



USING AIOPS SOLUTIONS TO ACHIEVE BUSINESS RESILIENCE

Artificial Intelligence for IT Operations (AIOps) is all about making automated decisions by analyzing huge amount of data and using it to predict and prevent future events that could impact system availability and / or performance. This is achieved by automating mundane IT operations work. AIOps has evolved and has spread the impact beyond infrastructure and application management areas to enable IT operations significantly improve business outcomes in the new digital world. We believe, with the right combination of technology platforms offering the required capabilities, delivery partners implementing the right fit use cases and execution models that align to business outcomes, organizations can accelerate their AIOps journey to achieve the highest maturity level yielding maximum business value.

Introduction

AIOps addresses the challenges of speed, scale, and complexity that IT leaders are facing in the wake of digital transformation. AIOps in application management acts as the unifying bridge between service management, performance management

and automation. CIOs are aggressively investing in AIOps solutions to achieve radical cost reduction, improve system resiliency, enhanced user experience and higher agility. All these objectives when driven with a business context and with an

alignment to improve the business process key performance indicators (KPIs), the results will be transformational.

For organizations to fully achieve these objectives, there are some key technology capabilities that are required:



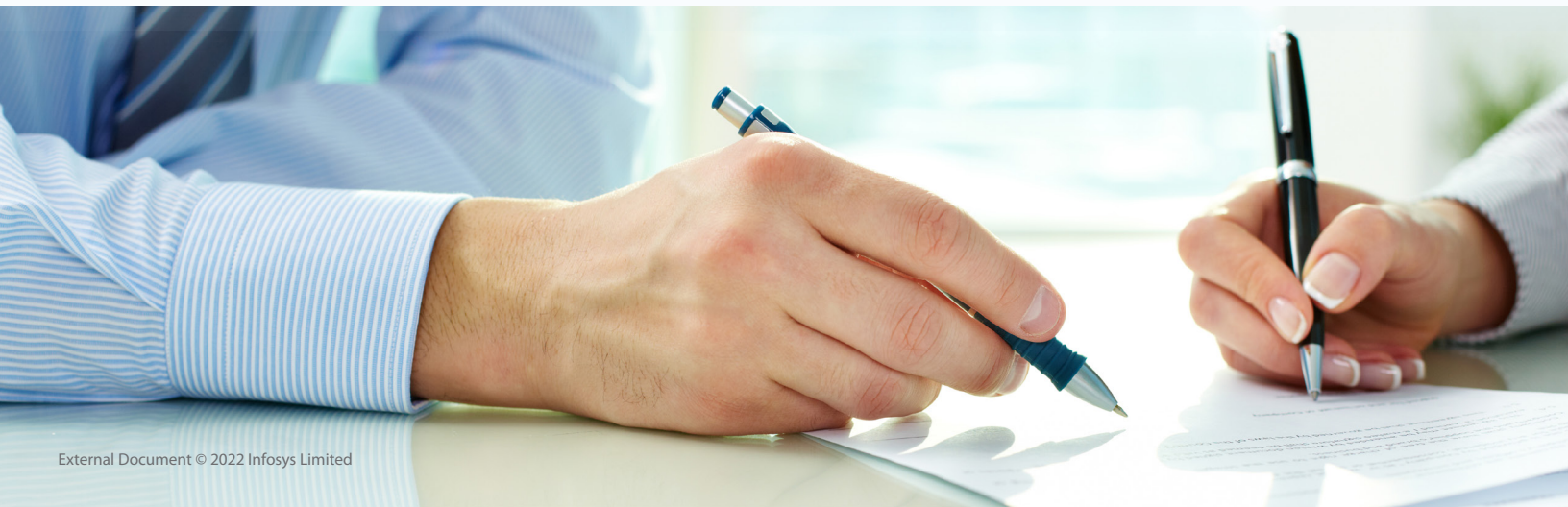
- Full stack observability – All the way from network, infrastructure, database, applications, and user actions through the lens of interconnected business processes
- Predictive analytics – Predict probable faults using Artificial

Intelligence (AI)/ Machine Learning (ML) models

- Capacity analytics – Predicting just-in-time capacity needed for on-premise and cloud infrastructure
- User experience analytics – Deep analytics and insights on end-user page

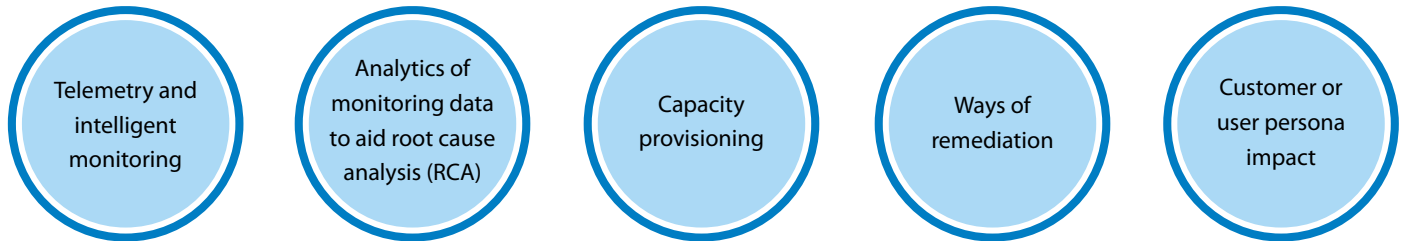
loads, navigations, and user action metrics

