

# 2.5 MFI Features: Quick View

Dec 2020

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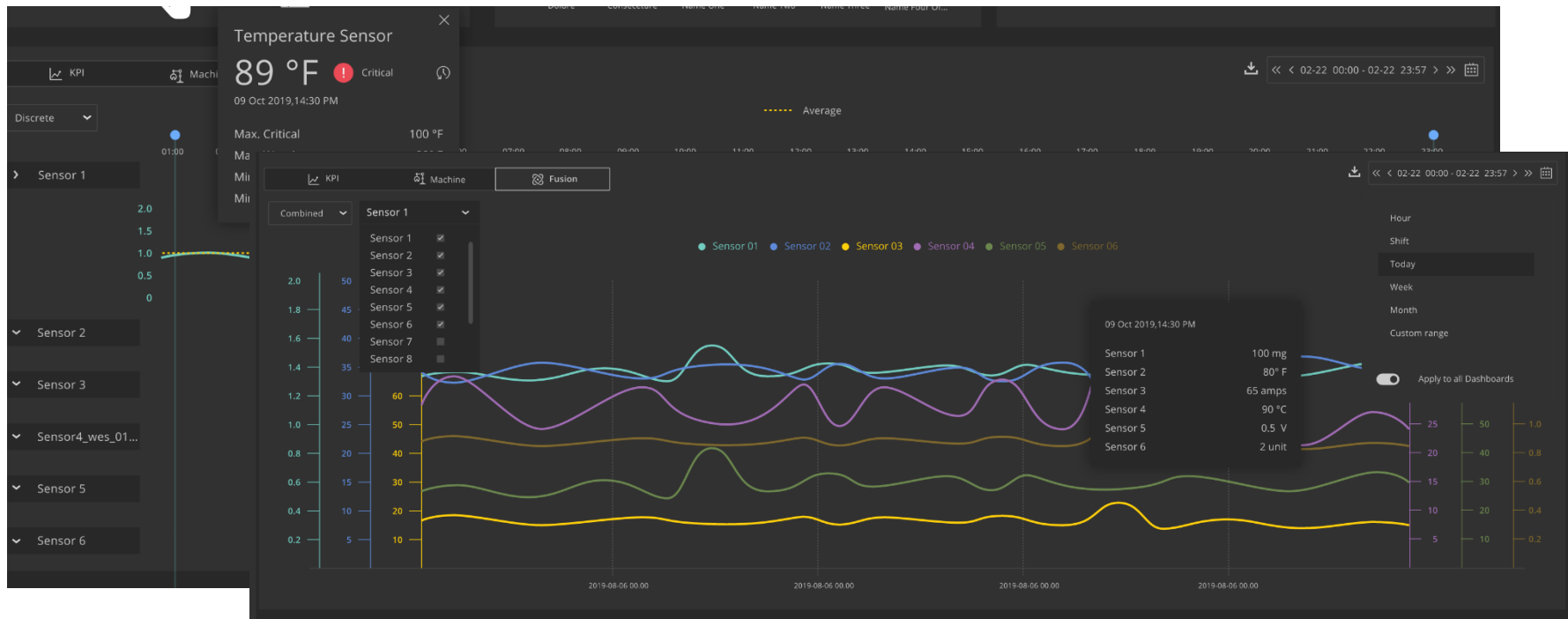
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# Key Features in 2.5.0

No	Summary	Key Customer Inputs	Value
1	Multi-Sensor View	PD, Toyota, HRI	Determine problems impacting machine performance by comparing multiple KPIs from the machine together
2	Company Dashboards for Production Analytics	Shaeffler	Executive view into the production KPIs across all the factories for comparison, tracking and improvement
3	Changes to Notifications	PD	Easier subscription to multiple kind of machine notifications on email, in-app and SMS
4	QR Code generator for 4M Data recorder	HAS Thailand	Add QR codes for use with the 4MDR as well for any other traceability purposes
5	Shift(start time) based Calculation for PA views	Shaeffler	Shift-timings aligned production dashboards for quicker & better aligned insights
6	Audit Capability in MFI	Product Enhancement	Trace all the changes across machines, process and thresholds with ease
7	Custom Widget in the PA screen	Shaeffler	Support ad-hoc customer requirements for additional insights on production process with ease
8	Component Upgrades	Logan	Updated, more secured components with additional capabilities(Nifi,Druid)
9	Show Resolved Events	PD	Track, Trace and see updates of all events on a machine, for better traceability of issues and resolution
10	Production Dashboards in Superset	Product Enhancement	Lower application footprint, quicker and easier to maintain version
12	Quality Dashboard Enhancements	Adani, Outokumpu	Support for quality traceability across a full production process, tracing raw material consumption and output quality at a machine, process step, process group and full process flow
13	Excel Downloads on Dashboard	Toyota, HRI, SPBD	Download excel reports from all the key insights of MFI for user's own analysis
14	Admin data import to Non-Blank database	KFM	Onboard customers quicker with excel template-based configuration. Now supporting only changes-based updates through excel as well to all the meta data configurations
15	Data Management Portal	HAS Thailand, Toyota, HRI	Remove transactional data through filtering APIs - no need to ask support team or run SQL queries
16	Custom Time Range Selector	Shaeffler	See production insights across any time duration with added support for custom time-range and ability to move back and forth across any chosen time range, across the application
17	Machine Event(Downtime) Enhancement	KKFT, Schaeffler – Thailand	Track and find production bottlenecks due to machine downtime with support for machine downtime reasons across the modules, along with deep insights
18	No Schedule Data Ingestion	HAS- Thailand, KKFT	Onboard customers across the maturity cycle with enhanced support for customer with no production planning, some plans and fully planned schedules
19	UX Revamp as per Design System	Product Enhancement	Shared visual language with other Hitachi Vantara products, bringing in a cohesive user experience
20	Machine Dashboard Updates for Alerts	Toyota, HRI, PD	More actionable insights for alerts
21	Machine Dashboard Updates for Cycle Time	Toyota, HRI, PD, JRA	Better insights into cycle time across various products, alignment to the various defined thresholds
22	Asset Hierarchy Changes	JRA	More nuanced machine dashboards with support for multi-level sub-systems and components

