

Planned Independent Requirements (PIR = ZVSF)

Target of PIR

ALERT: Please note that this chapter should only be used for experience SAP MM-PP experts and being centralized by only one or two people per plant.

Please use this only for materials with version Z0 and Z4 (for plants). The version 00 is being used by pre-series ALK and they apply this procedure by themselves.

Training PIR ZVSF Part 1 with examples MFA2 and Platines 20220303

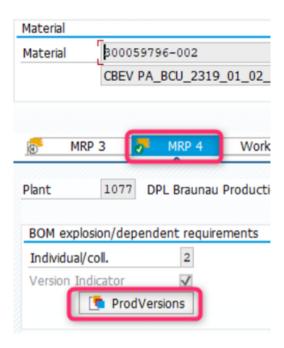
ZVSF are being used when customer demand is either not available or the forecast (e.g., 6 months) is too less to order components from our suppliers.
Staring point is that you get an Excel on monthly basis for a forecast on finished goods level. In our example we use 19 finished material numbers from ELFE production plant 1077 BRA.

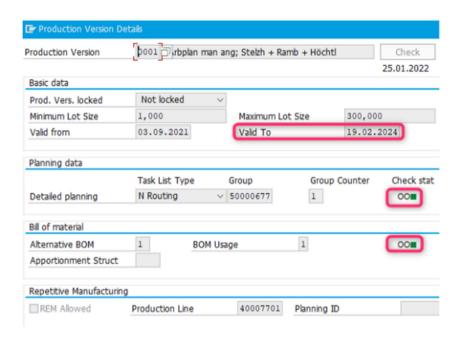
A	В	C	G	н	K	L	М	N	0	р	Q	R	S	Т	U	V	W
Kunde /	Ü	, and the second			M2022 01	M2022 02	141	M2022 04	M2022 05	M2022 06	M2022 07	M2022 08	M2022 09	M2022 10	M2022 11	M2022 12	Jahressumme
Empfänger																	2022
internes																	
	Kunde / Projekt	Bezeichnung	Aufschlag	(aktuelle) SAP Matnr.													
HUN	Porsche J1	Porsche J1 DIUS (inkl. BurnIn)	5%	108216253-018	7980	7980	7980	7980	7613	4730	1785	4730	4730	4730	4463	6809	71510
HUN	Porsche J1	Porsche J1 BCUE (VR12.1.1)	5%	108216243-033	7980	7980	7980	7980	7613	4730	1785	4730	4730	4730	4463	6809	71510
HUN	Audi CBEV	CBEV Interlock Low	5%	300002419-011	3880	4463	3686	4074	3880	3104	2328	4268	3880	4074	3106	4368	45109
HUN	Audi CBEV	CBEV SOP+1 DIUS LOW	5%	108681682-019	3880	4463	3686	4074	3880	3104	2328	4268	3880	4074	3106	4368	45109
HUN	Audi CBEV	CBEV SOP+1 BCU LOW (Index F)	5%	108611250-021	3880	4463	3686	4074	3880	3104	2328	4268	3880	4074	3106	4368	45109
HUN	Audi CBEV	CBEV Interlock High	5%	108681415-014	970	1115	922	1019	970	776	582	1067	970	1019	776	1092	11277
HUN	Audi CBEV	CBEV SOP+1 DIUS HIGH	5%	108577810-018	970	1115	922	1019	970	776	582	1067	970	1019	776	1092	11277
HUN	Audi CBEV	CBEV SOP+1 BCU HIGH (Index F)	5%	108611249-022	970	1115	922	1019	970	776	582	1067	970	1019	776	1092	11277
HUN	Audi CBEV	DIUS PL 49/58	5%	107751260-024	5726	7306	5726	5726	6575	5726	7157	5726	5726	6575	4293	5647	71907
	BMW Sternkoppler	Sternkoppler Variante 1	0%	300021731-016	187500	187500	187500	187500	187500	187500	187500	187500	187500	187500	187500	187500	2250000
	BMW Sternkoppler	Sternkoppler Variante 6	0%	300021748-013	187500	187500	187500	187500	187500	187500	187500	187500	187500	187500	187500	187500	2250000
	BMW FAAR WE	LIN Modul Basis FAAR WE	5%	190056296-010	3899	5068	4433	4655	5235	6246		17903	15611	21749	16539	32488	140744
	BMW FAAR WE	LIN Modul Mid FAAR WE	5%	190056298-010	205	267	233	245	276	329	364	942	822	1145	870	1539	7237
Marquardt	Audi	PPE DIUS PYRO	0%	300000016-021			1150	383	383	383		2167	767		1533	1533	10600
Marquardt	Audi	PPE DIUS ISO	0%	300017721-021			1150	383	383	383	767	2167	767	1533	1533	1533	10600
Marquardt	Porsche	PEE DIUS PYRO (Porsche Version)		300058376-007			636	775	202	212	1086	86			662		
Stellantis	Maserati	Maserati DIUS	5%	300020926-013	0	1050	0	0	0	1101	76	209	252	2365	197	252	5502
HUN	Audi CBEV PA	CBEV PA BCU LOW (CR059)	5%	300059796-002			105	53	210	0	945	0	2625	6405			
HUN	Audi CBEV PA	CBEV PA BCU HIGH (CR069)	5%	300059795-002			105	52,5	84	0	210	0	630	840			

Setting on Finished Material Number level (NOT-Activated Z4)

A) Active Production version

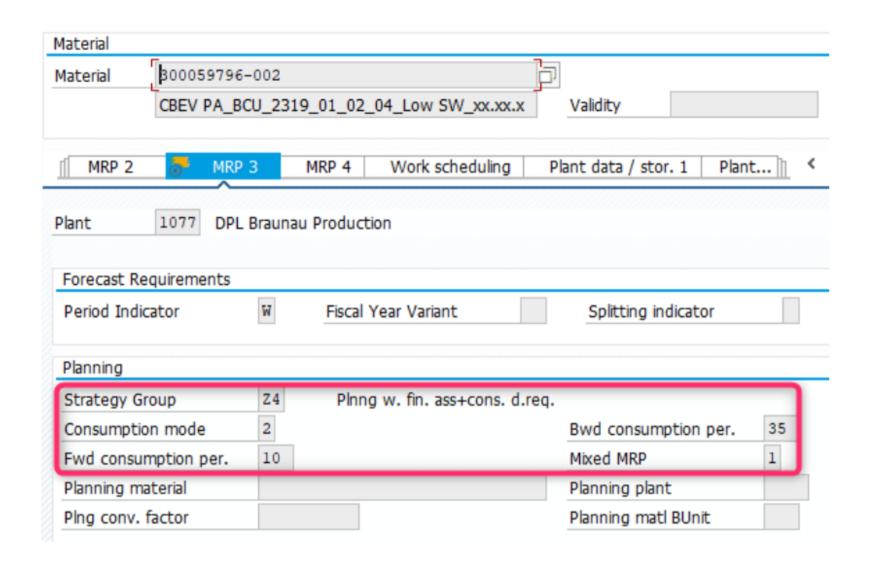
Please check before that all relevant finished material number have a valid and long enough production version incl. BoM and BoP (MM03-MRP4):





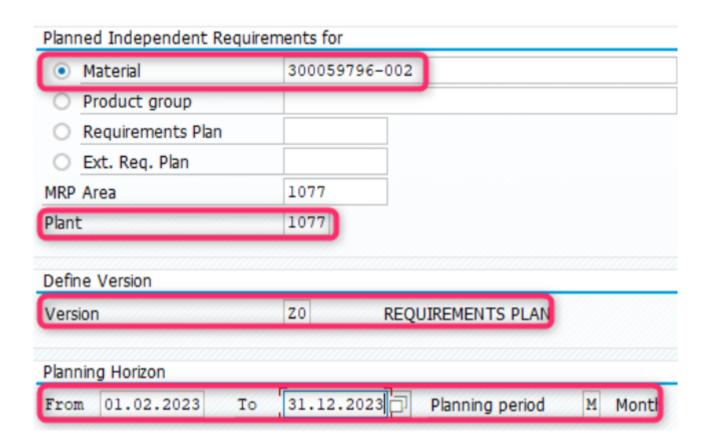
B) Check or maintain Master Data

Following fields must be set, especially the Strategy Group "Z4" (MARC-STRGR) as well Mixed MRP "1" (MARC-MISKZ). Normally this setting is default during MDG workflow:



C) Maintain PIR ZVSF in MD63 table (MD61)

In the last step you can now maintain the forecasted quantities per month via the transaction MD61:



If the Strategy Group is not maintained following error message occurred:

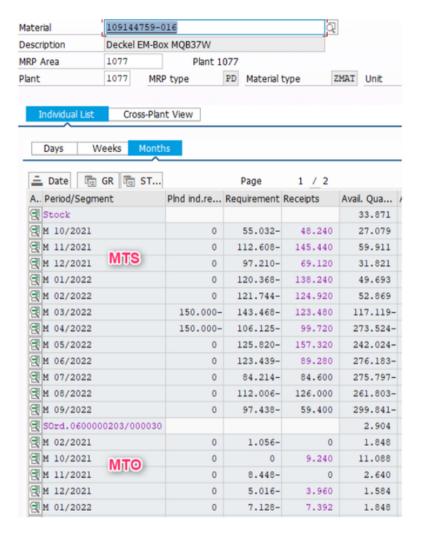
No requirement type exists for material 300000016-016 in plant 1077

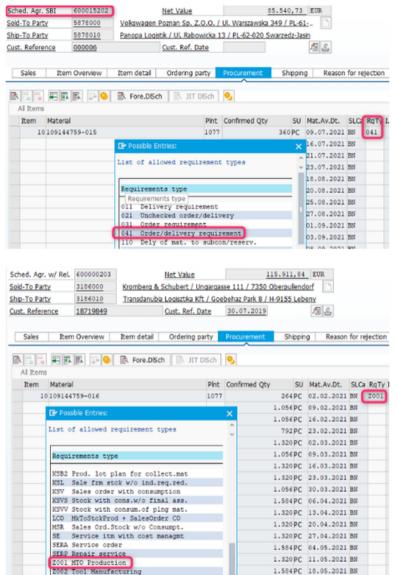
The quantities can be copied (Control+C) from Excel and paste (Control+V) into the SAP table:



ALERT: Do NOT activate them!

Remarks: @DRX the Make-To-Stock (MTS) and Make-To-Order (MTO) settings being used in the SD-Scheduling Agreements. Since the PIR ZVSF can only being maintained on MTS and the requirement types (e.g., 041/ Z001) does not allow offsetting – we cannot use this function of Offsetting PIR ZVSF on finished material number level.





Setting on Component Level (activated Z0)

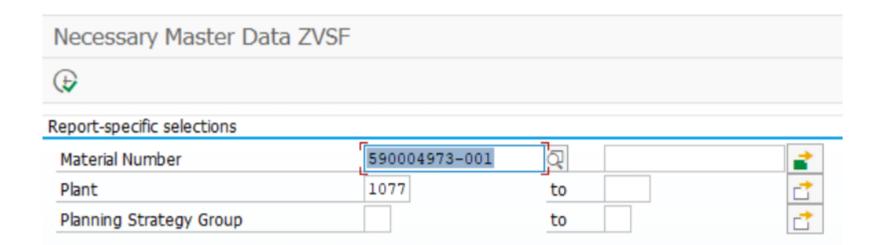
A) Retrieve component list (CS13H)

For the next steps you need to retrieve all related components on material number level. SAP offers some Standard transaction and here the CS13H helps. Please note that the CS13H only retrieves the Buy or purchase parts (F-parts). Since we only like to maintain forecast on buy parts the CS13H is the right one.

Here is the Selection Screen. Please download the Result into an Excel. This transaction needs to be made for all finished material numbers (in our example for 19 parts):

Then you create one Pivot sheet out of the 19 single BoM sheets to summarize all components. In our case we have deleted software part numbers (Description "non stock") as well auxiliary materials (GER Hilfsstoffe). In the end we have retrieved

475 components.
B) Check or maintain Master Data
Pls. use new transaction to retrieve relevant master data:
ZPPR_MATERIAL_MASTER
You need to check if all marked master data is maintained. If not, please update via MDG Workflow 14:



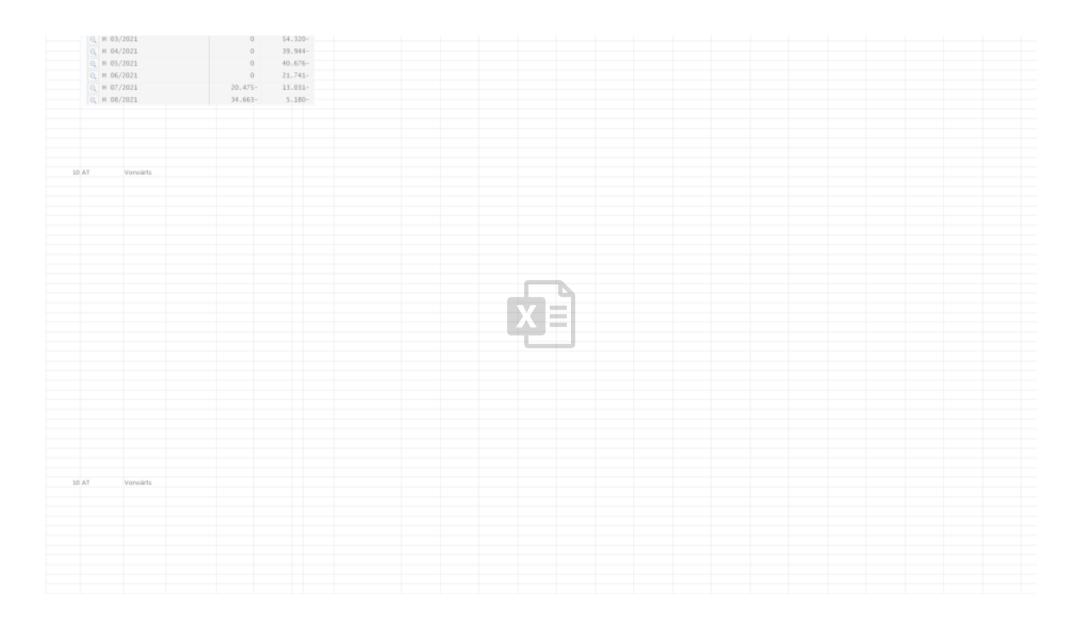
Necessary Master Data ZVSF All data available!												
Material	Plnt	ProcType	SG	Consumption mode	Bwd cons. per.	Fwd cons.period	Мх					
590004998-001	1077	F	Z4	2	035	010	1					
590004997-001	1077	F	Z4	2	035	010	1					
590004995-001	1077	F	Z4	2	035	010	1					
590004990-001	1077	F	Z4	2	035	010	1					
590004978-001	1077	F	Z4	2	035	010	1					
590004975-001	1077	F	Z4	2	035	010	1					
590004974-001	1077	F	Z4	2	035	010	1					
590004973-001	1077	F	Z4	2	035	010	1					
590004990-002	1077	F	Z4	2	035	010	1					
590004996-001	1077	F	Z4	2	035	010	1					
590004991-001	1077	F	Z 4	2	035	010	1					

Here are some examples how these parameters control the offsetting but in generally this setting allows that PIR-ZVSF are being offset by material reservations within a month.