- Cognitive automation – Rapid ability to scale across enterprise to make real-time decisions on actions to be taken from data insights, perform these actions and validate results at scale

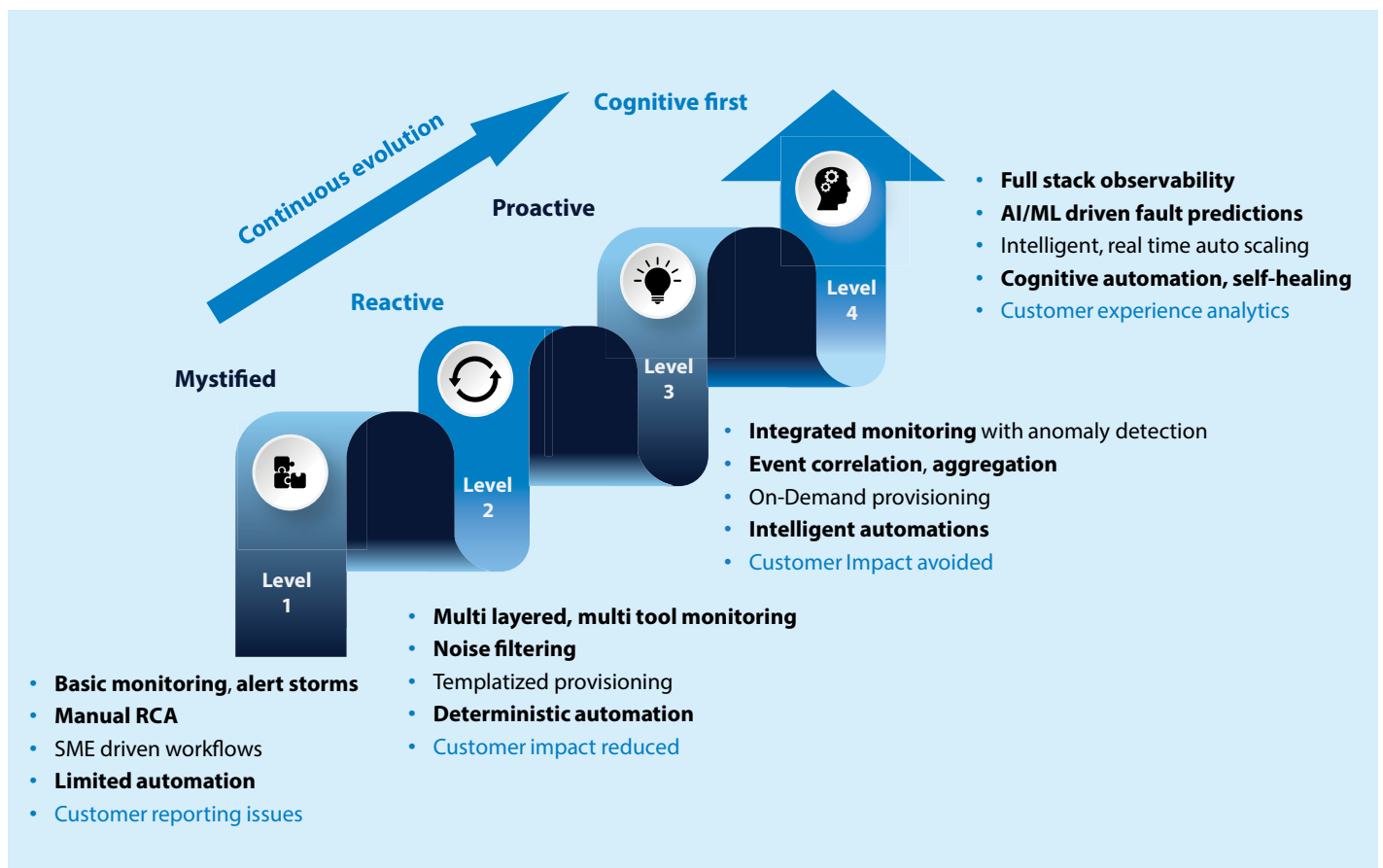


AIOps journey to reach the destination of business resilience

We, at Infosys see this as a journey and we are partnering with our clients to accelerate AIOps adoption to achieve business resilience. The key elements that determine the maturity level and stage of an enterprise in this journey are:



We have defined 4 levels of AIOps maturity based on these key elements, which can give a good view of where an enterprise stands in this journey. Assessing the current level helps in outlining an effective roadmap that can elevate an enterprise to the desired maturity level. You can do so by selecting the right set of use cases that will deliver maximum business value in a time-boxed plan.