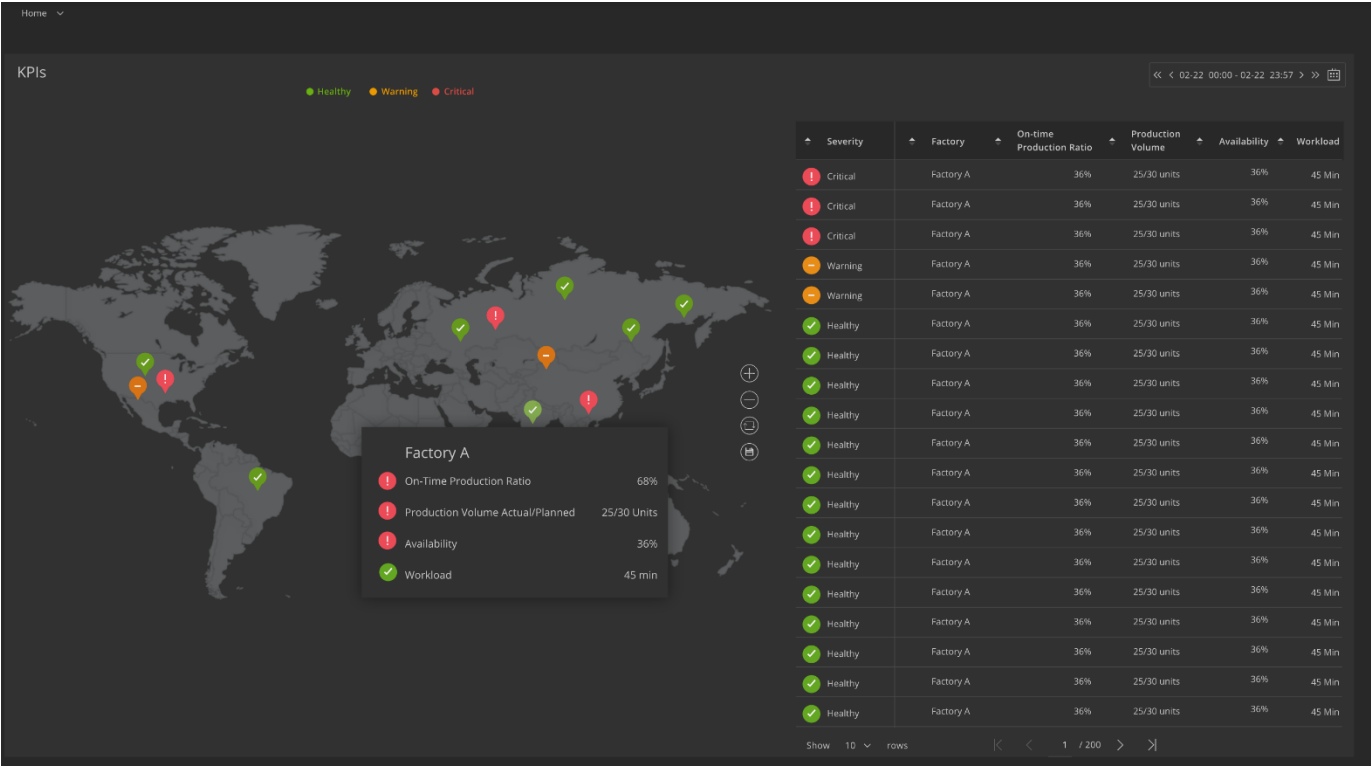
# Multi-Sensor View

Bring upto 6 sensors together(in Combined view) or bring forth all sensors(in Discrete view) together, in the machine dashboards, to find the machine operating information at any point in time for detailed analysis & finding root-cause for any problems



# Company Dashboards for Production Analytics

See a bird's eye view of all factories, with insights into on-time production ratio, production volume(including planned and actual values), availability % and workload across the factory in a single dashboard to compare and analyse factory performance, in real-time



# Notification Enhancements

Quickly define & copy notification rules and validations in the updated notification subscriptions in admin module

