



CrowdCell: Applications and Services

Lime Microsystems | FPRF company
Guildford, Surrey, United Kingdom

OPEN CrowdCell allows for APPs on TOP, no limit to what's possible

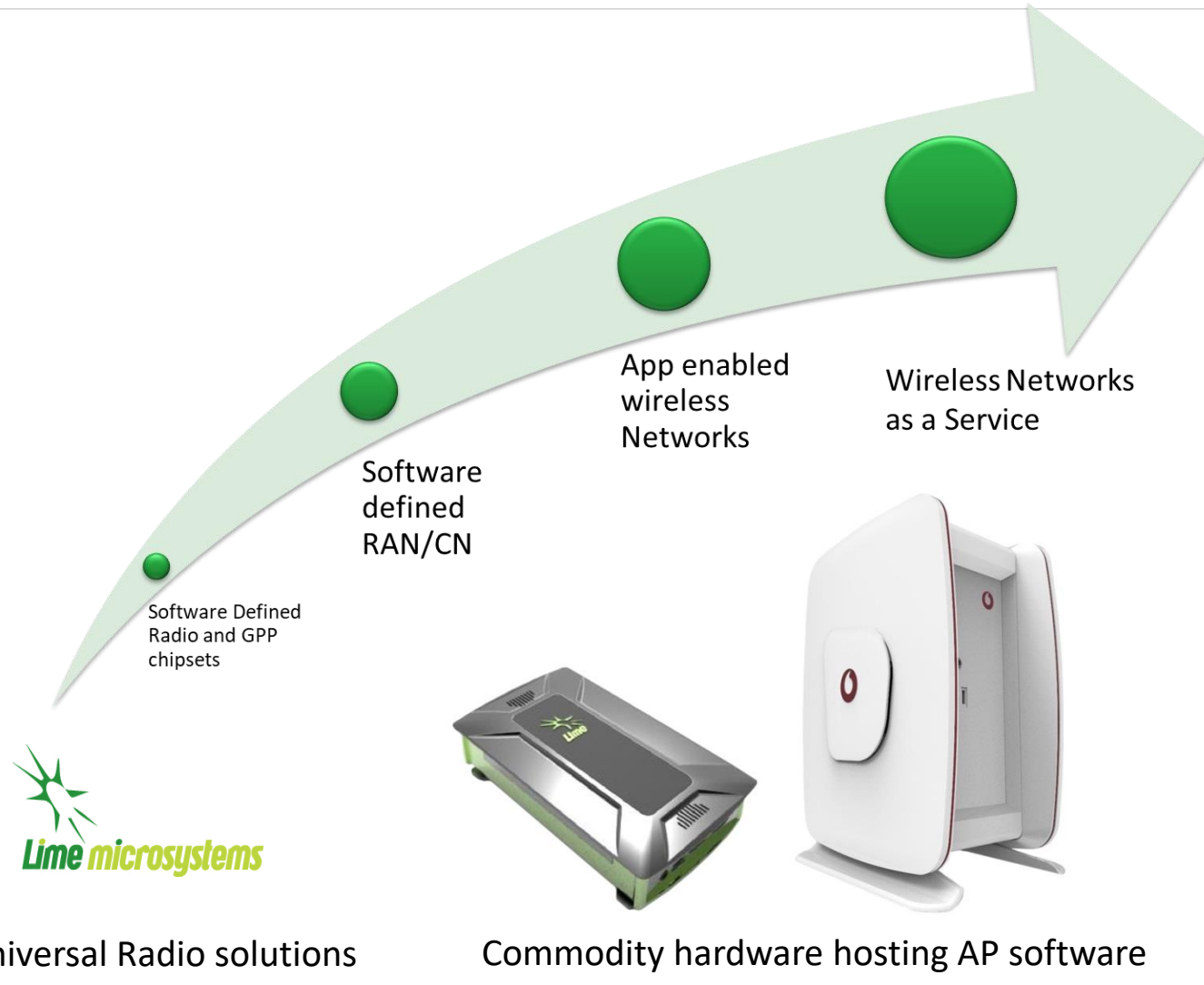


- Vodafone LimeNET Micro IoT (without and with a screen display)










- Vodafone CrowdCell (side and front views)

App enabled through CrowdCell Edge Cloud



App store

[featured](#) [databases](#) [network](#) [robotics](#) [home](#) [private](#)

