

PRODUCT CONFIGURATOR

EXAMPLE AND DATA FLOW



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https://help.sap.com/viewer/product/SAP_BUSINESS_ONE/9.3/en-US and <https://training.sap.com/businessone>.



Requirements for this tutorial

What you need to know

1. The basics of SAP Business One
2. The basics of Beas Manufacturing
3. Basic commercial know-how



Learning targets

After working through the lesson, you will be able to:

1. understand the possible levels of complexity
2. understand the process logic
3. know the data flow regarding the product configuration
4. have an overview on coding



AGENDA

Explanation of product configurator

1. Possible levels of complexity

2. Decision tree (bicycle example)

3. Realization

4. Data flow

5. Coding

Possible levels of complexity

Very simple

- No graphical surface
- enter data in UDF into SBO form (measures, weight etc.)
- assignment of values stored in fields in BoM and item master (formulas may be used)
- based on maximum BoMs and routings

Normal

- graphical surface, built up dynamically
- in the item the creation of the surface is coded
- based on maximum BoMs and routings
- assignment of values (via decisions YES/NO or exchange) stored in BoM and item master in appropriate fields (eg. via formulas)

Complex

- graphical surface, built up dynamically
- in the item the creation of the surface is coded
- BoMs and routings are extendable dynamically
- assignment of values stored in BoM and item master and can be extended by BeasScript-programming

Very complex

- static programmed surface (incl. functional logic), depending on the item
- BoMs and routings are extendable dynamically
- assignment of values stored in BoM and item master and can be extended by BeasScript-programming

