

MSBTC Concept of Operations and Strategic Plan

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GEORGETOWN
UNIVERSITY



McDonough
SCHOOL *of* BUSINESS

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Executive Summary

The McDonough School of Business (MSB) provides world-class business education. MSB Technology Center (MSBTC) exists to form and build a technical infrastructure that provides the key technology enablers in communication, research, teaching, administration, and community that are characteristic of leading international institutions.

This Concept of Operations and Strategic Plan is a statement of how we will plan and implement the progressive environment noted below. The principles of this plan are:

- Technology is integral to any successful endeavor at MSB.
- IT innovation and streamlined procedures are fundamental to MSBTC operations.
- Providing IT begins with communication and ends with customer service.

Technology is a given. It permeates the culture of institutions. It is one of the core competencies of any successful organization. MSB too requires a vibrant technology infrastructure. Technology however, unlike almost any other business competency, “morphs” at a dizzying pace. A dedicated effort must not only establish technology within the organizational culture but it must also turn the maelstrom of technology change into an advantage.

Technology at MSB is supported by two organizations, University Information Systems (UIS), which supports IT systems used across all GU divisions, and the MSB Technology Center (MSBTC). MSBTC is a MSB resource independent of Georgetown UIS. MSBTC focus will be on the IT services MSB requires in addition to those provided centrally and on the services that must have enhanced support. MSBTC exists exclusively for the benefit of the MSB community and that will always be the central purpose. MSBTC recognizes not only the requirement to adhere to University IT policies but also that UIS and other GU IT organizations represent a wealth of resources and knowledge. MSBTC will to the maximum extent possible collaborate and partner with other Georgetown IT offices in implementing IT.

Truly progressive institutions will embrace technology and its undeniable demands. For MSBTC success is measured in building not only the dynamic technical aspects of the plan but creating the consensus and background that allows faculty, staff, and students to exploit IT at every opportunity. Three factors, recognizing the potential of technology, implementing technology in a solid organizational business plan and community culture, and maintaining a technical edge through constant re-evaluation, are the central themes of this MSBTC Concept of Operations.

Recognizing the Potential

Our ability to pick and choose from the latest Information Technology offerings, the freedom to pattern MSB systems from other proven successes, and the ability to frame the implementation and activation of selected technologies quickly is an extraordinary advantage that can move MSB initiatives at a truly accelerated pace.

MSB IT managers will often be challenged with providing value judgments on new technology. In a normal business options to implement a new service must be subject to rigorous evaluation and risk analysis. As outlined later in this document detailed analysis and costing will be the first and essential step in all MSBTC initiatives whenever possible. It is important to realize however that at times due to the emerging and transitive nature of new technologies, sometimes these decisions are unavoidably made without complete information. To make competent decisions in the face of incomplete

information MSBTC leaders must have a fundamental understanding of how MSB operates and the priorities of our three communities, students, faculty and staff and the mandate to lead.

This capacity to discriminate among the multitude of various IT systems and opportunities and select those which provide the most advantage to MSB is the single most important demand on MSB IT administration. Fundamentally MSB must retain this prerogative within the Georgetown administrative system and MSB IT leaders must have the courage and capability to make decisions.

Implementing the Technology

In the end technology advances are only correctly achieved through people. Operations and innovation are not possible without the commitment of the workforce involved. MSB Technicians must be motivated and trained and procedures must be established, but that alone will not guarantee success. MSBTC cannot live in the ivory tower of hardware/software experts.

“Technology is the easy part.” Anyone can purchase and install IT systems. IT today is largely done with “off-the-shelf” components. The application of information technology is however more than programming and activation. Adoption of IT and real success revolves around a comprehensive partnership with the users and beneficiaries of IT services. The ground work of discovering and codifying user requirements and detailed schedule of implementation and training which incorporates user’s needs as the fundamental issue must be the central focus of any IT initiative. This is a much more complicated endeavor. MSBTC Concept of Operations recognizes the initial work of correctly defining requirements is the most complicated element in any project and will require the most time and resources.

Maintaining a Technical Edge

Information Technology is unique in industry in that it often does not matter what the accumulated wisdom of ten or even five years past is. Recognizing IT and reacting to IT trends may mean jettisoning old, “comfortable” technology and assumptions. Technology is so dynamic that dated technical experience can actually slow future progress. Enablers within IT increase as flexibility, change and innovation are incorporated into the fabric of IT services and administration.

This characteristic argues for a dynamic program to keep IT personnel as up-to-date as the hardware and software they manage. An aggressive and generous program of training and education is mandatory. As the old adage goes: Finance Manager to IT Manager: “What if we spend time and money to train a technician and he leaves?” IT Manager to Finance Manager: “What if we don’t spend the time and money and the tech stays?”

This is MSB’s IT challenge. This plan will emphasize the opportunity to build a forward-thinking strategy that not only chooses the best technology available today, but sets the stage for future changes and innovation that must come inevitably as MSB refines its place as a premier business school. Central to this plan will be to build an IT infrastructure at MSB that maximizes flexibility and the opportunity to incorporate change as it comes.

