Document Management System (DMS)/ Business Management System (BMS) Project

8 July 2015

High-Level Requirements & SharePoint/Project Server 2013 Fit-Gap Analysis

SESAR Joint Undertaking (SJU)

FROM INNOVATION TO SOLUTION

pwc

SESAR JOINT UNDERTAKING

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1. Introduction

The major objective of the DMS/BMS project is to build a solution aligned with the SESAR Joint Undertaking (SJU) 2020 needs by analysing, defining and implementing a compatible solution. This involves operating an interoperable platform managing the knowledge of 3,000 experts from different organisations using various systems with regards to the Project and Programme Management Processes, while promoting cross-organizational collaboration and enhanced capability using a new DMS/BMS tool.

The purpose of this document is to provide the SJU with the documented high-level requirements for the Programme, Administrative and Transversal processes described in the Project Initiation Report (PIR) and validated by the SJU Subject Matter Experts (SMEs) through rounds of workshops. Furthermore, to provide the SJU with an understanding of the requirements level of “fit-for-purpose” to the proposed solution (Microsoft SharePoint 2013, Project Server 2013).The requirements defined in this document will be used to begin the Design (4) and Build (5) phases of the DMS/BMS project, by acting as a base for defining and building the solution. This high-level requirements document combines two of the DMS/BMS project deliverables (#3: High Level Requirements (Draft) & #8 SharePoint/Project Server 2013 Fit Gap Analysis) as described in the Project Initiation Report (PIR).

This document will be used to facilitate a go/no-go decision for the next phase of the DMS/BMS project, confirming the original assumption that Microsoft SharePoint 2013 and Project Server meets the requirements of the SJU.

After the decision has been made, if a “Go” decision has been reached, the following requirements will be baselined. Proposed changes to any approved requirement will be addressed in alignment with a change control process. A change may be initiated through communication with Business Process Owners, Key Stakeholders and end-users or the Project Team. Clarifications, additional information, or editorial changes which do not alter the intent or character of the original requirement, are not considered items which enter into the change control process. Any questions about such a modification will be adjudicated by the Project Managers, as necessary. Changes to requirements will be assessed by the project team. The Project Team will also determine the impact of the change on the project. The change request and impacts are reviewed and adjudicated by the Project Manager and the Project Steering Committee to help ensure it aligns with SESAR JUs needs and contractual agreements. The exception to this process rests with the Horizon 2020 rules that will begin to surface in the coming months. Each new rule that affects a SJU Programme, Administrative or Transversal process or requirement, will be evaluated by the Project Team and presented to the Steering Committee based on its impact.

The following sections of this document will first provide a consolidated analysis of all of the requirements, prior to providing further detail by breaking down the requirements by stream. The document also includes the detailed list of requirements by process, providing the prioritization per requirement as well as the “Fit/Gap” assessment per requirement.

2. *Analysis*

The high-level requirements were gathered through different rounds of workshops to understand the current processes and to define the to-be requirements. In parallel, synchronisation meetings were held with Microsoft to align requirements and capabilities to SharePoint/Project Server 2013. An iterative approach to each topic/process was organized which totalled over 42 workshops and validation sessions. For further details, please see Annex 1: Methodology.

During the requirements validation process, the DMS/BMS Project Team formulated requirements based on those items identified in the workshops with the SMEs. Requirements establish the capability that the solution must have to satisfy a need, solve a problem, or accomplish a task. Each requirement was assigned a unique identifier to support testing and traceability through analysis, design and implementation of the product. The High-level Requirement Document will define each high-level requirement with an alphanumeric identifier. The high-level requirement defines the specified need, be it a use case, business essential, industry-recognized standard, or government regulation. The SJU will measure the completion of the development process based on the satisfaction of each requirement that it defined for the product.

The types of requirements collected have been prioritized based on the following criteria:

- **MR: M**inimum **R**equirements are requirements which the DMS must comply with. This type of requirements is marked with MR and a serial number.
- **HP: H**igh **P**riority requirements are not absolutely necessary, but they are highly appreciated. High priority requirements are marked with HP and a serial number.
- **LP: L**ower **P**riority requirements are supplementary. If the DMS supports these types of requirements it will be appreciated. Lower priority requirements are marked with LP and a serial number.

Table 1: Requirement Prioritization

Furthermore, the verification of a "fit-for-purpose" requirement was performed by Microsoft. The results of the study are included within this document and are based on the following criteria:

- **Out-of-the-box Product:** Functionality available in the Product which doesn't require configuration and/or Customization (Pre-defined views, Baseline Projects).
- **Out-of-the box configuration:** The way a solution is configured (i.e. Custom Fields, Templates, Lookup tables, workflows, Permissions).
- **Customization:** Functionality not included in the out-of-the box Product which requires coding (i.e. Events, SQL views, new features).

Table 2: Requirement Fit for Purpose Categories

The following sections provide statistics on the requirements from a priority perspective as well as from a "fit-for-purpose" perspective, both inclusively and dispersed by Project Stream. The intention of this section is to provide consolidated results and commentary on the documented requirements in order for the appropriate stakeholders to make informed decisions from a holistic point of view, rather than a granular point of view given the tight timelines.

2.1 Consolidated Findings

2.1.1 Consolidated Findings - Fit/Gap

Figure 1 provides an overview of the 323 "Fit-Gap" analysed requirements identified for the Programme, Administrative and Transversal processes. 93% of the identified requirements do not require any customization in SharePoint 2013 and Project Server. As a result, SharePoint and Project Server 2013, based on industry best practices have the available functionality to respond to the SJUs requirements. The remaining 7% customisation required by the business reflects the number of requirements, however this number is significantly higher than the reality as most of the "custom" requirements, are duplicated cross-project.

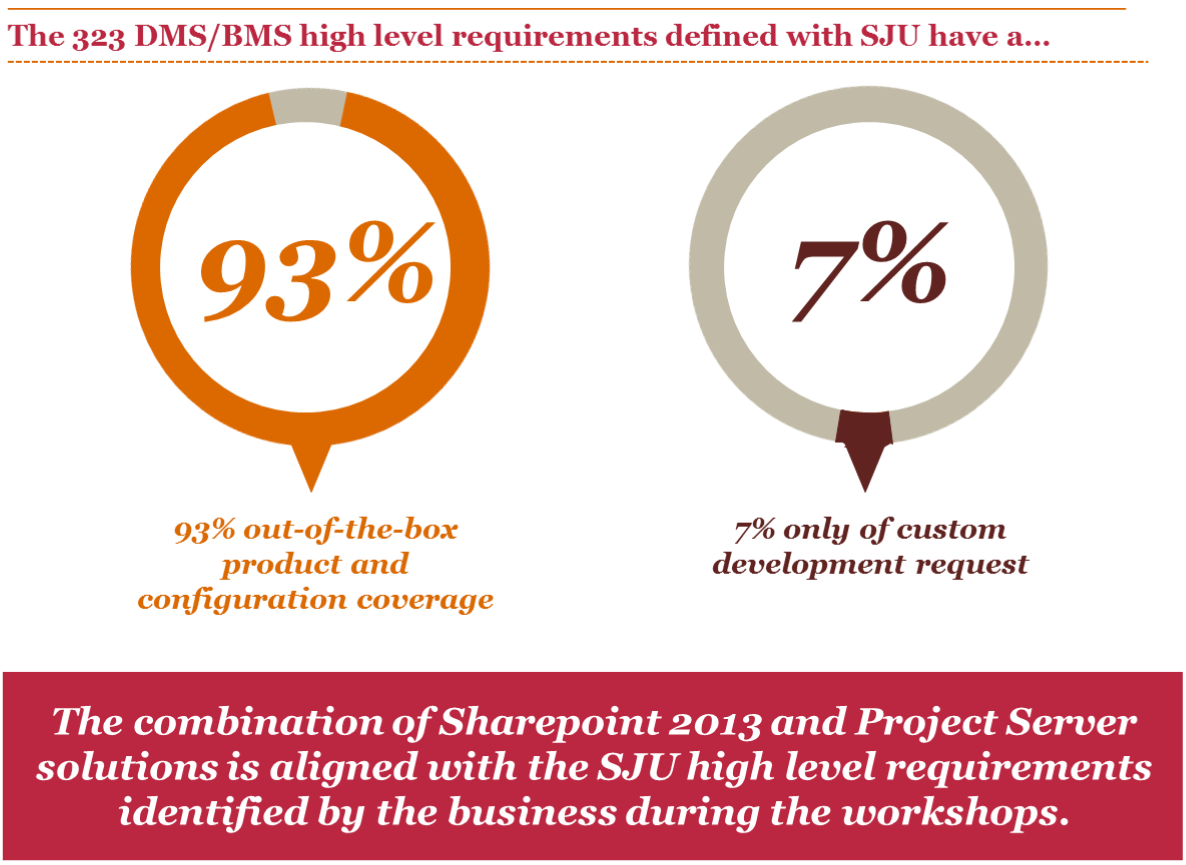


Figure 1: High-Level Requirements Fit-Gap Analysis

The 7% of "customization" required, covers the Programme, Administration and Transversal requirements which adds up to 22 out of the 323 requirements. As part of the scoring methodology, if a requirement was partly "Out-of-the-box" and partly "customization", a score of 0.5 was given to each part of the requirement for a total of "1". That being said the total number of requirements that "partly" require customization is higher than 22, however many of the Programme processes perform similar activities which resulted in the duplication of requirements which have been identified and categorized in Table 3. Further detail on the breakdown by stream of the customized requirements can be found in Section 2, more specifically Figures 5 and 7 and Tables 3 and 4.

2.1.2 Consolidated Findings - Prioritization

Figure 2 provides an overview of the prioritization that was completed by SJU Subject Matter Experts (SMEs). Overall, 76% of the requirements have been deemed a "minimum requirement", which is a requirement that must be complied with. All "Fit-Gap" categories have an average of ¾ "minimum requirements". That being said, it is surprising that only 2% of the total requirements were Low Priority (LP), a further prioritization may be required as the project proceeds due to timing and budget.

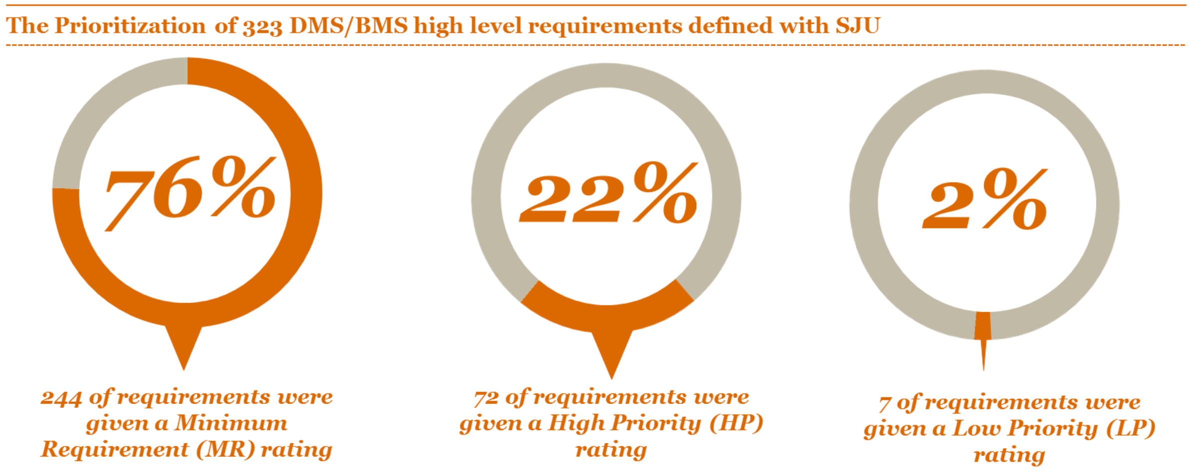


Figure 2: Requirements Prioritization

Figure 3 provides a further detailed view on the prioritized requirements per Fit-Gap category (i.e. Out-of-the-Box Product, Out-of-the-Box Configuration and Custom Development). Across the Fit-Gap categories, a consistent average of 76% of the requirements were given a Minimum Requirement (MR), while the low priority (LP) requirements hovered between 2-5%.

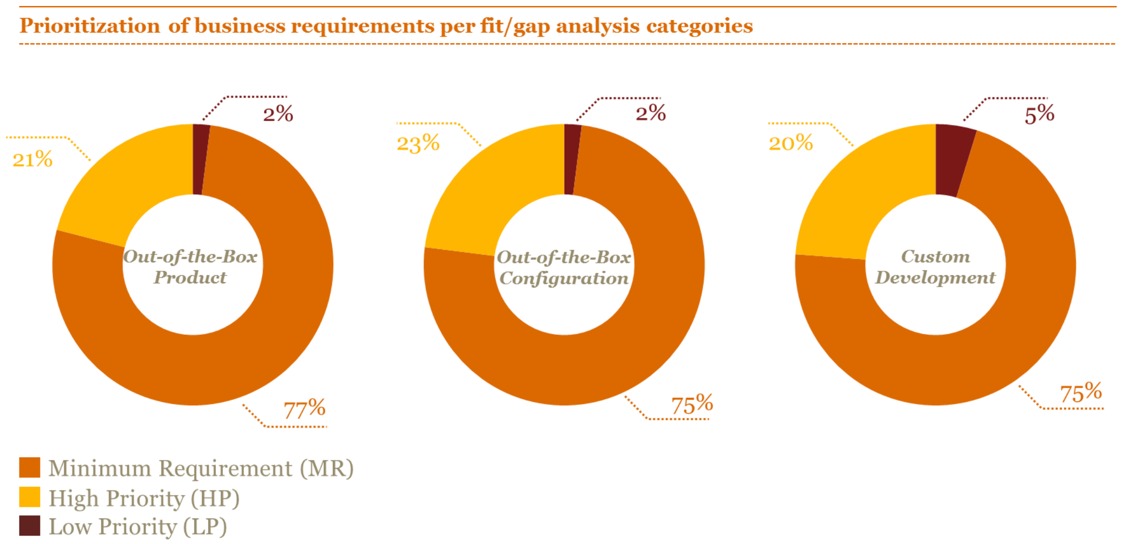
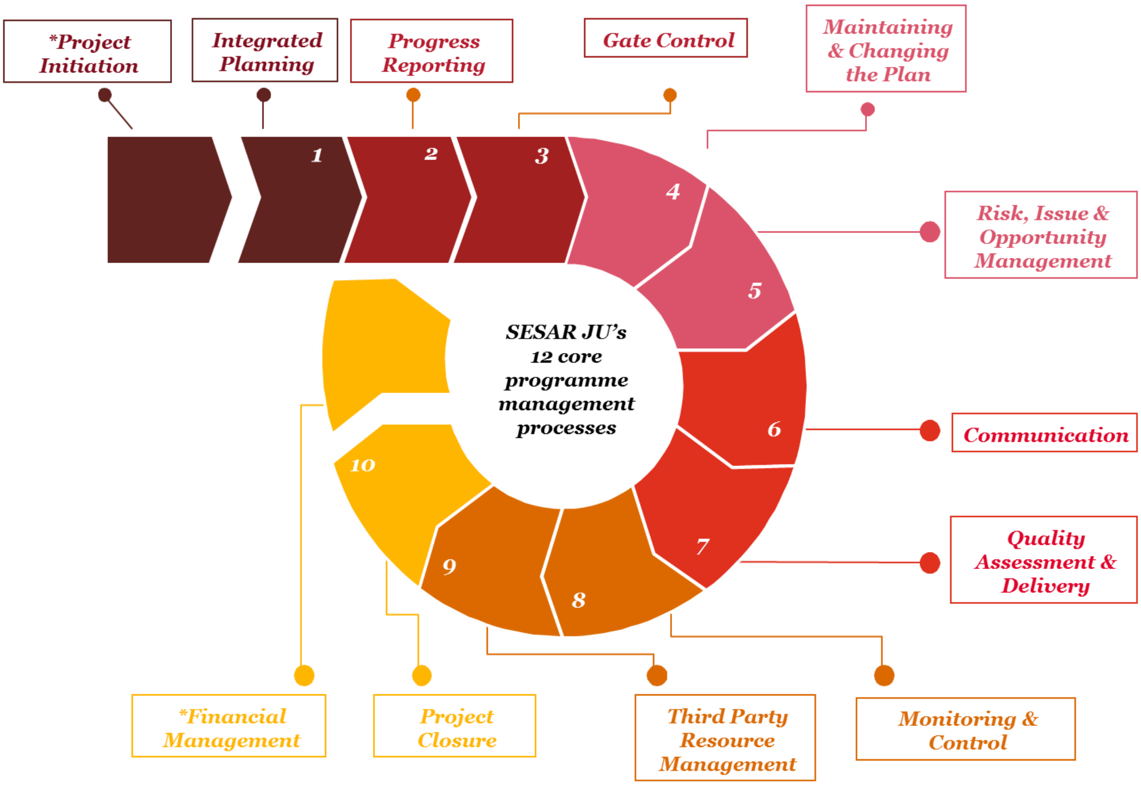


Figure 3: High-Level Requirements Prioritization by Fit-Gap

2.2 *Findings per Stream*

2.2.1 *Programme High Level Requirements*

The following section provides a detailed analysis of the Programme specific requirements that were identified during Phase 2 of the DMS/BMS project. Through 22 "As-Is" and "To-Be" workshops with SJU Programme staff, 237 requirements were identified across 12 Project and Programme Management processes. These requirements were then prioritized by the SJU prior to Microsoft conducting a "Fit-Gap" analysis towards Microsoft SharePoint & Project Server 2013. Over 92% of the Programme requirements were identified to not require customization which responds to the following Project Objective "**to streamline** and enhance **the efficiency and effectiveness** of SESAR JU business". The 12 processes used to "bucket" the 237 requirements are identified below:



*: Project Initiation & Financial Management are not part of the SJU 2020 Programme and Project Management Processes however requirements needed to be gathered for these processes for upcoming project phases.

Figure 4: SJU 2020 - Programme Management Processes

Figure 4 provides an overview of the Programme and Project Management requirements prioritization per fit/hap category. 181 of the requirements are “Out-of-the-Box Configuration” with a “minimum requirement” prioritization. This ultimately shows that SharePoint and Project Server 2013 can support over 90% of the business needs through industry best practises and tools, however it also demonstrates the maturity of the Programme in the level of configuration required to maintain the business while improving efficiency.

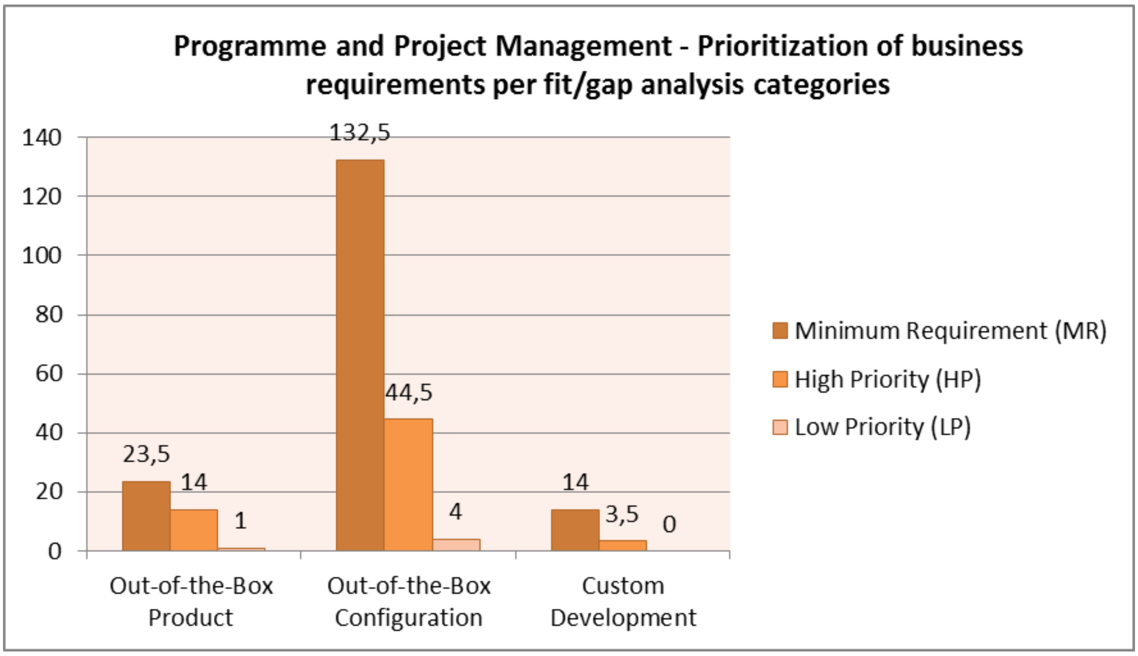


Figure 5: Programme and Project Management Prioritization per Fit/Gap Category

Seven customization categories were identified, covering 17.5 requirements across all Programme and Project processes (7% of total Programme Requirements). As a result of the validation session with the Chief Development & Delivery and his team, the number of customization categories was reduced to four.

As many of the Programme processes perform similar activities, the identified requirements have been grouped into four categories in Table 3 below. The following customization categories were identified during the “Fit-Gap” analysis and confirmed as mandatory for the business by the SJU Chief Development & Delivery.

