


# Managing Effective Data Science Teams

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**How cool is the  
“coolest job of  
the 21<sup>st</sup> century”  
these days?**

# Key Issues



What do modern data science teams look like?

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What challenges do data science teams face at different stages of their journeys?

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What are the best practices for effective data science?



# Key Issues



What do modern data science teams look like?

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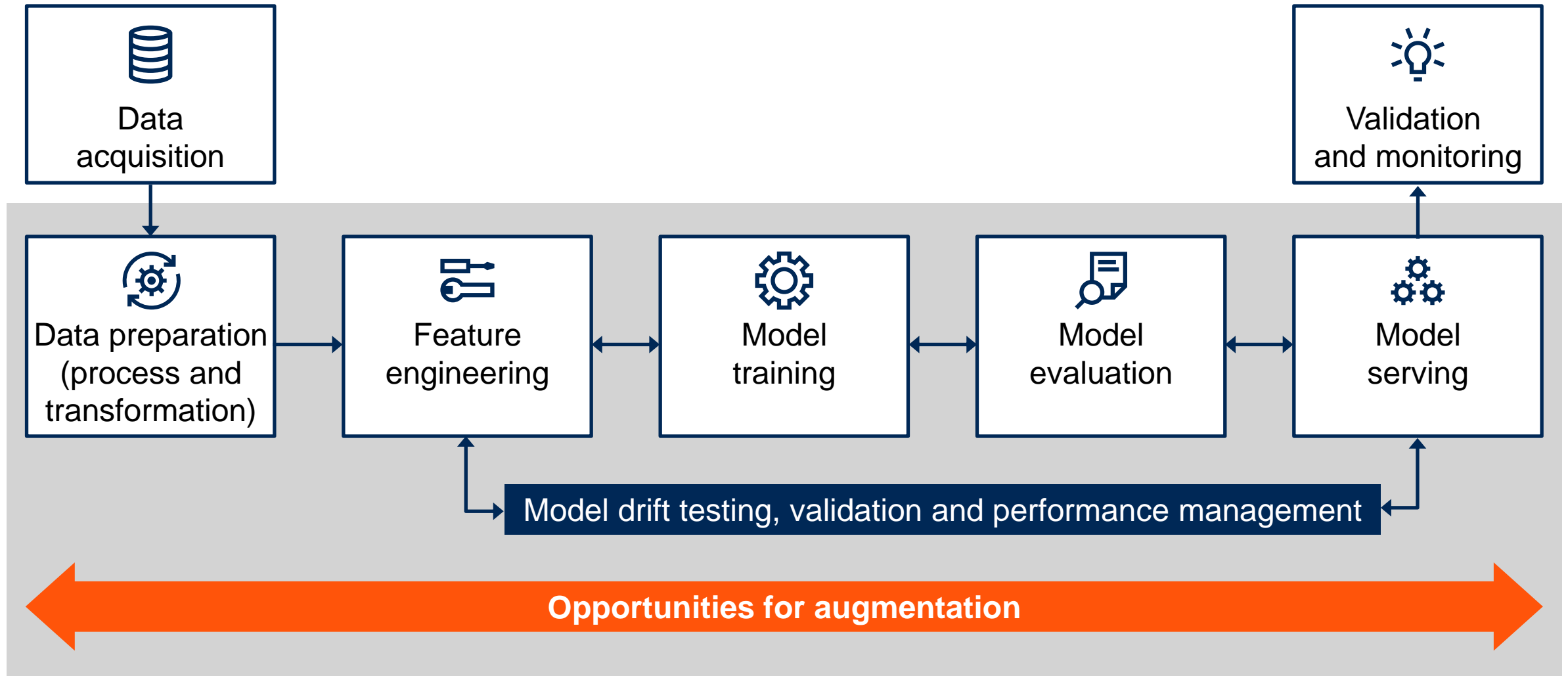
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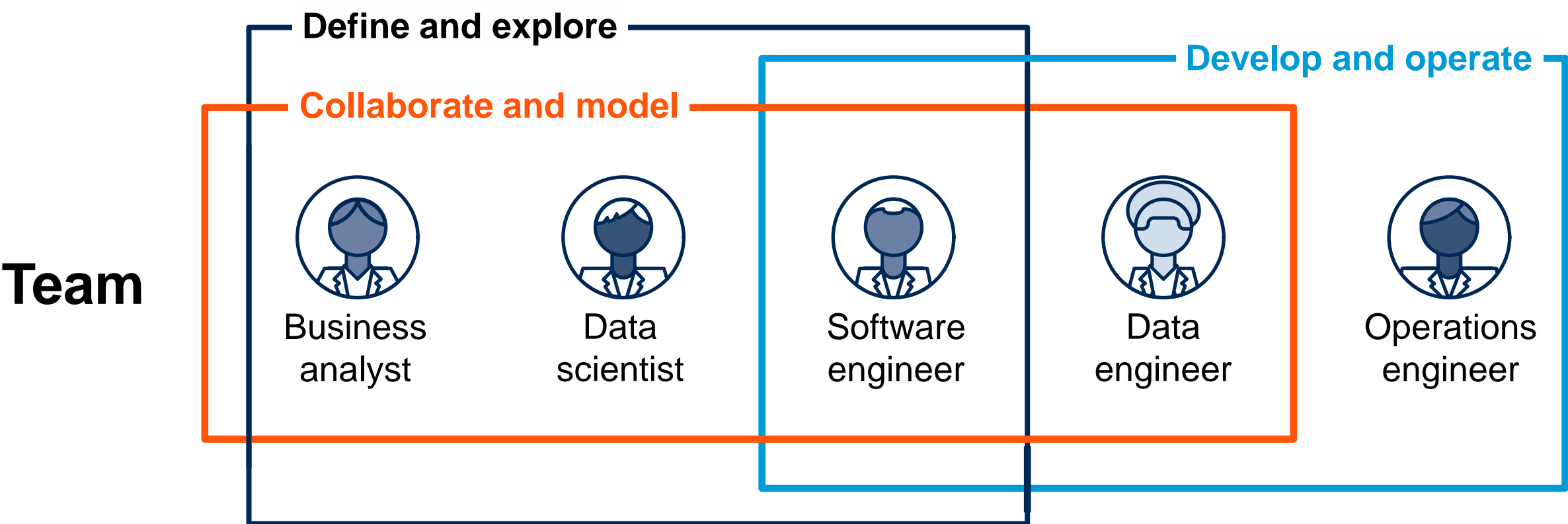
# Typical DSML Steps



