



Business-friendly Solutions

## #Digitaligence at work!

# Implementing DevOps Driven Software Development to Accelerate Innovation

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## DevOps

Digital businesses rely on software applications which drive their ability to differentiate and grow in an ultra-competitive marketplace. They need to build competitive advantages quickly and keep costs minimal while adapting to continuous change in consumer demand.

The DevOps way of continuous automation of release and deployment processes has emerged as a powerful enabler of this strategy. In this new era of software development, IT is expected to drive and enable business innovation via agile application development and deployment. Building software-

driven architectures for scale, reuse, automation and deployment/rollback can free both developer and IT operations resources to focus on creating business value, meeting customer demand and taking advantage of strategic business opportunities. DevOps tools, processes and metrics can be put in place to reduce overhead to create an environment that caters to innovation, while reducing risk from security, environment mismatches and other operational issues.

## High Cost of Development Time

Application development and release time is often the biggest challenge, delaying time-to-market and hurting business value. It also represents the highest share of cost. Faced with shortage of skills in a tight labor market, improving productivity of existing resources is a crucial need. Solutions that automate repeatable and iterative engineering processes, enables an increased focus on business differentiation, allowing organizations to free scarce resources and drive innovation and agility.

Using DevOps best practices can eliminate inefficiencies in infrastructure provisioning and maintenance, as well as application development workflow, directly impacting the probability of success.

Creating a high-performance development model can be accomplished using relatively easy architectural changes.



## Six Steps to Improve Productivity & Drive Agility through DevOps

- Creation of a self-service IT environment where developers can provision approved resources via push button deployments, reducing the load on IT and dependence related wait-time
- Optimization of the local developer environment using container strategies to create frameworks that run quickly and efficiently without complex set-ups
- Setups for continuous integration and delivery systems to speed-up application releases including the implementation of quality gates thereby enabling best practices and Continuous Testing pipelines for various testing strategies. Advantages include:
  - Autonomously try new ideas and make architecture changes
  - Run concurrent (parallel) environments for A/B testing
  - Create QA and build environments without having to wait for resources
  - Fearlessly break and recreate development and test environments without worrying about consequences
  - Implement changes in production environment, while minimizing friction between developers and IT through the process
- Use of cloud automation to configure, manage and deploy environments with minimal maintenance
- Implementation of configuration management systems and processes for streamlined deployments

- Implementation of distributed monitoring and appropriate metrics for continuous feedback and improvement

With the implementation of DevOps, overall approach to security also needs a refresh – described as DevSecOps. Like DevOps, DevSecOps seeks to achieve greater efficiency and productivity through team collaboration, however, DevSecOps incorporates security principles. To sum, DevOps represents a fundamental shift in IT operations, addressing functional as well as organizational processes and structures.



## Can Developers Fix These Operational Issues?

Yes. Developers are smart, and they have confidence that they can fix operational challenges. However, while fixing these operational issues can be a part of their job, is it the best use of their time? Will the expected output be optimal? The answer to both questions is likely a “No.” The value proposition provided by a software organization is primarily driven by the number of new features provided

to its customers during the shortest time interval. Developers know the code base, and they can add features faster than anyone else. If their precious bandwidth is diverted from feature development to addressing code-cleaning tasks, it may be detrimental to organizational interests. Also, solving some of these challenges is sometimes an art, not an exact science.

## How Will DevOps Metrics and Pipeline History Help?

The history of pipeline execution activities provides important information and metrics, such as the average build time for the pipeline, successful builds within a given period of time, amongst others. These metrics are important to measure the success of DevOps. It also enables auditability and provides insights to improve and extend DevOps Initiatives as a part of the continuous improvement loop.

## Are DevOps-based Products a Solution Here?

If one subscribes to the Lean model, agility is the key. Agility can only be achieved if there is freedom and flexibility for innovation. Further, governance and processes need to be instituted to align with these objectives. People, structures, cultures and a shared set of goals are key to success. Out-of-the-box technology solutions alone cannot provide a solution. On the contrary, inflexible solutions reduce agility will negatively affect the team’s ability to respond to new opportunities.

