Developing a Code of Conduct Framework for the Telecom Ecosystem

It is proposed to setup a project to develop a code of conduct framework for the telecom ecosystem to boost innovation and increase vendor diversity. The design and implementation of this framework should involve telecom operators, startups, new vendors, investors, system Integrators and other relevant players.
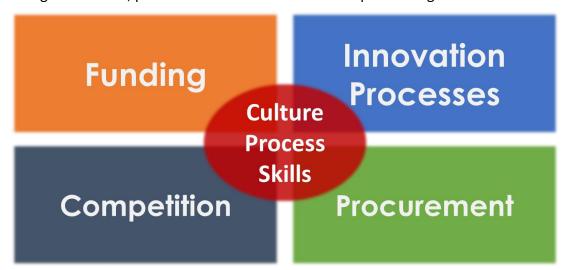
Background

An international [consultation with telecom vendors and industry stakeholders](#) has identified key areas where telecom operators must improve their processes for engagement with vendors in order to substantially increase vendor diversity and encourage investment and innovation in the telecom ecosystem.

At large, we define "ecosystem" as the diversity of players needed to enable competitive supply of all hardware and software needed to build, maintain and evolve telecom infrastructures for the long term. A deficit in one or more technology areas damages prospects for telecom operators to deploy innovative end-to-end solutions which optimally meet their needs. In addition, the ecosystem needs to include investors willing to fund vendor innovation activities, standards organisations, system integrators, training providers as well as universities and other educational establishments preparing the next generation of telecom engineers and managers.

For the purposes of this specific code of conduct project we focus primarily on the "narrow" ecosystem of telecom operators and vendors, along with the investment community that enables it.

Areas to be Addressed

The areas we have identified fall into four categories which taken together, point towards a need for systemic changes in culture, process and skills within telecom operator organizations:

We recognize that these changes are significant and not readily attainable within a mature industry without market-driven incentives, but we believe useful progress can be achieved by decomposing and systematically addressing these areas.

Funding

The massive geographic and volumetric scale of telecommunications networks leads to investment cycles measured in years if not decades. This has a knock-on effect on the vendor ecosystem where the Return on Investment (ROI) on bringing new products to market may extend well beyond the timeline necessary for smaller vendors to survive, or for large vendors to build a business case. It is therefore much more difficult for startups in the telecom sector to attract Venture Capitalist (VC) funding. Larger vendors also need an adequate ROI to justify investment in new products, and to maintain an acceptable level of profitability.

Innovation Processes

Diminishing participation by smaller vendors in the telecom innovation ecosystem, coupled with industry consolidation and geopolitical pressures impacting the global telecommunications industry, has significantly reduced diversity, thereby reducing competition and the potential for innovation in the sector. The problem is exacerbated by telecom operators having reduced core R&D spending and delegating standards and open source development to a few large vendors. As a result, these large vendors wield immense influence on the potential for innovation in the telecom ecosystem and continually seek opportunities for lock-in, which further disincentivises innovation.

Competition

Currently, there is not a level playing field between small and large vendors. Large vendors often have correspondingly large teams on each account and simultaneously engage multiple telecom operators globally to identify commonality of requirements or influence technology directions in order to minimize product variants and achieve economies of scale. In addition, telcos often demand long term R&D engagement and participation in standards development, open source and other industry organisations as well as delivering proof of concepts which the telco is unwilling to pay for.

Procurement

Typically, telco organisations are complex and siloed requiring multiple internal relationships to be established and tracked to fully understand (and influence) innovation directions and what requirements will ultimately appear in a future Request for Product (RFP). The time allocated for vendors to respond to large and complex telco RFPs is often very short and may span holiday periods, creating an almost impossible hurdle for smaller vendors to navigate. Assuming the vendor can meet the technical requirements of an RFP, the terms and conditions and pricing requirements are often the killer which renders a response from a smaller vendor impossible to contemplate.

