
USER GUIDE

Hub Operations with SAP Operational Process Intelligence powered by SAP HANA

*Take complete control of shipments movement with real time visibility
on centralized data-to-day operations at Airport hub*

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1. OVERVIEW

1.1. SCENARIO DESCRIPTION

Air Cargo Shipment AG has their operation hub in multiple airports across the world. Each operation hub handles large volume of shipments every day during operation hours. The primary goal of the hub is to route the shipments received from all inward cargo flights to the appropriate onward cargo flights. This scenario showcases how SAP Operational Process Intelligence helps Air Cargo Shipment AG to successfully do their daily operation at their hubs.

1.2. BUSINESS PAIN POINTS

The following scenario addresses three major challenges of Hub Operations Manager at Air Cargo Shipment AG

- a. Limited operational visibility
- b. Key SLA to route 97% of shipments without delay
- c. Resource allocation to avoid escalations and delay

1.3. KEY MESSAGE AND VALUE PROPOSITION

SAP Operational Process Intelligence (OPInt) powered by SAP HANA enables line-of-business users to gain process visibility across their end-to-end business processes with a clear focus, improving the operational decision making to achieve better business outcomes.

SAP OPInt allows transportation and logistics companies to track the progress and milestones of key performance indicators that are crucial for their business.

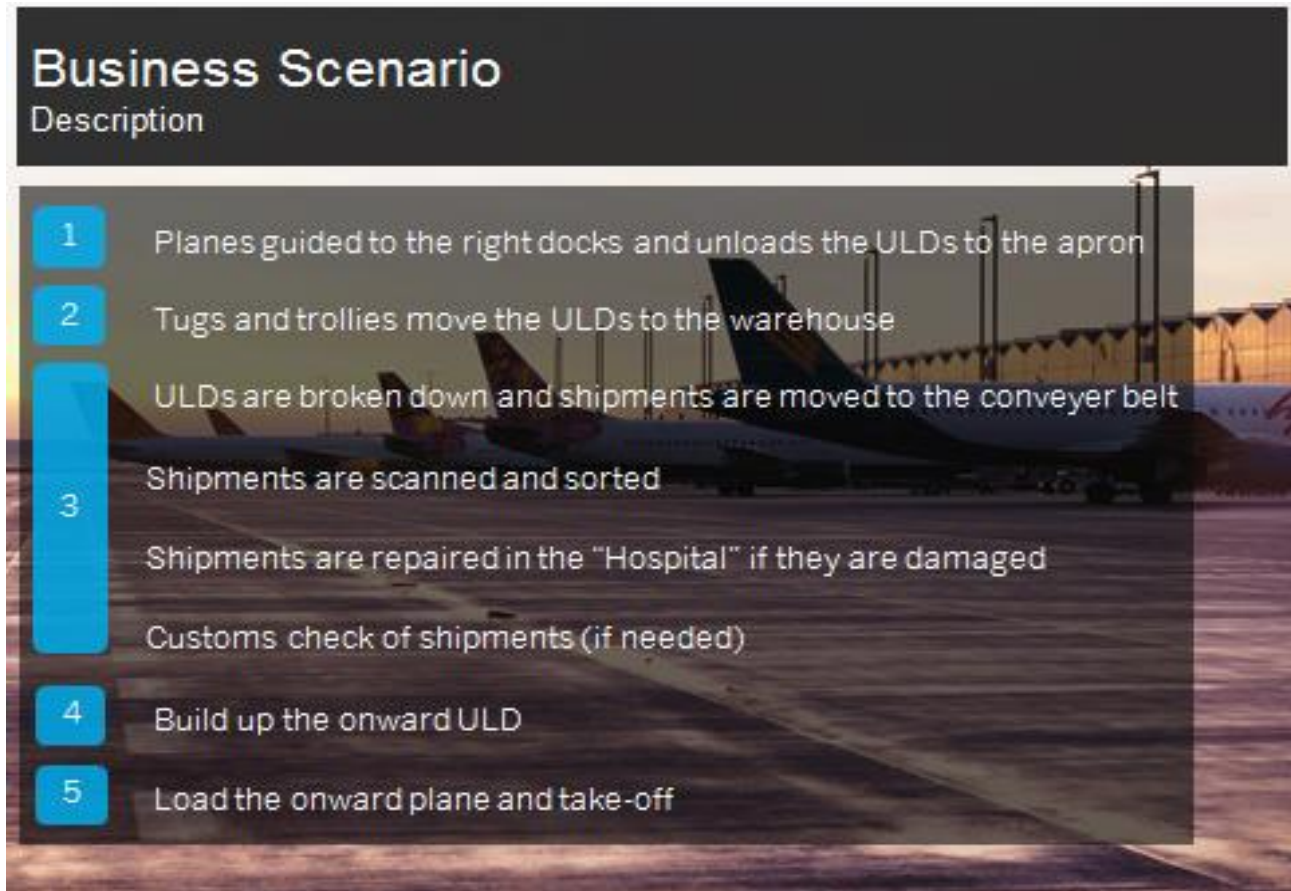
These KPIs are defined in OPInt using measures and indicators. KPIs for this Hub Operations scenario are like total volume of shipments loaded in a day, total time to load and unload the ULDs.

SAP OPInt provides workspace which will be used by hub operations manager to analyse shipments that are overdue or at risk and take appropriate actions.

Operations manager can also view complete details of shipments and since when the shipment is in that particular state. He can take action by creating tasks for that shipment which are not completed on time.

1.4. STORY FLOW

The process in Air Cargo Shipment AG Hub is started when the cargo plane lands and guided onto the right dock. The loaders unload the ULDs (Unit loading device) to the apron. The trollies move these ULDs to the warehouse where these ULDs are broken and shipments are moved to the conveyer belt for sorting. Shipments are then scanned and any damaged shipments are repaired. These shipments are then bundled and build up for onward ULDs and finally loaded on the plane. The process is completed when the plane takes off



Business Scenario
Description

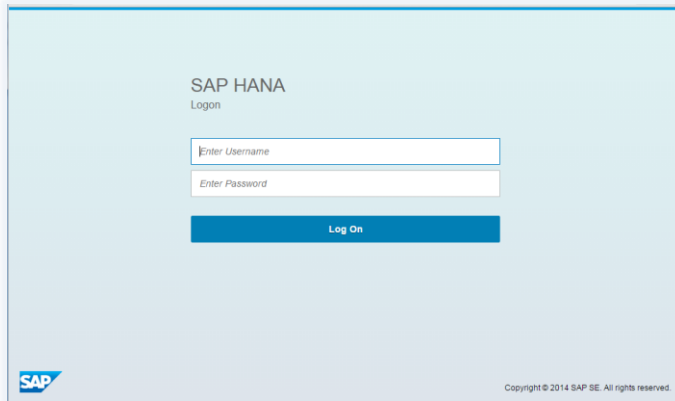
- 1 Planes guided to the right docks and unloads the ULDs to the apron
- 2 Tugs and trollies move the ULDs to the warehouse
- 3 ULDs are broken down and shipments are moved to the conveyer belt
Shipments are scanned and sorted
Shipments are repaired in the "Hospital" if they are damaged
Customs check of shipments (if needed)
- 4 Build up the onward ULD
- 5 Load the onward plane and take-off

