



Connected Society  
OnionDev's Mobile Vaani media marketplace  
serves underserved populations in emerging  
markets with locally relevant content



Connected  
Society

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The GSMA represents the interests of mobile operators worldwide, uniting nearly 800 operators with almost 300 companies in the broader mobile ecosystem, including handset and device makers, software companies, equipment providers and internet companies, as well as organisations in adjacent industry sectors. The GSMA also produces industry-leading events such as Mobile World Congress, Mobile World Congress Shanghai and the Mobile 360 Series conferences.

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Supporting the mobile industry to increase the adoption of the internet for the underserved by tackling key barriers: network coverage, affordability, digital skills and locally relevant content.

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## Summary

OnionDev is the social enterprise born out of Gram Vaani community media and a strategic business partnership with OnMobile, a leading international mobile value-added services (VAS) vendor. This entity aims to address scalability and sustainability in mobile for development (M4D) content services.

OnionDev provides a voice-based interactive media platform to underserved populations in developing regions, accessible for free through low-end feature phones. This matters because it enables even marginalised populations to access information from which they are otherwise excluded. In many developing markets, although information is available online, smartphone penetration and mobile data use is currently low. Underserved consumers often lack digital skills and basic literacy and there is a lack of locally relevant content online.

The product combines a technology platform, vAutomate, and its online marketplace and content management system, Mobile Vaani, with its offline network to engage underserved communities to

create and consume content and services through voice recordings. Examples of content include hyperlocal news, civic rights, useful information products, and community-building and self-expression opportunities. Moderators publish content from national or state-level sources three times a day. Volunteers (with financial incentives) and users generate hyper-local content and publish it throughout the day. Users access the content by dialling a short code, browsing through multiple channels, skipping and listening to different voice messages on the IVR menu, and can share their own content by simply recording a voice message. When users call Mobile Vaani, they also get exposed to a marketplace of life-impacting VAS to which they can subscribe, offering a marketing channel for VAS. Revenue to sustain the platform is generated from social sector organisations, commercial companies, and governments which are keen to engage with rural users to share information, advertising, and value added information products. Such products include subscription-based civil service exam practice, financial literacy and entrepreneurship training.

<b>Year Launched</b>	2015
<b>Business Model</b>	Business (B2B); managed services
<b>Targeted Device</b>	Basic, feature (current) & smartphone (planned)
<b>Primary Delivery Technology</b>	IVR/Voice, messaging and apps (going forward)
<b>Products &amp; Services</b>	Information access via a technology platform (vAutomate) & market place (Mobile Vaani); professional services (managed services)
<b>Markets Deployed In</b>	India – 12 states; also in Afghanistan, Sri Lanka, and six African countries: Ghana, Kenya, Mali, Nigeria, South Africa and Tanzania
<b>Estimated Total Number of Users</b>	100+ clients paying to use different products, reaching out to a collective user base of 1.5 million users
<b>User Acquisition Rates</b>	As of January 2016, 15% month on month growth when launching Mobile Vaani in new geographies
<b>Estimated Number of Active Users</b>	30% of users are active on a monthly basis (defined as making at least one call in a month)

## Background & opportunity

OnionDev is headquartered in India, a country in which 68% of its approximately 1.3 billion population live in rural areas and approximately 22% live below the national poverty line. Diverse in religion, culture and economic status, they speak 22 officially recognised languages, with many unofficial languages and dialects spoken regionally. Approximately 31% of the adult population are illiterate.<sup>1</sup>

The high levels of illiteracy and poverty, as well as certain social and cultural norms, mean there are large numbers of people lacking access to reliable information and few ways to communicate their needs in society. Although increasing amounts of information are available online, smartphone penetration and mobile data use continues to be low, especially among the base of the pyramid; these consumers often lack digital skills and basic literacy and even if users are able to get online and read content in a language they understand, there is a lack of locally relevant content to access when they get there.

