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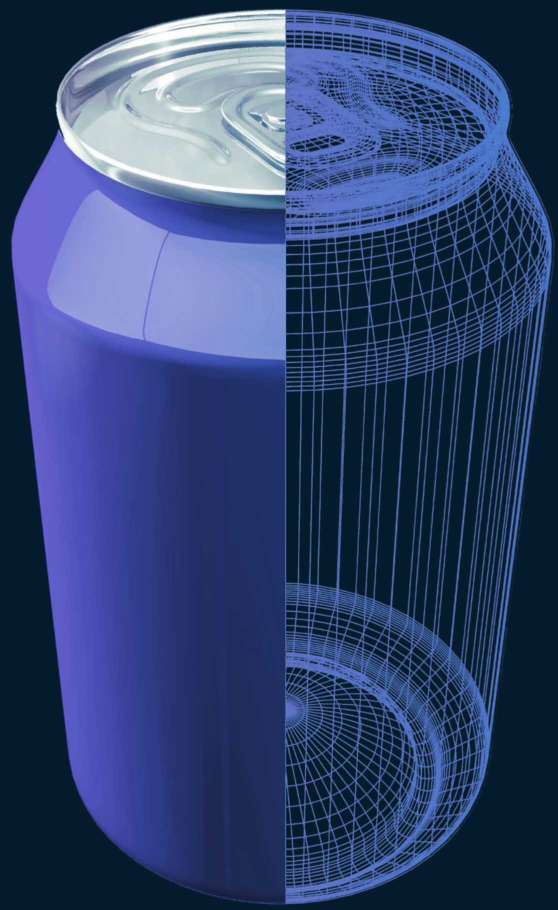

The Next Normal

The future of packaging: Smart bottles, edible boxes

October 2019

Milk jugs with sensors on them. Personalized wine bottles. Edible boxes and bags. These are just a few examples of *The Next Normal* in packaging. They might sound gimmicky now, but they could become commonplace in the coming years.

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The future of packaging

McKinsey experts expect tomorrow's packaging to be smart, personalized, and reusable.

How packaging will change

David Feber: Packaging is ubiquitous. It touches almost every person on the planet. It affects things that human beings need to survive: food, healthcare, personal care. All of that is packaged. Today, none of that has a lot of intelligence. But there are real concerns with a lot of those products. There are concerns of spoilage, there are concerns of authenticity ("Is this what I thought I was getting?"), and there are concerns of origin ("Where is this coming from?"). With different types of intelligence and sensing, those packages can be much more dynamic and can help in two ways. One way is, "Don't throw this out, even though it's past its expiry date." Or, on the other side, "That yogurt container that you just bought that is supposed to last two weeks hit a temperature that caused it to spoil, and don't consume it." Those are the types of examples that we suspect we'll see.

Nick Santhanam: You go to the supermarket. You decide to buy a bottle of alcohol. You buy it, and you say, "I don't know what to do." Instead, think about if the packaging on it is able to tell you one thing: how to make a cocktail. Two, when you scan it, it tells you, "You can make a cocktail, which suits you this way, because I know this is the type of cocktail you like and make. Here are the two other ingredients you need to buy." And you're going to have it. So, it's becoming a personalized assistant to you.

Daniel Nordigården: What is already being tested now is digital print. How can I have my name on a beverage bottle? Or, when I buy a jar of jam or something, how can I have my name on it—or some kind of customized promotion? I think, especially for in-store sales, that kind of personalization will be important to drive the sale of goods.

David Feber: You could envision the packaging changing to you as a consumer having your own personalized container that can be reused over and over—that your Instacart shopper picks up from your house, fills with strawberries, and brings back to your house. We may see more micro supply chains set up in certain communities that have a higher demand for consumer personalization or [that have] requirements for packaging to be sustainable and personalized and reusable.

Nick Santhanam: A great example people talk about is vegetable-based packaging. Think about it this way: you go buy a burger, then you throw away the box. What happens if you can eat the box? What happens if you can heat up the box and put it into your soup? What if it's algae based or if it's protein based? Then you can reuse it but not reuse it as a package—but in a different application. You can end up eating it. Or your dog can end up eating it. Those are the kinds of innovation I believe you're going to see in the next five years, ten years, 15 years.

