



# SAP based Mobile Maintenance and Service

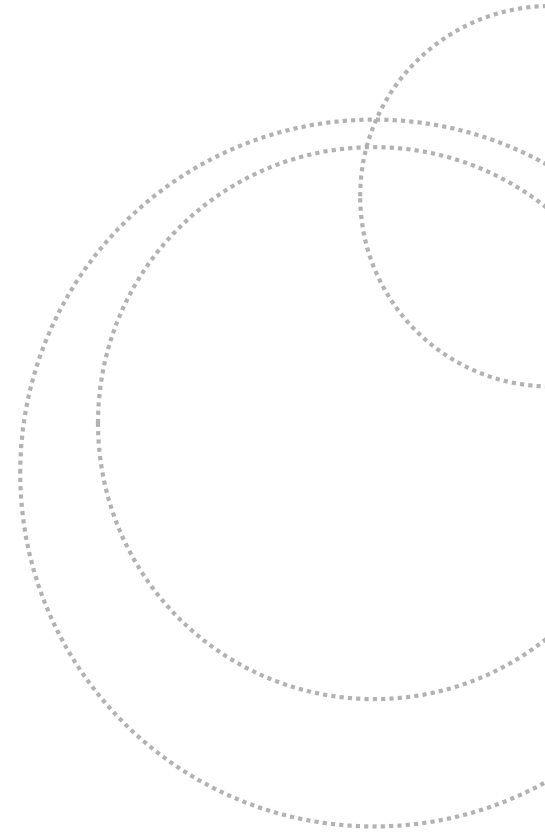
TA Cook - SAP Mobile Applications for Asset Management

26.10.2017

# AGENDA

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- 1 Evora IT Solutions Company Overview
- 2 Our Approach to SAP Mobile Projects
- 3 Lessons Learned & Outlook





# evora

— IT SOLUTIONS —

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Offices in **USA, Germany, India**

SAP and Mobile expertise: **Mobility & Scheduling (Mobile Workforce Management)**

User experience expertise: **SAP Fiori, SAP Screen Personas and Evora platform templates with SAP UI5**

Partnerships with **SAP, ClickSoftware and leading System Integrators**

Close personal contact to current SAP leadership team

# Evora History



Evora IT Solutions is a premier end-to-end provider of scheduling and mobile workforce management solutions with experience in over ten verticals, including utilities, oil & gas, consumer products, manufacturing, and pharmaceuticals, combining expertise from multiple scheduling and mobility solutions including ClickSoftware and SAP.



Evora founders met and work together at SAP & ENERGY4U (Atos)

Mobility Team wins Syclo Partner of the Year Award

Portfolio enhanced by UX Design Services, Custom App Development & Products

50+ Projects in <24 months delivered HCP Projects



2017

2016

Projects in 20+ countries

We work with more than half of DAX companies

SAP Strategic Partner & SAP Early Adopter Care

Additional Evora Intellectual Property

2015

Number of Employees over 40

Global Support Organization (Application Management) established

2014

Evora Solutions US and Evora Solutions Germany established

2013



2012



2011

Evora IT Solutions India founded

2002-2009



# Portfolio

Schedule &  
Dispatch

Mobile Solutions  
(Evora and SAP)

Custom  
Applications

SAP Fiori

SAP Screen  
Personas

Mobile Workforce Management

Design Services

Cloud & Consulting for Plant Maintenance, Service, Sales and Marketing

Support & Application Management

# SAP Work Manager Projects Involving Evora Team Members



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# The Mobile Workforce Management Cycle

## INTEGRATION AND CONFIGURATION

Streamline business processes in multiple backend systems e.g. by configuring and enhancing **SAP PM, SAP IS-U or SAP CRM** or by preparing information for efficient mobilization

Create orders & prepare information

Assign jobs

## SCHEDULING AND DISPATCHING

Integrate, install and enhance optimized scheduling systems like **SAP MRS, Click Schedule** or introduce **EvoPlan-Dispatching Tool** for manual assignment

Perform the job

## MOBILE

Mobilize your workforce, customers and partners with tailored mobile solutions based on SAP standards like **SAP Work Manager, SAPUI5 Developments, SAP Fiori**

## SUPPORT AND CROSS-TOPICS

Introduce review and error management cockpit to ensure a smooth information flow back into the main system. notifications get created to follow up on critical failures starting the cycle anew. Examples: **EvoTime, EvoMon**

Close jobs & store information

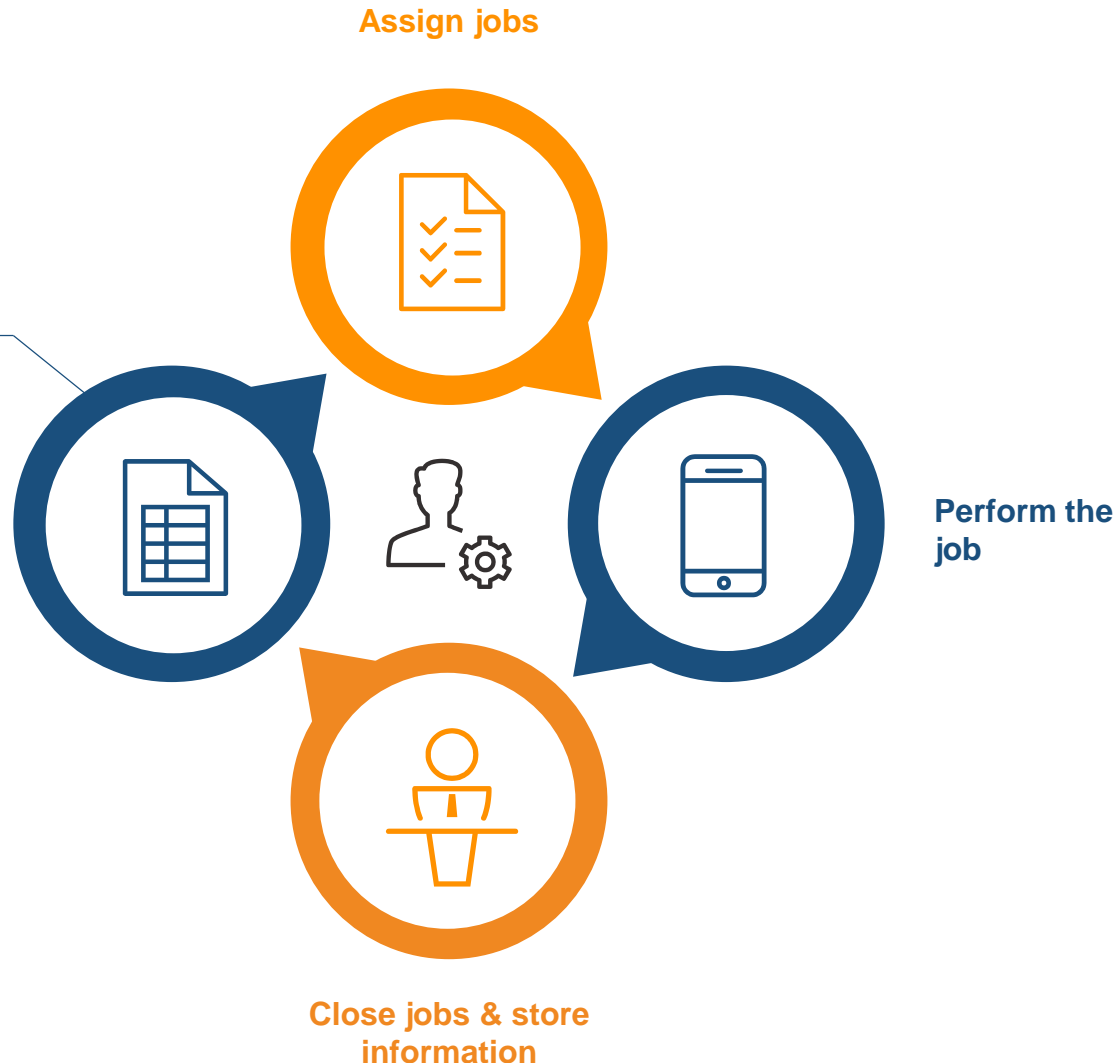


# The Mobile Workforce Management Cycle

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Streamline business processes in multiple backend systems e.g. by configuring and enhancing **SAP PM, SAP IS-U or SAP CRM** or by preparing information for efficient mobilization

