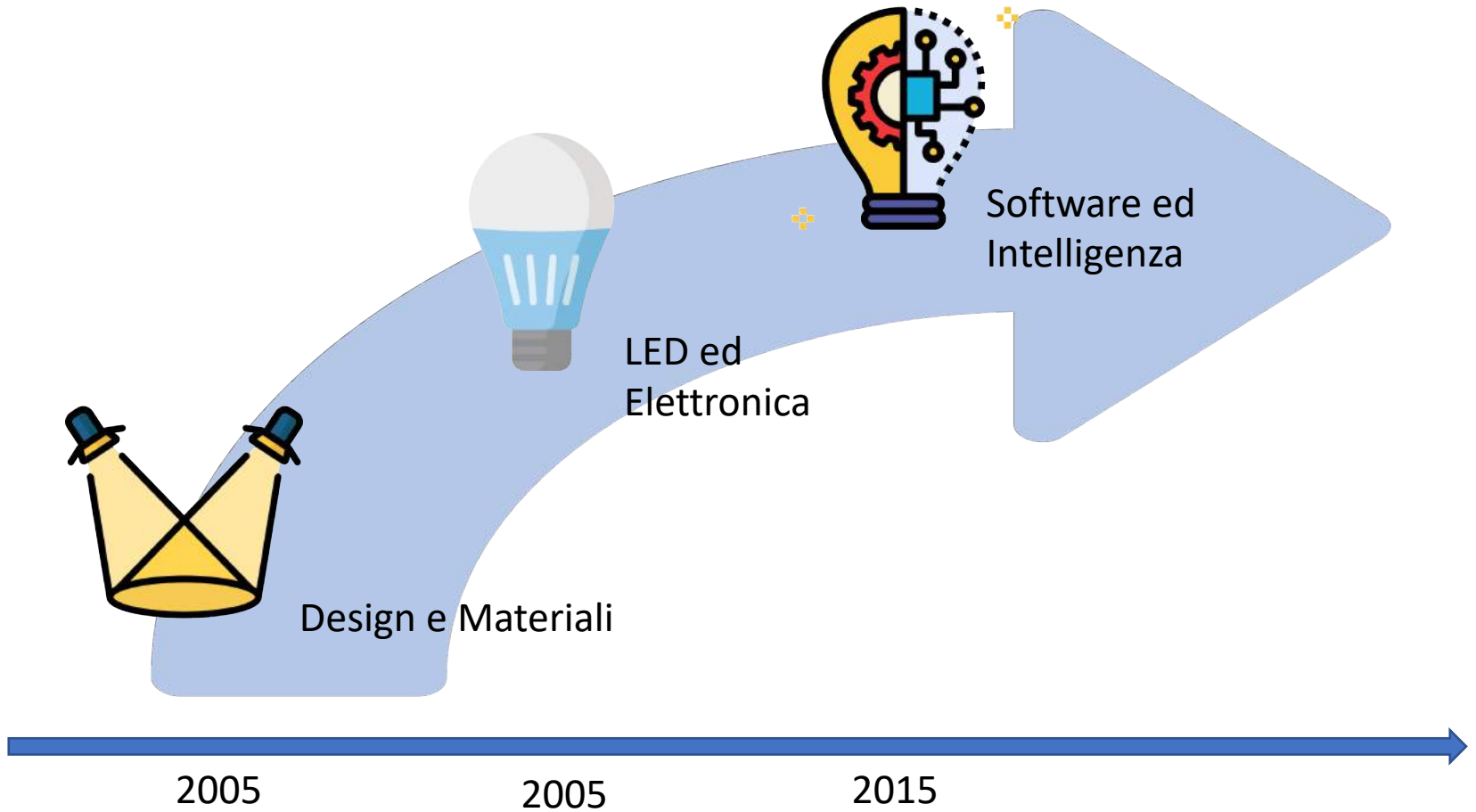
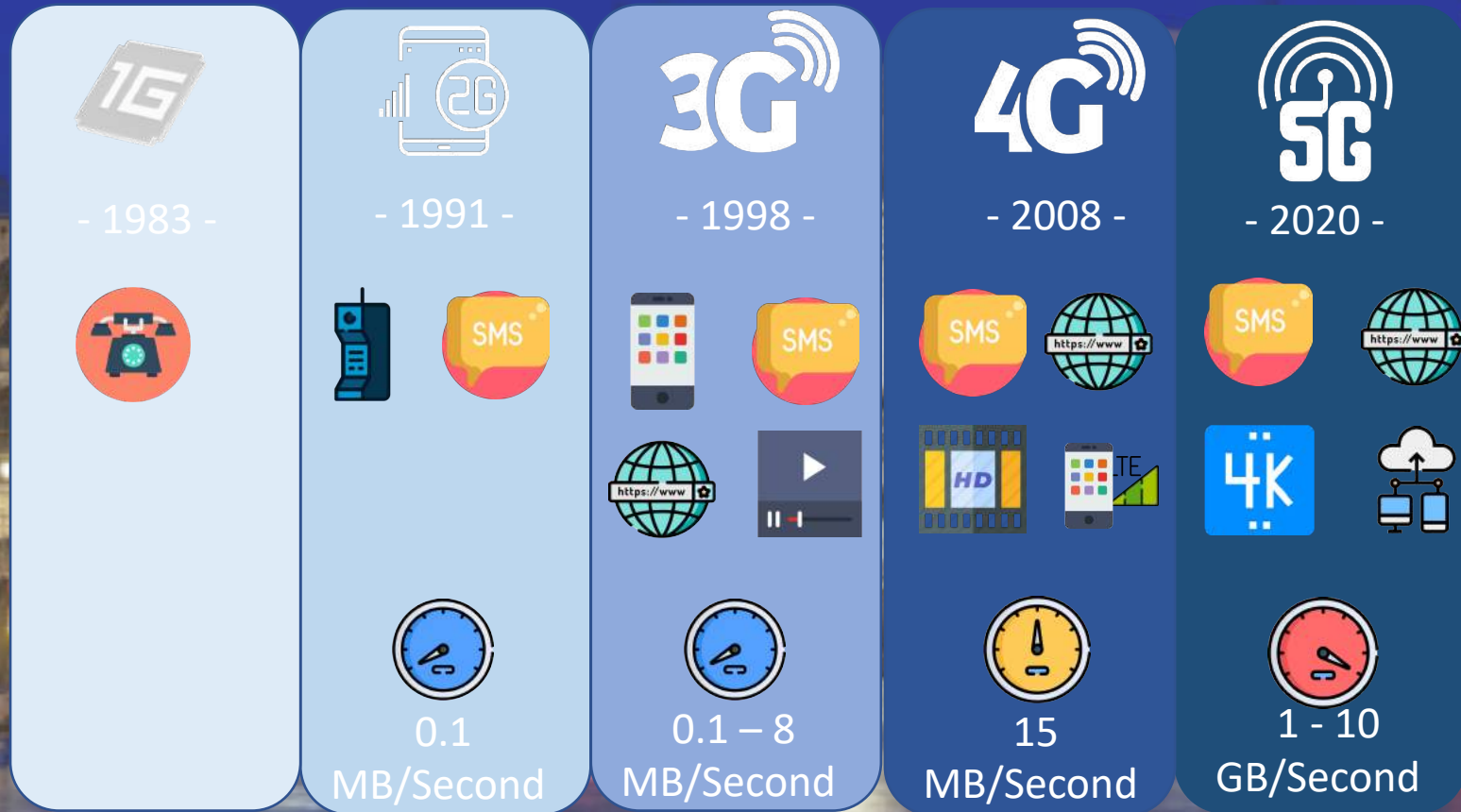


Lighting Fixtures evolution



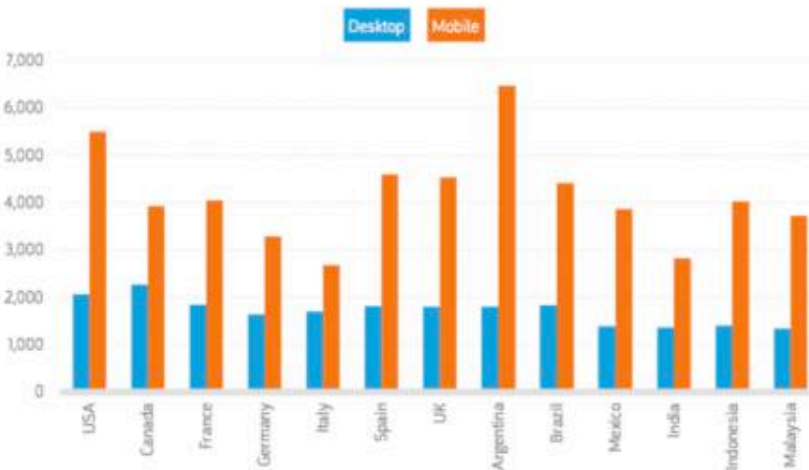
Wireless evolution



Strumenti utilizzati per il lavoro quotidiano

Desktop?

Mobile users consume more than 2x minutes vs. desktop users
Average Minutes per User by Platform



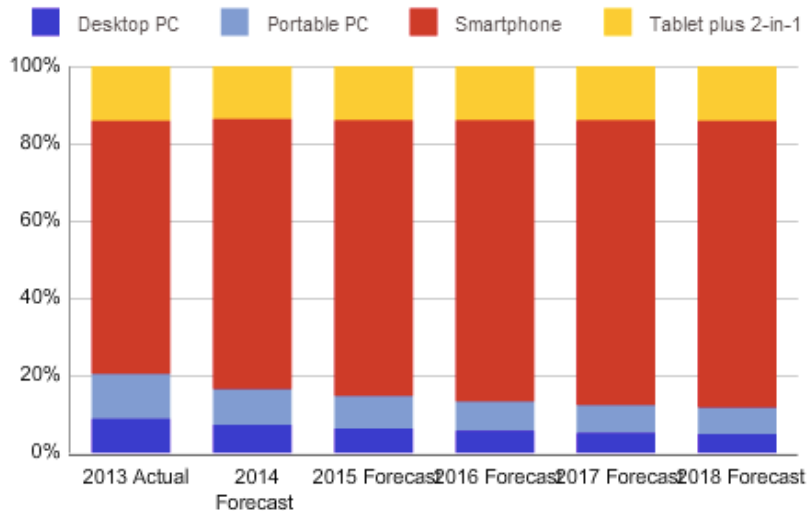
When looking at each region's desktop users and mobile users separately, mobile users universally consume more digital minutes per person – more than double in the majority of countries.

Argentina continues to deliver the largest number of mobile minutes per user, while Canada has the highest level of per-user desktop consumption.


Source: comScore iM3R Multi-Platform, Dec. 2017

© comScore, Inc. 5

Worldwide Smart Connected Device Forecast
Market Share by Product Category, 2013-2018



O Dispositivi Portatili?



Connettività per

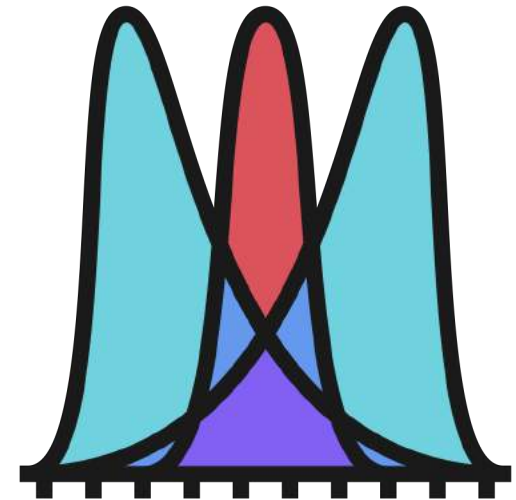
- ✓ Monitorare L'Ambiente
- ✓ Controllo.....
- ✓ Programmazione.....
- ✓ Manutenzione.....
- ✓ Informazione.....
- ✓ Sicurezza...
- ✓ Controllo Accessi... Flussi...
- ✓ Condivisione (Sharing)

iBeacons

- Tecnologia di localizzazione indoor basata su BLE
- Navigazione, contenuti basati sulla posizione, promozioni, azioni automatizzate Indicazioni...
- Vendita al dettaglio, centri commerciali, stadi, musei ...
- Tutte le unità Casambi fungono da mittenti iBeacon



Quale tecnologia wireless usare?

