

OpenValue
Consulting

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OpenValue DDMRP Solution

The OpenValue DDMRP Solution

- 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.
- DDMRP apps are officially **certified by the Demand Driven Institute** (demanddriveninstitute.com) as compliant with both the **DDMRP** and the **DDOM (Demand Driven Operating Model)** criterias.

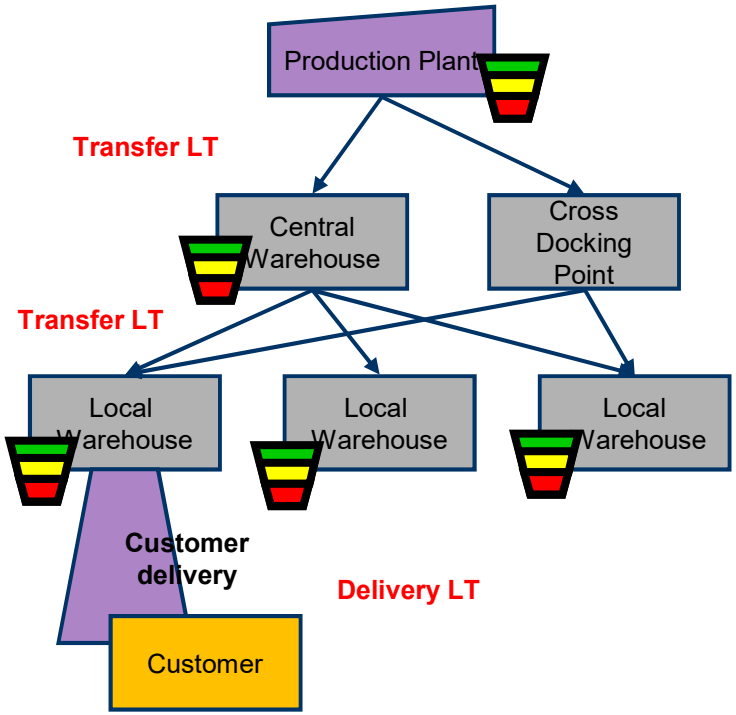
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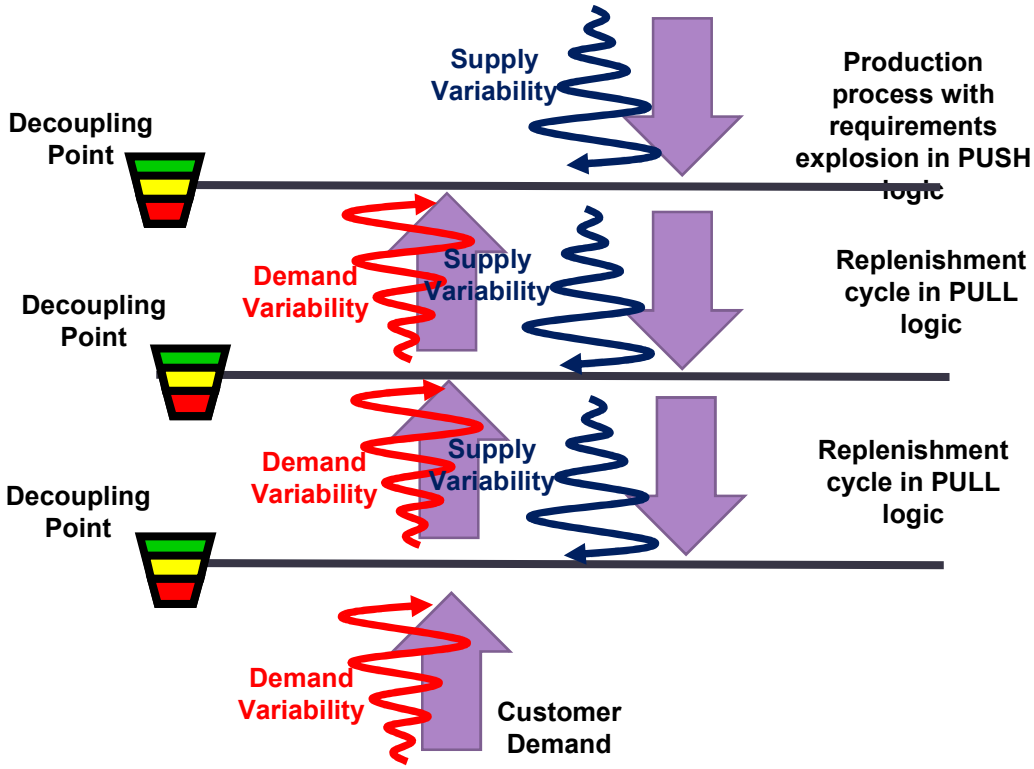
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The OpenValue DDMRP solution in supply chain management

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

Distribution network





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

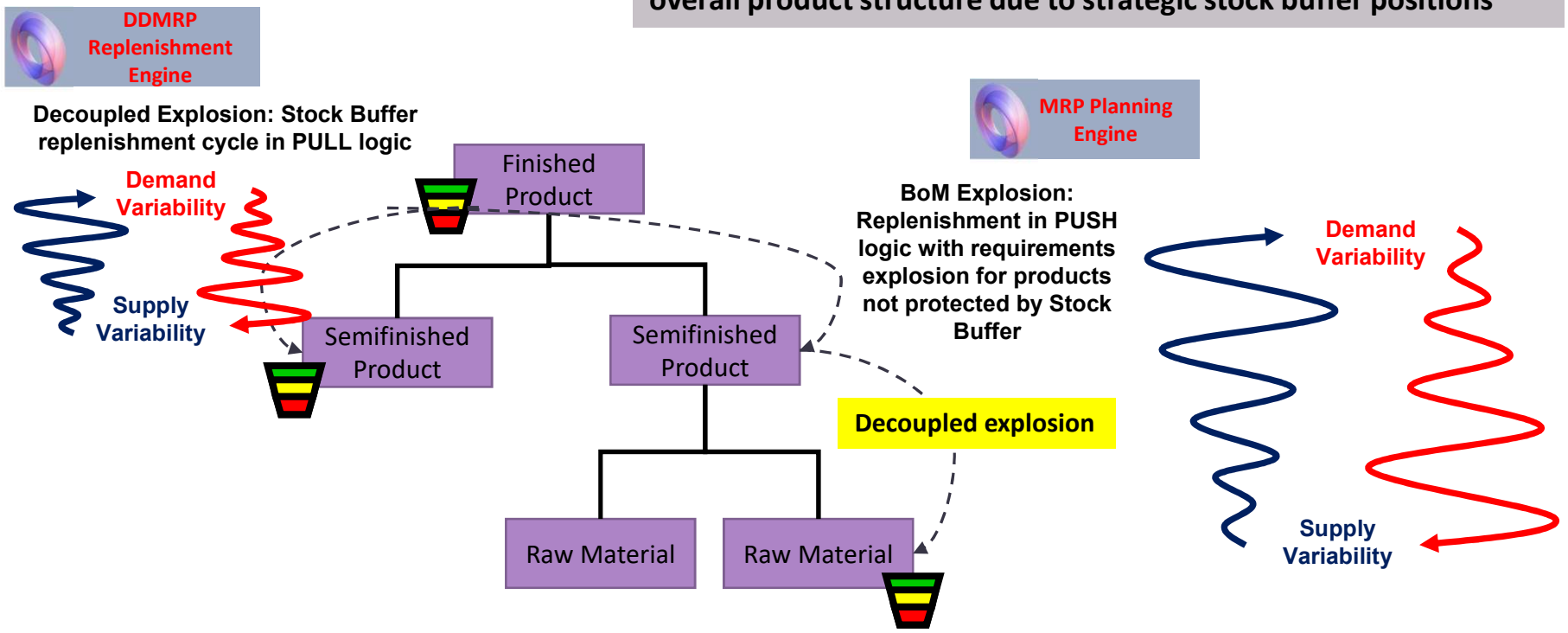
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The OpenValue DDMRP Solution material planning for manufacturing plants

