



# **Shaping the Future: Integrating AI to reinvent business & industry**

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**German University of Digital Science**  
**Board Member, Board Advisor and Senior Advisor**



# Llama 4, April 5 2025: Meta's Advanced Multimodal AI Model



## Llama 4: Leading Multimodal Intelligence

Newest model suite offering unrivaled speed and efficiency

### Llama 4 Behemoth

**288B** active parameter, **16** experts  
**2T** total parameters

The most intelligent teacher model for distillation

Preview

### Llama 4 Maverick

**17B** active parameters, **128** experts  
**400B** total parameters

Native multimodal with **1M** context length

Available

### Llama 4 Scout

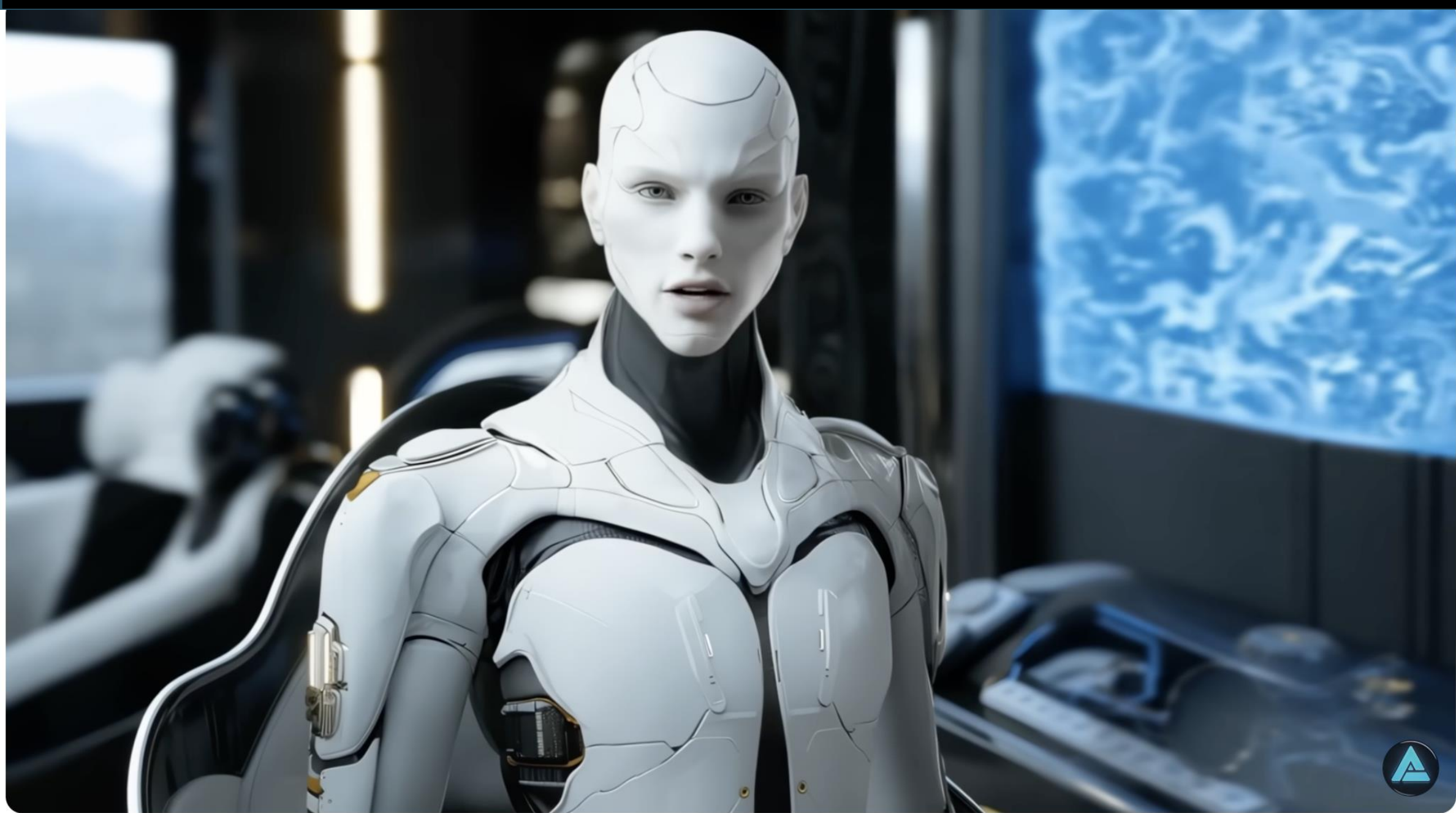
**17B** active parameters, **16** experts  
**109B** total parameters

Industry leading **10M** context length  
Optimized inference

Available



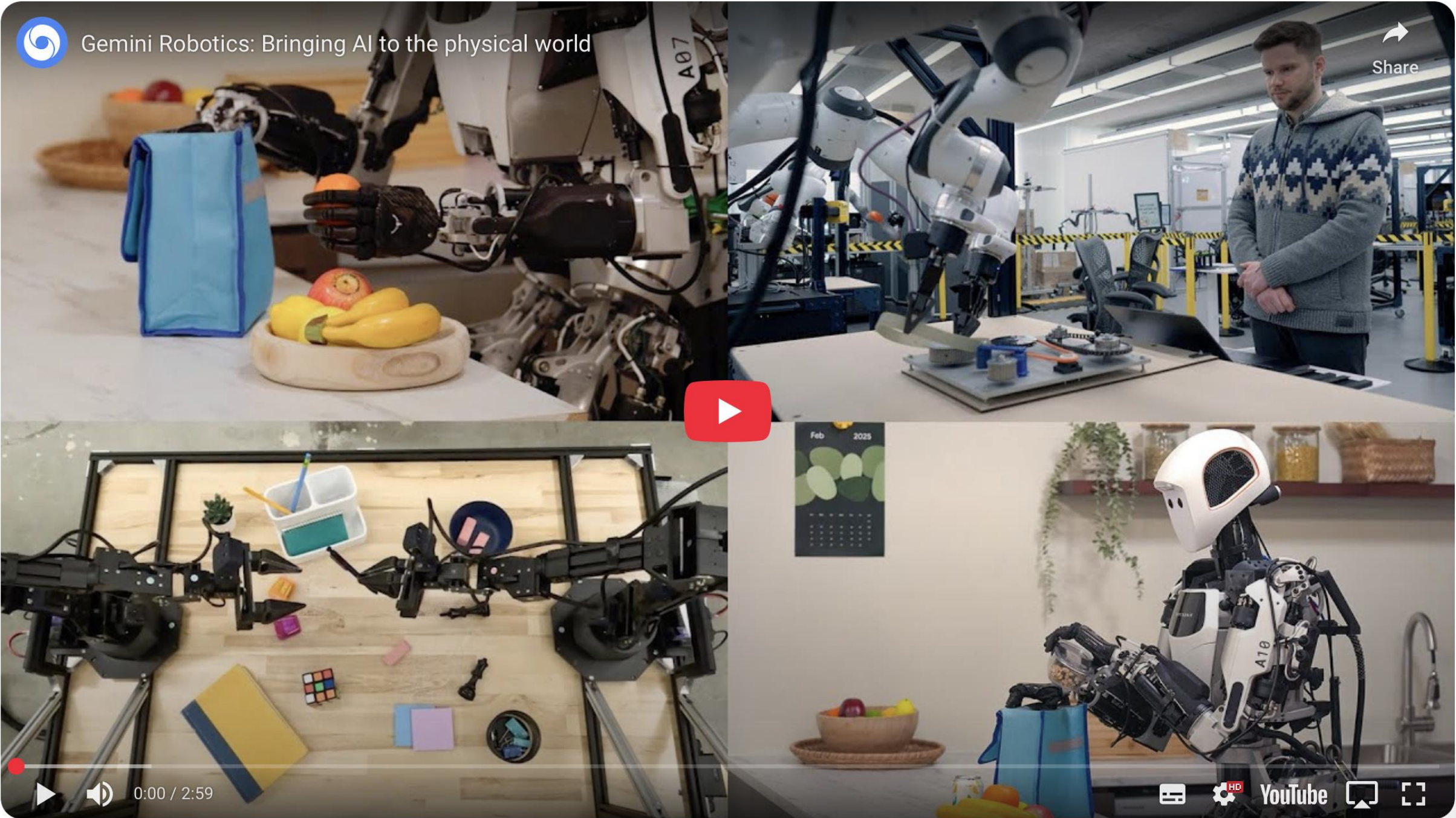
# Gemini Robotics, March 12 2025: Bridging AI and the Physical World



