C3-Cloud

"A Federated Collaborative Care Cure Cloud Architecture for Addressing the Needs of Multi-morbidity and Managing Poly-pharmacy"

PRIORITY Objective H2020-PHC-25-2015 - Advanced ICT systems and services for integrated care

D9.1 Functional and Non-Functional Testing Criteria for C3-Cloud Components

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EXECUTIVE SUMMARY

The purpose of Deliverable D9.1 is to define the testing criteria used for component testing through development and deployment of the implementation of the C3-Cloud project. The criteria for component testing will be informed by applying IEEE 829-2008, an IEEE standard that specifies the form of a set of documents for use in software and system testing.

Two different types of testing are involved in component testing: functional testing and non-functional testing. Functional testing is concerned only with the functional requirements of a system or subsystem and covers how well (if at all) the system executes its functions. Non-functional testing is concerned with the non-functional requirements and is designed specifically to evaluate the readiness of a system according to the various criteria which are not covered by functional testing. Please see chapter 2 for more details.

Each component's testing will be documented in a set of six documents: test plan, test design specification, test procedure, test log, test incident report and test summary report. Please see section 1.3 for further information.

The EuroRec quality labeling tool will be utilized within the component testing planned for C3-Cloud. Specifically, the repository of criteria and the toolsets it has developed will contribute to the methodologies adopted by C3-Cloud in component testing. The EuroRec quality labeling tool was selected following consideration of other options and was deemed particularly appropriate given the extensive experience gathered in defining and undertaking quality testing over a 10 year development period. Further information on the tool can be found in chapter 3.

The requirements to be tested as are identified in the requirements traceability matrix of D3.3, which is an update of the matrix in D3.2 and is also linked to the user scenario descriptions defined in D8.1. A description of the requirements matrix can be found in chapter 4 and the matrix itself in Appendix 5.2.

Deliverable 9.1 has defined the functional and non-functional test criteria, as far as possible given their developmental nature, for the C3-Cloud components. The testing will be carried out in task 9.2 and reported in D9.3.

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1. INTRODUCTION

1.1. Purpose

The purpose of Deliverable D9.1 is to define the testing criteria used for component testing through development and deployment of the implementation of the C3-Cloud project. This deliverable covers the investigation into testing coverage through the application of IEEE 829-2008 and the analysis of the requirements traceability matrix, delivered in D3.2 and D3.3, to derive the test cases specifications for the testing which will be undertaken in task 9.2.

1.2. Context

The functional/non-functional test cases for the C3-Cloud software components will be defined based on D3.2 Requirements Specification of the C3-Cloud Architecture and D3.3 Conceptual Design of the C3-Cloud Architecture and by complying with the IEEE 829 Standard for Software and System Test Documentation.

The requirements to be tested are identified in the requirements traceability matrix of D3.3, which is an update of the matrix in D3.2 and is also linked to the user scenario descriptions defined in D8.1. The matrix will be used to define which requirements are to be considered part of the component testing, the criteria for which is outlined in this document, and which requirements are to be tested through application and usability testing which will take place in task 9.2 and will be reported in D9.3. Please see chapter 4 of this document for further information.

The three types of testing to be carried out in task 9.2 can be defined as:

- *Component testing*: the technical functionality of the components not based on interaction with users. The plans for which are detailed in this document.
- Usability testing: the interaction with a user i.e. workflows and bottlenecks. Specifically:
    - *Application testing*: functional
    - *Usability testing*: non-functional

1.3. Approach

The functional and non-functional testing of C3-Cloud Components will be conducted by applying IEEE 829-2008, an IEEE standard that specifies the form of a set of documents for use in software and system testing. The standard specifies the format of these documents, but does not stipulate whether they must all be produced, nor does it include any criteria regarding adequate content for these documents. These criteria are component related and will be defined separately for each component.

Two different types of testing are involved in component testing: functional testing and non-functional testing.

- *Functional testing* is concerned only with the functional requirements of a system or subsystem and covers how well (if at all) the system executes its functions. These include any user commands, data manipulation, searches and business processes, user screens, and integrations. Functional testing is done using the functional specifications based on the design specifications like use cases provided by the project design.
- *Non-functional testing* is concerned with the non-functional requirements and is designed specifically to evaluate the readiness of a system according to the various criteria which are not covered by functional testing. So basically, non-functional testing demonstrates how well the product behaves as opposed to simply what the product does.

Each component's testing will be documented in a set of six documents, please see Table 1 below, including the Test Plan of the component, plus several others covering all aspects and outputs of the testing. Each type of test document produces at least one test document instance, but more may be produced if specific conditions require it. In this situation, all instances of duplication of the same type of document have to be linked and referenced.

Table 1 below lists and describes the different types of document produced during testing procedure. For example versions of the seven documents please see the appendix.

Table 1: List of Test Document Types

Document	Description
Test Plan	Provide an overall test management and test planning document.
Test Design Specification	Detailing test cases and the expected results as well as test pass criteria.
Test Procedure	Detailing how to run each test, including any set-up preconditions and the steps that need to be followed.
Test Log	To provide a chronological record of relevant details about the execution of tests, e.g. recording which tests cases were run, who ran them, in what order, and whether each test passed or failed.
Test Incident Report	To document any event that occurs during the testing process that requires investigation. This may be called a problem, test incident, defect, trouble, issue, anomaly, or error report.
Test Summary Report	To summarize the results of the designated testing activities and to provide evaluations and recommendations based on the results following completion of test execution.

The EuroRec quality labelling tool will be utilized within the component testing planned for C3-Cloud, specifically the repository of criteria and the toolsets it has developed which will contribute to the methodologies adopted by C3-Cloud in component testing. The EuroRec quality labelling tool was selected following consideration of other options and was deemed particularly appropriate given the extensive experience gathered in defining and undertaking quality testing over a 10 year development period. Further information on the tool can be found in chapter 3.

1.4. Abbreviations and Acronyms

Table 2: List of Abbreviations and Acronyms

Abbreviation/ Acronym	DEFINITION
CAMBIO	Cambio Healthcare Systems AB
C3DP	Coordinated Care and Cure Delivery Platform
CDS	Clinical Decision Support
CDSM	Clinical Decision Support Module
CDSS	Clinical Decision Support Service
DoA	Description of Action
FHIR	Fast Healthcare Interoperability Resources
GDL	Guideline Definition Language
GUI	Graphical User Interface
IdP	Identity Provider
IEEE	Institute of Electrical and Electronics Engineers
INSERM	INSTITUT NATIONAL DE LA SANTE ET DE LA RECHERCHE MEDICALE
MDT	Multidisciplinary Care Team
MEDIXINE	MEDIXINE OY
ORU	OREBRO UNIVERSITY
OSAKI	Servicio Vasco de Salud Osakidetza
PCPDP	Personalized Care Plan Development Platform
PEP	Patient Empowerment Platform
PHR	Personal Health Record
RJH	REGION JAMTLAND HARJEDALEN
SDD	Software design description
SIS	Semantic Interoperability Suite
SPS	Security and Privacy Suite
SRDC	SRDC YAZILIM ARASTIRMA VE GELISTIRME VE DANISMANLIK TICARET ANONIM SIRKETI
STU	Standard for Trial Use
SWFT	SOUTH WARWICKSHIRE NHS FOUNDATION TRUST
TIS	Technical Interoperability Suite
TS	Terminology Service
UI	User Interface
UML	Unified Modelling Language
WARWICK	THE UNIVERSITY OF WARWICK

2. TESTING CRITERIA

Testing criteria are objective indicators, benchmarks or standards against which test procedures and outcomes are compared. Each test case defines its own testing criteria which will drive the evaluation of success or failure of its runs.

2.1. Component Testing Criteria

2.1.1. Functional Test Cases

Functional tests cases are related to use cases described in deliverable D3.2 Requirements Specification of the C3-Cloud Architecture and updated in D3.3 Conceptual Design of the C3-Cloud Architecture. Each use case presented leads to one functional test case. Please see the requirements traceability matrix in chapter 4 for a full list of use cases and requirements.

Functional tests are divided into two categories: positive and negative functional testing. Positive functional testing involves loading valid inputs to see how the component responds to these and also testing to determine if outputs are correct. Negative functional testing involves using different invalid inputs, unanticipated operating conditions and other invalid operations. It is assumed that all functional testing of C3-Cloud components will be data-driven tests, other possible types of tests were considered unsuitable for functional testing of components at the time of writing this deliverable.

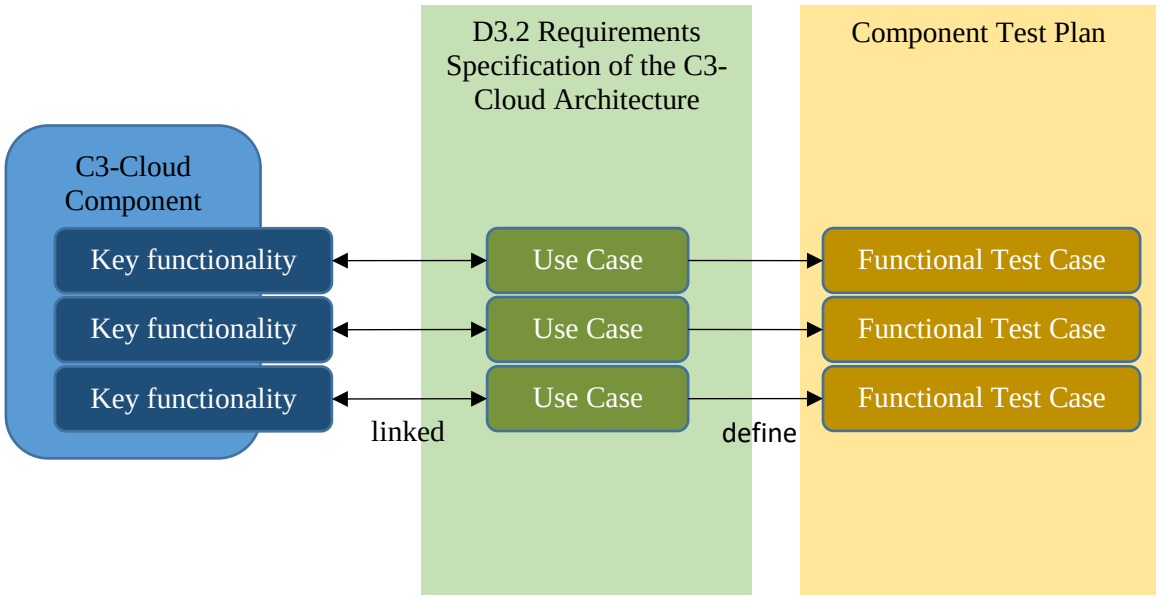


Figure 1: Simplified functional test cases definition workflow

The main criteria output of this kind of test is a precision ratio for positive functional testing and failure and recovery evaluation of negative functional testing, specifically an evaluation of how the component handles incorrect input and maintains an available and stable state.

2.1.2. Non-functional Test Cases

Functional tests may include, but are not limited to:

- **Performance Testing** to determine how a system performs in terms of responsiveness and stability under a particular workload.
- **Security Testing** to reveal flaws in the security mechanisms that protect data and maintain functionality as intended.
- **Usability Testing** to evaluate a product by testing it on users. It focuses on measuring a human-made product's capacity to meet its intended purpose.
- **Reliability Testing** to test a software's ability to function, given environmental conditions, for a particular amount of time. It aims to discover problems in the software design and functionality.
- **Endurance testing** to find out whether an application can withstand the processing load it is expected to have to endure for a long period.
- **Load testing** to determine a system's behavior under both normal and anticipated peak load conditions, and determine the maximum operating capacity.
- **Localization – Internationalization testing** to check whether a system can perform properly in any given locale and function properly with all types of international given inputs.
- **Installation Testing** focuses on what customers will need to do to install and set up the new software successfully. The testing process may involve full, partial or upgrades install/uninstall processes.
- **Configuration Testing** to test the system with each of the supported software and hardware configurations.
- **Availability Testing** may be part of performance testing; availability testing helps to determine whether the application is successfully up and running without any issues.
- **Recoverability Testing** to test how well the system is able to recover from crashes, hardware failures and other similar problems.

3. MONITORING, CERTIFICATION AND QUALITY LABELLING

This section summarises the overall quality labelling process that has been developed and refined by EuroRec, through a 10-year period of quality labelling and certifying electronic health record systems within Europe. Its experience in defining and undertaking quality testing, its repository of criteria and the toolsets it has developed will contribute to the methodologies adopted by C3-Cloud in component and application testing.

The EuroRec quality label provides an assurance – especially to potential purchasers and users - that new software tools or components, or patient data, have a certain independently and objectively assessed level of quality. In relation to the organisational framework shown in Figure 2, which was developed through the EHR-Q^{TN}, HITCH and Antilope projects, EuroRec conforms to international standards for conformity assessment.

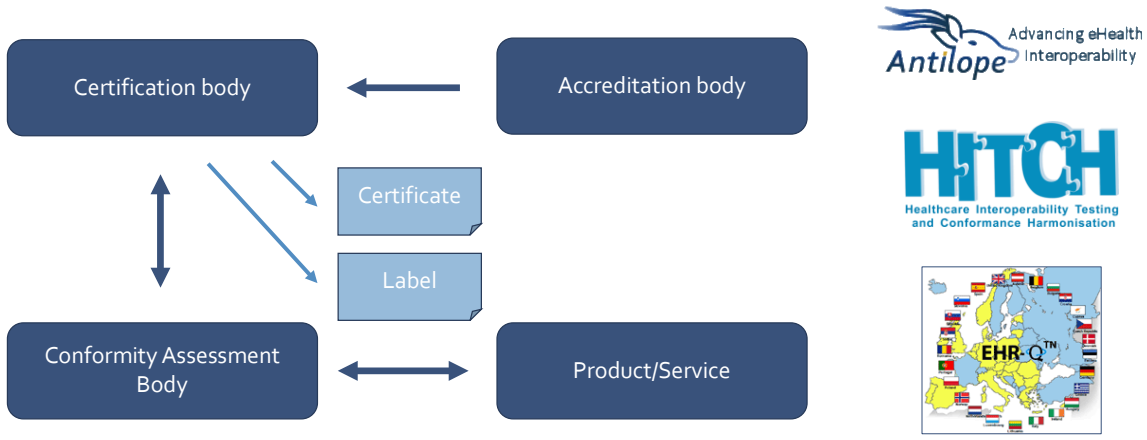


Figure 2: The bodies usually involved in a Quality Labelling or Certification process

EuroRec usually performs the role of the Conformity Assessment Body, for example providing reports to a Health Ministry which will issue a Certificate. However, for its own Quality Seals, EuroRec has acted as the Certification body and a national ProRec Centre has acted as the Conformity Assessment Body undertaking the testing process. If used within C3-Cloud, EuroRec would be more likely to play the role of the Conformity Assessment Body.

It should be noted that the EuroRec certification/quality labelling framework does not address CE labelling.

3.1. Tools used

RAMIT[1], under supervision of EuroRec, has developed a set of online tools that can be used to define and conduct quality testing (see Figure 3). This set of tools make use of an internal repository of quality criteria, developed by EuroRec and consist of requirements, testing criteria, scenarios etc. mainly related to EHR systems and clinical research platforms. These statements exist in all major European languages within the tools. Additional criteria for new components and applications can be added.

[1] RAMIT vzw (Research in Advanced Medical Informatics and Telematics), a non-profit association, is a research platform established with the support of the Ghent University. RAMIT is responsible for the labeling of different EHR systems in Belgium.

Figure 3: EuroRec Quality Labelling and Certification Tools

EuroRec has two EHR Quality Seals, Seal 1 with 20 minimal criteria and Seal 2 with 50 criteria addressing various essential EHR functions. As subcontractor of RAMIT, it also has experience of Belgian national quality labelling for general practice systems (2010 to 2012) and for general practice, physiotherapy and home care nursing systems (2013 to 2015). EuroRec has just completed testing the first commercial product for a new Quality Seal for Research Platforms (QS4RP), which was commissioned by the European Institute for Innovation through Health Data (please see http://www.i-hd.eu/index.cfm/services/qs4rp/).

3.2. The quality assessment process

EuroRec's quality assessment processes comply with several relevant international conformity assessment standards and guides, which are listed here. These standards are not elaborated here, but have been summarised, and their application to health ICT described, in deliverables of the EURECA and Antilope projects.

Software product Quality Requirements and Evaluation (SQuaRE)

ISO/IEC 25010 is a part of the SQuaRE series of International Standards, which consists of the following divisions:

- Quality Management Division ISO/IEC (2500n)
- Quality Model Division ISO/IEC (25010)
- Quality Measurement Division ISO/IEC (25020)
- Quality Requirements Division ISO/IEC (25030)
- Quality Evaluation Division ISO/IEC (25040)
- SQuaRE Extension Division ISO/IEC 25050 – ISO/IEC 25099 (to appear)

Other ISO/IEC standards

- ISO/IEC 17000:2004 Conformity assessment – Vocabulary and general principles

- ISO/IEC 17011:2005 Conformity assessment – General requirements for accreditation bodies accrediting conformity assessment bodies
- ISO/IEC 17020:2000 General criteria for the operation of various types of body performing inspection
- ISO/IEC 17021:2011 Conformity assessment -- Requirements for bodies providing audit and certification of management systems
- ISO/IEC 17025:2005 Conformity assessment – General requirements for the competence of testing and calibration laboratories
- ISO/IEC Guide 28:2004 Conformity assessment – Guidance on a third-party certification system for products
- ISO/IEC Guide 65:1996 General requirements for body operation product certification systems
- ISO/IEC Guide 67:2004 Conformity assessment – Fundamentals of product certification

IEEE standards

- IEEE 829:2008 Software and System Test Documentation

The overall quality evaluation process reference model is summarised in Figure 4, taken from ISO/IEC 20540.

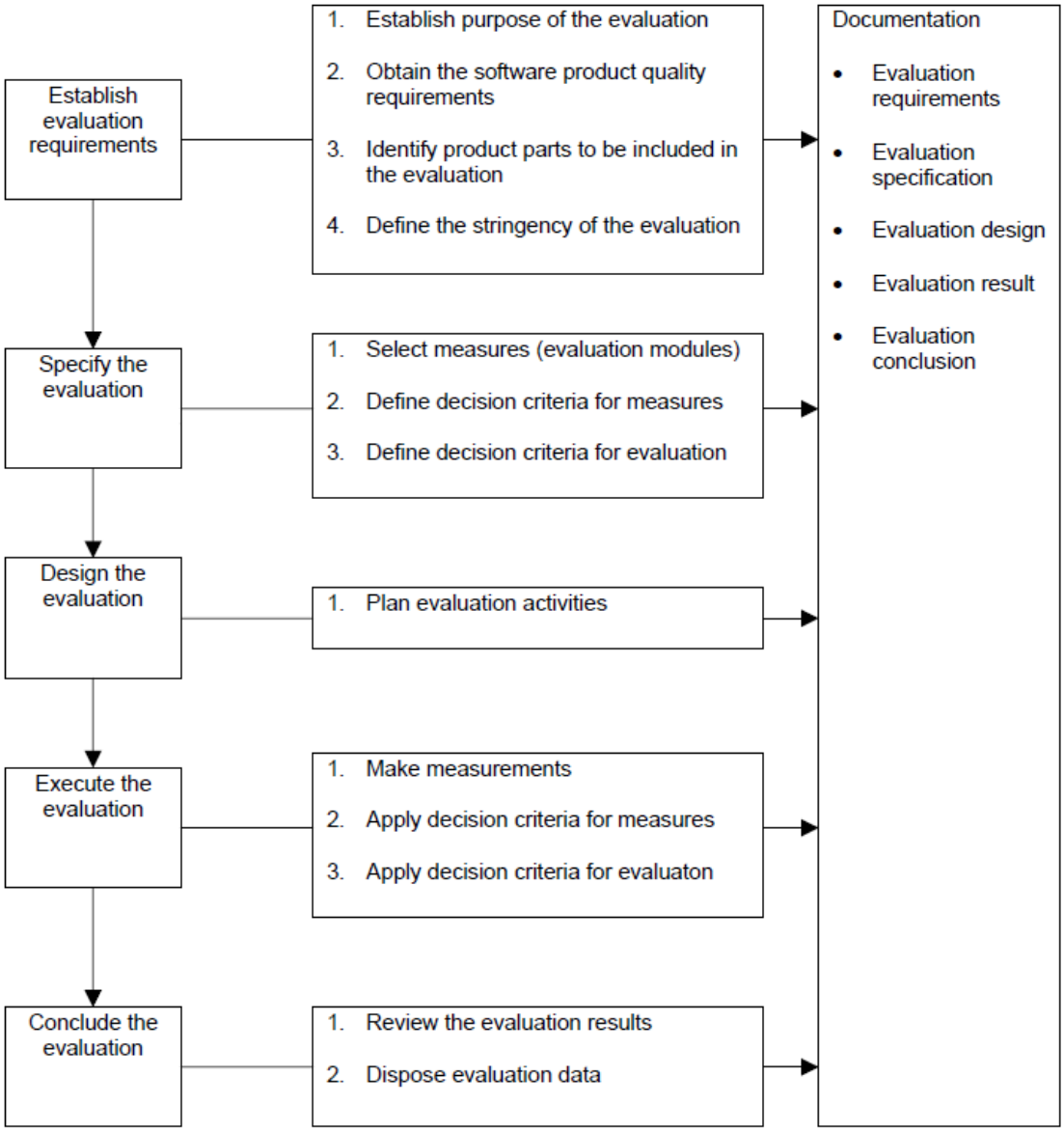


Figure 4: Software product Quality Evaluation Process reference model, adapted from ISO/IEC 25040

3.3. Procedure requirements

An elaborated model that outlines the steps that might be needed in establishing a national certification programme are shown in Figure 4. This model was developed during the EHR-Q^{TN} project, led by EuroRec.

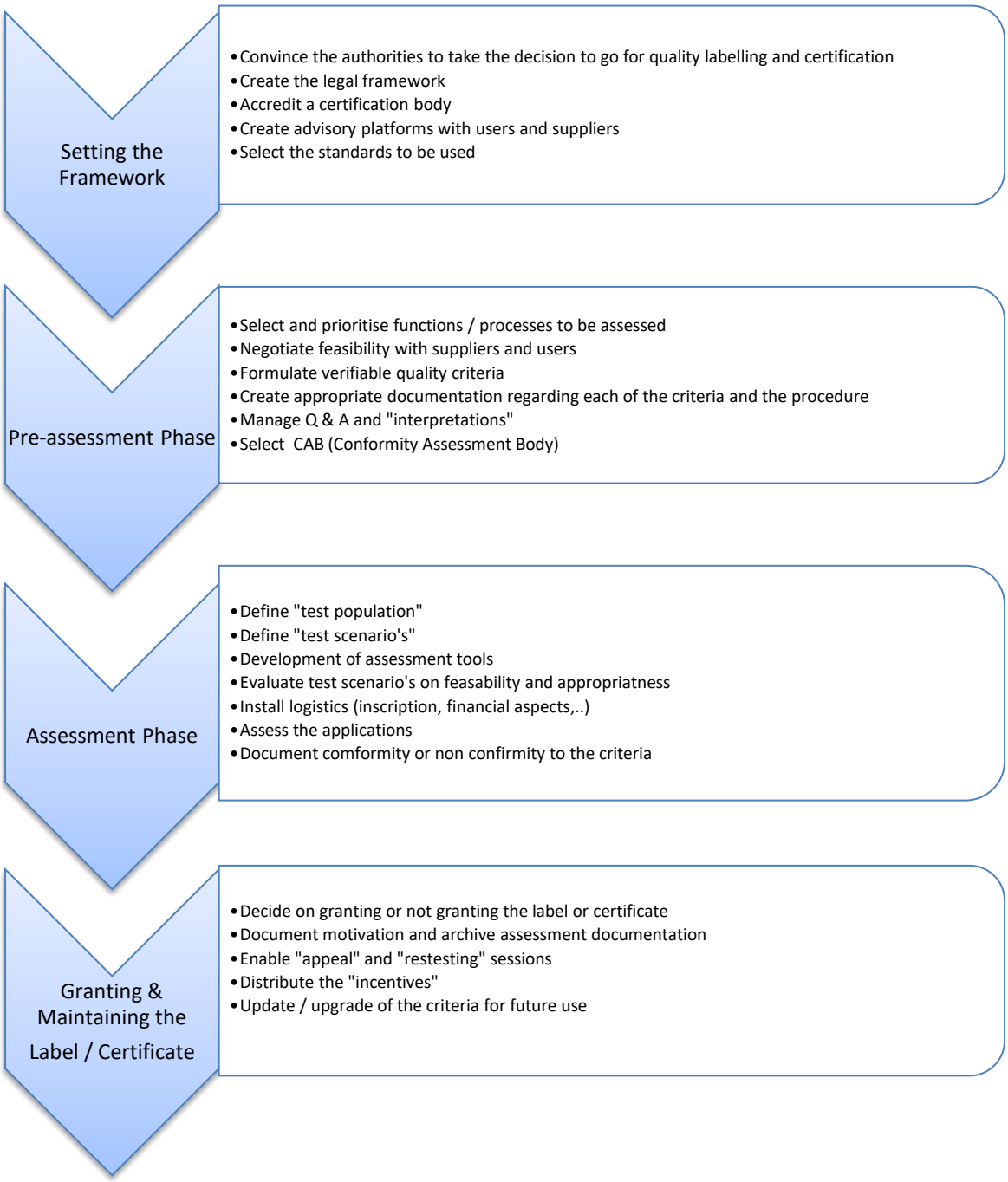


Figure 5: Roadmap for developing and delivering a National Level Quality Label or Certificate

For the purposes of a non-statutory quality labelling process, as would be the case for C3-Cloud during and after the project (when vendors might incorporate C3-Cloud components and need a seal of conformity to verify their adoption) the model is less complicated. It consists of four phases: an application phase, a pre-assessment phase, an assessment/testing phase, and the phase of issuing the certificate/quality label.

3.3.1. Application phase

In the application phase the interested party (e.g. service provider, software developer, data provider, …) fills out the application form with all necessary details (e.g. company details, contact person,

software details, …). In a second step, dependent of the certification/quality labelling request, a selection is made of existing quality criteria in the EuroRec repository. This repository now contains a number (+1700) of indexed quality criteria, most of them translated in several European languages. If needed, new criteria will be added and indexed during C3-Cloud to assess any additional component or application functional and non-functional requirements. A formal methodology is needed to develop new criteria, including functional and non-functional aspects, ensuring that the criteria reflect relevant population characteristics etc.

In this process the EuroRec Repository and Composer tool is used. With the Composer, the user can search and select the quality criteria to be used. In a next step, the Certifier tool is used to create certification sets. A certification set is a selection of quality criteria from the "basket", where it can be indicated which of the quality criteria will be actually tested in the (pre-)assessment phases. For this, a "status" and "weight" can be indicated for each of the quality criteria.

The final list of criteria is then communicated to the applicant, with additional documentation for each of the criteria. In some cases, the applicant is requested to register fictitious patient data (upon request by the testers) into their software. A Q&A service is also available, so questions can be answered before the actual (pre)assessment/testing takes place.

3.3.2. Pre-assessment phase

In the pre-assessment phase, the applicant is requested to provide *convincing* documentation that the quality criteria are met. It is suggested that the applicant provides either a written document with – for each of the criteria – a scenario the applicant has followed to demonstrate conformity to the criterion and accompanied with the necessary screenshots, or provides a video with screen actions.

Based on the documentation the applicant has provided, a preliminary conclusion is taken regarding the (non)conformity of the criteria. This conclusion is sent to the applicant, who has then a fixed period to provide comments to the conclusion. For instance, the applicant can mention he does not agree with the conclusion regarding criterion x because of reason y. A final conclusion – taking into account the applicant's feedback – is then provided. If successful, the actual testing (assessment) can take place.

3.3.3. Assessment phase

The actual testing (assessment) preferably takes places at the applicant's premises. However, a videoconferencing system can also be used (e.g. GoToMeeting). It is up to the testers to make a choice between a physical meeting (test) or a videoconference.

A scenario based test methodology has been developed. A test scenario consists of a number of test scripts, which in turn are linked to one or more quality criteria. Development of such a test scenario is done via the EuroRec Testing tool. The collection of scripts will lead to the full test scenario. This scenario is then used in the actual assessment/test.

In the next step, for each criteria, test comments can be noted by the testees as well as comments provided by the applicant can be recorded. If necessary, screenshots related to the tested criterion can also be registered. Finally, a preliminary score can be registered for each criterion that is related to that test script.

After the test has been completed, the full evaluation can take place. This is done in the EuroRec Testing tool as well. For each conducted test, a test report can be launched where the prefinal scores can be given. At this stage the scores remain in a prefinal stage, because the applicant has a feedback possibility after having received this prefinal report.

After analyzing the applicant's feedback to the prefinal report, the final scores are given to each criterion and at that time the report becomes final. The final report can be viewed in the EuroRec Quality Assessment Suite, and can be exported to Word/pdf format as well.

3.3.4. Issuing the certificate/label

After a successful evaluation, a certificate/label can be issued. The information is published on the EuroRec website, and the applicant receives a copy of the certificate.

These four phases result in documentation that closely aligns with the document types defined by IEEE 829, as shown in Table 2. The tools described in the last column are explained and illustrated later in this section.

Table 2: Table of correspondence between IEEE 829 document types and the tools supported steps of the EuroRec quality labelling workflow

Document	Description	Documentation generated by EuroRec
Test Plan	Provide an overall test management and test planning document.	Description of the quality labelling process, as summarised in this chapter Review and supplementation of the library of criteria Translation of new criteria into multiple languages, as needed
Test Design Specification	Detailing test cases and the expected results as well as test pass criteria.	Selection of criteria - statements - from the library, as basket(s), using the EuroRec Composer tool Defining the importance - weight - and optionality of each statement, using the EuroRec Certifier tool
Test Procedure	Detailing how to run each test, including any set-up preconditions and the steps that need to be followed.	Produce certification scenarios and link the scripts to the statements they are supposed to validate for a system, using the EuroRec Scripter tool
Test Log	To provide a chronological record of relevant details about the execution of tests, e.g. recording which tests cases were run, who ran them, in what order, and whether each test passed or failed.	The EuroRec Testing tool documents the provenance, context and detailed execution of the testing sessions, and the outcomes.
Test Incident Report	To document any event that occurs during the testing process that requires investigation. This may be called a problem, test incident, defect, trouble, issue, anomaly, or error report.	The EuroRec Testing tool permits the assessors to capture comments from the assessors and separately from the product vendor at an overall level, or per criterion. Issues can therefore be documented and explained by both parties.
Test Summary Report	To summarize the results of the designated testing activities and to provide evaluations and recommendations based on the results after test execution has finished.	The EuroRec Testing tool can generate a final report, for example as a PDF or Word document.
n/a		The Conformity Assessment Body issues this report to the Accreditation Body that

Document	Description	Documentation generated by EuroRec
		independently determines if the report findings warrant the recommendation for the product to pass the assessment. Either the Accreditation Body or a separate Certification Body will award a certificate of conformity to the product vendor.

It is important to note that the above table only considers the production of documents. IEEE 829 is a generic standard for the documentation of software testing but, unlike the standards listed earlier in this section, it does not elaborate the end to end quality and governance processes that should be followed. The EuroRec Quality Assessment Suite of tools imposes rules and behaviours on users, including some role based controls, which provide governance to the end to end process.

3.4. Documentation of the EuroRec Quality Assessment Suite

For a better readability of the deliverable, the Documentation of the EuroRec Quality Assessment Suite is available as Appendix 5.1 at the end of the document.

4. REQUIREMENTS TRACEABILITY MATRIX

In the requirements traceability matrix table (please see Appendix 5.2 for the full table), we define:

a) which requirements (identified in D3.2 and updated in D3.3) are to be considered part of the component testing;
b) the testing criteria defined in this deliverable; and
c) which requirements are to be tested through application and usability testing which will take place in task 9.2 which will be reported in D9.3.
d) We also include the type of users who will be involved in the testing.

The requirement traceability matrix consists of the following columns:

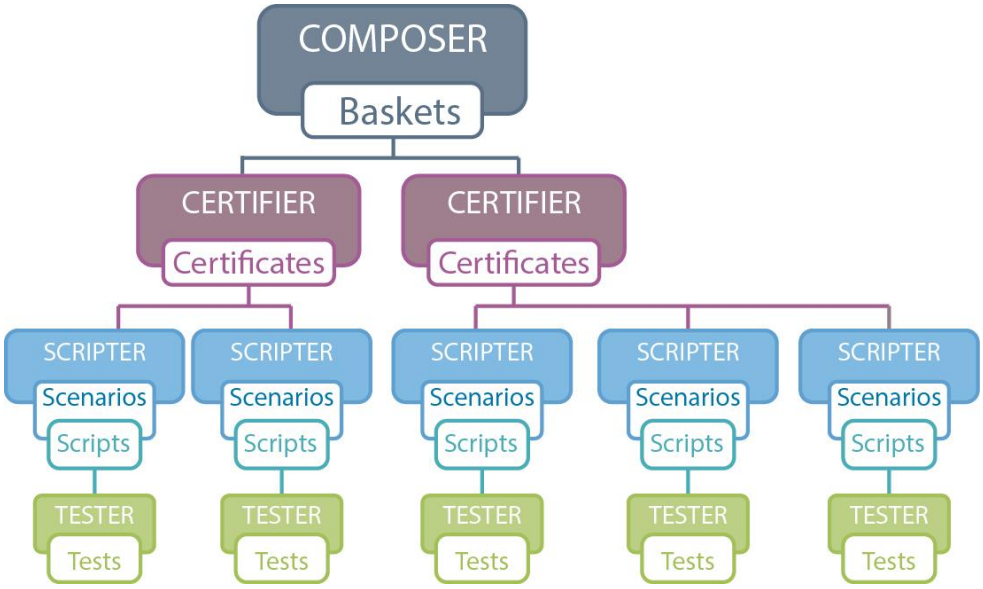
- **Requirement ID**: This column should contain the unique identifier of the requirement. It could be a system generated number if using a utility, or manually assigned in a requirements document by the requirements author/analyst.
- **Description**: This column should be populated with a brief description of the requirement.
- **Associated Use Case:** This column should be populated with a description of the use case linked to the requirement.
- **Associated User Requirement**: This column should be populated with a link to the User Requirements defined in D8.1 to indicate that this requirement addresses the needs of the selected user scenarios
- **Status:** This column should be populated with the current status of the requirement. (Proposed, Validated, Obsolete, Designed, Implemented, Tested)
- **Type:** This column should be populated with the type of requirement: (Functional, Information, System Interface, User Interface, Performance, Reliability, Maintainability, Security, Usability)
- **Priority:** This column should be populated with the importance of the requirement as designated by/or agreed upon by the users.
  (H – High, M – Medium, L – Low).
- **Assigned To:** Identifies the C3-Cloud Partner responsible for fulfilling this requirement.
- **System Component(s):** This column should be populated with a description of the high level system component(s) linked to the requirement (PEP, TIS, SIS, SPS, CDSM, PCPDP, C3DP).

- **Architectural/Design Document:** This column should be populated with a reference of the related subsection of the architectural/design document (D3.3) linked to the requirement. (a.k.a. "Trace To Design")
- **Architecture Design:** This column contains references to the design model IDs in deliverable D3.3 linked to the requirement. (a.k.a. "Trace To Design")
- **Component testing:** Indicates the stage of development at which the component will be tested, here are the options:
    - After Integration with C3DP
    - After integration with C3DP and PEP
    - After integration with CD3P, TIS, SIS, CDSM, local systems
    - After integration with CDSM
    - After integration with CDSM, TIS and PEP
    - After integration with CDSM, TIS and SIS
    - After integration with existing teleconference system(s)
    - After integration with local care system
    - After integration with local identity provider systems
    - After integration with PEP
    - After integration with SIS
    - After integration with SPS
    - After integration with SPS and SIS
    - After integration with SPS and TIS
    - After integration with SPS, C3DP and local care system,
    - After integration with SPS, local care system, C3DP and SIS
    - After integration with TIS
    - After integration with TIS
    - After integration with TIS and PEP
    - After integration with TIS and SIS
    - After integration with TIS, SIS and PEP
    - Before integration
    - Before integration with C3DP
    - Before integration with local care system
    - Before integration with SIS
    - During pilot operation
      i) Before integration ii) after integration with SIS
    - Obsolete
    - Tested in pilot
- **Users involved:** the users who will be involved in the testing, in various combinations of the three listed below:
    - Technical personnel
    - Clinical personnel
    - Patients and Informal Carers
- Additional Comments: this column should detail what testing should take place if component testing is not suitable i.e. application or usability testing. The three types of testing can be defined as:
    - Component testing is the technical functionality of the components not based on interaction with users.
    - Usability studies are about interaction with a user i.e. workflows and bottlenecks.
        - Application testing: functional
        - Usability testing: non-functional

5. APPENDIX

5.1. Documentation of the EuroRec Quality Assessment Suite

This section is not intended to be a complete user manual, but rather a walkthrough of illustrative screen shots. User training materials will be developed later in the project to support C3-Cloud users.



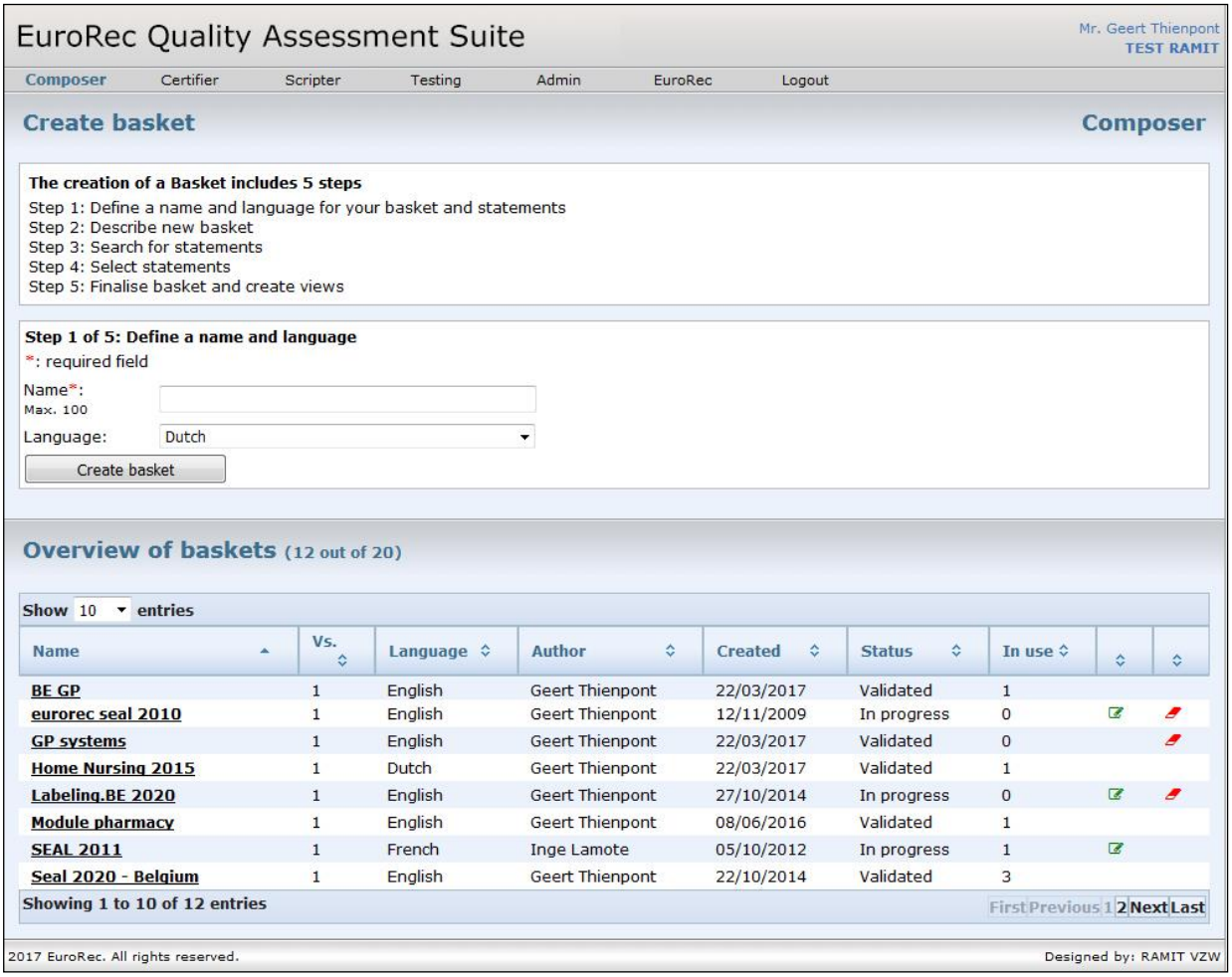
Every tool in the suite follows more or less the same procedure:

Step	Description	Actions	Status
1	Define a name for the tool (and connect a basket, certificate,…)	Update - Delete	Draft
2	Describe the new tool	Update - Delete	Draft
3	Tool specific steps	Update - Delete	Draft
4	Add comments	Update - Delete	Draft
5	Export to PDF	Update - Delete	Draft
6	Request validation	Delete	To be validated
7	Validate tool	Delete - Connect	Validated
8	Connect (e.g. basket –certificate)		In use

5.1.1. Composer

The composer is intended to create and maintain a Basket of Fine Grained Statements to be used for Certification, for Product Documentation or for Procurement purposes.

Home page of the composer:

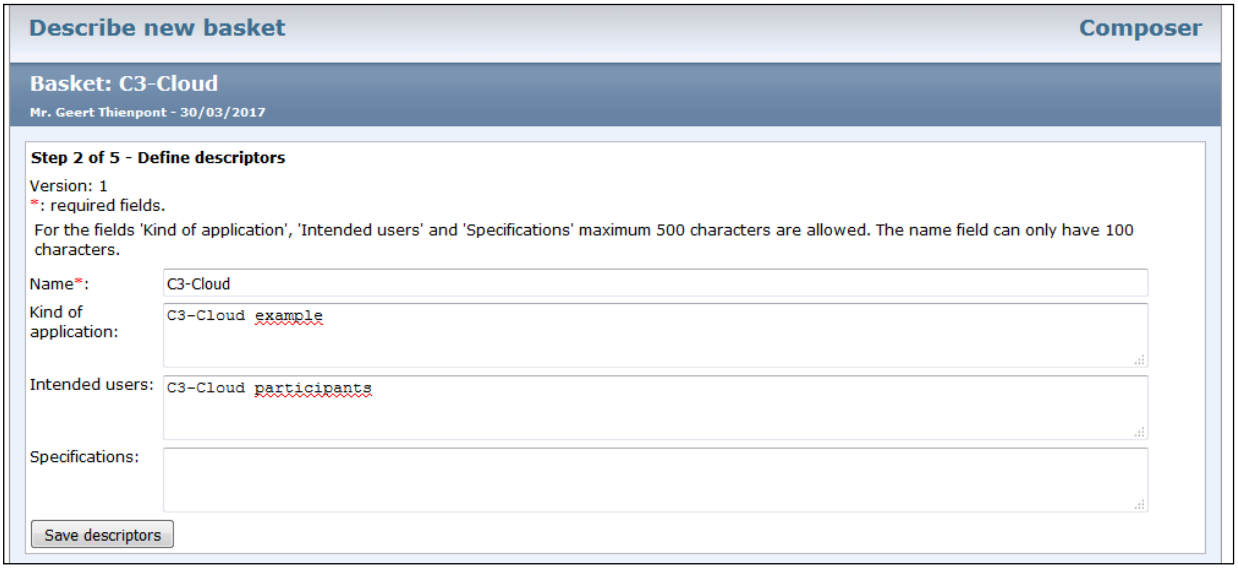


Create basket

Creating a new Basket by filling in the name and choosing a language. The default language is always English. Extra languages can be added in consultation with EuroRec.

