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Leaders from NSCA offer in-the-trenches perspective on how to ensure your business stays in the black and your projects remain profitable. PAGE 22

Creating a Sustainable Future

Integrators have always had a vital role to play in sustainable design for buildings, attractions and experiences. Now, integrators are also rallying to recognize environmental degradation. **By Alyssa Borelli**

The Fundamentals of Sustainable Building Design

The National Institute of Building Sciences has defined six fundamental principles of sustainable building design.

1. **Optimize site potential**
2. **Optimize energy use**
3. **Protect and conserve water**
4. **Optimize building space and material use**
5. **Enhance indoor environmental quality**
6. **Optimize operational and maintenance practices**

SUSTAINABLE MANUFACTURING, which the U.S. Department of Commerce defines as using industrial processes that minimize negative environmental impacts and that are safer for both employees and consumers, has been gaining momentum lately amid what the United Nations calls the "Decade of Action."

According to *The Wall Street Journal,* there will be, in the next decade, upwards of $12 trillion of business opportunities for companies that align themselves with sustainable development. A study from Oxford Economics highlighted that 65% of companies have created a clear mission statement around sustainability, with another 23% indicating that they are in the process of developing such a statement. Thus, of those companies studied, 88% are prioritizing sustainability.

Similarly, in a SAP survey, 46% of business leaders shared that sustainability is top of mind for them throughout the man-ufacturing process. Perhaps even more significantly, 68% of them have reduced energy consumption at their business.

Gen Z, whose members represent the future generation of buyers, is especially focused on sustainability as a core value. That means future-minded business leaders should make sustainability a priority in order to strengthen brand reputations, build public trust and, ultimately, connect with tomorrow's customers.

Sustainability in AV (SAVe)

One of the biggest sustainability stories our industry has ever seen is the emergence of Sustainability in AV (SAVe) to give voice to prioritizing sustainability-minded practices. "Let's be honest," Christina De Bono, founder and president of SAVe, says. "The AV industry has been part of the problem. But it's equally true that we can help drive the solution." To her point, according to The Shift Project,

4% of greenhouse gas emissions are caused by digital technologies, and it is increasing by 9% every year. We can't just let that figure stand.

De Bono decided to launch SAVe, an AV-industry-wide independent nonprofit organization, after hearing from many in the industry who are very concerned about the growing climate crisis, persistent inequality and ongoing poverty in the U.S. She wanted to use the organization's platform to highlight the issues we're facing and the responsibility that the AV industry has in regard to sustainable production and manufacturing. Efforts like these bring together industry stakeholders who, collectively, can take concerted action to achieve the 2030 Sustainable Development Goals (SDGs) adopted by all 193 nation representatives of the United Nations.

Individual and Business Responsibility

"Look at what's happened just in the past two-and-a-half years since the start of the pandemic," De Bono begins. "Every day now, we're facing a massive natural disaster that's being perpetuated by increasing extreme weather events [occurring] due to climate change." She continues, "At the same time, we have growing inequality and poverty in this country. These challenges are profound, and they're getting

Technology Master Planning and Consolidating the Network

"Every construction site I've been on, there's a bundle of cable that runs to one room to another that could be potentially consolidated into a single cable," Yiannis Cabolis, director of technology innovation at Electrosonic, laments. *"[That] could have saved infrastructure, installation and a number of different cost centers."* He notes that running 2,000 feet of Cat6 network cable with eight points costs around $3,800. *"You can start to add that up, especially when you have hundreds of devices,"* he continues. *"And there's really no technical reason the video and control systems can't run on the same physical network and physical cabling."*

Clearly, there are cost benefits to consolidating a network. However, as Cabolis makes clear, there must be a strategy, and it starts with technology master planning. "In simple terms, it's the coordination, planning and design of unified infrastructure for separate networks and subsystems that creates efficiencies and savings," he says.

Although integrators know the current technologies well and have a decent outlook for where the next couple of years are headed, Cabolis acknowledges, "We don't know the next big, disruptive thing that's going to come in. There could be all-new technology — [for example,] new cabling, infrastructure, etc. — that we only [can guess] but nobody really knows." Integrators, he advises, should think about what happens 10 years after a project's completion. "You can provide an extra cable and conduit, which could potentially save money during a renovation or technology add-on, so you're not having to tear a structure down to rebuild it just to add a new cabling type."

Hotel chains, casinos, theme parks and Fortune 500 companies that have strong IT departments are starting to understand the redundancy and extra infrastructure of AV networks, and they're aligning themselves with integration firms to consolidate and reduce the overall infrastructure costs to design and run the networks for different systems. In this way, technology can not only reduce overall operating costs but also, ultimately, have a positive environmental impact.

"I challenge [integration] owners and designers to insist on the design and operation of a unified network solution that spans multiple subsystems," Cabolis declares. "Make this change, take the risk, be the leaders of change [and] unify the network infrastructure to use AI to create real, sustainable smart buildings and attractions."

SAVe provides a vehicle for AV industry members to achieve sustainable development and is a bridge to other industries, NGOs and partner organizations.

worse." Ultimately, De Bono believes, it's not just nations that need to come together to address these problems; it's also business and industry that must. Citing the need to make systemic changes, she says, "There's a huge role for business and industry, and the AV industry has a big responsibility toward this."

Achieving Sustainable Development

SAVe provides a vehicle for the AV industry to achieve sustainable development, and it serves as a bridge to other industries, non-government organizations (NGOs) and partner organizations that share similar convictions that we must take urgent action to preserve the health of the planet, as well as the communities and people that populate it.

