



# *Innovazione 100x con Open Source e Cloud Native AI*

**NATALE VINTO**

*Director - Product Marketing Technical Red Hat*

**VEM**  
**LIVE**  
**2024**



## Big ideas drive... **business innovation**

.....

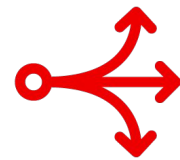
Every organization in every geography and in every industry can innovate and create more customer value and differentiation with open source technologies and an open culture.

# But **innovating** isn't always easy



## **Innovation** .....

Innovate at speed.



## **Flexibility** .....

Flexibility to adapt to market changes.



## **Growth** .....

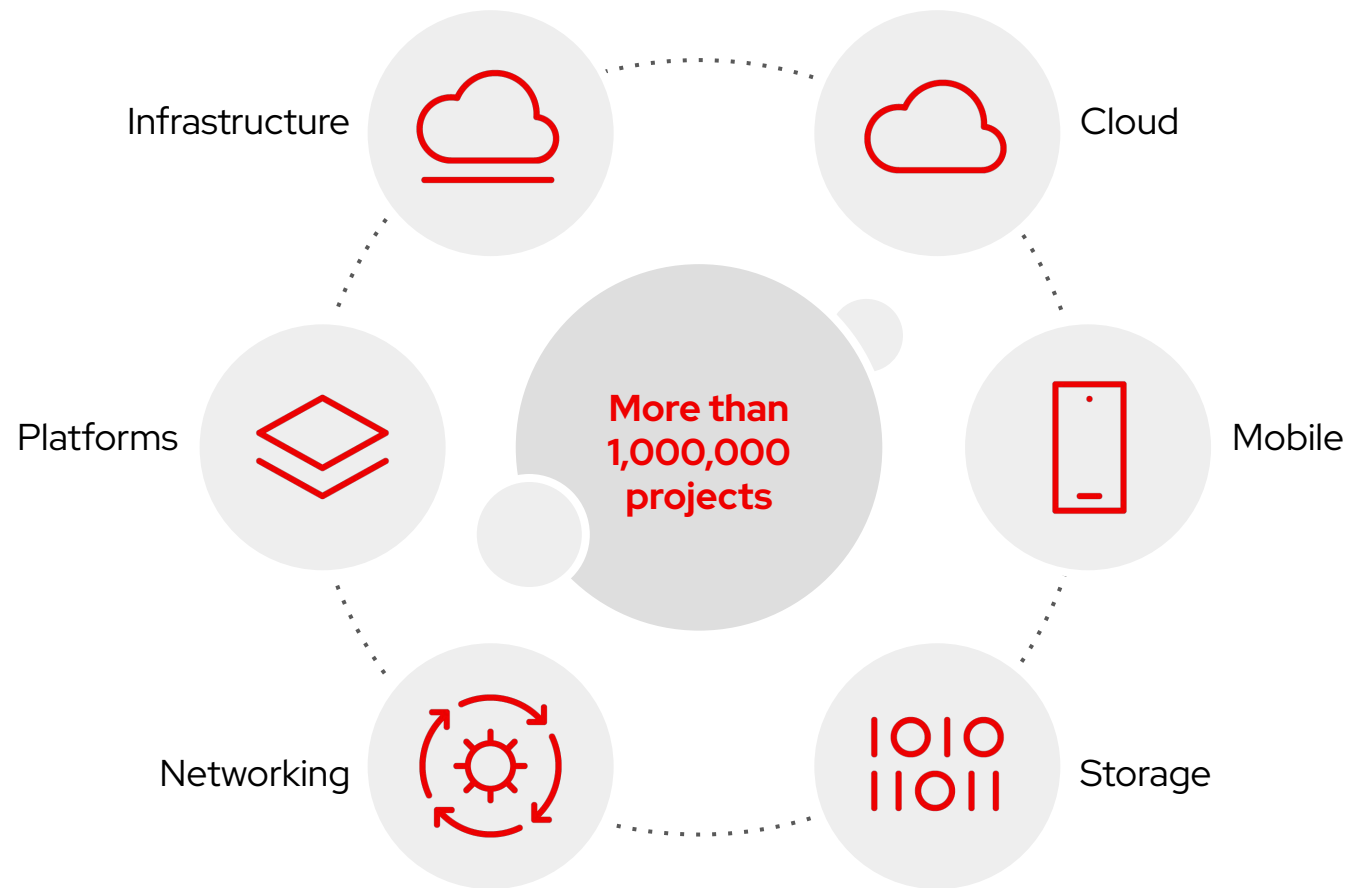
Grow new customer experiences  
and lines of business.

# Open source is great driver for Innovation

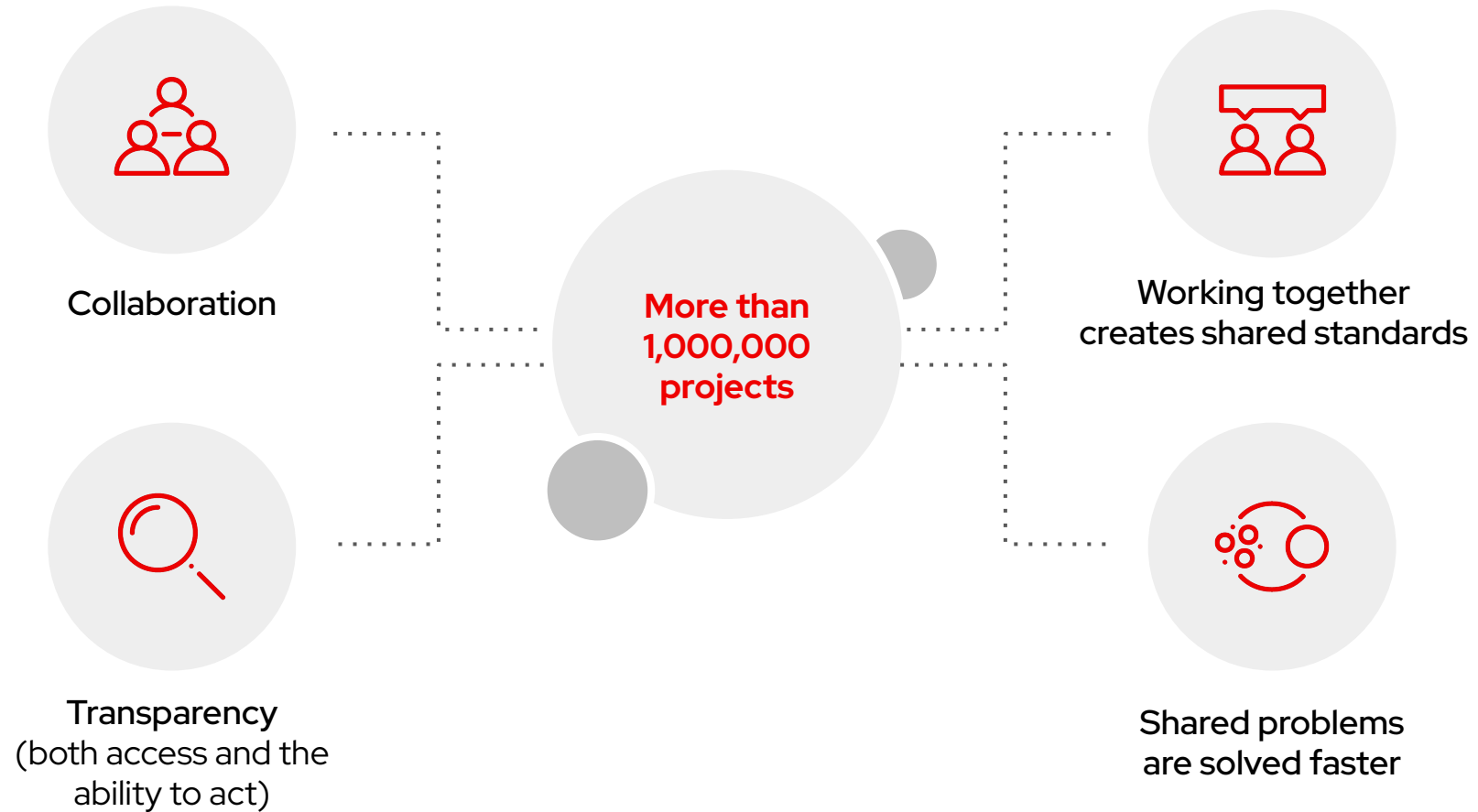
Open source is about more than developing software.  
It's how we built our company.

