

# **Software Validierung – Was habe ich damit zu tun ?**

Michael Neumann

09.12.2020



Systemvalidierung (1/2) - Musterdokumente, Checklisten und Vorlagen

TOOLPOOL  
GESUNDHEITSFORSCHUNG  
IT-Werkzeuge und Information  
Powered by TMF

Produkte Themen Projektplanung Über das Portal Mitmachen Anmelden

Produkt > Arbeitsmaterial / Checkliste  
**Systemvalidierung (1/2) -  
Musterdokumente, Checklisten  
und Vorlagen**

Dieses Produkt wird entwickelt  
von TMF – Tech  
für die

THEMEN  
> Klinische Studien  
> Forschungsdatenmanagement  
PRD

Zusammenfassung  
Produktdetails  
Beschreibung  
Erfahrungsberichte  
Verwandte Produkte  
(zuletzt aktualisiert)

Produktdetails  
Datum der Erstverfügbarkeit: 23.05.2018  
Lizenzmodell: TMF  
Preis: kostenlos

Downloadpaket Systemvalidierung  
Teil1 (ZIP 10.05 MB)

Nutzungsbedingungen der TMF

Systemvalidierung - Schulung

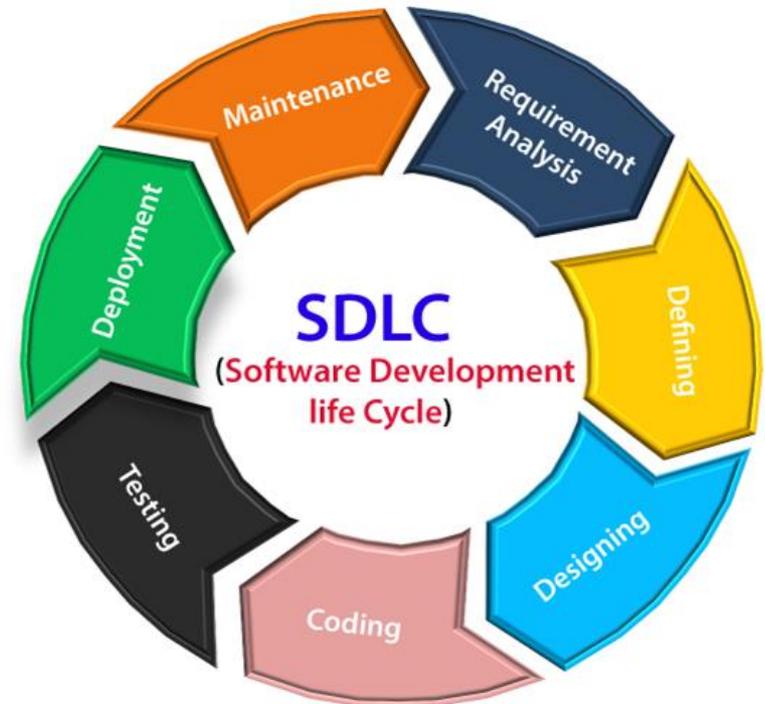
Ansprechpartner  
Dr. Johannes Drepper  
Geschäftsstelle TMF  
e.V.  
Kontaktieren

**Beschreibung**  
Nur mit validierten IT-Systemen lassen sich zulassungsrelevante Studien durchführen. Die  
regelmäßige Validierung ihrer Systeme stellt für viele Forschungsverbünde eine hohe Hürde  
dar. Um diese Hürde zu überwinden, stellt die TMF ein Dokumentenset für die Validierung

<https://www.toolpool-gesundheitsforschung.de/>

Der Entwicklungsprozess besteht aus ...

- Anforderungsanalyse
- Risikoanalyse
- Entwicklung
- Validierung
- Inbetriebnahme

