

CONSULTING IN THE TIME OF DIGITAL TRANSFORMATION



“If you don’t know where you’re going, any road will get you there.” - paraphrased from Alice in Wonderland.

Unlikely as it seems, this piece of Carrollian wisdom continues to guide much of enterprise IT strategy even today. By adopting new technology in bits and pieces ad hoc, or based on instinct, enterprises have created a highly complex landscape over the years. This landscape comprises intricate systems and applications, which pose several challenges related to scalability, agility, and risk, to name just a few. As organizations battle these legacy challenges on the one hand, while dealing with a number of externalities such as disruptive competition, technology evolution, and regulatory strictures, on the other, they need to take a comprehensive, long-term view of their businesses. At the same time, they must take stock of technologies that can enable a future vision. In short, they would need to create a master technology blueprint that would enable them to transform into successful organizations in a world that is being irrevocably digitized.

At Infosys, we are leveraging our extensive consulting knowledge, IP, and delivery experience to help a number of clients around the globe to create and realize their master technology blueprint – a transformational roadmap. This is an ongoing journey in which enterprises revisit and **renew** their existing technology landscapes and capabilities while exploring entirely **new** ones.

Since the renew and new imperatives are primarily directed by external realities, enterprises should start their journey introspecting on the biggest environmental factors driving their business. They should then use that insight to prioritize what to renew in their existing construct of business processes and supporting technologies, as well as how to acquire (or design, define, and execute) a new construct of capabilities.



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This is necessarily a dual pursuit – when a business acquires a new capability, it has to connect it back into the existing landscape to reap the benefits at full scale; most times, this calls for renewing the systems that the capability is being connected to. At other times, a new capability, such as Design Thinking, enables an organization to devise an alternative solution to a ‘standard’ renewal problem or extract higher value from existing strategies.

As we delve deeper into these issues, the mutual reinforcement of the renewed and exploring the new will become self-evident.

A knowledge-based approach to renewal

The technology landscape at most enterprises consists of a core ERP solution, numerous applications, and underlying infrastructure powering it all. It is complex and expensive, to say the least. Hence, one very obvious goal of renewal is to simplify the landscape to make it both cost-efficient and tractable. But while efficiency is important, most enterprises would desire a lot more from a renewal initiative. For instance, they would expect their systems to become flexible and responsive enough to integrate new capabilities, once these are developed, into the ecosystem in a short time.

We believe that every renewal must essentially fulfill one or more of the following three needs:

Automate knowledge – simplify: Using knowledge-based engineering, organizations can tap into the vast knowledge resources trapped inside system silos, and thereby avoid duplicating applications and capabilities across the enterprise. To illustrate, consider a redefined Aerospace Integration Testing approach that we took for one of our clients. We replaced the traditional method based on predictive analytics with a hybrid approach combining structural dynamics and an aerodynamics data-modeler with artificial neural networks. This meant that ‘unbalance’ forces in an aircraft could now be predicted using historical flight data rather than

iterative flight tests. This reduced flight testing time and related costs by 50 percent.

Automate support – reduce cost-to-run:

Enterprises can fulfill this requirement by using a support automation platform that leverages AI and automation technologies.

