1. AUDIT TRAIL

Version	Change Description
Version 2.3.4	2.3.4 is an update of the 2.3.3 (2.3.13115.20969) release with a few bug fixes and improvements

2. REMARKS

3. SIGNATURES

Signature Meaning	Name	Role	Date	Signature
Author	Wolfgang Huber	Production Responsible		
Approver	Yves Berquin	Production Responsible, Operation Responsible		

4. PURPOSE

Documentation of verification and validation results of Matrix Requirements Release 2.3.7

5. SCOPE

This release with number 2.3.7 is a minor update of the 2.3.3 release. It contains the changes listed in the "Appendix: Changes" below.

6. REFERENCES AND APPLICABLE DOCUMENTS

- **SIGN-342 Verification and Validation Plan, Ver. D**
- **SIGN-344 Software Development Plan, Ver.G**
- **SIGN-396 Project Kickoff Form**

7. RESPONSIBILITIES

| Name	Responsibility
Aloïs Paulus	coding, testing
François Chasseur	coding, creating tests
Ignas Žakaitis	main tester
Michael Stanton	coding
Rytis Blinkovas	testing
Tilman Schlenker	coding, creating tests, testing
Wolfgang Huber	coding, creating tests, testing
Yves Berquin	coding

8. VERIFICATION AND VALIDATION SUMMARY

8.1. VALIDATION SUMMARY

No user validation was required due to the scope of changes.
All changes from the previous version are documented covered by tests. All these tests were executed as part of the verification.

8.2. VERIFICATION SUMMARY

A total of 64 tests were execute by 5 people. From these 64 tests 8 initially failed and were repeated successfully after fixing.
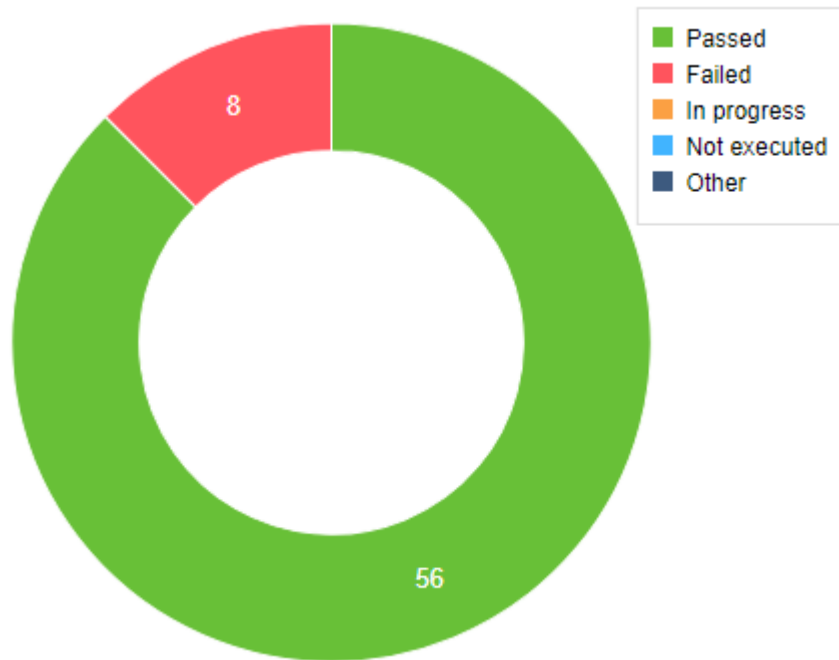
The tests were executed in 4 test cycles each covering a different release candidate.

8.2.1. Tested Release Builds

The tests were executed using several builds, with 4 major test cycles.

Build	Test Cycle	Number of Tests	Passed Tests
2.3.4.1030-64bbaec	First Cycle	28	22 / 28
2.3.4.1053-0c9e29c	Second Cycle	19	18 / 19
2.3.4.1071-5fc7a0e	Third Cycle	11	10 / 11
2.3.4.1080-e42a252, 2.3.4.1082-1dfa85b	Forth Cycle	6	6 / 6