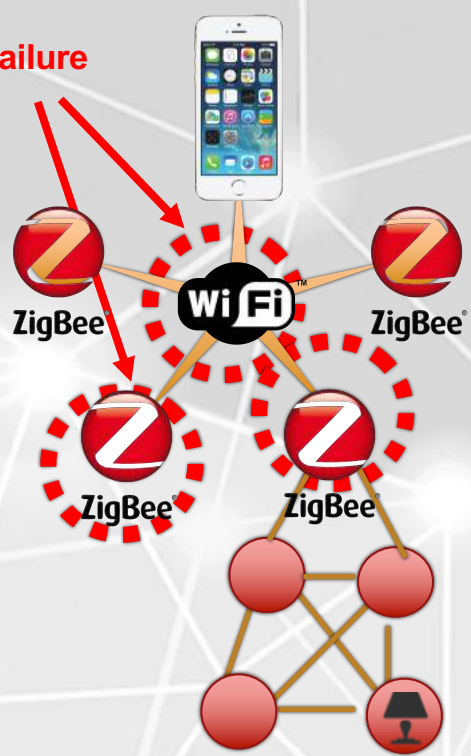


Wireless Architectures

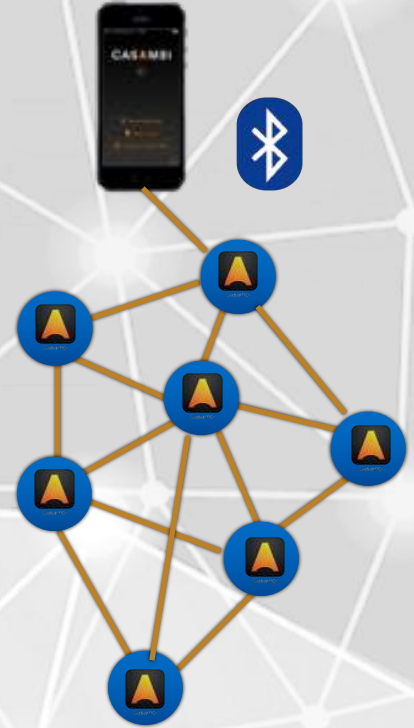
Wifi





Wifi/ZigBee Bluetooth





Bluetooth Mesh



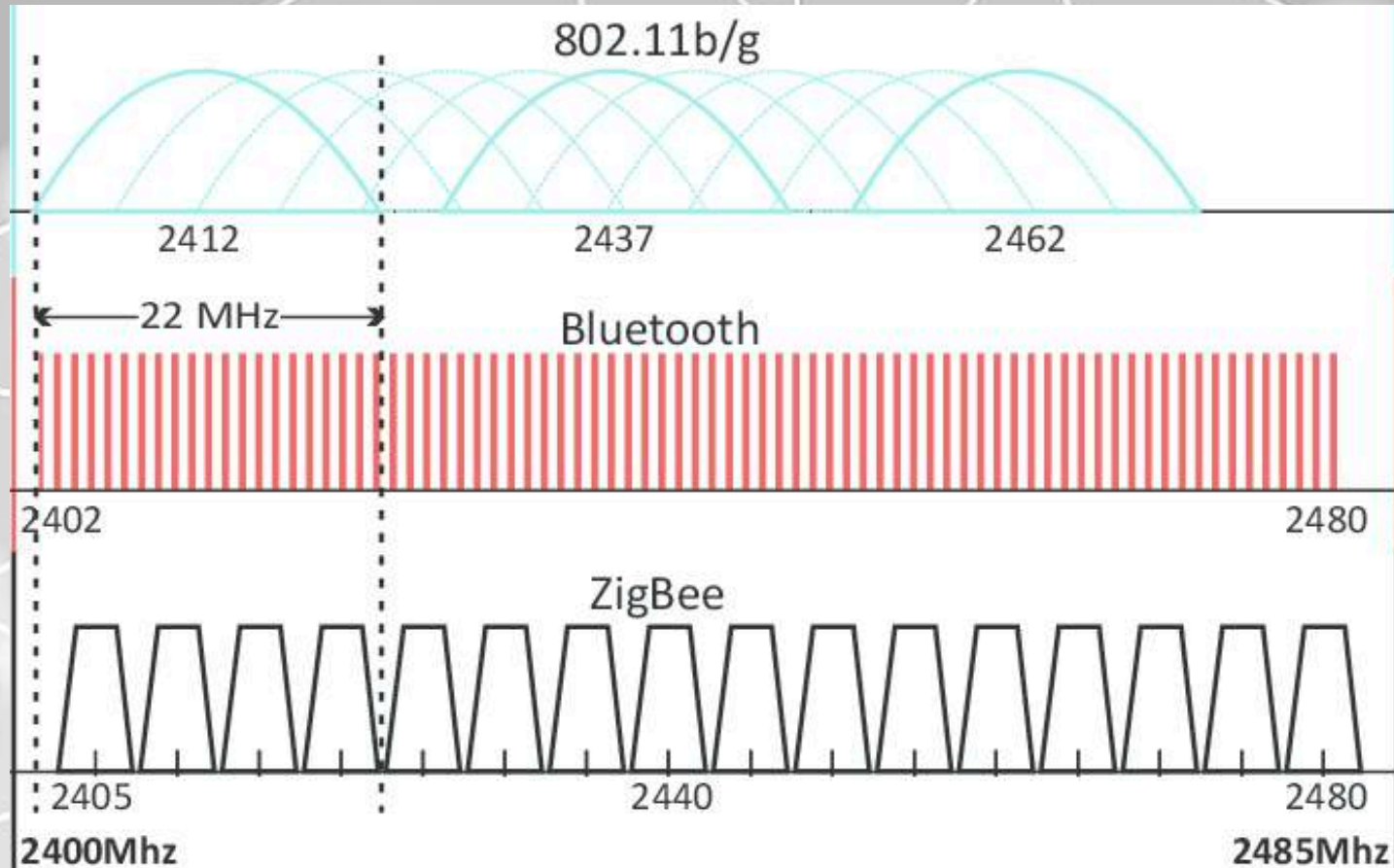
 WiFi Router
 WiFi Receiver

 ZigBee Gateway
 ZigBee Transceiver

 Internet not required
 Connected when needed

 Bluetooth Transceiver

WiFi + ZigBee and BLE

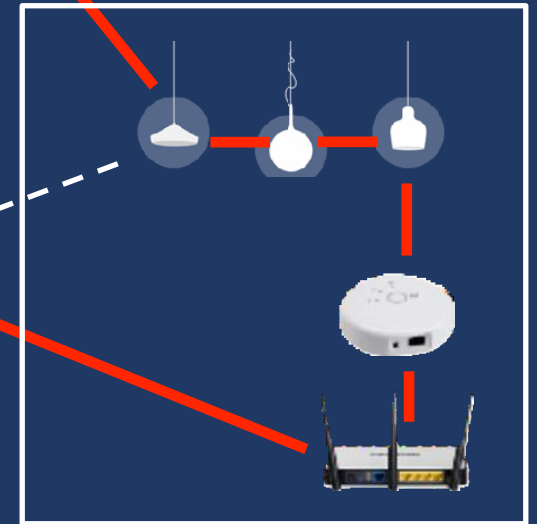
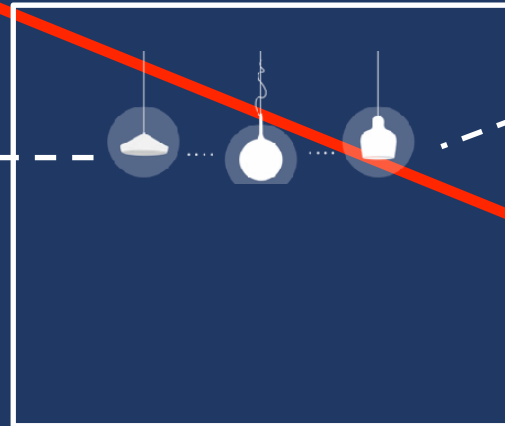
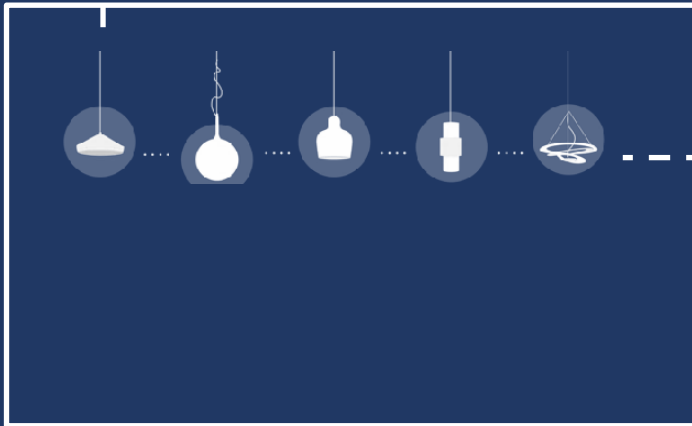
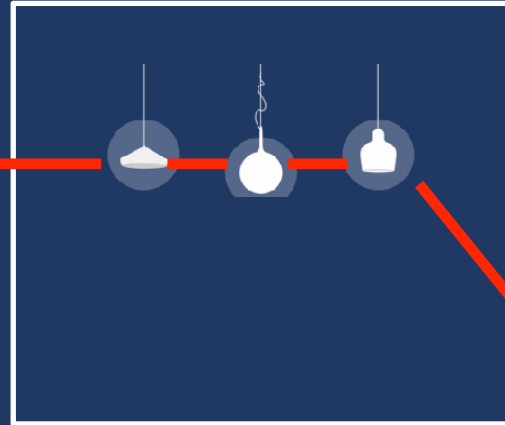
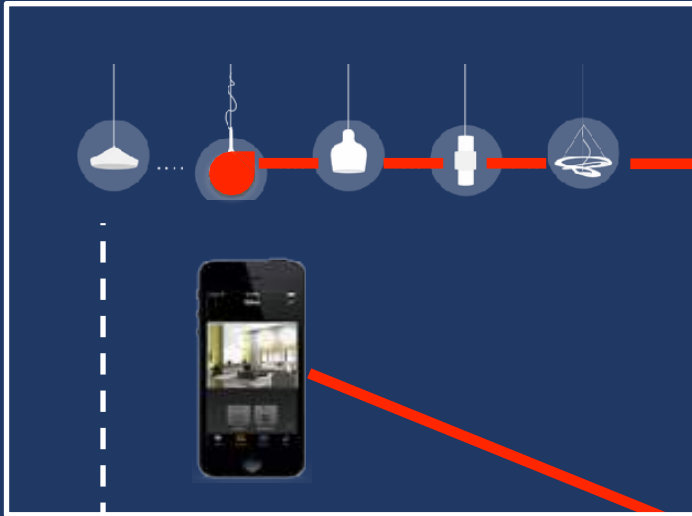


When a Wi-Fi network works on the same ZigBee frequency channel, usually disturb each other.

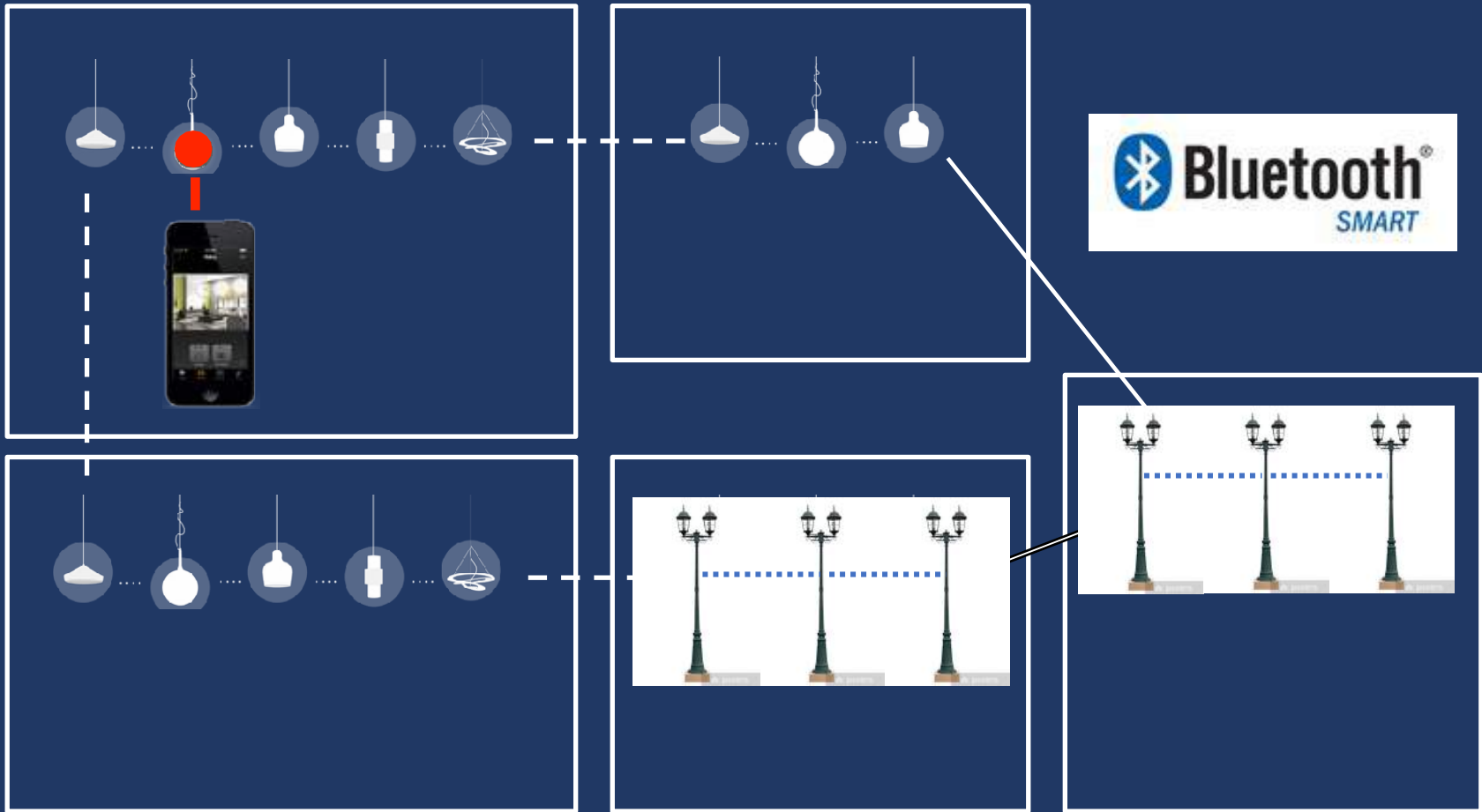
WI:FI Verso BLE

PROPERTIES	BlueTooth	Wi-Fi
Frequency	2,4 GHz	2,4/5,0 GHz
Range	medium	medium/low
Energy consumption	low	high
Mesh Network	yes	no
Band width	medium	big
Technology cost	low	high
Channels	40 (37 available)	11 (3 available)
Overlapping	yes	no
Centralized Hardware	no	yes

