Enterprise DevOps Assessment – Report & Roadmap

Your Results Overview

Thank you for taking the time to use our tool.

Although we asked many questions related to tech and engineering practices on your teams, you'll notice that your assessment results focus primarily on process and culture, rather than specific tools or technologies. There are endless combinations of tools and technology products you can use for IT solutions. When it comes to culture, however, the behaviors high-performing teams have in common are not that numerous. You'll also notice that the best tools associated with DevOps-type work are designed to align with these behaviors.

These behaviors will be recurring themes in the results of the following report. They are the foundation of technology success in the 21st-century enterprise organization. Without them, your "human architecture" will always be the limiting factor in your technology success. No amount of tools or engineering can compensate for it.

The following report contains a number of recommendations. Not every recommendation will be right for you, but if even a few of them spark useful ideas for improvement, then we've done our job.

Your Results Chart
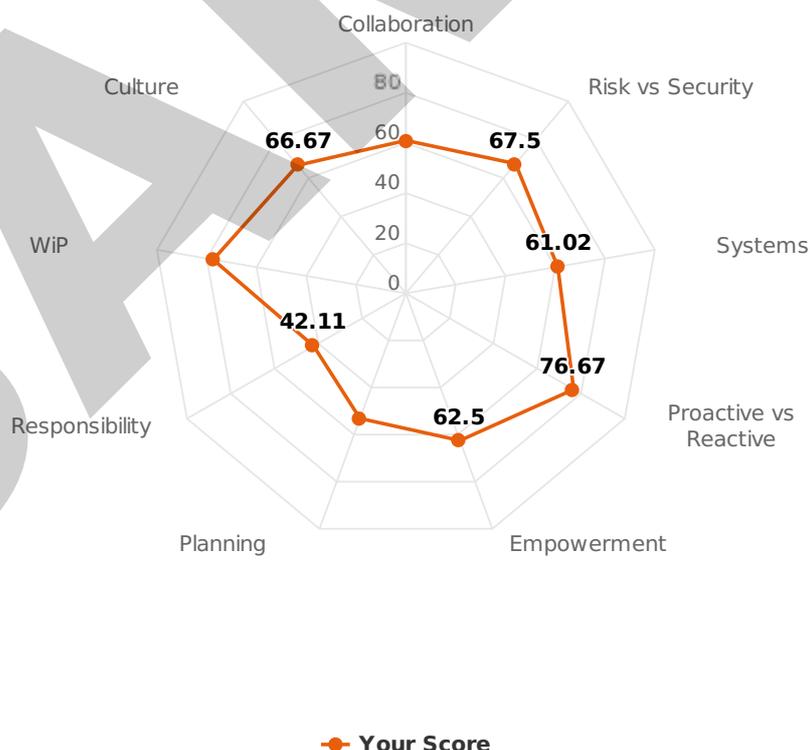
Section 1: Collaboration

You Scored Intermediate on Collaboration

You are making progress on the road to dissolving silos and leveling workflow across functional teams. Your teams demonstrate a willingness to let their guard down with each other as they pursue a larger goal together. However, your responses indicate that this collaboration could be increased with more robust tooling and agreed-upon processes between teams. Handoffs of work between teams could be further streamlined, and the organization should definitely take a day or two to map value streams across technology workflows if it has not already.

Your teams face a need for collaboration improvement which should prioritize lower transaction costs between teams and departments over new tools. However, your organization should find ways to make continuous, small investments in collaboration tools and enablement while the majority of your focus gets spent on mapping value streams and finding ways to increase the capacity of your pipelines.

Key Recommendations

- If your teams have never done so, perform a value-stream mapping workshop with everyone who is involved in delivering technology products and services. Getting everyone in a room for a day or two is the fastest way to establish a common understanding of how long work takes to travel across multiple teams, and where critical handoffs and bottlenecks can be improved.
- Further invest in tooling and automation to allow teams to self-serve instead of waiting on someone else to deliver work.
- Ensure that teams are all using common version control and dependency repositories. If you are using a tool like Subversion or TFS for version control, consider integrating a distributed version control system such as Git or BitBucket.
- Make sure security priorities in your organization are getting the same amount of collaborative attention as everything else.

