

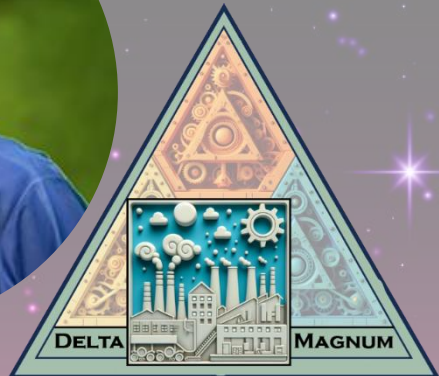
2026  
**DYNAMICS**  
CON  
Vegas





# D365 SCM Product Configurator

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2026  
DYNAMICS  
CON

# Session Objectives

- Learn how to use Product Models configuring a Sales Line and/or a Production order (or even a Batch order – with limitations)
- Learn how to build, test, validate, release and maintain Product Models



# Session Agenda



Why Configure?

Using a Product configuration model

Building a Product configuration model

Testing a Product configuration model

Maintaining a Product configuration model

Use of Phantoms on configured BOM lines

# Why Configure?

If using a Configurator would increase the configurability of your products, it is likely that you will do everything you do.

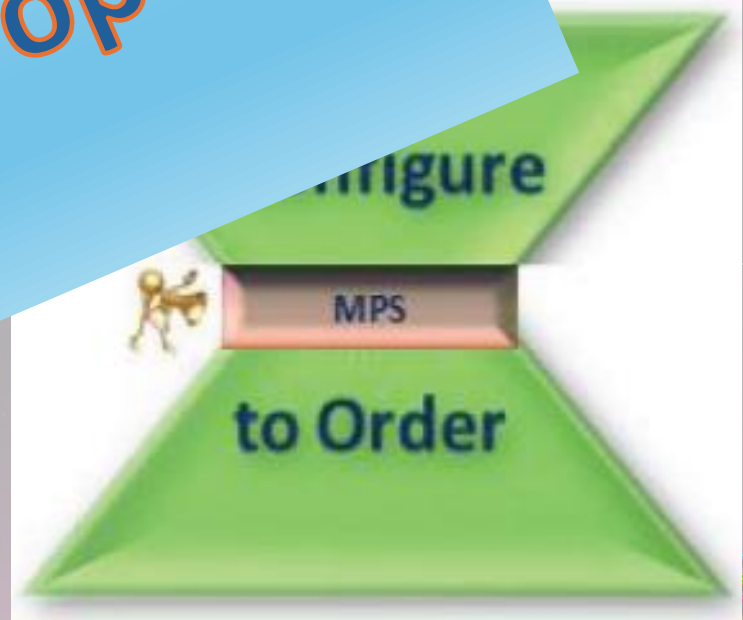
likely that  
s

If you are  
what  
co

ne

**Every sales line is initiated by a pre-defined customer questionnaire regarding product features and options**

- What
- What
- How
- What



# Product Configuration Overview



- Configuration is guided through a structured feature selection interface (dialog)
- Uses constraints to define valid combinations, rather than rigid rule sets
- Intended for internal teams such as customer service and sales engineering, not end customers
- Product models are created per product master version ("many-to-many"), typically by design or manufacturing engineers
- Constraints apply at the model level, not at the individual product level
  - *Multiple models can map to a single product and vice versa, but only one model may be active per product at any given time. Site and quantity are not factored in unless included as selection attributes in the configuration dialog.*
- Models can support multiple levels, allowing configured parent items to contain configured child items
- Supports generating structured item dimensions such as configuration, style, color, and size (variants)

# Let's see a sales line get "Configured"



## Sales order lines

+ Add line + Add lines Add products Remove Sales order line Financials Inventory Product and supply Update line Warehouse Retail Engineering change

Ty...	Variant number	Item number	Configuration	Product name	C	type	Site	Warehouse	Unit price	Adjusted unit ...
<input checked="" type="checkbox"/>	VN-000315	D0006	true-2-true-1	Speaker solution / D0006--		NEW	1	13	2,063.10	0.00000

- NEW
- Production order
- Transfer order
- 
- New batch order
- Event kanban
- PRODUCT MODEL
- Configure line

# ... and see a dialog



Price and ship date

---

Speaker solution

---

[Load template](#)

- Speaker solution
- High end speaker
- Insurance

Show only feasible  No

Additional insurance

**CABLE**

Include cable

Next

# ... More dialog



## Configure selected item

[Load template](#) [View price breakdown](#)

Speaker solution

High end speaker

Insurance

Show only feasible

No

Cabinet finish

Oak

Front grill

Black

Corner protection

False

Speaker height

14

Next

# ... and even more dialog



## Configure selected item

[Load template](#) [View price breakdown](#)

▲ Speaker solution

High end speaker

Insurance

Show only feasible

No

Insurance period

2

Next

# ... And create production



## Sales order lines

+ Add line + Add lines Add products Remove Sales order line Financials Inventory Product and supply Update

<input type="radio"/>	Ty...	Variant number	Item number	Configuration	Product name	
<input type="radio"/>		VN-000315	D0006	true-2-true-1	Speaker solution / D0006--	<b>NEW</b> Production order Transfer order New batch order

# What did it do to the Sales Line?



## Sales order lines

+ Add line   + Add lines   Add products   Remove   Sales order line ▾   Financials ▾   Inventory ▾   Product and supply ▾   U

<input type="radio"/>	<input type="radio"/>	Ty...	Variant number	Item number	Configuration	Product name	Quantity	Unit	D
<input type="radio"/>			VN-000315 ▾	D0006	true-2-true-1 ▾	Speaker solution / D0006--	1.00	ea ▾	S

### ITEM REFERENCE

Reference type

Production

Reference number

P000260

Reference lot

013417

### BOM/ROUTE

Sub-BOM

000201 ▾

Subroute

000148 ▾

# And created BOMs (plural!) – Multi-Level!



Item number	Product name	Configuration	Size	Color	Style	Warehouse	Quantity	Unit	Item type
T0001	SpeakerCable / Speaker Cable 2	<b>D0006 Speaker Solution</b>	2				1.0000	ea	
D0004	HighEndSpeaker / HighEndSpeaker	Oak-Black-14-false-2				13	1.0000	ea	
S0021	Insurance						2.0000	ea	

<input type="radio"/>	Item number	Product name	<b>D0004 Speaker</b>	Configuration	Size	Color	Style	Warehouse	Quantity	Unit	Item type
<input type="radio"/>	M0008	High End Cabinet / High End Cabinet Oak				Oak		11	1.0000	ea	
<input type="radio"/>	M0021	Front Grill - Cloth / Front Grill - Cloth Black				Black		13	1.0000	ea	
<input type="radio"/>	M0004	Crossover						11	1.0000	ea	
<input type="radio"/>	M0002	Mid-Range Speaker Unit						11	1.0000	ea	
<input type="radio"/>	M0003	Tweeter Speaker Unit						11	1.0000	ea	
<input type="radio"/>	M0001	Wiring Harness						11	1.0000	ea	

