India has a unique opportunity to avoid repeating other countries’ mistakes. Khosla Ventures founding partner Vinod Khosla argues that the “leapfrogging” mind-set requires policies that foster innovation not imitation.

There’s a general tendency in life to want to do what others have done. It’s an understandable impulse but shortsighted. One of the great things about being a relatively poor, trailing, but rising power like India is that you have the opportunity to see what you want to imitate—and, more important, what you want to skip.

Here’s an example. In 2000, I chaired a three-day telecommunications seminar for McKinsey & Company in New Delhi. I talked to everybody about skipping the landline. I said, “If I were India, I wouldn’t worry about adding ten million more copper lines. I would go straight to voice over Internet and mobile.” I didn’t have it exactly right; I missed how big mobile could become and how quickly. But my argument was that the giant traditional telecom-equipment and -system providers were offering the wrong system for the 21st century. Happily for India, despite its plans to the contrary and its focus on “traditional technology” landlines, the right thing (mobile) has happened. And India is not alone in this path—Africa has taken a similar evolution toward mobile telephony.

Was this a one-time phenomenon? No. There are many areas where a developing country can apply this kind of leapfrog mentality and find a different path to a better future: education, health care, energy, even infrastructure. But the key, which leapfrog advocates often miss, is how you go about creating this alternative path.

It’s not enough to say, “Let’s look beyond today and plan for 2025.” Most emerging-market countries do that. Such plans are usually far too prescriptive: let’s build 40 new universities by a certain date, add 80,000 doctors, build 8,000 kilometers of new highway, or install 10 million solar panels. Usually, these plans are based on a regressed estimate of today’s baseline. Rushing to do specific things is a big mistake. Technology advances in ways that are quirky and unpredictable. It’s unwise to rely on plans that presume to see the future too clearly; strategic-planning and consultant forecasts almost invariably mislead.
So rather than trying to predict the future, India’s leaders should be trying to fit into the future as it happens. Instead of setting out ten concrete goals, they should encourage one broad direction and adopt an evolutionary mind-set. That way, as the world changes, as the price of oil shifts or a breakthrough technology comes along, India can adapt.

Take transportation, a pressing future need for India. In a linear model, you might presume that if there are 80 cars per 100 people in the United States, then that’s where India will end up and begin to plan for that. But if I were building the system, I would look for ways to anticipate and skip what exists today (my rule number one) while trying to lean in the right direction (rule number two). I would consider the possibility that for the world in 2025, self-driving cars, like the ones Google is well on the way to developing successfully, will be widespread. And then I would ask: What are some of the implications of that assumption?

The first implication is that we’ll need a different type of transportation infrastructure. With a system of self-driving cars at scale in the United States, you might end up with one-fifth of the current number of cars sold annually. Instead of owning cars individually, perhaps drivers of the future will think of cars more the way we do taxis and limos now or like fractional jet ownership of the sort that NetJets pioneered—as fleets you could tap into for different occasions and with a lower total cost of ownership. With the fleet approach, the quality of service could improve because customers wouldn’t be tied to the cars they bought. For a night on the town, you might get a BMW; for everyday use, a Prius; for hauling stuff over the weekend, a Suburban. And all ordered on your smartphone.

A second implication of the spread of self-driving cars and the adoption of a fleet approach to car ownership is that cities can set aside less space for parking. Think what phone companies do in dense urban spaces. They don’t add a phone line for every person in a building. They multiplex: if there are 100 people in a building, they run 25 to 30 lines. With self-driving vehicles, we could multiplex cars the same way.

A shift toward a multiplexed fleet of auto-navigating vehicles would enable India to cut resource usage in a major way, lessening the need for capital investment and reducing expenditures for steel. Electric cars would become more affordable; the usage factor would be much higher, so the payback time would be much shorter. Even with today’s batteries, you could justify paying a higher price for electric cars. Instead of being driven 6,500 kilometers a year, electric cars would be driven 160,000 kilometers a year, like a taxi. That, in turn, would lower oil consumption.

Such a distributed system would be much more adaptive than making a massive investment in a new electric rail network. Loads would dynamically balance to fit demand. A distributed approach to transportation doesn’t require betting on a single $10 billion project. In effect, the transportation network can be built out one $20,000 car at a time.
If these assumptions are correct, the future of India’s transportation system will look very different from the one the government is planning for. That’s what happened to India, accidentally, in communications. Why not learn from the telecommunications experience and apply the lesson to cars? The precise outcome doesn’t matter (my assumption may be wrong). The main thing is to create a regulatory and investment climate to support the right broad policy goals (access to transportation) rather than lock everyone into specific technologies. In a nutshell, we don’t know what the future winners are—and it would be foolish of government to attempt to determine that. But we can try to set the groundwork.

This isn’t just about waiting for technology to advance. Governments with an evolutionary mindset—those that seek to encourage rather than prescribe—can use incentives, taxes, and standards to push in broad directions without trying to force specific solutions. With self-driving cars, I’d offer a huge tax advantage to the first million cars deployed. I’d also lay out efficiency standards—whether for refrigerators, lighting, or cars and trucks. The right way to do that is to make those standards self-modifying and dynamic, so that they change in step with technology.

