



Development Teams Survey

March 2023

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Executive Summary

Propel and Davidson have worked with a large number of product companies and enterprises across multiple industries and while we won't say "we've seen it all", we have certainly seen a lot when it comes to how companies organise around product development.

To dive deeper into the current state of play and the issues facing our clients, we recently ran a short survey to gather quantitative and qualitative information on how our clients are structuring their development teams especially in relation to hybrid onshore and offshore teams.

In all, we received 20 survey responses predominantly from software companies (80%) and 4 were enterprise businesses where digital offerings are a core part of their business. Importantly, the survey covered a wide range of team sizes from small organisations with less than 10 in their development function to large teams of more than 250 employees. Many different industries were also represented.

Team organisation and location

How are others structuring their teams? Based on the survey we conducted, we found that the majority of organisations structure their teams based on products or platforms or a combination of the two. This is consistent with our experience that this is the predominant model over the last 10-15 years as it provides a level of focus and autonomy for each end-customer product offering and is also easy to account for in terms of cost (and product profitability) tracking.

Where are others offshoring their teams? In terms of where the work is performed, use of offshore teams is well embedded in practically all organisations with the majority of those arrangements being in place for more than 2 years. Asia is a popular geography for locating offshore staff accounting for 83% of locations with India, Vietnam and Philippines the most common countries being used for offshore development.

Which roles are usually kept onshore and which are usually offshored? Where teams have offshore members, Product Managers, Product Owners, Delivery Managers and Development Managers are almost always on shore while other roles are mixed with the majority of developers/quality analysts in hybrid teams being offshore. The rationale being that technical managers and product managers will be able to foster greater collaboration and communication with the various parts of the business as well as their customers if they are based onshore where the customers and business operations are. The majority of companies with offshore teams allocate work to offshore teams based on the type of work (eg. maintenance) or the relevant tech stack.

What should you watch out for when offshoring? The biggest challenge faced with offshore teams is efficient collaboration between offshore and onshore teams due to time zone differences. There is clearly a trade-off with productivity and quality when utilising offshore team members which is exacerbated where the time zone restricts the overlap in working hours. This often puts extra work on onshore team members such as Product managers, BAs and Technical leads that have to be more prescriptive when supporting offshore team members.

Ways of working

What are the most popular development methodologies adopted by teams? More than 70% of respondents follow Scrum methodology, with more than 50% of these complementing Scrum with Kanban. This is very consistent with the industry-wide adoption of these practices in the last 10 years.

Almost all our respondents say that new features or enhancements take up the majority of their teams' time, with around 60% stating that these take up 60% or more of their time. There was only a small variation in these allocations, usually a decrease in feature work was due to a larger portion of time spent on defects or unplanned work.

Measurement

Which development performance metrics are being adopted with the most success? Most teams measure performance using OKRs or outcomes, and the effectiveness of these methods have been at least partly satisfactory. When slicing the data by organisation sizes, we see that larger organisations tend to also include DORA metrics, whereas smaller organisations lean towards measurement by delivery dates.

The greatest correlation between success in managing stakeholders and metrics measured was for companies that measure OKRs/outcomes and DORA at 60% of respondents. This does not mean that DORA metrics are used to manage stakeholders, however those businesses who are focusing on DORA have a more mature delivery practice focusing on frequent delivery of value and quality of delivery. Larger organisations also tend to be better at managing stakeholder expectations.

Looking ahead

What are the biggest concerns for software development leaders? The biggest concerns for organisations looking forward to 2023 and 2024 are costs, productivity, and capacity (respectively) with 70-90% of respondents ranking these as their highest concerns. This is not surprising given the experience of the last few years which has seen a steep rise in salaries and scarcity of onshore resources.

A word of thanks

Davidson and Propel would like to thank our customers who took the time to participate in this survey. It provided a great cross section of our industry and we trust there is value to everyone in the detailed analysis that follows.

The approach

An online survey was sent out to targeted C-level executives in organisations that either Davidsons or Propel have worked closely with in recent years. Importantly, the companies chosen span a wide range of industries and sizes but in all cases, product development is a major part of their business.

The responses received are from companies with <20 people in their product development team through to 250+.

