

A Discussion with Tata Technologies' Warren Harris

Boyden's *Leadership Series* presents discussions with business and thought leaders from organizations across the globe. The series focuses on topical issues that offer executives, political leaders and the media insight into current trends in business and talent management in the global marketplace.

This issue features Warren Harris, Chief Executive Officer and Managing Director at Tata Technologies, an engineering and IT services firm for the global manufacturing industry. He discusses manufacturing and automotive trends, global workforce challenges and opportunities, vehicle safety and regulations, the importance of bringing employees together, and the definition of innovation at Tata Technologies.



Warren Harris

Harris has held positions of increasing responsibility at Tata Technologies and its predecessor companies for nearly three decades. He graduated from Harvard Business School's Advanced Management Program and earned a bachelor's degree in engineering with honors from the University of Wales Institute of Science and Technology. Harris is a member of the Institute of Mechanical Engineers and a Chartered Engineer.

Additionally, his global manufacturing expertise has been leveraged by top tier and industry media outlets. He has presented to several engineering and automotive groups, and spoken at international forums.

Boyden: You've had a 27-year plus tenure with Tata Technologies and its predecessor companies. How has your role transformed over time?

Harris: I started as an engineer at Babcock International, a small design services bureau near London. We were doing fairly innovative computer-aided design and manufacturing work, and IBM invited us to get involved with some of their big technology benchmark activities. That provided me an opportunity at the end of the '80s to come to the States for a benchmark project at Chrysler.

I came over originally for 30 days, and ended up serving as a consultant to Chrysler for six and a half years while it rolled out the first complete product lifecycle management solution.

During that time, the company I was a part of was acquired by a public company in the UK. A couple of years later that public company became overleveraged and invited the subsidiary company to buy itself out. At that point, while I was consulting at Chrysler, 10 colleagues and I decided to mortgage our houses and beg, steal and borrow enough money to take the company private. I was learning a great deal in terms of what I was doing technically, but I was also starting to take more and more responsibility for strategy and direction of the organization.

In 1994 I went back to the UK to head up our global consulting organization. I ran that for five years. Then I became CEO and we took the company public in 2004. We had a successful IPO in London, and were very much looking forward to running the company independently when we were invited to become part of the Tata Group.

In April of 2005 I went to India, ostensibly to collect ammunition to defend our position against analysts' perceived threat from India. After spending a week in India

A Discussion with Tata Technologies' Warren Harris *(con't)*

and visiting with Tata Technologies and a couple of other organizations in this space, I became convinced we needed to be part of what was going on there as opposed to being threatened by it. We became part of the company in October of 2005.

I originally ran the INCAT organization, as it was referred to then, independently for a couple of years as the CEO. Then in 2007 we decided to put Tata Technologies and INCAT together and at that point I became the Chief Operating Officer. That was the position I held until September of last year, when my predecessor Pat McGoldrick stepped down and I was invited to become CEO of Tata Technologies.

Boyden: Tata Technologies applies technology to help the manufacturing industry create better products. Can you give us three examples of how this approach has changed, as technological capabilities and manufacturing industry standards have evolved?

Harris: We've seen a movement away from doing things sequentially; a reduced dependence upon physical testing; and a much more immersive experience in and around the digital product, which allows the product to be embraced before it is actually built.

Boyden: You are responsible for scaling the business to \$1 billion in revenue through intelligently differentiated services for your manufacturing clients around the globe. How are you achieving this scale?

Harris: Our revenues are just less than \$500 million, and we are intending to double the business in the next three to four years. We have a very comprehensive business plan that supports our confidence that \$1 billion is imminently achievable.

On the intangible side of the balance sheet, we're investing in leadership, processes, and the technology that underpins the way we do things. We are making a lot of infrastructure and people investments as an organization. On the tangible side, we're investing in capability and we've built up a fairly substantial war chest. We've targeted acquisitions that we believe are complementary to our existing skills and capabilities.

Boyden: As a global company well-positioned to capitalize on continued growth in the engineering services industry, where are your employees located and what is the focus of the work done in those regions?

Harris: We have 8,000 employees in 13 geographic locations and more than 25 different nationalities. As a truly global company, in the product development space we need to be where our customers are. Unlike the IT offshoring business, the product development space requires a great deal of customer intimacy. Product development and innovation are driven by change. If you're not intimate with your customers, and not aligned with the change cycles that typically underpin the development of a vehicle, aircraft or construction equipment, then it's very difficult to provide effective support.

Boyden: What are the challenges and opportunities associated with this global structure? How do employees leverage access to the company's global facilities and design centers, as well as a varied menu of onshore and offshore services?

Harris: Knowledge management is a big challenge because the employee base is dispersed globally.

A Discussion with Tata Technologies' Warren Harris *(con't)*

We have to ensure consistency in our value proposition and in how we do things.