However, around 40% of the population own their own mobile phone<sup>2</sup> (most commonly a feature phone) and many more have access to mobiles. This offers social sector, government and commercial organisations a channel through which they can communicate with otherwise unreachable audiences and crucially, a

means through which illiterate or disenfranchised populations can make their voices heard.

There have been an increasing number of organisations wanting to use the mobile channel in this way, yet among those in the social sector, government and enterprise sectors in particular, there was a lack of understanding of the mobile ecosystem and a lack of capacity to develop, deploy and manage mobile services, sustainably and at scale.

Social sector clients are structured in very different ways to the more traditional mobile operator, media and corporate clients of the VAS industry. To maximise the opportunity presented by social impact or Mobile for Development (M4D) VAS and to serve the needs of social sector clients more closely, OnMobile and OnionDev formed a strategic partnership, focusing on building a community action social enterprise. This new company develops the Mobile Vaani platform and its associated capabilities to serve social sector and government clients with channels to reach their target audiences. Based on the strategic B2B partnership, it leverages the technology and deep operator relationships that OnMobile has internationally and the on-the-ground networks and knowledge of the base/middle of the pyramid users of Gram Vaani.

## Objective

Through Mobile Vaani, OnionDev aims to enable users with low-end phones to access and share life impacting information with each other through voice recordings.

1. World Bank. <http://data.worldbank.org/country/india> [Accessed 30 October 2015].

2. GSMA Intelligence. 'The Mobile Economy 2015.' [Accessed 4 February 2016] <https://gsmaintelligence.com/research/?file=4113a57d43a9e93968e7ed00123ba4b2&download>

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Advertising for Mobile Vaani by a  
JMV Volunteer-from Club Dhanbad,  
Jharkhand state.



## Results

OnionDev has a roster of 100+ clients, including the Population Foundation of India, Sesame Workshop, Oxfam India, New Holland Tractors and Greenlight Planet, who are paying for access to the platform across 12 states of India on a managed services basis (i.e. where OnionDev manages all aspects of the service: technical, online content management as well as offline community engagement). The platform is licensed for partners to manage (via 'platform as a service' or PAAS) in Afghanistan, Sri Lanka, Ghana, Kenya, Mali, Nigeria, South Africa and Tanzania. Clients use the platform in a variety of ways, for example to reach out to remote rural populations to advertise their products and services; increase awareness of appropriate health and education practices among people; create behaviour change through campaigns on social issues such as early marriage and domestic violence, and link community action with government responses by setting up grievance registration and redressal processes on public welfare schemes.

The total number of people who have benefited from Mobile Vaani includes:

1. 1.5 million users in central and north-eastern India
2. 100+ documented cases of improvement in the delivery of government schemes, with each case

bringing indirect impact to several thousand households or more.

- » For example, a crowd-sourced data collection exercise researching the quality of care received by patients in rural health clinics was covered by the major regional media publications in Jharkhand, India. This led to an improvement in the functioning of 5 out of 10 health clinics in the area, with a direct impact on the entire community of more than 100,000 households.

Awareness raising efforts include:

1. Consistent 30%+ improvement in awareness levels recorded among users of the various information communicated through the platform (such as life impacting health information; education or learning opportunities without having to leave their villages; their eligibility for government schemes and financial literacy information).
2. Rural advertising by a tractor firm generated 500 enquiries in 4 weeks - an increase of two and a half times on traditional advertising through newspapers and TV.

## Approach

OnionDev developed Mobile Vaani to provide a voice-based interactive media platform for underserved populations in developing regions. The platform can be accessed for free through low-end phones and enables the participating community, regardless of literacy level and technical know-how, to share life-impacting information with each other through voice recordings. Examples of content include hyperlocal news, civic rights, useful information products, and community-

