

Review Article

Managing Innovation in Indian Startups

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Hans B V. Managing Innovation in Indian Startups.
J Adv Res Tech Entre Start-Up Incub Ecosys 2025;
1(2): 14-19.

Date of Submission: 2025-11-23

Date of Acceptance: 2025-12-22

A B S T R A C T

India's start-up ecosystem has become one of the fastest-growing in the world because of the rapid growth of digital technology, government policies that help businesses, and more people wanting to invest. In our fast-paced world, good innovation management is now one of the most important factors in the success and growth of a business. This article looks at how Indian start-ups think about, carry out, and keep up with innovation in product development, business models, and organisational processes. Utilising modern case studies and secondary research, the study emphasises essential facilitators, including entrepreneurial leadership, agile methodologies, open innovation practices, and the strategic application of emerging technology. It also points out problems that keep coming up, such as not having enough resources, not having enough skilled workers, complicated rules, and market uncertainty. The results show that start-ups that make innovation a part of their business through defined processes, a culture of experimentation, and relationships with other businesses are more likely to get ahead of the competition and develop over time. The essay ends with suggestions for entrepreneurs, policymakers, and investors on how to make India's start-up scene more innovative.

Keywords: Innovation management, Indian start-ups, entrepreneurship, agile practices, and ecosystem development are some of the words that come to mind

Introduction

Beginning

Managing innovation in startups creates new value by developing new products and services. It helps entrepreneurs reach their goals by picking the best new ideas, quickly testing them, and then gradually growing the best ones while making sure that their efforts are in line with their funding and resources. Four important words define these activities: Innovation means developing something new that has value; ideation means coming up with new ideas and concepts; validation means checking if something is desirable, feasible, and viable; and scaling means putting innovations into action and making them available to everyone.¹

What is managing innovation?

India has a lively startup ecosystem with a wide range of companies from different areas and stages [2]. Data from 2021 shows that India had roughly a quarter of the world's tech-enabled companies, the third-highest number of unicorns (865), and almost 30% of tech startup investments. This proves that India is the third-largest startup ecosystem in the world. Three main things have led to the rapid growth of the startup ecosystem: (1) a huge, underserved domestic market; (2) the rapid rise in access to the internet and smartphones, along with low-cost digital infrastructure, which has created a lot of opportunities for new ideas in payment methods and distribution channels; and (3) a fast-growing, well-educated workforce (40% of whom are engineers) that is more willing to join startups. Digital

apps have also helped new-age firms get a lot of attention. Fintech, e-commerce, hyperlocal delivery, and edtech are some of the sectors that have grown the fastest. Funding from both new and old businesses has made competition amongst Indian startups stronger at all stages and in all sectors in the past few years.

There are five main sorts of actors in the startup ecosystem: seed, accelerator, and early-stage investors; later-stage investors; incubators; universities; and service providers. There are usually four stages in the flow of capital: (1) seed capital for developing a product concept or prototype; (2) angel funding for activities that help a company enter a new market; (3) venture capital for entering new regions or product-market segments; and (4) private equity for widespread growth or diversification. There are differences between locations: Bengaluru, the National Capital Region (NCR), and Mumbai get roughly 76% of tech startup investments. However, investments in startup businesses in other regions have been going up since 2016.

Over 80% of startups in India fail, even if there are a lot of them. 31% fail because they make things that no one wants, 24% fail because they run out of money, and 18% fail because they can't find the right team. Startups have a lot of competition, even at the seed stage, and changing ideas often slows down growth. There are often more people looking for jobs than there are jobs available.

The startup scene in India

The Global Entrepreneurship Monitor (GEM) report³ says that entrepreneurship in India got a lot better between 2011 and 2016. After a time when there weren't many new businesses, startup activity picked up again, thanks to "Digital India" policies. Between 2014 and 2017, the Indian start-up ecosystem grew at an incredible rate in terms of fundraising, starting new businesses, getting investors involved, and setting up co-working spaces.⁴ India is the third country in the world with the most start-ups as of May 2022.¹ In just 2022, the country added 44 unicorns to its already impressive cap heads. In terms of the share of host start-up supply by region, Bengaluru remained the leader. According to a number of estimations, the total number of recognised start-ups in the country has passed 40,000. About 16% of them are in e-commerce, and 10% are in EdTech. There are a lot of different start-up businesses and funds, and they are getting deeper all the time. This is thanks to a number of things, such as the fact that more and more children are getting educated, tier-II cities are growing, the middle class is growing, the internet and mobile phones are spreading, and the government is supporting initiatives like Start-Up India and Atmanirbhar Bharat. The current situation is good for creating and growing start-ups that are based on digitalisation, new ideas, and technology-driven solutions.

