TAG 2018 Annual Meeting

Information Technology Trends: A Focus on Planning, Effectiveness and Cost Optimization

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Mark serves as the industry managing partner for Grant Thornton’s Not-for-Profit and Higher Education practices, with overall responsibility for services performed by the firm for these clients nationwide, along with all marketplace initiatives in these sectors.

Mark also is an Advisory principal responsible for providing business strategy and governance, operations improvement, information technology, and business risk services to the firm’s clients. His engagements have included strategic planning, organizational reviews, reserves analyses, board governance, financial modeling, benchmarking and best practices reviews, risk assessments, ERM, operations improvement, internal audit, construction audit, technology effectiveness assessments, IT strategy and planning, requirements analyses, business continuity/disaster recovery, system selections and implementation, cybersecurity risk analysis, and post-implementation reviews.

Mark is a frequent panelist and lecturer on business and technology topics. He has spoken at numerous industry events, including NACUBO, EACUBO, CACUBO, ACUA, InsideNGO, FFOG, TAG, NJSSCPA, AHIA, NJHFMA, and the AICPA. Mark is a member of Grant Thornton’s national leadership team, and serves on several national not-for-profit boards (including roles as audit committee chair and executive committee member).

Mark holds an Information Systems degree from the Wharton School of Business at the University of Pennsylvania.
Agenda

• IT Planning
• IT Effectiveness
• IT Cost Reduction
IT Planning Overview

• An IT Strategic Plan provides a blueprint for future technology projects and investments that will allow the organization to meet future business demands

• Implementation of an IT Strategic Plan should provide benefits throughout the foundation, such as:
  – Increased productivity and more streamlined workflow
  – Better data for making management decisions
  – Improved quality of service
  – Enhanced communications with grantees, key constituents, and internal “customers”
  – Improved knowledge sharing
IT Planning Overview (cont'd)

• The plan must be more than just a technology exercise; a strictly technology-driven plan will not help you achieve strategic goals

• A business-based approach to developing an IT Plan must take into account
  – organizational issues
  – governance needs
  – legal and regulatory compliance
  – functional process and control requirements
  – industry trends

• The IT plan should position the organization to support and enable achievement of mission

• In developing a plan, an understanding of the marketplace is needed to identify best practices, industry trends, and competitive drivers
IT Planning – Objectives

• Identify strategic applications and technology that address current deficiencies and future business needs

• Define organization and processes required to support technology initiatives

• Assess IT project implementation capabilities
  – IT governance, management practices and processes
  – Supporting technology required to implement projects in a cost-effective manner
IT Planning – Objectives (cont’d)

• An IT plan can be the roadmap/charter for effective IT management, and can aid in making investments and decisions in software, hardware, and organization:
  – **Software**
    • Identification of deficiencies with the current application and enabling technology portfolio
    • Assessment of the portfolio’s ability to support current needs and future direction
    • Determination of what the needed applications are and how they will integrate into the current environment
IT Planning – Objectives (cont’d)

− Hardware
  • Decisions as to the long-term equipment strategy
  • Guidance as to how the parts fit together
  • Integration of overall technology direction and initiatives
  • Identification of key technology projects required (e.g., network upgrades, security/firewalls, Intranet, etc.) and how and when they should be done
IT Planning – Objectives (cont’d)

− **Organization**
  - Determination regarding how hardware and software will be maintained
  - Identification of how new technology will be developed
  - Determination of how users should be supported
  - Decisions regarding what the IT organization should look like and to whom it should report
  - Assessment as to which functions, if any, are best suited to outsourcing
  - Guidance regarding an enhanced organizational structure
  - Establish linkage between IT efforts and the organization's strategy and planning
    - Ensure IT projects undertaken are consistent with the business plan
    - Technology investments should support business objectives and direction
IT Planning – Scope

• **A review of where you are** – a confirmation of current systems, procedures, and technologies as a means of defining current needs

• **A review of where you are going** – a look at future business plans and the needs that will ensue

• **A definition of where you should be** – development of a target applications and technical environment, along with IT staffing, outsourcing opportunities and support recommendations