# And created Routes (plural!)

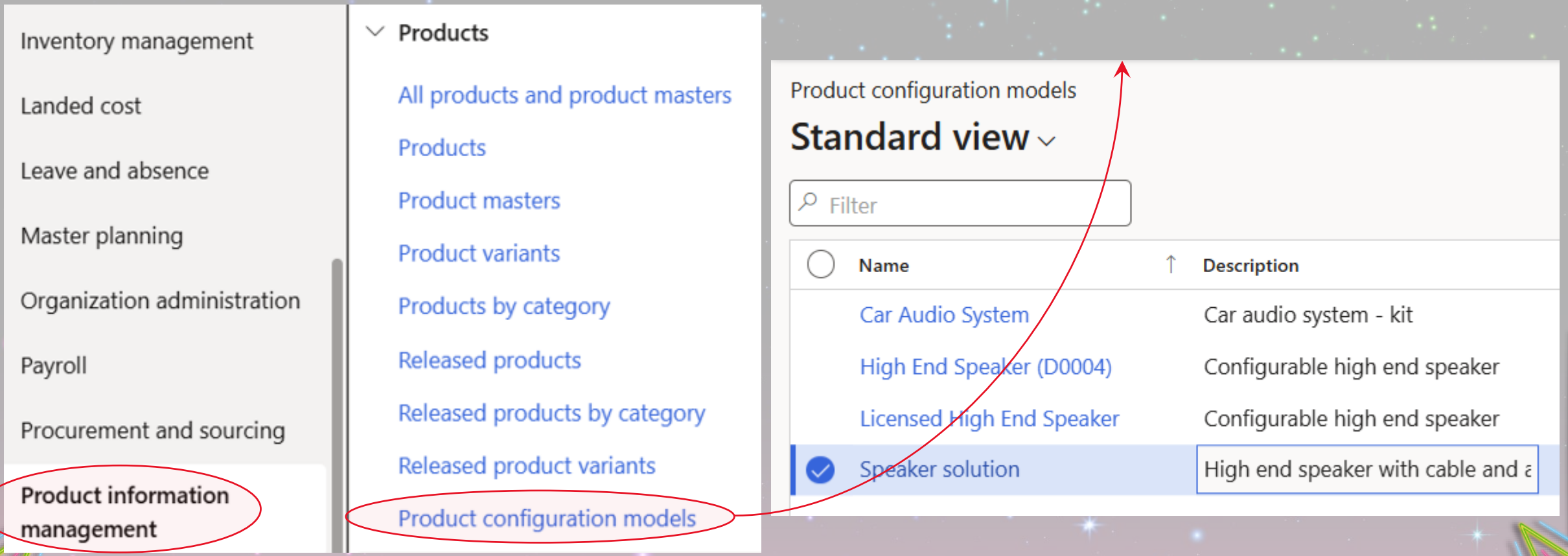


Configuration			Name		
All	<input type="text" value="true-2-true-1"/>	<input type="text"/>		D0006 Speaker Solution	
Oper. No.	Priority	Operation	Name	Run time	Process quantity
10	Primary	Trim/Cut	Triming and cutting foam into panels	1.00	1.00
20	Primary	Packing	Packing	1.00	1.00

Configuration			Name		
All	<input type="text" value="Oak-Black-14-false-2"/>	<input type="text"/>		D0004 Speaker	
Oper. No.	Priority	Operation	Name	Run time	Process quantity
10	Primary	Assembly	Speaker assembly	1.25	3.00
20	Primary	Finishing	Front grill mounting	1.00	20.00
30	Primary	Testing	Speaker testing and calibration	1.00	3.00
40	Primary	Packing	Packing	1.00	15.00

# So just how did it do all that magic?

It used all the meta-data on a Product configuration model that had our item number as an Active Version on that Model for this date



The screenshot shows the SAP navigation pane on the left and the 'Product configuration models' view on the right. In the navigation pane, 'Product information management' and 'Product configuration models' are circled in red. A red arrow points from the circled 'Product configuration models' to the 'Standard view' section of the right-hand pane.

**Navigation Pane:**

- Inventory management
- Landed cost
- Leave and absence
- Master planning
- Organization administration
- Payroll
- Procurement and sourcing
- Product information management**

**Product Configuration Models View:**

Product configuration models  
**Standard view** ▾

Filter

Name	Description
Car Audio System	Car audio system - kit
High End Speaker (D0004)	Configurable high end speaker
Licensed High End Speaker	Configurable high end speaker
<input checked="" type="checkbox"/> Speaker solution	High end speaker with cable and a

# Product configuration model Versions



Maintain	Product model details		Set up		Languages	Run	Exchange
Duplicate	Versions	Model properties	Components	Price models	Translation	Clear cache	Export product model
	User interface	Configuration templates	Attribute types	Price model criteria		Test	Import product model
			Table constraints			Validate	

Speaker solution	Speaker solution   Standard view <span>∨</span>
High end speaker	<b>Speaker solution</b>
Insurance	High end speaker with cable and an insurance option
	General
	Attributes
	Constraints
	Calculations
	Subcomponents
	User requirements
	BOM lines
	Route operations

# Product model Versions

- the tie to Item numbers (Product Masters)
- Many-to-many

Versions | Speaker solution

Standard view ▾

Filter

Product number	From date	To date	Approved	Approver	Active	Pricing method
D0006	1/3/2009	Never	✓	000019	✓	Attribute based

- Pricing is based on attributes rather than cost

# The Model Fast Tabs - General



## General

[Reset configuration reuse](#)

Name

Speaker solution

Description

High end speaker complete with speaker cable and additional insurance.

Reuse configurations

Yes

Use configuration nomenclature

Yes



- Reuse configurations: If Config id's match use the prior Config Id

# The Model Fast Tabs - General



## General

Reset configuration reuse

Name

Speaker solution

Description

High end speaker complete with speaker cable and additional insurance.

Reuse configurations

Yes

Use configuration nomenclature

Yes



- Reuse configurations: If Config id's match use the prior Config Id

**You will get the old BOM and Route!**

- So click on Reset configuration reuse if Model rules on BOM lines or Route operations are changed!

# The Model Fast Tabs - General



## General

[Reset configuration reuse](#)

Name

Speaker solution

Description

High end speaker complete with speaker cable and additional insurance.

Reuse configurations

Yes

Use configuration nomenclature

Yes



- Nomenclature can give intelligence to the Config Id

# The Model Fast Tabs - General



## General

Reset configuration reuse

Name

Speaker solution

Description

High end speaker complete with speaker cable and additional insurance.


