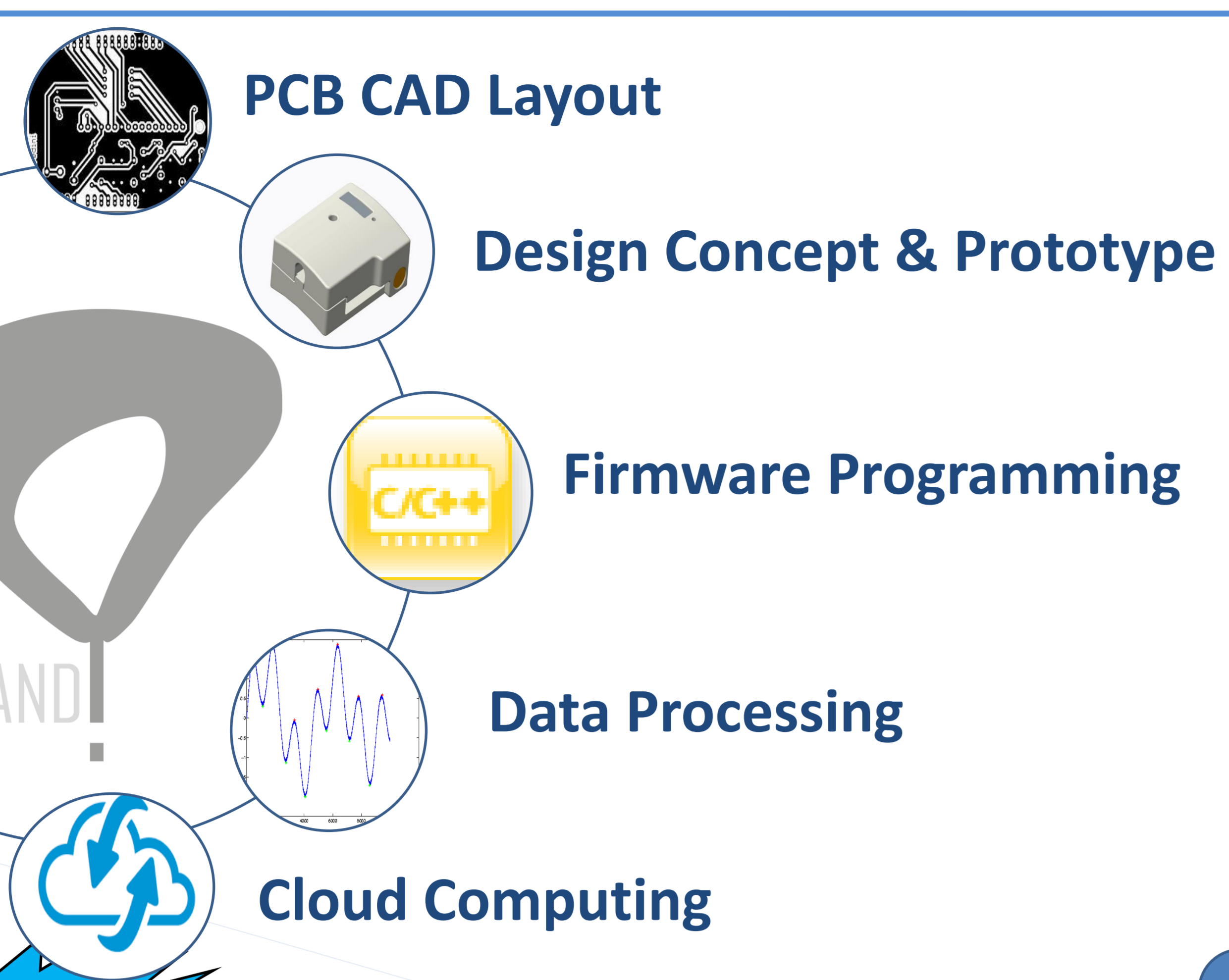




DAPHNE PROJECT

ACCORDO DI PROGRAMMA QUADRO MIUR-MIDE-REGIONE
TOSCANA DGRT 758/2013 PAR FAS 2007-2013



HANDi - wearable sensor devices:

- ✓ finger posture/movement measure and analysis
- ✓ upper and lower limbs motor assessment
- ✓ human-robot interaction
- ✓ gesture recognition



