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The State of BI and Analytics: The Move Toward Automated Insights Generation

Joao Tapadinhas
@jtapadinhas


Where do you start?

Key Issues

1. What is the state of BI and analytics and what model can we use to assess its evolution?
2. How is the state of BI and analytics evolving and what impact will it have on organizations?
3. How can organizations move to "the next level" in analytics?

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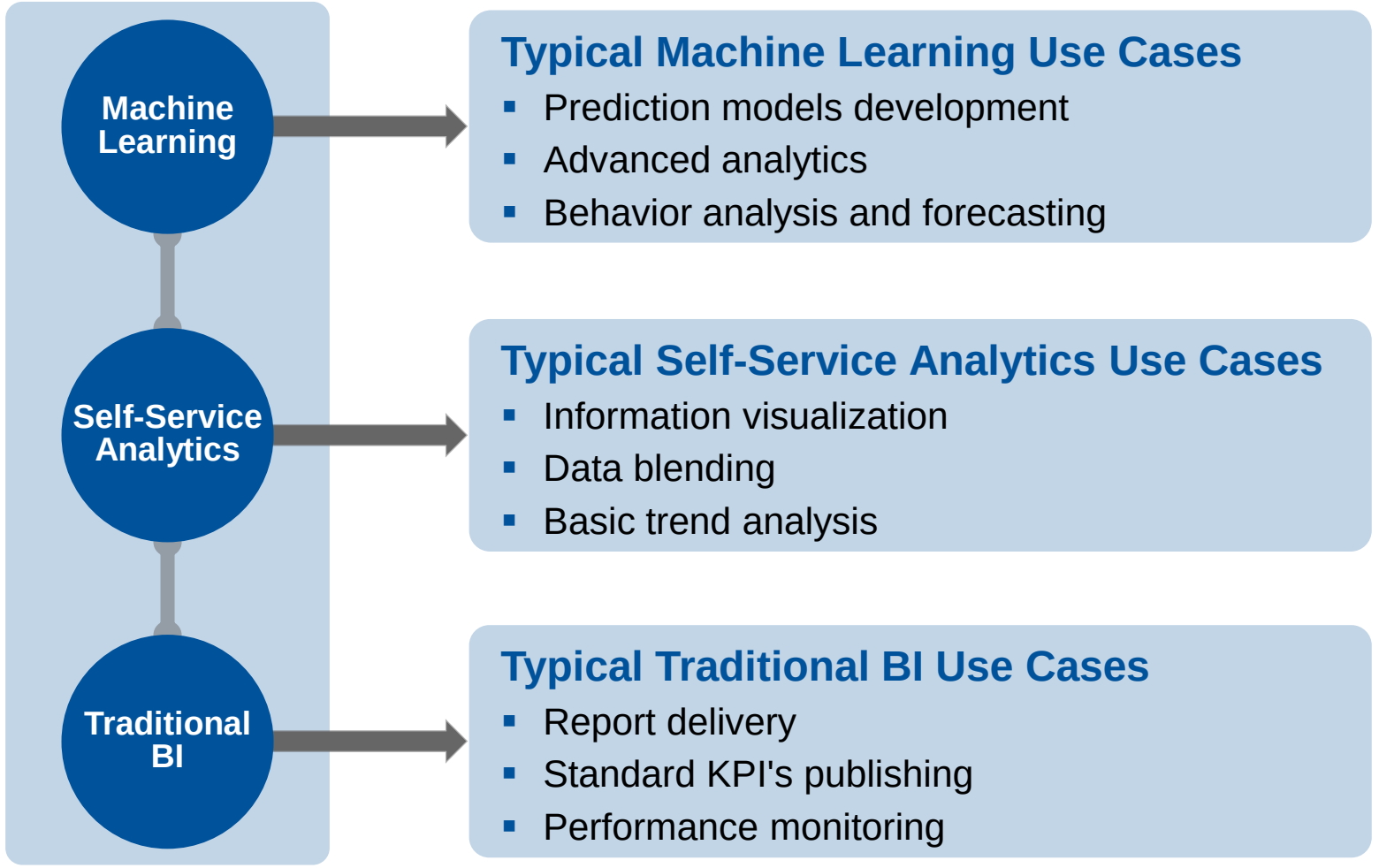
Common Analytics Capabilities

Very small sample of the analytics market



Typical Machine Learning Use Cases

- Prediction models development
- Advanced analytics
- Behavior analysis and forecasting

Typical Self-Service Analytics Use Cases

- Information visualization
- Data blending
- Basic trend analysis

Typical Traditional BI Use Cases

- Report delivery
- Standard KPI's publishing
- Performance monitoring

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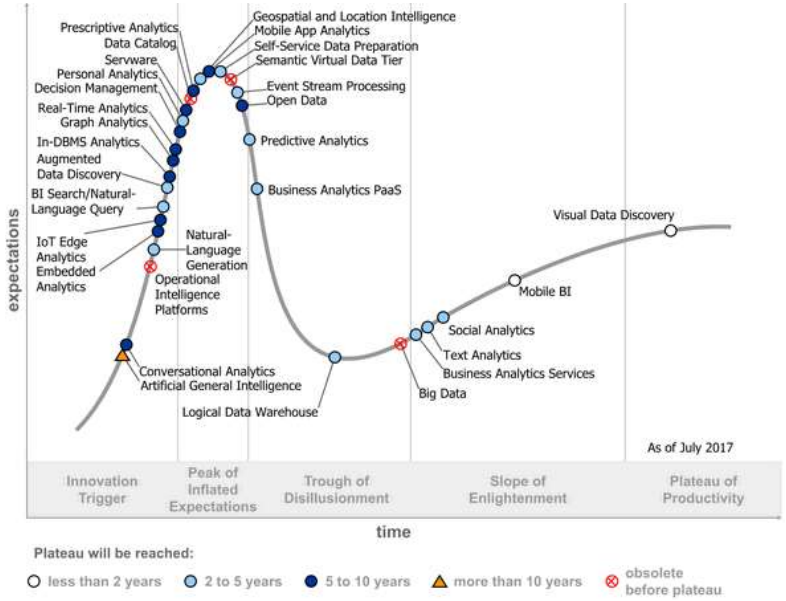
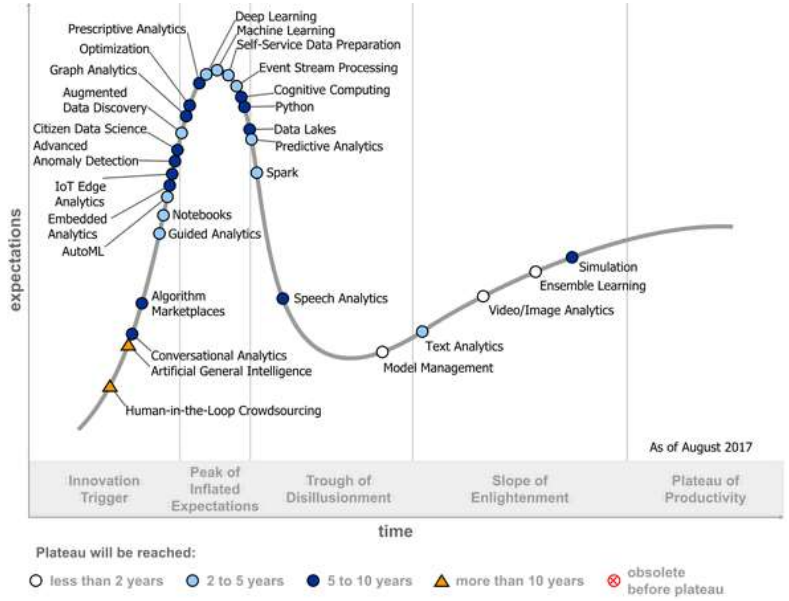
Hype Cycles With Technology Profiles

It's a Complex Market!

