

Top 10

Infrastructure and Operations Trends

You need to follow
in 2022

Introduction

The ever-accelerating evolution of technology puts pressure on IT Infrastructure and Operations (I&O) departments to introduce solutions aligned with modern business priorities, as well. This new reality demands shifting I&O leaders' focus from maintenance to innovation.

The following year will be pivotal for I&O teams who struggle to stay relevant, as whole organizations undergo large-scale cultural and technological changes. Skills that just a couple of years ago were central in this job are becoming obsolete. Digital transformation efforts drive companies to focus more on flexibility, cross-departmental competencies, and business acumen.

Inspired by the impressive Gartner's report, we decided to dig a little bit deeper and present to you the list of 10 trends that we believe will have a major impact on I&O professionals in 2022.

01

Just-in-Time Infrastructure solutions will spread, and companies will look at time-to-deployment as a key factor in deciding suppliers.

02

Sustainability efforts will affect decisions in the I&O field, potentially resulting in environmental and financial benefits.

03

Digital native companies' success will inspire traditional businesses to embrace ideas like the outside-in approach.

04

The prevalence of hybrid infrastructure will force organizations to create **Disaster Recovery** plans that are better suited to the current state of technology.

05

Companies will try to integrate single-purpose **management tools** or replace them with more **comprehensive** ones.

07

With more and more data generated every day, businesses will turn to I&O teams for support in creating competent **data management policies**.

06

Enterprises will focus on **automation** even more.

08

Hybrid workplaces are here to stay. Businesses will strive to improve their **Anywhere Operations** models.

09

I&O leaders will be expected to develop their **business competencies**.

10

Career ladders will evolve to **career lattices**, resulting in new career development paths for I&O employees.

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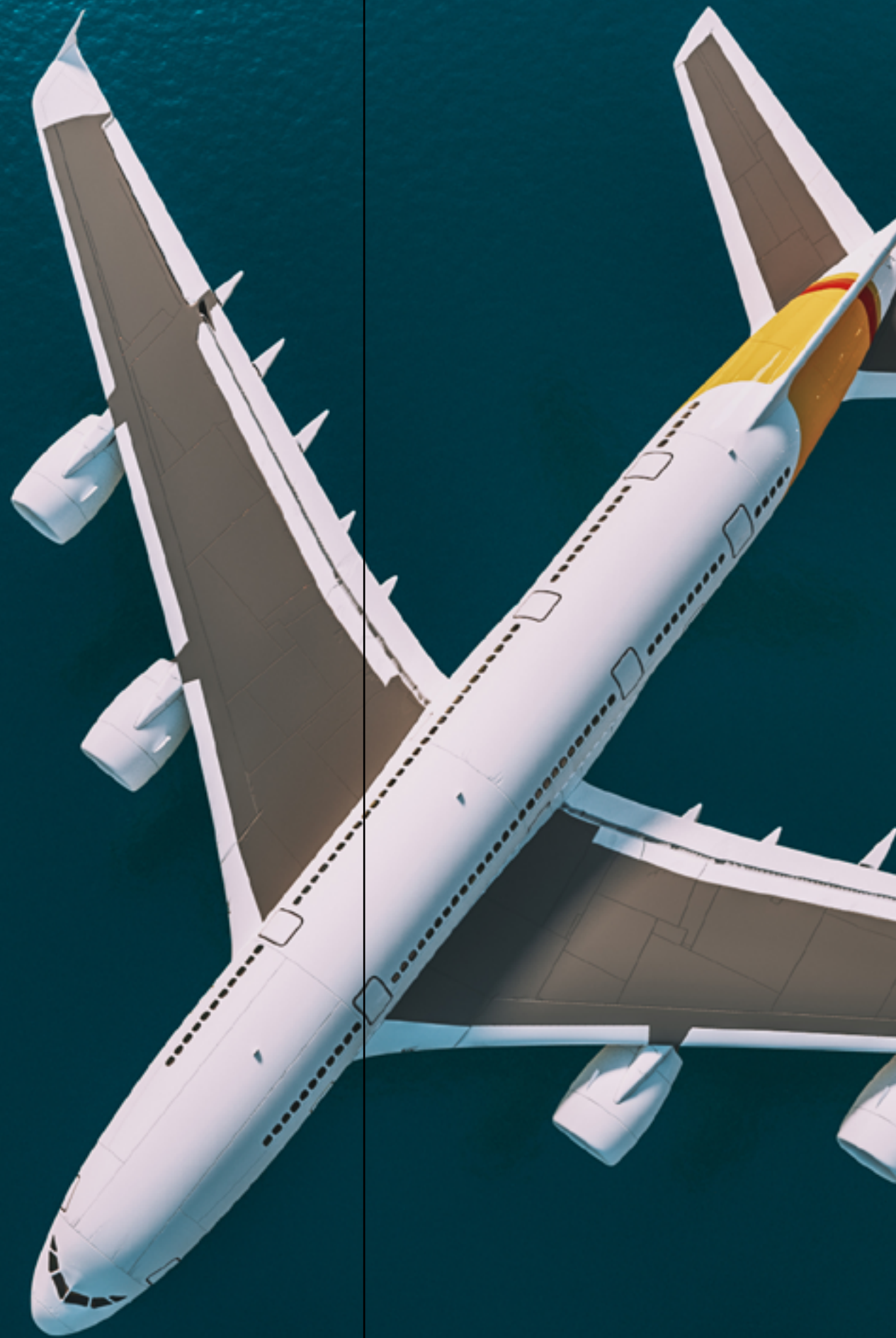


