Project Management of Major or Large NDUS Information Technology Projects

Purpose

This standard will ensure accountability for the resources allocated to major/large information technology (IT) projects as directed by the legislative mandates summarized below, and ensure that a consistent approach will be used to manage major/large IT projects.

The Interim Legislative Information Technology Committee (IT Committee) is required to:

- Receive information from the State Board of Higher Education regarding higher education information technology planning, services, and major projects (NDCC 54-35-15.2).

The State Board of Higher Education (SBHE) is required (per NDCC 15-10) to:

- Manage and regulate information technology planning and services for institutions under its control, including:
  - Development of information technology policies, standards, and guidelines in coordination with the Information Technology Department (ITD).
  - Implementation of a process for project management oversight and reporting.
  - Integration of higher education information technology planning and reporting with the Board’s strategic planning process and annual performance and accountability report required by NDCC, Section 15-1-14.2.
Participation in Internet2 or other advanced higher education or research-related networking projects as provided in NDCC, Section 54-59-08.

Development of an annual report concerning higher education information technology planning and services.

- Collaborate with the Information Technology Department to coordinate higher education information technology planning with statewide information technology planning.

- Provide advice to the Information Technology Department regarding the development of policies, standards, and guidelines relating to access to or use of wide area network services as provided by NDCC, Section 54-59-09.

- Shall present information regarding higher education information technology planning, services, and major projects to the information technology committee on request of the committee.

The Information Technology Department is required to:

- Collaborate with the State Board of Higher Education on guidelines for reports to be provided by institutions under control of the State Board of Higher Education on information technology in those entities (NDCC 54-59-05).

The Legislative Council is provided assistance with the implementation of these mandates from the North Dakota University System (NDUS) – Office of the CIO and the State Board of Higher Education.

**Standard**

All *major or large information technology projects* shall comply with the following directives:

1. A business case shall be developed to justify the business need for the project and to identify the *proposed solution*.

   1.1. The business case shall minimally include the *project description*, *project objectives*, *business need/problem*, *proposed solution*, *consistency/fit with the organization’s mission*, *cost/benefit analysis*, and *project risks*. The business case should be developed and finalized during the origination and initiation processes. Additional information and a template can be found in the ND Project Management Guidebook (see Guidance section).
1.2. An initial business case shall be submitted to the Office of the CIO prior to any pre-project expenditures e.g. RFI/RFP development, etc.). As additional information is available, the business case will be updated.

1.3. The Office of the CIO shall review the business case for general compliance with directive 1.1 and provide comments to the issuing entity within ten business days of receipt.

1.4. Upon acceptance of the final version of the business case, the Office of the CIO shall submit a copy to the NDUS CIO who will review the business case. Upon acceptance, a copy will be made available for the State Board of Higher Education.

1.5. In addition to a Business Case, the submitting entity shall complete a Self-Analysis Ranking Form which will be used in determining the level of project management methodology that will be required on their project.

2. A project manager shall be designated for the project to develop the project plan, manage its execution (including scope, schedule, cost, and quality control), and manage project human resources, communications, risks, and procurements.

3. A project charter shall be developed and executed to initiate the project and to secure commitment for the resources (human, financial, equipment, etc.) necessary for the project.

3.1. The project charter shall minimally include the following information: project background, **project scope**, **project objective(s)**, **critical success factors**, cost, **required resources**, **constraints**, **assumptions**, and **project authority**. The project charter shall be completed prior to the planning process. Additional information and a template can be found in the ND Project Management Guidebook (see Guidance section).

3.2. The **project sponsor** shall formally approve the project charter in writing.

3.3. A copy (electronic) of the project charter shall be submitted to the Office of the CIO prior to signing of vendor contracts.

3.4. A signed copy of the project charter shall be submitted to the Office of the CIO and a copy retained by the creating entity/institution.

4. An Executive Steering Committee shall be established to provide management support to the project.

4.1. The committee members shall include at minimum, the project manager, project sponsor(s), and key stakeholders. The Office of the CIO shall be invited to attend as an ex officio member.

4.2. The committee shall be responsible for reviewing the status at project milestones, authorizing significant changes to the project plan, and facilitating decision-making.

4.3. The committee shall meet quarterly, or on a more frequent basis as defined in the project plan.
5. A project plan shall be developed as the primary planning document for the project.

5.1. The project plan shall follow the guidelines of the Project Management Institute’s (PMI) Project Management Body of Knowledge (PMBOK), and/or follow the guidelines of the ND Project Management Guidebook and Project Plan Template (see Guidance section).

5.2. The project plan shall identify specific milestones throughout the project and their associated cost, schedule, and deliverables.