For example, why not set a tax of 10 percent on the 25 percent of vehicles with the lowest energy efficiency and offer a subsidy worth the same dollar amount for the top 25 percent of cars with the highest energy efficiency? That way, the companies at both the top and bottom have an incentive to keep pushing, and as technology advances, the standard ratchets up. That’s much better than the US approach of saying, “Let’s set 54-miles-per-gallon efficiency standards for 2025 even though we don’t know what technology will be available.”

More broadly, India has a major opportunity, thanks to its massive domestic market, to change the rules of its future development. For example, R&D tax credits encourage more R&D; a fat depreciation tax credit encourages very large capital-intensive facilities. The first favors distributed development and a more level playing field. The latter is more rigid and centralized and favors fewer, bigger players. Every policy contains some kind of bias in one direction or another. The question is: What do you want to bias your system toward?

If the environment is changing rapidly, then you want to bias your system toward change, flexibility, and adaptability. You want to foster what I call “innovation capitalism” versus “incumbency capitalism.” Incumbency capitalism relies on generous depreciation rules that favor big, established players: those that have the most capital and can pay for $400 million plants. Innovation capitalism offers generous R&D tax credits that favor start-ups, people with ideas who are willing to experiment and create.

India needs more innovation capitalism. Take education. In Kenya, Khosla Ventures has funded a start-up called Bridge International Academies, which is operating hundreds of schools that break even at $5 per child a month, a price even the poorest can afford. We’re opening one or two new facilities a week. The model combines physical schools that can take up to 300 kids, but instead of
using textbooks the pedagogy runs off mobile phones. We compete head-to-head with public education provided for free by the Kenyan government and are winning—both in outcomes and in the minds of low-income parents who willingly choose the Bridge option over others.

The shift to online education is slashing costs and transforming traditional approaches to teaching. Instead of a prescriptive system that specifies a strict time (four years of high school) and variable results in learning, we’re moving to a world of fixed learning (the subjects you master and skills you acquire) and variable time. The increasing sophistication of online assessment tools allows each student to advance at his or her own pace.

So when India plans for education in 2025, it may still want to build many more Indian Institutes of Technology. But it also needs to think about how it can leverage the technology revolution to reshape education at all levels and rethink its physical infrastructure. It needs to be sure it is creating policies that encourage these trends and financing lots of experiments.

One thing we’ve learned with Internet start-ups is that everything needs to be iterated continually. A successful venture like Pinterest went through 300 evolutions before it caught on. With online education, it will be the same. Like any biological system, it won’t be perfect at first, but it will keep on getting much better.

The same principles apply to health care. Today, if you compare the doctor-to-population ratio in the United States and India, India’s is ten times lower. The resource-intensive answer is to say we need to build ten times the number of medical schools we currently have. A better alternative is to accelerate the adoption of new computer diagnostic systems, delivered via cell phones and cheap tablets. I believe such systems can eventually replace 80 percent of doctor visits and deliver results with a better and more consistent quality of care.

Happily, India, despite its painful shortages in physical infrastructure, is well on its way to creating a massive adaptive advantage by building out the foundations of a 21st-century electronic infrastructure through its Aadhaar program and its growing success in establishing universal digital identification. Having these fundamentals in place enables more than simply authenticating that a person requires a government service from the National Payments Corporation of India, which in turn avoids the need for a physical visit to fill out forms in triplicate. With the right authentication system and new regulations to spur things such as electronic contracts, you can build out a new digital-reputation system. Just as an eBay seller has a reputation and people always migrate to the person with the most stars, every one of a billion people can have a reputation tied to his or her digital ID. That will fundamentally increase trust in the system, which in turn reduces risk and transaction costs (both major burdens in doing business in India today). In this way, India is establishing a framework that the private sector can build upon in myriad ways.
I’m not arguing that India doesn’t need more and better physical infrastructure—roads, ports, power plants, and the like. I’m saying that the size of that future increase can be reduced by scaling out an alternative electronic infrastructure, which is also cheaper to build.

Despite India’s well-known problems, I am optimistic about its prospects. Its enormous young English-speaking population is a huge advantage. Its democracy, though messy, adds resilience and stability to the system and gives it an advantage over planned-and-directed economies like China, despite China’s reputation for “getting things done.” The overseas Indian community is increasingly emerging as a great resource for seeding—not only capital, but also a desire to experiment and try something different. And, frankly, new ideas are more important than capital.

The critical missing link is to marry that leapfrogging mind-set to a better policy framework that sparks innovation and experimentation—one that reimagines the future by encouraging instead of prescribing.

Vinod Khosla is founding partner of Khosla Ventures. This essay is excerpted from Reimagining India: Unlocking the Potential of Asia’s Next Superpower. Copyright © 2013 by McKinsey & Company. Published by Simon & Schuster, Inc. Reprinted by permission. All rights reserved.