DSML = data science machine learning

Source: [Democratize Data Science Initiatives With Augmented DSML](#)

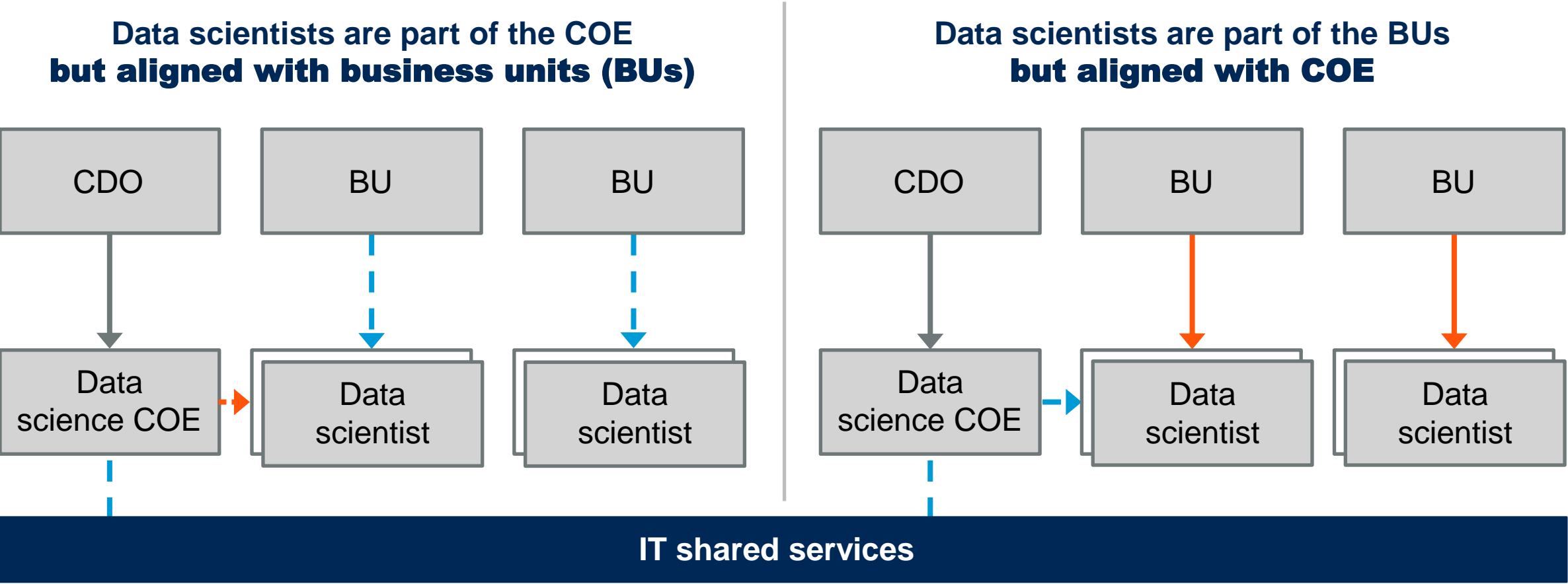
# Data Scientist Collaboration Scope



Source: [Implement Agile Data Science to Accelerate Business Value Delivery](#)

# Example Team Structure

— Direct reporting    — Dotted line reporting



Source: [Machine Learning Playbook for Data and Analytics Professionals](#)



**Data science is a team sport with diverse players and specializations.**



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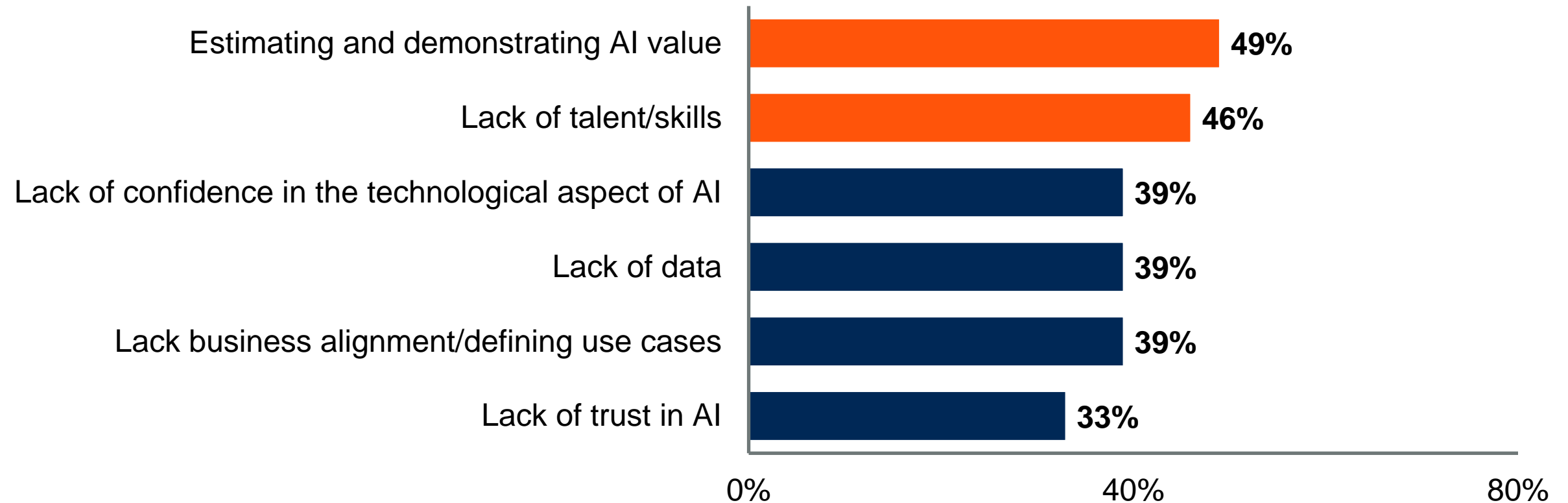


What are the best practices for effective data science?

