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Fuel Enterprise Agents with Trusted Context: The Roadmap to Enterprise AI at Scale

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Agents Transition AI from Response to Proactive Action

- **Increased Efficiency:**
  AI agents can process large amounts of data, freeing up human resources for more strategic and creative tasks.

- **Improved Customer Experience:**
  AI-powered customer service agents can resolve issues faster and more accurately, leading to higher customer satisfaction.

- **Enhanced Decision-Making:**
  AI agents can analyze complex data sets, providing valuable insights for informed decision-making.

- **Cost Savings:**
  By automating repetitive tasks and optimizing resources, AI agents can help businesses reduce operational expenses.

- **Data-Driven Insights:**
  AI agents can analyze large datasets, providing businesses with actionable insights to drive growth and innovation.

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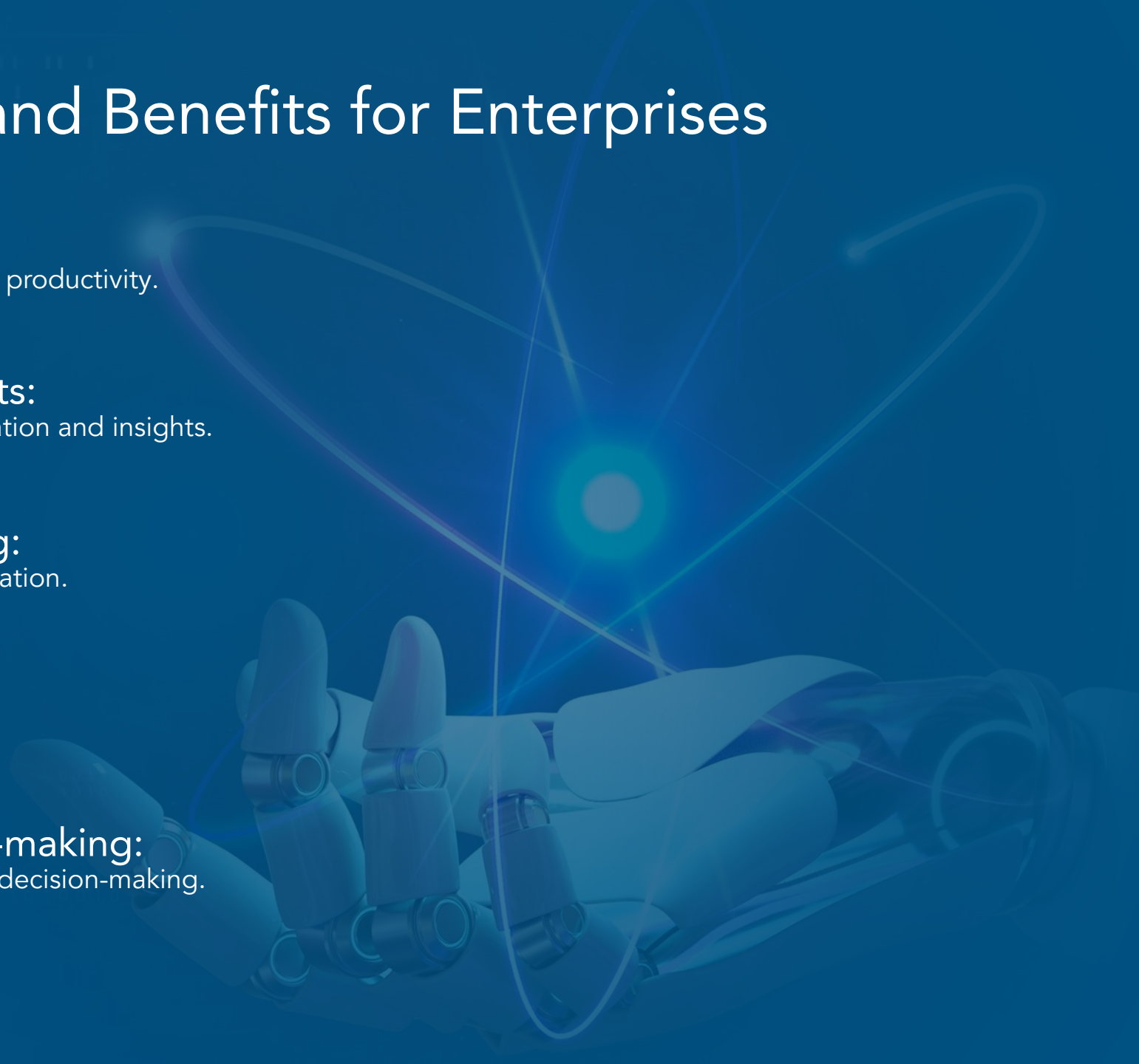
Capabilities and Benefits for Enterprises

