



Smartare Analys 2013



knowit



accenture
High performance. Delivered.



Middlecon AB

STREAM-INTELCOM

Big Data = Business Value



Arild Kristensen
Nordic Sales Manager, Big Data Analytics

arild.kristensen@no.ibm.com, tlf. +4790532591

Imagine the Possibilities of Harnessing *your* Data Resources

Big data challenges exist in every business today

Government cuts acoustic analysis from hours to **70 Milliseconds**



Utility avoids power failures by analyzing **10 PB** of data in minutes



Hospital analyzes streaming vitals to intervene **24 hours earlier**



Retailer reduces time to run queries by **80%** to optimize inventory



Stock Exchange cuts queries from 26 hours to **2 minutes** on **2 PB**

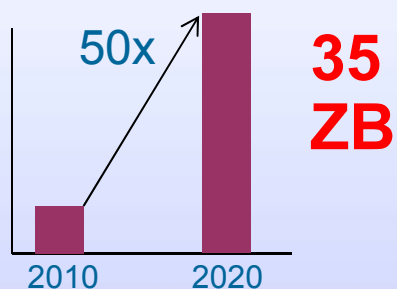


Telco analyses streaming network data to reduce hardware costs by **90%**



The characteristics of big data

Cost efficiently processing the growing **Volume**



Responding to the increasing **Velocity**



30 Billion RFID sensors and counting

Collectively Analyzing the broadening **Variety**



80% of the world's data is unstructured



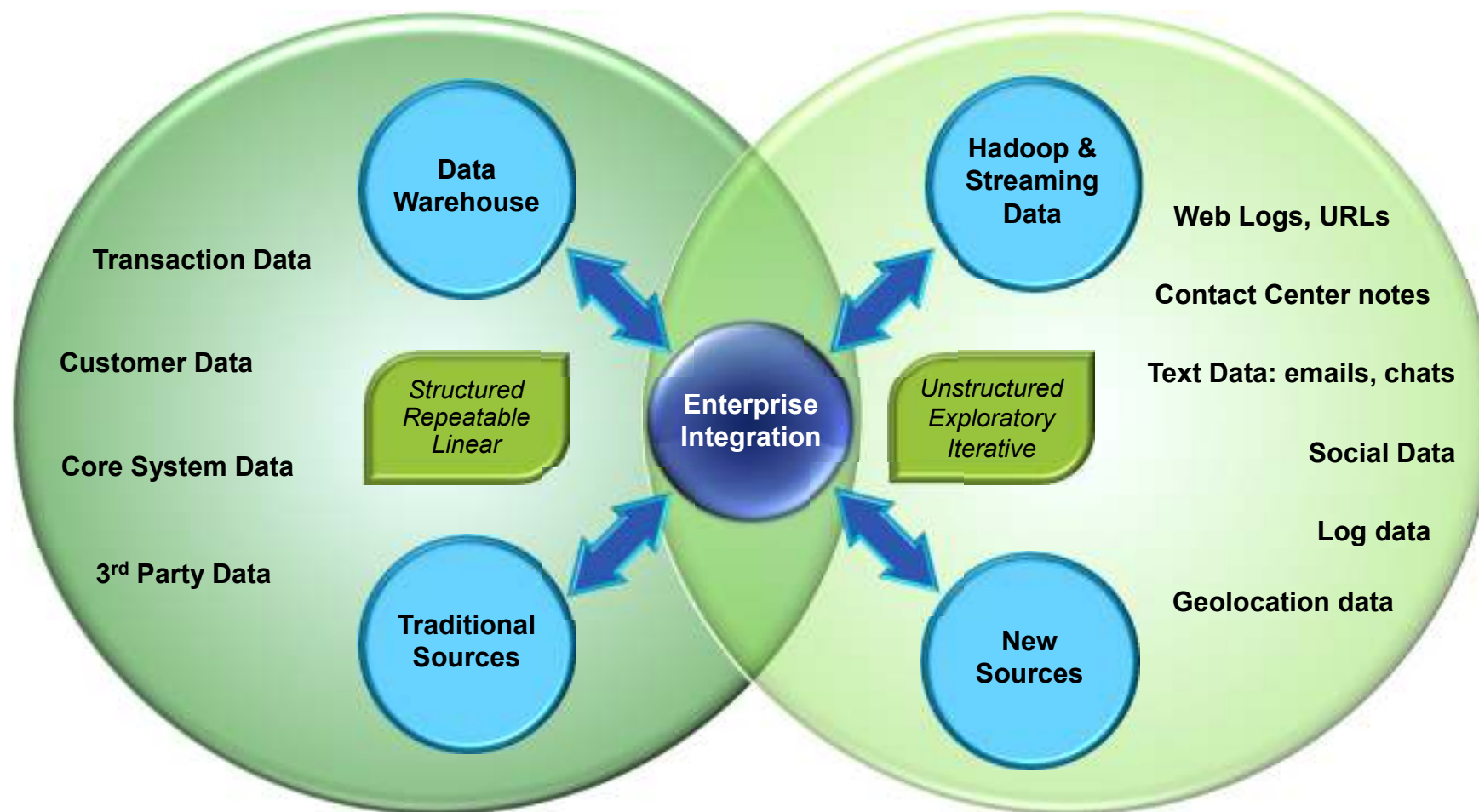
Establishing the **Veracity** of big data sources

1 in 3 business leaders don't trust the information they use to make decisions

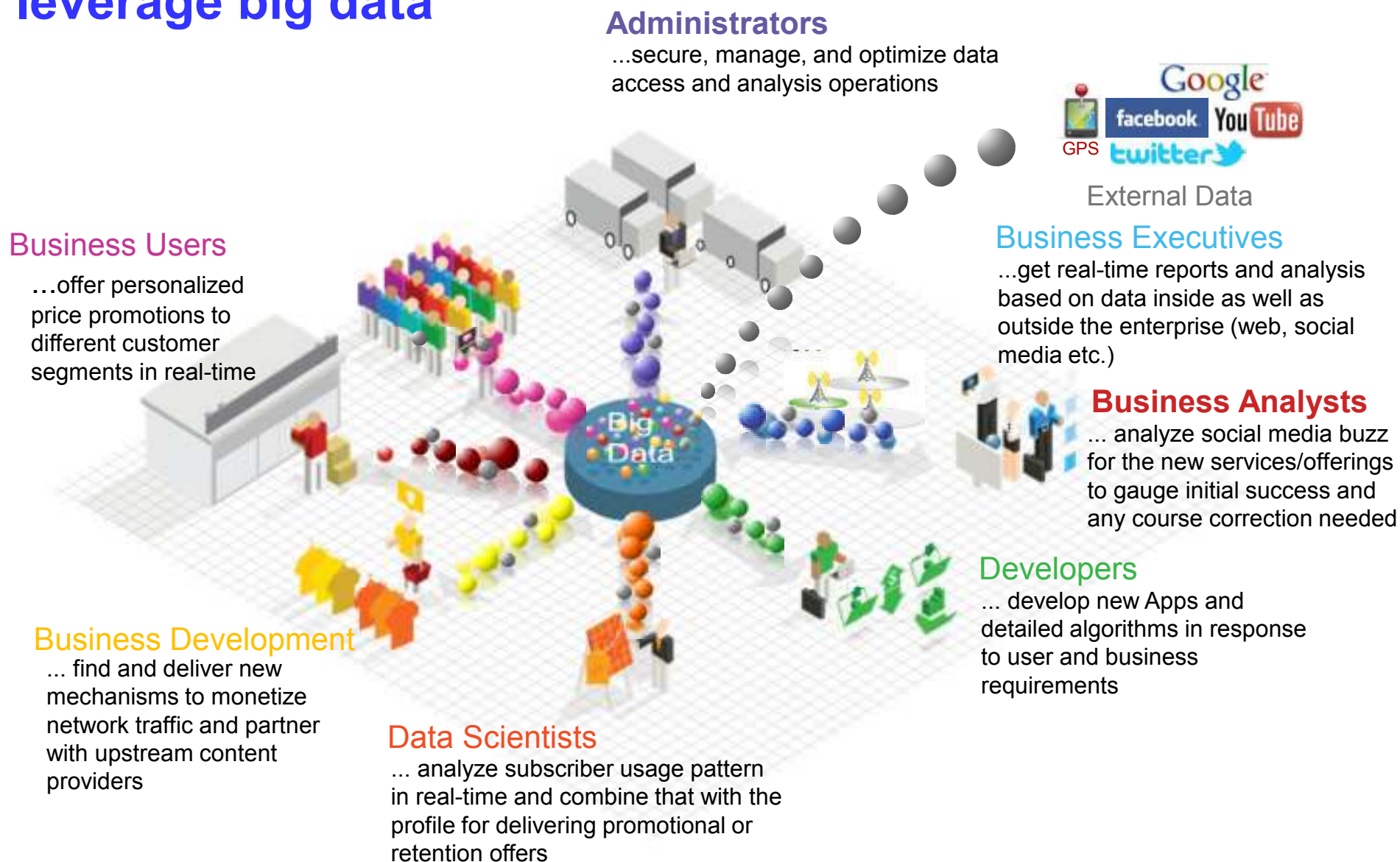
Analytics is expanding from enterprise data to big data, creating new opportunities for competitive advantage

