TECH NAVIGATOR: REIMAGINING EXPERIENCES AND PROCESSES

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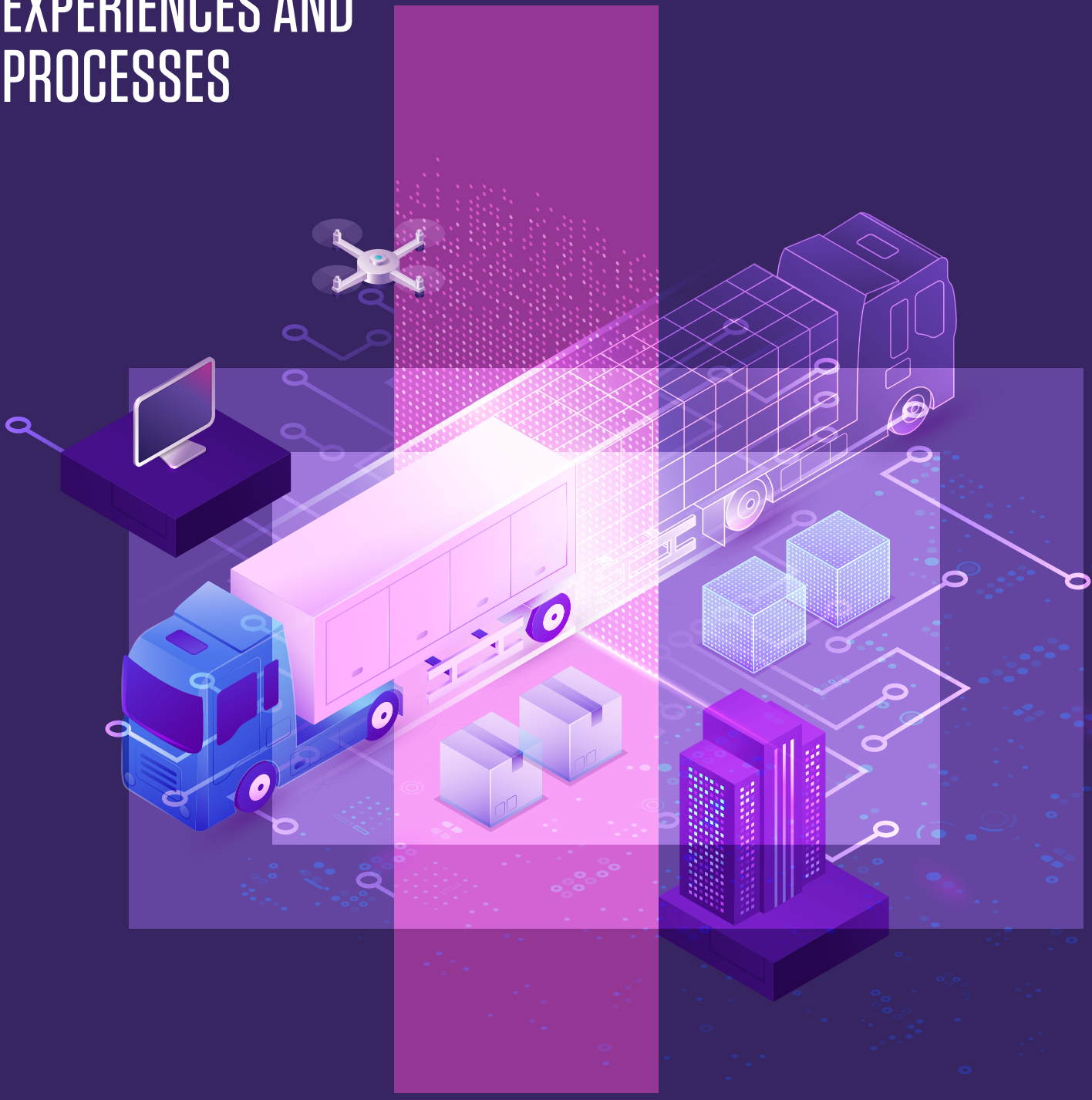

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Birth of the AI assistant

Technology, as we posited in last year's Tech Navigator - Building the Human-centric Future[1], has the potential to empower individuals. AI-first organizations will offer experiences that unlock the full potential of their workforce.

