IDC

AI Driven Decisioning: How AI can improve Decision Velocity

IMPACT AI Summit

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Audience Question

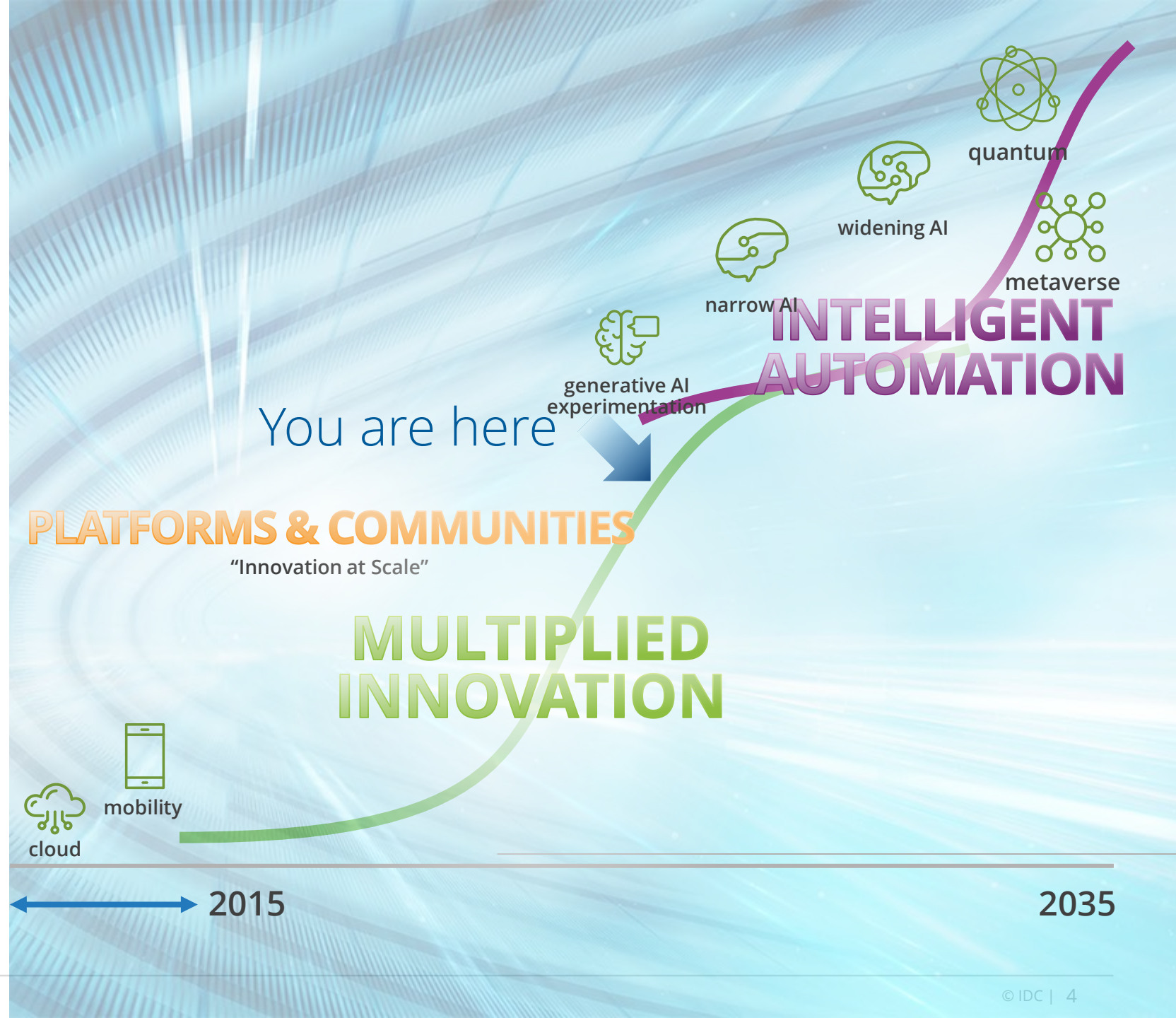**What was the 2023 Word of the Year for Technology Leaders?**

Innovation

Efficiency

Data

Transformation

Automation

Growth

Resiliency

Agility

Trust

Speed

Word of the Year for 2023 = Efficiency

Efficiency is the CIO "Word of the Year" for 2023

Growth

#3 Data

Resiliency

Speed

#1 **Efficiency**

Agility

Trust

#2 Transformation

Automation

Innovation

Q. Which of the following words most reflect what your organization needs to focus on to thrive in 2023?

IDC CIO Quick Poll, n=69 (December 2022)

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A TRANSITION
IS HERE.

You are here

quantum

widening AI

narrow AI

metaverse

generative AI
experimentation

INTELLIGENT
AUTOMATION

PLATFORMS & COMMUNITIES

"Innovation at Scale"

MULTIPLIED
INNOVATION

mobility

cloud

2015

2035

Spending on Big Data and Analytics

$290 Billion in 2022

U.S. BDA
15.5%
30-year CAGR

Rest of Software
9.4%
30-year CAGR

U.S. GDP
4.4%
30-year CAGR

Have we been investing to solve the right problem?

Are we ready for our relationship with data to change?

82% have not been able to remove data silos[2]

40% cite distribution and number of data sources impacting outcomes[3]

37% cite data type variety as a complexity impacting outcomes[3]

41% cite that data is changing faster than they can keep up with[4]

77% say data intelligence is a challenge (observability, lineage, cataloging)[3]

