Changing the World with Big Data
Real-time with Real Results

David Parker, VP, SAP Big Data
Big Data Has Changed the World FOREVER
So how do we use it to improve our world?

Years to Reach 50 millions Users

<table>
<thead>
<tr>
<th></th>
<th>Radio</th>
<th>TV</th>
<th>Internet</th>
<th>iPod</th>
<th>Facebook</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>38</td>
<td>13</td>
<td>4</td>
<td>4</td>
<td>9 months</td>
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100M users in 9 months

If Facebook were a country it would be the world’s 3rd largest between India and the U.S (China is #1)

- India: 1.23B
- Facebook: 1.11B
- U.S.: 313.9M

Number of Internet users worldwide: 2.2B

Number of Google searches 2012: 1.2T

Number of electronic business and consumer transactions per DAY by 2020: 450B

More mobile phones have been manufactured than there are people on earth. 5 Billion are in use today.
Big Data - Definition

Big Data opportunity: turn raw data into insights that drive massive business value

Big Data challenge:

“Big Data refers to the problems of capturing, storing, managing, and analyzing massive amounts of various types of data.”

Most commonly this refers to terabytes or petabytes of data, stored in multiple formats, from different internal and external sources, with strict demands for speed and complexity of analysis.”

Big Data Today

GE engines in 2013

“These engines generate 1Tb of data per aircraft per day”

Jeff Immelt – CEO GE Keynote for Minds + Machines 2012 talking about the new LEAP engine
Could cars soon run on PLASTIC BAGS?
Scientists convert carriers into diesel and natural gas
M2M / IOT
TAP INTO THE STREAMING VOICES OF PEOPLE, PROCESSES, AND THINGS
Crowdsourcing data in this connected world
AT-RISK STUDENTS STAY IN SCHOOL WITH REAL-TIME GUIDANCE
Alliander

EFFICIENT
ENERGY
MANAGEMENT
FOR A
GREENER
SAFER
PLANET

Predictive Maintenance
Real time Spatial information
Agile Logistics (Parts, Service)
Smart Products
BIG DATA DIVERTS DRIVERS BEFORE FATAL ACCIDENTS HAPPEN
ANTICIPATES CONSUMER BEHAVIOR

SAP MAKES BIG DATA REAL
ACCELERATE TECHNOLOGY
CANCER PATIENTS RECEIVE TREATMENT OPTIMIZED TO THEIR DNA
Explosion of Biological Health Information Has Surpassed Human Cognitive Capacity

20-40% annual increase in medical image archives

1GB – 3D CT Scan
150MB – 3D MRI
30MB – X-ray
120MB – Mammograms

800 MB Per Genome
300 TB+ 200 Cancer Genomes
200 TB+ All Known Variants
15 PB+ Broad & Sanger DB

The Strategic Application of Information Technology in Health Care Organizations (Third Edition 2011) by John P. Glaser and Claudia Salzberg
Big data's potential big impact on sustainability hinges on three simple facts:

- taking meaningful action on corporate sustainability requires an understanding of all the impacts that the business world and the natural world have on each other;
- the business world is a very complicated place, with lots of interactions between consumers and companies and suppliers and markets;
- the natural world is even more complicated, with lots of interactions between people and resources and ecosystems and climate.
Thank you

Social Innovation for a Better World http://youtu.be/NjtBtYstDV8
Milk and SAP HANA - Creating Professional Lives http://youtu.be/eEjHRyZlj8M
Cleaner Cities Run SAP http://youtu.be/AgBCNmeBnNQ
Carpooling Made Easy http://youtu.be/NUuKTKHHbYc

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