(multi)'. The interface includes a menu bar with options like 'Datei', 'Start', 'Einfügen', 'Seitenlayout', 'Formeln', 'Daten', 'Überprüfen', 'Ansicht', 'Hilfe', 'Foxit Reader PDF', 'DATEV', 'Acrobat', 'Analysieren', and 'Entwurf'. The status bar at the bottom indicates 'Bereit' and '100%' zoom.

Attribute	Type
c_FL_SY (multi)	8
c_Related_ISO_Requirements	8
c_Problem_Report	7
c_Problem_Source	7
c_problem_source(single)	5
c_Problem_Source_type(single)	1
c_Change_Reques_Type(multi)	1
c_Discipline_FSM	7
c_discipline_fsm(multi)	7
c_Result_Test_Run	6
c_result_test_run(single)	6
c_Test_Procedure	6
c_Test_Postcondition	6
c_LS	6
c_LS(multi)	6
c_Regression_Test	6
Boolean(single)	5
c_regression_test(single)	1
c_FL_LS	6
c_FL_LS(multi)	6

Tools for Data Analysis: DOORS Attribute Analyzer

- > Enum-Values per Enum-Type
- > To derive Enum-Values
- > Double-Click on numbers shows list of modules

The screenshot shows an Excel spreadsheet with the following data:

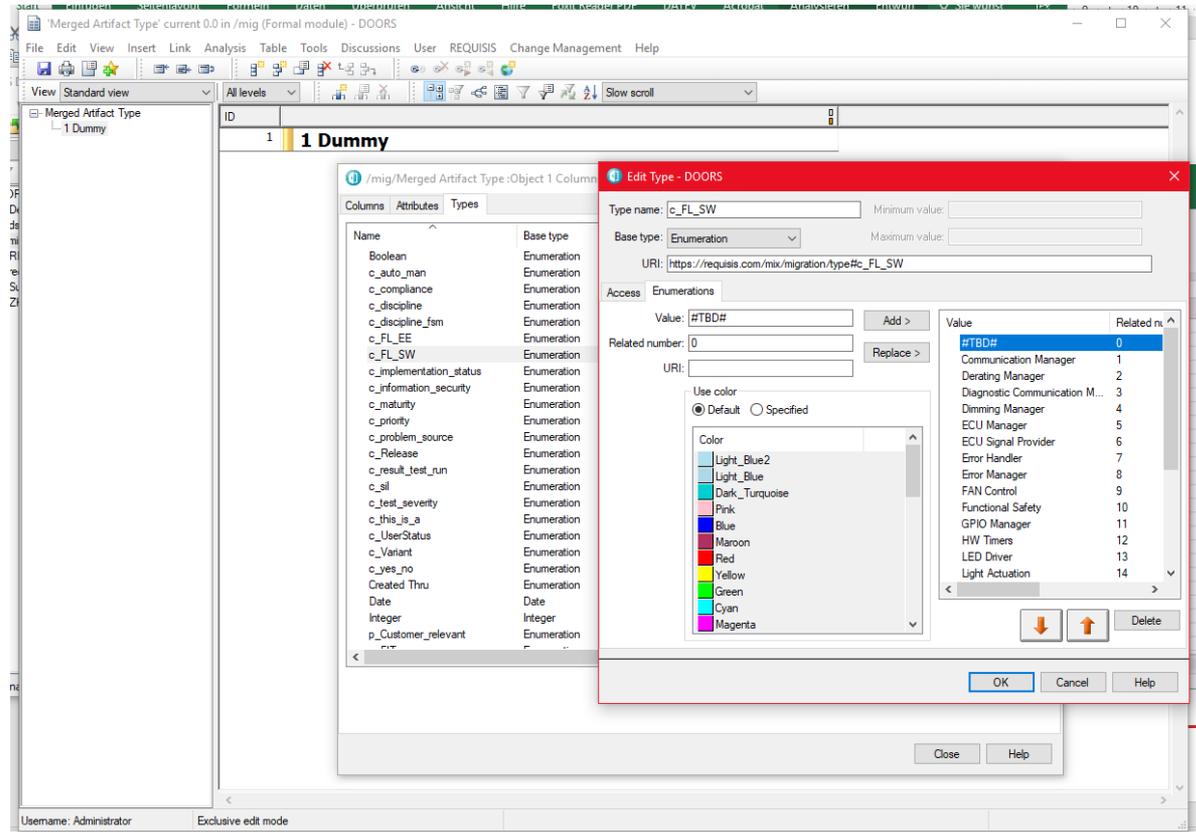
	A	B	C	D	E	F	G	H	I	J
77			valid		22					
78			invalid		22					
79		c_FL_EE								
80			N/A		11					
81			#TBD#		6					
82			EE_Function_1		5					
83			EE_Function_2		5					
84			EE_Function_3		5					
85			Bucks		1					
86			HW Function 2		1					
87			Boost 2		1					
88			Boost 1		1					
89			HW Function 3		1					
90			RCOD/NTC		1					
91			Rev Pol 2		1					
92			Rev Pol 1		1					
93			FAN		1					
94			SBC		1					
95			uC		1					
96			HW Function 1		1					
97			GPIO		1					
98		c_FL_LS								
99			N/A		6					
100		c_FL_ME								

The dropdown menu for the number '22' in row 79 shows the following list of modules:

- c_FL_EE
- N/A
- #TBD#
- EE_Function_1
- EE_Function_2
- EE_Function_3
- Bucks
- HW Function 2
- Boost 2
- Boost 1
- HW Function 3
- RCOD/NTC
- Rev Pol 2
- Rev Pol 1
- FAN
- SBC
- uC
- HW Function 1
- GPIO