Manufacturing Plant

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



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

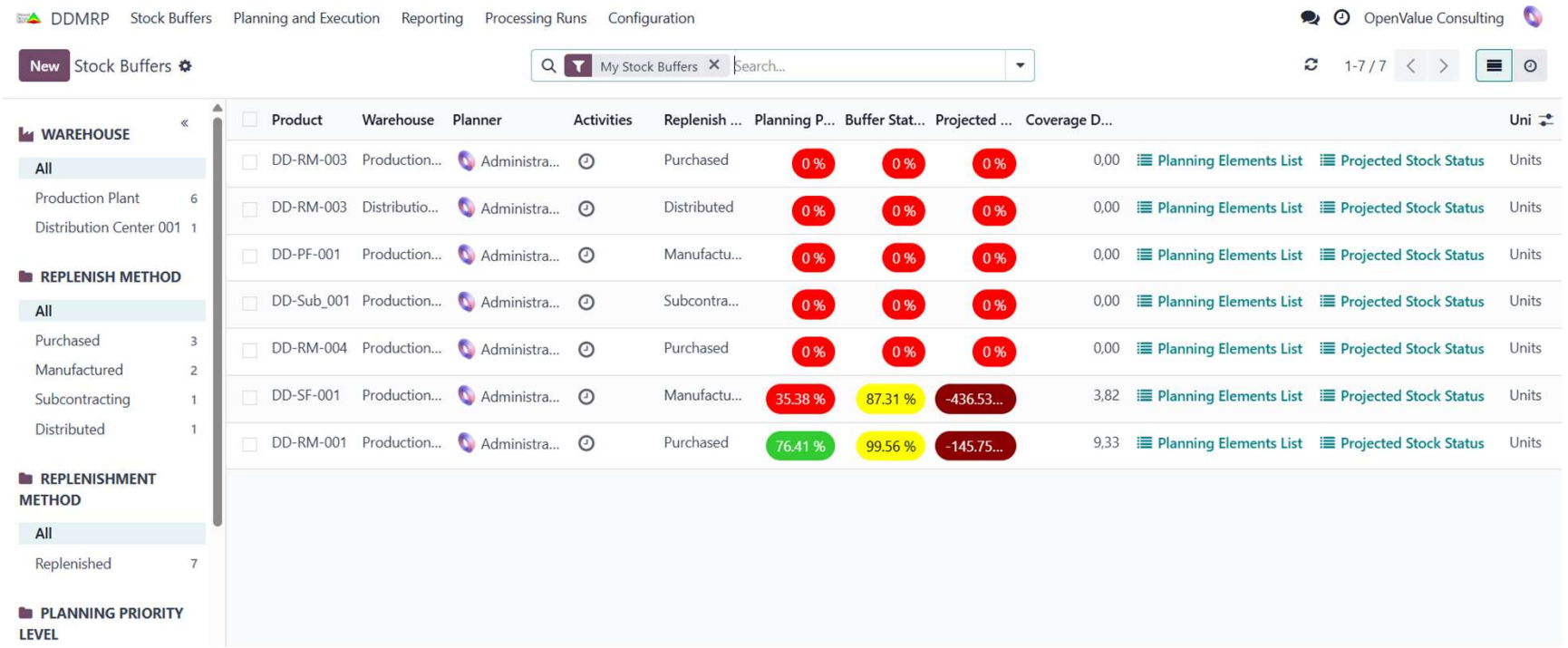
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DDMRP: Stock Buffer Management

Stock Buffer dashboard

The dashboard provides an overview of the overall buffer status and enables their efficient management



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Stock Buffer Master Data

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.

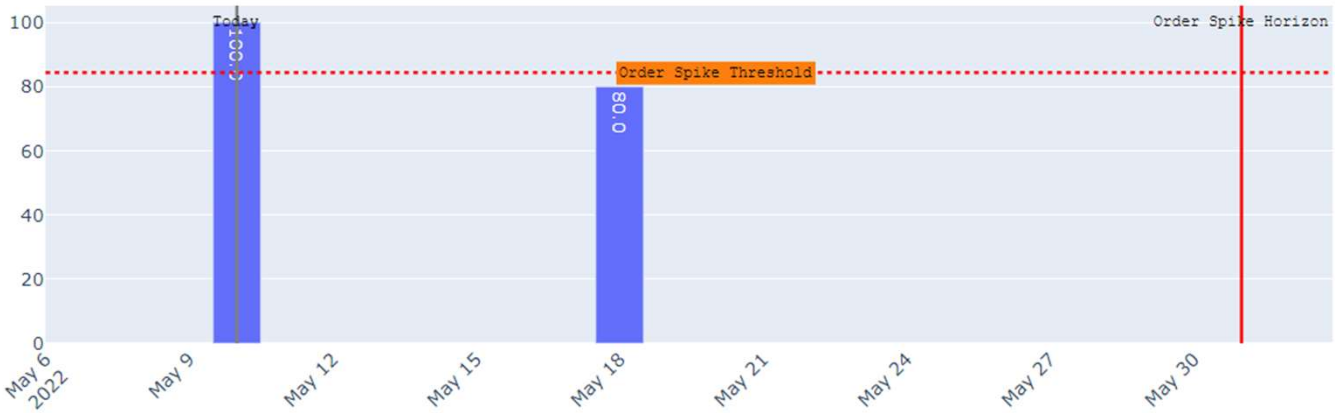


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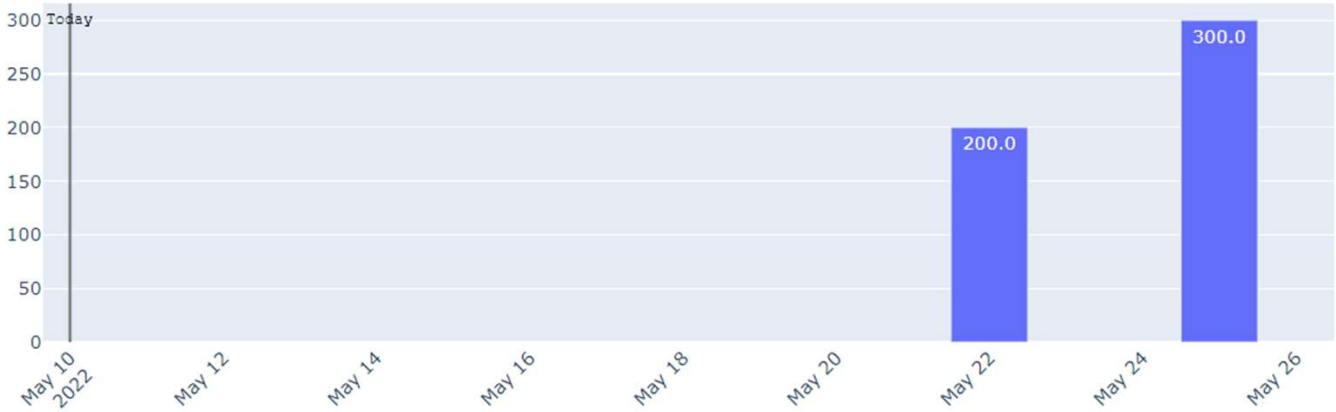
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Stock Buffer management

Qualified demand graph and



Incoming supply graph are available also.

