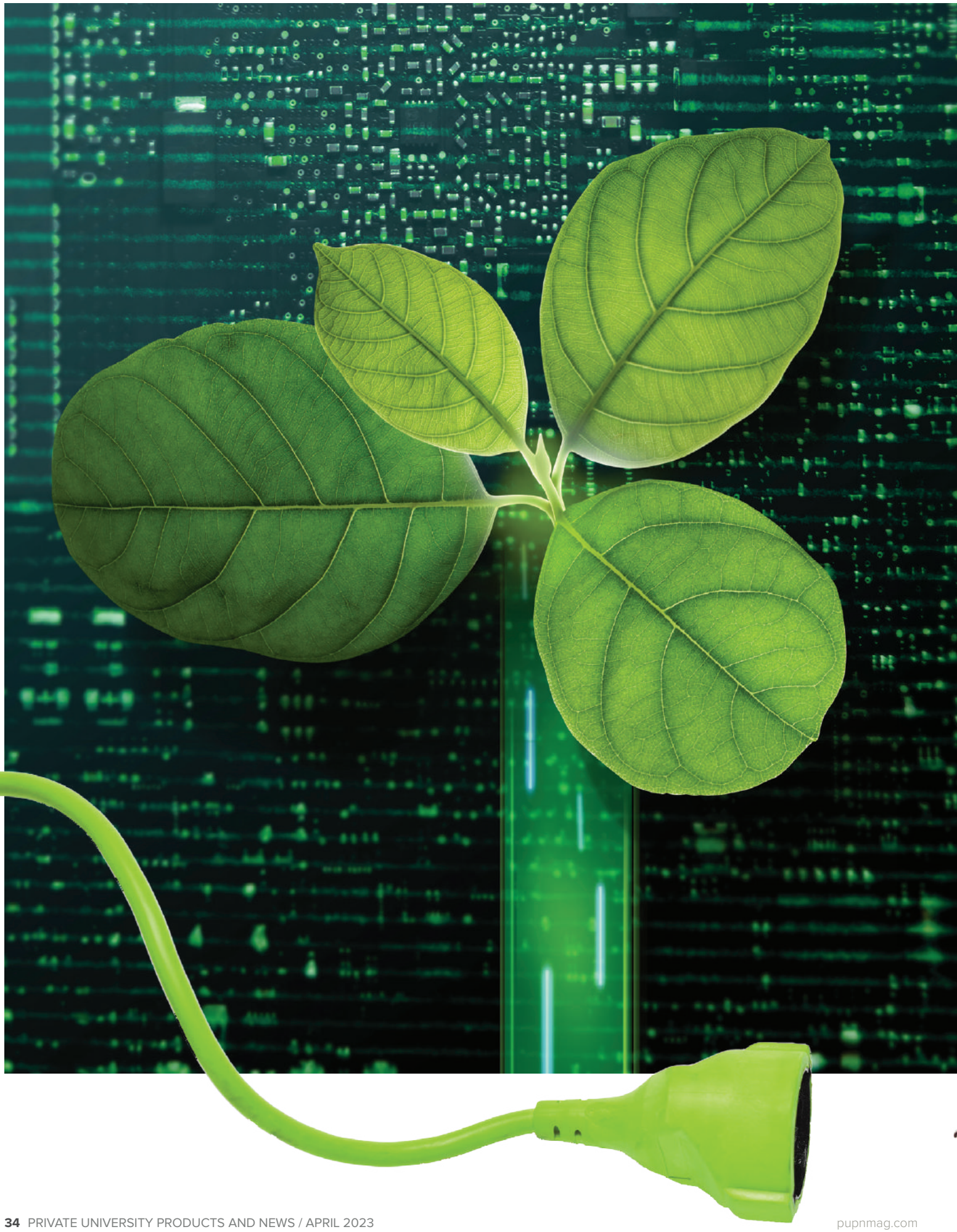

HARNESSING TECHNOLOGY

TO CREATE AN ECO-FRIENDLIER CAMPUS

BY ANTHONY CORTES

In a world of rising standards, higher education institutions are increasingly faced with ways to enhance their support of environmental sustainability. Institutions must develop specific goals and equip staff and students with the tools, knowledge, and skills to implement energy saving initiatives and achieve greener campus environments.