Tools for Data Analysis: DOORS Attribute Analyzer

- > Merged Attribute and Type Definitions in DOORS
- > Can be used to export types and attributes to DNG using ReqIF
- > Attributes and Types are created in DNG during import using ReqIF
- > Some minimal cleanup in DNG needed (e.g. remove created Module Artifact Type)





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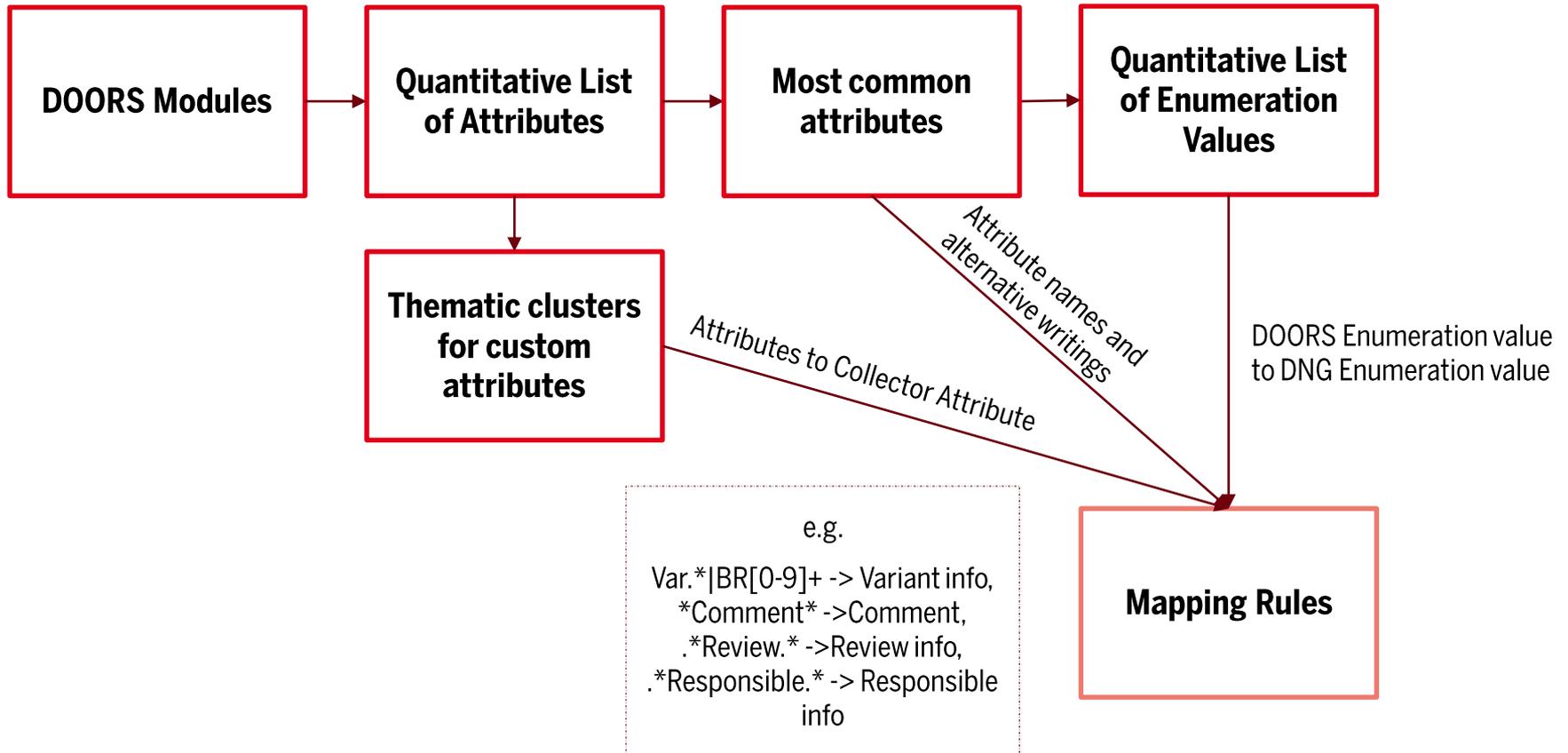
Create Mapping Rules

Goals for creating mapping rules

- > Reduce manual effort to a minimum
- > Reduce mis-configuration
- > Increase Quality by always having the same mapping

- > Only manual effort to
 - > Deal with custom attributes
 - > that were too rare to be considered during the data analysis
 - > Check findings of the pre-check
 - > to decide if further steps are needed to prevent a data-loss

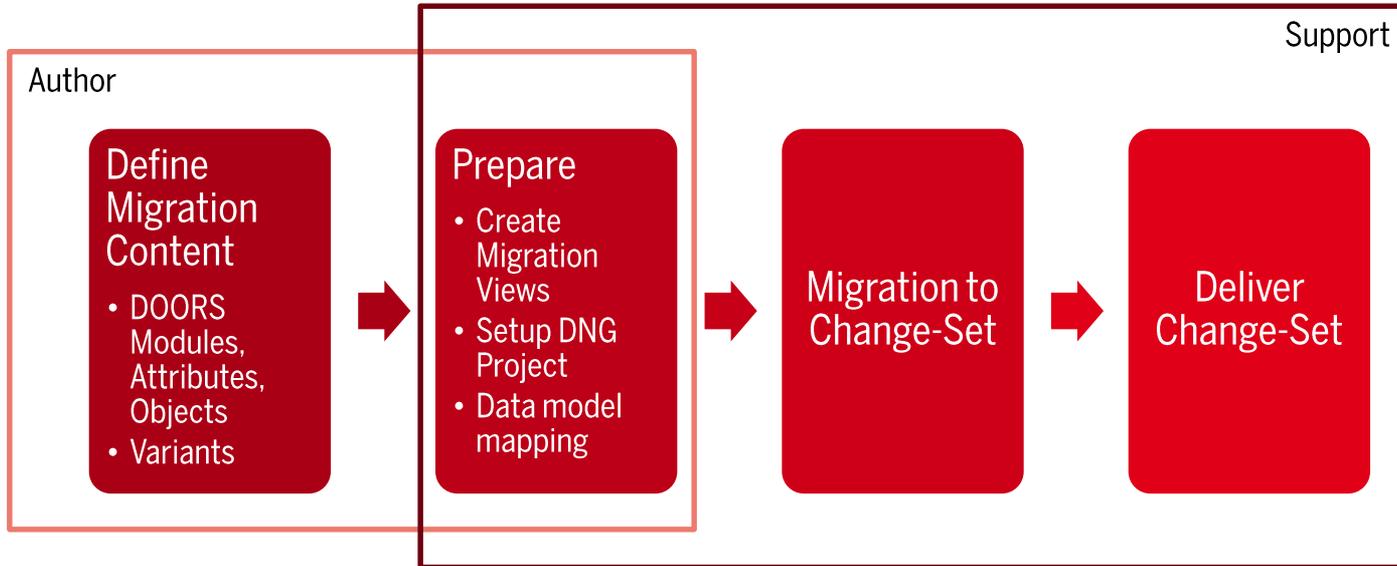
Data analysis for defining the mapping rules