Traditional Approach
Structured, analytical, logical

New Approach
Creative, holistic thought, intuition



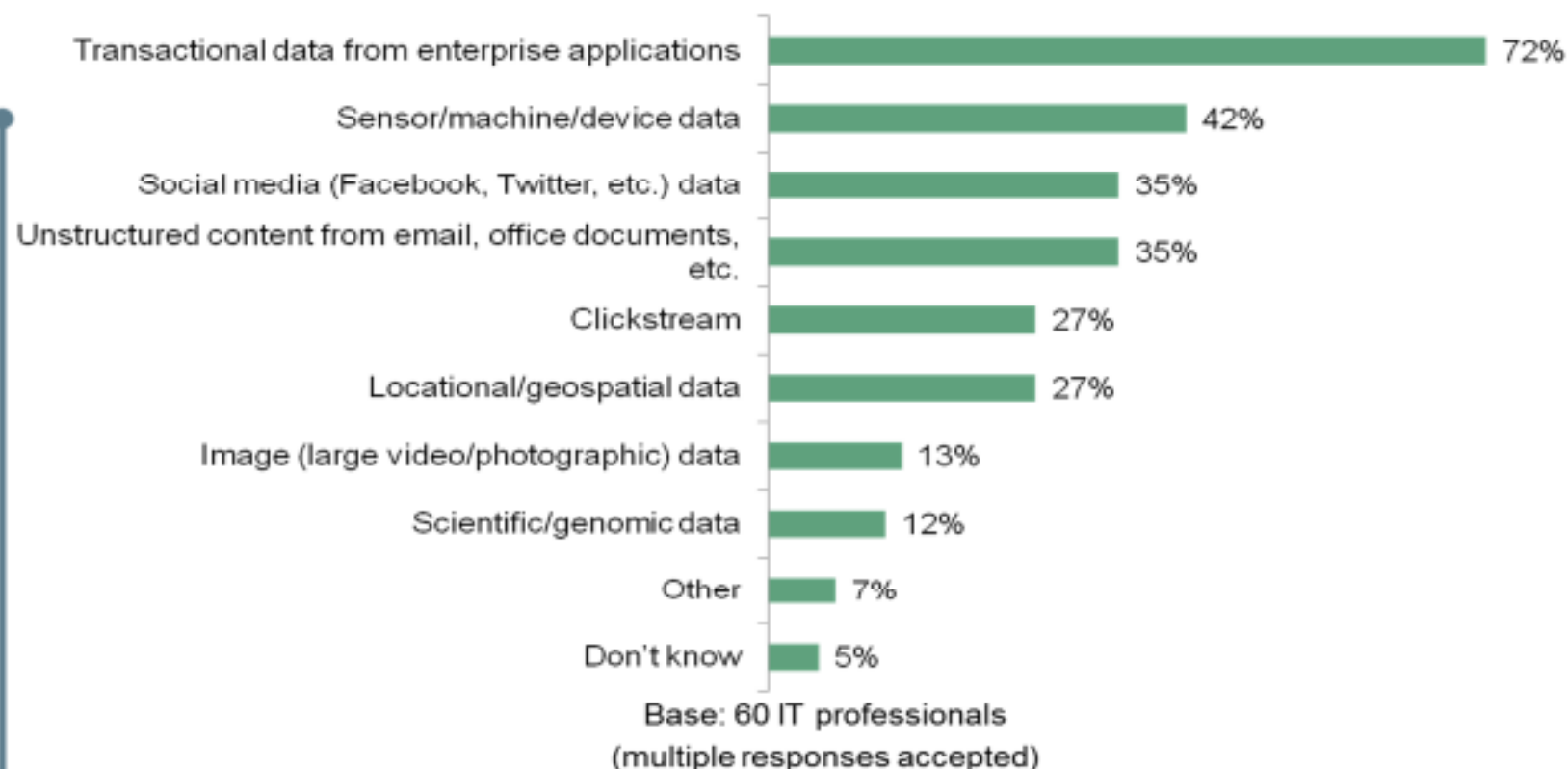
Big data made simple: Everyone can develop and leverage big data



FORRESTER RESEARCH

Big data: across diverse subject domains

“What types of data/records are you planning to analyze using big data technologies?”



Most big data use cases hype its application for analysis of new, raw data from social media, sensors, and web traffic, but we found that firms are being very practical, with early adopters using it to operate on enterprise data they already have.

The 5 Big Data Use Cases



Big Data Exploration

Find, visualize, understand all big data to improve business knowledge



Enhanced 360° View of the Customer

Achieve a true unified view, incorporating internal and external sources



Security/Intelligence Extension

Lower risk, detect fraud and monitor cyber security in real-time



Operations Analysis

Analyze a variety of machine data for improved business results



Data Warehouse Augmentation

Integrate big data and data warehouse capabilities to increase operational efficiency

Big Data Exploration: Needs



Find, visualize, understand all big data to improve business knowledge



Struggling to manage and extract value from the growing 3 V's of data in the enterprise



Inability to relate “raw” data collected from system logs, sensors, clickstreams, etc., with customer and line-of-business data managed in enterprise systems



Risk of exposing unsecure personally identifiable information (PII) and/or privileged data due to lack of information awareness

Enhanced 360° View of the Customer: Needs



Achieve a true unified view of any entity, incorporating internal and external sources



Need a deeper understanding of customer



Desire to increase customer loyalty and satisfaction



Challenged getting the right information to the right people to provide customers what they need to solve problems, cross-sell & up-sell

Enhanced 360° View of the Customer

IBM Lotus Notes interface showing search results for "collaboration".

