



# PLUGGED IN

A TECHNOLOGY SOLUTIONS  
HANDBOOK FOR NON-PROFIT  
ORGANIZATIONS



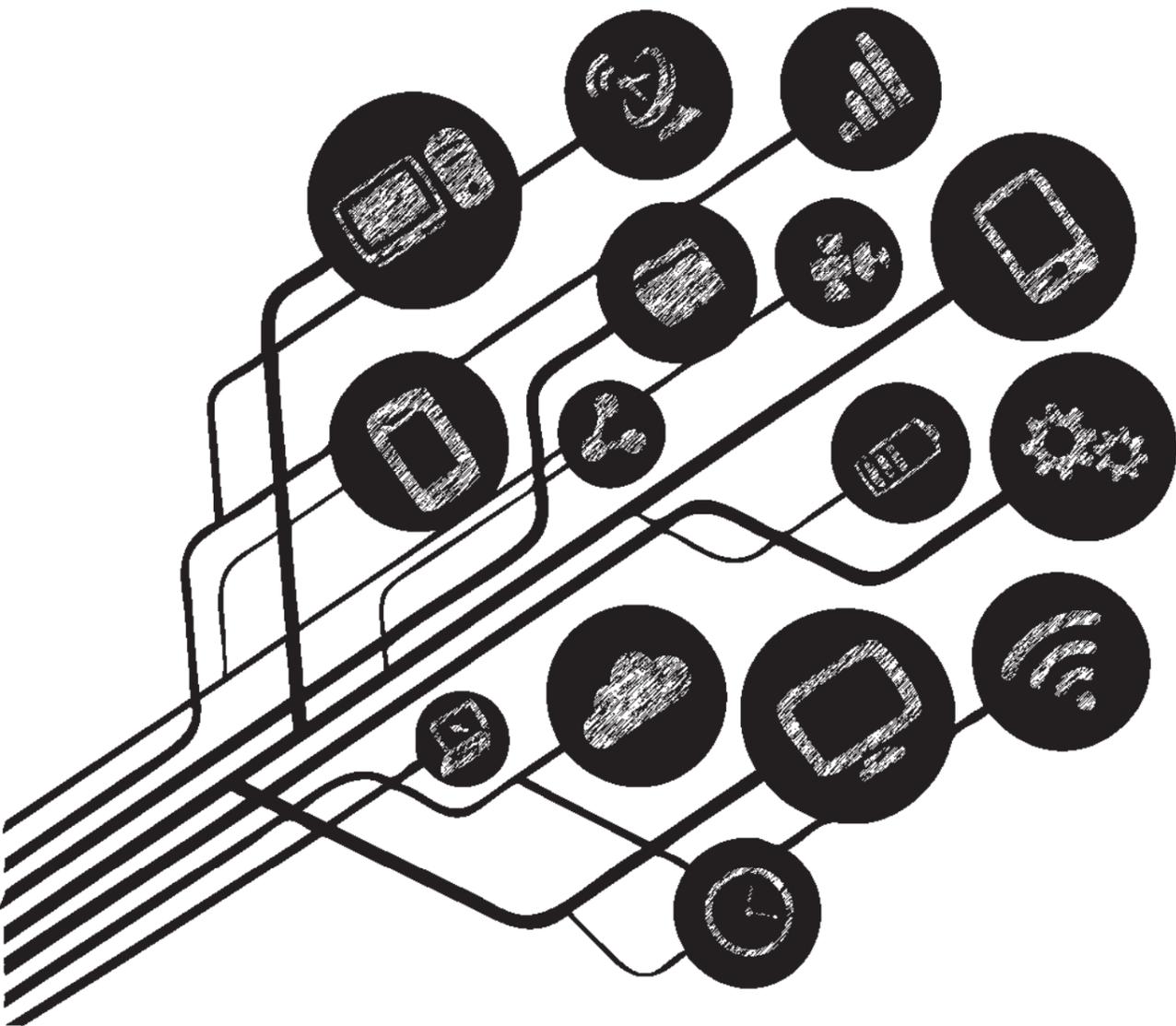
**USAID**  
FROM THE AMERICAN PEOPLE

**Kiawah Trust**



**Piramal Foundation**  
knowledge action care





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## Kiawah Trust

The Kiawah Trust is a UK family foundation that is committed to improving the lives of vulnerable and disadvantaged adolescent girls in India. The Kiawah Trust believes that educating adolescent girls from poor communities allows them to thrive, to have greater choice in their life and a louder voice in their community. This leads to healthier, more prosperous and more stable families, communities and nations.



Piramal Foundation strongly believes that there are untapped innovative solutions that can address India's most pressing problems. Each social project that is chosen to be funded and nurtured by the Piramal Foundation lies within one of four broad areas - healthcare, education, livelihood creation and youth empowerment. The Foundation believes in developing innovative solutions to issues that are critical roadblocks towards unlocking India's economic potential. Leveraging technology, building sustainable and long term partnerships, and forming scalable solutions for large impact are key to their approach.



Dasra meaning 'enlightened giving' in Sanskrit, is a pioneering strategic philanthropic organization that aims to transform India where a billion thrive with dignity and equity. Since its inception in 1999, Dasra has accelerated social change by driving collaborative action through powerful partnerships among a trust-based network of stakeholders (corporates, foundations, families, non-profits, social businesses, government and media). Over the years, Dasra has deepened social impact in focused fields that include adolescents, urban sanitation and governance and has built social capital by leading a strategic philanthropy movement in the country. For more information, visit [www.dasra.org](http://www.dasra.org)

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# HOW TO USE THIS HANDBOOK

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*Are you a non-profit organization interested in learning more about adopting technology? Have you made the decision to integrate Information Communication Technology (ICTs) into your programs and now you need to know how to move forward? Was a past attempt at introducing a technology solution unsuccessful?*

If you answered yes to any of the above, this handbook is for you. You could be the founder of a non-profit who sees technology as a key strategic shift in your organization's priorities or a program manager who wants to improve processes and the efficiency of your intervention.

Regardless of how nascent or mature your organization is or how large your budget, staff strength and outreach are, reading this handbook will give you a deeper understanding of what it means to introduce ICTs into your programmatic and organizational processes.

This handbook is meant to serve as an introductory guide to understanding technology execution and is specifically designed for non-profit organizations. It includes Dasra's findings from in-depth interviews with experts, including those who have succeeded and failed at adopting ICTs in non-profit programs, those who have funded technology projects, and those who design and deliver technology services to non-profit organizations.

While this handbook will give you tools and resources to help you research the types of technology solutions available, identify a service provider and dispel myths about technology adoption—it will not prescribe one course of action over another. This is because at every juncture of the decision-making process there are several contextual factors that you must take into consideration, including resources, organizational culture, buy-in among employees and leadership that vary widely across organizations. Instead, consider this as a resource that will begin to demystify what it takes to implement ICTs, through tools, examples, and case studies that hold relevance particularly in the Indian context.

This handbook contains two sections. The first guides you through understanding what is needed prior to executing a technology solution—from clearly articulating why you are going the technology-route to identifying the different kinds of service providers you might consider. The second helps you bust myths about the adoption of technology and leaves you with tools that you can explore in further detail.

Dasra recommends that you read these sections sequentially so you get the most out of what the handbook has to offer. Call-out boxes and tips are peppered throughout the guide, and the appendix towards the end includes additional resources.



CHAPTER

# 01

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# TAKING THE LEAP

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**By the end of this chapter you should be able to:**

- Understand what it means to be technology-ready.
- Evaluate whether your organization is ready to adopt a technology solution.

# PICTURE THE WORLD BEFORE THE INTERNET

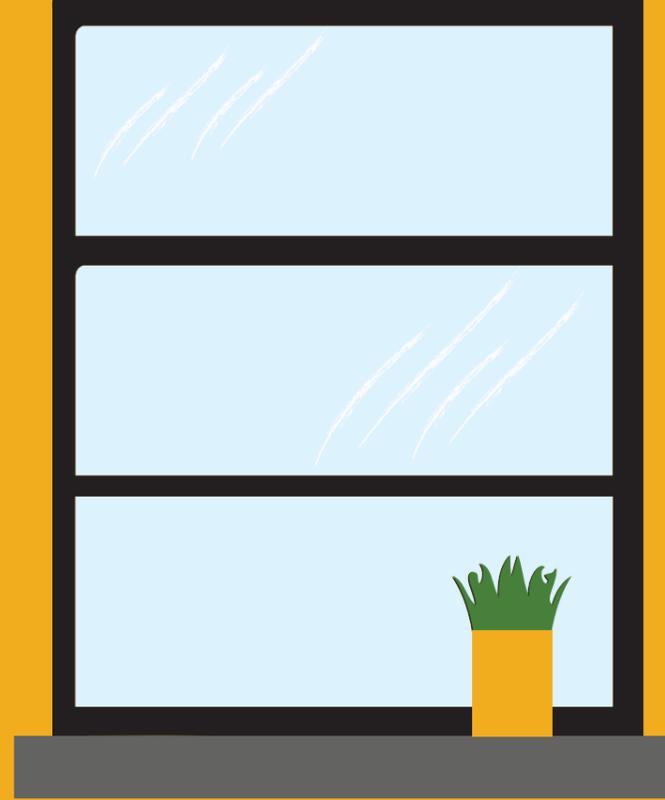
There are no mobile phones or computers, which means there is no instant access to information, ideas or people. News, like coffee, is consumed perhaps twice a day and catching up with a friend involves deciding the exact time and place beforehand.

*Go ahead.  
Take a moment to envision it.*

It's perhaps as difficult to imagine as telling the time by looking at the sun's position in the sky or going to the post office to mail a letter when you can send an e-mail from your smartphone.

Technology enables us to be more efficient, productive, knowledgeable and connected. Even in lower-income countries where basic services such as water and education may remain out of reach, people have access to a mobile phone. This growing ubiquity and potential make Information Communication Technologies (ICTs) a powerful and popular tool when serving hard-to-reach populations.

## WIKIPEDIA



## INSTAGRAM



## FOURSQUARE



## LINKEDIN



## SKYPE



However, technology comes with its own set of problems. Organizations routinely undervalue the importance of doing their homework, evaluating how technology can address a problem, determining its relevance against organizational objectives, weighing related costs against perceived benefits and pre-empting implementation challenges. Evaluating how prepared your organization is to adopt technology is a fundamental first step when making any major technology investment decision.

