

N e x t Extended Warehouse Management G e n e r a t i o n

Speaker: Stephen Hackett



The Config Team[™]
SAP Supply Chain Specialists



The Config Team™
SAP Supply Chain Specialists

SAP Supply Chain
Specialists



>150 in the team

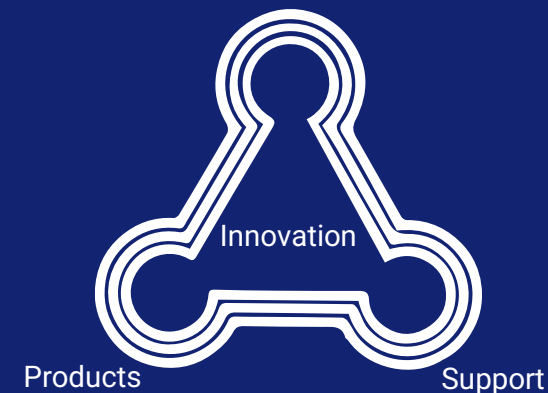
>95 Active
Customers Globally



ISO Certified



SAP Consultancy



Established in
1994



SAP® Certified
Products



24 Hour
Support



Dedicated
Product
Development
Team

Agenda



Good UI



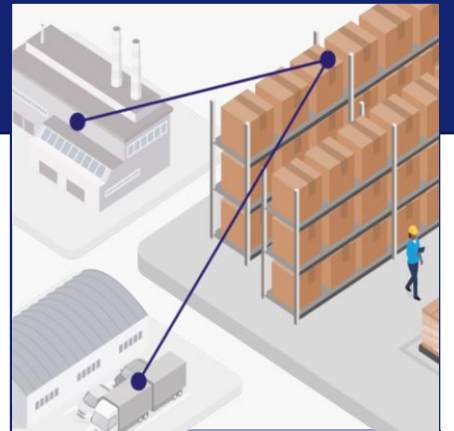
Augmented reality



Gamification



Analytics



3PL Integration

Cost of a poor user experience

A poor UX diminishes a team's productivity every hour of every day

7 times longer to correct inaccurate transactions than get it right first time



4% of employee salary spent on training



Inadequate software UX estimated to cost US economy

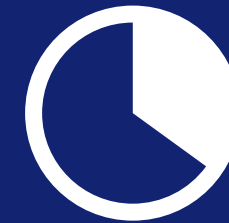
\$57.7 billion

per year in lost productivity



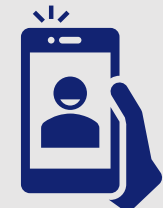
Employees abandon software

and revert to manual processes and paperwork

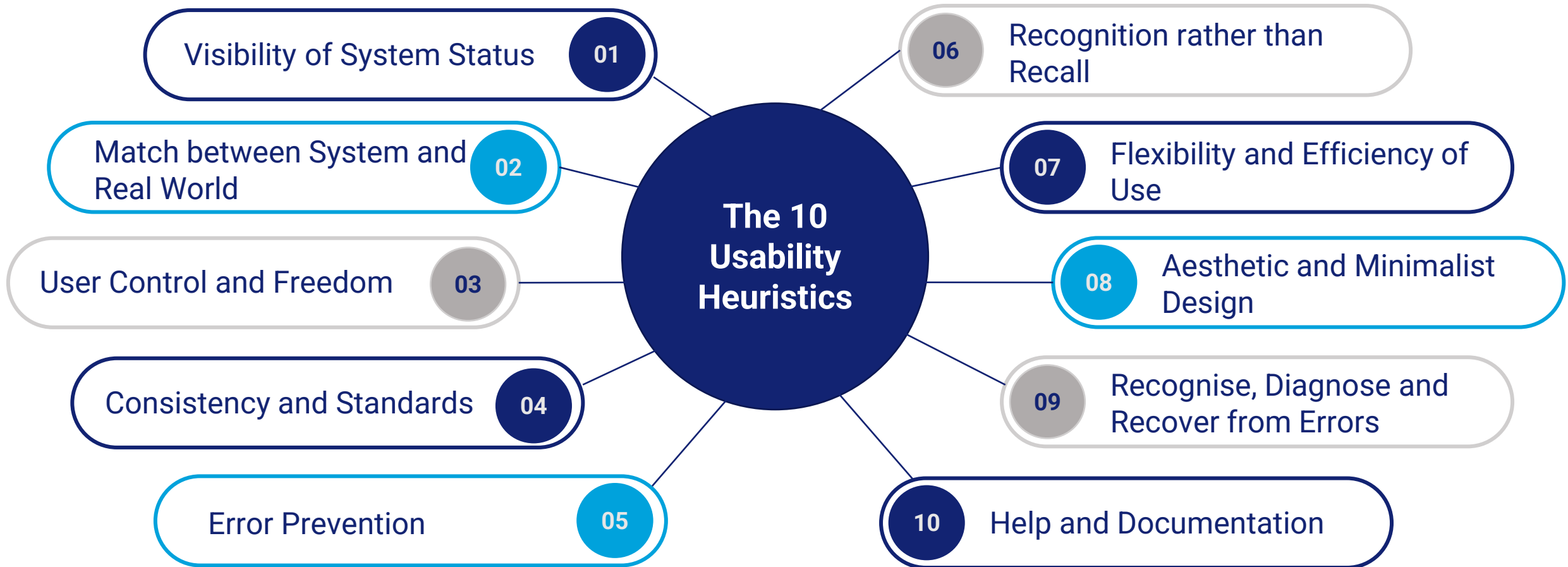


One Third of a disengaged worker's salary in lost productivity

40% of staff consider moving for improved technology experiences



The Ten Usability Heuristics



SAP Mobile Landscape

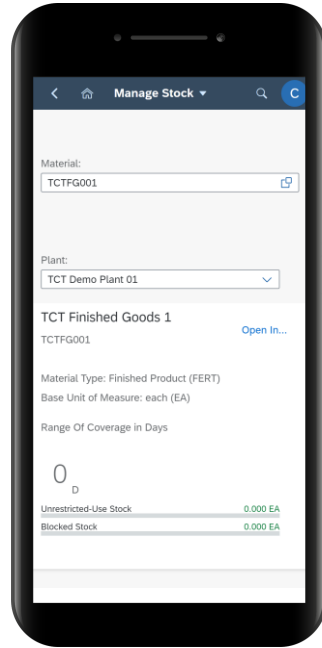
Increased mobile offering to address supply chain changes and demand

