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INTERNATIONAL
USERS' MEETING

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2026

Navigating the agentic frontier

Carlo Poloni
President of ESTECO

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Agenda

01. Concept definition

The transition from Suggestive AI to Autonomous Agents in Engineering.

02. Engineering accuracy

Addressing the zero-tolerance constraint for software quality.

03. The foundation

ESTECO's role in providing reliable tools for the agentic era.

04. What's next

Future perspectives on ESTECO Technology.

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Concept definition

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We envision to integrate agentic AI into PLM, SPDM, and automation workflows to surpass human speed and boost product development further.

Uyiosa Abusomwan
Senior Global Technology Manager, Digital Design & Engineering
Eaton Corporation

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The Agentic Frontier represents a shift in digital engineering where software moves beyond simple assistance. AI Agents now plan, orchestrate, and execute complex simulation workflows autonomously, requiring a foundation of absolute precision.

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The paradigm shift

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The paradigm shift

Suggestive AI

Chatbots and Co-pilots that answer questions or generate text based on passive data retrieval. The human remains the sole engine of execution.

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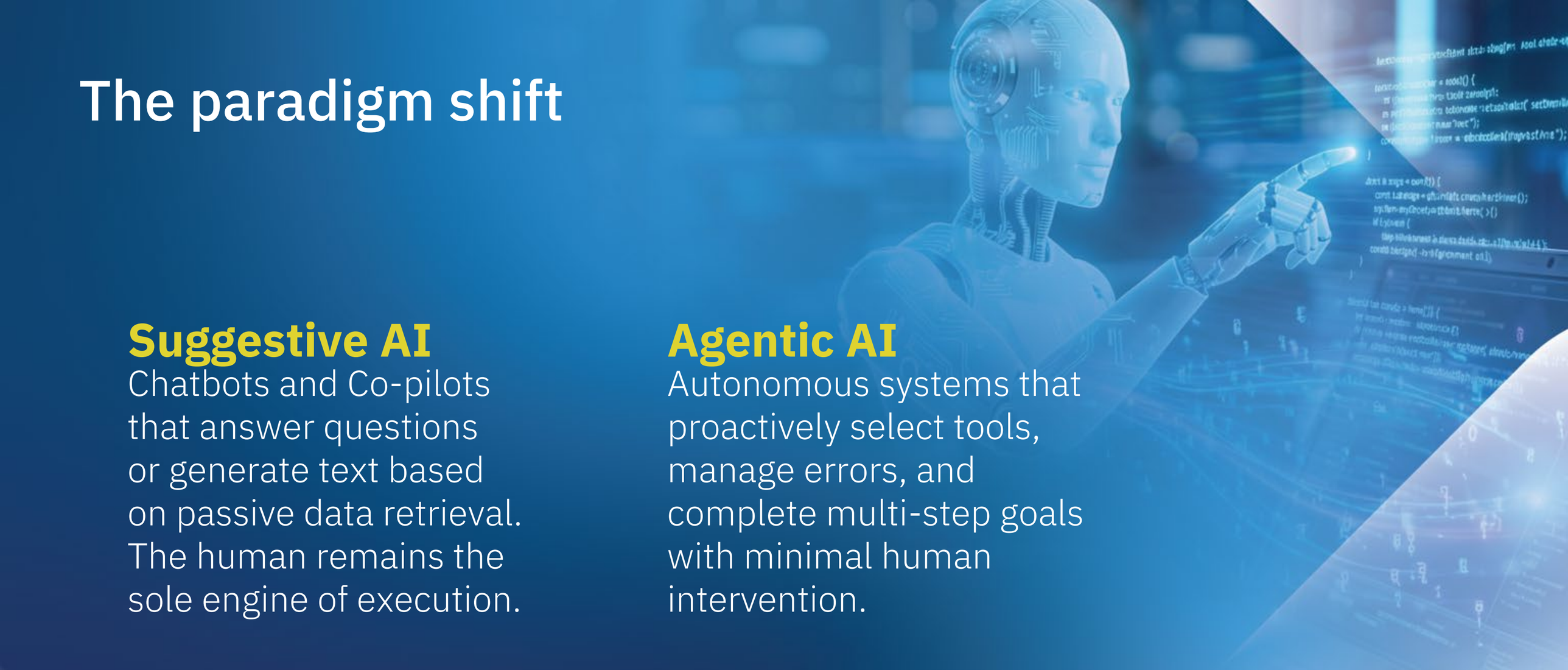
The paradigm shift



Suggestive AI

Chatbots and Co-pilots that answer questions or generate text based on passive data retrieval. The human remains the sole engine of execution.

