A control panel builder roadmap to Industry 4.0 growth

A partner program that drives opportunity and broadens visibility in a competitive marketplace

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Introduction

With companies in nearly every vertical industry undergoing digital transformation and seeking to take advantage of Industry 4.0 technologies, it's an exciting time to be in the industrial automation space. That certainly holds true for control panel builders (CPBs).

CPBs are instrumental in the industrial ecosystem, building the solutions that end users need to monitor and control industrial machines and systems. They play a significant role in digital transformation efforts, including delivering on the promise of the Industrial Internet of Things (IIoT). As they seek to capitalize on these opportunities, CPBs face challenges, including employee training and retention and the continuous need for further technology and product education.

Schneider Electric is taking tangible steps to help with the launch of its Control Panel Builder Program. In this e-guide, learn about how this Control Panel Builder Program can help CPBs take advantage of market trends to help grow your business.

Schneider Electric built this program specifically for control panel builders. Read on to learn all about the program and its benefits.
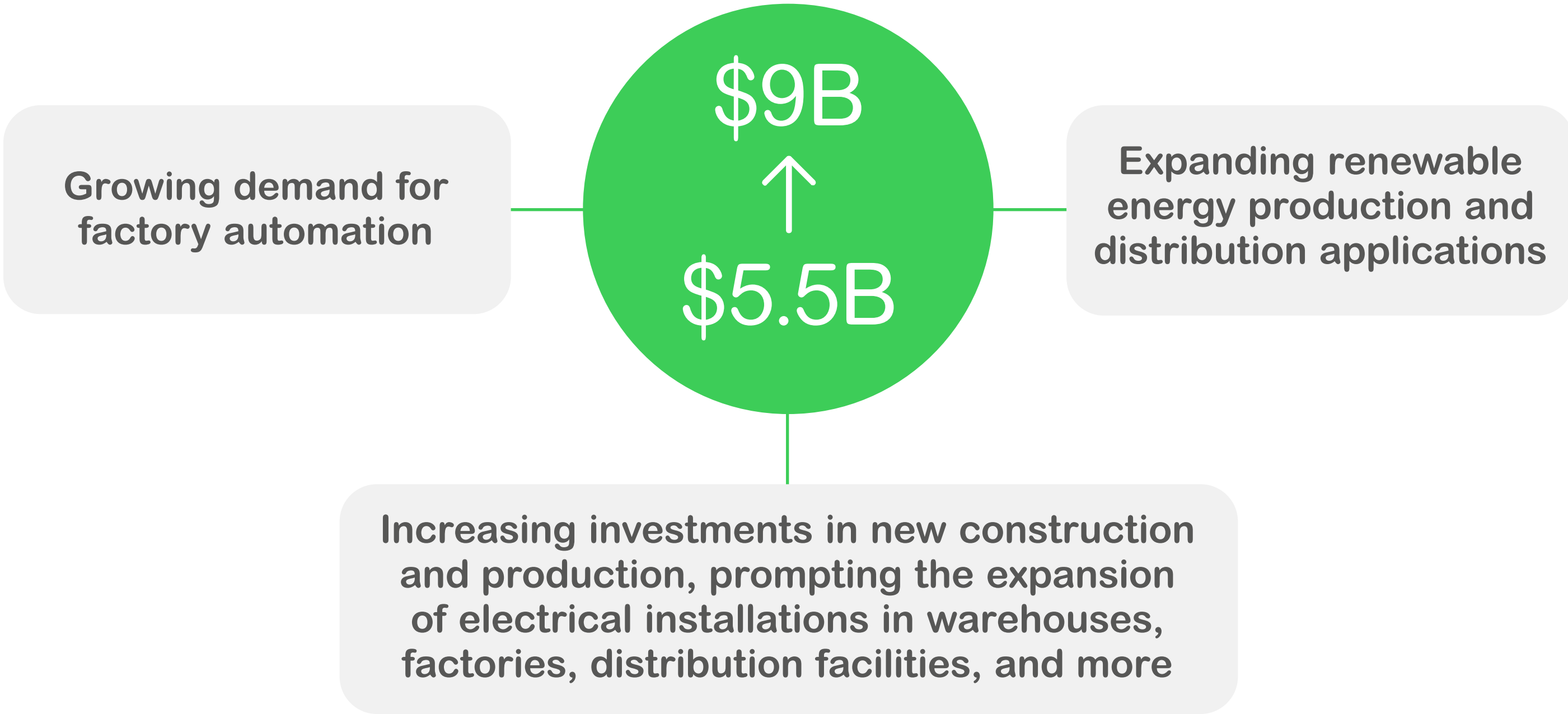
The control panel builder market: poised for growth

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The control panel builder market: poised for growth

Control panel builders are in a position to take advantage of the overall growth in the industrial automation and control systems market, which was valued at nearly $147 billion in 2020 and expected to expand at a compound annual growth rate (CAGR) of 8.9% from 2021 to 2028, according to Grand View Research.[1]

The pace of IIoT adoption is driving a need for automated distributed control systems (DCS). In fact, this segment is expected to dominate the market and account for the largest revenue share of 10.6% from 2022 to 2030.

