



**DECODING IMPACT PRESENTS**  
**DECODING THE OPEN NETWORK  
FOR DIGITAL COMMERCE WITH  
SUJITH NAIR**

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# Acknowledgements

## Contributors

This podcast was arranged by the **Digital Platforms Team** in Sattva Knowledge Institute and was hosted by **Rathish Balakrishnan**.

We would like to thank **Sujith Nair**, the Co-founder and CEO of Beckn Foundation, for participating in this podcast and for contributing his valuable expertise, insights and time.

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## About Sattva Knowledge Institute

**Sattva Knowledge Institute (SKI)**, established in 2022, is our official knowledge platform at **Sattva**. The **SKI** platform aims to guide investment decisions for impact, shedding light on urgent problems and high potential solutions, so that stakeholders can build greater awareness and a bias towards concerted action. Our focus is on offering solutions over symptoms, carefully curating strong evidence-based research, and engaging decision-makers actively with our insights. Overall, SKI aims to shift intent and action toward greater impact by influencing leaders with knowledge. All of our content proactively leverages the capabilities, experience and proprietary data from across **Sattva**.

**Introduction:** From Sattva Knowledge Institute. This is Decoding Impact, the podcast where we apply systems thinking in conversation with extraordinary experts to understand what it truly takes to scale solutions in the social sector. Decoding Impact is hosted by Rathish Balakrishnan, a co-founder and managing partner at Sattva. Welcome to today's episode.

**Rathish Balakrishnan (RB):** [00:00:38] The gross merchandise value for the digital commerce retail market in India was 2.85 lakh crore in 2020. While that sounds like a large number, it is only 4.3% of the total retail GMV in India. And if that number has to grow, it has to be in a manner that is both inclusive and is working at scale. India is estimated to have 6.3 crore micro, small and medium enterprises (MSME), most of which are not part of the digital revolution. For digital commerce to be truly inclusive, we need to onboard these MSMEs not just on one platform but across many platforms. In the podcast, we will explore the Open Network for Digital Commerce (ONDC) and how it will address and enable many MSMEs to be part of the digital commerce movement.

We have with us Sujith Nair, who is the CEO and co-founder of Beckn Foundation, the genesis, author and Angel donor to an open-source initiative called the Beckn Protocol that enables the creation of decentralised digital economy ecosystems. Prior to Beckn, Sujith headed management, consulting practices and businesses in areas of mobility and digital payments. Sujith has been part of many large-scale digital ecosystem transformations in India that include the Aadhaar and the pioneering effort in India's urban mobility sector with open payment interoperability that formed the genesis of India's National Common Mobility Card specifications, or the India One Nation One card initiative. Sujith, thank you so much for joining us today.

**Sujith Nair (SN):** [00:02:03] Thank you. Absolutely. Pleasure being here.

**RB:** [00:02:04] Sujith we want to cover a whole bunch of things today, but I'd love to start with your background. What brought you here to Beckn?

**SN:** [00:02:11] The interesting conversation that started off Beckn was rooted in the sector of urban mobility, the space where I spent almost a decade now trying to bring interoperability in my own little way.

Payment interoperability was a route I had taken initially. This is immediately after my stint with *Aadhaar* but this conversation that I had was to look at interoperability as a way to solving for the societal problem of urban mobility, the transport. It's so difficult to answer this question of a customer saying, how do I go from point A to point B? Today you have several forms of mobility. You have many choices, but sort of no solution at the end of the day, because they all operate in silos and there's enough information asymmetry which puts on a cognitive load. And we still kind of gravitate back to depending on our own personal vehicles and using whatever little of the roads that we have to go from point A to point B. So, the idea of Beckn end started off is saying that instead of trying to create another platform or a solution by ourselves, is it possible to kind of find a way to unify all the offerings that are there, whether it's an auto-rickshaw on the road or a bus or a metro or the bike sharing or the new forms of mobility, including, of course, ride-hailing is not new anymore, but all these together. And can they come together seamlessly to answer this question for the end user? So how do we make mobility a consumer-centric digital service rather than a farm-

centric solution? So so that idea kind of sort of led us to think that if we can we do something similar to what has been done in India with digital rails as an idea, starting with other than UPI, is there an opportunity to think of a similar digital rail as a set of specifications, not as a platform or software, but a set of specifications that can bring the ecosystem of mobility service providers together and make it seamless for the end user to find all these options at a place of her or his convenience.

That's kind of the genesis of conversation that led to the creation of Beckn protocol specifications, it was essentially Beckn mobility at that time. But I think as we were solving for it and we were designing these specifications, we sort of discovered what we call the 'deeper truth' of that essential vocabulary of that specification is pretty relevant beyond mobility as well. I mean, the adjacent sector like logistics and even beyond that to hyperlocal commerce and commerce in general today Beckn is going beyond commerce and looking at health care skilling in many other sectors. So, it's interesting that these ideas emanate from the problem of mobility that we were trying to attempt to solve in 2018.

**RB:** [00:05:07] You know, this is fascinating and I want to break this into three parts. The first part is the discussion on mobility itself, and I want to make sure I get that right. The second part of it is the idea of the protocol. And we had a session earlier on ORKIN and because the protocol is not intuitive, it's not something everybody understands. And as to why that's important, you know, except if you've done computer science and you realise that it's HTP or something like that. So, I want to talk about that. But the third thing I want to touch upon is exactly what you talked about, how something that was designed for mobility has become now something that is relevant for hyperlocal commerce, which is probably not intuitive. So, I want to try to talk about that, but let's start with mobility. You know, there was a recent announcement that the German government made where they said you have a nine-year-old card, you use that card to get on a bus, you can get on a train, you can get on any form of vehicle that I guess the government is running and probably not private players and they said that's an invitation to come into Germany and explore the tourism that doesn't exist in India today. The bus providers, the train providers, and the rate of cab providers. Is that the problem that you are solving to say, hey, I'm leaving from home and I have an interconnected set of options that take me from option eight to option B, where the payment is one aspect of it? But the interconnectedness from a consumer-centric perspective was the problem you were looking to solve.

