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OpenValue DDMRP Solution

The OpenValue Solution for Supply Chain Management according to the DDMRP methodology

- The **OpenValue Solution**, based on the ERP Odoo system enhanced by proprietary applications, has been designed and implemented for managing manufacturing and supply chain planning and execution processes.

- The **OpenValue DDMRP Solution** is fully integrated part of the overall OpenValue Solution.

- The DDMRP apps have been certified by the Demand Driven Institute (*www.demanddriveninstitute.com*) as compliant with the DDMRP methodology and with the Demand Driven Operating Model (DDOM) criterias.
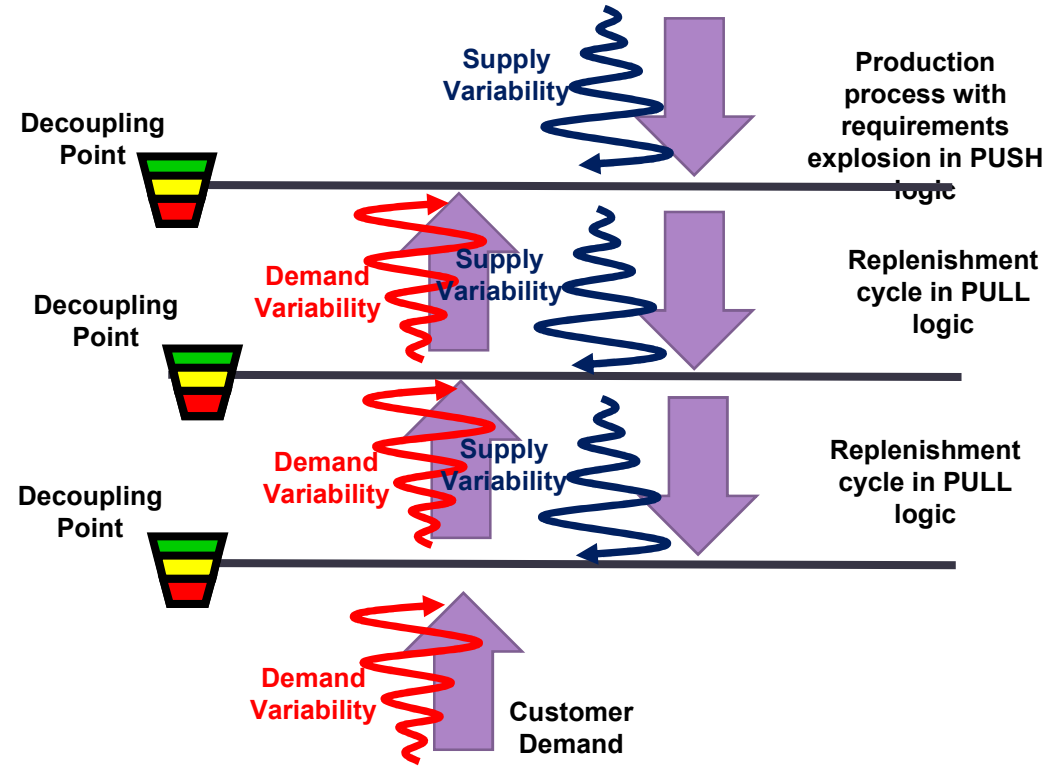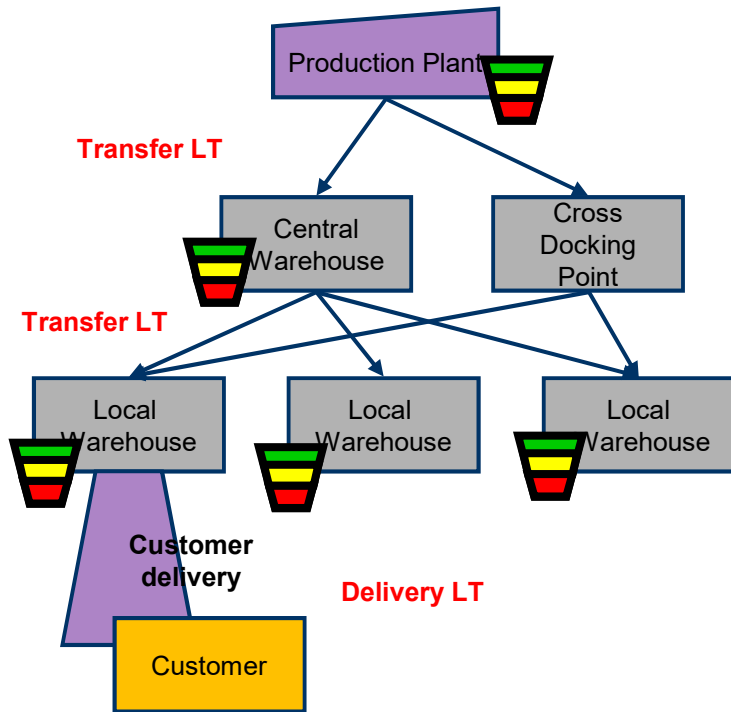
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DDMRP

The OpenValue DDMRP solution in distribution system management

Demand and Supply Variability are not propagated along to the overall supply chain due to strategic stock buffer positions

Distribution network

Production Plant

Transfer LT

Central Warehouse

Cross Docking Point

Transfer LT

Local Warehouse

Local Warehouse

Local Warehouse

Customer delivery

Delivery LT

Customer

Decoupling Point

Supply Variability

Production process with requirements explosion in PUSH logic

Decoupling Point

Demand Variability

Supply Variability

Replenishment cycle in PULL logic

Decoupling Point

Demand Variability

Supply Variability

Replenishment cycle in PULL logic

**Demand Variability**

Customer Demand

The OpenValue Solution manages planning and execution processes in challenging distribution systems according to the DDMRP methodology

# The OpenValue DDMRP Solution material planning for manufacturing plants

DDMRP Replenishment Engine

Decoupled Explosion: Stock Buffer replenishment cycle in PULL logic

Demand Variability

Supply Variability

MRP Planning Engine
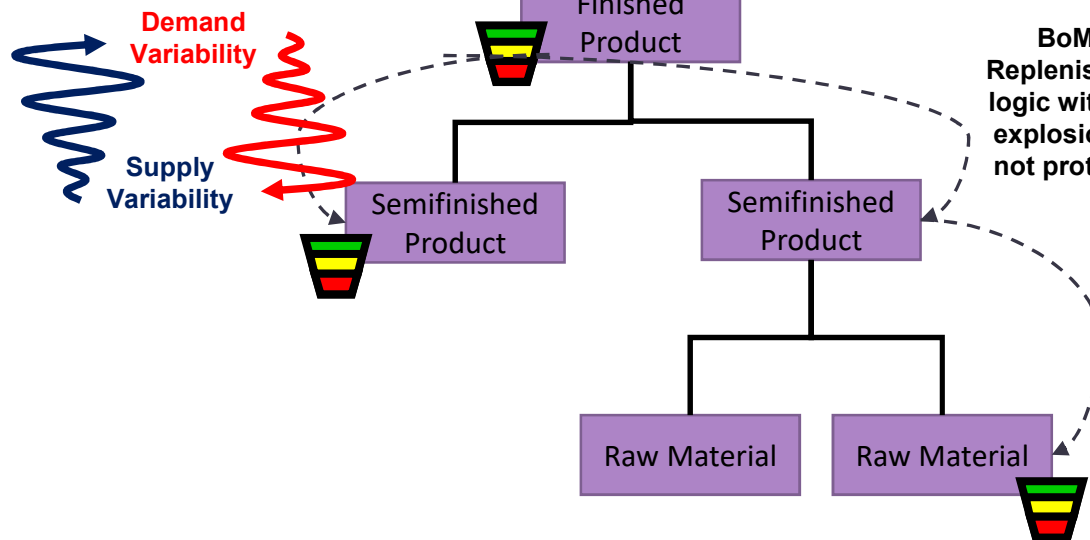
BoM Explosion: Replenishment in PUSH logic with requirements explosion for products not protected by Stock Buffer

Demand Variability

Supply Variability

Finished Product

Semifinished Product

Semifinished Product

Raw Material
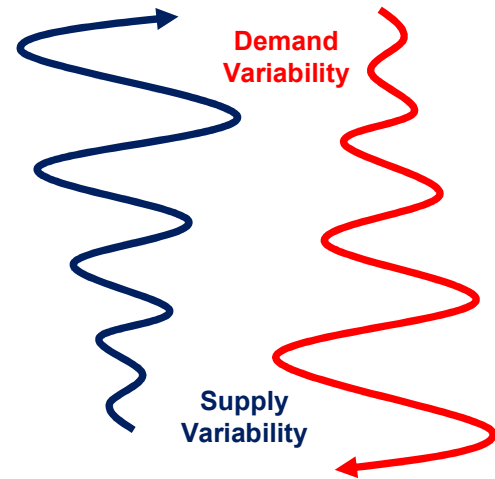
Raw Material

The material requirements planning is managed through two planning engines integrated each others:

- The DDMRP engine for planning the stock buffer replenishment
- The MRP engine for planning the material requirements for products not protected by stock buffer

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The main features of DDMRP solution (1/2)

- Stock buffer management:
  - net flow position,
  - planning priority level indicator,
  - buffer status level indicator,
  - decoupling LT,
  - ….
- stock buffer profile setting with LT factor and Variability factor
- ADU calculation according to the following possible methods:
  - Fixed
  - Past (consumption)
  - Future (forecast)
  - Blended (consumption + forecast)
- LT Adjustment Factor
- Demand Adjustment Factor and its propagation to all the BoM levels
- Zone Adjustment Factor
- Stock planned order (planning proposal for stock buffer replenishment), conversion in final documents, i.e. purchase order, manufacturing order, subcontracting order, stock transfer, and sorted by planning priority

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The main features of DDMRP solution (2/2)

- On Hands Status Reports: for final documents the main relevant pieces of information are reported sorted by buffer status level for supporting their execution process

- Planning History Run Chart for displaying the net flow position over the time (system stability)

- Execution History Run Chart for displaying the on hand stock over the time (system stability)

- BoM explosion report for determining decoupled LT, cumulative LT and replenishment LT for Components in all the BoM levels

- Projected stock status in the decoupled LT

- Synchronization alert list

- Stock planned order conversion report (system reliability)