 LTE eNodeB Amarisoft ★★★★☆ \$1200	 Evolved Packed Core Quortus ★★★★☆ \$1500	 Spur IoT Button Continuum Bridge ★★★★☆ \$50	 Smart Support for Snap RevTwo ★★★★☆ \$250
 The IoT Platform Soracom.io ★★★★☆ \$200	 Distributed Billing iota.org ★★★★☆ \$50	 Weather Led Canonical ★★★★☆ Install	

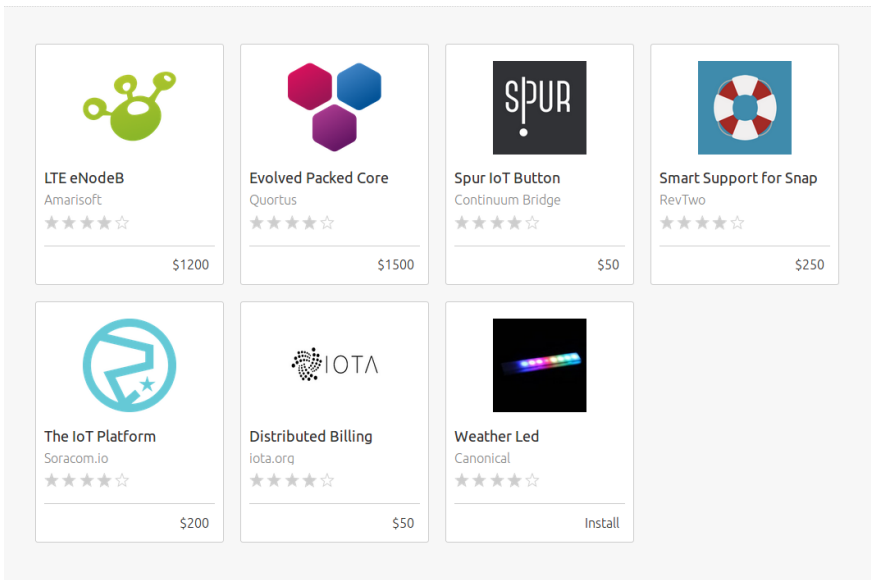
App enabled networks, a feature rich network for all addressable markets



Lime in partnership with Canonical are setting up Network centric App store where Radio modem is presented as an APP

App store

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■ Sample Apps:

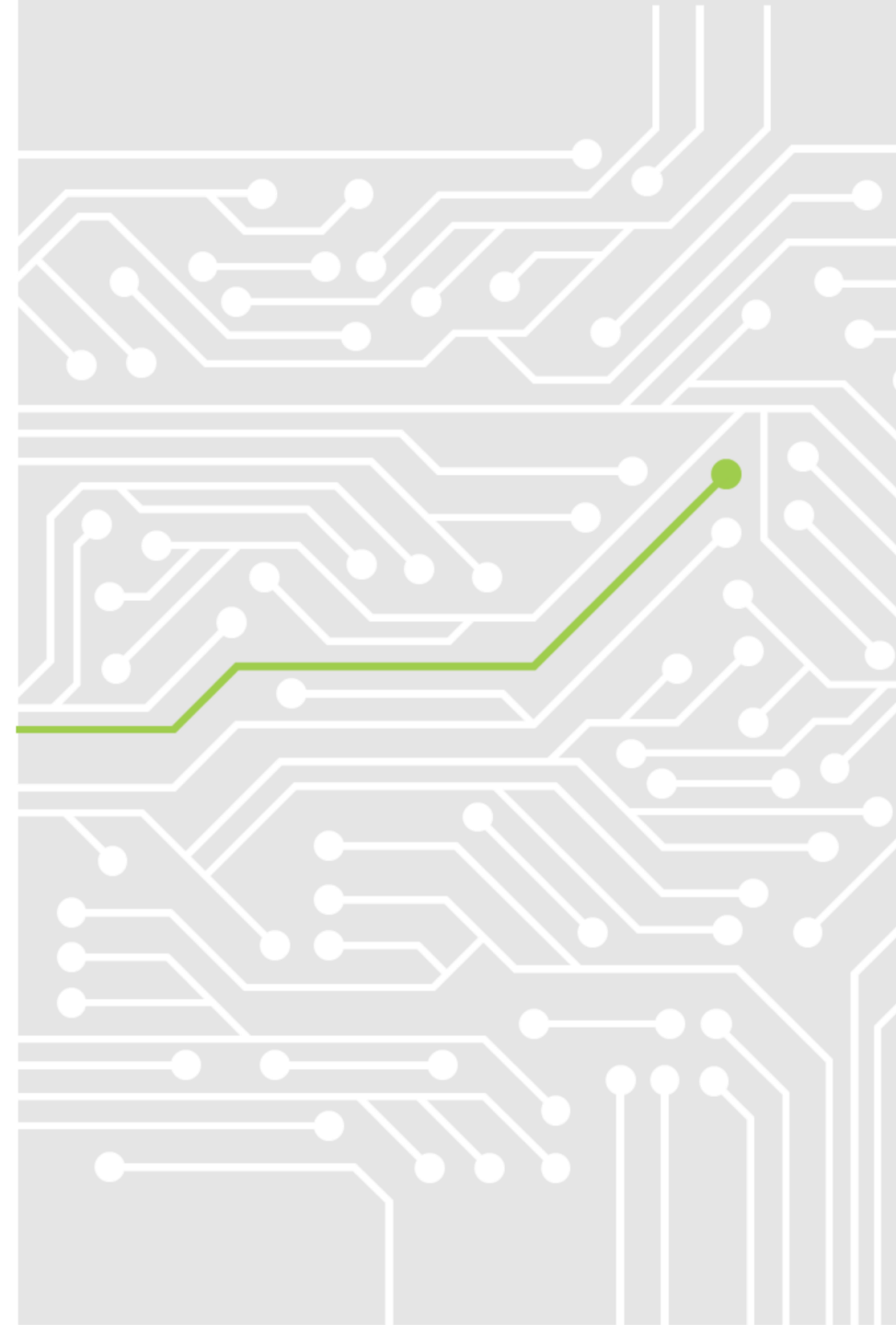
- 2G to 5G cellular Network in a box
- IoT gateway
- service steering
- RAN Slicing
- policy-based QoS
- traffic analysis App agents
- Fine motion detection and people counting
- LimeNET access Extends the cloud to the edge for 5G mass adoption
- Augmented reality App
- Virtual reality App
- secure connected healthcare monitors and wearable devices
- spectrum capture for a complete assessment of spectrum utilisation





