Hewlett Packard
Enterprise

Agile Projects Are More Successful Than Hybrid Projects

Research White Paper

Agile projects are more successful than hybrid projects

Executive summary

The growing importance of software development activities to businesses has created a lot of interest around understanding the use and effectiveness of various development methodologies, such as Agile, Waterfall, and a Hybrid approach (often called 'WaterScrumFall'). While growth in the adoption of Agile approaches has been demonstrated elsewhere, the lack of evidence suggesting the superiority of Agile leaves audiences wondering how to interpret such data. In the research reported here we examine the success of each approach. Results suggest there is extensive Agile adoption, and that those using Agile development approaches perceive the journey and the outcome of projects most positively, with those only using Hybrid approaches - which attempt to straddle two very different areas – faring the worst, calling into question the utility of such an approach.

ABOUT THIS RESEARCH

We interviewed 403 Development and IT Professionals using a 15 minute online survey.

Profile of companies:

- 500+ employees in company
- All verticals except ISVs and Education

Participant's primary role in organization:

- Dev Team (n=100)
- IT Operations (n=103)
- Test (n=100)
- Project Mgmt/ Project Management Office (PMO) (n=100)

Key topic areas:

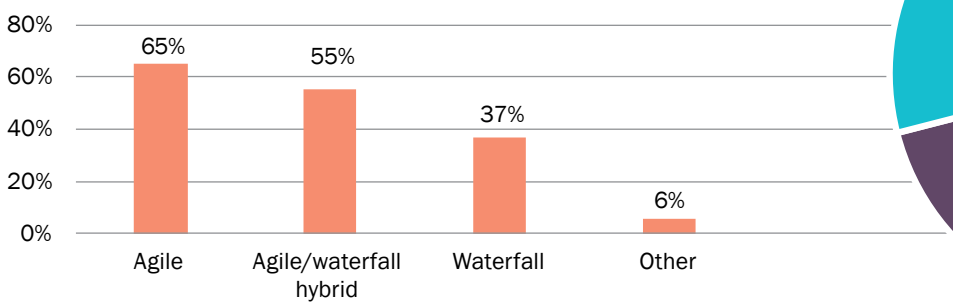
- Development methodologies used at company.
- Percentage of projects using various development methodologies.
- Performance ratings for various aspects of the development ecosystem for a focal application worked on.
- Success metric ratings for six key areas for a focal application worked on.

This research was sponsored by Hewlett Packard Enterprise and conducted by YouGov

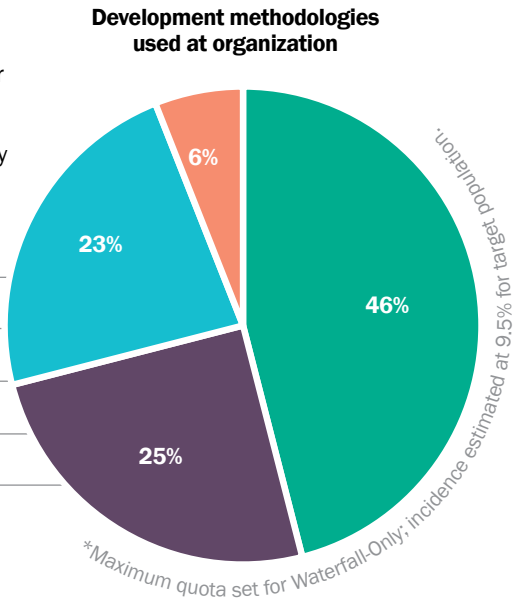
Agile is being used a lot

Given a lot of business organizations use multiple development methodologies, it is not uncommon for researchers to ask survey questions that accommodate that fact, asking what the primary or predominant methodology that is used at their org. For those really trying to quantify adoption, that leaves questions unanswered. In this research we tried to better quantify adoption. The below bar chart and pie chart are the results of our first question, where we asked participants to indicate all development methodologies used at their org. Just about two-thirds indicate they use Agile, just over half use Hybrid, and just over a third use Waterfall. The pie chart regroups that same data into mutually exclusive buckets, including those who *only use Agile*, and who *only use Hybrid*, with about a quarter in each bucket. The rest – almost half - mostly use a combination of methods. Not surprisingly only a very small chunk say they exclusively use Waterfall*.