• **A description of the roadmap to get there** – identification of the projects required to achieve the desired future state in priority sequence with high-level timeframes, costs, benefits, and staffing estimates
IT Planning – Approach

Overview

• Review business plans, direction, and needs
• Review industry and competitive environment
• Identify deficiencies in current environment
• Define future state
• Develop implementation approach and budget
IT Planning – Approach (cont’d)

- Interview select executives and key management:
  - Confirm organization vision/mission, strategy, and performance metrics/criteria
  - Review plans for business growth and new directions
  - Identify key business drivers, priorities, and critical success factors
  - Discuss strengths, weaknesses, opportunities, threats
  - Review strategic uses of technology
- Review industry and competitive environment
IT Planning – Approach (cont’d)

- Obtain/review inventory of systems, forms, volumes, reports, etc.
- Assess current applications and procedures/processes (system capabilities, processing limitations, interfaces, manual intervention, controls, etc.)
- Assess current hardware, systems software, enabling technologies, networks, databases, and support infrastructure
- Review IT organization, structure, responsibilities, and skill levels
- Review inter-departmental communications, coordination, and information flow
- Summarize deficiencies in current environment
- Identify how each functional area uses/would like to use technology
- Compare technology, staffing, and costs to industry best practices
IT Planning – Approach (cont’d)

• Develop target applications environment
• Determine applicability of enabling technologies
• Develop target technical environment
• Identify third-party servicing/outsourcing opportunities
• Define organizational impact, staffing and support requirements
• Define application, technology, organizational projects (incl. description, costs, benefits, timeframe, resources required, dependencies, assumptions, priority)
• Develop procedural recommendations/opportunities for business process improvement
• Identify interim improvement opportunities
IT Planning – Approach (cont’d)

- Establish project schedules, priorities, implementation sequence
- Summarize project costs and investment schedule
- Create Information Systems Plan document
IT Planning – Key Deliverables
Target Applications Environment
IT Planning – Key Deliverables
Target Infrastructure Schematic
IT Planning – Key Deliverables
Future State IT Organization

- CIO
  - VP of Operations
    - Help Desk Manager
      - Help Desk Staff (2)
      - Help Desk Staff – Off Hours
      - Help Desk Assistant
    - Senior Systems Administrator
    - Systems Admin (NY)
    - Communications Manager
  - Director of IT Operations
  - Project Manager / Business Analyst (1-2)
  - Director of Programming
  - eLearning Director
    - Programmer / Analyst (2)
    - Knowledge Management Staff (9)
    - Data Architect / DBA
    - Knowledge Management Staff (3)

- VP of Applications
  - Senior Director, Knowledge Management
  - Programmer / Analyst (1-2)
  - Knowledge Management Staff (3)

LEGEND
- Current Position
- Redefined Position
- New Position
## IT Planning – Key Deliverables

### Technology Investment Projection

<table>
<thead>
<tr>
<th></th>
<th>FY18</th>
<th>FY19</th>
<th>FY20</th>
<th>FY21</th>
<th>FY22</th>
<th>FY23</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Staff Salaries &amp; Benefits</strong></td>
<td>$636,975</td>
<td>$901,571</td>
<td>$1,035,723</td>
<td>$1,077,152</td>
<td>$1,120,238</td>
<td>$1,165,047</td>
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<tr>
<td><strong>Consultants</strong></td>
<td>$366,700</td>
<td>$471,201</td>
<td>$506,284</td>
<td>$635,930</td>
<td>$784,202</td>
<td>$508,540</td>
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<tr>
<td><strong>Hardware/Software</strong></td>
<td>$201,150</td>
<td>$287,167</td>
<td>$304,230</td>
<td>$304,338</td>
<td>$443,493</td>
<td>$293,696</td>
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<tr>
<td><strong>Licensing/Maintenance</strong></td>
<td>$51,000</td>
<td>$129,895</td>
<td>$208,310</td>
<td>$268,822</td>
<td>$264,004</td>
<td>$287,208</td>
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<tr>
<td><strong>Training</strong></td>
<td>$0</td>
<td>$54,000</td>
<td>$29,250</td>
<td>$63,250</td>
<td>$75,000</td>
<td>$7,500</td>
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<tr>
<td><strong>Communications</strong></td>
<td>$127,514</td>
<td>$133,890</td>
<td>$140,504</td>
<td>$147,613</td>
<td>$154,994</td>
<td>$162,744</td>
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<tr>
<td><strong>Other IT Costs</strong></td>
<td>$13,500</td>
<td>$21,703</td>
<td>$13,908</td>
<td>$14,117</td>
<td>$14,328</td>
<td>$14,543</td>
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<tr>
<td><strong>Total Technology Expense</strong></td>
<td>$1,396,839</td>
<td>$1,999,425</td>
<td>$2,238,289</td>
<td>$2,511,242</td>
<td>$2,776,260</td>
<td>$2,439,278</td>
</tr>
</tbody>
</table>