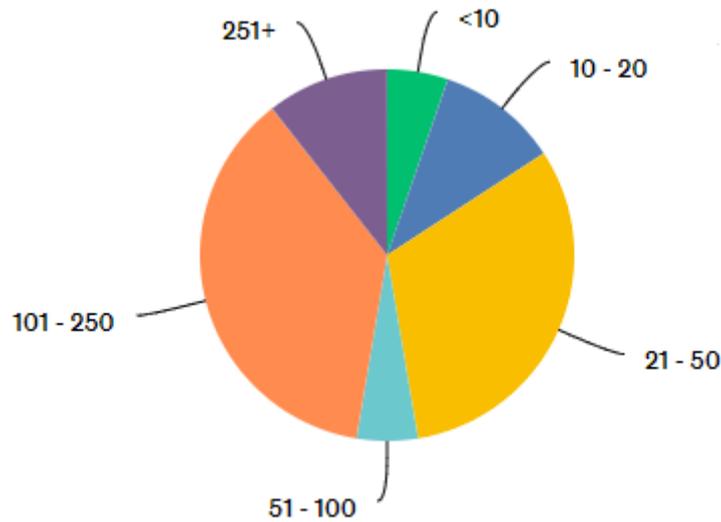


Figure 1: Distribution of survey responses by size of product development teams

The majority of the respondents were software product companies, where their core focus is developing a digital product for direct sale to customers. 4 of the 20 responses were enterprises where digital is a key part of their business.

Team organisation and location

Team organisation

Firstly, we sought to understand what criteria is used to determine the organisation of development teams:

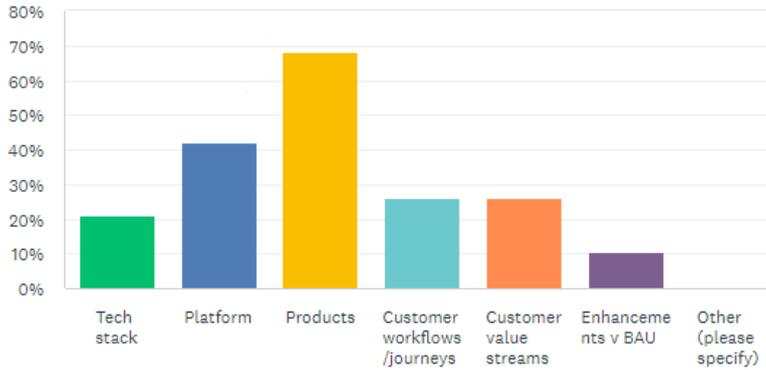


Figure 2: Respondents' development team organisation principles
**Note: this was a multiple choice question*



The majority of organisations structure their teams based on products or platforms.

In our experience this is the predominant model over the last 10-15 years as it provides a level of focus and autonomy for each end-customer product offering and is also easy to account for in terms of cost (and product profitability) tracking. The natural challenge that this approach presents is a high dependency on effective collaboration between teams to deliver cross product outcomes for end customers.

Use of offshore vs onshore teams

The availability of offshore teams has been steadily increasing in the last few years and we wanted to understand how long our customers have been using that capability:

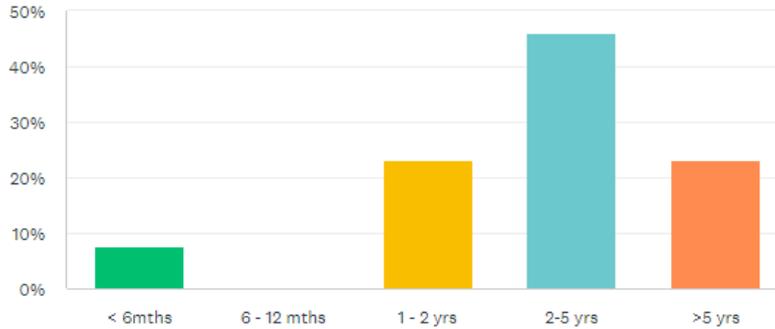


Figure 3: How long respondents have been using offshore teams



The use of offshore teams is well established with over 70% of respondents having an offshore presence, the majority of these for more than 2 years.

The most utilised offshore locations include India and Vietnam followed by The Philippines, Eastern Europe or other Asian countries. Other locations comprised Russia, Indonesia and Australia (where the head office isn't in Australia)

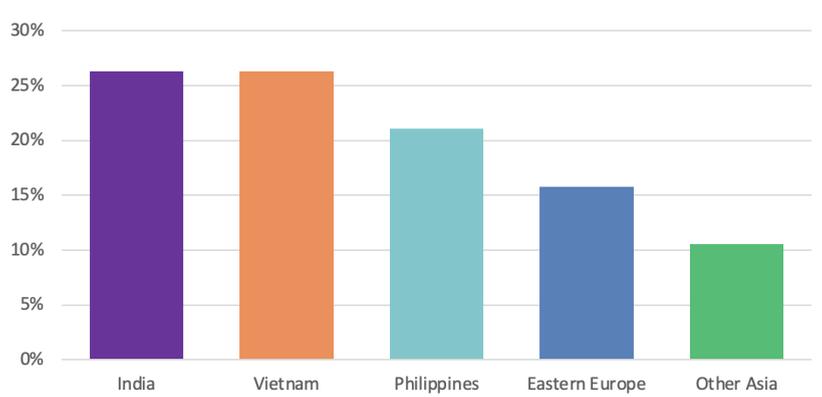


Figure 4: Respondents' offshore locations for their development teams
**Note: this was a multiple choice question*

How are decisions made on which work is given to offshore vs kept with onshore teams?