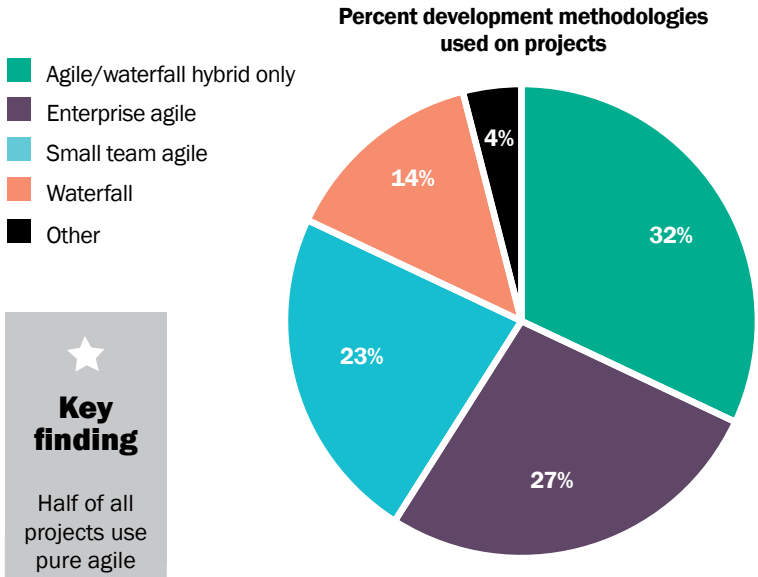
Development methodologies used at organization



Development methodologies used at organization



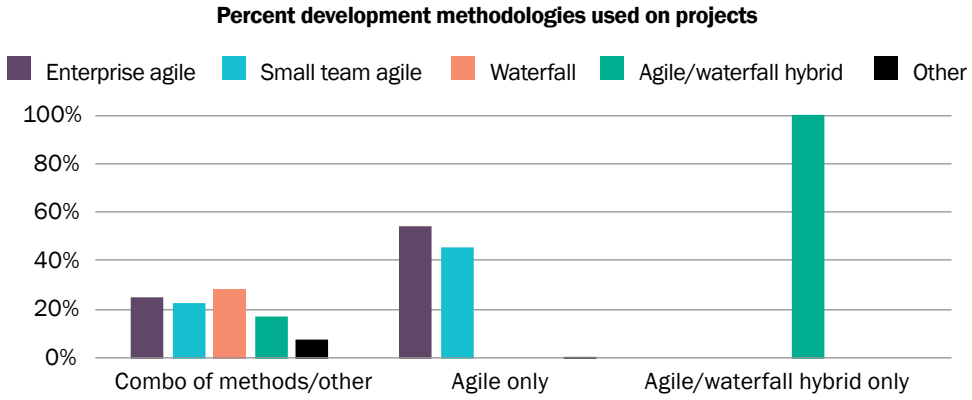
This provides a useful way to slice up the space, and our second question about the distribution by projects sheds even more light. The below pie chart shows the results of the question regarding the percent of projects using each development approach, with an additional distinction made here between *Small Team Agile* and *Enterprise Agile*. As can be seen, about half of all development projects are using some type of pure agile approach, roughly split between small team and enterprise. About a third of projects are using a hybrid approach, with the rest waterfall or other. Another way to look at it - roughly 82% are using agile or agile/waterfall hybrid – a large percentage.



