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Welcome to the Webinar hosted by Circuitry.ai:

Optimize Outcomes with Decisions Powered by AI

With Panelists:

- Dr. Lorien Pratt, Author & Advisor on DI
- Ashok Kartham, Founder & CEO, Circuitry.ai

Moderated by: Rod Langohr

Decision Intelligence Webinar

March 12, 2024

ABOUT
CIRCUITRY.AI

AI as a Service (SaaS)

Enterprise AI as a Service applications to Analyze, Augment, and Automate impactful, recurring, and operational decisions

Decision Intelligence (Platform)

Decision Intelligence platform to model, execute, monitor, and orchestrate decision flows and outcomes.

Intelligent Automation

Infuse Intelligence into Business Applications, Processes, and Workflows to enable Fully Autonomous Business (FAB).

WEBINAR PRESENTERS

Ashok Kartham

Founder & CEO
Circuitry.ai

Founder and CEO of multiple enterprise software companies. 25+ years of experience as the leader in digital transformation using Cloud, Mobile, and AI.

Dr Loraine Pratt

Decision Intelligence
Advisor

Author of Decision Intelligence Handbook and DI Advisor for Circuitry.ai. Dr. Pratt has over four decades of applied machine learning experience.

WHAT IS DECISION INTELLIGENCE?

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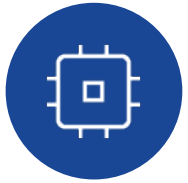
Decision Intelligence is about how actions lead to outcomes. It is a discipline that:

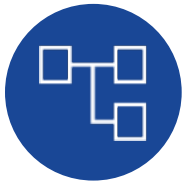
Align on desired outcomes

Helps your team to align around desired outcomes and available actions



Understand actions

Helps people who understand actions and outcomes to communicate their needs to technical people



Integrate multiple technologies and disciplines

Helps those technical people to integrate multiple advanced technologies and disciplines (including artificial intelligence, behavioral economics, simulation, data, business intelligence, and more) in such a way to maximize the impact on desired outcomes

DECISION CIRCUIT

Decision Intelligence to optimize outcomes targeted to a specific industry, domain, and decision cases.

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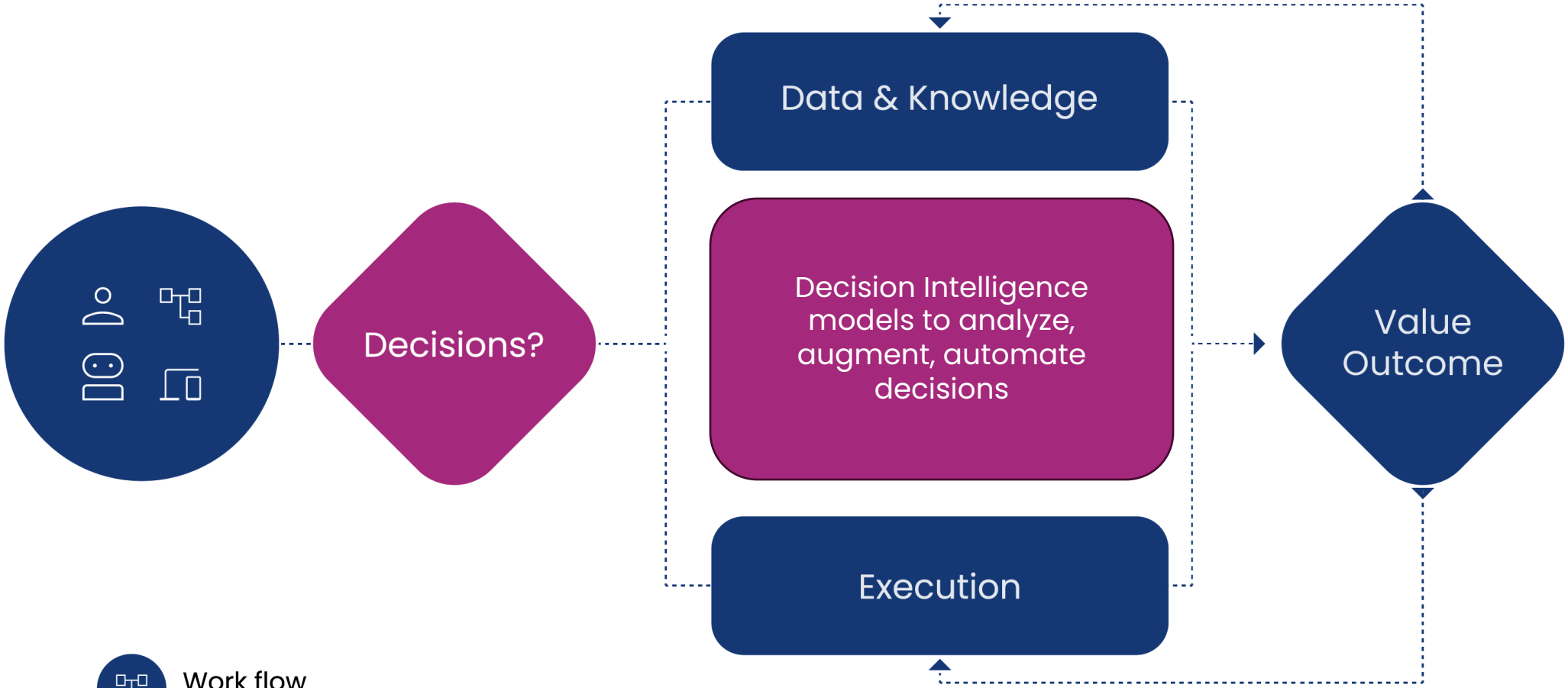

Outcomes = Decisions(Data) + Actions

WHAT KINDS OF DECISIONS DOES DI ADDRESS?