8.2.2. Testers

The majority of tests were executed by a dedicated tester:
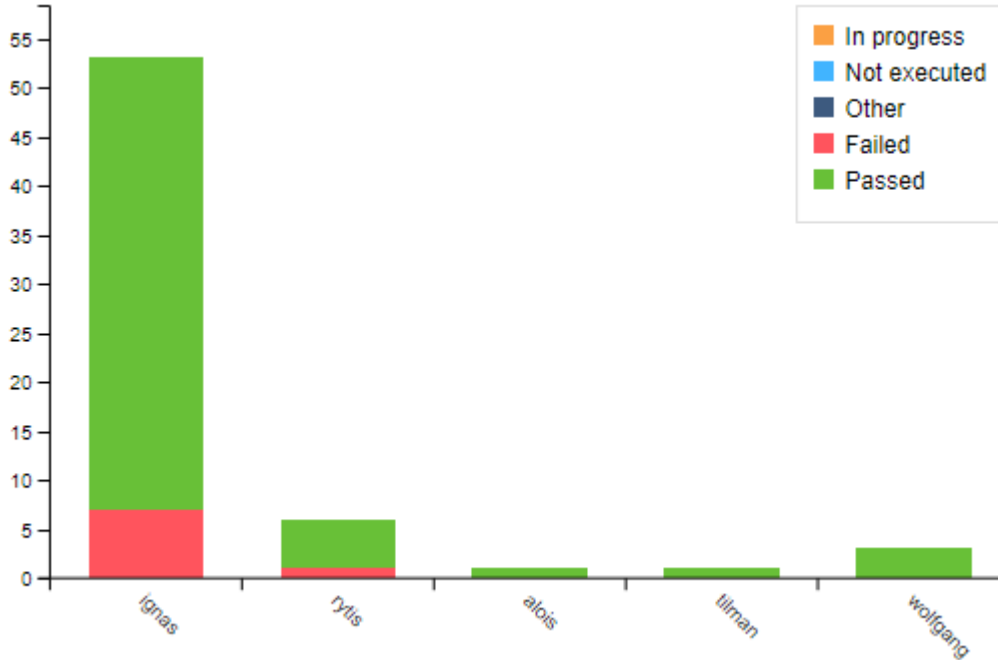
Tester	# Tests executed
ignas	53
rytis	6
alois	1
tilman	1
wolfgang	3

8.2.3. Testes Environment

All tests were executed with the latest versions of the used browsers (safari, brave, chrome), on Windows, linux.

8.2.3.1. OS / browser (incl version)

OS / Browser	# Tests
Windows 10 / Brave Browser Version 1.41.96 Chromium: 103.0.5060.114 (Official Build) (64-bit)	7
Windows 10 / Version 1.41.96 Chromium: 103.0.5060.114 (Official Build) (64-bit)	9
Windows 10 / Brave Browser Version 1.41.100 Chromium: 103.0.5060.134 (Official Build) (64-bit)	5
Windows 10 / Brave Browser Version 1.43.89 Chromium: 105.0.5195.102 (Official Build) (64-bit)	17

Windows 11 / Version 105.0.5195.102 (Official Build) (64-bit)	7
Windows 10 / Version 1.41.100 Chromium: 103.0.5060.134 (Official Build) (64-bit)	5
Windows 10/ Brave Browser Version 1.41.100 Chromium: 103.0.5060.134 (Official Build) (64-bit)	1
Windows 10 / Brave Browser Version 1.42.86 Chromium: 104.0.5112.81 (Official Build) (64-bit)	1
Windows 10/ Brave Browser Version 1.43.89 Chromium: 105.0.5195.102 (Official Build) (64-bit)	1
Linux / Chrome Version 105.0.5195.52 (Official Build) (64-bit)	1
Windows 10 / Brave Browser Version 1.43.93 Chromium: 105.0.5195.127 (Official Build) (64-bit)	8
Windows 11 / Version 1.44.112 Chromium: 106.0.5249.119 (Official Build) (64-bit)	2

8.3. FINAL VERDICT

All addressed issues and improvements have been tested and passed the tests.
The software build 2.3.7 can be released.