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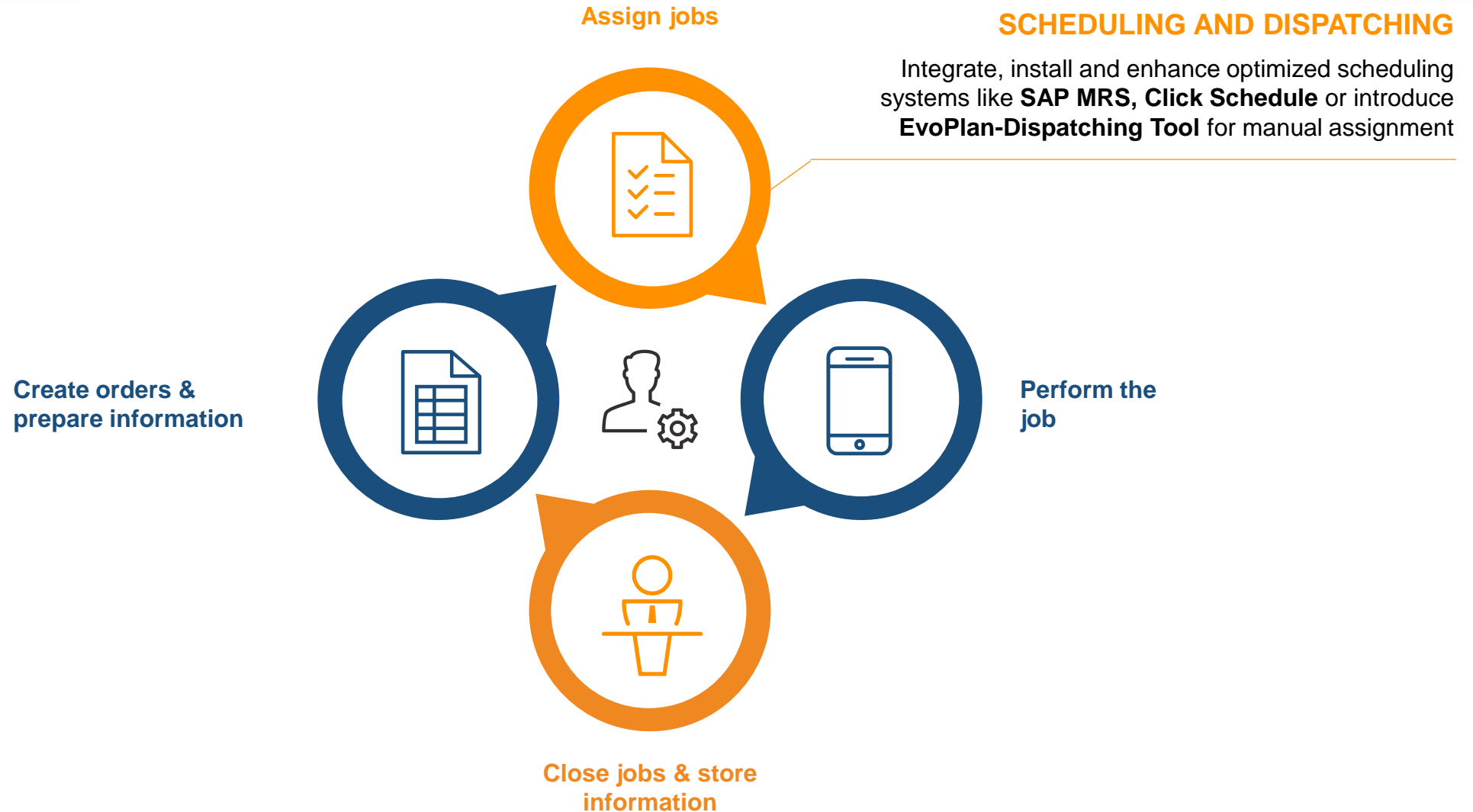
# Important topics to get your backend ready

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- Define task types for rule-based scheduling and to drive mobile processes
- Think about task durations and variations
- Which data needs to be visible in the subsequent steps?
  - Documents at work order, notification and technical object level
  - Measurement points and characteristics
  - Notification information
  - Checklists and forms
- Which data do you have today about your technicians?
  - Shifts
  - Absences
  - Organizational structure
- How does your unified digital process look like?



# The Mobile Workforce Management Cycle



# Example: EvoPlan

- Lightweight Drag&Drop Dispatching of Orders and Notifications
- Work Assignment for large Numbers of Work Orders or Operations
- Workload Monitoring by Operation Status
- Map Visualization
- Map-based Dispatching

The screenshot displays the EvoPlan software interface. The top part shows a list of work orders with columns for ID, Order, Work ctr, Operation short text, and Sort field. The bottom part shows a map visualization with a route and several red location markers.

ID	Order	Work ctr	Operation short text	Sort field
820311	SOER-BK	SOER-BK	Zählerwechsel ETZ	
820312	SOER-BK	SOER-BK	Zählerwechsel ETZ	
820313	SOER-BK	SOER-BK	Zählerwechsel ETZ	
820314	SOER-BK	SOER-BK	Zählerwechsel ETZ	
820315	SOER-BK	SOER-BK	Zählerwechsel ETZ	
820316	SOER-BK	SOER-BK	Zählerwechsel ETZ	
820317	SOER-BK	SOER-BK	Zählerwechsel ETZ	
820318	SOER-BK	SOER-BK	Zählerwechsel ETZ	
820319	SOER-BK	SOER-BK	Zählerwechsel ETZ	
820320	SOER-BK	SOER-BK	Zählerwechsel ETZ	
820321	SOER-BK	SOER-BK	Zählerwechsel ETZ	

The map visualization shows a route (orange line) and several red location markers (pins) on a street map. The map includes labels for streets like 'Scherenmoorer Landstraße', 'Lausanner Str.', 'Wollager Str.', and 'Sankt-Gotthard-Straße'. There are also labels for 'DICKDIK', 'Am Hallacker', 'Züricher Str.', 'Graubündener Str.', 'Am Hildekeberg', 'Grenzwehr', 'Große Vierem', 'Poggenburg', 'Etelser Str.', 'tholzer Landstraße', 'Gesundheit Nord - Klinikverbund Bremen', 'Seeweg', and 'Zun Bel'. The map also shows a red location marker near 'KÖNIGSMO' and 'Seeweg'.