Another trend or the pressing topic in this area especially after Cloud Adoption is Risk Assessment, Risk Governance and compliance model.

Companies will move towards Just-in-Time Infrastructure

“Infrastructure as Code (IaC) is being adopted by many enterprises as a way of having an elastic computing infrastructure, which can be spun up at the time of demand and then later dismantled. IaC also helps to provide additional IT resources as and when an application demands the same, to cater to an increase in traffic or the number of users of the system, etc. IaC is very agile and cost-effective as well. There are tools and technologies, like AppZ, available for Enterprise I&O to achieve IaC”

– Rajagopal Nair, COO and Head of Business Development at Cloud Control Solutions



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Just-in-Time infrastructure is available immediately when your business needs it. Allocating resources exactly where they are needed and at the specific time when they are needed is a characteristic of Cloud Services that other infrastructure areas try to emulate because of its cost-efficiency and flexibility.

Just-in-time (JIT) is a strategy present in many industries that aims to improve efficiency and lower costs by leveraging the speed of delivery. In the case of an eCommerce store, just-in-time delivery means that the company will order goods from the manufacturer only when a customer purchases them. When implemented correctly, the strategy reduces inventory costs but not the delivery time.

Just-in-time means that its components are delivered at the right place (e.g., in the cloud, at the data center, at the edge), at the right time (when needed). This trend drives suppliers to offer shorter timelines for delivery or implementation. In the case of cloud services, there's an additional benefit: when you don't need the additional infrastructure, it scales back down, so you're not paying for resources you don't use.

To succeed in building Just-in-Time IT Infrastructure, you'll need a highly skilled maintenance team and reliable suppliers with negotiable delivery/implementation times. When making any arrangements related to the infrastructure, always consider time-to-deployment.



Sustainability efforts will influence the decisions

in the Infrastructure and operations field

The concept of sustainability is relatively new, but it draws a lot from the ideas that preceded it, such as social justice and conservationism. The most famous definition of sustainability comes from the “Our Common Future” report (commonly known as the “Brundtland Report”). Published in 1987, it states that sustainable development is “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”

Companies everywhere strive to become more sustainable and reduce their negative impact on the environment. Looking for ways in which the technology can help those environmental efforts at least partially falls under Infrastructure and operations responsibilities, as the IT infrastructure requires vast quantities of energy to function. But investing in sustainability is not only about protecting the environment, as it fosters innovation, promotes automation, and even reduces costs.



