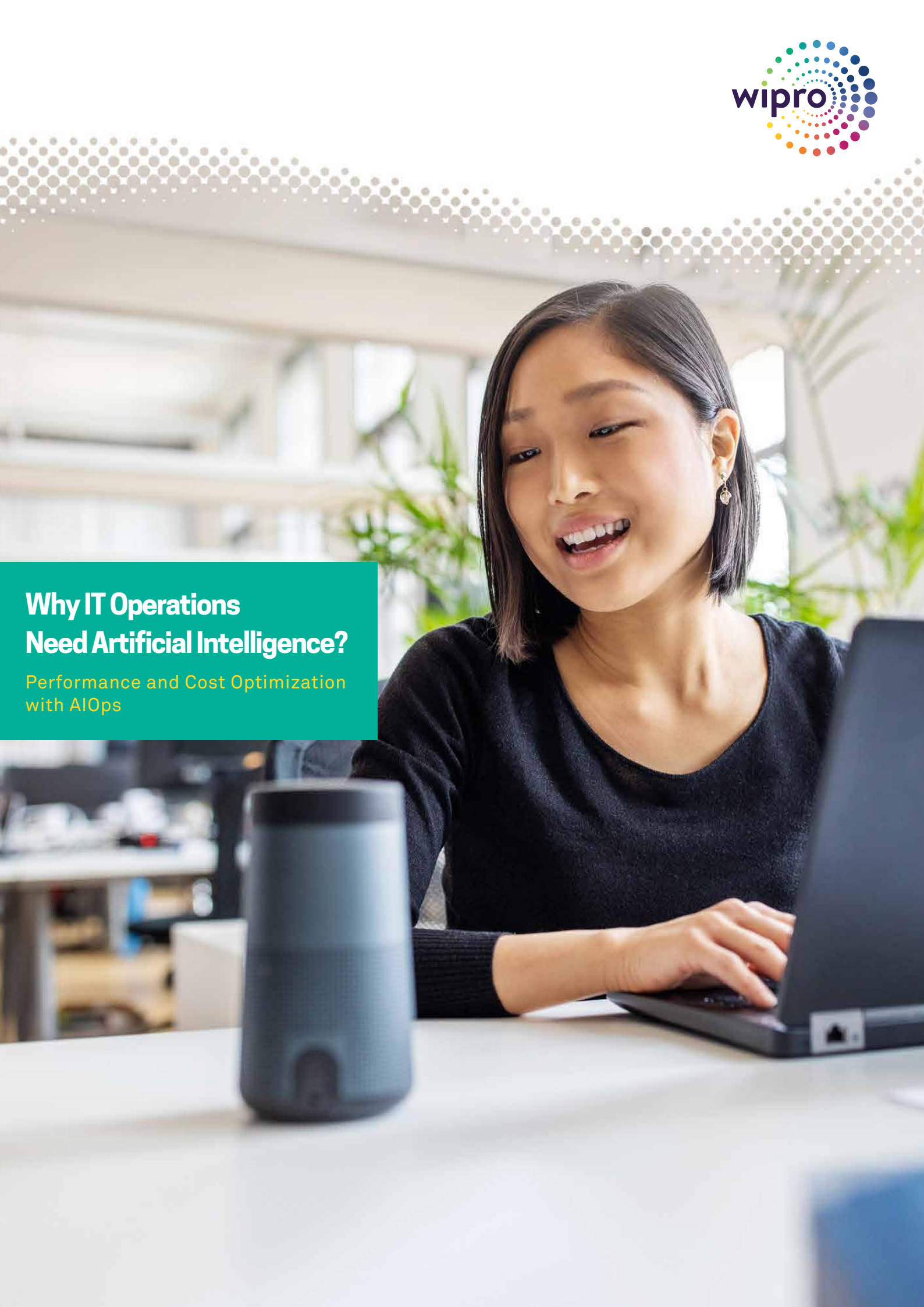




## Why IT Operations Need Artificial Intelligence?

Performance and Cost Optimization  
with AIOps



**Taking the AIOps approach to transform IT as an application and software service enables better business outcomes with cost and capacity optimization**

The key driver for continuous technological advancements has always been the intent to increase human efficiencies and enhance quality of life. This ultimately results in cost optimization, rapid production, and enhanced quality. Information Technology (IT) is no different.

It is the core enabler for every business, driving overall technological advancement for modernization and cost optimization.

Wipro has been enabling the transformation of physical data center based infrastructure to cloud-based SaaS and containerization for multiple customers. Our experts leverage Docker & Kubernetes for a channelized DevOps pipeline to transform everything in IT as an application or a software service – be it infrastructure, network or an end application.

AIOps plays a crucial role in implementing DevOps pipeline on containers (See Figure 1). This helps allocate the required capacity to the right resources at the right time in an agile manner.

At Wipro, we leverage AIOps to understand available capacity and determine where and when it is required.

