Information Technology Services

Project Management Office Operations Guide

Revised 3/31/2015

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ABOUT US

MISSION STATEMENT

The Project Management Office (PMO) leads and manages the portfolio of key IT and business process improvement projects. The office is responsible for selecting, managing and optimizing the project resources and ensuring projects are aligned with the University's mission and strategic goals.

PMO staff works in partnership with IT cross-functional departments to form cohesive teams to achieve project objectives. PMO supports the successful management of IT projects through application of leading project management practices. We also recognize that all projects are different and may require an adaptable approach to meet the client's needs.

The PMO is also responsible for monthly posting of the Strategic and Tactical Plan reports. Our department homepage resides within Information Technology Services org site at –> PMO homepage

PURPOSE OF THIS DOCUMENT

This document describes in detail the process that the PMO intends to use during the initiating, planning, managing (controlling and executing), and closing stages of technology projects.

In defining this methodology, the PMO hopes to reach the following goals:

- Provide a common point of reference and a common vocabulary for talking and writing about the practice of project management for technology projects with ITS
- Provide guidelines as to what is a Project
- Increase the awareness and professionalism of good Project Management Practice
- Define the roles of the Project Manager, Key Stakeholders, Technical and Business leads

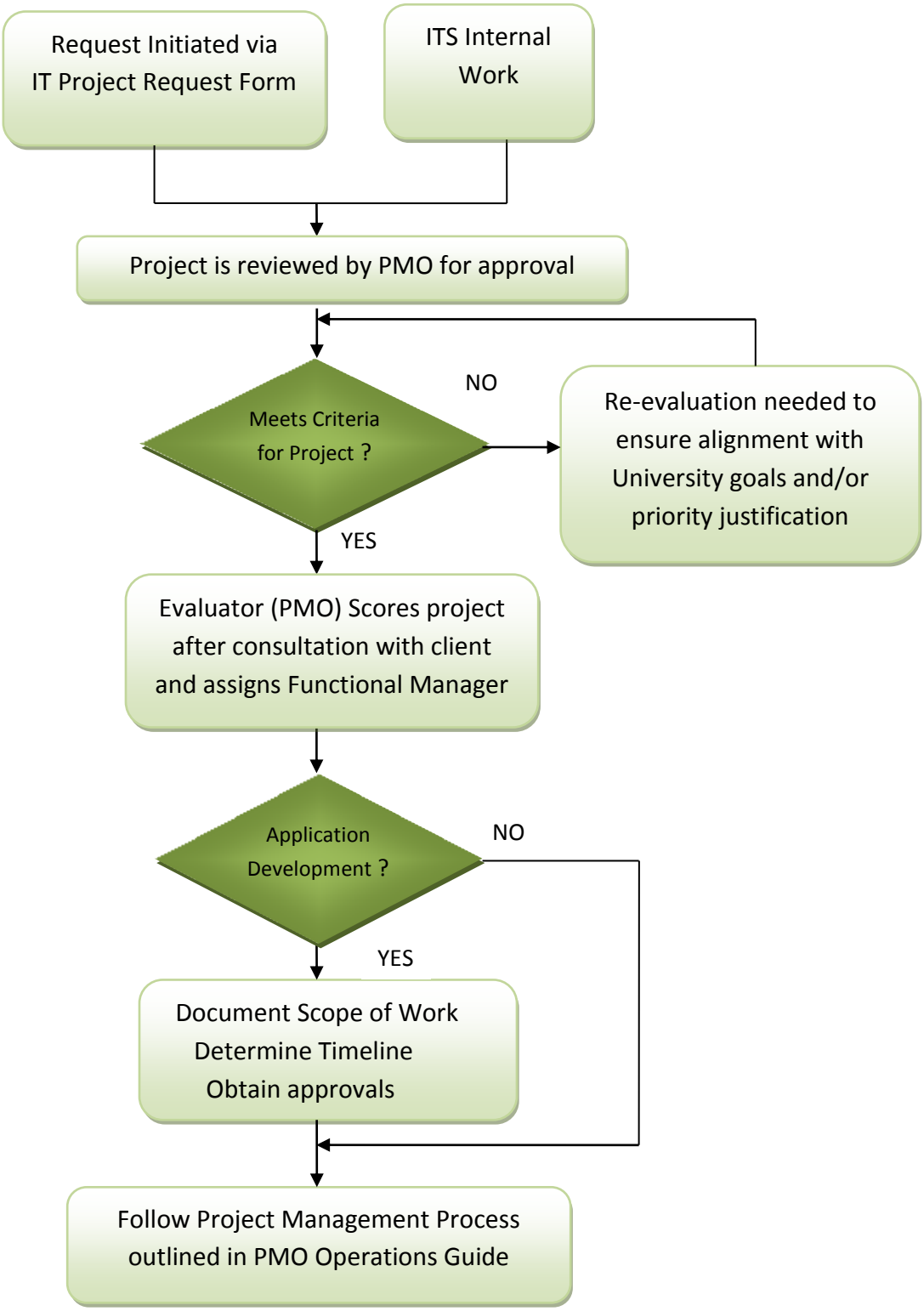
ORGANIZATION

Each section of this document is organized as follows:

- PROCESS OVERVIEW
- GUIDELINES

WORKFLOW

The PMO receives and processes projects as follows:



PROJECT LIFECYCLE

PROJECT INITIATION

PROCESS OVERVIEW

The Project Management Office is currently engaged in a variety of projects and initiatives and assists with ITS resource planning. The PMO critically analyzes all IT project requests and recommends prioritization to the Chief Information Officer.

The PMO defines a project as follows:

- A group activity designed with a goal to produce a unique product, service or result
- It is considered "temporary" in that is has a definitive beginning and end time
- Has a defined scope and resources
- In alignment with the University's Strategic Goals
- Not associated with daily business operations
- The effort requires at least 40 business hours of an individual staff member's time

GUIDELINES