And it's why we have been so successful.

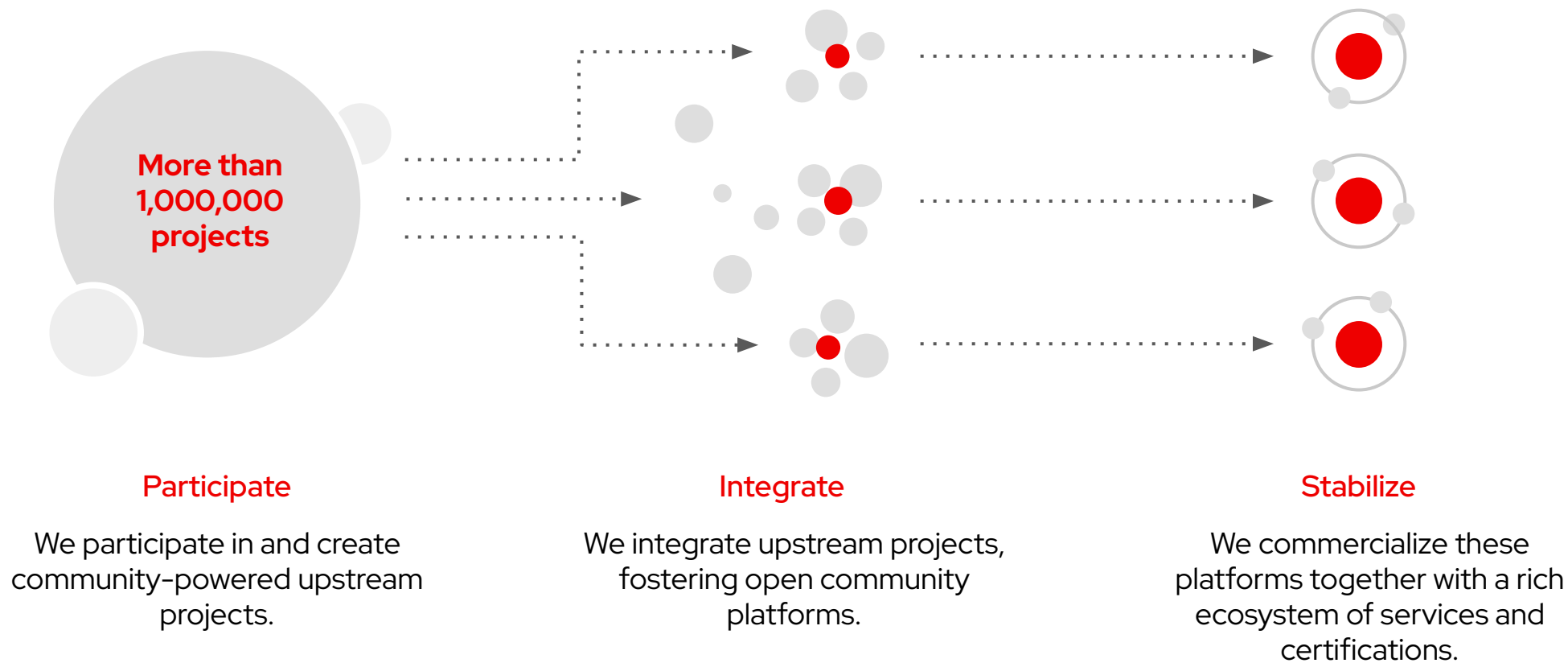
# Open source fuels rapid innovation



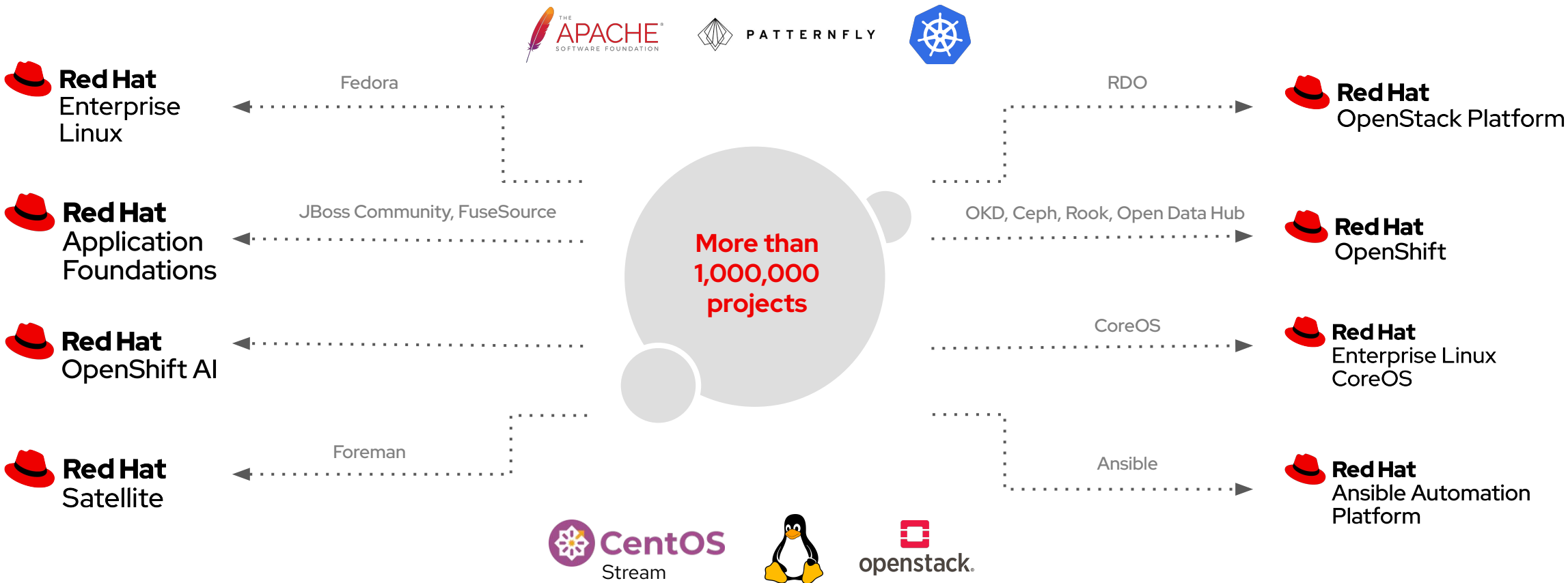
# The culture of open source is the culture of Red Hat



