



Unlock Potential

McKNIGHT
Consulting Group

What Does Information Management Maturity Look Like in 2023

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We Are in the Business of Information

- Information volume is exploding
- Data is the lifeblood of artificial intelligence
- Business is real-time, all the time
- Information usage differentiates the competition
- Information quality impacts all stakeholders
- Information is reused over and over
- Even seldom-used data is essential to be under management
- Third-party information is essential to use
- Information is a key business asset



Data.....



Big data is at the foundation of all the megatrends that are happening.

- Chris Lynch
American Writer of Books



"Without big data analytics, companies are blind and deaf, wandering out onto the web like deer on a freeway."

- Geoffrey Moore
American Management Consultant and Author



There were 5 exabytes of information created between the dawn of civilization through 2003, but that much information is now created every 2 days.

- Eric Schmidt
Executive Chairman of Google



EVERY COMPANY HAS BIG DATA IN ITS FUTURE AND EVERY COMPANY WILL EVENTUALLY BE IN THE DATA BUSINESS.

Thomas H. Davenport
President's Distinguished Professor in IT and Management

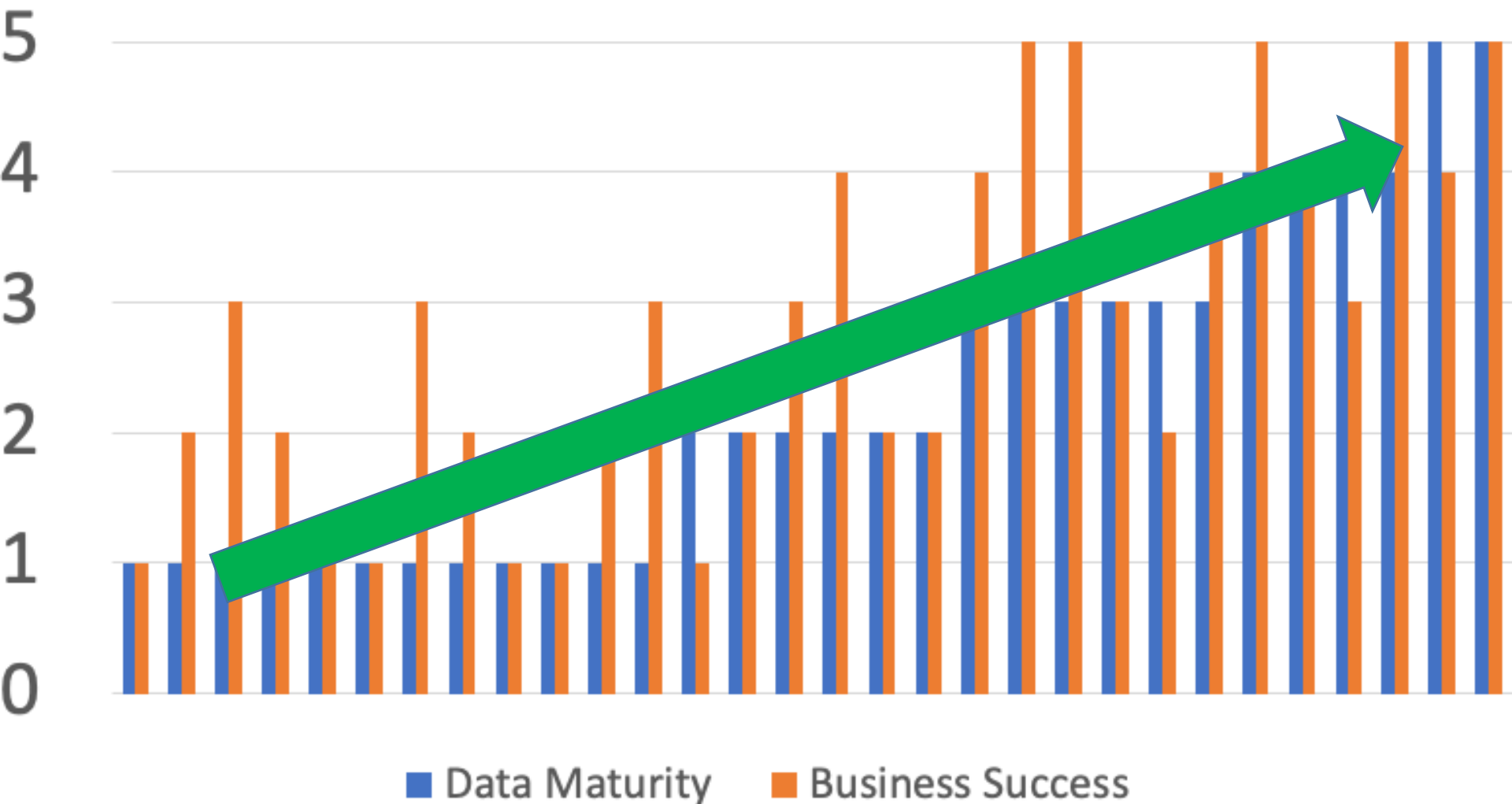


The Approach

- Last 30 intimate enterprise projects
 - Mostly clients
 - Power Hour to Full Implementation
 - Confidential
- 50 Questions
