Project Management: Prioritizing, Managing, and Controlling your Project and Application Portfolios

Pre-conference Workshop WS2, February 11, 2019

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Susan M Houston, Principle Consultant, Houston Solutions
Conflict of Interest

Ryan D. Kennedy
Susan M Houston

Have no real or apparent conflicts of interest to report.
## Agenda

<table>
<thead>
<tr>
<th>Topic</th>
<th>Presenter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Check-in &amp; Registration</td>
<td></td>
</tr>
<tr>
<td>Welcome, Introductions, Agenda</td>
<td>Sue</td>
</tr>
<tr>
<td>Project Request Management</td>
<td>Ryan</td>
</tr>
<tr>
<td>ACTIVITY (Small Group)</td>
<td>Ryan</td>
</tr>
<tr>
<td><strong>Break</strong></td>
<td></td>
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<tr>
<td>Governance Management</td>
<td>Ryan</td>
</tr>
<tr>
<td>ACTIVITY (Class)</td>
<td>Ryan</td>
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<tr>
<td>ACTIVITY (Small Group)</td>
<td>Ryan</td>
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<tr>
<td><strong>Lunch</strong></td>
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<tr>
<td>DISCUSSION (Class)</td>
<td>Ryan</td>
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<tr>
<td>Program/Project Portfolio Management</td>
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<tr>
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<td>Sue</td>
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<tr>
<td>Closing, Summary, Q&amp;A</td>
<td>Ryan</td>
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</tbody>
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Learning Objectives

• Review the processes for ongoing application reviews and asset management to help define the right time for disposition

• Identify the steps to gather, categorize, and manage new IT requests

• Develop a governance process for the evaluation of new IT requests and the review of the performance of the portfolio of current projects

• Create a project and program portfolio strategy to assess the quality of processes and deliverables while managing project performance
Introduction

Susan M. Houston
Portfolio Management

• Organizational approach on how to manage a portfolio of projects and investments

• Provides a framework for strategic decisions related to maintaining the portfolio within the constraints of available resources

• Examples of IT portfolios would be planned initiatives, projects, programs and ongoing IT services (such as application support)
Portfolio Management Professional

- Fosters alignment of portfolio components (projects, programs, operations) with the strategic objectives and priorities of the organization
- Establishes a governance model and portfolio management plan to support effective decision making
- Continuous monitoring to identify issues, risks and opportunities for improvement
- Strives to balance and optimize the portfolio to achieve strategic objectives
Justification

• Research shows that portfolio management is a way to bridge the gap between strategy and implementation, per PMI
• Provides improved decision making and risk management
• Allows for an ‘organizational view’ of IT activities and investments to ensure strategic alignment with mission and goals
Organization

- Reporting relationship
- Portfolio Office membership
  - Direct
  - Indirect
Necessary Structure

• Processes
• Templates
• Tools
• Staff

Starting with an initial request
Project Request Management

Ryan D. Kennedy
Objectives

• Develop a plan for gathering new IT requests
• Analyze, clarify, refine, and categorize the request
• Define different management strategies for IT work
• Develop a plan for converting the request to operational work
Request Management

Submission  Analysis  Categorization  Handoff
A Word about Buy-in

To adopt a successful request management process, you need support from executive management.

Focus points:
• Quality of Service
• Cost Savings
• Streamlined Services
• Fair Process
You WANT Requests... Don’t You?

Risk of *not* knowing: Shadow IT

- Unapproved or illegal procurements
- Last-minute and unplanned IT resource requests
- Escalating costs due to poor planning
- Duplicate IT solutions
- Solutions that are not in line with organization’s objectives
- Heightened risks of security/privacy issues (e.g. data loss)
- Unknown or uncontrolled data flows
- Wasted time
- Demoralized IT department
Progression of Request Review

Requestor
- Ensures proper internal approvals to initiate request
- Submits initial request form

Receiver
- Reviews request for completeness and adherence to policy
- Maintains log of inbound requests

Analyzer
- Gathers additional requirements & technical details
- Creates a business case or charter, as appropriate

Portfolio Office
- Manages and monitors the request and documentation
- Categorizes request and obtains final approval/disposition
It All Starts with a Plan

- Things to Consider
  - Who is making the requests?
  - How are requests initiated?
  - Who is receiving the requests?
  - How are requests categorized?
Who is Making the Request?

