QUICK GUIDE

The **5 steps** to your **DevOps success**

Tips and tricks for rapidly achieving long-lasting DevOps success

sandhata™

Contents

1. Introduction to the DevOps journey
2. **Step one:** Start with a solid strategy
3. **Step two:** Automate the key software delivery activities
4. **Step three:** Invest in Continuous Delivery
5. **Step four:** Work towards Continuous Deployment
6. **Step five:** Aim for Continuous Operations
7. Summary
8. About Sandhata

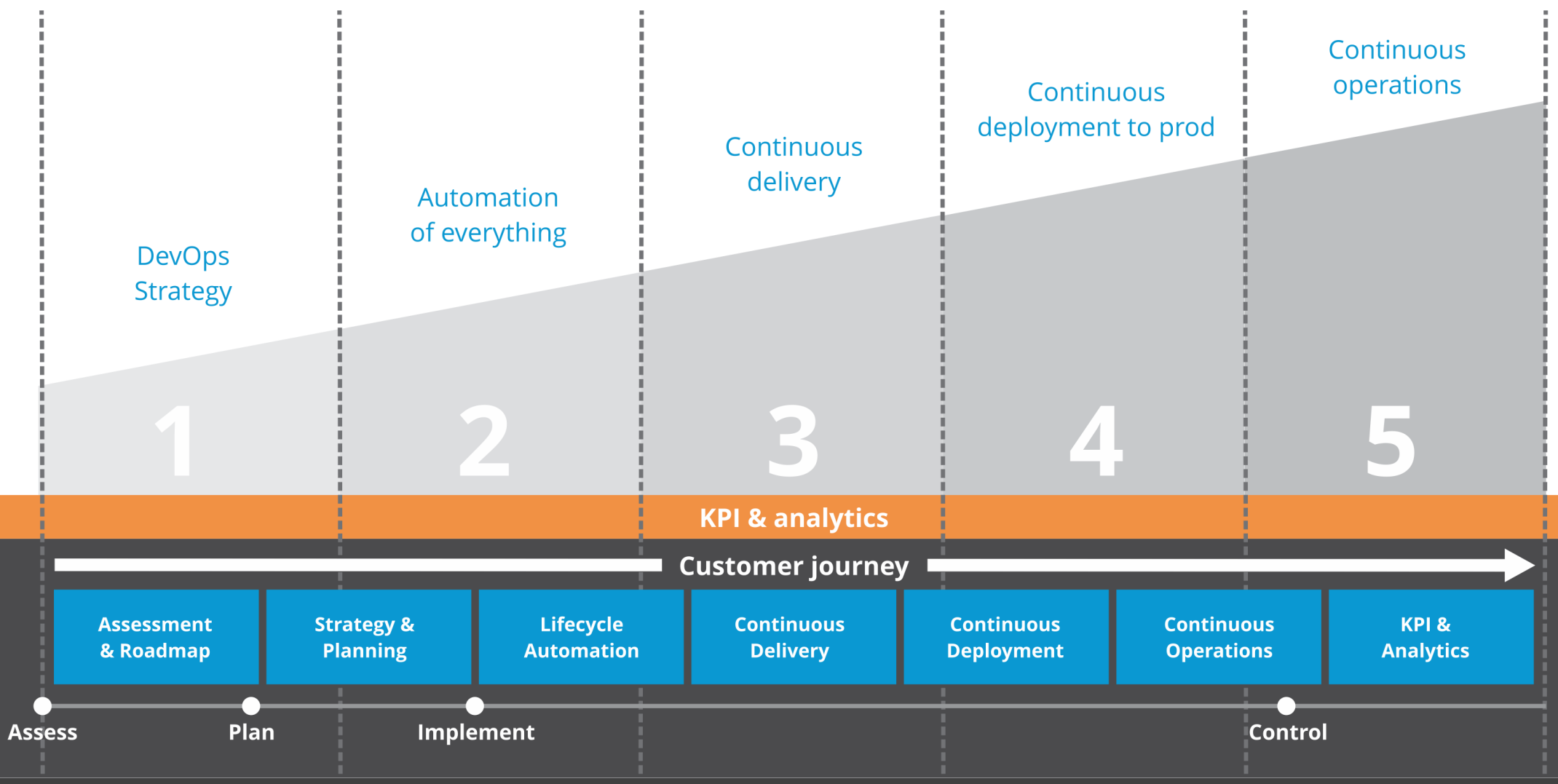
sandhata™

QUICK GUIDE

Is this your DevOps Journey?