MSBTC Technology Vision

The McDonough School of Business Technology Center's vision of technology places it as an integral strategic resource that enables and facilitates the establishment of MSB as a top international business school.

Mission

The mission of The MSB Technology Center is to achieve excellence through the design, development, and implementation of Information Technology which will have a transformational impact on research, learning, communications, administration, and student experience. Imperatives in achieving this goal are:

- Align resources and invest in technologies directly related to the school's vision and goals
- Create and foster a culture that encourages innovation
- Provide and maintain transparent, robust, secure, boundless, and nimble technology infrastructures
- Develop partnerships within and outside MSB to enhance IT
- Encourage and facilitate the adoption of new technologies
- Leverage advisory organizations and institutions
- Develop measures to evaluate progress
- Incorporate customer service into every aspect

Current State

Understanding the current state of MSB programs is crucial to designing their future. This is particularly true for technology. The following elements define where we operate, our customer's needs, obstacles, risks, and opportunities.

IT Environment

Internet

MSB, as an organization with international aspirations, will compete on the Internet for students and recognition. The Internet will become a tool in virtually every initiative. World-wide there are telling statistics that highlight the impact of technology in society.

- Computing is pervasive and expanding. More devices will connect to the Internet in the next five years than in the previous 15. 78% of Americans are frequent Internet users.
- The developing areas of the world are experiencing change at a faster rate than anywhere else. From 2000 to 2011 Internet use in the Middle East grew by 1,987%. Asia grew by 709%. North America grew by 151%. Yet, North American access is only 11% of total world-wide Internet traffic. The Internet is now just as important internationally as it has been for the last decade in the US.
- In a single year Internet users will generate more than three million times the data that is available in all the books ever written
- Non-traditional web communications is becoming the norm. FaceBook has over 1.1 billion active users, one in every 13 people on earth. 50% log in every day. 68% are mobile users. YouTube alone hosts over 100 million video streams a day. 100 hours of content are uploaded

every minute. 70% of YouTube's traffic comes from outside the US. Billions of MP3s are shared each day over the Internet

- Business has recognized the value of the Intranet. Amazon's 2013 annual revenue was \$74.45 billion. Google was \$59.83 billion. In the US 23% of disposable income is spent on-line. In India it is 33%.

A bulletproof presence on the Internet is central to success. High bandwidth network service, contracting services, hardware and software vendors must be reliable, varied and robust. Building and maintaining these support relationships will be fundamental to the continued support of MSB environmental IT services.

Campus IT

MSB's internal IT management is technically independent. However, Georgetown University Information Systems maintains central systems essential for MSB IT operations. UIS also exercises ultimate control over IT on campus. It is important that this UIS oversight be used as an advantage and not be allowed to form organizational structures that will impede progress. MSBTC internal management will work within an already established university-wide management structure and those relationships will characterize on-going management.

Within these guidelines however MSB has significant license to build the technical infrastructure to support the unique demands of the business school. MSBTC will expand on the regulatory, management and oversight tools necessary to organize IT services and yet maintain the flexibility and speed that IT decision making enjoys with the current low managerial overhead.

These IT assets are supported either jointly or independently at MSB.

- Wired or Physical Cabling (Jointly with UIS) - Standard 3M CAT-6 Cabling infrastructure has been designed for all local data, voice points throughout the campus with trunk lines 100% fiber. It is complete structured cabling that will be maintained by UIS.
- Network Infrastructure (Jointly with UIS) - A complete layered Infrastructure of CISCO switching, routing, and security solution has been installed. The system provides high-availability, redundancy, throughput requirement and future scalability. The complete campus is also covered under Wi-Fi access. MSBTC will use UIS services as appropriate for network services but will independently significantly augment servers, security, AV, and other infrastructure technologies.
- Data Center Design (Jointly with UIS and external corporations) - MSBTC supports a small internal data center. MSBTC contracts for a significant amount of external server support including servers on both the internal GU cloud and external cloud.
- Learning Management Systems (Jointly with UIS) - MSB participates in the centrally implemented LMS, currently Blackboard. As appropriate additional LMS are supported for limited applications including distance learning, specialty programs and small learning environments.
- Enterprise Business Systems - MSBTC supports a variety of enterprise business systems either wholly or as part of UIS systems. The primary roles for MSBTC regarding enterprise systems are:
 - Facilitate and control access
 - Ensure system reliability
 - Enhance usability through customized access to MSB employees

- Integration with an institutional Constituent Management System (CMS) system. MSBTC is currently using Salesforce to enhance all of the factors above. This major program is and will remain an important MSBTC initiative.