Here, technologies augment rather than replace human capabilities. One way to do this is to use AI assistants, based on generative AI. The vision is that AI assistants will help individuals streamline their work by automating tasks such as code-writing, data review, and document classification. This means humans are released from time-consuming tasks and can turn their attention to value-generating work.

Deriving business value from this technology requires firms to think of the personas, experiences, processes, and jobs that can be reimagined using AI and empowered through AI assistants.

Figure 1 sets out how these sort of AI assistants can be applied to the software engineering lifecycle.

> As we go AI-first, we'll be giving each Infosys employee an AI assistant. Through generative-AI capabilities, the assistant will be a steady and empathetic human counterpart, well versed in the day-to-day activities that employees have to do, while amplifying their creative and human potential in the process.
>
> **Nandan Nilekani**
> Chairman of Infosys

Figure 1. Applying AI assistants to the software engineering lifecycle

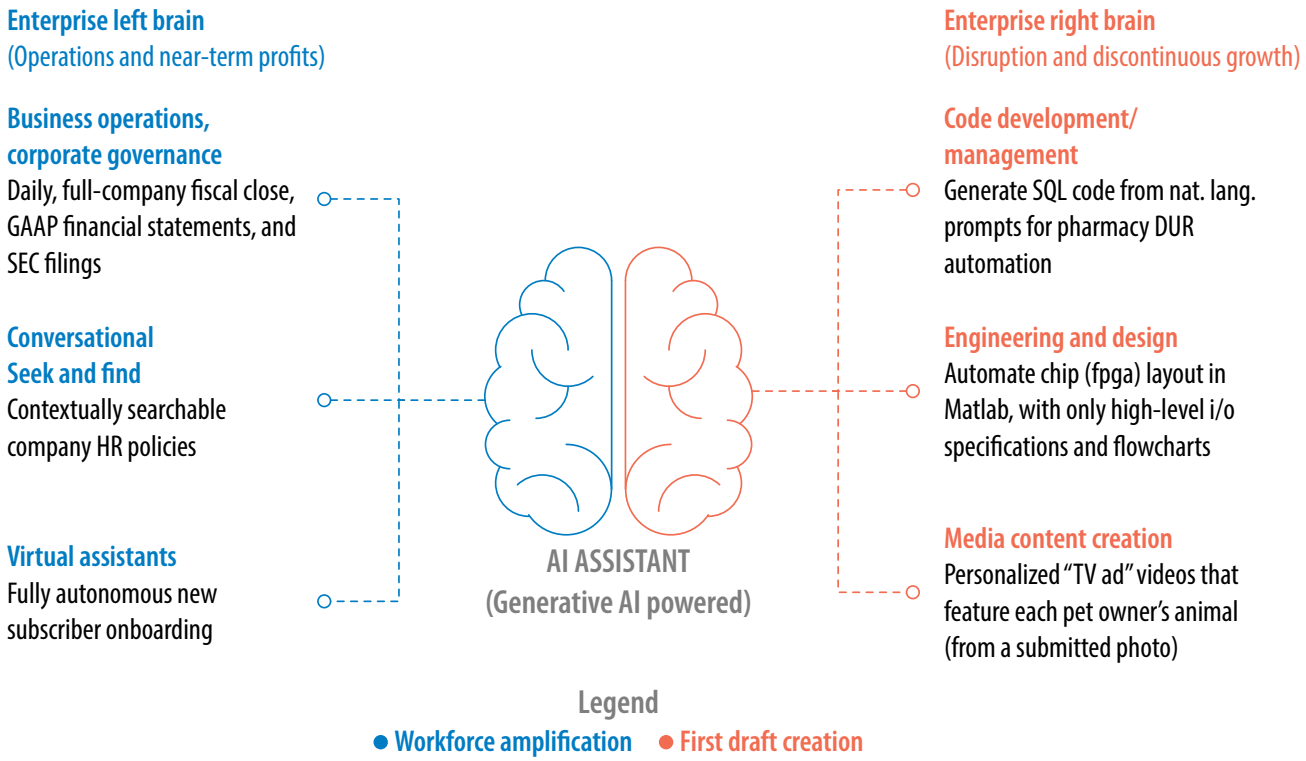
	Lifecycle stage	AI augmentation through AI assistants
1	Project planning and analysis	• Effort estimation planning and analysis • Risk assessment • Instant simulation
2	User stories and backlog development	• Document completion and suggestion • Product features completion • Requirements completion analysis • Knowledge management
3	Visual and technical design	• Image generation, • Image inpainting • Headline/copy texts • Website and code generation
4	Build	• Code generation • Code completion • Code documentation • Code translation • Design pattern implementation • Unit test case generation • Bug prediction • Application security testing
5	Test	• Optimize the number and value of tests • Eliminate redundant tests • Automated test script generation, self-healing of scripts, visual regression, test suite optimization, defect prediction, automated test selection – based on code changes, coverage analysis
6	Operate	• AIOps • Predictive failures and actions • Digital workers (orchestrating tasks) • Knowledge management
7	Refactor	• Code refactoring • Bug predictions • Application security testing

