

The Industrialist

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“If you’re not a data-driven organization, you’re just making guesses.”

Daniel Schumacher
Director of Information Technologies,
Toyota Material Handling

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Material change: Toyota Material Handling's reinvention

Each month, we speak to a different industry leader about their approach to innovation and emerging trends impacting the industrial sector. For this edition, we talked with Toyota Material Handling's Daniel Schumacher about his take on the state of play of the material handling industry, on-going technology revolution and his predictions of the game changers that lie ahead:



[Addressing the changing material handling industry](#)



[Leveraging technology to unlock new value](#)



[Sustainability and impact: the role of technology](#)

In conversation with Toyota Material Handling's Daniel Schumacher



Daniel Schumacher
Director of Information Technologies,
Toyota Material Handling

Every business must be a technology business to be competitive. In the face of supply chain issues and talent shortages, end consumers still expect to be served engaging digital experiences at a rapid pace, in all areas of their lives. And at the heart of one of the most fundamental daily services they expect, is Toyota Material Handling (TMH).

“So many of the things that we take for granted in our personal lives, related to expedited delivery, are only possible through our material handling products,” says Daniel Schumacher, Director of Information Technologies at TMH. “Ten years ago, getting an order in one or two weeks seemed fast. Today, if we don't get something in 48 hours it feels like it's taken forever. We're helping our customers carry the load and transform the industry.”

TMH's total enterprise reinvention is helping it supply customers with digitally enabled experiences that are in turn transforming experiences for end-consumers. And its differentiators—from more sustainable electric forklifts to data generating machinery—have cemented TMH's place as an innovative market leader. We spoke to Schumacher about how the company is redefining success and why being part of the industry's transformation has been such a fun ride.

What one word describes you best?

Imaginative. I try to apply creativity to problem-solving and strategic thinking. There's always a better way to do something. It's one of the fun things about joining Toyota, which literally wrote the book on Kaizen, a work philosophy centered on continuous quality improvement. I like to have an open mind and explore the art of the possible.



Can you share some insights around your career journey to date?

My journey started with Andersen Consulting in the 1990s, and my first client assignment was in an SAP solution center in Frankfurt, Germany.

I started learning SAP in German, and to this day I still remember words like “Buchungskreis”, which is German for ‘company code’. That led to opportunities in Paris and the US, working in the utilities, medical device and high-tech industries. I will never forget doing an SAP implementation at Universal Studios where every day my name was on the list at the security gate and during breaks, I could drive a golf cart around the set.