# Estimating and Demonstrating AI Value, Lack of Talent/Skills Are the Main Challenges

## Top barriers in implementing AI techniques

Sum of top three ranks

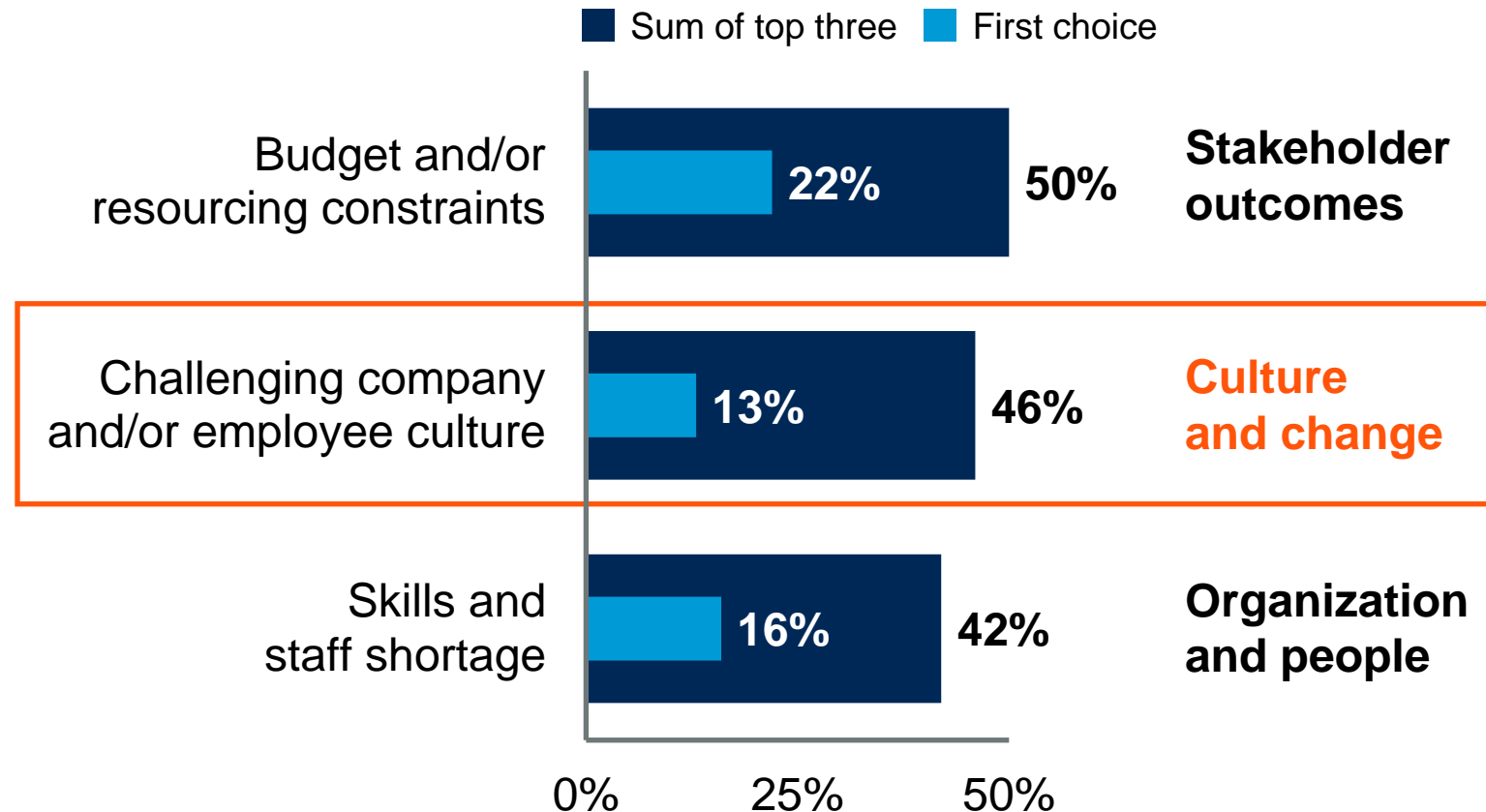


n = 57 leaders highly involved in AI with a primary focus on BI; excluding unsure

Q18: What are or will be the top 3 barriers to the implementation of AI techniques within your organization?