# How do community projects become enterprise products?



# From communities to enterprise



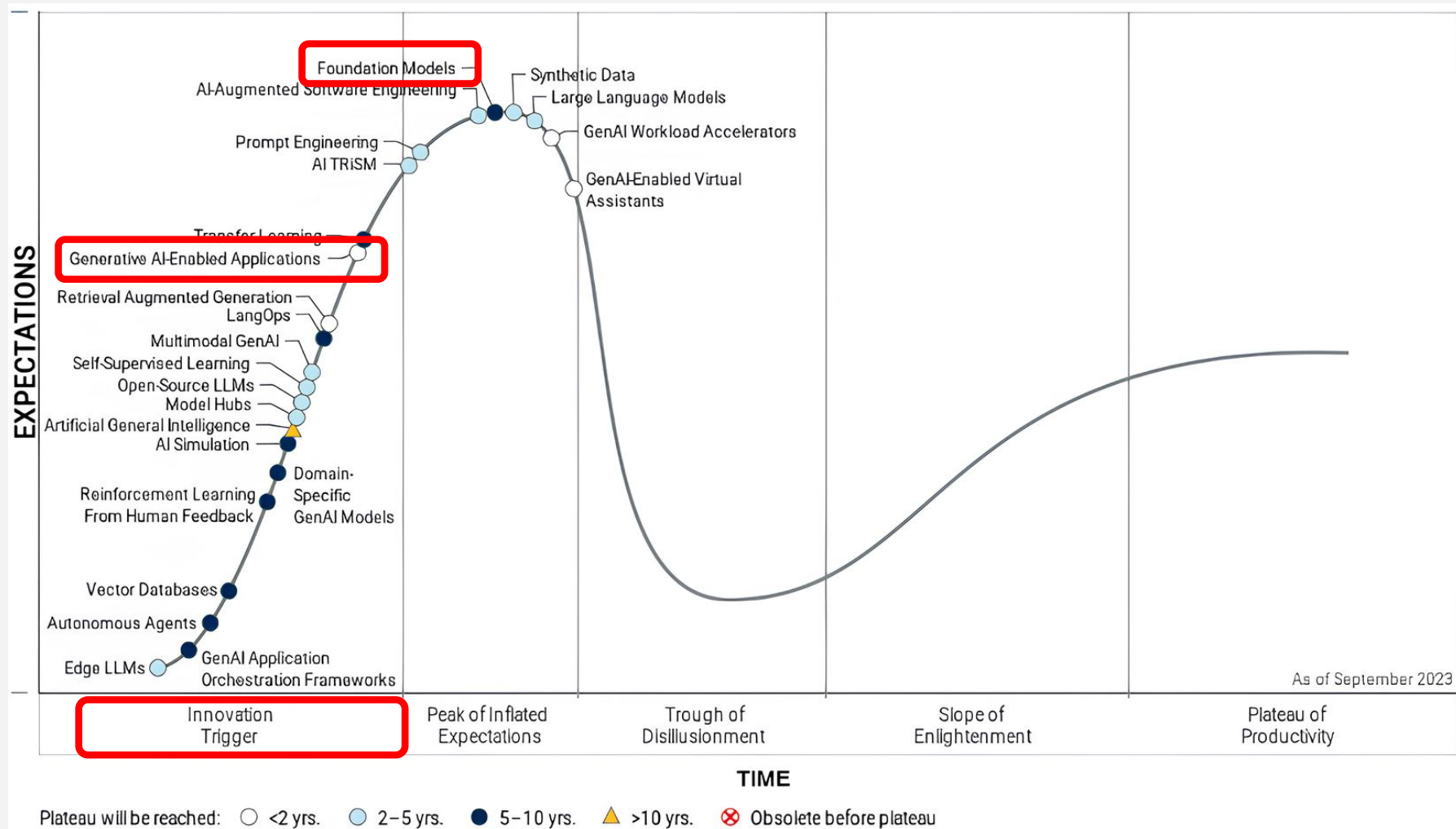


# AI



Generative AI is  
the path to 45%  
increase in  
productivity

# The Generative AI-enabled apps just started



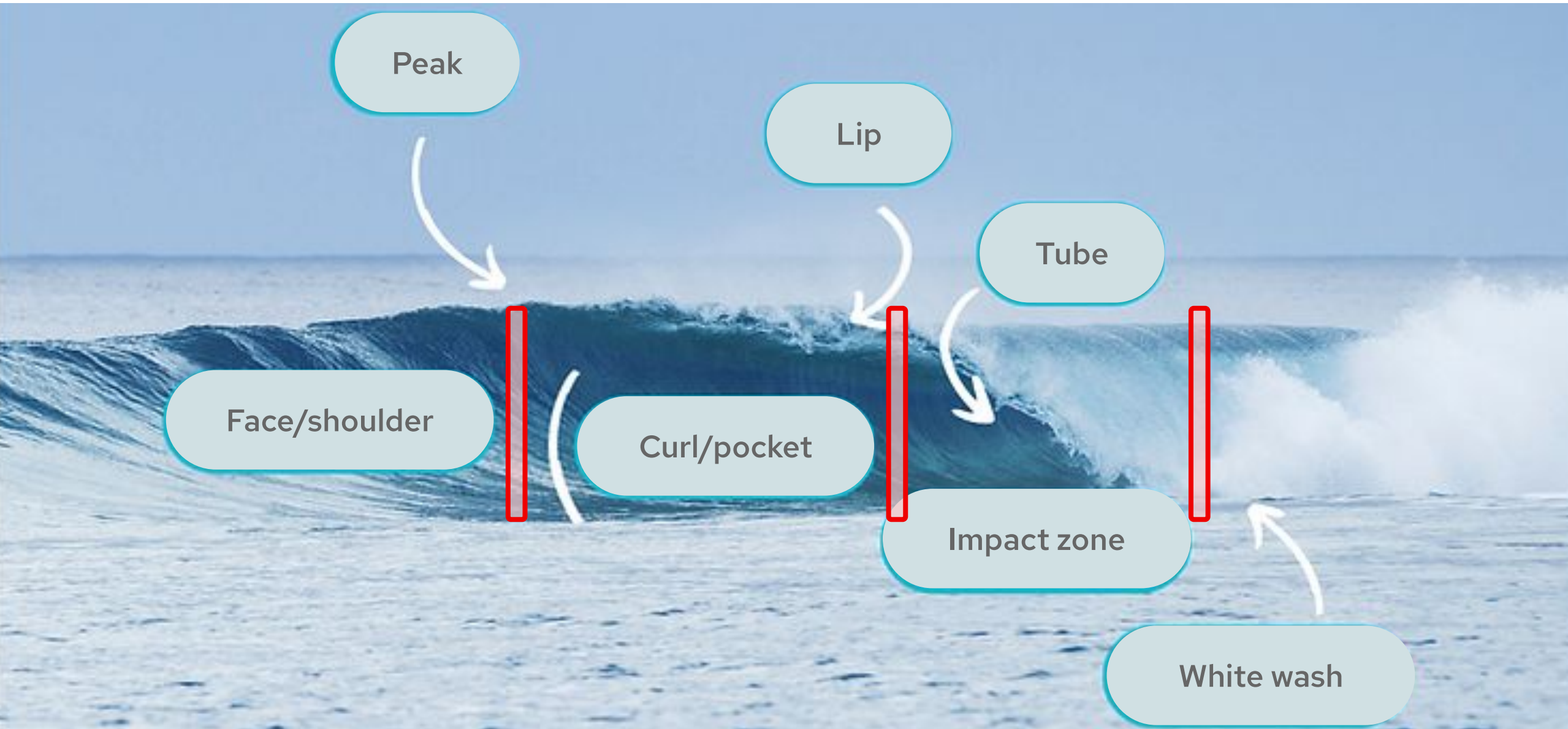


Catch the Wave!

**SEBASTIAN STEUDTNER**



# Divide the Wave!





You don't ride this waves alone



What we will go through during the day

Models

Your  
own data

New roles to  
work with

New developer  
stack & flow

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RH products & OS projects

## Models

Your  
own data

New roles to  
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RH products & OS projects



# Open source models explosion

The screenshot shows the Hugging Face homepage. At the top, there's a navigation bar with the Hugging Face logo, a search bar, and links to Models, Datasets, Spaces, Posts, Docs, Pricing, Log In, and Sign Up. Below the navigation bar, the left sidebar features a 'Tasks' section with a search bar and a list of task categories: Multimodal (Image-Text-to-Text, Visual Question Answering, Document Question Answering) and Computer Vision (Depth Estimation, Image Classification, Object Detection, Image Segmentation, Text-to-Image, Image-to-Text, Image-to-Image, Image-to-Video, Unconditional Image Generation, Video Classification, Text-to-Video, Zero-Shot Image Classification). The main content area displays a list of models under the 'Models' tab, with a total of 684,067 models. The list includes: mistralai/Mistral-7B-Instruct-v0.3 (Text Generation, Updated 7 days ago, 37.8k downloads, 491 likes), openbmb/MiniCPM-Llama3-V-2\_5 (Visual Question Answering, Updated 1 day ago, 21.6k downloads, 707 likes), microsoft/Phi-3-vision-128k-instruct (Text Generation, Updated 11 minutes ago, 23.6k downloads, 570 likes), CohereForAI/aya-23-8B (Text Generation, Updated 3 days ago, 10k downloads, 214 likes), meta-llama/Meta-Llama-3-8B (Text Generation, Updated 16 days ago, 958k downloads, 4.3k likes), and mistralai/Mistral-7B-v0.3 (Text Generation, Updated 7 days ago, 33.7k downloads, 175 likes).