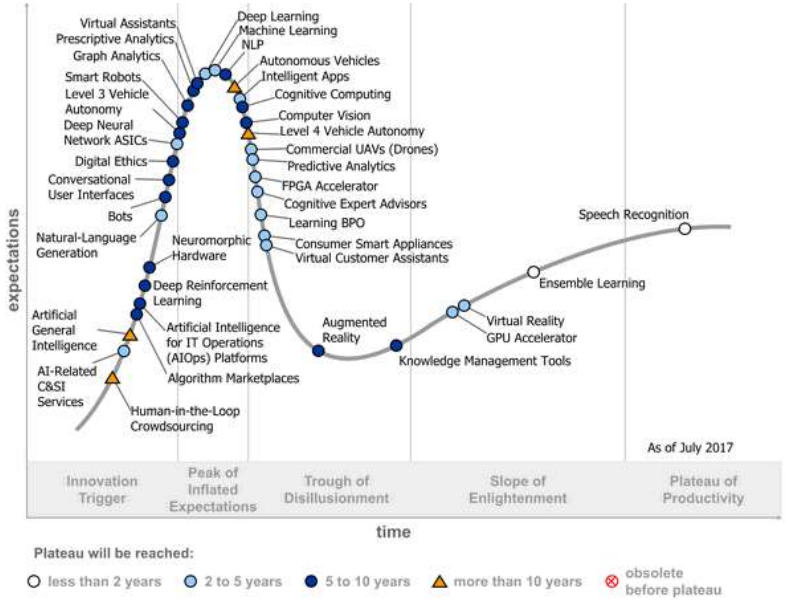
Business Intelligence & Analytics



Data Science & Machine Learning



Artificial Intelligence



We need a classification model to understand the state of BI and analytics, and be able to assess your organization's readiness.

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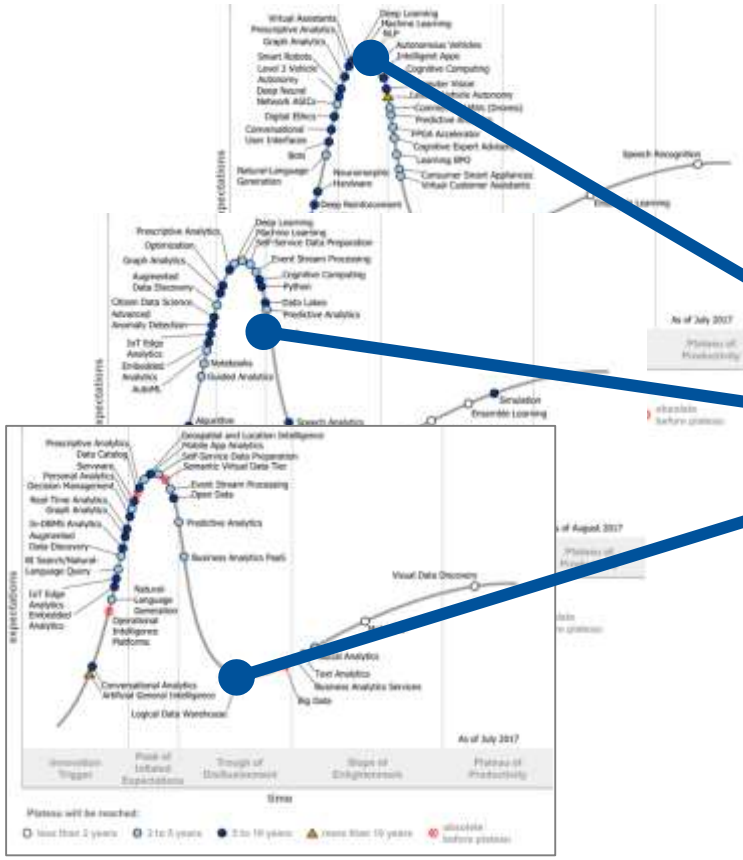
The Analytics Block: Additional Levels of Requirements



