Study Objectives

• Understand Program Management, Project Management, and Project Portfolio
• IT Project Management Structure
• Roles and Responsibilities
• Project Governance Mechanisms
• Software Size Estimation
• Project Control Frameworks, practices, and Tool
Typical Project Management Org Chart

Adapted from “CISA Review Manual,” ISACA.
Project Organization Form

• What is a Pure Project Organization?
• What is a Matrix Project Organization?
• What is a Influence Project Organization?
• What are some of the advantage and disadvantages?
Roles and Responsibility

Who is responsible for providing direction to the team to ensure the project gets completed close to on time, and on budget, and meets business needs?

A. Executive Sponsor
B. User Management
C. Steering Committee
D. Project Manager
Roles and Responsibility – Case Study

The QA manager on a $10 million ERP migration project for a Pet Store company, PetNow, reports to the Project Manager. The Project Manager thinks this will expedite the delivery of the project by using some of the Agile methods. What should the Internal Auditor, who recently joined the Project Team do once he understand the roles and responsibilities? (10 minutes)

A. Nothing as it makes sense to expedite the delivery

B. Demands changes to the Project Team right away, as the Project is certainly likely to fail

C. Understands the goal of the project, current state of the project, and then advises Steering Committee to possibly make the changes so that QA manager is independent to both the Project Manager and User Management

D. Waits for a problem to surface to make his case for a change or no change
Roles and Responsibilities

Senior Management

Executive Sponsor

User Group Management

Project Manager

Steering Committee

Development Project Team
- Tech Manager
- Systems Analysts
- Architects
- Developers

User Project Team
- User Manager
- Business Analysts
- Key Users
- UAT Testers

Infrastructure Team
- Software Support
- Hardware Support
- Network Support
- Application Monitoring

Quality Assurance Team
- QA Manager
- Functional Testers
- Regression Testers
- Performance Testers

Internal Auditor

Adapted from “CISA Review Manual,” ISACA.
What are Project Management Areas?

PMI (Project Management Institute) Defines 5 Domains
• Initiating
• Planning
• Executing
• Monitoring and Controlling
• Closing

The 5 Domains correspond to 9 Knowledge Areas
• Project Integration Management
• Project Scope Management
• Project Time Management
• Project Cost Management
• Project Quality Management
• Project Human Resource Management
• Project Communications Management
• Project Risk Management
• Project Procurement Management

Project Management Areas – Further Insight

Get broader understanding of these areas of the PMP Outline (pages 3-12):

http://www.pmi.org/certification/project-management-professional-pmp/~/media/pdf/certifications/pmp%20examination%20content%20outline_2010.ashx
Project Planning

What’s most important to consider as part of an IT project planning?

A. Deliverables or functionality
B. Timeline
C. People / Budget
D. All of the above?
Duration, Resource (Budget), and Deliverables

Adapted from “CISA Review Manual ” ISACA.
Software Size Estimation

What are some of the ways to estimate the software development size?

- LOC (Line of Code)
- Function Points
  - Functional decomposition of the supported features
- Comparing with similar projects
- COCOMO (Constructive Cost Model)
Function Points – Exercise (10 mins)

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Count</th>
<th>Weighting Factors</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td># of screens</td>
<td>5</td>
<td>x5</td>
<td>x25</td>
</tr>
<tr>
<td># Services</td>
<td>2</td>
<td>x10</td>
<td>x20</td>
</tr>
<tr>
<td># Database table</td>
<td>4</td>
<td>x10</td>
<td>x15</td>
</tr>
<tr>
<td># Files</td>
<td>4</td>
<td>x5</td>
<td>x10</td>
</tr>
<tr>
<td># Reports</td>
<td>2</td>
<td>x20</td>
<td>x30</td>
</tr>
<tr>
<td># External Input</td>
<td>1</td>
<td>x20</td>
<td>x40</td>
</tr>
<tr>
<td># Environment Variables</td>
<td>3</td>
<td>x20</td>
<td>x40</td>
</tr>
</tbody>
</table>

Determine the labor cost at 10 hours/FP and cost at $1,000/FP
### Function Points – Exercise (10 mins)

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Count</th>
<th>Weighting Factors</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td># of Screens</td>
<td>5</td>
<td>x5</td>
<td>= 200</td>
</tr>
<tr>
<td># Services</td>
<td>2</td>
<td>x10</td>
<td>= 120</td>
</tr>
<tr>
<td># Database Table</td>
<td>4</td>
<td>x10</td>
<td>= 70</td>
</tr>
<tr>
<td># Files</td>
<td>4</td>
<td>x5</td>
<td>= 40</td>
</tr>
<tr>
<td># Reports</td>
<td>2</td>
<td>x20</td>
<td>= 120</td>
</tr>
<tr>
<td># External Internet Services</td>
<td>1</td>
<td>x20</td>
<td>= 120</td>
</tr>
<tr>
<td># Environment Variables</td>
<td>3</td>
<td>x20</td>
<td>= 180</td>
</tr>
</tbody>
</table>

**Total** 13 25 11

Resource = 10 Hours/FP => 910 x 10 Hours = 9,100 Hours
Cost = $1,000/FP => 910 x 1,000 = $910,000
Software Cost Estimation

Software Cost depends on many factors

- Labor Cost – experience of staff, programming language, development environment, architecture, testing needs
- Hardware - such as servers, network, routers, gateways
- Expected Volume of transaction
- Licensing
- Maintenance and Support
- Operational Requirements - such as Availability, redundancy
- ....
Question?

Which of the following would BEST help to prioritize project activities and determine the timeline for a project?

A. Gantt chart
B. Earned value analysis (EVA)
C. Program evaluation review technique (PERT)
D. Function point analysis (FPA)
Upcoming Assignments/Tests

1. Individual Case Study - 1 (BesToy Feasibility Study): Thu 1/28 before the class

Questions?
Summary of Today’s Class

• Project Management Organization and Roles and Responsibility
• Project Governance Mechanism
• Software Size Estimation
• Focus of the Next Class and Reading
• Questions