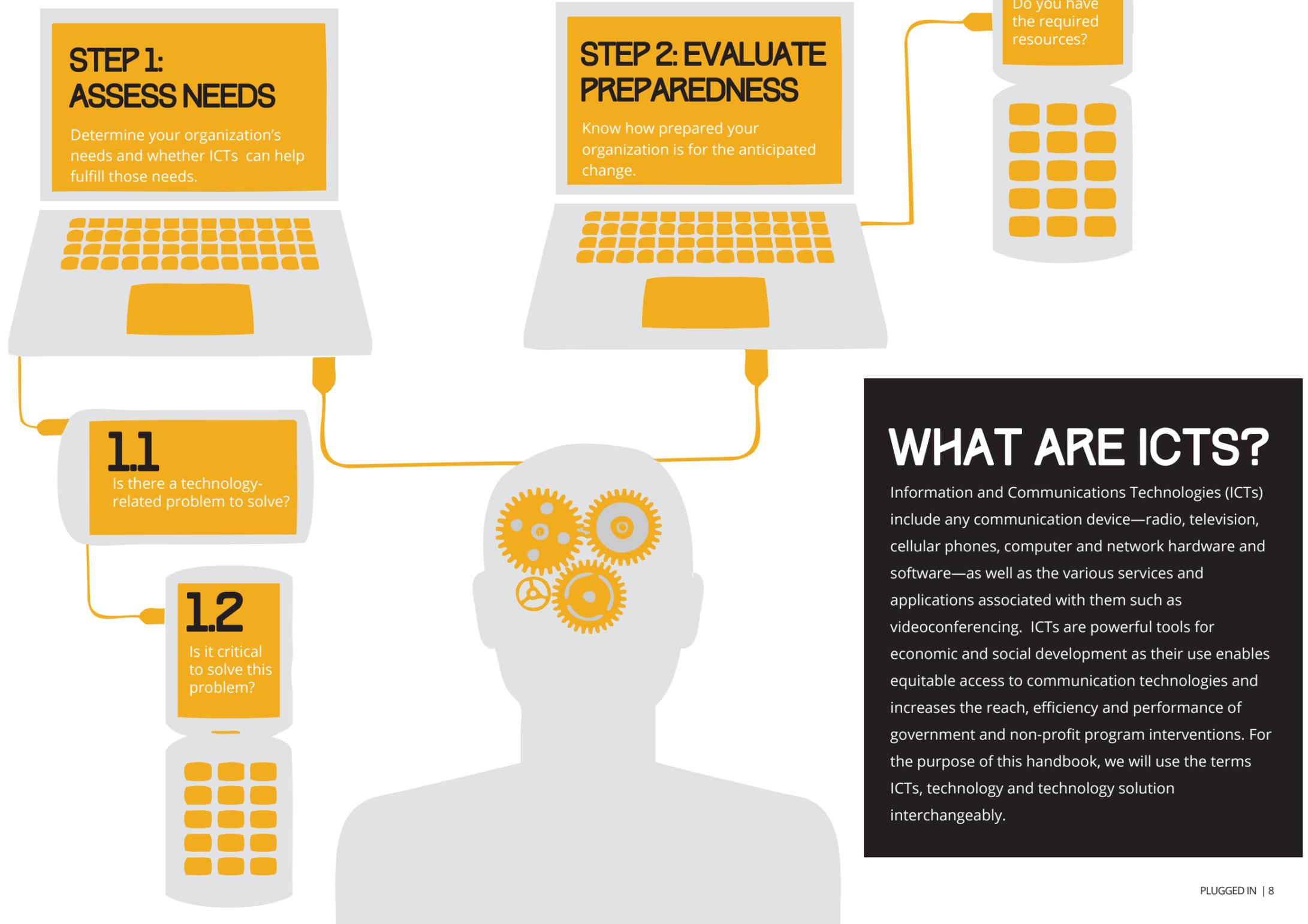
Being ready to introduce ICTs into your work is thereby a measure of both how well technology fits with your organization's needs, strategic priorities and culture — as well as the resources, time, and employee support you can mobilize. Without evaluating each of these factors, you may run the risk of implementing a solution that does not survive infancy. Yet, through its research, Dasra has seen that most organizations consistently underestimate the disruptions that taking on technology can cause.

Integrating a new technology solution can affect everything from workflows and workloads to how information and data is collected, analyzed and reported on. It is therefore critical to consider how decisions are taken and who gets to take them. Organizations must also tackle employee inertia and resistance to change. *For more information on this, please refer to the SNEHA case study (Annexure- I).*

Organizations need to prepare themselves to manage and adapt to these changes well, so that the gap between the promise of a technology solution and its performance is minimized.

**Consider the following steps when evaluating whether your organization is tech-ready:**

## IS YOUR ORGANIZATION TECH-READY?



## WHAT ARE ICTS?

Information and Communications Technologies (ICTs) include any communication device—radio, television, cellular phones, computer and network hardware and software—as well as the various services and applications associated with them such as videoconferencing. ICTs are powerful tools for economic and social development as their use enables equitable access to communication technologies and increases the reach, efficiency and performance of government and non-profit program interventions. For the purpose of this handbook, we will use the terms ICTs, technology and technology solution interchangeably.

# STEP 1: ASSESS NEEDS

DETERMINE YOUR ORGANIZATION'S NEEDS AND WHETHER INFORMATION COMMUNICATION TECHNOLOGIES (ICTS) CAN HELP FULFILL THOSE NEEDS.

## 1.1 IS THERE A TECHNOLOGY-RELATED PROBLEM TO SOLVE?

Organizations explore the possibility of introducing technology into their work for a variety of reasons. Some use ICTs to respond to a business problem — this could include collecting accurate and timely data, improving monitoring and evaluation of programs or streamlining internal processes. Occasionally, organizations will consider ICTs after a donor suggests they do so, regardless of whether or not it is the right strategic move. Still others may explore technology to keep up alongside a growing trend in the sector, not fully considering what this process entails.

If you want to truly benefit from the advantages that ICTs offer, solving a business problem that is aligned with your organization's overall strategy should always take precedence. When solving a business problem, the first step is to identify the problem. While you may have a sense of the general nature of the problem, it is essential that the solution you are considering addresses the root cause rather than a symptom.

For example, let's consider the case of an organization that works with victims of gender-based violence across 10 districts in Kerala. The organization is concerned that cases of violence are being under-reported because victims are uncomfortable with the social stigma attached to gender-based violence, and are therefore reluctant to share information with frontline workers (FLWs). Its leadership believes that using a technology-based solution like an app that allows victims anonymity, will increase the number of cases being reported.

However, a possible reason for under-reporting could be the FLWs' lack of sensitivity when interviewing victims. A tech-solution in this case would not adequately solve this issue. Instead, FLWs need to be trained to address victims more appropriately. Hence, organizations must always take the time to critically evaluate what problem the technology solution is attempting to solve — it is a fundamental first step in getting it right.

Once you have articulated the business problem a technology solution will address, it is worth listing the intended benefits. This requires articulating a clear vision of what would be different after adopting technology, as well as identifying definitive measures of success. These could be quantitative benefits such as improvements in costs, time and outreach, or qualitative benefits, such as improvements in organization transparency and credibility. This exercise will also help develop indicators by which you can compare different ICT solutions and measure the return on your technology investment.

ADDITIONAL QUESTIONS THAT YOU MIGHT CONSIDER WHEN ASSESSING ORGANIZATIONAL NEEDS:

### FIT WITH PRIORITIES

Does using technology to solve your problem fit within the strategic priorities of your organization?

### FIT WITH CULTURE

Does the organization's culture support innovation and change?

### AGILE ENVIRONMENT

Is the operating environment agile enough to support swift and large changes?

## 1.2 IS IT CRITICAL TO SOLVE THIS?

Even if you have decided that introducing technology is the most appropriate solution, you should evaluate how important solving the problem is for your organization at this time, and whether the benefits are worth the costs. Dasra's research suggests that technology solutions that fit an organization's long-term goals have the highest potential to succeed. If you and your team are able to take a long-term view to implementing technology, the change would be more easily accepted within the organization, and you will be better positioned to make a strong case for funding it.

That said, despite these conditions being met, you may have more urgent priorities at the time that require funding, people, and expertise — which could mean postponing technology implementation. The approach to and criticality of any decision will vary across organizations and contexts, and there are few objective measures that aid such decision-making. A simple yet useful test to get a sense of how important ICTs are for addressing your needs, is to consider the consequences of not using technology. If the perceived drawbacks of not going the technology-route outweigh the anticipated benefits, you should consider moving forward. This approach is critical when your organization is on the brink of dramatically scaling its work. The benefits of technology—reducing manual effort, improving standardization, increasing reach—are best leveraged when operating at scale.



*“A technology solution is more likely to be successful if the conversation with a technology provider begins with keeping the end-user in mind. You must ask —“What are the end-users’ pain points and how can technology make their lives easier?”*

— NEIL PATEL, CEO, AWAAZ DE

*“The true benefits of technology are best realized when using the technology solution to scale.”*

— SUNDEEP KAPILA, CO-FOUNDER, SWASTH FOUNDATION

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# STEP 2: EVALUATE PREPAREDNESS

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## KNOW HOW PREPARED YOUR ORGANIZATION IS FOR THE ANTICIPATED CHANGE.

When introducing changes that affect the entire organization, the most common pitfall some leaders make is to ‘decide now and figure out implementation later’. It is no different when implementing technology solutions. Successfully incorporating ICTs into program systems hinges on many factors, chief among them being how open people across levels are to accepting and adapting to unforeseen changes. Planning for these factors in advance allows for a more seamless implementation process.

There are certain questions related to resources and stakeholder buy-in that must be considered before implementing a technology solution. These questions are important to keep in mind and will help you identify the steps your organization needs to take while implementing a technology solution.

## 2.1 DO YOU HAVE THE REQUIRED RESOURCES?

- Are there resources available to begin developing or implementing the solution? If not, is there a plan to raise the required funds?
- Have you identified the skills and abilities you require within your organization to raise funds for this endeavor?
- In your fundraising plans, have you accounted for the long-term costs associated with ongoing maintenance, management, monitoring and evaluation of the technology solution?