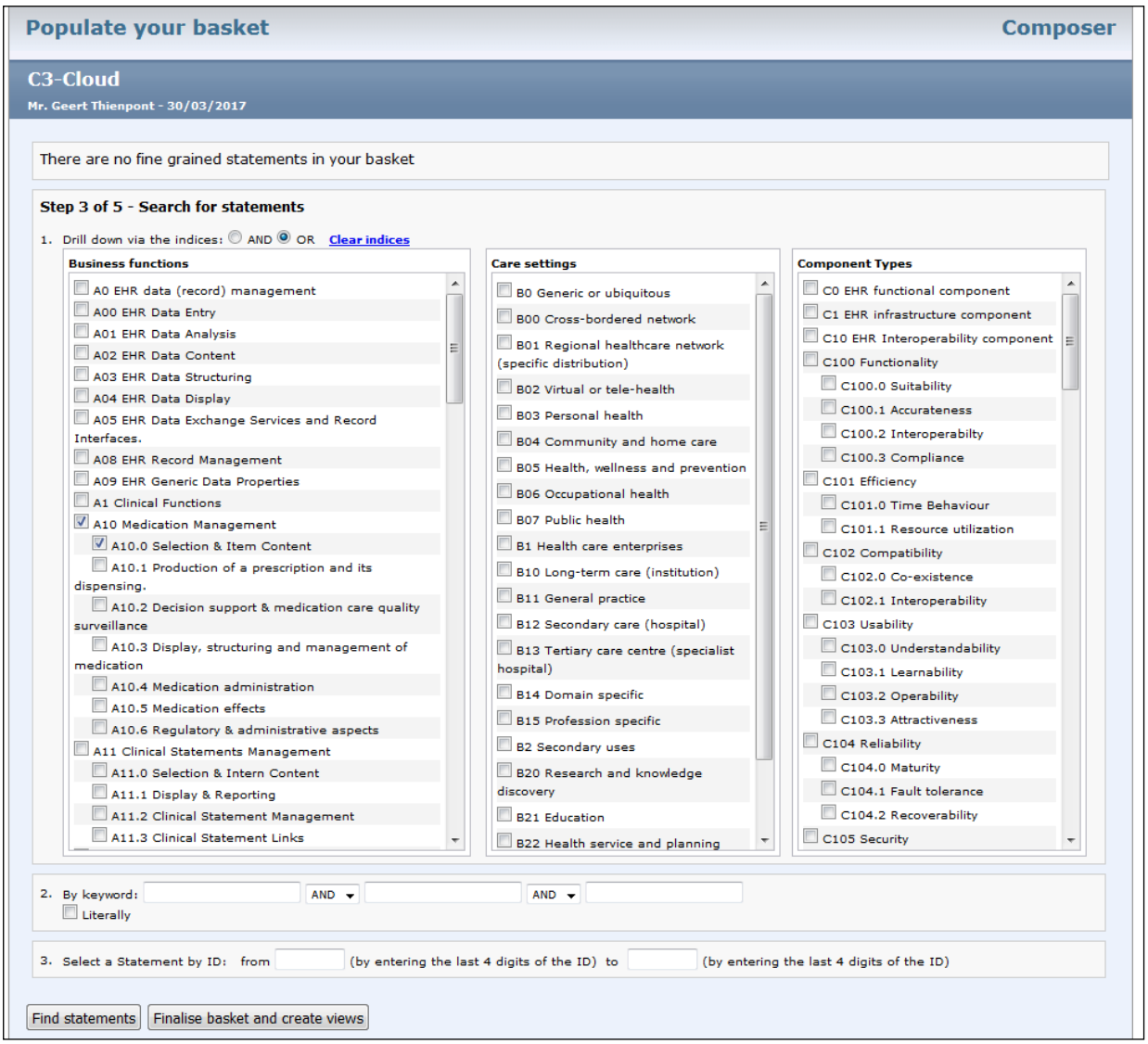
Create a EuroRec Basket of Statements:

Define descriptors of the basket:

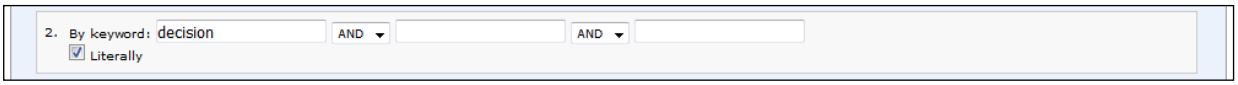


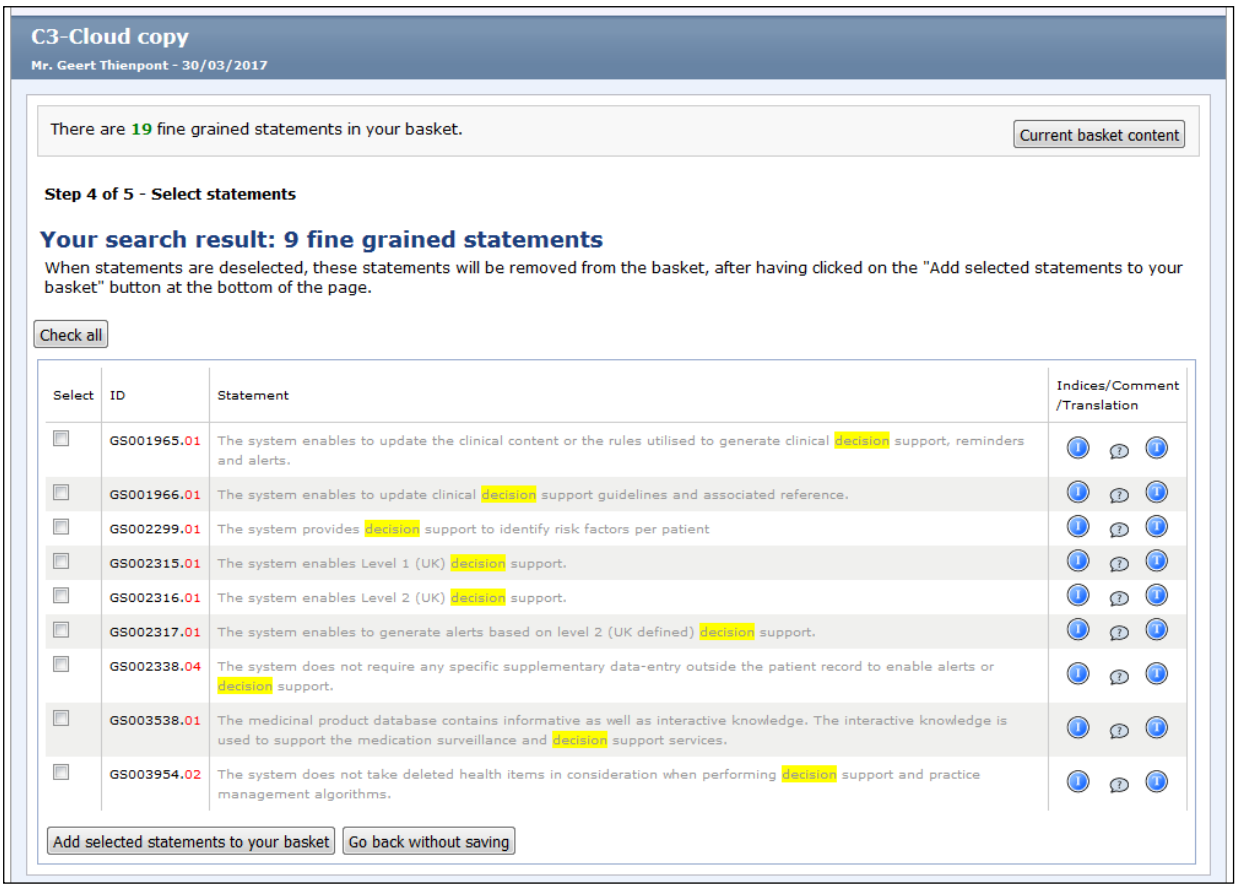
Search for relevant statements to include

- Either direct selection, one by one, of the individual Fine Grained Statements, using their EuroRec ID
- Or by retrieving the individual statements using the EuroRec index-based retrieval functionalities. The Composer tool presents 3 lists of indices:
    - Business functions
    - Care Settings
    - Component types

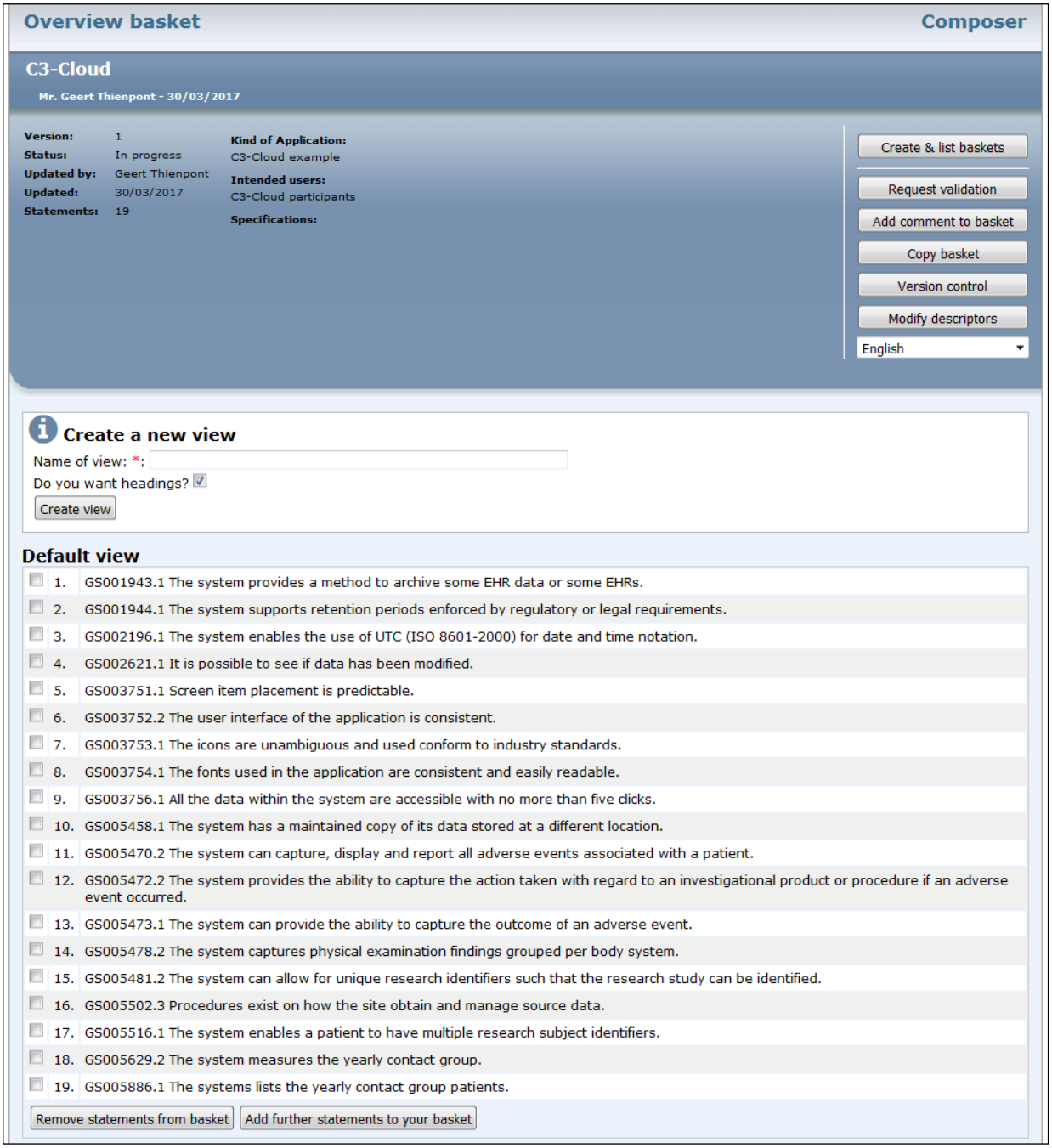


- Or by keyword.





This finally results in a Basket of statements that can be ordered, edited etc.

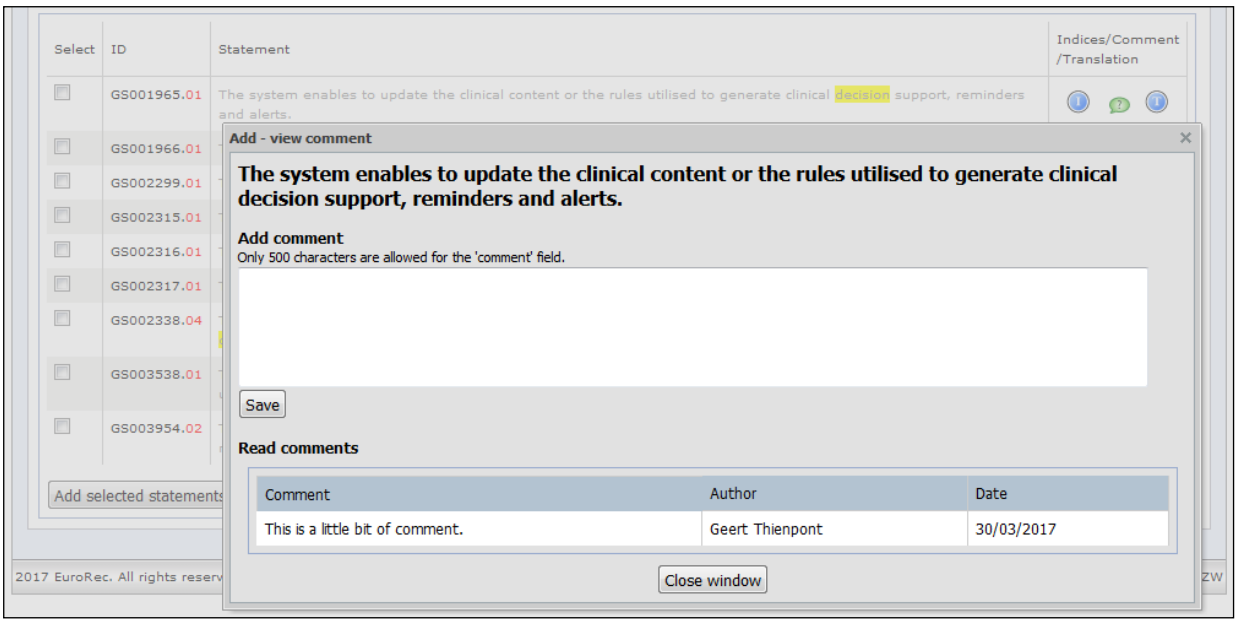


The user can now start with creating views. Views let the statements be reordered and grouped by adding headers.

The statements

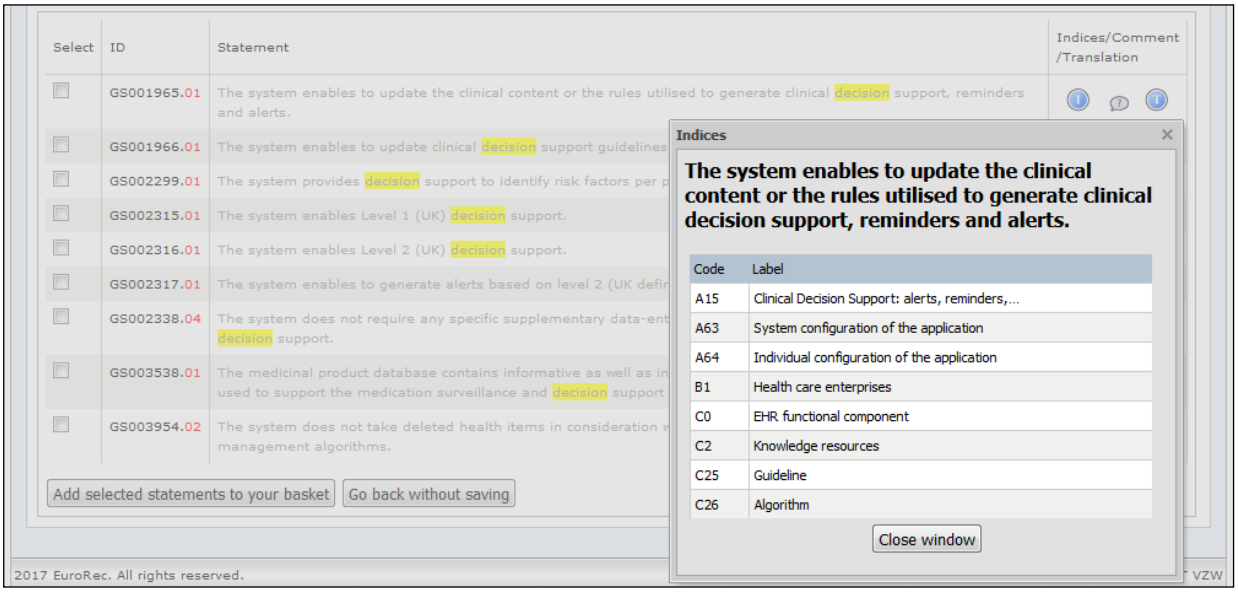
Comments

Comments can be added and viewed clicking on the text balloon. The green balloon indicates some member of your team has added comments.



Indices

Get an overview of all the indices the statement belongs to.by clicking on the “I” icon.



Translations

The blue “T” icon shows all the available translations.

Basket

Update basket

A basket can be updated as long as the status of the basket is “in progress”. Statements can be added or removed, views can be created or updated.

A basket can have 4 different statuses:

- In progress
- To be validated
- Validated
- In use

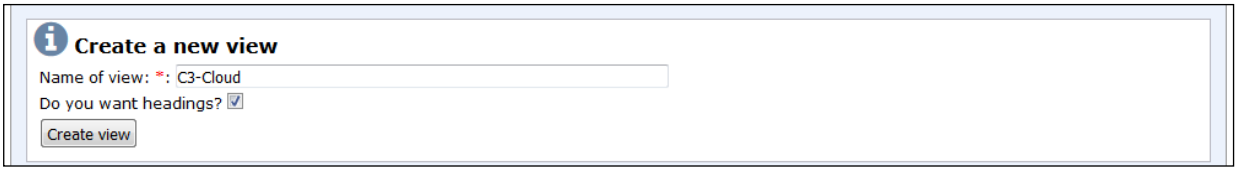
Once a basket is ready “To be validated” no more updates can be made.

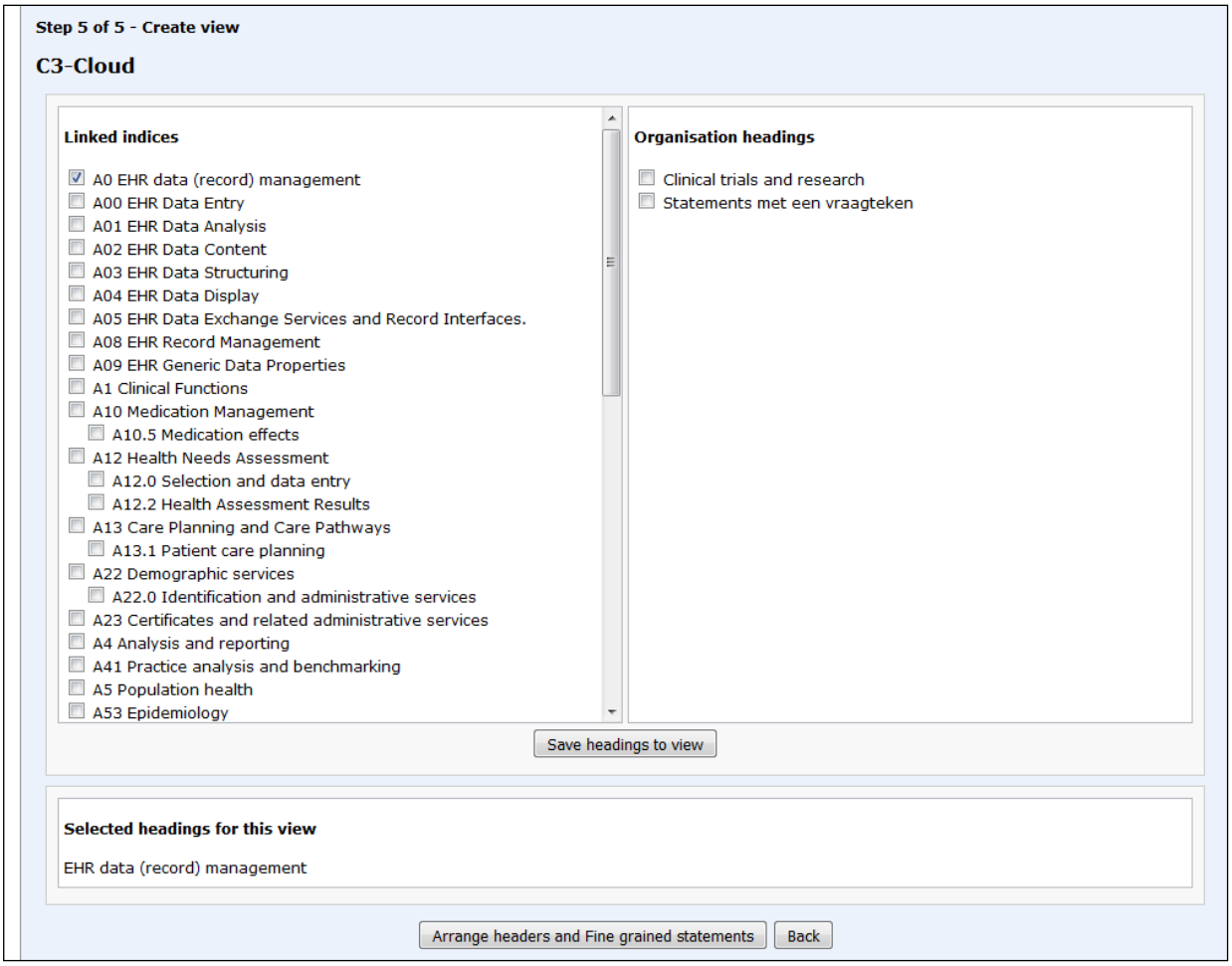
Copy basket

Another way to create a new basket is to copy an existing basket. All statements in the basket are copied as well. The status however always starts from “In progress”.

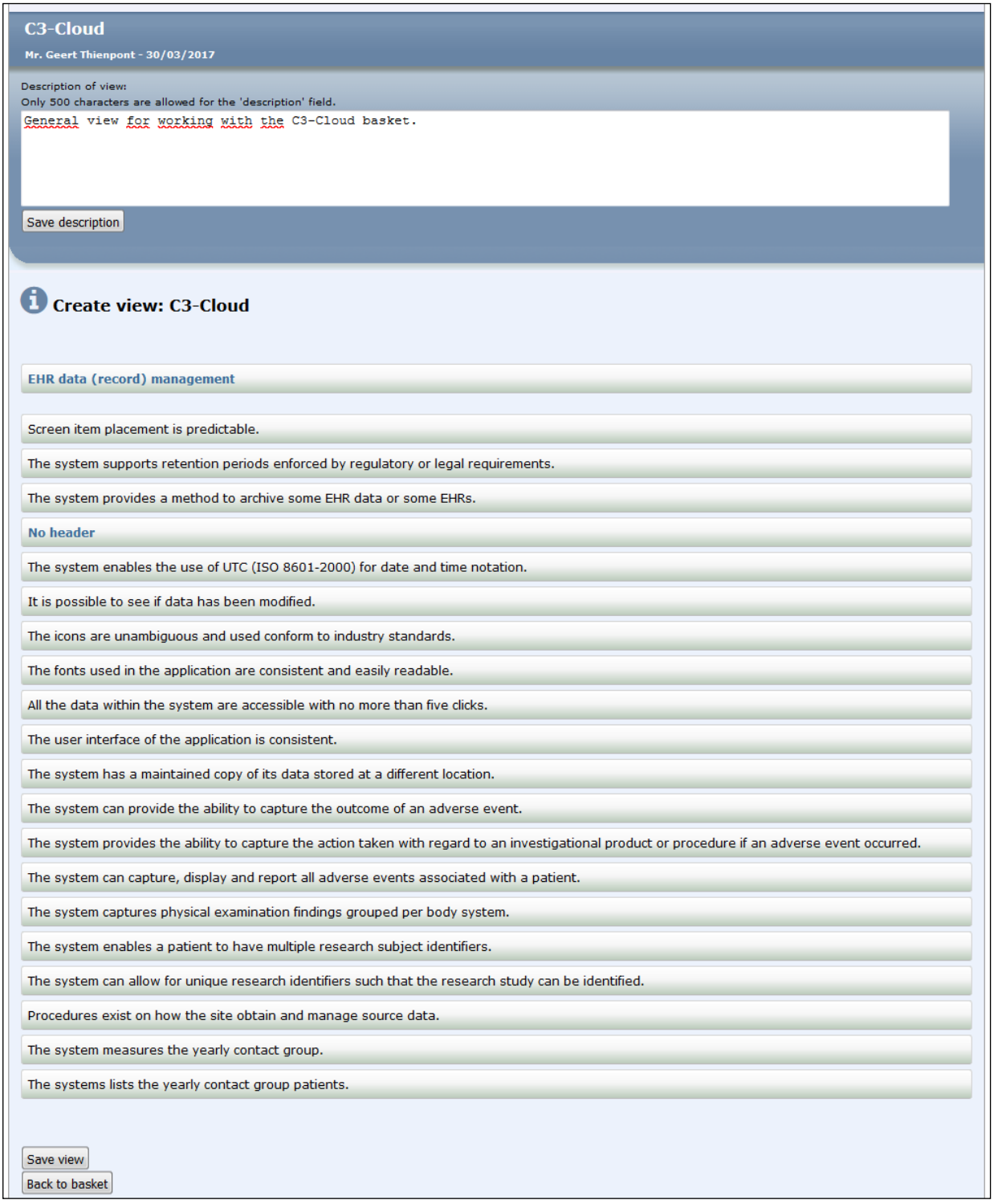
Create view(s)

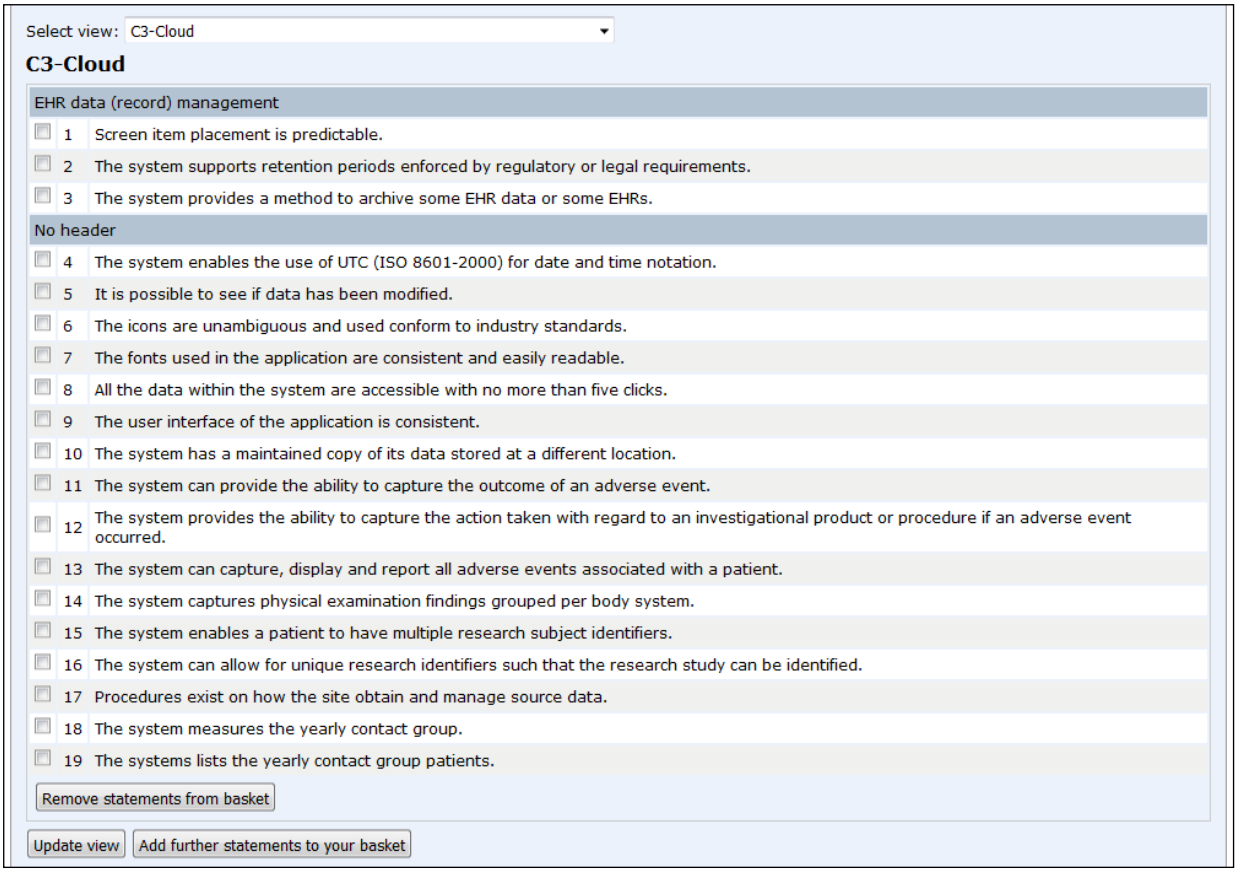
Give your view a name, check the box if you want to include headers.





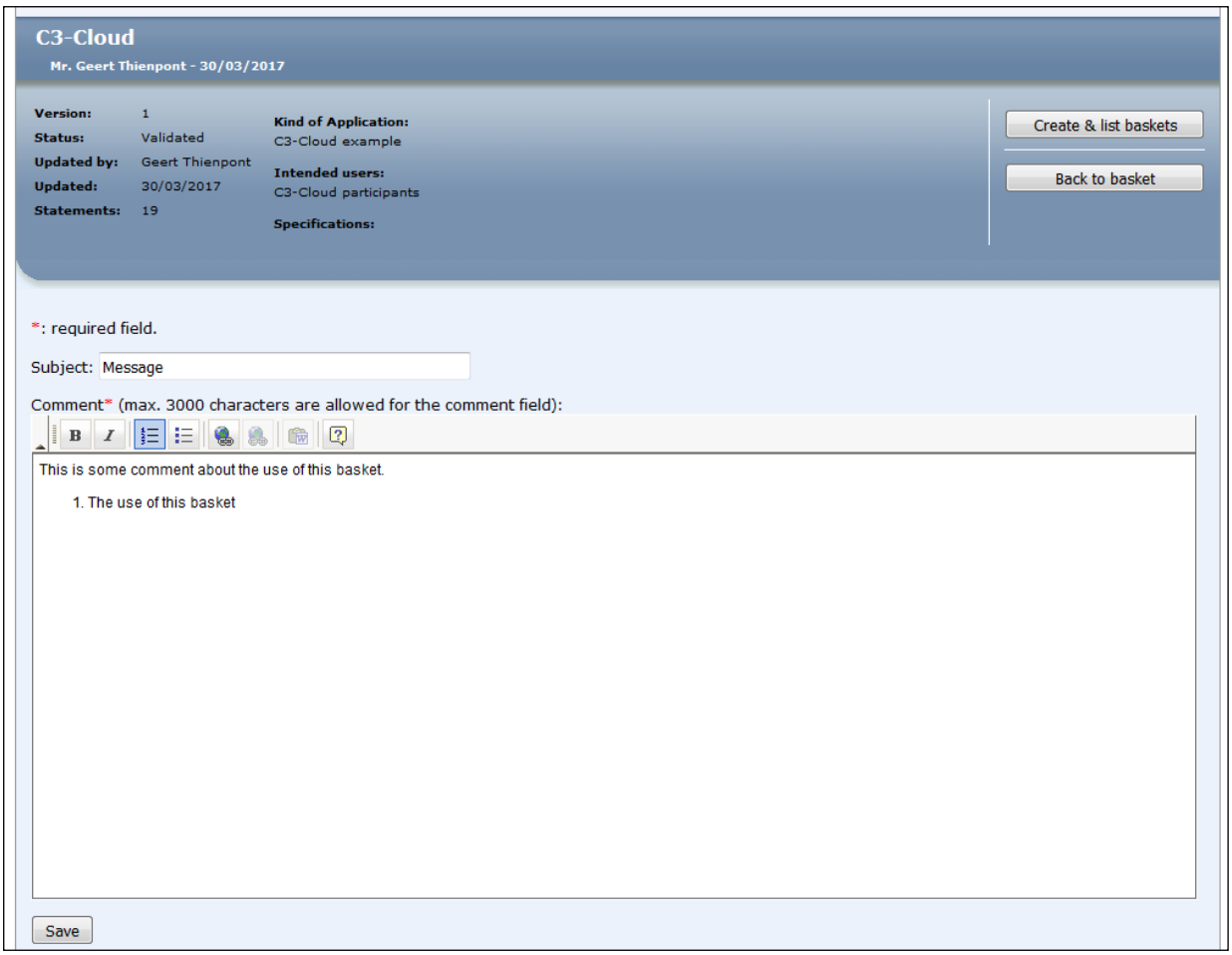
Rearrange the statements by moving the statements.

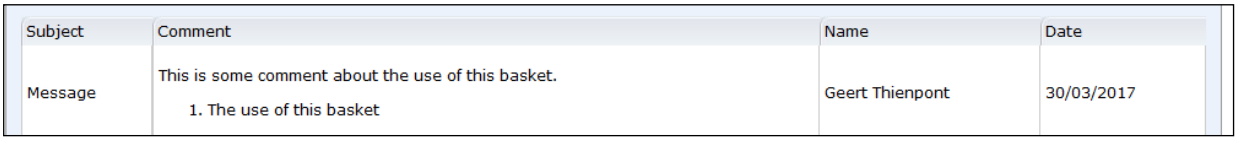


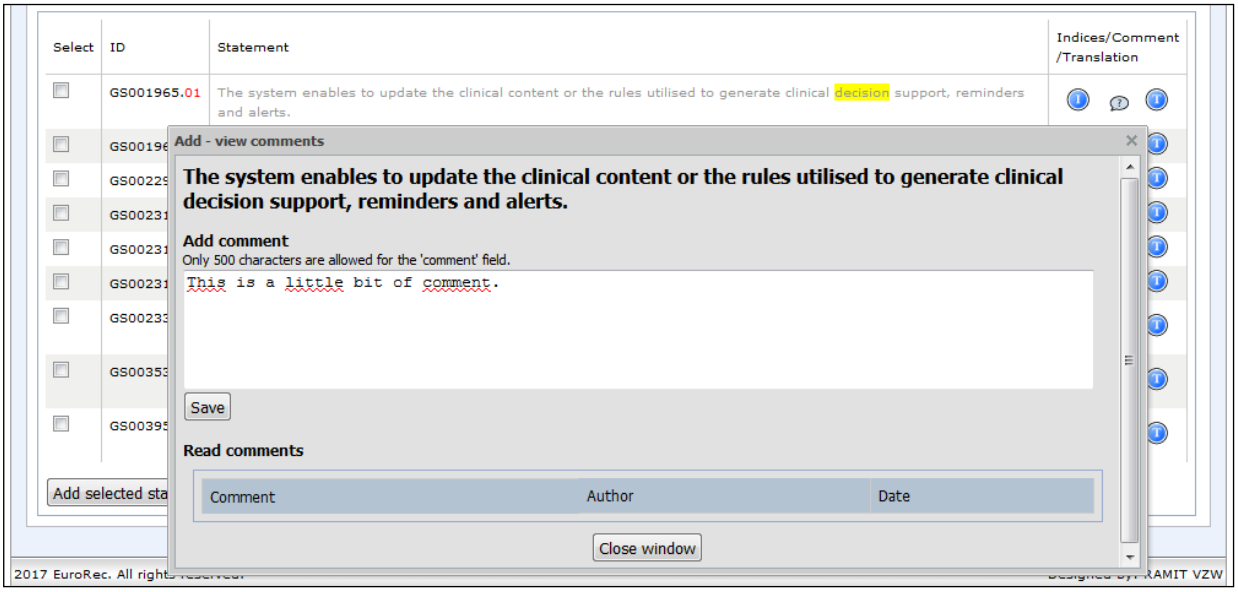


Comments

There is also the possibility to add comments to a basket or a statement.


C3-Cloud
Mr. Geert Thienpont - 30/03/2017
Version: 1
Status: Validated
Updated by: Geert Thienpont
Updated: 30/03/2017
Statements: 19
Kind of Application:
C3-Cloud example
Intended users:
C3-Cloud participants
Specifications:
Create & list baskets
Back to basket
*: required field.
Subject: Message
Comment* (max. 3000 characters are allowed for the comment field):
This is some comment about the use of this basket.
1. The use of this basket
Save


Subject
Comment
Name
Date
Message
This is some comment about the use of this basket.
1. The use of this basket
Geert Thienpont
30/03/2017

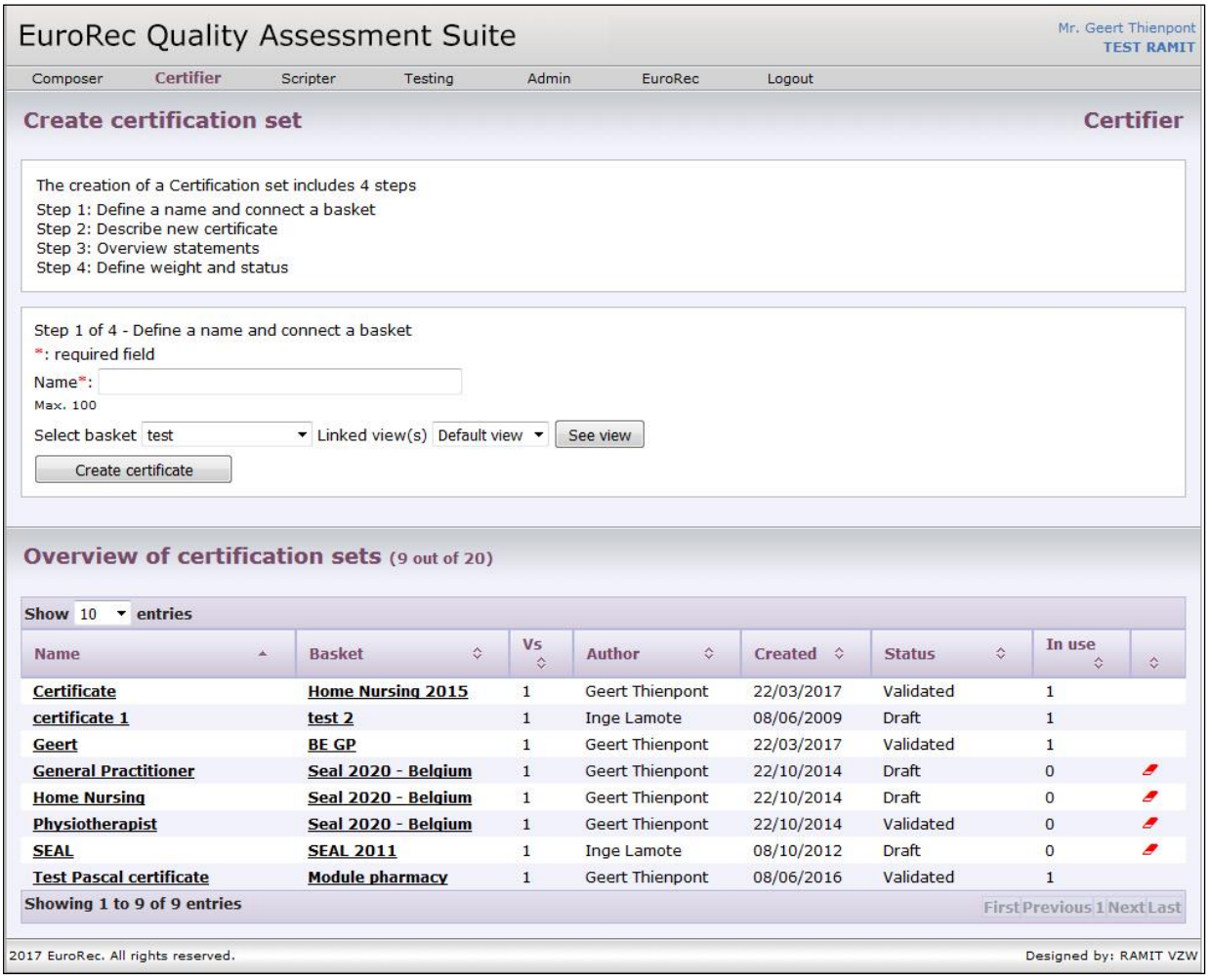

Select
ID
Statement
Indices/Comment /Translation
GS001965.01
The system enables to update the clinical content or the rules utilised to generate clinical decision support, reminders and alerts.
Add - view comments
The system enables to update the clinical content or the rules utilised to generate clinical decision support, reminders and alerts.
Add comment
Only 500 characters are allowed for the 'comment' field.
This is a little bit of comment.
Save
Read comments
Comment
Author
Date
Close window
Add selected sta
2017 EuroRec. All rights reserved.

Validate basket

Once the basket is ready it can be validated. Only users with coordinator rights can validate a basket. Once the basket is validated it can be used in the Certifier.

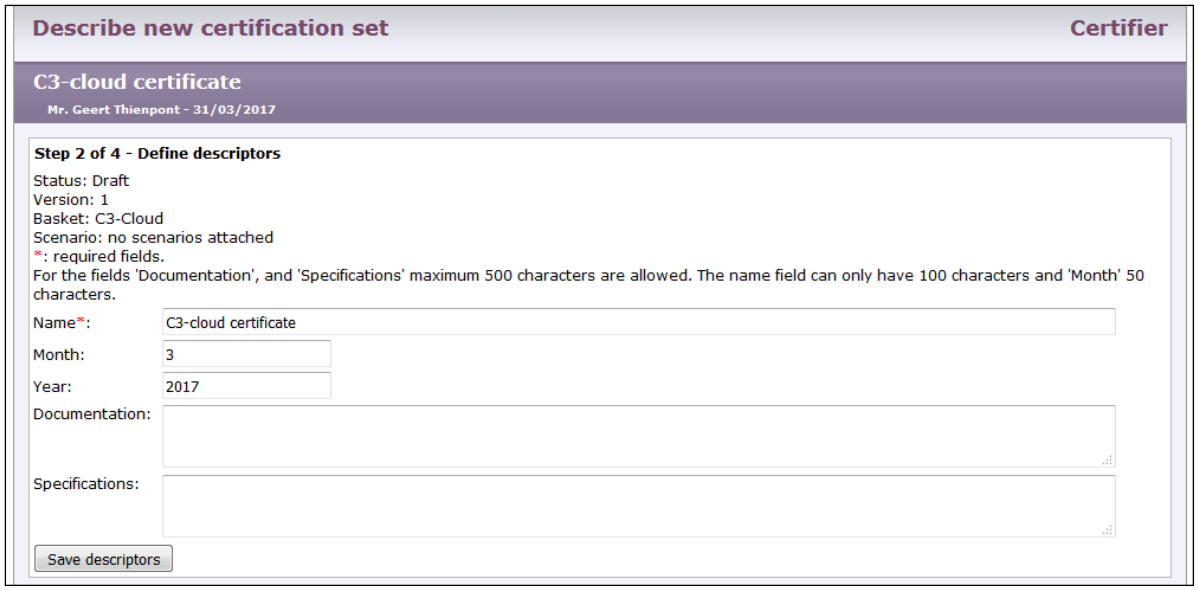
5.1.2. Certifier

Next step in a Certification approach is to use the **Certifier** in order to define – within the selected EuroRec Basket – the mandatory aspect and/or the importance of each individual statement within a given certification session.



Create Certificate

Fill in the name of the new certificate and select a basket.