- Parameters setting:
    - Red Zone Order Spike Threshold Percentage
    - Red Zone Execution Priority Level Percentage
    - Red Zone Projected Stock Priority Level Percentage

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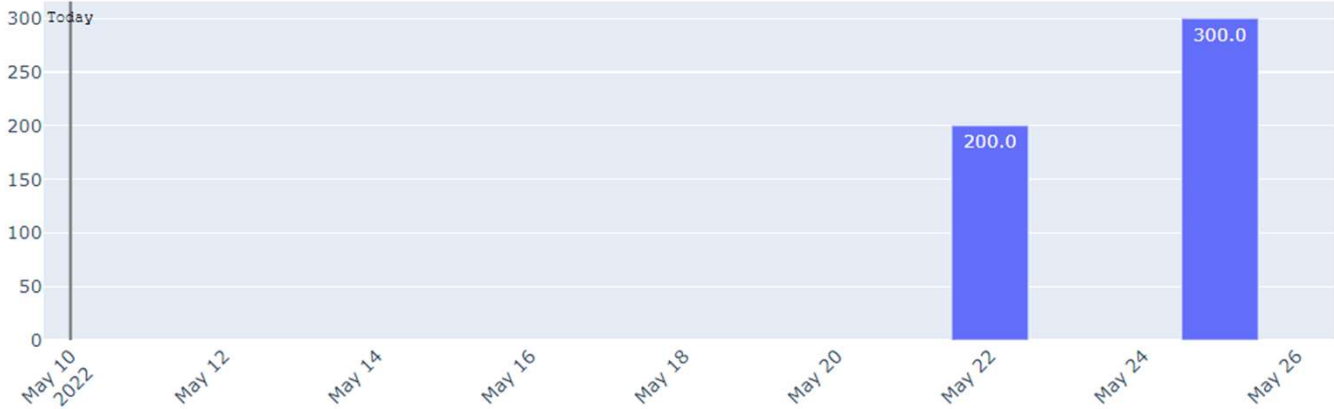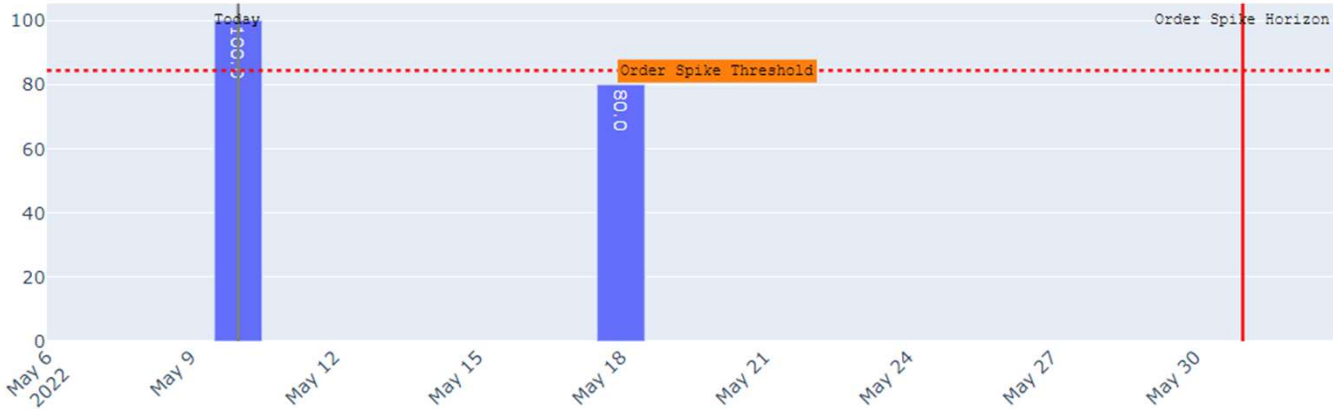
DDMRP: Stock Buffer Management

Stock Buffer management

- Stock buffer master data is the core part of the overall DDMRP solution; as per DDMRP methodology, all the stock buffer figures and the related features are available, as example:

    - Stock buffer profile

    - net flow position,

    - decoupling LT

    - planning priority level,

    - buffer status level,

    - LT Adjustment Factor

   - Zone Adjustment Factor

    - ADU calculation method … and so on.
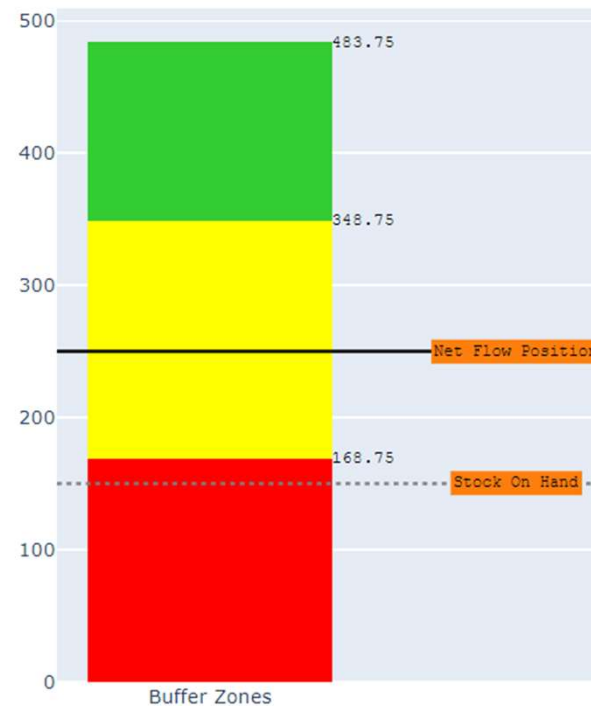
Stock Buffer management

- **Qualified demand** graph and **incoming supply** graph are available also.

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Stock Buffer management

Planning History Run Chart for displaying the net flow position over the time and **Execution History Run Chart** for displaying the on hand stock over the time are provided for implementing an adaptive model in stock buffer parameter setting.
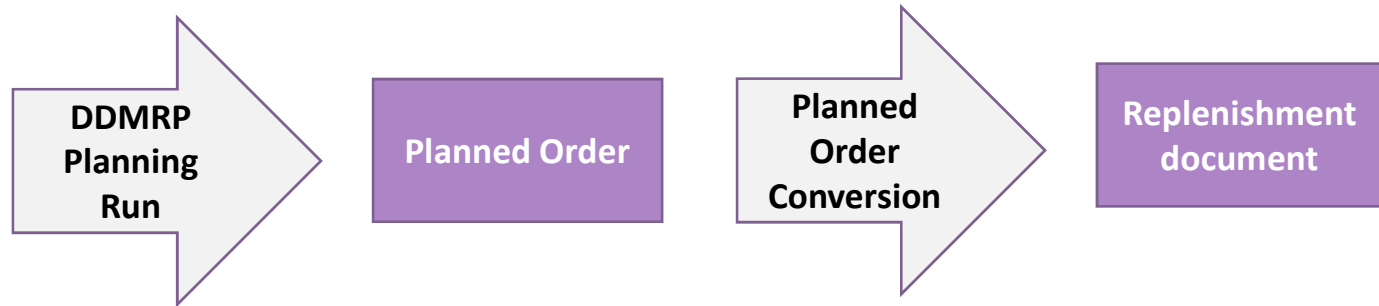
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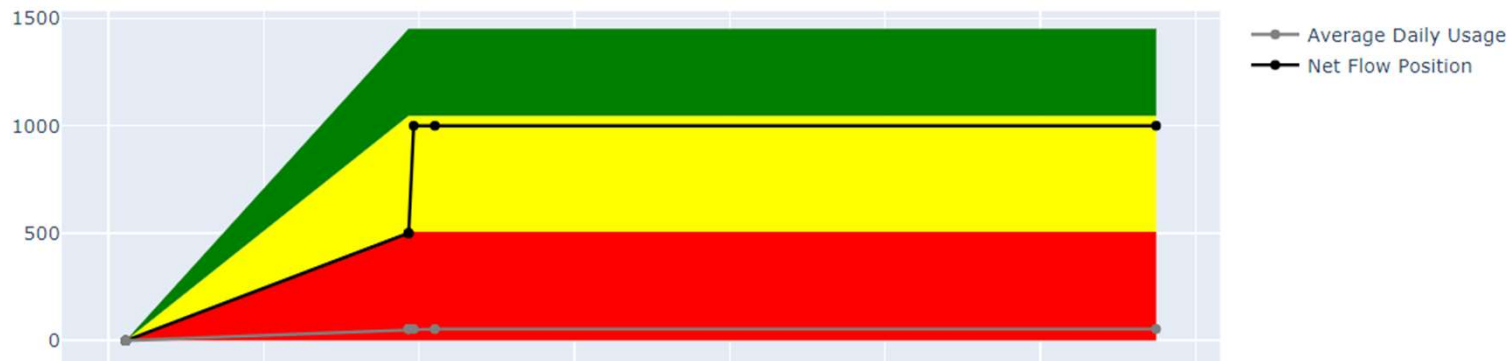
DDMRP: Planning and Execution

The Planning process

Stock Buffer Status
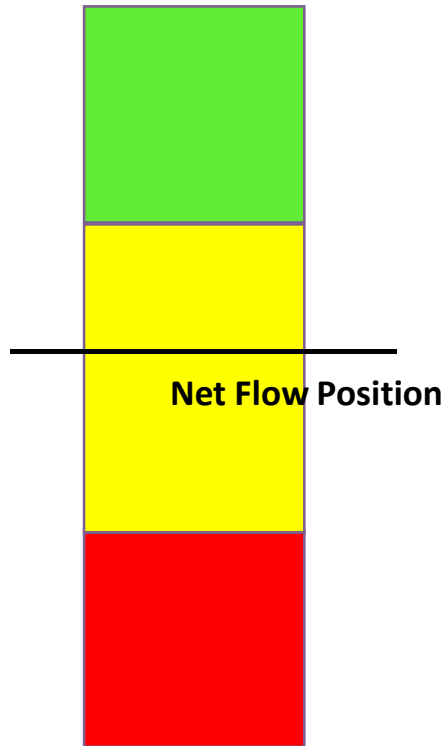
Stock Planned Orders are created by the DDMRP planning run as proposals for stock buffer replenishment. A Stock Planned Orders can be created manually also.