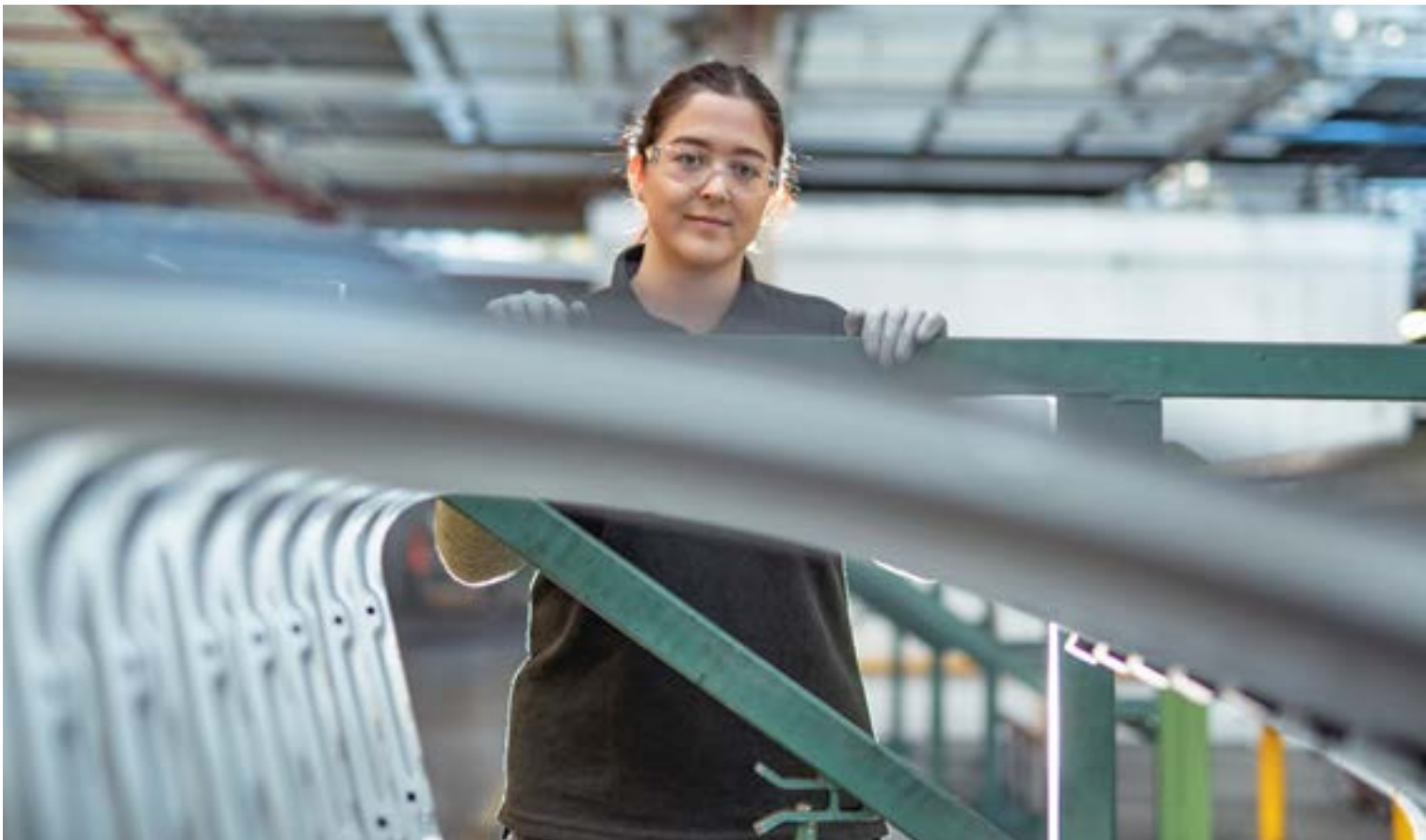
That’s rare when you’re in the technology industry! I had some truly unique experiences and really learned a lot with Andersen Consulting and Accenture. I also spent some time with PricewaterhouseCoopers, Johnson Controls and Komatsu across a wide variety of roles, everything from compliance to audit, which ultimately led to digital transformation, problem-solving CIO roles. I feel like I’ve seen and experienced a little bit of everything, but I think those early days at Andersen Consulting prepared me for a career where you wake up every day and have to figure out what needs to get done. It’s been a fantastic journey.

What trends are impacting TMH, and how is the company responding?

Most people don't realize how dependent they are on the material handling industry.

If you get mail or packages at home or work, there is a good chance that it has been handled by TMH or Raymond material handling products (a Toyota group company). Expedited delivery has been made possible through our products. Toyota and Raymond's core business is as an Original Equipment Manufacturer (OEM) of traditional material handling products like forklifts. However, we're expanding into adjacent areas with heavier-duty products that can pick up and load containers, as well as autonomously guided vehicles and advanced warehousing products through our sister companies like [Bastian Solutions](#).

We understand how dependent people are on their supply chain, both personally and commercially. And we're committed to making that a more advanced experience by transitioning from only selling pieces of equipment, to selling solutions and capabilities that can be fully integrated to drive a reliable experience. Distribution centers and warehouses must operate as efficiently as possible to enable the last mile delivery. The Home Depot and other companies, for example, require more than simple unloading and loading of big containers. They need to get the products consumers want to buy directly onto the shelf where they need it to be.