Customization Categories (and affected requirements)		Affected Processes
#1	A consolidated view of lists cross project site (i.e. such as change requests, risks, issues, opportunities) ➢ The system must be able to shoe a consolidated view of Change Requests (2.13) ➢ The system must be able to show the Top 5 Risks, and “Red”/”Amber” issues from RIO register (2.14) ➢ System must be able to roll-up the Project Progress Reports and consolidate with member quarterly effort report to produce quarterly reports based on different hierarchies (2.15) ➢ The system must show consolidated views of change requests (3.15) ➢ The system must be able to show the top 5 risks and “red”/ “amber” issues from RIO (3.16) ➢ Dashboarding Capability (8.25, 8.26, 8.27, 8.28, 8.29, 8.30, 9.24) ➢ The system must automatically publish pre-defined reports to different sites (9.25) ➢ The system must be able to generate consolidated views of objects as part of Final Interim Report (10.15) ➢ The system must be able to generate follow-up actions in the	Progress Reporting, Gate Control, Closure, Monitoring & Control, 3pRM

	past on status still "open" and those actions closed since last "Gate" (10.18) ➢ The system must trigger a notification once FPR has been submitted (CMs to submit CBF) (10.20) ➢ The system must trigger a notification to Finance team to submit FFAR once CBFs have been submitted (10.21)	
#2	Business rules outside of the "Out-of-the-Box" SharePoint/Project Server 2013 business rules for (i.e. SharePoint Workflows, Project Server Workflows, Reporting) ➢ The system must support the configuration of various business rules (2.16) ➢ The system must ensure that tasks from a previous progress report that were 100%, cannot be edited (2.20) ➢ The system must recognize that if effort has been reported on a Task, the task cannot be deleted via a CR (4.10)	Progress Reporting, Maintaining & Changing the Plan
#3	A mechanism to historize Project Schedule Data for traceability and auditing purposes ➢ The system must allow historization of the baseline and current plans on a quarterly basis (2.17) ➢ The system must generate a view of the progression from the "current plan" published from the last Progress Report to the "current plan" produced as a result of the progress report taking place (2.24) ➢ The system must be able to archive all Gate information which is easily accessible for audit and traceability purposes (3.22) ➢ The system must allow historization of the current plans on a quarterly basis (after progress reporting) (4.11)	Progress Reporting, Gate Control, Maintaining & Changing the Plan
#4	Content views and filters on cross-project lists and registers ➢ The system must have a view of the Change Requests at the Project and SJU Management Level (4.1) ➢ The system must have a consolidated (central) view of all change requests, with filtering capabilities (4.6) ➢ The system will have a view RIO list feature which is a central repository for risks with options such as Export to excel and notifications (5.9) ➢ The system must be able to generate views of deliverables that are ready for publishing (8.19)	Maintaining & Changing the Plan, RIO Management, Monitoring & Control

Table 3: Customization Categories

To summarize Table 3, many of the customized requirements fall within distinct categories. The most impactful being consolidated views across all projects (from a project plan perspective) and consolidated views cross-project (from a list and register perspective). The customization categories directly impact the SJU reporting and dash boarding functionality that is used cross-processes.

Note: The Programme Financial Management process is not covered in the below requirements tables due to the uncertainty around the future of the process with Horizon 2020. After conducting an "As-Is" and "To-Be" workshop with the SJU Finance team, it was discovered that there was not enough information on H2020 to proceed with requirements at this time. Furthermore, due to these uncertainties and the level of interdependencies in the process between the Members, European Commission, Third Parties and the SJU, it was decided that the Out-of-the-Box SharePoint/Project Server 2013 Financial Management solution does not fit the purpose of the SJU, and will not be proposed until further information on H2020 is available.

The project team will continue to reach out to H2020 contacts and liaise with the SJU responsible contact in an effort to further understand the requirements for the new Programme.

2.2.2 Administrative & Transversal High Requirements

This section covers the DMS part of the project, where a detailed analysis of the administration and transversal cross-processes is provided. The identification of the requirements, in the second phase of the DMS/BMS project, was done through 20 “As-Is” and/or “To-Be” workshops organised with SJU program staff. These workshops resulted with the collection of 86 requirements across 16 administrative and cross-processes. Prior to Microsoft conducting a “Fit-Gap” analysis towards Microsoft SharePoint 2013, the requirements were prioritized by SJU. Over 95% of the requirements were identified to not require customisation which responds to the following Project Objective “to streamline and enhance the efficiency and effectiveness of SESAR JU business”. The 16 processes used to “bucket” the 87 requirements are identified below:

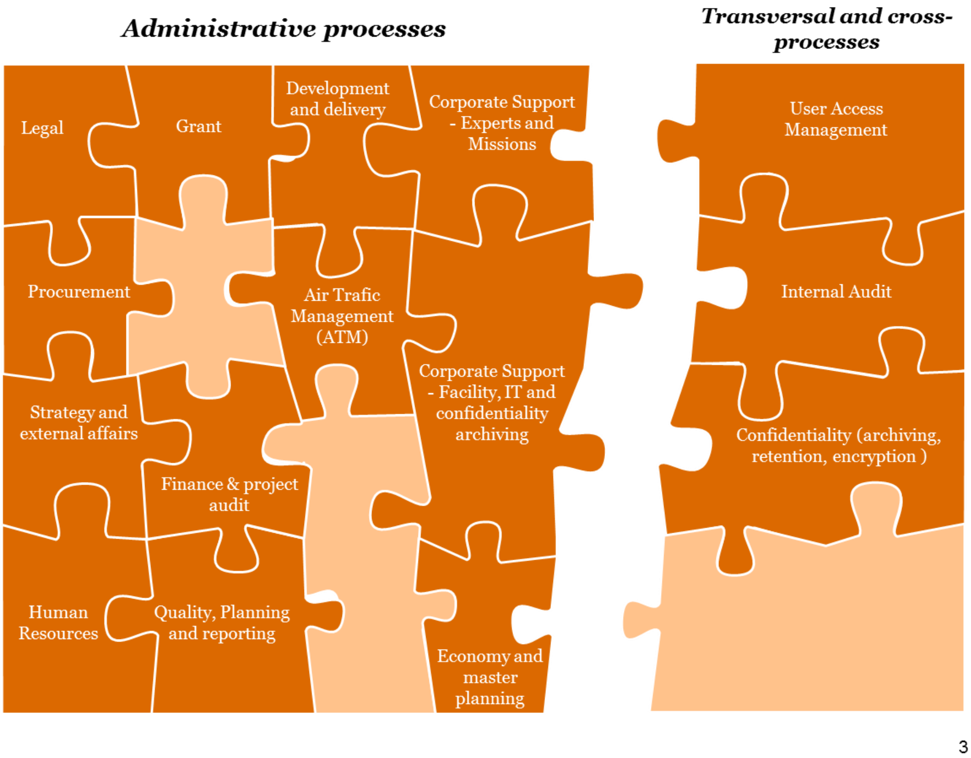


Figure 6: Administration & Transversal Cross Processes

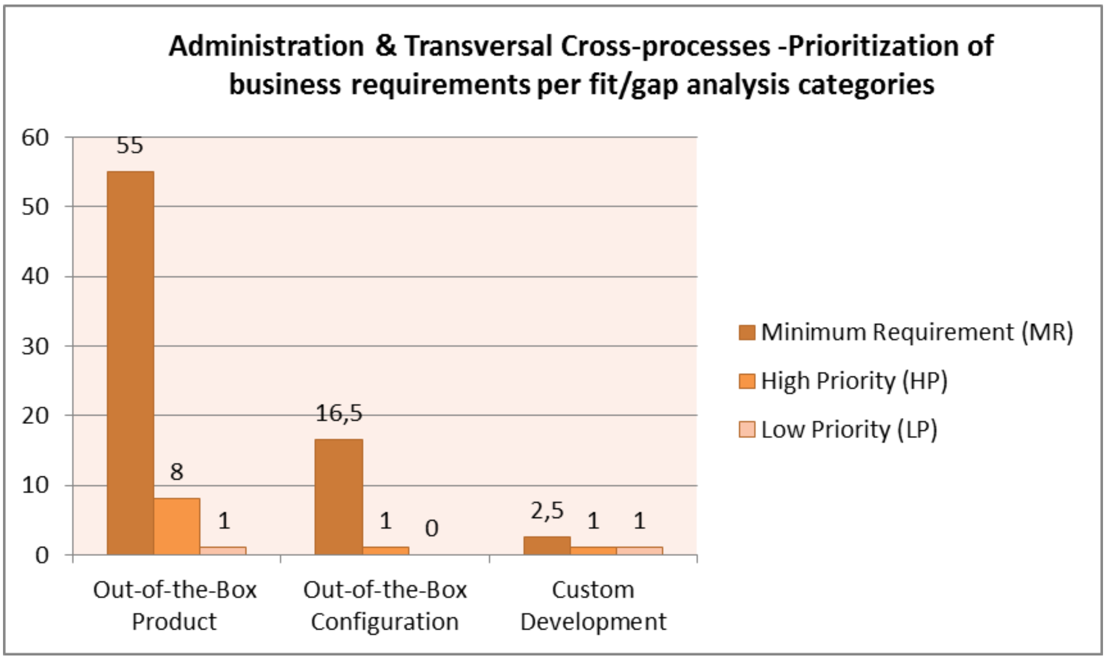


Figure 7: Administration & Transversal Cross-Processes, Prioritization of Business Requirements per fit/gap Category

To answer the requirements of the administration and transversal cross-processes, seven customisations were identified during the fit gap analysis and confirmed as mandatory for the business by the SJU Chief Administration Affairs. As a result of the requirements validation session, one of the customizations was dropped. As a result, only 6% of total administration and cross processes requirements need to be covered through the identified customisation categories.

Requirements	Priority	Fit/Gap Analysis
The DMS/BMS must be capable of extracting metadata elements automatically from records when they are captured (including OCR functionalities)	HP	Automatic capturing of metadata when scanning documents (OCR) requires a 3rd party application.
The DMS/BMS must allow the user to reset or request a new password directly in the system without the involvement of the helpdesk team	LP	This requires an Identity Management solution such as Microsoft Identity Manager to be in place. Users authenticates against active directory, so the password management reset functionality must be implemented there.
The DMS/BMS must allow to check permissions of users or groups across all SharePoint sites	MR	This requires custom development of a script or tool, or a 3rd party tool (Control Point or similar) that can scan all sites and cache the permission information in a data warehouse
The DMS/BMS must provide an unique identifier for a document including all versions. If the unique identifier is used for search, only the last version will be displayed by the system (by default).	MR	To ensure uniqueness across sites, a custom document id provider can be developed, which can generate globally unique ids.

Requirements	Priority	Fit/Gap Analysis
The DMS/BMS should allow to index the textual content of documents (MS Office, PDF, images…) and emails (Outlook,…)	MR	3rd party indexing filters can be purchased (i.e. images, videos…)
The DMS/BMS should allow to export the search in several formats according to the MS Office suite (i.e. CSV…).	MR	An app can be built that will enable the export of search results.

Table 4: Administration & Transversal Customizations

2.3 Assumptions

2.3.1 Requirements Assumptions (from Phase 2)

The assumptions below provide the context and set the framework in which the high-level requirements were collected and the fit-gap analysis carried out during Phase 2 of the project. The source of the majority of these items is the list of risks and assumptions from PwC's original offer. Assumptions made at the end of Phase 1 as part of the Project Initiation Report are also re-called here.

1. **Microsoft solution**: The project is based on the findings from a previous study and a recommendation of SharePoint 2013 and Microsoft Project Server 2013 as the best solution to fit SESAR JU requirements with limited customization.

2. **Customization**: The level of customization of Microsoft SharePoint 2013 and Project Server 2013 MUST remain low to ease future maintenance and updates.

3. **Document migration**: There is no formal migration from former to new. The migration approach to be followed is to take the documents and then include them manually in the system. In summary, automatic migration is out of scope for Microsoft and PwC, whereas the migration of certain documents is to be done manually by SESAR.

4. **External experts' involvement**: External program stakeholders (members) are not directly involved in requirements identification and validation. SJU stakeholders have a clear understanding of the current program benefits and limitations from the perspective of the external experts and convey their requirements.

5. **Workflow**: The defined solution should be "future proof" and ensure workflow could be added at a later stage.

6. **Roles and responsibilities**: PwC takes the project responsibility, SESAR JU remains the ultimate accountable party and Microsoft (Technical Integrator) take the responsibility for the delivering the technical solution and all related deliverables (e.g. budget estimates, technical architecture, build, etc.).

7. **Optimisation**: Processes will be streamlined by the new platform using standard functionalities and best practices where applicable.

8. **Engagement**: SESAR JUs stakeholders will be fully engaged, available and work closely on-site with PwC & Microsoft's teams.

9. Due to the extended absence of the Subject Matter Expert (SME) during the Phase 2 of the

project, Vicencia Da Silva, Edita Barauskaite & José Calvo have been involved as Business Owners to represent the Data Protection Manager (DPM) in the workshop relative to **protection of personal data, confidentiality and retention periods**.

10. **Horizon 2020**: At the time of collecting the high level requirements, there was no clear understanding about which H2020 rules will have to be applied for managing the Programme. Impact on S2020 working processes and associated tooling may vary depending on EC decision on the derogations asked by SJU.

2.3.2 *Preliminary Assumptions for Subsequent Phases*

A preliminary list of assumptions for the subsequent phases of the project has been drawn up as well. Pending a go decision it will be further elaborated at the start of the next project Phase (4).

1. **Microsoft solution**: Implementation work in the subsequent phases of the project is based on a confirmation of the assumption that the Microsoft solution is fit for purpose, on the choice of implementation scenario as well as confirmation of customization and configuration requirements.

2. **Customization**: The level of customization of Microsoft SharePoint 2013 and Project Server 2013 MUST remain low to ease future maintenance and updates.

3. **Document migration**: SJU will communicate its data migration approach and plan to PwC and Microsoft on time (before the beginning of Phase 5) to allow smooth data migration prior to the solution going live.

4. **External experts' involvement**: SJU will ensure involvement of external experts in the Test (5) Phase of the project if deemed necessary. PwC and Microsoft will receive SJU's decision on that and, as appropriate, further information before the beginning of Phase 5.

5. **Workflow**: Program workflow will be included in the scope of the Design (4) Phase. However, including Admin and Transversal processes workflow is subject to a positive decision on extending the project scope.

6. **Roles and responsibilities**: PwC takes the project responsibility, SESAR JU remains the ultimate accountable party and Microsoft (Technical Integrator) take the responsibility for the delivering the technical solution and all related deliverables (e.g. budget estimates, technical architecture, build, etc.). In relation to phases 4 and 5, Microsoft will perform all work required (technical specifications, build, etc) with the exception of Integration testing and User Acceptance Testing (see #14 below), while PwC's role is overall coordination and quality control.

7. **Optimisation**: Processes will be streamlined by the new platform using standard functionalities and best practices where applicable.

8. **Engagement**: SESAR JUs stakeholders will be fully engaged, available and work closely on-site with PwC & Microsoft's teams.

9. **Logistics**: An office for up to 4 people will be made available to PwC during the execution of the project, as well as office space for 3 people for Microsoft for Phase 4 & Phase 5.

10. **Project Manager availability**: It is assumed that the two SESAR JUs project managers have each 30% of their time allocated to the project on average.

11. **Steering Committee (SC):** will occur every six weeks, the SC has the right level of decision making and quickly address risk and issues.

12. **Project management meeting (1 hour):** occurs every two weeks (fixed timeline to be defined) – SESAR JU two project's managers (PMs) are available or will be represented accordingly. The two PMs have the authority to take actions and decisions.

13. **Issue resolution process**: Issues can be quickly resolved by SESAR JUs when they occur:
    - Limited (less than one day impact on the project) issues within 4 open business days;
    - Medium (more than one day less than two days impact on the project) issues within 3 open business days;
    - High (more than two days impact on the project) issues within 2 open business **days.**

14. **Phase 5** (build/test/customisation): will include unit testing (performed by Microsoft), Integration testing (performed by SESAR JU) and User Acceptance Testing (performed by SESAR JU). PwC will supervise and coordinate the testing phases.

15. **Deliverable commenting process**: Comments on draft and final deliverables:
    - 5 open days for consolidated comments;
    - Two rounds of commenting per draft and final documents maximum;
    - Documents will be provided on regular basis as intermediary versions and always accessible to stakeholders.

17. **Horizon 2020**: At the time of collecting the high level requirements, there was no clear understanding about which H2020 rules will have to be applied for managing the Programme. Impact on S2020 working processes and associated tooling may vary depending on EC decision on the derogations asked by SJU.

3. High level Requirements – Program

The Collection of requirements covered both the program management and administration. This chapter covers the program management analysis, which was based on processes. The analysis of the administration analysis part was based on modules and is covered in chapter (4).

Workshops with different stakeholders have been organised, to collect the High level requirements of the new application to be implemented at SESAR JU. The requirements reflect all the needs which SESAR JU is willing to cover in the new platform with minimal customization. In order to verify if the suitability of the new application proposed, a fit gap analysis study has been done by Microsoft. The results of the study are included within this document and are based on the following criteria (Out-of-the box Product, Out-of-the box configuration, and Customization).

1.1 Process 0: Project Initiation

1.1.1 High level Requirements & Fit/Gap Analysis

Each Project shall start with an initiation phase. This phase has a dual purpose.

1. In the initiation phase the project participants should prepare themselves to get ready to start the work.

2. Through the initiation phase the project should provide the SJU the essential information needed to take a go/no-go decision on the execution of the project.

During the initiation phase, the Members participating in the Project under the co-ordination of the Project Manager shall establish the project baseline to be proposed to the SJU by combining the various Members' contributions. In support of the first purpose indicated above it is expected that the project members start developing their project management plans. They are expected to extract the information that should be recorded in the Project Initiation Report which shall allow the SJU Executive Director to decide on the execution or not of the Project. The SJU will not review all project management plans in detail, but only the essential details provided through the Project Initiation Report.

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
0.1	The system must have a standard project site template that is created once a projects Multi-Framework Agreement (MFA) has been signed	MR		Project Sites are automatically created upon creation of a Project using a pre-defined Project Site Template **Solution Mapping:** **- Create Project using Enterprise Project Types** **- Create Project using a SharePoint Site and promote it to a Project by importing the site into Project Server** **- Create Project using a SharePoint List with an automated workflow to initiate the Project Creation** **- Create Projects using Microsoft Project and initiating the Site Creation while publishing the project** **- Project Site Templates can be used with pre-defined**	

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
				documents and content	
0.2	The system must be able to promote a project site following a workflow trigger, based on defined governance hierarchy: *- Initiation* *- Execution* *- Closure*	MR		Project Server has a Project Life Cycle features where you can define Phases and Stages of a Project and initiate an automatic Project Site Creation. **Solution Mapping: Enterprise Project Types with configurable Phases, Stages, Project Pages, Schedule Template and Project Site template**	

	High level requirements	Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
0.3	The system must have an initiation library on the project site where the following documents will be stored: *- BAFO contractual documents* *- Consolidated Project Report*	MR		Within a Project Site Template an Initiation Library can be defined with pre-defined columns (metadata). Upon Creation of a Project, the Project site is automatically created with the Initiation Library included **Solution Mapping:** **Document Library in the Project Site Template**	
0.4	The system must have an Initiation Library on the SJU Management site which will store the following documents per project: *- Revised Cost Assessments (RCAs) from the Members* *- Operational Analysis Report* *- Financial Analysis Report* *- Offer Acceptance Decision* *- Execution of Project Decision*	MR		An SJU Management Site can be created with an Initiation Library containing those documents. **Solution Mapping:** **- SharePoint Site** **- Initiation Library with Custom Columns (i.e. Project, Document Type)** **- Sent To Other Location feature to send the document from one library to another (cross site)**	

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
0.5	The system must allow users to capture information from contractual (BAFO) document and supporting documents (excel form) in a form or document on the Project Site	HP		Depending on the content types of the information to be filled in, two approaches can be considered here. Option 1, the documents can be managed as documents on the Project site in a document Library. Option 2, Depending on the information, the content of the document can be filled in in forms in the Project. When ready the content can be generated (after an approval if required) in a document (Word, Pdf or excel) and stored on the Project site library (with versioning) **Solution Mapping:** **- For Option 1: Document Library on the Project site** **- For Option 2: Project Detail Pages with Enterprise Custom Fields to capture content** **- For Option 2: SQL Server Reporting Services to create the Document (using standard out-of-the-box SQL views**	

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
0.6	The system must have different options to create projects with their project information and schedule	HP		To create a Project there are different ways: - Approach 1: The project can be initiated using Project types that contain forms where project information is logged. During the initiation phase you have also a project web app to create a schedule in real time - Approach 2: You can create Projects from a Project SharePoint list with metadata and start the initiation process. This will lead you to approach 1 - Approach 3: You can create a Projects site based on a template and asking people to load documents, create Project Tasks. When ready this site can be promoted to a Project and it can (depending on the type you choose initiate the process in Approach 1. The task are automatically converted into a Project Schedule. - Approach 4: If real time access is an issue, then SJU can also provide a Project Schedule Template (map with predefined columns) to the members and ask them to fill it in and sent it or put on a document library. Then SJU can create a project based on that Project Schedule through Microsoft Project. It can then initiate approach 1. This approach can also be used to exchange project schedule information between two parties	

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
0.7	The system must have a contact register where members contributing to a project can be added and responsibilities allocated on a project site level	MR		In the Project Site a SharePoint List Contacts can be created to assign a responsibility using Meta data **Solution Mapping:** **- SharePoint Contact List (Project Site)**	
0.8	The system must trigger an approval workflow for the Execution of a project	MR		The Project life Cycle (from Initiation to Closing) can be defined in Phases and Workflow Stages. In each step an approval workflow can be initiated. **Solution Mapping:** **- Project Server Life Cycle Management (Phases & Stages)** **- Project Server Workflow (SharePoint Designer)**	
0.9	The system must allow users to generate an Initiation Gate report which is view on the following: *- MPP Project Plan* *- Deliverables* *- Dependencies* *- Risks, Issues, Opportunities*	MR		Integrated Reporting tools can be used to build a Gate Report and make it accessible through the BI solution and/or in a Project Page **Solution Mapping:** **- Microsoft BI & Reporting (Integrated Mode)** **- Out-of-the-box SQL views (for SharePoint components it is limited to the standard columns of a list)** **- Data Source to SharePoint Lists**	

