KAPS Framework

Solution classes that leverage the AI-Assisted Enterprise Knowledge Ecosystem Blueprint

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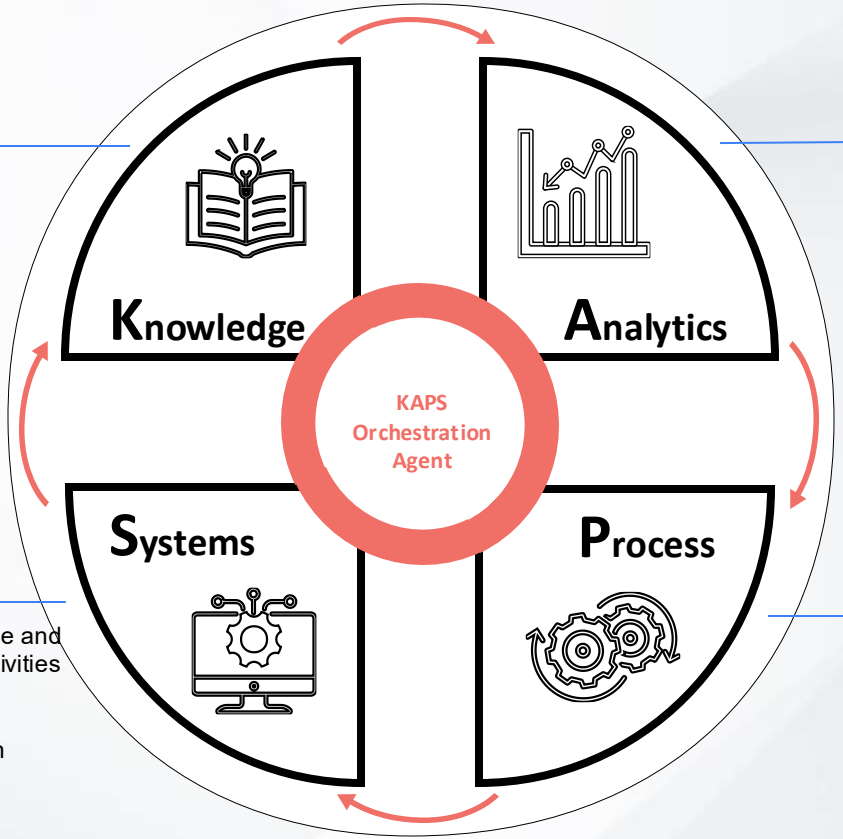
KAPS : Our Generative AI Adoption framework

KAPS Framework systematically categorizes the business use cases into four specialized portfolios. These portfolios are supported with tailored architectural components, facilitating the seamless execution of diverse use cases with agility and efficiency

Knowledge Agents

The agents work with unstructured content to deliver use cases like:

- Conversational assistants
- Data extraction tools
- Document Generation
- Customer Support



Generative BI Agents

The agents work with structured data and various databases to enable tools like:

- Data exploration tools
- Reports and dashboards
- Right Answers / DataBots

System Agents

The agents are trained on code base and SDLC artifacts to support SDLC activities like:

- Code Documentation & Migration
- Test Case Generation
- Code scanning and auto fixing
- Support/Managed Services

Process Automation Agents

The agents are trained on cognitive tasks of the business processes to achieve:

- Cognitive Process automation
- AI driven process redesign
- Data Curation & Quality improvements

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Knowledge Assistant (K)

Key Features of Agents:

- Conversational interfaces,
- Data extraction from unstructured sources,
- Document generation,
- Intelligent customer support.

Case Study Example:

Customer Assist AI Agent for Abbott, demonstrating application in healthcare customer support.

Solution Execution Flow:

Initial Setup:

- Ingest and preprocess unstructured data
- Create vector representations and build knowledge graph

Operational:

- Process user queries and retrieve relevant context
- AI agents response and present to users

Optimization:

- Log interactions and evaluate response quality
- Update knowledge graph, orchestrate agents and fine-tune AI models

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Generative Analytics (A)

Key capabilities of Agents:

- AI-driven data exploration and pattern discovery
- Automated generation of predictive models and forecasts
- Dynamic creation of interactive dashboards and reports
- Natural language generation of analytical insights and recommendations
- Anomaly detection and proactive alert systems
- Autonomous data quality management and enhancement

Case Study Example:

Data Quality Assessment agents for Genfare, illustrating capability in improving data integrity and generating actionable insights for transit operations.

