VIEW POINT

AI—POWERED INFRASTRUCTURE

Abstract

In this point of view, we look at how enterprises can leverage the power of People + Software in the context of IT.

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THE FOURTH WAVE AND ENTERPRISE IT

History is full of great stories of change – but three gigantic waves of change leap out among them, because they changed how we do what we do, how we think, and what we think.

The first wave of change was the industrial revolution, driven by coal and steam. The second wave was the computer revolution, driven by the microprocessor.

The third wave was the internet revolution, driven by global telecommunications.

The fourth wave is upon us now – a wave of change driven by artificial intelligence – and it is all about amplifying human potential using the power of People + Software. In this point of view, we look at what that means for enterprises in the context of IT.

The Zen of the three waves of transformation is about amplifying human potential.

PURPOSEFUL AI: THE NEW DISRUPTIVE FORCE

When the computer revolution met the internet revolution, it only made change faster and more disruptive. Software became more powerful, collaboration became easier, and machines got smarter. The Internet of Things (IoT) is here, Artificial Intelligence (AI) and Machine Learning (ML) adoption are on the rise, and automation is everywhere.

So what's next?

Purposeful AI – combining artificial intelligence, machine learning, and deep knowledge of an enterprise, is already disrupting business and permeating every aspect of society – from economics to education, governance to global trade, from processes to personalization.

CHALLENGES IN THE ADOPTION OF PURPOSEFUL AI

Even when the impact of AI is easy to see, enterprises are wary about adopting it, and adapting to it. The reasons are manifold, including:

PRESSURE TO REDUCE COSTS

Does the investment justify the results, especially given that AI technologies are evolving?

SKILL SHORTAGE

Won't the reskilling and redistribution of the workforce change the workplace dynamic and pose a formidable challenge?

FEAR OF EXTREME DISRUPTION

Do I really need to become data-driven, and find new business models?

SECURITY CONCERNS

How secure will sensitive customer information be? I fear loss of control and accountability.

Just like any new technological trend, AI has its own challenges and concerns and they must be addressed before any enterprise can embark on a strategic initiative.

THE RIGHT WAY TO ADOPT AI

When enterprises face the challenges head on and address the concerns, they can adopt purposeful AI which will enable people do more of what they are good at – imagine, ideate, and perform the judgmental, creative, and cognitive parts of their jobs, and by doing so, attain their true potential, even in the context of the enterprise.

But the method of adoption is as important as the economic implications. The AI field is a vast one – there are many solutions to solve many problems. That is why, enterprises seeking purposeful AI must have the right balance of these factors – Humanics, Mechanics, and Economics – that is right for them.

HUMANICS

Using the power of imagination to discover new possibilities and create new experiences

- Assurance – powering intuitive client experience
- Change the organizational culture
- Reskill and reorganize talent

MECHANICS

Converting the new possibilities into reality, uncovering the massive intelligence hidden away in systems, machines, and people

- Shift from point solutions to an integrated, cohesive approach
- Reinvent system landscapes
- Migrate existing workloads to take advantage of the new AI-powered underlying infrastructure

ECONOMICS

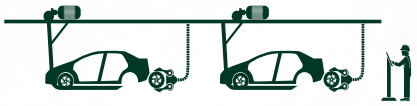
Finding the right economic model for the right context

- Leverage `technology' arbitrage
- Taking cost out of business

THEY ARE ALREADY RIDING THE FOURTH WAVE

EMBRACE COMPLEXITY

Infosys worked with a retail chain and implemented a simple dashboard that provides a comprehensive view of the IT landscape. It is powered by AI and ML, and allows even outlet managers to find and fix issues. Even if incidents need to be fixed manually, machine learning learns how to fix the problem automatically in the future, simplifying maintenance, and ensuring uninterrupted system availability.



CHANGE FASTER

When an auto major needed a supply-chain management system so that they could start production just 72 hours after customers finished customizing their cars, Infosys modernized the IT infrastructure with automatic health checks, pattern analysis, and automated error fixes. This helped the company focus on changing faster with seamless production, and keeping pace with evolving customer expectations by offering various value-added services.

INNOVATE FASTER AND SMARTER

When a global auto major decided to leverage big data to improve product development and offer contextual services, Infosys set up the IT infrastructure that collects 60 million data points from connected cars every day, enabling the company to explore some amazing capabilities like algorithms that recognize, remember, and learn to adapt to driver habits, sensors that monitor and alert owners to service their cars, and much more.