Copy Notification

Asset Name \*

Automotive Factory

Parameter \*

User

Level \*

Critical

Frequency \*

Hourly

Mode \*

Email

Email Address

Enter new email address

Add email

abcdef@gmail.com

lore@yahoo.com

Save

Cancel

Select the Asset

Company

Automation Factory

Quality Testing

Shop Factory

Automotive Primus Factory

Primitive monitoring line

Primitive monitoring line for update testing

Line 3

Line 4

Line 5

Primitive monitoring line

QA Regression Factory

Delete API

Factory Two

SAIL

Select

Close

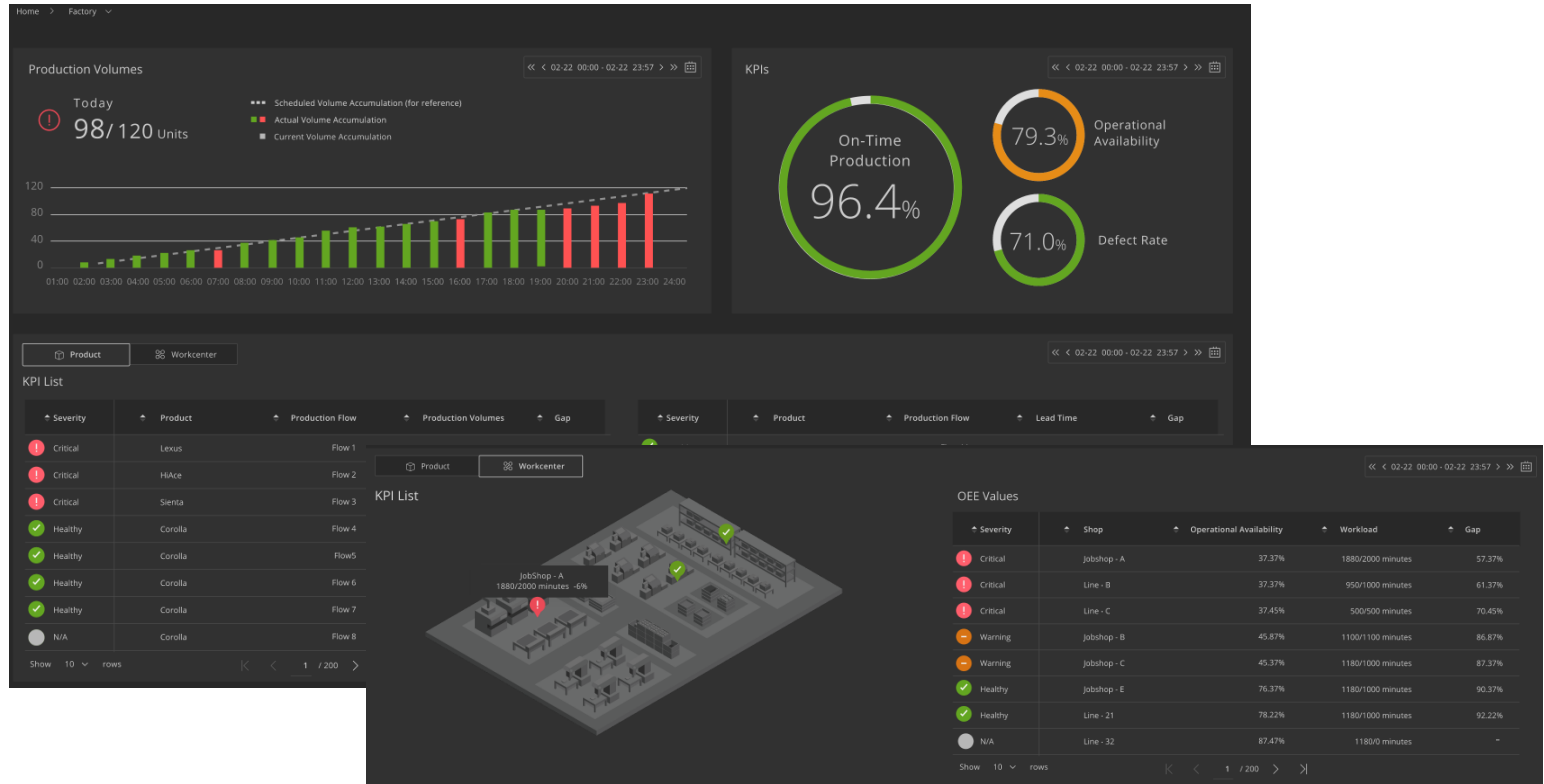
# QR Code Generator for 4M Data Recorder

Get QR codes for all relevant entities with a single click. Additionally create your own through the API for use in other systems.

The screenshot displays the LUMADA Manufacturing Insights web application. The top navigation bar includes the LUMADA logo, 'Manufacturing Insights', an 'ADMIN' button, and tabs for 'Asset', 'Machine Group', 'Product' (which is active), 'Process', and 'Organization'. A user profile icon is in the top right. On the left, a 'Product List' sidebar contains a search icon, a QR code icon, a list icon, and an 'Add Product' button. The main content area shows a list of products under the heading 'Multi Loop Controller (with complex calculation function) SDC45V'. The list includes items like 'Controller Module', 'NX-D15 Controller Module', 'NX-D25 Controller Module', 'NX-D35 Supervisor Module', 'NX-S11/12/21', 'Digital Input Module NX-DX1', 'Pulse Input Module NX-DX2', 'Digital Output Module NX-DY1', 'Digital Output Module NX-DY2', 'Communication Box NX-CB2', 'Communication Adapter NX-CL1/CR1', 'Terminal Adapter NX-TL1/TR1', 'Single Loop Controller SDC35', 'Single Loop Controller SDC36', 'Multi Loop Controller SDC45A', 'Digital Input Module NX-DX1', 'Pulse Input Module NX-DX2', 'Digital Output Module NX-DY1', and 'Digital Output Module NX-DY2'. Each item has a small QR code icon to its right. A modal dialog titled 'Product List QR code' is open in the center. It features a close button (X), 'Upload', 'Download', and 'Delete' buttons. Below these are size selection options: '50px', '100px', '200px', '300px', and 'Custom'. A large QR code is displayed in the center of the dialog. Below the QR code, text reads: 'Download the QR code as a .zip file by clicking on Save, after selecting the size.' At the bottom of the dialog are 'Save' and 'Cancel' buttons. In the background, behind the dialog, there is an 'Upload' section with an upward arrow icon and the text 'Click here to add image', followed by image specifications: 'Ideal Dimension of the Image (X&Y)- 470px X 500px', 'File type support .jpg, .gif, .png', and 'Max upload limit 2mb'.

