IBM Software Group Strategy & Vision

Gökhan Nalbantoğlu
Software Group Country Leader

20.09.2012

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Agenda

1. **IBM Software Group Strategy & Vision**
2. Big Data
3. Coffee Break
4. New Era of Customer Interaction
5. Independent Integrated Systems
6. Cocktail

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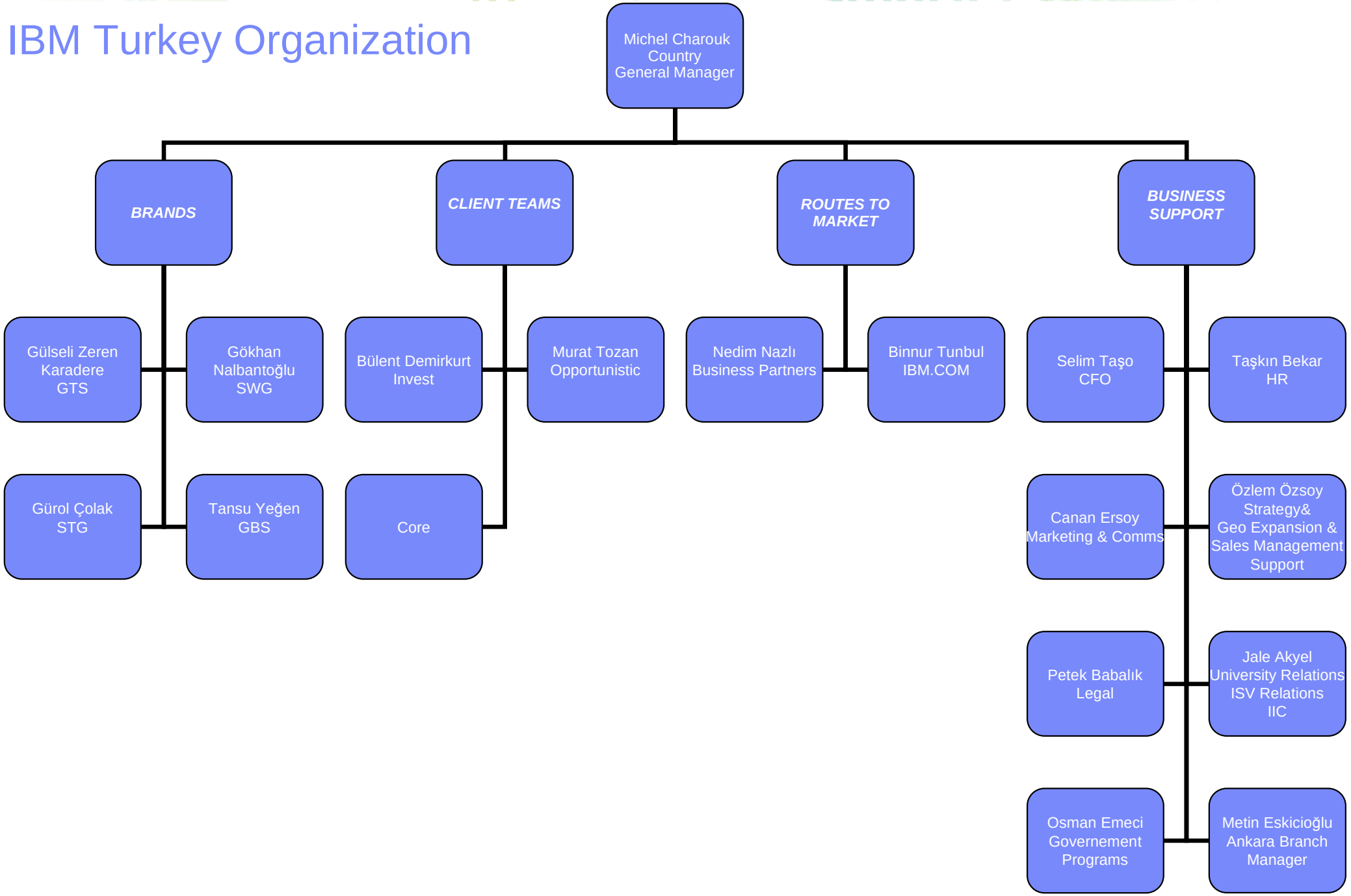
IBM Turkey Organization



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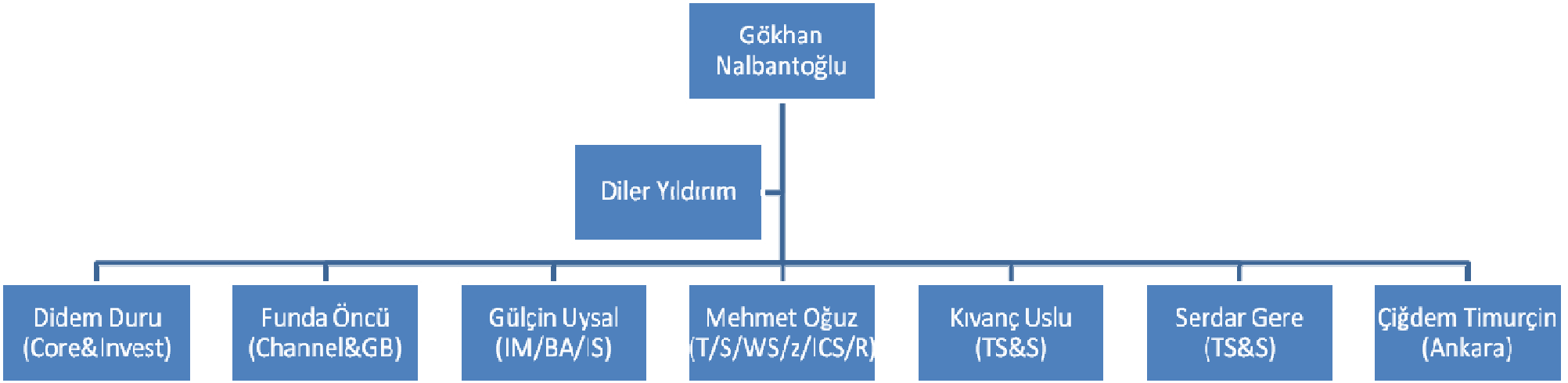
Core Management Team Software Group Turkey



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On a smarter planet, everyone is connected to everything, which makes us face

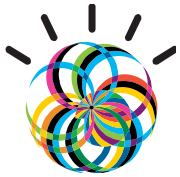
- An explosion of big data
- ❿ A hyperconnected society
- Increasingly demanding customers
- The push for relentless innovation

These marketplace shifts represent new opportunities for growth

IBM software helps businesses to achieve that growth

Smarter analytics

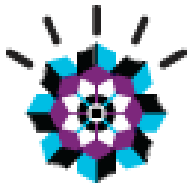
Cloud and IT optimization



Social business

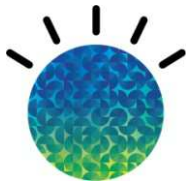
Security

Smarter cities



Product and service innovation

Business agility and mobility



Smarter commerce

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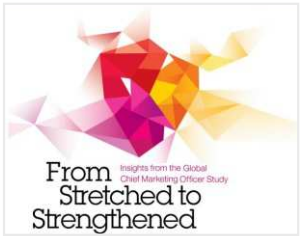
Over the last three years, IBM has transformed its software portfolio to address clients' business and IT needs by industry and role …

Industries

Banking | **Energy** | **Government** | **Healthcare** | **Education** | **Traffic** | **Retail** | **Communications**

Functions/roles



Marketing CMO

Finance CFO

Human resources CHRO

Supply chain CSCO

Executive CEO

IT CIO

Business and IT needs

Turn information into insights | **Deepen engagement with customers, partners and employees** | **Enable the agile business** | **Deliver enterprise mobility** | **Accelerate product and service innovation** | **Optimize IT and business infrastructure** | **Manage risk, security and compliance**

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By providing clients with an incredibly rich set of capabilities

Need	Capabilities	Need	Capabilities
Turn information into insights	▪ Business Analytics ▪ Data Management ▪ Big Data ▪ Data Warehousing ▪ Enterprise Content Management ▪ Information Integration and Governance	Deliver enterprise mobility	▪ Mobile Development and Connectivity ▪ Mobile Management and Security
Deepen engagement with customers, partners and employees	▪ Social Collaboration ▪ Unified Communications ▪ Web Experience ▪ Commerce ▪ Enterprise Marketing Management ▪ Smarter City Operations	Accelerate product and service innovation	▪ Application Lifecycle Management ▪ Complex and Embedded Systems ▪ Enterprise Modernization
Enable the agile business	▪ Business Process Management ▪ Connectivity, Integration and SOA ▪ Application Infrastructure	Optimize IT and business infrastructure	▪ Cloud and IT Optimization ▪ Asset and Facilities Management ▪ Enterprise Endpoint Management
		Manage risk, security and compliance	▪ Identity and Access Management ▪ Data Protection ▪ Application Security ▪ Infrastructure Protection ▪ Security Intelligence and Compliance Analytics

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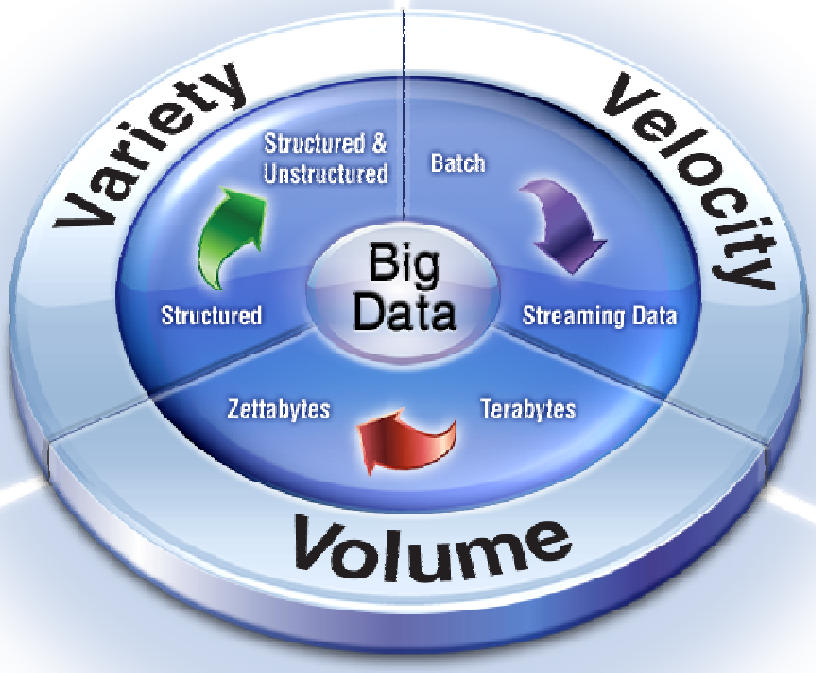
What is Big Data

Extracting insight from an immense volume, variety and velocity of data, in context, beyond what was previously possible.



Variety — Manage the complexity of multiple relational and non-relational data types and schemas

Velocity — Streaming data and large volume data movement

Volume — Scale from terabytes to zettabytes

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About the Communications Industry

Dramatic forces across the communications industry require new approaches to succeed in a dynamic market.

Disruptive competitors drive down profit margins

Advances in technologies like cloud and next-gen networks challenge legacy systems' ability to keep pace

Mobility and data services growth cause an unprecedented network traffic and data explosion

Empowered customers expect a superior communications experience anywhere, anytime, on any device

Active government involvement means increasing regulations

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About the Communications Industry

The constant change of the communications industry today represents a tremendous growth potential.

Mobility

50 billion mobile devices

will be connected to the internet by 2020

Customer advocacy

55 percent

of CSP customers worldwide who are considered “antagonists” and can be converted to “advocates”

Data services

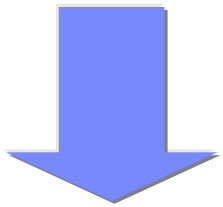
18 times increase

increase in data services by 2015

New markets

$126 billion Cloud market

potential for cloud-based services by 2015



To sustain revenue growth, leaders across your industry are prioritizing three imperatives

Deliver smarter services that generate new sources of revenue

Transform operations to achieve business and service excellence

Build smarter networks

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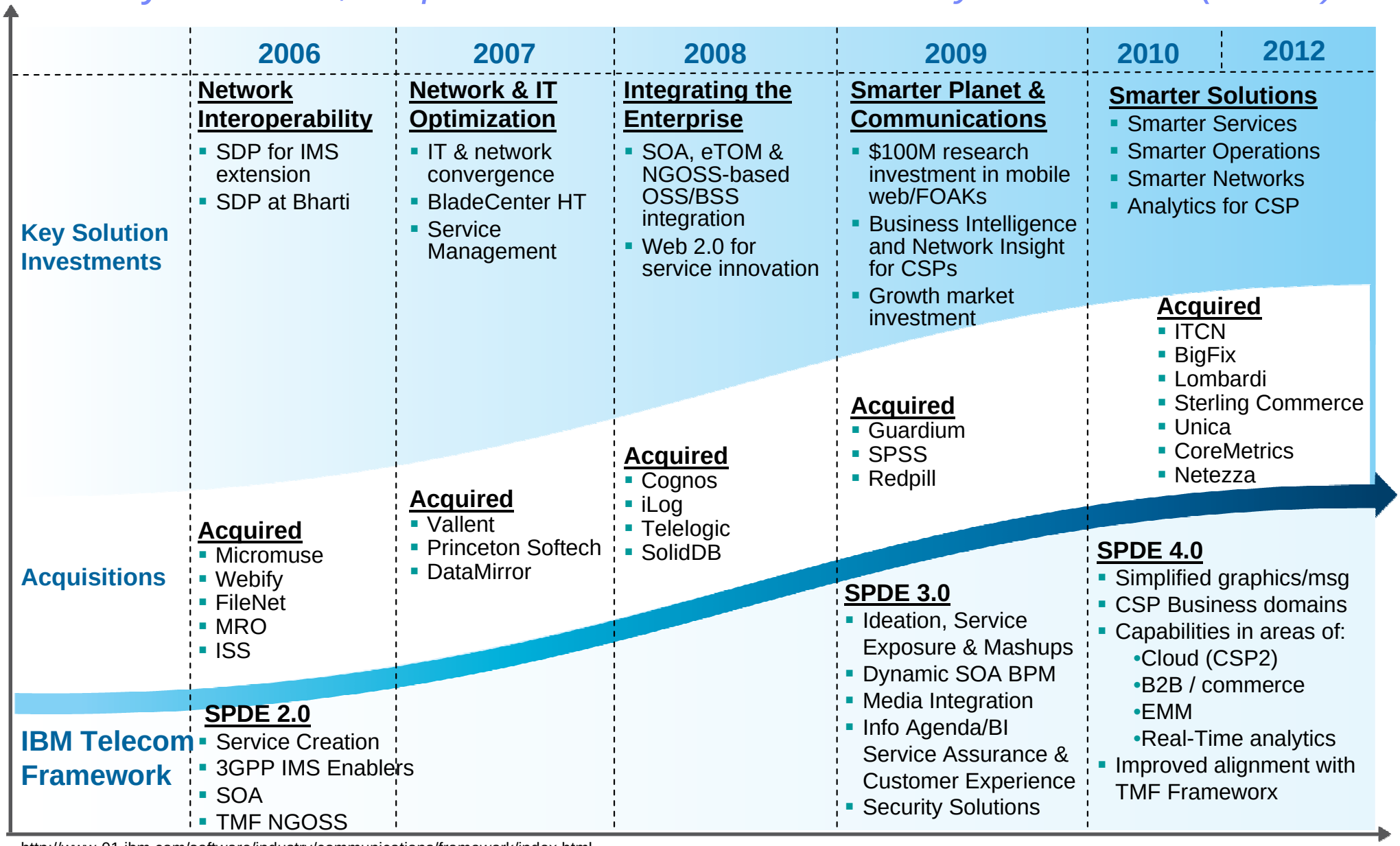
We continue our significant investments in the communications industry *Solutions, Acquisitions and Telecom Industry Framework (SPDE)*



http://www-01.ibm.com/software/industry/communications/framework/index.html

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IBM's global network of Telecom expertise

- 15,000+ subject matter experts
- Global Telco Center of Excellence (GTCoE)
- OSS, BSS & Comverse Centers of Excellence
- 8 Telecom Solution Labs (TSLs)
- 7 Software Solution Labs for Telco
- 2 Media Solution Labs (MSLs)

IBM Research

Innovation that Matters

- Telecom is IBM's #1 industry research focus
- 100 staff years devoted to Telecom-specific projects
- 250 staff years committed to cross-industry projects
- Telecom is one of IBM's targeted cross-industry markets

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Big Data

Ayhan Önder
Client Technical Professional, Netezza

20.09.2012

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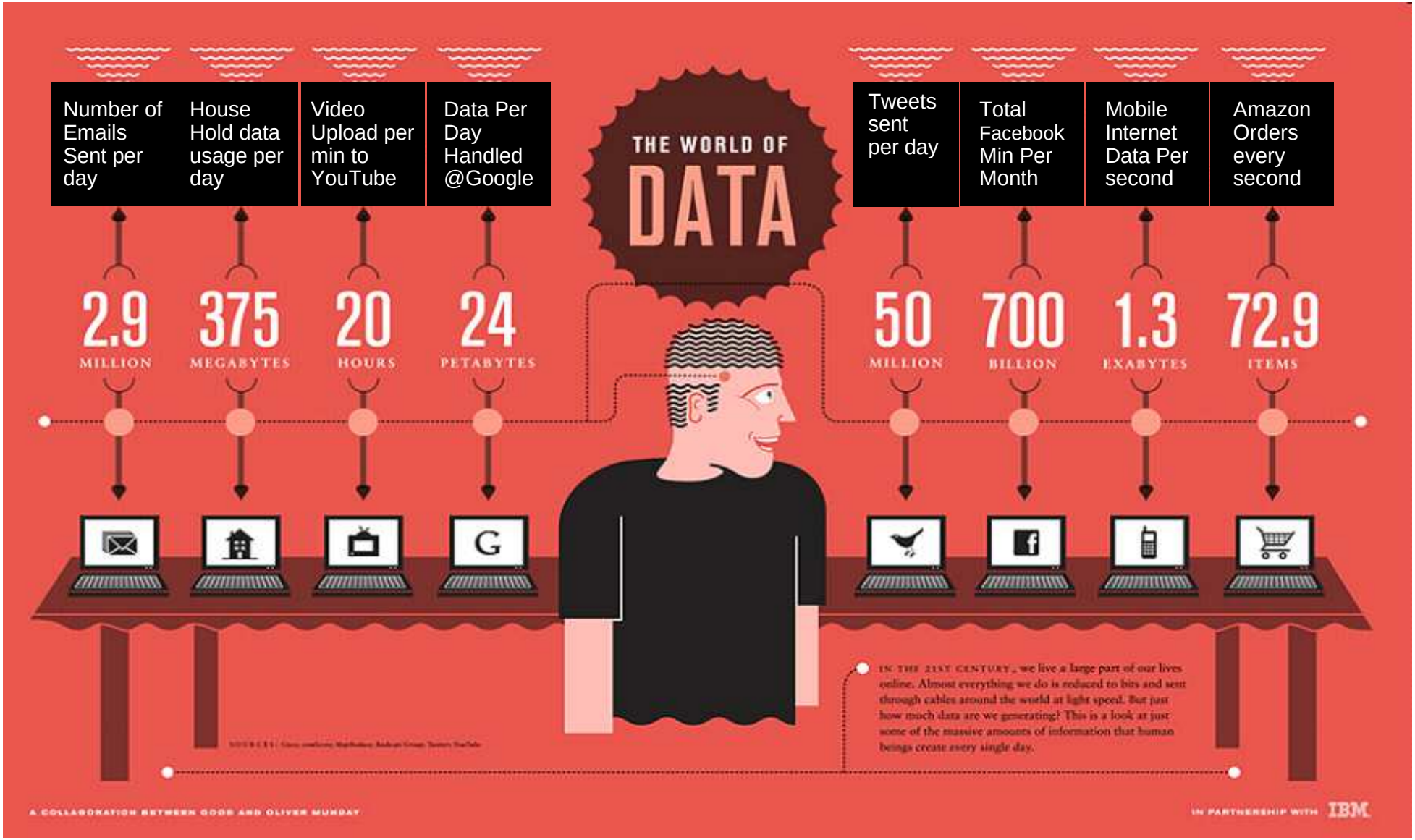
The World of DATA



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“Data is the new Oil”

In its raw form, oil has little value. Once processed and refined, it helps power the world.

Forbes.com

“Big Data has arrived at Seton Health Care Family, fortunately accompanied by an analytics tool that will help deal with the complexity of more than two million patient contacts a year…”

The New York Times

“At the World Economic Forum last month in Davos, Switzerland, Big Data was a marquee topic. A report by the forum, “Big Data, Big Impact,” declared data a new class of economic asset, like currency or gold.

FT FINANCIAL TIMES
World business newspaper

“Increasingly, businesses are applying analytics to social media such as Facebook and Twitter, as well as to product review websites, to try to “understand where customers are, what makes them tick and what they want”, says Deepak Advani, who heads IBM’s predictive analytics group.”

THE WALL STREET JOURNAL.

“Companies are being inundated with data—from information on customer-buying habits to supply-chain efficiency. But many managers struggle to make sense of the numbers.”

Forbes.com

“…now Watson is being put to work digesting millions of pages of research, incorporating the best clinical practices and monitoring the outcomes to assist physicians in treating cancer patients.”

Los Angeles Times

The Oscar Senti-meter — a tool developed by the L.A. Times, IBM and the USC Annenberg Innovation Lab — analyzes opinions about the Academy Awards race shared in millions of public messages on Twitter.”

CNBC

“Data is the new oil.”
Clive Humby

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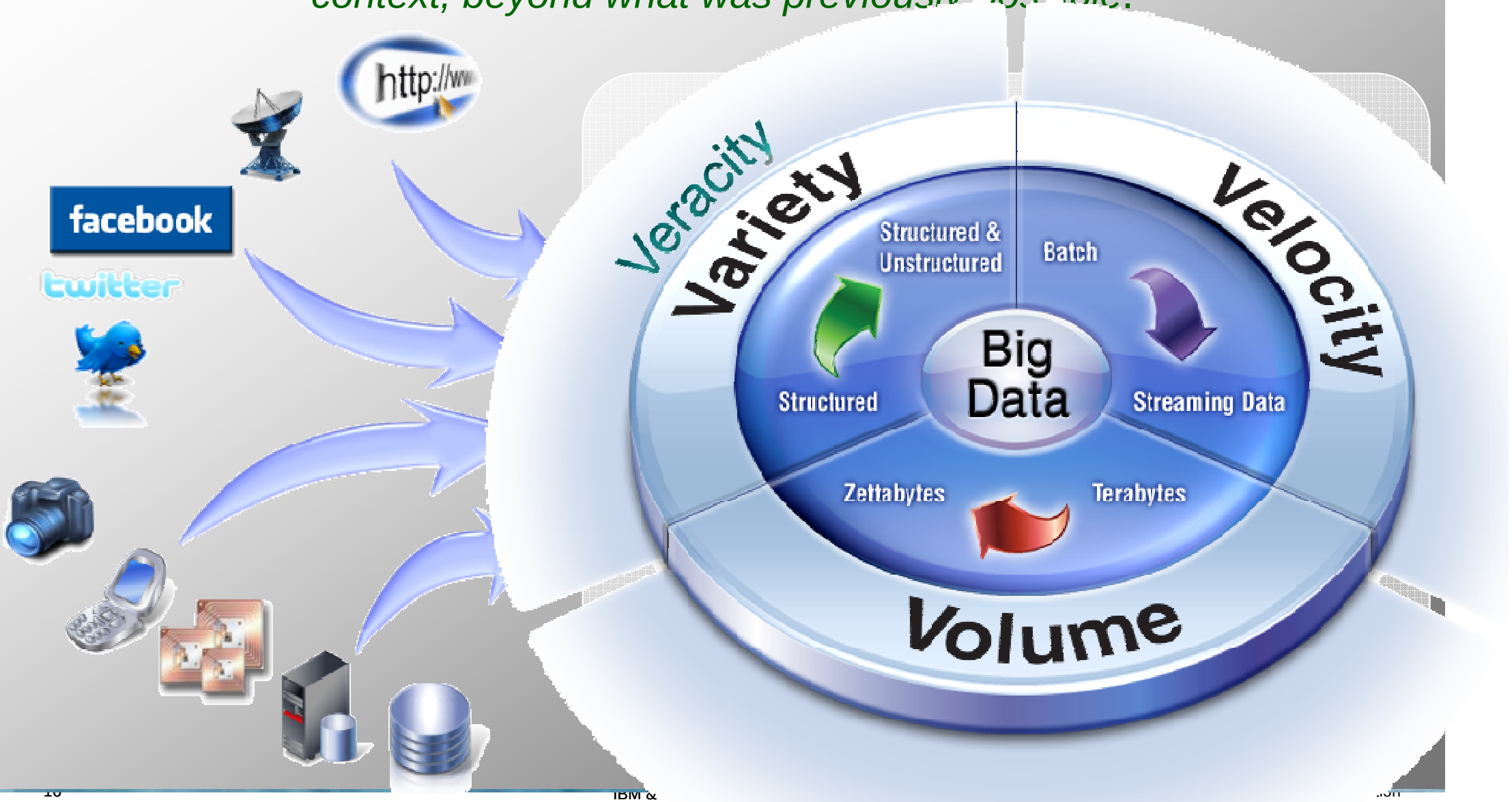
The Big Data Opportunity

Extracting insight from an immense volume, variety and velocity of data, in context, beyond what was previously possible.



What Our Customers Tell Us . . .