- Email and Communications Solution (Jointly with UIS)– With UIS leading MSBTC currently supports Google systems for faculty and staff e-mail, calendaring, and collaboration. MSBTC will work within the UIS/Google framework to enhance Google support to MSB users.
- Conferencing Solution - Video Conferencing and teleconferencing services are available in all space in the Hariri Building. Web conferencing solutions are also available for personal and group venues.
- Distance Learning – MSBTC supports an expanding distance learning infrastructure that will grow and align with MSB instruction on the Internet.
- Audio-Visual Services – MSB supports a robust set of classroom and conference room AV tools. Classroom activities can be recorded for both synchronous and asynchronous viewing.
- Physical Security (Jointly with UIS)– Physical access control via card scan and surveillance services are supported by University Security.
- PABX System (Jointly with UIS)- Hybrid PABX System with integration option of both conventional Analog and IP Phones are supported by University Telecommunications.

MSB is fortunate to have a new building which provides excellent learning, research, administrative, and community spaces. The state-of-the-art classrooms, meeting spaces, and study spaces cultivate active learning. The Rafik B. Hariri Building offers a student experience that is both a critical and a “game-changing” benefit. The building is a vital asset and must be maintained, enhanced and nurtured for future scholars.

Management

Relationships

MSBTC can avail itself of IT best practices using a variety of sources. They can be loosely divided into internal MSB, Georgetown University, and external sources. MSBTC must be willing to look both inside and outside the organization for advice, and once the best course of action is determined, have the initiative, budget, and management support to commit to action.

- External Relationships. MSBTC contacts at leading academic and business institutions are providing guidance. These relationships are normally very cost effective and must be used to the maximum extent possible.
- Internal Relationships. MSBTC has formal committees, groups, or cabinets, for the purpose of advising on IT. It is the responsibility of these groups to evaluate any IT project in terms of management, cost-benefit, security, and other quantifiable measures and make recommendations. Additionally the governance structure must determine the contribution of any IT initiative, defined by the concepts outlined above, to MSB Strategic Goals. The three primary user groups, students, faculty and staff should have representation in these groups. Business divisions within MSB (Exec Ed, MBA / Undergrd / Evening Programs, Admissions, etc.)

have routine access to MSBTC IT management. This interaction are also fundamental to managing IT processes.

- University Information Systems (UIS). A strong, mutually respected relationship with UIS is essential for not only smooth daily operations, but also to stay current with GU and industry initiatives. Cooperation is mandatory.
- Other Georgetown IT . GU has other special purpose IT offices including CNDLS, Advancement, GU Alumni Office, GU Admissions, GU Law, and the Lauinger Library.

Strategic External Partners

MSB has strategic partnerships with corporate vendors and academic institutions who will work with MSBTC to provide the latest technologies and assist in determining cost benefit analysis. These relationships extend beyond the technology infrastructure to include opportunities for student employment and project collaboration.

These relationships are a strategic asset. The academic community is essentially unique in that institutions who could be classified as competitors will readily share operational details of past, current, and future projects, clearly indicating success or failure and analysis of both. MSBTC will be asked to share experiences and achievements in these forums. Simultaneously MSB will benefit from the wealth of institutional knowledge at these organizations.

Existing external relationships include:

- IBM
- Novell
- Microsoft
- Lenovo
- Microsoft
- Google
- Salesforce and the Salesforce Foundation

Academic organizations that can provide technology strategic and operational experience include:

- AACSB – The Association to Advance Collegiate Schools of Business <http://www.aacsb.edu/>
- EDUCAUSE - <http://www.educause.edu/>
- TBSr – The Technology in Business Schools Roundtable <http://www.tbsroundtable.org/>
- InfoComm - <http://www.infocomm.org/cps/rde/xchg/infocomm/hs.xsl/index.htm>
- UB Tech <http://www.ubtechconference.com>

Within the above institutions are a wealth of committees, blogs, on-line resources, webinars, conventions, meetings and other traditional and non-traditional opportunities to stay abreast of technology, limited only by IT staff willingness to participate.

Strategy

This Concept of Operations defines the processes involved in incorporating IT into the basic infrastructure of the school.

This plan outlines type of choices faced in constructing IT support, e.g. “buy vs. build”, “contract vs. in-house”, and “open source vs. proprietary software”. All options will be embraced as appropriate for the individual project or goal.

- General Guidelines

1. Mature technologies tend to lend themselves to outsourcing, especially with the options presented by new cloud technology. Outsourcing mature technologies to UIS or corporations is an important MSB support option.
2. Innovative or projects requiring speed and do not generally rely on partners will likely be better accommodated using in-house assets. Presumably the in-house assets will be unencumbered by excessive management overhead and enhance with streamlined decision making.
3. The exception to out-sourcing is customer service. MSB will remain a “high touch” IT service environment. As a rule MSBTC will not outsource functions that benefit from enhanced communication between MSBTC and MSB users.
4. Technical solutions will be decided using a consistent, repeatable, and comprehensive analysis codified into a framework and a process of review. The oversight and review structures to manage change will be inclusive and comprehensive yet formed with the understanding that, as IT change is dynamic, the MSBTC IT project approval process should also be streamlined. As such the MSB Chief Technology Officer is relied upon to make decisions and form solutions as the final arbitrator.
5. MSBTC IT initiatives will be associated with at least one of MSB strategic goals.
6. IT projects will be associated with MSBTC IT goals. These goals are listed below and their association with each project under consideration forms a quick analysis of relevance.