# GIS – Map-based Dispatching @ Tadano Faun

**EvoPlan**

	Count	Pers.No.
ISUSERV	5	
BARTELS CHRISTIAN	5	90001
27.03.2015	0	90001
28.03.2015	0	90001
29.03.2015	0	90001
30.03.2015	0	90001
31.03.2015	0	90001
Zugewiesen	5	
<b>SETTY KARTHIK</b>	0	90005
27.03.2015	0	90005
AM	0	90005
PM	0	90005
28.03.2015	0	90005
29.03.2015	0	90005
30.03.2015	0	90005
31.03.2015	0	90005
Zugewiesen	0	
SOER-BK	6	
BAUMKONTROLLEUR 1	2	81011
27.03.2015	0	81011
28.03.2015	0	81011
29.03.2015	0	81011
30.03.2015	0	81011
31.03.2015	0	81011
Zugewiesen	2	
BAUMKONTROLLEUR 2	0	81012

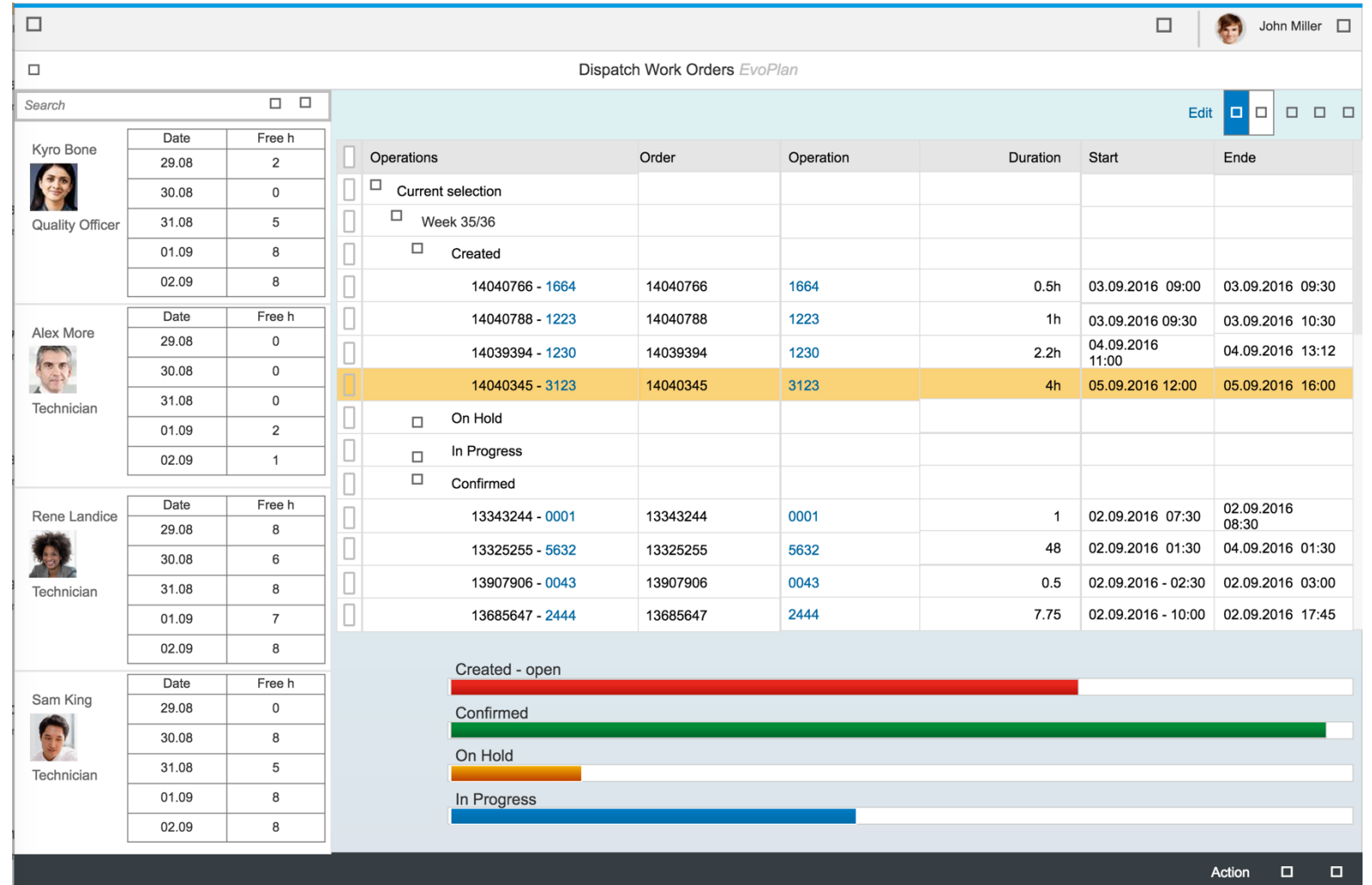
In the map view, the orders are selected using different shapes, which can be drawn in the map.

These can be assigned by

1. selecting the technician
2. Assign Order!

# GIS – Map-based Dispatching – Web-based EvoPlan

- Evora is currently developing a web-based Version of EvoPlan
- The HTML5-based Version runs in a Browser and can also be used on Tablets



Dispatch Work Orders *EvoPlan*

Search

Kyro Bone  
Quality Officer

Date	Free h
29.08	2
30.08	0
31.08	5
01.09	8
02.09	8

Alex More  
Technician

Date	Free h
29.08	0
30.08	0
31.08	0
01.09	2
02.09	1

Rene Landice  
Technician

Date	Free h
29.08	8
30.08	6
31.08	8
01.09	7
02.09	8

Sam King  
Technician

Date	Free h
29.08	0
30.08	8
31.08	5
01.09	8
02.09	8

Operations	Order	Operation	Duration	Start	Ende
Current selection					
Week 35/36					
Created					
14040766 - 1664	14040766	1664	0.5h	03.09.2016 09:00	03.09.2016 09:30
14040788 - 1223	14040788	1223	1h	03.09.2016 09:30	03.09.2016 10:30
14039394 - 1230	14039394	1230	2.2h	04.09.2016 11:00	04.09.2016 13:12
14040345 - 3123	14040345	3123	4h	05.09.2016 12:00	05.09.2016 16:00
On Hold					
In Progress					
Confirmed					
13343244 - 0001	13343244	0001	1	02.09.2016 07:30	02.09.2016 08:30
13325255 - 5632	13325255	5632	48	02.09.2016 01:30	04.09.2016 01:30
13907906 - 0043	13907906	0043	0.5	02.09.2016 - 02:30	02.09.2016 03:00
13685647 - 2444	13685647	2444	7.75	02.09.2016 - 10:00	02.09.2016 17:45

Created - open

Confirmed

On Hold

In Progress

Action

# SAP MRS – Scheduling in SAP

Scheduling in SAP GUI or browser

Possibility to integrate maps

Shows the technicians to one or more workcenters

Shows unavailabilities

Open demands from e.g. SAP work order operations

The screenshot displays the SAP MRS Scheduling interface. At the top, there's a 'Planning Board' for the period '04.12.2016 to 08.12.2016'. Below this, a 'Gantt Chart' shows resource assignments for 'Monday, 05.12.2016' and 'Tuesday, 06.12.2016'. A 'Map' view on the right shows a geographical location with a callout for 'Franz Heier' at 'TEST IMPL'. Below the Gantt chart, a 'Resources' list includes: Frank Weimer, Franz Heier, Johannes Zimmer, Patrick Mandel, Thomas Bauer, and Service Team. A 'Demands' table lists several 'Optimizer Demo Order' entries with IDs like 000004000605, 000004000607, 000004000608, and 000004000609. At the bottom, an 'Einsatzplanung vom 08.07.2015 bis 20.07.2015' grid shows resource availability for various technicians like Alexander Fede, Alexi Nedved, Anna Sprankle, etc., with colored blocks indicating assignments or unavailabilities.

