IBM BusinessConnect

Ključ do rešitev 2014

Misli prihodnost. Bodi sprememba.

360º View of the Customer in a Big Data World

Graham Cobb
IBM European Big Data Leader Banking and FM
Cobbgrah@uk.ibm.com

Ključ do rešitev 2014
Misli prihodnost. Bodi sprememba.

IBM BusinessConnect

A customer is a puzzle made up of many pieces

Contact Information
Name, address, employer, marital…

Business Context
Account number, customer type, purchase history, …

Social Media
Social network, affiliations, …

Legal/Financial Life
Property, credit rating, vehicles, …

Leisure
Hobbies, interests …

Professional Life
Employers, professional groups, certifications …

Every interaction requires someone to piece together parts of the puzzle

Information about your customers is dispersed, forcing your employees to extract it piece-by-piece

Ključ do rešitev 2014
Misli prihodnost. Bodi sprememba.

IBM BusinessConnect

The current state of customer management for many organisations

Limits cross-sell success for example and provides a poor customer experience

"I have an offer – let me find a customer to sell to."

Customer Needs and Segment Strategies
Mass Market | Mass Affluent | Small Business

- Deposits
- Card
- Mortgage
- Investments

Offer → Offer

Direct mail
BC
Agent, IVR
Online, email
ATM
Mobile, SMS
Chat

Relevance?
Awareness?
Value?
Understanding?
Clarity?

Customers Point-of-View

- You **do not know me** or understand my needs.

- You **ask me multiple times** about the same thing.

- Most of your suggestions are for products and services that seem irrelevant to me.

- I am **not offered solutions** based on **my multiple relationships.**

- When you recognize that I have a need, **you send me multiple offers** for different products – *it's confusing*.

…customer insight is limited to a sub-set of available data…

…limiting the relevance and timeliness of offers or services to customers for example…

Ključ do rešitev 2014
Misli prihodnost. Bodi sprememba.

IBM BusinessConnect

Big data embodies new data sources & characteristics adding to the complexity and the problem……..But!

Characteristics of Big Data

Volume

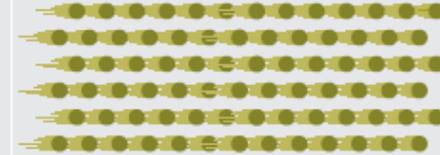Data at scale

Terabytes to petabytes of data

Variety

Data in many forms

Structured, unstructured, text, multimedia

Velocity

Data in motion

Analysis of streaming data to enable decisions within fractions of a second

Veracity

Data uncertainty

Managing the reliability and predictability of inherently imprecise data types

Source: IBM methodology

Ključ do rešitev 2014
Misli prihodnost. Bodi sprememba.

IBM BusinessConnect

Disruptive forces impact long standing business models AND create new opportunities

Pressure to do more with less

Shift of power to the consumer

Proliferation of big data

"Data is the new oil.
Data is just like crude.
It's valuable, but if unrefined
it cannot really be used."
– Clive Humby

"We have an economy based on a
resource that is not only renewable, but
self-generating. Running out is not a
problem, drowning in it is."
– John Naisbitt

Ključ do rešitev 2014
Misli prihodnost. Bodi sprememba.

IBM BusinessConnect

Improving the customer experience by better understanding behaviours and interactions drives almost half of all active big data efforts
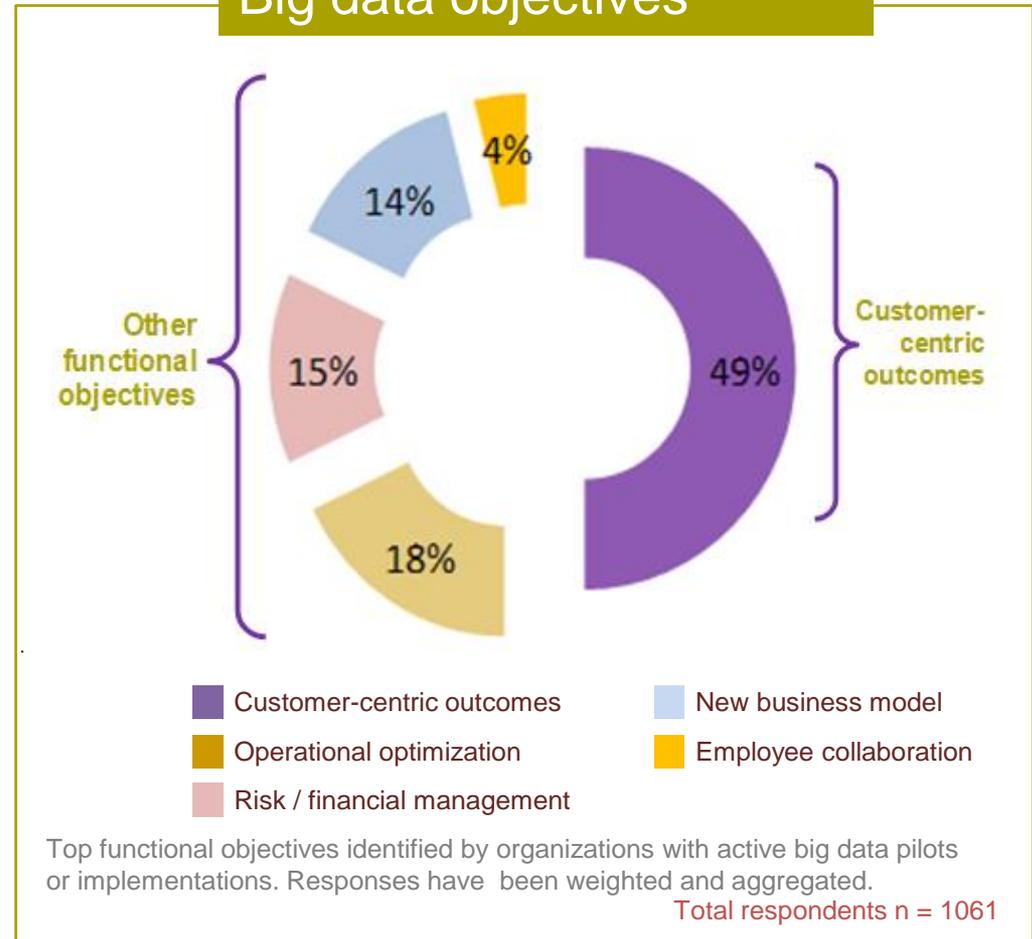
Customer-centric outcomes