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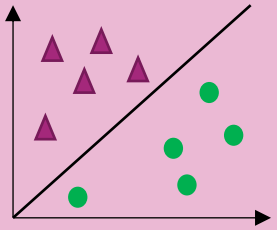
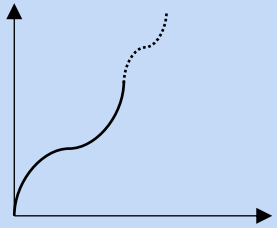
AI/ML

Classification Decisions



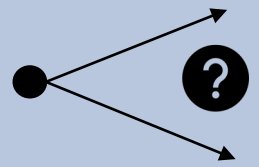
AI/ML

Regression Decisions



DI

Action-to-Outcome Decisions



"Decisions that"

An unmet need: People need systems that help them determine the best actions that lead to outcomes

DECISION SELECTION & PRIORITIZATION

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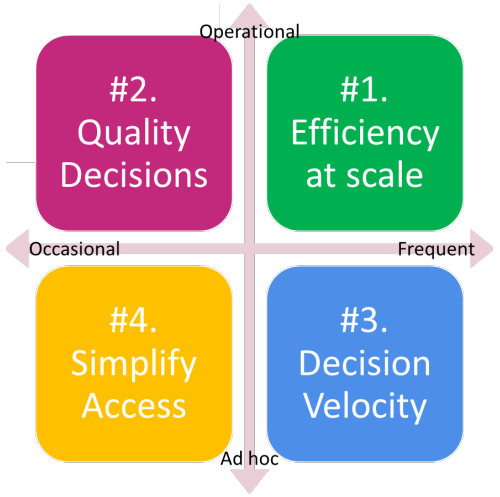
Value X Feasibility

High ROI

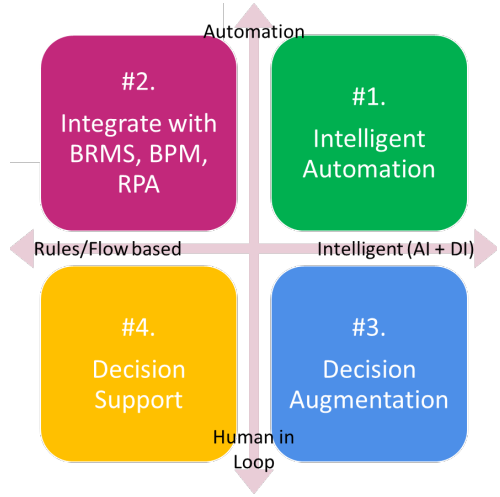
Prioritize Highly feasible and high value/impact decisions. Use Quick win opportunities to demonstrate value and feasibility of DI



Frequency X Operational

Efficiency at Scale

Focus on improving efficiency of repeat operational decisions with DI. DI can enhance the quality, velocity, and consistency of all decisions.



Intelligent X Automation

Autonomous Business

Intelligent Automation to optimize outcomes with right governance. Support, and Augment other decisions with human in the loop.

BENEFITS OF DECISION INTELLIGENCE

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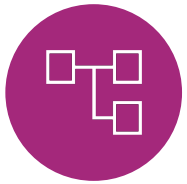
Optimal Outcomes

Grow sales, cut costs, increase customer retention, and allocate the resources effectively by optimizing decision-making during the entire customer lifecycle.

Quality Decisions

Improve the quality and consistency of decisions at all levels with Decision Orchestration Center to model, execute, and monitor decision flows.



Efficiently at Scale

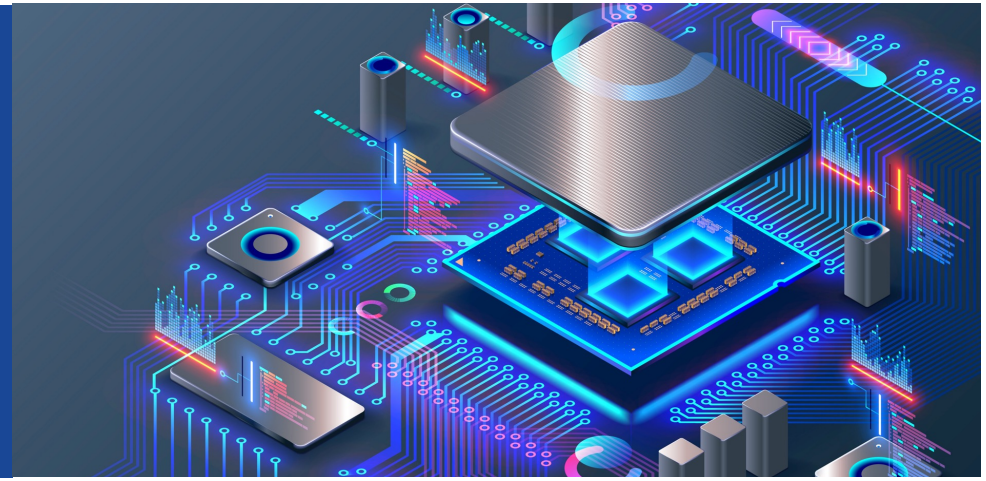
Improve efficiency and productivity of the knowledge workers by empowering them with prescriptive analytics, best recommendations, and executable actions.

Intelligent Automation

Integrate seamlessly with existing applications, workflows, and Robotic Process Automation (RPA) to infuse intelligence at critical decision points.