The electric control panel market is expected to grow from $5.5 billion in 2022 to $9 billion by 2030, a 6.5% CAGR, according to The Insight Partners,[2] with growth drivers including:

$9B
↑
$5.5B

Growing demand for factory automation

Expanding renewable energy production and distribution applications

Increasing investments in new construction and production, prompting the expansion of electrical installations in warehouses, factories, distribution facilities, and more

[1] Industrial Automation And Control Systems Market Size, Share & Trends Analysis Report, 2021-2028, Grand View Research
[2] Electric Control Panel Market Forecast to 2030, Insight Partners, June 2022.

Company characteristics

Amid all this growth, control panel builders have become crucial players in the industrial automation ecosystem. Equipment manufacturers of building machines and systems for various industrial processes, buildings, and facilities increasingly rely on CPBs to deliver effective interfaces that provide users with machine control.

In a recent survey, Kadence International found that CPBs identified that their businesses are relatively equal among three main panel types:[3]

38%

Control panels

32%

Automation and control panels

31%

Power panels
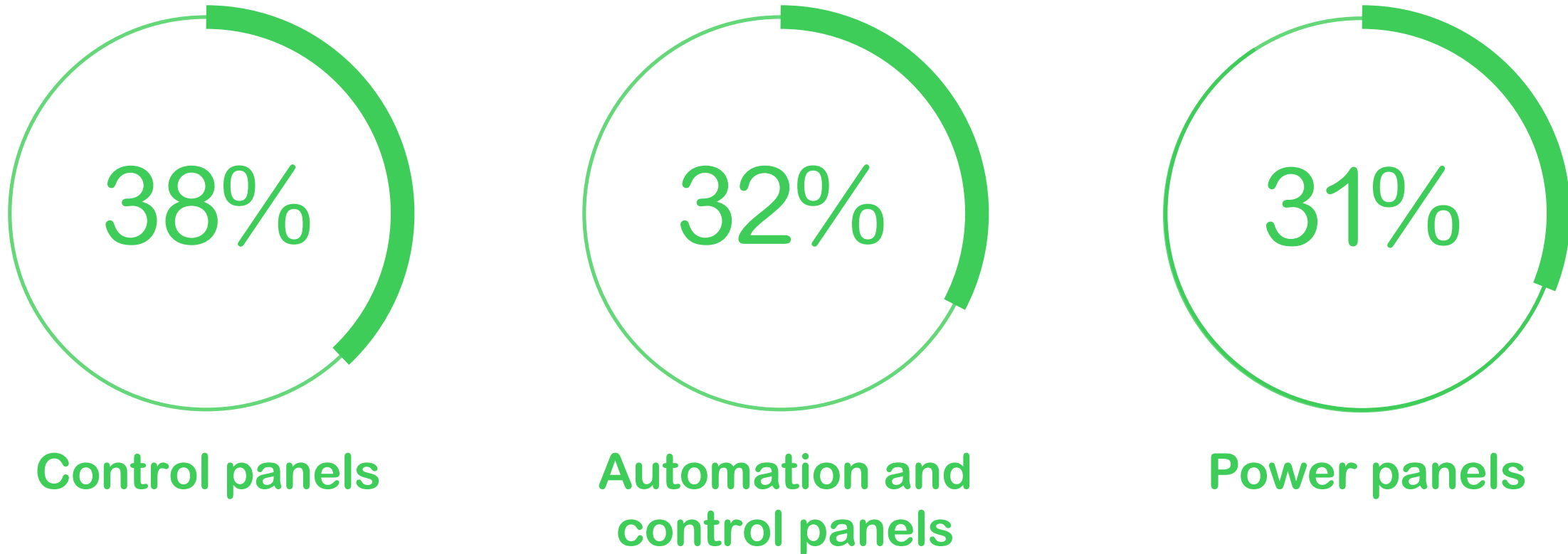
Schneider Electric recognizes the value CPBs bring to the market and wants to help them climb the revenue ladder to reach or exceed their goals. The intent of the Control Panel Builder Program is to give CPBs the necessary tools to:

Capitalize on market opportunities

Become increasingly indispensable to their machine builder and original equipment manufacturer (OEM) clients

Grow their businesses

[3] Industrial Automation Journey, Kadence International for Schneider Electric, May 2021.

Trends shaping the market

Capitalizing on market opportunities requires understanding market trends, so CPBs can demonstrate to their original OEM customers that they are staying up-to-date on today's technology and prepared for what's next.

