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Director Analyst



Key Issues

1. How did we create the DSML MQ and what did we learn from the evaluation process?
2. What trends are driving customer conversations about DSML today?
3. What trends should shape your long-term DSML strategy?

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DSML Platform Definition

- “a core product and supporting portfolio of coherently integrated products, components, libraries and frameworks (including proprietary, partner-sourced and open-source)”
- **The DSML platform:**
 - Offers functionality for building DSML solutions (primarily predictive and prescriptive models).
 - Supports the incorporation of these solutions into business processes, surrounding infrastructure, products and applications.
 - Supports variously skilled data science professionals — a DSML platform’s user base is often made up of professionals with diverse technical and business backgrounds

DSML Platform Definition

- Supports multiple tasks across the data science life cycle, including:
 - Problem and business context understanding
 - Data ingestion
 - Data preparation
 - Data exploration
 - Feature engineering
 - Model creation and training
 - Model testing
 - Deployment
 - Monitoring
 - Maintenance
 - Data and model governance
 - Explainable artificial intelligence (XAI)
 - Business value tracking
 - Collaboration
- 15 Critical Capabilities
- 4 major use cases
 - Data and Business Exploration
 - Citizen Data Science
 - Expert Model Development
 - Operationalization

Polling Question 1 of 2

How would you characterize the phase* that your organization is in?

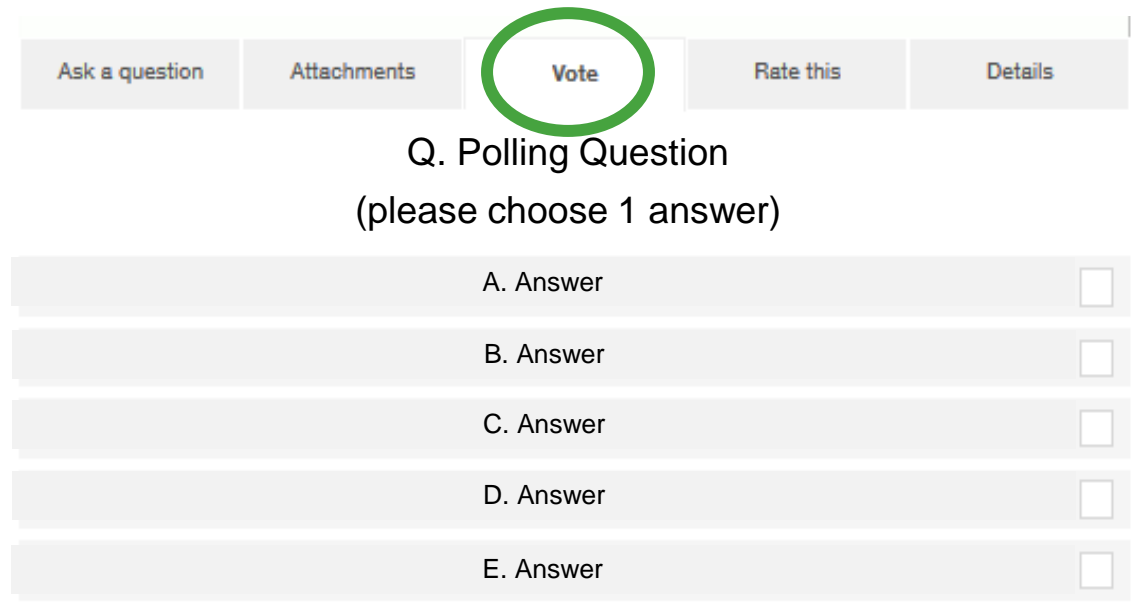
* By phase, we are referring to your **most** significant investment and resources

- A. Investigation (Exploration) Mode
- B. Piloting Mode
- C. Production Mode
- D. None of the Above or Not applicable (E.g. vendor or investor)

How to participate in our polling

If you are in full screen mode – click Esc
The poll question is on the “Vote” tab.
Please click the box to make your selection.
Upon voting you will see the results.

Thank you!



The screenshot shows a navigation bar with five tabs: "Ask a question", "Attachments", "Vote", "Rate this", and "Details". The "Vote" tab is highlighted with a green circle. Below the tabs, the question text reads "Q. Polling Question (please choose 1 answer)". There are five answer options, each with a checkbox: "A. Answer", "B. Answer", "C. Answer", "D. Answer", and "E. Answer".

Strategic Market Positioning of Vendors In a Magic Quadrant

Focus on Today




Ability to Execute

- Customer Experience
- Operations
- Product or Service
- Overall Viability
- Sales Execution/Pricing
- Marketing Execution
- Market Responsiveness and Track Record

Strategic Market Positioning of Vendors In a Magic Quadrant

Focus
on Tomorrow



Completeness of Vision

- Market Understanding
- Offering (Product) Strategy
- Innovation
- Marketing Strategy
- Vertical/Industry Strategy
- Sales Strategy
- Geographic Strategy

Common Mistakes to Avoid When Using the Magic Quadrant

- Looking **only** at the graphic.
- Using only the Magic Quadrant in your vendor selection:
 - Use the **Critical Capabilities** for a deep dive on product.
 - Use **Market Guides** and **Hype Cycles** for up-and-coming vendors and innovation.
- Applying different definitions to the axes.
- Looking only at the leaders.
 - What about your use cases, your needs as an organization — the leaders are not always the right match.

Magic Quadrant for Data Science And Machine Learning Platforms



From [Magic Quadrant for Data Science and Machine Learning Platforms](#), 1 March 2021 (G00467320)