- Don’t know what should be analyzed
- Volumes can be extremely high
  - Potentially valuable data is dormant or discarded (size/performance)
  - Too expensive to justify integrating large volumes of unstructured data
- Much of their data is unstructured, or in widely varying structures, which are difficult to analyze
- Difficult to integrate information distributed across multiple systems and the Internet
- Some information has a short useful lifespan
- Analysis needed in the context of their existing information

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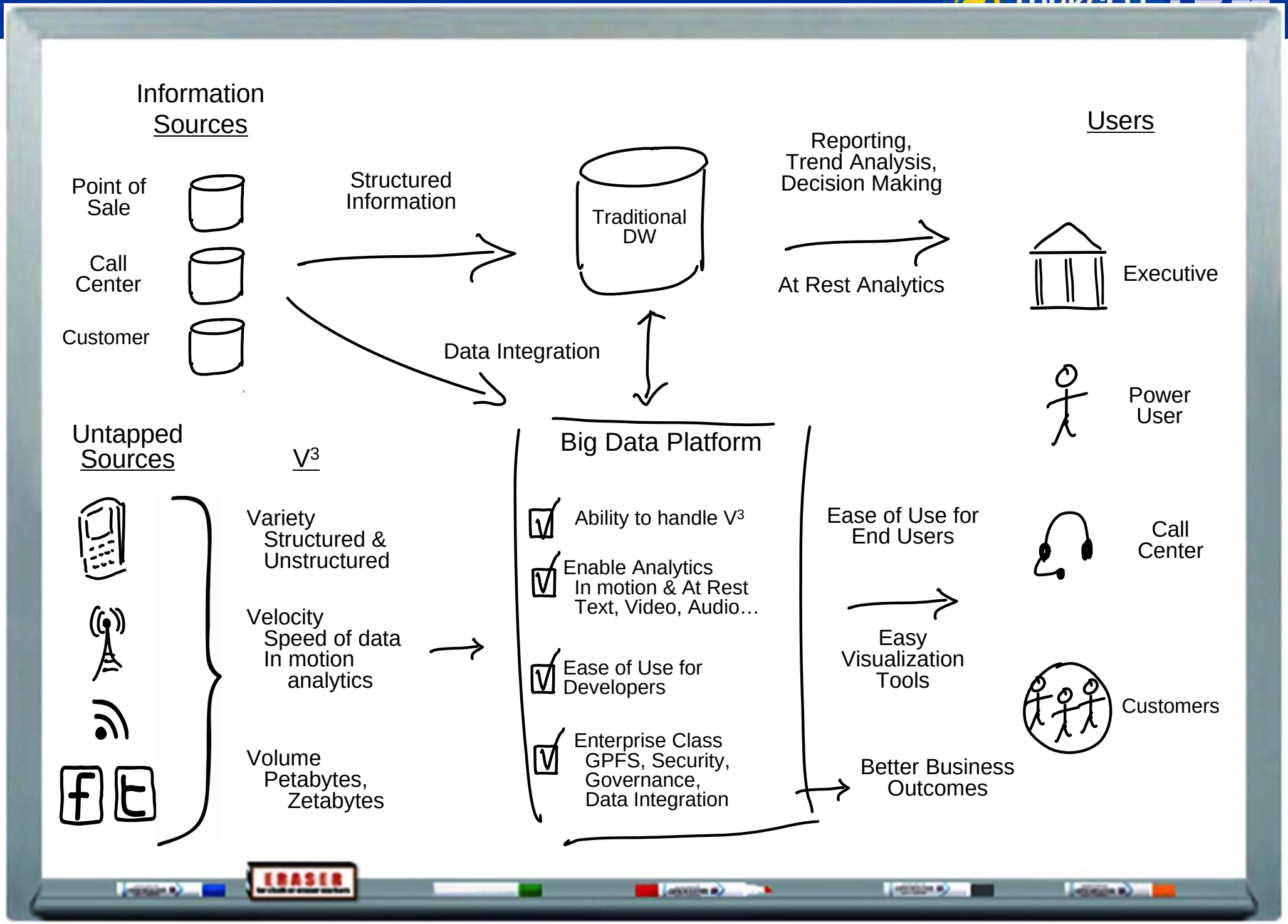

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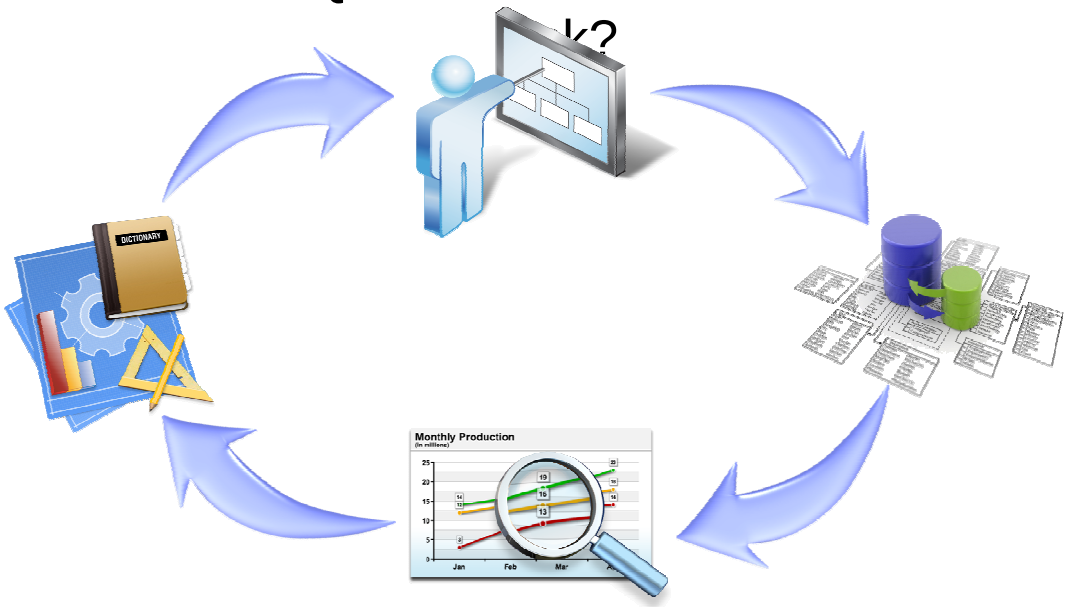
Traditional Analytics:
Business Requirements Drive Solution Design

Business Defines Requirements – What Questions Should we ask?



IT Designs a Solution with a set structure and functionality

Business executes queries to answer questions over and over

New requirements require redesign and rebuild

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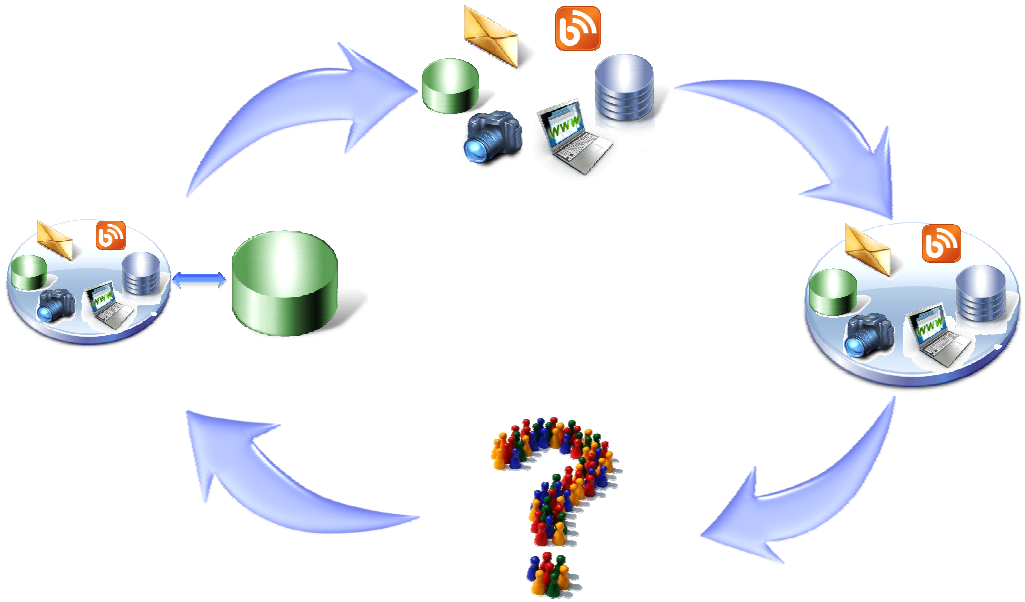
Big Data Analytics:
Information Sources Drive Creative Discovery

Business and IT Identify Information Sources Available

New insights drive integration to traditional technology



IT Delivers a Platform that enables creative exploration of all available data and content

Business determines what questions to ask by exploring the data and relationships

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Merging the Traditional and Big Data Approaches

Traditional Approach
Structured & Repeatable Analysis

Business Users
Determine what question to ask

IT
Structures the data to answer that question

- Monthly sales reports
- Profitability analysis
- Customer surveys

Big Data Approach
Iterative & Exploratory Analysis

IT
Delivers a platform to enable creative discovery

Business
Explores what questions could be asked

- Brand sentiment
- Product strategy
- Maximum asset utilization

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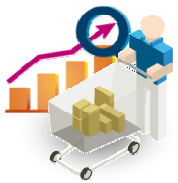
Achieve Breakthrough Outcomes with Big Data capabilities

Achieve Breakthrough Outcomes

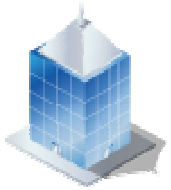


Know Everything about your Customers

Run Zero-latency Operations

Innovate new products at Speed and Scale

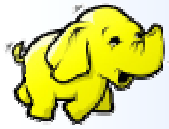
Instant Awareness of Fraud and Risk



Exploit Instrumented Assets

With Unique Capabilities

Visualization & Discovery



Hadoop

Data warehousing

Stream Computing

Text Analytics

Integration & governance

To Analyze Any Big Data Type

Transactional / Application Data

Machine Data

Social Media Data

Content

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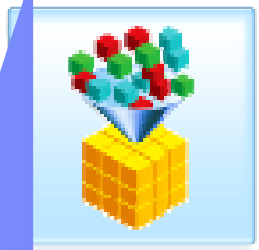
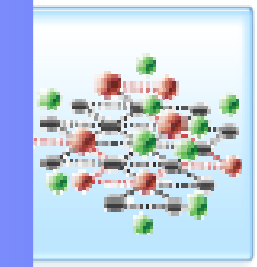
Most Use Cases Combine Multiple Technologies



Pre-processing

Ingest and analyze unstructured data types and convert to structured data

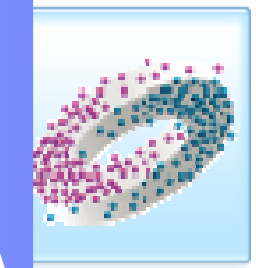


Combine structured and unstructured analysis

Augment data warehouse with additional external sources, such as social media

Combine high velocity and historical analysis

Analyze and react to data in motion; adjust models with deep historical analysis



Reuse structured data for exploratory analysis

Experimentation and ad-hoc analysis with structured data

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Opportunities To Exploit Big Data Are Everywhere

Analyze Information in Motion

- Smart Grid management
- Multimodal surveillance
- Real-time promotions
- Cyber security
- ICU monitoring
- Options trading
- Click-stream analysis
- CDR processing
- IT log analysis
- RFID tracking & analysis

Analyze a Variety of Information

- Social media/sentiment analysis
- Geospatial analysis
- Brand strategy
- Scientific research
- Epidemic early warning system
- Market analysis
- Video analysis
- Audio analysis

Analyze Extreme Volumes of Information

- Transaction analysis to create insight-based product/service offerings
- Fraud modeling & detection
- Risk modeling & management
- Social media/sentiment analysis
- Environmental analysis

Discovery & Experimentation

- Sentiment analysis
- Brand strategy
- Scientific research
- Ad-hoc analysis
- Model development
- Hypothesis testing
- Transaction analysis to create insight-based product/service offerings

Manage and Plan

- Operational analytics – BI reporting
- Planning and forecasting analysis
- Predictive analysis

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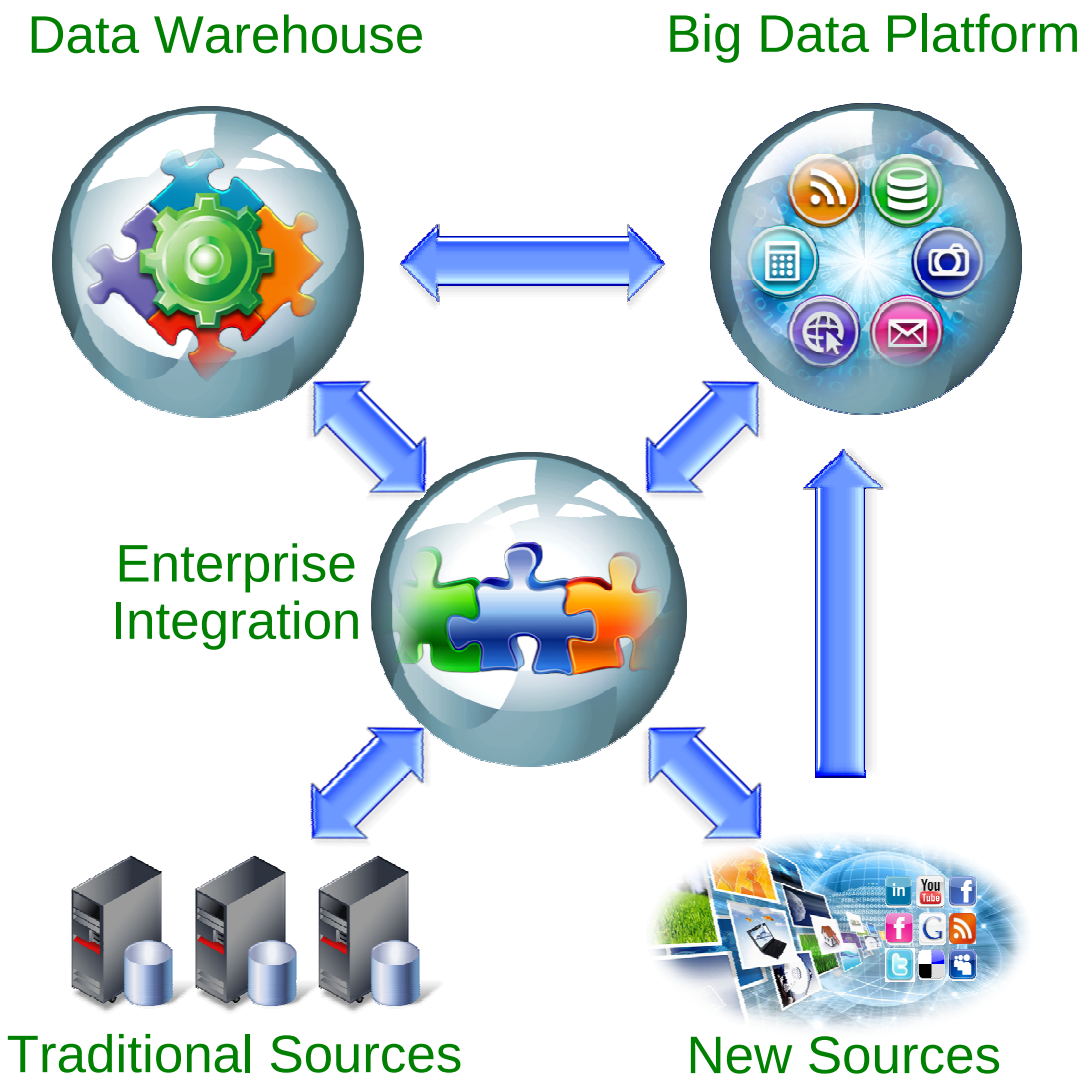
Big Data: Integrated in Enterprise Information Architecture

- Big Data is Here to Stay
- It Must Not Be a Silo
  - It must be fully integrated for it to deliver value
- It Must be Easy to Deploy and Integrate



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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

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Entry Points are Accelerated by Products Within the Big Data Platform

1 – Unlock Big Data

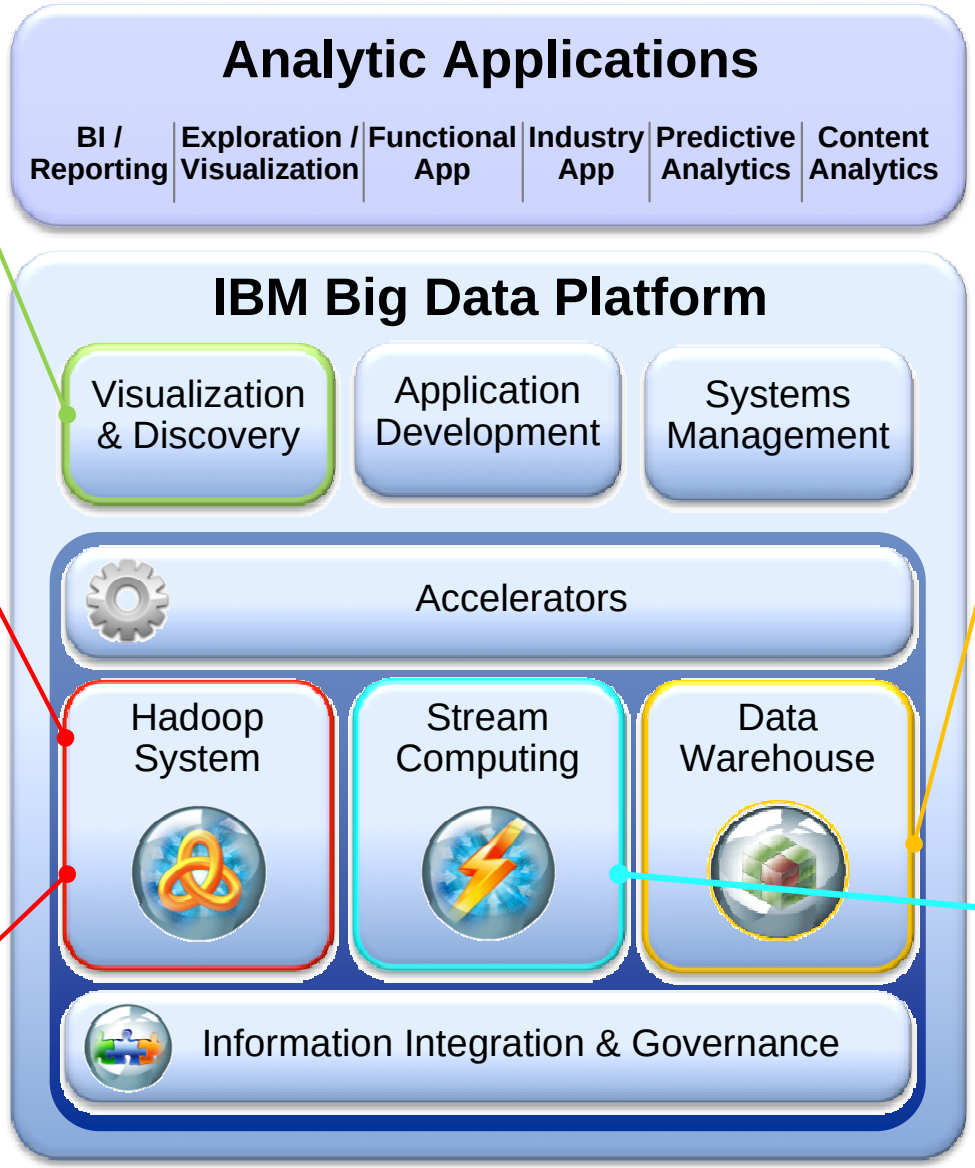
IBM Vivisimo

2 – Analyze Raw Data

InfoSphere BigInsights

4 – Reduce costs with Hadoop

InfoSphere BigInsights



3 – Simplify your warehouse

IBM Warehouse Solutions

5 – Analyze Streaming Data

InfoSphere Streams

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days for a single query

constant tuning

> ***Nearly 70%*** *of data warehouses experience performance-constrained issues of various types.*
>
> *- Gartner 2010 Magic Quadrant*

specialized resources required

months to deploy

Highway or off-road? Building a machine for its workload

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Transactional workloads vs. analytic workloads

Two VERY different requirements for storing and processing data

Customer

Transaction

Business Transaction

Simple Query

```
Item:'Shoes'
Cost:'$34'
Cust:'James'
```

Transactional Database

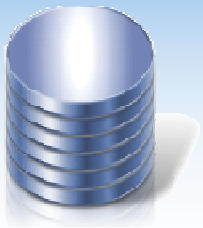
Item	Cost	Cust
Shoes	$34	James

Business Analyst

Complex Query

```
Sales & Profit for
Shoes & Belts
Year >= 2005
```

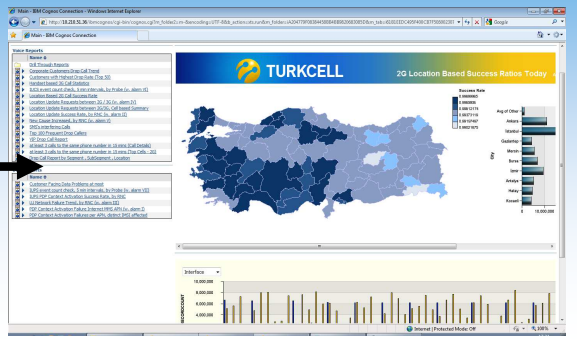
Data Warehouse



SALES

2010
2009
2008
2007
2006
2005

BI Reports & Dashboards



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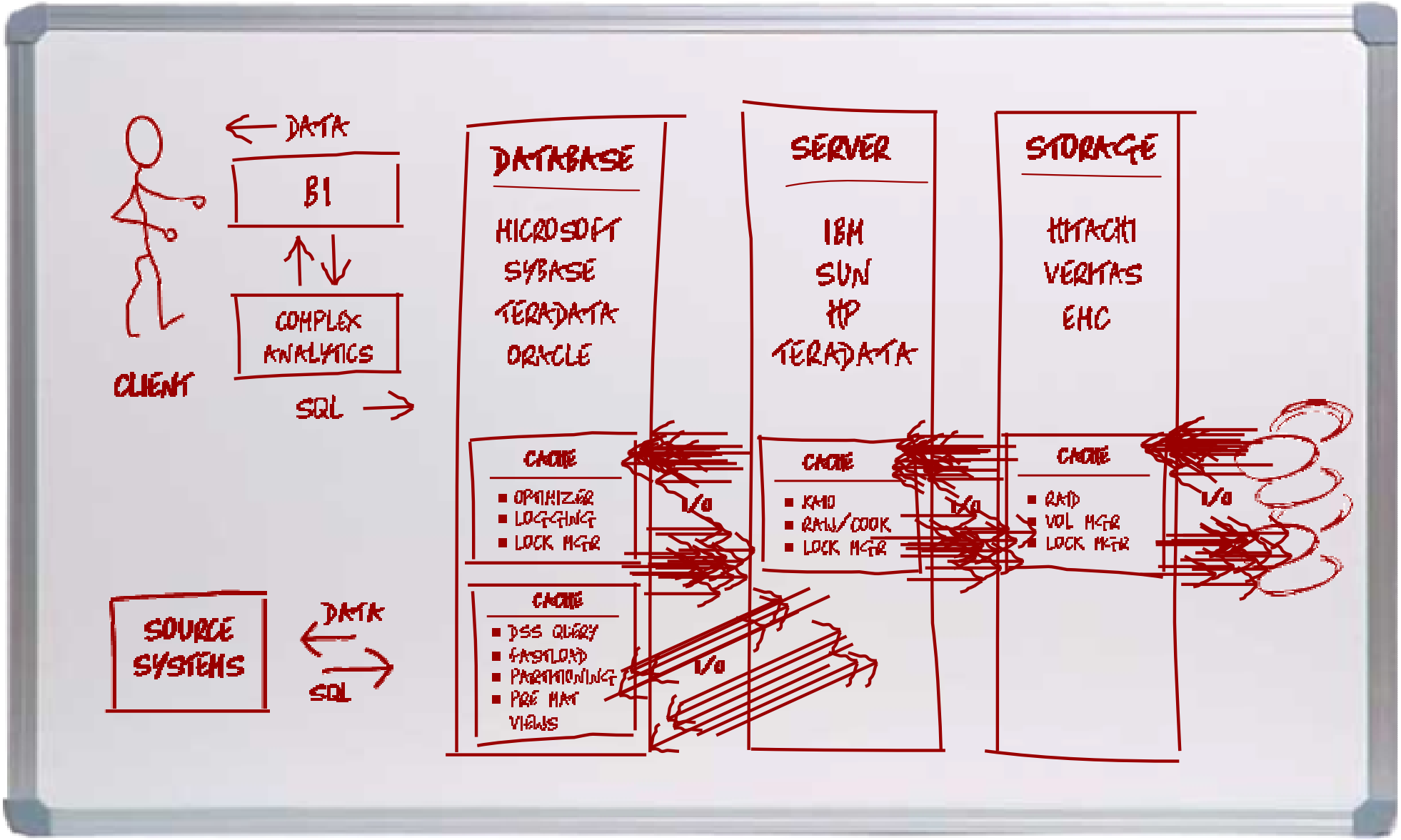
Traditional Data Warehouse Approach



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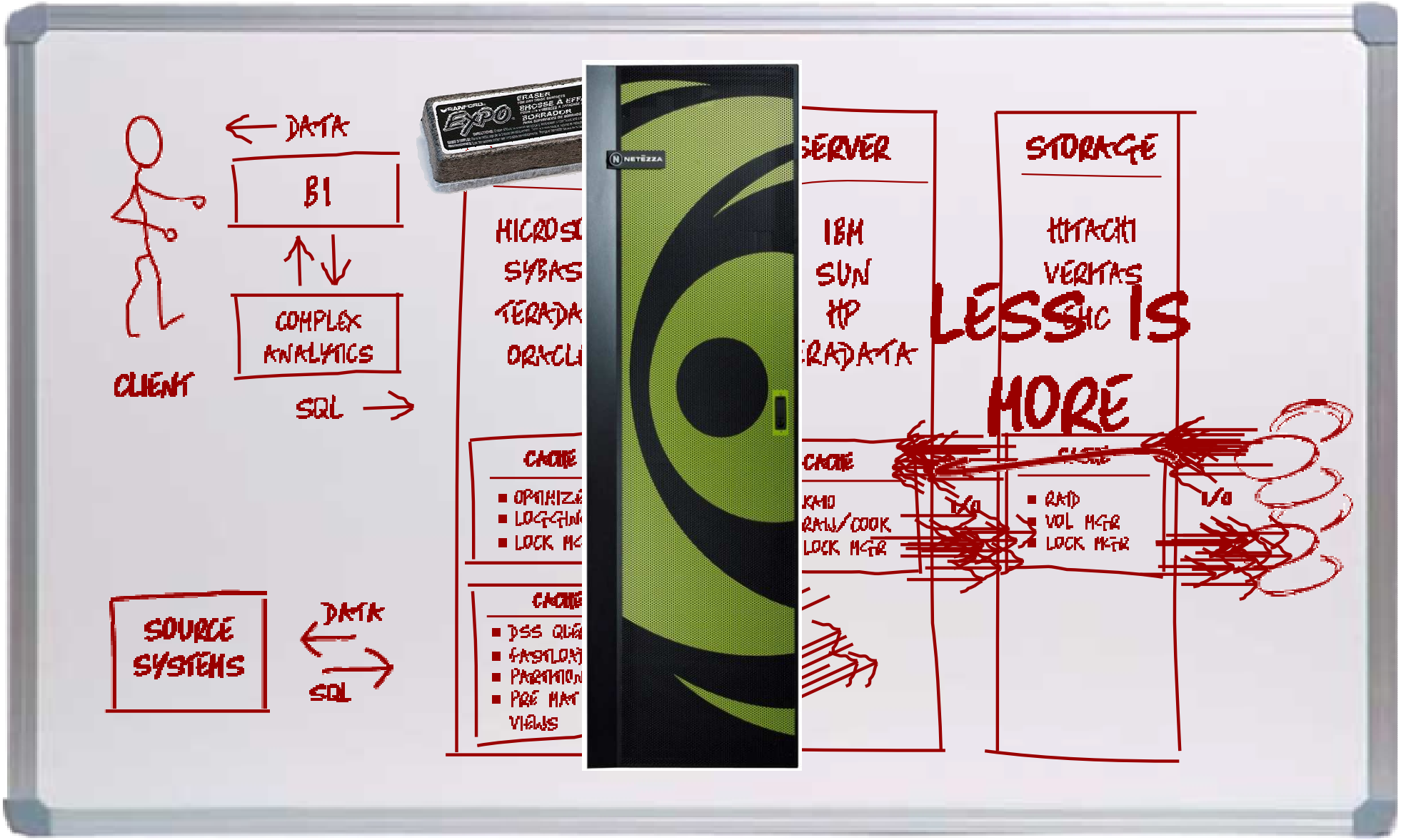
Netezza – Simplicity



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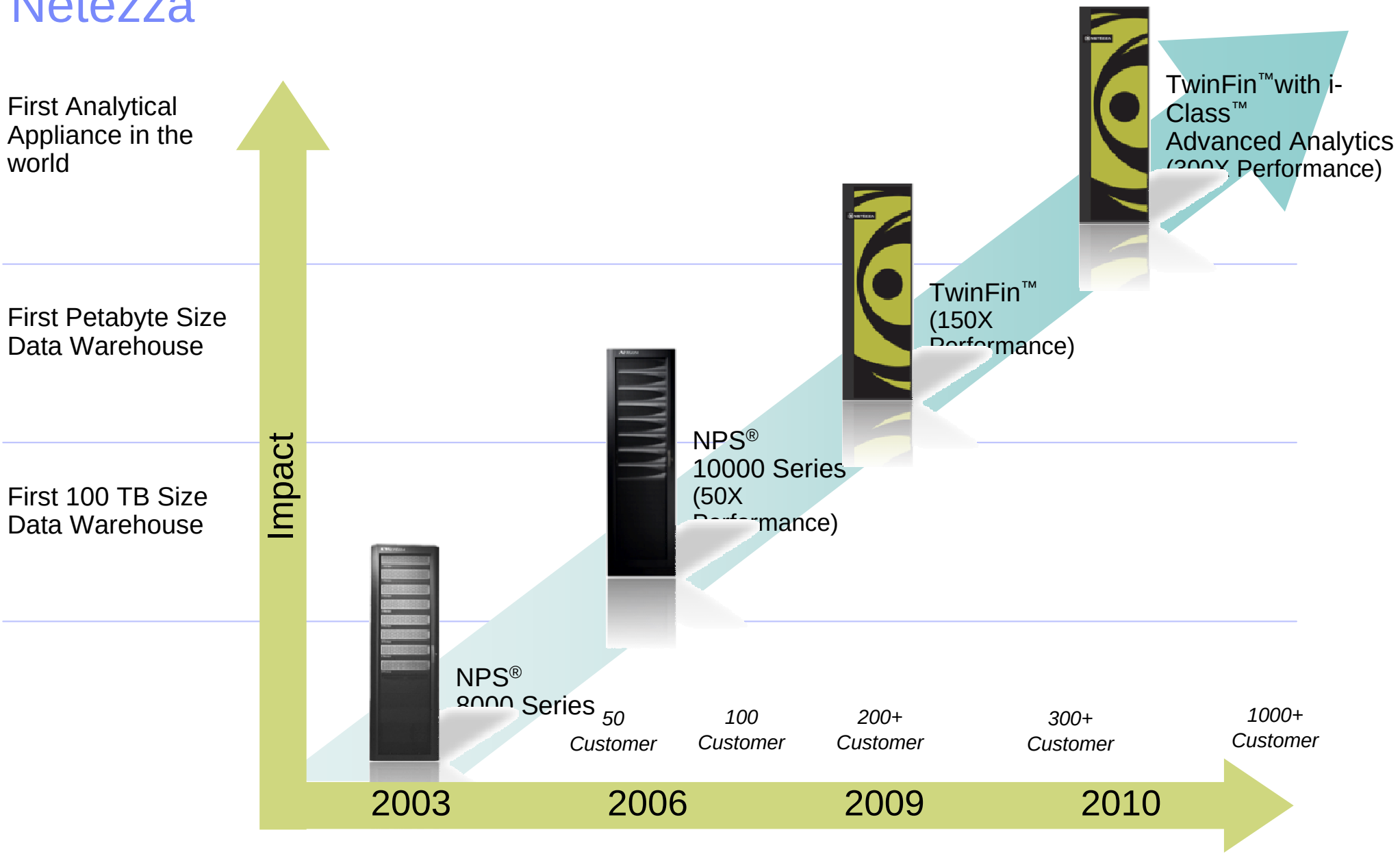
Netezza



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Netezza was part of the inspiration for Exadata …

We'd like to thank them for forcing our hand and forcing us to go into the hardware business.