Having a profile of the use of offshore teams, we next wanted to understand how these teams were used vs their onshore counterparts:

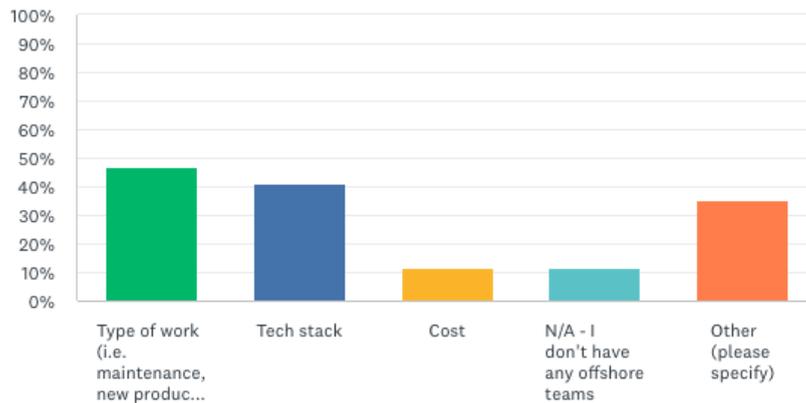


Figure 5: Criteria used to decide which work was allocated to offshore teams

The majority of companies with offshore teams split the work based on the type of work or the relevant tech stack. For those who do not (ie. “Other”), this is generally because their teams include both offshore and onshore employees, hence there was no need to differentiate the work.

For other companies who do not differentiate the type of work to be split between offshore and onshore teams, there are instances where it made more sense for the Australian team to run a project if it is for an Australian customer.

How are team roles located when using offshore development?

Drilling down deeper into how offshore teams are utilised, we asked respondents to specify where each team role predominantly resided:

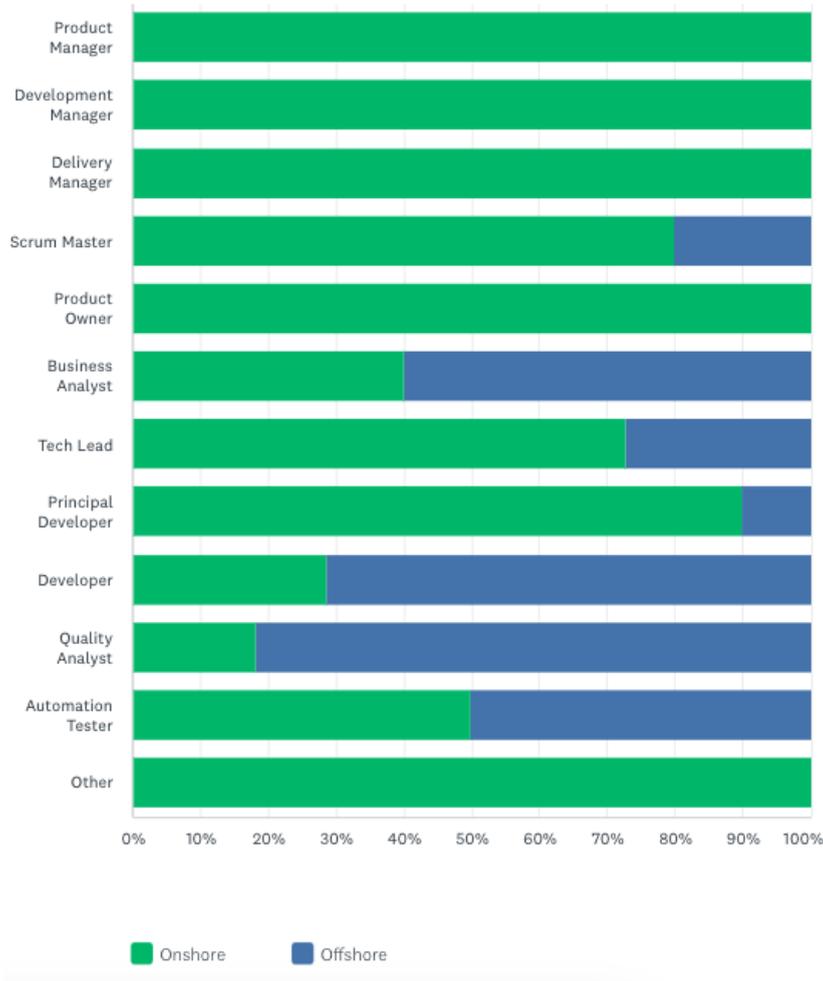


Figure 6: Role locations



Product Managers, Product Owners, Delivery Managers and Development Managers are almost always on shore while other roles are mixed with the majority of developers/quality analysts in hybrid teams being offshore.

The rationale being that technical managers and product managers will be able to foster greater collaboration and communication with the various parts of the business as well as their customers if they are based onshore where the customers and business operations are located.

What are the issues in working with offshore development?

Having understood how organisations are currently using offshore teams, we sought to understand what challenges they are facing:

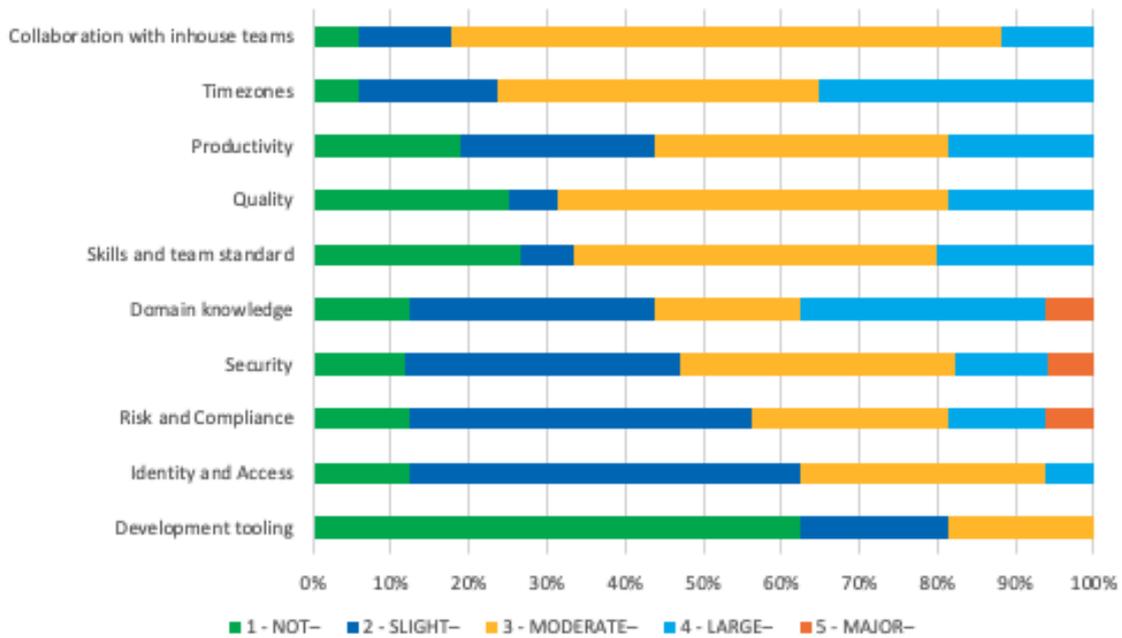


Figure 7: Barriers to working with offshore development

There were very few insurmountable issues identified for companies using offshore development apart from security, risk and compliance which are strictly regulated in certain industries.



The biggest challenge identified using outsourced teams is collaborating efficiently with in-house teams, with our survey showing that 88% of respondents citing this as a moderate or higher issue.

Not surprisingly this was closely followed by time zones with 75% citing this as a moderate to large issue, the greater the time zone difference the greater it is seen as a challenge.