Describe new certification set — **Certifier**

C3-cloud certificate

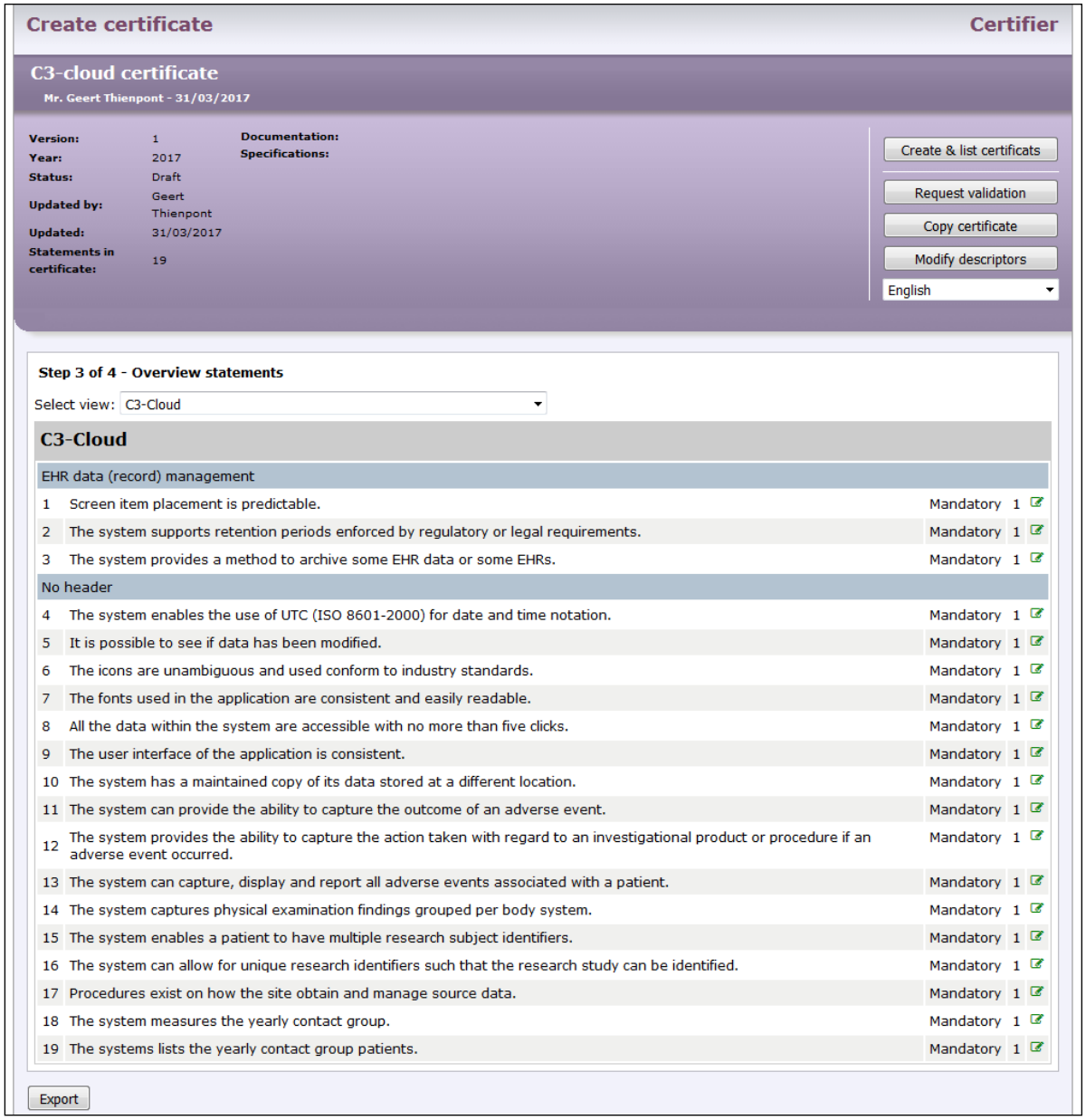
Mr. Geert Thienpont - 31/03/2017

Step 2 of 4 - Define descriptors

Status: Draft
Version: 1
Basket: C3-Cloud
Scenario: no scenarios attached
*: required fields.
For the fields 'Documentation', and 'Specifications' maximum 500 characters are allowed. The name field can only have 100 characters and 'Month' 50 characters.

Name*:	C3-cloud certificate
Month:	3
Year:	2017
Documentation:	
Specifications:	

Save descriptors



Create certificate — **Certifier**

C3-cloud certificate

Mr. Geert Thienpont - 31/03/2017

Version:	1	**Documentation:**	
Year:	2017	**Specifications:**	
Status:	Draft		
Updated by:	Geert Thienpont		
Updated:	31/03/2017		
Statements in certificate:	19		

Create & list certificats
Request validation
Copy certificate
Modify descriptors
English

Step 3 of 4 - Overview statements

Select view: C3-Cloud

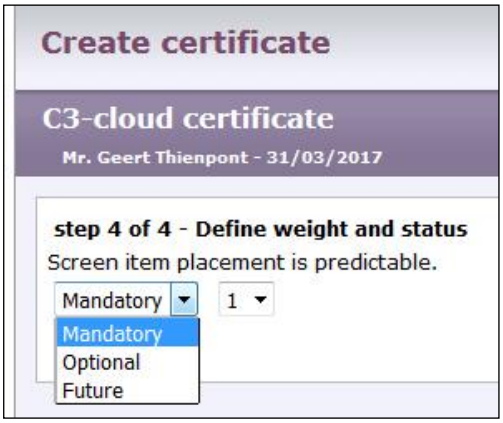
C3-Cloud

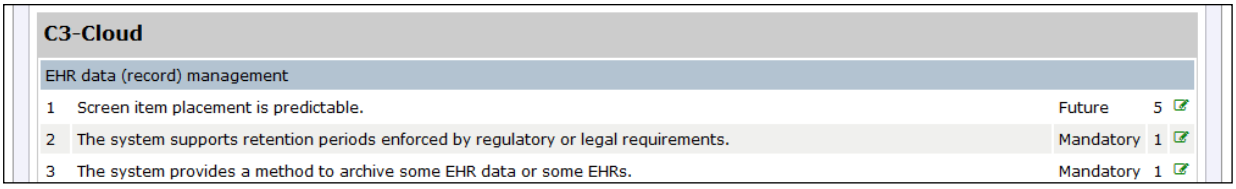
EHR data (record) management			
1	Screen item placement is predictable.	Mandatory	1
2	The system supports retention periods enforced by regulatory or legal requirements.	Mandatory	1
3	The system provides a method to archive some EHR data or some EHRs.	Mandatory	1
No header			
4	The system enables the use of UTC (ISO 8601-2000) for date and time notation.	Mandatory	1
5	It is possible to see if data has been modified.	Mandatory	1
6	The icons are unambiguous and used conform to industry standards.	Mandatory	1
7	The fonts used in the application are consistent and easily readable.	Mandatory	1
8	All the data within the system are accessible with no more than five clicks.	Mandatory	1
9	The user interface of the application is consistent.	Mandatory	1
10	The system has a maintained copy of its data stored at a different location.	Mandatory	1
11	The system can provide the ability to capture the outcome of an adverse event.	Mandatory	1
12	The system provides the ability to capture the action taken with regard to an investigational product or procedure if an adverse event occurred.	Mandatory	1
13	The system can capture, display and report all adverse events associated with a patient.	Mandatory	1
14	The system captures physical examination findings grouped per body system.	Mandatory	1
15	The system enables a patient to have multiple research subject identifiers.	Mandatory	1
16	The system can allow for unique research identifiers such that the research study can be identified.	Mandatory	1
17	Procedures exist on how the site obtain and manage source data.	Mandatory	1
18	The system measures the yearly contact group.	Mandatory	1
19	The systems lists the yearly contact group patients.	Mandatory	1

Export

Define status and weight

Changing the status or the weighting factor of a statement within a given certification set.

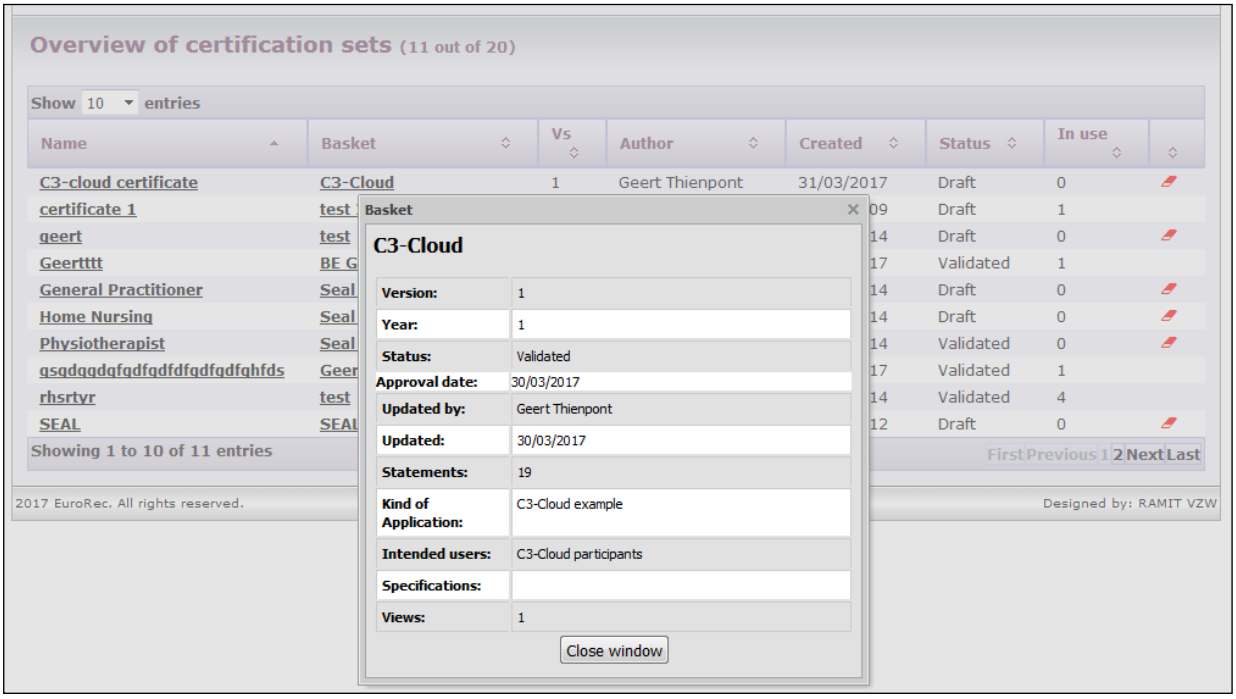




Certificate

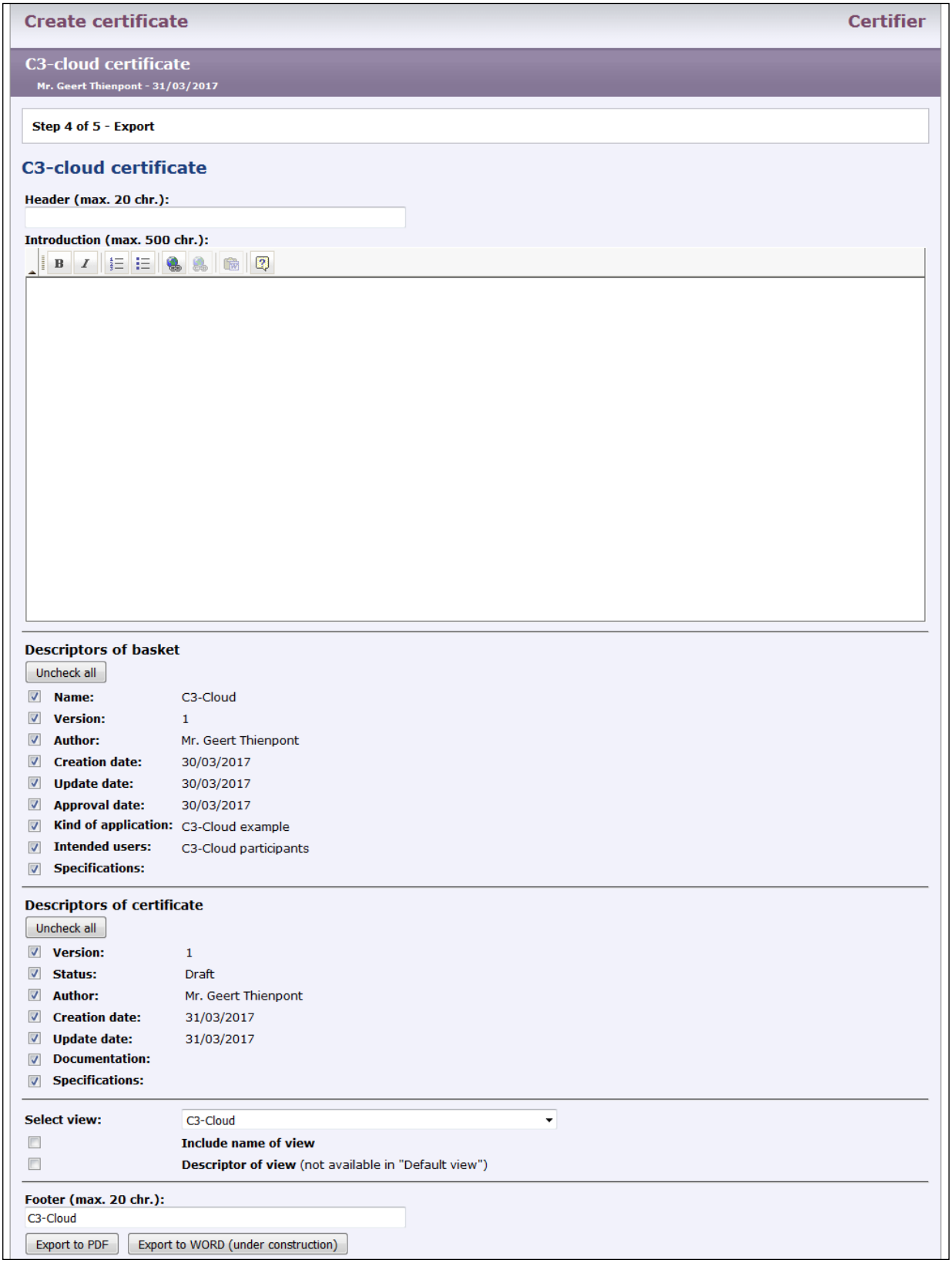
Update certificate

View basket connected to the certificate



Once a basket is being used in a certificate, the basket can no longer be deleted. This is clearly visible in the overview of baskets in the composer. The field “In use” shows the number of times the basket is connected to a certificate. As long as an object (basket, certificate,…) is connected deletion is not possible. A parent object can have one or more children. The last child or grandchild in the chain has to be deleted first.

Export certificate to PDF



C3-cloud certificate - Mr. Geert Thienpont

info@eurorec.org

Geert Thienpont
Universitair Ziekenhuis
Kliniekgebouw 3 -5e verdieping
De Pintelaan 185
9000 Gent
Belgium

C3-cloud certificate

Descriptors of basket

Basket name: C3-Cloud
Version: 1
Author: Mr. Geert Thienpont
Update date: 30/03/2017
Approval date: 30/03/2017
Kind of application: C3-Cloud example
Intended users: C3-Cloud participants
Specifications:

Descriptors of certificate

Name: C3-cloud certificate
Certificate version: 1
Status: Draft
Update date: 31/03/2017
Documentation:
Specifications:

EHR data (record) management			
1	Screen item placement is predictable.	Future	5
2	The system supports retention periods enforced by regulatory or legal requirements.	Mandatory	1
3	The system provides a method to archive some EHR data or some EHRs.	Mandatory	1
No header			
4	The system enables the use of UTC (ISO 8601-2000) for date and time notation.	Mandatory	1

Validate certificate

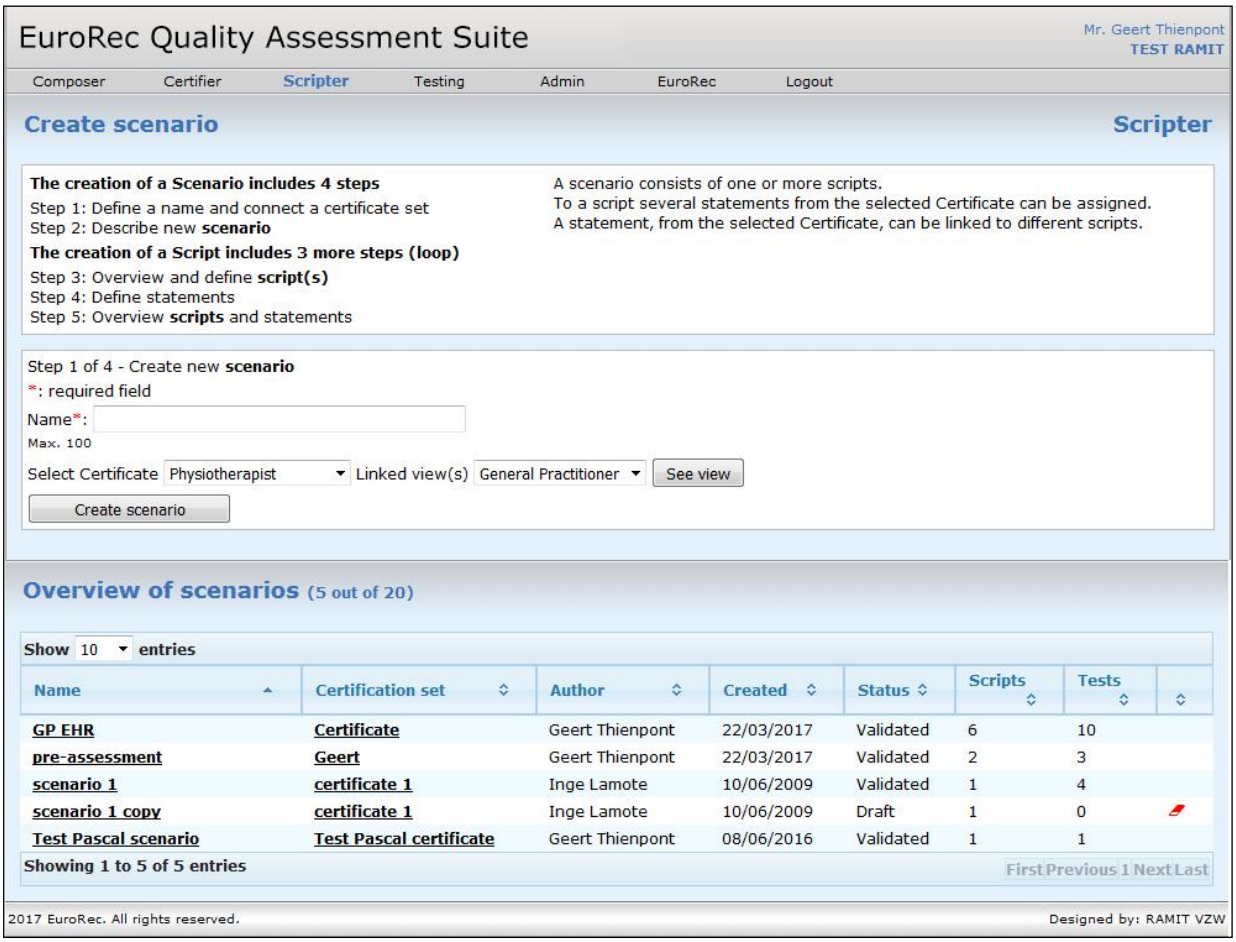
Overview of certification sets (11 out of 20)

Show 10 entries

Name	Basket	Vs	Author	Created	Status	In use	
C3-cloud certificate	C3-Cloud	1	Geert Thienpont	31/03/2017	To be validated	0	

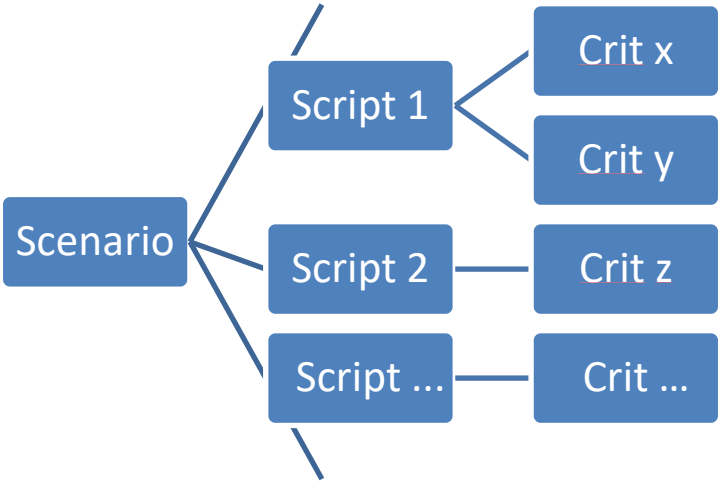
5.1.3. Scripter

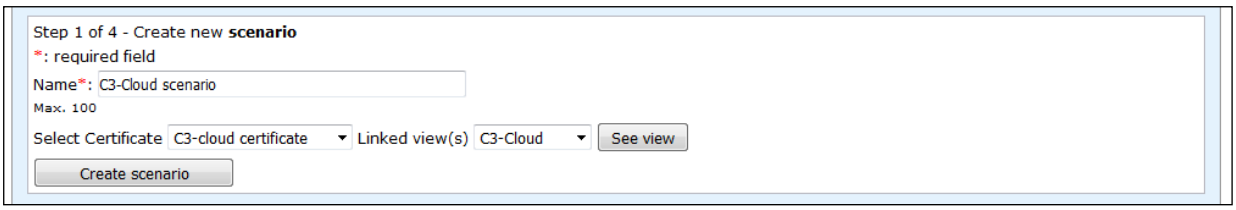
The **Scripter** finally enables the certification authority to produce certification scenarios and to link the scripts to the Fine Grained Statements they are supposed to validate for a system.

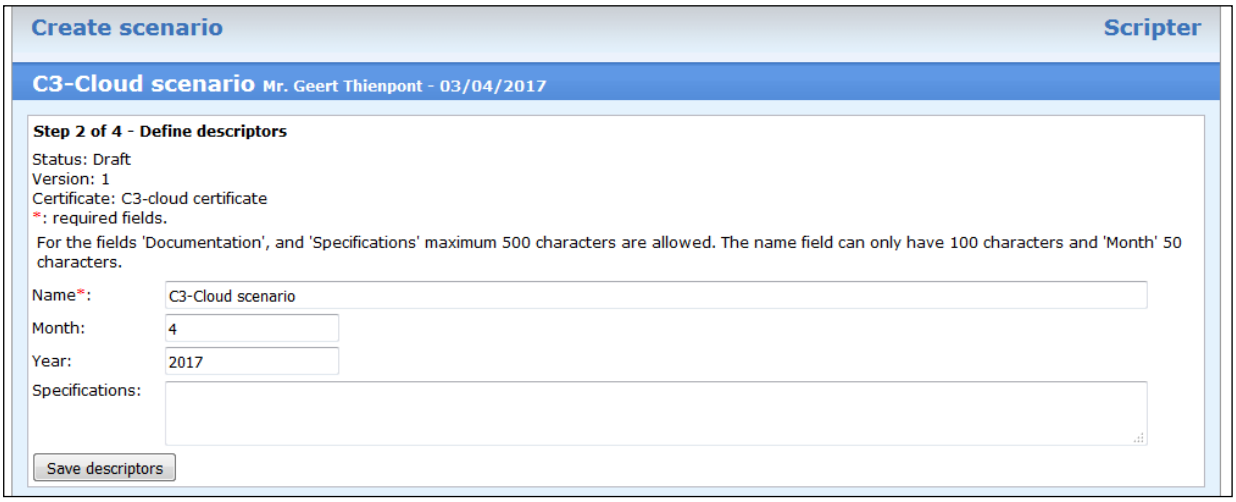


Scenario based testing

Before defining scripts we start by creating a scenario. The scenario will group all the scripts needed for a test.

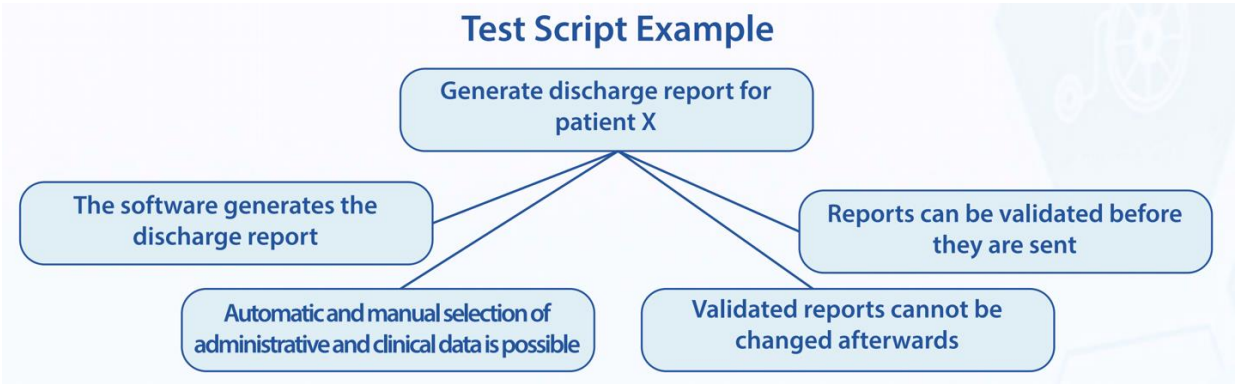




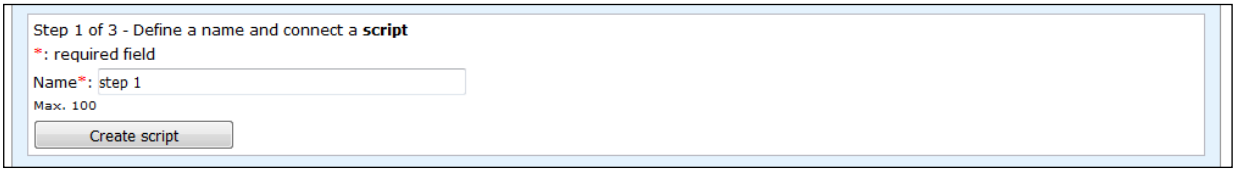


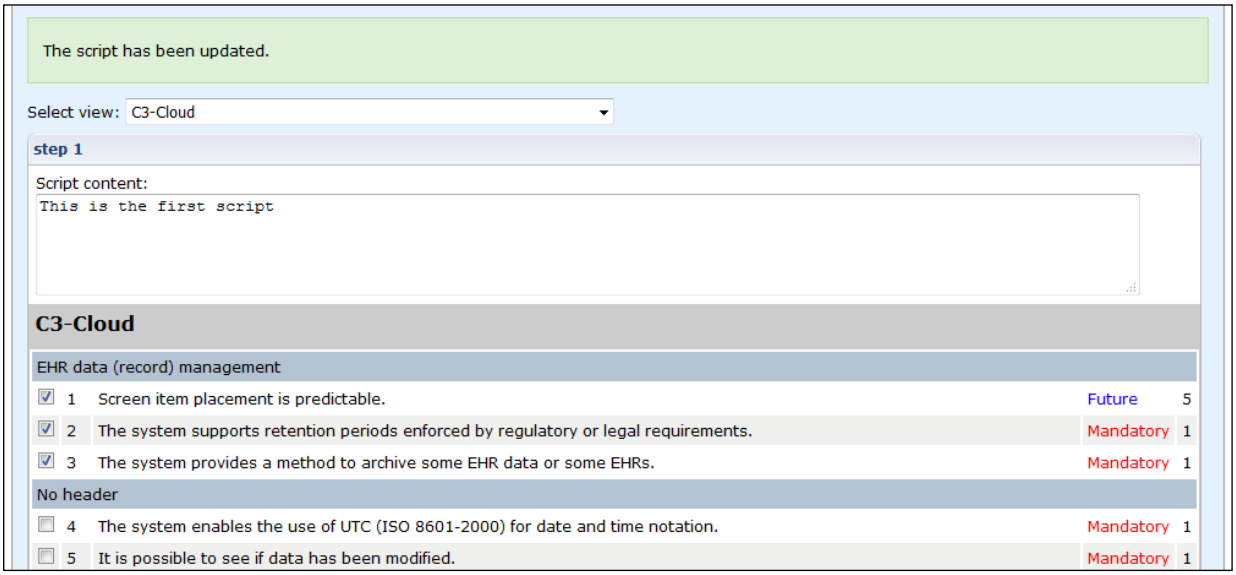
Scenario

Create script(s)

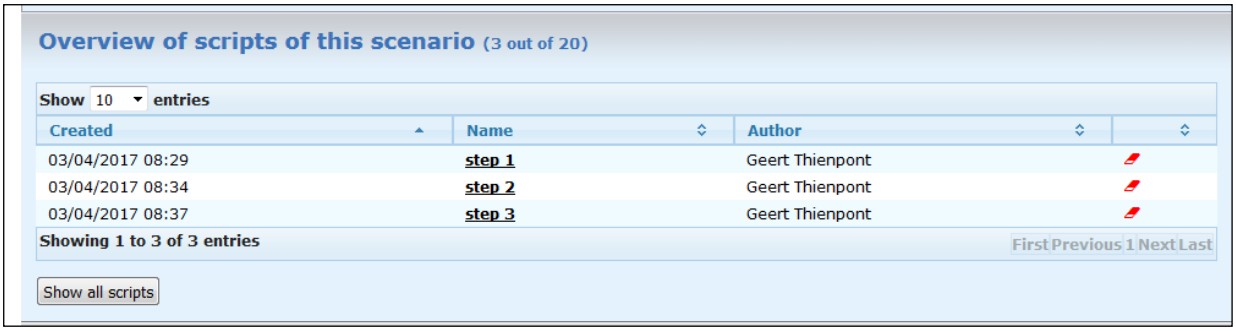


Creation of a script and identify the statements that can be certified with that script

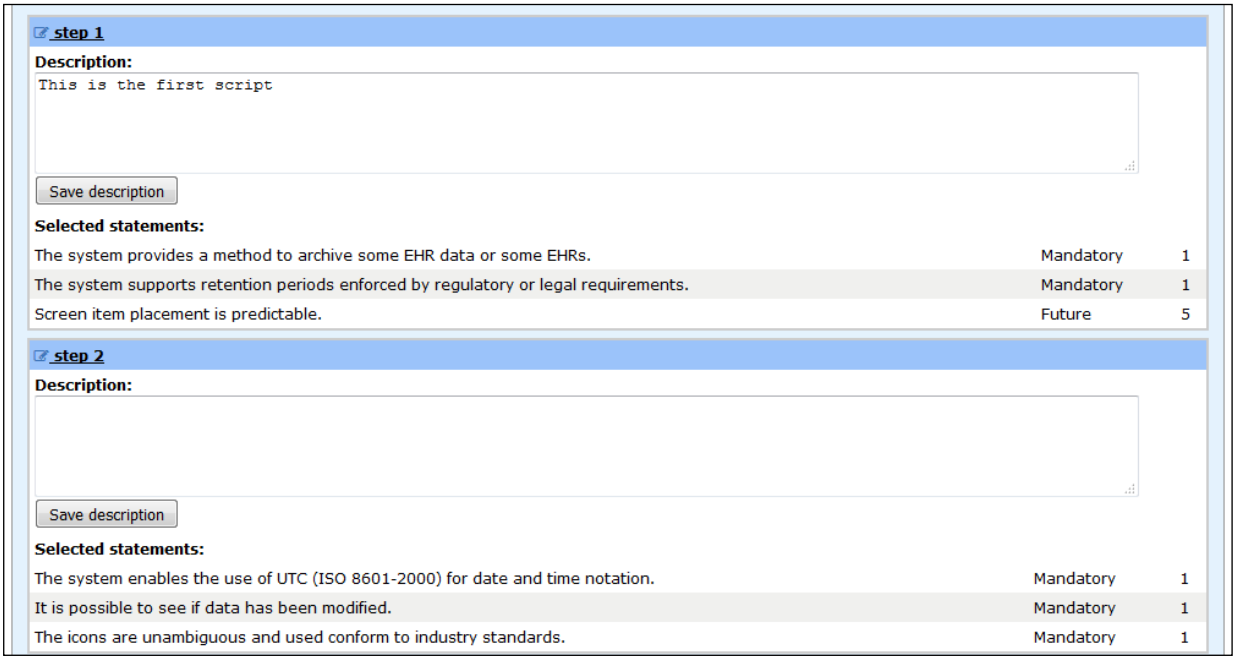




View of the scripts related to a scenario, the statements that can be validated by each script

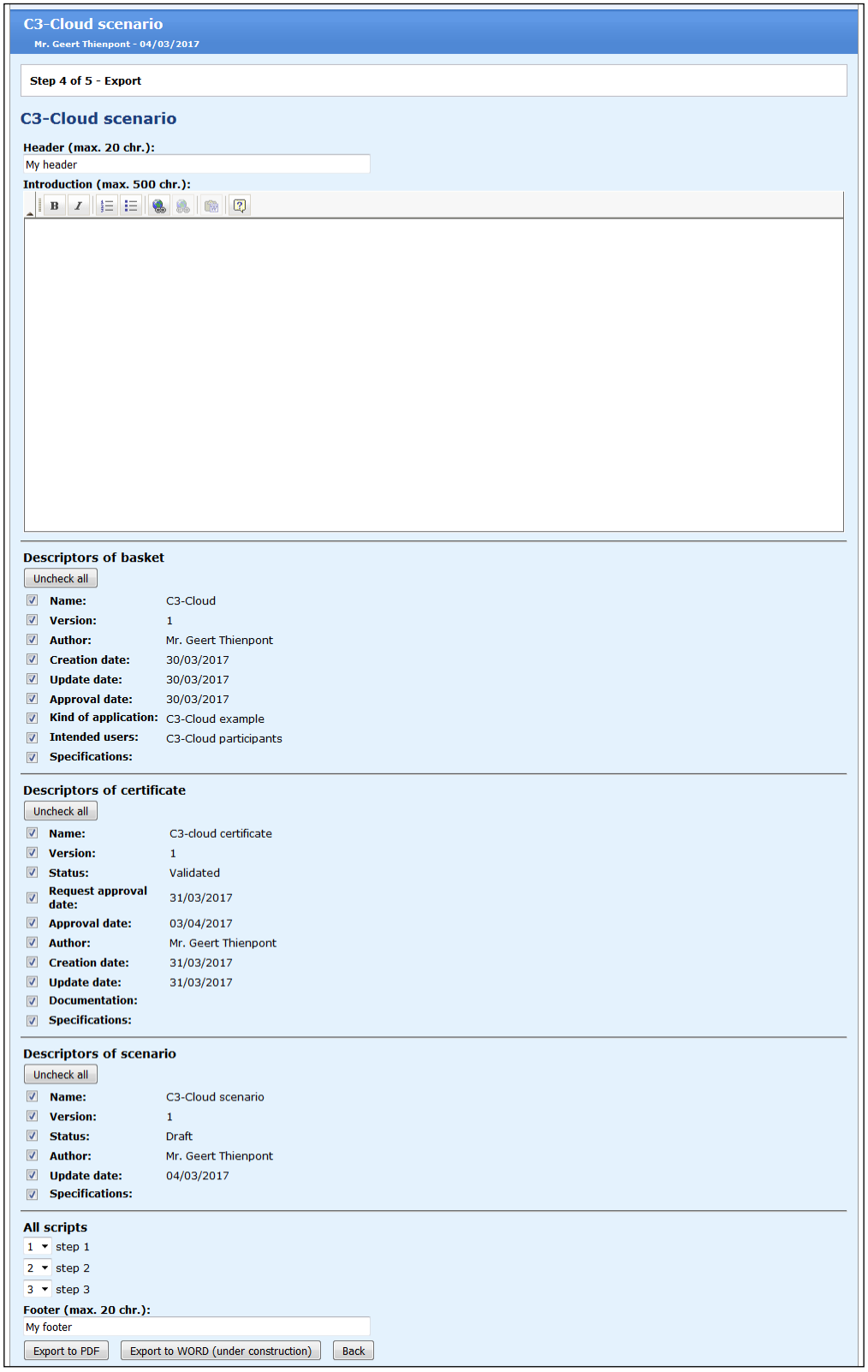


Overview of scripts within a certain scenario



And the different statements within a script

Export scenario to PDF



C3-Cloud scenario

Descriptors of basket

Basket name: C3-Cloud

Version: 1

Author: Mr. Geert Thienpont

Update date: 30/03/2017

Approval date: 30/03/2017

Kind of application: C3-Cloud example

Intended users: C3-Cloud participants

Specifications:

Descriptors of certificate

Name: C3-cloud certificate

Status: Validated

Request approval date: 2017-03-31 00:00:00.0

Approval date: 2017-04-03 00:00:00.0

Update date: 31/03/2017

Documentation:

Specifications:

Descriptors of scenario

Name: C3-Cloud scenario

scenario version: 1

Status: Draft

Update date: 04/03/2017

Specifications:

Validate scenario

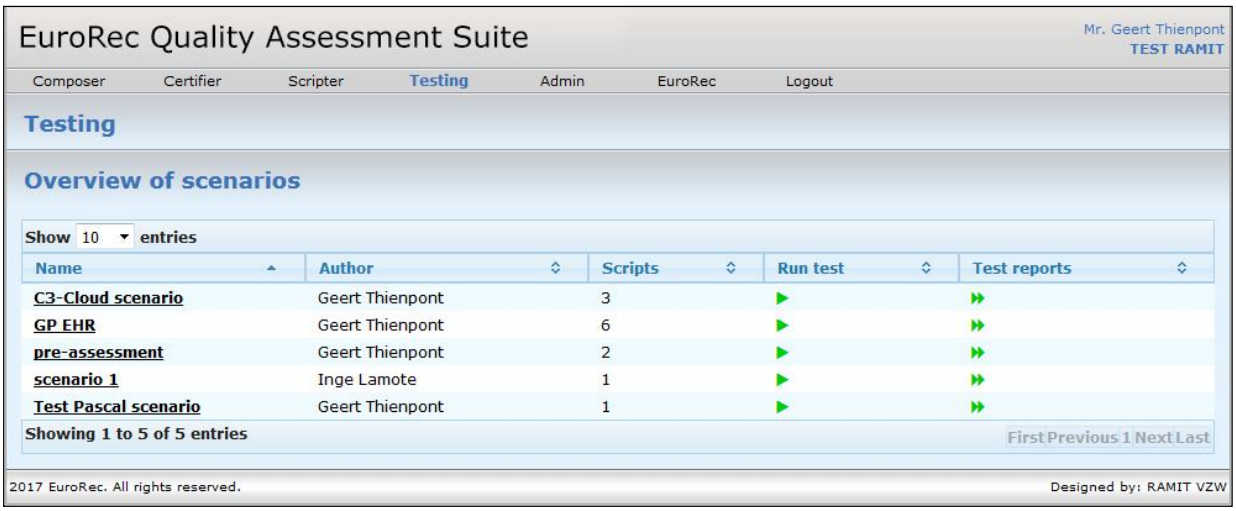
Before we can start with the final step of testing the scenario has to be validated first.

