

Booming through constant change

Finding your way through traditional and modern headwinds

BY DR. ALAN McLENAGHAN

Our economy has been growing solidly for quite a few years now. While this is positive and more than welcome, growth is not without its challenges—albeit challenges that are far more pleasant than those we face when times are hard.

At SageGlass, a part of the Saint-Gobain group, we are bringing a relatively new technology to a well-established global market. Our mission is to bring well-being to people by creating great living places and improving daily life. We deliver on this mission by manufacturing smart windows for the commercial market that darken or lighten automatically to dynamically manage unwanted heat and glare without compromising the view or connection to the outdoors. The glass reacts in real time to outdoor conditions. It's adaptable sunglasses for your building, but smarter!

We've been growing at approximately 300 percent per annum, with a 2019 global sales pipeline that looks to achieve the same again. With this growth comes challenges. No, not challenges, let's use a more direct term—*problems*, real problems! The problems we at SageGlass face are perhaps an amplification of the problems all manufacturers face due to the “growing pains” introduced by the growth rate.

Therefore, I thought I'd highlight a few of the most pressing macro problems as I see them and share how we've attempted to address them while delivering about 3X year-over-year growth.

Overcoming the labor shortage

Time's up for the Baby Boomers! They've spent a lifetime serving their

industry or organization, and now it's time to head off for that well-earned, oft dreamed of retirement. These boomers take with them valuable skills and many years of experience. Today about 60 percent of open-skilled production positions are unfilled. Inc eased automation and robotics will help, but skilled workers will still be needed. Skilled team members are still the solution!



SageGlass CEO Dr. Alan McLenaghan has led the company through a three-year period of about 300 percent growth per year. During a presentation at AME San Diego 2018 last November, he noted that what the company produced in a year in 2015 took only 8.5 days to produce in 2018. In 2019, the company will produce that amount in 60 hours.

One of the reasons I believe manufacturers find it difficult to fill positions is the lack of trade-school opportunities. To alleviate this problem, SageGlass, like many companies within Saint-Gobain, developed training programs with local community colleges to teach current (and future) members of our team the electrical, mechanical, mechatronic and IT skills we need. As we projected our growth rate, we took the decision to invest in this early. We do this by playing a role in building our “near-future” workforce through partnership with local community and technical schools. We financially support trade programs, apprenticeships and internships that lead to full-time employment or promotion within the company upon attaining the skills.

We also got creative in how we attract people. By finding them where they're at—online. As a company and individually as leaders, we have become very active on LinkedIn and Glassdoor.com. In these venues, we promote SageGlass

ABOUT SAGEGLASS

SageGlass, a wholly owned subsidiary of Saint-Gobain, is a specialized building glass developer based in Faribault, Minnesota. The company designs, develops and manufactures electronically tintable smart glass (also known as electrochromic glass, EC, or dynamic glass) for use in building windows, skylights and curtainwalls. The glass automatically tints or clears to optimize daylight, reduce glare and manage heat improving occupant comfort in buildings. Learn more at www.SageGlass.com.



SageGlass facility in Faribault, Minnesota.

opportunities not as jobs or careers. Rather, we promote SageGlass as an organization that is team-member/community well-being centric. In the simplest of terms, we want people to feel proud to be a member of our team. We won't do anything that would make you embarrassed or ashamed. We operate by a set of principles of conduct and action. We don't believe in winning at any cost. We believe in values and principles that attract team members, partners, suppliers and customers.

But take heed of a cautionary note: This isn't a promotional exercise with no substance. This is a talk that you better already be walking not just because you read somewhere that it'll help you attract people, but because it's a journey you passionately believe in, and you welcome those who share the same passion and values.

Addressing cybersecurity threats

As technology advances and our use of it spreads like a virus, so too do the skills, efforts and potential rewards of cybercriminals. Ransomware was, until recently, the most common form of cybercrime, and many businesses, manufacturers among them, are still unable to robustly combat them. New threats are already hammering on the factory walls or rather being welcomed into the factory servers inadvertently by the very people who work there and have the best interests of the company at heart.

It's estimated that more than 40 percent of organizations globally were affected by Trojans and cryptocurrency miners in the first half of 2018. The trojans are welcomed in, not under cover of the night in a wooden horse but in the middle of the business day in an e-mail with an enticing attachment.

