Big Data:
Show Me The Money

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Digital Business

The creation of **new business designs** by blurring the digital and physical worlds

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2013: $31B DBMS Market Grew 7.8% - And the Rules Began to Change

|	2011 ($M)	2012 ($M)	2013 ($M)	2013 Growth%
Total	26,611.8	28,681.6	31,260.9	8.3

Source: "Market Share: All Software Markets, Worldwide, 2012"

- **Rule #1 – "my strategic DBMS first" – is history**
- **A polyglot data world with traditional Transactions, Interactions, and Observations**
- **Each has its rules, styles, languages and structures**

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Enter "Big Data" – And Things Change More

"Big data" is high-volume, high-velocity and high-variety information assets *that demand cost-effective, innovative forms of information processing for enhanced insight and decision making.*
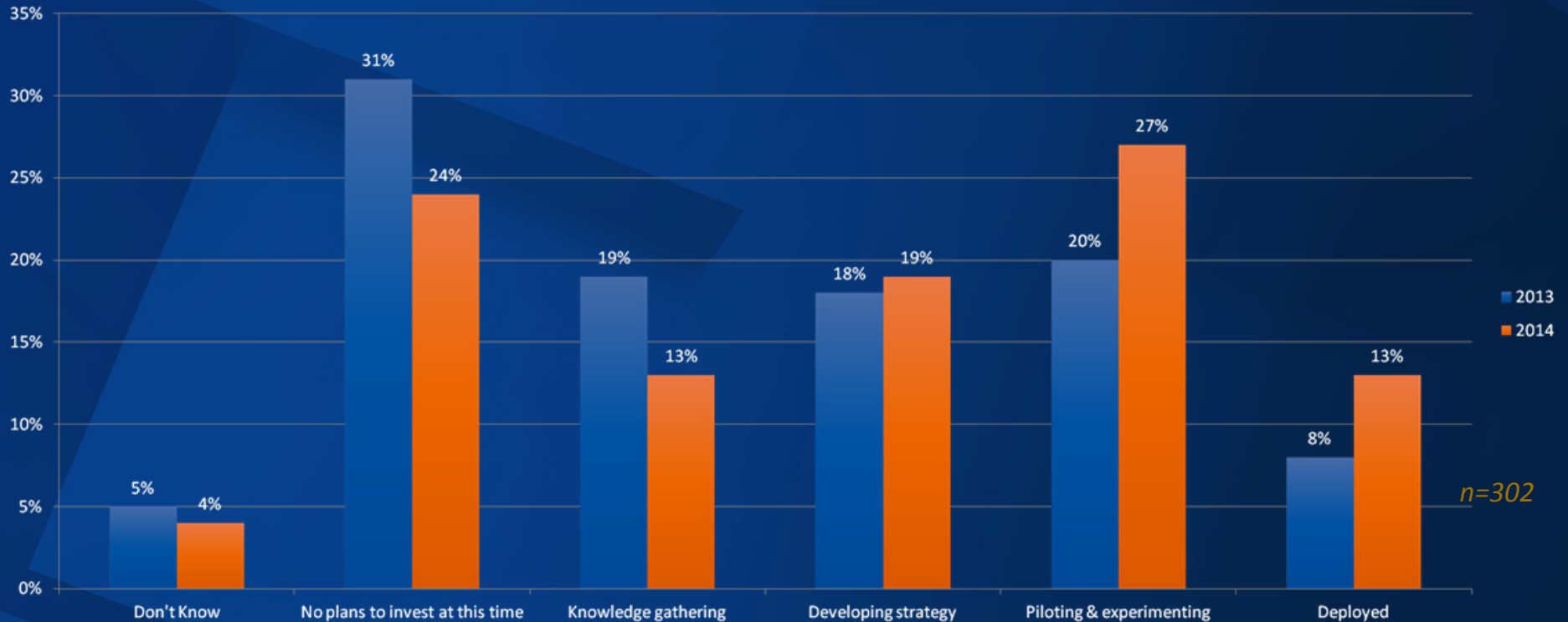
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Big Data – Journey Beyond Hype