- **Digital connections have enabled customers to be more vocal about expectations and outcomes**

- **Integrating data increases the ability to create a complete picture of today's 'empowered consumer'**

- **Understanding behavior patterns and preferences provides organizations with new ways to engage customers**

Other functional objectives

- **The ability to connect data and expand insights for internally focused efforts was significantly less prevalent in current activities**
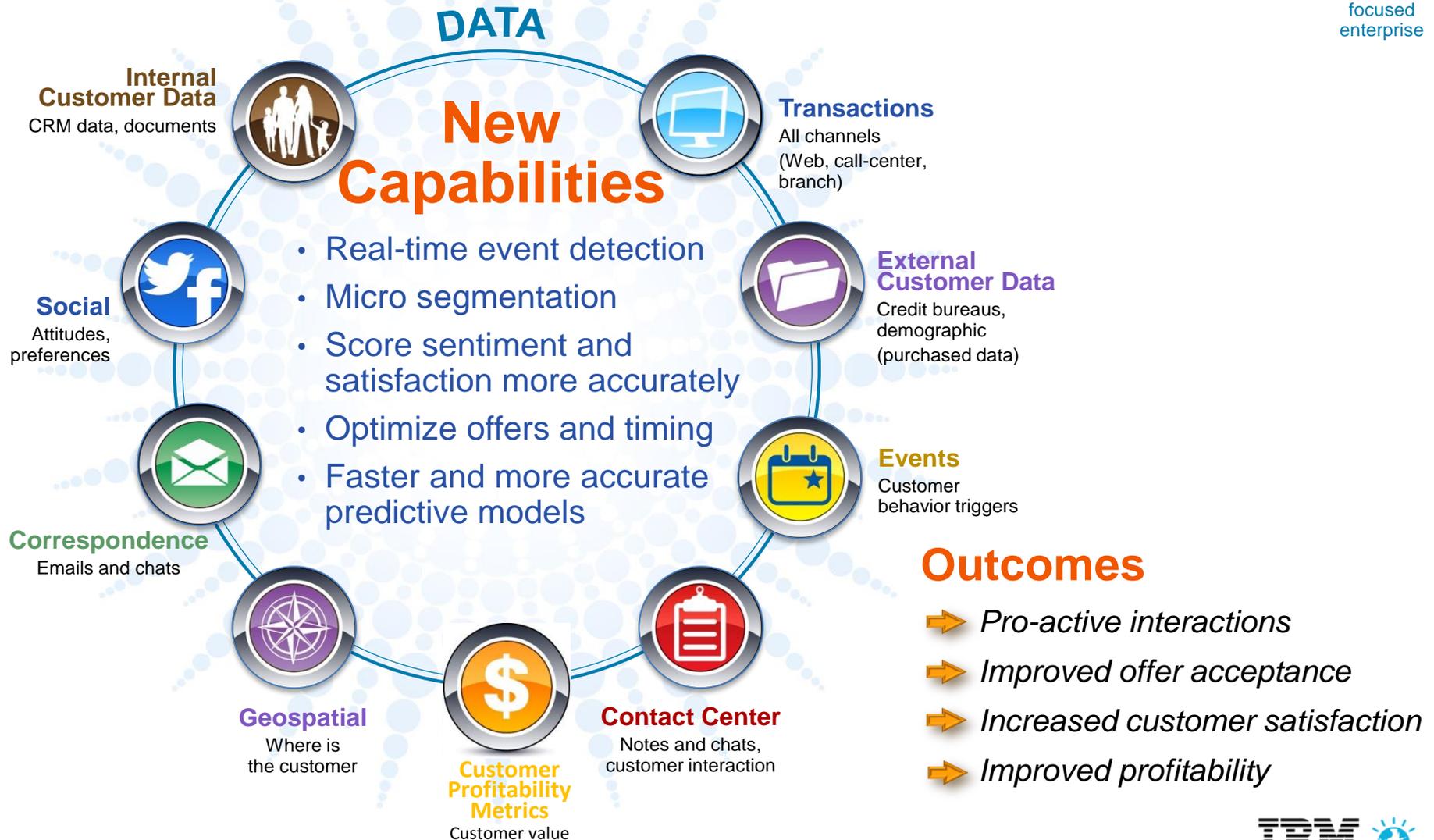
Big data objectives

