

# Scope Management

## Introduction

What if your project scope exceeds your team's schedule or resources? Can you extend your schedule or increase your resources? If not, plan your phases so that you deliver value with early releases.

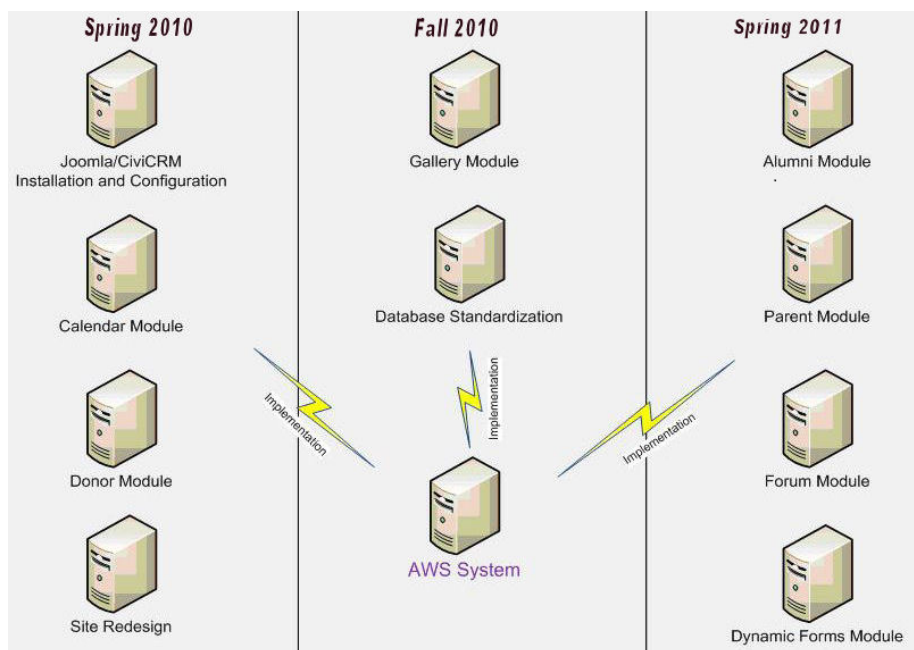
What if your project has multiple goals—a common situation for IT projects? Planning your phases to maximize the value of your early effort will increase stakeholder satisfaction as they witness your success with meeting some goals quickly and presenting plans that meet all project goals eventually.

All the techniques we teach in MIS 374 are part of managing scope, because they assist with analysis (defining the scope) and collaborating with stakeholders to determine the scope\schedule\resource balance and build trust. Planning strategies that increase the chance of delivering early value for a fast return-on-investment (ROI) is the focus of this reading.

## Description

Project planning for early releases depends on knowing your stakeholder's top priority goals and your ability to succinctly present, to your stakeholders, the options for achieving these goals. Figure 1 is a graphic proposal that the spring 2010 team for Austin Waldorf School (AWS) presented to their key stakeholders. They proposed splitting their project into three major releases over three semesters. The spring team proposed setting up the new site using open source software for non-profit organizations to keep the project budget low. They also proposed redesigning the site and completing new functionality for Calendar and Donor pages. The next semester's team would create additional functionality improving the site's infrastructure. The third team would be able to complete four modules for the new site. The new functionality would go live for the public several times each semester.

**Figure 1. Three Major Releases Across Three Semesters for the Austin Waldorf School (AWS)**



## Phasing Strategies

IT project teams breakdown system challenges into phases--manageable categories of activities--so stakeholders and developers can focus on solvable project goals individually. You must create a phasing strategy that includes choosing the functional phases and prioritizing these phases. Early releases of functionality are a key advantage of a phased project life cycle.

