

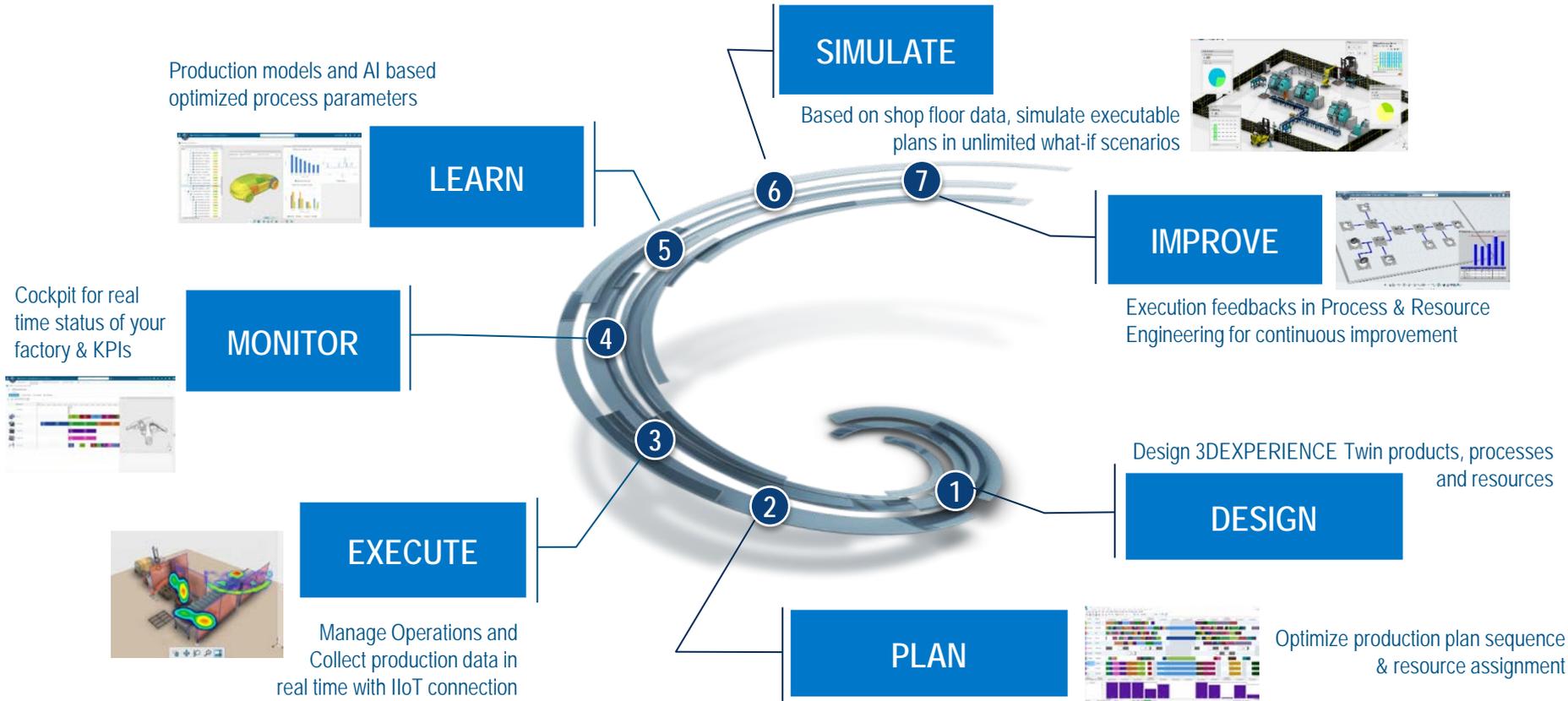


**3DEXPERIENCE®**

# DELMIA Apriso 2020

Release Overview

# Value Proposition - 3DEXPERIENCE Twin for Manufacturing Operations

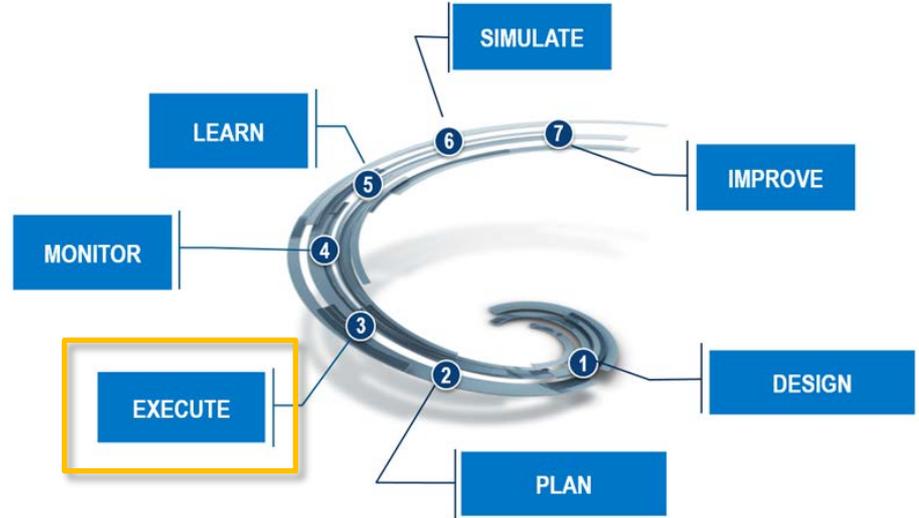


# DELMIA Apriso MOM – Vision & Strategy

*Deliver the best MOM software for