

TECH NAVIGATOR: BUILDING THE HUMAN-CENTRIC FUTURE

Infosys[®]
Navigate your next





The impact of technology is universal. Machine intelligence has started challenging human intelligence in both good and bad ways. Before intelligent machines eclipse human intelligence, it is time to build technologies that behave the human way.

This report attempts to balance two perspectives. The first perspective is ideal: a digital world with human-machine symbiosis — good for the environment, society, and individuals. In this world, real-time, socially aware communication is beneficial; machines direct humans toward better health and prosperity; emotional human-machine interfaces alleviate stress; and virtual spaces enable pandemic-constrained populations to meet, innovate, and produce.

But the other perspective is practical and ultimately threatens humanity: technology removes our agency,

Focusing on human outcomes as well as technology adoption leads to

\$357 Billion 
in extra profits

transforms our actions into metrics, and makes us addicts to algorithms and prone to threats.

While the negative side of technology will always be there, the ideal version should take over for a better world, both in terms of monetary gain and stakeholder impact.



ESG is a platform for a socially responsible future. It helps firms evaluate employee well-being, employee experience, and how well they consider customers and partners in their operating models. It also includes workforce profile, benefits, careers, productivity, well-being, and culture, along with ethical metrics related to immoral behavior and reskilling programs.

Infosys knowledge institute research found that business growth can increase by **63%** when Human-Centric levers such as upskilling and using advanced collaboration platforms are adopted



Our [Agile Radar 2021 research](#) found that human-centric levers, such as upskilling, self-organizing, and using advanced collaboration platforms, can increase business growth by as much as 63%.² Firms instituting these human-centric levers at scale (termed “Sprinters”) have better business and IT outcomes and are more likely to set long-term goals for their teams. Some industries, including healthcare, manufacturing, and high tech, do human centricity particularly well. They build solutions with the human front and center, and they are faster and

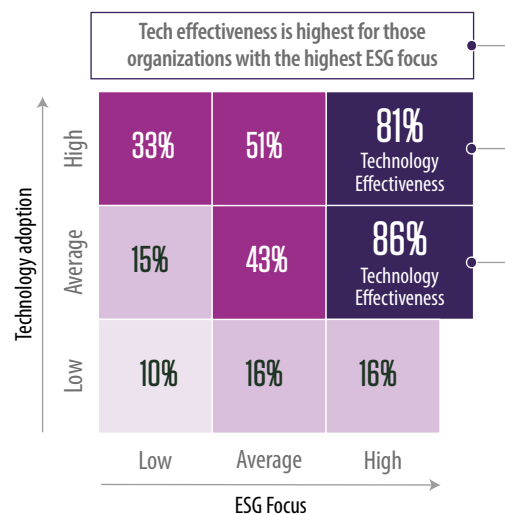
Figure 1. Technology adoption and an environmental, social, and governance (ESG) focus combine to deliver better technology outcomes

But how?

Human-centric intelligent systems are the mantra here.

Our recent [Digital Radar research](#) evaluated how well technology meets its primary goals for a business. This might mean increasing revenue and innovation, or fostering more customer engagement. We discovered two things. At a certain point, there are diminishing returns from more technology. But those companies that focus on impacting stakeholders, including society and the planet, achieve the highest effectiveness from technology (see Figure 1).

In fact, the profits they generate from their technology are \$357 billion more than those that don't focus on these human outcomes.¹



Source: Digital Radar 2022, IKI

more innovative. CVS Health is one such example. With a focus on sustainability, equity, and customer experience, the company's revenue grew over 10% during FY20-21³, with its shares advancing more than 30% in 2021 alone.⁴

So, how can your firm do the same? What technologies, processes, and ways should be adopted to outpace competitors and resolve the pain points of diverse stakeholders?

The **Tech Navigator's** first edition summarizes the need and approach for building a human-centric future. Here, the three building blocks are 1) human-centric design with purpose at its core, 2) hyperproductive, empowered humans, and 3) an enterprise metaverse to operate and thrive in (see Figure 2).

Theme 1:

Humans at the center of technology design and development

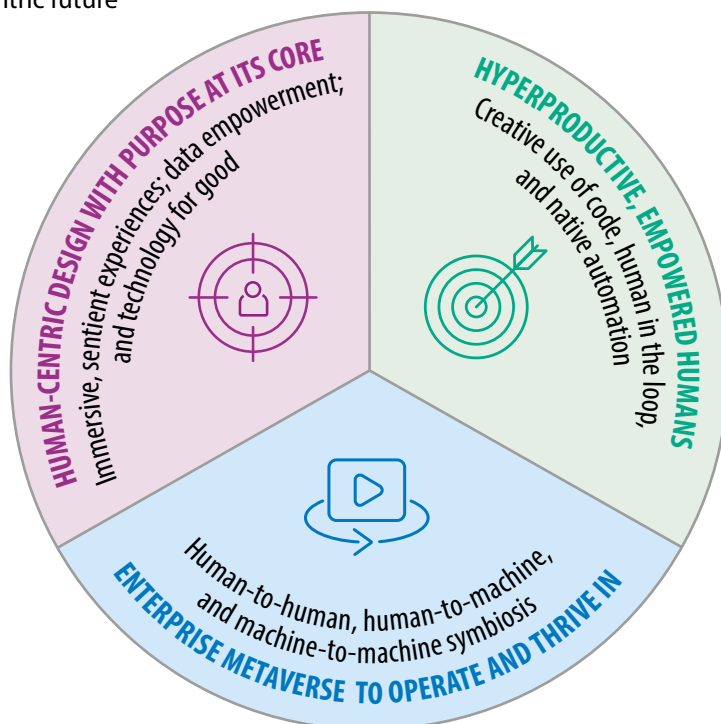
Our research shows that executives across firms rate stellar **human-centric experiences** as essential to well-functioning business and operating models. A focus on efficiency is not enough, and chasing revenues alone can risk business resilience. Solutions should be compatible with human wants, needs, and desires, and account for human fears around safety and transparency throughout the user journey. In all, solutions should be



Figure 2. Three building blocks of a human-centric future

THESE THREE BUILDING BLOCKS CREATE AN ENTERPRISE THAT

- Is more resilient, agile, sentient, and autonomous
- Is more human, with increased social credibility and profits



Source: Digital Radar 2022, IKI



increasingly **sentient** — a term often used to describe Infosys. Here, underlying processes are redesigned with human aspirations and experiences in mind. Systems anticipate human behavior and act immediately with real-time recommendations for what humans should do next. **Data empowerment and protection**, the ability to give back to humans the control of their data, should also be woven into the entire information lifecycle. This is increasingly important. According to research, no industry sector received a “trust rating of over 50%” when it comes to how they acquire, process, and use data.⁵

Almost every organization is now steadily working toward diverse ESG goals. Apple has positioned itself as a sustainability leader, while Microsoft is the most widely held company by U.S. ESG funds.⁶ The top 500 global asset managers worldwide emphasize the “sustainability nexus” that links purpose, diversity, equity, and inclusion and ESG principles.⁷ To get ahead of the crowd, Amazon augmented its R&D budget on **technology for good** in 2020 more than many large EU countries. From better ways to quantify pain using data-driven tools to crowdsourced, low-power Wi-Fi for energy-efficient networks, technology is increasingly being used to make planet Earth a better place.

Theme 2: Hyperproductive humans

Systems built around human wants, needs, and desires are important, but coders are in short supply. Firms should do well to harness the creative capability of the entire workforce.

No code/low code (NC/LC) technologies require little coding knowledge to build applications and processes. This enables firms to overcome the shortage of talent in this area while empowering “citizen coders” to utilize their collective imagination on a working product.

Through NC/LC, executives build a strong software pipeline and democratize the firm’s intellectual property (IP). This way, they can make their business more innovative, resilient, and data driven. According to Gartner, NC/LC applications will account for 65% of all app development by 2024. And Forrester perceives the LC market alone to be worth \$21 billion by the end of 2022.⁸



A further step toward hyperproductive organizations is **artificial intelligence (AI)-driven coding and writing**. Analysts say that cognitive enhancement with AI created \$2.9 trillion of business value in 2021 alone, surpassing all other AI initiatives.⁹ Here, firms like OpenAI, Google, and Microsoft are creating AI systems that do the hard labor. These systems turn natural language into different programming languages, auto-complete segments of code, fine-tune AI models, search source code, and find troublesome bugs. Some machine learning (ML) systems are even used to create better ML models.

Clearly, we are heading to a creation where one simply speaks in an Excel interface, and a sales report is generated in minutes.

Cognitive enhancement with
AI created almost
\$3 trillion
 in business value in 2021
 alone, surpassing all other
 AI initiatives





Experts predict that, by 2025, more than one-fifth of retail products will be manufactured, packed, shipped, and delivered without being touched. The final step of this hyperproductive journey is a paradigm called **native automation**. Here, organizational processes are taken apart and reimaged from the ground up, infusing AI and sentient principles into technology systems. Our research has found that organizations leading in AI operations, including the ability to scale native automation, outperform laggards by as much as 6 percentage points of operating margin.¹⁰ Live Enterprise, Infosys's own journey toward a completely self-learning, evolving organization, is a good example of this transformation, as is our work with BP and its fully autonomous store. As firms become more hyperproductive, humans will relinquish ownership

of mundane tasks to computers and concentrate on higher-value work. They will work with and not on computer systems, forming symbiotic relationships that enable them to enjoy their work-life much more while delivering better business outcomes. Our AI research has found that by focusing on both the employee and the customer, operating margins can increase by 2 percentage points. This implies that a U.S. banking firm with revenue of \$10 billion can add an extra \$200 million through this — no small figure, right?¹¹

