

# IBM Performance 2012

Smarter Analytics. Smarter Outcomes.



## Transform Big Data into Business Opportunity

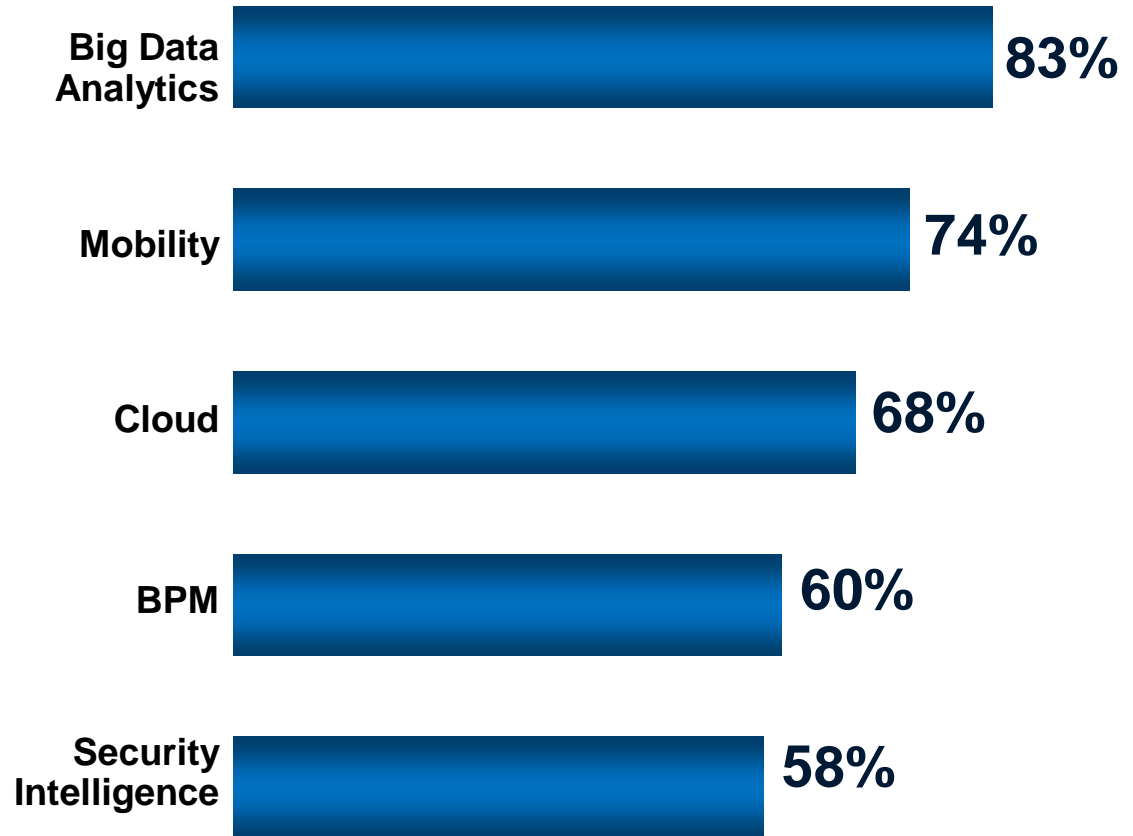
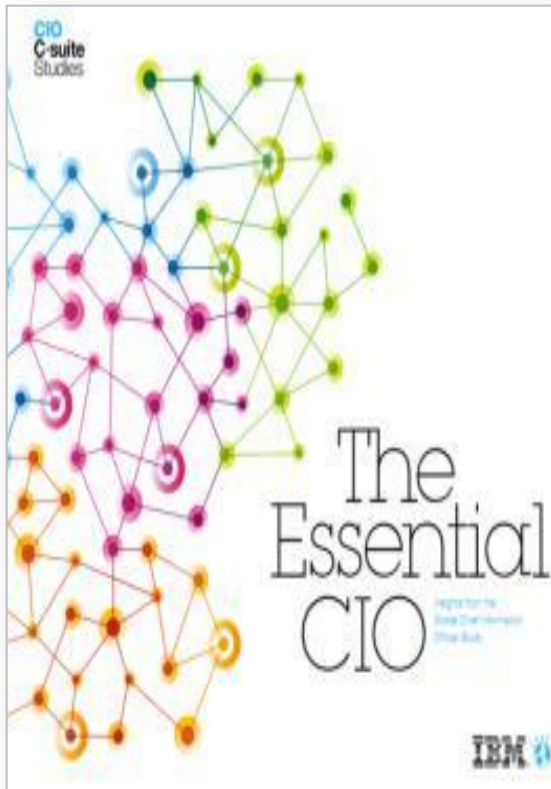
Falke Van Onacker