ITS Mobile



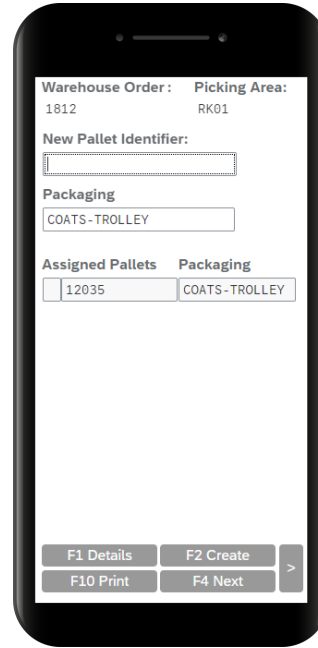
WM, Stockroom Management
and EWM

Fiori



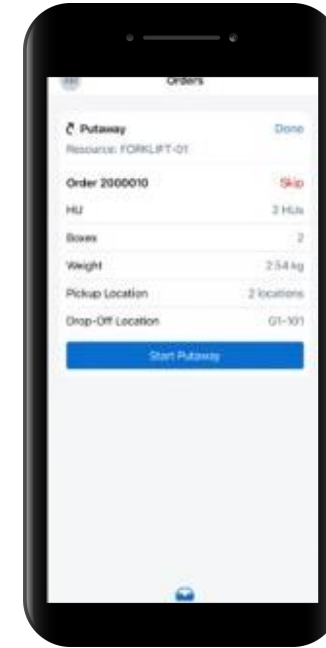
Limited IM and EWM
processes

Personas



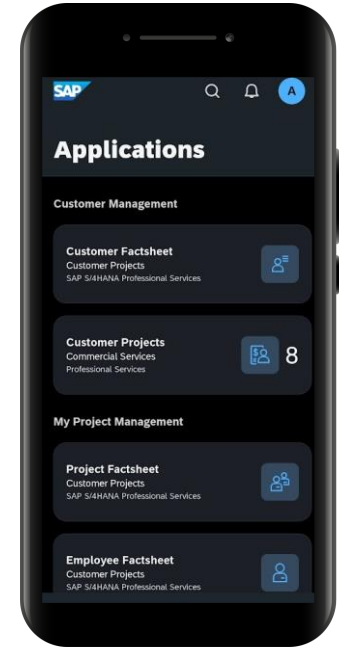
WM, Stockroom Management
and EWM

Warehouse Operator App



Limited EWM
processes

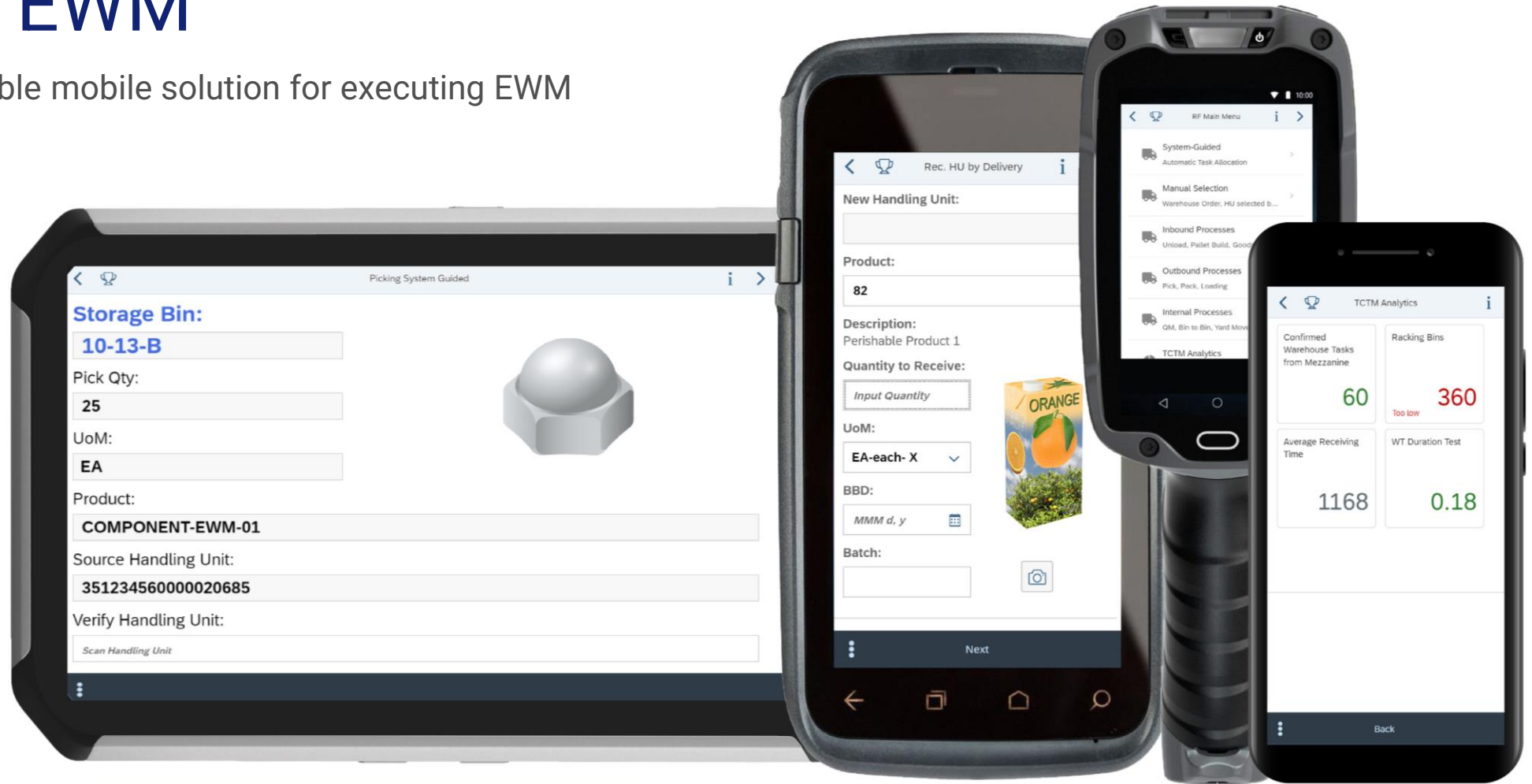
Mobile Start



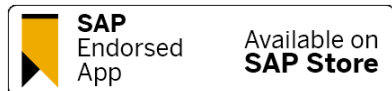
Launchpad for other SAP
mobile solutions

PreBilt for EWM

Feature-rich, configurable mobile solution for executing EWM transactions



All rights reserved



Benefits of a Good UX (PreBilt for EWM)

There are clear business benefits to providing employees with a high-quality mobile user experience for EWM