Net Flow Position

DDMRP Planning Run → **Planned Order** → **Planned Order Conversion** → **Replenishment document**

Stock Planned Orders are to be converted in replenishment documents, i.e. **purchase orders, stock transfer or manufacturing orders**. The conversion is addressed by the supply method, automatically determined in the stock buffer master data.

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Planned Orders dashboard

- The Planned Order Dashboard provides a list of Stock Planned Orders sorted by planning priority level.

- According to the DDMRP methodology, the planning priority level indicator address the planner behaviour in handling the relative priority in planning phase.

- In the dashboard all figures are provided to support planners in their activities.

- Stock Planned orders are converted in the final execution documents, i.e. purchase order, manufacturing order, subcontracting order, stock transfer as per the related supply method.

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On Hand Status monitors

According to the Supply Method, a replenishment document is created by converting planned orders.

Supply Method	Stock Buffer Master Data	Planned Order Conversion
Buy	Supplier Info	Purchase Quotation
Produce	Manufacturing BoM	Manufacturing Order
Stock Trasfer	Source Warehouse	Stock Moves
Subcontracting	Subcontracting Supplier Info	Subcontracting Purchase Quotation

For each kind of replenishment document, a monitor is available. According to the DDMRP methodology, the replenishment documents are sorted by stock buffer status level which address the priority during the execution phase. The monitors provides all figured necessary to support the document responsible (buyer, planner or stock manager) in handle relative priority in performing the execution activities.

DDMRP: Average Daily Usage Calculation

Average Daily Usage calculation methods

The ADU can be determined according to the following possible methods:

- **Fixed:** a manual value has to be entered manually and therefore its has been determined out of the system

- **Past (based on stock goods consumption moves):** according to this method, the ADU is calculated as average quantity of all goods consumption moves in a time horizon; several methods can be created based on different horizons

- **Future (based on stock demand forecast):** the ADU is calculated by collecting all forecast demand elements in a future horizon; several methods can be created based on different horizons

- **Blended (mixed method based on consumption and forecast):** the two concerned components are weighed; several methods can be created based on different possible weights

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Stock Buffer Demand

The Blended Future ADU calculation method are based on forecast demand elements. The independent demand has to be entered manually and its related dependent demand is calculated based on the supply chain and BoM explosion.

Local Warehouse

Central Warehouse

Production Plant

Finished Product

Semifinished Product

Raw Material

Start date

End date

Customer Demand

Forecast Qty

Transfer LT

Dependent Demand

Transfer LT

Dependent demand is calculated by moving back by the transfer Lead Time the demand in the upstream element in the distribution network

Dependent Demand

Lead Time

Dependent Demand

Dependent demand is calculated by moving back by the replenishment Lead Time the demand in the upstream element in the BoM explosion

Lead Time

Dependent Demand

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Stock Buffer Demand Adjustment

Correction factors can be entered at all level of supply chain and it is propagated down for adjusting the ADU value in a period of time

Start date   **End date**

Customer Demand   **Correction Factor**

Transfer LT

Dependent Demand

Transfer LT   ADU correction factor is propagated down in the distribution network and moved back by the transfer Lead Time

Dependent Demand

Lead Time

Dependent Demand

ADU correction factor is propagated down in the BoM elements and moved back by the replenishment Lead Time

Lead Time

Dependent Demand

Local Warehouse

Central Warehouse

Production Plant   Finished Product

Semifinished Product

Raw Material

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DDMRP: Reporting

DDMRP BoM explosion
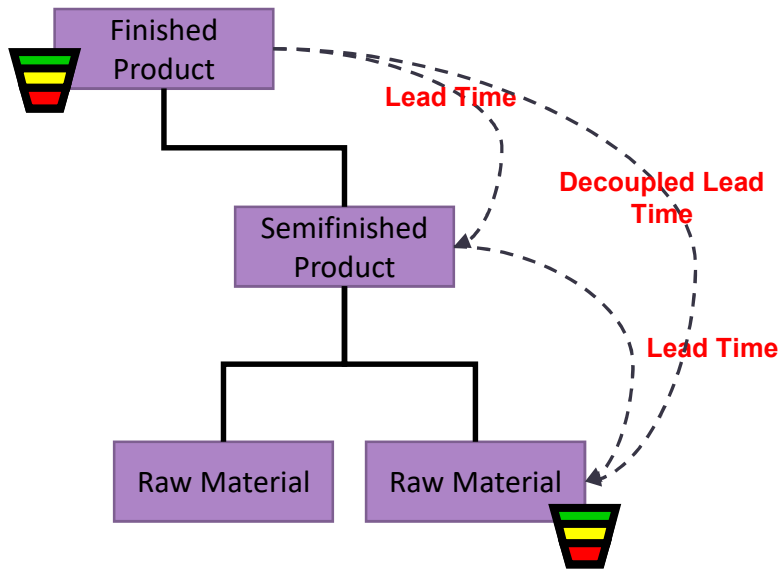
The "**DDMRP BoM Explosion"** report computes the decoupled lead time and the cumulative lead time by exploding all levels of BoM. The critical path is determined also.

Its printout is available.

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## DDMRP BoM explosion Decoupled Lead Time ✕

Product	FP-001	Replenish Method	Manufactured	
Warehouse	Production Plant	LT (days)	5,00	
Bill of Materials	FP-001	CLT (days)	25,00	
BoM Type	Manufacture this product	DLT (days)	20,00	
BoM Quantity	1,00 Units	Stock Buffer	FP-001-Production Plant	

BOM Explosion

BoM Lev...	Product	Qty	UoM	Product Type	Replenish Meth...	BoM	BoM Type	Stock Buffer	LT (day
1	SUB-001	1,00	Units	Storable Product	Subcontracting	FP-001	Manufacture this produ...	SUB-001-Production Plant	10,0
2	CONS-0...	1,00	Units	Consumable	Purchased	SUB-001	Subcontracting		10,0
2	RM-001	1,00	Units	Storable Product	Purchased	SUB-001	Subcontracting	RM-001-Production Plant	10,0
2	RM-002	1,00	Units	Storable Product	Purchased	SUB-001	Subcontracting		10,0
1	SF-001	1,00	Units	Storable Product	Manufactured	FP-001	Manufacture this produ...	SF-001-Production Plant	5,0
2	RM-001	1,00	Units	Storable Product	Purchased	SF-001	Manufacture this produ...	RM-001-Production Plant	10,0
2	RM-002	1,00	Units	Storable Product	Purchased	SF-001	Manufacture this produ...		10,0
2	CONS-0...	1,00	Units	Consumable	Purchased	SF-001	Manufacture this produ...		10,0
1	RM-003	1,00	Units	Storable Product	Purchased	FP-001	Manufacture this produ...		10,0
1	SF-002	2,00	Units	Storable Product	Manufactured	FP-001	Manufacture this produ...		5,0

PRINT BOM EXPLOSION PDF   CLOSE

Planning Elements List
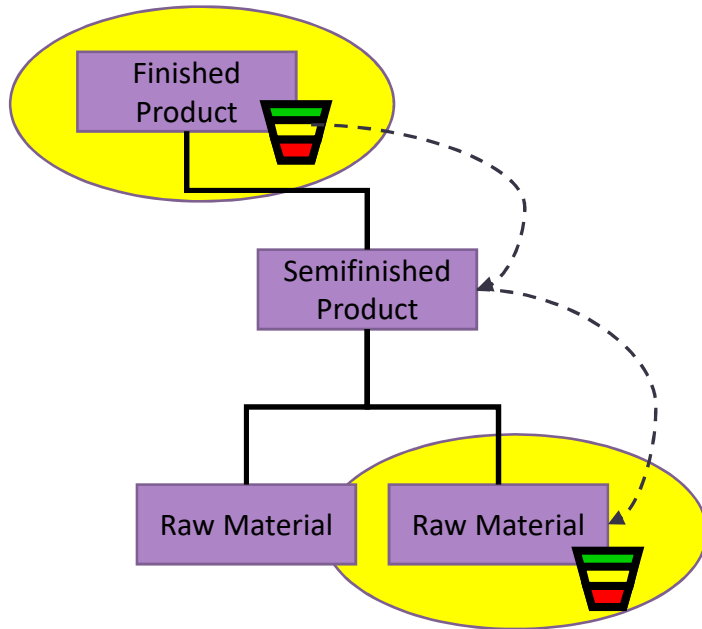
The "**Planning Element List"** report provides a list over the time of all procurement elements; the projected stock is calculated also.

This is the main tool used by planner for checking the correctness of planning results.

DDMRP Planning Elements List   ×

UPDATE

| Stock Buffer | RM-001-Production Plant | | | Replenish Method | Purchased | |
| Planner | Claudio Candito | | | | | |

MRP Date	Origin	Order Number	Parent Product	Planning Note	MRP Quanti...	Projected Stock Q...
01/01/1900					0,00	0,00
09/05/2022	Manufacturing Order	PP/MO/00002	SF-002	Demand MO Explosion: SF-002	-2,00	-2,00
21/05/2022	Purchase Order	P00001			967,00	565,00
21/05/2022	Purchase Order	P00002	SUB-001	Demand PO Subcontracting Explosion: SUB-001	-400,00	565,00
23/05/2022	Manufacturing Order	PP/MO/00001	SF-001	Demand MO Explosion: SF-001	-241,00	324,00
31/12/2999					0,00	324,00

CLOSE

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Projected Stock Status
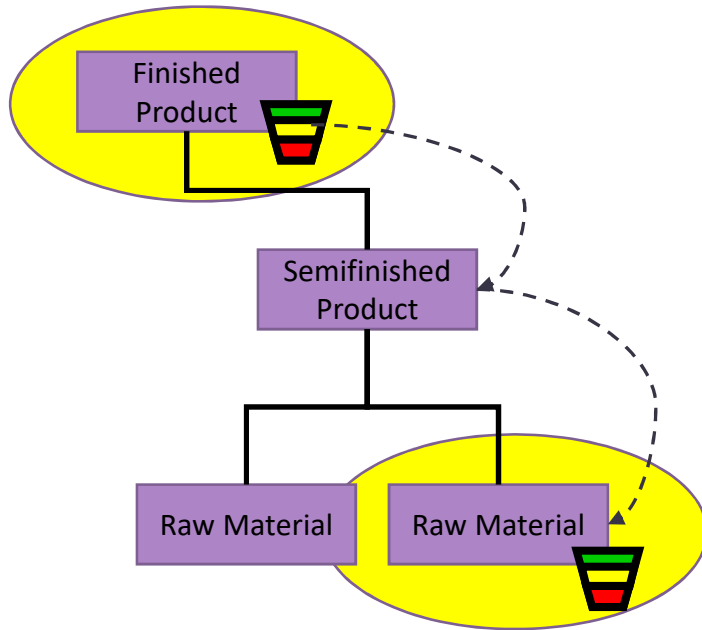
The "**Projected Stock Status**" report computes from today to the DLT the projected stock and the related projected stock status indicator.