"Must dos" for packaging companies

David Feber: We're seeing a lot of packaging companies that are waiting for their customers to come and ask for something different. The challenge with that is, often, when these customers ask for something different, they're going to a new converter. So, there's a real opportunity for packaging converters to step ahead, understand how these trends are affecting consumers and therefore their customers, and come in with solutions.

Daniel Nordigården: Going forward, there needs to be much closer partnerships with brand owners, with retailers, with upstream recyclers, and even downstream—with new types of customers, like e-retailers—to think through, "How is this packaging going to work in the value chain? How do you develop this to solve a pain point?" Going forward, I think more and more relocation of assets closer to customers—close by or even in house—will happen a lot.

Nick Santhanam: The point on innovation is not to go attract ten PhDs from Cal Tech [California Institute of Technology] and put them in Silicon Valley. It's about finding what the biggest customer pain point is that he or she is not able to solve. Two, how do you solve it? But not alone—solve it in an ecosystem; solve it with a partner. Three, get your organization to act. Go do it. And when you fail, fail fast. It's about getting your organization to be agile, to be "customer back." If you fail, that's OK. Learn from it and move fast.

David Feber is a partner in McKinsey's Detroit office, where **Daniel Nordigården** is a senior expert; **Nick Santhanam** is a senior partner in the Silicon Valley office.

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July 2019 | Interview

Winning in the new age of packaging: An interview with WestRock's CEO, Steve Voorhees

WestRock, which is headquartered in Atlanta, has operations around the world and expertise in every shopping category. The company has created game-changing innovations in paper-making, packaging design, and retail solutions. McKinsey's Nick Santhanam spoke with WestRock CEO Steve Voorhees to gain his perspective on packaging sector and the road ahead.

McKinsey: How has packaging changed over the past 15 years?

Steve Voorhees: Packaging has served three roles: protecting, promoting, and performing. With protection, needs have evolved as the channels for getting products to customers have changed, and we'll continue to see new developments. Packaging's role in promotion is growing in importance and helping our customers increase their sales. But the greatest changes relate to performance, and that will continue to be the case over the next five to ten years.
McKinsey: How is packaging performance evolving?

Steve Voorhees: First, sustainability is a much more important aspect of what we offer to customers. They like paper-based packaging because it's made from renewable and recyclable resources. Customers also appreciate packaging that contains less material. Those changes help packaging perform its role in promoting sustainability.

Another part of performance relates to new technologies embedded in packaging that allow it to do far more than protecting and promoting products. For instance, consumers can get information about products by scanning labels on some packages.

McKinsey: That brings up another question. Is the new emphasis on sustainability primarily coming from your customers, or are consumers providing the major push?

Steve Voorhees: I think it's driven by the consumers. Look at Earth Day last year, when there were pictures of plastic in the ocean. Consumers were very engaged. Now they're saying, "What can I do, through my individual buying decisions, to help the environment?" For many people, not buying plastic is a way to help. Paperboard packaging nicely fits with this trend. And our customers respond to consumers. It's a virtuous circle.

McKinsey: What is your company doing to increase sustainability?

Steve Voorhees: We're very committed to sustainability at WestRock and we're focused on giving our people opportunities to make a positive impact on the environment, including within the communities where we operate. We have specific sustainability goals and we track our progress closely.

We have a great paper R&D area, and the discoveries allow us to design paper packages that replace plastics across the board. There are many opportunities to do this in different markets—we've done many replacements in beverage over the past few years. We anticipate that there will be more opportunities to replace plastic with paper.

McKinsey: How do you think governments will support the push for sustainable packaging?

Steve Voorhees: I think the consumers are going to encourage governments to take action. It's the same as what is happening with our customers, where consumers are showing their support for sustainability by purchasing products that minimize waste.

McKinsey: Now let's move to another topic. We've seen a lot of mergers and acquisitions within packaging recently. Do you think the consolidation is contributing to the higher returns that we're seeing?

