Huawei Tech. Co., Ltd

Digital CRM R2.1

TM Forum Frameworx 16.0 Certification

Business Process Framework (eTOM) Release 16.0

Self-Assessment Process Mapping Report

Level 2 Process: 1.3.7 - Problem Handling

Version: V1R2 (Primary Review comments, second pass)

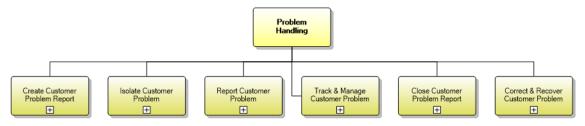
21st February 2017

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Table of Contents

1	Level	2: 1.3.7 PROBLEM HANDLING	3
1.1	L	evel 3: 1.3.7.3 Track & Manage Customer Problem	4
	1.1.1	Level 4: 1.3.7.3.1 Coordinate Customer Problem	6
	1.1.2	Level 4: 1.3.7.3.2 Cancel Customer Problem	11
	1.1.3	Level 4: 1.3.7.3.3 Escalate/End Customer Problem	13
	1.1.4	Level 4: 1.3.7.3.4 Monitor Customer Problem Jeopardy Status	15
	1.1.5	Level 4: 1.3.7.3.5 Prioritize Customer Problem	17
	1.1.6	Level 4: 1.3.7.3.6 Escalate Customer Problem to support team	19
1.2	L	evel 3: 1.3.7.4 Close Customer Problem Report	21
	1.2.1	Level 4: 1.3.7.4.1 Contact Customer for Feedback	23
	1.2.2	Level 4: 1.3.7.4.2 Complete and Validate Customer Problem Report	24
	1.2.3	Level 4: 1.3.7.4.3 Update Time to Restore Service	25
	1.2.4	Level 4: 1.3.7.4.4 Finalize Customer Problem Report	27
1.3	L	evel 3: 1.3.7.5 Create Customer Problem Report	29
	1.3.1	Level 4: 1.3.7.5.1 Generate Customer Problem Report	31
	1.3.2	Level 4: 1.3.7.5.2 Obtain Configuration Information	34
	1.3.3	Level 4: 1.3.7.5.3 Check for major outage	36

1 Level 2: 1.3.7 PROBLEM HANDLING



Frameworx Process	Level 3 Category	Process Identifier	Brief Description
Isolate Customer Problem	(3) eTOM Process Type	1.3.7.1	Identify the root cause of the customer problem.
Report Customer Problem	(3) eTOM Process Type	1.3.7.2	Monitor the status of customer problem reports, provide notifications of any changes and provide management reports. This includes customer problems caused by security events.
Track & Manage Customer Problem	(3) eTOM Process Type	1.3.7.3	Ensure that recovery activities are assigned, coordinated and tracked efficiently, and that escalation is invoked as required for any open customer problem reports in jeopardy.
Close Customer Problem Report	(3) eTOM Process Type	1.3.7.4	Ensure that a problem affecting the customer is solved

Create Customer	(3) eTOM	1.3.7.5	This process creates a
Problem Report	Process		new Customer Problem
	Туре		Report.
Correct & Recover	(3) eTOM	1.3.7.6	Restore the service to a
Customer Problem	Process		normal operational
	Туре		state as efficiently as
			possible

1.1 Level 3: 1.3.7.3 Track & Manage Customer Problem

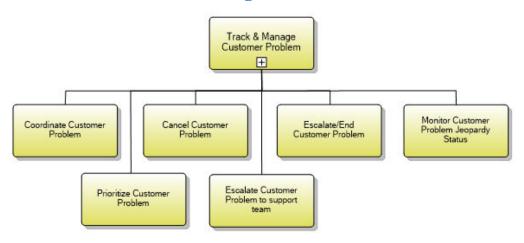


Figure 1 1.3.7.3 Track & Manage Customer Problem decomposition

Process Identifier: 1.3.7.3

Brief Description

Ensure that recovery activities are assigned, coordinated and tracked efficiently, and that escalation is invoked as required for any open customer problem reports in jeopardy.