GET MORE DONE

At a global major, synonymous with finance, AI- and ML-enabled systems of Infosys are helping traders focus on trading, by autonomously handling the IT infrastructure – running checks, patches, updates, and upgrades. They free up processing power to ensure overnight positions are validated, records are evaluated, and accounts are settled, ensuring the latest information is in the hands of the traders – reducing trading risk by 15%.

REINVENT THE BUSINESS

Recently, a global office equipment major set an ambitious agenda for change: To evolve into an enterprise services company. Infosys played a key role by consolidating a distributed IT setup – from nine servers to just two data centers, optimizing performance, simplifying maintenance, and lowering IT costs by 30%. The company could now reinvent itself, launching new managed document-, production printing-, office-, and IT-services – worth US$25 million.

RIDING THE FOURTH WAVE, WITH PURPOSEFUL AI

Embracing change, rather than avoiding it, is the key to the future, because disruptive forces can arise from anywhere.

The successful enterprises are those that are prepared for the next wave of change – with flexibility and adaptability.

And here are a few things that can help enterprises look at the road ahead with optimism, and ride the fourth wave:

TECHNOLOGY WILL AMPLIFY PEOPLE

Contrary to popular belief, AI will not kill jobs. It will, instead, release employees from monotony by taking over repetitive tasks, and will help improve project productivity. It will allow people to dedicate talent and skill to solving newer problems, creating true value in areas that require innovative solutions to existing and future problems.

FIND THE RIGHT STRATEGY

AI is not just for companies with lean processes and systems. Enterprises that use traditional services can access the power and benefits of AI too, by first identifying the right strategy and platform. Enterprises can also take up pilot projects to test how AI can work for them, exploring and finding a strategy and approach that fits their goals, and measuring the actual impact it will have on their organization.

DRIVE AI IN THE ENTERPRISE SENSIBLY

Some enterprises fear the loss of control and possible security risks that AI brings in. But it is important to know that security mechanisms that deliver a final human level of authentication can be easily applied, and are a simple, effective way to ensure security.

AMPLIFY YOUR ENTERPRISE POTENTIAL

For an enterprise, the future is full of unrestrained possibilities. And purposeful AI will play three key roles in turning those possibilities into reality. They are:

AUTOMATION

This is a role that AI has already taken on. And powered by machine learning, it will only become more powerful. AI will not only keep machines up and running, automatically finding and fixing errors, but it will also drive efficiency, by allowing people to use the power of automation to their advantage.

As machines take over repetitive tasks, it will free humans from monotony and allow us to be who we really are – thinkers, explorers, and dreamers.

INNOVATION

As we get the freedom to think, explore, and dream of the many possibilities that are suddenly within reach, we will need to innovate – to ask new questions, and seek better answers. The world is a complex place, and complex problems will need complex solutions, and it is up to us – humans – to find them.

Succinctly put, scientific enquiry is not about the search for knowledge, but for the gaps in it – it is a journey into the unknown.

LIFELONG LEARNING

As we journey into the unknown, we have to relinquish control of 'what is' to the machines, so we can aspire for 'what can be'. And doing that involves learning, learning throughout our lifetimes – to seek, to explore, and to understand. So what do you want to be? What do you want your organization to be? What do you want the world to be?

DIGITAL INFRASTRUCTURE IN THE NEW WORLD

Software is the new Hardware, and every aspect of infrastructure management will soon be software-driven. Intelligent systems and cloud-native applications that run on them will manage themselves. Applications will talk to one another, request additional capabilities, and get them, all without human intervention. This will give rise to the construct of 'Micro-Services Architecture'.

This 'Digital Infrastructure' will be powered by purposeful AI, and maintained by self-healing, machine-learning backed algorithms. The systems will become an integral part of the Internet of Things (IoT) and use sensors and mobile devices to collect up-to-date information and deliver personalized services.

A banking firm is leveraging voice-recognition through a smart speaker and mobile app to deliver seamless banking and shopping.

An engineering company is able to promise uptime and availability of its turbines using sensors to monitor systems and predict failures.

The use of a combination of devices, software, and infrastructure to drive innovative customer experiences like these companies are doing, will not only change IT processes from 'people managing processes' to 'machine managing processes', but it will change business processes, too, helping enterprises gain deep insights and deliver delightful customer experiences. That is the power of People + Software, and the fourth wave.

AM I READY FOR AI?

When you decide to leverage artificial intelligence, machine learning, and deep learning, a very good first step is to evaluate the infrastructure you already have in place using the Infosys tool that measures your organization's AI maturity index.

Find out now, at: http://aimaturity.com/

For more information, contact askus@infosys.com

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