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
0.10	As part of the Initiation Gate report the system must allow users to provide: *- Operational Recommendation (green, amber, red)* *- Advice on Project Execution*	MR		Custom Fields can be used in Project Pages to log a Recommendation based on a pre-defined lookup table representing the RAG and for Advice a multi-line text field can be used to log information **Solution Mapping:** **- Project Detail Page for Gate Report** **- Enterprise Custom Fields & Lookup Tables**	
0.11	The system must allow a user to generate latest approved Baseline Schedule and Initial Current Schedule (MPPs)	MR	The Baseline versus Current Plan can be viewed in both the Project Web Application and in the Microsoft Project Client **Solution Mapping:** **- Baseline in Project Web App** **- Baseline in Project Professional (Client)** **- Pre-defined Reports/Dashboards with Baseline information** **- Pre-defined Visual Reports (Excel and Visio Format)**		

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
0.12	The system must allow users to trigger workflow notifications	MR		Upon submitting a specific step within the Initiation, a workflow can trigger an email notification. **Solution Mapping:** **- Project Server Life Cycle features** **- Project Server Approval Workflow (SharePoint Designer)**	
0.13	The system will have the functionality to report on the following: *- Projects going into Initiation Phase* *- Projected going into Execution Phase*	MR		An Enterprise View is available to have a list of all Projects grouped by Phase and Stage of the Project Life Cycle with Grouping & filtering capabilities with the possibility to pre-define Views, Grouping and Filtering specific for Initiation and/or Execution. Next to that, the data concerning Phases is also available in out-of-the-box SQL Views **Solution Mapping:** **- Project Centre Page** **- Pre-defined Views/Filters** **- Ad-hoc Grouping/Filtering** **- Excel Services or SSRS with out-of-the-box SQL Views**	
0.14	The system must allow emails to be stored in document libraries within sites	LP	You can save an email document with attachments as a file in the DMS/BMS.	DMS/BMS can be configured to store received emails by forwarding them to the document library	
0.15	The system must have search functionality that supports relevancy tuning, and has a number of built-in linguistic features that helps the user find what it's looking for (work breaking, stemming, spelling variants, and spelling correction).	MR		**Solution Mapping:** **- SharePoint Search Engine**	

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
0.16	The system must allow access rights to be managed at least at the level of a whole site (access rights at library/document level are most likely requiring too much effort to manage and therefore shall be avoided)	MR		Project Server has built-in Security capabilities to manage security on the level of Projects and Document Libraries **Solution Mapping:** **- Project Server Security** **- SharePoint Security**	
0.17	The system must allow a user to sync filtered views of selected document libraries to a local computer, and have changes automatically synchronized bi-directionally	MR		**Solution Mapping:** **- OneDrive for Business Client**	

1.2 Process 1: Integrated Planning

1.2.1 3.1.1 High level Requirements & Fit/Gap Analysis

The purpose of the integrated planning process:

- Is to bring together and consolidate any relevant information that contributes to a viable plan in order to ensure a clear definition of the work to be done by each project.
- Generate and baseline clear expectations, which will form the basis of an agreed work-plan between the SJU and the project and members.
- Is to detail the dependencies between the various contributors within the Programme and the SJU and as such to organise any work within the Programme;
- is to use planning information to monitor scope, progress and quality, with the aim of forecasting progress against the plan and when/where needed identify and execute corrective actions;

Project planning shall ensure that each project, depending on the nature of its activities (i.e. research or demonstration) and the type of the project (SESAR JU solution, Technological Solution, Content Integration, Transversal Support) complies with the policies concerning:

- Programme and release life cycle

- Content Integration and other transversal activities;

- The way a SESAR Solution or a SESAR Technological Project conducts the work to be done and is aligned with the maturity targets;

- Compliancy visibility will be derived from information such as milestones, identified dependencies and deliverables.

The table below shows the list of requirements concerning the integrated planning:

High-level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
1.1	The system must generate Integrated Plan views of the following information: *-V&V - Platform View* *-V&V System View* *-V&V - Service Provider View* *-Release View* *-OI Schedule View* *-Current Project View* *-Baseline Project View*	MR		Once the Integrated Project Schedule is synchronized with Projects and content available in SharePoint lists. It is possible to generate this views using out-of-the-box features in Microsoft Project Professional. ➢ Solutions will have their own project plans with Exercises (and all V&V fields). ➢ Soft links (dependencies) between Project Plans and Solutions ➢ SJU will have control over validation exercises ➢ Embedded reporting using excel services/SSRS **Solution Mapping:** **- SharePoint Lists** **- Enterprise Projects** **- Project Professional Views/Filters** **- Project Server Baselining**	
1.2	The system must generate the following views for Project Managers: *- Release Schedule* *- OI Schedule* *- Current Project* *- Baseline Project*	MR		A Project Manager can open all his project in one Schedule and use pre-defined views and filters. Enterprise custom Fields for Release & OI need to be configured, Filters & Views need to be configured. **Solution Mapping:** **- Project Centre** **- Project Professional**	

High-level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
				View/Filters **- Project Server Baselining**	
1.3	The system must be able to extract release exercise information from individual Project Plans and the V&V exercise register and consolidate into one plan. *- Filter for Specific Exercises* *- Baseline the Plan* *- Secured Baseline*	MR		Same as 1.1	
1.4	The system must have a release register where users can manage release exercise milestones associated to individual projects: *-tasks* *-deliverables* *-milestones*	MR		Part of 1.3	

High-level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
1.5	The system must be able to set pre-defined and ad-hoc filters/views and have a sorting capability on a consolidated schedule	MR	It is possible to open several projects in a consolidate schedule with the possibility for pre-defined and ad-hoc filters and views and sorting capabilities **Solution Mapping:** **- Enterprise Projects on the server** **- Project Centre to select projects** **- Project Professional to open a consolidated schedule**	Pre-defined filters & views need to be configured **Solution Mapping:** **- Project Professional Views/Filters** **- Enterprise Projects**	
1.6	The system must be able to export a project plan and/or consolidated project plan into different formats	MR	It is possible to download the Project Schedule in mpp format or to export the schedule in other formats such as pdf, csv, xml. **Solution Mapping:** **- Project Professional Export**		
1.7	The system must be able to use multiple hierarchies in the plan	MR		In the Project Plan on the level of Project and Task it is possible to use pre-defined Lookup tables to link Projects to an hierarchy and to link the WBS (Tasks, Milestones, Deliverables, Gates) to an hierarchy defined in a lookup table **Solution Mapping:** **- Enterprise Custom**	

High-level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
				Fields & Lookup Tables **- Project Web App views** **- Project Professional views**	
1.8	The system must be able to provide multiple project plan views based on meta data which are associated on the level of project task, deliverable and milestones	MR		Assuming that Task, Milestones and Deliverables are part of the WBS in the schedule it is possible to have several views of the schedule based on Enterprise Custom Fields **Solution Mapping:** **- Enterprise Custom Fields & Lookup Tables** **- Project Web app Views/Filters** **- Project Professional Views/Filers**	
1.9	The system must have a validation workflow that allows the V&V information about an exercise in the register to be approved/baselined, which will then restrict most subsequent modifications of that information by the project	MR		Same as 1.1	

High-level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
1.10	The system must be able to exchange project plans with external parties	MR	It is possible to exchange plans from one party to another using the standard export capabilities using a predefined template called map with synchronization capabilities while keeping the identifiers between the two schedules aligned **Solution Mapping:** **- Enterprise Project (on the server)** **- Enterprise Custom Fields** **- Microsoft Project Export**		

1.3 Process 2: Progress Reporting

1.3.1 High level Requirements & Fit/Gap Analysis

The principle of reporting on the progress is established in the MFA and is done quarterly.

The objective of Progress Reporting is to monitor in a qualitative and quantitative manner the progress and the forecast of the Projects including the status of their risks and issues.

In order to ensure proper monitoring and control, the Programme collects and consolidates information from Projects on their progress. The SJU validates the progress of the overall Programme and initiates corrective actions on time, effort and/or quality where necessary.

The content of the reporting can be summarised as follows:

- A summary status which gives an executive statement on the progress made and key issues;
- Achievements made in the last reporting period, i.e. milestones, control gates, and key data on tasks;
- % completion at the task level;
- Top 5 risks in order of criticality and/or priority;
- Red and amber issues, with their status and corrective actions;
- Main targets and events over the next reporting period.
-

The table below shows the list of requirements concerning the Progress reporting:

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
2.1	The system must have calendars with different views for Project and SJU Management where meetings can be logged and visible to the appropriate Project/SJU Management Users	HP		Each Project has a Project Site an out-of-the-box calendar. Events can be logged with custom fields facilitating the use of different views. The same features are available in other sites as well **Solution Mapping:** **- SharePoint Calendars**	
2.2	The system must have an announcement register on the Extranet Home Page	HP		**Solution Mapping:** **- SharePoint Announcement App**	

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
2.3	The system must have a Progress Reporting Register with pre-populated fields, drop down lists and free form text fields	MR		Progress Reports shall be generated in an automated way based on data stored in the Project Site and data stored in the Project. After the Progress Report generation (In Project Server) the document can be stored in a document library (in pdf for example) with the required custom fields **Solution Mapping:** **- Document Library with meta data on the Project Site** **- Pre-requisite: Project Server Progress Report Process in the Project Life Cycle**	

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
2.4	The system must be able to know that and when a progress report was published. Rolling up project progress to programme level requires all project current plans to be up to date	MR		Progress Reports can be logged using Pre-defined Custom Fields in Project Pages specifically configured for Progress Reporting. The Progress report document can be generated and stored in a document library on the Project site. In the library you will see a create date of the report. On the other hand when submitting the Progress Report (defined in the Project Life Cycle) the status can change thanks to a Workflow (approval if necessary). This way you can track when the report was submitted. Finally you can create business rules in reports to check whether a project is up-to-date or note, such as uncompleted task in the past or completed tasks in the future. **Solution Mapping:** **[Same approach as Req 0.10 of the Project Initiation Process]** **- Project Server Workflow** **- Stages to support Progress Reporting** **- Project Detail Pages to capture Progress Information** **- Project Site Library to store the generated Progress Report** **- SharePoint Designer to build the workflow**	

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
2.5	The system must trigger notifications to users at the SJU and Project when the status of a report has been changed to published	MR		After submitting the Progress Report an email notification can be sent to the user **Solution Mapping:** **- SharePoint Designer to build the workflow** **- See also 2.4**	
2.6	The system must allow users to upload documents	MR	Documents can be uploaded in document Libraries on the Project site or any other SharePoint Site **Solution Mapping:** **- SharePoint Document Library** **- Upload Feature**		
2.7	The system must be able to generate consolidated views of following objects as part of the Quarterly Project Progress Report: *- Milestones* *- Tasks* *-Deliverables* *- Gate Actions Table* *- Dependencies* *- Change Requests* *- Top 5 Risks* *- Red & Amber Issues*	MR		Assuming that this components are objects in the Project Schedule and for list such as Risks, Issues & deliverables the Standard fields are used and if CRs are is a Type within the Issue Register, then the Progress Reports can be generated in real time using the automated Project Server Data warehouse. Different integrated reporting capabilities are available **Solution Mapping:** **- Excel Services** **- SQL Reporting Services (SSRS)** **- SQL Views (out-of-the box) are used for Reporting** **- SharePoint data connection to lists**	

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
2.8	Once published, the system must generate the Progress Report and automatically saved in pre-defined libraries in a non-editable format (i.e. PDF)	MR		After a Progress Report is generated in the Project it can be generated in different formats (pdf, xls, word) and saved by the user on any document library **Solution Mapping:** **- Project Detail Page** **- SQL Reporting Services (SSRS)** **- SharePoint Document Library**	
2.9	For the Milestone Register, the system must be able to generate the following: *- Milestones or Gates achieved in the current reporting period and those not achieved in the past, current and next period*	MR		Progress Reports for individual Projects can be generated in real time using the automated Project Server Data warehouse. Different integrated reporting capabilities are available. Note in Project Server Milestones are managed in the Schedule and not in a Register **Solution Mapping:** **- Excel Services on the embedded BI Platform** **- SQL Reporting Services (SSRS)** **- Reporting based on SQL Views (out-of-the box)**	

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
2.10	For the Deliverable Register, the system must be able to generate the following: *- Deliverable handed over in the current period and those not being handed over in the past and by the end of the next period*	MR		Progress Reports for individual Projects can be generated in real time using the automated Project Server Data warehouse. Different integrated reporting capabilities are available. **Solution Mapping:** **- Excel Services** **- SQL Reporting Services (SSRS)** **- SQL Views (out-of-the box)** **- Connection to Data Source of SharePoint list**	
2.11	For the Gate Action Table, the system must be able to generate the following: *- Actions in the past on status still "open" and those actions closed since the last Gate*	MR		Progress Reports for individual Projects can be generated in real time using the automated Project Server Data warehouse. Different integrated reporting capabilities are available. Assuming that Gate Actions are managed as Tasks in the Schedule **Solution Mapping:** **- Excel Services** **- SQL Reporting Services (SSRS)** **- Based on SQL Views (out-of-the box)**	
2.12	For the Dependency Register, the system must be able to generate the following: *-Dependencies with a "needed by date" within the current or next period and those with status different than "achieved" in the past*	MR	An out-of-the-box Excel Services report is available on the BI Platform of Project Server for dependencies cross Project. **Solution Mapping:** **- Out-of-the-box Excel Services Report**	Next to the out of the box Report, additional reports could be built that combine data from the Project Schedule and data from Dependencies	

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
2.13	The system must be able to show a consolidated view of Change Requests *- Not "closed"* *- "Closed" in the current period*	MR		Once the view is created reporting tools can be used to report on CRs **Solution Mapping:** **- Excel Services** **- SQL Server Reporting Services**	**Customization n°2:** A consolidated view of Lists cross Project site (such as Change Request, Risk, Issues) is not supported in the out-of-the-box. A customization is required to create a consolidated view of all Change Request
2.14	The system must be able to show the Top 5 Risks (based on criticality) and the "Red" and "Amber" issues from RIO register	MR		RAG values can be entered in the RIO on which reporting can be done **Solution Mapping:** **- Risk, Issue, Opportunity Register in the Project Site** **- Custom Fields for RAG** **- Excel Services for Reporting** **- SQL Reporting Services (SSRS)**	**Customization n°2:** If needed in a consolidated view of all Projects in one report
2.15	The system must be able to roll up the Project Progress Reports and consolidate with member quarterly effort report to produce quarterly reports based on different hierarchies	MR		A Portfolio Report can have a consolidated view of Progress of the different Projects with drill down capabilities to the individual Project Detail. No customization is required if for Risk, Issues and Deliverables the standard fields are used for reporting. **Solution Mapping:** **- Content of Enterprise Projects** **- Content of Project Sites (Risk, Issues, Deliverables)** **- Enterprise Custom Fields** **- Schedule Content** **- SQL Reporting Services (SSRS)**	**Customization n°2** If the assumption doesn't apply and if the Dependency Trend is required

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
2.16	The system must support the configuration of various business rules	MR		The following business rules are supported: - Rules in SharePoint Workflows - Rules in Project Server Workflows - Rules in Reporting	**Customization n°3:** Other rules require customization
2.17	The system must allow historization of the baseline and current plans on a quarterly basis (after progress reporting) - traceability for auditing purposes.	MR			**Customization n°4** A mechanism needs to be foreseen to historize Project Schedule Data after the Progress Report has been submitted
2.18	The system must have a number of standard libraries for every project (including for the SJU at programme level) that allow segregating files related to different processes and phases of the project lifecycle.	MR		Upon Project Creation a Project Site is automatically created based on a Project Site Template containing the pre-defined Libraries with the pre-defined meta data **Solution Mapping:** **- Project Site Template** **- Document Library**	
2.19	The system must have a Library for each project where content can only be uploaded and edited by SJU Management "Latest Library"	MR		Each Document Library can have its proper Permissions configured **Solution Mapping:** **- Library Permissions**	
2.20	The system must ensure that tasks from a previous progress report that were 100%, cannot be edited (covered in 2.16)	HP			**Customization n°3:** A mechanism needs to be foreseen to block deletions/updates of tasks. Or it can be solved through reporting combined with Customization 4°

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
2.21	The system must ensure that only projects in the Execution or Closure Phase are able to create a Progress Reports	HP		Progress Reports can be generated after a certain step in the Project Life Cycle of the Project **Solution Mapping:** **- Enterprise Project Type** **- Project Phases and Stages** **- Project Detail Pages** **- SharePoint Designer Workflow**	
2.22	The system must ensure that if a Progress Report (i.e. final interim report) is required by a Project after the Final Project Report (FPR) is submitted, it will be stored in the Closure Document Library as part of the Closure Phase	MR		Progress Reports can be generated in real time using the automated Project Server Data warehouse. After the generation of the Report it can be stored in the Project site on a Document Library or any other site. **Solution Mapping:** **- SQL Reporting Services (SSRS)** **- SharePoint Document Library**	
2.23	The system will have narratives on the Progress Report form, with instructions and FAQs when filling out the Progress Report	HP		It is possible to capture narratives in pre-defined Custom Fields on a Project Page used for Progress Reporting. This narrative can be used in reporting. **Solution Mapping:** **- Pre-Defined Project Detail Pages for Progress Reporting** **- Enterprise Custom Fields** **- SQL Server Reporting Services**	

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
2.24	The system must generate a view of the progression from the "current plan" published from the last Progress Report to the "current plan" produced as a result of the progress report taking place (i.e. to have the ability to see evolution from one progress report to the next)	HP		This is a report based on the Current Project Data and the historical data **Solution Mapping:** **- SQL Server Reporting Services (SSRS) or Excel Services**	**Customization n°4**

1.4 Process 3: Gate Control

1.4.1 High level Requirements & Fit/Gap Analysis

The objective of a Control Gate is to assess the accomplishments of the past period, usually a year, and to get approval to proceed to the next phase.

The SJU Programme Manager is responsible for preparing and running Control Gates. He does this in close cooperation with the Project Manager or the Project Managers of the project or the projects involved in the Control Gate review.

The user profiles under the platform must be as clear as possible given the involvement of various stakeholders from different organisations. Some key information must be available and editable for users.

The table below shows the list of requirements concerning the User Profiles of Gate Control:

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
3.1	The system must have calendars with different views for Project, SJU Management, where meetings can be logged and visible to the appropriate Project/SJU Management Users	HP	Each Project site can have one ore multiple calendars where events can be logged. **Solution Mapping:** **- Calendar in the Project Site**	Additional views can be configured based on meta data	
3.2	The system must alert users of upcoming events based on pre-defined dates (i.e. 90, 30, 5, 2 days prior to Gate Review meeting to facilitate preparation activities)	MR		Tasks can be created in a SharePoint task list with a due date. Upcoming tasks can be displayed in a view on the Project home page. By connecting the task list to Outlook, reminders can be set for the tasks, and users who have connected the tasks list to Outlook will get reminders as well as see their tasks in the task pane. **Solution Mapping:** **- SharePoint Tasks**	

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
3.3	The system must have a form for the Gate Interim Progress Report with pre-populated fields, drop down lists and free form text fields	MR		Progress Reports shall be generated in an automated way based on data stored in the Project Site and data stored in the Project. After the Progress Report generation (In Project Server) the document can be stored in a document library (in pdf for example) with the required custom fields **Solution Mapping:** **- Document Library with meta data on the Project Site** **- Pre-requisite: Project Server Gate Process in the Project Life Cycle**	

	High level requirements	Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
3.4	The system must have a gate control checklist with automated and free-form texts fields (for comments)	MR		The Checklist would be partially automated (such as status information) with content from the Project and partially manual by means of custom fields (text, drop down list, flags) in Project Pages configured to support Gate control **Solution Mapping:** **- Project Server Project Life Cycle containing a Gate Process** **- Project Detail Pages to capture through custom fields the manual part of the Checklist** **- SQL Server Reporting Services to generate both the manually entered checklist and the automated checklist into one report**	
3.5	The Gate checklist must be integrated in the progress/interim report or should be automatically be generated when progress report has been submitted, and sent to Project Manager and other subscribed users	HP		same as 3.4	

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
3.6	The system must be able to notify users when the Gate Checklist has been completed	HP		After completion of the Checklist the Workflow Stage where the Checklist is linked can be submitted to trigger a workflow to send an email notification. Another approach is the status of the Checklist which can be consulted in the system **Solution Mapping:** **- Project Server Life Cycle with Gate Stages to support the Checklist** **- Workflow build in SharePoint Designer** **- Workflow Status Page**	
3.7	The system must be able to link an outlook meeting invite to a calendar "event" created	HP	SharePoint Calendars can be opened in Outlook, with two-way synchronization enabled. A SharePoint Calendar can be viewed next to a personal calendar, or in overlay. Events can be copied from one calendar to the other. **Solution Mapping:** **- SharePoint/outlook Calendar Integration**		

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
3.8	The system must be able to notify and remind users that they have documents to submit: *- Submit Interim Report* *- Submit Gate Presentation*	HP		Tasks can be created in a SharePoint task list with a due date. Upcoming tasks can be displayed in a view on the Project home page. By connecting the task list to Outlook, reminders can be set for the tasks, and users who have connected the tasks list to Outlook will get reminders as well as see their tasks in the task pane. **Solution Mapping:** **- SharePoint Task List**	
3.9	A system user must be able to trigger a publish workflow for the Interim Report in the system	MR		(Assuming that publishing the report means making it visible to all users in the project site): The document library can be configured to require approval of formal versions before making them visible to all members of the site. An approval workflow can be run to have the report approved and "published". **Solution Mapping:** **- SharePoint Document Library** **- Version Approval**	