Comment for the compliance:

AM (Please refer to the document BP.CC.TT.01 "Trouble ticket")

See Level4s in scope below for details of support

Extended Description

The purpose of the Track & Manage Customer Problem processes is to ensure that recovery activities are assigned, coordinated and tracked efficiently, and that escalation is invoked as required for any open customer problem reports in jeopardy. Responsibilities of these processes include, but are not limited to

- Scheduling, assigning and coordinating tracking any recovery activities, and any repair and restoration activities delegated to other processes;
- Generating the respective service trouble report creation request(s) to Create Service
 Trouble Report based on specific customer problem reports;
- Undertake necessary tracking of the execution progress;
- Modifying information in an existing customer problem report based on assignments;
- Modifying the customer problem report status;
- Canceling a customer problem report when the specific problem was related to an incorrect customer problem report
- Monitoring the jeopardy status of open customer problem reports, and escalating customer problem reports as necessary.

Note that some specific product and/or service components may be owned and managed by other Parties. In these cases the Track & Manage Customer Problem process is responsible for initiating requests, through other Party Problem Reporting & Management processes for restoration and recovery by the other Party of the specific service components. These processes will co-ordinate all the actions necessary in order to guarantee that all tasks are finished at the appropriate time and in the appropriate sequence. The Track & Manage Customer Problem processes will also inform the Close Customer Problem processes by modifying the customer problem report status to cleared when the customer problem has been resolved.

Commen	t for	the co	ompi	iance:
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AM

Please refer to the Level4s in scope below for details of support

Explanatory

Reserved for future use.

Mandatory

Reserved for future use.

Optional

Reserved for future use.

Interactions

Reserved for future use.

LEVEL 4 PROCESS MAPPING DETAILS 1.3.7.3.1 Coordinate Customer Problem

Brief Description

This process coordinates all the actions necessary in order to guarantee that all tasks are finished at the appropriate time and in the appropriate sequence. It schedules, assigns and coordinates any recovery activities, and any repair and restoration activities delegated to other processes. It undertakes necessary tracking of the execution progress, modifies information in an existing Customer Problem Report based on assignments, and modifies the Customer Problem Report status.

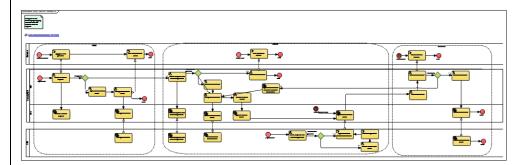
Comment for the compliance:

AM (Please refer to the document BP.CC.TT.01 "Trouble ticket")

The CSR is the main user of the problem handling function. The coordination between the CSR staffs are supported by the routing function of the system.



The relevant process in Huawei BP is "Trouble Ticket to Solution" which can be found here:



The diagram can also be opened here:



In this process, the activities of the diagram are used to realize the "Track Problem Handling Process Capability" in TMF Process Framework.

 Customer apply to solve problem Customer contact customer service centre and apply to solve problem about fixed service or FMC offer. Create a service request CSR queries customer standard information, and then create a service request record after identified the contreason based on the information. Usually, service request include customer type, service 	tact
solve problem about fixed service or FMC offer. 2. Create a service request CSR queries customer standard information, and then create a service request record after identified the contreason based on the information.	tact
Create a service request CSR queries customer standard information, and then create a service request record after identified the contreason based on the information.	
CSR queries customer standard information, and then create a service request record after identified the contreason based on the information.	
create a service request record after identified the con- reason based on the information.	
reason based on the information.	
Usually, service request include customer type, service	
, , , , , , , , , , , , , , , , , , , ,	
request type, etc.	
3. Duplicate the trouble ticket	
A duplicate trouble ticket indicates the same problem,	
fault, or request that a customer reports multiple time.	s in
specified time duration.	
When CSR create a service request, the system displays	s a
message indicating that the service request is duplicate	e.
4. Query the trouble ticket	
After indicating the service request is duplicate, CSR qu	ıerv
and views the trouble ticket that created before.	
5. Feedback trouble ticket handle status	
After queried the trouble ticket, CSR can feedback the	
trouble ticket's latest handling progress to customer, ij	f
customer want to supplement more information, CSR o	can
add a midway opinion.	
6. Online diagnose and solve the problem	
If this is the first time that customer apply to solve the	
problem, CSR can use troubleshooting steps guide to	
diagnose and solve the problem by the tools provided i	by
BES and OSS.	

7. Feedback customer and confirm

After diagnose and solve the problem, CSR can tell customer the result about the problem. If customer confirms the result, that means CSR solve the service request.