To further analyse the timezone issue, we looked at the relationship between timezone and location:

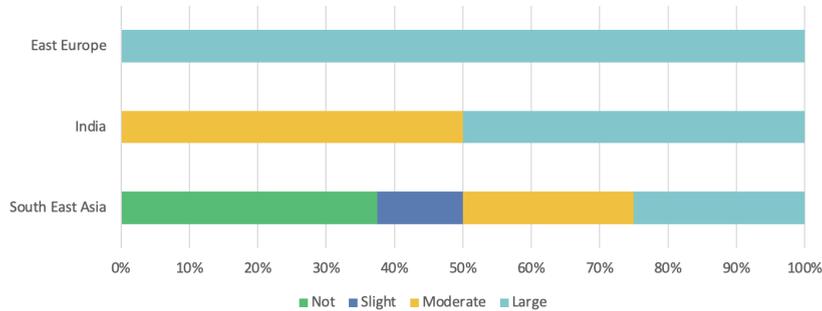


Figure 8: How significant an issue timezone is by location of offshore team

This showed a clear correlation between time zone and the perceived challenge of quality and productivity. 80% of respondents with teams in Eastern Europe or India (where time zone difference is greater than 5 hours) had moderate or greater concern about quality and 70% a concern about productivity. For those with teams in South East Asia, where the time zone is generally around 3 hours difference allowing greater overlap within the work day, only 50% raise quality and productively as a moderate or greater concern.



There is clearly a trade-off with productivity and quality when utilising offshore team members which is exacerbated where the time zone restricts the overlap in working hours. This often puts extra work on onshore team members such as Product managers, BAs and Technical leads that have to be more prescriptive when supporting offshore.

Team composition

What is the standard or average composition of teams?

We were interested in determining whether there was a standard size and shape of teams across the survey cohort. In fact there were sizable differences with the average composition being:

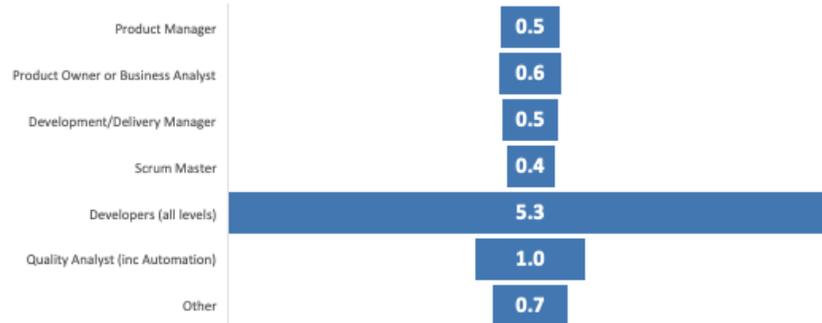


Figure 9: Average team composition

The survey data saw team sizes of 6 to 10 members comprising:

1. Dedicated team members:
 - either a Business Analyst or Product Owner generally, but not both
 - 4-6 Developers of various levels including tech leads, and
 - 1-2 Quality Analysts or Automation testers
2. Shared team members:
 - Product Manager
 - Development or Delivery Manager
 - UX Designer(s)

Interestingly, the role of Scrum Master was not universally included in teams.

Note that these are averages only and there is variation in team sizes even within organisations for various reasons. For example, a mobile team may be larger to include both Android and iOS development streams.



There was no significant correlation between size of companies or company type (enterprise vs product) with the composition of teams.

How does the team composition vary between 100% onshore teams vs hybrid teams?

We were interested in understanding whether the size and shape of teams changed between 100% onshore and hybrid (onshore / offshore) teams.

In analysing the responses, it was clear that there are four approaches that survey respondents used:

- Onshore only - no use of offshore resources at all
- Offshore with hybrid teams comprising onshore and offshore members
- Offshore with teams made up of either 100% onshore or 100% offshore members

When looking at the composition of onshore only and hybrid teams, there is very little difference between the two approaches:

Team role	Onshore only	Hybrid
Product Manager	0.6	0.5
Product Owner or Business Analyst	0.8	0.3
Development/Delivery Manager	0.4	0.6
Scrum Master	0.3	0.6
Developers (all levels)	5.0	5.5
Quality Analyst (inc Automation)	0.8	1.2
Other	0.7	0.7
TOTAL	8.5	9.4

For offshore only teams, the most common approach was to have Quality Assurance as the exclusive role of the offshore team.

How are contractors/consultants used to complement teams?

As another way to understand team composition, we asked respondents, how extensively they use contractors or consultants:

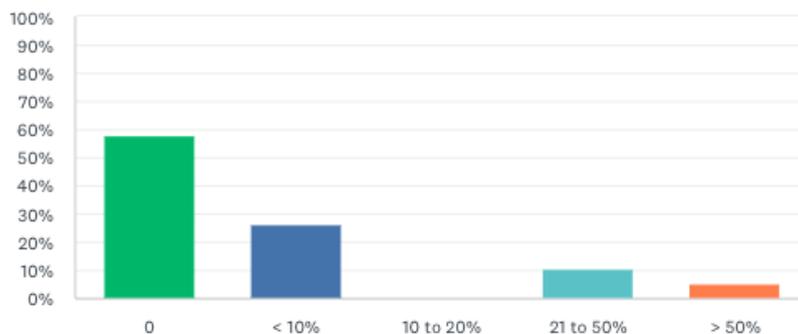


Figure 10: Ratio of contractors to permanent employees - onshore teams

The majority of onshore teams we surveyed have full teams of permanent employees, and those that use contractors do so only sparingly. The one major exception reported using >50% contractors which is due to a company-wide policy more so than being a model that is specific to their development teams.