AGENDA

Explanation of product configurator

1. Possible levels of complexity

2. Decision tree (bicycle example)

3. Realization

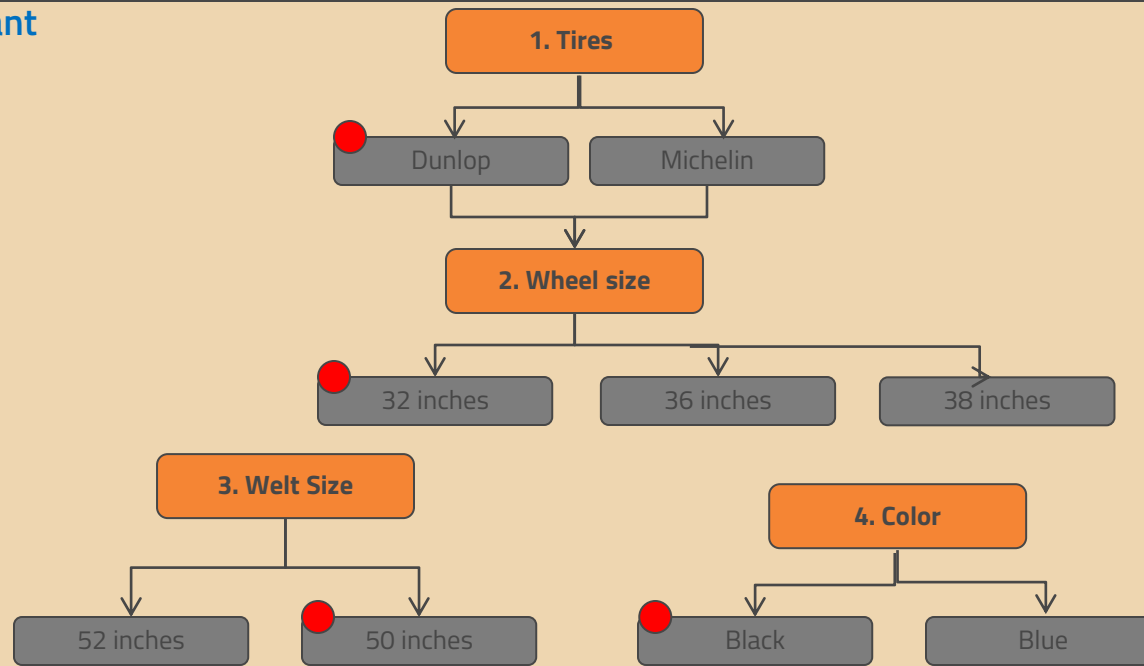
4. Data flow

5. Coding

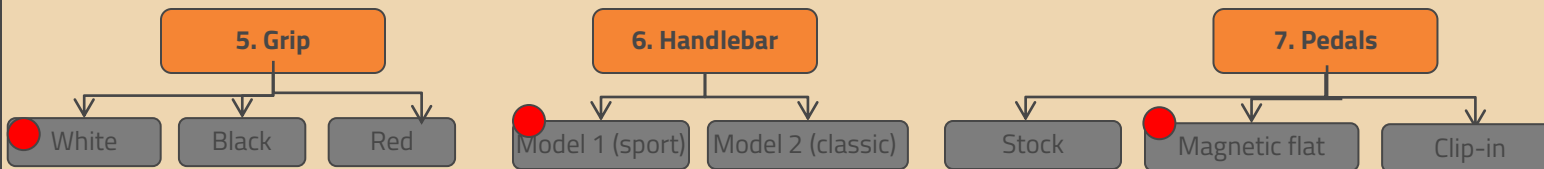
Decision tree

(Bicycle example, normal complexity)

Variant



Accessories



Resulting BoM

Tires "Dunlop"

Wheel "32 inches"

Welt "50"

Color "Black"

Grip "White"

Handlebar "Model 1 (sport)"