**SN:** [00:06:19] It's interesting that you mentioned that many cities in Europe and other places do have this sort of a common card. And I think India is already has been doing some, you know, kind of initiative in that I think you already spoke about One Nation, one card as part of my introduction. I think it does solve the problem, but it does only solve the problem to an extent. As you said, it mostly works for those transit ecosystems which are largely public, largely public-funded transit systems. But if you look at the innovation, the evolution of form itself, that's happening. It's happening at a breathtaking pace.

I mean, we're talking about autonomous cars and urban aviation at some point. So I don't think one solution, whether it's in the form of a card or a payment, I think that that betting on one form of a solution to bring the ecosystem together, especially if you're solving for a population scale adoption may be scalable or sustainable beyond a point, which is where the idea is to probably think a bit more, and have a more minimalistic approach of not trying

to define a particular solution like a common card or but go beyond that and say, why don't we create an enabling infrastructure in the form of digital specifications? And you do have questions on protocols. I'll come to that later, but create this way of letting other people find the solution that brings them together. Sometimes it could be a card, but it's a card alone. Sufficient? No. Probably you would need some smart tech entrepreneurs to harness the ubiquity of smartphones in the hands of people.

So, you don't need a plastic card anymore. But using smartphones, is it possible for them to bring all these services together and organise the trip and use the options? We can choose what our options of mobility are available and then plan their trip and as part of that, maybe use this card to make the payment or make the booking. And somebody can blend in, add another layer of solution saying, look, while you're on your way, why can't I deliver your coffee or something like that? So, if you want that to happen, then it's important that we create a more minimalistic but enabling infrastructure and then let solutions be, you know, evolve on top of it by the larger ecosystem.

This is probably one of the ways of calling it, not solving it yourself, but distributing the ability to solve it. That's pretty much what the Internet did or for that matter, any infrastructure that's done. I mean, if you have a village and if you lay a road or a highway, the village becomes a town, the town becomes a city. There's economic development all happening. Not because the road was trying to do anything by itself, but because it allowed for access to economic development and opportunities to show up. So similarly, if you were to take that same analogy, and that's exactly what the Internet did, the Internet just did not particularly solve for shopping or mobility, just laid out that infrastructure and it allowed people to build solutions and all of that. So that's much broader thinking we have done with Beckn and that's yeah. So, in a way, it's combining these one card stories with maybe the ubiquity of smartphones and bringing all of that together and letting the entrepreneurial innovation build on top of it to solve this problem.

**RB:** [00:09:12] And I want to spend a little more time on that because the idea that we are enabling innovation to happen is, it's a journey like you said, it starts on the road and walking on the road, people move from products to platforms. So, if I'm an entrepreneur today, for me to set up a shop is a lot easier because I have an infrastructure where everything else is taken care of so I can innovate on top. So, platforms people intuitively understand because there are so many of them around us protocols, not so much unless you've done computer science and they tell you about how I, you know, HTTP as a protocol that enables people to talk to each other. You probably do not use that in a regular model. So, I would love to ask you more about why protocol and what does that enable? And I'll let you sort of answer that. But the second thing I want to touch as part of that, I think it's also part of a larger innovation that India is driving in the world. We. Just, I think, much bigger than what every other country is looking for, which is to say, is there a new paradigm for solving for scale? And I don't know if I'm right, but I'd love to have you speak about that as well.

**SN:** [00:10:15] To answer your question on why protocols and I understand I don't think it's expected that beyond people who are involved in building tech solutions, are expected to know what a protocol is. I mean, the idea is to see what is the value of what it is rather than what it is. But the fact that we have been always been using some of the other protocols, the fact that there are 200 billion emails being sent across a planet on a daily basis.

The fact that there are 25 billion devices connected to the Internet itself is because somebody thought of these protocols. I mean, somewhere along the path of the evolution of the Internet, I think probably the focus on protocol, evolution, protocol development sort of faded and then, of course, this whole innovation, private innovation platform economy and the whole Silicon Valley thing took off in a big way. So maybe protocols kind of fell back. But the idea of what protocol did is actually something phenomenal. I mean, the reason why we have the Internet is that we have a stack of Internet protocols, TCP/IP, HTTP and all of that. But what it does is precisely that it did not try to build a particular point solution to solve something. It just enabled that infrastructure for allowing the Amazons and Airbnbs in the world to build solutions. On top of that, nobody thought that they will be an Amazon, but the fact that something like this is available, you're able to create something on top of that and today for solving for mobility or commerce, why is protocol important? I think that's an important question to ask.

So if you look at the general model of any digital economy, whether it's commerce, you know, mobility, food delivery, it's premised on this one model, this edifice which assumes that the buyer and the seller, the consumer and the provider need to be on the same platform to discover each other, find a way to trust and transact with each other. Now, that model itself by design has a scale issue because it mandates the need for a central intermediary who takes this effort of bringing the consumer side and the supply side together onto one platform, and then some kind of transaction and economy flourish on that platform. But what if we were to reduce the dependency on having an intermediary because one intermediary cannot be bringing everybody on board? And the fact that despite so many years of commerce, retail commerce is only 7% of what's happening, shows that beyond a point one or two or few platforms cannot solve the population scale problem. So, therefore, what if we were to rethink this model, or at least while the model is continuing, why don't we think of a complementary model where if we were to reduce this dependency or take away the dependency of buyer and seller, be having to be on the same platform, what if the buyer is on any platform? The choice, I mean, from typically every smartphone user is on some platform or the other is on an Android phone or an iOS phone, or is probably using a Google map or a chat messenger or any of those is on some platform.