Reuse configurations

Yes

Use configuration nomenclature

Yes



- Nomenclature can give intelligence to the Config Id
- You need to click on  to define that intelligence

# Define Nomenclature



Speaker solution : 11620 | Standard view ▾

## Product nomenclature

Example

Yes-20-Yes-123456

### Segments

Add ▾ Remove

<input type="radio"/>		Number ↑	Type	Text	Number sequence	Attribute
<input type="radio"/>		1	Attribute value			<u>Include cable</u> ▾
		2	Text constant	-		
		3	Attribute value			Cable size
		4	Text constant	-		
		5	Attribute value			Additional insurance
		6	Text constant	-		
		7	Number sequence value		Bill_29	

# Product Master Setting of the Nomenclature

- You CAN preset Size,

Product details | Standard view

D0006 : Speaker solution

Number nomenclature	Name nomenclature	At subcomponent	Effect on Config ID	Effect on Config ID
No	No	<b>Fails</b>	Builds based on attribute values	Could be blank
No	Yes	<b>Fails</b>	Builds based on attribute values	Builds based on attribute values
Yes	No	OK	Uses a number sequence	Could be blank
Yes	Yes	OK	Uses a number sequence	Builds based on attribute values

- BUT DON'T set "Use number Nomenclature" to "No" for a Subcomponent Version. It will fail.**

Color group  No

Style group  Yes

Product type \_\_\_\_\_

Item \_\_\_\_\_

Product owner \_\_\_\_\_

Size group \_\_\_\_\_

Product variant number nomenclature [ColorSize](#)

Use name nomenclature  Yes

Product variant name nomenclature [ColorSize](#)

# The Model Fast Tabs - Attributes

Attributes

+ Add Remove **Maintain attribute types**

<input type="radio"/>	Name	Solver name	Description	Attribute type	Set default	Default value
<input type="radio"/>	Include cable	includeCable	Should a speaker cable be inclu...	BooleanDomain	<input type="text"/>	
	Cable size	cableSize	What cable size should be used?	Cable size	<input checked="" type="checkbox"/>	2
	Additional insurance	additionalInsurance	An additional insurance can be i...	BooleanDomain		

**MODIFIERS**

Hidden  No

Mandatory  No

Read-only  No

Condition

Condition

Condition

- Includes attributes that will display as choices in the dialog
- Includes attributes that are calculated: Visible or Hidden

# Maintain Attribute Types

- Only accessible from within one Model
- BUT maintains ALL attributes for ALL Models

Speaker solution: Cable size | Standard view

## Attribute types

Attribute type name  
Cable size

---

### General

Type  Fixed list  Yes Value range  No

---

### Values

+ Add Remove Move up Move down Translate

<input type="radio"/>	Value	Solver value
<input checked="" type="radio"/>	2	2
<input type="radio"/>	10	10
<input type="radio"/>	20	20
<input type="radio"/>	30	30

Filter

Binocular magnification
BooleanDomain
Brand
Cabinet finish
<b>Cable size</b>
Camp Seasons
Campaign
Camping Best Use
Capacity
Car audio system
Car type

# Maintain Attribute Types

- Value Range Compatible types

**General**

Type  Fixed list  No Value range  No

Currency  
DateTime  
Decimal  
Integer  
Text  
Boolean  
Reference  
Video  
Image

# Maintain Attribute Types



- Type Text: Fixed List

## Attribute types

Attribute type name

Cabinet finish

### General

Type

Text

Fixed list



Value range



### Values

+ Add Remove Move up Move down Translate

<input type="radio"/>		Value	Solver value
<input checked="" type="radio"/>		Oak	Oak
<input type="radio"/>		Rosewood	Rosewood
<input type="radio"/>		White	White
<input type="radio"/>		Black	Black

# The Model Fast Tabs

## - Maintain Constraints – Table Constraint



Constraints

+ Add Remove Validate Maintain table constraints Edit expression Edit table constraint

<input type="radio"/>	Name	Description	Constraint type	Expression	Table constraint definition
<input type="radio"/>	Color and Finish	Cabinet color and finish combin...	Table constraint		Color and finish
<input type="radio"/>	Corner protection	Corner protection is only availab...	Expression constraint	Implies[FrontGri...	

Table fields

<input type="radio"/>	Name	Attribute type
<input type="radio"/>	Finish	Cabinet finish
<input type="radio"/>	Grill	Front grill

Table constraint definition | Color and Finish : Cabinet color and finish combinations

Standard view

Filter

Name	Description	Type
Color and finish	Cabinet color and finish combin...	User defined

Table fields

<input type="radio"/>	Name	Attribute type
<input type="radio"/>	Finish	Cabinet finish
<input type="radio"/>	Grill	Front grill

Allowed combinations

+ Add Remove Validate

<input type="radio"/>	Refresh	Field 1	Field 2
<input type="radio"/>	<input type="checkbox"/>	Finish	Grill
<input type="radio"/>	<input type="checkbox"/>	Oak	Black
<input type="radio"/>	<input type="checkbox"/>	Rosewood	White
<input type="radio"/>	<input type="checkbox"/>	White	Black
<input type="radio"/>	<input type="checkbox"/>	White	White
<input type="radio"/>	<input type="checkbox"/>	Black	Black

- Type Text: Fixed List

# The Model Fast Tabs

## - Maintain Constraints - Expression



High end speaker with cable and an insurance option

+ Add Remove Validate Maintain table constraints **Edit expression** Edit table constraint

<input type="radio"/>	<input type="radio"/>	Name	Description	Constraint type	Expression
<input checked="" type="radio"/>	<input type="radio"/>	Color and Finish	Cabinet color and finish combin...	Table constraint	
<input checked="" type="radio"/>	<input type="radio"/>	Corner protection	Corner protection is only availab...	Expression constraint	Implies[FrontGrill != "Metal", !CornerProtection]

- If you know OML key the constraint in here
- Otherwise select Edit expression for more assisted coding

# The Model Fast Tabs

## - Maintain Constraints - Expression



High end speaker with cable and an insurance option

+ Add Remove Validate Maintain table constraints **Edit expression** Edit table constraint

<input type="radio"/>	<input type="radio"/>	Name	Description	Constraint type	Expression
<input checked="" type="radio"/>	<input type="radio"/>	Color and Finish	Cabinet color and finish combin...	Table constraint	
<input checked="" type="radio"/>	<input type="radio"/>	Corner protection	Corner protection is only availab...	Expression constraint	Implies[FrontGrill != "Metal", !CornerProtection]

- If you know OML key the constraint in here
- Otherwise select Edit expression for more assisted coding
- *What do think this OML is doing?*

# Maintain Constraints – Expression

- Optimization Modeling Language (OML) via Microsoft Solver Foundation – Domain specific
- Lines can be formed by successive selection OR by simply keying in the text

Enter expression

✓ Validate

Expression

```
Implies[FrontGrill != "Metal", !CornerProtection]
```

All symbols

Attributes

Operators

Values

Symbol	Symbol type
(	Operator
True	Value
False	Value
!	Operator
-	Operator
Implies[	Operator
And[	Operator
Or[	Operator
Not[	Operator



# Maintain Constraints – Expression

- Optimization Modeling Language (OML) via Microsoft Solver Foundation – Domain specific
- Lines can be formed by successive selection OR by simply keying in the text
- Validate for OML syntax only

Enter expression

✓ Validate

Expression

```
Implies[FrontGrill != "Metal", !CornerProtection]
```

All symbols

Attributes

Operators

Values

Symbol

(  
True  
False  
!  
-  
Implies[  
And[  
Or[  
Notf

Symbol type

Operator  
Value  
Value  
Operator  
Operator  
Operator  
Operator  
Operator  
Operator



# The Model Fast Tabs - Maintain Calculations



## Calculations

+ Add Remove Validate Edit expression

		Name	Description	Target attribute	Expression
<input checked="" type="radio"/>		Assembly time	Calculation of the assembly time	AssemblyRunTime	If[ ( SpeakerHeight / 3 ) > 4.1, 1....

