THE MONEYBALL CIO

Learning the Science of IT Decision Making

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Billy Beane

Beane has applied statistical analysis (known as sabermetrics) to players, focusing on On-Base Percentage, which led teams to reconsider how they evaluate players.
Business Satisfaction is **IT’s KEY METRIC**

- **Innovator:** Transforms
  Reliable Technology Innovation
- **Business Partner:** Expands
  Executive Execution on Business Projects
- **Trusted Operator:** Optimizes
  Executive Fulfillment of Work Orders
- **Firefighter:** Supports
  Reliable Infrastructure of IT Service Desk
- **Unstable:** Struggles
  Inability to Provide Reliable Business Services
Our data is sourced from three Analytical Programs

**CIO Business Vision**
- Stakeholder Satisfaction
  - 59,000+ Business Leaders

**CEO-CIO Alignment**
- IT / Business Alignment
  - 380+ Pairs of CIOs & CEOs

**Management & Governance**
- IT Team Capability & Mgmt
  - 7,100+ IT Staff Members
CEOs & CIOs: do they see eye-to-eye?

Alignment on the Target Role for IT
- Aligned: 36%
- Somewhat Misaligned: 40%
- Highly Misaligned: 24%

Alignment on the Current Performance of IT
- Aligned: 29%
- Misaligned: 71%

n = 380+ pairs of CEOs and CIOs
How satisfied do we make the Business?

65% of firms have an Overall Satisfaction score between 6.0 and 8.0

Just 25% of firms score above 8.0 in Overall Satisfaction

10% of firms score lower than 6.0 in Overall Satisfaction

Average Score: 7.3
How about over time?

A closer look

The only category that is steadily going up is Dependency.

IT is not improving and the business is becoming more dependent on IT.

n = 709 first year organizations from ITRG's CIO Business Vision diagnostic
What Drives Business Satisfaction?

Values represent the percent of the $R^2$ value that each category accounts for in a multiple linear regression model.
Analyzing **BUSINESS SATISFACTION**

- Overall Satisfaction with and Value from IT
- Core IT Services
- Relationship Satisfaction
- Resource Constraints and IT Dependency
- Use of Shadow IT

Built from 43,000 Business Leaders
Levels of IT Performance vary significantly

<table>
<thead>
<tr>
<th>Service</th>
<th>Importance</th>
<th>Satisfaction</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Desk</td>
<td>2</td>
<td>79%</td>
<td>41%-98%</td>
</tr>
<tr>
<td>Devices</td>
<td>5</td>
<td>76%</td>
<td>50%-94%</td>
</tr>
<tr>
<td>Network Infrastructure</td>
<td>1</td>
<td>75%</td>
<td>31%-94%</td>
</tr>
<tr>
<td>Work Orders</td>
<td>8</td>
<td>75%</td>
<td>43%-96%</td>
</tr>
<tr>
<td>Business Applications</td>
<td>3</td>
<td>72%</td>
<td>44%-89%</td>
</tr>
<tr>
<td>Data Reliability</td>
<td>4</td>
<td>72%</td>
<td>43%-90%</td>
</tr>
<tr>
<td>IT Policies</td>
<td>11</td>
<td>72%</td>
<td>29%-83%</td>
</tr>
<tr>
<td>Requirements Gathering</td>
<td>12</td>
<td>69%</td>
<td>35%-94%</td>
</tr>
<tr>
<td>Projects</td>
<td>10</td>
<td>69%</td>
<td>37%-90%</td>
</tr>
<tr>
<td>Innovation Leadership</td>
<td>9</td>
<td>66%</td>
<td>35%-93%</td>
</tr>
<tr>
<td>Analytical Capability</td>
<td>7</td>
<td>66%</td>
<td>31%-89%</td>
</tr>
<tr>
<td>Customer Facing Tech</td>
<td>6</td>
<td>65%</td>
<td>30%-85%</td>
</tr>
</tbody>
</table>

Net IT Support Score: Satisfaction
- Percentage: +29%

Net IT Support Score: Value
- Percentage: +20%

Relationships
- Satisfaction:
  - Needs: 72%
  - Execution: 71%
  - Communication: 70%
Business Leaders misjudge which services really matter to them.