2 out of 3 enterprises lack AI investments to improve data usage[5]
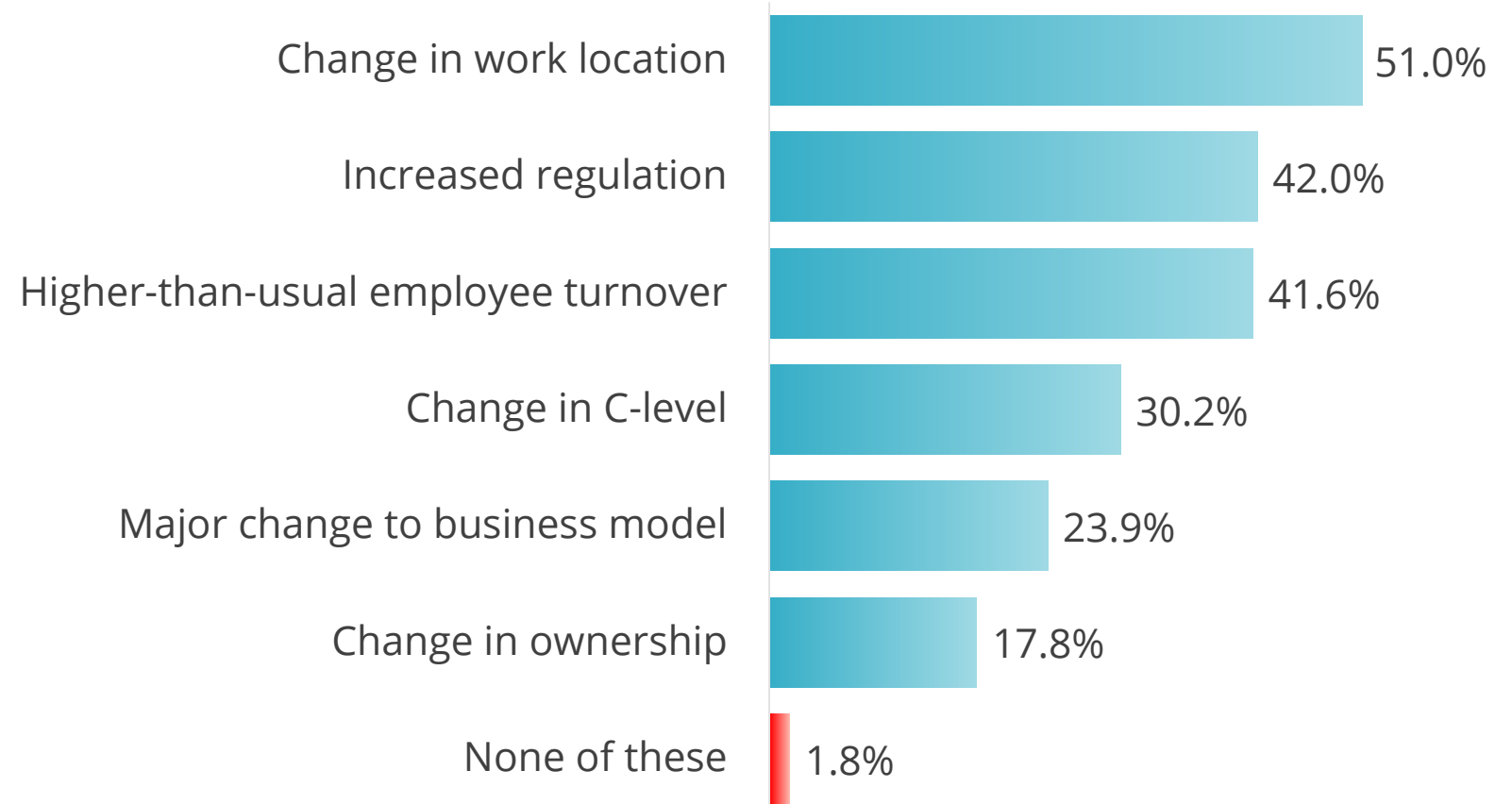
31% cite data technology debt[3]

"We were largely designing through experience and data and then using analysis and simulation to investigate what we'd already produced...

... today we design and simulate in the virtual world, and the real world just intrudes through validation step of those models"

Geoffrey Willis — Director of Commercial Engineering, Mercedes AMG Petronas Formula 1 Team
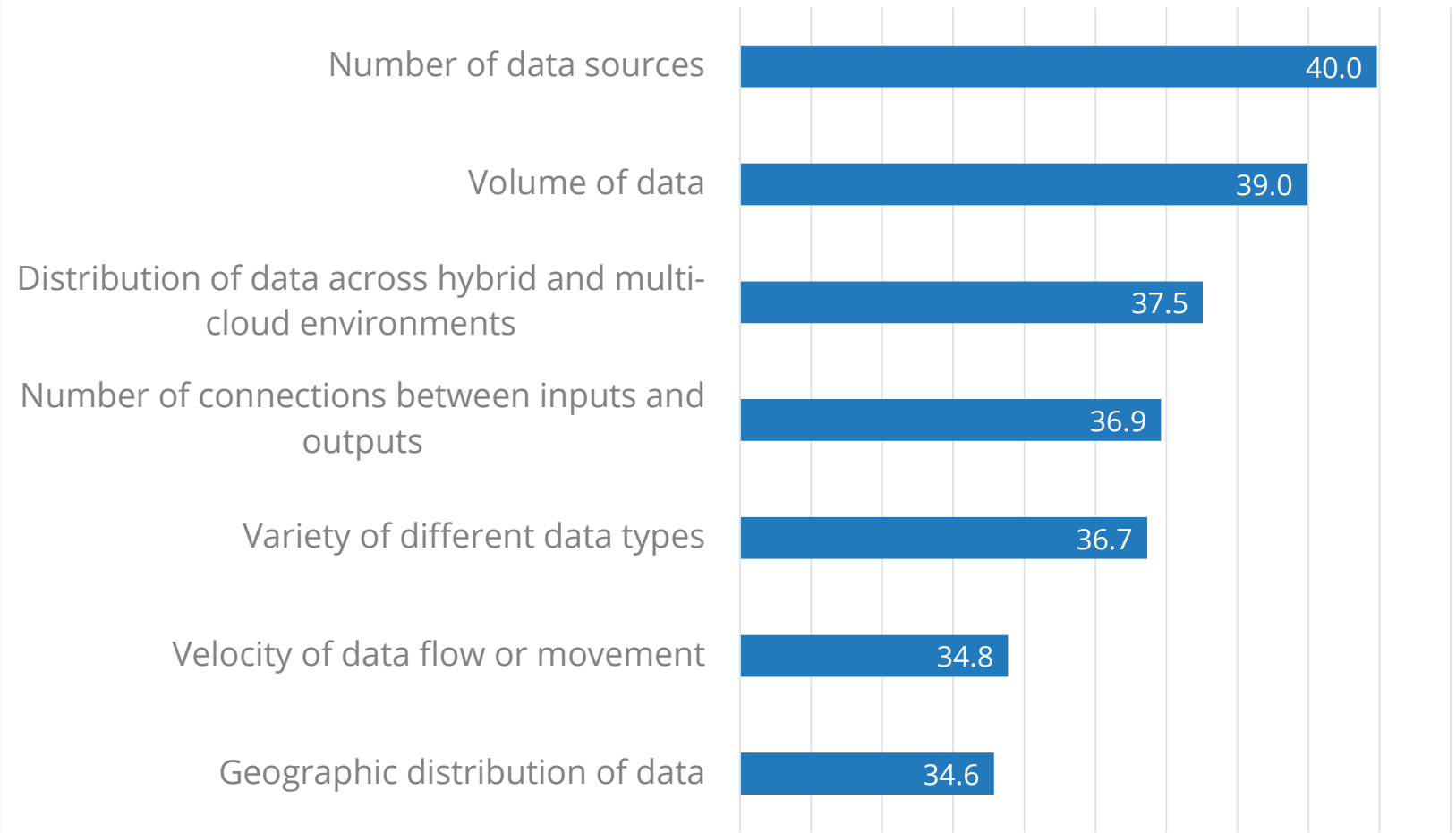
Volatility & Uncertainty

