

Category: Products and Services

Project: XPAND Code: Bridging the Gap Between Physical Worlds and the Internet

What was the challenge?

In the age of smartphones and ubiquitous internet access, quick access to information and seamless interaction between the digital and physical worlds have become crucial. Traditional QR codes, while practical and useful, have limitations in terms of size, aesthetics, and integration with industrial design. This created a challenge for architects, designers, and urban planners who sought to incorporate digital interactivity in their projects without compromising aesthetics or functionality.

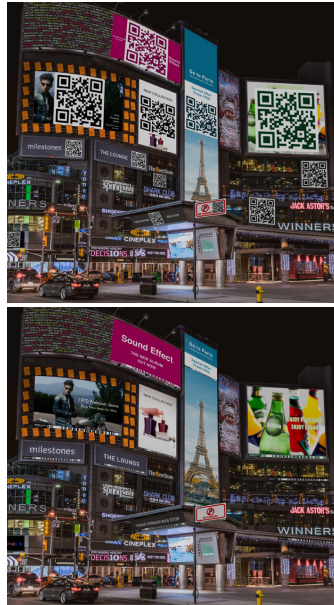
What was the solution?

Enter the XPAND Code, an innovative solution designed to bridge the gap between the physical world and digital information. The idea for XPAND Code was conceived while designing wayfinding signs for public transport. The need for a suitable tool to link the physical world to the internet led to the invention of the elongated barcode, based on existing technology. This next-generation tool builds upon the foundation of QR codes, but enhances their functionality in multiple ways:

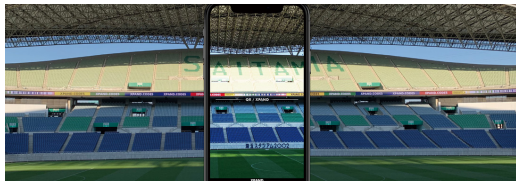
- Size and Visibility: XPAND Codes are scalable and can be integrated seamlessly into various spaces and products. They can also be displayed at larger sizes and greater distances, making them suitable for large-scale projects.
- Aesthetics: XPAND Codes offer improved design flexibility, allowing architects and designers to create visually appealing elements without compromising the code's functionality.
- Integration: XPAND Codes are designed for seamless integration with various materials, surfaces, and lighting conditions, making them versatile and adaptable to different architectural contexts.

One of the key advantages of XPAND Code is that it does not require a power supply or special inks, which further enhances its adaptability and ease of use.

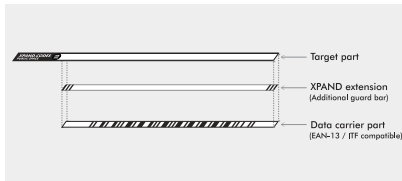
*Note that this entry sheet introduces features and case studies from the XPAND Code 2020 version onwards.



Comparative simulation of QR code and XPAND Code in urban spaces. When the read distance is set to the same, XPAND Code works in less than 20% of the area compared to the QR code.



XPAND Code displayed on an LED ribbon at a football stadium. In this demonstrative test, the codes were successfully read from a distance of more than 200 metres using smartphone apps.



XPAND Code is an adaptation and extension of the existing 1D barcode encoding technologies. By replacing only the encoding part, the new technology can be introduced without any changes to the UX.



Case: Tokyo Pavilion at ISPO (Munich, 2020)



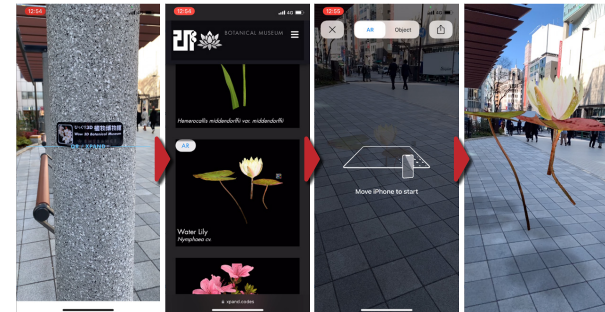
Case: Japan Pavilion at GITEX (Dubai, 2020)

What was the effect?

The introduction of XPAND Code has had a profound impact on the design industry, opening up new possibilities for interactivity and connectivity between the physical world and the internet. Some of the key effects include:

- Enhanced User Experience: XPAND Codes provide an intuitive and immersive experience for users, allowing them to access relevant digital content quickly and easily by reading the code with their smartphones.
- Smart Cities: Urban planners are now integrating XPAND Codes into various aspects of city infrastructure, such as public transportation, wayfinding, and tourism, improving accessibility and promoting a more connected urban experience.
- Innovative Design: Architects and designers are embracing the potential of XPAND Codes as a creative tool, using them to develop interactive installations, augmented reality experiences, and unique design elements that combine form and function.

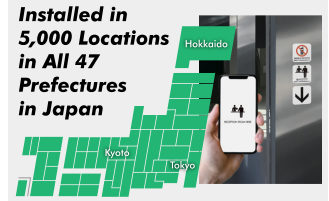
In conclusion, the XPAND Code is a game-changing innovation that addresses the limitations of traditional QR codes and offers architects, designers, and urban planners a powerful tool for creating more interactive, connected, and aesthetically pleasing environments. As this technology continues to evolve and become more widespread, we can expect to see even more groundbreaking applications that will further revolutionise the architecture and industrial design industries.



Case: AR Museum (2023)
By reading XPAND Codes attached to stickers in the city or on stationery, users can enjoy more than 1,600 digital biological specimens in AR through their smartphones.



Case: The Ginza Daifuku Great Jizo, an Outdoor Ad in Tokyo (2023)
XPAND Code has been incorporated into a trick art sign installed in Ginza, a prime area in Tokyo. By reading the XPAND Code, you can get in-depth information on how to enjoy Ginza daily via your smartphone.



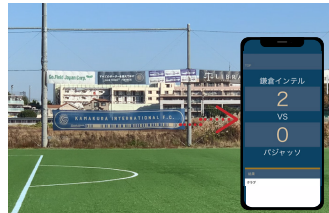
Installed in 5,000 Locations in All 47 Prefectures in Japan



Case: Sports Jersey (2020)
When the XPAND Code attached to the athlete's jersey is read, a life-size AR of the athlete appears.



Case: Mask Sticker (2022)
The XPAND Code attached to the musician's disposable mask can be read to view a video of her performance.



Case: Virtual Scoreboard (2022)
A virtual scoreboard appears when banners placed on the football field are read.

Contact:
name: NANMOKU Toworu
company: XPAND K.K.
e-mail: info@xpand.co.jp
website: https://xpand.website