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
3.10	The system must be able to generate consolidated views of following objects as part of the Interim Report: *- Milestone* *-Deliverable* *- Gate Actions Table* *- Dependency* *- Change Request* *- Top 5 Risks* *- Red & Amber Issues*	MR		Same as 2.7 in the Progress Reporting Process	
3.11	For the Milestone, the system must be able to generate the following: *- Milestones or Gates achieved in the current reporting period and those not achieved in the past, current and next period*	MR		Same as 2.9 in the Progress Reporting Process	
3.12	For the Deliverable , the system must be able to generate the following: *- Deliverable handed over in the current period and those not being handed over in the past and by the end of the next period*	MR		Same as 2.10 in the Progress Reporting Process	
3.13	For the Gate Action Table, the system must be able to generate the following: *- Actions in the past on status still "open" and those actions closed since the last Gate*	MR		Same as 2.11 in the Progress Reporting Process	
3.14	For the Dependency, the system must be able to generate the following: *-Dependencies with a "needed by date" within the current or next period and those with status different than "achieved" in the past*	MR	Same as 2.12 of the Progress Reporting Process		
3.15	The system must be able to show a consolidated view of Change Requests *- Not "closed"* *- "Closed" in the current period*	MR		same as 2.13 in Progress Reporting Process	same as 2.13 in Progress Reporting Process
3.16	The system must be able to show the Top 5 Risks (based on criticality) and the "Red" and "Amber" issues from RIO register	MR		Same as 2.14 in Progress Reporting Process	Same as 2.14 in Progress Reporting Process

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
3.17	The system must have a register for capturing follow-up actions as a result of the Gate Review Meeting	MR		When a Project is closed follow-up actions can be tracked in a Task List **Solution Mapping:** **- Task List on the Project site**	
3.18	The system must provide users with the functionality to link project deliverables to a gate	MR		Option 1: Gates can be defined as Milestones in the Project Schedule To this Gate you can link a Deliverable that resides in the Deliverable List in the Project site. Option 2: Both Gates and Deliverables are defined in the Project Schedule as resp. Milestone and Task in the WBS and linked through hard links in Project Server **Solution Mapping:** **- Deliverable feature in Project Server** **- Deliverable List in the Project Site** **- Hard links in Project Server**	

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
3.19	The system must be able to manage gates as milestones in the project plan	HP	Gates and Milestones can be managed in the Project Schedule as Milestones. Thanks to a custom field it is possible to make a difference between a Gate and a Milestone which facilitates filtering & Reporting **Solution Mapping:** **- Project Server Schedule**	Thanks to a custom field it is possible to make a difference between a Gate and a Milestone which facilitates filtering & Reporting **Solution Mapping:** **- Project Server Schedule** **- Enterprise Custom Fields & Lookup tables**	
3.20	The system must be able to include the Gate Event and tasks in the Project Plan with the functionality to exclude the Gate Milestone from the Baseline (i.e. modifications to the planned gate date should not involve a Change Request to the baseline)	HP	See 3.19. In Project Server you can have a full Baseline of the Project Schedule or only selected Tasks or Milestones. This way you don't need to baseline Gate Milestones **Solution Mapping:** **- Entire Baselining Schedule** **- Selected Task Baselining**		
3.21	The system will have narratives on the Gate Report form, with instructions and FAQs when filling out the Progress Report	HP		Same as 2.23 of the Progress Reporting Process	
3.22	The system must be able archive all Gate information which is easily accessible for audit and traceability purposes	MR			**Customization n°4**

1.5 Process 4: Change Request

1.5.1 High level Requirements & Fit/Gap Analysis

The objective of the change management process is to ensure that changes originated at the Project level are analysed, and the appropriate measures such as changes in schedule, scope, budget allocation per task etc., are taken to update the project plan when needed.

The Programme management shared and agreed baseline is determined by a Programme reference model and a set of Programme configuration items, defined and maintained by the Information and Configuration Management process.

The table below shows the list of requirements concerning the Change Request process:

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
4.1	The system must have a view of the Change Requests at the Project and SJU Management level	MR		At the Project level you can have a CR List. At the SJU level you can have a simple view of all CRs on a certain Page and according to certain criteria. From that View you can access the CR which resides on the Project site. **Solution Mapping:** **- SharePoint List** **- Content Query Web part**	**Customization n°5:** If the standard isn't fit for purpose, then a customization is required for a SJU CR Screen (roll-up of content)
4.2	The system must have a Change Register form that has the following inputs: *- Project Items to be modified* *- Description field* *- Initiator Comment* *- Rationale for Change* *- Sponsor* *- Sponsor Comment*	MR		Each Project shall have a Project site with a Change Register where this fields can be configured **Solution Mapping:** **- SharePoint List on the Project Site**	
4.3	The Change Register must allow adding attachments	MR	Adding attachments in a list item is out-of-the-box		

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
4.4	The system, through automated notifications must inform the appropriate role that they have an action pending	HP		On Submitting a workflow, an email notification can be sent to the person to whom the action is assigned. **Solution Mapping:** **- SharePoint Designer Workflow**	
4.5	The system must allow users to see all active workflows allocated to them	HP		A Workflow Tasks is assigned to a user in a specific task list. The user can have a view of all his tasks cross project site in the My Tasks page **Solution Mapping:** **- SharePoint Designer Workflow** **- SharePoint Work Management Services**	
4.6	The system must have a consolidated (central) view of all Change Requests (from all projects), and a filtering capability by: *-Hierarchy* *- Project* *- Change Initiator* *- Change Sponsor* *- Change Approver* *- Status* *- Type*	MR		Same as 4.1	**Customization n°5:**

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
4.7	The system must allow users to update data directly in the system in real time	LP		Users shall have access to the Change request form in their Project Site where they can view and edit in real time. The affected deliverables and Milestones are tasks in the Project Schedule created by the user. The user can edit those in real time as well and manually link Deliverables/Milestones in the schedule with a Change request in the CR list **Solution Mapping:** **- SharePoint List** **- Enterprise Project with Project Schedule** **- Related item feature**	
4.8	The system must have a validation capability that compares the latest Baseline to the Proposed Plan from the Change Request Initiator, and as a result produce an output of all differences between the two plans Output Includes: *Validation* *Contribution Comparison* *Contribution Roles* *Contribution Description* *Summary* *Additions* *Deletions* *Updates* *Member Impacted Tasks* *Dependencies* *Tasks*	MR	A Microsoft Project Compare Tool is available to make comparison between two versions of a Project Schedule to compare all changes in standard fields based on out-of-the-box Gantt tables and resource tables. The outcome is a comparison report **Solution Mapping:** **- Microsoft Project Professional** **- Compare Projects Tool**	You have also the possibility to configure your own comparison tables based on your Enterprise Custom Fields. This way you can compare any value in your Project Schedule **Solution Mapping:** **- Microsoft Project Professional** **- Compare Projects Tool** **- Enterprise Custom Fields** **- Enterprise Tables (Project Professional)**	

	High level requirements	Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
4.9	The system must be able to version the baseline and current plans to differentiate the difference between versions.	MR	By Default you can Baseline up to 11 Baselines. You can compare the Baseline Plan and the Current Plan in terms of schedule and cost. The baseline versus Current Plan is visible on both the Gantt table and on the Gantt Chart. **Solution Mapping:** **- Baseline (Project Web App)** **- Baseline (Project Professional)**		
4.10	The system must recognize that if effort has been reported on a Task (e.g. via a Quarterly Progress Report), the Task cannot be deleted via a CR.	MR			**Customization n° 3**
4.11	The system must allow historization of the current plans on a quarterly basis (after progress reporting) - traceability for auditing purposes.	MR			**Customization n° 4**
4.12	The system must allow an implemented Change Request to be tagged/visible to relevant projects via a notifications (alerts)	MR		Implemented Change Requests have status completed in the Schedule. Thanks to a formula field and indicator can be highlighted on the level of the deliverable in the Schedule **Solution Mapping:** **- Microsoft Project Schedule** **- Formula Fields with Indicators**	

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
4.13	The system must allow a user to create "what-if" scenarios by analysing potential change requests without impacting the Baseline or Current Plan	HP	What-if scenarios can be done activating or in-activating tasks (=tasks, deliverables, milestones). This way changes can be simulated in the current plan without impacting the baseline and/or current plan. **Solution Mapping:** **- Project Professional - Active/In-Active Tasks**		
4.14	The system must be able to "mark" or create "alerts" on specific deliverables (where a Change Request impacts that deliverable)	MR		When a Change Request impacts a Deliverable it results in Additional effort or Cost. This will be visible in the Project Plan where the variance between baseline/current plans can be visualized. Thanks to a formula field an indicator can be highlighted for the Deliverable in the schedule **Solution Mapping:** **- Microsoft Project Schedule** **- Formula fields with indicators**	
4.15	The system must be able to report on Change Request History	MR		The change request register has versioning History. Every change to a CR is logged in the history. **Solution Mapping:** **- SharePoint List versioning**	

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
4.16	The system must be able to make views on Change Request data of related projects available in the project	MR		Thanks to the Related Item feature you can see what objects are linked to a Change Request. This could be a Change Request of another Project **Solution Mapping:** **- SharePoint List Related Items**	

1.7 Process 5: Risk, Issues, and Opportunities Management

1.7.1 High level Requirements & Fit/Gap Analysis

The way Risks, Issues and Opportunities (RIO) are going to be managed is throughout the Execution Phase of the SESAR JU Programme. It describes the procedures and processes to register them, to define Treatment Actions (TA) and to follow them up throughout their life cycle.

The purpose of the RIO procedure is to provide information and guidance to facilitate the integration and the visibility on the Risks, Issues and Opportunities into the overall SESAR Programme registers.

The objective of RIO Management is to ensure that, throughout the lifecycle of a project and/or the programme, the processes to identify potential events affecting the ability of the SJU to reach its objectives or seizing opportunities to capture benefits are operating effectively and on a timely manner at all levels of the programme (e.g. Project, WP and SJU levels).

The table below shows the list of requirements concerning the Risk, Issues and Opportunities Management:

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
5.1	For each Project and for the SJU Management the system will have a Risk Register accessible by each Project and SJU Management with automated (RIO ID only), dropdown and free form text fields	MR		Each Project has a Project site with a predefined Risk Register with automatic id numbering. Additional column (dropdown, text) can be configured in the Risk Register **Solution Mapping:** **- Project Risk List on the Project Site**	
5.2	For each Project and for SJU Management the system will have an Issue Register accessible by each Project and SJU Management with automated (RIO ID only), dropdown and free form text fields	MR		Same as 5.2	
5.3	For each Project and for the SJU Management the system will have an Opportunity Register accessible by each Project and SJU Management with automated (RIO ID only), dropdown and free dorm text fields	HP		Same as 5.2	

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
5.4	The system will allow linking Risk, Issues and Opportunities to Project Deliverables & Milestones	HP	It is possible to Link RIO's to any Schedule Task (Deliverables & Milestones). If Deliverables are defines as Document or on a Deliverables list it is also possible to link RIO's to these types of objects or to other RIO's **Solution Mapping:** **- Related Items feature in the Schedule, List & Documents**		
5.5	The system will allow linking Risk, Issues and Opportunities to Project Deliverables & Milestones in other projects	HP	Same as 5.4 but also to other Projects		
5.6	The system will allow linking Risk, Issues and Opportunities to Solutions	HP		Assuming that Solutions are defined in a list (type Task). Then the link to system can be done based on a Lookup Column in the RIO Registers **Solution Mapping:** **- SharePoint Lists & Lookup columns**	
5.7	The system will allow each RIO register to categorize RIOs	MR		A list can use columns to categorize the items or a Taxonomy if the categorization is hierarchical **Solution Mapping:** **- SharePoint List** **- Meta Data Navigation & Term Store**	
5.8	The system will allow each RIO register to relate RIOs to each other	HP	The Solution offers the possibility to Relate Items to each other **Solution Mapping:** **- SharePoint Lists with Related Items feature**		

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
5.9	The system will have a view RIO list feature which is a central repository for risks with options such as Export to Excel and notifications	HP			**Customization n°5**
5.10	The system will have a RIO Path - showcasing the trail of an active RIO in a quadrant based on impact and probability figures	LP		Reporting tools can be used to build a Risk Radar. **Solution Mapping:** **- Microsoft BI & Reporting** **- Out-of-the-box SQL views**	
5.11	The system must have a Creator role and a RIO Owner Role allocated to each RIO : - Creator (RIO Initiator, all users can create risk) - RIO Manager (RIO Owner, specific project/SJU allocated role)	MR	By default the following users are defined: Creator, Owner, Assigned To. More roles can be defined by adding new columns in the Lists **Solution Mapping:** **- Risk List on the Project Site** **- Issue List on the Project Site**	Additional roles can be configured by adding columns in the specific lists **Solution Mapping:** **- Columns (Person or Groups) in Lists**	
5.12	The system must allow the Risk Owner role to "accept ownership" of a risk or "reject ownership", or propose ownership to another user	MR		New risks can have a workflow associated to them, either automatically or manually, that requires the Risk Owner to accept or reject ownership (similar to approval workflow). Alternatively, accepting ownership could be a status dropdown fields that the Risk Owner updates manually. **Solution Mapping:** **- SharePoint Designer Workflow**	

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
				- SharePoint List	
5.13	The system must allow a RIO creator or owner to "propose" the risk to another owner on another project	MR		While creating a Risk a user can assign any owner using the People Picker (Active Directory) or he can log a risk for that owner in a risk register of another project **Solution Mapping:** **- People Picker in Lists** **- Related Items in Lists**	
5.14	The system must have a Treatment Action Owner Role allocated to each Treatment Action created for a risk - Treatment Action Owner (all users can be an action owner)	MR		It is possible to create actions based on a Risk thanks to the feature Related Items. The user has access to any task list where he logs an action and links it to the Risk **Solution Mapping:** **- Related Items feature in Lists**	
5.15	The system will have an approval workflow for each RIO	HP		Each list can have its own workflow associated to it. **Solution Mapping:** **- SharePoint Designer Workflow**	

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
5.16	As part of the approval workflow, the system must trigger an additional level of approval at the SJU Programme Manager Level based on the level of criticality identified in the RIO	HP		The workflow can be configured to accommodate SJU Programme Manager Level approval if certain conditions are met. **Solution Mapping:** **- SharePoint List** **- SharePoint Designer Workflow**	
5.17	The system must force treatment actions to be followed up and closed, prior to a RIO being closed	MR		In the workflow used for closing the RIO, the first step should be to check the status of the related items, and if they're not closed, the workflow will be terminated. **Solution Mapping:** **- SharePoint Designer Workflow (2013 mode)**	
5.18	As part of the approval workflow the system must generate alerts when there is a status change on a RIO	MR		An email notification can be sent when the status of an item changes **Solution Mapping:** **- SharePoint Designer Workflow**	

	High level requirements	Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
5.19	When logging a new RIO, the system will provide the RIO Creator with narratives on the logic of the "likelihood" and "Severity" scoring system and how they result in GC TNC, NC scores	HP		Depending on the length of the narrative, this can be done in one of two ways: 1. For a short narrative, the explanation can be added as the description of the severity and likelihood fields. 2. For longer narratives, the description field of the severity and likelihood values (terms in term store) can contain the narrative, and users will see these descriptions in the term picker dialog when registering a new RIO. **Solution mapping:** **- SharePoint List fields or** **- SharePoint Term Store/set**	
5.20	The system must trigger an alert when a deliverable has been handed over that is linked to a risk	HP		When a handover workflow starts it checks whether there is a risk linked to the deliverable, and if so then the person responsible for that risk is notified by email. **Solution mapping:** **- SharePoint Designer Workflow (2013 mode)**	
5.21	The system must have a search and filtering capability, to efficiently locate RIOs by project and at Programme Level	MR		A RIO dashboard can be set up to accommodate search and filtering.	
5.22	RIO creation, closing and modification dates and users involved in the actions should be visible	MR	In the SharePoint list you have all information concerning the creation and changes in columns and/or history **Solution Mapping:** **- Pre-defined Columns**		

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
			- Version history		

1.8 Process 6: Communication

1.8.1 High level Requirements & Fit/Gap Analysis

The objective of the communication process is threefold:

- To create awareness and outreach about SESAR 2020 and its projects;
- To showcase the research outcomes and benefits that SESAR solutions can bring to real day-to-day Air Traffic Management (ATM) operations;
- To accelerate the operational acceptance and subsequent deployment of SESAR solutions.

To ensure that communications are consistent with the SESAR JU brand, project consortia are requested to contact SJU Communications Sector when preparing external communication activities, in order to:

- Validate SESAR-related content;
- Develop possible joint outreach activities through various communications channels;
- Benefit from SJU messaging support;
- Secure SJU speakers, if needed;
- Allow the SJU to further cascade relevant content through its own existing channels.

The table below shows the list of requirements Communication:

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
6.1	The system must have a site for Programme Communications	HP		As part of the Project Server Site Collection we can implement a separate Programme Communication site **Solution Mapping:** **- SharePoint Sub Site**	
6.2	The Communications site must have a calendar where users can enter communications activities and events	HP	Most of the site templates contain already a Calendar **Solution Mapping:** **- SharePoint Calendar**		
6.3	The system must have a communications link on each Project Site that takes users to Communications site	HP		The url of the communication site can be added on the Project site Template **Solution Mapping:** **- Url Links on a SharePoint site**	
6.4	The system must have a robust alerting mechanism that allows users to be notified when there are upcoming activities/events. In addition, frequency and type of alert can be specified.	HP		Workflows can be used for event in the Calendar to trigger notifications to the users. Connecting the Calendar to Outlook enables reminders as well. **Solution Mapping:** **- Calendar** **- Outlook** **- SharePoint Designer Workflow**	
6.5	The system must have different views (calendar, list) to manage all communications activities and events	HP		The SharePoint calendar has pre-defined views that can be extended with other views **Solution Mapping:** **- SharePoint List views**	

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
6.6	As part of the Gate Process, the system will assess communications activities through pre-defined fields	HP		Gates are activities in the Project Schedule. To the Gates you can have pre-defined fields associated where you log information **Solution Mapping:** **- Project Schedule** **- Enterprise Custom Fields**	
6.7	The system must automatically create communication activities upon creation of the project plan through pre-defined template	LP		Upon Creation of a Project the system can create automatically a Project Schedule with communication tasks from the Project Schedule Template **Solution Mapping:** **- Project Schedule Template**	
6.8	The system must have reporting functionality where the communications assessment (6.6) will provide statistics on how many projects have been communicating against a SESAR Solution	HP		Based on the information available in the Project Schedule (Activities + Pre-defined fields for Gates) You can create reports with Excel Services using out-of-the-box SQL Views **Solution Mapping:** **- Project Schedule and Enterprise Custom Fields** **- Excel Services** **- Out-of-the-box SQL Views**	
6.9	The system must have a Programme Communications Strategy Plan view on the Programme Communications Site	LP		The communication Plan can be managed in the Project Schedule with Tasks, Deliverables and Milestones for Communication activities **Solution Mapping:** **- Project Schedule**	

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
6.10	The system must have the functionality to produce the Integrated Plans to be able to see Project Milestones/Deliverables (i.e. outputs from the Integrated Planning process visible in the Communications Project Site).	HP		Making outputs from Projects in the Communication site can be done through reporting and/or provide the communication Team read access to the Integrated Planning **Solution Mapping:** **- Enterprise Projects (Project Centre View)** **- Microsoft Project Professional Client** **- Excel Services** **- Project Server Reporting views**	
6.11	The system must have discussion boards for project and programme communication	LP	A discussion board is out-of-the-box. Social features/Yammer could also be used for this purpose. **Solution Mapping:** **- Discussion Board** **- Yammer**		
6.12	The system must have a wiki library that allows low-maintenance knowledge sharing, brainstorming, collaborating on designs, gathering data	HP	A wiki library is out-of-the-box. **Solution Mapping:** **- Wiki Library** **- Enterprise Wiki**		
6.13	The system must have an announcement list, with expiry dates on announcements. The announcements should be able to be placed on different pages	MR	An Announcement list is out-of-the-box. **Solution Mapping:** **- Announcement List**		

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
6.14	The system must have community site functionality where social networking can take place around a given subject	HP	In SharePoint 2013, a Community Site is a new site template that provides a forum experience in the SharePoint environment **Solution Mapping:** **- Community Site** **- Yammer (but Cloud)**		
6.15	The system must provide document storage for all Communications material	MR	Communication can use one or more document libraries on the communication site to store all kind of documents **Solution Mapping:** **- Document Libraries**		
6.16	The system must be able to store files such as videos, pictures (marketing material from members)	MR	SharePoint offers a special library app called an Asset Library. An Asset Library is pre-configured to use special features that help you manage rich media assets, such as image, audio, and video files **Solution Mapping:** **- SharePoint Asset Library**		

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
6.17	The system must be able to display videos and pictures via web part or publishing page	HP	SharePoint offers a video experience in the solution. A few possibilities are uploading videos in a specific library with all content related to the video, watching videos with a built in media player, and search videos. **Solution Mapping:** **- SharePoint Videos**		
6.18	The system must have a search and filtering capability for communications information	HP	SharePoint has built-in search capabilities **Solution Mapping:** **- SharePoint Search**		
6.19	The system must provide a register or document library for communications material (i.e. press releases) to be submitted by members/project participants	HP		Both a list and a Library can be configured to store content or documents **Solution Mapping:** **- SharePoint List** **- SharePoint Document Library**	
6.20	The system must trigger a handover workflow when a member/project participant submits a communications document (i.e. press release) to the SJU Communications team	MR		Workflows can be used to move/copy documents from one library to another **Solution Mapping:** **- SharePoint Document Library** **- SharePoint Designer Workflow**	

