



ons

NORTH AMERICA

OPEN NETWORKING //

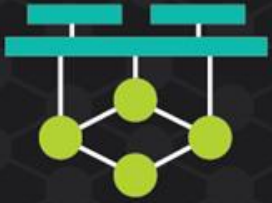
Enabling Collaborative
Development & Innovation

They are Popping up like Mushrooms!

Do we really need so many Open Source Edge
Projects?

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Who We Are



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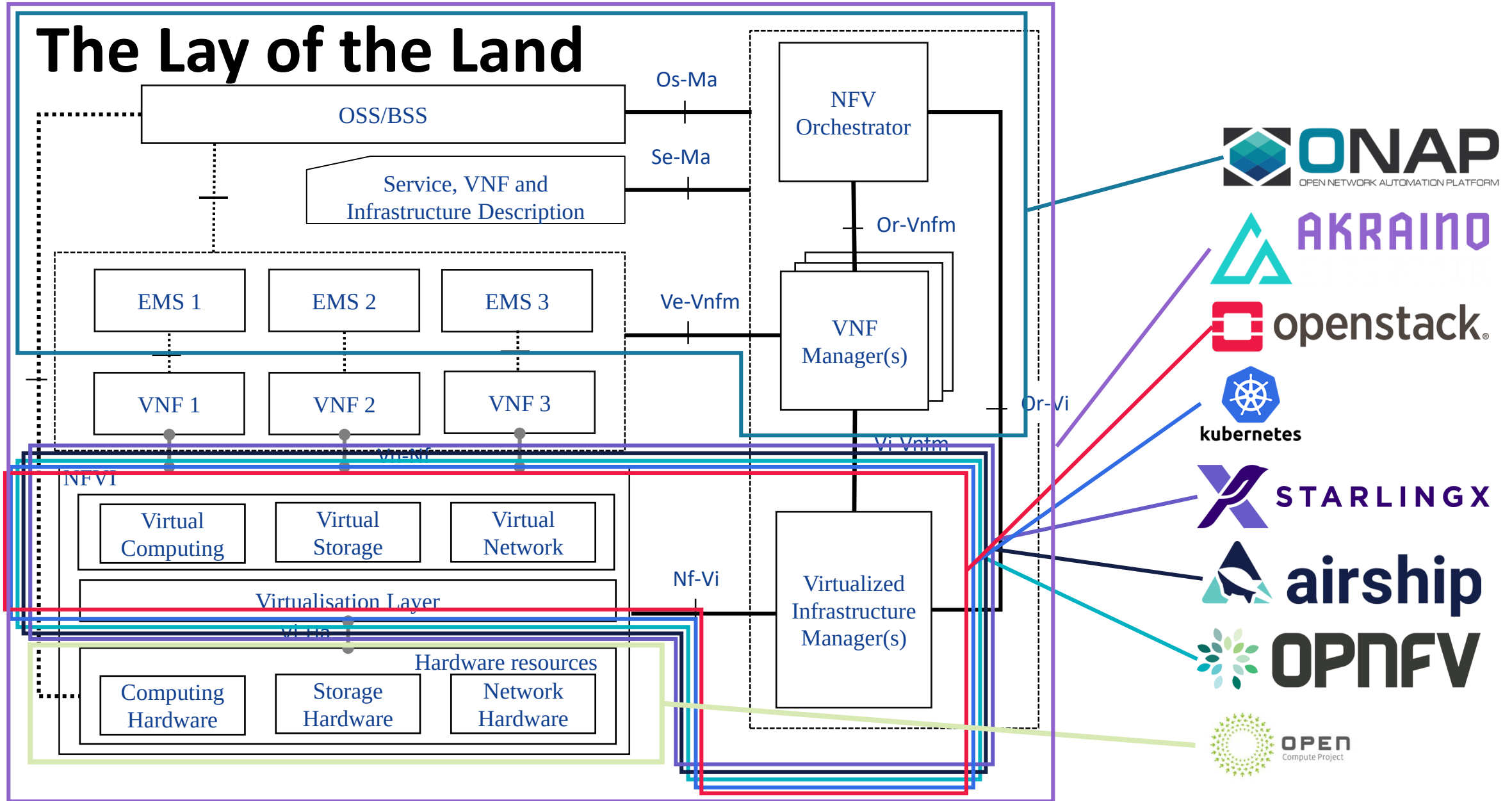
Ecosystem Technical Lead
OpenStack Foundation

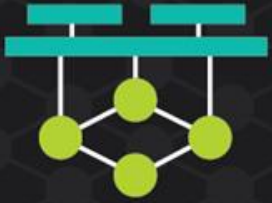
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The Lay of the Land





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Questions?



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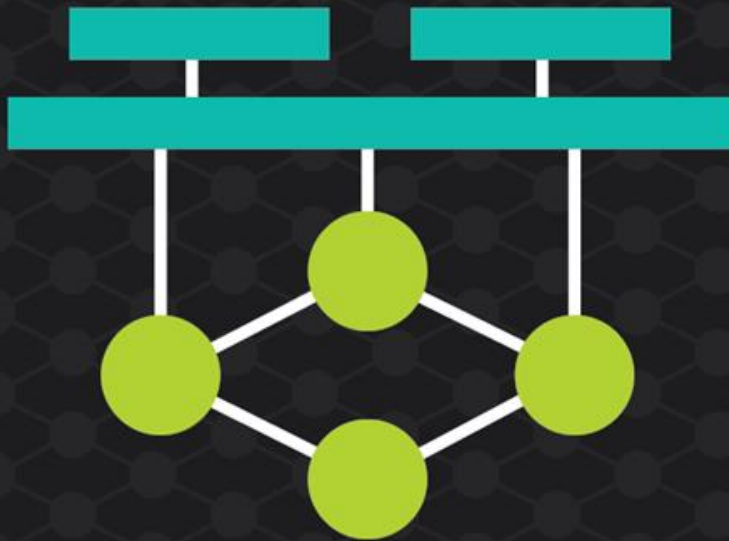
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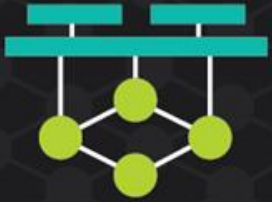
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Appendix Materials