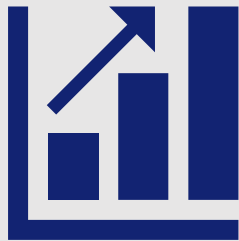


25% more likely to have high levels of work effectiveness



30% more likely to have a high intent to stay with current employer

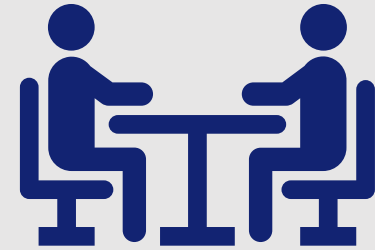
30% increase in productivity



10% improvement in delivering good customer experience

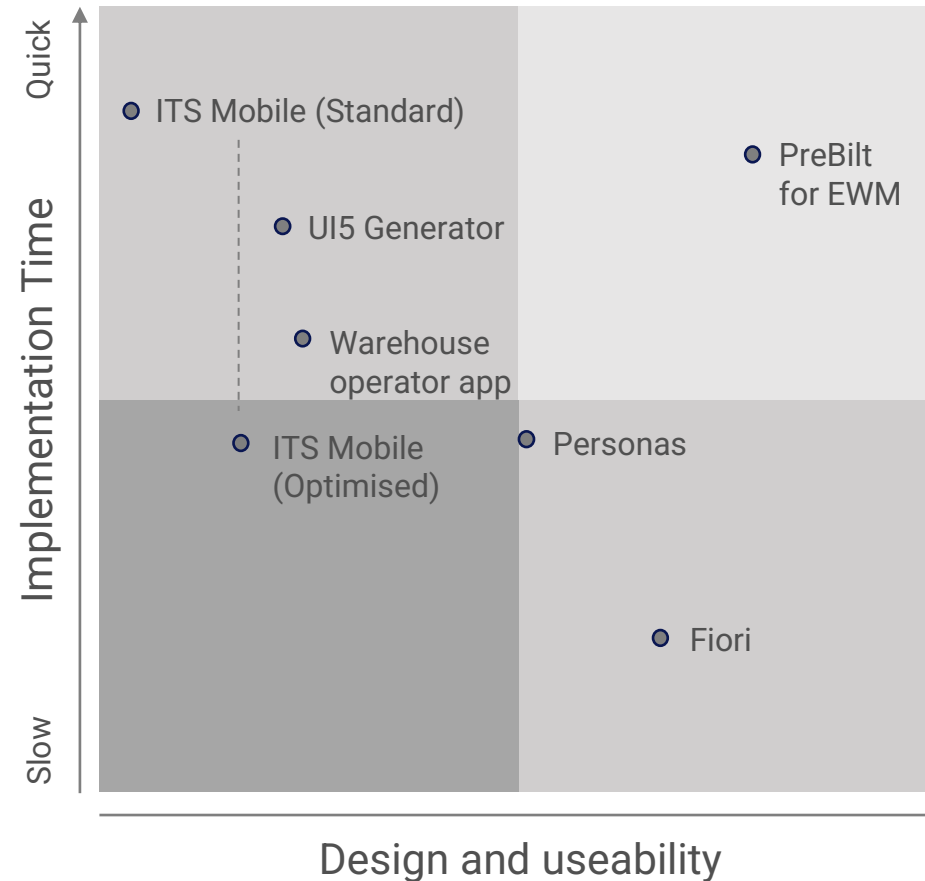


8% uplift in discretionary effort



Summary of SAP Mobile Solutions

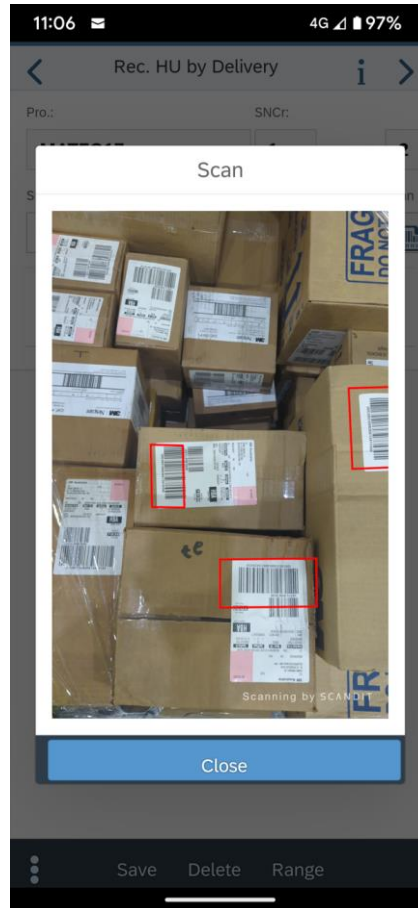
A portfolio of different options but no one comprehensive, intuitive mobile solution to use with EWM



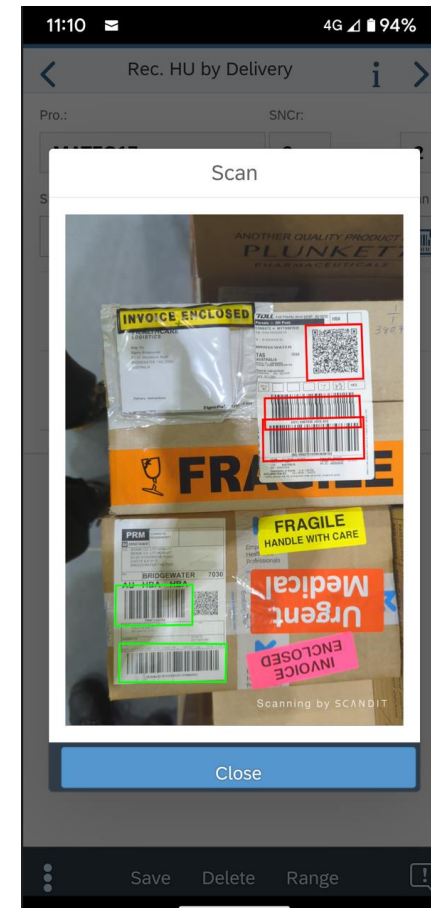
Advanced Scanner Integration



Ability to scan difficult to read barcodes



Orientation and multi-barcode handling



Utilising AR to provide useful feedback to users



The Config Team™
SAP Supply Chain Specialists



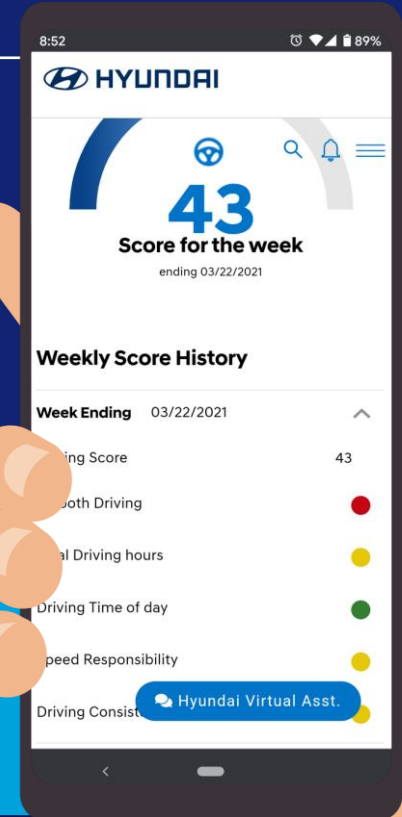
Gamification

What is Gamification?

Gamification refers to the **application** of **game mechanics** into traditionally non-game related **activities**, with the broader goal of **increasing user engagement**.