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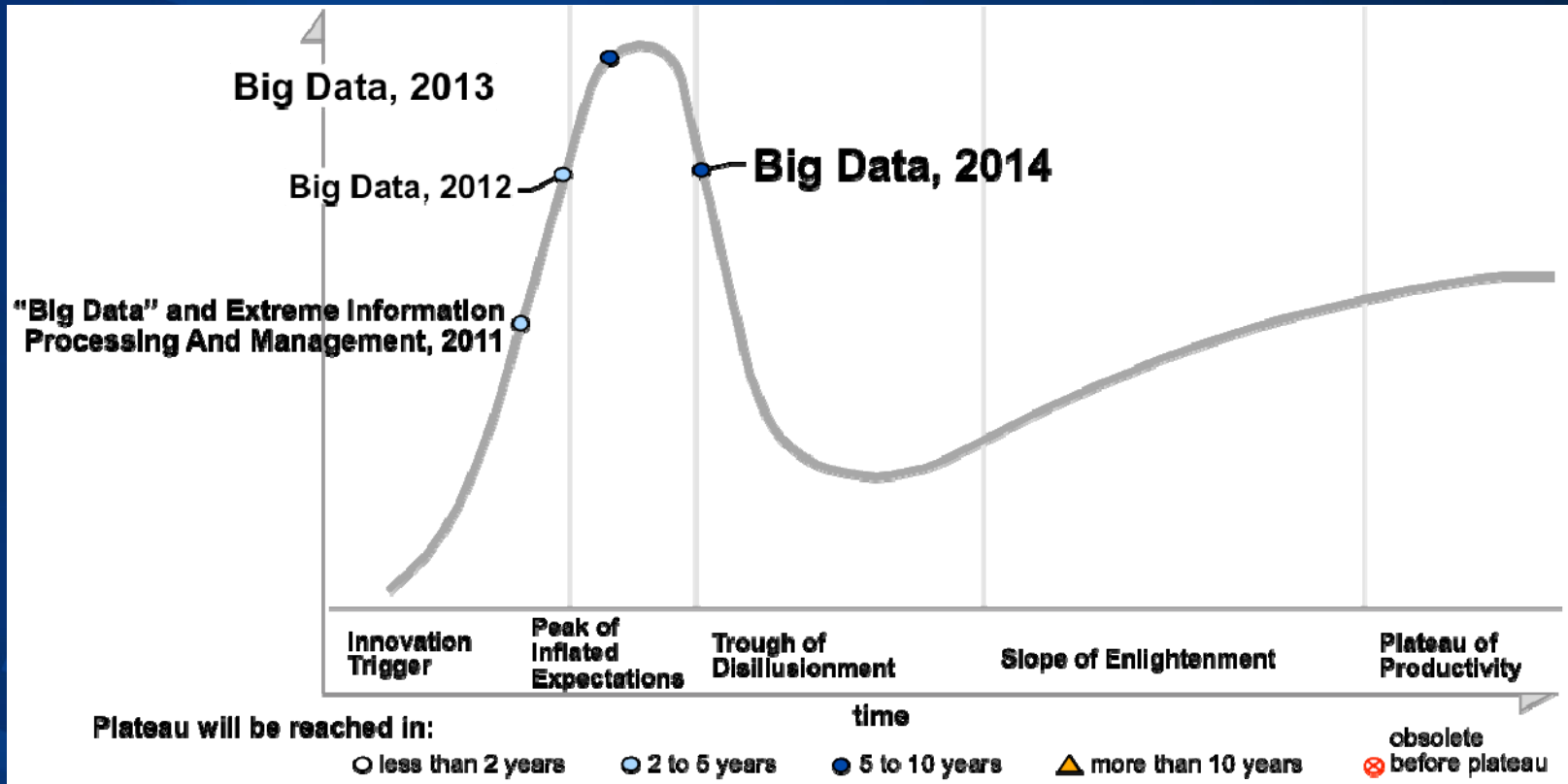
Big Data Investment Continues to Rise