A scope of work document (aka Statement of Work / SOW) will promote an early collaboration between the client and the project team. Establishing a good rapport with your sponsors will ensure a cooperative spirit during project lifecycle.

The scope of work should be reviewed by all invested parties so that everyone involved can understand and agree on the proposed specs. The document includes:

1. Project Proposal
2. Benefits that can be expected
3. Technical approach (IT solution)
4. Approximate time table for delivery

Formal acceptance of statement of work by the client is critical and required. PMO will also ensure the project is in alignment with the University's strategic goals.

Sample Statement of work template can be found on our website -> Sample SOW

PROJECT PLANNING

PROCESS OVERVIEW

Project planning defines the project tasks and describes how the tasks will be accomplished. The PMO will focus on more clearly defining the project scope and provide a framework for management review and control.

The PMO may schedule internal discussions with team leaders at this stage to gain an understanding of the effort involved and perform a preliminary sizing. A Project Initiation checklist [1] is used as a guideline.

GUIDELINES

The PMO's planning process includes the following steps:

1. Estimating the size of the project
2. Estimate the technical scope of the project
3. Estimate the resources required to complete the project
4. Produce a schedule
5. Develop a Communications Plan[2]
6. Identify and assess risks
7. Negotiate commitments

The PMO will assess whether or not the project requires a formal project plan or if a high-level list of milestones is more appropriate. Several iterations of the planning process are performed before a formal plan is actually completed.

[1] See CHECKLISTS section of the document

[2] See COMMUNICATIONS section

An appropriate Tier level will be decided upon after initial assessment. For more details on Tier levels, please see Definition of Tiers section[3]

If procurement is involved (i.e. purchase of equipment or vendor resource), a budget is established and a formal RFP (Request for Proposal) or Quote will be prepared at this time. Management and Finance approvals are required before ordering equipment or contracting vendor resources.

PROJECT EXECUTION, MONITORING AND CONTROLLING

PROCESS OVERVIEW

Once a project moves to this phase, the project team is formed and the necessary resources are allocated to perform project tasks outlined in the project plan.

The Project Plan execution, monitoring & controlling process ensures the planned project tasks are carried out in an effective and efficient way. The PMO is responsible for reporting project progress and keeping management informed of any issues that may arise.