## Gemini Robotics: Bringing AI to the physical world

YouTube · Google DeepMind · 12 Mar 2025

YouTube





# Manus AI, March 6 2025: General-purpose AI agent for complex tasks



# AI Strategy: Open Questions for Each Company

- **AI North Star**

- Do we have a clearly defined North Star for our AI strategy?

- **Data Strategy**

- Do we have a comprehensive catalogue or inventory of the data we own, produce, can access, or need to access?
- Are we planning to leverage (Generative) AI to accelerate digitalization efforts for data?
- What is the current state of the data ecosystem within the industry?

- **AI Stack**

- Do we need multiple AI Stacks?

- **Central AI Hubs**

- Should we establish a central AI hub, or should we consider a distributed model with different spokes? Alternatively, should we adopt a hybrid structure with a central group-level AI hub, division-specific AI hubs, and spokes for individual business units?

- **Collaboration with regulators**

- Should we proactively engage with regulators to shape and influence the certification process for AI-empowered or AI-embedded manufacturing, business processes, and AI-integrated products?

- **Thought leadership in our industry**

- In what areas can we establish ourselves as thought leaders within our industry?



# AI North Star





# AI North Star: Automotive Industry, Car Companies



Autonomous Driving



Automation of Manufacturing and Business Processes





# AI North Star: Aviation Industry, Commercial Aircraft





# AI North Star: Aviation Industry, Commercial Aircraft



AI Copilot



Automation of Manufacturing and Business Processes

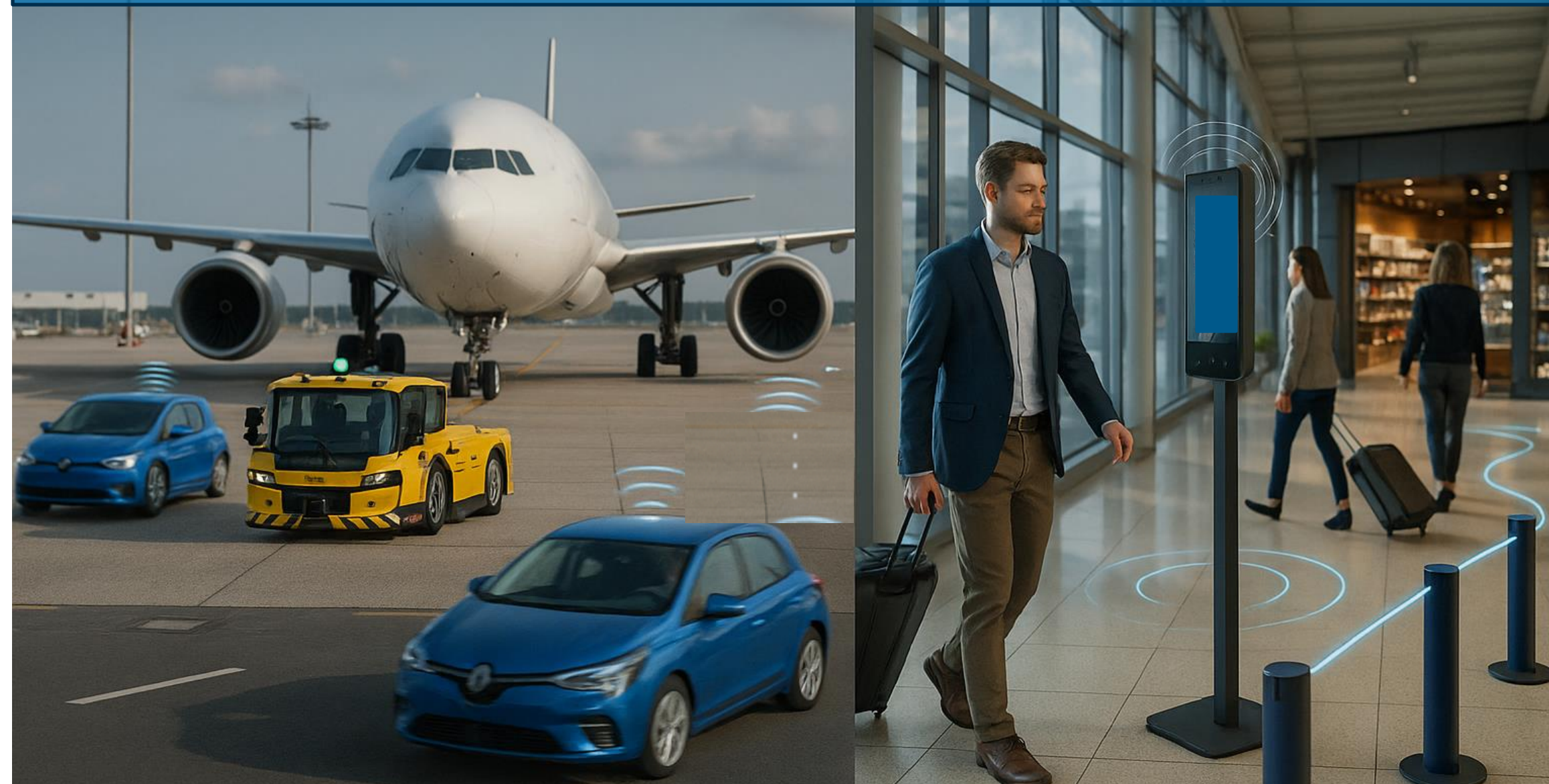




# AI North Star: Airport



Towards a fully adaptive, self-regulating *airport* ecosystem: Autonomous airport operations and intelligent passenger experience



