Requirement	Description	Scope
Report		
SRQ20 - The system shall enable the operator to produce an assessment report from the reported sections	Provide the necessary high-level overview of an assessment of an IM log that is required for submission to the governing body or top management and/or a trusted community Provide the technical in-depth perspective of an assessment of an IM log that is required by an assessor or, if desired, by an auditor **Define report section for:** **- Deviations found between organization's policy for IM process implementation and integrated IM reference model (SRQ5)** **- Assessment criteria and justification how results will be evaluated (SRQ9)** **- Detection and activation as well as resolving and closure of incidents (SRQ12)** **- Temporal compliance development and areas of concern (SRQ16)** **- Most critical incidents incidents in terms of fitness, non-compliance and execeeded response times (SRQ19)** **- Assessment time and past assessments (SRQ21)** **- Assessment results, i.e., findings and non-conformities (SRQ25)** **- Recommendations from an assessment (SRQ26)** **- What-if analysis (SRQ33)**	Reporting
SRQ5 - The system shall generate a report section that lists any deviations found between the organization's policy for IM process implementation and the integrated IM reference model	Generate a section in the assessment report that lists all detected deviations and interesting information between the organization's policy for IM process implementation and the integrated IM reference model Include descriptions for each deviation together with its location within the policy documents Classify detected deviations in the report section based on severity levels from predefined criteria Provide recommendations by the operator for aligning the organization's policy for IM process implementation with the integrated IM reference model based on the detected deviations that are actionable and alllow addressing and resolving deviations Include comments regarding the historical development of the organization's policy for IM process implementation, if considered to be appropiate in the current context, made by the operator	Interaction Reporting

Requirement	Description	Scope
SRQ9 - The system shall generate a report section that includes the assessment criteria and justfies how results will be evaluated against assessment criteria	Include the assessment criteria provided by the operator Include the operators narrative justification on how the assessment results, i.e., findings and non-conformities, will be evaluated against the assessment criteria	Interaction Reporting
SRQ12 - The system shall provide a report section dedicated to the detection and activation as well as resolving and closure procedure of incidents	Include the most common execution variants and most critical incidents regarding non-compliance costs and fitness for detection and activation as well as resolving and closing of incidents Include average metrics for time to activation, time to detection, false positive and true negative rate if available Include individual metrics for time to activation, time to detection, false positive and true negative rate if available for incidents that are highlighted as concerning Include average impact metrics for downtime duration, amount of data loss, estimated costs of damage and SLA violations if available Include individual impact metrics for downtime duration, amount of data loss, estimated costs of damage and SLA violations if available for incidents that are highlighted as concerning Include comments by the operator regarding the overall and individual compliance performance of incidents for activation and detection as well as resolving and closure procedure	Interaction Reporting
SRQ16 - The system shall provide a report section that is dedicated to temporal compliance development and areas of concern	Include the temporal compliance development as well as the average value for the selected incident time period Include areas of concern that were highlighted/flagged by the operator automatically and for each area of concern allow to include the justification in the form of the identified trends and patterns Include comments by the operator for systemic weaknesses and threats and proposed actions that are aimed towards reducing or eradicating areas of concern Include comments by the operator to set the temporal compliance development in context	Reporting Interaction

Requirement	Description	Scope
SRQ19 - The system shall provide a report section dedicated to the most critical incidents in terms of fitness, non-compliance costs and exceeded response times	Include the set thresholds for fitness and non-compliance cost as well as their justification Include all incidents that fall within the set thresholds for fitness and/or non-compliance costs Include for each critical incident, a summary of the execution trace and, if applicable, exceeded response or resolve times that justify the classification as critical Include comments by the operator for each critical incident if desired	Reporting Interaction
SRQ21-A - The system shall provide a report subsection within a section that is dedicated to the assessed time period, past asessments and changes to the used assessment framework if available	Provide information on whether assessments were regularly performed prior to the current assessment and if not why if those information are available Provide the selected time period for which the assesment takes place Include comments about past assessments if desired by the operator that aim to summarize the improvements or changes to the IM that were implemented based on the results of the past assessments Include comments about past assessments if desired by the operator that give notice if changes to the assessment procedure/workflow are introduced since the last assessment like the assessment against a different framework	Reporting Interaction
SRQ21-B - The system shall provide a report subsection within a section that is dedicated to the versioning and, if applicable, changes in the versioning of the currently used assessment framework if available	Include comments about the name and versioning of the currently used assessment framework by the operator Include comments about changes to the versioning of the currently used assessent framework for justification if applicable by the operator	
SRQ25 - The system shall store all the reports to allow reproducibility of the analyses	Include for each asessment result the assessment criteria it is evaluated against Include comments by the operator that explain assessment findings including referring to past assesment reports in order to communicate recurring issues Include comments by the operator that explain non-conformities as well as grade them qualitative- or quantitative-wise	Reporting Interaction