DATA DRIVEN INSIGHT

Rethink your priorities; invest in services with the highest return on IT satisfaction.

Projects, work orders, and innovation leadership drive IT satisfaction.

Ensure projects deliver value, remain on budget, and finish on time.
Achieve fast turnaround on work requests.

Data needs to be good, but truly spectacular data may go unnoticed.

Investing in state-of-the-art devices won’t significantly bolster satisfaction.

Reported Importance

1. Network Infrastructure
2. Service Desk
3. Business Applications
4. Data Quality
5. Devices
6. Client-Facing Technology
7. Analytical Capability
8. Work Orders
9. Innovation Leadership
10. Projects
11. IT Policies
12. Requirements Gathering

Actual Importance

1. Projects
2. Work Orders
3. Business Applications
4. Innovation Leadership
5. Requirements Gathering
6. Service Desk
7. Network Infrastructure
8. Data Quality
9. Analytical Capability
10. Client-Facing Technology
11. IT Policies
12. Devices

Overrated Services

Underrated Services

N = 39,000+ employees from 700+ organizations
Provide the Right Level of Core Service…
but Focus on the Services that Drive Business Satisfaction

Overall IT Satisfaction

Satisfaction in Core IT Services

Projects
Work Orders
Innovation Leadership
Business Applications

Requirements Gathering
Service Desk
Network Infrastructure
Data Quality

Analytical Capability
Client Facing Technology
Devices
IT Policies

*Created Based on Correlation Coefficients
The Formula for Business Satisfaction
Linking Core Services and Happy Stakeholders

\[ \hat{y} = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 + \beta_5 x_5 + \epsilon \]

\( \hat{y} \) is the predicted overall satisfaction with IT,
\( \beta_0 \) is the intercept of the model,
\( \beta_1 \) is the slope for \( x_1 \) which is Satisfaction with Project Delivery,
\( \beta_2 \) is the slope for \( x_2 \) which is Satisfaction with Relationships,
\( \beta_3 \) is the slope for \( x_3 \) which is Satisfaction with Infrastructure,
\( \beta_4 \) is the slope for \( x_4 \) which is Satisfaction with Innovation,
\( \beta_5 \) is the slope for \( x_5 \) which is Satisfaction with Applications, and
\( \epsilon \) is a random error term.

Example: for every 10% increase in relationship satisfaction, overall IT satisfaction is expected to increase by 0.41%.
How Well Does The Model Predict Satisfaction?

93.1% of the predicted values were within ±5% of the actual satisfaction with IT.

Accuracy

<table>
<thead>
<tr>
<th>Range</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;1%</td>
<td>31.1%</td>
</tr>
<tr>
<td>1% to 1.9%</td>
<td>26.5%</td>
</tr>
<tr>
<td>2% to 2.9%</td>
<td>17.5%</td>
</tr>
<tr>
<td>3% to 3.9%</td>
<td>10.6%</td>
</tr>
<tr>
<td>4 to 4.9%</td>
<td>7.5%</td>
</tr>
<tr>
<td>5% to 9.9%</td>
<td>6.3%</td>
</tr>
<tr>
<td>10%+</td>
<td>0.6%</td>
</tr>
</tbody>
</table>
A NEW PERSPECTIVE ON IT

Using data to help optimize IT performance
Three Very Different Philosophies
Which will help you the best?

Balanced Bill
Chief Information Officer
Blue Bus Co.

“Every IT process is an equally important part of a successful IT operation.”

Trendy Tony
Chief Information Officer
Yellow Yukelele LLC

“An IT leader in 2018 needs to do three things to succeed: invest in cloud, increase capacity, and innovate.”

Cautious Carla
Chief Information Officer
Green Gardens Inc.

“I don’t know what my priorities will be. Depends what matters, and where we can make an impact.”
Which Approach is Best?
What you try to improve matters. A lot.

