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Readying CERN for connected device era

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Whether you consider "IoT"as a real thing or a buzzword, there's no doubt that connected devices, data analysis and automation are transforming industry. CERN is no exception: a network of LoRa-based radiation monitors has recently been deployed and there is a growing interest in the advantages connected devices could bring—to accelerator operations just as much as to building management.

Connected devices bring risks as well as advantages, however, and the last thing any business needs is an unsafe, uncoordinated and unmanaged sensor environment. To support the deployment of the LoRa-based radiation sensors, CERN has established both a Low Power Wireless Area Network (LPWAN) to complement the existing wired and wireless networks and a service infrastructure to manage the provisioning, orchestration, data transfer, security and operation for connected devices.

This presentation will describe CERN's LPWAN infrastructure and our connected-device support architecture and set out how we foresee this being used to support devices that connect to higher-bandwidth networks such as Wi-Fi, BLE or 5G.

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