**Hugging Face** Search models, datasets, users...

Models 684,067 Filter by name Full-text search ↑↓ Sort: Trending

**Tasks** Libraries Datasets Languages Licenses Other

Filter Tasks by name

**Multimodal**

- Image-Text-to-Text
- Visual Question Answering
- Document Question Answering

**Computer Vision**

- Depth Estimation
- Image Classification
- Object Detection
- Image Segmentation
- Text-to-Image
- Image-to-Text
- Image-to-Image
- Image-to-Video
- Unconditional Image Generation
- Video Classification
- Text-to-Video
- Zero-Shot Image Classification

**Models**

- mistralai/Mistral-7B-Instruct-v0.3**  
Text Generation • Updated 7 days ago • 37.8k • 491
- openbmb/MiniCPM-Llama3-V-2\_5**  
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Text Generation • Updated 7 days ago • 33.7k • 175



Technology ▾ Get started ▾ Trust & Safety ▾ Community ▾

Try Meta AI ↗

Download models

Blog

Publications

Careers

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# Build the future of AI with Meta Llama 3

Now available with both 8B and 70B pretrained and instruction-tuned versions to support a wide range of applications

Get Started

Experience Llama 3 on Meta AI



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## Frontier AI in your hands

Open and portable generative AI for devs and businesses.

Try le Chat

Build on la Plateforme

## Open sourcing IBM's Granite code models



# Regulating AI: The EU-AI Act (March 13)



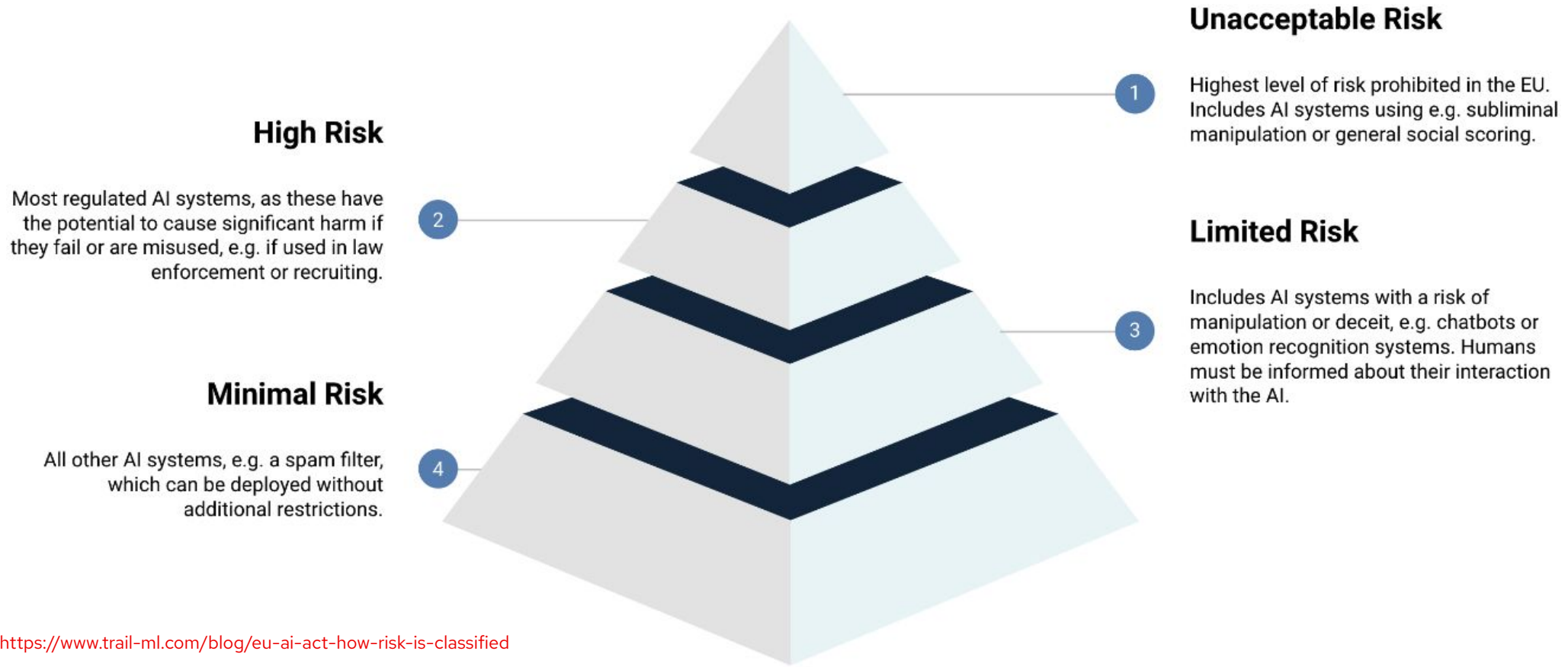
The EU is committed to strive for a balanced approach to AI

- **Lawful** → accurateness
- **Ethical** → transparency
- **Robust** → fairness
- no bias
- security

## Generative AI & EU Act Requirements:

Explainability, Documentation, Process & Data  
Governance, Human Oversight, Risk  
Management, Auditability.

Unregulated, irresponsible or abusive use of AI could lead to negative consequences for individuals or the society, create public opposition and **hinder AI innovation in the EU**

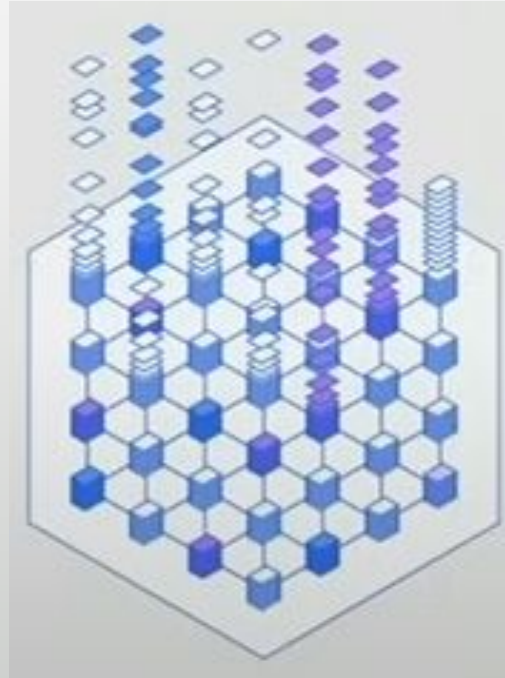


# Why you must choose a base model carefully

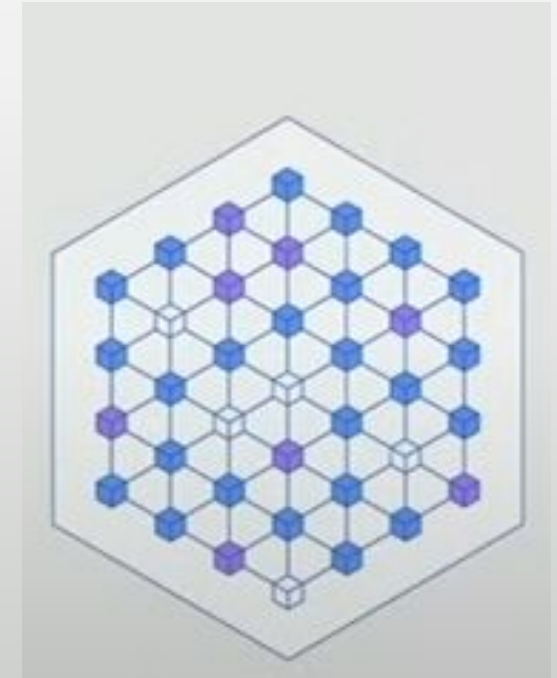
The base model should be **transparent** so that you know what its contents are



