

Opus Suite
Conference

TURIN

The journey of Opus Suite towards tomorrow's solutions

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by Systecon
opus
suite

 **Systecon**

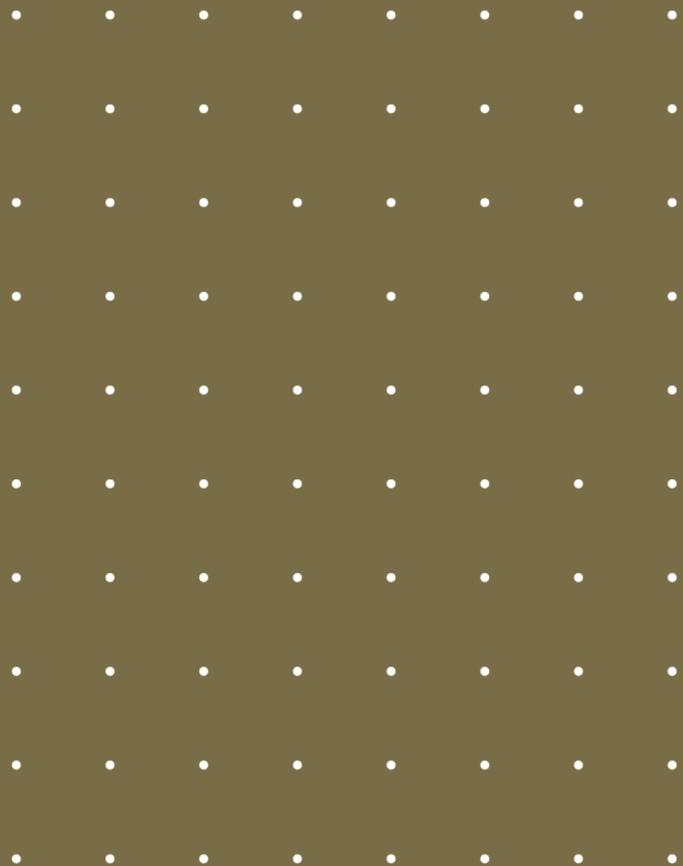
The Opus Suite journey

- 01** **Opus Suite NEW**
The modern user experience
- 02** **A better C/E-curve**
New and improved methods
- 03** **The (artificially) intelligent suite**
AI in the LCM process

