Fast Step into Generative AI for SAP Customers - From Concept to Implementation

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SAPinsider

In This Session

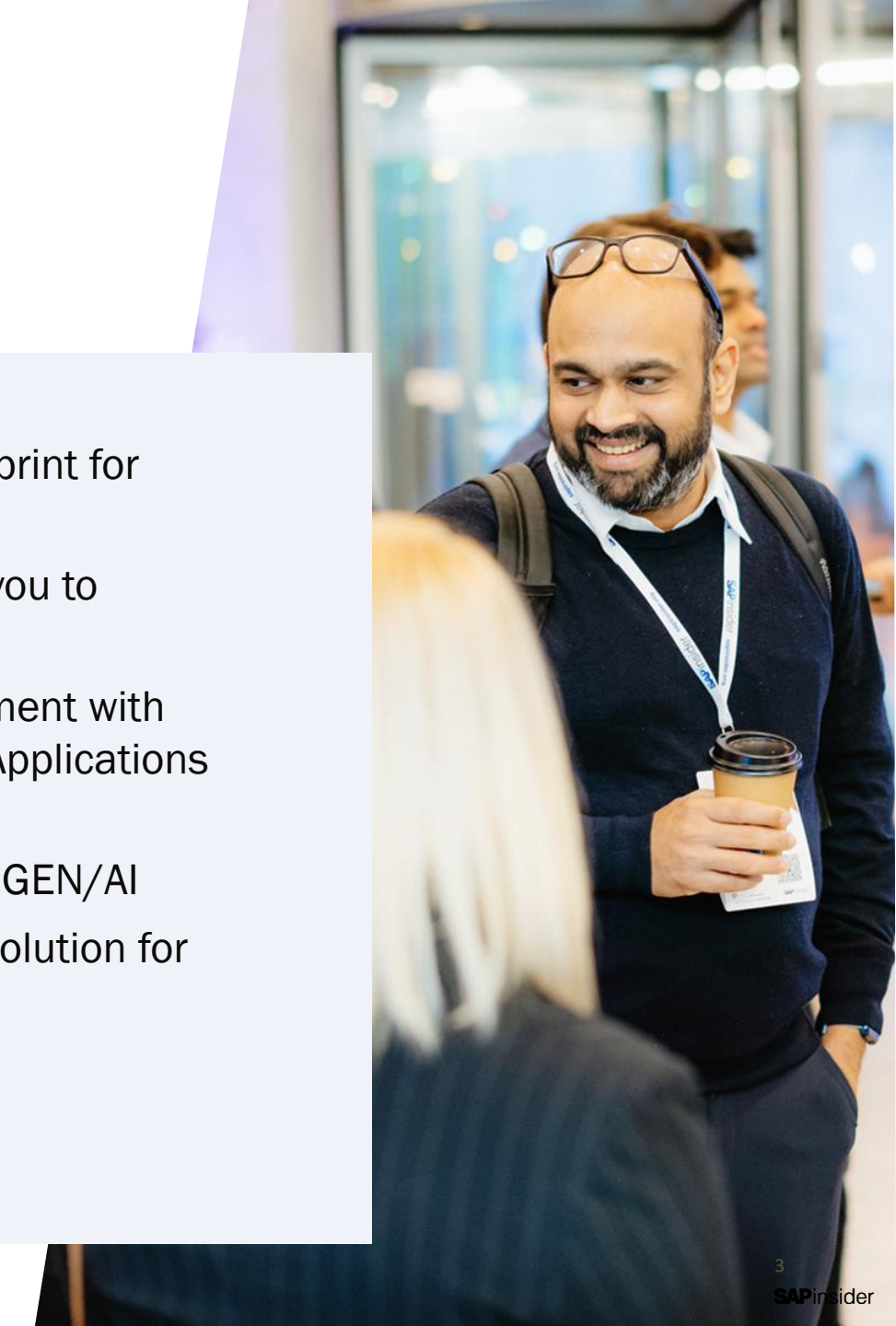
Generative AI has revolutionized the landscape of artificial intelligence, opening up new realms of innovation

However, amidst the excitement, there's a critical gap: while many discuss the "what", few delve into the essential "how"

We will explore the practical steps to harness the power of generative AI effectively