Because when **adding your data**, you need to know with what you're mixing it



The resulting **combination** is what your enterprise will consume





# A base model must give you

- Performance and transparency
- Broad commercial rights
- Indemnification



Models

**Your  
own data**

New roles to  
work with

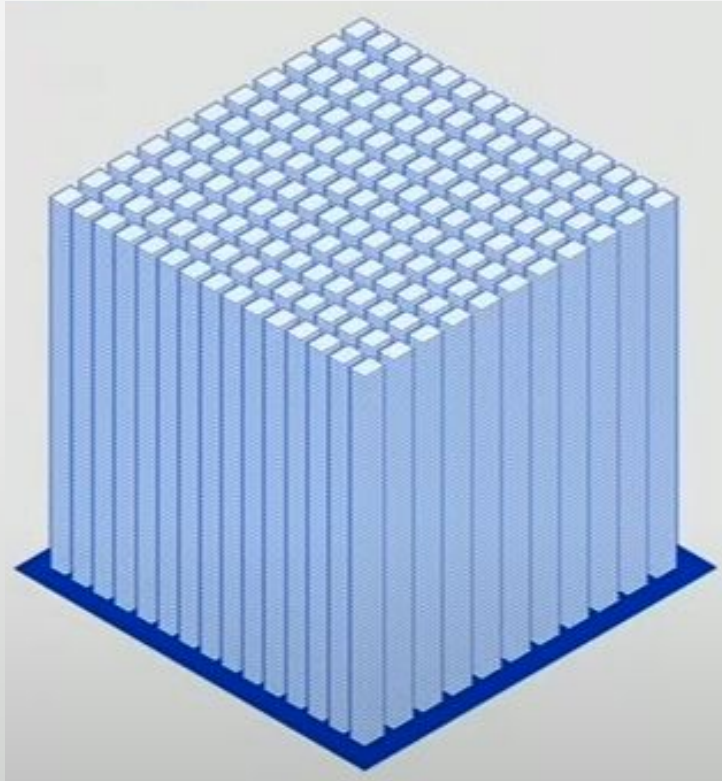
New developer  
stack & flow

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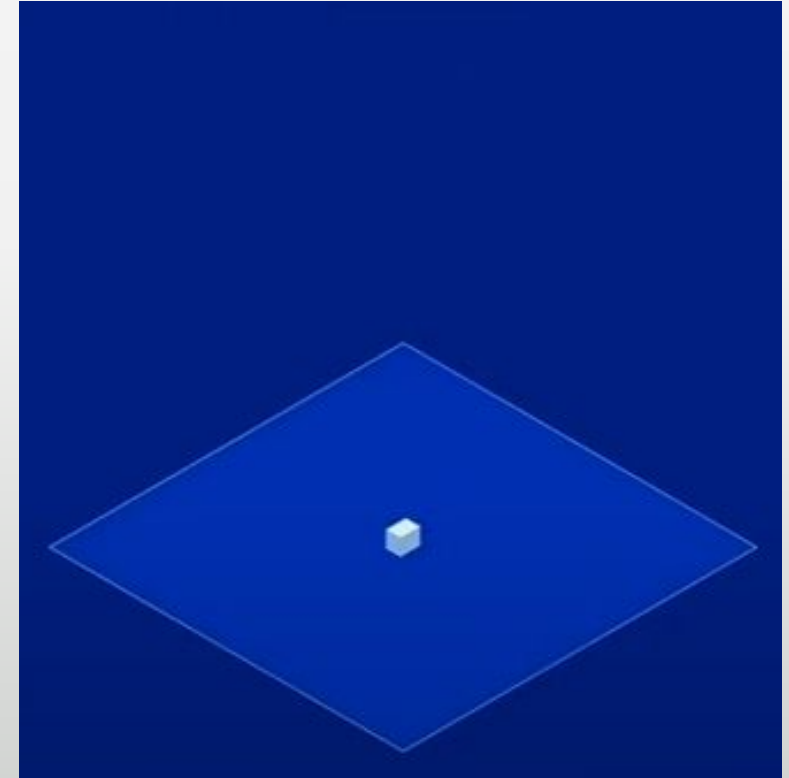
RH products & OS projects