Source: 2023 Gartner AI in the Enterprise Survey

# Not Addressing These Challenges Will Get You Fired



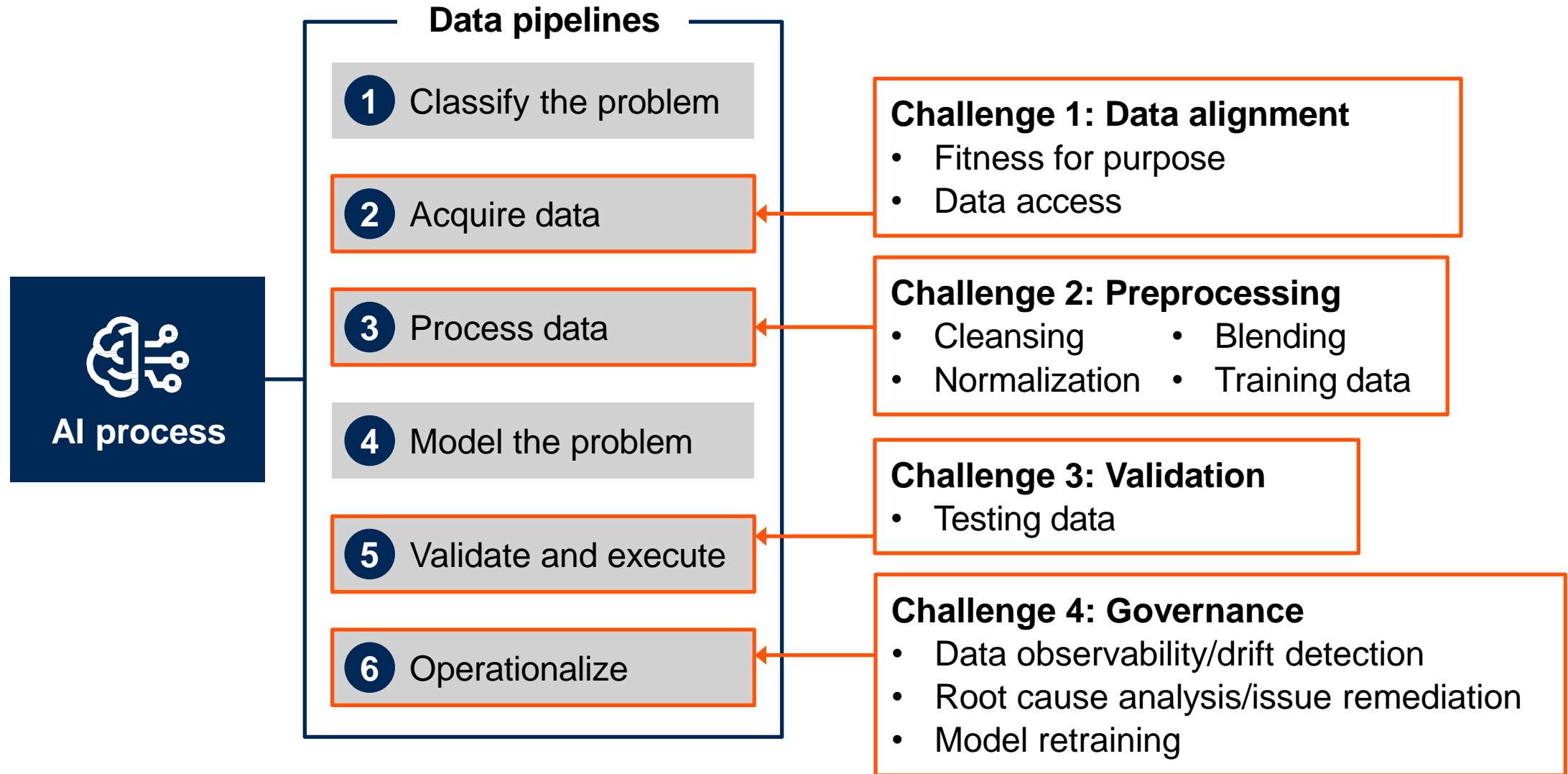
n = 478; all respondents, excluding no roadblocks

Q15: Most pressing challenges to the success of your data and analytics initiatives?

