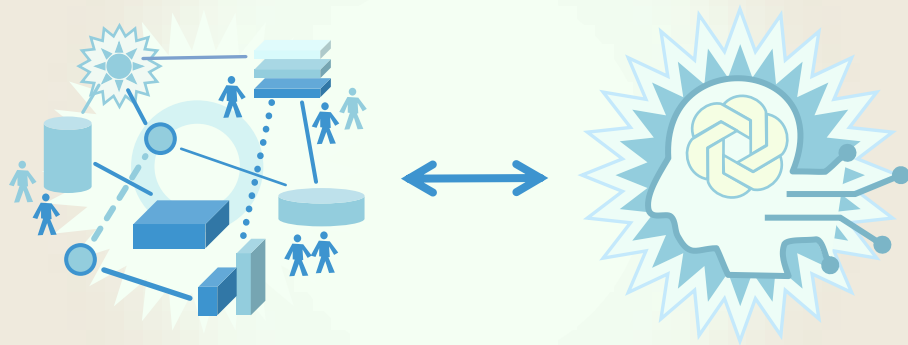




AI as a Modeler's Productivity Tool: Introducing the AnyLogic AI Assistant

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The AnyLogic Company

The AnyLogic Conference 2026
September 15, 2026
Online

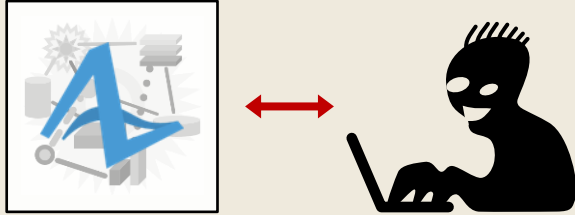


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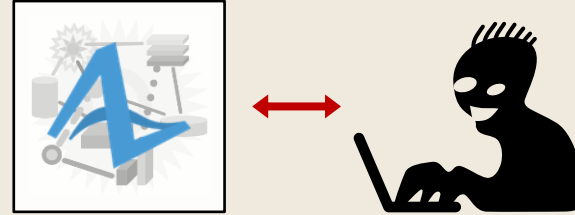
AI (LLM) & Simulation journey

[A slide from ALC 2025]

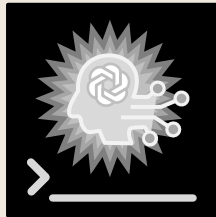
Now: The modeler occasionally uses AI as a separate, auxiliary tool



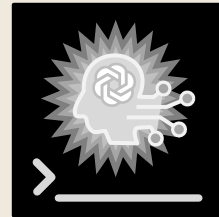
Next step: The modeler uses AI built into AnyLogic to perform specific tasks



