

Pursuit of Innovation



In Pursuit of Safe and Sustainable Innovations

The BenQ Public Display Products (PDP) department is committed to designing and delivering innovative display solutions that help schools and businesses effectively create functional spaces conducive to active learning and collaboration. In line with this goal are our ongoing commitments to help organizations maintain safe and engaging learning environments and workspaces and adhere to the sustainable development goals (SDGs) set forth by the United Nations Development Program (UNDP).

Of the 17 SDGs detailed by the UNDP, we have focused on three that best match our department's core competencies. As a technology brand that heavily caters to educational institutions and businesses, with a special focus on health-focused innovations, we believe that we can contribute by actively promoting good health, quality education, and sustainable innovations.

UNDP SGD	Good health and well-being Strengthen the capacity of organizations to manage critical health risks	Quality education Upgrade educational facilities and enable learners to acquire skills and knowledge required for sustainable development	Industry, innovation, and infrastructure Upgrade infrastructure and technological capabilities through energy-efficient, sustainable innovations
	Help organizations maintain healthy spaces BenQ offers interactive displays fitted with SIAA and TÜV-certified features that help safeguard the well-being of our users and prevent the spread of germs in classrooms and workspaces.	Provide state-of-the-art educational tools BenQ equips schools with interactive displays that come with innovative features that help facilitate active and hybrid learning, ensuring educational resilience and the continued development of students' 21st century skills.	Adhere to sustainable global production standards BenQ produces solutions that are globally certified for being energy-efficient, eco-friendly, and safe for use. Our production processes adhere to the strictest environmental standards set by prominent international organizations.
	BenQ PDP commitments		

Percentage of BenQ display solutions that have passed global environmental protection standards

Environmental protection certificate	BenQ display solutions	
	Interactive displays	Digital signage
European Energy-related Products (ErP) Directive	100%	100%
European Waste Electrical and Electronic Equipment (WEEE) Directive	100%	100%
European Restriction of Hazardous Substances (RoHS) Directive	100%	100%
Energy Star	100%	89%



Help organizations maintain healthy spaces

In order to help organizations create and sustain safe and healthy spaces for both education and business, we at BenQ continuously develop products with user health and safety as key considerations. Currently, we focus on three areas of user health: eye care, good air quality, and disease prevention by limiting germ transmission.

Eye-care technologies

BenQ has fitted our displays with three different eye-care technologies that aim to protect our users' eyesight.

Flicker-free screens

As early as 2012, our displays come with flicker-free panels that prevent both visible and faint screen flickering that may cause eye strain and fatigue.

Blue light filter

Added in 2013, our displays' blue light filter protects users from exposure to harmful blue light, which is known to have negative long-term effects on eyesight, including blurry vision and macular degeneration.

Anti-glare screen

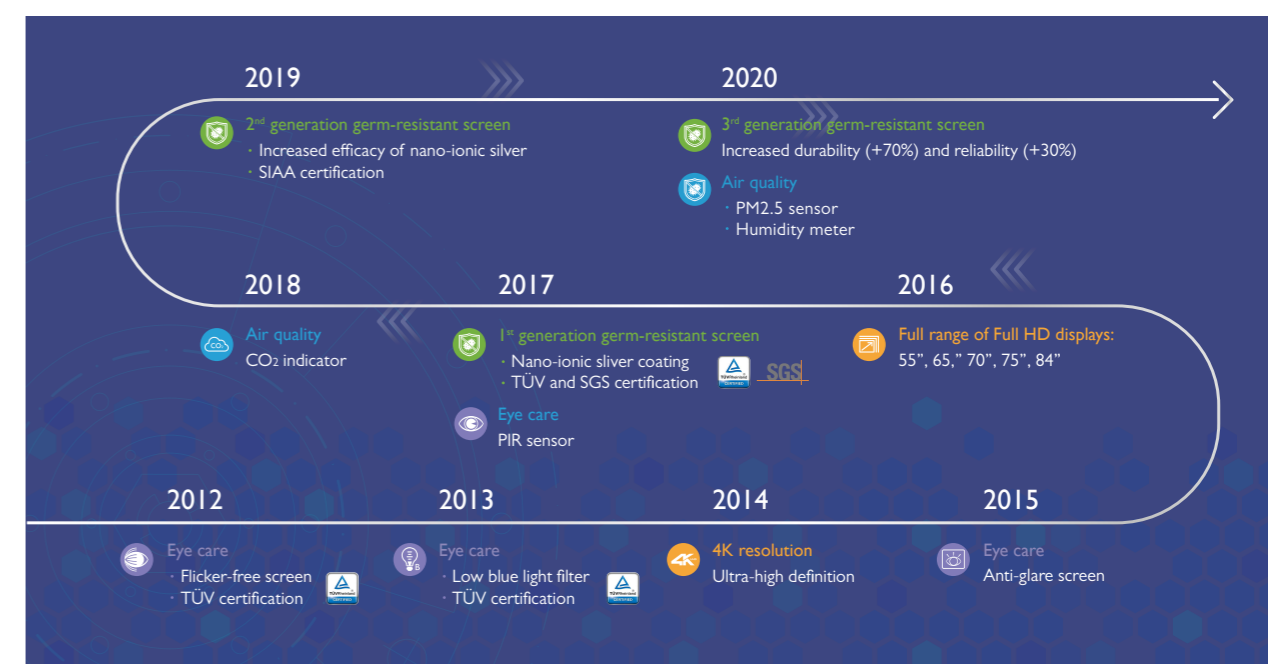
Starting 2015, our displays come with screens that have an anti-glare coating, designed to significantly reduce the amount of reflected light on the glass panel and increases the visibility of on-screen content.