Companies with teams with less than 100 employees tend to use slightly more contractors than their larger counterparts.

Ways of working

Do you follow any agile methodologies?

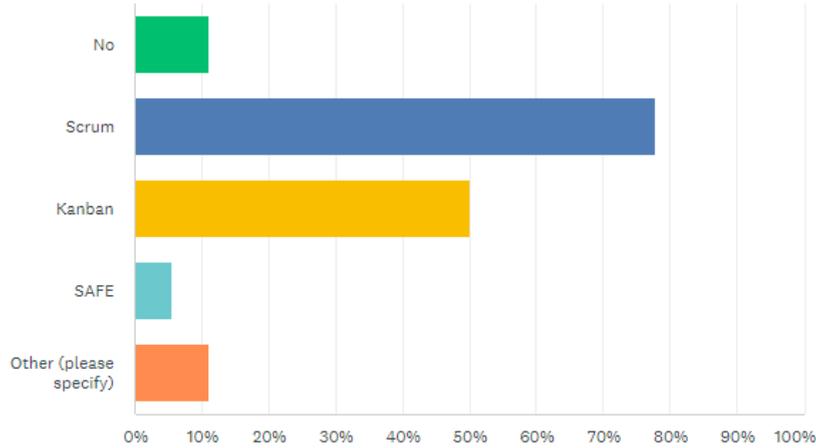


Figure 11: Respondents' use of agile methodologies



More than 70% of respondents follow Scrum methodology, with more than 50% of these complementing Scrum with Kanban.

Other methodologies include a focus on lean software engineering principles, combining a variety of Agile methodologies and one respondent described their ways of working as a mix of waterfall and agile.

Do you run explicit discovery processes?

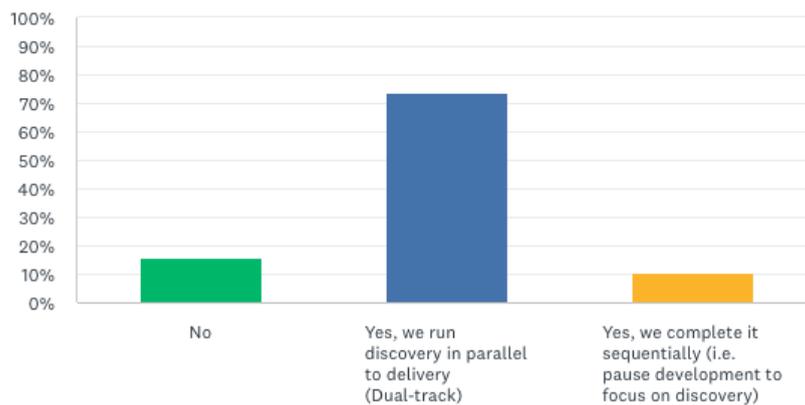


Figure 12: Respondent's usage of explicit discovery processes



The majority of respondents run discovery which feeds into their feature development. Most of these companies run discovery in parallel to delivery. Less than 25% of respondents indicate that they do no discovery at all.

What percentage of time is spent on the different work types?

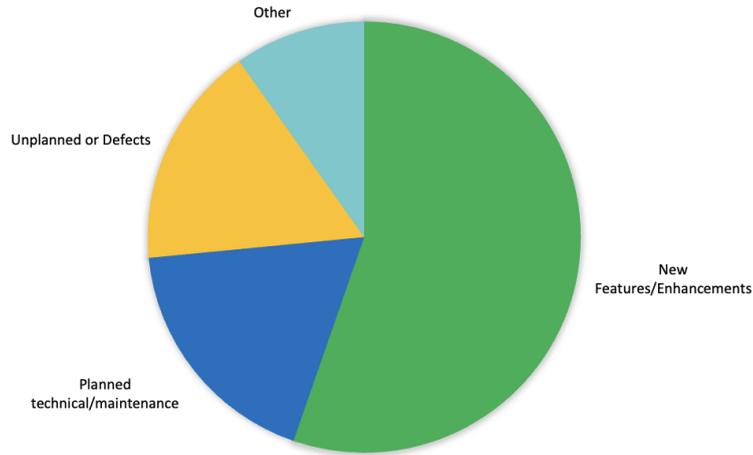


Figure 13: Average split of effort

Almost all our respondents say that new features or enhancements take up the majority of their teams' time, with around 60% stating that these take up 60% or more of their time. There was only a small variation in these allocations, usually a decrease in feature work was due to a larger portion of time spent on defects or unplanned work.