MSBTC IT Goals

Innovation

Innovation does not just happen. Innovation is nurtured on many levels including funding, manpower, trust, connection with strategic goals, and relevance. The innovative exercise is too fragile to allow it to be left to chance. MSBTC must develop a process for innovation. The process involves funding, committed manpower resources, and independence.

IT Simplification

IT simplification produces another method of increasing funding for MSBTC initiatives. Creating IT simplification is an investment. Streamlining processes and infrastructure is financially appealing in the long run, but rarely comes with no up-front costs.

Communication

Communication pathways within the MSB community needs to be informative, easy, and all-encompassing. Input from the user community is critical to understanding need and the success or failure of any IT initiative. MSBTC must champion communication through any and all means available.

Dialog

MSBTC will foster and extend communications with external groups, peer institutions, prospective students, vendors, governing organizations, and sponsors.

Governance

Providing an IT governance structure to all MSB students, faculty and staff is an enabling environment. Properly defined governance creates process and plans. Governance will:

- Determine the potential impact of proposed projects
- Communicate the allocation of resources to all stakeholders
- Define process to establish formal management such as Needs Statements, Statement of Work, Return on Investment, Risk Analysis, and Evaluating Success Criteria
- Require expert guidance, whether internal or external to manage transformative technologies.

Collaboration

Collaboration invites inclusion and efficiencies across groups. When possible, MSBTC will champion collaboration in IT initiatives

Maximize IT Services

Progressive Corporate Environment

MSB IT will reflect a “Progressive Corporate Environment” and, as far as students are concerned, a “Learn by Doing” approach to basic IT skills. The vision is that students will have at MSB the full suite of analytical, communication, and administrative tools that would be available in the world’s top corporations. Care will be taken to model systems to business practice which normally contains a more robust collection of IT services than might be available in an academic setting.

For example, MSBTC intends to provide student, faculty, and staff the benefits of a standardized Microsoft application infrastructure. Microsoft is the signature standard in business IT. Implementation of a standardized, modern business IT infrastructure will just through its daily use familiarize students with the operational aspects of business IT. Students arriving with work experience should find the IT tools in use at MSB familiar, reducing the training required to use the system.

The goal is a progressive infrastructure that facilitates especially communications and collaboration.

Academic Research

MSB IT system will be geared to support academic research as efficiently as possible. There are multitudes of commercially available databases and knowledge-based systems that can be accessed through the Internet. It is the intention of MSBTC to work in concert with the GU Lauinger Library to support world-class access to on-line data and library services. Robust research IT, with pervasive use of electronic data sources will be a central facet of the MSBTC/Lauinger Library cooperative partnership with fully supported computational resources, network speed, and data subscriptions.

Enterprise Business Systems

MSB IT systems will facilitate efficient, high-quality and integrated enterprise business systems emphasizing the following:

- Off-the-shelf programs. These programs are pervasive in the academic industry and represent not only streamline marketing and admissions procedures, but also simplified processes.
- Integration with university systems. MSBTC will avoid “shadow” systems with redundant data and will instead seek to leverage GU systems of record. Beyond technology security and privacy of data and adherence to GU policy and procedure will be prime considerations.
- Simplification of user interface. MSBTC will use an integrated front-end, currently designed to use Salesforce, to ease MSB user access to all enterprise systems. The goal will be a customized, efficient, adaptable and easy to use MSB user interface.

Service Level Agreement

MSB IT services will function more smoothly when the expectation of the users are in line with the capabilities of MSBTC. The principle instrument to define and promulgate this relationship will be a MSBTC Service Level Agreement (SLA). The SLA will be administered by the MSBTC Director of Operations. The Director of Operations will review and update the SLA at least annually.

In the SLA the important aspects of what MSBTC will support, when MSBTC will support it and how MSBTC will provide services will be carefully delineated. It will detail points of contact between MSBTC and the various user groups. Just as MSBTC will have responsibilities, user and supported department responsibilities will be defined.

The current MSBTC SLA is available on the MSBTC web site <http://technology.msb.edu> .

Formalizing Innovation

MSBTC internal IT will emphasize fostering innovation. This is a real commitment to associate IT projects with a the MSB themes of pedagogy, security, or administration. MSBTC is tasked with encouraging stakeholders, including students, to develop a compelling case in the form of a proposal and to formulate a basic plan. Each plan will encourage corporate and/or internal sponsorship. Buy-in from stakeholders is the key factor to jump start the process. In the end this will be a dedicated group, committee, or office to address non-traditional and “experimental technologies.