2. STEP BY STEP GUIDE

Step 1 – Access OPInt Space.me

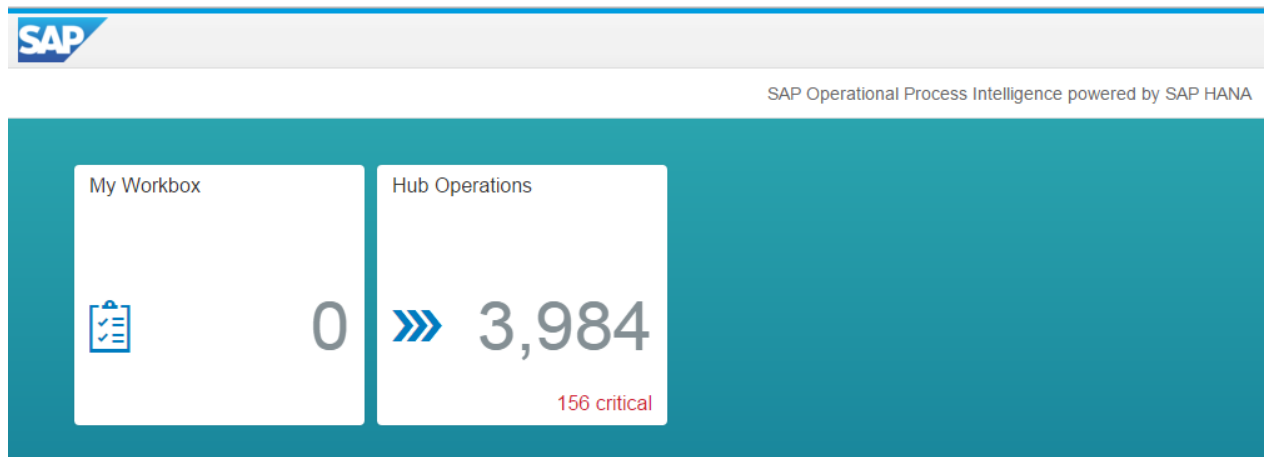
1. Login to space.me with user: **Gerd** and password: **Abcd1234**

<https://smartprocessapps636d78be.hana.ondemand.com/sap/opi/pv/workspace>



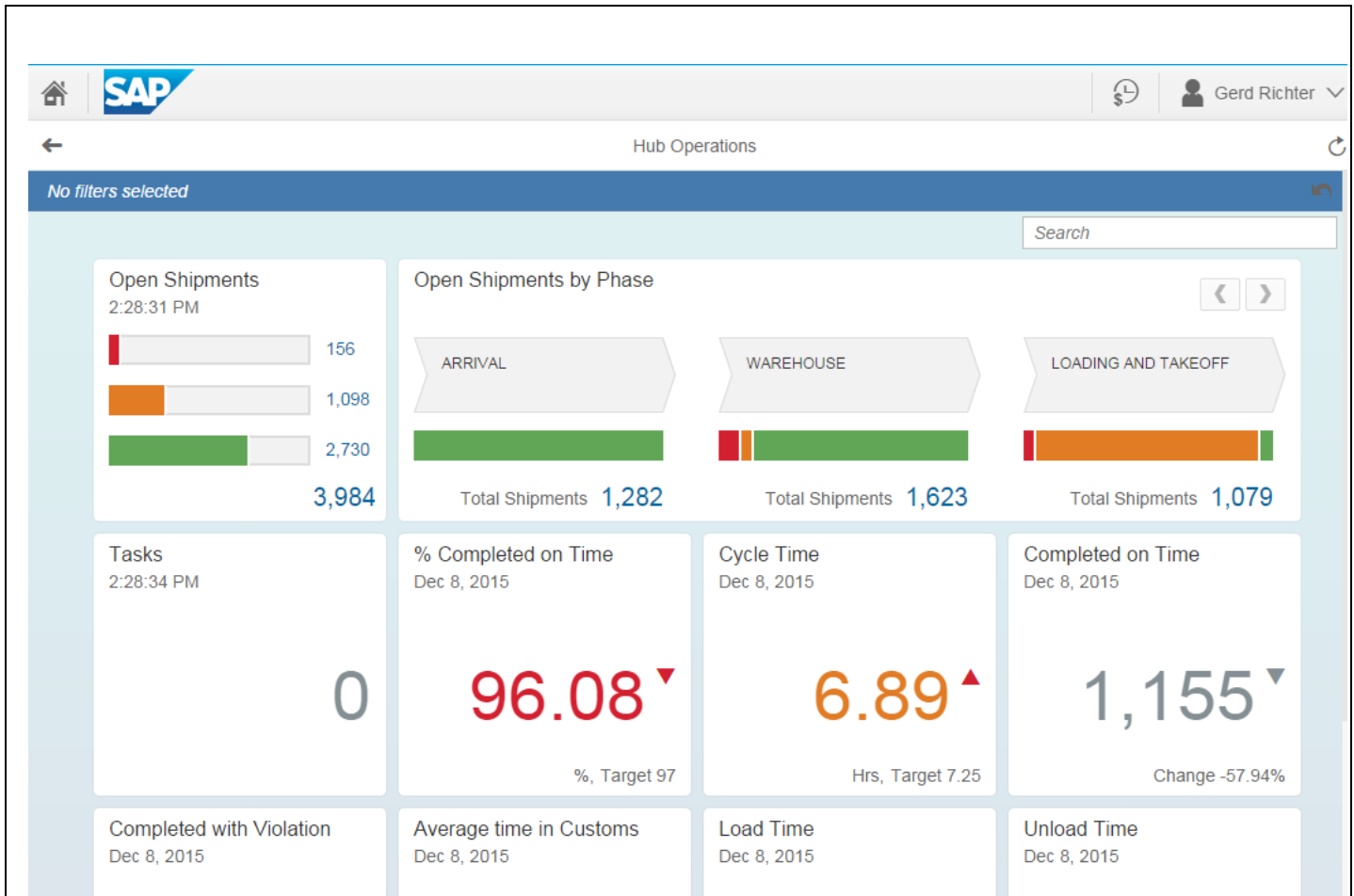
2. You can see the open shipments which are currently under process in a hub, out of which status of 156 shipments are critical i.e. these shipments have already surpassed their delivery date.

Click on the **Hub Operations** tile and you will be navigating the details of these shipments.

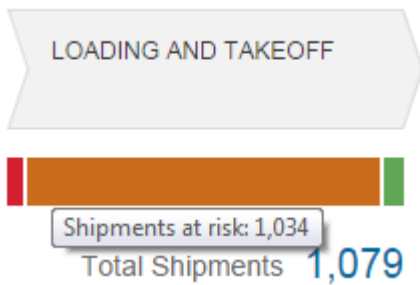


3. Explore **Open Shipments** and **Open Shipments by Phase** tiles to analyze shipments that are overdue or at risk. You will see that there are lots of pending shipments in **LOADING AND TAKEOFF** phase.

Now drills down into **LOADING AND TAKEOFF** phase to get complete details of all the pending shipments.