"Top Technology Trends Transforming Warehousing Over the Next 5 Years"
Gartner Jan.2022



Examples of Games



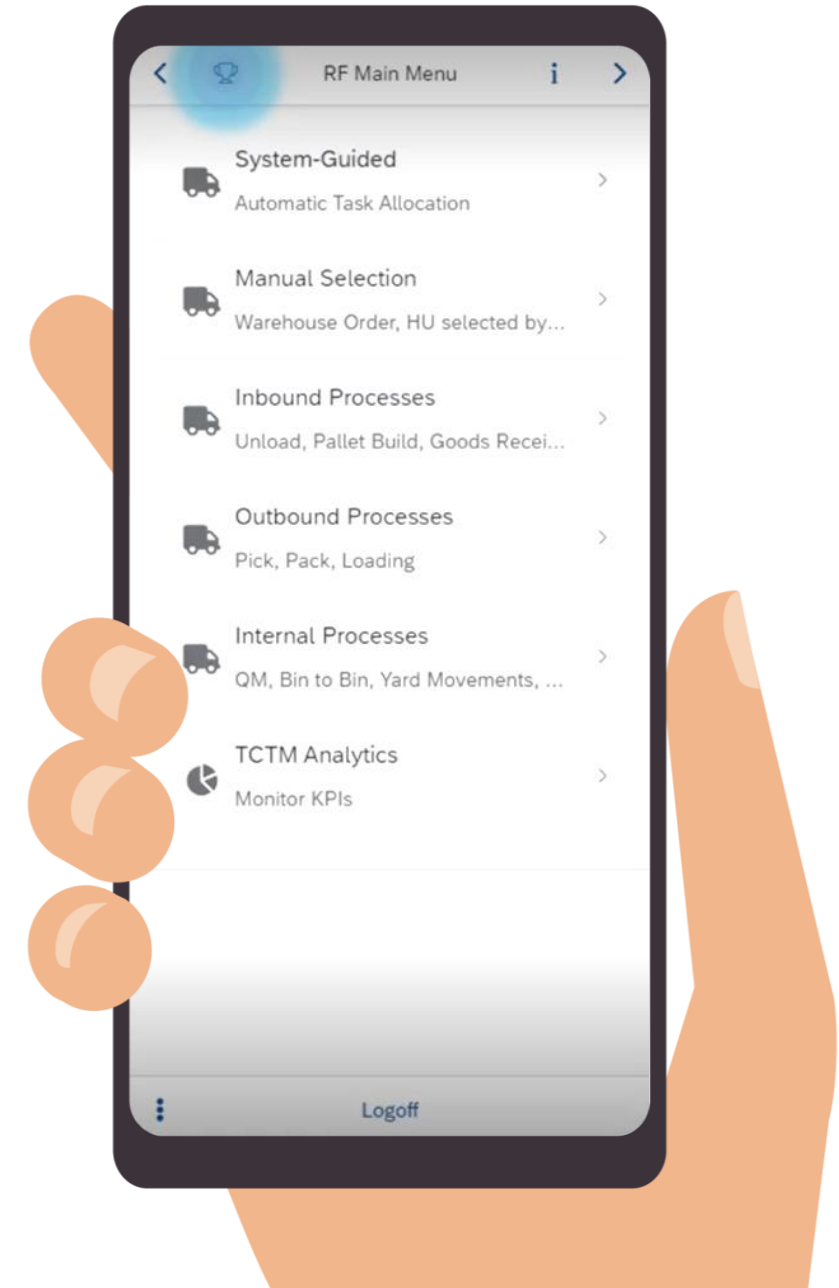
Competitions

- Individuals against each other
- Teams/shifts against each other.

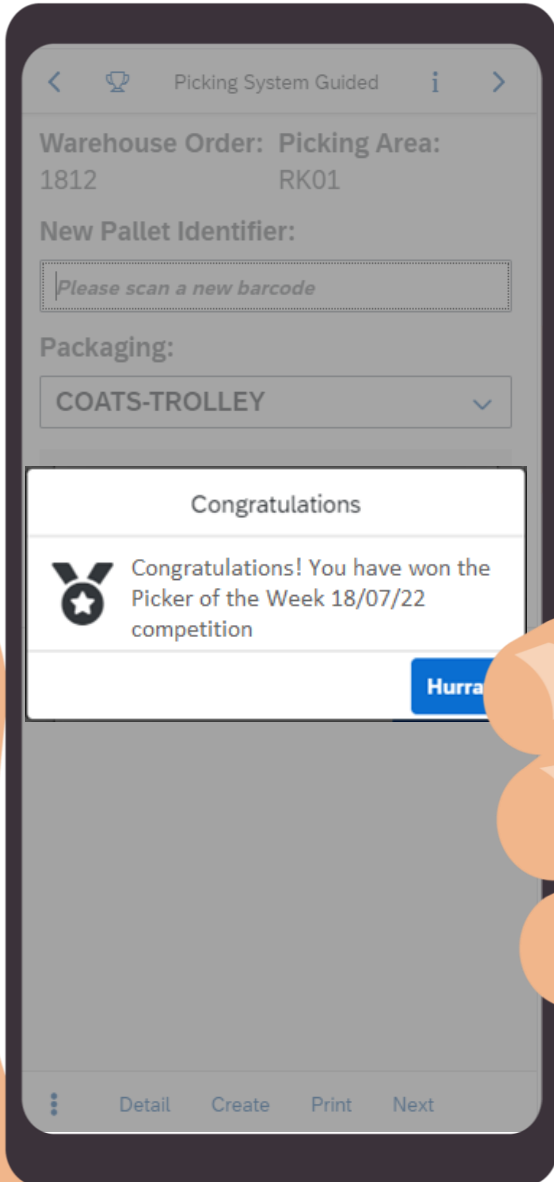


Challenges

- Individuals are only competing against themselves
- Game duration is much longer



Games in a Warehouse



Distance walked in a shift, over multiple shifts.