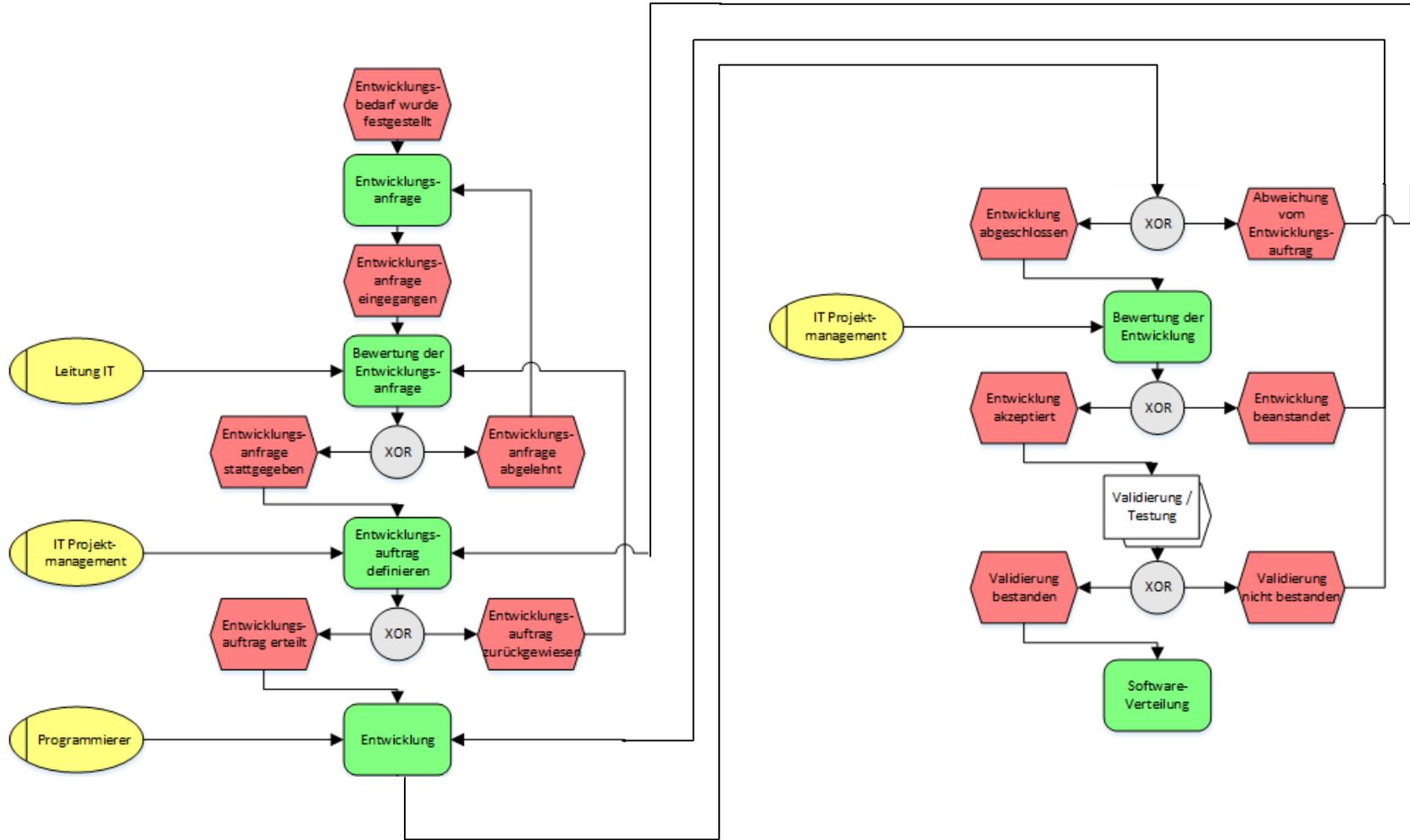


[javatpoint.com](http://javatpoint.com)

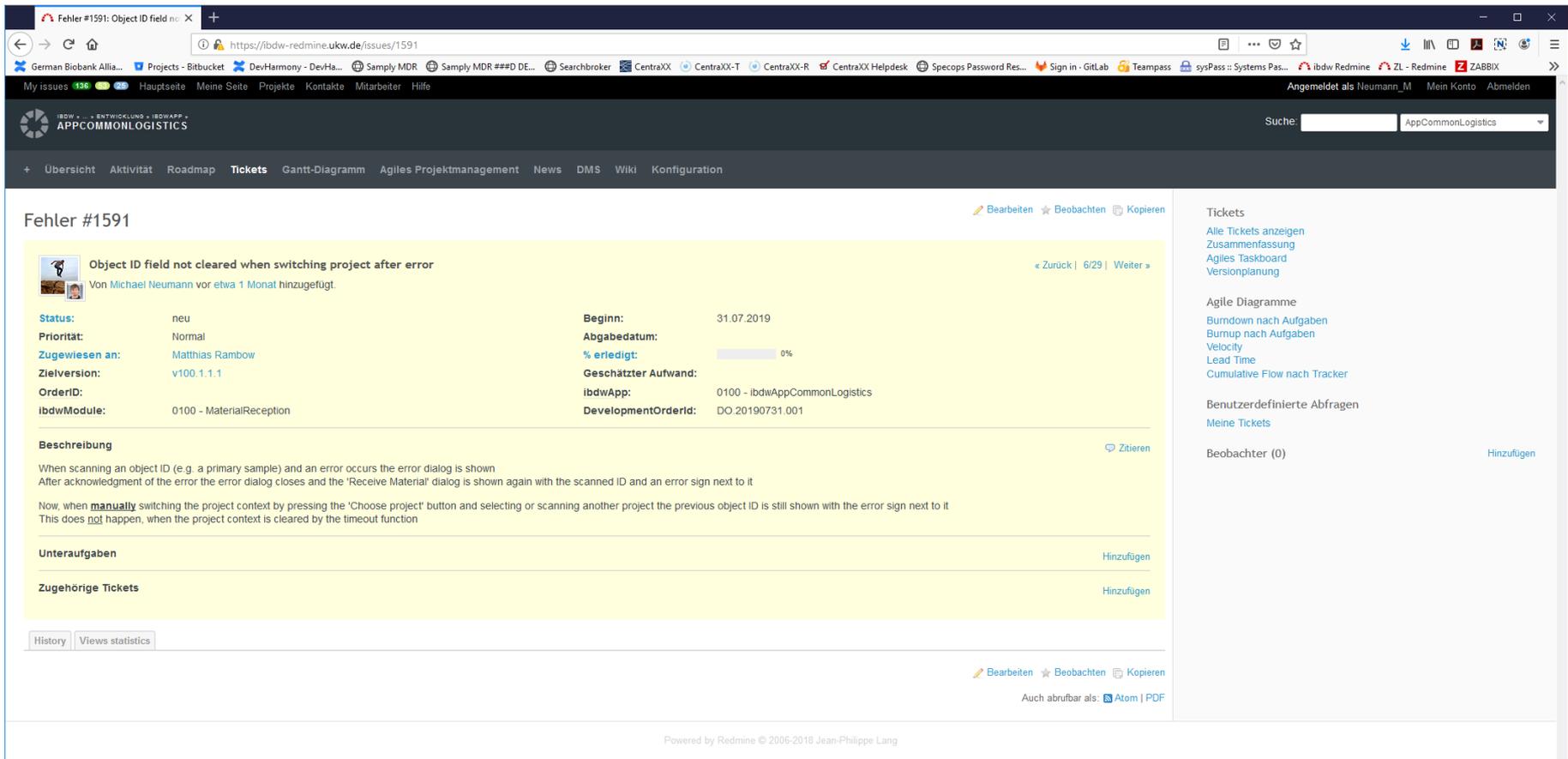
# Der Entwicklungsprozess



German  
Biobank Node  
bbmri.de



## Development Order



The screenshot shows a Redmine issue page for 'Fehler #1591: Object ID field not cleared when switching project after error'. The page is viewed in a browser window with the URL 'https://ibdw-redmine.ukw.de/issues/1591'. The browser's address bar and tabs are visible at the top. The page header includes navigation links like 'Übersicht', 'Aktivität', 'Roadmap', 'Tickets', 'Gantt-Diagramm', 'Agiles Projektmanagement', 'News', 'DMS', 'Wiki', and 'Konfiguration'. The issue details are as follows:

<b>Status:</b>	neu	<b>Beginn:</b>	31.07.2019
<b>Priorität:</b>	Normal	<b>Abgabedatum:</b>	
<b>Zugewiesen an:</b>	Matthias Rambow	<b>% erledigt:</b>	0%
<b>Zielversion:</b>	v100.1.1.1	<b>Geschätzter Aufwand:</b>	
<b>OrderID:</b>		<b>ibdwApp:</b>	0100 - ibdwAppCommonLogistics
<b>ibdwModule:</b>	0100 - MaterialReception	<b>DevelopmentOrderid:</b>	DO.20190731.001

**Beschreibung**

When scanning an object ID (e.g. a primary sample) and an error occurs the error dialog is shown. After acknowledgment of the error the error dialog closes and the 'Receive Material' dialog is shown again with the scanned ID and an error sign next to it. Now, when manually switching the project context by pressing the 'Choose project' button and selecting or scanning another project the previous object ID is still shown with the error sign next to it. This does not happen, when the project context is cleared by the timeout function.

