Project Management Methodology
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INTRODUCTION

1. Overview
University of North Carolina at Greensboro (UNCG) has established a centralized Project Management Office (PMO) within the division of Information Technology Services (ITS), as a means of achieving a greater degree of success in its technology projects. As part of its Charter, the PMO is charged with creating and maintaining a documented Project Management Methodology for use in all technology projects. This methodology is designed to meet the needs of all segments of the organization as they engage in technical project work. It serves as a guide to the organization as it selects its projects, to project teams as they plan the work, to management as they supply the required oversight, and to Sponsors and Clients as they collaborate in the design and delivery of new business systems. This methodology is designed to be consistent with the Project Management Institute’s (PMI®) *A Guide to Project Management Body of Knowledge (PMBOK®)* as much as possible while meeting the unique needs of ITS project management at UNCG. It should apply equally well to and meet the requirements of projects large and small. Various templates are available to support this methodology; they are referenced throughout this document.

This document describes in detail the process that UNCG ITS intends to use during the initiating, planning, managing (controlling and executing), and closing stages of technology projects.
PHASE 1 – PROJECT INITIATION

Projects may come about for a variety of reasons and they may present themselves at any time. The selection process is carried out during Initiation. The Initiation Process is that time in the lifecycle of a project when the project idea is defined, evaluated, and authorized. The executive committee at UNCG is our Project Review Committee (PRC) that meets on a weekly basis. Each division at the University creates a ranked list of projects. During the PRC meetings, the highest ranked projects in each division are selected for “sizing & scoping” effort to determine which resources are needed and if the project is feasible given available resources. This process gives management and other stakeholders an opportunity to validate the project’s potential benefits realization.

The amount of effort that goes into the Initiation Phase of a project will depend in some part on the size, complexity and resources required of the proposed project. We generally will need to know more about big projects that represent substantial investment than about small ones. The total effort required to complete the Initiation Phase may range from hours to weeks.

More information about the process used at UNCG can be found on the Project Management Office web site: http://its.uncg.edu/pmo/
1. Governance Model

Project governance at UNCG is handled by the Project Review Committee (PRC). This committee is chaired by the Associate Vice-Chancellor of Client Services and the Enterprise Projects Officer; its purpose is to review and manage project prioritization and execution decisions that affect ITS and our Clients. For active projects, it also provides a forum for any project changes, risks or issues that require discussion and/or resolution by the PRC group. The group meets weekly, and utilizes a Google docs site for information collaboration (only members of the PRC and ITS have been granted rights to this site). Members include ITS managers, the ITS Project Managers, and Client representatives from each of the Divisions of the University.

https://sites.google.com/a/uncg.edu/arc/

2. Project Prioritization Process

To help ensure that ITS effectively uses its resources to meet high-priority University needs, ITS and the Administrative Systems Committee have established a prioritization process for technology projects requiring ITS resources. The process relies on University divisions to define highest-priority projects of interest and a representative from each division is responsible for communicating division-specific priorities to the Associate Vice Chancellor for Enterprise Administrative Applications and to ITS. These client representatives work with their respective Divisions to develop a divisional priorities list of projects for their area. Leading up to a new fiscal year, these lists are reviewed by the Project Review Committee.

The project may fall under a Program which is defined as;

UNCG Program - A group of related projects managed in a coordinated way to obtain benefits and control not available from managing them individually. Programs may include elements of related work outside scope of the discrete projects in the program.

Programs usually utilize a team of resources already assembled and accustomed to working together on similar tasks. Timelines and deliverables may be interdependent and coordinated and communicated by a single Program Manager. Programs help to ensuring no duplication of work occurs across separate projects.

Characteristics of Programs
· Business change
· Significant change in the organization
· Longer in duration than projects
· Multiple projects run during the same time period
· Can have multiple Project Managers reporting project status to a Program Manager
· Benefits can be received through the duration of the Program
· Often linked to an ITS or University strategic initiative
3. **Initiate Remedy Project Request**

When, based on divisional priority level, a new project request is ready to be evaluated by the PRC, either ITS or the division representative will submit a request to establish a formal project through 6-TECH.

All project requests are assigned to the ITS PMO and will be discussed in the next PRC meeting as a “New Project Request”.

