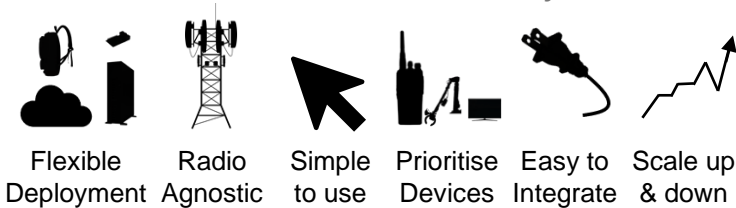


## Raemis™

### More than just a core network

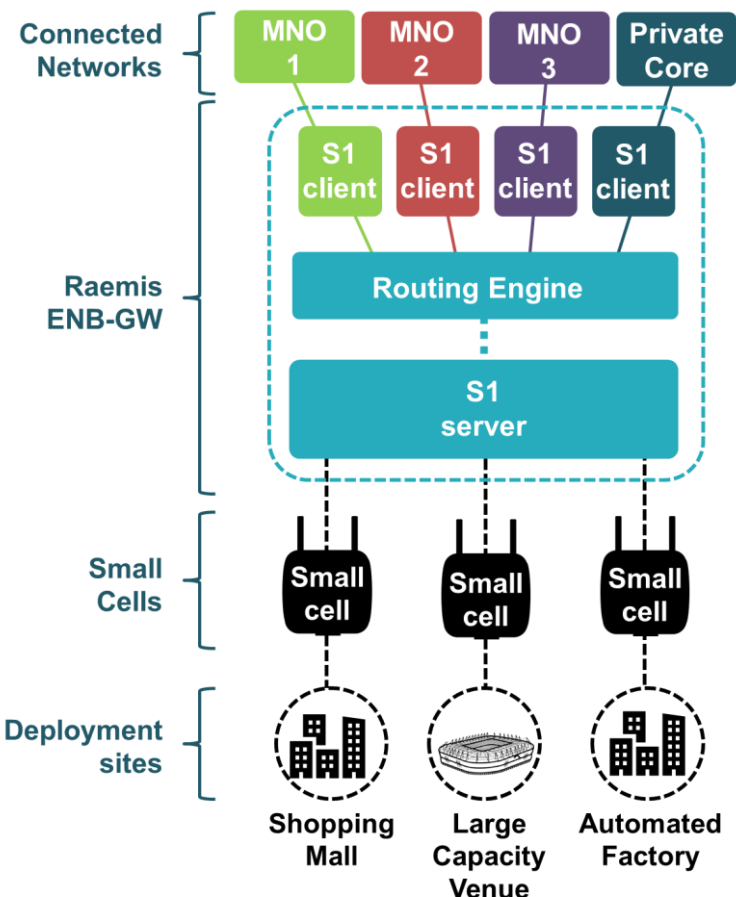
Druid's cellular solutions are built on our Raemis™ technology platform, which is comprised of a 3GPP compliant 4G/5G core, RestAPI and additional functionality.



### 3GPP to the Core

Druid's neutral host solution is built on our Raemis™ technology platform, which is comprised of a 3GPP compliant Multi-operator Core Network Gateway (MOCN Gateway or MOCN-GW), RestAPI and additional functionality.

### Multiple networks on one radio



### Raemis™ Neutral Host Main Features

- MOCN-GW Dashboard.
- Easy installation and integration with MNOs.
- 4G and 5G NSA support.
- Security Gateway (SeGW).
- Distributed Network Manager (DNM) integration.
- Performance and scalability (for both scale up and scale down).
- Resilience and redundancy options.
- Real-time System Monitoring.
- Admin User with GUI, Expert Mode and Edit permissions.
- Alarm Monitoring and Troubleshooting.
- Security Hardened images.
- Enterprise Integration.
- Full IPv6 support.

### MNO Integration

The Raemis™ MOCN-GW can integrate with any MNO using a 3GPP compliant S1 link. The SeGW is used to provide secure communication into the MNO's core network. The SeGW also supports CMPv2 if needed.

### Raemis Neutral Host 3GPP Features

#### Signaling (S1-C) handling

- Full E911 support
- S1 Flex with Load Balancing.
- Full S1 handover support.
- Ability to route based on TAI or IMSI.
- Support for emergency attaches.
- Access Control of UEs, per eNodeB or per system.
- PWS/CMAS support.