<table>
<thead>
<tr>
<th></th>
<th>Applications</th>
<th>Project Mgmt.</th>
<th>Infrastructure</th>
<th>Innovation</th>
<th>Relationships</th>
<th>Standards</th>
<th>Satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline Scores</td>
<td>65%</td>
<td>62%</td>
<td>58%</td>
<td>56%</td>
<td>60%</td>
<td>52%</td>
<td>63%</td>
</tr>
<tr>
<td>“Every IT process is equally important.”</td>
<td>68% ▲3</td>
<td>65% ▲3</td>
<td>61% ▲3</td>
<td>60% ▲4</td>
<td>63% ▲3</td>
<td>56% ▲4</td>
<td>66% ▲3</td>
</tr>
<tr>
<td>“Invest in infrastructure, increase capacity, and innovate.”</td>
<td>67% ▲2</td>
<td>63% ▲1</td>
<td>66% ▲8</td>
<td>63% ▲7</td>
<td>61% ▲1</td>
<td>54% ▲1</td>
<td>66% ▲3</td>
</tr>
<tr>
<td>“I need to find out what matters, and where we can make an impact.”</td>
<td>65% ▲1</td>
<td>72% ▲10</td>
<td>58% –</td>
<td>57% ▲1</td>
<td>68% ▲8</td>
<td>52% –</td>
<td>71% ▲8</td>
</tr>
</tbody>
</table>
Ken had a new CFO and had just come out of the recession where his organization lost over 20% of their business. He needed to present what IT did, and didn’t have an effective way to show ITs value or how they were going to address new technology coming on the landscape (cloud, MDM, big data).

By leveraging data, ken embarked on an IT transformation and undertook major projects across service management, network upgrades, client facing technology and had incredible results.
Overall Metrics

Overall Satisfaction and Value are key indicators of the overall impression of the IT department. These metrics let the IT leader determine at a glance if they are meeting the needs of the business.

<table>
<thead>
<tr>
<th>Satisfaction</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>This Year</td>
<td>Last Year</td>
</tr>
<tr>
<td>66%</td>
<td>65%</td>
</tr>
</tbody>
</table>

IT Support Breakdown

The IT Support Breakdown chart indicates the percent of stakeholders that fall into three important categories. Promoters are loyal enthusiasts of IT. Neutral stakeholders are satisfied but unenthusiastic about IT. Detractors are unhappy stakeholders who can damage your reputation.

<table>
<thead>
<tr>
<th>Net IT Support Score</th>
<th>Satisfaction</th>
<th>IT Support Breakdown</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Promoters (scored 8-10)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Neutral (scored 7)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Detractors (scored 1-6)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Net IT Support Score: Value</th>
<th>IT Support Breakdown</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Promoters - Detractors</td>
</tr>
</tbody>
</table>

-9%                          -23%

IT Relationship Satisfaction

Relationships are a key driver in stakeholder management. It is important that the business feels IT understands their needs and is getting enough communication.

<table>
<thead>
<tr>
<th>Relationship</th>
<th>Satisfaction</th>
<th>Last Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Needs</td>
<td>67%</td>
<td>--</td>
</tr>
<tr>
<td>Execution</td>
<td>64%</td>
<td>--</td>
</tr>
<tr>
<td>Communication</td>
<td>65%</td>
<td>--</td>
</tr>
</tbody>
</table>

Business Satisfaction and Importance for Core Services

The core services of IT are important when determining what IT should focus on. The most important services with the lowest satisfaction offer the largest area of improvement for IT to drive business value.

<table>
<thead>
<tr>
<th>Core Service</th>
<th>Satisfaction</th>
<th>Importance Ranking</th>
<th>Last Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT Policies</td>
<td>70%</td>
<td>12th</td>
<td>--</td>
</tr>
<tr>
<td>Network &amp; Comm. Infrastructure</td>
<td>70%</td>
<td>1st</td>
<td>--</td>
</tr>
<tr>
<td>Business Apps</td>
<td>68%</td>
<td>5th</td>
<td>--</td>
</tr>
<tr>
<td>Service Desk</td>
<td>67%</td>
<td>3rd</td>
<td>--</td>
</tr>
<tr>
<td>Data Quality</td>
<td>67%</td>
<td>2nd</td>
<td>--</td>
</tr>
<tr>
<td>Analytical Capability and Reports</td>
<td>65%</td>
<td>6th</td>
<td>--</td>
</tr>
<tr>
<td>Work Orders</td>
<td>65%</td>
<td>10th</td>
<td>--</td>
</tr>
<tr>
<td>Requirements Gathering</td>
<td>64%</td>
<td>11th</td>
<td>--</td>
</tr>
<tr>
<td>Devices</td>
<td>63%</td>
<td>4th</td>
<td>--</td>
</tr>
<tr>
<td>Projects</td>
<td>63%</td>
<td>9th</td>
<td>--</td>
</tr>
<tr>
<td>IT Innovation Leadership</td>
<td>59%</td>
<td>8th</td>
<td>--</td>
</tr>
<tr>
<td>Client-Facing Technology</td>
<td>56%</td>
<td>7th</td>
<td>--</td>
</tr>
</tbody>
</table>
IT Satisfaction Scorecard