Creating a mentality for innovation

Indian startups need to come up with new ideas and then choose which ones to work on. To get ideas, startups can hold brainstorming sessions, design thinking workshops, or open calls. After that, they should use a basic screening rubric and a set of predetermined criteria to pick the best candidates.

Thoughts come from exploring things on your own, talking to other inventors or people who are excited about them, or interacting with a larger group of people. Some good things to do are:

Brainstorming. The idea is to get people to think freely as much as possible. People can get together at any time of day to share thoughts. After that, the concepts can be put in order, grouped, and made smaller.

Design thinking. Promotes new ideas by putting yourself in someone else's shoes. The business looks at how it can make people's lives or experiences better, easier, or more enjoyable. It gets to know other people's lives, connects with their hopes and dreams, and then tries to figure out how the business might help.

Open calls. Some entrepreneurs don't wait for ideas to come to them naturally; instead, they ask for them directly. You can ask people, teams, or the whole organisation to come up with their own ideas and send them in through different channels. An organised submission request can get more focused answers.

Startups can look at things like how well a new product fits with their virtual offerings strategy, their brand values, the values of their target client category and/or ecosystem, and their clear value proposition/insights.

Idea screening is a planned and formalised way to help people make decisions.

The criteria used to evaluate ideas will vary on the business context, but they could include how well they fit with the mission, vision, and purpose; how well they fit with the strategy; the estimated costs (investment/time/resources); the estimated benefits/impact; the complexity of execution; compliance with policy/sustainability concerns; and so on.

A basic screening rubric is a changed version of the adapted innovation metric framework.

Helps figure out if new ideas are good. Should pay more attention to how clear, doable, and complicated something is than how new or valuable it is likely to be.

- **Clarity:** The notion is clearly and easily understood. The description might be too complicated and needs more explanation.
- **Feasibility:** Can the organisation actually do it? Do they have the skills, resources, and time to do it? Any plans

to fill up gaps must be doable and take into account what is already there.

- **Complexity:** The level of expected challenges encountered in implementing the initiative. When assessing complexity, things like the costs of the first transaction, the problems with operations, and the adjustments that need to be made to existing disruptions are taken into account.⁵

Coming up with ideas and deciding which ones to use

The next phase for a company is to test their fresh ideas after they have come up with them. Validation checks to see if a concept is worth following through on. Startups look at how likely it is that the new idea will work, how much it will be worth, and how it will affect customers, operations, and finances. The best result is to come up with an idea that is technically possible, has a lot of potential, and fits with the startup's aims.⁶

To validate an idea, you need to do the following:

- Do a cursory check of the feasibility. The team looks at the technological problems that the idea might face. A short look at the staff shows if they have the right expertise in-house or if they need to work with another company. Technology availability and regulatory restrictions are also quite important.
- Make a Minimum Viable Product (MVP). The team makes a simpler version of the new product that gets to the heart of the problem it was made to tackle. Mock-ups, sketches, diagrams, or interactive prototypes are all possible forms of the MVP.
- Set up a loop for user feedback. Startups give the MVP to a small set of carefully chosen future users. The goal is to get feedback on whether the idea solves their problems, how useful the solution is compared to what is already on the market, and whether the users would be willing to pay the projected price for it. Most of the time, this process takes one to three weeks.

Some ways to measure how viable the idea is are:

Technical feasibility. Can the new solution be put into action with the technology we have now? - Strategic fit. Does the offer fit with the startup's goal, not just its mission statement but also what the company really wants to do? - Market that can be reached. Is there a large enough group of clients who would find the new solution useful? - Expected effect. What are the expected results in terms of more sales, lower costs, more loyal customers, or more users? - Learning. What has the team learnt about the customer's problem that can help improve current goods or find new groups of customers?

Testing and validation

Startups should check new ideas early and often. Validation and testing are very important because most ideas are inaccurate. One estimate says that 85% of product concepts fail.⁷ Founders shouldn't put too much effort and money into terrible ideas. After determining whether a concept is possible and whether it fits with the business model, entrepreneurs should test it using a minimum viable product (MVP) and send the best ideas via a feedback loop for improvement and additional evaluation.¹ Checking an idea against criteria for effect and viability lets you choose which ones to work on and make decisions about how to scale them.

When testing and validating ideas in a startup, think about three things: fast assessments of feasibility and market fit, an MVP sent to early users or supporters, and a feedback loop that keeps continuing with metrics for acceptance, impact, and value.

Do some quick tests on the surface of a new idea to see if people like it. This method lets you quickly get rid of concepts that are plainly not good without having to make a prototype or hire a developer. The tests can also check that the solution works and assist in figuring out how well it fits with what is already available. Direct users, future consumers, business partners, or investors who have relevant experience are good first sources of feedback. Some questions can help you understand what the idea is trying to do, who it is for, and what problems or holes it might have.