## A Comprehensive Consulting-led Approach to DevOps Implementation

Getting the right consulting help for DevOps and operational workflow setup makes absolute sense. Vigilant assessment of what activities are helping the business to differentiate and deliver the customer promise. All other IT services and activities are candidates for standardization and external sourcing, with a focus on acquiring agility, flexibility and adaptability for future digitalization efforts.”

# ITC Infotech's ZICOS-powered DevOps Solution

Companies are migrating to the cloud for leaner, simplified and more cost-effective business processes – to effectively meet challenges of the digital dynamic – intensified competition and diminishing market share.







Clients from across industries partner with ITC Infotech to shift to a continuous delivery model through DevOps – where robust applications are created to match the speed of business.

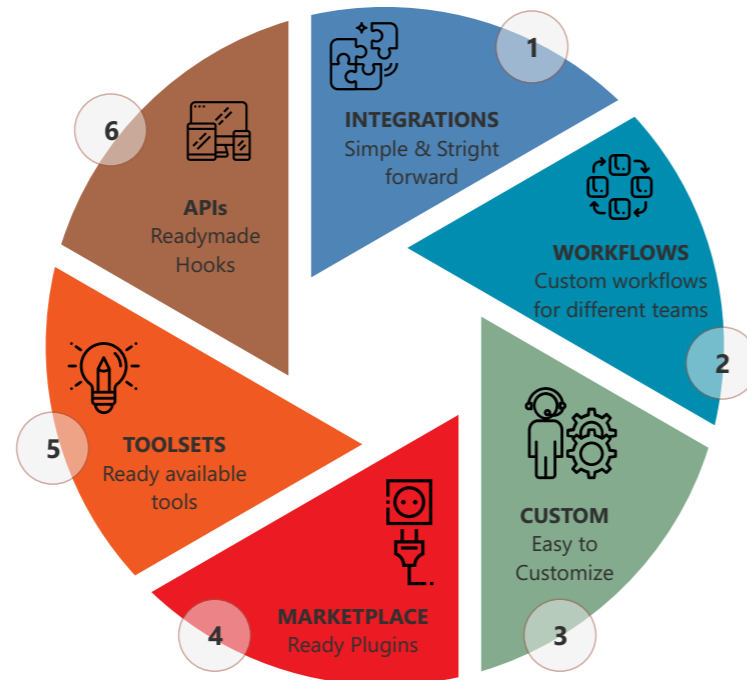
We build and manage digital service delivery workflow pipelines, inclusive of application assessment and migration, engineering, architecture services and managed DevOps, cloud service management and application performance management, powered by our proprietary tools and framework – together, we term as "Digitaligence at work !".

Our in-house solution, ZICOS enables the orchestration of the software development supply chain using coded pipelines and open-source tools that allows designers to create and test environments to match existing blueprint. It further provides dashboards catering to all stakeholders in the organization and an extensible architecture that supports on premise and public cloud providers.

ZICOS' extensible architecture, one-click installs and set-ups, single window insights for delivery-to-deployment enables alignment to organizational process maturity and walk the path towards incremental improvements. The ability to integrate with the customer's provider of choice, use pre-existing tools and deliver metrics for transparency and insights and transparency makes ZICOS a smart and reliable choice to optimize returns on investment.

ZICOS provides a 360-degree view of the software development process from development-to -deployment, using best of breed technologies

-  Web services, API and Agent
-  CI, CT & CD
-  Microsoft & Java World
-  CI, CT & CD plugins
-  Open Source tools instances
-  RESTful APIs



The ITC Infotech way of approaching the DevOps transformation journey



## **About ITC Infotech**

ITC Infotech is a specialized global full service technology solutions provider, led by Business and Technology Consulting. ITC Infotech's Digitaligence@work infuses technology with domain, data, design, and differentiated delivery to significantly enhance experience and efficiency, enabling its clients differentiate and disrupt the business.

The company caters to enterprises in Supply Chain based industries (CPG, Retail, Manufacturing, Hi-Tech) and Services (Banking, Financial Services and Insurance, Airline, Hospitality) through a combination of traditional and newer business models, as a long-term sustainable partner.

ITC Infotech is a fully-owned subsidiary of ITC Ltd, one of India's foremost private sector companies and a diversified conglomerate.

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