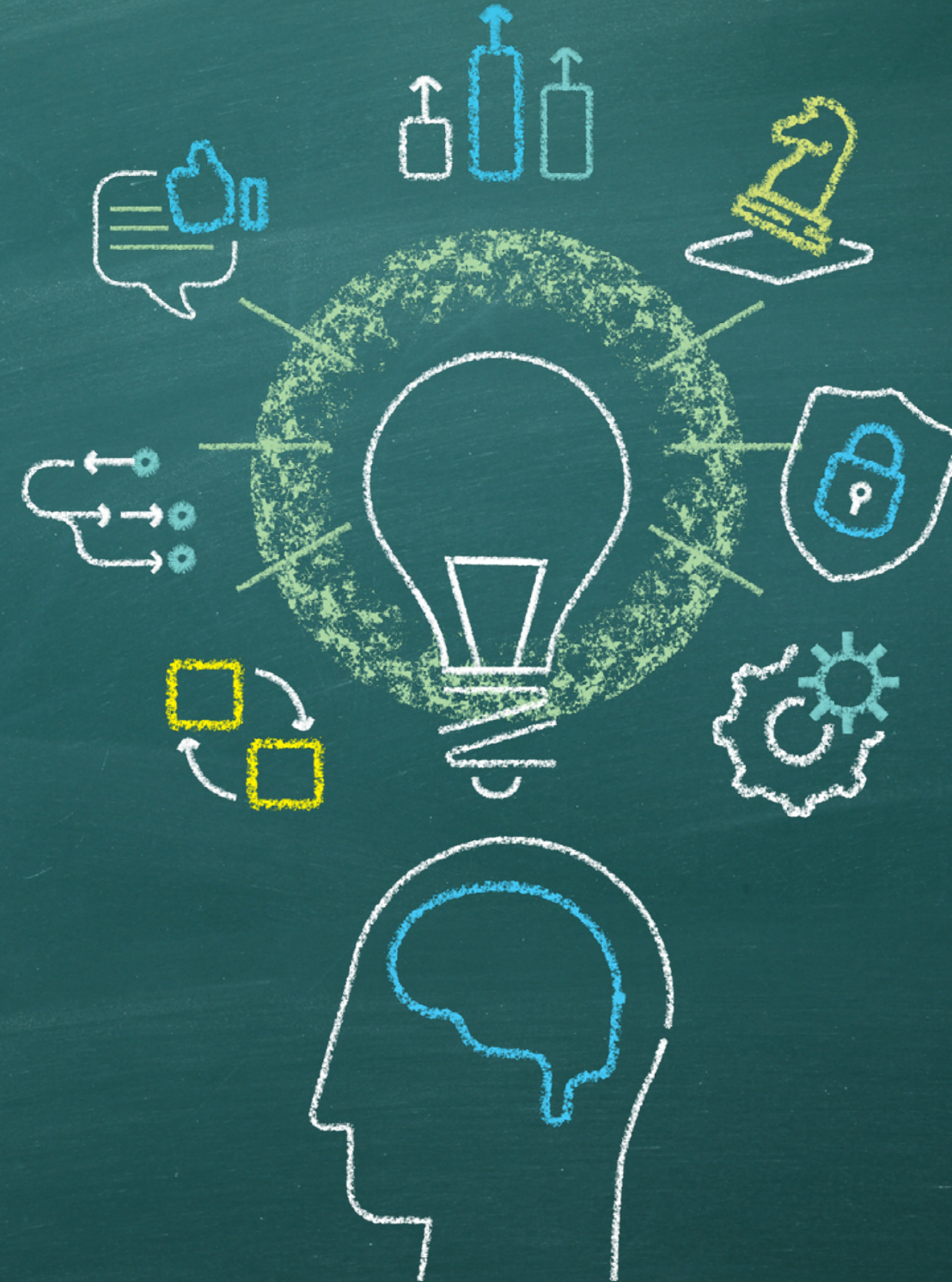




# Cloud Migration Cheat Sheet: Building a DevOps mindset

---

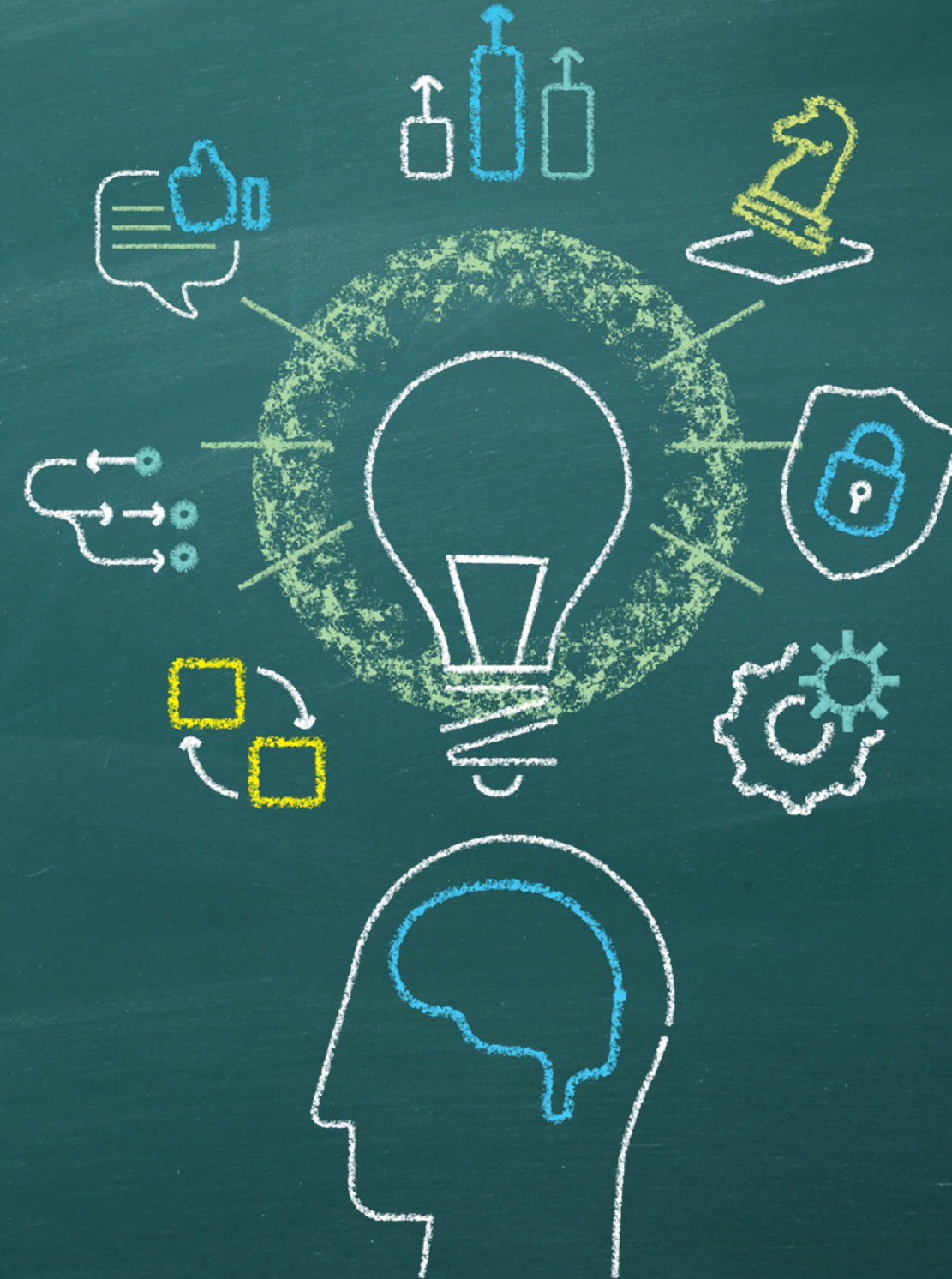
Your quick and simple guide to harnessing the power of DevOps to deliver a robust, successful and sustainable cloud migration for your business.





# Table of Contents

Cloud Migration: 6 Challenges You Need to Overcome	1
The DevOps Mindset: 3 Principles to Understand and Embrace	2
The Cloud Migration Evolution: Picking The Right Approach	4





# 6 Cloud Migration Challenges

Migrating to the cloud offers greater agility, better security and lower costs. But it can be a complex process with lots of challenges. Based on our extensive experience partnering with clients and helping them get maximum value from the cloud, **here are the top 6:**



## 1) LACK OF EXPERTISE

Internally and externally—finding, hiring and training the people you need is difficult, time consuming and expensive.



## 2) SECURITY

Security should be in-built from the ground up, but you might not have the necessary skills and processes in place to do this.



## 3) AUTOMATION

In order to leverage the benefits of the cloud, you need to automate extensively which can be challenging.



## 4) COST

If cloud infrastructure is not built correctly it might actually cost more as the business grows.



## 5) STRATEGY

It is essential to have a long-term plan and buy-in from key stakeholders across the whole business.



## 6) CONSTANT CHANGE

Your cloud infrastructure needs to be updated or changed as your business evolves.