# Updated Production Factory Dashboards

More relevant KPIs, easy icons to identify planned and unplanned data modes and more in revamped Production Factory Dashboards



# Audit for all meta data configurations

Track & Trace across all the meta data changes in the admin module, for all entities, with all relevant details & activity trail

Configuration

Audit

When	Who
10 Oct 2019 13:24	David
19 Oct 2019 17:35	Rahul
19 Oct 2019 17:45	Murali
20 Oct 2019 18:25	Jacob
20 Oct 2019 18:30	Hari

Show 5 rows

When

Who

What

How

Changes

10 Oct 2019 13:24

David

Create

API

5 Changes

Values changes

Old

New

Motor Tracking Value

23

25

Motor Tracking Value 02

27

28

Motor Tracking Value 03

23

21

Motor Tracking Value 04

22

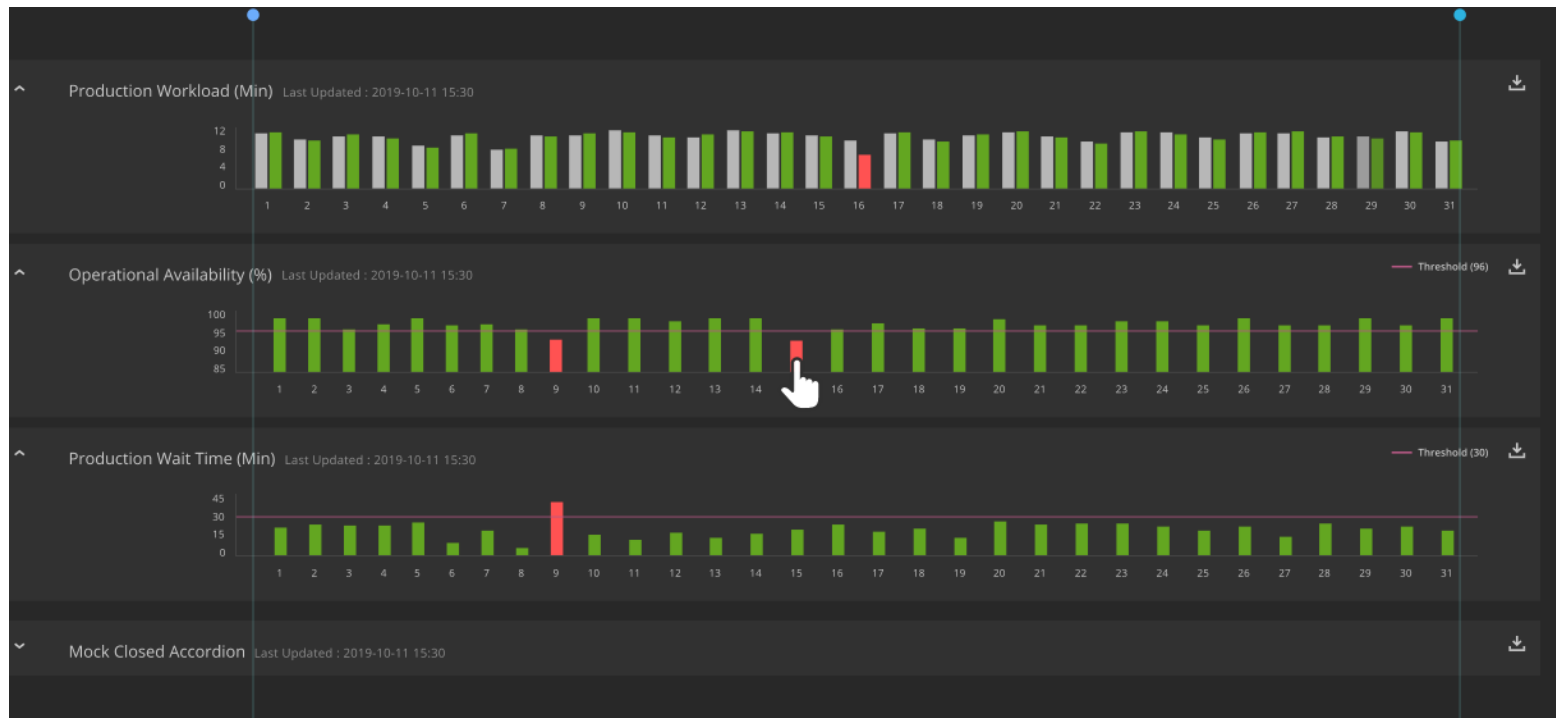
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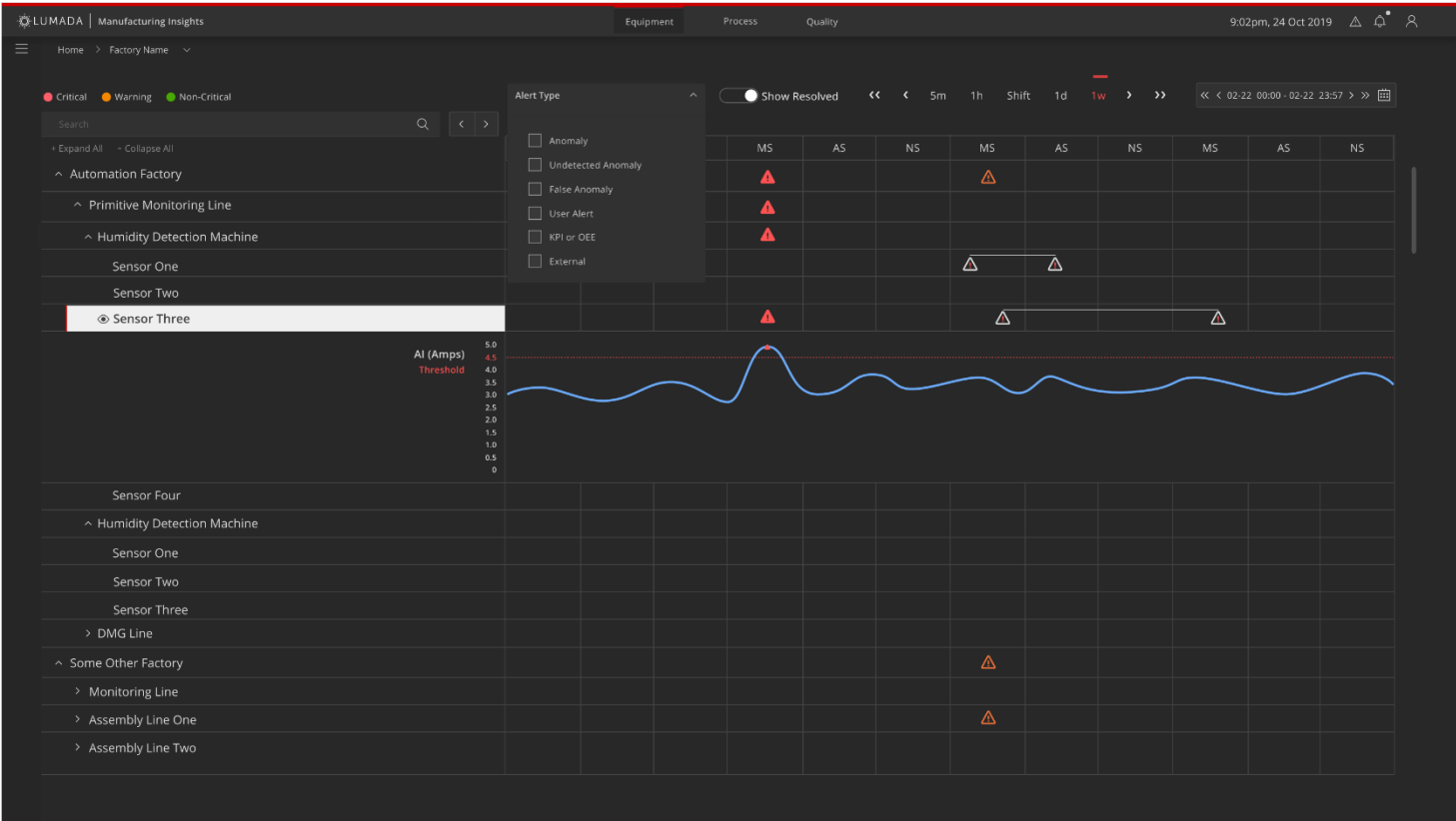
# Custom Widgets for Production Details