What Changes Has Your Organization Undergone in the Past 2 Years or Is Experiencing Currently?
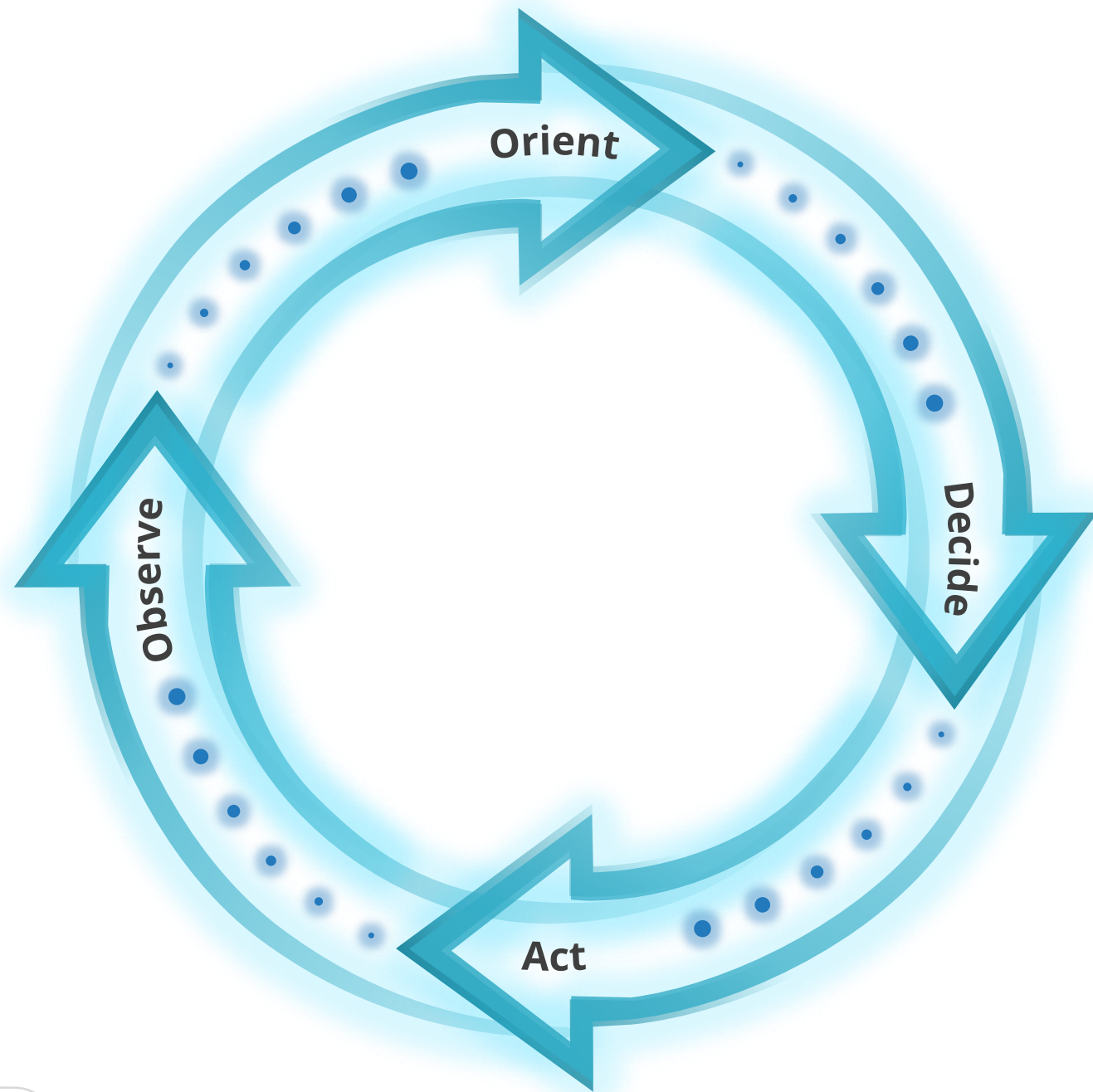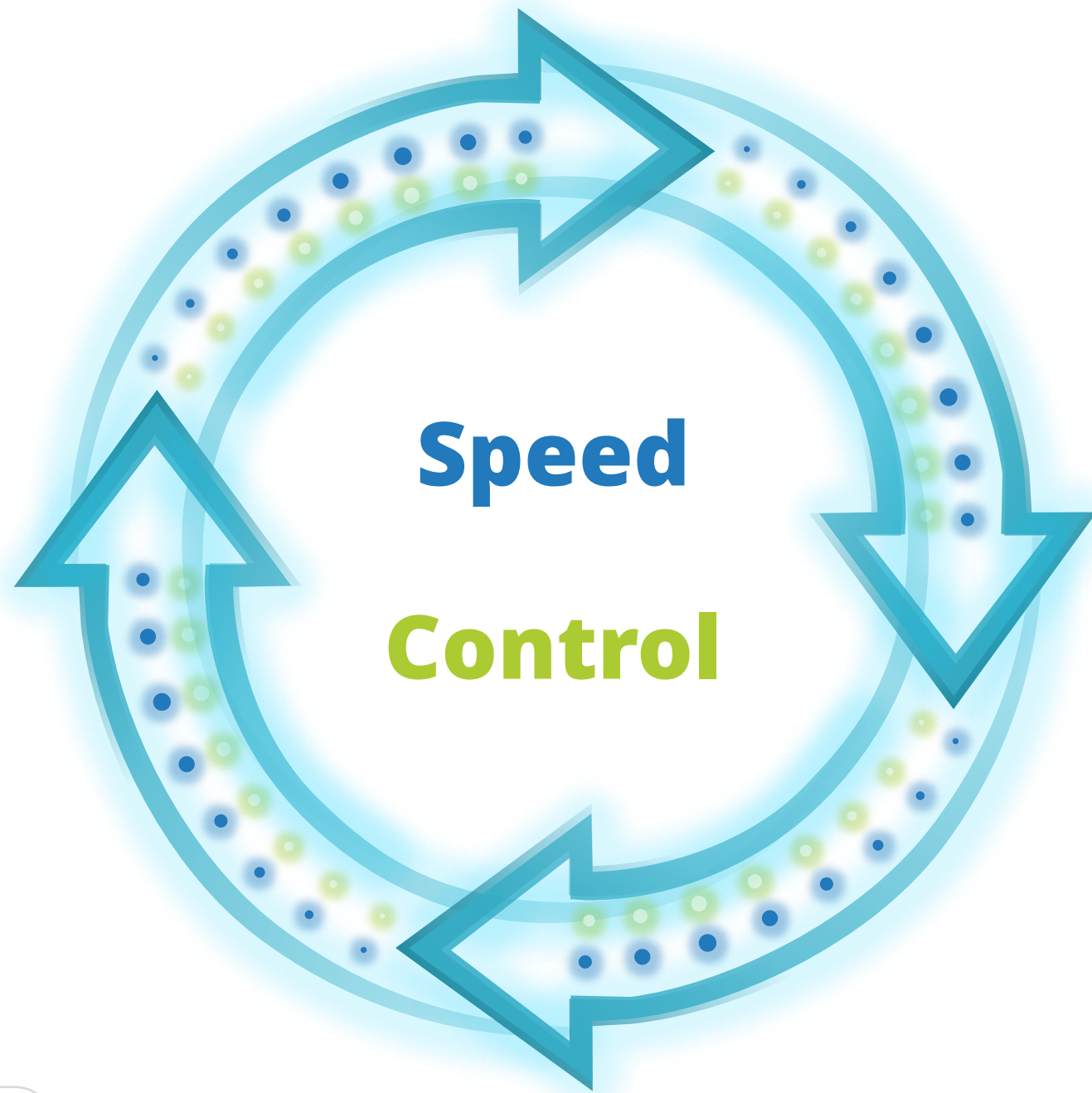
Category	Percentage
Change in work location	51.0%
Increased regulation	42.0%
Higher-than-usual employee turnover	41.6%
Change in C-level	30.2%
Major change to business model	23.9%
Change in ownership	17.8%
None of these	1.8%