Periodenkennzeichen	М	GeschJahresvariante:	Aufteilungskennz
/orplanung			
Strategiegru	ppe Z7	IC: Endmontage, Baugruppenverrechnung	
Nerrechnungsmo	dus: 2		Verint Rückwärts: 35
Merint Voor	arts 10		Mischdisposition:
Vorplanmate	eriat:		Vorplanungswerk:
To post in the contract of			

2. Methode

- VSF werden periodisch gepflegt, d.h. Monat oder Woche
- SAP vergibt der Periode das Datum des 1. Arbeitstages, z.B. Monat August = 02.08.2021
- Verrechnungsmodus "2" legt fest, dass zuerst 10 AT über Parameter "Verint Vorwärts" vorwärtsgerechnet wird; erst wenn es nach vorne keine Kundenbedarfe gibt (sehr selten), wird die Rückwärtsrechnung mit 35 AT (Parameter "Verint Rückwärts") angewendet
- Z.B. VSF Febr. 21 → 01.02.2021 → 10 AT nach vorne → 18.01. von dort aus werden dann bis max. dem gesamten Monat Febr. 21 etwaige Kundenbedarfe verrechnet → im

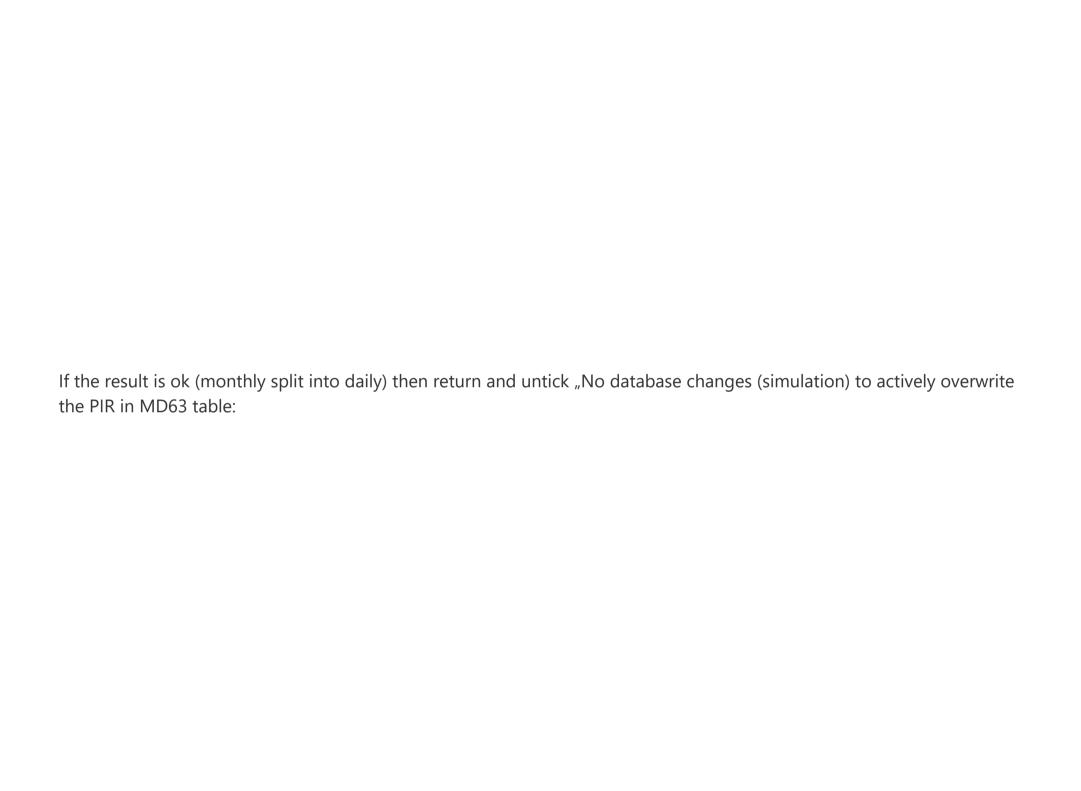


Create Simulation Demand (MS-Environment)

SAP offers a simulation environment which use similar transaction codes instead of MD04 the MS04 etc.

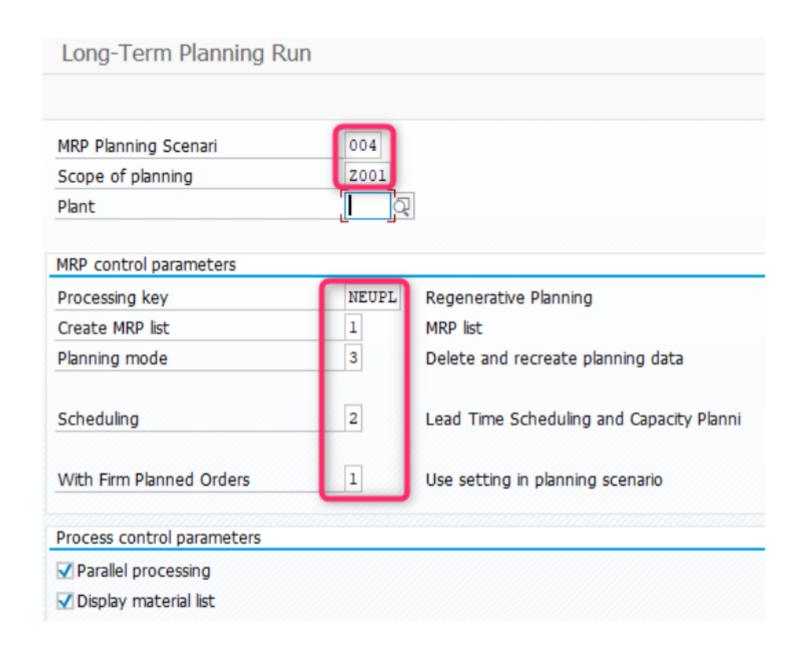
A) Split from Monthly to Daily for Z4 PIR-ZVSF Finished Materials

But before we need to split the monthly PIR ZVSF on finished material level to daily via transaction MD67. Please run firstly "Test Run":

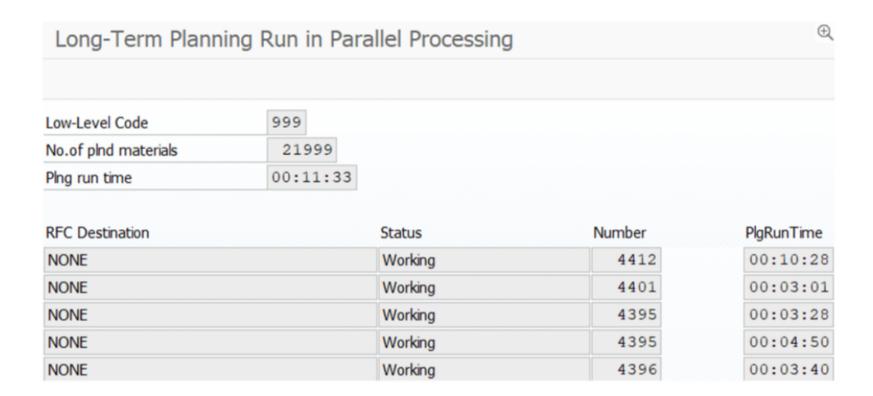


B) Simulation Run (MS04/ MS01) The simulation run MS01 is actively being started and no daily job being set. The last result of a Simulation MRP (MS01) can be retrieved via MS04. Our MRP Planning Scenario is 004:

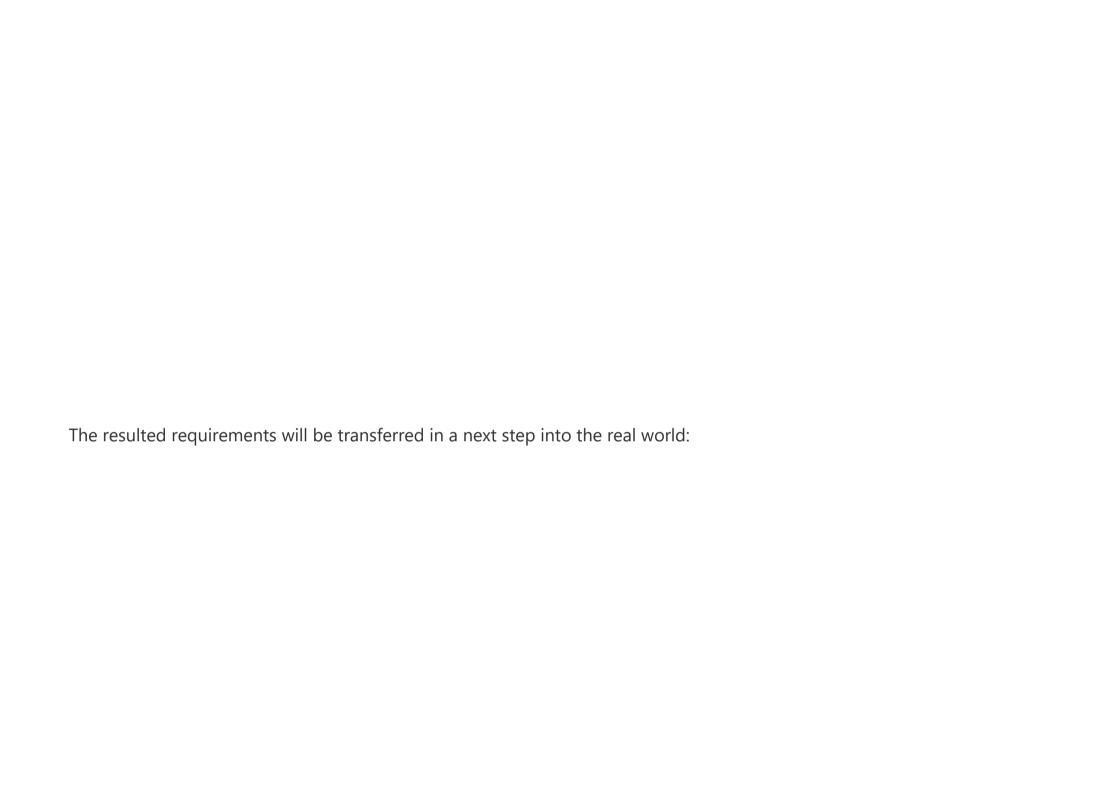


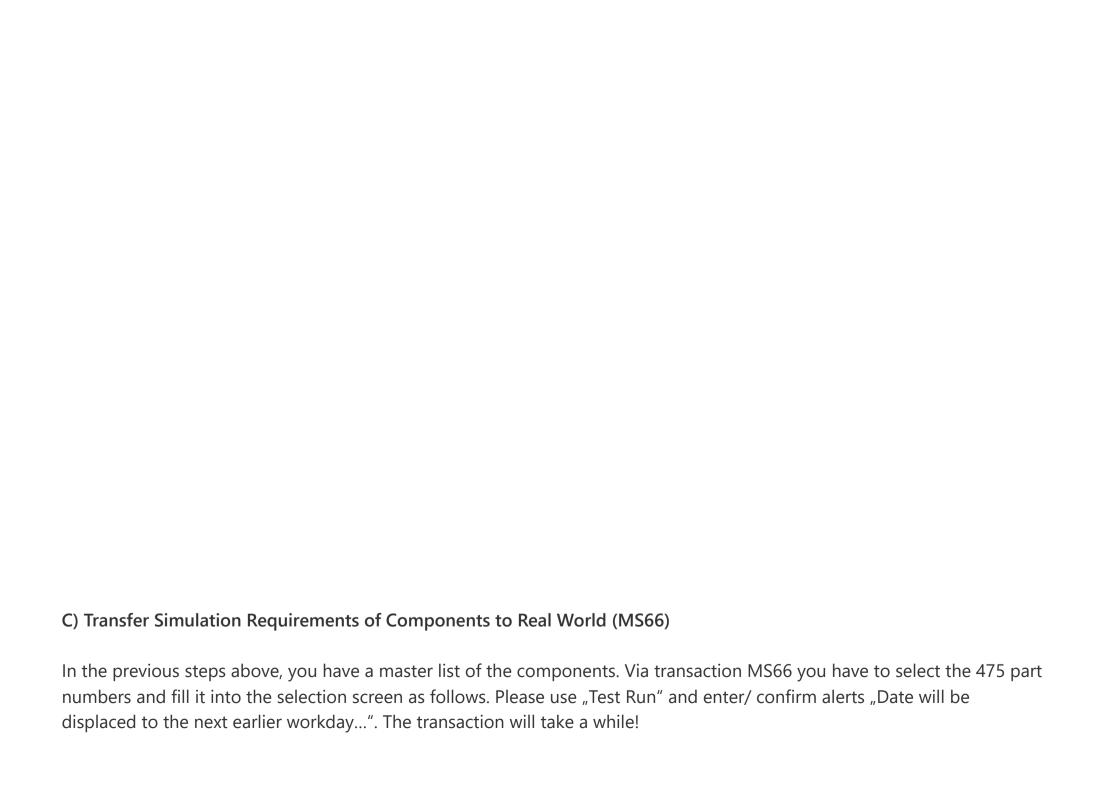


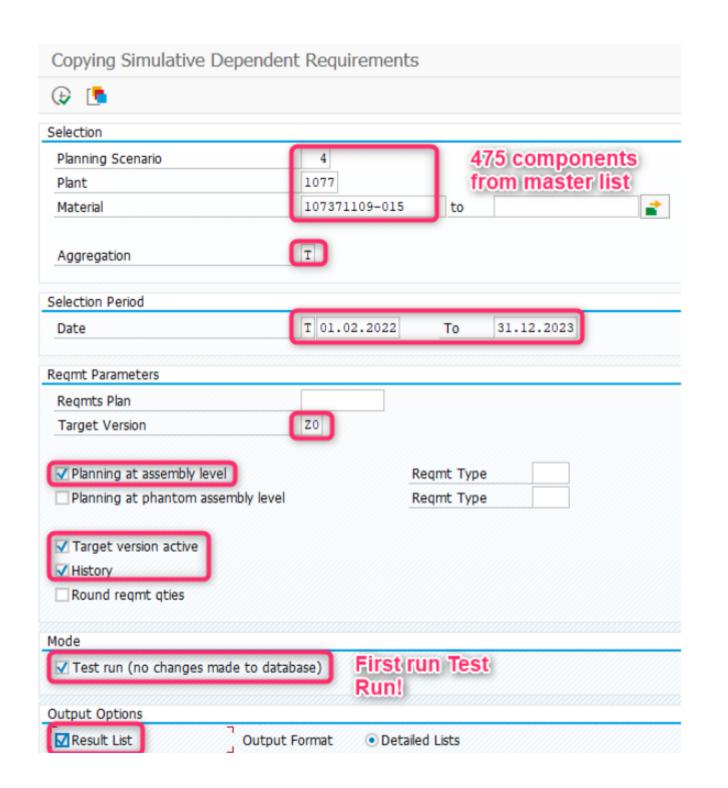
You can see the progress in such a processing screen:



After the MRP is finished you can make a random check (MS04) if the simulation demand is being calculated correctly:



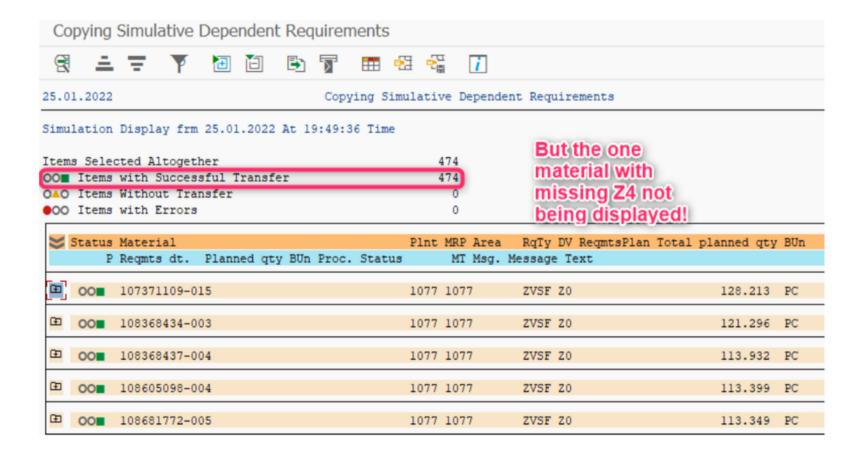




○ Incorrect Items Only ○ W/o Sched. Lines

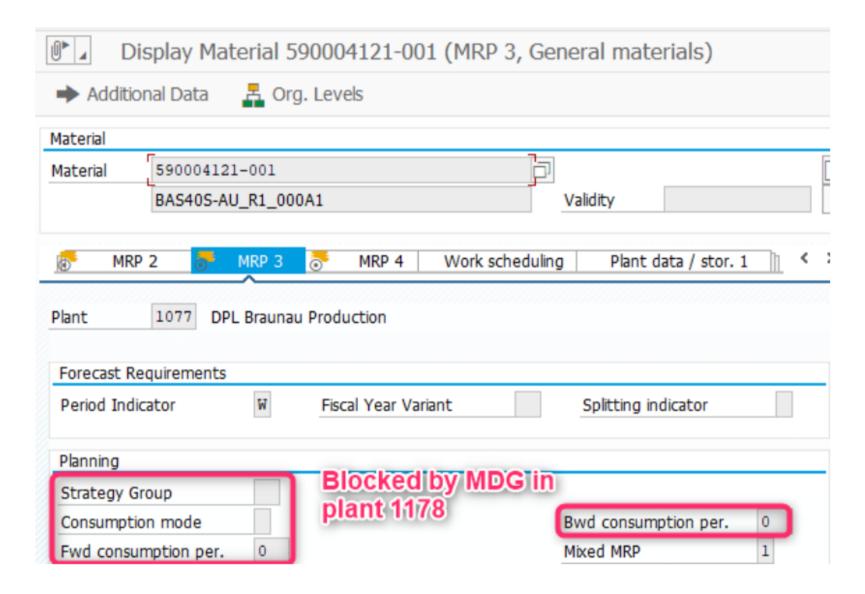
Result screen will show you if all simulation demand could be written into the MD63 of the real world.

ALERT: The result shows only the material which can be load in. If for example a component does not have the Strategy group, this number will not be shown. In our case we have 475 materials but only 474 could be loaded:

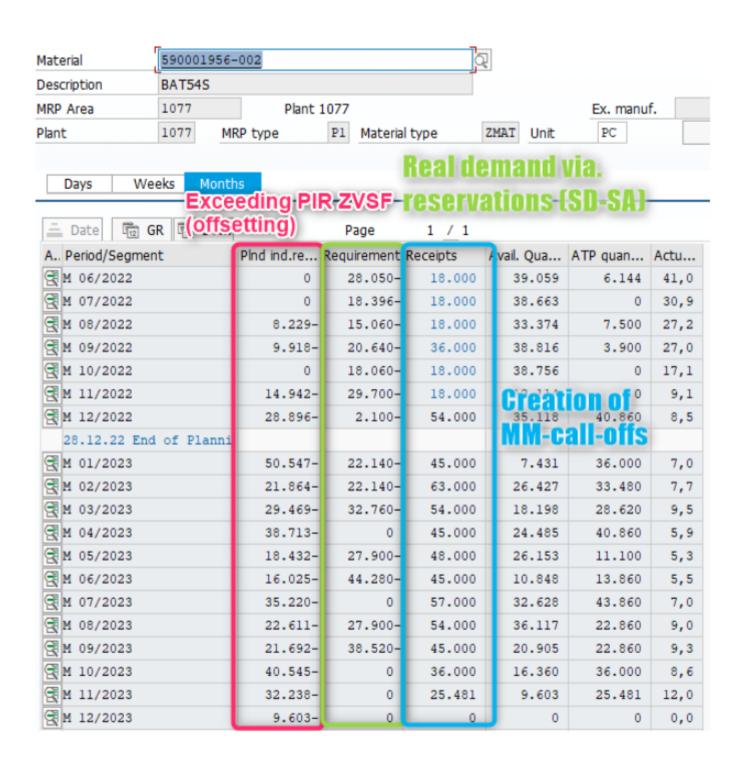


To retrieve the missing material, you have to make a download as "unconverted" file and later upload the text file into Excel and make a VLOOKUP with your master component list.

In our case this material is being blocked by MDG in plant 1178, so plant 1077 cannot make the update:



After you made the check return again to MS66 and untick the "Test Run" to copy the simulation requirements into MD63 real world.
You can check the new PIR ZVFS via MD63 and now you can see that they are activated:
Via MD04 you can see how the offset being done and MM-scheduling lines being created for the future:



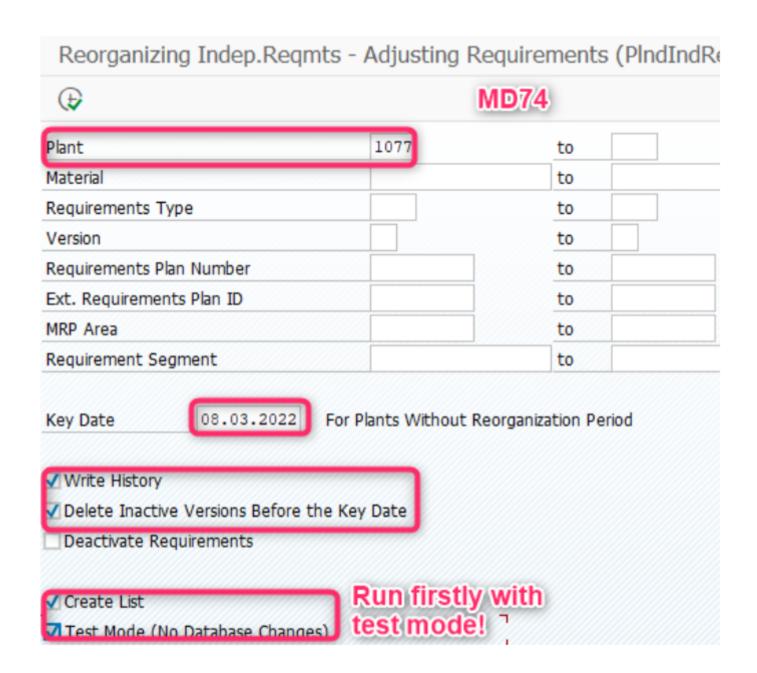
Reorganizing Indep. Reqmt. (MD74)

Alert: Please use this only for materials with version Z0/ Z4 (for plants). The version 00 is being used by pre-series ALK and they apply this procedure by themselves.

As you can see the PIR ZVSF have a strong impact on MRP planning. If the real demand is higher the PIR ZVF will be consumed. On the other hand, if the real demand is not as high the PIR ZVSF are increasing the demand. In addition, we have activated the Firm zone and the demand from PIR ZVSF and real demand have created scheduling lines / call-off to suppliers which will not be changed inside the firm zone. If the real demand is decreasing or a technical change is occurring, we have a high risk of exceeding or obsolete materials. On the other hand, you have a tool to secure your supply chain, so you avoid out-of-stock situations in the future.

To reduce this risk, you should run the MD74 at least every two weeks to delete the PIR ZVSF in the short-term horizon. At that stage the firm zone already applies, and the real demand should be valid and most likely not being changed anymore. Hence the exceeding PIR ZVSF should not create any further demand. After the MD74 run the next MRP will reduce further call-offs out of the firm zone by the reduced/ deleted PIR ZVSF. The risk of further exceeding or obsolete materials can be reduced.

The Key Date should be min. 6 weeks in the future. Selection screen is as follows based on today 25.01.2022. The transaction takes a while:



The result shows you the PIR ZVSF which would be deleted if you untick the "Test Run":

Training Video ZVSF-MFA2 Platines MFA

Short-Cut: ZSVF being consumed with SD primary demand or MM scheduling lines (e.g., Interco)

The above mentioned "long" work-around was designed under following conditions:

- Using SAP module "Integrated Business Planning" (IBP)
- Using not only MTS-SD's but also MTO-SDs

Since IBP was descoped the only existing condition are the MTO-SDs which mainly being used when a material number being shipped to our customers in different packages (e.g., cartonnage for overseas).