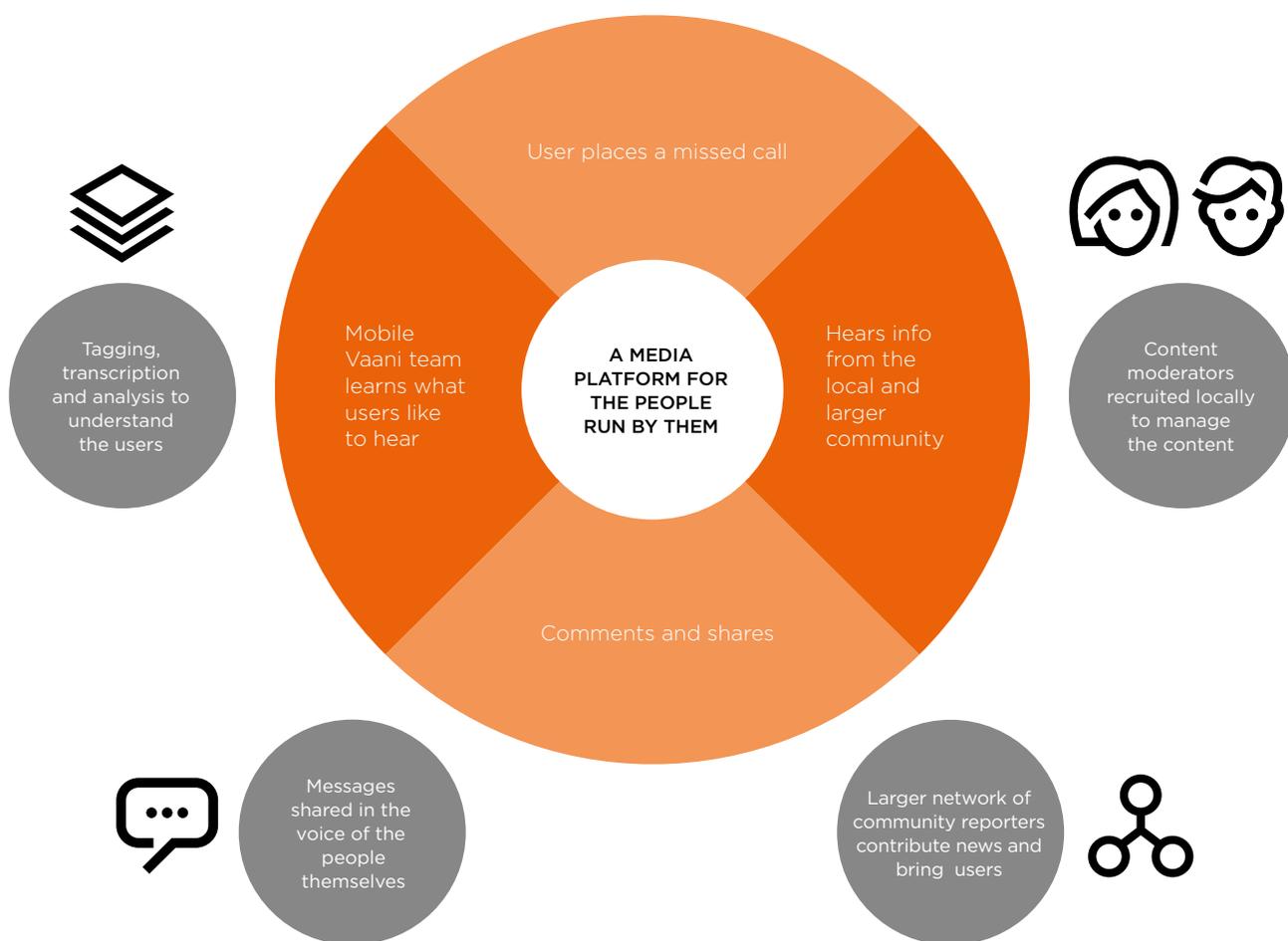
building and self-expression opportunities. Moderators publish content from national or state-level sources three times a day. Volunteers (with financial incentives) and users generate hyper-local content and publish it throughout the day. Users access the content by dialling a certain short code, browsing through multiple channels, skipping and listening to different voice messages on the IVR menu, and can share their own content by simply recording a voice message.