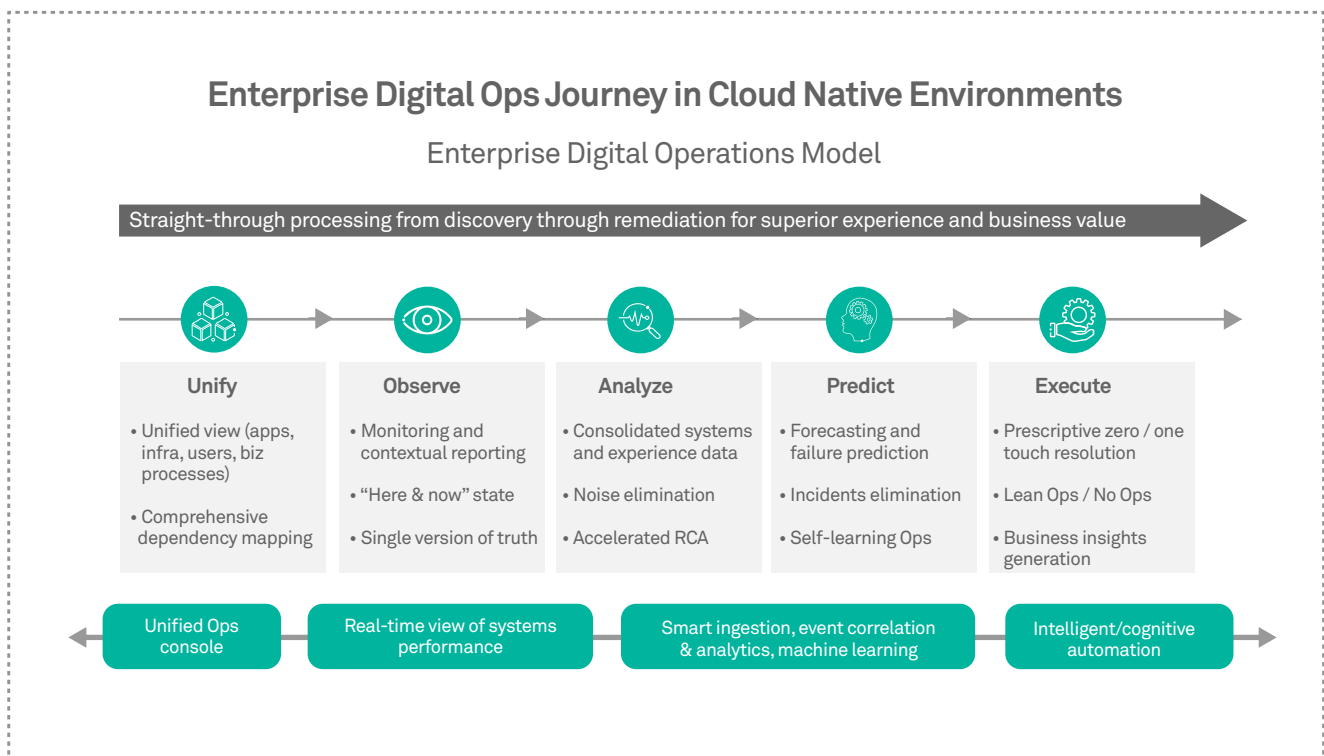


Figure 1: Moving to cloud based SaaS and containerization

## AIOps: Enabling true capacity optimization on cloud and containers

Digital Cockpit, designed by [Wipro's Business Service Management \(BSM\)](#) team leveraging machine learning (ML) and application of data sciences, helps us develop solutions for true capacity optimization on cloud and containers. We treat monitoring as the insight intelligence providing the trigger points for:

- ✔ Intelligence for predictive actions
- ✔ Pin pointed analysis
- ✔ Cognitive execution insights

With our business-focused solution, we take a proactive approach to performance analysis based on application environment data and AIOps platform connected performance insights.

This helps treat each IT component as an application and use everything as a software service.



Business Problem	Wipro AIOps Solutions
<ul style="list-style-type: none"> <li>• Application dependency problem tracking</li> </ul>	<ul style="list-style-type: none"> <li>• Solution auto-detects all application dependencies and tracks transactions across all tiers</li> </ul>
<ul style="list-style-type: none"> <li>• Development effort optimization</li> </ul>	<ul style="list-style-type: none"> <li>• The problematic code is identified with minimal effort through code level analysis</li> </ul>
<ul style="list-style-type: none"> <li>• Application blind spots</li> </ul>	<ul style="list-style-type: none"> <li>• Solution eliminates application blind spots by providing complete insight and understanding of the inter dependencies between application components and infrastructure in context</li> </ul>
<ul style="list-style-type: none"> <li>• Multiple tools for monitoring, troubleshooting and alerting</li> </ul>	<ul style="list-style-type: none"> <li>• Comprehensive view of your entire infrastructure, which unifies and correlates logs and metrics, providing an integrated experience for monitoring, troubleshooting, and alerting</li> </ul>
<ul style="list-style-type: none"> <li>• Alert storm</li> </ul>	<ul style="list-style-type: none"> <li>• A full-stack monitoring solution to eliminate alert storms from isolated tool sprawl and focus resources on proactive actions with the highest impact</li> </ul>

Table 1: Applying Wipro's AIOps solutions to real world problems

## Building a new paradigm for next gen DevOps

At Wipro, we provide visibility and clarity to the most complex multi-cloud environments by bringing together data from disparate sources so that IT teams can analyze and understand data in context. This also stops applications from failing or running slowly by isolating the probable cause, while linking patterns or anomalies to events .