The following ZVSF planning strategy can be used in following cases on finished goods level where primary demands come from customer demand (SD-elements VA03 and/ or VA33):

- for the relevant material number anyhow only MTS-SDs exists
- the MTO-SDs can be neglected, or this demand needs to be manually considered by reducing the ZVSF with the MTO-SD's demands

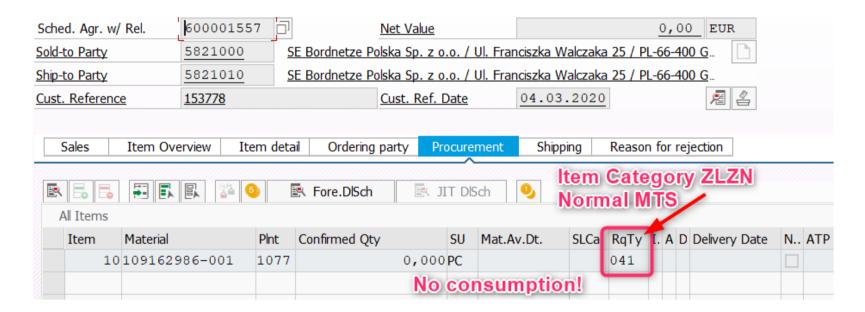
Normally this ZVSF planning strategy is the standard method in SAP for discrete manufacturing and will be explained now. When you do not have SD's but MM-scheduling lines instead (e.g., Interco) than skip the chapter with the SD's:

Every primary demand like customer SD's or planned independent requirements (ZVSF) do have a Requirement Type (GER Bedarfsart). First you need to define a Requirement Class (GER Bedarfsart) via OVZG. The main Class as well Type in current DRX setting is 041 Order/delivery regmt:

By the ticks "AvC" (Availibility Check) and "Rq" (Transfer of requirements) the transfer to MRP planning being done. In customizing transaction OVZG the class and the more important requirement type being linked:

The 3rd configuration is the determination of the respective requirement type (GER Bedarfsklasse) via "Item Category" and MRP type. The current DRX customizing is as follows:

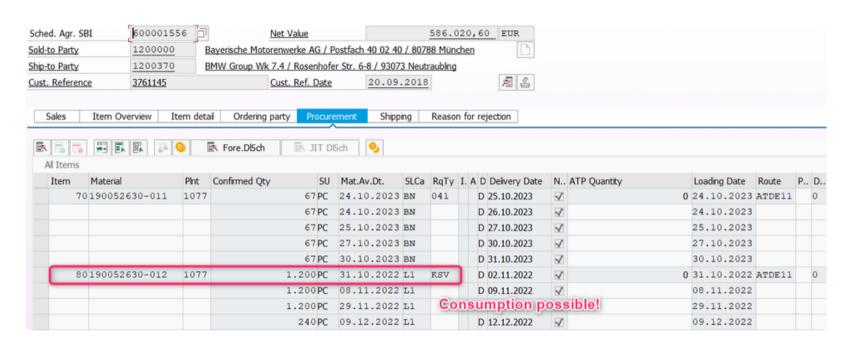
So, for the major SD's we have set Requirement Class "041" which **does not** make a consumption with PIR = ZVSF! Since GBS is maintaining the relevant Item Category of the SD the Requirement Class "041" is automatically being set:

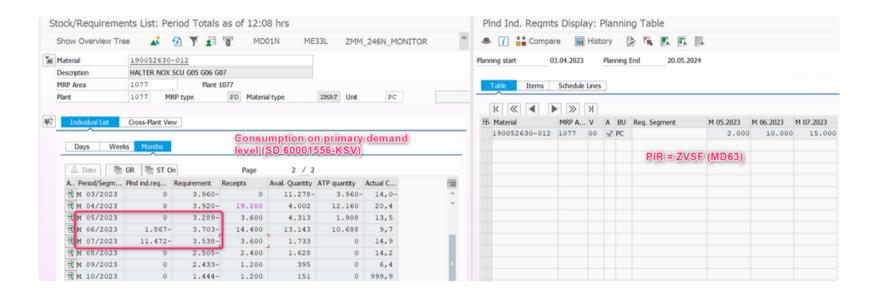


When you like to use consumption on primary demand level you have to options:

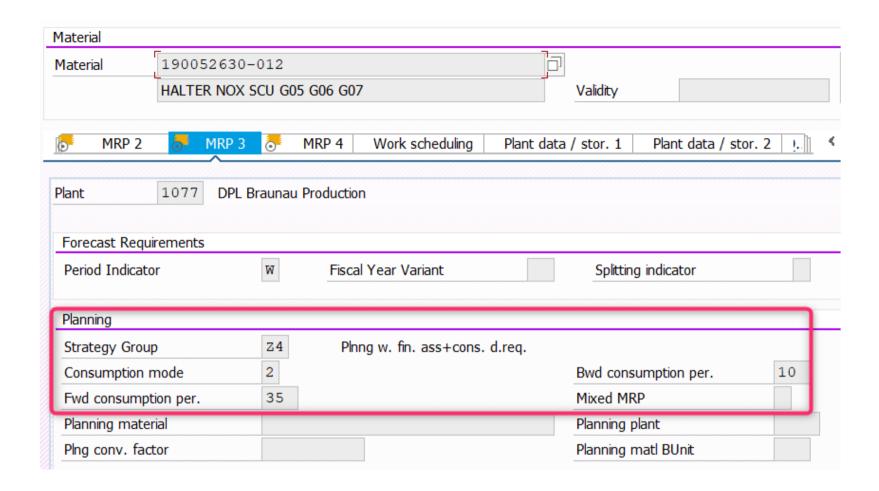
- 1. You change customizing as follows
- 2. You maintain via a new Pos. the "RqTy" to KSV

New	Custo	omizing												
ItCa	Тур	RqTy	Requirements type	Src	SchLC	AvC	Rq	Allin	ReqCl	AvC	Rq	MTS/MTO	Variant	Result
ZLZN		41	Order/delivery requirement	1	L1	X	X		KSV		X	MTS	MTS Sched. Agreement Item external (GER Lieferplanposition external)	MTS consumption
ZLGT		41	Order/delivery requirement	1	Z1	X	X		KSV		X	MTS	Sched. Agreement Intercompany GiT (Gutschriftsverfahren)	MTS consumption
ZLIC		41	Order/delivery requirement	1	L1	х	X		KSV		Х	MTS	Sched. Agreement Intercompany Invoicing	MTS consumption
ZLZE		Z001	MTO Production	1	L1	X	X		Z01		X	мто	MTO Production	Not possible