How to enter a request in Remedy:


4. **Perform Sizing/Scoping and Resource Worksheet Estimates**

A Project Manager or "PM" will be assigned to do the initial sizing and scoping. That PM may or may not be the project manager that manages the project when it becomes "Active". The PM is responsible for working with the client and/or sponsor to define the scope and determine resource estimates during the initiation phase. Using the template below, the PM will meet with the Resource Manager, assigned IT resources, and assigned Client Resources. During the Sizing and Scoping meeting, the team will review high level scope and deliverables then estimate the number of hours for each deliverable.

The PM will add the University Information Security Officer, Chuck Curry, to the Kickoff meeting as optional so he may assign a Security Officer if he feels the project may require their consultation. When the Resource Estimate is complete the Security Implementation/Consultation section will either have the number of hours required or ‘Not Required’ in that section. This resource estimate worksheet will also be sent to Chuck Curry when sent to the PMO Project Manager Technical Support Analyst, Kim Ivey-Bourne.

For templates: https://sites.google.com/a/uncg.edu/pmo-templates/templates

5. **Project goes back to PRC for Review**

Once the PM has completed the Resource Estimate Worksheet, they should update the agenda for the PRC under the section indicating the Sizing and Scoping is complete. In hours, they should list the number of hours per skillset and send a copy of the worksheet to the PM Technical Support. During the PRC, the Committee will determine if the project can be moved to “Approved for Scheduling”. If resources are not available, the project may be assigned a later date for re-evaluation, or even deferred to the next fiscal year.

If a project is categorized as “Institutional”, it is usually moved to “Active”, providing resources are available.
6. Perform quarterly Scheduling Meetings

On a quarterly basis, the PRC will hold a scheduling meeting to look at all projects that are “Approved for Scheduling”. The hours of effort are matched against the available hours in each skillset needed to determine if the resources required for the project are available. If so, the project may be moved to “Active”.

The PM Technical Support produces a “Consolidated Work Estimate for IT Resources” report to help match up the available skillsets with the projects. This spreadsheet is reviewed on a monthly basis and can be found on the PRC site.

7. Project Manager is assigned to the new “Active” project

During PRC, the project will be moved to “Active” status if it is deemed a high priority and the necessary resources are available. A Project Manager is assigned at that time. The assignment is usually made within the PMO and is dependent on the PM’s expertise, their current project workload and/or by client request. This Project Manager may or may not be the PM that performed the sizing and scoping in the Initiation Phase. In some cases based on the nature of the project, the assigned PM can be someone from outside the PMO.

If you are outside of the PMO and managing a project, please contact the PMO Project Manager (PM) technical Support Analyst and we will grant you access to the Project folder.
PHASE 2 – PROJECT PLANNING

Project Planning follows the Project Initiation phase and is considered to be the most important stage in project management. Project Planning is not a single activity or task. It is a process that takes time and attention. Project Planning defines the project activities and describes how the activities will be accomplished. Time spent up-front identifying the proper needs and structure for organizing and managing projects saves countless hours of confusion and rework in the Managing (Execution and Controlling) phase of the project.

The purpose of the Planning phase is to:

- More clearly define project scope
- Obtain sign-off on scope
- Establish more precise schedule of the project (including a list of deliverables and delivery dates)
- Establish named resources based on skillsets identified during sizing & scoping
- Plan for possible purchases and acquisitions
- Draft a Service Level Agreement (SLA) for the product or service.

Project planning helps ensure a project’s success by making sure all players know the purpose of the project and the extent of the workload and time expectations.

Based upon the size and complexity of a project, there are some documents that may not be required. However, some documents are required for all projects.

“Small” projects are estimated by ITS to require less than 80 hours of effort, involve only Management Information Systems (MIS), Office of Data Management (ODM), or Client Services staff as lead resources, have a fairly well-defined need (specific scope), can be solved using well established technical approaches (similar to work previously performed), and do not require extensive coordination across multiple functional areas for requirements gathering, testing, or implementation. Other exceptions may apply. Small projects must be authorized by each division’s representative and will be prioritized on the Divisional small project list.