Mapping Rules in requisis_MiX

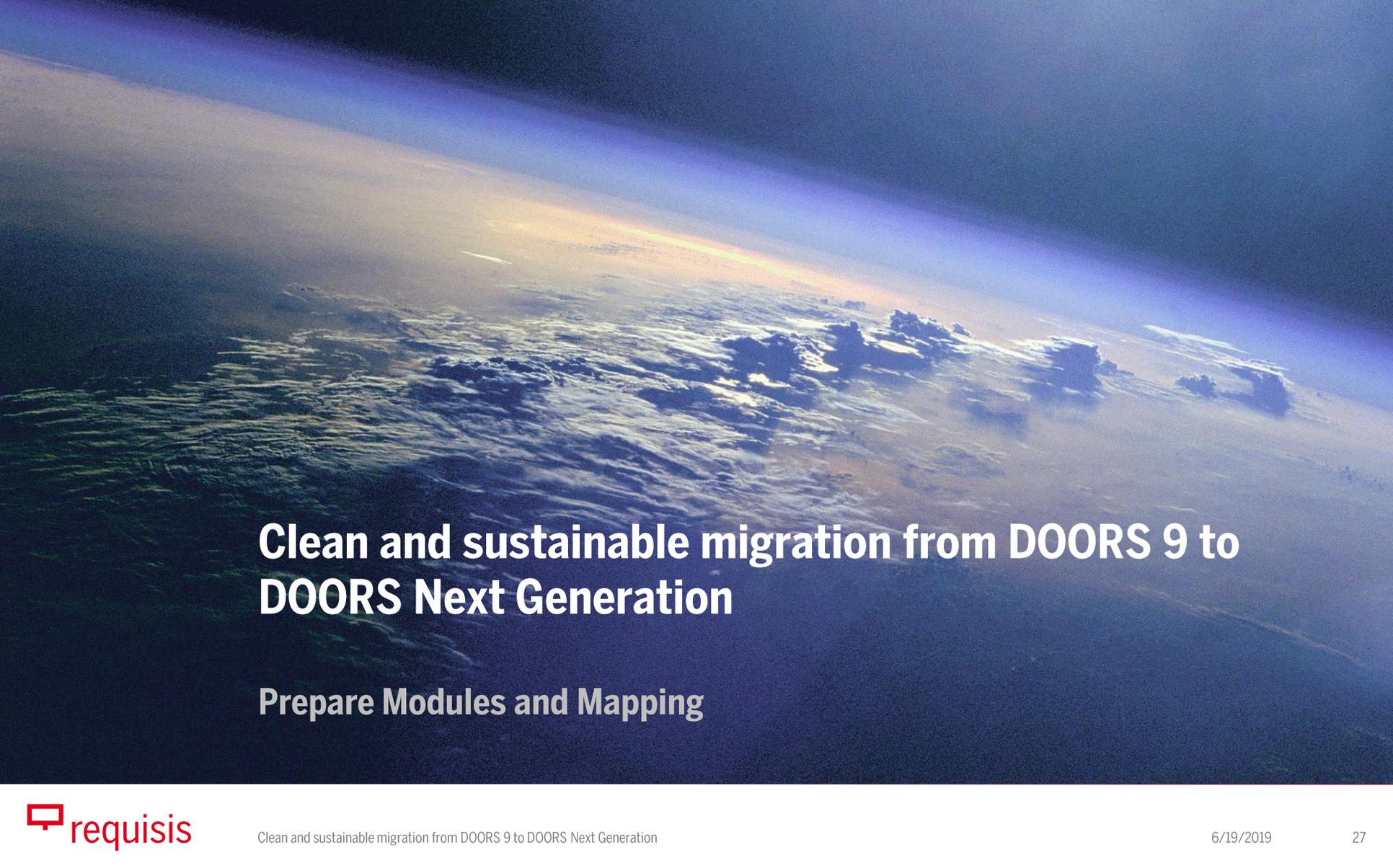
- > Mapping of Artifact Types
- > Mapping of Attributes
 - > specific for Artifact Type
 - > independent of Artifact Type
- > Mapping of Enum-Values for each Attribute-Rule
- > Mapping uses regular expression
- > Catch-All-Rules and substitution
- > First hit wins