Other functional objectives — 14%, 15%, 18%, 4%
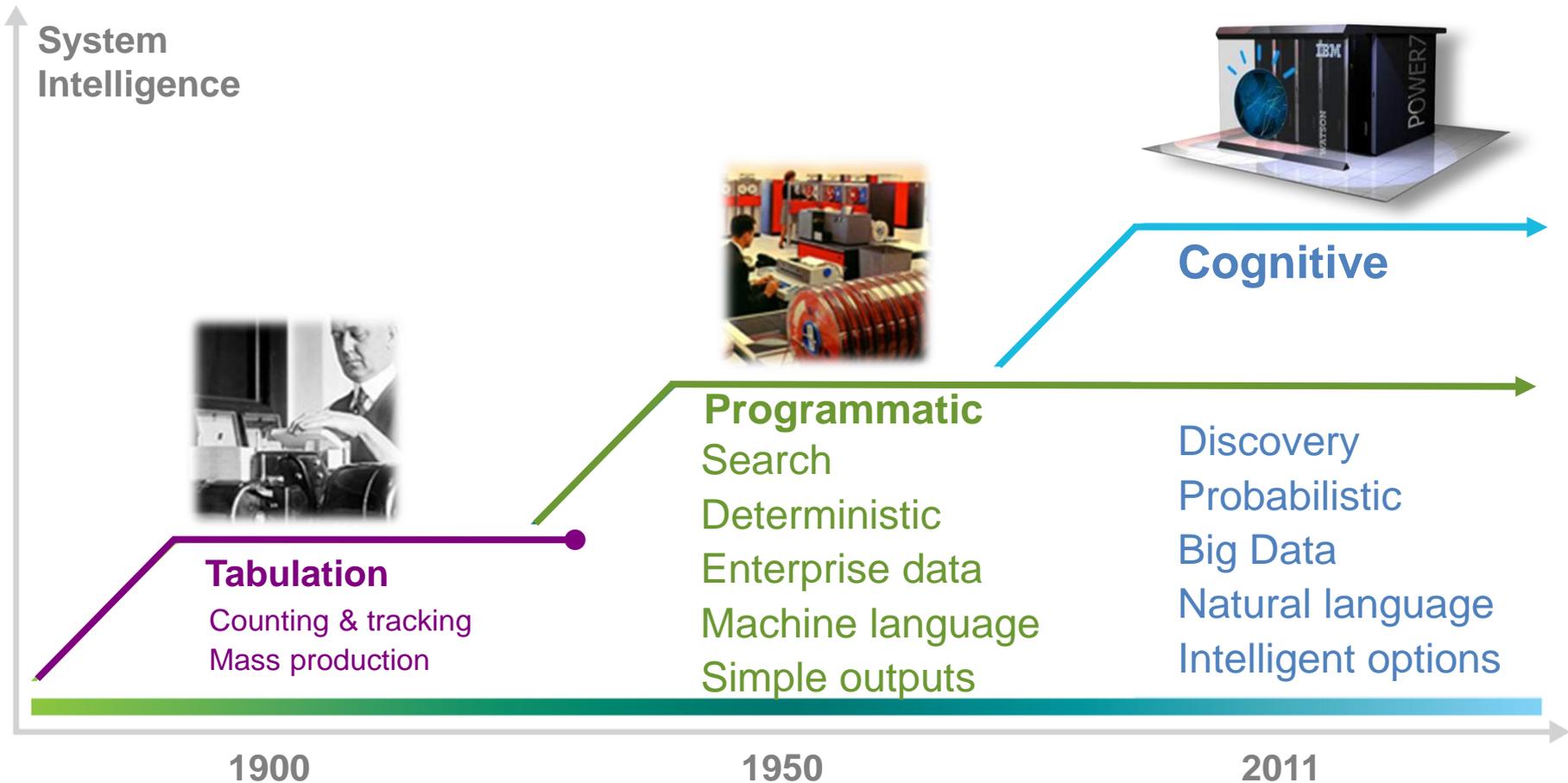
Customer-centric outcomes — 49%

- ■ Customer-centric outcomes
- ■ Operational optimization
- ■ Risk / financial management
- ■ New business model
- ■ Employee collaboration

Top functional objectives identified by organizations with active big data pilots or implementations. Responses have been weighted and aggregated.

Total respondents n = 1061

Ključ do rešitev 2014
Misli prihodnost. Bodi sprememba.

IBM BusinessConnect

Leveraging Big Data and Analytics at the point of engagement
TO IMPROVE THE CUSTOMER EXPERIENCE

Create a customer-focused enterprise

DATA

New Capabilities

Internal Customer Data
CRM data, documents

Transactions
All channels (Web, call-center, branch)

Social
Attitudes, preferences

External Customer Data
Credit bureaus, demographic (purchased data)

- Real-time event detection
- Micro segmentation
- Score sentiment and satisfaction more accurately
- Optimize offers and timing
- Faster and more accurate predictive models

Correspondence
Emails and chats

Events
Customer behavior triggers

Geospatial
Where is the customer

Customer Profitability Metrics
Customer value

Contact Center
Notes and chats, customer interaction

Outcomes

➡ *Pro-active interactions*

➡ *Improved offer acceptance*

➡ *Increased customer satisfaction*

➡ *Improved profitability*

IBM

Ključ do rešitev 2014
Misli prihodnost. Bodi sprememba.

IBM BusinessConnect

We have entered a new era of computing…

**System
Intelligence**

Cognitive

Programmatic
Search
Deterministic
Enterprise data
Machine language
Simple outputs

Discovery
Probabilistic
Big Data
Natural language
Intelligent options

Tabulation
Counting & tracking
Mass production

1900

1950

2011

. . .enabling new opportunities and outcomes

Ključ do rešitev 2014
Misli prihodnost. Bodi sprememba.

IBM BusinessConnect

IBM is taking a platform approach to Big Data

- Process any type of data

  – Structured, unstructured, in-motion, at-rest

- Built-for-purpose engines

  – Designed to handle different requirements

- Analyze data in motion

- Manage and govern data in the ecosystem

- Enterprise data integration

- Grow and evolve on current infrastructure

Solutions

Analytics and Decision Management

IBM Watson Foundation

Visualization & Discovery | Application Development | Systems Management

Accelerators

Hadoop System | Stream Computing | Data Warehouse

Information Integration & Governance

Big Data Infrastructure

Ključ do rešitev 2014
Misli prihodnost. Bodi sprememba.