Measurement

How are your Product Development teams measured?

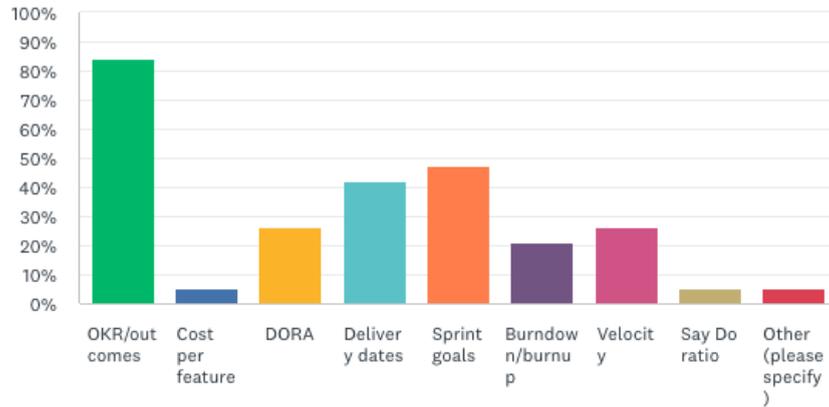


Figure 14: How respondents' development teams are measured

Greater than 80% of respondents suggested they measure performance with OKRs/Outcomes.

Greater than 80% of respondents suggested they measure performance with OKRs/Outcomes. Although that is the case, Propel's experience is that many organisations are still reasonably immature in creating true outcome based OKRs for development teams, with many OKRs written as delivery goals rather than true product outcomes such as business or client benefit.

Measuring output is also prevalent with 74% of respondents measuring metrics such as sprint goals, delivery dates and velocity, many using multiple of these metrics. Larger organisations tend to also include DORA metrics, whereas smaller organisations primarily measure success by hitting delivery dates.

a) Has your measurement practice been effective in driving delivery performance and continuous improvement?

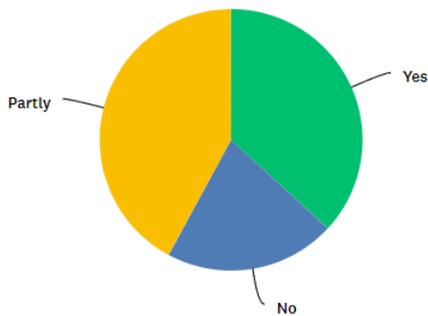


Figure 15: Effectiveness of respondents' measurement practices in driving delivery performance

b) Has your measurement practice been effective in managing stakeholder expectations and ensuring visibility and transparency of outcomes?

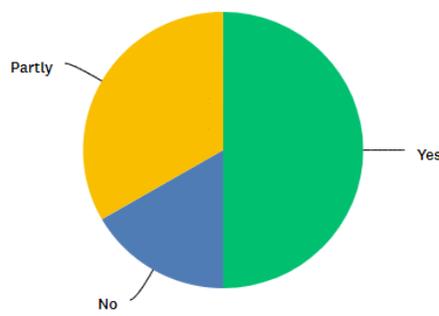


Figure 16: Effectiveness of respondents' measurement practices in managing stakeholders

While most respondents indicate that their current methods of measurement have at least yielded partial success in enhancing delivery performance and fostering ongoing improvement, it is worth noting that a small number of responses revealed that these methods were ineffective or only partially effective in these areas but were successful in meeting stakeholder expectations.



The greatest correlation between success in managing stakeholders and metrics measured was for companies that measure OKRs/outcomes and DORA at 60% of respondents. This does not mean that DORA are used to manage stakeholders, however those businesses who are focusing on DORA have a more mature delivery practice focusing on frequent delivery of value and quality of delivery. Larger organisations also tend to be better at managing stakeholder expectations.

The greatest correlation between success in managing stakeholders and metrics measured was for companies that measure OKRs/outcomes and DORA at 60% of respondents. This does not mean that Dora metrics are used to manage stakeholders, however those businesses focusing on Dora have a more mature delivery practice.

