



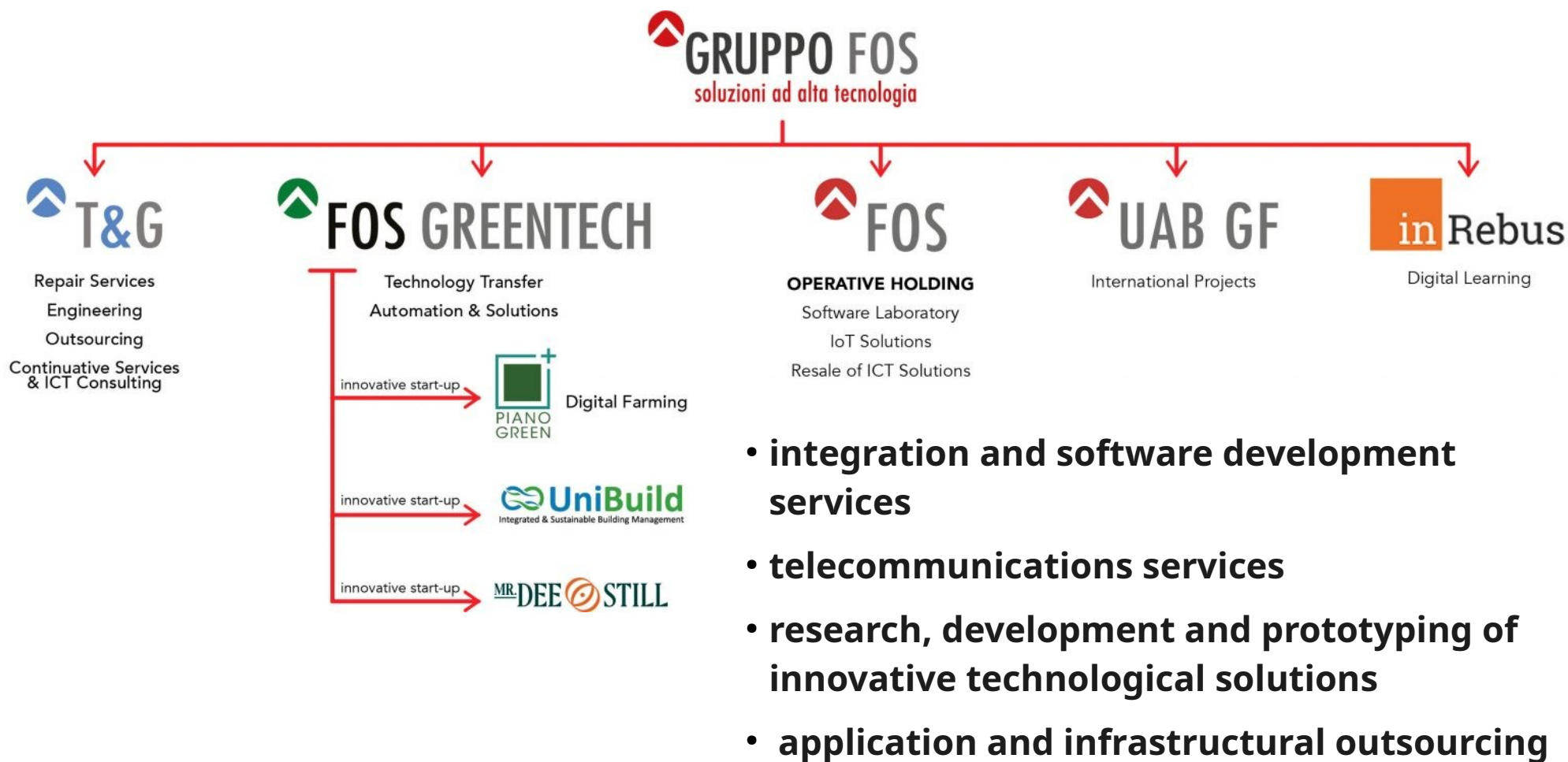
NOI Hackathon Summer Edition 2022

Gruppo FOS challenge

NOI Hackathon Summer Edition
Lido Schenna, Aug 5th-6th, 2022

- Gabriele Scarton, gabriele.scarton@fos.it, Juror and Mentor

Gruppo FOS overview



Gruppo FOS academy

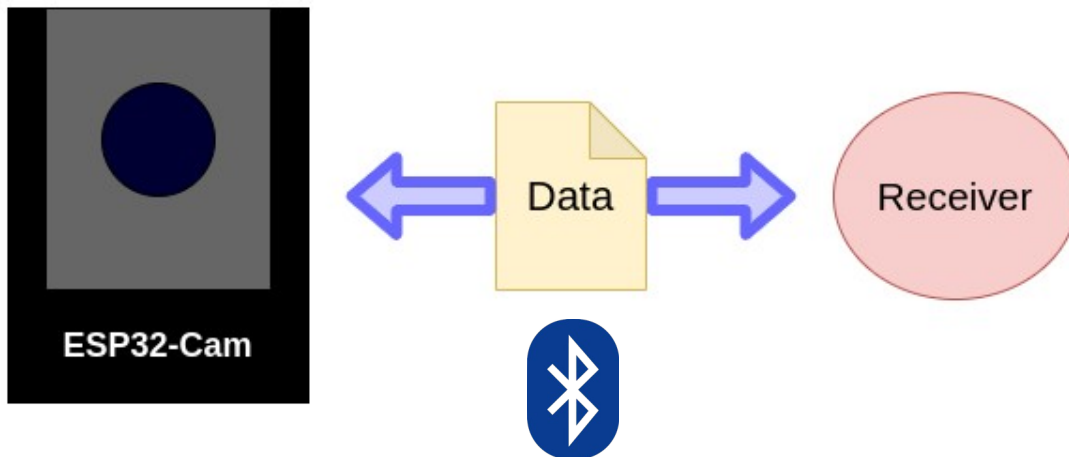


- FOS academy HQ:
career@fos.it
- Bolzano stage/internship:
giovanni.giannotta@fos.it



Gruppo FOS challenge

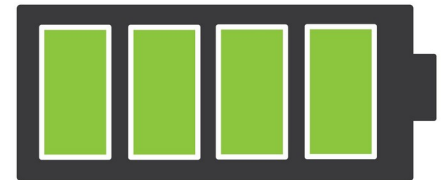
- Use a ESP32 micro-controller as a remote Bluetooth endpoint
- Send periodically small amount of data from ESP32 to a receiver
- Optimize power consumption of ESP32



Gruppo FOS challenge – Key points

- **Low consumption over real-time**

- Take advantage of ESP deep sleep functionality
- Find a trade-off between sleep and device availability



- **Configuration and automatization**

- More points if ESP32 changes its behaviour based on inputs sent via Bluetooth