Controlli Wireless prima della BLE



BLE Mesh Network





Grouping



Scenes



Animation



Gallery



Light colour



Colour temperature



Light sensor



Motion sensor



Calendar & Timer



Sunrise & Sunset



Gateway



Scalability



Synchronizing

CASAMBI Full Functions

Come Controllare l'Illuminazione



Light sensor



Motion sensor



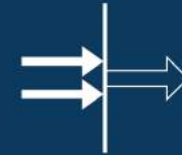
Smartwatch



Smartphone



Tablet



Remote Access



Push button



Xpress



Switch

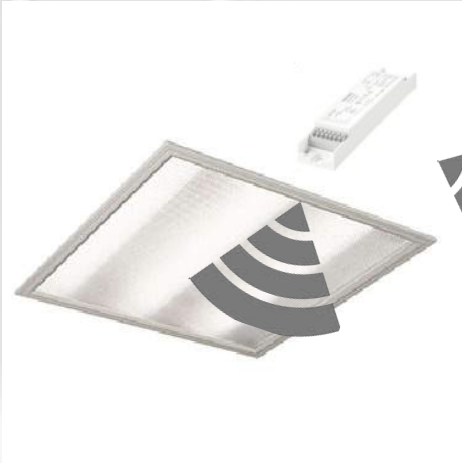
Cosa Non Serve in una rete BLE?



- Canalizzazioni
- Spazio armadi
- Cavi per il bus
- Tempo cablaggio
- Hardware rete
- Commissioning ridotto



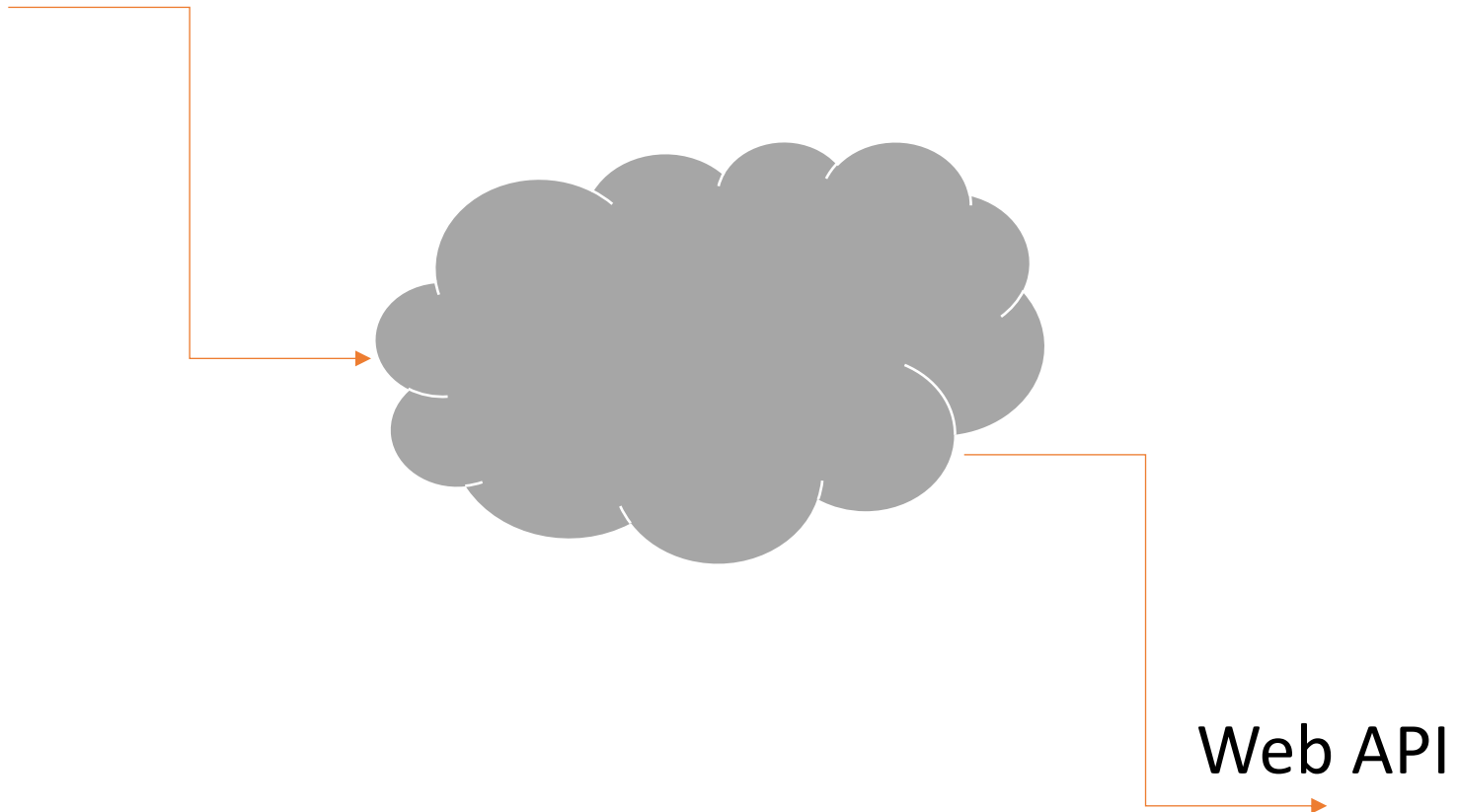
BLE Is Easy!



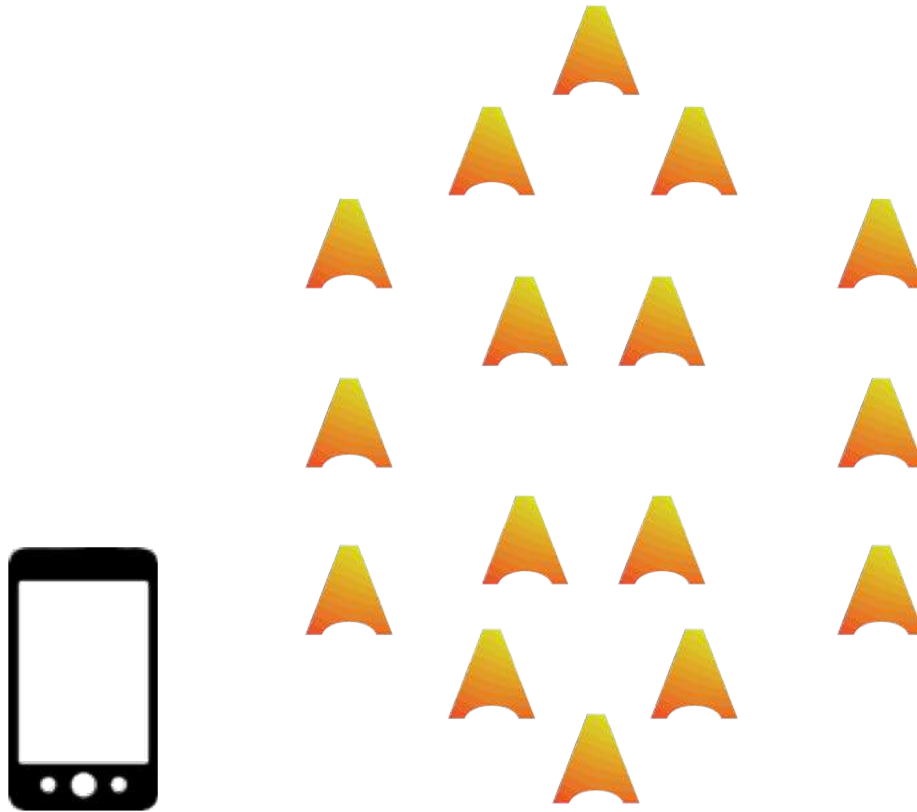
Nothing Else!