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
6.21	The system must have a publication library for project deliverables that are complete	MR		A Document Library can be used to store documents **Solution Mapping:** **- SharePoint Document Library**	
6.22	The system must trigger a handover workflow when a project deliverable is complete, where the deliverable is handed over between the Programme and the Communications team for publication	MR		Workflows can be used to move/copy documents from one library to another **Solution Mapping:** **- SharePoint Document Library** **- SharePoint Designer Workflow**	
6.23	The system must interface with the SJU Public Website in order to publish deliverables (part of a solution pack)	HP			This will depend on the technology of the Public Website and the integration capabilities with that website. It will be probably a customization
6.24	The system must be able to log events and link the event to a contact in the contact list	HP		An event can be logged in a Calendar or a Task list, where you can link a contact from the contact list. In this case the contact is just a meta data of the event. It cannot trigger an email/notification or assign to a task. Only the use of the People Picker (AD) can be used for that purpose. **Solution Mapping:** **- Column Lookup in a SharePoint List**	
6.25	The system must have the functionality to create contact and maintain contacts	HP	SharePoint has an out-of-the-box contact list **Solution Mapping:** **- SharePoint Contacts**		

1.9 Process 7: Quality Management

1.9.1 High level Requirements & Fit/Gap Analysis

The objective of the quality assessment process is to assess and monitor the quality of all relevant deliverables by the SJU. Within the SESAR Programme, the quality of the deliverables is managed according to the following principles:

- Quality assessment of deliverables is an integral part of the organisation and processes of the Projects: submission of a deliverable to the SJU involves all Project members and implies that the deliverable meets relevant standards and Programme expectations;
- The SJU assumes that Projects correctly apply internal quality controls prior to the submission of a deliverable to the SJU. The SJU may ask for evidence from the project to assess that internal quality controls are correctly planned and performed;
- Quality of deliverables is a major input for the acceptance at the Project Control Gate;

The table below shows the list of requirements concerning the Quality Management:

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
7.1	The system must be able to view all deliverables at the Project and Programme Level	MR		Deliverables are Planned at the Project level in the Project Schedule and also visible in the Project Plan. Projects are clustered into Programs using custom fields which can be selected and opened in one Project Plan. Thanks to a consolidated view of all Projects within a Programme and the filtering/viewing capabilities, the Deliverables can be presented at both Programme and Project Level **Solution Mapping:** **- Project Schedule** **- Master Projects** **- Project Professional Report** **- Excel Services**	
7.2	The system must have a view (SJU) of deliverables that are tagged for quality assessment based on the strategic and the quality criteria	MR		The SJU can have a separate "Project" Environment where deliverables are tracked in the Project Schedule, Deliverable List and a Deliverable Library. The Deliverables can be followed-up using columns in the Project Schedule **Solution Mapping:** **- Project Schedule with Custom Fields**	

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
7.3	The system must allow users to search and filter deliverables	MR		1. If Deliverables are Documents in a Library: Assuming that the deliverables are stored as a document in a Project Site Document Library it is possible to view a list of those deliverables and to filter based on the column defined. They will also be included in the standard search experience 2. If Deliverables are part of a Project Schedule. You can filter and search deliverables based on out-of-the-box filters and custom fields	
7.4	The system must allow users to select the appropriate deliverable template (based on the Deliverable Type/quality criteria)	MR		Documents in this case Deliverables can be created based on a document type which is linked to a template **Solution Mapping:** **- Document Library** **- Document Content Types**	
7.5	The system must allow users to be notified when the deliverable is ready for their review	HP		A Review workflow can be used here **Solution Mapping:** **- Document Library** **- SharePoint Designer Workflow**	

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
7.6	The system must capture which users have reviewed the deliverable and when	HP		The workflow triggers tasks in the Workflow Task list and the Workflow Task list history where you can retrieve the history of the workflow containing information on the who and when **Solution Mapping:** **- SharePoint Designer Workflow** **- Workflow Task History**	
7.7	As part of the deliverable handover the user (project) will include further meta data regarding the publication of the deliverable & meta data regarding which solution pack the deliverable belongs	MR		In a document Library where the deliverables will be stored you can configure additional columns to log handover information **Solution Mapping:** **- Document Library with additional Columns**	
7.8	The system must allow users to change the status of the deliverable template prior to handing it over: *- Draft* *- Revised Draft* *- Final*	MR		Thanks to the document versioning feature a document can be created first as draft using different minor versions before publishing it as a final version and approving it. The workflow can check whether a document is approved (= final) prior processing the hand-over. This can also be accomplished by using a Status dropdown field. **Solution Mapping:** **- Content Approval** **- SharePoint Designer Workflow**	

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
7.9	The system must allow a user to trigger a handover workflow for the deliverable	MR		Assuming that the Deliverable is a document in a Document Library, You can define a Workflow to handover the document to another document library in the same site or another site **Solution Mapping:** **- Document Library Workflow**	
7.10	The system must enforce the acceptance of a disclaimer that the user must accept after selecting "handover workflow"	MR		The workflow initiation page is the page that opens when you start a new workflow. We include the disclaimer text here, stating that by starting the workflow the user agrees/accepts **Solution Mapping:** **- SharePoint Designer Workflow** **- SharePoint Document Library**	
7.11	The system must have a Quality Assessment Library	MR		Document Libraries can be defined as default in the Project Site template. Upon creation of a Project, this document library shall be created automatically **Solution Mapping:** **- Document Libraries** **- Project Site Template**	
7.12	The system must have an Assessment Report template with pre-populated fields, drop down lists and free form text fields that can be instantiated for a particular Deliverable Assessment, and that will capture all information related to a particular assessment. Different users can provide input/comments (pre-assessment meeting) in the report in preparation for the assessment meeting	MR		The columns used in a Document Library can be inserted in a Word Document. Changes in the library columns will be refreshed in Word and vice versa **Solution Mapping:** **- Document Library Columns** **- Insert Quick Parts in Word**	

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
7.13	The system must be able to notify users when the Assessment Report has been completed (pre-populated)	HP		After completing an Assessment Report the Status needs to be updated. Based on the update of the status a notification could be triggered using a workflow **Solution Mapping:** **- SharePoint Designer Workflow (Wait for field to change in current item)**	
7.14	The system must have calendar for the Quality Assessment & Delivery Process	MR	A Calendar is an out-of-the-box functionality on a Project site for instance		
7.15	The system must alert users of upcoming events based on pre-defined dates	HP		Based on conditions (and columns in the calendar) a notification can be sent to a user. By connecting a calendar to Outlook, users can get calendar reminders as well. **Solution Mapping:** **- SharePoint Calendar** **- SharePoint Designer Workflow**	

	High level requirements	Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
7.16	The system must have a Quality Assessment Register where the following information can registered and reported on by users: **A) Deliverable Acceptance Meta Data** *- Project Number* *- Deliverable Code* *- Title* *- Actual Reception Date* *- Deliverable Type* *- Deliverable Owner* *- Planned Reception Date* *- Status* *- Comments* **B) Deliverable Assessment Meta Data** B-1) Main: - Project Code - Assessment Status - Review Meeting Start / Review Meeting End / IS Assessment - Closure Date Start / Closure Date End - Hand-over Date Start / Hand Over Date End / Handover Complete B-2) Deliverable: *- Deliverable code* *- Deliverable Template* *- PCP related & version* *- ATM Functionality / Sub Functionality* *- Delivery Quarter* *- Quality Category* *- Handover Complete* *- Handover Date* *- Assessment Planned End Date* *- SJU Approver* *- Foreground* *- Confidentiality* *- Assessment ID* B-3) Assessment:	MR		A possible solution could be a specific Project Schedule for Quality Assessment with custom fields and if necessary combined with a Deliverable list where each deliverable in the schedule can be linked to a deliverable in the Deliverable List **Solution Mapping:** **- Project Schedule** **- Enterprise Custom Fields** **- Deliverable List**	

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
	-Review Meeting Date *- Closure Date* *- Provisional Assessment Status* *- Clarification Due Date* *-Resubmission Due Date* *-Assessment Decision* *- Assessment Status* *- Authorities Review* *- Satisfaction Index* *- Alignment with commitments* *- content validity* *- interoperability validity* *- alignment with SJU material* B-4) Contribution: *- SJU Reviewers* *- IS Assessment* *- SJU Staff Association Assessment* *- Airspace Users Assessment* *-Military Assessment* *- SJU Scientific Committee*				

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
7.17	The system must support one or more handover workflow for the Quality Assessment Report (SJU to Project) *- Based on Deliverable Outcome, Project user must be able to update and re-submit the Deliverable* *-The system must be able to block out the names of those contributors who provided the assessment* *- The system must ensure that only comments field for the Assessment Report is editable by the Project* *- If a "loop-back" is required, the system must track the "second round of quality assessment via handover workflow*	MR		- Updating and re-submitting document is supported - A loop-back counter is possible via a counter in the Workflow - Making certain fields restricted for edition is a standard feature in Word and using a password in the document. If the comment field is managed on the library then a customization is required to make all fields read-only except the comment field - Block-out names: In word you can remove the names with the Inspect document feature but the name of the user saving the document in the library will appear. Hiding names is not supported. **Solution Mapping:** **- SharePoint Designer Workflow** **- Microsoft Word Restrictions**	
7.18	The system must be able to report on deliverables as part of the deliverables assessment process (Monitoring & Control Requirements 8.16-8.22)	MR		When deliverables are defined in the Project schedule with the relevant custom fields it is easy to generate a report of the assessment. Solution Mapping: - Project Schedule (+Enterprise Custom Fields & Lookup tables)	
7.19	The system must have narratives as part of the deliverable handover process to better explain the steps and provide guidance	HP		When a workflow is launched an InfoPath Form with narratives can be exposed to the user **Solution Mapping:** **- SharePoint Designer Workflow** **- SharePoint InfoPath**	

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
7.20	The system must have a roles allocation view, which is role based and hierarchy based	MR		Deliverables can be managed using both the Schedule and a Deliverable List where each item is linked to each other. Assuming that the deliverable Assessment is followed-up in the Project Web app where you can track deliverables in the schedule using project web app views (based on custom fields and lookup tables which can be hierarchical) which can be assigned to roles. Next to that in the deliverable list and in the Project Client you can create different views by role, but you cannot linked them to a specific role as the user needs to choose the view which is relevant for him. **Solution Mapping:** **- Project Web app Views** **- Project Professional Views** **- List Views** **- Document Library Views**	
7.21	Each project will have access to the following libraries: *- Execution* *- Working* *- Restricted*	MR		Document Libraries can be defined as default in the Project Site template. Upon creation of a Project, those 3 document libraries shall be created automatically with their **Solution Mapping:** **- Document Libraries** **- Project Site Template**	

1.10 Process 8: Monitoring & Controlling

1.10.1 High level Requirements & Fit/Gap Analysis

The objective of the monitoring and control processes is to ensure that quality and progress is being tracked at project level, and where needed to allow corrective actions to be taken and make available this information to the Programme management level.

The following monitoring and control processes are being made available and need to be applied in mandatory manner by and under the responsibility of the project manager:

Dependency management: this sub-process provides an instrument to project managers to define, track, and control dependencies between the project and

- Other project activities, deliverables, or milestones
- V2 and V3 validation exercises as recorded and base-lined in the V&V roadmap. These dependencies were called in the SESAR 1 Programme OFA dependencies.
- The overall Programme life cycle and its deliverables

Milestones tracking: this sub-process allows project managers to get an overview of all his milestones and record achievement including evidence. Besides being a usual tool for the project manager himself, it also provides essential information when rolled up at Programme level and to report on progress.

Deliverable assessment tracking: the sub-process gives visibility to project manager and any project stakeholder about the status of deliverables in function of hand over, quality assessment as performed by SJU and any other information linked to the financial handling of the work performed.

Integrated scheduling is a mechanism provided to project manager and any other stakeholder to aggregate schedule information and as such capture an overview of planned worked against actual progress.

The table below shows the list of requirements concerning the monitoring and controlling:

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
Dependency Management					
8.1	The system must allow any two projects to manage dependencies between them	MR		The solution supports the creation of dependencies between projects on one hand through hard links where tasks are directly linked to each other and on the other hand through soft links using -the Dependencies feature through deliverables to link tasks **Solution Mapping:** **- Microsoft Project Professional Task Links (Hard Links)** **- Project Server Deliverables (Dependencies)**	
8.2	The system must allow users from project A (consumer) to express a need to project B (supplier) by logging a dependency	MR		same as 8.1	
8.3	The system must allow project A (consumer) to express a "need" to a specific project B (supplier) Deliverable or Milestone	MR		same as 8.1	
8.4	The Dependency Register must have the following fields: -*Dependency ID* *-Consumer Type* *-Consumer ID* *-Dependency need description* *-Consumer needed by Date* *-Supplier Type* *-Supplier ID* *-Supplier Input Type* *-Supplier Input ID* *-Status*	MR	The solution doesn't use a Dependency Register, but links different Project Schedules through the Deliverable list of the Supplier. Although not all required fields are supported it is possible to know the supplier and customer project and tasks **Solution Mapping:** **- Project Server Dependencies Functionality**	Additional Custom fields can be created in the Project Schedule and/or the deliverable list **Solution Mapping:** **- Project Schedule** **- Enterprise Custom Fields** **- Dependencies Functionality**	

	High level requirements	Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
8.5	The Dependency Register must allow users to initiate an agreement workflow with the following statuses: *- Identified* *- Agreed* *-synchronized* *- Achieved*	MR	The dependency solution doesn't support agreements through workflow, but it shall rather inform the consumer in the Project schedule and on the Gantt chart. The consumer shall then accept the changes and re-schedule his Project Plan or lies with the Supplier so that he changes his plan **Solution Mapping:** **- Project Server Deliverables/Dependencies feature**		
8.6	The system, through automated notifications must inform users that they have an action pending	MR	The Consumer is informed by an indicator in his plan when he synchronizes his Project schedule. **Solution Mapping:** **- Project Server Deliverables/Dependencies feature**		

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
8.7	The system must be able to set pre-defined and ad-hoc filters/views and have a sorting capability on a consolidated schedule to view inter-project dependencies	HP	The solution supports the simultaneous opening of different schedules in a consolidated view, where you can easily view all dependencies on the WBS and the Gantt chart by using pre-defined and ad-hoc filters **Solutions Mapping:** **- Deliverable/Dependency Feature** **- Ad hoc Master Project** **- Filters/views**		
8.8	The system must update the Project A (consumer) and Project B (supplier) project plans with the dependencies once the status of the dependency has been "identified"	MR	The mechanism in the solution works as follows: 1. The supplier changes his plan. 2. The consumer synchronizes his plan and gets an update from the supplier. 3. He verifies the impact on his plan and accepts the changes. 4. After accepting the status, he changes manually his plan to align with the Supplier's plan **Solution Mapping:** **- Project Server Deliverables/Dependencies feature**		

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
8.9	The system must be able to generate views of validation and verification (v&v) activities across 1 or more projects	MR		V&V information can be managed as Custom Fields in the Project Schedule. Thanks to that and the capability to open several Projects in one Schedule view **Solution Mapping:** **- Enterprise Custom Fields** **- Master Projects views**	
Milestone Tracking					
8.10	The system must have the functionality to view Milestones per project	MR	The user can have a view on all Milestones in a Project Schedule **Solution Mapping:** **- Project Professional** **- Project Web App**		
8.11	Each Milestone will have the following meta data: *- Milestone Code* *- Description* *- Planned Date* *- Forecast Date* *-Achieved On Date* *- Is Gate*	MR		The solution offers the possibility to define Enterprise Custom fields on Task level which gives the possibility to assign custom fields values to Milestones **Solution Mapping:** **- Enterprise Custom Fields** **- Project Schedule**	

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
8.12	As part of the Quarterly Project Progress Report, the system will provide a view on Milestones planned/forecasted and achieved in the current and next reporting period & any overdue milestones	MR	The solution has a Reporting Feature in the Project client to have Progress on Milestones **Solution Mapping:** **- Project Professional Reports Feature**	The out-of-the-box report feature can be configured by additional reports using more project content, views and filters. Next to that You can build Reports and Dashboards using the BI & Reporting Centre of the Solution using out-of-the-box SQL views **Solution Mapping:** **- Project Professional Repots** **- BI & Reporting Centre**	
8.13	As part of the Release Dashboard, the system will generate: *- Last Milestone Achieved* *- Overdue Milestones* *- M8 & M9 Planned & Forecast Milestones (following 2 years)*	HP		You can build Reports and Dashboards using the BI & Reporting Centre of the Solution using out-of-the-box SQL views **Solution Mapping:** **- BI & Reporting Centre**	
8.14	The system must be able to generate views of Project Milestones for the entire Programme	MR		Same as 8.14	
Deliverable Assessment Tracking					

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
8.16	The system must be able to generate views that list all deliverables received by the SJU over a pre-defined period of time and with filtering capabilities	MR		If Deliverables received by the SJU are tracked in one central Project Schedule, it is possible to have a view using a date range of the reception date of the deliverables. If Deliverables are also tracked in a Deliverables list (linked to a Project Schedule) You can have views on the Deliverable List. Next to the schedule You can also use reporting tools such as Excel Services report schedule data and/or Deliverable list information. If custom columns are required in the reporting then a customization is required (n°2) **Solution Mapping:** **- Project Schedule** **- Enterprise Views** **- SharePoint List Views** **- Project Professional Views** **- Excel Services**	
8.17	The system must be able to generate views on QA Assessment Reports that are in Progress with the ability to filter by responsible user *- Age and Status of deliverables in the assessment process*	MR		Same as 8.16, but the view is based on the responsible. Depending on the Solution Design the responsible could be either a Resource in the schedule, a lookup table value linked to a deliverable or if a deliverable list is used then it could be a user from the people picker of the SharePoint list.	
8.18	The system must be able to provide views on: *- All Outstanding Deliverables (not-handed over and with a target date in the past) for the entire Programme* *- Deliverables planned to be delivered in the coming 6 months for the entire Programme*	MR		Same approach as 8.16	

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
8.19	The system must be able to generate views of deliverables that are ready for publishing	MR		If the deliverables are documents in a document Library or are items in a deliverable list in each Project Site, then a roll-up needs to be foreseen in the solution. If the deliverables which are tagged by SJU for Assessment purpose are managed in a central Project Schedule it will be the same approach as for 8.17	**Customization n°5**
8.20	The system must be able to generate a report that lists the deliverables that are linked to gates and hand-over deliverables that are not linked to gates	MR		The following approach could be adopted: A Central SJU Project Schedule for Deliverable Assessment as described in the previous sections, which has a custom fields Gates that is linked to a deliverable. A deliverable is a task within the Project Schedule. The Gate is a custom field with pre-defined values (Gate ER/IR, V1, V2, V3, Demo). **Solution Mapping:** **- Project schedule** **- Enterprise Custom Field= Gate**	
8.21	The system must be able to generate consolidated views of pre-defined KPIs based on different hierarchies : *- Status of Deliverables Planned to be delivered* *- Provisional Assessment results per month* *- Status of Assessment Decision per Assessment Closure Date* *- Assessment Decision (different hierarchy views)* *- Assessment Decision per Quality Category*	MR		Assuming that we have here the deliverables which are marked for Assessment. We can have one Project Schedule to track those deliverables. With easy views it is possible to see the progress of the assessment of those deliverables. Next to that you can also generate a report using a built-in excel services tool or the Report tool of Microsoft Project Professional **Solution Mapping:** **- Project Schedule** **- Excel Services**	

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
8.22	The system must be able to generate provisional and completed consolidated views on the following quality and satisfaction criteria: *- Alignment with the SJU applicable criteria* *- Alignment with the Commitments* *- Content Validation* *- Interoperability validity*	MR		Same as 8.21	
8.23	The system must be able to generate consolidated views on progress of a deliverable assessment	MR		Same as 8.21	
Integrated Schedule Tracking					
8.24	The system must be able to provide multiple project plan views based on meta data which are associated on the level of project task, deliverable and milestones : *- Release Schedule* *- OI Schedule* *- Current Project* *- Baseline Project* *- CR Proposed Project Plans*	MR		In the Project Schedule you can use Enterprise Custom Fields on Task Level (Tasks are also Deliverables and Milestones) and linked to each task. Several views can be created based on those Enterprise Custom Fields **Solution Mapping:** **- Project Schedule** **- Enterprise Custom Fields**	
Dashboards					
8.25	**Quarterly Dashboard (by hierarchy):** *-Resource Consumption and Programme Progress* *-Status of Planned Deliverables and Deliverable Assessments* *-Gate Outcomes and Gate Actions* *-Risk Reduction Ratio and Closed Actions* *-Past and Future (1 year) inter project incoming dependencies status* *-Change Management* *-3PRM AU Contribution*	MR		The BI & Reporting tools of Project Server offer various tools. An Excel Services report can be used here. In order to add other data such as 3PRM specific views need to be created **Solution Mapping:** **- BI & Reporting**	**Customization n°2**

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
8.26	***Member Quarterly Dashboard*** *-Resource Consumption and Programme Progress* *-Deliverable submission status and assessments* *-Risks and Issues* *-Gate Outcomes and Inter project Incoming Dependencies Status* *- Satisfaction Criteria* *- Deliverables contributing to part of a common project*	MR		The BI & Reporting tools of Project Server offer various tools. An Excel Services report can be used here **Solution Mapping:** **- BI & Reporting**	
8.27	**Release Dashboard (ability to filter dashboard by hierarchy)** *-Exercise Progress* *- Milestone Progress* *-Details Per Exercise* *- Business Need* *- OI* *- SESAR Solution* *-Validation Exercise ID* *-Validation Exercise Description* *-Status* *-Release* *-Open Issues/ Actions* *-Last Milestone Achieved* *-Overdue Milestones*	MR		The BI & Reporting tools of Project Server offer various tools. An Excel Services report can be used here. This requirement has a dependency with the V&V Roadmap, That's why it needs to be solved together with Customization n°2 **Solution Mapping:** **- BI & Reporting**	**Customization n°2**
8.28	**Closure Dashboard Timeline View (by Hierarchy):** *- Progress On-Time* *- Minor Delay* *- Overdue* *- Not Initiated* *- Planned Beyond 2020* *- Closed* *- Suspended* *- Cancelled* *- Missing Data*	MR		The BI & Reporting tools of Project Server offer various tools. An Excel Services report can be used or SSRS here **Solution Mapping:** **- BI & Reporting (Excel Services, SQL Server Reporting Services)**	

	High level requirements	Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
8.29	**Risk Management Quarterly Dashboard**: *-RIO status by KPI (situation % and trend)* *-Average criticality per hierarchy* *- % of actions not managed: due date missing per hierarchy* *- Risks % of actions not yet implemented and with past due date* *- Issues % of actions not yet implemented with past due date* *- Key new risks with Gross criticality (identified in last quarter) per hierarchy* *- Key new Issues with status "red" per hierarchy* *- Risks & Issues assigned to a SJU user* *- Issues by Release* *- Last quarter RIO activities & next quarter activities*	MR		The BI & Reporting tools of Project Server offer various tools. An Excel Services report can be used here. In order to add other data which are included in the RIO lists then a view needs to be created **Solution Mapping:** **- BI & Reporting**	**Customization n°2:**
8.30	**Program Portfolio Dashboard** Roll-up of all projects emphasis on: *-Release milestones* *-V&V Milestones* *- Performance Assessments* *- Projects per Phase (i.e. Definition, Call for Tender, Procurement, Initiation, Execution, Closure)* *- Total Cost* *- Overall Risk & Issue Criticality* *- % Progress Relative to Plan (SPI)* *- Cost Performance*	MR		The information of 8.30 is stored in the Project Schedule of the different projects. The roll-up of information can be realized by Reporting. If the V&V milestones are not managed in the individual Project Schedule but in the V&V roadmap than we can use customization n°2 to include V&V milestones **Solution Mapping:** **- Excel Services** **- Project Server views**	**Customization n°2**

1.11 Process 9: Third Party Resource Management

1.11.1 High level Requirements & Fit/Gap Analysis

The objective is to involve in the Programme activities resources which represent various groups of stakeholders such that their expertise and knowledge can be utilised in the most effective and efficient manner possible. The relationship with 3rd party stakeholders is special since 3rd parties are requested for their expertise contributing to project task like development or revision of specs, participation to validation exercises, etc... While the SJU monitors, reviews and approves the project deliverables. The involvement of 3rd Party stakeholders within the project should be applied to those activities that contribute to the development of SESAR JU Solutions as a priority

Contracts with the following stakeholders, who can be included in the 3rd party management, are currently in place:

- Airspace Users;
- Staff Associations;
- Military;
- International Validation Teams;
- National Authorities.