Today, five main trends are shaping both the industrial automation and control panel builder market:
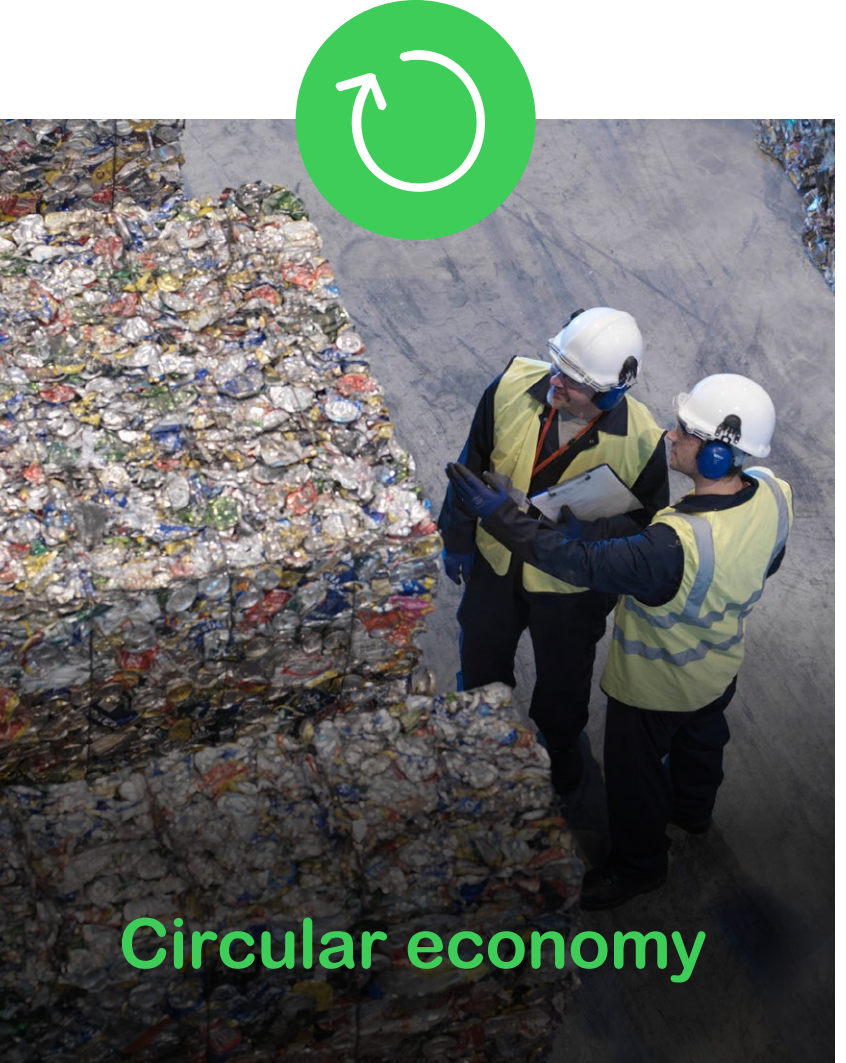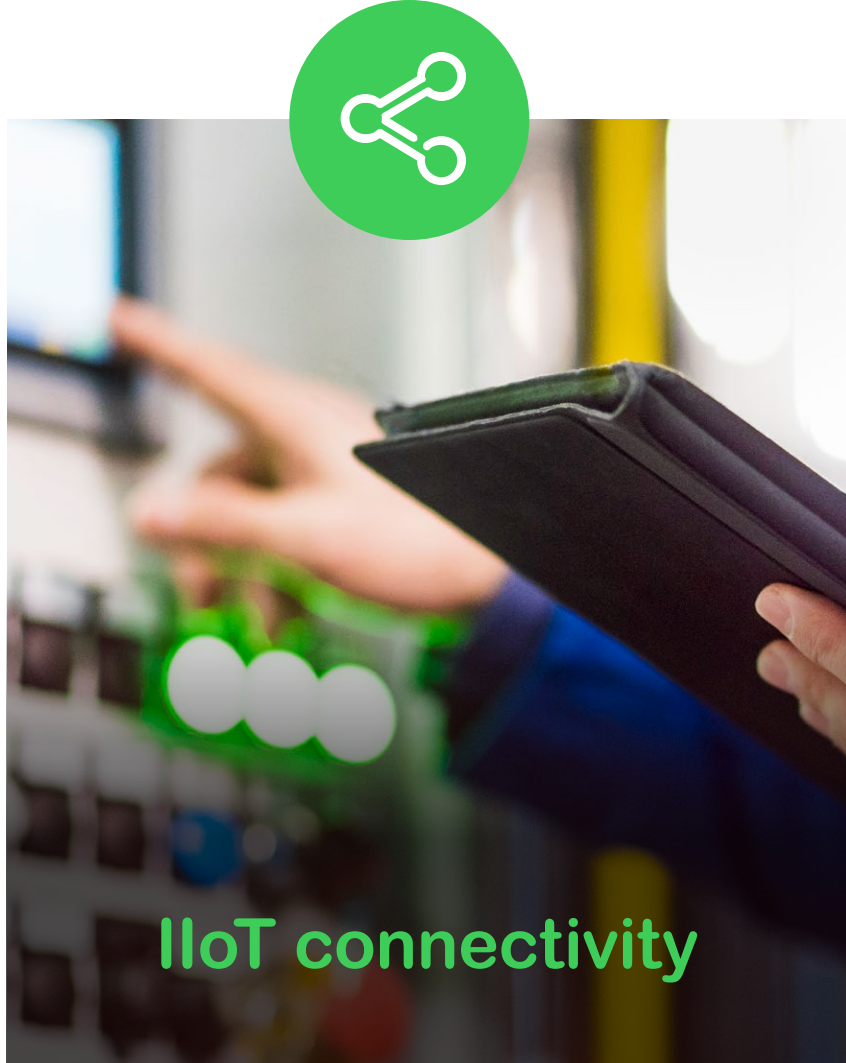
IIoT connectivity

Cybersecurity

Sustainability

Circular economy

Outsourcing

Trends shaping the market

| IIoT connectivity | Cybersecurity | Sustainability | Circular economy | Outsourcing |

As its name implies, IIoT applies IoT technology within industrial environments, and **Schneider Electric EcoStruxure™ helps bring all the required technology together**.