Optional Helper



Integrated Productivity Tool

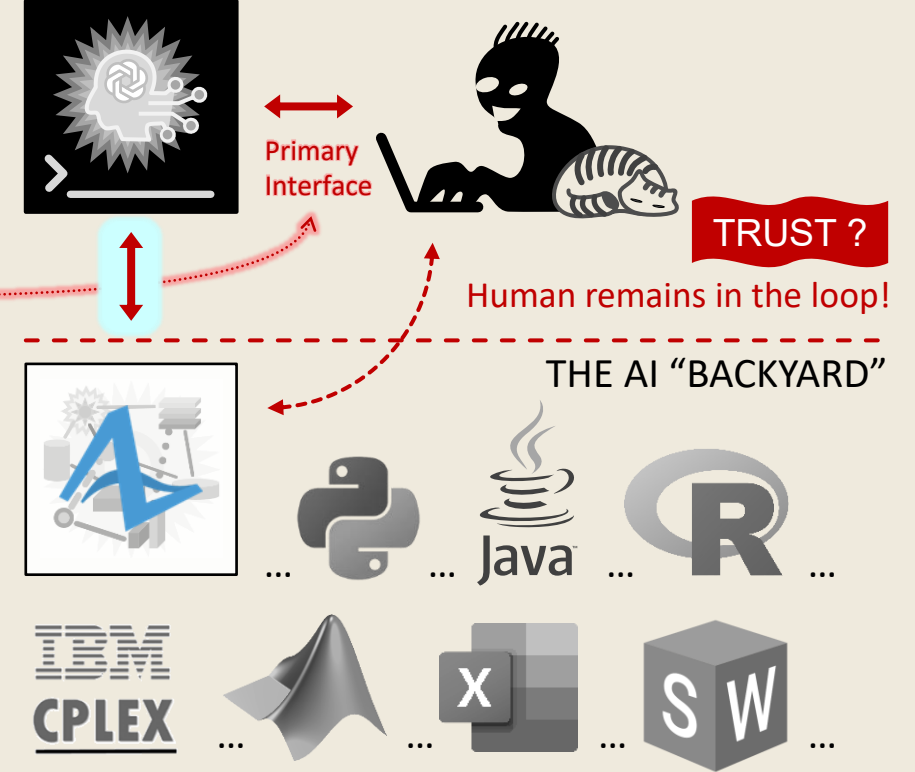


- Replacement to Help search
- Logic coding: suggest code snippets
- Debugging: provide hints to understand compilation and runtime errors
- Experiment planning
- Output analysis and interpretation
- Conceptualization suggestions

AnyLogic's current R&D ->

- Conceptualization: create initial version
- Logic coding: write code snippets
- Creating markup from images and CAD
 - Creating a 3D scene from photo or video
- Debugging: explain compilation and runtime errors and suggest fixes
 - Experiment planning and dashboard design
- Output analysis and interpretation
- Model improvement: change the model
- Explaining a model: what's inside and how it works?

Possible Future: The end user talks directly to AI to find a solution to the problem



- AI is the primary user interface.
- AI has AnyLogic and other tools and engines “in the backyard”
- AI orchestrates the suite of tools behind the scenes to transform the problem description and data to a complete solution – end to end.

AI (LLM) & Simulation journey

[A slide from ALC 2025]

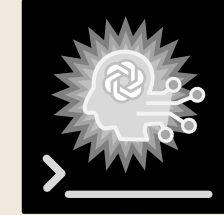
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Primary Interface

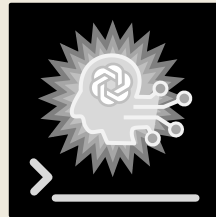


TRUST ?

Optional Helper



Integrated Productivity Tool



Human remains in the loop!

THE AI "BACKYARD"



- Replacement to Help search
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Meet in upcoming 8.9.10 ->

- AI is the primary user interface.
- AI has AnyLogic and other tools and engines "in the backyard"
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On the way to AI “Backyard”: Modeling assistant ≠ Code assistant

AI is already strong here:

- Explain existing Model:
 - “consumer” is a human: natural language
- Conceptualization:
 - broad domain, “world” knowledge
 - discussing assumptions, processes, etc.
- Writing code
 - code is text, easy for LLMs
 - lots of training: GitHub, Stack Overflow, etc.

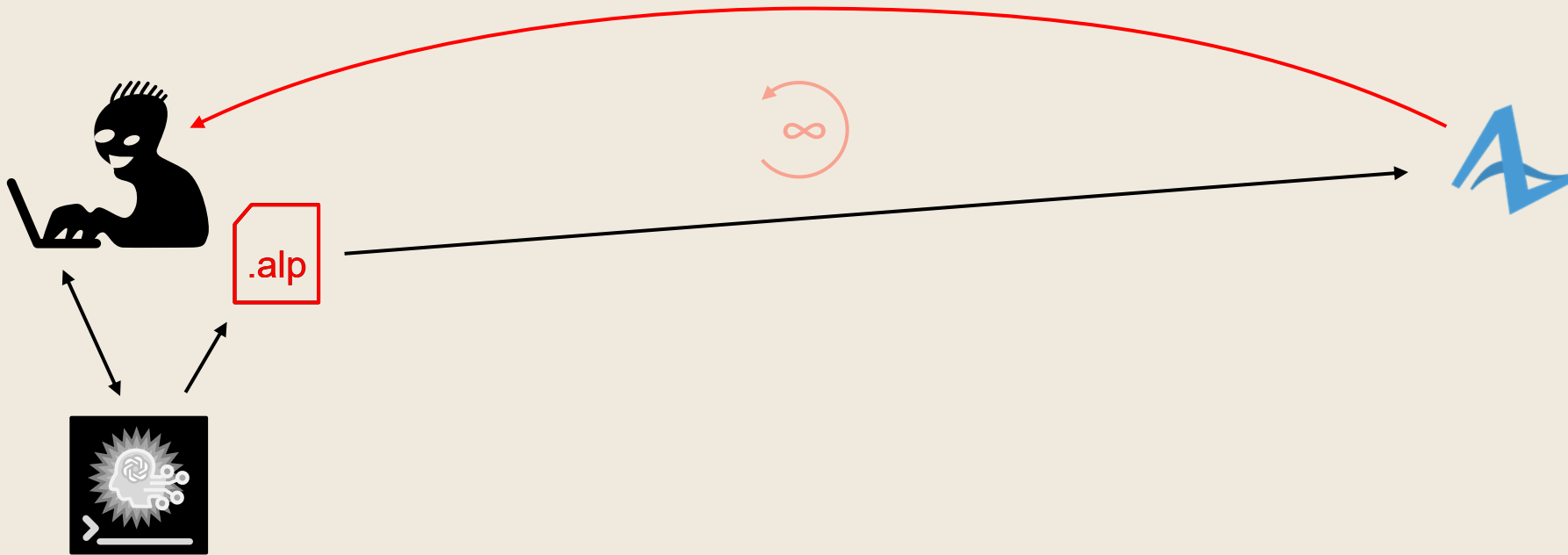
Challenges are:

- Create / change a model
 - “consumer” is not a human, it’s software: output should be “formally valid”
- Simulation model is more than code
 - Process flowcharts, statecharts, SD diagrams, ...
 - Space markup and graphical layout
- Spatial intelligence is a different skill
 - LLMs aren’t good at (x,y) placement

Understanding a model can be mostly a language problem.
Building a model is also a structural, spatial, and tool-interaction problem.

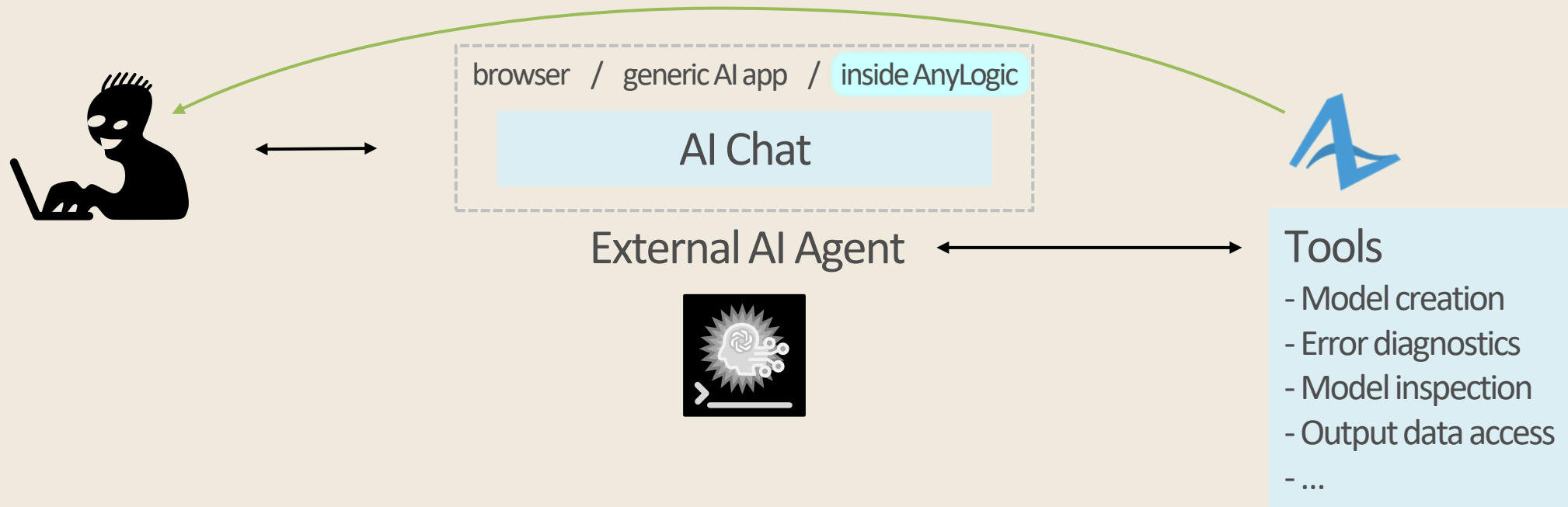
On the way to AI “Backyard”: ALP file?