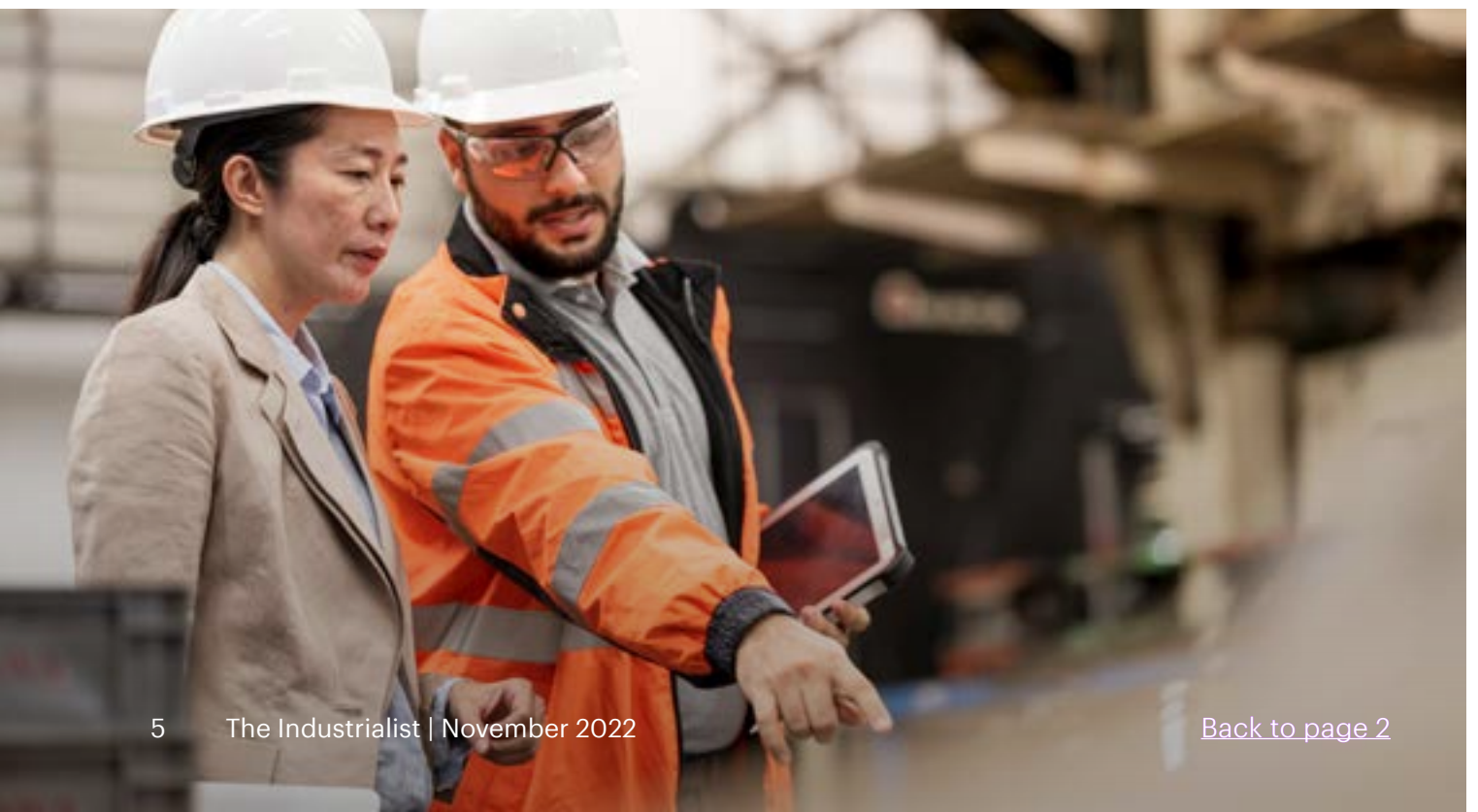


The ongoing technology revolution within the industrial industry harnesses new capabilities to build resiliency. Can you talk about how TMH is leveraging technology and data to better connect across the entire value chain?

It has been a holistic transformation across the value chain and how we operate as a company.

We no longer just manufacture pieces of machinery. We deliver customer portals; e-commerce capabilities; management systems that help our world-class dealers operate more efficiently and effectively; telematics-embedded products. We have fundamentally shifted from being a purveyor of equipment to a provider of holistic solutions that enable our dealer operations and ultimately help our customers achieve the outcomes they're seeking when they use our products. Our external transformation also required us to go through a substantial internal transformation. For example, the line

between a business professional and an IT professional is blurring to the point that there really won't be a difference soon. You can't implement technology unless you understand the business outcomes the company needs to deliver, and being able to deliver most business outcomes today independent of technology just isn't possible. We have also had to redefine what success looks like. We come to the market in a fantastic position, but we need to look at how we reinvent our organization in order to deliver outcomes that previously weren't core capabilities. We also have to redefine success for our dealers and our customers, as they look to use the capabilities we're delivering into their platforms to build additional capabilities. It's a very exciting time.



Can you talk about that your own total enterprise reinvention, and how you're leveraging technology to unlock new value?

There's an analogy I like to use when talking about data-driven transformations.