Sales Executive for Big Data and Netezza

La Hulpe - Room G - November 13, 2012

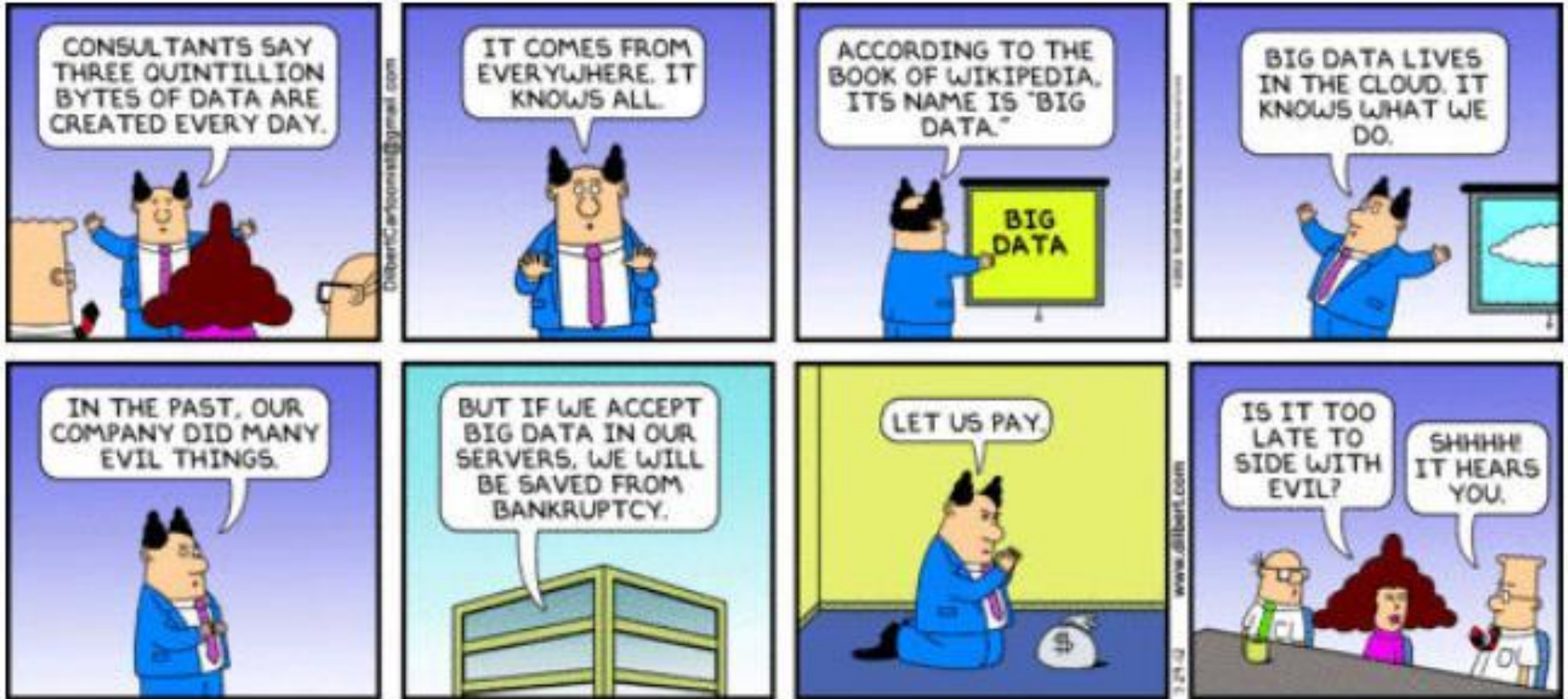


# What's Driving Innovation and Market Growth?



# Big Data

*Big Expectations, Budgets, Ideas,....*





*Who has won the US Presidential Election?  
On November 6?*



# *Who has won the US Presidential Election? On November 6?*

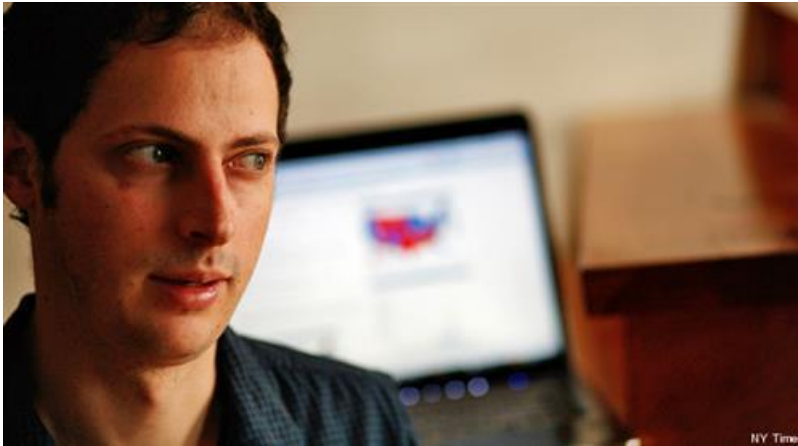




# *Who has “won” the US Presidential Election? On November 5?*



# Who has “won” the US Presidential Election? On November 5?



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**The New York Times**  
Sunday, November 11, 2012

**Politics**

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## FiveThirtyEight

Nate Silver's Political Calculus

November 10, 2012, 8:38 PM | 93 Comments

### Which Polls Fared Best (and Worst) in the 2012 Presidential Race

By NATE SILVER

As Americans' modes of communication change, the techniques that produce the most accurate polls seems to be changing as well. In last Tuesday's presidential election, a number of polling firms that conduct their surveys online had strong results. Some telephone polls also performed well. But others, especially those that called only landlines or took other methodological shortcuts, performed poorly and showed a more Republican-leaning electorate than the one that actually turned out.

Our method of evaluating pollsters has typically involved looking at all the polls that a firm conducted over the final three weeks of the campaign, rather than its very last poll alone. The reason for this is that some polling firms may engage in "herding" toward the end of the campaign, changing their methods and assumptions such that their results are more in line with those of other polling firms.

There were roughly two dozen polling firms that issued at least five surveys in the final three weeks of the campaign, counting both state and national polls. (Multiple instances of a tracking poll are counted as separate surveys in my analysis, and only likely voter polls are used.)