TÜV- and SIAA-certified germ-resistant screen

Germs can latch onto devices for up to several months, increasing the risk of disease transmission in classrooms and offices. Knowing this, BenQ developed the world's first germ-resistant screen for large-format displays.

Since 2017, we've been using nano-ionic silver, which is globally recognized by the scientific community for its efficacy against bacteria and other harmful microbes. The silver releases ions that inhibit germs by disrupting their DNA. BenQ's 3rd generation screen has the strongest concentration of nano-ionic silver that is carefully applied using a proprietary manufacturing process, where the glass and agent are heated at high temperatures until they fuse and bond, ensuring long-lasting antimicrobial efficacy.

Certified by renowned international testing organizations, BenQ's germ-resistant screen is proven effective and safe to use.



TÜV Rheinland is one of the world's leading testing service providers. Established in 1872, the company employs highly qualified experts to test and certify technical systems and solutions based on international standards. They have tested several BenQ solutions, such as our built-in eye care technologies as well as our germ-resistant screens, for efficacy and reliability. Based on results, BenQ's germ-resistant screens are effective against common germs like Escherichia coli, Staphylococcus aureus, and Pseudomonas aeruginosa.



The **Society of International sustaining growth for Antimicrobial Articles (SIAA)** is an organization of manufacturers and antimicrobial testing institutions that uphold the strictest quality and safety standards for products with antimicrobial properties. Only products that pass the following criteria are allowed to use the SIAA label:

- **Antimicrobial efficacy:** After a series of tests conducted in accordance with the ISO 22196 international standard, the bacteria on the surface of the treated product is 1/100 or less than that of the bacteria found on the surface of a non-treated product.
- **Safety:** The product is nontoxic and is safe for human use.
- **Appropriate labeling:** The product is clearly labeled with the type of antimicrobial agent used.



Software support to reduce exposure risks

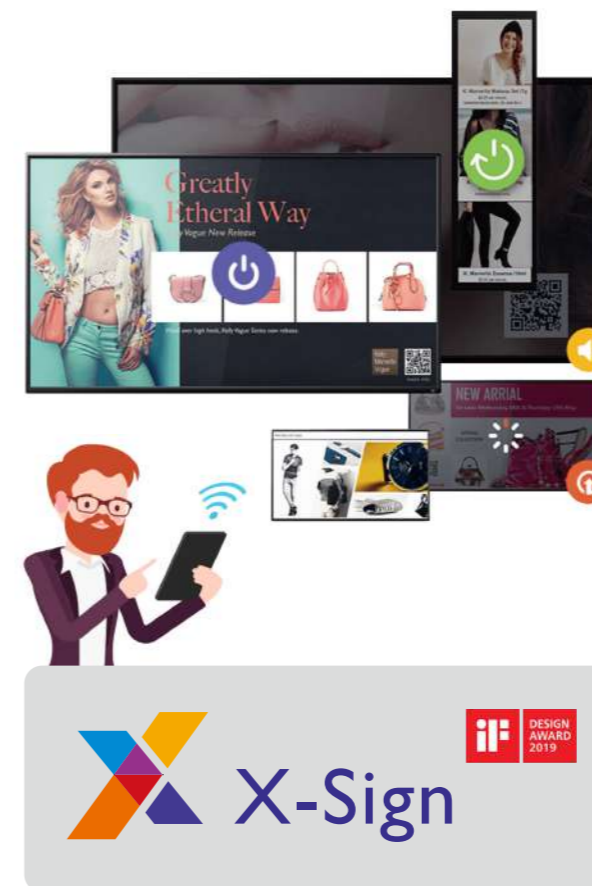
Another way to protect user health in places like schools and offices is by creating more resilient spaces. This means that, in the case of a pandemic, organizations can quickly apply social distancing measures or even hybrid and remote work.

