Proof of Concept for an Integrated Solution for IT Service Management
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Proof of Concept: Risk Minimization during Implementation of Solutions for IT Service Management

A proof of concept verifies the technical feasibility of a new system implementation and tests the cooperation with the provider as well as partners and distributors. In addition, the proof of concept offers the possibility to assess and plan the effort for installation and integration. Ideally, the functionality that promises the greatest benefit for the company is selected for the proof of concept. Based on this premise, a prototype is created which enables selected users to work on processes reflecting „actual cases.“ This approach checks usability and user acceptance at a very early stage. The proof of concept allows projections about the feasibility of the anticipated benefit and minimizes the risk of bad decisions during system implementation.

This document describes the contents and execution of a proof of concept for the evaluation of an integrated solution for IT service management. The described proof of concept follows hereby the entire service lifecycle according to ITIL® Version 3, as shown in the graphic below. This description of the proof of concept is extensive and requires at least two days to perform all described tasks.

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Service Strategy

01 Service Portfolio Management

After talks between the IT department and the sales department, a new service is added to the service portfolio. The new service will enable the sales representatives to have mobile data access to the customer data of the company. In the following, the service is called “mobile CRM.”
The new service “mobile CRM” passes through the life cycle according to ITIL. This document illustrates this process via selected examples.

**Tasks:**
- **A0101** Enter the service in the service portfolio management.
- **A0102** Describe the life cycle of the service and its historization.
- **A0103** Link the service to other processes that are related to it.

**Service Design**

**02 Service Catalog Management**
To make the service “mobile CRM” available, additional IT services as well as technical services are necessary.

**Tasks:**
- **A0201** Show the difference between the service portfolio, service catalog and the different service types.

**03 Service Model**
The necessary configuration items (CI) are linked with the service “mobile CRM” in the Configuration Management Database (CMDB). The links as well as their possible effects on the service availability are also entered in the CMDB. The service model for “mobile CRM” includes the following components:
- Server A with operating system Windows Server 2003 and MS SQL 2005 database
- Server B, also with Windows Server 2003 and MS SQL 2005 database
- Server A and Server B form a Microsoft Cluster. The database MS SQL 2005 is configured there as a high available application.
- Both servers have 2 Dual-Core CPUs and 4 GB RAM.
- It should be possible to enter purchasing date, price and monthly maintenance costs.
- Server C with application server JBOSS, operating system Sun Solaris
- Server D as VMWARE host
- Network switch C

**Tasks:**
- **A0301** Enter the different types of configuration items.
A0302
Enter the different relationship types (installed on, linked to...); especially the operating system and the database (e.g. application JBOSS) shall be maintained as separate configuration items.

A0303
Enter the different effects regarding the service availability.

04 Knowledge Management System
Already during the service design, valuable information is collected for future operation, which is entered in the knowledge database. This information will be eventually available for the operation.

Tasks:
- A0401
Create a new entry for the service “mobile CRM” in the knowledge database.

Example for an entry in the Knowledge Database:
- The login at service “mobile CRM” returns the error message 3008.

Error description:
The user is blocked after three times entering the wrong password.

Solution description:
An unblocking of the password is necessary.

Required solution steps:
- “Step 1”
- “Step 2”
- “Step 3”

05 Defining Service Quality
For the service “mobile CRM”, the degree of service quality will be defined.

Tasks:
- A0501
Enter a Service Level Agreement (SLA) for “mobile CRM.”

Example for the Content of a SLA
The scope of the service level agreement is as follows:
- Operating time: Monday – Friday from 8 am - 6 pm
- Response time:
  - 1 hour for priority “High”
- 2 hours for priority “Medium”
- 4 hours for priority “Low”

- Solution time:
  - 4 hours for priority “High”
  - 8 hours for priority “Medium”
  - 24 hours for priority “Low”
- Enter also the escalation and notification times.
- The service has a defined availability of 99%. This will be measured monthly and reported to the customer. Enter the appropriate process.

Service Transition

06 Moving New Service into Production

The service “mobile CRM” is moved into production. The Service Lifecycle is displayed via a change.

Tasks:
- A0601
  Set “mobile CRM” as a change process to “In Production.”

07 Knowledge Management System

As part of the test process, additional information is collected that will be important for future operation. This information is entered into the knowledge database.

Tasks:
- A0701
  Enter an additional entry in the knowledge database.

08 Agreeing to a Service Contract

The service is described similarly as in Point 5, Service Quality. After an agreement is reached with a customer or an organizational unit, it will be entered into the system. Additionally, the service contract regarding the Service Level Agreement is entered. To ensure that the SLA will be fulfilled, the service contract is linked to an underpinning contract.

Tasks:
- A0801
  Sign and enter a service contract.
- A0802
  Define and enter an underpinning contract.

Service Operation

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09 Incident
The sales department, where the service “mobile CRM” is used, reports an incident. The priority is set to “Medium.”

Tasks: Incident Resolution and Service Level Management
- A0901
  Show how the resolution times (SLA times) are visualized.
- A0902
  Show how possible solutions for this service are displayed.
- A0903
  Show which group is assigned to resolve the incidents in this service.
- A0904
  Show how the appropriate employees are notified (notification via email, visual display on dashboards, etc.)
- A0905
  Show how the data center sees the components (configuration items).