Source: 2024 Gartner Chief Data and Analytics Officer Agenda Survey

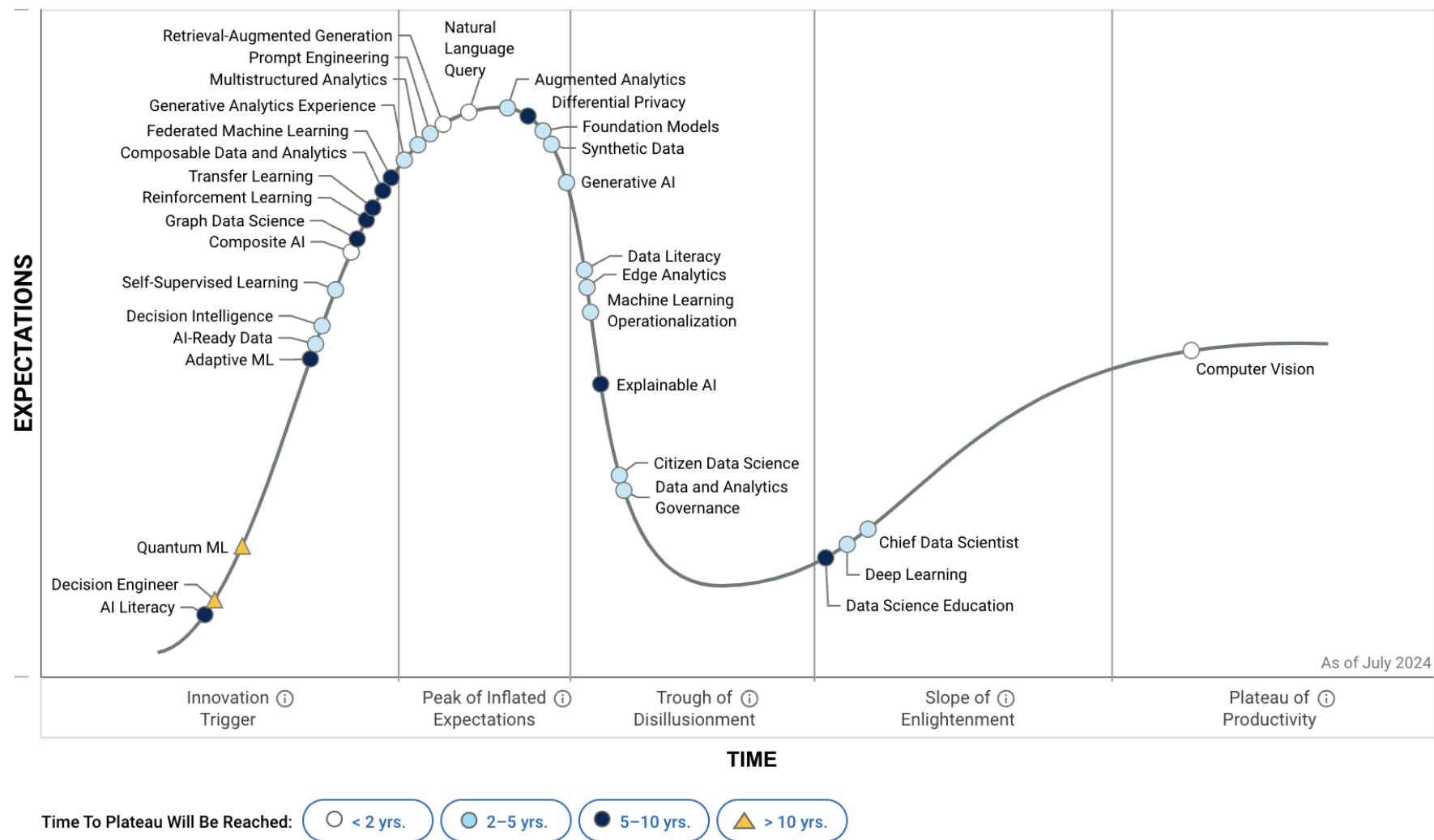


# Data Quality Challenges for AI and ML



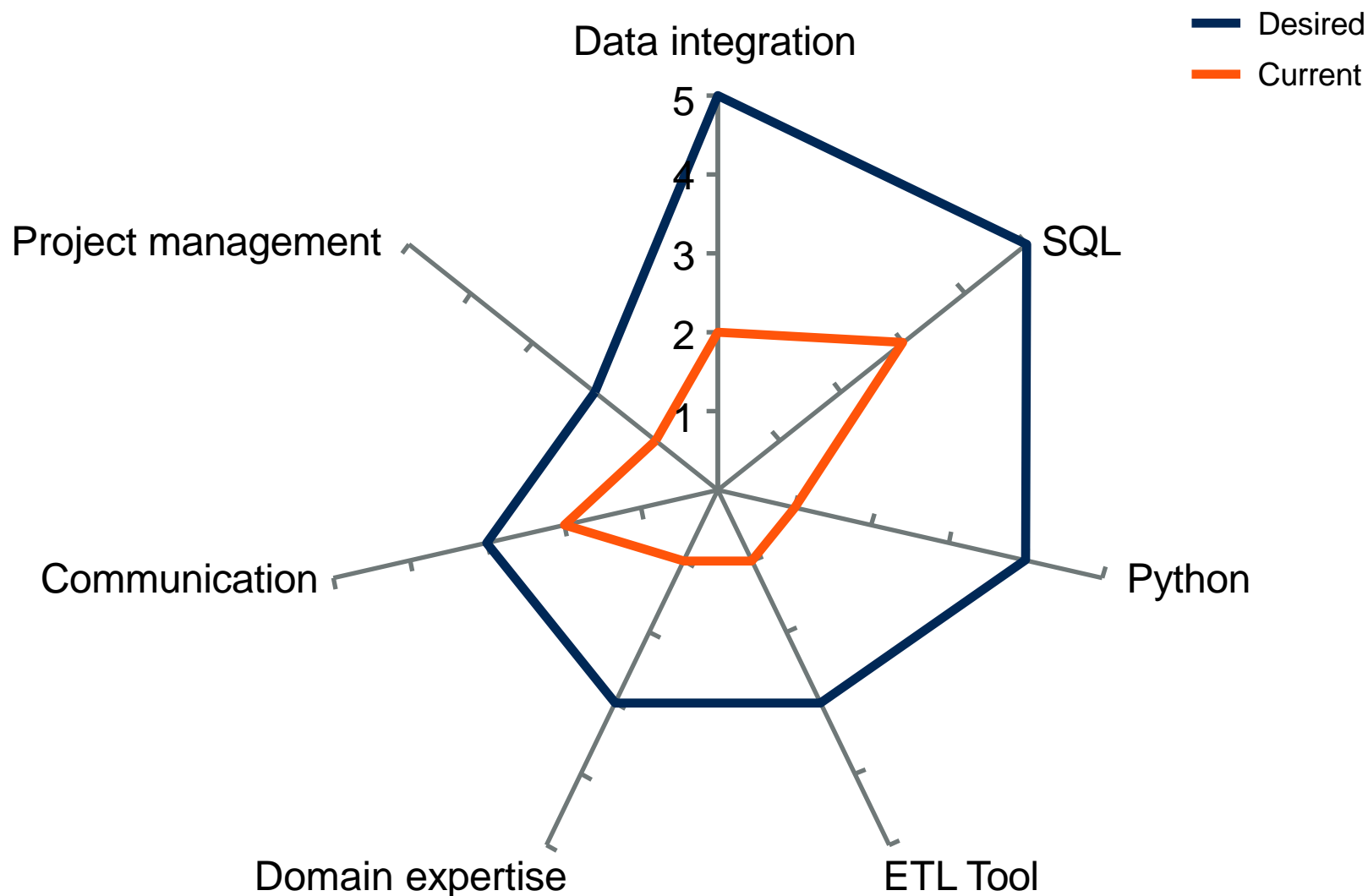
# Hype Will Get Worse Before it Gets Better

## Hype Cycle for Data Science and Machine Learning, 2024



Source: [Hype Cycle for Data Science and Machine Learning, 2024](#), 30 July 2024