Navigation tabs: All, Lotus Notes, SharePoint, Documentum, Employees, Trade Publications, Desktop

Search: collaboration

Sort by: Date Relevance

Your query has been expanded. Show Expansions

Results 1-10 of about 449

0 documents selected. Actions

Dynamic categorization

Setup alert to notify change

Identify topical experts

Narrow down results set

Graphical Refinements

▼ Date

Selected: 6/1/2005 - 2/25/2009

▼ Average Rating

Selected: 1 - 4.5

Refinements based on metadata

Highly relevant, secure & personalized results

Comment results

Tag results

Rate results

Store & share results

Topic Clusters

- Top 192 Results remix
- Portals, Content & Collaboration (16)
- Marketing (28)
- Mktgstrategiesig, Teambuilding Exercises (12)
- Social (16)
- Speaking, Proposal (8)
- Content Management (21)
- Vivisimo (11)
- Overview (14)
- Communications (15)
- Tech Choices (25)

Refinements

▼ Category

- Management (44)
- Windows (37)
- Review (32)
- Not Classified (24)
- Rolling (8)
- Idg News Service (5)
- Rolling Review (5)
- C.g. Lynch (4)

▼ Folder

- Mobile (8)
- Sales Education (6)
- Analyst (5)
- Competitor (5)
- Velocity 6.0 Research (5)
- BI (3)
- Collaboration (2)
- Social Tagging (2)
- Euro (1)
- Events (1)

Employees

Stacy Monarko

Department: Pittsburgh, PA

Title: Director of Product Management

Extension: 971

Email: S.Monarko@vivisimo.com

Top Tags

- collaboration (10), comp
- analysts (4), social netw

1. Confirmation Package for the Gartner Portals, Content & Collaboration Summit

From: Gartner Events | To: monarko@vivisimo.com

Confirmation Summit CONFIRMATION PACKAGE Dear Stacy Monarko: Thank you for your registration to the Gartner Portals, Content & Collaboration Summit at the Hyatt Regency Grand Cypress in Orlando, FL. I have enclosed ... PACKAGE Dear Attendee: Thank you for your registration to the Gartner Portals, Content & Collaboration at the Hyatt Regency Grand Cypress in Orlando, FL. I have enclosed the ...

My Tags: Tradeshow, Gartner, FCC, sporeedit tags

In Marketing: Analyst, Mobile

In Vivisimo: BI, Competitor, Security

200K - Lotus Notes - Rate result: ☆☆☆☆☆

2. RE: Portals, Collaboration & Content Conference brochure deadline


Fri, 30 Jun 2006 10:43:01 -0400 | From: Kevin Scola | To: Stacy Monarko

... Boston and in the Spring of 2007 to meet with many more portal, collaboration & content management decision-makers like these! Contact Mark Wallace, Vice President of Sales ... Schedule Portals, Collaboration and Content Management Conference Hotel Intercontinental, Boston, MA Tuesday, November 7, 2006 8:00 - 8:50 am Registration and Continental Breakfast - Lower Grande Hall 9:00am - 12:00pm ...

My Tags: add/edit tags

Folders

- Vivisimo
- All Results
- BI
- Competitor
- Sales Education
- Security
- Add folder
- Marketing
- All Results
- Analyst
- Mobile



Tier 1 Telco service provider uses big data to transform call centers with real time access to customer and product data

Need

- Call center agents must use multiple applications to look up relevant information to address the customer issue
- Expensive (\$1.1m per annum) manual process to prepare content for use by call center representatives

Benefits

- Ingest large device manuals from multiple vendors and create digestible chunks of information by customer service topic
- Index multiple information sources including Oracle UCM, Drupal, external web pages and SQL server instances for topic-wise search
- Deploying federated search to Blackberry World & Apple App Store for additional content
- Reduction in average handling time (AHT) driving significant cost savings for call center
- Cost savings by eliminating manual content preparation by Six FTEs



Security/Intelligence Extension: Needs



Security/Intelligence Extension enhances traditional security solutions by analyzing all types and sources of under-leveraged data



Analyze vast stores of under-leveraged data



Enhanced Intelligence & Surveillance Insight

Analyze data-in-motion & at rest to:

- Find associations
- Uncover patterns and facts
- Maintain currency of information



Protect networks from hackers & foreign attacks



Real-time Cyber Attack Prediction & Mitigation

Analyze network traffic to:

- Discover new threats early
- Detect known complex threats
- Take action in real-time



Improve human activity-based intelligence

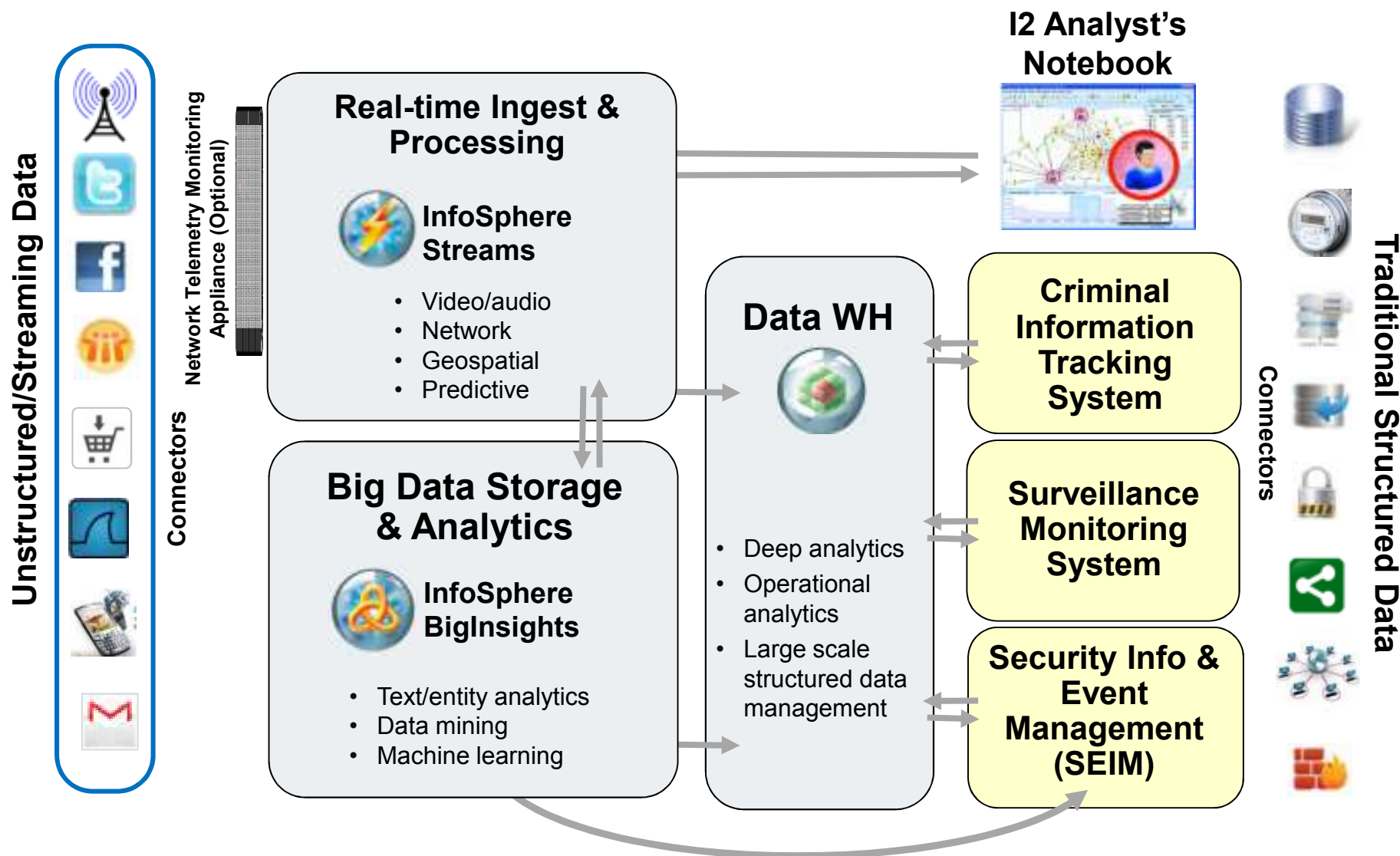


Crime prediction & protection

Analyze Telco & social data to:

- Gather criminal evidence
- Prevent criminal activities
- Proactively apprehend criminals

Security/Intelligence Extension



Security/Intelligence Extension: Customer Example



Asian Government Agency

Blinded for confidentiality

National Intelligence Platform Extension

Using InfoSphere Streams to filter & analyze all Internet traffic (social media, email, etc) to track persons of interest (drug/sex traffickers, terrorists, illegal refugees/immigrants) and civil/border activity.