Key finding

Half of all projects use pure agile approach

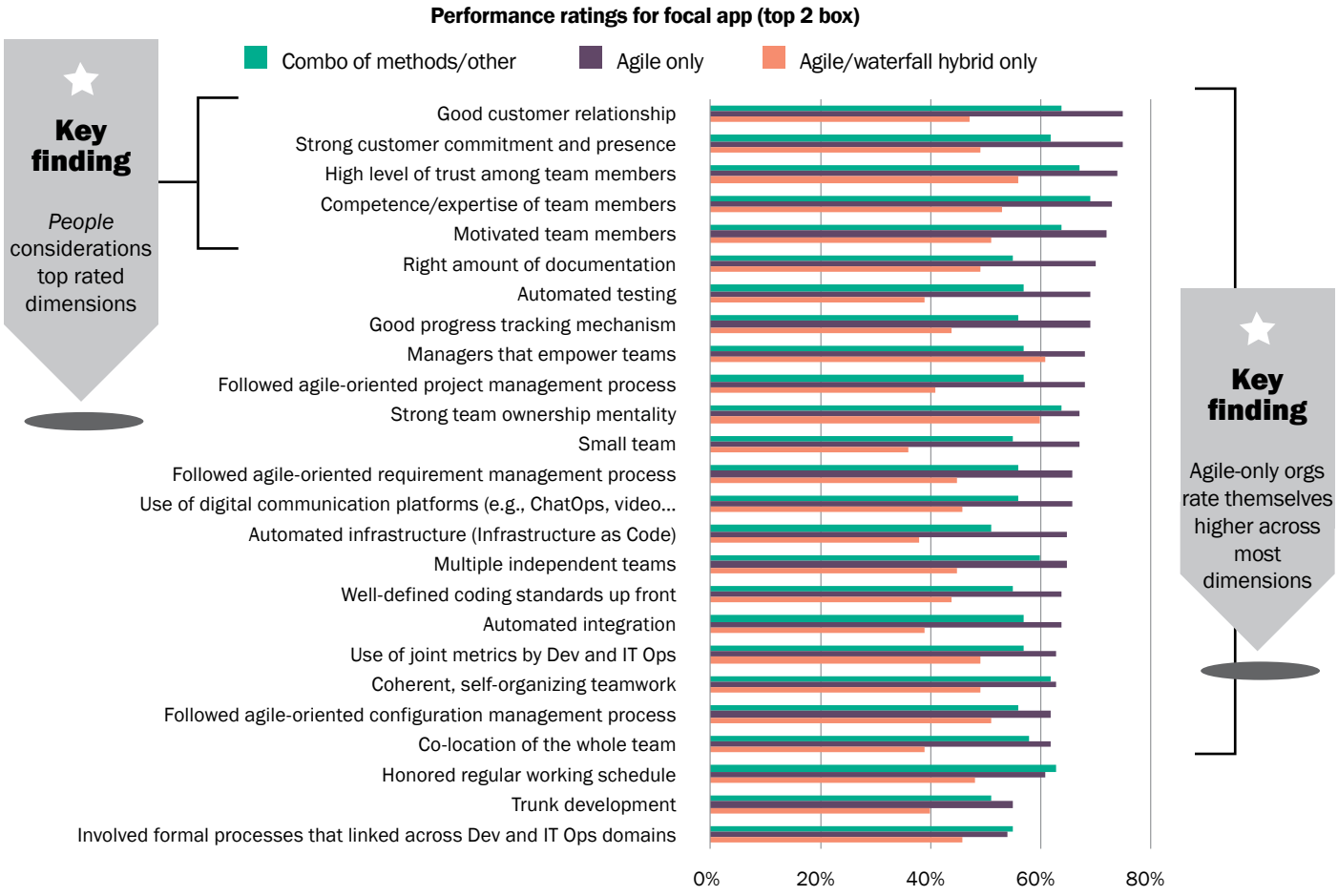
In the below chart the information from the two questions is crossed, revealing the distributions of projects within segment. The hybrid-only group by definition is using 100% hybrid. For the agile only group just over half of the projects use an enterprise agile approach, and just under a half use a small team approach. Perhaps the most interesting segment in this view is the combo of methods one, where we see that there is a real distribution across all of the methodologies, with roughly a quarter of projects using each of the enterprise agile, small team agile, and waterfall methods. The hybrid approach is used on only 17% of projects in this segment; another way to look at is that 83% of the projects in this segment are something other than hybrid.



