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The Internet Eco-system Value Chain:

It's Always Greener On The Other Side. Or Is It, Really?

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Over the last few months, I have had the pleasure to chair and moderate various global internet, information and communication technologies events, including 4G Mobile, Submarine Networks, Wholesale Operators & MVNO evolution, Technology Investment, Startups Innovation, and Telecom Services Strategies conferences and workshops around the world. This brought up, as it always does, insightful debates on the state of the affairs, market disruptions, underlying challenges, and provided a glimpse of the road ahead.

Recently, following a pause and reflection, some valuable take-aways surfaced clearly, and can be summarized as follows: the various players in the communication and Internet technologies value chain are no longer working synergistically as complementary players, as we have always assumed. In fact, they seem to be working in a "your pain is my gain" mode, as if the whole thing was a zero sum game scenario. What makes things look even more worrisome is that each layer in the value chain, seems to look at adjacent layers with envy, as if things were better and greener on the other side.

A brief synthesis of some of the most argumentative debates I have been part of, provides an overview of why this seems to be the case. Specifically, here is a re-run of four key panels among players in the same peer group debating the state of their industry: over the top (OTT) players, fixed and mobile telecom operators, infrastructure equipment vendors, and venture and private equity investors in telecom infrastructure and underlying technologies. In an ideal world, investors would be funding telecom operators who in turn, as customers, generate revenue to equipment vendors and serve as an infrastructure platform to a variety of OTT players with end users such as consumers or enterprises sitting at the top of the value chain pyramid. This would have them all share the risks and rewards of a healthy and growing global Internet and communication sector. But these were not necessarily the conclusions reached by these four groups of players, during the various interactions. Let's look at the market landscape from their point of view.

First, the network operators.

This includes both the fixed and mobile access operators. Interestingly, they are in strong agreement on the threat of reduced ARPUs and declining profit margins. They point the finger at OTT players who are grabbing most of the value of high margin services (Skype/Viber in voice, whatsapp, wechat in SMS and Google in advertising), an unfriendly regulatory environment (cable operators in the US with network fairness requirements, mobile operators in Europe with the upcoming roaming regulations), as well as disruptive and rapidly standardized technologies that didn't provide them enough time to capitalize on large sunk investments (fast track 2.5G to 3G to LTE migration). Such factors are compounded by a number of other factors which include macro developments that have made private equity investments in network infrastructure a rarity (very few greenfield operators are funded this way at the moment), geo-politics that lead to a risky "trans-border acquisitions as an expansion" model, and a single-vendor strategy by equipment vendors that is deliberately designed to lock operators into solutions from the large vendor/system integrators (as a result of vendor financing and managed services offering by the large network equipment vendors), which consequently make solutions roadmaps too rigid, products in the long run too expensive to deploy, stifles competition and innovation, and means that execution is slow, costly and constrained. In summary, network operators view their pain as the OTTs' gain; a pain that is caused by equipment vendor strategies and a lack of investor appetite to support aggressive business models.

Second are the OTTs.

They come in various shapes and forms, but overall they build their service on top of fixed and mobile networks and address the same end-customers. In the view of OTTs, the blame is on the winner takes all model (a tiny percentage of OTT application providers make it to market successfully). For the vast majority of OTTs who don't end up as ultimate winners, and even for some of those who were able to scale and win the game, the blame is on what is called under the top players (UTT), or in other words, the network operators. The operators are blamed for being too slow to adopt partnering models (as in the case of mobile payment and mobile advertising) that allow OTTs to better leverage their assets via Open network Application Programming Interfaces and dynamic interaction models (slow adoption of efficient automated services provisioning models, as in cloud orchestrators or network layer Software Defined Networks). They are also blamed for shying away from information sharing models where network intelligence is provided for OTT differentiation (Business Intelligence contextual data leverage), and for pushing back at developing customer leverage models that would make it easier to develop new user interaction models for various verticals such as mobile payment, m-health, and automotive MVNOs as current examples.

OTTs, as large scale software application providers over public/hybrid cloud infrastructures, view the equipment vendors' slow motion towards network provisioning models that leverage agile virtualized networking architectures, as a serious challenge, going against the OTT ultimate dynamic user-controlled network resources. As such, the challenge for the OTTs in growing their business is basically to figure out how to leverage – if not exploit - the UTTs, and to some extent, leverage the network vendors' infrastructure products beneath it. The more successful they are at this, the more they divert resources from the less than adequate deployment models that are already causing the fall off in Telecom Operators' ability to partner or create innovative services.

Third are the infrastructure equipment vendors.

They can be classified in two categories: the large vendors, who provide turnkey solutions and the smaller ones, who provide niche plays in early deployment cycles. Consensus is prevalent here too, albeit perceived differently by each group. Vendors see operators' slow evolution and technology adoption models as the main reason for their revenue and margin challenges (slow migration to IMS/RCS based services, Network Function Virtualization deployment models, large scale M2M, etc.). For example, vendors in the LTE ecosystem have to go through the operators' 3 to 4 years cycle in adopting new technologies such as small cells, advanced backhaul and core network architectures, as well as slow integration of OSS into the overall IT enterprise architecture. At the same time, vendors in the application eco-system space face a push back against new overlay payment, advertising, and M2M deployment models. Vendors point to the lack of operators' fast adoption of technology and business models as the main reason for having venture capital and private equity funds shy away from network infrastructure investments which in turn slows down innovation and makes differentiation inherently difficult. Moreover, large vendors would add to this the fact that mobile operators, via their slow moving decisions, have all the financial leverage to play vendors against each other and, as such, significantly affect their margins and business models. The equipment vendors' CFOs and CEOs point out that network operators are not providing them with the revenues they deserve and that investors are not supporting the needs of their long sales cycle.