*“Plan your funds wisely: many technology-based programs never go beyond the pilot stage because organizations fail to account for the resources it takes to re-design or upgrade existing solutions. This could be because funders are more willing to support the introduction of a technology solution than the ongoing management of an existing solution.”*

— SARA CHAMBERLAIN,  
BBC MEDIA ACTION

Costs associated with implementing technology :

- **Vendor:** Some technology solutions can be purchased off the shelf, while others may require you to hire someone to develop the solution from scratch.
- **Hardware and Software:** Mobiles, computers, servers etc.
- **Content Creation:** A good rule of thumb for new content is four hours of content development for every hour of content.
- **Dedicated Resources:** Over time most organizations find it more efficient to have a dedicated resource or team to manage troubleshooting and customization requirements.
- **Ongoing Training:** In addition to training direct users, organizations also have to train other stakeholders including donors, management and staff members to use the technology solution.

Source: Woodhard, J., Weinstock, J. and Leshner, N. (2014). Integrating Mobiles into Development Projects. 1st ed. [ebook].

## 2.2 HAVE YOU SECURED BUY-IN FROM ALL STAKEHOLDERS?

- If the decision to introduce technology was taken by management as opposed to being identified as a need by field-level staff, has the intention and rationale for it been communicated to others in the organization?
- Is there internal support for it? If not, have you considered what steps you need to take to bring people on board?
- Are there ‘champions’ within the organization who can help build consensus? Do you have a plan to engage them?
- Have you put in place structures to support the implementation once it begins, and shared this information with your teams?

You may not have answers to every question, but asking yourself about resources and organization buy-in will give you a better understanding of where you currently stand, vis-à-vis where you ideally need to get to when you begin implementing the tech solution. You should consider investing time and effort in bridging existing gaps so that you can integrate technology smoothly into your organization and programs.



*“Technology in its early stages will definitely fall apart. This is where the mindset of the leadership is critical. Leadership needs to identify champions within the organization who will stand up for technology when it meets both expected and unexpected roadblocks along the way.”*

— NEIL PATEL, CEO, AWAAZ DE



CHAPTER

# 02

## MAKING THE RIGHT CHOICE

**By the end of this chapter you should be able to:**

- Understand the key terminology and technical considerations of engaging with a technology service provider (TSP).
- Complete a Needs Assessment to outline your requirements from a TSP.
- Shortlist potential TSPs.

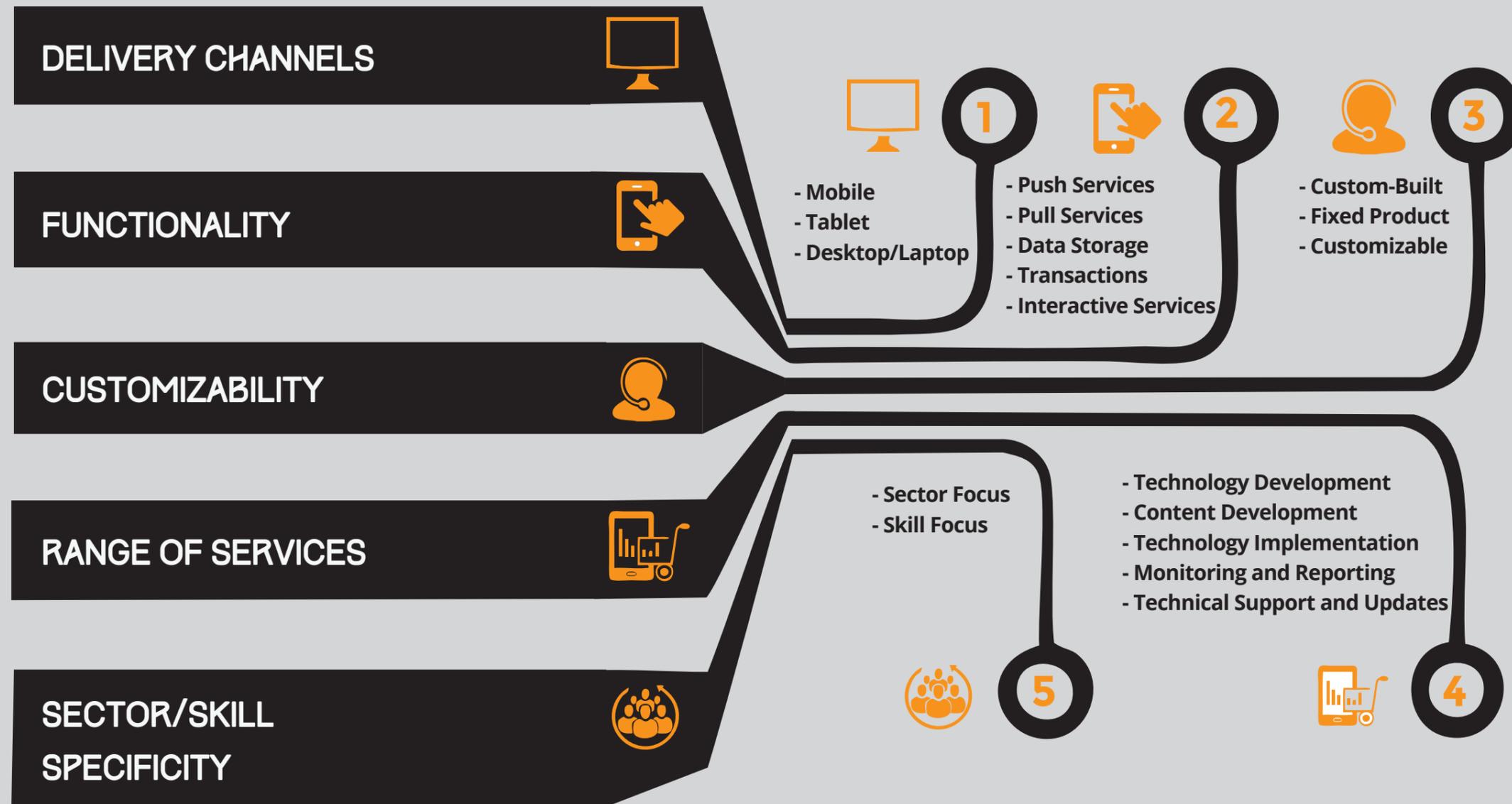
# WHAT IS A TECHNOLOGY SERVICE PROVIDER (TSP)? WHAT ARE THE DIFFERENT KINDS OF TSPS AVAILABLE?

Technology services cover a broad range of professional services that can support your organization's operations. Facilities such as internet connectivity and information sharing platforms can optimize internal processes. There are also technology services to facilitate communicating with beneficiaries, donors or staff more effectively.

TSPs support organizations in using technology and developing solutions based on their requirements. In order to choose the right TSP for your organization, you should understand the differences between their services and core capabilities, and how those align with your requirements.

To explain these differences, we have categorized and listed key terms that will help you during your selection process.

## TSP CATEGORIES





# 1. DELIVERY CHANNELS

This includes devices through which you communicate with your end user, such as mobile phones, laptops, desktops or tablets.

Depending on the use of technology, there could be more than one end user to consider. For example, a non-profit that requires a system to collect data from patients in rural areas can have at least two end users: first, the frontline workers who interact with the system to input patient data, and second, the non-profit team members who interact with the system to pull out reports and trends based on the data.

You should have a sense of which of the following devices your end user is using: mobile phone, tablet, desktop or laptop. Try to be specific when thinking this through. For example, if your end user will use a mobile phone, think about the type of mobile phone. Will it be a basic, feature or smartphone? It is important to know which device type your end user is using in order to develop the most relevant and useable technology solution.<sup>2</sup>

*Whilst smart phone penetration is growing rapidly in India, there is still a majority of the population using basic and feature phones. A Nielsen Mobile Consumer Report (2013) showed that 80% of the Indian population use feature phones and just 10% use smartphones. The smartphone users in India continue to grow.<sup>3</sup>*



# 2. FUNCTIONALITY

This refers to the various ways in which you can reach the end user.

i) **Push services** allow you to send or 'push' information or content to users. Push services can be used on web-based systems or mobile phones, however the delivery method (SMS, voice messages or email) will vary. For example, a health non-profit can use push services to send health and nutrition content via SMS to pregnant women.

ii) **Pull services** allow you to request or 'pull' information or content from others through surveys (online or message-based) or interviews. These include all forms of data collection and management. They also enable an individual to request information directly from you. For example, SMS services could enable a patient to message a relevant authority or organization, and pull information on the latest pricing of their medication. Pull services can be used with any delivery channel.

iii) **Data Storage** allows you to use the memory on a mobile device or web-based system to store information. For example, an education organization may store its curriculum on a CD or pendrive to allow easy offline access in resource-poor settings.

iv) **Transactions** allow a user to make a financial exchange by using pre-paid credit that can be transferred between parties, usually from their phone, for example, Paytm.

v) **Interactive Services** allow for communication between two parties at once. WhatsApp (mobile) and GoogleTalk (web) are examples of popular interactive services.

*Many successful technology solutions integrate two or more types of functionality. For example, implementing a push service to remind adolescent boys and girls to attend a class, and then using a pull service to test their understanding of a topic and gather feedback after the class.*

Source: Woodhard, J., Weinstock, J. and Leshner, N. (2014). Integrating Mobiles into Development Projects. 1st ed. [ebook].



## 3. CUSTOMIZABILITY

This relates to the extent to which a solution can be tailored.

Customizability is an important consideration when thinking about the type of solution you will need. While it is tempting to create a fully customized solution for your users, it may limit your ability to scale and reach more individuals without extra costs. There are three broad types of solutions, in terms of customizability. You should consider the implications of each option and how well it meets your needs.

**i) Custom-Built:** A program or software is developed from scratch to meet your needs. This is often the most expensive and most time-consuming option; however you have control over the entire design and functionality.

**ii) Fixed Product:** An 'off-the-shelf' product that is ready to use. While the time spent selecting and implementing this software may be shorter, off-the-shelf software products can come with complex fee structures and are not commonly developed for resource-poor settings. There are multiple off-the-shelf products in the market, from SMS messaging programs to more complex Management Information Systems (MIS).

**iii) Customizable:** An existing product that can be tweaked to your needs. Rather than developing the technology product entirely from scratch, customisation builds on existing technology and will generally be cheaper than custom-built. Here, the type of coding (open source vs. proprietary) may impact and inform your decision.

*One consideration when you choose software is to decide between open source or proprietary technology. Open source means that the source of the software — the coding and design — is freely open for adjustment and modification. It therefore allows you to update, refresh and innovate the software without restrictions. You may want to consider open source technology if you plan to modify your solution or model often. Proprietary, on the other hand, is owned and controlled by the developer and permissions must be obtained before making adjustments. In addition, consider the cost implications of both options before making a decision.*<sup>4</sup>

Source: Woodhard, J., Weinstock, J. and Leshner, N. (2014). Integrating Mobiles into Development Projects. 1st ed. [ebook].



