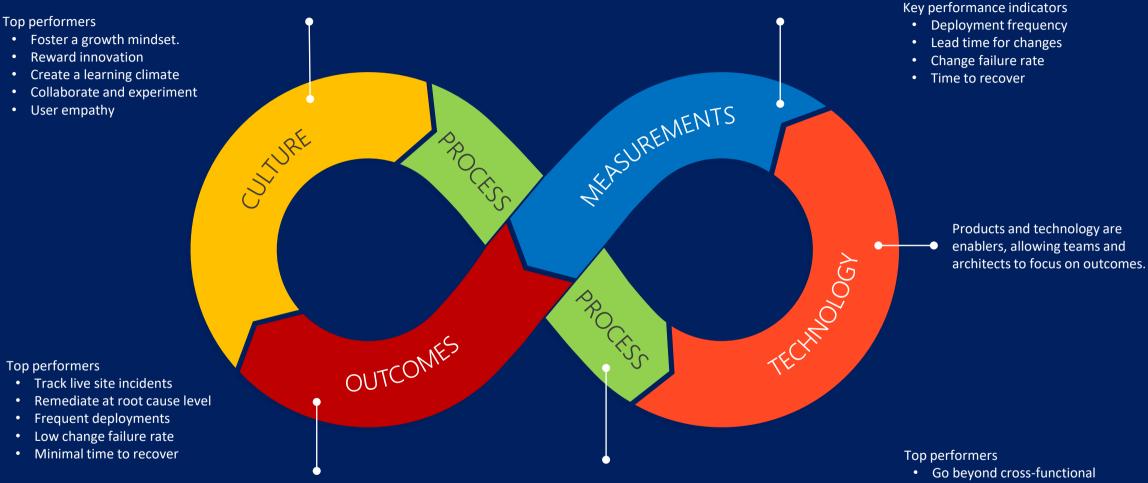# DevOps Practices

Monitoring of running applications in production environments enables a DevOps team to detect issues as they occur, to mitigate the impact, and to understand the application health. Further monitoring of customer usage helps organizations form hypotheses and quickly validate or disprove experiments.

Measurement is key to being able to assess performance and target improvement. Measurement allows you to see the state of the app in production, the flow from idea to code to delivery, and the actual usage of the features you produce.

Top performers
- Foster a growth mindset.
- Reward innovation
- Create a learning climate
- Collaborate and experiment
- User empathy

Key performance indicators
- Deployment frequency
- Lead time for changes
- Change failure rate
- Time to recover

Products and technology are enablers, allowing teams and architects to focus on outcomes.

Top performers
- Track live site incidents
- Remediate at root cause level
- Frequent deployments
- Low change failure rate
- Minimal time to recover

The point of DevOps is to achieve better outcomes. More frequent deployments allow you introduce new value more quickly. Higher deployment velocity gives you faster feedback on every change. Faster time to mitigate failures gives your users higher availability. More successful changes eliminate rework and let you go faster. All of these lead to more satisfied customers and more motivated employees.

The goal for modern application delivery is responsiveness, which relies on flexible scheduling, limiting work in process in favor of iterative experiments, and close team collaboration to facilitate real-time communication and eliminate wasteful handoffs.

Top performers
- Go beyond cross-functional
- Create multi-disciplinary teams
- Allow autonomous teams to go fast
- Align teams with enterprise objectives
- Common product backlog
- Minimize work in progress
- Nimble and rigorous quality practices

CULTURE · PROCESS · MEASUREMENTS · TECHNOLOGY · PROCESS · OUTCOMES