Everyone has ideas, but who has authority for submission?

• Option 1: Only designated individuals can submit
• Option 2: Team leads/managers can submit
• Option 3: Everyone can submit
How are Requests Initiated?
Committee-Based Requests

- Consensus from requesting department/team
- Well thought-out and comprehensive
- Better alignment to organization or team mission

- Time-consuming process
- May limit desire to submit
- Biased requests
Paper-Based Requests

✓ Easy access (no committees, logins, etc.)
✓ Easy to create, modify, and distribute
✓ Paper trail ensures higher security and confidentiality

✗ Poor version management of form layout
✗ Process flow can break or result in “lost” requests
✗ Ability for requestor to skip sections or provide limited detail
Electronic Form-Based Requests

- Clear, logical flow with required fields and approved requestors
- Able to quickly modify form based on organizational requirements
- Potential to track requests from submission through approval

- Inability to submit during system downtime
- Risk of data corruption or lost requests during failures
- System may not allow access to all necessary parties
Guidelines for Making Requests

It all comes down to Simplicity and Accessibility

Only 3 questions to ask:

**What?**
- What is the scope?
- When is it needed?

**Why?**
- Why is this needed?
- How does it relate to the mission?

**How much?**
- How much does it cost?
- Do you have the funds allocated?
Who is Receiving the Requests?

IMPORTANT: Remove the IT department!

Requests should be submitted to a third party (e.g. another department) to avoid any impression of bias.
Request Management

Once the request is received, the following takes place:

1. Analysis
2. Categorization
3. Handoff
Request Analysis

*By keeping the request process simple, you will need to gather more detail yourself*

**Key Questions:**

- Do you already have a solution in mind?
- Does this involve an existing system?
- Who or what is impacted? Who or what will benefit?
- What are the business/functional requirements?
- What are the technical requirements?
- What is the impact of not completing this request?
- When is this needed?
Request Categorization

**Operations**: Relatively simple (<40 hours) to complete

**Program/Project**: Requires coordination or significant work

- *Known* requirements + *known* solution = **Project Charter**
- *Known* requirements + *unknown* solution = **Business Case**
Request Categorization

**Business Case** should include:

- **The Problem**
  - Symptoms
  - Causes
  - Solutions
- **The Idea**
  - Business Requirements
  - Business Need
  - Funding
  - ROI
  - Alternatives
- **The Risks**
  - Likelihood
  - Mitigations
- **The Impact**
  - Positive
  - Negative
- **The Involvement**
  - Customers
  - Colleagues
  - Marketing
Examples – Business Case

Examples of requests that could be considered for Business Cases

- “A new tool to track nursing productivity and scheduling”
- “A cloud-based application for storing training documentation”
- “Replace the donor scheduling tool with a different system”
- “Convert the hospital’s phone system to Voice over IP (VoIP)”
Request Categorization

**Project Charter** should include:

- The Request
  - Description
  - Objectives
  - Justification

- The Deliverables
  - Technical Requirements
  - Milestones
  - Timeline
  - Funding
  - Build/Buy

- The Environment
  - Assumptions
  - Constraints
  - Risks

- The Involvement
  - Roles
  - Responsibilities
  - Stakeholders
Examples – Project Charter

Examples of requests that could be considered for Project Charters
• “Replacement of server hardware to comply with vendor specs”
• “Upgrade of barcode medication system to latest version”
• “Integration of medical devices with wireless network for updates”
• “Install this really great software solution I saw at HIMSS19”
Operations & Routine Maintenance

**Operations** follow Configuration/Change Management (CM)
The goal is to complete simple requests as quickly as possible.