8. Create trouble ticket

If CSR can't solve the problem, the CSR will generate a trouble ticket, so that the trouble ticket handler can perform further processing.

When CSR creates a trouble ticket for a customer, the system automatically obtains the basic customer information and the history service request records according to the handled number.

9. **Assign trouble ticket**

Based on the trouble ticket information, TT handler can determine to perform operations, if the problem belongs to the BSS domain, the handler can assign the TT to the corresponding department and service agents.

10. | Handle & update trouble ticket

A trouble ticket handler retrieves a TT, places it in the to-do area.

The handler can perform this task and record your handling opinion on the current TT and submit the TT to the next department.

Through end-to-end processes, ensure that problems are solved.

11. Create network trouble ticket

If the problem belongs to the OSS domain, the handler can create a network trouble ticket and assign the TT to the OSS department.

When CSR creates a OSS trouble ticket, the system automatically obtains the basic customer information and the history service request records according to the handled number.

12.	In-site diagnose and solve the problem
	When an OSS trouble ticket handler retrieves a TT, he can
	use use troubleshooting steps guide to diagnose and solve
	the problem by the professional tools provided OSS.
13.	Create off-site work order
	If the OSS trouble ticket handler can't solve the problem,
	the CSR will generate an off-site work order.
14.	Solve the problem
	If the OSS trouble ticket handler solves the problem, the
	handler can fill in the handling process and result, and then
	submit the trouble ticket.
15.	update network trouble ticket status
	In the OSS domain, after the trouble ticket's processing is
	complete, OSS trouble ticket system will invoke BSS trouble
	ticket interface and update the TT status handling progress.
16.	Update trouble ticket status
	BSS trouble ticket will be update by OSS trouble ticket after
	OSS TT is complete.

Extended Description

Not used for this process element

Explanatory

Not used for this process element

Mandatory

Coordinates all the actions necessary in order to guarantee that all tasks are finished at the appropriate time and in the appropriate sequence. It schedules, assigns and coordinates any recovery activities, and any repair and restoration activities delegated to other processes. It undertakes necessary tracking of the execution progress, modifies information in an existing Customer Problem Report based on assignments, and modifies the Customer Problem Report status.

Comment for the compliance

AM

Please refer to the previous response to Brief Description

Optional

Not used for this process element

Interactions

1.1.2 Level 4: 1.3.7.3.2 Cancel Customer Problem

LEVEL 4 PROCESS MAPPING DETAILS 1.3.7.3.2 Cancel Customer Problem

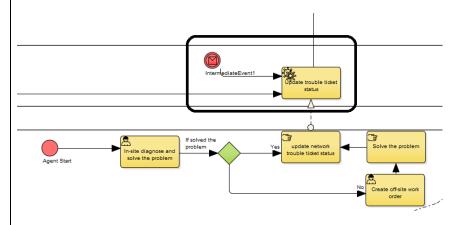
Brief Description

This process cancels a Customer Problem Report when the specific trouble was related to an incorrect customer problem report.

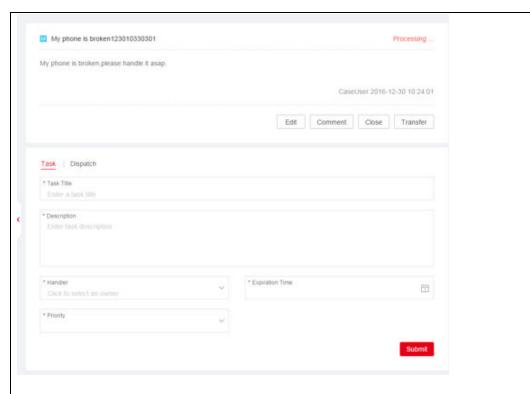
Comment for the compliance:

AM (Please refer to the document BP.CC.TT.01 "Trouble ticket")

When the problem is identified as solved or incorrect, this problem should be cancelled. The user can update the status of the problem to be closed with the comment to indicate it is invalid.



The screenshot of cancelling the problem is as the below:



Extended Description

Not used for this process element

Explanatory

Not used for this process element

Mandatory

Cancels a Customer Problem Report when the specific trouble was related to an incorrect customer problem report.