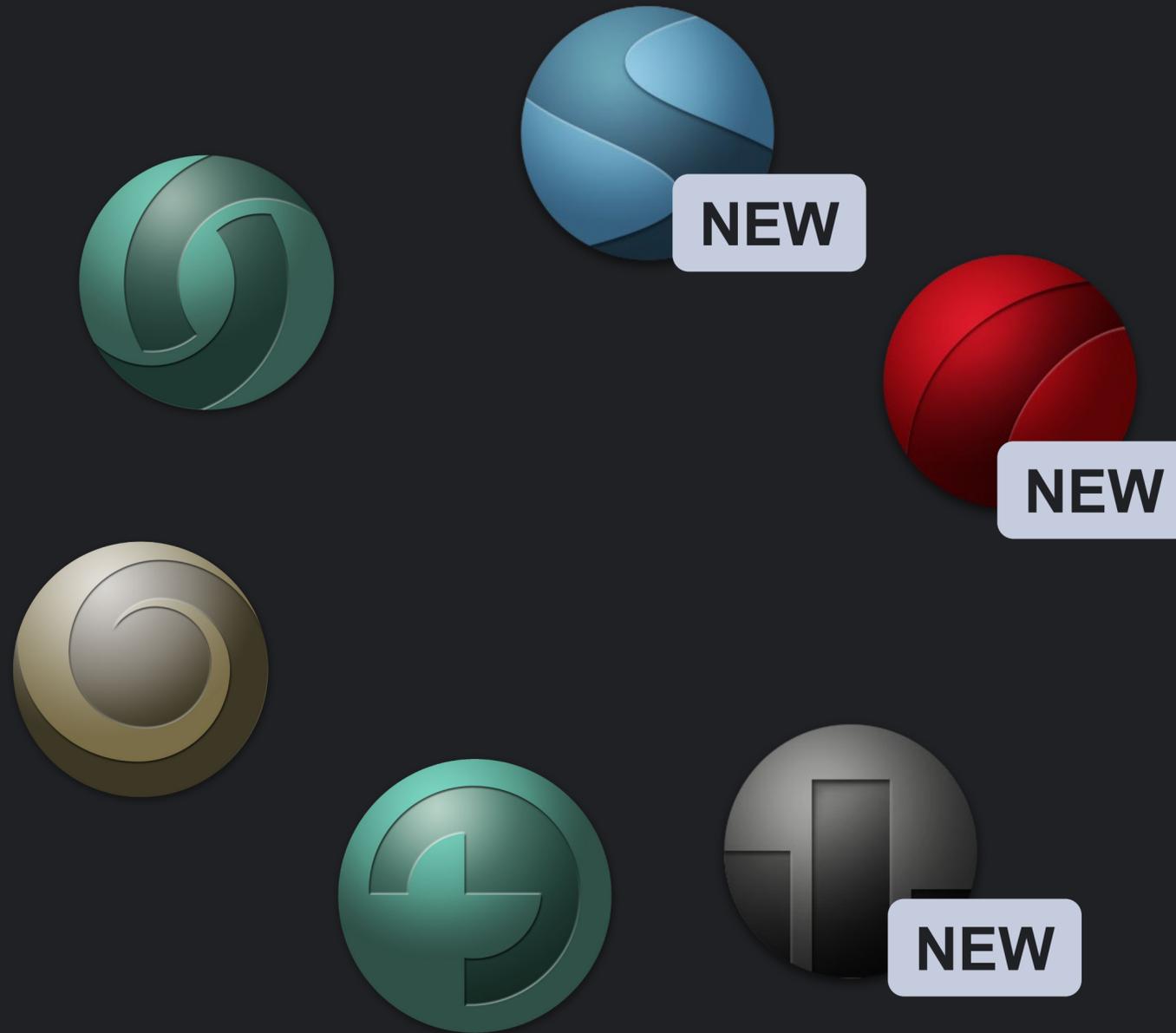
Opus Suite
Conference

TURIN

Opus Suite NEW



Opus Suite NEW



A modern suite with a larger scope

Traditional Opus Suite

Extract data

Transform data

Model representation

Forecast

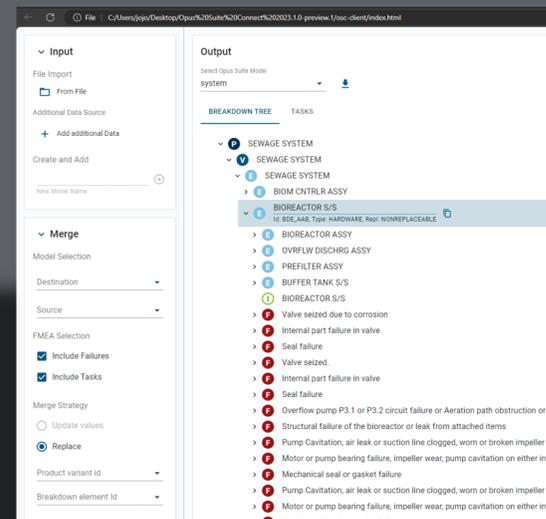
Enhance & Optimize

Insights & Analytics

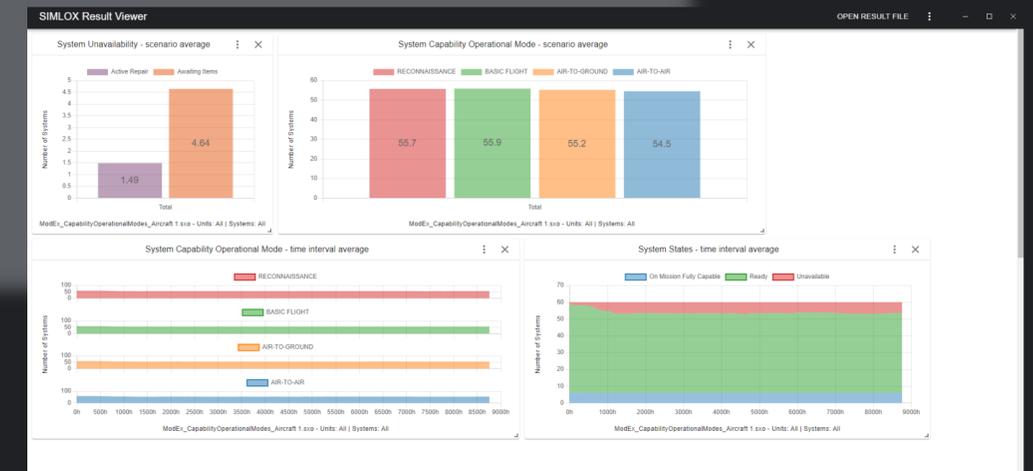
Modern Opus Suite

A modern suite with a larger scope

Traditional Opus Suite



Modern Opus Suite



A modern user experience

Opus Suite Connect 2024.0.2

Model F4U

MANAGE FILES

Model overview

Product

- F4U_FAMILY
 - Fighter 4U
 - Engine System
 - 51_ENG_1 / Engine
 - Fan
 - Compressor
 - Turbine (2)
 - 515
 - 51_ENG_6 / 516
 - 51_ENG_7 / 517
 - 51_ENG_8 / Bearing
 - 51_ENG_9 / 519
 - 51_ENG_10 / 5110
