



SIM for Things & IoT SAFE **Use case with German Bionics**

MWC Barcelona 2020

GLOBAL INFRASTRUCTURE | GLOBAL REACH | GLOBAL ORGANIZATION & Global MVNO/E for IoT

20+ YEARS
EXPERTISE IN
INTERNATIONAL
CONNECTIVITY

No. 1 Signaling
No. 1 IPX
No. 1 GRX
No. 1 LTE

**MARKET
LEADERSHIP**
IN ROAMING

Worldwide
presence and reach



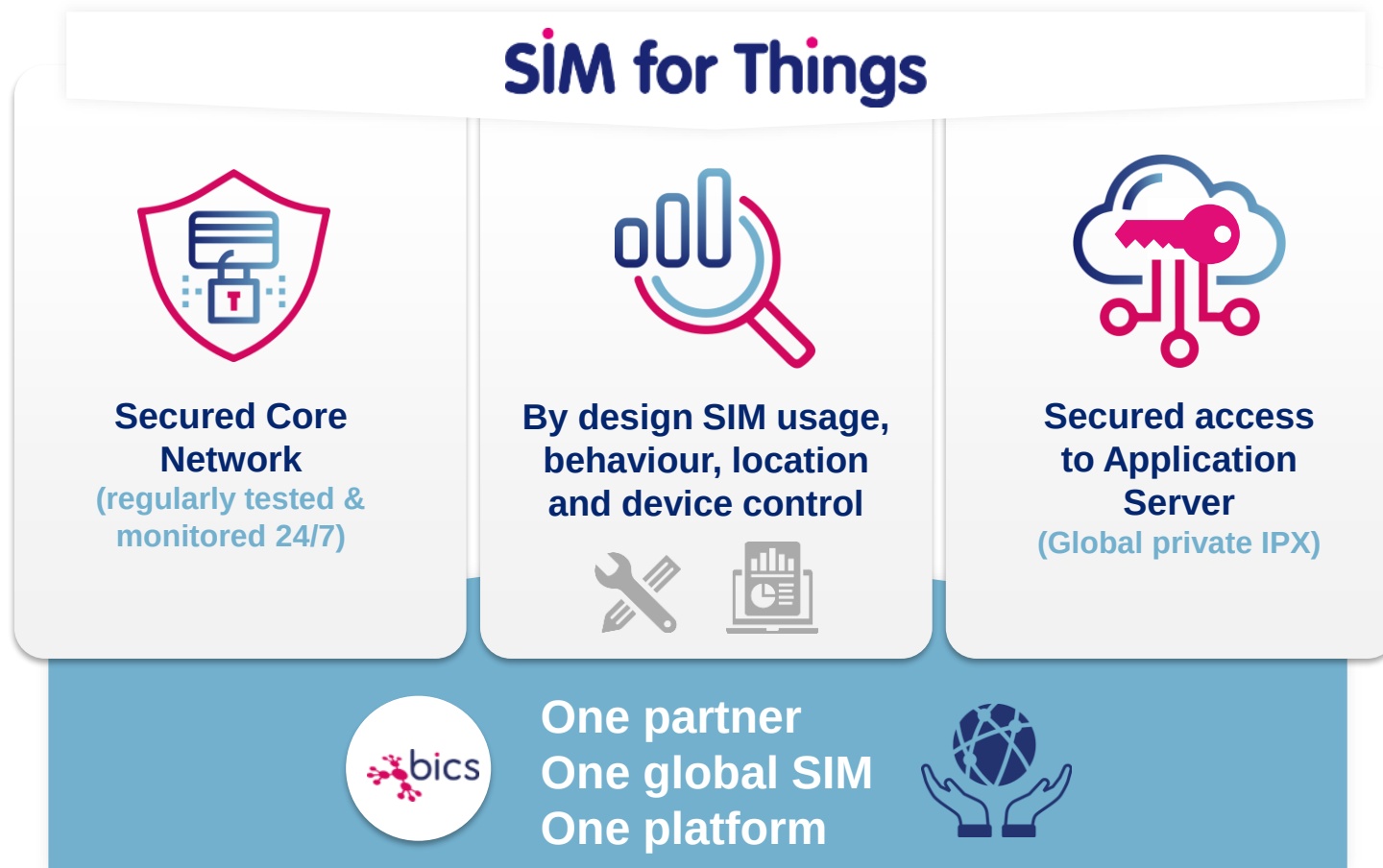
SIM for Things



**A Global IoT Solution for any
Enterprise with international
connected business**

Security for IoT Connectivity and Simplicity at the core of SIM for Things

And Why BICS supports IoT SAFE





German Bionic Cray X

IoT Security input for IoT SAFE. – MWC 2020

January 2020 - Hoefft

Intro:

- ❖ The **Cray X** is a fully connected **IoT exoskeleton** for **industrial workers** & the first of its kind deployed at scale
- ❖ Though it can be used offline as well, the **value proposition increases with a secure & stable connection to the Cloud**

