Unlocking Hidden Potential at Intel Through Big Data Analytics

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• Leading Manufacturer of Computer, Networking & Communications Products
• Founded by Gordon Moore and Robert Noyce in 1968
• Headquartered in Santa Clara, California
• $55.9B in Annual Revenues - 25+ Consecutive Years of Positive Net Income
• Over 107,000 Employees, 170 Sites in +70 Countries
• 12th Most Valuable Brands in the World by Interbrand
• Ranked #12 on Forbes World’s Most Reputable Companies
• Largest Voluntary Purchaser of Green Power in the United States since 2008
• Invested more than $1B in Education across more than 100 Countries over the past decade
• 4 Million Hours of Volunteer Service toward improving education over the past decade
Utilize the power of Moore’s Law to bring smart, connected devices to every person on Earth.
Intel’s Vision

If it is smart and connected, it is best with Intel.

<table>
<thead>
<tr>
<th>Data Center</th>
<th>Client</th>
<th>Wearables/IoT</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Data Center Image]</td>
<td>![Client Image]</td>
<td>![Wearables/IoT Image]</td>
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Our IT Environment

Intel IT successfully supports >106,000 employees at 170 Intel sites in 66 countries with our 50 IT sites and 6,065 IT employees.

IT Spending per Employee in USD

<table>
<thead>
<tr>
<th>Year</th>
<th>Goal</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>'14</td>
<td>12,000-18,000</td>
<td>12,700</td>
</tr>
<tr>
<td>'13</td>
<td>12,000-18,000</td>
<td>12,900</td>
</tr>
<tr>
<td>'12</td>
<td>12,000-18,000</td>
<td>13,600</td>
</tr>
</tbody>
</table>

Percent of IT Spending against Revenue

<table>
<thead>
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<th>Year</th>
<th>Goal</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>'14</td>
<td>&lt;2.60%</td>
<td>2.30</td>
</tr>
<tr>
<td>'13</td>
<td>&lt;2.60%</td>
<td>2.36</td>
</tr>
<tr>
<td>'12</td>
<td>&lt;2.60%</td>
<td>2.53</td>
</tr>
</tbody>
</table>

Social Collaboration

Of 102,000 employees surveyed, 77,520 participate on our social collaboration platform.

Cloud Services

With the construction of our private cloud we can provision new web apps in <1 day.

Devices

45,000 touch-enabled Ultrabook™ devices are provided by IT.

Business Intelligence

We delivered over USD 351 million in revenue through the use of advanced analytics tools.

Data Centers

More than 80\% of our data centers have been virtualized.
Key IT Indicators

Clients / Mobility

- **Devices IT Supports**
  - Includes our bring-your-own-device program
  - 13,934 Desktop PCs
  - 105,992 Mobile PCs
  - 48,700 Smartphones
  - 5,000 Tablets

- **Number of Handheld Devices**
  - '14: 53,700
  - '13: 43,200
  - '12: 39,000
  - '11: 29,000

- **Number of Mobile Apps Developed**
  - '14: 164
  - '13: 57
  - '12: 41
  - '11: 25

Data Centers

- **Number of Data Centers**
  - Does not include manufacturing data centers
  - '14: 61
  - '13: 64
  - '12: 68
  - '11: 87

- **Petabytes of Storage Capacity**
  - '14: 106
  - '13: 72
  - '12: 56
  - '11: 38

Business Intelligence

- **USD 76.2 M**
  - Revenue increase from advanced analytics on sales leads

- **USD 264 M**
  - Revenue increase from advanced analytics on supply, demand, and pricing

Cloud

- **Time to Provision Infrastructure Services**
  - Before server virtualization: 90 Days
  - After server virtualization: 14 Days
  - After server virtualization and private cloud implementation: 45 minutes

Security

- **Security**
  - Time for Data Analysis Throughput to Detect Threats
    - '14: 20 minutes
    - '13: 2 weeks

Social

- 76% participate in social collaboration
IT & Business Partnership

Intel Key Stakeholders

- Engineering
- Manufacturing
- Sales & Marketing
- Finance/HR

Intel IT Organization Structure

CIO

Customer Oriented IT Solution Teams

Horizontal IT Capabilities

(Architecture, Engineering, Data, Operations, Support)
“A strategic inflection point is an event that changes the way we think and act.”

Andrew Grove,
Intel CEO 1987-1998
Only the Paranoid Survive...
Channel Reseller
A Changing Business Model

Previously

Intel → Authorized Distributors → Resellers build final product → End User

Currently

Intel → ODMs and OEMs build final product → Authorized Distributors → Resellers → End User
Optimized business processes through analytics

What happened?

Why did it happen?

Diagnostic

Slice & Dice

Predictive

What will happen?

Predict customer’s propensity to buy

Prescriptive

How can we make it happen?

Rank all customers according to their potential sales volume

Adapted from Gartner

Original © 2010

Sales transactions reports

value

difficulty

Adapted from Gartner

Original © 2010
SMART
Sales & Marketing Account Recommendation Tool

Who?
Prioritize reseller engagement by propensity to buy using advanced analysis of customer profiling

What?
Provide a personalized product recommendation to enable a data driven sales conversation

• Optimize sales account management and increase estimated incremental revenue through advanced predictive analytics solution
• Identify and prioritize which resellers have the greatest potential for high-volume sales through real-time data analysis
• Recommend optimal contact time in customer’s buying cycle
• Propose products to offer – cross & up-sell opportunities
Targeted Predictive Process

Data Transformation

Promoted Form Factor Big Buyers
1
2
3
4
5

Overall Big Buyers
1
2
3
4
5

Customer Profile

Early Adopter Behavior

Similarity Between The Products

Predictive Models

Ranked list for each Form Factor
Predictive Analytics Engine

Module A
Unsupervised Clustering
- Reseller Data
- Clustering Model
- Rank Clusters

Module B
Supervised Classification
- Prediction Algorithm
- Reseller Data Including Static Business Rules
- "Good" Account Probability

Module C
Ranking
- Combined Ranking System

Feedback & Refinement
Product Innovation and Revenue Growth

Account Recommendation Analytics Engine
Disrupting Traditional Channels

5X Improvement in Reseller selection

> $76M Value Delivered
Other Use Cases

• Data driven insights for process transformation
  – Personnel Management, Revenue Growth
• Predictive Analytics for seeing the future
  – Cash-flow forecasting, risk management
• Prescriptive analytics for gaining control
  – Customized credit policies, customer retention

Master Data Management is Key
A Strategic Inflection Point

Value

Transform Big Data into Actionable Knowledge

= the “Asset”

Big Data

= the “Action”

Analytics
Some Learnings...

1. Full and accurate data is key to success
2. Spend time to learn the business process
3. Regular feedback and adjustments
4. Don’t make it difficult to take action
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Making Sense of Data to
UNLOCK THE POTENTIAL