- Today’s LLMs can already generate/modify an .alp file directly
 - Simple models only, incomplete knowledge of file format
 - Difficult for the agent to localize error

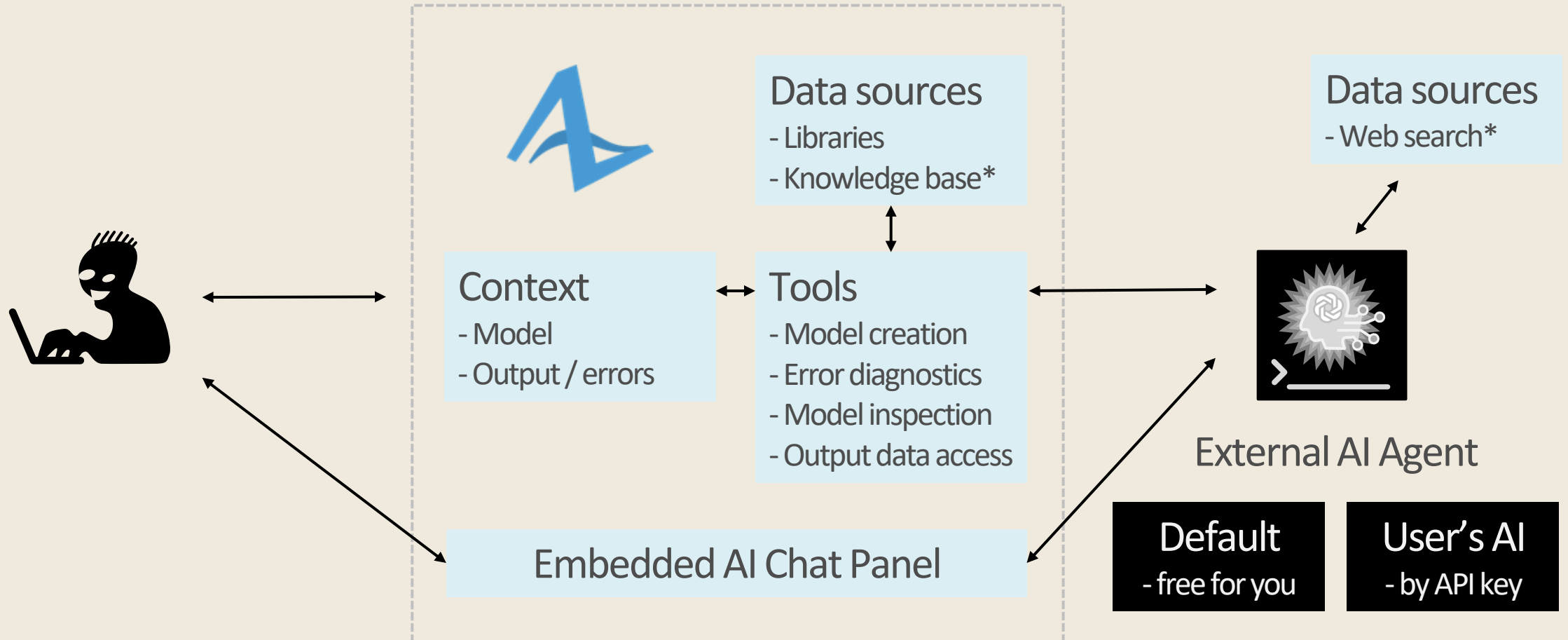


On the way to AI “Backyard”: Tools!

- Goal: make AnyLogic a reliable environment that an AI agent can operate.



AI with the Modeler



* Default AI uses AnyLogic knowledge base including Help, User's AI may use web search