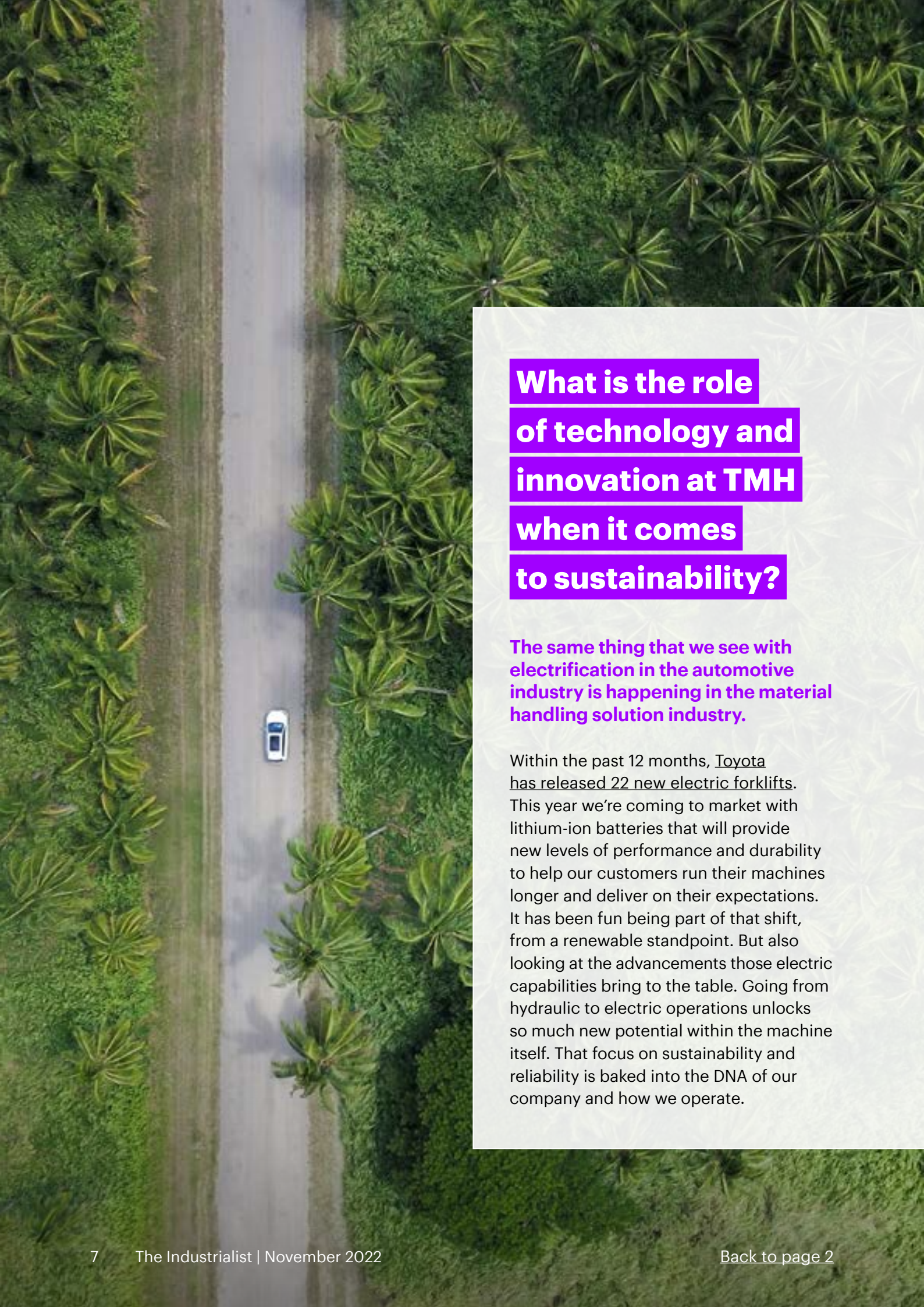
If you got in your car and had no information about how fast you were going or whether you had any gas, you would never leave the parking lot. In business, if you're not a data-driven organization you're just making educated guesses. If you wouldn't do that when you're driving your car home, how could you possibly do that with a complex business organization? We're not focused on data for its own sake, but on changing that data into insights that drive action. As our business becomes more data enabled and our machines generate more data, it provides more opportunities to understand what's happening so we can make improvements. For example, we can identify how one customer is using

a particular piece of equipment versus another, then use that knowledge to unlock insights that drive reliability, efficiency and optimization. That's the really fun part of this industry's transformation. Ten years ago, no one could imagine autonomous, interconnected vehicles working in a warehouse. You might think it was the least digital workplace of all. Yet warehouses have undergone a huge transformation, from being the place where you store stuff to being highly interconnected environments that generate massive amounts of operational data and insights. It's the data and insights coming from our machines that enable our customers to get packages to people on time. Being part of that value chain is really fun.