Source: Infosys

AI assistants will help AI-first organizations maximize profit from improved operations (what we term "enterprise left brain") while at the same time creating new forms of value (we characterize this as"enterprise right brain"). This AI-first organization is "structurally ambidextrous" (see Figure 2).

We recommend that any AI-assistant development initiatives in an organization should be evaluated and compared along three fundamental dimensions: business impact, ease of implementation, and trustworthiness.

Figure 2. Structural ambidexterity in corporate innovation



Source: Infosys

The AI assistant must also have explainability, governance, and provenance baked into the design of the LLM, a theme we turn to in the third section of this report.

AI assistants are an example of AI-in-the-flow, where individuals can do their work in one screen, with underlying technologies abstracted away. We believe that this AI-augmented user experience will improve employee satisfaction and, as Digital Radar 2023 found[2], increase employee retention.

AI-powered processes

AI enables better, faster, and more automated processes. Better processes lead to better outcomes, which enhance efficiencies.

However, the change initiative must be considered carefully. Some firms plug AI into existing processes to make employees' lives easier or to generate ad-hoc customer insights. This has little impact on overall organization health. Conversely, others attempt to overhaul the entire organization at once — but are overwhelmed by too many moving parts, stakeholders, and the sheer number of AI initiatives.

One approach is to first identify processes that benefit from AI-led microchanges, then use AI assets to deliver the reimagined process. The Infosys AI Store provides more than 12,000 AI use cases, including generative AI use cases and more than 150 pretrained AI models, 100 datasets, and 50 AI templates to unlock process value at scale.

We also recommend developing an AI canvas for each of the prioritized AI processes. This covers the business problem; expected business value; expected end-user value; data strategy for training and modelling; an objective function for measuring effectiveness; and the guardrails and controls to be put in place during implementation.

Some industries are ripe for business process redesign, while some are advanced in their journey. Insurance companies use advanced AI to improve client onboarding and underwriting.

Utilities have begun to use AI for equipment maintenance processes and procedures, especially for remote areas.

Computer vision algorithms are automating home and car repair, while AI-based telemedicine is changing the way healthcare is delivered.

Mercedes Benz aims to use advanced AI to shorten the time its cars spend on the test bench. The impact goes beyond faster test cycles, leading to decreased CO2 emissions without reducing standards. Infosys is adding AI assistants to its mobile employee experience layer for sales personnel to incorporate fresh relevant market intelligence as part of its AI-first sales tool operations.

The caveat is no matter how much AI is used in process re-engineering, a human in the loop is always necessary, to comply with regulations and ensure trust, transparency, and explainability. Telemetry should be used to capture feedback on AI effectiveness and use the data to improve the AI model performance over time.

Process re-engineering is reaching another level of performance in the AI era. Smart companies view the introduction of AI as rationale for a fresh perspective and higher expectations for end-to-end processes and customer journeys. As firms increase their use of generative AI, they will automate or augment everyday tasks and reimagine their business processes. Entirely new business models[3] will emerge to generate revenue, and the operating models will follow to make them a reality. AI-first business models and experiences will then allow small businesses to appear big and incumbents to move faster.

References

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