Analytics Block

Analytics Components

Roles and Skills

Analytics Capabilities

Data Capabilities

Processes and Governance

People

Analytics

Data

Analytics Outcomes

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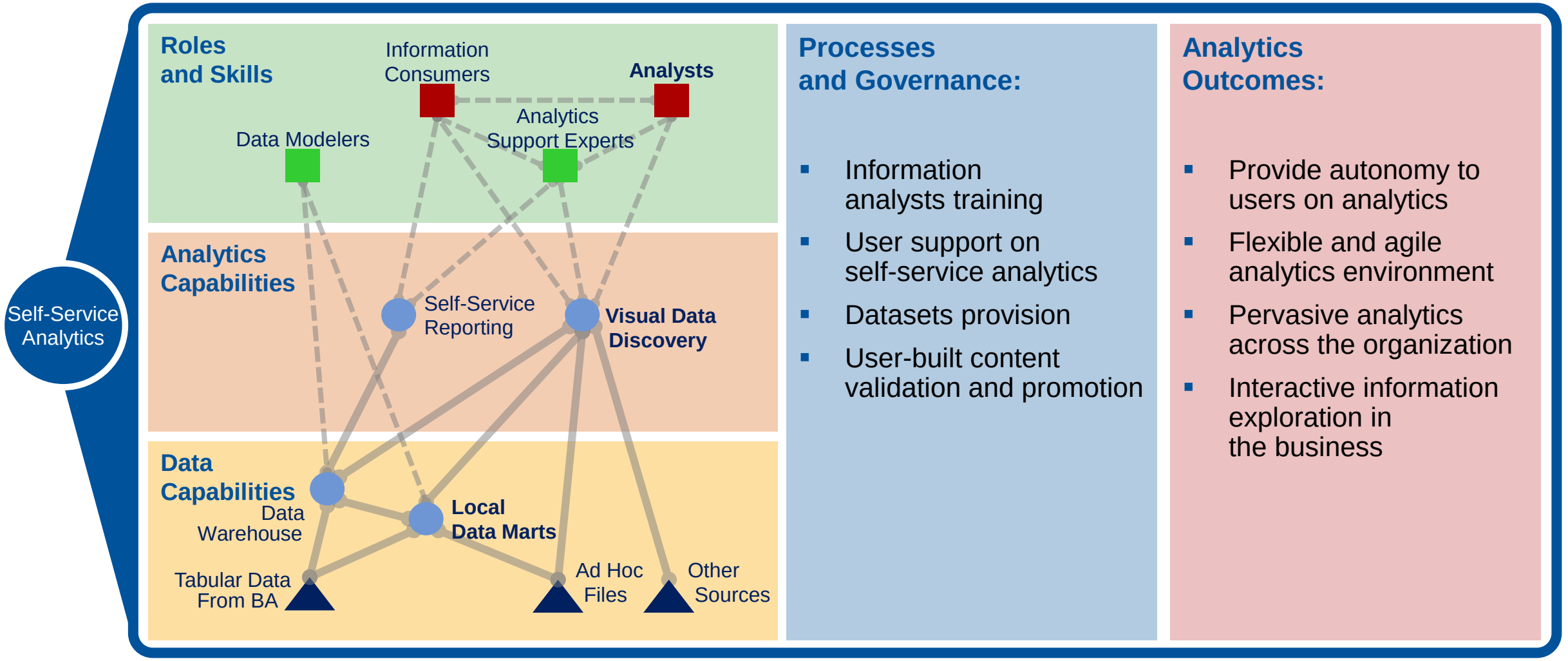
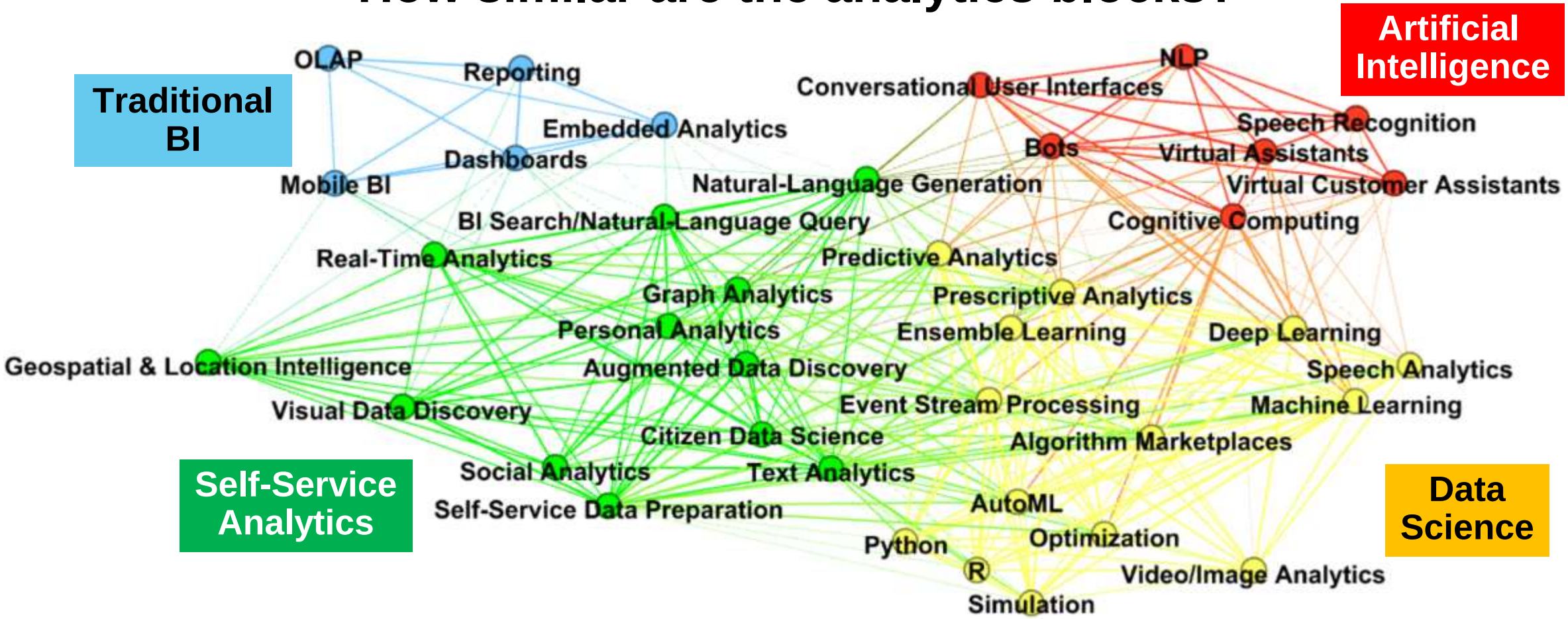
Self-Service Analytics: Visual Data Discovery



Clusters of Analytics Blocks

How similar are the analytics blocks?



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Clusters of Analytics Blocks: Analytics Domains

Analytics Capabilities

Information Portal	Analytics Workbench	Data Science Laboratory	Artificial Intelligence Hub
Reports, Dashboards	Self-Service Analytics and Data Preparation, Citizen Data Science	Machine Learning, Deep Learning	Personal Digital Assistants, Video/Image Analytics
▪ Credible ▪ Consistent	▪ Agile ▪ Insightful	▪ Advanced ▪ Comprehensive	▪ Self-Learning ▪ Autonomous
Monitor	**Explore**	**Investigate**	**Perform**

Sample list of analytics capabilities:

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Analytics Domains

Analytics Capabilities

Information Portal

Reports

Dashboards

- Credible
- Consistent

Monitor

Analytics Workbench

Self-Service Analytics and Data Preparation

Citizen Data Science

- Agile
- Insightful

Explore

Data Science Laboratory

Machine Learning

Deep Learning

- Advanced
- Comprehensive

Investigate

Artificial Intelligence Hub

Personal Digital Assistants

Video/Image Analytics

- Self-Learning
- Autonomous

Perform

Sample list of analytics capabilities:

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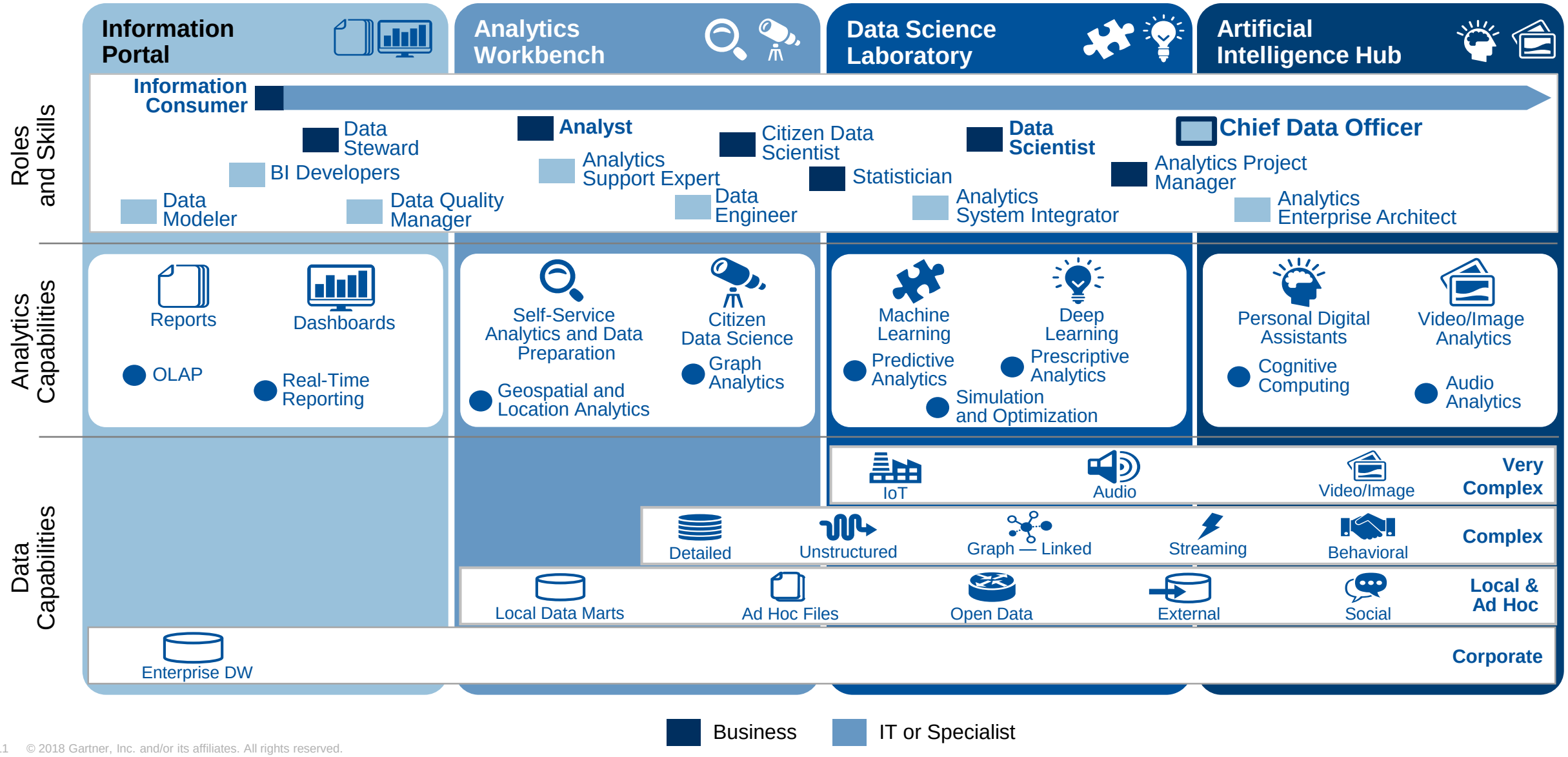
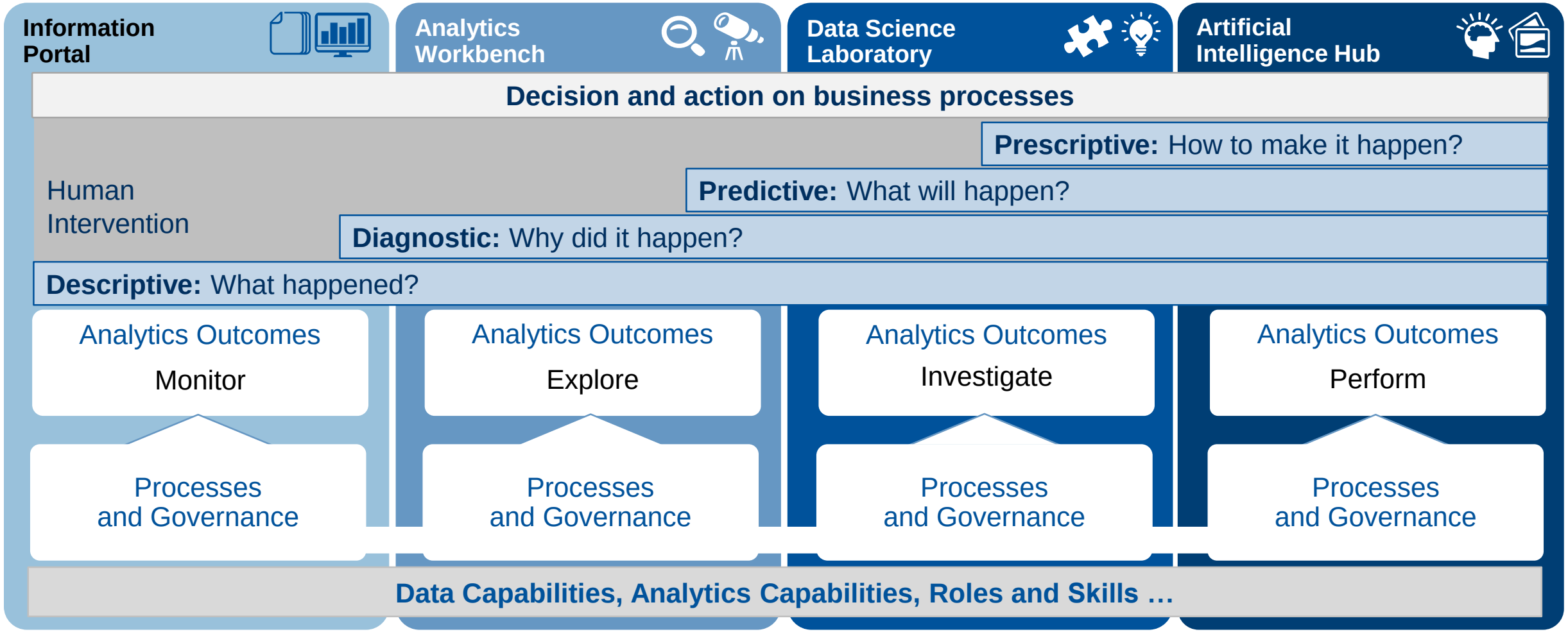
Detailing the Analytics Domains