Pedals „Magnetic flat“

AGENDA

Explanation of product configurator

1. Possible levels of complexity

2. Decision tree (bicycle example)

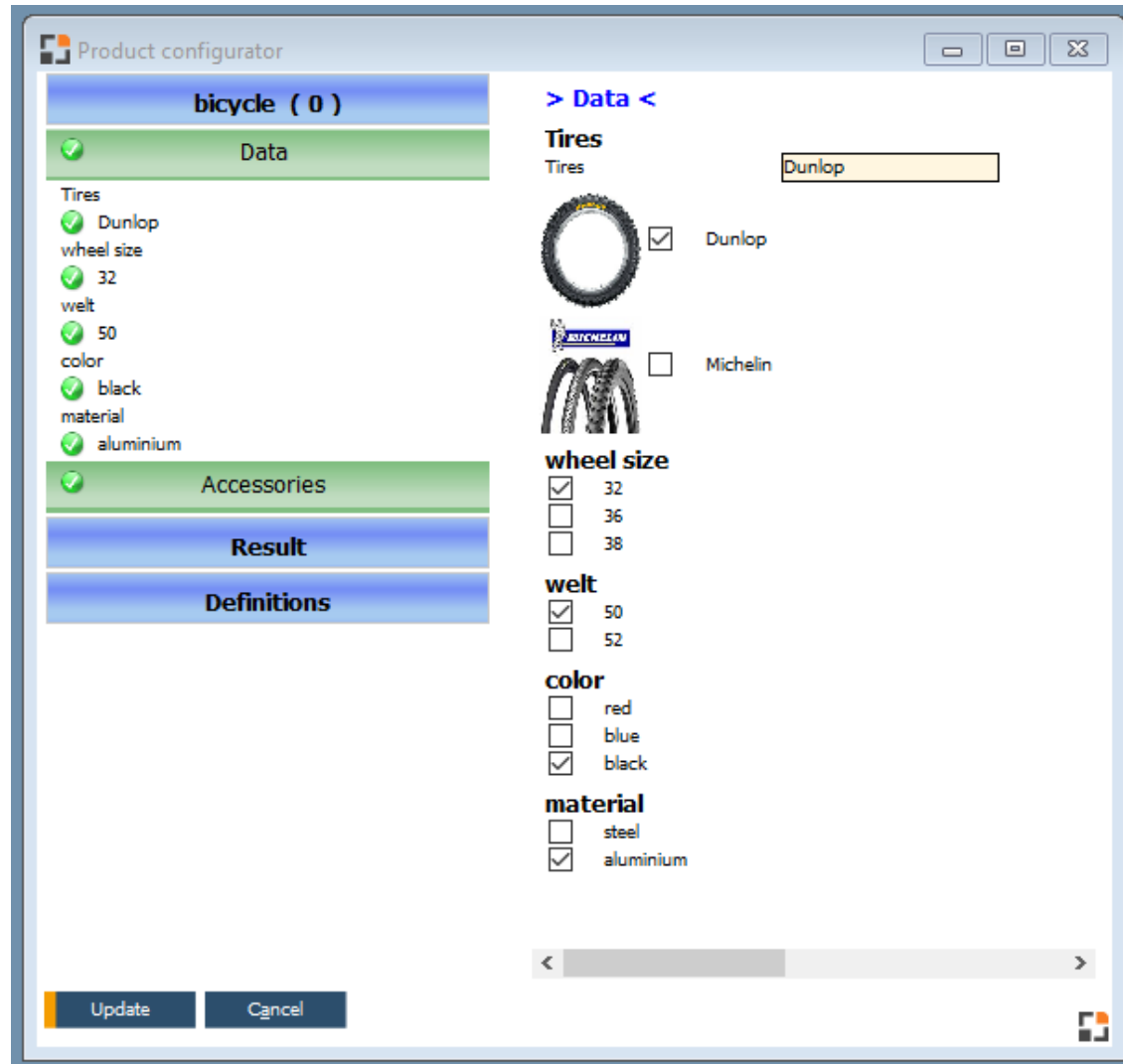