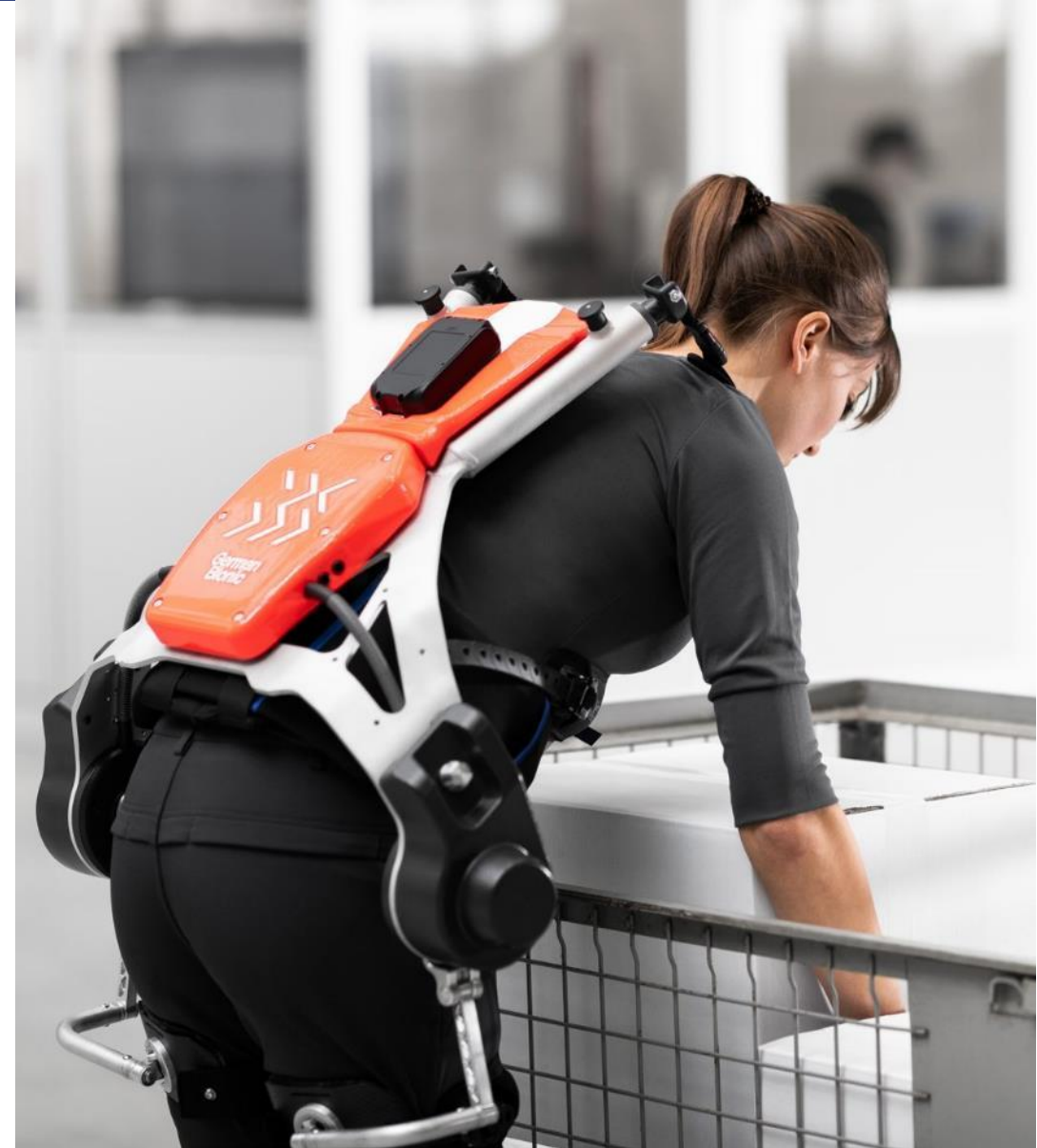
- ❖ **Highlights**

- ❖ Remote Device Provisioning & Monitoring & OTA
- ❖ Digital Twin of every device in the Cloud delivering specific RT insights to improve workplace ergonomics & processes
- ❖ Intelligent control system through ML to adjust to individual operators and workflows
- ❖ M2M interfaces to enable integration with other machines or devices across factories



Challenge:

- ❖ Robotic Exoskeletons like the Cray X are **body-worn** devices which amplify the users movement and support when lifting heavy items which makes them **very sensitive** within the context of other IoT devices since its one of the **closest human-machine interactions** (besides implants).
- ❖ **Security for the IoT solution is required on multiple aspects:**
 - ❖ The device control software cannot be altered to prevent dangers to the operator & the customer facility and inventory
 - ❖ Data is neither lost, stolen, or altered
 - ❖ Unauthorized software cannot be transmitted or installed on the device
 - ❖ Its enabling an easy flow for device provisioning for mass production



Highest premise

- ❖ In order to protect the operator at all times, we rather permanently isolate & decommission an exoskeleton immediately in an event of manipulation or suspicious action
- ❖ Next to the German Bionic custom certification mechanisms, **IoT SAFE provides an additional standardized pillar** to secure the **handshake between Cray X & Cloud** to follow through with our premise by enabling:
 - ❖ **secure communication,**
 - ❖ **device identification**
 - ❖ **& provisioning.**

Looking forward, German Bionics supports **additional IoT SAFE functionalities** to **protect software**