Polling Question 2 of 2

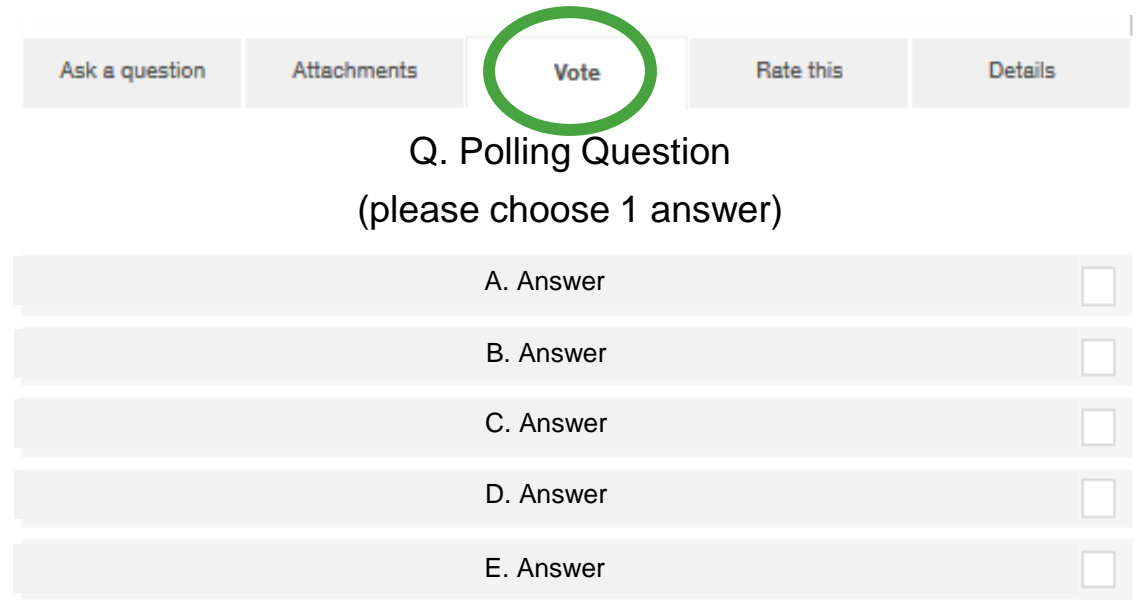
How have your AI Investment Strategies changed (since the onset of the crisis)?

- A. Increased Investment**
- B. Decreased Investment**
- C. Temporarily Suspended**
- D. No Change**
- E. Not applicable (E.g. vendor or investor)**

How to participate in our polling

If you are in full screen mode – click Esc
The poll question is on the “Vote” tab.
Please click the box to make your selection.
Upon voting you will see the results.

Thank you!

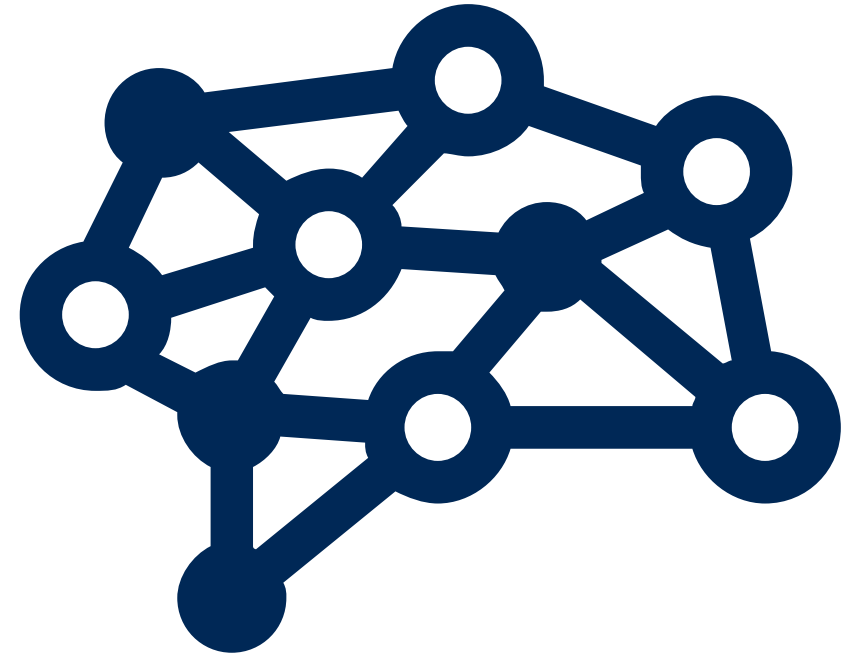


The screenshot shows a navigation bar with five tabs: 'Ask a question', 'Attachments', 'Vote', 'Rate this', and 'Details'. The 'Vote' tab is highlighted with a green circle. Below the tabs, the text reads 'Q. Polling Question (please choose 1 answer)'. There are five rows of answer options, each with a checkbox on the right:

- A. Answer
- B. Answer
- C. Answer
- D. Answer
- E. Answer

What else did we learn?

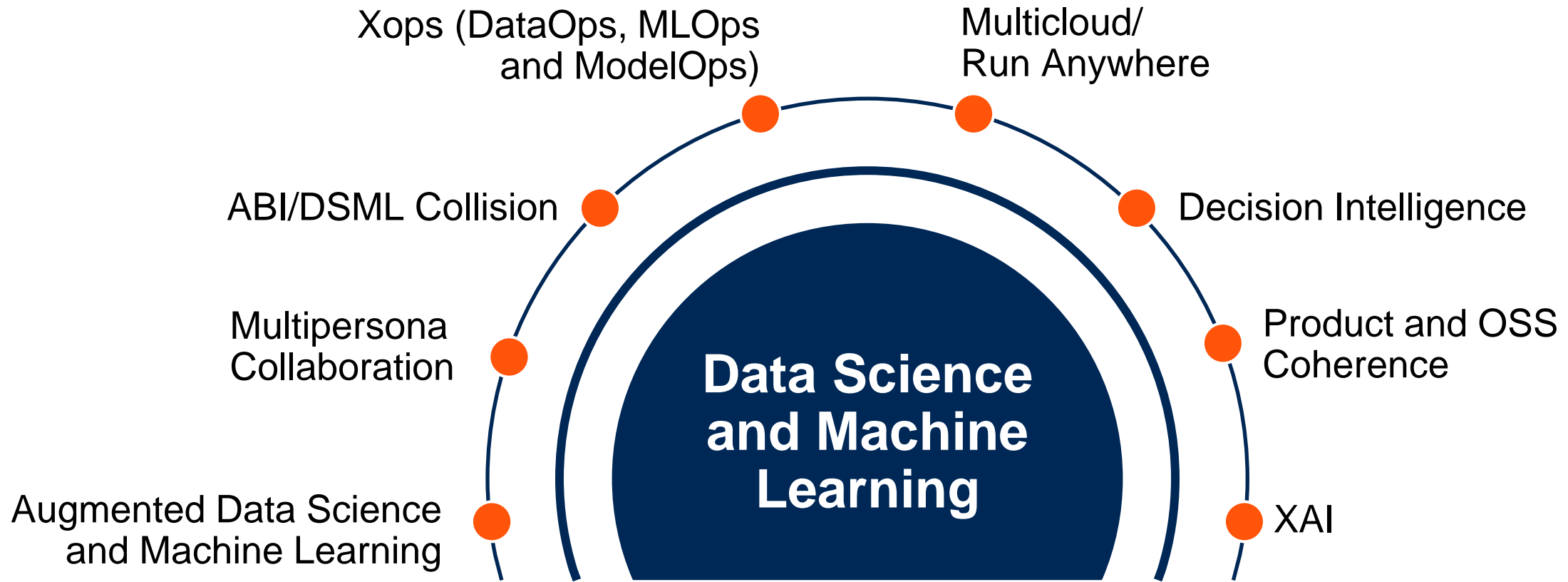
- Resilience of DSML space - strong vendor growth and product development during pandemic
 - Aligns with increased AI investment during pandemic
- Cloud migration accelerated by COVID, still plenty of on-prem
- Brutally competitive space no matter how you slice it
 - Expert DS, CDS and Ops
- Lots of frenemy partnerships between vendors