**% Increase over previous year**

- FY19: 43.1%
- FY20: 11.9%
- FY21: 12.2%
- FY22: 10.6%
- FY23: -12.1%
# IT Planning – Key Deliverables

## Project Schedule

| #  | Project Name                                      | Category                     | Anticipated Investment | Duration (months) | FY13 | FY14 | FY15 | FY16 | FY17 |
|----|---------------------------------------------------|------------------------------|------------------------|-------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1  | Technology Standards - Requirements Definition   | Infrastructure              | $0                     | 1                 | 1    | 3    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 2  | Program Impact Analysis - Requirements Definition| Applications                | $10,000                | 1                 | 3    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 3  | Email Upgrade / Archiving                         | Applications                | $30,000                | 3                 | 6    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 4  | Business Continuity including Disaster Recovery & Security | Governance                 | $60,000                | 3                 | 6    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 5  | Infrastructure Development                        | Infrastructure              | $59,500                | 6                 | 9    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 6  | Collaboration Tools                               | Applications                | $300,000               | 12                | 18   |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 7  | IBM Governance                                    | Governance                  | $7,500                 | 6                 | 9    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 8  | Office-in-a-box - Requirements Definition         | Processes                   | $15,000                | 1                 | 3    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 9  | Line Data Feeds (Reverse Media) - Requirements Definition | Infrastructure              | $21,250                | 1                 | 3    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 10 | Organizational Structure                          | Organization                | $205,000               | 3                 | 6    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 11 | Donor Offer Evaluation - Requirements Definition  | Applications                | $10,000                | 1                 | 3    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 12 | Data Warehouse                                    | Applications                | $235,000               | 9                 | 12   |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 13 | Enhance Volunteer Database                        | Applications                | $12,000                | 1                 | 3    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 14 | Video & Tele-Conferencing Project                 | Infrastructure              | $161,050               | 3                 | 6    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 15 | EMR / Practice Management / e-Health Records      | Applications                | $66,000                | 9                 | 12   |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 16 | Donor Data Mining & Analytics                     | Applications                | $72,500                | 3                 | 6    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 17 | Enhance Overseas Technology Support               | Organization                | $0                     | 1                 | 3    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 18 | Metadata Tagging - Requirements Definition        | Applications                | $15,000                | 1                 | 3    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 19 | Partner (Constituent) Relationship Management (PRM) | Applications                | $577,500               | 9                 | 12   |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 20 | Helpdesk & Related Infrastructure                 | Infrastructure              | $45,000                | 3                 | 6    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 21 | Partnership Network                               | Applications                | $60,000                | 1                 | 3    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 22 | Interface for Distribution Reporting              | Applications                | $17,500                | 3                 | 6    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 23 | Virtual Order                                     | Applications                | $17,500                | 3                 | 6    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 24 | Expense Reporting - Requirements Definition       | Applications                | $10,000                | 1                 | 3    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 25 | Phone System Replacement                          | Infrastructure              | $200,000               | 1                 | 3    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 26 | Comprehensive Business Process Review             | Processes                   | $0                     | 1                 | 3    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
## IT Planning – Key Deliverables