This is to detect stock out from demand not covered by the stock buffer.

DDMRP Projected Stock Status   ✕

Stock Buffer	SF-001-Production Plant		Replenish Method	Manufactured
Planner	Claudio Candito			

MRP Date	Sequence Day	Projected Qty	Issues Qty	Receipts Qty	Projected Stock Status
10/05/2022	0	30,00	0,00	0,00	71,11 %
11/05/2022	1	30,00	0,00	0,00	71,11 %
12/05/2022	2	30,00	0,00	0,00	71,11 %
13/05/2022	3	30,00	0,00	0,00	71,11 %
14/05/2022	4	-292,00	-322,00	0,00	-692,11 %
15/05/2022	5	-292,00	-322,00	0,00	-692,11 %
16/05/2022	6	-292,00	-322,00	0,00	-692,11 %
17/05/2022	7	-292,00	-322,00	0,00	-692,11 %

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Synchronization Alerts List
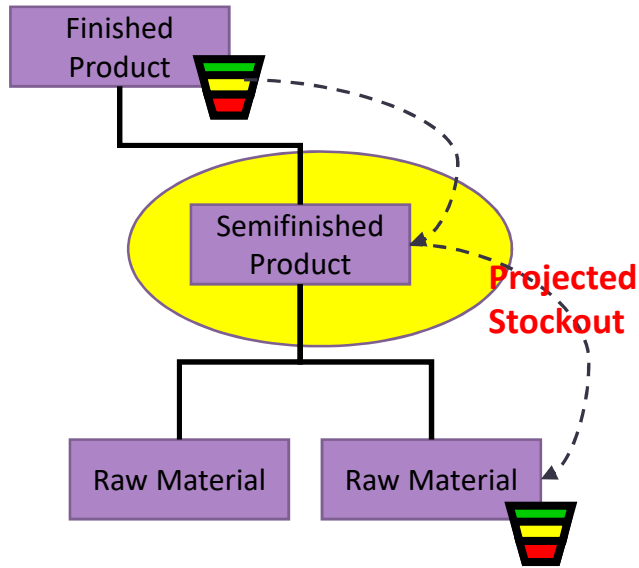
The "**Material Synchronization Alert List"** report provides visibility for supply issues in manufacturing orders or subcontracting orders for not buffered materials: in case that the projected stock quantity of buffered components is negative an alert is generated.

This is the planner perspective of the same issue managed by the projected stock status for purchased products.

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Stock planned order conversion report

To evaluate the "supply planned order signal integrity", i.e. the execution reliability of your organization in processing planned order, the report **closed planned order** is provided for comparing planned and actual dates and quantity. Therefore, timing and accuracy are monitored in processing planned orders.

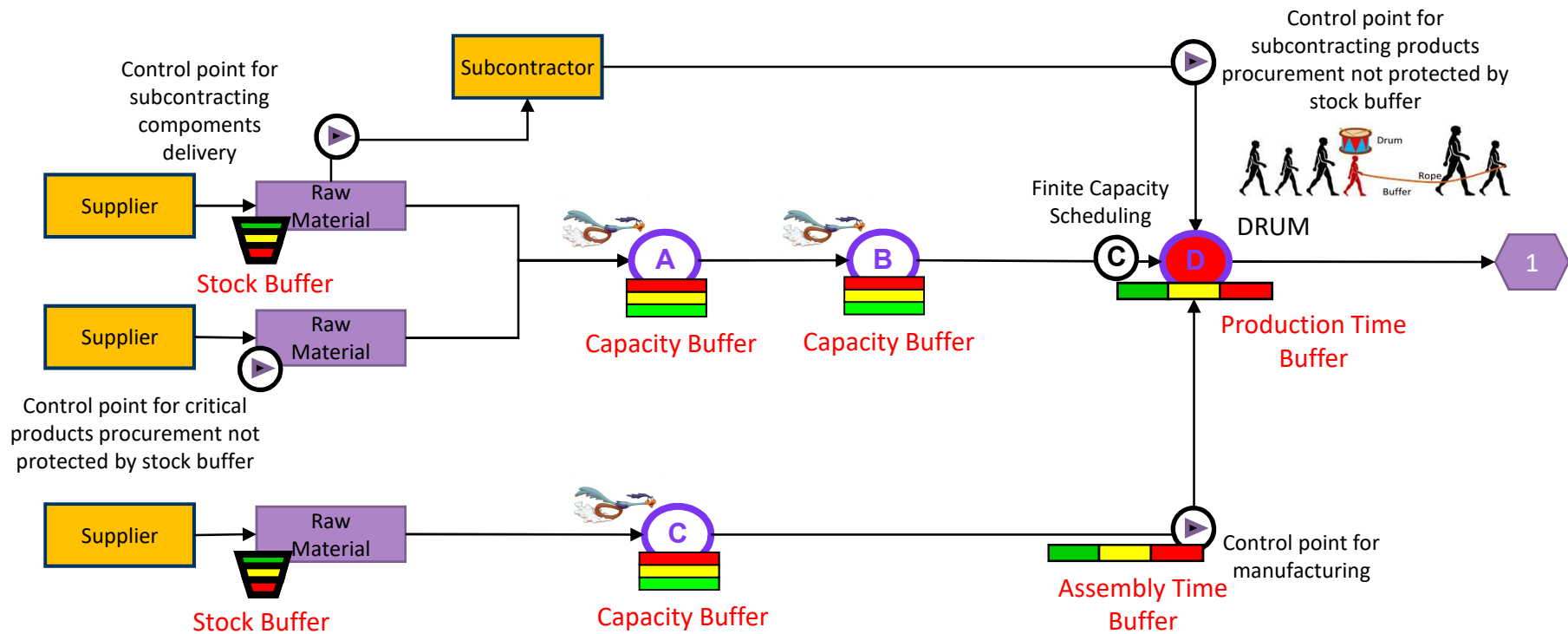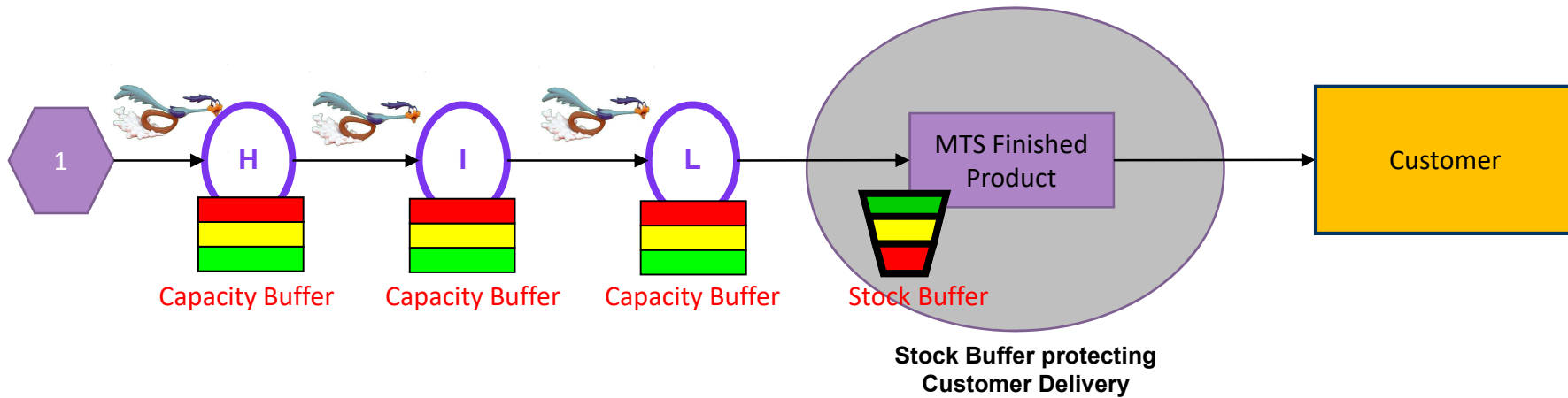|	Name	Stock Buffer	Product	Warehouse	Planner	Replenish Meth...	Planned Release Date	Conversion Order Da...	Planned Due Da...	Planned Quanti...	Replenishment Quantity	Unit of Measure	Conversion Plannin...
☐	SBPO000000...	FP-001-Distribution Cen...	FP-001	Distribution Center 001	Claudio Candito	Distributed	11/10/2022	10/10/2022	12/10/2022	26,00	26,00	Units	0,00 %
☐	SBPO000000...	FP-001-Distribution Cen...	FP-001	Distribution Center 001	Claudio Candito	Distributed	10/10/2022	10/10/2022	11/10/2022	26,00	26,00	Units	0,00 %
☐	SBPO000000...	FP-001-Distribution Cen...	FP-001	Distribution Center 001	Claudio Candito	Distributed	10/10/2022	10/10/2022	11/10/2022	26,00	26,00	Units	0,00 %
☐	SBPO000000...	FP-001-Production Plant	FP-001	Production Plant	Claudio Candito	Manufactured	07/11/2022	10/10/2022	14/11/2022	671,00	671,00	Units	0,00 %
☐	SBPO000000...	FP-001-Production Plant	FP-001	Production Plant	Claudio Candito	Manufactured	07/11/2022	10/10/2022	14/11/2022	671,00	671,00	Units	0,00 %
☐	SBPO000000...	FP-001-Production Plant	FP-001	Production Plant	Claudio Candito	Manufactured	10/10/2022	10/10/2022	14/11/2022	671,00	671,00	Units	0,00 %
☐	SBPO000000...	RM-002-Production Plant	RM-002	Production Plant	Claudio Candito	Purchased	10/10/2022	10/10/2022	22/10/2022	26,00	26,00	Units	0,00 %
☐	SBPO000000...	RM-001-Production Plant	RM-001	Production Plant	Claudio Candito	Purchased	10/10/2022	10/10/2022	22/10/2022	124,00	124,00	Units	7,44 %
☐	SBPO000000...	FP-001-Production Plant	FP-001	Production Plant	Claudio Candito	Manufactured	07/11/2022	10/10/2022	14/11/2022	671,00	671,00	Units	0,00 %