Hidden  Yes

Mandatory  No

Read-only  No

Condition

Condition

Condition

- Again, clicking on Edit expression allows lines to be formed by successive selection OR by simply keying in the text
- Note that this result is Hidden in the dialog

Validate

Expression

If[ ( SpeakerHeight / 3 ) > 4.1, 1.25, 0.75 ]

# We'll skip Subcomponents and User requirements until we cover Multi-level models




The screenshot shows a software interface for configuring a model. The top navigation bar includes a back arrow, a menu icon, and buttons for 'Edit', '+ New', 'Model', and 'Options'. The main content area is divided into two panels. The left panel, titled 'Speaker solution', contains a list of items: 'High end speaker' and 'Insurance'. The right panel, also titled 'Speaker solution', shows a 'Standard view' dropdown and a description: 'High end speaker with cable and an insurance option'. Below this are several tabs: 'General', 'Attributes', 'Constraints', 'Calculations', 'Subcomponents', 'User requirements', 'BOM lines', and 'Route operations'. The 'Subcomponents' and 'User requirements' tabs are circled in red.

# The Model Fast Tabs - BOM Lines



## BOM lines

+ Add  Remove [BOM line details](#) [Edit condition](#)

<input type="radio"/>		Name	Description	Condition	Item number
<input type="radio"/>		Cabinet	High end speaker cabinet		M0008
<input checked="" type="radio"/>		Cloth grill	Speaker front grill, cloth	FrontGrill != "Metal"	M0021
<input type="radio"/>		Corner protection	Protective corners	CornerProtection	M0009
<input type="radio"/>		Crossover	Crossover		M0004
<input type="radio"/>		Metal grill	Speaker front grill, metal	FrontGrill == "Metal"	M0022

# The Model Fast Tabs - BOM Lines

## BOM lines

+ Add
🗑 Remove
BOM line details
Edit condition

<input type="radio"/>	<input type="radio"/>	Name	Description	Condition	Item number
		Cabinet	High end speaker cabinet		M0008
<input checked="" type="radio"/>		Cloth grill	Speaker front grill, cloth	FrontGrill != "Metal"	M0021
		Corner protection	Protective corners	CornerProtection	M0009
		Crossover	Crossover		M0004
		Metal grill	Speaker front grill, metal	FrontGrill == "Metal"	M0022

*What do you think this OML does?*

# Edit condition



Expression

```
Implies[FrontGrill != "Metal", !CornerProtection]
```

All symbols   Attributes   Operators   Values

Symbol	Symbol type
==	Operator
!=	Operator
<	Operator
>	Operator
<=	Operator
>=	Operator
&	Operator
	Operator
:-	Operator

# The Model Fast Tabs - BOM Lines

## BOM lines

[+ Add](#)
[🗑 Remove](#)
[BOM line details](#)
[Edit condition](#)

<input type="radio"/>	<input type="radio"/>	Name	Description	Condition	Item number
<input type="radio"/>	<input type="radio"/>	Cabinet	High end speaker cabinet		M0008
<input checked="" type="radio"/>	<input type="radio"/>	Cloth grill	Speaker front grill, cloth	FrontGrill != "Metal"	M0021
<input type="radio"/>	<input type="radio"/>	Corner protection	Protective corners	CornerProtection	M0009
<input type="radio"/>	<input type="radio"/>	Crossover	Crossover		M0004
<input type="radio"/>	<input type="radio"/>	Metal grill	Speaker front grill, metal	FrontGrill == "Metal"	M0022

# BOM Line details

## - Details

### BOM line details

Item number  Item number  Val...  Attribu...

**Details** Setup Dimension

#### SUBCONTRACTOR

Vendor account

#### BOM

Position

Line type

Calculation  Yes

Subroute

Sub-BOM

#### PROJECT

Set subproduction to Consumed  No

#### VALID

From date

To date

#### OPERATION

Oper. No.

End  No

#### CONSUMPTION

Resource consumption  Yes

Vendor account  Val...  Attribu...

Position  Val...  Attribu...

Line type  Val...  Attribu...

Calculation  Val...  Attribu...

Subroute  Val...  Attribu...

Sub-BOM  Val...  Attribu...

Set subproduction to Consumed  Val...  Attribu...

From date  Val...  Attribu...

To date  Val...  Attribu...

Oper. No.  Val...  Attribu...

End  Val...  Attribu...

Resource consumption  Val...  Attribu...

# BOM Lines as Phantoms

- Can really help Engineering Change management

## BOM line details

Item number  Item number  Val...  Attribu...

**Details** Setup Dimension

### SUBCONTRACTOR

Vendor account

### BOM

Position

Line type

Item

Pegged supply

Vendor

### PROJECT

Set subproduction to Consumed  No

### VALID

From date

To date

### OPERATION

Oper. No.

End  No

### CONSUMPTION

Resource consumption  No

Vendor account  Val...  Attribu...

Position  Val...  Attribu...

Line type  Val...  Attribu...

Calculation  Val...  Attribu...

Subroute  Val...  Attribu...

Sub-BOM  Val...  Attribu...

Set subproduction to Consumed  Val...  Attribu...

From date  Val...  Attribu...

To date  Val...  Attribu...

Oper. No.  Val...  Attribu...

End  Val...  Attribu...

Resource consumption  Val...  Attribu...