### Staffing Plan

<table>
<thead>
<tr>
<th>Resource Type</th>
<th>FY18</th>
<th>FY19</th>
<th>FY20</th>
<th>FY21</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total full-time resources</td>
<td>8</td>
<td>10</td>
<td>12</td>
<td>13</td>
</tr>
<tr>
<td>Current staff level</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Help Desk support</td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Fundraiser/Donor DB support</td>
<td></td>
<td>1</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

| Total part-time resources            | 3    | 4    | 4    | 4    |
| Current staff level                  | 3    | 3    | 3    | 3    |
| Knowledge management professional    |      | 1    | 1    | 1    |
IT Planning – Key Deliverables
Project Descriptions

• Project Name:
• Description:
• Requirements:
• Benefits:
• Resources/Skills:
• Costs:
• Duration:
• Timing:
• Dependencies:
• Assumptions:
• Priority:
## IT Planning – Key Deliverables

### Project/Strategy Map

<table>
<thead>
<tr>
<th>National Goal</th>
<th>New York Goal</th>
<th>Communications Goal</th>
<th>Revenue Goal</th>
<th>Infrastructure Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Transition IT to serve as a strategic asset</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Support tactical and operational needs</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Rebuild trust in IT as a service</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Enhance the application portfolio</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Enhance the technology infrastructure</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Expand IT skills and competencies</td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>
IT Capability Maturity Model

• Helps assess the degree to which technology is positioned as a strategic asset and how IT supports the organization and its mission
  – **Stage 1: “Nuts & Bolts”** – IT functions as a technical service organization and focuses on “keeping the lights on”
  – **Stage 2: Satisfy Requests** – IT functions as a business service provider; when the business community requests a tool or service, IT can provide it
  – **Stage 3: Enable Business** – IT functions as a business enabler; when the organization expresses a need, IT can design a solution and implement it
  – **Stage 4: Strategic Partner** – IT functions as a business driver; IT brings forward ideas that create significant value for the organization
## IT Capability Maturity Model (cont’d)

<table>
<thead>
<tr>
<th>Area</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Governance</td>
<td>Organizations with more sophisticated IT governance have the oversight in place for setting policies and standards, determining acceptable service levels, establishing priorities, and rationalizing spending.</td>
</tr>
<tr>
<td>Organization / Skills</td>
<td>Organizations that are higher on the organization/skills scale have well-defined roles, appropriately designed organizational structures, and adequate training, allowing IT to apply innovative technology solutions to business needs.</td>
</tr>
<tr>
<td>Processes and Controls</td>
<td>Organizations with well-defined IT processes have formalized procedures for executing IT activities such as change control, request intake, support tracking, and maintenance. In addition, proper internal controls are in place, securing the IT environment from potential risks.</td>
</tr>
<tr>
<td>Applications</td>
<td>Organizations with sophisticated application environments have interoperable systems that effectively serve the organization’s needs. Data is more readily shared across applications, and systems can more easily be adapted or expanded for new business requirements as they are identified.</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>Organizations with advanced infrastructure environments employ technical architectures that enable business continuity, provide scalability, and protect against accidental and malicious intrusion.</td>
</tr>
</tbody>
</table>
## IT Capability Maturity Model (cont'd)

### (Level of Sophistication)

<table>
<thead>
<tr>
<th></th>
<th>Today</th>
<th>FY18</th>
<th>FY19</th>
<th>FY20</th>
<th>FY21</th>
<th>FY22</th>
</tr>
</thead>
<tbody>
<tr>
<td>Governance</td>
<td>Low</td>
<td>Low</td>
<td>Medium</td>
<td>Medium</td>
<td>Medium</td>
<td>Medium</td>
</tr>
<tr>
<td>Organization/Skills</td>
<td>Medium</td>
<td>Medium</td>
<td>Medium</td>
<td>Medium</td>
<td>Medium</td>
<td>Medium</td>
</tr>
<tr>
<td>Processes and Controls</td>
<td>Medium</td>
<td>Medium</td>
<td>Medium</td>
<td>Medium</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Applications</td>
<td>Low</td>
<td>Medium</td>
<td>Medium</td>
<td>High</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>Low</td>
<td>Low</td>
<td>Medium</td>
<td>Medium</td>
<td>Medium</td>
<td>High</td>
</tr>
</tbody>
</table>

