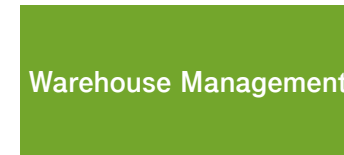# GIMM PROCS

GIMM SOLUTION

GIMM

A SUPPLY CHAIN MANAGEMENT SOLUTION

gimm (Global Integrated Manufacturing Manager) is a T-SYSTEMS solution created to synchronize the automotive supply chains (car manufacturers and first tier suppliers) giving a specific answer to Just in Time, Just in Sequence, Traceability, Production Control and Warehouse Management.

gimm manages the logistic and productive activities in discrete delivery or production environments, synchronizing the processes of the plant to ensure proper keeping of the supply chain.

MANUFACTURING EXECUTION

WAREHOUSE MANAGEMENT

DELIVERY EXECUTION

gimm lincs

Sequencing Management

gimm procs

Production Control System

gimm stocs

Warehouse Management

PROCS manages factory's internal production through automation of their productive operations in "Manufacturing Execution System" (MES) modality, controlling the robots at workstations or work cells and thus guaranteeing follow-up and automatic traceability of both their productive processes and finished products.

Main functionalities covered by PROCS:

- Acquires and stores traceability data,
- Ensure production process quality,
- Management of workstations and work cells,
- PLC configuration and management,
- Handles raw material, production, rework, scrap and packing stations
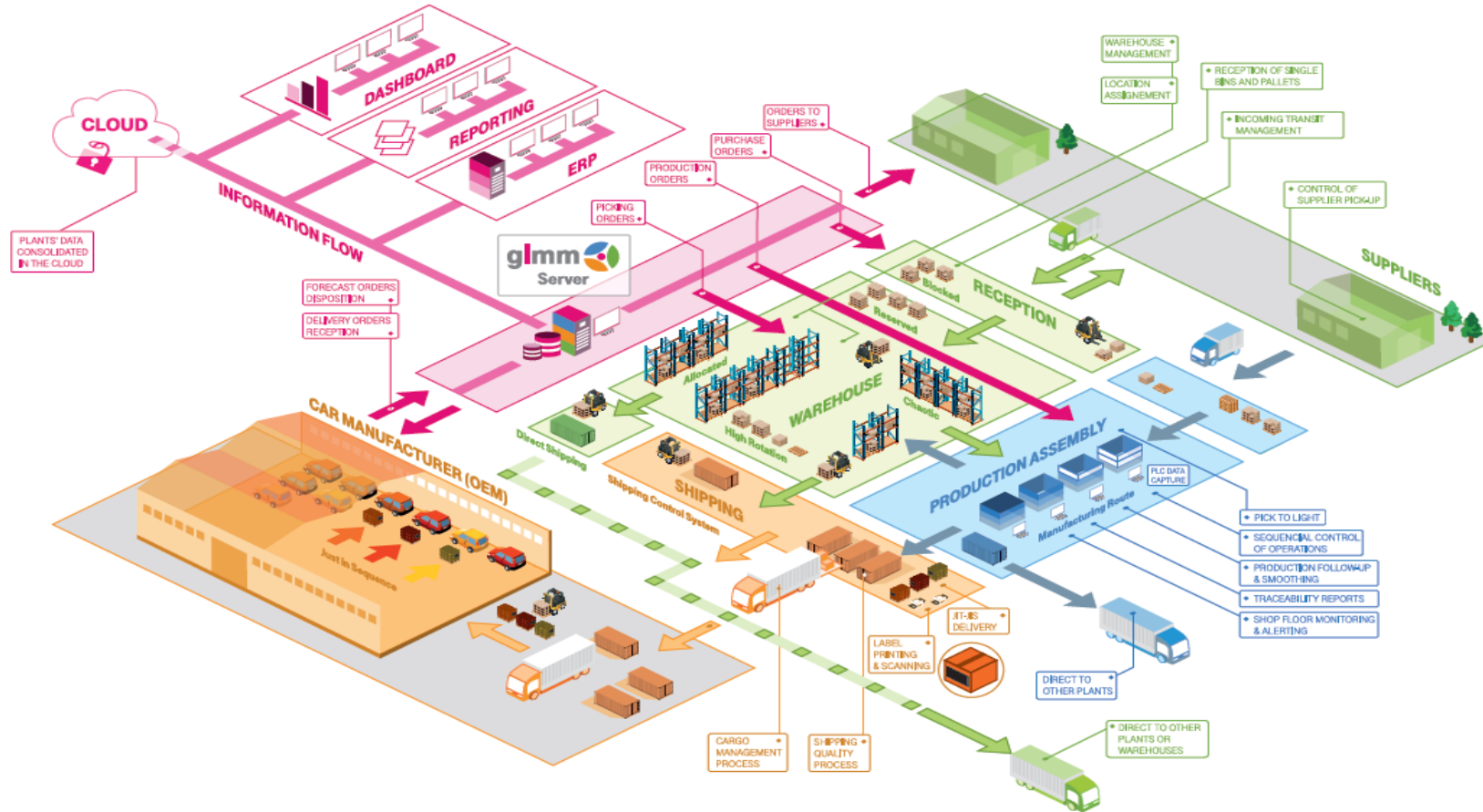- Management and configuration of productive workflow.
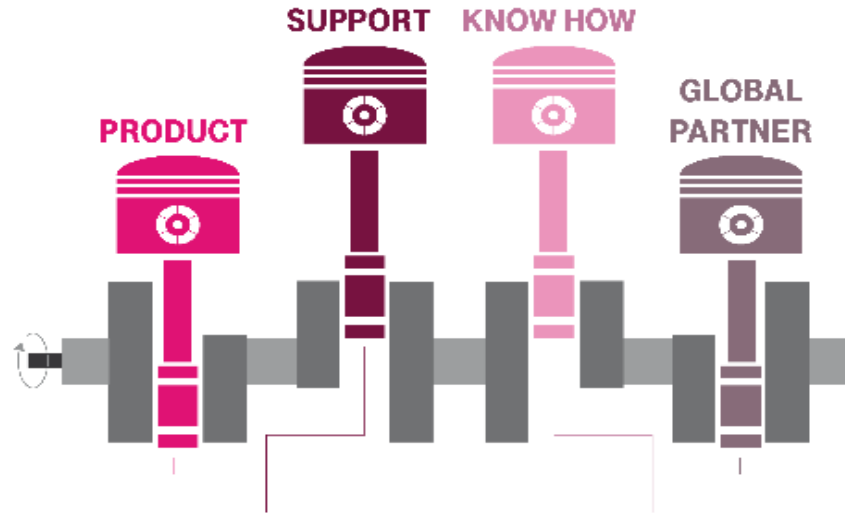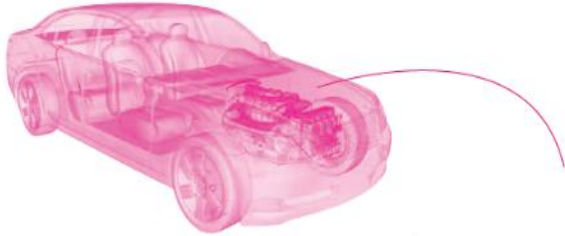
GIMM
PICKING SYSTEM MODULES