9. VERIFICATION DETAILS

All changes have been reviewed and tests have been executed to ensure they are working.
The traceability has been reviewed to make sure all changes have been implemented, reviewed and tested as planned.
Notes
- It was verified that above changes were all changes done to the source code (nothing else changed than the planned changes)
- tests were executed after the last code change
- all FEAT have been tested (see Appendix: Test Results)

10. VALIDATION DETAILS

n/a - see above

11. APPENDIX: CHANGES

FEAT-850 Performance Improvements

Various performance for large projects

- Faster searches: some searches are up to 10x faster (e.g. if they don't need the folder hierarchy)
- If showing search results in a list, only the first 200 are shown initially. To see more the user needs to click on "show xxx remaining" at the end of the list
- Rendering the application is faster: it first renders the item, than a sparse tree and only afterwards it loads and renders the whole tree in the background. When the tree is required (for item selection for instance), there is a spinning wait.
- Pinging the server is faster
- Rendering lot's of notification in the tree is faster
- DOC items with mrql queries, run the queries sequentially and a progress indicator shows the progress
- Training dashboard is faster

FEAT-849 Change release number version

The version number shown in the bottom left was made more user friendly.

The version number shown to user now contains 3 numbers: Major Release, minor release and patch level.

FEAT-855 Categories can be recreated

If someone deletes a category, the category can now be re-created.

To be able to recreate a category the category delete operation will rename the category, so that the id is available.

FEAT-847 Test Execution Overview Dashboard to show configuration issues

The Test Execution Overview dashboard shows now the reason why it might not render (e.g. no XTC category exist, no tester field, no date field, no test_result field)

In some configurations the Test Execution Overview dashboard cannot not render meaningful results. In that case no error was shown.

FEAT-848 LiveQMS fails gracefully when no publication exists

Now the LiveQMS page shows that there is nothing published yet.

When someone tried to access the published qms before anything was published an server error was shown.

FEAT-863 Password link expiry is now configurable

It is now possible to define the number of days a password link is valid.

There is now an option to specify the validity duration of token in case of password reset or user onboarding.

Password Settings   help

☐ **Require signature password to be different to login password**

☐ **Allow browser to fill password fields**

☐ **Require user to type user name when signing document**

Password Expiration   never   ▼

☐ **Send password expiry emails**

Password Strength   none   ▼

Disable after failed logins   never   ▼

Password reset limitation   3 days   ▼

Session timeout   30 minutes   ▼

Default is now 3 days

FEAT-872 MRQL searches for display name

We can now search dropdowns and labels based on their displayed values

For dropdowns:
```
mrql:dropname=[value]    (to find a dropdown with only that value)
mrql:dropname~[value]    (to find a dropdown with that value and perhaps
others)
mrql:dropname!=[value]    (to find a dropdown with only one value which is
not that one)
mrql:dropname!~[value]    (to find a dropdown without that value)
```

the "dropdown" above is the name of the field, but the value is the visible label selectable by the user
If value has spaces, it needs to be enclosed in double quotes
```
mrql:dropname=["the value"]
```
For labels:
```
mrql:label=[value] (to find items with that label)
mrql:label!=[value] (to find items without that label)
```

value here is the displayed name of the label. We take the display name by decreasing priorities from:
- displayName
- reportName
- the label.on.displayName

FEAT-854 Signature meanings not shown

The signature meaning was not shown if the same person signed a document twice in two different signature boxes.

Now the signature meaning is correctly shown for each signature.

FEAT-853 Issue with folder rendering in custom sections

It was not possible to render fields of folders in custom sections.

Now fields of folders can be shown in custom sections

FEAT-852 Excel export of risks ignored risk control changes

When exporting risks in excel, the math was not updated when risk controls were deleted.

Now there is warning if risk controls got deleted and the user can review and update the risks, before exporting them to excel.

FEAT-851 Custom section did not print external links

Custom section did not show external links

Now external links can be rendered.

FEAT-858 SyncUtils double escape html characters

When using SyncUtils to sync external items, special HTML characters such as > in the title would be displayed as > in the sync target.

Now entities are correctly escaped

FEAT-859 Labels were not published in QMS

It was not possible to show Labels in LiveQMS

Now labels can be published.

FEAT-860 TEO dashboard, dialog could not be closed

In TEO dashboard, using 'OK' button to close 'Items not covered by selected XTCs' dialog did not work.

The dialog can now be closed with the OK button

FEAT-862 Passwords with & did not work for Gates

Passwords with & did not work for approving gates

Now passwords with & can be used to approve gates

FEAT-865 Fix image rescaling logic

Sometimes images did not scale nicely when printing.

Before, the scaling of images was done based on the largest dimension. Now, it is based on the bigger ratio (of image size vs page size, vertically compared to horizontally).

FEAT-867 Deleted users not showing in XTCs and other places

Some functions in Matrix are built around showing a particular user as a tester, or an approver for a gate. When viewing and item the selected user shall be visible even after it was deleted. It shall be marked as deleted.