### Maturity Stage

- **Stage 1**: "Nuts and Bolts"
- **Stage 2**: Satisfy Requests
- **Stage 2**: Satisfy Requests
- **Stage 3**: Enable Business
- **Stage 3**: Enable Business
- **Stage 4**: Strategic Partner
IT Planning – Benefits

• Provides overall vision and consistent direction for future IT initiatives

• Aligns IT investment and strategy with overall business strategy, ensuring that IT technology spending and projects undertaken are consistent with the business plan and support business objectives

• Positions you to deploy the technology required to support and enable achievement of mission

• Establishes a technology investment planning horizon that allows you to decide on a planned rate of investment and change based on the organization’s business and investment priorities and its ability to absorb change

• Defines organization and processes required to support technology initiatives

• Identifies strategic applications and technology that address current deficiencies and future business needs
IT Planning – Benefits (cont’d)

• Provides a framework for project review/approval
• Shifts decisions from short term focused to long term, avoiding individually made decisions and firefighting
  – allows prioritization of efforts
  – avoids costly mistakes which result from spending money without having the vision to guide investments
• Provides a basis for evaluating how IT investments will compete for resources with other company initiatives
• Informs IT decisions with a marketplace perspective
• Can be used as a funding vehicle for prospective donors
IT Effectiveness – Drivers

• Non-technical management concerns over technology spending or practices
• Technology management concerns over adequate support/funding
• Leadership interest in best-practices and industry perspectives not available with long-tenured in-house personnel
IT Effectiveness – Different “Flavors”

• Broad-based organizational use of technology
  – Satisfying constituent needs

• IT departmental review
  – Structure and organization (capability, skill sets, competencies, use of third parties)
  – Practices and processes

• Evaluation of a specific “piece” of technology (application, data center, network, etc.)
IT Effectiveness – Objectives

• Determine if the investment to-date in technology has been effective, considering the following:
  – Is the organization where it expected to be with regard to IT?
  – Has there been a good return on technology investment and are the benefits from investments being realized?
  – Has overall technology-related spending been appropriate for the size, purpose, and planned direction of the organization, from both an internal and comparable practices standpoint?
  – Are strategic business objectives being appropriately supported by IT?
  – Are key business functions properly supported by technology?
  – Are internal and external constituents satisfied?
  – Does the organization have the right IT support staff in the right positions with the necessary skills to support what is currently in place, as well as for what is planned for the future? If not, how should it change?
IT Effectiveness – Objectives *(cont’d)*

- Determine if the investment to-date in technology has been effective, considering the following:
  (cont’d)
  - Are suitable IT governance practices in place (i.e., request/approval process, budget setting, project tracking, methodology, disaster recovery, etc.)?
  - Are upcoming planned investments in technology (hardware, software, networking, etc.) appropriate to meet future objectives?
  - Is the pace of change commensurate with the organization’s ability to absorb change?
- To the extent that the technology environment is deemed to be ineffective, identify the causes and address them before committing significant resources for additional efforts
IT Effectiveness – Scope

• Grant Thornton's Technology Effectiveness methodology uses a “Balanced Scorecard” approach to evaluate technology from four different perspectives:
  – Strategic and Management
  – Internal (IT/user)
  – External (constituent/vendor/competition)
  – Financial

• Apply industry best practices and establish tangible and intangible criteria for evaluating key metrics (costs, timeliness, quality, service)

• Assess IT strengths and weaknesses

• Develop recommendations for improving effectiveness
IT Effectiveness – Scope (cont’d)

• **Strategic and Management Perspective**
  – Ability to provide useful management information
  – Support for organizational goals and business strategies
  – Anticipated to actual benefits
  – Positioning for the future

• **External Perspective**
  – Capability to address constituent needs (now and in the future)
  – Use of emerging technologies to achieve competitive advantage
  – Comparison to industry best practices

• **Internal Perspective**
  – Degree of fit to requirements
  – User knowledge of system capabilities and features
  – Effective use of applications and enabling technologies
  – User satisfaction
  – Skills/ability to support needs