Casambi IoT Oggi

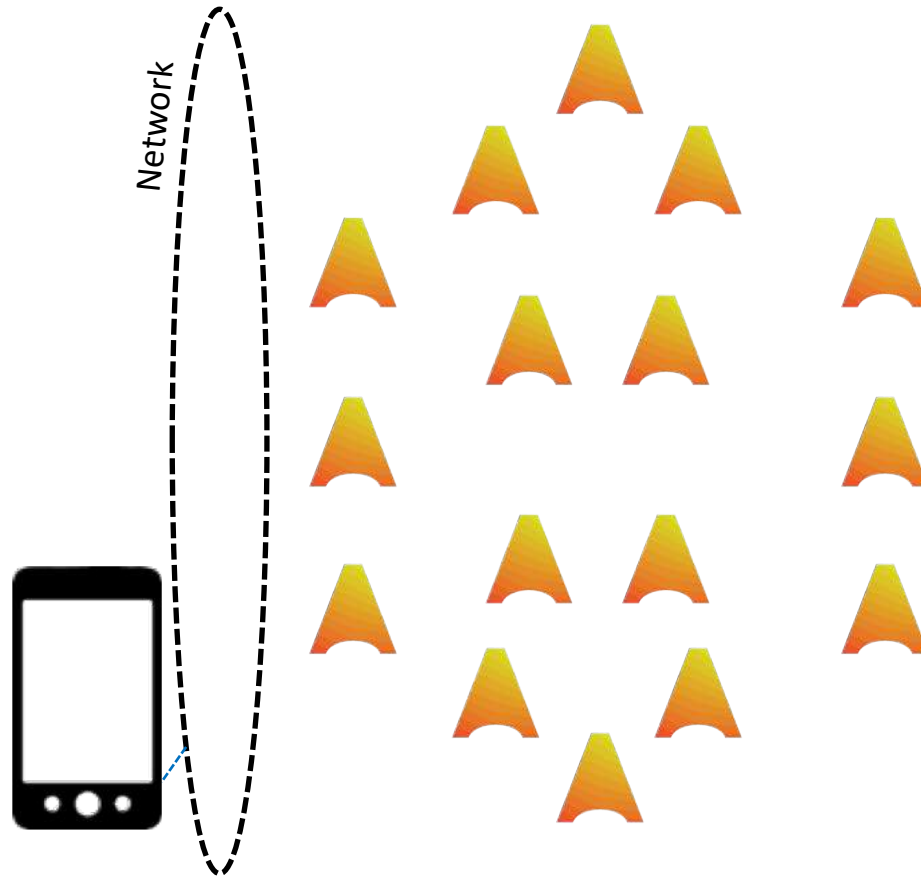
Sensori raccolgono ogni tipo di dato



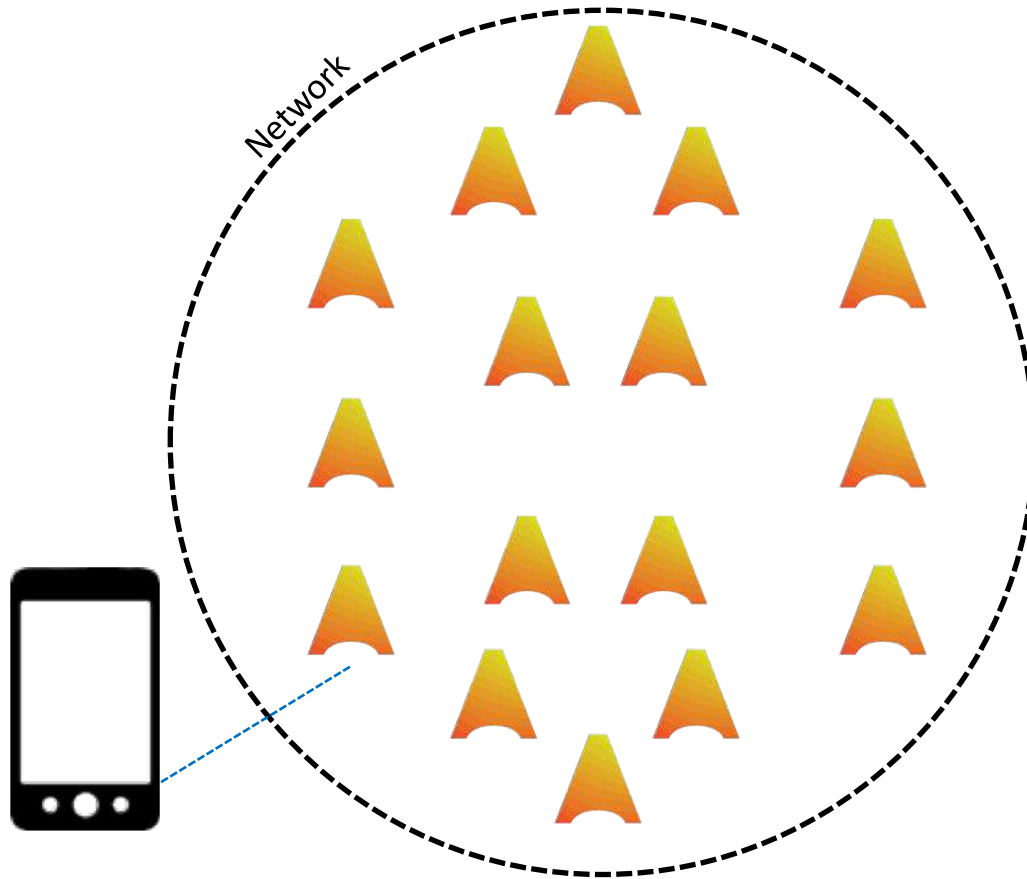
1. Unpaired devices



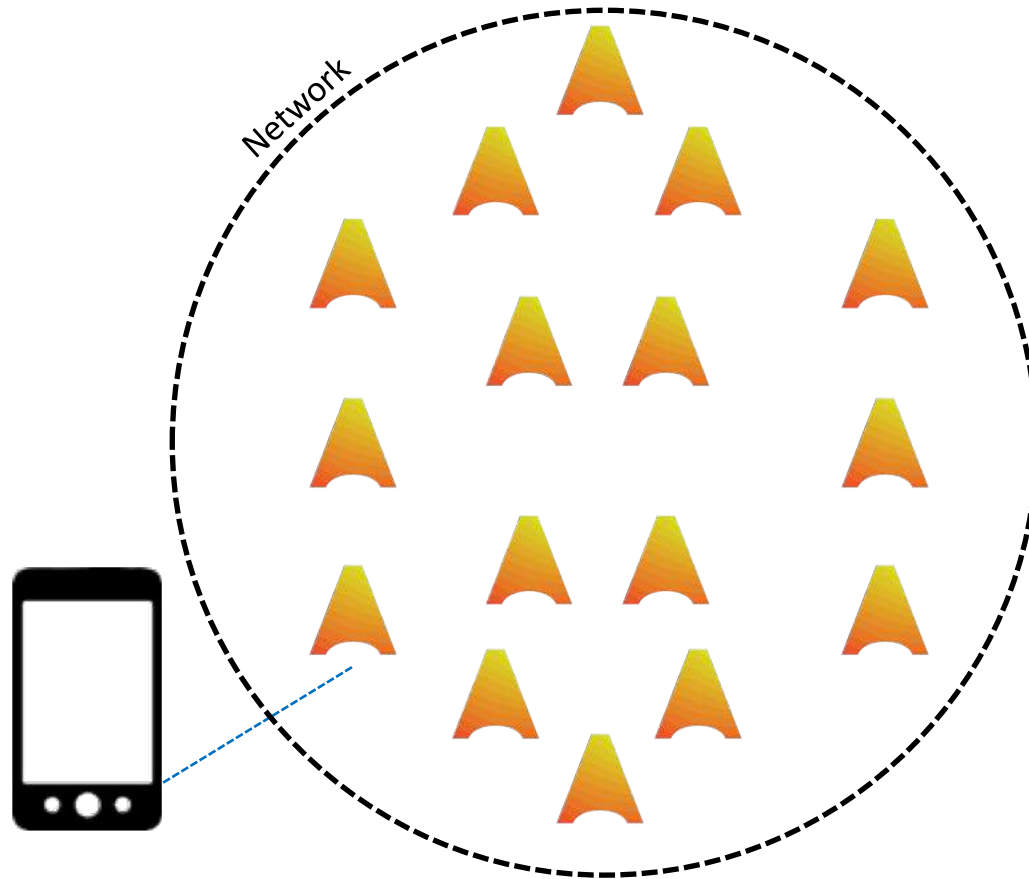
2. Create a Network



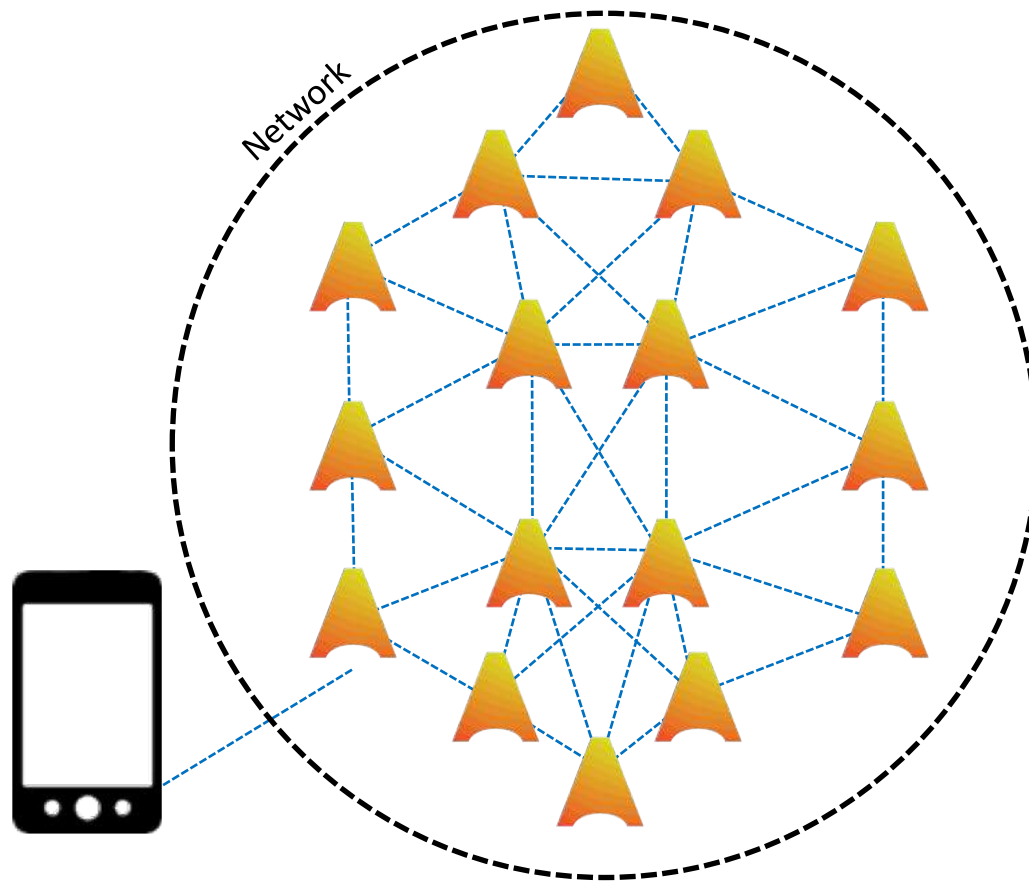
3. Add devices



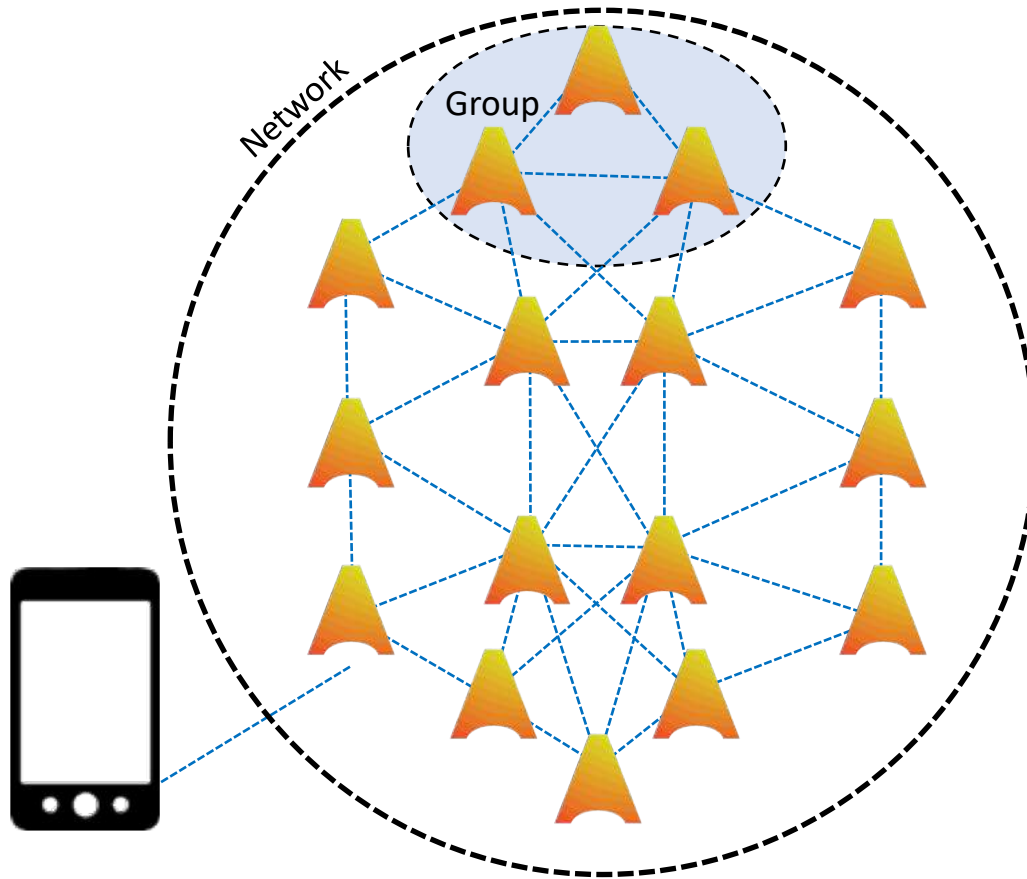