Unique Processes, Governance and Analytics Outcomes



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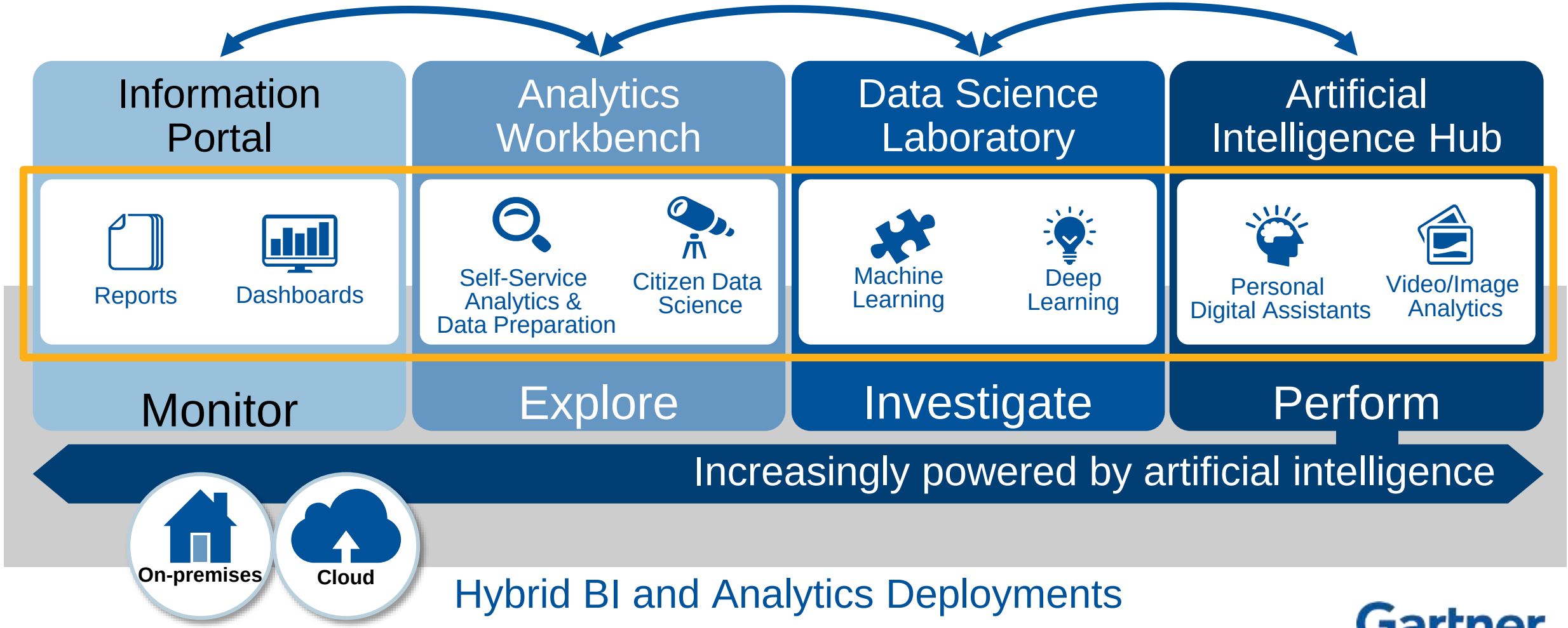
Important Drivers

Integration driving analytics sophistication and supporting handling of complexity.



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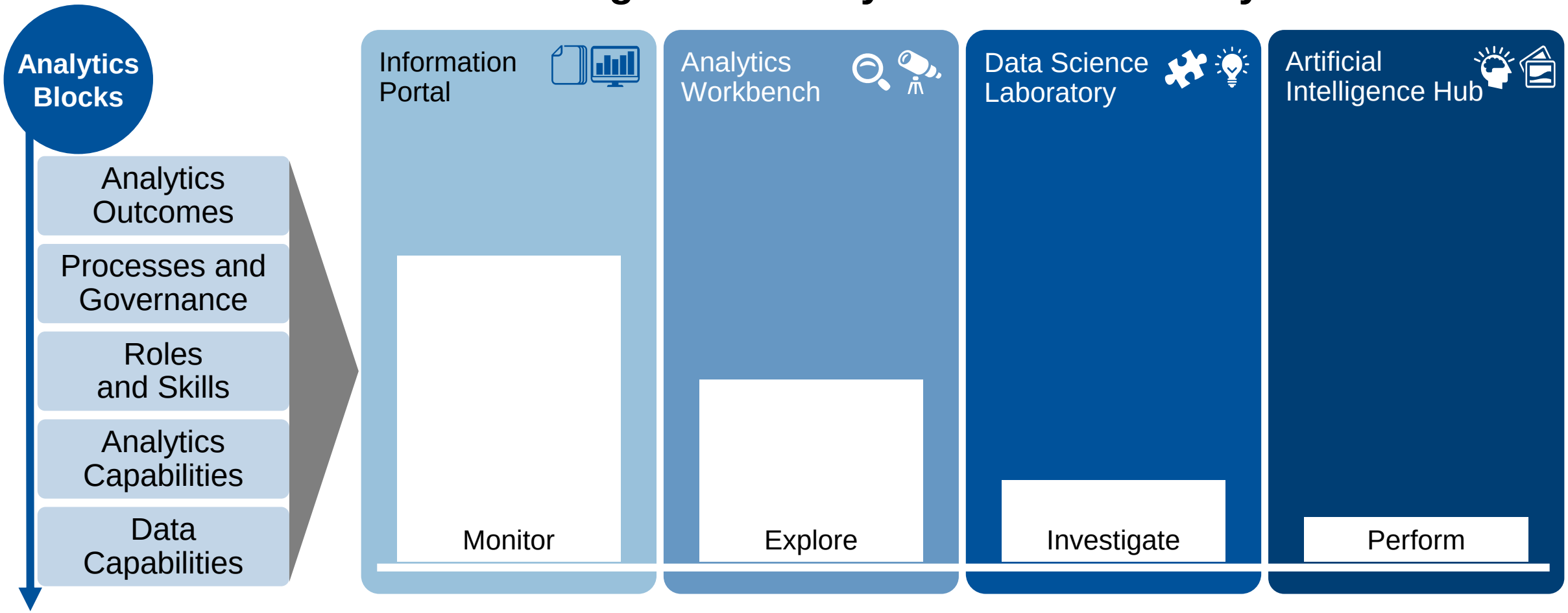
What Is the State of BI and Analytics?

Assessing the maturity level of each analytics domain



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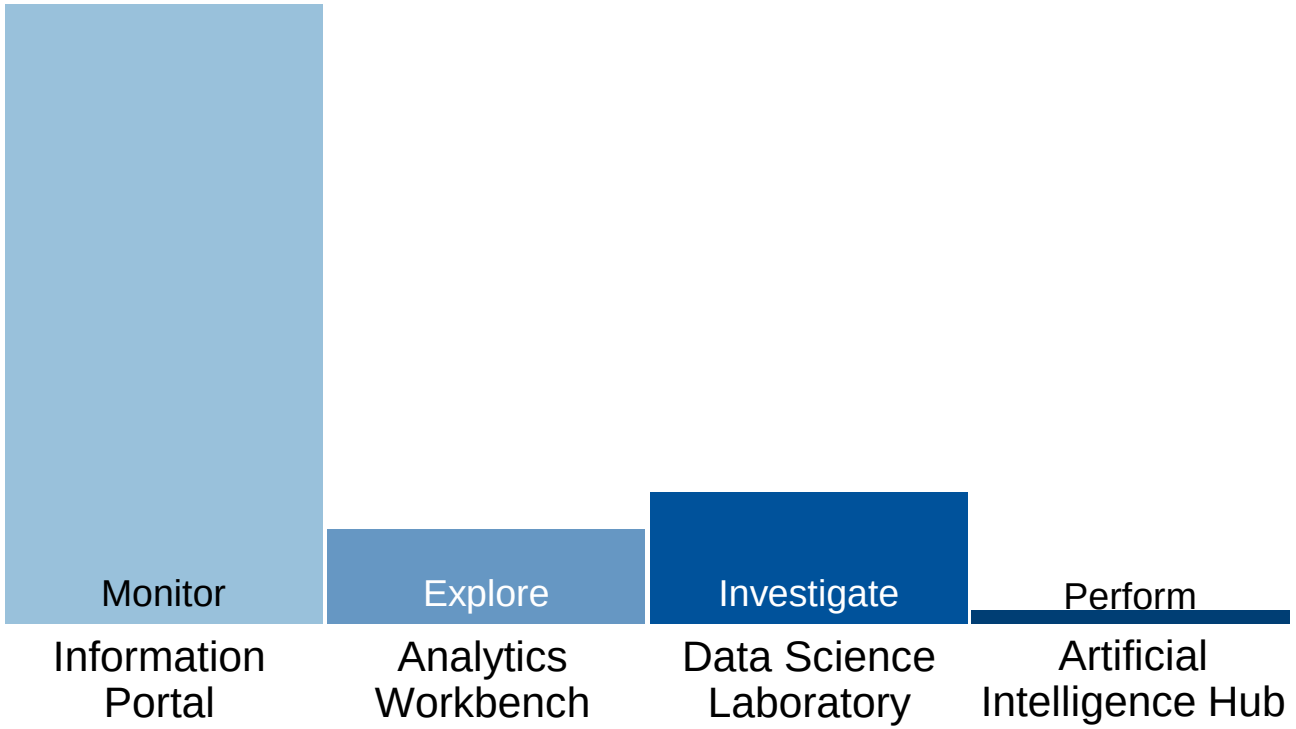
The State of BI and Analytics: More Than 5 Years Ago

