

SCM Consulting Solutions

Lot Size Simulation 2011.1

Ferenc Gulyassy, Business Processes Senior Consultant (SAP Consulting)
October, 19th 2012

Released
for
customer

Agenda

1. **The challenge: Determination of the optimal lot sizing procedure**
2. The solution: SCM Consulting Solution lot size simulation
3. Details on lot size simulation

The challenge: Determination of the optimal lot sizing procedure

During the determination of the optimal lot sizing procedure, the MRP planners are often facing the following problems:

- The decision about the optimal lot sizing procedure is often taken in intuitive way
- The result of simple rule-of-thumbs, like 6 order cycles per year, is put into the system as a fixed or minimal lot size. These values are not adjusted to changing demands (e.g. during an economic crisis)
- MRP planners don't trust the system's lot sizing calculation, as they don't have a possibility to verify the results
- MRP planners have no tool to simulate different lot sizing procedures and the resulting costs for a high number of materials
- As there is no decision support tool available, a single procedure is used for all materials

Agenda

1. The challenge: Determination of the optimal lot sizing procedure
2. **The solution: SCM Consulting Solution lot size simulation**
3. Details on lot size simulation

The solution: SCM Consulting Solution lot size simulation

Questions and answers about SAP's lot size simulation tool

Which prerequisites must be fulfilled by the customer?

- The use of SAP R/3 Material Management and the SAP MRP monitor
- Ordering costs and storage cost indicator must be maintained in the material master

Which advantages does the lot size simulation tool offer?

- Simulation of all in the material master available lot sizing procedures on the basis of real demands with in the SAP ERP system
- Flexible variation of lot sizing parameters possible
- Tabular and graphical display of resulting costs and inventory situation

Is the lot size simulation tool a modification?

- No, it is not. It is a add-on tool.

Is there any customizing for the use of the tool necessary?

- No, there are no customer specific adjustments necessary.

How time-consuming is the installation?

- The consulting solution is available within one-day and immediately ready-to-use.

What are the costs of the lot size simulation tool?

- Please send an inquiry to Marc Hoppe or Ferenc Gulyássy

Goal's of SCM Consulting Solution lot size simulation

The lot sizing simulation tool allows a optimal determination of the lot sizing procedure for every material. Consequently, a reduction of the procurement and inventory costs can be achieved.

- The tool determines for every material of the MRP planner the optimal lot sizing procedure. This can be adjusted in the material master.
- With the help of a flexible parameter variation future trends (like decreasing demands, increasing procurement costs) can be considered during the simulation.
- Maintenance of lot sizing procedure from the simulation tool is possible.

Agenda

1. The challenge: Determination of the optimal lot sizing procedure
2. The solution: SCM Consulting Solution lot size simulation
- 3. Details on lot size simulation**

Details on lot size simulation

Variation of several input factors possible

Simulation of several lot sizing procedures possible

Parameters For All Materials

Standard- and Lean-Variant

Ordering Costs: +/- \$

Storage Costs: +/- Pts

Demand: +/- \$

Horizon Limitation: to

Standard-Variant

Reorder Point: 0 \$

Safety Stock: \$

Lot-Sizing Procedures

Static Lot-Sizing Procedures

- Lot-for-Lot Order Quantity (EX)
- Fixed Order Quantity (FX)
- Replenish to Maximum Stock Level (HB)

Optimum Lot-Sizing Procedures

- Least Unit Cost Procedure (WI)
- Part Period Balancing (SP)
- Dynamic Lot Size Creation (DY)
- Groff Reorder Procedure (GR)

Period Lot-Sizing Procedures

- Daily Lot Size (TB)
- Weekly Lot Size (WB)
- Monthly Lot Size (MB)

Buttons: Simulate, Reset Values, Lean Variant (only mandatory parameters)