 - 51_ENG_11 / Oil Pump
 - 51_ENG_12 / 5112
 - 51_ENG_13 / Electronic unit
 - 51_ENG_14 / 5114
 - 51_ENG_15 / 5115
 - 51_ENG_16 / 5116
 - 51_ENG_17 / Fuel pump
 - 51_ENG_18 / 5118
 - 51_ENG_19 / 5119
 - 51_ENG_20 / 5120
 - Landing Gear System
 - Flight Control System
 - Environmental Control System
 - Fuel System
 - Communication System

Maintenance organization

OPUS10 Result Viewer

F4U DASHBOARD | SHIP DASHBOARD | NEW DASHBOARD | NEW DASHBOARD (1)

Result files: All | 4 points selected

Point chart

Point data

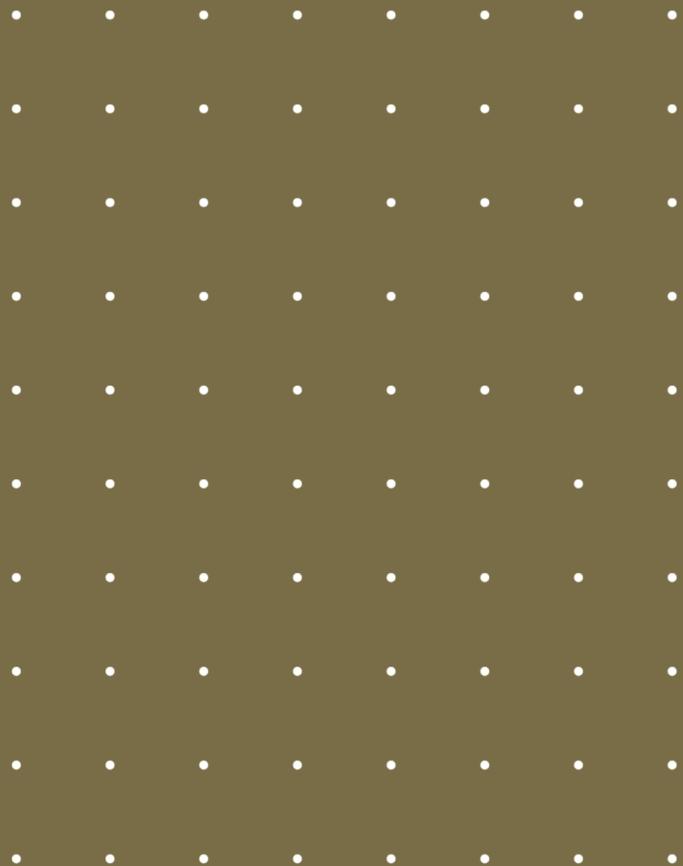
Scenario	System availability	Expected number of backorders	Life support cost
F4U_optimal.oprv	0.947	2.846	717,365,456
F4U_SupplierSuggestion_repl.oprv	0.938	0.952	717,681,152
F4U_international.oprv	0.892	0.932	716,275,392