Any updates or changes in project scope will be incorporated through a Change management process. Change in scope can impact resource allocation and/or delivery timeline.

GUIDELINES

The PMO will be responsible for the following:

1. Regular review of project progress and creation of status reports
2. Schedule checkpoint meetings to update status
3. Control and track tasks in project plan (deliverables on track)
4. Adhere to Quality Management and Risk Management Policies[4]
5. Update project plan (completion dates, new tasks, milestones)
6. Communicate risks and concerns to client and team
7. Change management[5]
8. Obtaining appropriate sign offs for user acceptance testing and deliverables

Periodic status reports are essential to communicate progress and team accomplishments. Status reports can also provide insight to next steps, as well as bring issues to the attention of the appropriate team for assessment. Clients are emailed a list of current ITS projects along with status on a scheduled basis. Checkpoint Team meetings are held with stake-holders as appropriate.

[3] See DEFINITION OF TIERS section of the document

[4] See QUALITY MANAGEMENT and RISK MANAGEMENT sections

[5] See CHANGE MANAGEMENT section

PROJECT CLOSEOUT

PROCESS OVERVIEW

The final phase of the project's lifecycle is project closeout. Project closeout is completed once all defined project tasks and milestones have been completed and the customer has accepted the deliverables.

A Production Ready Checklist [6] is referenced when a system is being prepared for deployment. Production applications will be maintained via steady-state support teams within ITS.

GUIDELINES

The PMO will be responsible for the following:

1. Verification of formal acceptance by stakeholders
2. Work with Management for the release or redistribution of resources
3. Contract closure
4. Identify and document "lessons learned"
5. Celebrate project success (recognize team members)
6. Archiving Project records
7. Distribution of client satisfaction surveys upon project closure

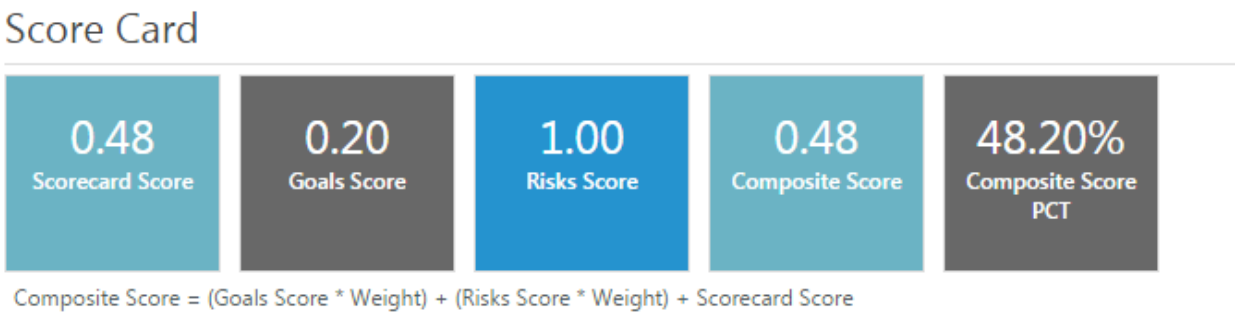
[6] See CHECKLISTS section of this document

PROJECT SCORING MODEL

Our project ranking model is based on weighted responses to project initiation checklist questions which are typical for IT projects. This model is currently implemented in TeamDynamix which will aid the PMO and Project Review Board in assessing priority.

In order to rank incoming projects, we evaluate its importance by assessing the value it will bring as well as ensuring it is aligned with the University's strategic goals. We also take into account the risk, urgency, and target audience.

The Scorecard criteria questions along with Goals and Risk are calculated to create a composite score percentage. A summary report of scored projects is reviewed by the governance committee in order to determine priorities.



SCORECARD CRITERIA – WHY ARE WE DOING THIS AND HOW WILL IT BE COMPLETED?

1. **Value Add / Impact**: Projects that have a positive impact on the largest customer base are ranked highest on this criterion. Projected business benefits can include financial, organizational, student enrollment or retention.