4. Automatic mesh network



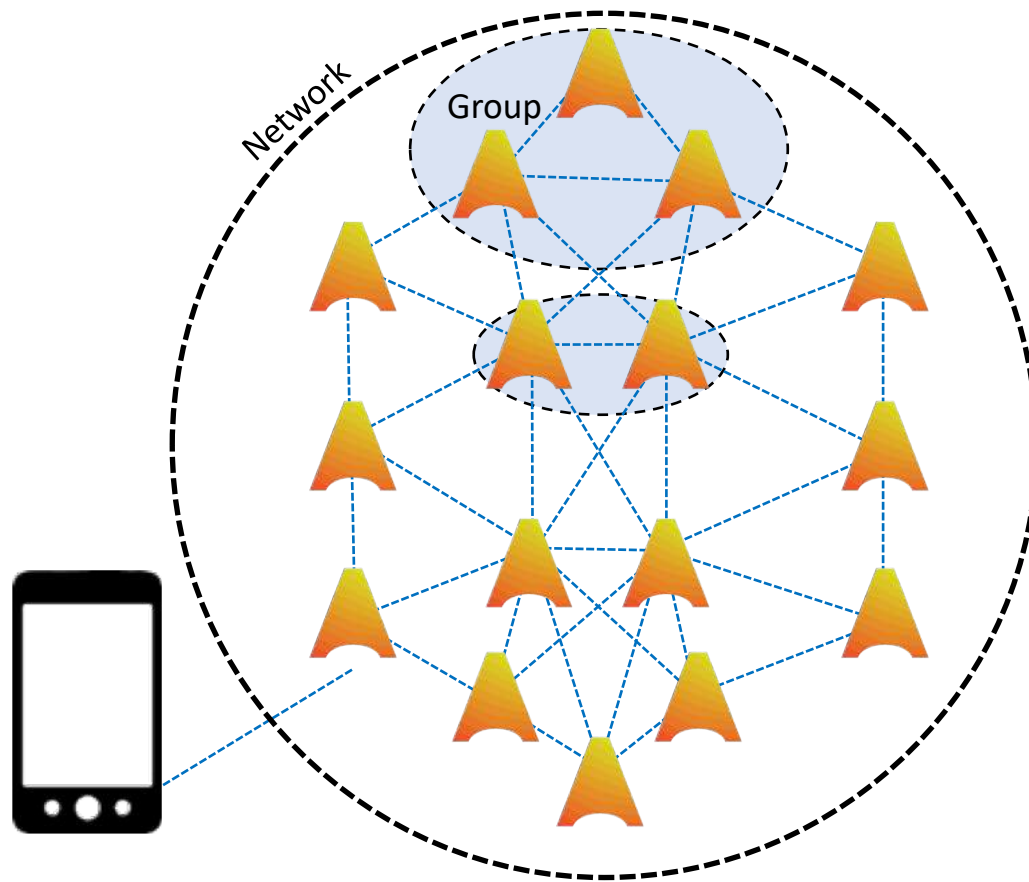
4. Automatic mesh network



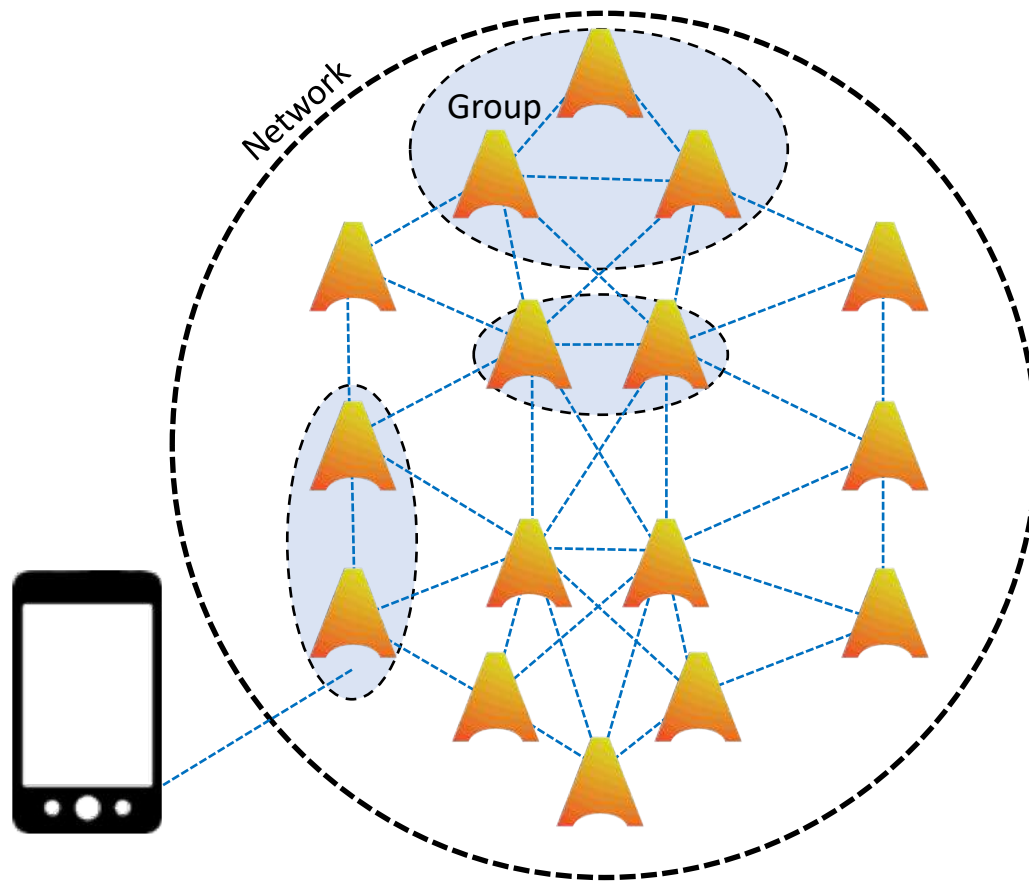
5. Create Groups



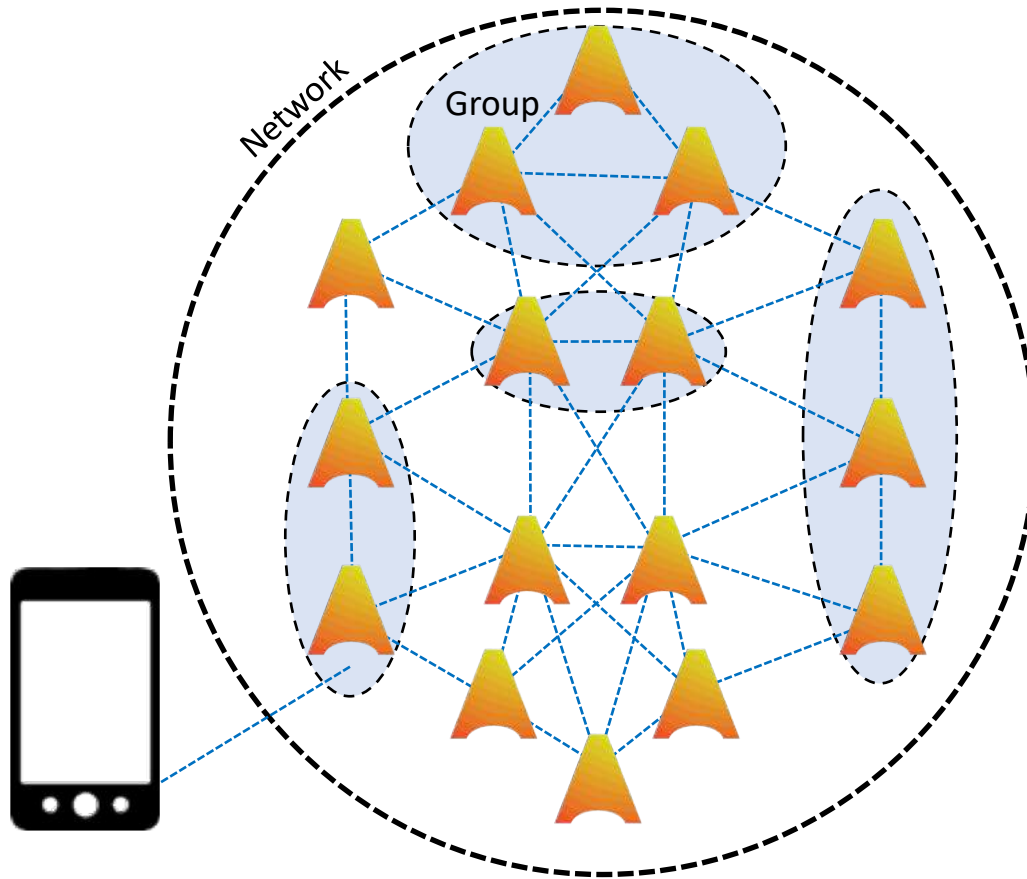
5. Create Groups



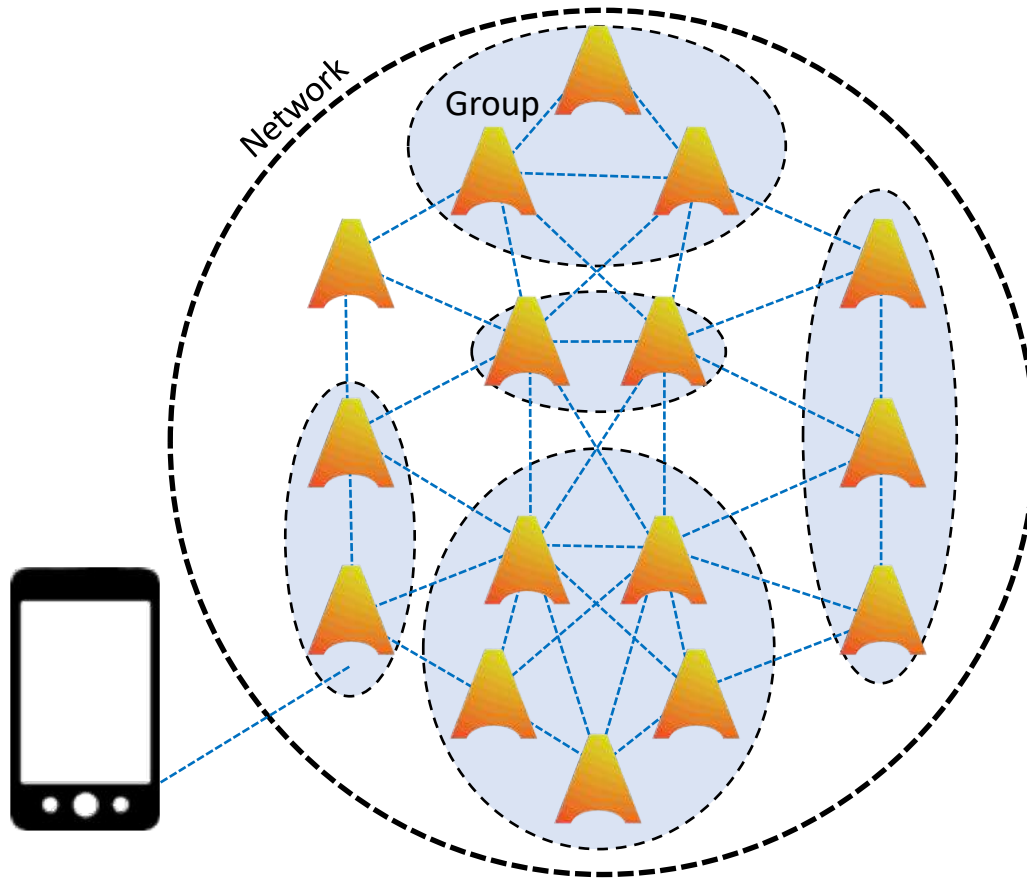
5. Create Groups



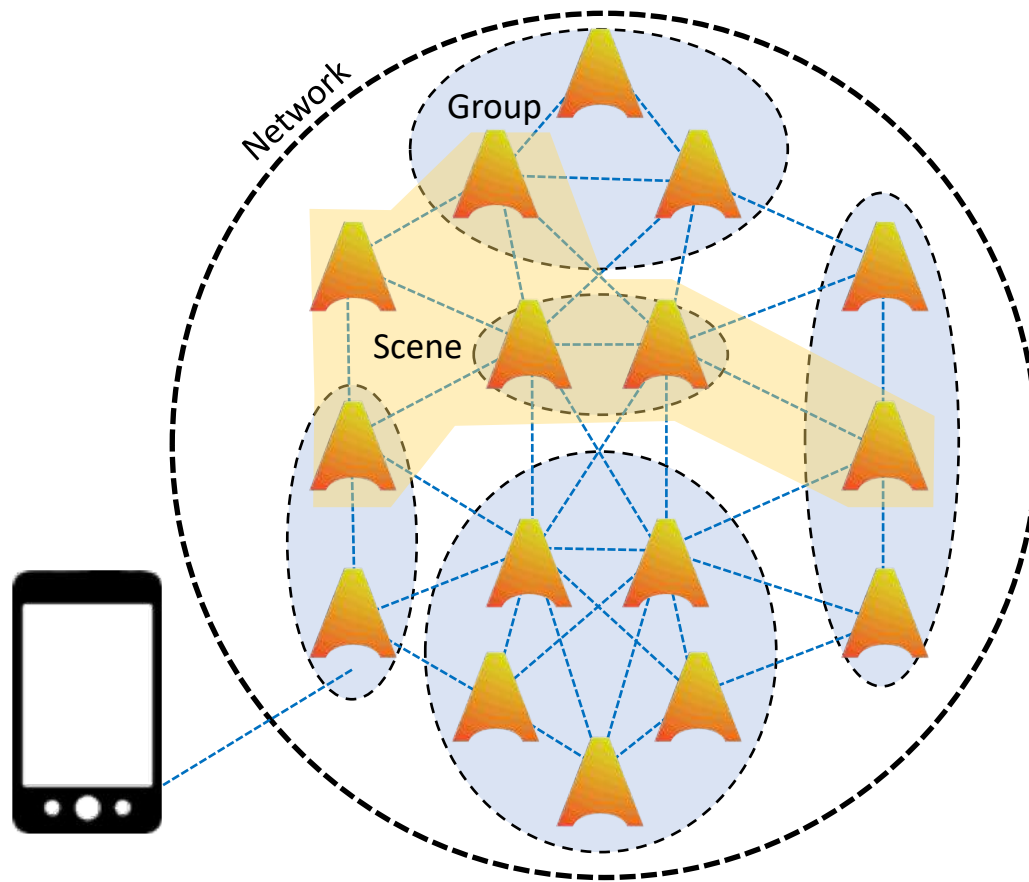
5. Create Groups