Steve Voorhees: I think companies are benefitting more from scale than consolidation. Some people might say that there is no distinction, since scale results from consolidation, but there is one. As companies become larger, they can serve customers more economically, with a broader range of paper and packaging products. The larger size allows them to be more efficient when trying to meet customer needs. At WestRock, scale is definitely one of our advantages. Our comprehensive portfolio of paper and packaging products works to our advantage.

McKinsey: You like to use the expression "Preparation meets opportunity." Can you talk a bit about how have you capitalized on acquisition opportunities and new technologies?

Steve Voorhees: If you're prepared, you can take advantage of opportunities when they arise. At WestRock, we've designed our organization to be prepared, and we've built the capabilities needed to capture opportunities. And we'll continue to build our capabilities and our business for a long time into the future.

McKinsey: Are you looking at both organic and inorganic opportunities to build capabilities, or are you focusing mostly on M&A?

Steve Voorhees: We're building capabilities organically more than ever before. We've taken that stance since we built WestRock through the merger of two companies, about four years ago. Now we're reaping the benefits. Of course, we still have the opportunity to grow via acquisition and obtain new capabilities, but the next several years will mostly involve organic growth. We'll benefit from the capabilities that we've built as an organization to meet the needs of our customers.

McKinsey: Even before M&A was popular in packaging, WestRock was very successful in acquiring companies. What's your approach in aligning organizations and cultures after an acquisition?

Steve Voorhees: Well, we've learned from experience, since not all of our acquisitions have been successful with respect to integration. We've built a framework to integrate companies and welcome them into WestRock. And the core of that is our values and our vision and our behaviors.

We want all of our teammates to feel engaged and comfortable in their work. But the mechanics of any individual integration are very much situational. The best way to integrate a new company, particularly with respect to systems, culture and processes, will vary.

McKinsey: Why is cultural integration so difficult for many companies?

Steve Voorhees: I think it's really hard to listen. There's a tendency for people to say, "I'd love to share my ideas with you" when they are speaking to staff from an acquired company. Instead, they should ask, "What are the best things that I can learn from you?" They'll find that people are willing to share their views. You really have to create a situation in which both sides listen to each other. If you can do that, people from both companies will share ideas and end up with better results than either would attain on their own. If the companies don't listen to each other, you're not going to end up with a very good result.

McKinsey: Beyond scale that companies often achieve through M&A, what are some other important value drivers for packaging companies?

Steve Voorhees: The other major value driver is innovation—the application of technology in manufacturing, design, and administrative processes. Technology and innovation feed each other, and they're both enhanced by scale. They'll be the main drivers of value in the future.

McKinsey: We are living in a world of massive disruption brought on by technologies like blockchain and the Internet of Things. What are the implications for the packaging industry and for companies like WestRock?

Steve Voorhees: Technology is having a tremendous impact on society and industry. At WestRock, we're embracing that by looking at digital and determining how it can make our business more effective. Take product design. There are many opportunities to use technology to improve product design and create packaging that customers really want. And within operations, there are multiple opportunities to use innovative technologies—we can change everything from how we measure our product to our printing methods. We're also using digital tools to improve how we recruit, attract, and retain employees.

McKinsey: What's your vision for connected packaging and how will WestRock support its evolution?

Steve Voorhees: It's an opportunity for us to continue to add value to our packaging. Look at a product we created for 19 Crimes. Each package has a picture of a convict who was transported to Australia for crimes committed in England in the 1700s and 1800s. If you download an app, you can point it at the package and hear the criminals come to life and tell their story. There are also some other interactive features. That's an experience you can only get from connected packaging.

Connected packaging also creates great opportunities to reach customers in stores. If we connect at the store, we might have the opportunity to convince customers to buy our product.

McKinsey: Investing in new technologies costs money. How do you ensure a good return on investment on packaging innovations?