Training Recommendations

- To better leverage distributed version control: Git and GitHub Boot Camp, DevOps Enablement for Team Foundation Server, or BitBucket Repo Boot Camp
- To map and visualize value streams and waste in pipelines: Value Stream Mapping Workshop
- To better manage change and technical project work: JIRA for Agile Project Management

Section 2: Risk vs Security

You Scored Intermediate on Risk vs Security

Your teams likely understand that security is important and treat it as a priority, but could further improve security outcomes and protect against future risk by making further process improvements. Investments in additional technology enablement are probably needed, and the teams who are most responsible for security outcomes should hold high decision power in how those investments occur.

The key to rugged, secure products and policies is continuous design effort and collaboration between stakeholders early and often. Ensure ongoing development of code repositories for tests, resources, and services which have been designed and are maintained as pre-secured components for other technology teams.

Key Recommendations:

To speed up workflow and produce more robust, secure products: invest in security checks and tests as early in the development process as possible. Remember to design the development process itself as a team before kicking off a project, and make sure anyone with a stake in security is in attendance and has their voices heard.

If you do not already, consider increasing automation of testing along your development pipeline, and increasing the ability of engineers to self-serve infrastructure from a code base which is maintained and tested to secure standards.

Imagine and rehearse emergency scenarios before they happen. Build plans which are supported by decision frameworks and technology resources which have been prepared in advance.

Coaching recommendations:

Your teams could benefit from an on-site coach for a week or two after teaching one of the classes above. The coach helps ensure that new skills and tools are being applied in a way that is practical and valuable for the teams using them. Request More Information on Coaching Here.

Training Recommendations:

- For monitoring, log analysis, and prediction of potential security incidents: Splunk Boot Camp
- To teach teams across all of IT and product development how to nurture and maintain rugged, secure systems and services: DevSecOps Boot Camp
- To teach software development teams how to proactively build and pass security tests for their code before it ever leaves their desk: Test-Driven Development Workshop

Section 3: Systems and Tools

You Scored Intermediate on Systems and Tools

Your responses to this survey indicate that, like most technology organizations, you're doing some things well and some things not so well. One of the biggest challenges is probably how to prioritize investments and how to correctly predict which investments will produce the best returns. It is beyond the scope of this assessment to prescribe specific technology products or services. However, a few fundamental questions about your teams' core principles and processes can be useful to make good choices about why specific tools get chosen and how integration and usage roll out.

Key recommendations:

- Are you committed to processes and tools which both empower front-line technology employees while simultaneously creating transparent accountability? Today's cloud-driven capabilities and automation tools allow teams to be vastly more productive while also being more fairly evaluated. Who makes decisions in your organization about new tools and technology architecture? Is it the people who work most closely to technology every day? Designing processes which decentralize technology decisions without sacrificing compliance or security requirements is the key to faster action and greater accountability.
- The world is moving to service-oriented teams and products. Technology architecture and infrastructure should be designed so small cycle times and product increments can be managed by small teams who own their specific area of responsibility. Consider investing in technology architectures and service platforms which allow responsibilities to be arranged this way.
- We recommend taking a focused look at the "quality first" commitment in your organization's technology centers. Are systems, tools, platforms and environments designed for loosely coupled, limited-scope areas of responsibility? There are many areas this question can be asked: software engineering, testing, IT operations, project and program management practices, business analysis, feature backlogs, and product and business portfolios to you name a few. How much commitment is given to proactive practices which reduce risk and cycle time in these areas? Do your teams perform scenario modeling, infrastructure investment, continuous prioritization, and a lot of front-end testing? If they don't, they probably should!

Coaching recommendations:

Everyone's system is complex and probably requires a lot of nuanced understanding. A technical coach can be very helpful in addressing specific questions or decisions about new tools or specific initiatives. Our coaches have seen it all and we specialize in large, complex organizations. Coaches can also help develop your own culture of mentorship, helping identify and nurture high-talent professionals in your own organizations who can propagate their expertise to colleagues. Finally, our coaches are invaluable in helping make prioritization decisions about where to invest in products and personnel to support your organization's technology needs. Request More Information on Coaching Here.