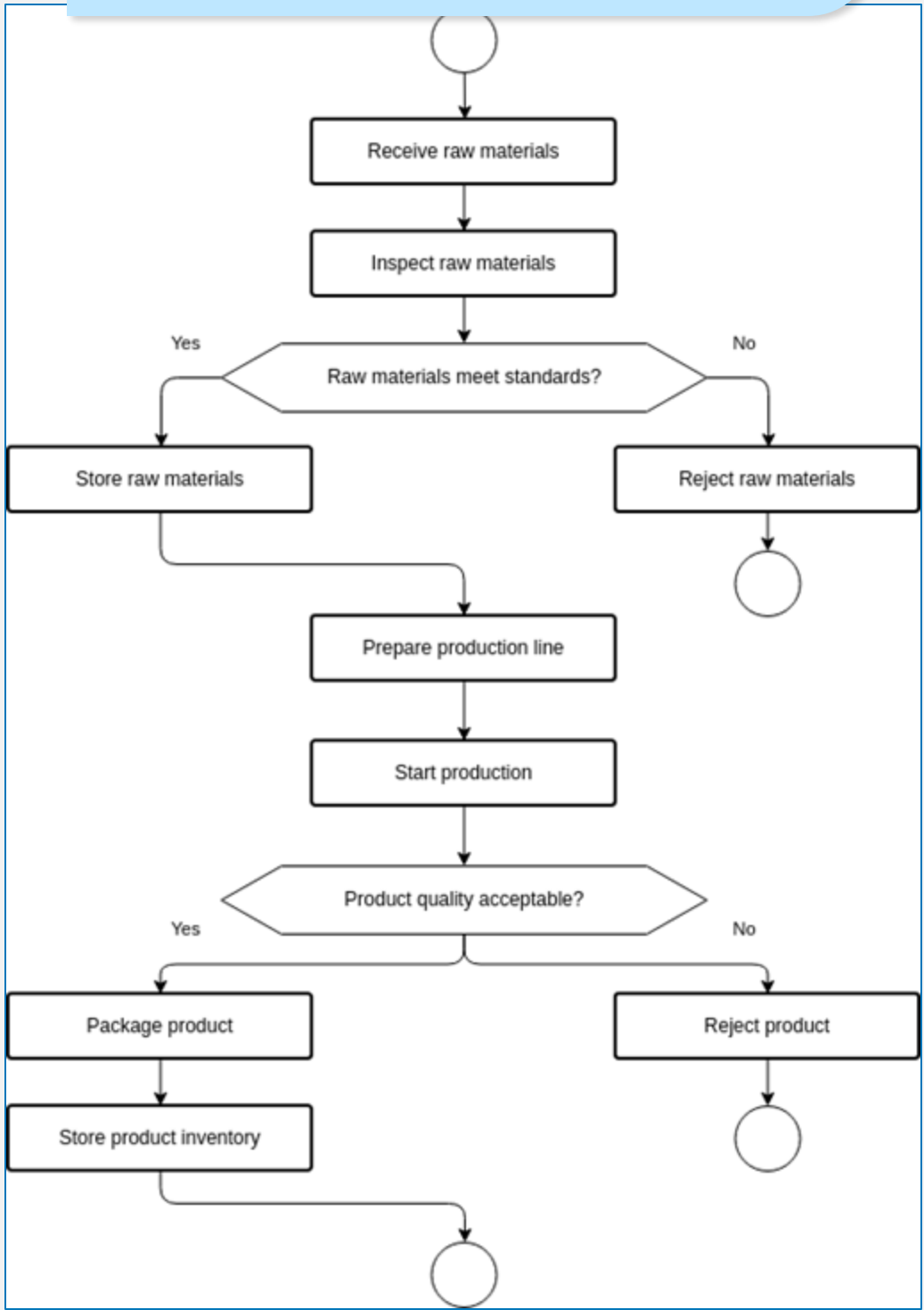


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# Industry and Business Data are Complex

## Flowchart for a manufacturing process

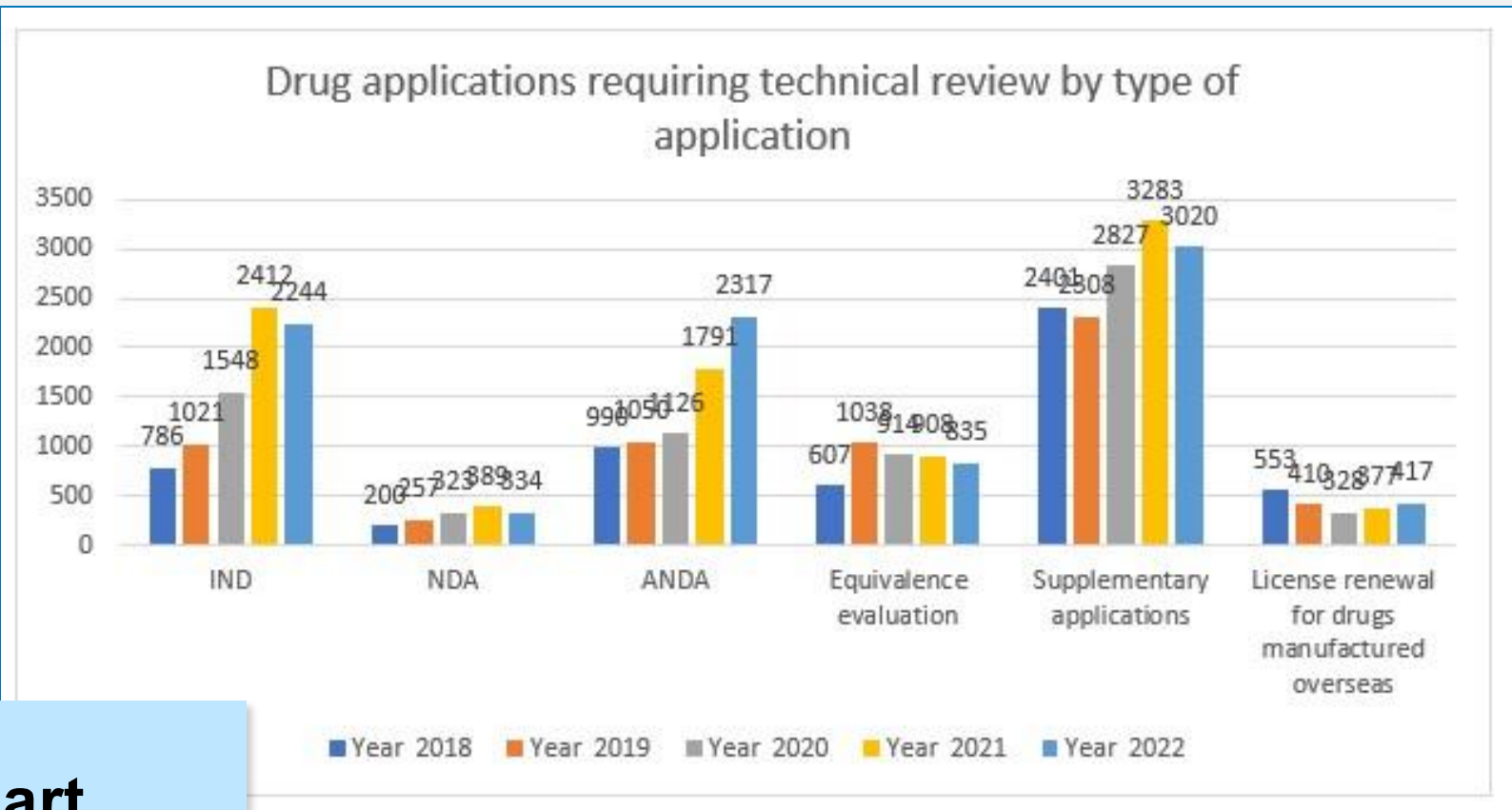


<https://online.visual-paradigm.com/diagrams/templates/flowchart/flowchart-for-a-manufacturing-process/>