The table below shows the list of requirements concerning the Third party resource management:

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
9.1	The system must have a demand register where a demand can be requested (requester): *- requester email* *- expertise* *- activities* *- the exact number of experts they require* *- The effort per expert* *- Status* *- Release* *- Validation Exercise* *- Resource Type* *- Attachments* *- Demand Type*	MR		A SharePoint list can be used to log demands and capture all information in different columns. After an approval the Demand can be promoted manually or automatically to a Project, if required. **Solution Mapping:** **- Project Server Demand Management**	

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
9.2	The system must have an Expert register where a supplier can log experts: *- Expert ID* *- Status* *- Resource Type* *- Organisation* *- Contribution Manager Email* *- Expert Name* *- Expert Type* *- Expert Email* *- Expertise* *-Involvement in other projects* *- Attachments*	MR		A SharePoint list with columns can be used for this purpose **Solution Mapping:** **- SharePoint List**	
9.3	Users must be able to contribute to a demand based on pre-defined expertise (contribution managers only see demand relevant to them)	MR		There are two approaches here. 1. Experts can be created in a list and used as a lookup field in the Contribution list. 2. Experts can be created in Active directory and linked to an AD Group, which is used in the contribution list **Solution Mapping:** **- Column Lookup** **- Column People Picker**	

	High level requirements	Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
9.4	The system must have the functionality to "contribute" to an individual demand in the demand register (9.3): *-Ad Hoc or Annual (Default)* *-Demand ID (default)* *- Demand Status (default)* *-Demand Year (default)* *- Demand Start/End (default) (if ad-hoc demand)* *- Demand Forecast Quarterly Dates (if annual demand)* *- Demand Forecast Total (if ad-hoc)* *- Organization Name (supplier)* *- Expert Type (supplier)* *- Expert Name (supplier)* *- Forecast Effort (supplier) - Per Quarter (Annual)/ Ad-Hoc (Total)* *- Attachments* *- Add multiple experts*	MR		A SharePoint list with columns can be used for this purpose. **Solution Mapping:** **- SharePoint List**	
9.5	The system must allow a user (supplier) to propose several experts per demand (9.4)	MR		The Contributions list can have a lookup field against the Demand list and the Experts list, and a status field describing whether a contribution is proposed, approved, completed etc. Proposing an expert = create a new item in the Contributions list with status set to proposed. **Solution Mapping:** **- SharePoint List**	
9.6	The system must have a view on all contributions per project	MR		A list view containing the relevant columns can be created. **Solution Mapping:** **- SharePoint list view**	

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
9.7	The system must allow users to collaborate (agree on the demand, contribution and expert) using a community site	MR		A community site or discussion list can be created to accommodate this. **Solution Mapping:** **- Community site / Discussion list**	
9.8	Once agreed the system must allow users to change the status to agreed	MR	The status value can be changed by the user.		
9.9	The system must track the supplier proposed contribution through profile statuses : *- On-going* *- Approved* *- Rejected*	MR		SharePoint list views can be created for the Contributions list to accommodate this. **Solution Mapping:** **- SharePoint list view**	
9.10	The system must track the demand through the following statuses prior to SJU approval: *- draft* *- pending (published to resources)* *- Communications Webex Performed (box or pop-up)* *- agreed (received all contributions, ready to provide to SJU) **only once the proposed contribution is "Approved" (9.9)*	MR		SharePoint list views can be created for the Demands list to accommodate this. **Solution Mapping:** **- SharePoint list view**	
9.11	Once agreed (9.10), the SJU track the Contribution through the following statuses: *- Accepted* *- Request for Clarification* *- Cancelled* *- Completed* *- Pending* *- Rejected*	MR		The Contributions list can have a status column with fixed statuses, using either a dropdown or managed metadata column. **Solution Mapping:** **- SharePoint list column** **- Term store**	
9.12	The system must ensure that once a demand is agreed with all approved contribution and has been rejected or completed, the profile status cannot be changed (accepted only to completed or cancelled)	MR		A workflow can accommodate this. **Solution Mapping:** **- SharePoint Designer Workflow**	

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
9.13	The system must have a comments field for the (SJU) to enter their rational for the status	MR		Include a comments field in the relevant lists. **Solution Mapping:** **- SharePoint List column**	
9.14	When completing actual contribution, a user must be able to update the following contribution fields: *- Quarterly Baseline Effort (not editable)* *- Quarterly Forecast Effort, Quarterly Actual Effort Home, Quarterly Actual Effort Mission, Quarterly Total Actual Effort, Quarterly Summary* *-Total Forecast Effort, Total Actual Effort Home, Total Actual Effort Mission* *- Attachments*	MR		An InfoPath form in the contribution list can accommodate this **Solution Mapping:** **- SharePoint list with pre-defined columns** **- SharePoint InfoPath**	
9.15	Based on the actual contribution (9.14) the system must allow user (demand requester) to assess each quarter (annual) or total (ad-hoc)	MR		SharePoint list views can be created for the Contributions list to accommodate this. **Solution Mapping:** **- SharePoint list view**	
9.16	When assessing contribution (9.15), a user must be able to assess each quarter via Quarterly Assessment: *- Year* *- Quarter* *- Assessment Result* *- Approved* *-Comments*	MR		SharePoint list views can be created for the Contributions list to accommodate this, based on list metadata/columns. **Solution Mapping:** **- SharePoint list view**	
9.17	The system must allow the requester (9.16) to close the demand once they have completed all assessments	MR		A workflow can check if all Assessment with one contribution have been filled in before closing the Demand **Solution Mapping:** **- SharePoint Designer Workflow**	

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
9.18	The system will provide a view of all changes to a demand or contribution when edited	MR		Versioning logs all the changes. A version history can be viewed to see changes made between each version. **Solution Mapping:** **- SharePoint list version history**	
9.19	The system must ensure pre-defined users receive notifications when statuses change within the system	MR		A specific SharePoint User Group can be created to manage the people to receive a notification. If the solution is not enough a SharePoint App can be developed to activate automatically the notification for the users based on a list	
9.20	The system must ensure that if a contribution has been rejected, the pre-defined users no longer receive notifications on that contribution	MR	No notifications will be sent unless there is a change.		
9.21	The system must have an enhanced search and filtering functionality to efficiently locate demands, contributions and experts	MR		SharePoint list views can be used to accommodate this. If that's not sufficient, a search page can be created for the purpose. **Solution Mapping:** **- SharePoint list views / SharePoint search page**	
9.22	The system must enable some users to manage their own notifications in the system	MR	Any user can create and manage alerts to receive notifications for given events in specific lists or views.		

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
9.23	When reviewing effort, the system will allow a user (CM) to view all experts per demand (without drilling down to expert by expert)	MR		SharePoint list views can be used to accommodate this. If that's not sufficient, a search page can be created for the purpose. **Solution Mapping:** **- SharePoint list views / SharePoint search page**	
9.24	The system must be able to produce reports and dashboards covering the following hierarchies: *- Annual Demand Per Project* *- Ad Hoc Demand per Project* *- Annual Demand per Third Party* *- Ad Hoc Demand per 3rd Party* The reports and dashboards will report on the following: *-Demands in Pending & Agreed status (quarterly forecast & totals)* *-Demands Accepted & Completed (quarterly forecast & totals)* *-Demand per 3rd party - i.e. Airspace User (quarterly forecast & totals)* *- Demands per Organization i.e. Air France under Airspace User (quarterly forecast & totals)* *- Demand forecast baseline vs actuals*	MR			Excel Services and PowerPivot Services can be used to host an Excel spreadsheet that pulls this information from SharePoint search, and uses a PivotTable to present it to the relevant users, in a SharePoint dashboard. Solution Mapping: - SharePoint Excel Services - SharePoint PowerPivot Services - Excel spreadsheets
9.25	The system must automatically publish pre-defined reports to different sites on a regular interval period	MR		Excel Services reports can be updated at a given frequency, for instance monthly. However, will not result in new reports, just new versions of the same.	SQL Server Reporting Services is the best solution for doing this.

1.12 Process 10: Closure

1.12.1 High level Requirements & Fit/Gap Analysis

The objectives of the Project Closure process is to determine if a Project has achieved its objectives, if the resources have been used in accordance with the plans and economically; overall to determine the sound financial management of the Project in accordance with the SJU Financial Rules of 12 December 2013.

The Project Closure determines through the Project Closure Gate the end of the obligations of the concerned Members/Contractors in relation to the activities to be performed for a given Project in accordance with the MFA or, mutatis mutandis, its respective contract in the case of WP E and WP 11 Projects (non-MFA). Unless specified, this process is applicable in the same manner to all Project closures.

The table below shows the list of requirements concerning the Closure process:

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
10.1	The system must have a closure checklist with automated and free-form texts fields (for comments)	MR		The closing is a Phase in the Project Life Cycle. When a closing is started the user can have a Project Page to log information in text fields and lookup tables **Solution Mapping:** **- Project Detail Pages** **- Enterprise Custom Fields & Lookup tables** **- Project Life Cycle**	
10.2	The system must have time sensitive alerts on upcoming events	HP		Tasks can be created in a SharePoint task list with a due date. Upcoming tasks can be displayed in a view on the Project home page. By connecting the task list to Outlook, reminders can be set for the tasks, and users who have connected the tasks list to Outlook will get reminders as well as see their tasks in the task pane.	

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
10.3	After the quality assessment of the FPR has taken place, the deliverable must be stored in the Closure Library (not the Execution Library) *Note: If the FPR is pre-defined as a deliverable of the project closure phase, it may be copied to the closure library upon hand-over*	HP		A Closing Library can be defined in each Project site using a Project Site Template Solution Mapping: - Project Site Template - Document Library	
10.4	The closure checklist must have the sections concerning "status" automated	HP		A Project Status Page can be viewed in the Checklist Page in the Closing Phase **Solution Mapping:** **- Project Detail Pages** **- Project Life Cycle** **- SQL Server Reporting Services (Status Report)**	
10.5	The system must be able to notify users when the closure checklist has been completed	HP		A checklist is a stage within a workflow in the Project Life Cycle. When the checklist is finalized the stage can be submitted (no approval). A workflow can trigger an email notification. **Solution Mapping:** **- Project Life Cycle** **- Project Server Workflow (SharePoint Designer)**	
10.6	The system must have a register for the Final Interim Report with pre-populated fields, drop down lists and free form text fields	HP		The Final Interim Report is a report that can be generated based on both Project data as custom fields available in Project Pages used for Closing **Solution Mapping:** **- Project Life Cycle** **- Projected Detail Pages** **- Enterprise Custom Fields** **- SQL Server Reporting**	

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
				Services	
10.7	The system must allow a user to initiate a publish workflow for the Final Interim Report,	MR		As part of the Project Life Cycle Process a final Report could be generated. After generation the report can be stored in a document library in several formats (pdf, word, excel) **Solution Mapping:** **- Project Life Cycle** **- Document Library**	x
10.8	The system must be able to notify and remind users that they have documents to submit, based on pre-defined dates: *- Final Interim Report* *- Closure Gate Presentation*	HP		As part of the Project life cycle process an email notification can be sent when the Closing is started. This will trigger the user to complete the closing. Reminders can be configured in the Workflow **Solution Mapping:** **- Project Life Cycle** **- Project Server Workflow (SharePoint Designer)**	
10.9	The system must trigger an update to the Current Plan with the Gate Closure Meeting agreed date	HP		Same as 10.2	

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
10.10	The system must have pre-defined closure tasks in each Project Plan	HP		A Project Schedule Template with pre-defined closing tasks & milestones can be used to create Project Schedules **Solution Mapping:** **- Project Schedule Template**	
10.11	The system must alert users of upcoming events	HP			
10.12	The system must trigger a notification once FPR has been submitted for: *- Contribution Managers of all members working on the project requesting final CBFs (Cost Breakdown Form)*	HP		The FPR could be either a Document in a Document Library with a workflow to submit the FPR while triggering an email Notification. Or, it could be a stage within a Project Life Cycle workflow that triggers an email notification after submitting the FPR **Solution Mapping:** **- SharePoint Document Library** **- SharePoint Designer Workflow** **- Project Life Cycle** **- Project Server Workflow (SharePoint Designer)**	

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
10.13	When all CBFs have been submitted, the system must trigger a notification to the SJU Finance Team to submit FFAR	HP		In the Project Lifec Cycle we can include a notification (in a workflow stage) towards the finance team after the CBF has been submitted. Or it could be a CBF Document in the Project Site Document Library that can trigger a workflow after submitting the CBF **Solution Mapping:** **- SharePoint Document Library** **- SharePoint Designer Workflow** **- Project Life Cycle** **- Project Server Workflow (SharePoint Designer)**	
10.14	The system must provide access to a library where *- CMs can handover CBFs to the SJU (MFA Project) - closure library* *- SJU Finance can submit FFAR (MFA Project) - closure library* *- SJU can store Complementary activity reports*	MR		Same as 10.3	
10.15	The system must be able to generate consolidated views of following objects as part of the Final Interim Progress Report: *- Milestone* *-Deliverable* *- Gate Actions Table* *- Dependency* *- Change Request* *- Top 5 Risks* *- Red & Amber Issues*	MR		Same as 2.7 in the Progress Reporting Process	Same as 2.7 in the Progress Reporting Process
10.16	For the Milestone, the system must be able to generate the following: *- Milestones or Gates achieved in the current reporting period and those not achieved in*	MR		Same as 2.9 in the Progress Reporting Process	

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
	the past, current and next period				
10.17	For the Deliverable, the system must be able to generate the following: *- Deliverable handed over in the current period and those not being handed over in the past and by the end of the next period*	MR		Same as 2.10 in the Progress Reporting Process	
10.18	For the Gate Action Table, the system must be able to generate the following: *- Actions in the past on status still "open" and those actions closed since the last Gate*	MR		Same as 2.11 in the Progress Reporting Process	Same as 2.11 in the Progress Reporting Process
10.19	For the Dependency, the system must be able to generate the following: *-Dependencies with a "needed by date" within the current or next period and those with status different than "achieved" in the past*	MR	Same as 2.12 of the Progress Reporting Process		
10.20	The system must trigger a notification once FPR has been submitted for: *- Contribution Managers of all members working on the project requesting final CBFs (Cost Breakdown Form)*	MR		same as 2.13 in Progress Reporting Process	same as 2.13 in Progress Reporting Process
10.21	When all CBFs have been submitted, the system must trigger a notification to the SJU Finance Team to submit FFAR	MR		Same as 2.14 in Progress Reporting Process	Same as 2.14 in Progress Reporting Process
10.22	The system must provide access to a library where *- CMs can handover CBFs to the SJU (MFA Project) - closure library* *- SJU Finance can submit FFAR (MFA Project) - closure library* *- SJU can store Complementary activity reports*	MR		Same as 10.3	
10.23	The system must have a decision library to which all of the decisions (scanned signatures on Project Closure) are published	MR		Same as 10.3, but for Decisions	

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
10.24	The system must have a publication library for project deliverables marked to be published	MR		Same as 10.3, but for Deliverable Documents	
10.25	A user in the system must be able to "lock" project information once the project has "closed"	MR		When the Project is Closed, Project fields can become read-only. This is not enough as the schedule needs to become also read only. This is solved by moving the project into another security category which is read only. **Solution Mapping:** **- Read Only fields in Project Detail Pages** **- Category Permission in Project Server**	
10.26	The system will have narratives on the Final Interim Report form, with instructions and FAQs when filling out the Interim Report	HP		The Final Interim Report is a report that can be generated based on both Project data as custom fields available in Project Pages used for Closing. In those Pages the user can fil in text or lookup fields **Solution Mapping:** **- Project Life Cycle** **- Project Detail Pages** **- Enterprise Custom Fields**	

4. High level Requirements – Administration & Transversal Cross-Processes

The Collection of requirements covered both the program management and administration. This chapter covers the administration and transversal cross processes analysis, which was based on modules.

Workshops with different stakeholders have been organised, to collect the High level requirements of the new application to be implemented at SESAR JU. The requirements reflect all the needs which SESAR JU is willing to cover in the new platform with minimal customization. In order to verify if the suitability of the new application proposed, a fit gap analysis study has been done by Microsoft. The results of the study are included within this document and are based on the following criteria (Out-of-the box Product, Out-of-the box configuration, and Customization)

1.13 Module 1: Metadata

1.13.1 High level Requirements & Fit/Gap Analysis

Metadata is typically stored for each document. Metadata may include generic metadata (i.e. date of the document, file name, identity of the user...) and specific metadata (i.e. project reference, lot number,...).

The DMS/BMS may also extract metadata from the document automatically or prompt the user to add metadata. Some systems also use optical character recognition on scanned images, or perform text extraction on electronic documents. The resulting extracted text can be used to assist users in locating documents by identifying probable keywords or providing for full text search capability, or can be used for reporting needs.

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
1.1	o The DMS/BMS must be capable of extracting metadata elements automatically from records when they are captured (including OCR functionalities)	HP			**Customization #8** Automatic capturing of metadata when scanning documents (OCR) requires a 3rd party application.
1.2	o The DMS/BMS must allow creators of records to enter manually pertinent record metadata that cannot be captured automatically.	MR	Metadata attributes can be manually completed.		
1.3	o The DMS/BMS must support the validation of metadata that is entered by users, or imported from other systems.	LP	Metadata can be validated in a few different ways: - attribute values must be selected from a predefined metadata set for the choice, lookup and managed metadata attribute type. In case of need, a validation formula can be applied to the value of an attribute.		

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
1.4	o Metadata must be logically linked to the records, files, and classes it documents, so that users can review metadata information when they retrieve records.	MR	All documents have metadata linked to them. This can be viewed in the SharePoint user interface, or within the corresponding Office application when opening the document.		
1.5	o The DMS/BMS must allow for the modification or reconfiguration of metadata sets, but the authorization to make changes must be restricted.	MR	Metadata sets in SharePoint can be defined in lookup lists, term sets or choice fields. They can all be modified, and a user must have certain access rights to do so.		
1.6	o The DMS/BMS must support inheritance of metadata by lower levels of the classification scheme so that, by default, addition of a new class results in automatic inclusion of those attributes by the new class, which are defined as inherited from the higher level.	MR	Content types can inherit from other content types; this can be used to build a class hierarchy. The inheritance includes metadata attributes.		
1.7	o The DMS/BMS must facilitate the following of archiving constraints for each document by using metadata (i.e. archiving date), and to define the link with the physical paper document	MR		Metadata fields for "Archiving" Date etc can be defined. A metadata field for filling in the paper document reference can be added to the relevant document types, and follow the documents throughout the lifecycle.	
1.8	o The DMS/BMS must keep all document metadata during the creation of a new document version.	MR	Yes.		