Requirement	Description	Scope
SRQ26 - The system shall provide a report section that explains effectiveness, sufficiency and provides recommendations from an assessment	Include comments by the operator regarding given effectiveness of processes and procedures, sufficiency of details and recommendations for an updated organization's policy for IM process implemenation as well as updated and/or new controls to fulfill the organization's policy for IM process implemenation	Reporting Interaction
SRQ33 - The system shall provide a report section that is dedicated to what-if analysis	Include the basic and advanced functions that were used and which impact on the IM log KPIs was observed Include the change in temporal compliance development that was observed from what-if analysis Include comments by the operator that set the what-if analysis into context to the actual assessment	Reporting
SRQ44 - The system shall provide a functionality to export the produced assessment report	Export the assessment reports in common and well-supported data formats such as PDF, DOCX and XLSX	Interaction Reporting
Analytics Features		
SRQ3 - The system shall provide a functionality to compare the organization's policy for IM process implementation with the integrated IM reference model	Provide a functionality to compare specific sections of the organization's policy documents for IM process implementation with corresponding sections of the integrated IM reference model Allow the operator to map sections of the organization's policy for IM process implemenation to states of the integrated IM reference model Enable the operator to highlight differences and similarities between the organization's policy for IM process implementation and the IM reference model in a text-based format	Analysis
SRQ4 - The system shall detect possible deviations between the organization's policy for IM process implementation and the integrated reference model if prior is processable	Detect possible deviations by performing automatic mapping between sections of the organization's policy for IM process implementation and states of the integrated IM reference model if prior is delivered in an appropiate format for automatic processing Consider any instance where the organization's policy for IM process implementation does not align with the requirements or recommendations of the reference model as possible deviation List the possible deviations in a text-based format that enables the operator to manually rectify possible deviations suggested by the system easily	Analysis

Requirement	Description	Scope
SRQ7 - The system shall enable the operator to check if information is complete, correct, consistent and current	Verify the completeness of the IM log by ensuring that all required fields are existent and populated Verify the accuracy of the data provided by the IM log by comparing it with trusted sources and implement data verification mechanisms such as checksums or hash functions if applicable Ensure consistency across the different fields and IM events with appropiate consistency checking mechanisms Check timestamps of IM log events to ensure it is up-to-date and implement mechanisms to flag outdated data	Analysis
SRQ8 - The system shall provide digital checklists as well as the possibility to define and/or automatically suggest assessment security controls	Provide a checklist functionality that may be used by an operator to define the desired asessment security controls Generate a costumizable checklist template that contains common security controls Suggest common assessment security controls based on selected IM framework or standard that the operator may find useful and import in the assessment checklist automatically Evaluate common assessment security controls automatically regarding appropiate ranges of KPIs of the IM log if available Provide a the status of all security controls as a measure of global progress to the operator	Interaction
SRQ10 - The system shall enable the operator to identify the activation and detection as well as resolving and closure procedure of incidents through suitable metrics	Highlight the most common execution variants for activation and detection as well as resolving and closing incidents before context-aware trace alignment Highlight the most critical incidents regarding activation and detection as well as resolving and closure procedure with respect to fitness and non-compliance costs Highlight the metrics for detection and activation as well as resolving and closing of incidents from additional attributes carried in the IM log	Analysis

Requirement	Description	Scope
SRQ14 - The system shall enable the operator to analyze multiple incidents to identify trends and patterns as areas of concern	Provide a functionality that allows to explore the number of active/closed incidents and time to activate and resolve over time as well as the correlated Fitness and Non-compliance Cost Provide a functionality that allows to explore the distribution of Fitness and Non-Compliance Cost for incidents Perform trend and pattern analysis on the selected incident time period with appropiate techniques such as statistical analysis (descriptive statistics, time series analysis, etc.) and pattern recognition algorithms (clustering, anomaly detection, frequent pattern mining, etc.) Provide a functionality that allows to define and search for patterns (e.g., variants) in selected incident time period Provide appropiate visualization tools that allow the operator to identify trends and patterns manually Provide a function to highlight/tag areas of concern based on identified trends and patterns	Analysis
SRQ17 - The system shall enable the operator to prioritize and analyze details of the most critical incidents with respect to fitness and non-compliance cost individually	Define a qualitative scale for compliance severity that divides the range of values in fitness and non-compliance costs into categories low, moderate, high, critical Provide a function that allows the operator to filter for incidents in certain compliance severity categories regarding fitness and/or non-compliance costs or previously identified areas of concern in order to allow a prioritization of incidents with higher severity Allow to inspect the details of (selected) incidents individually for technical analysis	Interaction Analysis
SRQ18 - The system shall indicate missing escalation steps when proper response times were exceeded	Define proper response time from detection to closing or activation to resolving for incidents of an IM trace based on average values of the provided IM log or set by operator manually Indicate possible missing internal escalation if time between execution steps is beyond certain threshold or if response time is exceeded Provide, if available, information on wether an interm report after exceeding organiaztion's threshold for response time was generated for an incident	Interaction Analysis