"Focusing on sustainability benefits the health of AV businesses by better positioning the entire industry to address new market opportunities, reducing exposure to a variety of business risks and strengthening the very foundation of the economy," De Bono declares. "By its very nature, the AV industry is well positioned to make substantial progress in areas related to responsible waste management, lifecycle carbon-emission reduction and reduced energy usage."

SAVe, which officially launched earlier this year, offers a "SAVe Certified" certification program. It enables AV companies to align their business with the Sustainable Development Goals (SDGs). For example, Issaquah, Wash.-based audiovisual integrator Tempest Technologies recently completed the three-part, two-day educational session, workshop and assessment with the goal of establishing a sustainable development plan specific to the company.

Debbie Williamson, co-owner and general manager of Tempest Technologies, says that her company has always recognized its responsibility to the community. "Becoming SAVe Certified is part of our effort to take that commitment a step further," she explains. "It helps us be proactive with clients and manufacturers about the role we can play for the world, our community, our clients and us personally." Williamson adds that integration companies and their leaders are aware of the waste our industry often generates. She continues, "This is about more than recycling. It's about what we can do daily, and the influence we can have on our clients, customers and partners. It's about the legacy we leave for future generations."

Start an Education Process

Williamson adds an important point — that being SAVe Certified can be the start of a process that enables integrators like Tempest Technologies to have conversations

Smart Devices Point to a Brighter, Smarter Future

Imagine walking to your hotel room after a long flight and entering a 65-degree room at 10pm. "I don't know about you," Electrosonic's Yiannis Cabolis says, "but, by implementing some smart technologies, there's substantial savings that can be had. And that's no different for office buildings and hospitals."

According to the United States Environmental Protection Agency, commercial buildings account for 65% of the U.S.' total electricity use, 2% of total water use, 30% of total CO_2 emissions and 60% of total non-industrial waste generated (from construction and demolition). More startlingly, approximately 30% of the energy used in commercial buildings is wasted.

"I looked at my home router and discovered that I have 47 different devices on my home network," Cabolis continues. "Sixty-nine percent of homes have more than one smart device, and over 815 million smart devices were shipped last year. This market is growing at an incredible rate of 30% year over year." But what if we were using those devices to create smart commercial buildings, rather than mostly focusing on smart homes? Certainly, there's an upfront cost in designing and buying those technologies. But what benefits might they yield?

There's no doubt that we're surrounded by technology, and it's part of our everyday lives. When it comes to commercial environments, customers, guests, employees, etc.,

expect integrated technology everywhere they go. "We live with this [smart] technology every day at home," Cabolis says. "But why isn't there more of this in commercial buildings and attractions?"

The point is simple: Yes, technology can help with many common tasks, but it can also be used as a force for good, such as by helping to monitor and improve power, water and utilities usage. Thus, it can ameliorate the effects of climate change and pollution. The point isn't that Alexa is going to be used to run attractions, necessarily. But there's certainly more to come from cloud-based data center IoT and smart-building technologies working together.

Cabolis believes that "we are at the tip of the iceberg" when it comes to automation, IoT and data analytics. "And," he continues, "we're going to see so [many] more developments and benefits that haven't been thought of today, which will be developed in the years to come."

Chris Moore, strategic partners executive consultant at Electrosonic, says, "Ten to 20 years ago, [integrators] were kind of the bad guy. We had big projectors, big displays and power-hungry systems that messed up all the energy currents into buildings." That reputation is quickly changing, as the integration community continues to raise its consciousness. It's a collective effort by everyone in the industry, all aligned to the meet the needs of the present without compromising future generations' ability to live and thrive.

with manufacturers and clients. "We don't have direct control over their decisions," she acknowledges, "but we will start an education process that can be as illuminating for them as it was for us."

Additionally, by investing in educating the entire team, Williamson says Tempest has begun a dialogue that can lead to change.

SAVe: A Second Life

The rapid pace of technological change means that products are being replaced in increasingly shorter cycles. That, of course, can and does have serious environmental consequences. In 2019, for example, more than 50 million tons of e-waste — including displays, cables, power supplies and other AV equipment — was generated in North America and Europe. That number has increased 21% over the last five years. Less than 20% of used electronics are formally recycled, SAVe reports. And the AV industry has no uniform process, system or policy to deal with where equipment should go at the end of its lifecycle.

'This is about more than recycling. It's about the legacy we leave for future generations.'
— Debbie Williamson, Tempest Technologies

The SAVe: A Second Life program, which is in the early stages of being developed, is about giving AV equipment a second life at the conclusion of its first life. The process involves donating the equipment through a network that SAVe has established in partnership with Commission on Voluntary Service & Action (CVSA) of non-government organizations throughout North America that represent people and communities in need of systemic solutions to social, economic and environmental problems. Many folks within the industry have tried to take in used equipment and give it to schools and/or donate it to other organizations. This burgeoning program creates a clearer, better-defined pipeline for that.

A Time to Act

De Bono emphasizes that the time to act is right now. "The sustainability to our planet is at stake — as is that of our industry," she says with evident passion. "It's very clear that sustainable practices bear directly on a company's ability to generate funding, win business, attract employees and lead communities to build healthy and equitable environments."

To volunteer, get SAVe Certified, donate or become a sponsor of SAVe, visit SAVeAV.org. **CI**