

FAQ

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frequently asked
questions

Balancing Waterfall Predictability with Agile Flexibility

As popular as agile methods have become, most companies have not adopted them completely, instead straddling between traditional waterfall ways and the new horizons of agility. One of the core reasons for this is the simultaneous desire for flexibility and predictability, which are at some level fundamentally opposite.

However, the situation isn't hopeless. The aim of agile methods is to eventually speed up project delivery so that long-term projections are largely unnecessary. There are techniques that can help bridge this gap in the meantime. This allows organizations to experiment, innovate, and adjust without the substantial baggage of large plans and commitments.

Determining potential project costs up front: To estimate both a short-term and long-term budgeting forecast, use historical project data from your project team that will be performing the work. And the more recent, the better: Whatever you spent last quarter should be similar to what you'll spend now, as long as you're not substantially changing team composition or making capital expenditures. Use very coarse-grained estimation units, such as T-shirt sizes: small, medium, large, and extra-large.

You may want to consider using incremental funding strategies. The expectation that business planning for software projects should be an annual activity is an unfortunate artifact of waterfall project management, as evidenced by the time organizations spend redoing budgets following the annual effort. A better approach is to keep track of how much you need to spend in total, then allocate as your project progresses based on current needs. The benefit of this approach is that it gives the business more flexibility in managing its budgets and the development efforts being funded.

Knowing when the project is going to be done: Agile planning largely relies on a rearview mirror approach, and in longer-term budgeting activities, this is usually the most reliable method. By using a project's average velocity, generally calculated based on the team's accepted output over a series of sprints, teams get a good idea of their average capacity over time. Teams who ignore their previous velocities often overcommit.

Improving estimates and projections: The best advice I have found is to keep teams as stable as possible. This makes everything more accurate and consistent—notably, velocity—and should improve team productivity and collaboration. Bring work to established teams rather than establishing teams around projects. Constantly adjusting resource allocations makes an organization's true development capacity extremely fuzzy to measure, not to mention the frustration it brings to the team.

Once teams get underway, start gathering data. This will improve their familiarity with what they're building and improve planning and forecasting activities.

Promote regular progress updates to stakeholders instead of long-term projections and promises; the latter won't be accurate, but they'll still hold you to it. Assure stakeholders that you won't allow any nasty surprises to sneak up on them and will provide frequent updates and more accurate forecasts over time. Don't make promises many months out, especially if you won't be able to keep them.

Consistently meeting sprint commitments: Focus on effective product backlog grooming and story splitting. Stories ready for sprints ideally should require just a few days for a team to deliver—likely one to two points, or six to eight stories per sprint.

In summary, a few themes emerge in balancing waterfall predictability with flexible, agile methods: stable teams, consistent communication over long-term promises, incremental budgeting and funding practices, and data-driven projections. Following these guidelines, classically waterfall organizations can grow more adaptable and agile. **{end}**

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