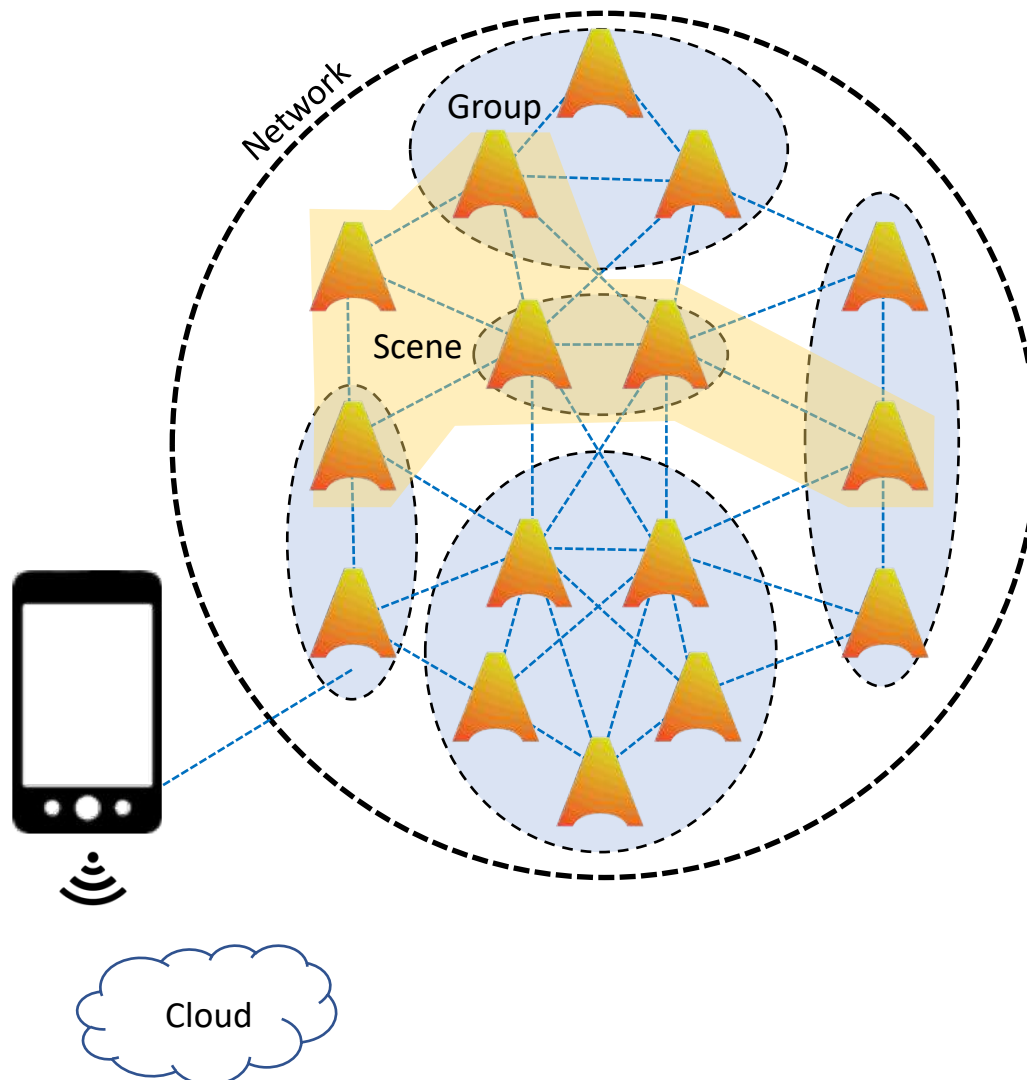
5. Create Groups



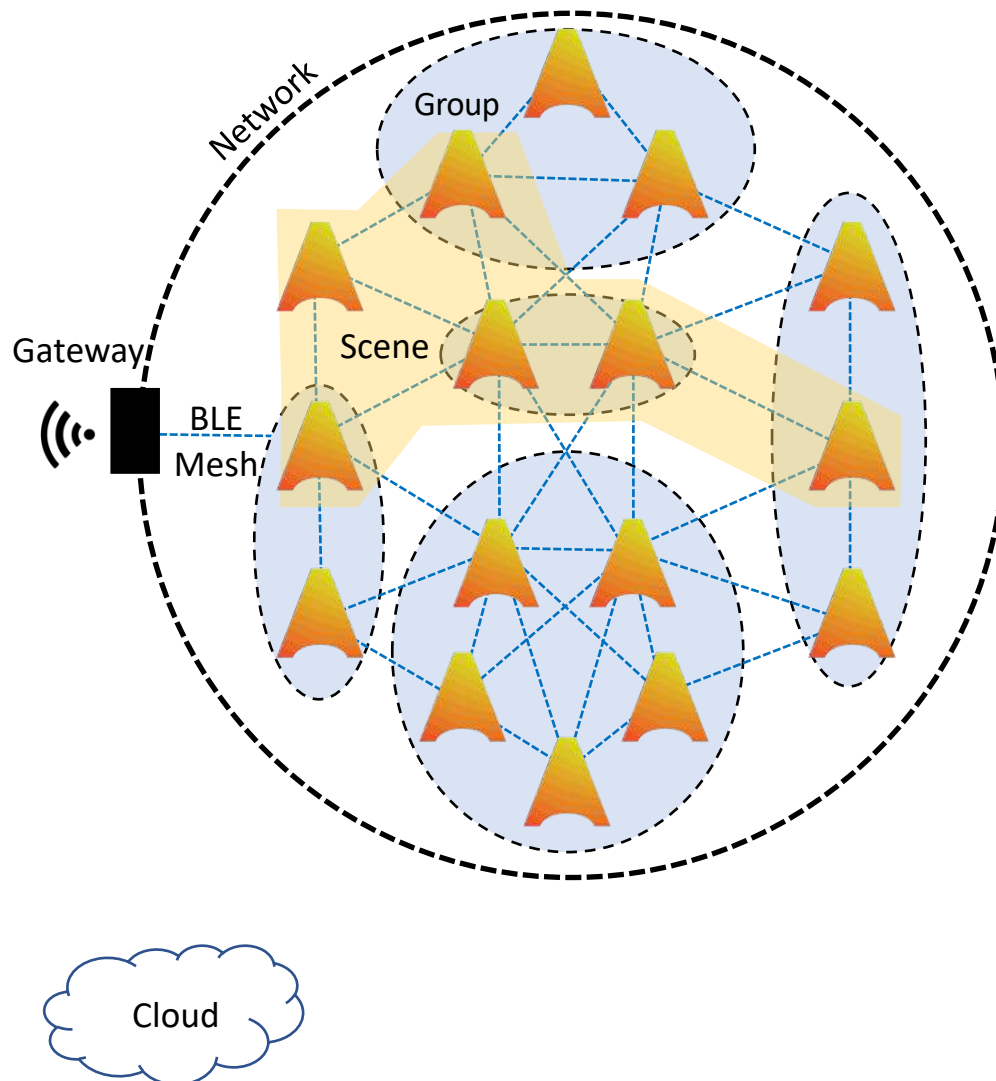
5. Create Scenes



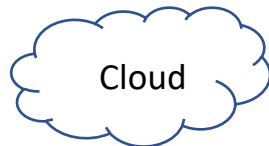
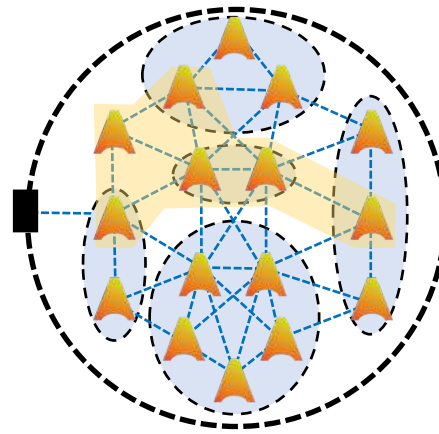
7. Share the Network



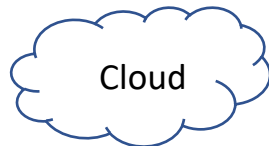
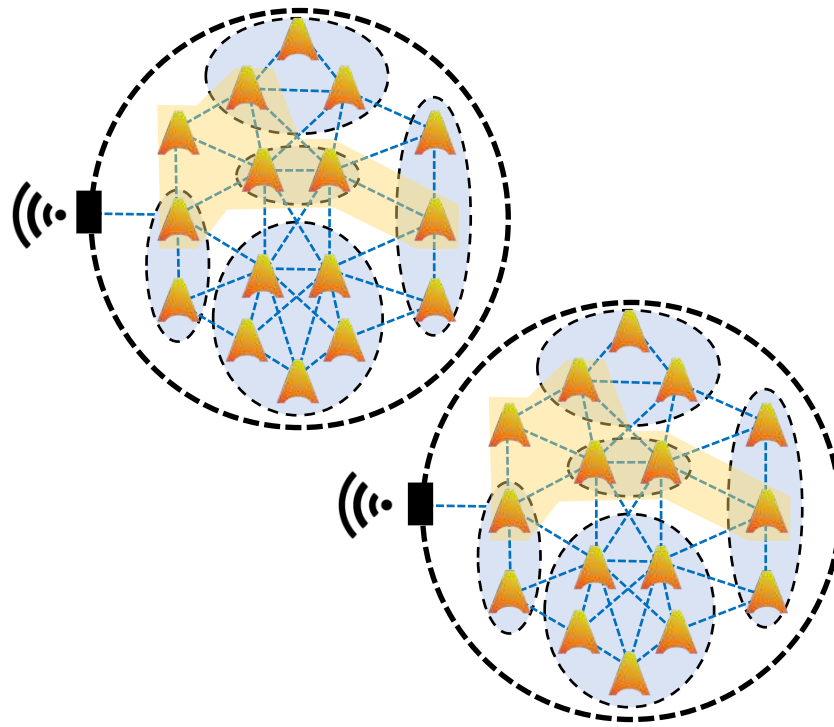
8. Add a Gateway



