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2023 Mobile Network Predictions: Pain and Progress

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Telecom is staring down a year poised for significant economic attrition. It will make 2023 one of the most interesting years yet for our industry.

Change comes faster than usual and is unavoidable when times are hard. I predict we will see hard business decisions made around sustainability, supply chain industrialization, smart use of cloud, and improved automation and network delayering.

Lest there be a whiff of negativity in my tone, let me state explicitly I think this confluence of factors is actually a positive. They make 2023 a perfect year for telecom to accelerate change.



Economic downturn forces harder business decisions

The economic downturn will force telecom to become more practical, remove inefficiencies and make real business progress.

I base this on my experience during the “dot-bomb” collapse of 2000 and what we collectively saw telecom achieve during the pandemic.

Change happens faster when there is no alternative. Then we are always amazed at how quickly and competently progress can happen. Case in point: when Covid sent the world home, telecom transformed and modernized customer care support centers, and supported remote capabilities for workers. We kept the services going. There were no outages. It wasn't chaos. It wasn't crazy. If telecom had to plan this in advance, it would have taken years and there still would have been mistakes. Unavoidable change forced our industry to do what may have seemed impossible seemingly overnight.

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2023 will force more radical, harder business decisions. This is going to drive the need for faster change. It's hard to pinpoint what that change looks like but for me, it doesn't hinge on a technology answer like Open RAN. Open RAN is just a different enabling approach to get to a different result. One thing I know telecom needs is speed. If we are all being honest, the industry is no longer keeping up with the speed of technology happening outside of our bubble.

I predict that for many operators, a lot of the projects they've been dancing with—these "impractical ideas"—could very likely turn out to be growth engines.

Sustainability becomes big

Real progress on sustainability will be made in 2023, mostly for economic and critical infrastructure reasons. One of the reasons telecom sustainability is going to become suddenly so big is because energy prices are going up and energy supply is

becoming unstable. Every year, carriers pay billions of dollars in electricity bills. If they can reduce that by 20 percent, that all goes to the bottom line. Reducing energy can do more for this industry—and the planet—than anything else. Telecom is a critical infrastructure, which means sustainability, resiliency, and security are key and center. We now live in a reality defined by political instability, energy supply instability and planet instability, all in parallel, and we will redesign how we handle all three.

Goodbye pets: supply chain industrialization grows

I think the telecom industry will wake up to the fact that it needs to focus on supply chain.

Telecom needs to industrialize its supply chain to move from being highly inefficient to highly efficient.

Supply chain industrialization is where servers are no longer treated as "pets"—that is, servers that get named and are repaired and upgraded. Instead, they are treated like "cattle"—managed like a herd with numbers instead of names and if they break, they are no longer useful.

There is a known process to follow called the industrialization cycle that continuously optimizes supply chain following phases of standardization, combination, abstraction, automation and governance. [I've written about this cycle on LinkedIn.](#)

Telecom has been stuck in a pre-industrial place, but public cloud is well advanced in industrialization of its computing infrastructure and able to reduce costs by using yield management, automation, consolidation and combination of the whole server fleet. This has led to unit economic growth that supports offering services that look like they're losing money when they are not. They are running at 80 percent gross profit because they have pulled the inefficiency out of the supply chain.

What needs to happen in the hardware supply chain is to minimize the number of different SKUs required. Every SKU creates a different supply operation and needs to be inventoried and warehoused. Spare parts must be ordered, systems managed, and technicians and operators trained.

I've heard of some operators with nearly 500 different hardware SKUs—that's 500 different bits of hardware that require inventory warehouse, spare parts, returns and management.

Imagine the simplicity of a telecom operation with only two hardware SKUs that do everything required in the network. The cost savings are enormous. And then those two SKUs are managed the same way so they can be automated. Then, fleet management can be done on the SKUs.

The software supply chain is completely different. What's important here is modernizing software development into a continuous integration and continuous delivery (CI/CD) process with automated onboarding, testing and upgrading.

To date, telecom has not managed to disaggregate hardware supply chain from software supply chain. Software still moves at the speed of hardware and hardware has too many SKUs. That then immediately becomes incredibly expensive. That's why cloud is changing the world: it is disaggregating and abstracting hardware from software.

Adopting a cloud-smart mindset

Another big focus for telecom is around truly moving to a 5G standalone (SA), cloud-based operation and telecom truly becoming cloud. Many people have discussed having a cloud-first mindset, but the industry needs a *cloud-smart* mindset. Cloud smart is an economics discussion around infrastructure supply chain and utilization. Cloud is a verb. It is not something you buy to solve a problem. Let's differentiate between a cloud-smart mindset and running workloads in the public cloud. Public cloud is brilliant when there are unpredictable traffic volumes, experimental growth or fast-iterating development.

To cope with Black Friday demand once a year, public cloud is really good. But if it is for running a radio in a mobile network 24/7, public cloud is really expensive. We are seeing this with Internet companies that have used public cloud and hit with 30 to 40 percent growth in public cloud bills every year. These companies are starting to realize that if there is a stable, predictable workload, moving it to the public cloud is the worst thing you can do.

Telecom must build and adopt a cloud mindset. Until it does, it cannot truly adopt the cloud and 5G will remain 4G plus. In other words, if operators cannot deploy standalone (SA) 5G in the cloud, they cannot capitalize on dynamic traffic routing, management capabilities and all the whiz-bang things that 5G promises.

The inflection for a traditional telecom moving from non-standalone (NSA) to SA is actually a paradigm shift and if it's not, then really what's happening is 4G with 5G technology.

Telecom automation starts with network delayering

The pressure to accelerate automation is a result of an aging workforce, a lack of ability to react to network outages and the need for scale. These three forces demand telecom be faster, cheaper and use fewer people.

The delayering and automation momentum will gather steam in 2023. Delayering will start at the most basic level separating digital infrastructure from physical and civil infrastructure that requires site permits, site development and access to sites. These asset groups have a completely different operating model, asset-class valuation and lifetime management requirements.

How should this combination be managed?

The physical and civil assets are a real estate business. There is a hardware supply chain with its two-year replacement cycle and tail inventory management. Then there's an automation operation layer that is partially people, partially software trying to get to autonomy.

On top of that, there is a service experience layer, where operators are putting in significant investments to generate new revenues. This is where a lot of new applications need to be deployed at zero marginal cost.

How can operators run all those things according to one management structure, one set of KPIs and one investment plan? Because telecom has not delayered, it is not releasing the assets it has, either from a programmability perspective or from an asset class that can be monetized.

I think telecom executives at the highest levels understand that the delayering is something they need to do, but I'm still learning about how mature the thinking is on these issues. We do see a lot of evidence of carriers just selling assets—for example, selling towers to get them off the books. This feels more like a managed decline of an industry in crisis than a strategic understanding of asset class from a delayering point of view. But that might not be true. Time will tell and I believe clarity will increase in 2023.

Change is certain. The industry needs it to reset for the challenges of the future. When we look back at 2023, hopefully we are pleasantly surprised by how well change forced us to perform.