ID	Information / Name in DOORS	Name in DNG	Comment
32	[I]nformation	Information	
41	[Rr]edefinition	Predefinition	
39	[Rr]equirement	Requirement	
74	\\[Attachments\\]	Binary Artifact	
75	\\[Doors Tables\\]	#TBD#	
33	(.*)	\$1	Try to map the rest using the same name in DNG. (Must be the last rule if desired)
34	3 --- Rules for Attributes based on Artefact Type ---		
3	3.1 DNG Information	(matches)	Rules for artifact type "DNG Information"
7	3.1.1 Object Type	Artefact Type	Handling of "Object Type" within artifact type "DNG Information"
36	(.*)	\$1	Try to map the rest using the same name in DNG. (Must be the last rule if desired)
9	3.1.2 Priority_(.*)	Prio_\$1	Map Priority_* or *_Priority to Priorität_\$1, where \$1 is replaced by the content of (.*)
10	[Hh]igh [Hh]i	High	Mapping on attribut basis
11	[Mm]edium [Mm]ed	Medium	
12	[Ll]ow [Ll]o	Low	
13	3.2 [Rr]equirement [Aa]nforderung	(matches)	
72	(.*)	\$1	Try to map the rest using the same name in DNG. (Must be the last rule if desired)
1	4 --- General Rules for Attributes ---		
		The following mapping rules are applied to all object types / artefact types.	Place the mapping of attributes when no match based on artefact types was found here. DO NOT CHANGE THE CHAPTER-NAME!



Migration Workflow

How to conduct a migration

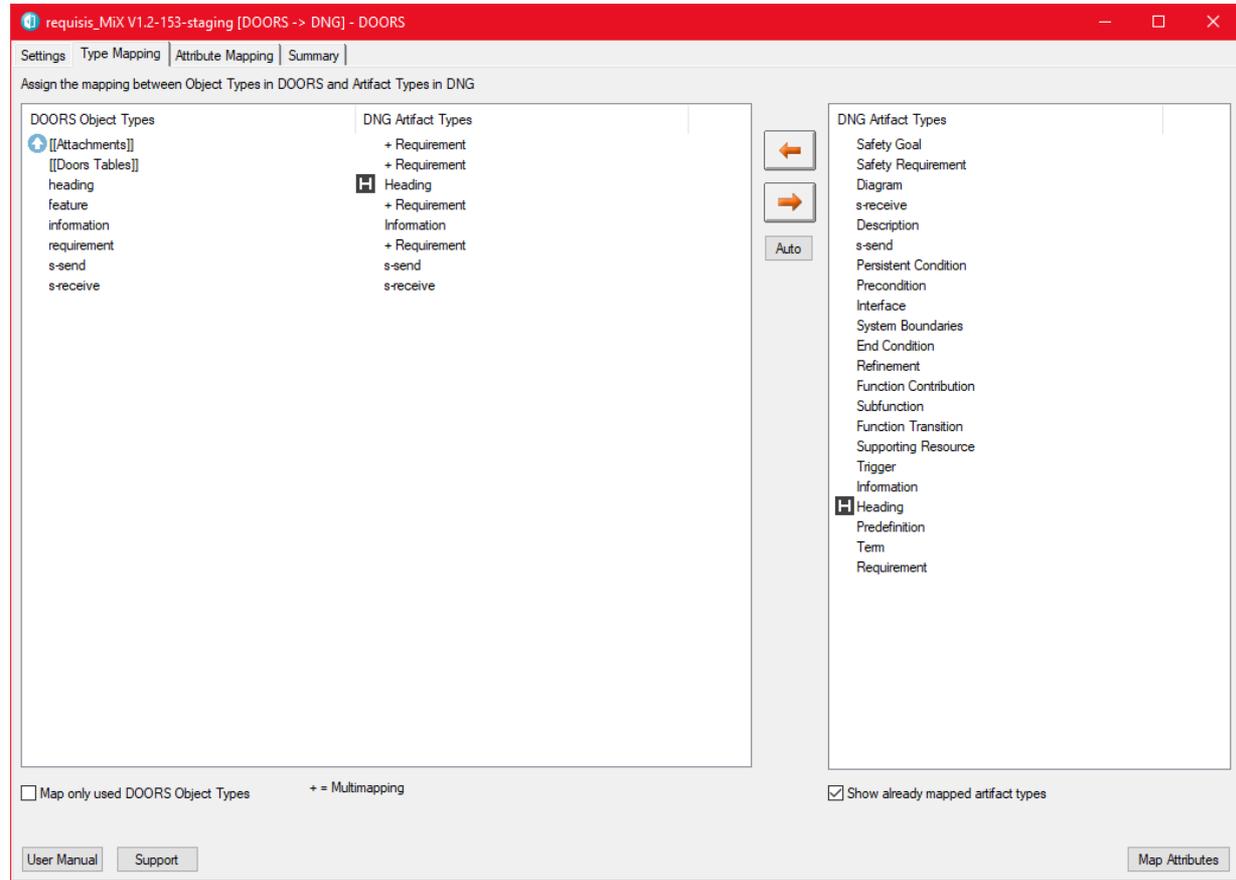


Clean and sustainable migration from DOORS 9 to DOORS Next Generation

Prepare Modules and Mapping

requisis_MiX: Mapping of Artifact Types

- > Artifact Types are read directly from DNG
- > Mapping prefilled by mapping rules
- > n:1 Mapping is possible
- > Just drag and drop or use arrows to map



requisis_MIX: Mapping of Attributes for each Artifact Type

- > Attribute are read directly from DNG
- > Mapping prefilled by mapping rules
- > Mappings per Artifact type
- > n:1 Mapping is possible
- > Also mapping of Enumeration Values
- > Just drag and drop or use arrows to map

The screenshot shows the 'Attribute Mapping' window in DOORS. The window title is 'requisis_MIX V1.2-153-staging [DOORS -> DNG] - DOORS'. The 'Attribute Mapping' tab is active, and the 's-receive' artifact type is selected. The window displays two tables for mapping attributes and enumeration values.