Any DevOps adoption is a journey – as unique as the business adopting it. This quick guide describes the 5 steps which form the basis of the most common journeys to DevOps success. Understanding of the 5 steps allow enterprises to understand where they are in their journey, and how to progress along that path to achieve their DevOps goals.

1. It is critical that you start your DevOps journey with a solid **DevOps strategy**.
2. Most organisations aspire to **automate all their key SDLC activities** and find themselves at varying stages of automation maturity.
3. Once enough automation is in place, the natural direction for businesses is to invest in **Continuous Delivery**.
4. Moving from Continuous Delivery to **production release automation** is a big step.
5. **Continuous Operations** is purely aspirational for many organisations at the moment.



sandhata™

QUICK GUIDE

Step One: Start your journey with a solid DevOps strategy

It is critical that you start your DevOps journey with a solid DevOps strategy. This needs to be backed by the latest engineering and technology standards, release policies, operating models, as well as compliance and governance models.

How to Achieve a Strong DevOps Strategy

People

Organisations can find themselves stuck with functional teams in silos, unable to change the culture to embrace shared goals and realign teams to be more collaborative. One option is to optimise teams for speed rather than cost-reduction, to hep focus on fast deployments.

Process

Large organisations or those operating in tightly-regulated industries can have heavyweight governance models which don't fit with agile and lean approaches. The DevOps strategy needs to improve time to market and productivity - without compromising security and compliance.

Technology

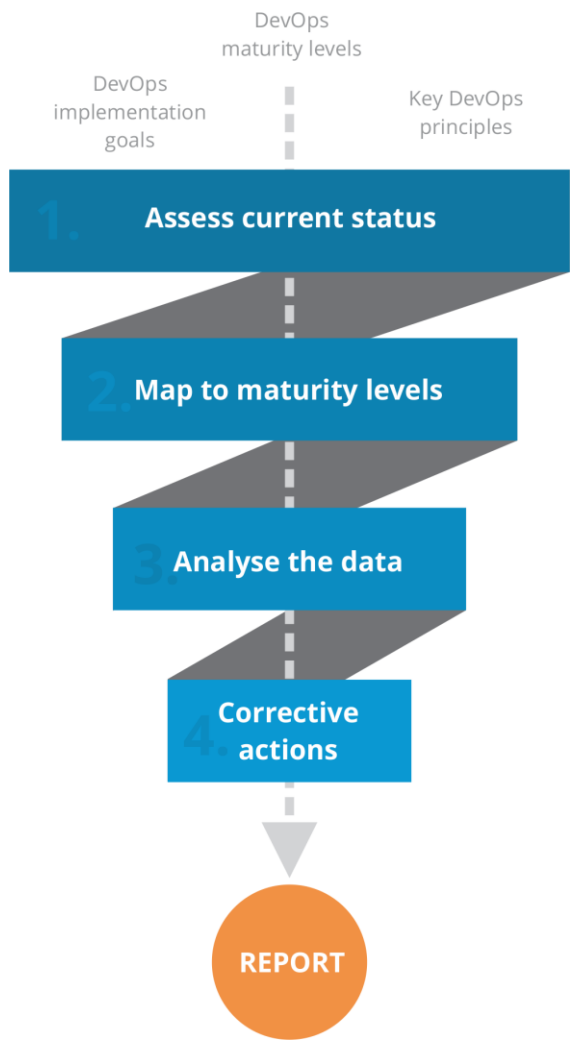
Typical challenges faced when trying to integrate new technologies include lack of strategic vision, poor understanding of the required integration, and shortage of organic skills. Key to successful implementation of new technology ensures that IT priorities are 100% aligned with the business drivers.

How DevOps addresses key business drivers

SPEED
Agile and better collaboration means less time wasted, faster changes and improved delivery speed.

RELIABILITY
Any uncertainty is drastically reduced, by delivering with a continuous feedback mechanism.

SPENDING
IT spend is reduced with the help of lean thinking and improved efficiency across the teams.



DevOps Maturity Assessment

A holistic DevOps Maturity Assessment can help to get the insight you need to determine your current state, and provide detailed recommendations covering:

- **Maturity levels** across people, process, technology, tools, and KPIs
- **Inventory** of tools and KPIs
- **Recommendations** for your DevOps strategy and roadmap

sandhata™

QUICK GUIDE

Step Two: Automate your key software delivery activities

Most organisations aspire to automate all their key SDLC activities and find themselves at varying stages of automation maturity. Enterprises with a large legacy footprint sometimes struggle to accelerate automation across all disciplines, but the main objective is to reduce wastage and increase speed at all stages of the delivery process.