Add custom data widgets with ease, with support for visualizations across Flows, WorkCentres and Machine views for additional data



# Resolved Events & Alerts

Revamped asset analytics view to choose the required alerts and also view resolved events for further analysis



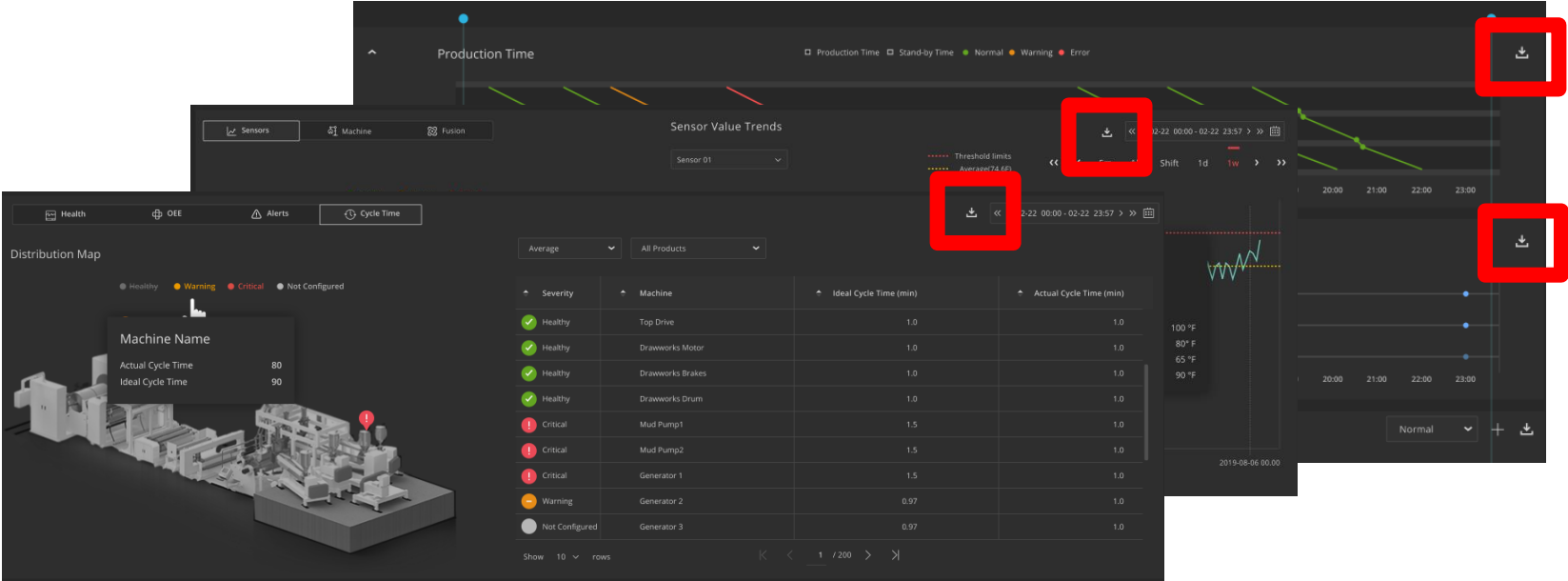
# Quality Dashboard Enhancements

Revamped quality dashboards with more nuanced information for quality at factory, line and machine levels