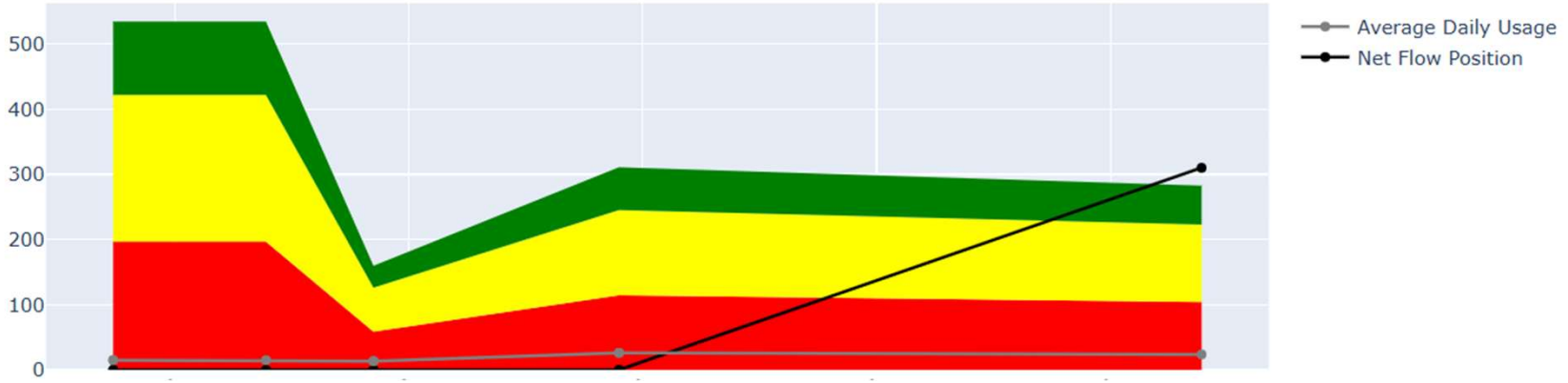


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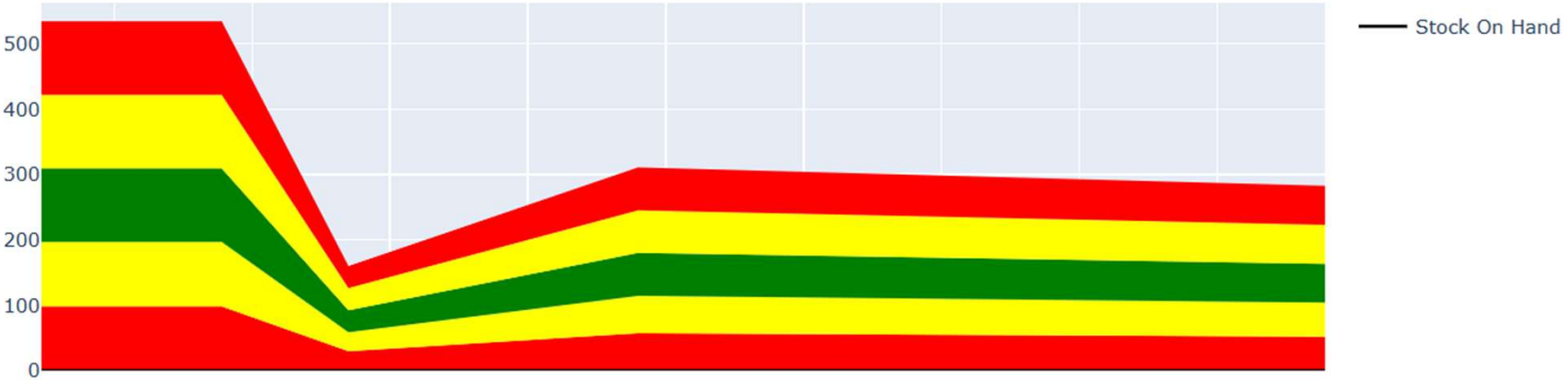
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Stock Buffer management

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.



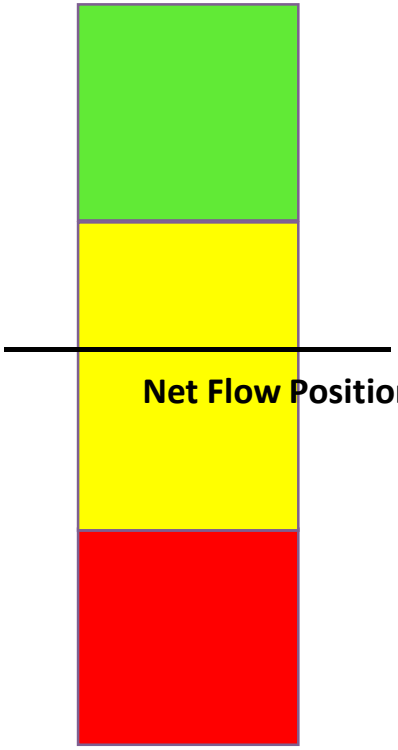
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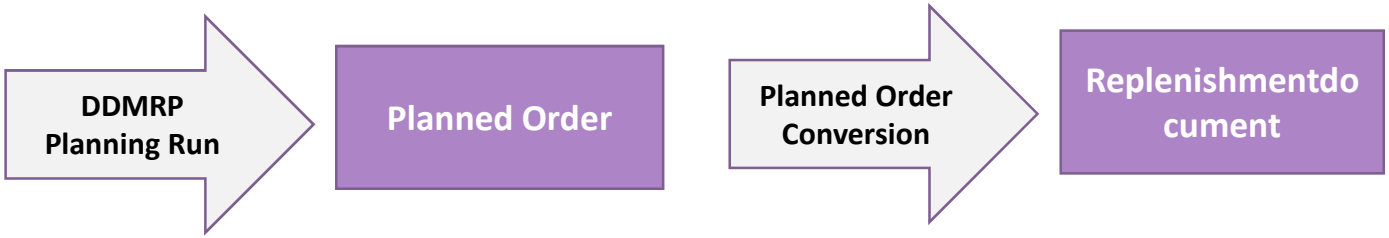
DDMRP: Planning and Execution

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.



