

OpenWisp

openwisp.org

andrea ferraresi <a.ferraresi@openwisp.org>
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Openwisp in three points

- OpenSource Solution for a widespread urban wifi network
- OpenSource driven development
- Cheap, versatile, easy to setup & install

Tech Infrastructure

Introduction

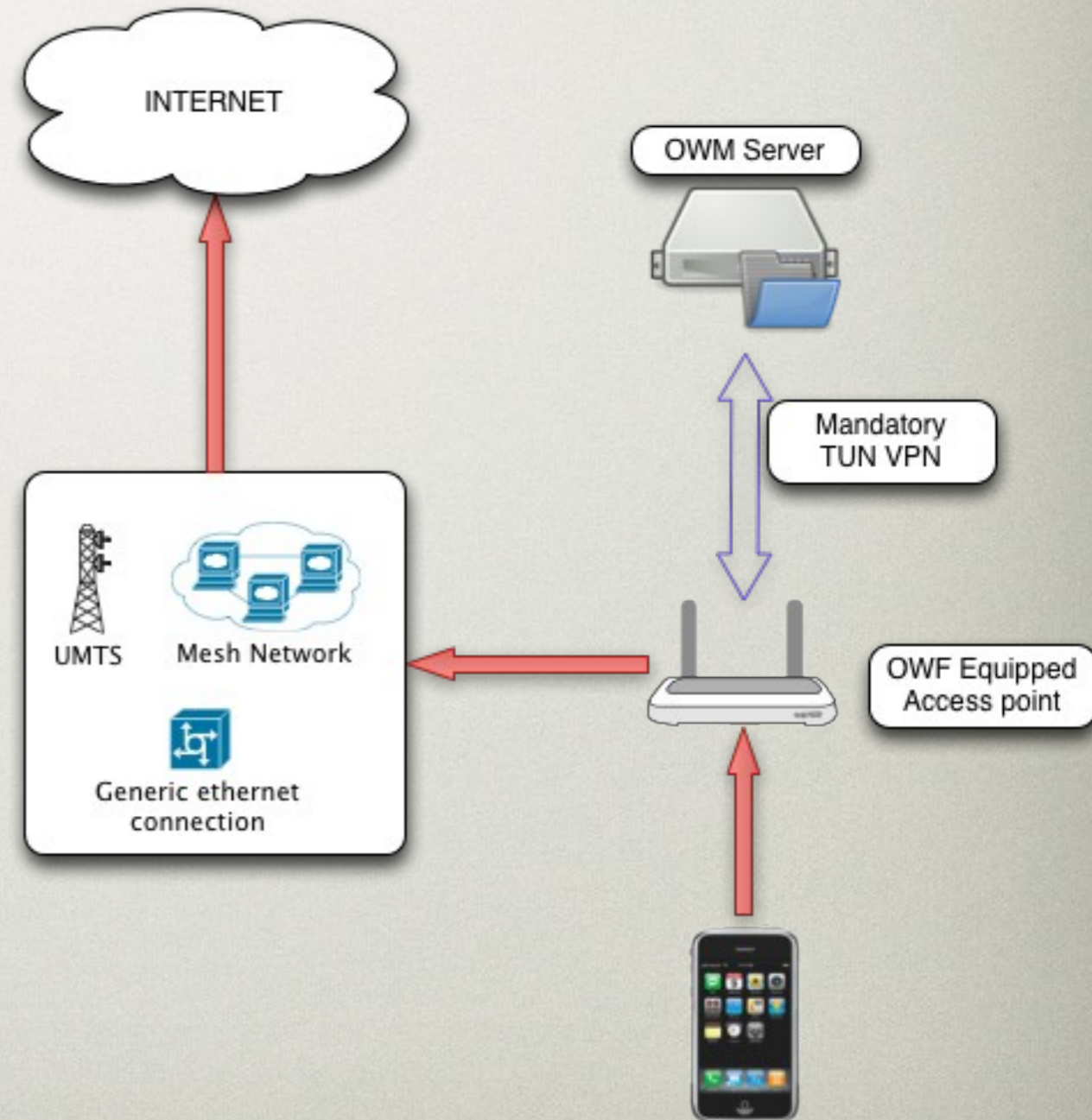
Introduction

OpenWisp Suite

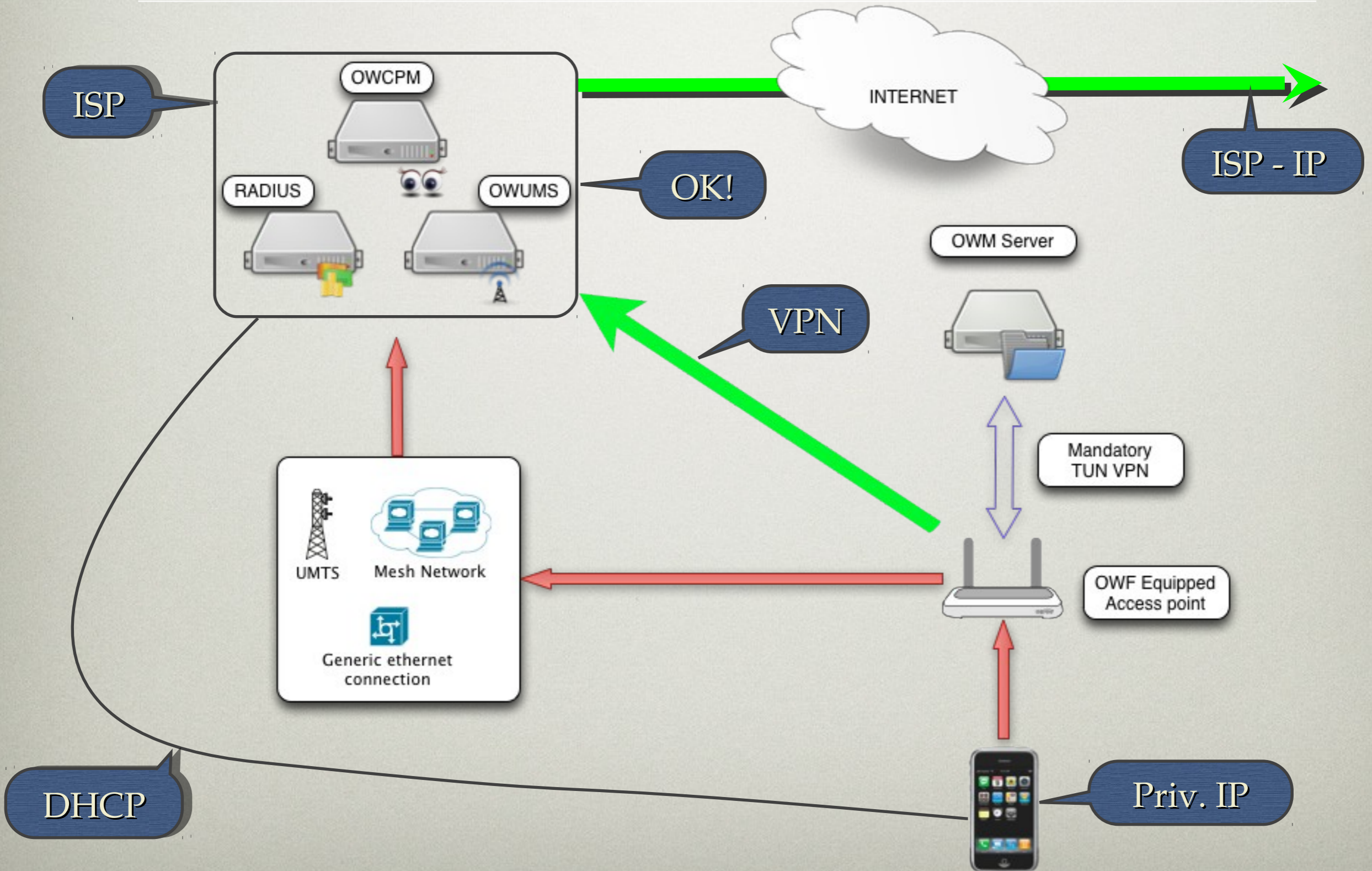
- Firmware & AP Manager: an OpenWRT based OS for our antennas and a web IF to configure it
- User Management: accounting from scratch
- Geographic Monitoring: keep-an-eye software written from scratch
- Captive Portal Management, auth system from scratch
- Middleware makes components interaction

The Basic Approach

- Only Firmware and Wisp Manager are mandatory
- VPN Setup
- Uplink-independent



The Typical Approach



Interesting Facts

- Almost every component can be replaced
- Accounting can be implemented with other software
- You can use different captive portals, as is in the case in Sardinia and with provinciawifi
- The apps interact one another through the OpenWISP Middleware

The Middleware

- How Apps Interacts -
- How Apps Interacts -

- Collects data from all apps
- Expose data with RESTful URI's
- Protects data via http basic auth
- custom urls, aggregated data for stats...and so on



OpenWisp In Numbers

- Provincia di Roma, offers economic support and a huge testbed (+200.000 users, +1100 hotspot, +3000 login per day)
- Just like other 12+ public administrations with ~2000 AP's & ~400.000users

FreeItaliaWiFi

The Public WiFi experience in Italy



FreeItaliaWiFi

- the idea behind -
 - the idea behind -
-

- Re-Sign up on each city is annoying
- Would be better to use the same credentials all over Italy
- So let's federate Radius
- Public administration driven initiative (+30 PA's)