Attributes Mapping:

DOORS Attributes	DNG Attributes
Object ID	SourceID (static)
Object Heading	+ Primärtext
Object Text	+ Primärtext
Object Type	[no transfer]
E_ASIL	ASIL
IESE-Kommentar	+ Beschreibung
CustomAttr1	+ Beschreibung
CustomAttr2	+ Beschreibung

Enumeration Values Mapping:

DOORS Enumeration Values	DNG Enumeration Values
ASIL C	ASIL C
ASIL C(C)	ASIL C(C)
ASIL C(D)	ASIL C(D)
ASIL D	ASIL D
ASIL D(D)	ASIL D(D)
ASIL X	ASIL X
k.A.	open
-	not relevant

The interface also includes a list of 'Unmapped DNG Attributes' and 'Unmapped DNG Enumeration Values'. The 'Unmapped DNG Attributes' list includes: [no transfer], Titel, Potential Verification Method, OriginID, Variant Info, English Preparation Note, Components_Systems, Maturity, Function Type, Relevance, PVSUBstitutionMarker, Review Info, Preparation Note, and English Heading. The 'Unmapped DNG Enumeration Values' list includes: [no transfer].

Buttons for 'Auto', 'Next Type', 'Finish Mapping', 'User Manual', and 'Support' are visible at the bottom of the window.

requisis_MiX: Configuration Summary

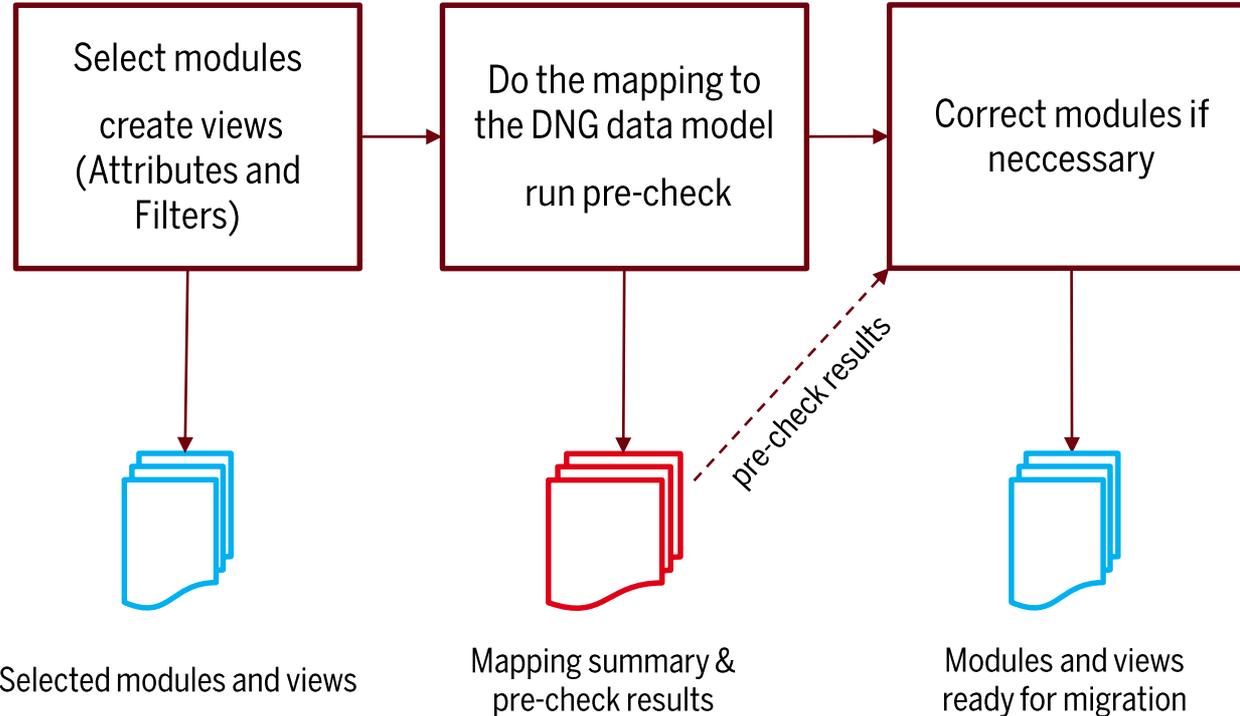
- > All relevant settings
- > Including chosen Mappings
- > Basic configuration check
 - > Do all objects have a selected “object type”
 - > Does the view contains a filter without “show ancestors”
- > Can be saved to disk

The screenshot shows a web application window titled "requisis_MiX V1.2-153-staging [DOORS -> DNG] - DOORS". The window has a navigation bar with tabs for "Settings", "Type Mapping", "Attribute Mapping", and "Summary". The main content area is titled "Configuration Summary" for "requisis_MiX V1.2-153-staging". It features a "Summary" section with a table of configuration details:

DOORS Module	/Screencast/Repräsentatives Modul - TSG-VDA-KLH_Modul_2
Selected View	Export
DNG Module	GC-Test1 MIX-DEMO-2 > TSG
DNG Context	DEMO 2019-04-18 (Change Set)
Heading Behavior	Based on the mapped DNG artifact type
Configuration Status	ready

Below the summary is a "Details" section. At the bottom of the window, there are buttons for "User Manual", "Support", "Save Summary as...", "Advanced Settings", "Precheck", and "Migrate".