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
1.9	o The DMS/BMS must allow the administrator to create, add, modify or delete the metadata of a document type and to spread it to existing documents.	MR	At a site collection level, administrators can create document types (content types), and modify existing document types, for instance by adding, modifying or deleting metadata field. These changes can be propagated to all libraries containing the document type as well as documents of the given document type within the site. Deleting metadata fields will not affect existing libraries and documents.	By utilizing the built-in content type syndication mechanism (service to activate), administrators can make such changes in one site collection, and push the changes out to all the sites in the DMS/BMS.	

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
1.10	o The DMS/BMS must allow the administrator to: 1. set a default value for a metadata manually or automatically (based on the document name or content of the document), 2. define a metadata field as mandatory or optional, 3. define a list of choice for a specific metadata field.	MR	1. The file name, title, creator and creation date are automatically extracted and set as metadata for a document. This cannot be changed by the administrator. Any other metadata can have a manually defined default value, either at globally, per site collection, per library or per folder. 2. Metadata fields can be set as mandatory/optional on a content type or library level. 3. There are three different metadata field types that can have a defined list of values; choice (values defined specifically for this field), lookup (from a local list), and managed metadata (local or global term set). These fields can be added and configured on a content type, library, site or site collection level.		
1.11	o The DMS/BMS must offer the opportunity to gather logically the metadata in the user interface.	MR	There is a Properties dialog that allows the user to view and modify the metadata.		

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
1.12	o The DMS/BMS must allow to pre-fill metadata according to system information (owner of the document, creation date, last modification date...)	MR	The metadata mentioned is automatically captured (owner = created by/last modified by).		

1.14 Module 2: Integration

1.14.1 High level Requirements & Fit/Gap Analysis

Many document management systems attempt to integrate document management directly into other applications, so that users may retrieve existing documents directly from the document management system repository, make changes, and save the changed document back to the repository as a new version, all without leaving the application. Such integration is commonly available for office suites and e-mail or collaboration software.

The table below shows the list of requirements concerning Integration:

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
2.1	o The DMS/BMS shall be able to integrate applications from the Microsoft Office package. The users shall be able to create, edit and save documents directly from the interface of Microsoft applications into the DMS.	MR	Office applications can edit documents stored in SharePoint directly.		
2.2	o The DMS/BMS shall support a well-defined interface for integrating applications other than Microsoft Office applications (i.e. SysPer, CRM …)	HP	SharePoint has a rich API that allows for integration with other systems.		
2.3	o The DMS/BMS shall support creation of new documents on the basis of documents templates.	MR	Each document content type has a document template associated with it.		
2.4	o The DMS/BMS shall associate applications to document file types. It shall be possible to start up an application directly when a document is accessed.	MR	Document type is passed from SharePoint when opening a document. It is still dependent on the application associations in the operating system of the client computer to open the document in the correct application.		

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
2.5	o The DMS/BMS must allow to link several documents (i.e. amendments and memo linked to a contract)	MR		SharePoint supports document sets, which are specialized content types that have metadata and can contain documents. It's a way of grouping some documents sharing the same metadata.	
2.6	o The DMS/BMS must allow creating specific forms (i.e. to easily follow and link the legal requests received from the business and the legal responses provided by the legal team).	HP	This can be achieved by using a SharePoint list with fields specifically configured for each scenario.		
2.7	o The system must allow to link emails from Outlook with DMS/BMS documents	MR	You can save an email document with attachments as a file in the DMS/BMS.	DMS/BMS can be configured to store received emails by forwarding them to the document library	
2.8	o Capacity of migration to another storage support or to another platform (export of documents, index…)	HP	SharePoint has a well-documented API that can be used to migrate content (many 3rd party vendors are using this in their migration tools)		
2.9	o The DMS/BMS must allow sending a document as a link or an attachment in an email, according to the user access rights.	MR	Users can send links or attach documents from SharePoint in an email. Sharing a document also sends a link by email, grants the recipient access rights, and passes along the sharing comments (optional). Links will respect the access rights of the receiving user, attachments will not.		

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
2.10	o The DMS/BMS must allow creating a document from an existing document (i.e. save as…)	MR	Yes.		
2.11	o The DMS/BMS must allow using the functionalities of MS suite applications (i.e. search, document comparison, merge…)	MR	Yes.		

1.15 Module 3: Indexing & Classification

1.15.1 High level Requirements & Fit/Gap Analysis

Indexing tracks electronic documents. Indexing may be as simple as keeping track of unique document identifiers; but often it takes a more complex form, providing classification through the documents' metadata or even through word indexes extracted from the documents' contents. Indexing exists mainly to support retrieval. One area of critical importance for rapid retrieval is the creation of an index topology.

The table below shows the list of requirements concerning Indexing:

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
3.1	o The DMS/BMS must support and be compatible with the organization's classification scheme defined by SESARJU. When the classification scheme is non-existent or only partially constructed it is strongly recommended that the classification scheme be based upon business processes.	MR	The classification scheme and hierarchy must be designed, and then configured as content types in the DMS.		
3.2	o The DMS/BMS must automatically assign appropriate classification metadata to records and files and to classes within the classification scheme at the point of creation and capture.	MR	Metadata fields are defined in the classification scheme, so all document and records created within the classification scheme will automatically get these metadata assigned.		

	High level requirements	Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
3.3	o The DMS/BMS must ensure that the authorization to reclassify, add, delete or otherwise modify the classification scheme is carefully controlled and monitored, in accordance with adequate access rights.	MR	Access to administration of content types within each site is limited to the site owners. When using the content type hub feature (centralized administration and publishing of classification scheme to all sites within the DMS), this is handled by dedicated content type hub administrators.		
3.4	o The DMS/BMS must allow an authorised user to add and modify the existing structure of the classification scheme.	MR	Access to administration of content types within each site is limited to the site owners. When using the content type hub feature (centralized administration and publishing of classification scheme to all sites within the DMS), this is handled by dedicated content type hub administrators.		
3.5	o The DMS/BMS must be capable of supporting a hierarchical business classification scheme, with an unlimited and varying numbers of levels below the root level.	MR	Content types can inherit from other content types. There's no limit to the number of levels.		
3.6	o The DMS/BMS must support the initial construction of a business classification scheme within the DMS, in preparation for the creation of folders and before the receipt of electronic documents and data.	MR	The classification scheme/content types can be created before the DMS is populated.		

1.16 Module 4: Storage, Archiving, and Retrieval

1.16.1 High level Requirements & Fit/Gap Analysis

Storage of the documents often includes management of those same documents; where they are stored, for how long, migration of the documents from one storage media to another (hierarchical storage management) and eventual document destruction.

Retrieve the electronic documents from the storage. Although the notion of retrieving a particular document is simple, retrieval in the electronic context can be quite complex and powerful.

The table below shows the list of requirements concerning Storage, Archiving and Retrieval:

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
4.1	o The DMS/BMS must ensure that records, metadata, links to metadata or to files, and classification schemes can be converted or migrated to new system hardware, software and storage media without loss of vital information.	MR	The documents and their metadata are accessible through APIs, and can be migrated using a migration tool. The SharePoint content is stored in SQL Server databases, and can be migrated to new hardware using backup/restore. New servers can be added to the SharePoint farm by referencing the existing farm.		
4.2	o The DMS/BMS must produce a report detailing any failure during a conversion or transfer and identifying records that were not successfully exported.	HP	A detailed error message is presented to the user if an error occurs during the transfer or conversion.		

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
4.3	o The DMS/BMS must retain all records that have been exported until confirmation of a successful transfer process.	HP	If an error occurs during transfer, documents will not be removed from the source.		
4.4	o The DMS/BMS must provide automated procedures that allow for the regular backup and recovery of all records, files, metadata, and classification schemes.	MR	Backups are usually handled through SQL Server backup. Alternatively, PowerShell scripts to back up contents can be scheduled using Windows Scheduler.		
4.5	o The DMS/BMS must alert the SESARJU users at the end of the retention and archiving periods	MR		A retention policy can be set up that notifies specific users that the archive period requirement has been met. The retention policy can also start a disposition approval workflow, to get approval for deleting the record.	
4.6	o The DMS/BMS must ensure that records can be easily accessed and retrieved in a timely manner in the normal course of all business processes.	MR	Records can be searched, and accessed directly from the search result page.		
4.7	o The DMS/BMS must ensure that all components of a record or file, including contents, relevant metadata, notes, attachments, etc., can be accessed, retrieved and rendered as a discrete unit or group and in a single retrieval process.	MR	The record, along with its metadata, will be stored and accessed as a single information object.		
4.8	o The DMS/BMS must be able to manage, store and archive a minimum of 650,000 documents (estimation based on the current situation: 53,931 documents from the current SharePoint system and 566,210 documents from the shared drive).	MR	SharePoint can handle millions of documents. It's however important to keep these numbers in mind when designing the SharePoint farm.		

	High level requirements	Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
4.9	o The DMS/BMS must allow to restore a previous configuration of the system and the data in case of problem	MR	The configuration and data is stored in databases, which can be restored.		
4.10	o The DMS/BMS must have a sufficient absorption capacity to support significant integration of documents in case of high activity peak	HP	SharePoint farm sizing will be calculated based on the expected peak load, which will be estimated based on previous statistics, expected number of users and activity.		
4.11	o Avoid the users to modify or delete the content of a document tagged as an archived document.	MR		Documents declared as in-place records will be set as read-only if the site is configured that way.	
4.12	o Capacity of recover a document deleted by error (especially in case of incorrect handling)	HP	There is a two stage recycle bin function that lets users or administrators recover documents that were deleted by error.		
4.13	o The DMS/BMS must allow to extract data towards office tools (i.e. Excel) and to extract raw data to achieve statistics or to create customised dashboards.	HP	Document library/list data can be exported to Excel for analysis.		
4.14	o The DMS/BMS must allow displaying warning or confirmation messages to users before an action on a document (i.e. delete or move a document).	MR	A confirmation message is displayed when deleting a document (move is only supported through Windows Explorer).		

1.17 Module 5: Security & User Access Management

1.17.1 High level Requirements & Fit/Gap Analysis

Document security is vital in many document management applications. Compliance requirements for certain documents can be quite complex depending on the type of documents. Some document management systems have a rights management module that allows an administrator to give access to documents based on type to only certain people or groups of people.

The table below shows the list of requirements concerning Security:

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
5.1	o The DMS/BMS must allow only authorized personnel to create, capture, update records, metadata associated with records, files of records, classes in classification schemes, and retention schedules.	MR	Access control applies to all the listed aspects.		
5.2	o The DMS/BMS must allow controlling access to the records according to adequate access rights.	MR	Access to records can be granted to users or groups. Defining the actual criteria for who should have access is up to the system administrators or information owners.		
5.3	o A user must never access to information that he or she is not permitted to receive. The users access rights will vary according to the type of data or records contained in the system.	MR	User must be granted permissions in order to access information.		
5.4	o The DMS/BMS allows the external user to directly modify his personal information in the system (company name, contacts…).	MR		External users are stored in Active Directory, in a dedicated container. User Profile synchronization can be set up for these users; they can be allowed to update their personal information in SharePoint, and have that written back to active Directory.	

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
5.5	o The external user can input and send his access request directly in the DMS/BMS	MR	When users try to access a site they're not allowed to access, they can request access directly in the site.		
5.6	o The DMS/BMS must show the list of pending access requests	MR		A site can be configured so that access requests are stored within the site. There's a dedicated view for pending access requests	
5.7	o The access rights validation and justification (history, status) must be linked to the user request in the DMS/BMS	MR		A site can be configured so that access requests, along with their status and any comments or discussions, are stored within the site.	
5.8	o The SJU system administration team must be able to create a validation workflow to manage the access rights in the DMS/BMS, delegation functionality included (i.e. by the user himself for unplanned absence, like holidays, by the hierarchy for unexpected absence, by delegation according to the nature of document to validate during the absence,...)	MR		A site can be configured so that access requests are stored within the site, and all site owners can access these requests to approve or reject them.	
5.9	o The SJU project manager must be able to validate the access rights requests in the DMS/BMS, in adequately approved cases.	HP		A site can be configured so that access requests are stored within the site, and all site owners can access these requests to approve or reject them. As long as the project manager is a site owner, he can validate the access requests for the site.	

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
5.10	o The DMS/BMS must allow the user to reset or request a new password directly in the system without the involvement of the helpdesk team	LP			**Customization #9** This requires an Identity Management solution such as Microsoft Identity Manager to be in place. Users authenticates against active directory, so the password management reset functionality must be implemented there.
5.11	o The DMS/BMS must allow to manage access and to share permissions for users and groups	MR	Privileged users can manage access and permissions within a site. Access can be granted to users and groups.		
5.12	o The DMS/BMS must allow to check permissions of users or groups across all SharePoint sites	MR	Permissions for a user or group can be checked at a site level only.		**Customization #10** This requires custom development of a script or tool, or a 3rd party tool (ControlPoint or similar) that can scan all sites and cache the permission information in a data warehouse.
5.13	o The DMS/BMS must be able to manage a minimum of 5500 external users (i.e. currently 3677 activated/operational and 1503 inactive) and 100 internal users	MR	Yes.		
5.15	o The DMS/BMS must allow to restrict the access to a document based on his status	MR		A SharePoint document library can be configured to only show approved/major versions of documents to users who are neither the owner nor approvers.	

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
5.16	o The DMS/BMS must allow to manage access rights for all action types (create, edit, print, consult, annotation, update,...) at users, groups and roles levels	MR	The supported access rights for documents are view, open, add, edit, delete, view versions and delete versions. This can be assigned on a user or group level.		

1.17.2 User Access management

1.17.2.1 Managing permissions

1.17.2.1.1 Users and groups

Permissions in the DMS/BMS have to be granted to groups, Active Directory groups, or single users. Groups are typically modelled around which role the different groups of people have in relation to the content managed. Visitor, Member and Owner are standard roles that make sense in most situations. It's requested to use groups for managing permissions, and then make Active Directory groups and single user's members of such groups, to simplify permission management and be able to quickly get an overview of the permissions.

For SJU, a lot of roles have been identified that are relevant to the sites that will be created (see Annex 2: Workshops). For instance, in the case of Risk and Issue Management, a summary of the identified roles are Project Manager (PjM), WP Leader (WPL), Program Contribution Manager (PCM), SJU Program Manager (PM), Program Quality Coordinator (PQC), Program Quality Expert (PQE) and Chief Development & Delivery (CDD). However, some of these require the same permissions, so they can be combined into groups representing all the roles with similar needs. In the example below, there is only need for two roles; A Visitor (read access) and a Member (contribute access):

Document	Project Manager (PjM)	WP Leader (WPL)	Programme Contribution Manager (PCM)	SJU Programme Manager (PM)	Programme Quality Coordinator (PQC)	Programme Quality Expert (PQE)	Chief Development & Delivery (CDD)
Document X	-	-	-	R	R	E	R
Document Y	-	-	-	R	R	E	R
Document Z	-	-	-	R	R	E	R
Document W	-	-	-	R	R	E	R

R=Read
E=Edit

1.17.2.1.2 *Permission levels*

What users that have been granted permissions through a group or an Active Directory group are allowed to do is controlled by the assigned permission level. The permission level is a detailed definition of permissions, such as create item, delete item, delete versions, approve items etc. Typical permission levels are Read, Contribute and Full Control, but this can be configured according to the needs of the DMS/BMS. It's a recommendation to use the same permission levels and roles to simplify support and management.

1.17.2.1.3 *Granting Permissions*

Access management in the DMS/BMS has to be very granular, and permissions have to be granted to users and groups at any level of the hierarchy. By default, permissions are inherited down through the hierarchy. However, permission inheritance can be broken at any level, to allow for setting unique permission. Users and groups can be granted permissions directly, or through membership in a group.

It's a good rule of thumb to always set permissions at the highest possible level in the hierarchy, to keep the complexity of understanding, managing and supporting the DMS/BMS as low as possible. For instance, if an auditor should only have access to certain documents for a project, these should be placed in a dedicated folder with a descriptive name, and the auditor should be granted permissions to this folder and its content only.

1.17.2.1.4 Access Request and delegation

The DMS/BMS must have a built-in access request feature that allows anyone who is not a member of a site to request access to it, and to provide a reason for requesting access. A notification email is sent to an email address specified for this site, and requests are placed in a queue for manual processing; until approved, the requestor will not have access to the site. Members of a site can also invite others to the site; however this would also create an access request that must be approved before access is granted. Approving and rejecting access requests is done by users who have the site owner role in the DMS/BMS. The full history of access requests can be found in the access requests page.

In SJU's case, for project sites this role should be held by the project manager, as he will be best suited to evaluate an access request due to his knowledge of the project, members and stakeholders; if needed, the approver can have a dialog with the requester directly as part of processing the access request, to clarify why the user needs access, or provide a reason for rejecting the request.

1.18 Module 6: Collaboration

1.18.1 High level Requirements & Fit/Gap Analysis

Collaboration should be inherent in a DMS. In its basic form, collaborative DMS should allow documents to be retrieved and worked on by an authorized user. Access should be blocked to other users while work is being performed on the document. Other advanced forms of collaboration act in real time, allowing multiple users to view and modify documents at the same time. The resulting document is comprehensive, including all users additions. Collaboration within DMS stores the various mark-ups by each individual user during the collaboration session, allowing document history to be monitored.

The table below shows the list of requirements concerning Collaboration:

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
6.1	o The DMS/BMS shall provide a collaboration and knowledge sharing platform where users from external parties can access restricted documents areas for sharing documents and for obtaining information about documents, tasks etc.	MR	As long as external users can access the system with his web browser, can authenticate with the system, and have been granted permissions to a site, library or document, they can collaborate with other internal or external users.		
6.2	o The DMS/BMS shall provide a web-interface of the system from where external and internal users can get a secure access to the system.	MR	Yes.		
6.3	o The DMS/BMS shall provide the same functionality for managing documents to external users as it does to the internal users.	MR	SharePoint doesn't distinguish between internal and external users; the permissions granted to a user determines what the user is allowed to do, and is equally applicable to internal and external users.		

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
6.4	o The DMS/BMS shall support the electronic signature	MR	Signature functionality from the Office applications can be used in combination with SharePoint; sign documents in Office, store them in SharePoint.	A simple Collect Signatures workflow can be used to assign signing tasks to certain people. The tracking will be stored in the workflow history.	
6.5	o The DMS/BMS shall facilitate the process of document validation and workflow, to replace the current "parapheur"	MR		Simple workflows for document approval or review can be set up; tasks will be assigned to the people implied, and they will manually set their tasks to complete when done.	
6.6	o The DMS/BMS must allow to define a naming convention for all files names and metadata created in the system, to facilitate the collaborative work	MR	The naming convention can be handled manually.		
6.7	o The DMS/BMS must allow to circulate information through users lists, by department, by management, or by name	MR		A simple workflow can be set up to assign reading tasks to the implied people.	
6.8	o The DMS/BMS must allow to provide shortcuts or links from the source document (i.e. a document stored will be available from several folders but with only one copy of the document in the DMS/BMS)	MR	Links can be created in link lists.		
6.9	o The DMS/BMS must allow keeping the comments and tracking changes in a document during a check-in or check-out.	MR	Check-in comments are stored as metadata for the checked-in version. Comments and change tracking within a document is handled by the Office application.		

1.19 Module 7: Versioning

1.19.1 High level Requirements & Fit/Gap Analysis

Versioning is a process by which documents are checked in or out of the document management system, allowing users to retrieve previous versions and to continue work from a selected point. Versioning is useful for documents that change over time and require updating, but it may be necessary to go back to or reference a previous copy.

The table below shows the list of requirements concerning Versioning:

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
7.1	o The DMS/BMS shall be able to manage versions and revisions of documents	MR	The system supports versions and revisions.		
7.2	o The DMS/BMS shall keep track of the history of versions and revisions of documents.	MR		Version history is built in, but must be enabled.	
7.3	o The DMS/BMS shall attach version and revision numbers as metadata to the documents.	MR	Version and revision numbers are attached as metadata to the different versions and revisions of documents.		
7.4	o The DMS/BMS shall be able to show all versions and revisions to the user.	MR	A list of versions and revisions can be viewed along with the metadata changes for each version/revision, and each version and revision of a document can be opened.		

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
7.5	o The DMS/BMS must provide an unique identifier for a document including all versions. If the unique identifier is used for search, only the last version will be displayed by the system (by default).	MR		SharePoint has a built-in feature called Document ID, which can be enabled in sites. It lets a site administrator set a prefix to use, and then all new documents within the site will get a unique number with that prefix. Given that there can be a strict manual regime around the prefixes to ensure each site has a unique prefix (recommended), this should be sufficient.	**Customization #12** To ensure **uniqueness across sites**, a custom document id provider can be developed, which can generate globally unique ids.

1.20 Module 8: Searching & Reporting

1.20.1 High level Requirements & Fit/Gap Analysis

Searching finds documents and folders using template attributes or full text search. Documents can be searched using various attributes, metadata and document content.

The table below shows the list of requirements concerning Searching:

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
8.1	o The DMS/BMS search function shall be a robust and fast search engine.	MR	The FAST for SharePoint search engine powers the search in the system.		
8.2	o The DMS/BMS search function shall be able to search on document identification numbers, document classification and metadata on all documents.	MR	All metadata is searchable.	To search in specific metadata fields (i.e. document classification = <search criteria>), SharePoint must be configured to handle these fields accordingly.	
8.3	o The DMS/BMS search function shall be able to search on different versions and revisions of documents. Standard search shall always only show the last version of documents.	MR	The latest version is always shown in the search result. Previous versions can be found by going to the document library where the document is stored, and open the version history of the document from there.		
8.4	o The DMS/BMS search function shall be able to make free text search in the content of documents.	MR	The content of supported documents (Office documents, PDFs) is fully searchable.		
8.5	o The DMS/BMS search function shall be able to make free text search in metadata.	MR	The metadata is searchable by free text search.		