All other projects are considered “regular” projects.
1. **Finalize Project Scope Statement** (required for regular projects)

The development of a Project Scope Statement provides the basis for future project decisions and is required for all projects. This statement is of singular importance to the project because it sets the overall guidelines as to the size of the project. The content of this statement, at a minimum, will include the following:

- **Business Need/Opportunity**: The statement of need/opportunity should explain, in business terms, how the proposed project will address specific needs or opportunities. Typically, satisfaction of a need or opportunity will provide specific benefit to the organization. May want to also include Strategic Direction Cornerstone, Client Priority List, etc.

- **Objectives**:
  - **Business Objectives** - Define the results that must be achieved for a proposed solution to effectively respond to the need/opportunity, i.e. the business objectives are the immediate reason for investing in the project. Objectives also serve as the “success factors” against which the organization can measure how well the proposed solution addresses the business need or opportunity.
  - **Project Objectives** - Are the specific goals of the project. Project objectives, if properly defined and met, will lead directly to accomplishment of the Business Objectives. While Business Objectives relate to the goals and objectives of the organization, Project Objectives relate specifically to the immediate goals of the project. For example, the project goal “implement a new time tracking system” has no value in and of itself. That goal only brings value to the organization when it leads to accomplishment of the Business objective (e.g. “Reduce costs and improve productivity through improved resource management”).

- **Project Scope**: What is and is not included in the work to be done

- **Project Milestones**: Proposed start and end dates for Project Phases (e.g., Initiation, Planning, etc) and other major milestones

- **Approval by Sponsor and Key Stakeholders.**

After meeting with the Sponsor, Client, and Technical Lead, the Project Manager will complete the Project Scope Statement.

For templates: [https://sites.google.com/a/uncg.edu/pmo-templates/templates](https://sites.google.com/a/uncg.edu/pmo-templates/templates)

2. **Create Resource Management Plan**

   **Identify Specific Resources for each Required Skill Set**

   May be included in Scope Document.

   During the Initiation Phase, the list of required skills needed was documented in the sizing/scoping document. During the Planning Phase, specific resources are named for each of those required skills if not previously identified. Negotiation of
time commitments may need to occur with respective administrative managers. This is usually done in the PRC meeting in which the project becomes “Active”. The outcome will be the list of the project team members.

**Identify Other Resource Requirements**

All Project Teams require the tools to successfully perform the tasks assigned. In scheduling resources, the Project Manager must ensure that both people and the equipment necessary to support those people are available simultaneously.

**Schedule a recurring time and location for the project team meeting**

Try to schedule the project team’s status meeting on a regular frequency, such as weekly, bi-weekly, or monthly. Find a location that is conducive for the majority of the project team members or is close to the equipment/labs that may be needed. McNutt and Forney each have conference rooms that can be scheduled through our email calendaring tool for these meetings. For assistance in scheduling conference rooms, please see one of the project managers or the ITS Administrative Assistants. The PMO does have a dedicated bridge-line (334-5153) that can be scheduled through our email calendaring tool as well.

**3. Create Project Work Schedule – (required for all projects)**

The project schedule (or tasks list) provides the capability to track progress on the project and provides a mechanism to set expectations for what is expected from whom and by when. Some of the tools used at UNCG for creating a project schedule are:

- Microsoft’s Project - provides the capability to include dependencies, to track the critical path, and to run various reports including major milestones and resource usage.

- Microsoft Excel or Microsoft Word tables - could be used for less complex projects.

- Google also provides project tools that can be used.
Steps to create a project schedule:

i. Identify Activities and Activity Sequences based on Project Scope and Deliverables
   a. Start with high-level milestones and decompose into manageable chunks of work.
   b. Be sure to include tasks for the entire project, including requirements, design, implementation, transition management, testing, training, installation, and maintenance.

ii. Estimate Activity Duration, Work Effort, and Resource Requirements
   a. Make sure smallest block of work can be done in a manageable amount of time.
   b. Perform high-level resource work-load balancing to make sure everyone on the project has work and that no one is overloaded.

iii. Determine any Activity Dependencies – there are often relationships between tasks.

UNCG has managed some projects utilizing some of the SCRUM methodology. These projects also have a project schedule but due to their more cyclical nature, they will follow the sprint timeline.

For templates: https://sites.google.com/a/uncg.edu/pmo-templates/templates

4. Create Project Communications Management Plan

May be included in Scope Document.