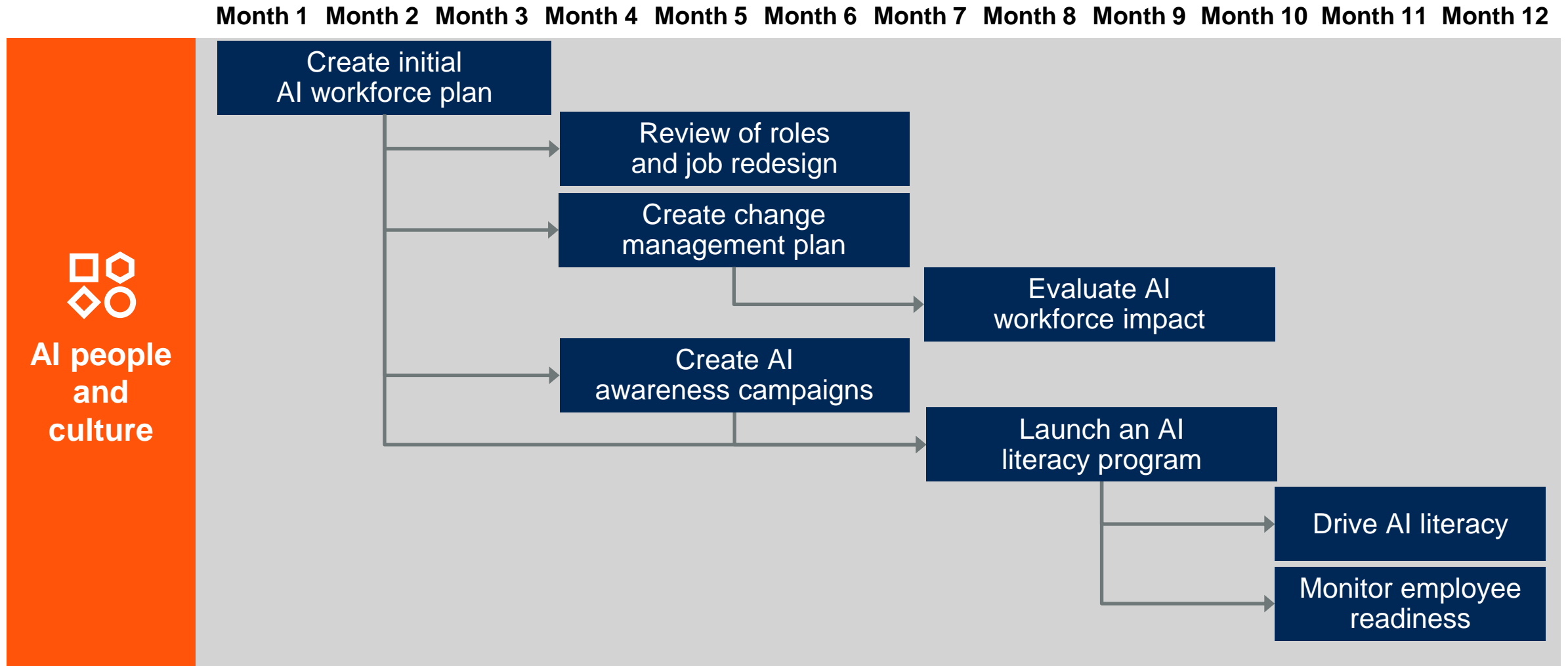
# Example Skill Gap



ETL = extraction, transportation and loading



# AI People and Culture Illustrative Roadmap



# Key Issues



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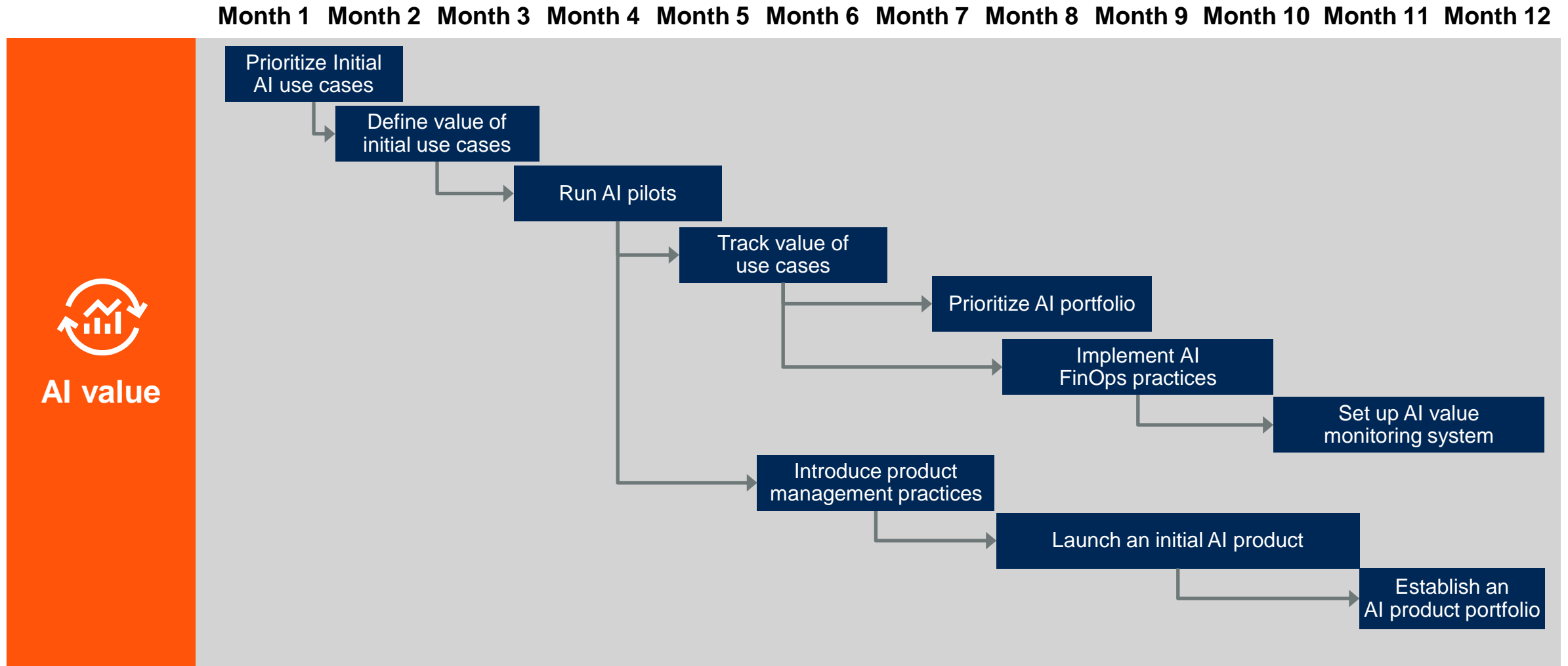