IBM BusinessConnect
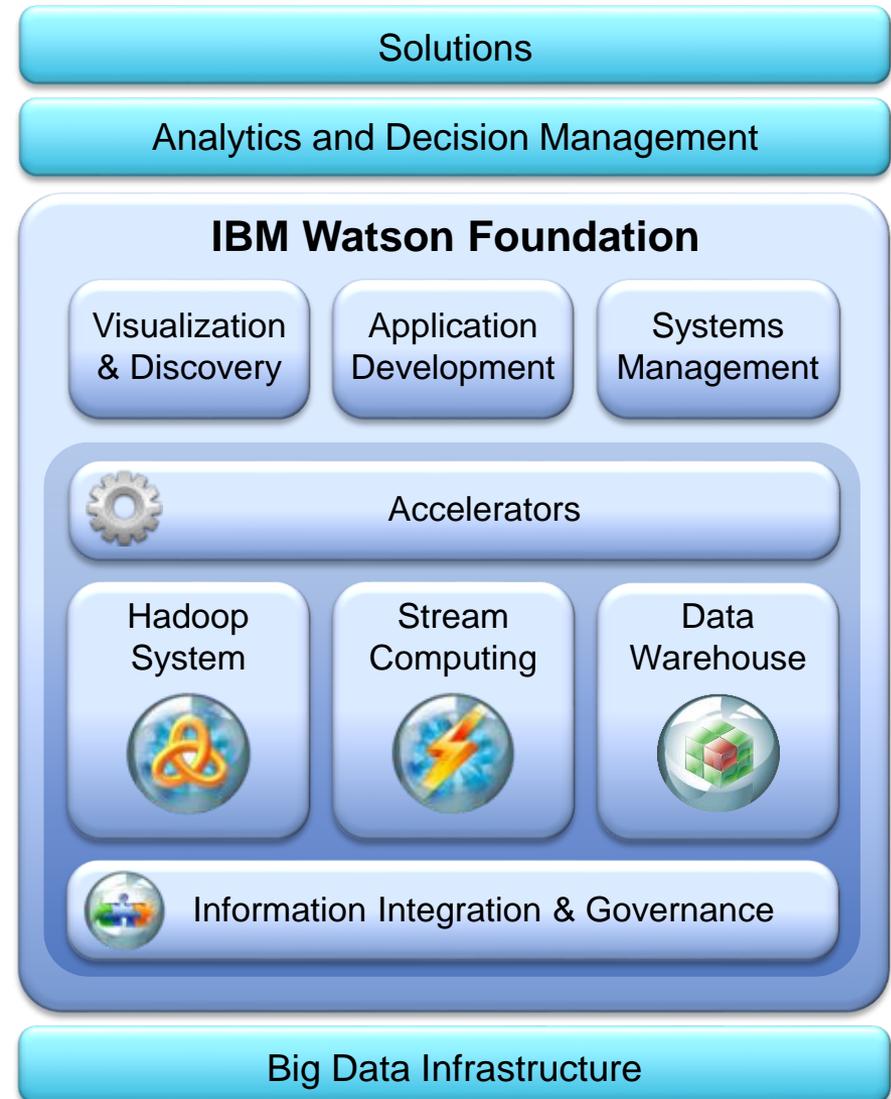
Data is the new oil….
But to strike gold you need to explore & mine first

External Content
(Twitter, News Feeds...)

Internal Content
(CRM, Warehouses, ERP, ECM...)

**20% Structured,
80% Semi-Structured,
Unstructured**

?

Silos
Security
Availability
SLAs
Infrastructure
Integration
Latency
Volume
Velocity
Veracity
Compliance

Getting started is crucial!
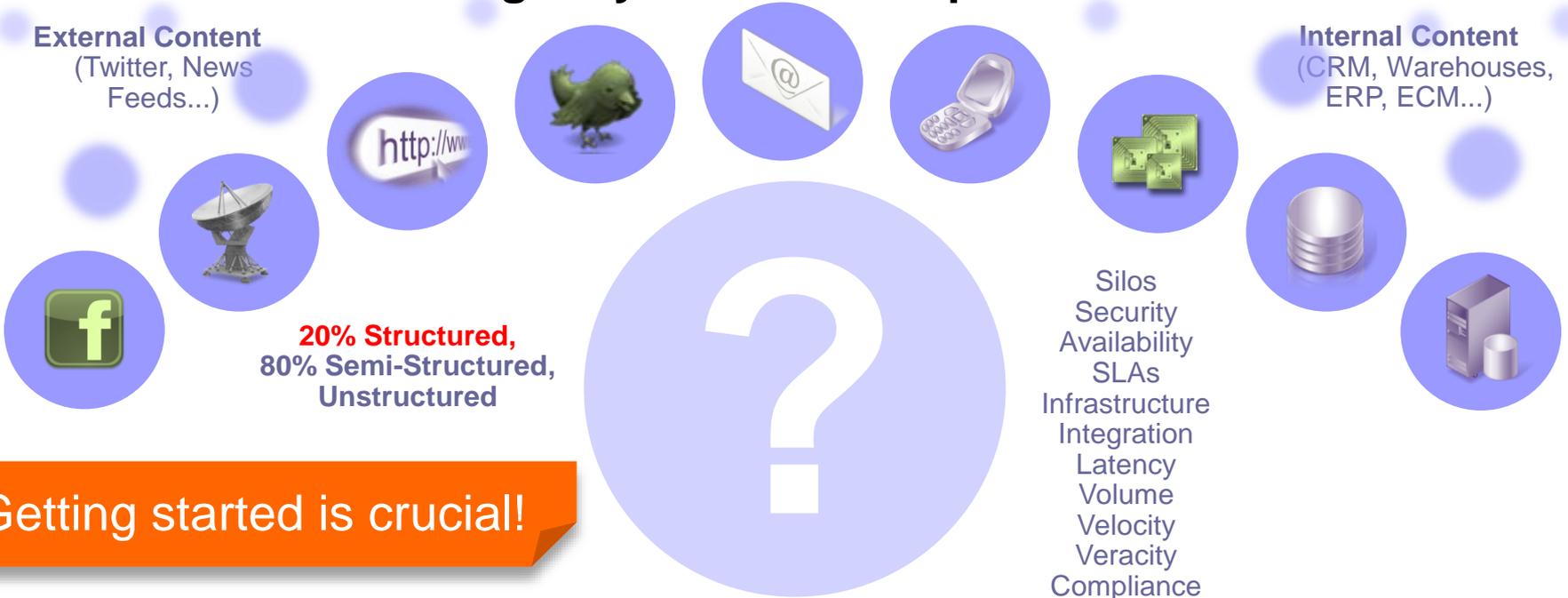
"I can't find the right answers fast enough to support my customers."

