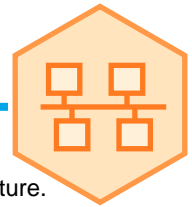


# Architecture Essentials



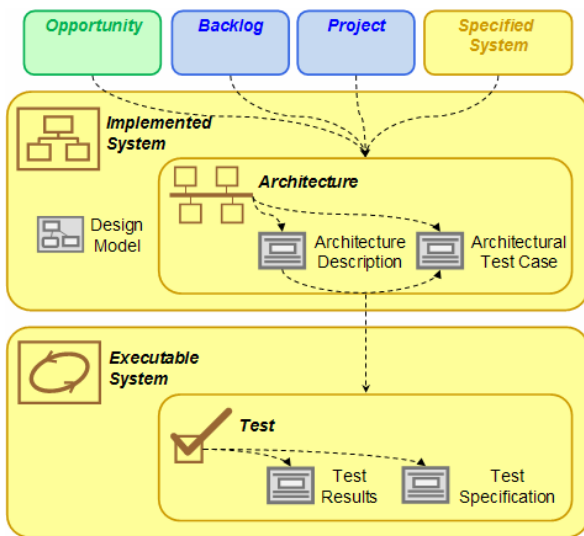
## Create a firm foundation for the development of a robust, high-quality system

Use this practice to actively address the technical risks facing the project and establish an appropriate architecture.

This practice allows teams to:

- Effectively address the technical risks facing the project.
- Share the major decisions about the structure and organization of the implemented system.
- Verify that the system exhibits the key characteristics expected by the customer.
- Objectively prove that the selected approach is fit for purpose.

### Things to Produce



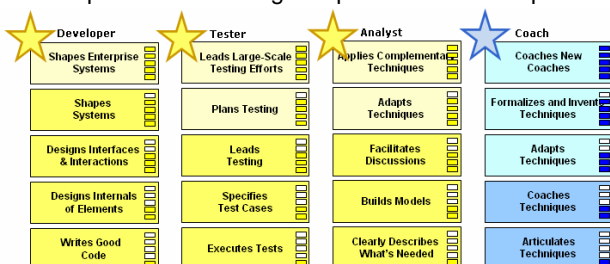
This practice involves the production of a number of implementation and test related artifacts:

- The architecture is documented by preparing an architecture description, a set of architectural test cases, and a set of architectural views of the design model.
- The architecture is verified by testing the executable system produced. This starts by initially building and testing a minimal, “skinny” version of the system – one that implements the architecture and the essential elements of the system’s functionality. The architectural testing is then repeated each time a new version of the system is produced. This checks that the addition of more functionality has not broken the architecture.

### Key Competencies

This practice requires the team to be skilled in shaping systems, developing architectural prototypes, testing the architecture and coaching the team on the architecture.

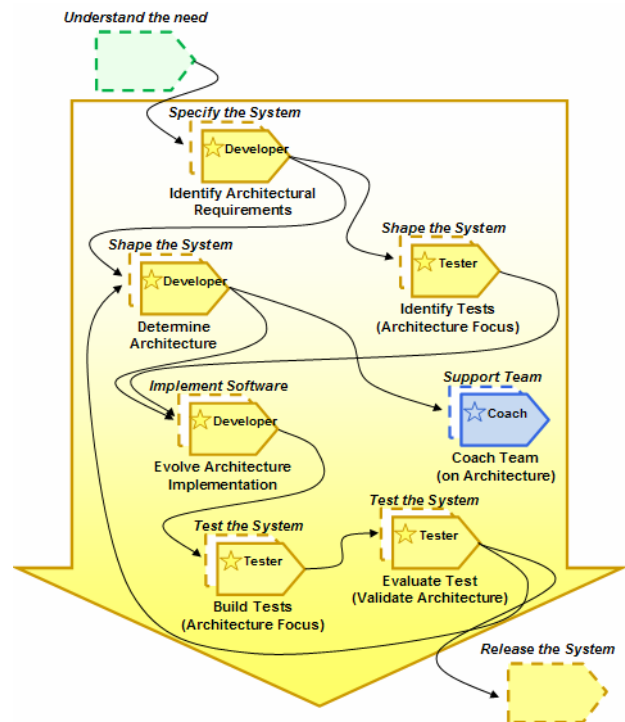
This requires the following competencies to be in place:



To identify the architectural requirements co-operation from individuals with the Project Lead and Customer Representative competencies will be needed but no specific competency level is required in these areas.

### Things to do

The practice starts by identifying and clarifying those requirements that are of architectural significance. This establishes the goals of the architecture.



The practice then determines the architecture to be implemented and specifies the set of tests to be used to verify and prove the implementation.

The architecture is then evolved to produce a skinny system that is tested to prove that it meets the architectural requirements. The team is then coached in the use of the architecture to ensure that all software produced benefits from the foundation it provides.

The architecture is then continually evolved by refactoring the architecture and evolving the architectural implementation in response to the test results and emerging requirements. All system builds are subjected to the architectural tests to ensure the continued validity of the architectural implementation.