

# How to Model **Without** Modeling?

An Agentic AI Authoring Layer for  
AnyLogic and Where It Breaks

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Presenters: Salman Sangi, Hamid Tikani





**ALSANX** is an Industrial Engineering company based in Montreal. We help the industrial units make better decisions for their Design, Scale and Operations. We build simulation models, optimization systems and digital twins for manufacturing, metals and logistics operations, with AnyLogic and anyLogistix at the core, extended by optimization, AI and data analytics, and high fidelity 3D visualization via NVIDIA Omniverse.

# PRESENTERS

## OUR SPEAKERS



**Salman Sangi** is Co-founder and CEO at ALSANX Inc. With a background in Engineering and International Business from HEC Montréal, he brings over 15 years of experience in industrial projects, specializing in Engineering, Project Management, Simulations & Optimization, and Decision making systems for Industrial Plants.



**Hamid Tikani** is Technical Manager at ALSANX Inc. and holds a PhD in Industrial Engineering. With over 10 years of experience, he specializes in simulation, optimization, decision-support systems, and digital transformation for manufacturing and supply chains.

# **WHAT WE'LL COVER TODAY**

Presentation  
Outline

## ■ Section 1

**Introduction | Our Motivation and the Problem**

## ■ Section 2

**The Thesis | Practical Way to Solve a Real Problem**

## ■ Section 3

**Warehouse Builder | From A Prompt To An AnyLogic Ready Model**

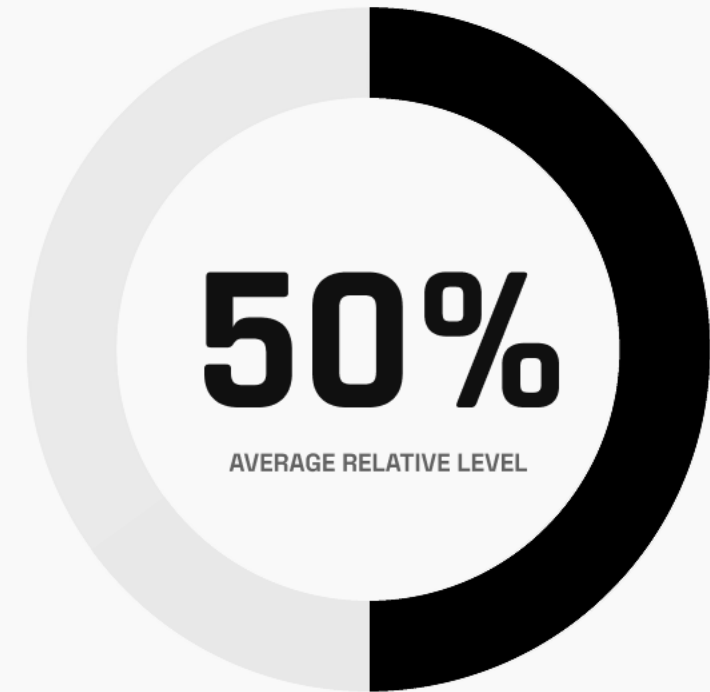
## ■ Section 4

**Conclusion**

## 01 Our Motivation and the Problem

# A Significant Productivity Gap Between SMEs & Large Enterprises.

- Can we reduce that cost and complexity enough to make simulation-driven productivity improvement accessible to a **much larger group of companies?**



### INDUSTRIAL SME PRODUCTIVITY

Relative to large firms in 2024

**Average SME labour productivity relative to large firms**

Source: OECD Compendium of Productivity Indicators 2026, Figure 5.1.

Business sector; unweighted country average; turnover per person employed.

## 01 Where Does the Cost of Modeling Go?

We analyzed internal cost of simulation projects over the past few years.

- 10% Layout creation
  - 10% Resource creation
  - 30% Process flow and Functions
  - 20% 3D creation and preparation
- 
- 10% Model & Data validation
  - 10% Optimization and decision support
  - 10% Complex process logic and functions



\*Approximation draft is acceptable  
AI can help create the draft version



\*Accuracy is required  
More care is needed.

# 70%

of our effort happens **before**  
validation, optimization and  
decision support.

## 02 The thesis

### **practical way to solve a real problem:**

Reducing the complexity and cost of simulation modeling, and eventually reducing the cost passed to the end client

productivity **improvement** becomes more accessible to a larger group of companies.

**AI should not replace the simulation model.  
It should change who can afford to create one.**

Reduce authoring cost. Keep simulation rigor.

