

: *When is agile most appropriate?*

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Agile methods are most appropriate when project requirements are uncertain, stakeholders seek rapid results, change is likely, requirements are ambiguous, and the project is complex. Agile organizations and agile teams are increasingly needed and appropriate. Agility is a means of coping with a complex, uncertain, volatile environment, where facts are increasingly ambiguous and disputed. Bureaucratic, rigidly plan-driven organizations and project teams may be more efficient in stable, mechanistic environments.

A frequent choice facing managers deals with two questions: 1) how to organize and 2) what process to use to complete a project or task. Frequently decision-makers use criteria or factors to choose among alternatives. A number of factors should be considered when evaluating these two questions. The following project attributes are especially important to examine: 1) Requirements of the Project; 2) Size and Scope of the Project; 3) Flexibility of the Design of the Project; 4) Planning and Control of the Project; 5) Type of Customers; 6) Developers knowledge, skills, experiences; 7) Need to alter existing application/code; and 8) Risks known and the potential impact on the project.

Mike Cohen of Mountain Goat Software asserts "the most appropriate projects for agile are ones with aggressive deadlines, a high degree of complexity, and a high degree of novelty (uniqueness) to them. We want to use agile when we are doing something that is new ... And in today's world, there is almost always a sense of urgency."

In a thoughtful blog post, Jose Santana (2016) discusses six indicators that agile is the most appropriate project management method. He argues first and most important is to use agile when project requirements are uncertain; second, use it when project teams are co-located and can benefit from daily scrums; third, use agile when there is a proactive product owner because real-time feedback is key for success in Agile; fourth, use it when teamwork and collaboration are important and teammates are likely to show initiative; fifth, when there is a willingness to fail and learn fast; and sixth, use agile when management support use of the Agile framework and its culture of empowering teams.

In a blog post titled "Agile vs. Waterfall: Matching Method To Project Requirements" (2018), Eileen O'Loughlin argues "you need to be proficient at both agile and waterfall PM practices so you can apply the right methodology, to the appropriate projects to achieve the best results." Neither one is always the best and an organization should not use one approach exclusively. She identifies four factors that make agile a better fit than the waterfall method. These factors include: 1) Unclear requirements/deliverables, 2) a high level of participation/input and buy-in from stakeholders, 3) the

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cost of change is minimal, and 4) there is an emphasis on teamwork, transparency, and continuous improvement. She claims "pure agile or pure waterfall is almost nonexistent at this point." and seems to favor a hybrid approach to project management.

Many authors seem to favor a hybrid or contingency approach to implementing agile with a more plan-driven approach that creates well-defined deliverables at the beginning of a project. Steve Cobb (2017), an experienced practitioner, in a Quora post concluded "agile is best suited for projects with high levels of uncertainty where creativity and innovation in finding the best solution are more important than predictability, planning, and control."

Project managers must have experience with multiple approaches to managing and completing a project. A project manager should be more a coach and decision maker than a taskmaster or a specialist on a project team. If your client/customer/ product owner wants lots of upfront planning, wants approvals at each stage of a project or task, wants extensive documentation, and your culture is formal and structured, then stick with bureaucratic, highly structured processes. In general, one of the agile processes will fail in such a situation. The processes for a project and for an entire organization must be designed, managed and controlled. If you can dance, then dance on ...

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