

City of Palma de Mallorca

Providing free and accessible WiFi to millions of users along the beaches has revolutionized the tourist industry for this Spanish city



- One of Europe’s most popular vacation spots with tens of thousands visitors annually
- Deployed Meraki APs over 5 km of beaches in 3 months along with custom tourism apps
- Segmented SSIDs, splash pages, and Facebook login for customized authentication



Situated just outside the island of Mallorca’s capital, City of Palma, the beaches of Playa de Palma are one of Europe’s most popular vacation destinations; the nearby airport of Palma floods the area with more than a million tourists every season. However, high data roaming charges often dissuade visitors from using their mobile devices while vacationing, preventing them from learning about special events or unique cultural opportunities promoted online.

In an effort to provide tourists with the best possible experience, the City of Palma began looking at new concepts that would provide a more welcoming technological environment for tourists. As a member of the Spanish Network of Smart Cities (RECI), it was crucial for the city to create a framework that built upon the idea of Smart Cities and developed solutions that could be replicated in other cities.

After reviewing several ideas, the city partnered with MallorcaWiFi to deliver accessible WiFi using the Cisco Meraki cloud networking solution, which provides easy-to-use management of distributed networks via a centralized dashboard. “We’ve been trusting the Cisco Meraki solution for six years and chose it here because we wanted to provide the best possible service: management, capacity, scalability, and adoption of new features,” remarked Mauricio Socias, MallorcaWiFi CEO.

MallorcaWiFi’s proposal stipulated that they would not only manage the daily operation of the entire network, but would also carry the complete investment for the project. Once deployed, the city

and tourists would benefit from the wireless at no additional cost. MallorcaWiFi’s cost return would be provided through advertising contracts with local businesses that would then run advertisements and commercials using MallorcaWiFi’s custom application platform. Wireless service for end users is completely free.

Working with the SmartOffice of Palma, a department created by the City of Palma to supervise the project, and the Playa de Palma Consortium, an organization which oversees sustainable city development and the installation of WiFi devices in public areas, MallorcaWiFi began installing Cisco Meraki access points. “The four-year project consists of three phases,” explained Socias. “The complete planned installation will use more than 100 Meraki outdoor APs and several Meraki indoor 802.11n and 802.11ac APs.”

Phase One of the project, spanning an area of 5 km along the first line of Palma beaches, was completed in just three months. “The installation process with Cisco Meraki was very easy and fast,” said Socias. “Most of the time was spent on the strategic placement of equipment on 15 meter tall lampposts and working on partnerships to place APs on buildings and other structures where service would be provided to the most users.” In areas where the APs would be exposed to extreme environmental conditions, such as humidity, salt, and high temperatures, rugged Cisco Meraki outdoor APs were used. Depending on deployment location and available infrastructure, APs are connected either via Ethernet cable or through an automatic, self-configuring mesh network.

MallorcaWiFi is taking full advantage of the 15 different SSIDs available on every Cisco Meraki network. Each local business, including hotels and cafes, that chose to purchase advertising contracts on the wireless is assigned an SSID with a unique authentication method. Some of the companies have implemented custom splash pages with a walled garden, so users must first watch a video or click through an ad to access the free wireless. Other companies with social media pages have opted for users to authenticate to their SSID via Facebook WiFi login, which enables clients to “check in” to the location to access the free wireless. Both options provide increased brand awareness for the companies, either through targeted ads on the splash pages or by promoting the business to users’ social groups.

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Once logged in, each public SSID has been specifically configured with per-client bandwidth limits in order to provide the optimal user experience for visitors. Using the built-in management features and Layer 7 fingerprinting on every device, MallorcaWiFi restricts access to specific groups of applications which heavily consume bandwidth, including peer-to-peer, file sharing, and gaming. However, other applications that tourists rely upon are prioritized, including social web and photo sharing, email, and access to both the city’s and MallorcaWiFi’s websites.

Using the Cisco Meraki dashboard, admins have quick visibility into the network. This visibility provides valuable information into where visitors are accessing the network and what applications are being used. “The latest features like location analytics and integration with Facebook are simply killer,” Socias exclaimed. Using this information, the city can organize public safety as needed or customize messages for guests to promote tourist sites or cultural events. MallorcaWiFi is also creating smart apps for tourists, as well as businesses, to ensure that tourists always have the best experience and up-to-date information.

With only two technicians and two account managers from MallorcaWiFi ensuring the network’s daily operation, the centralized management provided by the Cisco Meraki dashboard is key. The team’s work is facilitated by numerous built-in features that assist in providing a reliable and secure network environment. For example, RF optimization automatically ensures strong performance on each AP in MallorcaWiFi’s highly dense wireless environment, maximizing the network performance, while Air Marshall detects and neutralizes wireless threats like rogue SSIDs and malicious broadcasts.



Should there be an issue with the network, automatic alerts are sent to the admins. Using the web-based dashboard, they can quickly analyze the potential problem and troubleshoot remotely, without the need to go on-site. “We work with the dashboard in real time, anywhere, at any time,” notes Socias. “It is simple and very effective.”

While the ultimate goal of this project is to solidify the Playa de Palma as a Smart Destination and provide visitors with services they may not find at other tourist destinations, only half of the network’s capacity is dedicated to this objective. “The Playa de Palma Consortium,” explained Socias, “has access to 50% of the network for coordination with public administrations, law enforcement, research with the university, and more.” In order to provide this seamless segmentation within the same network, group policies have been created within the Cisco Meraki management dashboard that give certain groups, like law enforcement, unrestricted bandwidth usage and the ability to bypass splash pages when authenticating to the network.

Since the deployment of the first phase of the project, the City of Palma has seen a steady increase in daily connections, initially at 3,500 daily connections using 1.5 TB of traffic and surging to more than 25,000 daily users now. This influx in wireless usage has benefitted the city in numerous ways, including increases in tourism at cultural sites, awareness of tourist presence throughout the city, and overall public works and safety. Additionally, the placement of the Cisco Meraki wireless solution along the beaches of Playa de Palma provides opportunities for local companies to develop new business practices, increasing revenue and improving visitor experience.

The next phases of the project will cover two more expanses of beach and areas of the town, covering more than 1,000 hectares of land with an expected 10 million users per year. “Innovation, adaptation, and trust were important considerations for us when choosing a wireless solution,” said Socias. “The implementation of the Cisco Meraki network has seen unprecedented success in these areas. 95% of users accessing the network are tourists using smartphones, with more than 25,000 unique daily users connected!”