DECISIONS POWERED BY AI

Decision Intelligence relies on AI for natural language processing (NLP), predictive & prescriptive analytics, Inference & recommendation engines, optimization algorithms, Simulation & Scenario analysis, and continuous learning.



Informed by Knowledge

GenAI makes the knowledge accessible to all stakeholders involved in decision making.

Predict Outcomes

Use decision models, composite AI methods, and simulations to predict outcomes, and recommend actions.

Intelligent Automation

Automate by infusing intelligence into existing applications, processes, and workflows to optimize outcomes.

Decision Intelligence Use Case Examples

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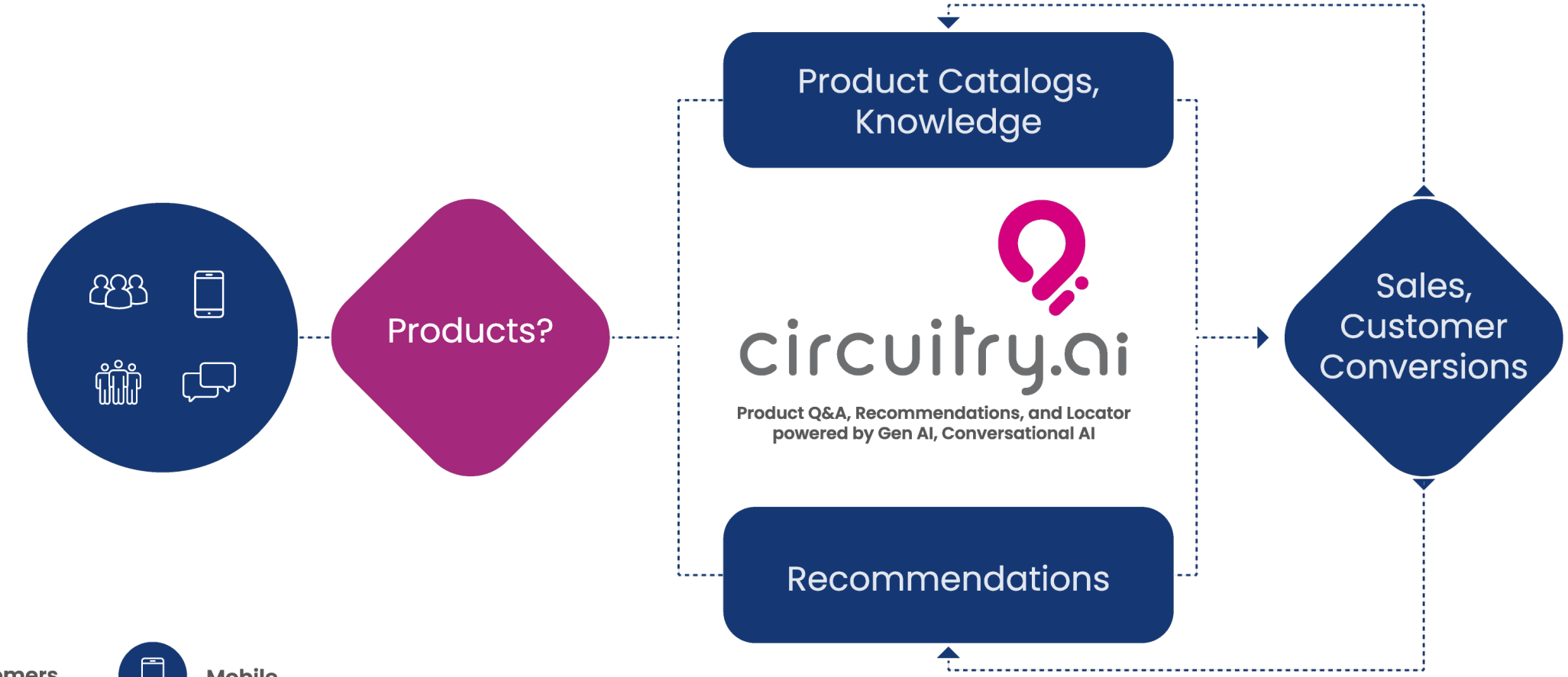
Level	Objective	Capabilities	Example Use Cases
Decision Support	Enhance human decision-making with data-driven insights.	• Data Integration • Analytics Tools • Dashboards and Reporting • Training and Data-Driven Culture	• Sales forecasting • Customer segmentation • Inventory management • Quality Analysis
Decision Augmentation	Augment human decision-making by providing predictive insights and recommendations.	• Advanced Analytics and Machine Learning • Recommendation Systems • User Interaction • Feedback Loops	• Product Advisor • Service/Parts Advisors • Personalized marketing • Dynamic pricing strategies • Predictive maintenance
Decision Automation	Automate decision-making processes for specific, well-defined tasks.	• Rule-Based Systems • Autonomous AI Systems • Monitoring and Oversight • Continuous Learning	• Fraud detection • Real-time resource allocation • Autonomous customer service chatbots