Requests that can be considered non-projects include:

- Day-to-day changes and modifications
- Minor changes to existing hardware and software
- Limited work effort (less than 40 hours, post-analysis)
- Limited resource requirements (less than 2-3 teams)
- Limited (or no) cost
Examples – Operations

Examples of requests that could be considered for Operations

• “Add new orderable items to the Electronic Health Record”
• “Upgrade the memory in the server that hosts our application”
• “Install a patch on an application due to a vulnerability”
• “Send new lab components through the existing interface”
Handoff

Completed documentation is ready for handoff to the next group

Governance Board

CM Process
Small Group Activity

Analyzing a New Request
Governance Management

Ryan D. Kennedy
Objectives

• Identify the need for project governance in your organization
• Create a project governance implementation plan
• Describe the steps required to gather appropriate documentation to start a project
Governance Management

What is it?
A framework for making decisions on the applicability and priority of project requests as it relates to the organization’s mission.

Does the following:
• Comprises diverse, executive-level, engaged stakeholders
• Provides accountability, direction and oversight for the project
• Ensures alignment with organizational objectives
• Approves authority for the project and project manager
Governance Management

Why do we need it?

Consider IT’s role in approving and prioritizing projects

• Who is responsible for the project?
• How do you organize more requests than you handle?
• What potential issues may arise?

How do we make the organization (not just IT) accountable for IT projects?
Governance Management

Identifying the Need

- Lack of awareness of the impact of IT on the organization
- Disagreements on priority of IT work
- Poor, disorganized, and failed implementations of IT initiatives
- Disengaged sponsors, or limited organizational oversight
- Limited organizational expertise in project management

Any one of these may constitute a need for project governance!
Governance Drivers

1. Alignment of projects and requests to organization’s mission
2. Compliance with IT regulations and privacy legislation
3. Thoughtful and measured product requirements
4. Competitive advantage of products and services
5. Avoidance of security threats to infrastructure and other assets
Governance Process

**Definition/Planning**
- Alignment to Mission
- Portfolio Planning

**Section/Prioritization**
- Requests submitted
- Business Case/Charter Defined
- Resource allocation
- Scoring & Prioritization

**Authorization/Control**
- Approve Strategy
- Review Performance
- Generate/Review Data
Setting it Up

- Ensure buy-in from executive-level decision makers
- Ensure formal project processes are in place
  - Project Management Office (PMO)
  - Technical and business-level sponsors
  - Templates, frameworks, and methodologies
- Determine chair/champion of governance board (should *not* be IT)
- Identify voting and non-voting members of the committee
- Develop charter for governance board
Components of a Governance Charter

• Committee Name
• Effective Date / Duration
• Purpose
• Delegation of Authority
• Deliverables & Reporting Requirements
• Committee Chair and Members (Designate voting members)
• Roles and Responsibilities
Governance Environment

- EHR Prescribers & Users
- Purchasing & Contracting
- Medical Committees
- Steering Committees
- Section Leaders

Governance Board

Hospital Leadership
Membership Responsibilities

Members should be keenly aware of their role in the governance process and their impact on the organization.

Key Responsibilities:
• Defending of the organization’s mission and vision
• Holding management accountable for an aligned IT strategy
• Prioritizing new requests, understanding the impact to existing
Governance Management

Integrate governance into all levels of the organization

“A Shared Responsibility”
Additional Governance Roles

- Portfolio Manager
- Project Manager
- Key Stakeholders
Responsibilities: Portfolio Manager

*Interface with governing body to verify that projects and IT investments align to the organization’s objectives.*

- Educate requestors on the policies and procedures of the organization’s governance process.
- Participate in the review and prioritization of new IT requests.
- Review and optimize the overall portfolio to ensure it remains in compliance with organization’s goals.
- Provide detailed analysis of new requests so that leadership and governance bodies can make educated decisions.
Responsibilities: Project Manager

Manages approved projects, facilitates project communication with resources and stakeholders, and reports on the status of the work.

- Track project risks and performance in accordance with organizational standards.
- Report and escalate status, issues, risks, changes, and other necessary data to the portfolio manager.
- Verify that key stakeholders are engaged in the project.
- Monitor the scope of the project to ensure it remains in compliance with approved objectives.
Represents the business and functional goals and requirements of projects and investments.