Mobile Vaani is a moderated forum. Any voice messages recorded on the IVR are manually checked by a team of content moderators who follow basic policies to check for audio quality and advanced editorial policies to ensure that politically motivated content, rumours, or unverified corruption allegations are not published. Roughly 6-8% of daily calls lead to people leaving messages, of which 30% messages are publishable. For more than 70% of the rejected messages, the

main reason for rejection is poor audio quality. Other messages get rejected because the report is not articulate enough, or it is incomplete, and only 1.5% of messages are rejected because the content is objectionable or incorrect. In terms of the workload, a full-time, salaried content moderator employed by Onion Dev needs to be added for every 500-700 calls per day increase to vet the content contributions and assign appropriate tags, categories, and titles for the content.

**FIGURE 1**

### How content is generated on Mobile Vaani

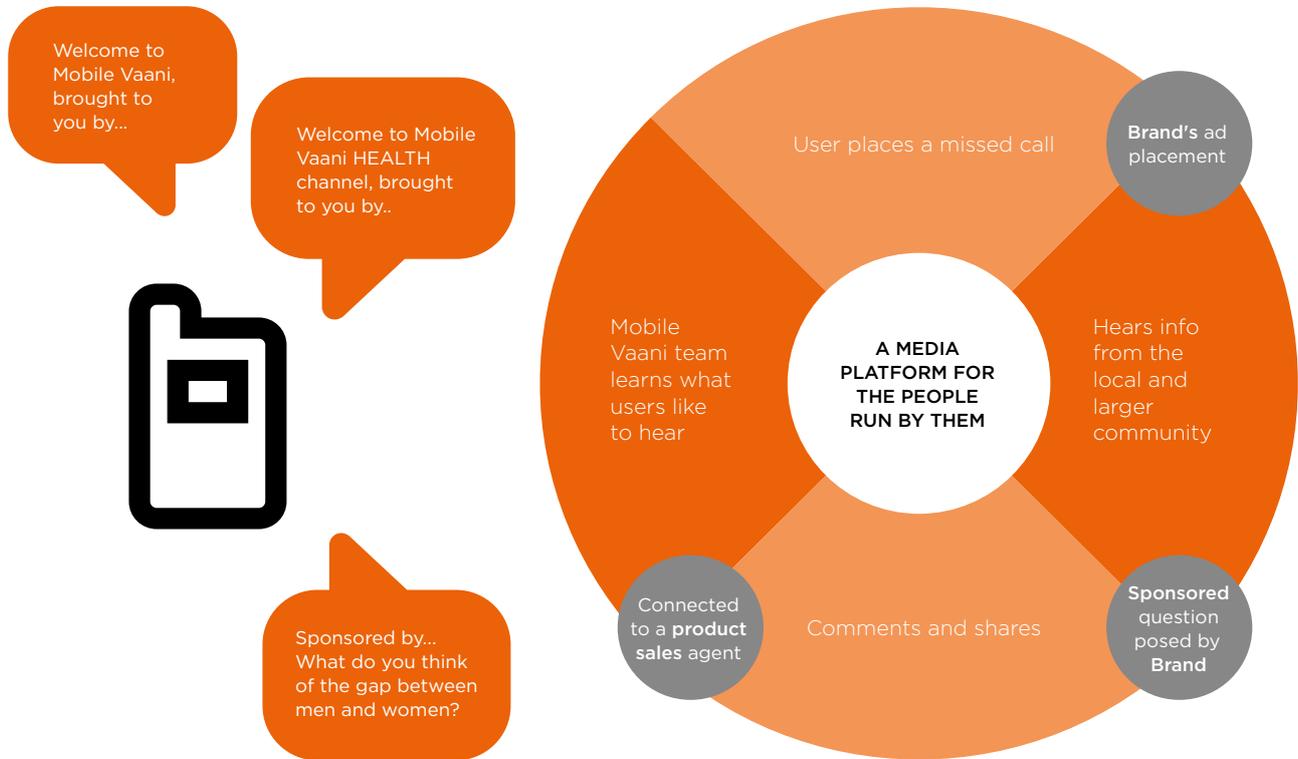


Revenue to sustain the platform is generated from social sector organisations, companies, and governments keen to engage with rural users to share information, advertising, and value added information products. OnionDev operates using an end-to-end

managed services business model, offering program design, rapid application development, technology hosting and management, content support, native advertising, and field training to clients wishing to leverage its ready reach to 1.5 million rural users in India.