One of the things we've done is invest very heavily in our own e-learning platform. We acquired a company in 2005 that has a platform called i GET IT®, which is used by companies like Apple, Tesla, SpaceX and 3M, and some of the more progressive manufacturing companies in the world. This e-learning platform has provided us internally with an opportunity to capitalize on our knowledge and disseminate it through the different regions and teams we have around the world.

Boyden: Tata Technologies provides engineering skills, offshore facilities, design capabilities, and knowledge of IT systems in support of product and manufacturing processes, along with many other skills and resources. What are some specific examples of how clients have received the maximum value from all of these services?

Harris: We are the only company in the Indian private sector that's been trusted to undertake the complete outsourcing of a full vehicle. We have taken responsibility for a premier automotive manufacturer to develop an SUV from concept all the way through production and launch.

We're also the first in the Indian private sector to complete the center fuselage, rear fuselage and vertical tail for a business jet. Additionally, we're working with a Japanese construction equipment manufacturer to develop a backhoe loader for the Indian market.

These examples help illustrate the complexity of the projects we can undertake. Our balance between onshore and offshore services, and our industry-leading capabilities in and around the use

of tools, allows us to invariably deliver these projects at a fraction of the price our clients can deliver them themselves, and at a fraction of the price of some of the onshore full-service providers.

On the IT side of things, we help manufacturing companies select and deploy the tools with which new products are built. The thing that really differentiates us is our understanding of the product development process. This includes the work we do in and around the deployment of product lifecycle management systems, dealer management systems, and enterprise resource planning systems. The fact that we use what we sell and vice versa enables us to take a pragmatic view of what is important when it comes to the selection of technology and its use.

Boyden: You have said Tata Technologies' ability to partner with clients is very much part of the DNA and character of your company. Would you provide an example or elaborate on that?

Harris: The development of new products is essentially the 'family jewels' of any manufacturing company. When you're trusted to be a part of the development of a new vehicle, next-generation aircraft or combine harvester, you're working on what's going to define the competitive position of those companies in the future.

Therefore, trust is an important and yet somewhat intangible part of what defines Tata Technologies. Many of our employees have worked with our customer base for a long time. This onshore/offshore balance and intimacy we enjoy with customers provides the sort of psychological platform around which trust, relationships and success are built.

A Discussion with Tata Technologies' Warren Harris *(con't)*

Boyden: You are a recognized authority on global manufacturing. What are your thoughts on the topic of 'globality' or global competition?

Harris: It's inevitable. Any organization or country that tries to fight globality may enjoy some tactical success, but the medium to long term will prove the train has left the station. The countries and organizations that are going to be successful in the future are the ones that can embrace the reality of what this shift represents. Companies need to leverage the best-in-class assets, resources and capabilities of various regions around the world.

Governments also must deal with the consequences of globalization. Investments in skills and education provide somewhat of a safety net for those communities and individuals impacted by the fallout of an inevitable set of circumstances.

Boyden: You are British, live in Michigan, and lead an Indian company. How does this hybrid background influence your perspective?

Harris: It's a great privilege to live and work in somebody else's country. I will always have a great affinity for the United States because of what it's done for me and my family. I'm also extremely fond of not just India, but of Asia. I've spent a lot of time in Japan and set up a JV there at the end of the '90s.

The opportunity I've had here at Tata Technologies has given me a great deal of appreciation and respect for the value contribution that different parts of the world are in a position to deliver. That perspective certainly colors my view in terms of how

we're looking to architect the future for Tata Technologies. We are agnostic in terms of culture and where we have different teams located. We're committed to tapping into the best and the brightest around the world. I think my ability to do that is driven by the experience this wonderful organization has afforded me.

Boyden: Engineering talent is increasingly scarce, while demand for new and better products is exploding thanks to a growing global middle class. How is the company staying at the forefront of these issues?

Harris: We take our commitment to sustainability seriously. We have a global program called Ready Engineer that is focused on promoting STEM education in K-12 schools and also readying engineers for the workplace through the relationships we have with colleges and universities in Europe, Asia-Pacific and North America.

Additionally, we're donating our e-learning platform and subject matter experts' time. We are raising money and funds to invest in related programs. Sustainability is a very, very, very important part of what we're looking to have define us in terms of the contribution we make to the communities in which we live and work.

Boyden: The automotive industry has gone through a lot of consolidation. In terms of manufacturing, which areas are of greater focus for the auto sector and Tata Technologies?

Harris: The big trend we are following at the moment is the move to alternative propulsion systems, and the key condition that renders those propulsion systems viable is a lightweight body structure.

A Discussion with Tata Technologies' Warren Harris *(con't)*

If we're not able to take weight out of a vehicle, the alternative propulsions are far less efficient than conventional internal combustion engines and will not provide the power and performance the consumer expects.