Training recommendations:

- To teach teams how to use new tools and systems to improve productivity and work/life balance: DevOps Implementation Boot Camp
- To use powerful new tools for automating configuration, provisioning, test infrastructure, and production environments: Puppet, Chef, or Ansible configuration management Boot Camps
- To refactor monolithic, tightly-coupled architecture into loosely-coupled technology services which narrow the focus of accountability and responsibility: Microservices Engineering Boot Camp
- To begin using Kubernetes for orchestration, containerized IT, and machine learning/AI platforms: Introduction to Kubernetes

Section 4: Proactive vs Reactive

You Scored Intermediate on Proactive vs Reactive

Your responses to the survey indicate that you are doing well with a lot of your planning practices, but you could use assistance finding and visualizing the areas where there may be hidden wastes in how your teams deliver technology products and services. At an intermediate level, your priority should be in detecting these wastes and using process improvement and automation to address them. In a large organization, wastes are not always visible. There are tools commonly associated with DevOps and business agility which can help you find them.

Planning is critical in a DevOps practice, but not always in a way that seems intuitive or conventional. Plans which attempt to thoroughly estimate and predict times and costs do not set up teams for success. Your teams likely need planning which is ongoing and designed to accommodate unpredictable needs, adaptive decisions and commitments, and responsiveness to change.

Key recommendations:

- If you are not already, a top priority should be differentiating and documenting what works well versus what is not working well in your organization. An outside coach can provide a lot of assistance here very quickly.
- Test new practices for DevOps or Agile at scale using pilot teams and projects. Keeping the early adoption of new practices limited in scope and investment can help show quick wins and light up the path for larger-scale adoption and success.
- Evaluate how well data and analytics is being used in your organization to create enablement for predicting needs, analyzing economic decisions for commitments, and measuring time cycles and outcomes. Is every available data source being integrated and managed? Do you have an advanced analytics practice or dedicated business units for data science and/or analytics in the organization? Are they integrated into your software engineering teams? IT operations teams? Is data produced by these areas being ingested, curated and analyzed? Better analytics and data engineering can support improvements across every area of the technology organization.

Coaching recommendations:

The most immediate opportunity for a coach to help your teams become more proactive is by assisting with a structured assessment of your planning processes, conducted over two days by one of our experts. The cost for this time returns tremendous value by giving you an outside perspective on priorities and rapidly discovering what types of newer practices and processes might benefit your teams the most. Because you likely have a broad mix of teams and practices we can help you identify what is working well and what is not working so well. During a two-day assessment, our expert sits with many representatives from your teams and asks you questions which can lead to a valuable discovery about where there are opportunities to improve. Request More Information on Coaching Here.

Training recommendations:

- Foster an environment in which high-potential talent is identified and developed: [Agile Coaching Workshop](#)
- Bring teams together so we can help them visualize dependencies, waiting, and cycle times: [Value Stream Mapping Workshop](#)
- Increase your teams' abilities to leverage data and predictive information: [Data Analysis Boot Camp](#)
- Build applications and algorithms for integrating machine prediction into your solutions: [Machine Learning and Predictive Analytics Foundation](#)
- Adopt the Scaled Agile Framework for organizational agility in a large enterprise: [SAFe for Teams](#)

Section 5: Empowerment

You Scored Intermediate on Empowerment

Your responses indicate that teams enjoy significant empowerment in your organization. Ownership of outcomes and setting of goals may already be done with collaboration between employees. However, chances are high that more could be done to align leadership priorities to daily work and to place decision power in the hands of employees.

Your teams probably still operate with some siloed behaviors which impede fast teamwork, shared incentives, and individual empowerment. Cycle times may not be as fast as they could be with more decentralized decision frameworks. Fortunately, a few key questions and recommendations can reveal immediate opportunities for improvement.