CrowdCell Apps on Canonical App store

<https://limenet.snapcraft.io/>



1) LimeCount CrowdCell App (see the video on this [\[link\]](#))



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mmWave sensors



Bringing intelligent autonomy to fine motion detection and people counting with CrowdCell and mmWave sensors

1) LimeCount CrowdCell App, use cases



■ Shopping experience

- Detecting and tracking shoppers in a store for assessing their interest and providing/informing them with special offers depending on their location

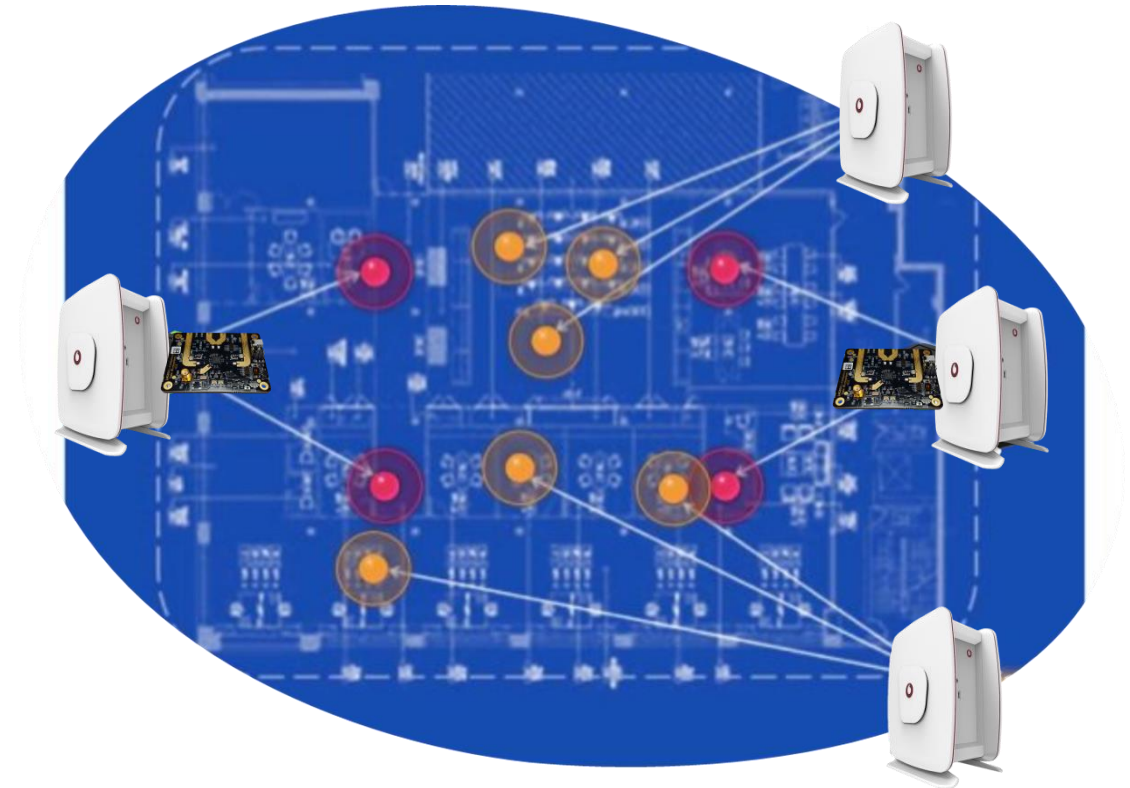
■ Smart building and cities

- Providing architects and urban planners of smart buildings, factories and cities to address the challenges of resource conservation, increased security and seamless human-machine interaction