gimm provides extension modules for picking and kitting processes. Based on technologies such as tablets, lights, vision and voice or combination of several of these elements the picking system modules bring to customers innovative logistics solutions to achieve Industry 4.0 objectives.

INDUSTRY 4.0

Paperless

T··Systems·

GIMM
FUNCTIONAL MODULES OVERVIEW

gimm

CLOUD

DASHBOARD

REPORTING

ERP

PLANTS' DATA CONSOLIDATED IN THE CLOUD

INFORMATION FLOW

ORDERS TO SUPPLIERS

PURCHASE ORDERS

PRODUCTION ORDERS

PICKING ORDERS

gimm Server

FORECAST ORDERS DISPOSITION

DELIVERY ORDERS RECEPTION

WAREHOUSE MANAGEMENT

LOCATION ASSIGNEMENT

• RECEPTION OF SINGLE BINS AND PALLETS

• INCOMING TRANSIT MANAGEMENT

• CONTROL OF SUPPLIER PICKUP

SUPPLIERS

Blocked

Reserved

RECEPTION

Allocated

WAREHOUSE

Classic

High Rotation

Direct Shipping

PRODUCTION ASSEMBLY

PLC DATA CAPTURE

Manufacturing Route

• PICK TO LIGHT

• SEQUENCIAL CONTROL OF OPERATIONS

• PRODUCTION FOLLOW-UP & SMOOTHING

• TRACEABILITY REPORTS

• SHOP FLOOR MONITORING & ALERTING

CAR MANUFACTURER (OEM)

Just in Sequence

SHIPPING

Shipping Control System

LABEL PRINTING & SCANNING

JIT-IS DELIVERY

DIRECT TO OTHER PLANTS

CARGO MANAGEMENT PROCESS

SHIPPING QUALITY PROCESS

• DIRECT TO OTHER PLANTS OR WAREHOUSES

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GIMM - BENEFITS

PRODUCT

SUPPORT

KNOW HOW

GLOBAL PARTNER

- ❑ Focused on Automotive sector for JIT/JIS and traceability
- ❑ Flexible, scalable and highly configurable
- ❑ Standard interfaces
- ❑ Product Management & Roadmap

- ❑ 24x7 expert assistance specialized on mission critical environments
- ❑ +80% incidents solved within first contact
- ❑ OEM's demand compliant
- ❑ Worldwide support service

- ❑ Industrial expertise
- ❑ Highly skilled team worldwide
- ❑ +15 years business experience
- ❑ Excellent knowhow in shop-floor processes

- ❑ Single provider with worldwide coverage
- ❑ Cost effective
- ❑ Global approach
- ❑ T-Systems product