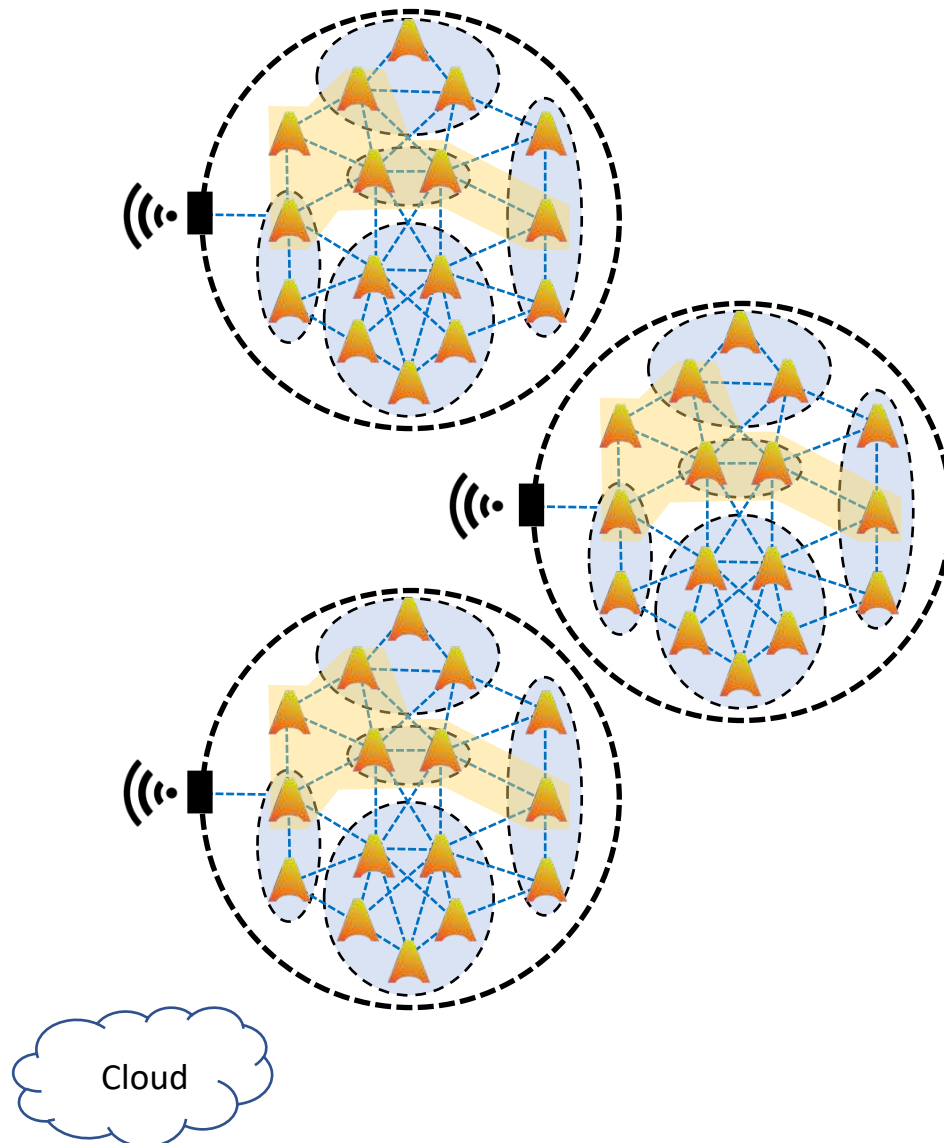
9. Create more networks



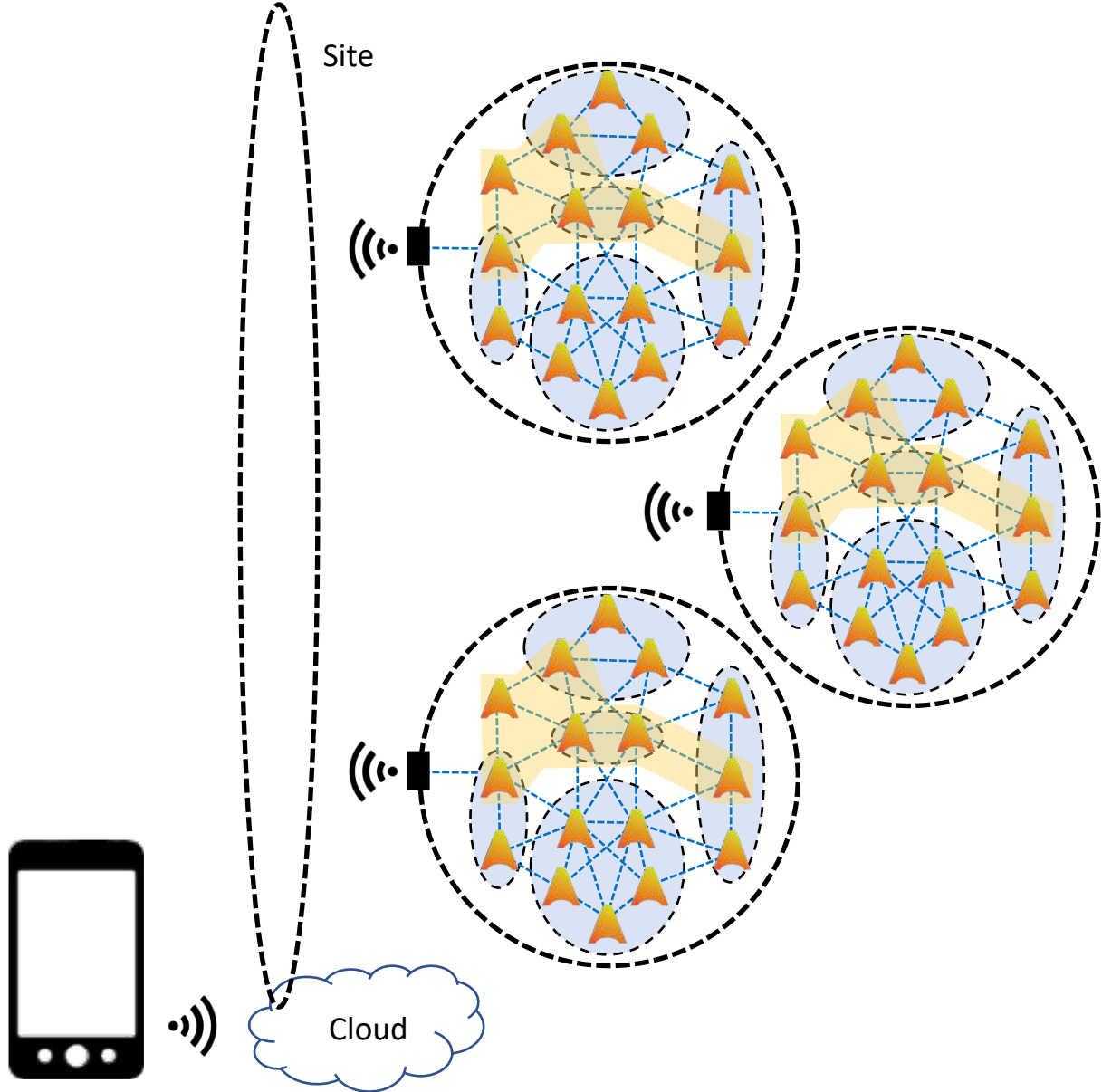
9. Create more networks



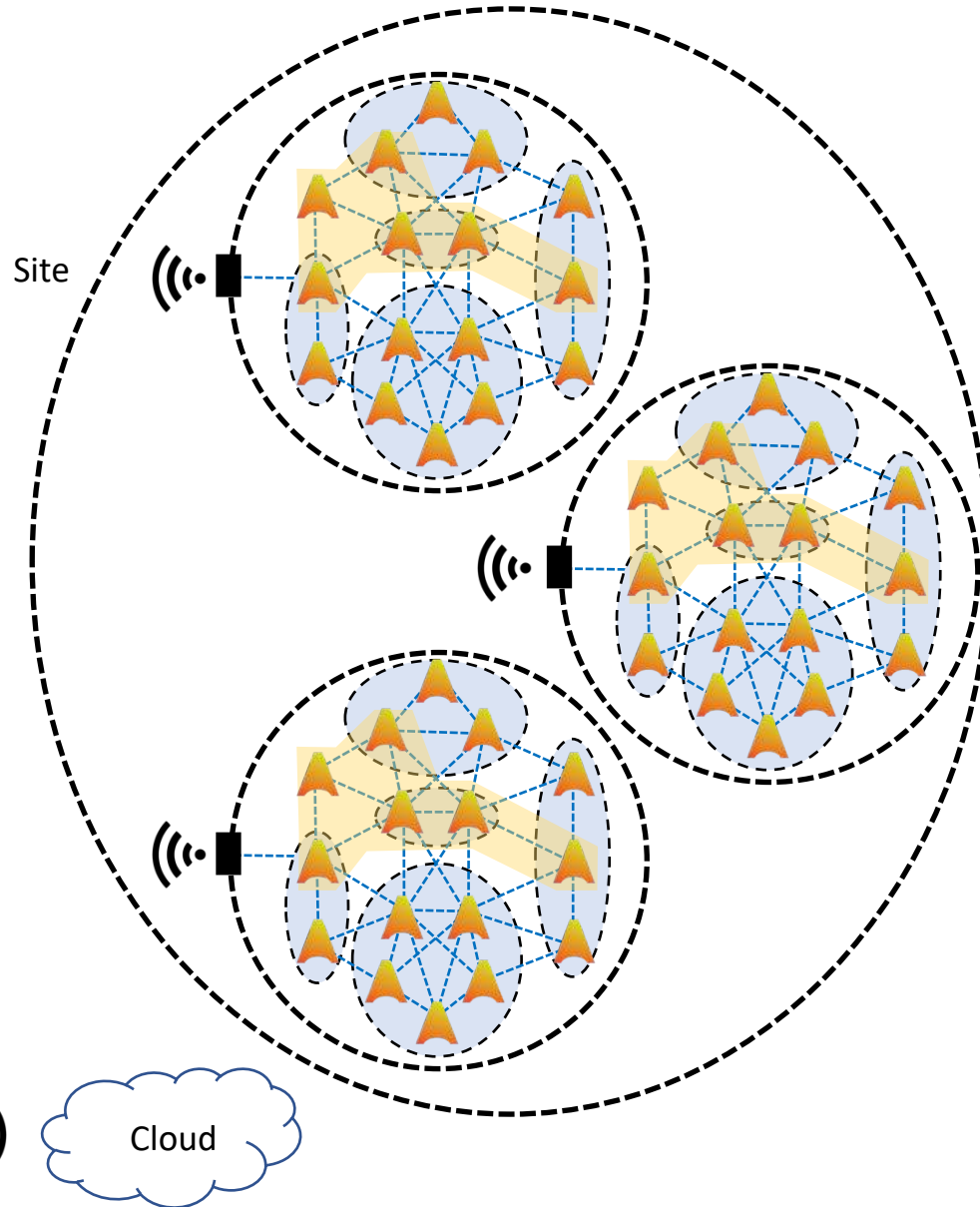
9. Create more networks



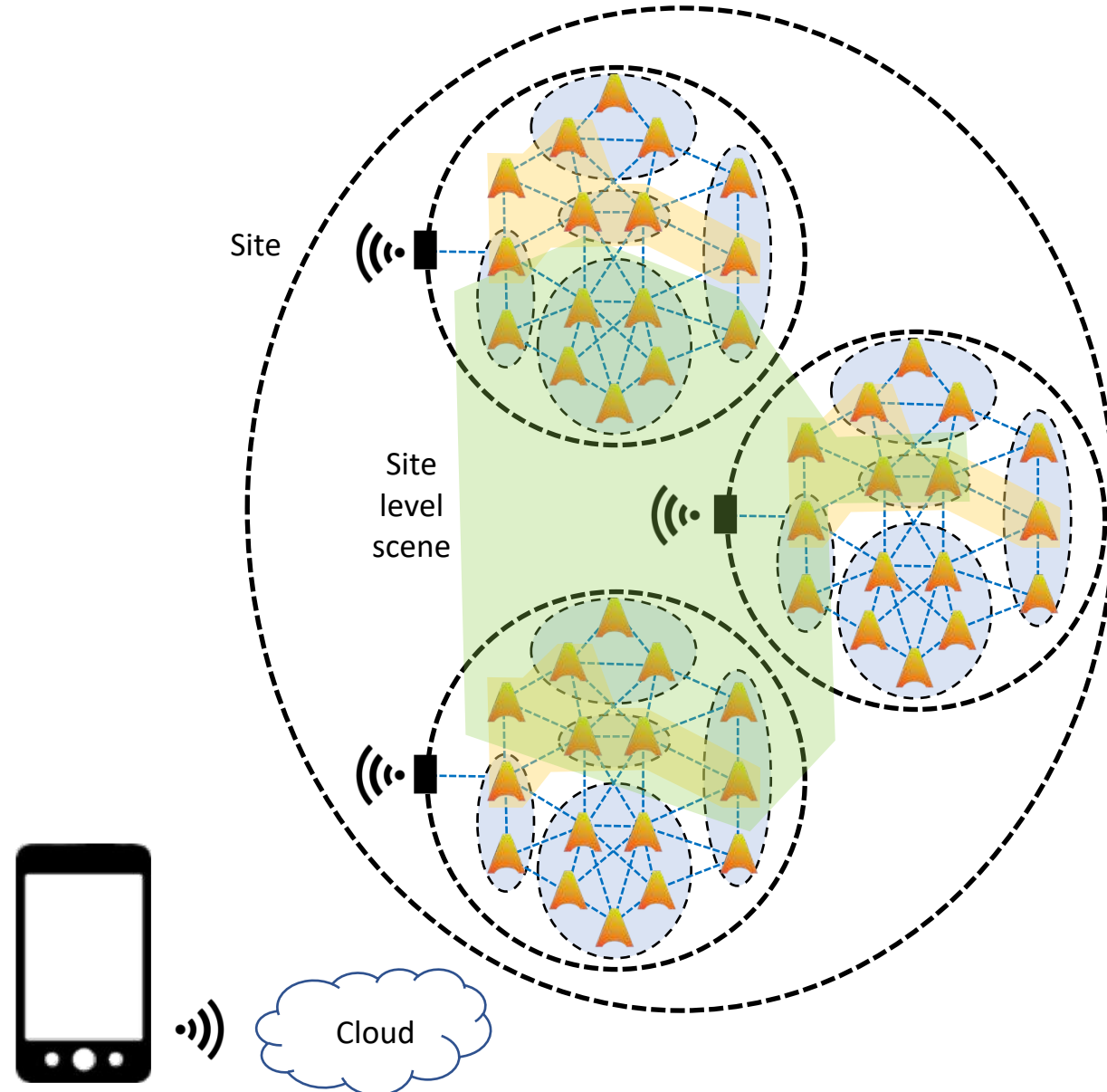
10. Create a Site



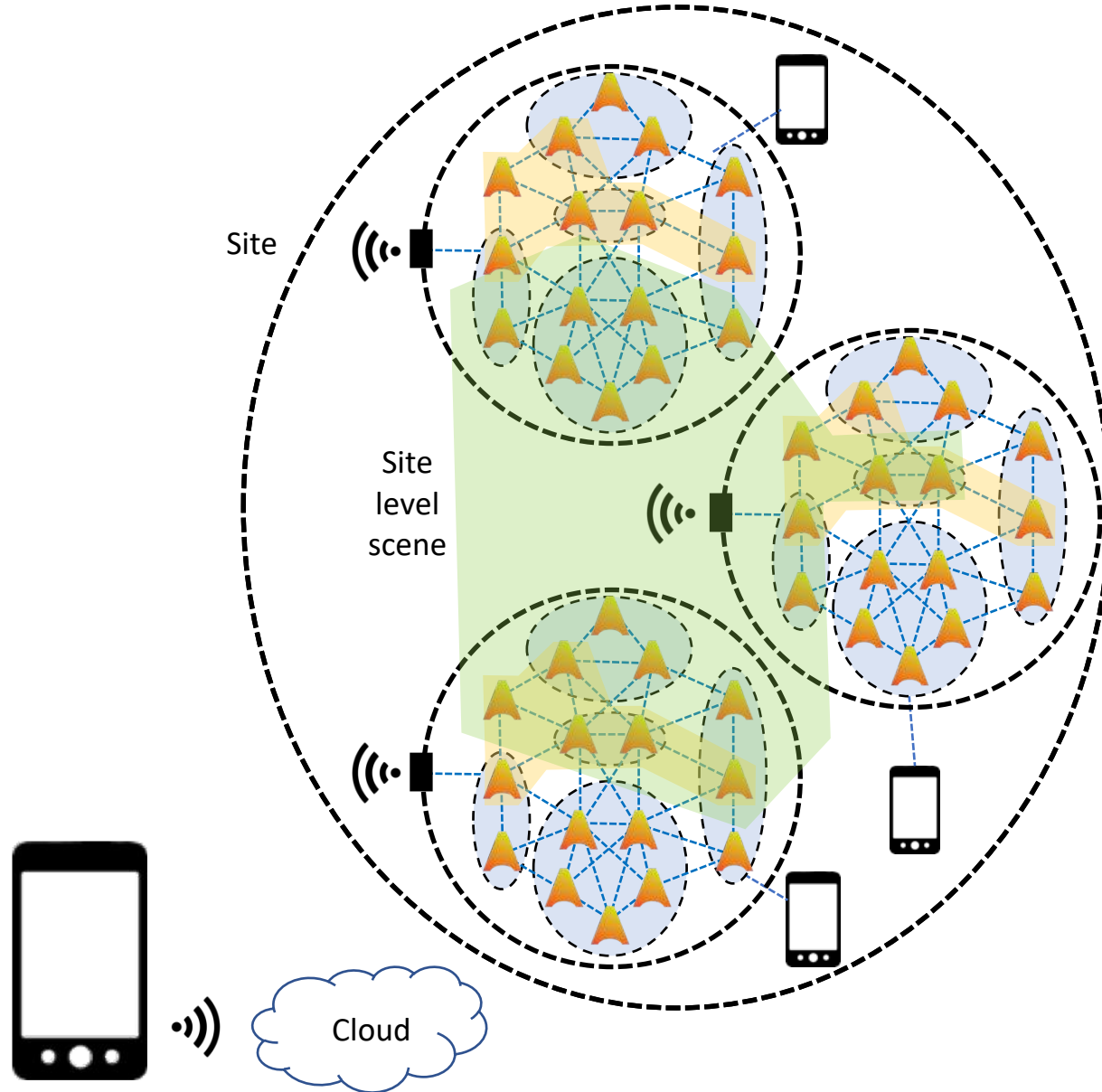
11. Add Networks



12. Create site scenes & timers



13. Control locally or remotely



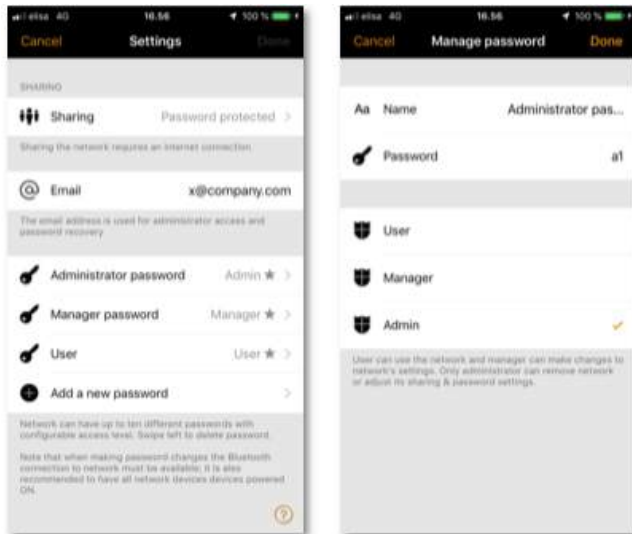
System topology, IoT, Data Harvesting.



Security

Three roles, similar to Sites:

- **User:** can use the network
- **Manager:** can use and edit the network, *except sharing settings*
- **Admin:** can do anything
- Up to ten different passwords can be added



- **Open:** can be discovered and used by anyone. When used without password the access level is always *user*.
- **Password protected:** can be discovered by anyone but password is needed to open it.
- **Administrator only:** can be discovered only with email address and password.
- *Note that in all cases that granted access level depends on the role of used password.*

Casambi No Limit

From Little TO Bigger



A professional television studio set for BBC World News. A news anchor in a grey suit stands on a raised platform to the right. The background features large curved screens displaying abstract red and white graphics. A camera on a crane is visible on the left, and a monitor shows a close-up of the anchor. A semi-transparent circular overlay is positioned in the lower-left foreground, containing text and the Casambi logo.

Projects

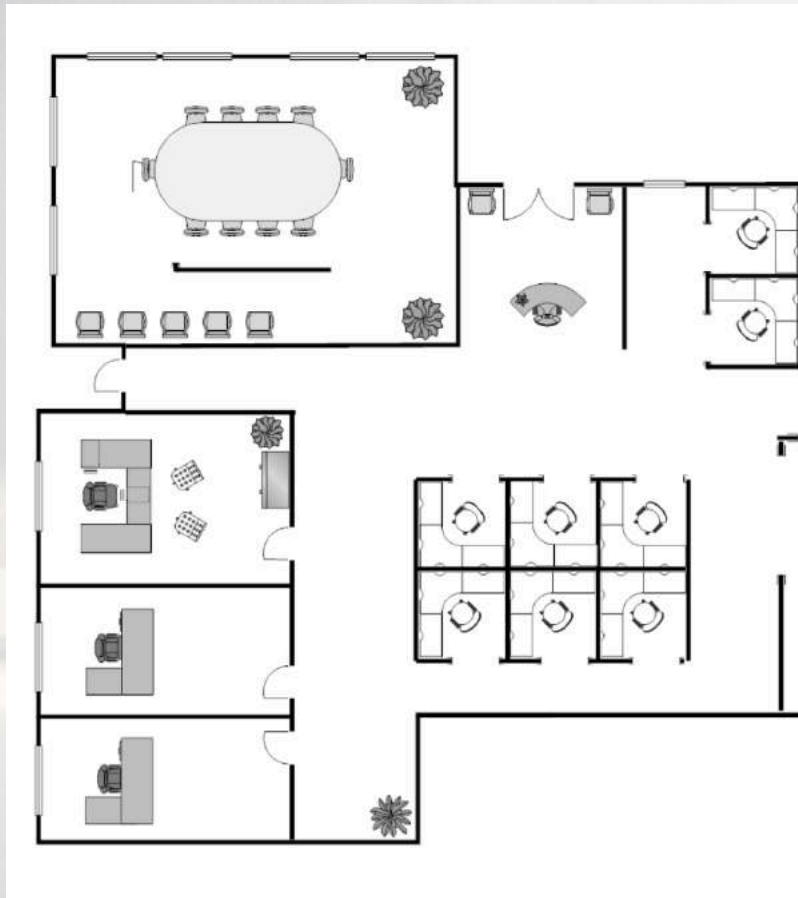
Ulster Hospital (8000 Casambi modules)

Royal Academy of Arts (4000)

Prince and Princess of Wales Hospice (1200)

BBC Headquarter (2500)

Documentazione Per I Progetti



- Sistemi, tender text.
- Prodotti, tender text.
- Descrizione del sistema.
- CAD files, sistemi connessioni.