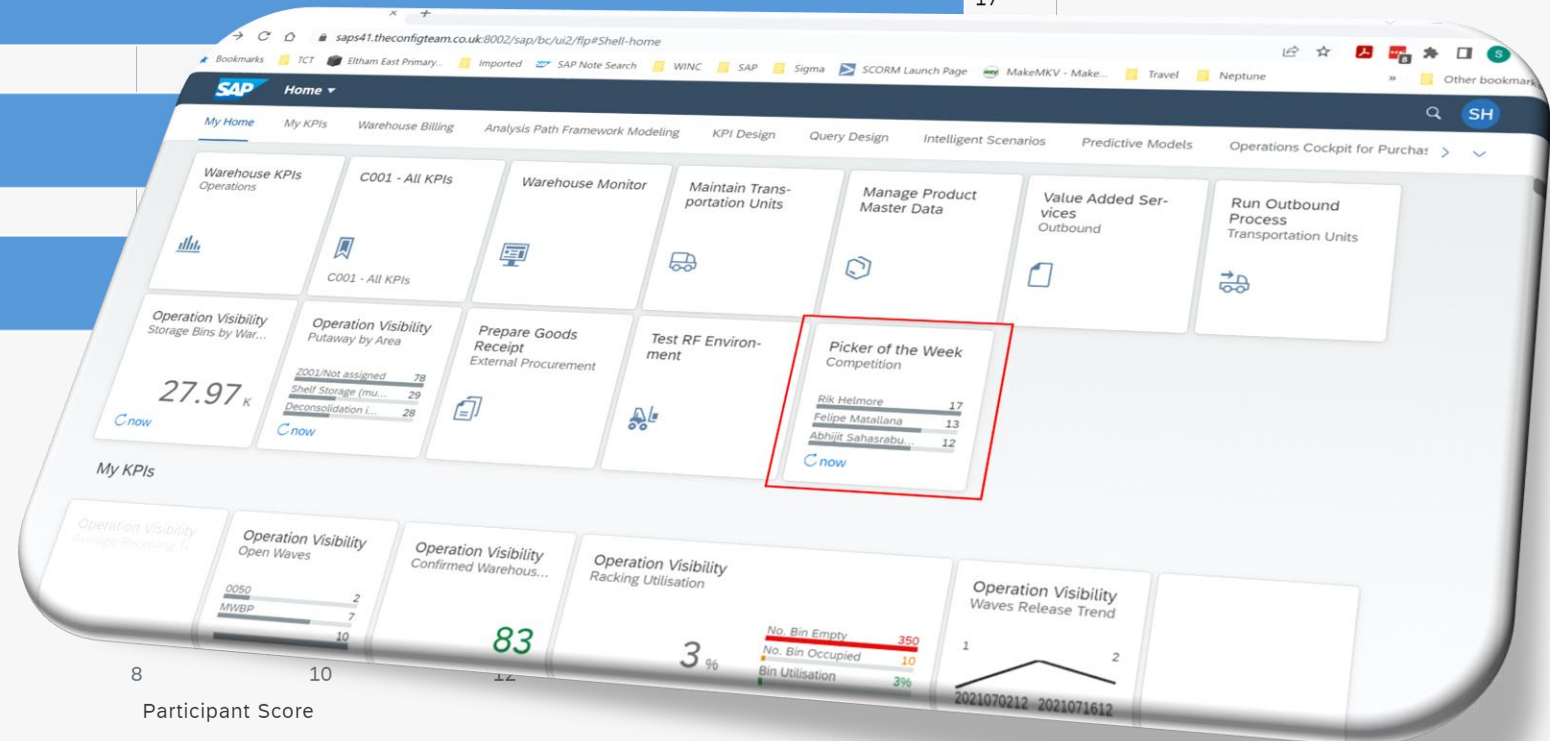
Cases received per hour.



Cases picked in a shift.

Filtered By (1): Competition ID

Participant Name	Participant Score
Rik Helmore	17
Felipe Matallana	13
Abhijit Sahasrabudhe	12
Christoph Herrmann	6
Stephen Hackett	4



Who currently offers Gamification?



The Config Team™
SAP Supply Chain Specialists

 **BlueYonder**
Fulfill your potential™



L O C U S



 **Manhattan**
Associates®

Considerations

Do not just roll this out without firstly engaging with the workforce.

What legal frameworks do you need to consider.

Address unhealthy aspects such as workplace bullying, people gaming the system itself.

Each of these can be addressed based upon the type of game you deploy. Having a tool taking this into account is important.



The Config Team™
SAP Supply Chain Specialists



Warehouse Analytics

The Challenge with Analytics in EWM

Analytics and KPI reporting has gone through numerous iterations inside SAP



Our Experience with Customers

Business Suite customer <= EWM 9.5 not on a HANA DB.

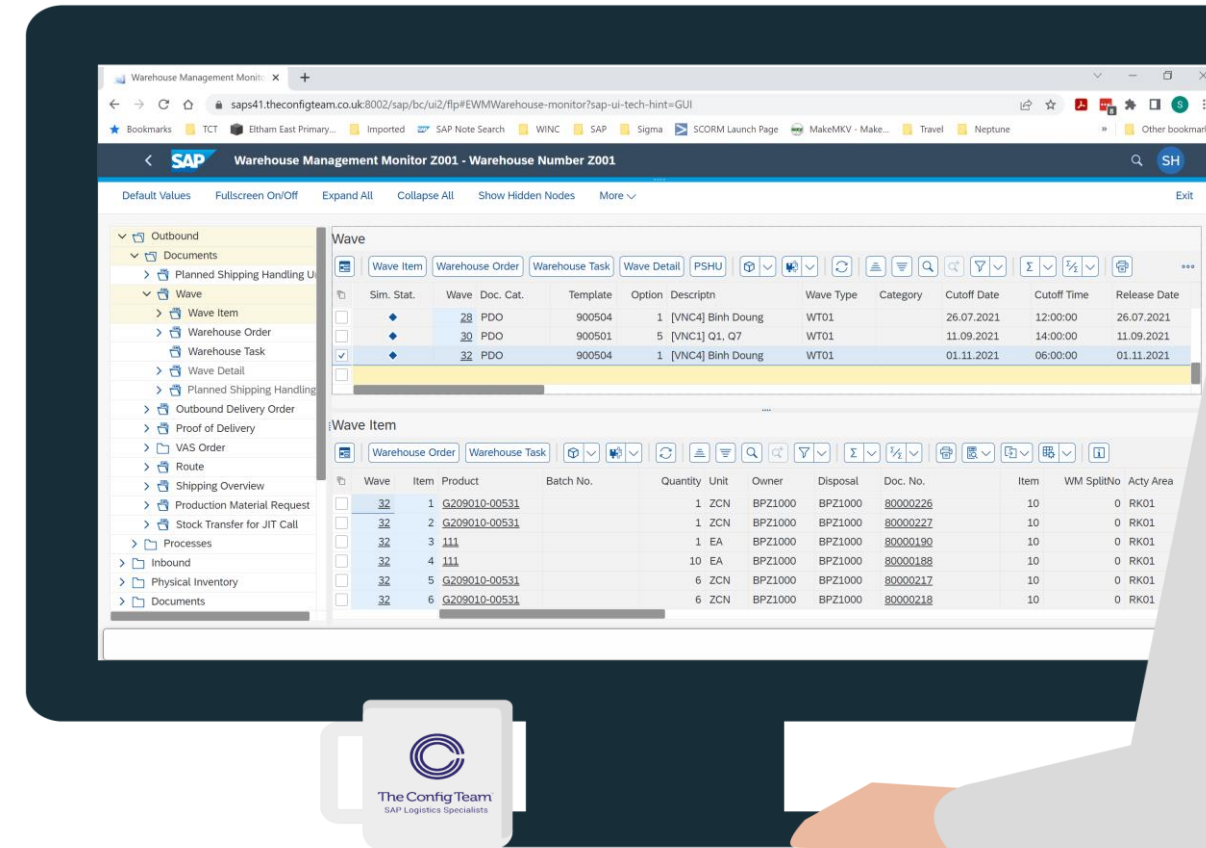
Warehouse Cockpit. Using Measurement Services

Business Suite Customers <= EWM 9.5 and lower, on HANA DB. Note: this is not S/4, just the HANA DB.