GIMM PROCS

PROCS
SCOPE OF THE SOLUTION
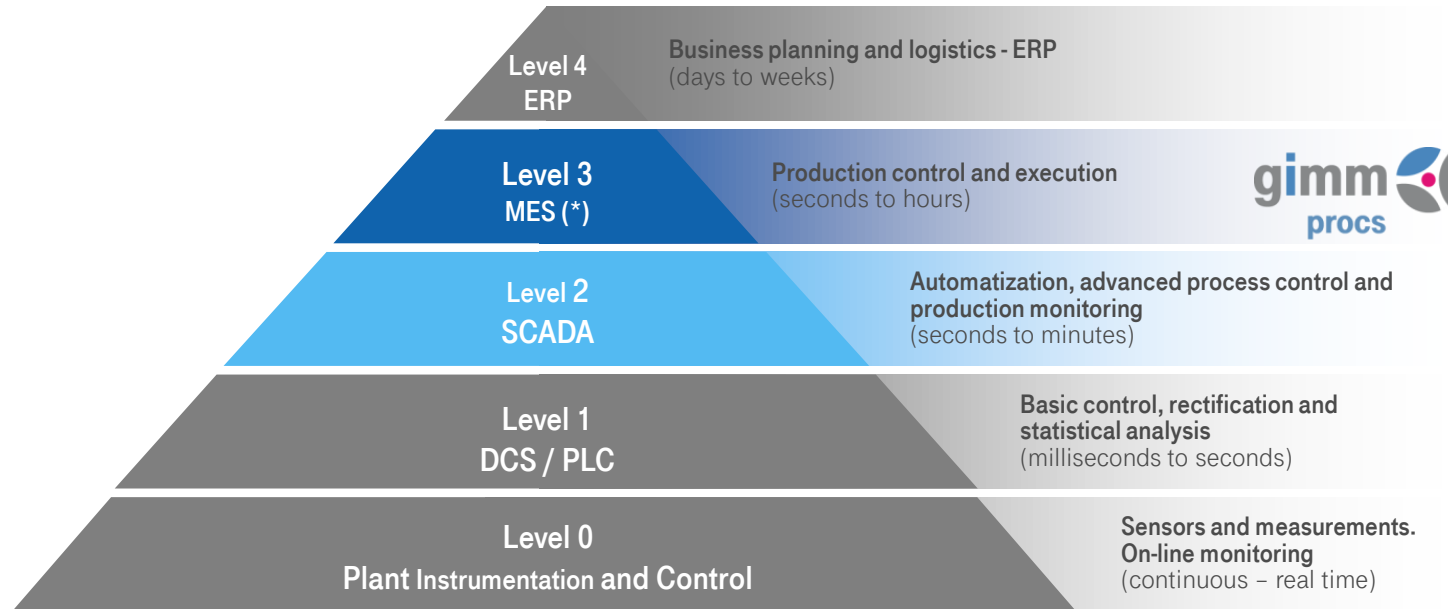
PROCS (**Production Control System)** manages factory's internal production processes through automation of their productive operations in "Manufacturing Execution System" (MES) compliance, guaranteeing a follow-up and a traceability of both their production processes and finished products by exchanging data with machine tools, robots and operators.