FIGURE 2

## How revenue is generated on Mobile Vaani



The key aim is to encourage people at the base of the pyramid to use Mobile Vaani as the “first referral point” for seeking information associated with their specific needs.

According to OnionDev, one of the key reasons for the poor uptake of mobile VAS amongst base of the pyramid segments in developing countries is lack of awareness. Amplifying this is the lack of a strong user acquisition and engagement process, poor customisation efforts and a reliance on untargeted mass-marketing, whether above the line on billboards and television, or below the line via SMS blasts.

Therefore, OnionDev combines technology access with an offline user education and acquisition approach, which ensures consumers are informed about the benefits of the service and pricing details, as well as bringing the required credibility that comes with human intervention. This has been key to the platform’s success to date.

The process begins with the OnionDev field team entering a new geography with its NGO or corporate clients. The team identifies volunteers – either individuals or members of existing educational or civic institutions - and trains them as trainers, content generators and

advocates for the service. Over time, these volunteers are grouped into clubs. The clubs are then financially incentivised to promote the service, generate hyper-local content; educate and acquire users and maintain users' engagement in the service thereafter.

Example uses of the Mobile Vaani platform include:

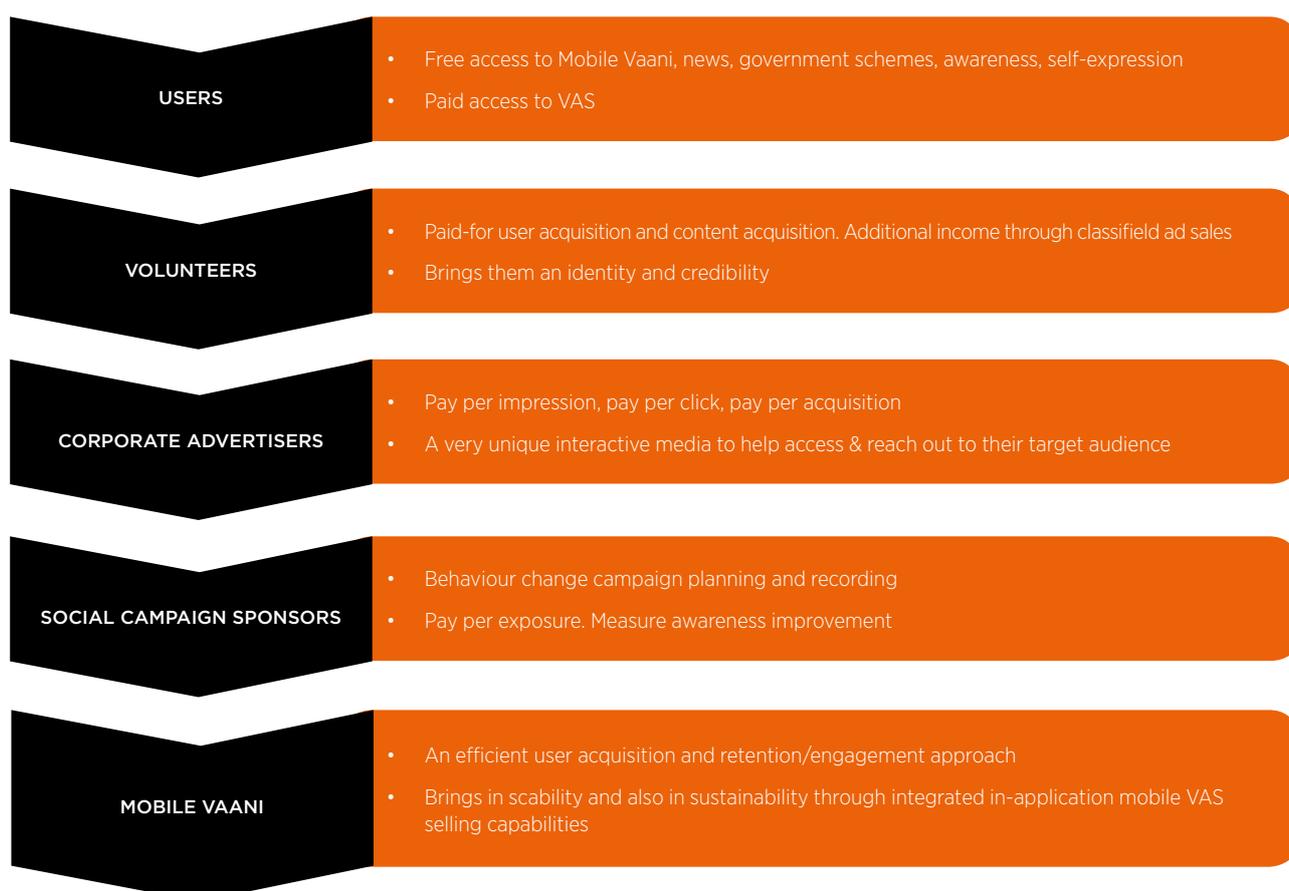
- A crowd sourced data collection feedback service on the quality of care received by patients in rural health clinics.