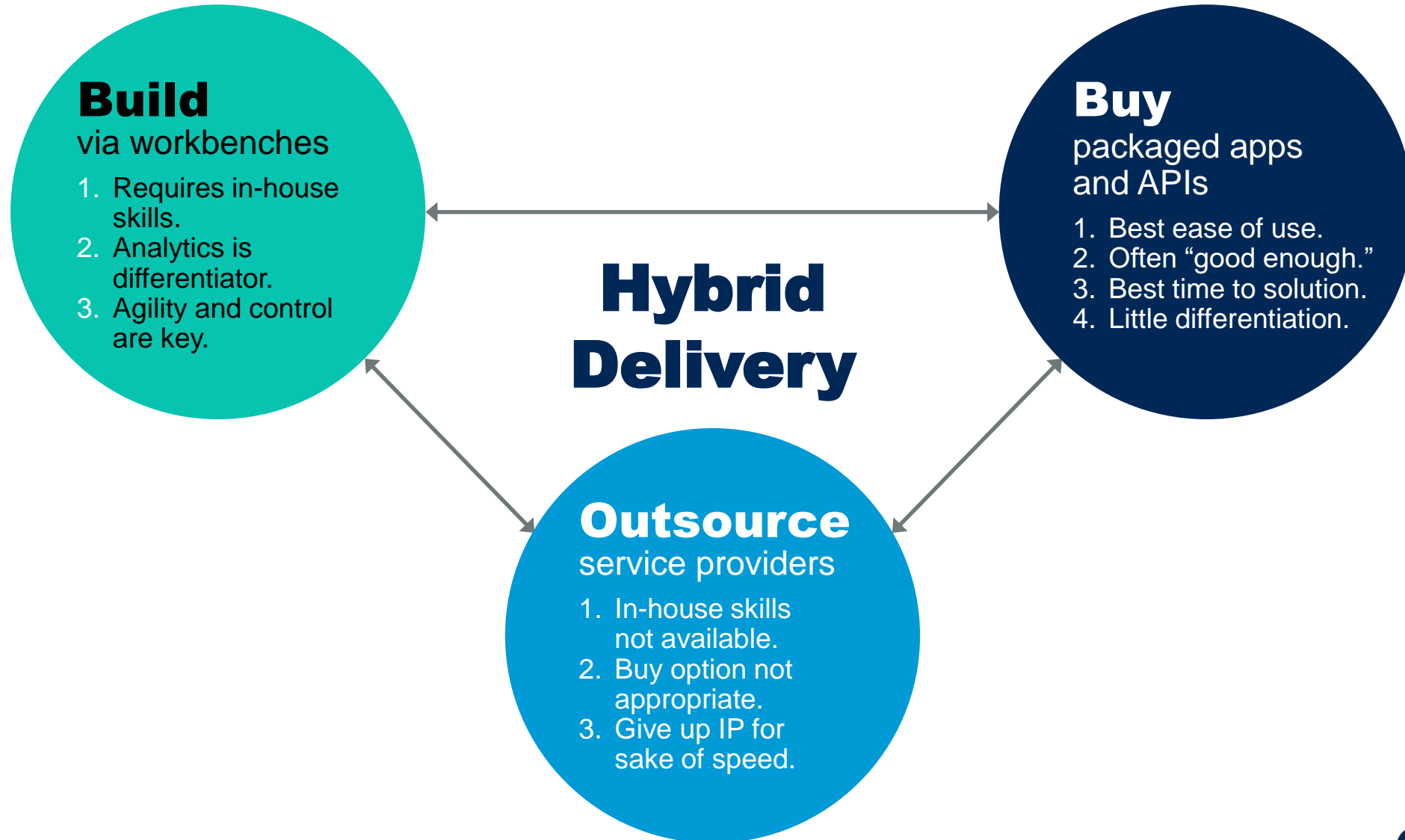
Key Issues

1. How did we create the DSML MQ and what did we learn from the evaluation process?
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Key Trends Impacting Data Science And Machine Learning Platforms



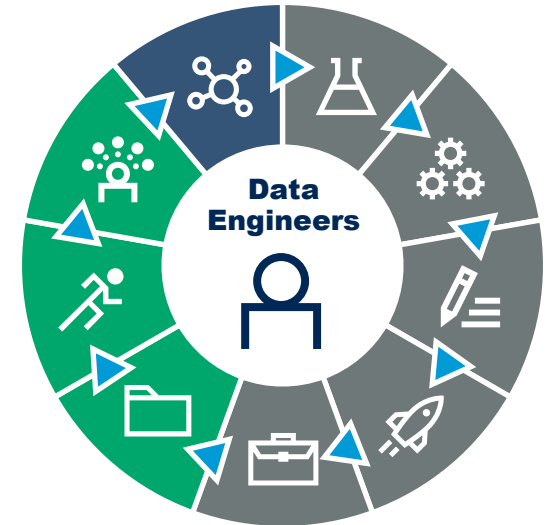
Delivery Models Are Blurring



Skill Map



 **Citizen Data Scientist**



Knowledge Spectrum



Match the Right Level of Data Science Seniority to the Tasks to Be Done

 Core
  Significant
  Decent
  Some

	Guide, Inspire and Storytelling	Formulate/Prioritize Projects	Collect and Integrate Data	Prepare and Refine Data	Explore and Understand Data	Build ML Models	Operationalize ML Models
Junior Data Scientists							
Citizen Data Scientists							
Midlevel Data Scientists							
Senior Data Scientists							