Strategy	Weight	Criteria	Value
Value Add	20%	No Impact	.0
		Single Administrative Division / College	.33
		Multiple Administrative Divisions / Colleges	.66
		Significant Return on Investment	1
		University-wide	1

2. **Urgency**: In an effort to make sure the project benefits the university as a whole or a specific component of the institution, this criteria ranks both the urgency and the group(s) who will benefit from it.

Strategy	Weight	Criteria	Value
Urgent	20%	Not Urgent or important	.0
		Important to 1 or more departments	.25
		Urgent – time sensitive	1

3. **Required**: Measure the extent to which the project is required for compliance (minimizing any risk to the University) or cost reduction. A patch or upgrade to major university systems based on federal regulations is associated with remaining in compliance (highest value).

Strategy	Weight	Criteria	Value
Required?	20%	Not Required	.0
		Associated with planned initiatives	.33
		Required to sustain operations	.66
		Required to remain in compliance	1

4. **Mission Supported**: Identify how this project supports our organization's mission.

Strategy	Weight	Criteria	Value
Mission Supported	10%	Administration	0
		Academic	1
		Research	1

		Student Experience	1

5. **Increase Effectiveness:** The project will contribute to ongoing efforts that drive continuous process improvement. Does this improve an existing process or enhance user experience? For example, does this project produce a new service that will reduce administrative cost and create an easy-to-use interface for the student or user?

Strategy	Weight	Criteria	Value
Increase Effectiveness	10%	No Impact on Efficiency	.0
		Improved User Experience	.5
		Increased Administrative Efficiency	.5
		Increased User Experience & Admin Efficiency	1

6. **Funding**: Costs include both human resource and physical (hardware/licensing) costs. If funding is available and allocated to support the project life-cycle, the score is higher. If funds are not available, we cannot proceed with taking on this project.

Strategy	Weight	Criteria	Value
Funds Allocated	10%	Funds are not available	.0
		Funds are available	.5
		Funds are available and allocated	1

7. **Goals clearly articulated:** A complete set of requirements are required to develop a scope document. A scope document includes description of solution, deliverables, exclusions, constraints and assumptions. Stakeholders and IT must agree to scope before committing to execution.

Strategy	Weight	Criteria	Value
Goals clearly articulated	10%	Solution is unclear; problems expected	.0
		Solution is known: some problems expected	.33
		More than 1 approach is available	.66
		Solution is well defined: no problems expected	1

GOALS

Note: the List of Goals will be updated to reflect 2016-2020 University Strategic Plan as soon as they are released.

I - Advance Pace's Academic Programs

II - Build a Culture of Community

III - Create Vibrant and Distinct Campus Identities

IV - Build a Strong Financial Foundation and Efficient Infrastructure

V - Enhance Pace's Visibility

RISKS

- Not Applicable = 1
- Low = 0.67
- Medium = 0.33
- High = 0

Risk Score = (Sum of all risk scores) / (Total number of risks). A lower risk score means the project is more risky. Risk scores will fall between 0 and 1.

1. **Campus Risk non-compliance** Would the university potentially be at risk if this project was not completed (regulatory or security related)