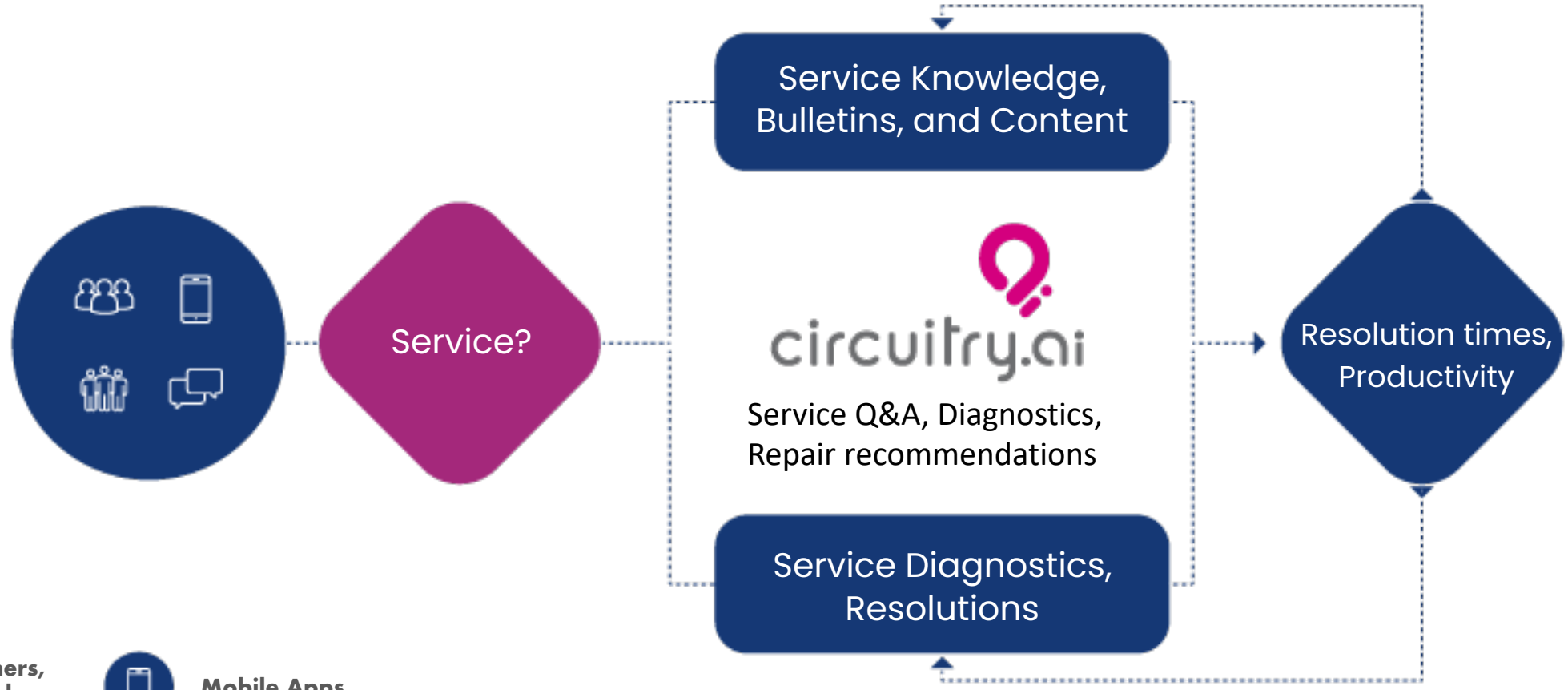
PRODUCT AIDVISOR

Intelligent Product Advisor to answer questions, recommend products, and enable sales with conversational experience for your customers and sales teams on all channels.



SERVICE AIDVISOR

Intelligent Service Advisor to help service technicians and teams to get help and answers on service diagnostics, service procedures, and repair recommendations.



Customers, Channel

Mobile Apps

Service Teams

Messenger (SMS, WhatsApp)

QUALITY AINALYST: ARCHITECTED TO ENABLE ADVANCED QUALITY INTELLIGENCE

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SSO Auth0 | Quality Teams | Warranty | Engineering & Manufacturing

Circuitry.ai Quality AInalyst
(Advanced Analytics + AI/ML: Descriptive, Diagnostic, Predicitve, Prescriptive)

Excel Access, Reliability Tools

Downloads

BI & Data Visualization

Power BI

BI | Reports | Data Science | Machine Learning

Quality Data Sources

- Warranty
- Support
- Inspections
- Returns
- Repair Orders
- 3rd Parties

Data ingestion

400+ Connectors

Data lakehouse

Structured, Semi-Structured and Unstructured Data

databricks

aws | Azure

WHAT ROLES DOES GENERATIVE AI PLAY IN DECISION INTELLIGENCE?

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3. **Decision making** (e.g., using the chatbot to help choose a new policy)

Specialized software that sits between the user and the LLM

LLM Model (e.g. ChatGPT4)

Next thing to say

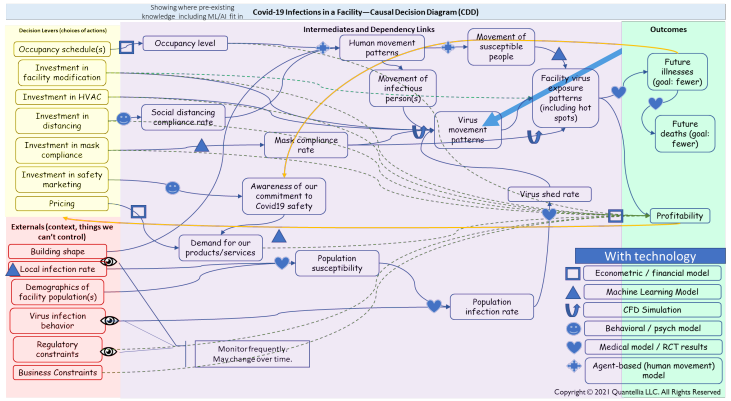
Custom Knowledge (e.g., a book you wrote)

Personalized Knowledge (e.g., cultural information about a user)

Data (e.g., a student's current grades)