Source: Gartner

720573_C

How the Expanded Data Science Team Contributes to the Key Data Science Tasks

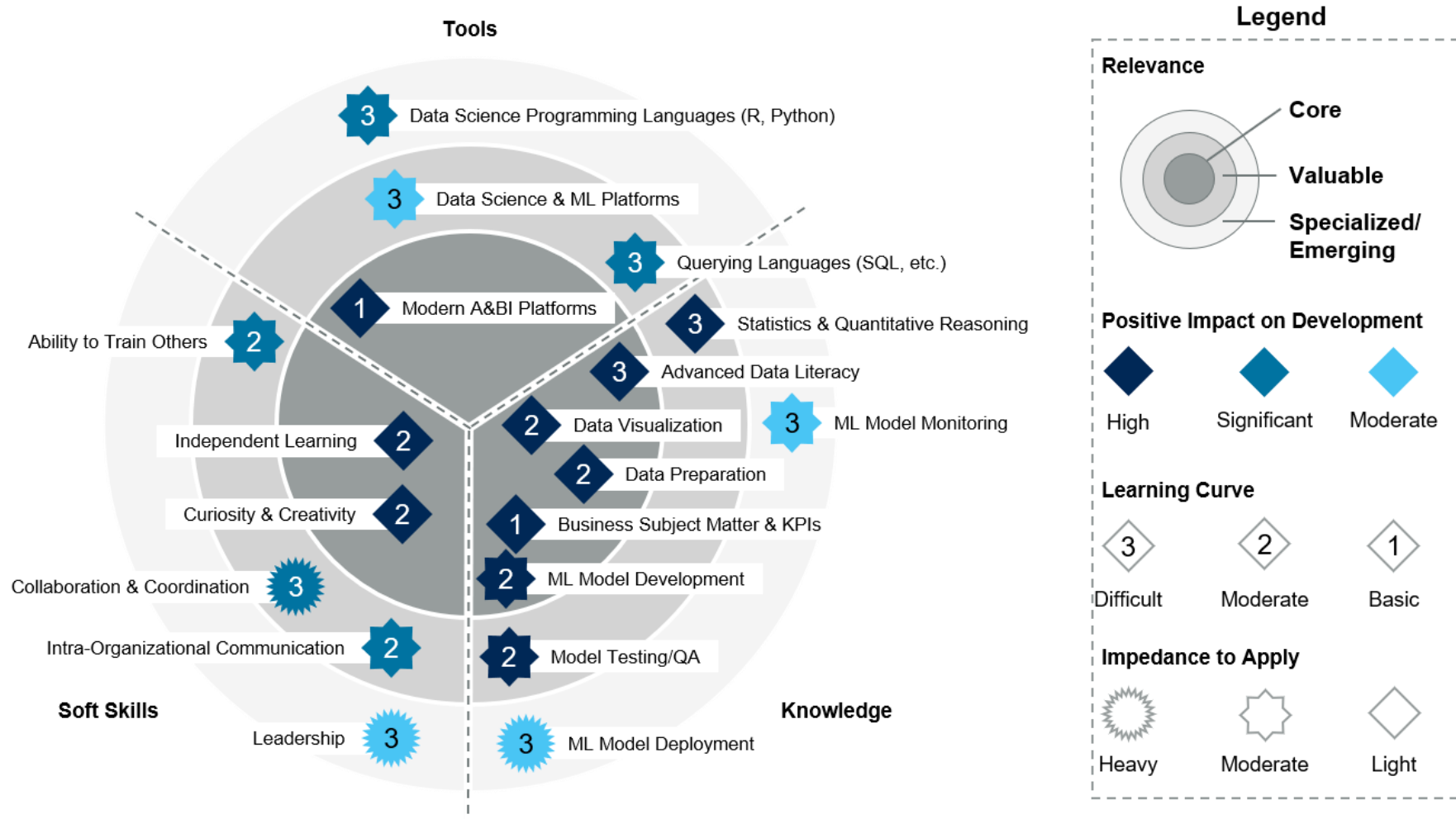
★★★★ Core ★★★★★ Significant ★★ Decent ★ Some - None/Very Little

	Guide, Inspire and Storytelling	Formulate/Prioritize Projects	Collect and Integrate Data	Prepare and Refine Data	Explore and Understand Data	Build ML Models	Operationalize ML Models
Data Engineers	★	★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★
Domain Experts	★★★	★★★★	★	★★★	★★★	★★	★
Business Translators	★★★★★	★★	★	-	-	-	-
Data Analysts	★★★	★	★	★★	★	★	★★
Software Engineers	★	★	★★	★	-	-	★★★★
Infrastructure Architects	★★	★	★★	★	-	-	★
System Experts	★	★	★★★	-	-	-	★