Requirement	Description	Scope
SRQ23 - The system shall **retain assessment findings, areas of concern and non-conformities** **during an assessment**	List assessment findings, ares of concern and non-conformities in tabular way and sort by compliance severity by default Allow managing of assessment findings, ares of concern and non-conformities in such a way that adding/removing/replacing/grouping/enriching issues is possible Document for each finding, area of concern and non-conformity how they have been collected and which corrective actions have been taken to leverage or supress specific results Provide a summary of findings, areas of concern and non-conformitries as a measure of global progress to the operator	Interaction
SRQ27 - The system shall implement and maintain the controls to **monitor and assess the IM log** **in order to meet compliance obligations and deduce compliance risks**	Support the operator in assessing the IM log against the compliance obligations communicated in the organization's policy for IM process implementation and the integrated IM reference model Allow the operator to deduce compliance risks after assessing the IM log	Analysis
SRQ31 - The system shall provide the operator with basic tools to **perform what-if analysis** **towards the IM log to determine if changes to organization's IM affect the IM compliance performance**	Provide basic functions such as ignoring or fixing, with respect to fitness or non-compliance cost, specific incidents in the IM log based on their identifier in the overall compliance assessment Provide advanced functions that allow to query for specific patterns in the IM log and exclude the resulting list of incidents based on their identifiers from the overall compliance assessment Provide advanced function to manipulate specific variables of one or mutiple incidents in the IM log	Interaction Analysis
SRQ39 - The system shall allow the operator to **adjust a suggested deviation** **parameterization that reflects assessment preferences**	Provide an explanation to the operator how the parameters of the deviation parameterization affect the cost function of the cost model Provide mechanisms for each incident state from the integrated reference model for each error category (missing, repitition and mismatch) and error weights for error category that allow to modify the values of each parameter of the cost function	Interaction
SRQ40 - The system shall allow the operator to **define a new context-aware deviation parameterization** **independently**	Provide an explanation to the operator of how the deviation parameterization works Provide mechanisms for each incident state from the integrated reference model for each error category (missing, repitition and mismatch) and error weights for error category that allow to set the values of each parameter	Interaction

Requirement	Description	Scope
SRQ47 - The system shall be capable to limit the assessed data of the IM log to a specific time period	Provide functionality to set time period in which the assessment takes place and only consider the incidents within the selected time period Set the default time period to 1 year from the actual current date	Interaction Analysis
Modeling		
SRQ2 - The system shall model an IM reference model based on a standard or framework for IM processes	Require the definition of a standard reference model for IM processes such as ISO 27035 or NIST SP-800-61 that is to be delivered by the operator and then implemented into the system Implement the reference model in an appropiate representation format so that it can serve as a benchmark for the organization's IM process implementation and IM log	Interaction
SRQ28 - The system shall determine metrics to measure how activities deviate from and impact compliance to the reference model	Define and configure metrics for measuring deviations and impacts on compliance Define and calculate incident trace fitness metric which is delivered by conformance checking as average and individually Define and calculate non-compliance cost metric which is delivered by cost model using context-aware conformance checking as average and individually Define and calculate further metrics such as number and percentage of incidents handled, time per incident until resolved or closed, SLA violations, impact and urgency and priority coupled with affected location, category, subcategory and sympton if available as average and individually Define and calculate further metrics for time to activation, time to detection, false positive and true negative rate if available as average and individually	Analysis
Non-Functional		
SRQ24 - The system shall ensure appropriate identification and description, format and media when creating or updating information	Provide standardized formats for creating and updating information such as fields for description, justification, comments, media etc. Allow the operators to easily identify and update or remove information about assessment findings and non-conformities	