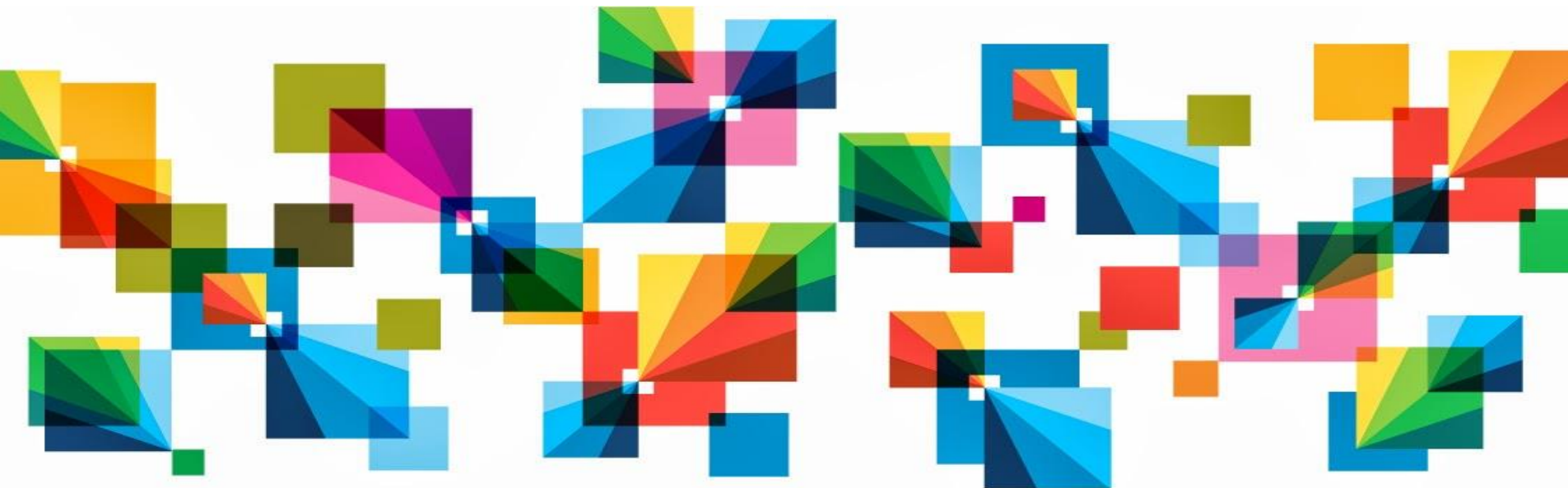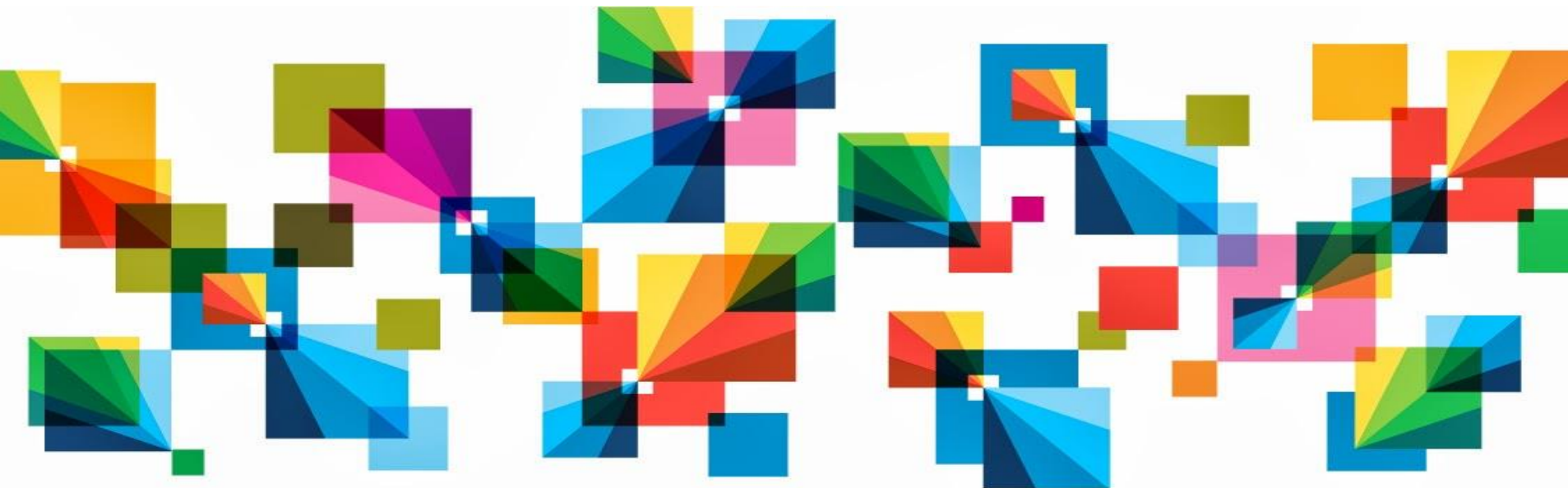# A Smarter Approach To Big Data