 - Probing Answers
 - 40 on Data Topics
 - 10 on Business Success
 - For publicly traded companies, we used public information as well
- Progression in data topics \sim data maturity

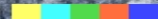


Results





Beyond the Mountain lies
more mountains



Maturity Modeling

- Capabilities emanate from the presence of the items shown
- Should give you a sense of priority
- You Can't Skip Levels – in any category
- Maturity Levels tend to move in harmony
- Midsize and smaller companies can +1
- Momentum is paramount!

Categories:

Strategy

Architecture

Technology

Organization



Information Management Professional Success Metrics






Data Maturity Scorecard

	Score	Next Steps
Strategy		
Architecture		
Technology		
Organization		
Total		
Average		



Maturity Level 1



"The Data Warehouse is a Struggle and that's the way it is and will always be"



"Artificial Intelligence is for Others"

Infrastructure Overwhelmed

My DB is hitting the wall.

Cloud Costs Out of Control

"One Vendor" Mentality

Outdated Tools

High Data Skills Turnover

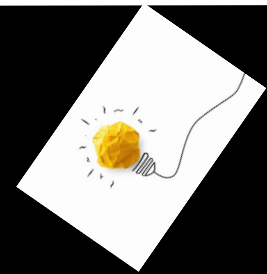
Organizational Silos

Resistance to Change

Multiple Overlapping Data Stores



Achieve Business Goals While Increasing Data Maturity





Maturity Level 2

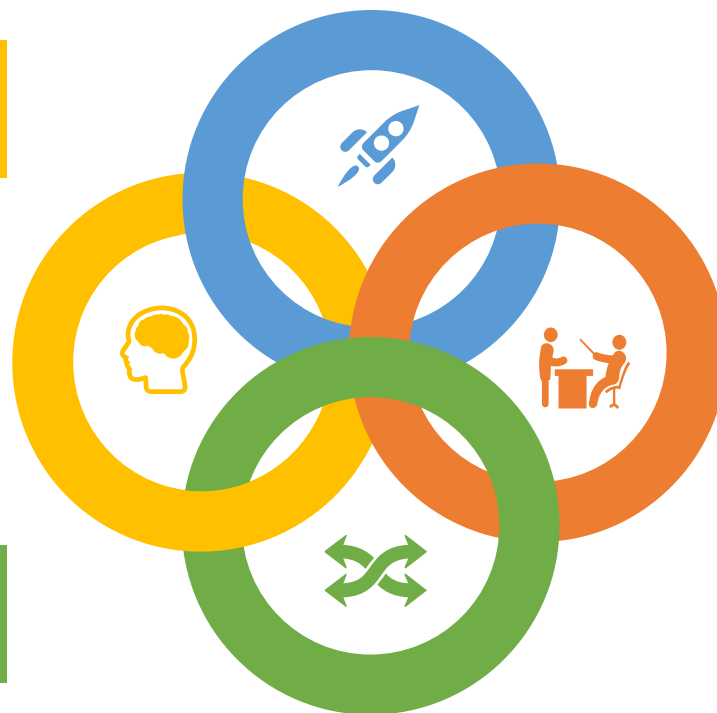


Data Strategy

- Emerging Data Standards
- Data Decentralization
- Executive Awareness of Data
- Partial Self-Service BI
- Cloud First Direction