Has your organization already invested in technology specifically designed to address the big data challenge?
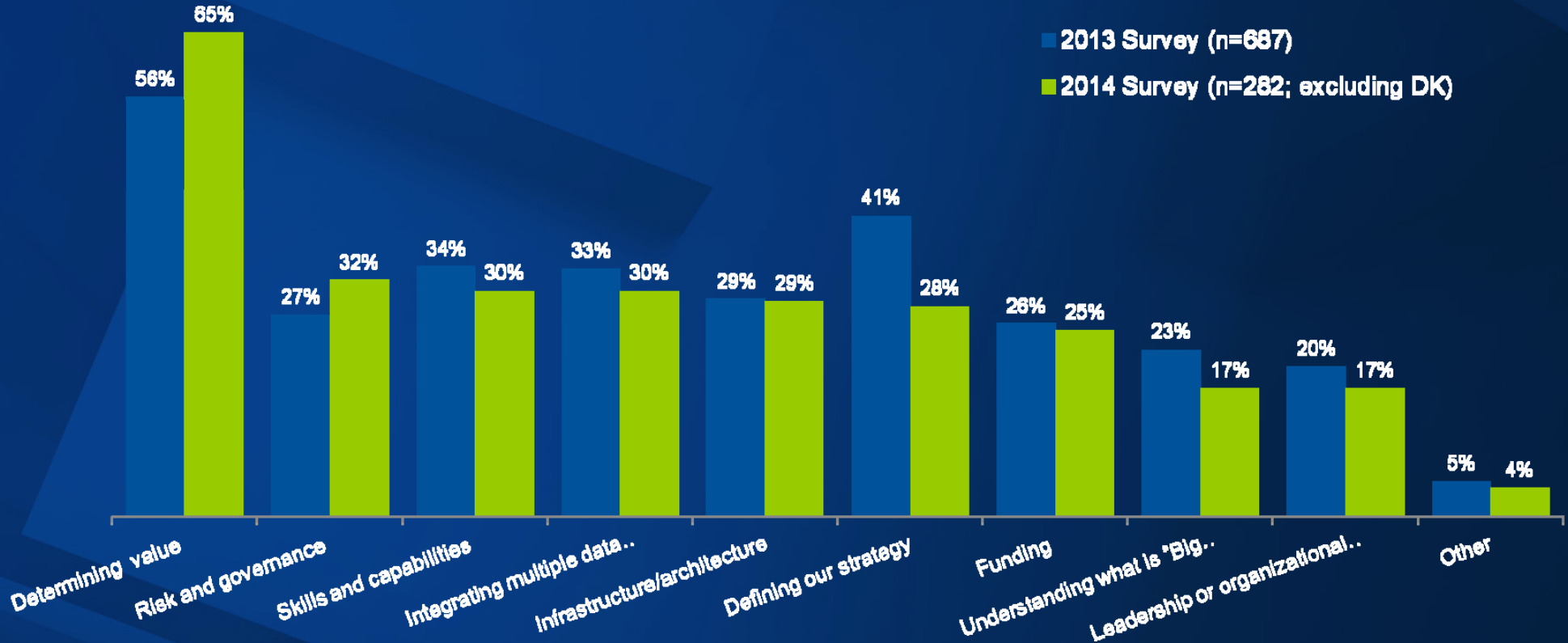
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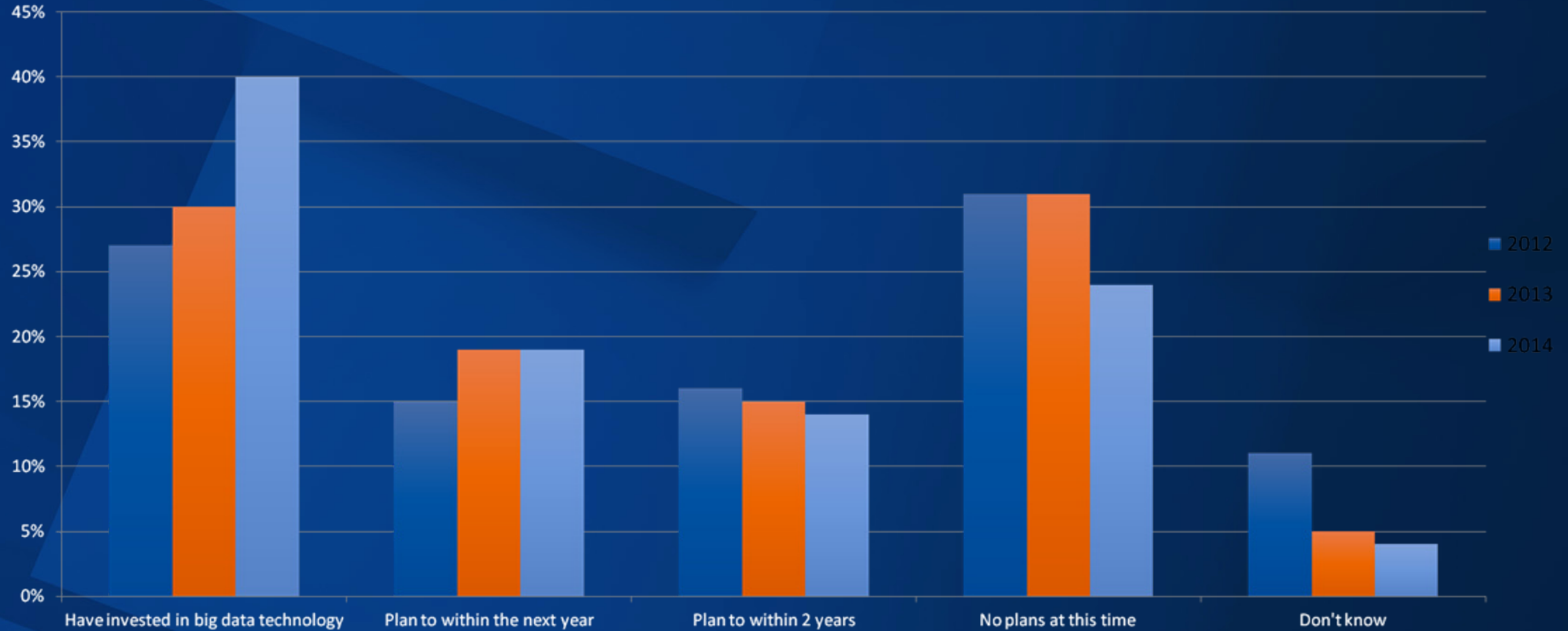
State of Big Data Adoption