Nearly every machine or device in an industrial environment can be outfitted with a sensor or software that delivers data on its health and operational status over a network to a computer or database. Such data enables new environmental monitoring and control levels and drives practical applications to improve processes, such as industrial automation, predictive maintenance, smart logistics, and more.

To process this data, industrial environments often need edge computing facilities, essentially small data centers that sit in specialized protective enclosures to protect sensitive computing equipment from potentially harsh environments. These edge facilities typically connect to larger data centers on the customer premises or in the cloud, requiring a network connection.

Scroll to read more about IIoT connectivity

IIoT connectivity

Learn more

Trends shaping the market

| IIoT connectivity | Cybersecurity | Sustainability | Circular economy | Outsourcing |

All of this infrastructure drives the need for control panels that integrate the various components into a complete system that is simple enough for operation technology (OT) staff to operate, since industrial environments typically do not have IT staff on site.

EcoStruxure, Schneider Electric's IoT-enabled, plug-and-play, open, interoperable architecture and platform, helps CPBs bring all the required components together seamlessly and is based on three foundational elements:

1 **Connected products:** industry-standard connectivity to enable smart buildings and products

2 **Edge control:** integration across systems to promote easy access to and control over IoT devices

3 **Apps, analytics, and services:** actionable insights to increase performance, efficiency, and reliability

With EcoStruxure, CPBs will find all the tools they need to deliver effective control solutions that address Industry 4.0 needs, such as preventive maintenance and proactive monitoring.

Trends shaping the market

| IIoT connectivity | **Cybersecurity** | Sustainability | Circular economy | Outsourcing |

As industrial environments become increasingly connected, they are subject to the same cyber threats as any other internet-connected device or computer.

This is a relatively new phenomenon for industrial environments. The proprietary networks that ruled such environments for decades were "closed," meaning they had no (or few) connections to the outside world. Such connections are now required in digital transformation efforts, so industrial environments must take steps to protect against cyber threats.

Cybersecurity protection should be built into the various hardware and software components that make up the industrial environment. Tools such as firewalls, anti-virus, and anti-malware software – all standard components in business computing environments – are now also required in industrial settings.

⬇ **Scroll to read more about cybersecurity**

Cybersecurity

Learn more

Trends shaping the market

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This is the approach Schneider Electric takes with EcoStruxure. Security is embedded throughout the vendor-neutral, IoT-enabled architecture and platform to address three pillars of a comprehensive cybersecurity strategy:

1 **People:** an educated and cyber-aware workforce

2 **Processes:** sound practices and policies, including consistent, regular risk and threat assessments and gap analyses

3 **Technology:** the software and tools used to ensure security, including ensuring the security of any technology coming from vendors
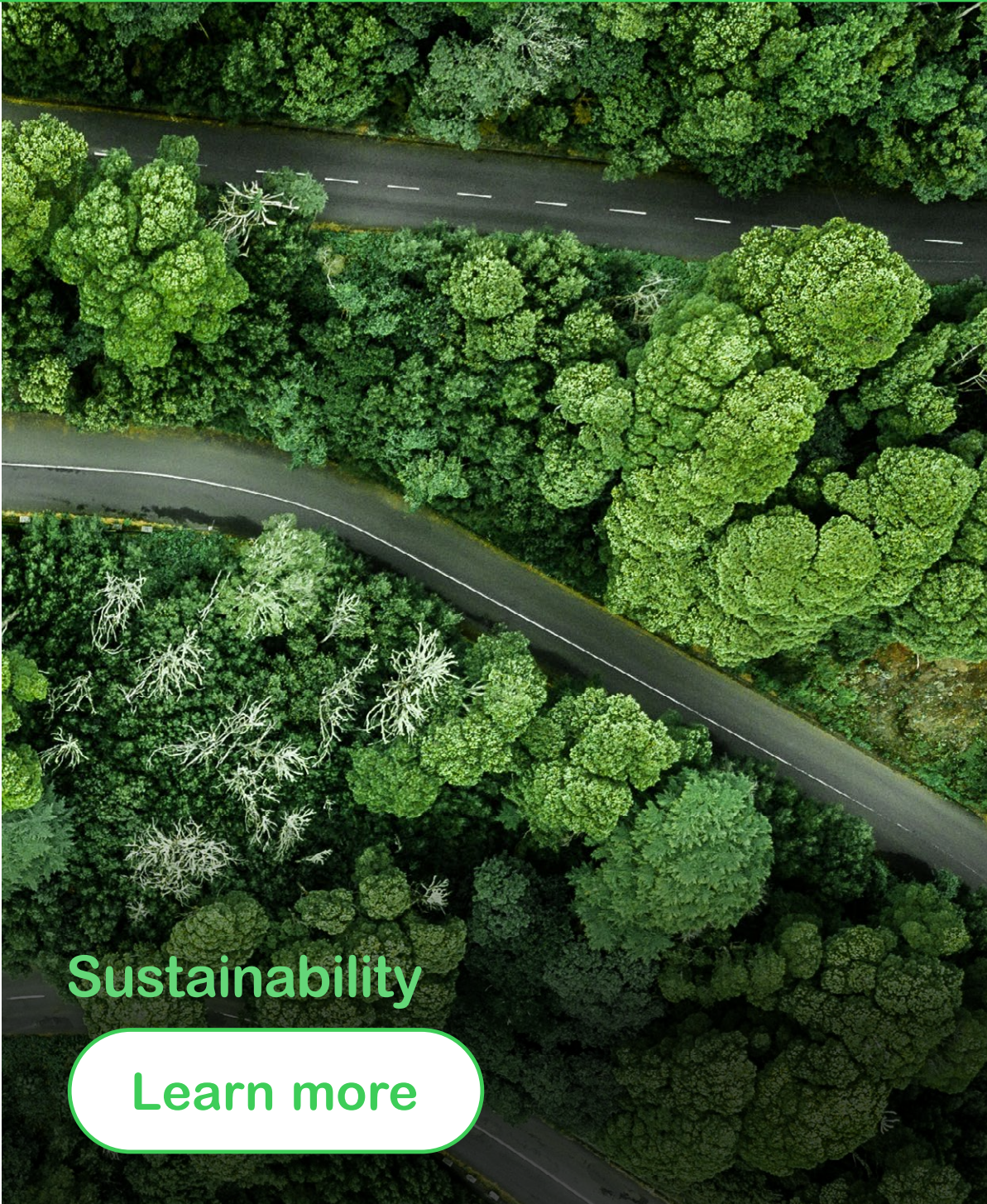
Trends shaping the market