For each of these polling firms, I have calculated the average error and the

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### FiveThirtyEight Forecast

Updated 10:10 AM ET on Nov. 6

President Nov. 6 Forecast	President Now-cast	Senate Nov. 6 Forecast
Barack Obama		Mitt Romney

313.0  
+14.0 since Oct. 30

Electoral vote

225.0  
-14.0 since Oct. 30

270 to win

90.9%  
+13.5 since Oct. 30

Chance of Winning

9.1%  
-13.5 since Oct. 30





*Who has “won” the US Presidential Election?  
In the weeks/months prior to November 6?*





# Who has “won” the US Presidential Election? In the weeks/months prior to November 6?





*Who has won ...*

*WHY?*





# Catalina Marketing using IBM Netezza to *Build Loyalty*

## 1 *Customer at a time*

- Predict with 86% accuracy what next item a customer will buy in the future
- Capture more than 300 million transactions each week
- Use three years of consumer data to *present more relevant information to consumers*
- 2.5 petabytes managed on Netezza – 600 billion rows in one table
- Using predictive analytics, combination of existing BI Applications + new Netezza Appliance



- **Marketing to a segment of one** – 195 million US citizens are helped
  - Every coupon printed is unique to the individual customer
  - Customized offer based on three years' worth of purchase history
- **24% redemption rate using predictive models**

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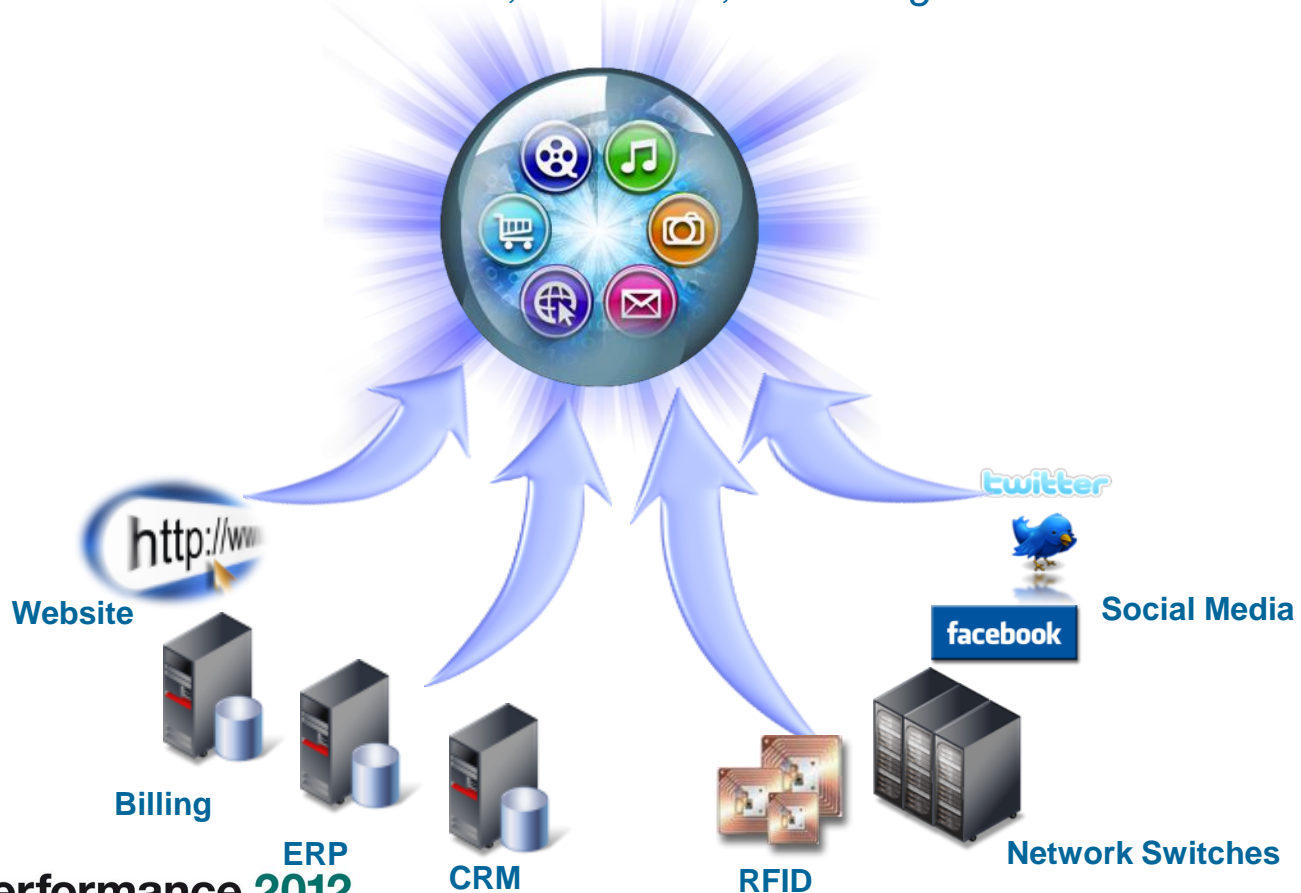
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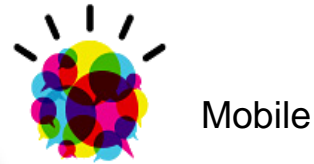
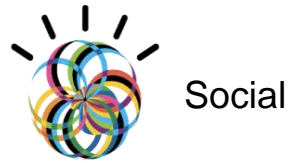




# Big Data is a Hot Topic *because Technology Makes it Possible to Analyze ALL Available Data*

Cost effectively manage and analyze  
*all available data in its native form*  
*unstructured, structured, streaming*