For this, BenQ has software solutions that help educational and corporate institutions minimize physical interaction and hardware sharing in meeting rooms (via wireless screen sharing) and cloud-based services designed for the remote management of BenQ displays and signage content.

Remote management of displayed content

Due to the pandemic, many businesses have had to pivot to some form of fully remote or hybrid working setup. For those tasked to maintain building signage or commercial displays, BenQ supports them through our X-Sign system, a cloud-based service that gives users the ability to design, push, and play visual content without ever having to physically be on site. Through X-Sign, content managers can perform the following tasks remotely, from wherever they are:

- Design and create content
- Manage and schedule content playlists
- Remotely control the display power
- Monitor the performance of the content, and, if the displays are touchscreen, analyze the interaction data



Since our smart signage and display solutions can be accessed and managed via the internet, administrators can safely stay at home, easily log into X-Sign Manager, update the played content, turn displays on and off, and review display analytics.

Wireless projection reducing exposure risks

With the sharing of equipment such as displays and cables becoming a possible transmission vector of disease-causing germs during meetings, it may be good for organizations to consider wireless alternatives.

BenQ InstaShare makes contactless meetings possible. It allows users to instantly present content and share their screens while eliminating the need for data cables and other shared peripherals like meeting room keyboards and mice. All users need when presenting on a BenQ display is their own personal device.

To start sharing, they simply need to ensure that their devices are on the same network as the display, turn on InstaShare, and then begin casting their content onto the screen. This setup works regardless of whether users have a Windows laptop, MacBook, iPhone, iPad, or an Android phone or tablet.



InstaShare



InstaShare 2

(Ready to bring you a new experience in 2021)

Case Studies

Chang Gung Memorial Hospital uses BenQ displays to meet changing medical demands

The Chang Gung Memorial Hospital installed BenQ SL series displays in their operating rooms. Since it's a large-format 4K display, the SL series gives surgeons enough space to view all relevant information—such as surgical parameters and vital signs—on one screen, allowing them to better concentrate on the surgery at hand.

“We keep operating rooms very cold to prevent bacteria growth. Because of this, the internal temperature of displays is relatively high. For many brands that we tested, it resulted in a lot of condensation on the screen. BenQ’s displays never had this problem,” says Dr. Shih-Che Chen. “When I and other medical staff were testing the BenQ displays, we were particularly satisfied by its high-resolution, flicker-free screen. Compared to all other displays we tested, we knew BenQ was our preferred option.” Moreover, the true colors replicated by the SL series’ Pantone mode produce accurate images that doctors refer to during operations.

The hospital also acquired RP series interactive displays for their offices, granting them an easy way to plan and schedule medical procedures.

Kuei-Chi Chung, Technical Development Project Manager of the hospital’s Information Business Department, says: “We are about to usher in a new medical era. Given the complexity of the medical industry, it’s difficult to determine whether a product will meet the needs of on-site staff without conducting field tests. Based on our experience, BenQ displays have been very stable and reliable.”



Shih-Che Chen, Assistant General Manager of General Manager Office, Chang Gung Medical Technology Co., Ltd.

Royal Berkshire Hospital overcomes COVID-19 setbacks through BenQ interactive displays

The Royal Berkshire Hospital (RBH) originally acquired BenQ DuoBoards to fulfill their meeting requirements. The large-format displays gave them a wider screen for their presentations—a feature that helped with their internal COVID-prevention efforts. “What the DuoBoard has done is enable us to have group discussions in a socially distanced environment. The screen was large enough for our staff to see all the details being shared. It allowed more interaction compared to when we had meetings using desktops and laptops,” says Dr. Sumith Perera, clinical lead of the Prince Charles Eye Unit of RBH.

With the emergence of COVID-19, they were not only able to maximize the DuoBoard for social distancing, but they also managed to smoothly transition into an operational hybrid working setup: “We had 10% of our staff on-site while the rest were working remotely or from home,” notes Dr. Perera. “We used the BenQ cameras with a wide field of view so that remote staff can clearly see everyone in the room.”

“Surgeries involve multidisciplinary input from teams and staff from different sites,” explains Dr. Perera. “We need to factor in pre-operative assessments, COVID swabbing, theatre nursing staff allocations, anesthetic and surgeon allocations. The BenQ solutions allow us to meet regularly to discuss these items. The DuoBoard has been particularly useful when we’re showing facts and figures to staff participating from different sites.”



