MIS 5203
Systems & Infrastructure Lifecycle Management 1

Week 1
Aug 25, 2014
Getting Started

• Introduction
• MS in IT Auditing and Cyber Security
• MIS 5203 (Systems and Lifecycle Management 1)
Syllabus

See Separate Handout

Syllabus also posted on the blog, and any updates to the syllabus would be posted to the blog as well going forward
Study Objectives – IT Business Case Development

• Understand what is an IT Business Case
• Feasibility Study and Business Case
• Ownership
• Quantitative Benefits
• Qualitative Benefits
• Business Case Example
• RFI and RFP
• SOW Example
• Individual Assignment
• Questions
• Next Class
IT Business Case

• When, during the SDLC, should the Business Case be developed?

  A. After the Business Requirement Document (BRD) is completed
  B. During the Feasibility Study
  C. When the software is ready for “alpha” trial
  D. After the Design Phase when the scope of the work is locked
IT Business Case

- Part of the Impact Analysis of several projects an enterprise works on, to prioritize the work
- Typically originates from the Business Owners, but can also come from IT
- Typically, an enterprise goes through the Business Case cycle to quantify and prioritize Business Cases
Business Case Benefit Realization

• Determine Business and Functional Goals

• Conduct Quantitative Benefit Analysis
  – labor, equipment, training, vendor, implementation cost etc.
  – Productivity, efficiency, additional revenue, etc. Could be the benefit
  – Cost Benefit Analysis Examples - Net Present Value (NPV); Return on Investment (ROI), Total Cost of Ownership (TCO)

• Conduct Qualitative Benefit Analysis
  – Customer Satisfaction
  – Strategic Advantage

• Documentation and Assumption
Feasibility Study vs. Business Case

• Feasibility Study
  – Broader study of what is possible
  – Normally step before Business Case

• Business Case
  – Follows up Feasibility study
  – At this stage “something concrete” seems to be feasible
  – Focus is on specifics and details
Feasibility Study – Case Study

• Group Discussion – 15 minutes
Come up with an IT Feasibility Study for a mid-size Toy company, *BesToys*, with $500 million in revenue, and $10 million in income. The company sells 850 toys through the Retail Store in the Eastern United States. Most of the toys are imported. The Revenue and income had been pretty “flat” during last 3 years. The company has been using the same IT system for the last 10 years. The new CEO of the Company thinks “a lot” can be done to increase revenue and income with the help of IT.
Feasibility Study – Case Study

Alan’s Best Chocolate Feasibility Study Example
http://www.projectmanagementdocs.com/templates/feasibility-study-template.html

Class Discussion
Business Case – Case Study

Smith Consulting Example – Business Case Template


Class Discussion
The Feasibility Analysis of the *Bestoys* indicated immediate benefit of setting up an e-Commerce site, where the customers can order the toys online, in addition to buying them in store. The Business Sponsor “thinks” that it’s always better to “buy” rather than “build,” and an RFP is being sent to vendors for building the site.

- Do you agree with the Business Sponsor?
- You, the *Bestoys* Internal Auditor, has been asked to advise the Project Team on Buy vs. Build Decision. What are some of the things you would recommend?
Software Buy vs. Build Consideration

- The timing of when the systems need to be functional
- The cost of development against that for buying
- Resource Skills and availabilities
- Licensure and Maintenance needs
- Compatibility with the Strategic Business Plans
- Compatibilities with Organizations IT Infrastructure
- Future Requirements
- Ability to Make changes
RFP

What’s the difference between RFI and RFP?

RFI (Request for Information) Stage

RD (Requirement Definition) Stage

RFP (Request for Proposal Stage)

Typical RFP Steps

1. Provide RFP to targeted Vendors
   - RD
   - Architecture
   - Expected time-line

2. Provide clarification
   - Provide clarification to the vendors on their questions

3. Receive Vendor Proposals

4. Vendor short-list and presentation
   - Presentation further refines responses

5. Vendor Selection
   Criteria include:
   - Time
   - Cost
   - Prior Experience and track record
   - Ability to make changes
RFP – Case Study

Ace Consulting – RFP Template

• http://www.projectmanagementdocs.com/project-documents/request-for-proposal.html
SOW – Case Study

Statement of Work (SOW) is submitted typically in response to an RFP

SOW is a legal contract between a contractor and the company on the work to be done or deliverables, timeline, amount payable, penalty, incentives

Smith Consulting Example – SOW Template

Internal Controls

What are Internal Controls?

Internal Controls are mechanisms that ensure the proper functioning of processes and systems within the company. Processes and systems exist for some specific business purposes. The auditor must look for risks that could impact the accomplishment of those business purposes and then ensure that internal controls are in place to mitigate those risks.

Adapted from Davis et. al. *IT Auditing: Using Controls to Protect Information Assets*, 2011.
Types and Implementation of Internal Controls

3 Types of Internal Controls

1. **Preventive**
   - Stops bad things from happening
   - Ex. User ID and password to prevent unauthorized access
   - Ex. Regression testing to prevent unintended defect to be introduced

2. **Detective**
   - Detects bad thing
   - Ex. Access logs to detect unauthorized access
   - Monitoring of SOAP fault of a web service

3. **Reactive (corrective)**
   - Detects bad things and then corrects (in between 1 & 2)
   - Ex. Centralized anti-virus system to find out is the latest signature file exist on the client desktop, and if latest file is not found push it
   - When # of SOAP faults increases the threshold, M&P to route the traffic to an alternate web-service farm

Implementation of any of the type of Internal Control could be one or more of the following

1. **Administrative**
   - Ex. M&P, Processes

2. **Technical**
   - Ex. Systems /software based

3. **Physical**
   - Ex. Locked door
Auditing Feasibility Study and Business Case

- Review Feasibility and Business Case for reasonableness
- Determine if cost/Benefit are measurable and verifiable
- Determine how important is the need
- Determine reasonableness of the solution
- Determine the high-level or requirements and design area included in the Business Case
- Ensure RFI/RFP are distributed to a reasonable number of vendors
- Ensure selection of the vendor has gone through proper evaluation

Refer to ISACA CISA manual 3.14.2 and Cascarino Chapter 21 for more details.
Individual Assignment 1

Bestoy Case Study (available on our blog site)

**Due:** Monday Sep 15, 2014 before the Class by Email to Vasant (required). Also, please bring a hard-copy, and submit (recommended).

**Vasant’s Email:** vasant.kumar@temple.edu
Summary of Today’s Class

• The CIS 5203 Objectives and Plans
• Business Case Development
• Focus of the Next Class and Reading
• Questions