What if from the platform that the user, the buyer is present on, can he naturally discover a seller who happens to be another platform but is becoming naturally discoverable and go beyond discovery and engages in the sort of any buying, selling transactions with them? For that to happen, you need to have those separate platforms where the buyers and sellers can start talking to each other through a common language which semantically understands the concept of commerce, the concept of teleconsultation or things like that. And somebody. So, since nobody wrote that, I thought it's important to write that specification, which everybody agrees to. It's like, you know, natural language, like English. English is, by design, interoperable for the very reason, right? So, if we can create an interoperable language, which is which two platforms can understand, then you are overcoming this problem of needing to have both buyer and seller on the same platform.

And that by itself unlocks value because now a buyer cannot just talk to the seller on one platform, but on many platforms and the seller can discover buyers on many platforms while staying on one platform. So that automatically kind of expands the access vector mutually,

significantly. And this idea is not radical because this is exactly how e-mails operate or Internet operates. I mean, the sender and receiver emails are not on the same platform. Therefore, I think there is relevance in why we should look at it as a protocol way of finding a way to provide access, enable inclusion and more importantly, drive market expansion. Now, on top of this kind of new model, if you can allow innovation to happen at both ends, you don't have to wait for one intermediary to let innovation happen. Now you're opening access to a smart tech entrepreneur who can bring a bunch of taxi drivers online without. Having to worry about acquiring customers himself or herself. Now he just has to bring the supply liquidity onto a platform or a bunch of platforms. The demand is already available on an open network. So that's where I think protocol conversation is very important and very relevant in the current times because we are looking at giving every small business sort of a right or freedom to do business online.

I mean, as much as every small business is trying to be Internet-friendly, I thought, why don't we sort of flip it the other way and say, is there a way we can make Internet small business-friendly by kind of removing this rite of passage, of having to be dependent on one intermediary you have to solve for both sides.

**RB:** [00:15:46] So before starting Sattva, so that my background was in middleware architecture and enterprise integration and just one organisation in a company, I know how much pain it is to have 20 systems talk to each other and the amount of literally plumbing that you do to make that happen. Now you make that population scale and just not know how do I talk about the word buy? What does it word sell mean? What does it mean by just not having a common definition? I mean, it's such a deceptively simple idea and when it's done takes up so much transaction friction from a problem. But the point that you made about why this is important when you touched upon a very important point on the scale, they know two players are going to scale, however big they are. They are going public.

But the second thing that I think is important also is that in the absence of that interoperability, I think the intermediary gets a lot of power because once they've locked them in, you can then put as many discounts as you want. You can change the rules of the game. Then a lot of the impact is downstream by enabling interoperability, putting the agency on the guy who is on the platform saying, Listen, if it's not you, I'm going to somebody else has more choice, which I think in the long run creates better balance because a lot of what we see in the narrative if you agree with it, a lot of what we see in big tech is the concentration of power, the few people who have lock-ins with a large part of the market. And I'll just add one point and I'd love to have you react to that. A friend of mine started one of the first bus companies, Red Bus, and a lot of his work was to convince bus guys to give him seats. And we imagine he gets that for free. All his effort is around citizen experience. All this effort is going to be about making the last mile more friendly. I'm guessing this in addition to solving for scale, builds the agency of the app, and the participants in the platform and also fosters innovation to move the effort more to the last mile than as much and doing a lot of back-end plumbing. I don't know if that makes sense.

**SN:** [00:17:30] I think I think power asymmetry is there for everybody to see. I think the fact that by the act of having two economic participants, the buyer and seller on one platform, you are creating what is called as a store of value, that the value of the platform is enriched by the interactions and the value is stuck on that platform. I keep talking to taxi drivers, the

delivery boys, I think they keep saying this, quoting this example, if I were to move away from a platform to another platform, my entire transaction history, my credentials, my reputation, which is probably the only way I get chosen over the other person in the pecking order of search the reputation rating. I end up losing all that when I go from one platform to the other. So as much as the platforms are empowering others, they do extract power by the very model and it kind of takes away agency too, because if I am able to build a business on one platform and if I don't have the autonomy and access to that kind of data and move it to another place, you are creating a sort of a power asymmetry. I think that's I mean, that's loud and clear in my mind. I think that's a problem that we should be solving. And so, therefore, the idea of Beckn is of giving that agency and as the word Beckn actually saying that just at your own command, give that ability for a seller or small business to stand up on its own command, say that, hey, I'm available to do business on my terms.

So that opportunity is what you are enabling through more protocol centric as a network rather than a single centralised platform. And what it probably also does is to kind of expand the whole value exchange, because it's not one central store of value operator by one sort of an intermediary. You suddenly have many platforms, one-sided platforms, talking to each other, and there's a larger flow of value. So, this whole transition from a store of value to a flow of value, I think it's critical for market expansion, a more inclusive way of expansion and generating that agency because people want to make the most of doing business online. If online is the way forward because most consumers are becoming hyperconnected and they want to check for options online. Even if I know there's a grocery store right next to me offering bread, I don't know the fact that I'm searching for bread. The seller doesn't know. The seller doesn't know that. I mean, the fact that he has bread, I don't know. I just end up doing I think that's the kind of direction we're going to. If digital is a default, then I don't think small businesses should be denied that opportunity and I think you're right.