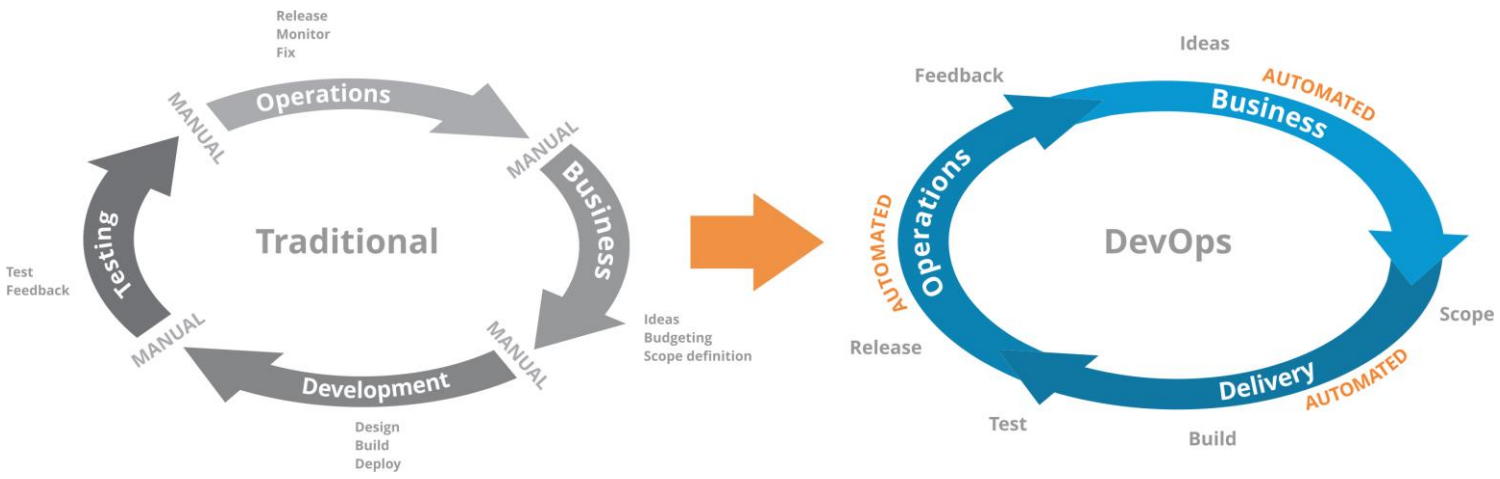
What to Automate First

- Automate the most common tasks. Once you start delivering more frequently, the investment required to automate these tasks will be paid many times over.
- The earlier in the delivery process you can introduce automation, the faster you will see tangible results.
- Assessing current systemic issues and technical debt will highlight potential efficiency gains.
- With the use of service virtualisation and containerisation, you will be able to build and deploy an automated environment which will dramatically speed up provisioning and delivery.
- Enable on-demand creation of development, test and production environments.

Define a Consistent Tool Chain

- A consistent end-to-end toolchain which spans the delivery lifecycle will save you money and time.
- By introducing automation and consistency, team members in different teams are able to collaborate effectively together.
- Consistent tooling helps to remove inefficiencies as delivery processes are streamlined, and no duplicate tasks are required
- Sharing code, artefacts and APIs across teams can also help to speed the adoption and consistency of the DevOps practices and methods across the enterprise

Your overall goal is to ***increase velocity.***



sandhata™

QUICK GUIDE

Step Three: Invest in Continuous Delivery to build on your automation

Once enough automation is in place, the natural direction for businesses is to invest in Continuous Delivery. This will include consolidation of tools and technology, CD pipeline orchestration models, and process optimisation that incorporates governance and control.

Decide Which Application to Start With

The ideal application to start with would be a **business critical application** where changes made will produce immediate business results. Critical applications have visibility and focus, which will keep momentum in your DevOps strategy.

If the chosen application is too complex and the complete release process is difficult to automate, then the task can become too challenging and demoralise the DevOps advocates to the point where the entire process is likely to fail.

Identify Processes to Automate

- Building pre-defined environments or containers
- Code packaging, ready for deployment
- Copying packages and files onto destination locations
- Automating deployment and configuration of integration services
- Populating configuration data
- Managing and restarting services/applications
- Scripting and releasing DB changes
- Executing automated smoke tests
- Running test scripts
- Installing monitoring processes

It is key to release changes in small increments of delivery. Small releases provide the fastest path to customer value and customer feedback, and they minimize risk.