## Tabular data

Date	Nature	Assets	Paid up Capital	Liabilities	Income	Expenses	Dividends
Jun-01	Capital and Asset(Cash)	50,000	50,000				
Jun-06	Expenses and Asset(Fixed asset)	-10,000				-10000	
Jun-15	Expenses and Asset(Fixed asset)	-5,000				-5000	
Jun-15	Expenses and Asset(Inventory)	-1,000				-1000	
Jun-22	Expenses and Asset(Cash)	-200				-200	
Jun-30	Expenses and Asset(Cash)	-13,000				-13000	
Jun-30	Expenses and Asset(Cash)	-15,000				-15000	
Jul-13	Revenue and Asset(Cash)	35,000			35000		
Jul-18	Expenses and Asset(Cash)	-1,500				-1500	
Jul-31	Expenses and Asset(Cash)	-13,000				-13000	
Jul-31	Expenses and Asset(Cash)	-13,500				-13500	
Aug-05	Revenue and Asset(Cash)	28,000			28000		
Aug-26	Expenses and Asset(Inventory)	-5,000				-5000	
Aug-31	Revenue and Asset(Cash)	-13,000				-13000	
Aug-31	Revenue and Asset(Cash)	-17,000				-17000	
Aug-31	Dividend and Asset(Cash)	-1,000					-1000
Aug-31	Revenue and Asset(Cash)	-3,000				-3000	
		1,800	50,000	0	63,000	-110,200	-1,000

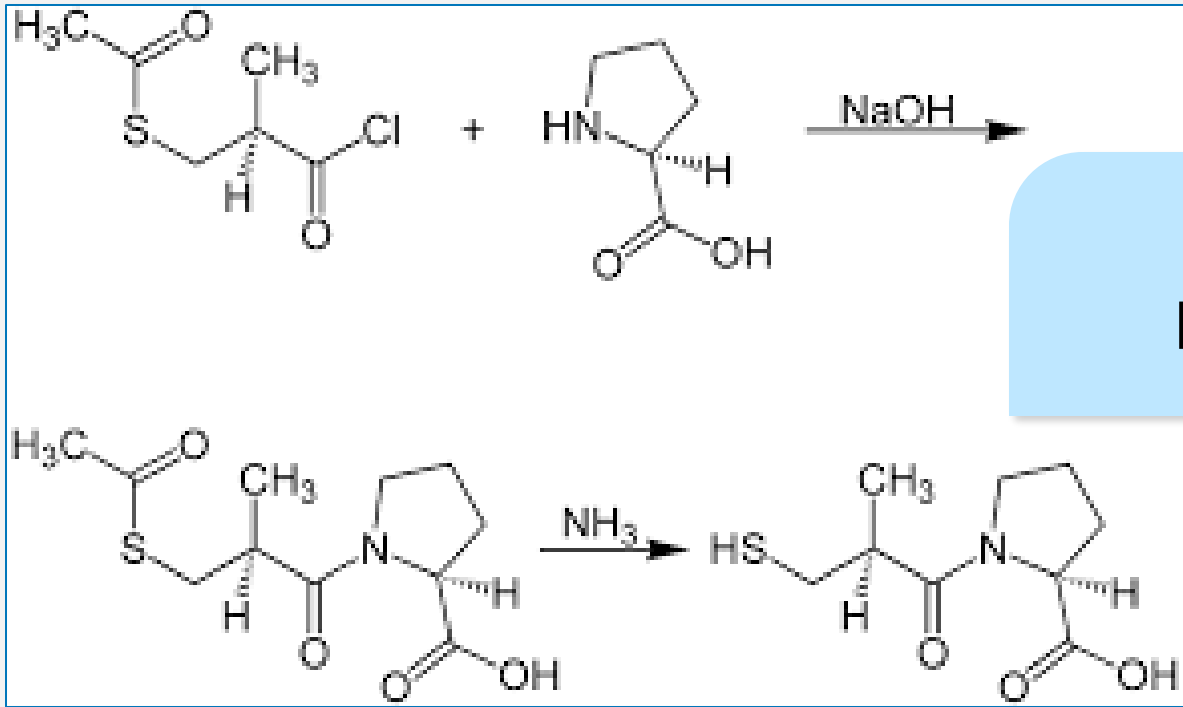
<https://www.wallstreetmojo.com/expanded-accounting-equation/>



## Chart

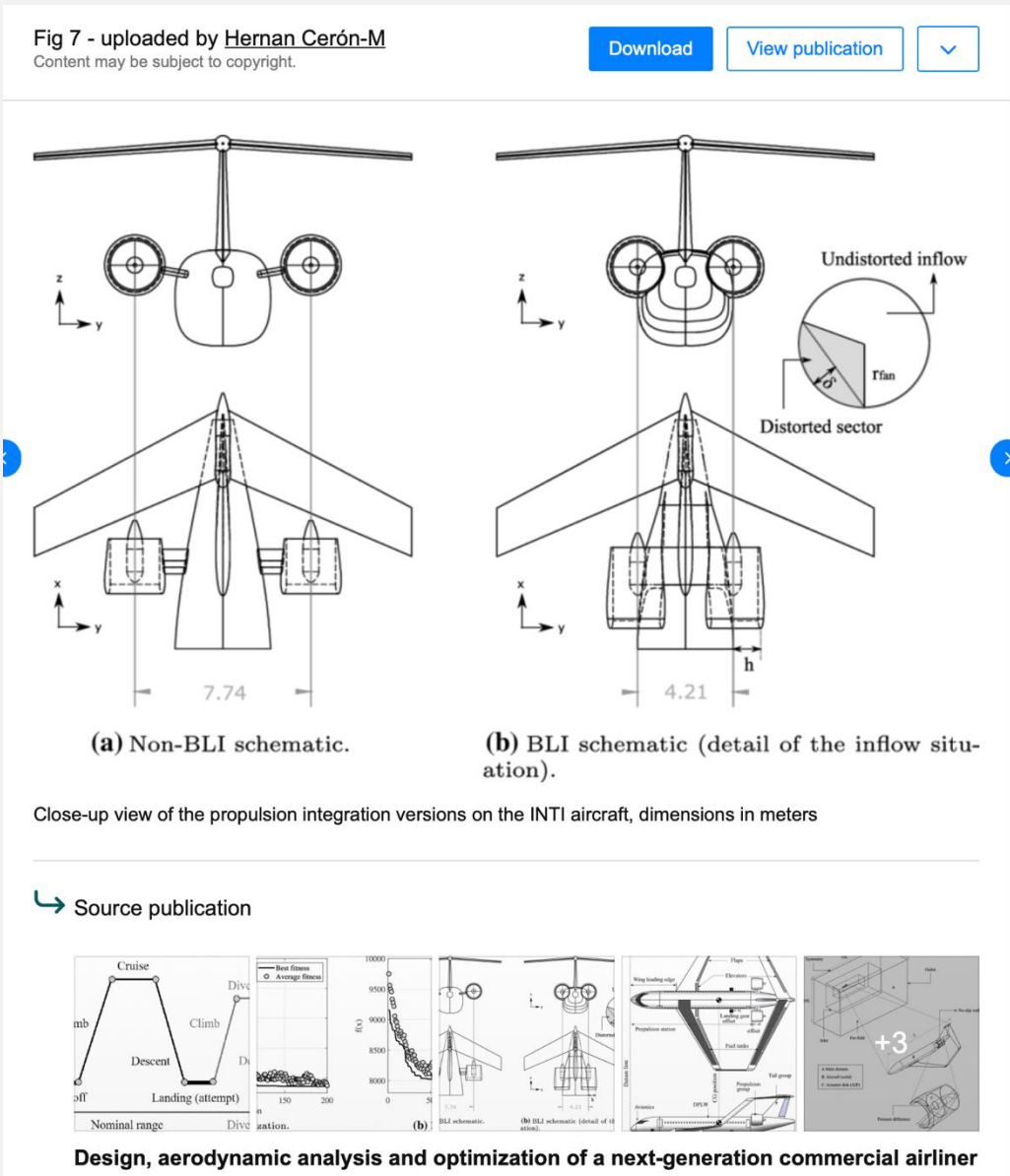
<https://www.cisema.com/en/china-drug-evaluation-report-2022/>