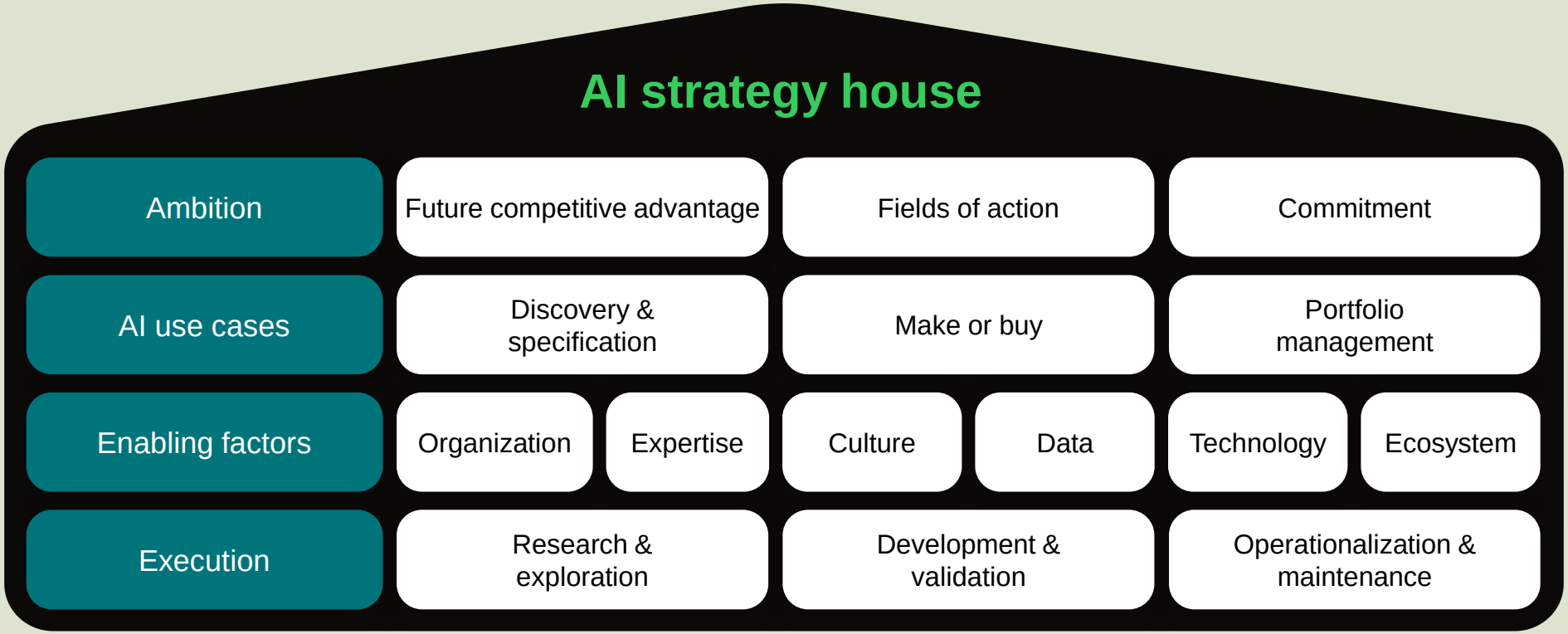
What We'll Cover

- How to build your AI Strategy House – a blueprint for success
- Hype vs reality - how Functional blocks help you to architect a Sovereign AI Platform
- How Dell's IT manages a Multicloud Environment with over 450 AI/ML projects serving over 2000 Applications for 130k users
- Crafting your own Reference Architecture for GEN/AI
- how Dell simplifies your path to an Edge/AI solution for SAP landscapes



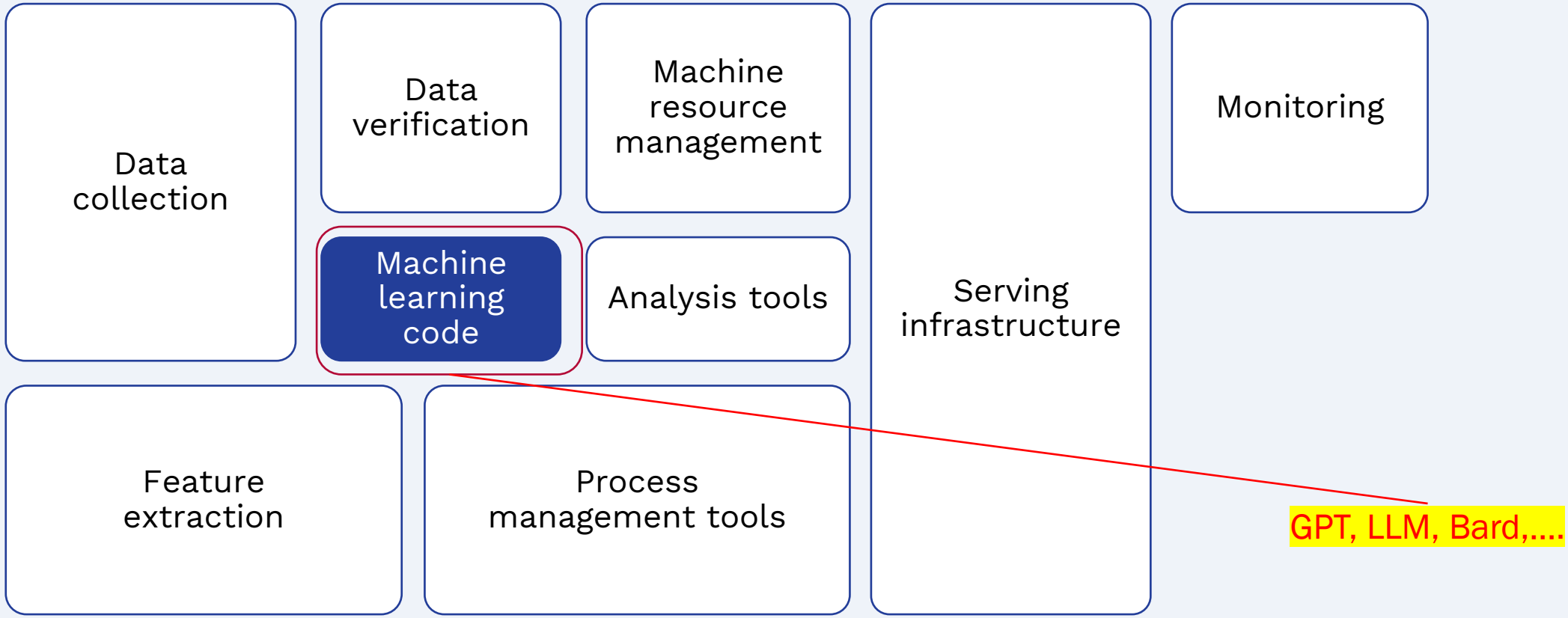
AI Strategy House

Advancing in AI requires organizations to systematically tackle challenges in various dimensions



Source: AppliedAI - Your partner for the application of trustworthy AI in the industry (appliedai.de)

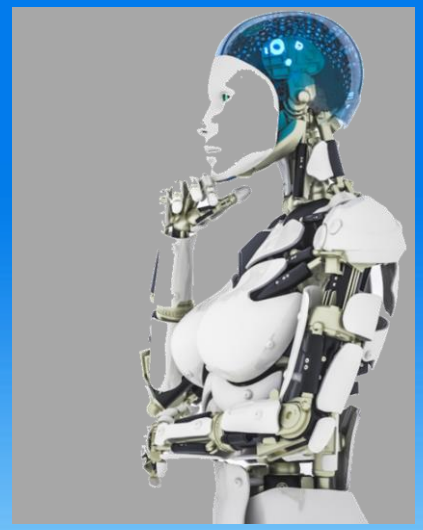
Scaling successful AI pilots often fails since Machine learning code is only a small fraction of being successful with AI