# Automated Malfunction Reporting – Iberdrola USA

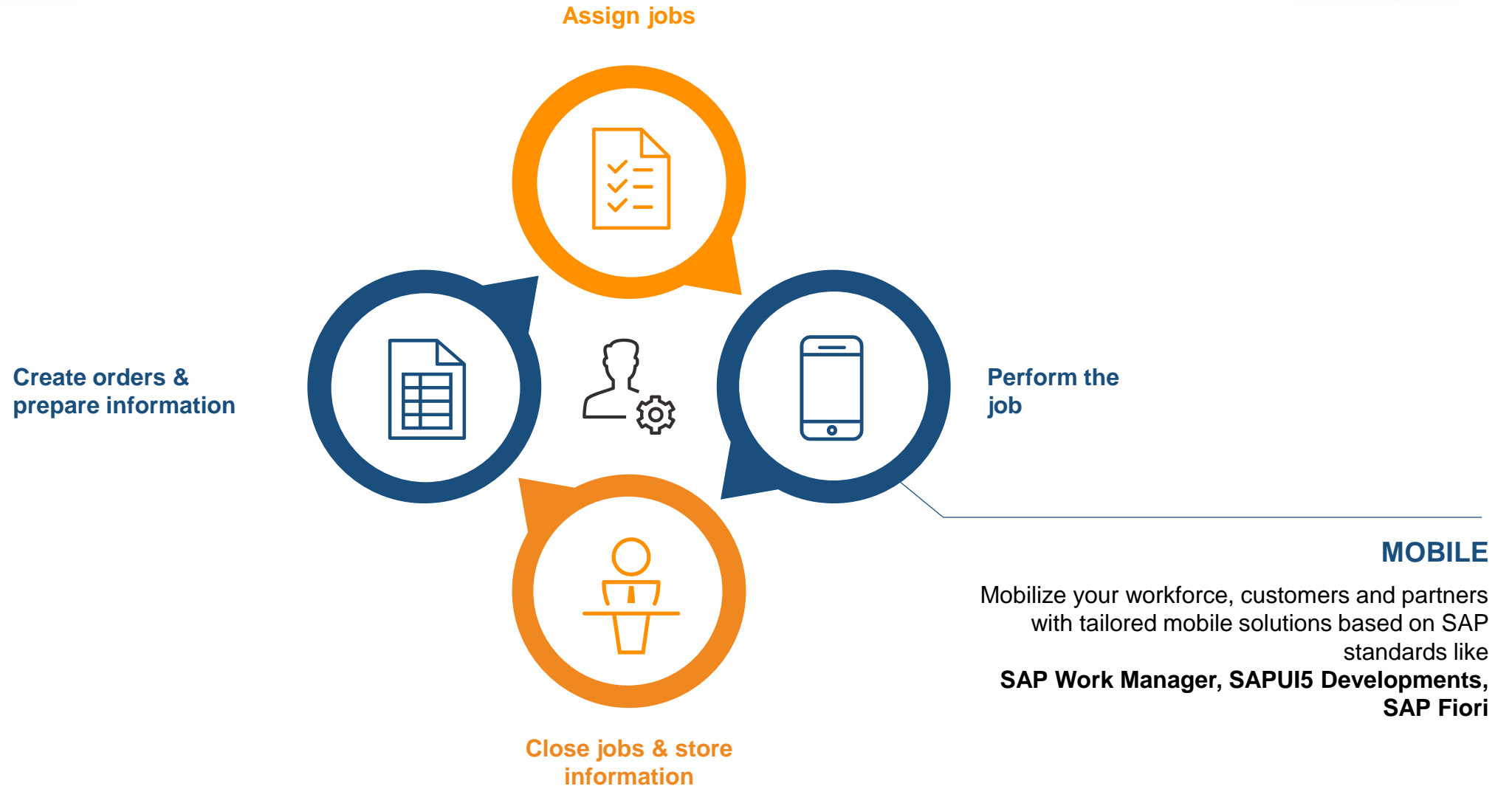
- Iberdrola USA is using a SCADA System to monitor its Electricity and Gas Pipeline Grid
- Automatic Issue Detection Algorithms create Malfunction Notifications automatically
- Multiple Notifications are grouped by Root Issue and a Work Order is created & dispatched to Technicians as Emergency
- Evora implemented ClickSchedule for automated Scheduling as well as Map-based manual Dispatching (“Show close-by Technicians”)
- Evora implemented ClickMobile for mobile Work Order Execution
- Updated SAP Emergency Orders also update Information in the SCADA System

The screenshot displays the ClickSchedule software interface. The top menu includes Main, View, Schedule, Execute, Monitor, Workload Management, ClickOne, and Help. The main window is titled "Resource Gantt (12)" and shows a Gantt chart for Monday, January 03, 2011, from 7:00 AM to 2:00 PM. The chart lists technicians and their assigned tasks, such as CO1, CO2, AC01(1), AC08(1), and EL06(1). A navigation pane on the left shows a calendar and business structure for South-East Texas. A task list table is visible at the bottom, listing tasks with columns for Call ID, #, Priority, Type, Status, Duration, Start, Finish, Assigned Resource, and Region.

Sche	Call ID	#	Priority	Type	Status	Duration	Start	Finish	Assigned Resource	Region
	HE0516_4	1	4	Power Tools	Scheduled	1:15	1/7/2011 2:45 PM	1/7/2011 4:00 PM	Paul Morrison	South-East
	HE0814_4	1	4	Rebuilding	Scheduled	0:45	1/7/2011 2:00 PM	1/7/2011 2:45 PM	Paul Morrison	South-East
	LI0710_4	1	4	Refrigeration	Scheduled	1:30	1/7/2011 1:50 PM	1/7/2011 3:20 PM	Laura Smith	South-East
	EL0712_4	1	4	Rebuilding	Scheduled	0:30	1/7/2011 1:19 PM	1/7/2011 1:49 PM	Paul Morrison	South-East
	CL0531_4	1	4	Heat	Scheduled	1:15	1/7/2011 1:15 PM	1/7/2011 2:30 PM	Jim Matthews	South-East
	LI1142_4	1	4	Complex	Scheduled	1:15	1/7/2011 1:04 PM	1/7/2011 2:19 PM	John Rickell	South-East
	LI0136_4	1	4	Electricity	Scheduled	1:15	1/7/2011 12:49 PM	1/7/2011 2:04 PM	Janet Jones	South-East
	AC0238_4	1	5	Rebuilding	Scheduled	0:45	1/7/2011 12:47 PM	1/7/2011 1:32 PM	James Clifton	South-East
	LI069_4	1	4	Laundry	Scheduled	1:30	1/7/2011 11:50 AM	1/7/2011 1:20 PM	Laura Smith	South-East
	AC0322_4	1	5	Power Tools	Scheduled	1:00	1/7/2011 11:33 AM	1/7/2011 12:33 PM	Paul Morrison	South-East
	AC086_4	1	7	Electricity	Scheduled	1:30	1/7/2011 11:29 AM	1/7/2011 12:59 PM	Pam Lewison	South-East
	EL0126_4	1	7	Electricity	Scheduled	1:15	1/7/2011 11:25 AM	1/7/2011 12:40 PM	Mary Adams	South-East
	HE017_4	1	4	Cooling	Scheduled	1:15	1/7/2011 11:24 AM	1/7/2011 12:39 PM	Jim Matthews	South-East
	CL0225_4	1	7	Lifts	Scheduled	0:15	1/7/2011 11:10 AM	1/7/2011 11:25 AM	Mary Adams	South-East
	HE0350_4	1	7	Laundry	Scheduled	1:30	1/7/2011 11:00 AM	1/7/2011 12:30 PM	Tom Willhouse	South-East



# The Mobile Workforce Management Cycle



# OpenUI Enhancements for SAP Work Manager

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## Challenge:

- Many customers chose Windows based devices for SAP mobility and existing applications
- Some UX features of standard Agency and SAP Work Manager can be greatly enhanced using the SAP OpenUI Technology contained in SMP 3.0

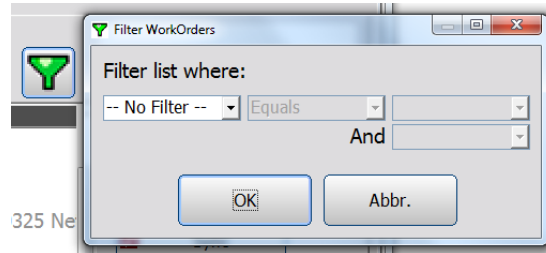
## Solution:

- Therefore, we implemented native .NET controls leveraging OpenUI on the client
- We closely aligned the .NET controls to standard SAP Work Manager to ensure seamless integration into the existing UI
- Focus was to provide an easier UI for technicians in handling their daily tasks

# Filtering and Sorting

## Common Customer Request:

- Search is accessing all available data fields and all words within the table are considered. The search results are updated after each keystroke.
- Standard Agency column based search requires too many clicks and does not cover the general search case.