Which of the following best describes your organization's stage of big data adoption?

n=302
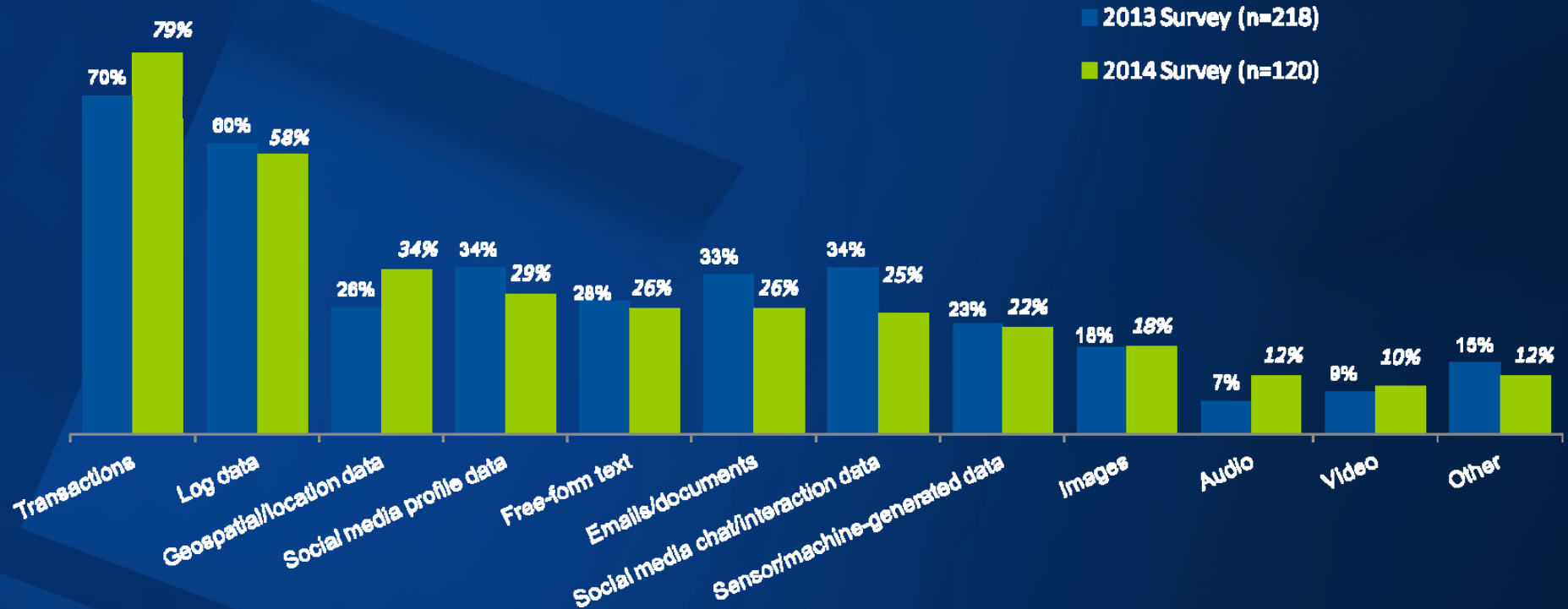
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Big Data Challenges

