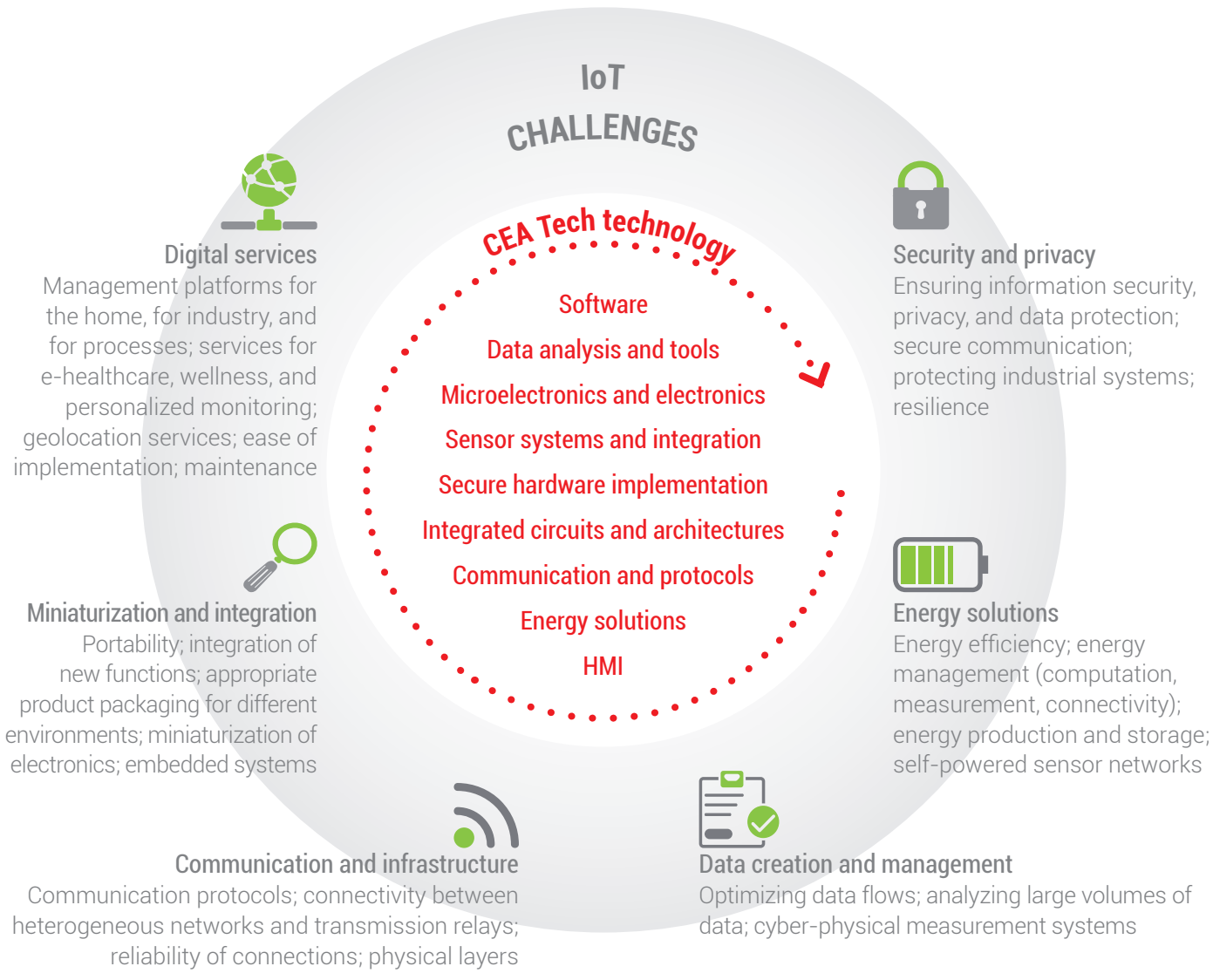




# CEA TECH SERVICES FOR THE INTERNET OF THINGS (IoT)

Technology for IoT challenges:



## CEA Tech can help the following businesses:

- IT outsourcers, electronic component and systems manufacturers
- Network administrators
- Companies that integrate internet-enabled solutions into consumer products for transportation, construction, sports, health, wellness, and more
- Companies that integrate internet-enabled solutions into commercial-grade products for the chemical, manufacturing, aerospace, and other industries

Here are some of the ways CEA Tech can support your development:



**Microelectronics and components**

Component miniaturization by vertical, heterogeneous, and multi-functional assembly; high-performance, energy-efficient resistive memory

**Custom sensors and switches**

Multi-parameter, biochemical, MEMS, and NEMS (accelerometers, gyrometers) sensors; imaging (THz, IR) sensors; piezoelectric switches; small form-factor, low-cost solutions

**Integrated circuits and architectures**

Ultra-low-energy architectures for sensors specific to RF applications; components for embedded systems and software; alarms; microservers

**Energy solutions**

Optimal energy conversion and system management; energy recovery and charging; custom batteries; microbatteries

**Communication and protocols**

Reliability of communications and connections; sensor network security; energy-efficient protocols; real-time optimization of network selection

**Sensor systems and integration**

Analysis of movements and activities; manufacturing process tracking; driverless cars; environmental control; cyber-physical systems

**New HMIs and data creation**

Augmented reality glasses; multimedia interfaces; haptic-feedback systems; large-area HMIs; touch-interfaces for the Internet

**Software, big data, and data analysis**

Traffic management; remote coaching; network administrator platforms; geolocation; systems implementation, operation, and maintenance

**Cybersecurity and security**

Sensor network security; secure, effective implementation of cryptography protocols; certification; software reliability and security; homomorphic encryption

**Operating security (real-time requirements)**

System and software reliability; industrial infrastructure control; surveillance of aircraft structures

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