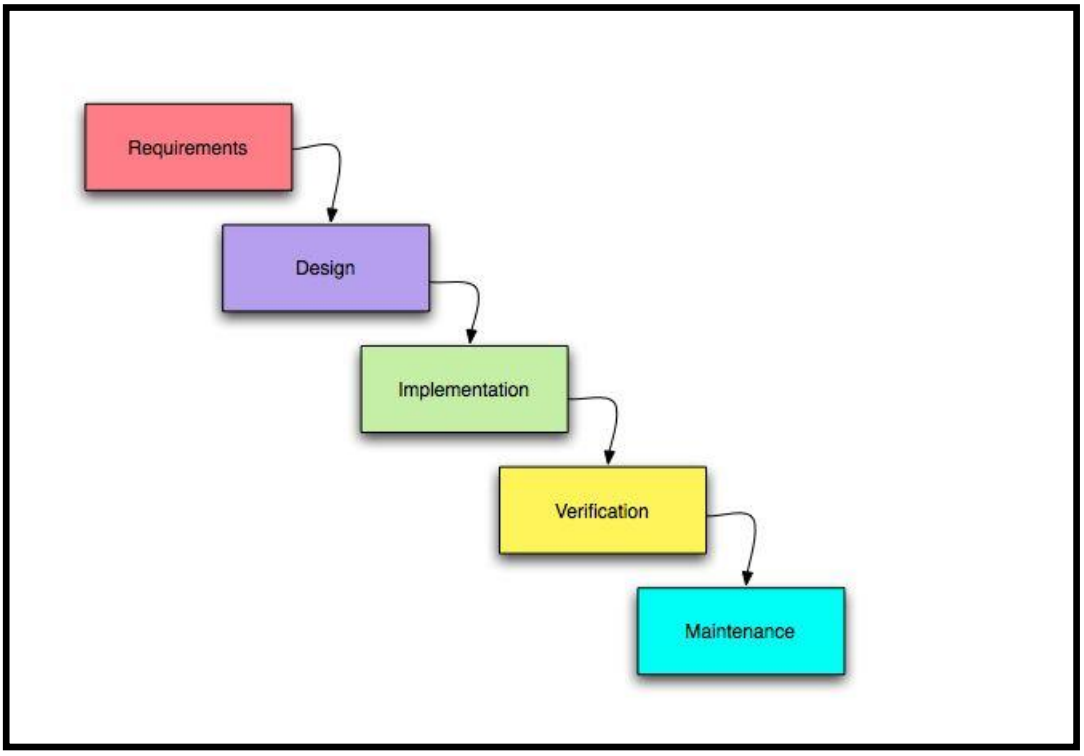
2. **Risk mitigation** Risk mitigation involves development of mitigation plans designed to manage, eliminate, or reduce risk to an acceptable level. Once a plan is implemented, it is continually monitored to assess its efficacy with the intent of revising the course-of-action if needed.

SDLC – SOFTWARE DEVELOPMENT LIFE CYCLE

WATERFALL MODEL

The PMO works with the client and the Application Development Group using the waterfall model to develop new applications. This is model applies to the majority of our Tier 1 and 2 development projects. For more complex or high-risk projects, phases may overlap to accommodate change in scope and/or extensive testing.

- Each phase produces deliverables required by the next phase in the life cycle.
- Requirements are translated into design.
- Code is produced during implementation that is driven by the design.
- Testing verifies the deliverable of the implementation phase against requirements.
- Each phase must be completed in its entirety before the next phase can begin.
- At the end of each phase, a review takes place to determine if the project is on the right path.



SDLC Description of Phases

REQUIREMENTS

- Recognition of need
    - Can be environmentally or organizationally based.
    - Ideas are generated to advance technology
    - User-originated ideas prompt initial investigation

- Feasibility Study
    - Economic: Cost benefit analysis
    - Technical: Determine whether existing systems can support what is requested.
    - Behavioral: An estimate is made of how strong a reaction the user staff is likely to have toward the development of a new system.
    - Steps:
        - Form a project team and appoint a leader.
        - Prepare system flowcharts.
        - Enumerate potential systems.
        - Describe and identify characteristics of candidate system.
        - Evaluate performance.
        - Select best candidate system.

- Analysis
    - In-depth analysis is performed to obtain a detailed understanding of the business needs.
    - Tools used: interviews, on-site observation, etc.
    - Training, experience, and common sense are required for collecting information to do analysis.

DESIGN

- Defines the final system and refers to technical specifications.
- Logical Design: Specifies user needs.
- Physical Design: Tells ITS what the candidate system must do.

IMPLEMENTATION

- 3 Types:
    - Implementation of a computer system to replace manual system.
    - Implementation of a new computer system to replace an existing one.
    - Implementation of a modified application to replace existing one.

VERIFICATION

- Determine if system does what it was designed to do.
- Ensure it supports the user effectively, efficiently, and as required.
- Determine success in terms of functionality, performance, and cost versus benefits.

MAINTENANCE

- Ensure that needs continue to be met and system continues to perform according to specifications.
- Routine hardware and software maintenance and upgrades are performed to ensure effective system operations.
- User training continues during this phase, as needed, to introduce new users to the system or to introduce new features to current users.