Agentic AI

Autonomous systems that proactively select tools, manage errors, and complete multi-step goals with minimal human intervention.

Source: AI Agents vs. Agentic AI: A Conceptual taxonomy, applications and challenges

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Engineering accuracy

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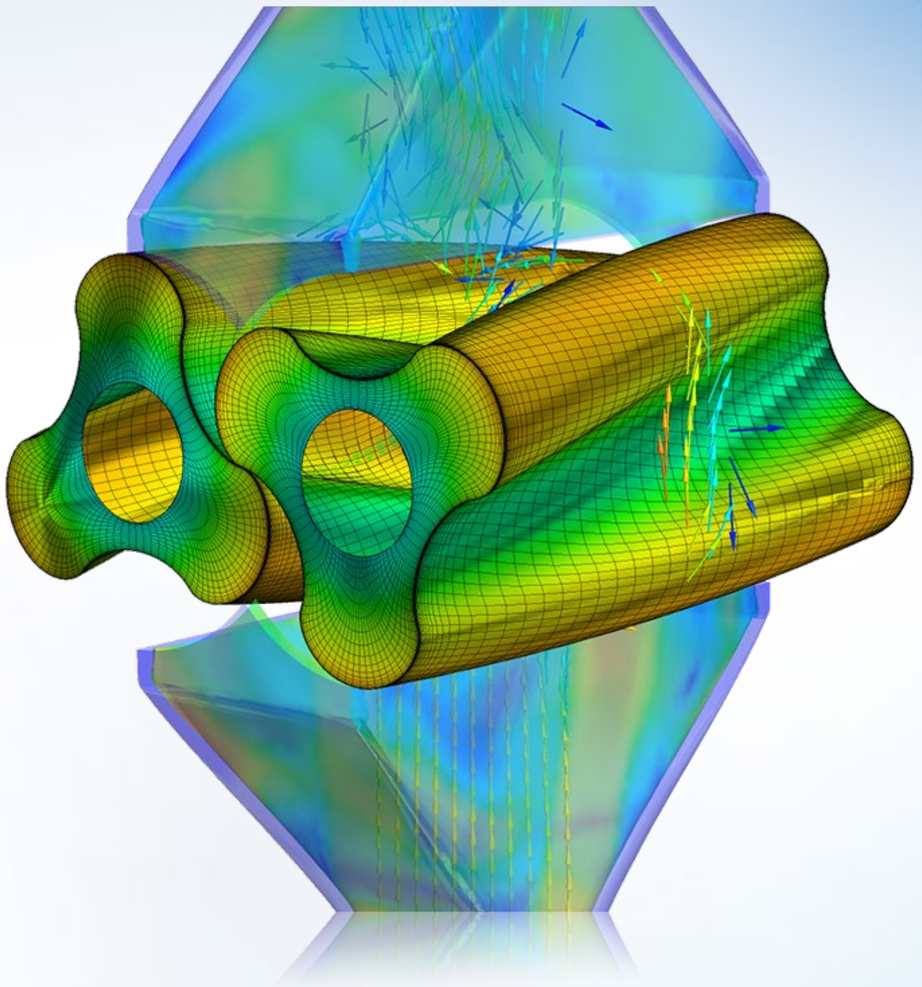
The engineering constraint

In the world of simulation and design, **precision is non-negotiable**. Unlike generic LLMs, engineering agents cannot afford "hallucinations" or probabilistic guesses.

Trust is built on deterministic accuracy and physical consistency.



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The autopilot analogy

An Agent is only as good as its tools.

The most advanced autopilot algorithm is powerless if the flight controls are imprecise or the sensors are uncalibrated.

ESTECO provides the secure software infrastructure—the robust flight systems—that allow **AI Agents to navigate safely and effectively.**

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The foundation

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Engineering trust

Software quality

25 years of obsessive focus on code stability and performance.

Math robustness

Optimization algorithms validated for mission-critical tasks.

Data thread

Ensuring complete traceability across the digital design cycle.