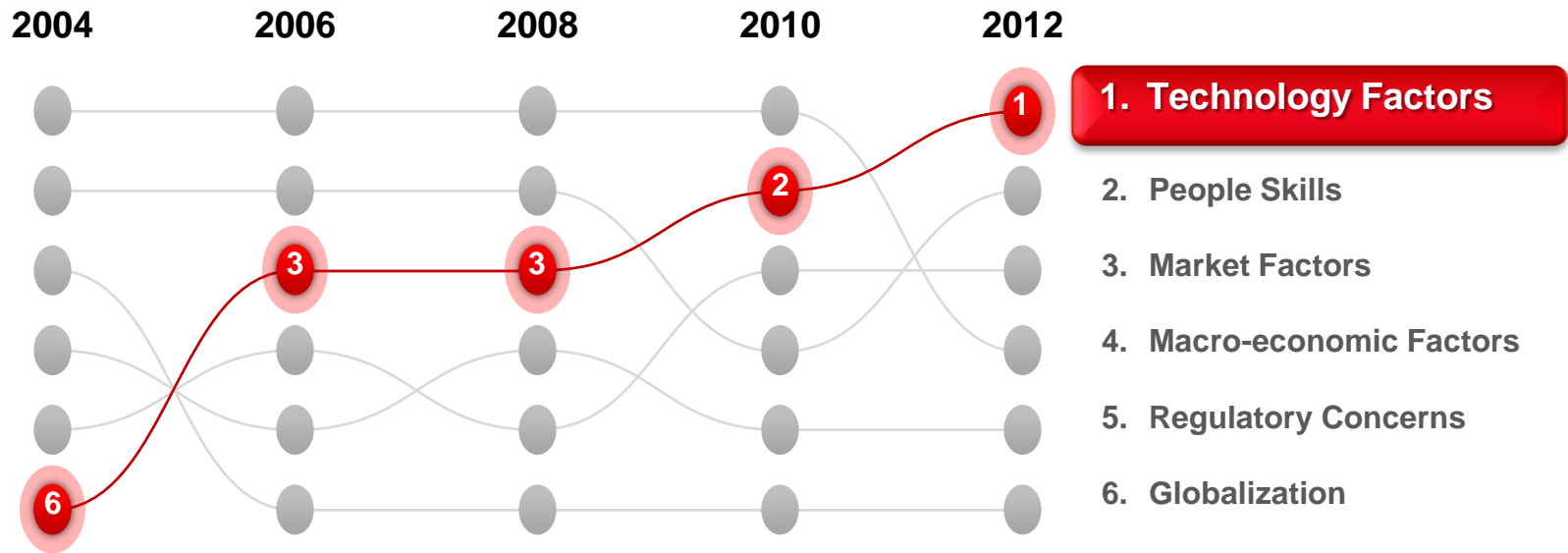
# A New Era of Computing is Emerging...