## 02 THE DIVISION OF WORK

# AI-Assisted Authoring, Engineering-Led Validation

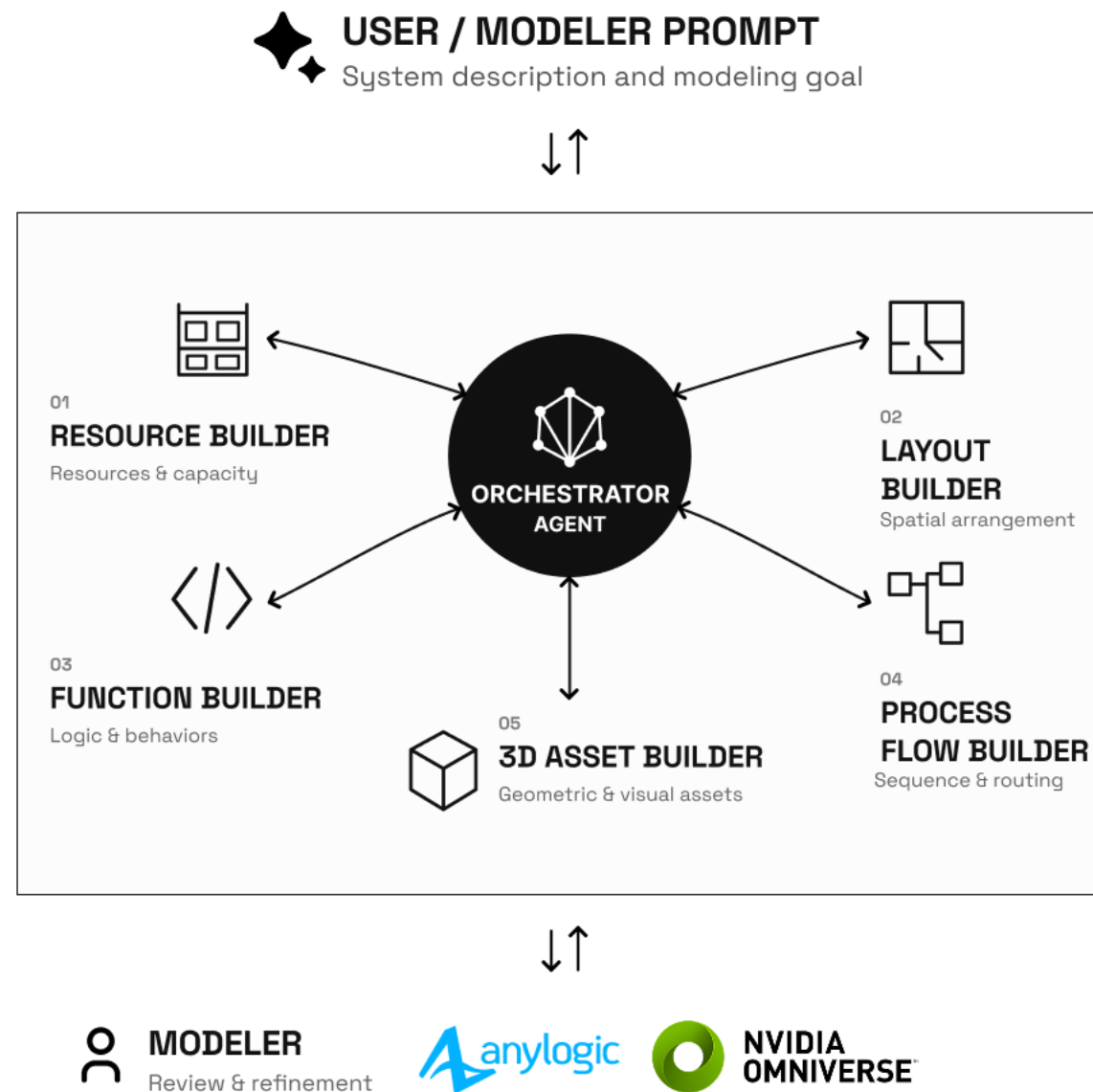
AI prepares the first draft

Layout, resources, process flow, routine functions and 3D assets. This reduces repetitive modeling work.

### Engineers establish accuracy

They check data and assumptions, refine complex logic, validate model behavior and assess optimization results.

The result remains an editable, inspectable **AnyLogic model**.