Building Blocks for Continuous Delivery

- Continuous Integration
- Test Automation
- Service Virtualization
- Environment Management and maintenance
- Workflow Management
- Monitoring

sandhata™

QUICK GUIDE

Step Four: Work towards Continuous Deployment to get maximum business value

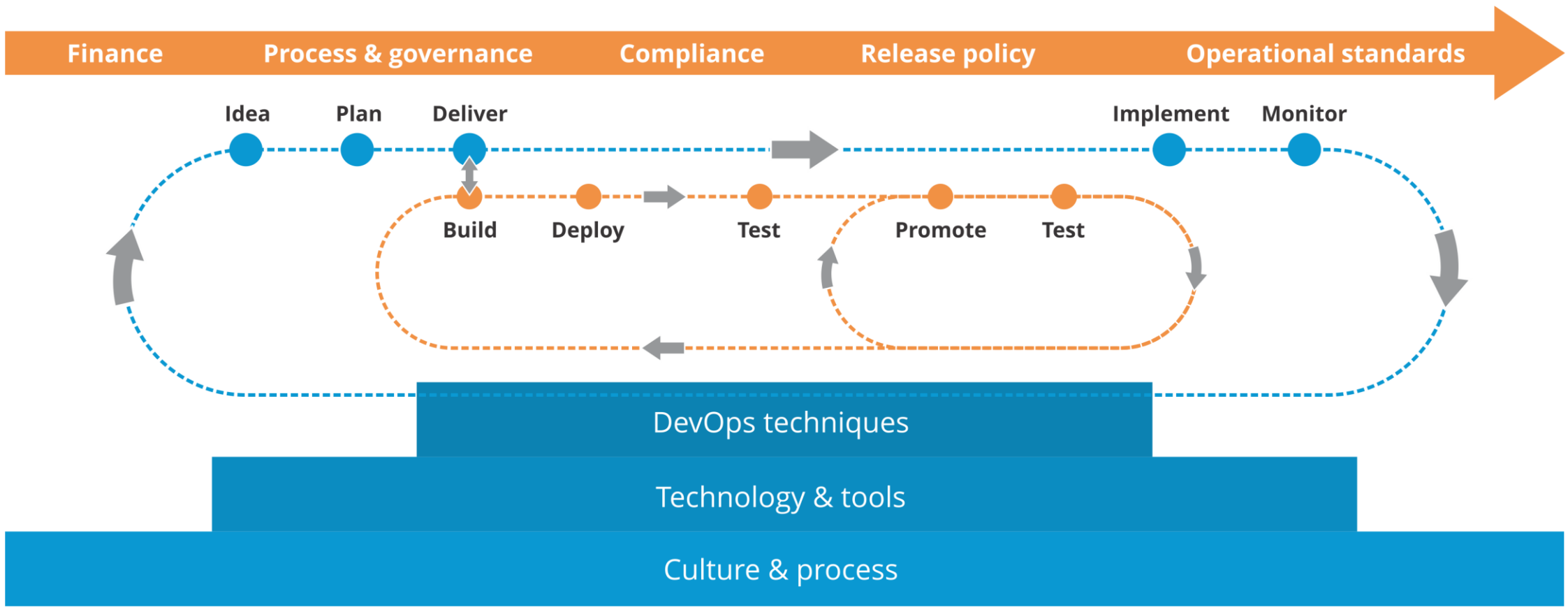
Moving from Continuous Delivery to production release automation is a big step. This is a move which needs to address governance issues, traceability and audit requirements as well as compliance. Companies tend to spend a disproportionate amount of time in achieving this step if release automation was not included in the initial strategy.

Technical Enablers for Continuous Deployment

- Application Configuration Management
- Infrastructure Configuration Management
- Build automation
- Deployment automation
- Release automation

Common Challenges faced in Release Transformation

- Multiple IT Landscapes with isolated governance
- Inefficiencies due to siloed teams
- Wastage due to lack of well defined Value Streams
- Complex Compliance and Security Requirements
- Challenges to automate monolithic and legacy systems



1. Assess the current release process
2. Define end state Release Management goals
3. Use Value Stream to remove wastage and identify Improvement areas
4. Architect the release management process in a phased manner
5. Define and capture KPIs to monitor progress

sandhata™

QUICK GUIDE

Step Five: Aim for Continuous Operations to close the feedback loop and achieve true business agility

Continuous Operations is purely aspirational for many organisations at the moment. The comprehensive production monitoring and effective, automated feedback mechanisms are vital to the success of a Continuous Operations model, but can be challenging to achieve without professional guidance.

Embed Transparent Monitoring and Feedback

A successful DevOps culture is not only about the quality of the delivery output, but also about the transparency of the process. This makes monitoring and feedback a critical piece of the DevOps puzzle.