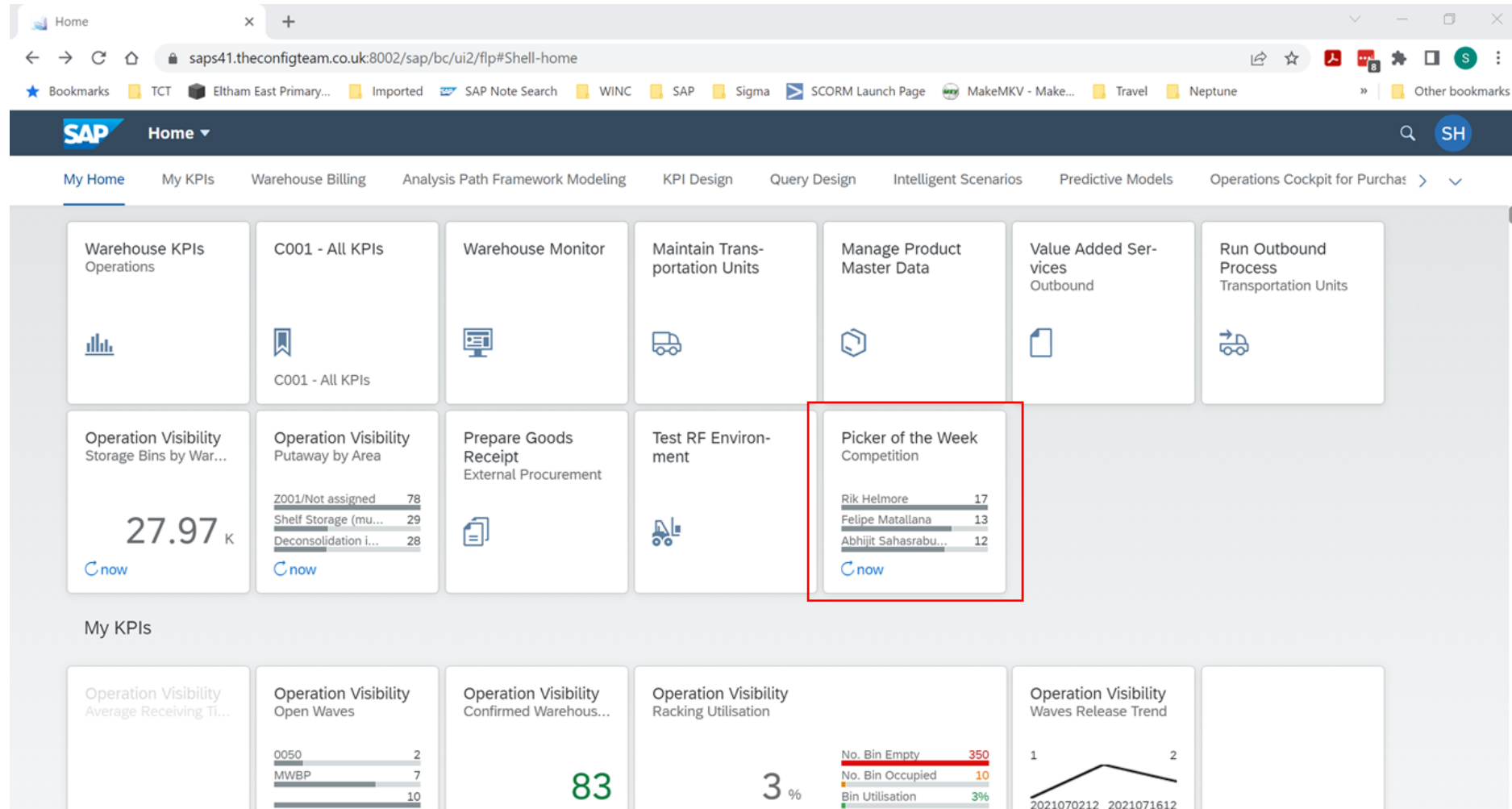
Smart Business Modeller for Business Suite is your KPI tool of choice (in theory).
In reality it takes a strong technical team to set this up.
Just not fully stabilised in this version.

S/4 Customers >= EWM 1709. Embedded Analytics.

Successor to Smart Business Modeller.
Much more stable, easier to setup, direct integration with CDS.
Much quicker to use standard and custom CDS. Faster time to production.

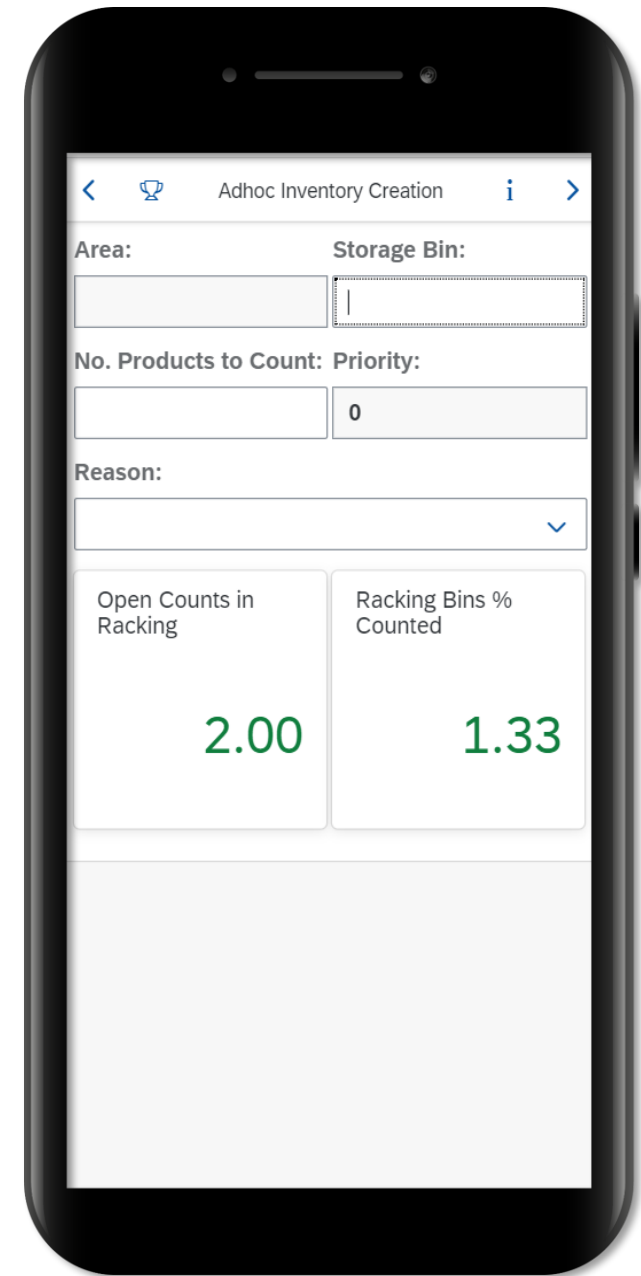
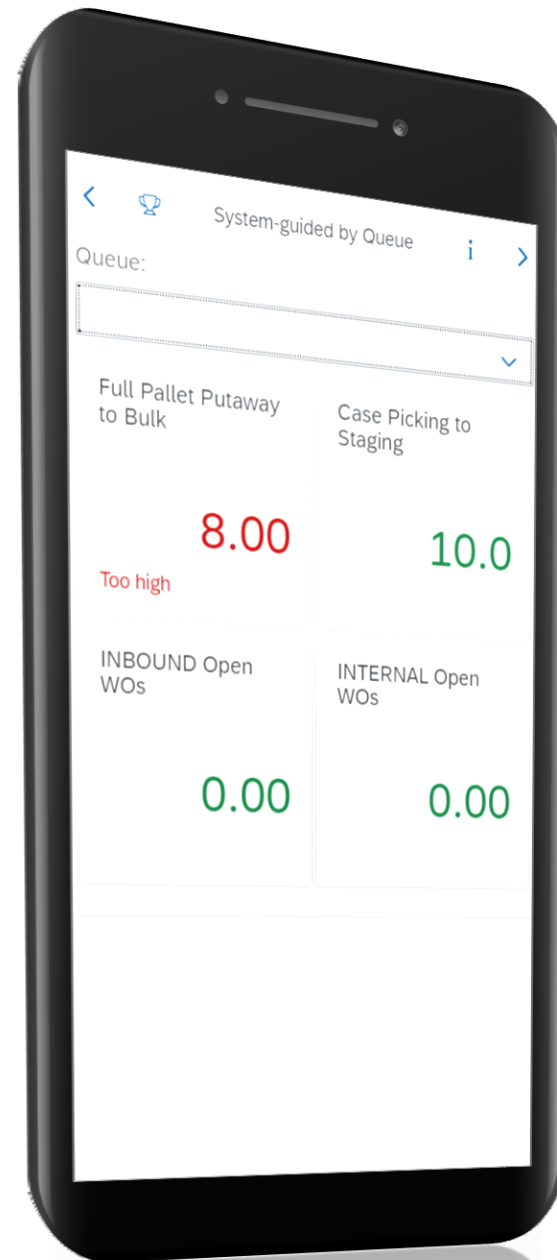