## Solution:

- Filtering functionality provided as part of the native list control. Each keystroke updates the work order lists and filters available entries based on all columns of the list.
- The list allows sorting for one or several columns

## SAP Work Manager

swb Arbeitsaufträge

Arbeitsaufträge

Meldungen

Personalzeit

Filter:

Nr.	Start	Kurztext
4000138	09.10.2014 03:40	Wartung Hochspannungsst. 03130
4000137	09.10.2014 01:29	Wartung Hochspannungsst. 03130
4000136	09.10.2014 09:26	Inspektion Stromnetz
4000135	09.10.2014 01:24	Wartung Hochspannungsst. 03130
4000134	09.10.2014 01:22	Inspektion Hochspannungsst. 03130
4000133	09.10.2014 01:21	Wartung Mittelspannungsst. gelb
4000131	09.10.2014 01:15	Wartung Armaturen
4000130	09.10.2014 01:13	Inspektion Gasstation
4000129	09.10.2014 01:10	Gasnetz Wartungsauftrag
4000128	09.10.2014 01:07	Wartung Gaswerk
4000127	10.10.2014 01:06	Wartung Gaswerk 2
4000125	09.10.2014 00:59	Wartung Station
4000124	09.10.2014 01:09	Wartung Gaswerk 3
4000119	08.10.2014 22:04	Inspektion Hochspannungsst. 0325 Netz
4000117	08.10.2014 20:26	Inspektion Mittelspannungsst. 0325 Netz
4000116	08.10.2014 20:04	Wartung Gasregelung
4000114	08.10.2014 19:45	
4000109	01.08.2014 14:13	CM 493/2007-SCHERING_PLOUGH
4000108	29.07.2014 14:52	Calibratie (lage) geleidbaarheid
4000107	08.10.2014 19:43	Preventative Maintenance

# Filtering and Sorting

## SAP Work Manager

swb Arbeitsaufträge    Arbeitsaufträge    Meldungen    Personalzeit

Filter:

Nr.	Start	Kurztext	Technischer Platz	Arbeitsplatz	Messpunkt	Klassifizierung
4000138	09.10.2014 03:40	Wartung Hochspannungsst. 03130	1000-001-AA-04	AIR	<a href="#">Messpunkte...</a>	<a href="#">Klassifizierung...</a>
4000137	09.10.2014 01:29	Wartung Hochspannungsst. 03130	1000-001-AA-03	AIR	<a href="#">Messpunkte...</a>	<a href="#">Klassifizierung...</a>
4000136	09.10.2014 09:26	Inspektion Stromnetz	1000-001-AA-03	AIR	<a href="#">Messpunkte...</a>	<a href="#">Klassifizierung...</a>
4000135	09.10.2014 01:24	Wartung Hochspannungsst. 03130	1000-001-AA-03	AIR	<a href="#">Messpunkte...</a>	<a href="#">Klassifizierung...</a>
4000134	09.10.2014 01:22	Inspektion Hochspannungsst. 03130	1000-001-AA-03	AIR	<a href="#">Messpunkte...</a>	<a href="#">Klassifizierung...</a>
4000133	09.10.2014 01:21	Wartung Mittelspannungsst. gelb	1000-001-AA-03	AIR	<a href="#">Messpunkte...</a>	<a href="#">Klassifizierung...</a>
4000131	09.10.2014 01:15	Wartung Armaturen	1000-001-AA-03	AIR	<a href="#">Messpunkte...</a>	<a href="#">Klassifizierung...</a>
4000130	09.10.2014 01:13	Inspektion Gasstation	1000-001-AA-03	AIR	<a href="#">Messpunkte...</a>	<a href="#">Klassifizierung...</a>
4000129	09.10.2014 01:10	Gasnetz Wartungsauftrag	1000-001-AA-03	AIR	<a href="#">Messpunkte...</a>	<a href="#">Klassifizierung...</a>
4000128	09.10.2014 01:07	Wartung Gaswerk	1000-001-AA-03	AIR	<a href="#">Messpunkte...</a>	<a href="#">Klassifizierung...</a>
4000127	10.10.2014 01:06	Wartung Gaswerk 2	1000-001-AA-03	AIR	<a href="#">Messpunkte...</a>	<a href="#">Klassifizierung...</a>
4000125	09.10.2014 00:59	Wartung Station		AIR	<a href="#">Messpunkte...</a>	<a href="#">Klassifizierung...</a>
4000124	09.10.2014 01:09	Wartung Gaswerk 3		AIR	<a href="#">Messpunkte...</a>	<a href="#">Klassifizierung...</a>
4000119	08.10.2014 22:04	Inspektion Hochspannungsst. 0325 Netz	1000-001-AA-04	AIR	<a href="#">Messpunkte...</a>	<a href="#">Klassifizierung...</a>
4000117	08.10.2014 20:26	Inspektion Mittelspannungsst. 0325 Netz	1000-001-AA-03	AIR	<a href="#">Messpunkte...</a>	<a href="#">Klassifizierung...</a>
4000116	08.10.2014 20:04	Wartung Gasregelung	1000-001-AA-03	AIR	<a href="#">Messpunkte...</a>	<a href="#">Klassifizierung...</a>
4000114	08.10.2014 19:45		1000-001-AA-03	AIR	<a href="#">Messpunkte...</a>	<a href="#">Klassifizierung...</a>
4000109	01.08.2014 14:13	CM 493/2007-SCHERING_PLOUGH		MOBILE	<a href="#">Messpunkte...</a>	<a href="#">Klassifizierung...</a>
4000108	29.07.2014 14:52	Calibratie (lage) geleidbaarheid		MOBILE	<a href="#">Messpunkte...</a>	<a href="#">Klassifizierung...</a>
4000107	08.10.2014 19:43	Preventative Maintenance	1000-001-AA-03	AIR	<a href="#">Messpunkte...</a>	<a href="#">Klassifizierung...</a>

# Creation of measurement documents

## Common Customer Request:

- Measurement points linked to functional locations are displayed in a list and measurement documents can be created directly within the list without clicking additional buttons
- Values are preselected based on SAP configuration

## Solution:

- Native list control displays the data and by entering data in the fields the input is validated
- Measurement documents are created automatically and send in the background to SAP