global manufacturers in our target verticals*

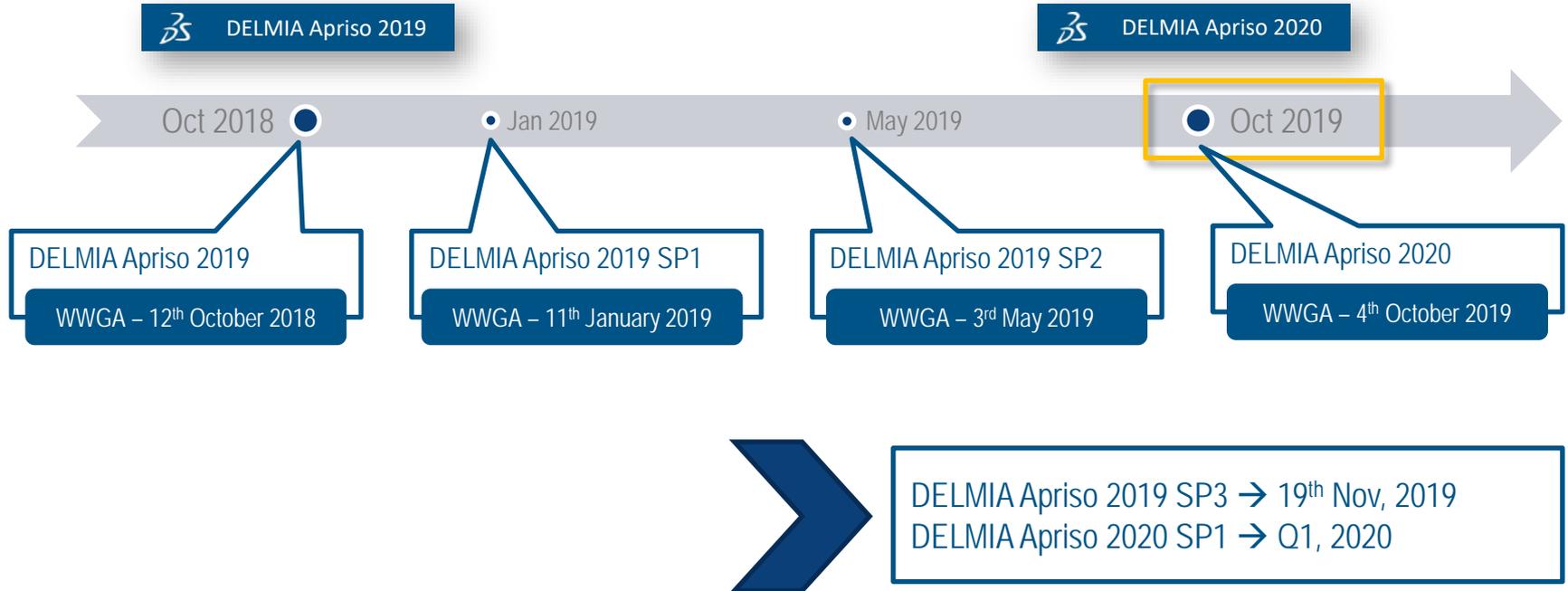
## Key Strategic Pillars

- ➔ Prepackaged Roles & Apps
- ➔ Platform Industrialization
- ➔ Digital Continuity



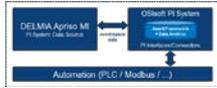
# DELMIA Apriso Releases Timeline

(2018-2019)



