

A diverse group of five people (three men and two women) are gathered around a laptop in a modern office setting. They are all smiling and looking at the laptop screen, suggesting a collaborative work environment. The man in the foreground is wearing glasses and has his hand on his chin. The woman on the right is wearing a striped shirt. The man on the left is wearing a brown shirt. The woman in the middle is wearing a beige top. The man in the background is wearing a light blue shirt. The laptop is open on a desk with a red mug, a white mug, and some papers. A large purple circle is overlaid on the bottom left of the image, containing the text "Basic Set-Up to enable DevOps".

**Basic Set-Up to
enable DevOps**

Leverage toolsets which have to be set in place to ensure a smooth transition for a Telco into DevOps.

In the current scenario that most Telcos find themselves in, there is a strong need to roll out new products faster and in a very stable manner, while the declining revenue growth also demands a cut in IT spend. To make the situation trickier, organizations are structured in siloed team formations where we have a team for IT Development and one for operations. This invariably results in ownership conflicts while handling critical customer-impacting business processes. In such a case, there is a strong ask from most telecom operators to adopt more sustainable and optimized ways of working, with clear and contained ownership within one domain, to enable change while maintaining stability - DevOps appears to be the unanimous first choice.

The solution appears simple at first glance. However, since this is a huge disruption, going with a big bang where we introduce major changes in one shot could lead to failure as teams may take longer time to grasp and adopt all of these changes. Also, there are scenarios where the team's maturity doesn't complement the big changes. In order to prevent chaos and ensure DevOps doesn't result in burden or failure, we suggest a phased approach to move toward embracing effective DevOps.

Initial Set Up

We have laid down these basic checks before we start ideating DevOps for an organization.

Assessing the maturity of the current landscape to see which stage we are on in terms of...

- **Ways of Working** – With focus on faster roll-out of products to the customer, we recommend an organization adopt a more flexible and iterative delivery methodology such as Agile, so that the benefits of DevOps can be reaped.
- **ITSM tooling** – The number of processes enabled in it. Basic processes include Incident Management, Change Management, Problem Management, Service Request management.

- **Knowledge Management**- One of the most underrated yet crucial factors for the progress of any organization is having a good knowledge repository in place. A centralized and up-to-date repository will provide a base for finding scope to automate the repeated procedures and steps, eventually reducing manual efforts and optimizing opex.
- **Test Regression suites** – Having a good and reliable quality gate in place saves lots of time and effort spent on fixing a cascaded issue realized later in the product lifecycle (incidents). Ensuring good coverage, regression test suite is defined as the initial step to ensure your organization spends lesser time on fixing the “Ops” side of problems once the product is rolled out to production. Hence, the quality gateway has to be well defined and automated as much as possible. Automated regression suites can be the first automation place in the product lifecycle before the product rolls out to production.
- **Basic Monitoring and Dashboards** – This is indeed a very organization-friendly feature and has a multitude of benefits. Not only does it save a lot of time and effort spent in looking into every application, log and event by providing an updated view on these in one screen, it also makes visualization of the entire product lifecycle easy and user-friendly.

If implemented smartly, this will play a critical role in reducing a large amount of manual Operations work. Additionally, it will aid in the generation of insights for improvement in both the IT domain as well as the business.

On the basis of these parameters, we have listed a few criteria and also defined the maturity levels which we usually see in any organization. The

maturity levels in yellow tiles are the basic levels an organization must be at, in order to move toward embracing DevOps.