Architecture

- Central Data Warehouse(s)*
- Emerging Platform Heterogeneity
- Data Lake** In Development



Technology

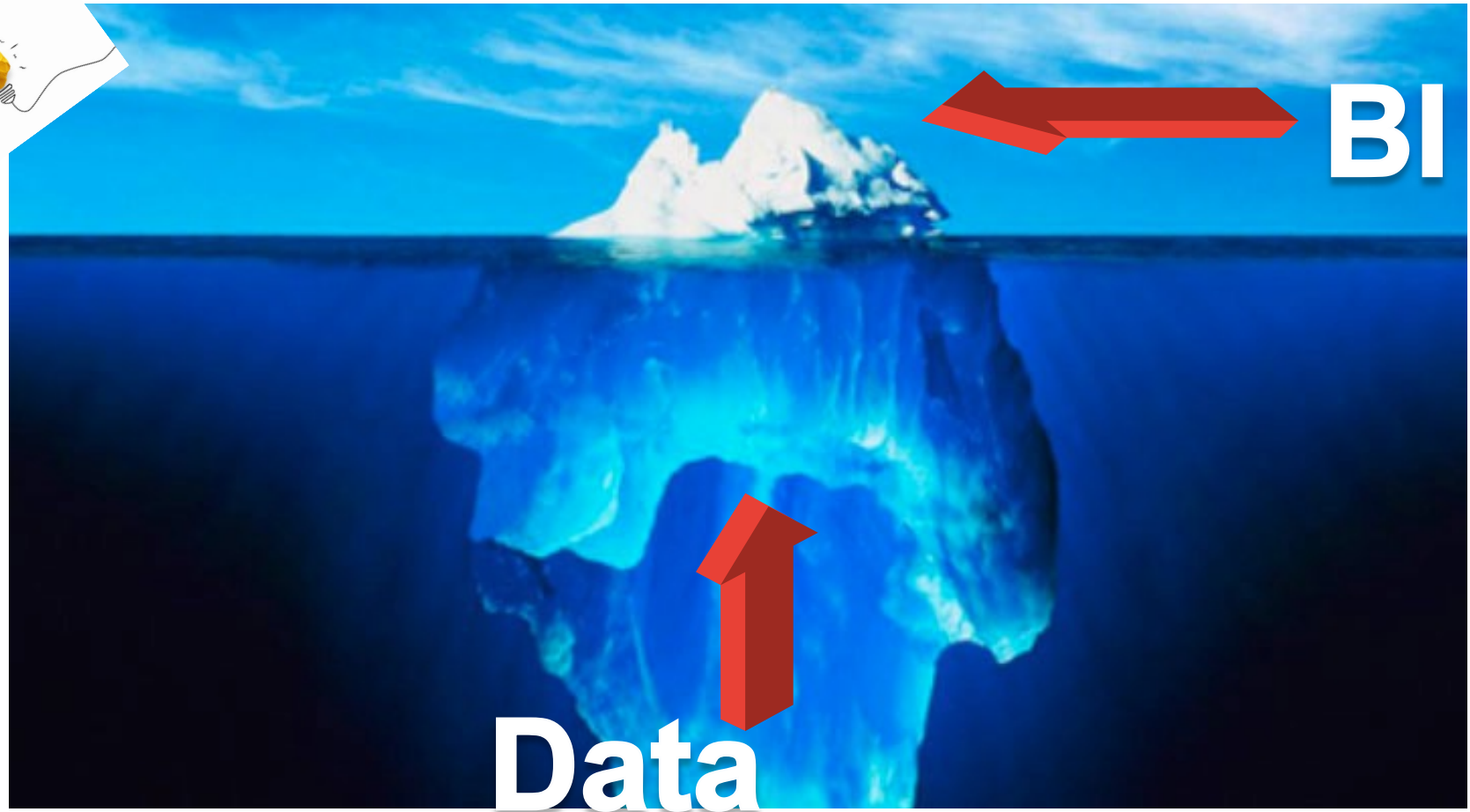
- Master Data Sharing
- Third Party Data Utilized
- ML Chatter
- Data Integration=ETL, ELT
- Dashboards