During the work to resolve the incident, it is discovered that server C is not available.
- A0906
  Document that server C is not available.
- A0907
  Show how other members of the service desk see that server C is not available.
- A0908
  Show the effect of this non-availability of the CI has on other connected CIs.
- A0909
  Visualize the relationships of the configuration items in graphical form.

During the work on the incident, it is noted that server C had a downtime of 2 hours.
- A0910
  Show to what degree the downtime affects the service availability over the entire reporting period.
- A0911
  Create meaningful reports.

Due to the server downtime, more incidents are reported.
- A0912
  Link the new incidents to the original incident.

The original incident is resolved.
A0913
Show how this affects the linked incidents.

10 Interaction of Incident Management and Problem Management
Based on the incidents that were reported for the service “mobile CRM”, a problem is opened to analyze the cause of the incidents and to resolve it.

Tasks:
- A1001
  Create a new incident for “mobile CRM.”
- A1002
  Define a problem and automatically import certain information from the incident. Link the problem with the incident.

The cause of the problem is not obvious. Two teams (e.g. “Database team” and “Server team”) are supposed to work simultaneously on the problem analysis to expedite the process.

- A1003
  Show how the simultaneous work of the two teams is displayed.

During the work on the problem, a workaround is found and documented.

- A1004
  Show how the service desk gets notified about this workaround and how it will use the information.

During the work on the problem, it is discovered that a change in the IT infrastructure is necessary.

- A1005
  Within this problem, open a new change so that problem and change are linked with each other.

11 Change Management and Release Management
According to the service life cycle based on ITIL, the processes change and release management belong to the area of service transition. However, due to the sequential format of our example, they are listed in the chapter Service Operation.

Tasks for the Change Management
- A1101
  Show how the individual phases are entered in the authorization process.
- A1102
  After opening the change, the change manager has to authorize it. An electronic signature is needed here. Show how verification and documentation take place.
After the authorization, the change is implemented. This happens in several, partially simultaneously occurring steps. Document the individual actions.

Show how the change manager can review and verify additionally scheduled changes (Forward Schedule of Change).

The change is closed. Show how this affects the related problem.

Show how closing the changes affects the incidents related to the problem.

Conduct a Post Implementation Review.

Tasks for the Release Management

Show planning and implementation of a release; for instance, an update of the service „mobile CRM.”

12 Request Fulfillment

A new IT employee requests access to server C. The assignment of the access privilege shall be displayed via the service request as well as the self-service.

Tasks:

Show how to accept an appropriate entry in the order catalog.

Show how the order catalog is linked with the service portfolio.

Display the entire process of the request:
  - Authorize the request of the IT employee to have server access.
  - Display the necessary steps of the request in detail.
  - Document the access privileges in the CMDB.

Continual Service Improvement

13 Key Performance Indicators and Trends

The process “mobile CRM” is in production for six months, and now the continuous improvement process shall be started.

Tasks:

Show how the key performance indicators can be visualized and how you can interactively conduct a multidimensional analysis to identify vulnerabilities and cost drivers.
A1302
Visualize the trends.

A1303
Enter target figures in the system.

A1304
Show that implemented measures have a sustainable improvement effect.

A1305
Graphically display the actual process steps of “mobile CRM.”

Additional Functions

14 Configuration Management Database and Change Reconciliation

The Configuration Management Database shall be regularly reconciled with the actual IT infrastructure to detect possible errors.

Tasks:

A1401
Show how the CMDB is reconciled with the actual infrastructure.

You have an XML or CSV file as a result of an inventory scan at your disposal. This result shall be linked with different CMDB types and serves for the initial filling of the CMDB.

A1402
As the result of a second scan, you receive a second XML/CSV file with the same structure. The second scan contains changes in attributes and relations. Show how the configuration manager recognizes changes between the CMDB and the actual scan.

A1403
Show if there are changes to the modifications because it was forgotten to document these modifications.

15 CMDB – Quality Assurance by Validation

The CMDB shall only include validated information. However, some of the data has to be maintained manually. For each server, the internal asset ID is manually entered. This asset ID is crucial for the determination of related values such as the residual value. The list of still available, valid asset IDs is accessible in a database table. You will receive only read privileges.

Tasks:

A1502
As part of the configuration management, enter only a valid asset ID that is listed in the table or show that only values from this table can be selected.

16 License Management

For the service “mobile CRM,” licenses for five new sales representatives are needed.
Tasks:
- A1601
  Show how licenses and usage rights can be identified, assessed and, if necessary, reassigned.
- A1602
  Show how over- or underlicensing can be identified and resolved.

17 Expansion of the Table Structure and the Dialogs

During the continual service improvements, changes to the IT service management system itself are necessary.

Tasks:
- A1701
  Expand the dialog of the incident management form by two additional fields.
- A1702
  If it does not follow automatically, also expand the web dialog for the end-user (Self-Service) by the same two fields as in the incident management form.
- A1703
  Show in the incident management the history of departments (cost centers), which the incident notifier already has passed through.
  The history for the already processed departments is pulled from a table and can contain any number of entries for each incident notifier.
- A1704
  Create the table and maintenance form.
- A1705
  Show the limitations that exist for these expansions.

18 Data Import

The marketing department makes new customer- and contact information available for sales. These come in form of Excel files (100 records).

Tasks:
- A1801
  Import all contact information from the Excel file.

Statement of Work

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