-- Larry Ellison, CEO
Oracle Corporation
January 27 2010

http://oracle.com.edgesuite.net/ivt/4000/8104/9238/12652/lobby_external_flash_clean_480x360/default.htm

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IBM Netezza

The Simple Appliance for Serious Analytics

Purpose-built analytics engine

Integrated database, server and storage

Standard interfaces

Low total cost of ownership

Speed: 10-100x faster than traditional system

Simplicity: Minimal administration and tuning

Scalability: Peta-scale user data capacity

Smart: High-performance advanced analytics

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Inside IBM Netezza data warehouse appliances

Optimized Hardware + Software

Purpose-built for high performance analytics; requires no tuning

True MPP

All processors fully utilized for maximum speed and efficiency

Streaming Data

Hardware-based query acceleration for blistering fast results

Deep Analytics

Complex analytics executed in-database for deeper insights

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Netezza delivers simplicity

- Up and running 6 months before being trained
- 200X faster than Oracle system
- ROI in less than 3 months

"Allowing the business users access to the Netezza box was what sold it."

-- Steve Taff,
Executive Dir. of IT Services

XO Communications

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IBM Netezza Appliance family

IBM Netezza 100	IBM Netezza 1000	IBM Netezza High Capacity Appliance
Development & Test System	Data Warehouse High-Performance Analytics	Queryable Archiving Backup/DR
1 TB to 10 TB	1 TB to 1.5 PB	100 TB to 10 PB

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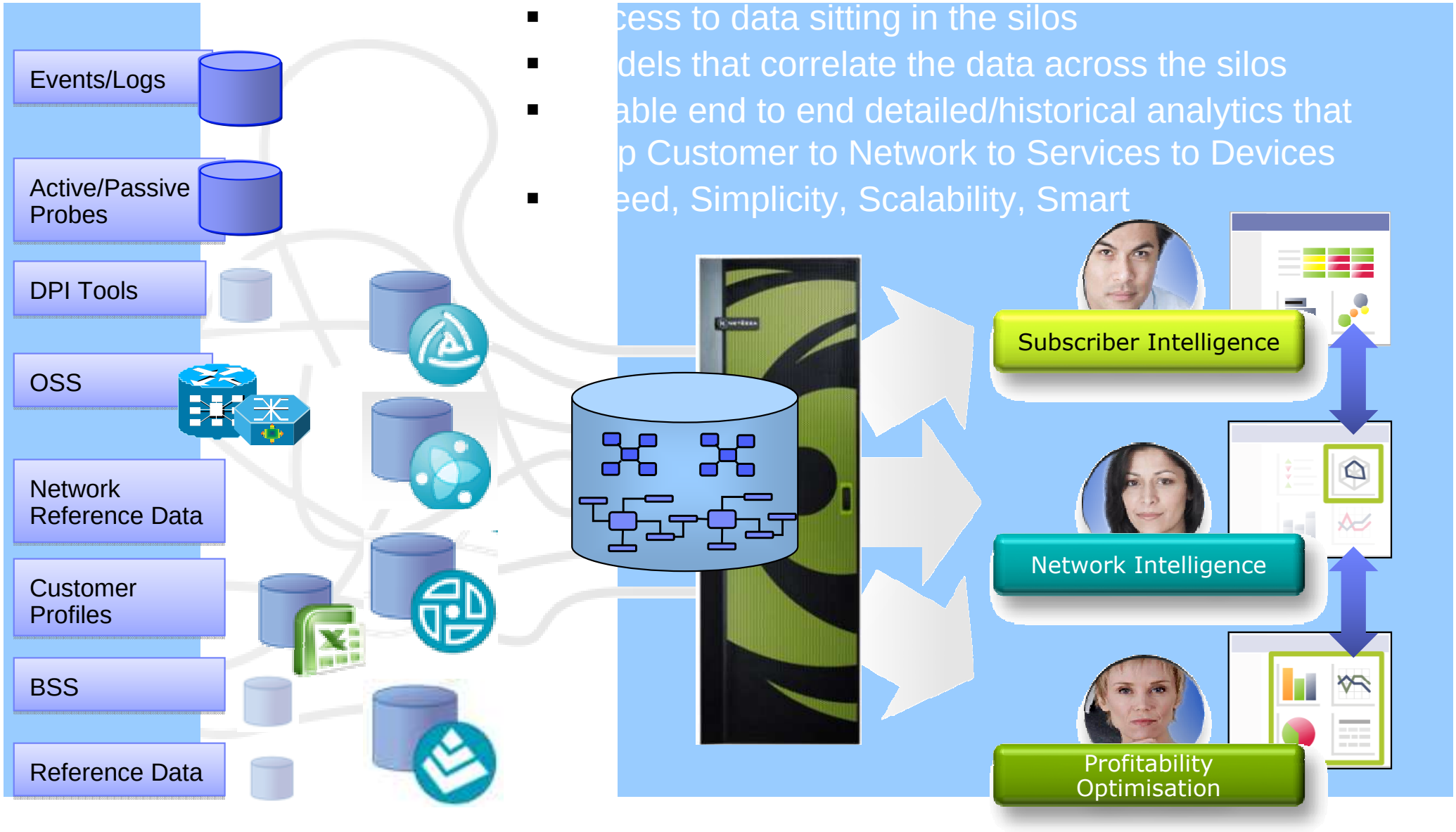
Network Analytics with Netezza

Single view of Network, Customers, Services and Devices

- cess to data sitting in the silos
- dels that correlate the data across the silos
- able end to end detailed/historical analytics that p Customer to Network to Services to Devices
- eed, Simplicity, Scalability, Smart



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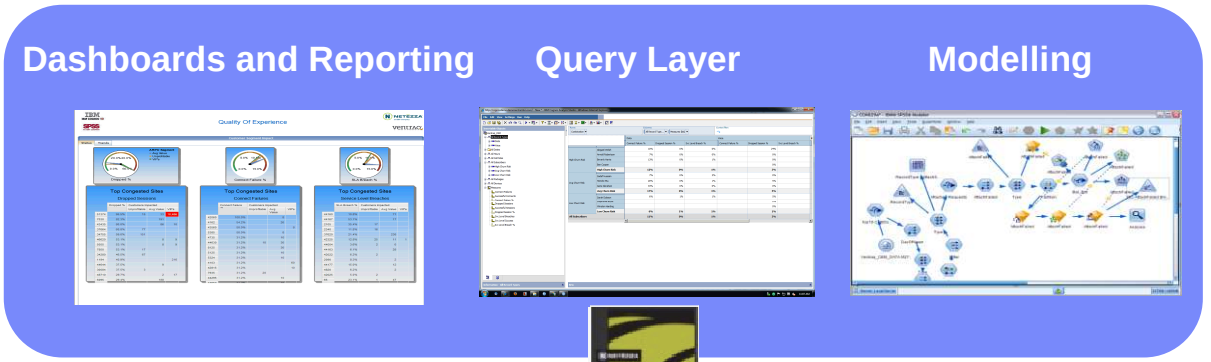
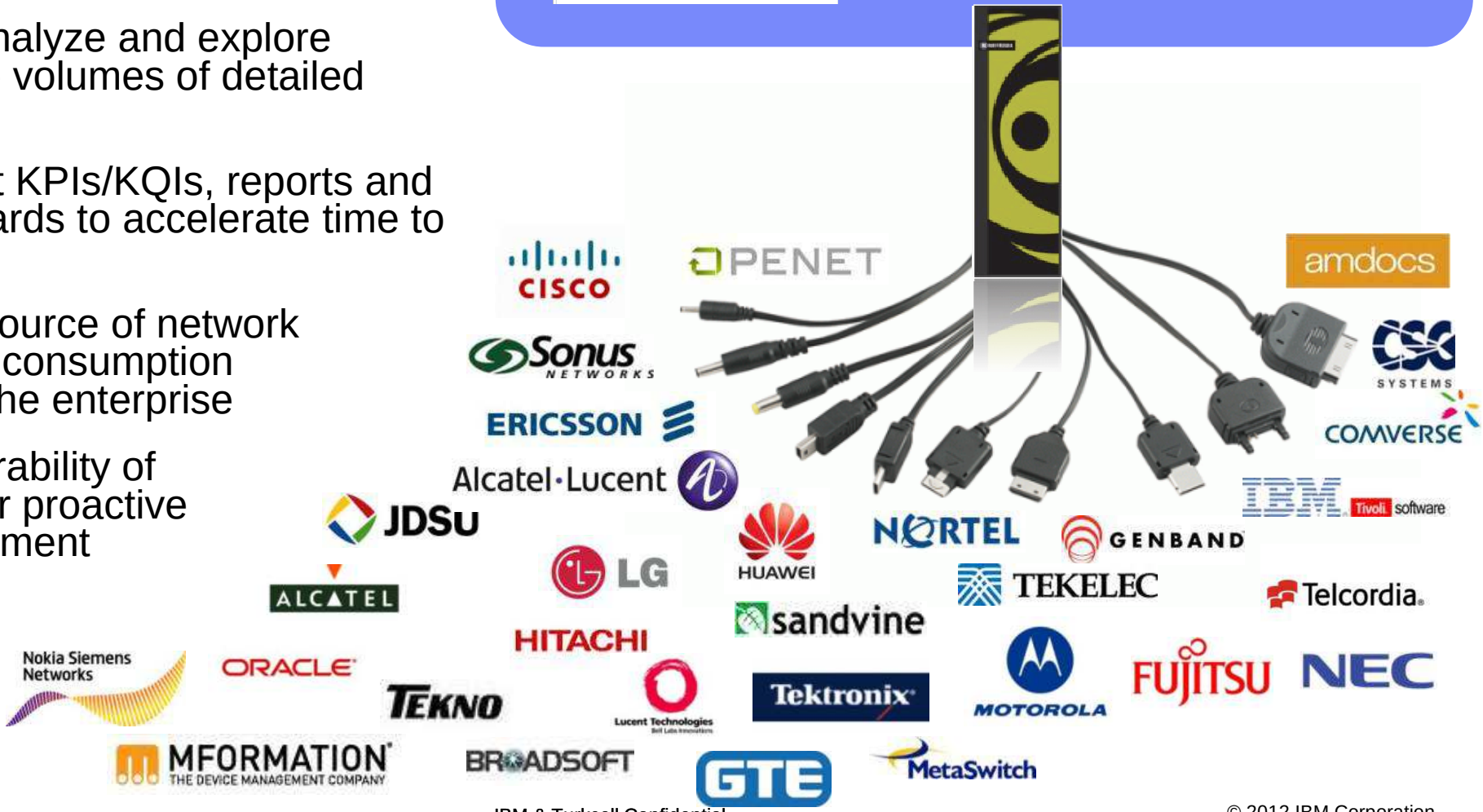
Out of the box solutions for Network Analytics

- Data acquired directly from network elements or systems, OSS/BSS applications or other data stores via landing zone
- Load, analyze and explore massive volumes of detailed events
- Pre-built KPIs/KQIs, reports and dashboards to accelerate time to value
- Single source of network data for consumption across the enterprise
- Configurability of alerts for proactive management





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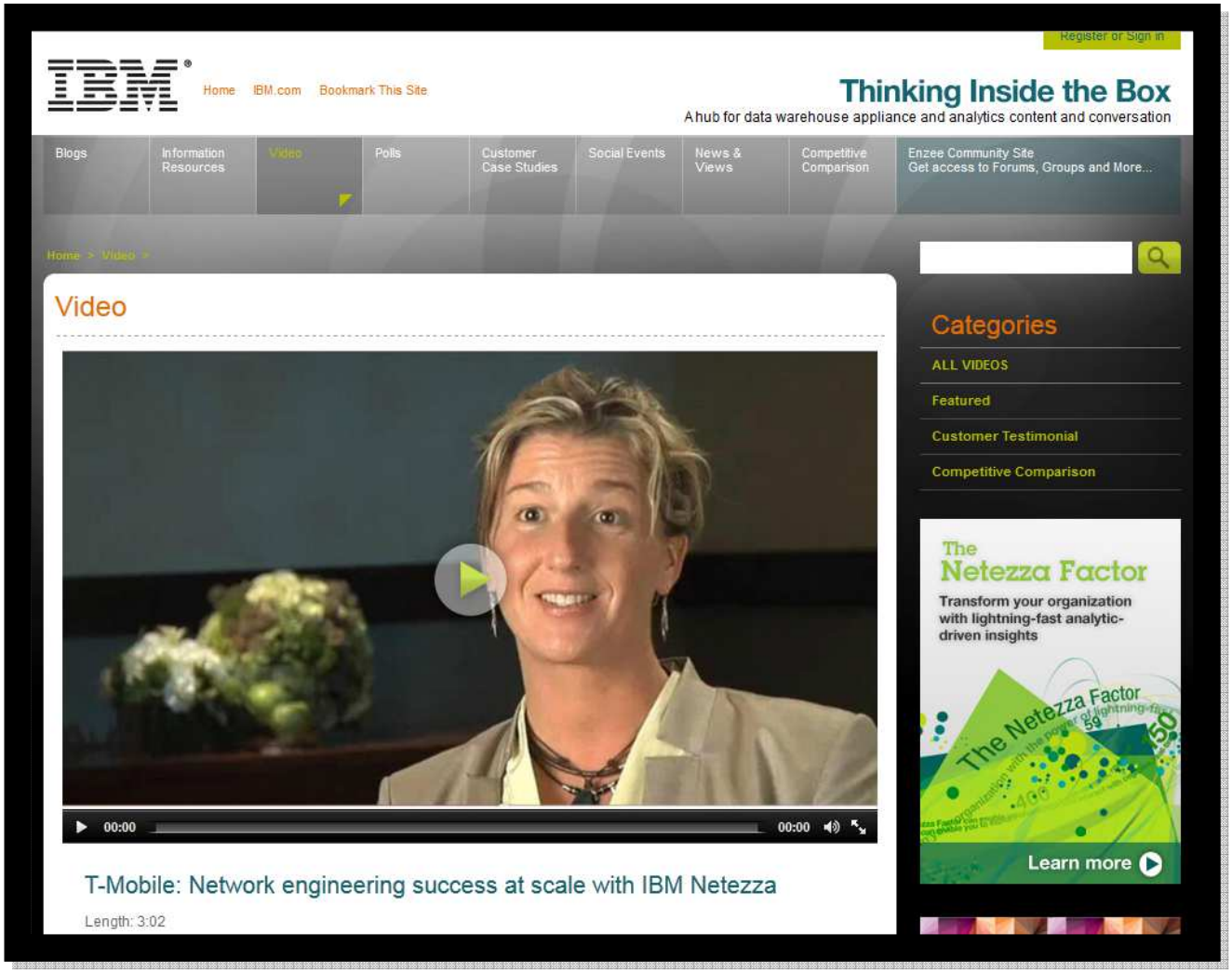
Results – In T-Mobile's (USA) own words



http://thinking.netezza.com/video/t-mobile-network-engineering-success-scale-ibm-netezza

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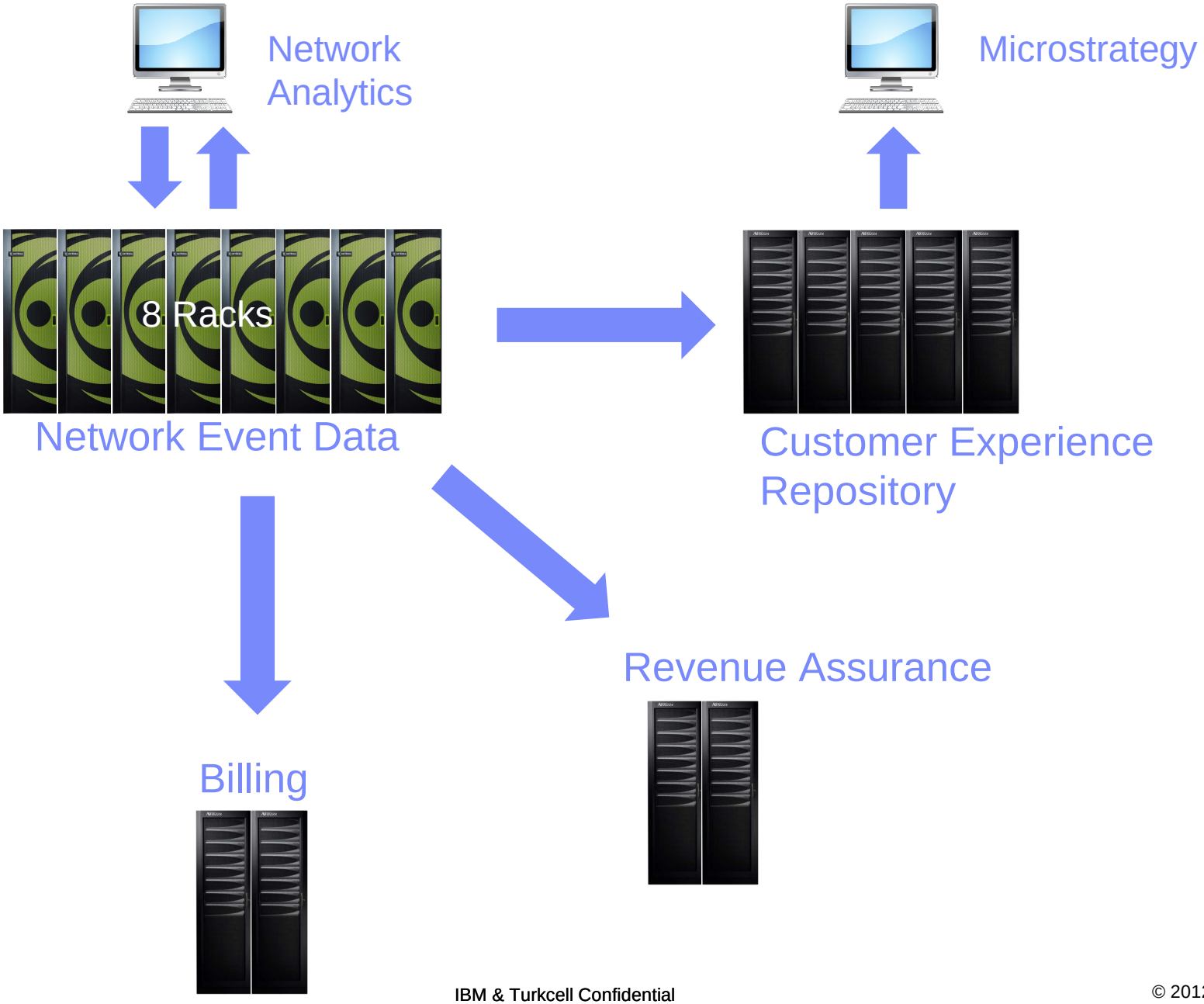
T-Mobile USA



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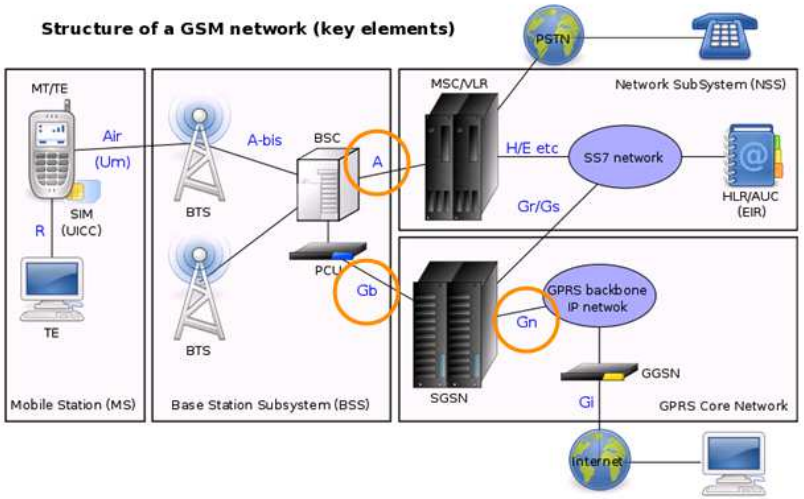
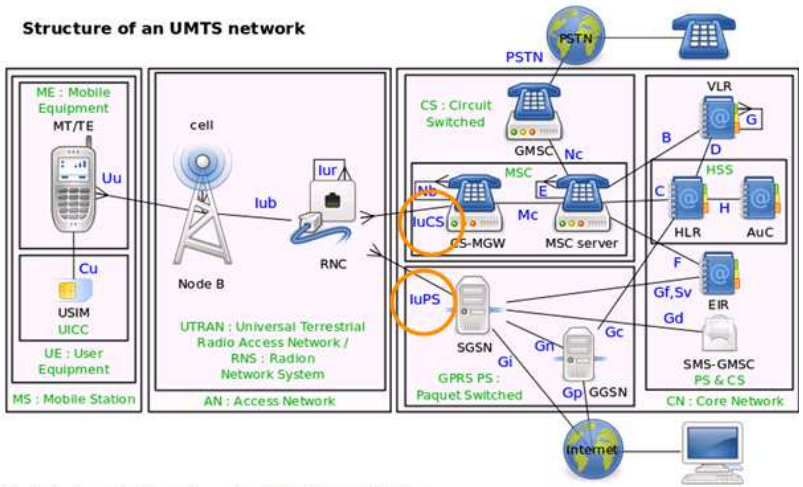
Turkcell, Big Data PoC





NAT

SGSN

MAP

Anritsu

FTP

ADR — Single file in each 5 minutes
Avg.1.3 billion event per day

GB — Single file in each 5 minutes
Avg.440 million event per day

GN — Multiple files continuously
Avg.5.2 billion event per day

IuCS — Single file in each 5 minutes
Avg.440 million event per day

IuPS — Single file in each 5 minutes
Avg.625 million event per day

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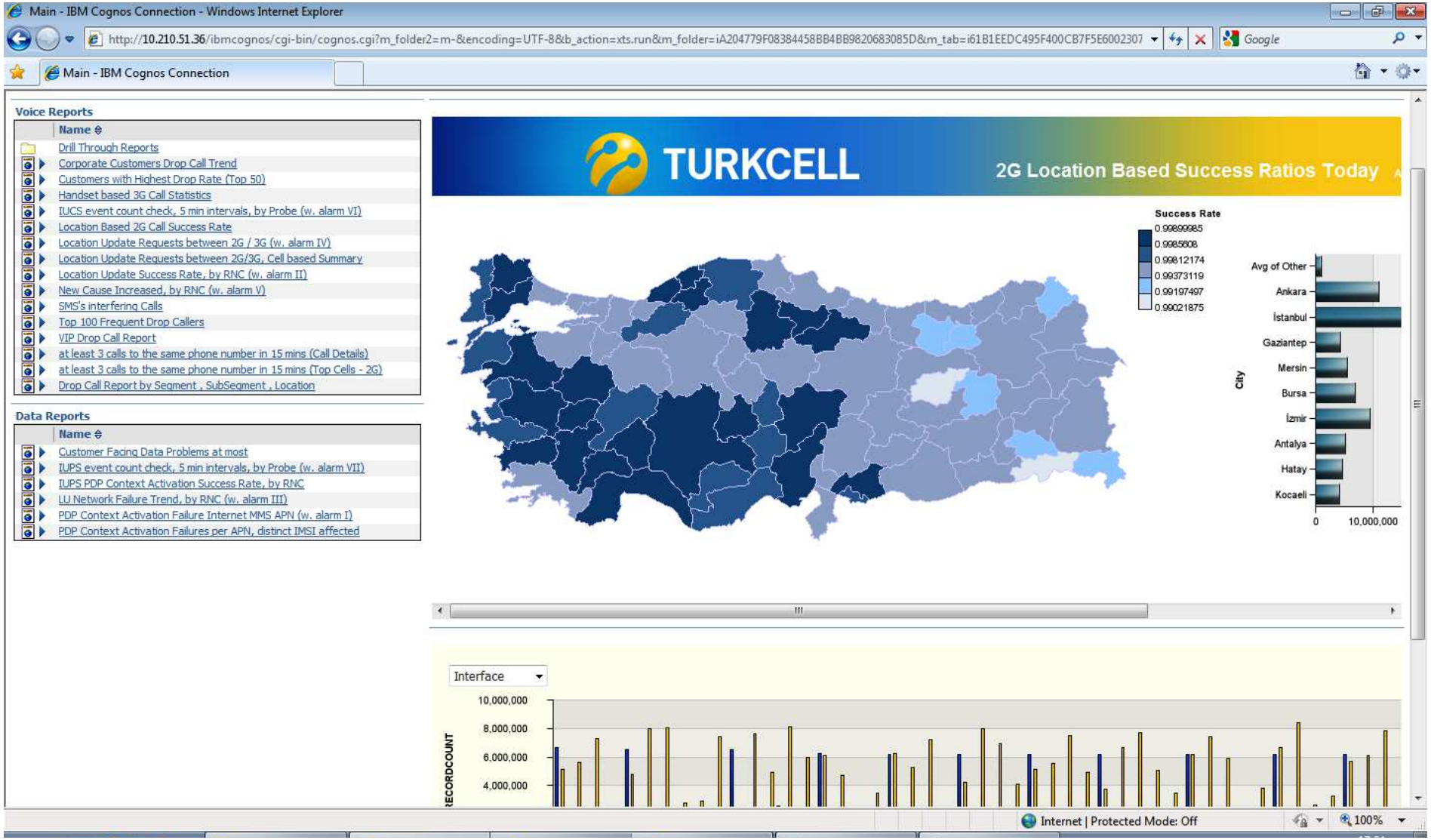
Cognos, Data & Voice Reports



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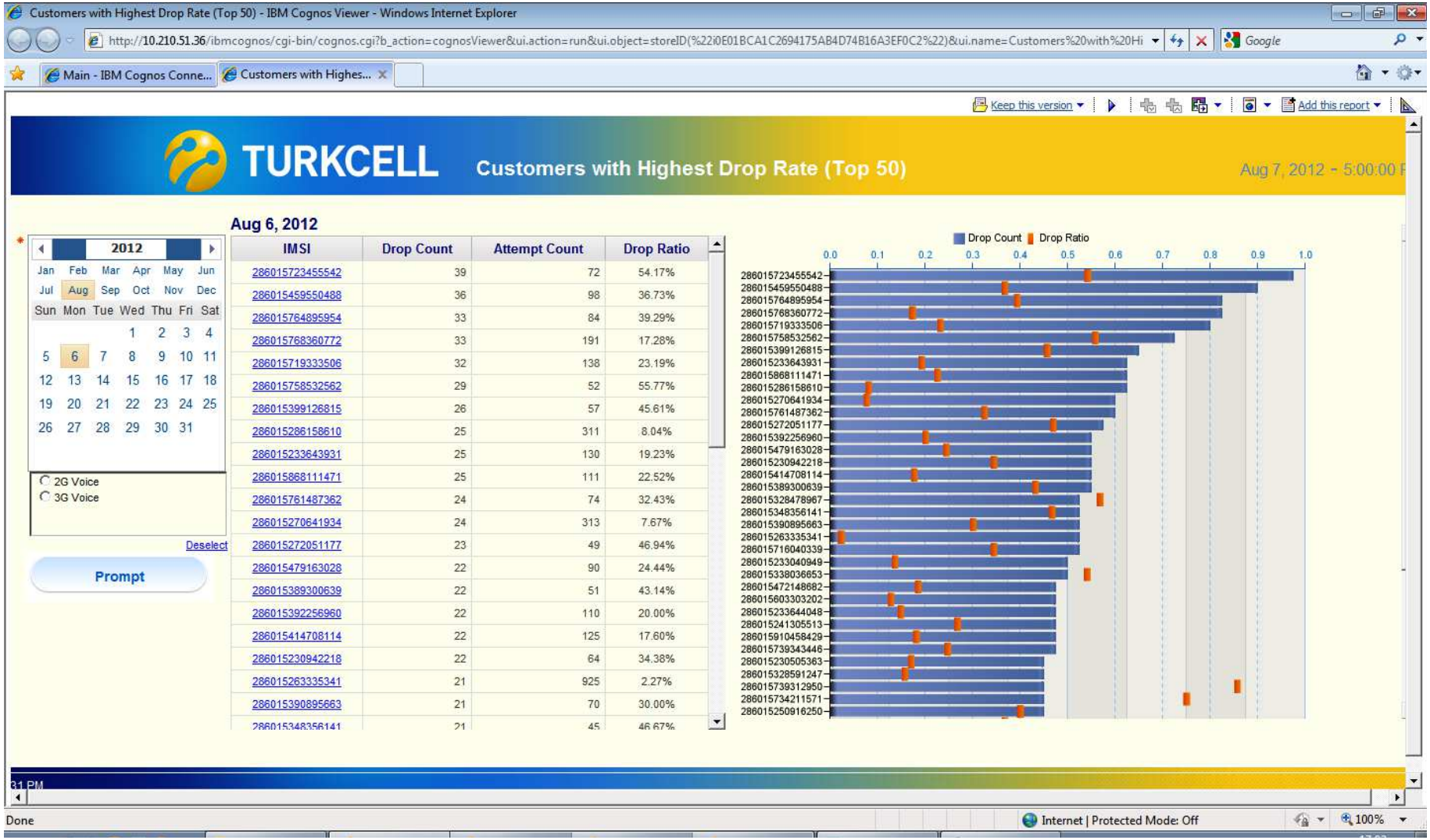
Customers with Highest Drop Rate (Top 50)

Customers facing Highest Droprate (Top50) for the given date. Produced report includes 2G / 3G filtering, as well as graphs allowing drop ratio and drop count comparison for each IMSI.