DEFINITION OF PROJECT CLASSIFICATIONS

Project classifications are used to sort projects by type of service provided to help determine value added by each project.

ACADEMIC TECHNOLOGIES

Projects related to academic technologies in classrooms, online, or related to faculty research.

ADMINISTRATIVE SYSTEM IMPROVEMENTS

Upgrades to departmental or division-wide workflows or systems.

INFRASTRUCTURE IMPROVEMENTS

Upgrades to networking, telecommunication, or server infrastructure that affects specific physical locations or the entire University.

IT GOVERNANCE & STRATEGIC PLANNING

Projects to create a reinvigorated IT governance structure that promote transparency and include representation from faculty and staff.

IT SECURITY

ITS security initiatives to reduce/mitigate risk, or maintain compliance with industry standards and best practices.

IT SERVICE IMPROVEMENTS & OUTREACH

Projects to improve IT services to the University community as well as IT staff development.

RESEARCH TECHNOLOGY SERVICES

Projects related to faculty and/or student research.

STUDENT EXPERIENCE

Service improvements that directly affect student experience. This includes upgrades such as: digital signage systems, improvement to computer classrooms and computer labs, academic support, and retention initiatives.

DEFINITION OF PROJECT TYPES

The Project Type attribute allows the PMO to break down ITS projects by technology, e.g. measuring percentages of development projects versus construction projects.

APPLICATION DEVELOPMENT / BANNER

Projects involve web applications developed for client departments, typically to streamline workflows and/or eliminate paper forms. These projects can be submitted by a variety of University departments including Human Resources and the Office of Student Assistance and typically require work from ITS' Application Development Group or Administrative Programming Group.

BUSINESS INTELLIGENCE

Projects to develop dashboards, reports, analyses, and decision-support information prepared by Enterprise Reporting, sometimes in collaboration with the Application Development Group or Administrative Programming Group.

CONSTRUCTION

Typically affect one or more departments or entire campuses depending on project size. The PMO is responsible for coordinating between construction managers and relevant ITS departments like Networking, Telecommunications, and Educational Media to ensure adequate voice/data service in new or renovated spaces and to provide academic technology in student-facing areas.

PACE WEB SITE

Involve updating the University-wide website as well as making changes to, or updating, departmental websites for the various departments and colleges in the University and involve ITS' Web Services department.

SYSTEMS & INFRASTRUCTURE ADMINISTRATION

Projects that affect backend systems and infrastructure. These are typically initiated internally by ITS to upgrade or maintain network or server infrastructure.

TRAINING / PROGRAM MANAGEMENT

Projects typically involve training faculty on new or updated academic technologies, developing a suite of IT services to support faculty research, tracking progress on the yearly University PC Replacement program, etc. These projects involve a variety of University departments and typically require input from ITS' Academic Technology or User Services departments.

DEFINITION OF TIERS

Based on the project scorecard and criteria listed below, ITS projects are sorted into project tiers which provide guidance related to variations in approval requirements, execution methods, and documentation requirements.

TIER 1 – Minimal Complexity

- No Banner integration or other data ETL (Exchange Transfer Load)
- Estimated work time greater than 40 hours but less than 2 months
- User population less than 20
- Single ITS department completing work
- Bi-weekly status report issued by PMO to Business Sponsor and/or Key Stakeholders
- Project Management Lifecycle is followed
- Quality Management Policy Level 1 is followed[7]
- High level milestones/tasks identified

TIER 2 – Moderate Complexity

- May include Banner integration or other data ETL
- Estimated work time greater than 2 months but less than 12 months
- May include multiple ITS departments
- Technical Lead identified to ensure appropriate strategy
- User population greater than 20 and may have multiple university clients
- Bi-weekly status report issued by PMO to Business Sponsor and/or Key Stakeholders
- Project Management Lifecycle is followed
- Quality Management Policy Level 2 is followed
- Requires a high level Project Plan with milestones and dependencies