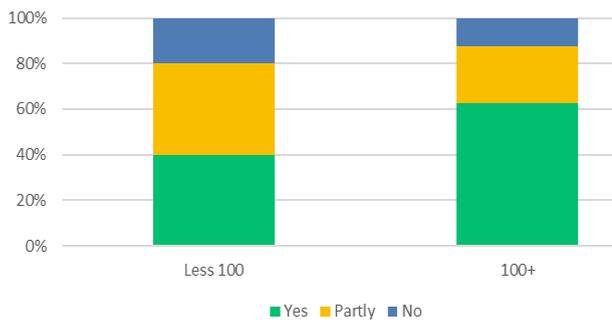


Figure 17: Effectiveness of respondents' measurement practices in driving delivery performance - small vs large

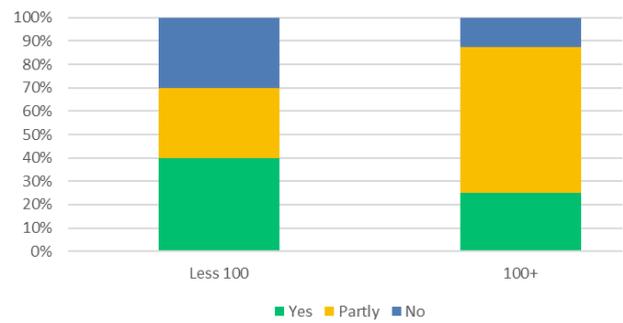


Figure 18: Effectiveness of respondents' measurement practices in managing stakeholders - small vs large

Larger organisations are better at managing stakeholder expectations, with 60% saying their measurement practices were effective at managing stakeholder expectations vs 40% at smaller organisations.

Almost half of our respondents have tried and abandoned other forms of measurement such as KPIs, cycle time, WIP limits and sprint goals.

Looking Ahead

Looking forward to 2023/2024, what are your product development teams' biggest concerns?

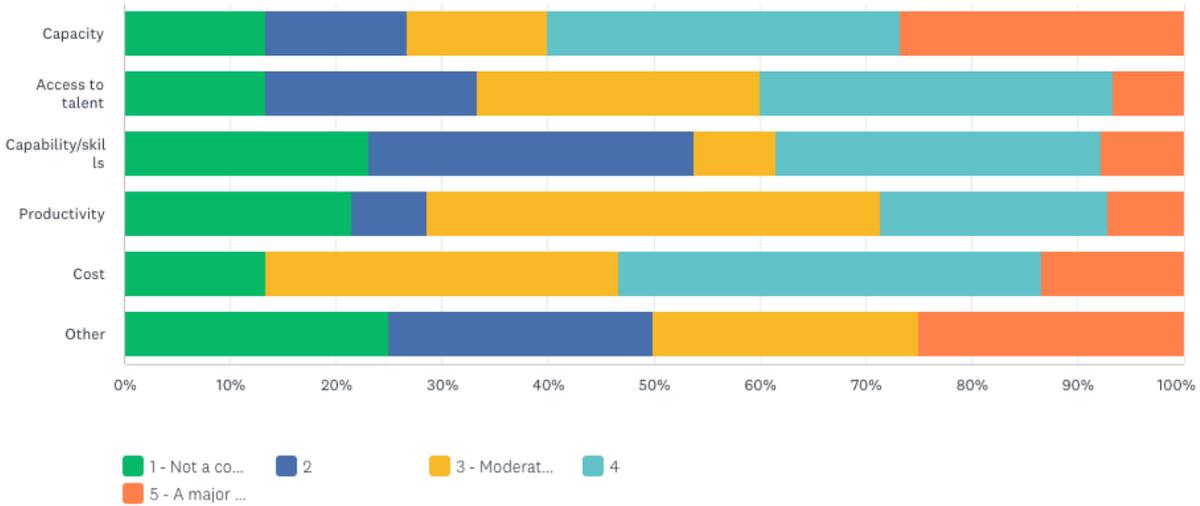


Figure 19: Respondents' biggest concerns in 2023/2024

The biggest concerns for organisations looking forward to 2023 and 2024 are costs, productivity, and capacity (respectively) with 70-90% of respondents ranking these as their highest concerns.

This is not surprising given the experience of the last few years which has seen a steep rise in salaries and scarcity of onshore resources.

Other concerns called out include geopolitical constraints with China.



About Us



Propel exists to help our customers achieve sustained product success

7 Hill St, Cremorne VIC 3121

hello@propelventures.ai



At Davidson, every action – big or small – is directed to enhancing workplace performance, supporting careers, and making a positive difference to the lives of our clients, candidates, and the broader community.

Level 18, 500 Collins Street
Melbourne, VIC 3004

info@davidsonwp.com.au