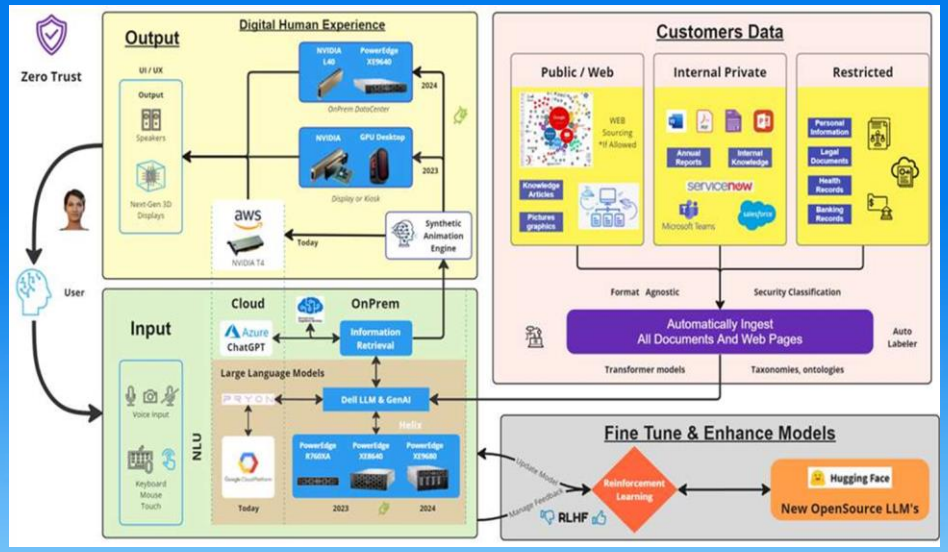


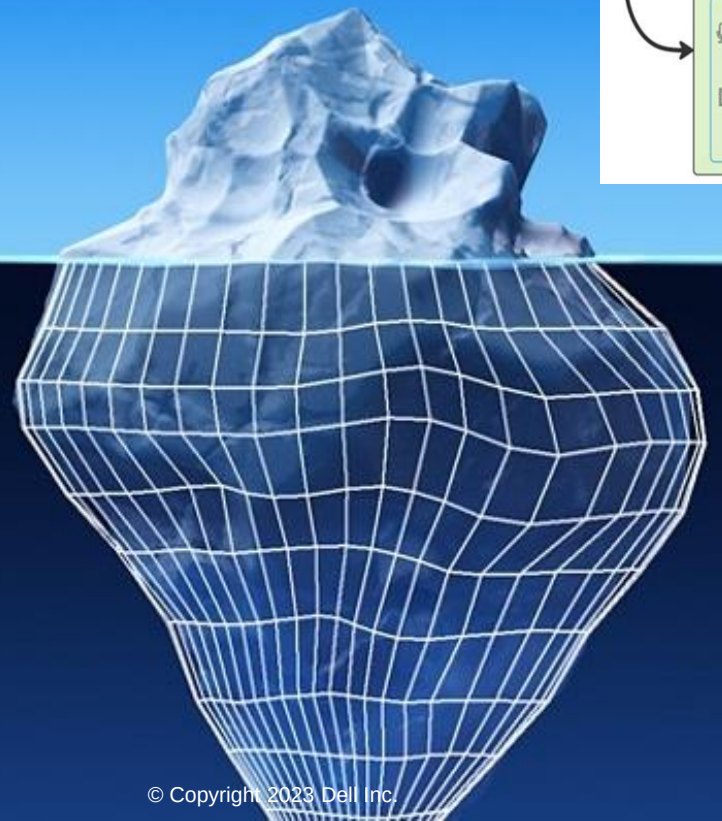
SOURCE: Sculley et al. (2015): Hidden Technical Debt in Machine Learning Systems.