Key Questions to Ask

- ✓ Do you want to enrich your security or intel system with unused or underleveraged data sources (video, audio, smart devices, network, Telco, social media)?
- ✓ Do you need sub second detection, identification, resolution of physical or cyber threats?
- ✓ Do you want to follow activities of criminals, terrorists, or persons in a blacklist?
- ✓ Do you want to enhance your surveillance system with real-time data from video, acoustic, thermal or other security sensors?
- ✓ Are you wanting to correlate lots of technical or human intel data and sources looking for associations or patterns (big data forensics)?
- ✓ Do you want to enhance your Security Information & Event Management (SEIM) solution with unstructured data (email, social) to improve cyber threat detection & remediation?

Operations Analysis: Needs



Analyze a variety of machine data for improved business results

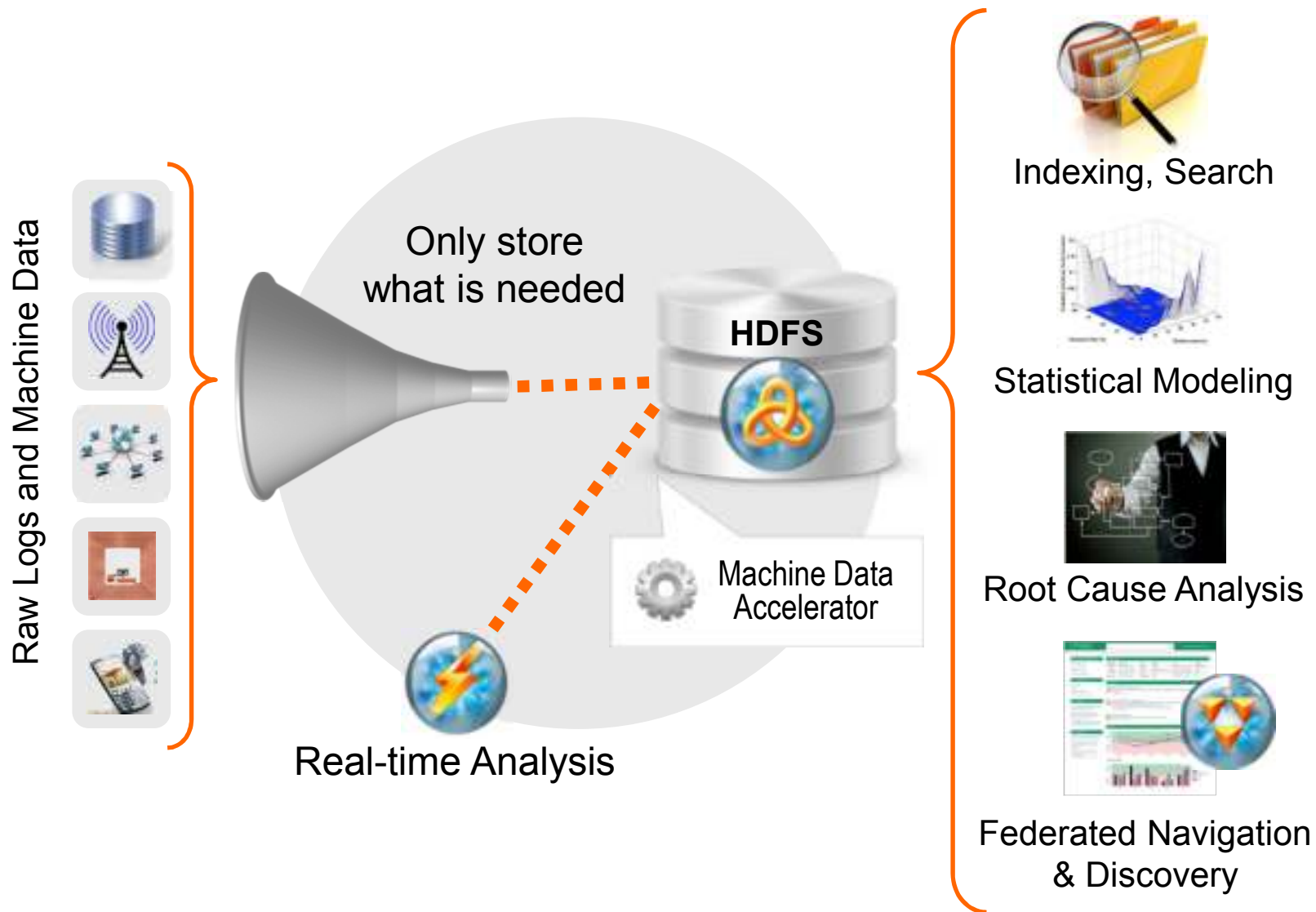
Because of the complexity and rapid growth of machine data, many companies make decisions on a small fraction of the information available to them

The ability to analyze machine data and combine it with enterprise data for a full view can enable organizations to:

- Gain real-time visibility into operations, customer experience, transactions and behavior
- Proactively plan to increase operational efficiency
- Identify and investigate security threats and anomalies
- Monitor end-to-end infrastructure to proactively avoid service degradation or outages



Operations Analysis: Value & Diagram



An offshore oil rig is silhouetted against a sunset sky. The sun is low on the horizon, creating a bright orange and yellow glow that reflects on the water. The rig's complex structure of towers and cranes is visible against the bright sky. The water in the foreground is dark, with the sun's reflection creating a shimmering path.

ConocoPhillips uses stream data to monitor ice-floe movement in real time

Need

- Acquire streaming data from a variety of sources to analyze atmospheric conditions in real time
- Collect thousands of data points per second from multiple sources.
- Analyze massive volumes of data continuously at rates up to petabytes per day and adapt to rapidly changing data forms and types
- Leverage sub-millisecond latencies to respond to events and trends as they unfold
- Model, forecast and track ice flow

Benefits

- Long term improvement in safety and environmental factors
- Manage assets more proactively and lower cost associated with unplanned outages

The ConocoPhillips logo is displayed in white text on a red rounded rectangular background. The logo consists of the word "ConocoPhillips" in a sans-serif font, with a stylized white flame or drop shape above the letter "o" in "Phillips".

ConocoPhillips



Vestas optimizes capital investments based on 2.5 Petabytes of information

Need

- Model the weather to optimize placement of turbines, maximizing power generation and longevity

Benefits

- Reduce time required to identify placement of turbine from weeks to hours
- Reduces IT footprint and costs, and decreases energy consumption by 40 % -- while increasing computational power
- Incorporate 2.5 PB of structured and semi-structured information flows. Data volume expected to grow to 6 PB



Vestas

Traditional data warehousing

has become too complex for many customers

Nearly 70% of data warehouses experience performance constrained issues of various types

- Too complex an infrastructure
- Too complicated to deploy
- Too much tuning required
- Too inefficient at analytics
- Too many people needed to maintain
- Too costly to operate

IT shops supporting business operations have to think about how to deliver more critical analytics for the enterprise with shorter time to value



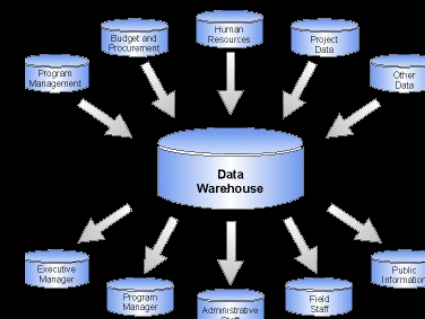
We are observing an evolution

Where the industry has been

- Monolithic EDW (data)
- Data and data mart sprawl
- Lack of enterprise agility
- Complex structure, process & architecture – focused
- Governance: limited or lacking
- Everyone talking about Analytics