Digital native companies will continue to grow in prominence

“Traditional enterprises now want to modernize their legacy on-premise applications by adopting technologies such as containers and cloud orchestration platforms (eg. Kubernetes) to leverage the advantages and benefits offered by cloud namely scalability and resilience. It would also make the cloud deployments cost effective as it optimizes the compute footprint. However they are currently struggling in finding skills with Kubernetes and container technologies. More and more enterprises are adopting tools such as CloudControl AppZ, in order to adopt cloud. CloudControl AppZ is a modernization and management tool for hybrid-clouds for those Enterprises who do not have the deep cloud skills required for the tasks. The tool hides the complexities and enables the Enterprises to migrate and manage workloads through an easy to use UI.”

- Rajagopal Nair, COO and Head of Business Development at Cloud Control Solutions

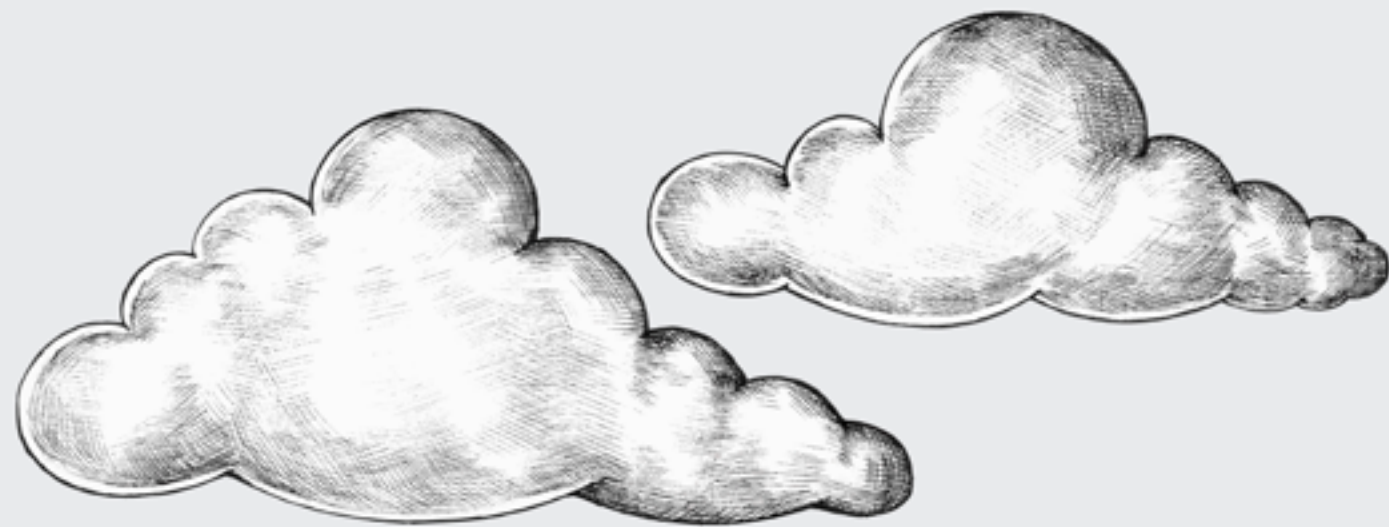


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Companies that embrace modern digital solutions from the start continue to challenge traditional brands in fields of innovation and efficiency. According to Gartner's report, we should expect more enterprises that leverage digital capabilities and focus on customer experience to rise to prominence in 2022, following the footsteps of brands like Uber and DoorDash. In their efforts to stay competitive, non-digital-native businesses should look closely at what those innovators are doing, especially in customer experience, cost management, and agile solutions. Shift towards more agility and operating expenses optimization will impact the I&O field.