## ...creating new business and IT challenges and opportunities





# What Factors Are Impacting Organizations?



**Speed Value**

**90%**

Are adopting Cloud Computing

**Extended Reach**

**1 Billion**

Smartphones and 1.2 billion mobile employees by 2014

**New Insights**

**2.7ZB**

Of digital content in 2012, up 50% from 2011



# In Order to Realize New Opportunities, Customers Need to Think Beyond Traditional Sources of Data

## Transactional and Application Data



- Volume
- Structured
- Throughput

## Machine Data



- Velocity
- Semi-structured
- Ingestion

## Social Data



- Variety
- Highly unstructured
- Veracity

## Enterprise Content



- Variety
- Highly unstructured
- Volume





# How Are Organizations Getting Value from Big Data?

## Volume



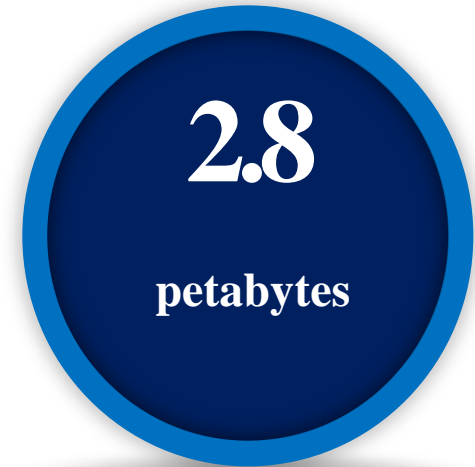
 T-Mobile

## Velocity



Dublin City Council  
Comhairle Cathrach Bhaile Átha Cliath

## Variety



 Vestas





# We've Seen This Before



**2010 –  
New Era Analytics**

**1990 –  
Web, e-business and SOA**



**1960 –  
Transaction Systems**



**Mainframe, IMS and CICS**

**WebSphere**

**Big Data Platform**

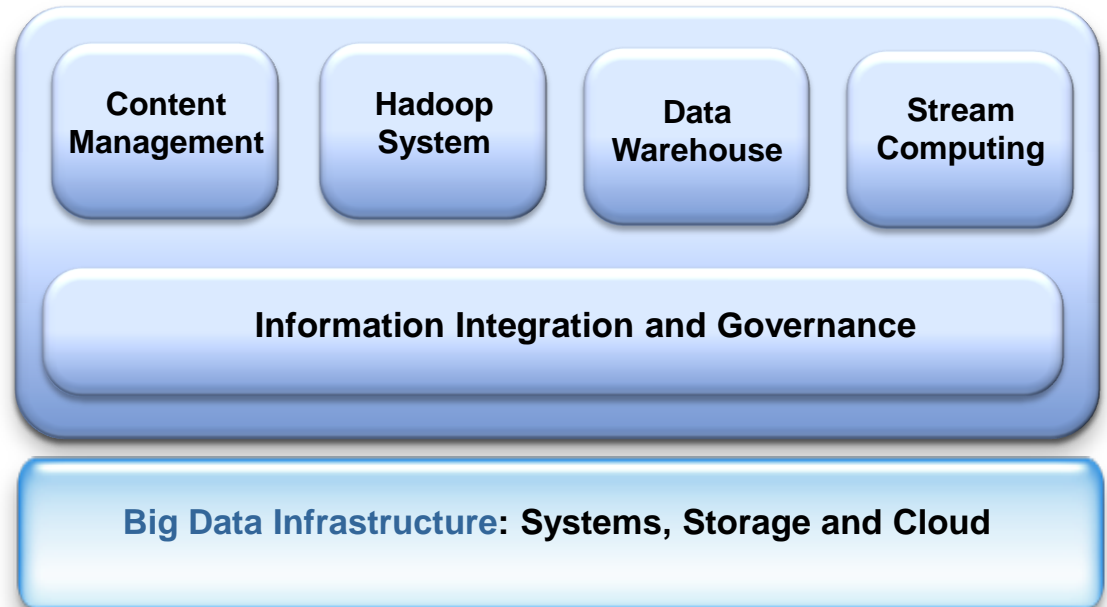
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# Building the Foundation

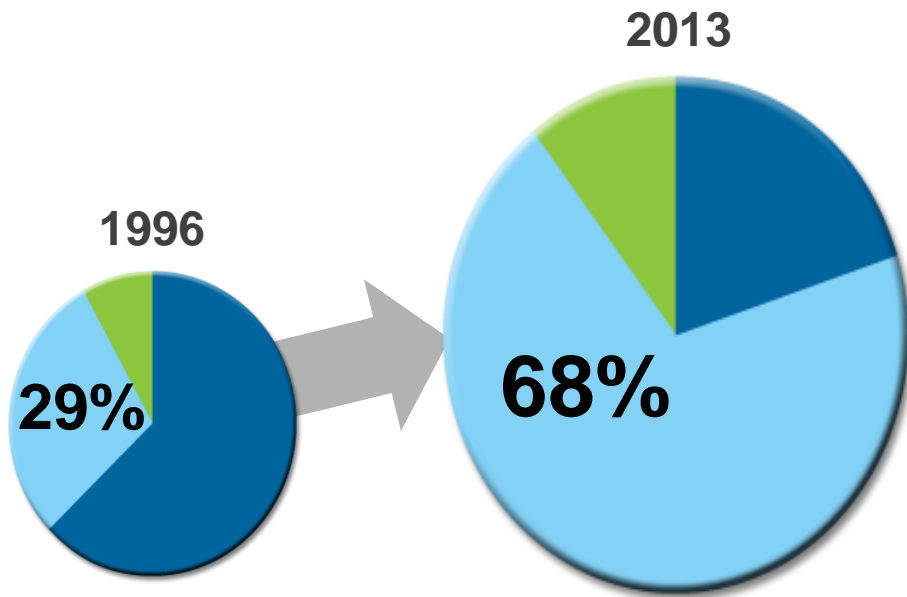


**Platform for the new era of big data applications**

## IBM Big Data Platform



# Is IT Ready for the Challenge?



**68% of IT**

operating costs in 2013 will be for management and administration



**Only 1 in 5**

organizations allocate more than 50% of IT budget to new projects



\* 2012 IDC

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\* 2012 IBM Global Data Center Study

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# PureSystems



**Cloud Software | Scalable Infrastructure | Simple Delivery**





# PureData



*Workload optimized performance*

*Data load ready in hours*

*Integrated management*

*Single point of support*

*Automated maintenance in hours, not days*

## Data Platform

*Delivering Data Services*

# PureSystems

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# Why Are Data Workloads Different?