Where the industry is going

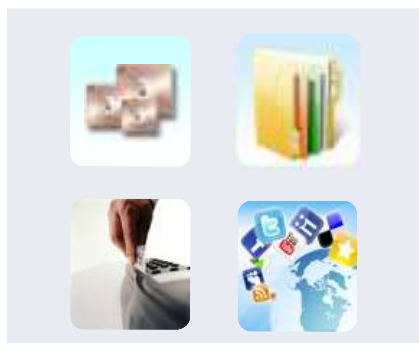
- “Smart Consolidation”
- Consolidate sprawl & reduce cost
- Analytics delivered via appliances & specialized systems (API's)
- Time to value is paramount
- Centralized data governance program
- Analytics integrated to real-time business operations



Data Warehouse Augmentation: Needs



Integrate big data and data warehouse capabilities to increase operational efficiency



Need to leverage variety of data

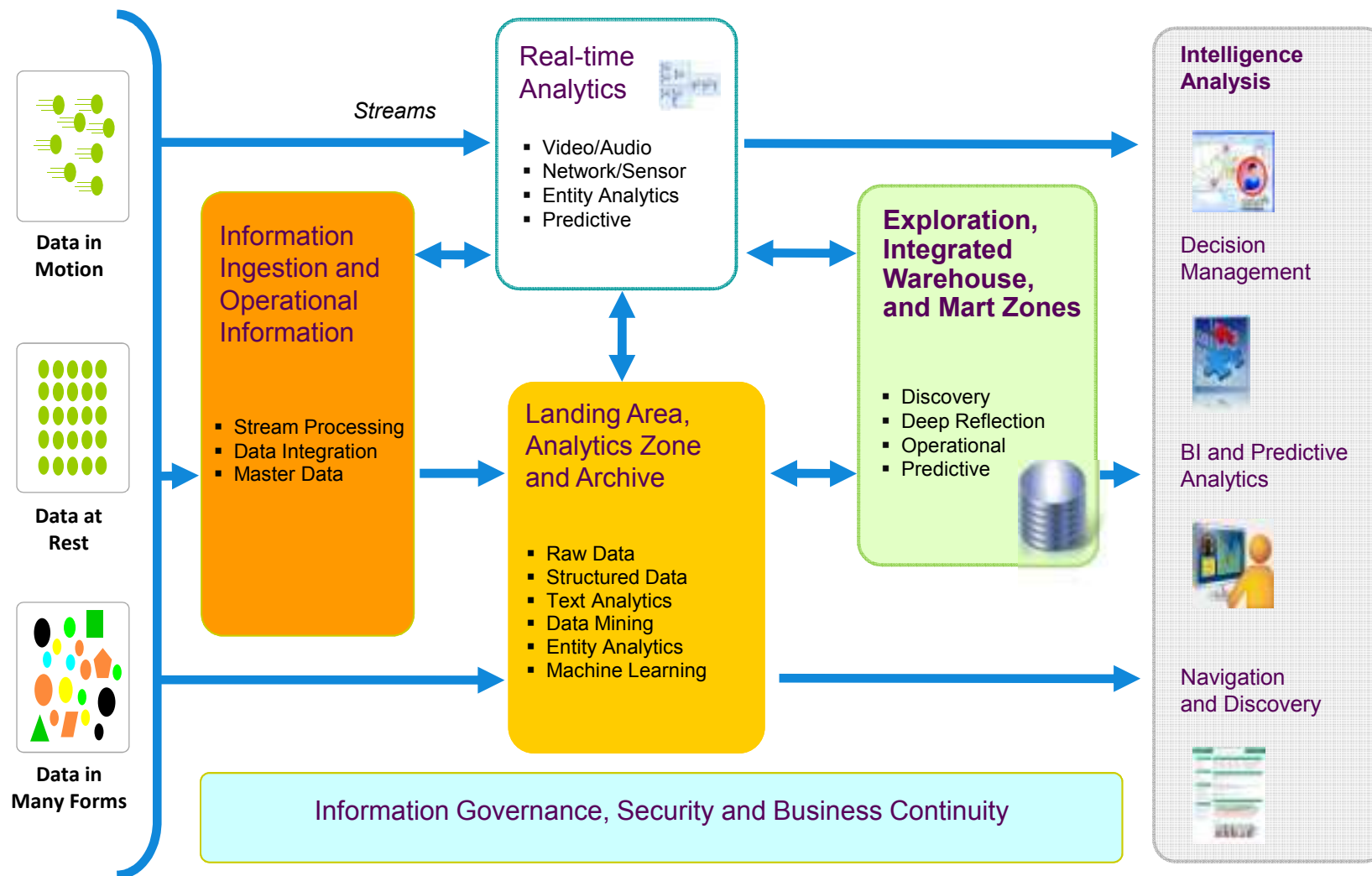
- Structured, unstructured, and streaming data sources required for deep analysis
- Low latency requirements (hours—not weeks or months)
- Required query access to data



Optimize warehouse infrastructure

- Optimized storage, maintenance and licensing costs by migrating rarely used data to Hadoop
- Reduced storage costs through smart processing of streaming data
- Improved warehouse performance by determining what data to feed into it

New Architecture to Leverage All Data and Analytics



Results

Dataanalyse med turbo

Sparebank1 har valgt en løsning som drar analyse av enorme datasatt ned fra timer til minutter.

DAG-RUNE Z. VOLLEN

— Vi har et datavarehus basert på programvare fra SAS, og arbeidet med en ny informasjonsløsning som leverte analyser og visualiseringer. Men vi var ikke fornøyd med ytelsen. Vi hadde svært store datafiler som gjorde at datalastejobber ikke lot seg gjøre. Dagfinn Røed, leder i Sparebanken1 Forsikring, sier: «Det er viktig at analysene våre blir gjort på kort tid. Nå gir eksempelvis analyse av skadeforsikringsporteføljen på 3-4 timer er nede i 1,5 minutt.

— Vi ønsker å gjøre analyse på datasett som består av flere forsikringsporteføljer. I dag lastes dette datasettet i «batch» på natten. framover ønsker vi å nærme oss sanntidsoppdatering innenfor del områder.

Prosjektet med bedre analyseverktøy var opprinnelig beregnet for skadeerstatnings-

delen av konsernet. Etterhvert er det utvidet med livsforsikringer, men det er et mål at alle virksomhetsfeltene i banken skal kunne ta dette i bruk.

— Når vi analyserer skadeforsikringsporteføljen er det snakk om svært mange detaljer som må inkluderes. Datagrunnlaget må kunne benyttes til alt fra hovedtrender til å analysere

” Vi ønsker å kjøre analyser så nær sanntid som mulig.

Dagfinn Røed, Sparebanken1

Vanlige batchjobber på 3-4 timer ned til 1.5 minutt

— Det er litt uvant for denne type analyseløsninger der det som regel har vært et spørsmål om programvare som vi i og for seg kan levere uten særlige grenser. Her er det en helhet av maskinvare og programvare som vi faktisk kan gå tom for.

Hva er i et navn?

Løsningen er levert av IBM, og het fram til i høst IBM Netezza. Etter at navnet hadde fått seg en sving innom markedsavdelingen kom det stakkars produktet ut som IBM

Pure Data Systems for Analytics. Netezza kom til IBM etter et oppkjøp i 2010.