A Way Forward

We recognize that addressing the systemic issues we have identified will require multiple solutions and initiatives which are beyond the scope of this project. But we believe a project to improve telecom ecosystem diversity and competition will stimulate richer conversations and potentially act as a catalyst for the broader changes needed to accelerate innovation in the telecom arena.

To address the specific issue of diversity and competition in the telecom ecosystem, the authors of this paper believe the telecom industry should create a code of conduct framework which governs interactions between telecom operators and vendors, particularly small and medium size vendors who do not have the resources of the larger players.

A code of conduct framework would codify the behaviors and business and financial relations considered best practice and essential to enable smaller players to participate, thereby increasing diversity and participation in the telecom industry innovation ecosystem.

To be successful, the code of conduct would need to be accepted by a significant number of telecom operators. Signature to the code of conduct would be a public commitment to the behaviours documented in the code of conduct. Signing-up to the code of conduct would be considered a positive move from a vendor and stakeholder perspective, provided that adherence to the code of conduct is a credible measure of behaviour, i.e. that it is properly implemented with strong compliance monitoring processes.[1]

Implementation should start with piloting of example individual agreements to verify the mechanism, increase public awareness and gain acceptance of the code of conduct approach. If successful, the code of conduct would need to be created and maintained by a recognized permanent industry body.

Flagging of non-compliances needs to be confidential to avoid damaging the reputation of the concerned parties. Investigation of non-compliances should be undertaken by the body maintaining the code of conduct framework. Non-compliances should be resolved through private negotiations and would not be made public unless the non-compliance cannot be resolved. Failure to resolve the non-compliance or reach an amicable settlement, could result in the company concerned being removed from the code of conduct listing.

Developing the Code of Conduct Framework

The following is a preliminary listing of the commitments that could be included in a code of conduct framework. In the final code of conduct template and supporting materials, each commitment would be customised and expanded in a consistent and unambiguous way, along with reasoning and rationale.

Funding

Code of conduct signatories would need to comprehend fully why investors need to see them truly investing and progressing through to a procurement commitment.

- Engage existing investment bodies to identify actions that would boost enthusiasm for investment in the telecom sector.
- Optionally, setup named investment funds, possibly per telecom sector, with a specific investment size along with sustained PR to advertise the fund.
- Commit to fund infrastructure and middleware vendors, not just (or only) over-the-top start-ups.
- Expect to make multiple-round funding commitments for each investment – dry powder for each investment set-aside for incremental rounds.
- Commit to lead investment rounds with the expectation to lead in up to half the deals.

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[1] Being listed as a signatory to the telecom industry code of conduct could be akin to the British Standards Institute Kitemark™

- Establish partnerships with VCs and financial institutions for joint funding and raising debt (where needed).
- Commit to non-trivial investments in Series B / Series C rounds (e.g. >$2M)
- Build a dedicated team to help investment portfolio vendors to succeed. For example, shepherding them through the multiple internal groups and processes necessary for success.

Innovation Processes

- Allocate annual funds to pay for lab and field trials with new vendors/solutions on an annual basis.
- Commit to clearly indicate innovative new technology requirements in RFI/RFP documents
- Commit to clear decision gates to drive new technology from lab to Minimum Viable Product (MVP) to deployment over a fixed time period (technology validation excepted). E.g. from lab to field trial in six months and deployment in 18 months.
  - Before trials commence, provide clarity on the next steps that can be expected to occur after successful completion, along with anticipated schedules, so that the vendor can plan and budget their overall engagement with high confidence in the process.
- Openly publish and keep up to date, system architectural and functional models which enable vendors to identify areas where they can contribute innovative new products.
- Undertake to work with new vendors across telco organizations, including operations teams, support, finance, marketing, etc.
  - Reserve time/funding for operationalizing new technology, including OSS/BSS work, training, etc.
- Where risks are perceived to be too great for a small vendor, but the smaller vendor's technology has been successfully evaluated, commit to taking appropriate fair patent license on the technology, whether the less risky alternative is an internal solution or purchased from an alternative vendor.
  - This should not be relegated to the other supplier's indemnity clause. The service provider should handle the license directly and separately handle its relationships with larger suppliers.
- Commit to disaggregating the architecture away from monolithic or single vendor solutions. Commoditise where possible and drive innovation in areas that add business value.
- Undertake to remove onerous legacy feature requirements for new vendors. Focus on the "innovator's dilemma". What is the minimum viable product that unlocks the value of the new solution/vendor?
- Offer prepayment for requested features that require additional development, with these payments recouped by the buyer over time once the features have been delivered.