Comment for the compliance:

AM

Please refer to the previous response to Brief Description

Optional

Not used for this process element

Interactions

1.1.3 Level 4: 1.3.7.3.3 Escalate/End Customer Problem

LEVEL 4 PROCESS MAPPING DETAILS 1.3.7.3.3 Escalate/End Customer Problem

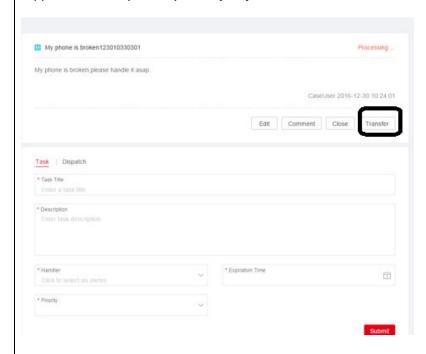
Brief Description

Initiate escalation of customer problem reports as necessary

Comment for the compliance:

AM (Please refer to the document BP.CC.TT.01 "Trouble ticket")

When the user finds the problem is important/critical or it cannot be simply solved by him, the user can escalate the problem to the other expert or the supervisor. This is supported in the system by "transfer" function as the screenshot below.



Extended Description

Not used for this process element

Explanatory

Not used for this process element

Mandatory

Ensure that escalation is being invoked as required for any open customer problem reports in jeopardy.

Comment for the compliance:

AM

Please refer to the previous response to Brief Description

Optional

Not used for this process element

Interactions

1.1.4 Level 4: 1.3.7.3.4 Monitor Customer Problem Jeopardy Status

LEVEL 4 PROCESS MAPPING DETAILS 1.3.7.3.4 Monitor Customer Problem Jeopardy Status

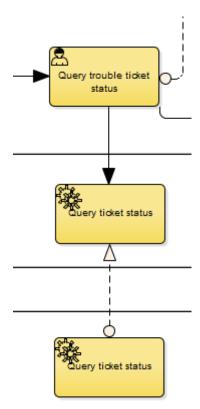
Brief Description

Monitoring the jeopardy status of open customer problem reports

Comment for the compliance:

AM (Please refer to the document BP.CC.TT.01 "Trouble ticket")

The problem status is monitored by the dedicated staff in the problem handling process. The user (staff) can query the problem to trace its status.



Extended Description

Not used for this process element

Explanatory

Mandatory

Ensure that any open customer problem reports in jeopardy are identified and reported

Comment for the compliance:

AM

Please refer to the previous response to Brief Description

Optional

Not used for this process element

Interactions

1.1.5 Level 4: 1.3.7.3.5 Prioritize Customer Problem

LEVEL 4 PROCESS MAPPING DETAILS 1.3.7.3.5 Prioritize Customer Problem

Brief Description

To be added

Extended Description

Not used for this process element

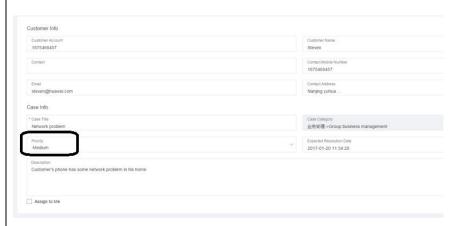
Explanatory

This process is responsible for assigning the prioritization to customer problem in order to establish an order for handling it. . Associate Impact and Urgency levels to a problem; to enable focusing on the business critical problems based on the problem prioritization.

Comment for the compliance:

AM (Please refer to the document BP.CC.TT.01 "Trouble ticket")

The user can set the "priority" of the problem to differentiate its degree of importance and urgency. The screenshot below is the entrance of such operation.



Mandatory

The prioritization is assigned (usually automatically) according to criteria, such as, categorization, customers affected and SLAs. Record and prioritize the Problem with appropriate diligence, in order to facilitate a swift and effective resolution and avoid ambiguities.