Innovation requires the “freedom to fail”. MSBTC will not insist on guarantees that a particular initiative will succeed. Only that it will be carefully planned, pursued with vigor, and be managerially completely transparent. Even project failures can have value. A quote from one of the greatest innovators of all time, Henry Ford; “Even a mistake may turn out to be the one thing necessary to a worthwhile achievement.”

Computing Infrastructure

“Hardware is easy”

Building an IT infrastructure has the obvious elements of physical equipment, servers, desktops, laptops, wiring and routers. At the next level are critical elements of network protocols, security, authentication, and backup. The requirements of software integration, maintenance, data base normalization, security and backup will consume an organization if these demands are not addressed in every IT decision. MSBTC is well practiced in implementing a hardware/software system that recognizes hardware and software installation, even as successful as it is, is not even half the task.

Even the most comprehensive hardware and software solutions are moot if they cannot be efficiently employed. MSBTC will consider the user as the most complex element in implementing technology and will place detailed user requirements, process, training and support as the most critical factors in every system.

Identity Management

As a practice MSBTC systems will require integration with a robust identity management (IM) system. Many MSB Administration systems will require pulling personal data from some database. It is very important that the source of this personal data be centralized and access be strictly controlled.

The IM system should not be limited to only network login and traditional IT systems access. For example, a central IM source will be required for the access control system providing physical room access and entry point ID, the Learning Management System, and any RFID system. Whenever possible any IT systems should be driven from the central university IM DB. However, MSB is in the position of having to support an independent IM system. UIS controls services that range across all Georgetown user groups and MSB supports a system that responds to the unique requirements of the MSB user community. To the greatest extent possible duplicate authentication systems should be avoided even in the face of moderate cost increases and additional development time, but this is not always possible or efficient.

The benefits to managing these systems that define individual access and program rights from a single, central database are extraordinary. Systems that will benefit from a single, central identity management system include:

- corporate contact management system
- internal debit card service
- parking
- library services and equipment check out

Example systems that would more flexibly operate under a MSB IM system include:

- Intranet
- Printing
- Special programs
- Research computing

Security

The technical aspects of computer security are well understood and MSBTC is not having a problem addressing these. Backup technology whether through traditional tape backup, virtual tape libraries, remote off-site real-time or time-delayed are all addressed.

MSBTC Security Manager

In order to retain competency in IT security MSBTC will employ a Network Security Manager. The Security Manager will have a "dotted line" report to the CTO and will be authorized to go directly to the MSB Dean or Central IT Security Manager in extreme situations.

The Security Manager will be a required member for all major MSBTC projects.

It will be the Security Manager's responsibility to build a close professional relationship with the Central IT Security Office. The MSBTC Security Manager will keep informed on current and proposed security issues.

Academic Continuity

The concept of "Academic Continuity" is one security issue that is not yet well understood and is poorly implemented in many educational institutions, including MSB. Central to successful academic continuity initiatives are:

- Classroom recording with synchronous and asynchronous delivery
- Clearly defined plans for off-site or mobile delivery of education
- Robust LMS with multiple two-way and group user delivery options from cell-phone to laptop to desktop.
- Robust and complete user education

Almost every institution, including MSB, has the communications tools available to assist the institution in continuing to operate under adverse circumstances ("Webinar" tools, classroom recording, video-telecommunications). The concept of academic continuity at MSB should integrate network security with the tools that are used each day to communicate. This association of standard classroom communication tools shows additional value as a part of a comprehensive security solution.

Security Evaluation

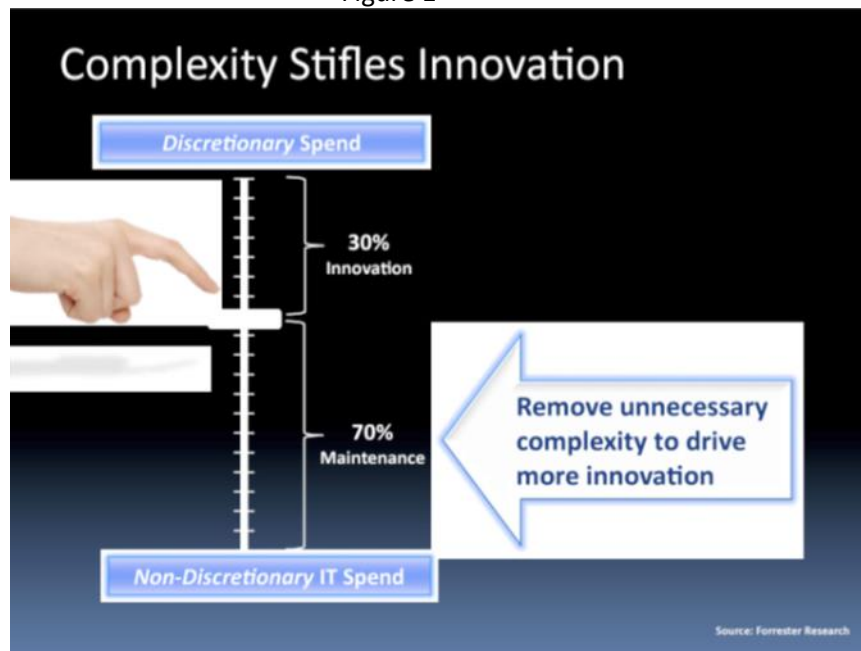
Attached to this document is a tool designed to do a strategic evaluation of the current IT security situation. This tool and the framework were created to evaluate the people, process, and technology components of cyber security. Although a unit within MSB may also use it tactically to help determine the maturity of individual information security programs, this tool is intended for use by the school as a whole. This tool should be used strategically in an examination of IT security lead by senior management (Dean, CTO, COO, or a designee). If the Security Evaluation tool is used in good faith it will provide an advantage to be proactive and auditable at any point in time.