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Industrial environments tend to use a lot of energy to power various machines. **With a global emphasis on energy efficiency, machine builders focus more on producing smaller, more efficient machines** and taking other steps to reduce the environmental impact.

At the same time, suppliers are offering tools to help companies monitor and manage energy use. This includes power metering diagnostics that provide a full system analysis of energy consumption and power monitoring software that gives insight into electrical system health, quality, and efficiency. Some systems also offer advanced energy visualization and analysis tools.

In addition to promoting energy efficiency, such tools help increase electrical network reliability and optimize configuration settings to improve performance.

Scroll to read more about sustainability

Sustainability

Learn more

Trends shaping the market

| IIoT connectivity | Cybersecurity | **Sustainability** | Circular economy | Outsourcing |

Schneider Electric has been at the forefront of sustainability for at least 15 years with products and services, including EcoStruxure, that are built to help customers meet their own sustainability goals and create a greener planet. Recent acknowledgments of these efforts include:

Named the **world's most sustainable company** in 2021 by the Corporate Knights Global 100 Index

First place in the Electronics & Equipment sector by Vigeo Eiris, Moody's principal European ESG rating agency

Number one position among Electrical Components & Equipment companies in the 2022 Corporate Sustainability Assessment (CSA) conducted by the rating agency S&P Global

A-List status on the 2022 list of companies recognized as **leaders in environmental transparency and action** compiled by CDP

With a role in the design phase, CPBs are in an excellent position to recommend innovative tools and solutions to their customers, helping them make more informed decisions to improve their energy efficiency and reduce costs.

Trends shaping the market

| IIoT connectivity | Cybersecurity | Sustainability | **Circular economy** | Outsourcing |

Closely related to sustainability is the circular economy, which is the idea of **reusing materials rather than throwing them away**.

Today the amount of recovered materials as a percentage of overall materials stands at only 8.6%, according to the 2022 Circularity Gap Report,[4] an annual report published since 2018 by the Circularity Reporting Initiative (CGRi).

Between the time the Paris Agreement was formed at the COP25 conference in 2015 and COP26 in Glasgow in 2021, "70% more virgin materials were extracted than what the Earth can safely replenish," CGRi reports. "This cannot continue – we only have one planet."