Gartner also predicts that by 2025 the roles of about 70% of I&O leaders who refuse to innovate will be reduced to legacy system support only. It would be a shame since the industry veterans still have a lot to offer to employers and their younger colleagues. At Maxima Consulting, we believe that the best way to progress is to facilitate intergenerational cooperation. That way, the experience and knowledge mix with the constant influx of new ideas and approaches. One common characteristic of digitally native brands is the customer-centric "Outside-In" approach, based on the belief that listening to customers (or users) and focusing on adding customer value will result in long-lasting and worthwhile relationships with them. This assumption led digital-native companies to pursue sophisticated data analysis methods and seamless user experience.

For many traditional brands that operate in the contrasting "Inside-Out" approach (i.e., companies that see their strength in what they are good at and what they know), full-on turn-around isn't realistic or even necessarily desirable. Nonetheless, introducing solutions that enhance customer experience seems highly desirable for every business model, considering how customer expectations evolve.



Disaster recovery plans will be taken more seriously

For years now, organizations have been moving away from owning on-premise servers to various types of cloud (private, public, or hybrid). Contrary to a popular belief, this change doesn't make disaster recovery (DR) unnecessary. As recent public cloud outages imply, DR plans are essential to prevent or minimize system and application downtimes.

To create acceptable DR plans, the I&O teams should engage with all proposed software solutions from the start. Only then preparing an infrastructure resilient enough to combat any unforeseen events is possible.

Depending on the budget, expectations, and Service Level Agreement (SLA) with a cloud provider, these plans will vary in intricacy. Infrastructure and process automation are crucial components of those plans since, if done right, automation guarantees a shorter recovery time. If the budget allows it, creating a single control plane to manage disaster recovery across all systems should significantly reduce the complexity that comes with using multiple public cloud vendors.

DR plans are still crucial irrespective of cloud or on prem servers, however another challenge in the I&O space is to keep IT services uninterrupted and bring absolute zero and hands free (Automated) automation.



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Management tools will evolve to be more comprehensive

As the need for various management and monitoring solutions increases, IT Infrastructure & Operations teams are facing a new challenge: to replace single-purpose tools with more comprehensive ones or to find ways for better integration of those tools. In 2022, organizations should inventory their current usage of management tools, including IT service management (ITSM), application performance monitoring, artificial intelligence operations and identify the areas where those solutions can be combined.

Integrating multiple systems into a single comprehensive tool is no easy task. But doing so may reduce overall costs, offer better insights by combining different data types, improve workflows, facilitate information sharing, and fuel other automation efforts.