Comment for the compliance:
AM
Please refer to the previous response to Brief Description
Optional
Not used for this process element
Interactions
Not used for this process element

1.1.6 Level 4: 1.3.7.3.6 Escalate Customer Problem to support team

LEVEL 4 PROCESS MAPPING DETAILS 1.3.7.3.6 Escalate Customer Problem to support team

Brief Description

To be added

Extended Description

Not used for this process element

Explanatory

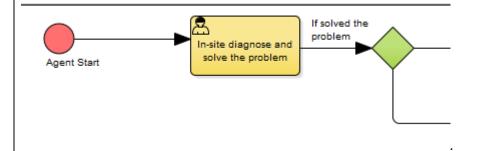
This process provides the escalations between support levels and actors when a customer problem cannot be solved by the current assigned group. Therefore, the escalation can be carried out between supports levels at CRM level, or, it can be escalated to others actors, such as, service provider or third-parties. It is essential the ability to rapidly escalate customer problems according to clear and agreed rules. The support of a higher level specialist is needed to resolve the problem.

Comment for the compliance:

AM (Please refer to the document BP.CC.TT.01 "Trouble ticket")

The problem can be sent to the supporting team when it involves the technical analysis or diagnosis so it cannot be handled only by the front office staff.

The relevant process step is as the below:



Mandatory

Escalate the customer problem, to involve the appropriate support team, with all related customer and problem information to a higher level support.

Comment for the compliance:

Please refer to the previous response to Brief Description

Optional

Not used for this process element

Interactions

1.2 Level 3: 1.3.7.4 Close Customer Problem Report



Figure 2 1.3.7.4 Close Customer Problem Report decomposition

Process Identifier: 1.3.7.4

Brief Description

Ensure that a problem affecting the customer is solved

Comment for the compliance:

AM (Please refer to the document BP.CC.TT.01 "Trouble ticket")

The compliance is "partial" because not all the level 4 processes are mapped.

See Level4s in scope below for details of support

Extended Description

The purpose of the Close Customer Problem Report processes is to close a customer problem report when the problem affecting the customer is solved. These processes are also responsible for possibly contacting the customer to inquire about the customer's satisfaction with resolution of the problem. These processes monitor the status of all open customer problem reports and recognize that a customer problem report is ready to be closed when the status is changed to cleared.

Comment for the compliance:

AM (Please refer to the document BP.CC.TT.01 "Trouble ticket")

See Level4s in scope below for details of support

Explanatory

Reserved for future use.

Mandatory

Reserved for future use.

Optional

Reserved for future use.

Interactions

Reserved for future use.

LEVEL 4 PROCESS MAPPING DETAILS 1.3.7.4.1 Contact Customer for Feedback

Brief Description

This process is responsible for contacting the customer to inquire about the customer's satisfaction with resolution of the problem.

Comment for the compliance:

AM (Please refer to the document BP.CC.TT.01 "Trouble ticket")

The details are same as the previous section.

Extended Description

Not used for this process element

Explanatory

Not used for this process element

Mandatory

Contacts the customer (where appropriate) to inquire about the customer's satisfaction with resolution of the problem.

Comment for the compliance:

AM

Please refer to the previous response to Brief Description

Optional

Not used for this process element

Interactions

LEVEL 4 PROCESS MAPPING DETAILS 1.3.7.4.2 Complete and Validate Customer Problem Report

Brief Description

To be added

Extended Description

Not used for this process element

Explanatory

This process is used to validate the customer problem report. Which involves root-cause analysis to determine the cause of the resolved problem and also document the process that solved this problem.

Comment for the compliance:

AM (Please refer to the document BP.CC.TT.01 "Trouble ticket")

The problem handling records is stored and able to be queried for the further analysis which is normally in the Business Intelligence system.

The compliance for this process is "partial".

Mandatory

Validate whether or not a resolution has been implemented for the customer problem. And ensure that the solution to a problem affecting the customer has been documented.

Comment for the compliance:

AM

Please refer to the previous response to Brief Description

Optional

Not used for this process element

Interactions

The Complete and Validate Customer Problem Report processes will notify the Update Time to restore Service processes when the analysis is complete.

Comment for the compliance:

1.2.3 Level 4: 1.3.7.4.3 Update Time to Restore Service

LEVEL 4 PROCESS MAPPING DETAILS 1.3.7.4.3 Update Time to Restore Service

Brief Description

To be added

Extended Description

Not used for this process element

Explanatory

Not used for this process element

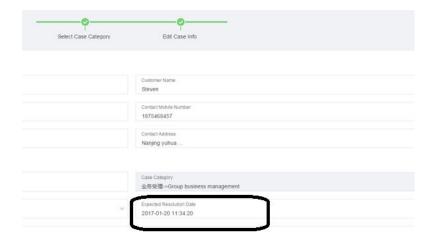
Mandatory

Update the time taken to restore a configuration or Service after a failure; measured from the time the service failed until it was fully restored to its normal functionality.

