Big Data & Big Business

Wolfgang Nimführ

Big Data & DWH Community Leader, Information Agenda Executive Consultant

IBM Software Group Europe
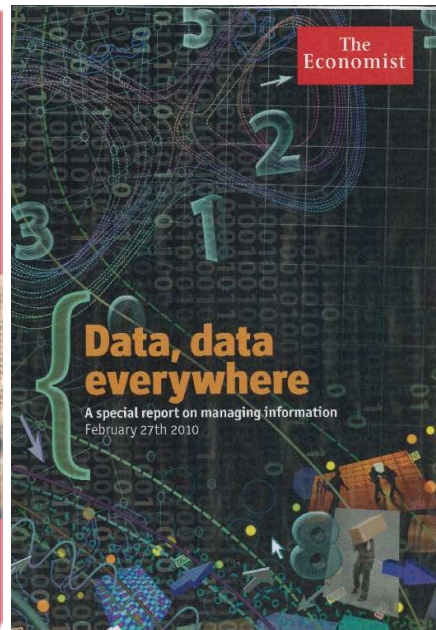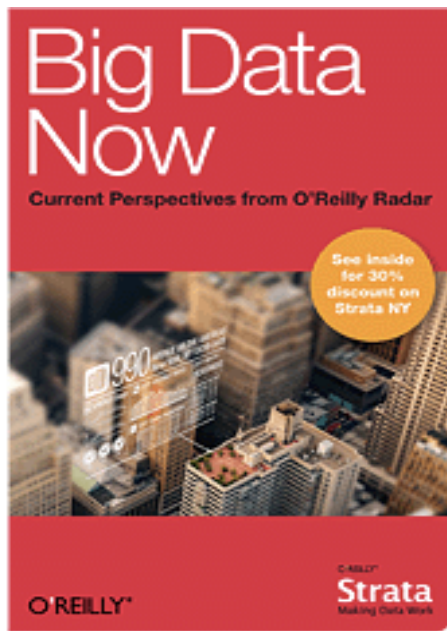
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Smarte Software für Ihr Business

Big Data – ein Hype ?

Searches *for "big data" on Gartner's website have increased* **981%**
(between March 2011 -October 2011)

"*We're in an environment where negative blogs can lead to an emergency board meeting.*" (Edmond Moutran, Chief Executive Officer, Memac Ogilvy & Mather MENA (Middle East & North Africa)

"Big Data: The next frontier for innovation, competition and productivity"
McKinsey Global Institute

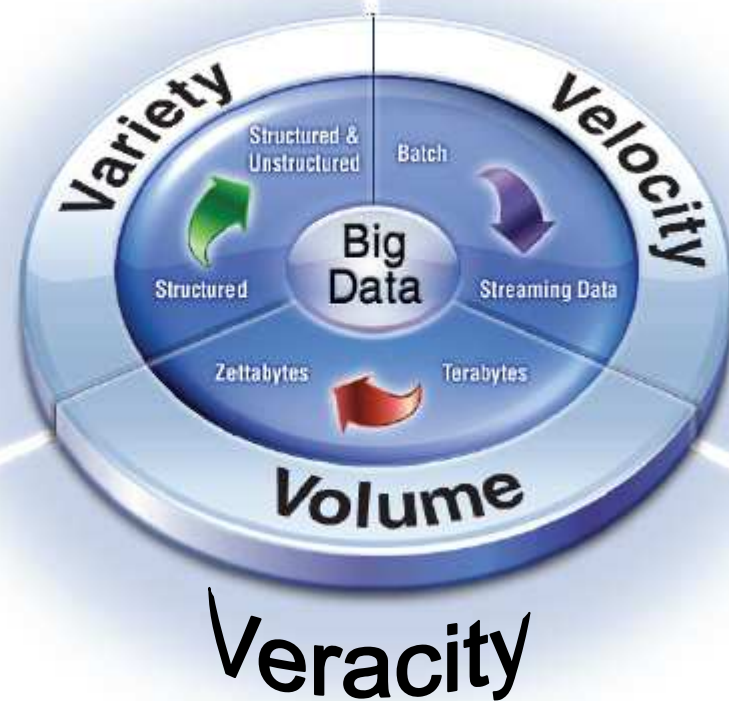*2012 will be the year of 'big data'*
BBC Nov 30 2011

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Die Herausforderung - Digitale Datenexplosion

facebook

twitter

http://ww

?