## 03 WAREHOUSE BUILDER

# FROM A PROMPT TO AN **ANYLOGIC**-READY MODEL

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### Warehouse Builder | Demo

Prompt / Clarification / Construction / AnyLogic review

## 03 WAREHOUSE BUILDER

ASK. BUILD. CHECK. REFINE.

### 01 DESCRIBE

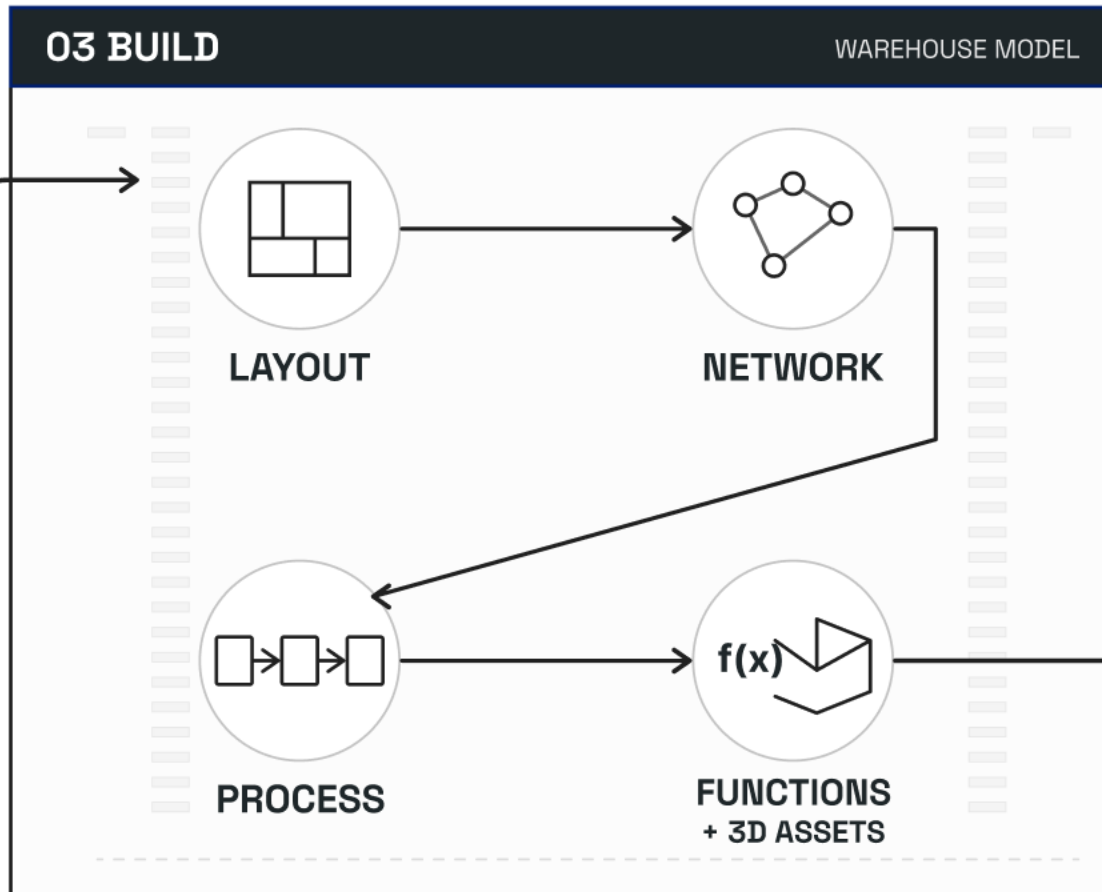


Prompt + operational data

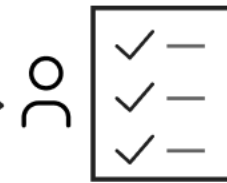
### 02 CLARIFY



Resolve missing details



### 04 VERIFY



Review the model



## 03 AI Assistance for Warehouse Simulation

The screenshot shows a web browser window with the address bar displaying 'localhost:5174'. The page title is 'AlsanX Simulation Studio - Agent model authoring for AnyLogic'. The main heading reads 'Describe the facility. Get a runnable AnyLogic model.' Below this, a section titled 'CHOOSE A MODELLING DOMAIN' presents six options:

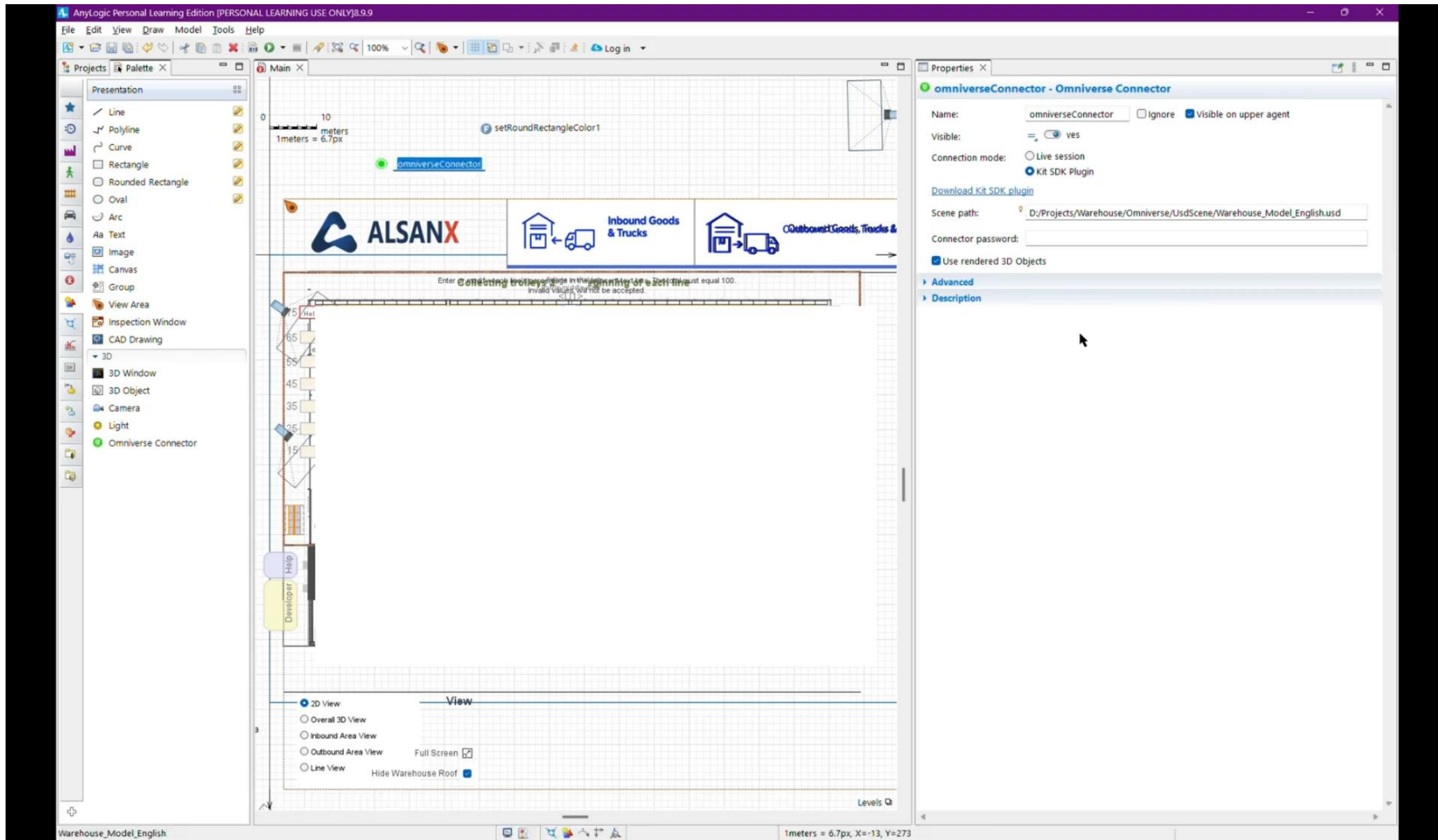
- Warehouse & Distribution** (AVAILABLE): Includes 'RackStorage', 'TransporterFleet', and 'Store / Retrieve' components. Description: 'Racking, docks, forklift networks and storage policy'.
- Steel Meltshop** (IN DEVELOPMENT): Includes 'Ladle agents' and 'Caster resources' components. Description: 'EAF, ladle logistics, caster scheduling'.
- Sea Port & Terminal** (IN DEVELOPMENT): Includes 'Berth allocation', 'Quay cranes', and 'Yard blocks' components. Description: 'Berths, quay cranes, yard blocks and gates'.
- Supply Chain Network** (IN DEVELOPMENT): Includes 'Network map', 'Echelon policy', and 'Lane costs' components. Description: 'Multi-echelon flow, sourcing and inventory policy'.
- Discrete Manufacturing** (IN DEVELOPMENT): Includes 'Conveyors', 'Station buffers', and 'Changeover' components. Description: 'Lines, buffers, changeovers and OEE'.
- Healthcare & Patient Flow** (IN DEVELOPMENT): Includes 'Patient agents', 'Staff pools', and 'Department flow' components. Description: 'Departments, staffing and pathway bottlenecks'.