What are your organization's top 3 hurdles or challenges with big data? Rank Summary

Legend:
- 2013 Survey (n=687)
- 2014 Survey (n=282; excluding DK)

Challenge	2013 Survey	2014 Survey
Determining value	56%	65%
Risk and governance	27%	32%
Skills and capabilities	34%	30%
Integrating multiple data..	33%	30%
Infrastructure/architecture	29%	29%
Defining our strategy	41%	28%
Funding	26%	25%
Understanding what is "Big..	23%	17%
Leadership or organizational..	20%	17%
Other	5%	4%

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Types of Big Data analyzed

Which types of big data does your organization currently analyze?

Base: Invested in big data technology (Q1)

Legend:
- 2013 Survey (n=218)
- 2014 Survey (n=120)

Category	2013	2014
Transactions	70%	79%
Log data	60%	58%
Geospatial/location data	26%	34%
Social media profile data	34%	29%
Free-form text	28%	26%
Emails/documents	33%	26%
Social media chat/interaction data	34%	25%
Sensor/machine-generated data	23%	22%
Images	18%	18%
Audio	7%	12%
Video	9%	10%
Other	15%	12%

Multiple responses allowed

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Is It "All Hadoop, All the Time?" No.

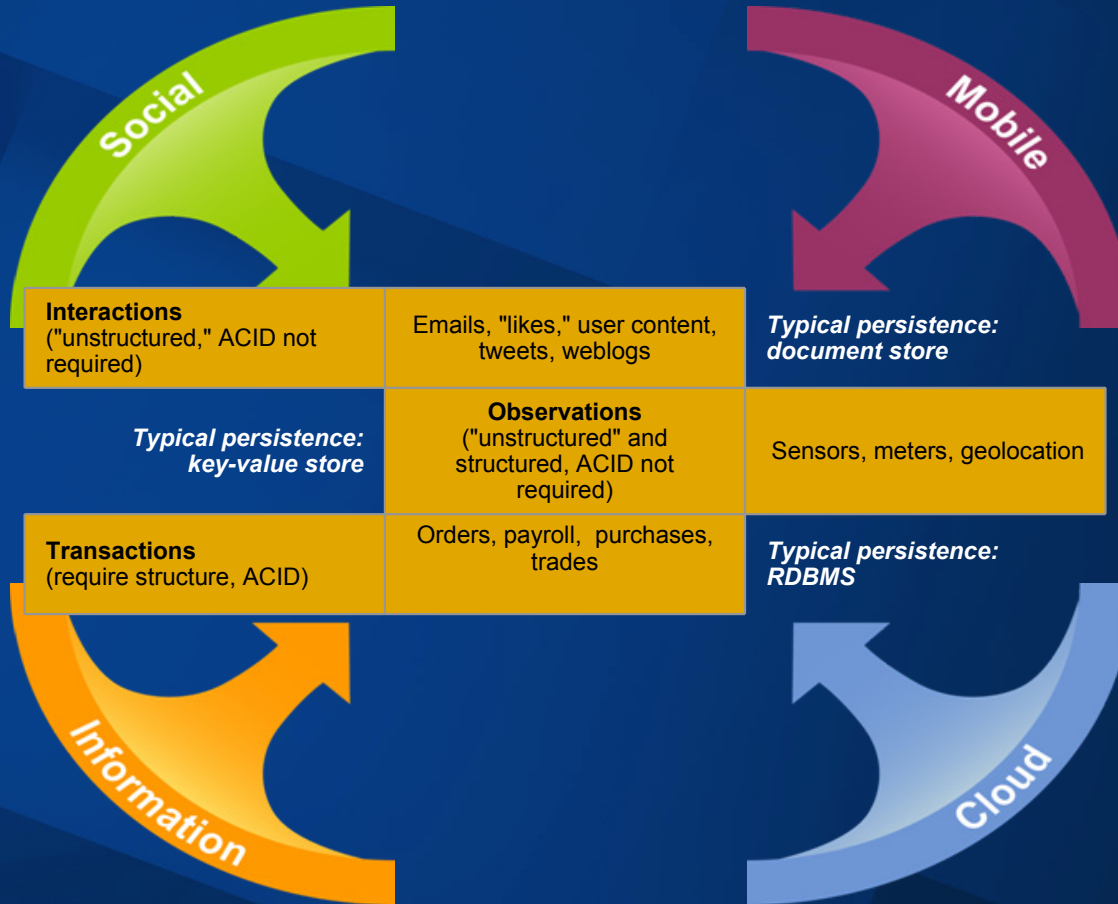What technologies are your organization using or planning to use to derive value from big data?