Overview of scenarios (6 out of 20)

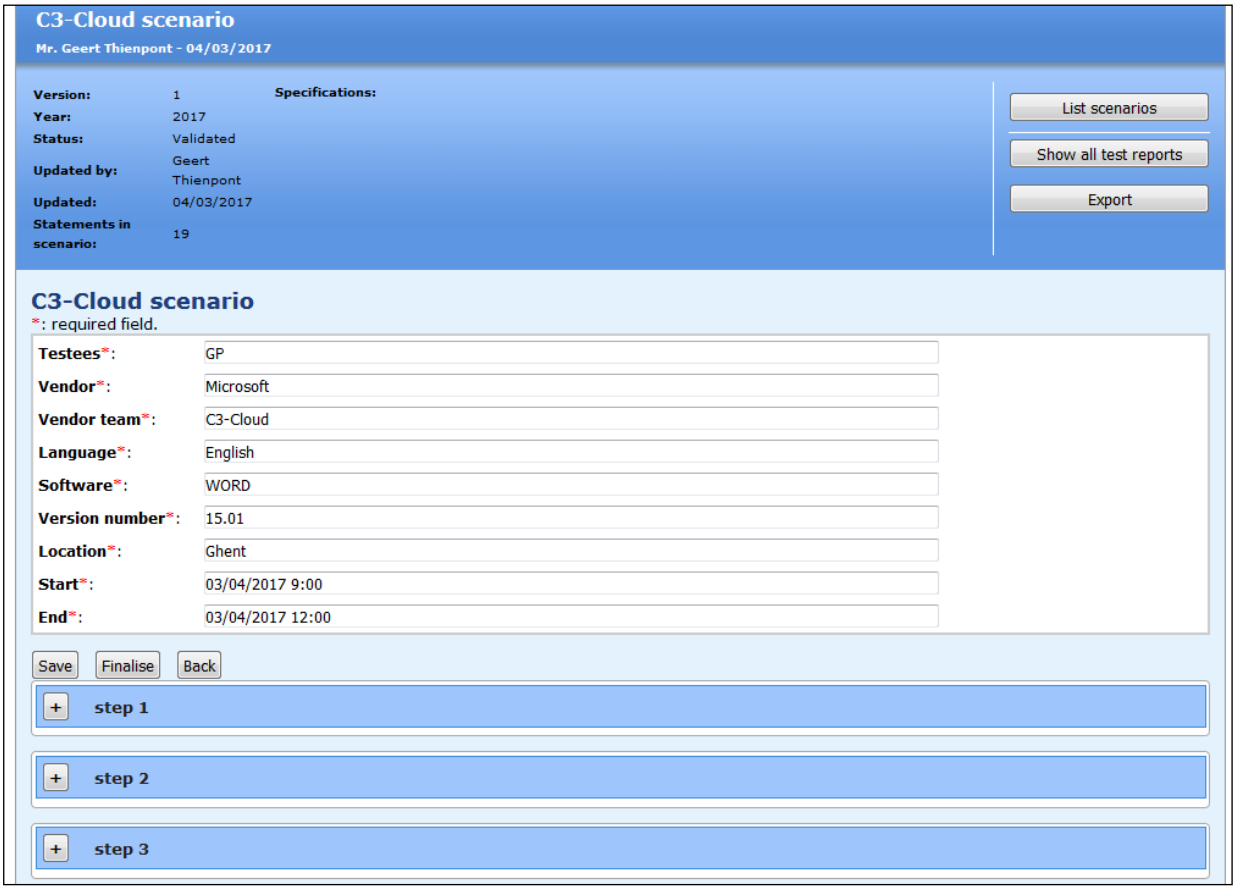
Show 10 entries

Name	Certification set	Author	Created	Status	Scripts	Tests	
C3-Cloud scenario	C3-cloud certificate	Geert Thienpont	03/04/2017	Validated	3	0	

5.1.4. Testing

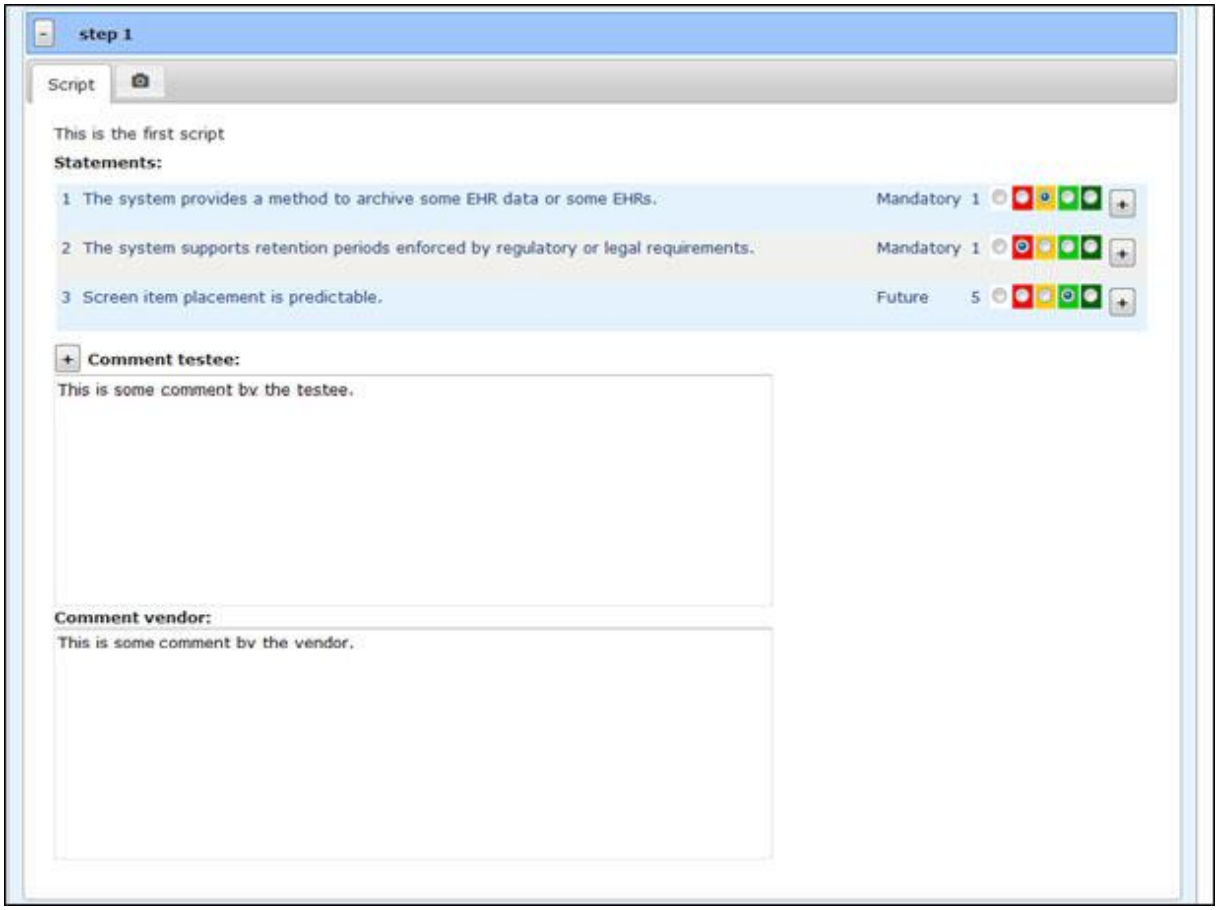


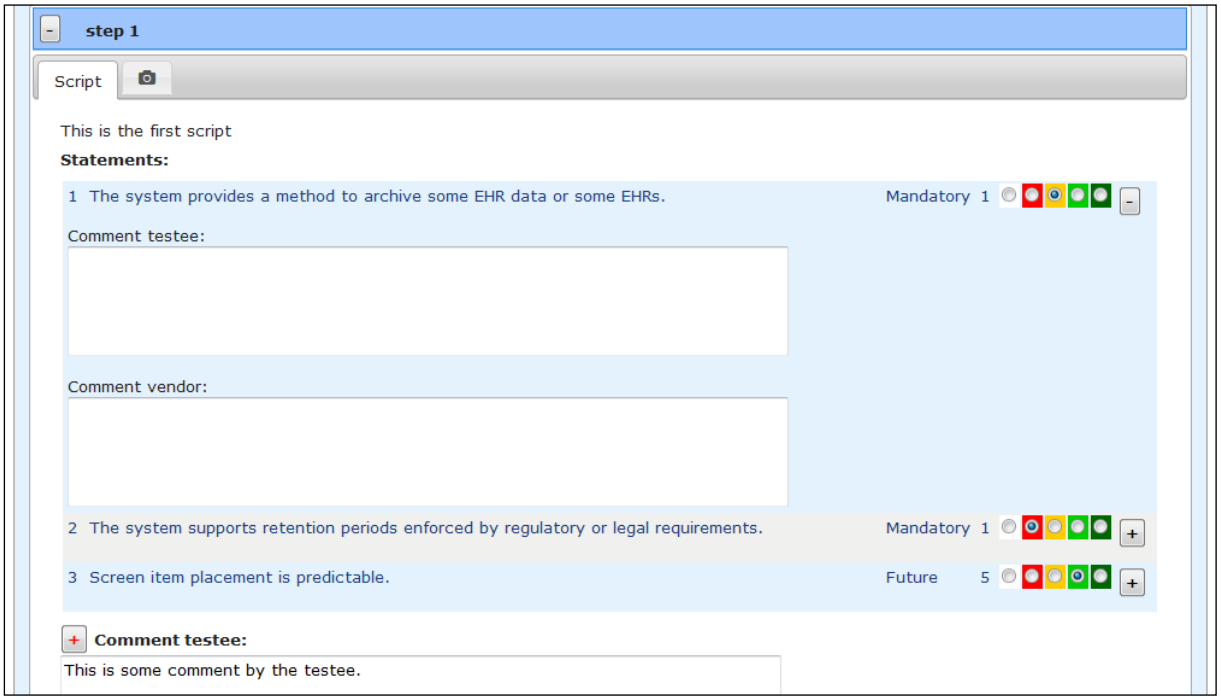
Conducting a test



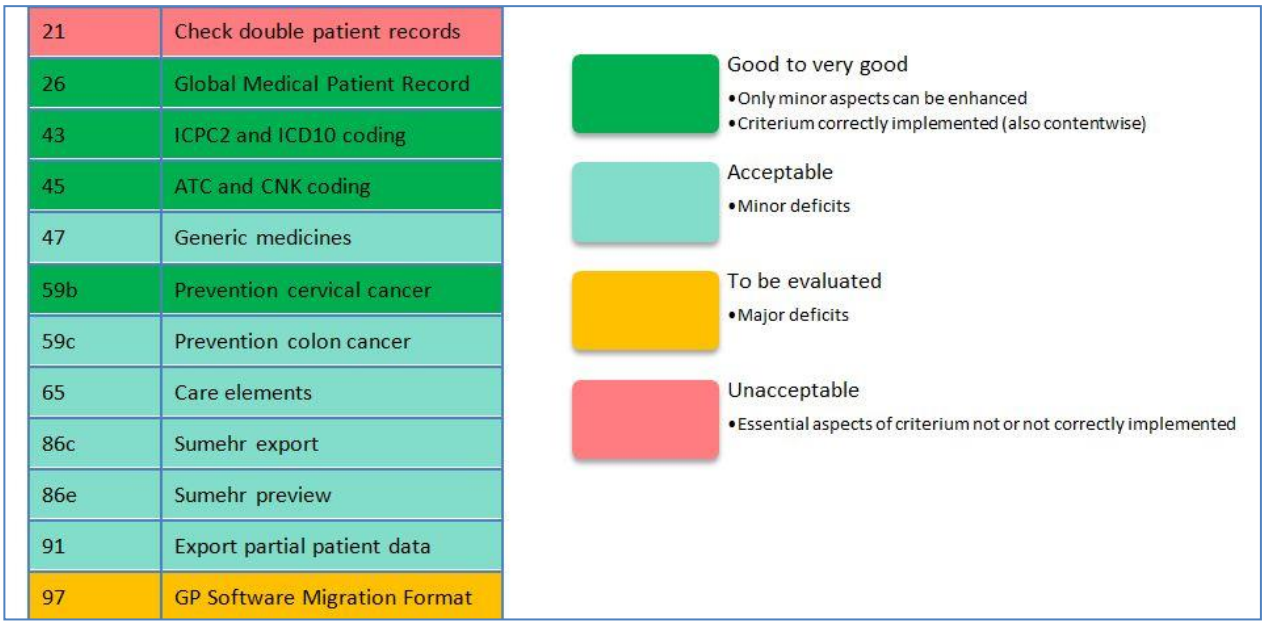
Comments

Comments can be added at script or at statement level by the testee and the vendor.



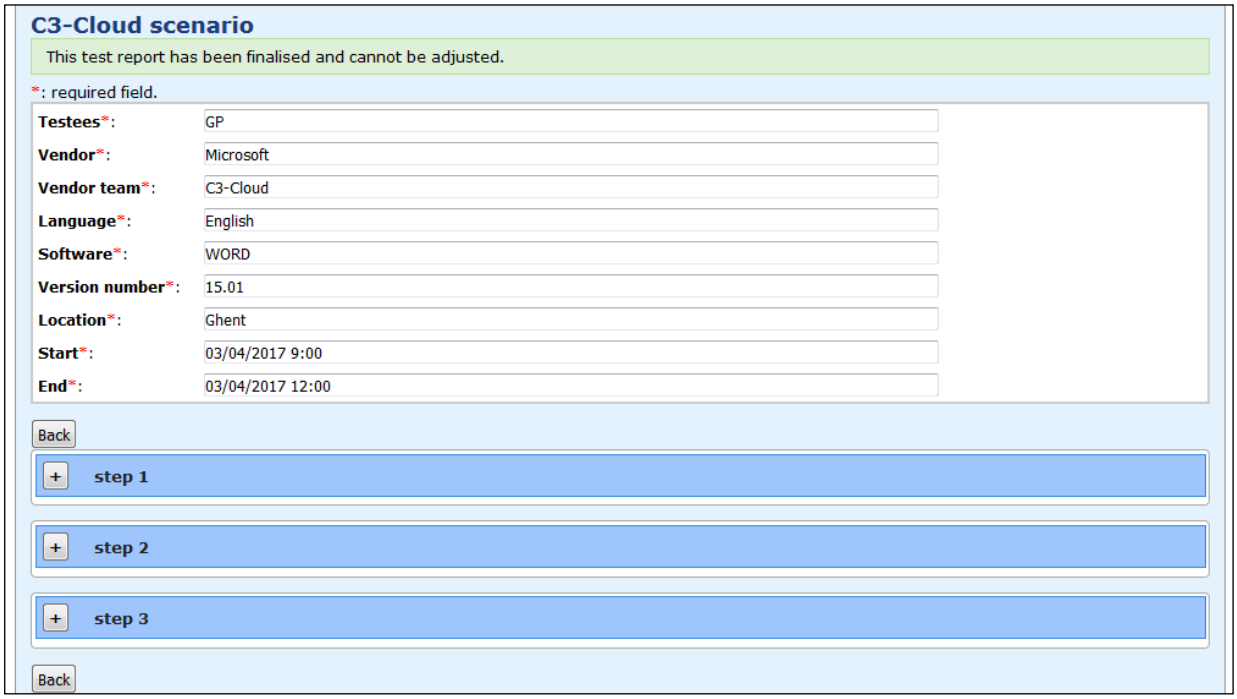


While running the test the testee can evaluate the different statements and give a score. There are 4 different options:



21	Check double patient records
26	Global Medical Patient Record
43	ICPC2 and ICD10 coding
45	ATC and CNK coding
47	Generic medicines
59b	Prevention cervical cancer
59c	Prevention colon cancer
65	Care elements
86c	Sumehr export
86e	Sumehr preview
91	Export partial patient data
97	GP Software Migration Format

Once the test is finished and all statements have been evaluated the test is finalized and cannot be adjusted. Now the test is ready to be concluded.

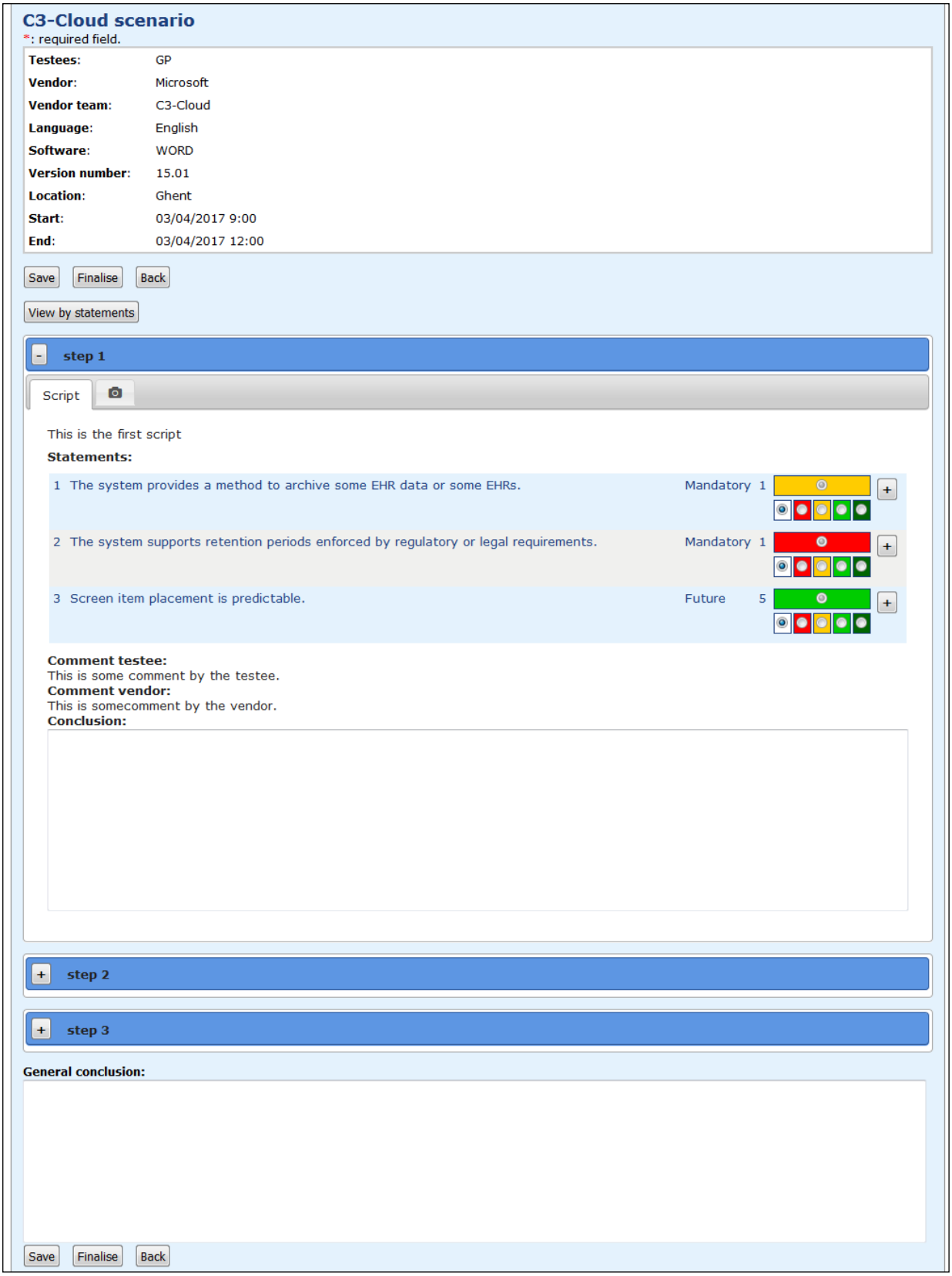


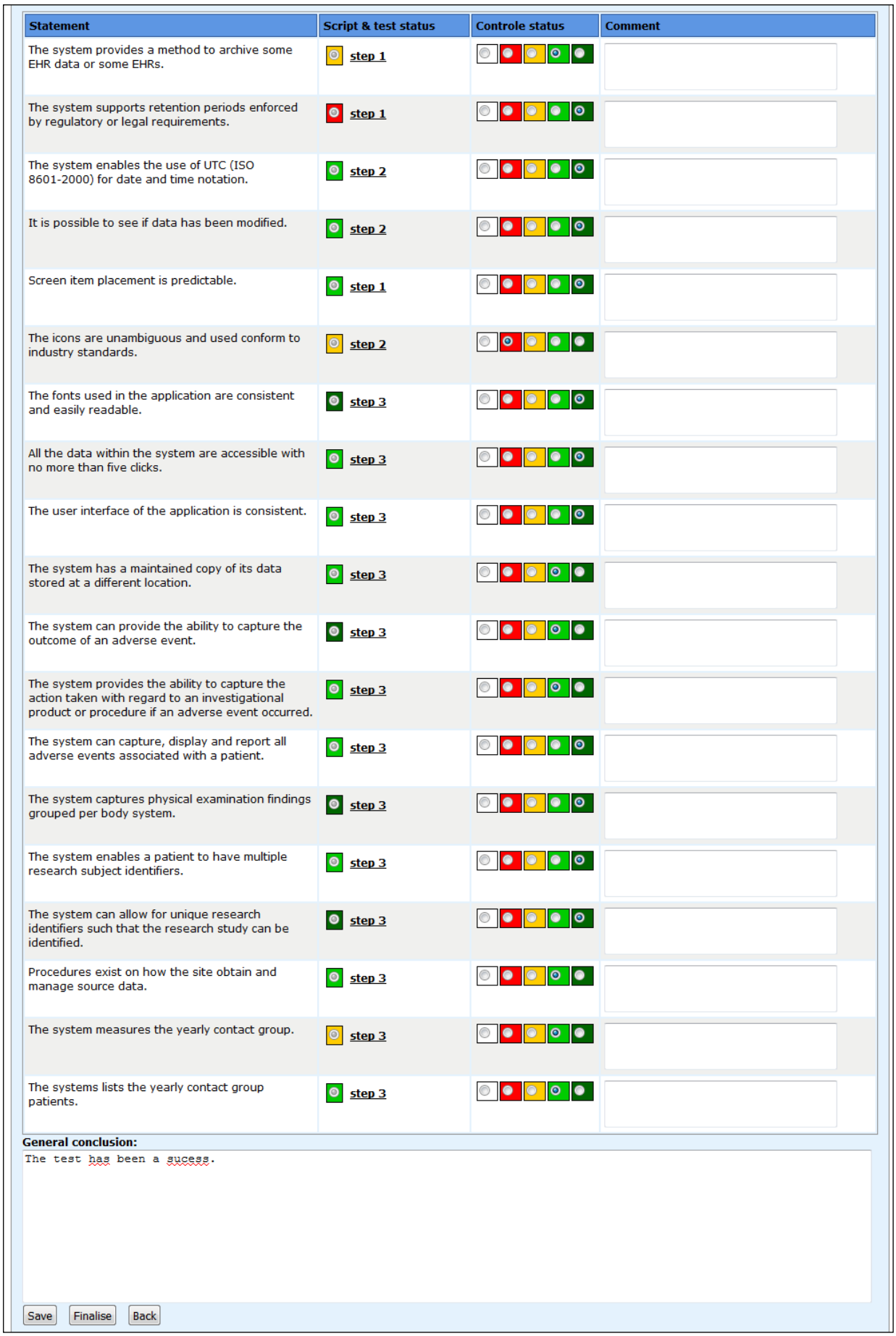
The C3-Cloud scenario has 3 scripts and one test has been run:

Final step: Conclusion

For each statement you now the testee makes his conclusions based on the result of the test and the different comments.

The test can be viewed ordered by the different scripts or the full list of statements.


C3-Cloud scenario
*: required field.
Testees: GP
Vendor: Microsoft
Vendor team: C3-Cloud
Language: English
Software: WORD
Version number: 15.01
Location: Ghent
Start: 03/04/2017 9:00
End: 03/04/2017 12:00
Save
Finalise
Back
View by statements
step 1
Script
This is the first script
Statements:
1 The system provides a method to archive some EHR data or some EHRs. Mandatory 1
2 The system supports retention periods enforced by regulatory or legal requirements. Mandatory 1
3 Screen item placement is predictable. Future 5
Comment testee:
This is some comment by the testee.
Comment vendor:
This is somecomment by the vendor.
Conclusion:
step 2
step 3
General conclusion:
Save
Finalise
Back



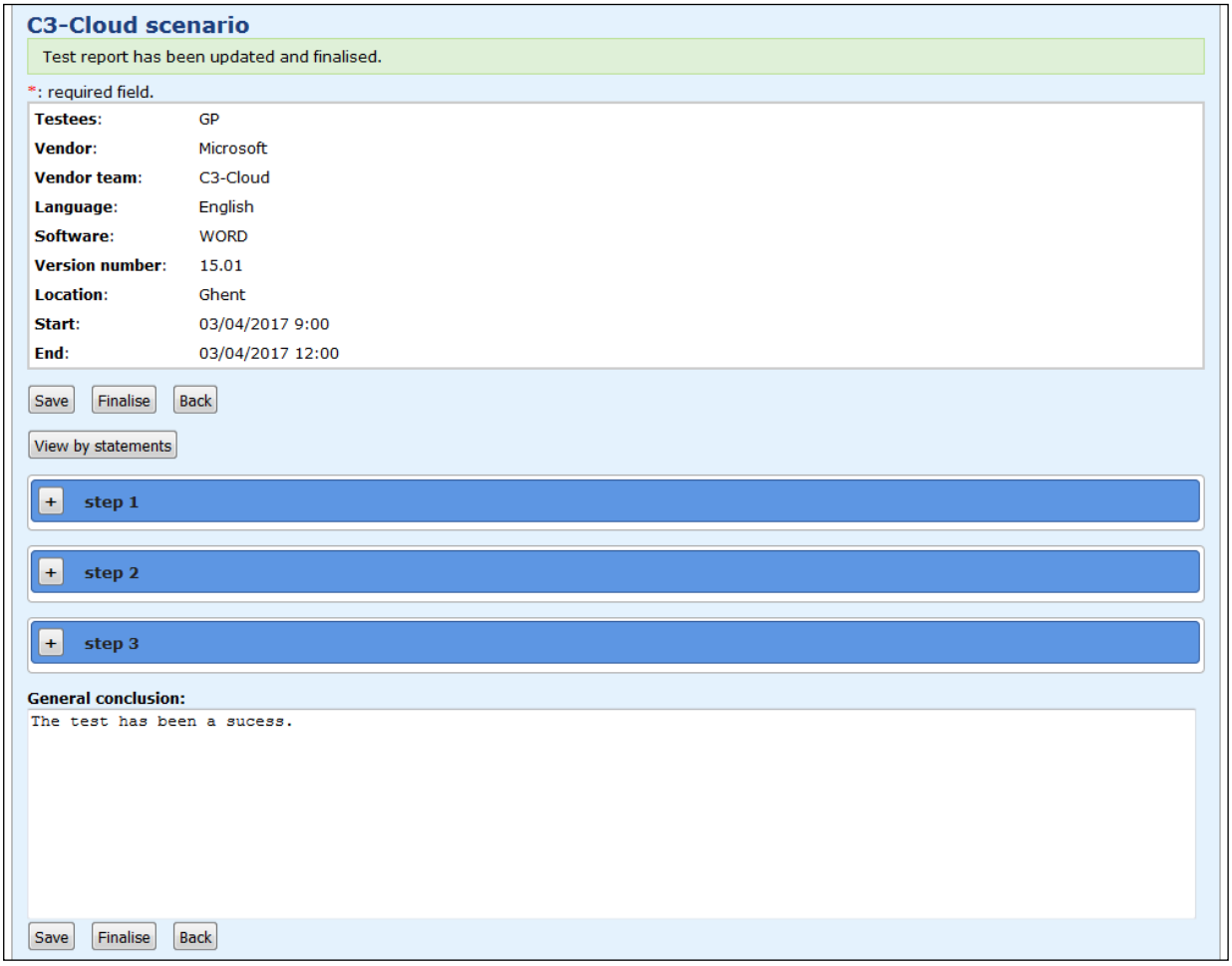
Statement	Script & test status	Controle status	Comment
The system provides a method to archive some EHR data or some EHRs.	step 1		
The system supports retention periods enforced by regulatory or legal requirements.	step 1		
The system enables the use of UTC (ISO 8601-2000) for date and time notation.	step 2		
It is possible to see if data has been modified.	step 2		
Screen item placement is predictable.	step 1		
The icons are unambiguous and used conform to industry standards.	step 2		
The fonts used in the application are consistent and easily readable.	step 3		
All the data within the system are accessible with no more than five clicks.	step 3		
The user interface of the application is consistent.	step 3		
The system has a maintained copy of its data stored at a different location.	step 3		
The system can provide the ability to capture the outcome of an adverse event.	step 3		
The system provides the ability to capture the action taken with regard to an investigational product or procedure if an adverse event occurred.	step 3		
The system can capture, display and report all adverse events associated with a patient.	step 3		
The system captures physical examination findings grouped per body system.	step 3		
The system enables a patient to have multiple research subject identifiers.	step 3		
The system can allow for unique research identifiers such that the research study can be identified.	step 3		
Procedures exist on how the site obtain and manage source data.	step 3		
The system measures the yearly contact group.	step 3		
The systems lists the yearly contact group patients.	step 3		

General conclusion:

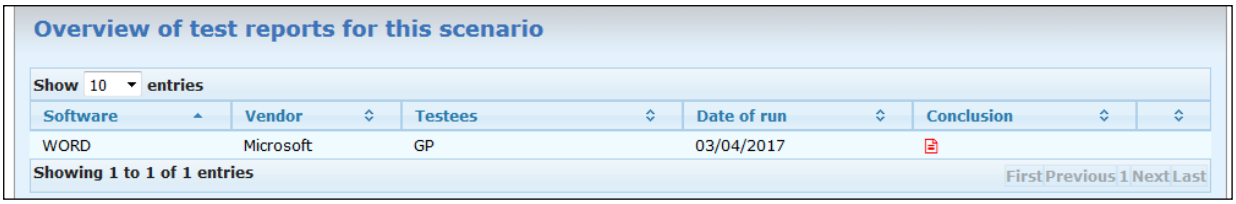
The test has been a sucess.

Save Finalise Back

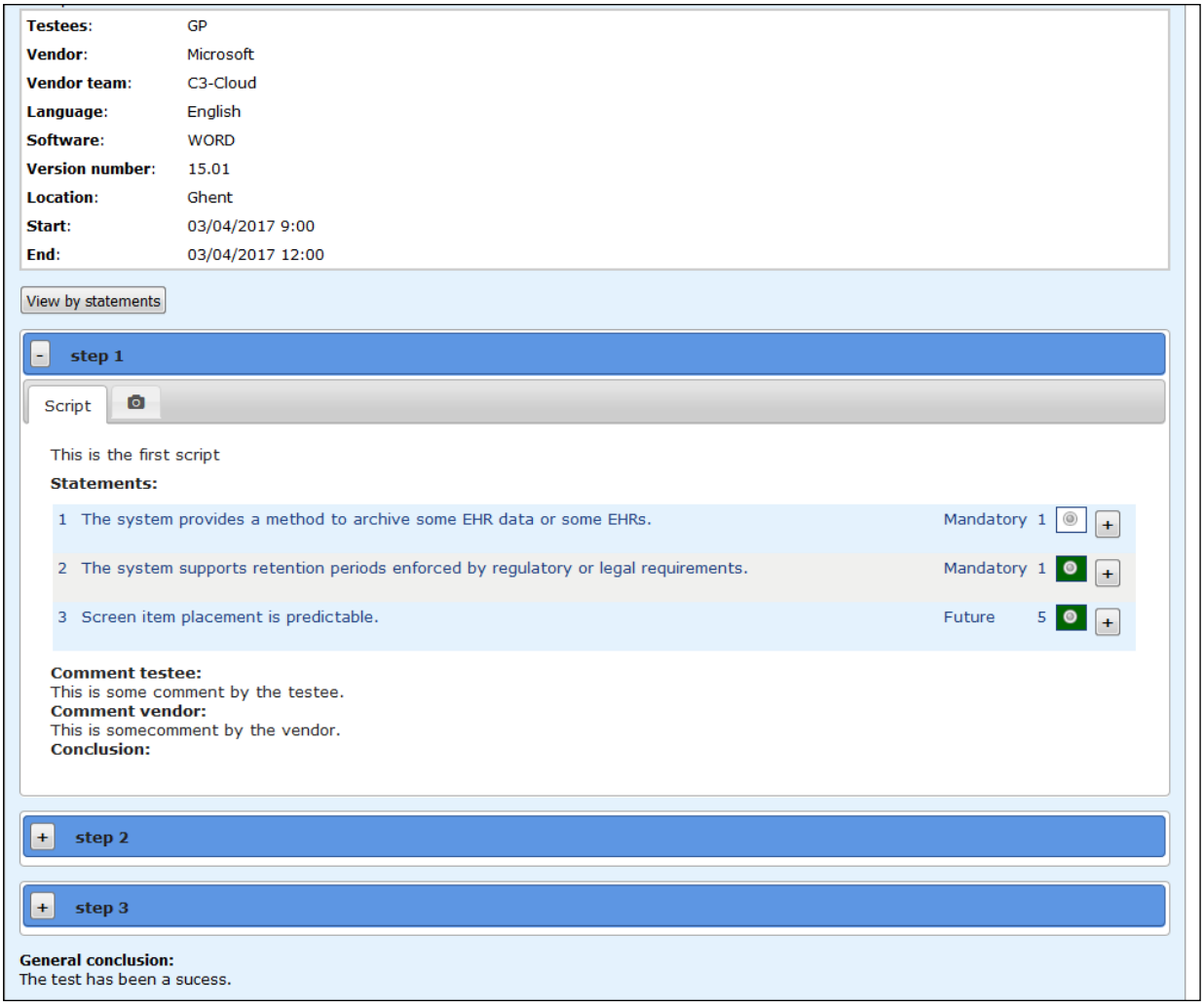
Once the testee has finished his conclusion the test and conclusions gets finalized. The test is closed.



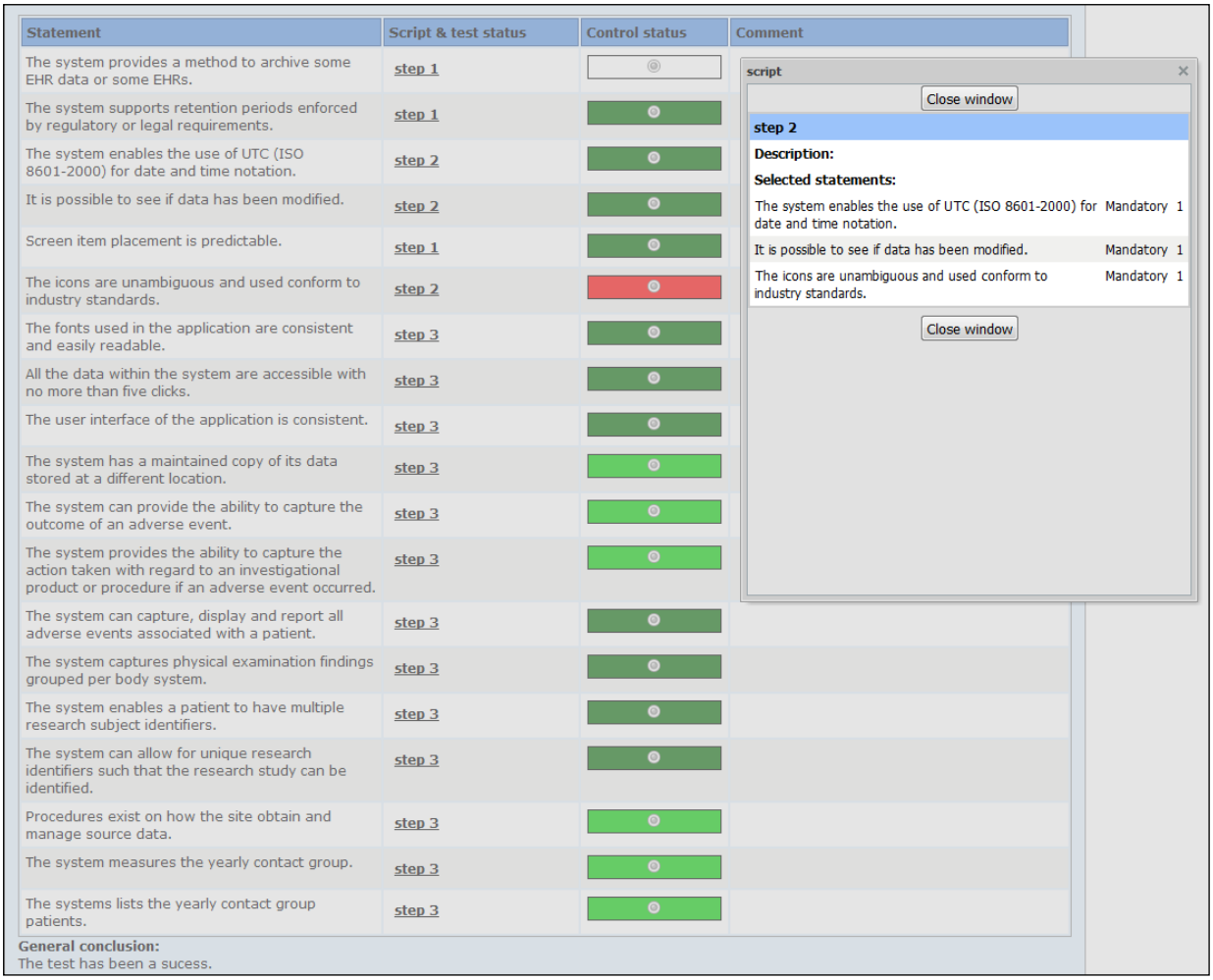
Overview of test reports for the C3-cloud Scenario.



Final report



The “statements” view showing the Script details:



Statement	Script & test status	Control status	Comment
The system provides a method to archive some EHR data or some EHRs.	step 1		
The system supports retention periods enforced by regulatory or legal requirements.	step 1		
The system enables the use of UTC (ISO 8601-2000) for date and time notation.	step 2		
It is possible to see if data has been modified.	step 2		
Screen item placement is predictable.	step 1		
The icons are unambiguous and used conform to industry standards.	step 2		
The fonts used in the application are consistent and easily readable.	step 3		
All the data within the system are accessible with no more than five clicks.	step 3		
The user interface of the application is consistent.	step 3		
The system has a maintained copy of its data stored at a different location.	step 3		
The system can provide the ability to capture the outcome of an adverse event.	step 3		
The system provides the ability to capture the action taken with regard to an investigational product or procedure if an adverse event occurred.	step 3		
The system can capture, display and report all adverse events associated with a patient.	step 3		
The system captures physical examination findings grouped per body system.	step 3		
The system enables a patient to have multiple research subject identifiers.	step 3		
The system can allow for unique research identifiers such that the research study can be identified.	step 3		
Procedures exist on how the site obtain and manage source data.	step 3		
The system measures the yearly contact group.	step 3		
The systems lists the yearly contact group patients.	step 3		

General conclusion:
The test has been a sucess.

script

Close window

step 2

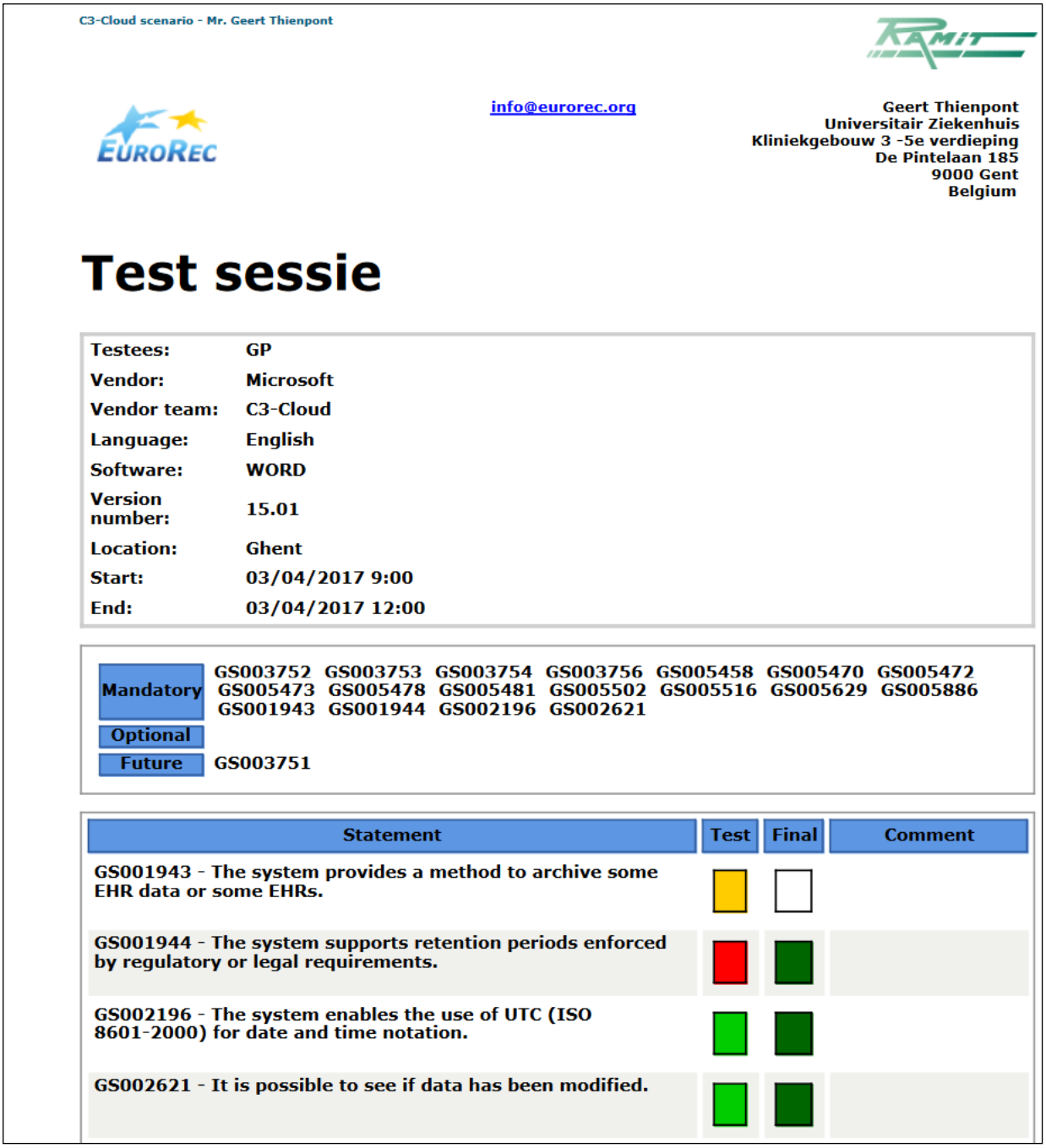
Description:

Selected statements:

The system enables the use of UTC (ISO 8601-2000) for date and time notation.	Mandatory	1
It is possible to see if data has been modified.	Mandatory	1
The icons are unambiguous and used conform to industry standards.	Mandatory	1

Close window

Export conclusion to PDF



C3-Cloud scenario - Mr. Geert Thienpont

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Geert Thienpont
Universitair Ziekenhuis
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De Pintelaan 185
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Test sessie

Testees:	GP
Vendor:	Microsoft
Vendor team:	C3-Cloud
Language:	English
Software:	WORD
Version number:	15.01
Location:	Ghent
Start:	03/04/2017 9:00
End:	03/04/2017 12:00

Mandatory	GS003752 GS003753 GS003754 GS003756 GS005458 GS005470 GS005472 GS005473 GS005478 GS005481 GS005502 GS005516 GS005629 GS005886 GS001943 GS001944 GS002196 GS002621
Optional	
Future	GS003751

Statement	Test	Final	Comment
GS001943 - The system provides a method to archive some EHR data or some EHRs.			
GS001944 - The system supports retention periods enforced by regulatory or legal requirements.			
GS002196 - The system enables the use of UTC (ISO 8601-2000) for date and time notation.			
GS002621 - It is possible to see if data has been modified.			