1) CrowdCell deployment in a shopping mall for tracking shoppers and initiate the tracking of shopkeepers



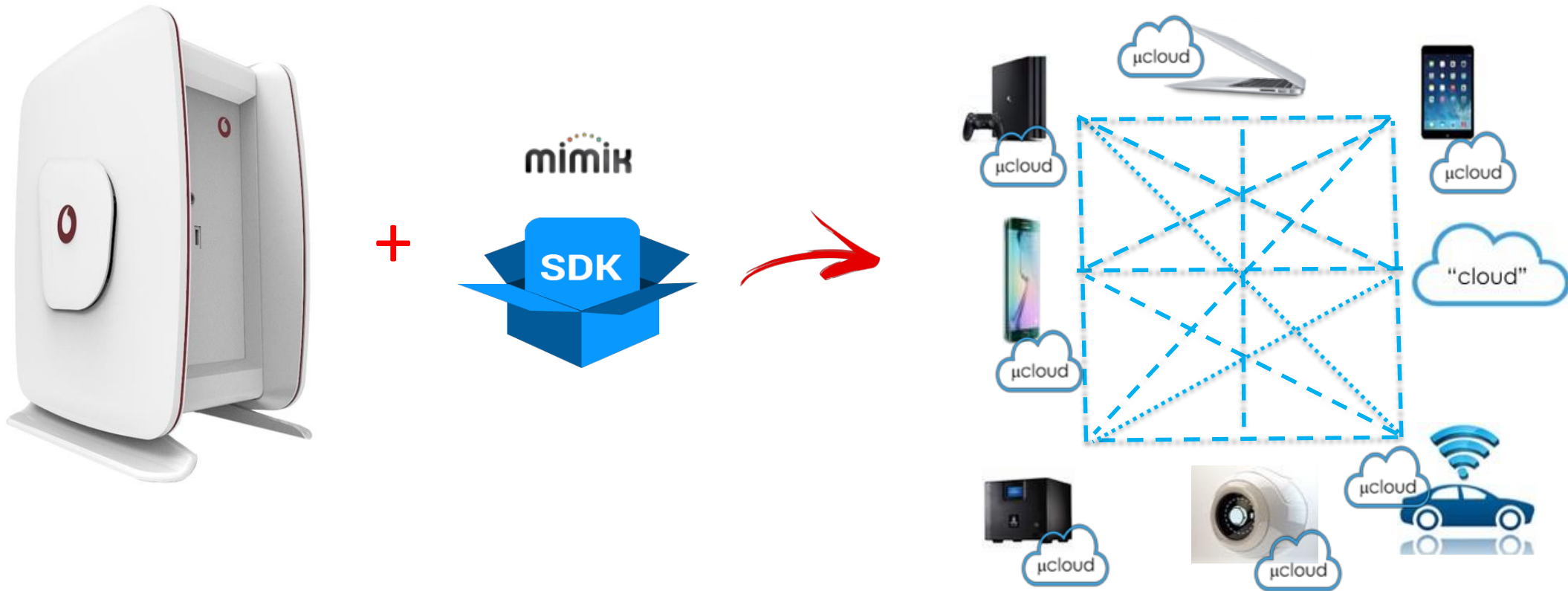
- Motion detection and people counting for intelligent shopping experience by placing the CrowdCell strategically at few locations in the store (minimum 1 for a smaller office)
- At least 2 CrowdCells should be equipped with mmW sensors for a passive detection of shoppers entering and leaving the network
- Any CrowdCell that is connected to the core network of a given operator could then track their subscribers and push content directly moving through the store for quick adoption