# BOM Line details

## - Setup

Details **Setup** Dimension

### CONSUMPTION CALCULATION

Formula  
Standard

Quantity  
1.0000

Per series  
0

Unit  
ea

Consumption is  
Variable

Flushing principle

Release to warehouse  
Allow partial reservation

Constant scrap

Variable scrap

### ROUNDING-UP

Rounding-up  
No

Multiples

### MEASUREMENT

Height  
Speaker height

Width

Depth

Density

Constant

Formula  
 Value  Attribute

Quantity  
 Value  Attribute

Per series  
 Value  Attribute

Unit  
 Value  Attribute

Consumption is  
 Value  Attribute

Flushing principle  
 Value  Attribute

Release to warehouse  
 Value  Attribute

Constant scrap  
 Value  Attribute

Variable scrap  
 Value  Attribute

Rounding-up  
 Value  Attribute

Multiples  
 Value  Attribute

Height  
 Value  Attribute

Width  
 Value  Attribute

Depth  
 Value  Attribute

Density  
 Value  Attribute

Constant  
 Value  Attribute

# BOM Line details

## - Dimensions

Item number  Item number  
 Value  Attribute

Details Setup **Dimension**

### INVENTORY DIMENSIONS

<input type="checkbox"/>	Configuration	<input type="text"/>
<input type="checkbox"/>	Size	<input type="text"/>
<input checked="" type="checkbox"/>	Color	<input type="text" value="Front grill"/>
<input type="checkbox"/>	Style	<input type="text"/>
<input type="checkbox"/>	Version	<input type="radio"/> Value <input type="radio"/> Attribute
<input type="checkbox"/>	Warehouse	<input type="text"/>
<input type="checkbox"/>	Batch number	<input type="text"/>
<input type="checkbox"/>	Location	<input type="text"/>
<input type="checkbox"/>	Inventory status	<input type="text"/>
<input type="checkbox"/>	License plate	<input type="text"/>
<input type="checkbox"/>	Serial number	<input type="text"/>

Configuration  
 Value  Attribute

Size  
 Value  Attribute

Color  
 Value  Attribute

Style  
 Value  Attribute

Warehouse  
 Value  Attribute

Batch number  
 Value  Attribute

Location  
 Value  Attribute

Inventory status  
 Value  Attribute

License plate  
 Value  Attribute

Serial number  
 Value  Attribute

# The Model Fast Tabs - Route operations



Route operations

+ Add Remove **Route operation details** Edit condition

<input type="radio"/>		Name	Description	Condition	Operation
<input type="radio"/>		Assembly	Speaker assembly		Assembly
		Finishing	Cabinet finishing		Finishing
		Packing	Speaker packing		Packing
		Testing	Speaker testing		Testing

# Route operations - Details



Operation:  Operation:  Val...  Attribu...

**Details** Setup Times Resource requirements

**OPERATION**

<input checked="" type="checkbox"/>	Oper. No.	<input type="text" value="10"/>	<input checked="" type="radio"/> Val... <input type="radio"/> Attribu...
<input checked="" type="checkbox"/>	Next	<input type="text" value="20"/>	<input checked="" type="radio"/> Val... <input type="radio"/> Attribu...
<input type="checkbox"/>	Priority	<input type="text" value="Primary"/>	<input type="radio"/> Val... <input type="radio"/> Attribu...
<input type="checkbox"/>	Link type	<input type="text"/>	<input type="radio"/> Val... <input type="radio"/> Attribu...

**ROUTE**

<input type="checkbox"/>	Property	<input type="text"/>	<input type="radio"/> Val... <input type="radio"/> Attribu...
<input checked="" type="checkbox"/>	Route group	<input type="text" value="Proc"/>	<input checked="" type="radio"/> Val... <input type="radio"/> Attribu...
<input type="checkbox"/>	Route type	<input type="text" value="Standard"/>	<input type="radio"/> Val... <input type="radio"/> Attribu...

# Route operations - Setup



Operation  Operation  Val...  Attribu...

Details **Setup** Times Resource requirements

## CONSUMPTION CALCULATION

Formula

Factor

Costing resource

## COST CATEGORIES

Setup category

Run time category

Quantity category

Formula  Val...  Attribu...

Factor  Val...  Attribu...

Costing resource  Val...  Attribu...

Setup category  Val...  Attribu...

Run time category  Val...  Attribu...

Quantity category  Val...  Attribu...

# Route operations - Times



Operation:  Operation:  Val...  Attribu...

Details Setup **Times** Resource requirements

**TIMES**

<input type="checkbox"/>	Queue time before	<input type="text"/>	<input type="radio"/> Val... <input type="radio"/> Attribu...
<input type="checkbox"/>	Setup time	<input type="text"/>	<input type="radio"/> Val... <input type="radio"/> Attribu...
<input checked="" type="checkbox"/>	Run time	<input type="text" value="Assembly run time"/>	<input type="radio"/> Val... <input checked="" type="radio"/> Attribu...
<input checked="" type="checkbox"/>	Process quantity	<input type="text" value="3.00"/>	<input checked="" type="radio"/> Val... <input type="radio"/> Attribu...
<input type="checkbox"/>	Transit time	<input type="text"/>	<input type="radio"/> Val... <input type="radio"/> Attribu...
<input type="checkbox"/>	Queue time after	<input type="text"/>	<input type="radio"/> Val... <input type="radio"/> Attribu...
<input checked="" type="checkbox"/>	Hours/time	<input type="text" value="1.0000"/>	<input checked="" type="radio"/> Val... <input type="radio"/> Attribu...

**OVERLAP**

<input type="checkbox"/>	Transfer batch	<input type="text"/>	<input type="radio"/> Val... <input type="radio"/> Attribu...
--------------------------	----------------	----------------------	---

# Route operations – Resource requirements



- Note: You can only set Values for Resource requirements. You can't populate with Attributes.

Operation:  Operation:  Val...  Attribu...

Details Setup Times **Resource requirements**

**RESOURCES**

Quantity:  Load:

**RESOURCE REQUIREMENTS**

[+ Add](#) [Remove](#)

<input type="radio"/>	<input type="radio"/>	Requirement type	Requirement	Operations sch...	Job scheduling
<input type="radio"/>	<input type="radio"/>	Capability	Assembly	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**IDENTIFICATION**

Requirement type:

Requirement:

Description:

**USE FOR**

Operations scheduling:  Yes

Job scheduling:  Yes

**OPTIONS**

Minimum level needed:

# Let's move to the Ribbon now



The screenshot shows the Dynamics 365 ribbon interface. At the top, there are navigation icons: a back arrow, a hamburger menu, a 'Save' icon, a '+ New' icon, and a search icon. Below these are tabs for 'Model' (which is selected and underlined) and 'Options'. The ribbon is divided into several groups:

- Maintain**: Contains a 'Duplicate' button.
- Product model details**: Contains 'Versions', 'Model properties', 'User interface', and 'Configuration templates'.
- Set up**: Contains 'Components', 'Table constraints', 'Price models', and 'Price model criteria'. The 'Attribute types' option is circled in red.
- Languages**: Contains 'Translation'.
- Run**: Contains 'Clear cache', 'Test', and 'Validate'.
- Exchange**: Contains 'Export product model' and 'Import product model'.

- Attribute types - we already saw navigation from the Attribute fast tab

# Let's move to the Ribbon now



The screenshot shows the Dynamics 365 ribbon interface. The 'Model' tab is selected and highlighted. The ribbon is divided into several groups: 'Maintain', 'Product model details', 'Set up', 'Languages', 'Run', and 'Exchange'. The 'Set up' group contains 'Components', 'Price models', and 'Price model criteria'. The 'Attribute types' and 'Table constraints' items are circled in red. The 'Run' group contains 'Clear cache', 'Test', and 'Validate'. The 'Exchange' group contains 'Export product model' and 'Import product model'.