5.2. Requirements Traceability Matrix Full Table

Req ID	Description	Associated Use case	Associated User Requirement	Status	Type	Priority	Assigned To	System Component(s)	Architectural/ Design Document	Architecture Design (D3.3)	Component Testing	Software Module(s)	Test Case Number	Implemented In	Verification	Users involved in testing	Additional Comments
PEP-FR-1	The system shall process and store a new care plan published by a PEP Client System in such way that it can perform its automated duties and display the care plan to PEP Users.	PEP-1.1 Publish active care plan to patient	PAR-15, PAR-16, PAR-6	Designed	Functional	H	MEDIXINE	PEP		SDD-CMP-OVERALL, SDD-CMP-PEP, SDD-LGC-OVERALL, SDD-LGC-PEP, SDD-ITF-PEP, SDD-SEQ-PEP-1	After integration with C3DP and PEP						
PEP-FR-2	The system shall notify the patient when a new care plan is published to the patient.	PEP-1.1 Publish active care plan to patient	PAR-15, PAR-16, PAR-6	Designed	Functional	H	MEDIXINE	PEP		SDD-CMP-OVERALL, SDD-CMP-PEP, SDD-LGC-OVERALL, SDD-LGC-PEP, SDD-ITF-PEP, SDD-SEQ-PEP-1	After integration with C3DP and PEP						
PEP-FR-3	The system shall display the published, active care plan to PEP Users (the patient, authorized informal caregivers and health professionals).	PEP-1.2 View active care plan	PAR-18, PAR-19	Designed	Functional	H	MEDIXINE	PEP		SDD-CMP-OVERALL, SDD-CMP-PEP, SDD-LGC-OVERALL, SDD-LGC-PEP, SDD-ITF-PEP, SDD-SEQ-PEP-2	After integration with C3DP and PEP						
PEP-FR-4	The system shall mark the care plan as read when the care plan has been accessed by the patient or an informal caregiver.	PEP-1.2 View active care plan	PAR-18, PAR-19	Designed	Functional	H	MEDIXINE	PEP		SDD-CMP-OVERALL, SDD-CMP-PEP, SDD-LGC-OVERALL, SDD-LGC-PEP, SDD-ITF-PEP, SDD-SEQ-PEP-2	After integration with C3DP and PEP						

Req ID	Description	Associated Use case	Associated User Requirement	Status	Type	Priority	Assigned To	System Component(s)	Architectural/ Design Document	Architecture Design (D3.3)	Component Testing	Software Module(s)	Test Case Number	Implemented In	Verification	Users involved in testing	Additional Comments
PEP-FR-5	PEP Users and/or a PEP Client System shall be able to set the contact information of the patient needed to receive treatment intervention reminder messages.	PEP-1.3 Send care plan related treatment intervention reminders	PAR-20	Implemented	Functional	H	MEDIXINE	PEP		Native function supported by Medixine Suite product	After integration with C3DP and PEP						
PEP-FR-6	The system shall send treatment intervention reminder messages to patients according the timings defined in the patient's active care plan.	PEP-1.3 Send care plan related treatment intervention reminders	PAR-20	Proposed	Functional	H	MEDIXINE	PEP		To be addressed in D5.3	After integration with C3DP and PEP						
PEP-FR-7	The patient or another PEP user on behalf of the patient shall be able to mark a treatment intervention goal as achieved.	PEP-1.4 Flag care plan treatment interventions and the corresponding goals as achieved	None	Designed	Functional	M	MEDIXINE	PEP		SDD-CMP-OVERALL, SDD-CMP-PEP, SDD-LGC-OVERALL, SDD-LGC-PEP, SDD-ITF-PEP, SDD-SEQ-PEP-3	After integration with C3DP and PEP						
PEP-FR-8	The patient or another PEP user on behalf of the patient shall be able to mark a treatment intervention goal as not achieved.	PEP-1.5 Flag care plan treatment interventions and the corresponding goals as not achieved	None	Designed	Functional	M	MEDIXINE	PEP		SDD-CMP-OVERALL, SDD-CMP-PEP, SDD-LGC-OVERALL, SDD-LGC-PEP, SDD-ITF-PEP, SDD-SEQ-PEP-4	After integration with C3DP and PEP						
PEP-FR-9	The system shall process and store an updated care plan published by a PEP Client System in such	PEP-1.6 Update active care plan	PAR-15, PAR-16, PAR-6	Designed	Functional	H	MEDIXINE	PEP		SDD-CMP-OVERALL, SDD-CMP-PEP, SDD-LGC-OVERALL, SDD-LGC-PEP,	After integration with C3DP and PEP						

Req ID	Description	Associated Use case	Associated User Requirement	Status	Type	Priority	Assigned To	System Component(s)	Architectural/ Design Document	Architecture Design (D3.3)	Component Testing	Software Module(s)	Test Case Number	Implemented In	Verification	Users involved in testing	Additional Comments
	way that it can perform its automated duties and display the care plan to PEP Users.									SDD-ITF-PEP, SDD-SEQ-PEP-1							
PEP-FR-10	The system shall notify the patient when an updated care plan is published to the patient.	PEP-1.6 Update active care plan	PAR-15, PAR-16, PAR-6	Designed	Functional	H	MEDIXINE	PEP		SDD-CMP-OVERALL, SDD-CMP-PEP, SDD-LGC-OVERALL, SDD-LGC-PEP, SDD-ITF-PEP, SDD-SEQ-PEP-1	After integration with C3DP and PEP						
PEP-FR-11	The system shall set an active care plan as inactive when a PEP Client System notifies that the active care plan has been closed.	PEP-1.7 Mark active care plan as finished	None	Designed	Functional	H	MEDIXINE	PEP		SDD-CMP-OVERALL, SDD-CMP-PEP, SDD-LGC-OVERALL, SDD-LGC-PEP, SDD-ITF-PEP, SDD-SEQ-PEP-1	After integration with C3DP and PEP						
PEP-FR-12	The system shall support measurement device assignment to the patient when the patient care plan includes prescribed remote monitoring.	PEP-2.1 Measure and collect patient-observation data according the timings defined in care plan	PAR-35, PAR-47	Implemented	Functional	H	MEDIXINE	PEP		Native function supported by Medixine Suite product	After integration with C3DP and PEP						
PEP-FR-13	The system shall support upload of patient measurement data from connected devices.	PEP-2.1 Measure and collect patient-observation data according the timings defined in care plan	PAR-35, PAR-47	Implemented	Functional	H	MEDIXINE	PEP		Native function supported by Medixine Suite product	After integration with C3DP and PEP						
PEP-FR-14	The system shall send a notification	PEP-2.2 Complete	PAR-46	Implemented	Functional	H	MEDIXINE	PEP		Native function supported by	After integration						

Req ID	Description	Associated Use case	Associated User Requirement	Status	Type	Priority	Assigned To	System Component(s)	Architectural/ Design Document	Architecture Design (D3.3)	Component Testing	Software Module(s)	Test Case Number	Implemented In	Verification	Users involved in testing	Additional Comments
	to the patient when a prescribed questionnaire activity becomes active.	patient questionnaires according the timings defined in care plan								Medixine Suite product	with C3DP and PEP						
PEP-FR-15	The system shall send a notification to the patient if the prescribed questionnaire activity end time is reached before the activity has been completed.	PEP-2.2 Complete patient questionnaires according the timings defined in care plan	PAR-46	Implemented	Functional	H	MEDIXINE	PEP		Native function supported by Medixine Suite product	After integration with C3DP and PEP						
PEP-FR-16	The patient or another PEP User on behalf of the patient shall be able to start any time during the prescribed activity's active period to answer and complete the questionnaire.	PEP-2.2 Complete patient questionnaires according the timings defined in care plan	PAR-46	Implemented	Functional	H	MEDIXINE	PEP		Native function supported by Medixine Suite product	After integration with C3DP and PEP						
PEP-FR-17	The patient or another PEP User on behalf of the patient may interrupt and return later to complete the questionnaire.	PEP-2.2 Complete patient questionnaires according the timings defined in care plan	PAR-46	Implemented	Functional	H	MEDIXINE	PEP		Native function supported by Medixine Suite product	After integration with C3DP and PEP						
PEP-FR-18	The system shall enable the patient to send messages to health professionals.	PEP-3.1 Communicate via Safe messaging	PAR-22, PAR-23, PAR-24, PAR-41, PAR-42, PAR-43, PAR-49, PAR-50	Designed	Functional	H	MEDIXINE	PEP		SDD-CMP-OVERALL, SDD-CMP-PEP, SDD-LGC-OVERALL, SDD-LGC-PEP, SDD-ITF-PEP, SDD-SEQ-PEP-6, SDD-INF-SM	After integration with C3DP and PEP						

Req ID	Description	Associated Use case	Associated User Requirement	Status	Type	Priority	Assigned To	System Component(s)	Architectural/ Design Document	Architecture Design (D3.3)	Component Testing	Software Module(s)	Test Case Number	Implemented In	Verification	Users involved in testing	Additional Comments
PEP-FR-19	The system shall enable the health professionals to send messages to patients.	PEP-3.1 Communicate via Safe messaging	PAR-22, PAR-23, PAR-24, PAR-41,PAR-42, PAR-43, PAR-49, PAR-50	Designed	Functional	H	MEDIXINE	PEP		SDD-CMP-OVERALL, SDD-CMP-PEP, SDD-LGC-OVERALL, SDD-LGC-PEP, SDD-ITF-PEP, SDD-SEQ-PEP-6, SDD-INF-SM	After integration with C3DP and PEP						
PEP-FR-20	The system shall enable the patient and health professionals to reply to received messages and thus continue an on going conversation.	PEP-3.1 Communicate via Safe messaging	PAR-22, PAR-23, PAR-24, PAR-41, PAR-42, PAR-43, PAR-49, PAR-50	Designed	Functional	H	MEDIXINE	PEP		SDD-CMP-OVERALL, SDD-CMP-PEP, SDD-LGC-OVERALL, SDD-LGC-PEP, SDD-ITF-PEP, SDD-SEQ-PEP-6, SDD-INF-SM	After integration with C3DP and PEP						
PEP-FR-21	The system shall enable the communication between a health professional and a patients using video.	PEP-3.2 Communicate via Video appointment	PAR-51	Implemented	Functional	M	MEDIXINE	PEP		Native function supported by Medixine Suite product	After integration with C3DP and PEP						
PEP-FR-22	Health professional and/or a PEP Client System shall be able to create a future video appointment between a health professional and a patient.	PEP-3.2 Communicate via Video appointment	PAR-51	Proposed	Functional	M	MEDIXINE	PEP		To be addressed in D5.3	After integration with C3DP and PEP						
PEP-FR-23	The patient and the health professional shall be able to join the video appointment when it is due.	PEP-3.2 Communicate via Video appointment	PAR-51	Implemented	Functional	M	MEDIXINE	PEP		Native function supported by Medixine Suite product	After integration with C3DP and PEP						
PEP-FR-24	The system shall support the configuration of	PEP-5.1: Access self-	PAR-1, PAR-2, PAR-21	Implemented	Functional	M	MEDIXINE	PEP		Native function supported by	After integration						

Req ID	Description	Associated Use case	Associated User Requirement	Status	Type	Priority	Assigned To	System Component(s)	Architectural/ Design Document	Architecture Design (D3.3)	Component Testing	Software Module(s)	Test Case Number	Implemented In	Verification	Users involved in testing	Additional Comments
	links to self-management material published to patients.	management material								Medixine Suite product	with C3DP and PEP						
PEP-FR-25	Any PEP User shall be able to access the self-management material via the system.	PEP-5.1: Access self-management material	PAR-1, PAR-2, PAR-21	Implemented	Functional	M	MEDIXINE	PEP		Native function supported by Medixine Suite product	After integration with C3DP and PEP						
PEP-FR-26	The system shall support patients or PEP Users acting on behalf of the patient to subscribe to health coaching programs for the selected patient.	PEP-5.2: Manage health coaching subscriptions	PAR-52	Obsolete	Functional	M	MEDIXINE	PEP			After integration with C3DP and PEP						
PEP-FR-27	The health coaching engine shall monitor coaching program subscriptions and generate coaching messages to be delivered to a patient.	PEP-5.2: Manage health coaching subscriptions	PAR-52	Obsolete	Functional	M	MEDIXINE	PEP			After integration with C3DP and PEP						
PEP-FR-28	The system shall receive messages from the health coaching engine and deliver the messages to the patient.	PEP-5.3: Generate and deliver health coaching messages	PAR-52	Obsolete	Functional	M	MEDIXINE	PEP			After integration with C3DP and PEP						
PEP-FR-29	The system shall display sent coaching messages to PEP users.	PEP-5.3: Generate and deliver health coaching messages	PAR-52	Obsolete	Functional	M	MEDIXINE	PEP			After integration with C3DP and PEP						
PEP-FR-30	PEP Users shall be able to invite	PEP-4.4 Invite patient	PAR-17	Implemented	Functional	H	MEDIXINE	PEP		Native function supported by	After integration						

Req ID	Description	Associated Use case	Associated User Requirement	Status	Type	Priority	Assigned To	System Component(s)	Architectural/ Design Document	Architecture Design (D3.3)	Component Testing	Software Module(s)	Test Case Number	Implemented In	Verification	Users involved in testing	Additional Comments
	the patient to access the patient's own record.	to access own patient record								Medixine Suite product	with C3DP and PEP						
PEP-FR-31	PEP Users shall be able to invite an informal caregiver to access the selected patient's record.	PEP-4.7 Invite personal caregiver to access related patient's record	PAR-17	Implemented	Functional	H	MEDIXINE	PEP		Native function supported by Medixine Suite product	After integration with C3DP and PEP						
PEP-FR-32	The system shall send the patient access invitation to the invited person (patient or informal caregiver) by email.	PEP-4.4 Invite patient to access own patient record PEP-4.7 Invite personal caregiver to access related patient's record	PAR-17	Implemented	Functional	H	MEDIXINE	PEP		Native function supported by Medixine Suite product	After integration with C3DP and PEP						
PEP-FR-33	The invited person (patient or informal caregiver) shall be able to register to the C3 Cloud solution using the information contained in the invitation and an additional invitation code. The additional invitation code shall be delivered separately from the invitation email.	PEP-4.4 Invite patient to access own patient record PEP-4.7 Invite personal caregiver to access related patient's record	PAR-17	Implemented	Functional	H	MEDIXINE	PEP		Native function supported by Medixine Suite product	After integration with C3DP and PEP						

Req ID	Description	Associated Use case	Associated User Requirement	Status	Type	Priority	Assigned To	System Component(s)	Architectural/ Design Document	Architecture Design (D3.3)	Component Testing	Software Module(s)	Test Case Number	Implemented In	Verification	Users involved in testing	Additional Comments
PEP-FR-34	Any patient access user shall be able to log in to PEP System using their login credentials.	PEP-4.5 Authenticate patient access user to use PEP functionality	None	Implemented	Functional	H	MEDIXINE	PEP		Native function supported by Medixine Suite product	After integration with C3DP and PEP						
PEP-FR-35	Any health professional user shall be able to log in to PEP System using their login credentials.	PEP-4.6 Authenticate health professional user to use PEP functionality	None	Implemented	Functional	H	MEDIXINE	PEP		Native function supported by Medixine Suite product	After integration with C3DP and PEP						
PEP-FR-36	A logged in PEP User shall be able to select and open the record of any of the patient's the user is authorized to access and act on behalf of.	PEP-4.8 Access selected patient's record	None	Implemented	Functional	H	MEDIXINE	PEP		Native function supported by Medixine Suite product	After integration with C3DP and PEP						
PEP-IR-1	The care plan shall contain information needed to automatically guide, control, and monitor the execution and progress of the care plan activities and interventions.	PEP-1.1 Publish active care plan to patient PEP-1.6 Update active care plan	PAR-15, PAR-16	Proposed	Information	H	MEDIXINE	PEP		To be addressed in D7.4 and D5.3	After integration with C3DP and PEP						
PEP-IR-2	The care plan shall contain all information needed to display the care plan to PEP Users.	PEP-1.2 View active care plan	PAR-18, PAR-19	Designed	Information	H	MEDIXINE	PEP		SDD-INF-CP	After integration with C3DP and PEP						
PEP-IR-3	An updated care plan shall contain the change information	PEP-1.6 Update active care plan	PAR-15, PAR-16	Proposed	Information	H	MEDIXINE	PEP		To be addressed in D7.4 and D5.3	After integration with C3DP and PEP						

Req ID	Description	Associated Use case	Associated User Requirement	Status	Type	Priority	Assigned To	System Component(s)	Architectural/ Design Document	Architecture Design (D3.3)	Component Testing	Software Module(s)	Test Case Number	Implemented In	Verification	Users involved in testing	Additional Comments
	needed to highlight changes in updated care plan versions.																
PEP-IR-4	The care plan shall contain the information needed to schedule and generate the treatment intervention reminder messages.	PEP-1.3 Send care plan related treatment intervention reminders	PAR-20	Proposed	Information	H	MEDIXINE	PEP		To be addressed in D7.4 and D5.3	After integration with C3DP and PEP						
PEP-IR-5	The care plan information shall support the inclusion of prescribed remote monitoring information (measurement types, timings and goal/limit values).	PEP-1.1 Publish active care plan to patient PEP-1.6 Update active care plan	PAR-15, PAR-16	Proposed	Information	H	MEDIXINE	PEP		To be addressed in D7.4 and D5.3	After integration with C3DP and PEP						
PEP-IR-6	The care plan information shall support the inclusion of prescribed questionnaire activities.	PEP-1.1 Publish active care plan to patient PEP-1.6 Update active care plan	PAR-15, PAR-16	Designed	Information	H	MEDIXINE	PEP		SDD-INF-CP	After integration with C3DP and PEP						
PEP-SIR-1	All essential PEP Client System interfaces used by PEP shall support synchronous use.	All PEP Use cases	All PEP related	Designed	System Interface	H	MEDIXINE	PEP		SDD-CMP-OVERALL, SDD-CMP-PEP, SDD-LGC-OVERALL, SDD-LGC-PEP, SDD-ITF-PEP, SDD-SEQ-PEP-1	After integration with C3DP and PEP						
PEP-SIR-2	A PEP Client System shall publish the care plans in a machine	PEP-1.1 Publish active care plan to patient PEP-1.6	PAR-15, PAR-16	Designed	System Interface	H	MEDIXINE	PEP		SDD-CMP-OVERALL, SDD-CMP-PEP, SDD-LGC-OVERALL, SDD-LGC-PEP,	After integration with C3DP and PEP						

Req ID	Description	Associated Use case	Associated User Requirement	Status	Type	Priority	Assigned To	System Component(s)	Architectural/ Design Document	Architecture Design (D3.3)	Component Testing	Software Module(s)	Test Case Number	Implemented In	Verification	Users involved in testing	Additional Comments
	processable format to PEP System.	Update active care plan								SDD-ITF-PEP, SDD-SEQ-PEP-1							
PEP-SIR-3	A PEP Client System shall publish updated versions of an active care plan in a machine processable format to PEP System.	PEP-1.6 Update active care plan	PAR-15, PAR-16	Designed	System Interface	H	MEDIXINE	PEP		SDD-CMP-OVERALL, SDD-CMP-PEP, SDD-LGC-OVERALL, SDD-LGC-PEP, SDD-ITF-PEP, SDD-SEQ-PEP-1	After integration with C3DP and PEP						
PEP-SIR-4	A PEP Client System shall notify PEP System when a care plan is closed.	PEP-1.7 Mark active care plan as finished	None	Designed	System Interface	H	MEDIXINE	PEP		SDD-CMP-OVERALL, SDD-CMP-PEP, SDD-LGC-OVERALL, SDD-LGC-PEP, SDD-ITF-PEP, SDD-SEQ-PEP-1	After integration with C3DP and PEP						
PEP-SIR-5	The system shall notify PEP Client Systems when the care plan has been accessed by the patient or by an informal caregiver.	PEP-1.2 View active care plan	PAR-18, PAR-19	Designed	System Interface	H	MEDIXINE	PEP		SDD-CMP-OVERALL, SDD-CMP-PEP, SDD-LGC-OVERALL, SDD-LGC-PEP, SDD-ITF-PEP, SDD-SEQ-PEP-2	After integration with C3DP and PEP						
PEP-SIR-6	The system shall notify PEP Client Systems when a PEP User changes manually the status of a treatment intervention goal.	PEP-1.4 Flag care plan treatment interventions and the corresponding goals as achieved PEP-1.5 Flag care plan treatment interventions and the corresponding goals as not achieved	None	Designed	System Interface	M	MEDIXINE	PEP		SDD-CMP-OVERALL, SDD-CMP-PEP, SDD-LGC-OVERALL, SDD-LGC-PEP, SDD-ITF-PEP, SDD-SEQ-PEP-3, SDD-SEQ-PEP-4	After integration with C3DP and PEP						

Req ID	Description	Associated Use case	Associated User Requirement	Status	Type	Priority	Assigned To	System Component(s)	Architectural/ Design Document	Architecture Design (D3.3)	Component Testing	Software Module(s)	Test Case Number	Implemented In	Verification	Users involved in testing	Additional Comments
PEP-SIR-7	The system shall notify PEP Client Systems when a new patient observation is stored.	PEP-2.3 Notify connected systems of new and changed patient-observed data	PAR-8, PAR-34, PAR-36, PAR-37, PAR-39, PAR-48, PAR-6	Designed	System Interface	H	MEDIXINE	PEP		SDD-CMP-OVERALL, SDD-CMP-PEP, SDD-LGC-OVERALL, SDD-LGC-PEP, SDD-ITF-PEP, SDD-SEQ-PEP-5	After integration with C3DP and PEP						
PEP-SIR-8	The system shall notify PEP Client Systems when a questionnaire has been completed.	PEP-2.3 Notify connected systems of new and changed patient-observed data	PAR-8, PAR-34, PAR-36, PAR-37, PAR-39, PAR-48, PAR-6	Designed	System Interface	H	MEDIXINE	PEP		SDD-CMP-OVERALL, SDD-CMP-PEP, SDD-LGC-OVERALL, SDD-LGC-PEP, SDD-ITF-PEP, SDD-SEQ-PEP-5	After integration with C3DP and PEP						
PEP-SIR-9	The Health coaching engine shall send coaching messages via PEP System.	PEP-5.3: Generate and deliver health coaching messages	PAR-52	Obsolete	System Interface	M	MEDIXINE	PEP			After integration with C3DP and PEP						
PEP-SIR-10	A PEP Client System shall manage the care team and the health professional information in PEP System.	PEP-4.1 Manage care teams and health professionals	None	Designed	System Interface	H	MEDIXINE	PEP		SDD-CMP-OVERALL, SDD-CMP-PEP	After integration with C3DP and PEP						
PEP-SIR-11	A PEP Client System shall create a unique record in PEP System for each enrolled patient.	PEP-4.2 Create patient record for individual patient	None	Designed	System Interface	H	MEDIXINE	PEP		SDD-CMP-OVERALL, SDD-CMP-PEP, SDD-LGC-OVERALL, SDD-LGC-PEP	After integration with C3DP and PEP						
PEP-SIR-12	A PEP Client System shall manage which patients have a	PEP-4.2 Create patient record for individual patient	None	Designed	System Interface	H	MEDIXINE	PEP		SDD-CMP-OVERALL, SDD-CMP-PEP	After integration with C3DP and PEP						

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	relationship with which care teams.																
PEP-UIR-1	The system shall provide user interfaces for PEP Users to view the active, published care plan of the selected patient.	PEP-1.2 View active care plan	PAR-18, PAR-19	Proposed	User Interface	H	MEDIXINE	PEP		To be addressed in D5.3	After integration with C3DP and PEP						
PEP-UIR-2	The system shall provide user interfaces for PEP Users to manage the patient contact information.	All PEP-1.x use cases PEP-2.1 Measure and collect patient-observation data according the timings defined in care plan	PAR-15, PAR-16, PAR-18, PAR-19, PAR-20, PAR-35, PAR-47, PAR-53	Implemented	User Interface	H	MEDIXINE	PEP		Native function supported by Medixine Suite product	After integration with C3DP and PEP						
PEP-UIR-3	The system shall provide user interfaces for patient access users to access and use care plan related functionalities.	All PEP-1.x use cases	PAR-15, PAR-16, PAR-18, PAR-19, PAR-20, PAR-53	Proposed	User Interface	H	MEDIXINE	PEP		To be addressed in D5.3	After integration with C3DP and PEP						
PEP-UIR-4	The system shall provide user interfaces for PEP Users to access and manage collected data of a patient (observations and completed questionnaires).	PEP-2.1 Measure and collect patient-observation data according the timings defined in care plan PEP-2.2 Complete patient questionnaire	PAR-35, PAR-47, PAR-46	Implemented	User Interface	H	MEDIXINE	PEP		Native function supported by Medixine Suite product	After integration with C3DP and PEP						

Req ID	Description	Associated Use case	Associated User Requirement	Status	Type	Priority	Assigned To	System Component(s)	Architectural/ Design Document	Architecture Design (D3.3)	Component Testing	Software Module(s)	Test Case Number	Implemented In	Verification	Users involved in testing	Additional Comments
		s according the timings defined in care plan															
PEP-UIR-5	The system shall provide user interfaces for patient access users to communicate with health professionals.	All PEP-3.x use cases	PAR-22, PAR-23, PAR-24, PAR-41, PAR-49, PAR-50, PAR-51	Implemented	User Interface	H	MEDIXINE	PEP		Native function supported by Medixine Suite product	After integration with C3DP and PEP						
PEP-UIR-6	The system shall provide user interfaces for health professionals to communicate with patients.	All PEP-3.x use cases	PAR-22, PAR-23, PAR-24, PAR-41, PAR-49, PAR-50, PAR-51	Implemented	User Interface	H	MEDIXINE	PEP		Native function supported by Medixine Suite product	After integration with C3DP and PEP						
PEP-UIR-7	The system shall provide user interfaces for patient access users to access self-management material.	PEP-5.1: Access self-management material	PAR-1, PAR-2, PAR-21	Obsolete	User Interface	M	MEDIXINE	PEP			After integration with C3DP and PEP						
PEP-UIR-8	The system shall provide user interfaces for PEP Users to manage health coaching subscriptions and view received coaching messages.	PEP-5.2: Manage health coaching subscriptions PEP-5.3: Generate and deliver health coaching messages	PAR-52	Implemented	User Interface	M	MEDIXINE	PEP		Native function supported by Medixine Suite product	After integration with C3DP and PEP						
PEP-UIR-9	The system shall provide user interfaces to manage patient and informal caregiver access	PEP-4.4 Invite patient to access own patient record PEP-4.7	PAR-17		User Interface	H	MEDIXINE	PEP			After integration with C3DP and PEP						

Req ID	Description	Associated Use case	Associated User Requirement	Status	Type	Priority	Assigned To	System Component(s)	Architectural/ Design Document	Architecture Design (D3.3)	Component Testing	Software Module(s)	Test Case Number	Implemented In	Verification	Users involved in testing	Additional Comments
	to a patient's record.	Invite personal caregiver to access related patient's record															
PEP-UIR-10	The system shall provide user interfaces to manage health professional access to a patient's record.	PEP-4.3 Assign patient to health professional's care team	None		User Interface	M	MEDIXINE	PEP			After integration with C3DP and PEP						
PEP-NFR-1	All system functions shall respond within reasonable time.	All PEP Use cases		Proposed	Non-Functional	M	MEDIXINE	PEP		To be addressed in D5.3	After integration with C3DP and PEP						
PEP-NFR-2	All essential PEP Client System interfaces shall respond within reasonable time.	All PEP Use cases		Proposed	Non-Functional	M	MEDIXINE	PEP		To be addressed in D5.3	After integration with C3DP and PEP						
PEP-NFR-3	All system user interfaces should be designed in such manner that the system functions can be achieved with as few clicks as possible.	All PEP Use cases		Proposed	Non-Functional	M	MEDIXINE	PEP		To be addressed in D5.3	After integration with C3DP and PEP						
PEP-NFR-4	All system user interfaces should be designed in such manner that the user understands and knows what to do on each screen. All screens should include additional instructions and	All PEP Use cases		Proposed	Non-Functional	M	MEDIXINE	PEP		To be addressed in D5.3	After integration with C3DP and PEP						

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	help text whenever needed.																
PEP-NFR-5	All error messages should explain how to recover from the error and propose a fallback mechnanism.	All PEP Use cases		Proposed	Non-Functional	M	MEDIXINE	PEP		To be addressed in D5.3	After integration with C3DP and PEP						
PEP-NFR-6	The system shall not fail if an unsupported format of care plan is returned or pushed by PEP Client Systems.	All PEP Use cases		Proposed	Non-Functional	M	MEDIXINE	PEP		To be addressed in D5.3	After integration with C3DP and PEP						
PEP-NFR-7	The system shall provide a role based user access control mechanism	All PEP Use cases		Implemented	Non-Functional	H	MEDIXINE	PEP		Native function supported by Medixine Suite product	After integration with C3DP and PEP						
PEP-NFR-8	The system shall provide a log-in screen for users	All PEP Use cases		Implemented	Non-Functional	H	MEDIXINE	PEP		Native function supported by Medixine Suite product	After integration with C3DP and PEP						
PEP-NFR-9	The system shall check the authorization of users to perform the operations supported by the system.	All PEP Use cases		Implemented	Non-Functional	H	MEDIXINE	PEP		Native function supported by Medixine Suite product	After integration with C3DP and PEP						
PEP-NFR-10	All operations shall be audited.	All PEP Use cases		Implemented	Non-Functional	H	MEDIXINE	PEP		Native function supported by Medixine Suite product	After integration with C3DP and PEP						
TIS-FR-1	The system shall send queries to local care system for patient records	TIS-1: Query Patient Data	PAR-5 PAR-29 PAR-32	Designed	Functional	H	WARWICK	TIS		SDD-CMP-OVERALL, SDD-CMP-TIS, SDD-LGC-OVERALL,	After integration with local care system						

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										SDD-LGC-TIS, SDD-ITF-TIS, SDD-SEQ-TIS-1							
TIS-FR-2	The system shall send queries to local care system for clinical documents	TIS-1: Query Patient Data	PAR-5 PAR-29 PAR-32	Designed	Functional	H	WARWICK	TIS		SDD-CMP-OVERALL, SDD-CMP-TIS, SDD-LGC-OVERALL, SDD-LGC-TIS, SDD-ITF-TIS, SDD-SEQ-TIS-1	After integration with local care system						
TIS-FR-3	The system shall receive queries for patient records from PCPDP or C3DP	TIS-1: Query Patient Data	PAR-5 PAR-29 PAR-32	Designed	Functional	H	WARWICK	TIS		SDD-CMP-OVERALL, SDD-CMP-TIS, SDD-LGC-OVERALL, SDD-LGC-TIS, SDD-ITF-TIS, SDD-SEQ-TIS-1	After integration with C3DP						
TIS-FR-4	The system shall receive queries for clinical documents from PCPDP or C3DP	TIS-1: Query Patient Data	PAR-5 PAR-29 PAR-32	Designed	Functional	H	WARWICK	TIS		SDD-CMP-OVERALL, SDD-CMP-TIS, SDD-LGC-OVERALL, SDD-LGC-TIS, SDD-ITF-TIS, SDD-SEQ-TIS-1	After integration with C3DP						
TIS-FR-5	The system shall subscribe to clinical events generated by local care system	TIS-5: Push Patient Data	PAR-4 PAR-5 PAR-29 PAR-32	Designed	Functional	H	WARWICK	TIS		SDD-CMP-OVERALL, SDD-CMP-TIS, SDD-LGC-OVERALL, SDD-LGC-TIS, SDD-ITF-TIS, SDD-SEQ-TIS-5	After integration with local care system						
TIS-FR-6	The system shall receive patient records from local care system	TIS-1: Query Patient Data TIS-5: Push Patient Data	PAR-4 PAR-5 PAR-29 PAR-32	Designed	Functional	H	WARWICK	TIS		SDD-CMP-OVERALL, SDD-CMP-TIS, SDD-LGC-OVERALL, SDD-LGC-TIS, SDD-ITF-TIS, SDD-SEQ-TIS-5	After integration with local care system						
TIS-FR-7	The system shall receive clinical documents from local care system	TIS-1: Query Patient Data TIS-5: Push Patient Data	PAR-4 PAR-5 PAR-29 PAR-32	Designed	Functional	H	WARWICK	TIS		SDD-CMP-OVERALL, SDD-CMP-TIS, SDD-LGC-OVERALL,	After integration with local care system						

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										SDD-LGC-TIS, SDD-ITF-TIS, SDD-SEQ-TIS-5							
TIS-FR-8	The system shall send patient records to PCPDP or C3DP	TIS-1: Query Patient Data TIS-5: Push Patient Data	PAR-5 PAR-29 PAR-32	Designed	Functional	H	WARWICK	TIS		SDD-CMP-OVERALL, SDD-CMP-TIS, SDD-LGC-OVERALL, SDD-LGC-TIS, SDD-ITF-TIS, SDD-SEQ-TIS-1, SDD-SEQ-TIS-5, SDD-INF-DT-1, SDD-INF-DT-2, SDD-INF-AI, SDD-INF-CI, SDD-INF-CN, SDD-INF-DV, SDD-INF-DR, SDD-INF-ENC, SDD-INF-EOC, SDD-INF-FMH, SDD-INF-IMU, SDD-INF-MED, SDD-INF-MO, SDD-INF-MS, SDD-INF-OBS, SDD-INF-VS, SDD-INF-PAT, SDD-INF-PRC, SDD-INF-SPC, SDD-INF-SUB	After integration with C3DP						
TIS-FR-9	The system shall send clinical documents to PCPDP or C3DP	TIS-1: Query Patient Data TIS-5: Push Patient Data	PAR-5 PAR-29 PAR-32	Designed	Functional	H	WARWICK	TIS		SDD-CMP-OVERALL, SDD-CMP-TIS, SDD-LGC-OVERALL, SDD-LGC-TIS, SDD-ITF-TIS, SDD-SEQ-TIS-1, SDD-SEQ-TIS-5, SDD-INF-DT-1, SDD-INF-DT-2,	After integration with C3DP						

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										SDD-INF-BIN, SDD-INF-BUN, SDD-INF-CMP							
TIS-FR-10	The system shall receive care plan from PCPDP or C3DP	TIS-2: Share Care Plan	PAR-15	Designed	Functional	M	WARWICK	TIS		SDD-CMP-OVERALL, SDD-CMP-TIS, SDD-LGC-OVERALL, SDD-LGC-TIS, SDD-ITF-TIS, SDD-SEQ-TIS-2, SDD-INF-DT-1, SDD-INF-DT-2, SDD-INF-CP	After integration with C3DP						
TIS-FR-11	The system shall send care plan to local care system	TIS-2: Share Care Plan	PAR-15	Designed	Functional	M	WARWICK	TIS		SDD-CMP-OVERALL, SDD-CMP-TIS, SDD-LGC-OVERALL, SDD-LGC-TIS, SDD-ITF-TIS, SDD-SEQ-TIS-2	After integration with local care system						
TIS-FR-12	The system shall receive patient measurements from tele-monitoring device or PHR	TIS-3: Push Patient Observations	PAR-8 PAR-35 PAR-36 PAR-37 PAR-38 PAR-40 PAR-41	Obsolete	Functional	H	WARWICK	TIS		TIS will not collect tele-monitoring device measurements. PEP will collect instead.							
TIS-FR-13	The system shall send patient measurements to C3DP	TIS-3: Push Patient Observations	PAR-8 PAR-35 PAR-36 PAR-37 PAR-38 PAR-40 PAR-41	Obsolete	Functional	H	WARWICK	TIS		TIS will not collect and upload tele-monitoring device measurements. PEP will directly send C3DP.							

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TIS-FR-14	The system shall send patient measurements to PEP	TIS-3: Push Patient Observations	PAR-8 PAR-35 PAR-36 PAR-37 PAR-38 PAR-40 PAR-41	Obsolete	Functional	H	WARWICK	TIS		TIS will not collect tele-monitoring device measurements. PEP will collect directly.							
TIS-FR-15	The system shall send patient records in source format to SIS	TIS-4: Map Information Models and Terminologies	PAR-5 PAR-29 PAR-32	Designed	Functional	H	WARWICK	TIS		SDD-CMP-OVERALL, SDD-CMP-TIS, SDD-LGC-OVERALL, SDD-LGC-TIS, SDD-ITF-TIS, SDD-SEQ-TIS-1, SDD-SEQ-TIS-5	After integration with SIS						
TIS-FR-16	The system shall send clinical documents in source format to SIS	TIS-4: Map Information Models and Terminologies	PAR-5 PAR-29 PAR-32	Designed	Functional	H	WARWICK	TIS		SDD-CMP-OVERALL, SDD-CMP-TIS, SDD-LGC-OVERALL, SDD-LGC-TIS, SDD-ITF-TIS, SDD-SEQ-TIS-1, SDD-SEQ-TIS-5	After integration with SIS						
TIS-FR-17	The system shall send patient measurements in source format to SIS	TIS-4: Map Information Models and Terminologies	PAR-5 PAR-29 PAR-32	Obsolete	Functional	H	WARWICK	TIS		PEP will collect and convert tele-monitoring device measurements.							
TIS-FR-18	The system shall receive patient records in converted format from SIS	TIS-4: Map Information Models and Terminologies	PAR-5 PAR-29 PAR-32	Designed	Functional	H	WARWICK	TIS		SDD-CMP-OVERALL, SDD-CMP-TIS, SDD-LGC-OVERALL, SDD-LGC-TIS, SDD-ITF-TIS, SDD-SEQ-TIS-1, SDD-SEQ-TIS-5, SDD-INF-DT-1, SDD-INF-DT-2, SDD-INF-AI, SDD-INF-CI, SDD-INF-CN, SDD-INF-DV,	After integration with SIS						

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										SDD-INF-DR, SDD-INF-ENC, SDD-INF-EOC, SDD-INF-FMH, SDD-INF-IMU, SDD-INF-MED, SDD-INF-MO, SDD-INF-MS, SDD-INF-OBS, SDD-INF-VS, SDD-INF-PAT, SDD-INF-PRC, SDD-INF-SPC, SDD-INF-SUB							
TIS-FR-19	The system shall receive clinical documents in converted format from SIS	TIS-4: Map Information Models and Terminologies	PAR-5 PAR-29 PAR-32	Designed	Functional	H	WARWICK	TIS		SDD-CMP-OVERALL, SDD-CMP-TIS, SDD-LGC-OVERALL, SDD-LGC-TIS, SDD-ITF-TIS, SDD-SEQ-TIS-1, SDD-SEQ-TIS-5, SDD-INF-DT-1, SDD-INF-DT-2, SDD-INF-BIN, SDD-INF-BUN, SDD-INF-CMP	After integration with SIS						
TIS-FR-20	The system shall receive patient measurements in converted format from SIS	TIS-4: Map Information Models and Terminologies	PAR-5 PAR-29 PAR-32	Obsolete	Functional	H	WARWICK	TIS		PEP will convert tele-monitoring device measurements.							
TIS-IR-1	Patient records or clinical documents received from local care system shall comply with the clinical data requirements listed in Appendix III: Clinical Data Requirements	TIS-1: Query Patient Data TIS-5: Push Patient Data	PAR-5 PAR-29 PAR-32	Proposed	Information	H	WARWICK	TIS		To be addressed in D6.1							

Req ID	Description	Associated Use case	Associated User Requirement	Status	Type	Priority	Assigned To	System Component(s)	Architectural/ Design Document	Architecture Design (D3.3)	Component Testing	Software Module(s)	Test Case Number	Implemented In	Verification	Users involved in testing	Additional Comments
TIS-IR-2	Patient measurements received from tele-monitoring systems or PHR shall comply with the clinical data requirements listed in Appendix III: Clinical Data Requirements	TIS-3: Push Patient Observations	PAR-8 PAR-35 PAR-36 PAR-37 PAR-38 PAR-40 PAR-41	Obsolete	Information	H	WARWICK	TIS		Not a requirement for TIS any more.							
TIS-IR-3	The converted patient records or clinical documents received from SIS shall conform to C3-Cloud FHIR profile	TIS-1: Query Patient Data TIS-4: Map Information Models and Terminologies TIS-5: Push Patient Data	PAR-5 PAR-29 PAR-32	Proposed	Information	H	WARWICK	TIS		To be addressed in D6.1	After integration with SIS						
TIS-IR-4	The care plan received from PCPDP or C3DP shall conform to C3-Cloud FHIR profile	TIS-2: Share Care Plan	PAR-15	Proposed	Information	M	WARWICK	TIS		To be addressed in D6.1	After integration with C3DP						
TIS-SIR-1	The system shall provide FHIR-based API for PCPDP or C3DP to query and extract patient records and clinical documents	TIS-1: Query Patient Data	PAR-5 PAR-29 PAR-32	Designed	System Interface	H	WARWICK	TIS		SDD-CMP-OVERALL, SDD-CMP-TIS, SDD-LGC-OVERALL, SDD-LGC-TIS, SDD-ITF-TIS, SDD-SEQ-TIS-1	Before integration with C3DP						
TIS-SIR-2	Local care system shall provide API to query and extract patient records and clinical documents	TIS-1: Query Patient Data	PAR-5 PAR-29 PAR-32	Proposed	System Interface	H	WARWICK	TIS		To be addressed in D6.1	Before integration with local care system						

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TIS-SIR-3	Local care system shall provide API to subscribe clinical events	TIS-5: Push Patient Data	PAR-5 PAR-29 PAR-32	Proposed	System Interface	H	WARWICK	TIS		To be addressed in D6.1	Before integration with local care system						
TIS-SIR-4	Local care system shall send patient records or clinical documents when subscribed clinical events are triggered	TIS-5: Push Patient Data	PAR-5 PAR-29 PAR-32	Proposed	System Interface	H	WARWICK	TIS		To be addressed in D6.1	Before integration with local care system						
TIS-SIR-5	PCPDP or C3DP shall provide FHIR-based API to receive patient records or clinical documents	TIS-5: Push Patient Data	PAR-5 PAR-29 PAR-32	Designed	System Interface	H	WARWICK	TIS		SDD-CMP-OVERALL, SDD-CMP-TIS, SDD-LGC-OVERALL, SDD-LGC-TIS, SDD-ITF-TIS, SDD-ITF-C3DP, SDD-SEQ-TIS-5	Before integration with C3DP						
TIS-SIR-6	Tele-monitoring device or PHR shall send patient measurements at regular intervals or when pre-defined events are triggered	TIS-3: Push Patient Observations	PAR-8 PAR-35 PAR-36 PAR-37 PAR-38 PAR-40 PAR-41	Obsolete	System Interface	H	WARWICK	TIS		Patient measurements are sent to PEP directly.							
TIS-SIR-7	C3DP shall provide FHIR-based API to receive patient measurements	TIS-3: Push Patient Observations	PAR-8 PAR-35 PAR-36 PAR-37 PAR-38 PAR-40 PAR-41	Obsolete	System Interface	H	WARWICK	TIS		C3DP will provide interface to PEP to receive patient measurements							

Req ID	Description	Associated Use case	Associated User Requirement	Status	Type	Priority	Assigned To	System Component(s)	Architectural/ Design Document	Architecture Design (D3.3)	Component Testing	Software Module(s)	Test Case Number	Implemented In	Verification	Users involved in testing	Additional Comments
TIS-SIR-8	PEP shall provide FHIR-based API to receive patient measurements	TIS-3: Push Patient Observations	PAR-8 PAR-35 PAR-36 PAR-37 PAR-38 PAR-40 PAR-41	Obsolete	System Interface	H	WARWICK	TIS		PEP will not use TIS to collect patient measurements.							
TIS-SIR-9	SIS shall provide API to convert patient records or clinical documents into C3-Cloud FHIR format	TIS-4: Map Information Models and Terminologies	PAR-5 PAR-29 PAR-32	Designed	System Interface	H	WARWICK	TIS		SDD-CMP-OVERALL, SDD-CMP-TIS, SDD-CMP-SIS, SDD-LGC-OVERALL, SDD-LGC-TIS, SDD-LGC-SIS, SDD-ITF-TIS, SDD-ITF-SIS, SDD-SEQ-TIS-1, SDD-SEQ-TIS-5	Before integration with SIS						
TIS-NFR-1	The call to local care system API should return results in reasonable time (such as less than 10 sec)	TIS-1: Query Patient Data	PAR-5 PAR-29 PAR-32	Proposed	Performance	M	WARWICK	TIS		To be addressed in D6.1	After integration with local care system						
TIS-NFR-2	The call to PCPDP or C3DP API should return in reasonable time (such as less than 10 sec)	TIS-3: Push Patient Observations TIS-5: Push Patient Data	PAR-5 PAR-29 PAR-32 PAR-8 PAR-35 PAR-36 PAR-37 PAR-38 PAR-40 PAR-41	Proposed	Performance	M	WARWICK	TIS		To be addressed in D7.4	After integration with C3DP						

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TIS-NFR-3	The call to PEP API should return in reasonable time (such as less than 10 sec)	TIS-3: Push Patient Observations	PAR-8 PAR-35 PAR-36 PAR-37 PAR-38 PAR-40 PAR-41	Obsolete	Performance	M	WARWICK	TIS		No interface between TIS and PEP any more.							
TIS-NFR-4	The call to SIS API should return in reasonable time (such as less than 10 sec)	TIS-4: Map Information Models and Terminologies	PAR-5 PAR-29 PAR-32	Proposed	Performance	M	WARWICK	TIS		To be addressed in D6.2	After integration with SIS						
TIS-NFR-5	The system shall not fail if local care system fails to respond. The failure should be logged and appropriate error messages should be produced.	TIS-1: Query Patient Data TIS-2: Share Care Plan	PAR-5 PAR-29 PAR-32 PAR-15	Proposed	Reliability	H	WARWICK	TIS		To be addressed in D6.1	After integration with local care system						
TIS-NFR-6	The system shall not fail if PCPDP or C3DP fail to respond. The failure should be logged and appropriate error messages should be produced.	TIS-3: Push Patient Observations TIS-5: Push Patient Data	PAR-5 PAR-29 PAR-32 PAR-8 PAR-35 PAR-36 PAR-37 PAR-38 PAR-40 PAR-41	Proposed	Reliability	H	WARWICK	TIS		To be addressed in D6.1	After integration with C3DP						
TIS-NFR-7	The system shall not fail if PEP fails to respond. The failure should be logged and appropriate error messages should be produced.	TIS-3: Push Patient Observations	PAR-8 PAR-35 PAR-36 PAR-37 PAR-38 PAR-40 PAR-41	Obsolete	Reliability	H	WARWICK	TIS		No interface between TIS and PEP any more.							