"I am monitoring all angles – yet I can't connect the dots."

"Innovation is falling short as I am unable to see the full research picture."

"I can't unlock the value in my data to drive economic value to my business."

"I don't know what I don't know – where is my business exposed?"

IBM

The challenge customers face in Big Data: Unlocking value of info via single UI in real-time

IBM Watson Explorer

Providing unified, real-time access and fusion of big data unlocks greater insight and ROI

- Analyzes structured & unstructured data—in place
- Unique positional indexing
- Unlimited scalability
- Advanced data asset navigation
- Pattern clustering

- Virtual documents
- Contextual intelligence
- Text analytics
- Secure data integration
- Query transformation
- Easy-to-deploy big data applications
- User-friendly customisable interface

Improve customer service & reduce call times

Create unified view of ALL information for real-time monitoring

Increase productivity & leverage past work increasing speed to market

Analyze customer analytics & data to unlock true customer value

Identify areas of information risk & ensure data compliance

Ključ do rešitev 2014
Misli prihodnost. Bodi sprememba.

IBM BusinessConnect

Primary Watson Explorer Usage Scenarios

Big Data Exploration Applications

Fast access (pull) of structured, unstructured, internal & external info for:

- Knowledge workers
- R&D professionals
- Executives
- General Workers
- General users

Enhanced 360º View Applications

Targeted information delivery (push) for a complete view of all key data facets (customer, product, partner, service etc) for:

- Customer service
- R&D
- Supply Chain

Watson Explorer Engine
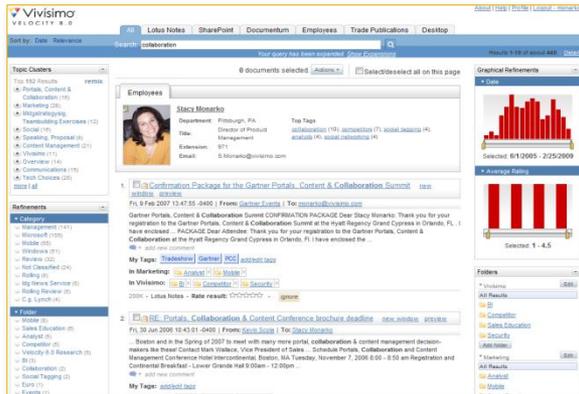
Watson Explorer Application Builder

360º view of a customer

Ključ do rešitev 2014
Misli prihodnost. Bodi sprememba.
Integrated Service Management for Aerospace and Defense

IBM BusinessConnect

Aircraft manufacturer accelerates problem diagnosis in its customer support war room to keep more planes in the air.

70%

improvement in call resolution times—from 50 minutes to 15

$36 million

savings in support costs

50

additional planes in the air every year without adding support staff

Solution Components

- IBM® Watson Explorer
- IBM Software Services
- IBM Business Partner SAP – ERP
- IBM Business Partner Oracle – Siebel CRM On Demand

Business Challenge: This aircraft manufacturer needed comprehensive diagnostic information in a central point of access to help technicians, support staff and engineers find the source of aircraft troubles more quickly, assemble the resources needed to fix each problem, and keep more planes in the air.

The Smarter Solution: With a powerful navigation and discovery solution, the company centralized its knowledge and expertise, maintenance records and technical documentation. Rich analytics help technicians isolate faults and anomalies to diagnose mechanical failures and find a path to resolution. The solution also identifies the skills and spare parts needed to fix the problem, even verifying their availability for repair scheduling.

Aircraft support technicians are racing against the clock to get airplanes off the ground and back in working condition. This navigation and discovery solution helps them beat the clock—and avoid steep fines.

Improve 360 degree view of customers and organizations

A big data problem due to volumes and sentiment analysis

Big data scale
- 1.5B+ customer records
- 20 systems
- 20% annual growth in records
- Generates over 300K duplicates daily

Sentiment analysis
- Intermediary "Social Hub" collects all social data and generates a SNAP (Social Network Advocacy Pulse) score
- Scoring linked to on premise customer information, and used to help guide customer interactions

Ključ do rešitev 2014
Misli prihodnost. Bodi sprememba.

IBM BusinessConnect

Global Investment and Financial Services Firm Increases Cross-Sell Between Personal & Workplace Investors

Increase Cross-Sell

Increase Up-Sell

Enhance Brand & Visibility

By:

- Consolidated view of information across multiple silos

- Providing information that helps anticipate client needs

- Increase engagement with high net worth clients

Business problem: The investment firm had information in multiple silos that prevented advisors from offering the best info to its clients. Difficulty finding the right information caused longer handle times and poor engagement with high net worth clients.

Solution: World-class destination for financial information, including workplace investing, news and more. Over 20 million clients are served retirement plan details. Financial advisors can anticipate needs and provide the right info for cross-sell & up-sell

IBM

Ključ do rešitev 2014
Misli prihodnost. Bodi sprememba.