Utilize Speed And Simplicity For Faster Value

Leveraging Big Data to Deliver Immediate Value

How IBM's Big Data Platform Solves the Complete Spectrum of Enterprise Big Data Problems

Market Changes Driving the Need for Next Generation Information Management and Analytics

Technology allows us to consume more data and generate new insight

The scale and scope of big data present new opportunities for innovation and competitive advantage

Fast access to insight is a top requirement

Businesses need to more quickly generate insight from information to accelerate decision making

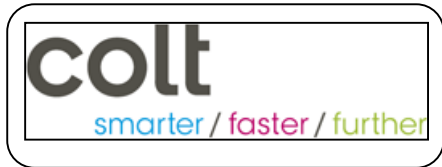**These insights are sparking new & rapidly evolving analytic requests**

Organizations need fast, simple and agile technology strategies for manipulating data and developing new applications

What does the Next Generation of Big Data Information Management and Analytics Look Like?

- Simple, intelligent and agile

- Super fast for transactional and analytic workloads
  - Using the most advanced in-memory technology, with leading SQL and NoSQL capabilities

- Uncovers hidden insights with advanced analytics

- Efficiently scales across clusters of inexpensive hardware

- Increases trust in data accessed across the enterprise

- Easy to deploy, cloud ready

Leading Business are Using Big Data to Gain a Competitive Advantage

Colt Technology Services Group **saves USD 1.9M** annually through improved business intelligence

Japanese internet company - analyze and process 18M transactions/hour, to increase **subscribers by 100%**

"reduce the time to analyze complex GIS data from **days to minutes** - a more than **98% improvement**."

Real business results!

Increased annual **revenues by 30%**

Enabled **600 percent growth** in mobile solutions and **200 percent growth** in internet banking
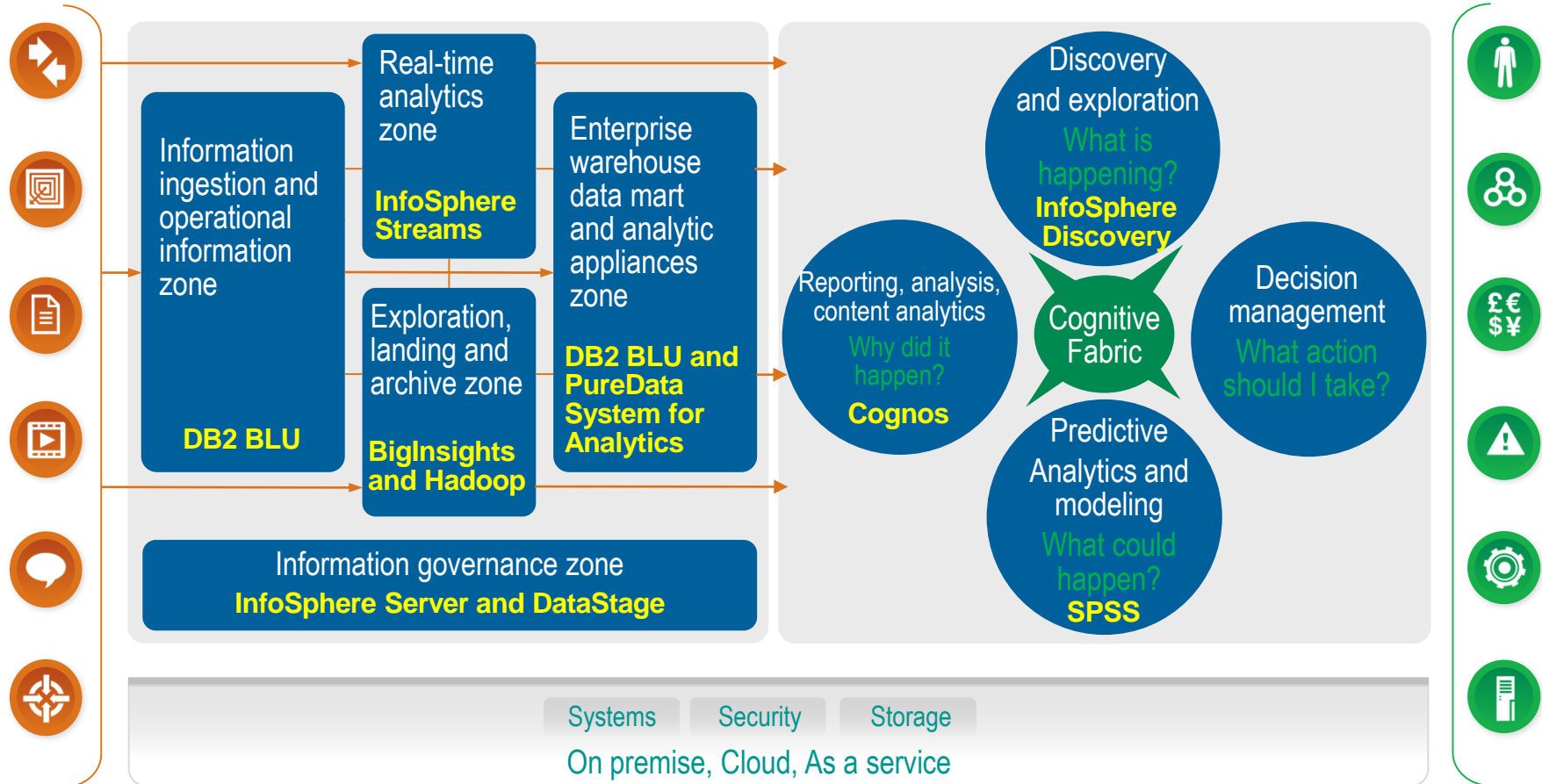