Overall Metrics
Overall Satisfaction and Value are key indicators of the overall impression of the IT department. These metrics let the IT leader determine at a glance if they are meeting the needs of the business.

**Satisfaction**
- This Year: 87%
- Last Year: 85%

**Value**
- This Year: 85%
- Last Year: 4%

IT Support Breakdown
The IT Support Breakdown charts are indicators of the pattern of stakeholders that fall into these important categories. Promoters are loyal enthusiasts of IT. Neutral stakeholders are satisfied but unenthusiastic about IT. Detractors are unhappy stakeholders who can damage your reputation.

Net IT Support Score: Satisfaction
- Net IT Support Score: Satisfaction
- IT Support Breakdown: +78%
- Detractors (scored 1-6)
- Neutral (scored 7)

Net IT Support Score: Value
- Net IT Support Score: Value
- IT Support Breakdown: +65%
- IT Support Breakdown = Supporters - Detractors

IT Relationship Satisfaction
Relationships are a key driver in stakeholder management. It is important that the business finds IT understands their needs and is getting enough communication.

<table>
<thead>
<tr>
<th>Relationship</th>
<th>Satisfaction</th>
<th>Last Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Needs</td>
<td>86%</td>
<td>5%</td>
</tr>
<tr>
<td>Execution</td>
<td>85%</td>
<td>5%</td>
</tr>
<tr>
<td>Communication</td>
<td>86%</td>
<td>5%</td>
</tr>
</tbody>
</table>

Business Satisfaction and Importance for Core Services
The core services of IT are important when determining what IT should focus on. The most important services with the lowest satisfaction offer the largest area of improvement for IT to drive business value.

<table>
<thead>
<tr>
<th>Core Service</th>
<th>Satisfaction</th>
<th>Importance Ranking</th>
<th>Last Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Desk: Satisfaction with responsiveness and effectiveness of service desk</td>
<td>91%</td>
<td>2nd</td>
<td>4%</td>
</tr>
<tr>
<td>Work Orders: Satisfaction with small requests and bug fixes</td>
<td>87%</td>
<td>6th</td>
<td>5%</td>
</tr>
<tr>
<td>IT Policies: Satisfaction with policy design and enforcement around security, governance, etc.</td>
<td>85%</td>
<td>11th</td>
<td>4%</td>
</tr>
<tr>
<td>Network &amp; Comm. Infrastructure: Satisfaction with reliability of comm. Systems and networks</td>
<td>85%</td>
<td>1st</td>
<td>4%</td>
</tr>
<tr>
<td>Devices: Satisfaction with desktops, laptops, mobile devices etc.</td>
<td>84%</td>
<td>3rd</td>
<td>9%</td>
</tr>
<tr>
<td>Data Quality: Satisfaction with providing reliable and accurate data</td>
<td>84%</td>
<td>4th</td>
<td>6%</td>
</tr>
<tr>
<td>Business Apps: Satisfaction with applications and functionality</td>
<td>83%</td>
<td>5th</td>
<td>4%</td>
</tr>
<tr>
<td>Projects: Satisfaction with large department or corporate projects</td>
<td>82%</td>
<td>9th</td>
<td>6%</td>
</tr>
<tr>
<td>Requirements Gathering: Satisfaction with BA’s ability to understand and support the business</td>
<td>80%</td>
<td>12th</td>
<td>4%</td>
</tr>
<tr>
<td>Analytical Capability and Reports: Satisfaction with effective standard reports, custom reports capability, and the ability to generate business insights</td>
<td>79%</td>
<td>7th</td>
<td>4%</td>
</tr>
<tr>
<td>IT Innovation Leadership: Satisfaction with providing opportunities for innovation and innovation leadership to improve the business</td>
<td>78%</td>
<td>10th</td>
<td>5%</td>
</tr>
<tr>
<td>Client-Facing Technology: Satisfaction with user experience and effectiveness</td>
<td>76%</td>
<td>6th</td>
<td>7%</td>
</tr>
</tbody>
</table>
Ken’s Progress was Steady