Organization

- Data Governance
- Agile Methodology
- Data Specialists



Focus on the Data Architecture as well as Data Access





Maturity Level 3



Data Strategy

- Data Layer Acknowledged
- Reactive AI for Automation
- Self-Service is Dominant Model

Architecture

- Multi-Year Architecture Direction/Plans
- Data Lake in Production
- Data Virtualization
- Measured DQ Levels
- Managing Many Data Types
- Some Data Lineage



Technology

- Data Warehouse in Cloud
- Graph Database For Relationship Data
- MDM of a Major Subject Area
- Use of Data Marketplace
- Use of Data Catalog
- Integration=Streaming
- Integration=Reusable

Organization

- Data Governance By Subject Area Across Most Major Subject Areas
- Organizational Change Management added to data projects
- Chief Data Officer
- Data Scientists
- Strong Devops



Follow the data
profile to the right
platform



Maturity Level 4

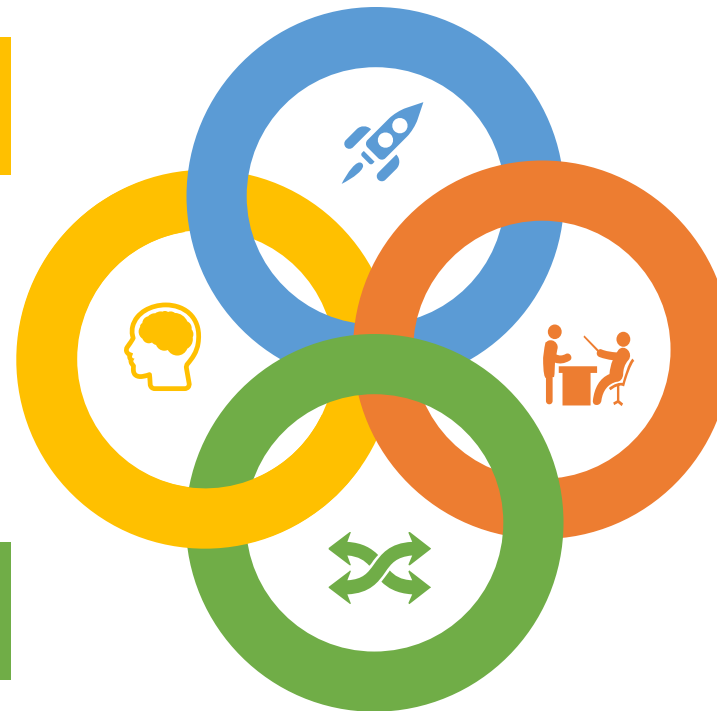


Data Strategy

- Data As Asset In Financial Statements / Executives
- Predictive Analytics
- AI Data Parsing
- AI Curated Insights

Architecture

- Kubernetes
- Identity Management
- Rest APIs
- Data Lakehouse
- Full Data Lineage

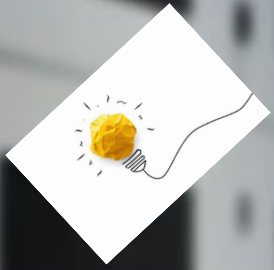


Technology

- MDM >1 Major Subject Area
- Data Catalog Populated
- Data Observability
- Search is Augmented and Interactive
- Live Analytics
- API Management

Organization

- Comprehensive Data Governance
- Chief Information Architect/Equivalent
- Strong MLOps



“To do information management right does not require more expense or time - it takes know-how and concentration..”





Maturity Level 5



Data Strategy

- Hyper-personalization
- Prescriptive Analytics
- Producing Information Products
- Limited Memory AI

Architecture

- Data Fully Discoverable
- Self-describing Data
- Microservices and Containerized Analytical Architecture
- Multi-model usage



Technology

- “Complete” Enterprise MDM
- Databases & Processing At Edge In IOT
- Embedded Database In Applications
- Policy Management