IBM BusinessConnect

Case Study: Global Investment and Financial Services Firm
Watson Explorer Customer Services Platform/Portal (via search-based app)

Challenges

- Reduce average handle time for routine interactions
- Increase engagement with high net worth clients for cross-selling, up-selling and relationship building
- Consolidate view across 160 different applications / databases
- Enhance brand and visibility

Why Watson Explorer

- Secure access and federation across many internal sources
- Granular control over search results
- Flexibility in designing UI
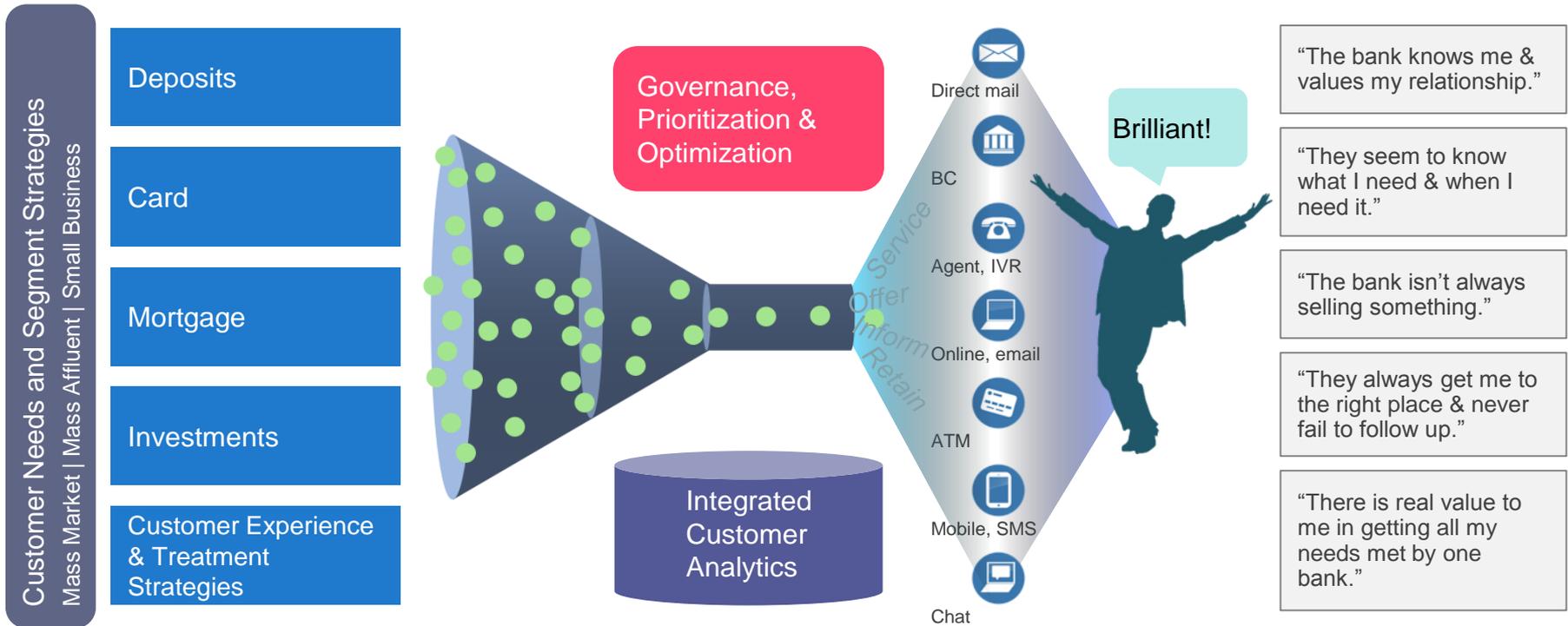- Ease of deployment and low TCO

Solution

- Public website - world-class destination for financial information, including workplace Investing, news, and more
- Over 20 million clients are served retirement plan details at corporate and individual levels
- Internal portal provides navigation across many internal sources for consolidated view of client and other information, helping financial advisors anticipate client needs and provide the right solutions

Ključ do rešitev 2014
Misli prihodnost. Bodi sprememba.

IBM BusinessConnect

'Delivering Relevance and Context at the point of engagement

"I have a customer – what do they need most?"

Customer Needs and Segment Strategies
Mass Market | Mass Affluent | Small Business

- Deposits
- Card
- Mortgage
- Investments
- Customer Experience & Treatment Strategies

Governance, Prioritization & Optimization

Integrated Customer Analytics

Service Offer Inform Retain

- Direct mail
- BC
- Agent, IVR
- Online, email
- ATM
- Mobile, SMS
- Chat

Brilliant!

"The bank knows me & values my relationship."

"They seem to know what I need & when I need it."

"The bank isn't always selling something."

"They always get me to the right place & never fail to follow up."

"There is real value to me in getting all my needs met by one bank."

The customer feels that the bank understands & responds to their changing needs

The bank's KPI's improve: Customer Profitability / Satisfaction & Advocacy / Retention

Ključ do rešitev 2014
Misli prihodnost. Bodi sprememba.

IBM BusinessConnect

360° View Applications with Watson Explorer App Builder

Purpose-built application to solve a specific information-centric business challenge