Deleted users show in XTC testers, gates and signatures with strike through to indicate they are deleted.

FEAT-869 Down and uplinks in DOC not filtered by filters

When showing lists of items with up and downlinks as document sections, document creation filters were not applied to the links.

Now the up and downlinks are also filtered

FEAT-870 < in text caused Excel export to truncate text

When exporting content to Excel via the Custom Print sections, < characters were not escaped correctly. This caused the Excel export to only contain text up to the < character.

Now the complete text is printed.

FEAT-873 Smart text resolution incorrect in custom sections

When using smart text (like abbreviations or terms) in rich text columns, they did not get resolved correctly when creating custom documents.

Now the information prints correctly.

FEAT-874 Logic regarding refresh and task in TEO has been improved

When showing external links in the testing dashboards, refreshing the view duplicated the shown external links.

The refresh button doesn't duplicate the task list anymore. Also the logic of the "Show task" checkbox has been improved.

FEAT-875 XTCs are overlapping in branches

When XTC are generated they don't use the rules for branches: they will be generated with the same IDs in all branches

The fix is using the check for branches to make sure the XTC Ids are generated uniquely across all branches of a project, the same way it is computed for all other created items
For XTC already generated in previous versions of 2.3 we have a utility that is able to move away the XTC Ids from the branches to a safe number

12. APPENDIX: TEST RESULTS

Item	Tested By	Execution Date	Last Modification	Test Result
FEAT-850 Performance Improvements	**XTC-2858 Authentication and Session Handling (TC-1)**	2022/09/16	2022/09/16 09:44:00	passed
	XTC-2839 Tree, Search and Filter (TC-5)	2022/09/06	2022/09/13 15:24:34	passed
	XTC-2840 Tree and MRQL Scalability (TC-334)	2022/09/06	2022/09/14 14:23:39	passed
	XTC-2794 Cross Project Links Tests (TC-30)	2022/07/20	2022/10/18 14:06:11	passed with deviation
	XTC-2795 Gate Test (TC-78)	2022/07/22	2022/10/17 13:56:36	passed with deviation
	XTC-2798 Documents with item selection based on search expressions (TC-105)	2022/07/26	2022/07/26 13:36:17	passed
	XTC-2802 MRQL: Uplink, downlink and folder search (TC-98)	2022/07/27	2022/07/27 11:47:33	passed
	XTC-2850 MRQL Test Searches (TC-107)	2022/09/09	2022/09/13 15:25:15	passed
	XTC-2851 MRQL risk search (TC-99)	2022/09/09	2022/09/13 15:25:20	passed
	XTC-2805 MRQL: Macros search (TC-115)	2022/07/27	2022/07/27 15:46:15	passed
	XTC-2806 MRQL: Review search (TC-131)	2022/07/27	2022/07/27 19:41:13	passed

Item	Tested By	Execution Date	Last Modification	Test Result
	XTC-2807 **Search for outdated items (TC-219)**	2022/07/28	2022/10/17 13:56:31	passed with deviation
	XTC-2808 **Cascading Searches (TC-223)**	2022/07/28	2022/07/28 08:14:27	passed
	XTC-2809 **Author and Editor Searches (TC-224)**	2022/07/28	2022/07/28 08:29:09	passed
	XTC-2810 **Date Searches (TC-225)**	2022/07/28	2022/07/28 08:39:23	passed
	XTC-2853 **Search List Limit (TC-339)**	2022/09/12	2022/09/13 15:25:30	passed
	XTC-2811 **QMS Training Dashboard (TC-272)**	2022/07/28	2022/08/08 14:12:29	passed
	XTC-2812 **Delete of notifications and trainings (TC-287)**	2022/07/29	2022/09/13 15:22:00	passed
	XTC-2814 **Label Overview Dashboard test (TC-226)**	2022/07/29	2022/10/17 13:56:26	passed with deviation
	XTC-2870 **XTCs dashboard overview (TC-164)**	2022/10/17	2022/10/17 11:33:11	passed
	XTC-2866 **Edges cases for deffered tree loading. (TC-343)**	2022/09/16	2022/09/16 11:41:52	passed
	XTC-2867 **Notifications in Tree (TC-344)**	2022/09/16	2022/09/16 11:42:05	passed
FEAT-849 **Change release number version**	**XTC-2818** **Verify version number display (TC-332)**	2022/08/01	2022/09/13 15:23:34	passed
FEAT-855 **Categories can be recreated**	**XTC-2796** **Deleting Test Categories (TC-314)**	2022/07/26	2022/09/16 11:44:19	passed