Reasoning (e.g., actions that the user can take to lead to their outcomes)

Role #2: DI models can provide reasoning that overcomes LLM limitations



Role #1:
GenAI makes suggestions for actions, outcomes, and more

GenAI DECISIONS

Generative AI (GenAI) augments AI with natural language conversations, augmented knowledge, and decision automation

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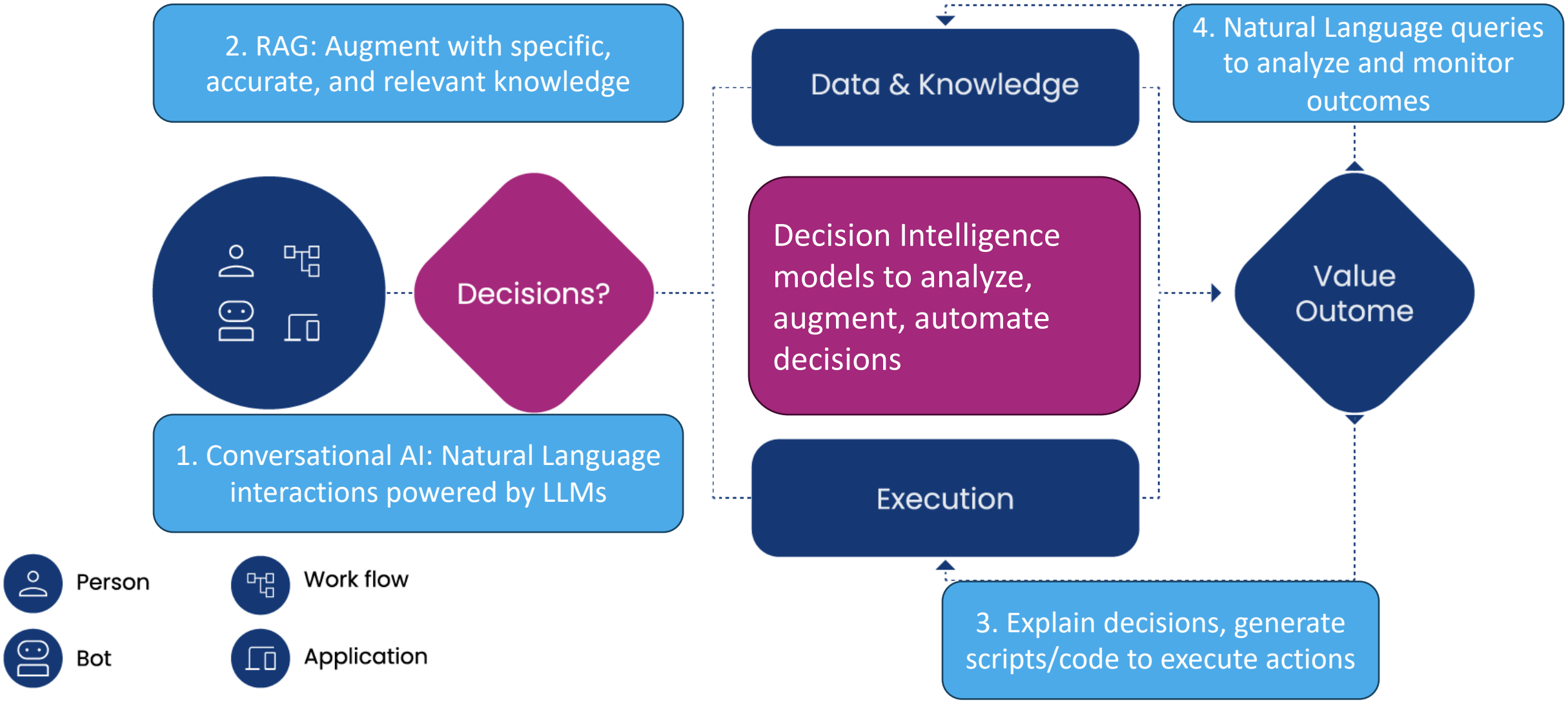

DI SUCCESS FACTORS

Select right use cases, decision intelligence platform, business model, and partners.

Success factors for decision intelligence (DI) hinge on selecting high-value, feasible use cases and leveraging Enterprise AI as a Service to minimize investment and risk. Choosing the right DI partner with relevant industry and domain expertise tailored to your use cases is crucial. Adopting a phased approach allows the model to evolve through analysis, augmentation, and automation of decisions.

Use Cases: Select right use cases with high business value and high feasibility

DI as a Service: Leverage the Enterprise AI as a Service model to reduce the investment, and risk

DI Partner: Right partner based on your industry, domain expertise, and use cases

Phased approach: Evolve the model to analyze, augment, and automate decisions.

Integrate: Infuse Intelligence by integrating with existing Apps, Workflows, and RPA

Optimize: Continuously monitor and refine decision models to optimize business outcomes.