— Løsningen er basert på serverblader fra IBM, spesiell programvare og en egen FPGA-brikke som er optimert for rask de-

trengs. En hemmelighet bak yteevnen er at dataene kjøres direkte inn i analysebehandlingen fra datasettene. Det er ingen indekser som må opprettes eller vedlikeholdes før spørringene kan kjøres.

20 timer ned til 7 minutter

konfigureres. IBM har fått innført raskere analyse og spesielle funksjoner for analyseprosjektene. E. Røed sier: «Det er viktig at analysene våre blir gjort på kort tid. Nå gir eksempelvis analyse av skadeforsikringsporteføljen på 3-4 timer er nede i 1,5 minutt.

lig for Netezza i IBM Norge. Han sier: «Det er viktig at analysene våre blir gjort på kort tid. Nå gir eksempelvis analyse av skadeforsikringsporteføljen på 3-4 timer er nede i 1,5 minutt.

— Det er litt uvant for denne type analyseløsninger der det som regel har vært et spørsmål om programvare som vi i og for seg kan levere uten særlige grenser. Her er det en helhet av maskinvare og programvare som vi faktisk kan gå tom for.

Boksene selges ferdigoppsett med tre, seks eller ni blader, og de skaleres lineært. Med andre ord kan en kunde som trenger mer kapasitet handle den kapasiteten som

— I det norske markedet er det bank og finans, telekom, varehandelen og energi og petroleum som vi blinker ut som typiske sektorer, understreker Næss.

Næss forteller at lisensen er knyttet til selve Netazza-enheten. Hvor mange brukere eller hvor mye den brukes er helt opp til kunden å avgjøre.

— I det norske markedet er det bank og finans, telekom, varehandelen og energi og petroleum som vi blinker ut som typiske sektorer, understreker Næss.

Næss forteller at lisensen er knyttet til selve Netazza-enheten. Hvor mange brukere eller hvor mye den brukes er helt opp til kunden å avgjøre.