3. Realization

4. Data flow

5. Coding

Realization

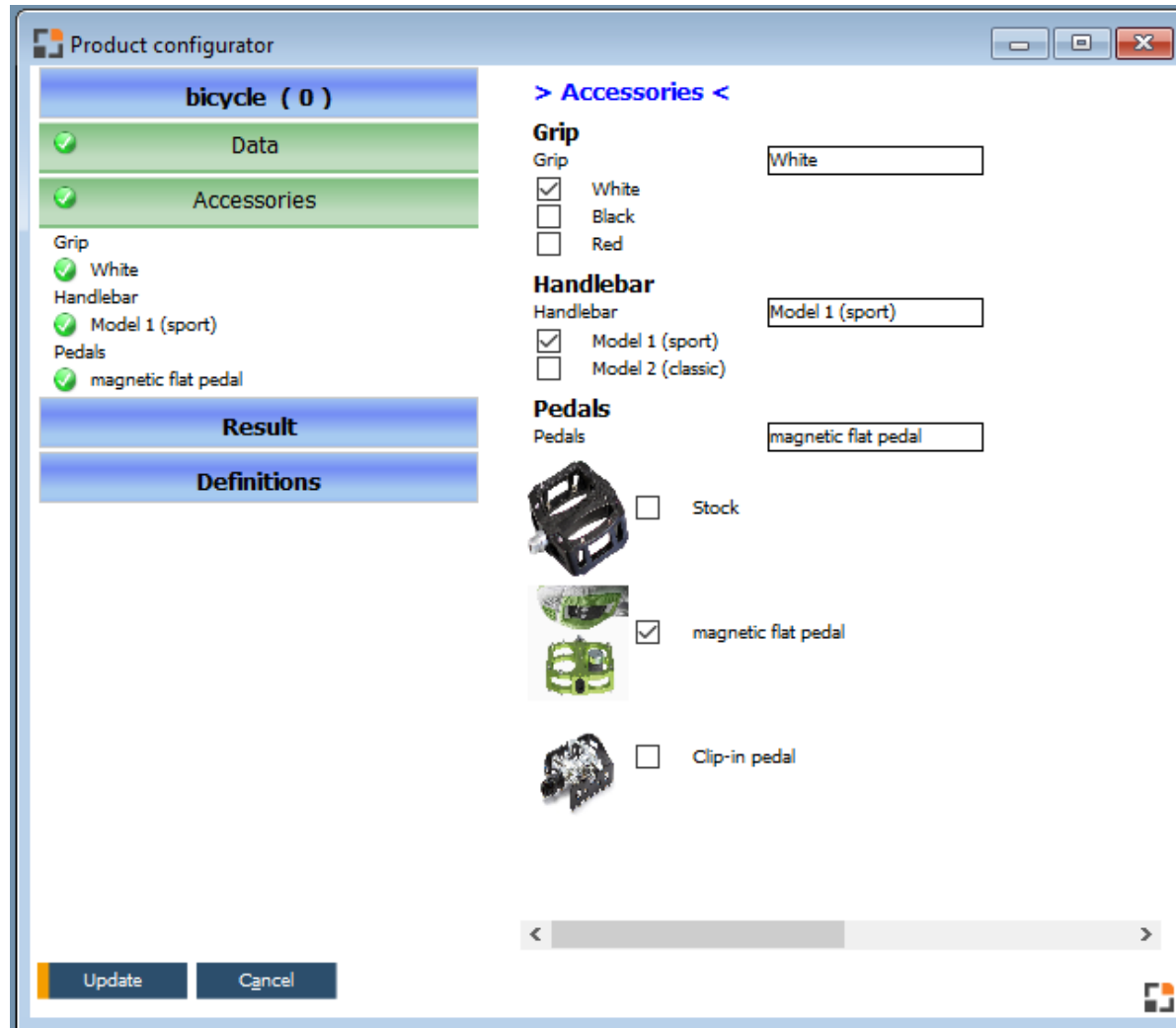
(Bicycle example, Configuration block "execution")