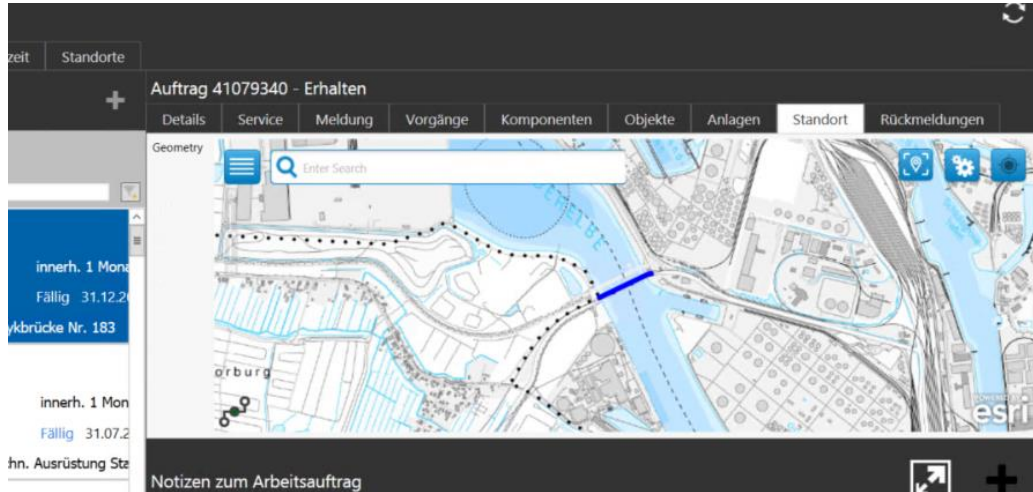
Technischer Platz				
Details	Klassifizierung	Messpunkte		
Bezugsobjekt	Messpunkt-Bezeichnung	Meßwert	Einheit	letzter Meßwert
Technischer Platz A	Länge	0	CM	13 (09.10.2014)
Technischer Platz A	Breite	10	CM	10 (09.10.2014)
Technischer Platz A	Tür in Ordnung?	<input type="radio"/> JA <input type="radio"/> NEIN		JA (09.10.2014)
Technischer Platz A	Farbe	<input type="radio"/> SCHWARZ <input checked="" type="radio"/> ROT <input type="radio"/> GRÜN		ROT (09.10.2014)

# Data Visualization

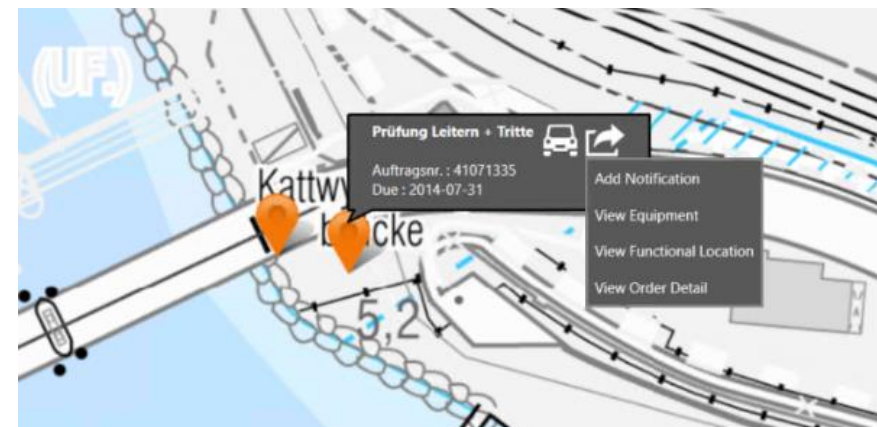
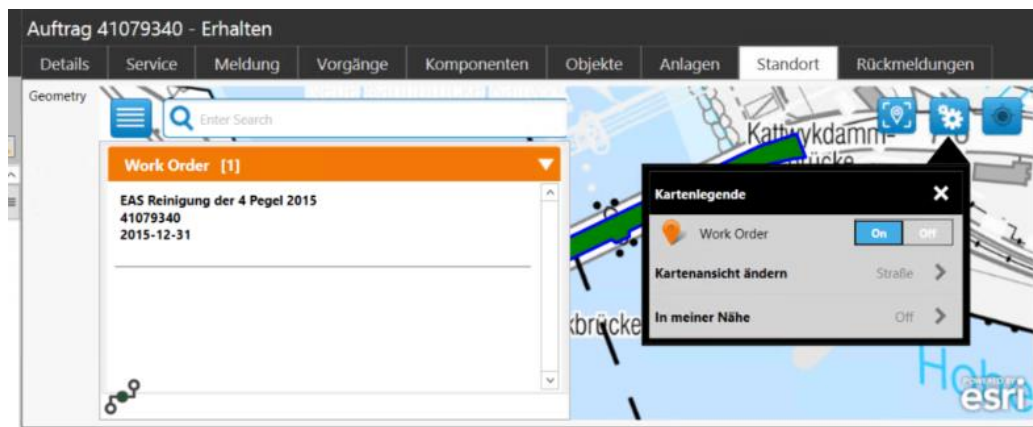
- Evora implemented Work Manager for Plant Maintenance at a chemicals company
- The Solution downloads Asset Data including Measurement Point History from SAP ECC
- The Mobile Application was extended with a visual Representation of the Data History including Min/Max Limits to improve User Experience and simplify Decision Making
- Technicians use the Data to proactively decide when preventative Maintenance is required



# Smart Maintenance @ Hamburg Port Authority (HPA)



- "Smart Maintenance" Workstream in HPA's "smartPort Logistics" Industry 4.0 Project
- Integrated GIS into SAP Work Manager
- Interaction within Map directly possible, e.g. to see more Details or other Orders
- Options to start new Actions (e.g. create a new Notification)



# GIS – Map-based Equipment Inspections @ Enwin Utilities

## Company

Enwin Utilities Ltd.

## Headquarters Location

Windsor, Ontario, Canada

## Industry

Utilities

## Products and Services

A management services company providing fleet, billing, collections, credit, financial, human resources, customer service, and information technology services to Windsor Utilities Commission and the City of Windsor

## Service Territory

267 km<sup>2</sup>

## Web Site

[www.enwin.com](http://www.enwin.com)

## The company's top objectives

- Provide map of work locations for technicians to visualize and determine daily route.
- Consolidate mobile applications to one version used by all technicians
- Support all functionality on multiple device platforms to enable a gradual migration from the older windows laptops to new iPads.
- Enable back office processes to support and increase the efficiency of field technicians.

## Evora Projects

### SAP Work Manager – 6.2 with ESRI ArcGIS Integration

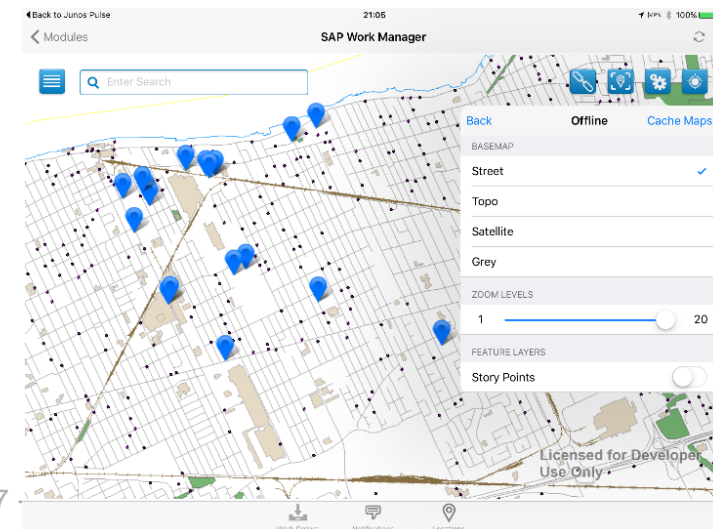
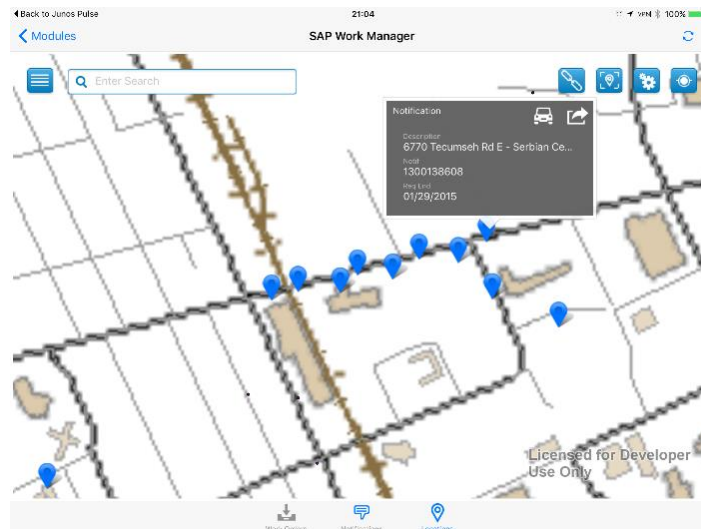
- New implementation of work manager with ESRI integration. Notifications plotted on the map with pin colors to indicate status. Technicians determine route and navigate the application via the map on iPad & Windows devices. Enhanced GIS integration to support various GIS object types, base layer and feature layers

### SAP Work Manager – 5.3 to 6.2 Upgrade

- Upgrade of preexisting Work Manager 5.2 to Work Manager 6.2 and existing enhancements migrated to map based version. Screens and workflows for hydrant inspections integrated and displayed per user's role.