- Defines project and investment-specific goals and objectives.
- Supports governance and portfolio processes.
- Identifies risks, issues, and necessary changes as they relate to IT projects and investments.
Define Requests to Review

Increasingly:
• Complex
• Pervasive
• Expensive
• Unique

Where do you draw the line?
The governance board should meet regularly, but not often. This requires requestors to think more strategically about their requests.

Options for Timeline:
• Routine Review (at next applicable meeting)
• Urgent Review (at next meeting, past deadline for requests)
• Emergency Review (ad-hoc process)
Sample Governance Meeting Agenda

• Announcements
• Review of New Project Requests
• Updates on Existing Projects
• Schedule & Staffing Review
Review of New Requests

- Review of original IT project request
- Review of project charter or business case
- Presentation from project requestor
- Governance committee recommendation
  - Approve
  - Approve, with modifications
  - Deny
  - Hold for further analysis / research
Governance Prioritization

- Prioritization and scheduling occurs after approval granted
- Methods to determine priority
  - Anonymous scoring from committee members
  - Weighted scoring based on benefit & impact
  - Committee voting
  - Comparison to existing projects
  - Decision from executive management / sponsor
  - Available resources
- How do mandated/required projects get addressed?
Key Areas to Score

1. Strategic Alignment
2. Business Process Impact (Value)
3. Return on Investment
4. Resource Utilization
5. Risk
## Strategic Alignment Scoring

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Scoring</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alignment to Mission</td>
<td>0 = No alignment</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 = Few objectives in alignment</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2 = Most objectives in alignment</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3 = Almost all objectives in alignment</td>
<td></td>
</tr>
<tr>
<td>Long-Range Impact</td>
<td>0 = No expected gains</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 = Short-term (1-6 month) gains</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2 = Moderate (6-18 month) gains</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3 = Long-term (multi-year) gains</td>
<td></td>
</tr>
<tr>
<td>Regulatory Requirements</td>
<td>0 = No regulations/mandates</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 = Suggested/recommended</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2 = Required eventually</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3 = Required now</td>
<td></td>
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</table>
# Business Process (Value) Scoring

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Scoring</th>
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</thead>
</table>
| Customer Satisfaction            | 0 = Potential decrease to satisfaction  
1 = No change to satisfaction  
2 = Minor increase to satisfaction  
3 = Major increase to satisfaction |
| Business Transformation          | 0 = No innovation (keep the lights on)  
1 = Meets basic industry standards  
2 = In alignment with competition  
3 = Industry-leading potential    |
| IT Impact                        | 0 = Enterprise-wide implementation  
1 = New technologies/hardware  
2 = Replacement technologies/hardware  
3 = No impact                    |
# Return on Investment Scoring

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Scoring</th>
</tr>
</thead>
</table>
| Funding Availability | 0 = No funds available  
1 = Some funds budgeted  
2 = Initial investment funds allocated  
3 = Funding allocated and available |
| Payback period       | 0 = No expected funding gains (or loss)  
1 = Expected to ‘break-even’ in 5+ years  
2 = Expected to ‘break-even’ in <5 years  
3 = Expecting short/long term gains |
| Environment & Urgency| 0 = No urgency  
1 = Strong sponsor support  
2 = Moderate urgency  
3 = High urgency & staff/customer desire |
### Resource Utilization Scoring

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Scoring</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT Resources</td>
<td>0 = All hands on deck to complete</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 = Major commitment</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2 = Minor commitment</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3 = Little to no commitment</td>
<td></td>
</tr>
<tr>
<td>Hospital Resources</td>
<td>0 = All hands on deck to complete</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 = Major commitment</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2 = Minor commitment</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3 = Little to no commitment</td>
<td></td>
</tr>
<tr>
<td>External Resources</td>
<td>0 = New contractors/staff needed</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 = Major impact to external resources</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2 = Minor impact to external resources</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3 = Little to no impact to external</td>
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</table>
## Risk Scoring