Volatility & Uncertainty

Q. Which factors are expected to add complexity to your data processing over the next 12 months?

Factor	Value
Number of data sources	40.0
Volume of data	39.0
Distribution of data across hybrid and multi-cloud environments	37.5
Number of connections between inputs and outputs	36.9
Variety of different data types	36.7
Velocity of data flow or movement	34.8
Geographic distribution of data	34.6

Decision Process

Orient

Decide

Act

Observe

Adopted from OODA Loop by John Boyd, 1976

Decision Velocity

Speed

Control

Obstacles to Speed

Top Ranked Roadblocks to Decision Making Speed

#1 Lack of **time** to analyze data

#2 Lack of necessary **systems and tools**

#3 **Siloed data** across the organization

Streaming but Not Real Time

Only 26% of streaming data is analyzed in real time before it is moved into a repository (e.g., data lake)

Obstacles to Control

Top Ranked Roadblocks to Decision Making Controls

#1 Unclear **policies** around data use

#2 Lack of adequate **technology**

#3 Inconsistent **data access**

#4 Insufficient **trust in data**

Lack of Data Intelligence

77% say Data Intelligence is a challenge (observability, lineage, cataloging) i.e., **No Unified Data Control Plane**
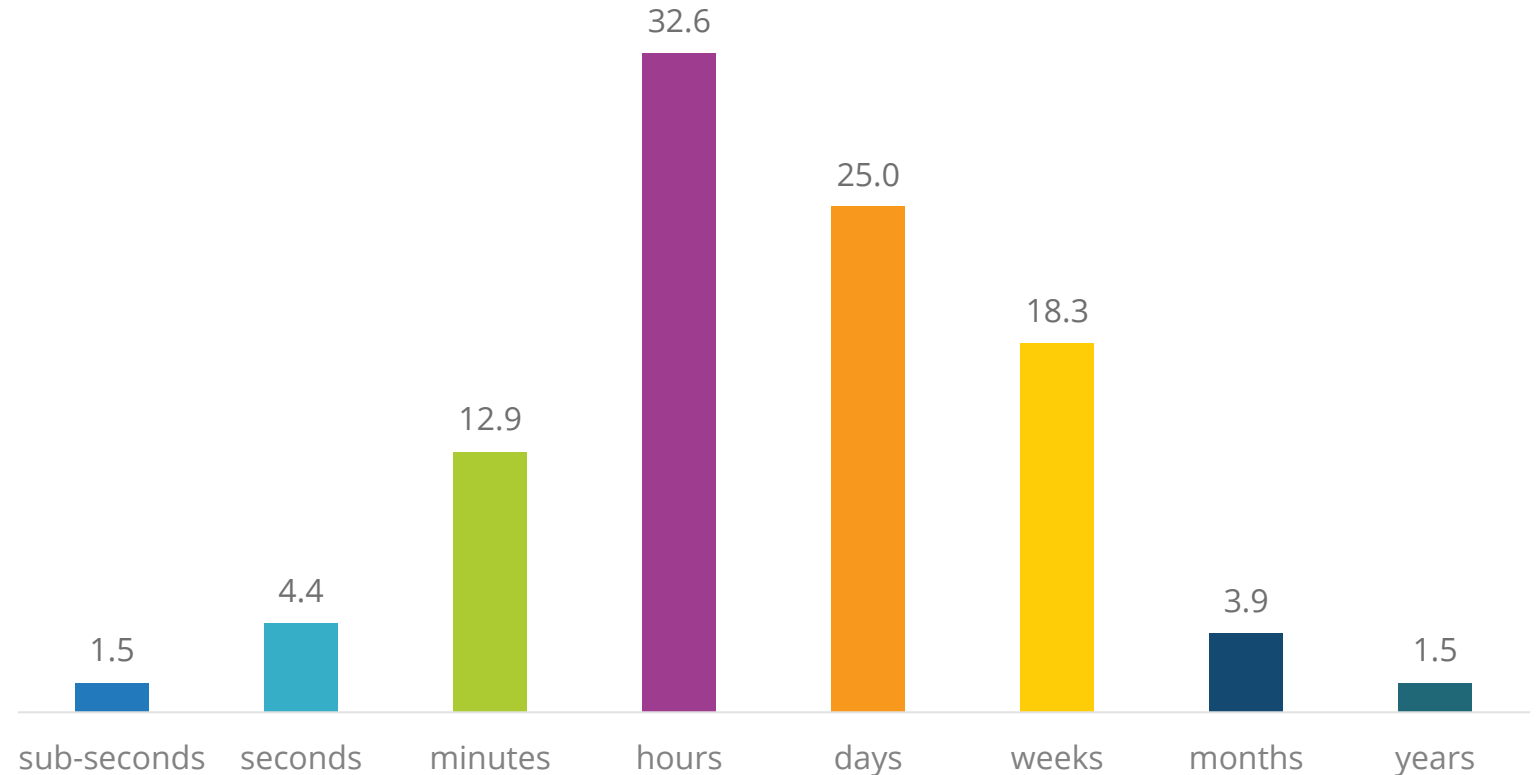
Impact on Decision Velocity

How often do you receive data that you <u>do not</u> get around to using or analyzing?
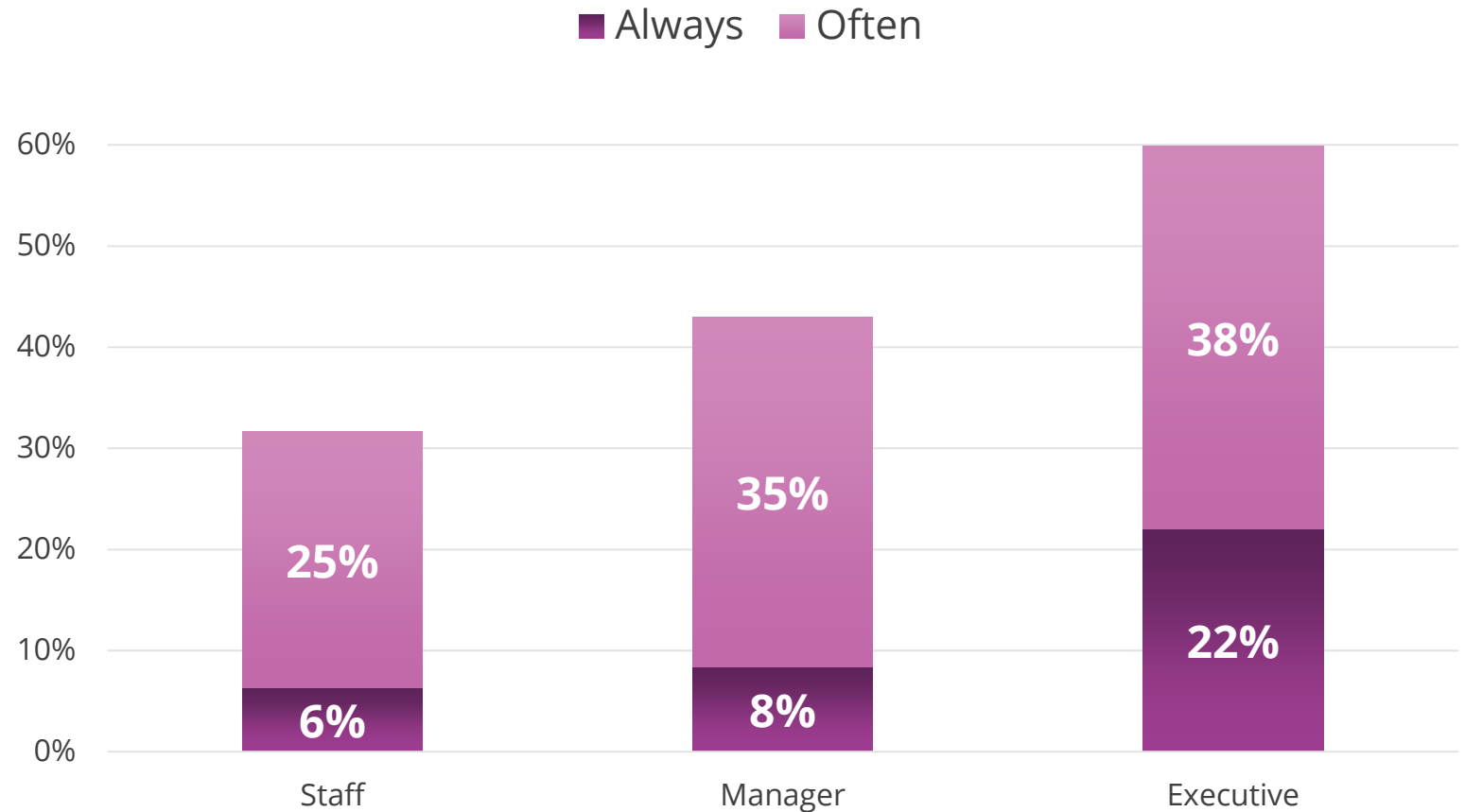
■ Often