- Tires: "Dunlop"
- Wheel size "32 inches"
- Material: "Aluminum"

Realization

(Bicycle example, Configuration block "execution")



- Grip: "White"
- Handlebar: "Model 1 (sport)"
- Pedals: "Magnetic flat"

AGENDA

Explanation of product configurator

1. Possible levels of complexity

2. Decision tree (bicycle example)

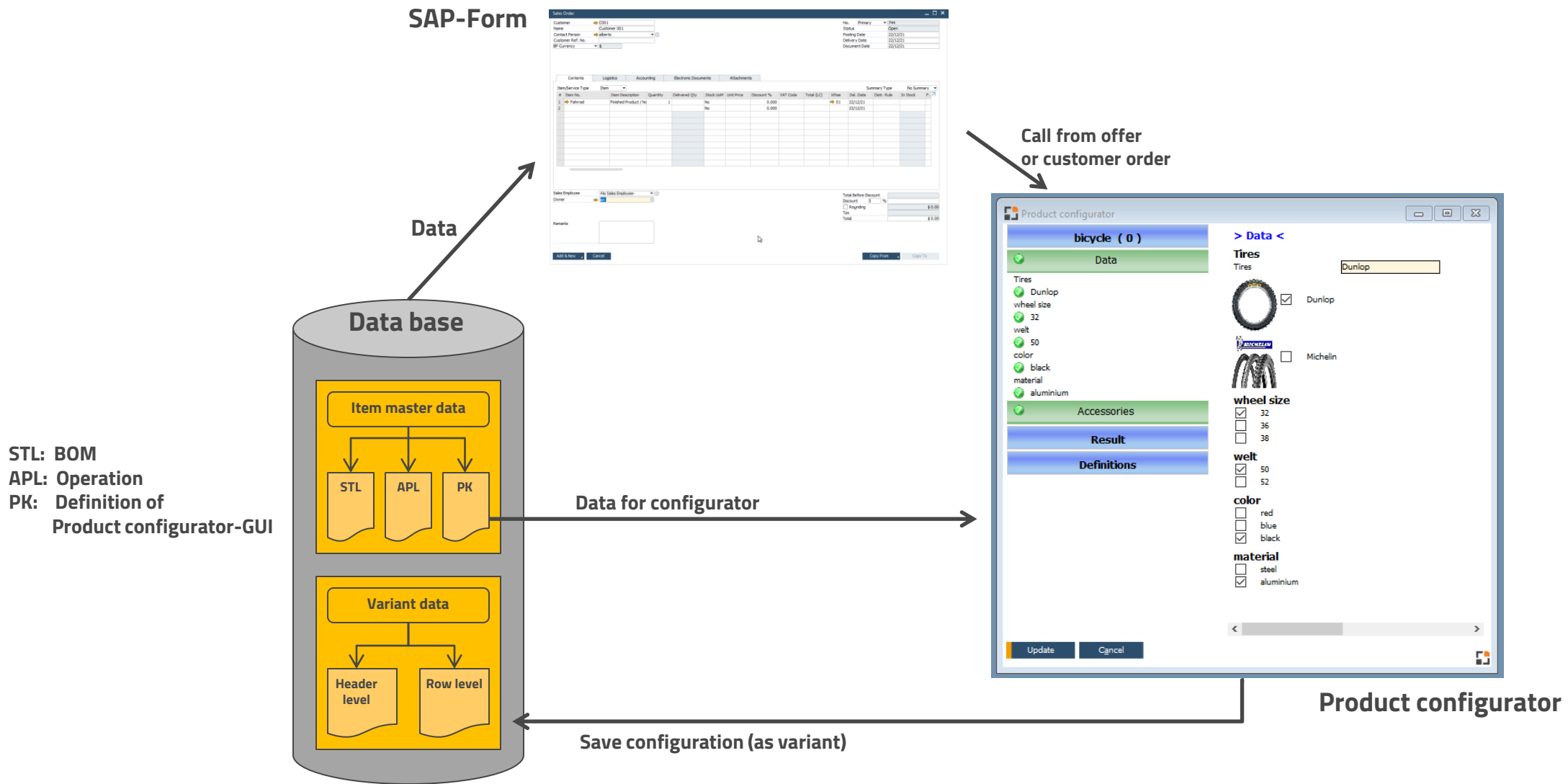
3. Realization

4. Data flow

5. Coding

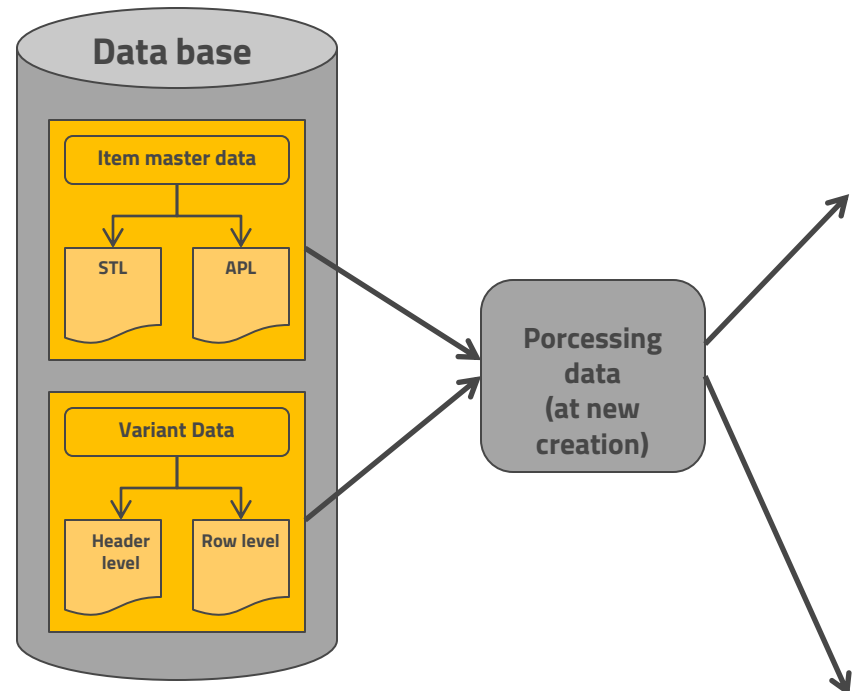
Data flow

(From/To product configurator)