4. Select on the orange traffic light region in **LOADING AND TAKEOFF** phase



Step 2 – Analyzing the Problem Cluster

Here you would see how to cluster the reasons for the delay in loading and takeoff of the shipments and how to take actions to keep these shipments delivered on-time to their respective destinations.

1. You will see complete list of shipments that are at-risk in **LOADING AND TAKEOFF** phase in **Open Shipments** page

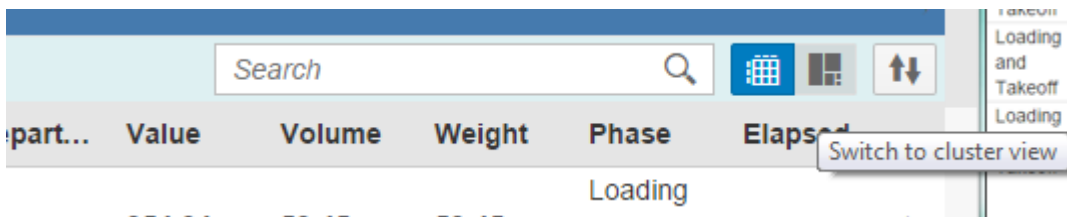
← Open Shipments ↻

Filtered by Status (At Risk) and Phase (Loading and Takeoff)

Search 🔍

Status	Substa...	Shipm...	Destin...	Materi...	Category	Arrivin...	Depart...	Value	Volume	Weight	Phase	Elapsed...
▲	Probably Overdue	22363554381	Madrid	Swiss Cargo	td	09:00am	DHK173 SWR158	954.34 ...	59.45 m3	59.45 Kg	Loading and Takeoff	6 h 4 min >
▲	Probably Overdue	21026879091	Istanbul	Turkish Cargo	Oversize		BOX171 THY160	1,562.7...	530 m3	528.4 Kg	Loading and Takeoff	6 h 4 min >
▲	Probably Overdue	13353934879	Frankfurt	Lufthansa Cargo	Cargo		ABR786 GEC138	2,949.3...	261 m3	245.1 Kg	Loading and Takeoff	6 h 4 min >
▲	Probably Overdue	24937092090	London	Virgin Cargo	td	09:00am	DHK157 VIR148	788.99 ...	56.45 m3	56.45 Kg	Loading and Takeoff	6 h 4 min >
▲	Probably Overdue	16482377672	Beijing	Swiss Cargo	Oversize		BOX170 SWR141	1,807.7...	454 m3	391.6 Kg	Loading and Takeoff	6 h 4 min >
▲	Probably Overdue	14852879047	Zurich	Swiss Cargo	Oversize		MTL165 SWR137	1,636.9...	478 m3	478 Kg	Loading and Takeoff	6 h 4 min >

2. Select 'Switch to Cluster View' option (next to Search)



3. Explore various clusters by selecting Attributes as shown the picture below
Notice that the cluster *Chennai* has the maximum shipments waiting to be loaded and taken off

Filtered by Status (At Risk) and Phase (Loading and Takeoff)

Search

At Risk				
Probably Overdue				
Loading and Takeoff				
Chennai	Frankfurt	Madrid	Amsterdam	
Linz	Tokyo	Zurich	Helsinki	Istanbul
Shannon	Hongkong	Mauritius	Moscow	London
			Shanghai	Bangkok

Attributes

- Status
- Substatus
- Phase
- Shipment ID
- Destination
- Material Category
- Category
- Arriving Flight
- Departing Flight

Create Task

- Select cluster for *Chennai* and click on the **Navigate to Shipments**
You will be navigating to the shipments (-stuck in LOADING AND TAKEOFF phase-) bounded for Chennai

Status:	At Risk
Substatus:	Probably Overdue
Destination:	Chennai
Shipments:	103
Filter	Navigate to Shipments

Open Shipments

Filtered by Status (At Risk) and Substatus (Probably Overdue) and Destination (Chennai) and Phase (Loading and Takeoff)

Status	Substa...	Shipm...	Destin...	Materi...	Category	Arrivin...	Depart...	Value	Volume	Weight	Phase	Elapsed...
▲	Probably Overdue	1276906 6477	Chennai	Lufthansa Cargo	td	09:00am	SOO169 GEC157	970.6 E...	4.45 m3	4.45 Kg	Loading and Takeoff	6 h 9 min >
▲	Probably Overdue	1147149 9154	Chennai	Lufthansa Cargo	Cargo		DHK173 GEC157	2,360.6...	323 m3	315.5 Kg	Loading and Takeoff	6 h 9 min >
▲	Probably Overdue	2026067 4245	Chennai	Lufthansa Cargo	Oversize		DHK157 GEC157	1,852.3...	527 m3	170.6 Kg	Loading and Takeoff	6 h 9 min >
▲	Probably Overdue	1440693 1483	Chennai	Lufthansa Cargo	Oversize		BOX170 GEC157	1,540.2...	538 m3	538 Kg	Loading and Takeoff	6 h 9 min >
▲	Probably Overdue	2463181 6467	Chennai	Lufthansa Cargo	Cargo		BCS167 GEC157	1,652.4...	277 m3	214.9 Kg	Loading and Takeoff	6 h 9 min >
▲	Probably Overdue	1157520 3365	Chennai	Lufthansa Cargo	Oversize		SOO169 GEC157	2,133.4...	450 m3	432.4 Kg	Loading and Takeoff	6 h 8 min >
▲	Probably Overdue	1349733 0758	Chennai	Lufthansa Cargo	Cargo		DHK174 GEC157	1,596.6...	336 m3	313.6 Kg	Loading and Takeoff	6 h 6 min >

5. Select one shipment by clicking on any row to see detailed information of that shipment

Status	Substa...	Shipm...	Destin...	Materi...	Category	Arrivin...	Depart...	Value	Volume	Weight	Phase	Elapsed...
▲	Probably Overdue	1276906 6477	Chennai	Lufthansa Cargo	td	09:00am	SOO169 GEC157	970.6 E...	4.45 m3	4.45 Kg	Loading and Takeoff	6 h 9 min >

Step 3 – Detailed Information of Shipment

Explore complete detail of an individual shipment together with various status information like how many hours has the shipment been lying in the LOADING AND TAKEOFF phase.

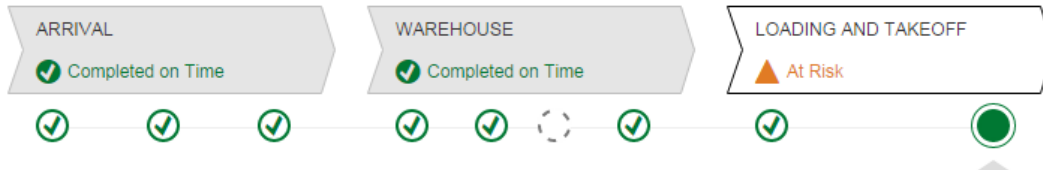
1. Check the current status of the shipment and also the status of each phase,
2. Check the milestones status under each phase



Transfer shipment to the next leg: Madrid on flight:SWR158 by Dec 8, 2015, 6:09:5...