Closed Planned Orders

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DDOM

Shop Floor Control management

Control point for subcontracting compoments delivery

Control point for subcontracting products procurement not protected by stock buffer

DRUM

Supplier

Raw Material

Stock Buffer

Subcontractor

Control point for critical products procurement not protected by stock buffer

Supplier

Raw Material

Capacity Buffer

Capacity Buffer

Finite Capacity Scheduling

Production Time Buffer

A

B

C

D

Supplier

Raw Material

Stock Buffer

Capacity Buffer

Assembly Time Buffer

Control point for manufacturing

1

The OpenValue Solution enables the finite capacity scheduling for work centers identified as DRUMs and to locate control points for monitoring material flows at the manufacturing process "boundary" and manufacturing common points

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Shop Floor Control management in MTS scenario

1 → H → I → L → **MTS Finished Product** → Customer

Capacity Buffer · Capacity Buffer · Capacity Buffer · Stock Buffer

Stock Buffer protecting Customer Delivery

In the MTS scenario the customer delivery is protected by a Stock Buffer placed before customer delivery

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Shop Floor Control management in MTO Scenario
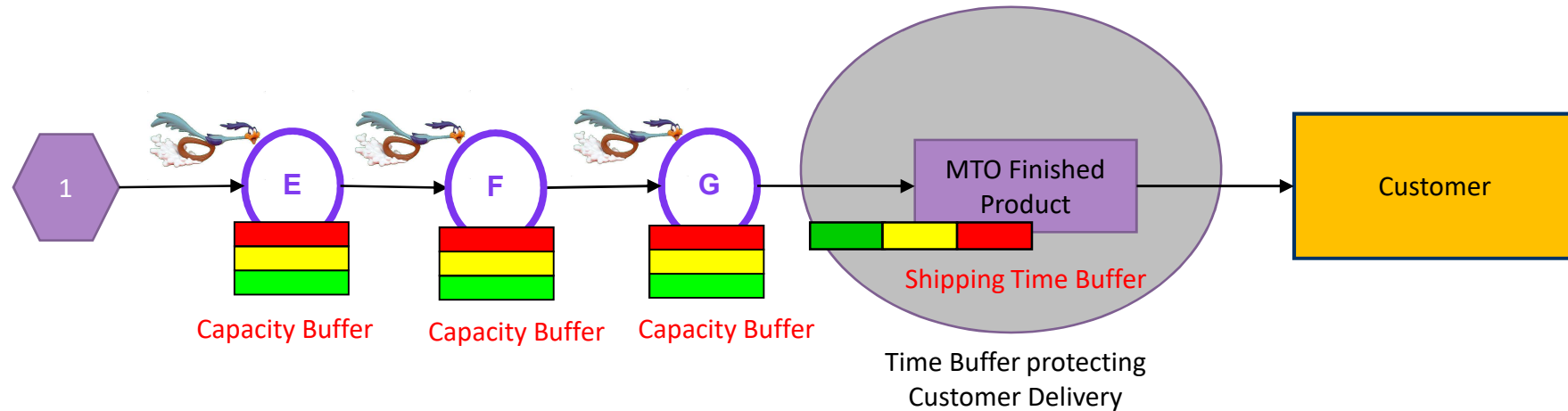
In the MTO scenario the customer delivery is protected by a Time Buffer placed before customer delivery

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The main features of DDOM solution (1/2)

- Identify work centers as DRUMs

- Define control points:
    - Purchase order for critical supply
    - Subcontracting component replenishment
    - Manufacturing common points

- Production Time buffer profile settings,

- Time Buffer determination for WO DRUM as per the following possible methods:
    - linear with threshold based on variability of upstream activities and a time buffer profile
    - fixed

- Finite capacity scheduler for DRUM work center operations for
    - time buffer calculation,
    - scheduled date determination for not DRUM operations and
    - production area replenishment date determination

- Manual scheduling for DRUM work centers operations

- Progress report for monitoring MO execution with WO DRUM and its GANTT chart

- Progress report for monitoring single WO DRUM and its GANTT chart

- Work center capacity loading report

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The main features of DDOM solution (2/2)

- Shipping Time buffer profile settings

- Time Buffer determination for protecting customer delivery for MTO products

- MTO sales order progress report for time buffer management

- Profile settings for defining time alerts in components procurement, subcontracting components delivery and manufacturing common points

- Control Point progress report for alert monitoring in

    - MTO SO items

    - critical PO items

    - subcontracting components delivery

    - Manufacturing common points

- Outlier Events report for late DRUM workorder confirmations with possible reason codes

- Outlier Events report for late MTO customer delivery with possible reason codes

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DDOM: Time Buffer Management

The DRUM work center

A workcenter can be set as DRUM, so
critical resource in the production process.

- Checks are provided to avoid to set
  multiple drums on the same routing

- a milestone operation after a drum
  operation

- A drum operation related two operation
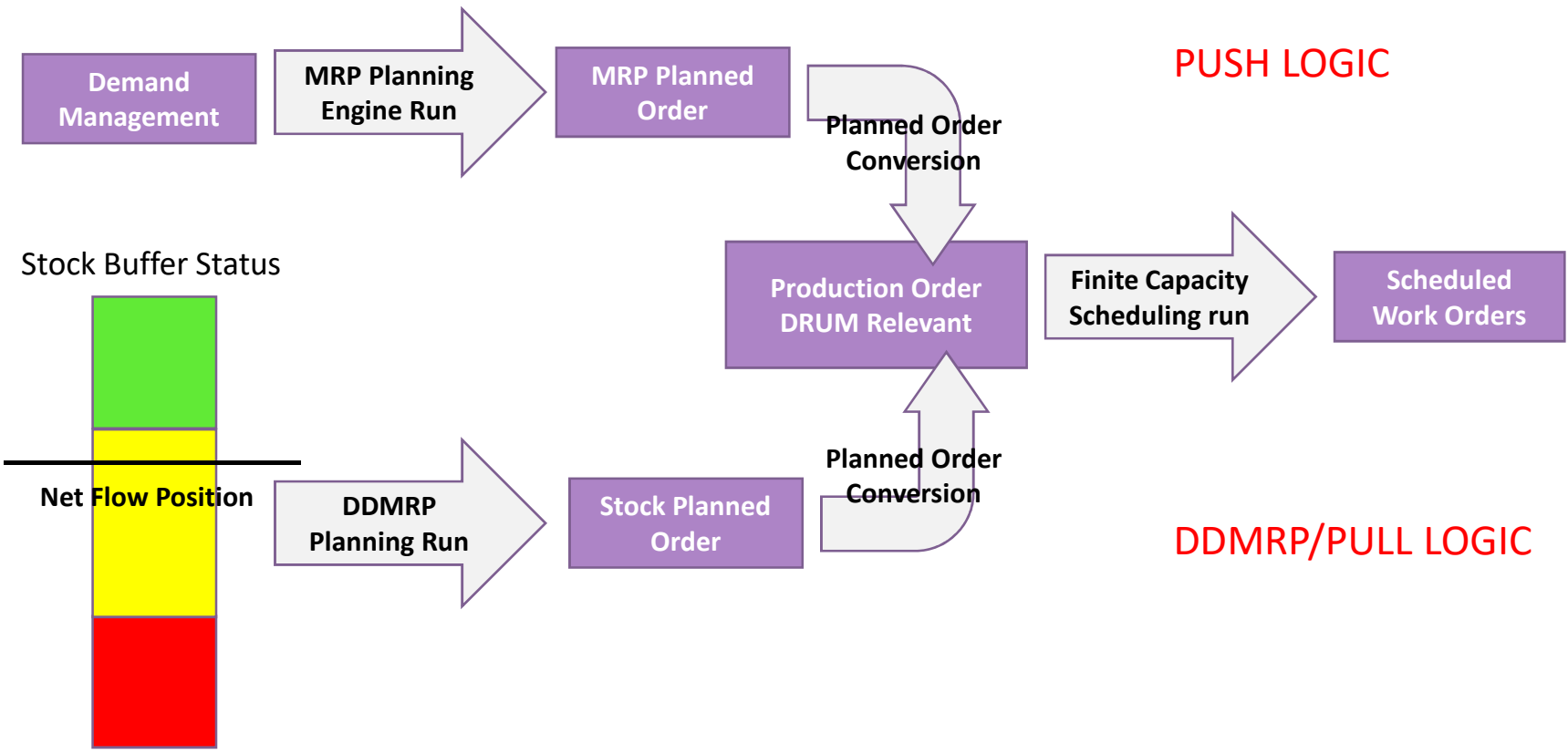 in parallel
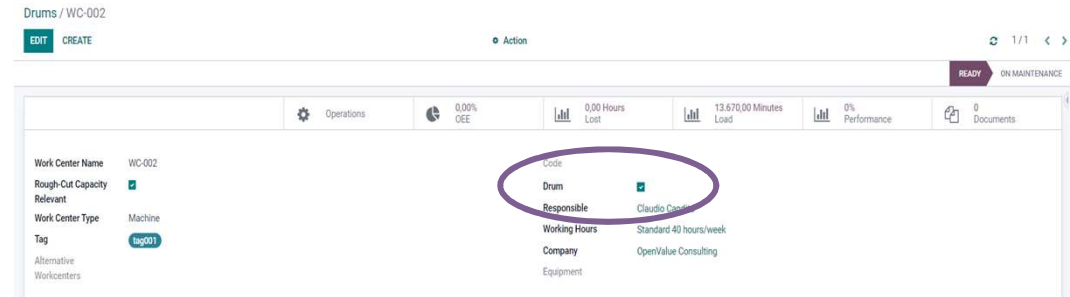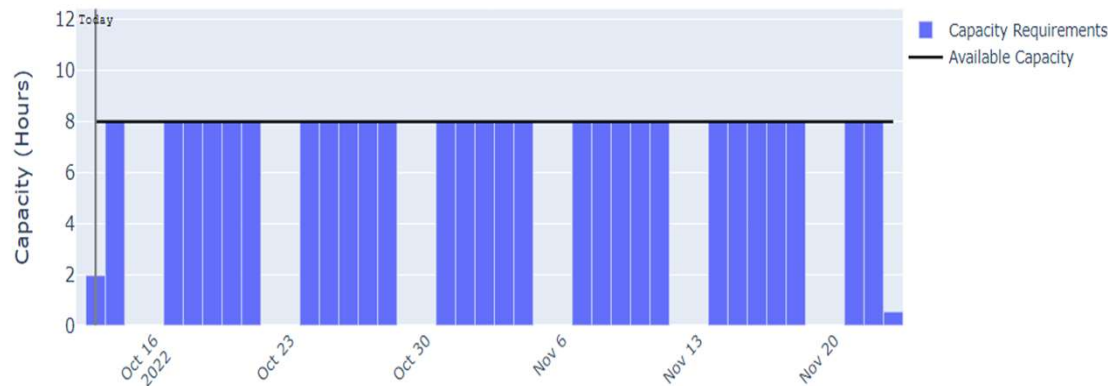
Capacity loading graph is available for
checking DRUM WC capacity
optimization comparing the capacity
requirements with the available capacity
over the time