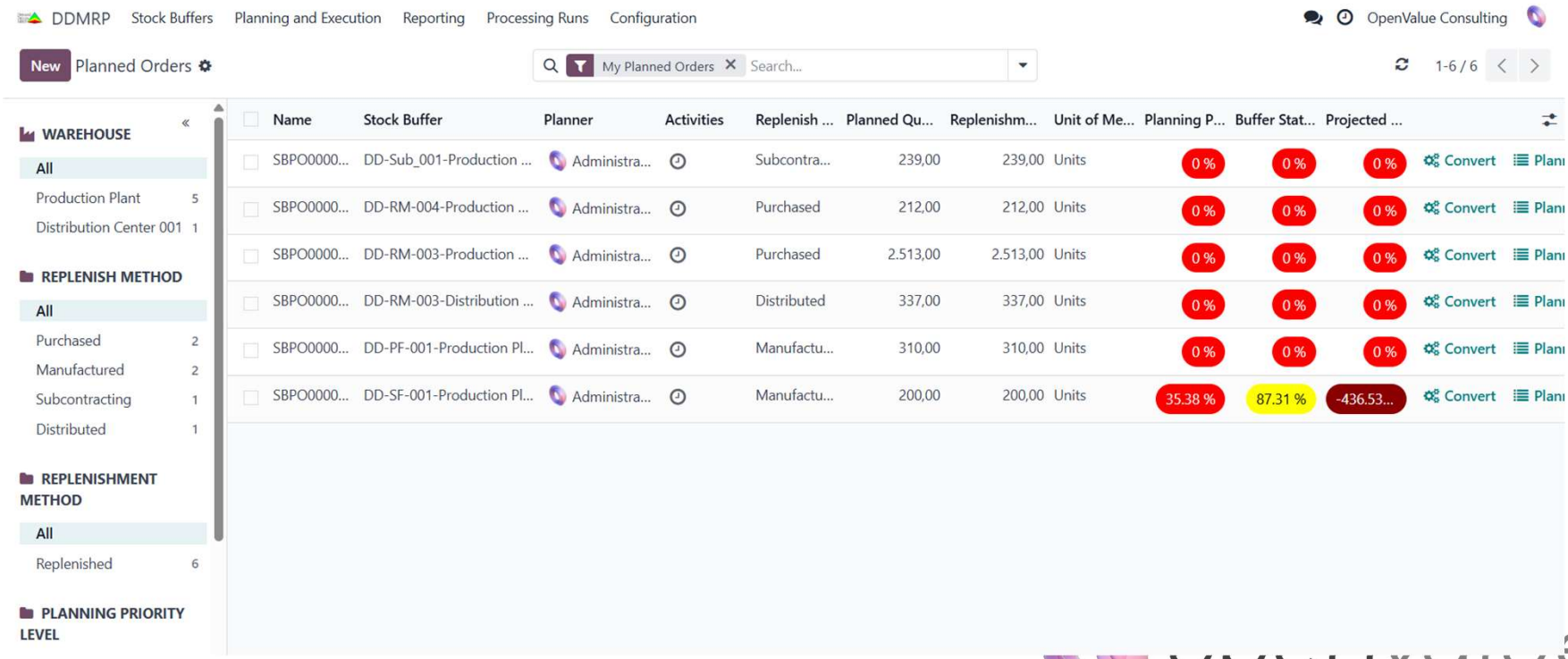
Stock Planned Orders are to be converted in replenishment documents, i.e. **purchase orders, stock transfer or manufacturing orders**. The conversion is addressed by the supply method, automatically determined in the stock buffer master data.

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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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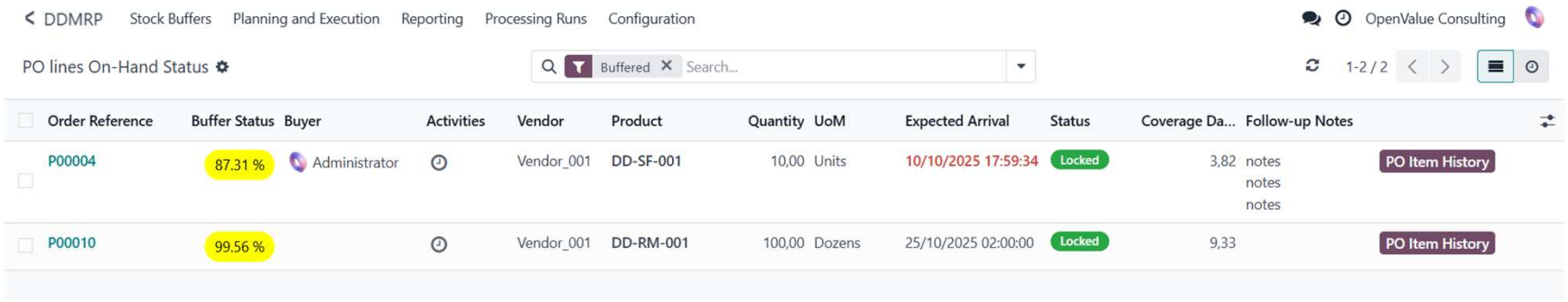
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On Hand Status monitors

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.



Notes can be added to track any anomalies.

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DDMRP: Average Daily Usage Calculation

Average Daily Usage calculation methods

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

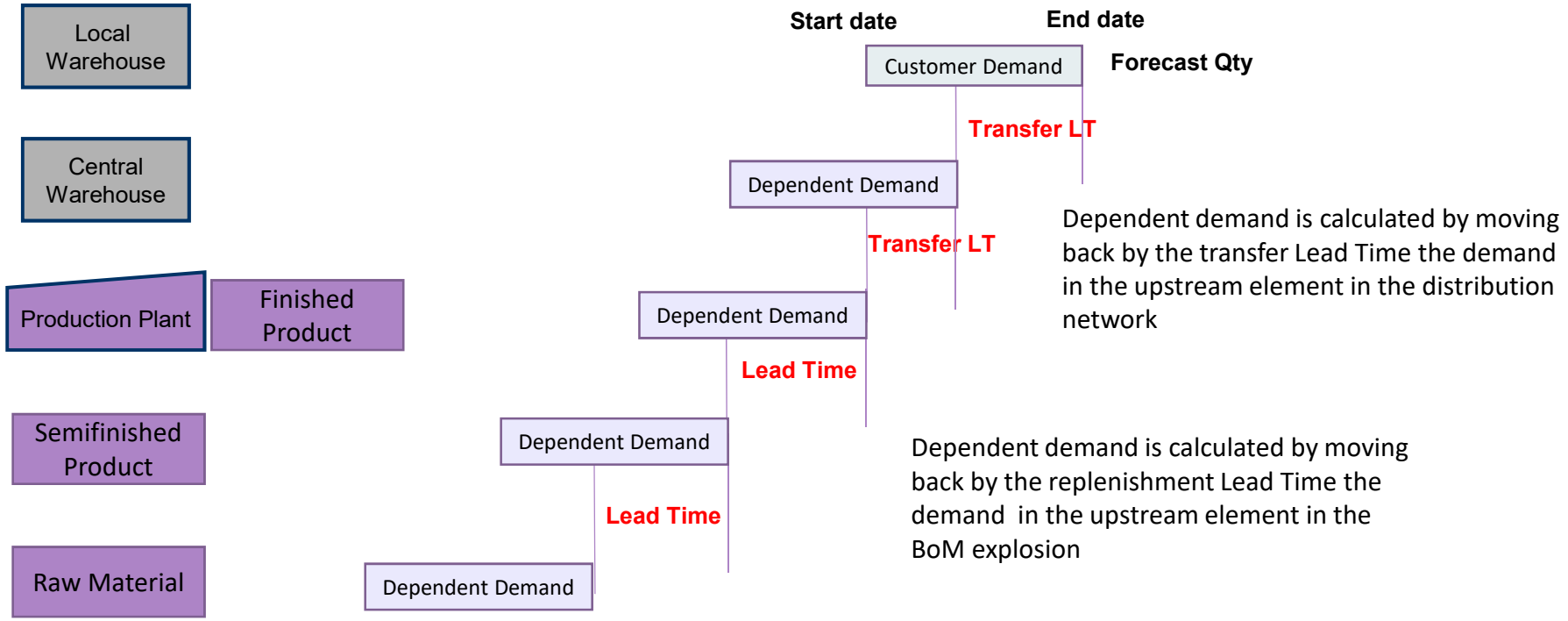
- **Fixed:** a manual value has to be entered manually and therefore its has been determined out of the system
- **Past (based on stock goods consumption moves):** according to this method, the ADU is calculated as average quantity of all goods consumption moves in a time horizon; several methods can 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.

