

The Challenge

Operators are striving to participate in the internet economy by growing revenue and transforming their business models. In their path are major barriers ranging from competition from over-the-top providers, inflexible legacy networks, to inefficient utilization of network assets. Revenue has flatlined at the same time as immediate investments are needed to achieve sustainable business growth.

The arrival of 5G will fundamentally alter the amount and type of services delivered by mobile operators. By gaining greater efficiency as the network scales, operators can unleash higher quality and greater resiliency at a lower cost of delivery. Rapid service creation and delivery will be improved by four times today's rate through slicing, automation, and microservices. Streamlining integration of third-party applications ensures that content can be consumed "as-a-service" to enhance customization and personalization of the overall experience.

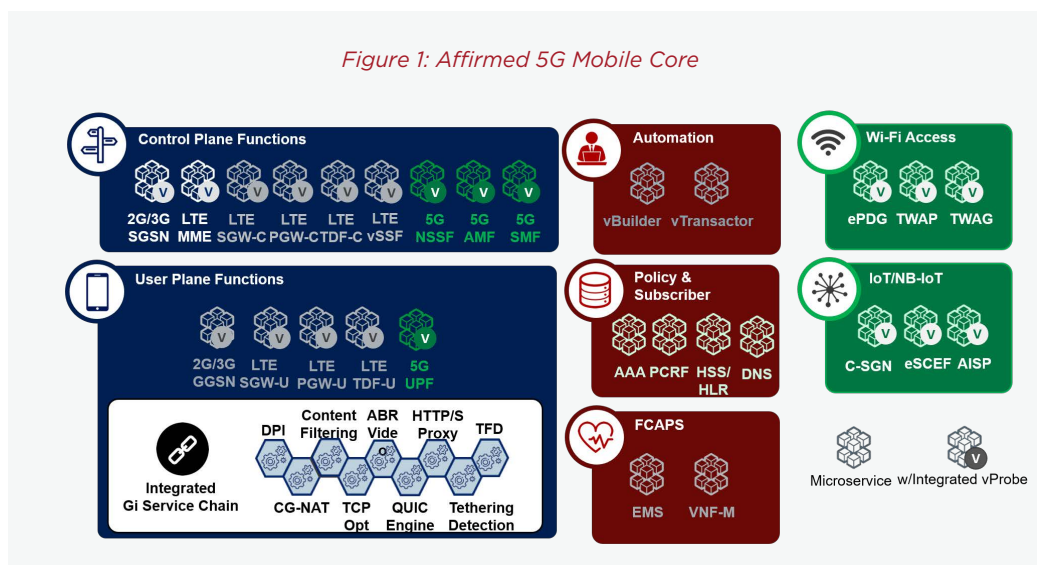
"A key challenge operators have today is not just maintaining status quo with today's LTE network as they start to adopt 5G technologies, but how to continue to drive business success spanning both their 4G and 5G networks. This is exactly what Affirmed is doing – using the technology foundation of 5G such as their web-scale platform and network slicing – to drive operator business success, today."

- Chris Nicoll, Principal Analyst, ACG

The Solution: 5G... Now

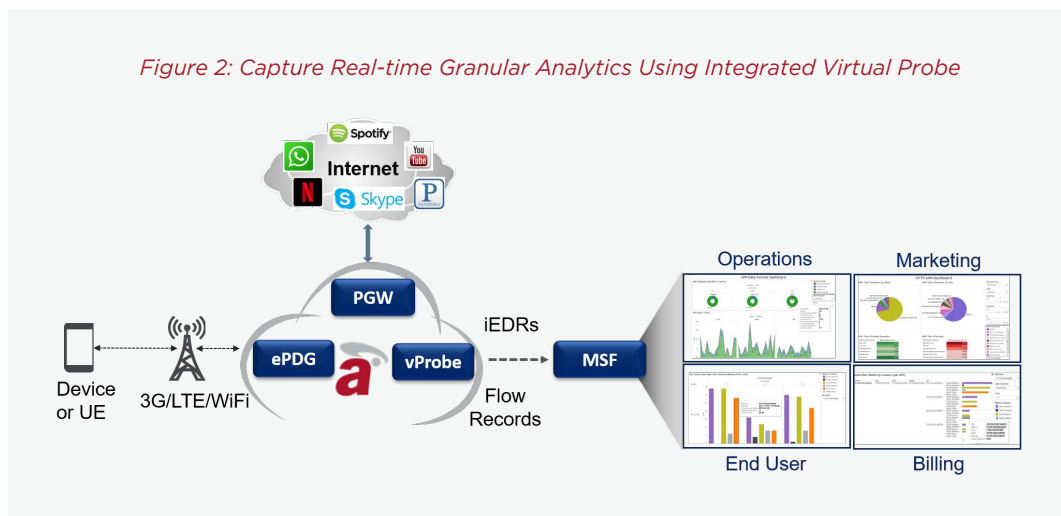
The arrival of 5G requires operators to support significantly more traffic, devices, and service types than ever before.