✓ The BI Age

Single Version of Truth



Key drivers and impact:

- **Centralized and IT driven BI.**
- Limited to no user autonomy.
- Silos of data science in the business.
- Very limited self-service led to the use of Excel for analytics.
- ✓ **Used to monitor the business, with limited impact on performance.**

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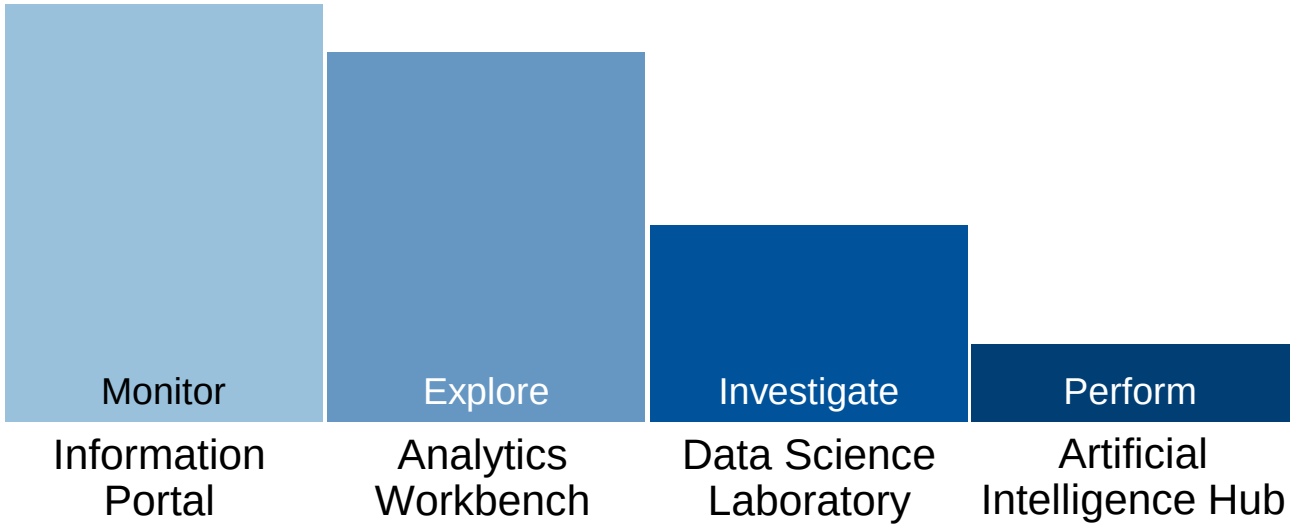
The State of BI and Analytics: Today

✓ The Self-Service Analytics Age
User Empowerment



Key drivers and impact:

- Centralized BI losing relevance.
- **Self-service analytics is the norm for net new deployments.**
- Data science is a priority for leading organizations.
- Artificial Intelligence is emerging.
- ✓ **User generated insights drive businesses and governance is the most pressing concern.**

See: "Essentials of BI and Analytics" by Cindi Howson

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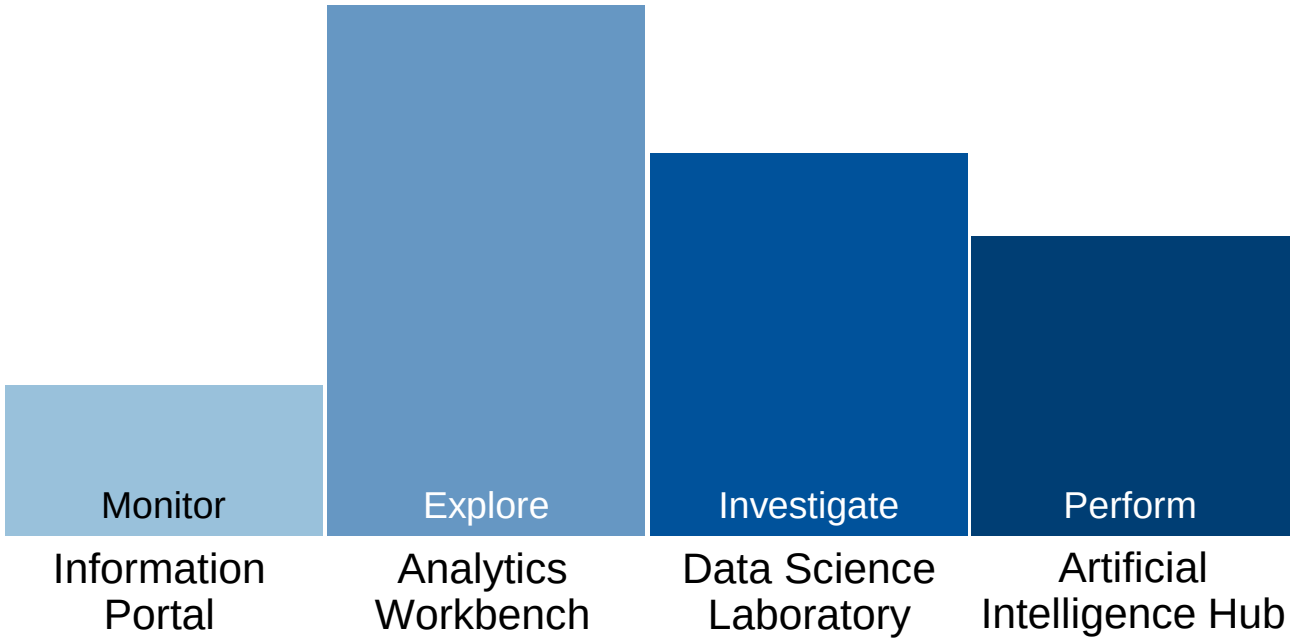
The State of BI and Analytics: Over the Next Three Years

✓ The Augmented Analytics Age

Automated Insights Generation



Key drivers and impact:

- Centralized BI less relevant.
- **Self-service analytics will be "assisted" by data science and AI, becoming pervasive.**
- Easy to leverage data science will expand adoption and use cases.
- ✓ **AI will become more relevant than reports or dashboards for human analysis.**