At the bottom, a small disclaimer states: 'Independent authoring tool. AnyLogic is a trademark of The AnyLogic Company.'

## 03 FMCG Warehouse Simulation Case Study



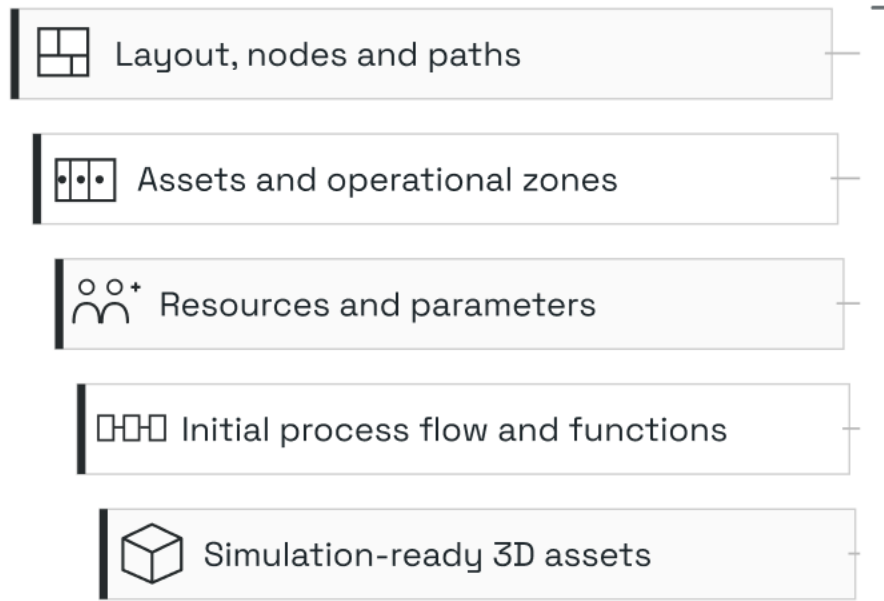
## 03 High-Fidelity Quality with NVIDIA Omniverse Integration



### 03 Where we drew the line?

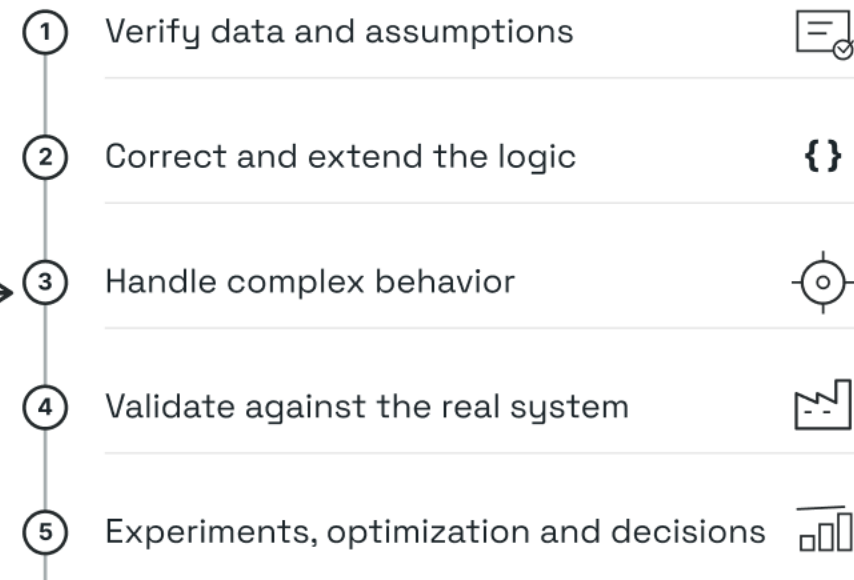
## AI DRAFTED

WHAT THE BUILDER PROVIDES



## ACCURACY IS NEEDED

WHAT THE MODELER COMPLETES



the output is a starting model.