Solution Execution Flow:

Initial Setup:

- Ingest and preprocess structured data
- Create feature representations and data relationship graph

Operational:

- Process analytical queries and retrieve relevant data
- Perform analysis and present insights through dashboards

Optimization:

- Schedule regular model retraining and data refreshes
- Evaluate analytical outputs and adjust models

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Cognitive Process Automation (P)

Key Features of Agents:

- AI-driven workflow automation and optimization
- Cognitive decision support for complex processes
- Predictive maintenance and intelligent resource allocation
- Process simulation and scenario analysis
- Adaptive compliance monitoring and enforcement
- Continuous process learning and improvement

Case Study Example:

Affable GenAI Implementation, showcasing application in automating and enhancing customer interactions or internal processes through cognitive understanding.

Solution Execution Process:

Initial Setup:

- Ingest process data and perform workflow analysis
- Build process flow and business rules graph

Operational:

- Monitor real-time processes and identify relevant patterns
- Perform process optimization and present results

Optimization:

- Log process execution data and analyze KPIs
- Update process knowledge and adjust parameters

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Intelligent Systems Engineering (S)

Key Features of Agents:

- AI-assisted code development, refactoring, and documentation
- Intelligent architectural design and optimization
- Automated testing, quality assurance, and security analysis
- Cognitive system monitoring, self-healing, and capacity planning
- Predictive maintenance and proactive issue resolution for IT infrastructure
- Continuous learning and adaptation of development and operational practices

Case Study Example:

GenAI in Box for On-Premise GenAI with Dell, demonstrating application in deploying AI systems for advanced software development, IT operations, and system architecture optimization.

Solution Execution Process:

Initial Setup:

- Ingest code repositories and IT infrastructure data
- Build software architecture and system topology graph

Operational:

- Process code-related queries or system diagnostics
- Generate code suggestions, recommendations for reducing technical debt

Optimization:

- Schedule code quality and system health checks
- Evaluate suggestions and fine-tune AI

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Cross-functional Applications

Many enterprise solutions span multiple KAPS categories, leveraging various aspects of the AI-Driven Enterprise Knowledge Ecosystem. These implementations demonstrate how the execution phases can be integrated across different solution classes to address complex, multi-faceted business challenges.

Case Study Example:

Knowledge Mesh and GenAI-based Drug Discovery Solution, illustrating how the execution phases can be applied across Knowledge, Analytics, Process, and Systems domains in the pharmaceutical industry.

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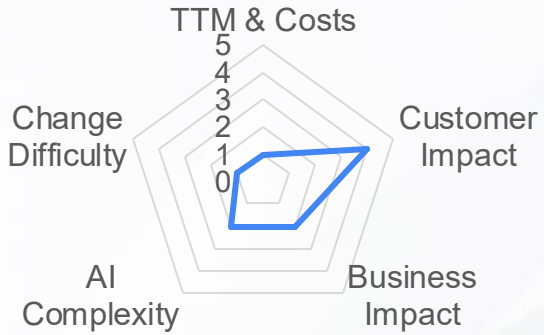
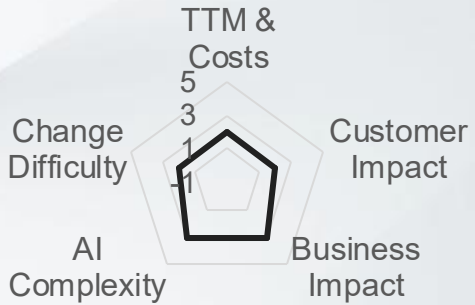
Strategic Pathways for Generative AI Adoption Through KAPS

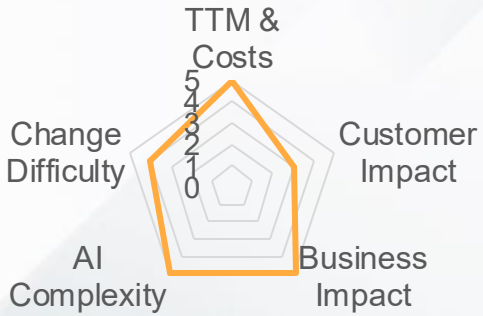
Knowledge - Low Hanging Fruits



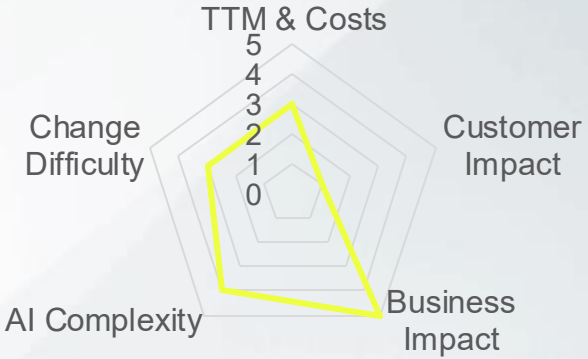
Data – Quick Wins



Systems – Transformative Programs



Process Automation – Strategic Investments



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Thank You