| Navigation & Discovery | 360° Customer View ✓ | Big Data |

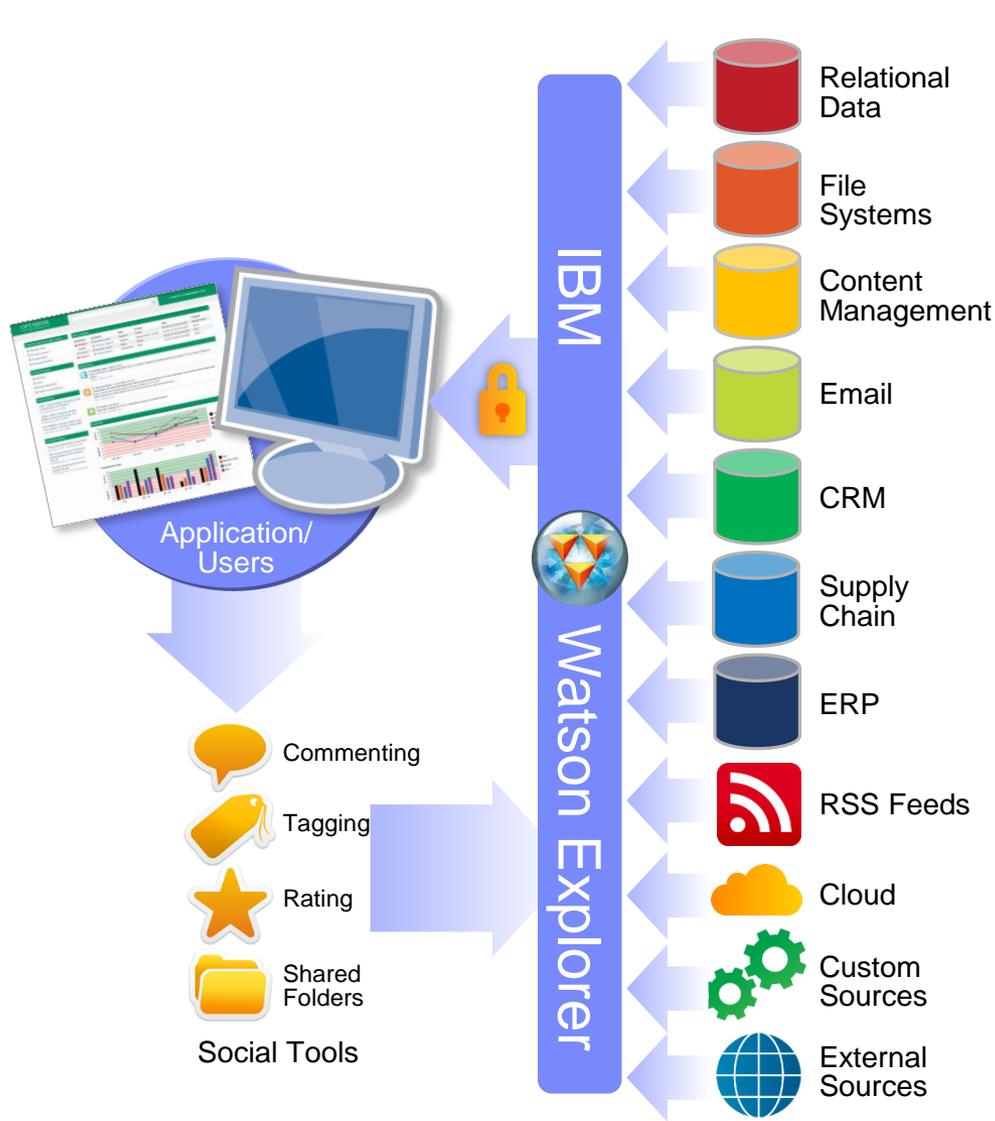Account view

Contact view

Product view

Search

- Powerful, easy-to-deploy application framework to create 360° view apps to support specific activities such as customer support & sales enablement

- Changes the information access paradigm by proactively pushing relevant information to each user based on roles, context, and current activities

- Combines structured & unstructured info to enable organizations to contextually view customers, products, projects, services etc

- Post comments in real time for larger audience to view

- Create shared spaces for project-level collaboration

- Push information through a portlet or i-widget to show the most recent information about a specific topic

- Fast time to value, rapid deployments from PoCs to production in 4-12 weeks

Ključ do rešitev 2014
Misli prihodnost. Bodi sprememba.

IBM BusinessConnect

Information Navigation, Discovery & Insight

Relational Data

File Systems

Content Management

Email

CRM

Supply Chain

ERP

RSS Feeds

Cloud

Custom Sources

External Sources

IBM

Watson Explorer

Application/ Users

Commenting

Tagging

Rating

Shared Folders

Social Tools

Navigation & Discovery	360° Customer View	Big Data

- Leaves data in place creating a "virtual" single repository fusing structured, unstructured & federated data, accessible via a singe UI for exploration & discovery

- Secure & granular access to all applications & data stores so users can only see & navigate info for which they are authorized

- Tag, comment, organize & rate content to enhance navigation & discovery results for other users through high relevancy

- Rich text analytics, incl. dynamic clustering, categorization, entity & metadata extraction

- Ability to ingest industry and domain-specific taxonomies and ontologies

- Scale to trillions of records, leveraging an efficient index infrastructure with enterprise-class features

- Adaptor toolkit is provided to integrate systems that are not supported off-the-shelf

Ključ do rešitev 2014
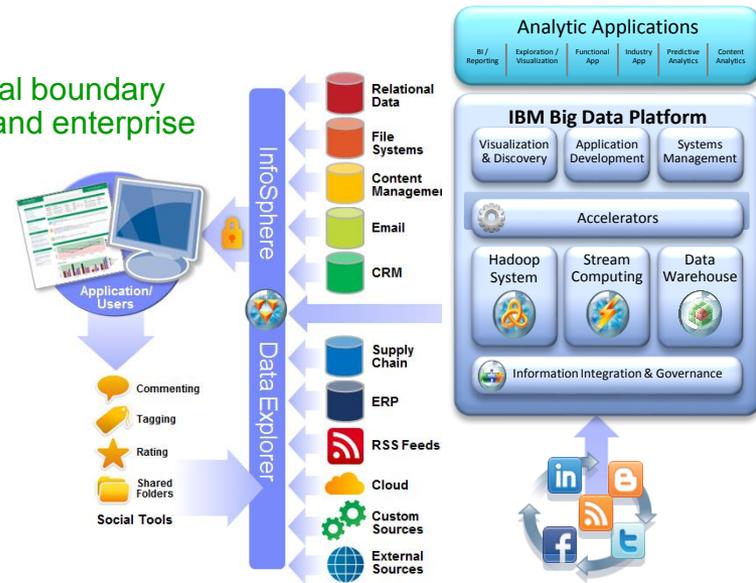Misli prihodnost. Bodi sprememba.