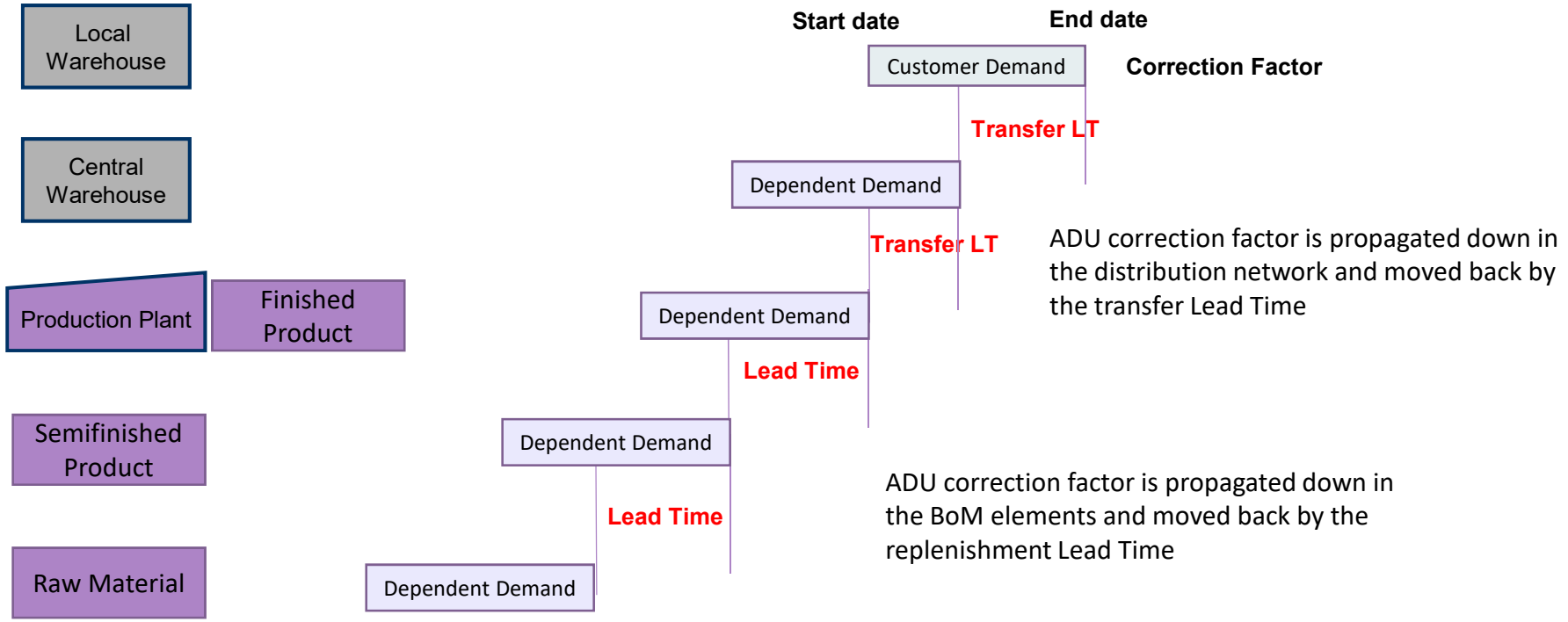


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Stock Buffer Demand Adjustment

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

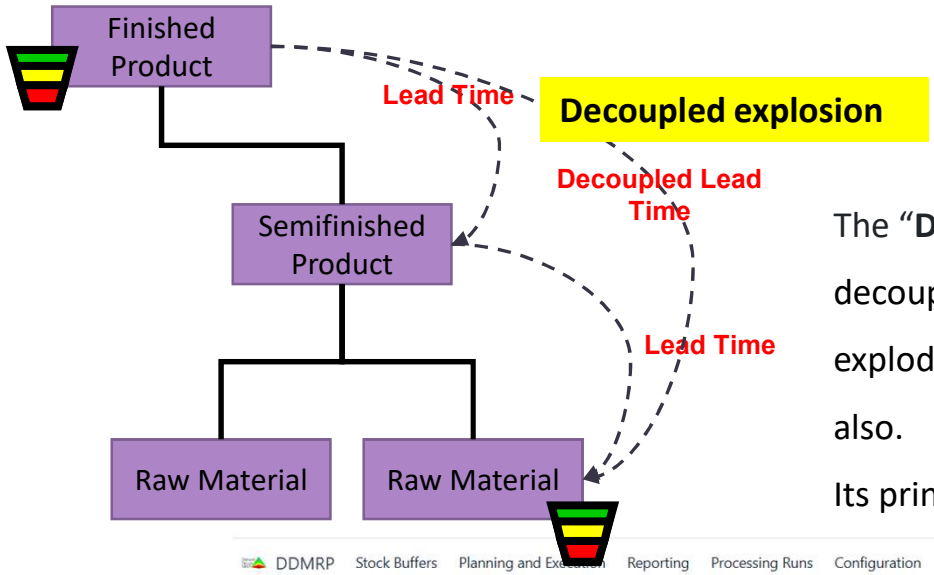


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DDMRP: Reporting

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 also.

DDMRP Stock Buffers Planning and Execution Reporting Processing Runs Configuration OpenValue Consulting

Stock Buffers
BoM explosion Decoupled Lead Time

1 / 1

Print BoM Explosion

Product	DDPF-001	BoM Quantity	1,00 Units	LT (days)	5,00
BoM	DDPF-001 Manufacture this product	Replenish Method	Produce	CLT (days)	25,00
Warehouse	Production Plant	Buffer	☑	DLT (days)	25,00

BOM EXPLOSION

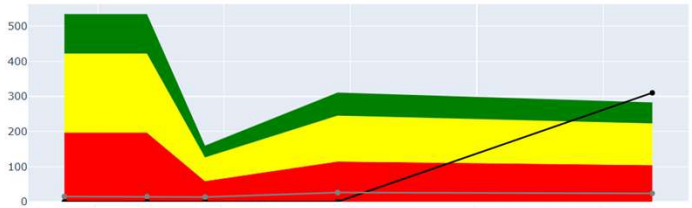
BoM Level	Product	Qty	UoM	Is Storable?	Replenish Method	Buffer	BoM	LT (days)	DLT (days)	CLT (days)	Critical Path
1	DDSF-001	1,00	Units	☑	Produce	☑	DDPF-001	5,00	15,00	15,00	☐
2	RM-001	1,00	Units	☑	Buy	☐	DDSF-001	10,00	10,00	10,00	☐
2	RM-002	1,00	Units	☑	Buy	☐	DDSF-001	10,00	10,00	10,00	☐
2	Consumable 001	1,00	Units	☐	Buy	☐	DDSF-001	10,00	10,00	10,00	☐
2	DDRM-001	1,00	Units	☑	Buy	☑	DDSF-001	10,00	10,00	10,00	☐
2	DDRM-002	1,00	Units	☑	Buy	☑	DDSF-001	10,00	10,00	10,00	☐
1	DDSub_001	1,00	Units	☑	Subcontracting	☑	DDPF-001	10,00	20,00	20,00	☐
2	RM-001	1,00	Units	☑	Buy	☐	DDSub_001	10,00	10,00	10,00	☐

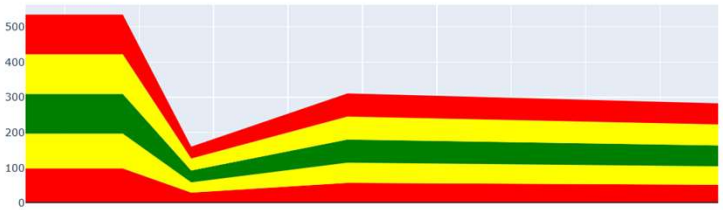
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Stock Buffer History

All main stock buffer figures are tracked over the time





Stock Buffer History

Search...