Maintain	Product model details		Set up		Languages	Run	Exchange
Duplicate	Versions	Model properties	Components	Price models	Translation	Clear cache	Export product model
	User interface	Configuration templates	Attribute types	Price model criteria		Test	Import product model
			Table constraints			Validate	

- Attribute types - we already saw navigation from the Attribute fast tab
- Table constraints - we already saw navigation from the Constraints fast tab

# Ribbon > Product model > Versions



Navigation: < Back, Menu, Save, + New, **Model**, Options, Search

Maintain	Product model details	Set up	Languages	Run	Exchange		
Duplicate	<b>Versions</b> User interface	Model properties Configuration templates	Components Attribute types Table constraints	Price models Price model criteria	Translation	Clear cache Test Validate	Export product model Import product model

Versions | Speaker solution

Standard view ▾

Filter

Refresh	Product number	From date	To date	Approved	Approver	Active	Pricing method
	D0006 ▾	1/3/2009	Never	<input checked="" type="checkbox"/>	000019	<input checked="" type="checkbox"/>	<b>Attribute based</b>

# Ribbon > Product model > Model properties



Standard view ▾

## Edit the model details

Name

Speaker solution

Description

High end speaker with cable and  
an insurance option

Solver strategy

Default ▾

Maximum number of columns

0

Root component

- New component
- Select existing component

Name

Speaker solution ▾

# Ribbon > Product model > Model properties



## Edit the model details

Name

Speaker solution

Description

High end speaker with cable and  
an insurance option

Solver strategy

Default

Default

Minimal domains first

Top-down

Z3

component

Select existing  
component

Name

Speaker solution

# Ribbon > Product model > User interface

- Design the layout of the User dialog
- Provides a Test button for just viewing and playing with the dialog  
(Can also be accessed from the model ribbon as we will see later)

The screenshot displays a software interface with a top navigation bar and two main panels. The top bar includes a back arrow, a menu icon, a 'Test' button, and several action buttons: '+ New attribute group', 'Delete attribute group', 'Move up', 'Move down', and 'Options'. The left panel is a tree view showing a hierarchy of attribute groups: 'Speaker solution' (expanded), 'Speaker solution' (expanded), '[Cable]' (expanded), 'Include cable', 'Cable size' (highlighted), 'Additional insurance', 'One to Ten', 'High end speaker : High End Speaker' (expanded), 'Cabinet finish', 'Front grill', 'Corner protection', 'Speaker height', 'Assembly run time', 'Insurance : Insurance' (expanded), 'Insurance period', and 'Additional insurance'. The right panel, titled 'User interface', shows a configuration for the selected 'Cable size' attribute. It has a 'Name' field containing 'Cable size' and an 'Attribute group' dropdown menu currently set to 'Cable'.

# Ribbon > Product model > Configuration templates

- A dialog with some or all answers already set

Configuration templates | Speaker solution

Standard view ▾

↻	Name	Description	Active
	Full speaker solution	Full speaker solution including cable and extra insurance	<input checked="" type="checkbox"/>
	Only speaker	Only the high end speaker	<input checked="" type="checkbox"/>

## Product configuration template: Full speaker solution

High end speaker with cable and an insurance option

Price and ship date

Full speaker solution

Load template

▾ Speaker solution

High end speaker

Insurance

Show only feasible

No

Insurance period

3 ▾

Next

# Ribbon > Product model > Configuration templates

- A dialog with some or all answers already set
- Click on the hyperlink to set the attribute values that will default if this template is selected by the user

Configuration templates | Speaker solution

Standard view ▾

↻	Name	Description	Active
	Full speaker solution	Full speaker solution including cable and extra insurance	<input checked="" type="checkbox"/>
	Only speaker	Only the high end speaker	<input checked="" type="checkbox"/>

## Product configuration template: Full speaker solution

High end speaker with cable and an insurance option

Price and ship date

Full speaker solution

Load template

Speaker solution

High end speaker

Insurance

Show only feasible

No

Insurance period

3 ▾

Next

# Ribbon > Set up > Components



← Save + New Delete Where-used Options 🔍

Components

Standard view ▾

↻	Name	Description
	High End Speaker	Configurable high end speaker
	Car Audio system	Car audio system - kit
	Speaker solution	High end speaker complete with...
	Insurance	Additional insurance for the spe...
	Licensed High End Speaker	Configurable high end speaker

- An alternate Navigation

# Ribbon > Set up > Components



← Save + New Delete **Where-used** Options 🔍

Components  
**Standard view** ▾

🔍 Filter

↻	Name	Description
	<b>High End Speaker</b>	Configurable high end speaker
	Car Audio system	Car audio system - kit
	Speaker solution	High end speaker complete with...
	Insurance	Additional insurance for the spe...
	Licensed High End Speaker	Configurable high end speaker

- An alternate Navigation
- Provides a Model Where-used inquiry

Where-used | High End Speaker : 11620

**Standard view** ▾

🔍 Filter

Name	Description
<b>High End Speaker (D0004)</b>	Configurable high end speaker
Speaker solution	High end speaker with cable an...

# Ribbon > Set up > Price models



← Edit + New Delete Edit Duplicate Options

Price models | Speaker solution

**Standard view** ▾

Filter

Price model name	Description
Qty break model	Qty break model
Standard prices	Standard prices for all customers

# Ribbon > Set up > Price models

← | Edit | + New | Delete | **Edit** | Duplicate | Options

Price models | Speaker solution

**Standard view** ▾

Filter

Price model name	Description
Qty break model	Qty break model
Standard prices	Standard prices for all customers

- Select Edit to modify the Price Model

# Ribbon > Set up > Price model Edit



Speaker solution

High end speaker

Insurance

Standard prices : Speaker solution | Standard view ▾

## Standard prices

Default currency

EUR

Current currency

EUR



### General

Name

Speaker solution

Base price expression

299.95



### Expression rules

+ Add



Remove



Validate

Edit condition

Edit expression

<input type="radio"/>		Name	Condition	Expression
<input type="radio"/>		Cable included	includeCable	69.95
		Cable size 2	cableSize == "2"	-59.95
		Cable size 30	cableSize == "30"	30 * 6.95

# Ribbon > Set up > Price model Edit



Speaker solution

High end speaker

Insurance

Standard prices : Speaker solution | Standard view ▾

## Standard prices

Default currency: EUR | Current currency: EUR ▾ + 🗑️

### General

Name: High End Speaker | Base price expression: 899.95 ✎

### Expression rules

+ Add 🗑️ Remove ✓ Validate Edit condition Edit expression

<input type="radio"/>	<input type="radio"/>	Name	Condition	Expression
<input type="radio"/>	<input type="radio"/>	All white	CabinetFinish == "Whi...	-59.95
<input type="radio"/>	<input type="radio"/>	Corner protection	CornerProtection	35.95
<input type="radio"/>	<input type="radio"/>	Metal front grill	FrontGrill == "Metal"	89.95
<input type="radio"/>	<input type="radio"/>	Rosewood	CabinetFinish == "Ros...	119.95
<input type="radio"/>	<input type="radio"/>	Speaker height		SpeakerHeight * 12.95

