Analytics

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Agenda

1. What is Analytics?
2. Analytics in Industry and by Domain
3. Case Studies
4. Questions
What is Analytics?
Analytics is the New Science of Winning

“You have more information at hand about your business environment than ever before. But are you using it to ‘out-think’ your rivals? If not, you may be missing out on a potent competitive tool…”

Analytics differentiates top performers

A recent study from MIT shows that on average the top performing companies use analytics almost three times as much as lower performing companies in everyday operations and decisioning.

What is Analytics?

Analytics is using data to generate predictive insights to help make smarter decisions and drive strategy.
Deliver hindsight, insight, and foresight

Shareholder Value

Value Dimensions

Revenue Growth
- Increase Production Growth
- Strengthen Pricing and Royalty

Risk Management
- Mitigate Corporate/Regulatory Risks
- Improve Planning and Analysis
- Grow Investor Trust

Asset Efficiency
- Improve Asset Use
- Improve Working Capital
- Reduction in downtime associated with equipment failures

Operating Margin
- Improve Supply Chain Insight
- Improve F&D Costs
- Reduce off-contract spend and leakage

Value Levers

- Improve optimization of transportation scheduling and drilling plans
- Field improvements and reliability

Indicators

Predictive Indicators

Leading Indicators

Lagging Indicators

Data

- Location Data
- Product Data
- Hierarchies and Categorization Data
- Well Data
- Asset Data
- Sub-Surface Sensor Data
- Material Data
- Pricing Data
- Human Resource Data
- Vendor Data
- Financial Data
- Land Lease Data
Analytics in Industry and by Domain
Industry impacts

A full-scale shift toward Analytics is underway today in almost every sector.

Things have gotten so complicated, that shooting from the hip has lost its allure.

<table>
<thead>
<tr>
<th>Industry</th>
<th>Trends</th>
</tr>
</thead>
<tbody>
<tr>
<td>Banking</td>
<td>Integrated Enterprise View of Risk &amp; Finance, Profitable Customer Targeting</td>
</tr>
<tr>
<td>Insurance</td>
<td>Customer Transformation, Sales Force Effectiveness, Distribution Strategy, Underwriting and Claims Excellence</td>
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<tr>
<td>Life Sciences</td>
<td>Physician Targeting, Managed Markets, Safety Analytics, Generic Drug Competition</td>
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<tr>
<td>Health Care</td>
<td>Pay for Performance, Fraud, Quality of Care Improvement, Workforce Analytics</td>
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<tr>
<td>Public sector</td>
<td>Performance Optimization, Cost Reduction, Fraud Management, Workforce Planning</td>
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What are the Analytics offerings?

Analytics can be offered in five domains:

- **Customer Analytics**
- **Supply Chain Analytics**
- **Workforce Analytics**
- **Finance Analytics**
- **Risk Analytics**
## Domain overview

### Customer Analytics
- **Domain Definition:** Customer Analytics is the use of Analytics to enhance the customer lifecycle, sales and pricing processes, and overall customer experience
- **Sample Sub-Components:**
  - Marketing
  - Sales force
  - Customer Service
  - Customer Segmentation
  - Pricing, etc.

### Supply-chain Analytics
- **Domain Definition:** Supply Chain Analytics is the use of Analytics to provide insights across the organizational value chain
- **Sample Sub-Components:**
  - Supply Chain Efficiency
  - Inventory Productivity
  - Planning and Forecasting
  - Sourcing and Procurement
  - Logistics and Distribution, etc.

### Financial Analytics
- **Domain Definition:** Finance Analytics is the use of Analytics to measure, control, and optimize financial management processes
- **Sample Sub-Components:**
  - Reporting & Valuation
  - Revenue Leakage
  - Working Capital
  - Bankruptcy Administration
  - Tax Analytics, etc.

### Workforce Analytics
- **Domain Definition:** Workforce Analytics is the use of Analytics to enhance and optimize workforce processes and intelligence
- **Sample Sub-Components:**
  - Talent Acquisition
  - Talent Retention
  - Organizational Design
  - Workforce Planning, etc.

### Risk Analytics
- **Domain Definition:** Risk Analytics is the use of Analytics to measure, monitor and mitigate enterprise risk
- **Sample Sub-Components:**
  - Enterprise Risk Management
  - Compliance
  - Risk Management and Reporting
  - Fraud
  - Assurance Analytics, etc.

### Cross-Functional / Other Analytics
- **Domain Definition:** Analytics pertaining to cross-functional and hybrid solutions that offer multi-dimensional benefits
- **Sample Sub-Components:**
  - Risk Based Performance Management
  - Anti-Corruption
  - Sustainability
  - Lease Accounting, etc.
Case Studies
Intuition will not deliver us (from bad decision-making)

What Leaders are doing

Leading firms are designing their Finance Analytics to overlap with Analytics in other functional areas:
- Core Finance Analytics, Finance Supported and Finance Owned Advance Analytics.