- A jobs channel where job openings are picked up from local newspapers and websites, and published amongst Mobile Vaani users.
- Agricultural Q&A channel pertaining to relevant local conditions.

It also helps creating livelihood opportunities for local entrepreneurs who can source local classifieds from small private hospitals, coaching institutes, restaurants, and individuals wanting to market their products or services after retaining a commission of 20-30% of fees as their income.

FIGURE 3

## Value chain in Mobile Vaani





Radhu-Rai and friends listening to Mobile Vaani at a junction while waiting for public transport

## User centric attitudes

The core philosophy of OnionDev's approach, which combines the technical platform and the online marketplace with offline community engagement, is that a media platform gains social and commercial power only when it is meshed with the local community, at which point it can be leveraged for accountability in governance, education, marketing, behaviour change, and collective action. Therefore, to ensure the platform's continued relevance to the communities it serves, OnionDev employs a bottom-up approach to ensure user-engagement. Its design principles can be summarised as follows:

1. **Source content locally** - Keeps content creation costs low and the information relevant, content is driven largely by the needs of the communities with whom volunteers interact with and to which they also belong. In addition to this, the content and moderation teams work in the field, interacting with end consumers, NGOs and social sector organisations to understand their real needs and accordingly package content that is relevant to users.
2. **Use technology that is easy for users to adopt** and migrate to new systems in line with the ecosystem. OnionDev has focussed on gaining traction with BOP communities who need or prefer voice channels. Not only does this most closely serve user needs now, but it also builds a solid foundation from which it can support the transition to richer app and data ecosystems in the future.
3. **Create processes that give ownership to the community.** Leads to new uses of the platform the OnionDev team may not have predicted and supports its self-perpetuation. For example, hyper local news became one of the most powerful uses of the Mobile Vaani platform. The company thought it would provide information to create discussion, and that change would follow. It did not expect the users to engage so heavily in the creation of hyper local news, but this has developed into one of the most significant aspects of the Mobile Vaani platform and it has developed functionality to support this. Such emergent uses of the platform are possible only when the users take ownership and are given the space to innovate.

## The use and value of data

OnionDev closely monitors user acquisition costs, engagement rates, growth rates and content consumption patterns, as well as conducting user surveys to understand the consumers' interests. In terms of production, it analyses how many people are creating content, the quality of that content, rejection rates and rationale, in order to inform how the community moderators engage and educate the users. In terms of consumption, it analyses which portals and which

content are more popular, and for whom, to help decide what content is created for what segments of which communities. For example, men tend to consume hyper local news extensively while women have been found to consume content and information relating to health/children's health, as well as entertainment. Youth segments are very interested in employment news and career counselling. These insights can be used to shape how these segments are targeted in the future.