AI Hype

“Generative AI” -The Hype and what’s behind







100’s T tokens

100’s PB-EB of Data

Data/Lake /House

100% Virtualized Infrastructure

Data pipelines

MLOPS

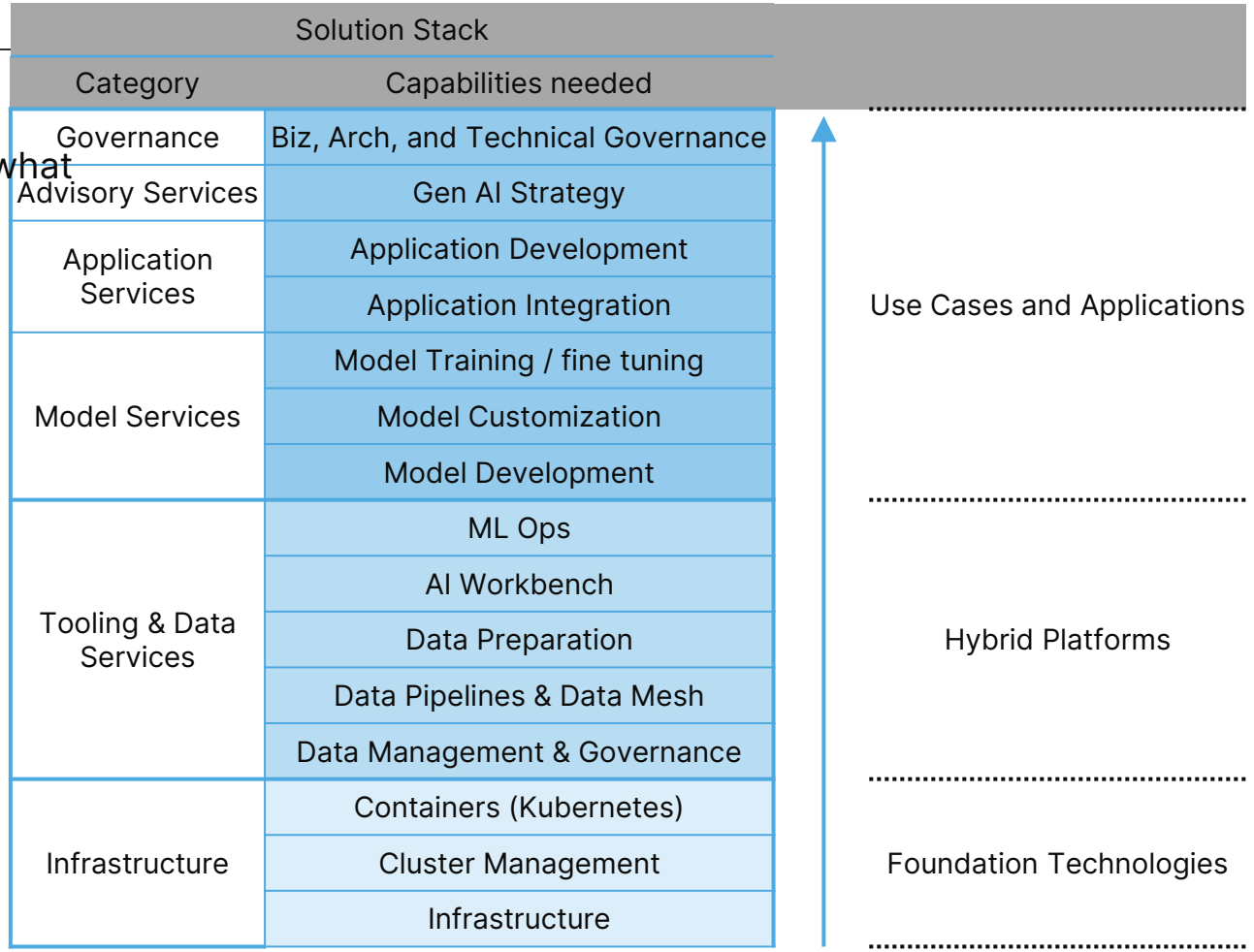
Data engineering

Edge

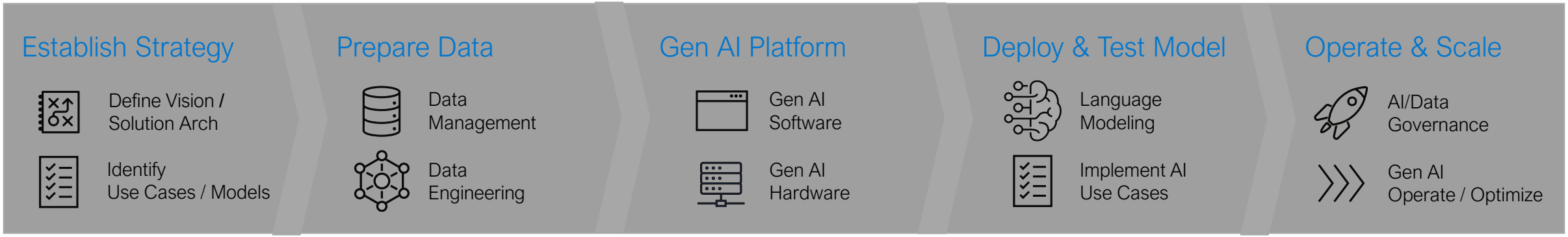
Check Box for an AI Project

Understand who can deliver what

Work out your Ecosystem



Gen AI …
Capabilities needed



- Build or Buy ?
- POC vs “Roll Out”
- Blackbox vs Architecture

- 92%
- Break down silos
- Virtualized, composable
- zero Trust/ zero IT

Building the reference Architecture

Discussion Points:

- Data Separation (GDPR)
- Container Management Platform
- Legal (EU AI act)
- MLOPS Strategy
- GRC (Models)
- GRC (IP/Data)

- Tech:
  - Software defined Storage layer (OneFS/ECS?)
  - High Bandwidth Storage for “Training”
  - Data Mesh (Cloudera, …)

Knowledge Providers:

- AppliedAI (non-profit)
  - CTO: Dr. Donald Leonhard-McDonald

- Data Product Management - The Missing Link To Create Value From AI (appliedai.de)

- MLOps & Governance (appliedai.de)

- A Guide for Large Language Model Make-or-Buy Strategies: Business and Technical Insights (appliedai.de)

Example: Dell’s IT for GEN/AI

Example: Dell Technologies

Enabling better decisions from data

Data science, AI & ML are growing close to customers & business processes.

40+ Data science teams

450+ AI & ML projects

12+ AI & ML tools used

1,800+ dedicated data roles

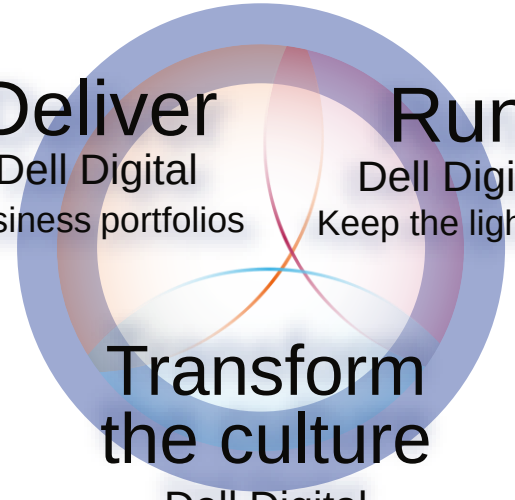
- Marketing
- Finance
- Operations
- Supply chain
- Sales
- Infrastructure solutions
- Services
- Digital & IT
- HR