aws Google Cloud Azure OpenAI

DI AS A SERVICE

Enterprise Apps

- SaaS
- Legacy Apps
- Mobile Apps
- RPA

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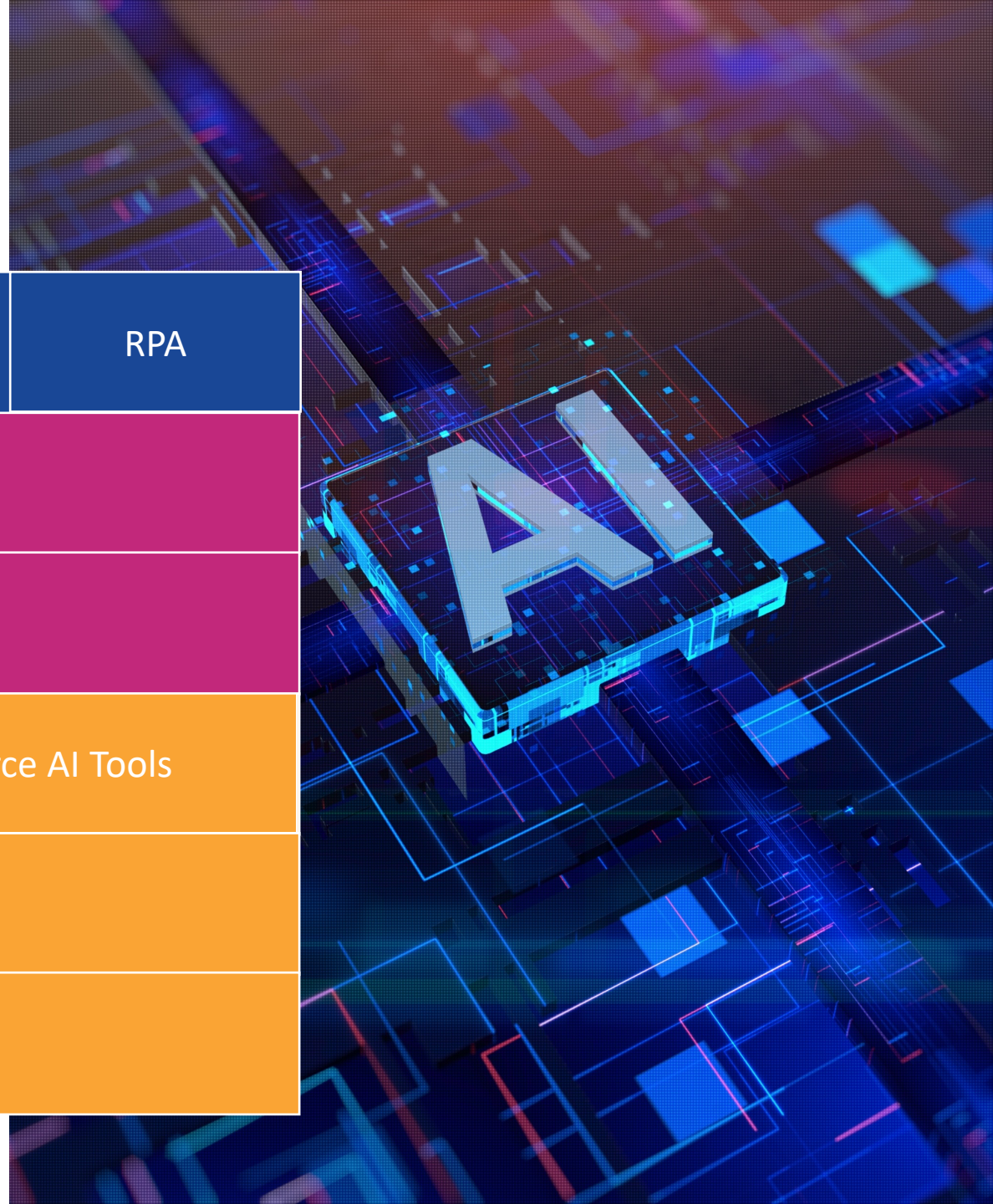
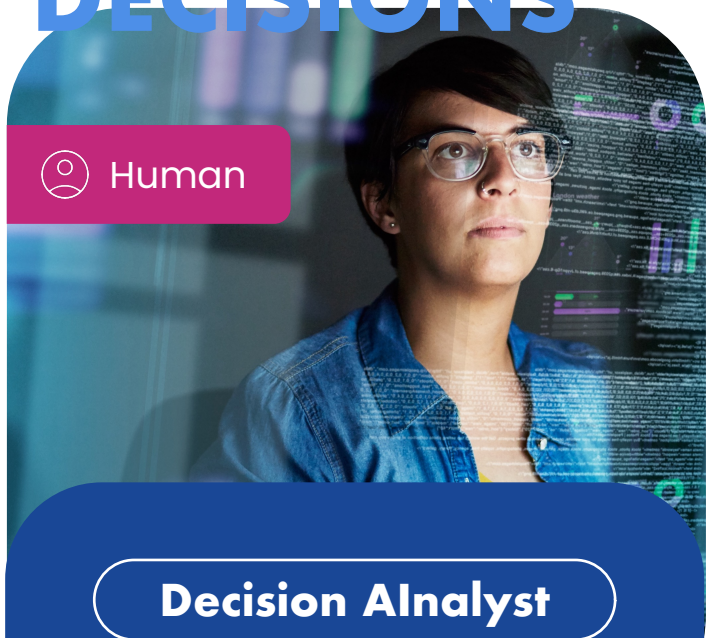
- Decision Circuits
- Decision Intelligence Platform

AI Infrastructure Tools

- Commercial AI Tools
- Opensource AI Tools
- Foundation Models
- AI Cloud Providers
  AWS, MS Azure, Google, NVidia



