Case Study: Phase 1

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☰ WHAT'S COVERED

In this lesson, you'll discuss a case study for a real-world project. You'll go through all four phases of the project life cycle, covering one each in the lesson. This tutorial will focus on Phase One of the project life cycle, beginning the project, through a case study on building an energy efficient house, specifically demonstrating:

1. **Phase One: Beginning a Project**
   - **1a. Identify Stakeholders and Expectations**
   - **1b. Define Project Scope**

1. Phase One: Beginning a Project

The case study that you'll be using is the development and construction of a highly energy efficient house for a couple. The couple wishes to move out of their larger home, and into a smaller place to save money.

The general contractor for home construction is actually a project manager by another name, so you'll refer to this individual as a project manager throughout these lessons.

Here are the steps in the context of this project.

1a. Identify Stakeholders and Expectations

If you recall, the initial step in Phase One will be identifying the stakeholders and gathering their expectations. This is the project manager's responsibility.

Stakeholders	Stakeholder Expectations
The couple building the house will be the key stakeholders for the project The architect should be considered a	The homeowners, architect, and project manager work closely to define those expectations. The homeowners often discuss in general terms, what they want.

stakeholder since this is an energy efficient house	The architect and project manager provide the knowledge and the expertise to make those expectations realistic.

1b. Define Project Scope

The next step is defining the scope of the project, which includes:

Project Scope	
Goals and objectives	In this case, the homeowners wish to take advantage of modern construction methods and materials to create an energy efficient home. However, they don't want to spend too much money adding those improvements. One goal for this project will be to create a home that is above average in energy efficiency but does not cost more than 15% over the cost of an average home.
Deliverables	The project manager must define the project deliverables, which for this project, will be the house.
Requirements	These flow from the expectations, goals, and objectives that the homeowners and the architect have for the home, and must be documented. For example, say that the homeowners want to make greater use of solar energy from the sun while still keeping the cost of the home down. The architect might suggest that solar panels shouldn't be used since they exceed the budget. The house can instead have the majority of its windows on the south side as these windows will receive sun during winter to help heat the home. If the homeowners agree, the suggestion is documented by the project manager as a requirement for the home.
Assumptions	These are documented next, as they help define what is expected to happen in the future and how that impacts the project. One assumption for this project might be that more efficient heating systems will be on the market and ready for installation by the time the house is built. If this assumption turns out to false, the project will need to be changed.
Estimates	These must be made for the schedule and the budget of the home. Since the homeowners in this project wish to remain 15% above the cost of an average home, the project manager could research the cost of an average home, then add 15% to reach the desired budget. The project manager could use similar construction projects to create a timeline for the work and possible move-in day.

Risks	One possible risk for this project would be if the architect warns the project manager that, in previous projects when the temperature increased in the summer, the greater amount of windows on the south side caused the home to overheat. A contingency that might be put in place to handle this risk could be the installation of overhangs that shield the southern windows in summer. The risk and its contingency should be documented by the project manager.
Project Governance	The governance is a documented list of rules and processes. These guidelines define how the project will be managed, who is responsible for what, and how decisions will be made. The project manager decides on the methods that will be used to manage the project. This is where communication channels will be specified for stakeholders. In this case, the phase-based method would be used since the construction of a home is very sequential, with clear dependencies and well-defined requirements. In this house project, any change request for the home must be approved by the homeowners and the architect before the project can be changed. The architect must also approve all work at the end of each phase before the project can proceed to the next phase.

From this information, the project manager then facilitates the creation of the project scope documents, including any supporting material to help to find the project scope.

In this project, the supporting material would be:

- Blueprints for the home
- The list of materials approved for use in an energy efficient home.

Once these documents are complete, the project manager presents them to the homeowners and the architect for their approval. When approval is received, the project can move on to the next phase.

During Phase 1: Beginning a Project, the following steps will occur:

- Identify Stakeholders & Gather Expectations
- Define the Project Scope
  - Goals and Objectives
  - Deliverables
  - Requirements
  - Assumptions
  - Estimates
  - Risks
  - Governance

SUMMARY

In this lesson, you used a real-world case study to walk through **phase one**, the beginning of a project. **Project governance** is a documented list of changes. You now understand how a project might look in this first phase.

Source: This work adapted from Sophia Author Jeff Carroll.