# Ribbon > Set up > Price model Edit



Speaker solution

High end speaker

**Insurance**

Standard prices : Speaker solution | Standard view

## Standard prices

Default currency: EUR | Current currency: EUR

### General

Name: Insurance | Base price expression: [ ]

### Expression rules

+ Add | Remove | Validate | Edit condition | Edit expression

	Name	Condition	Expression
<input type="radio"/>	Insurance period	additionalInsurance	insurancePeriod * 39.95

# Ribbon > Set up > Price model criteria



Name	Description	Price model	Order type	Valid from	Expire by
Standard prices - orders	Query for standard prices on sal...	Standard prices	Sales order	11/1/2013	Never
Standard prices - customer quotes	Query for standard prices on cu...	Standard prices	Quotation type customer	11/1/2013	Never
Standard prices - prospects	Query for standard prices on pr...	Standard prices	Quotation type prospect	11/1/2013	Never

Range Joins

+ Add - Remove

Table	Derived table	Field	Criteria
Order lines	Order lines	Sales order	
Order lines	Order lines	Line number	

Tables
Order lines
Customers
Sales orders

I added this one

- Answers "what price model applies where"
- Can be based on Line details, Customers and much more

# Ribbon > Languages > Translation



Product configuration model

Speaker solution

Element type	Component	Original text	Translated
Product configuration mod...	Speaker solution	Speaker solution	✓
Component	Speaker solution	Speaker solution	✓
Attribute	Speaker solution	Include cable	✓
Attribute	Speaker solution	Cable size	✓
Attribute	Speaker solution	Additional insurance	✓
Attribute	Speaker solution	One to Ten	✓
Sub component	Speaker solution	High end speaker	✓
Component	High End Speaker	High End Speaker	✓
Attribute	High End Speaker	Cabinet finish	✓
Attribute	High End Speaker	Front grill	✓

Speaker solution | Standard view

## Translation

Language

da

Element type

Attribute

Component

Speaker solution

### Translation

#### NAME

Original text

Include cable

Translated text

Inkluder kabel

#### DESCRIPTION

Original text

Should a speaker cable be inclu...

Translated text

Skal et højttaler kabel inkluderes?

# Ribbon > Run > Clear cache



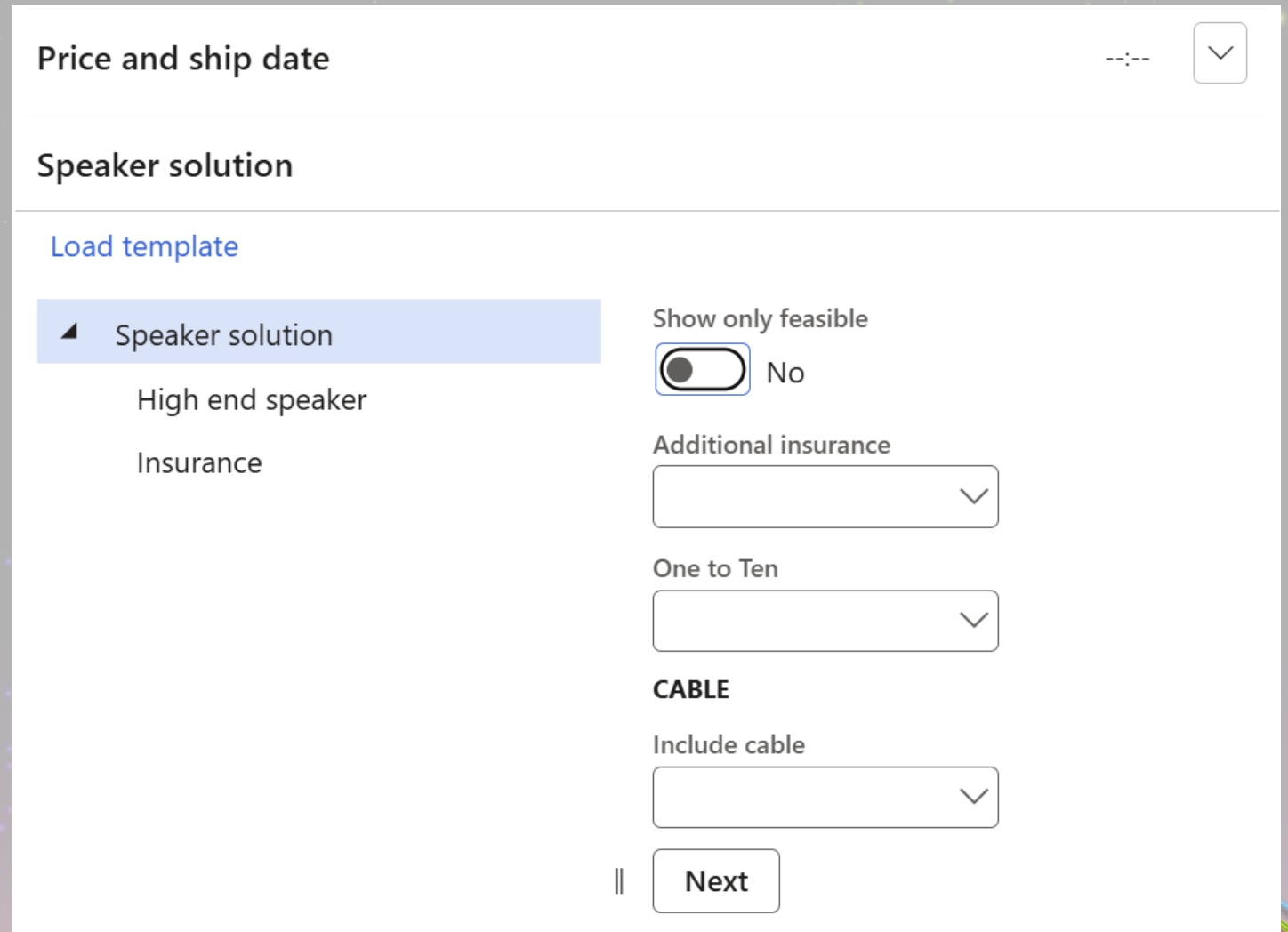
Maintain	Product model details		Set up		Languages	Run	Exchange
Duplicate	Versions	Model properties	Components	Price models	Translation	Clear cache	Export product model
	User interface	Configuration templates	Attribute types	Price model criteria		Test	Import product model
			Table constraints			Validate	

- Runs on clicking – no dialog
- Clearing cache removes stale compiled logic as a variable
- Especially when
  - Adding/removing attributes or components
  - Changing constraint logic significantly
  - Refactoring expressions (your nested IF example fits here)

*If testing doesn't reflect what you just changed, click Clear Cache*

# Ribbon > Run > Test

- Tests the dialog User interaction
- Does NOT test model pricing (that's done on the Price model form, seen earlier)
- Does NOT test BOM or Route generation



The screenshot shows a software interface for configuring 'Price and ship date'. At the top right, there is a menu icon and a dropdown arrow. Below the title, the section is labeled 'Speaker solution'. A blue link 'Load template' is visible. A sidebar on the left contains a list of options: 'Speaker solution' (selected with a blue background and a left-pointing triangle), 'High end speaker', and 'Insurance'. The main area contains a toggle switch for 'Show only feasible' set to 'No', and three dropdown menus for 'Additional insurance', 'One to Ten', and 'CABLE' (with a sub-label 'Include cable'). At the bottom right, there is a 'Next' button with a double vertical bar icon to its left.