The DRUM WC capacity optimization is
achieved by running the finite capacity
scheduler

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The production planning and scheduling processes

Demand Management → MRP Planning Engine Run → **MRP Planned Order**

Planned Order Conversion

PUSH LOGIC

Stock Buffer Status

Net Flow Position

Production Order DRUM Relevant → Finite Capacity Scheduling run → **Scheduled Work Orders**

DDMRP Planning Run → **Stock Planned Order**

Planned Order Conversion

DDMRP/PULL LOGIC

The OpenValue Solution provides a production planning and execution environment where all tools are integrated each others in a process perspective

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The Production Time Buffer determination

The Production Time Buffer is to protect DRUM WC for the variability of the upstream production activities.
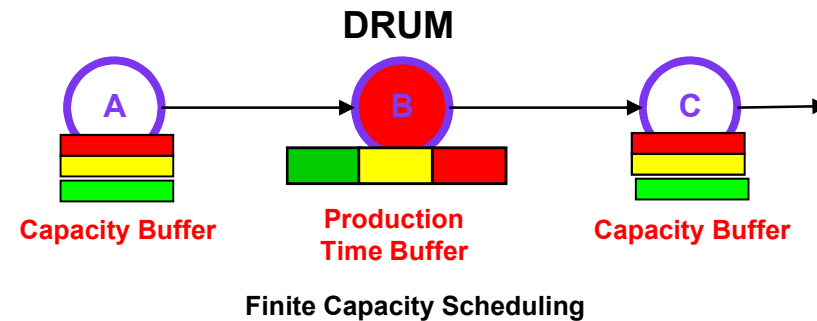
DRUM

In the Time buffer profile setting, a variability factor is to define how it is volatile and uncertain the upstream production process.

The time buffer profile is assigned to a BoM.

It is possible to determine the Time Buffer for protecting a DRUM as per the following methods:

- linear with threshold: based on variability of upstream activities and a time buffer profile setting
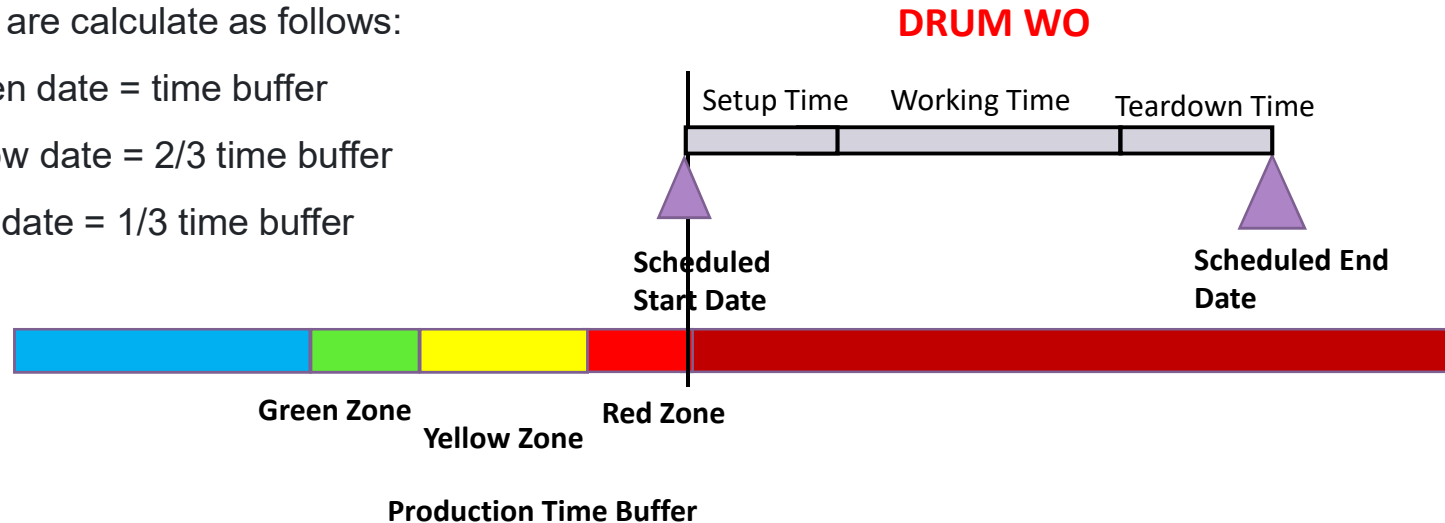- Fixed value

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The Production Time Buffer management

The Time buffer is determined from the DRUM workorder start scheduled date backwards.

Its time zones are calculate as follows:

- Green date = time buffer
- Yellow date = 2/3 time buffer
- Red date = 1/3 time buffer

DRUM WO

Setup Time | Working Time | Teardown Time

Scheduled Start Date

Scheduled End Date

Green Zone

Yellow Zone

Red Zone

Production Time Buffer

The Time Buffer is taken into account by the overall manufacturing order scheduling, i.e. the finished date of the previous workorder starts at the end of the time buffer, and for the determination of component release date.

The time buffer is calculated in working days.

When confirming finally the workorder, its time buffer is closed.

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The DRUM scheduling engine (1/3)

The **Finite Capacity Scheduler** runs at planning area level, i.e. warehouse, consistently with the planning engine process.

DRUM Scheduling Engine Run

Warehouse ▼

DDOM SCHEDULING ENGINE RUN   Cancel

This is for levelling and optimizing the capacity loading for DRUM work centers by moving their operations over the time (the corresponding capacity requirement is moved also). All the other operations assigned to the WCs not drum are moved accordingly.

Therefore, its main processing steps are:

- **Time buffer determination** and its placing before the DRUM operation
- **Scheduled date determination for not DRUM operations** based on the DRUM operation with mid point technique
- **Release date determination** for the production area components replenishment at header production order level

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The DRUM scheduling engine (2/3)

- The DRUM workorder confirmation is possible only if the finite capacity scheduling has been performed: this is to support consistently the shop floor control for DRUM workorders

- Manual scheduling for DRUM work centers operations is possible also

- List of DRUM workorders operations and its printout is available also

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The DRUM scheduling engine (3/3)

OLD Scheduling

| Operation 100 | Operation 200 | Operation 300 |

Operation shift

| Operation 200 |

the work center assigned to the operation 200 is the «DRUM»

NEW Scheduling

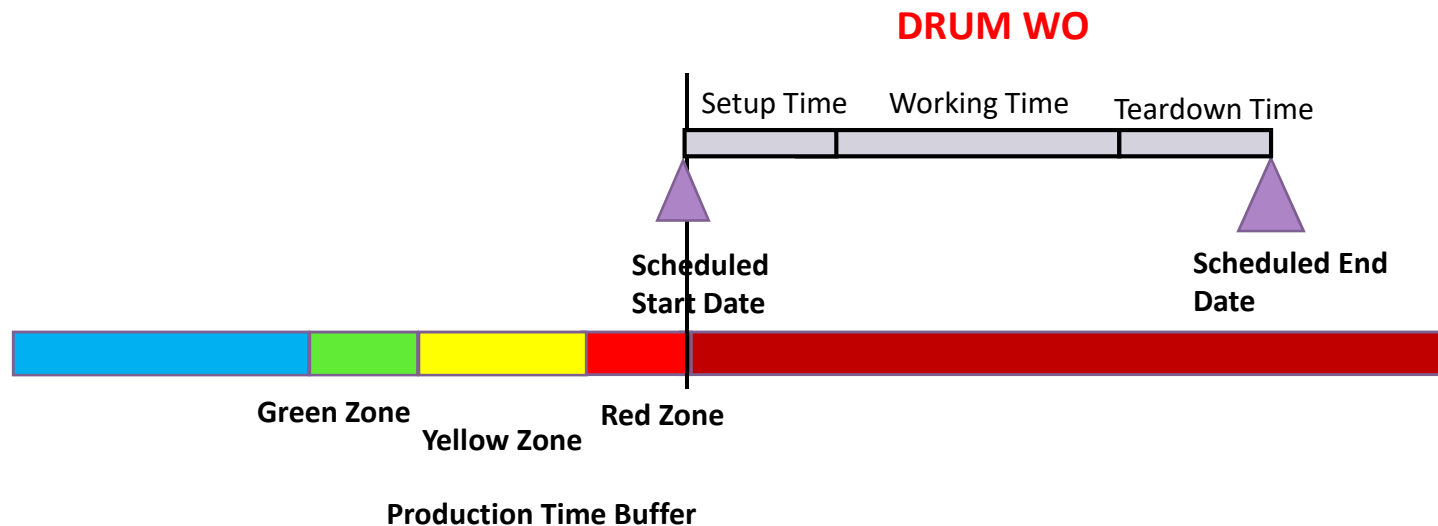| Operation 100 | Time Buffer | Operation 200 | Operation 300 |
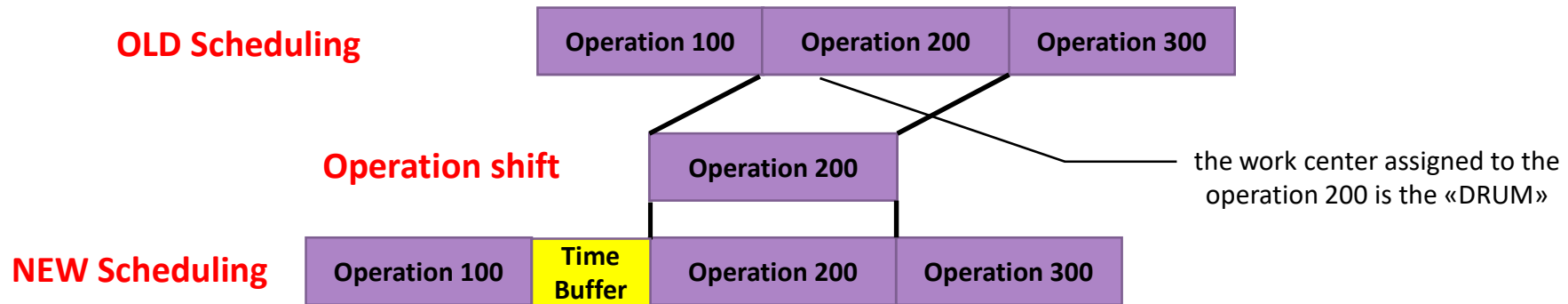
Mid-Point Scheduling technique focus

