



## 5 things application developers want telecoms operators to know

The telecommunications industry interested in edge computing must listen to the requirements of developers who will run their applications at the edge. These developers want clarity around delivery, orchestration and pricing.

Tilly Gilbert, Consultant

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STL Partners' edge computing practice has been engaging the develop community on edge computing for a number of years. Our [recent research paper](#) summarises the key lessons from these discussions.

1. Edge computing does provide an opportunity to solve the key pain points of some developers through improving user experience and increasing their addressable market. Application developers, particularly in key domains such as AR/VR, drones and content delivery, see edge computing as a potential gamechanger for them. Most of those we spoke to currently employ workarounds in order to ensure their application delivers a good user experience, such as installing servers on premise. However, this often limits their flexibility and potential to scale.



	Retail & Wholesale – Location Based Services	Augmented Reality / Virtual Reality	Video/Media (Upstream & Downstream)	Drones: Unmanned Traffic Management	Drones: Data Processing & Analytics
Why edge?	Local real-time analysis of location data	Offload processing power and maintain real-time interaction	Live streaming and bursting (high capacity situations)	Autonomous navigation	Avoid cost of moving data to central cloud
Latency Critical Compute	■ ■	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■
Heavy I/O	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■
Geo-Spatial Knowledge	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■
Hyper-Local Grouping	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■
Data Residency	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■

2. **The key drivers are latency and bandwidth.** Although edge computing can help applications improve location accuracy, coordinate multiple devices/users in a given area, manage data sovereignty, etc., the key drivers for software developers tend to revolve around latency and bandwidth requirements. For example, for VR/AR applications, developers stated they need sub-20ms latency in order to avoid users from noticing lag when rendering 3D objects.

*“AR/VR must run at 60 frames per second otherwise there’s a kind of a lag and that feels strange, or can give people a headache. With cloud, you can reach 30-40 frames per second. With edge computing, you can reach 50-60 frames per second”*

**Holo-Light**

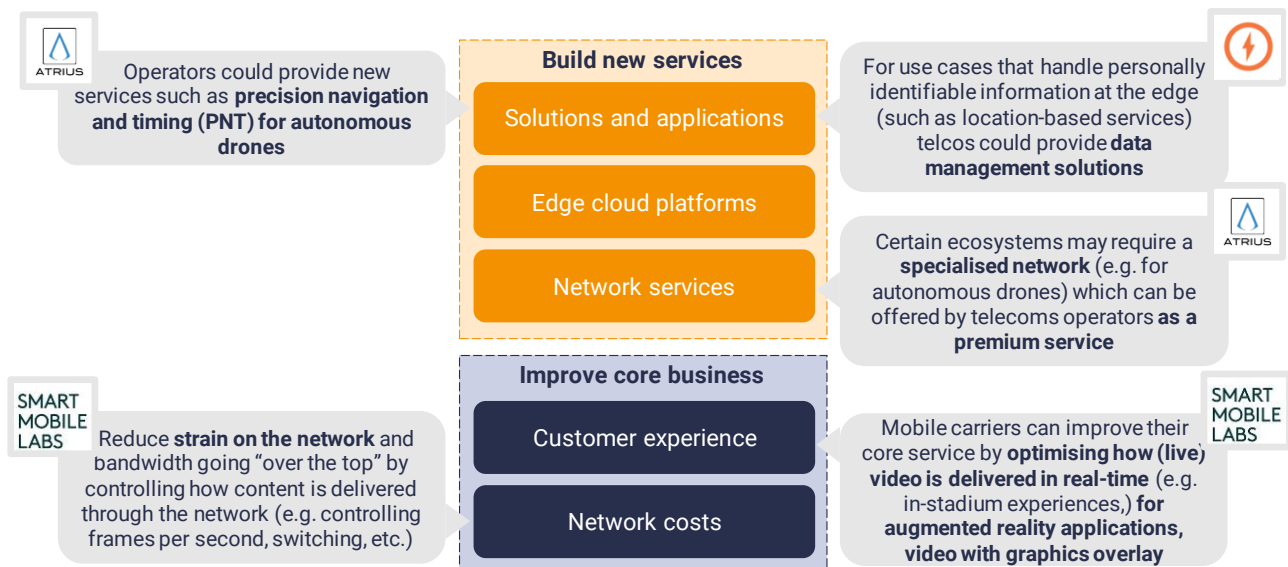
3. **Developers have different requirements for what they seek from edge computing.** Many felt that there needs to be more clarity around how they will be charged for access to the edge as well as clear information as to how workloads at the edge will be orchestrated and managed. Not only this, but some domains had specific requirements such as needing GPU available for rendering of images at the edge.



“How do you dynamically move and not have wasted capacity?”

**Section**

4. **There is a chicken-and-egg problem: without supply, demand cannot exist.** In order to successfully work with application developers and test the capabilities of edge sites, telcos will need to engage actively with the edge community as a whole and understand the diverse requirements of different domains. There is demand for edge computing from developers, but until there are enough edge sites for them to be able to leverage edge computing meaningfully and incorporate it into commercially available applications, they will continue to architect their applications with workarounds and edge computing gets stuck in POCs/trials.
5. **There are many ways telcos can monetise edge computing.** It can be used to both to improve the core connectivity business e.g. reducing latency for consumers when they stream video over their network, and to build new services, e.g. data management solutions at the edge that ensure data sovereignty and sharing requirements are met and enable data analysis. Below are suggestions from developers on how they see telcos adding value in the edge computing space.



For more information read STL Partners executive briefing report: [What edge developers want from telcos now](#). We would like to thank @MobileEdgeX for supporting this piece of research as well as interviewees from: @holo-light, @smart mobile labs, @Atrius, @Section, @Radius networks, @Arvizio and @1000 realities.

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Tilly Gilbert is a consultant who is part of our edge practise team. Beyond edge computing, she has led client projects on topics such as blockchain, AI and data analytics.

Get in touch in touch with her at: [tilly.gilbert@stlpartners.com](mailto:tilly.gilbert@stlpartners.com)

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