# Private Mobile Networks

#### enabling do-it-yourself





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# **Industry drivers**

- New use cases like smart robotics, predictive maintenance, AR/VR
  - Throughput and low latency
- Increased cyber risk awareness
  - Apply own security policy and manage networks along with rest of the digital infrastructure
- Productivity gains and reduce costs
  - Asset and material tracking
  - Connect employees and production machinery to backend
  - Remote control
- Worker Safety & Sustainability







Factories



Harbors/Airport/Depots



Stadiums/shopping centers

Moving work

**Events** 

Images Sven Mieke,, Michael Descharles, Martin Brechtl, VOO QQQ, Lalit Kumar. : Aksh Yac unsplash

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### **Emerging markets**, **Remote & Rural**

- 3 billion people with no Internet access
  - Education
  - eHealth
  - eGovernment
  - Asymmetric market information
  - Access to markets
- Remote
  - Business & digitalization enabler
  - Local coverage & Internet access
  - IoT





Agriculture

Mountains





Rural hotspots & hotels

Communities



Villas, ski cottages

Archipelago

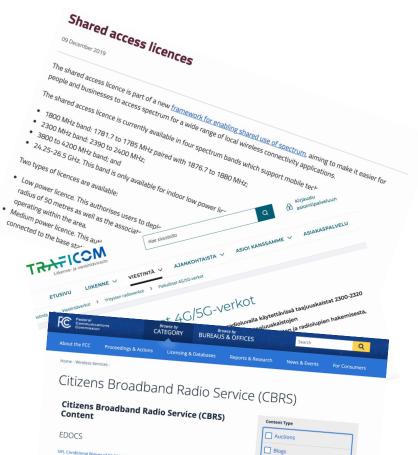
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Images Richard Bell, Sara Dubler, Mika Korhonen, Hugo L. Casanova, Harvan Galling, Eder Pozo Perez ; unsplash



# **Frequency deregulation**

- UK Shared Access License (1800Mhz, 2300 Mhz, 3800 - 4200 MHz and 24,5-26.5 GHz)
- US CBRS (3,5-3,7 GHz), 3-tier system
- Traficom Finland 2300-2320 (B40) GHz, 24,24-25,1 GHz
- NR-U



Bureaus and Offices

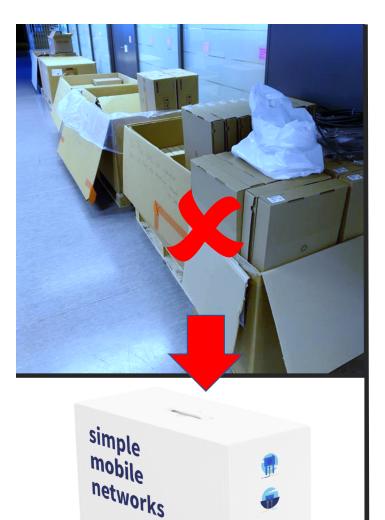
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#### simple mobile networks

- One drop shipment of self-installable consumer packages instead of exhaustive material consolidation.
- No construction or assembly work with special skill requirements
- Customer branding

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#### Connectivity in a box: private mobile network

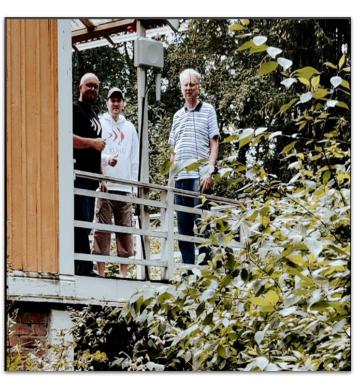


Community/enterprise hosted LTE for 1 ~ 10 km<sup>2</sup> coverage.

Use with regular mobile devices

Core is 5G ready ... need a small gNB ... and more different type of UEs

NR-U for capacity

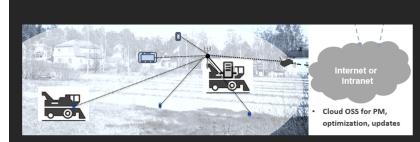


Frequencies are still an issue, but US, UK and Finland are showing the direction Cities could take an active role 5G for connecting private networks



11.10.2021

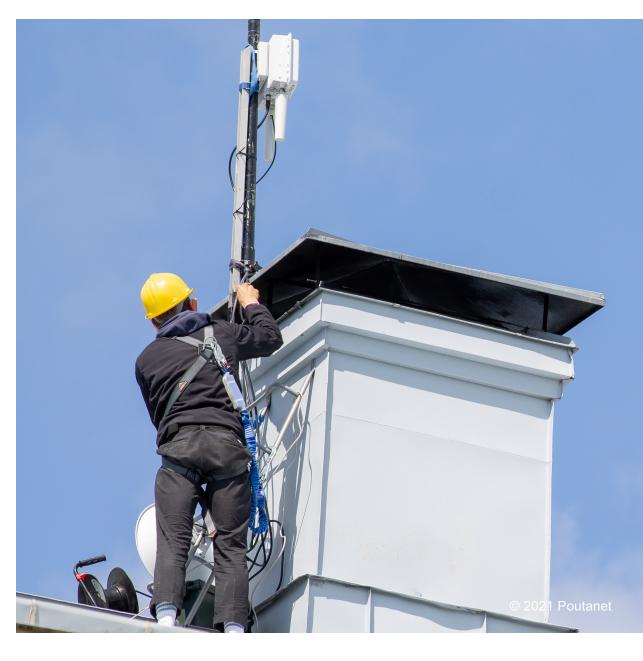
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## Rakkatec Connectivity Solution

Self-contained moving popup network for remote control





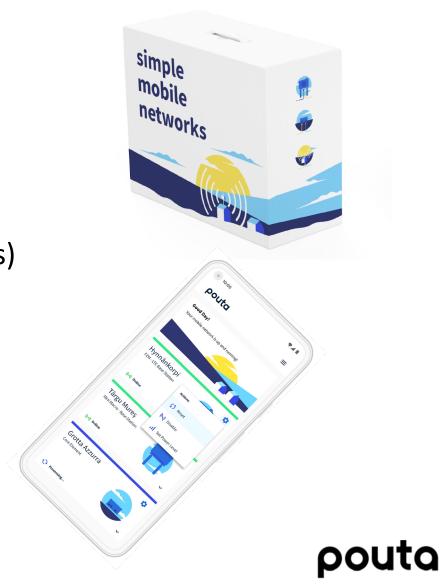
#### Temporary networks

Dedicated network for events to support service providers and staff on ground

# **Poutanet offering**

- Simple mobile networks

   + assistance in getting license
   + consulting if needed
   + Targeting hub partners (local integrators)
- Sunshine management and mediation solution for Nokia base stations
   + related consulting & integration
- Consulting on private mobile network topics



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