Data flow

(Creation of precalculation / work order)



Pre-calculation (Beas)

Quantity	Use	Cost	DMC	T/Min	LMC
1.000 Pcs	Fahrrad	0.00	47.00	700.00	2.928.00
10	pc_fahrrad0002_001		0.00	410.00	1.774.00
20	pc_fahrrad0002_003		0.00	210.00	894.00
30	pc_fahrrad0002_004		0.00	80.00	260.00
10	1800 (99)		0.00	0.00	0.00
	Material Costs by Bill of Materials				
	External processing	47.000			
	Direct Material Costs		47.00		
	Indirect Material Costs	0.0%			
	L+M costs				2.928.00
	Indirect Production Costs	3.0%			87.84
	Costs of goods sold				
	Shipping cost				
	Sales and Administration	3.0%			
	Cost of Sales				
	Profit Margin				
	Net Sales Price				
	Discount	3.0%			

Work order (Beas)

Document	Sales Order	Date	Customer	Name	From	To	Item	Plan	Actual
10	pc_fahrrad0004_000	Full bike			22.12.21	22.12.21	pc_fahrrad0004_000	1.00	0.00 Pcs
10	A pc_rad	Rad						2.00	0.00 Pcs
20	A pc_fahrrad0004_001	welt 50 ", color: White						1.00	0.00 Pcs
30	A pc_fahrrad0004_002	Cross brace						1.00	0.00 Pcs
10	1800	Lackierung							
1335	WH000302	22.12.21			22.12.21	22.12.21	pc_fahrrad0004_000		
1334	WH000301	07.09.21	V70009	CTI computers	07.09.21	07.09.21	Cisel-001		
1333	WH000300	02.09.21	CS0008	Band & Lufel	02.09.21	02.09.21	pc_fahrrad		
1332	WH000299	02.09.21	V70009	CTI computers	02.09.21	02.09.21	FP		

AGENDA

Explanation of product configurator

1. Possible levels of complexity

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Coding

(Product configurator surface)

The screenshot displays the SAP 'Item master data for pc_fahrrad' window, specifically the 'Configurator' tab. The interface is organized into a tree view on the left and a data table on the right. The tree view includes categories like 'Data', 'Accessories', and 'Tires'. The data table lists parameters such as 'Dunlop', 'Michelin', 'wheel size', 'welt', 'color', 'material', 'Grip', 'Handlebar', and 'Pedals', each with associated values and prices. A rule is visible: 'case when [material] = 'steel' then 'N' else 'Y' er'. The bottom of the window features navigation buttons: OK, Cancel, Open, Test, and Setup.

Parameter	Type of input	Mandatory	Type	Image	Cross Reference	Price	Rule
bicycle							
Data							
Tires			String			0.00	
Dunlop			String			0.00	
Michelin			String			0.00	
wheel size	Selection - Radiobox					15.00	
32			Auto			12.00	
36			Auto			0.00	
38			Auto			0.00	
welt	Selection - Radiobox					23.00	
50			Auto			24.00	
52			Auto			0.00	
color	Selection - Radiobox					4.00	
red			Auto			4.00	
blue			Auto			0.00	
black			Auto			0.00	
material	Selection - Radiobox					12.00	
steel			Auto			31.00	
aluminium			Auto			0.00	
f= cross brace			Auto			0.00	case when [material] = 'steel' then 'N' else 'Y' er
Accessories							
Grip			String			0.00	
White			String			0.00	
Black			String			0.00	
Red			String			0.00	
Handlebar			String			0.00	
Model 1 (sport)			String			0.00	
Model 2 (classic)			String			0.00	
Pedals			String			0.00	
Stock			String			0.00	
magnetic flat pedal			String			0.00	
Clip-in pedal			String			0.00	