Innovations that can be scaled

Taking an idea from a small trial or limited launch to full use throughout an organisation or market is called scaling.⁸ This step usually comes after the innovation and its business model have been tested and shown to be valid. Scaling activities usually involve building up the necessary capacity (people, processes, and resources), getting the organisation or target market ready for growth, and then actually scaling.

Scaling innovations is moving them from tiny tests or limited launches to full use in a whole company or market. This procedure usually comes after the first test of the innovation and its business strategy. Scaling activities usually include building and protecting the capacity needed for development, getting the organisation or target market ready for that growth, and then actually scaling up.

Capacity is about how much and how quickly the innovation can grow given the resources that are available. It includes people, processes, technology, money, resources, and infrastructure. Pilots and early launches give us a better

idea of how much capacity we need. When an idea grows, it frequently needs more output and better reliability, which might change how an organisation is set up and how quickly it can grow.

Governance and metrics for innovation

In innovation management, governance frameworks set the rules for how resources are used, choices are made, and people are held accountable. Even if they aren't officially called innovation management structures, the appointment of key people to lead innovation projects and oversee related procedures is generally followed by the creation of corresponding responsibilities. Clarifying ownership can affect how ideas are presented, authorised, and supported. It can also show how important innovation is to top management and how confident stakeholders are. When a company sets up an innovation group, which is a standard way to govern under the innovation-management framework, they should also do internal marketing to let everyone know what the group's charter, operational principles, and desired interactions with other units are.⁵

As a business grows, formal decision-making processes and limits on ideas and projects start to appear. Founders of new businesses are usually open to all new ideas, no matter what the first project, product, or service is, because they don't have any preconceived notions. In evolving businesses, when a founding idea is proven and the market starts to grow and spread, the way resources are used and the priorities of management change naturally. However, excessive dedication to a certain chance may hinder the pursuit of following ones.⁹

There are a lot of problems with defining innovation, which makes it hard to measure. So, companies use different ways to measure things. More than half of senior executives say that their organisations don't have any measurements. Those that are open to new ideas are more likely (46 per cent) to have at least one measure than those that are not (32 per cent). Some popular ways to measure success are the amount of new goods released, sales numbers for those items, customer feedback, and the number of concepts that make it through the adoption process. Other metrics look at things like how much of a competitive edge has been gained, how many people are taking part in open-innovation initiatives, how satisfied people are with the process, how many patents have been granted, and how many ideas have made it through each stage of the funding process.

Money and partnerships

Innovation is a dangerous and uncertain business. Innovation goes beyond making new products; it also includes changing company structures, delivery procedures, and how you interact with customers. New ideas might not work right first, and they could fail or cost money. To lessen the cost

of failure, a business idea needs some capital, either from inside or outside the company, to be tested and turned into a minimum viable product (MVP). Startups also need partners to help them build their products because not having enough technical knowledge in important areas can hurt their chances of success.¹

Some Indian entrepreneurs have worked with university research labs to make goods together. Startups that don't have a lot of money from big vendors might use industry subsidies to help them build academic research programmes, get a lot of students involved by giving them hard problems to solve in the real world, and improve their business skills. Research alliances can help people learn more about new technologies, stay ahead of research trends, and find smart ways to work together. Research-collaboration forums give companies the chance to meet people from other areas and fields.

Culture and people

When scaled quickly in early-stage businesses, innovation creates a lot of value. Companies typically have a hard time growing their old products in new markets. However, new innovations not only open up new markets but also give companies the chance to speed up the growth of their existing products. To meet unmet and undiscovered market demands, many businesses look for high-impact solutions. Innovation management methods consistently deliver, extract, and even multiply the value from potential breakthroughs.¹

India has made great strides in creating a lively startup ecosystem in the last few years. A lot of new businesses have become well-known, which has helped the whole industry grow faster. Still, the percentage of startups in the country that go from idea to product or get funding for growth stages is low.¹⁰ Even more worrying is the fact that more and more established startups are going out of business because of competition, which raises the stakes for innovation for businesses. Most of India's pre-revenue and growth-stage funding still goes to companies in Tier I cities. Innovations in Tier II and III locations generally have a hard time being noticed. Startups may expand and become more valuable in an increasingly competitive market by building a strong innovation management competence.

Innovation systems bring in ideas from outside the consumer and from sources that aren't well known. This creates systemic innovation loops that speed up the front end of innovation. The loops help new ideas and resources flow by speeding up innovation within existing systems. They gather failures and insights in a planned way. Well-developed consumer-focused innovation routines can use this idea to connect with commercial experimentation procedures that happen after them.