⬇ **Scroll to read more about circular economy**

Circular economy

Learn more

[4] The Circularity Gap Report 2022, the Circularity Gap Reporting Initiative, Jan. 19, 2022.
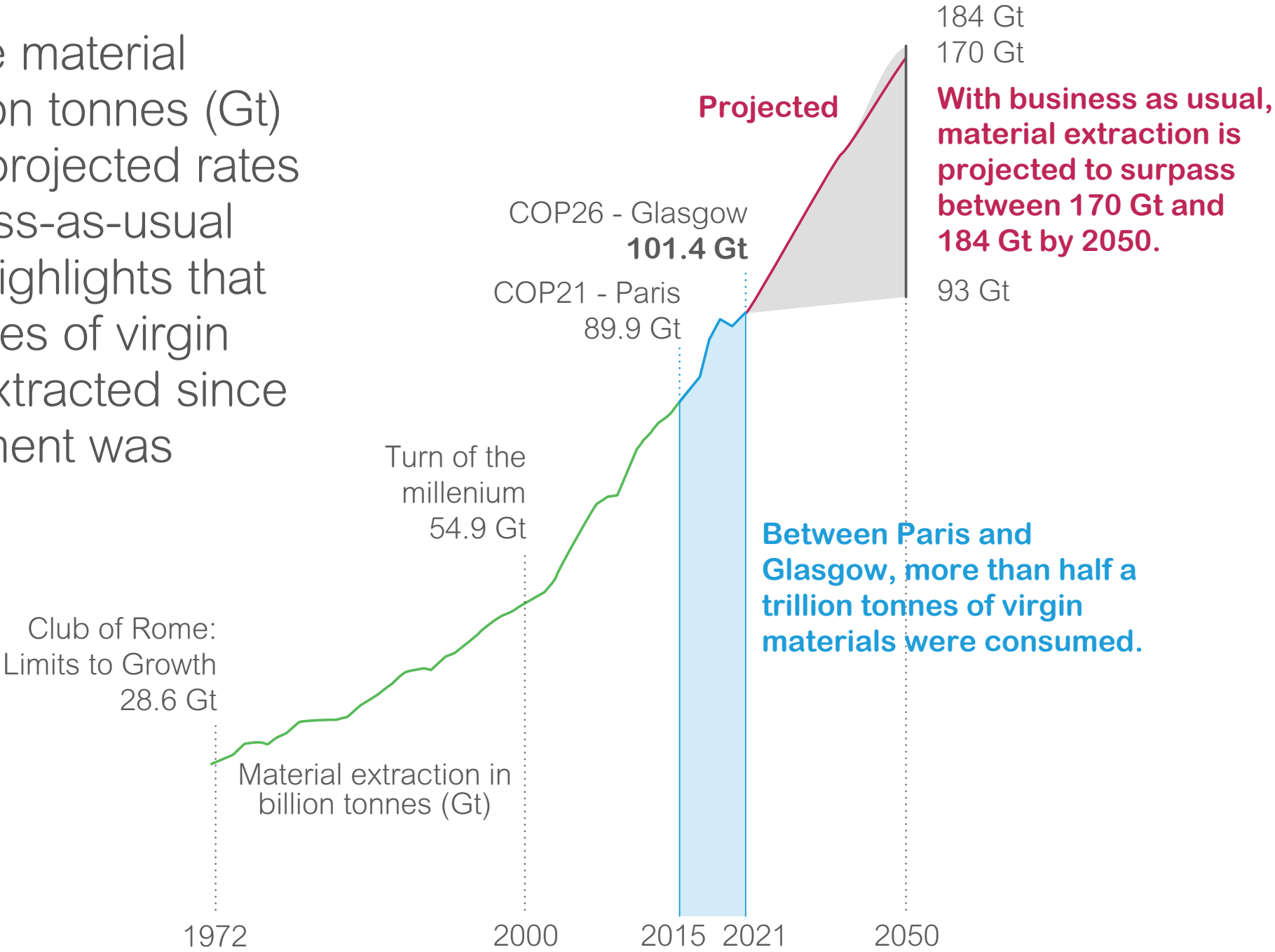
Trends shaping the market

| IIoT connectivity | Cybersecurity | Sustainability | **Circular economy** | Outsourcing |

Many OEMs are keenly aware of this issue and are taking steps to address it in their products. CPBs should also address this in conversations with OEMs and suppliers.

Ask suppliers for recycled materials, and you may find options available, writes Gaurav Sharma, Lead of Circularity Consulting Practice for Schneider Electric.

"Economies of scale are contributing to the affordability of using recycled materials: as more companies demand recycled products, they become increasingly accessible and competitively-priced (or cheaper) compared to virgin-sourced materials."

Figure One: The material extraction in billion tonnes (Gt) from 1972 to its projected rates in 2050 if business-as-usual prevails. It also highlights that half a trillion tonnes of virgin materials were extracted since the Paris Agreement was formed in 2015.

184 Gt
170 Gt

Projected

With business as usual, material extraction is projected to surpass between 170 Gt and 184 Gt by 2050.

COP26 - Glasgow
101.4 Gt

COP21 - Paris
89.9 Gt

93 Gt

Turn of the millenium
54.9 Gt

Between Paris and Glasgow, more than half a trillion tonnes of virgin materials were consumed.

Club of Rome:
Limits to Growth
28.6 Gt

Material extraction in billion tonnes (Gt)

1972   2000   2015 2021   2050

4 The Circularity Gap Report 2022.

Trends shaping the market

| IIoT connectivity | Cybersecurity | Sustainability | Circular economy | **Outsourcing** |

Machine builders are increasingly opting to outsource control panel production rather than keep it in-house. This opens up new opportunities for CPBs.

Why are machine builders outsourcing panel production? The reasons are much the same for any company that outsources some functions. It:

Expertise is another issue. Many control panel projects require specialized expertise in various technologies that machine builders don't always have. It's an issue only compounded by the rapid evolution of technology.

In summary, outsourcing enables machine builders to take advantage of CPB's expertise cost-effectively while getting products out the door faster.

Outsourcing

Learn more

Biggest challenges

While there's no question that control panel builders have plenty of opportunities in front of them, they also face some challenges in capitalizing on those opportunities – challenges the Control Panel Builder Program is specifically built to address.

These challenges are likely familiar to any CPB. Given they are typically not large companies, it can be difficult to find the time and resources to learn about new products.

Yet learning about new products and being certified with globally recognized partners in the market is crucial to the second-most oft-cited challenge, competitor differentiation.

CPB respondents to the Kadence International survey reported their biggest challenges are:

- **Learning** about new products

- **Differentiating** vs. the competition

- **Acquiring** technical knowledge

- **Adapting** to digital trends/new business models

- **Hiring/retaining** employees

- **Signing** new business

Biggest challenges

The Kadence International survey clarifies that **manufacturers and distributors play a larger role in helping CPBs address their challenges**. They must proactively update CPBs on new products and innovations and help them understand why one product is superior to another – one of the fundamental issues the Schneider Electric Control Panel Builder Program addresses.

CPBs also need OEMs and distributors to work closely with them to help anticipate their needs and proactively recommend innovative products and technologies that help optimize operations.

