Before I delve into the discussion, let me give you a brief intro about myself and why I am writing this. When I started my company - MobStac along with my co-founder Ravi in 2009, we set out with a simple mission - to connect the digital and physical worlds through the use of innovative technology. In the first few years, we focused on helping publishers build adaptive mobile sites that would work seamlessly across multiple devices.

Little did I know then, that a small start in this direction would lead me to be ranked among 'India's Hottest Young Entrepreneurs' by Businessworld in 2011. In 2014, we shifted our focus to the emerging field of proximity-based marketing and analytics as a new way to bridge online and offline experiences.

We recently launched our latest product - the Wifire app that aims to make Wi-Fi as reliable and ubiquitous as bottled water. In our endeavour to do so, we enable users to connect to the best public Wi-Fi hotspots around them with a single tap — automatically filling out web forms and OTPs.

Q1. Will the architecture suggested in the consultation note for creating unified authentication and payment infrastructure enable nationwide standard for authentication and payment interoperability?

Though the suggested architecture looks good in theory, for all practical purposes it's quite onerous and complicated. The architecture is limiting in quite a few ways, for example - creating a central registry of all Wi-Fi providers is a task that will take years for actual implementation. Also, who will own the registry and how it will be managed, is not clear.

"Any entity providing necessary APIs and SDKs to Hotspot provider system to integrate, connect, and collect payment using Wallet and UPI." is again very limiting.

The idea of using captive portals should be bypassed entirely as it could lead to a few/all of the following problems:

a. Restrictive usability
b. Non-standard landing pages, non-optimized for mobile. Latency - most of these pages will never open/open quite late
c. Confusing UX
d. Lengthy forms asking for unnecessary details
e. Web-based forms, in the age of apps

Also, these portals do not provide for encryption and do not ensure security.

The most important thing right now is to understand the reason behind non-proliferation of Wi-Fi hotspots across the country. As a matter of fact, this is not a 'technology' problem. The Wi-Fi access spectrum too, is not a bottleneck for the spread of Wi-Fi.

The main bottleneck is that deploying and maintaining Wi-Fi infrastructure is quite expensive. Currently there are only about 31,518 Wi-Fi hotspots in the country, despite a population of over 1.2 billion people. Of these, almost 13,000 are at hotels. While the number of private Wi-Fi hotspots is quite huge, the lack of incentives to resell Wi-Fi restricts these private hotspots from becoming public.

The need of the hour is to replicate the PCO model with Wi-Fi hotspots. Just as the privatization of PCOs in the 80s lead to massive proliferation of PCOs and a 'revolution' in the telecom industry, we can now enable a 'Wi-Fi revolution' by encouraging SMBs to become resellers of Wi-Fi without the need of becoming ISPs. Monetization of such services needs to made consistent and easy. This will help several entrepreneurs and SMB owners to become resellers or providers of Wi-Fi. If we create as many Wi-Fi booths as there were PCO phone booths - at the corner of every street, these Wi-Fi booths can work as Internet access points, and can be made sustainable through a paid model.

A public Wi-Fi system will enable last-mile connectivity by extending access to people to go online and access information. Public Wi-Fi can democratize digital access if communities, individuals and micro enterprises set up Wi-Fi hotspots at various locations for use by the masses. Not only will this make Wi-Fi ubiquitous, it will also create jobs and entrepreneurs.

The last problem with the suggested architecture is that of the method used for authentication. While Aadhaar and eKYC work well for Indian nationals, it won't work for tourists and foreign nationals.

Q2. Would you like to suggest any alternate model?

At this moment, we do not need a new architecture/framework for making Wi-Fi accessible and ubiquitous. There are already a massive number of private Wi-Fi hotspots that need to open up to the public and monetize sharing of data/bandwidth. Enabling SMBs or even home networks to monetize any unused data/bandwidth will provide enough incentive for sharing of Wi-Fi networks and enhance awareness/access to Wi-Fi among masses.

As mentioned earlier, replicating the 'PCO' model, where anyone could become a PCO operator will help achieve the goal of making Wi-Fi accessible to all.

Q3. Can Public Wi-Fi access providers resell capacity and bandwidth to retail users? Is "light touch regulation" using methods such as "registration" instead of "licensing" preferred for them?

Anyone with a valid PAN/eKYC, be it a small tea stall owner or a restaurant should be allowed to resell bandwidth and capacity. There is definitely a need for "light touch regulation" rather than restrictive regulations and licensing laws.

These are many opportunities to make India a more connected nation but a major hurdle stopping the establishment of paid public Wi-Fi systems is the stringent security and regulatory apparatus surrounding the Internet connectivity ecosystem. If the dream to connect India is for real, then complete liberalization/privatization is the need of the hour. Every individual, office, public institution, shop, society, academic institution or not-for-profit organization should be allowed to set up a public Wi-Fi system.

Q4. What should be the regulatory guidelines on "unbundling" Wi-Fi at access and backhaul level?

Providers of Wi-Fi at access point, such as owners of venues such as malls, coffee shops, restaurants, hotels and kirana stores can pay ISPs according to the bandwidth used by them.

Similarly, Neutral third party Wi-Fi providers with seamless authenticated connectivity across mobile operators and ISPs can connect to any telco/ ISP backhaul in an “unbundled” manner. These third party providers should pay ISP/Telcos according to the bandwidth used.

Q5. Whether reselling of bandwidth should be allowed to venue owners such as shop keepers through Wi-Fi at premise? In such a scenario please suggest the mechanism for security compliance.

Reselling of bandwidth should definitely be allowed as that will enable wider reach among masses. Enabling SMBs or even home networks to monetize any unused data/bandwidth will provide enough incentive for sharing of Wi-Fi networks and enhance awareness/ access to Wi-Fi among masses.

Just as Telcos/DTH operators charge for internet based on GBs used, resellers can sell data/bandwidth to their customers based on capacity of ‘data/Wi-Fi packs’. Such resellers can set up POS terminals and use mobile numbers for user authentication. The resellers themselves, can be only those who have valid PAN/eKYC.

Q6. What should be the guidelines regarding sharing of costs and revenue across all entities in the public Wi-Fi value chain? Is regulatory intervention required or it should be left to forbearance and individual contracting?

In the model suggested by us, there is no need for sharing of costs/revenue. A reseller will pay the ISP he has taken Wi-Fi access from, and a customer will pay the reseller based on the data used by him/her.

There isn’t a need for regulatory intervention for this. A reseller can charge for data from his customers based on the demand/supply model.