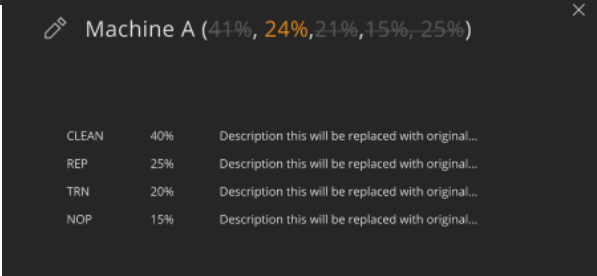
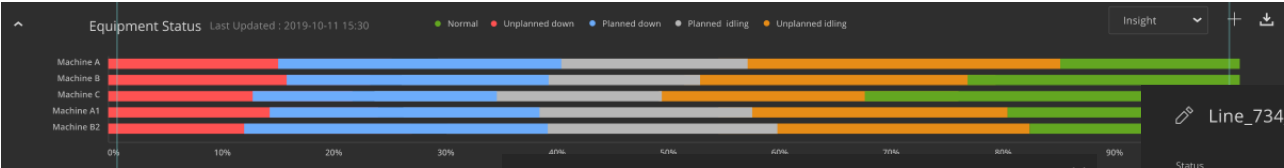
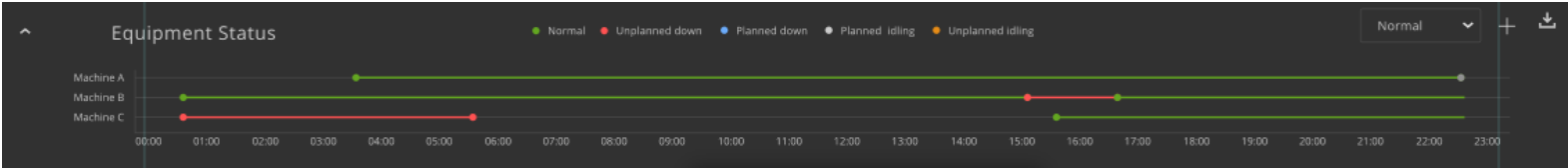
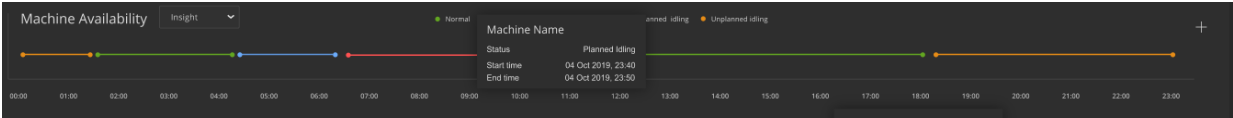
# Excel Downloads

Revamped quality dashboards with more nuanced information for quality at factory, line and machine levels



# Machine Downtime Events & Insights

Capture Downtime events, assign reasons for the downtime and see insights around the machine utilization and availability