Key recommendations:

- Evaluate how much cross-functional capability your teams exercise on products or projects. Being a cross-functional team doesn't mean "full-stack developers" do everything and there's no division of labor. Cross-functional capability means a product or project is being serviced by a team who has all the skills they need to deal with it. Poll teams to identify where certain skill sets are overworked and others are underutilized. These imbalances present opportunities to upskill existing team members or add new members to the team.
- Assess how IT work is structured in your organization: for instance – is it by products, projects, business unit, or specific initiative? How functional departments interact with that orientation can reveal a lot about how empowered front-line employees are to impact their priorities.
- Focus on finding handoffs and look for places where those handoffs produce wait time. Long wait times or queues are certain indicators of disempowering situations. When you find these situations, talk to the teams on either side of the handoff to investigate root causes for the wait time. When you find and address these root causes, progress will directly equate to greater empowerment for teams on either side of the handoff.

Coaching recommendations:

The best use of a coach's time when seeking to increase empowerment for technologists and engineers is to engage them for interviews of front-line individual contributors. The results of these interviews will make it obvious where sentiment lies in regard to empowerment, as well as the reasons why that sentiment falls the way it does. Request More Information on Coaching Here.

Training recommendations:

- To teach teams how to tie concepts of individual responsibility and empowerment to actual delivery-oriented technical practices and tools: Implementing CI/CD Pipelines
- To encourage and empower product champions in the agile practice: Agile for Product Owners
- To teach development teams to build quality in and own software engineering outcomes by following a "test-first" development approach: Test-Driven Development Workshop (offered in Java or C# flavors)

Section 6: Planning

You Scored Intermediate on Planning

Your responses indicate that some of your planning activities align well with DevOps practices, but your teams could probably be more agile in the way they approach planning.

If your management team doesn't encourage the planning techniques promoted by the Agile/DevOps movements, some practices may seem counterintuitive. For executive or management teams who have never done a lot of work in agile engineering environments, they may not understand that software and IT service work has the unique ability for sudden changes in scope or requirements to present new sources of value. If your leaders and project managers use planning to attempt to reduce variability in their understanding of costs, timeframes, and scope and create predictable outcomes before work starts, then they are guilty of this error. At the same time, there must be processes in place to keep teams focused on what they are trying to achieve. And of course, emergencies and unplanned work will always fall to technology staff for remediation. So striking a balance between a proactive stance and ongoing flexibility to deal with unforeseen requests is the planning challenge your DevOps practice should improve.

Key recommendations:

- Evaluate your projects and work commitments to see how long planning takes. Are planning times consistent or inconsistent? Consistency may actually be an indicator of over-planning. Are plans addressing short term time cycles or long-term time cycles? What defines a time cycle? How frequently does planning occur? In general answers to all of these questions should be trained towards faster, more frequent planning activities, and less towards long, detailed, prescriptive planning.
- Poll your IT operations teams and technical administrators to find out how often they are involved in IT planning for projects or products which ultimately land on their desk. Have they been given a chance to contribute input before these projects start? This is not just about making people feel good. There is specific business value available from including downstream contributors and administrators in front-end planning since they are often the ones who are most familiar with unplanned, hard-to-predict contingencies which may (will) come up later – but were not accounted for at the beginning. This may seem perfectly obvious, but many organizations don't operate this way.
- Ask teams if standups and retrospectives are effective. Are they valuable for understanding how to plan? If the teams who are closest to the work do not have positive things to say about standups and retrospectives, it's a sure sign that planning does not align with outcomes…a dangerous state of affairs!

Training recommendations:

- To learn how to use large-scale planning practices to maintain agility, speed and efficient prioritization: Agile Portfolio and Program Management
- Bring teams together so we can help them visualize dependencies, waiting, and cycle times: Value Stream Mapping Workshop
- To better understand and plan for economically-driven product life cycles: Lean Product

[Management and Development](#)

- To introduce and adopt fundamental Lean principles for more agile decision making in technology departments: [Lean IT Management](#)

Section 7: Responsibility

You Scored Low on Responsibility

Your responses did not earn a high score in the "responsibility" category. "Responsibility" is a broad term and we want to be clear about it what it means in the context of this assessment. We promote the idea that individual responsibility goes hand in hand with intrinsic motivation. These, combined with empowerment practices and how incentives are arranged, paint a picture of the value substrate in your organization. The key goal in attempting to assess how responsibility plays out in your organization is to understand how intrinsic motivation and creativity of the people closest to the work translate to downstream value outcomes in the organization. A low response in this section could be an indication that technology employees are not engaged and/or your culture could use some help.