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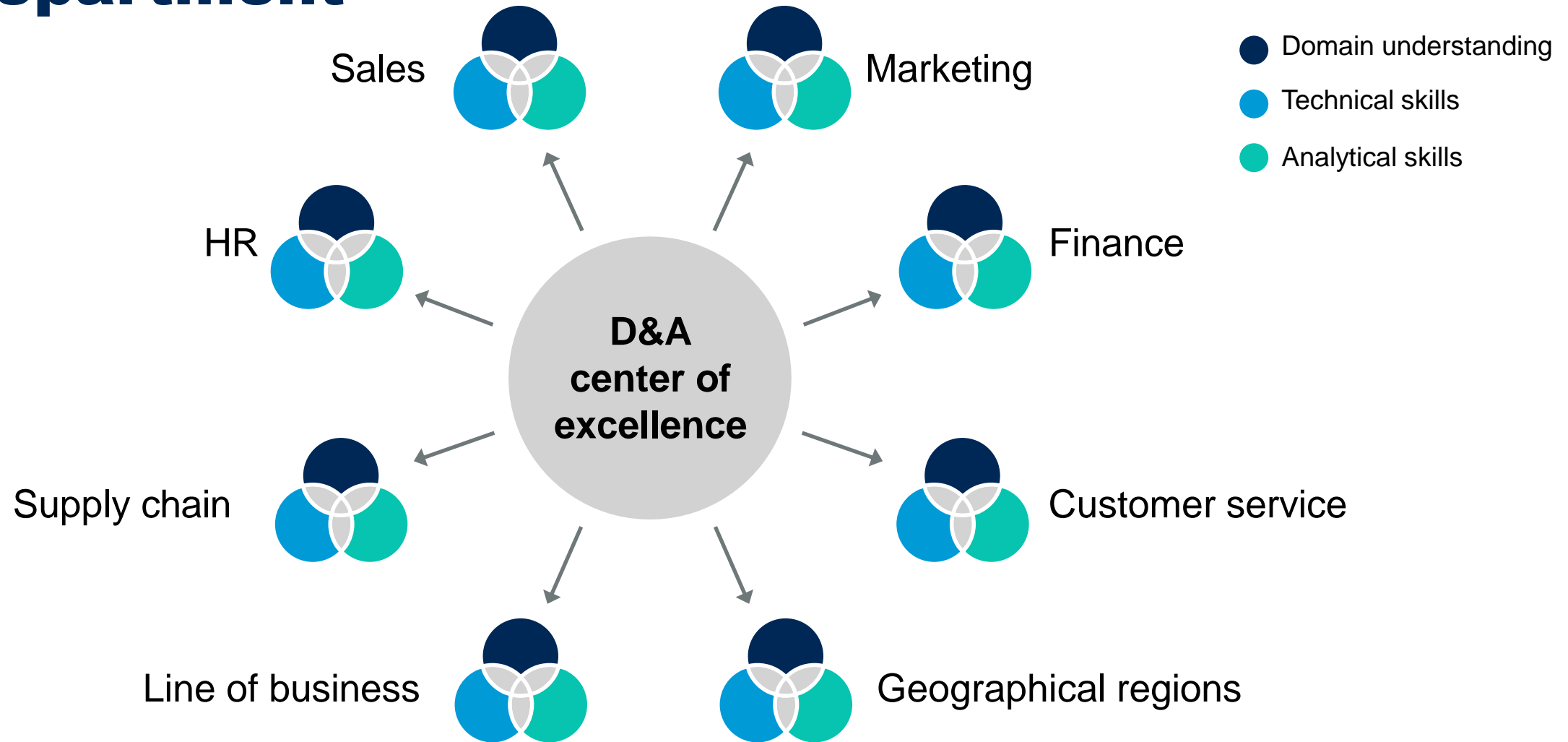


What are the best practices for effective data science?

# AI Value Illustrative Roadmap



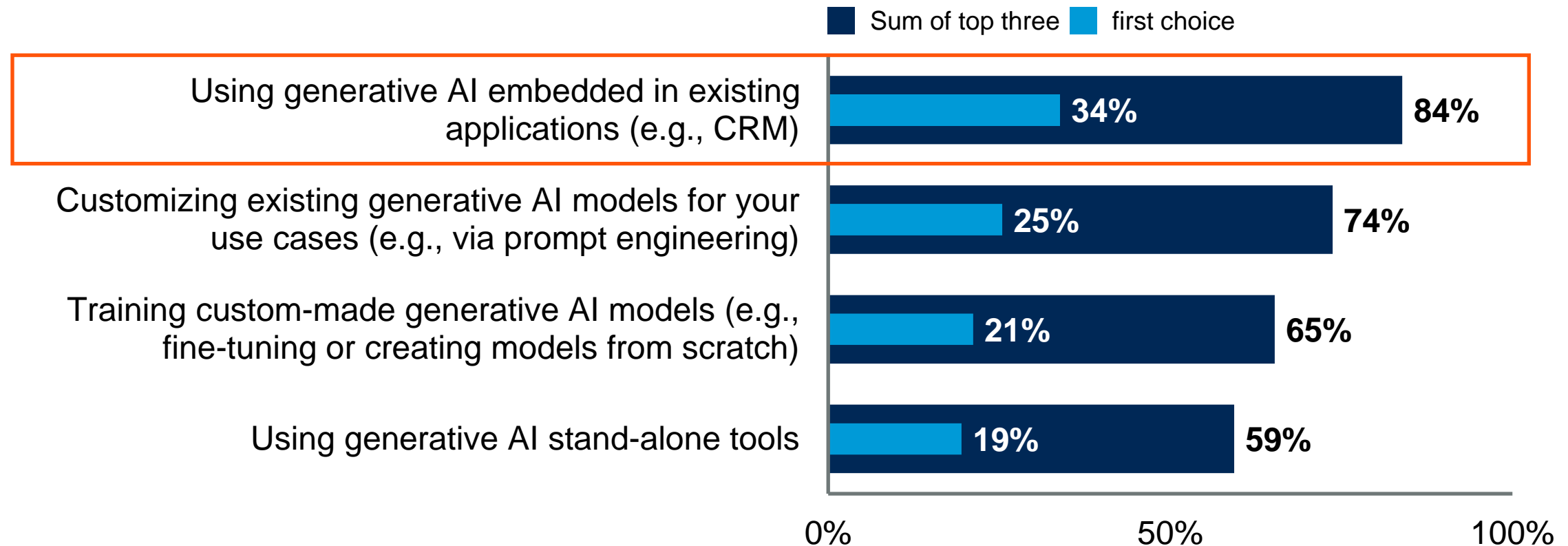
# Plan to Open an Analytics Franchise in Each Department