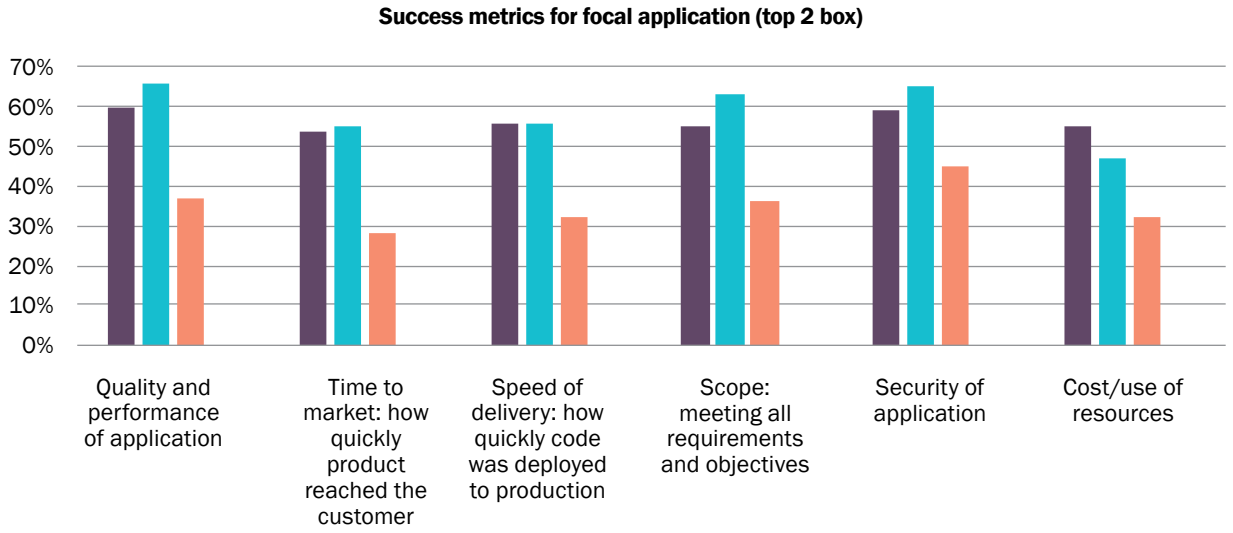
Measuring the success of projects

While it is clear that agile and hybrid approaches are being widely used, the above data doesn't shed any light on the effectiveness of the approaches. In order to better understand that question, we examined how each approach fared across a number of success metrics. The success metric ratings relate to the most important application the participant had worked on among those worked on in the past 12 months. Success was defined through six metrics, including *quality and performance, time to market, speed of delivery, scope, security,* and *cost/use of resources.*

The below graph shows the performance ratings by the agile only, hybrid only, and combo segments defined earlier. There are several trends that jump out. First, many of the top rated dimensions relate to people/team considerations, suggesting that participants perceive their organization as performing at a higher level on those dimensions relative to most of the technology and process considerations. Second, the agile only segment ratings are higher than the other segments on most considerations, with both the combo of methods and agile only segments faring better than the hybrid only segment.



The below graph shows the results of the success metric ratings by the same segments. The agile only and combo segments both perform better than the hybrid-only segment on every single metric. Why would the hybrid approach fare worse? It is the one approach that implicitly straddles two development methodologies that naturally pull in different directions. Perhaps they are incompatible.



Conclusion

Agile approaches are enjoying widespread adoption. That is for a good reason - Agile projects are more successful, particularly compared to Hybrid approaches, which implicitly combine two very different development methodologies that may be working against each other. Orgs using Hybrid approaches might want to reconsider.

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4AA4-xxxxENW, November 2016

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