Fostering standards for sustainability can decrease the university's impact on the environment and lead to a healthier, greener campus for living and learning. This approach can also attract and retain increasingly environmentally aware faculty and students to help mitigate tightened recruiting budgets. Not only do Gen Z students recognize the need for environmental sustainability, they also deeply care about their campus community's contributions. Plus, there are many rewards beyond just recruitment and the institutional image.

Energy Efficiency Bottom-line Savings

Governing bodies and funding sources are now offering directives, such as the Carbon Commitment, to achieve new energy and carbon footprint savings. Advances in environmentally-responsible products and practices, such as certifications for energy efficiency, have enabled simple, practical ways to help campus administrators be more aware when making decisions. Also, long-term carbon footprint reductions and improved efficiencies can be achieved by lowering energy consumption and decreasing energy costs; all of these approaches benefit operating budgets. Awareness and incentives for using renewable energy may also result in lower rates from utility companies. Common energy consumers on campus add up in expenses and carbon emissions, such as: heating, ventilation, lighting, cooling, computing, window shades, and so on.

Transitioning to AV Products That Support Sustainability

Environmental responsibility involves a comprehensive process. To improve energy efficiency on campus, decision-makers must first identify where and how to reduce energy consumption and lower operating costs, including consumables and utilities. A great starting point is to transition to AV systems designed with environmental sustainability in mind. Products are becoming more energy efficient as time moves on, so sourcing new or replacement devices from a manufacturer with responsible engineering and design practices can be an excellent start to saving money and reducing the carbon footprint. Also, planners can leverage free, easy-to-use calculation tools that can help to determine amplifier power demands, power and voltage ratios, the number of ceiling speakers needed for specific projects, and other requirements to facilitate visualizing of what's possible for each space.

Designing Sustainable Spaces with AV Technology

One of the most important aspects of shaping sustainability on campus begins with employing eco-friendly measures for more efficient use of resources to achieve a greener campus. Starting with a sustainable audiovisual plan and implementing environmentally-responsible technology can significantly reduce the institution's carbon footprint and improve performance. Whether designing a new building or renovating existing spaces, campus planners should focus now on managing energy usage and reducing long-term consumption.

Campus administrators should consider AV design and the products that are used within the campus environment, including control systems, speakers, microphones, displays, lighting, power amplifiers, switchers, recording and streaming systems, and control processors. When acquiring new products, decision makers should look at the energy impact and control capabilities, such as automation, in order to help conserve energy when full power is not needed. Electricity can be conserved—and waste heat can be reduced—by specifying energy-efficient products, especially those designed for low standby power during inactivity. Also, planners should explore products with low operating power consumption to help manage energy usage and reduce cumulative power costs. Taking such measures can yield unexpected benefits, such as eliminating the need for extensive cooling systems that consume additional power.

Energy usage can also be reduced by monitoring AV device usage patterns to gather data to help better understand overall requirements. For example, saving energy and money may be as simple as identifying when the devices need power and using programmable control systems to configure resources to be available at the time they're needed. AV management systems can also

continued on next page

JOIN 100+ CAMPUSES IN DEPLOYING AWARD-WINNING

SELF-SERVICE DISPENSING KIOSKS

PUPN
UNIVERSITY PRODUCTS NEWS
2021 DEAN'S LIST AWARD

Space-Saving • Experience-Enhancing • Forever-Flexibility

Mix-N-Match Laptops And Now 110V Portable Power Outlets

For More Info Go To:
ChargersAnytime.com

A New Innovative Approach To Student Battery Access

OVER 4 MILLION
ANNUAL CHECKOUTS AND GROWING
4,000,006

Trusted Technology Branded to Your Local Look-n-Feel

LAPTOPSANYTIME™
Automated Checkout Kiosks

1-877-836-3727 • LaptopsAnytime.com

When acquiring new products, decision makers should look at the energy impact and control capabilities, such as automation, in order to help conserve energy when full power is not needed. Electricity can be conserved—and waste heat can be reduced—by specifying energy-efficient products, especially those designed for low standby power during inactivity.

provide centralized monitoring and control of building management systems (HVAC, lighting, window shades) and AV systems, all of which affect the overall impact of the campus on the surrounding environment. Leveraging customizable AV programming, management dashboards, and analytics will ensure the least energy waste.