**RB:** [00:20:07] One last question on this, and then we'll move on to the conversation on ONDC. A protocol built for urban mobility in general today is part of a skilling stack that the government has announced as part of its budget. It's part of an E-commerce conversation that everyone's talking about since the press release has been out. How did that happen? How did it move from mobility to skilling to E-commerce?

**SN:** [00:20:31] I would call it a good set of happy accidents. As I said, we were only looking at mobility. But I think when we were trying to solve or create this vocabulary for mobility, the underlying generic nature of the vocabulary. If you typically look at any transaction between any consumer provider agnostic of which sector you're talking about, it essentially goes through these four broad stages. You go from Discovery where you're searching for something, then you find something, then you place an order, you pay for it, or you pay later, and then you track the fulfilment. If it's a physical fulfilment, like a taxi coming and picking you up or a grocery item being delivered to you, you track for it and then you receive it and then either you offer a rating or you put a complaint and you initiate returns, the whole fulfilment.

So broadly, if you look at any order lifecycle, whether you're talking about accessing skill or taking a doctor appointment or placing an order in retail commerce or mobility, it goes through this discovery order fulfilment, post fulfilment, which is the underlying essence. So if there is a common pattern that we see. So, we are trying to encode that common generic



vocabulary into the Beckn protocol which by design allows it to layer sectoral taxonomy on top of this generic vocabulary. So, the Beckn protocol core specifications are generic. It doesn't recognise any particular sector as it says. We unbundled or abstracted back and out of work in mobility in some sense, and made it open to allow for the layering of sectoral taxonomy. So, this is why I know ONDC can use the Beckn protocol with a retail taxonomy or a health network and look at a health taxonomy on the underlying Beckn vocabulary. So that's kind of a nice the deeper truth that we discovered. And yeah, it's been a fascinating journey ever since.

**RB:** [00:22:26] I think this sets it up very well for the ONDC conversation. Everyone's got a view of ONDC now and they see now. I think it suddenly has become this word that everyone's talking about and there is this notion that Nandan is building the next e-commerce company, which is not true at all. So, tell us about ONDC. What is it trying to solve? And I would love to after you've shared your overview, take it to the last mile. What does it mean for a person? What does it mean for a retailer? And I think it will be good to see ONDC from the lens of the retailer rather than the lens of the top.

**SN:** [00:23:00] I think ONDC, has been getting some kind of attention and discussions and I've been part of that. The first thing that I want to clarify, I would only say is that it has a network in its name. It's called Open Network for Digital Commerce. It's not a platform, but a network, a network that by itself does not do anything until there are platforms joining this to make it a network. So that's what ONDC is essentially a network. Think of it as a sort of a digital public rail, which is setting up the rail in form of specifications basing, using the underlying Beckn protocol and allowing for platforms which have some amount of buyers or sellers as part of their tenants to come and access this rail and make most of what this interconnection that can happen between the platforms, which has a large set of buyers and the platforms which have a large set of users. Now fundamentally it allows that. So as a network by itself, it doesn't do anything, but it allows it enables the platforms both on the buyer side and seller side to find a way to talk to each other in a common way with a common language as the underlying protocol.

Now, this automatically throws up options not just for the existing platforms to come on board, but suddenly it opens up it for any new, small or big platform. In fact, if you are to take that last mile example, a *Kirana* store in any city in the country can probably even build its own bespoke application if it were to go and connect to ONDC. You don't have to rely on one aggregator to do this. Any small, smart, big tech company can help a *Kirana* go online. Of course, it requires the *Kirana* to be digitised on its catalogue and inventory, but once that is done, the *Kirana* store does not have to worry about how will I make it my platform will reach all the users because that's the problem ONDC solves for. All you have to do is put up your hand and say, hey, I'm registered on ONDC, that's my platform and here's my catalogue. And then the buy-on platforms will do their side of the problem solving by bringing buyers to discover this *Kirana* store and the catalogue items. For example, if there's a *Kirana* store in North Bangalore, the users in North Bangalore, if somebody is searching for a packet of bread, when that search happens on the buyer platform by the buyer, the search will naturally get made, made available to all the platforms, including the platform on which this particular *Kirana* person is on. And they can respond and they can respond saying not just that I have a packet of bread, but you know, I happen to be just 500 meters or two

kilometres away from you and I can actually deliver it in 5 to 10 minutes. That's one thing it solves. It does that naturally.

So suddenly you are able to access demand in your neighbourhood and if you are a big player, you're into another kind of business. You can access demand pretty much across the country wherever the network is going live. All the platforms that are on ONDC already present. What it also does is help these small businesses in case if they don't have their own fulfilment capacity like a logistical delivery boy to go, go and deliver, they can use the network to find a similar set of platforms which are offering logistic services and use their services to help pick up those order from the store and have it delivered to their customers. So, it's solving for at least for today, the way the ONDC is going live with the beta. It's all for both the retail discovery and order and also logistics as well. So, on both sides, a *Kirana* store stands to benefit by being on the network and it's done and this is being done at a fraction of a cost. So tomorrow, if there's a POS machine provider which is traditionally accepting payments, can get ONDC enabled through this protocol and the POS machine is sufficient for the *Kirana* store to start receiving orders from the neighbourhood.

The user probably would be placing an order from a Paytm or a PhonePe or Google Pay or a Google search. And all the orders come to this by the *Kirana* store person on the POS and it can accept the order and plan for the fulfilment. This is just one. I mean, think of every such *Kirana* store, every such restaurant or any such goods and services provider in an urban setup, having natural access to what people are searching for in their neighbourhood. It will also help them, you know, look. That's a such dream and plan ahead of what they are hearing from their neighbourhood and plan for their inventory saying, look, I'm selling this product more than the others. Maybe I should keep that stock more. Being informed will help the supply chain that is feeding those products into them. Also being more informed and when they see will also bring probably the supply chain, the wholesalers and distributors also onto the same network because of all work on the same protocol. So suddenly you're able to unlock information and make it naturally discoverable and help *Kirana* or small businesses avail the network to do business better.