Communications planning involves defining the information needs of project stakeholders and team members, as well as identifying which people need what information, when it will be needed, and how they will get it. Communication is the cornerstone of how work gets done among different parties within a project and is a critical component in the process. For complex or cross-divisional projects, a formalized communication plan may be needed.

For templates: https://sites.google.com/a/uncg.edu/pmo-templates/templates
5. Schedule a Kick-off Meeting – (required for regular projects)

At this point, all required documents have been created and the project manager is ready to schedule the Kick-off meeting for the project. All team members and other stakeholders should be invited. The scope should be discussed to ensure everyone understands the purpose and extent of the project. Tasks and time expectations should be set. With the scope document and the task list, the project manager should have the materials needed to successfully run this meeting.

6. Create Procurement Management Plan – (optional)

Develop a Procurement and Sourcing Strategy that identifies those needs of the project that can be met by purchasing products or services from outside the ITS department. Details of this strategy are entered into the Procurement Plan document. The Scope document includes a section for Project Budget, which includes ITS skillsets, software, hardware, and ongoing services such as licenses, maintenance and infrastructure charges. Not all projects require a Procurement Management Plan.

7. Create the Other Project Documents

The Issues Log, Decision Log, and Change Control process are vehicles for project information distribution. The Security Office will be consulted via the PRC and if needed, the project may require a security risk assessment. There should be Agendas, Minutes, and Status Reports as well. Setting up these documents is very important for more complex projects and cross-divisional projects. They are put in place during the planning phase and will be used throughout the Execution and the Monitoring/Control Phases. These documents should be stored in the project folder in the PMO network department space so that everyone has access to them.

**Issues Log - optional**

The purpose of the issue management process is to provide a mechanism for organizing, maintaining and tracking the resolution of issues that cannot be resolved at the individual level.

**Decisions Log - optional**

The purpose of the Decisions Log is to provide a mechanism to document all major decisions that are made on a project. On a large project, management and the team will make many decisions. It is very important to keep track of everything you have agreed upon. It should include, at minimum, description of the decision, what date the decision was made, who agreed to the decision, and why the decision was made. Any significant decision should be reported to the Enterprise Projects Officer for inclusion to the ITS Decision Log.
Change Management Plan/Log – required for all projects

The purpose of the Change Management Plan and Log is to manage all changes to the scope of the project. The process should include documentation of requested changes to the scope, determination of impact of changes to the project timeline, resources, and budget, and define the review/approval process for a change.

Status Report – required for regular projects

A project status report should be created and distributed on the frequency stated in the Scope document.

Agenda for Meetings – required

Every formal meeting should have an agenda prepared prior to the meeting. Depending on the attendees and size, this can be done via email. It is recommended that the agenda be distributed to the participants prior to the meeting.

Meeting Minutes – required

Minutes of the meeting should be documented for all project meetings. These minutes can be captured in email, Google Docs, Google Sites or other means. These minutes provide an effective way for participants to know the status from each meeting. The minutes can be particularly beneficial to team members or management that were unable to attend the meeting.

Security Risk Assessment

The ITS Security Office may request that a Security Risk Assessment be done for each new application/service implemented as well as major enhancements.

For templates: https://sites.google.com/a/uncg.edu/pmo-templates/templates

8. Service Level Agreement (SLA)

The SLA should be started if appropriate for the project. As defined in the SLA, this will be a contract between the client and the service provider. Information recorded regarding the product or service include, business need, features, environment, and service scope. Much of the information can be derived from the projects deliverables. During the planning phase, consideration should be given to service after the close of the project. Which functional group(s) will be expected to maintain the product or service and at what levels? It is important to identify the stakeholders responsible after the completion of the project. Note any servicing or change processes that may be needed. Subject matter experts should be consulted as needed.
PHASE 3 – PROJECT MANAGING (EXECUTION & CONTROLLING)

Once a project moves into the Execution & Controlling phase, the project manager’s main focus during this phase shifts to monitoring the work being done. Managing the project plan ensures that planned project activities are carried out in an effective and efficient manner. A missed activity finish date may require adjustments to the entire project schedule, resource staffing, and other impacts.

1. Manage Scope

Scope control is a straightforward concept. The intent of implementing a scope control process is to identify and manage all elements (e.g., people and requirements) inside and outside of the project that increase or decrease the project scope beyond the required or defined need of the original, agreed-upon project Scope Statement.