Comment for the compliance:

AM (Please refer to the document BP.CC.TT.01 "Trouble ticket")

The "update time" is managed in the problem process as the attribute of the trouble ticket.



The activities in the process are as:

update network trouble ticket status

In the OSS domain, after the trouble ticket's processing is complete, OSS trouble ticket system will invoke BSS trouble ticket interface and update the TT status handling progress.

Update trouble ticket status

BSS trouble ticket will be update by OSS trouble ticket after OSS TT is complete.

Optional

Not used for this process element

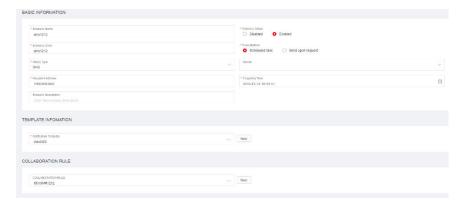
Interactions

The Update Time to restore Service process will notify the Finalize Customer Problem Report process when the update is completed.

Comment for the compliance:

ΑM

The notification can be defined in advance and be related to the problem process. The process will notify the necessary handling user at the configured point of process.



LEVEL 4 PROCESS MAPPING DETAILS 1.3.7.4.4 Finalize Customer Problem Report

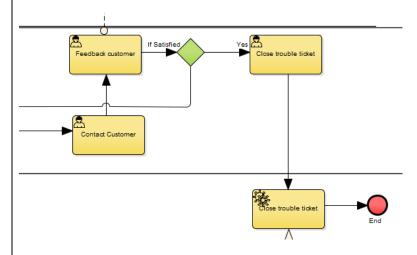
Brief Description

Ensure that a problem affecting the customer is solved.

Comment for the compliance:

AM (Please refer to the document BP.CC.TT.01 "Trouble ticket")

The details are of the finalizing the problem is shown as the diagram below which contains the steps of closing the problem after confirming with the customer.



Extended Description

Not used for this process element

Explanatory

It is used to close a customer problem report when the problem affecting the customer is solved.

Mandatory

Change the customer problem report status to cleared.

Comment for the compliance:

AM

Please refer to the previous response to Brief Description



1.3 Level 3: 1.3.7.5 Create Customer Problem Report

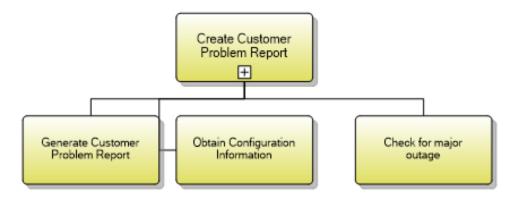


Figure 3 1.3.7.5 Create Customer Problem Report decomposition

Process Identifier: 1.3.7.5

Brief Description

This process creates a new Customer Problem Report.

Comment for the compliance:

AM (Please refer to the document BP.CC.TT.01 "Trouble ticket")

See Level4s in scope below for details of support

Extended Description

The objective of the Create Customer Problem Report process is to create a new customer problem report.

A new customer problem report may be created as a result of customer contacts indicating a problem with their purchased product offerings or, at the request of analysis undertaken by other processes in the CRM or SM&O horizontal process layers, which detect a failure or degradation which may be impacting customers. These processes are responsible for capturing all the necessary customer information to be included in the new Customer Problem Report.

Comment for the compliance:

AM (Please refer to the document BP.CC.TT.01 "Trouble ticket")

See Level4s in scope below for details of support

Explanatory

Reserved for future use.

Mandatory

Reserved for future use.

Optional

Reserved for future use.

Interactions

Reserved for future use.

LEVEL 4 PROCESS MAPPING DETAILS 1.3.7.5.1 Generate Customer Problem Report

Brief Description

To be added

Extended Description

Not used for this process element

Explanatory

This process is used to Create a new customer problem report including all necessary customer information.

Comment for the compliance:

AM (Please refer to the document BP.CC.TT.01 "Trouble ticket")

The detailed diagram of the process is same as the previous section.

The activities in the process are as:

1. Create network trouble ticket

If the problem belongs to the OSS domain, the handler can create a network trouble ticket and assign the TT to the OSS department.