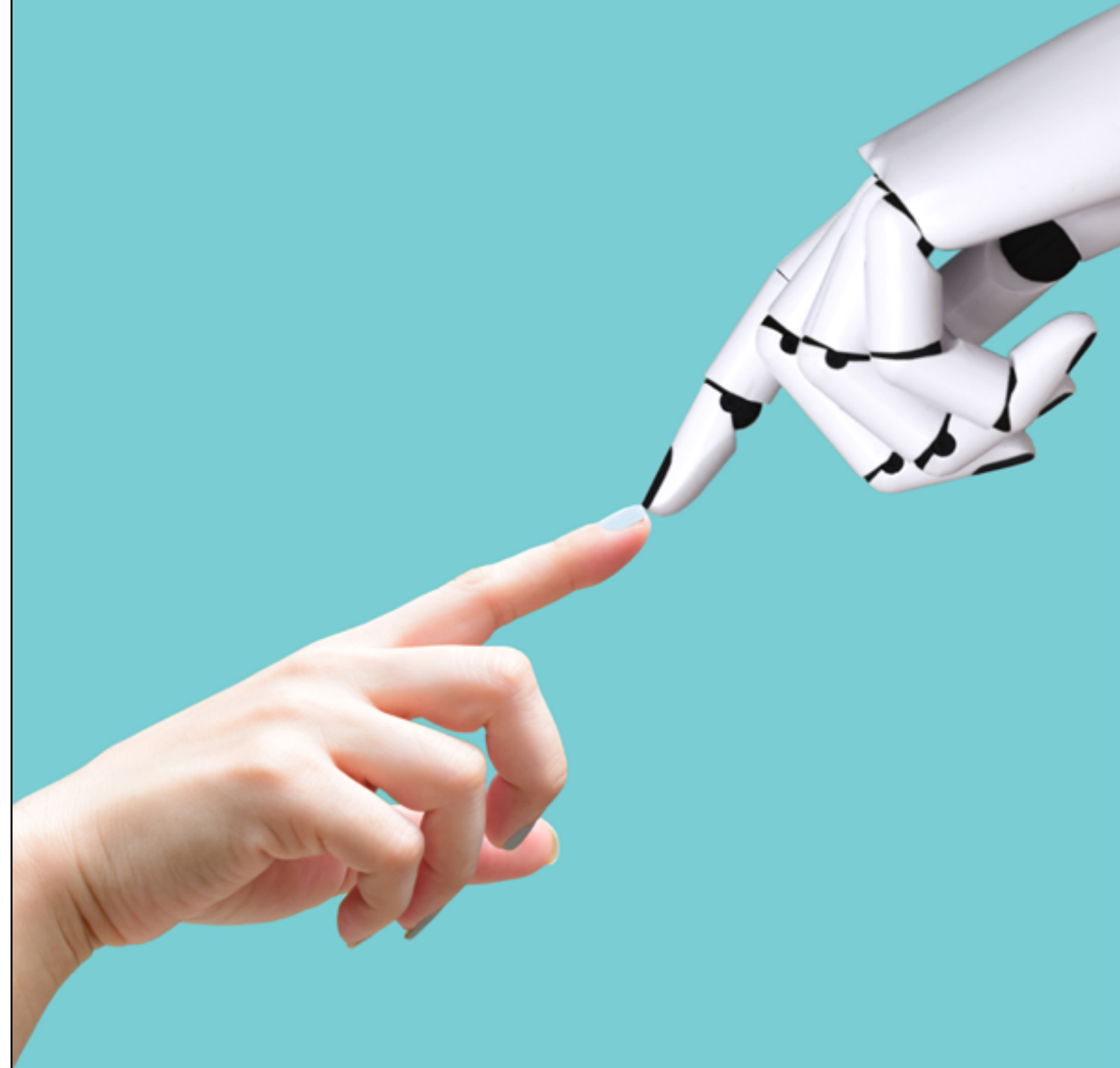
Automation will accelerate and become more prevalent

“Infrastructure automation is just as relevant as the business process automation in modern-day IT setup. In order to support the nimble way of business, infrastructure also needs to be agile and scalable, that’s why businesses should look into solutions like CloudControl Appz. Complete application infrastructure, including compute, storage, application stacks and business code can be brought up and maintained using modern-day cloud technologies. I&O leaders should adopt methodologies such as GitOps in order to achieve hyper-automation in infrastructure. GitOps, helps Enterprises to completely automate the process of release and upgrade of applications, right from the developers’ repository to the final production environment in the cloud. As soon as developers complete their coding, modern-day tools can pick up the same and run it through the CI/CD pipeline where the code is verified, compiled and released into Dev or QA or Production, as required. These tools ensure that the automation is timely, consistent, compliant, repeatable and leaves audit trails in case these needs to be reviewed later.”

- Rajagopal Nair, COO and Head of Business Development at Cloud Control Solutions

Hyperautomation is a holistic, business-driven style of automation that utilizes multiple technologies and tools, including robotic process automation (RPA), artificial intelligence (AI), machine learning (ML), as well as low-code and no-code solutions. Hyperautomation enables quick identification of repetitive tasks and aims to automate as many of them as possible. The I&O departments will play a crucial role in introducing this AI-augmented automation to their organizations.