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<tr>
<th>Criteria</th>
<th>Scoring</th>
<th>Score</th>
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<tbody>
<tr>
<td>Risk to Organization</td>
<td>0 = No risk, 1 = Minor risk, 2 = Moderate risk, 3 = Significant risk</td>
<td></td>
</tr>
<tr>
<td>Time Commitment</td>
<td>0 = Less than 3 month project, 1 = 3-9 month project, 2 = 9-12 month project, 3 = Multi-year project (1+ years)</td>
<td></td>
</tr>
<tr>
<td>Training Needs</td>
<td>0 = No training or learning needed, 1 = Basic training (flyer / communication), 2 = Moderate customer leaning, 3 = Significant staff/customer learning</td>
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Presentation of Scoring Outcomes

High Risk
Low Value

Low Risk
Low Value

Low Risk
High Value

High Risk
High Value
### Presentation of Scoring Outcomes

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Average Score</th>
<th>High Score</th>
<th>Low Score</th>
<th>Weighted Score</th>
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<tbody>
<tr>
<td>Project A</td>
<td>10.3</td>
<td>12</td>
<td>7</td>
<td>11.1</td>
</tr>
<tr>
<td>Project B</td>
<td>9.5</td>
<td>11</td>
<td>5</td>
<td>10.1</td>
</tr>
<tr>
<td>Project C</td>
<td>8.4</td>
<td>11</td>
<td>5</td>
<td>7.3</td>
</tr>
<tr>
<td>Project D</td>
<td>7.9</td>
<td>9</td>
<td>3</td>
<td>7.6</td>
</tr>
<tr>
<td>Project E</td>
<td>4.3</td>
<td>7</td>
<td>2</td>
<td>5.1</td>
</tr>
<tr>
<td>Project F</td>
<td>2.6</td>
<td>6</td>
<td>1</td>
<td>3.1</td>
</tr>
</tbody>
</table>

Max score = 12
Minimum score = 0
Project Prioritization

Recommend that governance does not “approve” any projects until resources are available to start.

Factors to consider:

• Average score
• Weighted score (when considering risk)
• Priority of the new project
• Priority of existing projects
• Resource availability
• Funding availability
Governance Monitoring

- Metrics and reporting from PM and PMO
- Review of expected & actual schedule, budget, and resources
- Earned value management
- Determine how new projects fit within portfolio
## Project Status Report

<table>
<thead>
<tr>
<th>ID</th>
<th>Type</th>
<th>Name</th>
<th>Size</th>
<th>Feb '19</th>
<th>Mar '19</th>
<th>Apr '19</th>
<th>May '19</th>
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<tbody>
<tr>
<td>1</td>
<td>Mandate</td>
<td>Project A</td>
<td>Lg</td>
<td>Plan</td>
<td>Pilot</td>
<td>Rollout</td>
<td>Rollout</td>
</tr>
<tr>
<td>2</td>
<td>Governance</td>
<td>Project B</td>
<td>Lg</td>
<td>Exec</td>
<td>Exec</td>
<td>Exec</td>
<td>Go-Live</td>
</tr>
<tr>
<td>3</td>
<td>O&amp;M</td>
<td>Project C</td>
<td>Sm</td>
<td>Plan</td>
<td>Exec</td>
<td>Go-Live</td>
<td>Close</td>
</tr>
<tr>
<td>4</td>
<td>O&amp;M</td>
<td>Project D</td>
<td>M</td>
<td>Exec</td>
<td>Go-Live</td>
<td>Close</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Mandate</td>
<td>Project E</td>
<td>M</td>
<td>Rollout</td>
<td>Rollout</td>
<td>Close</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Governance</td>
<td>Project F</td>
<td>Sm</td>
<td>Go-Live</td>
<td>Close</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Governance</td>
<td>Project G</td>
<td>Lg</td>
<td>Go-Live</td>
<td>Close</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>O&amp;M</td>
<td>Project H</td>
<td>M</td>
<td>Close</td>
<td></td>
<td></td>
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</table>
# Resource Allocation