Source: Gartner

720573_C

The Evolving Citizen Data Scientist Persona

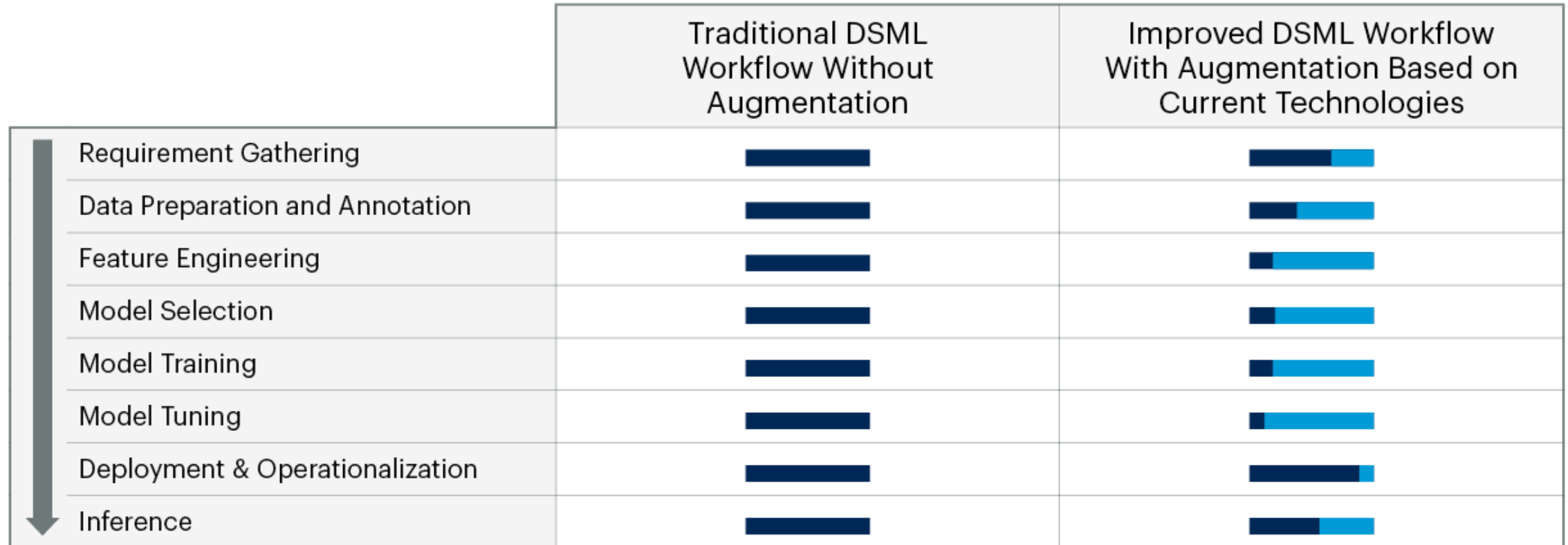


Source: Gartner
ID: 716448

How Augmentation Changes the Traditional DSML Workflow

Simplified View

■ Manual ■ Automated



Source: Gartner

721058_C

The Open-Source Landscape Is Overwhelming, but Vital



Caffe

dmlc
XGBoost

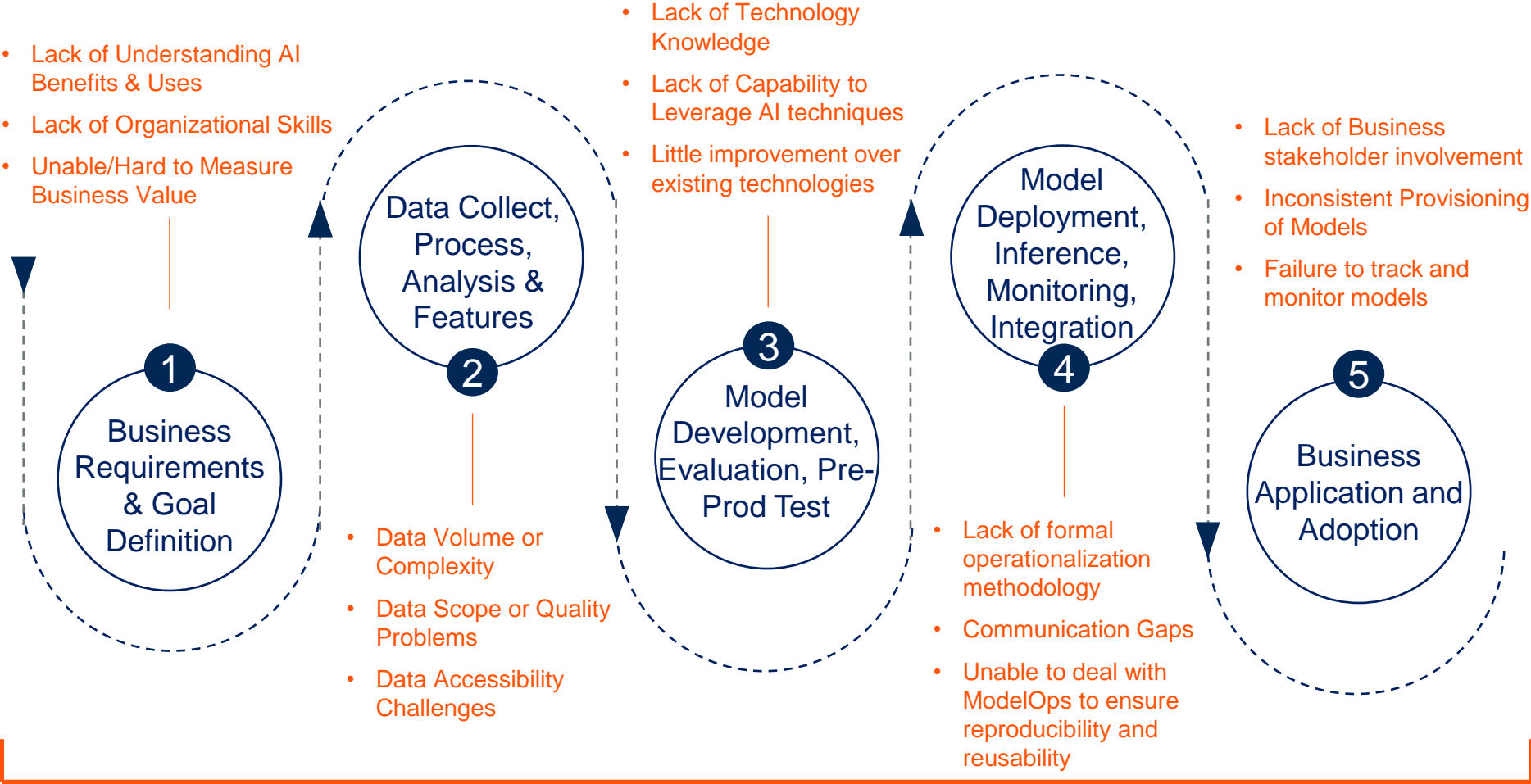


PYTORCH



theano

MLOps – More Vital than Ever



- Security and Ethical Concerns
- Potential Risks and Liabilities
- Complexity of Integration with existing infrastructure

Key Issues

1. What did we learn from about the DSML space from the recent MQ evaluation?
2. What trends are driving customer conversations about DSML today?
3. What trends should shape your long-term DSML strategy?

