IDEMIA

Connected industry sparks the fourth industrial revolution

Industry 4.0, or connected industry, is often referred to as the fourth industrial revolution and it has done exactly that: *revolutionized*.

# CONNECTIVITY

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In today’s advanced smart factory, machines, robots and devices constantly communicate and learn in order to operate, make decisions independently and ultimately disrupt traditional manufacturing. So how does this revolution work in real life? Powered by a tiny piece of technology called the eSIM, IoT devices can communicate via reliable, secure cellular networks.

Why the industry 4.0 requires next level connectivity

Connected industry requires fail-proof connectivity in order to automate tracking, monitoring, and maintenance processes in agile and smart factories. A connectivity failure here can have far more significant consequences than simply making you late to your zoom call. Here, a single machine losing communication can derail the meticulous configuration of a smart factory or can lead to an entire facility going offline. These mishaps not only represent lost time but can also have severe financial repercussions as well. Given these **reliability requirements**, cellular connectivity proves to be a far more effective option than Wi-Fi for the connected industry, and it is easier to set up and maintain than a wired network.

Robust eSIM IoT technology for the connected industry

To connect to the local cellular network, or to the smart factory private 5G network, manufacturing devices need to be equipped with a **robust eSIM IoT technology**. This enables them to send and receive data and instructions, securely and without interruptions. The physical toughness of the technology is essential to contend with **extreme temperatures, humidity or constant vibrations** common in the smart factory setting. The most advanced eSIM IoT technologies are also smart enough to signal unnecessary activity, such as excessive writing that can reduce their functioning or lifespan—a **monitoring capability** that makes a huge difference for the connected industry.

How eSIM improves IoT security in the connected industry

One of the advantage of relying on eSIM IoT technology is the enhanced security it provides to ensure that only authorized devices can authenticate to the network and send or receive data. With an eSIM IoT technology implementing the **GSMA IoT SAFE standard** smart factory managers can ensure that data exchanged between devices is accurate, and also that only authorized personnel can access this data and send commands to the smart factory devices.

Private 5G networks and eSIM joins forces for highly secure operations

To further control connected industry operations, private 5G networks allow organizations to maintain and customize network control, guarantee coverage in the smart factory premises and add an additional level of IoT security. A private 5G network also makes it possible to side step the connectivity challenges one might encounter when accessing public networks in isolated locations while **eSIM facilitates and secures the management of all the devices** within the facility.

As 5G networks deploy across the planet, this improved coverage will enable highly responsive networks and reinforce the expansion of Industry 4.0 facilities. Smart factories powered with reliable eSIM IoT technology will be more efficient, secure and connected than ever before.