Running Dell Digital while driving transformation

24 Datacenters
600PB+
Storage

130K
Team members working flexibly

28
Languages in every country in the world



260K+
Containers

59K+
Mobile phones MDM managed

60K
Virtual machines

~2,500
Applications

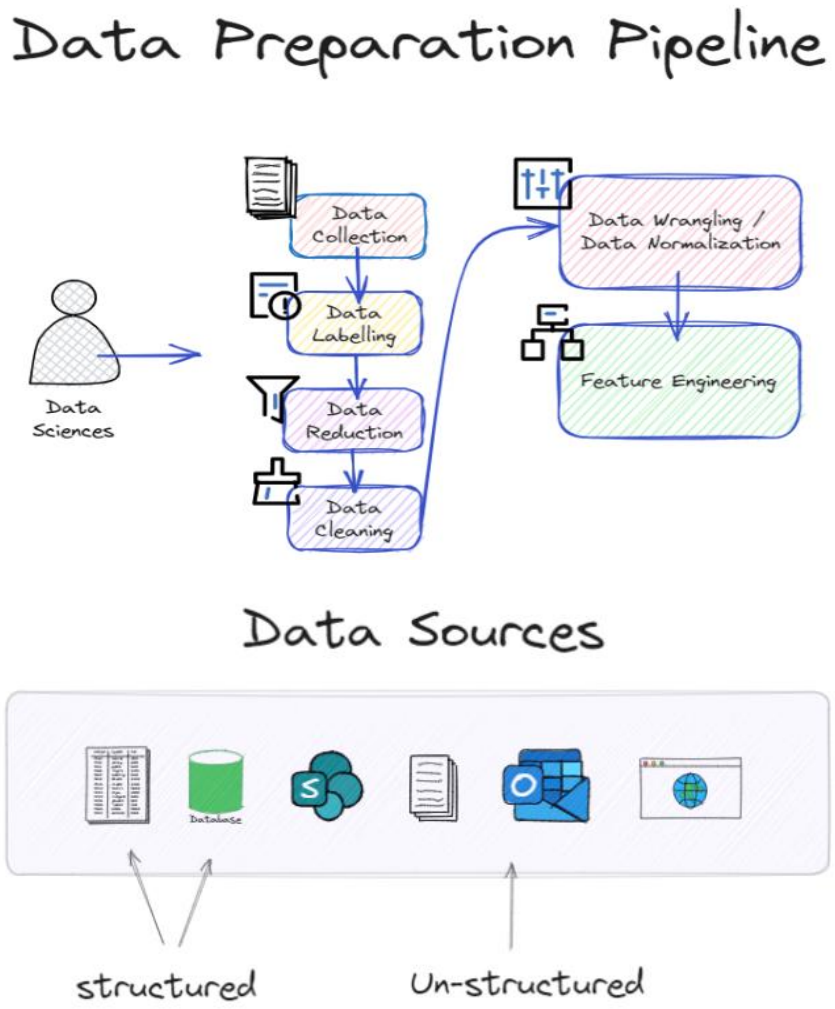
91%
Server virtualization

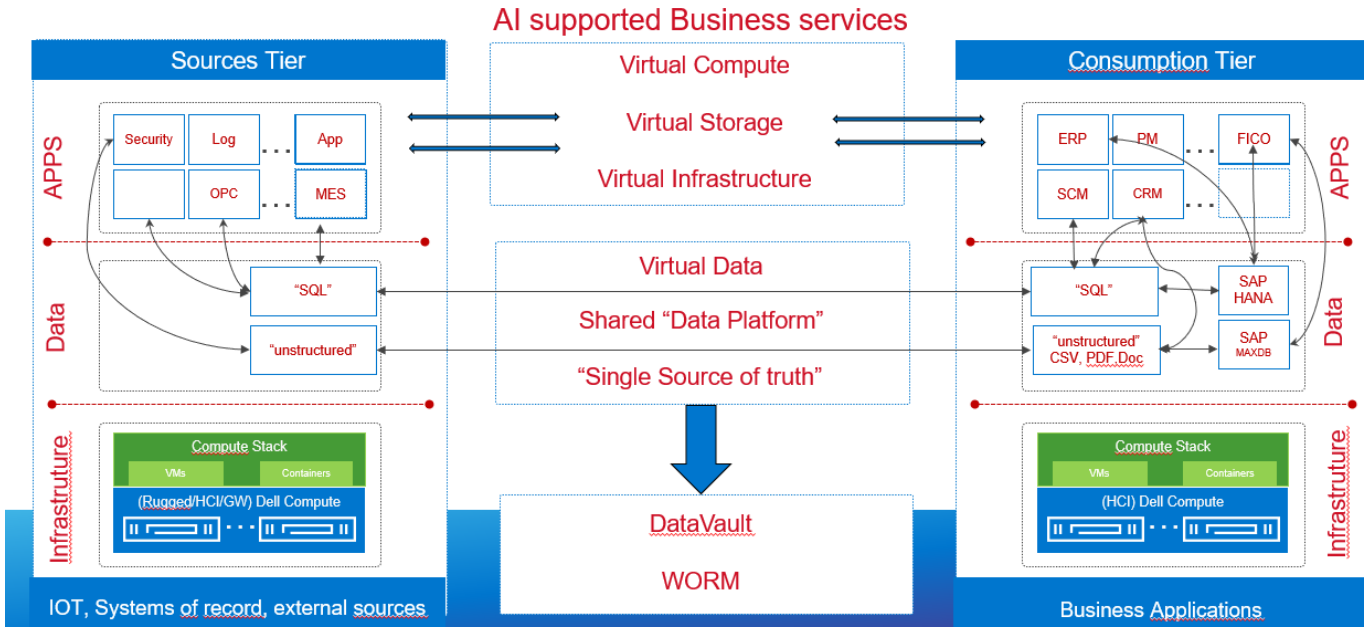
23M Orders annually
63K Shipments daily

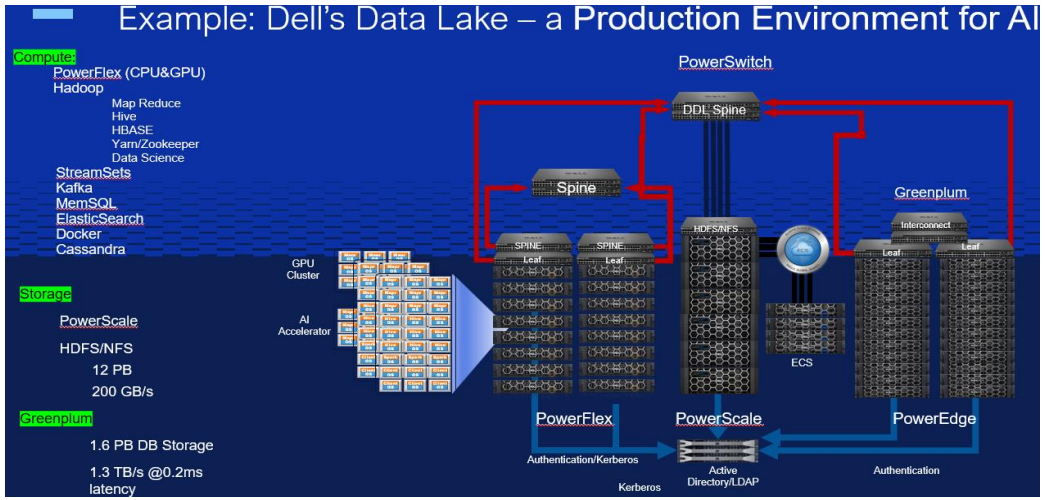
172
Ecosystems supported

Crafting a Reference Architecture for GEN/AI

ANY AI Project starts with “Data”