IT Administration

MSBTC will develop oversight tools and processes to evaluate and prioritize requests to ensure appropriate allocation of resources and enforce alignment with the school's vision. There is a danger. A recent survey by Forrester Research showed that for 2006/2007 70% of a company's overall IT strategy went to operations and maintenance – just "keeping the lights on". Only 30% was available for innovation. Figure 1 below illustrates these findings.

The inescapable conclusion is that a consistent, unified approach to IT management which eliminates unnecessary non-discretionary IT spending will have the greatest single impact on increased funding for innovation and change.

Figure 1



Staffing

The MSBTC CTO is directly responsible for implementing a comprehensive staffing model that includes full-time, part-time, student and contracted personnel. MSBTC staffing will be commensurate with the requirements of a first-class business school. Employee resources are a critical element in achieving this strategic goal. Appendix 1 is the current MSBTC staffing model.

MSBTC is essentially unique in use of student employees to fill positions that in most IT organizations would be full time staff. Currently MSBTC employs over 50 students in three divisions, AV, Tech and Apps. Students are directly supervised and trained by designated Student Managers.

The entire student program is formally set up. Training is formal and complete. The process of recruiting, training and enabling students has been highly successful and is a major contributor to MSBTC's "high-touch" support goal.

Training

Central to the concept of adequate staffing is an aggressive program of individual employee improvement through education and training. MSBTC will dedicate funding specifically for a program of continuous employee improvement. The goals of this program should be as much as possible a combination of not only MSBTC technical expertise requirements but also the personal career motivations of the individual employee. Thus each training program will be a highly individual set of academic and technical pursuits. Elements of a successful training program can include:

- Academic education - This element would include not only certificate programs but degree granting programs. Academic education is sometimes not directly related to MSBTC projects or management processes but nevertheless have significant potential to increase an employee's

value to the organization as a whole. Thus academic programs should be given equal emphasis to more traditionally accepted programs in direct technical education.

- Technical Education – Technical education, especially when closely related to specific MSBTC initiatives, is normally easily justified. Technical education can be directly associated with necessary skills in programming or network administration. It is important to realize that technical education need not always have this close linkage to be of value. General technical education frequently has associated values in analytical thinking and as ground work for projects that are at the moment not even being conceptualized. Thus, technical education, even when the subject matter is somewhat general or not directly linked to current technical issues, has value.
- Seminars, Conferences, Peer Group Meetings – Perhaps the best training environments for education in emerging trends, best practices, and case studies are industry-related seminars and conferences. The information available at these venues is normally very current and relates directly to issues being faced at the moment. For this reason conferences and seminars are a necessary and valuable training opportunity. Managers especially should be encouraged to participate in one or two of these events each year.
- Peer Group Organization Membership - Seminars and conferences, and to a lesser extent any training event, present the additional opportunity to build and maintain relationships with other peer institutions leadership. This peripheral benefit is significant and is enhanced with the individual participant’s total involvement in the peer group organization. Membership in these mission related peer groups is thus a valuable resource and should be encouraged.

Project Analysis

MSBTC Leadership has defined particular technologies as central to the futherance of IT goals. Furthermore, the relative importance of these technologies, as rated against factors such as difficulty, return on investment and operational requirements have been assigned. Table 1 should be used to further codify MSBTC projects lists. The result is a concise outline of technology priorities as they apply to the strategic plan.