	Staff	Manager	Executive
Often	11%	12%	34%
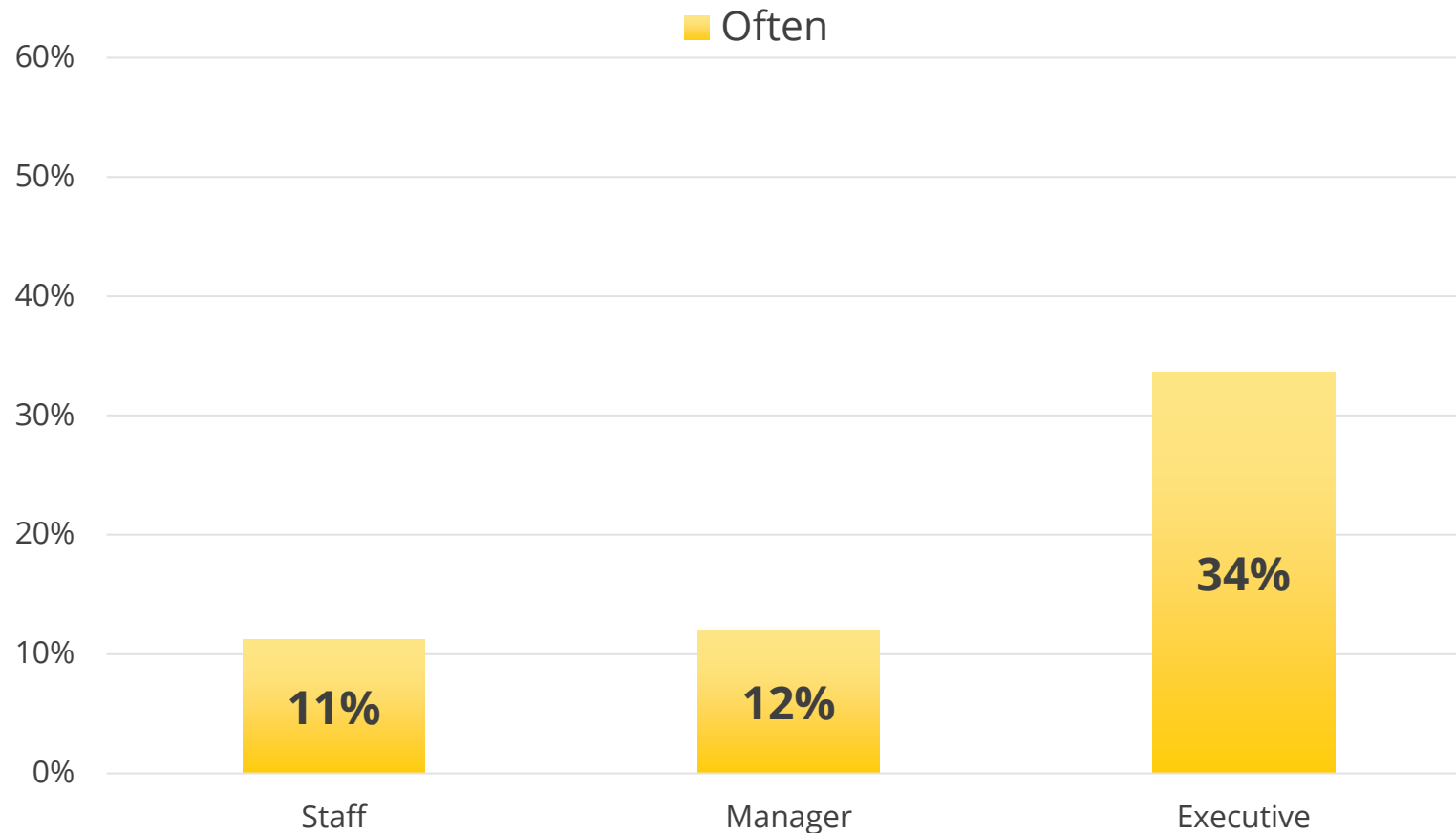
Data Decay

For the data you typically process as part of your role, what is its 'shelf life' or period within which it loses its value?