CPBs can benefit from new product education and training. Education will help them address their challenges – including hiring and retaining employees – because the opportunity for training makes employees feel appreciated and less likely to seek other opportunities.

A ready solution:
The Control Panel Builder Program

A ready solution: the Control Panel Builder Program

With the challenges CPBs face in mind, Schneider Electric developed a solution just for them: the Control Panel Builder Program.

The Control Panel Builder Program is a global initiative created to stimulate business growth and enrich the partnership between Schneider Electric and CPBs to provide:

- **An opportunity for growth** – a win-win partnership that increases sales and support

- **Training and tools** to improve control panel design, production, and commissioning

- **Global certification** and recognition

- **Cross-promotion** with Schneider Electric

The program intends to help CPBs advance their businesses and reward skills and contributions to the market. They have access to a variety of resources to help their business, from a single portal, from product info and configurators to training and webinars.

CPBs have significant power in the market. They decide which suppliers and products to use. Schneider Electric, of course, wants to partner with CPBs, so we make it easy and rewarding for them to do just that. The more time and effort they invest in the Control Panel Builder Program, the greater the rewards they will receive.

"I have found the Control Panel Builder Program to be an invaluable tool in my business. Its intuitive interface and comprehensive feature set have enabled me to efficiently design and assemble custom control panels for my clients. The program's versatility has allowed me to accommodate a diverse array of control panel configurations. In addition, the technical support team has consistently provided prompt and proficient assistance whenever I encountered any difficulties or questions. Overall, the Control Panel Builder Program has exceeded my expectations and I wholeheartedly recommend it to others in the industry."

— Digimeck Engineers, India

Program benefits

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builder market: The Control Panel   certification
poised for growth   Builder Program

Benefits to control panel builders

With Schneider Electric support, CPBs will realize four benefits, including:

1 — **Speed time-to-market**

Pre-selected tools and configurators help CPBs improve efficiency during the design, building, and commissioning phases. As a result, they get more done faster with existing staff.

2 — **Grow the business**

Dedicated customer support and close interactions with Schneider Electric experts help stimulate business growth.

3 — **Differentiate and gain visibility**

Display official Schneider Electric partnership recognition on their website and collateral to highlight their partnership status and differentiate their business.

4 — **Boost employee expertise**

A dedicated training path focused on new industrial process applications, machines, and technologies is tailored to control panel builder interests to keep employees current and engaged while improving productivity and quality.

The mySchneider Portal

Access to exclusive resources

Control Panel Builder Program members gain access to all available resources through a single source: mySchneider Portal. It includes:

- Exclusive content, including control panel technical guides and product launch data

- Pre-selected Schneider Electric digital tools that help save time and costs at every stage of projects

- Product configurators and commissioning tools to help with effective project planning

- EcoStruxure software modeling and management tools

- News and updates from Schneider Electric and our partners

- Updates on standards and regulations

"Schneider's partner platform offers a lot of training, introducing new technologies and allowing us to always keep our team updated and prepared for the market demands."

— Orbita Eletricidade Montagem de Panéis e Automação, Brazil

Benefits to your customers

The Schneider Electric Control Panel Builder Program also provides benefits for customers, including:

1 **Consistent quality**

By taking advantage of a global network of certified partners, CPBs will be able to provide high-quality control panels.

2 **Long-term support and availability**

With a wide array of offerings and worldwide coverage, it's easy for CPB customers to get support and spare parts. And our 180-year history means we'll be around for the long term.

3 **Global network of segment experts**

Schneider Electric has long understood the value of partnerships with a worldwide ecosystem of certified partners as a testament to our partner commitment. From building automation and control to data center infrastructure and industrial automation, our partners help meet a variety of customer needs.

4 **Cybersecurity expertise**

Schneider Electric understands what it takes to combat cyber threats. Whether PLCs or HMIs, we have certified products, tools, and solutions to counter cybersecurity threats and give customers peace of mind.

Levels of certification

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builder market: The Control Panel   **certification**
poised for growth   Builder Program

Levels of certification

Schneider Electric offers three levels of participation tailored to CPB business needs and competencies: Registered, Premier, and Premier Plus.

|	Registered	Premier	Premier Plus
Access to dedicated information	✓	✓	✓
Access to pre-selected training modules	✓	✓	✓
Access to pre-selected tools and configurators	✓	✓	✓
Dedicated animation and webinars		✓	✓
Preferential customer support		✓	✓
Access to advanced training modules		✓	✓
Invitation to digital events and local events		✓	✓
Promotion through Schneider Electric			✓
Invitation to global events and forums			✓
Partner locator			✓
Joint promotion of relationship			✓
Local technical pre-sales support			✓

All participants get access to special, dedicated training materials, enabling CPBs to invest in employee satisfaction and retention. Training programs cover topics including:

- Control panel functions such as motor control, operator interface, and more

- International standards and regulations

- The extensive Schneider Electric product portfolio, from energy management and industrial automation, offers software and digital tools