Fourth and last are the investors in network infrastructure and technologies.

Here again the perspective is fairly consistent. Returns haven't been what they should have been over the last decade (very few greenfield operators IPOs, rare success of trans-regional acquisitions). As such, the appetite for risk and new investment is fairly low at best. Large investors in particular see operators as investment vehicles who haven't managed to turn their cash generating models into high growth engines (utility models orientation), who have been shying away from new business models that could have shared the OTT service revenue (rare voice and video OTTs partnerships), and who have had limited success at growing organically by leveraging their customer base, geographically through acquisitions, or strategically through moves into adjacent markets such as online advertising and high value vertical markets analytics. Investors view the equipment vendors' push for open source models (Openstack cloud, Open Source controlled networking hardware, Hadoop framework for Big Data Compute) as a play against forecasted returns of custom design players. Investors also view the large vendors' links to operators as an impediment to high returns on investments in niche advanced technologies. As a result, with a paramount interest in return on investments through successful exits, investors view the infrastructure play as an industry in need of a different breed of network operators, as well as vendors in the infrastructure and OTT spaces needing more robust models for monetizing their product portfolios

What strikes me is that all these four groups were all adamant in agreeing to one thing: we are in challenging times mostly because the adjacent value chain-players are basically the embodiment of the exact threat we face, and our way out is to get a piece of the pie that these adjacency players are going after. In other words, our gain is their pain and our pain is their gain. What no one seems to be highlighting in the turmoil is that this pie is a growing pie, and that the rate of such growth is function of the synergy the various players can build among each others with the right business models. Of course, some of this logic is in the heads of the various players, and small start-ups tend to operate under this assumption most of the time, but still, the focus seems to be on laying blame as opposed to friendly – or synergistic - leverage.

Lets look at a couple of examples to illustrate how a friendly partnership can be leveraged. A strategic investor in telecom infrastructure technologies would see an increase in ROI when a mobile operator puts in place an architecture to monetize mobile data (as some operators are aggressively working on in the US right now), which would open new opportunities for solutions vendors and at the same time provide mobile OTT players with better returns on real-time online advertising models. A similar example would show how an investor into an optimized Hetnets (Small Cell / Wi-Fi) offload infrastructure (as some private equities are looking into in North America and Asia) would lead to a much better ROI for a neutral fixed line operator, which would in turn open up room for optimized network sharing vendor solutions, and through underlying novel business models, would open up the door for video OTTs to optimize their offering into a bundled wholesale and revenue sharing model. The growth of the Hetnet is an interesting example. It will clearly be an area of major investments, and leaving it to the operators means it will happen in an ad hoc way, driven by the trade off between fear of the competition getting there first and the constraints of their immediate budgets. But Hetnet expansion is an area where there is a clear win-win play for the joint community of investor, small cell vendor, infrastructure vendor, operator, and OTT service provider. The faster this gets rolled out, the more the consumer will use it, the more revenue will be generated for all concerned. If there were some vehicle whereby each player could participate in accelerating the deployment, ubiquity and standards for the Hetnet in a very large sense of the term, then the inherent dynamics of the total ecosystem working synergistically would mean lower costs, and better and faster revenues and thus ROI across the board. The question then is why is this not happening, or not happening fast enough? Is it really now a zero sum game?

So, as a network operator, OTT, network vendor or Investor, one would ask: Is it greener on the other side? Do the network operators have it better than the OTT players? Do the OTT players have it better than the investors in network infrastructure? Are the equipment vendors hurting because network operators are squeezing their revenues? No certainties, but what is clear is that we are at some major industry inflection points, as far as business model change and underlying technology innovation is concerned.

For the industry player that embraces this change, we will witness a fast mover advantage winning big scenario: mobile operators aggressively moving into adjacent markets, fixed operators developing new Internet-centric and enhanced infrastructure sharing models, data center players scaling optimized cloud delivery models, video OTTs pursuing smart operators partnerships, vendors leveraging advanced integration of IT and network technologies.

The new models coming into place are predicated on making the pie bigger! One way or another this Internet, Telecom and Information Technology pie will get bigger, and fast. Sometimes desperate times call for desperate measures, and as such, the arrival of a fast track vehicle to embrace innovative business and technology models is what we are about to witness.

Key learning for financial advisors and investors.

So, what would be the bottom line for TMT investors and their advisors? Our belief is that they would need to shift focus from the limited appetite for in-market consolidation and trans-border acquisitions to portfolio rationalization and investment in synergetic adjacencies.

Private equity investors would need to capitalize on the emergence of such disruptive evolution models and thereby reduce the availability of investment in more classical growth models. Equity investors instead of polarizing between investing towards high growth in revenue or high ROI need to focus on companies that strike the right balance and sustain growth in revenue and ROI over the long term. It remains my firm belief that companies that are increasing the pie will be the ultimate winners!

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