**RB:** [00:28:06] I know we've been talking about bread and shopkeepers and seems like a more intuitive case with all the ten-minute deliveries. But if I actually move this to an artisan conversation or craft person conversation, suddenly I am in, Vatakara for example, in Kerala, I was talking to a local entrepreneur there. They make these boat replicas which are apparently fantastic. No one knows where they're from. Now I can say I need a boat replica and you will get to that gentleman in Vatakara, he would actually get a sense of where are my balls getting sold. Because today he doesn't know. He is an artisan sitting in his, you know, workshop. People buy from him, but he has no idea where it's going today. He can actually use it only to say, I realise that 50% of my sales are actually happening in Jaipur, and if he wants a partner in Jaipur, he can actually say, Listen, a lot of people are buying my stuff. I could actually get into an agreement with you. Can we buy and do more stuff there? Because especially things like crafts, the obscurity of information and data are so huge. You don't know what is selling, who is buying. Even creative entrepreneurs who want the source have no idea where to get it from. And pretty much everyone's doing what agents used to do for basketball players. Right? So go to every show, see this, and just see the value that it can unlock for them just in terms of discovery, in sectors where information asymmetry is even higher than bread.

**SN:** [00:29:29] I think many people are yet to see as is one of the biggest enablers in ONDC is this whole democratisation of discovery. Today the fact that I have something to sell, it doesn't mean that I can be naturally discovered. Fine, you can have a website and all that, but how people will end up reaching your website is there are too many websites and you have a search through which you discover or may not discover. But here, if somebody is searching for something and if I have something even closely relevant to that item, that means I will become naturally discoverable. So if somebody is searching for a nice handicraft and if you're looking for that little, replica boat, I should be able to find even the Vatakara person. More importantly, because of this happening, as you said, if the bulk of the market is Jaipur, there will be another entrepreneur who will say, Hey, I will offer you near market warehousing facility through ONDC and I'll keep stock I will take I'll probably buy some stock and keep it and offer it myself, or I can help you stock your own inventory closer to the market and have it delivered in a single day because that information is now available not just for the buyer and the seller ecosystem, but the entire also the actors in between small and big warehouse providers who have some idle capacity, a lot to latch onto and say, Hey, you know what, there is this transaction happening. I am available in case you are looking for stocking it in the near market. So your fulfilment rates are better. Because of this removal of information asymmetry that happens with this democratisation of discovery is going to probably create almost a new, efficient way of looking at supply chains, and capital allocation across the value chain, I think that's where I think there'll be scope for a lot of innovation and expansion happening in a much bigger way. And that creates opportunities.

**RB:** [00:31:19] I want to talk about how we can get the party started because the value in its heyday is going to be great. I'm looking at UPI because UPI was similar. Google Pay made a big difference. The fact that Google put it on an app everybody trusted, the number of BHIM users versus Google Pay users to the PhonePe is significant. Is there a first adopter sort of a challenge here? Because we are also talking about a market where there are fairly large, significantly invested companies that are already doing commerce. How do we get this on the demand side, on the consumer side, and how do we get people to adopt ONDC? Because this is not in the interest of an Amazon or a Flipkart to adopt ONDC today, at least as far as I can see, because they are well-entrenched systems they probably are using as a differentiator. I don't know how you see that.

**SN:** [00:32:09] I think on the interest side, there is interest. I'm not as I will probably keep interest and urgency as two separate things. I think the fact that we have close to 200 million buyers, and users who use digital payments in India thanks to UPI and others. But I think only a fraction of that actually buys online. And I think the pandemic did aggravate the situation of looking at anybody who can deliver even groceries immediately to my doorstep. So, I think there is a general awareness that's there on the demand side. And yet many of these platforms, which actually have a large number of captive users in some sense, either on the payment side, are just doing a search or looking for a location on a map. These platforms did not have a way to onboard the supply side ecosystem so quickly. So, I think there is a latent buyer need and I think that discovery will increasingly become digital than physical. I mean, we will probably want to locate the store even before we want to go and ask whether they have an item or not. I think that behaviour is kind of there latent, but with ONDC, that ability to translate that intent into an actual work functioning search and convert that into order, that access will go up. So that's where I think all the big platforms or

anybody with a decent set of users on the demand side are definitely talking to ONDC. But I think the urgency will come from some of these young, smart entrepreneurs wanting to take big bets.

Like new challenges and interestingly, we are seeing that at least in the first cohort, we have companies like Growth Falcon, and Go Frugal which have been there for a while, all wanting to punch above their weight as a small, young startup and saying that, hey, I can bring a set of seller side ecosystem and their catalogues on because I don't need that excess capital or fundraise to solve for customer acquisition. Because with ONDC you have shifted the narrative from customer acquisition to a low-cost order acquisition. So if you do that, I have a plea and I can probably be the first. I think that's what happened with UPI. I think some of these apps like PhonePe will probably were not existed even before UPI. So I think the new challenge definitely adds momentum. The early momentum will come from them, but I don't see a reason why even the big players will stay away for the simple here that you're talking about market expansion from a 7% if you're waiting for it to let it become 30% and then I'll get into the market. I don't think it's prudent thinking from any big or small businesses, but you'll see momentum from the younger ones. Yeah.