Uncomfortably close to the target - Needs to complete in 1 h 22 min

Start Date: Dec 8, 2015, 9:59:51 AM
 Planned End Date: Dec 8, 2015, 5:09:51 PM
 Forecasted End Date: Dec 8, 2015, 3:58:59 PM



Reach **Shipment transferred to next leg** by Dec 8, 2015, 5:29:51 PM.


3. Navigate to **Information** and **Tasks** tab to view more context details about the shipment

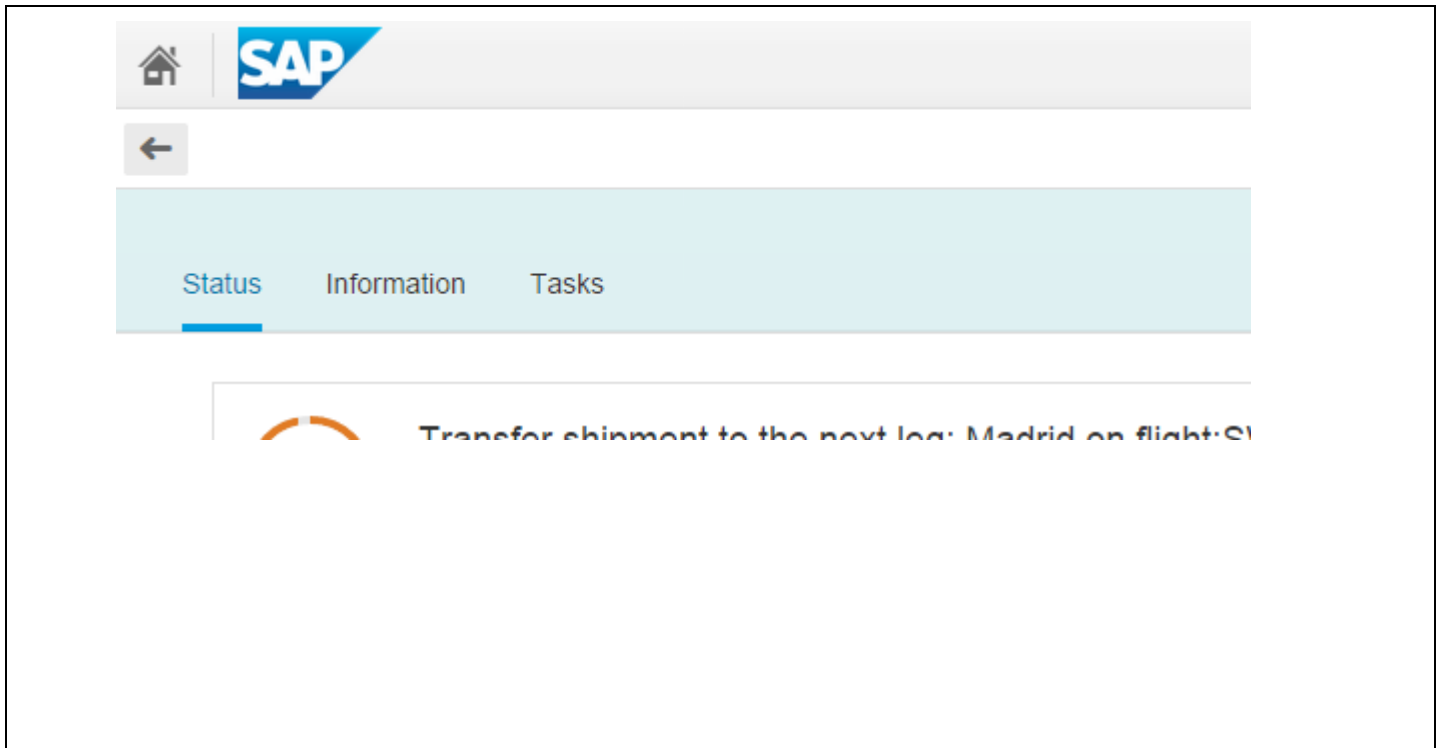
Related Data

Shipment ID	22363554381
Destination	Madrid
Material Category	Swiss Cargo
Category	td 09:00am
Arriving Flight	DHK173
Departing Flight	SWR158
Value	954.34 EUR
Volume	59.45 m3
Weight	59.45 Kg

Participants



4. Navigate back, using **Back** button  to the *Open Shipments* page after you have explored the content

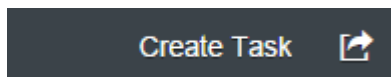


Step 4 – Creating Task

After identifying the problem cluster, needful steps/actions have to be taken to ensure that these shipments are loaded and taken off on time.

You (-as Gerd-) will create a task for Thomas, who you know is in charge of Chennai region. Thomas would then reply to the task and you can then choose to CONFIRM or REOPEN based on the response from him

1. In the Cluster View, click on **Create Task** button (bottom right on the button bar)



2. Enter *Subject* and *Description* of the task and then click on '**Create**' button to create the task.
Note: While entering description enter username with prefix @. This symbol is used to identify the user to which will be assigned.

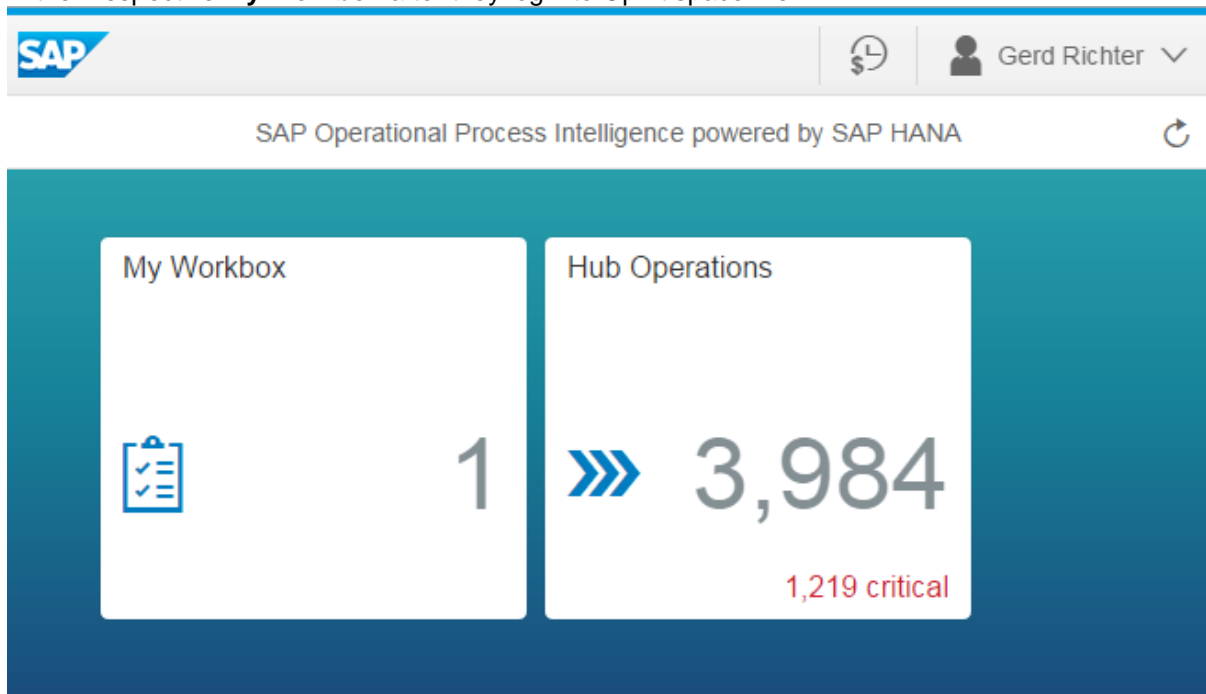
New task for the Hub Operations scenario