Coding

(Assignment of parameters/Variables to single fields in BoM / Routing)

The screenshot displays the SAP Item master data for 'pc_fahrrad' with the 'Bill of Materials' tab selected. The main table lists three items:

#	Position	Pos ID	UoM	Item	I-Version	Match code	Breakdown Variant	Description	Drawing number	Quantity	Manually	%	Active	Breakdown	V-
1	10	10	Pcs	pc_rad				Rad		2.00	<input type="checkbox"/>	50.0	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>
2	20	20	Pcs	pc_rahmen				welt <p:welt> ", color: <p:col		1.00	<input type="checkbox"/>	25.0	<input checked="" type="checkbox"/>		<input type="checkbox"/>
3	30	30	Pcs	pc_crossbrace				Cross brace		1.00	<input type="checkbox"/>	25.0	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>

Two dialog boxes are overlaid on the main window:

- Bill of Materials Item for pc_fahrrad:** Shows details for Position 10, Item pc_rad, and Description Rad. The 'Manually' checkbox is checked.
- Assignment Item:** Shows the 'Type' set to 'Formula' and 'Decimals' set to 0. The 'Selection' dropdown is also visible.

Red arrows indicate the flow of data from the main table to the 'Bill of Materials Item' dialog, and then to the 'Assignment Item' dialog.

Summary

You can now:

- understand the possible levels of complexity
- understand the process logic
- know the data flow regarding the product configuration
- have an overview on coding