## 4. RANGE OF SERVICES

This refers to the level of involvement of a TSP from developing the solution to implementing it and providing ongoing support.

TSPs can vary in the level of support and services that they offer.

**i) Technology Development** involves only the development of the solution and would require that you use another provider or internal resources for implementation, ongoing maintenance, as well as monitoring and reporting services. This is usually a popular choice when you have an internal team to implement and provide technical support.

**ii) Content Development** involves supporting your communications with the end user. Content can include visual (adverts, posters), written (articles) and audio (voice messages) information. A content developer may offer ongoing services to upload and manage content; alternatively, you may use internal resources to do this as required. Generally, a TSP may not provide content development support. If you are using a third-party for this, it is important that they are able to align with the TSP to ensure that the content can be delivered in a technologically-appropriate manner.

**iii) Technology Implementation** refers to the service provided by a TSP to actually have your solution set up and running.

**iv) Monitoring and Reporting** is a functionality that is either built into the technology solution and allows you to pull data reports in-house, or is provided by your TSP in the form of ongoing reporting.

**v) Technical Support and Updates** are services that many TSPs will offer as assistance for quick troubleshooting. They may also offer updates in the software to fix bugs over time. Having ongoing support can be particularly useful if you do not have internal resources to manage this.

**vi) Training** is a service TSPs may offer your organization to either train your staff or the end-user to use the technology solution.



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# 5. SECTOR/ SKILL SPECIFICITY

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This refers to the extent to which a TSP focuses on one particular sector versus having a skill focus.

You should consider how important it is for your TSP to have sector experience (such as health, education or agriculture) as opposed to skill expertise (such as data management, app development or voice call services).

For example, a health-focused TSP may be able to bring experience from a previous non-profit client to share insights on interacting with frontline workers, or managing patient data privacy. However, it isn't necessary to choose a sector-specific TSP in cases where the technology solution does not require sector-related expertise — for example, developing a content management system.

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# NEEDS ASSESSMENT

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This section is designed to help you determine which TSP is best for your organization. By assessing your organization's needs and readiness to adopt new technology, you can filter down to a few options. The needs assessment includes a sample completed sheet for your reference. You should use this example to guide you through the worksheet.

In the example, we explore decisions made by Y—a non-profit focused on adolescents' sexual and reproductive health education in urban areas. This fictitious organization is well-established, has a tried and tested curriculum and has been in operation for over a decade. Its program covers topics such as HIV/AIDS, puberty, nutrition, gender, relationships, body image, peer pressure and teenage pregnancy. Currently, the program is implemented within schools in rural communities across a few states in India, targeted at 10-19 year old adolescents.

Unfortunately, school teachers are reluctant to discuss sexual and reproductive health topics in their classrooms because of the stigma attached to these issues, which in turn hinders the effectiveness of the curriculum.

The organization wants to expand its program to schools in urban areas, and is looking to make its program delivery more efficient and accurate. The organization has good reason to believe that technology could help in overcoming the issues that it faces as it expands to urban areas. It is also looking to digitize its adolescents' reproductive and sexual health curriculum. The needs assessment contains sample responses from organization-Y based on its program objectives and challenges.

# DEVICE & DELIVERY CHANNEL

## NEEDS ASSESSMENT FOR ORGANIZATION Y

### a. What problem are you trying to solve?

*[Try to be as specific and descriptive as you can in this section so that you can share it with your potential TSPs – and they can help you to develop your ideas further.]*

Currently, the sexual and reproductive health (SRH) curriculum is being taught face-to-face across schools by teachers who are not accustomed to SRH topics. As a result, there is reason to believe that the lessons are not implemented as intended, questions are not answered as required or important details are being omitted. We believe that a technology solution could bridge the gap and make the conversation easier between teachers and students by having digital teaching aids.

### b. Who is your target audience/end user?

*[Often there will be multiple end users of your technology solution. You should think about who will use the solution both internally in your organization and externally.]*

- 1) All adolescent boys and girls (10-19 years old) in urban schools.
- 2) Teachers who will use the technology as a teaching aid.
- 3) Data analysts who will use the results of surveys, tests, etc. to track progress and improvement

### c. What device(s) is your end user commonly using?

If none, are you able to provide any of the following?

- Mobile
- Tablet
- Laptop
- Desktop PC
- Other: Schools will use tablet, laptop or desktop

### d. If mobile, what type of phone are they using?

- Basic phone
- Feature phone
- Smart phone

# DEVICE & DELIVERY CHANNEL

## PLEASE FILL IN YOUR ANSWERS OVER HERE:

PROBLEM

a. What problem are you trying to solve?

AUDIENCE

b. Who is your target audience/end user?

DEVICE

c. What device(s) is your end user commonly using?

PHONE

d. If mobile, what type of phone are they using?

# SERVICES

## NEEDS ASSESSMENT FOR ORGANIZATION Y

### a. Describe how you imagine the user-experience

The solution should be an e-learning portal that is available offline and online. It will be a portal that houses all of our sexual and reproductive health modules.

1) Students can enter each module from a central portal page and progress through the curriculum module by module, keeping track of where they left off. Each module will be interactive and include tips, simulation exercises and videos. Each module will end with a small test to measure understanding.

2) The results of these tests will be sent to teachers for record keeping and to track students' understanding so that they can provide feedback and explanations where required.

3) The grades from all students will be tracked over time by our data analysts in order to measure progress and report to our donors and stakeholders on the effectiveness of the program. The data will also be used for monitoring and evaluation of the program and assessing improvements in learning outcomes.

### b. What channels of communication will you use?

- Website/Email
- Voice
- SMS
- MMS
- Application

### c. What services/technology would you need? What do you want your technology to do?

Pull services will enable the organization to capture data before and after each module to track students' progress. Data storage means that these results are recorded over time.<sup>5</sup>

- Push services
- Pull services
- Interactive feature
- Transactions
- Data storage (including cloud-based solutions)
- Other:

# SERVICES

## PLEASE FILL IN YOUR ANSWERS OVER HERE:

USER-EXPERIENCE

### a. Describe how you imagine the user experience

CHANNELS

### b. What channels of communication will you use?

SERVICES

### c. What services/technology would you need? What do you want your technology to do?

# CUSTOMIZATION

## NEEDS ASSESSMENT FOR ORGANIZATION Y

a. Is there an existing solution or similar service already in the market that could fulfil your needs? *GSMA's Mobile for Development Intelligence and Dasra's Lifeline Report are good resources for determining this.*

- Yes
- No

b. If a solution exists, how costly is it to customize? How costly is it to then upgrade and scale the solution?

*This may require more research or conversations with some potential TSPs before you have a concrete answer. However, you should have a ballpark estimate for reference.*

**There are solutions for e-learning modules as many organizations are also implementing this solution, however the cost is to be determined. The important factor for us is to be able to develop new modules and integrate them as we grow the curriculum. In this case, if we were to expand to new states, we might need to consider the additional cost of translating the curriculum into the local language.**

c. What is the benefit/value add to customizing?

**We expect that we can take an off-the-shelf product for e-learning and keep the functionality and software as it comes. The only customization that we will consider is the 'look and feel' of the program, for example, the color schemes and imagery, and the content and information to be uploaded. Beyond this, there is little value add to customization.**

# CUSTOMIZATION

## PLEASE FILL IN YOUR ANSWERS OVER HERE:

SOLUTION

a. Is there an existing solution or similar service already in the market that could fulfil your needs?

COSTS

b. If a solution exists, how costly is it to customize? How costly is it to then upgrade and scale the solution?

VALUE ADD

c. What is the benefit/value add to customizing?

# ENGAGEMENT MODEL

## NEEDS ASSESSMENT FOR ORGANIZATION Y

a. What are you trying to measure? What metrics do you want to capture to gauge the impact that you are trying to create?

To gauge students' understanding of SRH topics, we hope to measure:

- 1) Students' Test Pass Rate: The average grade achieved per module to test understanding.
- 2) Students' Transition Rate: The number of students advancing from one module to the next.
- 3) Students' Completion Rate: The number of students completing the entire curriculum.
- 4) Students' Dropout Rate: The number of students stopping part-way through the curriculum – this will enable us to direct our feedback and improve the curriculum.

b. What services or support do you require externally (i.e. that you cannot conduct internally)?

- Technology development
- Content development
- Implementation
- Ongoing monitoring and reporting
- Ongoing technical support and upgrades
- Training

c. Do you have an existing implementation partner in mind, or resources in-house for implementation? If external, would you prefer to work with the same vendor for the technology development and implementation and/or monitoring? Check all that apply:

- In-house resources
- External support required
- Same vendor for all services required
- Same vendor not required

# ENGAGEMENT MODEL

## PLEASE FILL IN YOUR ANSWERS OVER HERE:

METRICS

a. What are you trying to measure? What metrics do you want to capture to gauge the impact that you are trying to create?

SERVICES

b. What services or support do you require externally (i.e. that you cannot conduct internally)?

RESOURCES

c. Do you have an existing implementation partner in mind, or resources in-house for implementation? If external, would you prefer to work with the same vendor for the technology development and implementation and/or monitoring?

# SECTOR EXPERIENCE

## NEEDS ASSESSMENT FOR ORGANIZATION Y

a. Does the problem you are trying to solve require sector knowledge? Or is functional expertise adequate?

- Sector knowledge required
- Sector knowledge not required

b. If you are looking for a sector expert, what sector are you working in?

- Health / Sanitation
- Education
- Employability
- Agriculture
- Disaster Relief
- Other:

# OTHER CONSIDERATIONS

Use this box to note the other considerations that you might have.

*You should consider any standards or policy requirements of your solution. For example, security policies or patient data confidentiality for a health service. Ideally, any existing policies and standards will be described in a local or regional eHealth strategy document that you can use to narrow your search.*

*This software will need to work offline. It can be accessed and downloaded from a website, but as the schools will have low connectivity, it is important that it can work without the internet.*

*The results from the quizzes should be available to download and email to teachers for their records.*

# SECTOR EXPERIENCE

PLEASE FILL IN YOUR ANSWERS OVER HERE:

EXPERTISE

a. Does the problem you are trying to solve require sector knowledge? Or is functional expertise adequate?

SECTOR

b. If you are looking for a sector expert, what sector are you working in?