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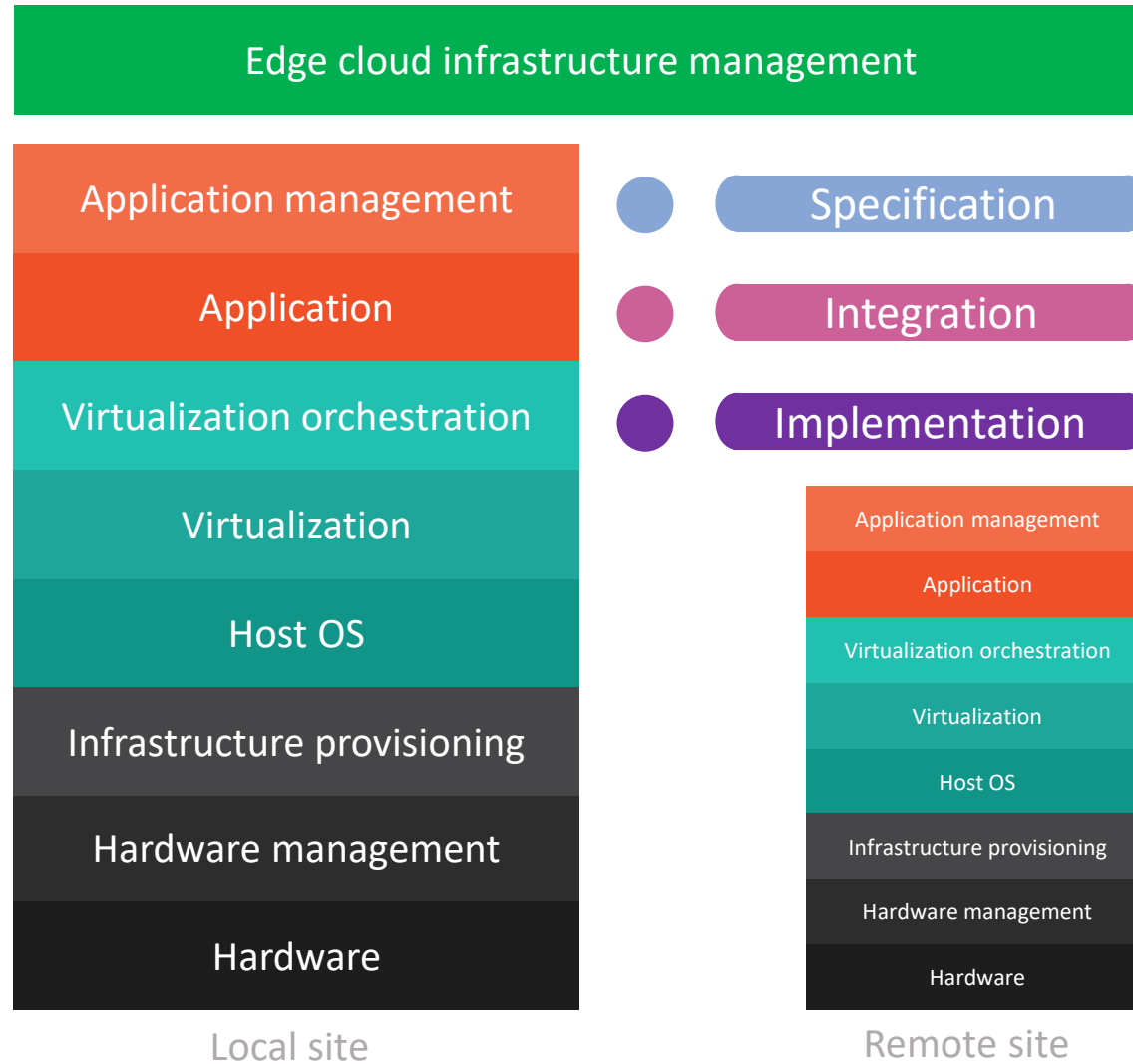
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Some Relevant Open Source Projects

- LF EDGE Projects
 - Akraino
 - EdgeX Foundry
 - Project EVE
 - HomeEdge
 - Glossary
- Adjacent communities
 - ONAP Edge Automation Group
 - OPNFV Edge Cloud Project
 - Kubernetes IoT Edge Working Group
- Adjacent communities
 - OpenStack: Cyborg, Glance, Keystone
 - IoTronic – unofficial, Airship, StarlingX
 - OpenEdge based on Baidu's existing Intelligent Edge (BIE)
 - MEF Projects – fill in
 - ETSI Projects – fill in
 - OpenCompute
 - Anything else....

Edge Project Legend



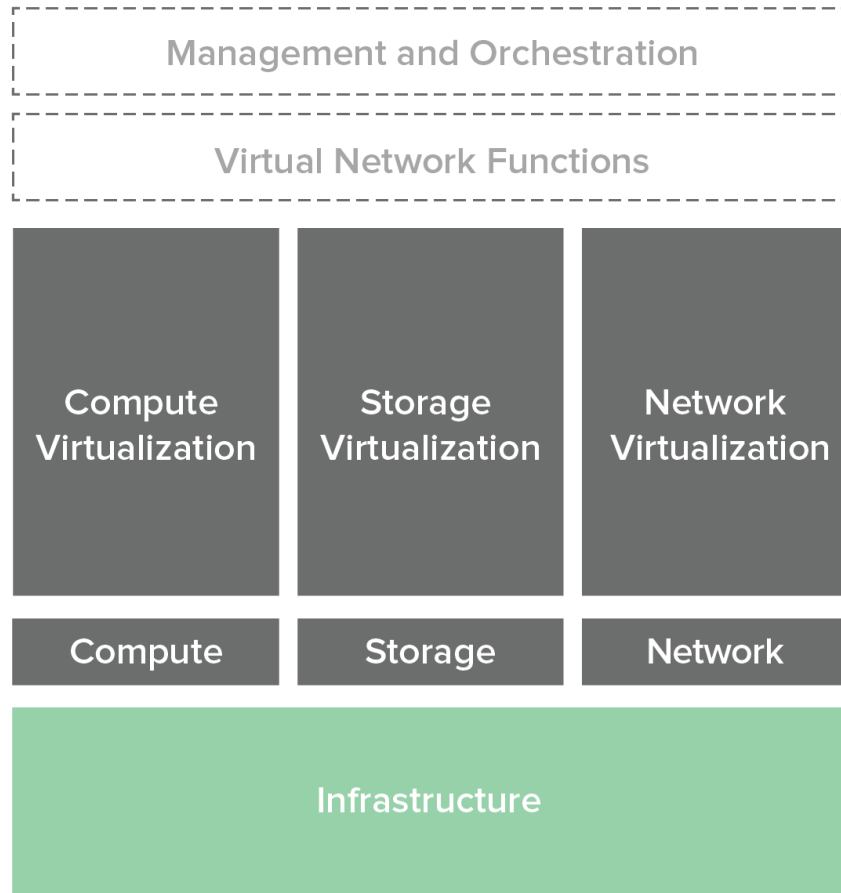
OPNFV: what



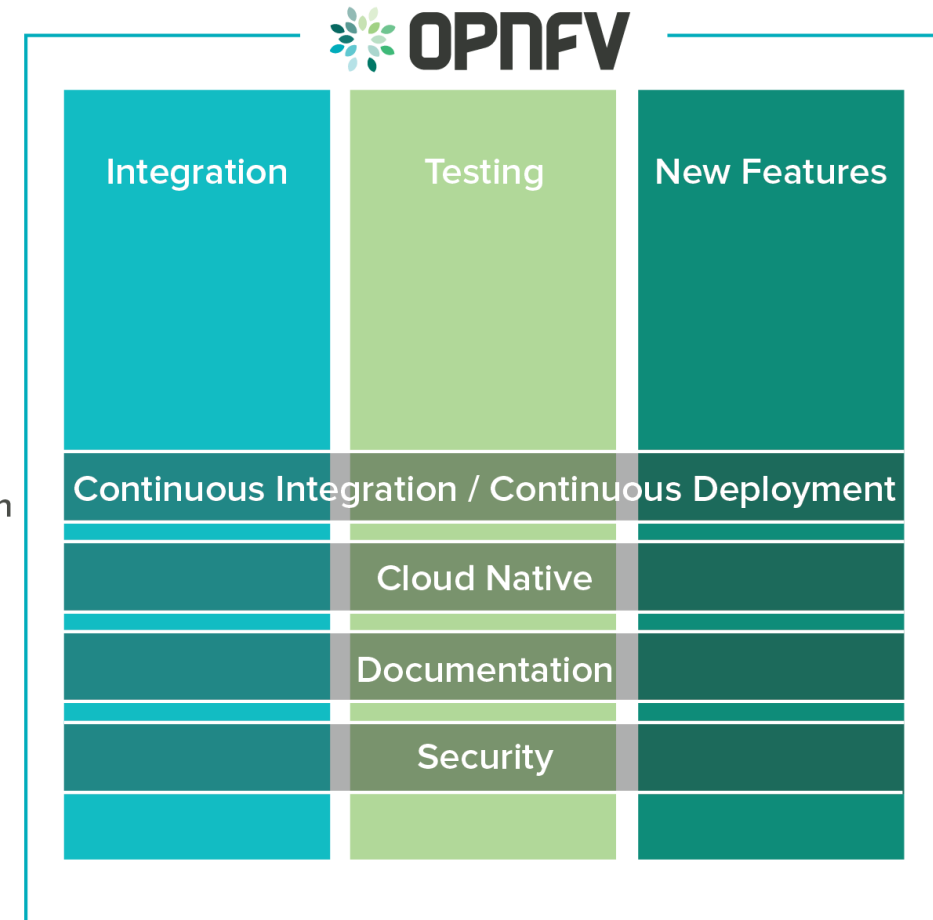
- Open Platform for NFV (OPNFV) facilitates the development and evolution of NFV components across various open source ecosystems.
- Through system level integration, deployment and testing, OPNFV creates a reference NFV platform to accelerate the transformation of enterprise and service provider networks.
- With OPNFV Verification Program OPNFV provides a reference platform to run the workloads on platforms which are compliant with a set of requirements.