Overall IT Satisfaction

- Balanced Improvement
- Optimal Improvement
- Actual Satisfaction

2013: 65.6%
2014: 73.3%
2015: 80.4%
2016: 87.7%

Ken’s progress shows a steady increase in overall IT satisfaction from 2013 to 2016.
If Business Satisfaction is IT’s Key Metric…

- **Innovator**: Transforms
  - Reliable Technology Innovation
- **Business Partner**: Expands
  - Executive Execution on Business Projects
- **Trusted Operator**: Optimizes
  - Executive Fulfillment of Work Orders
- **Firefighter**: Supports
  - Reliable Infrastructure of IT Service Desk
- **Unstable**: Struggles
  - Inability to Provide Reliable Business Services

Business Satisfaction Levels:
- **90-100%**
- **80-90%**
- **70-80%**
- **60-70%**
- **< 60%**
Improvement will be driven by IT Capabilities
Your team will struggle with **Importance & Effectiveness**

- **High Importance, Low Effectiveness**: Improve Process Immediately
- **Low Importance, Low Effectiveness**: Evaluate Process
- **Low Importance, High Effectiveness**: Maintain Process
- **High Importance, High Effectiveness**: Leverage Process
Your Data will Dictates What Matters

- **Strategic Projects**
  - IT Projects Meet Business Needs
  - IT Projects Meet Strategic Objectives

- **Discretionary Projects**
  - IT Execution of Requests
  - Work Order Execution
  - Requirements Gathering
  - Business Applications
  - IT Innovation

- **Quick Wins**
  - Work Order Speed
  - Needs Understanding
  - Communication

- **Time Sinks**
  - Analytical Capability
  - Data Quality
  - IT Policies

- **Ease of Improving Process**
  - Correlation with Overall IT Satisfaction
  - Low to High

- **Client Facing Technology**
  - Devices

- **IT Policies**
  - Networking Infrastructure
  - Service Desk

- **Applications**
  - Project Mgmt
  - Innovation
  - Infrastructure
  - Relationships

- **Your Data will Dictates What Matters**
Data allows you to define your needed capabilities and build action plans **Example: Security**

**Step 1**
**Diagnose Security Issues**

Despite all the security-related headlines in the news over the past few years, 94% of companies have experienced data breaches due to being stuck in reactive mode for operations.

**Step 2**
**Build Your Security Strategy**

90% of companies are still in reactive mode when handling security issues. Elevate your security operations out of reactive “block and tackle” models and become a proactive juggernaut.

**Step 3**
**Establish Mitigation Effectiveness Control**

The IT landscape evolves every 3 years, and security controls become obsolete over time. Being able to measure mitigation effectiveness leads to security excellence.

**Step 4**
**Develop your Risk Management Program**

CISOs and CIOs must understand how to assess risk. It's easy to describe the value of risk management, but the question becomes how to manage the risk.

**Step 5**
**Develop Your Incident Response Capabilities**

Security incidents are inevitable, but how they're dealt with can make or break an organization. Poor incident response negatively impacts the Business in multiple ways.

**Step 6**
**Adopt Human Centric Security Development**

The #1 method of penetration by hackers is social engineering against humans. The best technology cannot prevent hackers with critical access information.

**Step 7**
**Establish a Policy and Audit Framework**

Many companies still use regulatory governance as their policy control rather than using their business’ DNA to create policy. Make policy work for you to enhance your company’s security.

**Step 8**
**Select and Implement a GRC Solution**

Get the big picture of roles and responsibilities, operations and compliance obligations – and be able to manage them within one solution.

**Step 9**
**Optimize Your Budget**

For years, security operations have been improperly seen as a cost center. Help your C-Suite and Board of Directors see the value of security operations.
Organizations that Measure Satisfaction Dramatically Outperform their Peers

N=709 organizations

*Data point includes members at year 2-5 to ensure n-count sufficiency
THANK YOU

Questions?

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