Organization

- Pervasive Data Governance
- Finops/Multi-Hybrid-Cloud



Maturity Level 1-5 in 2024



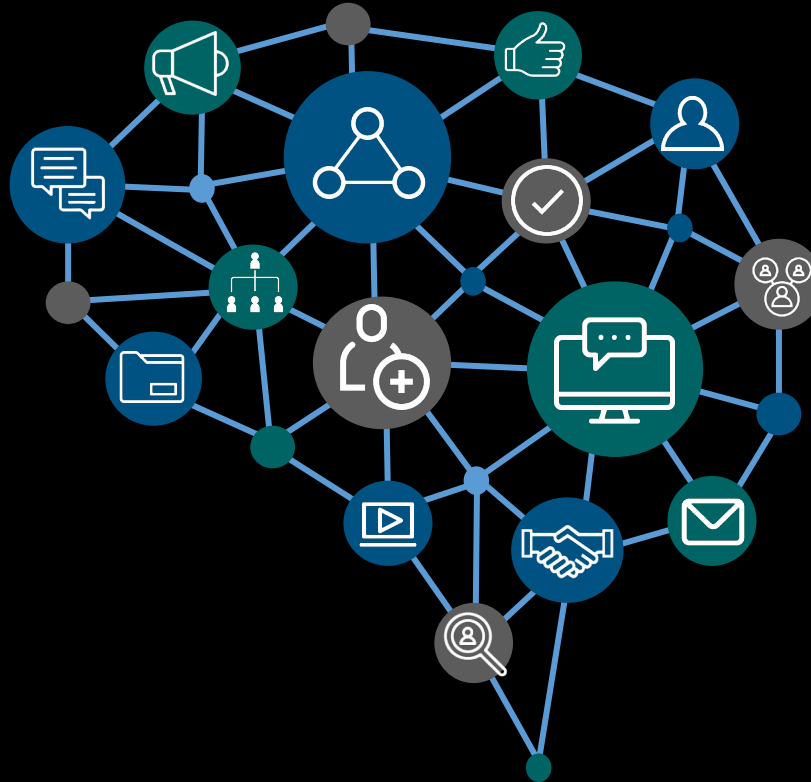
Data Strategy

Technology

TBD

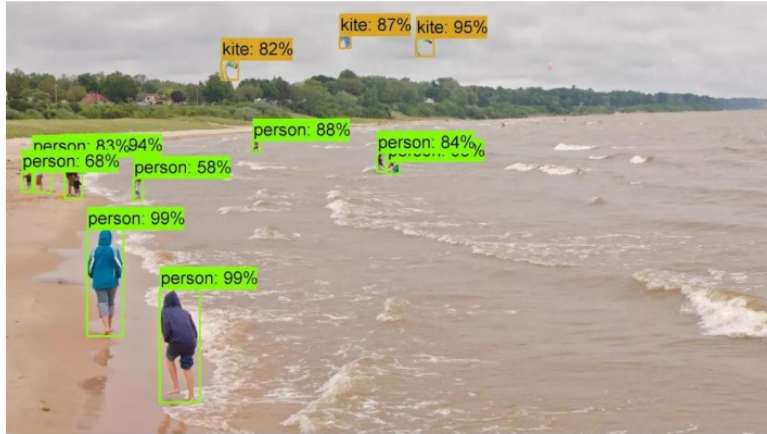
Architecture

Organization



Google's New AI Designs AI Better Than Humans Could

The company's new real-time computer vision system bests anything created by humans.



[Image: Google Research Blog]

ARTIFICIAL INTELLIGENCE AI is learning how to create itself

Humans have struggled to make truly intelligent machines. Maybe we need to let them get on with it themselves.