2) LimeNET access Extends the cloud to the edge for 5G mass adoption



mimik's edgeSDK turns any device into decentralised edge cloud servers (edge cloud)



CrowdCell and mobile devices are cloud servers and create a larger, faster & low cost cloud

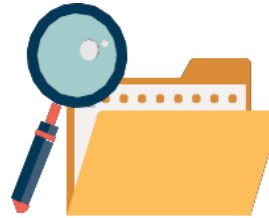
2) LimeNET access mimik App, use cases



**CrowdCell
private cloud**



**CrowdCell
content to all
devices**



**CrowdCell all
media access**



**CrowdCell
security cameras**



**CrowdCell screen
sharing & casting**



**CrowdCell secure
Enterprise cloud**

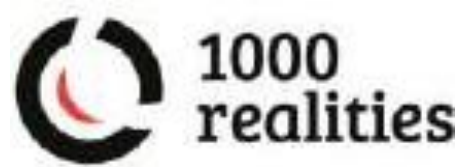


LimeNET Access and CrowdCell products turn devices into cloud servers and makes it possible to access and manage content anywhere, without the need for traditional cloud infrastructure, ensuring reliable and secure access on-platform, at reduced cost.

3) Aria CrowdCell 1000 realities Augmented reality App



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ARIA



- Increase safety and productivity with an intelligent AR Assistant
- Aria CrowdCell is a smart AR assistant for industrial and corporate employees
- It supports workers in their daily routines, guiding them through end-to-end processes and eliminating the risk of human error by displaying an interactive manual that immediately connects particular instructions with the factory or enterprise infrastructure.

3) CrowdCell 1000 realities Augmented reality App, use cases



- **GPS for employees**

ARIA can function as **an indoor navigation** system for employees. A worker can get a real-time request that is instantly displayed on a smart screen.

- **Virtual manual (hands free experience)**

ARIA eliminates the risk of human error by displaying an interactive manual that connects particular instructions with infrastructure elements and keeps the engineer's hands free throughout the process.

- **Warnings hazards**

A worker about to enter a dangerous space immediately sees a series of safety reminders and warnings about hazards, including:

- Wear your helmet
- Wear your gloves
- Do not enter
- Fire alarm

4) CrowdCell VREEA Virtual reality App



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<Mobileedge>



- VREE CrowdCell application coordinates the activity of multiple individuals using “full-body” VR/AR suits.
- It aggregates the data from the users and provides each with a synthesized view of the ensemble, applying avatars to the user position. VREE can also provide a “camera” view of the ensemble and thus be used to broadcast eSports.

4) CrowdCell VREEA Virtual reality App, use cases



- **Play**
With your body as controller in full body multi-play applications
- **Watch**
From any computer, tablet, phone or smart device within the coverage of CrowdCell
- **Interact**
With the platform from any location within the coverage of CrowdCell

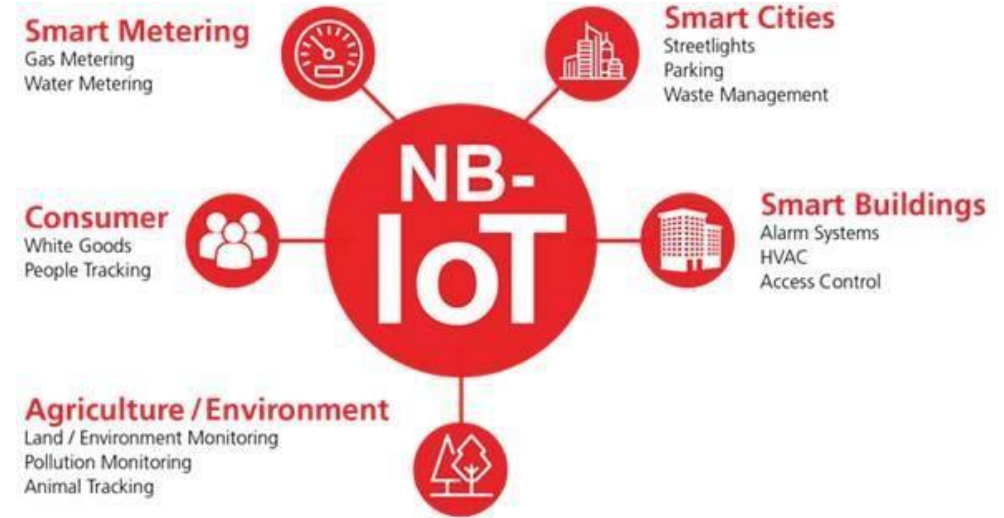


5) IoT CrowdCell App



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QUECTEL®



- Enables secure connected healthcare monitors and wearable devices at low cost.
- It will also significantly benefit the agriculture and industrial applications from new crop monitoring systems to automated manufacturing and monitoring in a large scale deployment.