See: "Augmented Analytics: The Next Generation Platform" by Rita Sallam

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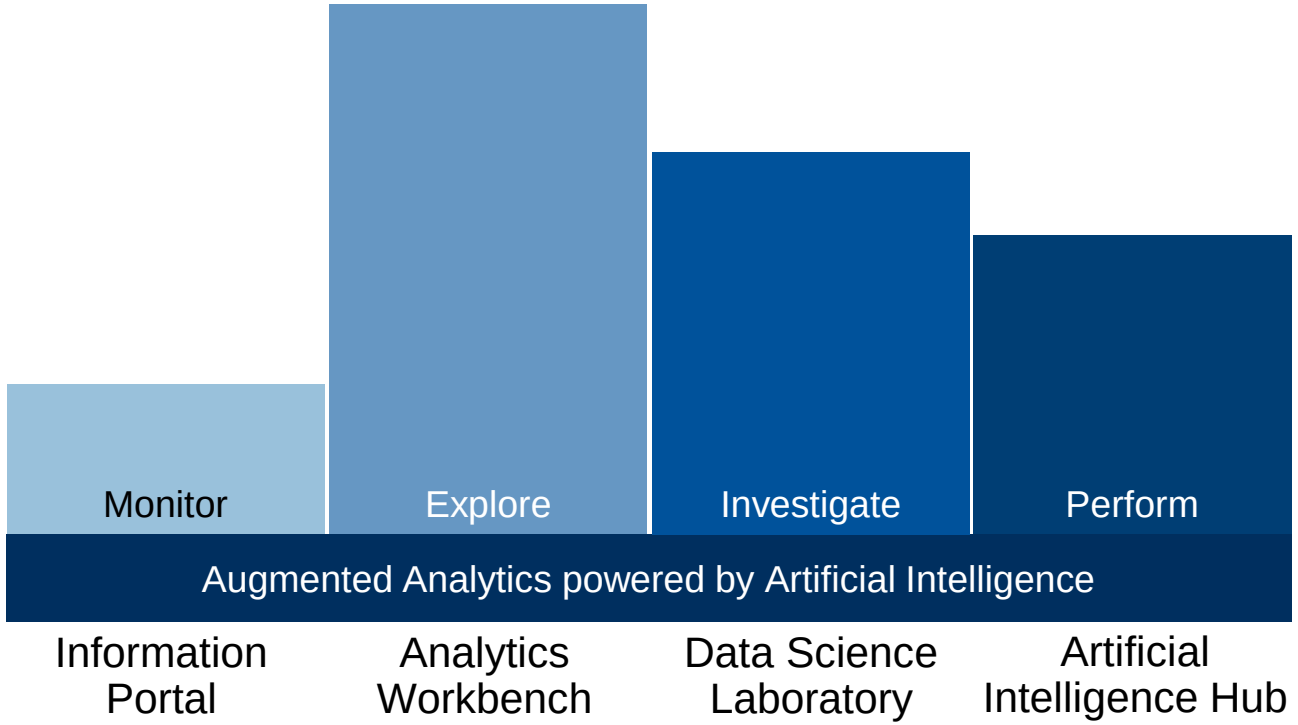
The State of BI and Analytics: Over the Next Three Years

✓ The Augmented Analytics Age

Automated Insights Generation



Augmented Analytics will be pervasive across data and analytics:

- Data collection, enrichment, modelling/harmonization and metadata inference.
- Data cleansing and quality.
- Outliers, patterns and trends detection.
- Conversational user interfaces with natural-language querying and insights generation.
- Automated root cause, trend and impact analysis.
- Automated predictive and prescriptive modelling.
- Alerts and customized insights distribution to users.

… and more.

See: "Augmented Analytics: The Next Generation Platform" by Rita Sallam

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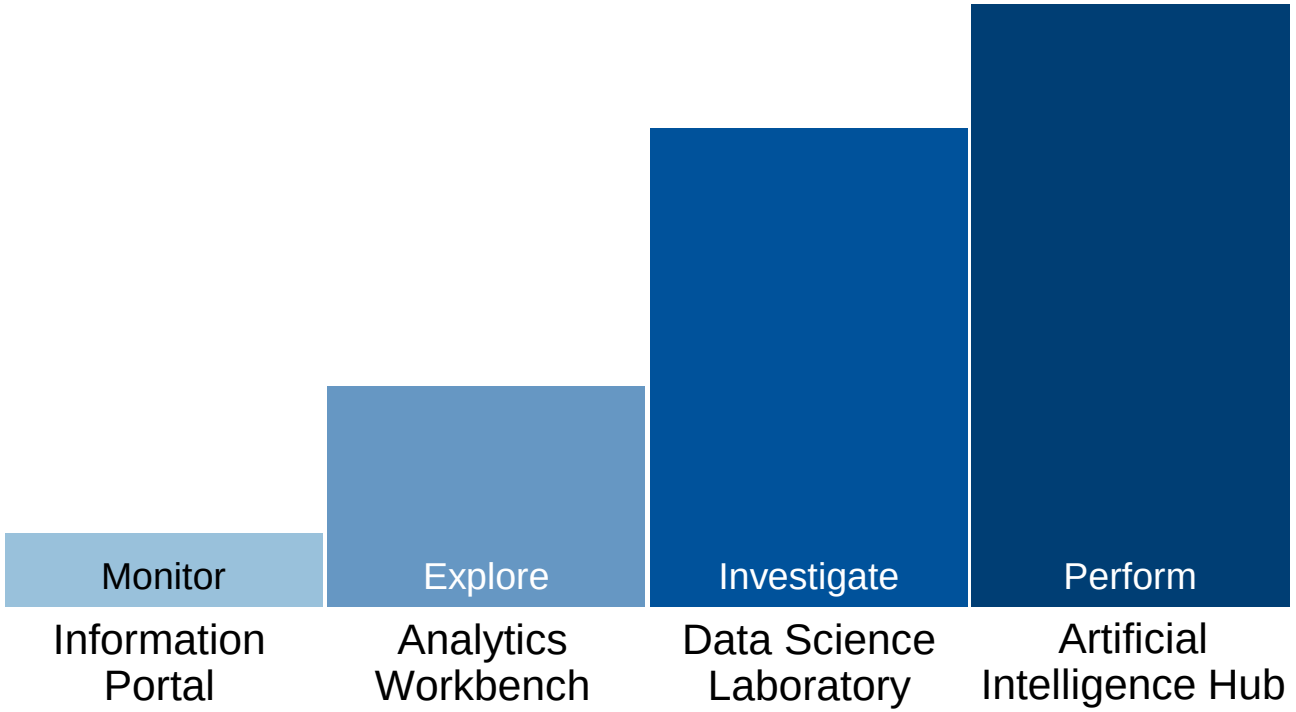
The State of BI and Analytics: Beyond 2020

✓ The Artificial Intelligence Age

Machine Empowerment



Key drivers and impact:

- Limited use of static reporting and dashboards.
- Self-service analytics mostly handled by artificial intelligence.
- Data science and decision making supported by AI will be a common capability.
- ✓ **Analytics will be better performed by computers than humans on many use cases. Impact on organizations will be transformative.**