*Subject:

Description:

Create Cancel

- The task will be shown in user's **My Workbox** tile. Both the assignee (i.e. *Thomas* in this example) and assigner (i.e. *Gerd* in this example) will see the task in their respective **My Workbox** after they login to Oplnt space.me



- Click on **My Workbox** and Select the task "Pending shipments in Chennai region"




Type	Subject	Creation Date	Due Date	Status	Priority
	Pending shipments in Chennai region	Dec 14, 2015		Ready	Medium

5. In Task Description page, select **Edit**

The screenshot shows the SAP Task Description page for the task "Pending shipments in Chennai region". The page header includes the SAP logo, a home icon, a clock icon, and the user name "Gerd Richter". The task title is "Pending shipments in Chennai region". The description section is expanded, showing a comment from @Thomas: "reasons for delay in loading the shipments in Chennai region". Below the comment is a text input field with the placeholder "Post a comment and invite people using @ notation" and a send button. The right sidebar shows the task details: Status: Ready, Priority: Medium, Due Date: (empty). Below the details is a section for participants, with a text input field "Add a new participant here" and a plus icon. The participant list shows "THOMAS". At the bottom right, there are "Complete" and "Edit" buttons.


6. Change the priority of the task to HIGH and due date
You may also choose to add more participant or delete existing ones



 **Gerd Richter**
Dec 14, 2015, 1:44:02 PM

Status:
Ready

Priority:

Due Date:



 **THOMAS** 

7. **Save** the task

← Pending shipments in Chennai region

Description

@Thomas - reasons for delay in loading the shipments in Chennai region

Post a comment and invite people using @ notation

Gerd Richter
Dec 14, 2015, 1:44:02 PM

Status	Ready
Priority	High
Due Date	Dec 31, 2015

Add a new participant here

THOMAS

Gerd Richter: updated the priority
A few moments ago

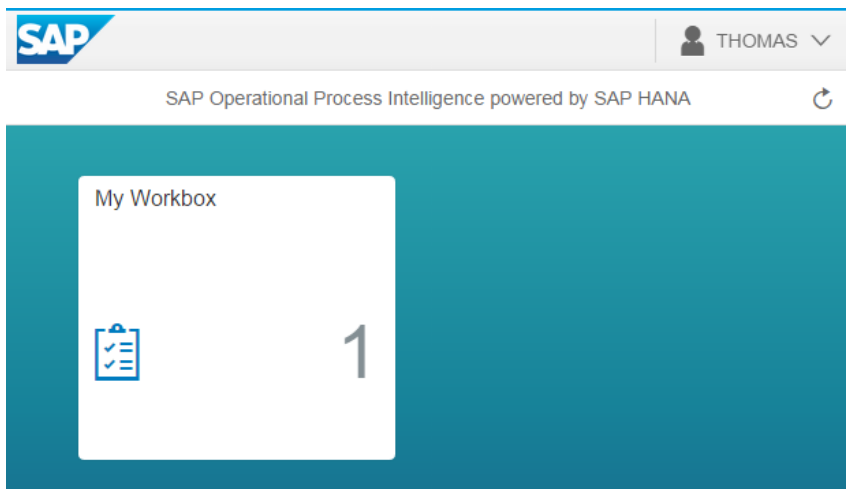
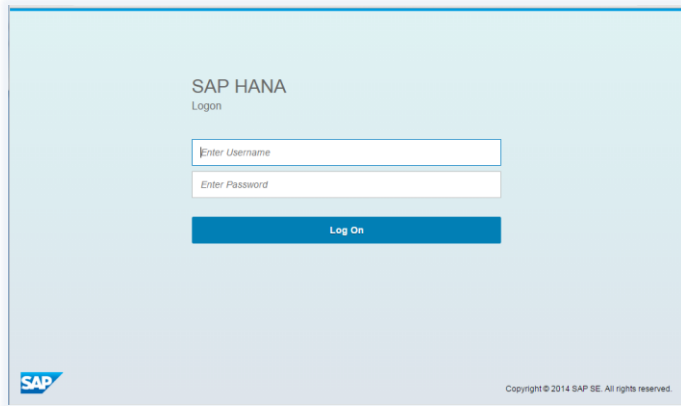
Gerd Richter: updated the due date
A few moments ago

Complete Edit

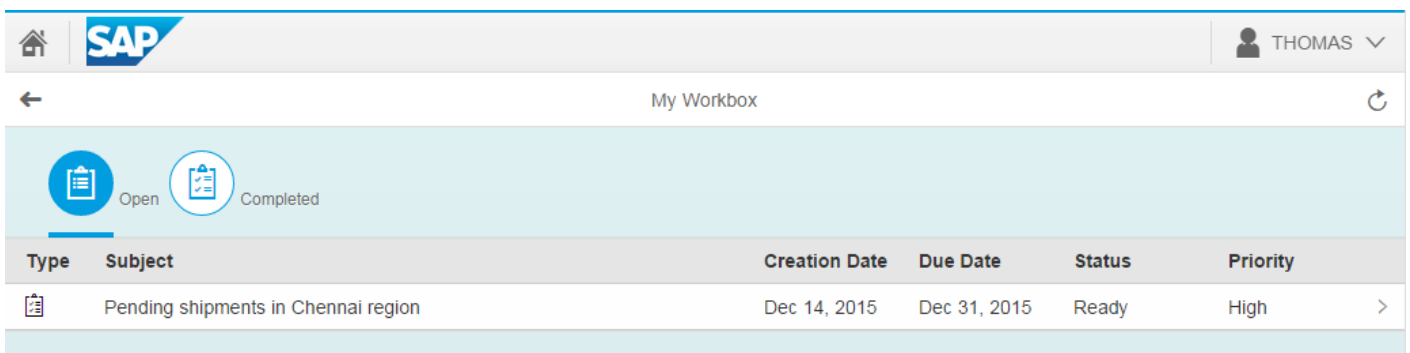
Step 5 – Task Collaboration

Explore **My Workbox** of the users involved in a task, to see how SAP Operational Process Intelligence helps them to manage their tasks and resolve the issue in a collaborative fashion.