Do customers today expect those kinds of solutions, versus straightforward material handling equipment purchases?

Absolutely. They expect it in our industry and across so many facets of life.

There are a lot of parallels with the automotive industry where things that are now standard in every car, were only in high-end vehicles ten years ago. Consumer expectations change with the digitization of their lives. It flows into every industry and ours is no different if you want to be competitive. New capabilities and differentiated products in our world enable new capabilities within our customers' world, which in turn help their end consumers.



What is the role of technology and innovation at TMH when it comes to sustainability?

The same thing that we see with electrification in the automotive industry is happening in the material handling solution industry.

Within the past 12 months, Toyota has released 22 new electric forklifts. This year we're coming to market with lithium-ion batteries that will provide new levels of performance and durability to help our customers run their machines longer and deliver on their expectations. It has been fun being part of that shift, from a renewable standpoint. But also looking at the advancements those electric capabilities bring to the table. Going from hydraulic to electric operations unlocks so much new potential within the machine itself. That focus on sustainability and reliability is baked into the DNA of our company and how we operate.



What inspires you the most?

**People. First and foremost,
that starts with my wife and
my best friend, Marie.**

I'm a firm believer that you can only be as good at work as you are at home. It's fundamental, for me as a person and as part of our Toyota core values, that we strive to build a home-like atmosphere in the workplace. When that starts with personal inspiration, you can carry that into the workplace and it empowers you to be more creative and innovative, and to explore new things. We're one big happy family here. And like any family, we have good days where it's easy to get along, and challenging days where we face complex problems and seemingly insurmountable odds. But it's the way we work with people, treating them as family, that allows us to build each other up, overcome obstacles and seek new solutions. I really believe that caring for people is at the foundation of everything that we do. And that extends from our business into our operations, our dealerships, and to our customers.

In closing

With further economic headwinds and rising energy prices, it has become increasingly clear that in order to reach the temperature goals set in Paris, we have no choice but to take bold measures. Many industrial companies know now is the time to act, but progress is hindered by the lack of expertise, not knowing where to start, and the ongoing challenges of an unstable environment. Their challenge is to make sustainability and ESG a true business driver while performing on all other key performance indicators.

How technology can lead the way to sustainability for industrial businesses?

Despite being widely hailed as a priority, many industrial organizations are still not approaching sustainability with the urgency or specificity it needs. They need to both talk *and* act. To meet ambitious ESG goals, it's time to integrate technology and sustainability strategies. Technology is—and will continue to be—the fundamental driver of sustainability for industrial organizations and their supply chains, customers, and broader business ecosystems.

To have real impact and harness the full potential of an integrated sustainable technology strategy, the industrial C-Suite, with the COOs and CIOs as the catalyst for change, can accelerate their digital reinvention by formulating an effective sustainable technology strategy with three integral elements:

1. Sustainability by tech

Using technology innovation to drive sustainability initiatives and transform the business model.

2. Sustainability in tech

Measuring the ESG impacts of technology and working to ensure it's designed, developed, and deployed sustainably.

3. Sustainability at scale

Collaborating with your ecosystem to trigger progress beyond your own organization and harness technology in completely new ways to deliver sustainable outcomes.

The insights provided by Toyota Material Handling's Daniel Schumacher in this edition of The Industrialist showcase that just being data-driven is not enough. Every business must be a sustainable business and technology and data are critical and fundamental enablers to making sustainable decisions and securing long-term business goals.

Best regards,



Thomas Rinn

Senior Managing Director,
Global Industrial Lead, Accenture



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The Industrialist is our monthly digital magazine that puts game-changing perspectives in the spotlight. It combines thought-provoking content and insights, to keep you on top of what's new in the industrial industry.

Featuring different CXOs and diverse views, you can be inspired by leading innovators, explore the latest trends, tools, technologies, and innovations, and ignite your industry interest with transformational thought leadership.

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