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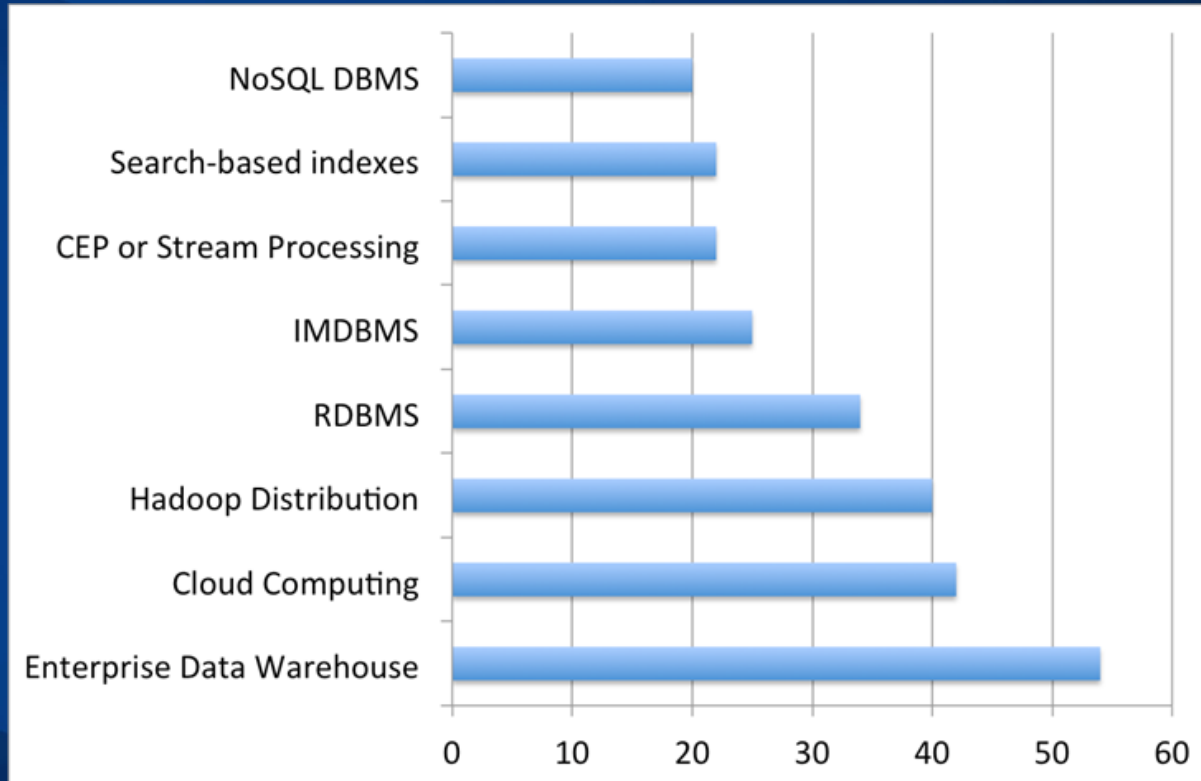
Hadoop Changes With YARN– Driving More Use Cases

Batch

SQL Interactive

DBMSs: Graph, others

In-Memory

Streaming and events

Search

Graph

YARN
Cluster Resource Management

HDFS
Distributed Storage

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Data Passing Through Hadoop Won't Always Stay There – Enter NoSQL

Social

Mobile

Interactions
("unstructured," ACID not required)

Emails, "likes," user content, tweets, weblogs

Typical persistence: document store

Typical persistence: key-value store

Observations
("unstructured" and structured, ACID not required)

Sensors, meters, geolocation

Transactions
(require structure, ACID)

Orders, payroll, purchases, trades

Typical persistence: RDBMS

Information

Cloud

14

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Why the Fuss About Mobile?