Experts and students using BenQ's DuoBoard in mixed training



Provide state-of-the-art educational tools

Quality education is crucial in order to achieve sustainable development. This means that schools need to go beyond traditional modes of learning that only require one-way lectures, notetaking, and rote memorization and recitation of facts and figures.

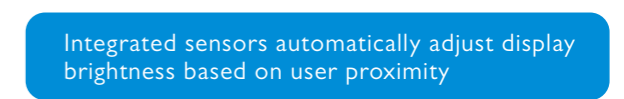
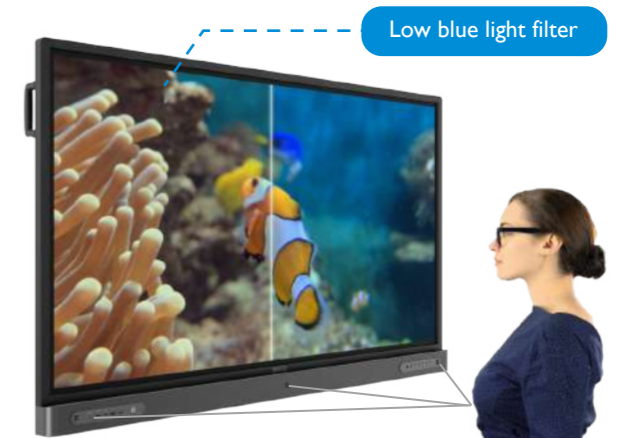
At BenQ, we recognize that the most effective way to equip students with the necessary 21st century skills they need in order to flourish in the real world is through active learning—a pedagogy characterized by the more active role students take in the processing of information presented to them. Through this approach, students learn to find ways to apply their acquired knowledge through practical applications.

In order to facilitate active learning activities in the classroom, teachers will need the right tools that would allow their students to participate more in discussions and collaborate with their peers in coming up with new concepts related to their field of study.

The most commonly used tools in class are whiteboards, projectors, tablets, and multimedia systems. BenQ is able to merge all these functionalities into our interactive displays for education, the features of which, we have detailed as follows:

Feature 1: Integrated eye care technologies

Built-in motion and light sensors automatically adjust the display brightness based on ambient light and the proximity of the user is to the display. When users are closer to the screen, its brightness gets dimmer and easier on the eyes. In addition, the flicker-free screen’s anti-glare coating coupled with the display’s low blue light filter prevent users from experiencing eye strain while using the display for long periods of time.

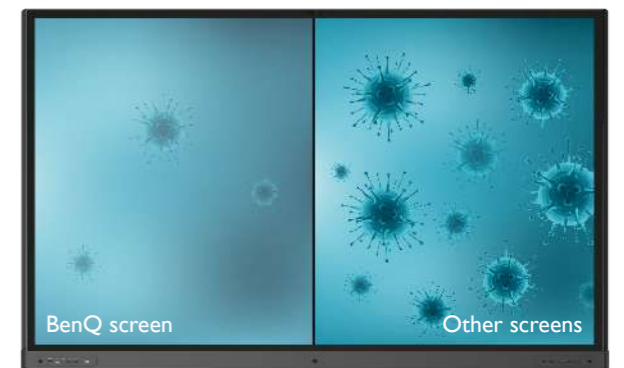


Feature 2: Germ-resistant screens

The prevalence of touchscreen displays in public settings makes them hotbeds for disease transmission. This is why BenQ became the first solutions provider to offer large-format interactive displays that feature germ-resistant screens.

BenQ uses nano-ionic silver, a globally recognized antimicrobial agent proven to inhibit germs from spreading further either through cell division or replication.

BenQ’s germ-resistant screens have undergone thorough testing and have been certified for reliability, 99.9% efficacy, and user safety by reputable international organizations such as TÜV Rheinland, SIAA, and SGS.



Feature 3: Air quality sensors

The built-in air quality sensors can help users assess a room's indoor air quality based on the particular matter (PM2.5 and PM10) concentration and CO2 levels in a room. Poor air quality is known to affect alertness and concentration, thereby reducing user performance. With the help of these sensors and the real-time reports summarized on the display's home screen, users can immediately adjust the room's ventilation to improve air circulation and mitigate the effects of poor air conditions.