## Scalability

OnionDev aims to build in scalability in a number of areas:

1. **Technology capabilities:** OnionDev has developed the capability to build complex voice applications in a few minutes. This enables a fast go-to-market plan/strategy for clients. The vAutomate platform is a mobile services technology platform on which OnionDev develops and manages the services it offers to its customers. It is time- and scale-tested with deployments across the mobile operator ecosystem. Access to this platform, via a strategic partnership with OnMobile and the Mobile Vaani marketplace offers a strong solution to help scale clients' and in-house developed products and services.
2. **Strategic partnerships:** With the help of its strategic partnership with OnMobile, OnionDev can potentially leverage the telecom operator

partnerships offering the ability to deploy services to mobile consumers across many countries globally. In India, the relationship also offers an extremely robust cross/multi-operator VAS infrastructure, which is integrated with mobile operator VAS deployments. These all have the potential to help launch VAS in India.

3. **Mobile Vaani reach:** the platform already provides access to a user base of more than 1.5 million users that have engaged with Mobile Vaani across the central part of India and it is being replicated rapidly to other geographies and states in the country, giving a strong base from which to scale.
4. **Content moderation capabilities:** The company constantly seeks to improve the training of content moderators and volunteers to ensure high quality content. It is also developing training apps to support those moderators and volunteers with smartphones.

## Partnerships

Partnerships are vital to the success, and indeed existence, of OnionDev. Those in operation currently can be categorised as follows:

1. Domain partners which provide content and domain expertise (e.g. Sesame Street, School Lens – both of which provide credible education content).
2. Distribution/field operational partners – self help group organisations (such as micro-finance group Jeevika in Bihar), or representatives of government organisations (such as Anganwadi or front line health workers and citizen service centres).
3. Technology partners – OnMobile, telecom operators, payment channel partners, etc.

The following outlines OnionDev's various types of clients and how it works with them. Although there is a defined client-supplier relationship, OnionDev also considers them partners. While it is helping these organisations to translate their requirements into mobile services, they also provide OnionDev the benefit of their domain expertise in terms of content and end user understanding, building OnionDev's capabilities in the long term.

1. **Managed service partners:** Large social sector and development agencies, government departments, enterprises who want to reach to a large user base with information services and/or develop large-scale interventions using mobile/ICT as a medium. These kind of partners require high engagement,

dedicated teams and require a substantial commercial commitment to the project. These are largely long term partners (2-5 years) who work or intend to address larger scale social objectives.

**2. Mid-scale partnerships and campaign partners:**

Intermediate/mid-level partners from the development sector, government departments, enterprises and brands that work on a shorter agreements (6 months-2 years) regarding geo-restricted projects or campaigns around particular social objectives.

**3. DIY (Do it Yourself) partners:** service or product interventions intended for testing or pilots by small/medium term development partners or enterprises, where the campaign or project durations are restricted to fewer than 6 months. These require low or no direct engagement and can be managed with a smaller technical team. These projects help validate ideas or projects without the need to spend significant amount of time, effort or resources. It helps democratise innovation and technology capabilities.

## Challenges

Below is a summary of the challenges and related solutions that face OnionDev.

Challenge	Solutions
<b>Balancing scalability &amp; sustainability: OnionDev needs to keep the cost of engagement low but at the same time, scale to multiple geographies</b>	<ul style="list-style-type: none"> <li>• Leveraging strategic partnerships and the operator ecosystem to bring down operational and network related costs</li> <li>• Develop and have more users migrate to its app/data solution, which will lower engagement costs</li> <li>• Engaging users on paid-for services, generating more revenues</li> <li>• Improving the efficacy of volunteer training and related methodologies</li> </ul>
<b>Increasing commercial advertising revenue</b>	<ul style="list-style-type: none"> <li>• Building successful use cases in the geographies it is currently working in and building a stronger local sales management for regional advertisers</li> <li>• Providing a larger user base as it scales to multiple states or circles, hence offering a business case for national advertisers</li> </ul>
<b>Scaling community engagement (field operations) model and content moderation capabilities</b>	<ul style="list-style-type: none"> <li>• Forging partnerships with like-minded organizations (NGOs/development partners etc.) to leverage each other's competencies</li> <li>• Building a strong operational framework and structure (including at a district level if relevant) to ensure clear messaging/communication through the ecosystem and maintaining the quantity and quality of content on the platform at scale.</li> </ul>