# DELMIA Apriso 2020 – Summary

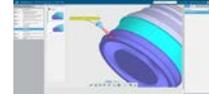
## OSI Soft Integration – 2019 SP1



## Notices – 2019 SP1



## 3D Work Instructions – 2019 SP2



 Apriso 2019 SPs

## Complex Assembly - Configurability



## Warehouse Operations - Enhanced



## Distributed Numerical Control (DNC)



 Apriso 2020

## Machine Time Analysis



## Mfg Process Extensions – 2020 SP1



## LTM Replacement – 2020 SP1



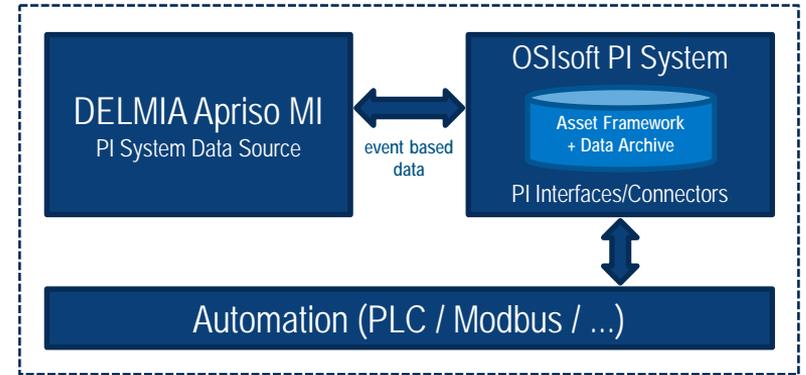
 Apriso 2020 SPs

# Machine Integrator – OSIsoft Integration

(available in DELMIA Apriso 2019 SP1)

Native event based communication between DELMIA Apriso and OSIsoft historian for machine integration

- ▶ New MI Data Source – OSIsoft PI System
  - ▷ Based on OSIsoft AF SDK
  - ▷ Subscription mechanism for tag change
  - ▷ Value read/write capability
- ▶ Dedicated MI Configuration screens
  - ▷ PI System Data Source parameters
  - ▷ Import & mapping of PI Elements/Attributes (tags) into Machine Integrator Points
  - ▷ Configuration import/export
- ▶ GPM support for MI Connector configuration



# DELMIA Apriso Notice Capability

(available in DELMIA Apriso 2019 SP1)

A new set of capabilities for publishing and acquiring a user acknowledgement for any type of Notice upon login

- ▶ In particular this will enable our customers to meet the GDPR Compliance requirements
- ▶ Use cases supported:
  - ▷ Administrator publishes notice to users
  - ▷ End-user accesses notices
  - ▷ End-user acknowledges the notice
  - ▷ End-user accesses their Personal Data
  - ▷ Administrator deletes (or pseudonymizes) requester's Personal Data



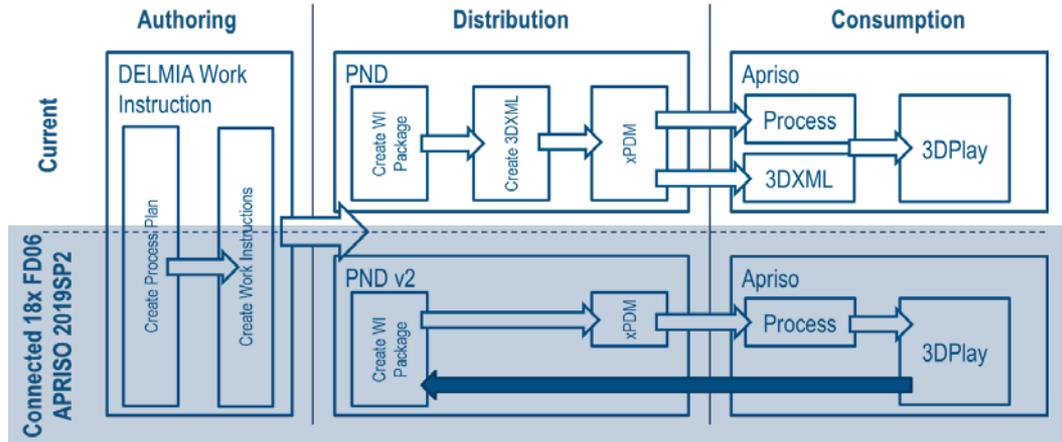
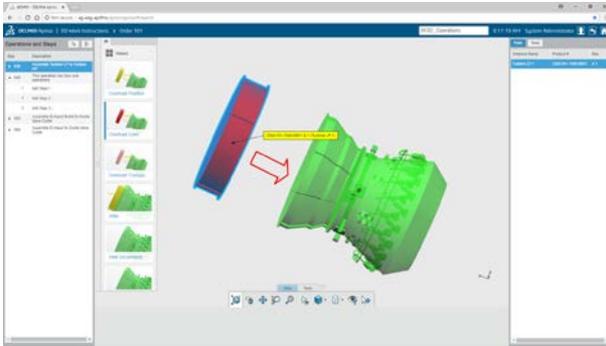
General  
Data  
Protection  
Regulation