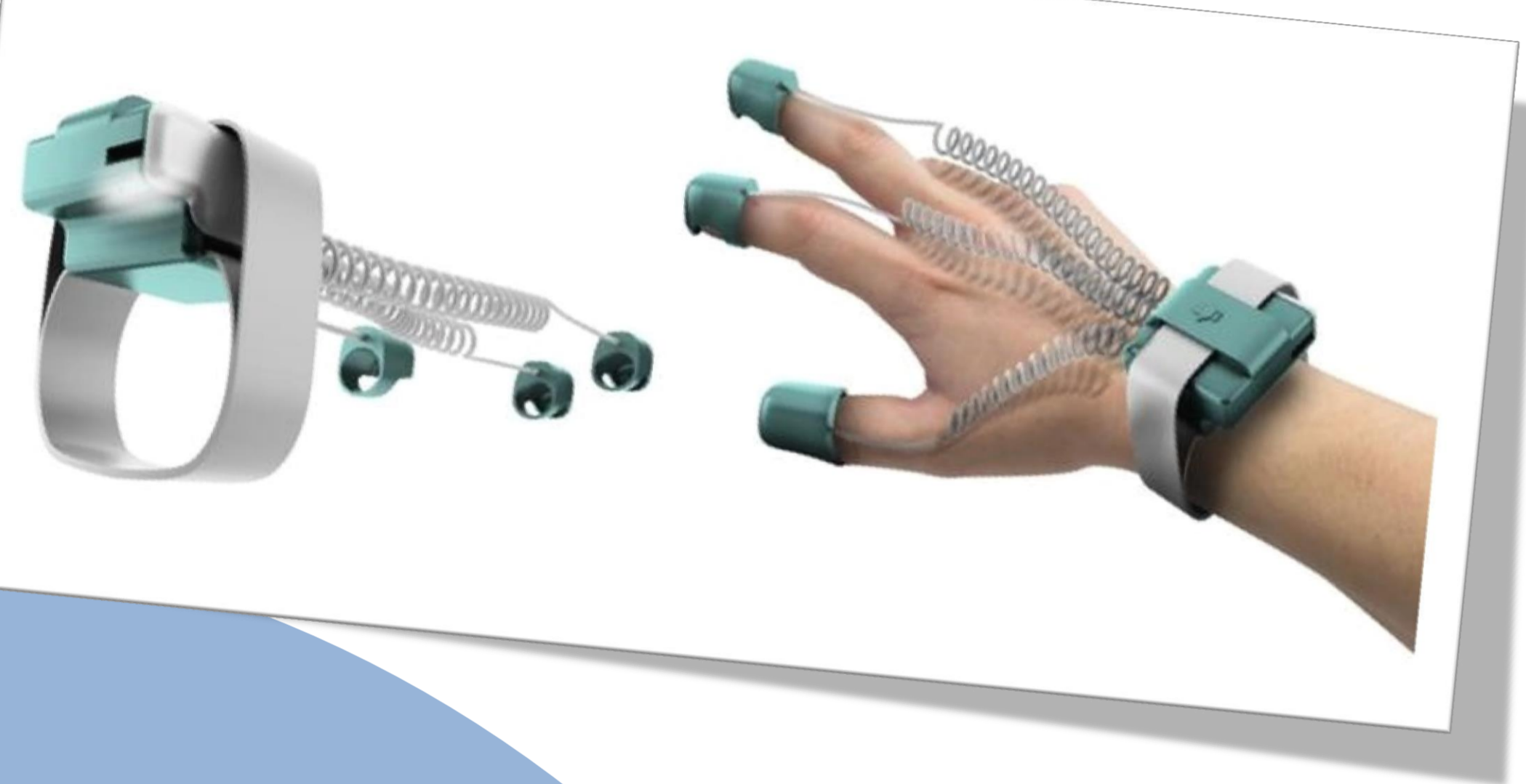
HANDi-G

- One coordinator located on the wrist/forearm with a 9-axis IMU and microcontroller (STM32F103xE)
- 3 finger units with a 9-axis IMU and microcontroller
- 100/50Hz sampling frequency
- Digital and Kalman filtering
- Battery supply
- Bluetooth standard of communication

HANDi-F

- 9-axis IMU and microcontroller (STM32F103xE)
- 100/50Hz sampling frequency
- Digital and Kalman filtering
- Battery supply
- Bluetooth standard of communication
- Single/double foot gait analysis

iNEMO Challenge Winner 2015, STMicroelectronics



HANDi-R

- 9-axis IMU and microcontroller (STM32F103xB)
- Proximity/gesture sensors
- 100/50Hz sampling frequency
- Digital and Kalman filtering
- Bluetooth standard of communication
- Battery supply
- Single ring or multipoint sensor network
- Flexible multilayers board



DAPHNE

Objectives

- ✓ Personalized solutions of (early) diagnosis, therapy guidance, rehabilitation in Hospital and at home
- ✓ Innovative sensors with mature technology for precise medicine
- ✓ Identification of innovative scales and features coming from the real life;
- ✓ Empowering patients with advanced immersive interfaces (adaptive, robots, etc.)

• Smart end-user interfaces for data collection and processing, sensors management and calibration.