Scope changes will come from the perceived need for a change in a project deliverable that may affect its functionality and in most cases the amount of work needed to perform the project. A scope change is a very crucial occurrence.

A scope change could require a change in resources time, and/or project funding. All scope change requests should be submitted in writing using the change control process and form. The Project Manager will review the change with the project sponsor and other major stakeholders to determine that the change is necessary and the additional resources are available. Any changes that are agreed upon must be approved by the project sponsor, technical lead, and/or clients as a matter of formal scope control. This can be an email or a change of scope document. A change of scope may cause changes to be made to other project documents such as the schedule/task list and budget. All changes must be communicated to the project team and stakeholders.

2. Manage Schedule

Schedule control is one of the most important activities within project control. It is important for the Project Team to know where the project stands with respect to project schedule (i.e., Is the project ahead of, or behind, schedule, or what tasks do I need to complete by what date?). It becomes key for Project managers to obtain statuses from the team members on a regular basis.

As part of the status collection, the Project Manager should:
• Validate that task start and end dates are still accurately reflected.
• Validate that task dependencies (or relationships) are still valid.
• Validate work effort (or task duration) is still valid in the schedule. If this changes, obtain accurate start and finish dates of completed tasks or estimates to complete work for ongoing tasks.

Schedule control is something that typically is managed at the project level by the Project Manager. However, it is very important to make the client aware that a schedule change has occurred. Furthermore, the client needs to be made aware of what is being done to fix the issue and the impact it will have on the project’s performance and deliverables. It is a good practice for Project Managers to hold regular project schedule reviews.

It is standard practice to baseline the schedule at the start of the project. This allows all schedule changes to be displayed against the original project schedule. If schedule slippage becomes severe it may be advisable to re-baseline the project. As this involved change to one of the project baselines, it should only be done through a formal Change Control Process.

3. Manage Issues

The Issue Management process should give everyone involved with, or affected by, the project a way to report issues or problems. The Issues Log format provides fields for documenting the problem, assessing the impact of the problem, making recommendations and determining the cost (people and assets) and time required for resolving the problem.

Any of the Project Team members, customers, or Stakeholders can submit an issue. This will be recorded on an Issue log or meeting minutes. All issues should be reviewed on a regular basis (e.g., in the project status meetings, since this group will typically meet on a weekly or biweekly basis).

Typically, when the issue or problem has been resolved and verified, recording the actual date the problem was resolved and the approval authority closes the issue. Some issues may need executive management approval. The appropriate processes will be followed to update contracts and baseline documents.

4. Manage Communications

The project Communications Plan is an important factor in the Managing phase. A large part of a Project Manager’s responsibility during this stage of the project is keeping the Stakeholders informed of project status. There are many facets to project communications. Some examples follow:

• Generate status reports to the team and perhaps to executives on a regular basis.
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- Meeting minutes should be made available to Stakeholders along with any “to-do” lists that may have been generated during the meetings.
- The project schedule and other project documentation should be available to the Stakeholders.
- Hold regular status meetings.
- In addition to these formal communications, a Project Manager should also stay in communication with the team on an informal basis. Informal discussion is sometimes the best way to determine team morale, true project status, looming difficulties, etc.

5. Manage Cost

Projects may fail to control costs, or go over budget, for many reasons. Often it is not a single problem but a series of small problems that, combined, permit cost control to be sacrificed and prevent the project from being completed successfully. Project Managers should monitor the costs as outlined in the Procurement Plan. If costs increase, the PM should search out the “why” and take appropriate action and inform the stakeholders of the authorized changes. Cost control is not simply a reporting process.

UNCG and each of its departments will have a defined set of guidelines and policies that provide the infrastructure for project purchasing that should be integrated within the Procurement Plan. These guidelines will outline the policy for solicitation, source selection and contract administration. Although the solicitation and contracting responsibilities may not always be managed by the Project Manager, it is still important that the Project Manager have a fundamental understanding of the department’s contracting and procurement policies.

The Project Manager may be responsible for ensuring that the vendors, once contracted to do the work, meet the contractual agreements specified within their contracts. Project Managers will also be responsible for tracking, reviewing and analyzing the performance of contractors on a project. This performance reporting will be the basis for any contractual changes that need to be made during the life of the contract. Finally, Project Managers may play an important role in oversight and review of any contract changes that will affect the project.