PRODUCTION CONTROL SYSTEM

MANUFACTURING EXECUTION SYSTEM

PRODUCTION TRACEABILITY

PRODUCT & PROCESS QUALITY
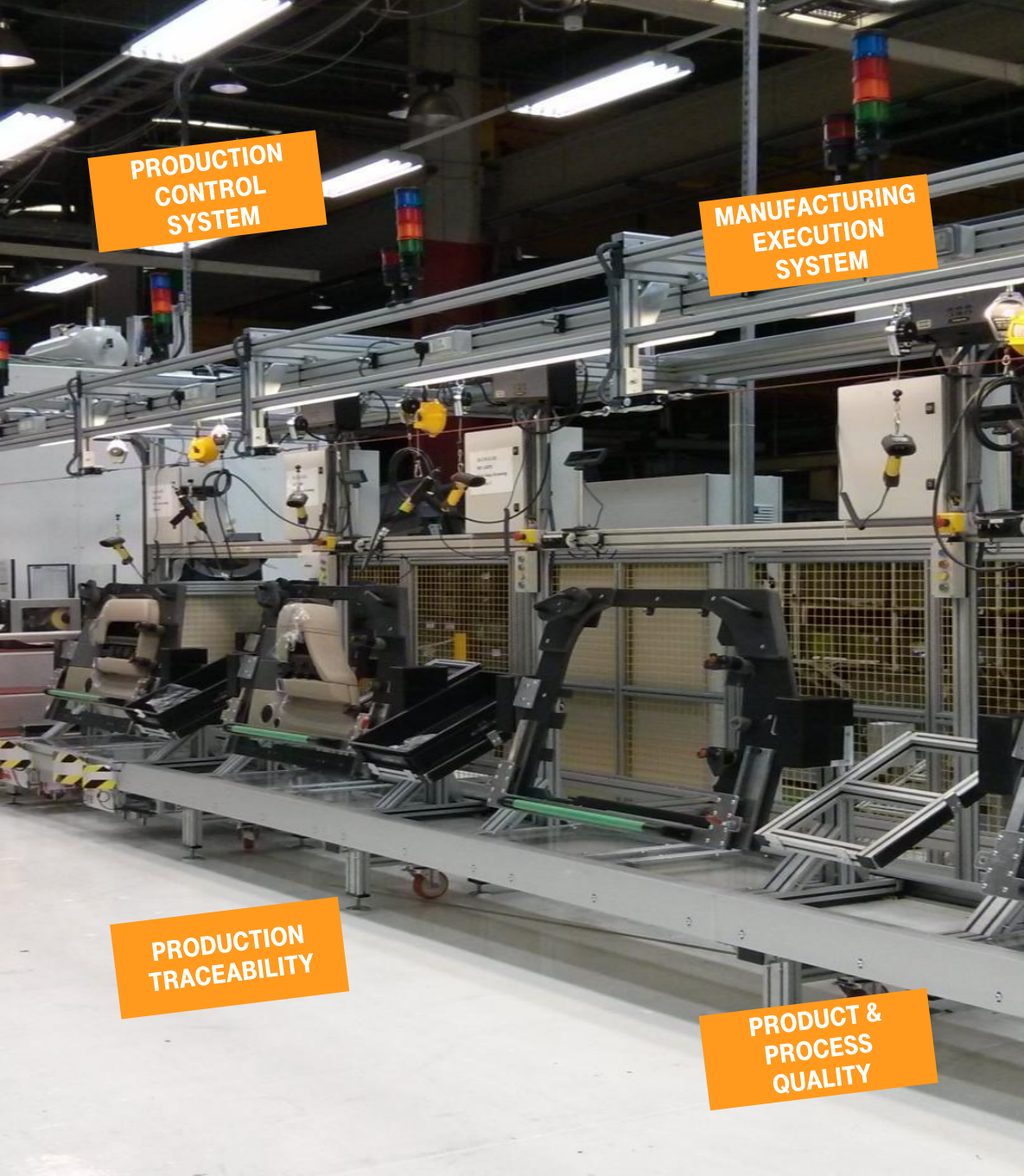
PROCS
MAIN FUNCTIONALITIES

- **Management of assembly /production lines** (work cells). Scalable for large physical facilities
- **Management and configuration of productive workflow** (sequential control of operations)
- Ensure production process **quality**
- Handles the **bill of materials** and the declaration of **reworks** and **scraps**
- **Packing of products** and **material consumption management**
- **Poka-yoke** production techniques
- **Standalone or connected to a JIS/JIT[1] - APS[2]** systems
- **Online monitoring of workstations**
- **Online monitoring of production KPI's**
- **Online production alerts** (graphical displays, email, labels,..)
- **Hardware simulators** (virtual devices) for modelling purposes

[1]**JIS/JIT:** Just In Sequence / Just In Time
[2]**APS:** Advanced Planning and Scheduling

PROCS

OPERATIONS & ENGINEERING

- **Login** on workstations and monitoring screens
- **User profiles tailoring**
- Multiple BOM /Routing
- File import/export capabilities
- **PLC** connection and management of data acquisition
- **OPC** compatible (Kepserver, Applicom, etc.)
- **Integration with different ERP** or multiples sources (databases, flat files, XML, WebServices, etc.)
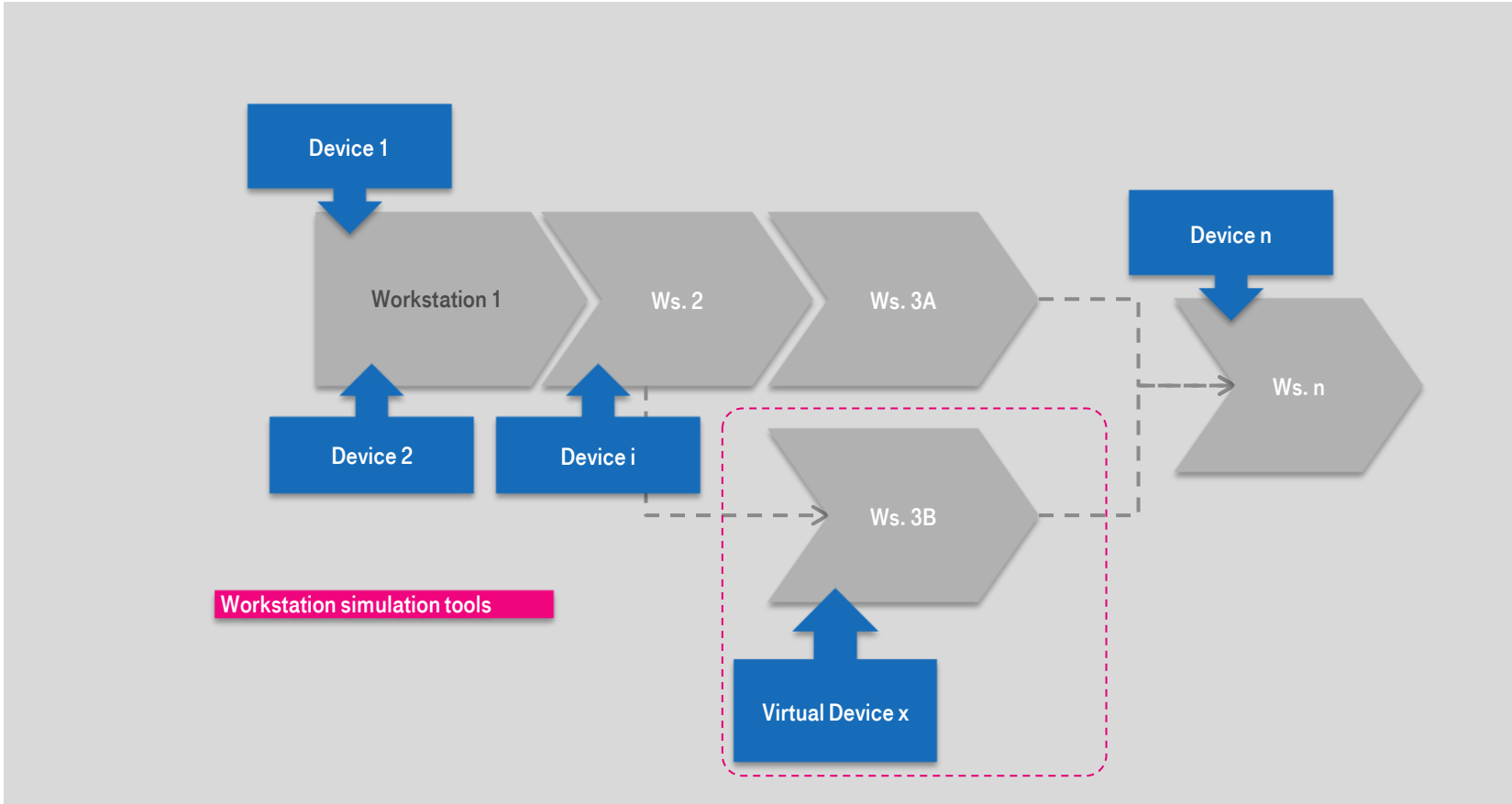
PRODUCT TRACEABILITY

- **Traceability of items** (subassemblies, components and batches) **and environment** (worker, machine process parameters,..)
- **Historical storage** of data (long-term data database)
- **Genealogy and traceability** reports
- **Full traceability of JIT orders**

