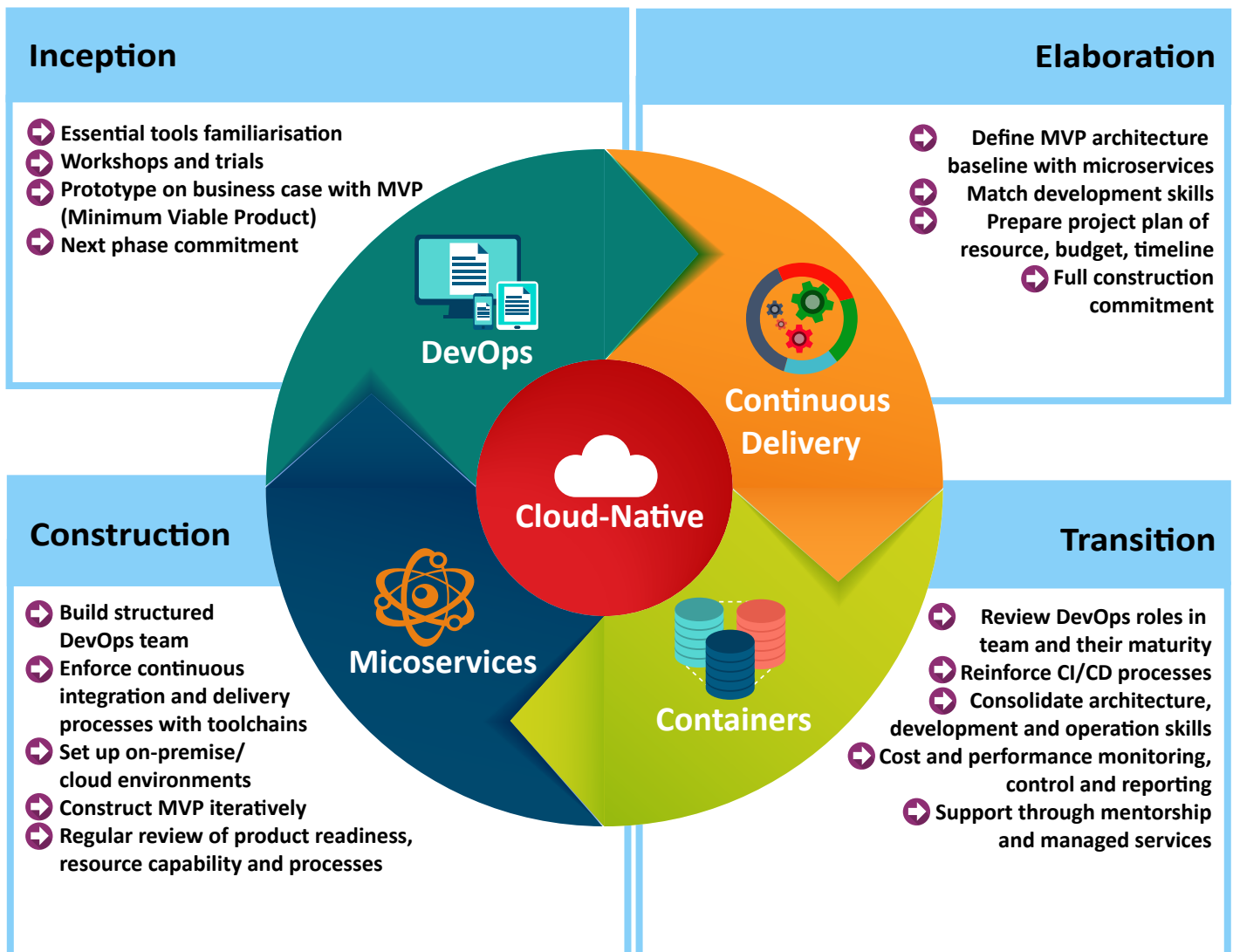




Challenges

Application	Business applications and associated development processes are slow to respond to competition
Customer	Needs to build customer community and brand loyalty through a variety of channels
Staff	Overstretched IT team to support new products development
Innovation	Innovation fails to keep up with competition and to create customer value quickly

DevOps Inception





Benefits of DevOps

Speed	Innovate for customers faster, adapt to changing markets better, grow more efficient Microservices and continuous delivery enable ownership of services and release of update
Rapid Delivery	Increase frequency and pace of releases, innovate and improve product faster Continuous integration and continuous delivery automate software release process
Reliability	Ensure quality of application updates and infrastructure changes Continuous integration and continuous delivery ensure change is functional and safe Monitoring and logging help you stay informed of performance in real-time
Scale	Operate and manage your infrastructure and development processes at scale Automation and consistency manage complex systems efficiently with reduced risk
Improved Collaboration	Developers and operation teams collaborate closely, share responsibilities, combine workflows Reduce inefficiencies and save time
Security	Retain control and preserve compliance without sacrificing security Use automated compliance policies, fine-grained controls, configuration management techniques

DevOps Best Practices

<h3>Continuous Integration & Continuous Delivery</h3> <p>A software development practice that developers regularly merge code changes into central repository. Code changes are automatically built, tested and prepared for the release to production</p> <ul style="list-style-type: none"> ➔ Find and address bugs quicker ➔ Improve software quality ➔ Reduce time to validate and release new software updates 	<h3>Containers Architecture</h3> <p>A logical packaging mechanism that allows applications to be deployed easily and consistently, no matter of whether the environment is private/ public/ hybrid/ multi-cloud</p> <ul style="list-style-type: none"> ➔ Provide consistent environment ➔ Create an isolated environment from other applications ➔ Multiple containers can be deployed as one or more clusters 	<h3>Microservices Architecture</h3> <p>A design approach with a single application as set of small services. Each service runs in its own process and communicates with other services through well-defined HTTP-based application programming interface (API)</p> <ul style="list-style-type: none"> ➔ Can be written by different frameworks or program languages ➔ Can be deployed independently, as a single/ group of service(s)
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