- **Automating complex tasks:**
  enabling unprecedented levels of efficiency and productivity.
- **Providing smart data environments:**
  offering personalized assistance for data exploration and insights.
- **Driving proactive decision-making:**
  unlocking new levels of data insights and automation.
- **Simplifying business processes:**
  streamlining operations and improving ROI.
- **Facilitating autonomous decision-making:**
  enabling hyper-personalization and data-driven decision-making.



Building the Enterprise Information Architecture

Reusable Extensions

Encourages adding modular extensions to the core architecture for enhanced functionality.

Tailored Structures

Involves creating custom data structures to meet specific needs.

Data Reusability

Promotes storing data in a way that allows for multiple uses without duplication.

Diverse Processing Approaches

Emphasizes the importance of integrating various data processing methods.

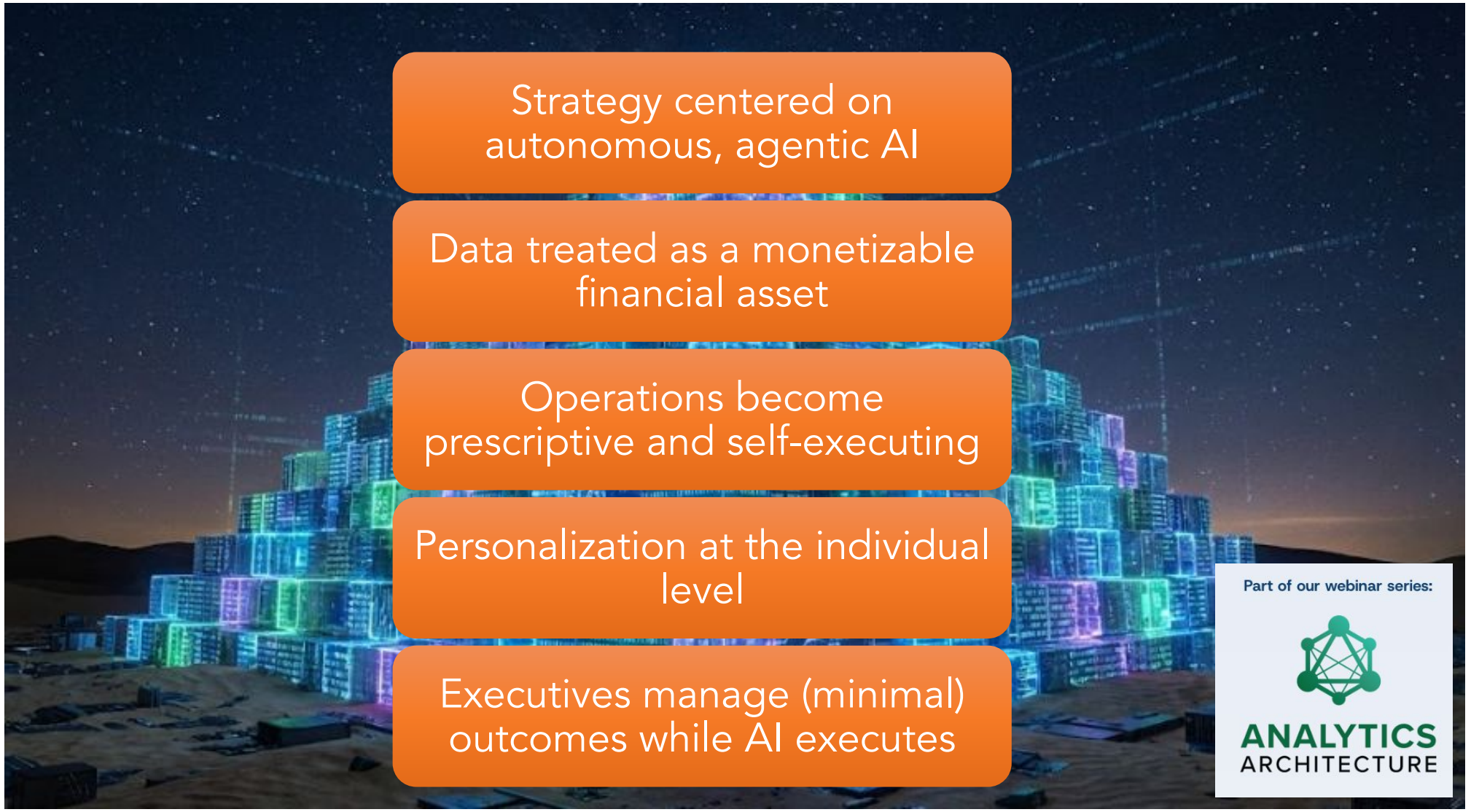
Enterprise Usability

Focuses on ensuring the architecture is widely accessible and usable across the enterprise.

Redundancy Minimization

Aims to reduce unnecessary data duplication to enhance efficiency.

Data Strategy – Level 5 (High Maturity)



Agentic AI Considerations

Not necessarily unique to Agentic AI….

AI agents want all enterprise data accessible
(audio, video, text, and alpha-numeric).

High-velocity, fast-paced streaming data is crucial as a "foundation for artificial intelligence."
This real-time data flow supports continuous learning, automation, and fine-tuning.

The expectation is that unstructured data will be "at parity with structured data."

Get the data act together – is the "lifeblood of AI agents".

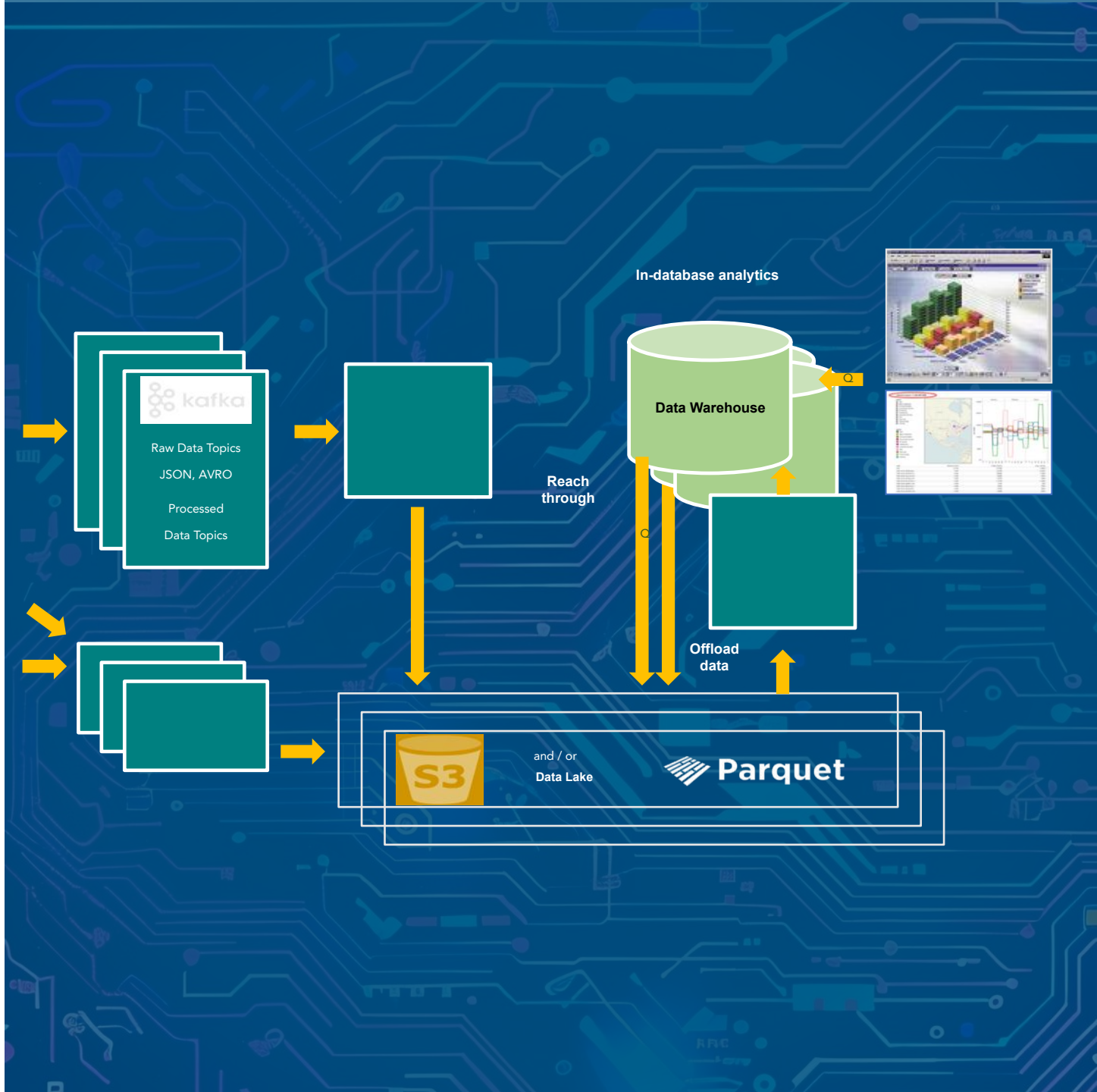
- Contextual relevance
- Temporal relevance
- Spatial relevance
- Causality reference
- Real-time data
- Multi-modal data