Fiori Launchpad with EWM KPIs



Usage in the Warehouse

- Context sensitive KPIs
- Factor in the user and what they need to see!





The Config Team™
SAP Supply Chain Specialists



3PL Integration

Interface Monitoring

Operating in current times

IN 2021...

3PL relationship management wasn't at the forefront of leaders' agendas.

However, **64% of leaders didn't have the adequate 3PL network** to effectively operate through disruptions

Expanded our base of 3PL providers

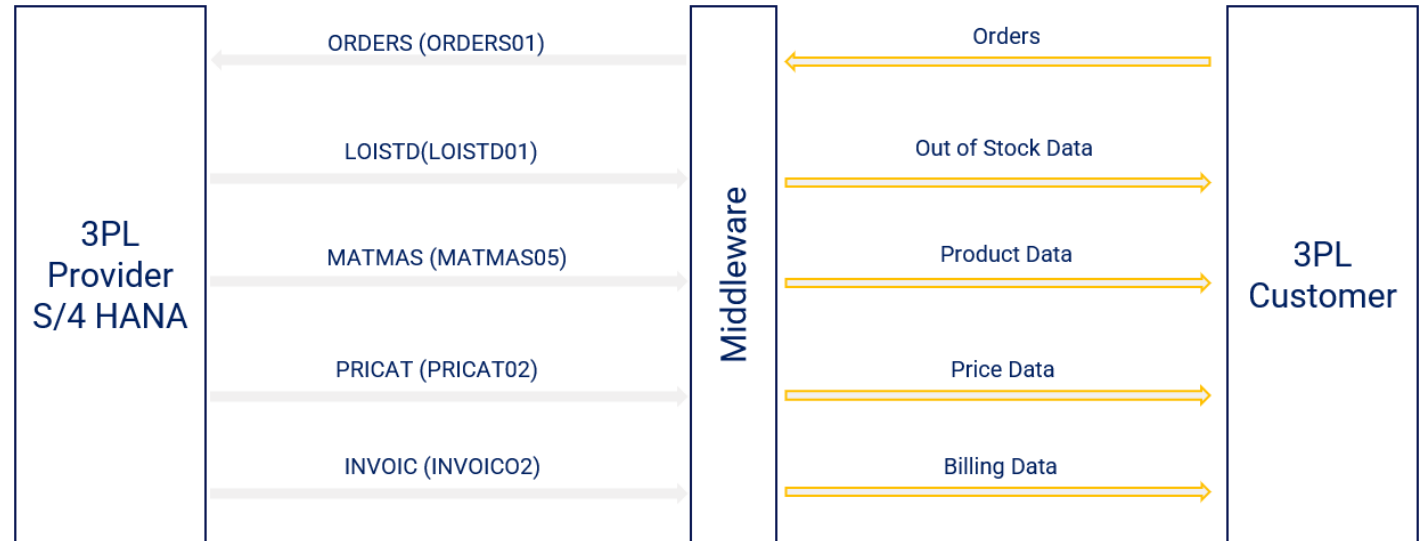
Consolidated our base of 3PL providers

3PL Integration Typical Flows

Each 3PL can have differing message requirements making harmonisation difficult.

Typical message flows for 3PL include:

- Stock balances.
- Product Data.
- Orders.
- Deliveries.
- Internal stock adjustments.
- Quality releases.
- Potentially payments (4PL) / Invoices.
 - Price Data
 - Billing Data



Standard Tools for Monitoring

- Many customers will simply build these interfaces, but then utilise very basic/standard reports for monitoring of message flow success each day.
 - WE02
 - BD87
 - EWM Warehouse Monitor IDoc Overview
- Unfortunately these tools are generally quite technical in nature, and typically cannot provide enough information as to the overall integration status with each 3PL. The fallout from not acting on a stuck message or system error can be high.
- This leads to maintaining a daily IT presence in the operation to ensure the system is working as expected.

Status Monitor for ALE Messages

IDocs	IDoc Status	Number
▼ IDoc selection		
▼ Changed on is in the range 04.11.2021 to 04.11.2022		
▼ Logical System S41 Client 100		19
▼ IDocs in outbound processing		9
> Error in ALE service	29	1
▼ Data passed to port OK	03	7
▼ SHPMNT		2
EA(083) : IDoc sent to SAP system or external program		2
> SHP_IBDLV_SAVE_REPLICA		5
> Original of an IDoc which was edited	33	1
▼ IDoc in inbound processing		10
> Application document not posted	51	5
> IDoc with errors added	56	5

Warehouse Management Monitor Z001 - Warehouse Number Z001

IDoc	St...	D...	WhN	IDoc no.	Msg. Type	BasicType	Basic Type Descr	BusObject	BusObj Key	Status	StatusText
				18012	/SCWM/WMTORD	/SCWM/WMTOID01	Create Warehouse Task	Warehouse Ord	0000002221	29	Entry in outbound table not found
				20002	SHPMNT	SHPMNT05	Shipment	Shipment	0000001040	51	Transportation planning type is not supported
				20004	SHPMNT	SHPMNT05	Shipment	Shipment	0000001040	51	Transportation planning type is not supported

What were Idorsia's challenges?