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TIS-NFR-8	The system shall not fail if SIS fails to respond. The failure should be logged and appropriate error messages should be produced	TIS-4: Map Information Models and Terminologies	PAR-5 PAR-29 PAR-32	Proposed	Reliability	H	WARWICK	TIS		To be addressed in D6.1	After integration with SIS						
TIS-NFR-9	The Technical Interoperability Suite's Mean Time To Repair (MTTR) shall not exceed 24 hours	All TIS use cases	PAR-5 PAR-29 PAR-32 PAR-8 PAR-15	Proposed	Maintainability	M	WARWICK	TIS		To be addressed in D6.1	Tested in pilot?						
TIS-NFR-10	The system shall establish a secure communication channel when transporting patient records or clinical documents from local care system to PCPDP or C3DP	TIS-1: Query Patient Data TIS-5: Push Patient Data	PAR-5 PAR-29 PAR-32	Proposed	Security	H	WARWICK	TIS		To be addressed in D6.3	After integration with SPS, C3DP and local care system						
TIS-NFR-11	The system shall establish a secure communication channel when transporting patient care plan from PCPDP or C3DP to local care system	TIS-2: Share Care Plan	PAR-15	Proposed	Security	H	WARWICK	TIS		To be addressed in D6.3	After integration with SPS, C3DP and local care system						
TIS-NFR-12	The system shall establish a secure communication channel when transporting patient measurements from tele-monitoring device	TIS-3: Push Patient Observations	PAR-8 PAR-35 PAR-36 PAR-37 PAR-38 PAR-40 PAR-41	Obsolete	Security	H	WARWICK	TIS									

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	or PHR to PEP or C3DP																
TIS-NFR-13	The system shall establish a secure communication channel when transporting patient records or clinical documents to and from SIS	TIS-4: Map Information Models and Terminologies	PAR-5 PAR-29 PAR-32	Proposed	Security	H	WARWICK	TIS		To be addressed in D6.3	After integration with SPS and SIS						
TIS-NFR-14	All communications with local care system, tele-monitoring device or PHR, PCPDP, C3DP, PEP and SIS shall be audited	All TIS use cases	PAR-5 PAR-29 PAR-32 PAR-8 PAR-35 PAR-36 PAR-37 PAR-38 PAR-40 PAR-41 PAR-15	Obsolete	Security	M	WARWICK	TIS		Replaced by TIS-NFR-14a							

Req ID	Description	Associated Use case	Associated User Requirement	Status	Type	Priority	Assigned To	System Component(s)	Architectural/ Design Document	Architecture Design (D3.3)	Component Testing	Software Module(s)	Test Case Number	Implemented In	Verification	Users involved in testing	Additional Comments
TIS-NFR-14a	All communications with local care system, PCPDP, C3DP, and SIS shall be audited	All TIS use cases	PAR-5 PAR-29 PAR-32 PAR-8 PAR-35 PAR-36 PAR-37 PAR-38 PAR-40 PAR-41 PAR-16		Security	M	WARWICK	TIS		To be addressed in D6.3	After integration with SPS, local care system, C3DP and SIS						
SIS-FR-1	The system shall receive patient records in source format from TIS	SIS-1: Map specific input data to C3-Cloud format and codes SIS-3: Map specific input data to other specific output format and codes	PAR-5 PAR-29 PAR-32	Designed	Functional	H	INSERM	SIS		SDD-CMP-OVERALL, SDD-CMP-SIS, SDD-LGC-OVERALL, SDD-LGC-SIS, SDD-ITF-SIS, SDD-SEQ-SIS-1	After integration with TIS					Technical Partners	
SIS-FR-2	The system shall receive clinical documents in source format from TIS	SIS-1: Map specific input data to C3-Cloud format and codes SIS-3: Map specific input data to other specific output format and codes	PAR-5 PAR-29 PAR-32	Proposed	Functional	H	INSERM	SIS		SDD-CMP-OVERALL, SDD-CMP-SIS, SDD-LGC-OVERALL, SDD-LGC-SIS, SDD-ITF-SIS, SDD-SEQ-SIS-1	After integration with TIS					Technical Partners	
SIS-FR-3	The system shall receive patient measurements in source format from TIS	SIS-1: Map specific input data to C3-Cloud format and codes SIS-3: Map specific input data to other	PAR-5 PAR-29 PAR-32	Proposed	Functional	H	INSERM	SIS		SDD-CMP-OVERALL, SDD-CMP-SIS, SDD-LGC-OVERALL, SDD-LGC-SIS, SDD-ITF-SIS, SDD-SEQ-SIS-1	After integration with TIS					Technical Partners	

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		specific output format and codes															
SIS-FR-4	The system shall send patient records in converted format from TIS	SIS-2: Map C3-Cloud formatted data to specific output format and codes SIS-3: Map specific input data to other specific output format and codes	PAR-5 PAR-29 PAR-32	Proposed	Functional	H	INSERM	SIS		SDD-CMP-OVERALL, SDD-CMP-SIS, SDD-LGC-OVERALL, SDD-LGC-SIS, SDD-ITF-SIS, SDD-SEQ-SIS-1	After integration with TIS					Technical Partners	
SIS-FR-5	The system shall send clinical documents in converted format from TIS	SIS-2: Map C3-Cloud formatted data to specific output format and codes SIS-3: Map specific input data to other specific output format and codes	PAR-5 PAR-29 PAR-32	Proposed	Functional	H	INSERM	SIS		SDD-CMP-OVERALL, SDD-CMP-SIS, SDD-LGC-OVERALL, SDD-LGC-SIS, SDD-ITF-SIS, SDD-SEQ-SIS-1	After integration with TIS					Technical Partners	
SIS-FR-6	The system shall send patient measurements in converted format from TIS	SIS-2: Map C3-Cloud formatted data to specific output format and codes SIS-3: Map specific input data to other specific	PAR-5 PAR-29 PAR-32	Proposed	Functional	H	INSERM	SIS		SDD-CMP-OVERALL, SDD-CMP-SIS, SDD-LGC-OVERALL, SDD-LGC-SIS, SDD-ITF-SIS, SDD-SEQ-SIS-1	After integration with TIS					Technical Partners	

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		output format and codes															
SIS-FR-7	The system shall receive information model specifications from Administrator	SIS-5: Create mapping between specific data format and C3-cloud format SIS-6: Register new data information model	PAR-5 PAR-29 PAR-32	Proposed	Functional	H	INSERM	SIS		SDD-CMP-OVERALL, SDD-CMP-SIS, SDD-LGC-OVERALL, SDD-LGC-SIS, SDD-ITF-SIS, SDD-SEQ-SIS-4, SDD-SEQ-SIS-5	After integration with local care system					Technical Partners	
SIS-FR-8	The system shall receive terminology definitions from Administrator	SIS-5: Create mapping between specific data format and C3-cloud format SIS-6: Register new data information model	PAR-5 PAR-29 PAR-32	Proposed	Functional	H	INSERM	SIS		SDD-CMP-OVERALL, SDD-CMP-SIS, SDD-LGC-OVERALL, SDD-LGC-SIS, SDD-ITF-SIS, SDD-SEQ-SIS-4, SDD-SEQ-SIS-5	After integration with local care system					Technical Partners	
SIS-SIR-1	The system shall provide API to perform mapping query.	SIS-4: Query terminology server for mapping	PAR-5 PAR-29 PAR-32	Proposed	System Interface	H	INSERM	SIS		To be addressed in D6.2	After integration with local care system					Technical Partners	
SIS-UIR-1	The system shall provide user interfaces for Administrator for register new information model of data source.	SIS-6: Register new data information model	PAR-5 PAR-29 PAR-32	Proposed	User Interface	H	INSERM	SIS		To be addressed in D6.2	After integration with local care system					Technical Partners	
SIS-UIR-2	The system shall provide user interfaces for	SIS-5: Create mapping between	PAR-5 PAR-29 PAR-32	Proposed	User Interface	H	INSERM	SIS		To be addressed in D6.2	After integration					Technical Partners	

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	Administrator for register new terminology mapping.	specific data format and C3-cloud format									with local care system						
SIS-NFR-1	The call to SIS API should return in reasonable time	All SIS use cases.	PAR-5 PAR-29 PAR-32	Proposed	performance	H	INSERM	SIS		To be addressed in D6.2	After integration with TIS					Technical Partners	
SIS-NFR-2	The system shall not fail if a mapping is impossible to achieve. The failure should be logged and appropriate error messages should be produced.	All SIS use cases.	PAR-8 PAR-35 PAR-36 PAR-37 PAR-38 PAR-40 PAR-41	Proposed	reliability	H	INSERM	SIS		To be addressed in D6.2	After integration with SPS and TIS					Technical Partners	
SIS-NFR-3	The Semantic Interoperability Suite's Mean Time To Repair (MTTR) shall not exceed 24 hours	All SIS use cases.	PAR-5 PAR-29 PAR-32 PAR-8 PAR-15	Proposed	maintainability	H	INSERM	SIS		To be addressed in D6.2	After integration with TIS					Technical Partners	
SIS-NFR-4	The system shall establish a secure communication channel when receiving requested and transmitting output.	SIS-1: Map specific input data to C3-Cloud format and codes SIS-2: Map C3-Cloud formatted data to specific output format and codes SIS-3: Map specific input data to other specific output format and codes	PAR-4 PAR-5 PAR-29 PAR-32	Proposed	security	H	INSERM	SIS		To be addressed in D6.3	After integration with SPS and TIS					Technical Partners	

Req ID	Description	Associated Use case	Associated User Requirement	Status	Type	Priority	Assigned To	System Component(s)	Architectural/ Design Document	Architecture Design (D3.3)	Component Testing	Software Module(s)	Test Case Number	Implemented In	Verification	Users involved in testing	Additional Comments
SIS-NFR-5	All communications of SIS shall be audited	All SIS use cases.	PAR-5 PAR-29 PAR-32 PAR-8 PAR-35 PAR-36 PAR-37 PAR-38 PAR-40 PAR-41 PAR-15	Proposed	Security	H	INSERM	SIS		To be addressed in D6.3	After integration with SPS and TIS					Technical Partners	
SPS-FR-1	Whenever available, the system should integrate with the existing organisational identity provider systems (e.g. LDAP, Active Directory) and allow associated Care Team Members to continue using their regular business user accounts in C3-Cloud software components such as PCPDP and C3DP.	SPS-1: Create Care Team Member Account	PAR-57	Designed	Functional	H	SRDC	SPS		SDD-CMP-OVERALL, SDD-CMP-SPS SDD-LGC-OVERALL, SDD-LGC-SPS SDD-INF-AUN SDD-ITF-SPS SDD-SEQ-SPS-2	After integration with local identity provider systems					SRDC, Pilot sites	
SPS-FR-2	For any Care Team Member without a business user account or whose organisation's identity provider system cannot be integrated with	SPS-1: Create Care Team Member Account	PAR-57	Designed	Functional	H	SRDC	SPS		SDD-CMP-OVERALL, SDD-CMP-SPS SDD-LGC-OVERALL, SDD-LGC-SPS SDD-INF-AUN SDD-ITF-SPS SDD-SEQ-SPS-1	Before integration					SRDC	

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	C3-Cloud SPS somehow, the system shall support user account creation in the internal Identity Provider System.																
SPS-FR-3	The system shall support new user account creation with approval of both parties for enhanced security; i.e. the Care Team Member and the Administrator of the regional/institutional setting.	SPS-1: Create Care Team Member Account	PAR-57	Designed	Functional	H	SRDC	SPS		SDD-CMP-OVERALL, SDD-CMP-SPS SDD-LGC-OVERALL, SDD-LGC-SPS SDD-INF-AUN SDD-ITF-SPS SDD-SEQ-SPS-1	Before integration					SRDC	
SPS-FR-4	The system shall enable rejection of new user account creation request by the Administrator.	SPS-1: Create Care Team Member Account	PAR-57	Designed	Functional	H	SRDC	SPS		SDD-CMP-OVERALL, SDD-CMP-SPS SDD-LGC-OVERALL, SDD-LGC-SPS SDD-INF-AUN SDD-ITF-SPS SDD-SEQ-SPS-1	Before integration					SRDC	
SPS-FR-5	The system shall enable single sign-on mechanism; i.e. the users shall be able to use C3-Cloud applications by using a single account.	SPS-2: Authenticate User	PAR-57	Designed	Functional	H	SRDC	SPS		SDD-CMP-OVERALL, SDD-CMP-SPS SDD-LGC-OVERALL, SDD-LGC-SPS SDD-INF-AUN SDD-ITF-SPS SDD-SEQ-SPS-2, SDD-SEQ-SPS-3	After integration with local identity provider systems					SRDC, Pilot sites	

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SPS-FR-6	The system shall display a list of integrated identity providers on the log on page and allow the user the select his/her associated identity provider.	SPS-2: Authenticate User	PAR-57	Designed	Functional	H	SRDC	SPS		SDD-CMP-OVERALL, SDD-CMP-SPS SDD-LGC-OVERALL, SDD-LGC-SPS SDD-INF-AUN SDD-ITF-SPS SDD-SEQ-SPS-2	After integration with local identity provider systems					SRDC, Pilot sites	
SPS-FR-7	The system shall automatically forward the user to the selected identity provider's sign in page, and upon providing of the necessary credentials and authentication by the selected identity provider, the authentication response shall be forwarded to the C3-Cloud application of interest (i.e. PCPDP and C3DP) and the authenticated user be navigated to the user interface of the C3-Cloud application.	SPS-2: Authenticate User	PAR-57	Designed	Functional	H	SRDC	SPS		SDD-CMP-OVERALL, SDD-CMP-SPS SDD-LGC-OVERALL, SDD-LGC-SPS SDD-INF-AUN SDD-ITF-SPS SDD-SEQ-SPS-2	After integration with local identity provider systems					SRDC, Pilot sites	
SPS-FR-8	In case of authentication failure, the user shall be informed about the outcome appropriately.	SPS-2: Authenticate User	PAR-57	Designed	Functional	H	SRDC	SPS		SDD-CMP-OVERALL, SDD-CMP-SPS SDD-LGC-OVERALL, SDD-LGC-SPS SDD-INF-AUN SDD-ITF-SPS SDD-SEQ-SPS-2	After integration with local identity provider systems					SRDC, Pilot sites	

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SPS-FR-9	The system shall provide the Administrator with the ability to manage access control policies through the Authorisation Manager subcomponent of the SPS.	SPS-4: Manage Access Control Policies	PAR-59	Designed	Functional	H	SRDC	SPS		SDD-CMP-OVERALL, SDD-CMP-SPS SDD-LGC-OVERALL, SDD-LGC-SPS SDD-INF-ACP SDD-ITF-SPS SDD-SEQ-SPS-4	Before integration					SRDC	
SPS-FR-10	The Authorisation Manager subcomponent shall support permission definitions based on roles (e.g. nurse, GP, specialist) that can be assigned to types of resources (e.g. care plan, referral note, calendar) and operations (e.g. create, read, update, delete).	SPS-4: Manage Access Control Policies	PAR-59	Designed	Functional	H	SRDC	SPS		SDD-CMP-OVERALL, SDD-CMP-SPS SDD-LGC-OVERALL, SDD-LGC-SPS SDD-INF-ACP SDD-ITF-SPS SDD-SEQ-SPS-4	Before integration					SRDC	
SPS-FR-11	The Authorisation Manager subcomponent shall enable definition of new policies/rules or update of existing policies/rules at any time.	SPS-4: Manage Access Control Policies	PAR-59	Designed	Functional	H	SRDC	SPS		SDD-CMP-OVERALL, SDD-CMP-SPS SDD-LGC-OVERALL, SDD-LGC-SPS SDD-INF-ACP SDD-ITF-SPS SDD-SEQ-SPS-4	Before integration					SRDC	
SPS-FR-12	The Authorisation Manager subcomponent shall store machine processable	SPS-4: Manage Access Control Policies	PAR-59	Designed	Functional	H	SRDC	SPS		SDD-CMP-OVERALL, SDD-CMP-SPS SDD-LGC-OVERALL, SDD-LGC-SPS SDD-INF-ACP	Before integration					SRDC	

Req ID	Description	Associated Use case	Associated User Requirement	Status	Type	Priority	Assigned To	System Component(s)	Architectural/ Design Document	Architecture Design (D3.3)	Component Testing	Software Module(s)	Test Case Number	Implemented In	Verification	Users involved in testing	Additional Comments
	permission definitions in a repository.									SDD-ITF-SPS SDD-SEQ-SPS-4							
SPS-FR-13	When a Care Team Member tries to perform a CRUD operation on a specific resource via PCPDP or C3DP, these applications shall provide the user attributes and information about the requested resource and operation to the Authorisation Manager.	SPS-3: Authorise User	PAR-58	Designed	Functional	H	SRDC	SPS		SDD-CMP-OVERALL, SDD-CMP-SPS SDD-LGC-OVERALL, SDD-LGC-SPS SDD-INF-AUN SDD-ITF-SPS SDD-SEQ-SPS-3	After integration with C3DP					SRDC	
SPS-FR-14	PCPDP or C3DP should be able to request additional attributes of the user from the associated identity provider when necessary.	SPS-3: Authorise User	PAR-58	Designed	Functional	H	SRDC	SPS		SDD-CMP-OVERALL, SDD-CMP-SPS SDD-LGC-OVERALL, SDD-LGC-SPS SDD-INF-AUN SDD-ITF-SPS SDD-SEQ-SPS-2, SDD-SEQ-SPS-3	After integration with C3DP					SRDC	
SPS-FR-15	The Authorisation Manager acting as the Policy Decision Point shall check the user attributes and requested resource and operation against the access control policies in its	SPS-3: Authorise User	PAR-58	Designed	Functional	H	SRDC	SPS		SDD-CMP-OVERALL, SDD-CMP-SPS SDD-LGC-OVERALL, SDD-LGC-SPS SDD-INF-AUN, SDD-INF-ACP SDD-ITF-SPS SDD-SEQ-SPS-3	Before integration					SRDC	

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	repository, and shall either approve or deny the operation.																
SPS-FR-16	The system shall have an Audit Record Repository (ARR) that accepts and stores standards based audit trail records.	SPS-5: Log Audit	PAR-60	Designed	Functional	H	SRDC	SPS		SDD-CMP-OVERALL, SDD-CMP-SPS SDD-LGC-OVERALL, SDD-LGC-SPS SDD-INF-ATR SDD-ITF-SPS SDD-SEQ-SPS-5, SDD-SEQ-SPS-6	Before integration					SRDC	
SPS-FR-17	Whenever a clinical data exchange is done between a data provider system and data requestor system, each system acting as the Secure Node shall create corresponding audit trail records and send them to the ARR.	SPS-5: Log Audit	PAR-60	Designed	Functional	H	SRDC	SPS		SDD-CMP-OVERALL, SDD-CMP-SPS SDD-LGC-OVERALL, SDD-LGC-SPS SDD-INF-ATR SDD-ITF-SPS SDD-SEQ-SPS-5	After integration with C3DP, TIS, SIS, PEP, CDSM, local systems					SRDC, WARWICK, INSERM, MEDIXINE, Pilot sites	
SPS-FR-18	Audit Record Repository shall inform the Secure Node about the result of the save operation.	SPS-5: Log Audit	PAR-60	Designed	Functional	H	SRDC	SPS		SDD-CMP-OVERALL, SDD-CMP-SPS SDD-LGC-OVERALL, SDD-LGC-SPS SDD-INF-ATR SDD-ITF-SPS SDD-SEQ-SPS-5	After integration with C3DP, TIS, SIS, PEP, CDSM, local systems					SRDC, WARWICK, INSERM, MEDIXINE, Pilot sites	
SPS-IR-1	User identity data including the secrets (password,	SPS-1: Create Care Team	PAR-57	Proposed	Information	H	SRDC	SPS		To be addressed in D6.3.	Before integration					SRDC	

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	authentication/authorization tokens) shall be stored in encrypted secure storage.	Member Account															
SPS-IR-2	The authentication request, response and user attributes shall all be represented in widely recognised industrial standards such as OpenID Connect.	SPS-2: Authenticate User	None	Designed	Information	H	SRDC	SPS		SDD-CMP-OVERALL, SDD-CMP-SPS SDD-LGC-OVERALL, SDD-LGC-SPS SDD-INF-AUN SDD-ITF-SPS SDD-SEQ-SPS-2, SDD-SEQ-SPS-3	Before integration					SRDC	
SPS-IR-3	The access control policies shall be represented in widely recognised machine processable formats such as OASIS XACML and XSPA.	SPS-4: Manage Access Control Policies	None	Designed	Information	H	SRDC	SPS		SDD-CMP-OVERALL, SDD-CMP-SPS SDD-LGC-OVERALL, SDD-LGC-SPS SDD-INF-ACP SDD-ITF-SPS SDD-SEQ-SPS-4	Before integration					SRDC	
SPS-IR-4	Audit trail records shall be based on widely accepted standards and profiles such as IHE ATNA and shall at least include information on timestamp, user requesting access/update to record(s), subsystem that the user is using to access/update to record(s), operation, details	SPS-5: Log Audit	None	Designed	Information	H	SRDC	SPS		SDD-CMP-OVERALL, SDD-CMP-SPS SDD-LGC-OVERALL, SDD-LGC-SPS SDD-INF-ATR SDD-ITF-SPS SDD-SEQ-SPS-5, SDD-SEQ-SPS-6	Before integration					SRDC	

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	of query if it is a query, the identifiers(s) of the accessed/updated records.																
SPS-SIR-1	All identity providers shall provide a software interface to accept authentication requests by C3-Cloud applications, and pass back the authentication tokens and user identity attributes to client C3-Cloud systems in a secure way after authenticating the user.	SPS-2: Authenticate User	PAR-57	Proposed	System Interface	H	SRDC	SPS		To be addressed in D6.3.	Before integration with local identity provider systems					SRDC, Pilot sites	
SPS-SIR-2	The Authorisation Manager subcomponent of the SPS shall provide a software interface to receive resource access requests (user identity attributes, the resource to be accessed and the operation to be performed) for ensuring authorised access.	SPS-3: Authorise User	PAR-58	Designed	System Interface	H	SRDC	SPS		SDD-CMP-OVERALL, SDD-CMP-SPS SDD-LGC-OVERALL, SDD-LGC-SPS SDD-INF-ACP SDD-ITF-SPS SDD-SEQ-SPS-3	Before integration					SRDC	

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SPS-SIR-3	The Audit Record Repository (ARR) subcomponent of the SPS shall provide a standards-based software interface for all C3-Cloud components acting as Secure Nodes to submit their audit trail records.	SPS-5: Log Audit	PAR-60	Designed	System Interface	H	SRDC	SPS		SDD-CMP-OVERALL, SDD-CMP-SPS SDD-LGC-OVERALL, SDD-LGC-SPS SDD-INF-ATR SDD-ITF-SPS SDD-SEQ-SPS-5	Before integration					SRDC	
SPS-UIR-1	The system shall provide a sign-in interface for Care Team Members and Administrators to authenticate users into C3-Cloud applications (PCPDP, C3DP and SPS components).	SPS-2: Authenticate User	PAR-57	Designed	User Interface	H	SRDC	SPS		SDD-CMP-OVERALL, SDD-CMP-SPS SDD-LGC-OVERALL, SDD-LGC-SPS SDD-INF-AUN SDD-ITF-SPS SDD-SEQ-SPS-2	After integration with C3DP					SRDC	
SPS-UIR-2	The system shall provide a user interface for account creation for Care Team Members without a business user account or whose organisation's identity provider system cannot be integrated with C3-Cloud SPS for a reason.	SPS-1: Create Care Team Member Account	PAR-57	Designed	User Interface	H	SRDC	SPS		SDD-CMP-OVERALL, SDD-CMP-SPS SDD-LGC-OVERALL, SDD-LGC-SPS SDD-INF-AUN SDD-ITF-SPS SDD-SEQ-SPS-1	Before integration					SRDC	

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SPS-UIR-3	The system shall provide user interface on top of the Authorisation Manager for Administrators to define/update access control policies.	SPS-4: Manage Access Control Policies	PAR-59	Designed	User Interface	H	SRDC	SPS		SDD-CMP-OVERALL, SDD-CMP-SPS SDD-LGC-OVERALL, SDD-LGC-SPS SDD-INF-ACP SDD-ITF-SPS SDD-SEQ-SPS-4	Before integration					SRDC	
SPS-UIR-4	The system shall have an Audit Record Repository (ARR) User Interface for Administrators to monitor, query and filter all the audit trail records in the ARR.	SPS-5: Log Audit	PAR-60	Designed	User Interface	H	SRDC	SPS		SDD-CMP-OVERALL, SDD-CMP-SPS SDD-LGC-OVERALL, SDD-LGC-SPS SDD-INF-ATR SDD-ITF-SPS SDD-SEQ-SPS-6	Before integration					SRDC	
SPS-NFR-1	After authentication, the identity providers should pass the authentication tokens and user identity attributes to client C3-Cloud systems in a reasonable time (less than 3 seconds).	SPS-2: Authenticate User	None	Proposed	Performance	H	SRDC	SPS		To be addressed in D6.3.	After integration with local identity provider systems					SRDC, Pilot sites	
SPS-NFR-2	The policy decision making of the Authorisation Manager should be completed in a reasonable time (less than 2 seconds).	SPS-3: Authorise User	None	Proposed	Performance	H	SRDC	SPS		To be addressed in D6.3.	Before integration					SRDC	
SPS-NFR-3	The call to audit trail record submission	SPS-5: Log Audit	None	Proposed	Performance	H	SRDC	SPS		To be addressed in D6.3.	Before integration					SRDC	

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	interface of the Audit Record Repository should return in less than 2 seconds.																
SPS-NFR-4	All system user interfaces should be designed in such manner that the system functions can be achieved with as few clicks as possible.	All SPS Use Cases	None	Proposed	Usability	H	SRDC	SPS		To be addressed in D6.3.	Before integration					SRDC	
SPS-NFR-5	All screens should have a help button.	All SPS Use Cases	None	Proposed	Usability	H	SRDC	SPS		To be addressed in D6.3.	Before integration					SRDC	
SPS-NFR-6	Error messages should explain how to recover from the error and propose a fallback mechnanism.	All SPS Use Cases	None	Proposed	Usability	H	SRDC	SPS		To be addressed in D6.3.	Before integration					SRDC	
SPS-NFR-7	The system shall not fail if authentication tokens or user identity attributes are invalid or in an unsupported format; appropriate error messages should be returned and the user shall not be authenticated.	SPS-2: Authenticate User	PAR-57	Proposed	Reliability	H	SRDC	SPS		To be addressed in D6.3.	Before integration					SRDC	
SPS-NFR-8	The system shall not fail when the Authorisation Manager cannot be reached (e.g. is down); the users shall be	SPS-3: Authorise User	PAR-58	Proposed	Reliability	H	SRDC	SPS		To be addressed in D6.3.	Before integration					SRDC	

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	informed and invited to try again later.																
SPS-NFR-9	The system shall not fail if an unsupported audit trail record is tried to be submitted; appropriate error messages should be returned.	SPS-5: Log Audit	PAR-60	Proposed	Reliability	H	SRDC	SPS		To be addressed in D6.3.	Before integration					SRDC	
SPS-NFR-10	The Security and Privacy Suite's Mean Time To Repair (MTTR) shall not exceed 24 hours.	All SPS Use Cases	None	Proposed	Maintainability	H	SRDC	SPS		To be addressed in D6.3.	During pilot operation					SRDC, Pilot sites	Usability testing
SPS-NFR-11	All software interfaces shall be secured by node-to-node authentication (SSL/TLS)	SPS-5: Log Audit	PAR-60	Proposed	Security	H	SRDC	SPS		To be addressed in D6.3.	After integration with C3DP, TIS, SIS, PEP, CDSM, local systems					SRDC, WARWICK, INSERM, MEDIXINE, Pilot sites	
SPS-NFR-12	All operations (create, read, delete, update, execute) shall be audited	SPS-5: Log Audit	PAR-60	Proposed	Security	H	SRDC	SPS		To be addressed in D6.3.	After integration with C3DP, TIS, SIS, PEP, CDSM, local systems					SRDC, WARWICK, INSERM, MEDIXINE, Pilot sites	
CDSM-FR-1	The system shall allow to create a new knowledge module	CDSM-1: Create or Update Knowledge Modules	None	Designed	Functional	H	WARWICK	CDSM		SDD-CMP-OVERALL, SDD-CMP-CDSS, SDD-LGC-OVERALL, SDD-LGC-CDSS, SDD-ITF-CDSS, SDD-SEQ-CDSS-1	Before integration						

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CDSM-FR-2	The system shall allow to update an old knowledge module	CDSM-1: Create or Update Knowledge Modules	None	Designed	Functional	H	WARWICK	CDSM		SDD-CMP-OVERALL, SDD-CMP-CDSS, SDD-LGC-OVERALL, SDD-LGC-CDSS, SDD-ITF-CDSS, SDD-SEQ-CDSS-1	Before integration						
CDSM-FR-3	The system shall allow to validate a knowledge module	CDSM-2: Validate Knowledge Modules	None	Designed	Functional	H	WARWICK	CDSM		SDD-CMP-OVERALL, SDD-CMP-CDSS, SDD-LGC-OVERALL, SDD-LGC-CDSS, SDD-ITF-CDSS, SDD-SEQ-CDSS-1	Before integration						
CDSM-FR-4	The system shall list all knowledge modules	CDSM-1: Create or Update Knowledge Modules CDSM-2: Validate Knowledge Modules	None	Designed	Functional	M	WARWICK	CDSM		SDD-CMP-OVERALL, SDD-CMP-CDSS, SDD-LGC-OVERALL, SDD-LGC-CDSS, SDD-ITF-CDSS, SDD-SEQ-CDSS-1	Before integration						
CDSM-FR-5	The system shall display metadata of a knowledge module	CDSM-1: Create or Update Knowledge Modules CDSM-2: Validate Knowledge Modules	None	Designed	Functional	M	WARWICK	CDSM		SDD-CMP-OVERALL, SDD-CMP-CDSS, SDD-LGC-OVERALL, SDD-LGC-CDSS, SDD-ITF-CDSS, SDD-SEQ-CDSS-1	Before integration						

Req ID	Description	Associated Use case	Associated User Requirement	Status	Type	Priority	Assigned To	System Component(s)	Architectural/ Design Document	Architecture Design (D3.3)	Component Testing	Software Module(s)	Test Case Number	Implemented In	Verification	Users involved in testing	Additional Comments
CDSM-FR-6	The system shall evaluate patient data using a knowledge module	CDSM-3: Guideline-based Diagnosis and Treatment Suggestions CDSM-4: Polypharmacy Management CDSM-5: Risk Assessment	PAR-7 PAR-8 PAR-9 PAR-10 PAR-37 PAR-38 PAR-39 PAR-40 PAR-44 PAR-46	Designed	Functional	H	WARWICK	CDSM		SDD-CMP-OVERALL, SDD-CMP-CDSS, SDD-LGC-OVERALL, SDD-LGC-CDSS, SDD-ITF-CDSS, SDD-SEQ-CDSS-2	Before integration						
CDSM-FR-7	The system shall have knowledge modules to provide clinical guideline based diagnosis and treatment suggestions	CDSM-3: Guideline-based Diagnosis and Treatment Suggestions	PAR-7 PAR-9 PAR-10 PAR-44 PAR-46	Designed	Functional	H	WARWICK	CDSM		SDD-CMP-OVERALL, SDD-CMP-CDSS, SDD-LGC-OVERALL, SDD-LGC-CDSS, SDD-ITF-CDSS, SDD-SEQ-CDSS-2	Before integration						
CDSM-FR-8	The system shall have knowledge modules to provide polypharmacy management suggestions	CDSM-4: Polypharmacy Management	PAR-7 PAR-9	Designed	Functional	H	WARWICK	CDSM		SDD-CMP-OVERALL, SDD-CMP-CDSS, SDD-LGC-OVERALL, SDD-LGC-CDSS, SDD-ITF-CDSS, SDD-SEQ-CDSS-2	Before integration						
CDSM-FR-9	The system shall have knowledge modules to provide risk assessment	CDSM-5: Risk Assessment	PAR-8 PAR-37 PAR-38 PAR-39 PAR-40	Designed	Functional	H	WARWICK	CDSM		SDD-CMP-OVERALL, SDD-CMP-CDSS, SDD-LGC-OVERALL, SDD-LGC-CDSS, SDD-ITF-CDSS, SDD-SEQ-CDSS-2	Before integration						

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CDSM-IR-1	The patient data for CDS evaluation shall conform to C3-Cloud FHIR profile	CDSM-3: Guideline-based Diagnosis and Treatment Suggestions CDSM-4: Polypharmacy Management CDSM-5: Risk Assessment	PAR-7 PAR-8 PAR-9 PAR-10 PAR-37 PAR-38 PAR-39 PAR-40 PAR-44 PAR-46	Proposed	Information	H	WARWICK	CDSM		To be addressed in D6.1	Before integration						
CDSM-IR-2	The system shall support the clinical guidelines that will be agreed upon in Task 7.1.	CDSM-3: Guideline-based Diagnosis and Treatment Suggestions	PAR-7 PAR-9 PAR-10 PAR-44 PAR-46	Proposed	Information	H	WARWICK	CDSM		To be addressed in D7.2	Before integration						
CDSM-IR-3	The system shall support the following polypharmacy criteria: 1. Beer's list 2. FORTA 3. Drug Burden Index 4. START 5. STOPP	CDSM-4: Polypharmacy Management	PAR-7 PAR-9	Proposed	Information	H	WARWICK	CDSM		To be addressed in D7.2	Before integration						
CDSM-IR-4	The system shall support the risk assessment algorithms listed as a part of clinical guidelines that will be agreed upon in Task 7.1.	CDSM-5: Risk Assessment	PAR-8 PAR-37 PAR-38 PAR-39 PAR-40	Proposed	Information	H	WARWICK	CDSM		To be addressed in D7.2	Before integration						

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CDSM-SIR-1	The system shall provide web service API conforming to HL7 DSS standard	CDSM-3: Guideline-based Diagnosis and Treatment Suggestions CDSM-4: Polypharmacy Management CDSM-5: Risk Assessment	PAR-7 PAR-8 PAR-9 PAR-10 PAR-37 PAR-38 PAR-39 PAR-40 PAR-44 PAR-46	Obsolete	System Interface	H	WARWICK	CDSM		CDS-hooks is adopted instead							
CDSM-SIR-1a	The system shall provide web service API conforming to CDS-hooks	CDSM-3: Guideline-based Diagnosis and Treatment Suggestions CDSM-4: Polypharmacy Management CDSM-5: Risk Assessment	PAR-7 PAR-8 PAR-9 PAR-10 PAR-37 PAR-38 PAR-39 PAR-40 PAR-44 PAR-46	Designed	System Interface	H	WARWICK	CDSM		SDD-CMP-OVERALL, SDD-CMP-CDSS, SDD-ITF-CDSS	Before integration						
CDSM-UI-1	The system shall provide user interface for knowledge engineers to create or update knowledge modules	CDSM-1: Create or Update Knowledge Modules	None	Designed	User Interface	H	WARWICK	CDSM		SDD-CMP-OVERALL, SDD-CMP-CDSS, SDD-ITF-CDSS, SDD-SEQ-CDSS-1	Before integration						
CDSM-UI-2	The system shall provide user interface for care team members to validate knowledge modules	CDSM-2: Validate Knowledge Modules	None	Designed	User Interface	H	WARWICK	CDSM		SDD-CMP-OVERALL, SDD-CMP-CDSS, SDD-ITF-CDSS, SDD-SEQ-CDSS-1	Before integration						

Req ID	Description	Associated Use case	Associated User Requirement	Status	Type	Priority	Assigned To	System Component(s)	Architectural/ Design Document	Architecture Design (D3.3)	Component Testing	Software Module(s)	Test Case Number	Implemented In	Verification	Users involved in testing	Additional Comments
CDSM-NFR-1	The operations to create or update knowledge modules should return in reasonable time (such as less than 10 sec)	CDSM-1: Create or Update Knowledge Modules	None	Proposed	Performance	M	WARWICK	CDSM		To be addressed in D7.2	Before integration						
CDSM-NFR-2	The operation to list and display knowledge module metadata should return in reasonable time (such as less than 5 sec)	CDSM-1: Create or Update Knowledge Modules CDSM-2: Validate Knowledge Modules	None	Proposed	Performance	M	WARWICK	CDSM		To be addressed in D7.2	Before integration						
CDSM-NFR-3	The operation to evaluate patient using a knowledge module should return results in reasonable time (such as less than 20 sec)	CDSM-3: Guideline-based Diagnosis and Treatment Suggestions CDSM-4: Polypharmacy Management CDSM-5: Risk Assessment	PAR-7 PAR-8 PAR-9 PAR-10 PAR-37 PAR-38 PAR-39 PAR-40 PAR-44 PAR-46	Proposed	Performance	H	WARWICK	CDSM		To be addressed in D7.2	Before integration						
CDSM-NFR-4	All system user interfaces should be designed in such manner that the system functions can be achieved with as few clicks as possible.	CDSM-1: Create or Update Knowledge Modules CDSM-2: Validate Knowledge Modules	None	Proposed	Usability	M	WARWICK	CDSM		To be addressed in D7.2	Before integration						
CDSM-NFR-5	Error messages should explain how to recover	CDSM-1: Create or Update	None	Proposed	Usability	M	WARWICK	CDSM		To be addressed in D7.2	Before integration						

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	from the error and propose a fallback mechnanism.	Knowledge Modules CDSM-2: Validate Knowledge Modules															
CDSM-NFR-6	The system shall not fail if wrong knowledge modules are referenced. The failure should be logged and appropriate error messages should be produced.	CDSM-3: Guideline-based Diagnosis and Treatment Suggestions CDSM-4: Polypharmacy Management CDSM-5: Risk Assessment	PAR-7 PAR-8 PAR-9 PAR-10 PAR-37 PAR-38 PAR-39 PAR-40 PAR-44 PAR-46	Proposed	Reliability	H	WARWICK	CDSM		To be addressed in D7.2	Before integration						
CDSM-NFR-7	The system shall not fail if input patient data are invalid. The failure should be logged and appropriate error messages should be produced.	CDSM-3: Guideline-based Diagnosis and Treatment Suggestions CDSM-4: Polypharmacy Management CDSM-5: Risk Assessment	PAR-7 PAR-8 PAR-9 PAR-10 PAR-37 PAR-38 PAR-39 PAR-40 PAR-44 PAR-46	Proposed	Reliability	H	WARWICK	CDSM		To be addressed in D7.2	Before integration						

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CDSM-NFR-8	The Clinical Decision Support System's Mean Time To Repair (MTTR) shall not exceed 24 hours	All CDSM use cases	PAR-7 PAR-8 PAR-9 PAR-10 PAR-37 PAR-38 PAR-39 PAR-40 PAR-44 PAR-46	Proposed	Maintainability	M	WARWICK	CDSM		To be addressed in D7.2	Tested in pilot?						
CDSM-NFR-9	The system shall provide a login screen to knowledge engineers and care team members	CDSM-1: Create or Update Knowledge Modules CDSM-2: Validate Knowledge Modules	None	Proposed	Security	M	WARWICK	CDSM		To be addressed in D7.2	Before integration						
CDSM-NFR-10	The system shall check authorizations of knowledge engineers to create or update knowledge modules	CDSM-1: Create or Update Knowledge Modules	None	Proposed	Security	M	WARWICK	CDSM		To be addressed in D6.3	Before integration						
CDSM-NFR-11	The system shall check authorizations of care team members to validate knowledge modules	CDSM-2: Validate Knowledge Modules	None	Proposed	Security	M	WARWICK	CDSM		To be addressed in D6.3	Before integration						

Req ID	Description	Associated Use case	Associated User Requirement	Status	Type	Priority	Assigned To	System Component(s)	Architectural/ Design Document	Architecture Design (D3.3)	Component Testing	Software Module(s)	Test Case Number	Implemented In	Verification	Users involved in testing	Additional Comments
CDSM-NFR-12	All operations to create, update or validate knowledge modules and evaluate patients shall be audited	All CDSM use cases	PAR-7 PAR-8 PAR-9 PAR-10 PAR-37 PAR-38 PAR-39 PAR-40 PAR-44 PAR-46	Proposed	Security	M	WARWICK	CDSM		To be addressed in D6.3	After integration with SPS						
PCPDP-FR-1	The system shall maintain a repository of machine processable care plans	PCPDP-1: Create Care Plan	PAR-28	Designed	Functional	H	SRDC	PCPDP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-2, SDD-SEQ-PCPDP-1, SDD-SEQ-PCPDP-2, SDD-SEQ-PCPDP-3	Before integration					SRDC	
PCPDP-FR-2	PCPDP-FR-2. The system shall utilize Clinical Decision Support Modules that suggests treatment goals and interventions based on clinical guidelines to create core care plans targeting selected health concerns	PCPDP-2: Add new Care Plan from a Core Care Plan	PAR-28	Designed	Functional	H	SRDC	PCPDP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-SEQ-PCPDP-1, SDD-SEQ-PCPDP-2, SDD-SEQ-PCPDP-3, SDD-SEQ-PCPDP-4, SDD-SEQ-PCPDP-5, SDD-INF-CP	After integration with CDSM					SRDC, WARWICK	

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PCPDP-FR-3	The system shall communicate with Technical Interoperability Suite (TIS) to access clinical data of a selected Patient	PCPDP-1: Create Care Plan	PAR-28	Designed	Functional	H	SRDC	PCPDP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-3, SDD-SEQ-C3DP-12, SDD-SEQ-C3DP-13, SDD-SEQ-C3DP-14 SDD-INF-DT-1, SDD-INF-DT-2, SDD-INF-AI, SDD-INF-CI, SDD-INF-CN, SDD-INF-DV, SDD-INF-DR, SDD-INF-ENC, SDD-INF-EOC, SDD-INF-FMH, SDD-INF-IMU, SDD-INF-MED, SDD-INF-MO, SDD-INF-MS, SDD-INF-OBS, SDD-INF-VS, SDD-INF-PAT, SDD-INF-PRC, SDD-INF-SPC, SDD-INF-SUB	After integration with TIS					SRDC, WARWICK	
PCPDP-FR-4	The system shall support the capability to define a care plan from scratch	PCPDP-3: Define new Care Plan	PAR-28	Designed	Functional	H	SRDC	PCPDP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-SEQ-PCPDP-2, SDD-INF-CP	Before integration					SRDC	

Req ID	Description	Associated Use case	Associated User Requirement	Status	Type	Priority	Assigned To	System Component(s)	Architectural/ Design Document	Architecture Design (D3.3)	Component Testing	Software Module(s)	Test Case Number	Implemented In	Verification	Users involved in testing	Additional Comments
PCPDP-FR-5	The system shall support the capability to define care plans by adopting core care plans (based on the suggestions provided by clinical decision support modules)	PCPDP-2: Add new Care Plan from a Core Care Plan	PAR-28	Designed	Functional	H	SRDC	PCPDP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-SEQ-PCPDP-1, SDD-INF-CP	After integration with CDSM					SRDC, WARWICK	
PCPDP-FR-6	The system shall support selecting the targeted health concerns from patient's medical history as the target of care plan	PCPDP-1: Create Care Plan, PCPDP-4: Update Existing Care Plan	PAR-6, PAR 28	Designed	Functional	M	SRDC	PCPDP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-SEQ-PCPDP-1, SDD-SEQ-PCPDP-2, SDD-SEQ-PCPDP-3, SDD-INF-CP	After integration with TIS and SIS					SRDC, WARWICK, INSERM	
PCPDP-FR-7	The system shall support utilization of Clinical Decision Support Modules (CDSM) features to calculate risk factors for the patient that can be added as health concerns	PCPDP-1: Create Care Plan, PCPDP-4: Update Existing Care Plan	PAR-6, PAR 28	Designed	Functional	H	SRDC	PCPDP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-SEQ-PCPDP-1, SDD-SEQ-PCPDP-2, SDD-SEQ-PCPDP-3, SDD-SEQ-PCPDP-4, SDD-SEQ-PCPDP-5, SDD-INF-CP	After integration with CDSM					SRDC, WARWICK	

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PCPDP-FR-8	The system shall support editing the details of health concerns such as editing the priority for patient or for the health professional.	PCPDP-4: Update Existing Care Plan	PAR-6	Designed	Functional	M	SRDC	PCPDP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-SEQ-PCPDP-1, SDD-SEQ-PCPDP-2, SDD-SEQ-PCPDP-3, SDD-INF-CP	Before integration					SRDC	
PCPDP-FR-9	The system shall support visualization of the details of care plan templates	PCPDP-2: Add new Care Plan from a Core Care Plan	PAR-28	Designed	Functional	H	SRDC	PCPDP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-SEQ-PCPDP-1 , SDD-INF-CP	Before integration					SRDC	
PCPDP-FR-10	The system shall support the capability to personalize core care plans as care plans for a specific patient by updating the core care plan definition accordingly	PCPDP-2: Add new Care Plan from a Core Care Plan	PAR-28	Designed	Functional	H	SRDC	PCPDP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-SEQ-PCPDP-1, SDD-INF-CP	Before integration					SRDC	
PCPDP-FR-11	The system shall enable definition of a new care team	PCPDP-1: Create Care Plan	PAR-28	Designed	Functional	H	SRDC	PCPDP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-SEQ-PCPDP-2, SDD-	After integration with TIS					SRDC, WARWICK	