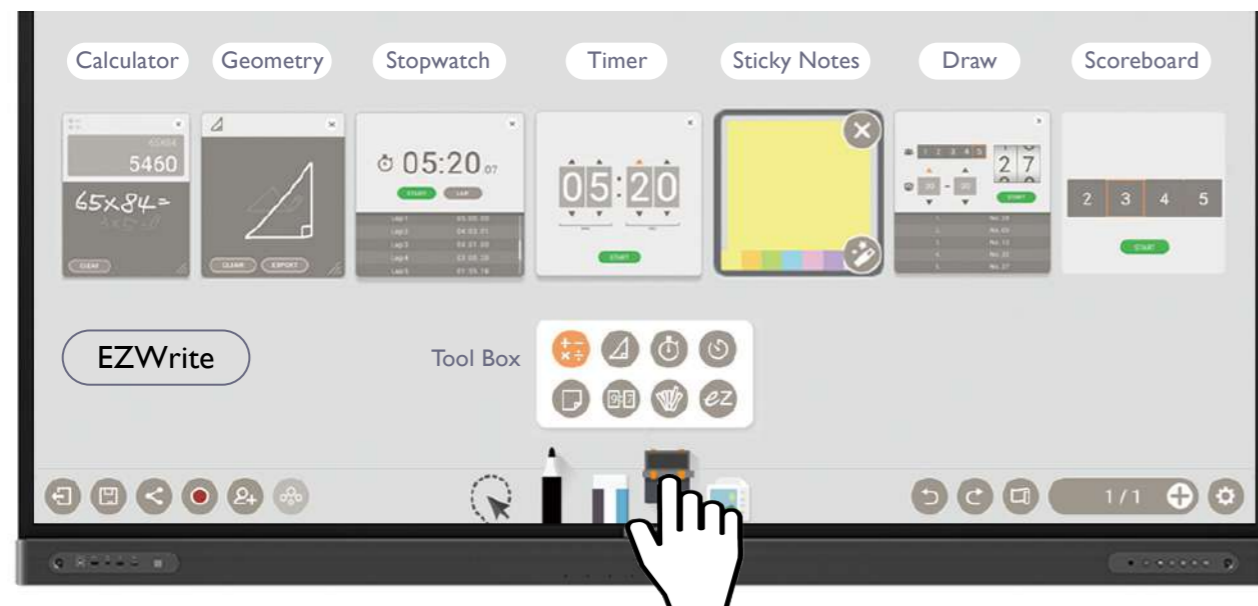
Feature 4: Interactive whiteboarding

BenQ interactive displays are equipped with EZWrite, BenQ's feature-packed whiteboarding software designed for highly engaging lessons. Its multi-touch support allows several students to come up to the board and write at the same time. EZWrite's machine learning handwriting recognition feature lets users convert their scribbles into editable text, which they can alter using a keyboard.

More than just text, EZWrite opens up a world of possibilities by giving teachers the freedom to import multimedia files on the board. They can add photos and illustrations, load PDF pages and slides, and even paste screenshots that they can write over, resize, and reposition.

EZWrite also has a full-feature toolbox that has everything they need to roll out their lessons: a calculator for math problems, a geometry tool for drawing accurate shapes, a stopwatch and timer for experiments, a number draw and scoreboard for games, and sticky notes for quick real-time surveys.

BenQ interactive displays also come with the Floating Tool, a moveable tool menu that teachers can access any time over any app opened on their display. From the Floating Tool, they can tap the pen tool for on-screen annotation, its eraser, as well as other features like screen recording and screenshots. They can save screenshots as image files or import them directly on EZWrite as part of an ongoing discussion.



Feature 5: Wireless screen sharing

BenQ software solutions such as InstaShare allow for quick and easy screen sharing in the classroom without the need for extra wires and peripherals. Teachers can simply open the InstaShare app on their BenQ display so that they and their students can simultaneously cast or mirror their device screens—regardless of whether they're using laptops, tablets, or smartphones—for highly engaging lessons.



Because InstaShare is wireless, teachers are free to move around the classroom during discussions. They can interact with their students more closely while controlling the board from a tablet. And since students can also share their own screens, it becomes easier to host collaborative activities. Teachers can hold fun educational games or facilitate peer critiques where students can get more hands on through InstaShare's two-way touch and annotation features.

Feature 6: Easy account access and permission management

Installing interactive displays in classrooms may tempt students to use them inappropriately during lulls in between classes, perhaps as large gaming tablets or digital graffiti boards. With the BenQ Account Management System (AMS), administrators can guarantee that only authorized personnel like teachers can use BenQ displays for official purposes such as holding classes or hosting in-campus staff or PTA meetings.

By utilizing AMS, teachers can also cut their setup time in half as it allows them to access their cloud storage accounts directly from the display. They can log in with a just tap of their ID card on the display's built-in NFC sensor* and then load their teaching materials straight from the cloud. They no longer need to bring USB drives or other bulky peripherals.