# The Top Way to Fulfill Generative AI Use Cases Is to Embed Generative AI Into Existing Applications

## Top Methods to Fulfill GenAI Use Cases

Sum of top three ranks versus first choice



n = 118 leaders highly involved in AI, whose orgs are advanced in generative AI adoption, excluding "unsure"

Q: How is your organization primarily fulfilling generative AI use cases?

Source: 2023 Gartner AI in the Enterprise Survey

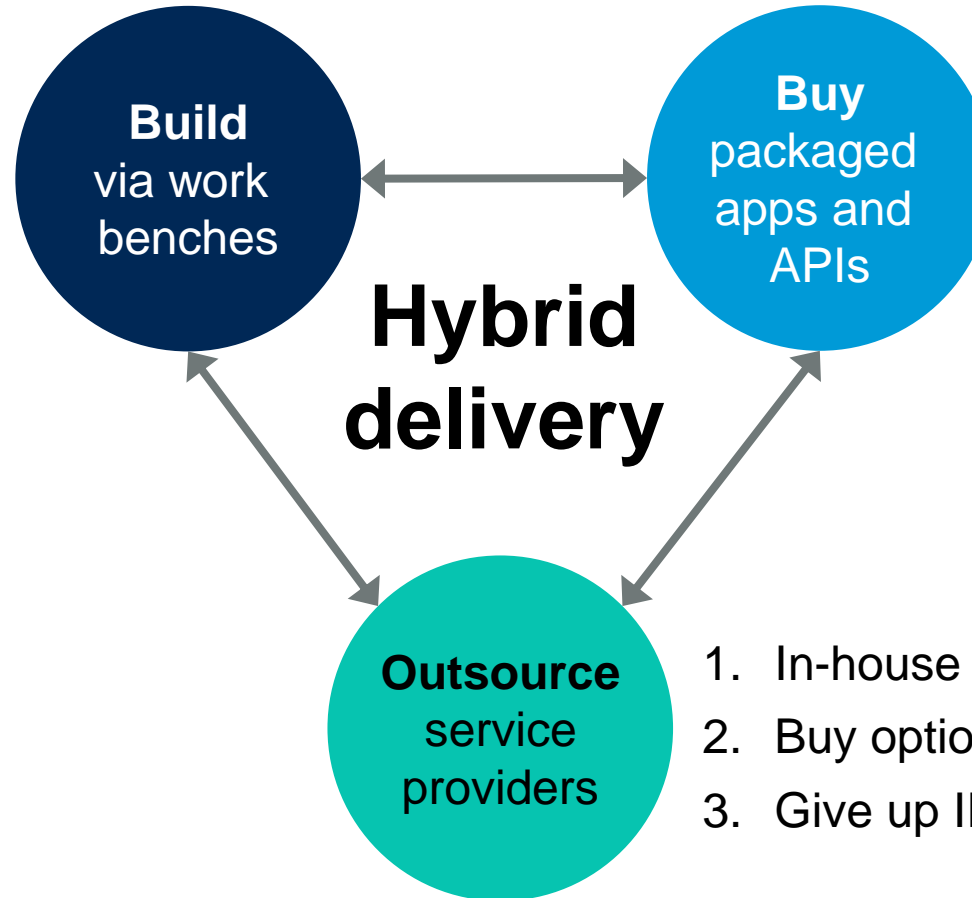


**GenAI is a game changer in data science and professionals are adapting.**



# Delivery Models Are Typically Blurred

1. Requires in-house skills.
2. Analytics is the differentiator.
3. Agility and control are key.



1. Best ease of use.
2. Often “good enough.”
3. Best time for solution.
4. Little differentiation.

1. In-house skills not available.
2. Buy option not appropriate.
3. Give up IP for the sake of speed.

# Where Data Science Usually Goes Wrong

Garbage in,  
garbage out

Talent struggles

Consumption  
gap

Deployment  
gap

Value gap

Data literacy

Storytelling and  
salesmanship



**Fundamentals will win the day.  
GenAI will polish and sharpen.**

# Recommendations

- ✓ Catalog data science skills and ambitions.
- ✓ Be serious and deliberate about team culture.
- ✓ Deliver with fundamentals, show off with GenAI.
- ✓ Cut through hype and semantics — start focused, stay focused.
- ✓ Strategize for permanent challenges (staffing, communication and adoption).

# Recommended Gartner Research

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- 🔍 [\*\*Magic Quadrant for Data Science and Machine Learning\*\*](#)  
Afraz Jaffri, Aura Popa, Peter Krensky and Others
- 🔍 [\*\*Hype Cycle for Data Science and Machine Learning, 2024\*\*](#)  
Peter Krensky
- 🔍 [\*\*Implement Agile Data Science to Accelerate Business Value Delivery\*\*](#)  
Peter Hyde and Joe Antelmi
- 🔍 [\*\*The Pillars of a Successful Artificial Intelligence Strategy\*\*](#)  
Pieter den Hamer and Raghvender Bhati