News release

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**Contextually Intelligent Mobile Technology Accelerates Focus on Programmable Communications Networks**

***Demand for Robust, Seamless Mobile Experience Requires Significant Network Bandwidth, Higher Service Quality, Security and Back End Services***

**New York, 21 Feb 2014**‑‑As people use increasingly sophisticated, contextually aware mobile devices and services, network providers are faced with greater demands for additional network bandwidth, enhanced service quality, security and other back end services. As such, there is an escalating focus on communications companies to develop programmable networks and infrastructure flexible enough to meet user needs, according to the latest Mobile Innovations Forecast report from PwC.

PwC's *Mobile Innovations Forecast (MIF) Phase II, Virtual Context: Connecting Two Worlds* article explores how consumer demands for more contextually intelligent mobile devices and services are causing Communications Service Providers (CSPs) to re-evaluate how their networks can become robust enough to handle communications traffic with both high volume and high levels of complexity.

Raman Chitkara, Global Technology Leader, PwC, said:

"User expectations about access and speed on their mobile devices are pushing cloud computing principles and technology deeper into the design and operation of communications networks. It’s more than becoming a larger data pipe to accommodate more uplinking and downlinking. Communications companies are moving to virtualise telecommunications in much the same fashion as the IT industry virtualised computer processing and storage.”

**Programmable Networks Rise**

Programmable networks use software to direct data flow and network elements independently of physical hardware. Similar to the concept of unbundling software from mainframe computers, programmable networks have the ability to reprogram infrastructure to change or modify services. CSPs are addressing the high volume demand issue by deploying new radio interfaces and all-IP infrastructures based on the Long Term Evolution (LTE) standard.

Transitioning to an all-IP infrastructure through LTE enables new frameworks such as Software Defined Networks (SDNs) and Network Function Virtualisation (NFV). SDNs and NFV help to develop a virtual network layer that can be centrally managed—resulting in an operating network that acts like a computing cloud.

**Capacity demands**

As users bring devices into every aspect of their lives, the higher the demand becomes on CSPs to enhance their indoor mobile data capacity. CSPs are now assessing network performance and quality of user experience as a function of app coverage more than of voice coverage. The measuring stick CSPs use for app coverage is how well the mobile data network performs at the geographic edge of a cell. To get better coverage, CSPs are installing radio interfaces such as 4G (fourth generation) LTE, with complementary small cell technologies.

Pierre-Alain Sur, Global Communications Leader, PwC, added:

“Having the ability to shape communications traffic around varied service quality goals without having to manipulate physical infrastructure is a crucial improvement for communications companies. It will allow for faster, more efficient response to customer needs which ultimately benefits the end user. We are now living in an app-driven world—as mobile devices and services become more evolved, the platforms serving them need to keep pace.”

The PwC paper delves into the main technologies and approaches that CSPs are using to address their volume and complexity challenges. The article also examines key features of SDNs and NFV, showcasing their impact on the move towards programmable networks.

This is the third article in the MIF Phase II series. The next article in this phase will tackle the topic of modelling and analytics in the cloud that will enable mobile devices to become true digital assistants.

For an introduction to this series go to: <http://pwc.com/mobileinnovations>

**Notes to editors:**

Raman Chitkara, Global Technology Leader, PwC, Twitter handle: @Raman\_Chitkara

Pierre-Alain Sur, Global Communications Leader, PwC, Twitter handle: @PierreAlainSur

To schedule interviews with either Raman Chitkara or Pierre-Alain Sur, contact Alayna Francis at Alayna.Francis@us.pwc.com.

For copies of the Mobile Innovations Forecast articles, go to

<http://pwc.com/mobileinnovations> or contact [Alayna.Francis@us.pwc.com](mailto:Alayna.Francis@us.pwc.com)

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