<table>
<thead>
<tr>
<th>Core Finance Analytics Examples</th>
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<tbody>
<tr>
<td>Transaction Processing</td>
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<tr>
<td>Revenue recognition optimization</td>
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<tr>
<td>Credit &amp; Collection Management</td>
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<td>Fraud detection</td>
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<td>FP&amp;A</td>
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<tr>
<td>Acquisition evaluation</td>
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<tr>
<td>Reporting</td>
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<tr>
<td>Planning and forecasting</td>
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<tr>
<td>Treasury &amp; Balance Sheet</td>
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<td>Portfolio optimization</td>
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<td>Cash management</td>
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<td>FX and operation hedging</td>
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<td>Tax</td>
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<td>M&amp;A analysis</td>
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<tr>
<td>Rate Analysis</td>
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<td>FX and repatriation</td>
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<td>Legal entity structure</td>
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<td>Investor Relations</td>
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<td>GAAP Margin analysis</td>
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<td>Earnings volatility</td>
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<table>
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<th>Finance-Supported Analytics</th>
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<tr>
<td>Procurement</td>
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<tr>
<td>Business Unit</td>
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<tr>
<td>Sales &amp; Marketing</td>
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<tr>
<td>Supply Chain</td>
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<td>IT</td>
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| Procurement                     |
| Spend analysis                  |
| Vendor management optimization   |
| Margin erosion analysis         |
| Pricing analytics               |
| Service level and customer profitability alignment |
| Revenue leakage                 |
| Revenue driver                  |
| Demand/price elasticity         |
| Cross-sell/up-sell              |
| Customer retention and churn    |
| Sales, Finance, Supply Chain linked forecasting |
| New product introduction profitability and dollarization effect |
| Technology investment planning and prioritization |

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<thead>
<tr>
<th>Finance Owned Advanced Analytics</th>
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<tr>
<td>Model based forecasting</td>
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<tr>
<td>Advanced fraud detection</td>
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<td>Capital portfolio optimization</td>
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Analytics will catch fraud before you can

What Leaders are doing:

Leading organizations are turning to technology-based solutions that incorporate rules-based testing and a variety of advanced analytics techniques to not only combat fraud, but also measure performance to standard, and fine-tune controls for constant improvement.

These advanced analytic techniques are essentially helping companies to make their controls smarter.

Combining rules-based testing and advanced analytics techniques enhance an organization's fraud detection.

Analytics uncovers the digital fingerprints of fraud.
Think you know what your customers are thinking? (Trend again)

Sample Approach to Customer Insights & Analytics

A variety of critical customer data inputs can be used to answer sales marketing and customer service questions through Customer Insights & Analytics solutions.
Measure the Humans

Overview

Senior executives are operating somewhat blindly when it comes to one of the largest expense items in the P&L: the workforce – and the many related corporate resources that support it.

In many companies, the workforce is the most prolific user of real estate, information technology, and other corporate resources. Between 40%-70% of most companies' operating expenses go toward meeting compensation, benefits, and other employee-related expenses.

Yet beyond basic cost figures and employee demographics, senior executives have little or no insight into how these expenses and resources relate to broader corporate issues.

Common Challenges:

Few organizations routinely analyze the data indicating their talent requirements and talent demand from an enterprise-wide perspective. Even fewer look beyond their four wall to understand the ebbs and flows of the global economy and talent-supply.

In many organizations, the data required for effective workforce planning and optimization is divided into silos. The downturn taught many companies that workforce planning cannot be effectively executed as a once-a-year exercise, or as a knee-jerk response to a crisis.

The biggest challenge is simply changing the culture around workforce planning: to encourage them to begin collecting more employee trend data, and to take a more fact-based approach to workforce planning.
Measure the Humans

**Mutual Fit Simulation**

A “Day in the Life” simulation is used to increase candidates awareness of job tasks and have those interested self select to proceed.

**Behavioral and Competency Models**

**Competency Model 1**
Which prospects will most likely complete the recruiting/on-boarding process?

**Competency Model 2**
Which newly placed agents are most likely to be successful agents in 3 to 5 years?

**Behavioral Model 3**
Which prospects exhibit behavioral attributes which predict success in the field?

**Prioritized Candidates**

Candidates applications are then scored on three different models to identify those with the highest skills, fit and potential.

Ability and Fit are then used to prioritize which candidates should be made offers and actively recruited to accept.
Measure the Humans

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<th>Approach</th>
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<td><strong>Analyze</strong></td>
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<td><strong>Model</strong></td>
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<tr>
<td><strong>Predict</strong></td>
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### Support Tool

- Proven methodology
- High level of predictive accuracy (>97%)
- Scenario planning
- Built-in reporting capability with graphical data display
- Web based

![Diagram](image_url)
Questions?