5.3. After approval by the project sponsor, a copy of the project plan shall be submitted to the Office of the CIO.

5.4. For projects that are reported as large projects to the Legislative IT Committee, a Project Startup Report is filed with the Committee by the Office of the CIO once the project has been baselined (scope, schedule, and resource budget are agreed upon). Throughout the life of the project’s implementation, reports will be provided to the Committee by the Office of the CIO on project status and any variances from the project’s baseline.

5.5. A current copy of the project plan shall be submitted to the Office of the CIO quarterly in conjunction with the quarterly project status report.

6. The Office of the CIO in conjunction with the Project Manager shall conduct a project performance assessment. This assessment, conducted at minimum quarterly, evaluates the project status and performance of the project budget and schedule. It is the basis for a project status report which will be submitted to the NDUS CIO along with others for compliance with North Dakota Century Code. The project status report shall be submitted to the Office of the CIO on a quarterly basis, or when a milestone exceeds twenty percent of planned cost or schedule. The report should include an executive summary, budget, schedule, issues, risks, project accomplishments and upcoming activities.

6.1. Throughout the life of the project, if changes occur which would impact the project objectives as stated in the original business case, or changes to cost, schedule, scope or quality (CSSQ) as defined in the project plan, those impacts shall be included in the project status report.

6.2. The report shall include the attainment of any project milestones, and summary information to include:

6.2.1. Any variance wherein the project costs exceed the planned costs for that milestone by a variance of twenty percent or more.

6.2.2. Any variance wherein the project schedule extends beyond the planned schedule for that milestone by a variance of twenty percent or more.

6.2.3. Specify corrective measures being undertaken to address any cost or time completion issue.

6.2.4. Both positive and negative cost and schedule variances for milestones accumulated for the duration of the project (See Guidance).
7. The Office of the CIO shall create a Major/Large Project Summary Report, which summarizes the performance of major/large projects, and submit it to the NDUS CIO and to the State Board of Higher Education once per quarter. Additionally, this information will be provided to the State’s Information Technology Department and submitted as part of their report to the Legislative IT Committee on Large Projects.

8. A Post Implementation Review (PIR) shall be performed by the project manager of the implementing entity at the conclusion of the project in order to assess the success of the project and to capture historical information.

8.1. The PIR shall minimally include a review and summary of lessons learned, project effectiveness, CSSQ management, risk management, communications management, acceptance management, organizational change management, issues management, project implementation and transition, performance of the performing organization, and key project metrics (i.e. cost, schedule, scope, quality). Additional information and templates can be found in the Project Closeout Chapter of the ND Project Management Guidebook (see Guidance section).

8.2. A copy of the PIR shall be submitted to the Office of the CIO.

8.3. Upon acceptance, the Office of the CIO shall submit a copy of the PIR to the CIO for review and upon their acceptance; a copy will be made available for the State Board of Higher Education.

8.4. For completion of a large project, the Office of the CIO will file a Project Closeout Report with the Legislative IT Committee. This report informs the Committee whether the project’s objectives were met, whether the scope, schedule and budget were met or the amount of variance from baseline, it describes lessons learned, and allows for a success story to be told.

Policy

Consistent with NDCC 15-10-44 the state board of higher education shall manage and regulate information technology planning and services for institutions under its control.

The Chancellor is charged with development of information technology planning, policies, standards, guidelines, and project management oversight and reporting in coordination with the state information technology department. NDUS Information Technology (IT) projects shall comply with established standards, guidelines, procedures and processes.

No more than every two years, a comprehensive information technology plan shall be submitted to the SBHE for their review and approval. Periodic progress reports on goal progress shall be submitted to the board.
Applicability

Projects are by definition a temporary endeavor undertaken to create a unique product or service. Due to the nature and scale of the projects defined as major/large IT projects, it is critical that project management practices be employed and that processes are in place, increasing the probability of delivering quality products, on time and within budget.

According to NDCC 15-10 and 54-35-15.2, this standard applies to any major project of the State Board of Higher Education if the project meets the following criteria:

All NDUS System Information Technology Services (SITS) departments must adhere to the standards, guidelines, procedures and processes for all IT projects. IT projects with a total cost of $250,000 or greater will be treated as a large/major project and will require formal project management. IT projects with a total cost less than $250,000 will be evaluated to determine whether they will have formal or informal project management methodology applied. The CIO will make the final determination on which IT projects will be exempt, which will require formal project management, and which will be required to follow informal project management practices/procedures as defined by the Office of the CIO.