OPNFV / what



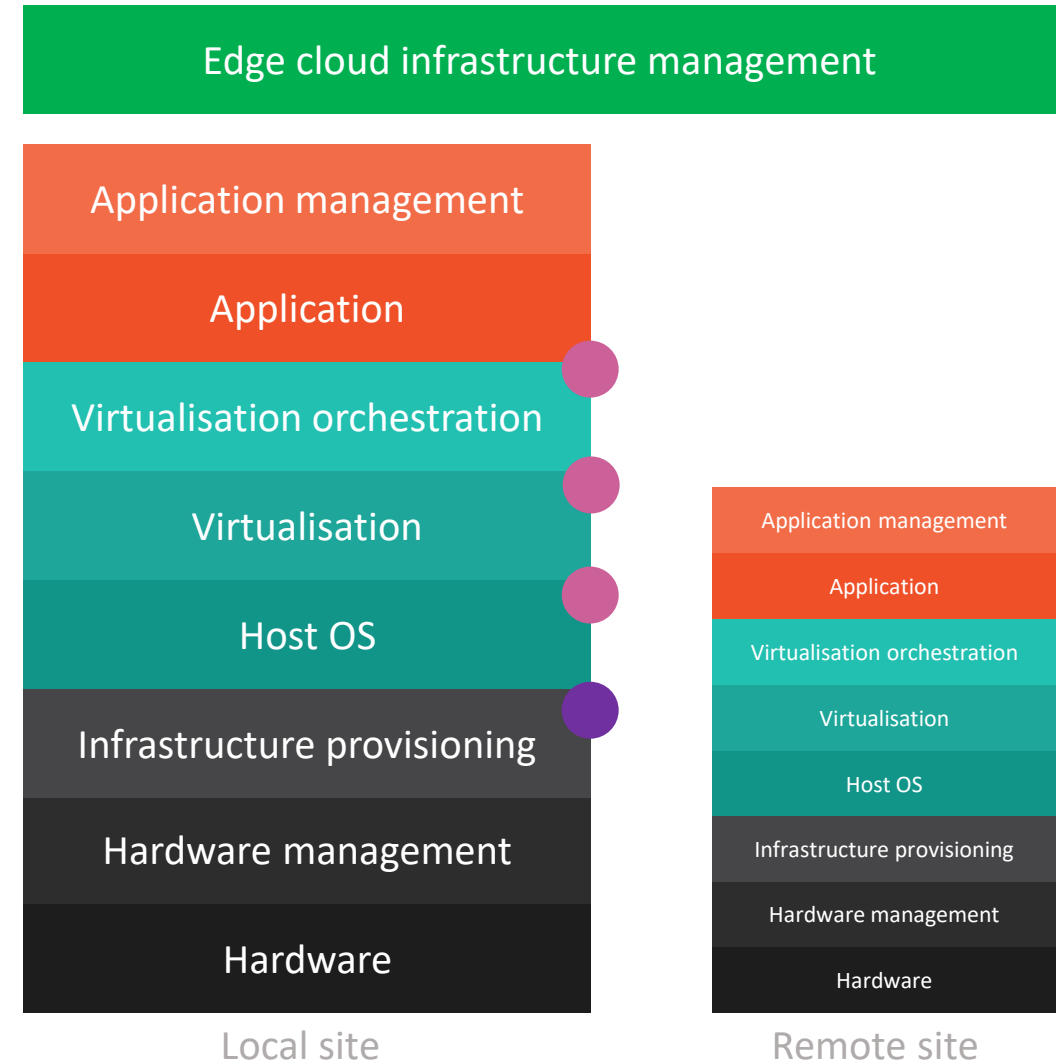
Upstream
Project
Collaboration



OPNFV: how /resources



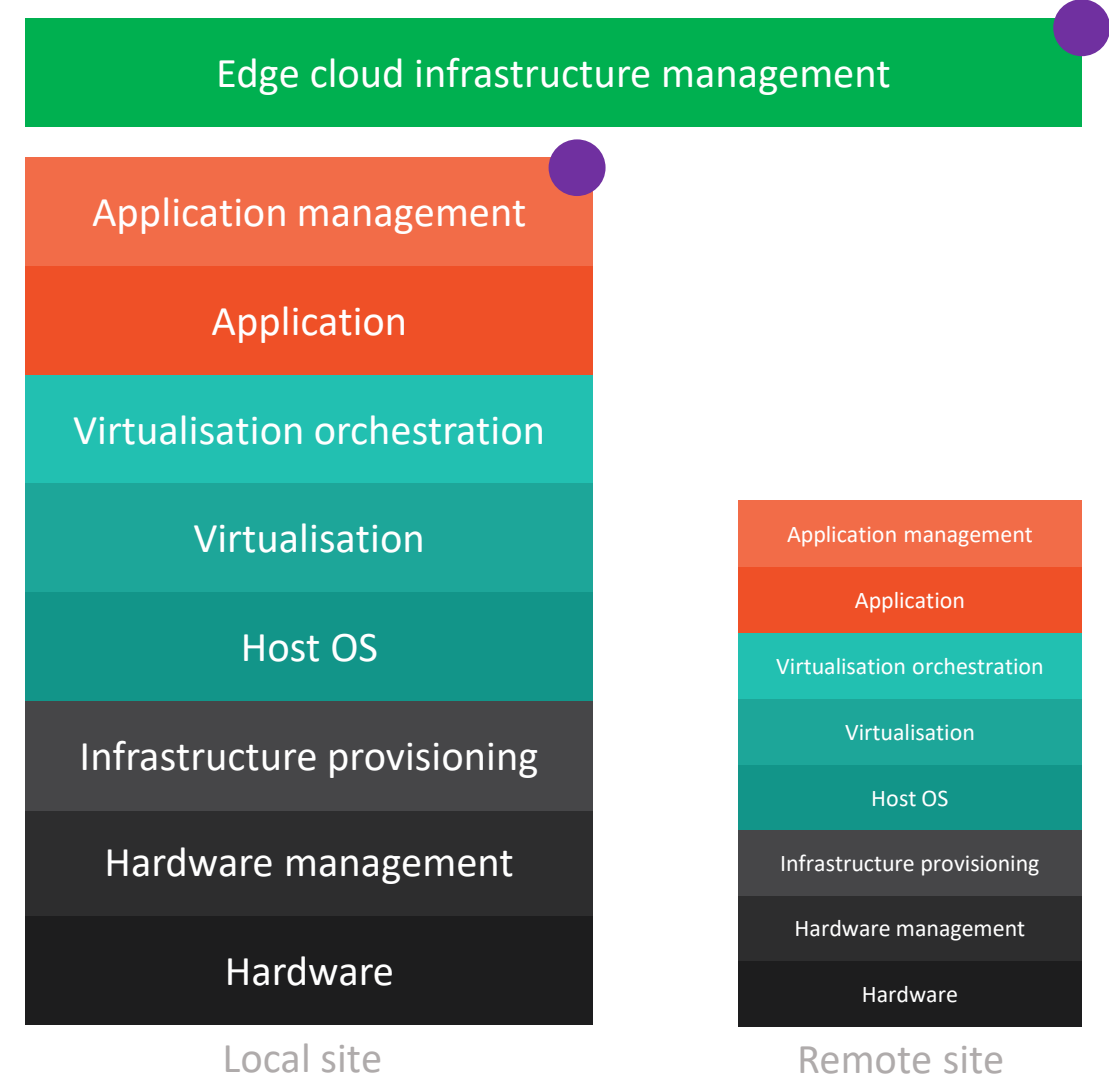
- OPNFV Edge Cloud Project Wiki:
<https://wiki.opnfv.org/display/PROJ/Edge+cloud>
- OPNFV Edge Project Whitepaper:
<https://docs.opnfv.org/en/latest/submodules/edgecloud/docs/development/requirements/requirements.html>
- OPNFV Containers Project Wiki:
<https://wiki.opnfv.org/display/OpenRetriever/Container4NFV>
- OPNFV Cloud Native WG:
<https://wiki.opnfv.org/pages/viewpage.action?pageId=26837622>
- OPNFV Rocket project proposal:
<https://wiki.opnfv.org/display/PROJ/Rocket>