# 3D Work Instructions Enhancements

(available in DELMIA Apriso 2019 SP2)

## Apriso 3D Work Instructions – Connected Mode

- ▶ Single Source of data
- ▶ Read 3D geometry directly from 3DEXPERIENCE platform
  - ▷ Faster graphic generation. No 3DXML.
  - ▷ Requires 3DPassport authentication





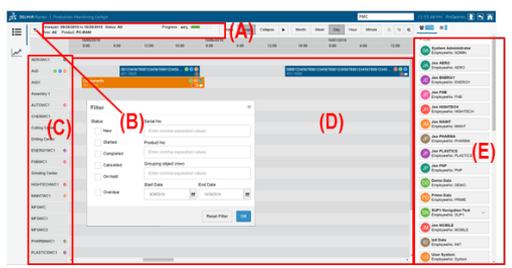
# DELMIA Apriso for Complex Assembly

Continued investment in Complex Assembly roles →  
 Extended configurability to better fit customers' needs

- ▶ Production Supervisor
- ▶ Complex Assembly Production Operator

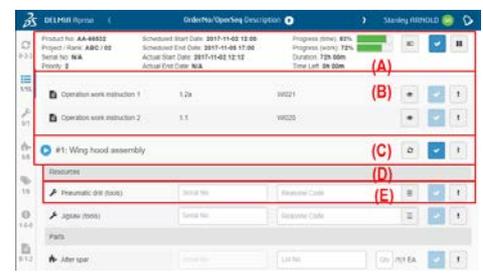
## PMC (Production Monitoring Cockpit)

- ▶ Layout and content of the key PMC sections:
  - ▷ Header, Resources, Activities, filtering, side tab lists
- ▶ Handlers for specific actions:
  - ▷ Change of assignment, time frame, and duration
- ▶ Periodic refresh of resources tiles (configurable)
- ▶ Capability to duplicate selected configuration



## Execution Cockpit

- ▶ Activities tab - configurability:
  - ▷ Step header, activities group header, work instruction line, component line, tool line, characteristic line
  - ▷ Sequencing and grouping step activities
  - ▷ New generation of Extension Points that allow to reconfigure layout and data displayed
- ▶ Operation Header added to Activities
- ▶ Work Instructions inline display
- ▶ Now based on Client Screen Flow Manager



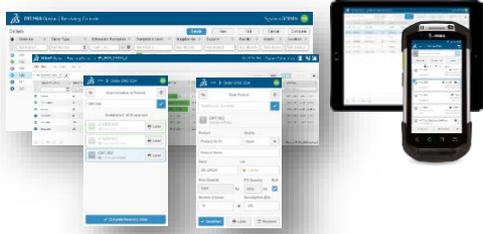
# DELMIA Apriso for Warehouse Operations

New OOTB capabilities covering typical warehouse activities



## Receiving Cockpit & App

- ▶ Import ERP message
- ▶ Register Inventory:
  - ▷ ASN
  - ▷ Purchase Order
- ▶ Assign Location
- ▶ Put Away



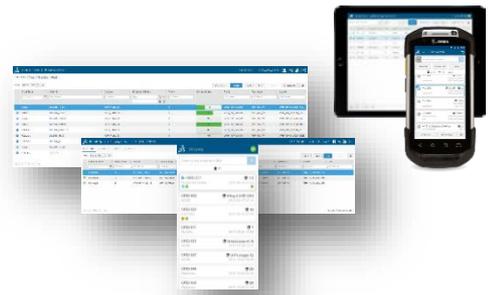
## Inventory Overview Cockpit & App

- ▶ Query by Location
- ▶ Query by Container
- ▶ Move & Move Quantity
- ▶ Adjust Quantity
- ▶ Quality Status change