# Your own data

Nearly all available **public data** is now represented in foundation models



Less than 1% of all **enterprise data** is represented in foundation models



Models

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**New roles to  
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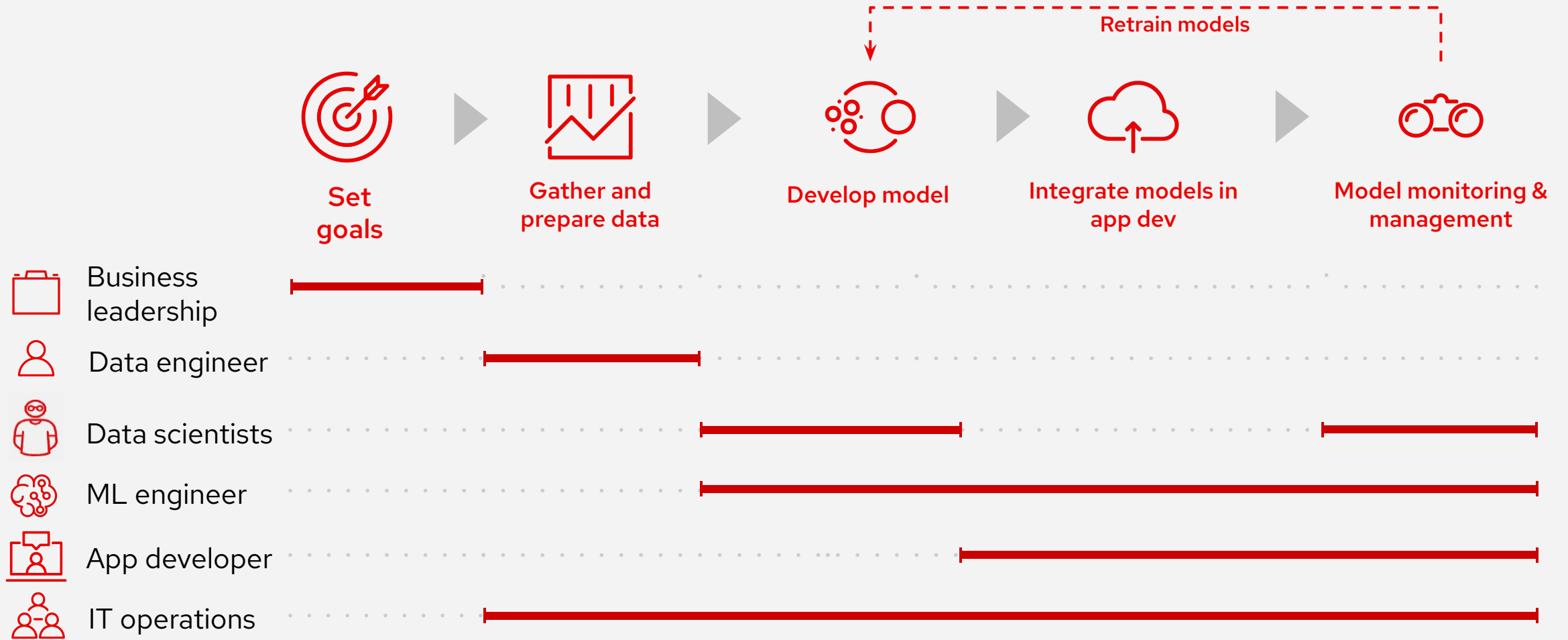
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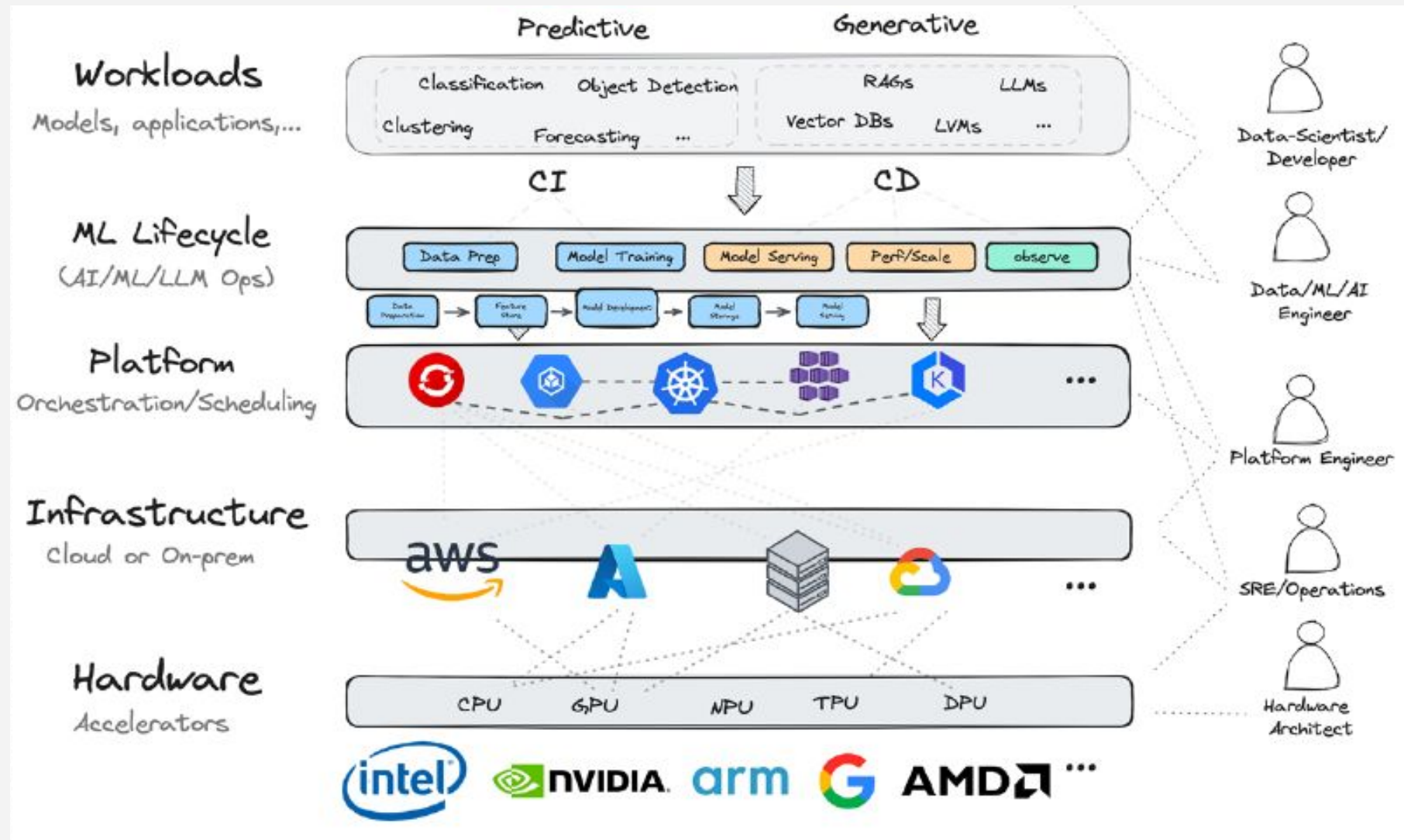
RH products & OS projects



# AI as a team initiative



# Joint areas of each of the roles



Models

Your  
own data

New roles to  
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**New developer  
stack & flow**

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RH products & OS projects

# CNCF landscape

[illegible]

[https://landscape.cncf.io/?utm\\_source=the+new+stack&utm\\_medium=referral&utm\\_content=inline-mention&utm\\_campaign=tns+platform](https://landscape.cncf.io/?utm_source=the+new+stack&utm_medium=referral&utm_content=inline-mention&utm_campaign=tns+platform)



The image shows a man in a light blue shirt and striped tie standing in front of a large wall covered in a grid of logos representing various cloud native technologies. He is gesturing with his hands, looking overwhelmed. The wall is divided into sections like 'Database', 'Messaging', 'Application Definition & Image Build', 'Container Integration & Delivery', 'Platform', 'Observability and Analysis', 'Networking & Orchestration', 'Cloud Native & Serverless', 'Service Mesh', 'API Gateway', 'Service Mesh', 'Cloud Native Software', 'Key Management', 'Service Provider', and 'Kubernetes Training Partner'.