Infrastructure Inversion

- The narrative shift from "AI as a bubble" to "AI as underbuilt" is driven by the move from training foundation models to the production deployment of AI agents.
- The Inference Demand Curve
  - **Token Consumption:** While a human using a chatbot generates modest inference, an agent—reviewing legal contracts, writing code, or managing supply chains—makes dozens of inference calls continuously.
- Structural Shift in Data Allocation
  - The Move from "Human-Speed" to "Machine-Speed" Data
  - From "Searchable" to "Actionable" Metadata
  - Allocation of "Compute" as a Utility
  - The Data "Audit Trail" Shift

Data Mesh, Data Lakehouse, Data Products

- Data Mesh emphasizes self-service analytics, domain-driven data ownership, data-as-a-product, and federated governance
- Data mesh is becoming a significant trend, focusing on distributed data management
- Data mesh initiatives are being driven from line-of-business units and business leaders, rather than central IT teams
- Data Products become the standard for data exchange within companies



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Open Table Format and Open File Format

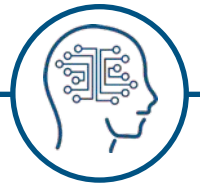
Agentic AI Requires Organization Transformation

Need for Human Oversight and Ethical Considerations:

AI agents require discrete goals and human guidance to prevent chaos and ensure alignment with company objectives.

Organizational Change Management:

Adopting AI agents will require significant change management to address internal resistance and integrate new roles.

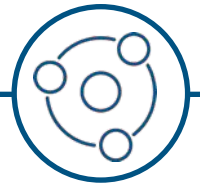


Reduction in Traditional Roles:

AI agents may automate tasks, potentially reducing the need for traditional roles like data analysts.

Disconnect between Executive Expectations and Technical Feasibility:

There's a risk of overly high expectations due to "vendor hype," requiring C-suite commitment and realistic understanding.



Cross-Functional Teams and AI Center of Excellence:

Establishing cross-functional teams and an AI Center of Excellence can help drive successful AI agent adoption and governance.

Challenges to Agentic AI

Inconsistent use of the term and a lack of standardization

Technical Challenges

- Data Quality and Availability: AAI models require high-quality, diverse, and relevant data to learn and generate accurate results
- Explainability: AAI models can be difficult to interpret, making it challenging to understand the decision-making process
- Scalability and Performance: AAI models can be computationally intensive, requiring significant resources to deploy and maintain

Process Challenges

- Aligning AI with business goals
- Knowing what you're building – program or project
- Need MLOps
- Internal Resistance
- Skills Gap

Navigating from POC to Production

Adopting MLOps & LLMOps Early: Most AI projects fail to reach production because they are treated as isolated "science projects." Organizations must implement MLOps to create repeatable, scalable paths to production.

Standardized Integration (MCP): MCP is a critical standard that safely and securely manages how agents connect to disparate enterprise data sources.

Human-in-the-Loop Governance: While agents operate autonomously, strict governance, accountability, and a "human-in-the-middle" approach remain mandatory for auditing, compliance, and ethical oversight.

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