E-commerce



Transaction  
Processing

Customer Analysis



Reporting and  
Analytics

Real Time  
Fraud Detection

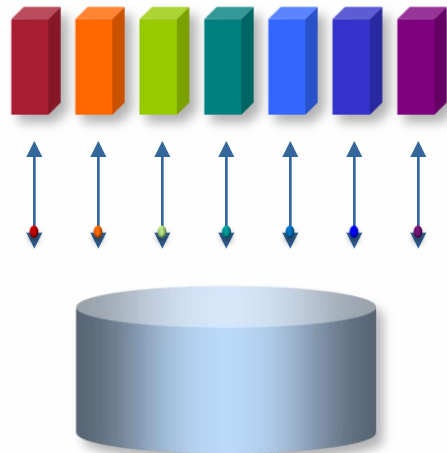


Operational  
Analytics



# Why Are Data Workloads Different?

## E-commerce



Scalable Transactional Database

**Transaction Processing**

## Customer Analysis



**Reporting and Analytics**

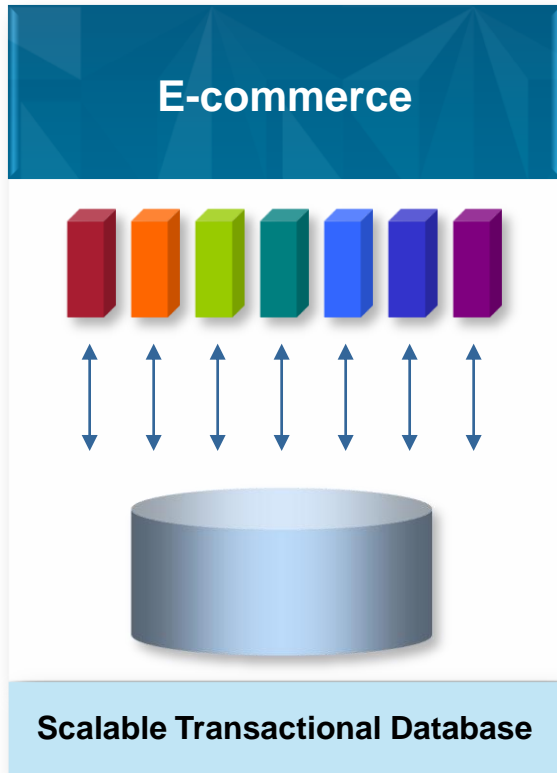
## Real Time Fraud Detection



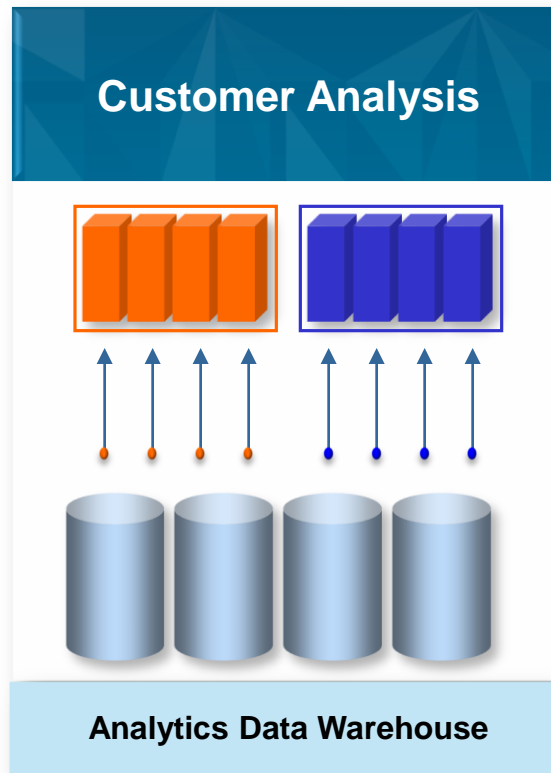
**Operational Analytics**



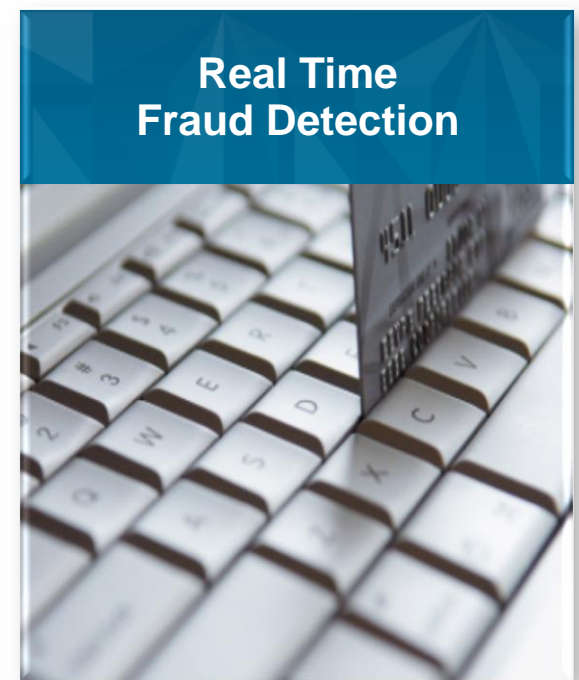
# Why Are Data Workloads Different?