### SAP Inventory Manager

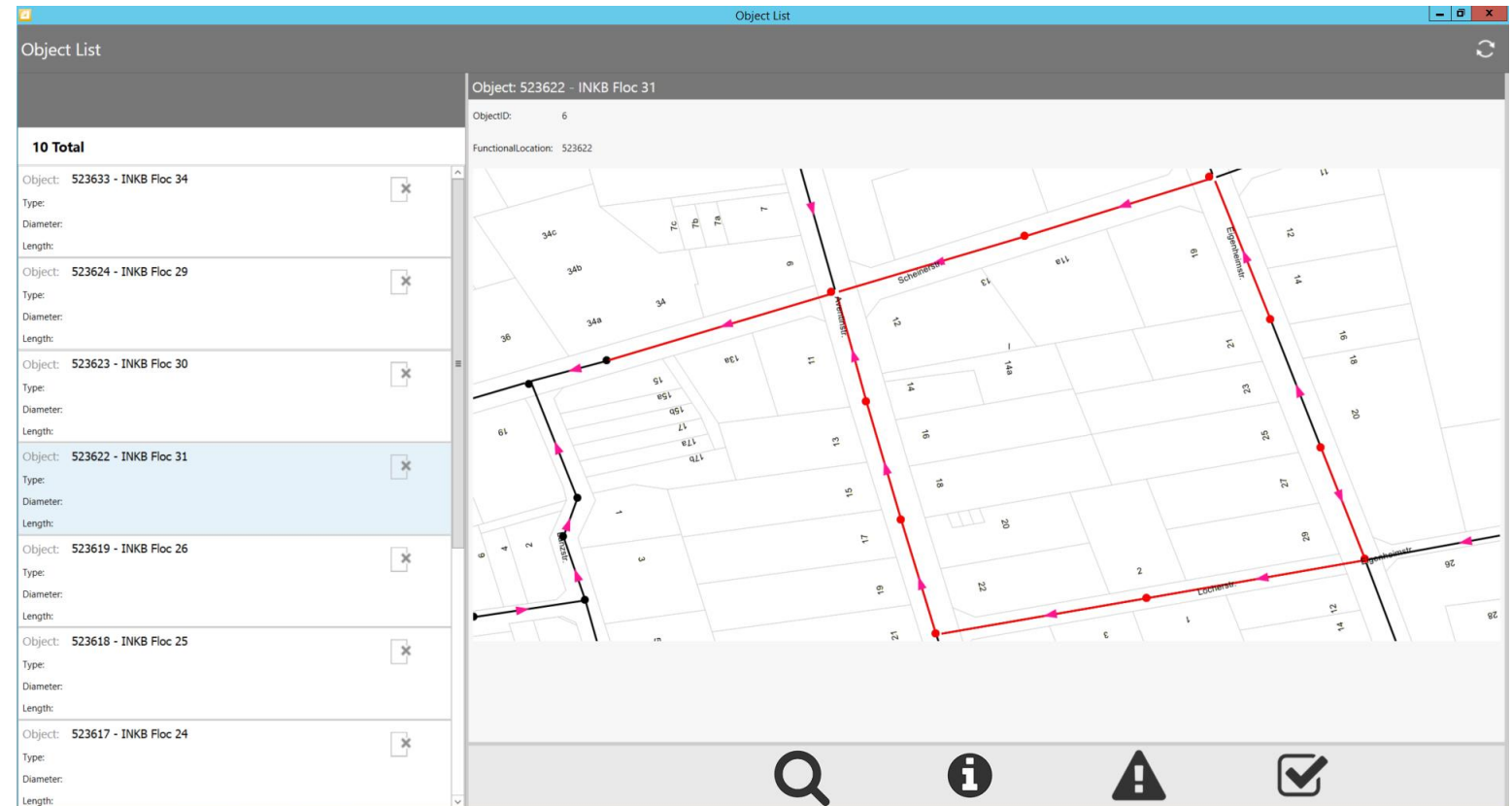
- Storeroom Technicians manage Physical Inventory (Cycle Counts), Goods Issue, Goods Return (Reversal), Good Receipt.





# GIS – GML based system with flow information

- Evora is extracting GIS data into an open format in order to render flow information into the SAP Work Manager
- The resulting map shows both individual objects, as well as the flow direction of waste water over a geographical base map
- Action buttons in the screen allow for quick access of object information, measurement points, etc.



# Example: EvoCheck

Equipment: 20197346 ( SAV K1)

Checkliste Technische Daten Messbelege

- 001 - 001 - Sichtprüfung  
Status: In Ordnung
- 002 - 002 - Auslösedruck  
Status: In Ordnung
- 003 - 003 - Dichtigkeit geprüft  
Status: Nicht in Ordnung
- 004 - 004 - Sichtprüfung  
Status: Offen

Zurück

Equipment: 20197346 ( SAV K1)

Checkliste Technische Daten Messbelege

- 001 - 001 - Sichtprüfung  
Status: Offen
- 002 - 002 - Auslösedruck  
Status: Offen
- 003 - 003 - Dichtigkeit geprüft  
Status: Offen
- 004 - 004 - Sichtprüfung  
Status: Offen

Zurück

Equipment: 20197346  
Messpunkt: Unterer Einstellw. (Ist-Messung)  
Letzter Wert: 208  
Einstellwert Unten: 110 +/- 3  
Obergrenze: 113  
Neuer Wert: 0 mbar  
Untergrenze: 107

Finish > Abbrechen

**Platform:** Windows (Laptop)

**App:** SAP Work Manager with maintenance extensions

**Capabilities:** Checklists are read in the backend based on object (e.g. equipment) and task type. Checklist items can be qualitative or quantitative. Quantitative result recording allows measurement document creation with dynamic upper/lower values. Out-of-range or negative evaluations lead to direct creation of notifications in the SAP system.

# Forms Processing in SAP Work Manager @ Netze Duisburg

Meldung 10085251

Formulare + SPUEL\_PROTOKOLL

1 Gesamt

SPUEL\_PROTOKOLL ✓

NENNWEITEN		
Nennweiten DA/DN 1	40	
Nennweiten DA/DN 2	40	
Nennweiten DA/DN 3	40	
Nennweiten DA/DN 4	40	
Nennweiten DA/DN 5	40	
Nennweite ID 1	32	
Nennweite ID 2	32	
Nennweite ID 3	32	
Nennweite ID 4	32	
Nennweite ID 5	32	

PRÜFUNG		
Durchfluss [m3/h]	5	m3/h
Tatsächliche Spülzeit [min]	7	min
Tats. Spülmenge [m3]	0.583	m3

Several Forms possible per Work Order

Dropdown Values from SAP

Free text entry, calendar selection etc. possible

Calculation on the basis of SAP configured formulars

# Accelerators on top of Work Manager - General

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- Grid & Meter Management including Smart Metering
- Meter Reading
- SAP MRS Integration
- Permit Management (SAP WCM)
- SAP PS Integration
- SAP CS Enhancement
- Online Lookups for Master Data
- Assignment of Work to Technician on the Client
- Digital Signature
- PDF Creation on Windows 7 Environment
- Sharepoint integration
- Optical read, NFC, RFID...