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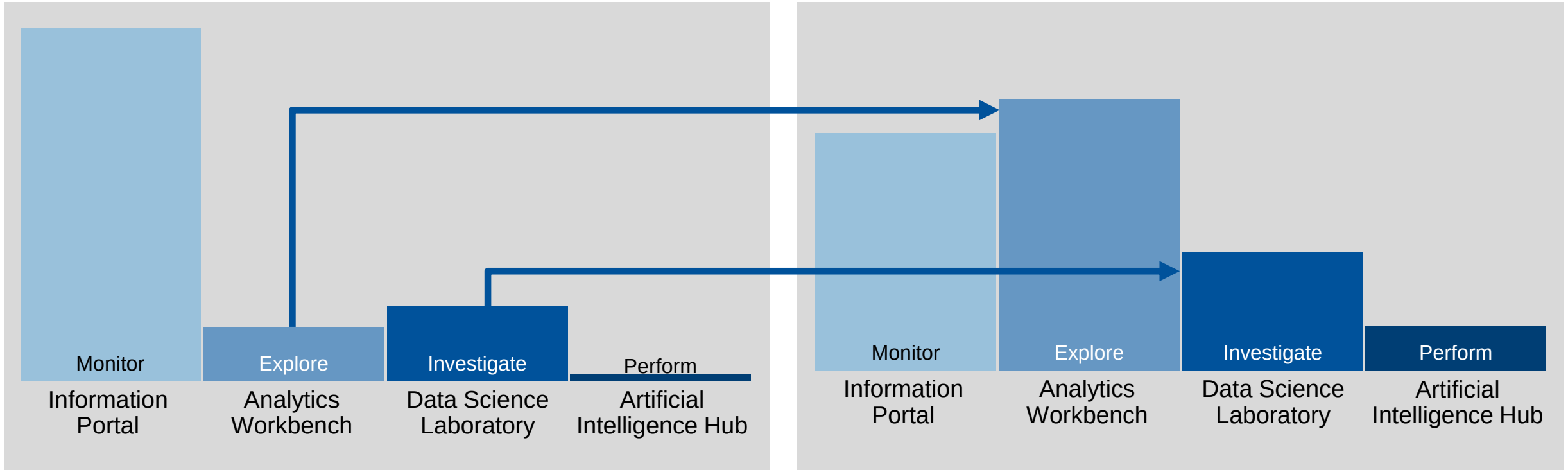
What Is the State of BI and Analytics in the Market and How Do You Compare With It?



How should you evolve the state of your BI and analytics deployment?

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What Analytics Block Should You Deploy Next?

Dashboards

Citizen Data Science

Deep Learning

Personal Digital Assistant

Next Big Thing

Reporting

Self-Serving Analytics

Machine Learning

Image and Video Analytics

Success is not about what capability to deploy next …

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… Success Is About Delivering the Analytics Capabilities Required to Support the Right Business Outcomes

Analytics Cluster

- Dashboards
- Self-Service Analytics
- Citizen Data Science
- Machine Learning

→ Reduce Customer Churn

Analytics Cluster

- Mobile BI
- Self-Service Analytics
- Geospatial and Location Analytics
- Simulation and Optimization
- Deep Learning

→ Improve forecasting and demand management

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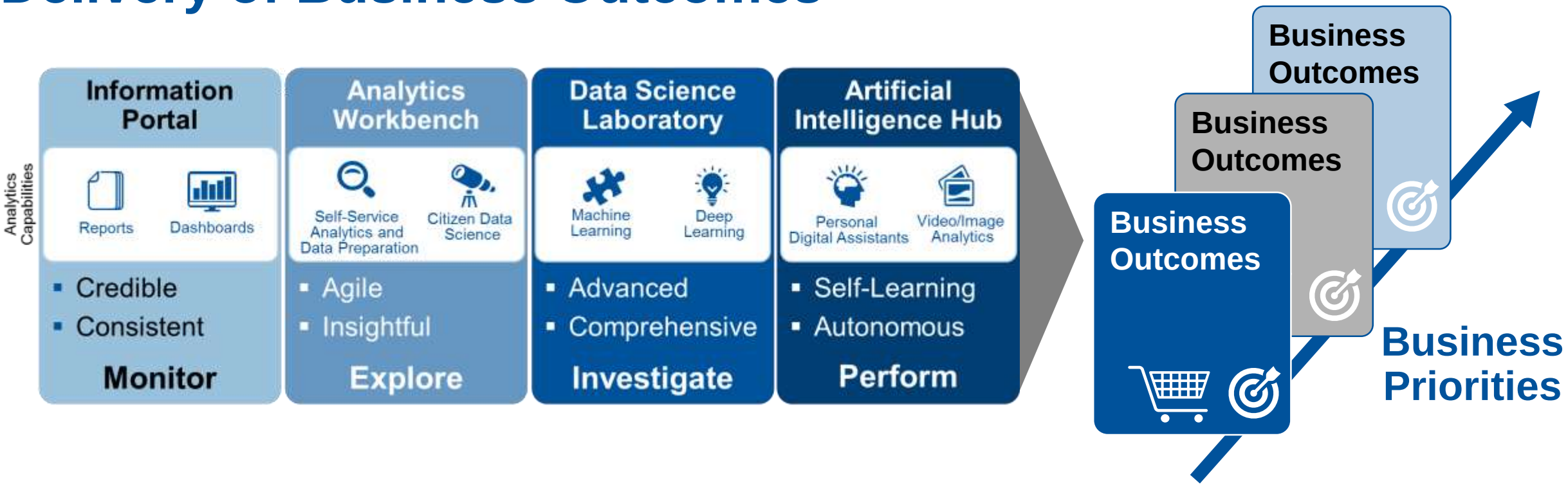
Start with the outcomes in mind.

Evolve the State of BI and Analytics While Focusing on the Delivery of Business Outcomes



But don't be afraid to experiment and create new business opportunities:

Image and Video Analytics

Personal Digital Assistant

Next Big Thing

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Recommendations

- ✓ Understand the breadth of analytics capabilities available in the market by reading Gartner Hype Cycles and Analytics Atlas.
- ✓ Assess your current state of BI and analytics and compare it with the market reference to identify gaps and opportunities.
- ✓ Work with your business users to identify the business outcomes that analytics should support.
- ✓ Build your analytics portfolio (and organization, processes and skills) according to the requirements of those business outcomes.
- ✓ Challenge users to think outside the box and leverage new analytics capabilities that could impact the business.

Recommended Gartner Research

- **Hype Cycle for Analytics and Business Intelligence, 2017**
  Kurt Schlegel and Jim Hare (G00314848)
- **Toolkit: Gartner Analytics Atlas**
  Joao Tapadinhas and Shubhangi Vashisth (G00343629)
- **Augmented Analytics Is the Future of Data and Analytics**
  Rita L. Sallam, Cindi Howson and Carlie J. Idoine (G00326012)
- **Where You Should Use Artificial Intelligence — and Why**
  Whit Andrews (G00328113)
- **Toolkit: Analytics Business Opportunities From Almost 200 Use Cases**
  Frank Buytendijk, Ankush Jain and Others (G00313738)

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