- Analyse von Logfiles, Datenspeicher und Netzwerken
- Unterstützende medizinische Diagnostik
- Vorhersage von Wetter-mustern zur optimalen Planung von Windkraftwerken, Vorausschauende Wartung
- Risiko-Entscheidungen auf Basis von Analysen in Echtzeit treffen
- Identifizierung von Gefahren aus Video, Audio und Datenströmen Verkehrsplanungen
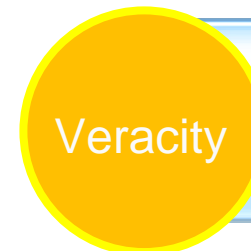
Was ist Big Data ?

|	
Variety	Verarbeitung der Komplexität von relationalen und nicht-relationalen Datentypen und Schemas
Velocity	Analyse von Daten direkt während sie entstehen
Volume	Effizientes skalieren für große Datenmengen
Veracity	**Umgang mit der Unzuverlässlichkeit von Inormationen**

Das neue Big Data Vorgehen zur Analyse

Traditionelles Vorgehen
Strukturierung & wiederholbare Analysen

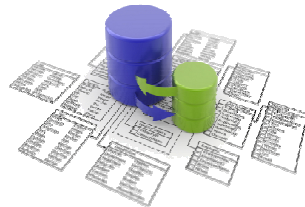**Big Data Vorgehen**
iterative & forschende Analysen

Fachbereich

Bestimmen, welche Fragen gestellt werden
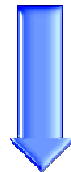
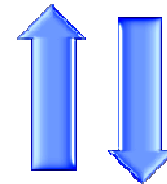**IT**

Strukturiert die Daten, um die Fragen zu beantworten

Monatlicher Umsatz
Profitabilität
Kundenanalyse …

IT

Bereitstellen einer Plattform für kreative Datenanalysen
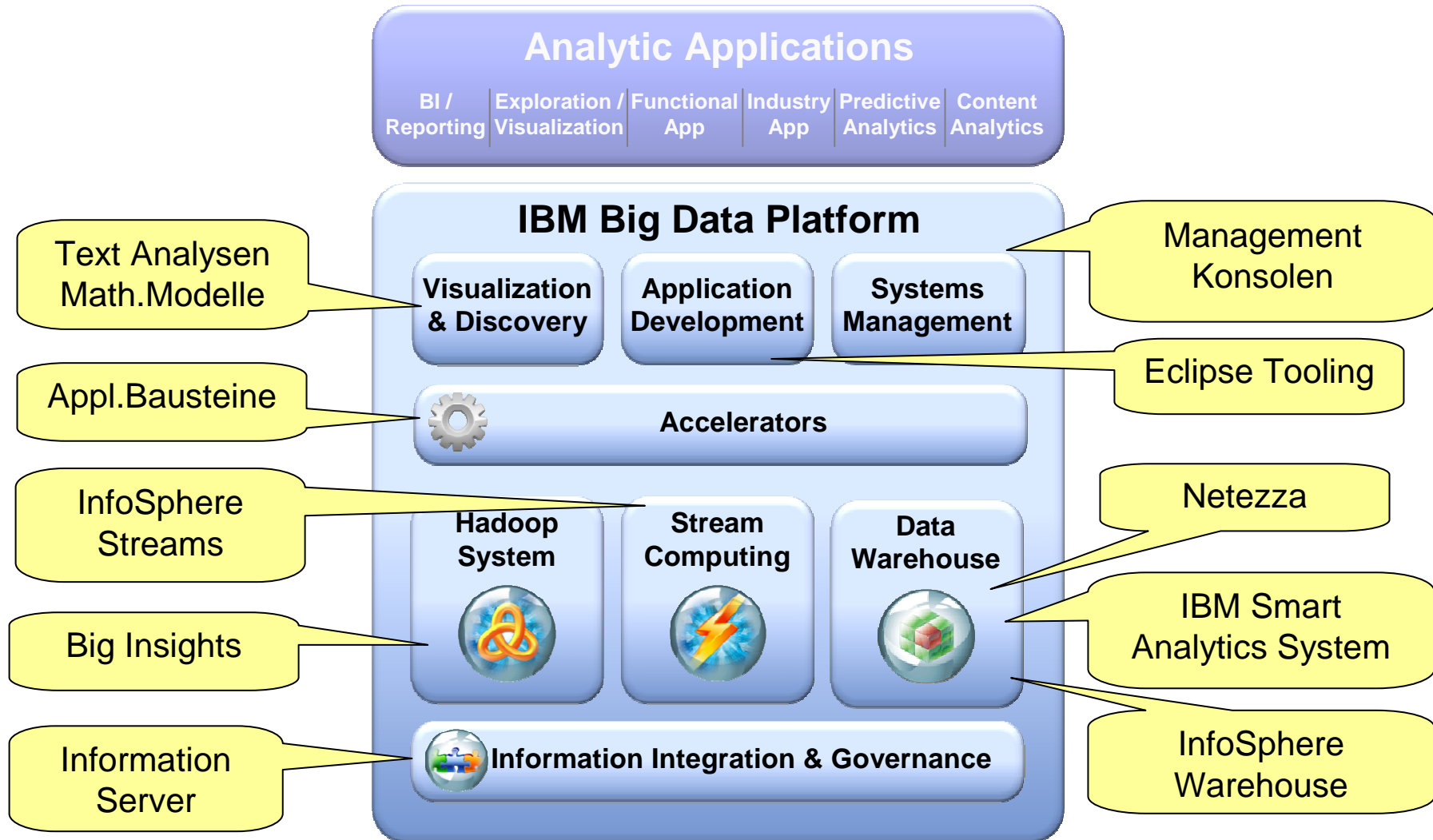
Fachbereich

