HCL 5G Offerings and Investments

HCL 5G Network Offerings

HCL believes 5G is about delivering business outcomes and generating new revenue streams for communication service providers (CSPs). With 5G network rollout, though the new kinds of spectrum bands grab all the headlines, radio access is just the tip of the iceberg. What lies beneath is unlocking the full potential of 5G cannot happen without a move to the cloud. HCL offers differentiated and compelling 5G offerings and some of them are listed below: -

01 Enterprise Solutions -
Private Networks and Cloud-Based Wireless LAN Controller

HCL PRIVATE NETWORKS

The Private Networks solution offers a single network to support diversified use cases such as low latency, high speed, power-efficient, seamless indoor/outdoor coverage along with better capacity planning, control and security.

Private network deployment requires collaboration between multiple partner ecosystems. It is also dependent on device and network standards and spectra access policies. Currently, these standards are still emerging and vary across geographies. To overcome these challenges,

HCL has on-boarded multiple partners and leveraged its products in setting up a private network in the lab environment and also created **PriNet (Private LTE as a kit)** as one of the offerings.

PriNet solves the adoption and deployment problems by defining the right-size kit depending on the scale and use cases. It supports operations from bare metal to cloud.

HCL has also created **Use Case as a Service** to meet the solution requirements of enterprises and already started manufacturing and health care solutions migration over private network.

RMI (Real-Time Manufacturing Insights) providing real-time operation visibility from shop floor to top floor is now available over private network.

HCL is also migrating AGV (Automated Guided Vehicle) operations over private network and also adding new features such as auto stop/start, CBM(Condition Based Monitoring) and dynamic routing to AGV operations.

HCL has plans to enable a managed services practice and AR/VR-based MEC use cases with zero-touch deployment alongside operations in its Private Network solution.

HCL CLOUD-BASED WIRELESS LAN CONTROLLER

HCL brings virtualized, hardware agnostic, scalable, and secured solution for managing large scale Wi-Fi access point deployments. It supports all Wi-Fi standards including the latest WiFi-6 (802.11ax).

This advanced analytics-based solution provides interference detection and avoidance, load balancing across access points with dynamic channel alignment, and power management to optimize Wi-Fi performance.

The Benefits of HCL Wireless LAN Controller are:

Assistance to global customers deliver improved user experience by offloading data at lower costs given the explosive data consumption with growing 5G adoption.

Prevention to CSPs from getting into a vendor lock-in situation with 'bring your own access point hardware'.

HCL continues to evolve the product with an enhanced feature set such as self-organizing, self-optimizing, and self-healing to address enterprise use cases.

HCL's strong engineering domain and diverse technology background will help in refining these solutions. HCL continues to invest in technologies for integrated 5G access points, AI/ML-based based network optimization, and radio resource management solutions for 5G networks. This helps enterprises meet the 'Time to Market' and 'Cost-Effective Digital Transformation' programs.

02 Open RAN Solution

- HCL contributes to the open-source community i.e., the ORAN alliance to increase automation and performance of disaggregated RAN management systems.
- HCL introduces a cognitive, intelligent solution to the open-source community.

03 TURBO – HCL's 5G Test Automation Solution

- HCL 5G Test Automation and Orchestration platform helps in managing, scheduling, and monitoring test case execution for 5G RAN (Radio Access Network), core and IP (Internet Protocol) transport network.
- HCL's UE (User Equipment) controller platform can test network performance KPIs for 5G RAN (Radio Access Network) and core using real UE (User Equipment).

04 5G Telco Cloud

- HCL BluGenie solution provides NFV (Network Function Virtualization) platform deployment automation, continuous everything (CI/CD/CT) workflows to iteratively mature network services from development-testing, integration, and pre-production to production stages
- HCL provides an analytics engine with AI model-driven key behavioral insights into xNFs and infrastructure services to aid in achieving MANO (Management and Orchestration) service assurance objectives

05 5G Products and IPS

- **High-capacity 5G wireless transport solution,** High-capacity millimeter wave modem delivers up to 25 gbps true traffic in dual carrier configuration.
- **Hardware-acceleration solution,** network acceleration workloads in Intel's N3000 SmartNIC cards.
- **iCE.X,** cloud-ready carrier-grade, intelligent connected device management platform.
- **SON** (Self-Organizing Network) to automate and optimize 5G access networks.