## Chemical Formulation



<https://www.sinodoschemistry.com/services/chemical-formulations>

## Design 2D and 3D



[https://www.researchgate.net/figure/Configuration-and-center-of-gravity-example-of-the-non-BLI-version\\_fig4\\_365873381](https://www.researchgate.net/figure/Configuration-and-center-of-gravity-example-of-the-non-BLI-version_fig4_365873381)



# GenAI increases efficiency and optimizes master data management



- AI Strategy
- AI Experts
- Data Scientist
- UI/UX
- Engineering expertise in Hardware & Software
- Cloud Technologies
- AI/ML Ops



Generative AI for  
Data Management

**BRÜCKNER**  
GROUP



- Brückner is optimizing data management of large, heterogeneous master data systems (over 500,000 entries) with the help of a customized GenAI app, reducing search times and improving data quality through automated processes.
- The new GenAI app saves engineers several hours each week, sustainably enhances efficiency, and creates space for more valuable tasks in their daily work.





# Data Categories: Real Estate Industry

- Market and pricing data
- Location and geodata
- Building data and property details
- Contract and legal data
- Financial and economic data
- Demographic and social data
- Contract and legal data
- Operational and energy data
- Regulatory and compliance data
- Risk management data





# Future of Building Construction

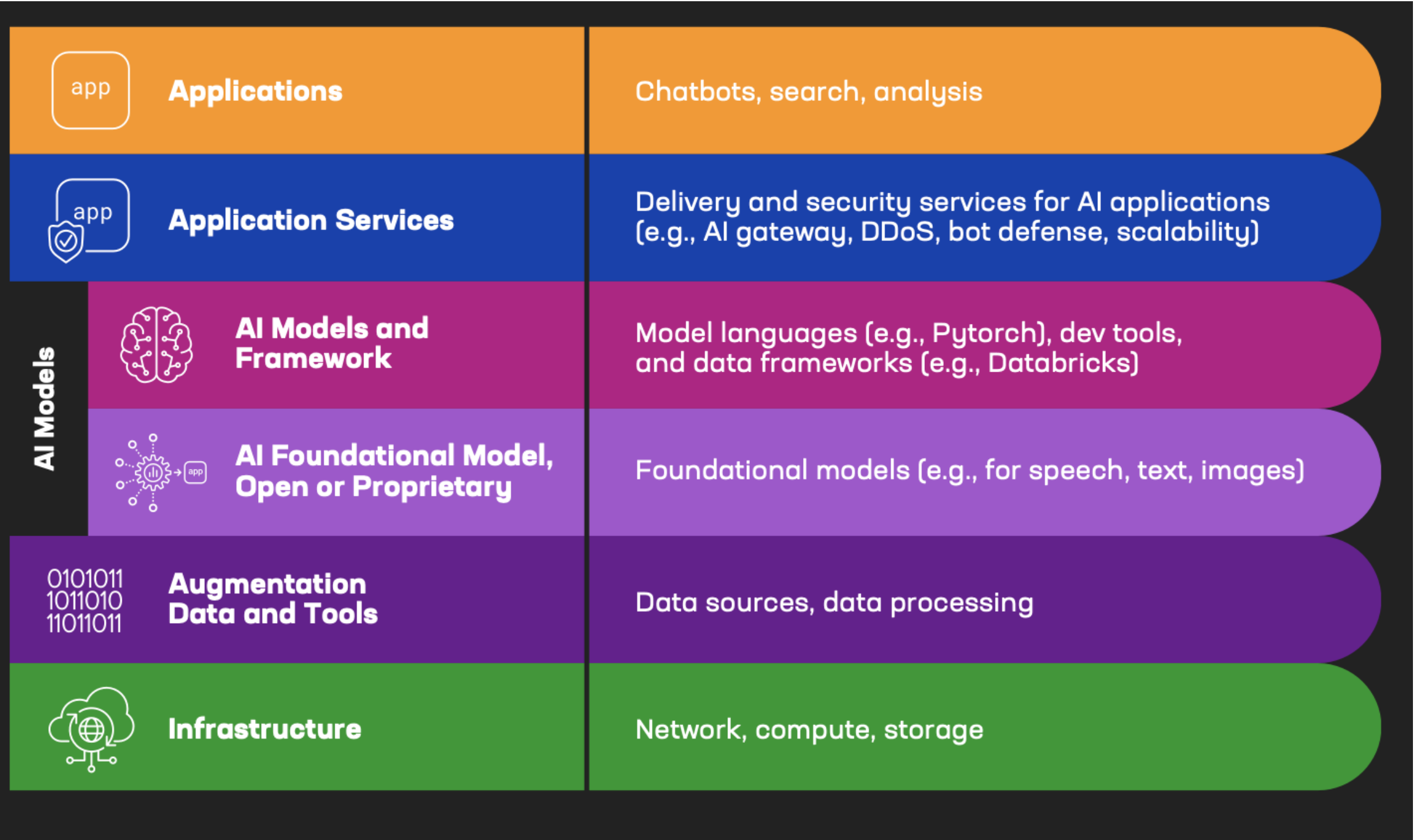




Do we need multiple AI Stacks?