Over the last 10 years we have invested heavily in our capabilities in and around lightweighting and replacing dependence upon carbon steels in the body structure with alternative lightweight materials, such as aluminum. We've done a lot of work in Europe and more recently in Detroit, and it's a key differentiator for us in the market.

Boyden: Vehicle safety and regulations are under increased scrutiny and government enforcement. What role does manufacturing play?

Harris: The role of manufacturing, and by association the OEMs that underpin it, is to stay aligned with consumer expectations. Clearly consumer expectations have been growing exponentially in the areas of safety and emissions. These areas will define the competitive position of the automotive OEMs.

Today if you're not regarded as clean and providing safe and reliable vehicles then really you are at a huge disadvantage in terms of your ability to sell products. Look at the hit VW's market cap took as a result of its emissions challenges.

Manufacturing teams have to be innovative and extremely progressive. They have to invest R&D dollars more and more in products that not only protect the driver and the passenger, but also the pedestrian. In addition to increasing regulations and consumer expectations for safety and emissions, there's a massive challenge

in what's happening with the autonomous vehicle and connected car.

Boyden: Innovation is an overused term today. Do you think it has meaning for the technology and/or manufacturing industry?

Harris: I would agree wholeheartedly that innovation is overused and misused. Innovation is about fresh ideas that have economic value. Unless we're coming at a challenge in a way that's new, and unless that solution represents an improvement in terms of the ability to sell or manufacture a product at a reduced cost, then it's not exactly innovative. It may be interesting from a research perspective and it may be stimulating intellectually, but for me it doesn't constitute innovation.

Automotive companies today have to balance all of these areas of demand for R&D dollars and ensure they make innovation commitments aligned with how they want their brand to be differentiated. It's going to be increasingly difficult to address all of the innovation requirements that surround an industry and a company. Therefore, I think innovation partnerships are going to be much more important.

One of the things we're trying to do at Tata Technologies is position ourselves as co-inventors with our clients. Not to provide complementary skills and capabilities, or overflow capabilities and services, but to be a specialist responsible for a part of the product or industry challenge. By independently managing that area of responsibility, we enable OEMs and clients to spread the load.

Boyden: What do you think is least understood about innovation by outsiders?

A Discussion with Tata Technologies' Warren Harris *(con't)*

Harris: Because the automobile is so ubiquitous and familiar, I think there is a lack of consumer appreciation in terms of what it takes to address the requirements that either regulation or the consumer is positioning upon manufacturers.

If you consider the connected car and the challenges in and around reducing emissions and improving fuel efficiency, what that requires is a massive investment in software capabilities, in how you build structural integrity into the vehicle, and in the propulsion system that will carry the vehicle. Those investments have grown incredibly over the last 10 years, when there was not even the concept of a connected vehicle.

Innovation was solely positioned against the look and feel of a vehicle and the driver experience. Now the industry has been completely disrupted and there are all of these different requirements to address.

Boyden: How would you describe your leadership style?

Harris: I'm accessible and I'm committed to collaboration and the team. I don't expect to be the smartest guy in the room. I've surrounded myself with the best people in the industry. I have an outstanding management team, and they all work very hard to make me look good.

Additionally, over the last 30 years I have developed resilience. The automotive industry is highly cyclical, with ups and downs, and the professional services business is extremely competitive. I've had to hone my competitive skills, but also accept from time to time that you can't always win every battle.

One of my old mentors used to say that in order to be a leader you need three B's: brains, balls and balance. Brains I owe to my mum and dad. Balls I've developed over the years given some of the risks I've had to take. Balance has come with experience and age.

Boyden: What has been your greatest leadership lesson?

Harris: Surround yourself with people that you trust and that share the same values. This is so important because as a leader, your success is realized through the success of others. It is cliché, but it's absolutely true.

Another thing I've learned is the importance of bringing people together. The 8,000 employees we have around the world get to make a choice every day as to whether they come back. The importance of dealing with people, cultural differences, and diversity in respectful and committed ways is very important to Tata Technologies and to me.

Boyden: In addition to your CEO responsibilities, you are Chairman of the North America Tata Network Forum, a platform for dialogue between the leaders of Tata Group's North American businesses. What has the impact of that been for you?

Harris: The opportunity to interact with other Tata Group companies and leaders in North America has given me a great deal of respect and appreciation for the communities in which we operate and the challenges they face.

The Group is made up of wonderful companies that represent some of the best organizations in the world.

A Discussion with Tata Technologies’ Warren Harris *(con’t)*

But underneath that, they’re made up of people. It’s been rewarding to see how hard these people work, and how dedicated they are not only to the responsibilities they have to their company and to the customers they support, but also to the community service values we have inside of the organization. I have been grateful for the opportunity and privilege of being able to hold that particular office.