FreeltaliaWiFi

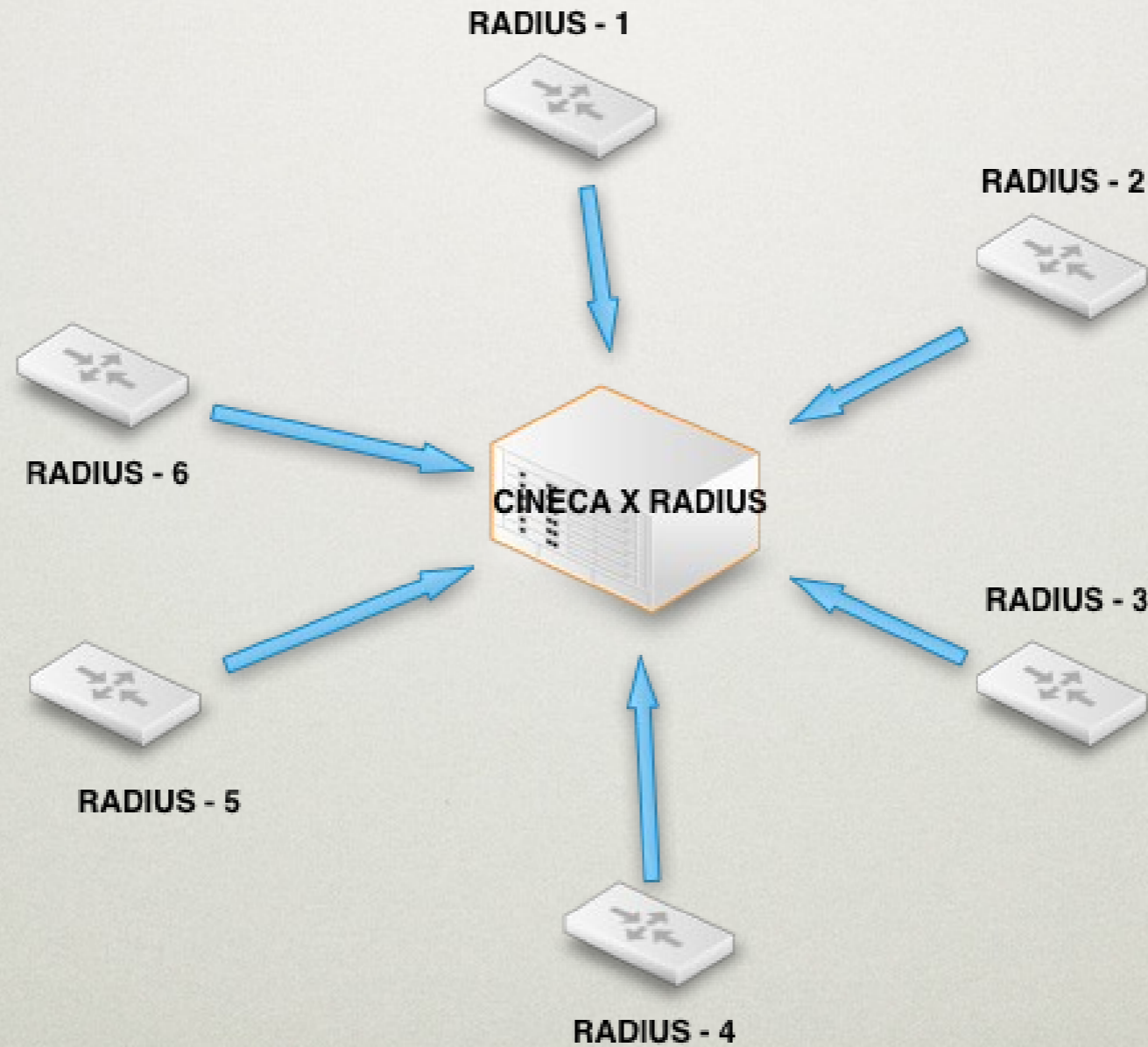
- The Principles -

- The Principles -

- Each administration does its best to give a good service
- Discrimination-free open access for all citizens
- No profit service
- Net Neutrality must be assured



Cineca as a wifi Exchange point



Freeltalia WiFi

- the role of openwisp -
 - the role of openwisp -
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- Almost every federate administration uses OpenWISP
- ...But is not a mandatory statement
- You can use almost any radius based system
- But respecting the principles is mandatory

Commons4EU

Commons for europe

Sharing the FreeltaliaWiFi experience across
europe

Commons4Eu

- scopes & objectives -
 - scopes & objectives -
-

- Help PA's understanding the use of commons in Open Innovation
- Establish a new kind of public service
- Target the collaborative development of apps
- Explore BUB technologies
- Create Code4Europe and BuB4Europe

Commons4Eu

- Approach -

- Approach -

- Commons4EU, is following the lead of Code for America application layer
- But we trying also to build up the infrastructures via BUB-initiative
- BUB Means net infrastructures for people by people

Code Commons

- Developing collaborative Web Apps
- Code Projects
- Code Sharing
- Pan European Calls

BuB Initiative

- Bottom Up Broadband technologies
- SuperWiFi
- Sensor Integration
- Fiber Commons

Commons4Eu

- Outcomes and Benefits -
 - Outcomes and Benefits -
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- Stimulate a wave of future internet-based services
- Wider uptake of innovation ecosystems in cities
- Reinforcing the role of the citizens
- Improving capacities for SMEs

OpenWisp & BUB

- Replicate the FreeItaliaWiFi Model across Europe
- The aim is to find a common law
- Use it as a candidate for a pan-european public WiFi Model
- Integrate sensors on OpenWisp
- Federate pre-existing networks
- In collaboration with Provincia Di Roma

Any Questions?