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Full List of Reports Developed (1/7)

Corporate Customers Drop Call Trend

This report lists down the top 1000 corporate customers having most drop calls for the entered date, call attempts and drop ratio are also presented in the report. It scans both 3G and 2G voice call attempts. The purpose of the report is to unleash drop ratio of same corporate customers for the same day previous week and same day 2 weeks ago, and the drop ratio change over the time.

Customers with Highest Drop Rate (Top 50)

Customers facing Highest Drop rate (Top50) for the given date. Produced report includes 2G / 3G filtering, as well as graphs allowing drop ratio and drop count comparison for each IMSI.

Drop Call Report by Segment , Sub Segment , Location

Report showing MO/MT calls with abnormal release codes and number of attempts by IMSI groups. This report uses dynamic prompts that are populated based on activity for the day. Each prompt cascades to the prompt below by pressing the corresponding re-prompt button. The City and IMSI list are built based on attempts > 1 for the corresponding selected day and selected segment information where appropriate. Note that segment could be a dimension to identify priority customers, and is provided as an example.

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Full List of Reports Developed (2/7)

Handset Based 3G Call Statistics

This report provides handset based 3G call statistics for the given time period. Provided statistics are categorized by common IU Release Cause, CC Release Cause codes (e.g. RAB pre-empted, Trecoverall Expiry, Fail.RadioProc., Rel.duetoUTRANGen.Reason, O&M Intervention, No Resource Available, Unspecified Failure, RadioConnWithUE Lost, Temporary Failure, No circuit/channel available, Network out of order), Attempt Counts, Success Counts, TAC , IMEI as well as SW version of the handset...

IUCS event count check, 5 min intervals, by Probe (with alarm attached)

Number of IUCS / 3G Voice events captured by Anritsu, presented as probe breakdown and in 5 minutes brackets for the requested date/time interval. The report has an alarm condition checked in every 15 minutes, if in any given probe, number of collected events drops to 10% in quantity compared to previous 5 min bracket, then the alarm is triggered. First 2 letters of Global RNC ID are used to represent the probe information.

Location Based 2G Call Success Rate

Report showing the 2G call success rate across the country, with a detailed cell list and call success ratio of selected city.

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Full List of Reports Developed (3/7)

Location Update Requests between 2G / 3G (with alarm attached)

This report lists down the Turkcell IMSI's having more than 10 location updates in the same cell in both 2G and 3G within the requested time window. The report has an alarm condition checked, if any given hour, number of 2G location updates on the same cell and number of 3G location updates on the same cell of any Turkcell IMSI both exceeds the threshold 10 then the alarm is triggered. For 3G, 1stLAC and 1stSAC fields are used.

Location Update Requests between 2G / 3G, Cell based Summary

This report shows Cells having frequent location update requests between 2G and 3G. It counts distinct Turkcell IMSI's having more than 10 2G/3G location updates in the same cell in one hour time intervals. For 3G, 1stLAC and 1stSAC fields are used to determine the cell information.

Location Update Success Rate, by RNC (with alarm attached)

This report produces RNC based breakdown of Location Update Attempt, Location Update Success and Success Ratios of Turkcell IMSI numbers. MM Message Flag is used to distinguish Location Update Attempts and Success. There is an alarm condition tied to the report , if in any RNC , for a 15 min. time windows , success ratio falls under 95% then the alarm is triggered.

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Full List of Reports Developed (4/7)

New Cause Increased, by RNC (with alarm attached)

This report produces RNC based breakdown of increasing New Causes (CC Cause 24/34/42). If CC Causes “No circuit available + destination out of order + switch equipment congestion occurs more than 1000 times in 5 minutes grouped by RNC, then an alarm is triggerred.

SMS' Interfering Calls

A MOC/MTC is generated. During the call, A-Number and B-Number receives an SMS. Call ends with an MM Cause = 65h.

Top 100 Frequent Drop Callers

The report lists down the Turkcell IMSI's having most drop calls between given date interval. It also shows how often the same IMSI appears in the top drop call lists. By default it retrieves top 100 IMSI numbers facing drop calls in each day, which can be customized by the top parameter.

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Full List of Reports Developed (5/7)

at least 3 calls to the same phone number in 15 min. (Call Details)

This report lists down the Turkcell IMSI's calling the same phone number at least 3 times in any given 15 minutes time window (continuous sliding windows are checked). It scans both 3G and 2G calls, considers the calls with call duration greater than 0 seconds, also checks the condition so that between each call there is no more than 30 seconds silence period. The report produces RNC based lists showing the BSMAP CAUSE and DTAP CC CAUSE codes of each call.

at least 3 calls to the same phone number in 15 min. (Top Cells - 2G)

This report lists down the top 2G cells in which IMSIs are trying calling same phone number at least 3 times in any given 15 minutes time window (continuous sliding windows are checked). Each call should have call duration greater than 0 seconds, and there shouldn't be more than 30 seconds silence period. The report has also drill down functionality to list down each call.

Customer Facing Data Problems at most

Daily report showing IMSI based top PDP activation attempts, failures and failure ratios, includes 2 sub reports; IUPS and GB PDP activation failures, with drilldown functionality to allow investigation of detach causes mostly experienced.

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Full List of Reports Developed (6/7)

IUPS event count check, 5 min intervals, by Probe (with alarm attached)

Number of IUPS events captured by Anritsu, presented as probe breakdown and in 5 minutes brackets for the requested date/time interval. The report has an alarm condition checked in every 15 minutes, if in any given probe, number of collected events drops to 10% in quantity compared to previous 5 min bracket, then the alarm is triggered. First 2 letters of Global RNC ID are used to represent the probe information.

IUPS PDP Context Activation Success Rate, by RNC

Report calculating IUPS PDP context activation success ratios for Turkcell IMSI's break down by RNC.

LU Network Failure Trend, by RNC (with alarm attached)

This report calculates LU Network Failures (GM Cause = 17) for the last 15 minutes time window, and compares the current values with the previous 12 x 15 minute fixed window averages for each RNC. There is an alarm condition defined on the report, if the current values are 7 times greater than the historical averages and if there is more than 10 failures then the alarm is triggered.

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Full List of Reports Developed (7/7)

PDP Context Activation Failure Internet MMS APN (with alarm attached)

PDP Context Activation failure ratios for IUPS and GB, filtered for Internet and MMS APNs. There is an alarm condition on the report, if any 15 min sliding time window, success ratio falls under 50% then the alarm is triggered.

PDP Context Activation Failures per APN, distinct IMSI affected

Daily report showing APNs that customers face PDP context activation failures mostly.

IUCS, Radio Connection with ue lost, then LU Type IMSI Attach

Report showing IUCS calls with IU Release cause = 46 (Radio Connection with ue lost) , with Location Update Type = IMSI Attach occurred in at most 1 min later on (LOCATION_UPDATE_TYPE=1 selected), grouped by RNC , with Terminal drilldown

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Query Performance

	Observed Duration in Cognos (includes report rendering / download time, while data loads are going on)
SMS' Interferrring Calls	< 15 sec.
PDP Context Activation Failures per APN, distinct IMSI affected	< 5 sec.
PDP Context Activation Failure Internet MMS APN	< 10 sec.
New Cause Increased, by RNC	< 3 sec.
LU Network Failure Trend, by RNC	< 3 sec.
Location Update Success Rate, by RNC	< 4 sec.
Location Update Requests between 2G / 3G, Cell based Summary	< 4 sec.
Location Update Requests between 2G / 3G	< 4 sec.
Location Based 2G Call Success Rate	< 4 sec.
IUPS PDP Context Activation Success Rate, by RNC	< 3 sec.
IUPS event count check, 5 min intervals, by Probe	< 3 sec.
IUCS event count check, 5 min intervals, by Probe	< 3 sec.
Handset Based 3G Call Statistics	< 6 sec. (for 3 days)
Drop Call Report by Segment , SubSegment , Location	< 10 sec.
Customers with Highest Drop Rate (Top 50)	< 10 sec.
Customer Facing Data Problems at most	< 5 sec.
Corporate Customers Drop Call Trend	< 5 sec.
at least 3 calls to the same phone number in 15 mins (Top Cells - 2G)	< 10 sec.
at least 3 calls to the same phone number in 15 mins (Call Details)	< 5 sec.

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BigInsights Summary

- BigInsights = analytical platform for persistent “Big Data”
  - Based on open source & IBM technologies
  - Managed like a start-up . . . .
- Distinguishing characteristics
  - Built-in analytics . . . . *Enhances business knowledge*
  - Enterprise software integration . . . . *Complements and extends existing capabilities*
  - Production-ready platform with tooling for analysts, developers, and administrators. . . . *Speeds time-to-value; simplifies development and maintenance*
- IBM advantage
  - Combination of software, hardware, services and advanced research

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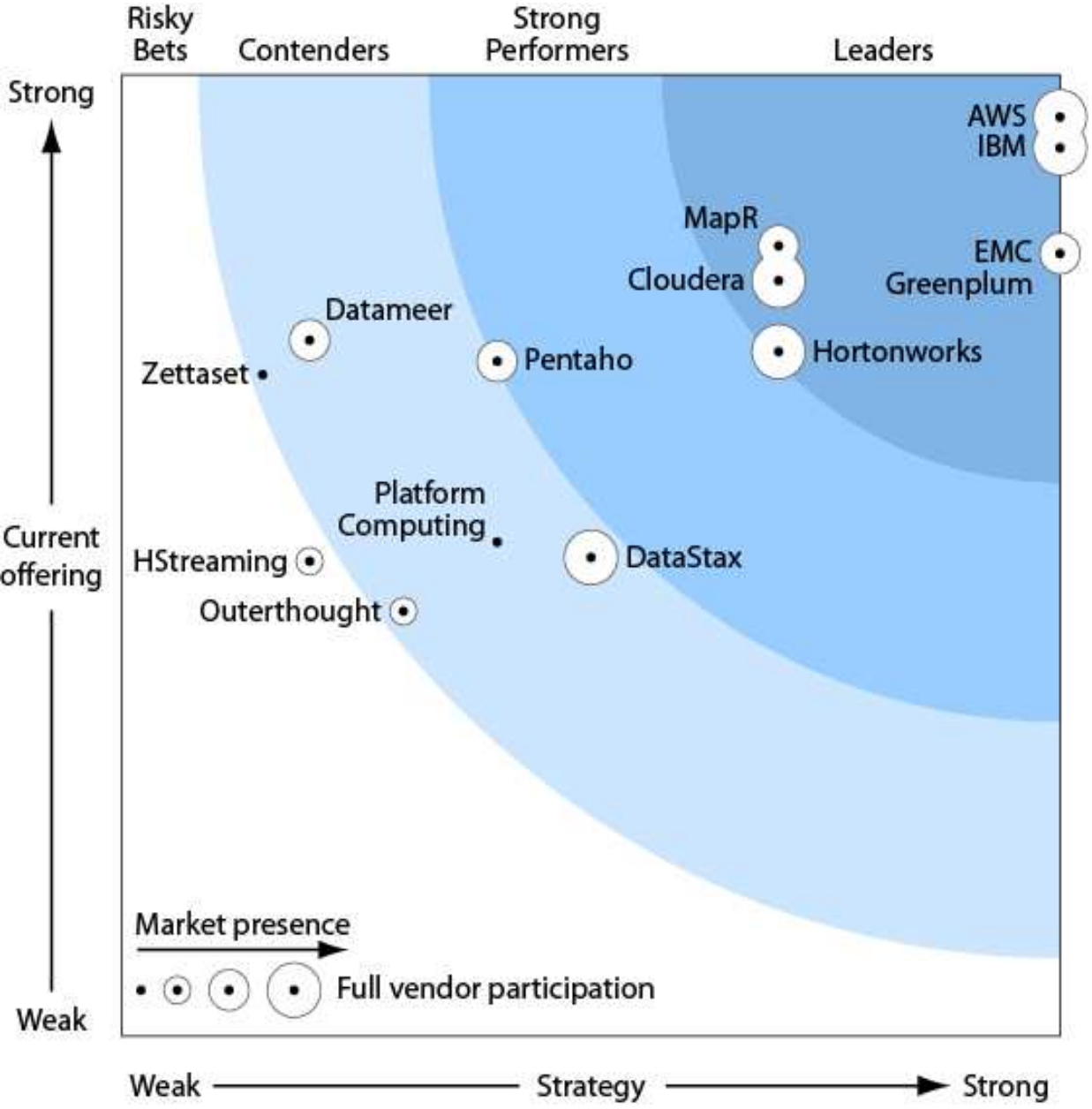
First Ever Forrester Wave on Hadoop, 2012Q1



FORRESTER®

"IBM has the deepest Hadoop platform and application portfolio. IBM, an established EDW vendor, has its own Hadoop distribution; an extensive professional services force working on Hadoop projects; extensive R&D programs developing Hadoop technologies; connections to Hadoop from its EDW."

–The Forrester Wave™: Enterprise Hadoop Solutions, 1Q12

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Big Database Vendors Adopt Hadoop

Microsoft climbs onto Hadoop bandwagon

Joint Microsoft-Hortonworks effort aims to deliver a Hadoop distribution for Windows Server and Windows Azure

By Jaikumar Vijayan

October 12, 2011 03:40 PM ET

Add a comment Like 6 +1 0

Computerworld - Microsoft is the latest of the world's top IT vendors to climb aboard the Hadoop 'big data' bandwagon.

Oracle Jumps on Hadoop Bandwagon with Cloudera

By Jennifer LeClaire
January 10, 2012 12:10PM

Follow NewsFactor on twitter! SHARE

Charles King, principal analyst at Pund-IT, said the Oracle-Cloudera partnership is a win-win. As he sees it, Oracle is coming late to the Hadoop-based Big Data party with Cloudera. He points to EMC's Greenplumb acquisition and IBM's Netezza acquisition, as well as HP's Vertica acquisition in this space as evidence.

Teradata taps Hortonworks to improve Hadoop story

By Derrick Harris | Feb. 21, 2012, 6:33am PT | No Comments

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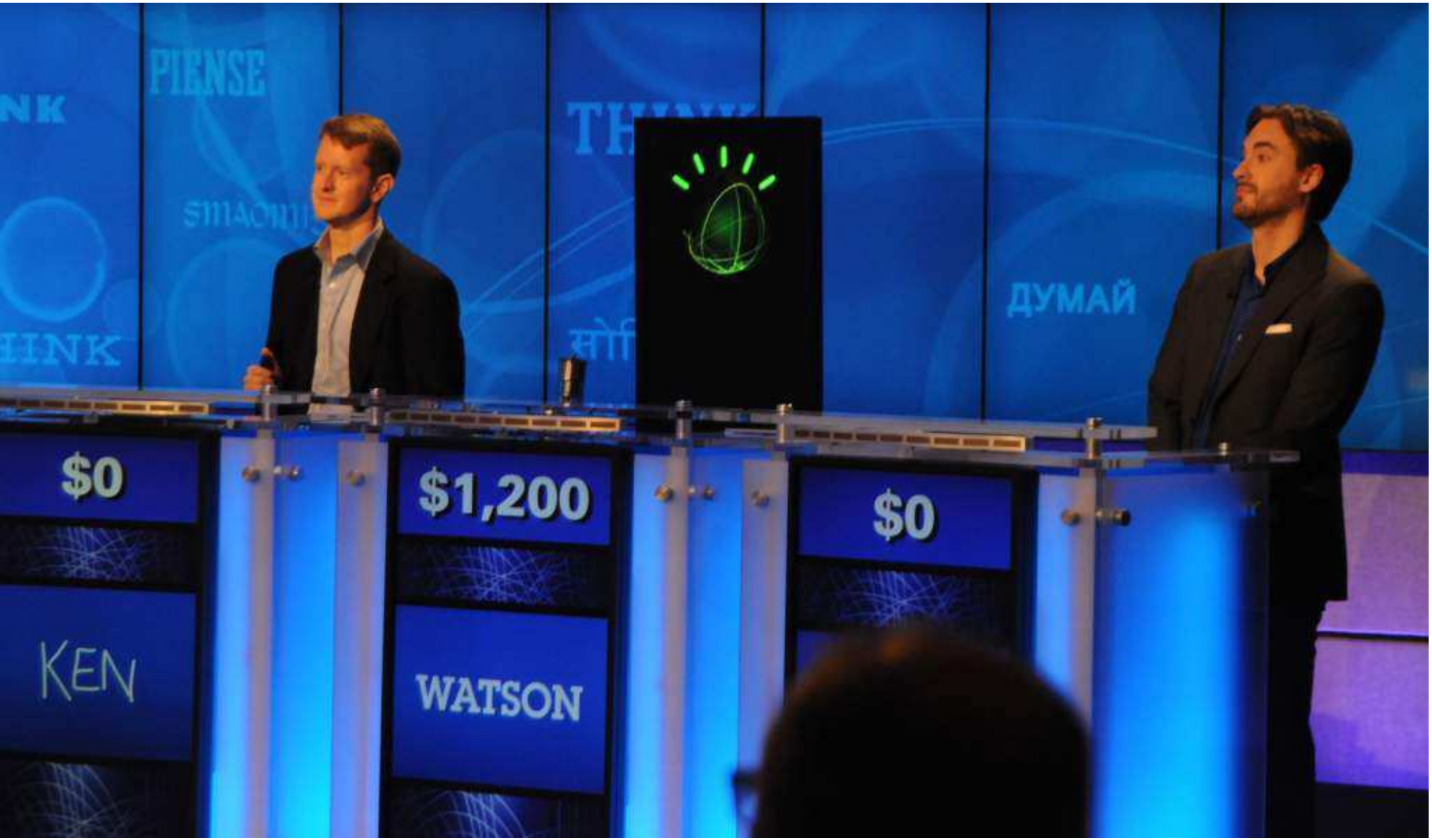
IBM Watson



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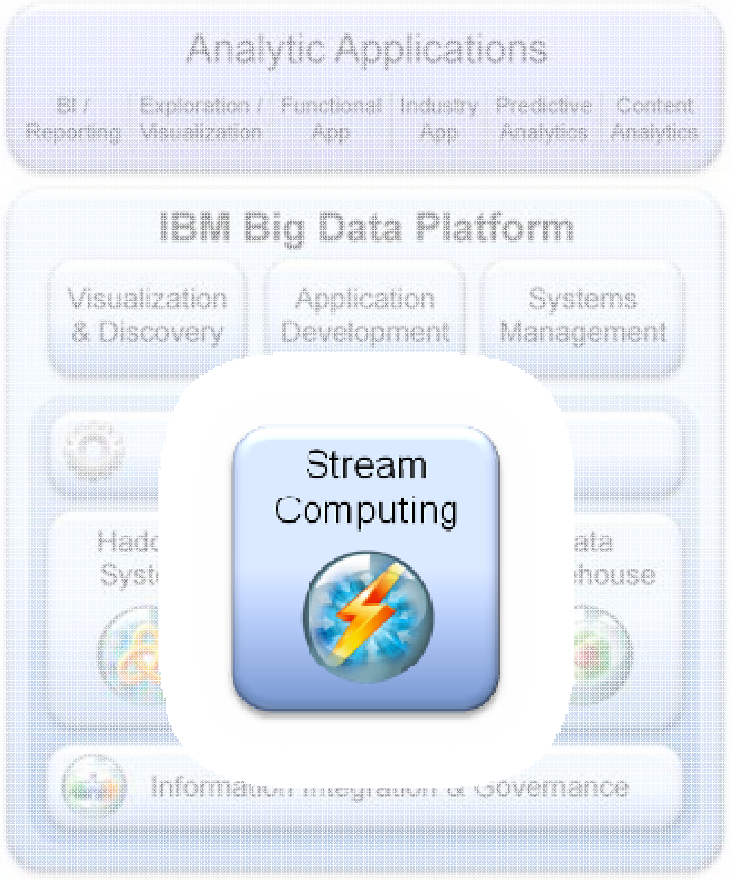
InfoSphere Streams - Streaming Analytics for Big Data

- Built to analyze data in motion
  - Multiple concurrent input streams
  - Massive scalability
- Process and analyze a variety of data
  - Structured, unstructured content, video, audio
  - Advanced analytic operators
- Enables Adaptive Real-Time Analytics
  - With Data Warehousing
  - With Hadoop Systems



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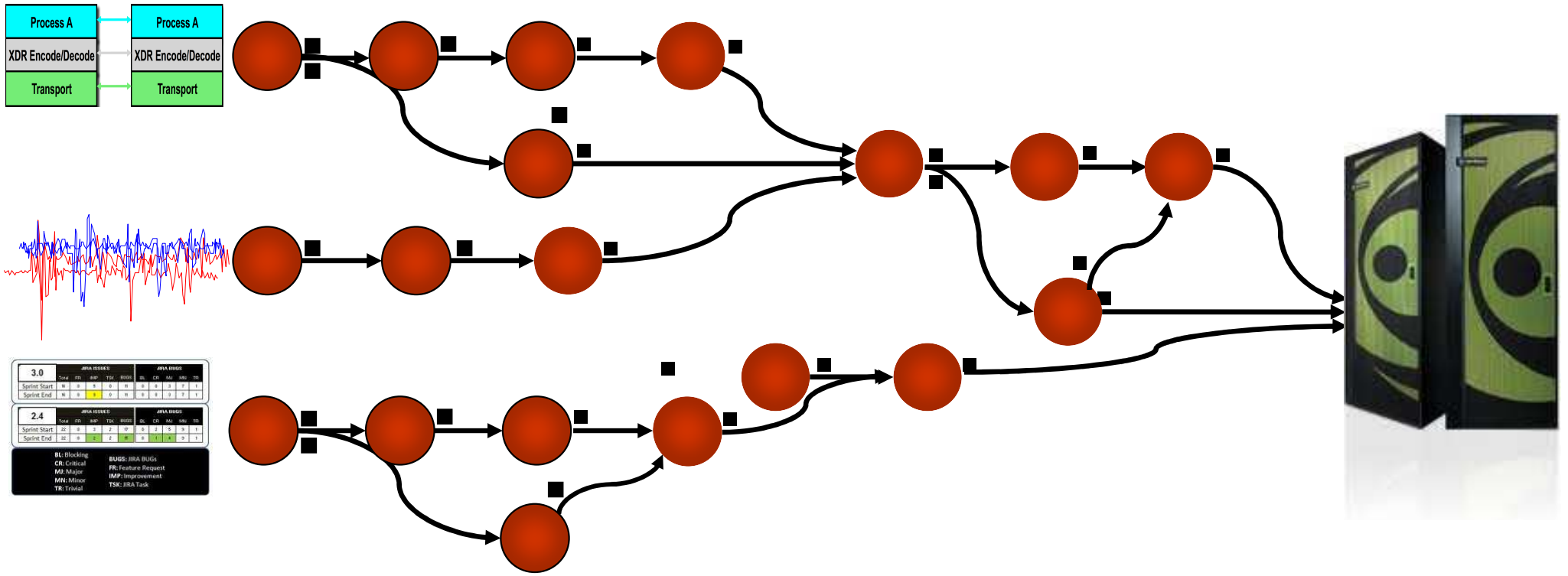
Data In Motion – Improving What They Already Have

Uses InfoSphere Streams and IBM Netezza

Significant Benefits:

- Over 90% reduction in time to merge/load call record data
- Over 90% reduction in storage
- Increased network quality,
- improved customer satisfaction,
- reduced churn



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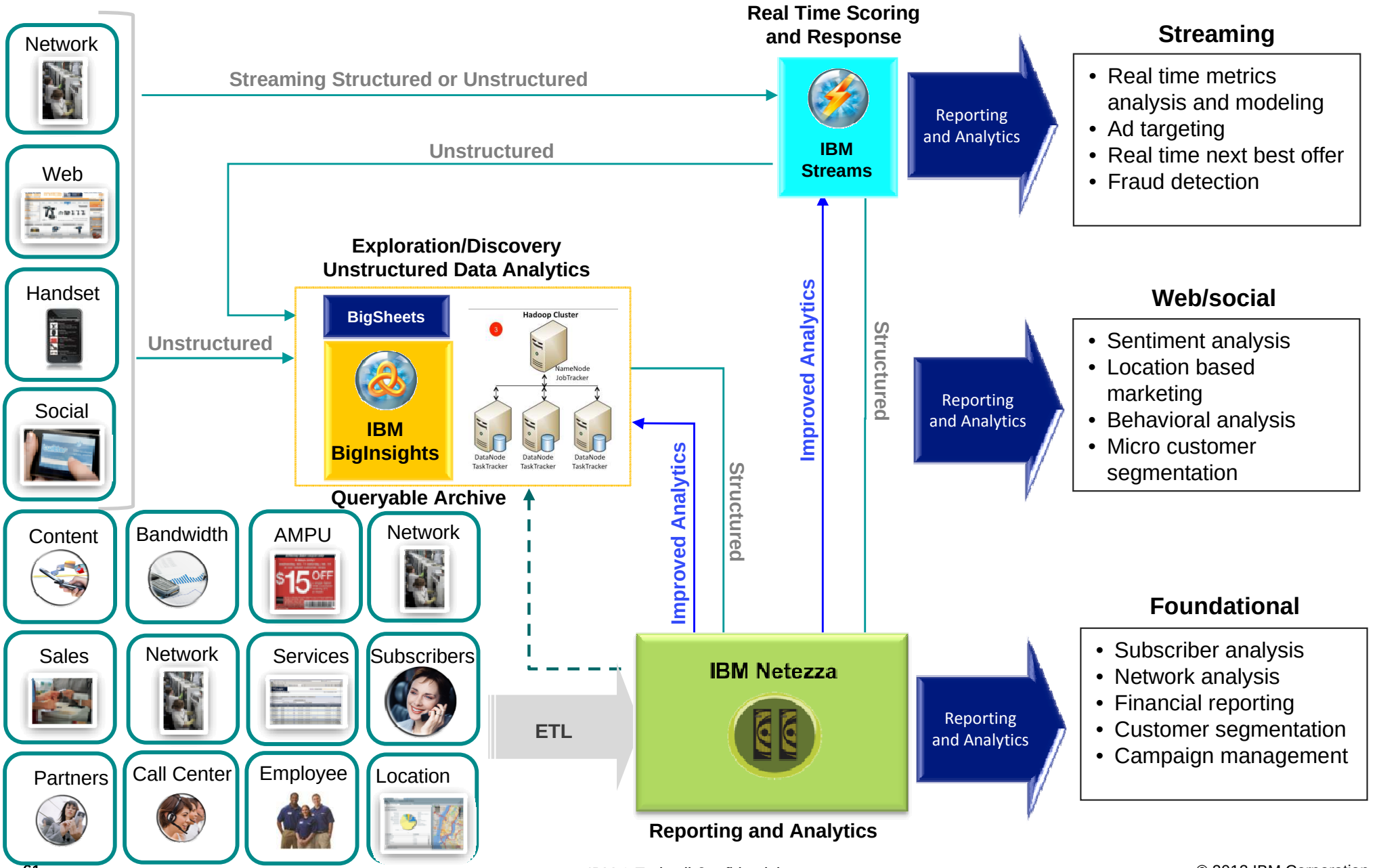
IBM Big Data integrates Streams, Hadoop and Netezza in an integrated platform