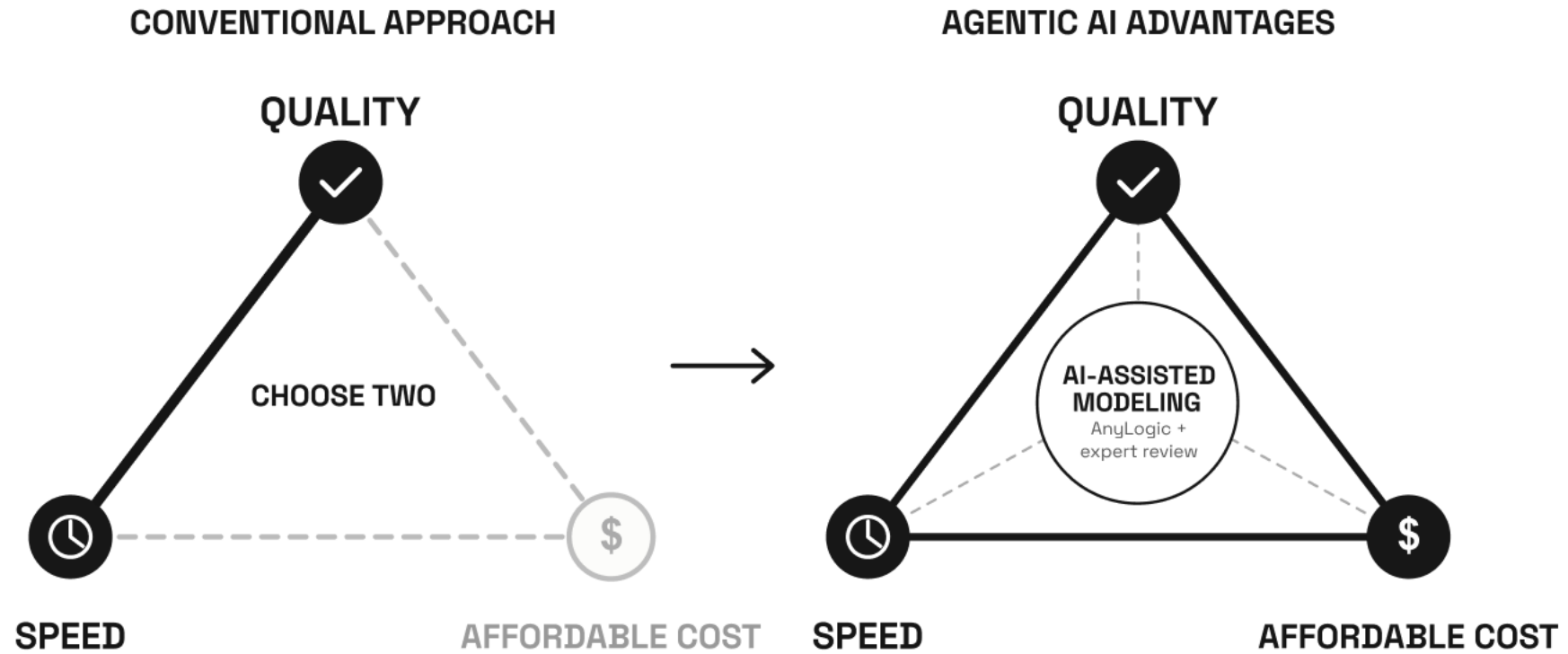
## 04 Conclusion

# What Are We Actually Trying To Do?

- We did not set out to build an automatic model builder or decision maker.
- We want to reduce the cost and complexity of simulation modeling and make productivity improvement accessible to a larger community.
- AI opened that opportunity.
- AnyLogic, validation and engineering judgment remain at the core.

**We automate  
model authoring,  
not engineering  
judgment**

## 04 Conclusion | Quality · Speed · Affordable Cost



**THE SHIFT** Less setup effort · Faster iteration · Expert validation

**A BETTER BALANCE**

## 04 Conclusion

**More organizations should be able to afford simulation.**

AI should not replace the simulation model. It should change who can afford to create one.

**AnyLogic**, validation and engineering judgment remain at the core.



WWW.ALSANX.COM

**ALSANX**

VIRTUAL POWER, REAL SOLUTIONS



**Salman Sangi**  
SANGI@ALSANX.COM



**Hamid Tikani**  
H.TIKANI@ALSANX.COM

## Thank You

Thank you for your attention  
We're now open for any questions.