**RB:** [00:34:45] What struck me when you were talking about that is that anyone who has an audience today and wants the audience to stay longer, a Google Maps, for example, probably would want to use this and say, hey, can I milk, monetise, engage you more to make this happen. You're right that the young startups today, just the barriers of entry have come down. They're going to come in. I want to now move to the supply side. Is the digital literacy or the digital readiness of the shopkeepers, the artisans, and the intermediaries that work with these people, a challenge?

**SN:** [00:35:16] I think if you look at everybody, at least from my conversation, the limited conversation I have with members of CAIT or Retail Association of India or some of the artisans that we have, or even the taxi drivers that I interact with in the city of Kochi, I think digital is a reality that they don't want to avoid or stay away from. That's a reality that they've embraced. And the fact that today they accept payments through apps and the fact that payments happen at the end of commerce. I think the fact that there are so many UPI users across the country, they're pretty much accustomed to this, just that they have a mental model that they have to wait for somebody to onboard them to make them do business online. I think that's a mindset that will take time because as and when the options start opening up and people say that, hey, I will I can be a small white label provider, it's your rules, your terms, which is what we're seeing with the mobility of a pilot we are doing, is that you set your rules, you set your terms. Whether it's a cancellation policy or return policy, you don't have to adhere to the terms of a public intermediary and anybody but at your own command, based on what level of inventory investments you're making and all that that autonomy for you to do that and the options that allow you to do that, once that opens up, I think they will gradually start embracing this more.

From the interactions that I'm having with some of the cohort participants, they're saying that the moment we explain this, in more so in restaurants than grocery, I think there's there's a unanimous. Yes. And I think it also fractionalised us the cost of the transaction because you have, you're moving from low volume, high value to extremely low value, high volume kind of a thing. You're sacrificing commerce in some sense. So that also adds to

their unit economics and scale. And that's probably how I see the supply side coming up. But it takes a lot. There is that little bit of a digital divide. So, for example, there are apps which are trying to bring natural language interaction and reduce screen dependency.

A seller has enough things to deal with in a store, so don't expect the seller to be on the phone, so there are a lot of ways in which they're trying to simplify access to the digital interface, and I already see natural language interfaces being brought in. I see companies like now on our tech through a voice memo digitising five big five fast-selling items of the seller's catalogue and that gets translated into English machine-readable thing. The buyer could be probably speaking in English, but probably you'll have a voice out in Gujarati as a seller, *Haan order accept Karlo* in Hindi, those are the things that will reduce this friction. But that's still you know, that's a problem we will deal with as the problem of the human-machine interface. This interface only we can solve to an extent, but it allows for acceleration of these efforts. Now an entrepreneur has a chance if he's a good NLP bot maker, he says that despite me being good I have a good algorithm, but I can still not be an e-commerce player because e-commerce entails ten other things, acquiring customers and all that. But now that is out of the equation. You let some of these smart tech guys offering those interfaces too.

**RB:** [00:38:37] I want to connect this back to the conversation we had about protocol and saying democratising the ability to solve problems. I think this is a very good example of that because I can imagine a product manager in an e-commerce company telling, NLP for Gujarati, he's like, you know what, my product backlog, that's going to be item number 27. And now you just make this available for everybody to come and do it because there are multiple companies and probably some guy in Surat who's saying, this is my core value proposition.

**SN:** [00:39:02] There are a few companies which are saying I have a good pricing algorithm for mobility, but I'm not a mobility aggregator. So, we have this local sort of a digital cooperative of a mobility pilot that's happening in Kochi. In fact, it went live in July last year called Kochi Open Mobility Network, where another third party. So that is interesting to offer pricing algorithms to the taxi. And there's a taxi company itself that has built an app through another software company, Just Pay. I'm sure you would have heard about it. They've also built the early version of the BHIM app, so you can have these values coming from multiple people trying to kind of offer a solution to that end seller. And then that that ability to distribute the problem solving to a wider ecosystem which allows more entrepreneurs, the solution providers to come in and stitch together a solution that makes it easier for the seller, that's possible. You're not dependent on one party or an entity to solve all the problems.

**RB:** [00:40:02] One of the discussions we had when we talked about OCEN was this idea of the policy environment being what it is for you to authenticate people, to know that they are legitimate, etc., and how that often reduces the speed with which this can be done. E-commerce has been dealing with the issue of fake products and spurious sellers, etc. and oftentimes it is the job of the brand to ensure that spurious sellers and fake products are sold. In a distributed environment like this where everyone's working, who's taking accountability for the risk?

**SN:** [00:40:33] Well, great question. I think this is something that comes with the design, the challenge, because, you know, there is always this idea that regulation is applied on an entity and that creates the whole idea of a centralised vantage point where it has to be applied. So, I'll apply it on an intermediary, and that intermediary will make sure the buyers and sellers are doing this in the case of an open network like ONDC you have no centre where you can apply this. So, this is where I think the designing of the protocol becomes essential because what the protocol allows for is to find a way to translate these rules, regulations and policies into some machine-readable code that could be overlaid on the protocol and what it does. It allows for ex-ante enablement of a policy to kind of keep these checks and balances of any kind of bad behaviour, whether it's fake products or products which are not properly listed as per the requirements of whatever is a metrology act and others. Those are things that the network will automatically enable. And the fact that you have a buyer and seller, any buyer or seller can probably say, hey, your items seem to be fake and I can report it, that possibility happens. It doesn't mean that you need to have somebody at the centre doing that. And even ONDC limited is not at the centre, they're just there facilitating this policy to be overlaid.