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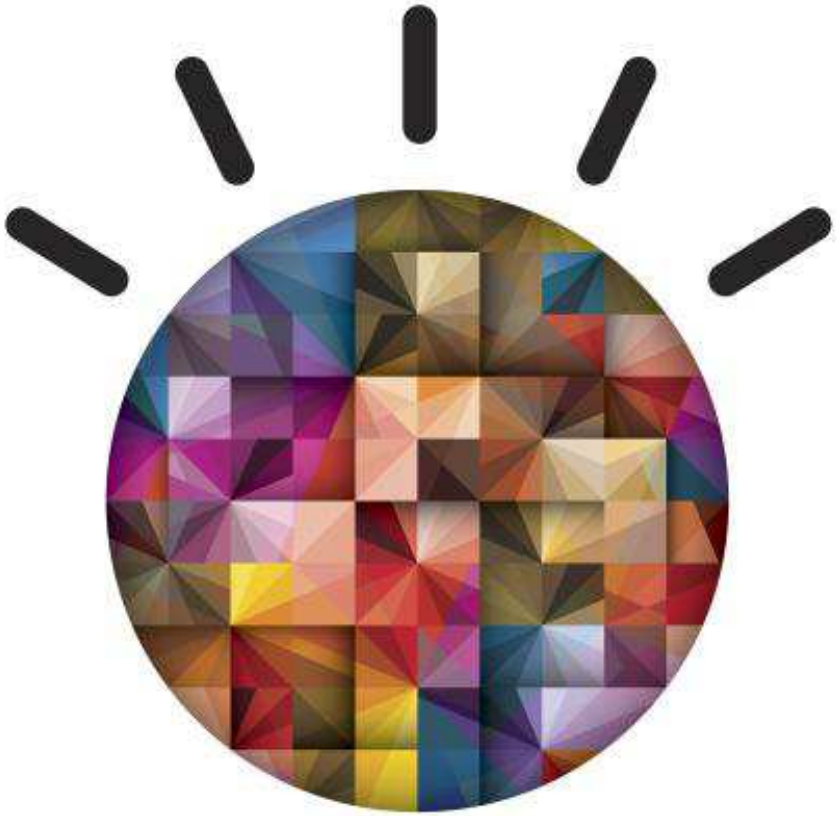
For more information:

ibm.com/bigdata



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New Era of Customer Interaction

Elana Anderson
Director, Cross-channel Marketing Solutions
Enterprise Marketing Management (EMM)

Marcel Holsheimer
Marketing Executive, Worldwide Demand Generation
Enterprise Marketing Management

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IBM research:
understanding marketing trends, challenges and best practices

IBM CMO Study

- Surveyed 1100 CMOs WW - largest CMO survey ever
- Identifying trends and challenges
- Indepth face-to-face interviews
- See www.ibm.com/cmostudy

IBM Holiday Readiness Report

- IBMs marketing solutions are used by the leading retailers world wide, providing a wealth of data on consumer behavior
- Frequent reports and benchmarks on consumer trends
- See ibm.com

IBM State of Marketing 2012

- Survey 370 marketing executives
- Compared high performing organization to the rest
- Identifying best practices – how to become a high performing organization
- See ibm.com

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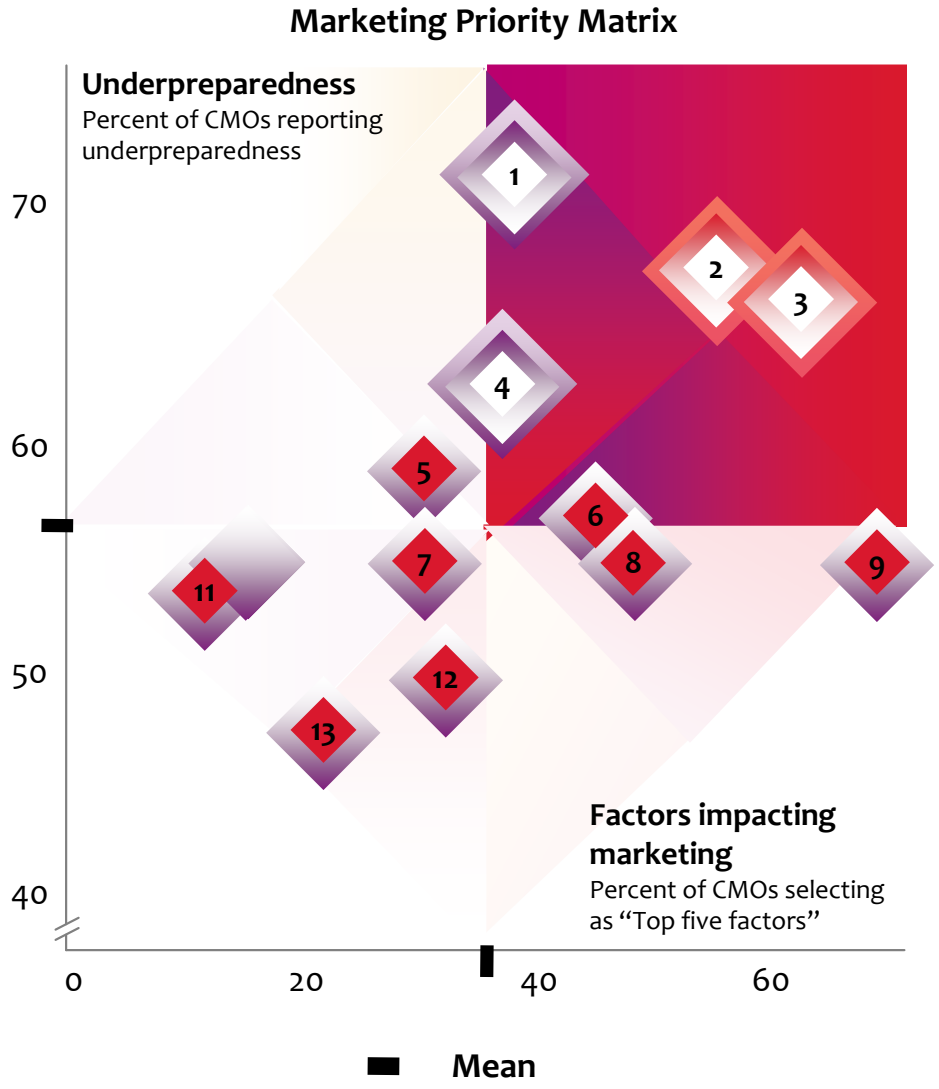
IBM CMO Study:
which underprepared areas are the most critical for CMOs?



1. **Data explosion**
2. **Social media**
3. **Growth of channel and device choices**
4. **Shifting consumer demographics**
5. Financial constraints
6. Decreasing brand loyalty
7. Growth market opportunities
8. ROI accountability
9. Customer collaboration and influence
10. Privacy considerations
11. Global outsourcing
12. Regulatory considerations
13. Corporate transparency

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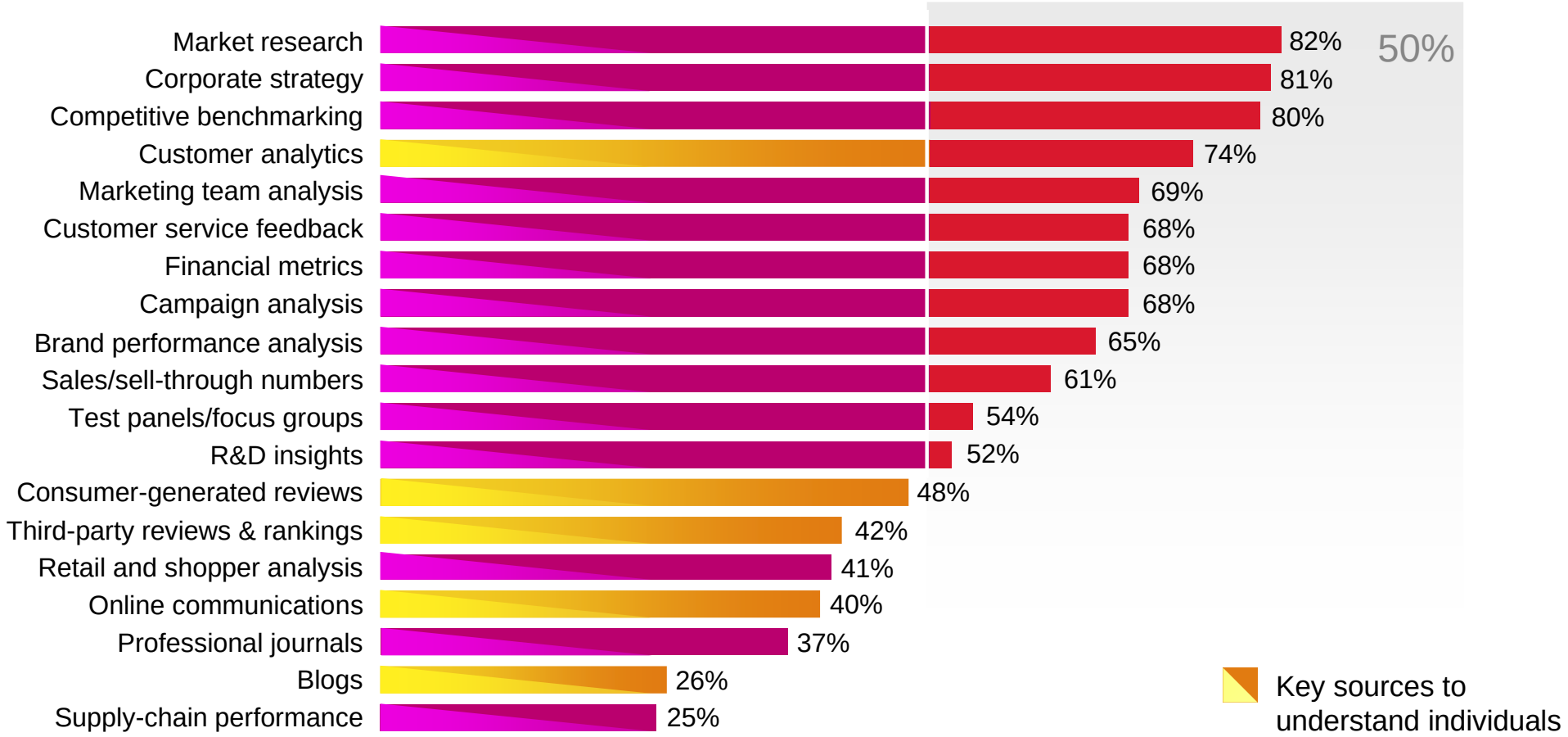
Most CMOs are still focusing on understanding *markets* versus understanding *individuals* to shape their strategy

Sources used to influence strategy decisions

Percent of CMOs selecting all sources that apply



Source: Q15 What sources of information influence your marketing strategy decisions? n=1733

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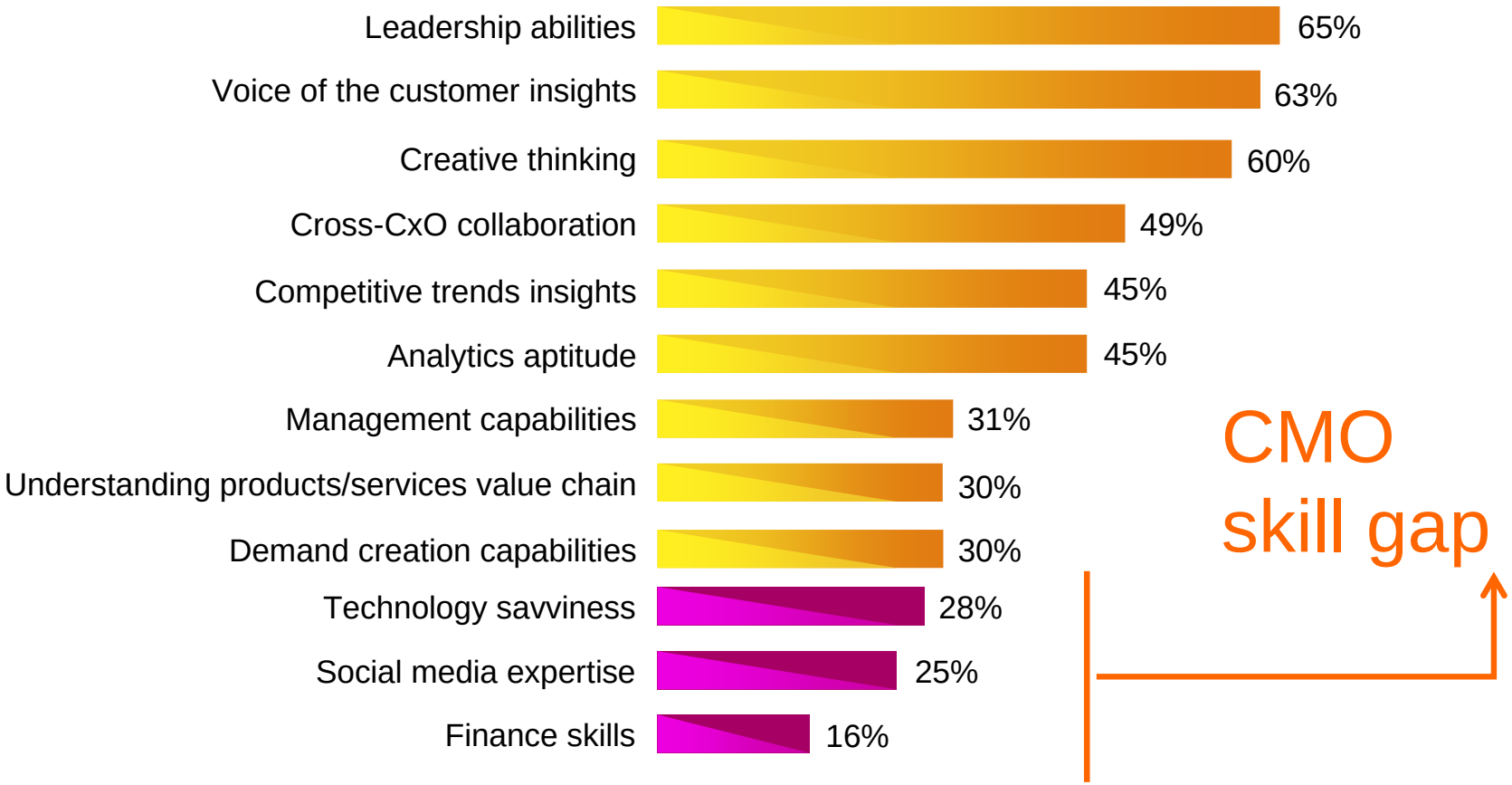
CMOs also can expand their personal influence by shifting to new capabilities that focus on technology, social media and ROI

Capabilities for personal success over next 3-5 years

Percent of CMOs selecting capabilities



Source: Q17 What capabilities do you need to be personally successful over the next 3 to 5 years? n=1733

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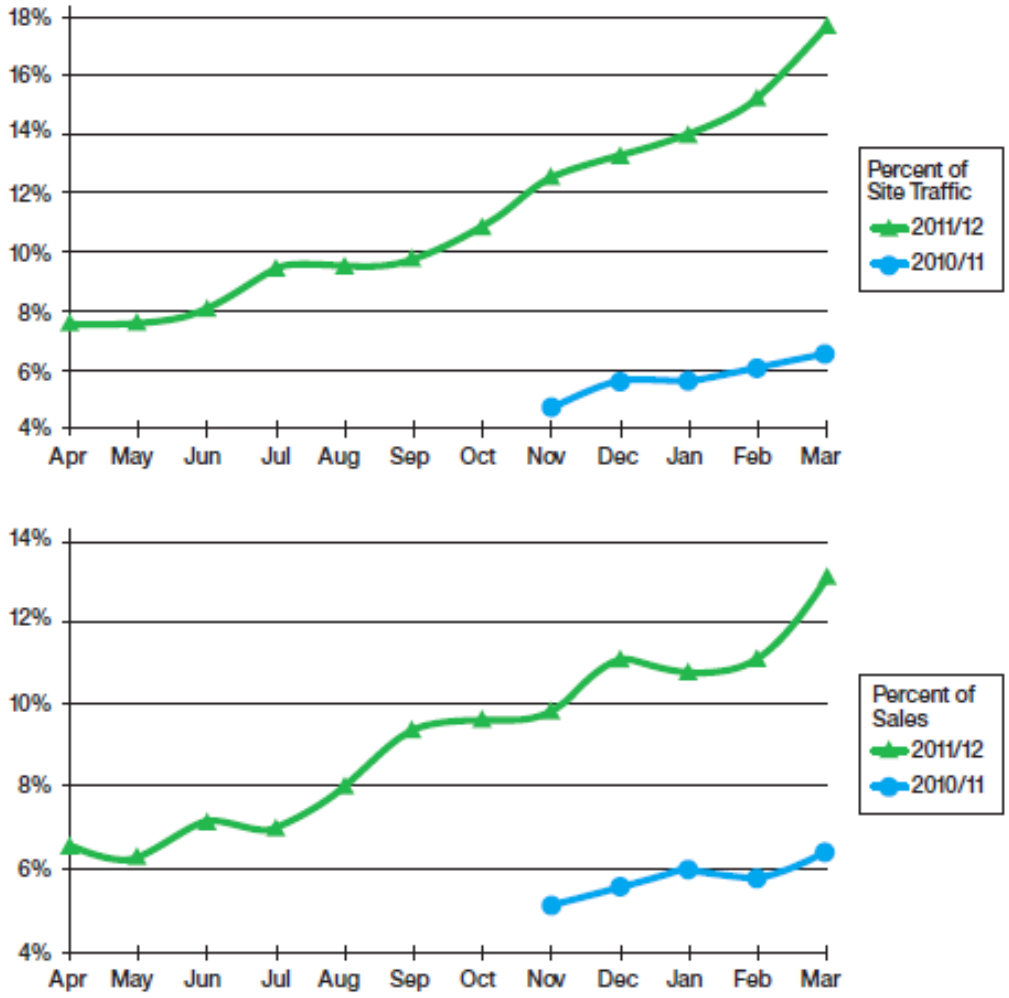
IBM Holiday Readiness Report: Mobile and Social are on the rise

Mobile Site Traffic and Sales Percentage



Figures 3: The mobile channel shows strong growth in percent of both site visits and sales.

- **Mobile** sales as a percentage of total site sales hit a record 13% in March 2012 - double 2011
- Visitors referred from a **social** site are 50% more likely to buy then visitors overall

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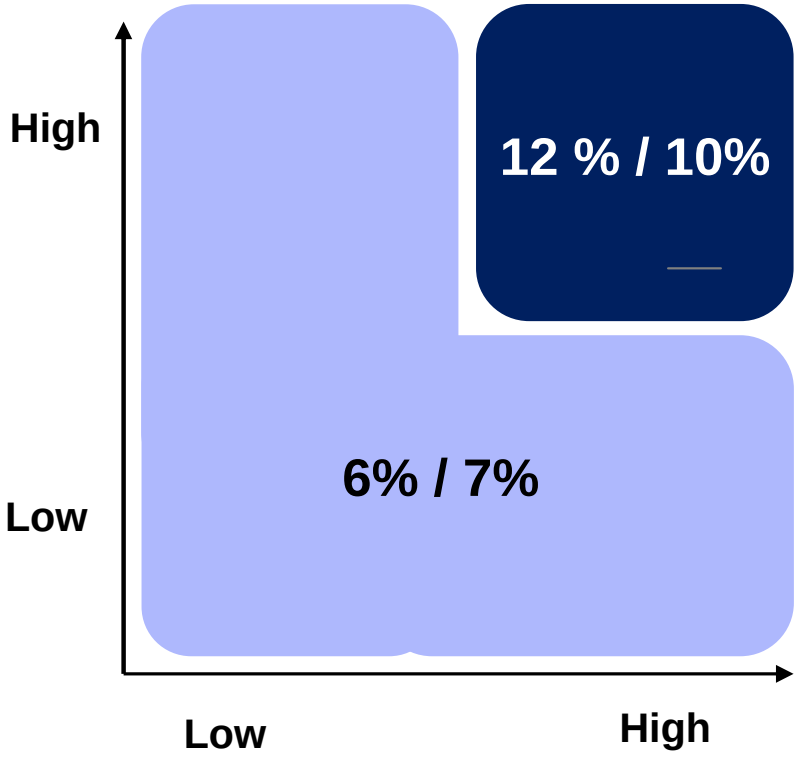
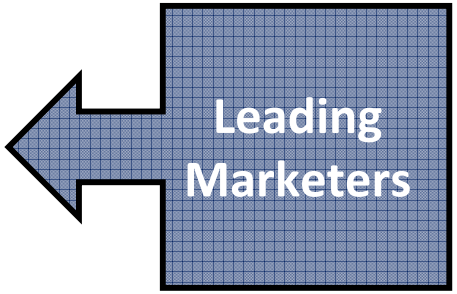
IBM State of Marketing 2012:
What are the best practices of high performing companies?

Revenue Growth / Gross Profit Growth

3-year CAGR, 2008-2011





Engage: optimize experience across all channels

Analyze: sophisticated usage of customer data

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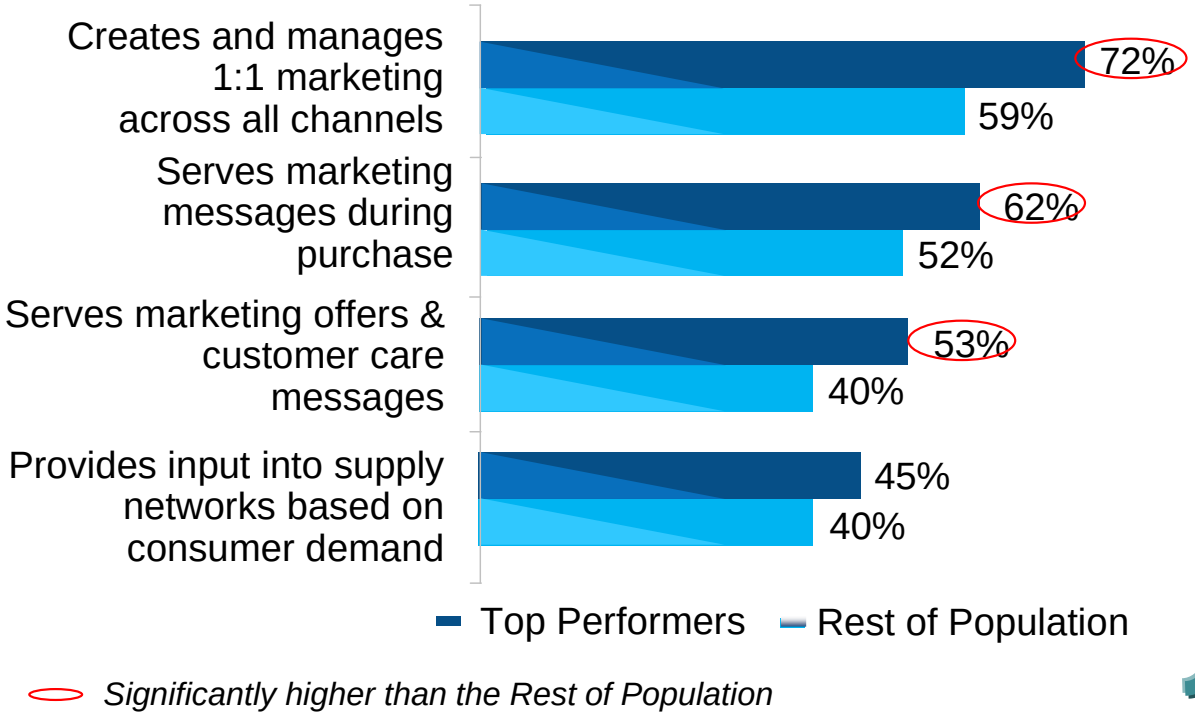
Leading marketers extend their role beyond marketing

Marketers from high-performing companies are more likely to lead the coordination of messages in different functional areas that are not marketing, expanding their strategic role and application of technology to proactively improve their customers' experience.

Figure: Marketing Responsibility by Business Outcome

Q. Please rate the level of responsibility marketing has for each of the following areas.



Significantly higher than the Rest of Population

Marketers

from high-performing companies are nearly 3X more likely to be proactive leaders driving the customer experience across all channels

Base: Total Sample (n=362), Top Performers (n=252), Rest of Population (n=110)

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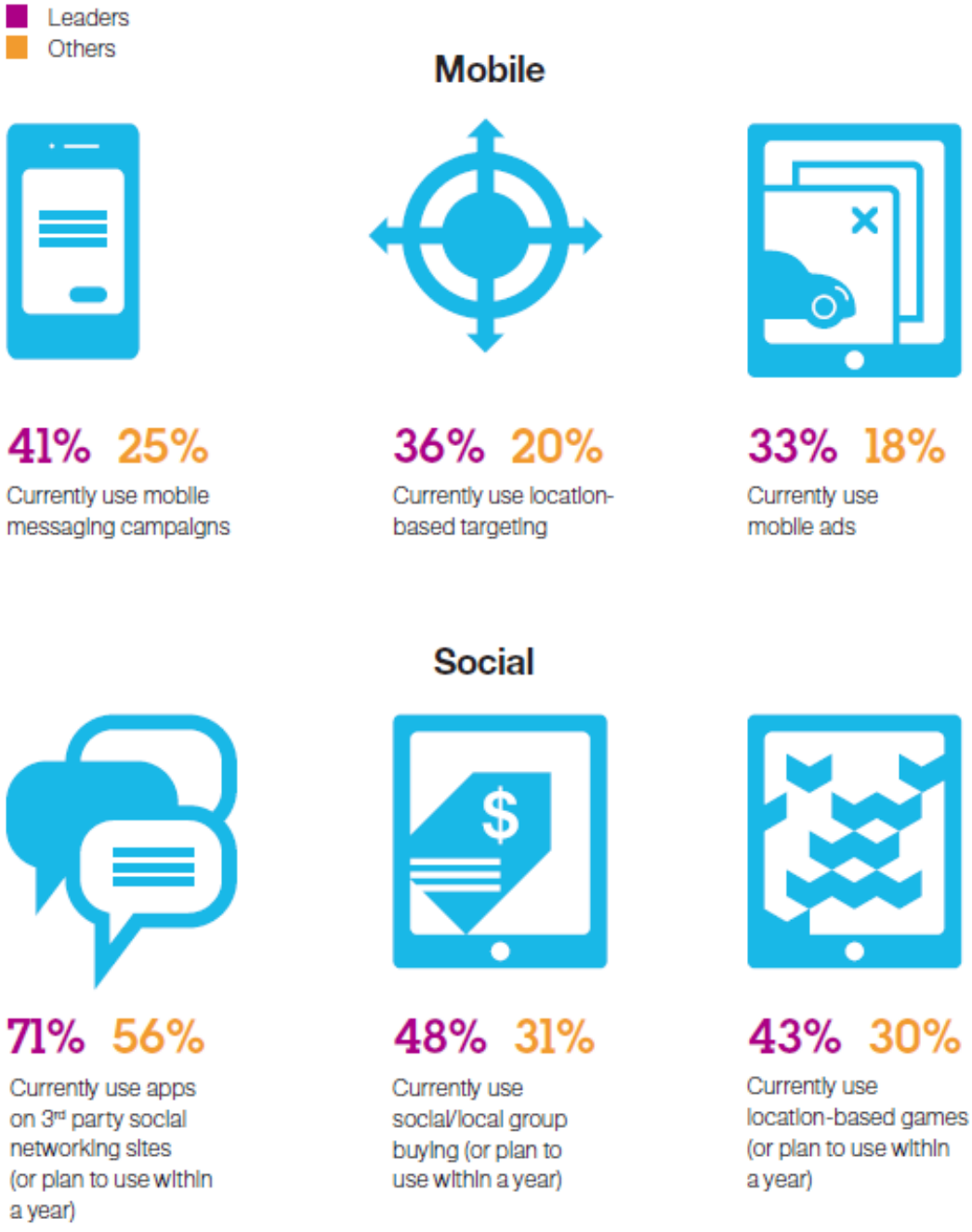
Leading marketers use innovative marketing techniques



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Leading marketers take advantage of combining on and offline data

65%

Of respondents are doing the basics by reporting and analyzing their online visitor data.

Only a third

Use this data in targeting one-to-one offers or messages in digital channels.

