By Alexandra Walsh

BEST IN CLASS IN AUTOMATION AND COLD

Customer perspectives on delivering controlled environment design-build.

Michael Adkins, Cold Storage Leader at BGO Cold Storage and Michael Lynch, Senior Vice President, Sustainable Energy at United States Cold Storage (USCS) share their perspectives, as cold storage building and design customers, on automation. You will be able to hear them both, along with other industry leaders, address this topic in the General Session at the CEBA Convention November 11-14.

Q: Is automation the right decision for every temperature-controlled environment?

Michael Adkins: Every facility should be designed with automation in mind. Facilities from the 1970s and 1980s are still in use, so I anticipate that new facilities built today will also be operational in the 2070s and 2080s. The key to ensuring this longevity is to plan for automation.

Michael Lynch: A cold storage warehouse needs to be operationally flexible, and automation inherently is limited operationally, so understanding the requirements from a product handling and throughput standpoint is paramount. Automation projects are typically more expensive, take a longer time to complete and require additional knowledge and training on the automation equipment and software platforms (WCS).

Automation is not always the answer and the adage "one size fits all" does not apply. There are a lot of providers and solutions to choose from so finding what works for your company is important for success.

Q: What goes into the thinking around how automation is going to impact your business and your customers?

MA: Flexibility is key. We don't want to ever say to a customer that they can't do something. We look at automation options and ensure they can fit in what is being built today as well as future concepts. This ranges from utilizing conventional racking and AGVs, to Turrets and VNAs, to multidirectional pallet moles and layers pickers, as well as rack-support AS/RS with integrated picking, and we ensure we can do all of these things in our cold chain spaces.

ML: Getting started in warehouse automation is a big step for a company to undertake. You have to find a partner that will help develop the right solution for the warehouse and your customer(s). We always start with the data such as SKU profiles and velocity, order profiles, order inventory levels, pallet height and weights. From this a material flow diagram (MFD) is developed and tested through computer modeling. Once the MFD is confirmed, the project would move into early stages of design and rough order of magnitude (ROM) costing before moving forward with project justification.

Q: Do you to have to educate your customer on what their needs are?

MA: We let the customers educate us through collaboration and shared best practices. We are clear if we think they are too focused on one item and help ensure we can all be successful. IF needed, we will push back and support our beliefs with data.

ML: Automation does add another level of complexity, as we have to ensure that the pallets and product going into the automated systems meet the quality standards necessary to safely and efficiently move throughout the systems. Typically, we do come across products that will not work in our automation systems for any number of reasons, and we communicate with our customers, so they know what we are experiencing, and work with them to address any issues and challenges together.

Q: What's different when building an automated site that is not customer-specific?

MA: When a facility is not customer specific, it limits the depth of automation you can install from day one.

ML: When designing an automated facility, we need to consider room temperature and whether temperature convertibility is necessary, maximizing the throughput in the design so the operation can handle peak days, and ensuring that we can take taller pallets and pallets that sometimes don't fit in a standard 40x48 footprint. This is why the data and the development of the MFD is so important. Operational flexibility and adaptability are the keys to supporting our customers.

Q: How do you adapt to a new client and also ensure the building is sustainable and serviceable into the future?

MA: It starts with front-end planning and determining what should be automated versus what can be automated. I think it's key all products still come in on pallets and need to be stored. If you can be mindful of pallet heights and facility density, a large part of the core business can be automated.

ML: Along with our design process, we engage our business development and operations teams to understand the challenges and opportunities, and our automated systems are built with energy efficiency and longevity in mind.

Maintain substantial amounts of automation spare parts to maximize system up time. Also important are cooperative relationships with your automation providers, regular meetings to review systems performance, scheduling preventive maintenance and future upgrades – mechanical, electrical and software.

Q: Levels that rise and lower to fit different pallet heights? What would you like to see in the automated cold storage facility of tomorrow?

MA: Flexibility will remain crucial. I would appreciate automation options that are less integrated into the construction of the facility and can be added based on customers' needs. Possibly, moved or even sold back to third parties. Further standardizing operating systems to allow technologies from different companies to work together would allow for more entrants into the market performing specific tasks.

ML: Although low-oxygen fire protection exists, it is not yet prevalent here in the United States, therefore many automated systems still rely on in-rack fire protection, making the adjustment of pallet storage heights cost prohibitive. That being said, the ability to quickly change pallet location heights would be a game changer as it would allow us to maximize storage space and better utilize energy resources when cooling rooms.

Q: How important is it to have automation, integration and construction expertise under a single umbrella in one company?

MA: Each company should have its experts and teams constantly learning and expanding their automation expertise. It's okay to have multiple "umbrellas" as long as they can collaborate effectively. However, having that single source to bring it all together will continue to be a differentiator for companies.

I feel that the industry needs to look at automation like it does cold storage overall. The Built by the Best award presented by CEBA heavily considers the number of participating CEBA members as part of the project scoring criteria. It makes sense because these contractors are experts in cold storage and understand what is necessary for a project to succeed, not just for their trade but overall. CEBA members have excelled in this industry by providing exceptional service, understanding customer needs and providing education on aspects that may not be clearly defined in specifications or project drawings. Additionally, these members collaborate to construct top-notch cold storage facilities.

Successful cold chain automation teams must have firsthand experience in the field. This involves collaborating with customers and fellow contractors. If they can bring it all together, both automation and cold, they will be best in class.

ML: We have found some great partners to work with. Building a strong relationship with open communication has been key to our success. USCS continues to develop a team that understands all facets of our automation system and requirements.

Automation effects everything from operations to transportation to the customer. Change is not always comfortable but needs to be promoted and achieved. Getting everyone on board and engaged early in the process greatly helps.