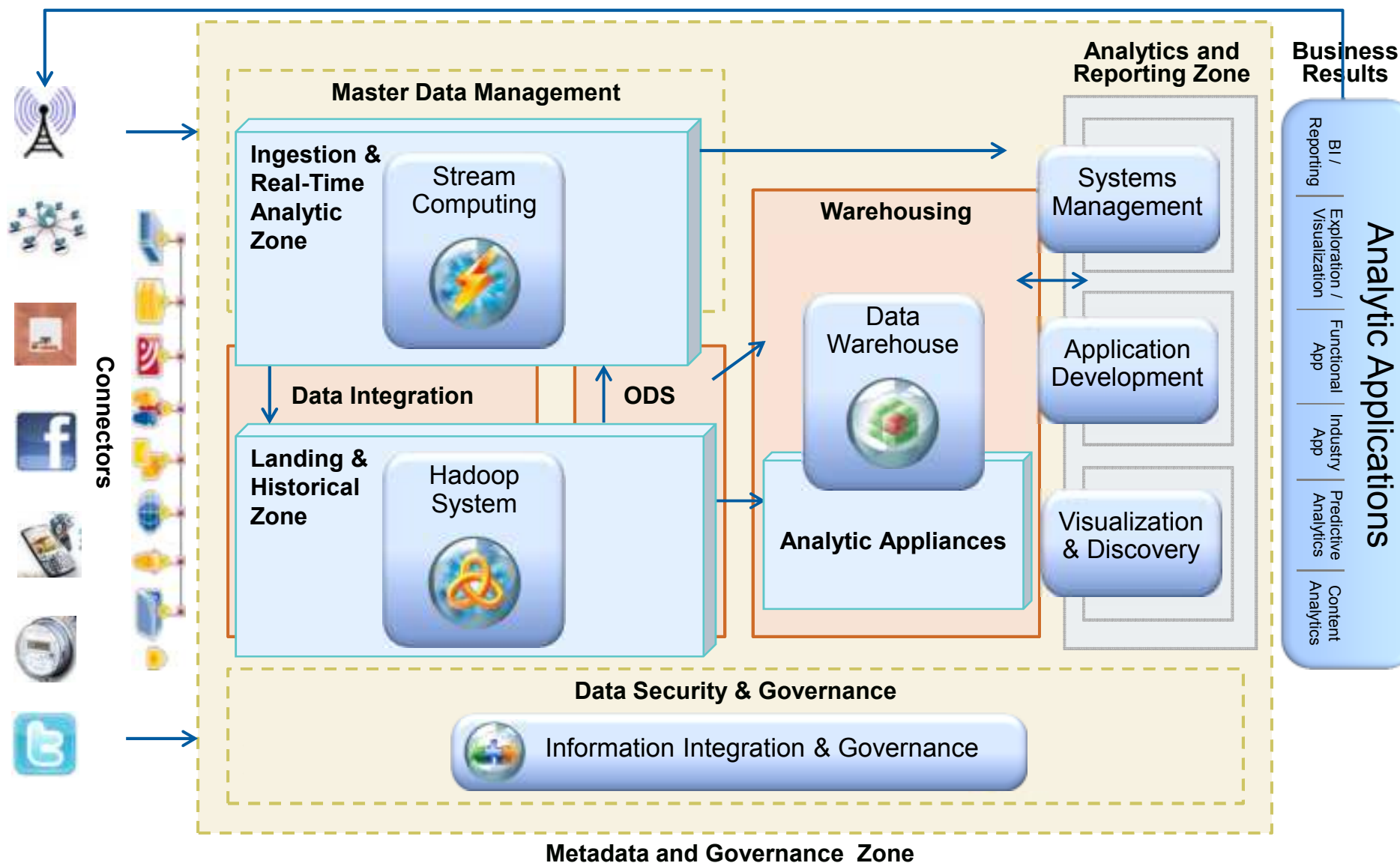
DAG-RUNE.VOLLEN@COMPUTERWORLD.NO

” Dette er ikke en Big Data-løsning. Pål Næss, Intelcom

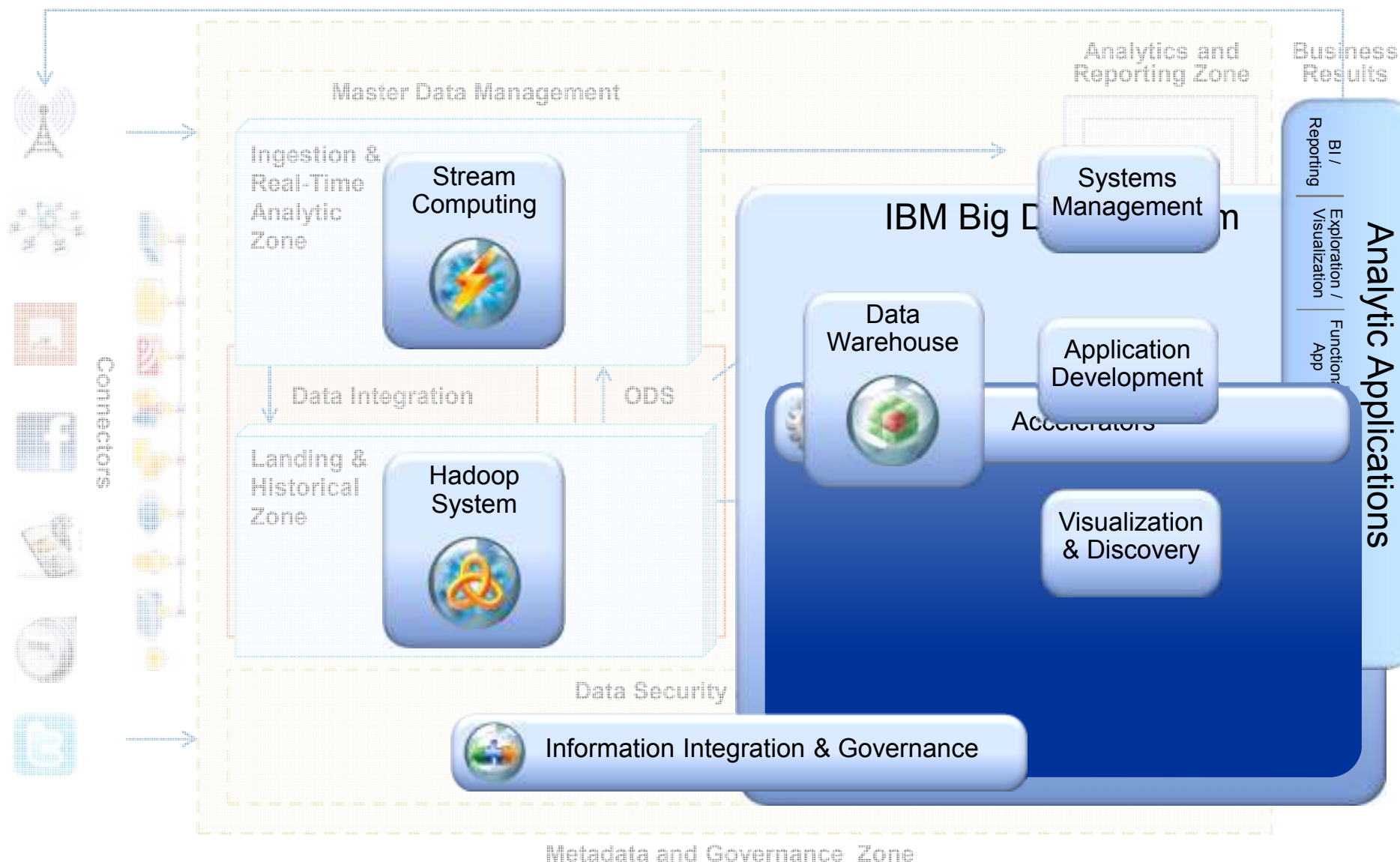
Big Data Use Cases by Industry

| | | | | |
|--|---|--|---|---|
|  <p>Banking</p> <ul style="list-style-type: none"> • Optimize Offers and Cross Sell • Contact Center Efficiency and Problem Resolution • Payment Fraud Detection & Investigation • Counterparty Credit Risk Management |  <p>Insurance</p> <ul style="list-style-type: none"> • Claims Fraud • Next Best Action • Catastrophe Modeling |  <p>Telco</p> <ul style="list-style-type: none"> • Pro-active Call Center • Network Analytics • Location Based Services • IT/Network Infrastructure Transformation • Smarter Campaigns |  <p>Energy & Utilities</p> <ul style="list-style-type: none"> • Smart Meter Analytics • Distribution Load Forecasting/Scheduling • Condition Based Maintenance • Create & Target Customer Offerings |  <p>Media & Entertainment</p> <ul style="list-style-type: none"> • Business process transformation • Audience & Marketing Optimization • Multi-Channel Enablement • Digital commerce optimization |
|  <p>Retail</p> <ul style="list-style-type: none"> • Actionable Customer Insight • Merchandise Optimization Playbook • Dynamic Pricing |  <p>Travel & Transport</p> <ul style="list-style-type: none"> • Customer Analytics & Loyalty Marketing • Capacity & Pricing Optimization • Predictive Maintenance Analytics |  <p>Consumer Products</p> <ul style="list-style-type: none"> • Optimized Promotions Effectiveness • Micro-Market Campaign Management • Real Time Demand Forecast |  <p>Government</p> <ul style="list-style-type: none"> • Threat Prediction and Prevention • Detect and Prevent Improper Payments • Single View |  <p>Healthcare</p> <ul style="list-style-type: none"> • Measure & Act on Population Health • Engage Consumers in their Healthcare • Increase visibility into drug safety and effectiveness |
|  <p>Automotive</p> <ul style="list-style-type: none"> • Data Warehouse Optimization • Predictive Asset Optimization (PAO) • Actionable Customer Intelligence |  <p>Chemical & Petroleum</p> <ul style="list-style-type: none"> • EDW Smart Consolidation & Augmentation • Operational Surveillance, Analysis & Optimization • Engineering & Operational Data Exploration & Mining |  <p>Aerospace & Defense</p> <ul style="list-style-type: none"> • Uniform Information Access Platform • Data Warehouse Optimization • Predictive Asset Optimization (PAO) |  <p>Electronics / Industrial Products</p> <ul style="list-style-type: none"> • Channel Driven Customer Analytics (CDCA) • Predictive Asset Monitoring & Optimization (PAMO) |  <p>Life Sciences</p> <ul style="list-style-type: none"> • Increase visibility into drug safety and effectiveness |