Theme 3: The enterprise metaverse

The metaverse concept has been recently popularized by Meta but also finds applications across enterprises. We define the metaverse as a world where humans are connected to digital twins of themselves (and everything else imaginable), with identities and assets completely run by computer code and transferable across platforms. The metaverse will be underpinned by **cloud continuum**, edge products, and other exponential technologies, with a creator economy built around **NC/LC** and **collaborative design** and development tools. In our Agile Radar research, we found that the ability to collaborate across functional boundaries increases a firm's chance of growth by as much as 7% more than competitors.¹²

We also envision enhanced enterprise exploration facilities with ratings, stores, and **software and data marketplaces** for data sharing and collaboration. All of this information will be accessed through open interfaces that work across enterprisewide software systems and applications. As an example of just how popular marketplaces are, one only has to look at Amazon. Network effects are a key driver for the behemoth's e-commerce dominance. Today, third-party sellers make up over 60% of Amazon's overall retail sales, compared with 34% in 2010 and 3% in 2000.¹³

This metaverse architecture will make enterprise professionals more productive, innovative, and successful. It will also meet people where they are in the user journey, with experiences that are more perceptive, sentient, and present.

Imagine a manager who wants to offer customers a new product to establish credibility and avoid their churn. But all the related parameters are scattered — the customer relationship management (CRM) data is in Salesforce, logistics data is trapped in an SAP system (managed by another department), and the pricing tool is archaic and poorly managed.

But in the metaverse, the enterprise cloud system knows the manager's name, access level, and the data, systems, and people needed to get the work done. It also knows how the manager and the team like to use data and has

a deep understanding of their online behavior, moment to moment. In this example, the system recommends NC/LC tools with strong design elements. These tools can be quickly purchased from a self-service software marketplace, with connectors to the original databases. The manager will thus be able to provide the team with the ability to determine the right product to sell and at the right price point. And all this in days, rather than months.

This new enterprise metafabric will create completely new **business and operating models**. Firms poised for success will be those that use Agile methodologies widely, flatten organizational structures, and, where necessary, become platforms on which others can build products.

Explore the full report

We now know that businesses should adopt technologies with humans in mind. Digital alone doesn't drive profits, as our research shows. Those who consider the human element throughout the product lifecycle and those who use as much heart as head will win customers, partners, and the world at large. In this spirit, the need for a human-centric future built around technology is a call to action for all organizations, for all people. And that's how we will enter the technology-enabled, human-centric future.

To take a deeper dive into Tech Navigator and discover how you can build these three human-centric tenets into your organization's future, please click [here](#).

References

1. [Digital Radar 2022](#), IKI.
2. [Agile Radar 2021](#), IKI.
3. [A closer look at CVS Health third quarter 2021 earnings](#), CVS Health.
4. [CVS Health expects growth in 2022 as pandemic impact eases](#), Tom Murphy, Nov. 3, 2021, ABC News.
5. [The consumer-data opportunity and the privacy imperative](#), Venky Anant & Lisa Donchack & James Kaplan & Henning Soller, April 27, 2020, McKinsey & Company.
6. [ESG in 2021 so far: An update](#), Sept. 1, 2021, Skadden.
7. [The world's largest asset managers – 2020](#), Thinking Ahead Institute.
8. [Why no-code and low-code software is the industry disruptor you should pay attention to](#), Soren Kaplan, Inc.
9. [Gartner says AI augmentation will create \\$2.9 trillion of business value in 2021](#), Aug. 5, 2019, Gartner.
10. [Maturing AI in the organization](#), John Gikopoulos & Saibal Samaddar & Nidhi Om Subhash & Harry Keir Hughes, Dec., 2020, IKI.
11. See Ref 10.
12. See Ref 2.
13. [Why Express, Urban Outfitters and J.Crew now sell items from all over online](#), Charity L. Scott & Sebastian Herrera, June 15, 2021, The Wall Street Journal.

About Infosys Knowledge Institute

The Infosys Knowledge Institute helps industry leaders develop a deeper understanding of business and technology trends through compelling thought leadership. Our researchers and subject matter experts provide a fact base that aids decision-making on critical business and technology issues.

To view our research, visit Infosys Knowledge Institute at infosys.com/IKI or email us at iki@infosys.com.

For more information, contact askus@infosys.com



© 2022 Infosys Limited, Bengaluru, India. All Rights Reserved. Infosys believes the information in this document is accurate as of its publication date; such information is subject to change without notice. Infosys acknowledges the proprietary rights of other companies to the trademarks, product names and such other intellectual property rights mentioned in this document. Except as expressly permitted, neither this documentation nor any part of it may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, printing, photocopying, recording or otherwise, without the prior permission of Infosys Limited and/or any named intellectual property rights holders under this document.