The other important thing in digital is the fact that there's a way for policy or enablement or compliance to happen through incentives. And that's where the reputation system makes a lot of sense. So, if I am a seller offering fake products, there is a way for them to kind of get marginalised because now you can have a network-level reputation system, not a platform-level rating system, but a network-level. So even if you are to go from a platform to plan B, of course, you can always change your name or incorporate it with your friend or family, but essentially it makes it that much more difficult or inconvenient to continue to display bad behaviour. So, the network-level reputation, which is interoperable, also solved the other problem. At the point that I was mentioning earlier, if a seller moves away from the platform and goes to another platform, he has to start from scratch. But this network level interoperability also serves the purpose of building on top of what you have done already, even if you move to a new platform, but also puts an essential check in their mind saying that, this is going to also go bad if you start demonstrating bad behaviour. Those are things that the network as a featured facility offers in terms of reputation systems and policy rails kind of enhances the trust of the network. I mean, let's be honest, even if you are buying a seller from a big platform, you are in tacitly or assuming that the platform is verified, the seller and you believe those ratings are again, I personally received orders in which you're saying that I'll give you 50 bucks if you rate me well. We humans we go with whatever is optically visible as a rating, but now we feel if you can build this at a network level, which is not specific to one platform, but agnostic at a level, there's a way to verify that. I think there will be some level of trust checks and balances, and consumers will be able to want to come and look at these sort of trust instruments, like rating and all, before they place an order.

**RB:** [00:44:02] Trust is such a sensitive issue. The first set of people you bring on board, the first set of products you allow for transaction and building that behaviour over a period of time to say, hey, start with the small stuff and then be able to go, or we'll create the first set of people who are coming in and then we will be able to make it open. I'm sure there are ways to sort of think about it today because I think trust is going to be a huge part of what we want to do for me, for example, the reason I stick with Amazon is just that I trust the brand. So how do we sort of build that I think is going to be important?

One of the questions I wanted to ask you is, is there some part of the ecosystem today suggests that is still probably not as mature for us to make this a reality? I mean, I am guessing the logistics service providers, etc. are probably very many because of what we do. But are there parts of it where you say, this ecosystem is still evolving, that part of the system is probably still not ready yet?

**SN:** [00:44:54] Know if you're looking at an ecosystem scale? I think there's a lot of maturities still to be desired because today most of this is a problem, especially on the fulfilment side, because in a protocol is all digital, but the fulfilment is physical. So that itself is unlike UPI, it's all money, it's all digital transfer, digital fulfilment. Here your e-commerce actually entails physical fulfilment and that's where things start crumbling. You start scrambling. There's a trust issue whether the item is delivered on time, or not on time. It's a fake item delivered and things like that. I don't think there is that maturity at an ecosystem level. A few monolithic platforms which do end-to-end, have done it, and have learned it the hard way through years of trials. But I think that needs to start infusing that maturity. That is where I think ONDC is limited and the larger ecosystems and entrepreneurs have challenges and an opportunity. I mean, it's an opportunity for fintech or the insurance guys or for small local digital cooperative aggregators of delivery agents or warehouses to or, you know, do seller education or seller credentialing. That could be all opportunities.

I mean, why can't we have multiple rating service providers who actually do some QC checks? And also, it creates an opportunity for other players to try to contribute to trust and do that. But it's a journey. It's not going to happen so soon. It will take its time. But I think the inherent value that I do have is supply liquidity on the network, I can access many catalogues, especially grocery, which is largely a long-tail problem. The fact that I can discuss several is the beginning, but over a period of time through this ecosystem participation and you know, these things like reputation, systems and policy and all that digital policies, I think we will be able to drive to that maturity. It's not going to be easy. I mean, nobody says it's going to be easy or quick or certain in any way, but that's a journey.

**RB:** [00:46:51] Maybe one last question on this and maybe a reflection. I'm realising the amount of entrepreneurial energy this is going to unlock. I mean, just the possibilities- you can be a warehouse provider, you can be a digitisation partner for shopkeepers, you can be a fintech player offering supply chain finance for this or purchase orders of finance for this. If there are large order logistics providers, you can trust parties, you can be communications agencies, and audience marketing providers that can create audience generation. I mean, I think just the ecosystem of entrepreneurial energy that we have to unlock for this to be real and just creates value. I think it's significant and I think what is exciting for me there is that it's not a Delhi, Bombay and Calcutta, entrepreneurial energy. There's probably somebody in Jharsuguda right now who's saying, listen, I have warehouses I can create for enabling better when I know which products are coming to Jharsuguda, who's ordering what? So perishable and non-perishable. I can actually build warehouses right now and register myself and discovery is less of a problem because how many warehouse providers exist in Jharsuguda together? So if somebody wants it, they are available. This distributed entrepreneurship that can actually create jobs across the country if it goes well and we are all building castles in the air at the moment is a massive opportunity because this is the problem so far has been that job creation still has been a very Gurgaon, Bangalore, Bombay conversation.

**SN:** [00:48:16] If you look at the beta life that has already happened, it's not just in Delhi and Bangalore. We are looking at Udupi, Sikkim, Coimbatore and other tier II and III cities. There are sellers who are already doing ONDC transactions at some scale. Of course, these are early days and just a beta pilot with a few sets of users from the local beta. But by buying list that Paytm has, which is the first app to go live. But, you're right, I think this will unlock opportunities across pin codes, across locations and it'll offer opportunities anywhere. I foresee an area where there could be platforms which say, hey, I have a white label SaaS platform to digitise catalogue as a service or order management or service and then maybe some local village entrepreneur who. Just bring the local ecosystem online and be a local sort of social aggregator of merchants there using some third-party smart platform hosted anywhere, so it's like a micro sort of a Shopify with a village entrepreneur trying to bring that ecosystem on board, whether it's artisans or agricultural or farm produce that you're trying to sell or textiles or carpet manufacturers in Uttar Pradesh, you can create that kind of an entrepreneurial, micro-entrepreneurial opportunity. So you're not looking at big unicorns, probably, but many small, which is a much bigger groundswell than what one or two unicorns can create here.