Gewinnen von Einsichten und Erkunden von Informationen

Reputation der Marke
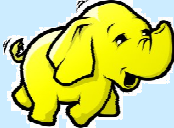Produktstrategie
Gewinnvorhersagen
Sentimente ...
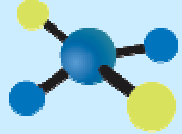
Die umfassende IBM Big Data Plattform

Analytic Applications

| BI / Reporting | Exploration / Visualization | Functional App | Industry App | Predictive Analytics | Content Analytics |

IBM Big Data Platform

Text Analysen Math.Modelle

Visualization & Discovery

Application Development

Systems Management

Management Konsolen

Appl.Bausteine

Accelerators

Eclipse Tooling

InfoSphere Streams

Hadoop System

Stream Computing

Data Warehouse

Netezza

Big Insights

IBM Smart Analytics System

Information Server

Information Integration & Governance

InfoSphere Warehouse

Leistungsfähigkeit einer Big Data Plattform

		Technology	*Description*
Process & Store huge volume of any data		**Hadoop & Map Reduce** InfoSphere BigInsights	**Distributed File System**
Structure and control data		**Data Warehouse** Netezza & ISAS InfoSphere Warehouse	**Parallel Processing Engine**
Process Streaming Data		**Complex Event Processing** InfoSphere Streams	**Stream Computing Engine**
Analyze Unstructured Data		**Text Analytics Engine** InfoSphere Streams InfoSphere BigInsights	**Analyze textual content for insights**
Integrate all data sources		**ETL, Data Quality** InfoSphere Information Server	**Integrate, transform, and manage meta data**

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Typische Architektur

Business Processes

Smarter Analytics

Drive consistent behavior across
all applications and processes

*Events and
Alerts*

web traffic and
social media Insight

Insight generates
customer churn alert

Big Data Platform

Internet Scale Analytics

Website Logs
Clickstream
Social Media
...

**Master Data
Management**

**Information
Integration**

**Data
Warehouse**

**Campaign
Management**

Campaigns

Customer

Product

Sales

Streaming Analytics

Customer behavior
and experience insight

Customer
Sentiment BI

**Customer
Insight BI**

Beispiel: Risikobewertung

Extract

Integrate

Textanalytics

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Beispiel: Wer ist Wer ?

Who Is James Dimon?

position

history

committee membership

Sincerely,

James Dimon
Chairman and Chief Executive O...