5) IoT CrowdCell App, use cases

- Smart logistics
- Smoke detector
- Smart lock
- Smart gas metering
- Smart water metering
- Smart lighting
- Smart electricity metering
- Smart parking



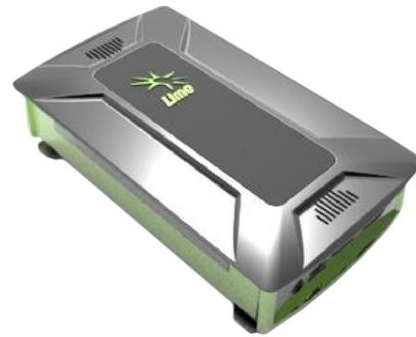
Functions performed by the CrowdCell

6) LimeScan CrowdCell

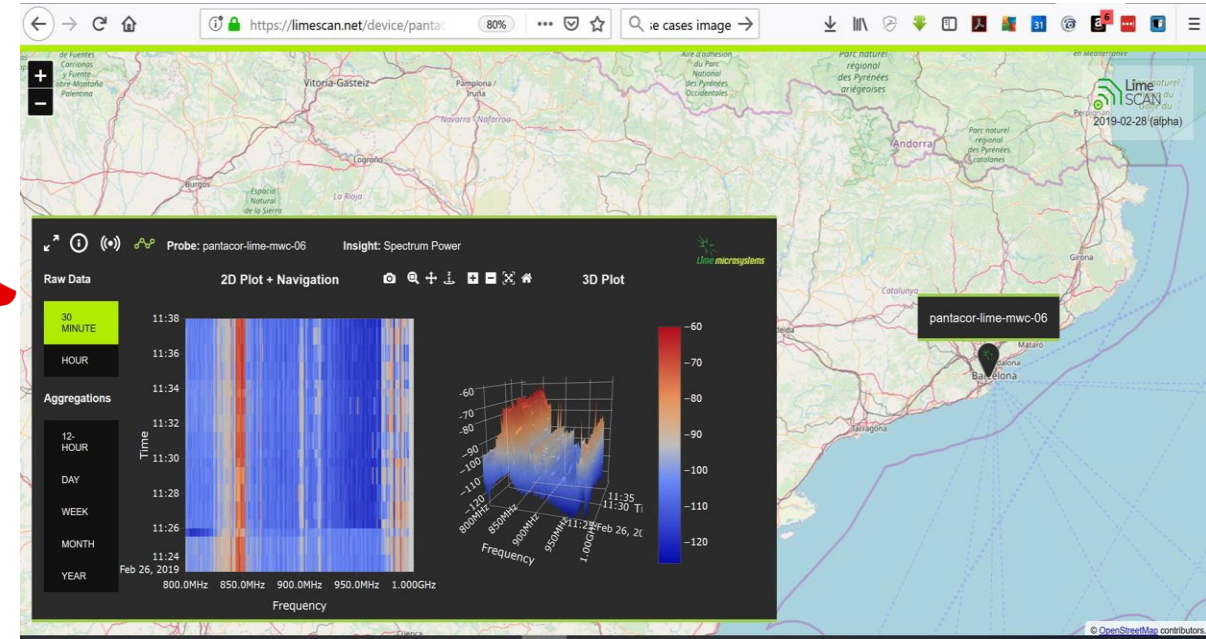


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LimeNET Micro



LimeScan



- Enables spectrum capture for a complete assessment of spectrum utilisation.
- Aids deployment and the information could be used to make better use of the spectrum.

- CrowdCell is the only platform today that could provide an operator with a network as a service topology.
- CrowdCell enables a significant number of applications, covering a diverse set of use cases.
- CrowdCell is the only platform backed by numerous developer communities who can provide dedicated applications based on the operator requirements



Thank You!

Useful links:

www.limemicro.com

www.myriadrf.org

www.crowdsupply.org