**RB:** [00:49:55] Talking about a promising future. But that'll be great to hear. Where are we today? And I'd love to know. Where are we today with respect to the Beckn protocol and where are we today with respect to ONDC? And then I have a final question, sort of wrap this up.

**SN:** [00:50:08] Beckn as a protocol was an idea that was put together by the foundation as the genesis of the authors but today there's a wider spectrum of community that contributes to the evolution of the protocol, so for Beckn to go from mobility to e-commerce and other things, it's just not happening by itself. A bunch of us put the idea first, but today we have volunteers with entrepreneurs, tech players or already in this ecosystem just giving their valuable time. We have these weekly check-ins on community calls. There are four or five communities across local retail delivery, and health care, and all of that who are taking time to participate and contribute to what is saying. What can be added? How can it be done better? So, it's become a very community-contributed community governance protocol. So, it's truly an open-source protocol and anybody can access that. Anybody can put it into action. It is not just for being part of open networks, but the amount of knowledge it encapsulates for anybody to build their own apps.

Whether it's joining the network or not, it's still a handy sort of tool for them to have. So one is that I think Beckn is getting kind of having its own orbit by itself in terms of a community taking it forward and vibrant community which is growing. We are also seeing references of and being adopted for sectors like other said, health care and others. And also, we are seeing some adoptions happening outside of India. There are entrepreneurs who are trying to take this idea and implement it in countries in Europe and other places in Africa, saying, hey, can we do this for others? So as an open protocol, it facilitates those kinds of idea generation and conversations but I think the biggest in terms of what I can see as a manifestation of work and protocol is the ONDC initiative itself and that is phenomenal to see how an idea can quickly gather such momentum and grow.



I think till about December there was no ONDC as an entity, but suddenly we have an entity and then there's this whole fantastic leadership and of course, the advisory council that is coming together and giving it a push. And today we have a network going live between December and now. The network is already live in some form as beta and you have participants big and small participating and sort of shifting the business model to be ONDC ready, that itself has a lot of room for growth. I mean, if you're just starting with retail and logistics in a few cities, the city horizon itself will expand just for retail. And when I say retail includes both grocery, restaurants and a few other things, but beyond retail and logistics, as I spoke about the supply chain that can open up on ONDC, I see conversations happening around enabling agriculture or rural commerce to also be part of our in ONDC.

Then I think it can foray into sectors like tourism, travel, and stay. I think there's a possibility for that expansion but obviously not getting ahead of ourselves in terms of saying where all it can go. But I think the potential is definitely there. I think the collective will and that entrepreneurship zeal, not just ONDC limited as a company but of the ecosystem wanting to make the most of it and can drive the sort of network to go beyond what one can imagine right now.

**RB:** [00:53:29] One of the questions we always end with is this question what can philanthropy do to drive this and accelerate this forward? And at times that philanthropy shouldn't do anything. And there are times when it can add value. I mean, just from our conversation today, I'm thinking about the last mile digitisation that we talked about, is there a way partner's philanthropy can enable that? I can do this for your type of approach, and I would love to hear your thoughts on this. Where can I add value?

**SN:** [00:53:53] Beckn as an idea was a philanthropic nudge in some sense because thinking about solving for mobility and said it doesn't take much to get some thinking going and to kind of think about, okay, why don't we put this protocol? That nudge can come from some philanthropic capital and nature that's very important. But the nudge should be in a way that they are not trying to solve the entire problem. So, because I think these some of these are definitely by design, not scalable, you cannot just have one or two or three philanthropic just trying to solve the entire problem at a population scale. But thinking of this, public goods are open ecosystems and create an opportunity for others to build on a very small thing that you created as a building block on which I can build ten other things. I think that's where philanthropic ventures can offer that much-needed starting plug or that spark plug kind of thing. To get the conversation started, I definitely believe that's a possibility. I think it's unfair to expect the government to solve everything or just the market to solve for them. So, there's an opportunity to get into the of space where nobody is looking and solve this problem. And it's sort of good and bad that it takes a philanthropic ness to think about public goods like protocols. But I'm hoping that going forward it has this conversation will become an opportunity for everybody to look at protocol seriously again.

**RB:** [00:55:14] And I want to build on what you're saying. And so important, because a lot of time philanthropy has a view of saying, I've put this \$1, I want to see where it got paid out. But poverty is such a complex problem. You're laying it out brick by brick. So, the most important question is, is your brick in the right place? So, creating these digital public goods because it allows for somebody to jump on top, build on top. And that mindset of thinking of it as a long game and saying, I'm adding components to this that is going to help solve the

problem, I think it's a big shift and it's a very necessary one. Sujith, I have so much more to ask you, and this has been a fascinating conversation. It's one of those rare times where, you know, three things are coming together for me. One is the idea that we are talking about something which is fairly abstract but can be tied down to something very tangible too. It's relating to a problem all of us can sort of touch and feel. It's not a poverty problem that I can't understand. I relate to it because I'm both a consumer and a player in this game. And three, it's also one of those things where what we are doing here in India actually holds true and holds the light for the rest of the world. Hence setting a new path not just for ourselves, but in some sense for the rest of the world as well. Thank you so much. This has been very helpful and thanks so much for your insights.

**SN:** [00:56:22] Thank you so much. It's been a very lively interaction and glad that we're putting this story out. It's been fascinating talking to you.

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