• **Financial Perspective**
  – Costs to develop/maintain
  – Cost to close identified gaps
  – Comparison of anticipated to actual IT costs
  – Return on investment
IT Effectiveness – Scope (cont’d)

• Highlights “technology effectiveness gaps” in:
  – Achieving business objectives
  – Organization and budget
  – Achieving target benefits and financial return
  – Capability and utilization of existing technology and personnel
  – Meeting constituent needs
  – Use of technology for competitive advantage

• Relates the role of technology to business and strategic objectives
IT Effectiveness – Approach
Understand current environment

Conduct interviews with senior and IT management to:

• Confirm/understand business plans and goals
  – Define management’s objectives for technology and the role technology is expected to play in supporting the organization’s strategic objectives
  – Determine if IT objectives and strategies are aligned with the strategic vision and direction of the foundation
  – Understand technology investment objectives/drivers
IT Effectiveness – Approach
Understand current environment (cont’d)

Conduct interviews (cont’d)

- Confirm/understand current technology environment
  - Review IT infrastructure, systems, and application inventory
  - Determine IT organization structure, responsibilities, skill levels, and outsourcing relationships
  - Identify IT cost elements and determine total cost of IT spending
  - Review and analyze IT operating and capital budgets and actual expenditures over the last several years in order to determine where IT investments have been made
  - Determine how IT costs and benefits are tracked
  - Understand IT’s impact on operations
IT Effectiveness – Approach
Understand current environment (cont’d)

Conduct interviews (cont’d)

• Confirm/understand IT risks and controls
  – IT policies and procedures
  – Logical security for the network and applications, including the use of security tools and processes
  – Network and applications security
  – Disaster recovery and business continuity
  – Backup and restoration procedures
  – Application change management
  – Segregation of duties
  – Computer operations
  – Physical security
IT Effectiveness – Approach
Understand current environment (cont’d)

Conduct interviews (cont’d)

• Review the key elements of IT Governance
  – Gather and analyze information about how the IT organization makes investment decisions and whether there is appropriate oversight
  – Understand how IT identifies technology opportunities and how they assess risk
  – Understand the controls over the use of third-party services
  – Understand how IT hires, compensates, and retains people
IT Effectiveness – Approach
Review On-Going and Proposed IT Efforts

Gain an understanding of the necessity, priority, and costs of both on-going efforts and proposed new projects

- Review IT plans, budgets, and project schedules for current and upcoming projects
- Identify priorities and confirm alignment with overall business goals
IT Effectiveness – Approach
Assess Effectiveness of Technology

• Evaluate whether technology effectively addresses key business drivers and priorities, and if anticipated benefits have been achieved
• Assess general level of user satisfaction with and knowledge of IT (systems, organization, etc.)
• Identify how each functional area uses/would like to use IT
• Review/evaluate applications, business processes and procedures (systems capabilities, processing limitations, “off-line” applications, interfaces, manual intervention, controls, etc.)
• Assess current hardware, systems software, enabling technologies, and support infrastructure
IT Effectiveness – Approach
Identify Resource and Skills Gaps

Assess resource requirements and skills needed for both the current and future state
• Evaluate the level of resources and skills required for current and upcoming projects
• Compare requirements to existing capabilities and identify gaps
IT Effectiveness – Approach
Review Best Practices

Compare technology, staffing, and costs to industry and relevant non-industry best practices

• Review comparable organization best practice information

• Assess capabilities relative to peer organizations
IT Effectiveness – Approach
Present to Management

Summarize and present findings and recommendations to management:

• Technology effectiveness assessment (Scorecard) of applications, infrastructure, processes, delivery, organization/skills
• Identification of effectiveness gaps
• Recommendations for improvement
CMM in IT Effectiveness

![Technology Capability Maturity Perception Map](image)