- Operations placed on the DRUM WC are moved over the time (sequencing) for determining new capacity loading for levelling and saturate the DRUM WC.

- all the remaining active workorders are moved in backward or forward scheduling according to if they are preceding or following the DRUM workorder

- Workorder in progress cannot be moved

- Closed and cancelled workorders are not taken into account

- Parallel workorders are scheduled with the same scheduled start

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The Production Time Buffer management

The Production Time Buffer penetration can be monitored:

- At DRUM manufacturing order level by the **DRUM Manufacturing Order Progress Report**

- At DRUM workorder level by the **DRUM Word Order Progress Report**

DRUM WO

Setup Time	Working Time	Teardown Time

Scheduled Start Date

Scheduled End Date

Green Zone

Yellow Zone

Red Zone

Production Time Buffer

When confirming a WC DRUM on delay, a reason code has to be entered and these outlier events are collected and analysed by the **MO confirmation Outlier Event report**

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The Shipping Time Buffer determination

The Shipping Time Buffer is to protect customer delivery for the variability of the upstream production/procurement activities.
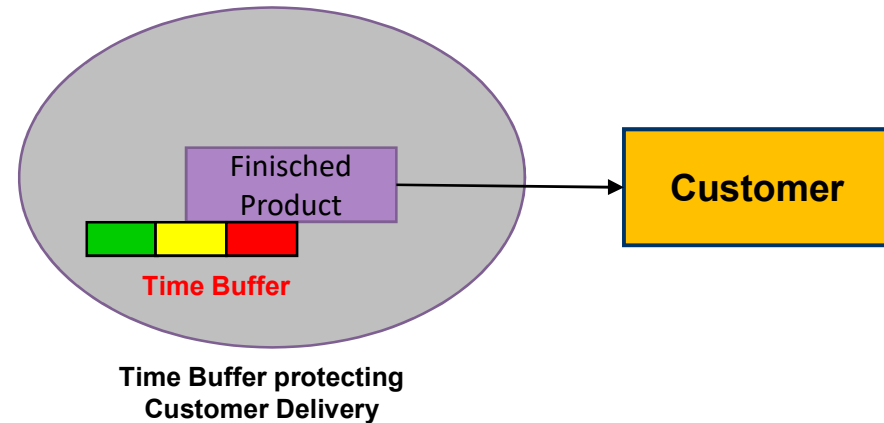
Finisched Product

Time Buffer

Customer

Time Buffer protecting Customer Delivery

In the Time buffer profile setting, a variability factor is to define how it is volatile and uncertain the upstream activities.

The time buffer determination is as follows:

- In case of production process, the profile is assigned to its BoM and all upstream operations are taken into account

- For purchase items, the profile is assigned to its supplier info

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The Shipping Time Buffer management

The Time buffer is determined from the Customer delivery data (for MTO Sales Order) backwards.

Its time zones are calculate as follows:

- Green date = time buffer
- Yellow date = 2/3 time buffer
- Red date = 1/3 time buffer

The green date represents the MRP date, i.e. the relevant date for planning purposes.

The time buffer is calculated in working days.

When delivering fully the sales order item, the buffer is closed.

MRP date   **Planned delivery date**

Green Zone   **Red Zone**

Yellow Zone

Shipping Time Buffer
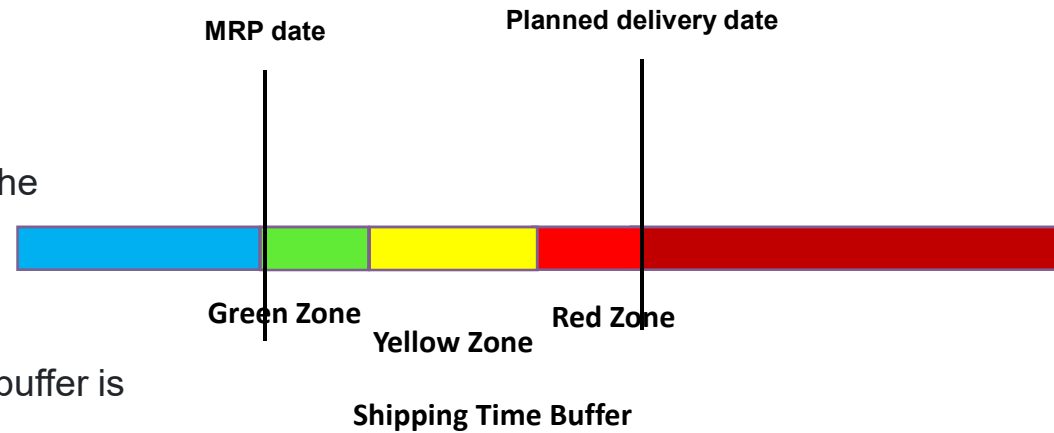
The Production Time Buffer penetration can be monitored at MTO sales order level by the **Sales Order Lines Progress Report**
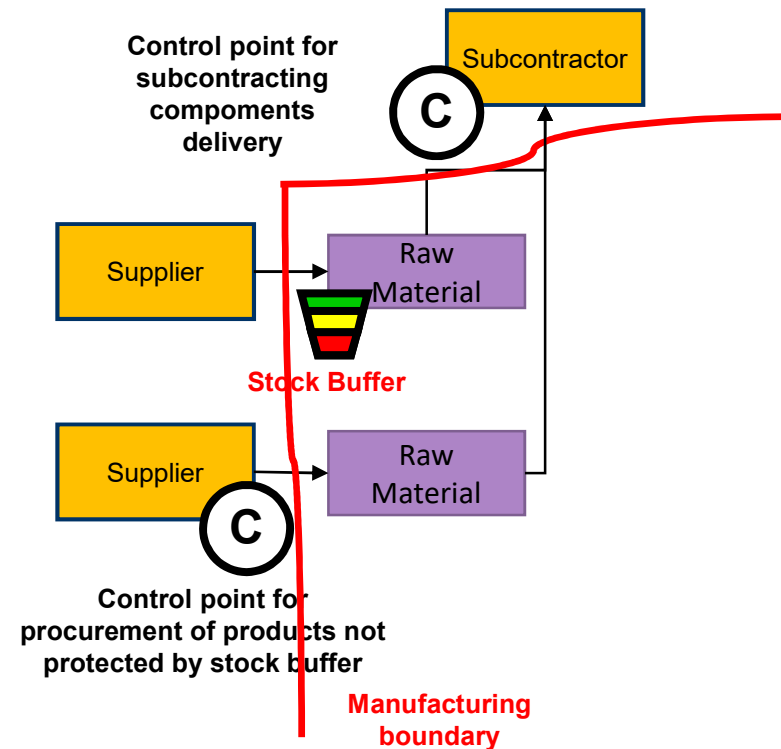
When delivering a MTO sales order item on delay, a reason code has to be entered and these outlier events are collected and analysed by the **Delivery Outlier Event report**

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DDOM: Control Points

Control Points (1/2)

Control Points can be defined to monitor material flow at the manufacturing process "boundary"

Check is provided to avoid to control material flow in case in the downstream stock is protected by a stock buffer

Control point for subcontracting compoments delivery

Subcontractor

C

Supplier

Raw Material

Stock Buffer

Supplier

C

Raw Material

Control point for procurement of products not protected by stock buffer
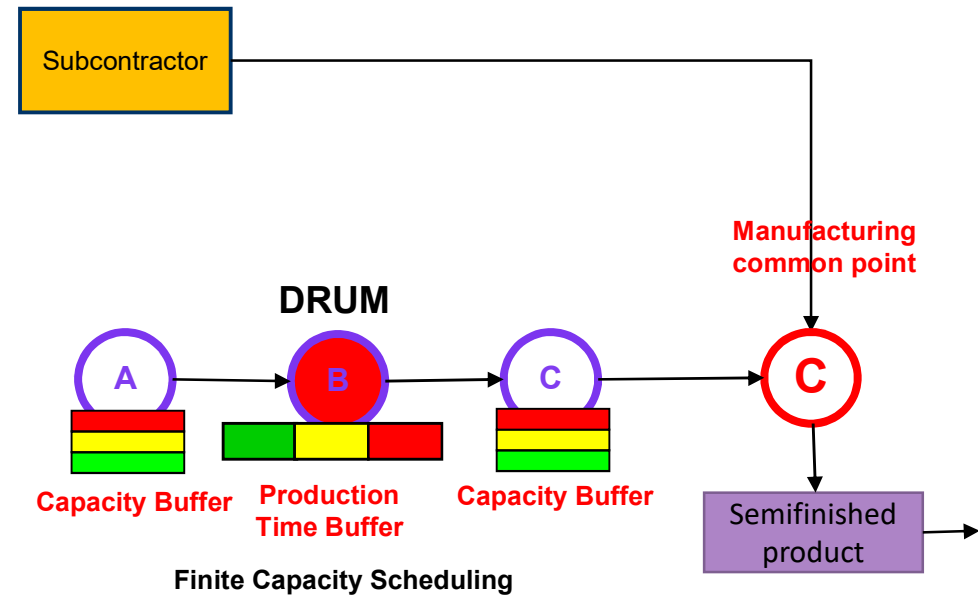
Manufacturing boundary