Steve Voorhees: We focus on packaging innovations related to four value drivers that are important to our customers. The first two involve increasing sales and reducing total costs. And for costs, we're not just talking about the price of packaging. We're trying to reduce costs in any way possible, and sometimes the savings we help customers obtain are higher than the cost of the package itself. Beyond sales and costs, we invest in technologies that will minimize risk. Those technologies help ensure that we can deliver complete orders on time, and we've been very successful with that. Last, we focus on innovations that will help customers meet their sustainability goals. As I noted, paper-based packaging can take them a long way toward that goal. Customers are very grateful for the value of our products, and we have a good relationship with them.

McKinsey: How has WestRock increased the proportion of recurring revenues? That's one of the biggest drivers of a metric that we term Quality of Revenue.

Steve Voorhees: I think we'll have an increase in recurring revenue at WestRock because we're getting better at providing differentiated solutions to our customers. We have the world's most comprehensive portfolio of paper and packaging, and we're creating customized solutions that our customers appreciate. That will encourage them to continue working with us. Our customer retention rate has improved significantly in recent years.

McKinsey: There's an advantage to being a first mover with new technologies, since you get to set the standards and drive change. But there's also some risk because you don't know the potential returns. How do you make decisions about how much you should invest in the core business and how much you should invest in innovative technologies?

Steve Voorhees: That's another great question because those choices are becoming more stark. There's not a perfect answer to that question, beyond saying that you need to look at the alternatives, set priorities, and make judgments. That's what we do at WestRock.

As we look at the future, technology will become more of a given within packaging. Ten years from now, technology will play an even greater role than it does now. I think that's an important consideration as we look at ways to build our company. If we have to choose between investing in new technology and hard assets, we might be more likely to choose technology.

McKinsey: There's a general sense that publicly listed company or publicly traded companies can't take a lot of risk because the market won't allow it. Would you agree?

Steve Voorhees: I think it depends on the risk. Our investors are very knowledgeable and understand our business. If we can make a case that it's an appropriate risk to take, our investors will support it. We pay attention to their concerns, and I think we've been successful.

McKinsey: Many packaging companies are working more closely with their customers, especially big tech companies, on packaging solutions. How do you see this trend evolving over the next three to five to ten years?

Steve Voorhees: I think the line between packaging companies and customers will become increasingly blurred. Technology is affecting all aspects of society and business. We're going to be investing in new packaging technologies, and tech companies might explore that as well. Companies like WestRock, which have scale, will have the resources to invest in new technologies.

McKinsey: What impact will millennials have on packaging? They shop much differently than older consumers.

Steve Voorhees: Actually, I think the way all customers shop, whether they're Generation X, Generation Z, or millennials, is changing in response to technology, the advent of mobile phones, and e-Commerce. That creates great opportunities for packaging companies that have the scale to be able to respond to those trends. Our challenge is to identify those needs and be the first to meet them.

McKinsey: What do you see as the biggest opportunity and the challenge for the packaging industry over the next five years?

Steve Voorhees: Integrating technology into business in a way that reflects market needs.

McKinsey: What's your greatest learning as CEO?

Steve Voorhees: You must stay focused on what's important, and that obviously includes your job. But it's also family and faith. You need a strong foundation. You will have good days and bad days, but having a strong foundation of support and consistent beliefs will get you through. Actually, I think I knew these things coming into my position, so I'm not sure I'd call it a learning. But it has become more true as time's passed.

McKinsey: Many people know you as a CEO. What are a few things they don't know about your life outside of work?

Steve Voorhees: They might not know that I love music. There are so many great songs out there. If you don't know Florence and the Machine, you're missing out.

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July 2019 | Interview

Opportunities in packaging: An interview with Sealed Air's president and CEO, Ted Doheny

Since 1960, Sealed Air has prospered by bringing innovation to the packaging industry, including Cryovac® packaging technology, Bubble Wrap® brand cushioning, and Jiffy® protective mailers. McKinsey's Shekhar Varanasi spoke with Sealed Air's president and CEO, Ted Doheny, about the challenges and opportunities in the packaging sector, as well as its future direction.

McKinsey: What are the important challenges in the packaging industry today? How do you think the industry will evolve?

Ted Doheny: From an industry perspective, the big challenge is this: How quickly can we innovate to save our customers money? From a more global perspective, it's important to think about the tremendous amount of waste associated with packaging—sometimes arising from e-commerce or because things are over- or underpackaged. And there will always be concern about plastics. We can solve our toughest challenges with new innovations that leave our environment and societybetter than we found them. That should be the focus of the future industry.