Price and ship date

Speaker solution

[Load template](#)

Speaker solution

High end speaker

Insurance

Show only feasible  No

Additional insurance

One to Ten

**CABLE**

Include cable

|| Next



# Ribbon > Run > Validate



Navigation: < Back, Menu, Save, + New, **Model**, Options, Search

Maintain	Product model details		Set up		Languages	Run	Exchange
Duplicate	Versions	Model properties	Components	Price models	Translation	Clear cache	Export product model
	User interface	Configuration templates	Attribute types	Price model criteria		Test	Import product model
			Table constraints			Validate	

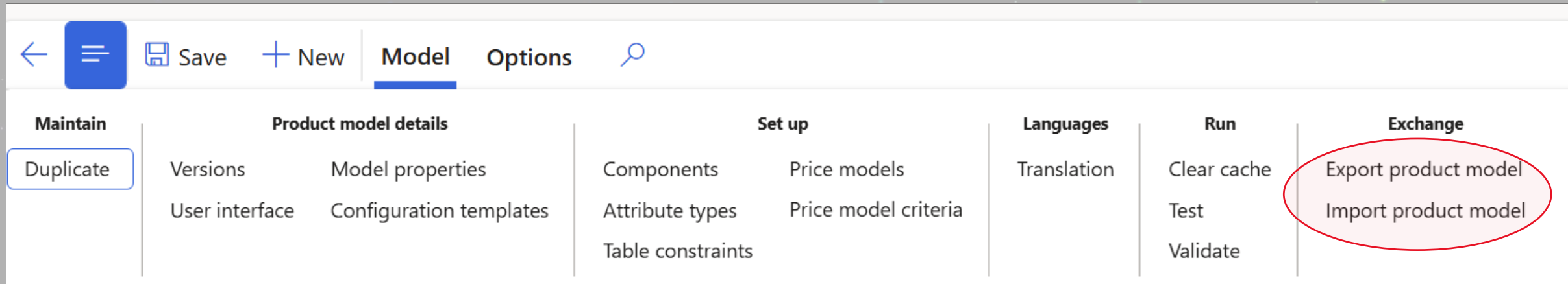
Standard view ▾

## Model validation

No errors found

**DETAILS**

# Ribbon > Exchange > Import/Export product model



- Export and Import of the model definition (Structure and logic) - XML
- Useful for:
  - Dev -> Test -> Prod
  - Backup/Versioning
  - Migrating to another entity or environment
- Always use “Clear cache” after Importing

# Multi Level Configuration

- Where there is one or a set of items, each needing Configuration that become parts of a parent Product that you likely sell
- Examples:
  - The Model we've been using
  - Tap beer dispensers where each dispenser is a different brand, perhaps with different features (familiar to everyone!!)
  - A valve manifold that includes several valves each with distinct flow rates, etc. (an example I helped implement with Product Builder on AX 3.0)

# Subcomponents FastTab



## Subcomponents

+ Add  Remove BOM line details Maintain components

<input type="radio"/>	Name	Solver name	Description	Component	Item number
<input type="radio"/>	High end speaker	highEndSpeaker	High end speaker	High End Speaker	D0004

### MODIFIERS

Hidden

No

Condition




- Note that there is an Item Number which is also defined as a Version on the "High End Speaker" sub-model. This will be the item number used on the "sub-Productions"

# Subcomponents FastTab



## Subcomponents

+ Add  Remove BOM line details Maintain components

<input type="radio"/>	Name	Solver name	Description	Component	Item number
<input type="radio"/>	High end speaker	highEndSpeaker	High end speaker	High End Speaker	D0004

### MODIFIERS

Hidden

No

Condition



- Note that there is an Item Number which is also defined as a Version on the "High End Speaker" sub-model. This will be the item number used on the "sub-Productions"

How would you handle a variable number of distinct Valves in a Valve manifold?



# REMINDER: Product Master Setting of the Nomenclature

- You CAN preset Size,

Product details | Standard view

D0006 : Speaker solution

Number nomenclature	Name nomenclature	At subcomponent	Effect on Config ID	Effect on Config ID
No	No	<b>Fails</b>	Builds based on attribute values	Could be blank
No	Yes	<b>Fails</b>	Builds based on attribute values	Builds based on attribute values
Yes	No	OK	Uses a number sequence	Could be blank
Yes	Yes	OK	Uses a number sequence	Builds based on attribute values

- BUT DON'T** set "Use number Nomenclature" to "No" for a **Subcomponent Version**. It will fail.

Description

Color group

Style group

Size group

Product type

Item

Product owner

**VARIANTS**

Enable unit of measure conversions  No

Use number nomenclature  Yes

Product variant number nomenclature [ColorSize](#)

Use name nomenclature  Yes

Product variant name nomenclature [ColorSize](#)

# User Requirements FastTab



## User requirements

+ Add  Remove Maintain components

<input type="radio"/>	Name	Solver name	Description	Component
<input type="radio"/>	Insurance	insurance	Additional insurance for the speaker solution	Insurance

### MODIFIERS

Hidden

Yes

Condition

!additionalInsurance



- Note that there is no Item Number, just a sub-Model. This acts a bit like a phantom BOM. The BOM(s) & Routing(s) will be incorporated INTO the one "parent BOM & Routing" – think of our Beer taps

# D365 SCM Product Configurator

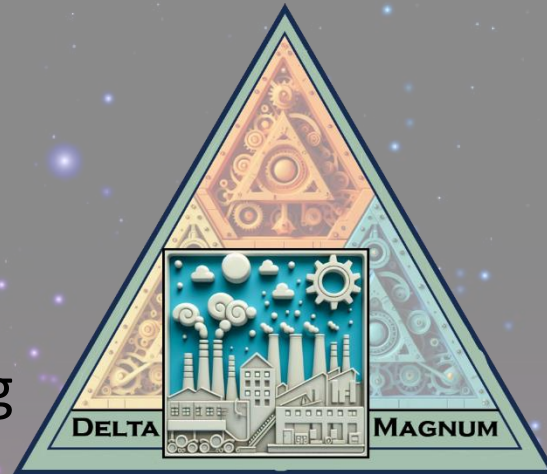
**Thank you for  
Attending!**



Nigel Cox  
D365 SCM  
Manufacturing  
Specialist

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(909) 489 7488



Product Configurator in D365FSM

Please Review so I can improve. . .

2026  
**DYNAMICS  
CON**