**Unteraufgaben**

**Zugehörige Tickets**

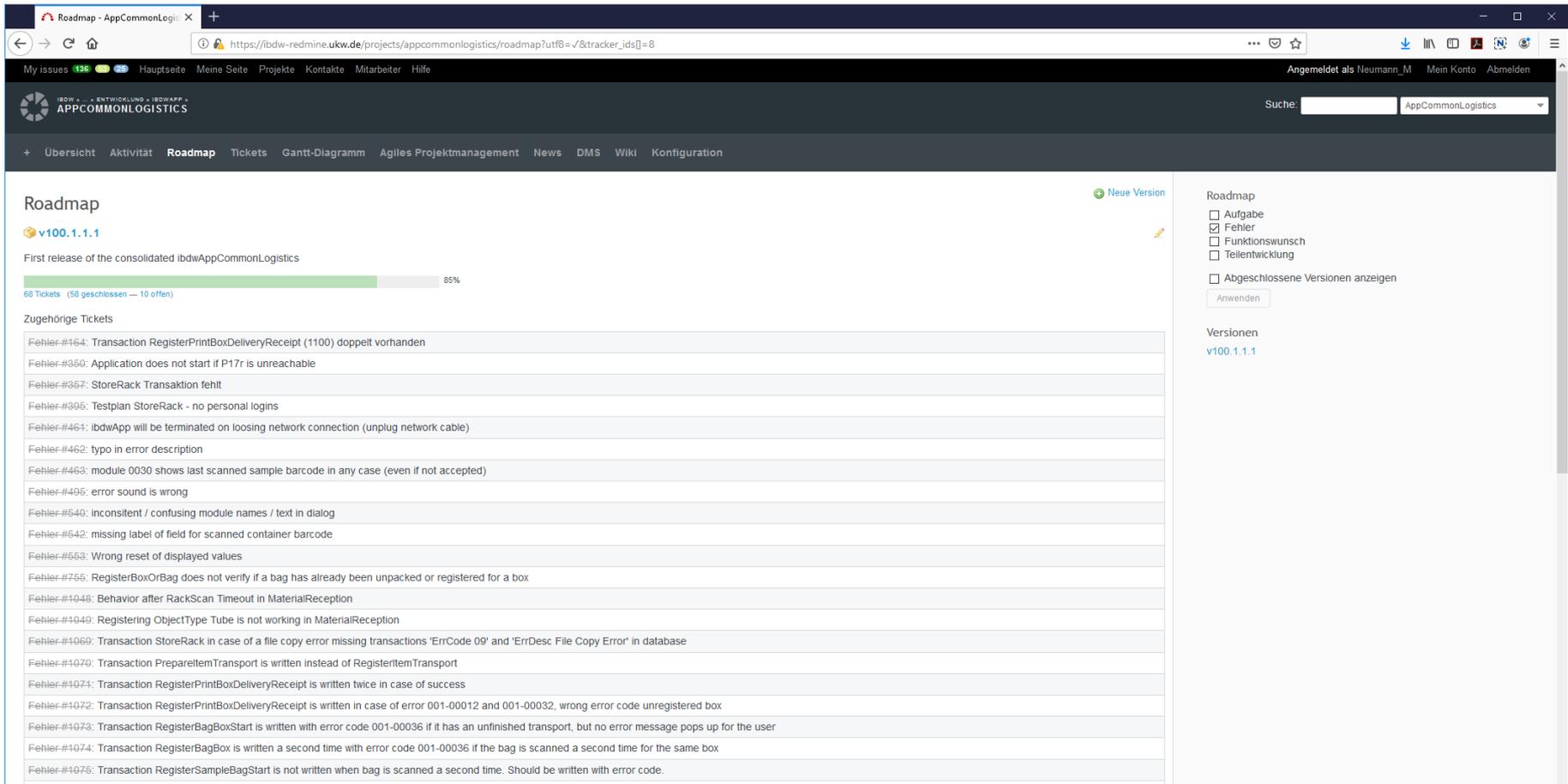
Navigation options: [Bearbeiten](#), [Beobachten](#), [Kopieren](#). Also abrufbar als: [Atom](#) | [PDF](#).



## Task Board

The screenshot shows a web browser window displaying the 'Agiles Taskboard' for the project 'AppCommonLogistics'. The browser address bar shows the URL: <https://ibd-w-redmine.ukw.de/projects/appcommonlogistics/agile/board>. The application header includes navigation links like 'Übersicht', 'Aktivität', 'Roadmap', 'Tickets', 'Gantt-Diagramm', 'Agiles Projektmanagement', 'News', 'DMS', 'Wiki', and 'Konfiguration'. A search bar is present with the text 'Suche: AppCommonLogistics'. The main content area is titled 'Agiles Taskboard' and features a search box 'Search by subject' and a filter dropdown. Below this is a Kanban board with columns representing task statuses: 'neu ()', 'In Bearbeitung ()', 'gelöst ()', 'vorgelegt ()', 'akzeptiert ()', 'zurückgestellt ()', 'eingepplant ()', 'entwickelt ()', 'begutachtet ()', 'getestet ()', and 'ausgeliefert ()'. The 'In Bearbeitung' column contains several tasks, including 'Aufgabe #1345 Adapt test plan RegisterSampleBag' assigned to Hansgeorg Molnar, 'Aufgabe #1356 Migrate Sample Collection Timestamp data' assigned to Matthias Rambow, 'Aufgabe #1152 Retrieve Liconic Rack Type from database' assigned to Michael Neumann, 'Aufgabe #1338 Prepare validation of ibdwAppCommonLogistics v100.1.1.1', and 'Aufgabe #1339 Check preconfigured list of projects' assigned to Michael. The 'zurückgestellt' column contains 'Teilentwicklung #310 Refactoring all the ibdwTouchscreenExample' and 'Funktionswunsch #353 names and labels are not standardised' assigned to Matthias Rambow. The 'ausgeliefert' column contains 'Funktionswunsch #551 erroneous and inconsistent gui behaviour' assigned to Michael Neumann. On the right side, there are sections for 'Tickets' (Alle Tickets anzeigen, Zusammenfassung, Gantt-Diagramm, Agiles Taskboard, Versionplanung), 'Mitglieder' (Achim Wagner, Bianca Schlier, Christina Zechmeister, Claudia Schütz, Daniela Siedel, Gabriele Hill-Gómez, Hansgeorg Molnar, Ingrid Strauß, Jörg Fuchs, Jörg Geiger, Katja Triebig, Madeline Starke, Mareike Münzer, Marko Wegehaupt, Martin Breu, Matthias Rambow, Michael Neumann, Nalisoa Stovesand, Ralf Kleienbeck, Roland Jahns, Sabine Herterich, Sandra Götz, Semira Both, Stefan Kircher), and 'Agile Diagramme' (Burndown nach Aufgaben, Burnup nach Aufgaben, Velocity, Lead Time, Cumulative Flow nach Tracker).

