



# India's up-and-coming digital ecosystem

Extending entrepreneurial possibilities

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# Economic growth in India

India is poised to further redefine its already transforming economy. A new digital ecosystem that includes close to a billion people is being created at a scale unprecedented anywhere else in the world. To prepare for the next decade, IndiaStack, a new generation of public and private digital infrastructure in the form of last-mile internet connectivity has emerged. Enormous opportunities exist for organizations and individuals to leverage the IndiaStack digital infrastructure to build platforms, work collaboratively and create and ride a new wave of digital innovation.

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## The rise of dynamic entrepreneurialism

A number of initiatives are converging to accelerate expansion of India's already growing economy. India has been encouraging digital innovation for startups and entrepreneurship has grown significantly. New company registration has grown from 15,000 annually in the 1980s to almost 90,000 in the 2010s.<sup>1</sup> Additionally, funding for startup companies more than doubled between 2016 – 2017.<sup>2</sup> In a survey conducted by the IBM Institute for Business Value, in collaboration with Oxford Economics, more than three-fourths of Indian executives (76 percent) pointed to India's economic openness as a major business advantage, while 60 percent identified India's skilled workforce. And 57 percent said India's large domestic market provides significant advantages.<sup>3</sup> With a median age of 32, India's entrepreneurs rank among the youngest in the world.<sup>4</sup>

The Aadhaar biometric identification initiative digitally links individuals with the various socio-economic features characterizing them. This universal identification database already covers 99 percent of India's total adult population and is being further integrated in several ways.<sup>5</sup> For example, all telecom subscribers must be reverified using Aadhaar cards. And Aadhaar has become mandatory for taxation records, death registration, bank account opening and for larger financial transactions.

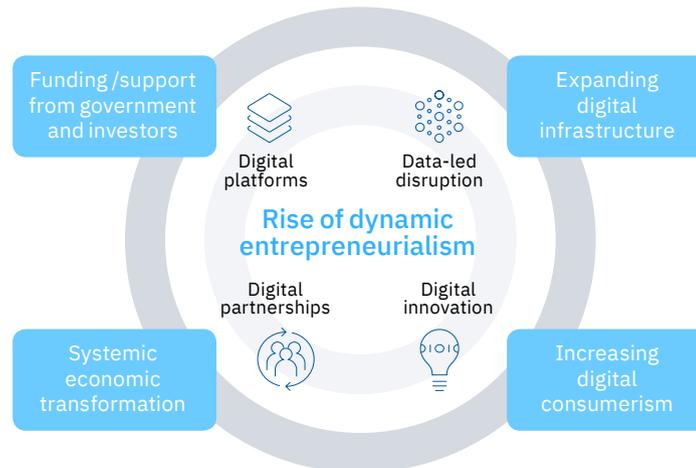
Another initiative, the BharatNet project, aims for 100 percent internet connectivity by 2020.<sup>6</sup> It is promoting expanded service by telecom operators, including Reliance Jio, Bharti Airtel, Idea Cellular and Vodafone with decreases in bandwidth cost of up to 75 percent and significantly expanded broadband and Wi-Fi services in rural areas.<sup>7</sup>

A new goods and services tax (GST) is intended to make it easier to do business across the nation, with Indian startups and others benefiting from the reduced logistics costs. GST is also intended to lower the tax burden on new businesses and reduce constraints on GDP growth while increasing revenue to reduce the fiscal deficit.<sup>8</sup>

Mobile data will continue to help drive the digital economy. Greater mobile access is expected to cause a rise in mobile penetration to 85-90 percent by 2020.<sup>9</sup> Early adopters of smartphones are likely to be consumers of entertainment and media.

**Figure 1**

*The rise of dynamic entrepreneurialism*



## IndiaStack digital infrastructure

IndiaStack has become the underlying platform for digital India. It provides a technical and collaborative infrastructure upon which digital India can grow, evolve and innovate. The expanding set of APIs operating on IndiaStack allows governments, businesses, startups and individual developers to use the digital infrastructure to achieve new types of presence-less, paperless and cashless service delivery. The Aadhaar “presence-less layer” provides Indian citizens authentication services that are essential for robust digital governance. The “paperless layer” supports paperless transactions through digital signatures, which eliminate the need for paper collection and storage. The “cashless layer” offers unified and universal online payments. And the “consent layer” makes it possible to securely provide Aadhaar details to service providers.

