

Conversations for tomorrow

Quarterly review
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**Intelligent Industry:
The Next Era of
Transformation**

#GetTheFutureYouWant



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DELIVERING SMART- MANUFACTURING OPERATIONS



Kimberly-Clark

Kim Kirkconnell is accountable for enabling technology for the Kimberly-Clark supply chain organization. Her current focus is

ensuring successful delivery of Manufacturing Execution System (MES) and quality systems for manufacturing, supply chain planning, demand planning, transportation management, and warehouse management systems. In her previous role, she was responsible for leading digital transformation, including establishing product management teams and technology platforms for sales, marketing and supply chain platforms.

Amy Sausen is leading smart manufacturing strategy hyper-connected to supply chain organization with a focus on planning and logistics, for end-to-end visibility. She is also driving innovation within CPG manufacturing and is leading the IIOT strategy and deployment, and developing edge computing vision. She is also responsible for executive partnership with global and regional manufacturing, research & development, engineering and other supply chain leaders.

The Capgemini Research Institute spoke to Kim and Amy about driving smart-manufacturing operations, interesting use cases, and their approach to upskilling.

TRANSITIONING TO SMART MANUFACTURING

Could you elaborate on how Kimberly-Clark is driving smart-manufacturing operations?

— **Kim:** We launched our smart-manufacturing operations transformation a few years ago. To be competitive and consumer centric, we knew we had to have the right foundations in place. This included the need to have a standardized Manufacturing Execution System (MES), rather than multiple platforms, as was the case. We are also working on ensuring that we have strong master-data governance in place. Instead of allowing our regions or mills to set their own standards, we are working on a global standard template with strong master data.

— **Amy:** We are also finally focusing on scaling operations quickly when we pilot a technology. If we are working on a digital-twin pilot to improve reliability, for example, how can we scale it quickly to all other mills by using the foundational systems implemented? At the same time, if the pilot fails, we need to fail fast. We must imbue the mindset among our people that it is okay to fail, provided we learn from it and then roll into the next idea.

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Has there been any changes in your technology strategy in light of the COVID-19 crisis? What are your top three priorities going forward?

— **Kim:** There hasn't been a change in strategy because of COVID-19. But there has been a greater focus on delivering a flexible and agile organization that can work in a new way. COVID-19 certainly reinforced the message that we need to have more automation in the mills; more tools that enable people to work remotely; more ways to train and onboard employees faster. Another area of focus is real-time dashboarding. Being able to see accurate data in real time when trying to make decisions about customer orders without having to wait for days or weeks for an analysis to be run, is critical.

How can the manufacturing process become more efficient? What are some of the applications of technology that interest you?

— **Amy:** There are a number of opportunities. In this industry, augmented reality (AR) and virtual reality (VR) are areas I'm very excited about, from the standpoint of whether I can train the workers faster. Can I enable mill workers to be connected and mobile, so that they aren't having to go and print a sheet of paper for work orders? Can I give the worker a headset and a mobile device that will make them more effective in a very large manufacturing facility? If I can, this is a powerful use case.

Another compelling use case is in the digital-twin space. The technology is not yet ready to help us in product innovation, because using fluid dynamics in a digital environment (for example, trying to model how a Kleenex tissue or a Huggies diaper absorbs moisture) can become very complex. However, using a digital twin to create an environment where a system can be monitored in real time, learning from that, and converting those insights into predictive or prescriptive actions is a stronger application because of

the vast amount of data available within manufacturing operations. We are piloting the predictive maintenance use case for a machine currently, to understand when the machine might breakdown and the reason for breakdown.

A third area that we are beginning to explore is intelligent automation, robots and cobots [collaborative robots]. We are exploring how automation can be used to benefit the workforce.

We would like to augment – not replace – our workforce, to relieve human workers of repetitive tasks and reduce the risk of injury, making the environment safer. These are some of the things that are most interesting to us right now.

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What would be your recommendations for organizations to scale these transformation initiatives?

— **Kim:** Focus on having the right data, whether to run a digital twin or provide predictive maintenance. Also, you need to work with an engineer or an employee at the mill to understand this data. If you just have data scientists running models without truly understanding the process, implementation is going to be challenging.

It is also very important to marry the technology and the business. At Kimberly-Clark, we don't start a project until the business is ready to commit resources to it. We tell them upfront how much time we need from each team, who needs to be involved, and what we need them to do.

— **Amy:** A lot of companies get caught in “pilot purgatory.” They start a pilot and find there is a pocket of knowledge and expertise to be tapped into. But what they have created is not scalable because they are not working from a common data framework, and the effort to cleanse and transform data impedes the success of a fast and scalable rollout approach. Without addressing these areas, pilots do not scale. In our organization, we encourage teams to innovate and work on these fun, creative things, but direct them to using our established enterprise platforms in a manner where things can be scaled. This definitely needs to be a management-led conversation. Leaders of the regions and the lines of business need to be really attuned to where their teams are spending their efforts, and ensure the pilots are built on established enterprise foundations with master data, or risk getting stuck with benefits that cannot scale.



USING DIGITAL TECHNOLOGIES TO MEET SUSTAINABILITY GOALS

By 2030, Kimberly-Clark aims to have reduced absolute greenhouse-gas emissions by 50% and the business's plastics footprint by 50%. What role will digital technologies play in helping the organization fulfil its sustainability agenda?

— **Kim:** We are using technology and innovation in various areas. For instance, in North America, the Huggies brand introduced diapers made with plant-based ingredients. We are already using sensor analytics to track our energy and water consumption to monitor our footprint. In the future, we will be looking at opportunities to apply digital twin technology in making our products more sustainable.

UPSKILLING WORKFORCE FOR INTELLIGENT OPERATIONS

How are you building the skillset required for these “intelligent operations”?

— **Amy:** This space requires IT and OT skillsets to work together in a new way. At Kimberly-Clark, we have put together a cross-functional workstream that's made up of both IT and engineering operations personnel. But we are also focusing on digital skills for manufacturing, and on imbuing IT skills into engineering and the operational technology (OT) environment. Similarly, we are looking at infusing the IT function with engineering knowledge and experience. We are starting to collaborate on training sessions and tools. This is a new way of learning and will evolve as we go forward.



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