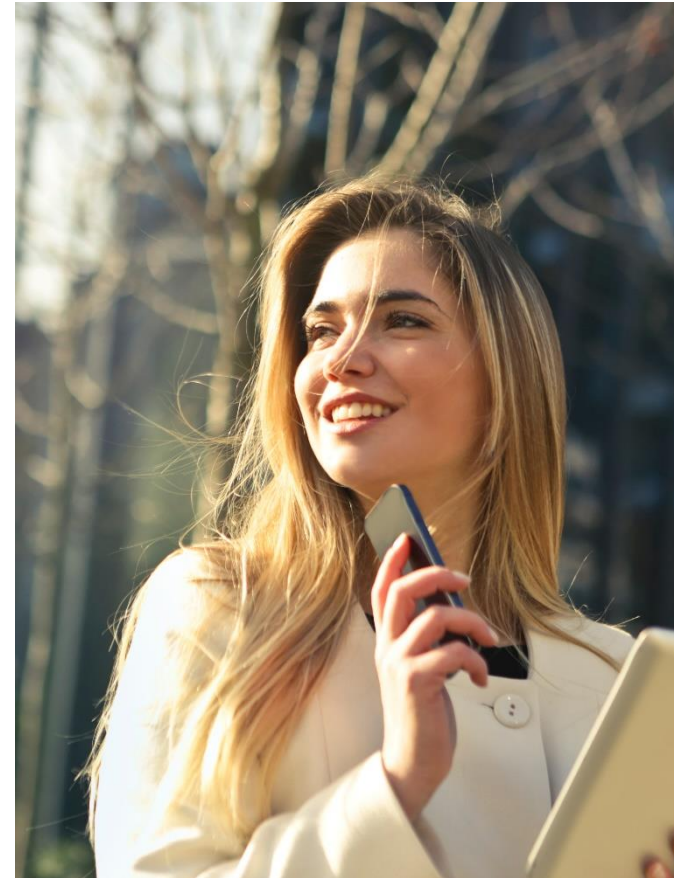
Thank you for your **attention!**

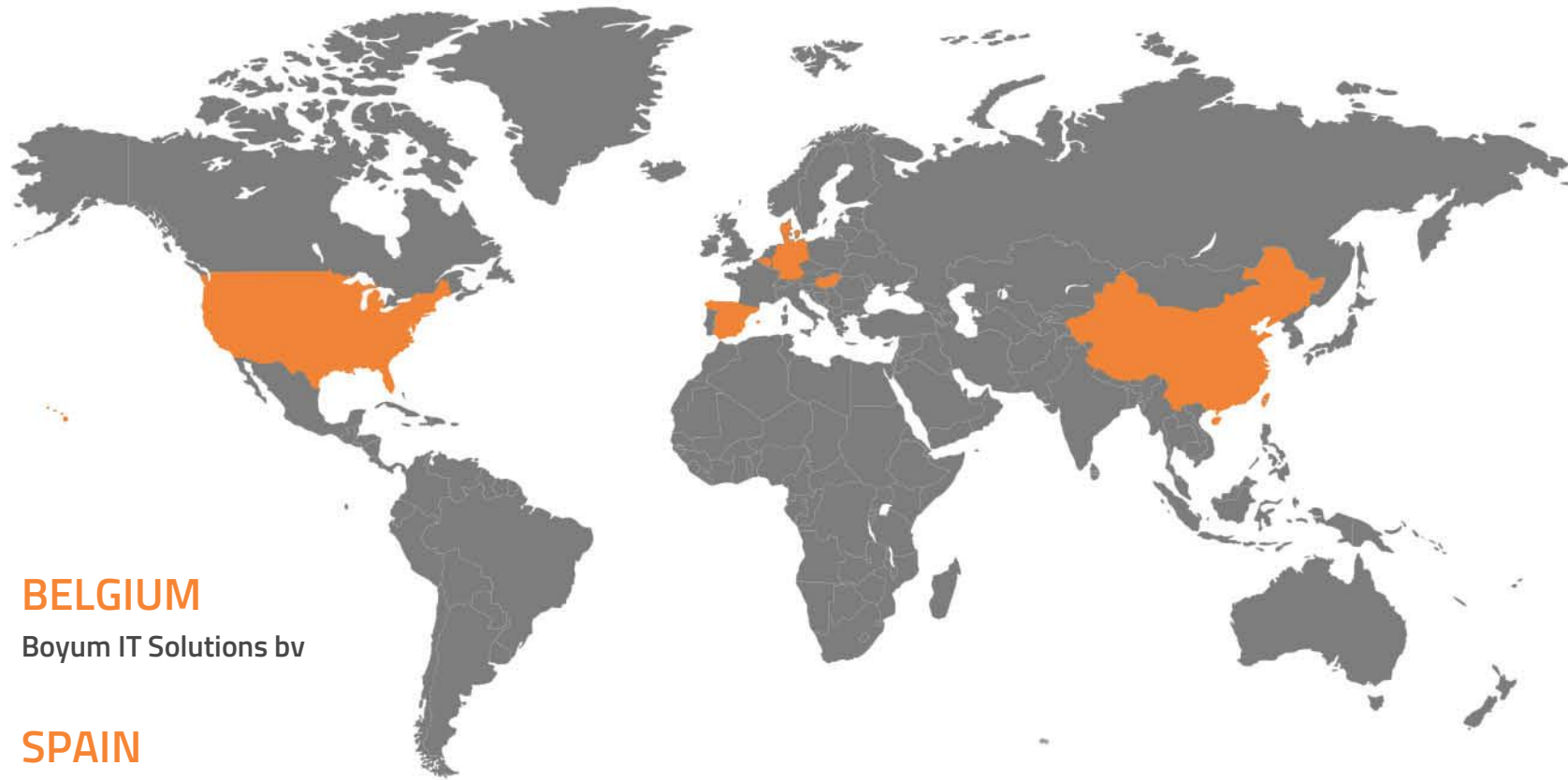
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