TIER 3 – Highly Complex

- Includes Banner integration or other data ETL
- Estimated work time greater than 12 months
- May include multiple ITS departments
- Technical Lead identified to ensure appropriate strategy
- User population is University wide
- Executive Business Sponsor identified (provide leadership support)
- Bi-weekly status report issued by PMO to Business Sponsor and/or Key Stakeholders
- Project Management Lifecycle is followed
- Quality Management Policy Level 2 is followed
- Requires detailed Project Plan with milestones and dependencies

[7] See QUALITY MANAGEMENT POLICY section

QUALITY MANAGEMENT POLICY

The purpose for managing quality is to validate that the project deliverables are completed with an acceptable level of quality. Quality management assures the quality of the project deliverables and the quality of the processes used to manage and create the deliverables.

LEVEL 1

- Key Project deliverables and processes are subject to quality review
- Completeness and Correctness of deliverables
- Ease of transition to support mode by new resource (from development to production)
- Business sponsor survey and review - Stakeholder project expectations are met

LEVEL 2

- All of Level 1
- Complete Project Initiation Checklist Review
- Major Deliverables of the project will be tested for satisfactory quality level
- Include organizational standards that need to be followed when performing quality review
- Quality control activities will occur more frequently throughout the project life cycle
- Quality control activity log will be maintained
- Complete Production Ready Checklist Review
- Business sponsor survey and end user survey and review (ensure expectations are met by both stakeholders and user community)

RISK MANAGEMENT

Low Risk	Medium Risk	High Risk
▪ Considered non-complex ▪ Minimal impact to user community ▪ No dependencies	▪ Considered moderately complex ▪ Test window required prior to deployment ▪ Some dependencies	▪ Considered highly complex ▪ Project plan with dependencies ▪ Weekend deployment possible
▪ No cost to client	▪ May include vendor costs	▪ May include vendor costs
▪ Does not store or transmit banner data ▪ Non-sensitive data	▪ May include one-way pull of banner data ▪ May include confidential data	▪ Includes banner data export/import ▪ May include confidential data
▪ existing technology, standard procedures	▪ May include technology upgrade	▪ New development work on new infrastructure ▪ May require equipment acquisition, setup
▪ Resource from single IT Dept ▪ Internal to IT or single department (client)	▪ Resource required from multiple IT depts ▪ multiple clients impacted	▪ Collaborative effort - ITS, Cross functional teams, University-wide impact.
▪ Project works toward goals and objectives of department	▪ Project in alignment with University strategic direction	▪ Project in alignment with University strategic direction

ROLES AND RESPONSIBILITIES

Each project has a team of people who fill various roles that works together to ensure each project is a success. Below are the typical roles individuals affiliated with ITS projects fulfil with an outline of their responsibilities.

REQUESTOR

- Initiates the request for identified project.
- Generally, end-user of the product or service.

PROJECT SPONSOR

- AVP or higher with vested interest in successful outcome of the project.
- Champions the project at the executive level to secure buy-in.
- Authorizes and promotes the project's business case.

PROJECT MANAGER

- Assigned by PMO.
- Responsible for managing and completing projects on behalf of requestor and/or sponsor.
- Coordinates communication across multiple functional departments.
- Reports on project status and progress.

FUNCTIONAL LEAD

- Provides and manages resources for project.
- Accurately and effectively represents the business needs of their department and the inter-relationships between departments.
- Provides guidance and insight for the project's roll-out within their areas of responsibility.
- Provides and shares feedback on deliverables.

STAKEHOLDER

- Has vested interest in the completion of the project and how the project will impact their specific area.
- Provides information, as needed, to insure that the project stays on track and meets the intended goals and deliverables.
- May be affected either positively or negatively by the project.
- Categorized as Responsible, Accountable, Consulted, or Informed.

CHECKLISTS

PROJECT INITIATION CHECKLIST

General Considerations

- Who is the Project Sponsor(s)?
- Who are the intended users (ex: students, faculty, and staff)?
- How and where will the users access the system?
- Are there specific security requirements / considerations (ex: limits on who should access the data, information that should only be accessed by a certain individual or group)?
- Are there special usability considerations?
- Are there specific reporting requirements / considerations?
- Are there specific performance requirements / considerations (ex: peak processing cycles)?
- Is a disaster recovery plan required or does one already exist?