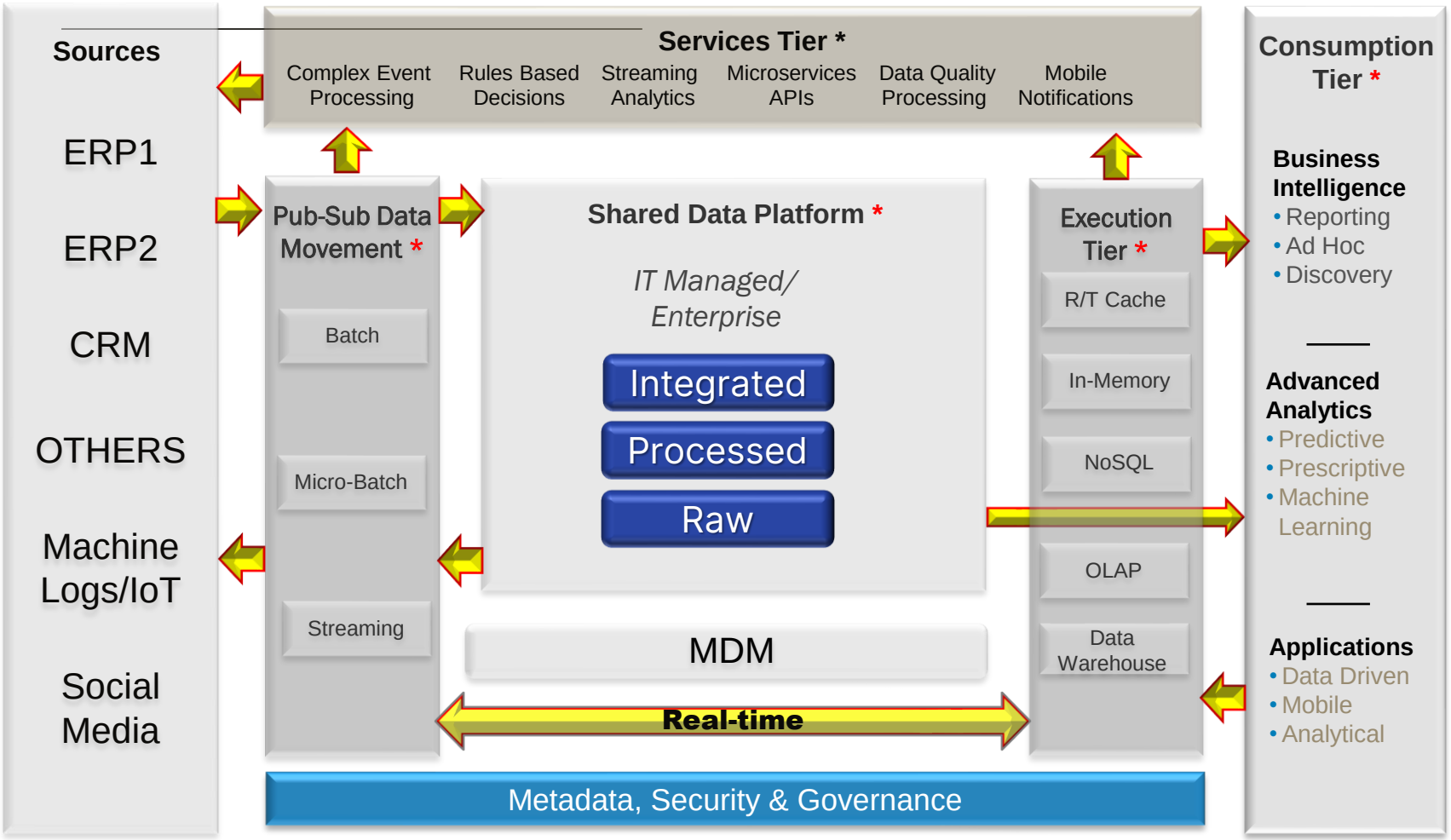
Data & AI Dell validated Designs

Using “Lego Blocks” to create a Data driven Architecture in your Company

Visualize Application Landscapes	Qualify Architectural aspects	Scope Architecture
Define Data Models Data Ingestion Data Preparation	Existing Applications Existing Cloud Operations	Options for Shared Data Platform Options for Management Options for Acceleration

Shared Data Platform

Logical Architecture



*** Key components enabled for end-to-end self-service**

Architecture Design Principles

Supports:
- High availability (3x 9s)
- Ultra highly available (4x 9s)
- Mission critical levels (5x 9s)