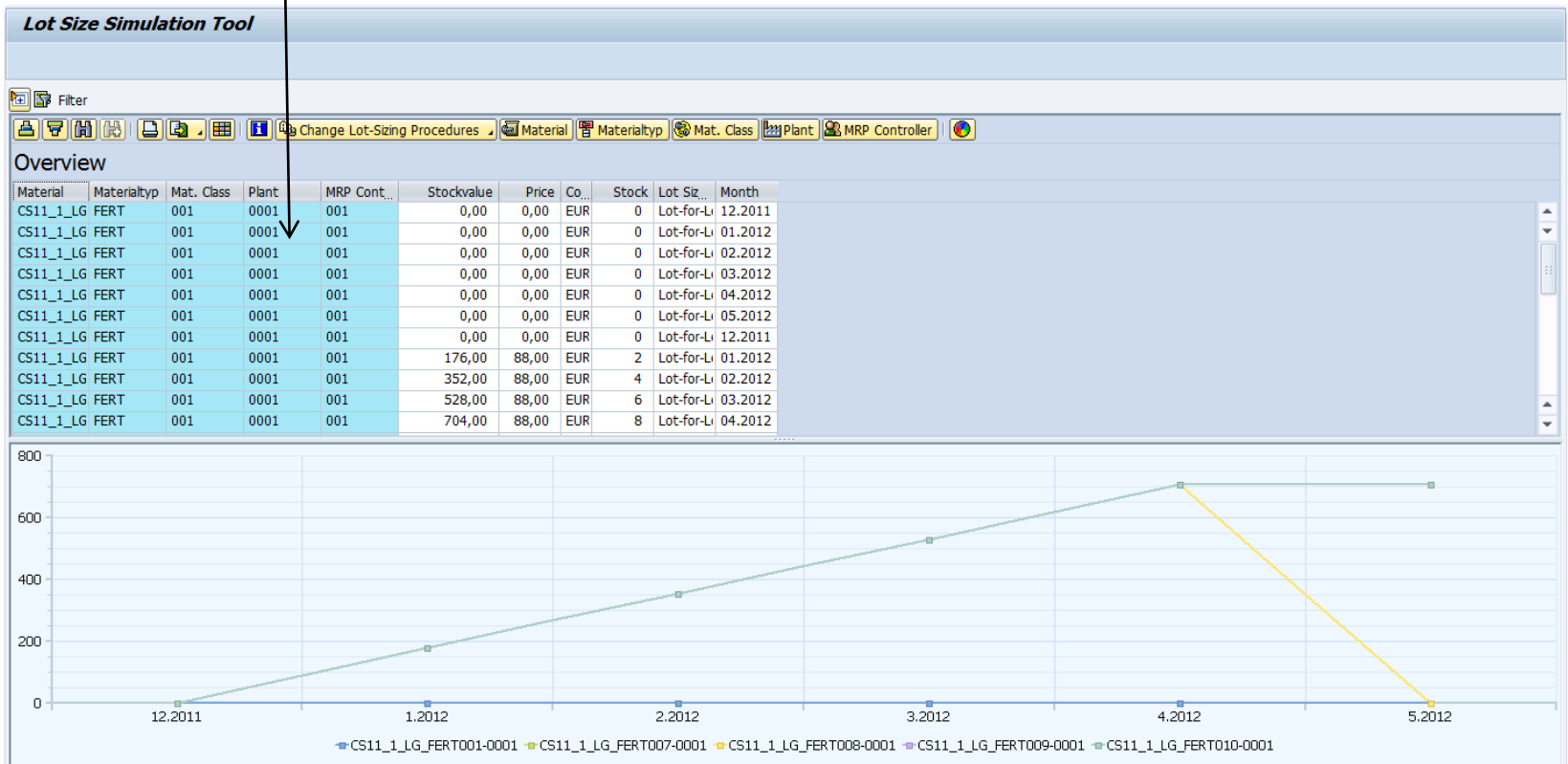
Material	Plant	Resub.Dat.	R	O	Not...	Curr...	C...	Δ Curr.Cos...	S...	Min.Std...	Δ Std.Var.	Lot-f-lot	Daily L	Weekly L	Monthly L	Least u...	Part.Per.	Dyn. Lot	Groff
CS11_1_LG_FERT001	0001	20.09.2011	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	EUR	FX	30,00	FX	30,00	0,00	30,00	30,00	30,00	30,00	30,00	30,00	30,00	30,00
CS11_1_LG_FERT007	0001	14.09.2011	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	EUR	SP	570,17	EX	485,63	134,54	435,63	435,63	435,63	435,63	570,17	570,17	570,17	435,63
CS11_1_LG_FERT008	0001	28.09.2011	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	EUR	ME	548,65	ME	548,65	0,00	548,65	548,65	548,65	548,65	683,19	683,19	683,19	548,65
CS11_1_LG_FERT009	0001	28.09.2011	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	EUR	EX	435,63	EX	435,63	0,00	435,63	435,63	435,63	435,63	570,17	570,17	570,17	435,63
CS11_1_LG_FERT010	0001	28.09.2011	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	EUR	EX	435,63	EX	435,63	0,00	435,63	435,63	435,63	435,63	570,17	570,17	570,17	435,63
								2.020,01		1.885,5	134,54	1.885,5	1.885,5	1.885,5	1.885,5	2.423,71	2.423,71	2.423,71	1.885,5