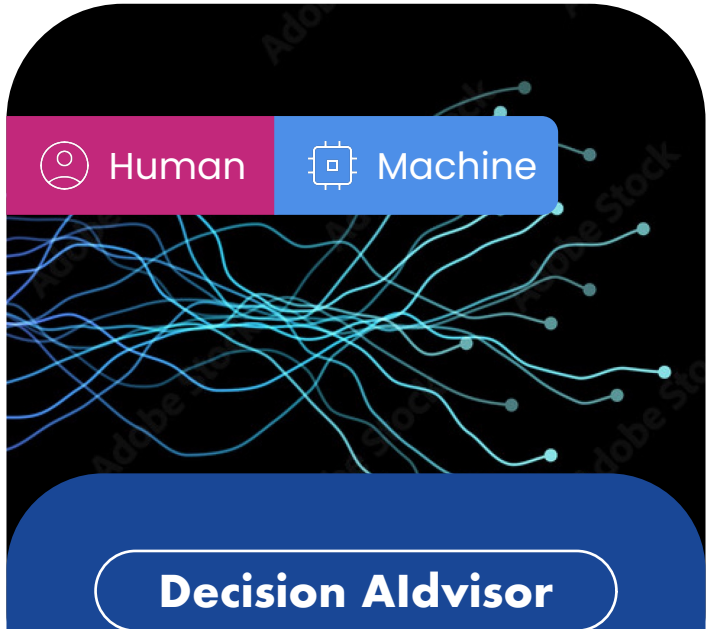
ANALYZE, AUGMENT, AND AUTOMATE DECISIONS



Decision AInalyst

Analyze

- Segment/Clustering
- Decision Trees
- Anomaly detection
- Diagnostics



Decision AIdvisor

Augment

- Recommendations
- Next Actions
- Predictions
- Forecast

Decision AIgent

Automate

- Decisions
- Actions
- Triggers
- Allocation

HOW TO CALCULATE AND REALIZE ROI FROM DI?

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- Start with “low hanging fruit” value:
  - DI can radically reduce your data management costs.
  - Why: 10% of the data has 90% of the value. DI will help you to determine which is the 10%. Learn More (https://bit.ly/freedi1)
- Focus on “intangible” value:
  - Simply drawing a DI diagram can help your team to all pull in the same direction, increasing productive across the board
- Use DI to determine how to use AI/ML for competitive advantage

ROI FROM DECISION INTELLIGENCE

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Benefit	Description	Value
Increased Revenue	Increased sales from enhanced marketing, product discovery, conversion rates, cross-sell/upsell	+ R % = $ R M
Cost Reduction	Savings achieved by optimizing operations, reducing inventory, or improving supply chain efficiency	+ C % = $ C M
Improved Efficiency	Time saved by automating decision processes or using AI to speed up data analysis	+ E hours X Rate $ = E $
Risk Mitigation	Better risk management through predictive analytics and improved decision-making processes	
Qualitative Benefits	Qualitative factors such as improved employee satisfaction, better customer insights, and enhanced decision-making capabilities	
Total Benefits		**X $/Year**
Cost of Decision Intelligence	Annual Subscription fees (AIaaS), one-time services, ongoing operations	(S $ /year)

HOW CAN COMPANIES GET STARTED WITH DI?

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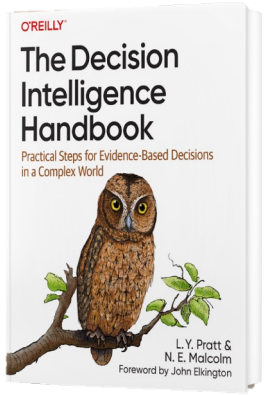
1. Choose a decision that's complex, perhaps in a rapidly-changing environment, maybe with some uncertainty and ambiguity, and which you think could be better
2. Ask your team to brainstorm about outcomes of the decision, without any judgment. Just list all the outcomes you can think of. List them on the right-hand side of a diagram.
3. Do the same with actions that might lead to those outcomes. List then on the left-hand side of a diagram.
4. See if you can think of what you can measure that might change how your actions lead to outcomes. List those on the left.
5. Draw some arrows to connect everything together, where the arrow means "the thing on the left will have some impact on the thing on the right"
6. Implement the decision model
7. Revisit and review it often.



Read
www.dihandbook.com
to learn more

GETTING STARTED WITH DECISION INTELLIGENCE

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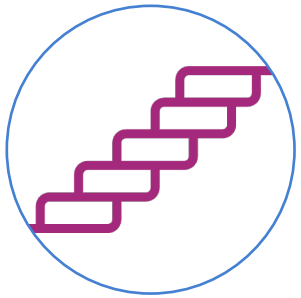
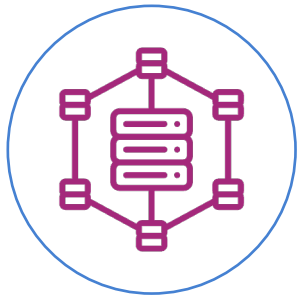


