Name: UHF RFID for smart lockers parcels placement verification
Team: Diogo Correia (dv.correia@ua.pt)

Scope: The proposed solution aims at providing assertion and verification of parcels placement in smart lockers.

Objective: Avoid misplacement of parcels and create visibility through the delivery process. The correct placement of packages in the smart lockers can be verified. This is carried by employees and is prone to error, misplaced packages happen from time to time. The visibility created by RFID through global standardised interfaces creates visibility through the delivery chain. Senders and receivers can know the state of delivery, automatic share of information between senders using the global standards (e.g. Amazon).

Stakeholder: MicroIO, CTT - Correios de Portugal, S.A.

Short Description:

- Smart lockers authenticate the delivery man that will place the parcels.
- The parcels are detected by the RFID system.
- The delivery man places the parcels in the lockers.
- The RFID system fails to see the parcel because of faraday cage effect inside the metal lockers.
- The system can assert the correct placement correlating the package ID that disappeared with the locker that was closed.

Problems: The faraday cage must be effective to have good performance of the RFID system.