<table>
<thead>
<tr>
<th>Team</th>
<th>Total Hours</th>
<th>Hours Allocated (Feb’19)</th>
<th>Hours Allocated (Mar’19)</th>
<th>Hours Allocated (Apr’19)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Team</td>
<td>200</td>
<td>210</td>
<td>205</td>
<td>190</td>
</tr>
<tr>
<td>B Team</td>
<td>150</td>
<td>155</td>
<td>145</td>
<td>140</td>
</tr>
<tr>
<td>C Team</td>
<td>150</td>
<td>175</td>
<td>160</td>
<td>155</td>
</tr>
<tr>
<td>D Team</td>
<td>100</td>
<td>77</td>
<td>62</td>
<td>55</td>
</tr>
<tr>
<td>E Team</td>
<td>50</td>
<td>55</td>
<td>45</td>
<td>40</td>
</tr>
</tbody>
</table>
Project Oversight

- Discontinuing projects due to higher priorities or non-performance
- Review of changes to existing project scope
- Project reporting & metrics
  - Project schedule (planned vs. actual)
  - Budget and funding
  - Requirements and quality control
Continuous Improvement

- Lessons Learned
- Review outcomes, performance, and measures of success
- Review financial outcomes and return on investment
- Transition to Support and Operational Control
Outcomes of Governance

• Approved and clearly-defined project scope and objectives
• Improved organizational understanding of portfolio of projects
• Alignment of projects to mission and vision of the organization
• Development of appropriate and relevant project metrics
• Heightened involvement and engagement from project sponsors
• Empowerment of the right people at the right time
Class Activity

Mini Governance Meeting
Small Group Activity

Scoring New Requests
Class Activity

Prioritizing Requests
Program/Project Portfolio Management

Susan M. Houston
Objectives

• Create project and program portfolio processes
• Assess the quality of processes and deliverables
• Evaluate the best method for managing portfolio performance
What is PPM

Framework used to manage the of collection projects and programs to achieve strategic objectives. Provides the ability to see the big picture while analyzing the performance of the portfolio as a whole.

The coordination and management of the interrelationships between projects and programs

- Risks and issues
- Schedule, tasks and activities
- Staff
- Budget
What is PMO, a PgMO, a PPO
Getting Started

Start with understanding your organization

- Complexity of current portfolio
- Leadership’s priorities
- Stakeholder’s expectations
- Current processes
- Portfolio performance reporting
- Gap analysis
Current Portfolio

What does your current portfolio look like?
• Single facility vs. multiple
• Quantity of new requests
• Criteria for a project
• Quantity of projects
• Quantity of programs
• Quantity of applications
• Size and distribution of IT department
Leadership Priorities

What are the strategic initiatives today, this year and next year?
Stakeholder Expectations

• Stakeholder analysis
• Governance and oversight
• Communication
Current Processes

What current processes do you have in place today?

• Request submission and management
• Project management methodology
• Program management methodology
• Application management framework
  – Configuration management process

What templates and tools are currently available?
Portfolio Performance Reporting

Provide information for portfolio oversight and governance

• EVM
• Current status
• Resource Allocation
• Escalated risks and issues
• Quality of deliverables
• Validation processes are being followed
Earned Value Management
Earned Value Management

- Budget OK, Schedule NOT
- Budget & Schedule OK
- Budget & Schedule Issue
- Schedule OK, Budget NOT

- Great
- Slow Down
- Speed Up
- Warning
# Current Status

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# Current Status

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</table>
Resource Allocation

![Bar chart showing resource allocation from 2018-Q1 to 2019-Q1. The chart compares capacity and allocation for each quarter.](chart.png)
Deliverable & Process Reviews

Independent review

• Deliverable review
  – Prior to finalization
  – Random sample of deliverables

• Process review
  – Ongoing monitoring
  – Check points
  – Random sample of projects
Gap Analysis

• Compare results of analysis vs. current state
• Identify gaps
  – What needs to be updated
  – What is missing
• Make a plan to close the gap
• Review with leadership and obtain approval
Hands On Activity

Processes and Templates
Class Discussion

Processes and Templates
Tools

• Determine need
• Evaluate what is currently available
• Research available options for any gaps
• Determine if gaps can be filled

*It doesn’t have to be a new application*

The tools should enhance the defined processes and procedures and provide a benefit
Ongoing Process Review

Review current processes, templates and tools regularly
• Lessons Learned since implemented or last updated
• What updates should be done
• Communication, or training, on changes
Application Portfolio Management