Item result table

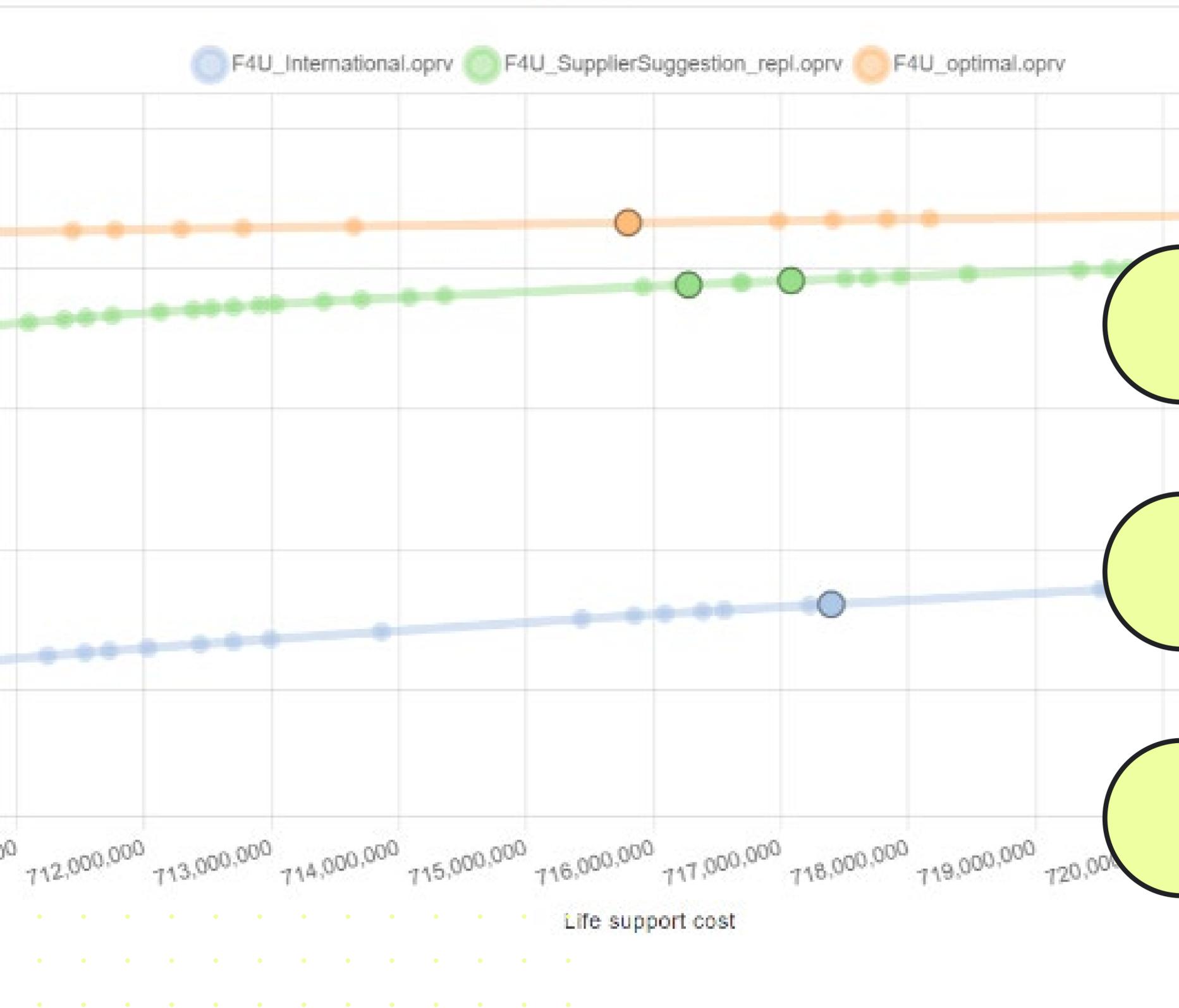
Item	Station	ROSIZ			STSIZ			CDI			
		F4U_Internati...	F4U_SupplierSuggestion_repl.oprv	F4U_optimal...	F4U_Internati...	F4U_SupplierSuggestion_repl.oprv	F4U_optimal...	F4U_International.oprv	F4U_SupplierSuggestion_repl.oprv	F4U_optimal.oprv	
331	INTL	0	-	-	0	-	-	75,262,871.33	105,522,780.09	105,909,295.97	105,272,308.21
331	MAINDEP...	0	0	0	0	1	1				
331	SQ1_W1	0	0	0	0	0	0				
331	SQ1_W2	0	0	0	0	0	0				
331	SQ2_W1	0	0	0	0	0	0				
331	W1	0	0	0	0	0	0				
331	W2	0	0	0	0	0	0				
331	WORKSH...	0	0	0	0	0	0				
3310	INTL	0	-	-	1	-	-				
3310	MAINDEP...	0	0	0	2	1	1				
3310	SQ1_W1	0	0	0	0	0	0				