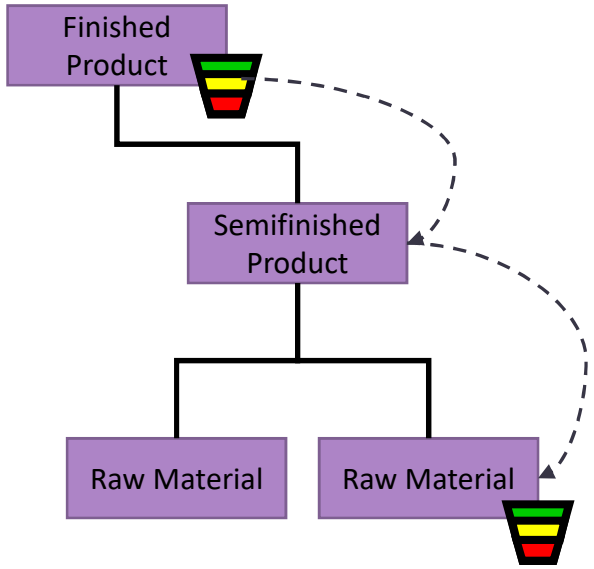
Measures | Insert in Spreadsheet

	Total					
	October 2025					
	ADU	TOG	TOY	TOR	NFP	OHP
Total	**40,83**	**1.022,30**	**750,35**	**356,83**	**111,10**	**39,58**
DD-RM-003-Production Plant	60,77	1.633,22	1.177,44	569,73	-103,33	0,00
DD-RM-003-Distribution Center 001	15,00	337,50	262,50	112,50	0,00	0,00
DD-PF-001-Production Plant	19,36	348,61	275,21	128,44	34,44	0,00
DD-Sub_001-Production Plant	12,38	201,18	170,22	46,42	-310,00	0,00
DD-RM-004-Production Plant	10,00	212,50	162,50	62,50	0,00	0,00
DD-SF-001-Production Plant	16,37	313,16	247,23	115,38	624,44	11,11
DD-RM-001-Production Plant	102,38	2.751,46	1.983,61	959,81	105,89	200,00

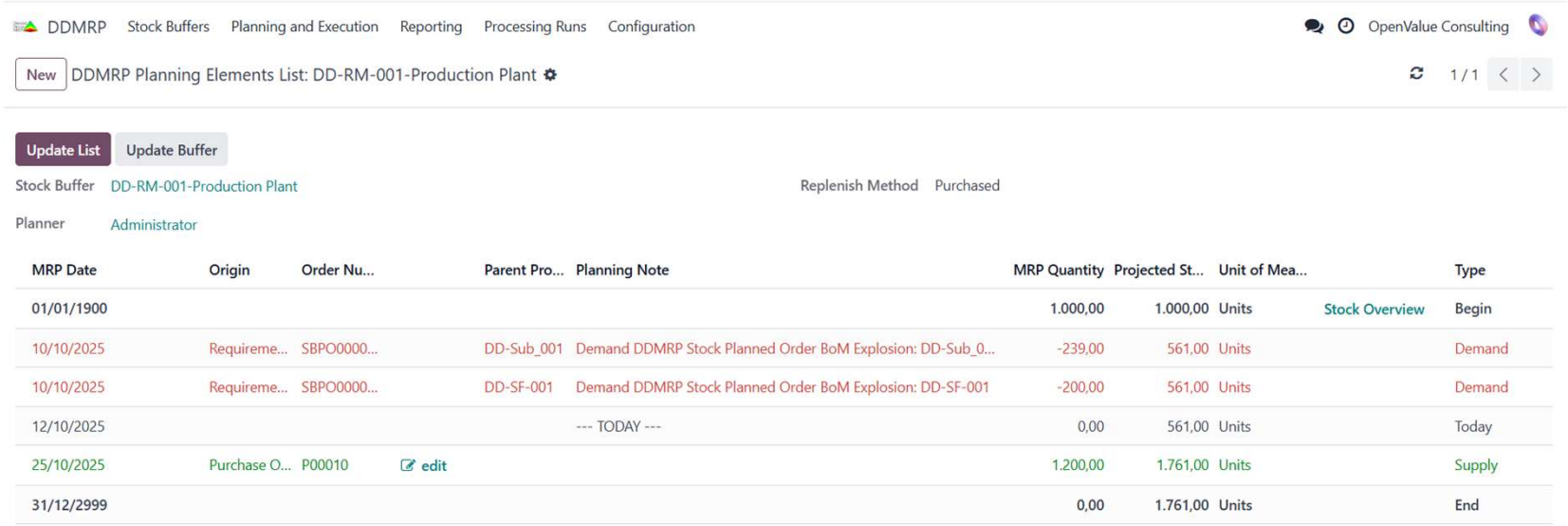
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Planning Elements List



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.

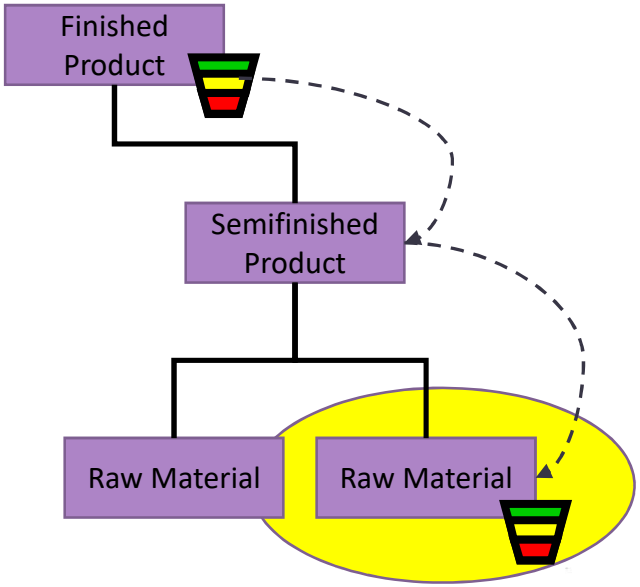


MRP Date	Origin	Order Nu...		Parent Pro...	Planning Note	MRP Quantity	Projected St...	Unit of Mea...		Type
01/01/1900						1.000,00	1.000,00	Units	Stock Overview	Begin
10/10/2025	Requireme...	SBPO0000...		DD-Sub_001	Demand DDMRP Stock Planned Order BoM Explosion: DD-Sub_0...	-239,00	561,00	Units		Demand
10/10/2025	Requireme...	SBPO0000...		DD-SF-001	Demand DDMRP Stock Planned Order BoM Explosion: DD-SF-001	-200,00	561,00	Units		Demand
12/10/2025					--- TODAY ---	0,00	561,00	Units		Today
25/10/2025	Purchase O...	P00010	edit			1.200,00	1.761,00	Units		Supply
31/12/2999						0,00	1.761,00	Units		End

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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.

