



HCL's Shiv Nadar: 'Transformation Is Beckoning, and It Is Right around the Corner'

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Shiv Nadar is chairman and CEO of HCL Technologies, a subsidiary of Hindustan Computers Limited (HCL), a firm he co-founded in August 1976 and which includes HCL Infosystems. While most Indian IT firms have made their mark in software, HCL has been a pioneer in hardware (although it is also the fifth-largest Indian software maker). According to Nadar, only three computer companies of the 1970s exist today: IBM, Apple and HCL. "Apple and HCL shipped out their first computers in the same quarter," he says. Since then, HCL, which celebrated its 30th anniversary last month, has "sustained its position of being India's No. 1 computer company," Nadar notes. HCL today has annual revenues of \$3.5 billion and more than 36,000 employees. In the first of a two-part interview with Knowledge@Wharton and Ravi Aron, a senior fellow at [Wharton's Mack Center for Technological Innovation](#), Nadar discusses issues ranging from HCL's origins to future challenges.



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Aron: HCL's history is interesting. Before 1976, you worked for Delhi Cloth Mills (DCM). What made you decide to leave a textile company and start a personal computer firm at a time when the business environment in India was so hostile to business and entrepreneurship? How did you make that leap?

Nadar: My colleagues and I were engineers who worked for DCM's calculator division. These electronic calculators used digital integrated circuits, and then they started using chips. The advanced versions of those chips were used for programmable calculators, which were the forerunners of PCs. A bunch of companies around the world were trying to make personal computers, and HCL was one of them. A few of us figured it was feasible to build a computer. But before we could do that we had to create the software system, which could connect all the parts and make the computer run.

We met with the government of India's Electronics Commission, which was interested in making entrepreneurs out of executives and engineers. They asked us to write a report -- and we did -- saying that we could build an eight-bit machine. We said we were sure we could do it. Youthful exuberance and age were on our side.

We launched HCL in August 1976. Our most difficult challenge was getting permission from the government to make computers. We were unlikely to get permission ourselves, so we had to find someone, such as a state government, that had been given permission and get into a joint venture. The government of U.P. [the state of Uttar Pradesh in northern India] joined the venture, and that's how we got the approvals. Interestingly, our toughest challenge was not designing or making computers but getting the government's approval to produce them.

Aron: So in 1976, HCL was born. Its genesis lay in the calculating machine. You did not have Microsoft DOS to run off at the time because there was no MS-DOS.

Nadar: Microsoft was just a gleam in Bill Gates's eye.

Aron: When you started the company, did you think that HCL would grow into a major manufacturer of PCs in India and get involved with different aspects of high technology? Did you think these things would happen, or did you have a fundamentally different vision and discovered things as you went along?

Nadar: I had a fundamentally different vision.

Aron: Tell us about it.

Nadar: At that time, every company in the country was focused on revenues. Revenues for any given activity could not exceed a certain amount because all the companies were licensed [and had revenue ceilings]. So, if you wanted to increase revenues, you had to be in a number of industries. For a firm to generate revenues of Rs. 100 crores [\$22 million] was a dream. It took us 13 years to reach that level in computers. We did it by 1989. It took us another 10 years or so to reach Rs. 1,000 crores [\$220 million]. Now we have annual revenues of Rs. 15,000 crores [\$3.5 billion]. Much of this growth has come in the past four or five years.

Aron: Clearly the growth has been exponential. Going back to 1976, at that time IBM was still in India. George Fernandes [then India's industry minister] evicted IBM in 1977...

Nadar: IBM wasn't evicted. The real story was different.

Aron: Tell us.

Nadar: The government of India came out with a ruling that said if a product was made in India, its source code had to reside in the country. Another requirement was that international companies had to dilute their equity. The equity dilution did not affect companies too much because they had to *agree* to dilute rather than dilute equity per se, but the source code requirement did. That was the main reason why IBM decided to leave India, as did Coca-Cola.

Knowledge@Wharton: What effect did IBM's departure from India have on HCL? Did you go after the market that opened up?

Nadar: We did not have to go after anybody, but according to me, if IBM had stayed on, we would have grown faster. See, IBM was fundamentally creating the market for computers in India. That job now fell upon us, and we were too young a company. IBM knew how to create a market for computers. They created the market, and we went in and pitched for a share of the business. After they left, we had to create the market all by ourselves. At that time no one saw the computer as a necessity. It was a convenience.

Aron: How difficult was it to raise capital? India had no venture capital activity at that time. What were your sources of capital?

Nadar: Our capital came from whatever savings we had. We launched HCL with money generated through selling calculators. We created a marketing company to sell calculators, and those were the funds we used for HCL. The total money was Rs. 20 lakhs [approximately \$180,000]. One-fourth of that amount came from the U.P. government and the rest came from us. That was the time when I truly understood what cash flow is, and what profit is, and what reserves mean. The first company, which was created to generate cash flow, was created with \$16,000 that came from the savings of the founders.

Aron: So you bet your family ranch to take a risk?

Nadar: What family ranch? I had barely worked for seven or eight years and had become a marketing manager.

Aron: How difficult was it to get bright, young people to buy into your vision in 1976? Most people must have wanted *sarkari naukari* [government jobs].

Nadar: We ourselves were very young. I was 31, and I was the oldest. When people came for interviews, the first thing we told them was, "You should know the size of the company you are joining." We offered a monthly salary of Rs. 2,000 [\$180], which was more than what Citibank was paying at that time. Otherwise, how do you get someone to work in an attic with a bedroom, a table and a chair? I did not have even a table to myself. But paying a high salary meant that each time we hired someone, it added 5% to the company overhead. We hired five students from the Indian Institute of Management in Calcutta. We wanted to know everything about them and judge them as closely as possible because to us, it was 5% of the overhead.