Rows per page: 100 | 1-100 of 1037

A better C/E curve



Point chart



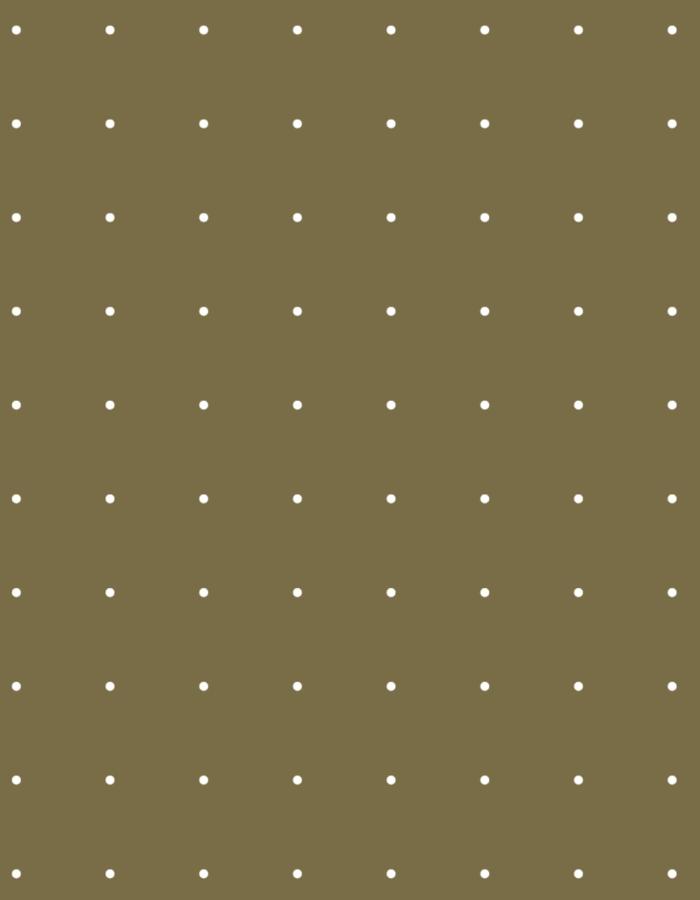
Improved cost effectiveness

New and improved algorithms

Operational capability rather than availability (better MoEs)