Line\_734\_Complex\_01\_Machine\_01

Status: Unplanned Down

Start Time: 01 July 2020, 01:30

End Time: 01 July 2020, 01:45

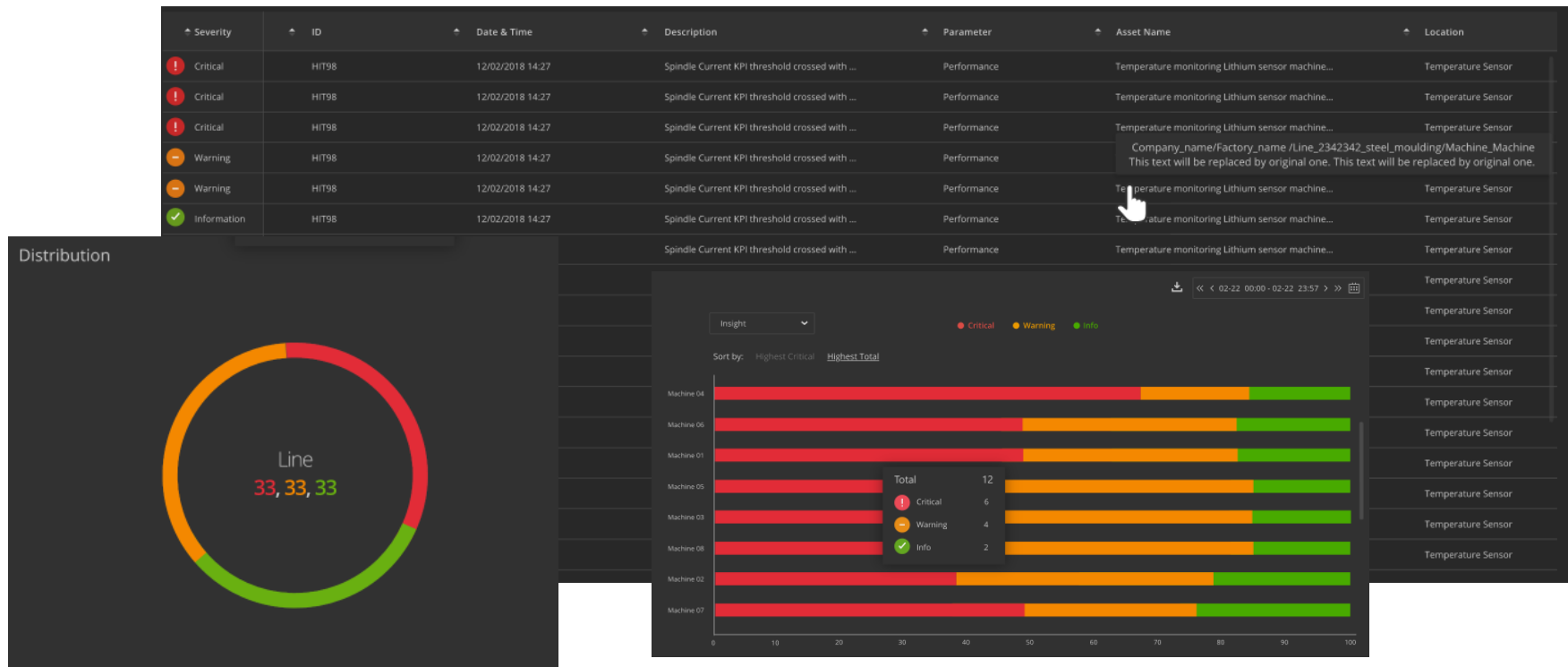
Reason Code: Clean

Save Cancel

## Alert Insights

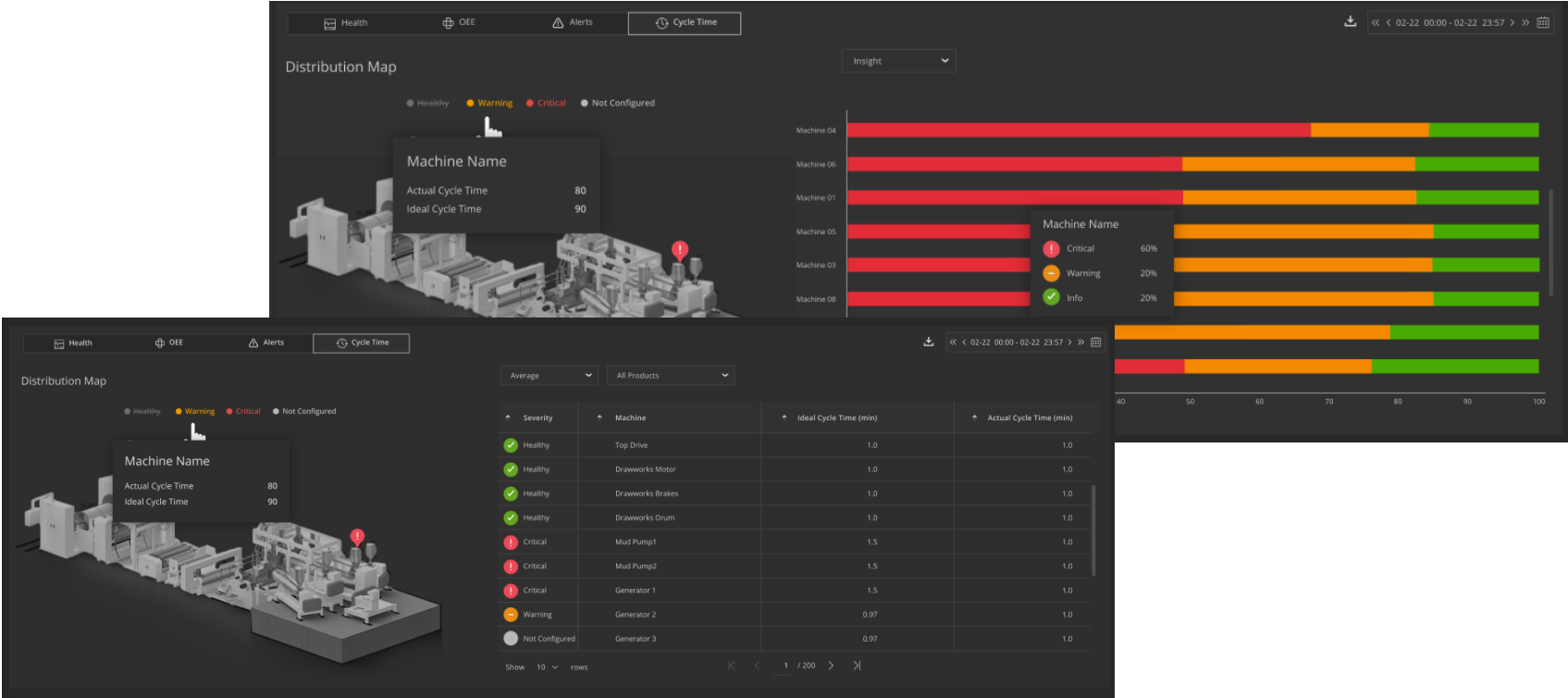
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Get insights into the nature and number of alerts across the line, and improve performance & health for critical machines