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What’s next

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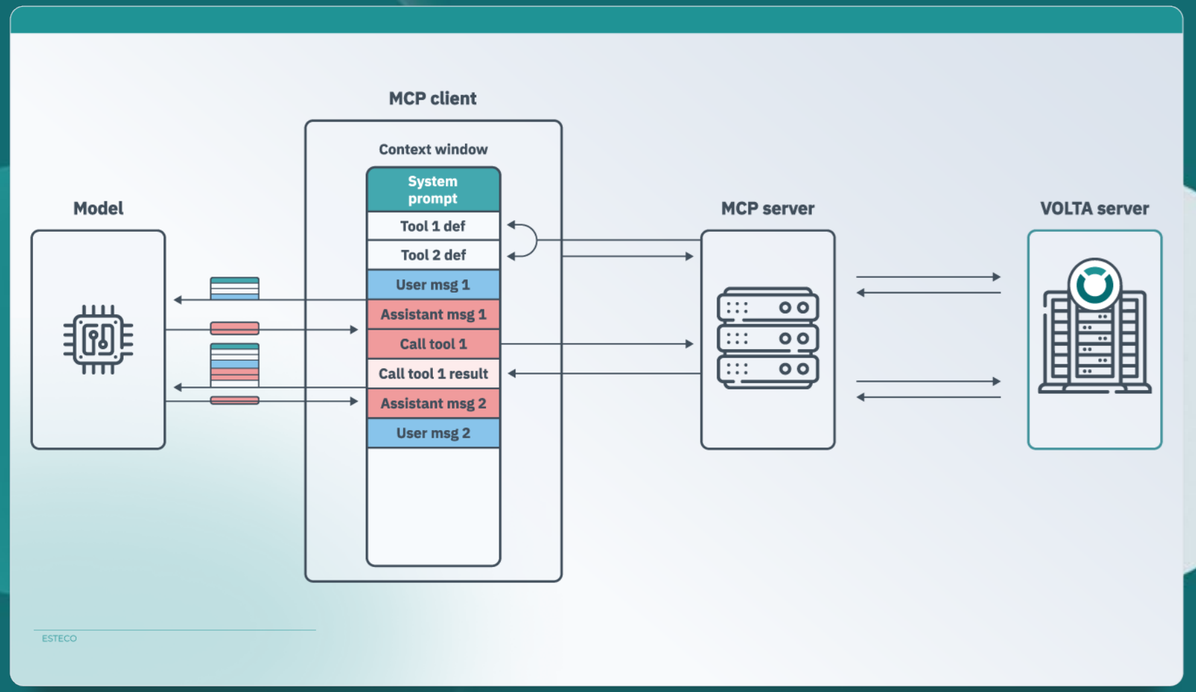
MPC server for VOLTA

Model Predictive Control (MPC) allows for proactive orchestration rather than just data management.

- Real-time response optimization
- Predictive behavior modeling
- Commanding complex toolchains safely