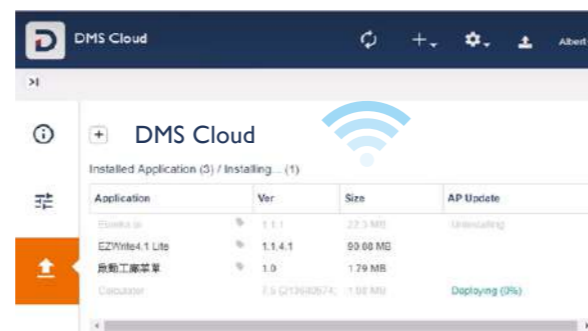
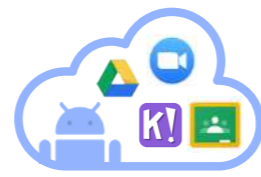


* Available only for certain models



Feature 7: Real-time alert and broadcasting system

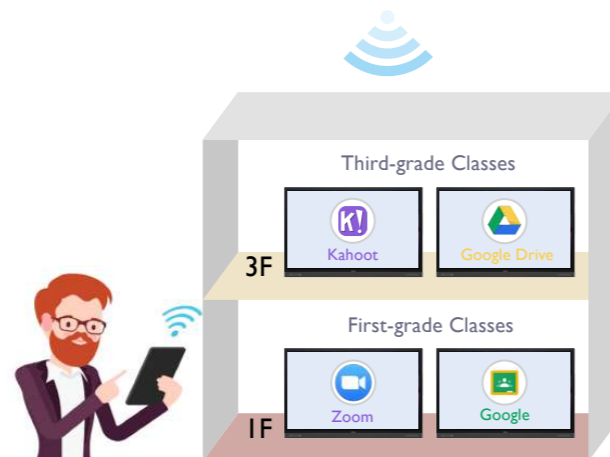
Through X-Sign Broadcast, BenQ's cloud-based public announcement system, users can send scheduled content or real-time alerts via their BenQ displays. This feature is especially useful for emergencies. School administrators can easily draft messages and push them to several classrooms simultaneously, giving both teachers and students any vital information they may need in case they're required to evacuate or take action.



Feature 8: Convenient app and update management

With the BenQ Device Management Solution (DMS), administrators can remotely oversee all their displays via a single cloud-based console. Through DMS, they can monitor the real-time status of their devices, install or remove applications, and even update their firmware.

By granting administrators the flexibility to remotely manage their displays, saves them both the time and the effort they would normally use to go to each display and manually perform these tasks on site.



Case Studies



Parishkar International College ensures educational resilience with BenQ interactive displays

The physical restrictions brought about by the pandemic posed a challenge to educators at Parishkar International College, who needed to find ways to take their classes online. Teachers had to convert their in-person lessons into pre-recorded or livestreamed sessions. With regular whiteboards, teachers had to write or post their lesson content to the board before they could start—a setup that proved time consuming. They were able to solve this issue with BenQ education displays.

College Director Dr. Savita Paiwal explains: "Teachers get to save a lot of time they used to spend writing on the board. They can prepare their presentations beforehand and are able to add videos and visuals. Through these displays, we are able to deliver a lot more study material in less time."

Both old and new teachers have noted how the displays have transformed their way of teaching. They can, for example, import multimedia diagrams, videos, and animation, move them around on the EZWrite whiteboard, and annotate over them to highlight key points.

Broca English School promotes active learning through BenQ interactive displays

As part of their mission to create world-class learning experiences for their students, the Boca English School

sought out BenQ's help to give their classrooms a much-needed upgrade. By installing RP interactive displays in their classrooms, they were able to transform what were once passive teaching areas into highly interactive learning spaces.

The connectivity offered by the RP series allows teachers to access an abundance of educational content hosted online. Not only does loading cloud content help them cut down the time used to set up their classes, but it also gives them more creative ways to roll out their lessons. They can now play and write over videos, hold online quizzes, and start video calls with ease.

Previously, classes merely involved students taking notes while listening to teachers give lectures. Now, students get to play a more active role in their learning. Because the displays are touchscreen, lessons become more hands-on. Students can go up to the display and explore concepts more closely by interacting with objects on the screen.

Teachers utilize the EZWrite whiteboard for annotations, easily importing images to better visualize the topics they're discussing. They also pull up tools like the timer and scoreboard to gamify their lectures, creating an exciting and engaging atmosphere conducive to active learning. Since using the RP series displays, they've noted how students have become more attentive and receptive to knowledge.