- End segments, including HVAC, pumping and hoisting, and material working

A sampling of products covered by the Control Panel Builder Program

1. Harmony HMI

2. Harmony Pushbuttons

3. Enclosures

4. Harmony tower lights

5. ComPacT NSX and NSXm

6. TeSys Giga Motor Circuit Breakers GV 5/6

7. Altivar 320

8. Altivar 212

9. Modicon M221

10. Harmony NFC Control and Timer Relays

11. Modicon Power Supplies

12. Multi9 Miniature Circuit Breakers

13. TeSys Deca Motor Circuit Breakers

14. TeSys Deca Contactors

15. Zelio Logic Smart relays

16. Preventa Safety Modules

17. TeSys Hybrid – ultra compact starter

18. Harmony Pocket

19. ClimaSys Smart Ventilation
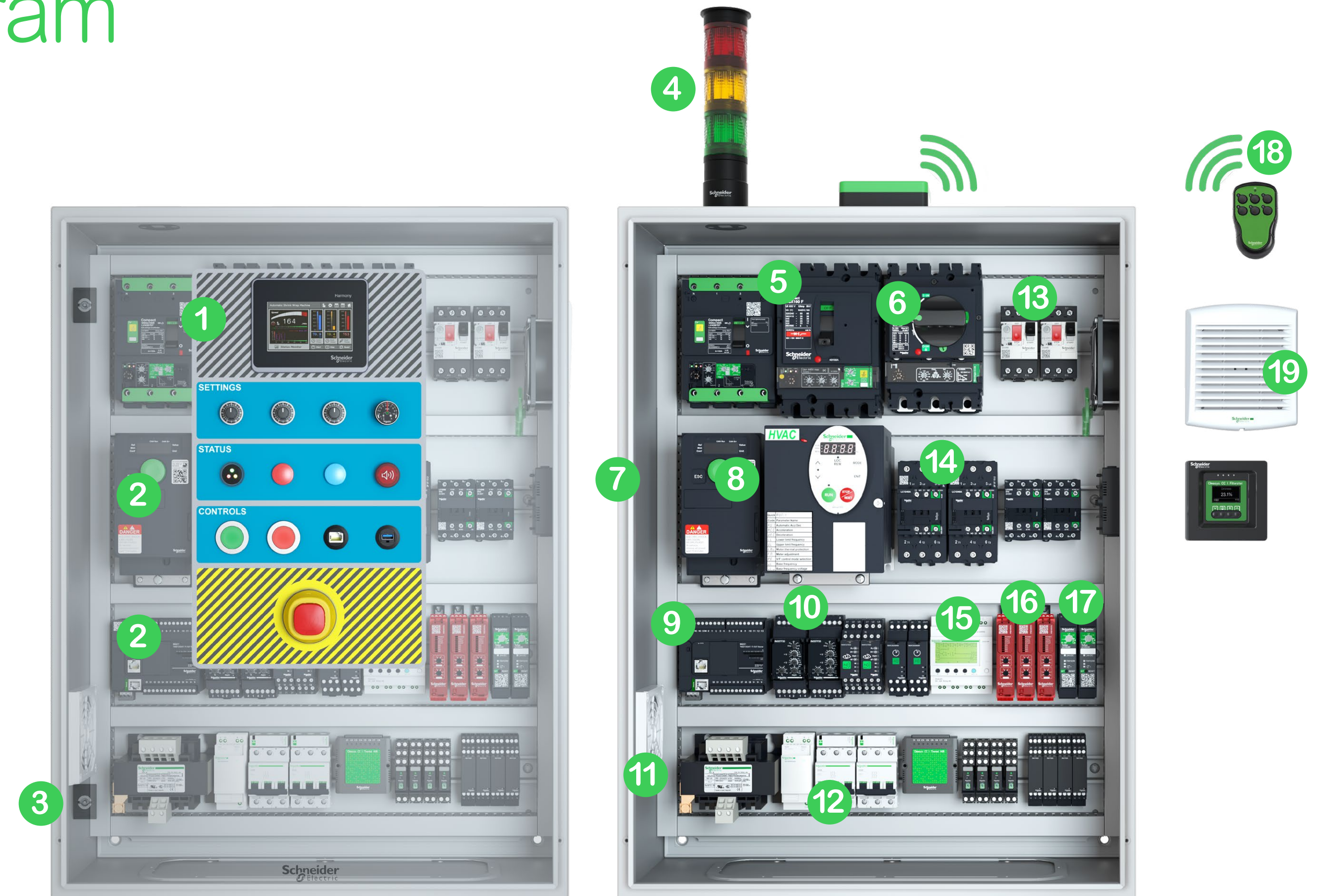
Join us

We built the Control Panel Builder partnership program for you – CPBs who are instrumental to the proper control and function of critical industrial machines and systems. We hope you'll take advantage of the resources the program offers, so we can help each other thrive in this exciting time of digital transformation and Industry 4.0.

To learn more about membership, visit our Control Panels page or contact your local Schneider Electric sales rep.

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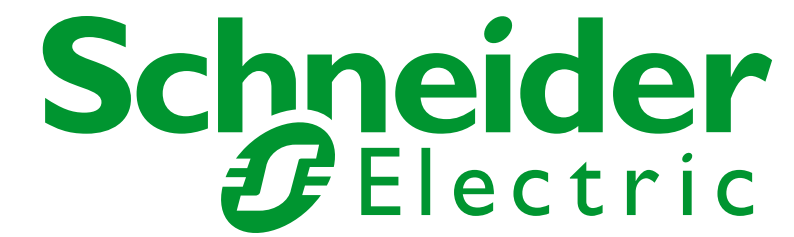
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