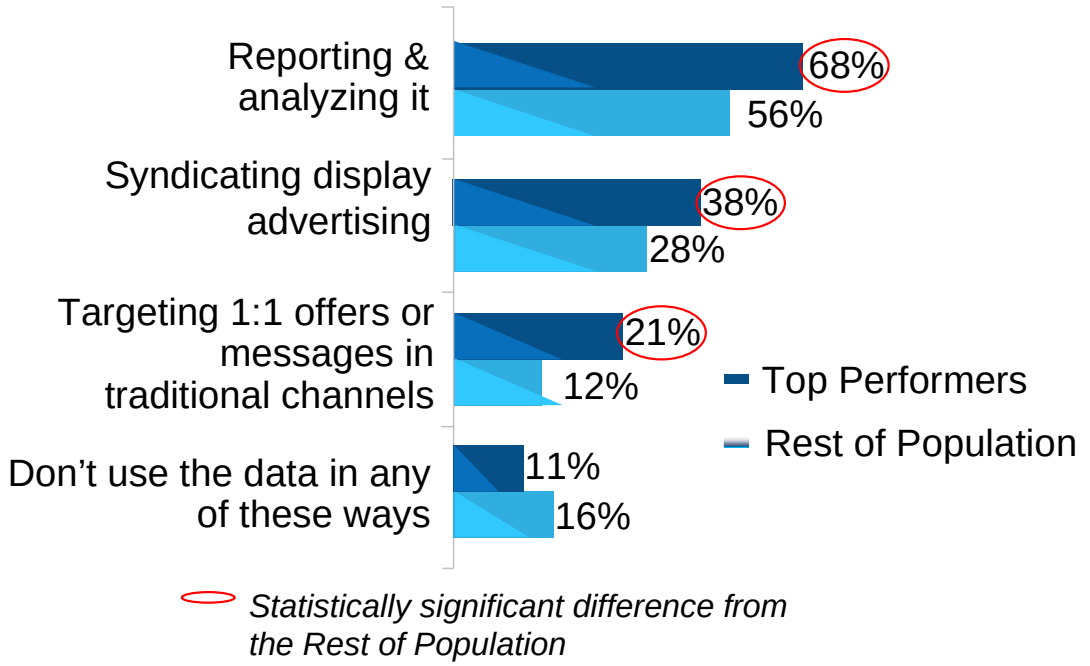
Less than 1 and 5

Leverage online data to make one-to-one offers in traditional channels.

High performing companies leverage their online data in other channels

Figure: Use of Online Visitor Data Comparing Company Performance

Q. How are you using your online visitor data?



Base: Companies that have online visitor data (n=351)

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Leading marketers require an integrated marketing suite to coordinate action across channels …

85%

Of marketers agree with the need for an integrated suite.

But 27%

Of marketers don't perform attribution.

And 34%

Manually analyze attribution through spreadsheets.

… and show the impact of marketing activities on business results

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Leading Marketers work closely with IT

76%

Of marketers either drive the purchasing decisions for marketing software or collaborate with IT.

48%

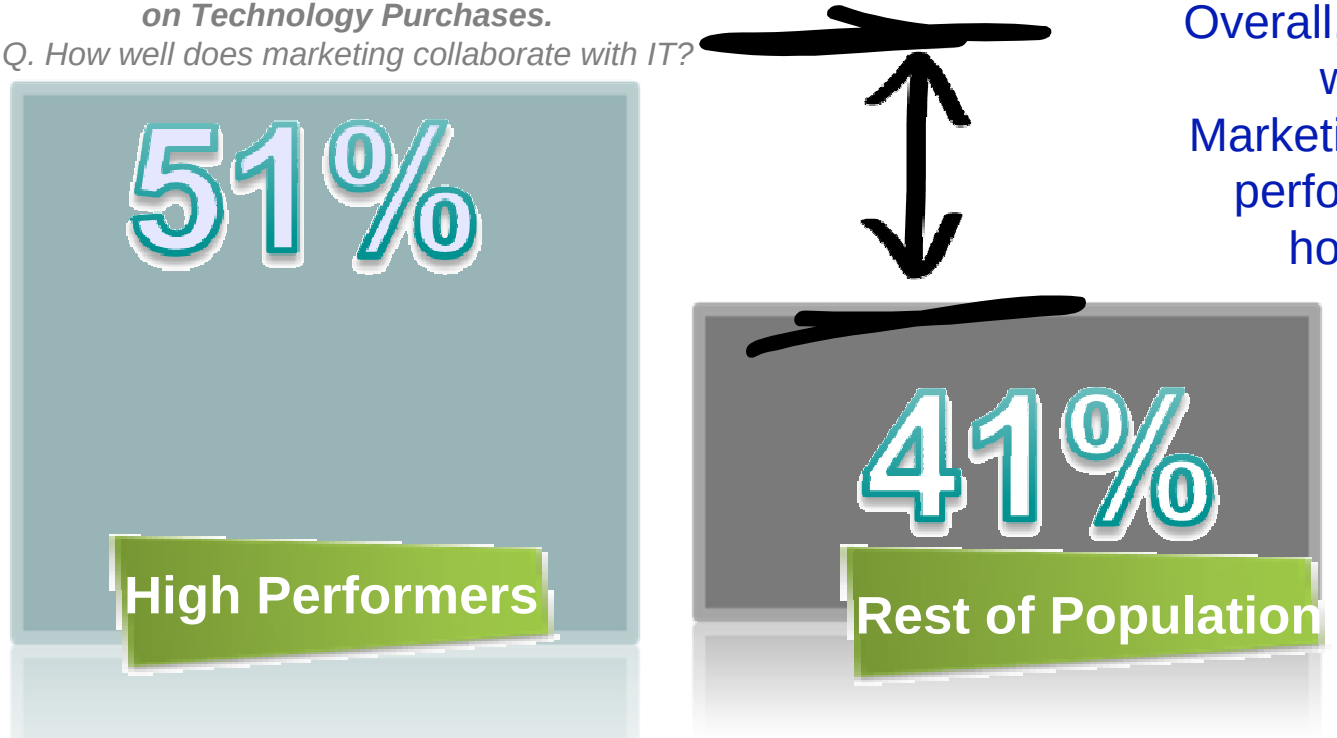
Believe improved technology infrastructure or software will enable marketers to do more.

Nearly 60%

Indicate that lack of IT alignment and integration are significant barriers to the adoption of technology.

Figure: Collaboration Between IT and Marketing on Technology Purchases.

Q. How well does marketing collaborate with IT?



Overall, marketing and IT work well together. Marketing and IT at high-performing companies, however, work more effectively.

Base: Total Sample (n=362)

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Marketing Trends, Challenges and Best Practices

- **Trends and Challenges**
  - Cross channel behavior poses challenges to marketing organizations
  - Social and mobile are on the rise
  - Organizations do have a wealth of customer data, that could help here, but they struggle to take advantage of this data

- **Leading organizations**
  - Include more channels in their campaigns, using advanced mobile and social
  - Leverage customer data better, combining on and offline behavior
  - Use (or require) an integrated suite
  - Place greater emphasis on marketing measurement and linking marketing to business results
  - Partner more effectively with IT

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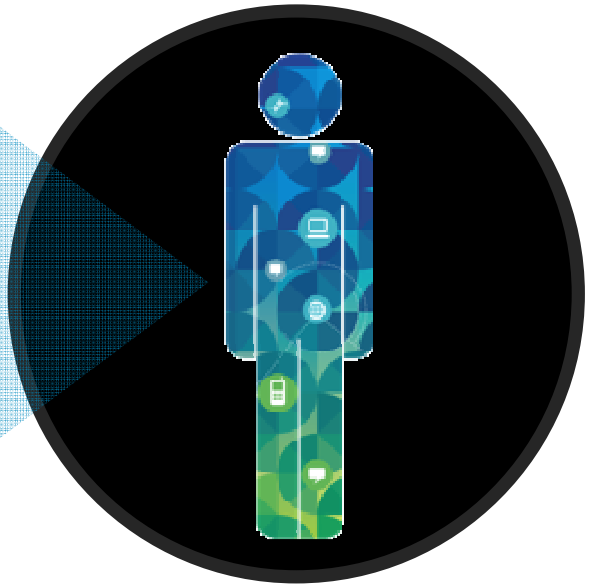
Creating a platform for a comprehensive system of engagement

Integrated Functional Layers

- Cross-channel Execution
- Centralized Decisioning
- Customer and Marketing Analytics
- Data Management
- Instrumentation

On-Cloud, On-Premises, and Hybrid Offerings



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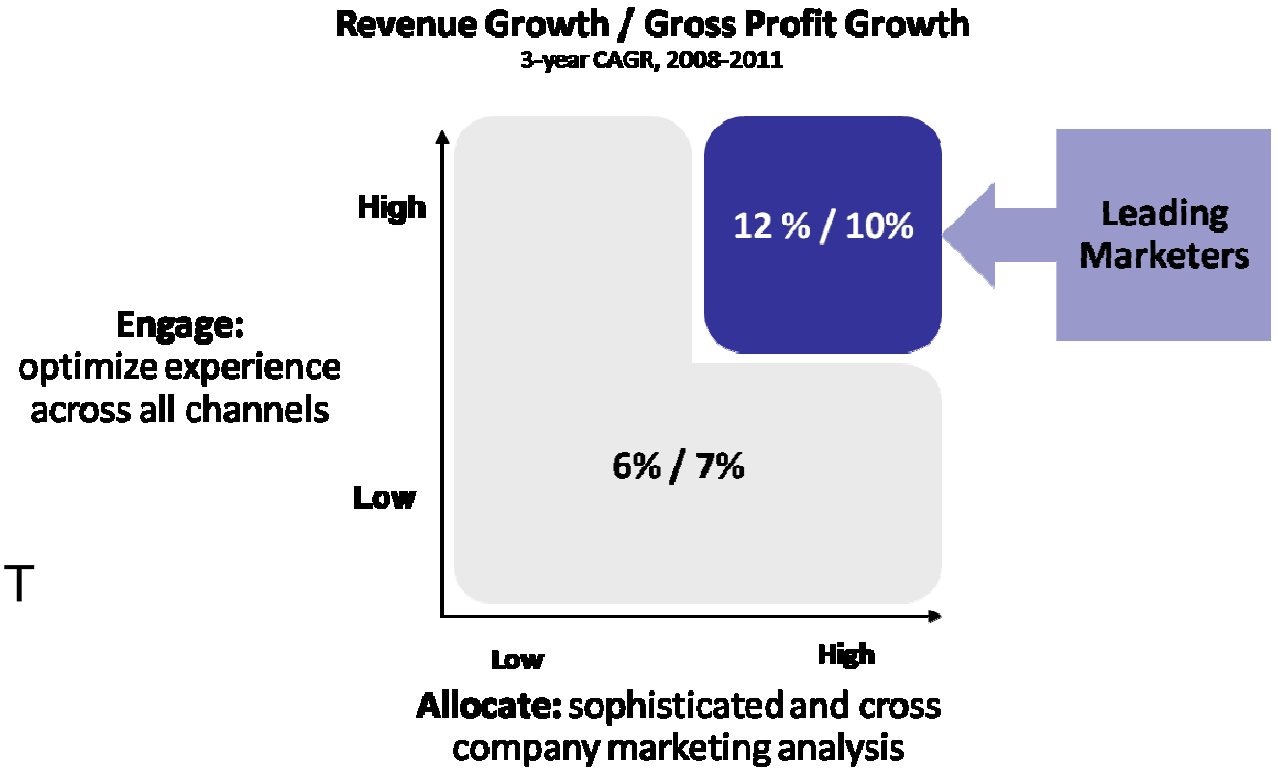
Future of Marketing Platforms

Lessons learned from marketers at leading companies

- Focus more aggressively on leveraging all channels – including emerging channels
- Place greater emphasis on marketing measurement and linking marketing to business results
- Partner more effectively with IT
- Working to build a system of engagement and integrate disparate technologies



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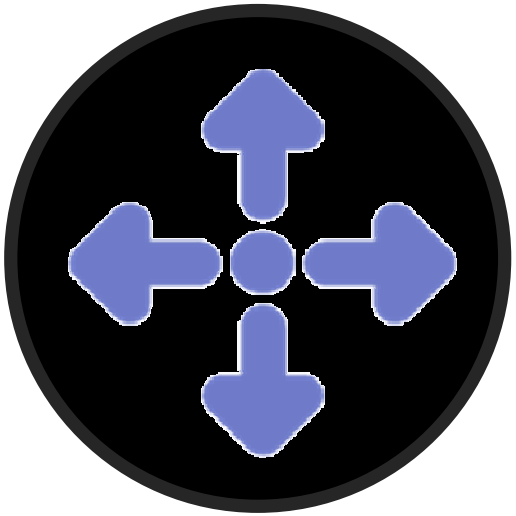
Leading marketers are reimagining the role of marketing



- Know your customer as an individual
  - Deep customer insight
  - Integrate digital behavior
  - Listen to social
- Create value at every touch
  - Marketing that feels like service
  - Complete customer experience
  - Ability to scale to millions of relevant offers
  - System of engagement across all channels
- Be an authentic brand and culture
  - Align operations with the brand across all areas of the business
  - Delegate more problem resolution power to front-line employees
  - Respond authentically to customer needs and amplify your fans' experience

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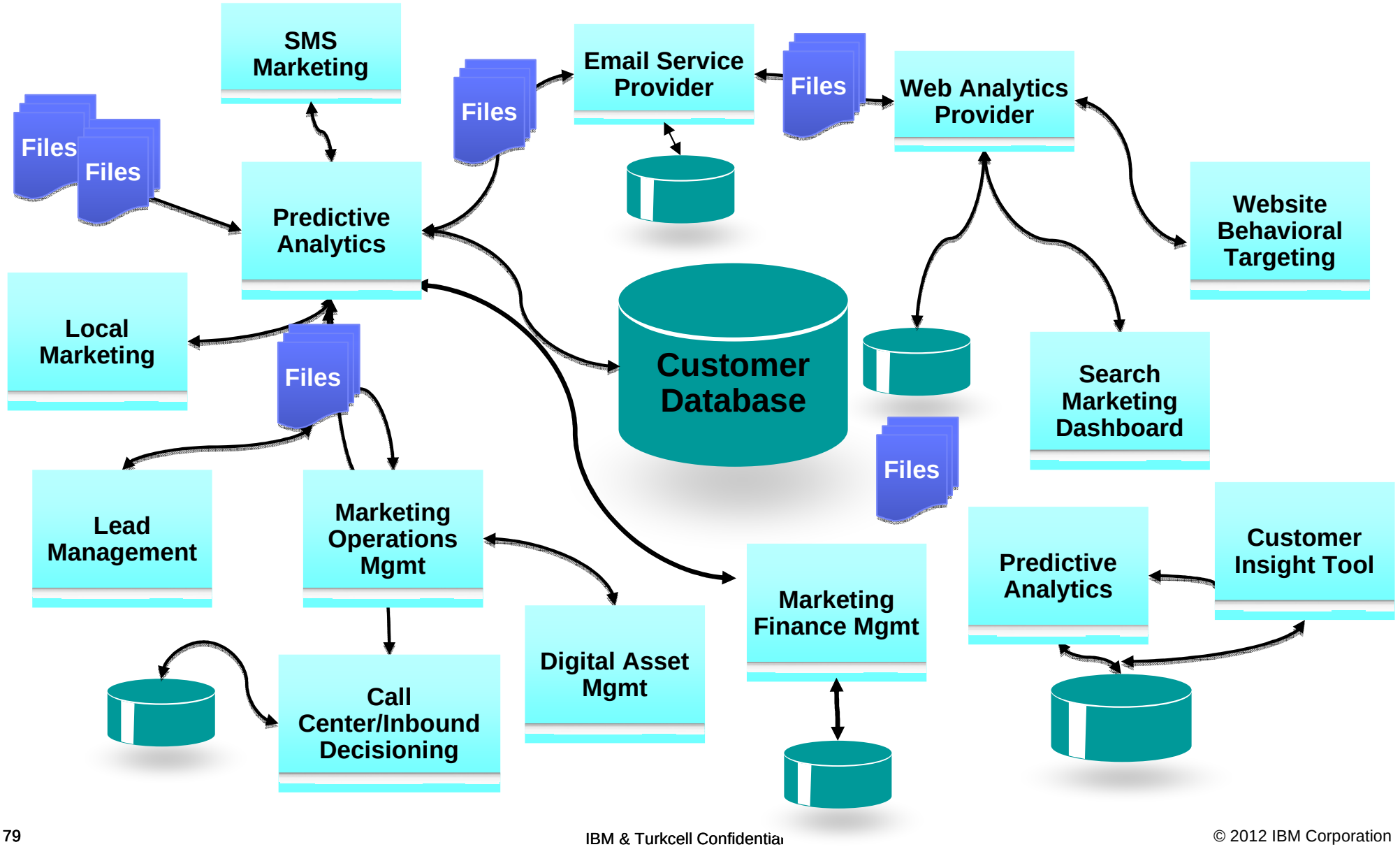
It’s awfully hard to re-imagine marketing when the technology infrastructure looks like this…



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…Instead, leading marketers need a comprehensive and integrated marketing suite

Key characteristics of an integrated marketing suite

- Fueled by fully integrated customer and marketing analytics
- Incorporates best-in-class digital marketing capabilities
- Delivered via a hybrid architecture blending on-cloud and on-premise elements in a seamless business user experience
- Ability to scale to manage millions of relevant offers - delivered in real-time
- Data syndication and sharing standards inside and outside the organization

These characteristics will grow more important over time

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IBM has embraced the opportunity and is aggressively investing in Enterprise Marketing Management (EMM)

A marketing technology category that supports the end-to-end marketing function across all marketing disciplines

unica

Coremetrics

DemandTec

tealeaf an IBM Company

Cognos

SPSS

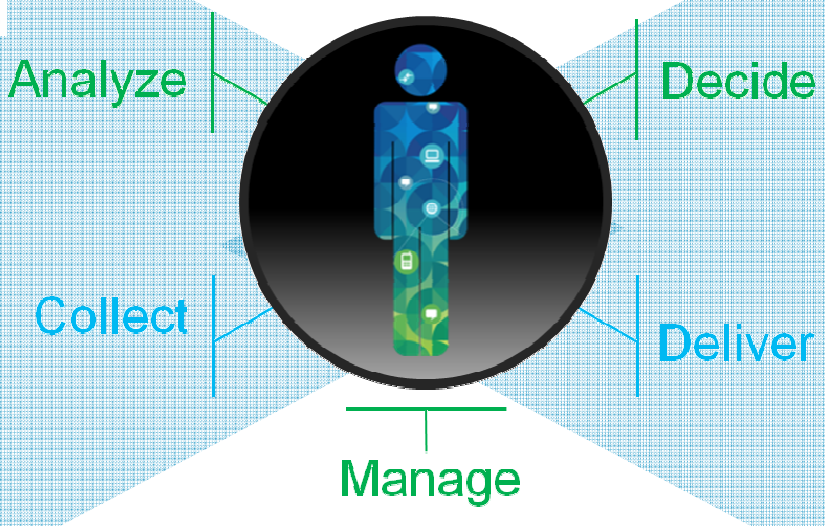
Initiate an IBM Company

NETEZZA

CAST IRON SYSTEMS

IBM DB2

InfoSphere



EMM Solutions

- Interaction Optimization
- Digital Marketing
- Customer Experience
- Pricing and Assortment
- Marketing Performance

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Delivering critical marketing capabilities built around deep customer knowledge….

Cross-channel Profile

is a *virtual* customer profile, made up of:

- Your existing data, accessed by EMM
- Data from outside sources, captured by EMM
- New data, generated by EMM

Leveraged by all EMM solutions

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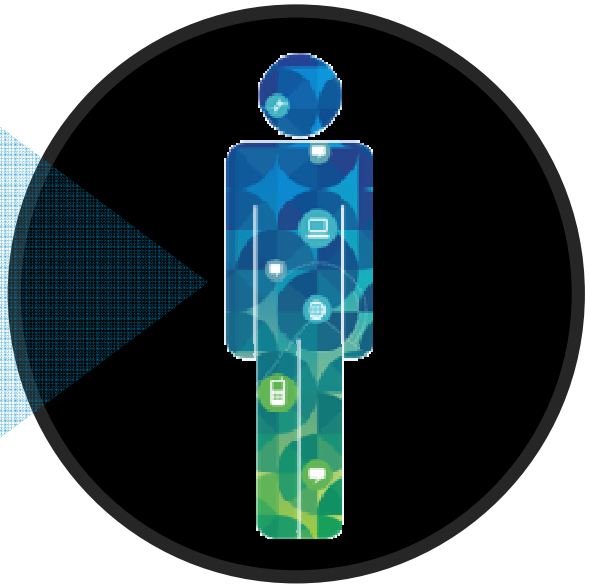
Creating a platform for a comprehensive system of engagement

Integrated Functional Layers

- Cross-channel Execution
- Centralized Decisioning
- Customer and Marketing Analytics
- Data Management
- Instrumentation



On-Cloud, On-Premises, and Hybrid Offerings

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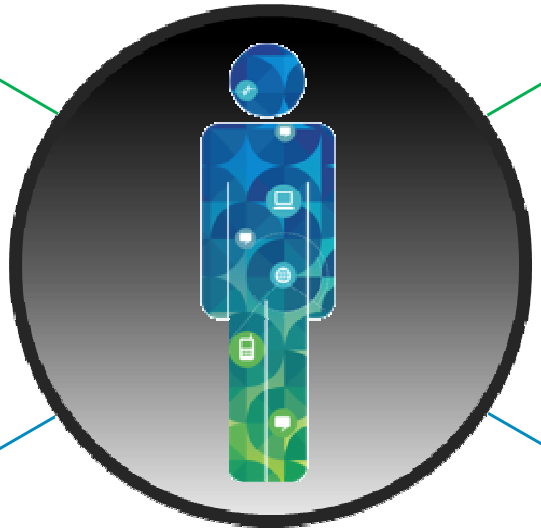
Supporting the end-to-end marketing process

Analyze
to indentify opportunities and predict outcomes

Collect
data that augments each customer profile



Decide
on the best action, offer, content, and/or channel

Deliver
relevant pricing, engaging messages, and capture reactions

Manage
marketing processes and measure results

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Across all media types

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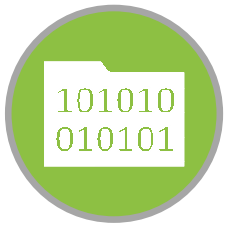
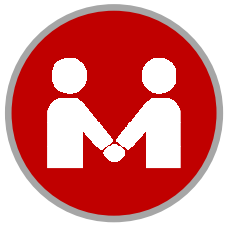
With integrated solutions designed for critical marketing roles

AUDIENCES	NEED	EMM SOLUTION
 Digital marketers	Focus on the whole digital experience to turn online prospects into repeat customers and loyal advocates	Digital Marketing Optimization
 Customer relationship marketers	Engage each customer and prospect in a one-to-one dialogue across communication channels	Interaction Optimization
Pricing, promotion, and product mix planners	Improve pricing and promotions to increase customer loyalty and profit Align product offerings with needs and preferences of shoppers	Price, Promotion, and Product Mix Optimization
Marketing leaders, planners & decision-makers	Improve marketing operations and planning to maximize marketing ROI	Marketing Performance Optimization

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Good marketing *IS* service

Objective

Differentiate the airline with superior customer service and relevant messaging driven by marketing thereby increasing customer value

Solution

- Phase 1: Service – real-time notification service sends information to passengers on unexpected changes (in advance, on the spot, proactive)
- Phase 2: relevant and real-time marketing

Results

- 35% increase in customer satisfaction
- 30% increase in repurchase intention
- 25% increase in social recommendation an TAF

Company Profile

AIR FRANCE KLM is one of the leading European air transport groups. In 2011, AIR FRANCE KLM carried 75.8 million passengers and 1.4 million tons of cargo. The group's fleet comprises more 586 aircraft.

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Customer-centric real-time next best action

Objective

Provide a new and innovative capability to deliver highly relevant and real-time next best action across channels

Solution

- Real-time connection from channels to the IBM Unica Interact that serves up offers through “the Hub”: call centre, branch, digital
- A back-end connection to customer profile and historical transaction information

Results

- Shift from
  - Product to customer-focus
  - Insensitivity to customer conditions to responsive to customer behavior and real-time interaction context
- 9x increase in utilization rate of targeted offers by CSRs
- Positive outcomes increased from 2-4% to over 35%

BMO Financial Group

Company Profile

BMO Financial Group serves more than 12 million personal, commercial, corporate and institutional customers in North America and internationally providing a broad range of retail banking, wealth management and investment banking products.

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wehkamp.nl goes “all in” on digital

Objective

- Shift towards younger demographic
- Shift brand image from practical to trendy
- Fully transform the business from traditional print catalog to 100% digital

Solution

- Leverages IBM’s EMM solutions including Coremetrics, Unica, and Tealeaf to understand and respond to digital behaviours and drive top notch customer experiences

Results

- 98% of customer interactions are personalized
- Targeted online banners generate 500% increase in click-thrus and 15x increase in ROI
- Highly customized email reduced opt-out by 67% and increased sales by an avg of 271% per campaign
- Direct mail downward spiral stopped: 35% increase in sales and 10% increase in ROI

wehkamp.nl

Company Profile

wehkamp.nl is the Netherlands’ largest online retailer, with 1.6 million customers and more than 110 million visitors per year.

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Why should you take IBM seriously in this market?

- It's the "perfect" technology problem
  - Capture and synthesis of disparate information
  - Integration across data and technologies
  - Analytics (of various types)
  - Expertise across a variety of disciplines
  - Cutting edge research and technology
- Success also requires strong services…
- …And a broad partner network

Marketing is the #1 focus of big data initiatives

Source: Forrester Research 2011 Global Big Data June Online Survey

There are precious few companies who can solve a problem of this magnitude – IBM is one of them.

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IBM Independent Integrated Systems

Erhan Ekici
Technical Sales
20.09.2012

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Agenda

- Current IT Challenges
- Introducing IBM PureApplication System Application System
- Deployment Models
- IBM PureApplication System Architecture
- IBM PureSystems Centre
- Q & A

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Smarter Planet

Law Enforcement

Fraud Prevention

Traffic Control

Trading

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What are today's pressures and realities

Innovation-driven CIOs believe IT can have the highest impact by creating new revenue sources[1]

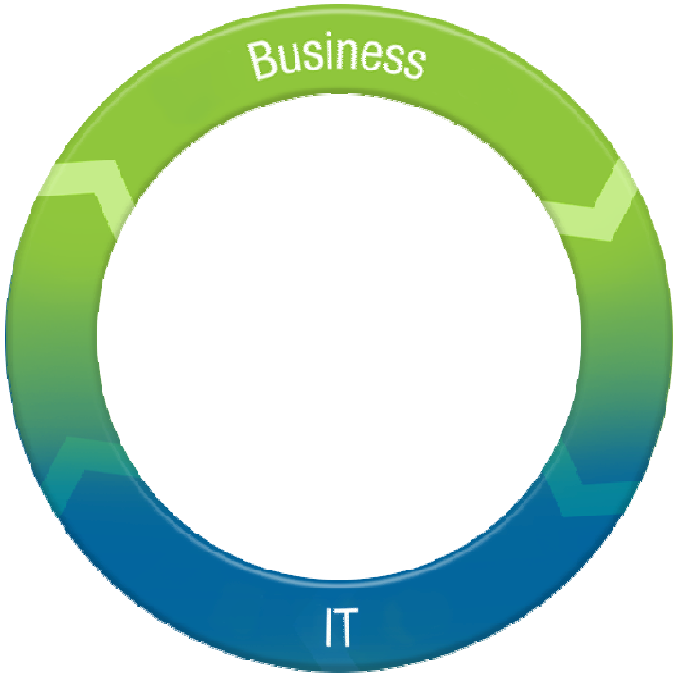
Consumerization

- Mobility
- Social business
- Iterative solutions

75% of organizations face yearly business model changes affecting applications[2]

Business Demands

- Address opportunities more quickly
- Drive business innovation
- Leverage technology more strategically



IT Needs

- Deliver new capabilities faster
- Shift resources from maintenance to transformation
- Control growing complexity

1) 2011 CIO Study
2) 2010 IBM Internal Study

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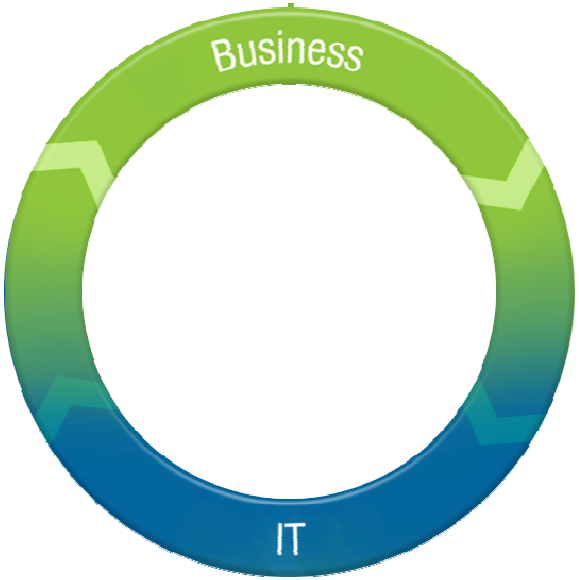
You experience the barriers of time, cost and risk today

Aligning IT and business goals

Business Goals

Grow top and bottom line by:

- Driving business innovation
- Make new markets
- Respond to competitive threats
- Enhance the customer experience



IT Reality

Getting Up and Running

- 2-3 months to specify and procure
- 2-3 months to integrate, configure and deploy

Development Operations

- 3-6 months to go from development to production

Ongoing Effort

- 1-3 months to troubleshoot and tune
- Ongoing effort and downtime to maintain, scale and upgrade

Typical Results:

- 34% of new IT projects (US) deploy late
- 55% experience application downtime for major infrastructure upgrades once deployed

From a commissioned study conducted by Forrester Consulting on behalf of IBM

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Only 1 in 5 can allocate more than half their IT budget to innovation

Least efficient data centers

Use of new technology:

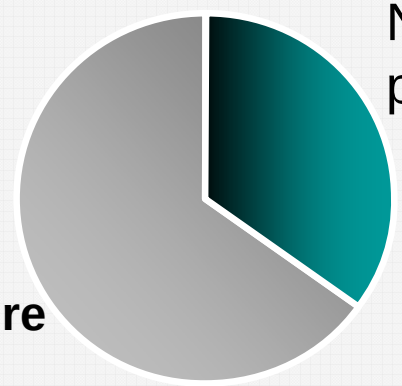
43% first and fast technology adoption

1% move virtual machines to meet desired outcomes

21% use storage virtualization

3% use a storage service catalog (tiered storage)

Results:



New projects

35%

Maintaining existing infrastructure

65%

Most efficient data centers

Use of new technology:

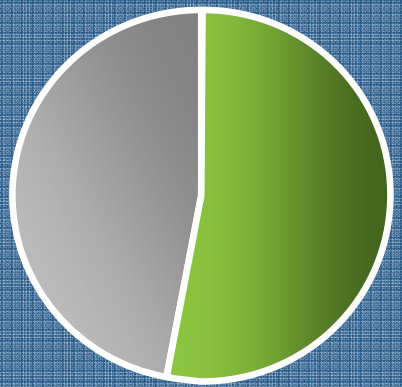
86% first and fast technology adoption

58% move virtual machines to meet desired outcomes

93% use storage virtualization

87% use a storage service catalog (tiered storage)

Results



New projects

53%

Maintaining existing infrastructure

47%

Source: 2012 IBM Data Center Study: www.ibm.com/data-center/study (http://www.ibm.com/data-center/study)

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Clients have tried various approaches to close the gap

	Client-tuned Systems	Appliances	Cloud
Benefits	**Flexibility Control**	**Simplicity Rapid Deployment**	**Agility Elasticity**
Challenges	**Time and Expense Required**	**Single Purpose**	**Shared Dependence**

What if you could have the best of all three?

