

# Using Software Architecture for Estimation

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**Abstract:** In this presentation, we introduce an approach for using software architecture for planning software projects. By applying architecture-centered software project planning (ACSPP), we believe that projects can be planned within a schedule estimation error of 15 to 20 percent. A software architecture design document is the primary input to the top-down and bottom-up planning processes, and a software development plan is the primary output. Each development team member uses the software development plan for generating a personal schedule with weekly milestones for the components that they are developing. In addition, there is an overall project schedule monitored by the project manager that identifies how the components are allocated to the incremental releases. The approach is best applied when the high-level design is complete and the development team is staffed. It helps transfer the design knowledge to the team members and builds buy-in of the schedule.

**Keywords:** Software architecture, estimation, project planning, high-level design.