Competition

- Identify technology/solution/business areas that require innovation and make public calls open for new vendors/new products (linked to investment cycle), and indicate budgetary spending for solutions. This also gives VCs a heads-up that the telco plans to spend money in this space.

- Commit to increased use of new vendors and partners for architectural components and end-to-end integration.
- Create a level playing field for small vendors. Large vendors often have teams of 30-40 sales/engineers on each account.
  - Dedicate a small team to ensure that smaller vendors receive the same "air-time" as the larger vendors
- Commit dedicated resources to help new vendors navigate internal telco organizations, so that a lack of existing contacts doesn't prevent them from reaching the appropriate decision-makers in the CTO office, product teams, operations, procurement, etc.
- Commit to enabling small vendors to win business without forcing them to partner with a large vendor/partner (who would likely prefer to squash them).
  - Set up an onboarding process. If partnership is necessary, pay an appropriate patent/intellectual-property license directly to the smaller partner.
- Commit to reducing compliance requirements on smaller vendors with <$100M run-rate business (e.g. ISO9001), unless required by law.
- Allow vendors to publicly reference progress within accounts, such as lab trials and contract signature, to encourage traction for them in their markets.

Procurement
- Commit to an easy and simple contract for small vendors with relatively small deals. Don't negotiate with small vendors for a $2M deal in the same way as a $2B deal.
  - Undertake to eliminate over-negotiating with small vendors in telco procurement organisations and remove incentives/bonus plans around extracting extra discounts and concessions. Winning a 30% additional discount from a start-up kills their ability to provide support and grow!
- Agree to pay software licenses and support agreements up-front, not after consumption, and be willing and able to count consumption across the network, or move to an enterprise agreement quickly.
  - Don't try to enforce better terms on your software licenses and support agreements from startups than is expected from large vendors.
- Commit to recurring-revenue (SaaS in particular) models for software purchases, understanding that this provides higher valuation returns to investors.
- Undertake to create simple agreements to allow smaller vendors to transact up to $5M a year without a master services agreement or similar.
- Commit to pay invoices on 30-day terms for vendors with <$100M revenue, without negotiating extra "points" or forcing them through a partner banking relationship.

Next Steps
This paper is intended to trigger industry discussions on how to increase telecom ecosystem innovation, diversity and competition. We have proposed creation of a code of conduct framework to drive the changes we believe are essential to achieve this goal. We further believe that this activity will

act as a catalyst for discussion around the broader changes needed to accelerate innovation in the telecom arena longer term.

The immediate next steps are as follows:

- An on-line colloquium to discuss the topics raised in this paper will be scheduled week of November 16th, 2020 (date to be confirmed). The structure and agenda for this colloquium will be published on the Telecom Ecosystem Group LinkedIn page.
- Some of the questions to be addressed via contributions to the colloquium and in follow-ups, will be:
    - How would a code of conduct framework for the telecom industry be developed and operated?
    - In addition to the commitments proposed in this paper, what other commitments should be included in a code of conduct framework?
    - Is there an existing body that would be willing to implement and operate such a framework?
    - Should there be a copyrighted mark that a company that complies with the code of conduct can display?
    - Should there be an evaluation process, e.g. an entrance test, to qualify for displaying the mark?
    - Should there be ongoing auditing of conformance?
    - What additional steps does the industry need to take, and by whom, to reinvigorate a sustainable telecom innovation ecosystem.
    - What other questions should be addressed at the colloquium and in follow-ups?

References

Telecom Ecosystem Home Page

Accelerating Innovation in the Telecoms Arena (White Paper)

END.