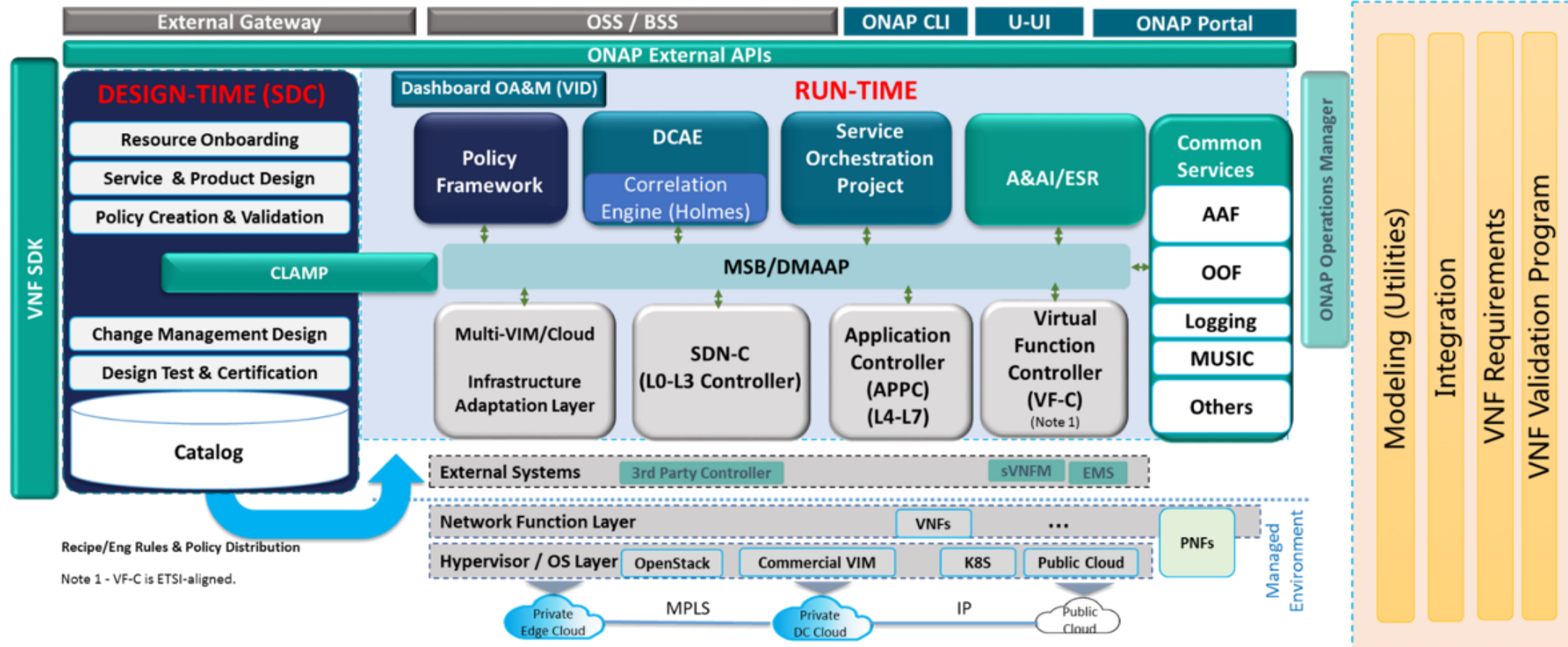
ONAP: what / how / resources



- ONAP provides a comprehensive platform for real-time, policy-driven orchestration and automation of physical and virtual network functions that will enable software, network, IT and cloud providers and developers to rapidly automate new services and support complete lifecycle management.
- ONAP Edge Automation wiki:
<https://wiki.onap.org/display/DW/Edge+Automation+through+ONAP>