<table>
<thead>
<tr>
<th>Technology Capability Maturity Perception Map</th>
<th>Perception of Sophistication</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>IT</td>
</tr>
<tr>
<td>Governance</td>
<td>High</td>
</tr>
<tr>
<td>Organization/skills</td>
<td>High</td>
</tr>
<tr>
<td>Processes and Controls</td>
<td>Medium</td>
</tr>
<tr>
<td>Applications</td>
<td>Low</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>High</td>
</tr>
<tr>
<td>Perceived Maturity Stage</td>
<td>Stage 3</td>
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</tbody>
</table>

Business Enabler  | Satisfy Requests  | "Nuts & Bolts"
IT Cost Reduction – Key Questions

- In identifying IT spending areas that can be reduced to improve the financial bottom-line, consider the following questions:
  - What opportunities exist to decrease overall operational and capital expenditures on information technology?
  - Are current software/infrastructure projects resulting in a financially sound return on investment, either due to revenue generation or expense reduction?
  - Do current and proposed projects have an adequate business case?
  - Is there a more effective ROI-based model that should be used to evaluate and prioritize projects, as well as allocate limited resources?
  - Are there ways to improve returns on current technology investments?
  - Are there opportunities to introduce new technologies that would lower the overall cost of IT operations?
IT Cost Reduction – Key Questions (cont’d)

• In identifying IT spending areas that can be reduced to improve the financial bottom-line, consider the following questions: (cont’d)
  – Is there an appropriate balance between the use of internal software development personnel with external resources?
  – Are there additional opportunities to outsource development that would result in an overall reduction in expenditures?
  – Are there ways to alter the financial burden that current infrastructure imposes on the organization, either by reducing costs or outsourcing our infrastructure needs?
  – Are there ways to provide IT services to our external constituents and generate revenue for the organization?
  – Should we adjust IT supply and demand such that we’ll provide lower levels of service than have been historically delivered/expected?
IT Cost Reduction – Areas to Consider

• Assess current and projected IT spending within the following areas:
  – Administration
  – Infrastructure
  – Operations
  – Software development
  – Licensing (e.g., hardware, software, etc.)
  – Project management
IT Cost Reduction - Potential Areas of Opportunity

• Resource reductions
  – Save labor or direct out-of-pocket expenditures by lengthening project timelines, delaying project start dates for future projects, or decreasing technical support
  – Examine capacity (e.g., number of users, transactions, history retained, response time) and complexity (e.g., availability, security, reliability, business continuity, system sophistication)
  – Take into consideration the impact of potentially lower service levels on constituents
IT Cost Reduction - Potential Areas of Opportunity (cont’d)

• Technology enhancement/consolidation
  – Update technology (e.g., data center, telecom, etc.) that can be provided at a lower cost for a similar level of service; for example:
    • Consolidate servers and leverage virtualization
    • Utilize cloud computing
    • Eliminate over-engineered solutions
    • Automate operations-related activities
    • Rationalize and eliminate under-utilized applications
    • Leverage open-source software
IT Cost Reduction - Potential Areas of Opportunity (cont'd)

• Activity management
  – Reallocate responsibilities between technologists to reduce overall capacity
  – Eliminate legacy tasks with limited value to the business today
  – Seek methods for shifting ownership of leverageable tasks to the business (i.e., outside of IT)

• Outsourcing
  – Utilize external resources for software development and/or for the organization’s infrastructure/support needs
IT Cost Reduction - Potential Areas of Opportunity (cont’d)

• Revenue enhancement
  – Increase/maintain existing services, but generate higher levels of remuneration from constituents
  – Identify opportunities to deliver additional services to constituents in exchange for enhanced revenue

• ROI framework
  – Improve the organization’s ROI/business case methodology, as well as thresholds for appropriate levels of return for current and proposed projects
IT Cost Reduction - Potential Areas of Opportunity (cont'd)

• Policy/process improvement
  – Introduce processes and policies that give the business greater visibility (and responsibility) for IT costs for their respective areas (e.g., chargebacks)
  – Enhance sourcing/procurement practices
  – Improve project management capabilities with a focus on eliminating cost overruns
  – Restructure IT governance practices to better prioritize projects
Additional Resources for Management and Trustees

Publications for not-for-profit organizations
www.grantthornton.com/industries/NFP
Questions?
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