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# SELECTING A TECHNOLOGY SERVICE PROVIDER

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Now that you have completed the Needs Assessment worksheet, you should have a high-level sense of your requirements from a TSP. Here are some other factors to consider when selecting a TSP:

- How well the TSP's skills and expertise fit in with your requirements.
- The reputation and capability of the TSP team.
- The size of the TSP and its ability to scale the solution in the future.
- The TSP team's qualifications and experience.
- The length of your engagement and contract terms and conditions.
- The option to conduct a pilot test and make modifications, if required.
- Concerns such as data privacy and security, confidentiality and regulatory compliance.

In Chapter 4 of this handbook, you will find a list of TSPs. Use this list to shortlist TSPs based on the criteria discussed.

The next step would be to research their services in more detail and set up meetings or phone calls to evaluate the fit for your organization and needs.



CHAPTER

# 03

## TECHNOLOGY ADOPTION MYTHS

By the end of the chapter you should be able to:

- Debunk some common myths associated with technology adoption.

Now that you have evaluated what you would like your solution to achieve and understood the types of services TSPs offer, you are entering a critical phase of the entire ICT integration process — implementation. The exact process of technology implementation varies based on a number of factors including the type of technology intervention, service provider, organization's stage of evolution and available resources. While the specifics are beyond the scope of this handbook, it is important to understand the investment that it will require (refer to a sample step-wise process in the Appendix).

It is not uncommon for organizations, despite having thoroughly researched and carefully developed their technology solution, to underestimate the effort required to implement technology and assume that the bulk of heavy-lifting is done. It is often this misstep that marks the difference between the solution's potential and its eventual performance.

So what makes some organizations successful at implementing technology while others struggle? The answer doesn't lie in more sophisticated solutions or larger amounts of funding.

Rather, non-profits that optimize technology have learned to implement and manage it well. They recognize that implementing technology goes beyond a one-time investment and requires ongoing commitment — that starts well before the solution is designed or customized and continues well beyond the pilot implementation. Those that don't, often underestimate the effort that goes into implementation, expecting the process to be similar to regular project management.

Given the complexities involved in adopting ICTs for development interventions, there are several myths that surround what it actually means to successfully integrate technology into an organization's systems and processes.

Based on secondary research and expert interviews, Dasra identified five myths that are prevalent in the technology adoption process.

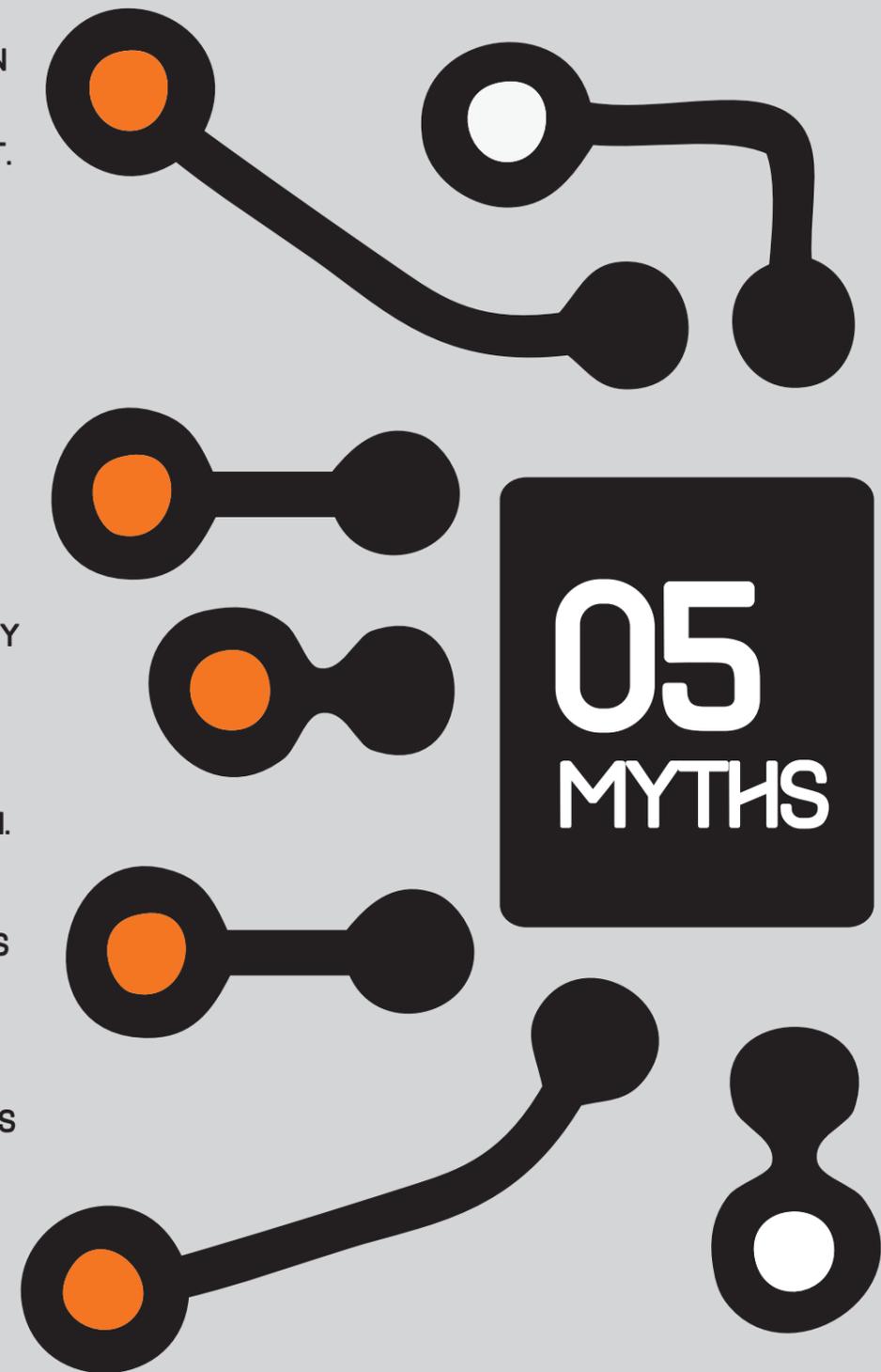
**MYTH 1:** THE PROCESS OF IMPLEMENTING A TECHNOLOGY SOLUTION IS SIMILAR TO REGULAR PROJECT MANAGEMENT.

**MYTH 2:** ANY PILOT LOCATION WILL DO AS LONG AS IT IS SUCCESSFULLY IMPLEMENTED.

**MYTH 3:** A DEDICATED TEAM WITH TECHNOLOGY EXPERTISE IS A NECESSARY CONDITION TO IMPLEMENT A TECHNOLOGY SOLUTION.

**MYTH 4:** TECHNOLOGY IS A ONE-TIME COST.

**MYTH 5:** ALL YOU NEED IS A GOOD TECHNOLOGY PRODUCT AND EVERYTHING ELSE WILL FALL INTO PLACE.





# MYTH 1

## THE PROCESS OF IMPLEMENTING A TECHNOLOGY SOLUTION IS SIMILAR TO REGULAR PROJECT MANAGEMENT.

Routine project management typically involves delivering a project that has been developed internally and therefore requires a predictable amount of effort to implement. Given their familiarity with programmatic details, those staffed on the project have the required skills to ensure that objectives are well-defined, deliverables are met and desired outcomes are achieved.

When implementing a new technology solution, project staff members are responsible for a product that someone external to the organization—in this case the technology service provider—has developed. Therefore, the developers should ideally design the hand-over in a way that allows team members to work alongside technology experts. In other words, before the baton changes hands, the runners should have been running in parallel for some time. Yet, this typically does not happen. Organizations often assume that rolling-out a new technology solution is similar to program management, and assign a program manager the dual role of managing both the program as well as implementing the technology solution. This inadvertently sets the program manager up for failure to perform in a role for which he/she may not be best suited.

Dasra's research highlights that although technological know-how is not critical for managing the roll-out of a technology solution, there are specific skills and abilities that the person in charge needs to exhibit, in order to ensure a seamless transition. The designated technology program manager should ideally be able to communicate with the technology service provider in a way that bridges gaps in the roll-out of a technology solution. Ideally, organizations should consider hiring a specific technology program manager or training an existing program manager to work alongside the service provider.



# MYTH 2

## ANY PILOT LOCATION WILL DO AS LONG AS IT IS SUCCESSFULLY IMPLEMENTED.

Organizations conduct a pilot either to prove technical feasibility of the new technology solution or provide a credible demonstration model. It is essential to choose the right pilot site for any new technology intervention.

Consider that you are looking to implement an enterprise resource planning (ERP) system across a chain of clinics. Each of these clinics will differ based on various factors including staff productivity and costs. Testing technology at a clinic that has more mature systems and processes and a team that is better equipped to manage technology — may offer a boost to morale at large by demonstrating a relatively seamless implementation process. However, this does not represent typical implementation across all clinic settings, and consequently, doesn't adequately evaluate if the technology solution can successfully be implemented at an average clinic.

Conversely, testing new technology at the worst performing clinic — even if it is where technology is most needed and could show the best results — may not be the better choice. If implementation doesn't go as planned, it will be difficult to ascertain how much of the failure is caused by extraordinary problems at the clinic and how much by fundamental issues with the technology solution.

Therefore, before selecting the pilot site, it is important to be clear about the purpose of the pilot test, to experiment and test feasibility, or to demonstrate success — and only then, select the site that best matches your needs.



# MYTH 3

## A DEDICATED TEAM WITH TECHNOLOGY EXPERTISE IS A NECESSARY CONDITION TO IMPLEMENT A TECHNOLOGY SOLUTION.

Organizations often assume that they need a Chief Technology Officer (CTO) or a dedicated team with technical skills to design, test and manage the ongoing maintenance and upgradation of technology. This team, they believe, should have academic or professional experience in the technology space.

This is a myth. The abilities required of the technology manager actually include being able to articulate the needs of each end user and communicating these specifications to the technology service provider. In addition, given the back and forth typically involved in the initial testing phase, the technology manager needs to have a clear understanding of the program's current needs and potential challenges with layering-in technology: how the solution will function, how its adoption will impact day-to-day operations, what changes to the process flow will likely ensue, the potential hiccups that might emerge, the time required for technology to be fully integrated, and how to preemptively tackle expected roadblocks.