Migration Preparation with requisis_MiX

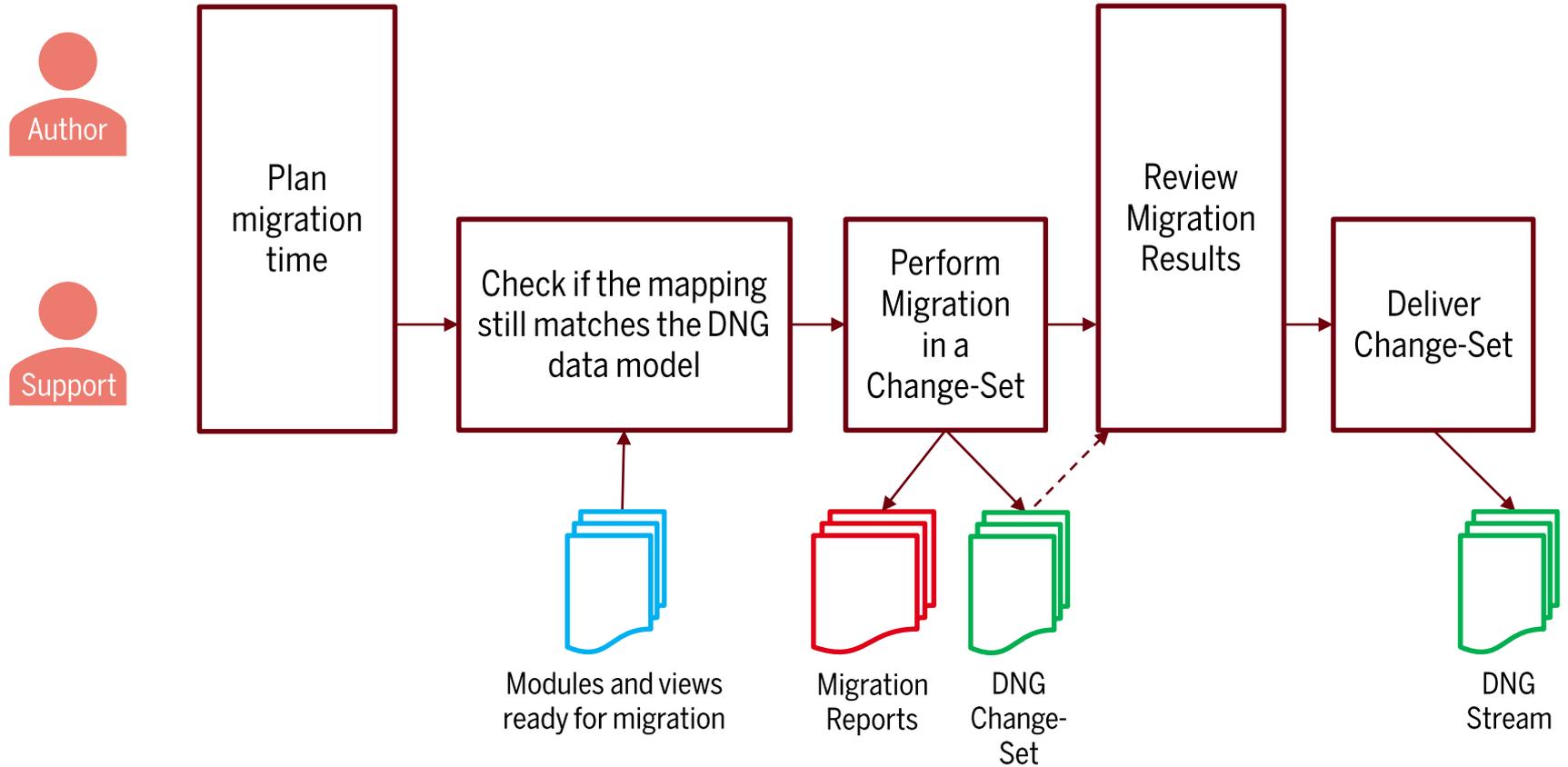




Clean and sustainable migration from DOORS 9 to DOORS Next Generation

Perform the Migration

Example Workflow for Migration Execution



requisis_MIX: Pre-check

- > Pre-check for possible data loss caused by tool differences, like
 - > OLEs in attributes mapped to other attributes than primary text
 - > Text formatting in other attributes
 - > Unsupported text formatting
- > Can be saved to disk

The screenshot shows the 'Precheck Result - DOORS' window. At the top, it indicates a duration of 30 seconds and 2 warnings. A green banner at the top reads: '2 Warning(s) - Please check the log messages below for details.'

Details

Overview of Warnings and Errors:

- 1 objects contain an OLE-object that cannot be transferred, since the DNG target attribute is of type string:**
1105(IESE-Kommentar)
- 1 objects contain text formatting in attributes that are mapped to string attributes in DNG:**
579(IESE-Kommentar)

Buttons: Show/Hide "Log Messages"

Log Messages

- warn Object 1105 contains an OLE-object in attribute "IESE-Kommentar". The mapped DNG attribute does not support embedded attachments.
- warn Object 579 contains text formatting in attribute "IESE-Kommentar". The mapped DNG attribute does not support text formatting.
- progress 18.04.2019 10:25:16
Processed 1100 objects.

Buttons: Show/Hide "Mapping Rules"

Mapping Rules

DOORS Type: "[Attachments]"	DNG Type: "Requirement"
DOORS Type: "[Doors Tables]"	DNG Type: "Requirement"
DOORS Type: "feature"	DNG Type: "Requirement"

Object ID SourceID (static)

Buttons: User Manual, Support, Save as...

Perform the Migration

- > Perform the Migration
- > Migration Result
 - > All relevant configuration settings
 - > Information about data-loss
 - > Migration Results
 - > can be saved to disk

The image shows two overlapping windows from the DOORS software. The background window is titled 'requisis_MiX V1.2-153-staging' and shows the 'Configuration' page for 'requisis_MiX v1.2-153-staging'. The foreground window is titled 'Sync Result - DOORS' and displays the 'Migration Result' for 'requisis_MiX V1.2-153-staging'. The migration was successful, with a duration of 5:47 minutes and 33 warnings. The summary of operations applied in DNG includes 1100 objects created, 0 objects deleted, 0 objects moved, 3320 attribute values updated, and 0 external links transferred.

requisis_MiX V1.2-153-staging

Settings | Type Mapping | Attribute

Configuration

requisis_MiX v1.2-153-staging

Summary

- DOORS Module: /Screencast/Repräsentatives Modul - TSG-VDA-KLH_Modul_2
- Selected View: Export
- DNG Module: GC-Test1 | MIX-DEMO-2 > TSG
- DNG Context: DEMO 2019-04-18 (Change Set)
- Heading Behavior: Based on the mapped DNG artifact type
- Start Time: 18.04.2019 10:26:47
- End Time: 18.04.2019 10:32:34

Migration Status: successful

Duration: 5:47 min
33 Warning(s) - Please check the log messages below for details.