> Adhere to sustainable global production standards

The PDP Department continuously develops sustainable solutions that are energy efficient, environmentally friendly, and safe for human use.

Energy conservation

Energy efficient design

All BenQ interactive displays and the majority (90%) of our digital signage meet the requirements of the Energy Star program as well as the ErP directive. This ensures that our solutions are produced with energy efficiency in mind.

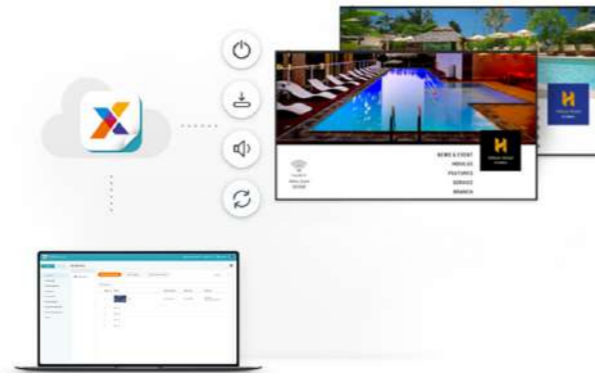
Energy Star is a program that seeks to promote energy efficiency in products and building materials. It was launched by the U.S. Environmental Protection Agency in 1992 with the aim of reducing the energy consumption and greenhouse gas emission of power plants. Products that meet the program qualifications can be marked with an Energy Star label.



Built-in energy saving measures

Our users can utilize software like X-Sign Manager and DMS to remotely switch off their displays in real time or set a power schedule to save energy when the displays are not in use.

In addition to this, our displays are also equipped with light sensors that detect if users are in close proximity to the display. The light automatically dims if there's a user nearby, protecting their eyesight and reducing energy use.



All BenQ displays sold in Europe meet the requirements of the ErP directive.

The **Energy-related Products (ErP) directive** is a framework of regulations set forth by the European Union to reduce the energy consumption and other negative environmental impacts of products. All products which use, generate, transfer, or measure energy, as well those which have an impact on energy consumption, are covered by the directive. Meeting the ErP directive requirements represents compliance with EU energy regulations.



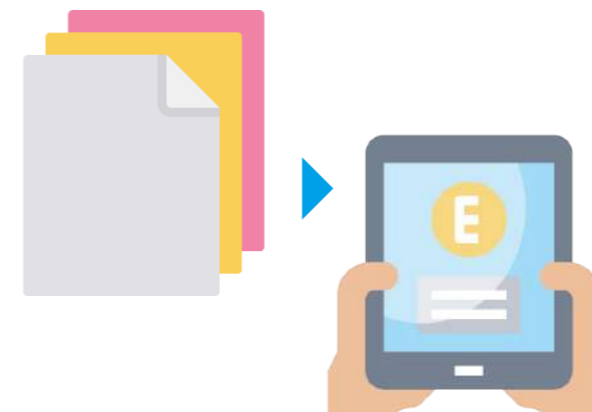
Efficient scheduling of shipments to reduce carbon emissions

In order to limit the carbon emissions related to the international shipping of our products, we accumulate and schedule regional orders so that they can be transported in one go instead of splitting them across multiple trips.



Going digital to minimize paper consumption

Hardware solutions almost always come with thick printed user manuals that consume a significant amount of paper. More often than not, these manuals are read only once and then discarded. In our effort to reduce paper waste, BenQ's PDP department has decided to go digital. Our customers can download manuals online, giving them quick and easy access to the information they need while minimizing the use of paper.



Safe to use

User health and safety is one of our top priorities, so we at BenQ always ensure that before our products go to market, they pass rigorous safety testing and inspection. Our large-format display solutions meet the strict safety regulations imposed by various countries. All our displays sold in Europe, for example, comply with the standards specified in both the REACH and RoHS directives.

Registration, Evaluation, Authorization, and Restriction of Chemicals (REACH) is a European Union regulation supervising chemical substance production and use, as well as the impact these have on human health and the environment. Virtually all chemical substances exported to markets in the European Union must be registered with competent authorities. Exporters are required to conduct safety inspections and register chemicals in compliance with the regulation.

REACH aims to protect human health and the environment by addressing the dangers of potentially toxic substances and forcing the use of harmful chemicals to eventually be phased out.



The Restriction of Hazardous Substances (RoHS) directive came into effect in 2006 to restrict the use of hazardous materials in electronic products and electrical equipment in the European Union. RoHS defines manufacturing standards that address the global issue of consumer electronics waste to protect public health and the environment. The list of hazardous materials regulated by RoHS includes lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls, polybrominated diphenyl ether, as well as four phthalates used as plasticizers. The RoHS standard specifies that electronic products and equipment must not contain more than 0.1% of lead.