Best Practices for Campus AV Projects

Campus decision-makers need to consider tangible ways to reduce energy costs and advance sustainability commitments by reviewing campus AV systems. In campus settings, the power consumed by devices left in standby mode, such as projectors, cameras, recording devices, and switchers, has a significant impact on costs. Planners should review and consider these helpful considerations to mitigate common energy culprits:

- **Lower energy consumption with smart products**
  - Employ automation and management capabilities such as occupancy sensors, remote device monitoring, and products with power save modes.
  - Leverage flexible resource management tools to remotely manage and monitor nearly any device over the campus network, and proactively plan maintenance activities.
  - Use minimal power consumption start-up strategies to turn on only the specific device needed.
  - Select compact devices (and fewer devices) with more compact equipment racks to save space.
  - Ensure products have low energy consumption while idle to reduce cooling and electrical requirements and implement scheduled shutdown of equipment during off hours.
- **Consider product lifecycles and incremental hidden costs**
  - Products built and tested to rigorous standards are designed to keep

continued on next page

Introducing **CENTURION®**

PVI's Most Powerful Water Heater Yet!

- **Compact, 2000 MBH water heater**
  - Up to 65% less footprint vs. the competition
- **Advanced Edge® Controller with O_2 Trim technology**
  - Self-adjusts and maintains optimal air-fuel ratios for peak efficiency, low emissions and maximum reliability
- **Durable, corrosion-resistant AquaPLEX® duplex stainless steel**
  - Fire tube heat exchanger backed by a 15-year warranty

PVI®
A **WATTS** *Brand*

(817) 335-9531 | pvi.com/centurion

downtime and failure rates to an absolute minimum, while providing a long service life.

- Longevity reduces refresh and replacement cycles; avoid built-in obsolescence to keep electronics out of landfills.
- Next-generation technology lowers environmental impact; for instance, consider efficient amplifiers that deliver the highest possible input-to-output power ratio to reduce radiated heat, and products using Gallium Nitride semiconductor technology which offer higher energy efficiency, higher power density, faster speed, smaller device size, and lower operating temperature when compared to silicon.
- Warranty terms should be reviewed for coverage periods, exclusions, return merchandise authorization (RMA) requirements for depot service, etc.

■ **Optimize the equipment needed within the space**

- Review device and room usage data from campus resource management tools; when the data indicates that rooms or devices are over- or under-used, take corrective action.
- Generate inventory lists for real-time insights into product details, location, and more.

■ **Gain efficiencies with shipping and storage to eliminate waste**

- Smart packaging results in less cardboard, plastic, and styrofoam to be recycled or sent to the landfill, and less storage space needed.
- Reduced shipping weight and volume results in more efficient freight handling and lower fuel consumption.
- Combine shipments where feasible.
- Engage with suppliers to see what types of programs are offered, such as returning unused power supplies, recycling, or other trade-in initiatives.

■ **Follow industry approaches to achieve environmental sustainability**

- Review various energy consumption, electrical safety, and electromagnetic emissions initiatives and standards including ENERGY STAR, UL, LEED, RoHS, REACH, and WEEE.

ABOUT THE AUTHOR: Anthony Cortes is the Director of Sales and Marketing, Education Classroom Systems, for Extron. He is responsible for the development and execution of all classroom programs. Anthony's extensive work with universities and education resellers gives him unique insights on the current state and future direction of classroom AV systems. For project assistance, visit www.extron.com/education

COMMERCIAL GRADE.
ALL DAY POWER.

TAX CREDIT $ ELIGIBLE

Commercial Grade

All Day Power

User Friendly

Planet Friendly

MEANGREEN ELECTRIC MOWERS

Find a Dealer at:
meangreenproducts.com

★USA
ENGINEERED AND BUILT

Assembled in the USA using domestic and foreign parts.