DevOps cannot function without effective monitoring and communication. Your teams need to have a clear, defined strategy for proactive production review and feedback, where Operations as well as customers communicate directly back into the Delivery organisation. This effective communication strategy will drive the production monitoring capabilities and enable the continuous feedback between teams to produce a more transparent delivery process.

How to Shorten and Amplify feedback loops

- Create **access to information radiators** to enable free movement of information and transparency
- **Analyse KPIs** to better understand trends ad predict problems and achieve goals
- Integrate hypothesis-driven **development and A/B testing** into daily work

How to build meaningful and measureable KPIs

- **Drive KPIs from strategic outcomes:** KPIs should show the stakeholders how they are doing in specific areas to achieve their strategic objectives and delivery outcomes.
- **Maximise real-time data:** The KPI process should maximise the use of real-time data which can be captured automatically with least overhead and manual intervention.
- **Tailor KPIs for your Organisation:** If you want your KPI to be fit for purpose, it should represent your organisation, its specific business needs, and aspirations.

Summary

This quick guide has given you an overview of the 5 steps which organisations typically follow on their journey to DevOps success. We hope you have found it useful, no matter where you are on your DevOps journey.

As a consultancy partner, we encourage organisations to not only adopt the right DevOps tools and methodologies, but to create and nurture a collaborative culture. Implementing the five steps alone while ignoring the culture shift that is needed on all levels of the organisation isn't guaranteed to result in a DevOps success story. As DevOps practices are adopted, you need to take every opportunity to foster a collaborative and innovative culture to help embed the DevOps ideals.

Changing the way a whole organisation functions – as well as the mindset of the employees – can take time. But with our structured, tried and tested DevOps consultancy services, we have helped a wide range of large scale teams get ahead in their DevOps journey.

We can do the same for you.

Get to know us

We are a global integrator, specialising in all areas of DevOps to help clients deliver a 'digital first' strategy. With a team of highly skilled professionals, we deliver Advisory, Management and Technology consulting innovation for clients in some of the most demanding, regulated industries throughout the world.

Your success is our success

Here at Sandhata, we take pride in delivering high calibre services, with a dedicated and hands-on approach that truly sets us apart from the crowd. By tailoring our services to your organisation's unique needs, our experienced consultants are able to work in a genuine partnership with you to facilitate cultural change and support your own teams in harnessing the powerful DevOps tools and processes. Thanks to our unique Advisory model, we also complement our technical consultancy with supporting strategic decision making and change management at board level.

Gary Thornhill
General Manager
+44 (0)203 290 4688
gary.thornhill@sandhata.com

Priya Raju
Head of DevOps Advisory
+44 (0)772 702 2648
priya.raju@sandhata.com

Bronwyn Davies
Head of DevOps Engineering
+44 (0)7916 150 907
bronwyn.davies@sandhata.com

Sandhata is a privately held service provider, headquartered in London and with a global presence undertaking engagements worldwide.

UK
Sandhata Technologies Limited
Coppergate House,
16 Brune Street,
London
E1 7NJ
United Kingdom

Phone: +44 20 7680 7105
Fax: +44 208 711 3147

UK Delivery Centre
Sandhata Technologies Limited
Synegis House
Crockhamwell Road
Reading RG5 3LE
United Kingdom

Phone: +44 207 993 6858
Fax: +44 208 711 3147

India
Sandhata Technologies Pvt. Ltd
Plot No.62
Sri Tower
JNTU-Hitech city road
KPHB Phase VII
Hyderabad – 500 072
Telangana, India

Phone: +91 40 6461 7848
Fax: +91-8099210055

Chennai Office
India Land Tech Park,
Tower-B, 6th Floor
No:14, 3rd Main Road,
Ambattur Industrial Estate,
Ambattur, Chennai-600058
Tamilnadu, India

Phone: +91 44 42112444
Fax: +91-8099210055

USA
Sandhata Inc.
40 Wall Street
28th Floor
New York 10005
USA

Phone: +1 646 741 1941
Fax: +1 646 741 1942

South Africa
Sandhata Software Svcs (Pty) Ltd
2nd Floor
West Tower Maude Street
Nelson Mandela Square
Sandton 2196
Johannesburg
South Africa

Phone:+27 11 881 5481
Fax: +27 11 881 5611

New Zealand
Sandhata Technologies Ltd
Level 15, HP Tower
171 Featherston Street
Wellington 6011
New Zealand

Phone: +64 4 894 8560
Fax: +64 4 894 6598

sandhata.com