The monitoring Lead Time penetration related to critical purchase items procurement can be performed at purchase item level by the **Control Point Purchase Lines Progress Report**

The monitoring Lead Time penetration related to critical subcontracting components replenishment can be performed at stock move level by the **Control Point Subcontracting Stock Moves Progress Report**

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Control Points (2/2)

Control Points can be defined to monitor material flow at the manufacturing process common points

Check is provided to avoid to control material flow in case in the downstream stock is protected by a stock buffer

Subcontractor

Manufacturing common point

DRUM

A → B → C → C

Capacity Buffer   **Production Time Buffer**   **Capacity Buffer**   **Semifinished product**

Finite Capacity Scheduling

The monitoring Lead Time penetration related to subcontracting items procurement fulfilling a production common point can be performed at purchase item level by the **Control Point Purchase Lines Progress Report**

The monitoring Lead Time penetration related to manufacturing orders fulfilling a production common point can be performed at manufacturing order level by the **Control Point Manufacturing Order Progress Report**

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DDOM: Reporting

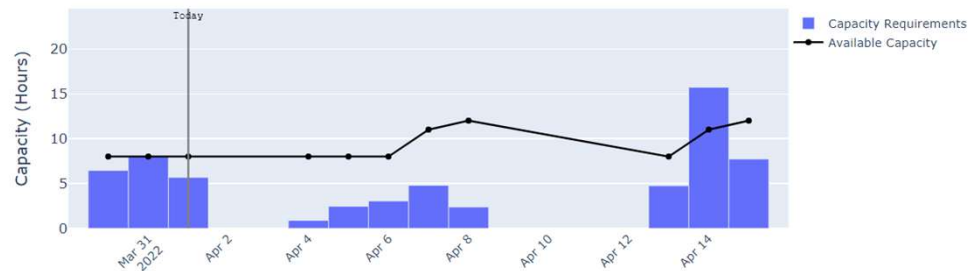# The Work Center Capacity Loading report

The capacity loading of all WCs can be monitored by comparing over the time the capacity requirements with the available capacity

in the Work Center master data a bar chart is available for comparing capacity requirements with the available capacity over the time. The overloads can be detected immediately.

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The Control Point Purchase Lines Progress Report

It is possible to monitor critical supplying (critical vendor), which could not be protected by a stock buffer, by placing a "purchase" control point.
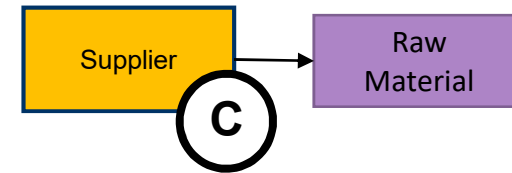
Control point for procurement of products not protected by stock buffer

The **Time Alert** period is calculated from the planned delivery date based on a profile buffer assigned to a supplier info and the purchase LT.

When receiving finally the goods, the purchase order position is closed.

All remarks log are stored in the purchase order history.

Control Point PO Lines Progress Report

Search...

▼ Filters   ≡ Group By   ★ Favorites   ⟳ 1-1 / 1 ‹ ›

☐ Order Reference		Partner	Product	Quantity	UoM	Received Qty	Status	Delivery Date ▾	LT Alert Horizon(days)	LT Priority	Fully Delivered	⋮
☐ P00001	UPDATE	Vendor_001	RM-001	10,00	Units	0,00	Locked	30/10/2022 12:00:00	2,50		☐	LOG REASON TEXT

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The Control Point Subcontracting Stock Moves Progress Report (1/2)

It is possible to monitor the subcontracting components replenishment process (i.e. critical subcontractor with unstable manufacturing process hence it is necessary to monitor the components replenishment process), which could not be protected by a stock buffer, by placing a "components subcontracting" control point.

Control point for subcontracting compoments delivery

C

Subcontractor

Supplier

Raw Material

Stock Buffer
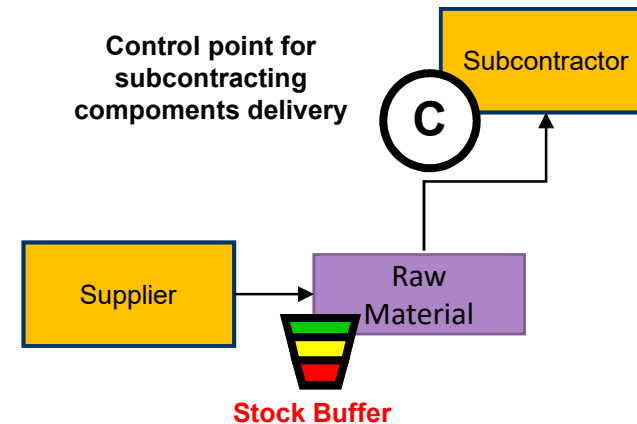
For the determination of **Time Alert** period two business cases are managed:

- Component provided by a purchase process (as shown in the above picture)
- Component provided by a manufacturing process

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The Control Point Subcontracting Stock Moves Progress Report (2/2)

The alert period is calculated from the planned delivery date of the replenishment picking.

For determining the variability of subcontracting manufacturing process, a profile buffer has to be assigned to the subcontractor.

For purchased items, the purchase LT from the "main" supplier is to calculate the time alert period.

For produced items, the DLT is used from the "main" BoM.

When transferring finally the goods to subcontractor, the stock move position is closed.

All remarks log are stored in the picking history.

Control Point SUB Stock Moves Progress Report

Transfer	Destination Address	Product	Quantity	UoM	Status	Deadline ▾	LT Alert Horizon(days)	Red Date	Yellow Date	Green Date	LT Priority	
PP/OUT/00008 UPDATE		Spare Part 001	1,00	Units	Available	20/10/2022 16:47:13	2,50	19/10/2022 20:47:13	19/10/2022 00:47:13	18/10/2022 04:47:13	0.0 %	LOG REASON TEXT

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The Control Point Manufacturing Orders Progress Report (1/2)

It is possible to monitor manufacturing common point for the following two business cases:

- Product in subcontracting (supported by the PO list described before)
- Product manufactured

Subcontractor

Manufacturing common point

DRUM

A   B   C   C

Production Time Buffer   **Capacity Buffer**

Semifinished product

Finite Capacity Scheduling
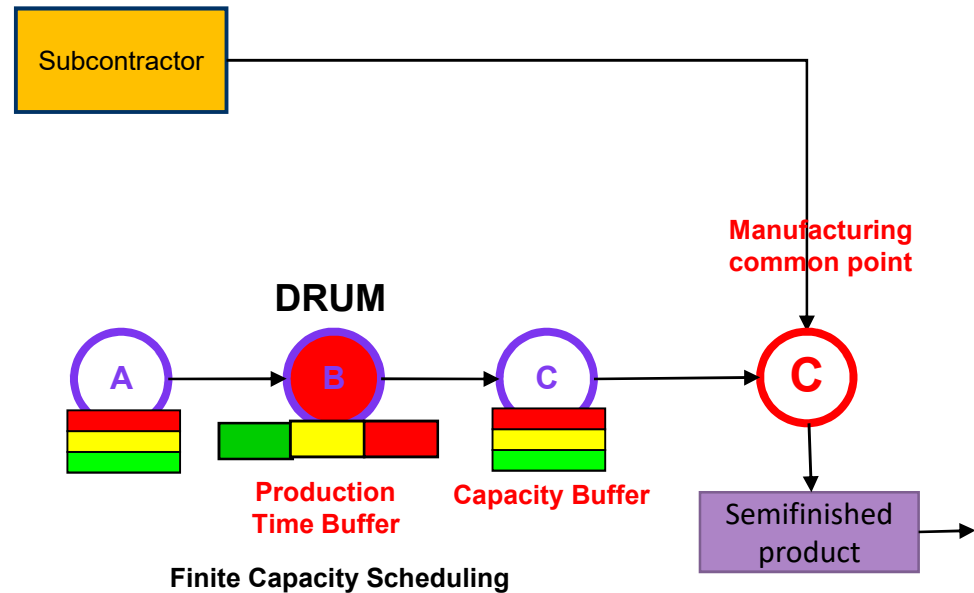
Control Point MO Progress Report

Search...

▼ Filters   ≡ Group By   ★ Favorites   1-3 / 3   ‹ ›

	Reference		Product	Qty	Uo...	Source	State	Responsible	Next Activity	Planned Start ...	Planned End Pi...	LT Alert Horizo...	Red Date	Yellow Date	Green Date	Time Buffer Pri...	
☐	PP/MO/00007	UPDATE	SF-001	1,00	Units		Confirmed	Claudio Candit⊙		20/10/2022 16:0...	27/10/2022 12:0...	10,00	27/10/2022 08:4...	26/10/2022 14:2...	26/10/2022 10:0...	-362.0 %	LOG REASON TEXT
☐	PP/MO/00009	UPDATE	SF-001	1,00	Units		Confirmed	Claudio Candit⊙		20/10/2022 16:0...	27/10/2022 12:0...	10,00	27/10/2022 08:4...	26/10/2022 14:2...	26/10/2022 10:0...	-362.0 %	LOG REASON TEXT
☐	PP/MO/00008	UPDATE	SF-001	1,00	Units		Confirmed	Claudio Candit⊙		20/10/2022 16:0...	27/10/2022 12:0...	10,00	27/10/2022 08:4...	26/10/2022 14:2...	26/10/2022 10:0...	-362.0 %	LOG REASON TEXT

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For manufactured products a profile buffer has to be assigned to the BoM to indicate the manufacturing process variability.

The time alert period is calculated from the planned finished pivot date by taking into account the manufacturing LT.

For Purchased products (supported by the PO list described above) the profile buffer has to be assigned to the supplier info.

The time alert period is calculated from the planned delivery date of subcontracted item by considering the purchase LT.

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