The technology manager needs to bridge the knowledge and communication gap between what the program intervention needs and how the solution is designed to address those needs. In the initial phase of implementation this manager will also need to constantly relay feedback to the technology service provider and oversee tweaks to improve performance or fix glitches well in time for a full roll-out. The good news is that these skills often exist within organizations, or can be learned on the job.

### Knowledge and skills needed by the person in charge of implementing the technology solution:

- Basic familiarity with technology.
- Ability to articulate (to the TSP) end-user pain points, program information and the organization's needs and context.
- Dedicated bandwidth (time) to serve as the single point of contact for both the TSP and internal users.



# MYTH 4

## TECHNOLOGY IS A ONE-TIME COST.

When introducing technology, it is often assumed that a majority of funds will be used during the initial development process. Typically, organizations begin by making a one-time commitment to purchase hardware and software, at times underestimating future ongoing costs. These costs include historical data migration (if you were using a non-technology or incompatible technology solution earlier), ongoing user training, multiple iterations that form a part of the initial 'teething' process, troubleshooting, and upgrading software and hardware.

An organization's financial commitment to technology must at the very least remain constant, if not increase over time. In fact, experts suggest that while initially layering technologies into organizational and programmatic processes, organizations should plan to increase technology spending each year. This is because they will not only be maintaining the system but also expanding it. In fact, organizations might want to consider allocating the same percentage of their budget to technology each year. In "Frequently Forgotten Fundamental Facts about Software Engineering" by Robert L. Glass, (an article in IEEE Software May/June 2001), the "60/60" rule is mentioned:

*Maintenance typically consumes 40% to 80% (60% average) of software costs. Enhancement is responsible for roughly 60% of software maintenance costs.*



*It is estimated that on an average, ongoing maintenance of technology systems accounts for almost 60% of the cost. Therefore, budget at the outset with a realistic expectation of upcoming costs. Additionally, you should consider building these costs into the program grant proposal instead of creating a tech-specific budget.*

*Build an annual maintenance cost (AMC) into the contract that articulates the time period during which the provider will be available for trouble-shooting and on-going, hands-on technology support.*

— EXPERT INTERVIEWS



# MYTH 5

## ALL YOU NEED IS A GOOD TECHNOLOGY PRODUCT AND EVERYTHING ELSE WILL FALL INTO PLACE.

At its heart, technology implementation is about 'Change Management'. Change Management refers to any approach to transitioning individuals, teams, and organizations using methods intended to re-direct the use of resources, business processes, budget allocations, or other modes of operation that significantly reshape a company or organization.

Implementing a new technology solution therefore needs to consider people and how they interact with technology. For this reason bringing people on board well before implementation begins is a necessary condition for getting it right.

That said, because implementing any organization-wide change disrupts existing systems and processes and requires overcoming inertia, organizations must address any initial resistance to introducing new technology. Some staff members may be wary of the change because of a genuine fear of the unknown, or because of a perceived threat of becoming redundant or subject to more reporting systems. It's important to quell these apprehensions early on so that staff resistance doesn't impede the process of technology integration.

There are a variety of stakeholders who need to buy into the importance of technology before implementation begins: senior leadership, middle management and end-users. Influencing each of them requires a different approach.

Top management is more likely to respond positively to technology if strategic benefits are highlighted — such as an increase in outreach, enhanced quality or a decrease in costs. However, bringing top management on board is not enough. Organizations must also ensure the involvement of the end-user, right from the design phase, to facilitate ownership of the tech solution and usage of the same.

While promoting technology internally is important, organizations must cautiously tread the line between promotion and hype, so as to avoid overselling the technology solution. The greater the mismatch between perception and reality, the greater the likelihood that end-users will be discontented with the solution, and therefore, less likely to actually use it.



*Identifying how technology is going to make my frontline worker's life easier is the starting point for any technology-related decision. Without this, what incentive does he/she have to use technology?*

— SUNDEEP KAPILA,  
CO-FOUNDER,  
SWASTH FOUNDATION

*Select a provider that views the engagement as a partnership rather than a one-time vendor relationship. This is important because you will require as much hands-on support as possible during the initial implementation phase.*

— EXPERT INTERVIEWS



CHAPTER

# 04

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## TECHNOLOGY SERVICE PROVIDERS

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**By the end of this chapter, you should be able to:**

- Identify a starting list of TSPs with whom you could work.
- Become familiar with basic organizational details of a few TSPs.

*This is by no means a comprehensive list – it is only a starting point to begin selecting a technology partner that best meets your organization's needs.*

# AWAAZ. DE



## ORGANIZATION OVERVIEW

Founded: 2012 | Location: Ahmedabad, Gujarat | Email: info@awaaz.de | Website: www.awaaz.de

### ► MISSION

Awaaz.De develops inclusive mobile solutions (with capabilities in IVR, SMS, mobile apps, and web) that enable organizations to achieve last-mile connectivity for social impact. It provides easy-to-use, cost-efficient and time-saving mobile solutions for organizations and communities across multiple sectors: education, agriculture, health, and financial services. With over 680,000 users in 12 countries globally, Awaaz.De develops customizable mobile technology solutions for a diverse set of clients.

## KEY SERVICES & PRODUCTS

### ► DEVICES

- SMART PHONE
- BASIC PHONE
- WEBSITE

### ► SERVICES

- TECHNOLOGY DEVELOPMENT
- CONTENT DEVELOPMENT
- CO-IMPLEMENTATION
- MONITORING & REPORTING
- TECHNICAL SUPPORT & UPGRADES
- TRAINING

### ► PRODUCTS

- PUSH/PULL
- DATA STORAGE
- TRANSACTION
- INTERACTIVE

## EXPERIENCE & LEADERSHIP

Sub-sector: Agriculture, Education, Health, Financial Services and Vocational Training

### ► LEADERSHIP

#### Dr. Neil Patel, Chief Executive Officer and Co-Founder

Dr. Neil Patel is co-founder and CEO of Awaaz.De. Born and raised in California, Dr. Neil holds bachelor's degrees in Computer Science and Business from UC Berkeley, and a PhD in Computer Science from Stanford University. He completed his dissertation on a mobile voice-based social platform for small farmers in India to access and share agricultural advice.

#### Sonali Mehta-Rao, Chief Growth Officer and Co-Founder

Sonali leads business development and engagement at Awaaz.De. Prior to Awaaz.De, Sonali co-founded Mela Artisans, a social enterprise working to provide a sustainable global market for artisans. She led the company to significant revenue growth in the first year of operations through major partnerships with luxury retailers in the United States. Most recently, she was Director of Tala's (formerly InVenture) India business, which focused on developing mobile technology to promote financial inclusion in underserved communities. She has also worked with a number of other social-enterprises in India and the U.S.

#### Dr. Tapan Parikh, Chief Scientist and Co-Founder

Dr. Tapan Parikh is an Associate Professor at the School of Information, University of California, Berkeley. He holds a Sc.B. degree in Molecular Modeling with Honors from Brown University, and M.S. and Ph.D. degrees in Computer Science from the University of Washington, where his dissertation won the William Chan Memorial award. Dr. Tapan has also received the NSF CAREER award, a Sloan Fellowship, was named TR35 Humanitarian of the Year, and has won several best paper awards for his group's work.

## CLIENTS

### ► CRISIL FOUNDATION

PROBLEM

Financial literacy training for women borrowers in Assam.

SOLUTION

Setup inbound IVR streams archives for women to access entertaining financial literacy training content in local dialects. The service has gone viral and has reached 4,000 women in two months.

### ► PRECISION AGRICULTURE FOR DEVELOPMENT (PAD)

PROBLEM

Providing farmers with the right information has been shown to increase their yields. But dispersed rural populations and difficult-to-monitor agricultural extension agents limit existing methods of information dissemination.

SOLUTION

Through voice-based Q&A forums and personalized, algorithmic push messaging, Awaaz.De worked with PAD to provide timely advice targeted at farmers' needs in a way that farmers actually use and understand. Within just six months of launching, the system reached nearly 30,000 farmers, with high engagement rates.

### ► SESAME WORKSHOP INDIA (GALLI GALLI SIM SIM)

PROBLEM

Anganwadi teacher training through basic mobile phones for 4,000 teachers in Uttar Pradesh.

SOLUTION

Activity-of-the-week reminders, teacher-to-teacher experience sharing voice forum, and M&E data collection surveys to enhance the effectiveness and impact of GGSS' in-person teacher training programs.

# DIGITAL GREEN



## ORGANIZATION OVERVIEW

Founded: 2008 | Location: New Delhi | Email: [contact@digitalgreen.org](mailto:contact@digitalgreen.org) | Website: [www.digitalgreen.org](http://www.digitalgreen.org)

### MISSION

Digital Green's mission is to integrate innovative technology with global development efforts to improve human well-being. The traditional top-down approach to agricultural and health extension is often scattered and inadequate. Digital Green empowers rural communities to produce videos on locally relevant best practices. These videos are produced by the community, featuring community members and are disseminated by local mediators in the villages ensuring high ownership and adoption of practices.

## KEY SERVICES & PRODUCTS

DEVICES	SERVICES	PRODUCTS
<ul style="list-style-type: none"> <li>MOBILE</li> <li>TABLET</li> <li>LAPTOP</li> <li>DESKTOP</li> <li>PICO PROJECTOR</li> </ul>	<ul style="list-style-type: none"> <li>TECHNOLOGY DEVELOPMENT</li> <li>CONTENT DEVELOPMENT</li> <li>CO-IMPLEMENTATION</li> <li>MONITORING &amp; REPORTING</li> <li>TECHNICAL SUPPORT &amp; UPGRADES</li> <li>TRAINING</li> </ul>	<ul style="list-style-type: none"> <li>COMMUNITY VIDEOS</li> <li>VIDEO LIBRARY</li> <li>COCO MIS</li> <li>LOOP FOR MARKET LINKAGES</li> <li>VIRTUAL TRAINING INSTITUTE</li> <li>FARMERBOOK</li> <li>WONDER VILLAGE GAME</li> </ul>

## EXPERIENCE & LEADERSHIP

Sub-sector Expertise: Agriculture, Livelihoods, Health and Nutrition

### LEADERSHIP

#### Rikin Gandhi, Chief Executive Officer

With a Master's in Aeronautical and Astronautical Space Engineering from Massachusetts Institute of Technology, and a Bachelor's in Computer Science from Carnegie Mellon University, Rikin first worked with Oracle where he received patents for linguistic search algorithms that he helped develop. Later he joined Microsoft Research India's Technology for Emerging Markets team, where he researched ways to amplify the effectiveness of agricultural development globally, which led to the non-profit spin off he later co-founded as Digital Green.