- CAD files, Architettura di sistema.
- Datasheet.



Commissioning Offline

Training Center

- We have a training center in our headquarter in Espoo, Finland.
- Available courses and the currently scheduled training dates can be found on the [Training website](#).
- All courses are provided free of charge. Casambi provides refreshments and lunch on the training days.



Software Licenses



COMMISSIONING TOOL:
FOR FREE.



USER INTERFACE:
FOR FREE.



GRAPHIC INTERFACE:
FOR FREE.



DAYLIGHT CONTROL:
FOR FREE.



CLOUDING:
FOR FREE.



DATA HARVESTING

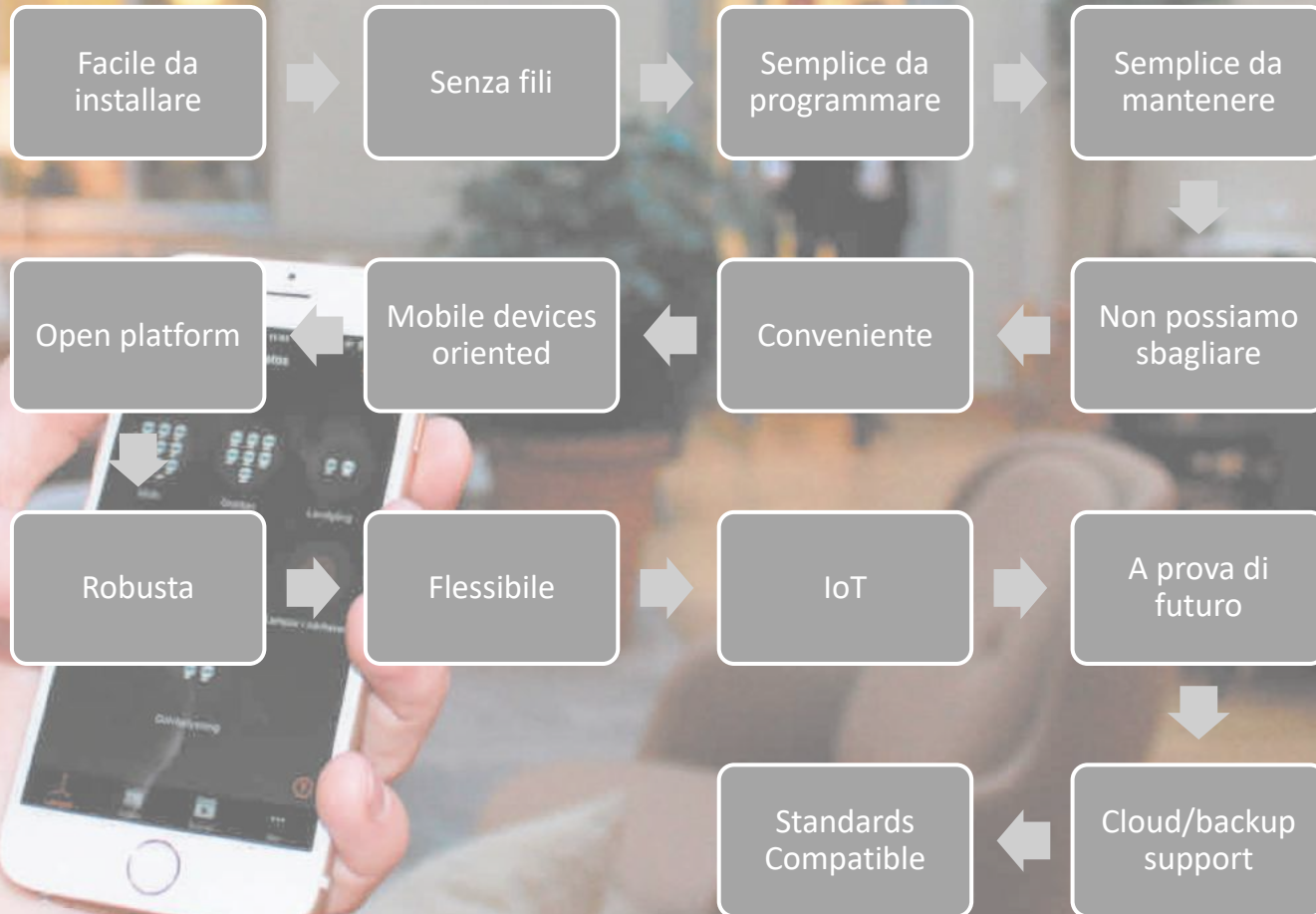


IBEACON:
FOR FREE.

Casambi BLE mesh benefit

- Estremamente facile da usare
- Autosufficiente. Niente di inutile necessario (Nessun gateway o WLAN necessari ...)
- Soluzione completa che si adatta agli scenari del mondo reale (rete mesh, più client, switch a parete e sensori)
- I dispositivi sono intelligenti da soli
- Intelligenza replicata in ogni nodo
- Self-healing
- Sincronizzazione costante
- Resta aggiornato dagli altri quando ritorna online
- Collegato quando necessario
- Non è necessaria una connessione a Internet

Perché dovremmo usare una mesh BLE?



Casambi

- Fondata nel 2011, Espoo, Finlandia
- Nokia – Innovation Technology
- Bluetooth Low Energy
- Fornitore di soluzioni, non solo un'azienda di controlli di illuminazione
- Prima presentazione del prodotto a L+B 2014
- Leader di mercato nei controlli wireless BLE



User
Experience
Driven
Company

“Our Goal is
to provide
the best possible
user experience
for all the stakeholders
and phases
in a project”

Timo Pakkala

CASAMBI Eco-System Partner-Hardware



TRIDONIC

OSRAM

TCI LED
professional led applications

Helvar

signify
PHILIPS

REGENT
LIGHTING

ERCO

MW
MEAN WELL

Occhio

FLOS

louis
poulsen

FEILO
SYLVANIA

TARGETTI

DELTA LIGHT

FAGERHULT





Grzazie

paride.maimone@casambi.com
support@casambi.com