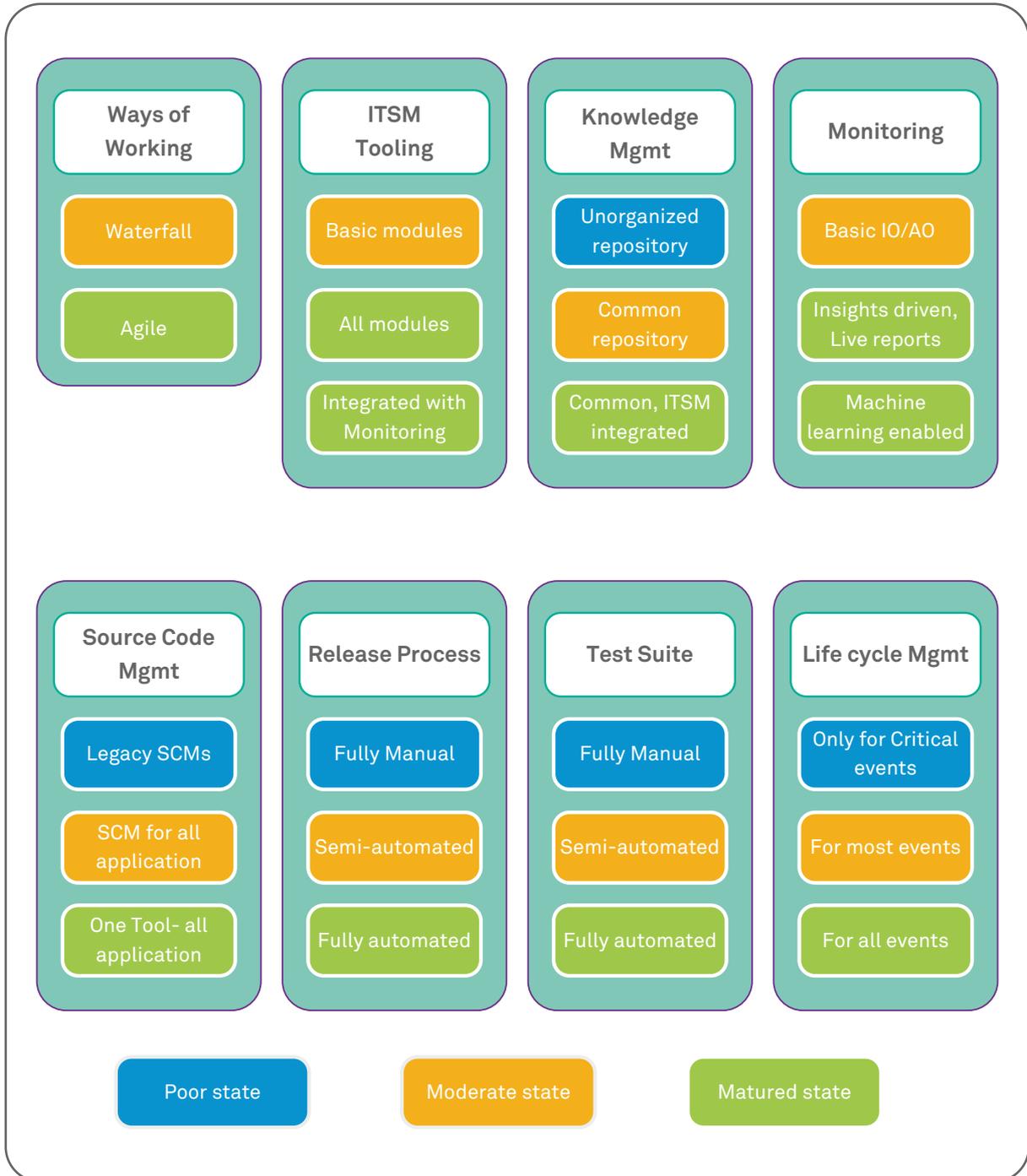


Fig 1- DevOps Maturity levels

Basic Toolsets

For easy adoption of DevOps Ways of Working, along with a People mindset, cultural change and process changes, an ideal combination of toolsets

can deliver magic. Below is the list of suggestions considered ideal for adoption of DevOps.

Categories	ITSM Tooling	Knowledge Mgmt	Monitoring	Source code Mgmt	Release process	Test Suite	Life cycle Mgmt
DevOps	All modules enabled	Integrated with ITSM tools	Basic IO/IO and alerts	For all applications & compatible with pipeline	Well defined, automated steps	Automated test suite	All tasks visualized
Potential Tools	Service Now, BMC Remedy	KM-Service Now, Sharepoint	Elastic, Splunk	Git based, TFS	CICD- Open source tools	Toolset driven	IBM- CLM, TFS

Table 1 – Recommended stage and Potential toolsets to start with DevOps Implementation

Moving toward the Target Model: With these basic steps in place, we can make the gradual transition from ‘As-Is’ ways of working, to becoming a DevOps setup. Once we reach the state as depicted in the above diagram, business can start extracting the benefits from faster releases, smooth testing and deployment processes aided by the tool and it will become easier for an organization to sustain with all the Opex pressure. This is also a stepping stone toward being future-ready for a No Ops model, where we will have complete automation in all aspects of release, testing, monitoring,

provisioning and management of resources. The monitoring as such can be further enhanced with machine learning enabling predictive monitoring and self-healing of repeated incidents. The mentioned tools also can stitch all the business processes together and give a full BLA view to business, with the possibility of drilling down an issue all the way to infra. This full-fledged DevOps setup with infra running on cloud will lead to the perfect end-state, where everything becomes automated and there is no longer a need for an operations team.

About the authors

Deepti Shriganesh Bhide,

Senior Consultant, Communication BU,
Wipro Limited.

Deepti Bhide is a Solution Lead representing the Cloud Transformation team, T-Mobile Netherlands, as part of the Communications BU. She has 13+ years of experience working with various service providers across Europe.

Mansi Dubey,

Consultant, Communication BU,
Wipro Limited.

Mansi Dubey is a DevOps consultant working for T-Mobile Netherlands, Transformation program as part of the Communications BU. She has 6+ years of experience working with various service providers across Europe.



Wipro Limited

Doddakannelli, Sarjapur Road,
Bangalore-560 035, India

Tel: +91 (80) 2844 0011

Fax: +91 (80) 2844 0256

wipro.com

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For more information,
please write to us at
info@wipro.com