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Building custom systems is not sustainable

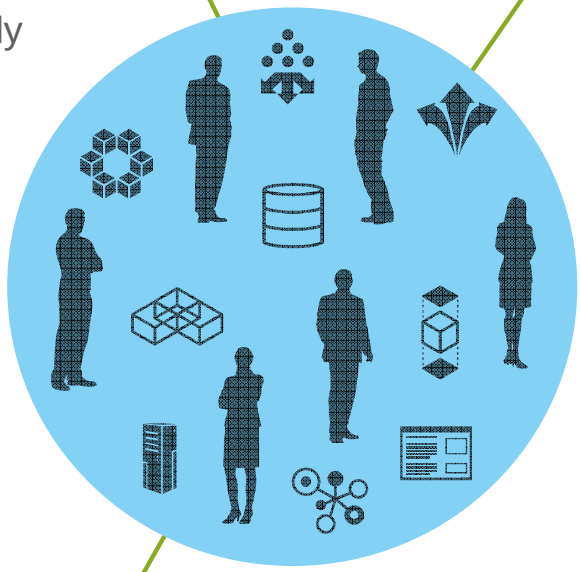
Up & Running

Specify/Design
Takes 30 days for an IT infrastructure system

Procure
Software & hardware ordered separately taking 5-20 days

Integrate
Components arrive as “bag of parts” – requiring optimization

Deploy
Can take weeks to months



Ongoing Effort

Customize/Tune
Meeting SLAs requires customization and ongoing tuning

Scale
Lack of dynamic elasticity results in cumbersome re-allocation of resources

Manage
Managing and monitoring with multiple tools is time consuming

Maintain
Separate fixes require separate testing

Upgrade
Months to plan, procure and test; days of downtime

Development Operations

Provision
Takes 30-60 days for a development or test environment

Configure
Modified and non-standard Dev/Test/Production configurations cause errors and delay production deployments by weeks

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Cloud computing is delivering value today

- **Cloud is:**
  - *A new consumption and delivery model*
- **Cloud addresses:**
  - *Cost reduction*
  - *Scale*
  - *Utilization*
  - *Self-service*
  - *IT agility, flexibility and delivery of value*
- Cloud represents:
  - *The industrialization of delivery for IT supported services*
- **Cloud includes:**
  - *Deployment models: public, private, hybrid*
  - *Delivery models: Infrastructure as a Service (IaaS), Platform as a Service (PaaS), Software as a Service (SaaS) and Business Process as a Service*
  - *Focus on the End user – self service delivery*

IBM and clients are seeing benefits from cloud computing

Test provisioning	**Weeks**	**Minutes**
Change management	**Months**	**Days/hours**
Release management	**Weeks**	**Minutes**
Service access	**Administered**	**Self-service**
Standardization	**Complex**	**Reuse/share**
Metering/billing	**Fixed cost**	**Variable cost**
Server/storage utilization	**10–20%**	**70–90%**
Payback period	**Years**	**Months**

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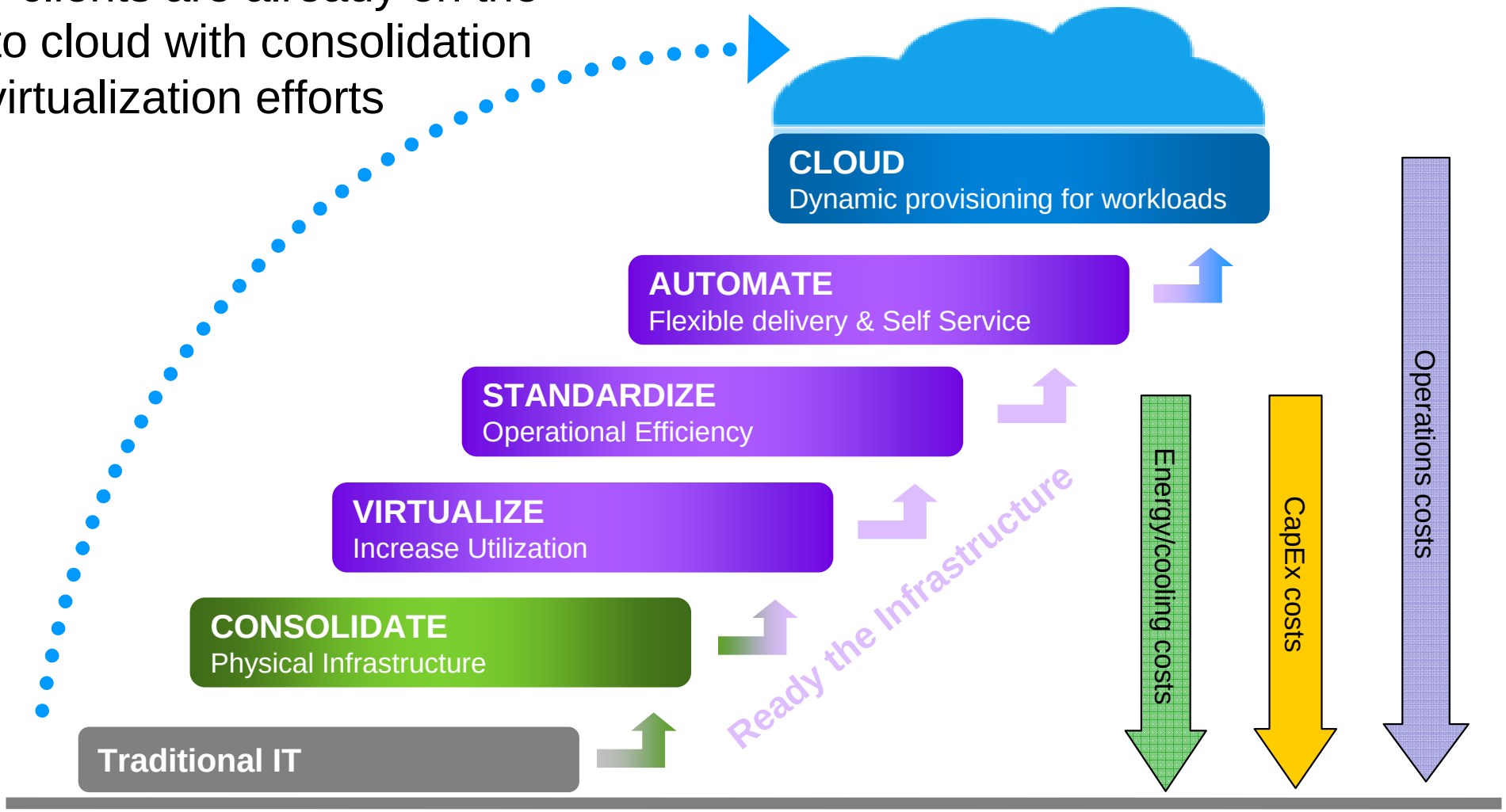
Evolution

Many clients are already on the way to cloud with consolidation and virtualization efforts



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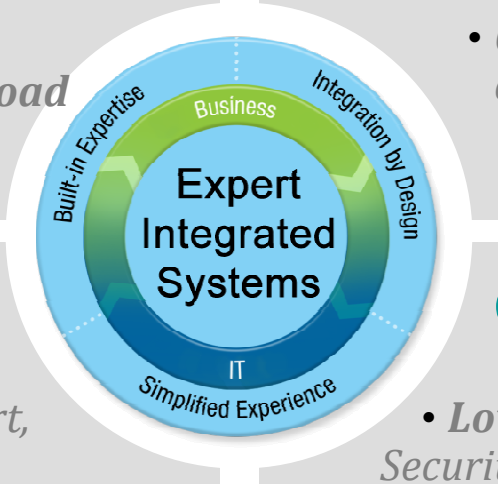
What does that mean for you?

Agility

- ***Months to hours**, Time for deployment of new application projects dramatically decreases.*
- ***Accelerate the industrial capabilities** wide and open ecosystem*
- ***Flexible compatibility to the workload** Without re-purchasing*

Efficiency

- ***Effective datacenter usage**.*
- ***Improve the maintenance lifecycle**, without any outages.*
- ***Cost effective**, switch the traditional IT approach to applicable IT costs.*



Simplicity

- ***Time saving,** from delivery to support, test and publishing*
- ***Stay away from delays***
- ***Fast and simple protection,** integrated system renewals*

Control

- ***Low risk and cost with otomation** Security and flexibility brings a smooth scalability*
- ***Maximum flexibility** with open standarts and architectures.*
- ***Smart Cloud Computing***

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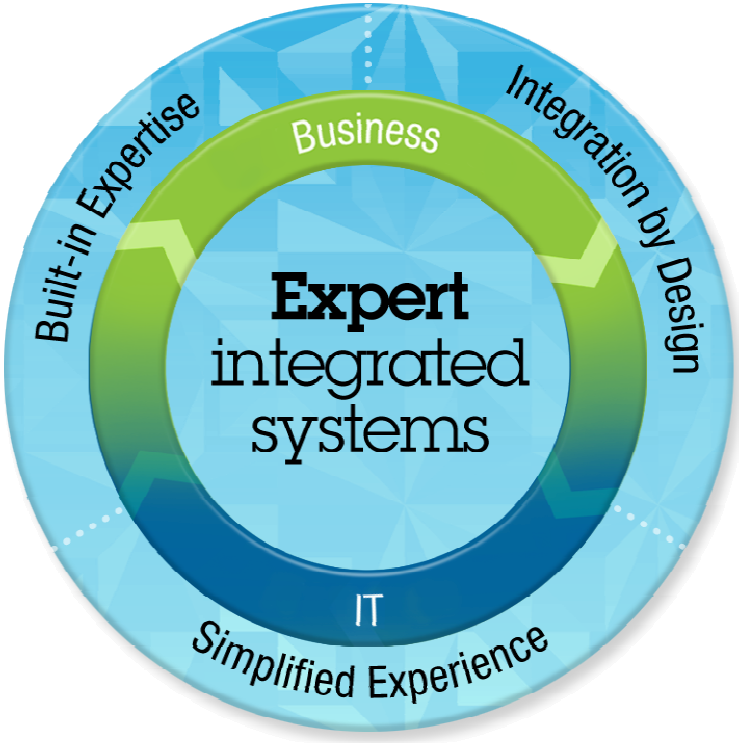
The time has come for a new breed of systems

Systems with integrated expertise and built for cloud

Built-in Expertise

Capturing and automating what experts do – from the infrastructure patterns to the application patterns



Integration by Design

Deeply integrating and tuning hardware and software – in a ready-to-go workload optimized system

Simplified Experience

Making every part of the IT lifecycle easier - *with integrated management of the entire system and a broad open ecosystem of optimized solutions*

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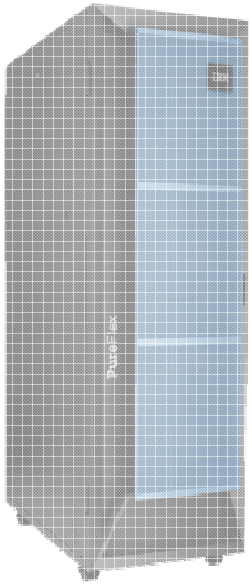
Announcing the First Two Members of the **IBM PureSystems Family**

PureFlex

Infrastructure System:
Expert at sensing and anticipating resource needs to optimize your infrastructure



PureApplication

Platform System:
Expert at optimally deploying and running applications for rapid time-to-value

Built-in expertise ▪ Integration by design ▪ Simplified experience

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IBM PureApplication System integration by design

Optimizes the complete solution stack:

- All hardware and software components factory integrated and optimized
- Virtualized across the stack for efficiency
- Unified management, monitoring & maintenance
- Integrated and elastic application and data runtimes
- Application patterns allocate system and application resources for optimal performance, security and reliability

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IBM PureApplication System

A Simple, Efficient, Flexible, Virtualized Application Platform

Complete, Ready-to-Go Systems

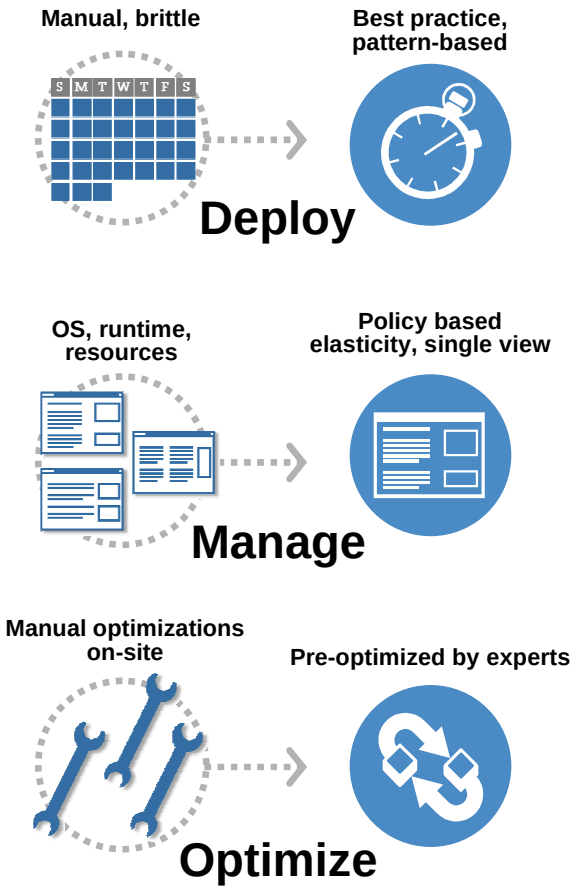
- Pre-integrated, up and running in <4 hours
- Pre-optimized for enterprise application workloads

Simplify Ongoing Tasks

- Single point of platform and application management
- Repeatable self service application provisioning

Built for Cloud

- “Platform as a Service”
- Elastic application runtimes



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IBM PureApplication System
Combining virtualized workloads with scalable infrastructure

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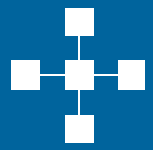
Examples of IBM PureApplication System use cases

Initiative	Use Case EXAMPLE	IBM PureApplication System Value
 Consolidate	**Consolidate 100s of applications on single system**	Single system supports 100s of web application workloads to drive **90% utilization for optimal resource efficiency.**
Optimize	**Upgrade and optimize current web application**	Manage, tune, and upgrade with no downtime your platform resources via a single management console to drive **55% reduction in cost and required management time and 98% reduction in unplanned outages.**
Innovate	**Launch self-service applications efficiently**	Web application deployment pattern of expertise can yield up to **100X faster deployment with reduced risk**
Accelerate Cloud	**Deliver IT services**	Deeply integrated Cloud deployment and application infrastructure and server virtualization can **reduce time to provision from 45 days to minutes**

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IBM PureApplication System configurations

Configuration 1	Configuration 2	Configuration 3	Configuration 4
6 Nodes	12 Nodes	24 Nodes	38 Nodes
96 Cores	192 Cores	384 Cores	608 Cores
1.5 TB Ram	3.1 TB Ram	6.1 TB Ram	9.7 TB Ram

+ 6.4 TB SSD storage
+ 48 TB HDD storage
+ Application Services entitlement

Upgrade to larger systems ***without taking an outage***!

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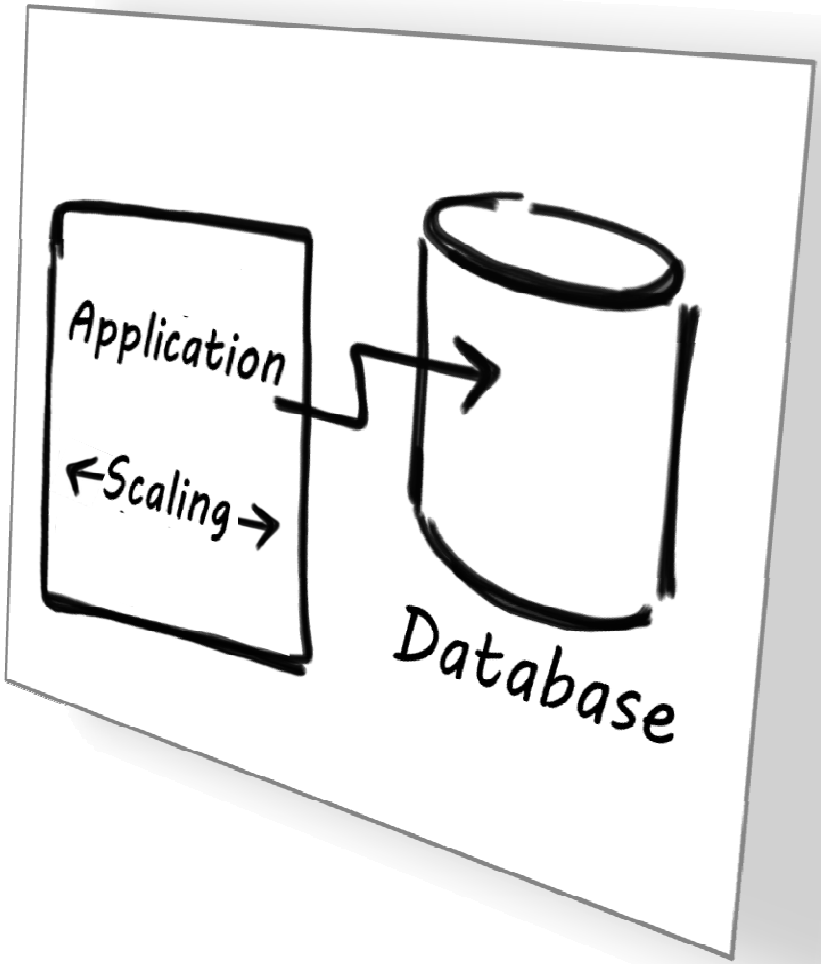
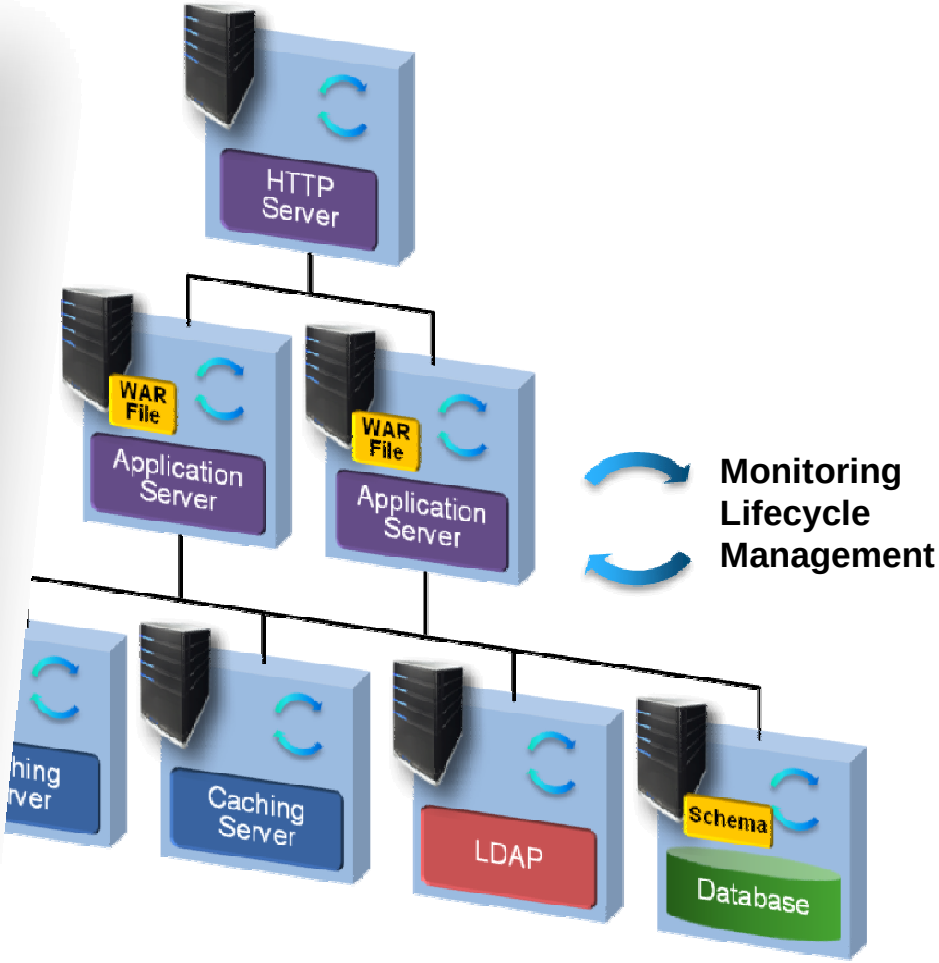
What the business wants…



What's required…



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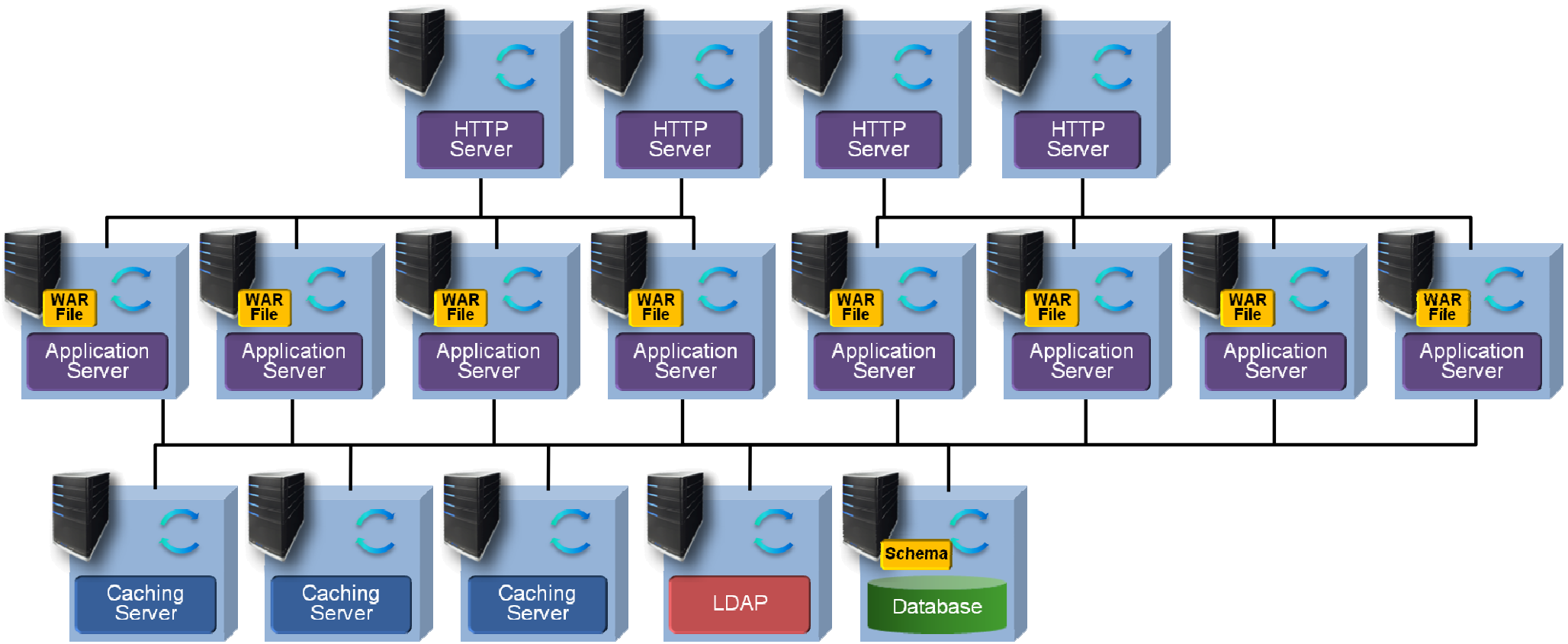
What will be needed tomorrow…