The majority of manufacturers rely on security systems incapable of addressing the number and complexity of today's threats, leaving them vulnerable. Our business was one that fell victim in 2017!

So it is perhaps not surprising that we acted—albeit after the Trojan horse had already done its job.

More sophisticated ways of securing our networks have been deployed after learning the hard way that our traditional firewall approach hadn't protected us from hackers who did real damage.

But don't throw your hands up in despair yet. Some of the best weapons for combating cyberattacks are simple, and we as manufacturers, renowned for

ABOUT SAINT-GOBAIN

Saint-Gobain designs, manufactures and distributes materials and solutions, which are key ingredients in buildings, transportation, infrastructure and in many industrial applications. They provide comfort, performance and safety while addressing the challenges of sustainable construction, resource efficiency and climate change



Saint-Gobain's SageGlass® shown in three tint states at the University of Colorado, Boulder, Colorado. The electrochromic glass tints on demand to optimize daylight, reduce glare and manage heat—all while maintaining unobstructed views of the outdoors.

our discipline to repeatedly execute the same tasks and procedures flawlessly day in day out, should be pretty darned good at deploying them:

1. Ensure all computer security software is routinely updated. C'mon how difficult can that be?
2. Educate team members regularly on the warning signs that security breaches are being attempted.
3. Share real examples.

As I mentioned earlier, a common network entry point for cybercriminals is email. We welcome millions of emails into our businesses daily. Regularly reminding team members of phishing scam signs to check and look for goes a long way to preventing damage. And if, as with Saint-Gobain, your IT team has the competence, why not carry out your own “hack attempts” to test the reactions of your team members, much in the same way you conduct fire, first aid or severe weather drills. Reward those team members who react correctly and defensively by spotting, reporting and preventing the “test hack.”

Thriving amid global competition

According to the Global Manufacturing Competitiveness Index, the U.S. is not the world's most competitive economy, China is. But before you hoist the white flag, let's understand what it will take to not only compete, but to win.

According to Deloitte's “The Future of Manufacturing,” what it takes is advanced technologies and talent—with talent being the driver for competitiveness. For a manufacturer to be “near-future” competitive, it must produce higher value, advanced-technology products and processes and offer product-as-a-service or service-based pricing models. Our near-future products should be smart, connected and capable of generating ongoing revenue from product-as-a-service.

At Saint-Gobain SageGlass, we've



Dr. Ruth Schlitz talks about being a part of Saint-Gobain's SageGlass. Watch this and other SageGlass videos and team member testimonials on our YouTube channel, SageTalks, or Glassdoor page.

been proud and confident to say we are the world's leading innovator in glass, glazing and dynamic glazing. In parallel, we have been the first to admit that we knew next to nothing about inter-operable devices, cloud connectivity and offering services to building owners, operators and occupants based on the data our dynamic product collected, generated and used to control it. So what did we do? We stayed arrogant and decided we could do it all ourselves! Of course not. We partnered up with those who could open the door to the brave new world of service provision from a product that was historically seen as a “one-and-done” financial transaction.

I may have made this sound easy, but it wasn't. As a “Gen-X” CEO, I find it scary as hell to put myself so completely into the hands of my millennial and Gen-Z team members and partners—but we “walk the talk” and are now on a journey defined by members of my team. A genuine example of servant leadership.

Adopting new technologies

Automation, the Industrial Interoperability of Things (IIoT), as I dislike the term Internet of Things (credit to Luc Julia for this enlightenment), robotics,

cloud computing and more—the rate of technology advancement is staggering. Most manufacturers struggle to keep up, let alone stay ahead. By the time we've completed our research, received approval, purchased and installed new technology, a better, cheaper, faster or more agile solution is available.

Today, manufacturers should take note of these important developments:

1. The Interoperability of Things (IIoT) market is growing rapidly and won't slow down anytime soon. 5G connectivity and new sensor technology gives manufacturers more opportunities to drive growth by adopting IIoT devices to optimize process flows, debottleneck in real time, increase productivity, improve quality, increase OEE and, as a consequence, reduce costs and increase our profitability.
2. As IIoT and intelligent systems are more widely used, we'll experience a surge in the data we generate. But data is useless without analysis. In fact, I might even go further and say that too much data is paralyzing and can be harmful. What's needed is real-time analysis of all this data, and this is where enterprise resource planning (ERP) technology can help manufacturers manage

the unimaginable amount of data and generate insights that allow us to make better decisions for the business. In SageGlass, and within the greater Saint-Gobain group, we are very driven by this—but we do not concede that our artificial intelligence (AI) is more valuable than our human intelligence (HI). AI will make us a better dynamic glass company, but our HI makes us the best dynamic glass company.