IBM provides the complete platform to support the new architecture

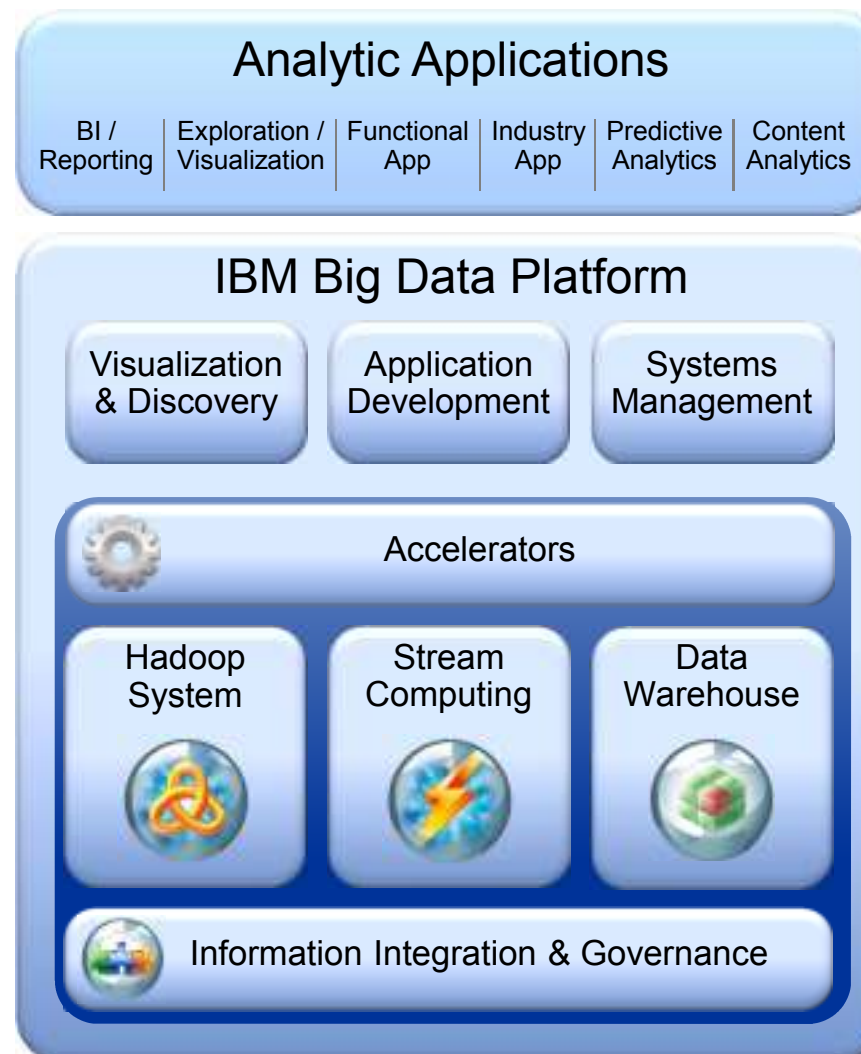


IBM provides the complete platform to support this evolution



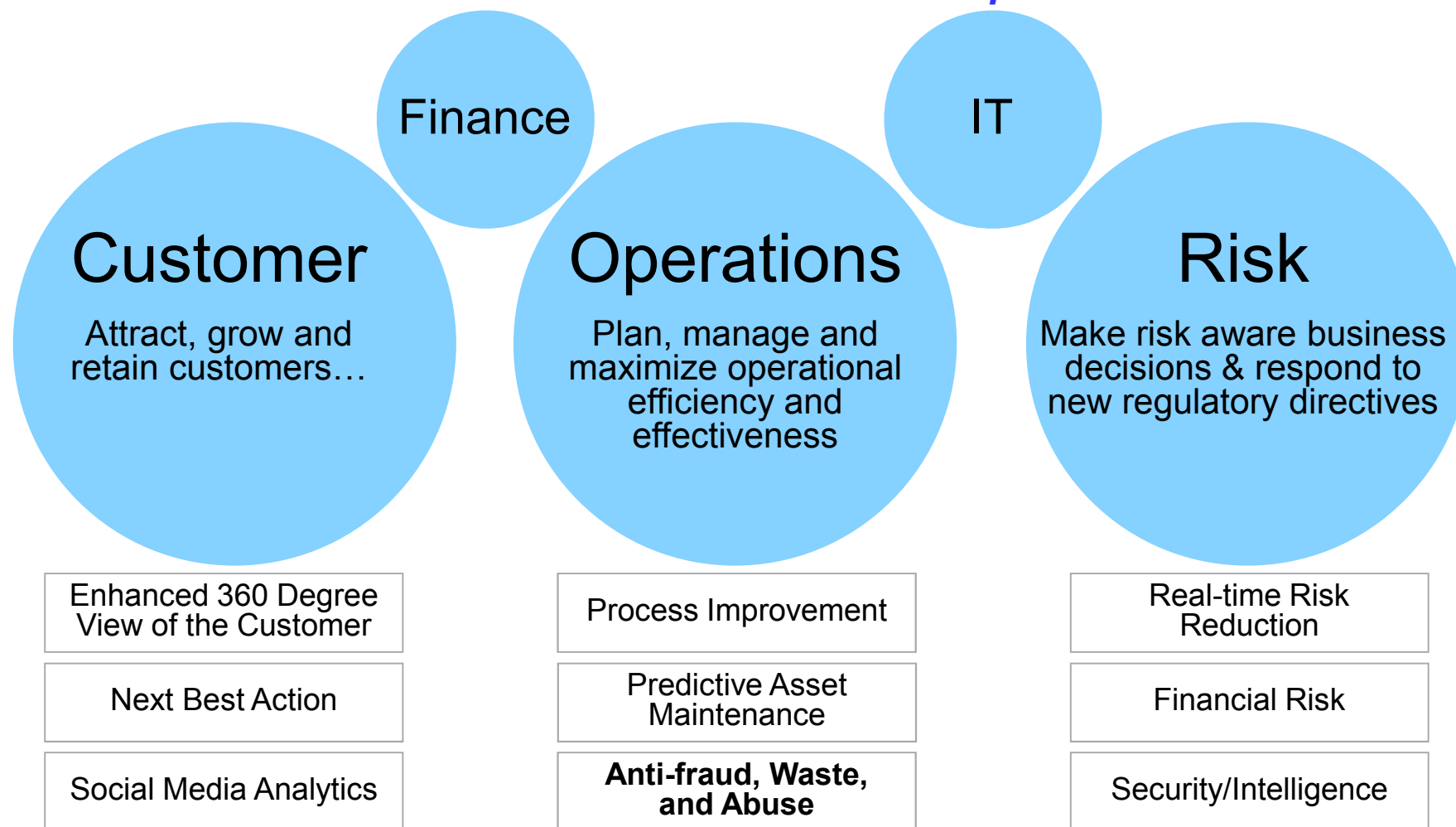
The Platform Advantage

- The platform enables starting small and growing without throwing away work
- Shared components and integration between systems lowers deployment cost, time and risk
- Key points of leverage
 - Accelerators built across multiple components to address common use cases
 - Pre-built integrations between the components using open connectors
 - Common analytic engines across components (i.e. text analytics)
 - Common metadata, integration design and governance across components



What We Have Learned

Successful Initiatives Start with a Clear Business Requirement



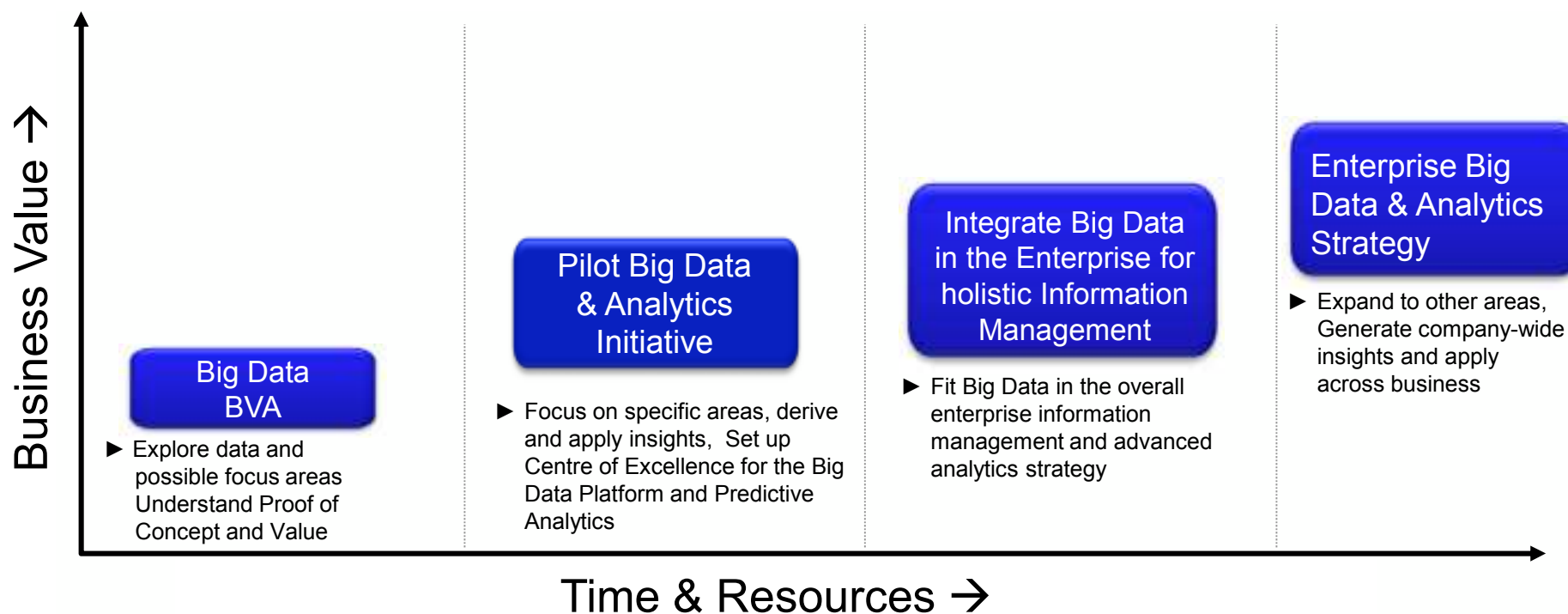
...business use cases trump technology in driving client value

What We Have Learned

Successful Initiatives Follow a Charted Course

These experiences reveal a great irony -- that while the impact of Big Data will be transformational, the path to effectively harnessing it is not. The journey is evolutionary versus revolutionary, incremental and iterative.

— Demystifying Big Data, TechAmerica Report, October 2012





Smartare Analys 2013



knowit



accenture
High performance. Delivered.