## Lessons learnt

1. **Partnerships are critical** in ensuring the right products/services are built, and then taken to the right audience at the right time, using the right channel.
2. **An eco-system based approach is required to help solve social issues** – technology is no silver bullet and no single entity/individual can solve all problems. It requires a combination of varied competencies and capabilities. Person-to-person engagement and an offline network of user acquisition mechanisms are a crucial part of reaching scale in a sustainable manner.
  - » **Non-tech innovations are just as important as the hi-tech** - OnionDev is continually refining its content management, community mobilisation, user education and engagement methodologies. These are vital offline activities without which the awareness and engaged use of the platform by the target base of the pyramid populations would be impossible.
  - » **User feedback loops are key** – Systematic, real time feedback mechanisms which collect genuine user feedback, act on it and present the iterated product or service to users for further feedback, enable the platform to serve user needs and respond to those needs as they develop to continually add value to the

user. The three main feedback processes are as follows:

- The offline volunteer network of 300+ grassroots workers across 25 districts, provide a sounding board to get quick feedback on any new content or programs being conceptualised.
  - Frequent field visits to hold focus group discussions with Mobile Vaani users, and capture the most significant stories of change selected by the people themselves, which helps convey which strategies and solutions have been the most impactful.
  - A random sample of new callers, callers who have dropped out, and regular callers are frequently interviewed by the moderation team over phone, to understand what users like or do not like about Mobile Vaani and the content and information products it features.
3. **Scalability & sustainability** are constant challenges that constantly need to be addressed, even for the most innovative of ideas or products in the social impact space.

## Future plans

OnionDev is working towards the following strategic areas in 2016/17:

1. Continuing to integrate services into the operator ecosystem and offering a scalable, robust, flexible voice service platform for its customers.
2. Experimenting with business models – e.g. user paid subscription service offerings, pay per use
3. Creating a digital migration plan – an App strategy (targeting the youth and other segments moving to a data enabled device/smartphone) to help those offline come online
4. Productising of certain applications, such as surveys/quizzes, feedback modules etc. These

models, charging integration with operators, offline payment collection models .

would be bought 'off the shelf,' to be easily accessed and used by customers through a cloud hosted model. For example, a small NGO partner wants to run a small survey in a district in an Indian state to evaluate the feedback of its target audience on the efficacy of the NGO-led awareness campaign on TB. The NGO can use the off-the-shelf vSurvey product for a quick turnaround at low cost.

5. Besides ensuring scale in its Indian managed services projects, OnionDev aims to develop one

strong international managed services project in another developing country (current international engagements are on a PaaS basis).

6. Building a scalable commercial advertising model to help sustain the platform and eco-system OnionDev has supported. For example, customised ringback tones for local Mobile Vaani clubs could attract revenue through the platform.

## Impact stories of Mobile Vaani



**Halima Azaz, housewife:** "My niece was ill but her family was not able to take her to the health centre for a proper diagnosis. I got to know about symptoms for malaria through Mobile Vaani and persuaded them to promptly act and start the medication".



**Farkeshwar Mahto, farmer:** "I got to know through Mobile Vaani that my district had launched a scheme to procure an irrigation pumping set at a discount. I was able to avail the opportunity in time, and now with the pumping set I have been able to significantly bring down my cost of cultivation."



**Radhu Rai, daily wage labourer:** "We were informed through Oxfam's awareness campaign on Mobile Vaani that we are entitled to medicines free of cost from our public healthcare centres. We therefore organised ourselves to demand our rights, and now the medical centre is well stocked and also regularly attended by a doctor."



**VK Verma, NGO worker:** I narrate my poems and essays on Mobile Vaani. I am very proud I can showcase my talent and be heard all across Jharkhand."





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