# AI Stack



Companies build and use applications

Microsoft Azure, AWS, IONOS, GCORE; F5 Networks, Cloudflare,

Microsoft, Google, Hugging Face, NIVIDIA, DataBricks

OpenAI, Mistral, Google DeepMind, Antropic, Meta, xAI, Cohere, AI21 Labs, Hugging Face, Stability AI, Alibaba, Baichuan Intelligence

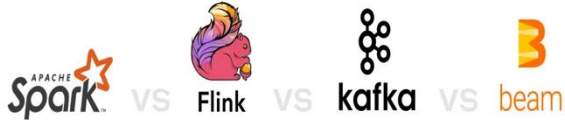
Microsoft Azure, AWS, Google Cloud, DataBricks, Alibaba, Tenecent, Baidu

Microsoft Azure, AWS, Google Cloud, Alibaba, Tencent, Baidu, GCORE, IONOS

Nvidia, Samsung, TSMC, Qualcomm, AMD, Broadcom

PyTorch, Tensorflow, JAX, Hugging Face Transformers, DeepSpeed, NViDIA NeMO

**GPT-4, Gemini X,** Claude X, **LLaMa X,** Grok-2, **Mistral X,** NeMo Megatron, Kosmos-2, **T0,** Tongyi Qianwen, Baichuan Intelligece



<https://www.f5.com/resources/reports/state-of-ai-application-strategy-report>



# Gcore: Everywhere Inference

Deploy ML models for fast, secure, scalable inference worldwide.


## Gcore at a glance


 **Founded:** 2015

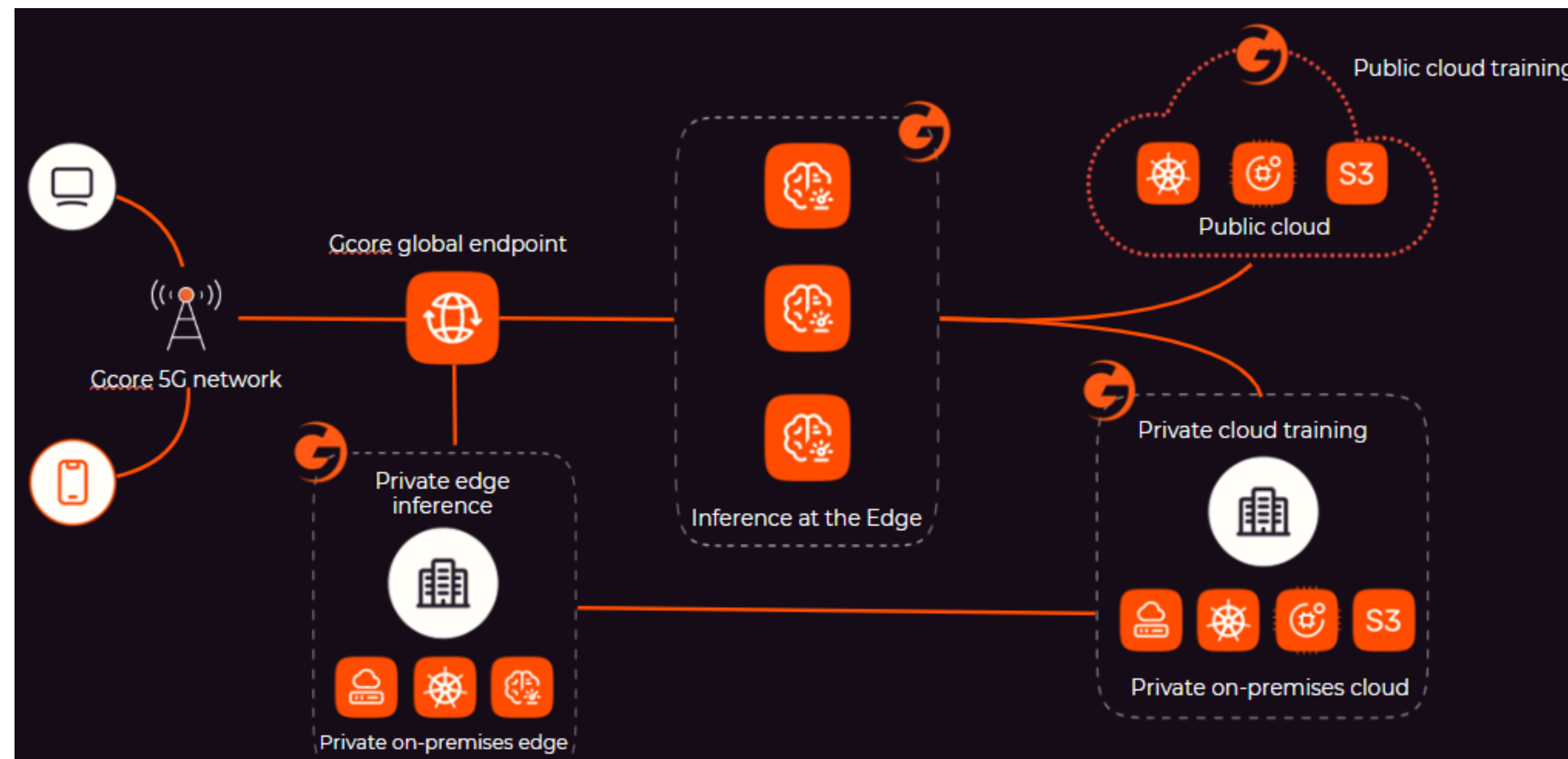
 **Headquarters:** Luxembourg

 **Core Services:**  
AI Infrastructure, Cloud, CDN, Edge & Security


 **Global Network:**  
180+ points of presence across 6 continents & 50 Cloud Locations


 **Clients:**  
Enterprises, gaming companies, media platforms, and public sector organizations

 **Mission:**  
To deliver innovative AI and cloud solutions to create a smarter, more connected, and secure world for everyone



 **Fast model response times** for real-time applications  
30 ms average network latency globally

 Run models **securely close to your users**, minimizing data transfer  
Automatically route to the nearest location

 Dynamic scaling, **usage-based pricing**.












## Connect with Gcore

- Website: [gcore.com/everywhere-inference](https://gcore.com/everywhere-inference)
- E-Mail: [elena.simon@gcore.com](mailto:elena.simon@gcore.com)
- Elena Simon General Manager Gcore GmbH



# Dynamic Hybrid Language Model (DHLM)

Approaches to fit LLMs to specific industry & Enterprise needs

Offering	<b>LLMs / Foundation Model</b>  Build a foundation model from scratch with industry specific data	<b>Finetuning a pre-trained model</b>  Apply supervised finetuning with an industry specific instruction set	<b>In-context learning large context window</b>  In early 2023 the size of context windows became practically unlimited and competence for an industry could be provided in context	<b>Dynamic Hybrid Language Model (DHLM)</b>  Proprietary neuland.ai technology providing only relevant industry competence context, increasing speed, maximizing quality and minimizing cost
Features	<ul style="list-style-type: none"><li>▪ High training costs</li><li>▪ Re-training necessary</li><li>▪ Requires a lot of data</li><li>▪ Hallucination</li><li>▪ Lack of Transparency</li></ul>	<ul style="list-style-type: none"><li>▪ High training costs</li><li>▪ Re-training necessary</li><li>▪ Limited availability, e.g. not for GPT-4</li><li>▪ LLM specific Hallucination</li><li>▪ Lack of Transparency</li></ul>	<ul style="list-style-type: none"><li>▪ No upfront investment</li><li>▪ No re-training</li><li>▪ LLM agnostic</li><li>▪ High run-time cost</li></ul>	<ul style="list-style-type: none"><li>▪ No upfront training necessary</li><li>▪ No re-training</li><li>▪ LLM agnostic</li><li>▪ Minimal cost</li><li>▪ High quality</li><li>▪ Dynamic control over content</li><li>▪ Dynamic content inclusion</li><li>▪ Capability to “Forget”</li></ul>
Examples	       			