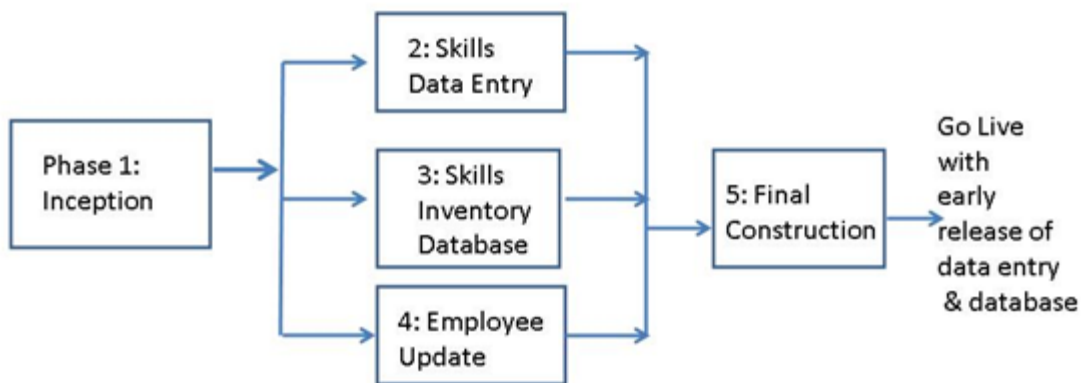
The ASTA Skill Set Inventory team's first planning step was to list possible phases based on their interviews, Root Cause Analysis, Stakeholder Roles and Responsibilities Tables, and data flow diagrams. Their initial list, starting, as always with Inception as the first phase (from the MIS 374 Systems Development Life Cycle) and ending with Final Construction, included 10 phases:

1. Inception Phase.
2. Skills Data Entry.
3. Skills Inventory Database.
4. Employee Skills Update.
5. Release 1 – Final Construction.
6. Project Management Reports.

7. Security Login Module for Web Access.
8. Web Access – Employees
9. Web Access - Applicants
10. Release 2 – Final Construction.

When they listed their functional phases, they realized that similar to the Austin Waldorf School team, they probably could not complete all the functionality ASTA wanted for their Skill Set Inventory. They decided to focus first on automating Yolanda Garza's tedious work: keeping up with the paper skill set documents. They thought an easy in-house computer-generated form to input the skill set profile data would be a way to encourage the employees to enter their own skill set data, as well as save Yolanda time. They created a quick version of a network diagram that is shown in Figure 2. The team thought including a list of future deliveries was a good way to show that they understood that ASTA wanted a web-based public system accessible outside the ASTA fire wall for applicants, as well as employees. If ASTA agreed on this plan, then by the end of their semester project they would have a searchable skill set database. Another team could finish the project the next semester.

Figure 2. Plan Overview for the Proposed ASTA Skill Set Inventory System with Early Release for Data Entry

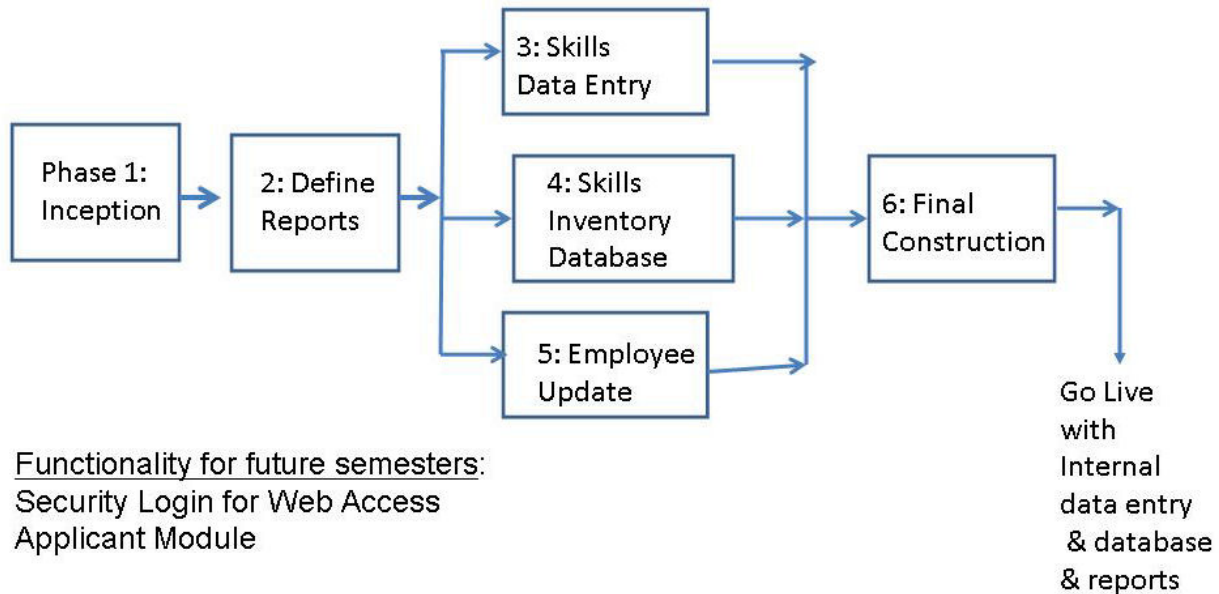


Functionality for future semesters:  
 Reports for Project Managers  
 Security Login for Web Access  
 Applicant Module