BUYER PERSPECIVE

DDMRP Projected Stock Status

Stock Buffer DD-RM-001-Production Plant

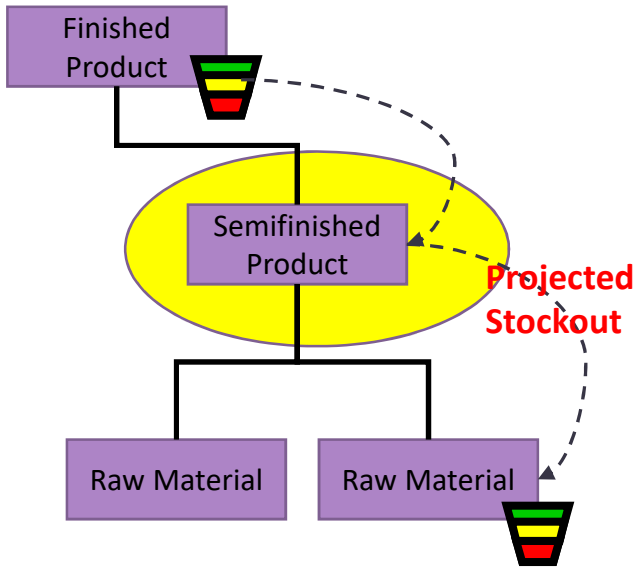
Replenish Method Purchased

Planner Administrator

MRP Date	Projected Qty	Available Qty	Issues Qty	Receipts Qty	Projected Stock Status
12/10/2025	561,00	1.000,00	-439,00	0,00	55.85 %
13/10/2025	561,00		-439,00	0,00	55.85 %
14/10/2025	561,00		-439,00	0,00	55.85 %
15/10/2025	561,00		-439,00	0,00	55.85 %
16/10/2025	561,00		-439,00	0,00	55.85 %
17/10/2025	561,00		-439,00	0,00	55.85 %
18/10/2025	561,00		-439,00	0,00	55.85 %

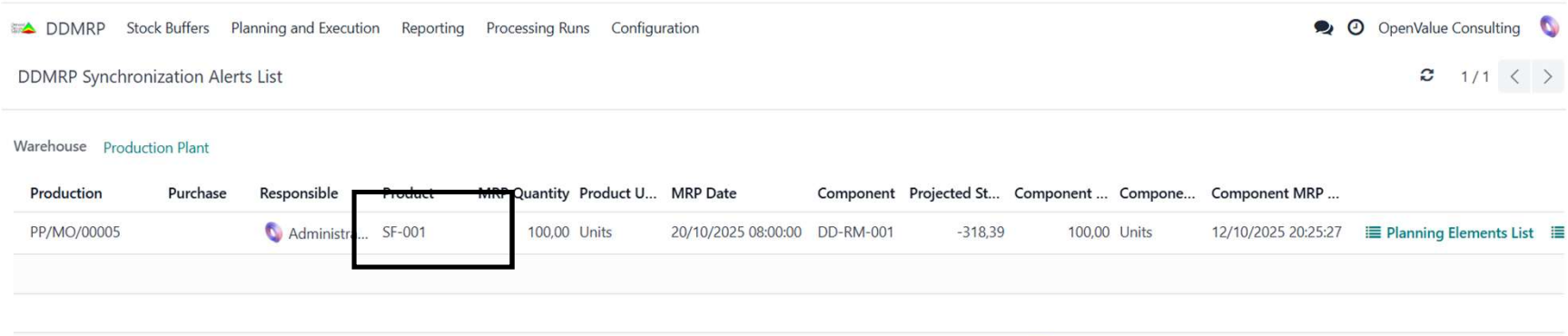
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Synchronization Alerts List



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.

PLANNER PERSPECIVE

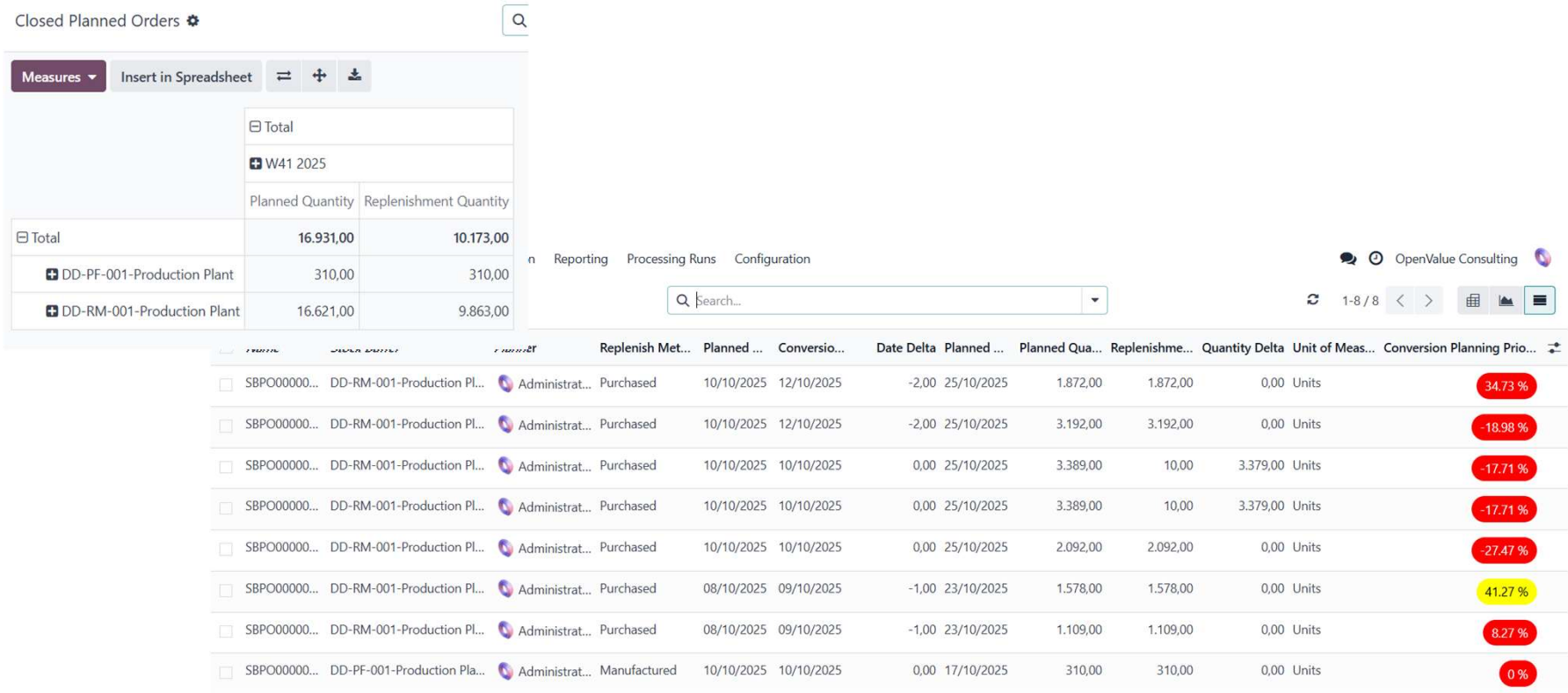


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Stock planned order conversion report

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.