Target system-of-systems rather than individual systems

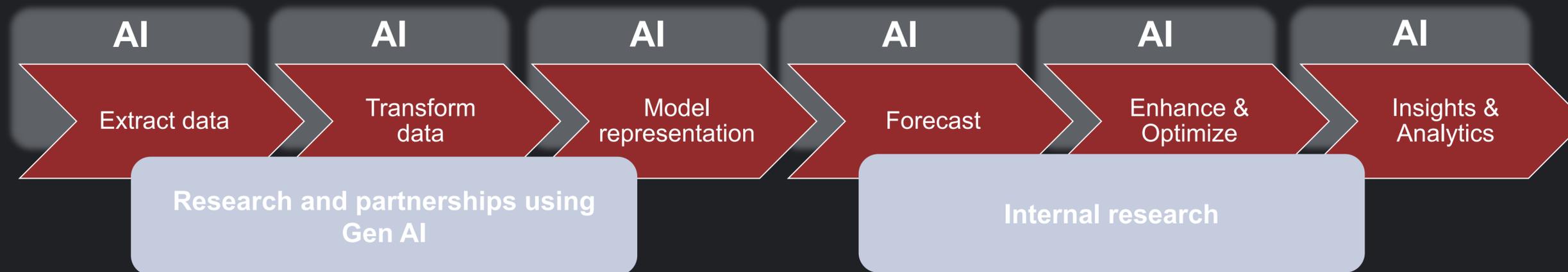
The (artificially) intelligent suite



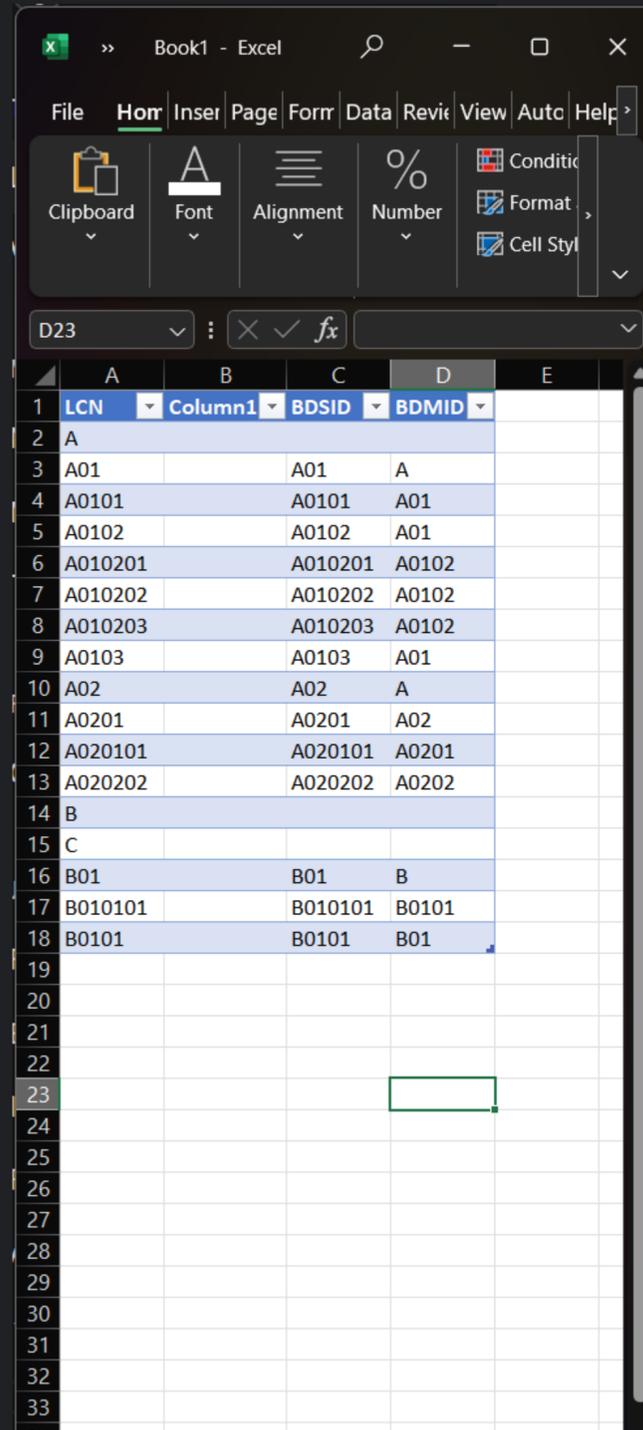
A recap of the journey so far

- Based in mathematical solutions
- Monte Carlo simulation
 - Use randomness to solve deterministic problem
- Increased use of heuristics in optimization
 - LORA
 - Extensions
 - Solution finder
 - OPUS EVO
- The future - Machine learning and Gen AI

Possible use of AI in Opus Suite



Can we do better?



The screenshot shows an Excel spreadsheet with the following data:

LCN	Column1	BDSID	BDMID
A			
A01		A01	A
A0101		A0101	A01
A0102		A0102	A01
A010201		A010201	A0102
A010202		A010202	A0102
A010203		A010203	A0102
A0103		A0103	A01
A02		A02	A
A0201		A0201	A02
A020101		A020101	A0201
A020202		A020202	A0202
B			
C			
B01		B01	B
B010101		B010101	B0101
B0101		B0101	B01



You

I have a number of LCN codes listed in the first column in an Excel sheet. Each LCN code corresponds to a node in a tree. For the LCN code "A010101" the first character indicates the first level, the 2 following characters the second level, the following 2 the third level and so on. The parent of "A010101" is "A0101" and the parent of "A01" is "A". Can you provide me with a VBA script that copies the LCN code from first column to the third and populated the fourth column with the parent of the node?

