Big Data – Just Noise or Does it Matter?

Opportunities for Continuous Auditing

Presented by: Solon Angel
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The CaseWare Group.

- An industry leader in providing technology solutions for finance and accounting, governance, risk and audit professionals.
- Over 250,000 users of our technologies across 130 countries and 16 languages.
- Customers include Fortune and Global 500 companies, Governments as well as Big Four and other major accounting firms.
- Certified ISO 9001
If data is new oil...

“Data is just like crude. It’s valuable, but if unrefined it cannot really be used. It has to be changed into gas, plastic, chemicals, etc., to create a valuable entity that drives profitable activity; so must data be broken down, analyzed for it to have value.”

— Michael Palmer
Agenda

• Big data: history of a buzz word.

• What do you do with Big Data?

• Highlights from the marketplace
IDC’s observations

Exabyte(s)

ATMs
ERPs
Transactional data
CRM, Accounting
databases, new compliance
requirements, new medias etc...

TENFOLD GROWTH OBSERVED IN FIVE YEARS
Today’s hype engine

Hardware vendors

EMC²

IDC

Gartner

Google

Yahoo!

Web economy
Definition

- “...data sets with sizes beyond the ability of commonly-used software tools...”
Increasing Data Variety & Complexity

BIG DATA

Web Logs
Offer history
Offer details
Support contacts
Web
CRM
ERP
Purchase Record
Purchase Detail
AP / AR
Payment Record

Sales transactions
Behavioral Targeting
Spatial & GPS Coordinates
Search Marketing
Affiliate Networks
Automated reports
Social Interactions & Feeds
User Generated Content
User Click Stream
Sensors /RFID/Devices

HD Audio, Video, Images
External Demographics
SMS/MMS
Mobile Web
Sentiment
Business Data Feeds
Printed reports

Megabytes
Gigabytes
Terabytes
Petabytes
Challenge always existed

• Auditors struggled to gain access to information.

• The auditor briefcase need to import from any accounting system.

• CPA firms still struggle to get relevant data from clients using ERPs.
Today: your competitive edge

- Auditors and risk seen as subject matter expert in their field
- CA implementations already required data centric approach, and auditors taking the lead in many banking initiatives.
- Supreme auditors, big 4 and F500 invested already in many data mining initiative stamped as “big data”.
- The auditors briefcase usually includes some data analytics.

➢ Audit and Governance professionals are suited to capitalize, and deliver insights from big data
Delivering value out of Big Data
Analytics as a solution

Big data is a problem... Analytics the solution

Data Sources
- Transactional systems
- Data warehouses
- Online databases
- Client files
- Printed reports

Analytics
- Audit Tests
- Statistics
- Duplicates
- Sampling
- Sort
- Append
- Group
- Join
- Search
- Gaps
- Stratify

Big Data Gap
Examples

- Medicare fraud
- In modern science
Example

• Medicare:
  – Massive data sets
  – Spread across all states and insurance
  – Applying analytics on “low hanging fruits”:

Authorities charge 91 in $430 million Medicare fraud
(Reuters) - Ninety-one people including doctors, nurses and other medical professionals were charged criminally in a new sweep of Medicare fraud.
Modern science

• Protein folding
  ➢ Human DNA code
  ➢ Protein folding is one of the hardest computational problems in biology

• Traditionally requires:
  ➢ Mathematicians and developers able to write algorithms
  ➢ Highly qualified scientists capable of interpreting results
Modern science

• How did they do it?

➤ New approach, new tools:
  — Distributed computing grid
  — Easy-to-use interface providing a single view of the problem, without the need to interpret data
  — Enabling collaboration of hundreds of individuals
In Today’s World.

• Modern Science

"You don't find many soloists among the top scorers.”

Global Moderator
How CA initiatives can help

1. A framework for gaining **insights**.
2. Effective analytics requires **domain expertise**, CA technologies minimize the interpretation.
3. CA technologies include a **collaborative** component (escalation, ownership etc.. ) .

➢ Empowers IT initiatives to focus on infrastructure.
Highlights from the marketplace
The Wall Street Journal

Getting the Big Picture on Big Data

By Ben Horowitz

The fact that "big data" is the next big thing is hardly new, but there are obstacles to its adoption. Manipulating data to get it to reveal patterns and useful information is hard and requires skills that many do not possess. In companies, it tends to be the preserve of IT departments.

Now, a company that grew out of research at Stanford, Calif., hopes to go some way toward putting sophisticated and powerful data visualization tools into the hands of anyone comfortable using a spreadsheet.

We caught up with Jack MacKinnon, the director of visual analysis at Tableau software, during his first trip to London. Tableau is a range of software tools that allow pretty much anyone who can navigate Excel to combine large datasets and produce rich interactive data presentations. The people it finds that allow pretty much anyone to use the data to tell a story. The ability to tell stories, he says, is a key part of making people comfortable.

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The Economist

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Schumpeter

Building with big data

The data revolution is changing the landscape of business

May 26th 2011 | from the print edition

The Economist

Local Governments: Ready for Big Data?

News yesterday from the U.S. Census Bureau that there are 89,004 local governments in the United States today. Are ready for transformation by big data?

McKinsey estimated that the application of big data in the public sector could save more than $100 billion ($149 billion) in efficiency improvements alone, not including using big data to reduce the costs of administrative activities. FedMint McKinsey, and "can play a similar role in Europe"...
“NOW IS THE TIME TO DEFINE A PRAGMATIC APPROACH TO BIG DATA WITH ADVANCED AUTOMATED ANALYTICS”

BIG DATA WILL DRIVE $96-$120 BILLION IN IT SPENDING IN 2013.
Driving factors

• Which application scenario for big data?
  1. (44%) Improved risk management
  2. (42.7%) Improved product development
  3. (40%) IT Analysis
  4. (36%) Improved management control
  4. (36%) Improved Customer Service

Source: IDC
Biggest challenge for big data

• What is the most important gap for successful big data initiatives:
  1. Data storage
  2. Qualified experts
  3. Costs
... where does CA fits?
Logical conclusions

• The subject matters experts that you are will be even more consulted

• Opportunities to deliver fast results and implementations of the technology and best practises will only increase
Our recommendations

1. Engage and commit IT efforts to positive cash flow outcomes.

2. Develop an enterprise-wide view based on CA technologies.

3. Start small with existing data for immediate returns, go for the quick wins, build analytical capabilities progressively.

4. Create a business case based on measured ROI for larger picture.
It’s you versus a 5.75-billion-row data set. Is your PC up to the challenge?

IDEA Server is. It works seamlessly with IDEA®, so you and your audit team can process large data sets and share analytics in a familiar, easy to use interface.

With secure, self-serve access to data, accelerated performance on large data sets, and collaborative support, you can work smarter and focus on what matters: getting the job done.

Questions

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