

# Shaping Spaces

*Why is it important to improve physical environments and user experience with Connected Mobile Experiences (CMX) technology?*

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There are many places and contexts in which diverse and dynamic groups of people move around large and often complicated physical settings. In fact, most of us will meander through an environment similar to this on an almost near-daily basis. This could be a shopping centre, a museum, an art gallery, an airport or train station or even an office building or conference space.

Keeping these spaces running smoothly and safely depends in large part on organisations being able to track the flow of people and the movement of assets throughout the environment, understanding their individual journey down to the level of the most likely

route taken and the time taken to cover different distances. Similarly, these organisations would benefit hugely from being able to communicate with visitors or staff members directly. One emerging technology that can help you maximise communication as a business benefit is Connected Mobile Experiences, or CMX.

The potential applications of this ability to track and communicate can unlock cost saving and revenue generating activities for your business, in turn allowing you to create tangible objectives around them. These can be as simple as turning off the lights or heating to save energy in unused areas, to tracking

users' locations to see if promotional offers are drawing in more foot traffic than usual and keeping users in shopping areas for longer by offering a strong mobile connectivity experience. CMX can be used to improve security, by tracking key wi-fi enabled assets through the supply chain, as well as being able to geofence and monitor the environmental conditions of high-value assets.

You can also use the information that you gather, and the platform that CMX creates, to improve compliance and CSR activities and improve the reception of your brand. So, what exactly is a CMX, and how does it work?

### **What is CMX?**

A CMX is a Software-as-a-Service (SaaS) product, or collection of products, aimed at aggregating intelligence across a specific physical environment which then informs both user location services and advanced analytics. Internet connected devices such as laptops and mobile phones send out continuous probes, looking for Wi-Fi networks to connect to, and CMX software uses these probes to track the location of each device as it moves throughout the space. The result is a detailed and dynamic picture of how devices, and therefore users, interact with a given location or environment.

In public spaces, where an open Wi-Fi network is provided, users can even be encouraged to download apps, through which organisations can connect directly with customers or visitors. An individual entering a particular store in a shopping centre might be presented with an app enabling them to browse special offers and cross-selling promotions, for example. Or, a visitor to a museum or art gallery could be targeted with an app providing additional information and interactive elements for specific exhibits. Such applications enable the organisation to directly communicate with visitors for marketing promotions, as well as generating a deeper and more granular understanding of user behaviour.

### **Practical Applications of CMX**

CMX can be deployed in a number of different types of organisations and settings. This includes the following:

#### **CMX for public spaces**

CMX can be utilised in public or retail environments, like museums and shopping centres, where users can also be encouraged to download a mobile app that allows them to interact with the space. The app might incorporate a map, for example, which can tell users how to find the particular shops or exhibits they are looking for, and with location tracking, it can help them find other features in their immediate environment that they would not otherwise be aware of. This not only assists with internal navigation but can be used as a foundation for targeted marketing, alerting users to particular offers or information when they are near an appropriate sensor. In museums or conferences, the same mechanism can be used to deliver information on specific exhibits or offer a more interactive experience through the use of video or user-generated content.



These applications of CMX include significant outward-facing elements, focused on driving greater visitor engagement and creating a richer and more interactive customer experience.

#### **CMX for corporate spaces**

Collecting and tracking location data allows managers to rapidly form a detailed picture of what is going on in their building, from the most popular routes through an environment, and dwell time in different areas, to overall footfall and the number of first time and repeat visitors. And this, in turn, can enable managers to make informed decisions regarding anything from Wi-Fi strength, to

lighting and air conditioning, and even security mechanisms and systems – all of which helps to deliver a more efficient, and cost-effective management of the space in question.

CMX also has additional capabilities that could be useful in a corporate environment; for example, mail trolleys can be equipped with location sensors, making it possible to alert users when deliveries are on their way. If specific parameters are set around meeting room availability, then users can similarly be alerted on their mobile devices when a meeting room becomes free. Most CMX software can also log up to five devices for each person, and link them together, so if someone comes in with different devices on different days, it can still track the user as a repeat visitor, meaning the data becomes more reliable.

As such, these applications of CMX are more inward-facing, with a greater focus on managing spaces and buildings efficiently, driving cost savings and process enhancement.



## Security and Privacy

One of the major benefits of CMX is that the data used to track user movement throughout an environment does not have to be personal or identifiable data, reducing associated security and privacy risks. The information gained when a mobile device is searching for available WiFi networks, for example, is not information that identifies the individual, despite its ability to provide useful intelligence to the organisation responsible for the running of the environment. This means that businesses and corporations can still extract useful data from users whilst maintaining their anonymity. The individual's privacy is

maintained, and the organisation itself is more able to remain compliant to regulatory frameworks.

## Making use of your data

For any business or organisation relying on a large number of people visiting or interacting with a large and varied space, CMX can be an invaluable tool for altering the environment to suit the behaviour of the visitors and influencing visitor behaviour. The information obtained through CMX enables facilities managers to generate a more holistic view of how assets and areas are being used. Gathering this data will offer a distinct advantage to managers for future planning, as well as delivering immediate improvements in user experience and the business bottom line. Utilising the information will help to create a profile of those businesses they are trying to attract, and therefore can cater their future offerings to attract more of their target market.



### About Systal Technology Solutions

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At every stage, we help our customers minimise the cost and maximise the business value of their IT expenditure.

We have experience delivering globally across a wide range of industry sectors. Our people strive to deliver excellent customer service, to exceed expectations and consistently go that extra mile.

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