**Transaction Processing**



**Reporting and Analytics**



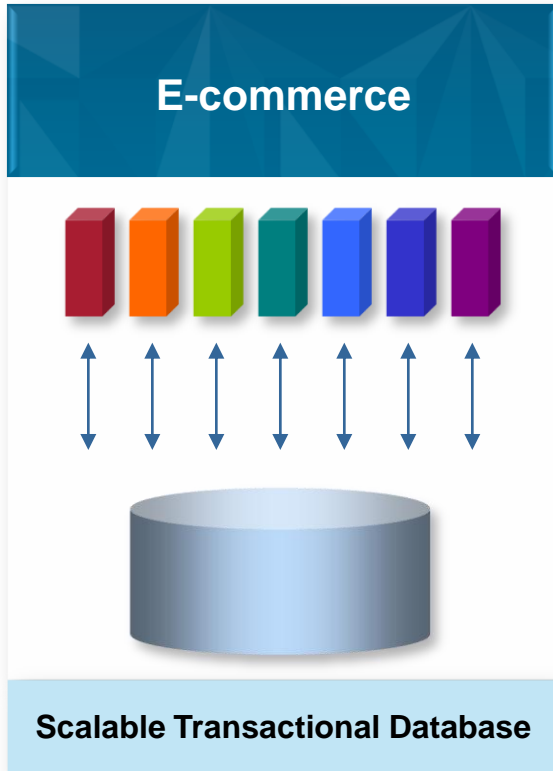
**Operational Analytics**



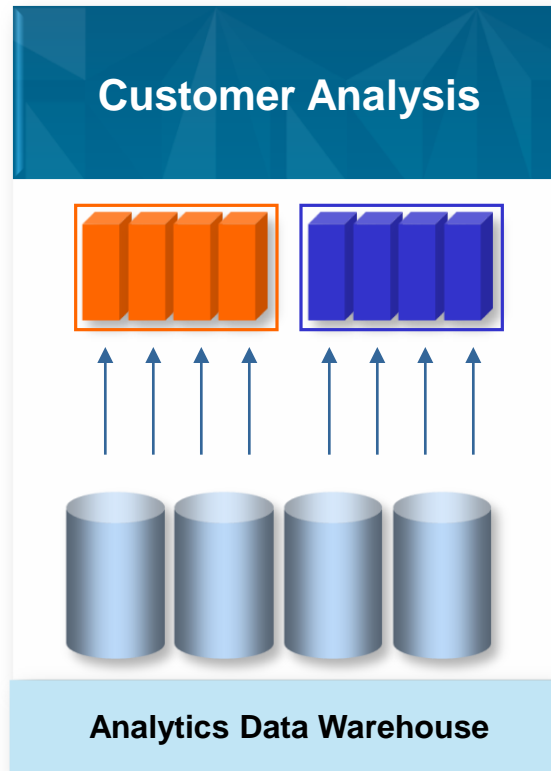




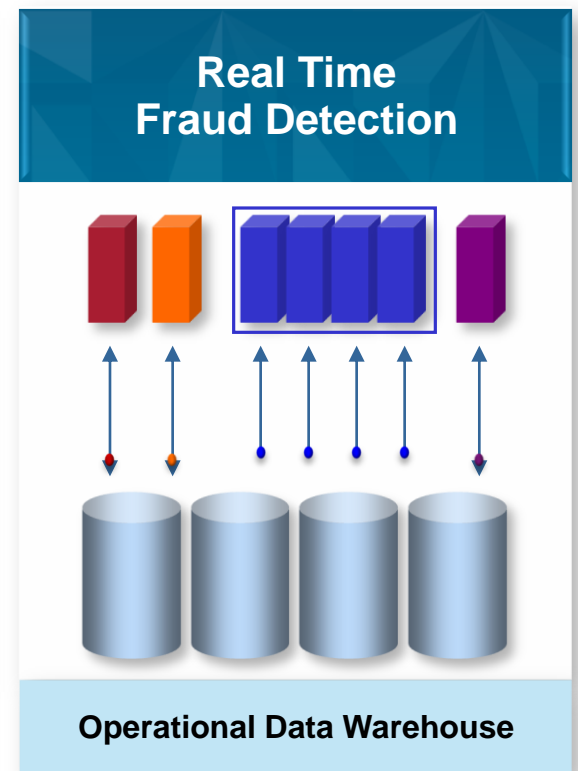
# Why Are Data Workloads Different?



**Transaction Processing**



**Reporting and Analytics**



**Operational Analytics**





# Why Are Data Workloads Different?

## PureData

Optimized Exclusively for  
Operational Data

**System for Transactions**  
E-commerce



**Scalable Transactional Database**

**Customer Analysis**



**Handles 100+** databases on 1 system  
**Up to 30x** database scalability  
**Up to 10x** storage space savings

**Analytics Data Warehouse**

**Real Time Fraud Detection**



**Operational Data Warehouse**

**Transaction Processing**

**Reporting and Analytics**

**Operational Analytics**





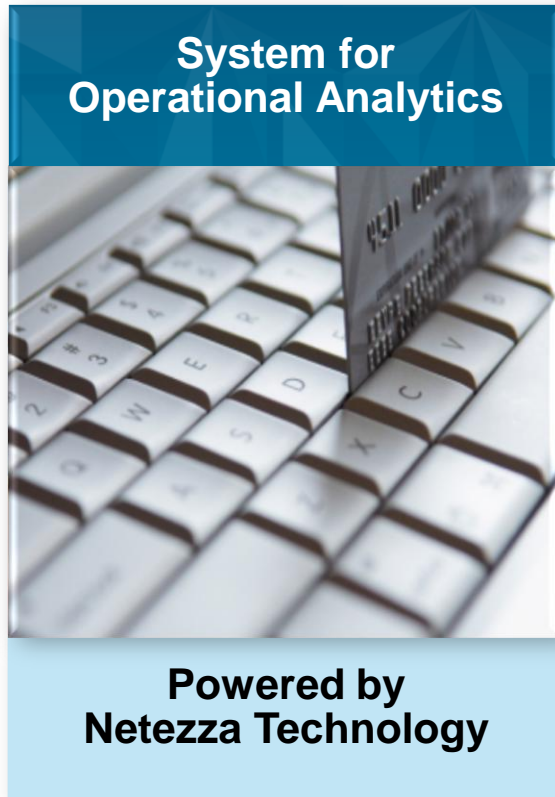
## Optimized Exclusively for Analytic Data Workloads

**10-100x** faster than traditional custom systems

**20x** concurrency and throughput for tactical queries

**Patented MPP hardware** acceleration





## Optimized Exclusively for Operational Analytic Data Workloads

**Handles 1000+**

concurrent operational queries

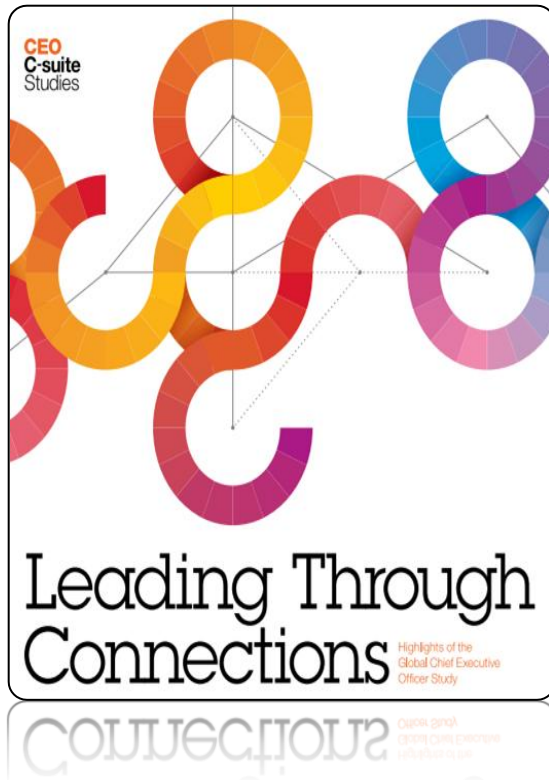
**Continuous ingest** of operational data