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										SEQ-PCPDP-3, SDD-INF-CP							
PCPDP-FR-12	The system shall enable invitation of new care team members	PCPDP-1: Create Care Plan, PCPDP-4: Update Existing Care Plan	PAR-6, PAR 28	Designed	Functional	H	SRDC	PCPDP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-SEQ-PCPDP-2, SDD-SEQ-PCPDP-3, SDD-SEQ-C3DP-2, SDD-INF-CP	After integration with TIS					SRDC, WARWICK	
PCPDP-FR-13	The system shall enable removal of care team members from the care team	PCPDP-4: Update Existing Care Plan	PAR-6	Designed	Functional	H	SRDC	PCPDP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-SEQ-C3DP-3, SDD-SEQ-PCPDP-3, SDD-INF-CP	Before integration					SRDC	
PCPDP-FR-14	The system shall inform PEP about Care Team Member updates	PCPDP-1: Create Care Plan, PCPDP-4: Update Existing Care Plan	PAR-6, PAR 28	Designed	Functional	M	SRDC	PCPDP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-SEQ-C3DP-3, SDD-SEQ-C3DP-2, SDD-INF-CP	After integration with PEP					SRDC, MEDIXINE	

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PCPDP-FR-15	The system shall support the capability to utilize the clinical decision support modules that suggest goals and interventions given a health concern to be addressed based on clinical guidelines	PCPDP-1: Create Care Plan, PCPDP-4: Update Existing Care Plan	PAR-6, PAR 28	Designed	Functional	H	SRDC	PCPDP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-SEQ-PCPDP-1, SDD-SEQ-PCPDP-2, SDD-SEQ-PCPDP-3, SDD-SEQ-PCPDP-4, SDD-SEQ-PCPDP-5	After integration with CDSM					SRDC, WARWICK	
PCPDP-FR-16	The system shall enable the definition of new goals for the care plan	PCPDP-1: Create Care Plan, PCPDP-4: Update Existing Care Plan	PAR-6, PAR 28	Designed	Functional	H	SRDC	PCPDP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-SEQ-PCPDP-1, SDD-SEQ-PCPDP-2, SDD-SEQ-PCPDP-3, SDD-INF-CP	Before integration					SRDC	
PCPDP-FR-17	The system shall enable linking care plan goals with health concerns set as the target of the care plan	PCPDP-1: Create Care Plan, PCPDP-4: Update Existing Care Plan	PAR-6, PAR 28	Designed	Functional	H	SRDC	PCPDP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-SEQ-PCPDP-1, SDD-SEQ-PCPDP-2, SDD-SEQ-PCPDP-3, SDD-INF-CP	Before integration					SRDC	

Req ID	Description	Associated Use case	Associated User Requirement	Status	Type	Priority	Assigned To	System Component(s)	Architectural/ Design Document	Architecture Design (D3.3)	Component Testing	Software Module(s)	Test Case Number	Implemented In	Verification	Users involved in testing	Additional Comments
PCPDP-FR-18	The system shall enable reviewing the details of existing goals in the care plan definition and updating them if necessary.	PCPDP-1: Create Care Plan, PCPDP-4: Update Existing Care Plan	PAR-6, PAR 28	Designed	Functional	H	SRDC	PCPDP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-SEQ-PCPDP-3, SDD-INF-CP	Before integration					SRDC	
PCPDP-FR-19	The system shall enable the definition of new interventions in the care plan	PCPDP-1: Create Care Plan, PCPDP-4: Update Existing Care Plan	PAR-6, PAR 28	Designed	Functional	H	SRDC	PCPDP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-SEQ-PCPDP-1, SDD-SEQ-PCPDP-2, SDD-SEQ-PCPDP-3, SDD-INF-CP	Before integration					SRDC	
PCPDP-FR-20	The system shall enable linking interventions with goals set as the target of the care plan	PCPDP-1: Create Care Plan, PCPDP-4: Update Existing Care Plan	PAR-6, PAR 28	Designed	Functional	H	SRDC	PCPDP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-SEQ-PCPDP-1, SDD-SEQ-PCPDP-2, SDD-SEQ-PCPDP-3, SDD-INF-CP	Before integration					SRDC	
PCPDP-FR-21	The system shall enable reviewing the status of the existing 'planned' interventions in the care plan definition, and	PCPDP-4: Update Existing Care Plan	PAR-6	Designed	Functional	H	SRDC	PCPDP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-	After integration with TIS, SIS and PEP					SRDC, WARWICK, INSERM, MEDIXINE	

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	based on the information received from the EHRs and the PHR of the patient, provide support to mark the ones that have been achieved.									1, SDD-SEQ-PCPDP-3, SDD-INF-CP							
PCPDP-FR-22	The system shall enable noting outcome observations to indicate the progress of patient to achieve these goals by linking them with the previously added goals and interventions	PCPDP-4: Update Existing Care Plan	PAR-6	Designed	Functional	H	SRDC	PCPDP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-SEQ-PCPDP-3, SDD-INF-CP	Before integration					SRDC	
PCPDP-FR-23	The system shall enable setting planned care plan review meeting dates	PCPDP-1: Create Care Plan, PCPDP-4: Update Existing Care Plan	PAR-27	Designed	Functional	H	SRDC	PCPDP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-SEQ-PCPDP-1, SDD-SEQ-PCPDP-2, SDD-SEQ-PCPDP-3, SDD-INF-CP	Before integration					SRDC	
PCPDP-FR-24	The system shall support utilization of CDSM services to review the care plan definition and the existing EHR of the patient to identify missing	PCPDP-5: Review Care Plan for Reconciliation	PAR-7	Designed	Functional	H	SRDC	PCPDP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-SEQ-	After integration with CDSM, TIS and SIS					SRDC, WARWICK, INSERM	

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	relevant interventions in the care plan given the demographics and current conditions of the patient									PCPDP-4 , SDD-INF-CP							
PCPDP-FR-25	The system shall support utilization of CDSM services to review the care plan definition and the existing EHR of the patient to identify contraindicating interventions	PCPDP-5: Review Care Plan for Reconciliation	PAR-7	Designed	Functional	H	SRDC	PCPDP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-SEQ-PCPDP-4, SDD-SEQ-PCPDP-5, SDD-INF-CP	After integration with CDSM, TIS and SIS					SRDC, WARWICK, INSERM	
PCPDP-FR-26	The system shall mark the missing missing relevant interventions and contraindicating interventions visually to present to the Care Team Member (s).	PCPDP-5: Review Care Plan for Reconciliation	PAR-7	Designed	Functional	H	SRDC	PCPDP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-SEQ-PCPDP-4, SDD-SEQ-PCPDP-5	After integration with CDSM					SRDC, WARWICK	
PCPDP-FR-27	The system shall enable utilization of C3DP and TIS functionalities to associate supportive documents (such as consultation note, progress note, diagnostic reports) with the newly updated care plan	PCPDP-4: Update Existing Care Plan	PAR-6	Designed	Functional	H	SRDC	PCPDP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-3, SDD-SEQ-C3DP-12, SDD-SEQ-C3DP-13, SDD-SEQ-C3DP-14	After integration with TIS					SRDC, WARWICK	

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PCPDP-FR-28	The system shall enable utilization of C3DP functionalities to share the defined care plan with Care Team Members including the patients via PEP	PCPDP-1: Create Care Plan, PCPDP-4: Update Existing Care Plan	PAR-14	Designed	Functional	H	SRDC	PCPDP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-ITF-C3DP-4, SDD-SEQ-PCPDP-2, SDD-SEQ-PCPDP-3, SDD-SEQ-C3DP-8, SDD-INF-CP	After integration with TIS and PEP					SRDC, WARWICK, MEDIXINE	
PCPDP-FR-29	The system shall enable utilization of C3DP functionalities to invite care team members to virtual care plan review meetings to collaboratively define, personalize, update and reconcile care plan definitions	PCPDP-1: Create Care Plan, PCPDP-4: Update Existing Care Plan	PAR-6, PAR 28	Designed	Functional	H	SRDC	PCPDP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-SEQ-PCPDP-2, SDD-SEQ-PCPDP-3	After integration with existing teleconference system(s) at pilot sites					SRDC, pilot sites	
PCPDP-FR-30	The system shall enable utilization of C3DP functionalities to initiate an asynchronous negotiation with care team members to discuss a new proposal for updating a care plan item	PCPDP-1: Create Care Plan, PCPDP-4: Update Existing Care Plan	PAR-6, PAR 28, PAR 33	Designed	Functional	H	SRDC	PCPDP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-SEQ-C3DP-6, SDD-INF-SM	Before integration					SRDC	

Req ID	Description	Associated Use case	Associated User Requirement	Status	Type	Priority	Assigned To	System Component(s)	Architectural/ Design Document	Architecture Design (D3.3)	Component Testing	Software Module(s)	Test Case Number	Implemented In	Verification	Users involved in testing	Additional Comments
PCPDP-FR-31	The system shall support the capability to share the exported care plan with local care systems via TIS functionalities	PCPDP-9: Export Care Plan	PAR-15	Designed	Functional	H	SRDC	PCPDP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-ITF-C3DP-3, SDD-SEQ-PCPDP-2, SDD-SEQ-PCPDP-3, SDD-INF-CP	After integration with TIS					SRDC, WARWICK	
PCPDP-FR-32	The system can open up multiple care plans in case of multimorbid conditions and enable the care team members to review the goals, and interventions proposed by individual care plans and to select and prioritize them.	PCPDP-6: Reconcile Care Plans for Multiple Conditions	PAR-7	Proposed	Functional	H	SRDC	PCPDP		To be addressed in D7.3	After integration with TIS					SRDC, WARWICK	
PCPDP-FR-33	The system shall support utilization of the related CDSM services to review the care plan definition and the existing EHR of the patient to identify missing relevant interventions in the integrated care plan given the demographics and current	PCPDP-6: Reconcile Care Plans for Multiple Conditions	PAR-7	Designed	Functional	H	SRDC	PCPDP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-SEQ-PCPDP-4, SDD-SEQ-PCPDP-5, SDD-INF-CP	After integration with CDSM, TIS and SIS					SRDC, WARWICK, INSERM	

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	conditions of the patient																
PCPDP-FR-34	The system shall support utilization of the related CDSM services to review the integrated care plan definition and the existing EHR of the patient to identify contraindicating interventions	PCPDP-6: Reconcile Care Plans for Multiple Conditions	PAR-7	Designed	Functional	H	SRDC	PCPDP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-SEQ-PCPDP-5, SDD-INF-CP	After integration with CDSM, TIS and SIS					SRDC, WARWICK, INSERM	
PCPDP-FR-35	The system shall mark the identified inconsistencies visually to present to the care team member (s) while reconciling multiple care plans	PCPDP-6: Reconcile Care Plans for Multiple Conditions	PAR-7	Designed	Functional	H	SRDC	PCPDP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-SEQ-PCPDP-4, SDD-SEQ-PCPDP-5	After integration with CDSM, TIS and SIS					SRDC, WARWICK, INSERM	
PCPDP-FR-36	The system shall support review of the identified problems and to resolve them by updating the care plan definition. It shall support reviewing, selecting and prioritizing health concerns, goals and interventions	PCPDP-6: Reconcile Care Plans for Multiple Conditions	PAR-7	Designed	Functional	H	SRDC	PCPDP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-SEQ-PCPDP-4, SDD-SEQ-PCPDP-5, SDD-SEQ-PCPDP-3, SDD-INF-CP	Before integration					SRDC	

Req ID	Description	Associated Use case	Associated User Requirement	Status	Type	Priority	Assigned To	System Component(s)	Architectural/ Design Document	Architecture Design (D3.3)	Component Testing	Software Module(s)	Test Case Number	Implemented In	Verification	Users involved in testing	Additional Comments
PCPDP-FR-37	The system shall enable discovery of existing plans for a patient by the authorized care team members in order to make the plan accessible for reading, reviewing and changing	PCPDP-7: Find Care Plan	None	Designed	Functional	M	SRDC	PCPDP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-SEQ-PCPDP-6, SDD-INF-CP	Before integration					SRDC	
PCPDP-FR-38	The system shall enable tagging care plan items (i.e. health concerns, goals, interventions, outcome assessments) requiring review or follow-up.	PCPDP-8: Tag Care Plan Items	None	Designed	Functional	L	SRDC	PCPDP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-SEQ-PCPDP-3, SDD-INF-CP	Before integration					SRDC	
PCPDP-FR-39	The system support export operation to create a care plan snapshot and share it as a machine processable Care Plan document	PCPDP-9: Export Care Plan	PAR-15	Designed	Functional	H	SRDC	PCPDP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-SEQ-PCPDP-9, SDD-INF-CP	i) Before integration / ii) After integration with SIS					SRDC, INSERM	
PCPDP-FR-40	The system shall support importing an existing care plan document represented in a machine processable format to the system	PCPDP-10: Import Care Plan	None	Designed	Functional	L	SRDC	PCPDP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-SEQ-PCPDP-10, SDD-INF-CP	i) Before integration / ii) After integration with SIS					SRDC, INSERM	

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PCPDP-FR-41	The system shall enable to ascertain who the lead clinician and care plan manager would be	PCPDP-1: Create Care Plan, PCPDP-4: Update Existing Care Plan	PAR-56	Designed	Functional	H	SRDC	PCPDP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-SEQ-PCPDP-2, SDD-SEQ-PCPDP-3, SDD-INF-CP	Before integration						SRDC	
PCPDP-IR-1	Care plan to be imported shall be in a machine processable format, such as C-CDA Care Plan Document template, HL7 FHIR Care Plan Resource	PCPDP-10: Import Care Plan	None	Designed	Information	L	SRDC	PCPDP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-SEQ-PCPDP-10	i) Before integration / ii) After integration with SIS						SRDC, INSERM	
PCPDP-IR-2	The system shall export the care plan snapshot in the machine processable formats supported by C3-Cloud pilot sites	PCPDP-9: Export Care Plan	PAR-15	Designed	Information	H	SRDC	PCPDP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-SEQ-PCPDP-9, SDD-INF-CP	i) Before integration / ii) After integration with SIS						SRDC, INSERM	
PCPDP-IR-3	The input and output to Clinical Decision Support Modules shall be through FHIR resources	PCPDP-5: Review Care Plan for Reconciliation,PCPDP-6: Reconcile Care Plans for Multiple Conditions	None	Proposed	Information	H	SRDC	PCPDP		To be addressed in D6.1	After integration with CDSM						SRDC, WARWICK	
PCPDP-IR-4	The patient data retrieved from TIS services shall be	§§	None	Proposed	Information	H	SRDC	PCPDP		To be addressed in D6.1	After integration with TIS						SRDC, WARWICK	

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	in the format of FHIR resources																
PCPDP-SIR-1	The CDSM services shall be accessible through a standardized API such as HL7 DSS SFM	PCPDP-5: Review Care Plan for Reconciliation,PCPDP-6: Reconcile Care Plans for Multiple Conditions	None	Proposed	System Interface	M	SRDC	PCPDP		To be addressed in D7.2	After integration with CDSM					SRDC, WARWICK	
PCPDP-SIR-2	Separate CDSM services shall be accessible for (a) calculating risk factors for the patient (b) identifying missing relevant interventions in the care plan given the demographics and current conditions of the patient (c) identifying contraindicating interventions in the care plan definition considering the poly-pharmacy indices, drug-to-drug & drug-to-condition contraindications.	PCPDP-5: Review Care Plan for Reconciliation,PCPDP-6: Reconcile Care Plans for Multiple Conditions	PAR-7, PAR-44, PAR-8, PAR-9, PAR-10, PAR-38, PAR-39, PAR-40, PAR-44, PAR-46	Proposed	System Interface	H	SRDC	PCPDP		To be addressed in D7.2	After integration with CDSM					SRDC, WARWICK	

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PCPDP-SIR-3	TIS services for retrieving patient data shall be accessible through a standardized API such as FHIR services	PCPDP-1: Create Care Plan, PCPDP-4: Update Existing Care Plan	None	Designed	System Interface	H	SRDC	PCPDP		SDD-CMP-OVERALL, SDD-CMP-TIS, SDD-LGC-OVERALL, SDD-LGC-TIS, SDD-ITF-TIS, SDD-SEQ-TIS-1 SDD-INF-DT-1, SDD-INF-DT-2, SDD-INF-AI, SDD-INF-CI, SDD-INF-CN, SDD-INF-DV, SDD-INF-DR, SDD-INF-ENC, SDD-INF-EOC, SDD-INF-FMH, SDD-INF-IMU, SDD-INF-MED, SDD-INF-MO, SDD-INF-MS, SDD-INF-OBS, SDD-INF-VS, SDD-INF-PAT, SDD-INF-PRC, SDD-INF-SPC, SDD-INF-SUB	After integration with TIS					SRDC, WARWICK	
PCPDP-SIR-4	C3DP shall provide an interface to PCPDP for inviting care team members to virtual care plan review meetings	PCPDP-1: Create Care Plan, PCPDP-4: Update Existing Care Plan	PAR-33	Designed	System Interface	H	SRDC	PCPDP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-SEQ-PCPDP-2, SDD-SEQ-PCPDP-3	After integration with existing teleconference system(s) at pilot sites					SRDC, pilot sites	
PCPDP-SIR-5	C3DP shall provide an interface to PCPDP for sharing the defined care plan	PCPDP-1: Create Care Plan, PCPDP-4: Update	PAR-14	Designed	System Interface	H	SRDC	PCPDP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP,	Before integration					SRDC	

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	with Care Team Members	Existing Care Plan								SDD-ITF-C3DP-1, SDD-SEQ-PCPDP-9							
PCPDP-SIR-6	C3DP shall provide an interface to PCPDP for retrieving patient data from local care systems	PCPDP-1: Create Care Plan, PCPDP-4: Update Existing Care Plan	PAR-5, PAR-29, PAR-32	Obsolete	System Interface	H	SRDC	PCPDP		This feature is handled directly from C3DP now.	Obselete						
PCPDP-SIR-7	C3DP shall provide an interface to PCPDP for initiating an asynchronous negotiation with Care Team Members	PCPDP-1: Create Care Plan, PCPDP-4: Update Existing Care Plan	PAR-33	Obsolete	System Interface	H	SRDC	PCPDP		This feature is handled directly from C3DP now.	Obselete						
PCPDP-SIR-8	PEP shall provide an interface to PCPDP for sharing the care plan with the patient and her informal care givers	PCPDP-1: Create Care Plan, PCPDP-4: Update Existing Care Plan	PAR-14	Designed	System Interface	H	SRDC	PCPDP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-4, SDD-SEQ-C3DP-8, SDD-INF-CP	After integration with PEP					SRDC, MEDIXINE	
PCPDP-UIR-1	The system shall provide user interfaces for authorized Care Team Members for creating, deleting and updating care plan Items i.e. health concerns, goals, interventions, outcome assessments	PCPDP-1: Create Care Plan, PCPDP-4: Update Existing Care Plan	PAR-6, PAR 28	Designed	User Interface	H	SRDC	PCPDP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-SEQ-PCPDP-2, SDD-SEQ-PCPDP-2, SDD-SEQ-PCPDP-3, SDD-INF-CP	Before integration					SRDC	

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PCPDP-UIR-2	The system shall provide menu items for importing care plans	PCPDP-10: Import Care Plan	None	Designed	User Interface	L	SRDC	PCPDP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-SEQ-PCPDP-8	Before integration					SRDC	
PCPDP-UIR-3	The system shall provide menu items for exporting care plans	PCPDP-9: Export Care Plan	PAR-15	Designed	User Interface	H	SRDC	PCPDP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-SEQ-PCPDP-7	Before integration					SRDC	
PCPDP-UIR-4	The system shall provide menu items for finding care plans for a given patient	PCPDP-7: Find Care Plan	None	Designed	User Interface	M	SRDC	PCPDP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-SEQ-PCPDP-6, SDD-INF-CP	Before integration					SRDC	
PCPDP-UIR-5	The system shall provide menu items for locating clinical guidelines for a given health concern	PCPDP-2: Add new Care Plan from a Core Care Plan	PAR-6, PAR 28	Designed	User Interface	M	SRDC	PCPDP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-SEQ-PCPDP-1, SDD-SEQ-PCPDP-2, SDD-SEQ-PCPDP-3	Before integration					SRDC	
PCPDP-NFR-1	The call to CDSM services should return a result in	PCPDP-5: Review Care Plan for	None	Proposed	Performance	H	SRDC	PCPDP		To be addressed in D7.2	After integration with CDSM					SRDC, WARWICK	

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	reasonable time (such as less then 10 sec)	Reconciliation,PCPDP-6: Reconcile Care Plans for Multiple Conditions															
PCPDP-NFR-2	The call to TIS services for retrieving patient data should return a result in reasonable time (such as less then 15 sec)	PCPDP-1: Create Care Plan, PCPDP-4: Update Existing Care Plan	None	Proposed	Performance	H	SRDC	PCPDP		To be addressed in D6.1	After integration with TIS					SRDC, WARWICK	
PCPDP-NFR-3	All system user interfaces should be designed in such manner that the system functions can be achieved with as few clicks as possible.	All PCPDP use cases	None	Proposed	Usability	H	SRDC	PCPDP		To be addressed in D7.3.	Before integration					SRDC	
PCPDP-NFR-4	All screens should have a help button.	All PCPDP use cases	None	Proposed	Usability	H	SRDC	PCPDP		To be addressed in D7.3.	Before integration					SRDC	
PCPDP-NFR-5	Error messages should explain how to recover from the error and propose a fallback mechnanism.	All PCPDP use cases	None	Proposed	Usability	H	SRDC	PCPDP		To be addressed in D7.3.	Before integration					SRDC	
PCPDP-NFR-6	The system shall not fail if an unsupported care plan format is tried to be imported, appropriate error messages should be displayed	PCPDP-10: Import Care Plan	None	Proposed	Reliability	H	SRDC	PCPDP		To be addressed in D7.3.	Before integration					SRDC	

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PCPDP-NFR-7	The system shall not fail if an unsupported format of patient data is returned by TIS, it should be saved as a non-machine processable supporting clinical data	PCPDP-1: Create Care Plan, PCPDP-4: Update Existing Care Plan	None	Proposed	Reliability	H	SRDC	PCPDP		To be addressed in D7.3.	Before integration					SRDC	
PCPDP-NFR-8	The system shall return to a stable state when care plan definition, and update operations are failed to be completed due to inappropriate user input	PCPDP-4: Update Existing Care Plan	None	Proposed	Reliability	H	SRDC	PCPDP		To be addressed in D7.3.	Before integration					SRDC	
PCPDP-NFR-9	The Personalized Care Plan Definition platform's Mean Time To Repair (MTTR) shall not exceed 24 hours	All PCPDP use cases	None	Proposed	Maintainability	H	SRDC	PCPDP		To be addressed in D7.3.	During pilot operation					SRDC, Pilot sites	Usability testing
PCPDP-NFR-10	The system shall provide a role based user access control mechanism	All PCPDP use cases	PAR-59	Designed	Security	H	SRDC	PCPDP		SDD-CMP-OVERALL, SDD-CMP-SPS SDD-LGC-OVERALL, SDD-LGC-SPS SDD-INF-AUN, SDD-INF-ACP SDD-ITF-SPS SDD-SEQ-SPS-3	After integration with SPS					SRDC	
PCPDP-NFR-11	The system shall provide a log-in screen for care team members	All PCPDP use cases	PAR-57	Designed	Security	H	SRDC	PCPDP		SDD-CMP-OVERALL, SDD-CMP-SPS SDD-LGC-OVERALL, SDD-LGC-SPS SDD-INF-AUN	After integration with SPS					SRDC	

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										SDD-ITF-SPS SDD-SEQ-SPS-2							
PCPDP-NFR-12	The system shall check the authorization of care team members to access/create/update a care plan for a specific patient	All PCPDP use cases	PAR-58	Designed	Security	H	SRDC	PCPDP		SDD-CMP-OVERALL, SDD-CMP-SPS SDD-LGC-OVERALL, SDD-LGC-SPS SDD-INF-ACP SDD-ITF-SPS SDD-SEQ-SPS-2, SDD-SEQ-SPS-3	After integration with SPS					SRDC	
PCPDP-NFR-13	All operations (such as create, delete, update of care plan items) shall be audited	All PCPDP use cases	PAR-60	Designed	Security	H	SRDC	PCPDP		SDD-CMP-OVERALL, SDD-CMP-SPS SDD-LGC-OVERALL, SDD-LGC-SPS SDD-INF-ATR SDD-ITF-SPS SDD-SEQ-SPS-5	After integration with SPS					SRDC	
C3DP-FR-1	The system shall support closing a care plan that is no longer in use and archive it	C3DP-1: Close Care Plan	None	Designed	Functional	H	SRDC	C3DP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-SEQ-C3DP-1, SDD-INF-CP	Before integration					SRDC	
C3DP-FR-2	The system shall send a notification to care team members whenever a care plan is marked as closed	C3DP-1: Close Care Plan	None	Designed	Functional	H	SRDC	C3DP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-ITF-C3DP-5, SDD-SEQ-C3DP-1,	Before integration					SRDC	

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										SDD-SEQ-C3DP-16, SDD-INF-CP, SDD-INF-SM							
C3DP-FR-3	The system shall notify PEP whenever a care plan is marked as closed	C3DP-1: Close Care Plan	None	Designed	Functional	H	SRDC	C3DP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-ITF-C3DP-4, SDD-SEQ-C3DP-1, SDD-INF-CP	After integration with PEP					SRDC, MEDIXINE	
C3DP-FR-4	The system shall enable an authorized care team member to invite another individual to a care team.	C3DP-2: Invite a Care Team Member	PAR-25, PAR-30, PAR-31	Designed	Functional	H	SRDC	C3DP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-SEQ-C3DP-2	After integration with TIS					SRDC, WARWICK	
C3DP-FR-5	The system shall prepare a communication with the details of the request to join the specific patient's care team, and send it through the channel specified.	C3DP-2: Invite a Care Team Member	PAR-25, PAR-30, PAR-31	Designed	Functional	H	SRDC	C3DP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-SEQ-C3DP-2	Before integration					SRDC	
C3DP-FR-6	The system shall provide an interface to the invitee to indicate whether s/he wants to be a part of the care team.	C3DP-2: Invite a Care Team Member	PAR-25, PAR-30, PAR-31	Designed	Functional	H	SRDC	C3DP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-	Before integration					SRDC	

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										1, SDD-SEQ-C3DP-2							
C3DP-FR-7	When the invitee accepts to be a part of the care team, the system shall provide the access details about the C3DP and PCPDP	C3DP-2: Invite a Care Team Member	PAR-25, PAR-30, PAR-31	Designed	Functional	H	SRDC	C3DP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-SEQ-C3DP-2	Before integration					SRDC	
C3DP-FR-8	The system shall notify the care team members about the new care team member added	C3DP-3: Add Care Team Member	PAR-30, PAR-31	Designed	Functional	H	SRDC	C3DP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-ITF-C3DP-5, SDD-SEQ-C3DP-2, SDD-INF-SM	Before integration					SRDC	
C3DP-FR-9	The system shall notify PEP whenever a new care team member is added	C3DP-3: Add Care Team Member	PAR-30, PAR-31	Designed	Functional	M	SRDC	C3DP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-ITF-C3DP-4, SDD-SEQ-C3DP-1, SDD-INF-SM	After integration with PEP					SRDC, MEDIXINE	
C3DP-FR-10	The system shall enable an authorized care team member to inactivate the membership of another care team member	C3DP-4: Remove Care Team Member	None	Designed	Functional	M	SRDC	C3DP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-SEQ-C3DP-3	Before integration					SRDC	

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C3DP-FR-11	The system shall notify the inactivated member about the inactivation/termination of his membership	C3DP-4: Remove Care Team Member	None	Designed	Functional	M	SRDC	C3DP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-ITF-C3DP-5, SDD-SEQ-C3DP-3, SDD-INF-SM	Before integration					SRDC	
C3DP-FR-12	The system shall notify PEP whenever a care team member's membership is inactivated/terminated	C3DP-4: Remove Care Team Member	None	Designed	Functional	M	SRDC	C3DP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-ITF-C3DP-4, SDD-SEQ-C3DP-3, SDD-INF-CP	After integration with PEP					SRDC, MEDIXINE	
C3DP-FR-13	The system shall enable the authorized care team members to explore the details of (such as contact points, specialities) of the other care team members	C3DP-5: Discover Care Team	None	Designed	Functional	M	SRDC	C3DP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-SEQ-C3DP-4, SDD-INF-CP	Before integration					SRDC	
C3DP-FR-14	The system shall enable an authorized care team member to send asynchronous messages to one or more care team member(s)	C3DP-6: Send Message to Care Team Member(s)	PAR-33	Designed	Functional	H	SRDC	C3DP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-SEQ-C3DP-SM	Before integration					SRDC	

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C3DP-FR-15	The system shall support the capability to link the messages with care plan items, when necessary by tagging them as “proposal”, “reject”, “counter proposal” or “accept”.	C3DP-6: Send Message to Care Team Member(s)	PAR-33	Designed	Functional	M	SRDC	C3DP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-SEQ-C3DP-5, SDD-INF-SM, SDD-INF-CP	Before integration					SRDC	
C3DP-FR-16	The system shall support care team members to view their messages, tag them, list them based on the tags	C3DP-7: Manage Messages	PAR-33, PAR-54, PAR-55	Designed	Functional	H	SRDC	C3DP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-SEQ-C3DP-6, SDD-INF-SM	Before integration					SRDC	
C3DP-FR-17	The system shall support care team members to list the messages s/he received from a specific Care Team/ Care Team Member	C3DP-7: Manage Messages	PAR-33	Designed	Functional	H	SRDC	C3DP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-SEQ-C3DP-6, SDD-INF-SM	Before integration					SRDC	
C3DP-FR-18	The system shall support care team members to list the messages s/he received from a specific Patient/Informal Care Giver	C3DP-7: Manage Messages	PAR-33	Designed	Functional	H	SRDC	C3DP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-SEQ-C3DP-6, SDD-INF-SM	Before integration					SRDC	

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C3DP-FR-19	The system shall support care team members to list the messages s/he received related with a specific patient	C3DP-7: Manage Messages	PAR-33	Designed	Functional	H	SRDC	C3DP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-SEQ-C3DP-6, SDD-INF-SM	Before integration					SRDC	
C3DP-FR-20	The system shall support care team members to list the messages sent by the C3DP system as notifications (which are automatically tagged as “System Notifications”) such as “New Care Team Member Invitation”, “Update in the Shared Care Plan”, “New Shared Care Plan”, “Reminder for Care Plan Interventions to be carried out”	C3DP-7: Manage Messages	PAR-33, PAR-54, PAR-55	Designed	Functional	H	SRDC	C3DP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-SEQ-C3DP-6, SDD-INF-SM	Before integration					SRDC	
C3DP-FR-21	The system shall support care team members to send an invitation to organize a joint virtual Care Plan Review Meeting	C3DP-8: Invite Care Team Members to a Virtual Care Review Meeting	PAR-33	Designed	Functional	H	SRDC	C3DP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-ITF-	After integration with existing teleconference system(s) at pilot sites					SRDC, pilot sites	

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										C3DP-5, SDD-SEQ-C3DP-7							
C3DP-FR-22	The system shall provide an interface to invited care team members to accept/reject virtual care plan review meeting invitations	C3DP-8: Invite Care Team Members to a Virtual Care Review Meeting	PAR-33	Designed	Functional	H	SRDC	C3DP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-SEQ-C3DP-7	After integration with existing teleconference system(s) at pilot sites					SRDC, pilot sites	
C3DP-FR-23	The system shall support organizing virtual care plan review meetings where an audio connection is established and where care team members follow the updates performed by an editor via web based PCPDP tool	C3DP-9: Organize Virtual Care Review Meeting	PAR-33	Designed	Functional	H	SRDC	C3DP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-SEQ-C3DP-7	After integration with existing teleconference system(s) at pilot sites					SRDC, pilot sites	
C3DP-FR-24	The system shall notify care team members whenever a new care plan is defined or an existing care plan is updated by making the care plan available via C3DP along with all the supporting clinical documents (if any)	C3DP-10: Share Care Plan with Care Team Members	PAR-14, PAR-45	Designed	Functional	H	SRDC	C3DP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-ITF-C3DP-5, SDD-SEQ-PCPDP-1, SDD-SEQ-PCPDP-2, SDD-SEQ-PCPDP-3,	Before integration					SRDC	

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										SDD-SEQ-C3DP-16, SDD-INF-SM							
C3DP-FR-25	The system shall notify PEP that a new care plan is defined or an existing care plan is updated	C3DP-10: Share Care Plan with Care Team Members	PAR-14	Designed	Functional	H	SRDC	C3DP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-ITF-C3DP-4, SDD-SEQ-PCPDP-1, SDD-SEQ-PCPDP-2, SDD-SEQ-PCPDP-3, SDD-INF-CP	After integration with PEP					SRDC, MEDIXINE	
C3DP-FR-26	The system shall provide an interface to capture the patient made observations/assessments from PEP. These include readings from personal medical devices, results of assessment scales and instruments (e.g. for activities of daily living), results of forms or questionnaires as instructed by the care plan, or notes from the	C3DP-11: Record Patient Observations	PAR-8, PAR-35, PAR-37, PAR-38, PAR-39, PAR-40, PAR-41, PAR-49	Designed	Functional	H	SRDC	C3DP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-ITF-C3DP-4, SDD-SEQ-C3DP-9, SDD-SEQ-C3DP-10, SDD-SEQ-C3DP-11, , SDD-INF-DVO, SDD-INF-QR, SDD-INF-PFO	After integration with PEP					SRDC, MEDIXINE	

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	patients about the realization of the interventions needed to be carried out by the patient or about the patient set goals.																
C3DP-FR-27	Whenever a new patient recorded data is received from the PEP, the system shall check care team members' subscriptions to receive notifications about these events and if necessary shall send system notifications via messaging platform	C3DP-11: Record Patient Observations	PAR-8, PAR-35, PAR-37, PAR-38, PAR-39, PAR-40, PAR-41, PAR-49	Designed	Functional	H	SRDC	C3DP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-ITF-C3DP-4, SDD-ITF-C3DP-5, SDD-SEQ-PCPDP-1, SDD-SEQ-PCPDP-2, SDD-SEQ-PCPDP-3, SDD-SEQ-C3DP-16, SDD-SEQ-C3DP-9, SDD-SEQ-C3DP-10, SDD-SEQ-C3DP-11, SDD-INF-SM	After integration with PEP					SRDC, MEDIXINE	
C3DP-FR-28	The system shall support manually importing clinical documents of the patients in to the system and associating them with the active care plan	C3DP-12: Associate Supportive Content	PAR-5, PAR-29, PAR-32	Designed	Functional	H	SRDC	C3DP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-ITF-C3DP-4, SDD-ITF-C3DP-3,	Before integration					SRDC	

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										SDD-SEQ-C3DP-13, SDD-INF-CP							
C3DP-FR-29	Upon manual import of clinical documents, the system shall utilize TIS features to mediate the unsupported clinical document formats in to the formats supported by C3DP	C3DP-12: Associate Supportive Content	PAR-5, PAR-29, PAR-32	Designed	Functional	H	SRDC	C3DP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-ITF-C3DP-4, SDD-ITF-C3DP-3, SDD-SEQ-C3DP-13, SDD-SEQ-SIS-1 SDD-INF-DT-1, SDD-INF-DT-2, SDD-INF-AI, SDD-INF-CI, SDD-INF-CN, SDD-INF-DV, SDD-INF-DR, SDD-INF-ENC, SDD-INF-EOC, SDD-INF-FMH, SDD-INF-IMU, SDD-INF-MED, SDD-INF-MO, SDD-INF-MS, SDD-INF-OBS, SDD-INF-VS, SDD-INF-PAT, SDD-INF-PRC, SDD-INF-SPC, SDD-INF-SUB SDD-INF-BIN, SDD-INF-BUN, SDD-INF-CMP	After integration with TIS					SRDC	

Req ID	Description	Associated Use case	Associated User Requirement	Status	Type	Priority	Assigned To	System Component(s)	Architectural/ Design Document	Architecture Design (D3.3)	Component Testing	Software Module(s)	Test Case Number	Implemented In	Verification	Users involved in testing	Additional Comments
C3DP-FR-30	The system shall support the capability to manually initiate the retrieval of patient data from local care systems by utilizing TIS services in pull mode	C3DP-12: Associate Supportive Content	PAR-5, PAR-29, PAR-32	Designed	Functional	H	SRDC	C3DP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-ITF-C3DP-4, SDD-ITF-C3DP-3, SDD-SEQ-C3DP-14, SDD-SEQ-TIS-1 SDD-INF-DT-1, SDD-INF-DT-2, SDD-INF-AI, SDD-INF-CI, SDD-INF-CN, SDD-INF-DV, SDD-INF-DR, SDD-INF-ENC, SDD-INF-EOC, SDD-INF-FMH, SDD-INF-IMU, SDD-INF-MED, SDD-INF-MO, SDD-INF-MS, SDD-INF-OBS, SDD-INF-VS, SDD-INF-PAT, SDD-INF-PRC, SDD-INF-SPC, SDD-INF-SUB	After integration with TIS					SRDC	

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C3DP-FR-31	The system shall provide an interface to accept the patient data from local care systems via TIS services in push mode	C3DP-12: Associate Supportive Content	PAR-5, PAR-29, PAR-32	Designed	Functional	M	SRDC	C3DP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-ITF-C3DP-4, SDD-ITF-C3DP-3, SDD-SEQ-C3DP-12, SDD-SEQ-TIS-3 SDD-INF-DT-1, SDD-INF-DT-2, SDD-INF-AI, SDD-INF-CI, SDD-INF-CN, SDD-INF-DV, SDD-INF-DR, SDD-INF-ENC, SDD-INF-EOC, SDD-INF-FMH, SDD-INF-IMU, SDD-INF-MED, SDD-INF-MO, SDD-INF-MS, SDD-INF-OBS, SDD-INF-VS, SDD-INF-PAT, SDD-INF-PRC, SDD-INF-SPC, SDD-INF-SUB	After integration with TIS					SRDC	

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C3DP-FR-32	Whenever new patient data is retrieved from local care systems or from PEP, the system shall invoke CDSM services to check for inconsistencies in the care plan, missing, duplicate or contradictory treatment interventions or new risks and notify care team.	C3DP-12: Associate Supportive Content	PAR-5, PAR-8	Proposed	Functional	H	SRDC	C3DP		To be further addressed in D7.3 and 7.4	After integration with CDSM, TIS and PEP					SRDC, WARWICK, MEDIXINE	
C3DP-FR-33	As a result of the notifications received upon the retrieval of new patient data and execution of CDSM services, the system shall provide the capability to update the care plan via the PCPDP	C3DP-12: Associate Supportive Content, PCPDP-4: Update Existing Care Plan	PAR-5, PAR-8, PAR-41	Designed	Functional	H	SRDC	C3DP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-ITF-C3DP-5, SDD-ITF-C3DP-3, SDD-SEQ-PCPDP-3, SDD-INF-CP	After integration with CDSM					SRDC, WARWICK	
C3DP-FR-34	The system shall provide mechanisms to subscribe to events in the lifetime of care plan execution (predefined set of events corresponding to changes in the care plan, associated patient	C3DP-13: Monitor Change	PAR-37, PAR-38, PAR-39, PAR-40, PAR-41	Designed	Functional	H	SRDC	C3DP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-ITF-C3DP-5, SDD-ITF-C3DP-3, SDD-SEQ-C3DP-15, SDD-INF-CP	After integration with TIS and PEP					SRDC, WARWICK, MEDIXINE	

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	data from local care systems and PEP, and patient feedback)																
C3DP-FR-35	Whenever a subscribed event is detected by the system, the system shall send notifications about these events via messaging platform	C3DP-13: Monitor Change	PAR-37, PAR-38, PAR-39, PAR-40, PAR-41	Designed	Functional	H	SRDC	C3DP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-ITF-C3DP-5, SDD-ITF-C3DP-3, SDD-SEQ-C3DP-16, SDD-INF-SM	Before integration					SRDC	
C3DP-FR-36	Whenever a subscribed event is detected by the system, if the patient needs to be notified, the system shall send notifications about these events to PEP to be delivered to the patient	C3DP-13: Monitor Change	PAR-37, PAR-38, PAR-39, PAR-40, PAR-41	Designed	Functional	H	SRDC	C3DP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-ITF-C3DP-4, SDD-ITF-C3DP-5, SDD-ITF-C3DP-3, SDD-SEQ-C3DP-16, SDD-SEQ-C3DP-5, SDD-INF-SM	After integration with PEP					SRDC, MEDIXINE	

Req ID	Description	Associated Use case	Associated User Requirement	Status	Type	Priority	Assigned To	System Component(s)	Architectural/ Design Document	Architecture Design (D3.3)	Component Testing	Software Module(s)	Test Case Number	Implemented In	Verification	Users involved in testing	Additional Comments
C3DP-FR-37	The system shall provide a dashboard through which the authorized care team members can see/monitor the activities carried out during the care delivery process for a selected patient; see the previous care plans defined/updated for the patient, patient encounters during the life time of the multi-disciplinary care delivery process, the clinical documents/patient data created in this process such as transfer of care summary, discharge summary, referral note; see a brief overview of the patient's medical summary including recent encounters, lab results, conditions, vital sign measurements, risk assessment results, patient reported data and	C3DP-14: Care Plan Dashboard	PAR-3, PAR-6, PAR-26, PAR-35 , PAR-49	Designed	Functional	H	SRDC	C3DP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-SEQ-C3DP-17, SDD-INF-CP SDD-INF-DT-1, SDD-INF-DT-2, SDD-INF-AI, SDD-INF-CI, SDD-INF-CN, SDD-INF-DV, SDD-INF-DR, SDD-INF-ENC, SDD-INF-EOC, SDD-INF-FMH, SDD-INF-IMU, SDD-INF-MED, SDD-INF-MO, SDD-INF-MS, SDD-INF-OBS, SDD-INF-VS, SDD-INF-PAT, SDD-INF-PRC, SDD-INF-SPC, SDD-INF-SUB	After integration with TIS and PEP					SRDC, WARWICK, MEDIXINE	

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	feedback from PEP.																
C3DP-FR-38	The system shall clearly mark the responsible editors of different sections of care plan	C3DP-14: Care Plan Dashboard	PAR-11	Designed	Functional	H	SRDC	C3DP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-SEQ-PCPDP-1, SDD-SEQ-PCPDP-2, SDD-SEQ-PCPDP-3, SDD-INF-CP	Before integration					SRDC	
C3DP-FR-39	The system shall provide access to educational materials for care team members based on their roles and needs via web based interfaces	C3DP-15: Access Educational Material	PAR-34	Designed	Functional	H	SRDC	C3DP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-SEQ-C3DP-18, SDD-INF-CP	Before integration / After acquiring educational materials					SRDC, SWFT	
C3DP-IR-1	The patient data retrieved from TIS services shall be	C3DP-12: Associate Supportive Content	None	Designed	Information	H	SRDC	C3DP		SDD-CMP-OVERALL, SDD-CMP-TIS, SDD-LGC-OVERALL,	After integration with TIS					SRDC, WARWICK	