#### Vinay Kumar, Regional Director, Asia and Global Initiatives

Vinay has been associated with Digital Green since its very inception and provides leadership to program strategy, organizational development and operations. He has over 30 years of extensive experience in public, private and non-profit sectors. Prior to Digital Green, Vinay was India Operations Director at Program for Appropriate Technology in Health (PATH), a Seattle-based non-profit in global health. He led operations at IntraHealth International Inc. (an affiliate of the University of North Carolina at Chapel Hill, USA) for its Asia and Near East office.

## CLIENTS

### BILL & MELINDA GATES FOUNDATION

PROBLEM

Enable National Rural Livelihood Mission to provide information to 70 million rural households regarding agriculture, health and nutrition practices in the shortest possible time and to ensure higher adoption of the best practices being promoted.

SOLUTION

Digital Green trained communities to produce and disseminate localised videos on agricultural best practices that have a higher adoption rate. This is tracked and measured on COCO, an in-house data management platform.

### USAID

PROBLEM

Support Jharkhand State Nutrition Mission (JSNM) to eliminate malnutrition from the state in the next 10 years.

SOLUTION

Developed a community-based video model to share best practices on Maternal and Child Nutrition, and explored complementary ICT partnerships to reinforce messaging.

### CISCO

PROBLEM

Smallholder farmers spend a considerable amount of time and money transporting their produce to the nearest market. However, they lack the volume and real-time, comparative pricing information that could yield better prices.

SOLUTION

Digital Green created 'Loop', a mobile phone application to streamline aggregation, transport and sale of produce for smallholder farmers to increase their income.



# DIMAGI



## ORGANIZATION OVERVIEW

Founded: 2002 | Location: Cambridge, MA, USA | Email: info@dimagi.com | Website: www.dimagi.com

### ► MISSION

Founded in 2002, Dimagi is a B-corp certified, award-winning, socially-conscious software company that develops technologies to improve service delivery in underserved communities. Dimagi's software platform, CommCare, is a leading digital platform for frontline service delivery. CommCare has supported hundreds of projects and partners, including governmental ministries, the United Nations, the Bill & Melinda Gates Foundation, USAID, Google, Microsoft, Dannon, Novartis, GE, Intel, GlaxoSmithKline, World Bank, NIH, MIT and Harvard.

## KEY SERVICES & PRODUCTS

### ► DEVICES

- MOBILE
- TABLET
- LAPTOP
- DESKTOP
- WEBSITE

### ► SERVICES

- TECHNOLOGY DEVELOPMENT
- CONTENT DEVELOPMENT
- CO-IMPLEMENTATION
- MONITORING & REPORTING
- TECHNICAL SUPPORT & UPGRADES
- TRAINING

### ► PRODUCTS

- PUSH/PULL
- DATA STORAGE
- TRANSACTION
- INTERACTIVE

## EXPERIENCE & LEADERSHIP

Sub-sector Expertise: Agriculture, Gender, Health and Humanitarian Response

### ► LEADERSHIP

#### Jonathan Jackson, Founder and Chief Executive Officer

Jonathan Jackson is a social entrepreneur, innovator, and dynamic leader with extensive mobile technology expertise in both low-income and high-income settings. He has co-founded multiple organizations focused on improved healthcare delivery and poverty alleviation. As co-founder and CEO of Dimagi, Jonathan has overseen the growth of the company from the founding team to over 100 employees worldwide that operate programs in over 50 countries. He made an uncompromising commitment to open source software and developed a highly interactive, collaborative culture that fosters partnerships across academics, philanthropists, and implementers.

#### Vikram Sheel Kumar, Founder and Chief Medical Officer

Vikram Sheel Kumar is an engineer and physician who co-founded Dimagi to bring the energy of the open source movement to solve important and interesting problems in health. Vikram studied engineering at the Indian Institute of Technology and Columbia University and medicine at the Harvard-MIT Division of Health Sciences and Technology, where he graduated magna cum laude.

## CLIENTS

### ► CATHOLIC RELIEF SERVICES (CRS)

PROBLEM

Poor delivery of community-level prenatal and postnatal care and support services.

SOLUTION

CRS worked with Dimagi to develop a customized, mobile health (mHealth) application for the government's frontline health workers using Dimagi's open source mobile platform, CommCare.

### ► SNEHA

PROBLEM

Improving MCH indicators and referrals.

SOLUTION

Three applications used to track inter-facility referrals of women with high risk pregnancies. Two Android phone-based apps are used at on-site facilities to record data from register books, and a third web-based app is used for editing and closing files.

### ► LATA MEDICAL RESEARCH FOUNDATION (LMRF)

PROBLEM

Lack of monitoring in the continuum of care; low levels of health-seeking behavior.

SOLUTION

Used CommCare to help frontline workers track pregnant women, and familiarize them with public health programs to improve their health-seeking behavior.

# DRISHTANT



## ORGANIZATION OVERVIEW

Founded: 2013 | Location: Mumbai, Maharashtra | Email: info@drishtant.com | Website: www.drishtant.com

### ▶ MISSION

Organizations in the social sector put tremendous effort into mobilizing resources to change the world. Drishtant believes that these valuable resources can often be utilized more efficiently by using appropriate technology. Its purpose is to help organizations use technology to save time and funds, and deliver stronger social impact.

## KEY SERVICES & PRODUCTS

### ▶ DEVICES

- MOBILE
- TABLET
- LAPTOP
- DESKTOP
- WEBSITE

### ▶ SERVICES

- TECHNOLOGY DEVELOPMENT
- CO-IMPLEMENTATION
- TECHNICAL SUPPORT & UPGRADES
- TRAINING

### ▶ PRODUCTS

- PUSH/PULL
- DATA STORAGE
- TRANSACTION
- INTERACTIVE

## EXPERIENCE & LEADERSHIP

Sub-sector Expertise: Data Management and Reporting

### ▶ LEADERSHIP

#### Ruchi Kumar, Founder and CEO

An alumna of Tata Institute of Social Sciences, Mumbai where she received the NTPC Gold Medal for the Best Student in Social Work and other awards. Ruchi has been part of several development projects in Maharashtra, Bihar and Jharkhand. She worked with Infosys as a software engineer after her undergraduate degree from Birla Institute of Technology, Mesra, Ranchi.

## CLIENTS

### ▶ Client 1

**PROBLEM** Clients had fundraising teams spread across several locations, which along with employee turnover, was leading to a loss of potential and repeat donors.

**SOLUTION** DonorCare - Centralized donor management system for storing contact details and managing communication with donors.

### ▶ Client 2

**PROBLEM** Large number of employees across multiple field locations, made routine HR processes and tracking of documents very difficult.

**SOLUTION** CiviHR - Centralized employee database with job contracts, document management and reminders for key dates such as joining, contract renewals and exiting.

### ▶ Client 3

**PROBLEM** Working with multiple partner NGOs on different projects made it difficult to collect project data on time and track key performance indicators in monthly MIS.

**SOLUTION** EasyMIS - helped to collect data from all partners on time in a standardized format, and generate instant MIS reports. Now historical data is also available in the same format for trend analysis.

### ▶ Client 4

**PROBLEM** Website was using outdated technology and the client was unable to add fresh content.

**SOLUTION** New E-commerce website that the client could easily update with new images and content, as well as add newly designed products for sale.

# MEDIC MOBILE



## ORGANIZATION OVERVIEW

Founded: 2010 | Location: San Francisco, USA | Email: [hello@medicmobile.org](mailto:hello@medicmobile.org) | Website: [www.medicmobile.org](http://www.medicmobile.org)

### ▶ MISSION

Medic Mobile is a non-profit organization that was founded to improve the health status of hard-to-reach communities around the world. It designs, builds, delivers and supports mobile and web tools for community health workers, facility-based staff, managers, household caregivers, and patients — enabling them to provide better care that reaches everyone. The Medic Mobile toolkit supports any language, works with or without connectivity, and runs on basic phones, smartphones, tablets, and computers. Medic Mobile is committed to developing open-source software, sharing learnings, and lowering barriers to adoption, scale, and reach for these tools.

## KEY SERVICES & PRODUCTS

▶ DEVICES	▶ SERVICES	▶ PRODUCTS
<ul style="list-style-type: none"> <li>■ SMART PHONE</li> <li>■ BASIC PHONE</li> <li>■ LAPTOPS</li> <li>■ COMPUTERS</li> <li>■ TABLETS</li> </ul>	<ul style="list-style-type: none"> <li>■ TECHNOLOGY DEVELOPMENT</li> <li>■ CO-IMPLEMENTATION</li> <li>■ MONITORING &amp; REPORTING</li> <li>■ TECHNICAL SUPPORT &amp; UPGRADES</li> <li>■ TRAINING</li> </ul>	<ul style="list-style-type: none"> <li>■ PUSH/PULL</li> <li>■ DATA STORAGE</li> <li>■ TRANSACTION</li> <li>■ INTERACTIVE</li> <li>■ HUMAN-CENTERED DESIGN</li> <li>■ CARE COORDINATION</li> </ul>

## EXPERIENCE & LEADERSHIP

Sub-sector Expertise: Healthcare

### ▶ LEADERSHIP

#### Josh Nesbit, Chief Executive Officer and Founder

Before co-founding Medic Mobile, Josh studied global health and bioethics at Stanford University, where his qualitative research focused on pediatric HIV/AIDS in Malawi. Josh is an Ashoka Fellow, PopTech Social Innovation Fellow, Echoing Green Fellow, and Rainer Arnhold Fellow. He has served on the Board of Directors for Developing Radio Partners and IntraHealth International.

#### Shreya Bhatt, India Country Lead

Shreya previously worked with organizations such as UNICEF, Teach for India and Trickle Up, conducting research and impact evaluations for strategic programs in education, livelihoods, and socio-economic empowerment. Currently based in Mumbai, Shreya holds a BSc in Finance and Management from NYU and a Master of International Affairs in Economic and Political Development from Columbia University.

## CLIENTS

### ▶ IPAS DEVELOPMENT FOUNDATION (IDF)

**PROBLEM** Delays in paper-based reporting system to monitor quality of safe reproductive health services offered by IDF-trained providers.

**SOLUTION** Designed and deployed Medic Collect, an Android app to capture real-time reporting on the quality of safe reproductive health services.