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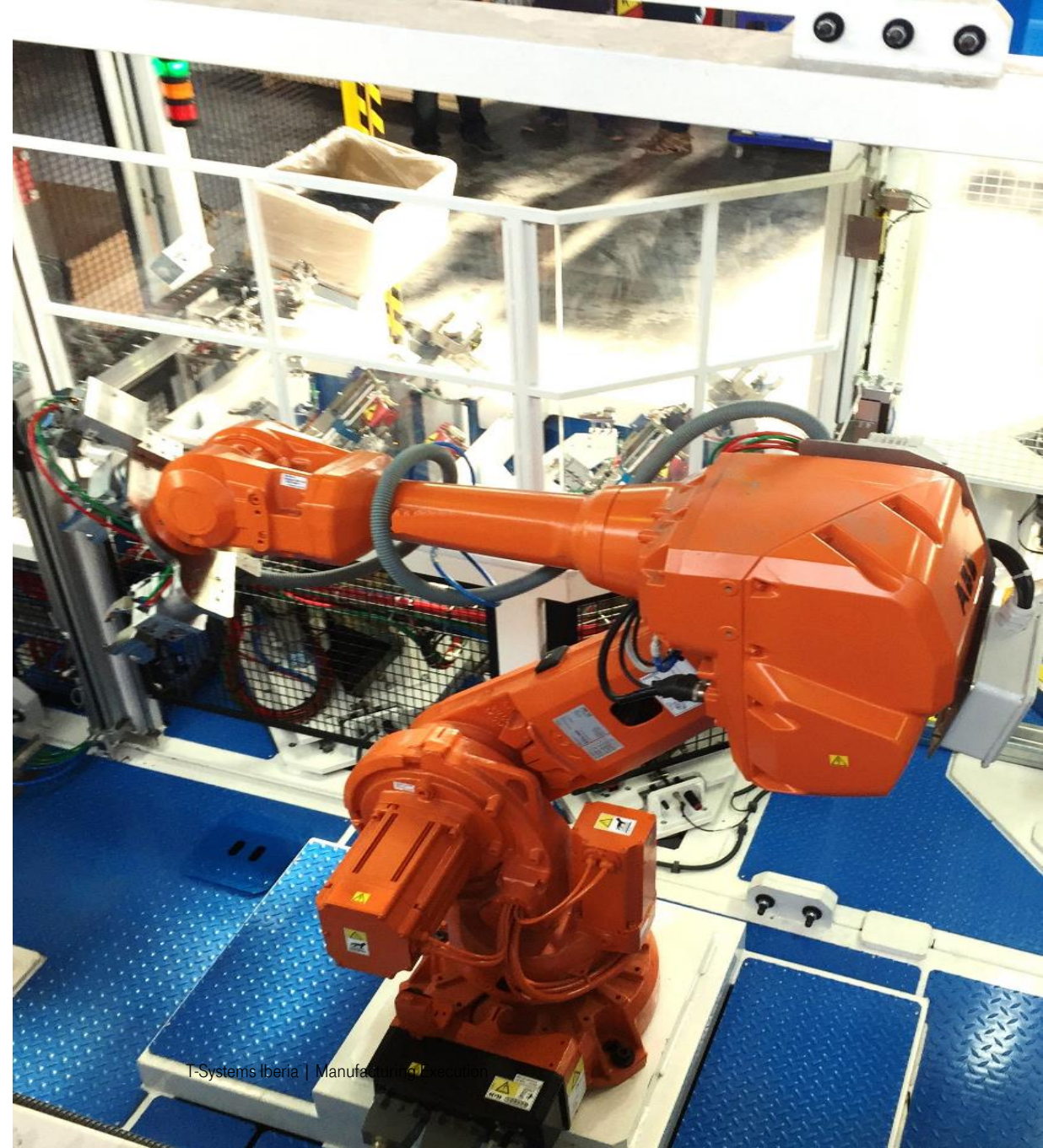
PROCS
PRODUCTION LINES MODELLING

PROCS
HADRWARE CONNECTIVITY

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GIMM PROCS

WEB STATION

Any device with a web browser: PC, Thin Client, Tablet, etc.

Option: scanner connected to the device or to Ethernet.

| ProFace | PLC | PLC with HMI | ProFace | PLC (Autonomous workstations) | WebStation | PLC | WebStation |

Scenario 1 | **Scenario 2** | **Scenario 3** | **Scenario 4** | **Scenario 5** | **Scenario 6**