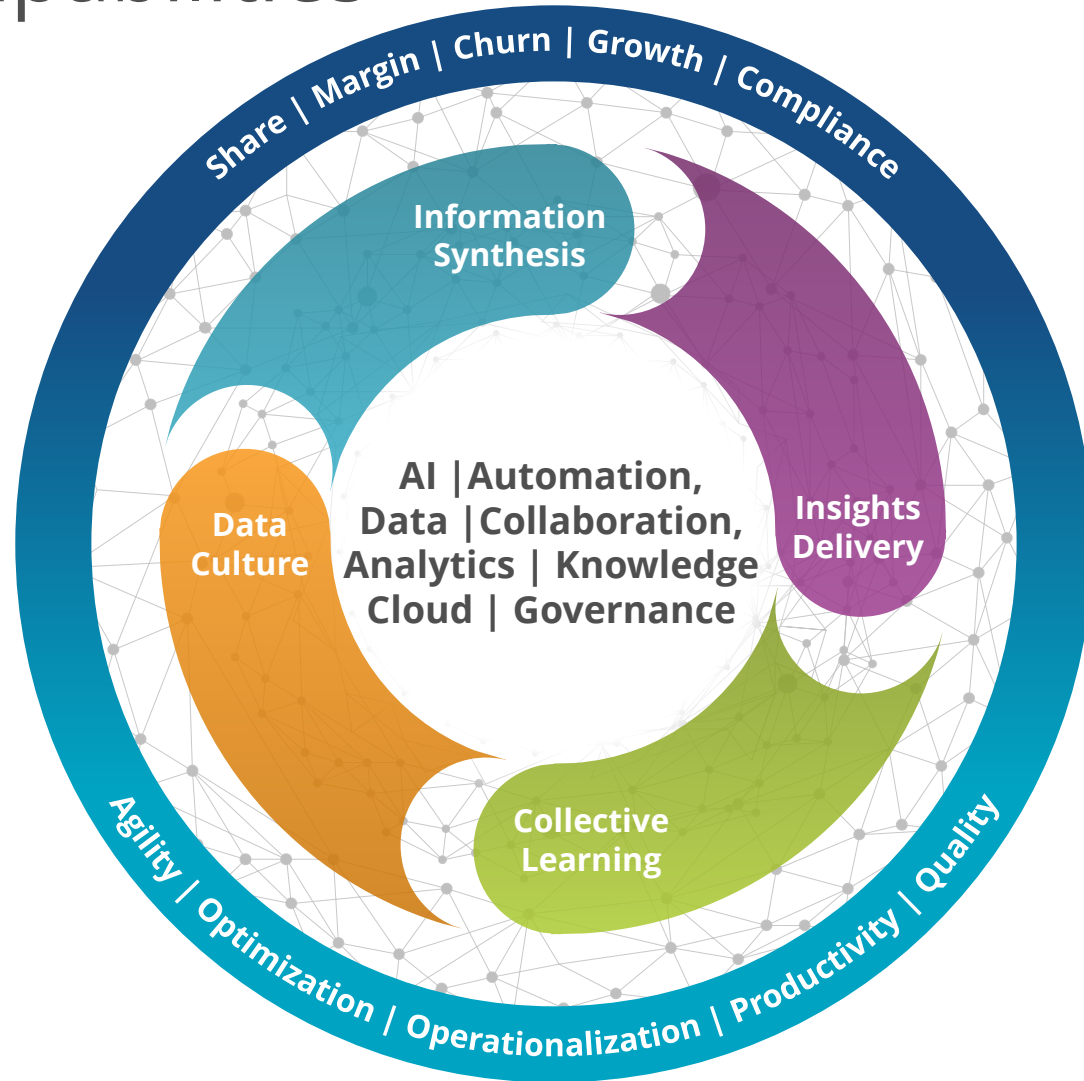| sub-seconds	seconds	minutes	hours	days	weeks	months	years
1.5	4.4	12.9	32.6	25.0	18.3	3.9	1.5

Percent of respondents among 1,024 organizations

Impact on Decision Velocity

How often do you need to access data that you did not expect you'd need?

■ Always ■ Often

Staff — Always: 6%, Often: 25%
Manager — Always: 8%, Often: 35%
Executive — Always: 22%, Often: 38%

Source: Global Data Valuation Survey, IDC, December 2022, N = 2,014

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# Enterprise intelligence is built by developing four core capabilities

- **Information synthesis**: Accessing and analyzing internal and external data to generate insights and create knowledge

- **Insights delivery**: Empowering all levels of the organization with the insights they need at the right time, in context, and at scale

- **Collective learning**: Continuously and collectively learning by capturing, curating, and sharing knowledge across the enterprise

- **Data culture:** Fostering and embracing a data-driven culture, and providing the technology and skills to improve data fluency and literacy pervasively

Organizations with excellent Enterprise Intelligence experience **3x-4x** greater business benefits compared with organizations with poor Enterprise Intelligence