Feasibility

- Is there a life expectancy of the product or service?
- Which technology is being considered and why?
- Is technology the best / appropriate solution or would business process reengineering be more appropriate?
- Have commercially available products been evaluated?

Dependencies

- Do other initiatives need to be completed before this effort can provide value?
- Is this effort predicated on a yet to be determined product or service offering that may not materialize?
- Is this a long term or short-term solution?
- Will data sources be under development?

Constraints

- Will this effort need additional funding beyond what is available at this time?
- Will this effort require expertise or knowledge not readily available at the University?
- Does the proposed solution integrate with the University's platforms of choice?
- Will this solution fit into our existing infrastructure?
- Are there entities within the University that do not support this initiative?

Risks

- What are the potential risks of moving forward with this effort?
- What are the risks of not moving forward with this effort?
- Are there contractual agreements that must be considered with this solution?
- Are there methods available to mitigate any identified risks?

PRODUCTION READY CHECKLIST

General Considerations

- Have we completed the development system testing process?
- Is the production hardware setup and ready for use?
- Has the base production software been installed and configured for use?
- Weekend window needed? (low traffic)
- Is there a process in place for data or content migration (if applicable)?
- Process in place to verify the production system?
- Are user accounts ready?
- Will users need to be on standby for testing during deploy window?
- Is there a back-out plan in place?

Dependencies

- Are there other applications running on the shared server that could be impacted?
- Does the server require a reboot post-deploy?
- Does the application or server require any special monitoring post-deploy?

Assumptions

- Will the application easily transition to steady-state support via the HelpDesk?
- Incremental upgrades to be handled as separate projects?
- Does the system require a support team specialist?

Risks

- Could the system running in production impact server performance?
- Are there methods available to mitigate any identified risks?

COMMUNICATIONS PLAN

PROCESS OVERVIEW

A communications plan identifies who needs what information, when they need it and how that information is provided. In developing a communications plan we consider how to report the project status throughout the project lifecycle including project health, accomplishments, upcoming challenges, significant changes, budget and schedule.

Establishing a communications plan will ensure interested parties are informed of the project status on a regular basis. During the planning phase we consult with the client and project team to determine a preferred method of communication that works for everyone.

GUIDELINES

1. Document any project specific procedures.
2. Describe how decisions are made (who will represent the departments) and how those decisions are communicated to the team.
3. Document how project information (i.e. schedule, budget, risk, change) is communicated with stakeholders, executives (reporting, email, or checkpoint meetings)
4. Determine frequency of updates.
5. Create and maintain user profiles in TeamDynamix

CHANGE MANAGEMENT

PROCESS OVERVIEW

The project manager will serve as change manager and lead change evaluator. Responsibilities include:

- Receive and log change requests via a Project Change Request Form
- Perform the timely and adequate evaluation of changes in terms of their impacts on project deliverables and constraints
- Outline options and recommend courses of action and priorities for changes
- Track and facilitate timely decisions on changes
- Incorporate changes into the appropriate project documents and plans
- Communicate changes to the project team and others as the communication plan dictates

The change requestor, who is any key stakeholder, may submit projects changes through the change request form. The project sponsors will evaluate and approve any change requests. Responsibilities include:

- evaluate options and recommended courses of action for these changes
- approve or reject changes

GUIDELINES

1. Submission and Logging - Change requests will be submitted formally via Project Change Request Form and entered as an issue in our project portfolio management system along with supporting documentation.

2. Evaluation - Changes will be evaluated to determine impact to project schedule by project team.

3. Decision - Approved changes along with impact to schedule, cost, will be communicated to project team by the PMO

4. Integration - If approved, the change will be incorporated into the original scope of work document and project plan.

REPORTING

The PMO is responsible for creating and publishing monthly reports on the ITS website. Tactical and Strategic Plan reports are published here -> Tactical and Strategic Plan Reports

The user must be within the Pace Network to view the PDFs.

PORTFOLIO MANAGEMENT TOOL

Team Dynamix

https://pace.teamdynamix.com