UI / UX provided by the customer

UI / UX provided by T-Systems

T··Systems·
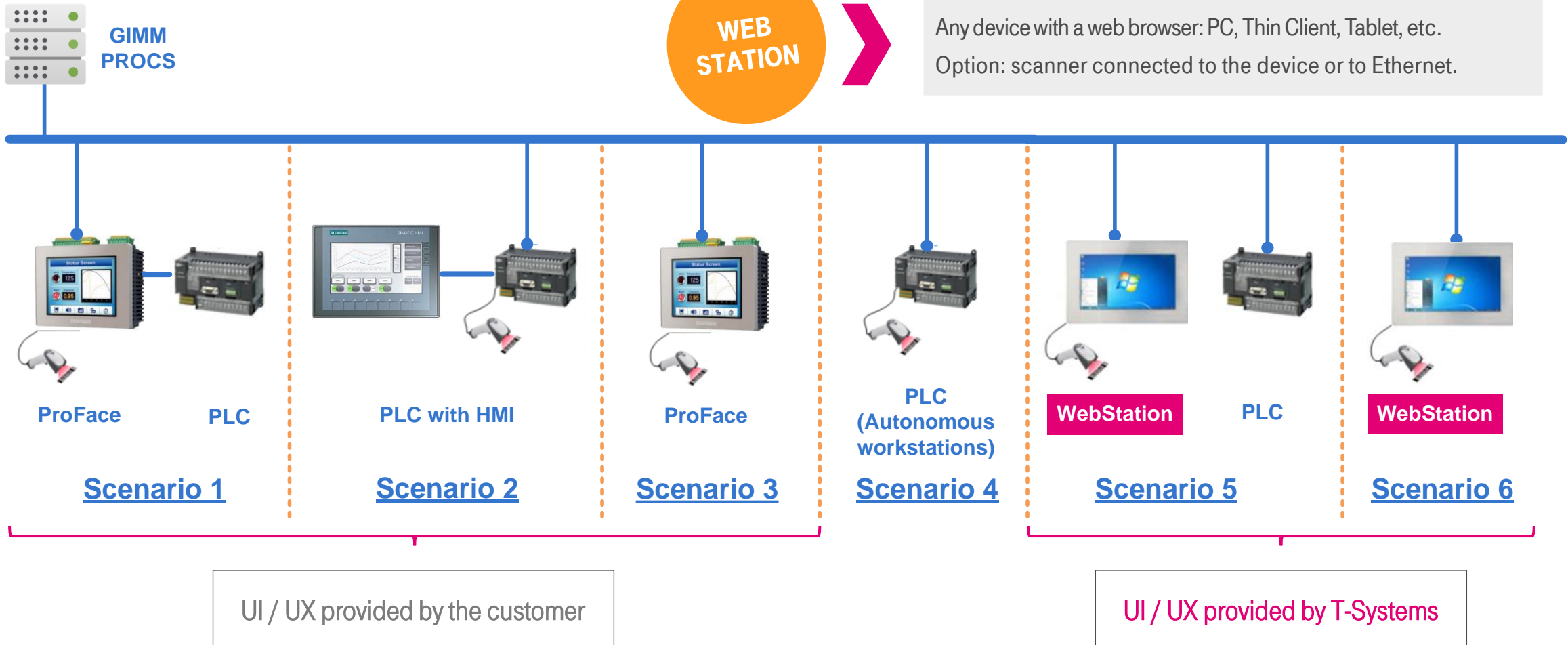
PROCS
DATA EXCHANGE PROTOCOL

	W/O WebStation

ProFace/ PLC → **PROCS**

STEP1
STEP2
STEP3

	With WebStation

PLC — **PROCS**
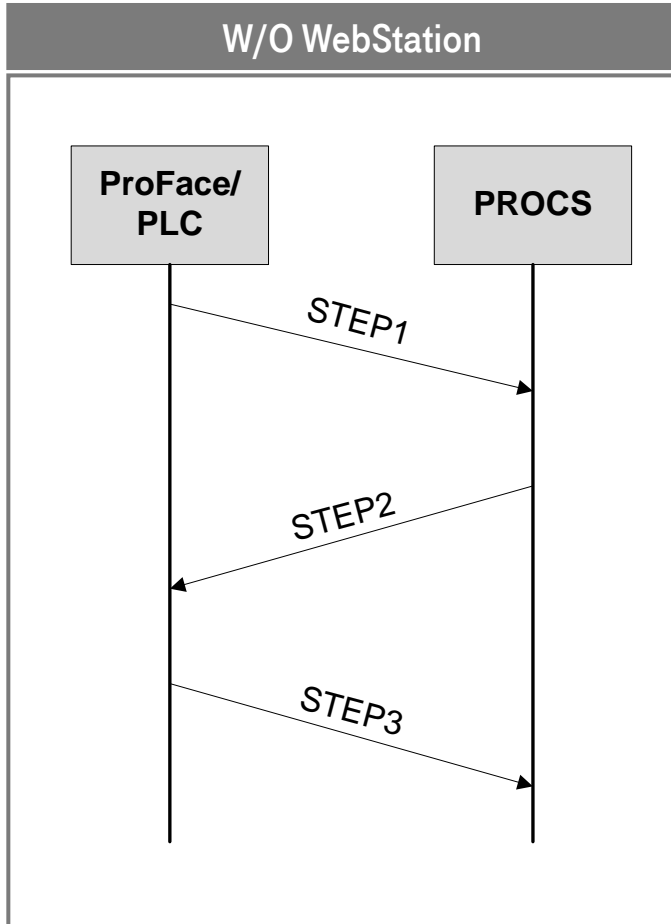
STEP1
STEP2
STEP3

STEP1 — Scan of components barcodes

STEP2 — PROCS sends the cycle authorization to the PLC/ProFace (optional, other data).