6. Manage Risk

Risk identification, monitoring and resolution are important tools for successfully completing a project. Larger projects may need a Risk Log, documenting known risks and any mitigation for those risks. One type of risk on IT projects is the development and implementation of technology equipment and software that
might become obsolete very quickly. Technology is evolving rapidly with increases in speed and capabilities. Accordingly, risk is increased when implementing high-dollar or homegrown technology systems. To alleviate this issue, the Project Manager must make sure that the efforts of the Project Team are aligned with the technology and business strategy of the department. Researching future needs, capabilities, and integration requirements of the products will be helpful.

7. Manage Quality

Quality assurance incorporates a process of evaluating overall project performance on a regular basis to provide confidence that the project will satisfy the relevant quality standards. Quality control should be performed throughout the project. Project results include both product results, such as deliverables, and management results, such as cost and schedule performance. Quality control is often performed by user acceptance testing. During User Acceptance Testing, Clients should identify how the results will be verified. Depending on the nature of the project, it is recommended that the Client develop a Testing Plan that includes Test Scripts, Testing Schedule, and Testing Signoff.

8. Managing the SDLC (Systems Development Life Cycle)

The Systems Development Life Cycle is the framework in which the actual development of the software or procedures occurs. The tasks on the project schedule should reflect the development, testing, and implementation during the Execution phase of the project. See the Appendix for more details.

9. Complete Service Related Documents

<Currently being revised by Service Operations in conjunction with the PMO>

For templates: https://sites.google.com/a/uncg.edu/pmo-templates/templates
PHASE 4 – PROJECT CLOSEOUT

The last major stage of a project’s life-cycle is project closeout. Project closeout is completed once all defined project tasks and milestones have been completed and the customer has accepted the project’s deliverables.

Project closeout includes the following key elements:

- Verification of formal acceptance by Stakeholders and the Executive Committee
- Re-distributing resources (staff, facilities, equipment and automated systems)
- Closing out any financial issues such as labor charge codes and contract closure
- Documenting the successes, problems and issues of the project
- Documenting “lessons learned”
- Celebrating project success
- Completing, collecting and archiving project records.
- Completion of SLA and signatures.

These activities are particularly important on large projects with extensive records and resources.

1. **Prepare Project Closure Document**

   The purpose of the Project Closure Document is to get verification and signoff from the Client that deliverables identified in the Scope document are complete. If for some reason there was a deliverable that was not completed, that should be noted and the reason why. The Project Closure Document is reviewed in the Project Closure Meeting. Also, during the meeting Lessons Learned are identified and documented. Work Estimates are entered from TimeTrack, if there is a substantial difference in the Budgeted Hours vs. the Actual Hours, you may want to comment on why there was such a difference so that this information can be used for future estimating efforts.

   For templates: [https://sites.google.com/a/uncg.edu/pmo-templates/templates](https://sites.google.com/a/uncg.edu/pmo-templates/templates)

2. **Completion of Service Level Agreement Document**

   Before the product or service moves into a production environment, a completed SLA should be signed and archived at the PMO. The SLA should reviewed and agreed upon by all stakeholders and service providers as appropriate.

3. **Conduct Final Project Closure Meeting**

   The issue of primary importance with project closure is the acceptance of the product or project deliverables by the customer for which they were created. The best way to ensure this is to convene a final meeting with all necessary Stakeholders to review the Scope
deliverables against the baseline requirements and specifications. Furthermore, any open action items or program level issues can be officially closed or reassigned to the support organization.

By drawing all of the Stakeholders together in a single meeting, the Project Manager avoids clearing up open issues on an individual basis. The final deliverable of this meeting should be the Project Closure Document created by the Project Manager describing the project’s final deliverables in comparison with the authorized project baseline documents. Approval is verified via the signature of a project closure document by all of the Stakeholders who signed the original project scope documentation. This document will be customized to the particular project to include pertinent deliverables, key features and important information about final product delivery.

The Final Project Closure Meeting should include all project stakeholders.

4. Project Documentation Archiving

Historical project data is an important source of information to help improve future projects.

The specific information archived for a project will vary; however, the following project data are archived:

- Project Scope Statement
- Estimating Worksheet
- Correspondence
- Meeting notes
- Status reports
- Project Closure
- Technical documents
- Other documents/information.