This type of automation is becoming more popular by the day, as enterprises recognize the opportunities that come with the comprehensive outlook on processes that hyper-automation facilitates. Rather than automating disconnected tasks, this approach promotes strategic planning and better prioritizing in an attempt to achieve tangible business goals.





Data will continue to multiply

“IPv4 addresses ran out on Nov 25, 2019 and thus the IPv6 protocol was forced upon us. Despite all the technical reasons why IPv6 is better, the real drive for its adoption was no more IP’s to go around (imagine if the world ran out of phone numbers). IOT is a big driver in these addresses going away and IPv6 has a solution to better manage this massive explosion”

- Patrick Jamal, President at Maxima Consulting

Artificial Intelligence (AI), Internet of Things (IoT), and machine learning (ML) are the top new technologies that enterprises of all sizes pursue in their goal to improve efficiency and customer experience. To take full advantage of data acquired with these solutions, companies require excellent data management policies, centralized solutions, and clearly defined goals for the future.

According to research published by McKinsey, the global pandemic greatly increased the speed of digitization worldwide. We can be sure that the variety, velocity, and volume of data will further increase in 2022 (and the following years). Not all that data is valuable, but Infrastructure & Operations teams must be ready to support vast quantities of it efficiently.

To create an optimal environment for handling that much data in a timely manner, Gartner recommends that I&O leaders should collaborate closely with data specialists: in the fields of retention policies, cost efficiency, risk avoidance, and file analysis.

In many cases, it is simply imperative to conduct a proper data audit before deciding on the next steps so you can get a firm grasp of its current state. It’s more than likely that the sudden multiplication of data we saw since the COVID-19 first hit has left your company with a variety of files scattered across public and private clouds, internal data centers, and the edge.



Organizations will further pursue Anywhere Operations

The adoption of remote and hybrid work models accelerated since the Covid-19 pandemic began. What started as a necessity now is a new normal for many. Some employees can't wait to return to their desks, and some never want to go back to the office. Others appreciate the flexibility of hybrid work models that enables them to work from home, the office, or their favorite cafe.

Anywhere operations is an organizational model that supports employees regardless of their physical location. The goal of this approach is to facilitate work from anywhere in the world, including the office.

Successful implementation of this model is not easy. It requires adequate technology, well-designed processes, strong team structures, and commitment to change.

Nonetheless, according to the Forrester Predictions 2022 guide, about 60% of companies in North America will shift to a hybrid work model. One-third of them will fail at their first attempts to do so.

On the other hand, trying, failing, and then trying again can be better than choosing to go back to a 100% in-office model, as a significant share of employees today simply won't accept it. 47% of employees surveyed by Envoy say that they would likely leave their job if it didn't facilitate hybrid work in the future. Forrester predicts that monthly quit rates in enterprises that will reject hybrid and remote solutions once the pandemic ends could rise to as high as 2.5%.

Those companies that were already executing on their 'workforce of the future strategies' pre pandemic should already have implemented an early version of 'Anywhere Operations' to accommodate generation Z hiring. These companies will be successful in their move to a truly flexible workforce as they will already have employed leaders and collaboration technologies to compliment this new way of working. Maxima Consulting's client experience team have designed and delivered multiple global workforce strategies and assist any companies looking to deliver remote solutions for the future.



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Business proficiency will become crucial for I&O leaders

Today most I&O leaders have technical backgrounds, but this will change soon. In order to better align I&O with the company's business goals, they'll have to work on their business skills. After all, presenting the infrastructure-led innovation in compelling business terms requires more behavioral competencies than technical skills. For example, designing just-in-time infrastructure or choosing the best public cloud provider requires some degree of business acumen.

We can also expect new hires in I&O leadership to be more business-oriented. According to Gartner, by 2025, as much as 65% of new I&O leaders will have business backgrounds and no I&O experience. This change will impact whole organizations and drive innovations, as this new type of leadership will provide more business justification for investing in technology.