Summary of operations applied in DNG:

- 1100 object(s) created.
- 0 object(s) deleted.
- 0 object(s) moved.
- 3320 attribute value(s) updated in 1100 object(s).
- 0 external link(s) transferred.

(Remarks)

User Manual | Support

User Manual | Support | Save Summary as... | Advanced Settings | Precheck | Migrate

Finishing the Migration

- > Review the results in DNG
- > Deliver change-set if satisfied with the result
- > Lock-down Modules in DOORS if desired

The screenshot displays the Jazz Requisite Management interface. At the top, there are browser tabs for '147854: TSG - Requirements Ma...' and a URL: 'https://jazz606.requisis.com/my/webAction-com.ibm.rdm.web.pages.showArtifact/artifactURI=https%3A%2F%2Fjazz606.requisis.com%2Fm%2Fresources%...'. The main content area shows a schematic diagram of a TSG with central components 'Benutzermanagement' and 'Innenraumbeleuchtung', and 'Türschloß' and 'Außenpiegel-einstellung'. Peripheral components include 'Schloßwächler', 'Tür-Offen-Sensor', 'Zentralverriegelung', 'Türverriegelungsschloß', 'Ausstrahlleuchte', 'Spiegel-Justierung', 'Spiegel-motoren', 'Spiegel-position', 'Spiegel-linse', and 'Spiegelwächler'. Below the diagram is the caption: 'Abbildung 1: Schematische Darstellung des TSG mit seinen peripheren Komponenten.' Below this, there are test cases listed in a table:

ID	Contents																
167263	- 1.2 Doors Table Test																
167266	<table border="1"><thead><tr><th>Column 1</th><th>Column 2</th><th>Column 3</th><th>Column 4</th></tr></thead><tbody><tr><td>A2</td><td>B2</td><td>C2</td><td>D2</td></tr><tr><td>A3</td><td>B3</td><td>C3</td><td>D3</td></tr><tr><td>A4</td><td>B4</td><td>C4</td><td>D4</td></tr></tbody></table>	Column 1	Column 2	Column 3	Column 4	A2	B2	C2	D2	A3	B3	C3	D3	A4	B4	C4	D4
Column 1	Column 2	Column 3	Column 4														
A2	B2	C2	D2														
A3	B3	C3	D3														
A4	B4	C4	D4														
167264	- 1.3 Physische Systemumgebung																
167265																	

At the bottom of the screenshot, it says 'Showing 1150 of 1100 (100%)' and '1 selected (Clear All Selected)'. The IBM logo is visible in the bottom left corner of the application window.

Updating Shadow-Modules

- > **If data type model has changed**
 - > Simply “close” the gaps by modifying the mapping
- > **If data type model was not changed**
 - > Just push on “migrate” or
 - > Use dxi-API to migrate
- > **Automate as an scheduled task**
 - > Execution in Batch-Mode is possible

Other use-cases

> Migration of Variants

- > Multiple filtered Views into multiple Streams by re-using same artifacts

> Advanced Update-Use-Cases

- > Only new objects
- > Only some attributes
- > Only attribute values (no structure updates)

Benefits of our approach and requisis_MiX

> Reduce effort of migration:

> Time:

- > Very low manpower needed
- > No preprocessing of the DOORS data needed
- > Quick configuration due to automatic mapping
- > Very fast data transfer

> Money:

- > No migration expert needed

> Do-it-yourself-migration

> Quality:

> Clean DNG type model:

- > No modification of the DNG type model
- > All required transformations are based on mapping rules

> Rule based migration:

- > Reduces configuration mistakes
- > Allows upscaling to large amounts of modules

> Pre-check: Detect issues before migrating

> Reusable Content:

- > Convert OLE-Objects into native format
- > Merge legacy attributes to collector attributes
- > Migrate into different base types if needed (e.g. enumeration to string)

> Repeatable Migration:

- > Updates and Re-Dos with just one click

Future work for requisis_MiX

> Migration Manager (version 1.5)

- > Configure multiple-modules at a time
- > Keep oversight over migration status
- > Run multiple migrations at once

> Sync DNG->DOORS (version 2.0)

- > Synchronization back to DOORS 9
- > Shadow-Copies to DOORS 9
- > Exchange-Processes
- > Complete Round-trips

Migration Manager - DOORS

requisis_MiX V1.5-DEV
licensed to: REQUISIS GmbH - Internal Use Only
expiry date: 31 Dec 2100
(c) 2018-2019 REQUISIS GmbH

General Settings
Used MIX Mapping Rule Module: /DNG Migration-Tool/Rule-Module/requisis_MiX-Mapping Rules
Used MIX Log Folder: C:\Users\NIKOLA~1\STE\AppData\Local\Temp\MIX\0000b65

MS	Module	View	DNG Context	Configuration Status	Migration Status
<input type="checkbox"/>	TSG-VDA-KLH_Modul_2				none
<input checked="" type="checkbox"/>	OLE-Objects for Extraction	OLE-Export	Screencast (Change Set)		migrated
<input checked="" type="checkbox"/>	OLE Objects	Test View	Screencast (Change Set)		migrated (successful - 20.03.2019 14:19:33)

Check/Uncheck All - Remove checked Module(s) from List
Module Status: not migrated configured migrated finished

Settings for selected module
DNG Target Module
Target DNG URI: https://jazz606.requisis.com/m/webfaction=com.ibm.rdm.web_pages.showArtifact&artifactURI=https%3A%2F%2Fjazz606.requisis.com%2Fm%2Fresources%2F_vhKAL
Target Module: GC-Test 1 | MIX-DEMO-2 > OLE-Objects for Extraction
Target Context: Screencast (Change Set)

DOORS Settings
Select a DOORS view for the migration:
OLE-Export
Select an Enumeration Attribute that defines the Object Type in DOORS:
Object_Type
Select how headings are set in DNG:
 Based on DOORS (A heading in DOORS is always a heading in DNG, independent of the mapped DNG artifact type.)
 Based on the mapped DNG artifact type (Only DOORS objects mapped to DNG artifacts of type heading will become headings in DNG.)