**Database**

**Messaging**

**Application Definition & Image Build**

**Container Integration & Delivery**

**Platform**

**Observability and Analysis**

**Networking & Orchestration**

**Cloud Native & Serverless**

**Service Mesh**

**API Gateway**

**Service Mesh**

**Cloud Native Software**

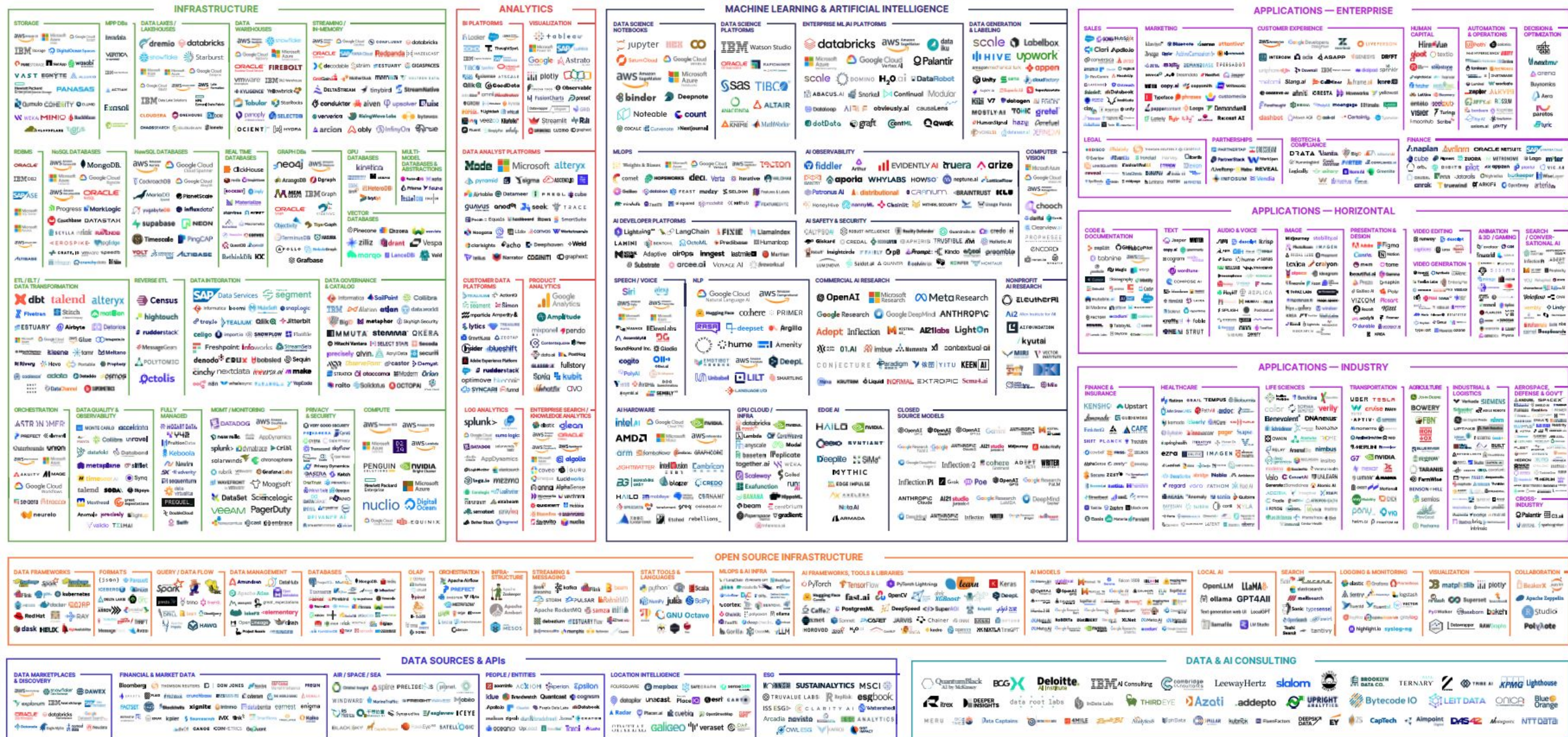
**Key Management**

**Service Provider**

**Kubernetes Training Partner**



# The 2024 MAD (Machine learning, Artificial Intelligence & Data) Landscape





# The 2024 MAD (Machine learning, Artificial Intelligence & Data) Landscape




























































# The updated AI stack and key OS projects

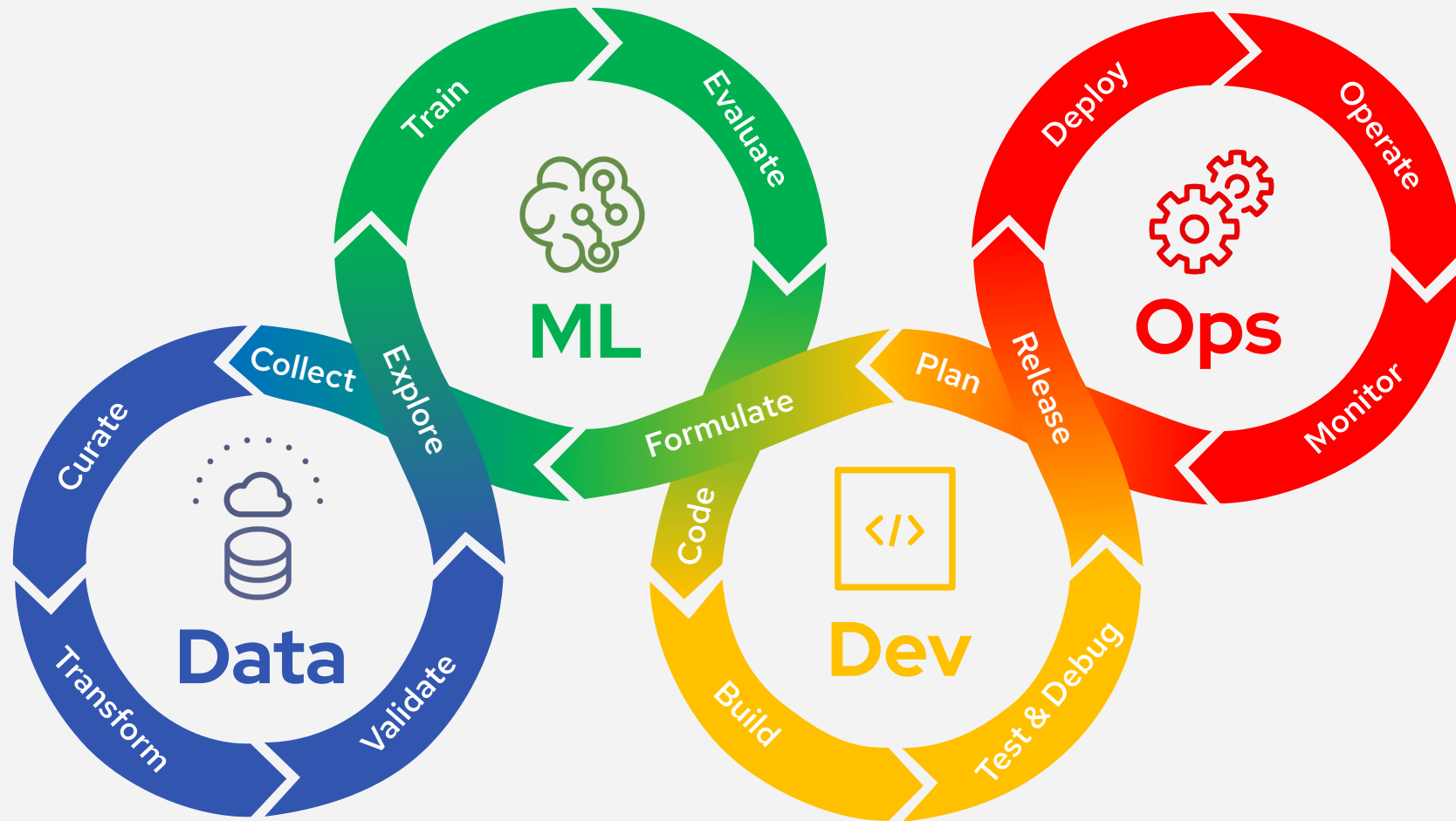
## AI & MLOps Platform

## Application Platform

AI models	
Machine learning libraries	       
Languages & development tools	    
Data visualization, labeling, processing	            
Software-defined storage	    
Operating containers at scale	      
Modernize & Accelerate app development	          
Containerization & container orchestration	   
Process scheduling & hardware acceleration	 