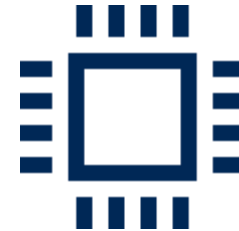
Present and future trends



**AI Trust and
Risk
Management**



**Fusion
Teams**



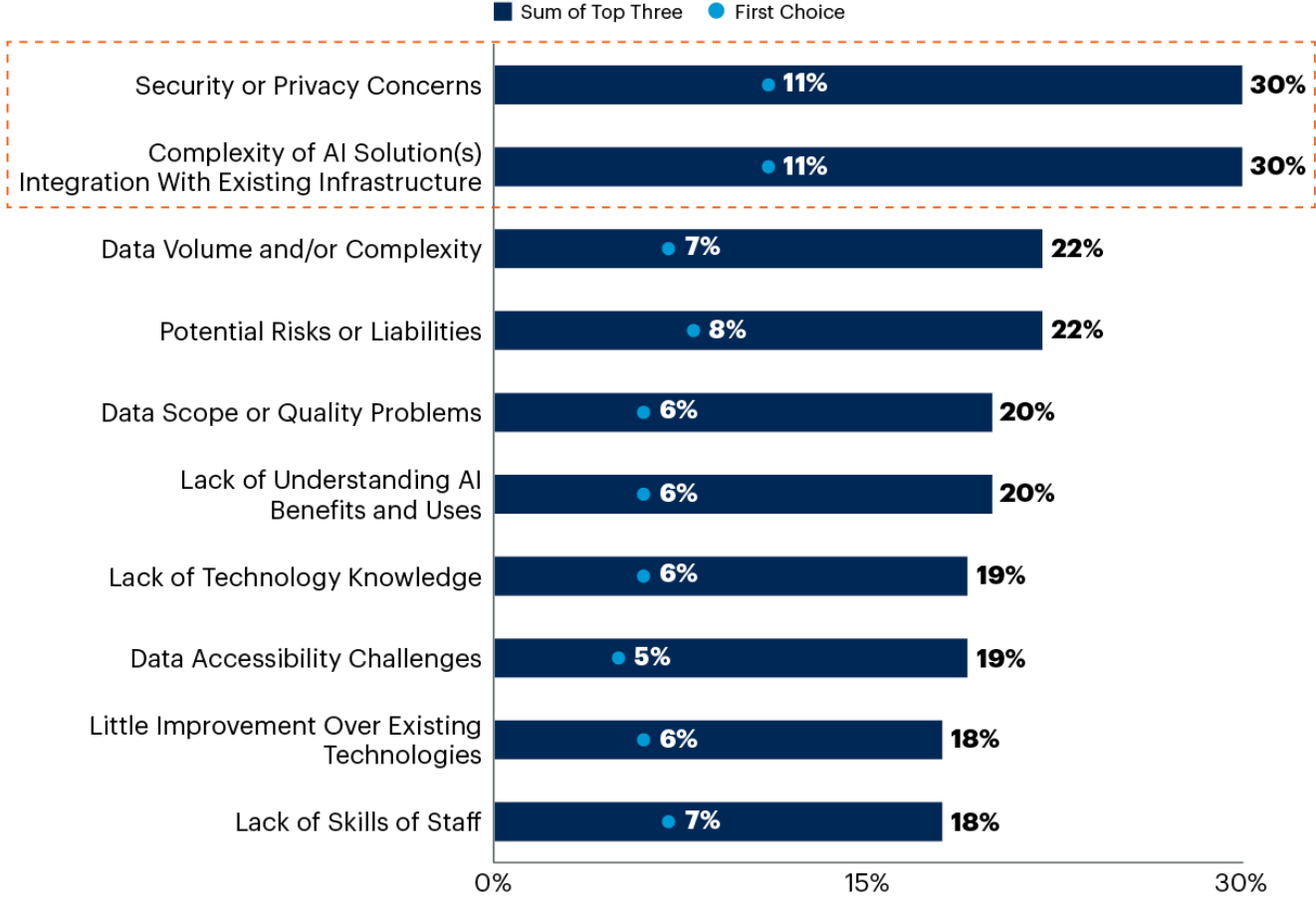
**ModelOps
and
Composite AI**



**Composable
D&A**

Barriers to AI Implementations

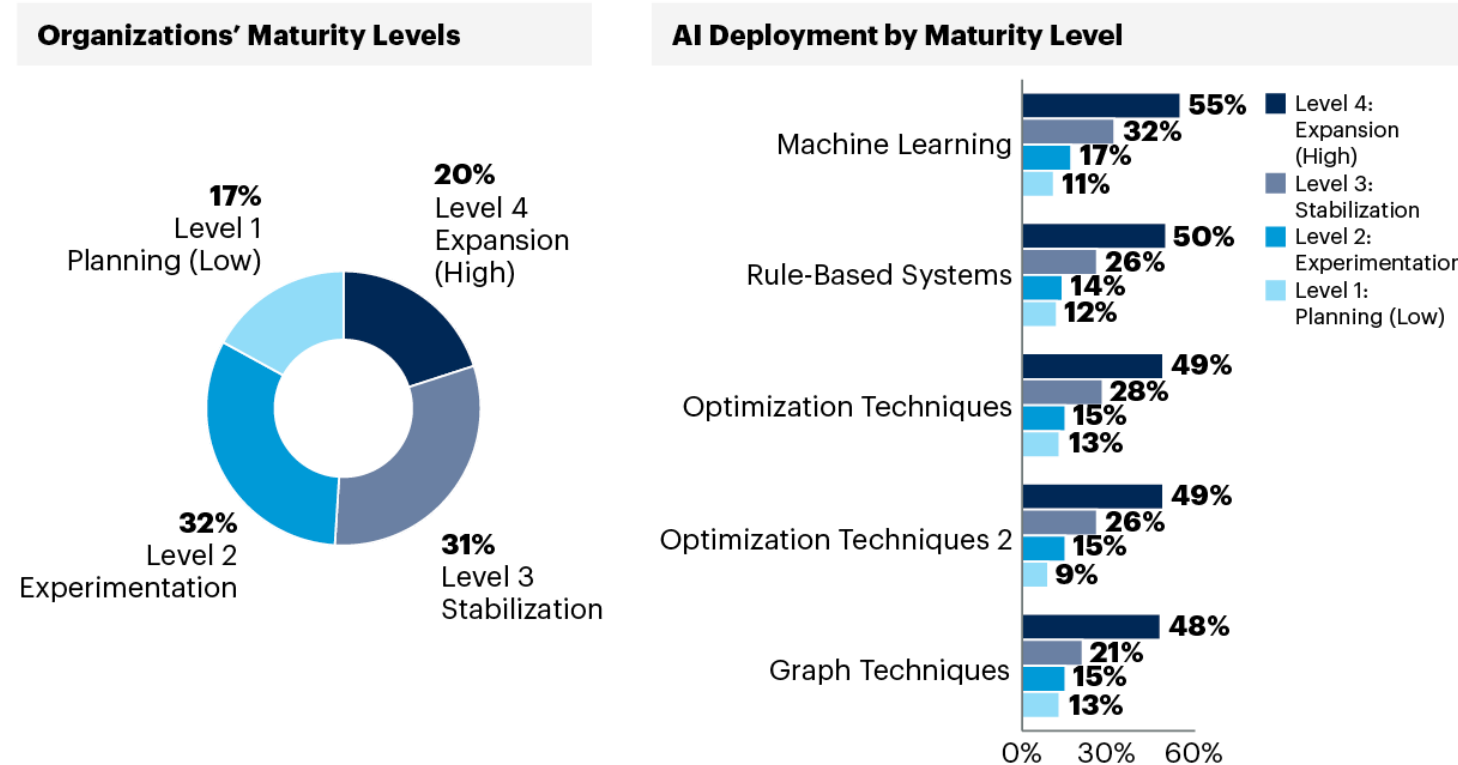
Top 10 Barriers to Artificial Intelligence Implementation
Percentage of Respondents



n = 601
 Source: 2020 Gartner AI in Organizations Survey
 Q: What are the top 3 barriers to the implementation of AI techniques within your organization?
 722711_C