#### Data (S1-U) handling

- TCP MSS Adjust
- IPv4 fragmentation
- IPv6 Packet Too Big

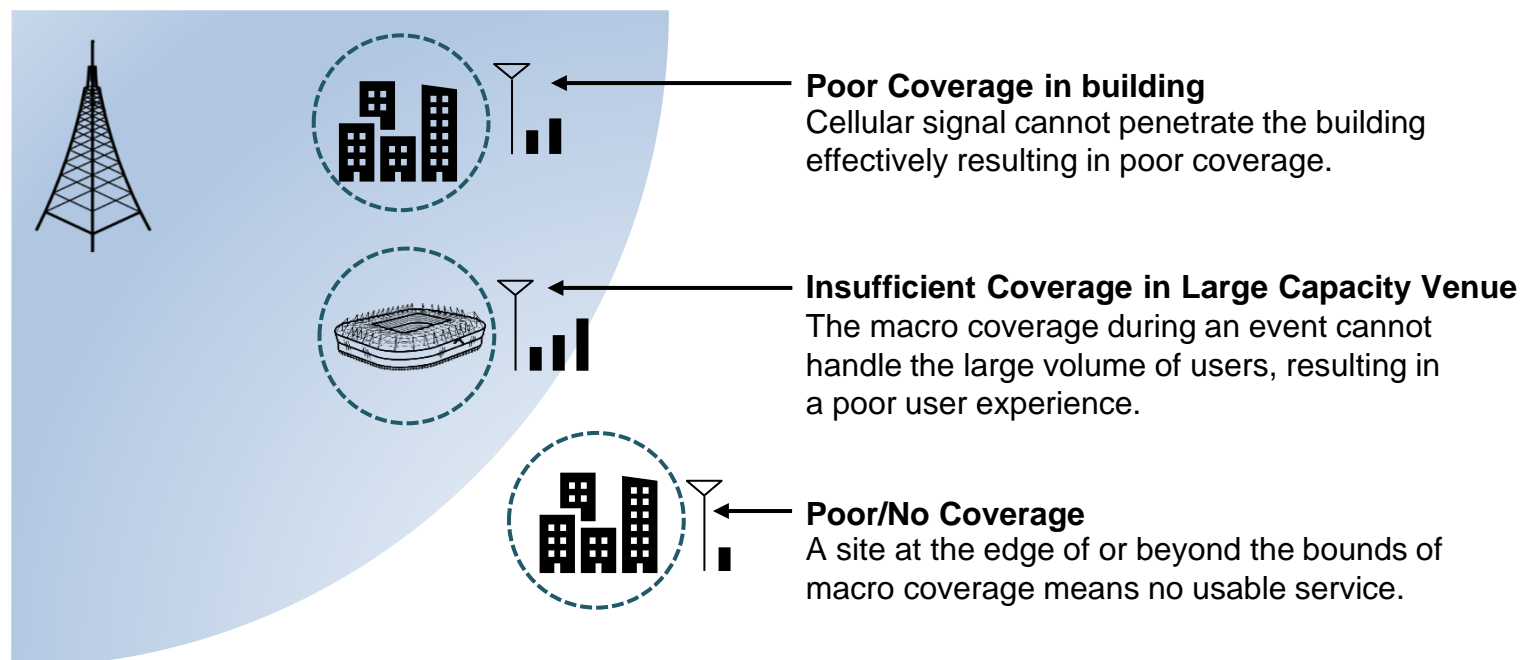
### Druid's Distributed Network Manager

Druid's Distributed Network Manager (DNM) can be used to orchestrate MOCN-GWs. The DNM enables you to deploy many serving gateways, all of which can be managed centrally from one Raemis login.

# MOCN Gateway enables Neutral Host

## MOCN stands for Multi Operator Core Networks

In the Neutral Host scenario, the MOCN-GW enables a single radio to support multiple MNOs. But not just that – it also enables a private network to operate on the same infrastructure, so the deployment will extend MNO coverage for public use, leaving the private network available for non-public use.



Raemis MOCN-GW solves the following issues:

- Poor Coverage in building:** Large buildings (e.g. hotels, office blocks, etc.) can have poor indoor coverage due to dense materials blocking MNO signals. Using small cells and Raemis, a building owner can supplement the MNO signals.
- Poor/No Coverage:** At a site that is that is beyond the reach of the MNO infrastructure, coverage is very weak or non-existent. Using small cells and Raemis, a building owner can extend MNO signals to provide service at the site.
- Large Capacity Venue:** Venues with large crowds (e.g. stadiums, festivals, etc.) can have poor service due an overloaded MNO network. Using small cells and Raemis, a building owner can provide extra capacity to the MNO network.

## The Raemis™ GUI

The Raemis™ GUI uses the Raemis™ RestAPI to access the core software and 3GPP components of the network, hiding the complexity of the 3GPP network, enabling an Enterprise's IT manager to perform complex tasks in a few clicks.

The Raemis™ GUI facilitates three levels of customisation:

- White labelling: Replacing the Raemis™ brand logo and product name.
- Extension Apps: Adding a new panel to the GUI.
- New GUI. Replacing the existing GUI with a customer-developed GUI.

## The Raemis™ API

The Raemis™ platform exposes a powerful RESTful API that enables application developers to build on top of Raemis™ or integrate external applications with the Raemis™ platform. Druid developed the Raemis™ PCN GUI using the same RESTful API that is available to application developers. Any feature, data, or action that currently available in the Raemis™ GUI is also available using the RESTful API.

## Scalability

- The Raemis™ platform works for organizations of any size, from small businesses to large enterprises.
- During the commissioning phase, Raemis is configured for the number of operators (1-10), numbers of eNodeB devices (1-1000) and the number of users (1-50,000).
- The Raemis platform can scale down to a single eNodeB device and a handful of users all in a single VM that has a small computing and memory footprint.

## gNodeB Gateway

- Druid are currently working on a gNodeB Gateway to enable 5G MOCN deployments, expected to be released in 2024.
- This means that future MOCN deployments will support both a 4G and a 5G capability.