Ability to scale for volume, variety and velocity with business needs

Enables Real Time

Agile/frictionless user experience

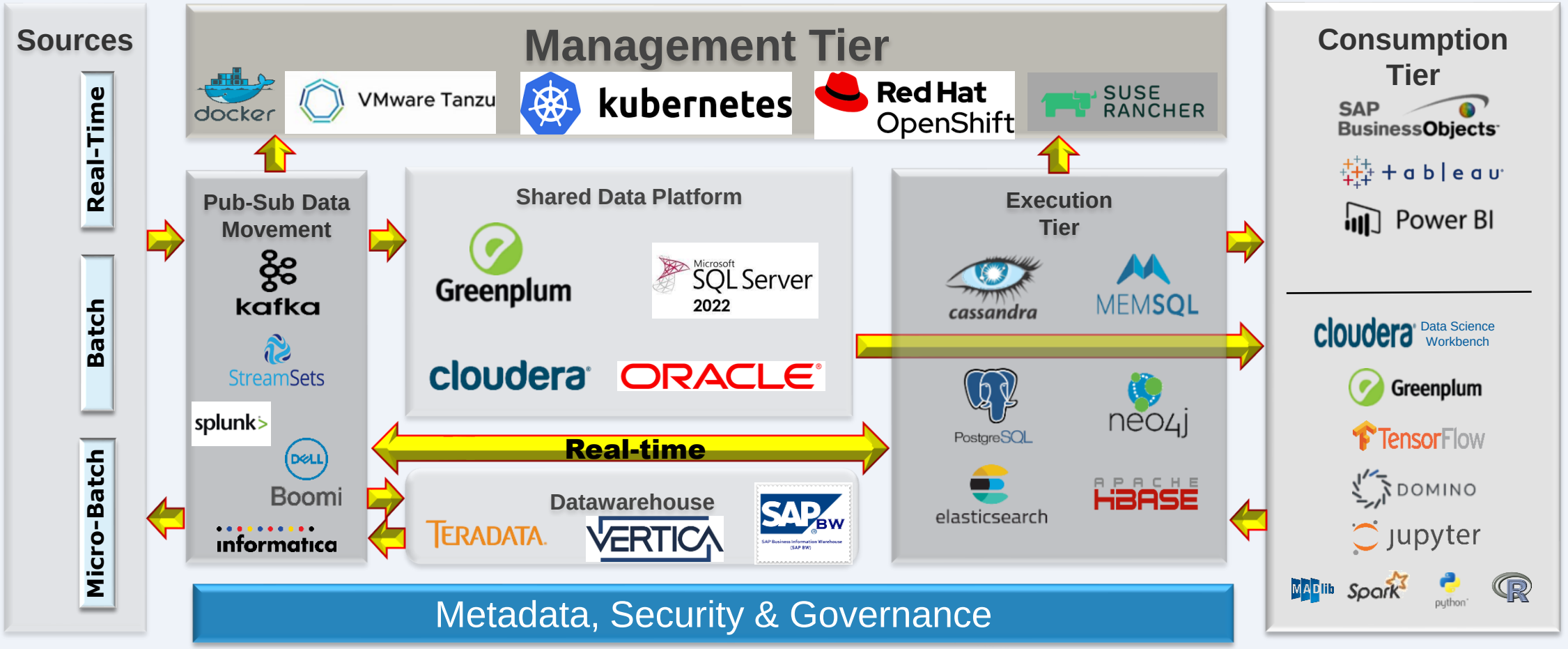
Self Service

Trusted and Governed data

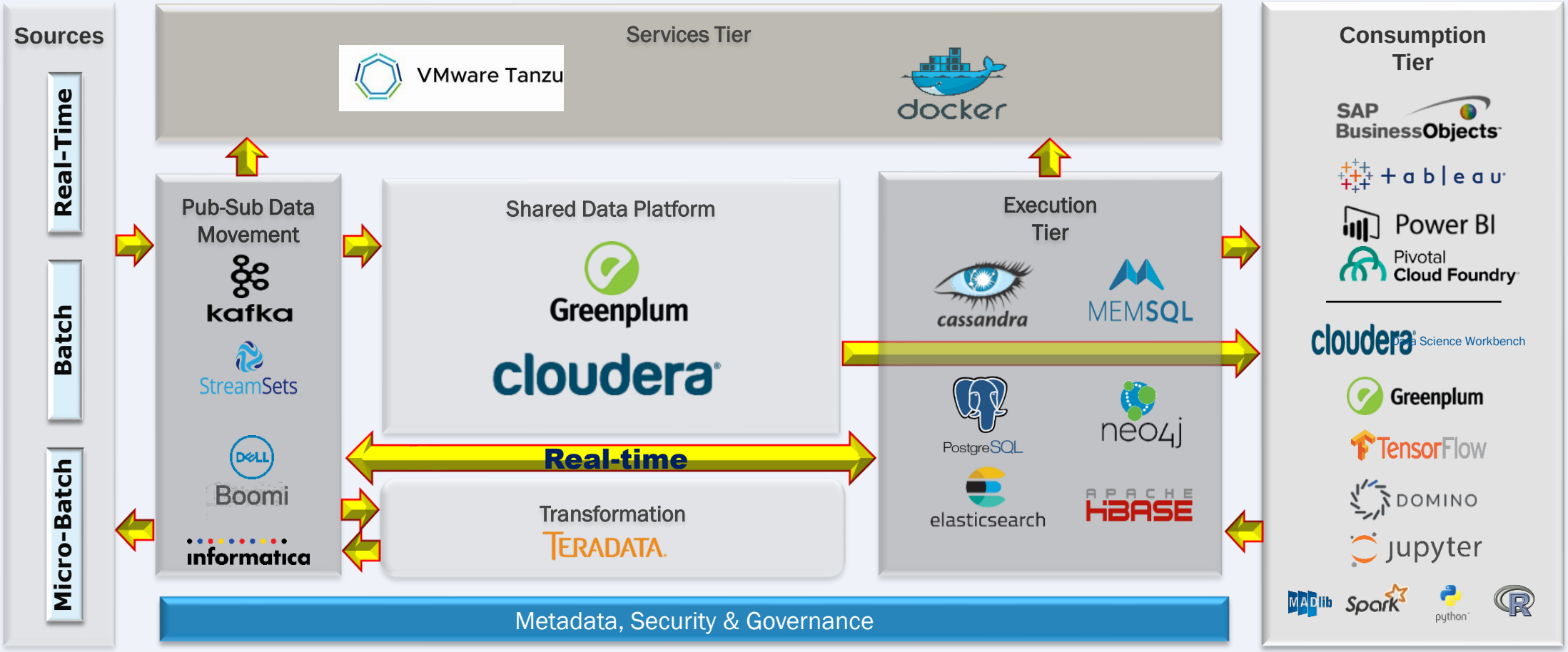
Data Driven API's

Continuous evolution

Graphical representation of Solutions and validated Designs



Dell Data Lake – SW Architecture



Example: Dell's internal Production Environment for AI

Compute:

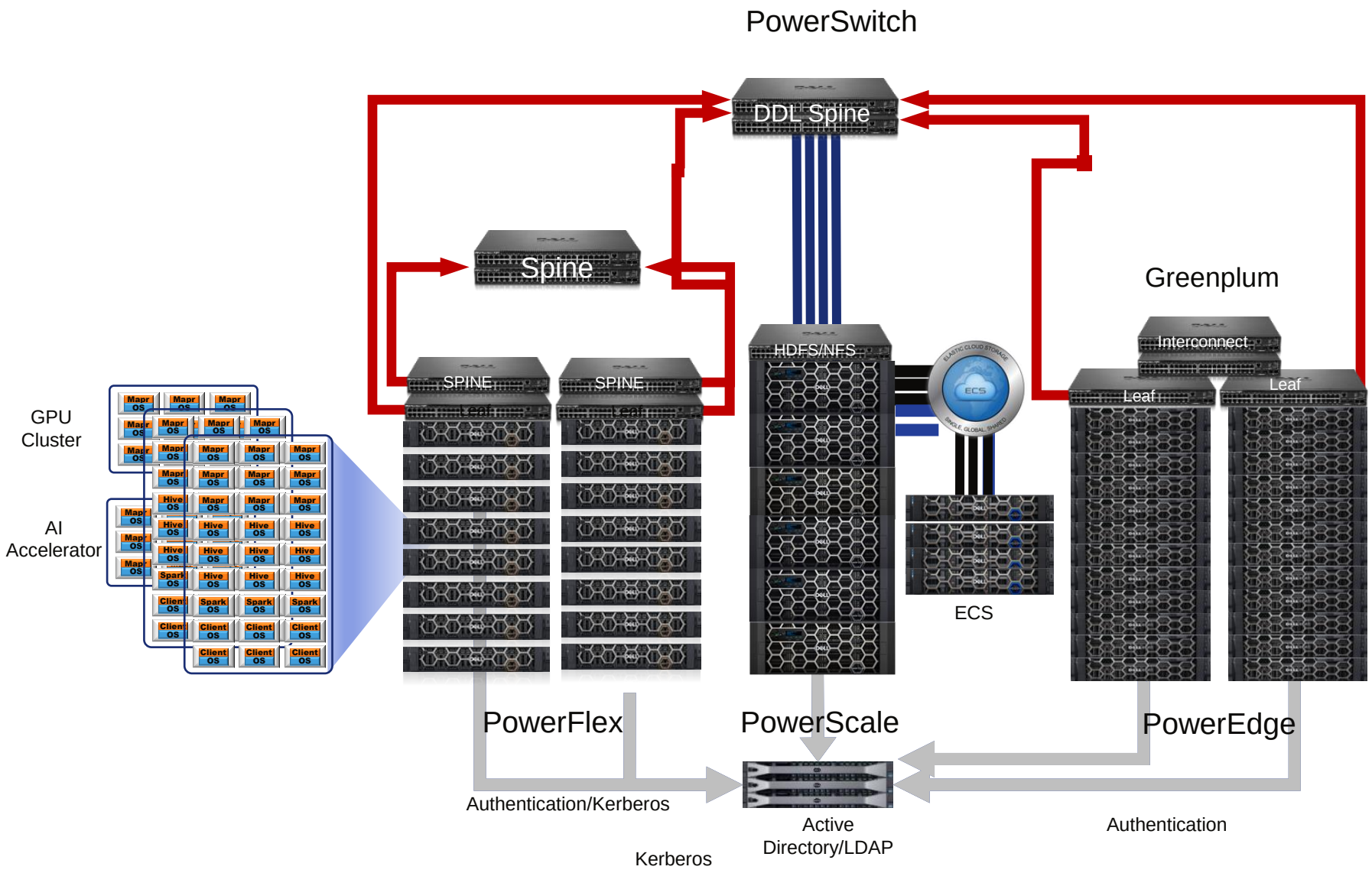
- PowerFlex (CPU&GPU)
- Hadoop
  - Map Reduce
  - Hive
  - HBASE
  - Yarn/Zookeeper
  - Data Science
- StreamSets
- Kafka
- MemSQL
- ElasticSearch
- Docker
- Cassandra