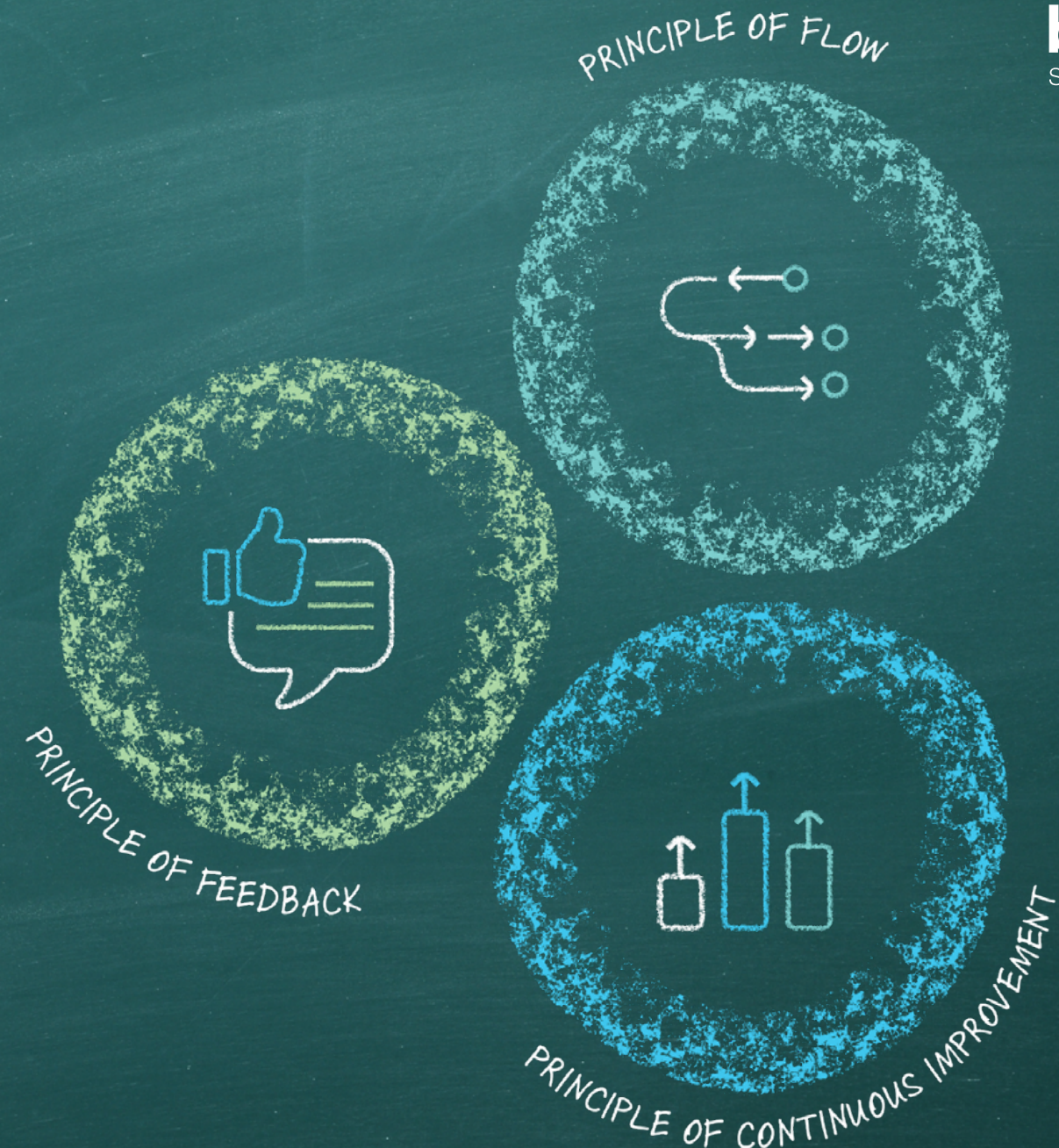
# The DevOps Mindset

DevOps is about breaking down the barriers between your development and operations teams. Rather than a siloed, waterfall approach to product development, your teams shift to a collaborative, iterative model supported by dedicated processes and tools.

A DevOps approach can help your business innovate and deploy software faster, slash your development lead times, ensure reliability, enable scalability and reduce your security issues. Google Cloud, Microsoft Azure and Amazon Web Services are all strong advocates for DevOps.

But what would DevOps look like in your business?

A great starting point for understanding DevOps is [The DevOps Handbook](#) by Patrick Debois, Jez Humble, Gene Kim and John Willis. In this widely-cited book, the authors identified 3 principles of DevOps:





When you look at the 3 principles of DevOps you can see how processes and mindset have to come together. DevOps is about changing how you work and how your teams work together. But it is also about changing how your organization thinks about work.