Premier Healthcare Alliance improves patient outcomes while **reducing spending by USD 2.85B**

Make Sense out of BigData with IBM Watson Foundations

IBM Watson Foundations

All Data

New/Enhanced Applications

Information ingestion and operational information zone

DB2 BLU

Real-time analytics zone
InfoSphere Streams

Exploration, landing and archive zone
BigInsights and Hadoop

Enterprise warehouse data mart and analytic appliances zone
DB2 BLU and PureData System for Analytics

Information governance zone
InfoSphere Server and DataStage

Reporting, analysis, content analytics
Why did it happen?
Cognos

Discovery and exploration
What is happening?
InfoSphere Discovery

Cognitive Fabric

Decision management
What action should I take?

Predictive Analytics and modeling
What could happen?
SPSS

Systems   Security   Storage
On premise, Cloud, As a service

Analyze all data, from any source, with the right technology

6

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Big Data: Five Most Common Use Cases

- Enhanced 360˚ View of the Customer
  - **Goal: B**etter customer engagement with a more complete view of internal and external customer data
  - **Business value: University a**ble to determine impact of TV ad for movie in a day

- Big Data Exploration
  - **Goal:** Find, visualize, and understand all Big Data to improve business knowledge
  - **Business value: F**inancial services firm supports merger with secure access across 21 subsidiaries

- Security and Intelligence Extensions
  - **Goal:** Enhance security solutions by analyzing all types of sources of data
  - **Business value:** Together with Brocade, can analyze network traffic to detect and respond to data leakage in near real-time.

- Data Warehouse Modernization
  - **Goal:** Integrate big data technologies within existing warehouse environments to gain new insight
  - **Business value:** Constant Contact was able improve performance by over 40x while reducing wait time from hours to seconds

- Operations Analysis
  - **Goal:** Analyze variety of machine and operational data for improved business results
  - **Business value:** Battelle was able to reduce energy costs and enhance power grid reliability and performance

Create More Value Through a Smarter Information Management Strategy

- Efficiently analyze your current data

- Visualize your data

- Analyze new sources of unstructured or semi-structured data, including data in motion

- Efficiently integrate all your data

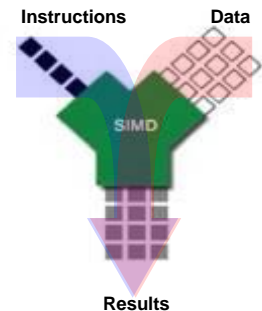- **Simplify** your environment with the right deployment model

Efficiently Analyze Your Current Data

Build On A Strong Foundation With Revolutionary BLU Acceleration

- A faster and easier way to do analytics
  - Innovative columnar data processing
  - Eliminate complex indexes and partitioning schemes

- Make best use of all your hardware resources
  - Dynamic in-memory database
  - Actionable compression
  - Parallel vector processing
  - Data skipping

- Handles extreme transactional performance

- Dramatically outperforms competitors

C1 C2 C3 C4 C5 C6 C7 C8

10-25x
improvement for analytics

Instructions   Data

SIMD

Results

4-50x
competitors

Visualize Your Data

Deliver to the people who need it in the format they need

- Complete business analytics portfolio
  – Powerful visualization capabilities to understand your data quicker
  – Predictive analytics to optimize business decisions

- Easy to use web tooling
  – Decreases development cost and supports easy deployment and delivery

- Make the data available to the people that need it in the format they can use it
  – Smart phone, dashboard, programs