# ML Ops = Data ML + Dev Ops



Models

Your  
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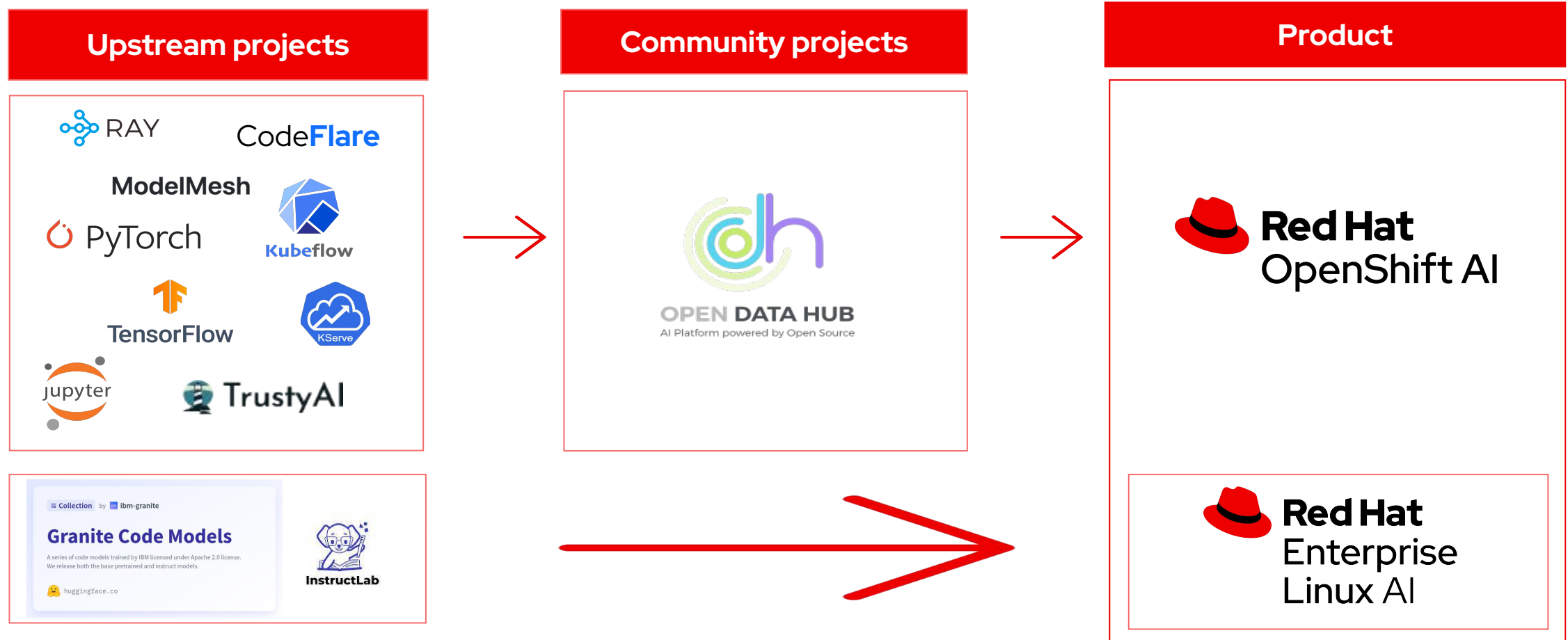
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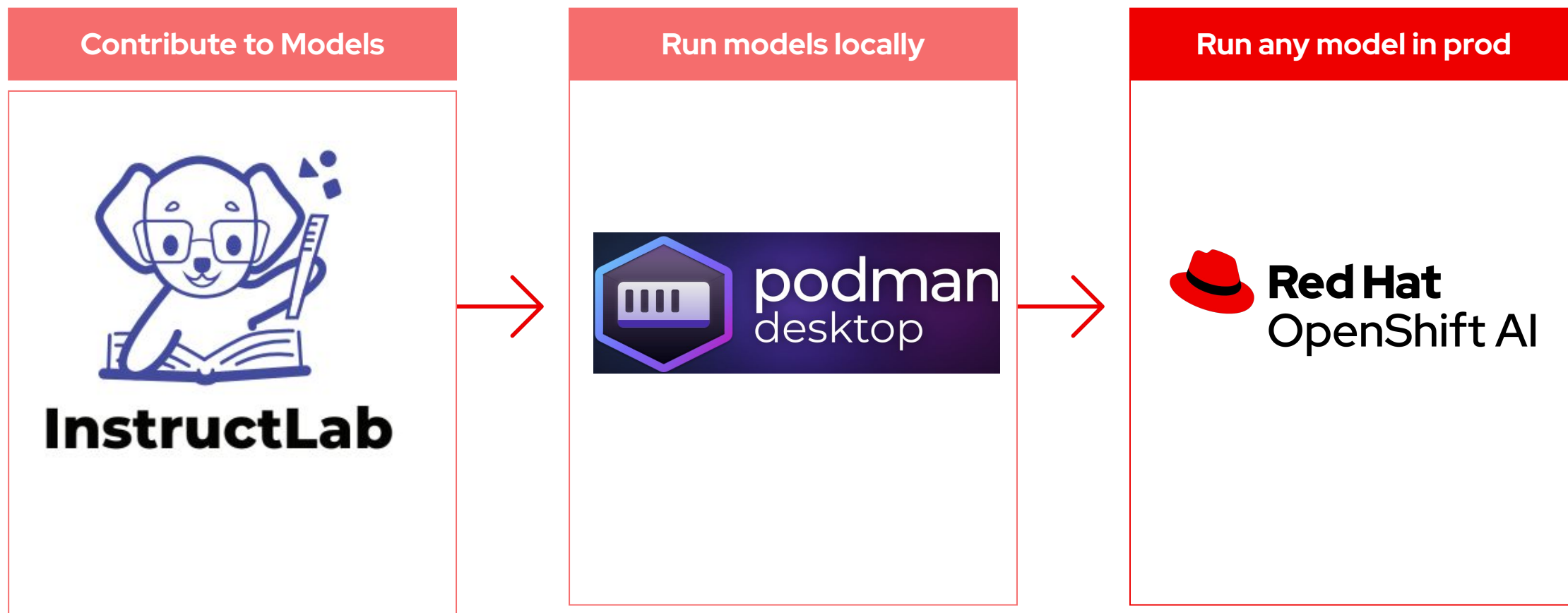
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**RH products & OS projects**

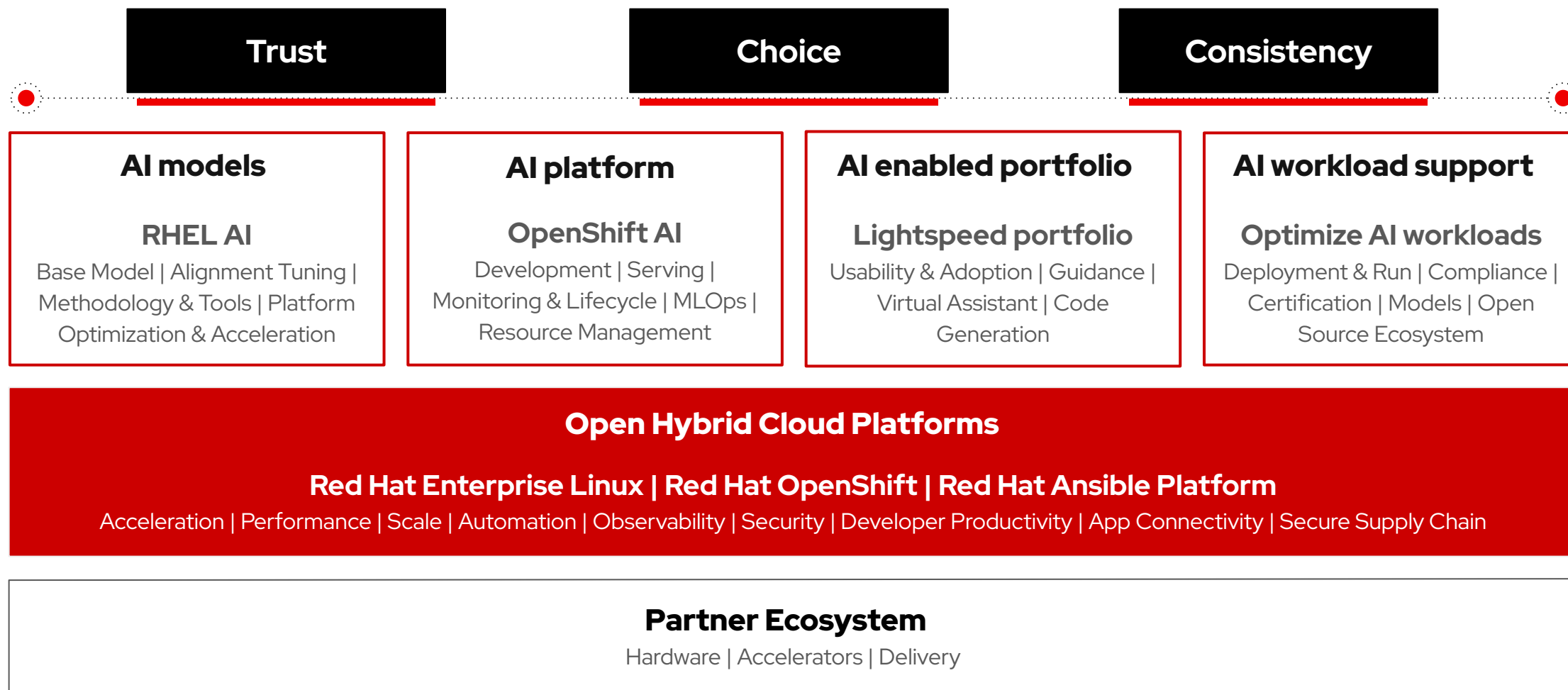
# Red Hat's AI/ML engineering is 100% open source



# Red Hat is democratizing AI



# Red Hat's AI portfolio strategy



Open Source and Cloud Native AI as the path to a

**100x Innovation speed!**



# Q&A

# Thank you

Red Hat is the world's leading provider of enterprise open source software solutions. Award-winning support, training, and consulting services make Red Hat a trusted adviser to the Fortune 500.

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