All NDUS institutions are to adhere to the standards, guidelines, procedures and processes, as defined by the Office of the CIO for administrative IT projects with a total cost of $250,000 or greater. An administrative project is a project that directly collects, aggregates, modifies, stores, or reports institutional student, financial, or human resources records or data and is provided primarily for administrative purposes. Administrative IT projects less than $250,000 or any research and academic IT projects must have NDUS CIO approval if the IT project interfaces to a major ERP system hosted by the NDUS (ConnectND, ODIN, etc.), significantly impacts the NDUS network, and/or has major impacts on NDUS resources (staffing, systems, etc.). A campus may request assistance with IT project management from the Office of the CIO. Requests to assist with IT project management will be honored based on availability of NDUS resources.

An NDUS institution has the discretion to proceed with an IT project that has not had NDUS CIO approval; however, there is a clear understanding that: 1) the project is a stand alone system and may be eliminated in the future, 2) initial and on-going support for hosting and/or interfacing to an existing NDUS system may not be available should the system not be stand alone and the institution will be responsible for all initial and on-going costs, 3) the system may not be compatible with a future system implemented by the NDUS and may be considered obsolete. Interfaces to NDUS hosted systems that are approved will be included in system upgrades and enhancements. Non-approved systems, including
interfaces, are the responsibility of the institution for all costs and for ensuring that their system will be operational when an NDUS hosted system is upgraded, enhanced or replaced. The NDUS will not be responsible for a non-approved interface or ensuring institutional non-approved systems are operational when NDUS hosted systems are upgraded, enhanced, or replaced.

Institutional projects must be reviewed by the institution’s NDUS CIO Council representative prior to being submitted to the Office of the CIO.

The NDUS CIO shall be the final authority on whether a project will be considered a major/large project and will follow formal project management methodology.

**Projects Reported to the Legislative IT Committee and the State’s Information Technology Department as Required for Large IT Projects**

Projects submitted to the State’s Information Technology Department as part of large project reporting to the Legislative IT Committee will include the following type projects and reporting will be the responsibility of the Office of the CIO; however, information to be included will come from the project manager assigned to a project. Projects include those that:

1. Significantly impacts the statewide area network, including the campus access routers;
2. Impacts the statewide library system; or
3. Is an administrative project. An administrative project is a project that directly collects, aggregates, modifies, stores, or reports institutional student, financial, or human resources records or data and is provided primarily for administrative purposes.

For the purpose of this subsection, a major project is a project with a cost of two hundred fifty thousand dollars or more in one biennium or a total cost of five hundred thousand dollars or more.

In addition to the above criteria, projects that would be reported are those that are:

1. New initiatives;
2. Major enhancements; or
3. Are changes in technology direction.

Projects that are not included as large projects to be reported are normal or maintenance types
including upgrades, patches, hardware replacements and minor enhancements that do not include a change in technology direction from what exists currently. The NDUS CIO will make the final determination of whether a project will be reported.

Definitions

1. Assumptions – A list of factors, for planning purposes, are known to be true, real, or certain.
2. Business Need/Problem – Those issues identified as driving the proposed project.
3. Consistency/Fit within the Organizations Mission – How the proposed project will fit within the entities or institution’s mission and/or strategic plan.
4. Constraints – Any known factors that limit the project’s execution.
5. Cost/Benefit Analysis – A dynamic review of the estimated cost, anticipated benefits, and a quantitative analysis justifying the costs for the anticipated benefits.
6. Critical Success Factors – Outcomes that must be achieved in order for the project to be considered a success. They should correlate with the Project Objectives.
7. Deliverable – The physical items to be delivered for a project. This may include organization attributes, reports and plans, as well as physical products or objects.
8. Milestone – A key or major event in a project based on planned work accomplishments rather than a fixed time interval. It has accomplishment criteria, assigned budget and schedule.
9. Project Authority – The levels of authority to the project (roles and responsibilities of the project team and the stakeholders)
10. Project Description – An initial review of the project objectives.
11. Project Management – The application of knowledge and tools to project activities to meet project requirements. Project management is accomplished through the use of the processes such as initiating, planning, executing, controlling, and closing.
12. Project Objectives – The purpose and expected outcomes of the project.
13. Project Risks – Any risk associated with the successful implementation of the project.
14. Project Scope – A brief description or bulleted list of what IS and IS NOT included in the scope of the project.
15. Project Sponsor – The manager(s) that provide the primary financial resources, human resources, and management support for the project.
16. Proposed Solution – The product or service of the project that would resolve the Business Need/Problem.
17. Required Resources – The individuals to be assigned to the project and whose participation must be approved by management.
**Guidance**

1. Office of the CIO
2. ND Project Management Guidebook

**Non-Compliance**

Non-compliance of this standard shall be reported to the NDUS CIO and the State Board of Higher Education. Non-compliance may result in non-approval of any IT expenditures associated with the project.