STEP3 — PLC/ProFace sends the result of the operation to PROCS (optional, other data).
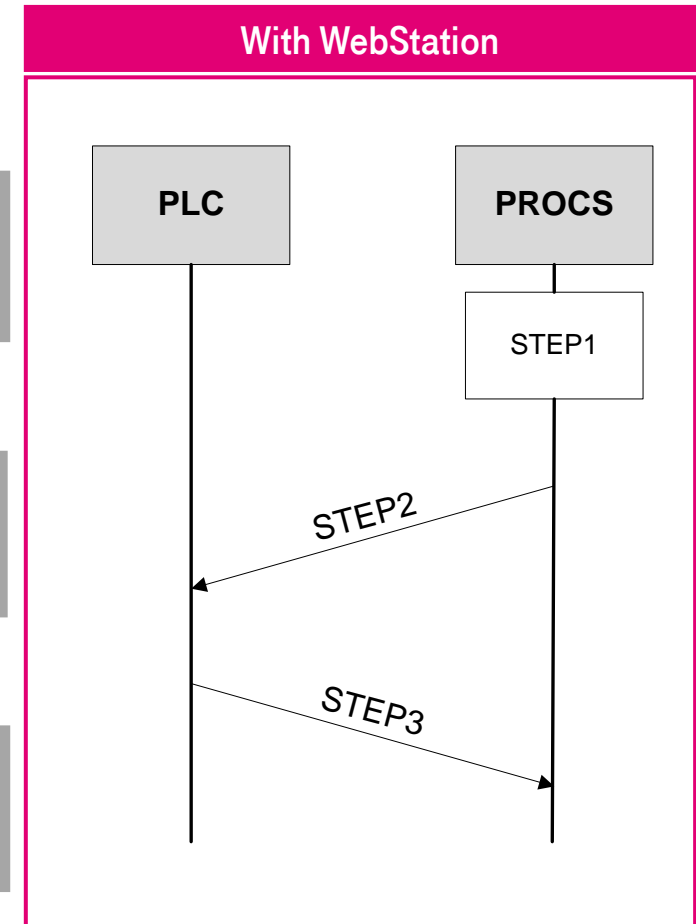
PROCS
WEBSTATION SCREENS

PROCS
TRACEABILITY DATA

Based on the workstations configured **PROCS** is able to trace all data sent by PLC or any other hardware connected to it. Data like measurements, weights, temperatures, etc. are all stored.

Traceability data can be accessible through pre-configured reports and monitoring tools.

TRACEABILITY = KNOWLEDGE

CORE FUNCTIONALITY

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PROCS
REPORTING

gimm is using Microsoft Reporting Services.

- There is a set of reports pre defined: full traceability of a single part, production between dates.
- New reports can be added depending on customer requirements.
- Reports can be exported to csv file, excel, pdf for internal purposes.

INTERLINKED REPORTS

STANDARD AND CUSTOMIZED REPORTS

PROCS
BUSINESS ANALYTICS

PROCS allows production data analysis.

- Collection in data cubes of all measures generated for KPI's, counters and downtimes.
- "Pivot grid" controls in order to build custom data views.

ADVANCED REPORTING

PRODUCTION ANALYSIS

PROCS
PRODUCTION LINE MONITORING

PROCS provides tools in real-time for monitoring the data gathered.

- From production line general overview to workstation status details.
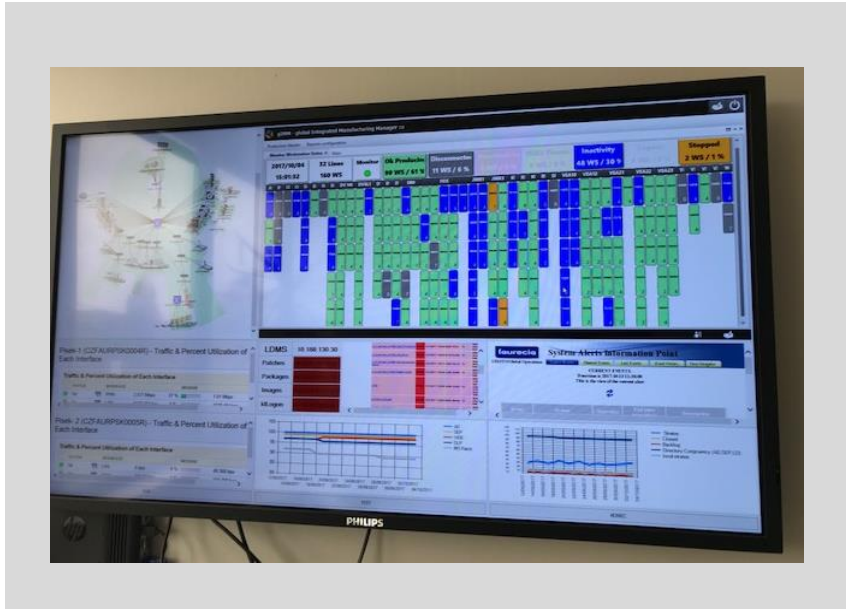
REAL TIME

COMPLETE MONITORING SERVICES

| 2017/07/05 15:24:32 | 34 Lines 160 WS | Monitor ● | Ok Producing 16 WS / 10 % | Disconnected 11 WS / 6 % | Heartbeat Lc 0 WS / 0 % | PDE3 Timeout 0 WS / 0 % | Inactivity 130 WS / 81 | Logout 1 WS / 0 % | Stopped 2 WS / 1 % |

DV NEO — Previous Screen

23010	DV NEO STUFFING
Stat:	PLC Disconnected 3389 min 47 sec ago
Op:	STUFFING
Ref:	2123214X1
Item:	2123214X161S170627074913
Heartbeat:	17/07/03 06:55:37
4	17/06/27 07:49:27

23040	DV NEO LEAKENING
Stat:	Logout 1793 min 58 sec ago
Op:	LEAKENING & ENGRAVING
Ref:	2123200XXX
Item:	2123200XXX61S170628121308
Heartbeat:	17/07/05 15:24:28
4	17/06/29 13:35:00

23900	DV NEO REWORK
Stat:	Workstation stopped
Op:	-
Ref:	-
Item:	-
Heartbeat:	17/05/18 15:19:30
0	17/05/18 15:19:30

23020	DV NEO GEOMETRICAL CONTROL
Stat:	PLC Disconnected 10490 min 32 sec ago
Op:	GEOMETRICAL CONTROL
Ref:	2123214X2
Item:	2123214X261S170627124017
Heartbeat:	17/06/28 08:34:39
7	17/06/27 13:21:49