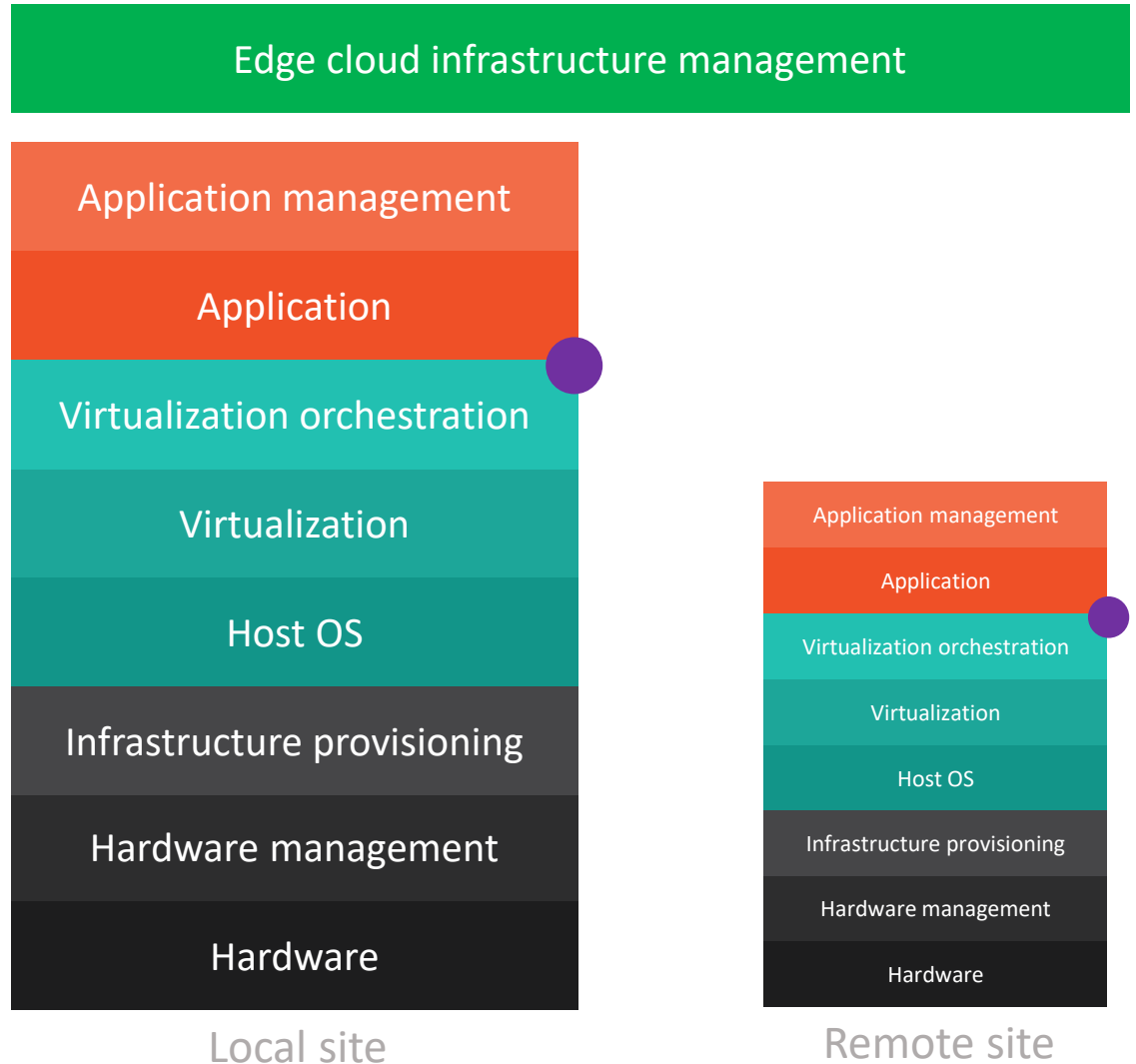
ONAP: what



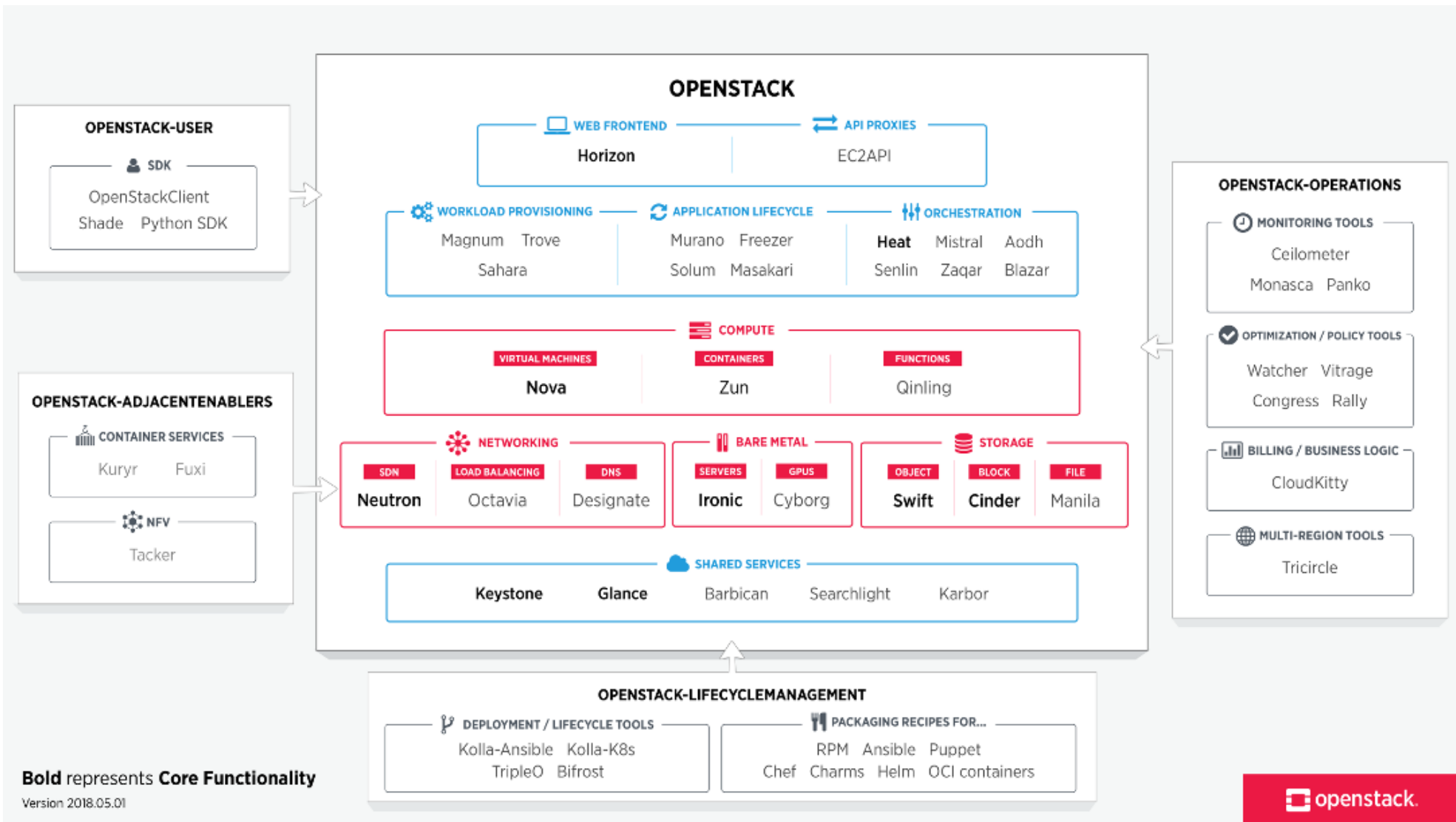
Kubernetes: what / how / resources



- Kubernetes is an open-source system for automating deployment, scaling, and management of containerized applications.
- IoT EDGE SIG WP:
<https://docs.google.com/document/d/1We-pRDV9LDFo-vd9DURCPC5-Bum2FvjHUGZ1tacGmk8/edit>