## Tickets



The screenshot shows a web browser displaying the 'Roadmap' page for 'AppCommonLogistics'. The page features a navigation menu with options like 'Übersicht', 'Aktivität', 'Roadmap', 'Tickets', 'Gantt-Diagramm', 'Agiles Projektmanagement', 'News', 'DMS', 'Wiki', and 'Konfiguration'. The main content area displays the 'Roadmap' for version 'v100.1.1.1', indicating it is the first release of the consolidated 'IbdwAppCommonLogistics'. A progress bar shows 85% completion, with 68 tickets (58 closed, 10 open) listed below. The tickets are presented in a table with columns for ID, description, and status. On the right side, there are filters for 'Roadmap' (Aufgabe, Fehler, Funktionswunsch, Teilentwicklung) and 'Abgeschlossene Versionen anzeigen', along with a 'Versionen' section showing the current version 'v100.1.1.1'.

ID	Description	Status
Fehler #164	Transaction RegisterPrintBoxDeliveryReceipt (1100) doppelt vorhanden	geschlossen
Fehler #350	Application does not start if P17r is unreachable	geschlossen
Fehler #357	StoreRack Transaktion fehlt	geschlossen
Fehler #396	Testplan StoreRack - no personal logins	geschlossen
Fehler #464	IbdwApp will be terminated on losing network connection (unplug network cable)	geschlossen
Fehler #462	typo in error description	geschlossen
Fehler #463	module 0030 shows last scanned sample barcode in any case (even if not accepted)	geschlossen
Fehler #405	error sound is wrong	geschlossen
Fehler #640	inconsistent / confusing module names / text in dialog	geschlossen
Fehler #642	missing label of field for scanned container barcode	geschlossen
Fehler #653	Wrong reset of displayed values	geschlossen
Fehler #756	RegisterBoxOrBag does not verify if a bag has already been unpacked or registered for a box	geschlossen
Fehler #1048	Behavior after RackScan Timeout in MaterialReception	geschlossen
Fehler #1049	Registering ObjectType Tube is not working in MaterialReception	geschlossen
Fehler #1069	Transaction StoreRack in case of a file copy error missing transactions 'ErrCode 09' and 'ErrDesc File Copy Error' in database	geschlossen
Fehler #1070	Transaction PrepareItemTransport is written instead of RegisterItemTransport	geschlossen
Fehler #1074	Transaction RegisterPrintBoxDeliveryReceipt is written twice in case of success	geschlossen
Fehler #1072	Transaction RegisterPrintBoxDeliveryReceipt is written in case of error 001-00012 and 001-00032, wrong error code unregistered box	geschlossen
Fehler #1073	Transaction RegisterBagBoxStart is written with error code 001-00036 if it has an unfinished transport, but no error message pops up for the user	geschlossen
Fehler #1074	Transaction RegisterBagBox is written a second time with error code 001-00036 if the bag is scanned a second time for the same box	geschlossen
Fehler #1075	Transaction RegisterSampleBagStart is not written when bag is scanned a second time. Should be written with error code.	geschlossen

## Verifizierung

Die Verifizierung ist ein Prüfungsverfahren mit objektiven Mitteln, das prüft ob **spezifizierte Produkteigenschaften** erfüllt sind.

**Fehler in der Spezifikation werden nicht entdeckt**

Quelle: Wikipedia

## Validierung

Sie prüft mit objektiven Mitteln, ob Nutzer in einem bestimmten **Nutzungskontext** die zuvor festgelegten **Nutzungsziele** erreichen können.

Man kann sie als Art **Feldversuch** sehen, der kontrolliert, ob das Produkt in der Anwendung wirklich das leistet, was der Kunde erwartet.

Quelle: Wikipedia

# Durchführung der Validierung



German Biobank Node  
bbmri.de

Checkliste Validierung

Universitätsklinikum Würzburg  
ibdw

Modulabklärung 0040 - RegisterSampleEvent

**Checkliste Validierung**

Organisation: **ibdw**

Zustand: **Modulabklärung 0040 - RegisterSampleEvent**

Ein Validierung und UAT ist ein Prozess, um den Zweck, die Funktionalität, die Sicherheit und das Management Layout zu überprüfen.

Validierungsgesamt:  
 - Validierung des Datenbankschemas  
 - Validierung der Datenbankanforderungen  
 - Validierung der Datenbankanforderungen  
 - Validierung der Datenbankanforderungen

Validierung erfolgt bis: **Zum nächsten Versionsauslass**

Verantwortliche(n): **Hansjörg Mahrer (PM)**

Dokumentation: **Maria Mahrer (PM)**

Genehmigung: **Michael Neumann (PM)**

Stufen- und priorisierte Ablauf der Validierung

Stufe	Validierungsschritt	geplantes Begin	geplantes Ende
1	Technische Planung	15.09.2017	15.09.2017
2	Testplan, Testfälle, Testdaten	16.09.2017	16.09.2017
3	Ausführung und Berichterstattung	17.09.2017	17.09.2017
4	Ergebnis	18.09.2017	18.09.2017