1. Logoff as **Gerd** user
2. Login to space.me with user: **Thomas** and password: **Abcd1234**
<https://smartprocessapps636d78be.hana.ondemand.com/sap/opi/pv/workspace>

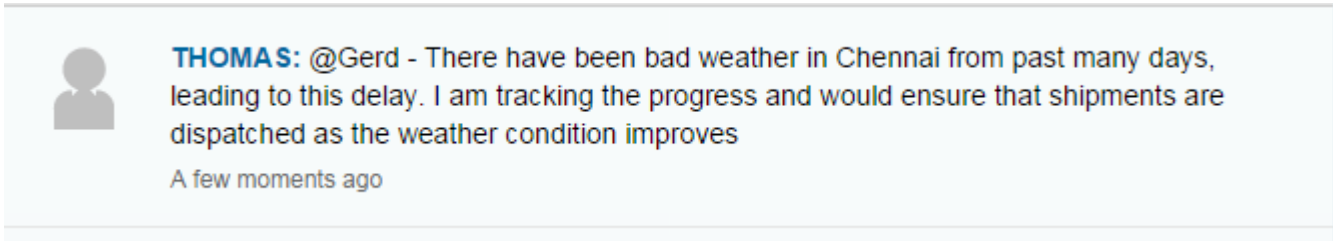


3. Click on **My Workbox** tile to see list of open tasks.



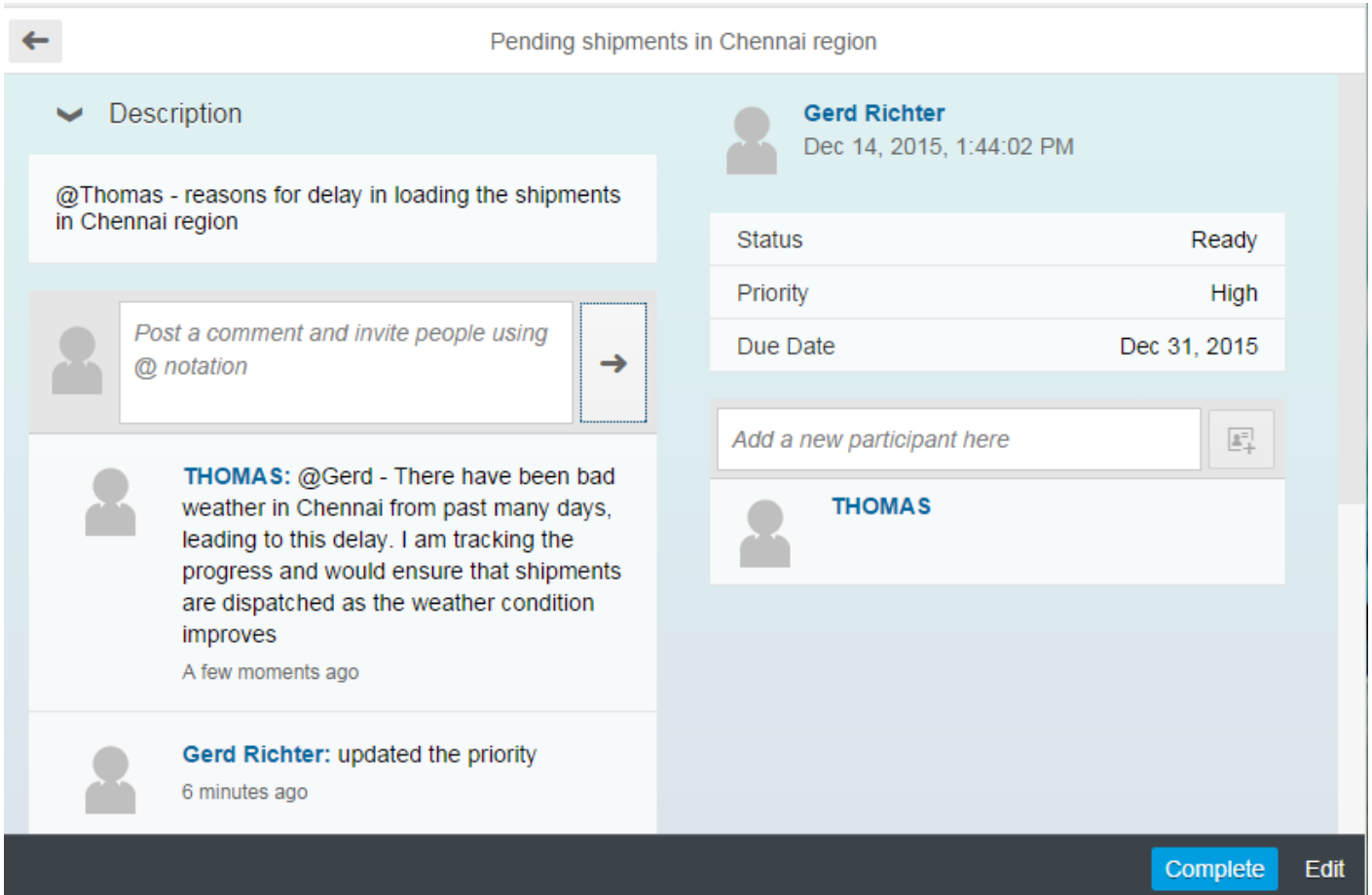
4. Select the task "*Pending shipments in Chennai region*" to reply

- Post a reply/comment and click **COMPLETED** button.
 “There has been bad weather in Chennai from past many days, leading to this delay. I am tracking the progress and would ensure that shipments are dispatched as the weather condition improves”



THOMAS: @Gerd - There have been bad weather in Chennai from past many days, leading to this delay. I am tracking the progress and would ensure that shipments are dispatched as the weather condition improves

A few moments ago



← Pending shipments in Chennai region

▼ Description

@Thomas - reasons for delay in loading the shipments in Chennai region

Post a comment and invite people using @ notation →

THOMAS: @Gerd - There have been bad weather in Chennai from past many days, leading to this delay. I am tracking the progress and would ensure that shipments are dispatched as the weather condition improves

A few moments ago

Gerd Richter: updated the priority

6 minutes ago

Gerd Richter
Dec 14, 2015, 1:44:02 PM

Status	Ready
Priority	High
Due Date	Dec 31, 2015

Add a new participant here

THOMAS

Complete Edit

- Task once completed would be removed from the Thomas' My Workbox and appear in Gerd's My Workbox
- Logoff as Thomas and Login to Space.me as **Gerd** username and password **Abcd1234**
- Open the **My Workbox** tile and switch to **Completed** tab

My Workbox

Open Completed

Type	Subject	Creation Date	Due Date	Status	Priority
	Pending shipments in Chennai region	Dec 14, 2015	Dec 31, 2015	Completed	High

- Select the task "Pending shipments to Chennai region" to open
See the response from Thomas and click **CONFIRM** button

Pending shipments in Chennai region

Description

@Thomas - reasons for delay in loading the shipments in Chennai region

You can only comment on an open task →

THOMAS: completed the task
One minute ago

THOMAS: @Gerd - There have been bad weather in Chennai from past many days, leading to this delay. I am tracking the progress and would ensure that shipments are dispatched as the weather condition improves
2 minutes ago

Gerd Richter: updated the priority
9 minutes ago

Gerd Richter: updated the due date

Gerd Richter
Dec 14, 2015, 1:44:02 PM

Status	Completed
Priority	High
Due Date	Dec 31, 2015

You can only add participants to an open task

THOMAS

Confirm Reopen

Step 6 – Details of Task

What to experience

Gerd and Thomas can see complete conversation of task collaboration by choosing that task from their **My Workbox** under Completed tab, at any given time