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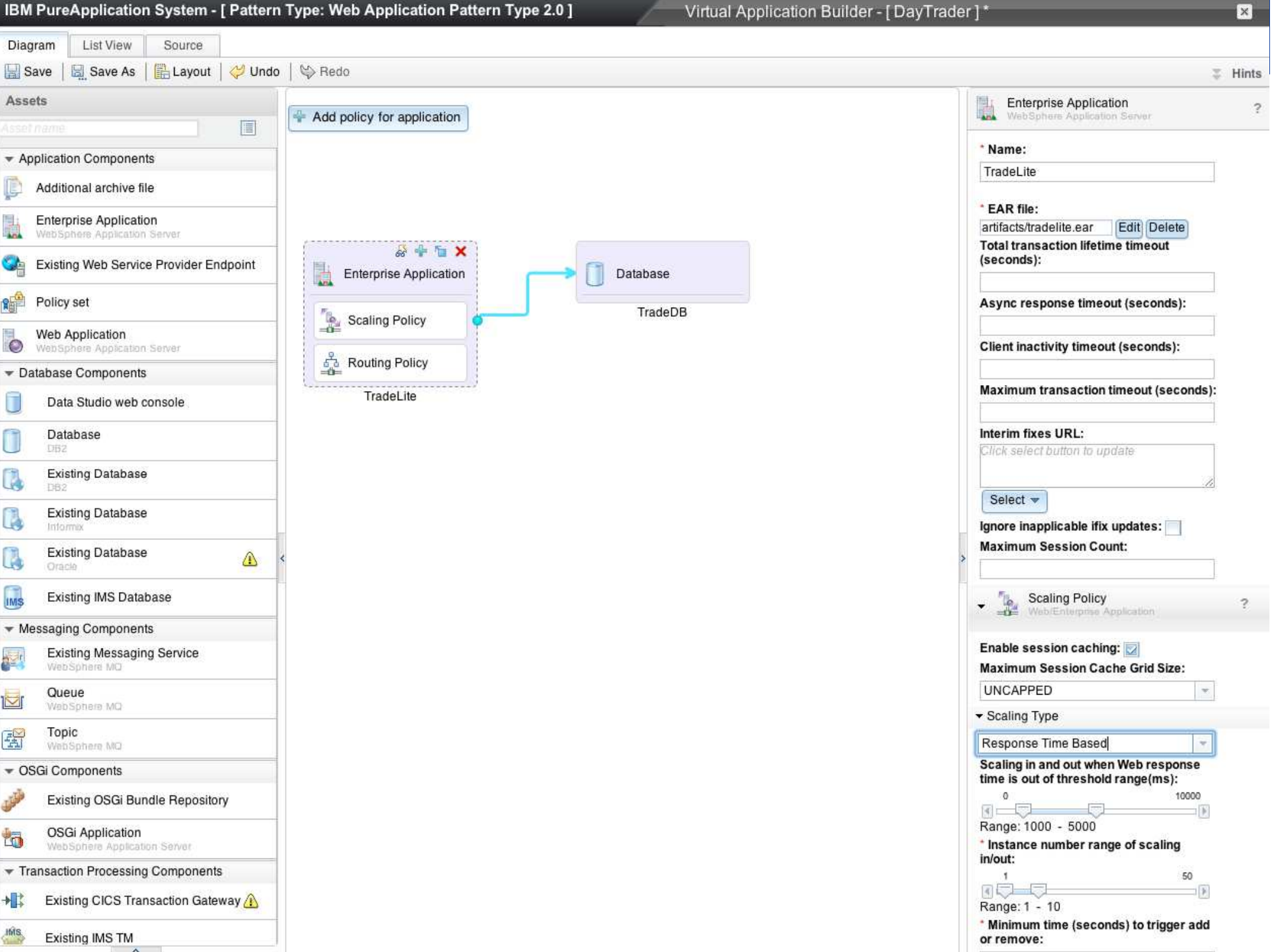
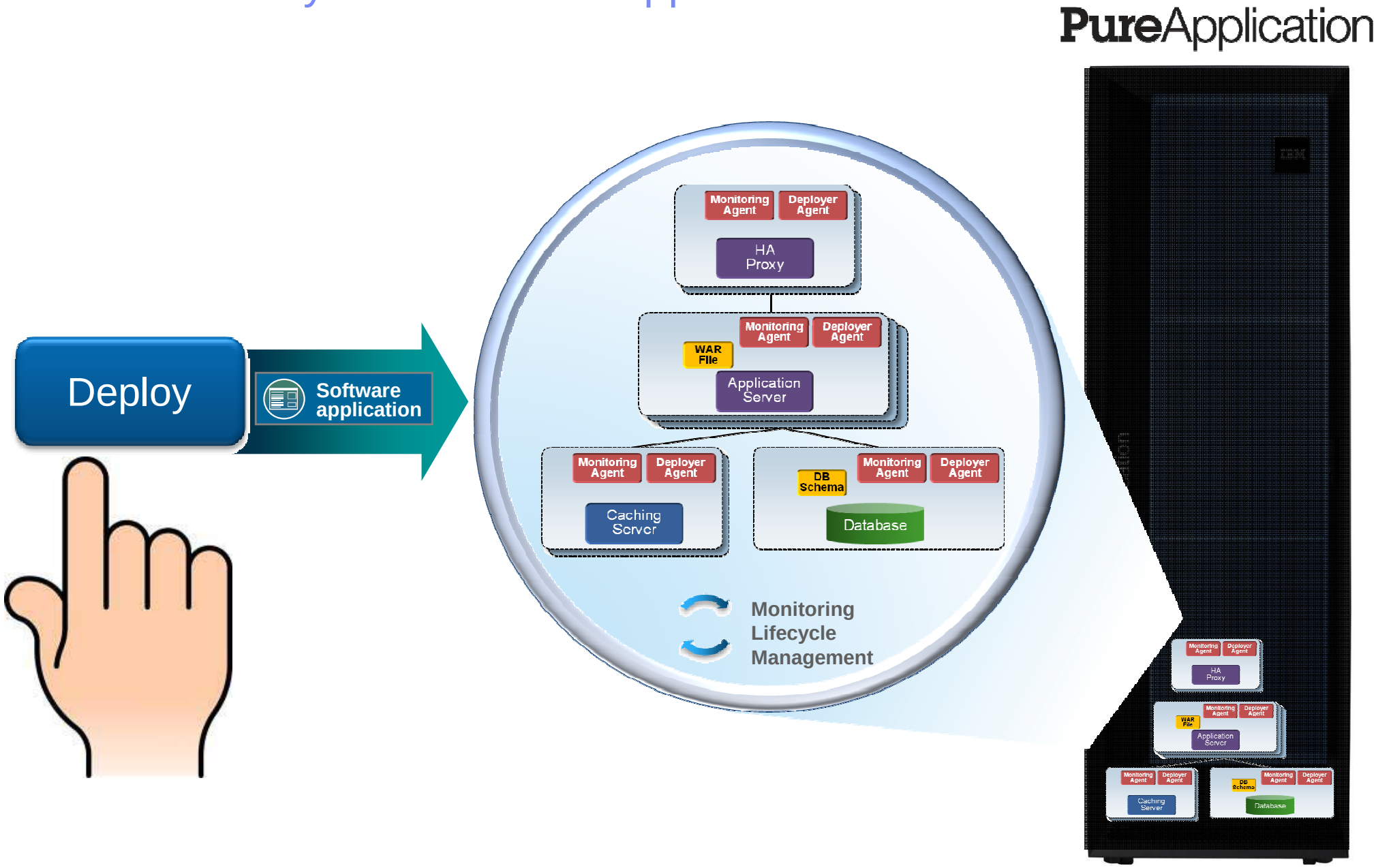

IBM PureApplication System - [Pattern Type: Web Application Pattern Type 2.0]
Virtual Application Builder - [DayTrader] *
Diagram
List View
Source
Save
Save As
Layout
Undo
Redo
Hints
Assets
Application Components
Additional archive file
Enterprise Application
WebSphere Application Server
Existing Web Service Provider Endpoint
Policy set
Web Application
WebSphere Application Server
Database Components
Data Studio web console
Database
DB2
Existing Database
DB2
Existing Database
Informix
Existing Database
Oracle
Existing IMS Database
Messaging Components
Existing Messaging Service
WebSphere MQ
Queue
WebSphere MQ
Topic
WebSphere MQ
OSGi Components
Existing OSGi Bundle Repository
OSGi Application
WebSphere Application Server
Transaction Processing Components
Existing CICS Transaction Gateway
Existing IMS TM
Add policy for application
Enterprise Application
Scaling Policy
Routing Policy
TradeLite
Database
TradeDB
Enterprise Application
WebSphere Application Server
* Name:
TradeLite
* EAR file:
artifacts/tradelite.ear
Edit
Delete
Total transaction lifetime timeout (seconds):
Async response timeout (seconds):
Client inactivity timeout (seconds):
Maximum transaction timeout (seconds):
Interim fixes URL:
Click select button to update
Select
Ignore inapplicable ifix updates:
Maximum Session Count:
Scaling Policy
Web/Enterprise Application
Enable session caching:
Maximum Session Cache Grid Size:
UNCAPPED
Scaling Type
Response Time Based
Scaling in and out when Web response time is out of threshold range(ms):
0
10000
Range: 1000 - 5000
* Instance number range of scaling in/out:
1
50
Range: 1 - 10
* Minimum time (seconds) to trigger add or remove:

Initiates a fully scalable Web Application



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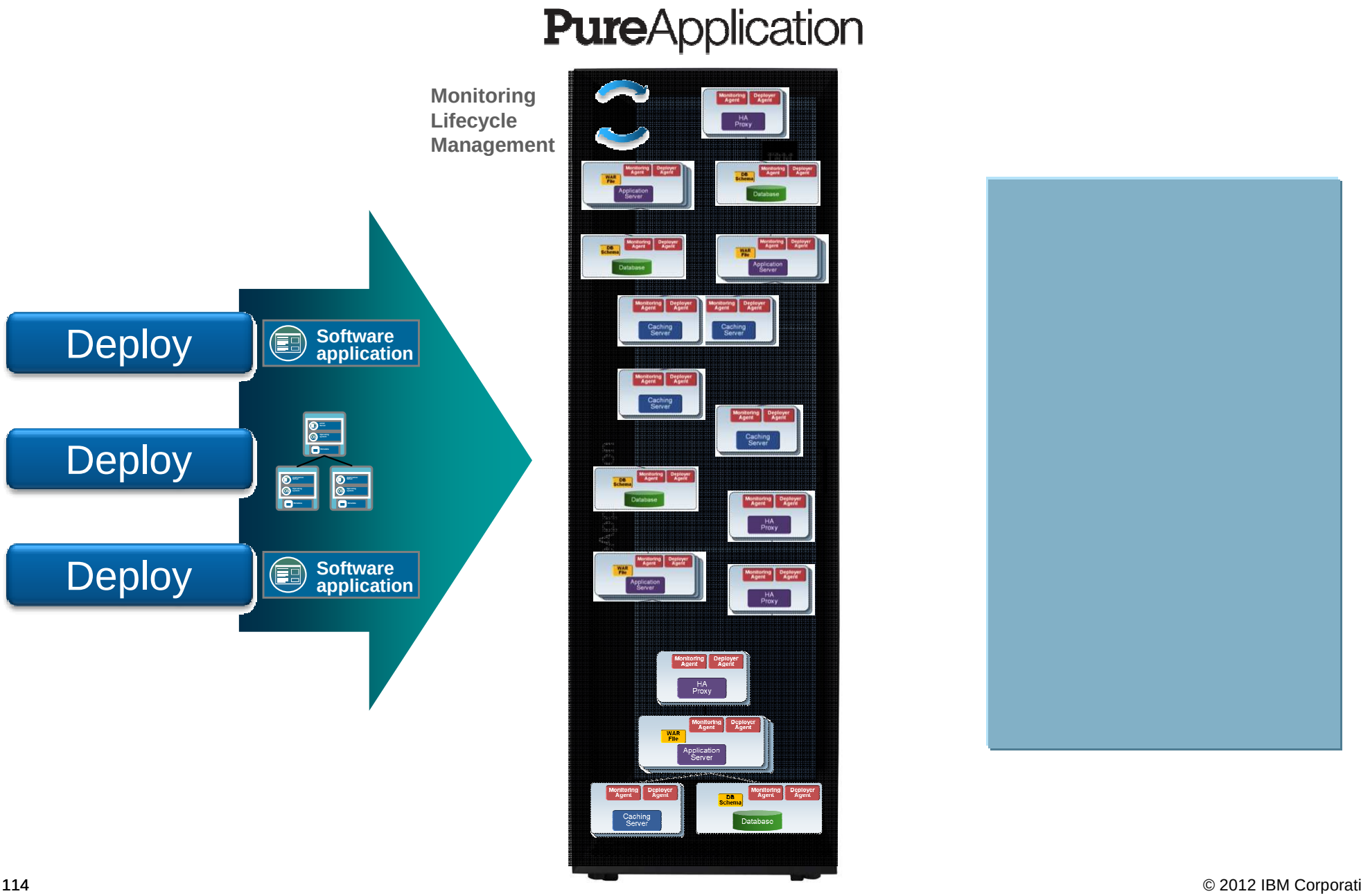
Continuous Application Level Monitoring and Management



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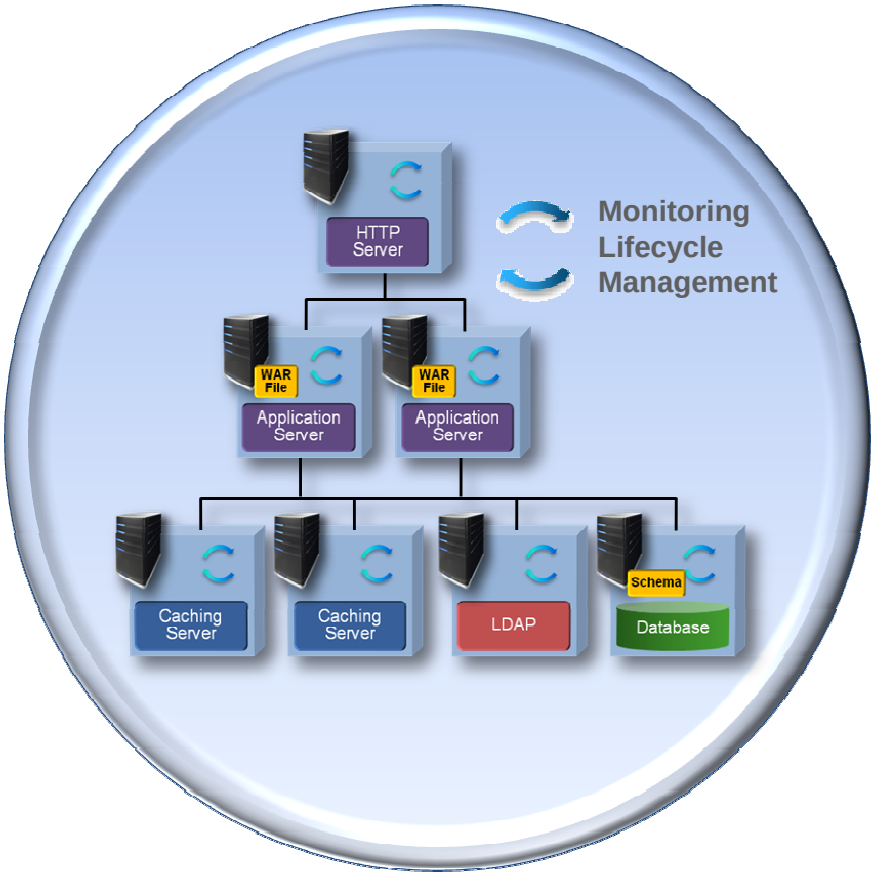
Patterns of Expertise: Proven best practices and expertise for complex tasks learned from decades of client and partner engagements that are captured, lab tested and optimized ***into a deployable form***

What is a Pattern?

- The pre-defined architecture of an application
- For each component of the application (i.e. database, web server, etc)
  - Pre-installation on an operating system
  - Pre-integration across components
  - Pre-configured & tuned
  - Pre-configured Monitoring
  - Pre-configured Security
  - Lifecycle Management
- In a **deployable form**, resulting in **repeatable deployment** with **full lifecycle management**
- **Delivering** superior results:
  - **Agility:** Faster time-to-value
  - **Efficiency:** Reduced costs and resources
  - **Simplicity:** Simpler skills requirements
  - **Control:** Lower risk and errors



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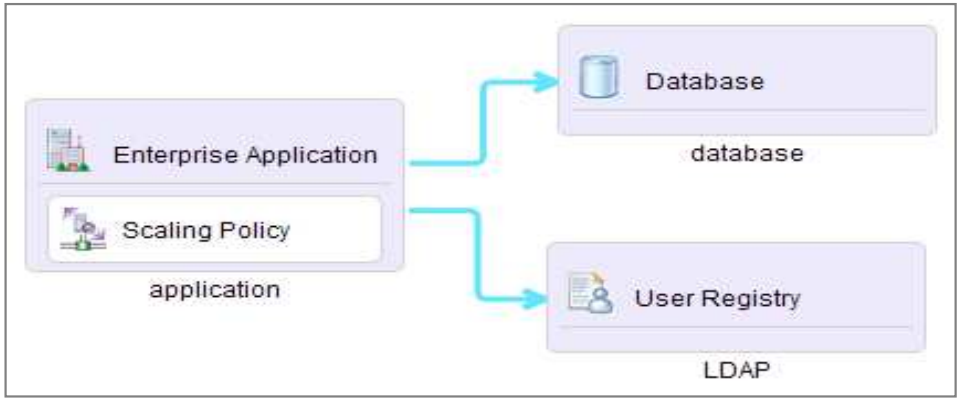
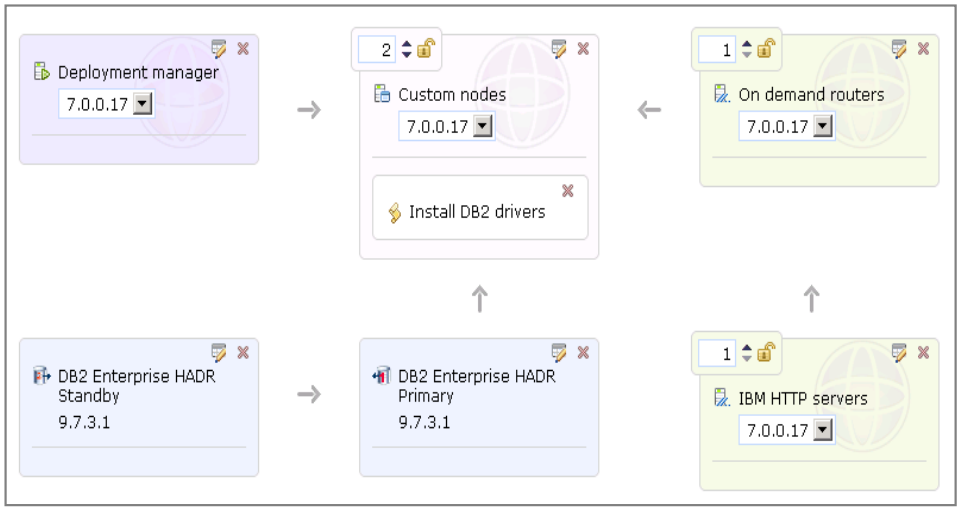
Deployment Model - Concepts At A Glance

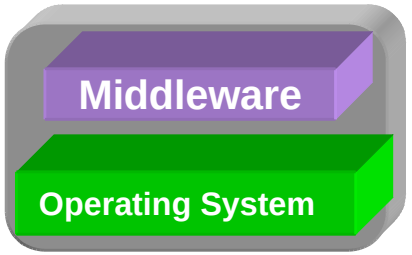
- Virtual Applications
  - Application Awareness
  - Highly standardized and automated
  - Integrated lifecycle management

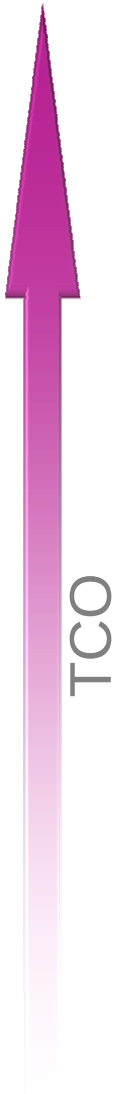
- Virtual Systems
  - Topology Awareness
  - Ability to create custom patterns
  - Traditional administration model

- Virtual Images
  - Basic management/runtime services
  - Complete control over contents









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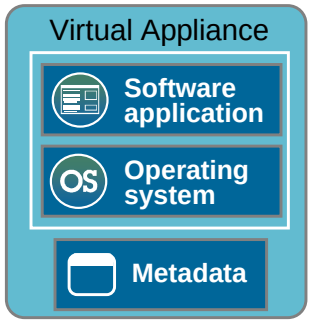
IBM PureApplication Pattern Types

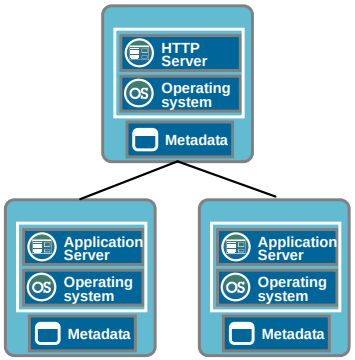


Virtual Appliances

- Standard software installation and configuration on OS
- Traditional administration and management model
- Infrastructure driven elasticity

Virtual Appliances

Standard TCO
existing applications



Virtual System Patterns

- Automated deployment of middleware topology patterns
- Traditional administration and management model
- Application and infrastructure driven elasticity
- Extend pattern by creating custom image

Virtual System Patterns

Improved TCO
virtualized applications

Virtual Application Patterns

- Highly automated deployments using expert patterns
- Business policy driven elasticity
- Built for the cloud environment
- Leverages elastic workload management services

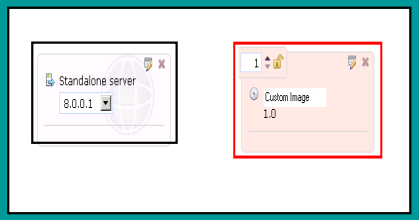
Virtual Application Patterns

Best TCO
cloud applications

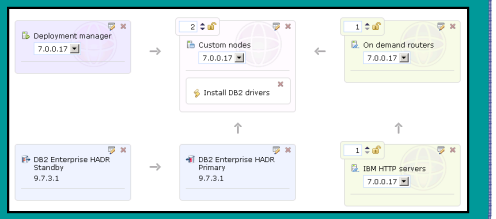
PureApplication Sistem Deployment Models

Flexibility → **Labor Saving**

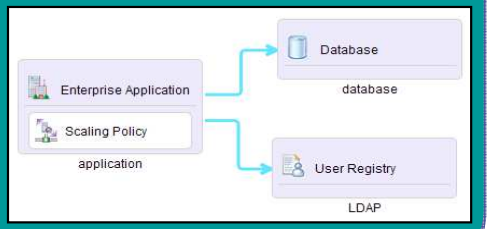
Custom Images



Virtual Systems



Virtual Applications



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IBM PureApplication System Full Rack High Performance Model

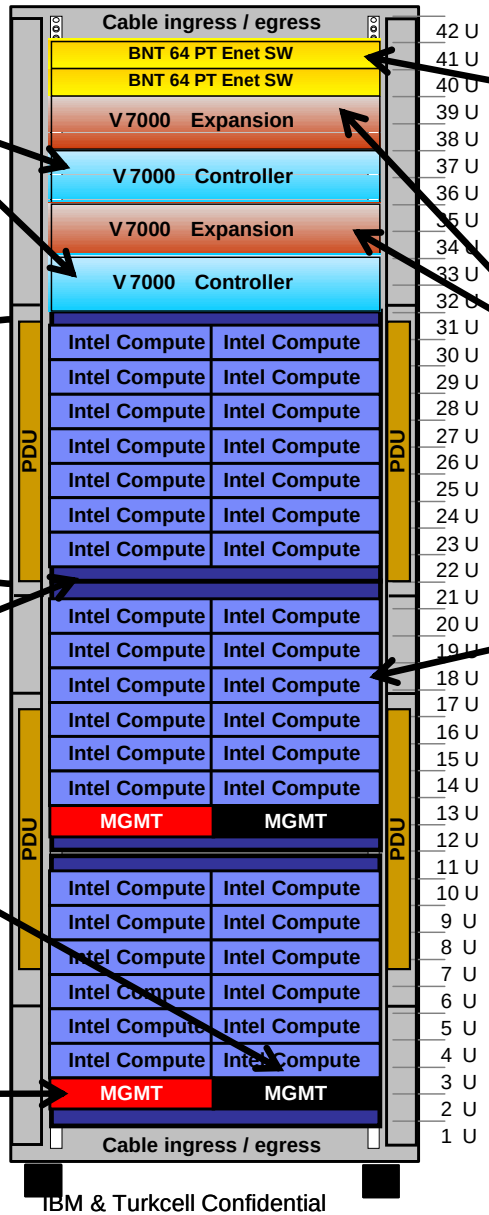
Storage Controller
IBM Storwize V7000 Disk System
4 x 400 GB SAS SSD per enclosure
20 x 600 GB SAS HDD per enclosure

New Chassis
Common Management Module
2x 10Gb Ethernet Switch
2x 16 Gb FC Switch

Service Laptop

PureApplication System Management Node
IBM Workload Deployer

VM Management Node



Top of Rack Switches
BLADE Network Technologies Top of Rack Switches
Customer Data Center & Rack-to-rack communications

V7000 Disk Expansion
Per enclosure:
4 x 400 GB SAS SSD
20 x 600 GB SAS HDD

Intel Compute
2.6 GHz 8C Intel processor, 110 W
256 KB L2 per core
4 MB eDRAM L3 per core
2x 4 Port 10 GbE
2x 2 Port 8 Gb/s FC

Overall	
Power	~30 KW
Cores	608 Cores
Memory	9.7 TB
SSD	6.4 TB (unformatted)
Storage	48.0 TB (unformatted)

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		PureApplication System	"Integrated" Alternatives
Time to Value	Ordering	Single part number for entire system	Starting point "foundations" require customization
	Delivery (hardware)	Racked and cabled at factory	Some require on-site racking and cabling
	Delivery (software)	Pre-installed, complete system management tool	Some installed on-site, all require separate infrastructure and cloud management tools
	Installation	Ready to deploy applications within four hours	Typical on-site integration, requires weeks or months
	Upgrading	Single part number, no downtime required	Custom orders, downtime may be required
	Patterns	Deploys IBM, ISV, and custom patterns to improve automation, maintenance, and lifecycle management	Limited or no pattern support
Cost of Ownership	Hardware mgmt	Integrated hardware management and monitoring	Separate hardware management tools
	Cloud mgmt	Integrated cloud management and monitoring	Separate cloud management tools
	Application mgmt	Integrated application management and monitoring	No application management included
	Support	Single support organization for all components, covered by single contract	Separate support organizations or companies based on component
	Patch delivery	Single, bundled system fixpack for all hardware components including integration testing	Separate patches for all hardware components with no integration testing
	Patch installation	Automatically sequenced to require no downtime	Requires manual sequencing for each patch
	Virtualization	Fully virtualized with deep VM awareness	Either basic VM monitoring, or no virtualization at all
	Licensing	Includes hypervisors, operating systems, provisioning, middleware (WAS, DB2), monitoring	Hypervisors, operating systems, provisioning, middleware, monitoring all separately licensed
	License tracking	Automatic license tracking for easier management	No license tracking included
	Dynamic scale	Responds automatically to changes in demand	No dynamic scaling capabilities included
	Open standards	Open platform for extensibility using standards-based tools and components	Some introduce risk of vendor "lock-in"

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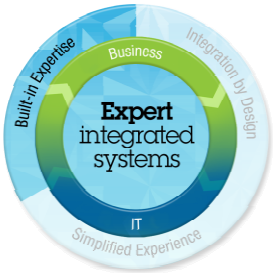
IBM PureSystems extensible with “patterns of expertise”

Including built-in cloud capabilities



	IBM PureFlex System	IBM PureApplication System	
Application Patterns and Images Available patterns images from IBM and Partners	Images available for client tuning	**100+ ISV business applications** **Business intelligence** **Business process management** **Web experience** ***More to come in 2012…***	***Available through PureSystems Centre***
Platform Patterns Expertise across the middleware and infrastructure	Images available for client tuning	**Web application deployment** **Database deployment**	***Built-in with flexibility***
	Cloud platform management		
Infrastructure Patterns Expertise across the compute resources	**Provisioning** **Storage optimization** **Scalability** **Upgradability**		

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Pre-Entitled Software Shipped with PureApplication System

- Clients have entitlement to run the following S/W on the full capacity of the System

- Virtual System (Hypervisor images)
  - IBM OS Image for Red Hat Systems 2.0.0.1 (includes Red Hat V6.2)
  - IBM WebSphere Application Server HV v7.0.0.23 – includes Intelligent Management Pack
  - IBM WebSphere Application Server HV v8.0.0.3 – includes Intelligent Management Pack
  - IBM WebSphere Application Server HV v8.5 – includes Intelligent Management Pack
  - DB2 V9.7-FP5, V10.1 Enterprise HV
  - Advanced Middleware Configuration HV 1.0 (for application onboarding) – same as Rational Automation Framework 3.0.0.3
- Virtual Application Patterns:
  - Application Pattern for Java Pattern v1.0.0.1
  - IBM Web Application Pattern 1.0.0.5 (based on WAS v7)
  - IBM Web Application Pattern 2 .0.0.2 (based on WAS v8)
  - IBM Transactional Database Pattern v1.1
  - IBM Data Mart Pattern v1.1.0.3
- Shares Services and Tools
  - Foundation Patten 2.0.0.3
  - Image Construction and Composition Tool 1.2

• Included in PureApplication System
• No upper limit on usage within the system
• Refer to Information Center for updated list

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Software

Pre-Entitled

Patterns

- Web Application
- Transactional Database
- DataMart
- Java Application

Images

- WAS 7
- WAS 8
- WAS 8.5
- DB2 9.7
- DB2 10
- RAFW 3.0.0.3

GA ***Separately Purchased*** **2H12**

Patterns

- Business Process Management Pattern
- Portal Pattern
- Web Content Management Pattern
- Messaging Extension for Web App Pattern
- SLA Management for SOA Governance Pattern

- Business Intelligence Pattern
- Decision Management Pattern
- IBM Connections Pattern
- Integration Pattern (C&I)
- InfoSphere MDM Pattern
- Mobile Pattern
- InfoSphere Infoserver Pattern*
- WebSphere Commerce Pattern*
- Predictive Enterprise Pattern*
- CastIron Pattern*
- Maximo Pattern*

Images

- BPM Std and Advanced Editions
- Informix
- Message Broker 8.0
- MQ 7.0.1
- WebSphere Portal 7.0
- Web Content Management 7.0

- InfoSphere Information Server
- IBM Connections
- WODM
- InfoSphere MDM*
- WTX w/Launcher*
- WebSphere Commerce*
- CastIron*

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Extensibility From The Broadest Ecosystem Is Made Easy

New IBM PureSystems Centre:

- Gain access to a broad community of IBM and certified partner expertise
- Download optimized, deployable application patterns from 100+ leading ISV partners
- Search by solution area, industry or system
- Download fixes and patches
- Access to developer community

Premier Business Partner

Ready For PureSystems

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