Storage

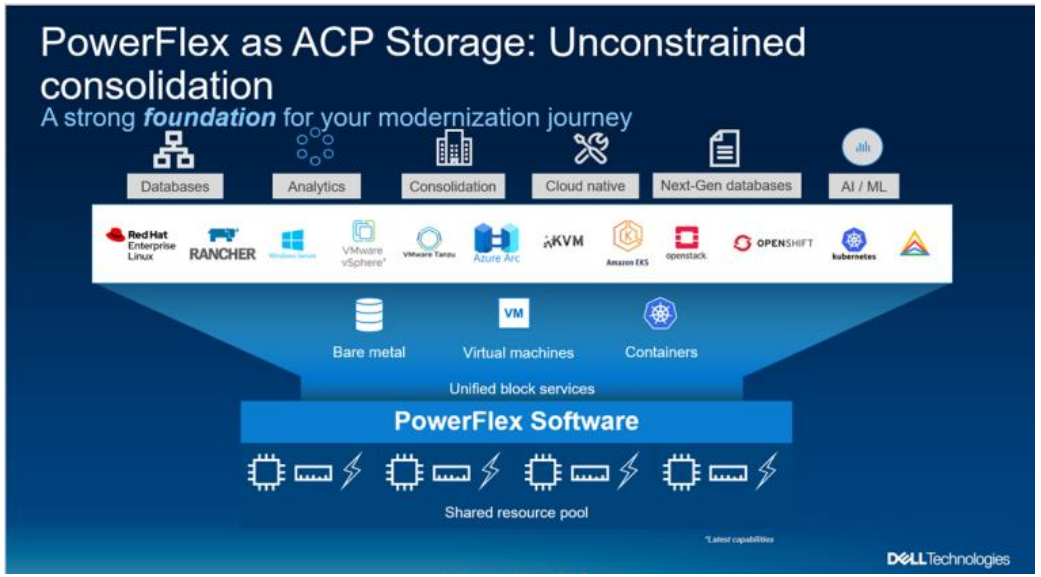
- PowerScale
- HDFS/NFS
  - 12 PB
  - 200 GB/s

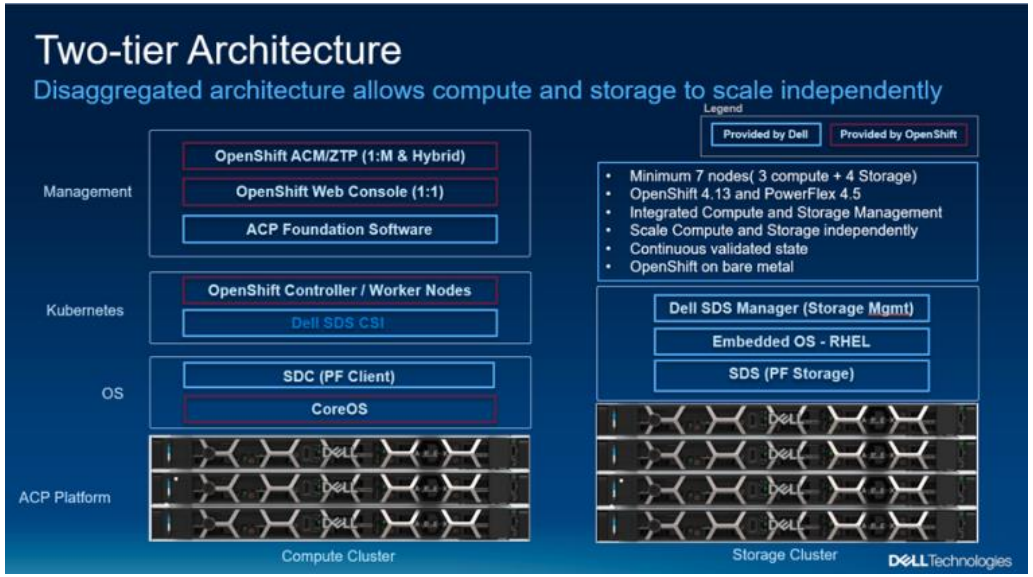
Greenplum

- 1.6 PB DB Storage
- 1.3 TB/s @0.2ms latency



Powerflex / Openshift / APEX Cloud Platform





Dell Technologies World 2023 - APEX Cloud Platform for Red Hat OpenShift - Itzikr's Blog (volumes.blog)

https://volumes.blog/2023/05/15/how-i-built-an-ai-platform-riva-speech-services-with-redhat-openshift-nvidia-gpus-and-dell-powerflex/

Simplify your path to Edge/AI for SAP Landscapes

Where to Find More Information

Prepare industry best practices for inspiration

Whitepapers

Prepare measurable KPIs for concrete assessment of value and complexity

Whitepapers

Review and prepare detailed UC pipeline & AI roadmap

Whitepapers

Prepare value chain by unit (BU) and a short summary of existing UCs

Whitepapers

Generative AI in the Enterprise | Dell Technologies Info Hub

AI Driven Speech Recognition and Synthesis on Dell APEX Cloud Platform for Red Hat OpenShift | Dell Technologies Info Hub

AI Maturity

Adapt preparation to the AI maturity level of your company

Non Technical Material for You provided by our Partner AppliedAI

Status Quo

[Quick Check - AI Maturity Compass (appliedai.de)]

Experimenter	Practitioner	Professional	Shaper
Isolated UCs with low business impact Disperse brainstorming sessions in different departments	Standardized way(s) for describing AI UCs Core team supports the implementation of AI UCs Systematic process for finding AI UCs Systematic prioritization of UCs based on a robust assessment of both value and complexity	Constant reviews of UC pipeline and realignment of AI roadmap Consideration of synergies between cases based on e.g. data or shared infrastructure AI UC descriptions include explicit and measurable goals to evaluate success	Consideration of complete value chains for AI UCs i.e. how various AI UCs can build upon and extend each other to create more value than every single UC on its own
Focus for preparation			
Prepare industry best practices for inspiration Whitepapers	Prepare measurable KPIs for concrete assessment of value and complexity Whitepapers	Review and prepare detailed UC pipeline & AI roadmap Whitepapers	Prepare value chain by unit (BU) and a short summary of existing UCs Whitepapers

Key Points to Take Home

UNLOCK THE POWER OF DATA

Create a shared Data Platform

Build a single source of truth

AUTOMATE DATA PROCESSES

Use Software to Manage your Data

Classification, Metadata, Security, Governance

PATH TO AI SUPPORTED BUSINESS

Use AI in your Business Applications

Use AI for all your Processes

Use AI in your Systems

Thank you! Any Questions?

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Please remember to complete your session evaluation.

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