by **Will Douglas Heaven**
May 27, 2021

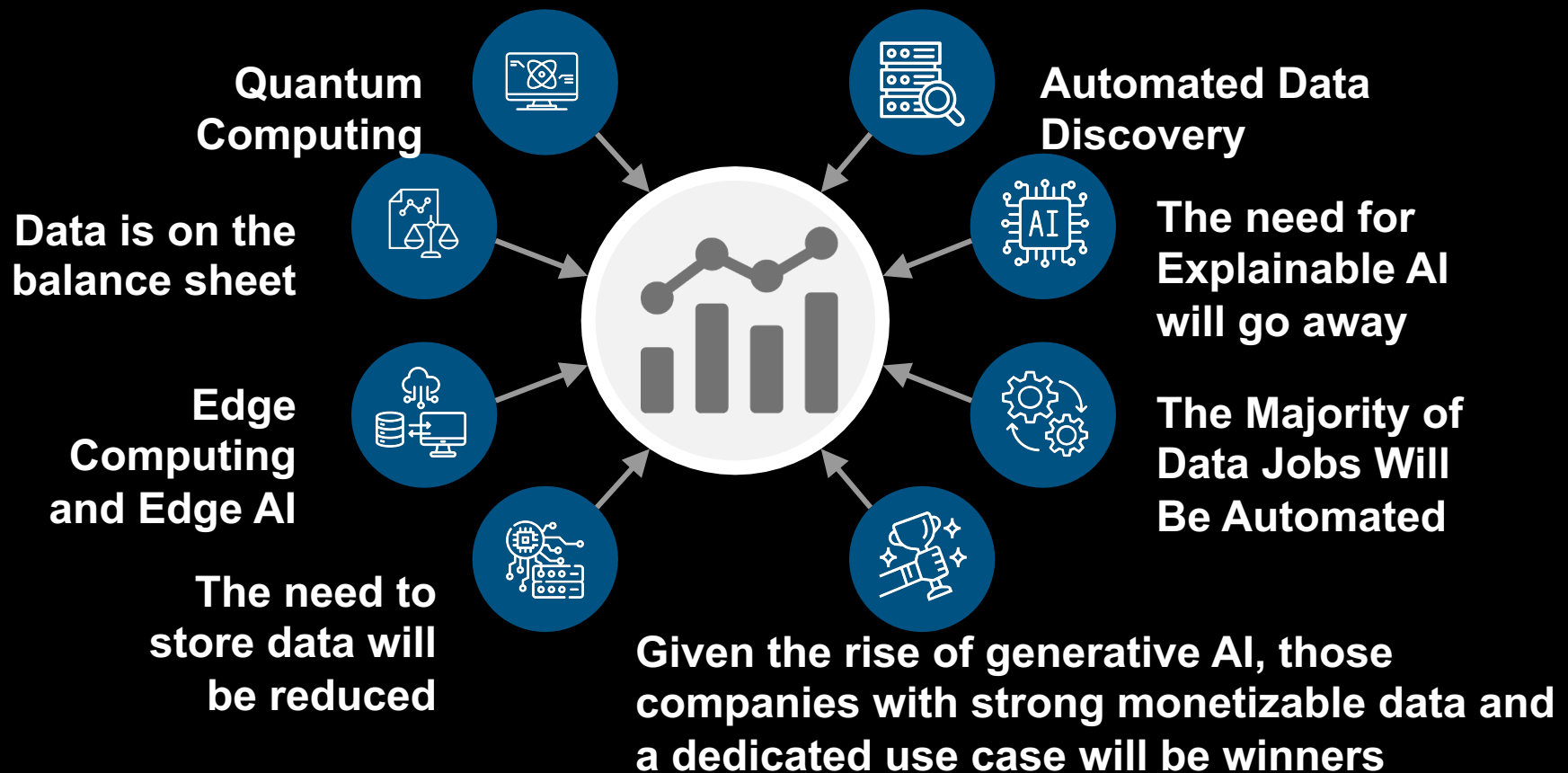
A little stick figure with a wedge-shaped head shuffles across the screen. It moves in a half crouch, dragging one knee along the ground. It's walking! Er, sort of.

Yet Rui Wang is delighted. "Every day I walk into my office and open my computer, and I don't know what to expect," he says.

An artificial-intelligence researcher at Uber, Wang likes to leave the [Paired Open-Ended Trailblazer](#), a piece of software he helped develop, running on his laptop overnight. POET is a kind of training dojo for virtual bots. So far, they



Beyond 2024





Startups will not be able to create the AI themselves, but they can use the APIs



Companies are using these techniques in software and statistical models to make predictions and drive businesses forward in a way that they're not able to with only humans

- There's more Maturity in moving imperfectly than in merely perfectly defining the shortcomings

- Build credibility

- Don't be afraid to fail

- Have an open mind; There are different paths

- No plateaus are comfortable for long

- That resistance is not about Maturity Level 5, it's the journey



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