CAPCO

DELIVERING DEVOPS AT SCALE IN FINANCIAL SERVICES

MANY ORGANISATIONS WANT TO IMPLEMENT DEVOPS TO IMPROVE OVERALL ORGANISATION PERFORMANCE

BUT WHY IS IT SO HARD TO ACHIEVE AT SCALE WITHIN FINANCIAL SERVICES?

DevOps is a superset of agile development and SRE operation practices; a mindset that encourages the creation of multi-disciplinary teams to build, run and support products.

DevOps seeks to improve the alignment between all stakeholders throughout the software delivery lifecycle, to reduce time-to-market, improve service quality and ultimately improve business outcomes.

To this end DevOps draws upon three key principles, known as the 'Three Ways', which can be summarised as follows.

- The first way focuses on the E2E process looking at the entire system and flow of delivery through a set of principles to optimize the flow of change in a safe manner from inception to production. This is based on making the work visible to everyone in the value chain, limiting work in progress, reducing size of change, minimizing hand-offs between teams and identifying and removing waste and constraints.

- The second way is about creating amplified feedback loops and draws on principles including fail fast, shift to the left (to push quality closer to source), and shift right (to improve resiliency). Feedback as a part of the flow of delivery is critical, with guardrails instituted to ensure that a product complies with the required quality and security controls. If those controls are not met, then teams should fail fast to provide the related feedback so improvement actions can take place.

- The third way is about creating a culture that fosters and encourages continuous experimentation and continuous improvement, predicated on learning from failure, injecting resilience patterns into daily work, repetition as the prerequisite for mastery, and sharing improvements across the organization.

In a greenfield context, DevOps is straightforward – but in financial services, where legacy technology and processes typically loom large, that is rarely the case. Breaking it down across people, process and technology, there are a range of pain points that we consistently encounter within financial institutions.

People:
- Most teams are interdependent and do not follow modern agile ways of working
- There is a lack of autonomy and a huge focus on individual success rather than team success
- There is a high resistance to change – especially when trying to move the needle
- There is often resistance to DevOps at the executive level
- The concept of a 'blameless culture', central to Agile's 'prototype, fail fast' creed, may exist on paper but rarely in practice.

Process:
- Feedback loops are not in place
- Key metrics including cycle time, build frequency, MTTR, availability, change failure are not monitored in real-time
- Release management is usually a tedious and time-consuming manual process with no version control
- Quality, security and compliance controls are not in place, and there is a lack of traceability
- There is lack of alignment between Business and IT teams.

Technology:
- There is a lack of automated testing, branching strategies and coding practices to make code testable as well as appropriate development environments
- Dynamic (cloud or non-cloud) infrastructure is lacking, which significantly constrains CI/CD and 'path to production'
- Environment setups are not designed to auto-scale.

Fixing all that sounds like a lot of work and an intimidating challenge to tackle all at once. However, our experience has shown that by implementing a four-stage programme you can effectively implement and scale DevOps. If well executed, then any organisation should be able to connect the flow of change from ideation through to a release in production successfully at scale:

1. Assess current state and define DevOps strategy

Understand your current level of DevOps maturity – if you know where you stand, it will be easier to create an achievable transition plan across people, processes and technology to attain the desired level of maturity. You can do this through a DevOps maturity assessment, which will result in a tailored implementation plan, a business case for why you want to transform, an established vision and agreement on transformation outcomes.

2. Rapid Mobilisation

The next step would be the swift mobilisation of a transformation team with a clear backlog of activities to help you build an MVP system of delivery with DevOps core services and patterns. Building the right foundations is essential for successful scaling. The capacity of both people and organisations to learn new practices and unlearn old habits is finite – having the right change ingredients when it comes to talent, culture, technology and ways of working will collectively provide the foundational pillars for successfully implementing your DevOps strategy at scale.

3. Build, Test and Evolve

Once the DevOps platform is providing the right system of delivery, you can start onboarding teams and products. Every change journey starts with a phase of enthusiasm and belief, and it is important to build on that. Establish a small set of cross-functional delivery teams and empower them with solving an impactful problem statement. The result will be proof that this new way of working is not only possible within the current organizational setting, but is also a tremendous learning and career defining experience for all involved.

Establishing a culture of trust and collaboration within the organisation through the creation of multidisciplinary autonomous teams is key, as it promotes intra-team engagement among the different disciplines involved in the development, security, quality and management of products. Effective feedback loops should also be in place, underpinned with the right level of coaching and training across leadership, management and delivery pods. Above all, however, there must be buy-in from the wider business to the concept of embracing change as a key pillar of future success.

4. Scale Delivery

Once you have proven your system of delivery works, it is time to scale. Scale the number of product onboardings via an agreed approach and target operating model. Increase the numbers of teams transitioning to actively using DevOps and agile best practices across their E2E development life cycle, and you will see noticeable improvements in product quality and availability, leading to better engagement and trust forming between Business & IT stakeholders.

IT teams will also start to see a decrease in their BAU budget spent, due to increased automation in product testing and monitoring practices both pre and post go-live. Finally, don't forget to foster a culture of continuous improvement, keep evolving your system of delivery, look for new ways of removing cognitive load when it comes to automation, and keep innovation at the front of all your decisions to ensure your organization keeps up with the latest technological advancements.

HOW CAPCO CAN HELP

By leveraging our deep expertise in DevOps – including DevOps engineering, test automation, cloud architecture, security, data automation and agile delivery – Capco can help your organization successfully implement DevOps and reap all the advantages including:

- Higher quality digital products delivered to market at a much faster rate
- Increased responsiveness to market changes reducing system downtime and lower overall level of risk
- Greater transparency to both product teams and clients
- A stable platform for scalability and flexibility of products

- A core focus on delivering business value and improved productivity of team's
- Best in class developer experience for engineers
- A healthy organizational culture with an environment that supports innovation and professional development of individuals

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ABOUT CAPCO

Capco, a Wipro company, is a global technology and management consultancy specializing in driving digital transformation in the financial services industry. With a growing client portfolio comprising of over 100 global organizations, Capco operates at the intersection of business and technology by combining innovative thinking with unrivalled industry knowledge to deliver end-to-end data-driven solutions and fast-track digital initiatives for banking and payments, capital markets, wealth and asset management, insurance, and the energy sector. Capco's cutting-edge ingenuity is brought to life through its Innovation Labs and award-winning Be Yourself At Work culture and diverse talent.

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