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
8.6	o The DMS/BMS search function shall be able to handle common Boolean search operators.	MR	The search engine supports boolean search operators like (i.e. AND, OR, NOT…)		
8.7	o It shall be possible to create, save and reuse user defined search criteria as well as the search results.	MR	User can bookmark a search in their web browser, and can create alerts for searches to be notified when new documents are created, existing documents are modified etc.		
8.8	o The DMS/BMS search function shall be able to search on archived documents	MR	As long as content is within the SharePoint environment, it can be searched.		
8.9	o The DMS/BMS should allow to display a customised dashboard for users with at least the following elements: - List(s) of actives tasks, for which an action is requested; - List(s) of documents recently used or opened; - List(s) of documents under modification (check-out); - List(s) of documents recently modified (check-in).	MR	*List of documents recently used or opened* can be found by default in the respective Office applications.	*List of tasks* can be populated by using standard search functionality. *List of documents recently modified* can be populated by using standard search functionality. *List of documents under modification* can be populated by using standard search functionality.	
8.10	o The DMS/BMS should allow indexing the textual content of documents (MS Office, PDF, images…) and emails (Outlook,…)	MR	Office documents, emails and PDFs are indexed.		**Customization #13** 3rd party indexing filters can be purchased (i.e. images, videos…).

	High level requirements	Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
8.11	o The DMS/BMS should allow exporting the search in several formats according to the MS Office suite (i.e. CSV…).	MR			**Customization #2** An app can be built that will enable the export of search results.
8.12	o The DMS/BMS must allow to generate reports based on specific metadata defined by each SJU departments (see Annex: Workshops)	MR		In a document library, users with sufficient access rights can create views that are either filtered or allow filtering by specific metadata. Search can be used to find documents with specific metadata across sites.	

1.21 Module 9: Publishing

1.21.1 High level Requirements & Fit/Gap Analysis

Publishing a document involves the procedures of proofreading, peer or public reviewing, authorizing, printing and approving etc.

The published document should be in a format that is not easily altered without a specific knowledge or tools, and yet it is read-only or portable.

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
9.1	o The DMS/BMS shall be able to publish documents to the intranet and extranet.	MR	In the proposed DMS solution, the intranet and extranet is the same system, thus publishing a document is just a question of granting read permissions to it, which is out of the box functionality.	Should more support for publishing documents be needed, SharePoint document libraries can be configured so that the versioning settings allow users with just read permissions to be able to only read major versions of documents. By using this functionality, documents can be kept as draft versions until ready for publishing, and then be approved for publishing through an Approval workflow (out of the box), or be manually published.	

High level requirements		Priority	Out-of-the-Box Product	Out-of-the-Box-Configuration	Customization
9.2	o The DMS/BMS must have the capacity to allow access to certain documents in time, in addition to the management of access rights.	MR	Limiting the availability of a document to a given period of time can be accomplished by configuring the SharePoint document library to be using the versioning and publishing features, in combination with item scheduling. When these features have been enabled, a publishing start date and a publishing end date can be specified for each document. Outside of the scheduled period, the document is only available to users with editing permissions.		

1.22 Protection of personal data, confidentiality and minimum retention period

PwC identified several documents relative to the protection of personal data, confidentiality and retention of documents. As European Union Body, the legal basis for the document management within the SJU should mainly be based on the following Commission decisions and their implementing rules:

- Commission Decision 2002/47/EC, ECSC, Euratom of 23/01/2002 amending its Rules of Procedure - Annex : Provisions on document management;
- Commission Decision 2004/563/EC, Euratom of 07/07/2004 amending its Rules of procedures - Annex : Commission's provisions on electronic and digitised documents;
- SEC(2009)1643 Implementing rules for Decision 2002/47/EC, ECSC, Euratom on document management and for Decision 2004/563/EC,Euratom on electronic and digitised documents, adopted on 30.11.2009 (recast);
- Collected Decisions and Implementing Rules above, published by the Publications Office of the European Commission;
- SEC(2012)713- First revision of the Common Commission-level Retention List for European Commission files, adopted on 17.12.2012, replacing the document SEC(2007)970 of 04.07.2007.

In addition, the SJU Regulation and the SJU Statutes provide the legal basis for a series of administrative rules governing the SJU's day to day functioning.

In the context of the confidentiality workshop, Vicencia Da Silva, Edita Barauskaite & José Calvo has summarised a compilation of the applicable provisions regarding protection of personal data, confidentiality and retention of documents applicable for the future SJU DMS/BMS project.

1.22.1 Required SJU DMS compliance with provisions on protection of personal data and confidentiality

1.22.1.1 Provisions on protection of personal data

DMS shall respect the provisions on the protection of personal data laid down in the Regulation of the European Parliament and of the Council on the protection of individuals with regard to the processing of personal data by the Union Institutions and Bodies and on the free movement of such data[1].

This regulation restricts access to documents. Any information concerning an identifiable person falls under personal data protection obligations.

The processing of personal data has to be done "fairly and lawfully". Data that is no longer needed for its original purpose may only be stored longer for mostly statistical reasons and in anonymous form. The processing of personal data of "special categories" (such as health data) is especially restricted. The Data Subject has the right of access to the information stored about him and the right to request the rectification of inaccurate data. Confidentiality and security must be guaranteed by technical and organisational measures. These measures must prevent "any unauthorised person from gaining access to computer systems processing personal data" and "any unauthorised reading, copying, alteration or removal of storage media".

Specific privacy rules have been developed by the SJU, such as within the framework of its procurement procedures and the management of the resulting contracts, staff related data, experts, etc. These rules are available at the following link http://www.sesarju.eu/sites/default/files/documents/procurements/privacy_personal_data.pdf but are also currently being updated by the Legal Affairs and Procurement Sector (i.e., complement of the

1 Regulation (EC) No 45/2001 of the European Parliament and of the Council of 18 December 2000 on the protection of individuals with regard to the processing of personal data by the Union Institutions and Bodies and on the free movement of such data

applicable legal basis, introduction of a reference to the controller of the processing and introduction of a reference regarding the conservation period for extracts from judicial records).

1.22.1.2 Provisions on confidentiality

In addition, DMS shall also comply with the principles and minimum standards of security defined in the Council's security regulations[2], in particular with regards to the assessment of the required degree of protection required for any classified document and to the security measures to be implemented by all persons having access to classified records, both in electronic system and paper archives.

Article 22 of the SJU statutes states that the SJU shall "ensure protection of sensitive information, the non-authorised disclosure of which could damage the interest of the contracting parties".

Where confidentiality is concerned, assessment of the degree of protection is required. The security measures shall extend to all persons having access to classified documents.

Classified Documents shall be archived in an area set apart from the other electronic archiving spaces and controlled by security rules; the degree of protection shall correspond with the security criticality of the individual records to be protected.

The main reasons for confidentiality identified so far at the SJU are protection of personal data, commercial interests of third parties and decision-making process.

1.22.1.2.1 Provisions on protection of personal data

The SJU needs to establish the steps for the necessary accreditations in order to be in the position to deal with EU classified documents. The EU classification is as follows:

EU Classification level	Nature of the information
EU Top Secret	This classification shall be applied only to information and material the unauthorised disclosure of which could cause exceptionally grave prejudice to the essential interests of the European Union or of one or more of its Member States.
EU Secret	This classification shall be applied only to information and material the unauthorised disclosure of which could seriously harm the essential interests of the European Union or of one or more of its Member States.
EU Confidential	This classification shall be applied to information and material the unauthorised disclosure of which could harm the essential interests of the European Union or of one or more of its Member States.
EU Restricted	This classification shall be applied to information and material the unauthorised disclosure of which could be disadvantageous to the interests of the European Union or of one or more of its Member States.

[2] Council Decision 2001/264/EC of 19 March 2001 adopting the Council's security regulations, OJ L 101, 11.4.2001, p.1. Decision as last amended by Decision 2005/952/EC (OJ L 346, 29.12.2005, p.18)

In addition to the EU classification level, for which special accreditation is needed and the process is ongoing, it is proposed the SJU uses additional classification levels:

SJU Classification level	Nature of the information
SJU Restricted	This classification shall be applied to information and material the unauthorised disclosure of which could be disadvantageous to the interests of the SJU, the SESAR Programme or its Members.
SJU Proprietary Information	This classification shall be applied to *"commercially sensitive"* or *"sensitive"* information and material sometimes designated as Proprietary Information (MFA) or Confidential Information (H2020) according to any SJU contractual relationship, the unauthorised disclosure of which could prejudice the disclosing party or the SJU. This detriment might be to the financial or commercial position of the disclosing party or to the public interest of the SJU

When using these specific classification levels on a document, the SJU staff member concerned shall make sure that:

- When the document is drawn up by the SJU, the definition of the granted SJU classification level appears in footnote of the document;
- When the document is received by the SJU, a standard letter or e-mail explaining the granted SJU classification level should be automatically generated by the IT system and sent to the entity which communicated the document;
- When a SJU classified document is communicated to a third party, the Legal Affairs and Procurement sector must previously be consulted for preparation of the necessary contractual documents, if needed. In this context, a "pop-up" window should automatically in the system proposing the consultation of the Legal Affairs and Procurement Sector.

1.22.1.2.2 Classification Process

It is the responsibility of every SJU staff to ensure the adequate classification of the exchanged and received documents. For this purpose, upon exchange or reception of any information described in section 1.2.1 above, the SJU staff shall immediately consult the SJU Legal Affairs and Contract Sector (DMS should reflect this requirement).

With regard to the EU classified documents, specific instructions should have been made available to the accredited persons within the SJU. It is advised in this context to consult these persons, if any, in a dedicated workshop.

With regard to documents that can be considered under the SJU classification, it recommended seeking advice from the SJU Legal Affairs and Procurement which may then check the obligations of the SJU with regards to the handling and protection of this information, if any, and proceed with the initial classification of the information in DMS.

In case of exchange of information from the SJU, specific non-disclosure agreement shall be signed by the parties before any disclosure.

In case of request of access to this classified information from a third party, a final decision regarding the classification of the Document will be taken by the SJU Executive Director, on advice and with the support of the Chief Administration Affairs.

1.22.1.2.3 Access to protected documents

Access to protected documents should be limited in case of sensitive documents or for data protection reasons (e.g. in personnel matters).

This access shall be only based on the need to know principle. In particular access shall be restricted in order to protect: privacy of personal data, intellectual property rights and sensitive information. The person registering the supporting document in the system is responsible for activating required security options and limiting access accordingly.

1.22.2 Retention of documents

The retention period is the time a document has to be kept for operational needs and to comply with legal and other requirements.

We would recommend making the retention period an obligatory metadata to the electronic record file.

The metadata would then clearly indicate the time of retention and make it possible to track documents that can be destroyed or transferred.

Legal or statutory retention periods should be regarded as minimum retention periods. For practical reasons, it may be advisable to retain some records slightly longer than these legal or statutory retention periods.

After the retention period the documents shall undergo a second appraisal to determine their long term archival value. We would therefore strongly advise developing in the DMS an alert (pop-up window). At the end of the SJU or at the end of the legal retention period several options are possible:

- Long term storage of electronic version (archiving)
- Extending the retention period
- Complete deletion and/or destruction
- Continuing electronic storage but destruction of original paper version
- The second appraisal, transfer or deletion will be carried out according to the rules in Commission Decision SEC (2008) 2233 (http://ec.europa.eu/transparency/regdoc/rep/3/2002/EN/3-2002-99-EN-1-1.Pdf).

1.22.2.1 Retention periods

We recommend mirroring the rules on the preservation of documents in paper format for the definition of the rules on the preservation of documents in electronic format.

All incoming and outgoing documents that require registration shall in principle be kept for 10 years.

Documents that include personal data and do not need to be stored for so long should be archived separately and destroyed after a shorter period (e.g. Documents concerning unsuccessful tenders, unsuccessful applicants for jobs in SJU, etc.). The retention period for Documents falling under personal data protection is defined by a separate Decision of the Executive Director of SJU.

1.22.2.2 Retention schedule for key document types

In line with the Level Retention List for European Commission Files[3], please find below some examples:

Description	Administrative Retention Period (after conclusion or supersession)
Annual Management Plan, Annual Activity report, SESAR Work Programme	5 years
Strategies, Policies and similar Documents	5 years
Inter-Institutional relations, European Commission, European Parliament, other European Agencies	5 years
Relations with the Court of Auditors	7 years
Internal audits	6 years
Budget and implementation of budget and accounting	10 years
Procurement and financial procedures	10 years
Contract management (following award of contracts)	10 years
Procedures for awards of grants	10 years
Management of grant agreements	10 years
Management of SJU IPRs	10 years
Legal Advice	5 years
Service Level Agreements (SLA) and other inter-institutional agreements	5 years
Studies produced by the SJU (internally or externally)	2 years
Commitments and payments (workshops, missions, etc.)	10 years
HR Personal Files	8 years after extinction of all rights of the person concerned and of any dependants, and for at least 120 years after the date of birth of the person concerned.
HR Selection processes, unsuccessful applications	5 years. The access to the related Documents shall be restricted in order to protect the privacy of personal data contained herein[4].
HR unsolicited applications	2 years for an annual file on all unsolicited applications. The access to the related Documents shall be restricted in order to protect the privacy of personal data contained herein[5].
HR day-to-day management	4 years
Organisational charts	10 years
Traineeships	5 years
Traineeships unsuccessful applications	2 years

[3] SEC(2012)713 available at http://ec.europa.eu/archival-policy/docs/edomec/2012_713_sec_en.pdf

[4] Specific privacy rules shall be developed by the SJU regarding the HR personal files, selection processes, unsuccessful applications and unsolicited applications.

[5] Specific privacy rules shall be developed by the SJU regarding the HR personal files, selection processes, unsuccessful applications and unsolicited applications.

5. Annex

1. Methodology

This project Phase (2) included a number of activities listed below and detailed further in the paragraphs that follow:

- Preparation of workshops, analysis of key processes, metadata, search strategy including taxonomy, reporting, policies/governance, layout, migration, access management, data processing, security, workflows and collaboration (emails, documents sharing), document storage (archiving, deletion, versioning & meta data), to be covered by the future system
- Performing workshops with key stakeholders, outlining workshops outcome and communicating to participants
- Optimising processes and workflows where possible by using standard functionalities and best practices where applicable
- Mapping of high-level requirements leveraging standard processes and best practices as much as possible towards SharePoint 2013 and Project Server Solution
- Constant engagement and communication with Microsoft

The high level requirements were gathered through different rounds of workshops to understand the current processes and to define the to-be requirements. In parallel, engagement and communication was Microsoft was ensured, for instance via synchronisation meetings to align requirements and capabilities to Project Server/SharePoint 2013. An iterative approach to each topic/process (see Annex 2: Workshops) was organized as further described below, which totalled to over 42 workshops:

Figure 8: Requirements Gathering Methodology

1. **Desk Review of As-Is Documentation:** PwC performed a desk review per topic/process, of all relative documentation to understand the SJUs way of working, coupled with the knowledge of the project context and elements identified in the Preparation Phase.

2. **As-Is Process Validation Workshop:** PwC organized and held a workshop per topic/process with SJU SMEs to validate the current As-Is process.

3. **Draft To-Be Requirements (Microsoft Involvement):** In close collaboration with Microsoft, PwC drafted High Level Requirements per topic/process, based on PwC's process improvement methodology and industry best practises.

4. **To-Be Validation & Prioritization Workshop (Microsoft Involvement)**: PwC organized and help a workshop per topic/process with SJU SMEs to validate the To-Be requirements and capture any new requirements identified by client. Furthermore a prioritization exercise took place where the SMEs were asked to rank each requirement

5. **Stream Owner Final Validation (Microsoft Involvement):** PwC organized and led a workshop with the Stream Owners to discuss and validate overall requirements, and more importantly, specific requirements which have already been identified to require high levels of configuration or customization in a new solution.

The DMS/BMS Project team referred to the following table of characteristics to help ensure that all requirements are of the highest quality.

• Attainable	The requirement can be met provided standard functionality and/or business process changes
• Complete	There are no missing elements or characteristics of the requirement
• Concise	The requirement is worded in language that is clear and brief, yet comprehensive
• Consistent	The requirement does not conflict with the intentions of other requirements
• Defendable	The intention and purpose of the requirement is sensible and necessary to the successful implementation of the solution
• Solution Agnostic	The requirement does not use solution-specific language and would be recorded regardless of the choice of solution selected by SESAR JU
• Necessary	The requirement results from a stakeholder need, rather than a lofty or superfluous 'nice to have'
• Specific	The requirement uses direct language that is free from interpretation
• Testable	The requirement results in a tangible or identifiable outcome, which can be assessed to validate degree or compliance
• Traceable	The source of the requirement (i.e. stakeholder) as well as other characteristics such as date recorded and Release number, can be identified
• Unambiguous	The requirement's intention, purpose and meaning are clear to the project team
• Verifiable	The eventual system requirement fulfilment can be identified by the stakeholders

Table 3: Requirements Characteristics

2. Workshops

i. Program and Project Management Stream

Stream	Category	SESAR stream owner	SESAR workshop attendees	Workshop date
Programme and Project Management	Integrated Planning	**Peter Hotham Alain Siebert Benoit Fonck**	**Wim Post/ Dean Swink/ Delphine Umulisa**	22-May-15
			Wim Post	05-Jun-15
	Involvement third-party stakeholders		**Cara Nolan**	18-May-15
			Cara Nolan	04-Jun-15
	Risk and Issue Management		**Wim Post/ Yasmina Cabezas**	19-May-15
			Wim Post	05-Jun-15
	Monitoring & Controlling		**N. Cruz**	27-May-15
			Wim Post	10-Jun-15
	Progress reporting		**Wim Post**	27-May-15
			Wim Post	09-Jun-15
	Maintaining and changing the plan		**Wim Post/ Dean Swink**	22-May-15
			Wim Post/ Dean Swink	04-Jun-15
	Communication		**Wim Post/ Triona Keaveney**	26-May-15
			Wim Post/ Triona Keaveney	08-Jun-15
	Quality Assessement & Delivery		**Wim Post/ Peter Dieben**	20-May-15
			Wim Post/Peter Dieben	09-Jun-15
	Gate Control		**Wim Post/ Leva Kuznecova/ B.Andrea**	19-May-15
			Wim Post	10-Jun-15
	Closure		**Wim Post**	26-May-15
			Wim Post	09-Jun-15
	Project Initiation		**Wim Post**	16-Jun-15
			Wim Post	16-Jun-15
	Project Finance		**Simeon Atanasov/ Marcel Dedic**	29-Jun-15
			Simeon Atanasov/ Marcel Dedic	29-Jun-15

ii. Administration

Stream	Category	SESAR stream owner	SESAR workshop attendees	Workshop date
Administration	Legal	José Calvo	**Jose Calvo Laura Gomez Gutierrez Vicencia Gomes Da Silva Edita Barauskaite**	19/05/2015
	HR		**Jose Calvo Patrick Courtois**	18/05/2015
	Finance & project audit		**Jose Calvo Marcel Dedic Simeon Atanasov Katty Hancq Christina Christodouli**	26/05/2015
	Grants		**Jose Calvo Laura Gomez Gutierrez Fedia Mattarelli Vicencia Gomes Da Silva Edita Barauskaite**	03/06/2015
	Procurement		**Jose Calvo Laura Gomez Gutierrez Vicencia Gomes Da Silva Edita Barauskaite**	19/05/2015
	Strategy and external affairs	**Michael Standar**	**Triona Keaveney Christine Stewart Fiona Mc Fadden**	18/06/2015
	Development and delivery	**Benoit Fonck**	**Ivan De Burchgraeve Alfredo Gomez Alessandro Prister Anja Van Hecke**	16/06/2015
	Air Trafic Management (ATM)	**David Bowen**	**David Bowen other attendees?**	17/06/2015
	Economy and master planning	**Alain Siebert**	**Alain Siebert François Huet Mara Dame**	18/06/2015
	Corporate Support - Facility, IT and confidentiality archiving	**Peter Hotham**	**Miguel Garcia Hubert Huyghe**	02/06/2015
	Corporate Support - Experts and Missions		**Catherine Jeanfils Jacqueline Kohl Marie-Luce Feugier Ieva Smalskyte**	04/06/2015

iii. Transversal Cross Processes

Stream	Category	SESAR stream owner	SESAR workshop attendees	Workshop date
Transversal Cross-processes	User Access Management	**Benoit Fonck - Peter Hotham**	**Dean Swink Marc Vanderstraeten**	03/06/2015
			Dean Swink Marc Vanderstraeten	03/06/2015
	Internal Audit	**Florian Guillermet**	**Veronique Haarsma**	27/05/2015
			Veronique Haarsma	27/05/2015
	Confidentiality (retention and encryption for Programme)	**Benoit Fonck**	**Cara Nolan Wim Post Nacho Cruz Yague**	28/05/2015
	Quality, Planning and reporting	**Peter Hotham**	**Phil Drake Peter Dieben Ilaria Vazzoler Anja Van Hecke**	18/06/2015
	Confidentiality (retention and encryption for Administration)	**Jose Calvo**	**Jose Calvo Laura Gomez Gutierrez Vicencia Gomes Da Silva Edita Barauskaite**	26/05/2015
			Jose Calvo Laura Gomez Gutierrez Vicencia Gomes Da Silva Edita Barauskaite	26/05/2015

iv. Workshop Outputs

- Indexation & Classification Plan
- Metadata
- Confidentiality
- Collaboration
- User Access Rights

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