### #1. The Principle of Flow

Work should move quickly from left to right. That is from idea to production. The Principle of Flow requires organizations to drive down work in progress. Instead smaller pieces of work move down the pipeline more often creating an iterative flow with more regular feedback.



### #2. The Principle of Feedback

Because work is moving left to right in smaller chunks, you should be able to increase the number and frequency of feedback loops from right to left. This feedback process helps to embed a culture of continuous improvement.



### #3. The Principle of Continuous Improvement

The third principle is about encouraging constant experimentation and learning. With teams working more closely together, on smaller pieces of work and with regular feedback loops, there should be a mindset shift that embraces controlled risk taking.



### THE DEVOPS INFINITY LOOP

DESCRIBES THE CONTINUOUS DEVELOPMENT, INTEGRATION AND RELEASE PROCESS. THERE IS NO END POINT AS PRODUCT ITERATION IS CONTINUOUS.



# The Cloud Migration Evolution

Our Cloud Migration Evolution provides a comparison between the different approaches to cloud migration and where DevOps can have the biggest positive impact.



## LIFT AND SHIFT

**Lift and Shift** is in some respects the simplest approach. It means taking your on-site infrastructure and replicating it in the cloud. While the upfront effort is lower, this strategy does not fully leverage the benefits of the cloud particularly in regards to scalability, cost and replicating existing issues.

## RE-ARCHITECT OR SERVERLESS




**Re-architect and Serverless** both involve changing your infrastructure rather than just moving it. Adopting cloud native features or starting from scratch in a cloud environment means more work at the start. But you also benefit from the longer-term cost savings, scalability and security that make the cloud so appealing.

## RE-ARCHITECT OR SERVERLESS W/ DEVOPS

**A DevOps approach** will have limited impact on Lift and Shift. But it can be transformative for Re-architect and Serverless. **With DevOps** you are not just changing the infrastructure, you are changing your development process and your company culture, embracing the principles of flow, feedback and continuous improvement. Implementing a DevOps approach increases your productivity, reduces maintenance costs, improves the business' ability to make ongoing changes and increases business confidence.



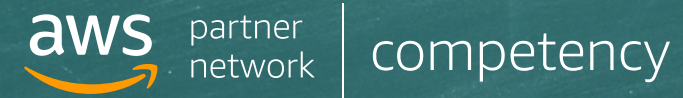
**Individual requirements vary.** You can compare different aspects of each strategy in this table to help find the right approach for your business.

	LIFT AND SHIFT	RE-ARCHITECT	SERVERLESS
INFRASTRUCTURE COSTS	CAPITAL: HIGH ONGOING: HIGH	CAPITAL: MEDIUM ONGOING: MEDIUM	CAPITAL: LOW ONGOING: LOW
LABOR COSTS (TIME/SKILL)	CAPITAL: LOW ONGOING: HIGH	CAPITAL: MEDIUM ONGOING: MEDIUM	CAPITAL: MEDIUM ONGOING: LOW
SKILLS REQUIRED	LOW	MEDIUM	HIGH
IMPACT ON BUSINESS CONTINUITY	LOW	MEDIUM	HIGH
BUSINESS CONFIDENCE	LOW	AUTOMATED ENVIRONMENTS: HIGH MANUAL ENVIRONMENTS: LOW	HIGH
PROS AND CONS	<b>PRO:</b> Existing staff skills are still relevant if you are managing virtual machines <b>CON:</b> Cost advantage is minimal to none and the same problems can occur as you have now	<b>PRO:</b> Improves scalability and maintainability of application components by leveraging the benefits of the cloud	<b>PRO:</b> Builds a highly scalable environment <b>CON:</b> Understanding how to manage costs is essential
WHEN TO USE	Legacy or off-the-shelf products. When you are simply moving on-prem to cloud "data centers."	A modern, well established product with active development	A new product from the ground up
IMPACT OF DEVOPS	LOW 	HIGH: RECOMMENDED 	HIGH: ESSENTIAL 





The Cloud Services People



**base2Services** is a global cloud delivery and operations company that specializes in DevOps and cloud-native computing. We enable organizations to accelerate innovation through automated, highly secure, repeatable and scalable cloud-based solutions.

Find out more about how we partner with clients to help them migrate to the cloud, implement DevOps and manage and optimize their cloud deployments.

CONNECT WITH US TODAY

**base2services.com** | [info@base2services.com](mailto:info@base2services.com)