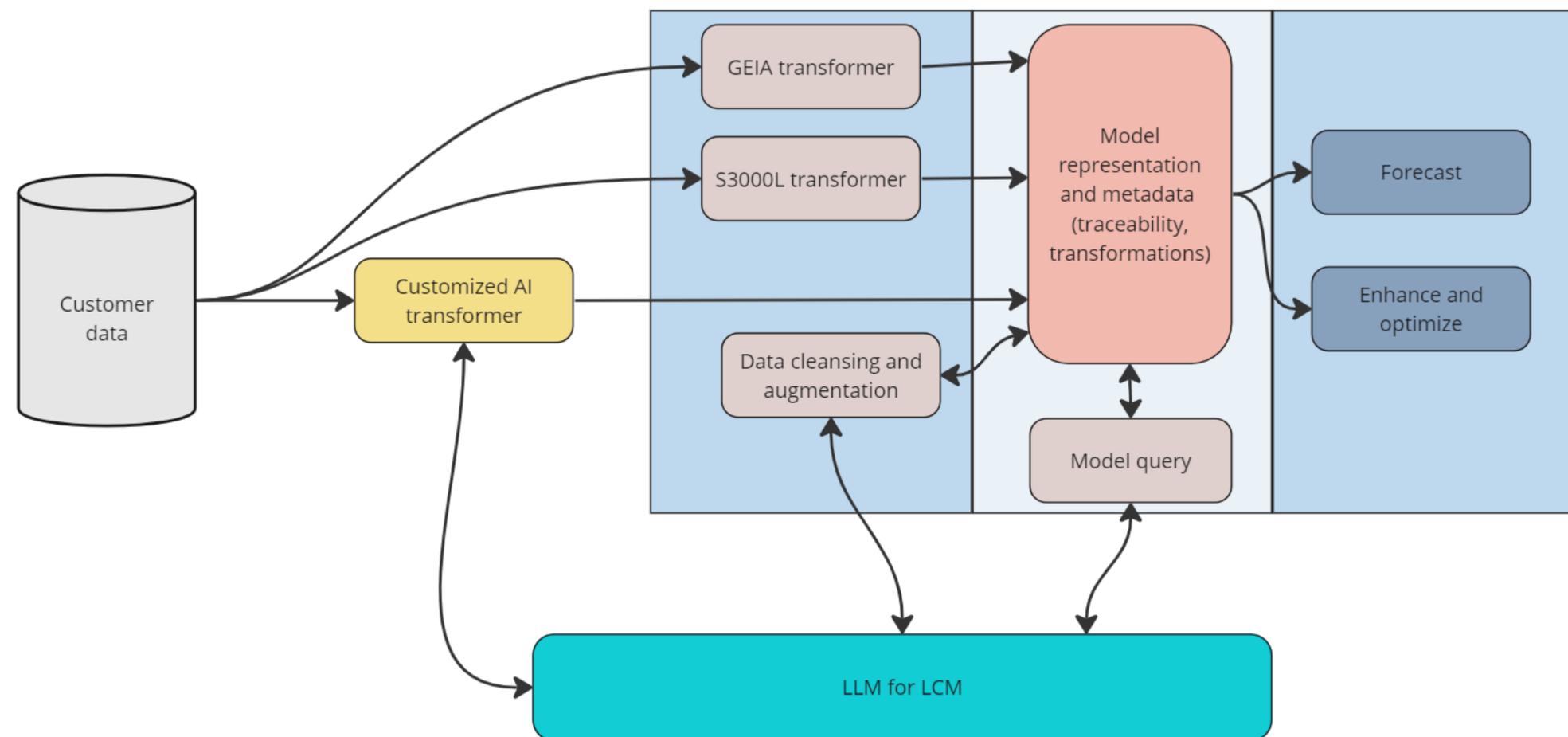


ChatGPT

Certainly! You can use the following VBA script to achieve this task:

```
vba Copy code  
  
Sub PopulateParentNode()  
    Dim ws As Worksheet  
    Dim lastRow As Long  
    Dim i As Long  
    Dim lcnCode As String  
    Dim parentNode As String  
  
    ' Set the worksheet where your data is located  
    Set ws = ThisWorkbook.Sheets("Sheet1") ' Change "Sheet1" to your a  
  
    ' Find the last row with data in column A  
    lastRow = ws.Cells(ws.Rows.Count, "A").End(xlUp).Row
```

Data processing in Opus Suite using Gen AI



Thank you.