**Up to 10x** storage space savings





# What New Complexities Are Businesses Facing?



“...we need better information and insight, but what we need most is **the capability to act on it.**”

– Unit Head, Government, Hong Kong

“The ***time available*** to capture, interpret and act on information is getting shorter and shorter.”

– CEO, Chemicals and Petroleum, United States

“How do you unleash the innovative power of the people who deal with customers ***every day?***”

– CEO, Insurance, United Kingdom







**Ufone** reduced churn and kept subscribers happy, helping ensure that campaigns are highly effective and timely

### **IBM Capabilities Utilized:**

***Cognos BI, SPSS, Unica  
InfoSphere Streams***

#### **Need**

- To ensure that its marketing campaigns targeted the right customers, before they left the network
- Keep its higher usage customers happy with campaigns offering services and plans that were right for them

#### **Benefits**

- **Increased annual revenues by 30 percent and annual profits by USD 7 million**
- **Decreased time required to compile sales tax data by 98 percent**



## **Vestas optimizes capital investments based on 2.5 Petabytes of information.**

- Model the weather to optimize placement of turbines, maximizing power generation and longevity.
- Reduce time required to identify placement of turbine from weeks to hours.
- Incorporate 2.5 PB of structured and semi-structured information flows. Data volume expected to grow to 6 PB.



# University of Ontario Institute of Technology (UOIT) Detects Neonatal Patient Symptoms Sooner

Capabilities Utilized:

*Stream Computing*

- Performing real-time analytics using physiological data from neonatal babies
- Continuously correlates data from medical monitors to detect subtle changes and alert hospital staff sooner
- Early warning gives caregivers the ability to proactively deal with complications

Significant benefits:

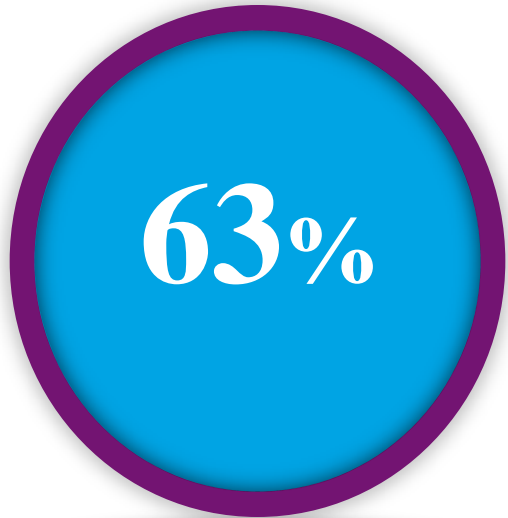
- Helps detect life threatening conditions up to 24 hours sooner
- Lower morbidity and improved patient care

“Helps detect life threatening conditions up to 24 hours sooner”

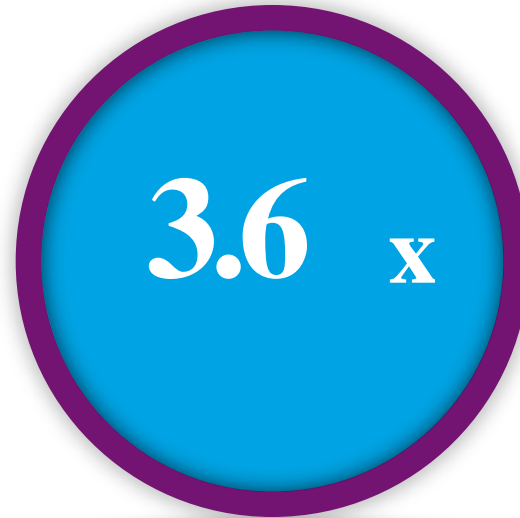




# Does Analytics Create A Competitive Advantage?



**Percentage of respondents who cited a competitive advantage**



**Organizations competing on analytics are more likely to outperform their peers**

Respondents were asked "to what extent does the use information (including big data) and analytics create a competitive advantage for your organization in your industry or market." Respondent percentages shown are for those who rated the extent a [4] or [5 Significant extent]. The same question has been asked each year. 2010 and 2011 datasets © Massachusetts Institute of Technology

Among respondents who self-assessed their organization as "substantially outperforming their competitive peers, there were 3.6 respondents who self-assessed the extent of competitive advantage created by information and analytics as a [4] or [5 Significant extent] for every one who rated the advantage to be [1 Very little extent], [2], or [3 Keeps us on par with competitors].



Business-centric Big Data enables you to start with a critical business pain and expand the foundation for future requirements



- “Big Data” isn’t just a technology - **it’s a business strategy** for capitalizing on information resources
- Getting started is crucial
- Success at each entry point is accelerated by products within the Big Data platform
- Build the foundation for future requirements by expanding further into the big data platform



# Think Big: Your Business Depends on It



**Leverage** analytics  
as a game-changer

**Embrace** big data  
to maximize your  
business outcomes

Get **inspired** and  
take action

Think **BIG**