Director	Audit	Compensation & Management Development	Corporate Governance & Nominating	Public Responsibility	Risk Policy
Crandall C. Bowles	Member				
Stephen B. Burke		Member	Member		
David M. Cote				Member	Member
James S. Crown				Member	Chair
James Dimon					
Ellen V. Futter				Member	Member

Name	Grant date	Approval date	Stock awards Number of shares of stock or units (#)	Option awards Number of securities underlying options (#)	Exercise price ($/Sh)	Grant date fair value ($)
James Dimon	1/22/2008	1/15/2008	364,048			$14,500,000
	1/22/2008 [3]	1/15/2008		2,000,000 [3]	$39.830	19,868,000 [3]
Michael J. Cavanagh [4]	1/22/2008	1/15/2008	94,151			3,750,000
	1/22/2008	1/15/2008		300,000	39.830	2,980,200
	1/30/2008	N/A		54,271	47.835	360,577
	1/30/2008	N/A		10,625	47.835	91,821
Frank J. Bisignano	1/22/2008	1/15/2008	94,151			3,750,000
	1/22/2008	1/15/2008		300,000	39.830	2,980,200

James Dimon, 53, Chairman and Chief Executive Officer of JPMorgan Chase. Director since 2000.

Mr. Dimon became Chairman of the Board on December 31, 2006, and has been Chief Executive Officer and President since December 31, 2005. He had been President and Chief Operating Officer since JPMorgan Chase's merger with Bank One Corporation in July 2004. At Bank One he had been Chairman and Chief Executive Officer since March 2000. Mr. Dimon is a graduate of Tufts University and received an MBA from Harvard Business School. He is a director of The College Fund/UNCF and serves on the Board of Directors of The Federal Reserve Bank of New York, The National Center on Addiction and Substance Abuse, Harvard Business School and Catalyst. He is on the Board of Trustees of New York University School of Medicine.

Beispiel: Analyse von Kaufverhalten

Beispiel: Unterstützende medizinische Betreuung

SickKids **University of Ontario Institute of Technology**

- Anwendungsfall
  - Überwachung von Früh- und Neugeborenen
  - Vorhersage von Infektionen bis zu 24h

- Lösung
  - Zentrale Überwachung von 120 Kindern: 120K msg/sec, billion msg/day
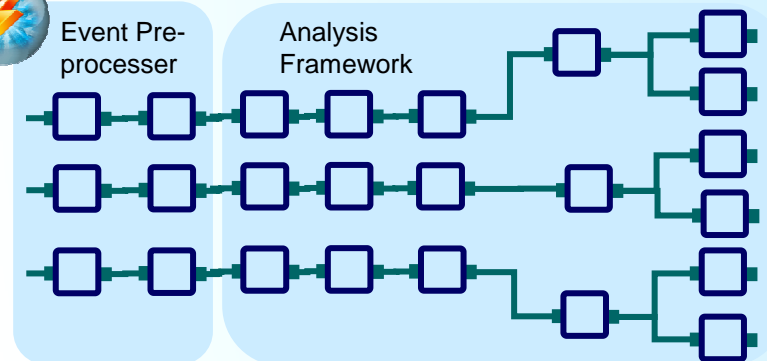 - Ausweitung auf Spitäler in US und China

Event Pre-processer

Analysis Framework

Sensor Network

Stream-based Distributed Interoperable Health care Infrastructure

Solutions (Applications)
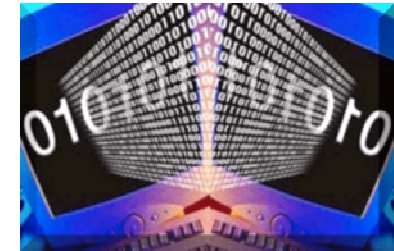
Anwendungsfälle in jeder Branche

Gesundheitswesen

Handel
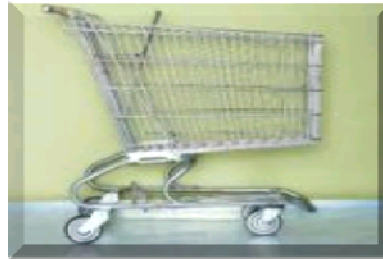
Finanzwesen
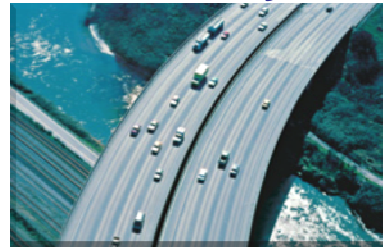
IT Security