23050	DV NEO HEATSHIELD
Stat:	4
Op:	HEATSHIELD CRIMPING & LABELING
Ref:	2123200XXX
Item:	2123200XXX61S170628114415
Heartbeat:	17/07/05 15:24:32
4	17/06/29 12:53:26

23901	DV NEO LEAKTEST REWORK
Stat:	4
Op:	<WOC>LEAKENING & ENGRAVING
Ref:	2123200XXX
Item:	2123200XXX61S170628123543
Heartbeat:	17/07/05 15:24:31
4	17/06/29 12:33:44

23030	DV NEO WELDING
Stat:	4
Op:	WELDING
Ref:	2123200XXX
Item:	2123200XXX61S170704071811
Heartbeat:	17/07/05 15:24:27
4	17/07/04 07:19:07

23600	DV NEO PACKING
Stat:	7
Op:	-
Ref:	-
Item:	
Heartbeat:	17/07/05 15:24:28
7	17/06/28 13:14:31

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PROCS
PRODUCTION LINE KPI'S

PROCS provides tools for analyzing in real-time **availability**, **performance** and **quality KPI's:**

- Core metrics used in Total Productive Maintenance (TPM)
- To achieve perfect production:
  - No Breakdowns
  - No Small Stops or Slow Running
  - No Defects

OEE

TRS

@
e-mail

SMS
SMS

User Interface

PROCS
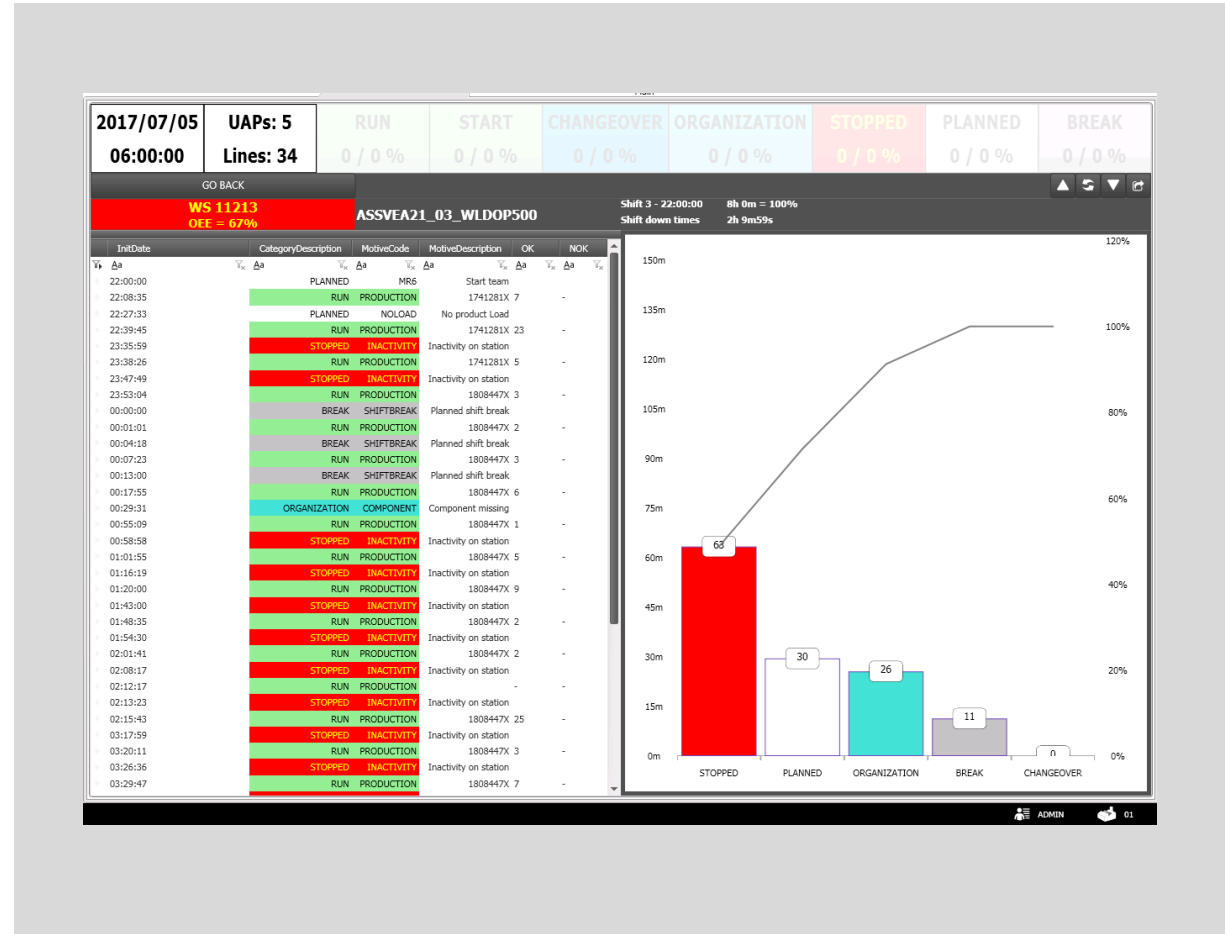## PRODUCTION LINE KPI'S

PROCS provides tools in real-time for analyzing **downtimes on Pareto graphic**.

- Planned and unplanned stops

- Custom downtime categories

DOWNTIMES ANALYSIS

THANK YOU FOR YOUR TIME

VISIT US ON: HTTPS://GIMMSOLUTIONS.COM/