Susan M. Houston
Objectives

• Discuss activities included in and managing an application portfolio
• Recognize the importance of ongoing application reviews
• Utilize asset management to define the right time for disposition.
Managing an Application Portfolio

- What does this mean
- What is an application
- What is needed to maintain this portfolio beyond application update/upgrade projects
  - Resources
  - Processes, templates
  - Tools
Application Lifecycle

- Idea and Request
- Buy or Build
- Initial Implementation
- Operations and Maintenance
- Disposition
Idea and Request

Review all requests for new applications
• Is there a need for another application
• Ensure they are reviewed for compliance to
  – Security and privacy standards
  – Architecture standards
Buy or Build

• Define need, not solution
• Evaluate current options
• Evaluate ability to build solution
• Market research
• Governance approval
Hand off from Governance

Once approved by governance, hand off to PMO for implementation project.
Initial Implementation Project

Important to include
• Architecture team
• Security and Privacy team(s)
• Configuration & Release Management team
• Application Owner & Support team
Architecture Documentation

- Design documentation
- Architecture diagrams
- Integration descriptions
Integration Architecture

Process Flow:

1. **Order Placed**
   - **Step 1:** Admissions Places an ADT Order

2. **Create ADT Message**
   - **Step 2:** Allscripts Order Generation Creates an ADT Message

3. **Obtain ADT Message**
   - **Step 3:** Allscripts Order Generation Passes the ADT Message to ISS

4. **Send ADT Message**
   - **Step 4:** ISS Sends ADT Message to QDX

5. **Pass Message to Ancillary Systems**
   - **Step 5:** QDX Passes Message to Ancillary Systems

6. **Send Acknowledgement**
   - **Step 6:** Ancillary Systems Send Acknowledgement to QDX

7. **Send Acknowledgement**
   - **Step 7:** QDX Sends Acknowledgement to Admissions

---

<table>
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<tr>
<th>Action</th>
<th>System</th>
<th>Interface Engine</th>
<th>Connection Name</th>
<th>Host Port</th>
<th>Send Application ACK</th>
<th>QDX Prod Thread/eLink Connection</th>
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<tr>
<td>ADT* Outbound</td>
<td>All ADT Systems</td>
<td>QDX</td>
<td>AD2OUT</td>
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<td>ADTIN</td>
<td>9001</td>
<td>Yes</td>
<td>adm_to_scm</td>
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</table>
Network Architecture
Security & Privacy Documentation

- Privacy Impact Assessment (PIA)
- System of Records Notice (SORN)
- Systems Security Plan (SSP)
- Security Risk Assessment
- Authority to Operate (ATO)
- Plan of Action & Milestones (POA&M)
Configuration & Release Mgmt

- Configurable Items & levels of control
- Configuration Management plan
- Release Management plan and schedule

Defined process from request, review, approval, development, migration, test, migration, and validation
## Levels of Version Control

<table>
<thead>
<tr>
<th>Item Controlled in CI database</th>
<th>Level 0</th>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
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<tbody>
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<td>Item Under Version Control</td>
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<tr>
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<td>No</td>
<td>Yes</td>
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<tr>
<td>Change Request required / Board Approval required</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Level 0 Example</th>
<th>Test Data Sheets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 1 Example</td>
<td>Processors on Production Server</td>
</tr>
<tr>
<td>Level 2 Example</td>
<td>Test Scripts</td>
</tr>
<tr>
<td>Level 3 Example</td>
<td>New Lab Test, Change to Allergy Code</td>
</tr>
<tr>
<td>Level 4 Example</td>
<td>Change to an Interface, Release Updates</td>
</tr>
</tbody>
</table>
CM Process Flow

1. Change Request Received
   - Analysis & Documentation
2. Approval Decision
3. Development
4. Ready for Testing
5. Migrate to Test Environment
6. Complete Change Request & Close
   - Validation
7. Migrate to Production
   - Passed Testing
   - Testing
Application Support Documentation

- Support call resolution documentation
- Monitoring expectations
- Disaster recovery expectations
- Downtime procedures
- Service Level Agreements (SLAs)
- Memorandum of Understanding (MOU)
- Post-project Metrics Plan
Post-Project Hand-off