ML is the most leveraged AI technique but not the only one

Adoption Status of AI in Organizations Percentage of Respondents



n = 595, All Respondents, Excluding Don't Know for Maturity Questions

Q: What is the adoption status of the following AI solutions in your organization?

Source: Gartner 2019, AI in Organizations

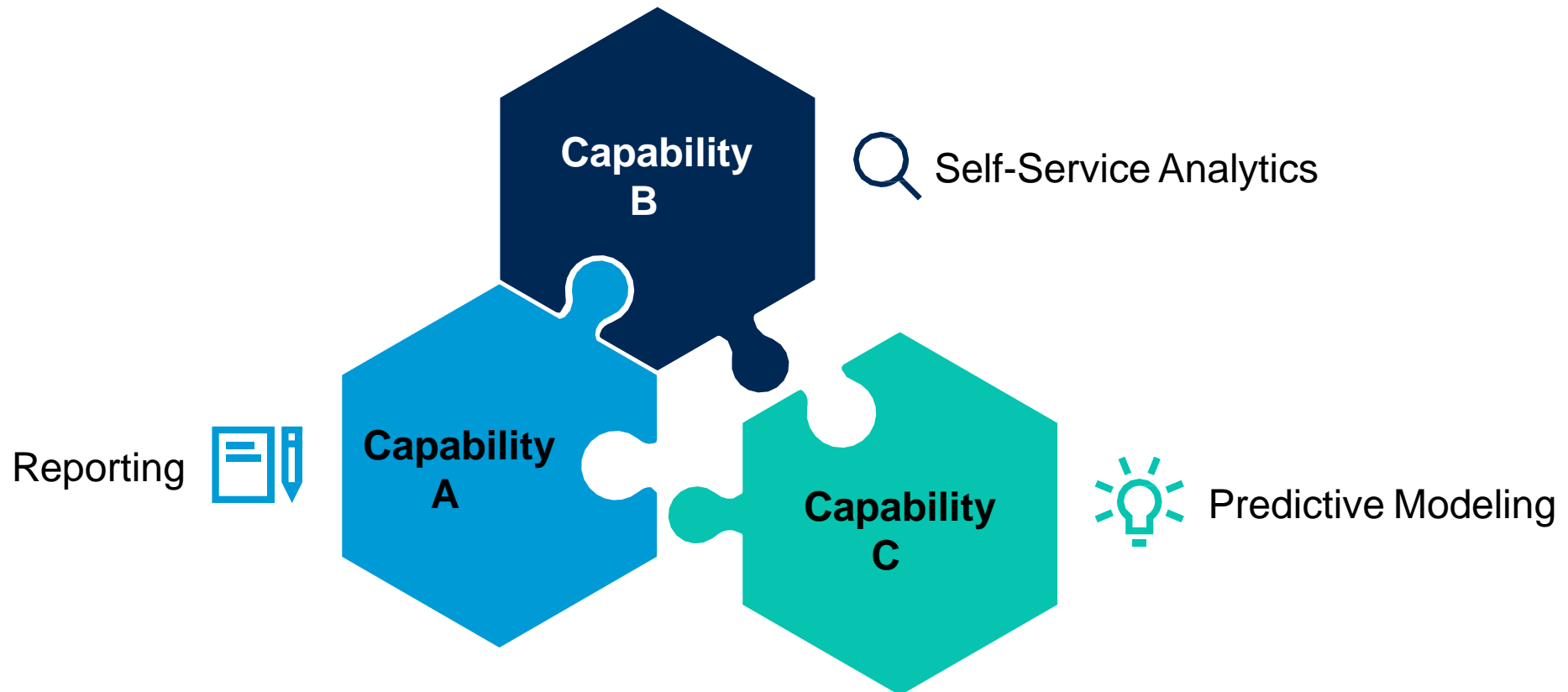
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From apples and oranges to fruit salad