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	in the format of FHIR resources									SDD-LGC-TIS, SDD-ITF-TIS, SDD-SEQ-TIS-1							
C3DP-IR-2	The patient reported observations to be retrieved from PEP shall be in the format of FHIR resources	C3DP-11: Record Patient Observations	None	Designed	Information	H	SRDC	C3DP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-ITF-C3DP-4, SDD-SEQ-C3DP-9, SDD-SEQ-C3DP-10, SDD-SEQ-C3DP-11, SDD-ITF-C3DP-4, SDD-INF-PFO SDD-INF-DVO SDD-INF-QR	After integration with PEP					SRDC, MEDIXINE	
C3DP-IR-3	The input and output to Clinical Decision Support Modules shall be through FHIR resources	C3DP-11: Record Patient Observations, C3DP-12: Associate Supportive Content	None	Proposed	Information	H	SRDC	C3DP		To be addressed in D7.2	After integration with CDSM					SRDC, WARWICK	
C3DP-SIR-1	The CDSM services shall be accessible through a standardized API such as HL7 DSS SFM	C3DP-11: Record Patient Observations, C3DP-12: Associate Supportive Content	None	Proposed	System Interface	M	SRDC	C3DP		To be addressed in D7.2	After integration with CDSM					SRDC, WARWICK	

Req ID	Description	Associated Use case	Associated User Requirement	Status	Type	Priority	Assigned To	System Component(s)	Architectural/ Design Document	Architecture Design (D3.3)	Component Testing	Software Module(s)	Test Case Number	Implemented In	Verification	Users involved in testing	Additional Comments
C3DP-SIR-2	Separate CDSM services shall be accessible for (a) calculating risk factors for the patient (b) identifying missing relevant interventions in the care plan given the demographics and current conditions of the patient (c) identifying contraindicating interventions in the care plan definition considering the poly-pharmacy indices, drug-to-drug & drug-to-condition contraindications.	C3DP-11: Record Patient Observations, C3DP-12: Associate Supportive Content	PAR-7, PAR-44, PAR-8, PAR-9, PAR-10, PAR-38, PAR-39, PAR-40, PAR-44, PAR-46	Proposed	System Interface	H	SRDC	C3DP		To be addressed in D7.2	After integration with CDSM					SRDC, WARWICK	
C3DP-SIR-3	TIS services for retrieving patient data shall be accessible through a standardized API such as FHIR services	C3DP-12: Associate Supportive Content	None	Designed	System Interface	H	SRDC	C3DP		SDD-CMP-OVERALL, SDD-CMP-TIS, SDD-LGC-OVERALL, SDD-LGC-TIS, SDD-ITF-TIS, SDD-SEQ-TIS-1 SDD-INF-DT-1, SDD-INF-DT-2, SDD-INF-AI, SDD-INF-CI, SDD-INF-CN, SDD-INF-DV, SDD-INF-DR, SDD-INF-ENC, SDD-INF-EOC, SDD-INF-FMH,	After integration with TIS					SRDC, WARWICK	

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										SDD-INF-IMU, SDD-INF-MED, SDD-INF-MO, SDD-INF-MS, SDD-INF-OBS, SDD-INF-VS, SDD-INF-PAT, SDD-INF-PRC, SDD-INF-SPC, SDD-INF-SUB SDD-INF-BIN, SDD-INF-BUN, SDD-INF-CMP							
C3DP-SIR-4	C3DP shall provide an interface to TIS to receive patient data in push mode from local care systems as FHIR resources	C3DP-12: Associate Supportive Content	None	Designed	System Interface	H	SRDC	C3DP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-ITF-C3DP-4, SDD-SEQ-TIS-3, SDD-SEQ-C3DP-12 SDD-INF-DT-1, SDD-INF-DT-2, SDD-INF-AI, SDD-INF-CI, SDD-INF-CN, SDD-INF-DV, SDD-INF-DR, SDD-INF-ENC, SDD-INF-EOC, SDD-INF-FMH, SDD-INF-IMU, SDD-INF-MED, SDD-INF-MO, SDD-INF-MS, SDD-INF-OBS, SDD-INF-VS, SDD-INF-PAT, SDD-INF-PRC,	After integration with TIS					SRDC, WARWICK	

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										SDD-INF-SPC, SDD-INF-SUB							
C3DP-SIR-5	C3DP shall provide interfaces to PEP to receive patient recorded data as FHIR resources	C3DP-11: Record Patient Observations	None	Designed	System Interface	H	SRDC	C3DP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-ITF-C3DP-4, SDD-SEQ-C3DP-9, SDD-SEQ-C3DP-10, SDD-SEQ-C3DP-11, SDD-ITF-C3DP-4, SDD-INF-PFO, SDD-INF-DVO, SDD-INF-QR	After integration with PEP					SRDC, MEDIXINE	
C3DP-SIR-6	PEP shall provide an interface to receive notifications about new/updated/closed care plans	C3DP-10: Share Care Plan with Care Team Members	PAR-14	Designed	System Interface	H	SRDC	C3DP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-ITF-C3DP-4, SDD-SEQ-PCPDP-1, SDD-SEQ-PCPDP-2, SDD-	After integration with PEP					SRDC, MEDIXINE	

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										SEQ-PCPDP-3, SDD-SEQ-C3DP-1, SDD-INF-CP							
C3DP-SIR-7	PEP shall provide an interface to receive notifications about new/updated/terminated care team members	C3DP-3: Add Care Team Member, C3DP-4: Remove Care Team Member	PAR-12 PAR-13 PAR-16	Designed	System Interface	H	SRDC	C3DP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-ITF-C3DP-4, SDD-SEQ-PCPDP-1, SDD-SEQ-PCPDP-2, SDD-SEQ-PCPDP-3, SDD-SEQ-C3DP-2, SDD-SEQ-C3DP-3, SDD-INF-CP	After integration with PEP					SRDC, MEDIXINE	
C3DP-UIR-1	The system shall provide user interfaces for authorized Care Team Members for managing messages from care team members	C3DP-7: Manage Messages	PAR-33	Designed	User Interface	H	SRDC	C3DP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-SEQ-C3DP-6, SDD-INF-SM	Before integration					SRDC	
C3DP-UIR-2	The system shall provide user interfaces for authorized Care Team Members for managing system notifications	C3DP-7: Manage Messages	PAR-33, PAR-54, PAR-55	Designed	User Interface	H	SRDC	C3DP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-SEQ-	Before integration					SRDC	

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										C3DP-6, SDD-INF-SM							
C3DP-UIR-3	The system shall provide user interfaces for organizing virtual care plan review meetings	C3DP-9: Organize Virtual Care Review Meeting	PAR-33	Designed	User Interface	H	SRDC	C3DP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-SEQ-C3DP-7	After integration with existing teleconference system(s) at pilot sites					SRDC, pilot sites	
C3DP-UIR-4	The system shall provide user interfaces for defining subscription rules to receive care plan event notifications	C3DP-13: Monitor Change	PAR-37, PAR-38, PAR-39, PAR-40, PAR-41	Designed	User Interface	H	SRDC	C3DP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-ITF-C3DP-5, SDD-ITF-C3DP-3, SDD-SEQ-C3DP-15, SDD-INF-CP	Before integration					SRDC	
C3DP-UIR-5	The system shall provide a dashboard for visualizing the events in care plan lifecycle	C3DP-14: Care Plan Dashboard	PAR-6, PAR-26, PAR-35, PAR-49	Designed	User Interface	H	SRDC	C3DP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-SEQ-C3DP-17, SDD-INF-CP	Before integration					SRDC	
C3DP-UIR-6	The system shall provide a dashboard for visualizing the patient's medical summary	C3DP-14: Care Plan Dashboard	PAR-3	Designed	User Interface	H	SRDC	C3DP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-	After integration with TIS					SRDC, WARWICK	

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										1, SDD-SEQ-C3DP-17, SDD-INF-CP							
C3DP-UIR-7	The system shall provide user interfaces for accessing educational material	C3DP-15: Access Educational Material	PAR-34	Designed	User Interface	H	SRDC	C3DP		SDD-CMP-OVERALL, SDD-CMP-C3DP, SDD-LGC-OVERALL, SDD-LGC-C3DP, SDD-ITF-C3DP-1, SDD-SEQ-C3DP-18, SDD-INF-CP	Before integration / After acquiring educational materials					SRDC, SWFT	
C3DP-NFR-1	The call to CDSM services should return a result in reasonable time (such as less then 10 sec)	C3DP-11: Record Patient Observations, C3DP-12: Associate Supportive Content	None	Proposed	Performance	H	SRDC	C3DP		To be addressed in D7.2	After integration with CDSM					SRDC, WARWICK	
C3DP-NFR-2	The call to TIS services for retrieving patient data should return a result in reasonable time (such as less then 15 sec)	C3DP-12: Associate Supportive Content	None	Proposed	Performance	H	SRDC	C3DP		To be addressed in D6.1	After integration with TIS					SRDC, WARWICK	
C3DP-NFR-3	The audio connection to be supported for organizing virtual care plan review meetings shall provide acceptable voice quality	C3DP-9: Organize Virtual Care Review Meeting	None	Proposed	Performance	H	SRDC	C3DP		To be addressed in D7.3.	After integration with existing teleconference system(s) at pilot sites					SRDC, pilot sites	
C3DP-NFR-4	The patient dashboard shall be available for	C3DP-14: Care Plan Dashboard	None	Proposed	Performance	H	SRDC	C3DP		To be addressed in D7.3.	Before integration (assuming					SRDC	

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	review within seconds										patient data is already at FHIR Repository)						
C3DP-NFR-5	All system user interfaces should be designed in such manner that the system functions can be achieved with as few clicks as possible.	All C3DP Use cases	None	Proposed	Usability	H	SRDC	C3DP		To be addressed in D7.3.	Before integration					SRDC	
C3DP-NFR-6	All screens should have a help button.	All C3DP Use cases	None	Proposed	Usability	H	SRDC	C3DP		To be addressed in D7.3.	Before integration					SRDC	
C3DP-NFR-7	Error messages should explain how to recover from the error and propose fallback mechnanisms	All C3DP Use cases	None	Proposed	Usability	H	SRDC	C3DP		To be addressed in D7.3.	Before integration					SRDC	
C3DP-NFR-8	The system shall not fail if an unsupported format of patient data is returned or pushed by TIS, it should be saved as a non-machine processable supporting clinical data	C3DP-12: Associate Supportive Content	None	Proposed	Reliability	H	SRDC	C3DP		To be addressed in D7.3.	Before integration					SRDC	
C3DP-NFR-9	The system shall not fail if an unsupported format of patient recorded observation is pushed by PEP, it should be saved as a non-machine	C3DP-11: Record Patient Observations	None	Proposed	Reliability	H	SRDC	C3DP		To be addressed in D7.3.	Before integration					SRDC	

Req ID	Description	Associated Use case	Associated User Requirement	Status	Type	Priority	Assigned To	System Component(s)	Architectural/ Design Document	Architecture Design (D3.3)	Component Testing	Software Module(s)	Test Case Number	Implemented In	Verification	Users involved in testing	Additional Comments
	processable supporting data																
C3DP-NFR-10	The system shall return to a stable state when the virtual care plan review meeting is interrupted due to system failure (power, internet connection failure)	C3DP-9: Organize Virtual Care Review Meeting	None	Proposed	Reliability	H	SRDC	C3DP		To be addressed in D7.3.	Before integration					SRDC	
C3DP-NFR-11	The C3DP Mean Time To Repair (MTTR) shall not exceed 24 hours	All C3DP Use cases	None	Proposed	Maintainability	H	SRDC	C3DP		To be addressed in D7.3.	During pilot operation					SRDC, Pilot sites	Usability testing
C3DP-NFR-12	The system shall provide a role based user access control mechanism	All C3DP Use cases	PAR-59	Designed	Security	H	SRDC	C3DP		SDD-CMP-OVERALL, SDD-CMP-SPS SDD-LGC-OVERALL, SDD-LGC-SPS SDD-INF-AUN, SDD-INF-ACP SDD-ITF-SPS SDD-SEQ-SPS-3	After integration with SPS					SRDC	
C3DP-NFR-13	The system shall provide a log-in screen for care team members	All C3DP Use cases	PAR-57	Designed	Security	H	SRDC	C3DP		SDD-CMP-OVERALL, SDD-CMP-SPS SDD-LGC-OVERALL, SDD-LGC-SPS SDD-INF-AUN SDD-ITF-SPS SDD-SEQ-SPS-2	After integration with SPS					SRDC	
C3DP-NFR-14	The system shall check the authorization of care team members to perform the operations	All C3DP Use cases	PAR-58	Designed	Security	H	SRDC	C3DP		SDD-CMP-OVERALL, SDD-CMP-SPS SDD-LGC-OVERALL, SDD-LGC-SPS SDD-INF-ACP SDD-ITF-SPS SDD-SEQ-SPS-	After integration with SPS					SRDC	

Req ID	Description	Associated Use case	Associated User Requirement	Status	Type	Priority	Assigned To	System Component(s)	Architectural/ Design Document	Architecture Design (D3.3)	Component Testing	Software Module(s)	Test Case Number	Implemented In	Verification	Users involved in testing	Additional Comments
	supported by C3DP									2, SDD-SEQ-SPS-3							
C3DP-NFR-15	All operations shall be audited	All C3DP Use cases	PAR-60	Designed	Security	H	SRDC	C3DP		SDD-CMP-OVERALL, SDD-CMP-SPS SDD-LGC-OVERALL, SDD-LGC-SPS SDD-INF-ATR SDD-ITF-SPS SDD-SEQ-SPS-5	After integration with SPS					SRDC	

5.3. Test Document Templates

The following 6 templates are provided:

- Component Test Plan
- Component Test Design Specification
- Component Test Procedure
- Component Test Log
- Component Test Incident Report
- Component Test Summary Report

C3-Cloud

"A Federated Collaborative Care Cure Cloud Architecture for Addressing the Needs of Multi-morbidity and Managing Poly-pharmacy"

PRIORITY Objective H2020-PHC-25-2015 - Advanced ICT systems and services for integrated care

Doc-ID Component Name
Component Test Plan

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V1.0	01-12-2016	Component Test Plan template	Inserm	All Consortium
V1.1	08-03-2017	Rework of the outline, detailled examples at each point	Inserm	All Consortium
V1.2	13-04-2017	Collect feedback from partners and rework of the template.	Inserm	All consortium
V2.0	27-04-2017	Final version	Inserm	All consortium

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- Text highlighted in green is provided as examples, and should not be retained in final implementations of this template.

1. INTRODUCTION

The introduction gives an overview of the document and the quality process applied to the testing plan. It has four sub-sections.

1.1. Background

Here is described what in the project is being tested. How does this plan fit in with other test plans in the project, which test plans precede and follow it (if applicable).

This current test plan is about Semantic Interoperability Suite testing as a component of the C3-Cloud project.

Regarding other component behavior, Semantic Interoperability Suite is in interaction with Technical Interoperability Suite, Personalised Care Plan Development Platform, Coordinated Care & Cure Delivery Platform and Patient Empowerment Platform. But as the purpose of this test plan is to verify that SIS meets its technical specification and satisfy declared use cases, there is no dependencies between components, and no requirements in term of test plan execution order with other components.

1.2. Objectives of the Test Plan

This sub-section deals with the purpose of the test plan. A key objective is to describe what the test plan is about.

Semantic Interoperability Suite test plan objectives are:

- define the scope of what will be tested;
- estimate the people and other resources required for performing tests;
- organise the activities and timescales;
- specify the approach taken to testing;
- specify how the testing results will be evaluated.

1.3. Objectives of the Component Test

Here is described the objective of the component test itself.

Objectives of SIS testing are checking that the delivered functionalities works to specification, which means all use cases described in D3.2 are covered be tested functionalities.

1.4. References

The sub-section References give references to any documents that are related to this plan and are used to help create it. Can be referenced here component related deliverables, other testing plans, design and requirement deliverable, used standards and guides, etc.

Standards

- IEEE Std 829-1998, Standard for Software Test Documentation

Deliverables

- D3.2 “Requirements Specification of the C3-Cloud Architecture”
- D9.1 “Functional and Non-Functional Testing Criteria for C3-Cloud Components”

2. TEST ITEMS

In section 2 and following is defined the scope of the component testing in detail.

In this section are specified in outline the software, materials or documentation items, that have to be tested along. The items to be tested correspond to what will be delivered but not to the functionalities provided by what is delivered.

ID	Name	Type	Comments
SIS	Semantic Interoperability Services	Software	Provide semantic mapping of exchanged data in the project
TS	Terminology Service	Software	Provide terminological mappings
SMR	Semantic Metadata Registry	Software	Provide metadata mappings

Table 1: Item to be tested

3. FEATURES TO BE TESTED

Section 3 define which of the features of the component will be tested. All the business operations, scenarios, and functionality that are to be tested in each system and sub-system as to be identified here.

Features are based on Requirement specifications (D3.2) and to PARs (D8.1) where applicable.

ID	Item Being Tested	Business Scenarios Being Tested
T-SIS-1	Semantic Interoperability Services	Convert local data to C3-Cloud FHIR format
T-SIS-2	Semantic Interoperability Services	Convert C3-cloud FHIR data to local system format
T-SIS-3	Semantic Interoperability Services	Register a new mapping
T-SIS-4	Terminology Service	Perform mapping from one terminology to another
T-SIS-5	Terminology Service	Store new terminological mapping
T-SIS-6	Semantic Metadata Registry	Perform mapping from one format to another
T-SIS-7	Semantic Metadata Registry	Store new format mapping

4. FEATURES NOT TO BE TESTED

In this section is defined which of the features of the system or sub-system will NOT be testing, and why. This is necessary so as to avoid later confusion when stakeholders thought something would be tested, but was not.

Item Being Tested	Business Scenarios NOT Being Tested	Comments

None.

5. APPROACH

Section 5 outlines the global approach of the test. More subsections can be added, in addition of the following:

5.1. Criticity of features to be tested

Here is defined the criticity of each main features to be tested.

Common levels of criticality which can be used below are:

- Level 0: No criticality evaluated, suppletive or non-effective functions;
- Level 1: Low criticality, tolerability of certain inadequate system functions and tools;
- Level 2: Heightened criticality, scheduled downtime is acceptable;
- Level 3: High criticality, failure will cause degraded mode to numerous systems;
- Level 4: Highest criticality, system functions, failure will cause unrecoverable and critical errors to numerous systems.

ID	Criticity level	Comments
T-SIS-1	3 (High criticality)	
T-SIS-2	3 (High criticality)	
T-SIS-3	2 (Heightened criticality)	
T-SIS-4	3 (High criticality)	
T-SIS-5	2 (Heightened criticality)	
T-SIS-6	3 (High criticality)	
T-SIS-7	2 (Heightened criticality)	

5.2. Test effort

Depending on their criticality and other criteria, this subsection indicates the test effort to be applied to the test of each feature or set of features. The weight given to each User Story in the schedule must be considered as input.

ID	Test effort
T-SIS-1	5 person hours
T-SIS-2	5 person hours
T-SIS-3	2 person hours
T-SIS-4	5 person hours
T-SIS-5	2 person hours
T-SIS-6	5 person hours
T-SIS-7	2 person hours

5.3. Test level

Here is described the different test levels that come into play, for example: component, integration, system and user acceptance.

ID	Test level
T-SIS-1	Component
T-SIS-2	Component
T-SIS-3	Component
T-SIS-4	Integration
T-SIS-5	Integration
T-SIS-6	Integration
T-SIS-7	Integration

5.4. Test technique

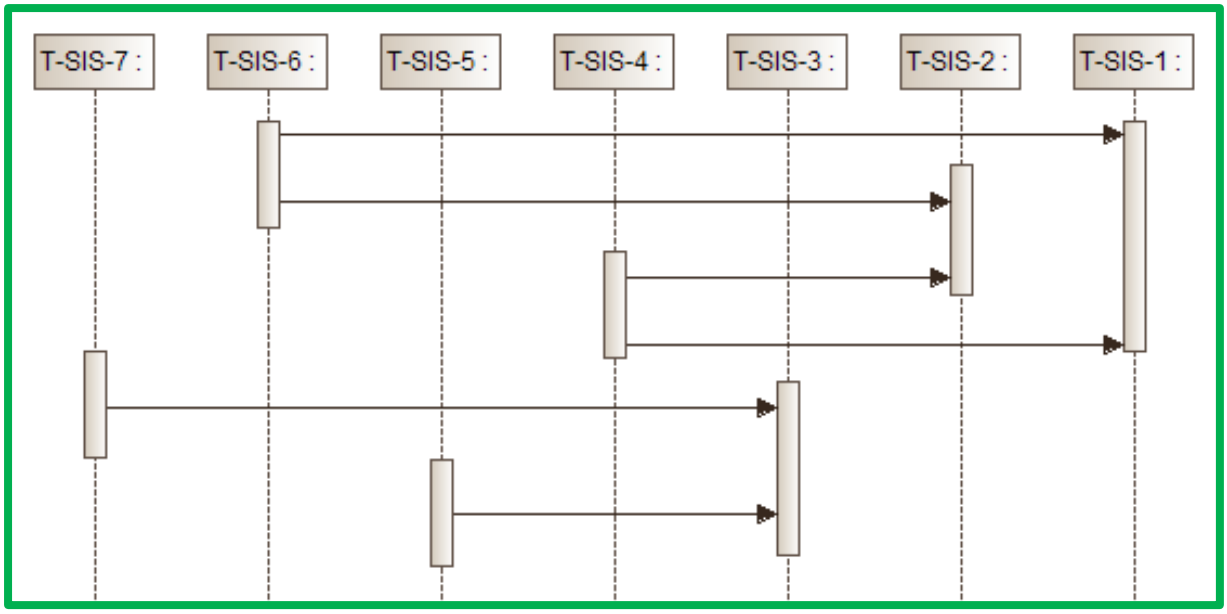
This subsection describes the different test techniques that will be used. For example: static and dynamic test, equivalence partitions, A/B testing, conformance testing, etc.

ID	Techniques involved in tests
T-SIS-1	Data-driven testing, expert reviewing
T-SIS-2	Data-driven testing, expert reviewing
T-SIS-3	Conformance testing
T-SIS-4	Data-driven testing, expert reviewing
T-SIS-5	Conformance testing
T-SIS-6	Data-driven testing, expert reviewing
T-SIS-7	Conformance testing

5.5. Priority of execution of tests

Here is indicated by which criteria the tests will be prioritized.

As Terminology Service and Semantic Metadata Registry are integrated parts of Semantic Interoperability Suite, their respective tests should be executed before related ones in Semantic Interoperability Platform. This results in these independent execution chains:



5.6. Monitoring test advancement and metrics

In this subsection, for each level and for the test plan as a whole, are defined the main metrics that will be used to monitor and pilot the progress of the tests. These measures may be made from a tool.

EuroRec suite will be used, to follow advancement and monitor metrics. Tool specific process and metrics are to be updated here when template will be implemented.

Metrics used in all data-driven and expert reviewing tests (T-SIS-1, T-SIS-2, T-SIS-4, T-SIS-6) are precision, recall and f-measure. Metrics used in Conformance tests (T-SIS-3, T-SIS-5, T-SIS-7) are rates of failure.

5.7. Management of defects

Here is identified the defects management life cycle applicable to this test plan and the associated roles and responsibilities (see 10.1). Describe the fields used to describe a defect in the tests.

ID	Defect managment	Associated roles
T-SIS-1 **T-SIS-2**	Defects of the sub-task that provoked this defect (T-SIS-4 or T-SIS-6) has occurred before. Mismatching of alignment of data will be reported. Test resumes with the next input.	Pilot Site Experts, Development Team
T-SIS-3	Defects of the sub-task that provoked this defect (T-SIS-5 or T-SIS-7) has occurred before. Failure of mapping attempt will be reported. Current test is aborted.	Development Team
T-SIS-4 **T-SIS-6**	If defect occurred due to an incorrect mapping reported by expert, notice and suggestion have to be logged. If defect occurred due to lack of relation, further fix will provide mapping. Defect of this task will throw T-SIS-1 or T-SIS-2 defect.	Pilot Site Experts, Development Team
T-SIS-7	Defect of this test will provoke immediate test failure.	Development Team

5.8. Test tools used

In this subsection is explained how is implemented traceability between requirements, tests results and defects. Sub-subsections can be added per tool types if needed.

Usage of EuroRec suite has to be explained here on template implementation.

6. ITEM PASS/FAIL CRITERIA

This section deals with defining when an item has passed or failed. This is not the place to define the detailed pass criteria for each feature, but to describe the process and overall standards for evaluating the test results.

There are various approaches that are used in evaluating test items including the mechanical one of passing or failing a test item depending on whether a predetermined number of incidents of certain types have been found, e.g. "There must be no Type B incidents and no more than 5 type C."

In this section is described a process to enable a realistic decision to be made about the test item.

ID	Criteria
SIS	Item pass if the rate of validated mappings is equal or above the threshold on each feature and if no error was triggered if new mapping definition.
TS	Item pass if the rate of validated mappings is equal or above the threshold on each feature and if no error was triggered if new mapping definition.
SMR	Item pass if the rate of validated mappings is equal or above the threshold on each feature and if no error was triggered if new mapping definition.

6.1. Evaluation Team

This sub-section deals with who should be on the team which evaluates the data from the testing process to make a pass/fail decision. This should not be a mechanical process but a considered discussion of all the testing process has discovered about the item being tested.

The team should call from a number of stakeholders such as the development team, involved people from pilot sites, work package and project leaders, and anybody else judged to have an interest in the release of the component.

Evaluation Team of the SIS Test will be composed by at least one representative from:

- Inserm as development team,
- SRDC and Warwick as development team of linked component,
- Pilot Site
- Project Management

Members of the test team (see 10.1) can be members of the evaluation team. Additional people from their respective partners might be involved in the evaluation team.

Nominative list not established yet.

6.2. Evaluation Process

This subsection describes a four stage process for systematically evaluating the results of the testing in order to make a decision about whether the test item has passed or failed. The stages are:

1. **Summarise Testing Results** – This deals with taking all Incidents and tracing them back to the requirements they affected.

2. **Evaluate Business Scenarios** – This is similar but is more organisation oriented as it deals with the effect of Incidents on the business scenarios the organisation will run on this test item. The intention is to evaluate exactly what the effect each open incident will have on the business scenario functionality.
3. **Estimate Business Impact** – Having identified where the open Incidents will affect each requirements and business scenario the effect on the organisation is then judged. A table is constructed showing the the incident, the effect it will have, the frequency of the impact on the business, and counter measures that could be taken if the item was released with this open incident.
4. **Make Acceptance Decision** – A decision is then taken as to whether to accept or reject the item. In practise there will be a lot of pressure to accept and item. Therefore it is useful to have a third category of Limited Acceptance, which means that the system is accepted with provisos.

6.3. Requirements Traceability Matrix

This subsection specifies what tools will be used to track:

- Incidents to the Test Cases that produced them.
- Test Cases Acceptance Criteria for which Test Cases were developed.
- Acceptance Criteria back to the Requirements from which they were extracted.

This results in you being able to trace an Incident back to the Requirement and Business Scenario it effects. A useful tool for these matrices is a straightforward set of spreadsheets.

C3-Cloud Traceability Matric will be referred here. Interaction with EuroRec suite has to be determined in template implementation.

7. TEST PLAN PASS/FAIL CRITERIA

Current section specifies the criteria that will be used to determine whether or not the test plan has passed successfully. At the component level, possible criteria are:

- All test cases were performed.
- A certain percentage of tests were performed and only a certain percentage of uncorrected minor anomalies remain.
- The tool for measuring the coverage of the code by the tests indicates that the desired coverage has been achieved.

Due to critical dependencies between items to SIS, the SIS test plan is considered as passed successfully only if none of the tree items has fail (see 6 for item criteria).

8. SUSPENSION CRITERIA AND RESUMPTION REQUIREMENTS

The section 8 specifies the criteria used to determine the suspension of the tests or part of the tests associated with this test plan. It specifies the conditions that will make it possible to decide on the resumption of the tests and to identify the activities that will have to be carried out during the resumption of the tests.

Testing of Semantic Interoperability Suite should be paused immediately if either system experiences login issues or failure in any basic CRUD (Create, Read, Update and Delete) actions, or in external component communication (like Technical Interoperability Suite).

Testing can resume will all previously listed suspension criteria encountered are solved.

9. TEST DELIVERABLES

This section describes what is produced by the testing process. Usually, 8 documents should be listed :

1. **Test Plan** – The present document, plan how testing will proceed.
2. **Test Design Specification** – The acceptance criteria, what need to be tested.
3. **Test Cases Specification** – The values input and results expected from tests.
4. **Test Item Transmittal Reports** – Developers handover report.
5. **Test Logs** – The detailed results of running the tests.
6. **Incident Reports** – Observations of unexpected results, what need to be investigated.
7. **Test Summary Report** – Summary of testing.
8. **Test data** – Data used for testing.

Semantic Interoperability Suite Testing will produce 8 documents, including the present Test Plan.

1. SIS Test Plan
2. SIS Test Design Specification
3. SIS Test Cases Specification
4. SIS Test Item Transmittal Reports
5. SIS Test Logs
6. SIS Incident Reports
7. SIS Test Summary Report
8. SIS Test data

10. TESTING TASKS

This section identifies the tasks required for the preparation and execution of the tests, and who is responsive of that.

10.1. Roles and Responsibilities

This subsection describes roles and responsibilities of people involved in the test.

Role	Name	Entity	Contact
Test Manager	Damien Leprovost	Inserm	
Development Tester		Inserm	
Inserm Expert		Inserm	
Pilot site Expert		SWFT, Osakidetza and/or RJH	

SIS Test Plan involves the following roles and responsibilities:

- The **Test Manager** is in charge of the Test Plan execution and the supervision of all related activites.
- The **Development Tester** is responsible of all code-related test actions.
- The **Expert** roles, both from Inserm who develop SIS and from pilot sites, are consulted the validate terminological semantic mappings.

10.2. Test preparation

This subsection identifies all tasks required for test preparation.

Task description	Person Responsible	Charge (PM)	Additional information (required resource and skills, dependencies, …)

10.3. Test execution

This subsection identifies all tasks required for test execution.

Task description	Person Responsible	Charge (PM)	Additional information (required resource and skills, dependencies, …)

10.4. Schedule

This subsection describe when the task described in 10.2 et 10.3 take place.

11. ENVIRONMENTAL NEEDS

This section identifies the properties of the test environments required, from a hardware point of view (server, ...) and software point of view (OS, Test tools, ...). For each environment, the periods of use should be specified. These environments can be described in an independent document that should be referenced in this section.

Usage of tools to run tests to be decided, may implies environmental needs.

SIS has to be implemented on physical server. No software dependencies has been identified.

12. STAFFING AND TRAINING NEEDS

Current section purpose is to identify the resources required by skill level, and the training required if any. This includes training related to application to the tester and training in tools and test techniques.

Usage of tools to run tests to be decided, may implies training needs.

Expert role implies a professional knowledge of manipulated items.

13. RISKS AND CONTINGENCIES

In this section, please identify the potential risks associated with this test plan. Specify a contingency action for each risk.

ID	Risk description	Impact (weak, average, strong)	Probability	Contingencies
	Mapping failure (T-SIS-1, T-SIS-2, T-SIS-4 or T-SIS-6 aborted). This will result SIS become inoperative.	strong	?	All C3-Cloud top level components may become unusable.
	Mapping accuracy is rejected (T-SIS-1, T-SIS-2, T-SIS-4 or T-SIS-6 failed)	strong	?	Possible lot of precision or information between local systems and C3-Cloud top level components. Results might be false.

C3-Cloud

"A Federated Collaborative Care Cure Cloud Architecture for Addressing the Needs of Multi-morbidity and Managing Poly-pharmacy"

PRIORITY Objective H2020-PHC-25-2015 - Advanced ICT systems and services for integrated care

Doc-ID Component Name
Component Test Design Specification

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1. INTRODUCTION

1.1. Objectives of the document

This document details the test cases and the expected results as well as test pass criteria for the current component testing.

1.2. References

The sub-section References give references to any documents that are related to this plan and are used to help create it. Can be referenced here component related deliverables, other testing plans, design and requirement deliverable, used standards and guides, etc.

2. DETAILS OF THE LEVEL TEST DESIGN

2.1. Features to be tested

Identify the test items and describe the features and combinations of features that are the object of this Test Design Specification. Other features that may be exercised but that are not the specific object of this TDS need not be identified (e.g., a database management system that is supporting the reports that are being tested). The test design provides more detailed information than the Test Plan. For example, identify an overall test architecture of all test scenarios, the individual scenarios, and the detailed test objectives within each scenario.

For each feature or feature combination, a reference to its associated requirements in the item requirement and/or design description may be included. This may be documented in the Traceability Matrix.

2.2. Approach refinements

Specify refinements to the approach described in the corresponding Test Plan. Include specific test techniques to be used. The method of analyzing test results should be identified (e.g., comparator tools, visual inspection, etc.).

Summarize the common attributes of any test cases. This may include input constraints that must be true for every input in a set of associated test cases, any shared environmental needs, any shared special procedural requirements, and any shared case dependencies. Sets of associated test cases may be identified as scenarios (also commonly called scripts or suites). Test scenarios should be designed to be as reusable as possible for regression testing, revalidation testing for changes, and training new employees who must either use or support the system over time.

2.3. Test identification

List the identifier and a brief description of each test case (or set of related test cases) in scenarios for this design. A particular test case, scenario, or procedure may be identified in more than one Test Design

Specification. List the identifier and a brief description of each procedure associated with this Test Design Specification.

2.4. Feature pass/fail criteria

Specify the criteria to be used to determine whether the feature or feature combination has passed or failed. This is commonly based on the number of anomalies found in each severity category(s). This section is not needed if there have been no subsequent changes to the criteria described in the related Test Plan.

3. GLOSSARY

C3-Cloud

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PRIORITY Objective H2020-PHC-25-2015 - Advanced ICT systems and services for integrated care

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1. INTRODUCTION

1.1. Objectives of the document

This document details how to run each test, including any set-up preconditions and the steps that need to be followed.

1.2. References

The sub-section References give references to any documents that are related to this plan and are used to help create it. Can be referenced here component related deliverables, other testing plans, design and requirement deliverable, used standards and guides, etc.

1.3. Relationship to other procedures

This sub-section describes any requirements this procedure may have for other procedures. Some examples of requirements for other test procedures include that they execute:

- Before this one
- Concurrently with this one
- Subsequent to this one

2. DETAILS

Introduce the following subordinate sections. This section includes the inputs and outputs as well as the ordered description of the test steps required to execute each test case.

2.1. Inputs, outputs, and special requirements

This sub-section identifies all that is needed to execute the tests, including but not limited to test cases, databases, automated tools, and external and/or third-party systems.

Identify any special requirements that are necessary for the execution of this procedure. These may include prerequisite procedures, special skill requirements, and special environmental requirements.

2.2. Ordered description of the steps to be taken to execute the test cases

Include the activities below (as applicable) for each procedure; there may be one or multiple procedures in one Level Test Procedure document. Include the degree to which the procedure steps can be varied and the process for determining the allowable degree of variation (if variance is allowed).

- Log: List any tools or methods for logging (the results of test execution, any anomalies observed, and any other events pertinent to the test).
- Setup: Provide the sequence of actions necessary to prepare for execution of the procedure.
- Start: Provide the actions necessary to begin execution of the procedure.
- Proceed: Provide any actions necessary during execution of the procedure.

- Measurement: Describe how the test measurements will be made.
- Shut down: Describe the actions necessary to temporarily suspend testing, when unscheduled events dictate.
- Restart: Describe any procedural restart points and the actions necessary to restart the procedure at each of these points.
- Stop: Provide the actions necessary to bring execution to an orderly halt.
- Wrap-up: Provide the actions necessary after the execution of the procedure has been completed (including termination of logging).
- Contingencies: Provide the actions necessary to deal with anomalies that may occur during execution.

3. GLOSSARY

C3-Cloud

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PU	Public	X
CO	Confidential, only for members of the consortium (including the Commission Services)	
EU-RES	Classified Information: RESTREINT UE (Commission Decision 2005/444/EC)	
EU-CON	Classified Information: CONFIDENTIEL UE (Commission Decision 2005/444/EC)	
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Document History:

Version	Date	Changes	From	Review
V0.1	13-04-2017	Initial release.	Inserm	All Consortium
V1.0	27-04-2017	Final version	Inserm	All Consortium

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1. INTRODUCTION

1.1. Objectives of the document

This document provides a chronological record of relevant details about the execution of tests, e.g. recording which tests cases were run, who ran them, in what order, and whether each test passed or failed.

1.2. References

The sub-section References give references to any documents that are related to this plan and are used to help create it. Can be referenced here component related deliverables, other testing plans, design and requirement deliverable, used standards and guides, etc.

2. DETAILS

Introduce the following subordinate sections. This section includes the essence of the test log, especially the information regarding each entry.

2.1. Description

Provide any general information that applies to all entries in the log (exceptions can be specifically noted in a log entry). The following information may be considered:

- Identify the items being tested including their version/revision levels
- Identify any changes from the prior testing documents to the attributes of the environments in which the testing is conducted
- Date and time of start and stop
- Name of the individual running the test
- Any issue that causes testing to halt

2.2. Activity and event entries

Record activities/events for each relevant detail, including the beginning and end of activities, and the occurrence date and time along with the identity of the author.

2.2.1. Execution description

Record the identifier of the Level Test Procedure being executed. Record all personnel participating in the execution including testers, support personnel, and observers. Also indicate the role of each individual.

2.2.2. Procedure results

For each execution, create a record of the results (manually or automated by a tool). Record the success or failure of each test case.

2.2.3. Environmental information

Record any changes in the test environment that are deviations from the plans.

2.2.4. Anomalous events

Record what happened before and after an unexpected event occurred. Record all circumstances surrounding the inability to begin execution of a Test Procedure or failure to complete a Test Procedure. If this information is recorded in an Incident Report, it is not also recorded here.

2.2.5. Incident Report identifiers

Record the identifier of each test Incident Report, whenever one is opened.

3. GLOSSARY

C3-Cloud

"A Federated Collaborative Care Cure Cloud Architecture for Addressing the Needs of Multi-morbidity and Managing Poly-pharmacy"

PRIORITY Objective H2020-PHC-25-2015 - Advanced ICT systems and services for integrated care

Doc-ID Component Name
Component Test Incident Report

Work Package:	WP9 Evaluation and Assessment
Due Date:	dd mmm yyyy
Actual Submission Date:	dd mmm yyyy
Project Dates:	Project Start Date: 01 May 2016
	Project End Date: 30 April 2020
	Project Duration: 48 months
Document Leader:	Beneficiary Short Name

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1. INTRODUCTION

1.1. Objectives of the document

This document reports any event that occurs during the testing process that requires investigation. This may be called a problem, test incident, defect, trouble, issue, anomaly, or error report. This document is deliberately named as an anomaly report, and not a fault report. The reason is that a discrepancy between expected and actual results can occur for a number of reasons other than a fault in the system. These include the expected results being wrong, the test being run incorrectly, or inconsistency in the requirements meaning that more than one interpretation could be made. The report consists of all details of the incident such as actual and expected results, when it failed, and any supporting evidence that will help in its resolution. The report will also include, if possible, an assessment of the impact of an incident upon testing.

1.2. References

The sub-section References give references to any documents that are related to this plan and are used to help create it. Can be referenced here component related deliverables, other testing plans, design and requirement deliverable, used standards and guides, etc.

2. DETAILS

Introduce the following subordinate sections. This section identifies the items contained in the AR including its status and corrective actions taken.

2.1. Summary

Summarize the anomaly.

2.2. Date anomaly discovered

Record the date (and possibly also the time) that the anomaly was first identified.

2.3. Context

Identify the software or system item (including any version numbers), or software or system configuration item, and/or the software or system life cycle process in which the anomaly was observed. Identify the test items involved indicating their version/revision level. References to the appropriate Test Procedure, Test Case, and Test Log may be supplied. Identify the level of test.

2.4. Description of anomaly

Provide a description of the anomaly. Indicate whether the anomaly is reproducible, and provide enough information to make it reproducible if it is. This description may include (if not already covered by the referenced information) the following items:

- Inputs
- Expected results
- Actual results
- Unexpected outcomes
- Procedure step
- Environment
- Attempts to repeat
- Testers
- Observers

Related activities and observations that may help to isolate and correct the cause of the anomaly may be included (e.g., describe any test case executions that might have a bearing on this particular anomaly and any variations from the published Test Procedure).

2.5. Impact

Indicate (if known) the depth and breath of the impact this anomaly will have on technical and business issues (e.g., test documentation, development documentation, user's ability to perform tasks, and system operations). Identify the existence of any known workarounds. This may include an estimate of the time, effort, and risk to fix the defect (completed by the development organization after the Incident Report is established).

2.6. Originator's assessment of urgency

Provide an evaluation of the need for an immediate repair. See IEEE Std 1044-1993 suggested categories. Most organizations have from three to five categories, where the most serious category means that the product is unusable, and the least serious is a cosmetic anomaly. Include any relevant risk analysis and conclusions about ris

2.7. Description of the corrective action

Summarize the activities during the corrective action taken to resolve the reported anomaly. It may include the time, effort, and risk required for the fix(es), with the actual time and effort added after the fix is completed. The corrective action may be deferral or retirement of a duplicate.

2.8. Status of the anomaly

Identify the current status of the anomaly. A common sequence might be as follows: open, approved for resolution, assigned for resolution, fixed, and retested with the fix confirmed.

2.9. Conclusions and recommendations

Specify any recommendations for changes to the development and/or testing processes and documentation that would help to prevent this kind of anomaly in the future. This may include identification of the source or injection point of the anomaly.

3. GLOSSARY

C3-Cloud

"A Federated Collaborative Care Cure Cloud Architecture for Addressing the Needs of Multi-morbidity and Managing Poly-pharmacy"

PRIORITY Objective H2020-PHC-25-2015 - Advanced ICT systems and services for integrated care

Doc-ID Component Name
Component Test Summary Report

Work Package:	WP9 Evaluation and Assessment
Due Date:	dd mmm yyyy
Actual Submission Date:	dd mmm yyyy
Project Dates:	Project Start Date: 01 May 2016
	Project End Date: 30 April 2020
	Project Duration: 48 months
Document Leader:	Beneficiary Short Name

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1. INTRODUCTION

1.1. Objectives of the document

This document summarizes the results of the designated testing activities and to provide evaluations and recommendations based on the results after test execution has finished. It provides any important information uncovered by the tests accomplished, and including assessments of the quality of the testing effort, the quality of the software system under test, and statistics derived from Incident Reports. The report also records what testing was done and how long it took, in order to improve any future test planning. This final document is used to indicate whether the component under test is fit for purpose according to whether or not it has met acceptance criteria defined before.

1.2. References

The sub-section References give references to any documents that are related to this plan and are used to help create it. Can be referenced here component related deliverables, other testing plans, design and requirement deliverable, used standards and guides, etc.

2. DETAILS

Introduce the following subordinate sections. This section provides an overview of the test results, all of the detailed test results, rationale for all decisions, and the final conclusions and recommendations.

2.1. Overview of test results

Summarize the evaluation of the test items. Identify the items tested, indicating their version/revision level. Indicate the environment in which the testing activities took place, and its impact (if any).

2.2. Detailed test results

Summarize the results of testing. Identify all resolved anomalies and summarize their resolutions (or reference where that information is available). Identify all unresolved anomalies. If anomalies are deferred, explain (or reference) the process for handling deferrals.

Summarize the major testing activities and events. Summarize the relevant metrics collected.

Report any variances of the test items from their specifications. Indicate any variances from the test documentation (e.g., test changes or tests not executed). Specify the reason for each variance (or specified group(s) of variances), or reference where it is recorded.

Evaluate the comprehensiveness of the testing process (e.g., coverage metrics, if specified) against the comprehensiveness criteria specified in the Test Plan, if the plan exists.

2.3. Rationale for decisions

Specify the issues that were considered for any decisions and the reason(s) for the selection of the conclusion(s).

2.4. Conclusions and recommendations

Specify an overall evaluation of each test item, including its limitations. This evaluation will be based on the test results and on the item level pass/fail criteria. An estimate of failure risk may be included. Recommend its status relative to availability for production use, and under what circumstances (e.g., immediately, with a specified subset of anomalies resolved, or never). This may include identification of anomaly clusters in functionality and/or anomaly root cause analysis.

3. GLOSSARY