

GE's CIO shares digital transformation lessons

General Electric (GE) is among America's most iconic brands. Founded by Thomas Edison in 1892, the company has over 280,000 employees in 180 countries and does business in almost every industry - from aviation to healthcare to power.

Over the last few decades, the company has transformed itself from an industrial conglomerate into a true digital business. Through this evolution, GE is now helping other industrial businesses enable their own digital transformation.

James Ross, CIO, Global Functions at GE, shares lessons and best practices on how the company made the leap from manufacturing to delivering technology-based solutions to its customers.

The opportunities and challenges of digital transformation.

Before GE could transform itself into a technology business, it needed to drive digital transformation within its own business. As just one example, when the cost to connect and leverage sensors began dropping pretty dramatically some years ago, GE realised it could use sensor data in ways it never could before - creating a richer analytical view of its assets, operations, demand and supply. The knowledge GE gained from that experience was later leveraged into new products for its customers.

GE's digital transformation continues today, with how it both chooses and deploys technologies internally to the growing number of innovative products offered to its customers. And with those changes has come a big cultural shift in how GE helps employees understand the enormous power of technology.



"Spend as much time as you can understanding how the business works and how digital transformation will help the business work even better."

- James Ross, CIO,
Global Functions, GE

"Some of the biggest challenges of digital transformation are really within the IT function ... it's really moved from a back-office function to a front-office function."

- James Ross, CIO, Global Functions, GE

"I've learned that there's a lot that goes into a digital transformation. Part of it is the technology, but quite honestly, the biggest change is really in the way people work," says Ross. "It's crucial to get people to realise that technology will empower them to use data in new ways and make decisions much quicker. As we see this shift happening, we really believe that changing the way people work is the most fundamental piece we can drive going forward."

As technology evolves and innovation happens more quickly, business models and processes have to be able to keep up with that rate of change, too. Digital transformation provides the opportunity to not just select and deploy better business systems, but also to rethink current traditional business models, Ross says. He emphasises that organisations need to be comfortable with occasional failures as they make changes, and learn from them.

"We won't always get it right, but progress is much better than perfection these days," says Ross. "It takes multiple years for digital transformation to be realised. For us, we looked at this as an endurance race and focused on persistence and perseverance to get through it."

"It's important that as an IT function, we make that shift, and the only way for us to do that is to lean into the problems that we have in front of us."

– James Ross, CIO, Global Functions, GE

Key behaviours for successful transformation.

As Ross reflects back on GE's journey, he's proud of how far the organisation has already come. Although digital transformation is a complex, never-ending initiative, it wouldn't have been possible to start it at GE without the following:

Getting internal alignment.

C-suite alignment is a critical first step in making sure that digital transformation is successful. Not only must the executive leadership be on board with digital transformation initiatives, but the alignment must also come from the top down. Leadership should also be involved in deciding the technology products and systems where the company invests.

Meanwhile, IT needs to be able to talk in the language of the business and paint a picture that's more than just functionality-driven and tactical. IT must be able to showcase the overall business value of the investment to its C-suite.

Building agile processes.

As mentioned earlier on, old processes will need to evolve through transformation to support a company's ability to move at a much quicker pace than it may have traditionally. And that requires them to embrace organisational agility. The first step in achieving agility is to identify bottleneck processes and look for ways to make them more nimble, Ross says. When those bottlenecks disappear, the door to the next step in your transformation journey opens.

Making data-driven decisions.

Democratising data is an important part of digital transformation. Putting data into the right hands of the right individuals at the right time accelerates business cycles, allows decision-makers to be much more informed and enables the company to move at the right pace as it goes forward.

As GE continues to digitally mature, data remains a key player at every stage. It's imperative that the company has access to accurate data to make decisions quickly. An equally crucial component is ensuring its data is stored in a single system and is readily available to the decision-makers who need to use it every day.

"Not only is data accessibility important, but so is making sure that people at the right level are able to use it. What we found early on is that we were locking data up to senior leaders who may take months to analyse it or even to see it, and they're not able to make a decision off of it," says Ross.

Enabling change management.

While change management is an essential component of digital transformation, it's also the hardest to do, Ross believes. That's because it involves people and the work they do every day. It's important to enlist early internal champions to build the momentum needed to drive more radical transformation.

"As we've evolved through our digital transformation journey, we have a specific team that's involved in change management for us," Ross shares. "Their job is to make sure that we activate change at the right levels and that they're focused on it at a personal level."

"One size doesn't fit all, and people are going to need to accept change in a different way. We're really focused on trying to find the specific needs of those individuals and targeting them in the ways that they work and in the areas that they work in as well," he adds.

Creating the right culture.

This is the most important part of digital transformation. At GE, the company needed to rebuild its culture around rapid decision-making, learning from failure, and a new people management process.

The company needed to compete for talent in the technology space, so it set out to build a culture that reflects an environment that thrives on innovation.

Invest in technology.

According to Ross, digital transformations really don't have a start or an end, so it's important to make sure the right systems are in place to make smart decisions.

GE created a digital technology council that's focused on identifying emerging technologies that the company should be investing in today. Whether it's robotic process automation, artificial intelligence or human resources technologies, the council is committed to finding ways of deploying it into the field as quickly as possible.

"My advice for other technology leaders is to really make sure you understand your businesses," says Ross. "Within IT, one of the advantages that we have is that we can see very broadly across the organisation, but we also have to understand how the business operates. Spend as much time as you can understanding how the business works and how digital transformation will help the business work even better."

What's next?

Ross explains that as GE moves forward with its digital transformation, it is bringing in more product managers who are really focused on owning wing-to-wing delivery. This is key to getting the speed they need as the company continues to evolve.

The positive implications of GE's transformation will be impactful across its businesses. In the early days of its transformation, the company was very focused on making sure it could manufacture and expand at a much more rapid rate. Now, GE is enabling transformation to gain a competitive edge in other areas, such as shortening the product design cycle and time-to-market for new developments.

Ross explains, "We're at a point where the manufacturing market is saturated, so we have to be much more efficient. So, as we think about digital transformation, it's about how we get more productivity out of the machines, the equipment, and the people that we already have deployed in the field. And I think this will be a major component in the next industrial revolution."



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