Table 1

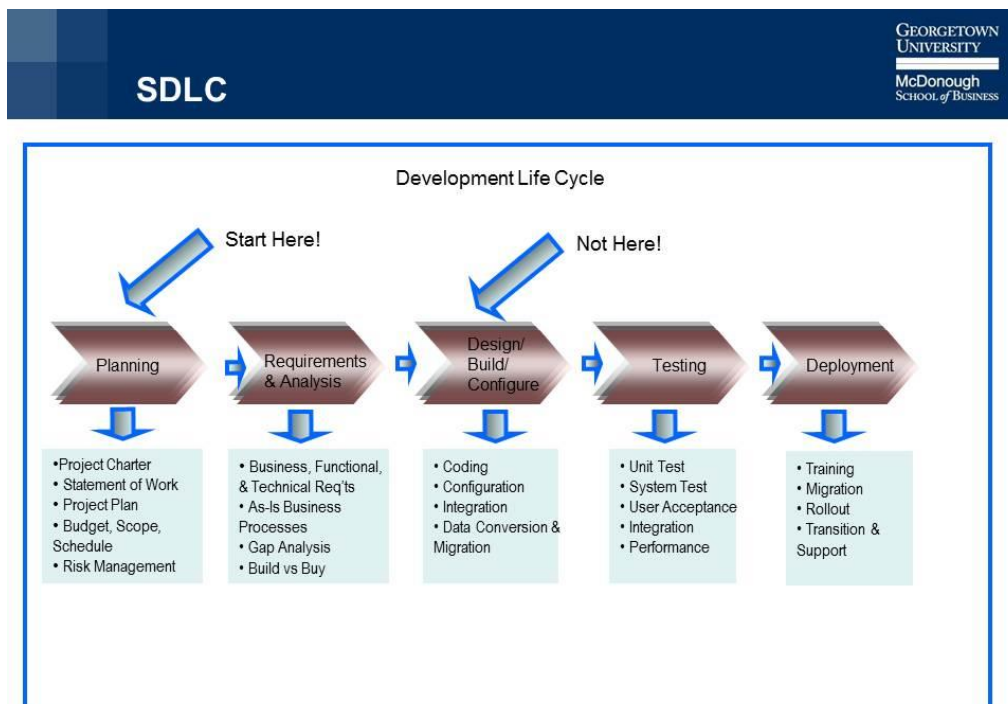
	MSB Strategic Goals				
	International Recognition	DC Advantage	Sustainable Finances	IT Infrastructure	Effective Marketing
IT Strategies and Initiatives					
Project					
Project					
Innovation					
Project					
Project					
IT Simplification					
Project					
Project					
Governance					
Project					
Project					
Communications					
Project					
Project					
Dialog					
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Project					

Life Cycle Development

MSBTC project development shall follow accepted, professional guidelines. Central to MSBTC development efforts will be a Systems Development Life Cycle. The major advantage of using a systemic approach is the emphasis on planning and requirements collection prior to initiating design/build. Figure 2 demonstrates this connection and the basic steps.

Naturally, any mature development program will have other, more detailed documentation in every category. This expanded documentation will reflect the scope and complexity of the initiative, but the steps in Figure 2 will nevertheless be addressed.

Fig 2.



Current MSBTC Initiatives

Current MSBTC strategic initiatives are listed below.

Lecture capture / streaming

Will be accomplished in 3 ways:

- Sonic Foundry Mediasite will undergo a 50% expansion allowing the MSBTC to record any 3 classroom lectures concurrently. Furthermore, video playback will be upgraded to HTML5 allowing for Android / Apple products viewing and portable streaming of live events.

- Echo 360 is a University wide lecture capture solution which will be implemented in all the classrooms allowing for PC / audio capture. Recordings will be automatically encoded and uploaded to an Echo 360 with links made available via Blackboard.
- iTunes and other On-Line AV.

AV Production Support

- As AV usage increases, the MSBTC will collection and editing services for MSB users.

Distance Learning Capabilities

- Provide the functions for online or distance learning using Media Site, Blackboard, or Moodle/Openscholar (in cases where Blackboard doesn't meet the requirements)
- Research possible vendors for contracting opportunities
- Approach each distance learning program with the understanding that it will represent the next step in expanding and refining MSB capabilities. Eventually MSB will have a robust and coordinate DL capability centered internally in MSB or in cooperation with UIS.

Admissions Systems

- Single, comprehensive admission system with streamlined connections to other MSB and university student administration systems

Enterprise Constituent Management System (SalesForce)

- An extensible, flexible and powerful tool for organizing meetings, data, personnel records and business communications with the goal of making this information available to ALL managers. In particular, it enable MSB to speak with "One Voice" on issues and to important external contacts.
- MSBTC is looking to SalesForce as the underlying technical solution to Corporate Database initiatives. The process will involve significant customization and will be organized as individual, cumulative, projects.
- This initiative is of a scale significant enough to warrant an individual MSB Salesforce Strategic Plan.

Assessment

Leaders have a requirement for objective, reliable data when it comes to gathering and applying the information used to determine strategy and future direction. MSBTC recognizes the increasingly important role played by metrics in tasks such as resource allocation, fundraising, faculty evaluation, and program review. MSBTC will find the right combination of evaluative content and tools to complement their current methodologies for measurement.

There are a number of professional tools that will aid in benchmarking performance for both the administrative and academic programs at MSB. The task is to determine which system integrates into the culture and function of MSB. Analysis should extend beyond ROI (Return on Investment) and TCO (Total Cost of Ownership) which do not play as well in an academic setting as they would in business. Tools range from helpdesk services and inventory tracking to analysis of faculty productivity.