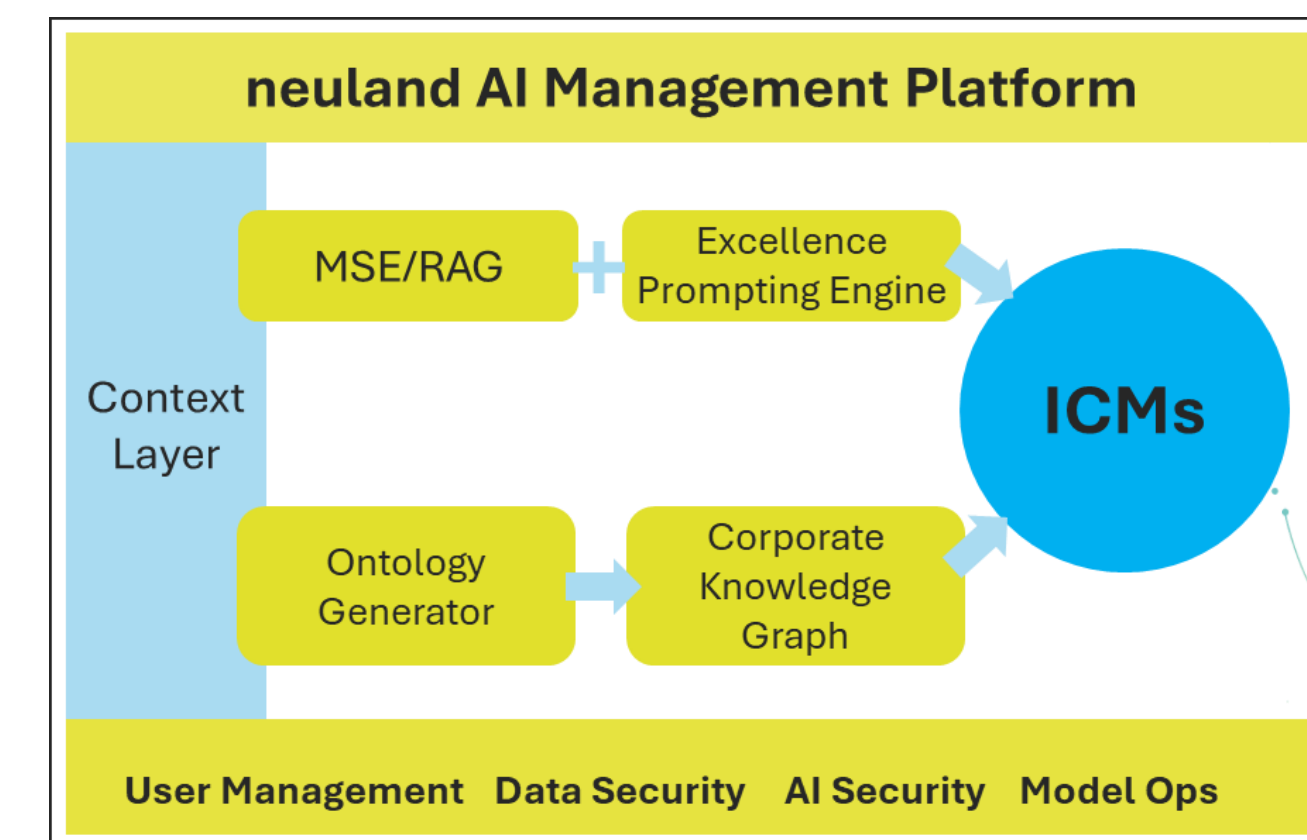
# Market Overview

So many tools, so few vertical solutions that integrate with others → Costly. Insecure. Dangerous.



The market for AI tools and AI infrastructure solutions has *grown into a nightmare zoo of opportunities* – deployed at large.

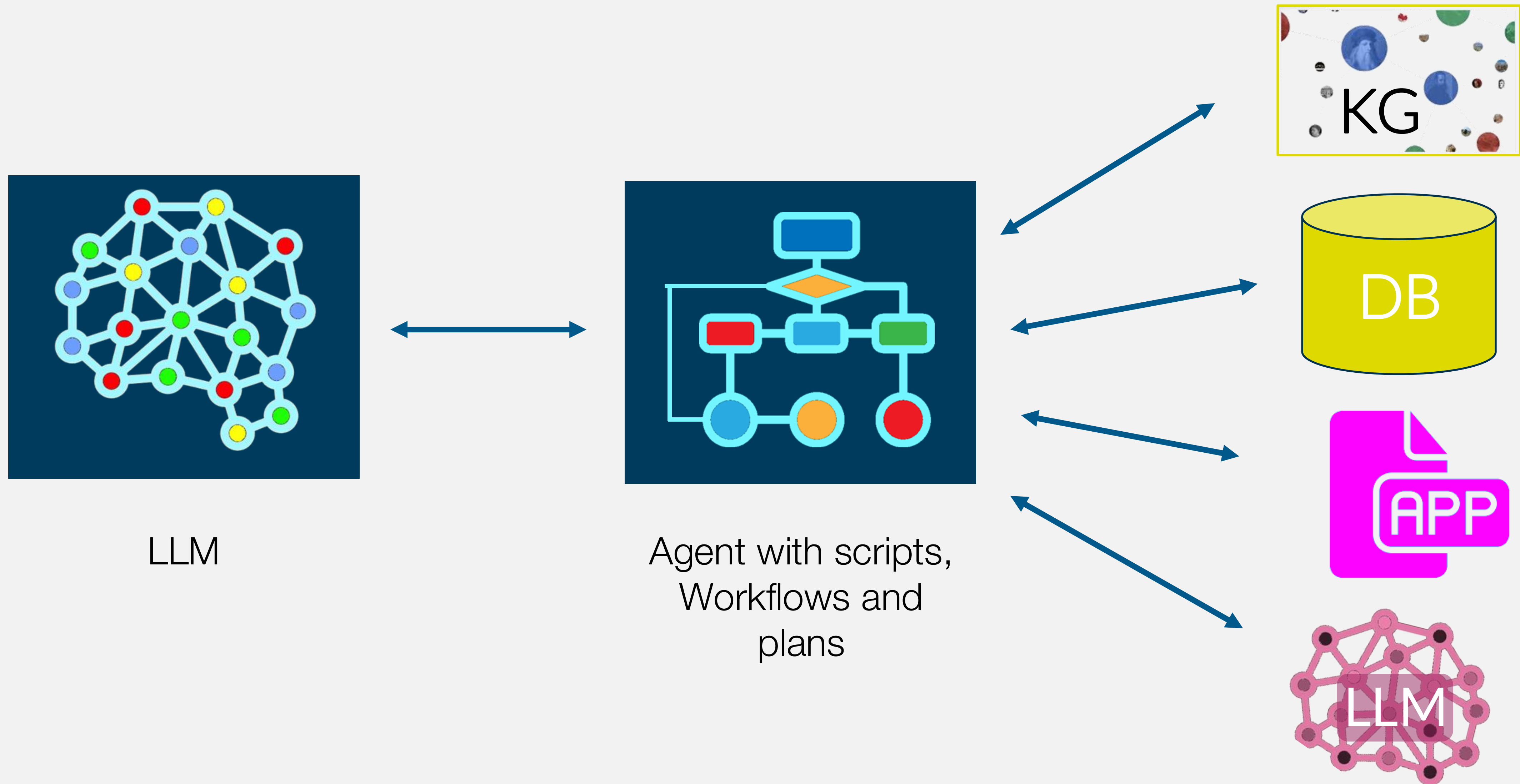
→ **AI Management Platforms** are the next level for *trust-worthy Enterprise AI* solutions. Without - it cannot be managed.