Sicherheitsdienste

Verkehrsleitsysteme

Telekommunikation

Marketing

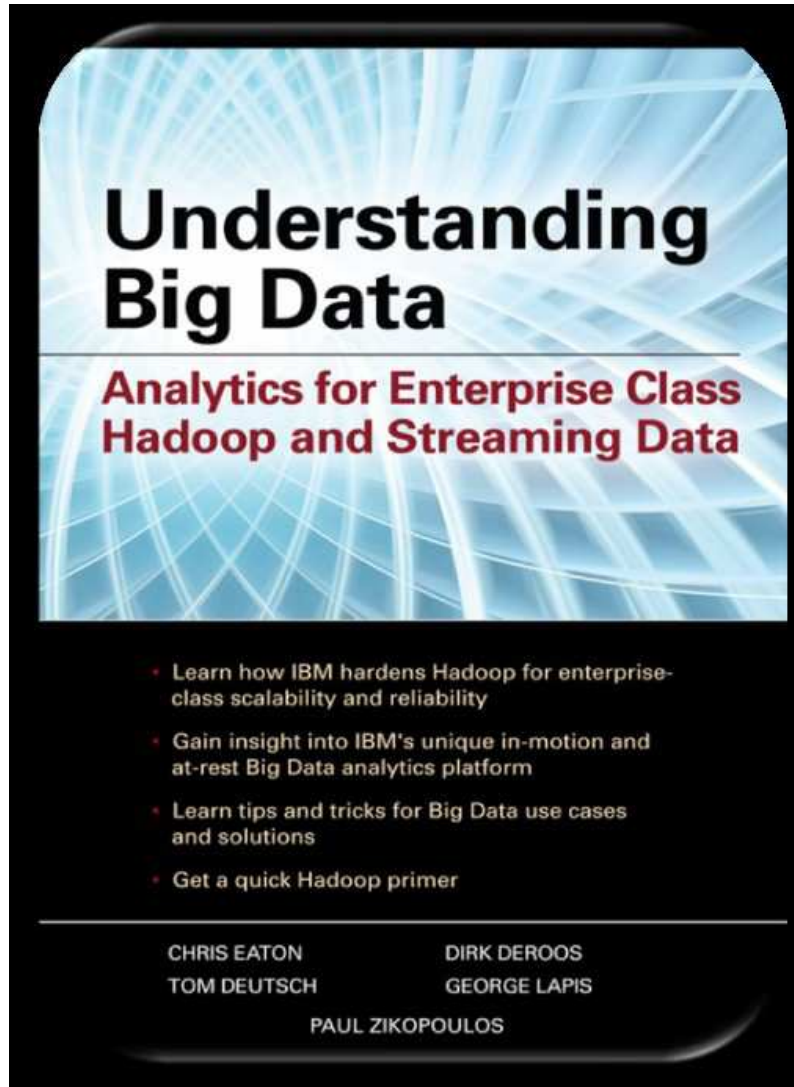**Produktion**
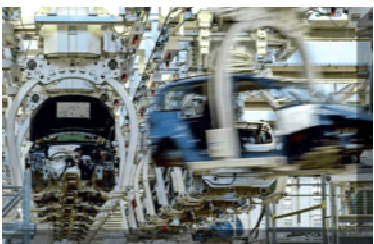
Handelsanalyse
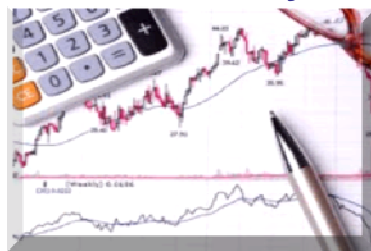
Betrugserkennung

Bestes Angebot

Weiterführende Informationen

ibm.com/bigdata

ibm.com/smarteranalytics

Demo Points

- Pure Systems

- Analytics Solution

- Netezza (Big Data)

Business Partners

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THINK Big – Big Data

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