

Use case 18: Rapid development, testing and validation of large scale wireless sensor networks for production environment

Problem/goal	To decrease time to market for large scale WSN implementation in production environment.
Potential users	SMEs willing to increase the performance of their production/manufacturing equipment by using wireless sensor networks (WSN).
NACE	C32 - Other manufacturing, J61.2 - Wireless telecommunications activities
Description	EDI testbed will allow to smoothly pass from one development stage to another (e.g. from lab to industrial environment). EDI TestBed is located in EDI premises in Riga, it consist of 2 parts: 1. EDI Indoor WSN TestBed (100 nodes) and 2. EDI mobile WSN TestBed (50 nodes) EDI Indoor WSN TestBed. EDI indoor WSN TestBed is a 100+ node heterogeneous WSN testbed. EDI mobile WSN TestBed has the same capabilities as EDI Indoor WSN TestBed only it is not "tied" to one location and can be moved to actual factory, to perform the tests in real production environment.
Hardware	EDI TestBed, EDI mobile TestBed
Software	Custom EDI SW (OpenWRT, MansOS)
Standards	Considered: IEEE 802.11a/b/g/n/p, IEEE 802.15.4,
Possible benefits	The experiment contributes to reduce time to market for large scale wireless sensor networks envisioned for use in production environment. It is expected to reduce development time by 20-30% and testing/validation time by 60-70%.
Partners	EDI (Latvia)
More info	https://www.dropbox.com/s/nz2ehraxieuz7ed/EDI_TestBed_leaf.pdf?dl=0