Handwritten initials: UK, UK, UK

Anforderungsliste

ibdw

**List of requirements**

1. Identification of all system objects to be tested

2. Prioritization of system objects to be tested

3. Definition of test objectives and test cases

4. Current project status

5. Test plan approval

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99. Test plan approval

100. Test plan approval

Handwritten initials: UK, UK, UK

Unterzeichneter Test Plan

ibdw

**Test Summary Report - Module Test**

Module-ID: **0040-RegisterSampleEvent** Version: **1.0.0.1.1**

Test objectives: **Verify that the OAT functionality of the module 0040-RegisterSampleEvent**

Test summary: **Validation test has been finished as expected and without problems**

Approval: **The module test 0040-RegisterSampleEvent is approved**

Handwritten initials: UK, UK, UK

Validierungs-Bericht

Universitätsklinikum Würzburg  
ibdw

Test Summary Report - Module Test

Module-ID: **0040-RegisterSampleEvent** Version: **1.0.0.1.1**

Test objectives: **Verify that the OAT functionality of the module 0040-RegisterSampleEvent**

Test summary: **Validation test has been finished as expected and without problems**

Approval: **The module test 0040-RegisterSampleEvent is approved**

Handwritten initials: UK, UK, UK

Validierungs-Protokoll

```
mysql> source TP.de.ukw.ibdw.0040.RegisterSampleEvent.verification.sql
1 1.2 -> !ACTION: 100 - AppStartup - Application Startup
2 Search Variables 18 NULL 19
3 2017-05-24T08:03:43 CheckNumRows (Current / Expected) 1 / 1 Ok
4 5.1.3 -> !ACTION: 200 - Login - Login User
5 Search Variables 19 19 20
6 2017-05-24T08:03:43 20 CheckPar1 (Current / Expected) TPW2H0W1 / TPW2H0W1 Ok
7 2017-05-24T08:03:43 CheckNumRows (Current / Expected) 1 / 1 Ok
8 2.1 -> !ACTION: 150 - ModuleInit - Module Initialize
9 Search Variables 20 20 21
10 2017-05-24T08:03:44 CheckNumRows (Current / Expected) 1 / 1 Ok
11 2.1 -> !ACTION: 801 - RegisterSampleEvent - Register Sample Event
12 Search Variables 21 21 21
13 2017-05-24T08:03:44 NoTransact Ok
14 2017-05-24T08:03:44 CheckNumRows (Current / Expected) 0 / 0 Ok
15 4.2 -> !ACTION: 801 - RegisterSampleEvent - Register Sample Event ### COMMENT: known bug
16 Search Variables 21 21 22
17 2017-05-24T08:03:44 22 CheckPar1 (Current / Expected) 200 / 200 Ok
18 2017-05-24T08:03:44 CheckNumRows (Current / Expected) 2 / 2 Ok
19 5.1 -> !ACTION: 801 - RegisterSampleEvent - Register Sample Event
20 Search Variables 22 22 23
21 2017-05-24T08:03:44 23 CheckPar1 (Current / Expected) TFFKX71SNVK / TFFKX71SNVK Ok
22 2017-05-24T08:03:44 23 CheckPar2 (Current / Expected) 200 / 200 Ok
23 2017-05-24T08:03:44 CheckNumRows (Current / Expected) 2 / 2 Ok
24 6.1 -> !ACTION: 801 - RegisterSampleEvent - Register Sample Event
25 Search Variables 23 23 24
26 2017-05-24T08:03:44 24 CheckPar1 (Current / Expected) TFFCAN72XNM / TFFCAN72XNM Ok
27 2017-05-24T08:03:44 24 CheckPar2 (Current / Expected) 200 / 200 Ok
28 2017-05-24T08:03:44 CheckNumRows (Current / Expected) 2 / 2 Ok
29 6.3 -> !ACTION: 801 - RegisterSampleEvent - Register Sample Event
```