The industry will find tremendous opportunities in driving innovation. Think about food. Over 30 percent of the food we grow and harvest is lost. We could work on packaging technologies to extend shelf life, or truck life, or plane life, or in the future, even drone life. It would change so much. The world is also becoming more automated, even in grocery stores, and packaging companies could help drive change there.

McKinsey: The packaging industry has moved from destroying value to creating value over the past 15 years. What are the most important steps you have taken to create value? And what should the industry do in the future?

Ted Doheny: Let's first talk about economic value and how we create it. At Sealed Air, we changed the metrics on how we think about value. We're focused on our return on invested capital (ROIC). We're thinking: "How do we deploy our assets above our cost of capital and actually create value?"

We need to focus on innovation, since that will keep driving profitable growth and value creation. And if we're not moving fast enough, that's when we should think about M&A to fill the gap and drive more growth. But before a company undertakes any deals, it has to be financially solid. It has to be creating value.

McKinsey: How do you become a company that provides end-to-end solutions across equipment, materials, and service?

Ted Doheny: There's a process. Before you become a solutions provider, you have to have tremendous products that actually create value for the customer. These products are essential to the next step—becoming a service player. Then, after you develop great services on top of your great products, you can provide solutions.

So it's really an evolution. You take great products and reinvent them until they're world class. You improve your service capabilities, sometimes using internet channels to provide even better customer interactions. All packaging companies need to get better on the digital-service side before they move to solutions. And that's what we've been doing.

McKinsey: What steps is Sealed Air taking to improve sustainability?

Ted Doheny: Our mission statement says that we solve packaging's most critical challenges with innovative solutions that leave our world better than we found it. We have a plastics pledge, and the goal is to have zero plastic waste. We have a timeline. The question is how do we get there from where we are today.

Our plastics pledge is opening up the door for innovations. We're looking at materials and thinking about changing the components that go into packaging. We're looking at how we make things, investigating digital technology, and helping our customers determine where they should dispose of their waste. We're looking at recycling. We're doing the right thing and opening some business opportunities in the process.

McKinsey: What opportunities are new technologies such as automation, artificial intelligence, and blockchain creating for the packaging industry?

Ted Doheny: It's interesting. If you create a Venn diagram, packaging is actually at the center point where these disruptive technologies are converging. That's because everything is put in a package. How does a package communicate with people who want to know what is inside, when it was filled, how much it weighs, whether it was stolen, and whether the contents are nearing their expiration? Packaging is the focal point of everything.

Think about blockchain. Packaging companies can use digital tools that note exactly when something went into a package. We can own that information and share it with customers, so they can trace the inputs and track the package. By providing that information, blockchain helps us add value.

Now think about automation. If a person loads a cart in a supermarket, they might get 15 or 20 items in it over a half hour. A robot is now under development that could work at ten times that pace. But it will need to be able to read the digital signature on packages for this to work. Beyond digital communication, we need to think about packaging materials that could help with automation. A robot hand might not be as soft as a human hand. So what packaging is required? We may have to design for both robots and humans.

McKinsey: How are you optimizing capital allocation?

Ted Doheny: For all our capital expenditures, we're asking: What is the return on that capital? How does it drive productivity? How does it drive growth? How does it drive cost savings? We're taking an end-to-end perspective. What's happening in the factories? Could a new innovation help? What about M&A?

We now look at capital allocation collectively, at the company level, instead of considering it by division and region. The new process is more holistic. We're also trying to improve capital allocation by driving process breakthroughs. We're not looking for incremental improvements that might make a process 5 percent better. We're considering full process redesigns. We want people to think out of the box.

Say we're looking at a customer's specifications. It calls for protective material, a box, and instruction books. Maybe we could think of a new design that dramatically lowers the cost. That same thing goes for internal operations. Could we move to fully automated systems that improve processes? If so, capital should flow to release the automation and increase our returns.

McKinsey: How do you balance the tension between short-and long-term benefits when making investment decisions?