2009
Personal Devices
1.6 Billion

2009
Internet of Things
.9 Billion

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What's the Impact of Mobile AND the Cloud? The IoT

2020
Internet of Things
30 Billion

2020
Personal Devices
7.3 Billion

What's So Great About Cloud Deployments?

- Inherently mobile
- Rapid innovation

For Employees

- No large-scale upgrades
- Staff redeployment
- Complexity avoidance

For Operations

- Easy to scale up or down
- Economics
- Opex, not capex

For Finance

The Cloud provisioning model holds widespread appeal for multiple constituencies

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Why Did Gartner Combine New DBMS Products With the Traditional DBMSs?

Survey Question: What consistency requirements apply to the application(s) that is(are) the subject of this survey?
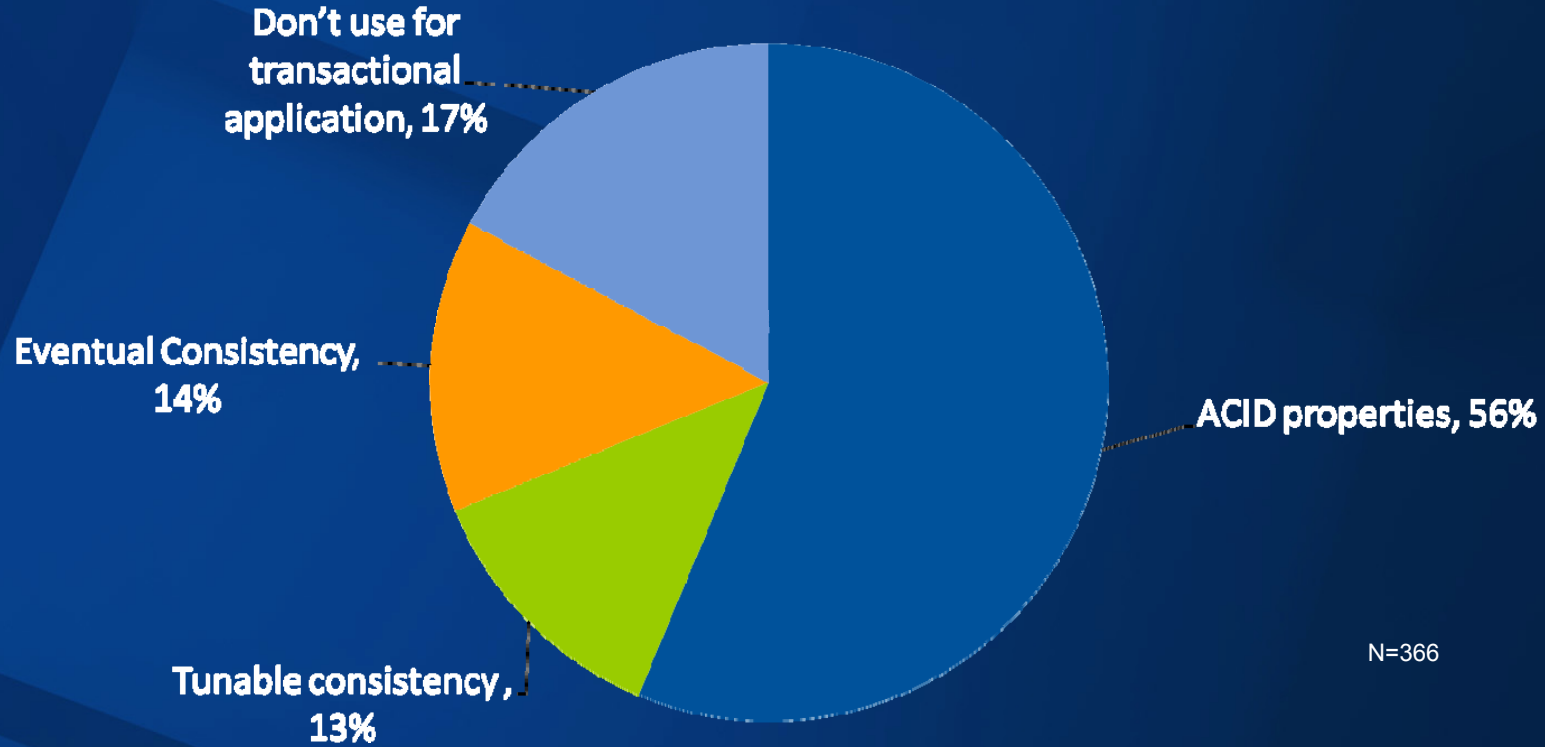
Don't use for transactional application, 17%