The foundation for the four capabilities is the Enterprise Intelligence Architecture
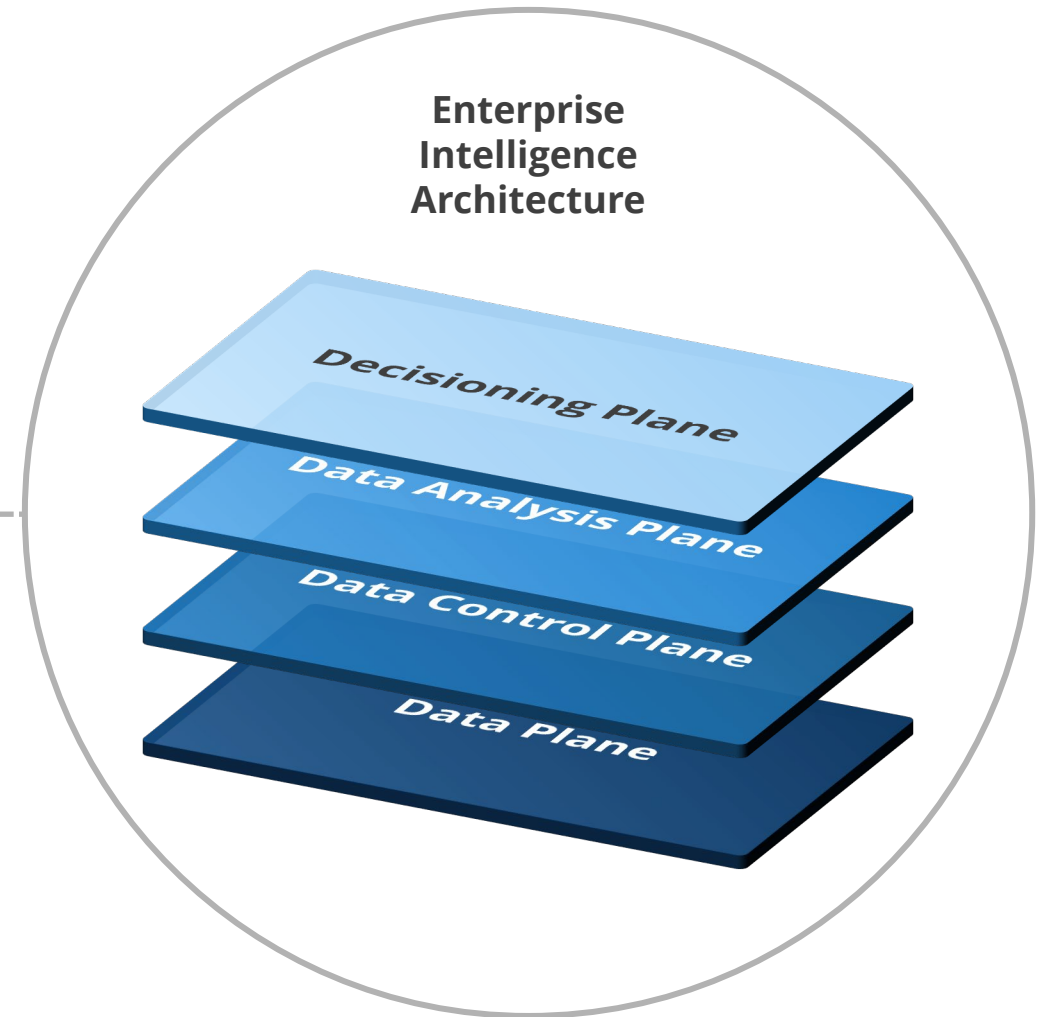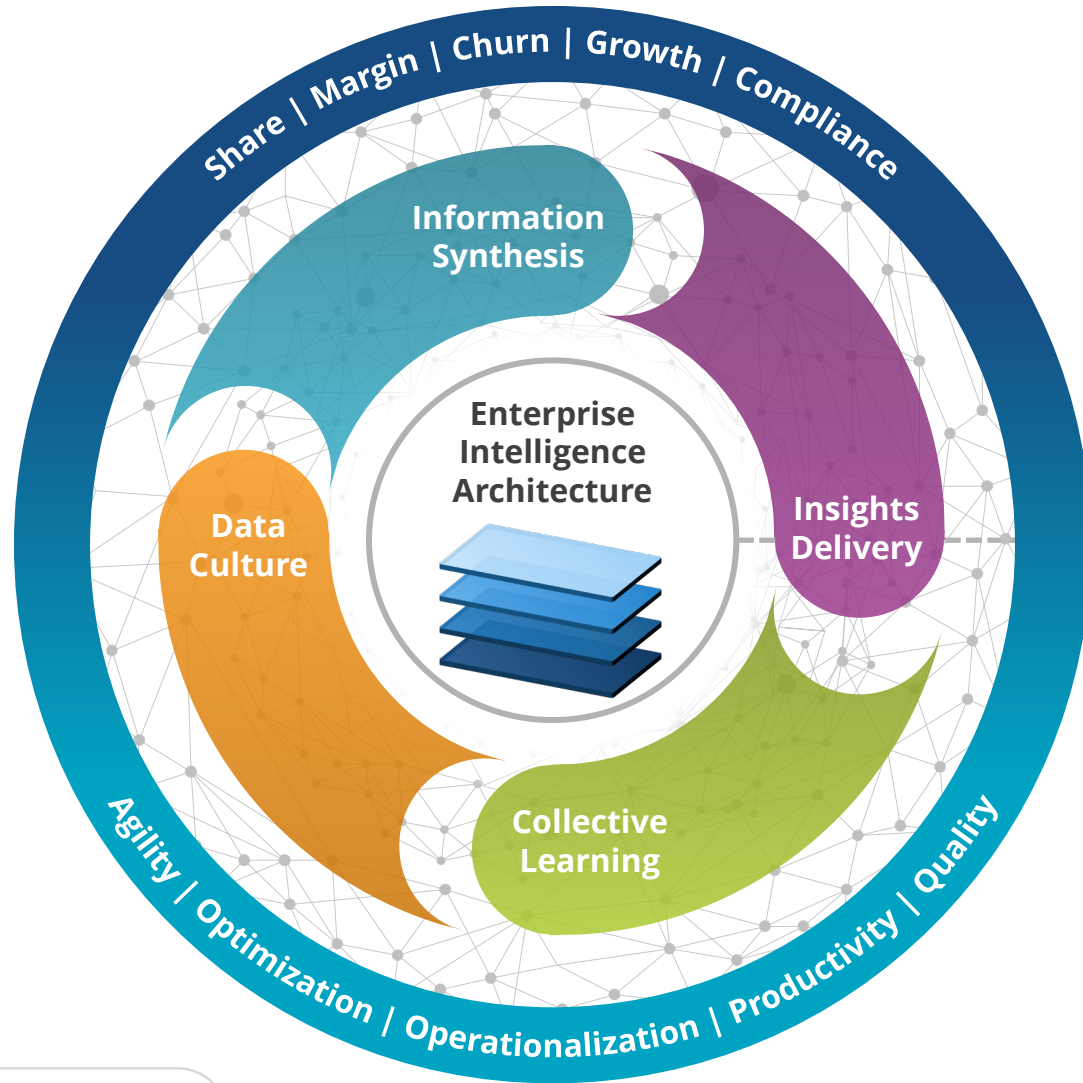
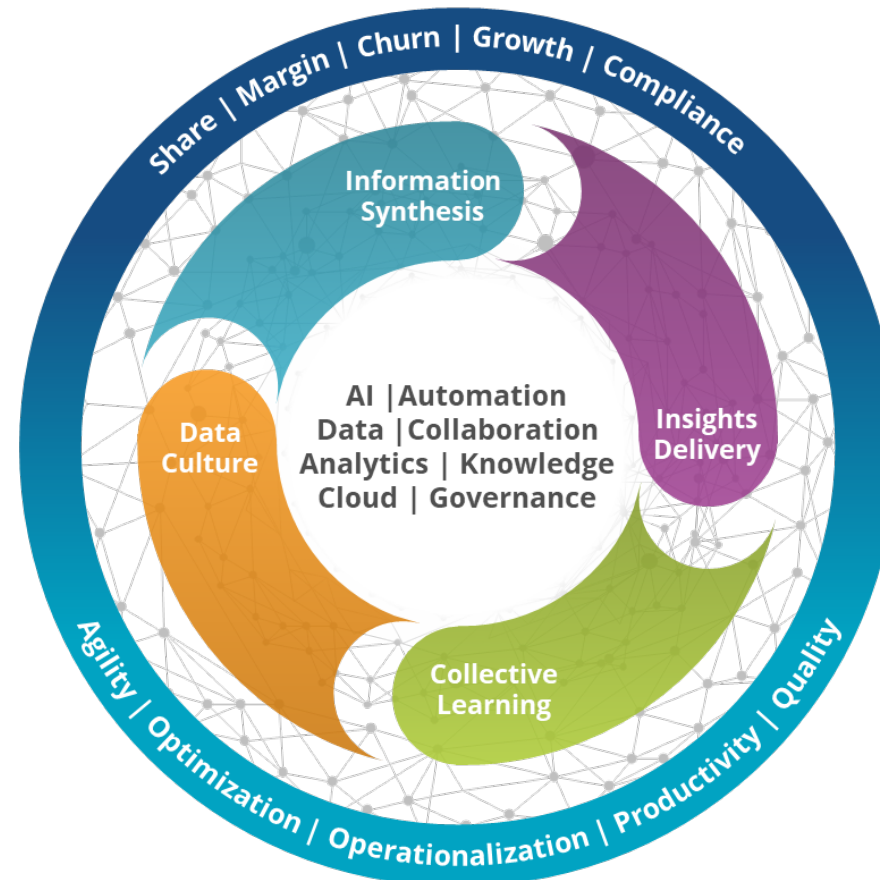# Enterprise Intelligence Architecture

Potential Opportunities to Apply AI to Elevate Decision Intelligence

Information Synthesis

- Suggesting new external data sources to augment internal data
- Creating new analytic models and autogenerating analytic code
- Creating stories, summaries to interpret data

Insights Delivery

- Exploring insights using natural language
- Making insights accessible to a wide range of users within other applications
- Generating reports and dashboards for users based on their data access

Collective Learning

- Generating new assets from knowledge sources
- Exposing knowledge and insights from unstructured data
- Advising, guiding, or teaching less experienced employees based on knowledge of experience staff.

Data Culture

- Making users more data-fluent
- Developing new data literacy content and making it available via natural language interfaces as stand-alone sessions or as chatbots within other applications.
- Enabling data driven decision making across the organization

Share | Margin | Churn | Growth | Compliance

Information Synthesis

Insights Delivery

Collective Learning

Data Culture

AI | Automation
Data | Collaboration
Analytics | Knowledge
Cloud | Governance

Agility | Optimization | Operationalization | Productivity | Quality

Risks of Using Generative AI to Affect Enterprise Intelligence

- Enterprises need to be aware that current forms of Generative AI have some risks associated with it.