• Begins during project planning
• Identify who will be supporting the new application
• Involved them in the project
• Hand-off meeting prior to activation
• Project team supports immediately after activation
• Hand-off to support team and communicate to all stakeholders
Operations and Maintenance

• Ongoing support and maintenance
  – Monitoring performance
  – Day to Day maintenance
  – Issue management

• Requested upgrade or new functionality projects
Class Discussion

Project vs. Operations

For the purpose of this discussion, utilize the following

**Operations**: Relatively simple (<40 hours) to complete

**Project**: Requires coordination or significant work
Example 1

Request: Update order interface to the nutrition system to include allergies

Analysis: The order interface is already in place, the work effort to add allergies is estimated to be 10 hours
Example 2

Request: Extend the wireless network to 2 new office spaces being renovated

Analysis: The spaces are both large and will require many access points each. Work effort is estimated to be 50 hours total
Example 3

Request: We need a small database to keep track of our journal submissions

Analysis: The application development team can develop a small application with the information noted in the request. Work effort is estimated to be around 100 to 150 hours.
Example 4

Request: Update current report by adding additional data elements

Analysis: While the report is fairly complex, this request does not require any reformatting or modification to current content. Work effort is estimated to be 35 hours.
Ongoing Application Reviews

• Architecture review
• Security and Privacy review
• Required upgrade or update
• Still used, still needed
Architecture Review

• Review of overall architecture
• Update documentation, as needed
• Operational assessment
• Are updates needed
  – Hardware refresh
  – Hardware software updates
  – Application upgrade or update
  – 3rd Party application upgrade or update
Security & Privacy Management

• Review of overall security status
• Update documentation, some required annually
• Operational assessment
• When updates are needed
  – Virus and Malware
  – Impact of new security requirements
  – Encryption at rest and/or in transit
  – Hardware or software upgrade/update
Configuration & Release Management

- Management of changes smaller in scope than a project
- Follow defined ongoing repeatable process
  - Requests for changes
  - Reviews, analysis and approval decision
  - Development or change implemented
  - Migrated through environments with testing and validation
  - Per release schedule, migrated to production
- Defined process for emergency requests
Issue & Risk Management

- Managing issues outside of projects
- Managing risks outside of projects
Asset Management

What are assets?
• Applications
• Software
• Websites
• Computers
• Servers
• Mobile devices
• Wireless access points
Ongoing Process Review

Review current processes, templates and tools regularly

• Lessons Learned since implemented or last updated
• What updates should be done
• Communication, or training, on changes
Disposition

• Determine when to replace or dispose
• During disposition
  – What to do with DATA
  – What to do with APPLICATION
  – What to do with HARDWARE
Hands On Activity

Disposition Template
Disposition Documentation

• Plan for disposition
• Review of plan
• Approval
• Action and tasks
• Documentation of activities with dates
• Vendor disposition agreement, if needed
• Inactivate application, if tracking
Disposition Document Template

- Application name & version
- Business point of contact
- Date of disposition decision
- Estimated disposition date
- Plan for disposition of data and database
- Plan for disposition of application
- Plan for disposition of hardware
- Architecture review notes
- Security & Privacy review notes
Disposition Document Template

- Server names & IP Addresses
- Active Directory or system accounts
- Active ports
- Firewall exceptions
- Web addresses (URLs)
- Backup copies
Disposition Document Template

• Final approval authority and date obtained
• Documentation and date disposition is completed
  – Data/Database
  – Application
  – Hardware
  – Ports, URLs, Firewall
  – AD accounts
• Date disposition is complete
Vendor Disposition Agreement

- Contract information
- Application details
- Description of data
  - To be returned
  - To be disposed
- Disposition plan, including method of disposition
- Approvals
- Dates
Closing

Ryan D. Kennedy
Objectives

• Review the processes for ongoing application reviews and asset management to help define the right time for disposition.

• Identify the steps to gather, categorize, and manage new IT requests

• Develop a governance process for the evaluation of new IT requests and the review of the performance of the portfolio of current projects

• Create a project and program portfolio strategy to assess the quality of processes and deliverables while managing project performance
Questions

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