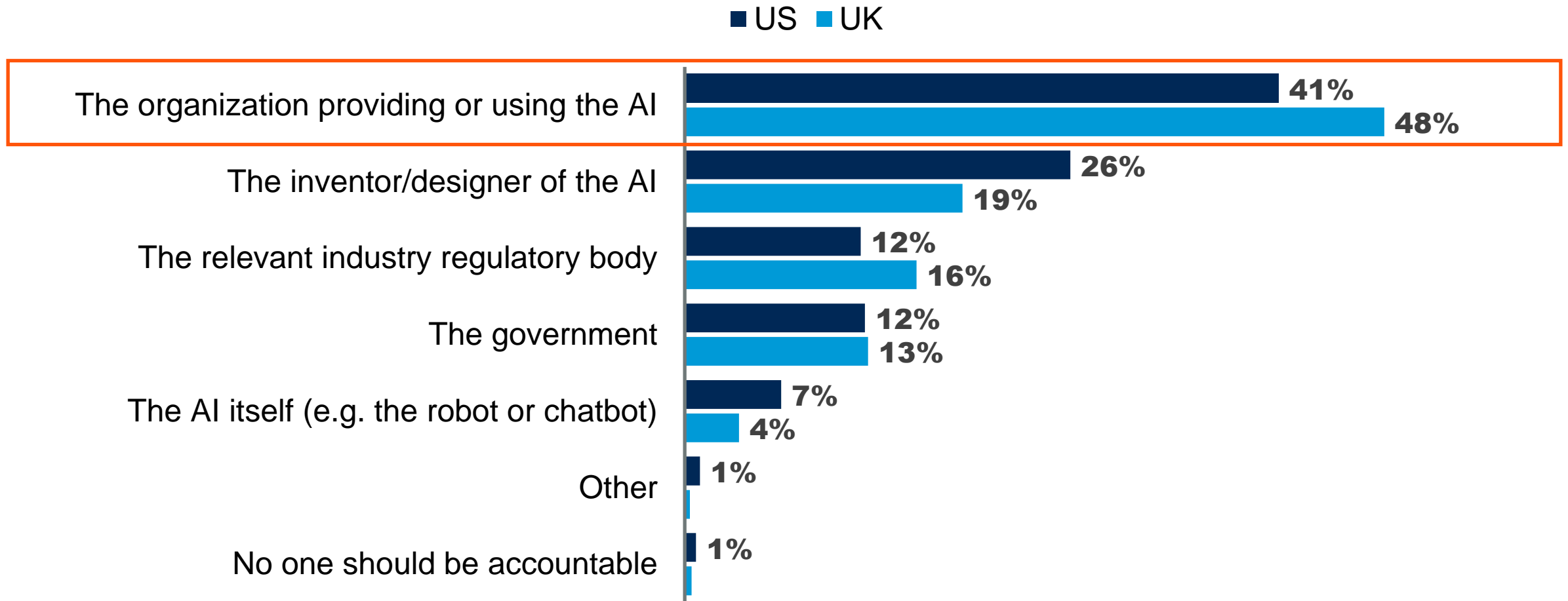


Organizations Need Composable Analytics to Evolve the Analytics Capabilities

Composable Analytics = Embedded + Low/No Code + Consumerization



Consumers Think Your Organization Should Be Accountable When AI Goes Wrong

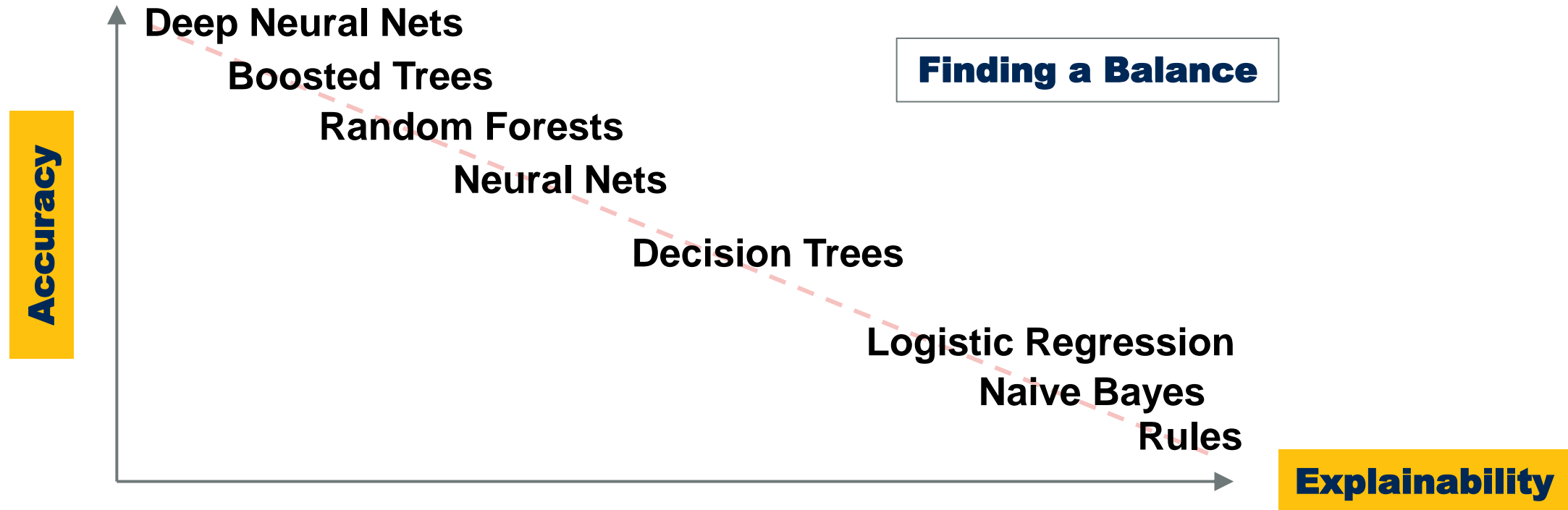


Base: All respondents, excludes unsure

U.K. n = 1,902/U.S. n = 1,905

Q. Who should be most accountable if AI goes wrong? (e.g., mistakes, accidents, bad advices)

Accuracy vs. Explainability



- Technically — Two of the **main differences between machine learning algorithms and traditional linear models** are that machine learning algorithms incorporate many implicit, high-degree variable interactions into their predictions.

Recommendations

- ④ Embrace a **heterogeneous set of tools** that includes vendor platform and components, partner integrations and open source tools.
- ④ Leverage **OSS** to keep pace with new developments and as means of portability across different platforms.
- ④ Focus on **multipersona collaboration** as a key aspect in democratizing DS and ML within the organization.
- ④ Think **beyond ML** models and create **comprehensive and flexible Ops** infrastructure and teams.
- ④ Begin drafting strategies for **XAI, composable AI** and a **multicloud** future.

Ask your questions



The image shows a user interface for asking a question. At the top, there are four tabs: 'Ask a question', 'Attachments', 'Rate this', and 'Details'. The 'Ask a question' tab is highlighted with an orange border and an orange arrow points to it from the left. Below the tabs is a text input field with the placeholder text 'Type your question here...'. At the bottom right of the form, there is a 'Send Question' button, which is also highlighted with an orange border and an orange arrow points to it from the left.

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人机结合的数据分析如何影响有效决策

进取型领导者重新调整数据和分析方法，将决策力转化为竞争优势

这本 Gartner 电子书向您展示如何重塑决策，并指导您：

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- 排序需要优先考虑的决策、分析和数据
- 纳入人工智能到决策中
- 重新思考D&A架构
- 培养利于有效决策的技能、习惯及建立相关团队



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CISO在采用人工智能之前必须回答的5个问题

机器学习技术的潜在优势和风险

围绕人工智能 (AI) 的炒作导致人们对AI的期望过高并且会模糊相关细节，甚至对AI产生恐惧：人工智能接管日常工作的想法常常会引起人们的焦虑。在该份研究中，您可了解到首席信息安全官 (CISO)如何更好地运用人工智能帮助企业提高安全等级。

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