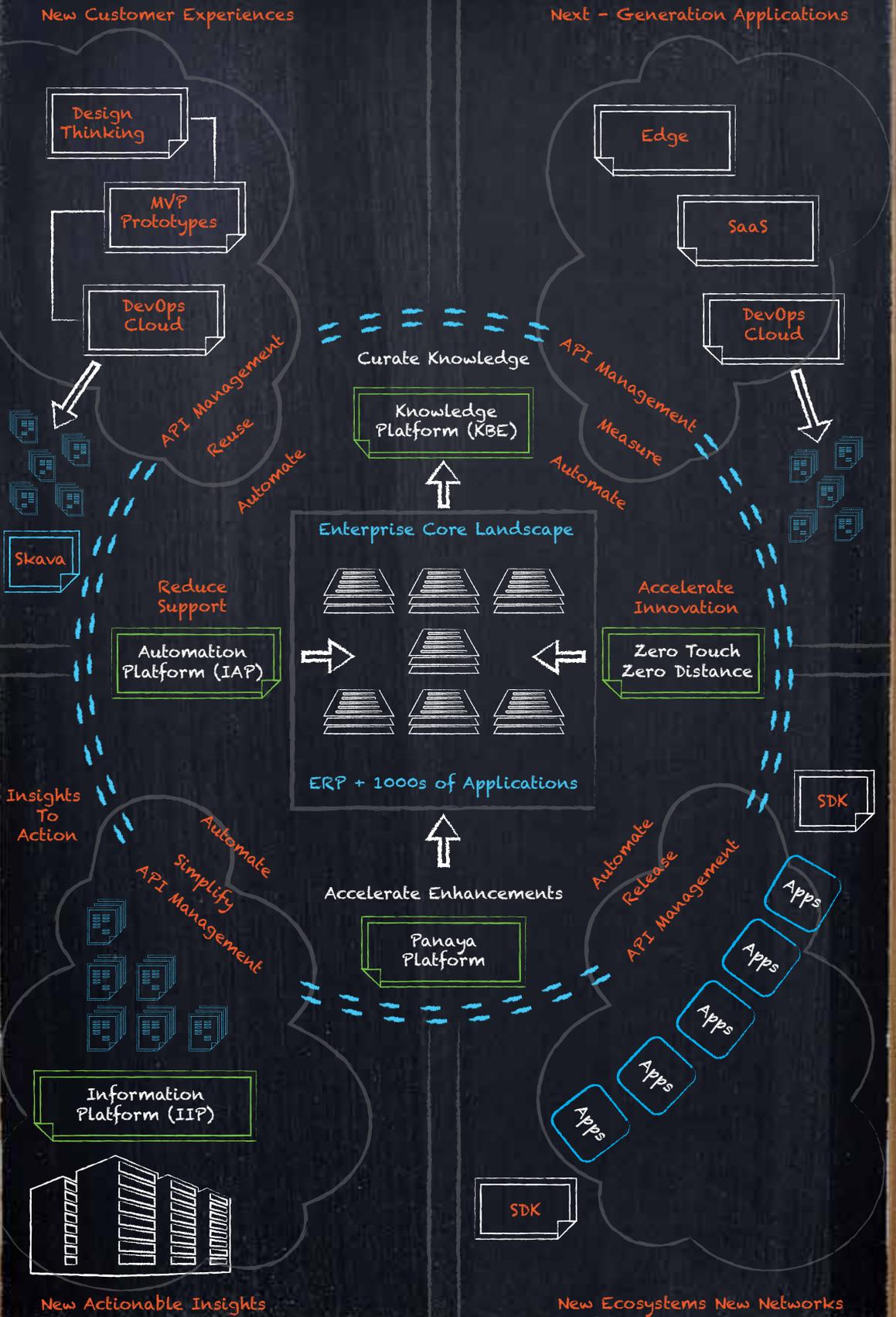
At Infosys, we have developed an intelligent automation platform that incorporates sensing (Human-Machine interaction, M2M interaction), decision-making (reasoning and prediction, know-how, and learning), and task execution (orchestration and services). Recently, this platform helped a telecommunications company save US\$1.3 million while resolving issues 48 percent faster. Similarly, for an agribusiness, this platform enabled 25 percent faster resolution of tickets.

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Automate re-engineering – reduce time-to-upgrade: Enterprises have to periodically release new capabilities into the market and update bespoke applications. They can leverage automation solutions to speed up these releases. Infosys continues to invest in such automation solutions and we recently acquired Panaya, a leading provider of automation technology for large-scale enterprise software management.

Renewal, as mentioned at the outset, is also deeply linked with the successful adoption of new capabilities. Hence, along with extracting knowledge, reducing support, and accelerating releases, facilitating the development, creation, and interfacing of new capabilities with the existing technology landscape is integral to the renewal agenda.

This is achieved by ‘fire-laning’ or isolating the complex core to prevent it from impinging on the enterprise’s new capability requirements of speed and agility. Using APIs, it is possible to create a variety of services that can drill into core systems to expose their capabilities or use data, algorithms, and workflows within, without touching current systems or infrastructure. For instance, a retailer can elevate the shopping experience on its ecommerce site by simply modifying the experience layer without tinkering



Legend Knowledge-based platform Knowledge-based applications

with the underlying system. Another way of building new functionalities is to create bespoke applications, again using new capabilities such as DevOps and automation. We used some of these techniques to create and manage an information platform to analyze customer data of the order of 30 million records per day, for a leading loyalty management company. Yet another way is to integrate with a third-party application based in the cloud. Once again, the Renew-New duality comes into play, as enterprises will be compelled to increase the flexibility and agility of current infrastructure to ensure it can interface with an increasing number of new applications that will originate and operate on the cloud.