- More points if the connection is automatic when available



Gruppo FOS challenge – Key points

- **Reproducible and multi-devices**

- More points if the receiver isn't a ESP32
- More points if I can use my device as receiver



- **Low level over UI**

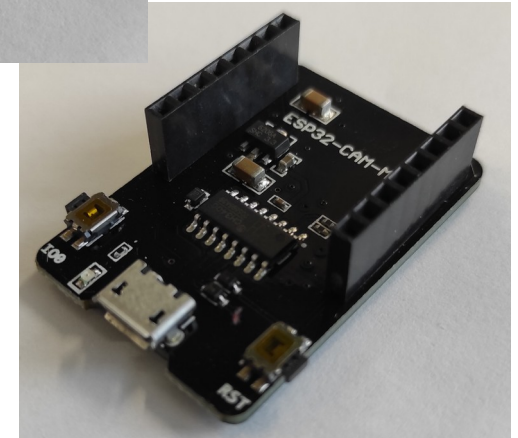
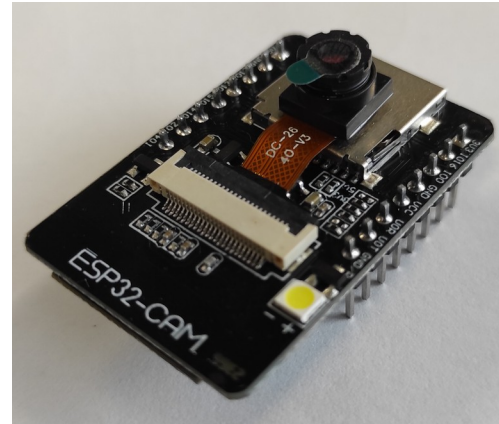
- More points if you use GATT profile instead of using BT as transport layer
- More points for a complex console script instead of a nice looking UI with small functionalities
- More points handling RSSI value of every packet



Gruppo FOS challenge – Materials

Here at Lido Schenna you will found (until supplies last):

- ESP32-Cam modules + CH340G USB interfaces to connect module to PC via USB (until supplies last)
- Me! Ask me anything!



Happy Hackathon!

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