

Rolling Wave Planning: How to Plan Fuzzy Projects ¹

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Recently, I worked with a client to choose the right planning approach for a new project. We weighed the merits of predictive methods, then explored how adaptive frameworks like Scrum could add flexibility. But ultimately, we chose a lesser-known approach that blends structure with adaptability in a way that's surprisingly intuitive. It's called **rolling wave planning**, and if your teams lead complex projects in dynamic environments, it's a powerful technique to have in your toolkit.

Projects Need Plans, Even When the Future Is Fuzzy

Every project needs a plan. Without one, teams risk thrashing - burning time and energy without making real progress. But in turbulent environments, the future beyond the near term may be too uncertain to plan in detail.

I'm not talking about fuzziness due to poor planning. I mean projects where the fuzziness is intrinsic to the project itself or the environment it's operating in. Maybe the environment is rapidly changing, or the work involves significant discovery. Perhaps the customer doesn't yet know what they want. The future is inherently unplannable until you get further into the project.

You might be tempted to skip planning altogether, but that's a fast track to disaster. On the other hand, creating detailed upfront plans when the future is fuzzy will waste effort or create a false sense of confidence. Any long-range plan will be subject to constant revision.

So how do you resolve this paradox: the need for a plan, and the impossibility of planning everything at the start?

A Smarter Way to Juggle Uncertainty and Clarity

A solution to this planning paradox was first proposed, to my knowledge, by F. L. Harrison in his 1981 book *Advanced Project Management*. Harrison described a layered approach to

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planning that we now call rolling wave planning: matching the level of planning detail to the clarity available at each phase of a project.

To use this technique, begin with a high-level plan that spans the entire project. Then add detailed planning for parts of the project you understand well - typically, but not always, those in the near term. As the project progresses and more information becomes available, roll the detailed planning windows forward to cover areas that are now better understood. Meanwhile, leave the rest of the project planned at a higher level until it's ready for deeper definition.

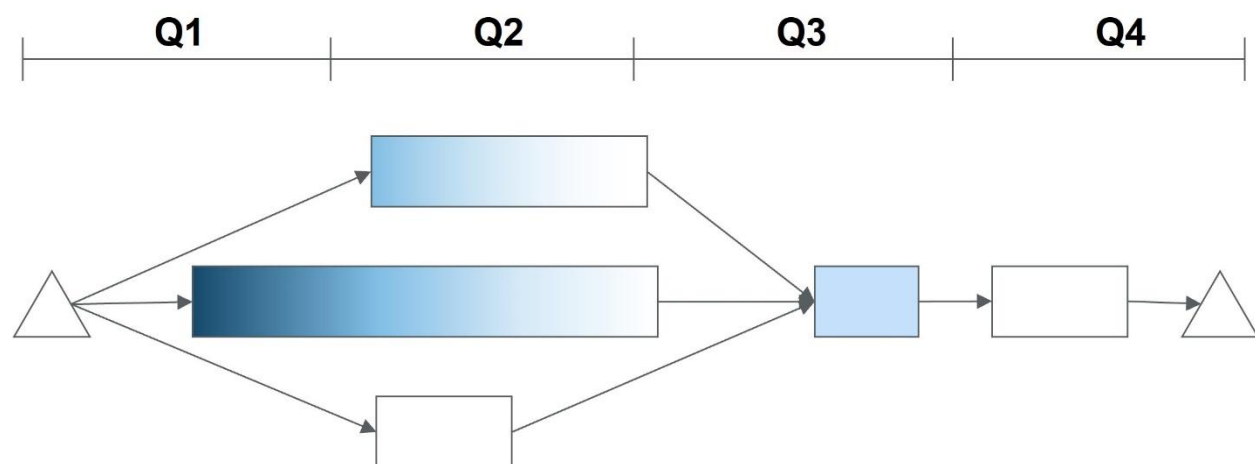


Figure 1: Timeline showing progressive planning; darker areas show more detailed planning.

The figure shows a project that is about 20% into its schedule. Some parts of the timeline are shown in darker colors, indicating that those areas have been planned in greater detail. Lighter areas represent parts of the project that are still planned at a higher, more general level. This contrast illustrates the core principle of rolling wave planning: each part of the project is planned at a level of detail that matches the current degree of certainty. Near-term activities typically have more detailed plans, while future phases remain high-level until more information becomes available. As the project progresses, the detailed planning “wave” rolls forward, deepening the plan where clarity has increased.

Rolling wave planning gives you a usable plan for steering the entire project, while also taking advantage of detailed planning where it adds value. It’s not just a clever name. It’s a deliberate strategy for balancing knowledge and uncertainty.

A Three-Level Variation

Preston Smith, who introduced me to rolling wave planning, describes three levels rather than two in his book *Flexible Product Development*.

1. **Detailed Planning:** For tasks with high clarity, typically in the immediate term.
2. **Moderate Planning:** For work that's approaching but not yet fully defined.
3. **High-Level Planning:** For distant phases where uncertainty still dominates.

The middle layer acts as a bridge, allowing teams to sketch out structure and dependencies without committing to full detail. It's especially useful in complex projects where long lead times, external dependencies, or regulatory steps require partial foresight. The third layer adds nuance without adding unnecessary rigidity.

Plan with Confidence Even When You Don't Have Certainty

Rolling wave planning is not a license to skip planning. It's a method for deciding *when* to make detailed plans, not *whether* to make them. Planning layers at all levels still need thoughtful sequencing, analysis of risks, and careful buffering.

This disciplined approach to planning brings another advantage. It allows teams to defer certain decisions until better information becomes available, enabling higher quality decisions. For more about how to make better decisions by deferring them, see spspro.com/goldilocks-decision-moment.

There are some hurdles. Smith warns, "Rolling-wave planning has a natural bias to keep in mind. In doing shallow planning, it is easy to be too optimistic - to use sunny-day planning and miss the details and problems that consume time. Guard against this as you build the long-term shallow plan or provide a buffer on it to protect yourself."

The rolling wave technique can be a psychological hurdle for stakeholders who equate detailed plans with control or certainty about the future. But in volatile environments, that control is often illusory. Rolling wave planning doesn't create uncertainty. It **acknowledges** it and offers a strategy to manage it.

When working with such stakeholders:

- **Communicate the rationale:** Explain why deferring detail and decisions can be a strength, not a weakness.
- **Show the structure:** Ensure that even high-level plans show intent and direction.

- **Demonstrate progress:** Intentionally pursue new information that allows you to roll the detailed planning wave forward and turn newfound clarity into action.

Rolling Wave is a Pragmatic Blend

You've probably noticed elements of both waterfall and Agile in this approach. Rolling wave planning combines the structure of predictive methods with the flexibility of adaptive ones. It allows teams to plan in detail where things are clear, stay high-level where uncertainty remains, and intentionally reduce that uncertainty as the project unfolds.

My client chose rolling wave because it's a practical way to move forward when some aspects of the project are well-defined and others are still emerging. Like them, you don't need all the answers upfront. Use what you know to outline the broad contours of the path ahead. Let the details take shape as you go and learn more. Planning is not about perfection - it's about progress.

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