Identify and prioritize key Decisions to augment with DI

Identify data and knowledge sources to inform the decisions

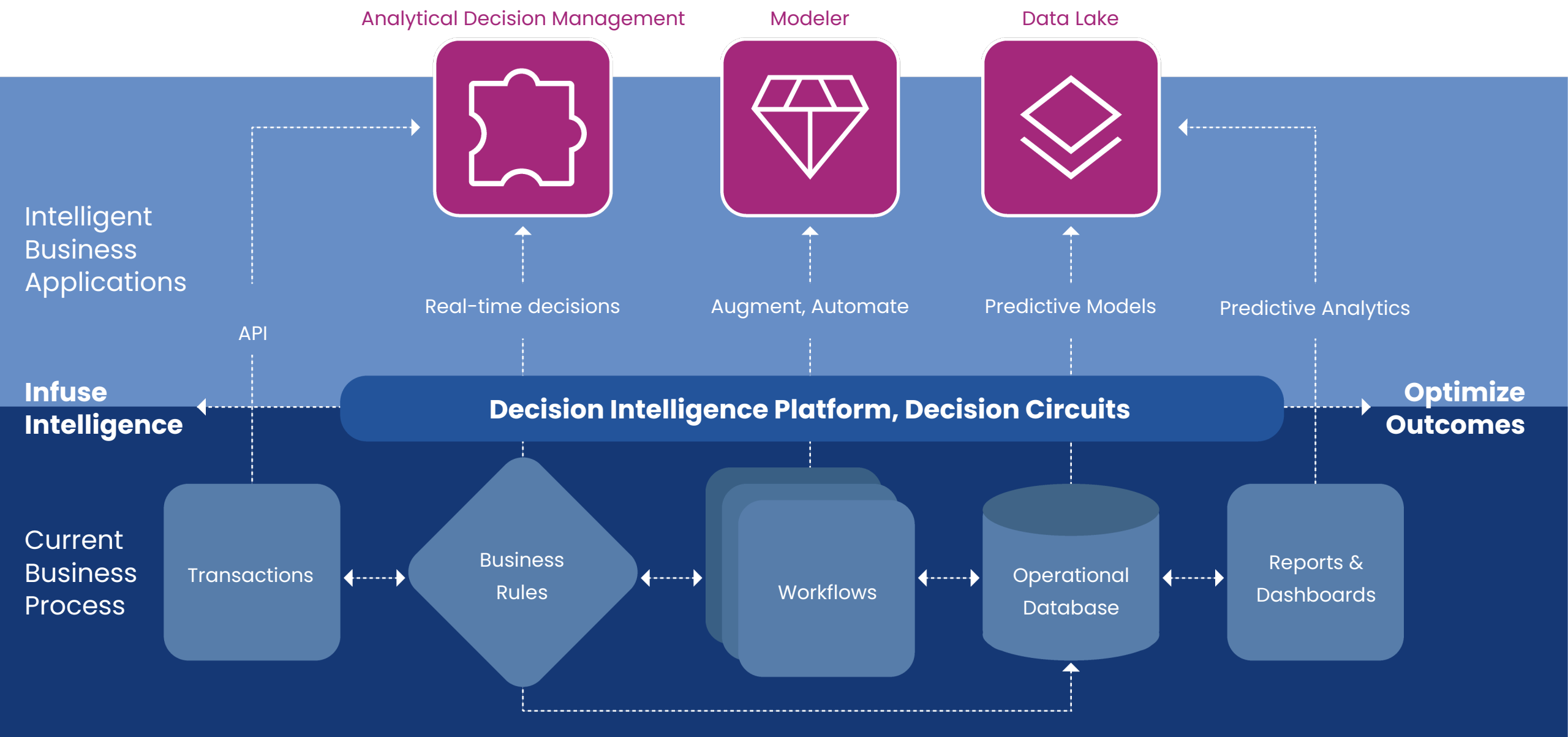
Select right Enterprise AI as a Service focused on your use cases



Build a POC or Pilot to demonstrate and validate value

Rollout and create roadmap to expand the users and use cases

INTELLIGENT BUSINESS APPLICATIONS



RISK MITIGATION

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Wrong use cases

Select high value, feasible, repeat, and operational decisions to augment or automate

Technology and Team skills

Leverage Enterprise AI as Service models to mitigate risks with Technology and internal skill shortage

Cost and Budget overruns

Plan and control costs for data acquisition, computing resources, integration with existing workflows, and ongoing maintenance

Data issues, Siloed Data

With Decision first approach, you can focus on (10% of) Data required to inform the decision.

Lack of Stakeholder buy-in

Phased approach to build trust, buy-in, change management, and education on job changes

AI/Data Privacy, Bias, Fairness risks

Implement data and model validation, testing, & governance. Continuous monitoring of model performance, safety, and user feedback

HOW CAN COMPANIES CONTINUE TO OPTIMIZE THE OUTCOMES?

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1. Keep in mind that a good decision is not the same as a good outcome.
   - Sometimes you make the best decision possible given the information available, but the outcome is not good because of uncertainty.
   - Sometimes you can make a bad decision and get lucky on the upside, too!

2. Use software to monitor decision elements
   - The decision diagram usually shows a superset of your existing KPIs
   - It adds the connections between them, though:
     - *"How does this KPI impact my desired business outcomes?"*
     - *"What actions can I take to impact this KPI?"*

3. If you have a decision that's repeated over time, then compare the DI system's predicted outcomes to the actual ones. Measure the error rate and re-calibrate your decision model if it crosses a threshold

MONITORING DECISION INTELLIGENCE

Monitoring and continuously improving Decision Intelligence (DI) to evaluate performance, make necessary adjustments, and ensure it optimizes outcomes.

KPI, Dashboards

KPI to measure decision accuracy, efficiency (time taken to make decisions), cost savings, revenue growth, customer satisfaction, and customer retention rates

Automated Analytics

AI algorithms to analyze the outcomes of decisions made through the DI, compare predicted outcomes with actual results., Identify patterns, trends, and discrepancies.

Feedback loops, and Monitoring

Track the performance and user feedback on decision-making processes including the effectiveness of AI models, data quality, and impact on business outcomes.

Learning & Optimization

Refining AI models and algorithms based on new data and feedback, optimizing decision workflows, adapting over time to improve accuracy and efficiency etc.

Q&A

Please submit your questions to panelists using Q&A button on Zoom toolbar.

If panelists cannot answer your question during the webinar because of time, you will receive a response via email after the webinar.

You can also submit questions after the webinar by sending an email to info@circuitry.ai

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