IBM BusinessConnect

Big Data Applications

Removes the artificial boundary between "big data" and enterprise information

- Unlocks the value of Big Data by enabling organizations to discover high value sources to bring into BigInsights™ or other Hadoop-based systems for deeper analysis

- Accelerates discovery & navigation of data sources giving high value insight on all sources of Big Data whilst leaving the source data in place

- Augment the data with user knowledge, create personalized views of the data, Identify ongoing user and system integration points

- Leverage relevant social media data to enhance view of customer/product/service etc to determine sentiment

- Gives business users control of how information is delivered & presented to their end users through an application-focused administrative console

- Fully distributed, real-time, fault-tolerant solution with unlimited scalability to enable indexing petabyte sized data sets
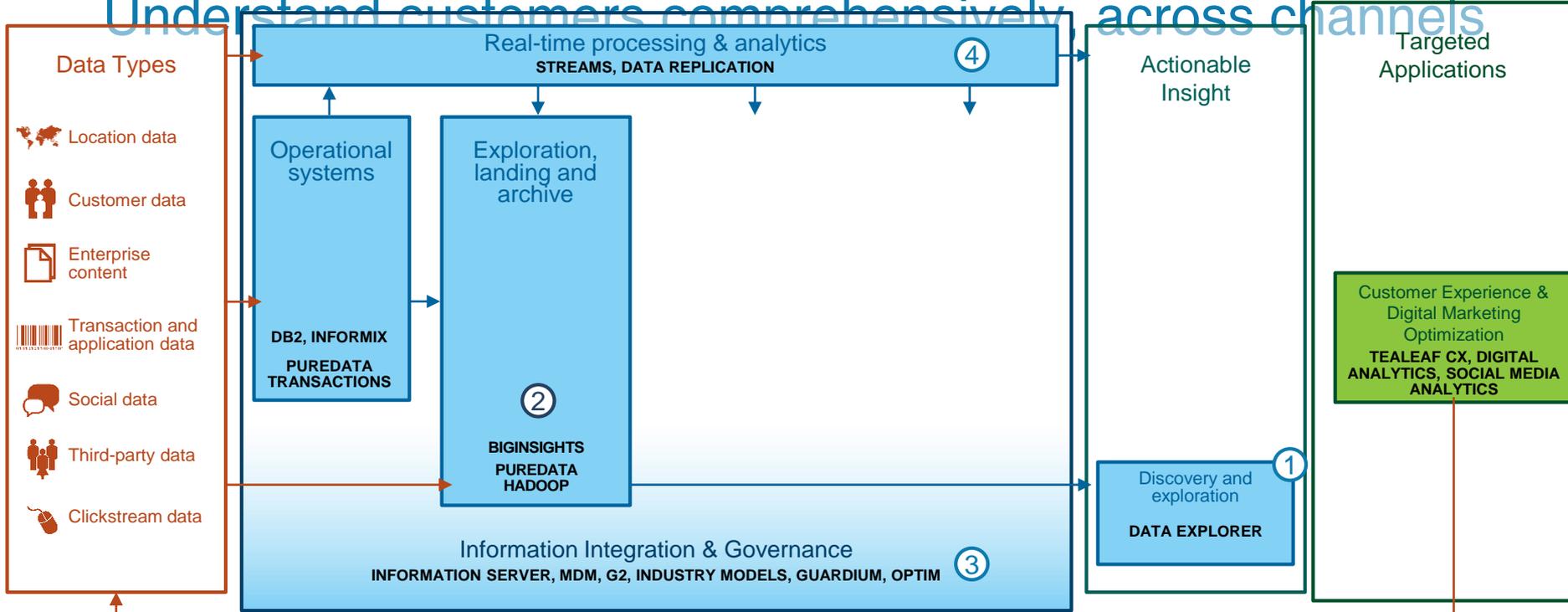
Ključ do rešitev 2014

IBM BusinessConnect

How can this transformation be applied to use cases that organizations commonly face, across industries?

Understand customers comprehensively, across channels

Data Types

- Location data
- Customer data
- Enterprise content
- Transaction and application data
- Social data
- Third-party data
- Clickstream data

Real-time processing & analytics
STREAMS, DATA REPLICATION ④

Operational systems

DB2, INFORMIX
PUREDATA
TRANSACTIONS

Exploration, landing and archive

②

BIGINSIGHTS
PUREDATA
HADOOP

Information Integration & Governance
INFORMATION SERVER, MDM, G2, INDUSTRY MODELS, GUARDIUM, OPTIM ③

Actionable Insight

Discovery and exploration

DATA EXPLORER ①

Targeted Applications

Customer Experience & Digital Marketing Optimization
TEALEAF CX, DIGITAL ANALYTICS, SOCIAL MEDIA ANALYTICS

---

1 Data Explorer: quickly find, view, and analyze customer data combined from all repositories and sources, across all data types

2 BigInsights: capture, correlate and align transaction- and interaction-level details in both structured and unstructured formats, against matched customer profiles represented differently across sources – (1)

3 MDM: align and govern customer data across sources – (1), (2)
G2: accumulate context to identify characteristics of entities and non-obvious relationships between them over time

4 Streams: update understanding from new observations in real-time – (1), (2), (3)

Targeted Applications (sources to a comprehensive understanding):

- **Digital Analytics**: track and analyze aggregate-level online behavior (aggregated clickstream data)
- **Tealeaf CX**: track in detail precise, individual customer behavior (detailed clickstream data)
- **Social Media Analytics**: understand affinities and competitive differentiation from direct, large-scale market research (social data)