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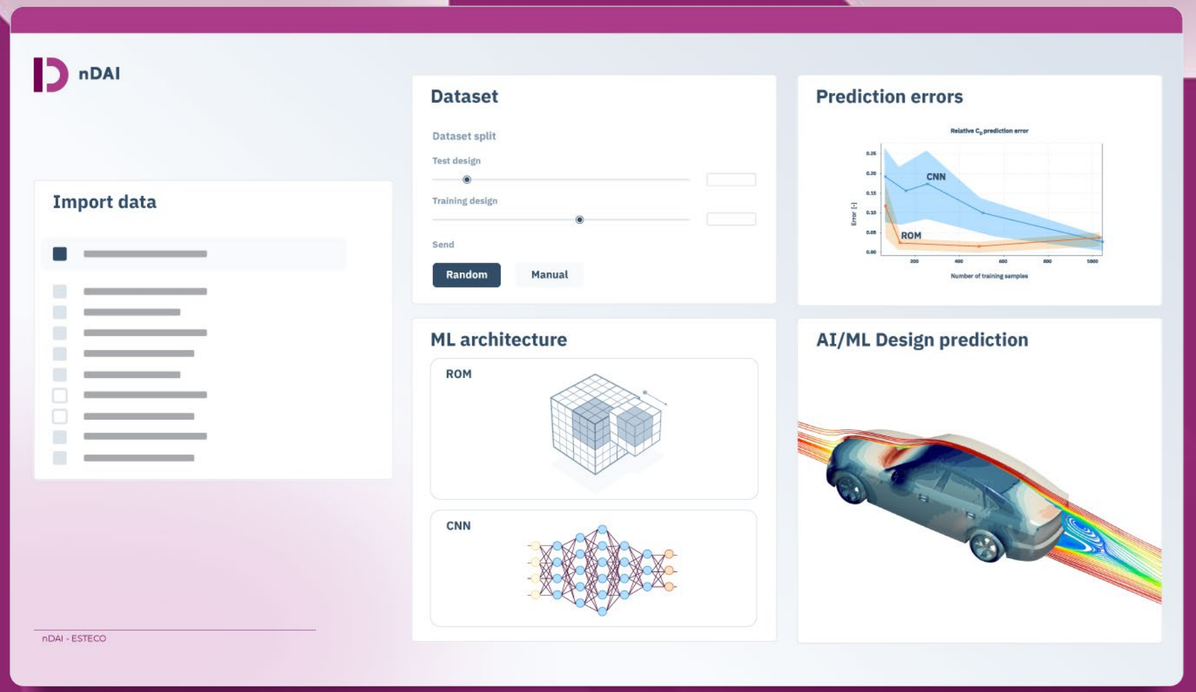
nDAI: multi-dimensional ML

Bridging Simulation
& Machine Learning (ML)

DAI provides the high-fidelity surrogate models (ROMs) that AI Agents require
to "understand" physics-based design spaces across any dimensionality.



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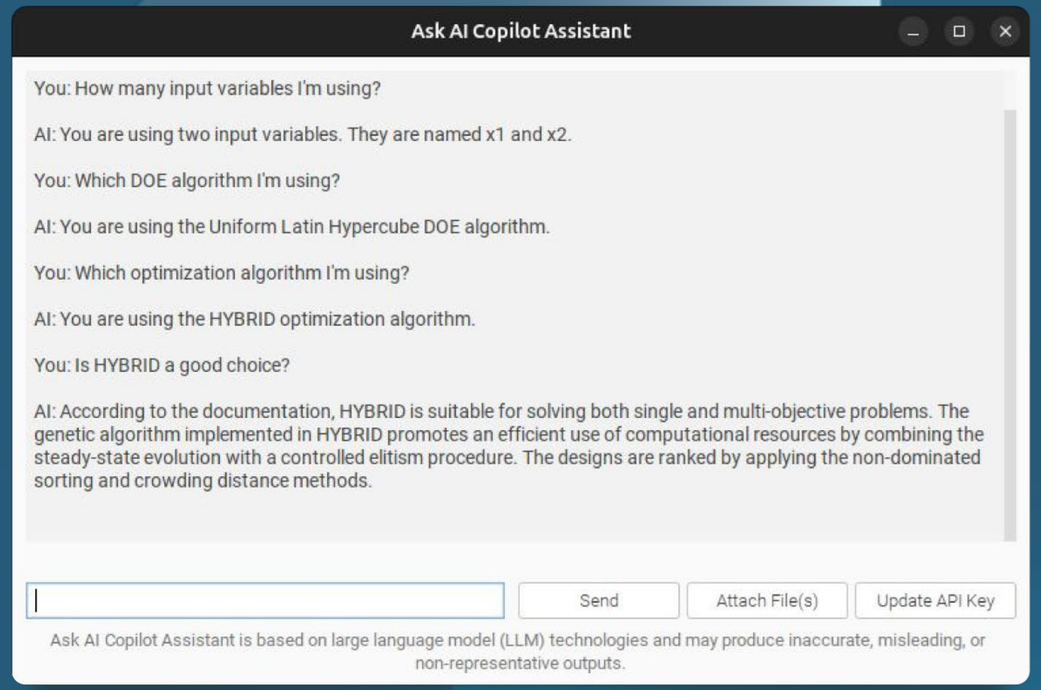
AI-Driven Insights

Integrating LLMs in modeFRONTIER

- AI Copilot assistant
- Pareto navigator
- modeFRONTIER Agent Orchestrator



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Hype vs. Engineering reality