So where do you start? You've no doubt already spotted the theme throughout my message: You cannot do it all on your own! Partner up and consider using a business consulting firm with expertise in manufacturing. Partnerships or the right consultant will move you faster. They'll bring insights and experience to select the most practical, cost-effective technologies and equipment. They'll support implementation and training.

I have a doctorate in polymer physics and as a consequence I get to refer to myself as Dr. McLenaghan—but that fancy title doesn't mean I believe I can set my own broken bones or treat my own ailments.

When I need a "real doctor," as my mother puts it, I have no qualms about seeking one out. I don't Google bone setting and go about it myself. So why would I think that way about my business?

Sourcing materials

There is no doubt it is getting much more difficult to source materials. The rise in demand, change in regulations and rapid changes in technology all seem to have created shortages rather than excesses.

Perhaps the use of the aforementioned technologies by suppliers is allowing them to become more efficient and more Just In Time in nature—resulting in less flexibility in the supply chain. With 30 percent growth, SageGlass has no option but to plan well ahead. But I believe the same issues also affect businesses with single-digit growth per annum.

Working with the mindset of partnership rather than supplier is the first step. Partners have a vested interest in your success and growth. Partnerships mean sharing forward plans and projections, which allows supply partners to plan for your growth (or contraction). We share our three-year plans and annual budget numbers with our critical supply partners—and even then we still face problems.

In 2018, we were exceptional with our glass supply partners and struggled with our logistics partners. Despite sharing in advance our macro needs for shipments to Europe, the Middle East and Asia, we struggled to robustly secure the trucking, containers, etc., when it came to the detail of individual order shipment. To quantify, our facility has an ex-works delivery performance that is just over 90 percent. Not ideal—but not bad considering 300 percent growth. But that same product only arrives on time at the off-shore customer's destination about 70 percent of the time. Something we continue to work on.

Attracting new (and retaining existing) customers

Traditional marketing for manufacturers and our products is far less effective than in the past. Trade shows, ads and cold calls don't work like they used to. In fact, I'm tempted to go further and say that they don't work period. In 2019, we need to do more than publish a website and hope that our best prospects stumble upon us. We need to make a concerted effort to be discovered online and be willing to openly share a wealth of information that demonstrates our relevance, our purpose, our value and our expertise. That means we need to leverage inbound marketing and search-engine-optimization (SEO) tactics by creating content that provides answers to customers' questions and problems. We need to be *the* thought leaders!

Clear, robust and coherent marketing strategies generate qualified leads by building trust through relevant blogs, case studies, infographics and other helpful resources. Once that trust is built through online

engagement, and our specifiers (sales people) nurture and support a potential customer through the early stages of the sales funnel, those leads are more likely to continue engaging with us by requesting a consultation, demo, assessment or other offer from the company. They are also highly likely to share their "SageGlass" experience with their network.

Creating all that content takes time, and a high level of expertise is needed to make your organization's content rank higher in search-engine results. Once again back to my theme—enlist the help of inbound marketing partners to help accelerate these efforts. Experts who understand our strengths and weaknesses and who are focused on the manufacturing sector will better equip you to meet these challenges head on.

It is important to me to end with a qualification. SageGlass is not a perfect organization. We don't have business psychology capabilities. We simply focus on what we are good at. We listen to our customers. We partner with others to improve or create those parts of our business that help us better serve our customers. With that said, I personally do not subscribe to the axiom that the customer comes first or the customer is king. For me, the SageGlass team members come first. I, as the CEO, my leaders, managers and supervisors act with this in mind, and in a way that our people believe, then each and every one of us will make the customer experience amazing; because we want to, because we know we'll be recognized for it, because we are treated respectfully, because we are trusted to "do what's right" for the customer and because we are ONE team following one mission: to bring well-being to people by creating great living places and improving daily life. ●

Dr. Alan McLenaghan, Saint-Gobain SageGlass CEO and past AME Conference presenter, has more than 20 years experience within various manufacturing operations. He has held numerous positions with the Saint-Gobain family of companies, including vice president of operations at SageGlass and senior vice president of technology at Verallia North America.