User Manual Support
Actions on checked modules: Automap Precheck Migrate Modules



Clean and sustainable migration from DOORS 9 to DOORS Next Generation

Other Tools

Other Tools allowing Map, transform & migrate

> Individual Standard

- > Mapping based on ReqIF-Files
- > Transformation of ReqIF-Files according to preconfigured Mapping on Known RDF-URIs
- > Workflow: Export from DOORS, Transform files, Import in DNG

> Opshub

- > Syncing between DOORS and DNG
- > No details publicly available

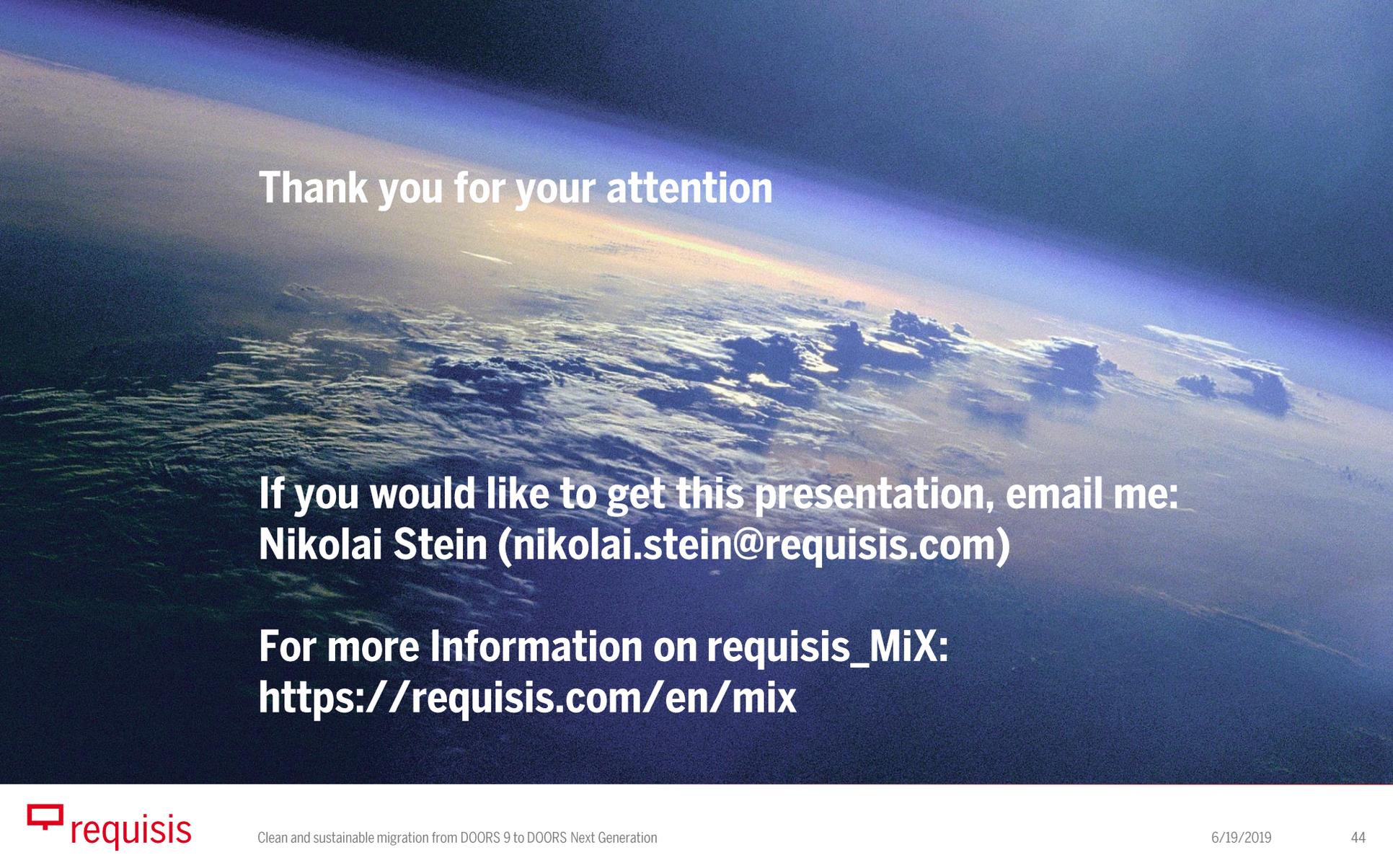
> IBM & Persistent tools (not indented for customer use)

- > No details publicly available

> Rivernorth Solutions (used as part of their service)

- > Custom migration tool for requirements and test cases

> Any more?

Aerial view of a coastline with a sunset or sunrise over the ocean. The sky is a mix of deep blue and orange, with the sun's glow reflecting on the water. The land is visible in the foreground, showing some greenery and structures.

Thank you for your attention

**If you would like to get this presentation, email me:
Nikolai Stein (nikolai.stein@requisis.com)**

**For more Information on requisis_MiX:
<https://requisis.com/en/mix>**