Metric	Generic AI Agents	ESTECO-Powered Agents
Physical Consistency	Probabilistic / Variable	**Physics-Constrained**
Process Reliability	Unpredictable Outcomes	**Deterministic Validation**
Traceability	Limited / Black Box	**Full Digital Thread (VOLTA)**
Execution	Tool-agnostic / Fragile	**Native Tool Mastery**

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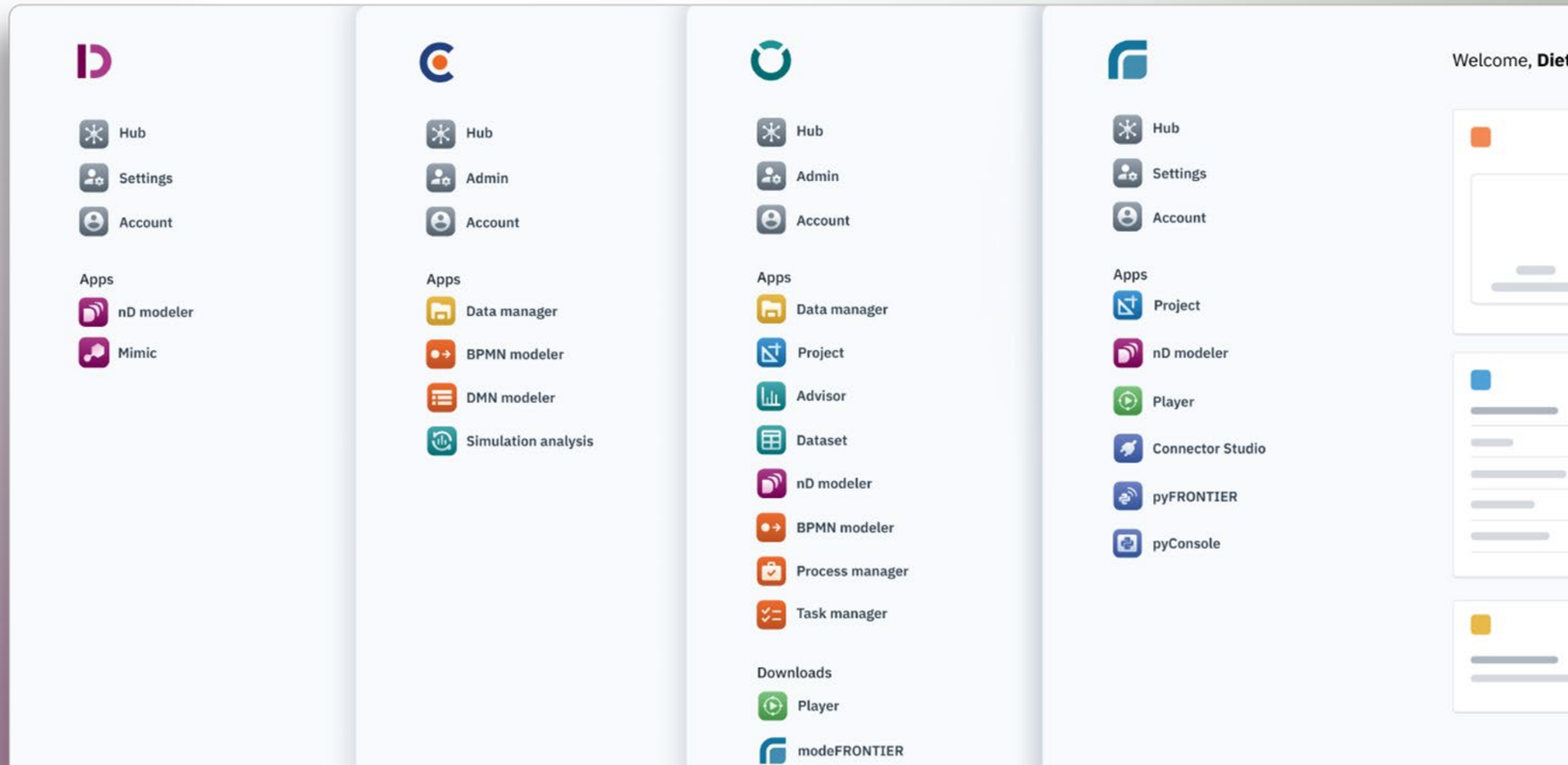
Shaping the future together

- Trusted innovation
- Community synergy
- Digital thread



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