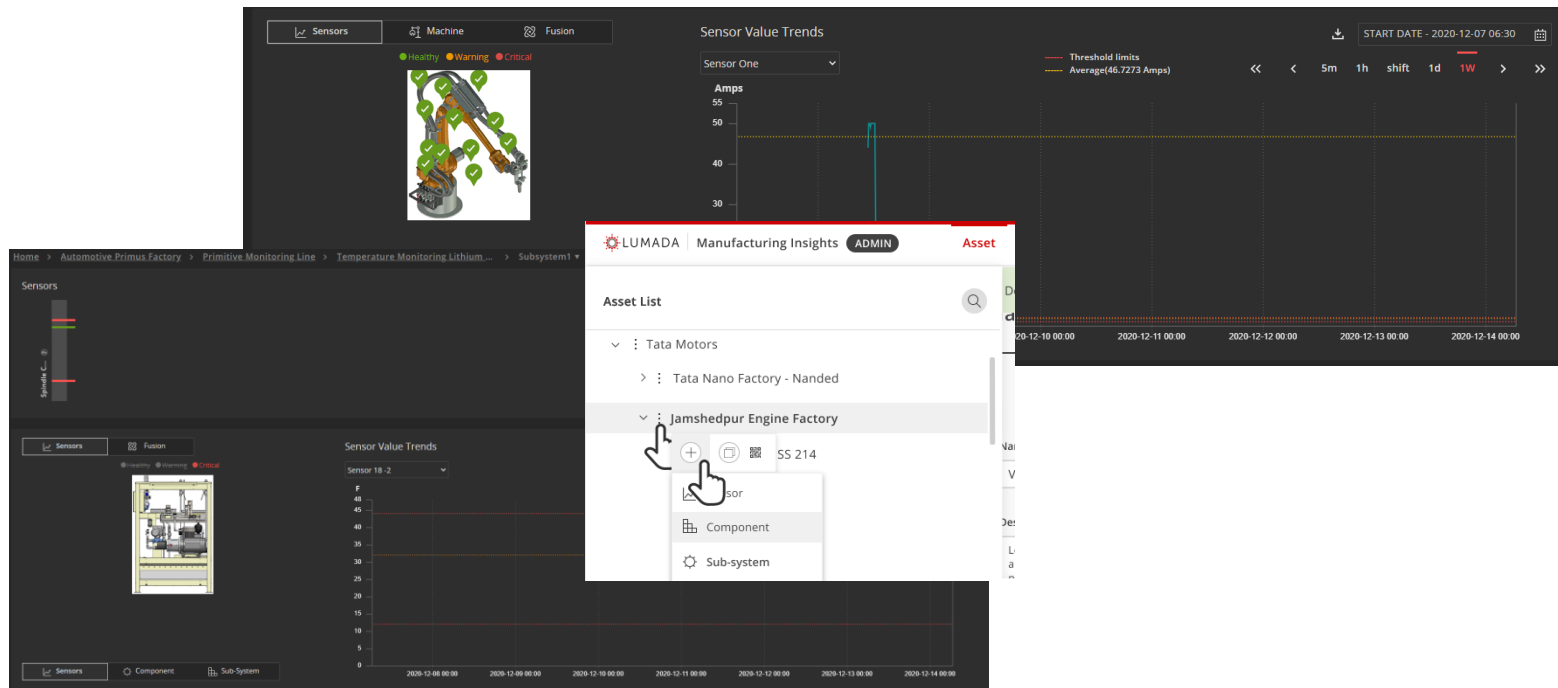
# Cycle Time Insights

Get insights into the production performance through cycle time insights across different products & processes



# Asset Hierarchy Changes

Support for sub-system & component dashboards & configuration for a more defined Digital twin of assets





# 4M Data Recorder

QR code based shop floor data capture for production analytics data input – now available as an add-on module

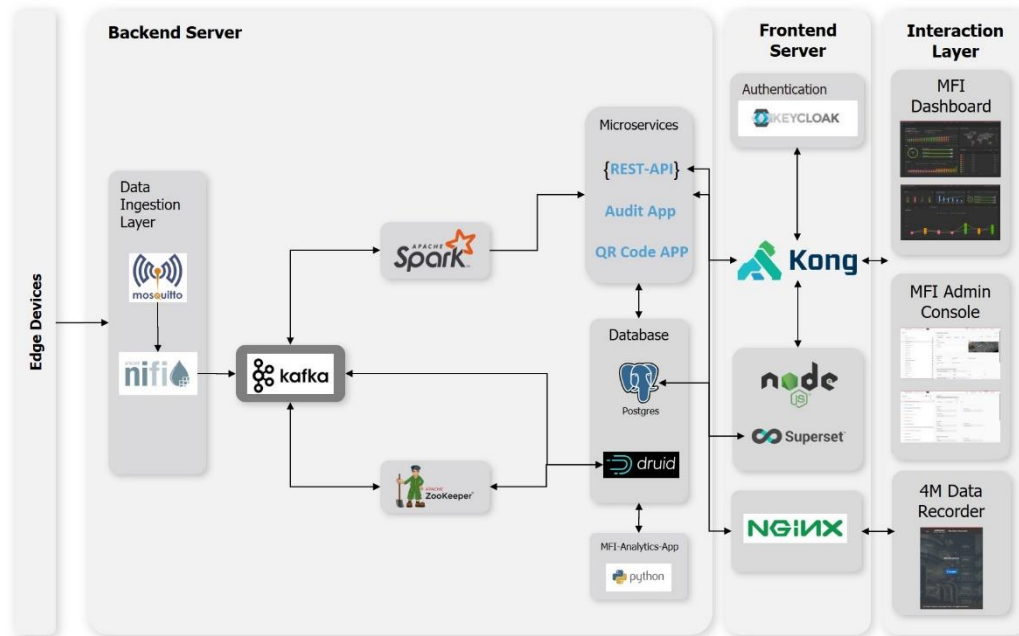
The image displays four overlapping mobile application screens for the 4M Data Recorder, showing a sequential workflow for data capture.

- Welcome Screen:** Features the HITACHI logo and 'Inspire the Next' tagline. A large 'Welcome' message is centered, with a blue 'Proceed' button below it.
- 1. Process Registration Screen:** Contains a progress indicator at the top. It has four input fields: 'Flow ID', 'Process Group ID', 'Process ID', and 'Product ID'. A blue 'Next' button is at the bottom right, and a 'Reset' button is at the bottom left.
- Material Registration Screen:** Features a 'Scan QR Code' button at the top. Below it is a field for 'Supplied Material ID' with a 'Scan QR Code' icon.
- 3. Worker Registration Screen:** Displays a 'Back' button at the top left. It shows pre-filled data: 'Process: JobShop\_1\_Group\_1\_Process\_2', 'Machine: Shop ID : temp\_line\_3', and 'Machine ID : temp\_machine\_7'. A '+ Add Worker' button is at the bottom.

At the bottom of the Welcome screen, it says 'Corporation 2020. All Rights Reserved.'

# Architecture: Production Analytics Server Removed

Native dashboards for production analytics, removing the add-on production analytics server, with additional features



# Revamped User Experience

Hitachi Design System alignment and lots of user feedback and enhancements



# Others

- Support for custom time range in Production Analytics
- Updated OSS Components(NiFi, Druid)
- Import meta(master) data in excel for existing entities
- Support for no scheduled data ingestion across production analytics
- **1-Click Installer (Beta)**
- Manufacturing **Analytics** as a product component – Anomaly Detection
- Bug Fixes