Analytics users outperform peers by **1.6x**

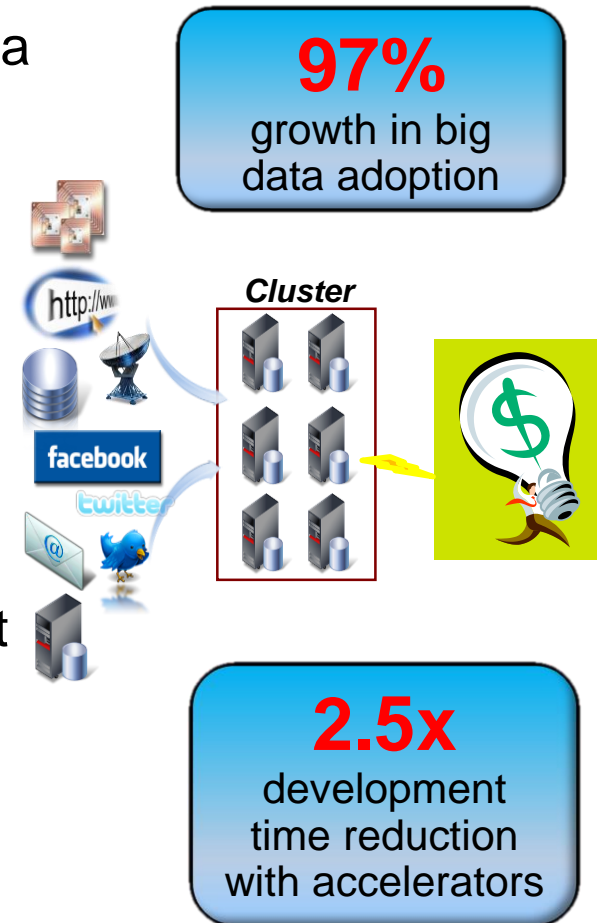**20x** faster predictive analytics

Analyze New Sources of Unstructured Data and Data In Motion

Include External Data To Get A Complete View Of Your Business

- **Gain competitive insight by leveraging external data**
  - Customer-focused objectives are top priority*

- **New programming models for new types of data**
  - Designed for efficient scale out cluster usage
  - Solve problems that we could not before

- **Advanced development tools for faster deployment**
  - GUI based accelerators for the most common scenarios

97% growth in big data adoption

Cluster

2.5x development time reduction with accelerators

*"Analytics: The real-world use of big data" - http://public.dhe.ibm.com/common/ssi/ecm/en/gbe03519usen/GBE03519USEN.PDF

Efficiently Integrate all your Data

Integrate Your Data Across The Enterprise With An Efficient Infrastructure

- Speed up integration projects

  – Handle change faster with agile tooling
  – Decrease time to deployment

- Complete end-to-end information integration

  – Runs heterogeneous platform
  – Native connector support, including new big data sources

- Fast and scalable

  – Parallel architecture for efficient scaling

- Ensure quality and enforce corporate rules

Outperform peers by **5x**

96% reduction in data latency

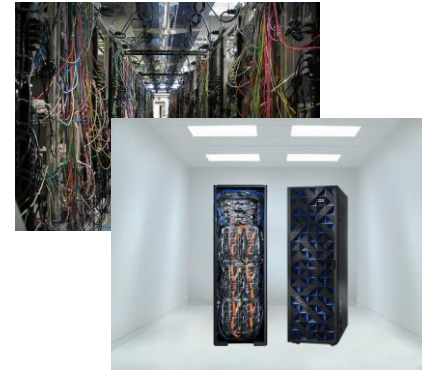# Simplify your Environments with the Right Deployment Model

Simplify complex environments to get results faster

- Software optimized for your existing infrastructure

  — Best overall TCO($) for known consistent workloads

- Expert integrated appliances for better time to value

  — PureData Systems are optimized for specific data workloads

  — Faster deployment and better performance

- Deploy in the cloud for increased flexibility and growth

  — Scale when you need it for variable and periodic workloads

  — Pay as you go – more storage or compute resources on demand

4-50x
faster than competition

Self-service BI and data warehousing on the cloud

Service Oriented Finance Wants to Capitalize on Big Data and Control Expenses

To increase our customer satisfaction, I need to understand what they like, what they don't like, and why.

I want to lower my operational costs.
Complexity is forcing me to spend most of my budget maintaining the current systems.

Service Oriented Finance CMO

Service Oriented Finance CIO

IBM Can Help Service Oriented Finance Utilize Analytics to Grow their Business

Let me show you examples of how IBM analytics solutions can help:

1. **Decrease your financial risk**
2. **Retain your best customers**
3. **Simplify your current environment**

IBM

01 - Introduction - A Smarter Approach to Big Data

DEMO: Gain a 360°View of our Customers to Help Retain Our Best Customers

- Solution
  - Combined data from Twitter with mortgage data in our data warehouse
  - Built report with Cognos Report Studio
- Purpose
  - Identify good customers who have made complaints about Service Oriented Finance on Twitter