Knowledge@Wharton: What were you looking for in those people and what was your pitch to them?

Nadar: Entrepreneurship. We said if you do things right, you should become an entrepreneur. Did any of them become entrepreneurs? No one did. But the mindset at that time was highly exuberant.

Aron: Could you contrast that with what HCL looks for on campuses today when you recruit people?

Nadar: We don't necessarily look for entrepreneurship on the campus, but we hope to discover it when someone has joined the company from a business school or engineering school.

Aron: What was HCL doing in the 1980s?

Nadar: The 1980s were fantastic. This was a time when we were at the peak of our creative work. The question of whether we would exist or not -- something which everybody used to ask, including ourselves -- stopped. Profits kept pace with growth requirements. HCL had credibility -- that was the biggest barrier we had to break. We were known as people who had said we would produce a computer and deliver it, and we had done that. Ours was a company full of young people, but it worked. We also wrote the first relational database system, called Genesis, ahead of Oracle.

Aron: Was it based on IBM's DB-2 and CICS?

Nadar: No, we wrote it from scratch.

Aron: Why was that? What was the thinking behind it?

Nadar: We had written a client-server product. It failed, because all this was too new for India. We felt that the existing databases were obsolete and they would not meet the requirements of client-server architectures. We needed a relational database; hierarchical databases would not do. So we got up and wrote the first relational database.

Aron: Corporations use relational databases mostly for handling large data sets, concurrency controls, version controls, and so on. But during the early 1980s, Indian companies were not even computerized.

Labor unions were protesting against computerization on the grounds that technology would displace jobs. Did you foresee that Indian companies would have to find ways of handling large data sets before deciding to write a relational database?

Nadar: That is what our assumption was. We said that when we came out with an electronic microprocessor-based system and produced a computer out of it. Mind you, that was only a PC that was useful to businesses. You know, in the Western world, a PC was never used with a matrix printer serving as a printing device. A matrix printer is not a legitimate printing device, and a floppy drive is not a legitimate storage device. It did not meet any conditions which should have been tested in a business environment, but it was adequate, and it worked. Having succeeded with this approach in computers, we decided to try it in the client-server product and in relational databases. We said, this is new technology, but we'll make it work -- but it didn't. By then, multi-tasking, multi-processor systems had come along. This was far too ahead of the times.

Knowledge@Wharton: Often, as organizations grow bigger, they stop experimenting because the cost of failure is too high.

Nadar: Yes, it's very high.

Knowledge@Wharton: In HCL's case, though, you were not afraid to experiment. How did you preserve that mindset as the company grew?

Nadar: HCL has grown, it grows, and probably will keep growing only if it continues to experiment. That is what allows you to achieve a delta of 30% to 40%. Take software, for example. We came from nowhere into the industry at a time when other companies were extremely well established there, and today we are the fifth largest.

Aron: Let's explore this further, especially as it relates to HCL in the 1980s. At a time when people saw no future in hardware, you went into that business gung-ho. When software firms thought "body-shopping" -- or providing software programmers -- was the way to go, you turned your back on it. You worked on client-server architectures and relational databases at a time when people wouldn't even consider doing such things. What made you, as a young company, take so many radical departures from the beaten path?

Nadar: We had no mental baggage. Consider the mental baggage that IT companies have today. Each quarter, Indian IT firms publish their results, and these are broadcast on CNBC. From the comfort of their boardrooms, executives say how many new employees have been added, how many more Fortune 500 companies have been signed up as clients, how many million-dollar companies were added, and so on. Now, if you go on like this year after year, where will it end? Are we trying to become companies that produce as many jobs as the railways? *[Editor's note: The Indian railways employ some 1.5 million people.]* It's just endless. The problem with such thinking is that it doesn't recognize that this activity merely reflects the migration of work from one country to another. You could put a football in a room and shoot it, it'll hit the wall somewhere, and if one side is Cognizant, another side is HCL, a third side is Infosys, whoever gets the ball will claim, "I scored a goal." Isn't that what it is?

This is too simplistic a way of doing business, and it will not survive. You have to have predictability in business, and it's not the simplest thing in the world. Beyond a certain point, the scalability of people will give way. Then some contracting form or something else will come about. Transformation is beckoning, and it is right around the corner.

Aron: Is this your thinking now, or did you think like this in the 1980s when you made your radical and contrarian decisions?

Nadar: I think like this now, for the future. For example, at HCL we want to reduce the number of our customers. We have 500, which is far too many for a company of our size. We need to bring that down by 200 over the next couple of years. This thinking is the reverse of the way many companies operate. But I believe we have to make a meaningful contribution to our customers. If we don't, we'll just be a project company. We could drop off the table and it would make no difference to the customers' lives; they would just continue to run as if nothing had changed.

Knowledge@Wharton: Could you describe the transformation that you see around the corner? What will it mean for HCL?

Nadar: If I put it in an extremely crude and simplistic form, organizations in the future will be like IKEA, the Scandinavian furniture retailer. It's a brand, it's a franchise, you don't know where the manufacturer is, you don't know who's designing the furniture, or who is motivating customers to want to buy these products, but there's a set of forces that are helping make this happen. Most corporations will take that position, whether they are in engineering or otherwise. And when that happens, work will be redistributed within countries, across countries and in multiple countries. This is our opportunity ahead. It's a matter of whether you want that or whether you want to take several million lines of code and maintain it. There's a good profit in both. It's a matter of how you define your business.

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