Maintain master data

Display of costs of alternatives

Details on lot size simulation

Diagrams of aggregated stock values for several aggregation objects



Details on lot size simulation

Comparison of different lot sizing procedures



Details on lot size simulation

Requirement proposals for simulated lot sizing procedures

Maintain parameters for simulation

Requirements Proposals

Lot-Size Procedure: Part period balanc. Reorder Point: 10

Material: CS11_1_LG_FERT007 Safety Stock: 10

Plant: 0001 Minimum Lot Size: 10

Maximum Lot Size: 100

Material Parameters for Lot Size Simulation:

Storage Cost Percentage: 10,00 % Fixed Lot Size: 0

Ordering Costs: 100,00 Rounding Value: 10

Price: 88,00 Maximum Stock Level: 0

Currency: EUR Rounding Profile:

Lot Size Simulation Tool

Material Parameters

Material: CS11_1_LG_FERT007

Plant: 0001

Lot size: SP

Standard- and Lean-Variant

Stge costs in %: 10,00

Storage costs: 1

Ordering costs: 100,00

Fixed lot size: 0,000

Max.stock level:

Standard-Variant

Reorder Point: 10,000

Safety Stock: 10,000

Min. Lot Size: 10,000

Max. Lot Size: 100,000

Rounding value: 10,000

Date	Demand	Receip	Stock	Safety ...	No.	Costs Per.	Strage co.	Order costs	Costs We	Costs Mo	Total Costs
13.12.2011	0	0	0	10	0	0,00	0,00	0,00	0,00	0,00	0,00
02.01.2012	88-	180	92	10	2	204,82	4,82	200,00	204,82	204,82	204,82
01.02.2012	88-	0	4	10	0	73,78	73,78	0,00	73,78	73,78	278,60
01.03.2012	88-	180	96	10	2	209,79	9,79	200,00	209,79	209,79	488,39
02.04.2012	88-	0	8	10	0	81,78	81,78	0,00	81,78	81,78	570,17

Where can I get more information on SCM CS?

Go to SAP service marketplace and search for note 1493943!

Or ask for more information:

Marc Hoppe

Consulting Manager SCM
SAP Consulting
SAP Deutschland AG & Co. KG
Großer Grasbrook 17
20457 Hamburg
marc.hoppe@sap.com

Ferenc Gulyássy

Business Processes Senior Consultant SCM
SAP Consulting
SAP Deutschland AG & Co. KG
Homburger Straße 25
40882 Ratingen
ferenc.gulyassy@sap.com