Tools and technology

Tools and technologies are very vital for startups on their journey of innovation. New technologies that make things possible include artificial intelligence (AI), blockchain, the internet of things (IoT), machine learning, and 3D printing. Digital platforms can do a lot of things that are part of managing innovation, such as working together, coming up with new ideas, testing them, and validating them¹. You can work with internal teams, outside partners, and customers using collaboration technologies. The fast expansion of early-stage businesses has led to the creation of many data-analytics companies that offer tools for specialised tasks or all-in-one platforms that help with machine learning, statistical analysis, data visualisation, and general data exploration. These kinds of technologies help people make decisions based on data and give them a way to swiftly gather, analyse, and verify data. Prototyping tools make it easy to make working models quickly, from low-fidelity wireframes to high-fidelity code-ready models. This lets you quickly make many different versions of a prototype.

Risks and morals

Innovation brings new ideas and things to the table. It can cause start-ups to fail, but it also has benefits because of new ideas and intellectual property rights. The sector needs to make a clear distinction between ethics, rules, and the law. Innovation has clear rules for what is right and wrong. It is socially accountable to build a future that is stable and follows the law. Innovation and living together make life easier and better. The text- and feature-vacuum modelling method makes money. When an organisation starts a process that doesn't work, it should know what the main forces are that are driving it. Failure can be a way to get ahead that works. There are outside groups that keep track of progress. For India to be competitive on the world stage, it needs to make reforms that are purposeful. Valuation methods are still widespread for getting ready for the road. India is the first country to see changes like a never-before-seen economy. Sharing ideas is vital for a start-up since the incubator needs to be open about its demands. The group video system on a desktop PC guarantees originality. You need information systems to learn how to establish a business. Service excellence lets businesses make more offers. The speed of product development and innovation in start-ups depends on having direct access to knowledge about new literature.¹

Examples of Indian startups in action

The waterfall model in¹ makes it easier to understand the two types of innovation: modular and architectural. Modular innovation changes a part without changing the whole system. Architectural innovation, on the other hand, changes how parts work together and the overall layout while

keeping the design of the parts. Both sorts are important for new businesses that are up against tough competition and fast-changing technology. Modular innovation, like releasing software in small updates, meets customers' needs in the short term. Architectural innovation, like delivering solutions that solve complicated client problems, makes things more sustainable and long-lasting.

Problems and how to solve them

There are a lot of problems that startups in India have to deal with, both inside and outside the company, that make it hard for them to come up with new ideas. Internally, hiring qualified workers, putting together a strong team, and creating a culture that encourages new ideas, testing them, and growing them are still major problems. Founders are under a lot of pressure from outside forces, including changing demand, market uncertainty, and fierce competition. This often leads them to focus on short-term survival instead of long-term and mid-term innovation. Also, burnout and depression take away founders' energy and excitement for new ideas.

If you want to make innovation management a part of your early-stage startup, you should think about the following action plan. Find the startup's specific innovation problems and work with important stakeholders to come up with solutions. Find out how well the startup is managing innovation right now, and then work with key stakeholders to make a plan for how to make it better. Make small changes that fit into the context and expand on what you already do to make it more relevant and effective. Do systematic assessments of external innovation management frameworks and practices to find more artefacts, processes, and measures that can be used in a startup setting.¹

What will happen next in Indian innovation?

In the next few years, Indian entrepreneurs need to be ready for changes in markets, technology, and regulation. The expected recession will cut down on investment, but businesses should keep coming up with fresh ideas and business strategies. As disposable income rises in tier 2 and 3 cities, the customer base will change, generating opportunities for affordable, high-quality solutions.

Several big IT companies are leaving India, yet the country can still benefit from the change in the geopolitical supply chain. To reach climate goals and get investors, businesses need to use green technologies. Indian companies don't have many ways to grow; therefore, their creators should look for financing opportunities in other countries and make goods that people all over the world will want to buy. Climate change, mental health, and caring for the elderly are big problems in the area, but vast amounts of money promised to businesses are still mostly unfulfilled.¹

Final Thoughts

Innovation management gives startups a disciplined way to find, plan, and put into action innovative ways to expand. This method helps businesses find ideas that will help them achieve their goals, reach their target market, and have the best potential for long-term success. Startups may systematically go after opportunities without overextending their resources via innovation management. They can organise and prioritise work on the ideas that show the most promise while still being able to change or stop working on ideas that aren't working.

There are four parts to innovation management: coming up with ideas, testing them, making them bigger, and making sure they follow the rules. To make an invention valuable, you need to do these things.¹¹ talks on how important institutional frameworks and support structures are for managing innovation in developing countries like India. Institutional variables, including good ideas, patents, funding, incubation, clustering, infrastructure, expertise and people, training, and rewards, have a big effect on how well companies' innovation efforts work.

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