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DDMRP Subcontracting List

- In case the stock buffer has Sibcontracting Replenishment Method, the subcontracting components replenishment process supported by the "**DDMRP Subcontracting List**"
- The transfer of components to subcontractors is based on components requirements: in case of projected stock quantity shortage in subcontracting location, a replenishment element, the "**Subcontracting Stock Replenishment Order**", is created
- By releasing a Stock Subcontracting Replenishment Order, a delivery stock transfer is created from warehouse stock to subcontracting location

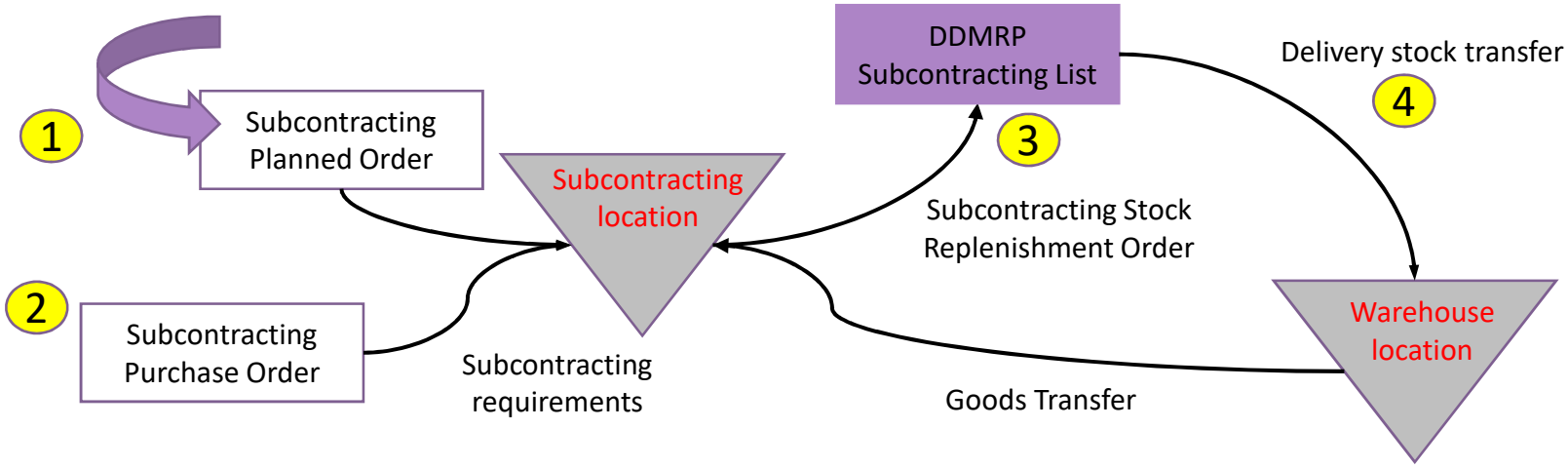
The "DDMRP Subcontracting List" supports the subcontracting component replenishment process based on the projected stock quantity shortage

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The Subcontracting Replenishment process

DDMRP run



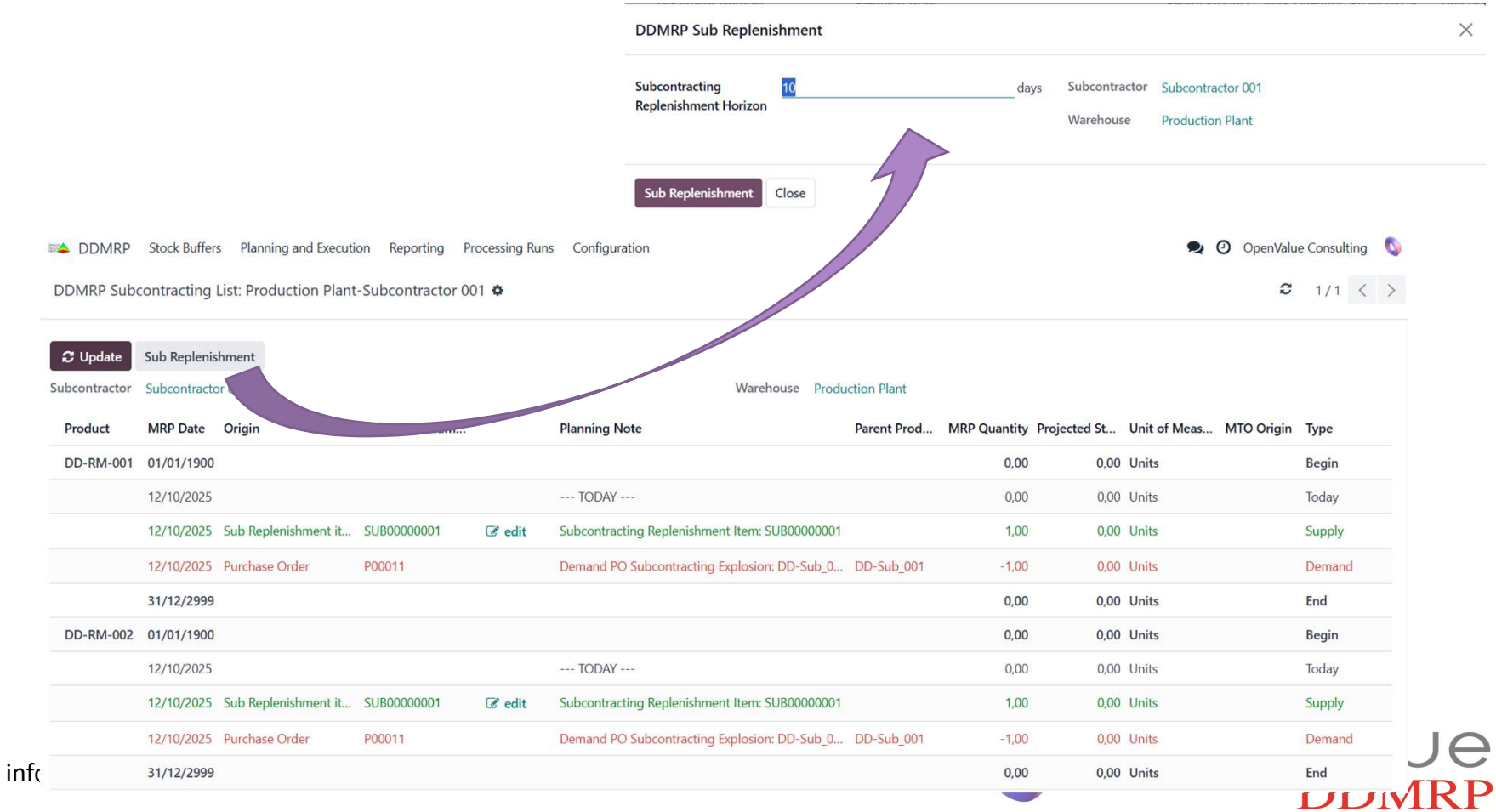
1. the DDMRP run creates a subcontracting planned order; the subcontracting BoM explosion creates subcontracting requirements on subcontracting location
2. The subcontracting PO confirmation triggers the components subcontracting replenishment process
3. the DDMRP Subcontracting list points out the projected stock shortage and creates a **Subcontracting Stock Replenishment Order** to fulfill requirements on subcontracting locazion
4. When confirming the Subcontracting Stock Replenishment Order, a delivery stock transfer is created to fulfill subcontracting requirements

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DDMRP Subcontracting List

- By specifying the replenishment horizon, subcontracting replenishment orders are generated to cover subcontracting requirements.
- The component quantity can be changed
- The DDMRP Subcontracting List monitors in real time



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