We have observed that a large majority of our clients are in the area encompassing level 1 and level 2. It is not necessary for every enterprise to go through all the steps starting from level 1 to attain the final maturity level of being a “Cognitive First” enterprise.

An enterprise could start from level 2 with respect to a specific element like “ways of remediation” and then reach level 4. It could also start from level 1 with reference to another dimension like “customer impact” and choose to take a halt when they reach level 3 of “proactively avoiding customer impact”.



The path to the journey and the final goals are completely driven by an enterprise's larger IT objectives and strategies. The end benefits achieved will be transformational across the dimensions of efficiency, effectiveness, and experience.

50%

reduction in system
outages

65%

reduction in MTTR

3X

higher end user
experience

Benefits shown are illustrative

Our recipe for an accelerated roadmap to success

Artificial Intelligence (AI) and Machine Learning (ML) technologies help in unearthing threats, identifying the underlying resources, and filtering the noise by finding patterns, related data sets and repeated events and alerts. This helps IT operators to solve issues and receive recommendations for optimizing IT performance. Infosys AI operations solution on Infosys Live Enterprise Application Management Platform (LEAP) powered by industry leading full stack observability (FSO) platforms (Cisco AppDynamics or Dynatrace) performs all these in a business context. It shows the potential business impact of an IT anomaly or a disruption and the associated inter-relationships across the

entire IT stack (from the process value stream to the underlying applications, to the middleware, to the database, and to the infrastructure components). A well planned and thoughtfully implemented AIOps solution will also enhance the collaboration and workflow within IT teams and between IT and business units. Key foundational steps and critical success factors to be considered for a successful implementation are:

1. Understand current state of IT operations and business value streams
2. Amplify human insights with machine intelligence to predict and prevent
3. Create a center of excellence (CoE) for adoption and best practice sharing
4. Select and implement use cases with clear value articulation
5. Define, setup and measure business outcome impact

While there are multitude of tools in the market for specific areas of AIOps solution, there isn't one tool that can provide compete end – end capability. This is where a platform like Infosys LEAP stands out as it integrates the individual tools and point solutions and creates a unified platformized solution. Infosys LEAP helps clients to bring the best out of their tools and creates synergy.

The technology platform alone will not be sufficient for a successful implementation. Skill and talent gaps and incorrect implementation cycles are the primary challenges an organization face, while embarking on this journey. The right combination of unified technology platform, codified knowledge and outcome-based sets of managed service delivery model helps an organization to be successful.

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At Infosys,
we have codified a vast amount of this knowledge in digital process models, benchmarks, and industry specific views. This largely removes the human dependency from establishing end-end AI and ML led solution.
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Unified Technology Platform



Codified Knowledge



Managed Services

The unified platform discussed above will help fast track the implementation of use cases, without technology constraints. These include full stack observability, data analytics and insights, business and IT impact visualization, auto provisioning,

cognitive automation etc. This is where a Next-Gen Application Management Services (AMS) platform like Infosys LEAP fits in perfectly with its pre-built integration with industry leading FSO tools like Cisco AppDynamics and Dynatrace.

Business resilience is client contextual. The key business KPIs that matter, the underlying value stream processes, and the association of the KPIs to processes to the applications and the IT stack on which they operate are often tacit knowledge that exists within enterprises.

Finally having a systems integrator (SI) orchestrate and deliver the AIOps services in the complex technology landscape on a managed services outcome driven model brings in accountability and facilitates measurement of success more effectively. We are seeing a drift towards an “as a service” model, where the entire solution is delivered by the SI on a subscription or consumption-based model as “Resilience as a service” or “AIOps as a service”.

Our recommendation is to start this journey by piloting the solution with a small representative set of use cases that can deliver maximum business value in a short timeframe and then progress iteratively in an agile manner.



Conclusion

The risks of brand damage, opportunity loss or sustenance due to competition from digital natives is pushing enterprises across the globe to embark on the digital transformation programs. End-users expect the application to be available all the time and one poor customer experience could jeopardize entire brand value and market share. With these radical shifts in priorities and rapid changes in the IT landscapes, numerous tools and technology solutions have been used by the enterprises to enhance the efficiency, effectiveness, and experience. This has only resulted in creation of huge amounts of data, which is humanly impossible to sense, analyze to gather insights and swiftly act upon the insights. The need of the hour is to derive meaningful insights from the telemetry data through correlation, machine learning and add the business context to predict and prevent any anomalies proactively. We strongly believe that an integrated AIOps solution that relies on full stack observability of IT systems in the context of key business process KPIs and that can take real-time actions to prevent outages and any potential business impact will also help achieve business resilience. Implementation of such a business aligned AIOps solution is a journey which can be accelerated with the right combination of technology platform, codified knowledge and partners who can deliver the solution as managed services.



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Reference

<https://www.infosys.com/services/application-development-maintenance/service-offerings/ai-operations-solution.html>

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