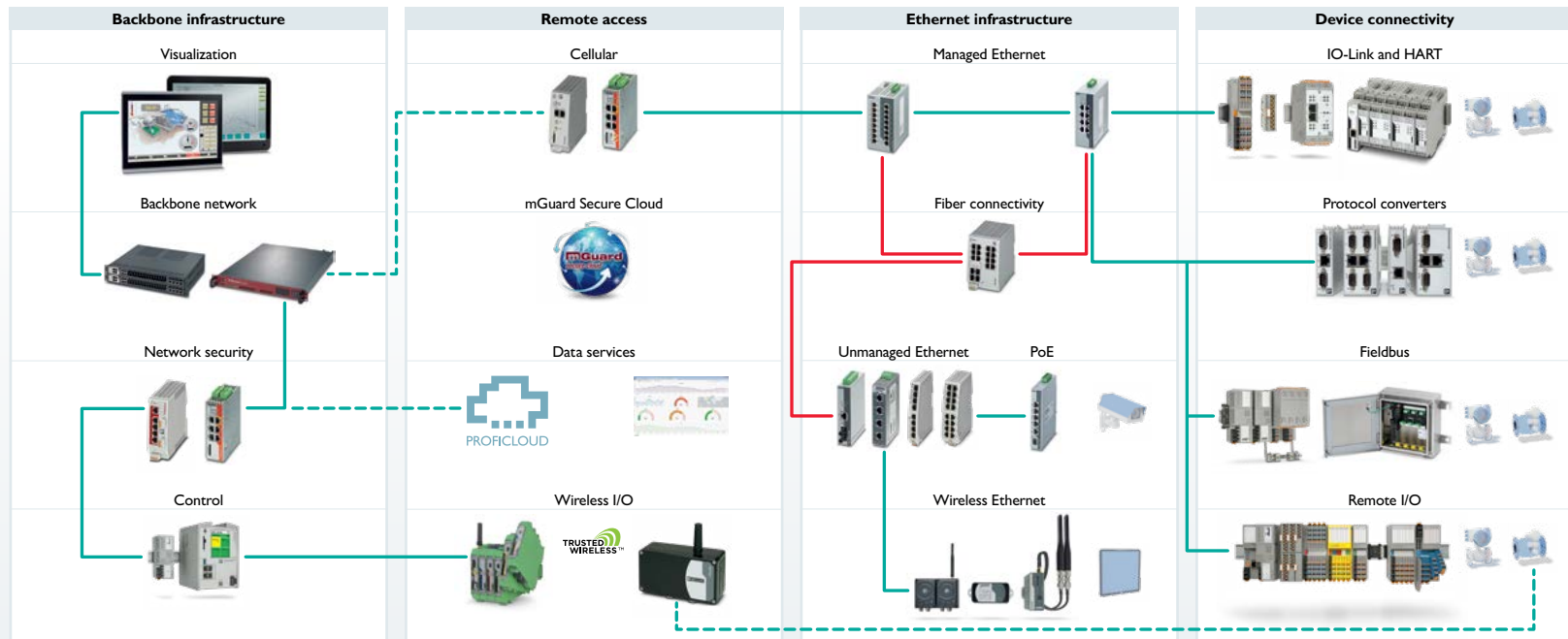


# Industrial Internet of Things (IIoT) – Connecting your devices



## **Backbone infrastructure**

The Industrial Internet of Things (IIoT) is about visualizing and collecting data from edge devices and subsystems, and making it available on the cloud in order to enable system analytics and autonomous control directly from the cloud. Suitable network infrastructure is required to connect these many assets, and robust security is paramount.

## **Remote access**

Assets are not always easily accessible due to distance or obstruction. Wireless technologies like cellular and 900 MHz can be used to remotely connect devices when traditional wired infrastructure is not available. Once on the Internet, devices can be accessed through secure VPN tunnels or data can be published into a unified namespace on the cloud for visualization and storage.

## **Ethernet infrastructure**

Ethernet has become the communications standard for most systems. Managed components provide additional network data and provide network redundancy. Special function modules can provide wireless Ethernet access using WLAN, or even provide both data and power to an Ethernet end device using Power over Ethernet (PoE).

## **Device connectivity**

Instrumentation, valves, and sensors are all edge devices that collect real-world data about a process or industrial application. These components require connectivity back to the controller through some form of direct wiring or networking. Networking can be a combination of serial and Ethernet including parallel wiring for 4-20 mA, HART, IO-Link, PROFIBUS, and Foundation Fieldbus. These networks function independently but if data needs to be passed between them, converters will need to be integrated.