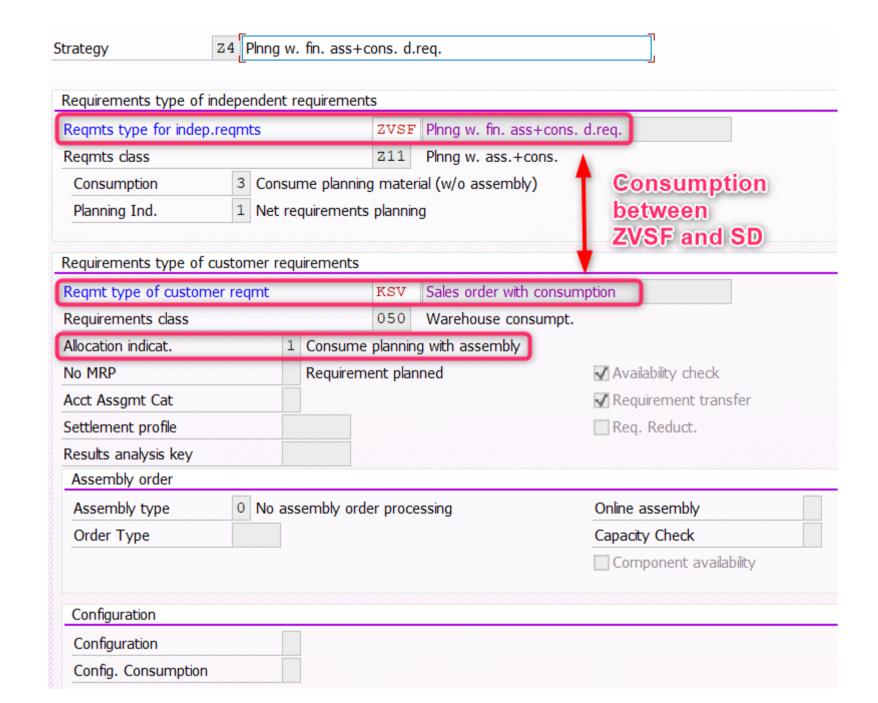


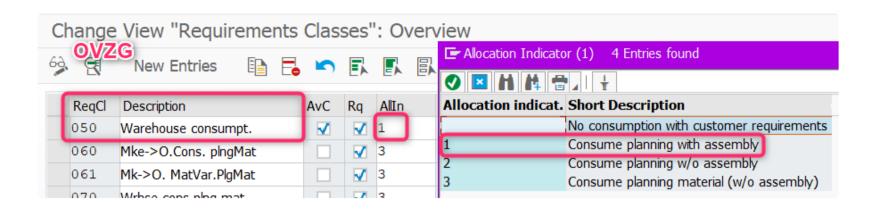


Before the Planning Strategy parameters needed to be maintained in MRP3 (normally automatically being done when material being created by MDG):

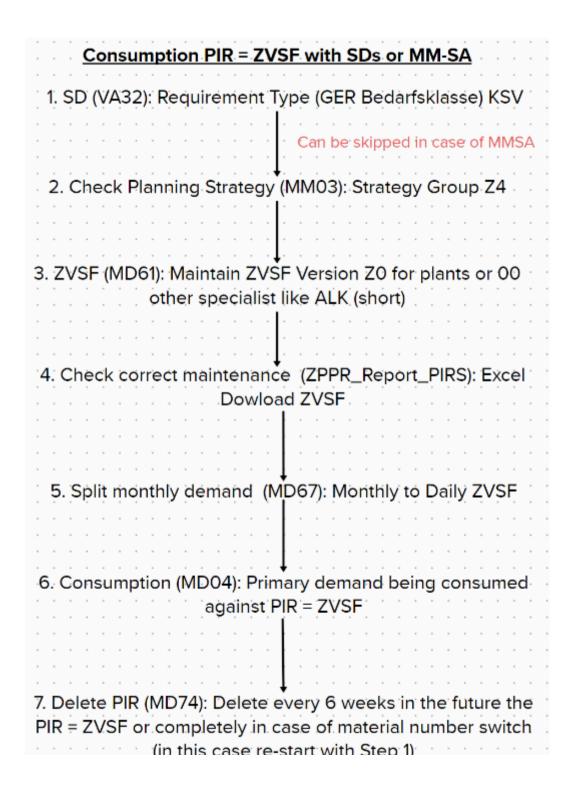


The definition of Strategy Group Z4 is as follows where a consumption on primary demand level is possible when Reqmt type KSV is maintained in the SD (VA33):



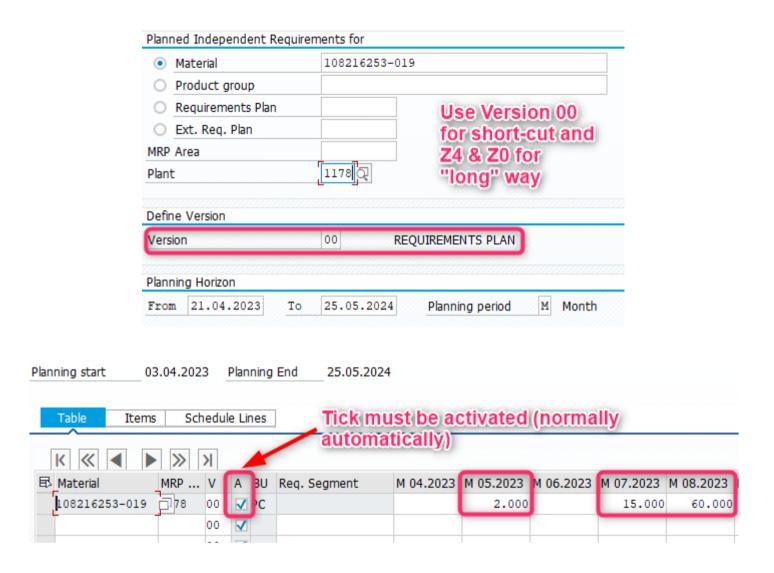


Now the "short" cut can be executed as follows:

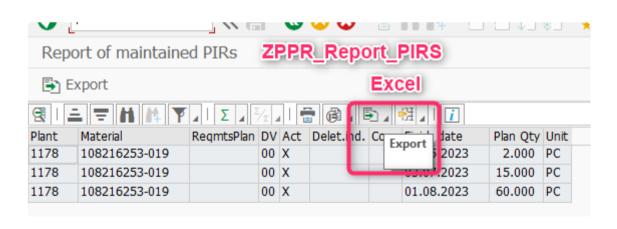


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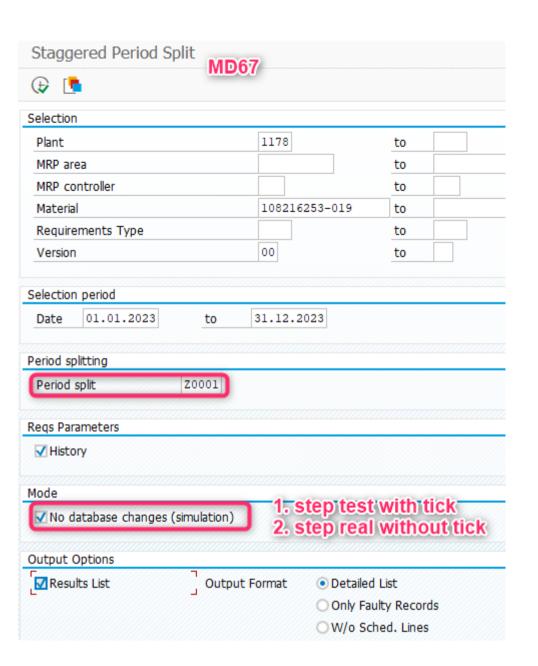
Step 3: MD61 Version Z0 for plants or 00 for another specialist like ALK in Month

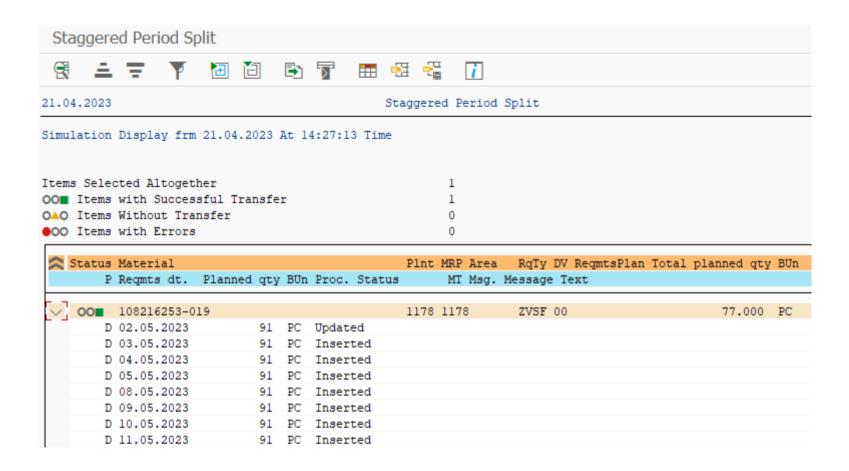


Step 4: ZPPR_Report_PIRS to make Excel download to check if qty. being maintained correctly:

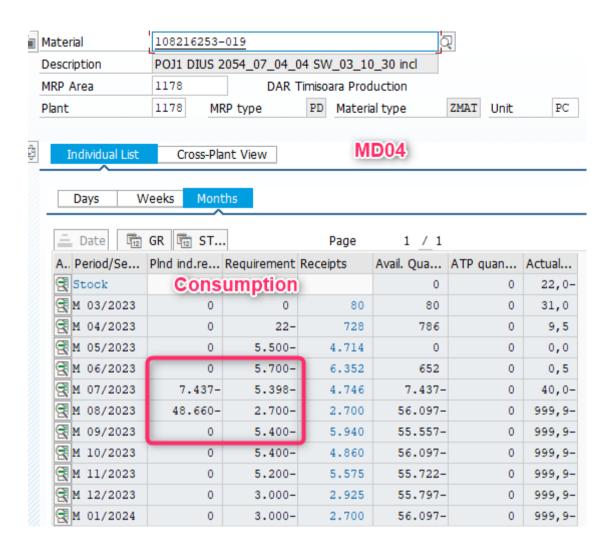


Step 5: MD67 Split monthly demand to daily (1st step test mode if ok 2nd real mode):





Step 6: MD04 check if consumption looks fine:



Either you wait for the night job for MRP (MD01N) or you manually execute MRP (MD01N)

Step 7: MD74 on a weekly basis (e.g., every Monday) the maintained PIRs should be deleted for the upcoming weeks since then only the "real" customer demand should be valid. In case you have a material number switch you also can delete all demands but I recommend to delete them via MD62:

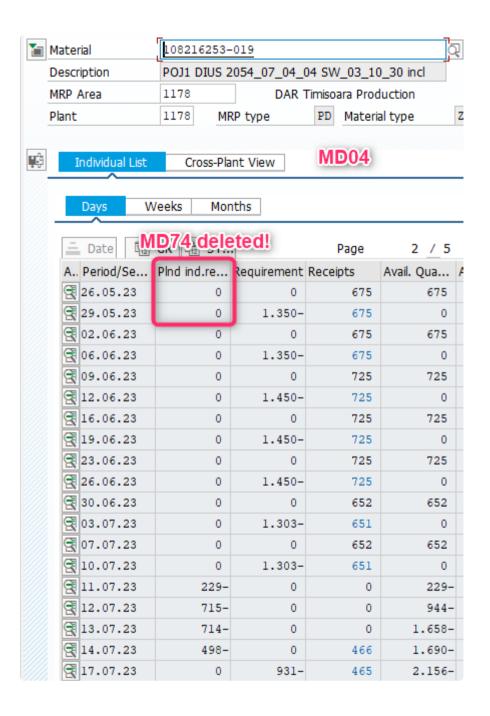
Reorganizir	ng Indep. Requi	rements - Adjusting	g Reqmt	s (PlndIndReq)			
(MD74					
Plant		1178	to				
Material		108216253-019	to				
Requirements Ty	/pe		to				
Version		00	to				
Requirements Pla	an Number		to				
Ext. Requiremen	ts Plan ID		to				
MRP Area			to				
MRP Controller			to				
Requirement Segment			to				
Key Date	02.06.2023						
Rel. Key Date	with Reference to Execution Date						
✓ Write History							
✓ Delete Inactive	e Versions Before the	e Key Date					
Deactivate Re	quirements						
✓ Create List		1st Test n	node				
▼ Test mode (N)	o database changes)	2nd Real	mode	(no tick			

MRP Area	Plant 1	Materi	ial			1	RqTyg	pe .	Version	Active
Del/finish	Planned	quant	ity	Withdrawal	Qty	Allocated	qty	BUn	ı	
1178	1178	108216	253-019				ZVSF		00	√
02.05.2023	1170	(91		0		0	PC		
03.05.2023		- 1	91		0		0	PC		
04.05.2023		- 1	91		0		0	PC		
05.05.2023		- 1	91		0		0	PC		
08.05.2023		_	91		0		0	PC		
09.05.2023			91		0		0	PC		
10.05.2023		- 1	91		0		0	PC		
11.05.2023			91	Would	d be		0	PC		
12.05.2023			91	delete			0	PC		
15.05.2023			91	ucici	U		0	PC		
16.05.2023			90		0		0	PC		
17.05.2023			91		0		0	PC		
18.05.2023			91		0		0	PC		
19.05.2023			91		0		0	PC		
22.05.2023			91		0		0	PC		
23.05.2023			91		0		0	PC		
24.05.2023			91		0		0	PC		
25.05.2023			91		0		0	PC		
26.05.2023			91		0		0	PC		
29.05.2023			91		0		0	PC		
30.05.2023			91		0		0	PC		
31.05.2023			90		0		0	PC		

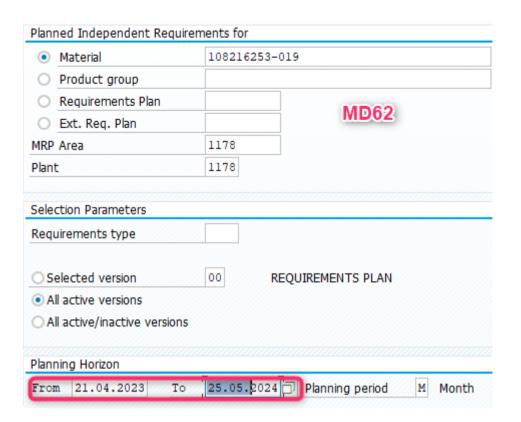
Reorganizing Indep. Requirements - Adjusting Reqmts (PlndIndReq)

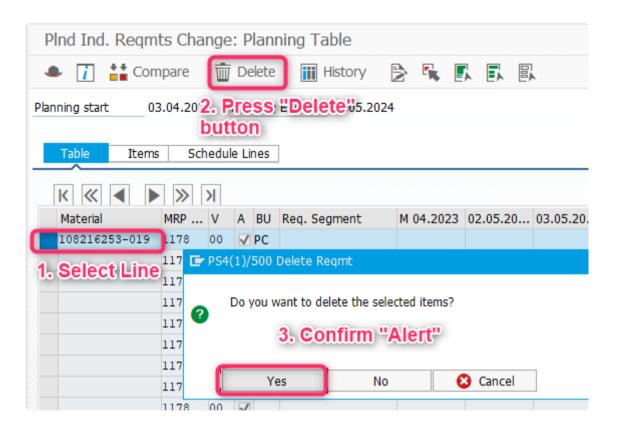
Key Date per Plant



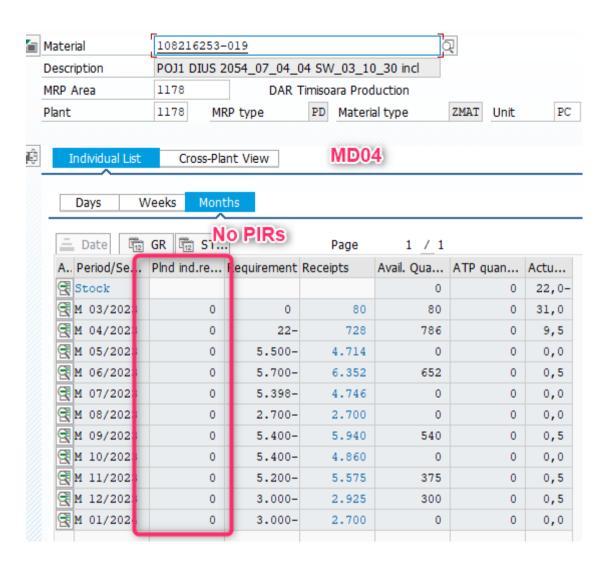


To delete all PIRs use MD62:





Double-Check either with MD04 or run Excel report ZPPR_Report_PIRS:



Contact



SO

LINKS



synapsis Knowledge Transfer SCM