# Anforderungen



German Biobank Node  
bbmri.de



How the customer explained it



How the Project Leader understood it



How the Analyst designed it



How the Programmer wrote it



How the Business Consultant described it



How the project was documented



What operations installed



How the customer was billed

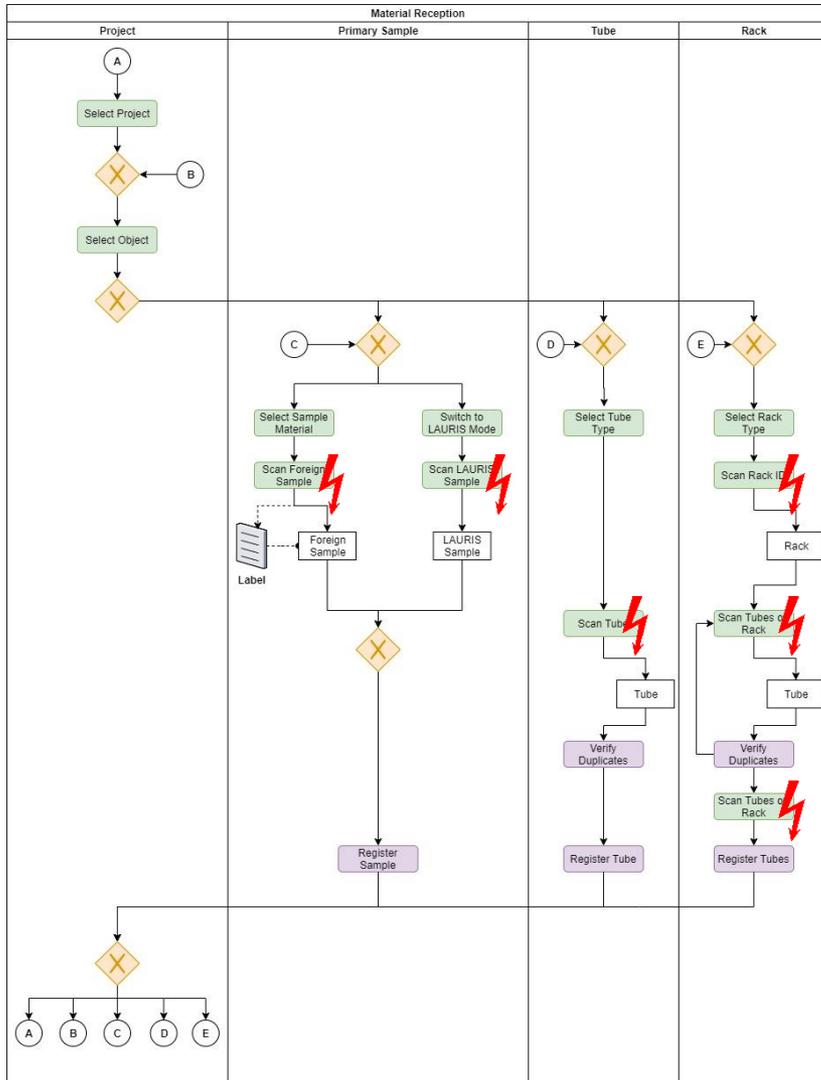


How it was supported



What the customer really needed

my-project-management-expert.com



## ibdw requirements - 0100\_MaterialReception - # 12

### List of requirements

module 0100 MaterialReception

#### shall:

- MaterialReception shall register objects to Valid objects are primary samples, tubes, or racks.
- Project context Before scanning an object an existing project context shall be displayed in the GUI.
- Current project displayed in GUI The current project is displayed in the GUI.
- Project context timeout There is a timeout for the selected project context. Before proceeding the project context has to be confirmed.
- At minimum there are two basic projects the unknown project which contains objects the unknown project shall only temporarily exist.
- Projects have to be pre-registered All projects for which objects (primary samples, tubes, or racks) are registered shall be pre-registered.
- Projects have a start date It shall not be possible to register objects to a project which has not started yet. Object can only be registered within the active period.
- Projects have an end date It shall not be possible to register objects to a project which has ended. Object can only be registered within the active period.
- Projects have permitted objects The objects that may be registered for a project shall be defined in the project context. A project needs at least one permitted object. At least one permitted object is required for a project.
- Not-permitted objects Objects that are not explicitly permitted for a project shall not be registered for that project.
- Projects may define their own material extensions The meaning of material extensions can be defined in the project context. E.g. material extension "Z1" may be Serum.
- Project context has to be selected prior to scanning of any object IDs the project context shall be selected prior to scanning of any object IDs.
- Projects may or may not have project defaults Project defaults specify which objects are pre-registered for a project.
- Project assignment for primary samples A primary sample can only be registered for a project if the project context is selected.
- Relabelling of primary samples Once a primary sample is registered for a project, its label shall not be changed.
- Registering original sample ID The original sample ID of the primary sample shall be registered for the project.
- Project assignment for individual tubes An individual tube may be registered for a project if the project context is selected.
- Project assignment for tubes on a rack All tubes on a certain rack have to belong to the same project.
- Confirm rack registration After a rack scan the scan result is graphical. The user can now confirm the scan and thereby register all detected objects. If the user rejects the scan and repeats the rack scan, the user can abort the rack scan process and scan another object (primary sample or tube).

#### cannot and will not:

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- detect primary sample / tube / rack that does not belong to the selected project context. It will not be possible to detect whether an object does not belong to the current project.
- register any primary samples (LAURIS or non-LAURIS) for the Undefined Project (i.e. if the corresponding project has not been defined). Thus, the Material Reception dialog will not allow to select the Undefined Project. If a project has not been defined, it will not be possible to register non-LAURIS samples that belong to the missing project because the sample material cannot be known (e.g. Serum pre-OP / Serum post-OP).

- register LAURIS samples in case the LIS interface is down

#### will have to (in future releases):

- Detect project from primary sample ID It shall be possible to specify a ReqExt for primary sample IDs in order to identify the corresponding project to which the primary sample belongs.
- Register blocked racks Blocked racks are racks for which the rack content must not be modified. The content of such racks is of no meaning for the ibdw and therefore the rack content (e.g. tubes) is not registered by any scan. Blocked racks are received, stored, and handed out in their original state and will never participate in any pick job.

12/05/2020

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# Risikoanalyse



Hauptprozess	Prozessschritt	Risikobeschreibung	Auswirkung	Risikobewertung 2020			
				W	S	Risiko	Handlungsweise
PD02 Proben-transport	Ankunft der Probe am Abholpunkt (Kurier)	Barcode der Tüte nicht lesbar	Barcode kann nicht gescannt werden; keine Zuordnung der Tüte	W1	S1	niedrig	Neuer Aufkleber
	Ankunft der Probe am Abholpunkt (für Kurier)	falsches Modul auf Registriereinheit ausgewählt, ignorieren der Fehlermeldung	Keine Info über liegende Proben	W1	S3	niedrig	Schulung der Mitarbeiter vor Ort Autostart mit richtigem Modul (neuer Release)
	Ankunft der Probe am Abholpunkt (für Kurier)	Scanner funktioniert nicht	Barcode kann nicht gescannt werden Keine Info über liegende Proben	W1	S3	niedrig	Schulung der Mitarbeiter vor Ort Hotline ibdw - dort Ersatzscanner vorrätig
	Abholen der Probe aus ZL	Scanner funktioniert nicht	Box kann nicht gescannt werden Keine Dokumentation des Probenverkehrs	W1	S2	niedrig	Schulung der Mitarbeiter vor Ort Hotline ibdw - dort Ersatzscanner vorrätig
PD04 Proben-entgegennahme	Ankunft der Probe im AB	Etiketten können nicht gedruckt werden	Kurier kann nicht abrechnen	W2	S1	niedrig	Manuelle Bestätigung des Transports
	Ankunft der Probe im AB	Telefon funktioniert nicht	Zeitlicher Verzug im Transport der Probe	W1	S2	niedrig	Anruf über Mobiltelefon möglich
	Ankunft der Probe im AB	Funker funktioniert nicht	Zeitlicher Verzug im Transport der Probe	W2	S3	mittel	Transport wird erwartet und Lieferung periodisch kontrolliert
Proben-verarbeitung	Proben-registrierung	Broad Consent Proben ohne Patientenbezug (z.B. Testpatient)	Proben ohne Patienten-Daten Ressourcenverschwendung	W1	S4	mittel	Schulung der Mitarbeiter vor Ort Regelmäßige Kontrolle des Probenlagers auf derartige Proben
	Aliquotierung	TECAN Probenregistrierung funktioniert nicht	TECAN kann die Probe(n) nicht verarbeiten	W1	S1	niedrig	Manuelle Aliquotierung
	Aliquotierung	TECAN Pipettierergebnisfiles können nicht übertragen werden	Keine automatische Registrierung der erstellten Aliquots	W1	S1	niedrig	Manuelle Übertragung der Pipettierergebnisfiles
Proben-einlagerung	Einlagerung Liconic	Liconic-Interface nicht gestartet	Probeneinlagerung nicht möglich Fehlermeldung in der App	W2	S2	mittel	Schulung der Mitarbeiter der ibdw Starten des Liconic-Interfaces Autostart des Interfaces
	Einlagerung Liconic	Liconic-Interface mehrfach gestartet	Rack wird ohne Doku in der ibdw-Datenbank eingelagert; Fehlermeldung	W2	S1	niedrig	Datenkorrektur in der Datenbank erforderlich Prüfung, ob Interface bereits gestartet wurde
Sicherheit/ Datenschutz	Sicherheit	Unbefugter Zugriff	Abgriff von Daten, Verfälschung von Daten, Verlust von Daten	W1	S4	mittel	Einhalten des BSI-Grundschutz: Betriebshandbücher CentraXX, Datenbank ibdwCommon, testo, Liconic Datensicherungs und -wiederherstellungskonzept
	Remote-Zugriff	Fehler beim berechtigten Zugriff von ibdw-externen	Abgriff von Daten, Verfälschung von Daten, Verlust von Daten	W1	S4	mittel	Einhalten des BSI-Grundschutz: Betriebshandbücher CentraXX, Datenbank ibdwCommon, testo, Liconic Datensicherungs und -wiederherstellungskonzept
	Wartungsarbeiten	Software Update	Betriebssicherheit gestört (z.B. Updates einspielen)	W1	S4	mittel	Einhalten des BSI-Grundschutz: Betriebshandbücher CentraXX, Datenbank ibdwCommon, testo, Liconic Datensicherungs und -wiederherstellungskonzept
	Backup und Restore	Backup nicht durchgeführt	kein Backup vorhanden	W1	S4	mittel	Automatisierter Backup inklusive Transaction-Logs
	Backup fehlerhaft	kein Restore möglich	W1	S4	mittel	Manuelle Prüfung der Durchführung des Backups regelmäßiger Restore-Test (VFA Restore Test)	