When CSR creates OSS trouble ticket, the system automatically obtains the basic customer information and the history service request records according to the handled number.

2. In-site diagnose and solve the problem

When an OSS trouble ticket handler retrieves a TT, he can use troubleshooting steps guide to diagnose and solve the problem by the professional tools provided OSS.

3. Create off-site work order

If the OSS trouble ticket handler can't solve the problem, the CSR will generate an off-site work order.

4. Solve the problem

If the OSS trouble ticket handler solves the problem, the handler can fill in the handling process and result, and then submit the trouble ticket.

5. update network trouble ticket status

In the OSS domain, after the trouble ticket's processing is complete, OSS trouble ticket system will invoke BSS trouble ticket interface and update the TT status handling progress.

6. **Update trouble ticket status**

BSS trouble ticket will be update by OSS trouble ticket after OSS TT is complete.

Mandatory

Capture all the necessary customer information and related problem details and include them in the new Customer Problem Report.

Comment for the compliance:

AM

Please refer to the previous response to Brief Description

Optional

Not used for this process element

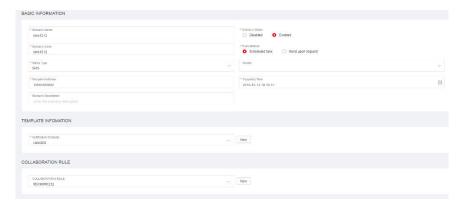
Interactions

The Generate Customer Problem Report process will notify the Obtain Configuration Information process when the report creation is complete.

Comment for the compliance:

AM

The notification can be defined in advance and be related to the problem process. The process will notify the necessary handling user at the point of "generating problem".



LEVEL 4 PROCESS MAPPING DETAILS 1.3.7.5.2 Obtain Configuration Information

Brief Description

To be added

Extended Description

Not used for this process element

Explanatory

This process is used to get the service configuration information.

Comment for the compliance:

AM (Please refer to the document BP.CC.TT.01 "Trouble ticket")

The details are same as the previous section.

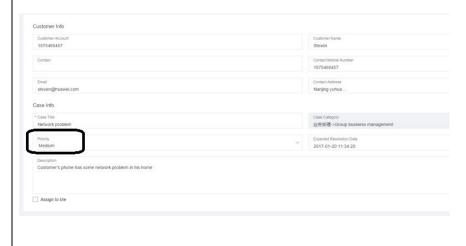
Mandatory

Acquisition of configuration information from the ITIL CMS and the placement of the customer problem in a known category and priority.

Comment for the compliance:

AM

The user can set the "priority" of the problem to differentiate its degree of importance and urgency. The screenshot below is the entrance of such operation.



Optional

Not used for this process element

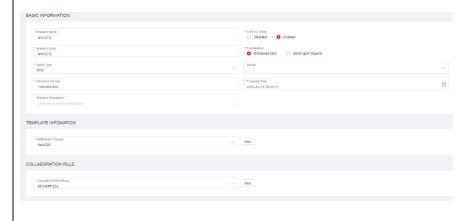
Interactions

The Obtain Configuration Information process will notify the Categorize & Prioritize Customer Problem process when the information is gathered. And will also interact with configuration management.

Comment for the compliance:

AM

The notification can be defined in advance and be related to the problem process. The process will notify the necessary handling user at the configured point of process.



LEVEL 4 PROCESS MAPPING DETAILS 1.3.7.5.3 Check for major outage

Brief Description

To be added

Extended Description

Not used for this process element

Explanatory

Check if the problem is general or specific.

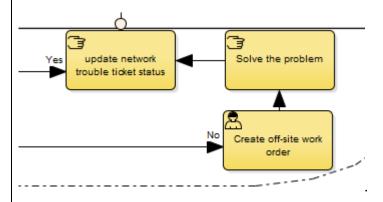
Mandatory

Check if the problem is related to major system/service outage and not only to a specific customer or group of customers.

Comment for the compliance:

AM (Please refer to the document BP.CC.TT.01 "Trouble ticket")

The outage handling is done by technical team. The problem tickets can be handled singly or in the batch. When the problems belong to the same category, the back-office team can solve the problems in the unified task. Thus the issues from the group of customers are handled efficiently.



Optional

Not used for this process element

Interactions