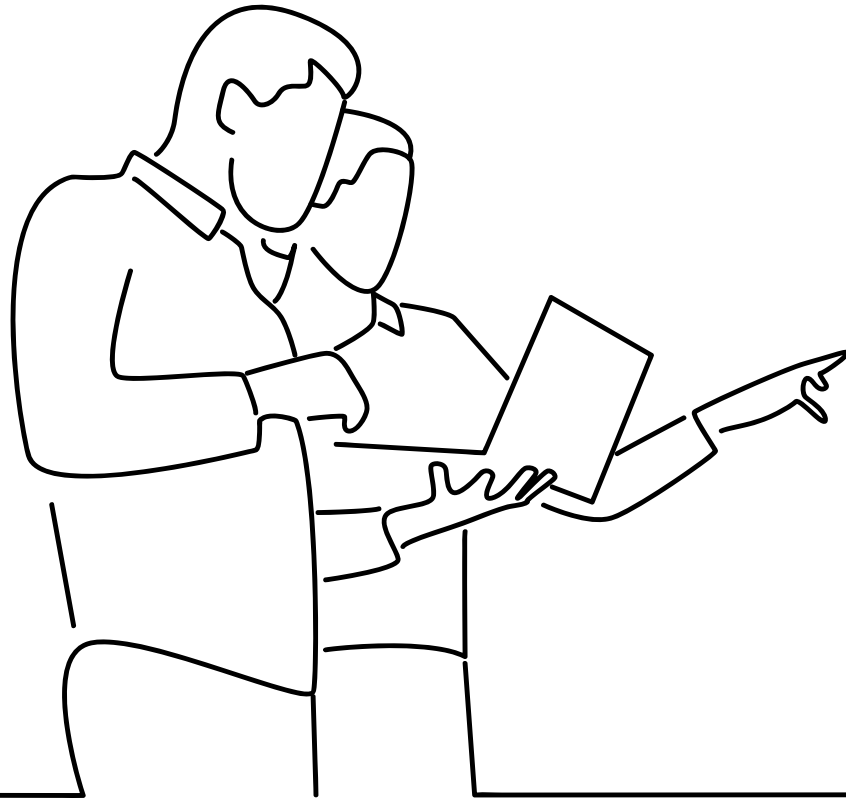
Moving to a product led Agile at Scale model naturally requires business oriented leaders and design thinkers to ensure that technology investment aligns with strategic goals. Business leaders that have bridged the gap between IT, Operations, Product and Client Service will be the most sought after as they will have the acumen and experience to invest in technologies that not only attracts and sustains client business but addresses regulatory and market problems statements in parallel.

Leaders with the right balance of business skills and understanding of technology drivers will employ the right technologists, client experience and delivery skills to build best in market products keeping an eye on the bottom line, compliance, client experience and employee engagement.



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I&O career paths will fork in multiple directions

To succeed in digital transformation, companies everywhere strive to reform their relationships with technology and their organizational cultures. Because of this, single-path career ladders in I&O departments are destined to be replaced with lattices that allow for vertical, horizontal, and diagonal career progression.

I&O employees should work with HR departments to identify their skill gaps and improve their learning agility, cross-domain expertise, and soft skills.

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Wrap up: Find your way from pressure to opportunity

With innovation coming to the forefront of many businesses' IT Infrastructure and Operations efforts, I&O leaders and their teams face the pressure to change. Understanding current trends is crucial to preparing for the future, but knowledge alone won't be enough. To effectively deal with the challenges that 2022 brings, I&O teams will need new competencies, better tools, dependable procedures, and, at least in some cases, a considerable mindset shift. However, it's important to remember that embracing current trends can notably increase the I&O divisions' influence on whole organizations.

It's also good to know that you don't have to tackle these changes alone.

At Maxima Consulting, we have years of IT I&O experience your business can put to use. Our friendly expert consultants are always on top of trends and thrive on challenges, so you can be sure they will deliver a state-of-the-art I&O solution your company needs to succeed.

Book a free consultation to learn how you can improve your IT Operations.

LET'S TALK