Figure 1: Affirmed 5G Mobile Core



The Affirmed Networks' 5G Mobile Core, built on a web-scale architecture, enables rapid delivery of new services and unlimited scale that operators require to provide outstanding service levels, self-service functionality, and faster activation times.

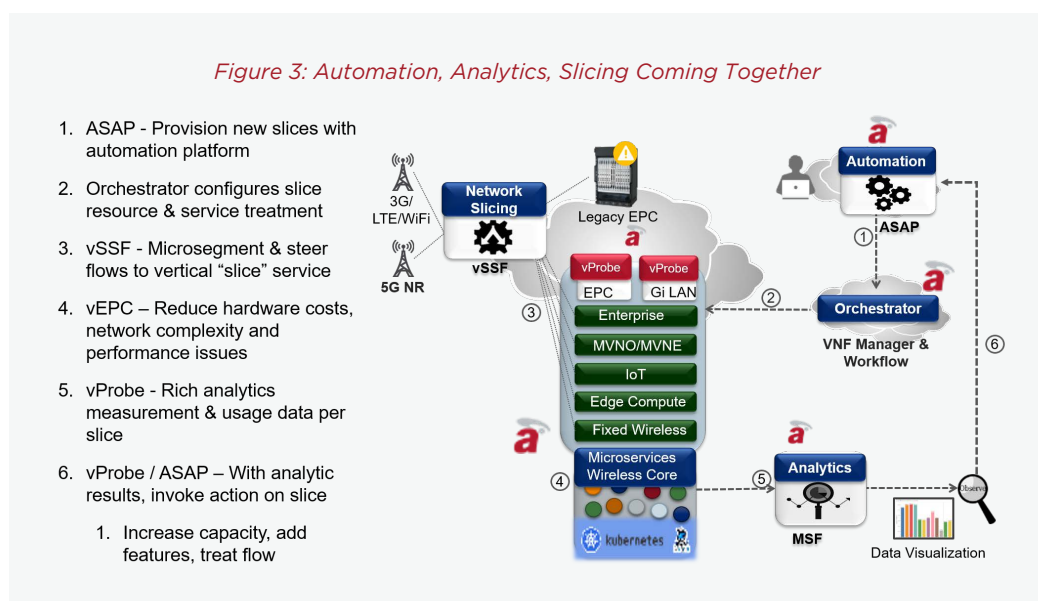
Figure 2: Capture Real-time Granular Analytics Using Integrated Virtual Probe



This 5G experience begins with integrated virtual probes that are providing real-time intelligence and service assurance via Affirmed Networks' vProbe and Analytics solution. With greater understanding of network and service utilization, operators can then automate service provisioning via Affirmed Networks' ASAP across legacy, virtualized, and multi-vendor environments.

Fine-grained network slicing with the Affirmed Virtual Slice Selection Function delivers a "one-touch" centralized function that transparently inserts into existing networks, requiring no configuration changes, making it easy to build network slices across any network. This is reinforced with a cloud native microservices architecture and customized policies (ex. Gi LAN Services) that enable focused delivery of new services or changes to specific customer policies based on preferences, devices, or other factors.