Generative AI Market Map, V3  
Source: Sequoia Capital (work in progress)

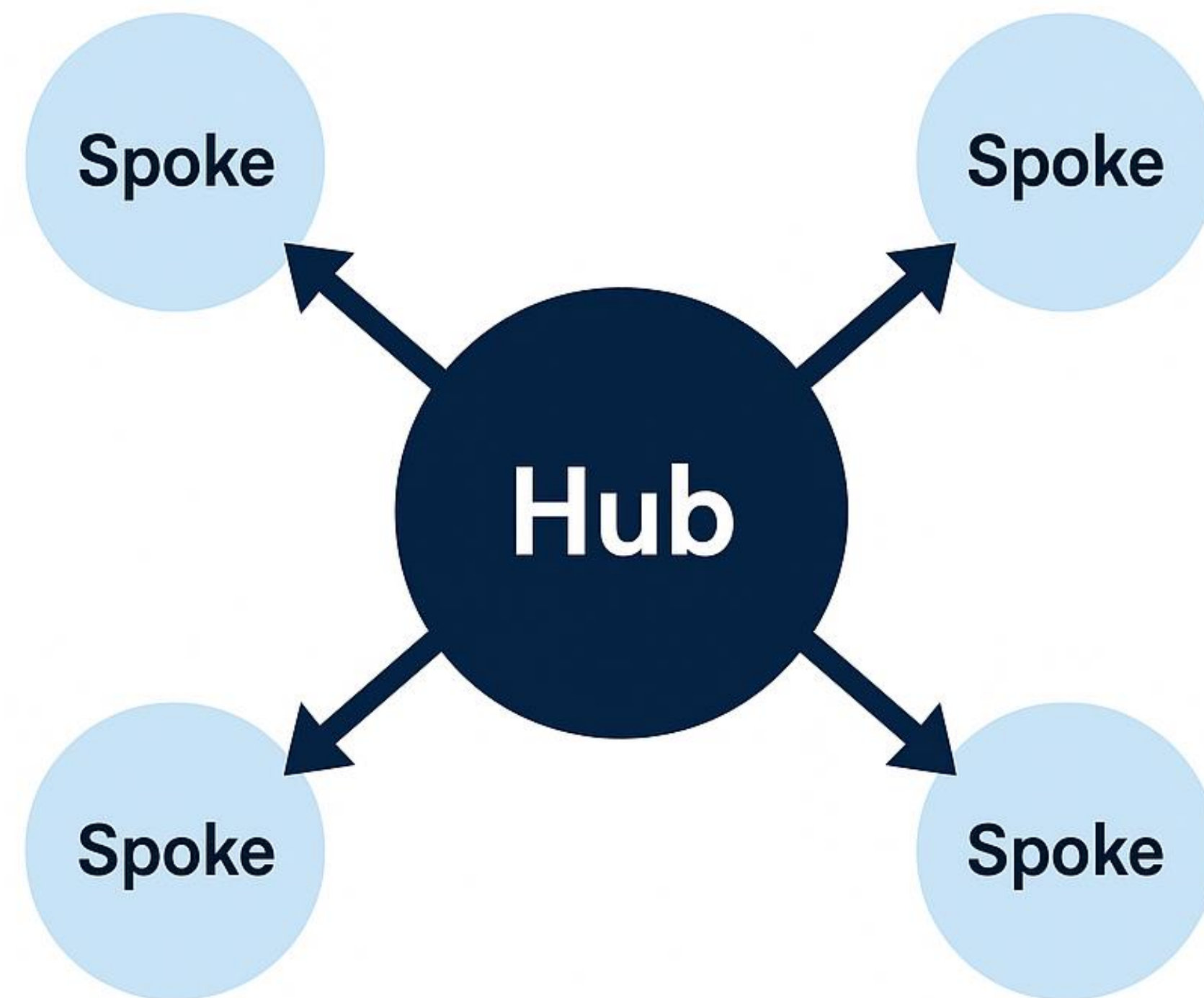


# Agents are needed for complex business solutions





## Hub-and-Spoke AI Collaboration Framework





# Responsibility of the Central AI Team/Hub

## Strategy

- Group level AI strategy
- Steering AI ethics policy
- Data legal framework
- AI regulations
- Identifying and monitoring Ecosystem
- Partnership in AI
- AI Investment strategy

In collaboration with Board, Strategy, Legal and Corporate Venture and Partner teams

## AI Stack and AI Platform

- Building up AI Stack
- Establishing AI application development lifecycle
- Evaluating and benchmarking AI technology vendors

In collaboration with IT, Product and Engineering teams

## Product Management

- AI application product management
- Quality control
- AI academy
- Collaboration with the product owners and AI teams in the business units
- Definition of industry specific data and AI benchmarks

In collaboration with Product and Engineering, Function, Legal, HR and Regulators



# AI Governance in the Board/Supervisory Board

## Strategy

- Integrate AI into corporate strategy
- Monitor market trends and adapt
- Define goals and manage resources

## Risk

- Define AI risk tolerance
- Evaluate bias, hallucination, third-party risks
- Structure monitoring and reporting

## Governance Structure

- Clarify responsibilities in Board & Management
- Framework for Trustworthy AI
- Committee structure with AI oversight (Digital Committee)

## Performance

- Financial & operational KPIs for AI
- Regular goal tracking
- Ensure continuous improvement

## Talent

- Assess skills to implement AI strategy
- Promote education & training
- Succession planning with AI focus

## Culture & Integrity

- Foster culture for responsible AI
- Transparent communication & ethics
- Build trust through compliance & values



# Singularity, AGI, Homanoid, Artificial Human/Living Being/Bio Material?



Emotional Intelligence?  
Self-Awareness?  
Common Sense?  
Enthics and Society?



AI + Synthetic Biology