The questions we have asked and our recommendations below are designed to build on the idea that harnessing intrinsic motivation is a critical success factor for high performing teams. The "responsibility" gauge in this assessment goes hand-in-hand with the feedback we provided earlier in this report on "empowerment." Based on your responses, changes in the way responsibility is assigned or understood on your technology teams may need to be the top priority. Is engagement low? If so, why?

Key recommendations:

- Survey your technology employees. Ask them questions to elicit their point of view about how work gets done. Anonymous surveys may be best. Use feedback to paint a picture of possible dysfunction on your teams. Look for common themes and recurring opinions. This feedback may not tell the whole story, but it will certainly help. Surveys like this must be administered correctly, but when done so their feedback can frame a great starting point for improvement efforts.
- Conduct value stream mapping workshops to visualize how responsibility changes hands as work products make their way through their life cycle. Look for project or product lifecycles in which there are many handoffs. These are likely to be problem areas where there is no concentrated sense of ownership preserved as the work progresses.
- Evaluate how funding is committed for the typical product, project or initiative. When does the funding stop? Is there money available for the support of products or features after they are delivered? Funding patterns usually tell a story. If team-level staff and individual contributors do not know that story and how it relates to their work, this signals a communication breakdown in your organization. At some point finance is the ultimate scorekeeper for an organization – use their criteria to inform value definitions for the team. The stories told to staff about why their work matters should align to the story told by how dollars are spent. If stories about why people are asked to work on things don't make sense to someone in the finance area of the organization, it's an indication that something needs to change.

Coaching recommendations:

The most immediate opportunity for a coach to assist you with how responsibilities and incentives are arranged is to arrange for the administration of the employee surveys mentioned in the first

recommendation. Our coaches have helped many global organizations use surveys like these to chart improvement actions. Once the surveys are completed and feedback has been reviewed, the coach can visit your organization for one or two days to help you interpret survey results and decide next steps. Request More Information on Coaching Here.

Training recommendations:

- Commit to next-generation technology practices and value-driven engineering: DevOps Foundation Certification
- Commit to digital transformation by introducing and adopting Agile practices: Agile Boot Camp
- Teach development and testing teams to own their work using distributed version control combined with automation and DevOps processes to deliver work in small, frequent, low-risk batches: Implementing CI/CD Pipelines
- Bring teams together so we can help them visualize dependencies, waiting, and cycle times: Value Stream Mapping Workshop

Section 8: WiP

You Scored Intermediate on WiP

Your responses indicate that your organization is fairly typical when it comes to managing open projects, feature requests, development work, and IT initiatives. Your organization is productive overall and at times highly efficient, while sometimes experiencing troubled projects that march on after they no longer align with needs. While you have some highly productive and successful teams in your IT organization, leaders may still view most of IT as a cost center. They may also wonder why IT can't operate faster or more efficiently.

IT teams may not have much visibility into where commitments for their projects originate or who makes initial funding decisions to green-light projects and products. Initiatives likely spend a lot of time in a requirements-gathering or feasibility phase before being committed to and passed to IT teams for work. This lack of visibility and a mixture of commitments likely causes technology teams to be worked at full capacity all the time. Technology teams may feel over-committed or like they can never get on top of their work. While your teams have significant capability, they are also likely to suffer from turnover and a high degree of stress – two symptoms of overloaded teams which will inevitably prevent potential innovation and improvements.