Process Failures

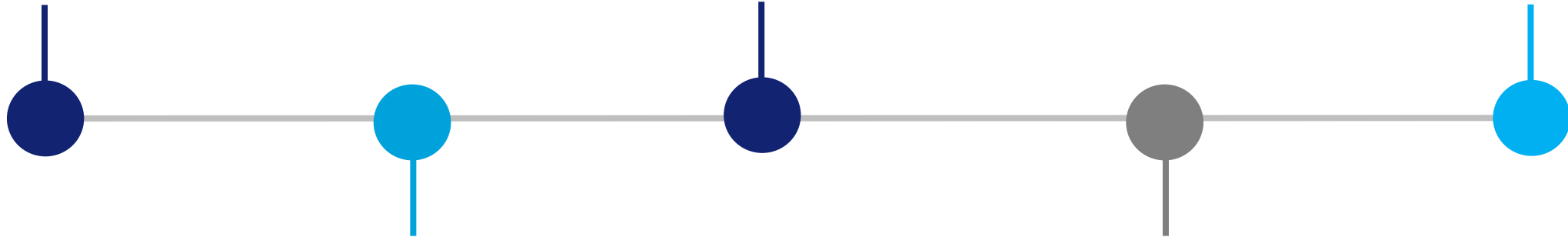
Multiple process failures, such as the ASN's not received, stock status changes aren't received in time, wholesale orders not received

Notifications

If goods receipt message is delayed, then the quality inspection lot isn't created. With no inspection lot, there's no mechanism to release the batch, potentially leading to a delay and poor customer service

Inaccuracies

Discrepancies in stock figures lead to poor planning and stock allocation leading to unfulfilled orders and poor customer service



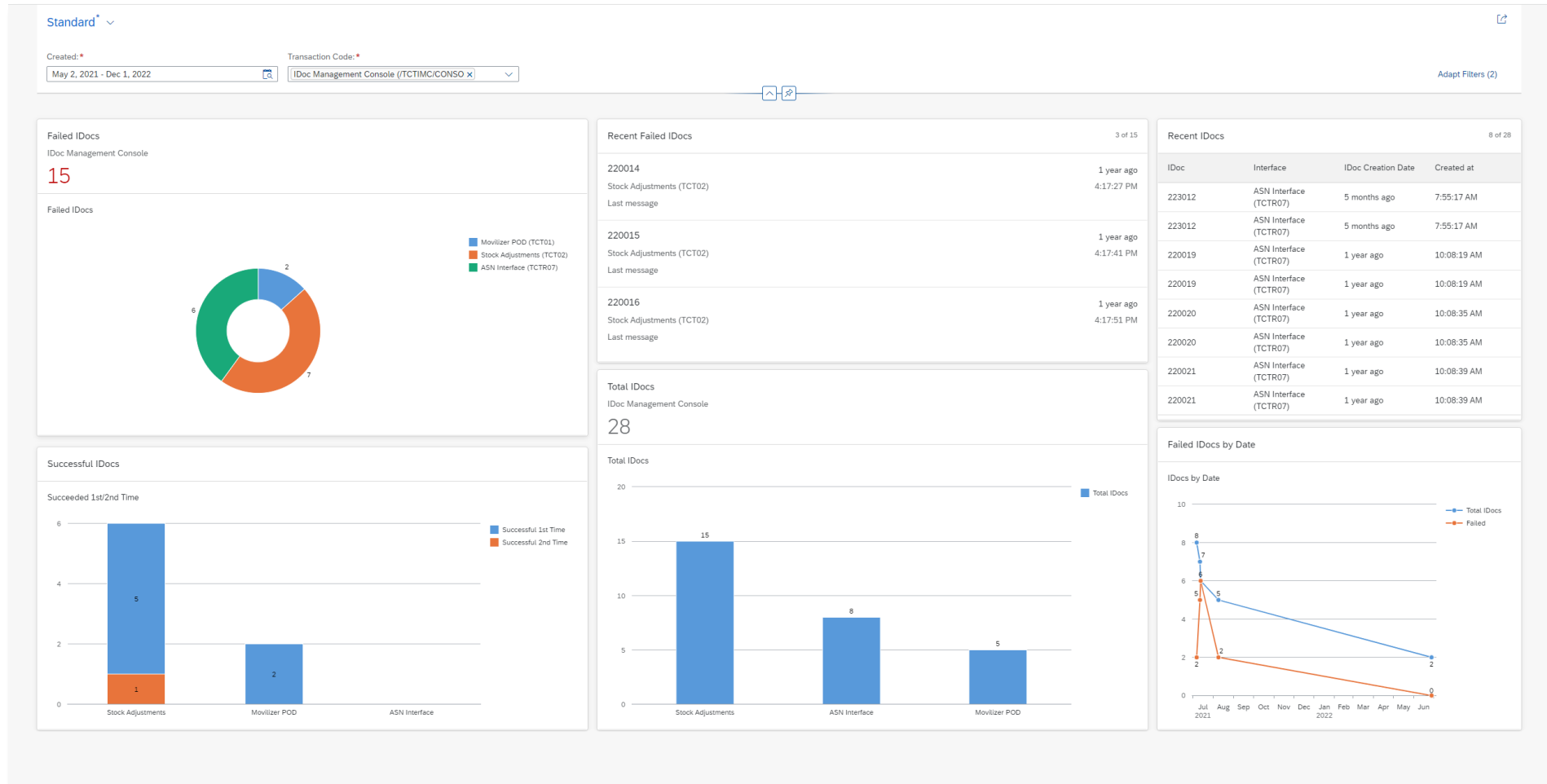
Reactive vs Proactive

It is essential businesses monitor and react to failed IDocs quickly – the standard SAP solution does not offer this functionality

Complex for User

A user needs to navigate a complex user interface and view several transactions to carry out functions

What was the solution?



What was the solution?



List

Edit

Goto

Views

Settings

System

Help

<

SAP

IDoc Management Console

✓

🔍

📄

📄

🔍

Σ

½

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

📄

<

IDoc Management Console - List

- Creation Date: 01.01.2019 - 27.10.2021 | Time: 00:00:00 - 24:00:00
- Interface: TCT02 - Stock Adjustments

IDoc number	Created On	Created at	Status	Material	Last Message
219016	07.07.2021	11:41:02	51	MOVFG-IM-03	Goods movement not possible with mvmt type 552
219019	07.07.2021	13:14:35	51	MOVFG-IM-03	Goods movement not possible with mvmt type 552
220012	12.07.2021	16:17:16	51	MOVFG-IM-XX	Material MOVFG-IM-XX not maintained in plant M001
220013	12.07.2021	16:17:24	51	MOVFG-IM-XX	Material MOVFG-IM-XX not maintained in plant M001
220014	12.07.2021	16:17:27	51	MOVFG-IM-XX	Material MOVFG-IM-XX not maintained in plant M001
220015	12.07.2021	16:17:41	51	MOVFG-IM-XX	Material MOVFG-IM-XX not maintained in plant M001
220016	12.07.2021	16:17:51	51	MOVFG-IM-XX	Material MOVFG-IM-XX not maintained in plant M001

Summary

Customers are taking the value of UX seriously now.

Consider your platform for mobile usage with EWM and what you want to be able to achieve.

Gamification is coming!

Consider warehouse analytics on devices.

3PL Integration



Any Questions?

12% improvement in stock accuracy and visibility

30% increased productivity

20% reduction in stock holding

20% increase in user adoption of mobile

25% improved supply chain efficiency

90% reduction in training time

Increased staff retention

Greater workforce flexibility

Strength in knowledge

How to Connect with Me

E: stephen.Hackett@theconfigteam.com

M: +61 408 538 862

Booth: C2