Item	Tested By	Execution Date	Last Modification	Test Result
FEAT-847 Test Execution Overview Dashboard to show configuration issues	**XTC-2816 TEO should fail gracefully (TC-330)**	2022/08/01	2022/09/13 15:23:06	passed
FEAT-848 LiveQMS fails gracefully when no publication exists	**XTC-2813 LiveQMS fails gracefully when no publication existing (TC-331)**	2022/07/29	2022/09/13 15:22:18	passed
FEAT-863 Password link expiry is now configurable	**XTC-2857 Password reset duration (TC-338)**	2022/09/12	2022/10/17 13:57:58	passed with deviation
FEAT-872 MRQL searches for display name	**XTC-2869 MRQL searches for dropdowns and labels (TC-347)**	2022/10/17	2022/10/17 11:33:06	passed
FEAT-854 Signature meanings not shown	**XTC-2801 Two Signature Table Test (TC-324)**	2022/07/27	2022/07/27 10:39:39	passed
FEAT-853 Issue with folder rendering in custom sections	**XTC-2861 PRINT - Folder content display (TC-294)**	2022/09/15	2022/09/16 11:41:01	passed
FEAT-852 Excel export of risks ignored risk control changes	**XTC-2797 Excel Export Tests (TC-70)**	2022/07/26	2022/09/16 11:44:34	passed
FEAT-851 Custom section did not print external links	**XTC-2800 PRINT - External Links Fields (TC-335)**	2022/07/27	2022/07/27 10:18:43	passed
FEAT-858 SyncUtils double escape html characters	**XTC-2855 Agile Links: Sync Test (TC-64)**	2022/09/13	2022/09/13 16:36:12	passed
FEAT-859 Labels were not published in QMS	**XTC-2854 QMS Viewer Test (TC-74)**	2022/09/12	2022/09/13 15:25:34	passed
FEAT-860 TEO dashboard, dialog could not be closed	**XTC-2870 XTCs dashboard overview (TC-164)**	2022/10/17	2022/10/17 11:33:11	passed
FEAT-862 Passwords with & did not work for Gates	**XTC-2844 Gate E-Signature Test (TC-230)**	2022/09/08	2022/09/13 15:24:48	passed
	XTC-2845 Gate control password should work with & (TC-337)	2022/09/08	2022/09/13 15:24:53	passed

Item	Tested By	Execution Date	Last Modification	Test Result
FEAT-865 Fix image rescaling logic	**XTC-2846 Verify image display (TC-340)**	2022/09/08	2022/09/14 14:25:34	passed
FEAT-867 Deleted users not showing in XTCs and other places	**XTC-2865 Verify display of deleted users (TC-342)**	2022/09/16	2022/09/16 11:42:27	passed
	XTC-2868 Ensure that a deleted users full name appears in a signed document (TC-345)	2022/09/16	2022/09/16 10:09:48	passed
	XTC-2875 Handling of deleted/no access users and user groups (TC-348)	2022/10/21	2022/10/21 17:05:41	passed
FEAT-869 Down and uplinks in DOC not filtered by filters	**XTC-2859 Label Filter in DOCs (docFilter) (TC-130)**	2022/09/16	2022/09/16 11:40:32	passed
FEAT-870 < in text caused Excel export to truncate text	**XTC-2860 Excel Output (TC-306)**	2022/09/16	2022/09/16 11:40:48	passed
FEAT-873 Smart text resolution incorrect in custom sections	**XTC-2872 Test legacy options for terms/abbreviations (TC-297)**	2022/10/17	2022/10/17 11:33:25	passed
	XTC-2873 Macro in test steps (TC-346)	2022/10/17	2022/10/17 11:33:20	passed
FEAT-874 Logic regarding refresh and task in TEO has been improved	**XTC-2870 XTCs dashboard overview (TC-164)**	2022/10/17	2022/10/17 11:33:11	passed
FEAT-875 XTCs are overlapping in branches	**XTC-2871 Branching Unique Id Tests (TC-199)**	2022/10/17	2022/10/17 11:45:35	passed