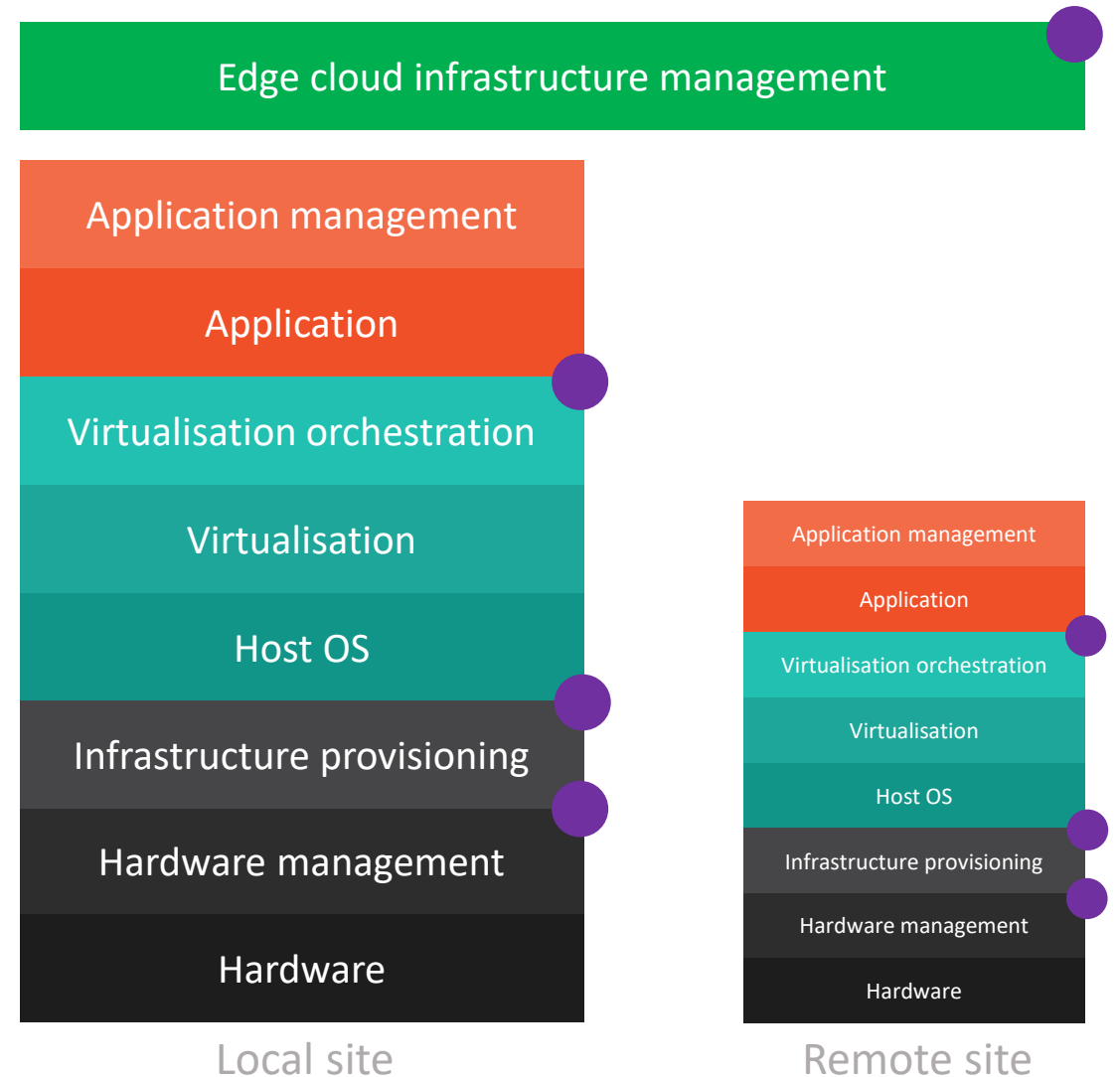
OpenStack: what



OpenStack: what / how / resources



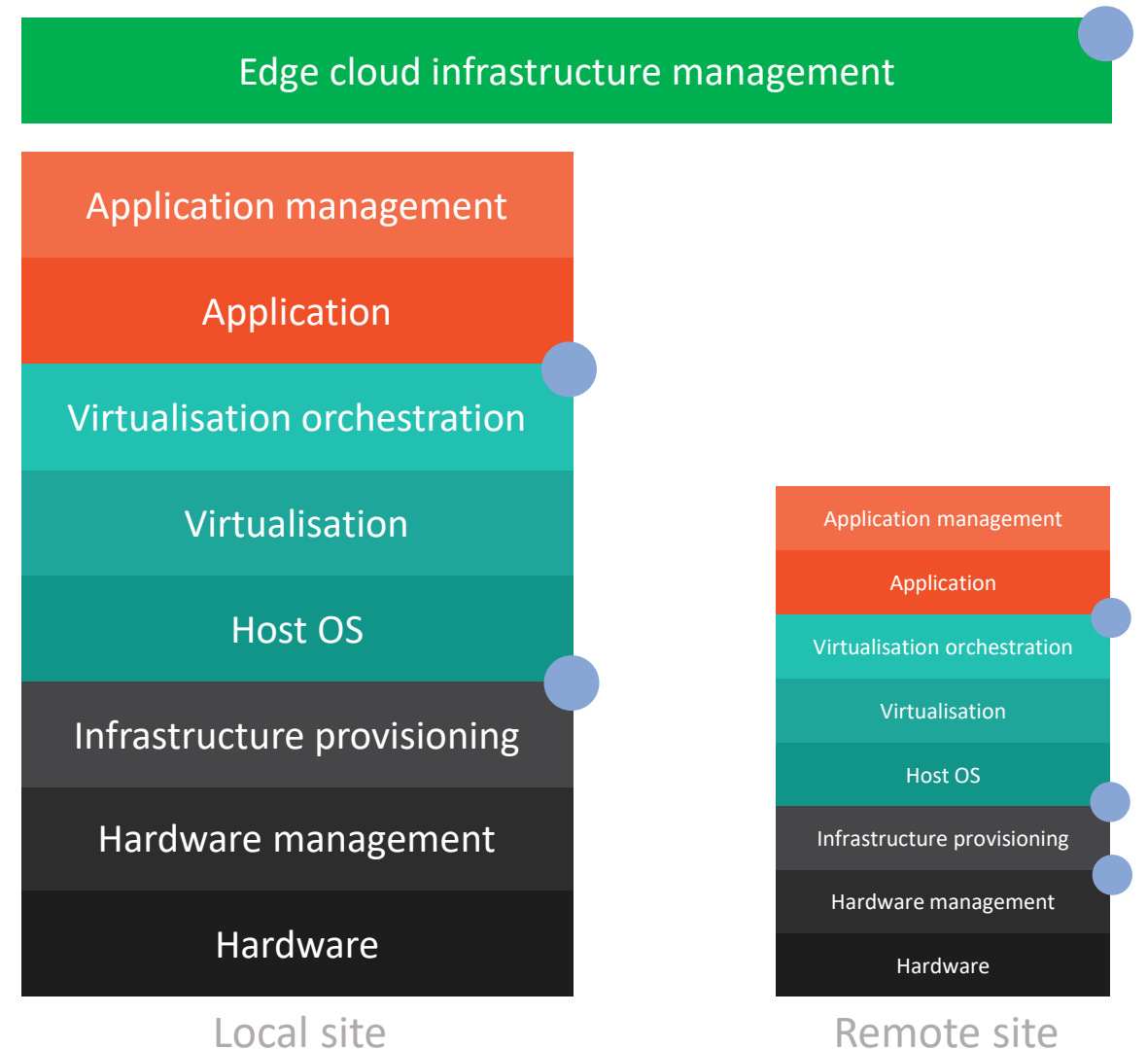
- OpenStack is a software package that provides a cloud platform for Public and Private cloud covering various use cases including Enterprise and Telecom. The main focus is on Infrastructure as a Service (IaaS) cloud and additional services built upon IaaS.
- Edge Computing Group wiki:
https://wiki.openstack.org/wiki/Edge_Computing_Group
- Use Cases wiki:
https://wiki.openstack.org/wiki/Edge_Computing_Group/Use_Cases
- Requirements wiki:
https://wiki.openstack.org/wiki/OpenStack_Edge_Discussions_Dublin_PTG
- Glance architectures wiki:
https://wiki.openstack.org/wiki/Image_handling_in_edge_environment
- Keystone architectures wiki:
https://wiki.openstack.org/wiki/Keystone_edge_architectures