ACID properties, 56%

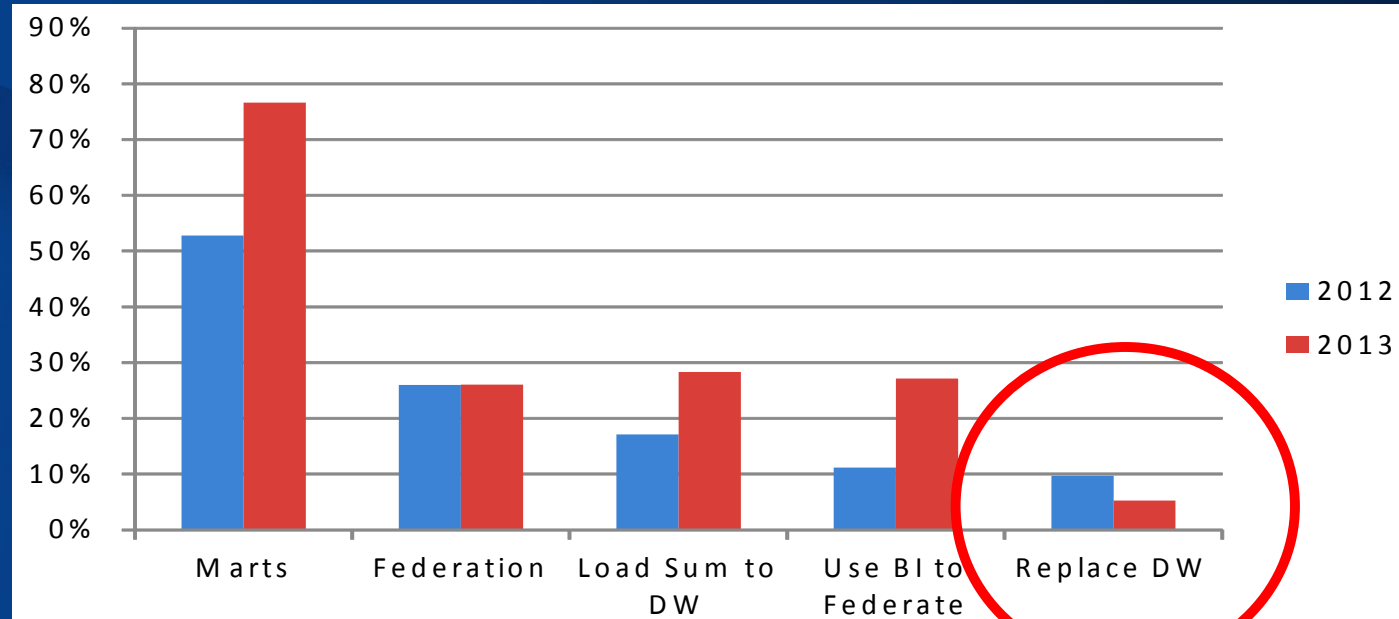Eventual Consistency, 14%

Tunable consistency , 13%

N=366

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Data lake... ...or reservoir?

"Big Data Replacing the Data Warehouse?" Not a Relevant Notion. It Joins the Warehouse.

What Are Organizations Planning for Their DWs?

Source MQ DW DBMS Survey, Nov. 2013 and Nov. 2012

Data warehouses are collections of data — not technology platforms.
A data warehouse can be made out of anything that manages data.
The key point is that when we find value, it is indeed managed.

A reservoir
contains
water that is...

Managed
Transformed
Filtered
Secured (somewhat)
Portable
Potable (fit for consumption)

Thank You!

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