## Strukturierte Durchführungsanweisung

- Laufende Nummer
- Durchzuführende Aktion
- Verhalten der Anwendung
  - Vor-Bedingung (Zustand)
  - Erwartetes Verhalten
  - Nach-Bedingung (Zustand)
- Bemerkungen
- Durchführende(r)
- Ergebnis (pass | fail)
- Unterschrift (Kürzel)



## Durchführung durch den Nutzer



# Test-Plan - Beispiel



Testing plan: TP.ukw.ibdwr.0100.MaterialReception		Date:			Plan# / Appendix#	
RegUnit: Application: ibdwr-CommonLogistics		Version: V20.1.1.1 Module: MaterialReception			/	
Rack Supplier: — Tube Supplier: —		Rack type: — Tube type: —			Temperature: 20°C	
Step	Test	Precondition (Pre), Expected Behavior (EB), Postcondition (Post):	Comments	responsible	Passed / Failed / Skipped	Short signature
8.00	select project with samples					
8.01	Push button 'Choose project in 'Material Reception – Receive Material' dialog	EB: Application switches back to 'Material Reception – Select project' dialog  Post: 'Material Reception – Select project' dialog appears Post: Field 'Project ID' is inactive. (grey) Post: Project Details (right part of the screen) is empty Post: Button 'Confirm' is disabled				
8.02	Use handscanner, scan the following valid project barcode 	EB: Application does accept barcode EB: After that, application switches to 'Material Reception – Receive Material' dialog  Post: 'Material Reception – Receive Material' dialog is visible Post: Selected project 'TNSeE' is shown in the title bar Post: Details of project 'TNSeE' are visible Post: Button 'Choose object type' is enabled Post: Button 'Choose rack type' is disabled Post: Button 'Choose tube type' is disabled Post: Button 'Choose material type' is disabled – Material Type selected is 'Serum3' Post: Button 'Lauris sample' is disabled Post: Button 'Default choice' is disabled Post: Button 'Choose project' is enabled				
8.03	Use handscanner and scan the following valid external sample ID barcode 	EB: Application does not accept barcode EB: After that, application switches to 'error' dialog  Post: 'error' dialog is visible Post: Red icon with exclamation mark is visual Post: Error number '001-00057' is visible Post: Message 'Undefined object type' is visible Post: Error description 'There is no object type chosen.' is visual				
8.04	Push button 'OK' on 'error' dialog	EB: 'Material Reception – Receive Material' dialog is ready to select object type  Post: 'Material Reception – Receive Material' dialog is visible Post: Selected project 'TNSeE' is shown in the title bar Post: Details of project 'TNSeE' are visible Post: Button 'Choose object type' is enabled Post: Button 'Choose rack type' is disabled Post: Button 'Choose tube type' is disabled Post: Button 'Choose material type' is disabled – Material Type selected is 'Serum3' Post: Button 'Lauris sample' is disabled Post: Button 'Default choice' is disabled Post: Button 'Choose project' is enabled				

# Test-Plan – Beispiel ausgefüllt



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Test Plan - Register Tube Sample