OSF Edge Computing Group (ECG): how



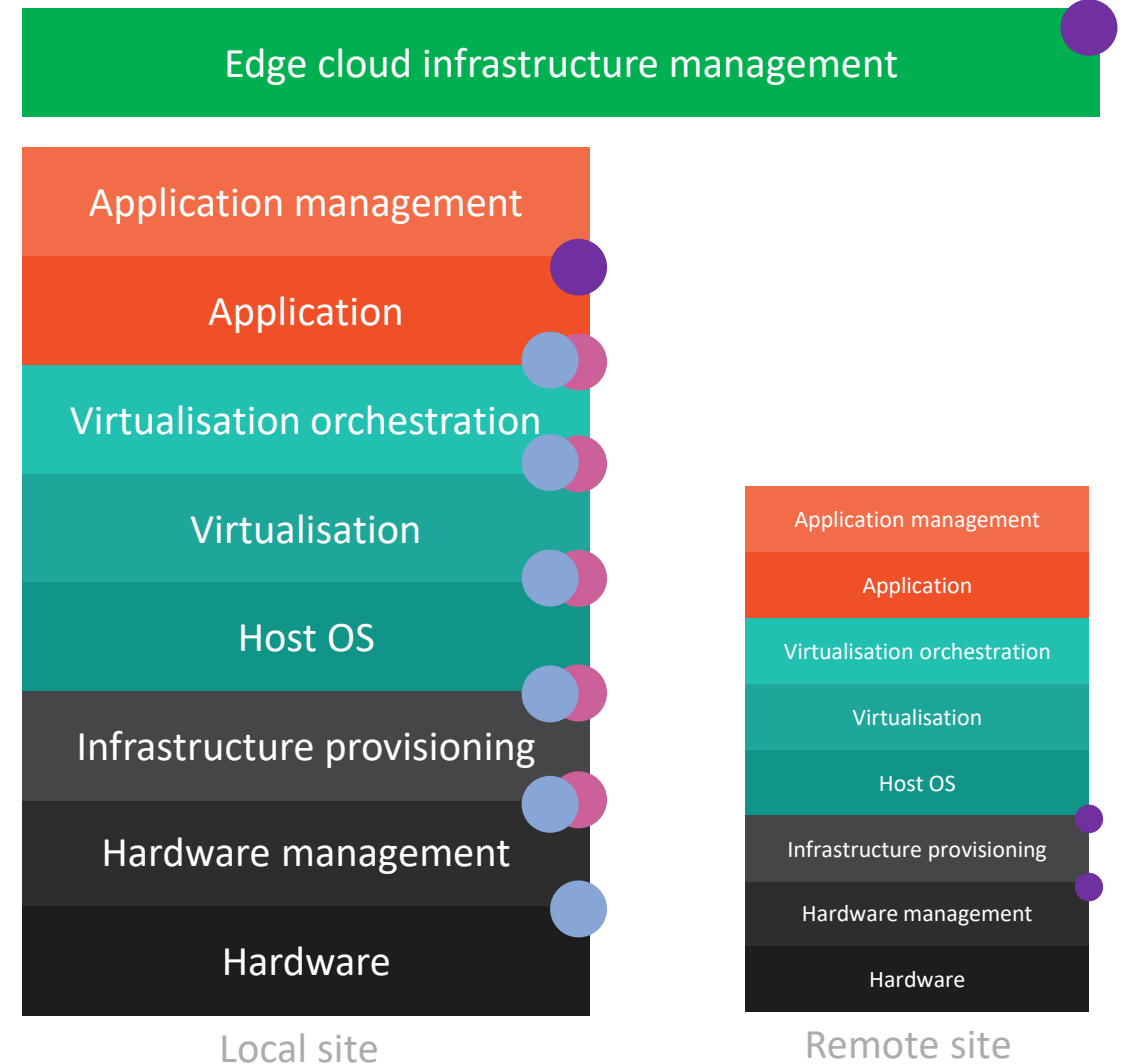
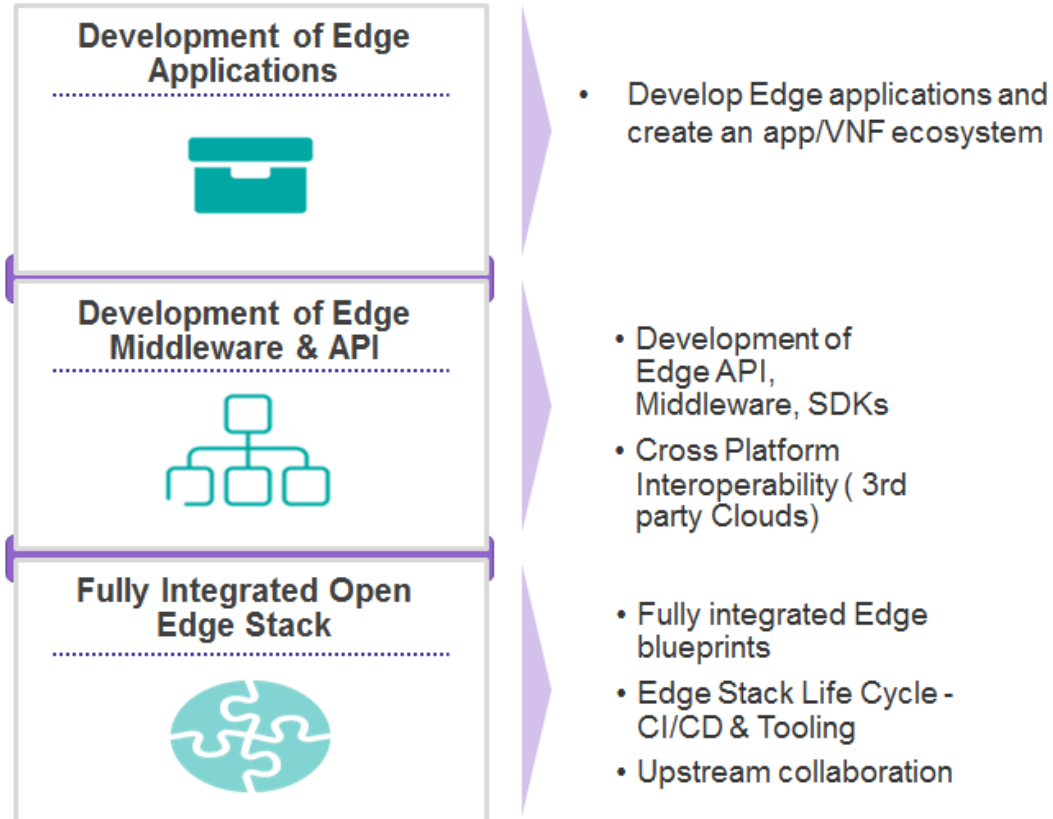
- A group under the OpenStack foundation to work out the use cases and requirements for edge clouds and to help different open source projects to implement these requirements
- Identify use cases and scenarios related to edge computing
- Focus on challenges and solutions in the IaaS layer
 - Find common requirements
 - Define common edge computing architectures
 - Design and implement
 - Enhancements to existing projects and services to provide a better fit for edge
 - New projects and services to implement missing functionality
- Emphasize the importance of open infrastructure
- Encourage industry-wide collaboration
- Whitepaper: <https://www.openstack.org/assets/edge/OpenStack-EdgeWhitepaper-v3-online.pdf>