All hard-copy records should be stored following standard UNCG record-retention guidelines. We currently store all closed project files in Active Directory (AD) in the PMO filespace. Many of the technical records and automated versions will be turned over to UNCG personnel responsible for maintenance and operation of the system. Summary technical information should be electronically stored for historical reference to facilitate later review. The project archive includes a description of the files being submitted, the application (including version) used to create the archived materials, and a point of contact if further information is needed.

This is required for all projects, including those run by project managers outside the PMO. If you are a project manager outside the PMO please contact the PMO Technical Analyst who can grant you access to the network PMO file space to store your files so they will be archived if necessary. Only the projects that meet the criteria listed below will need to be sent to the
University Archives. These projects will be identified in TimeTrack through a check box that the Project Manager will select.

http://its.uncg.edu/Records_Management/General_Schedule/Information_Technology/

<table>
<thead>
<tr>
<th>Series #</th>
<th>Series Title</th>
<th>Series Description</th>
<th>Items</th>
<th>Disposition</th>
</tr>
</thead>
<tbody>
<tr>
<td>GU136</td>
<td>Application Development Project</td>
<td>Development, redesign or modification of an automated system or application. Comply with applicable provisions of G.S. 132-6.1(c) regarding confidentiality of computer-related records.</td>
<td>project management, status reports, drafts, specifications, correspondence</td>
<td>Transfer to University Archives 5 years after project is completed.</td>
</tr>
</tbody>
</table>

**APPENDIX A**

**A Project Manager’s Daily Responsibilities**

A Project Manager’s daily responsibilities may include some or all of the following:

- Provide day-to-day decision-making on critical project issues as they pertain to project scope, schedule, budget, methodology and resources
- Provide direction, leadership and support to Project Team members in a professional manner
- Ensure project documentation is complete and communicated (e.g., scope statement, project schedule, requirements, testing and others)
- Develop an SLA for the project if appropriate and completed by the closing of the project
- Manage the planning and control of project activities and resources
- Assist with the management of project contracts with vendors
- Report project components status and issues to the project Sponsor and Client
- Provide teams with advice and input on tasks throughout the project, including documentation, creation of plans, schedules and reports
- Resolve conflicts within the project between resources, schedules, etc.
- Influence Stakeholders and team members in order to get buy-in on decisions that will lead to the success of department projects
- Delegating responsibility to team members.
APPENDIX B

Client Administrative Systems Governance

Listed below are UNCG Client Committee Groups that oversee and discuss UNCG future initiatives that need to be addressed to align with the overall Universities strategic and tactical goals.

Administrative Systems Committee (ASC)

Administrative Information Security Committee (AISC)

Data Stewards Council - convened by the Manager of the Office of Data Management, ITS; establishes and maintains enterprise-wide data standards to promote improvement of data quality for reporting, presentation, and predictive analytics.

Project Management Client Group - convened by the Associate Vice Chancellor for Administrative Systems; establishes the cross-divisional project priority list for enterprise administrative apps & oversees divisional project request & priority-setting processes.
APPENDIX C

Systems Development Life Cycle:
The Systems Development Life Cycle (SDLC) process
Scrum/Agile Project Management Methodology

In addition to the PMBOK Project Management Methodology, UNCG ITS has also adopted the practice of SCRUM on certain projects. SCRUM is a framework that employs various processes and techniques. It is an interactive, incremental approach to optimize predictability and control risk.

The PMO asks that a Project Manager be contacted to assist with deciding if a project meets the criteria for the SCRUM methodology.

To determine if a project should use the SCRUM Methodology, the following questions should be considered:

1. Will resources (IT and Client) be committed to the project more than 50% of their time?

2. Can requirements and tasks be clearly defined and measured in specific intervals of one to two weeks?

3. Will the resources be co-located?

4. Will resources be able to make daily progress on a task?
Scrum Cheat Sheet by agile42

**Product Owner**

Owns the Product Backlog

The Product Owner represents the interests of everyone with a stake in the project (Stakeholder) and he is responsible for the final product.

- elicit product requirements
- manage the Product Backlog
- manage the release plan
- manage the Return on Investment

**Sprint Planning**

Commit the deliverable(s) to the PO

Two part meeting. First, the PO presents the User Stories. Second, when the Team thinks they have enough Stories to start the Sprint, they begin breaking it down in Tasks to fill the Sprint Backlog (normally 3 to 4 days of work, than inspect & adapt).