MSB efforts at re-accreditation is the first area where metrics are likely to be used.

Studies and Surveys

MSBTC greatly benefits from a program of comparison and examination to both internal and external standards. MSBTC has participated for years in a number of external surveys and commissioned periodic studies of internal processes.

MSBTC participates in annual and ad-hoc surveys that compare MSBTC processes to peer institutions.

- TBS Annual Survey. This survey, managed for TBS by MSBTC, is a survey of IT resources and practices of AACSB accredited business school IT. The Survey is an outgrowth of the UCLA Business School Survey conducted by the Anderson School. The survey has been conducted by The Technology in Business Schools Roundtable since 2002. During this time MSBT has been the principle manager for TBS of the survey. Survey results are available through the TBS Roundtable organization.

- EOY Graduating Student Survey

Conclusion

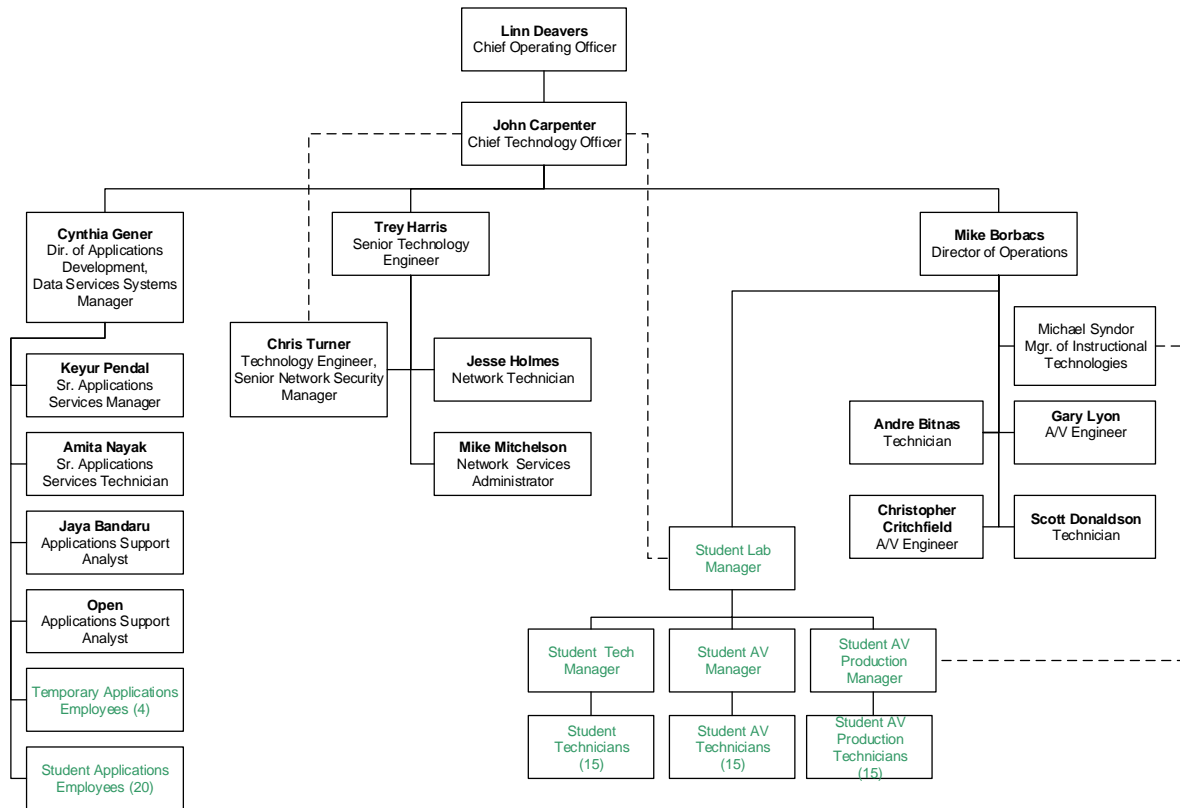
MSBTC operations will be governed first by Georgetown and MSB procedures, policy and culture. This document is designed to codify those elements MSBTC leadership believes defines this goal. As the MSBTC Concept of Operations considers the multitude of changing inputs from industry, Georgetown and MSB, this document will also be subject to period review and modification.

Suggestions, questions or input regarding this document should be forwarded to the MSB Chief Technology Officer, John Carpenter, at 202-687-4233 or carp@georgetown.edu.

Appendix 1 MSBTC Staffing

MSBTC organization chart.

MSB Technology Center June 2015



MSBTC is organized around the 4 separate services necessary to support MSB IT

Applications and Data Service

Network Services

Security

Operations

The organizational structure is not fixed and has been modified periodically over the history of the Tech Center. This trend will continue as new responsibilities are added and older commitments are either transferred to external support or dropped completely.