Akraino: resources / how



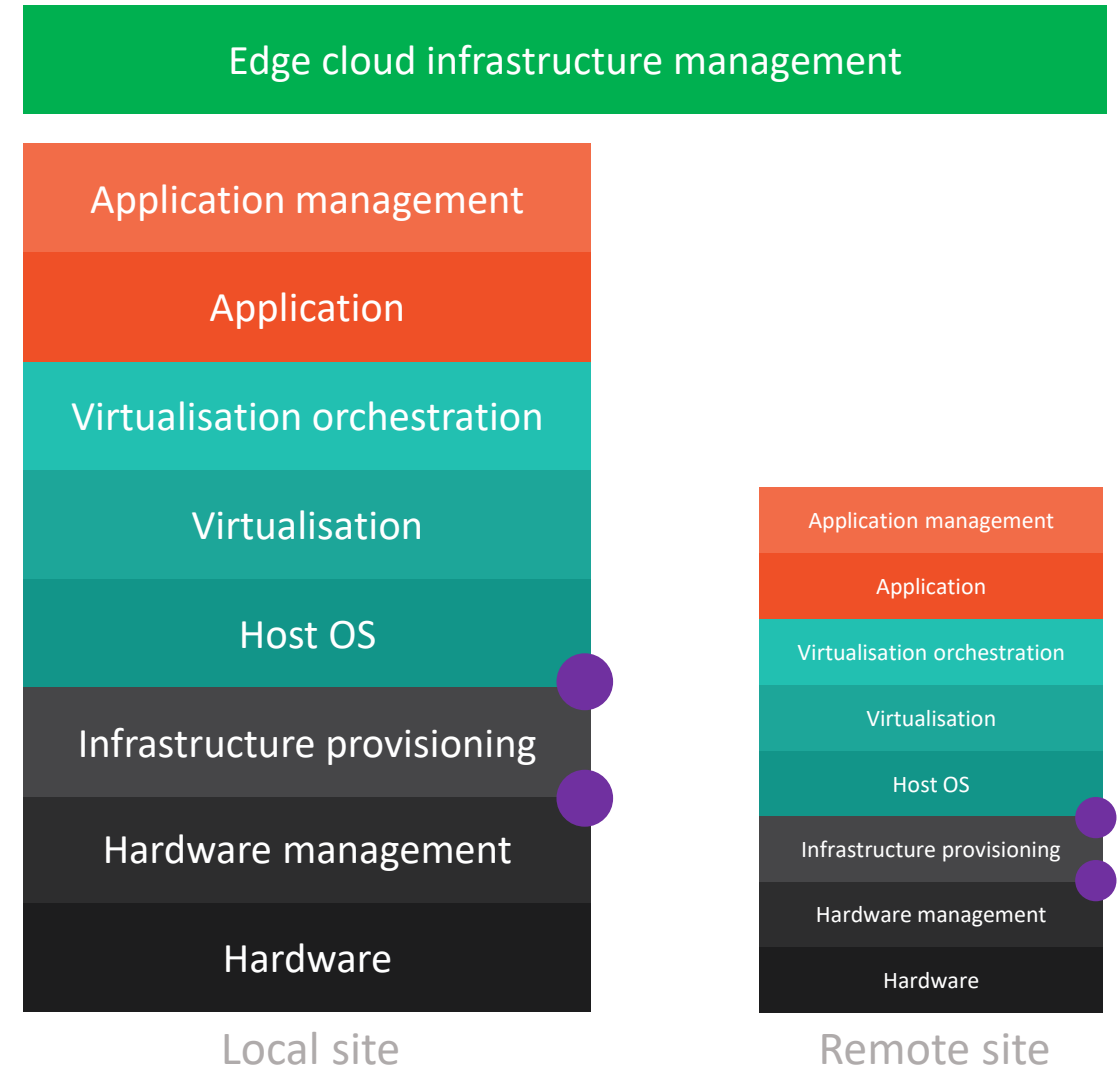
→ Akraino wiki:
<https://wiki.akraino.org/display/AK/Akraino+Edge+Stack+Goal+and+Key+Principles>



Airship: what / resources / how

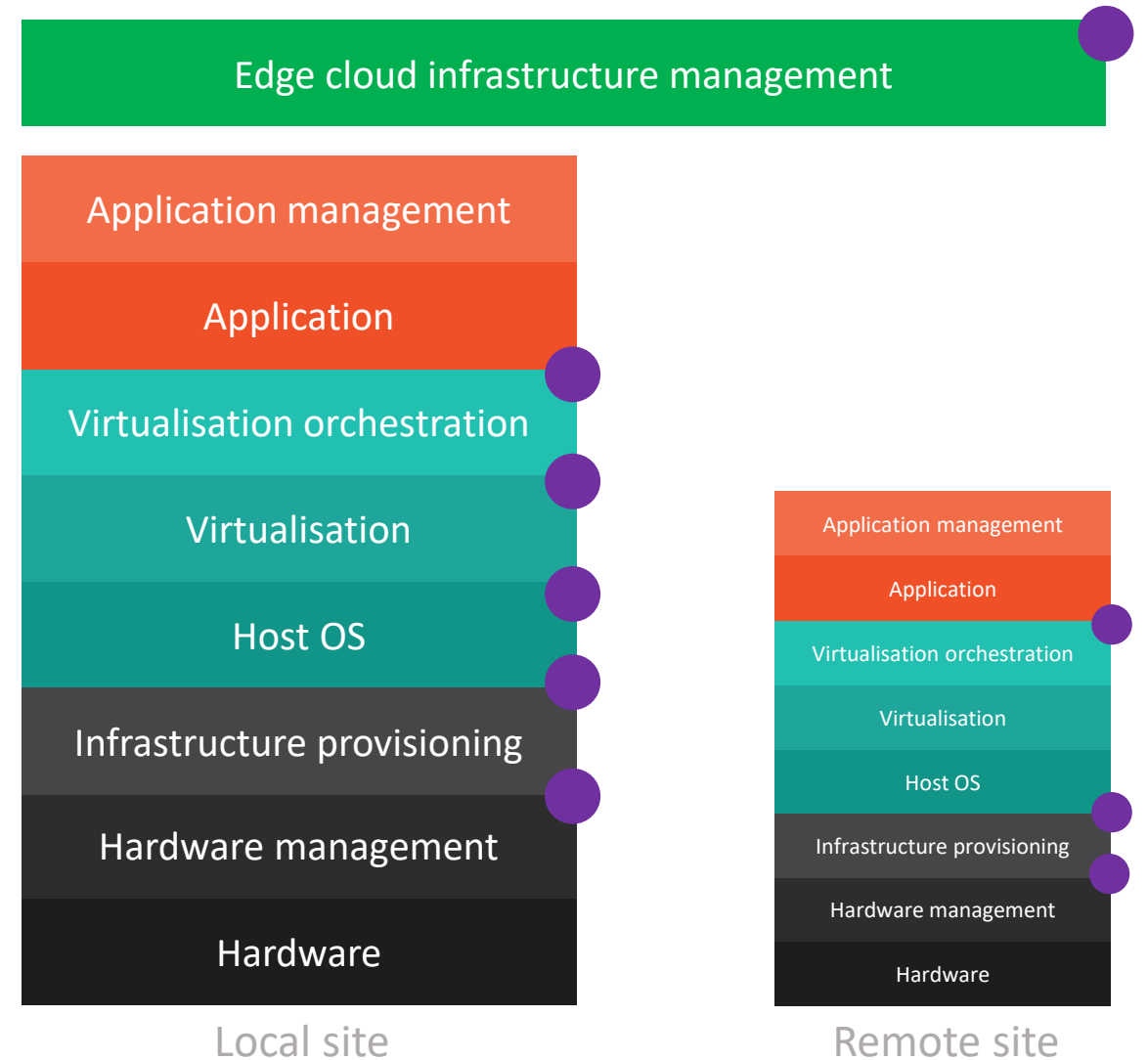


- Airship is a collection of interoperable and loosely coupled open source tools that provide automated cloud provisioning and management in a declarative way.
- Airship documentation:
<https://airshipit.readthedocs.io/en/latest/index.html>
- Airship treasuremap:
<https://treasuremap.readthedocs.io/en/latest/deployment.html>



StarlingX: what / resources / how STARLINGX

- StarlingX is open source software that provides cloud infrastructure for the most demanding applications in edge, industrial IOT, and telecom use cases.
- StarlingX wiki:
<https://wiki.openstack.org/wiki/StarlingX>



Open Compute Project: what / resources / how



- The Open Compute Project (OCP) is reimagining hardware, making it more efficient, flexible, and scalable. Join our global community of technology leaders working together to break open the black box of proprietary IT infrastructure to achieve greater choice, customization, and cost savings.
- OCP webpage: <https://www.opencompute.org/>