- As organizations explore Generative AI's usage, they must consider data security, governance of Intellectual Property, and the possibility of fake information.
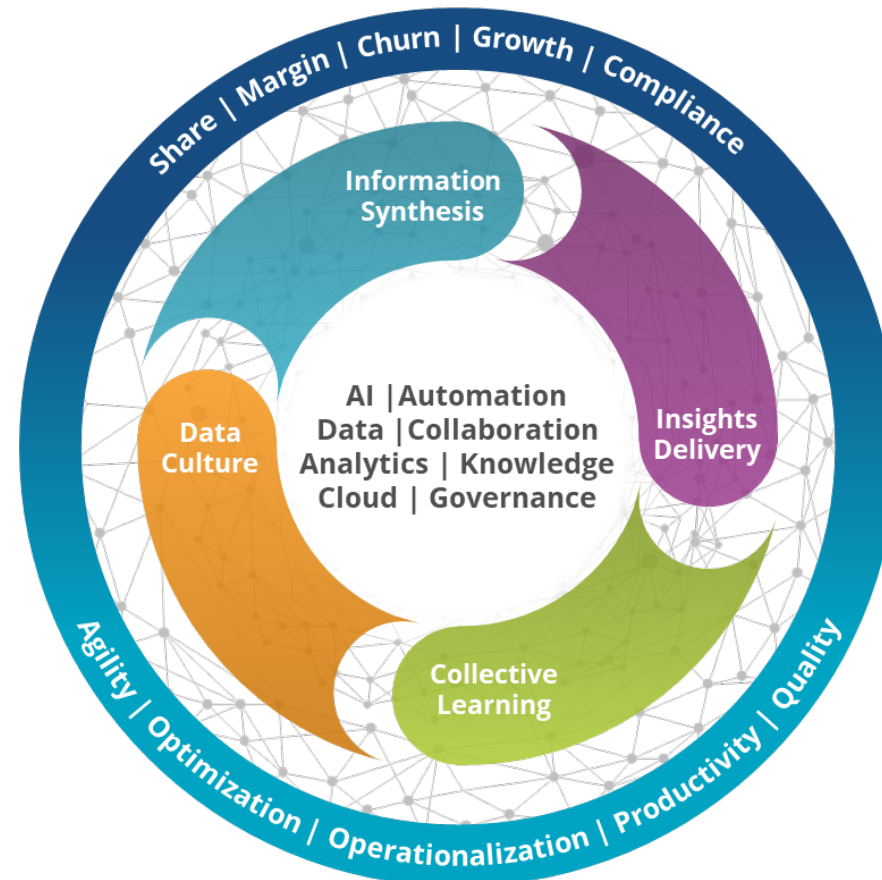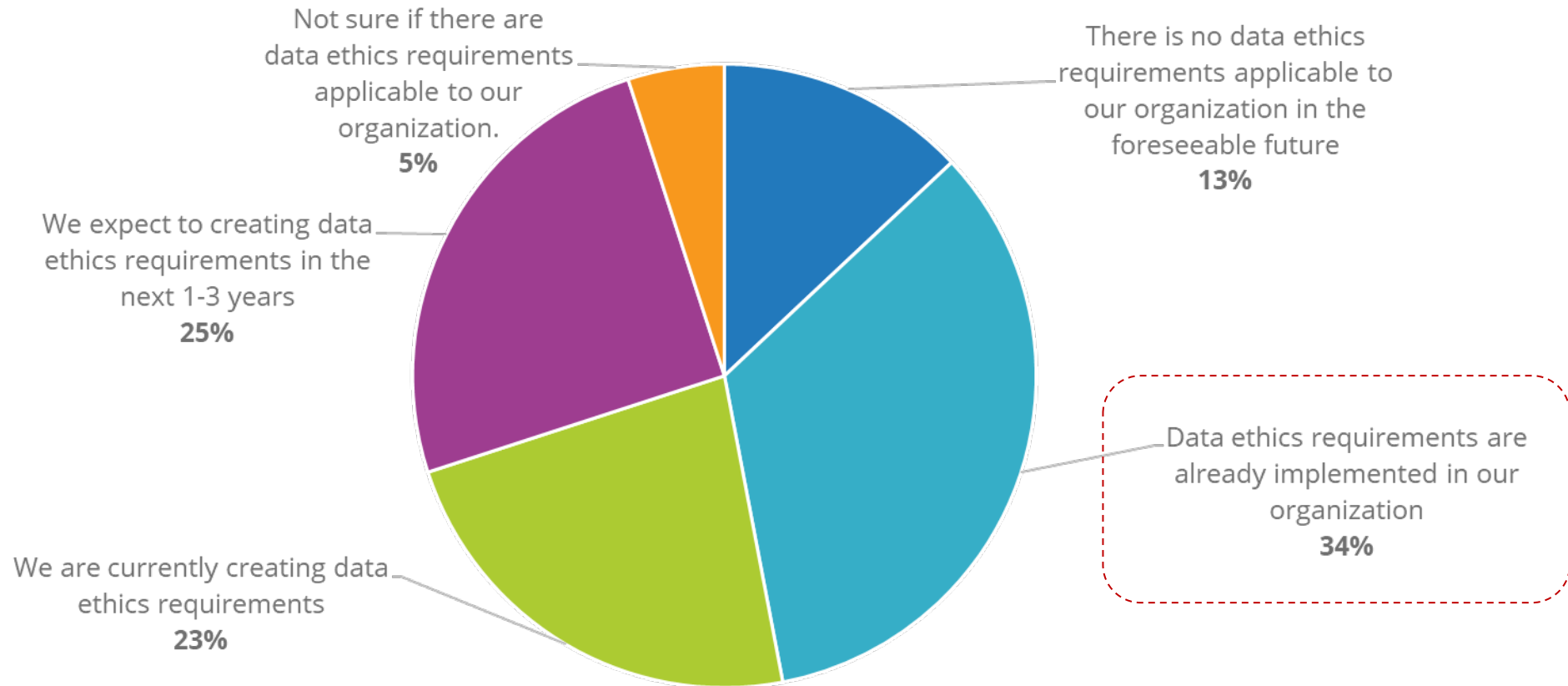
- Users must be trained to interpret generated insights and be able to explain models/code that has been generated by large language models.

- Organizations must enforce governance and security measures to ensure Generative AI is being used appropriately.

Trust is extremely important to be successful at AI

Not sure if there are data ethics requirements applicable to our organization.
5%

There is no data ethics requirements applicable to our organization in the foreseeable future
13%

We expect to creating data ethics requirements in the next 1-3 years
25%

Data ethics requirements are already implemented in our organization
34%

We are currently creating data ethics requirements
23%

Key Takeaways

Enabling digital business in the intelligent automation age

▶ Start with the decisions you make and ensure that the right data is available

▶ Align enterprise intelligence strategy with your overall growth strategy

▶ Make data everyone's responsibility, collect feedback often

▶ Build trust from ground up, all the way up the stack

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