## Shipping Cockpit & App

- ▶ Import ERP message
- ▶ Processing
  - ▷ Picking
  - ▷ Kitting
- ▶ Staging (gate)
- ▶ Loading



## Prefixes Configuration

- ▶ GS1 Standard prefixes OOTB
- ▶ Prefix Cockpit provided to custom standard definition



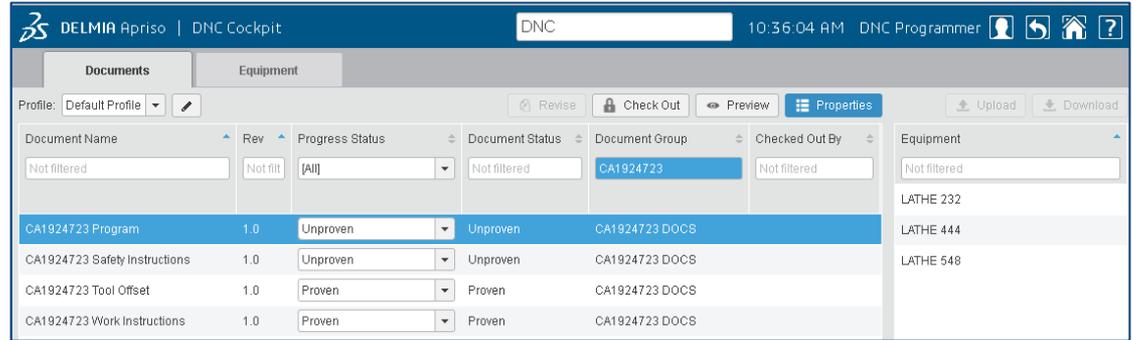
Object Type	Prefix	Object Code
Container	01	1234
Location	01	1234
Quantity	01	1234
Lot	01	1234
Serial	01	1234

# Distributed Numerical Control (DNC)

Better visibility and control over NC files management for machining operations

## Enhanced DNC Cockpit

- ▶ Document Management & Security for NC File control:
  - ▷ Role based
    - ▶ Revise & Edit using Check-out/Check-in
    - ▶ Status Changes
- ▶ “Where Used” visibility
  - ▷ Provides insight to impact of Document revisions
- ▶ Document History for Audit Trail
  - ▷ Upload/Download
  - ▷ Edit/Revision
  - ▷ Performed by



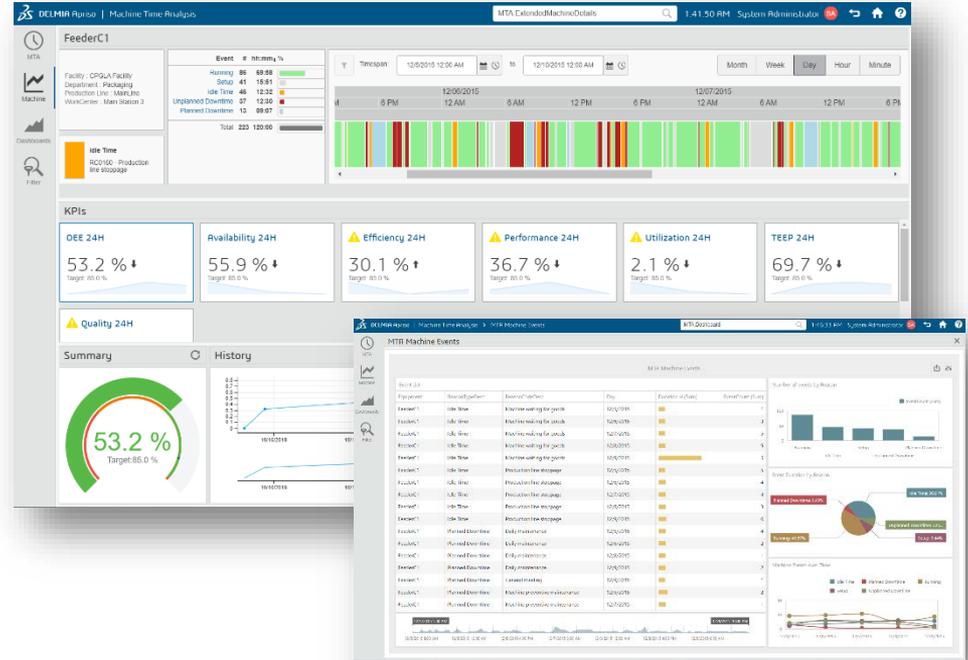
## Additional Communication Channels

- ▶ HTTP/HTTPS
  - ▷ Support for NC programs stored and maintained in the 3DEXPERIENCE Platform
- ▶ Apriso Standard Operation-allows for customizable transfer