Key recommendations:

- If your IT departments operate in functional siloes, create a pilot project or pilot teams to test truly cross-functional capability. Assign this team to a business outcome, not an IT project. Make sure to include an executive sponsor, a business analyst, IT development and operations staff, someone who owns security, and perhaps testing. Use this team as fact-finders and explorers to see how much open work exists requiring the attention of each functional role. When a team like this has to navigate among the typical siloes, it can get a good sense of which functional areas are the busiest.
- Evaluate how much work in IT is planned, and how much work is unplanned. The ratio can be very informative. If you are using a tool like Kanban to constrain how much open work passes through a team's hands, consider expanding the Kanban tool with more advanced features. Examples might be urgency profiles or categories of service. You may even consider arranging a program for outside teams to "pay" for faster or more intensive categories of service.
- Identify who on your IT teams is the "high-value bottleneck" who seems to understand how to do more than most other people. This person may be constantly getting called from all directions to help with pet projects. They may also have to engage in regular heroics or unplanned sprints of work in order to resolve emergencies or deliver projects because only they have all the knowledge to get everything done. To increase the flow of work through their departments, it is essential that these "high-value bottlenecks" be coached and enabled to transfer their skills and knowledge out to others in the organization. This may be easier said than done since they are usually so busy.

Coaching recommendations:

Our coaches can assist your teams in implementing the recommendations above. Your teams may also benefit from having a coach visit your organization to perform more in-depth assessments

and provide more detailed feedback and recommendations. Finally, an ASPE coach can be embedded with your technical teams for a period of days or weeks to help them adopt or progress new practices which open up capacity and prevent so much open Work in Process from overwhelming the capacity of the team. Request More Information on Coaching Here.

Training recommendations:

- Teach teams to use the Kanban system for managing WiP: Kanban Workshop
- Use lean techniques for testing and scaling new products: Lean Product Management & Development
- Apply lean workflow principles to technology work: Lean IT Management

Section 9: Cultural Health

You Scored Intermediate on Cultural Health

In any workplace – especially larger organizations – culture is a management topic that gets a lot of attention. Culture means different things to different people, so we want to be specific about what we mean. We will provide feedback and recommendations on these aspects of workplace culture:

- Staff retention
- Innovation Impact
- Automation Success

Your Results:

Staff retention – like many organizations, it appears that you have a mix of newly employed staff and veteran technology staff. Certain teams and departments probably have a greater share of high performers, with others dominated by low performers. Your framework for managing technology portfolios needs work to improve this mix. It would be a good idea to conduct some analysis of why this mix exists, what is working well, and what is not working so well.

Innovation impacts – Like most organizations, you're probably seeing some success with agile practices or a specific technology framework, but results are mixed and there is uncertainty as to how to repeat successful results. A possible blueprint for improving your innovation culture has been presented here in these results and recommendations. Hopefully, it is clear how you can take action on these recommendations, and realize more consistent and frequent innovation outcomes.

Success with automation - You probably don't have consistent automation usage throughout your teams, but neither do you have a flexible enough framework to support a loose, heterogeneous tool environment. New tools have probably been adopted organically and those that have led to real improvement are probably well known to your teams. There's a good chance that overall business architecture and IT architecture are the biggest barriers to more dramatic success with automation in your organization.

Links and Resources

About Us
As the nation's leading IT professional development company, we specialize in building customized, enterprise solutions. Through our wide range of Subject Matter Experts, strategic partnerships, and our ACT model, your teams are given the tools and knowledge necessary to make your organization more efficient, more effective, and more successful.

Learn more about ASPE.

ACT Model
The ACT™ Model stands for Assess, Coach, and Train. Each step of the approach is critical to helping you get the most out of your transformation. Our focus during each step is on your business outcomes, and we tailor programs around what success means to you and help you achieve your goals.

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Onsite Team Training
Private onsite training brings our experts to you — on your schedule, at your location. It also allows us to plan your training in advance and tailor classes directly to your needs. With learning targeted to your unique team environment, we're able to resolve your specific issues and meet your specific needs. Not only does the entire team benefit immediately, but the cost per student is significantly less than attending separate public courses.

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Corporate Coaching
Our expert, corporate coaches truly understand the goal of business agility. With significant industry experience and certifications, our coaching services help you address your organization's specific needs and assist with growing pain.

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