Ted Doheny: We rely on numbers and consider risk issues in combination with the timeline. An innovation might be associated with a lot of risk. And if it takes a long time to implement, we won't immediately see returns on our investment. But we need to consider the whole picture. Is the innovation a game changer? Will it transform the company and help us jump past the competition? So there is a financial component to our decisions, and some discipline. But our own judgment also plays a role.

As we innovate, we need to fail faster. We shouldn't keep moving forward if our work doesn't appear promising. We can learn from our failures. Many of the products we create require a lot of testing and FDA approval. That will always be the case, and our products will always take a long time to develop. But if an innovation isn't working, it doesn't have to go through the full process. We can stop development. We have to increase our failure rate.

McKinsey: You have spoken of the "four Ps" in reference to Sealed Air and the company's transformation. Tell me a little about them.

Ted Doheny: We're reinventing the entire company—and that's not meant to scare anyone. We're going to have a new way of organizing that relates to what we call the four Ps. The first one is performance. We're changing our metrics and our focus to ensure that we are a world-class company serving the packaging industry. We're targeting 40 percent operating leverage. We want to beat our cost of capital. And we will have one bonus pool for all teams.

The second P is process. We want to have common, world-class processes and benchmarks by area, function, and yield. But how will we define world class? How far away are we? The process change will happen throughout the whole company.

The third P relates to products. We have to reinvent our iconic products. Their good record doesn't guarantee their future. Where we've lost our patents, we're going to have to reinvent, and we'll need more significant innovation with our iconic brands. We need to reinvent Bubble Wrap®, reinvent Cryovac®.

The fourth P is really important—that's our people, and we want to reinvent our culture. As a new CEO, I had some meetings with the people on the management team to discuss how we could work as a team or individually, to reinvent the company's culture.

The essence of the four Ps is to drive sustainability and our positive impact on society. What we do affects the world we live in, and that's important. The more we address sustainability and social issues, the stronger the company becomes. It's the right thing to do.

McKinsey: You've already talked about the industry's future. What do you see as the greatest opportunities and challenges for Sealed Air over the next few years?

Ted Doheny: We have to combine our vision and strategy with strong execution. If a company has goals but doesn't execute on them, they're dreaming. But if they move to implementation without first having a clear vision and strategy, it's a nightmare. It simply won't execute well.

We have a clear vision and strategy, but there could be some macroeconomic issues that affect implementation. For instance, are there certain tariffs that could force us to change our supply base? We have to deal with those things. But what's exciting to me about our business is that we're connected to our customers—some of the major companies in the world. If their CEOs have a packaging issue, they get us in there. I think if we stay connected to our customers at the highest levels, we can fight through any implementation obstacles and gain some great opportunities.

McKinsey: What are the most important things you've learned about being a CEO?

Ted Doheny: I'm a second-time CEO. From day one, when you take over, you're responsible for every problem in the company. When I started at Sealed Air, I knew that I had to move fast, address every problem, and delegate to make that happen. There's always the fear that someone is moving faster than you are.

The most important thing is to find the right people, get a strong team in place, and execute. This is my second time around with a transformation, and my speed is probably twice as fast.

McKinsey: What are three things about you that we wouldn't have guessed?

Ted Doheny: Although I'm a CEO, you might be surprised to know that I'm a private person who sometimes doesn't want to do interviews! Second, I'm an entrepreneur trapped in a big company. I had my own business as a kid, selling fruits and vegetables, and that helped pay my way through college. My longtime friends can't believe I'm still with a big company. People who don't know me probably wouldn't realize that. Third? I guess I'd say that I'm something of a frustrated athlete. As a kid, being an athlete was my identity. I had to give that up, and I still have some regrets.

McKinsey: One last question. How does it feel to have an unlimited supply of Bubble Wrap® to pop?

Ted Doheny: I have wonderful memories of my mom popping Bubble Wrap® therapeutically. How do I feel about my unlimited supply? It's motivating me to develop sealedair.com. It makes me want to make Bubble Wrap® easily available at any time, anywhere, to anybody. We need to make that experience easy to get.

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