Our AIOps story in DevOps is aligned to:

- ✔ **Playing the supervisor in the development phase while building the dynamics for an application release in Everything as a Service (EaaS) method**
- ✔ **Playing the gatekeeper in the staging phase while easing out the test and quality analysis for all those dynamics**

- ✔ **Ensuring final release on PROD and end-to-end performance analysis for production operation, operational optimization as well as improvements and enhancements**

To provide an application like experience as an AIOps service, Wipro makes the DevOps journey free of resourcing efforts. This helps DevOps focus on real development operations.

The key to a flawless DevOps pipeline is knowing what resources are required when, and from where they can be allocated.

While containerization is the natural answer for this, it can work in perfect sync only when the system is intelligent enough to continuously run environmental scans to report on availability and optimize capacity.

Current DevOps	Futuristic DevOps with AIOps
<ul style="list-style-type: none"> <li>• DevOps teams tend to reuse the same techniques and fixes as built in the knowledge from operations</li> </ul>	<ul style="list-style-type: none"> <li>• AIOps helps learn from operational data and continuously optimize, which reduces repetitive actions and issues</li> </ul>
<ul style="list-style-type: none"> <li>• Developers are at times conservative in adopting a new idea or solution, citing the risk factor or difficulties in adoption due to organizational changes</li> </ul>	<ul style="list-style-type: none"> <li>• AIOps will support the application of learnt techniques and solutions without the mental block of risk or adoption</li> </ul>
<ul style="list-style-type: none"> <li>• Development is always dependent on individual skills and experience</li> </ul>	<ul style="list-style-type: none"> <li>• IT reduces the disparity in skills and improves quality of DevOps pipeline</li> </ul>
<ul style="list-style-type: none"> <li>• The limitation of adaptability with emerging technologies and tools limits overall optimization capabilities</li> </ul>	<ul style="list-style-type: none"> <li>• AIOps is constantly on, supporting not just performance analysis but also machine learning, which ensures mutation of ML</li> </ul>

**Table 2:** Adopting futuristic DevOps with AIOps

## Becoming operational ready with AIOps

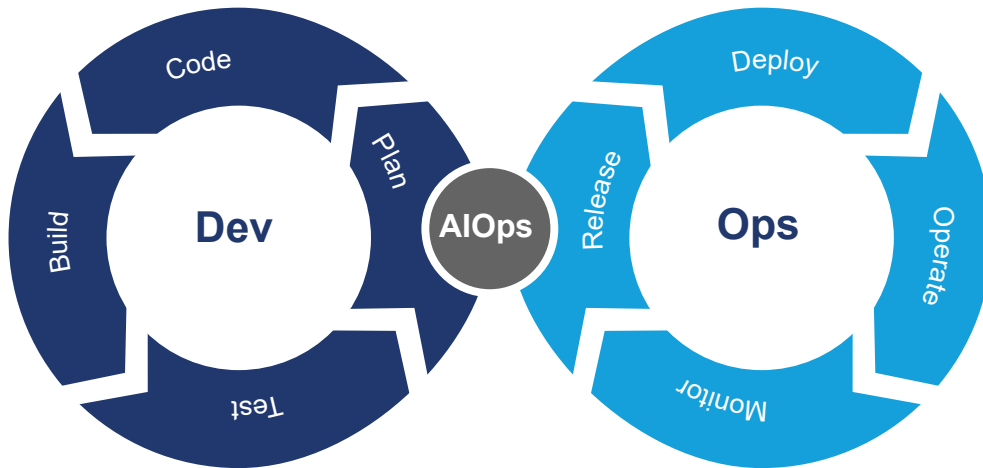


Figure 2: DevOps with AIOps

AIOps is becoming an inevitable component in EaaS-driven DevOps due to the concept of continuously training machines from machines within and applying the ML techniques on ever-evolving data from multiple operations channels. As agility is dependent on mutating demand, it makes business sense to move from current DevOps to futuristic DevOps with AIOps to drive insights for optimization.

*Wipro's AIOps solution is transforming the understanding of capacity analysis and hence, optimizing the overall capacity, especially leveraging the elasticity in the containerized environments of cloud and hybrid with microservices. Click here to connect with us and know how you can leverage this solution to ensure great outcomes from your cloud.*

## About the author

### Ankur Jalpota

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Ankur works with technology partners in advancing and modernizing the tooling space and aligning the overall offering with the ongoing evolution journey. He is an evangelist for humanizing technology that focuses on end customer usability and ground level business impact. Ankur has played key roles in developing next-generation transformative offerings and executing growth strategies at Wipro in AI & Cloud.

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strong commitment to sustainability and good corporate citizenship, we have over 180,000 dedicated employees serving clients across six continents. Together, we discover ideas and connect the dots to build a better and a bold new future.

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