Timebox: 4 hours
Owner: Product Owner
Participants: Team, Scrum Master

**Product Backlog**

Dynamic prioritized list of requirements

The requirements for the product are listed in the Product Backlog. It is an always changing, dynamically prioritized list of requirements ordered by Business Value. Requirements are broken down into User Stories by the PO.

*Prioritize the requirements by playing the Business Value game.*
*Buy these at [www.agile42.com](http://www.agile42.com)*

**Scrum Master**

Owns the Scrum process

The Scrum Master is responsible for the Scrum process. He ensures everybody plays by the rules. He also removes impediments for the Team. The Scrum Master is not part of the Team.

- manage the Scrum process
- remove impediments
- facilitate communication

**Daily Scrum**

Inspect and Adapt the progress

In this standup meeting the Team daily inspects their progress in relation to the Planning by using the Burndown Chart, and makes adaptation as necessary.

Timebox: 15-20 minutes
Owner: Scrum Master
Participants: Team, all interested parties may silently attend.

**Development Team**

Owns the software

The team figures out how to turn the Product Backlog into an increment of functionality within a Sprint. Each team member is jointly responsible for the success of each iteration and of the project as a whole.

- software quality
- technical implementation of User Stories
- delivery of a “potentially shippable” product increment at every Sprint

**Sprint Review**

Demonstrate the achievements

The team demonstrate the PO the result - on the developed product - of the Sprint. The PO can accept or reject features depending on the agreed acceptance criteria.

Timebox: 4 hours
Owner: Team
Participants: Scrum Master, Product Owner, optionally the PO can invite other Stakeholders

**Burndown Chart**

Displays the remaining work

The Burndown chart shows the amount of work remaining per Sprint. It is a very useful way of visualizing the correlation between work remaining at any point in time and the progress of the Team(s).

*Use a tool such as Agilo to automatically create the Burndown Chart.*
*Learn more at [www.agile42.com](http://www.agile42.com)*

**Sprint Backlog**

List of Tasks to fulfill the Sprint Goal

The Sprint Backlog contains all the committed User Stories for the current Sprint broken down into Tasks by the Team. All items on the Sprint Backlog should be developed, tested, documented and integrated in order to fulfill the Sprint Goal.

*Estimate Story complexity by playing Planning Poker.*
*Buy these at [www.agile42.com](http://www.agile42.com)*

**Requirements**

Make SMART Requirements: Simple, Measurable, Achievable, Realistic, Traceable.

**User Stories**

INVEST in User Stories: Independent, Negotiable, Valuable, Estimable, Small, Testable.

**Tasks**

Make sure a Task is TECH. Time boxed, Everybody (can pick it up), Complete and Human-readable.

**Retrospective**

Maintain the good, get rid of the bad

At the end of a Sprint, the Team evaluates the finished Sprint. They capture positive ways as a best practice, identify challenges and develop strategies for improvements.

Timebox: 3 hours
Owner: Scrum Master
Participants: Team, (Product Owner)

**Potentially Shippable Product**

Scrum requires at the end of each Sprint that the product is potential shippable to the customer. That means the increment is:

- thoroughly tested and stable
- well-structured
- well-written code
- user operation of the functionality is documented

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APPENDIX E

The Three Constraints in the Project Management Triangle – Time, Cost, and Scope

1 - Time (Schedule)

Time is a crucial factor which is uncontrollable. On the other hand, failure to meet the deadlines in a project can create adverse effects. Most often, the main reason for organizations to fail in terms of time is due to lack of resources.

2 - Cost

It’s imperative for both the project manager and the organization to have an estimated cost when undertaking a project. Budgets will ensure that project is developed or implemented below a certain cost. Sometimes, project managers have to allocate additional resources in order to meet the deadlines with a penalty of additional project costs.

3 - Scope

Scope looks at the outcome of the project undertaken. This consists of a list of deliverables which need to be addressed by the project team. A successful project manager will know to manage both the scope of the project and any change in scope which impacts time and cost.

Quality

Quality is not a part of the project management triangle, but it is the ultimate objective of every delivery. Hence, the project management triangle implies quality.