What to do & What you should see

1. Login to Space.me as **Gerd** or **Thomas** username and password **Abcd1234**
2. Open **My Workbox** and Select the task.
If the task is open you will see it in **Open** tab or else in **Completed** tab

← Pending shipments in Chennai region

▼ Description

@Thomas - reason for delay in loading the shipments in Chennai region

You can only comment on an open task →

Gerd Richter: confirmed the completion of the task
A few moments ago

THOMAS: completed the task
A few moments ago

THOMAS: @Gerd - There have been bad weather in Chennai from past many days, leading to this delay. I am tracking the progress and would ensure that shipments are dispatched as the weather condition improves
A few moments ago

Gerd Richter: invited THOMAS to the task
One minute ago

Gerd Richter: created the task
One minute ago

Gerd Richter
Dec 14, 2015, 2:47:15 PM

Status	Confirmed
Priority	High
Due Date	Dec 31, 2015

You can only add participants to an open task +

THOMAS

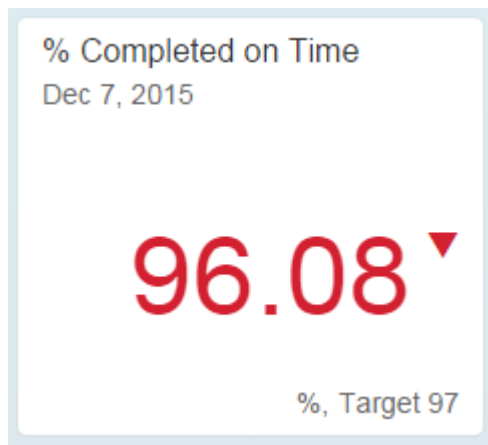
Step 7 – Details of KPI

What to experience

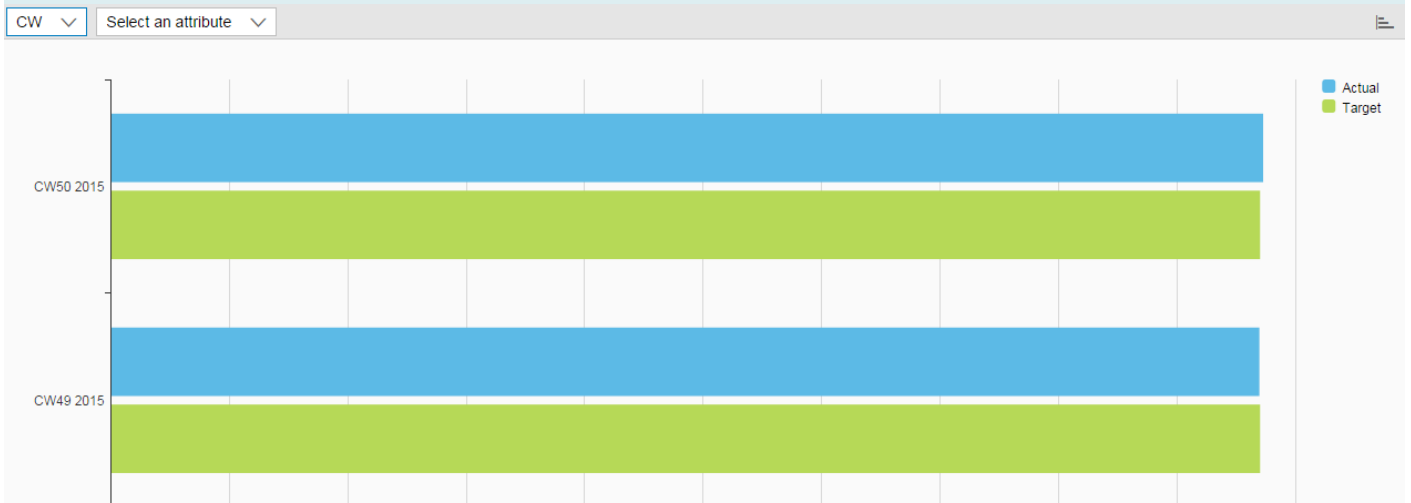
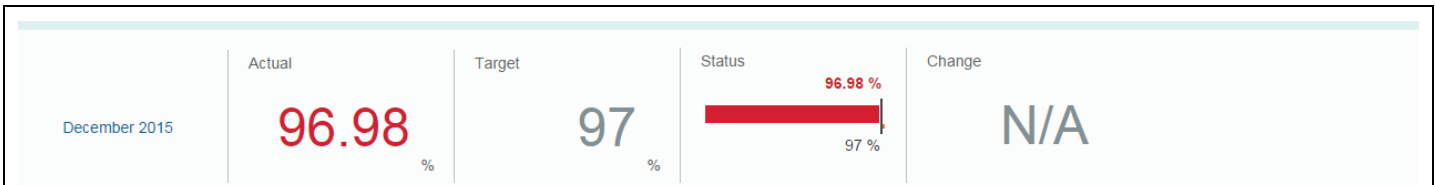
Explore key business KPIs, using SAP Operational Process Intelligence, to trace their progress and track if targets are met or overshoot. You can also observe trends to analyse performance and address the bottlenecks in your process before they become problems.

What to do & What you should see

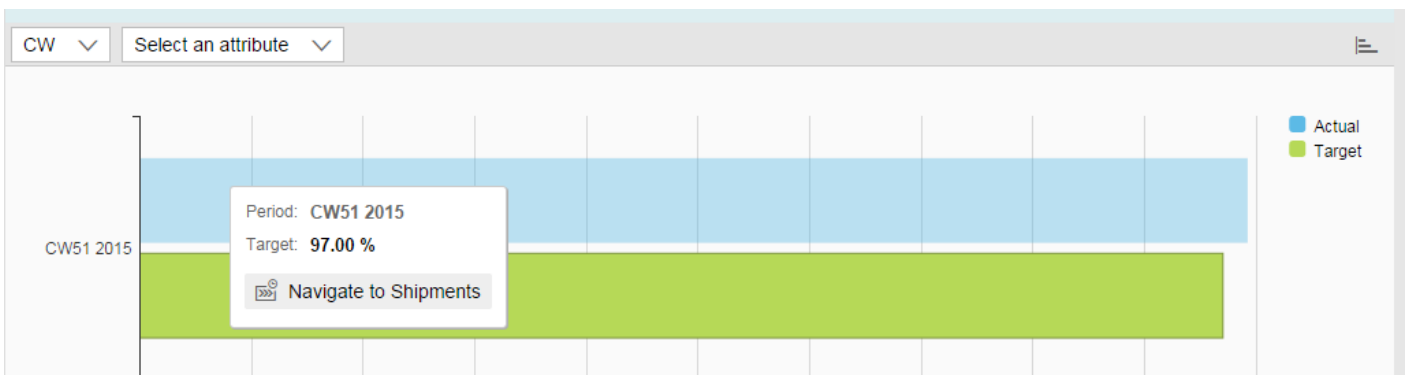
1. Goto on **Hub Operations** main page and then click on “**%Completed on Time**” tile to see targets and trends of shipments. **% completed on Time** KPI indicates the shipments which are transported on time without any violations. The trend shows negative because the target was 97 and the actual for that day is 96.08%.