# Machine Time Analysis – Improvements

Updated UI/UX with additional capabilities for machine state monitoring & analysis

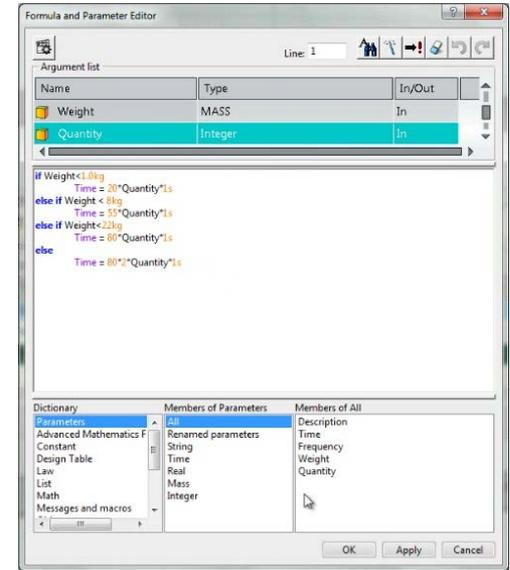
- ▶ Gantt chart with machine states in the specified time range
- ▶ Machine state legend allowing to filter machine states
- ▶ **KPI panel with real-time efficiency:**
  - ▷ OEE, Quality, Performance, Availability
- ▶ **Works against MPI & operational DB**
- ▶ **Personalized settings**
  - ▷ Equipment list
  - ▷ Time range
- ▶ **Dashboard – Machine Event Summary**
  - ▷ Detailed list of machine events
  - ▷ Charts allowing to filter interactively event list content



# Manufacturing Process Extensions

(to be available as of DA2020 SP1)

- ▶ Align DELMIA Apriso execution model with the 3DEXPERIENCE Platform Process model
  - ▷ Alerts, Signoffs, Data Collect Plans
- ▶ **Alerts** – support the ability to display configured alerts as part of the work order execution
- ▶ **Sign Offs** – support the ability to display the required signoff/buyoff request in the order and track its completion
- ▶ **Data Collect Plans** – support the updated data collect model
  - ▷ Ability to specify a number of readings on one Data Collect record
  - ▷ Support for formulas on Data Collect records
    - ▶ The formula needs to be calculated once the operator has entered the values for the Data Collect
    - ▶ The formula can be based on the results collected on other Data Collect



# SysOnyx XMLLinguist – LTM Replacement

(to be available as of DA2020 SP1)

## Defining mapping from flat files to XML for Business Integrator

- ▶ Replacement for now-defunct LTM 3<sup>rd</sup> party solution
- ▶ Maps in both directions
  - ▷ Flat file to XML
  - ▷ XML to flat file
- ▶ Handles delimited and fixed position flat files
- ▶ Supports hierarchies defined in flat files
- ▶ Mapping will be used by the existing Business Integrator engine to generate XML documents from the incoming flat files and



Technology Updates		DA2018	DA2019	DA2020
Server OS	Windows Server 2012 R2			→ Discontinued
	Windows Server 2016	Introduced →		
	Windows Server 2019			Introduced →
Database	Oracle 12c R1			→ Discontinued
	Oracle 12c R2	Introduced →		
	Oracle 18c			Introduced →
	Oracle 19c			Planned for SP1 →
	SQL Server 2014			→ Discontinued
	SQL Server 2016	Introduced →		
	SQL Server 2017		Introduced →	
	SQL Server 2019			Possible SP →
Desktop Client OS	Windows 7			→ Discontinued
	Windows 8			→ Discontinued
Mobile Client OS	Telnet			→ Discontinued
	Windows CE 6.0			→ Discontinued
	Windows Mobile 6.1			→ Discontinued
	Windows Mobile 6.5			→ Discontinued
	Windows Phone 8			→ Discontinued
Browser	Internet Explorer 11			→ Discontinued

# Key Takeaways

## ▶ DELMIA Apriso 2020 release provides:

▷ More configurability and new capabilities in OOTB roles & apps

▷ New Machine Time Analysis – on top of MPI DW and operational DB

▷ Further alignment with DELMIA DM Process definition (more to come...)