The team was not sure that the ASTA project managers would like this early focus on the data entry. The three project managers they had interviewed had very different ideas about how the data needed to be presented to help them respond quickly to Requests For Proposals (RFPs). So the team created a second Network Diagram that would put the entire team's effort on defining reports—Phase 2, right after the Inception Phase in Figure 3. Each team member would work with a manager in a different area and then the team would present proposed report options to ASTA CEO, CIO, Yolanda, and senior project managers for decision-making. The advantage of this approach was that they would be more confident that their functional phases 3, 4, and 5 would be based on an accurate view of the necessary information architecture. The big risk for this second option was that the report definition and prototyping would take so long that they would not have time to code all the data entry functionality and be able to Go Live with a well-tested system.

The team was not sure what was best, so they presented both options to their ASTA stakeholders. Yolanda, their key contact, was pleased that they had considered her needs as a top priority. The decision, however, by the CEO was to iron out the requirements for the project management reports early in their project, as shown in Figure 3. All the stakeholders were pleased to see the team's professional presentation and used their diagrams to talk about whether the team really needed to do any work on a Security Login or if they could use what was in place for other internal and customer-facing systems. The team was able to reduce their scope in this meeting and learned about several tech support staff members who would be willing to help them set up their development sandbox on ASTA hardware.

Figure 3. Overview for Proposed ASTA Skill Set Inventory System with Early Emphasis on Project Reports



Risk: Might not complete any functionality for release this semester

## Questions to Consider for Ordering Phases

**1. What is urgent?** Is there a subsystem or function that is error prone and costing the firm money? Has a competitor introduced a product

or service that is eroding market share for your client? In either of these examples, the best first functional phase—after (1) the inception phase and (2) a possible redesign phase—addresses this error or creates this new functionality. An early release of this functionality will be the greatest return on investment.

## 2. What could be a quick value added?

Planning to work on the error prone portion of a system may be the quickest value added, but it might be that the system problems require extensive redesign of the business processes and the reorganization of several business units. In this case the team might decide to start with a subsystem that could be completed and released for a quick return on investment before starting the more complex error prone portion of the system. Sometimes a good place to start is where it is easiest to impress the users and gain their confidence and support before tackling more disruptive subsystems.

## 3. What is key to understanding requirements?

Completing report design is sometimes key to understanding the users' goals as it was in the ASTA example. In this case an early phase may be report screens. The report screens might be hand drawn and shared with key users in a prototyping process, like the one illustrated in Figure 4. The goal is to learn the system requirements by creating a requirements prototype of just the reports before proceeding with any other portion of the system.

An advantage of the paper prototype process is that a business analyst team can focus on these key details while the tech lead focuses on understanding technical details such as the information architecture, production environment guidelines, and the development environment. If key users are unable to meet with the team together and come to a consensus on report screens and navigation among the reports, then videotaping the paper prototyping (or whiteboarding) sessions will be helpful for team and stakeholder review

Data entry is another aspect of the system that can be a good starting point if the end-users have been unwilling or unable to provide much help defining requirements. Again prototyping and videotaping can speed understanding of complex or confusing requirements and help gain stakeholder acceptance.

## 4. What is key to determining broad design issues?

Analyzing, designing, and constructing a test database is sometimes the best phase to follow the Inception Phase. Once the database is designed for the larger system, then a large team may be split into several smaller teams,

each working simultaneously on a subsystem phase.

## 5. What is key to the rest of development?

Are there other issues that might be important as the basis for later phases? For example, certain users may have an influence on system acceptance that goes beyond their formal responsibilities as defined on the organization chart. The special needs of these "power centers" probably should be met first to gain their support.

Figure 4. Paper Prototyping



Source: [http://amber840.blogspot.com/2010\\_10\\_01\\_archive.html](http://amber840.blogspot.com/2010_10_01_archive.html)