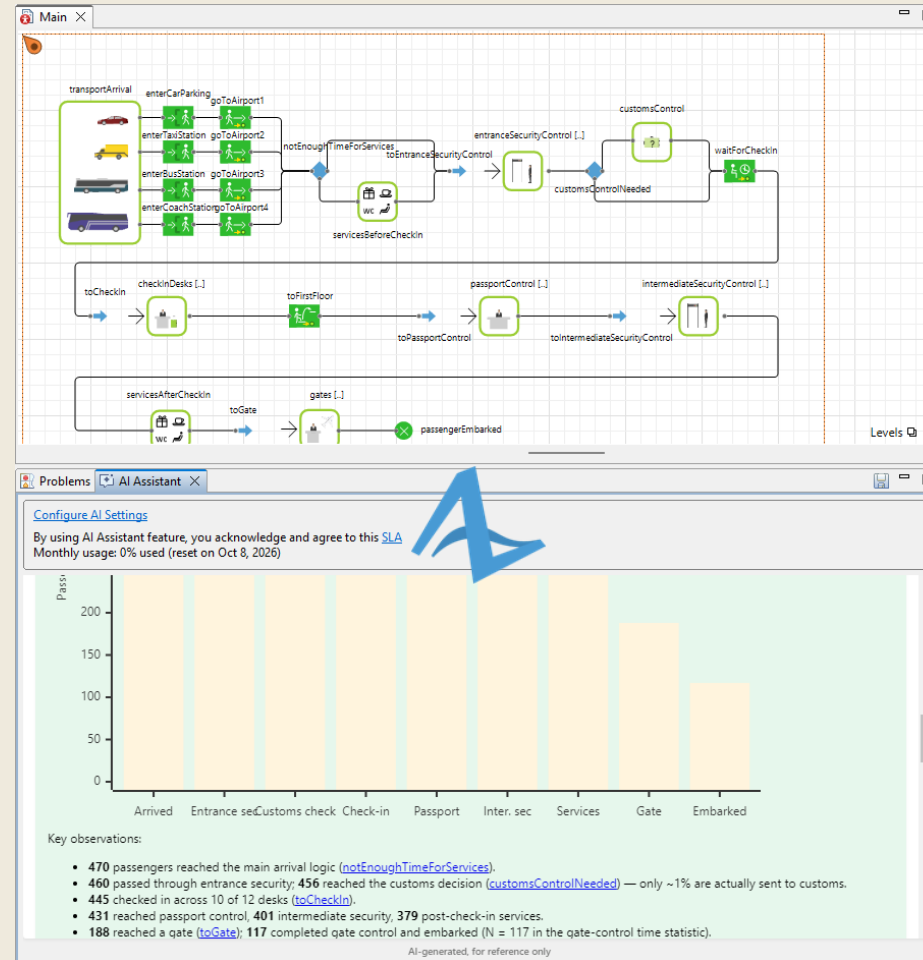
AI Chat - single access point

Draft a model

- conceptualize
- create a flowchart
- scaffold the layout
- suggest next steps

Explain the model

- describe flowchart
- summarize design



Fix model errors

- check last run output
- explain how to fix
- [later] apply fixes

Analyze model results

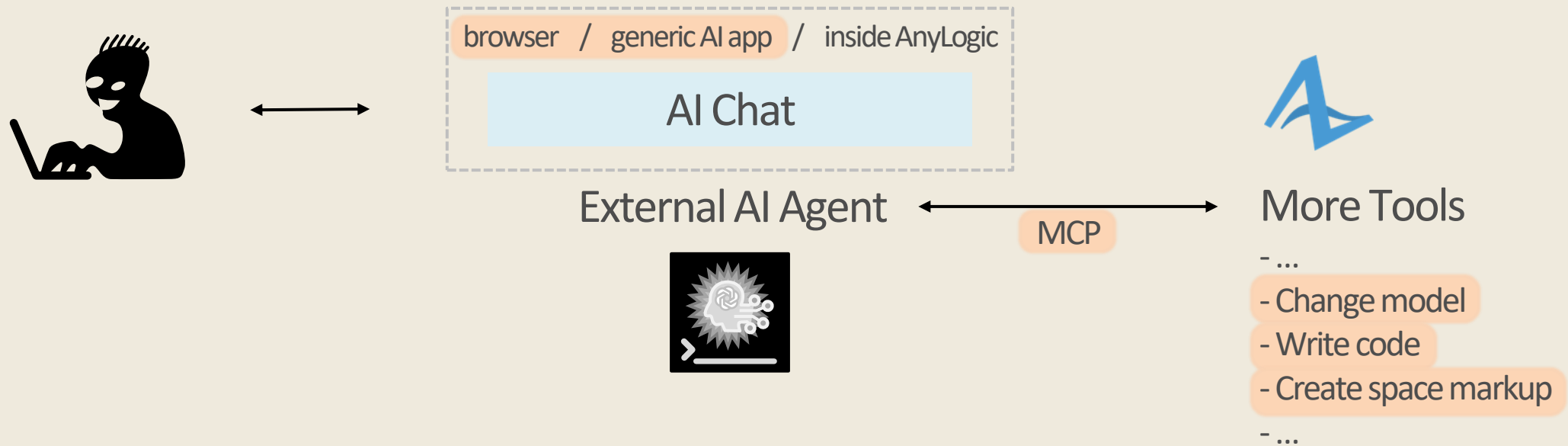
- spot trends
- interpret KPIs

[future] Improve model

▶ DEMO

Future steps towards Agent-Ready AnyLogic

- Enrich the “conversation-first experience”
- Open the tools for arbitrary external AI



Thank you!