A design-thinking approach to the new

Our new capabilities framework starts by taking a step into the unknown – an unknown realm in which problems and opportunities, as well as the solutions and capabilities to deal with them, are not known. Using the Design Thinking principles taught in our workshops, client organizations can discover these important, but yet-to-be-articulated problems, as well as the best ways to resolve them. For instance, we helped a leading European home automation company apply Design Thinking to change an ‘engineering’ product design mindset to one of customer empathy. As a result, they unearthed their customers’ true pain points and based on these, designed and tested a prototype solution that will soon hit commercial production. Through Design Thinking principles, we helped a consumer packaged goods company understand the pain points of different user personas and design its eProcurement platform with the active involvement of its users — requesters and suppliers.

Following problem discovery, enterprises take the next step of defining design challenges using Design Thinking principles, before moving on to the final step of creating a pilot and establishing proof of concept (POC). Sometimes, they may not have all the

requisite capabilities to build a functioning POC. In such a case, they can easily transcend their limitations by reaching out to alliance partners, third-party vendors, or even innovative startups to put it all together.

When a prototype approaches production-readiness, it needs to be integrated back with core systems and processes, or the production-grade environment in the enterprise. In this way, a cycle that began with the articulation of a new idea again ends with a renewal of the enterprise’s current landscape. And then it’s time to embark on another cycle of renewal, another new initiative. When it comes to Renew and New, the journey is indeed the destination.

Aikidō – Next-gen services that converge design thinking, platforms, and knowledge-based IT

Aikidō is an East Asian martial art that signifies the way of unifying life energy. And at Infosys, our Ai (Platforms), Ki (Knowledge-based IT) and Do (Design Thinking) services help combine the knowledge and energy in an enterprise towards its strategic path and priorities.

- **Ai (*The Combining*)** refers to platforms and platforms-as-a-service to build intelligent solutions. *Ai* is about platforms that help harmonize and unify the disjointed initiatives in enterprises – and help build solutions to emerging business problems.
- **Ki (*The Energy*)**, the first of these services, is knowledge-based management and evolution of landscapes. It captures the knowledge within an organization – in its people, structures, and systems over long periods of time. *Ki* is a large - scale, modular service to help renew enterprise landscapes.
- **Do (*The Path*)** refers to the service offering on Design Thinking and design-led initiatives that will provide Infosys the framework for finding, understanding, and defining the problems that are most important to clients and their businesses

A culture of learning and building thought leadership

When a company has to go through a fundamental transformation – whether it is a big box retailer grappling with digital, an oil major dealing with the reality of a hyper-connected world, or a fairly digitally advanced bank now addressing inclusive banking and next-generation kinds of opportunities – it calls for a change in mindset and attitude, along with acquiring skills higher up the value chain. It is in this context that training, education, and a culture of innovation, trust, and empowerment become instrumental for success.

At Infosys, we are steeped in a culture of learning traditionally, and we are further enhancing it by implementing Design Thinking training across the board. We believe that the user-empathetic dT framework will change the way we investigate, innovate, and deliver solutions for our clients. Similarly,

idea generation initiatives, involving crowd-sourcing of innovative ideas among employees, are strengthening our innovation ecosystem.

Thought leadership is fundamental to our consulting practice. We continuously invest in building capabilities within the company. This is supported by our primary research as well as collaborations with academic institutions and think tanks. Our collaboration ecosystem includes institutes such as Stanford University, Purdue University, East China Normal University, and over 100 strategic partners globally.

With an arsenal of knowledge-driven renewal of technology, Design Thinking principles for problem and solution discovery, and perennial learning, we are aggressively working towards being proactive design partners to our clients, and not merely aggregators of past knowledge.

About the Author



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Sanjay has over 25 years of diverse experience in incubating new businesses, product innovation, developing new business models, defining business strategy, and leadership development with leading businesses globally. He is deeply engaged with CXOs of global corporations in identifying and realizing new sources of business value and accelerating innovation.

Sanjay has a degree in mechanical engineering from the National Institute of Technology, Srinagar, India.

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