06 5G Experience Labs

HCL has invested in over $50 million across 22+ customer-centric labs, 40 state-of-the-art development centers in 6 major locations in India and 5 other locations globally. HCL has distributed 5G labs across India and the US. These labs comprise the Private Network solution ORAN-Radio Integration lab, 5G Solution lab, and Multi-VIM lab deployed in a multi-cloud environment.
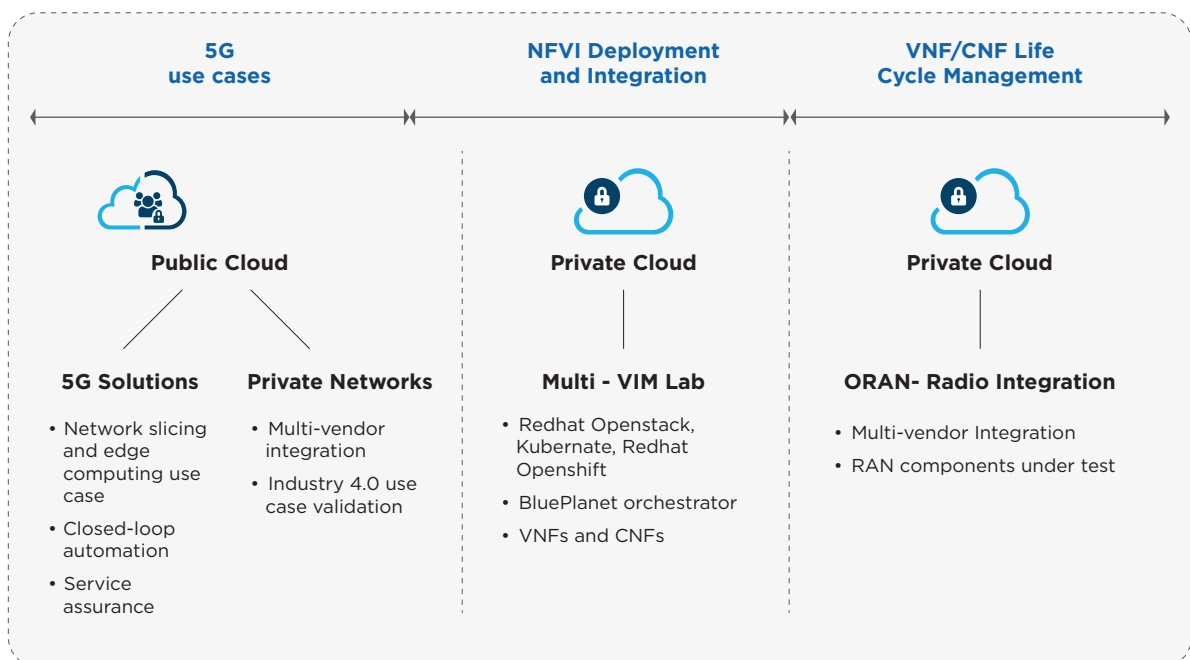
Figure 1 : HCL 5G Labs

HCL, along with its partners, will use the 5G labs showcase world-class 5G network use cases, and demonstrate interoperability and ease of integration to CSPs across the globe.

HCL's goal is to build automation, orchestration, and network analytic solutions in these labs to accelerate 5G rollout and minimize the cost of network operations. HCL will leverage the experience and expertise from these labs to offer ease of integration, reduction in root cause analysis time, improved interoperability, and also accelerate 5G services to CSPs.

Success Stories

HCL is working with its customers to accelerate their 5G journey. For the leading telecom OEMs, semiconductor companies' worldwide, HCL is an integral part of their R&D divisions towards engineering and innovating their products for the 5G environment. Some of our client success stories are:

For a leading US-based carrier, HCL works closely with the research division for the open source contributions in the ORAN area.

For a leading Tier-1 Philippines carrier, HCL did end-to-end design, implementation, and support for the NFVI project which includes activities such as new NFVI installation, VM creation, NIC creation, and VNF/CNF onboarding. This provided a 20% time-to-market acceleration.

For a leading Tier-1 Japanese carrier, HCL validated an open source-based WiFi-6 access point and a cloud controller. It conducted a nationwide deployment of the same. The product was launched quickly with 60% cost reduction as more than half of the cases were automated in the pre-production stage.

For a leading oil & gas producer, HCL is providing consultancy services by identifying migration needs, as well as defining unified network management, and application layer management, and high-level architecture.

Why HCL – The Right 5G Partner

HCL cultivates a unique and innovative 5G ecosystem – comprising of leading Silicon players, OEM players, CSPs, OTT providers, cloud providers, a 20+ partner ecosystem, and 5G labs along with differentiated IPs. HCL's 5G investment can play a crucial role in the entire value chain mainly driven by automation, optimization, cloudification, and containerization.

With our 5G Lab which comprises a multi-vendor partner ecosystem, we provide a 'one-stop 5G platform' to create a runway to experiment, innovate quicker, and take a fast-paced approach to develop a successful 5G ecosystem. Our domain expertise, vertical industry experience, in-depth understanding of technology trends, innovative solutions, and investment-led business models make us stand apart.