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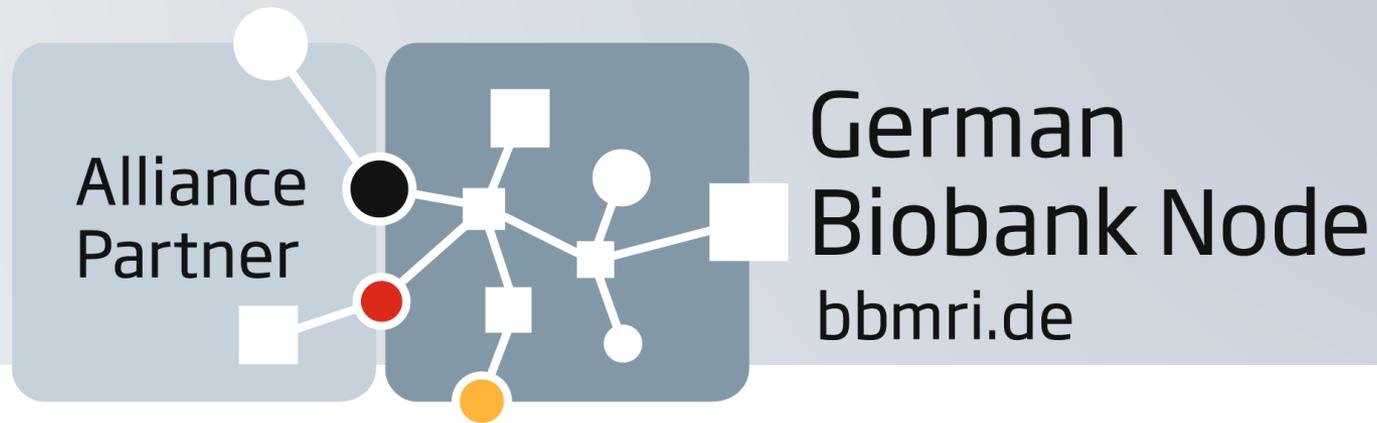
Step	Test	Precondition (Pre:), Expected Behavior (EB:), Postcondition (Post:)	Comments	responsible	passed / failed / skipped	Short signature
5.4	Push button 'OK' on 'error' dialog	EB: Application switches back to initial 'manual aliquoting' dialog  Post: 'manual aliquoting' dialog is visible Post: available tube types listed, buttons disabled Post: 'Use defaults' selected, button disabled Post: „No. of tubes: 0“ Post: Volume empty, buttons disabled Post: Sample Status button disabled Post: edit field "sample ID" marked with "failed"-symbol		MM	P	
6.0	Scan registered sample ID with aliquoting conditions satisfied					
6.1	Scan registered, centrifugated serum sample (SERUM_03) 	EB: Sample is accepted  Post: edit field "sample ID" marked with "accept"-symbol Post: button "Sample status" enabled Post: „Material: Serum“ Post: „No. of tubes: 0“ Post: button "Use defaults" enabled and checked Post: Tube type buttons disabled Post: buttons Volume +/- disabled Post: default tube type 'Micronic 0.750 ml' selected Post: default volume '350 µl'		MM	P	
6.2	Scan valid tube (TUBE_01)	EB: tube is accepted  Post: edit field "Sample ID" marked with "accept"-symbol Post: edit field "Tube ID" marked with "accept"-symbol Post: button "Sample status" enabled Post: „Material: Serum“ Post: „No. of tubes: 1“ Post: button "Use defaults" enabled and checked Post: Tube type buttons disabled Post: buttons Volume +/- disabled Post: default tube type 'Micronic 0.750 ml' selected Post: default volume '350 µl'		MM	P	
6.3	Scan valid tube (TUBE_02)	EB: tube is accepted  Post: edit field "Sample ID" marked with "accept"-symbol Post: edit field "Tube ID" marked with "accept"-symbol Post: button "Sample status" enabled Post: „Material: Serum“ Post: „No. of tubes: 2“ Post: button "Use defaults" enabled and checked Post: Tube type buttons disabled Post: buttons Volume +/- disabled Post: default tube type 'Micronic 0.750 ml' selected Post: default volume '350 µl'		MM	P	

# Datenbank Validierungs-Protokoll



German  
Biobank Node  
bbmri.de

```
C:\Users\neumann_m\AppData\Local\Temp\VL.de.ukw.ibdw.0040.RegisterSampleEvent.log.txt - Notepad++
File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?
TP.de.ukw.ibdw.0000.PROJECTS.variables.sql | TP.de.ukw.ibdw.0000.PROJECTS.prerequisites.sql | VL.de.ukw.ibdw.0040.RegisterSampleEvent.log.txt
1 mysql> source TP.de.ukw.ibdw.0040.RegisterSampleEvent.verification.sql
2 1.2 -> iACTION: 100 - AppStartup - Application Startup
3 Search Variables 18 NULL 19
4 2017-05-24T08:03:43 CheckNumRows (Current / Expected) 1 / 1 Ok
5 1.3 -> iACTION: 200 - Login - Login User
6 Search Variables 19 19 20
7 2017-05-24T08:03:43 20 CheckPar1 (Current / Expected) TPW2HOW1 / TPW2HOW1 Ok
8 2017-05-24T08:03:43 CheckNumRows (Current / Expected) 1 / 1 Ok
9 2.1 -> iACTION: 150 - ModuleInit - Module Initialize
10 Search Variables 20 20 21
11 2017-05-24T08:03:44 CheckNumRows (Current / Expected) 1 / 1 Ok
12 3.1 -> NO iACTION: 801 - RegisterSampleEvent - Register Sample Event
13 Search Variables 21 21 21
14 2017-05-24T08:03:44 NoTransact Ok
15 2017-05-24T08:03:44 CheckNumRows (Current / Expected) 0 / 0 Ok
16 4.2 -> iACTION: 801 - RegisterSampleEvent - Register Sample Event ##### COMMENT: known bug
17 Search Variables 21 21 22
18 2017-05-24T08:03:44 22 CheckPar1 (Current / Expected) 200 / 200 Ok
19 2017-05-24T08:03:44 CheckNumRows (Current / Expected) 2 / 2 Ok
20 5.1 -> iACTION: 801 - RegisterSampleEvent - Register Sample Event
21 Search Variables 22 22 23
22 2017-05-24T08:03:44 23 CheckPar1 (Current / Expected) TFFKX71SNVK / TFFKX71SNVK Ok
23 2017-05-24T08:03:44 23 CheckPar2 (Current / Expected) 200 / 200 Ok
24 2017-05-24T08:03:44 CheckNumRows (Current / Expected) 2 / 2 Ok
25 6.1 -> iACTION: 801 - RegisterSampleEvent - Register Sample Event
26 Search Variables 23 23 24
27 2017-05-24T08:03:44 24 CheckPar1 (Current / Expected) TFCCAN72XMW / TFCCAN72XMW Ok
28 2017-05-24T08:03:44 24 CheckPar2 (Current / Expected) 200 / 200 Ok
29 2017-05-24T08:03:44 CheckNumRows (Current / Expected) 2 / 2 Ok
30 6.3 -> iACTION: 801 - RegisterSampleEvent - Register Sample Event
Normal text file length: 6.404 lines: 99 Ln: 1 Col: 1 Sel: 0 | 0 Windows (CRLF) UTF-8 INS
```



**Vielen Dank für Ihre Aufmerksamkeit!**

Michael Neumann

09.12.2020