Waste management and recycling

According to the UN's 2020 Global E-Waste Monitor report, the total global e-waste in 2019 amounted to 53.6 million metric tons. That marks a 21% growth within a span of five years. Of this amount, only 17.4% was reportedly recycled.

E-waste, short for electronic waste, refers to any appliance or electronic device that has been discarded and is meant to be recycled or fully disposed of. Improper disposal of e-waste is known to cause serious environmental damage, such as marine pollution, and may also expose affected communities to numerous health risks, such as lead poisoning and various respiratory and neurological diseases.

In line with our goal to observe sustainable global production standards, BenQ actively makes steps to

properly manage and recycle electronic waste. For BenQ devices that have reached the end of their life cycle, we adhere to the guidelines for proper waste disposal that have been set by the local governing bodies. These guidelines include the collection, handling, disassembling, segregation, and recycling of components and materials.

In Taiwan, for example, we follow the directive from the country's Environmental Protection Administration, which has set up numerous waste collection channels that specialize in the correct handling of e-waste.

BenQ also closely complies with the rules stipulated in the WEEE directive to ensure that any possible negative impact to the environment associated with our e-waste is effectively minimized.

The Waste Electrical and Electronic Equipment (WEEE) directive was established by the European Union in 2003 to regulate the collection, recycling, and recovery of electronic and electrical equipment. The directive was passed to ensure the proper disposal of electronic waste and reduce the negative environmental impact of any hazardous substances these goods contain. The WEEE directive also aims to reduce the quantity of electronic and electrical waste, and more recently has set restrictions on the material manufacturers can use when creating new electronic equipment to be released in the EU market.



All BenQ interactive displays meet the requirements of the Energy Star program. All our products exported to Europe are also compliant with the ErP directive and meet the requirements of RoHS, REACH, and WEEE directives.



RP Series



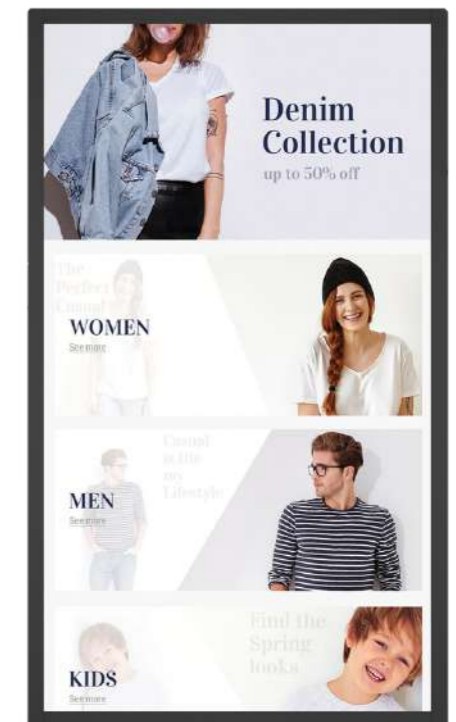
CP Series



RM Series



RE Series



IL Series

Almost 90% of our digital displays meet the requirements of the Energy Star program. All our products exported to Europe are also compliant with the ErP directive and meet the requirements of RoHS, REACH, and WEEE directives.



SL Series



CS Series



ST Series



BH Series

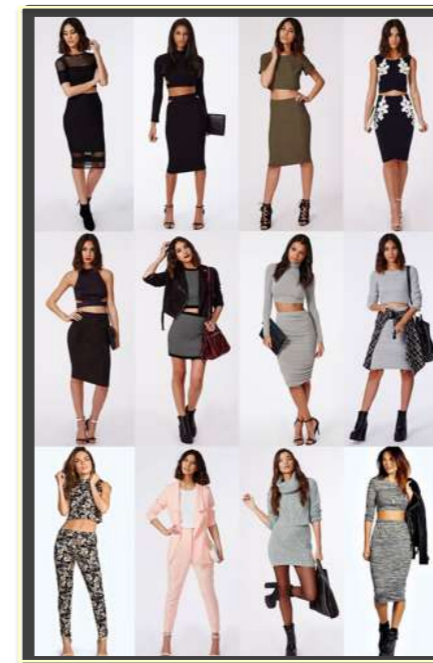
BenQ will release more exciting products in 2021. We always take health, education and environmental protection into consideration while pursuing innovation.



RM03 Series



ST02S Series



ILO1 Series



Meeting Room Solutions

For more details, visit our portals online.



BenQ Business Display



BenQ Business Display



BenQ Business Display