# The Mobile Workforce Management Cycle



# Example: EvoTime

**Users:** Foreman and Managers

**Capabilities:** Approve complex timesheets with automatic escalation paths

**Functions:**

- Insert work order numbers for bookings against notifications
- Enter approval or rejection comments
- Final confirm work orders
- Create IW42 bookings
- Generate HR input files for salaries
- Archive shifts and delete after retention period

The screenshot displays the EvoTime software interface, which is used for managing work orders and shifts. The main window is titled 'Übersicht der Einsatzschichten' (Overview of Shifts) and shows a list of shifts with columns for ID, status, description, status, person number, user, start and end dates, start and end times, work time, and other metrics. Below this list, there is a detailed view titled 'Detailsicht der Einsatzschichten' (Detailed View of Shifts) for a specific shift. This view includes 'Kopfdaten' (Header Data) such as ID, person number, name, status, and booking date. It also shows 'Einsatzzeiten' (Shift Times) and 'Zeitbuchungen' (Time Bookings) with columns for time entry, start and end dates, start and end times, work time, and other details. At the bottom, there are sections for 'Erschwerisse' (Obstacles) and 'Pausen' (Breaks), along with a 'Langtext' (Long Text) area for comments or notes.

Einsatz.ID	Status	Beschreibung	Status	Pers.Nr.	Benutzer	Beginndatum	Enddate	Beginnzeit	Endeuhzeit	Arb.zeit	Eins.zeit	Zuschl.	Bereitschaft	Überstunden	U.Üst.	P.Üst.	Ovt.	Sum	Vorname	Nachname
90000205	ILV	Verbucht ILV		2213	BLICKE	22.07.2015	22.07.2015	07:00:00	09:00:00	1,00	2:00	1,00						1,00	Thomas	Blicke
90000204	MOBF	Freigegeben Mobil		2213	BLICKE	22.07.2015	22.07.2015	07:00:00	16:00:00	7,25	9:00	0,00						0,00	Thomas	Blicke
90000203	VORZ	Zurückgewiesen durch Vorhandwerker		2213	BLICKE	22.07.2015	22.07.2015	07:00:00	11:00:00	3,00	4:00	1,00						0,00	Thomas	Blicke
90000200	HRV8	Verbucht HR		2213	BLICKE	21.07.2015	21.07.2015	09:00:00	11:00:00	2,00	2:00	0,00						0,00	Thomas	Blicke
90000199	MOBF	Freigegeben Mobil		2213	BLICKE	22.07.2015	22.07.2015	07:00:00	17:00:00	8,00	10:00	1,00						0,00	Thomas	Blicke
90000192	VORF	Freigegeben durch Vorhandwerker		2213	BLICKE	28.05.2015	28.05.2015	01:00:00	05:00:00	1,25	4:00	1,50						1,00	Thomas	Blicke

# Overview - evoSupervisor

SAP UI5 application for tablets and desktop designed for supervisors to manage technicians from the plant floor.

- Dashboard to View:
  - Assigned Work Progress
  - New Work
  - Unassigned Work
- Sophisticated Work Order Search
- Dispatching & Assigning Work Orders
- Capacity & Workload Visibility
- Time Entry Review

Status	Priority	Operation	Work	Duration	Activity Type	Assignee
613586 - Fix Vending Machine - McDonald's Deutschland GmbH & Co. KG						
	<span style="color: yellow;">●</span>	<b>Replace power unit</b> 0010	0.5 h	0.5 h	Electric	<a href="#">Assign now</a>
	<span style="color: red;">●</span>	<b>Replace entire pump</b> 0020	1.0 h	1.0 h	Plumbing	Johannes Türmer
	<span style="color: red;">●</span>	<b>Hand over new password</b> 0030	0.2 h	0.2 h	IT & Computing	Marco Weil

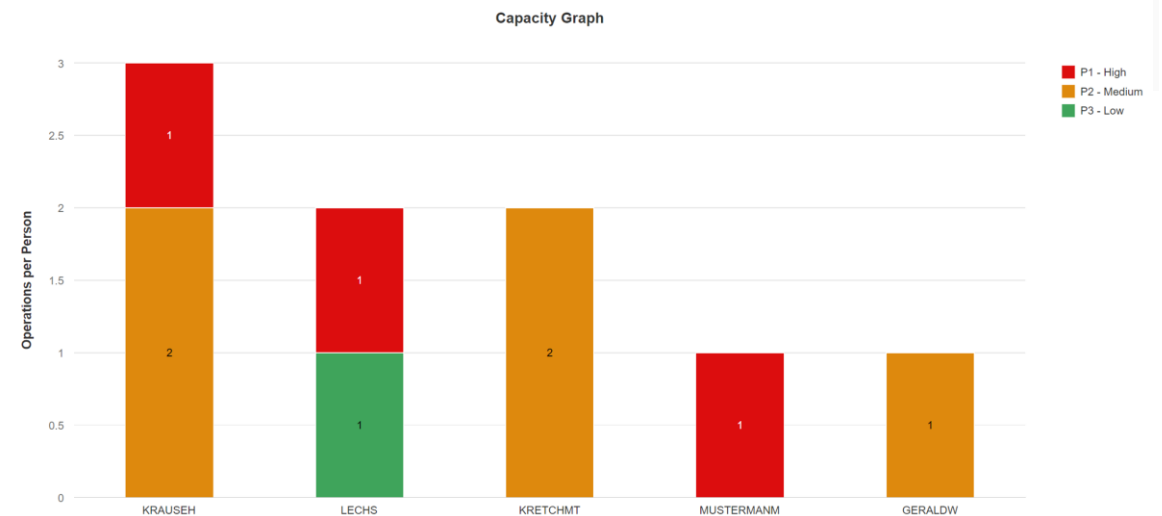
Capacity

Standard Hide Filter Bar Filters Go

Work Order:  Operation:  Person name:  Priority:  Status:

Assigned Operations (8)

Start Date	Status	Prio	Work Order	Operation	Functional Location	Equipment	Dispatcher	Duration	Capacity
KRAUSEH - ETECH									
4/3/17	✓	<span style="color: orange;">●</span>	<b>Replace Water Pump</b> 613585	Remove the cover and check the holes 0040	Booster pump plant - pump 1 K1-BR2-11	Electric pump 004 P-2000-N004	Tim Kretschmann	4 H	2
		<span style="color: red;">●</span>	<b>Replace Water Pump</b> 613585	Insert and connect a new pump 0060	Booster pump plant - pump 1 K1-BR2-11	Electric pump 004 P-2000-N004	Tim Kretschmann	4 H	2
			<b>Conveyer belt</b>	-	INKB Functional	-	-	-	-



# AGENDA

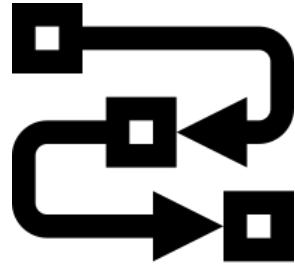
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- 1 Evora IT Solutions Company Overview
- 2 Our Approach to SAP Mobile Projects
- 3 Lessons Learned & Outlook



# Lessons Learned & Outlook

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**Unified digital processes**



**Moving into the Cloud**



**Human factor**



**Vision**

**Mobile Devices**



# Contact Us

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