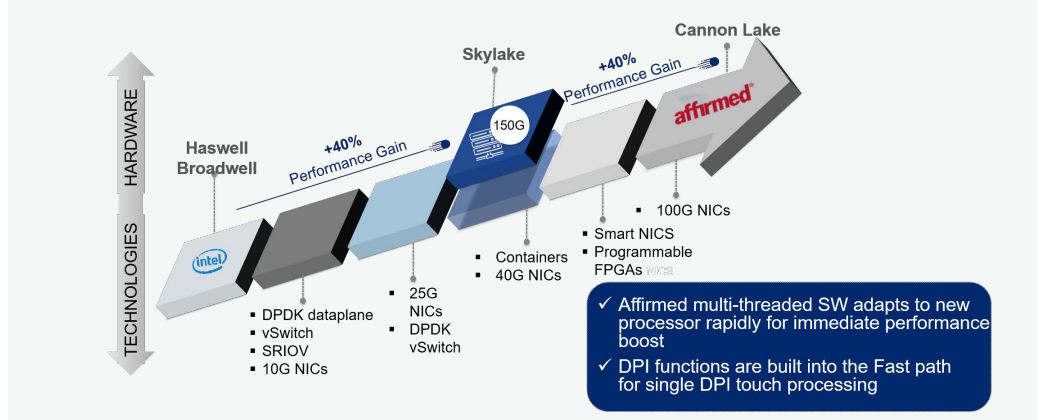
Figure 3: Automation, Analytics, Slicing Coming Together



With ubiquity in mind, the Affirmed 5G mobile core functions across multi-access networks – cellular, WiFi, and fixed line, including support for 5G New Radio (NR), the new global 5G radio standard that provides major performance, cost and efficiency improvements over previous wireless technologies.

A distributed control and user plane separation (CUPS) architecture supports high bandwidth, low latency applications, and edge computing that offers a 10x performance advantage over current industry offerings, delivering up to 150 Gbps throughput on a single x86 Intel Xeon Processor.

Figure 4: Affirmed Provides Best Performance in Industry Incorporating Latest Technology



Capabilities & Features

The Affirmed 5G Mobile Core features the following advancements:

- » **Support for 5G New Radio:** The new global 5G radio standard that provides major performance, cost and efficiency improvements over previous wireless technologies
- » **Performance Gains:** More than 10X over current industry offerings – delivering over 150 Gbps throughput on a single x86 Intel Xeon Processor
- » **Multi-Access Support:** Cellular, WiFi, Fixed Line
- » **Mobile Packet Core:** The industry-leading cloud native solution delivering cost effective scaling and agile architecture, IoT
- » **NGCore:** Cloud Native SMF, AMF, UPF, UDM Backwards compatibility with 4G VNFs
- » **CUPS:** Distributed scaling to reduce costs, support advanced high bandwidth, low latency services, 100 Gbps/server
- » **5G NR/NSA:** Standards-based support of 5G NR, open architecture to support all standards-based RANS; 20 Gbps per single session
- » **Advanced Gi LAN Services:** Service chain and automate to create, customize, and deploy services rapidly
- » **vProbe & Analytics:** vProbe directly from VNF, significant cost reduction for rich analytics
- » **Network Slicing:** Parallelize the network, manage granular flows, drive new revenue
- » **Automation:** Rapid service creation with automated service provisioning
- » **Microservices:** Rapidly and incrementally launch mass-customized microservices with more agile, processor efficiency and low impact on operations
- » **Third-Party Collaboration with APIs:** REST/HTTP APIs for both inter/intra communications
- » **Professional Services:** Support organizational readiness for cloud architecture with Build Operate Transfer services

Benefits

Developed to allow mobile operators to embrace a web-scale approach for developing and delivering differentiated services, the Affirmed 5G Mobile Core enables them to achieve benefits across many areas, including:

- » **Superior Customer Experience:** Efficiently gather real-time network and subscriber intelligence using integrated virtual probes, deliver faster service activation times and self-service capabilities with automated service provisioning.
- » **Rapid Service Creation and Delivery:** Deliver customized services with fine grained network slicing, enable rapid feature development and easy integration with third-party application and content partners using a microservices architecture.
- » **Unlimited Scale:** Affirmed Networks continues to lead the industry driving the highest levels of performance and delivering the lowest cost per bit with an open architecture that scale linearly to support the unprecedented mobile data growth.



About Affirmed

Affirmed Networks has achieved significant attention as its Network Functions Virtualization (NFV) solution has become the standard for the world's top mobile operators. The company recently introduced the industry's first cloud native 5G mobile core that builds upon this leadership, delivering the scale, performance and service agility required for operators to experience the potential of 5G and cloud-based architectures today. Customers globally are monetizing their 4G Networks with Affirmed Networks' 5G Core. Currently, the company has more than 75 customers across five continents, including some of the world's largest and most innovative Tier 1 and Tier 2 operators, and is engaged in many trials worldwide.