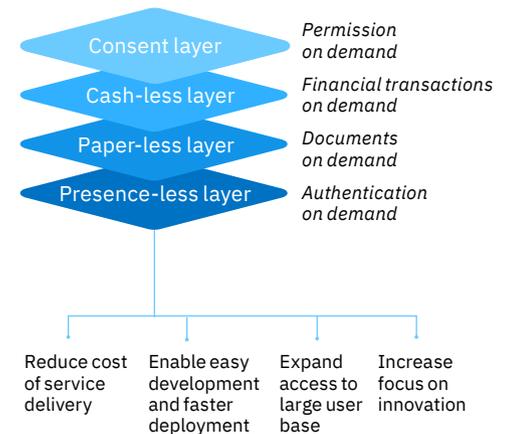
IndiaStack provides the digital infrastructure to link more than a billion consumers with developers, start-ups, enterprises, government and other organizations. It includes common specifications to enable developers to provide services

on top of the core APIs to create new compelling digital solutions. The expected outcome of all of the exchanged data and transactions in this digital-first ecosystem is expected to take India from being a “data poor” to a “data rich” nation in five years.<sup>10</sup>

IndiaStack is significantly lowering innovation costs, which makes it easier for businesses to build digital solutions. Using IndiaStack, Indian organizations are able to tap new opportunities to reinvent and improve existing applications and services, such as back-office processes and administration. Digital transformation of remaining manual-ridden functions such as employee recruitment and onboarding, document collection and ID management become not only possible but inevitable. And once the digitization of underlying processes and functions has been completed, organizations will be positioned to fully embrace conception and development of potentially disruptive new business models.

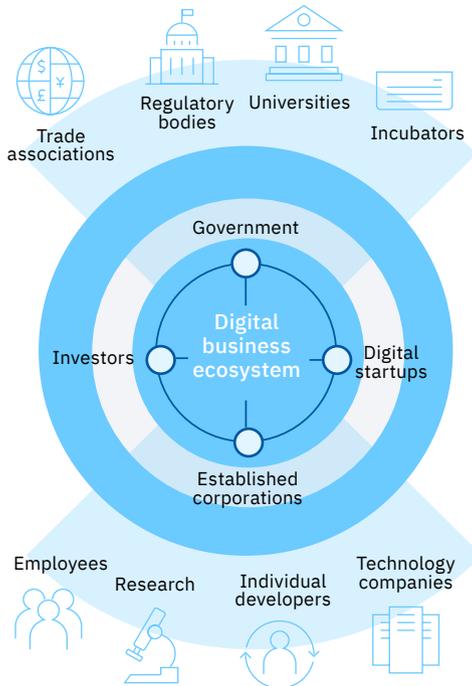
**Figure 2**

*The IndiaStack digital infrastructure*



## Collaborating to find new opportunities

**Figure 3**  
Collaborating to find new opportunities



IndiaStack has become fundamental to the deeper cultivation of India's startup community. And entrepreneurialism is central to India's future economic growth. Fostering startups has the potential to reap benefits extending well beyond the startups themselves, promoting new skills, capabilities and deeper integration into the global economy. Collaboration with startups is already helping established organizations achieve greater agility and improved customer experiences. For example, HDFC Bank is partnering with several startups.<sup>11</sup> And India's largest automaker, Tata Motors is already engaged with half a dozen startups and exploring partnerships with 20 others.<sup>12</sup>

Recent IBM Institute for Business Value data confirms this understanding. In fact, almost 80 percent of the surveyed executives from established companies said collaboration with startups can accelerate new ideas, augment and improve development of products and services and enable better access to skills.<sup>13</sup>

As digital technologies evolve, they have the potential to create more dynamic digital business ecosystems. New and novel data sources will feed into existing and emerging digital technologies, generating even more data. Much like mobility apps disrupted the transportation industry, or how online retail disrupted many traditional stores, startups with the benefits of IndiaStack can provide new competition and partnering opportunities for incumbent businesses. As in the financial services industry, incumbent organizations such as banks will be well positioned to collaborate more deeply with dynamic digital entrants such as the expanding fintech community.

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## Are you ready?

Innovators in India need to look at how various emerging technologies can be combined to solve problems and create new opportunities. India has unique advantages, and based on those advantages and the recognition that economic transformation is essential for the nation's long-term wellbeing, strides are being made toward economic advancement. Digital innovation has come to India. This systemic economic transformation and Digital Reinvention™ will benefit both businesses and the Indian population. Ecosystems made up of established companies, startups, venture capitalists, government and centers of higher education are well positioned to accelerate and amplify benefits and help India become and remain a leader in the global economy.

As you look at options for working within these ecosystems, consider these questions:

- What new opportunities might be available to your organization if you collaborate aggressively and work more closely with partners?
- What capabilities does your organization possess to facilitate interacting with other potential ecosystem partners?
- How can your organization support India becoming a leading player in the emerging global ecosystem economy?

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