2. You can analyze the trend by changing the attributes and adding more attributes to filter the data. You can view the graph as various options like line, column etc.



3. Select on the GREEN bar of any CW and click on **Navigate to Shipments**



← % Completed on Time ↻

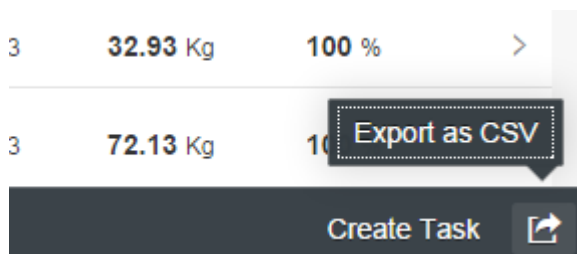
No filters selected

Search 🔍 🏠 📄 ⬆️ ⬆️

Shipmen...	Destination	Material C...	Category	Arriving F...	Departing...	Value	Volume	Weight	% Complet...
141111896 43	Tokyo	Lufthansa Cargo	Cargo	SWT786	GEC145	2,022.25 E...	301 m3	273.1 Kg	100 % >
218915348 39	Moscow	Lufthansa Cargo	td 09:00am	BCS167	GEC140	1,775.95 E...	93.45 m3	85.17 Kg	100 % >
208533253 27	Doha	Qatar Airways Cargo	td 12:00am	BOX170	QAC152	1,823.91 E...	5.7 m3	5.58 Kg	100 % >
230702217 25	Amsterdam	Lufthansa Cargo	td 12:00am	ABR786	DH3139	2,275.87 E...	0.5 m3	0.38 Kg	100 % >
246656711 25	Frankfurt	Swiss Cargo	Oversize	DHK173	SWR146	1,436.89 E...	503 m3	353 Kg	100 % >
234583828 90	Kuala Lumpur	Singapore Airlines Cargo	td 09:00am	DHK174	SIA248	1,351.26 E...	5.45 m3	5.45 Kg	100 % >
198604499 26	Frankfurt	Swiss Cargo	Oversize	DHK157	SWR146	1,085.49 E...	520 m3	446.4 Kg	100 % >
187208710 07	Tokyo	Lufthansa Cargo	td 09:00am	BOX170	GEC145	1,513.27 E...	18.45 m3	18.45 Kg	100 % >
113586502 94	Chennai	Lufthansa Cargo	td 12:00am	MTL165	GEC157	1,751.17 E...	9.8 m3	9.68 Kg	100 % >
187047219 46	Shannon	Lufthansa Cargo	Oversize	MTL165	GEC134	2,081.79 E...	475 m3	343.4 Kg	100 % >
168680094 66	Frankfurt	Lufthansa Cargo	Cargo	ABR786	GEC138	2,615.79 E...	347 m3	311.9 Kg	100 % >
173513138 94	Frankfurt	Swiss Cargo	td 09:00am	DHK174	SWR146	1,231.87 E...	41.45 m3	32.93 Kg	100 % >
221343544 55	Kuala Lumpur	Singapore Airlines Cargo	td 09:00am	SWT786	SIA248	2,729.65 E...	76.45 m3	72.13 Kg	100 % >


Create Task 📄

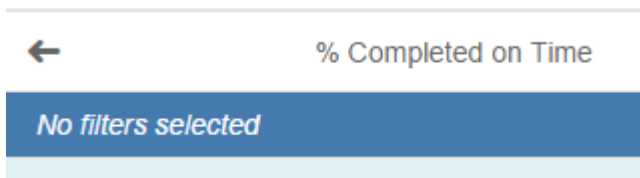
4. In the details page, select icon (📄) to export the complete list of shipments into CSV file
Click on "Export as CSV"



The file would be shown as downloaded as CSV



5. Navigate back, using **Back** button  to the *Hub Operations* main page after you have explored the KPI




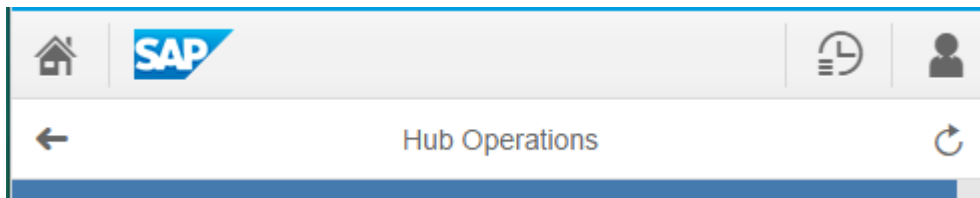
Step 8 – Business Situations

SAP Operational Process Intelligence enables sense and respond capabilities which notifies of any possible threats during Hub Operations. It also provides options to take action to avoid delays in shipment delivery.

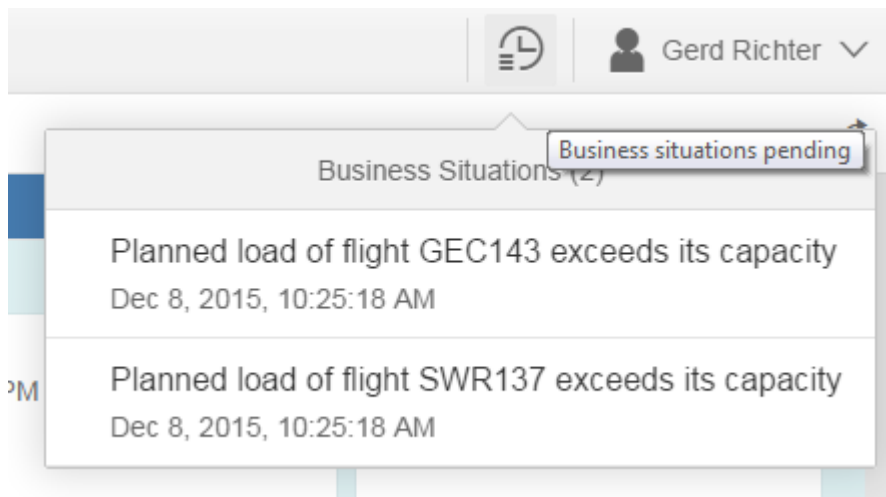
In this scenario, a situation is raised in Space.me whenever it is detected that total shipments in the flight exceeds the total flight capacity, much before it is actually loaded into the flight. This gives hub operations manager enough time to redirect the shipment to next best available flight – thus avoiding the delay in flight take-off time.

Ensure you are on **Hub Operations** scenario main page

1. Find **Business Situation** icon () on the title bar
Note: This icon will be shown only if there are any business situations raised in Hub Operations



2. Click on the icon to see the list of Business Situations raised for threats of overload in various flights



3. Select a Business Situation to redirect the shipment to next best available flight



4. Click on **Reroute Shipment <shipmentID>** button and select **Complete**
5. Go back to the **Business Situations** button and you will see the situation completed above is shown no more



Gerd Richter ▾

Business Situations (1)

Planned load of flight SWR137 exceeds its capacity

Dec 8, 2015, 10:25:18 AM

% Completed on Time

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