### ▶ MIRACLE FEET

**PROBLEM** Poor adherence to treatment protocols for children undergoing clubfoot treatment.

**SOLUTION** Designed and deployed Medic Mobile for SMS on feature phones to enroll patients' families into educational messaging schedules based on their specific phase of treatment.

### ▶ DEVELOPMENTAL MEDICAL FOUNDATION

**PROBLEM** Low vaccination rates; poor care coordination for immunizations with dropouts and missed appointments.

**SOLUTION** Designed and deployed Medic Mobile for SMS on feature phones to register infants and schedule automated SMS reminders to families and health workers for immunizations.

# SOCIALCOPS



## ORGANIZATION OVERVIEW

Founded: 2013 | Location: New Delhi, India | Email: hello@socialcops.com | Website: www.socialcops.com

### ► MISSION

SocialCops is a data intelligence company on a mission to confront the world's most critical problems with data. It works with 150 companies across 10 countries to make tough decisions easier and more effective through data intelligence. SocialCops' decision-making platform is used by mayors to decide budget allocations, by philanthropic organizations to decide strategic investments, by governments to decide sanitation interventions and by non-profits to decide on disaster relief measures.

## KEY SERVICES & PRODUCTS

### ► DEVICES

- SMART PHONE
- WEBSITE

### ► SERVICES

- TECHNOLOGY DEVELOPMENT
- CONTENT DEVELOPMENT
- CO-IMPLEMENTATION
- MONITORING & REPORTING
- TECHNICAL SUPPORT & UPGRADES
- TRAINING

### ► PRODUCTS

- PUSH/PULL
- DATA STORAGE
- TRANSACTION
- INTERACTIVE

## EXPERIENCE & LEADERSHIP

Sub-sector Expertise: Governance, Sanitation and Disaster Relief

### ► LEADERSHIP

#### **Prukalpa Sankar, Co-Founder**

Prukalpa is a graduate from Nanyang Technological University Singapore, where she studied engineering and entrepreneurship. She strongly believes that data-driven decision making can have a huge impact on issues that matter.

#### **Varun Banka, Co-Founder**

Varun Banka is a graduate from Nanyang Technological University Singapore, where he studied computer engineering. He loves working on products that solve real-life problems.

## CLIENTS

### ► SWADES FOUNDATION

PROBLEM

Needed to understand the impact of work being conducted in Maharashtra.

SOLUTION

An app called Collect was used by 250 surveyors for Swades Foundation to collect data from over 75,000 people.

### ► GOONJ

PROBLEM

Accountability for 1,000 tons of material donations made for the survivors of the Nepal Earthquake.

SOLUTION

Collect was used to gather information for each donor offline and send them receipts in the aftermath of the Nepal Earthquake.

### ► NEXT BILLION

PROBLEM

Need to analyze the effectiveness of a newly launched program across five countries.

SOLUTION

Collect was used in Myanmar, Indonesia, Vietnam, Bangladesh, and Mozambique to collate data from 10,000 surveys that gave Next Billion quick insights into this program.

# VOTO MOBILE



## ORGANIZATION OVERVIEW

Founded: 2013 | Location: Toronto, Canada | Email: info@votomobile.org | Website: www.votomobile.org

### VISION & MISSION

VOTO envisions a world where all people have access to the information they need to make decisions so as to lead healthy, prosperous lives, and to have meaningful relationships with governments, civil society, and businesses. VOTO connects individuals and organizations in emerging markets to make better decisions using digital technology.

## KEY SERVICES & PRODUCTS

DEVICES	SERVICES	PRODUCTS
<ul style="list-style-type: none"> <li>MOBILE</li> <li>SMART PHONE</li> <li>IVR-SOLUTIONS</li> <li>SMS-SOLUTIONS</li> </ul>	<ul style="list-style-type: none"> <li>TECHNOLOGY DEVELOPMENT</li> <li>CO-IMPLEMENTATION</li> <li>MONITORING &amp; REPORTING</li> <li>TECHNICAL SUPPORT &amp; UPGRADES</li> <li>TRAINING</li> </ul>	<ul style="list-style-type: none"> <li>PUSH/PULL</li> <li>DATA STORAGE</li> <li>INTERACTIVE</li> </ul>

## EXPERIENCE & LEADERSHIP

Sub-sector Expertise: Health, Education, Agriculture, Governance, Livelihoods and Financial Inclusion

### LEADERSHIP

#### Mark Boots, Chief Executive Officer and Chief Technical Officer

Mark holds a PhD in Engineering Physics from the University of Saskatchewan and has over 10 years of software development experience. He led the team that finished second in a global, NASA-sponsored engineering design competition.

#### Louis Dorval, Chief Programs Officer

Louis has more than 10 years of experience in international development and was recently a senior executive at a pre-IPO Silicon valley-based software company. He holds a degree in engineering from McGill University and an MBA from Oxford University where he was a Skoll Scholar.

#### Levi Goertz, Chief Operating Officer

Levi was previously an Engagement Manager at McKinsey & Company, as well as a senior executive at an international development organisation. He holds an MBA from UC Berkeley and an engineering degree from the University of Saskatchewan.

#### Charishma Chotalia, Regional Director of Programs, South Asia

Charishma is based in India and spends her time building out partnerships across South Asia. She has significant experience working in the international development sector, including time with UN Women, the Women's Refugee Commission, and Samasource. She holds a BA in Psychology from Stanford University and an MPH from Columbia University.

## CLIENTS

### INTERNATIONAL LABOUR ORGANIZATION

**PROBLEM** In the absence of formal grievance redressal mechanisms for domestic workers, there is no evidence on the nature and extent of complaints in this sector. There lacks a systematic mechanism for domestic workers to file their grievances and for unions to address such grievances.

**SOLUTION** Created a grievances hotline, where domestic workers could call a phone number, leave a recording of the issue they were facing, and have the issue be routed to the appropriate labor union. From there, labor unions could tag each issue and record each of the steps to resolution. At the same time, unions could also reach out to workers with their messages, as and when required. In addition, ILO could use the compiled data for advocacy efforts.

### CONSULTING FIRM (WORKING ON A PROJECT FOR A LARGE FOUNDATION)

**PROBLEM** Lack of rapid information on power outages across India to help inform the design of a new vaccine refrigerator.

**SOLUTION** Conducted a Pan-India IVR survey in one week that provided the consulting firm with information on power outages across the country.

### WIKIMEDIA FOUNDATION

**PROBLEM** Lack of insight into peoples' awareness of Wikipedia and how they were using it.

**SOLUTION** Conducted a Pan-India survey in 13 languages that provided Wikimedia Foundation with information on brand awareness and use. This survey has been replicated in six countries, globally.

# ZMQ TECHNOLOGIES



## ORGANIZATION OVERVIEW

Founded: 2011 | Location: New Delhi, India | Email: Hilmi@ZMQ.in | Website: www.ZMQDev.org

### ► MISSION

ZMQ is a technology for development organization. ZMQ builds technology-linked development solutions and models to connect underserved communities and deliver services in areas of health, education, and livelihoods. ZMQ's larger mission is to accelerate development using technology and advocate for the 'Right to Connectivity as a Right to Life'.

## KEY SERVICES & PRODUCTS

### ► DEVICES

- SMART PHONE
- BASIC PHONE
- WEBSITE
- INTERNET-BASED APPLICATIONS
- SENSOR-BASED DEVICES
- IOT DEVICES

### ► SERVICES

- TECH DEVELOPMENT
- CONTENT DEVELOPMENT
- CO-IMPLEMENTATION
- MONITORING & REPORTING
- TECHNICAL SUPPORT & UPGRADES
- TRAINING

### ► PRODUCTS

- PUSH/PULL
- DATA STORAGE
- TRANSACTION
- INTERACTIVE

## EXPERIENCE & LEADERSHIP

Sub-sector Expertise: Healthcare, Education, Livelihood and Disaster Management

### ► LEADERSHIP

#### Hilmi Quraishi, Co-Founder

Hilmi is an Ashoka Fellow and has a Masters of Technology degree in Computer Science. He started his career by setting up ZMQ with a mission and vision to use his skills and training to develop solutions for the underprivileged.

#### Subhi Quraishi, Chief Executive Officer and Co-Founder

Subhi has a Masters of Technology degree in Applied Mathematics and Computation and works with his brother to support ZMQ.

## CLIENTS

### ► CoreGroup

PROBLEM

Poor uptake of immunization and polio (SIA) in 13 high-risk districts of Uttar Pradesh.

SOLUTION

Built a mobile solution and backend platform for 246 FLWs covering 300 villages. The platform was built on open-source technology and tools were built for Java-enabled phones and Android tablets.

### ► JHPIEGO

PROBLEM

Poor sexual knowledge and risky behavior among youth in Kenya.

SOLUTION

Built a mobile Android-based game called 'Game Changer'. It uses role plays tailored to the local context in East Africa, as well as tracks user behavior-change patterns over continued game playing, thus capturing data to study behavior change among youth.

### ► Sangath

PROBLEM

Lack of front-line workers (FLWs) and familial support for rural children with neuro-developmental disorders.

SOLUTION

Developed an mHealth platform to screen and observe the daily routine of children with neuro-developmental disorders in low-resource settings. The platform provides multi-media support tools and strategies to facilitate the work of FLWs and the families they serve. The solution was developed for mobile phones and tablets.



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# APPENDICES

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- I. SNEHA CASE STUDY
- II. DIMAGI TECH-ADOPTION SAMPLE
- III. ACKNOWLEDGEMENTS
- IV. ENDNOTES
- V. BIBLIOGRAPHY

# SNEHA CASE STUDY

*This case study illustrates the process, decisions and challenges faced by a non-profit during their technology adoption journey.*

SNEHA is a non-profit organization based in Mumbai that works to improve health outcomes of women and children in Mumbai's urban slums, through its interventions in maternal and newborn health, child nutrition, sexual and reproductive health and violence against women. SNEHA works with communities and systems alike to cultivate and support positive health behavior and outcomes among the most vulnerable populations.

Starting in 2012, by partnering with Dimagi and their CommCare solution, SNEHA implemented a tablet-based solution for their front-line health workers.

This case study explores the various phases that SNEHA went through during the implementation process:



*Anything and everything can be automated, whether through an existing solution or something custom-made. Ultimately the decision of what should be automated comes down to time, cost and resources.*

— EXPERT INTERVIEWS

## 01. UNDERSTAND & EVALUATE

Before exploring technology, SNEHA was running multiple programs in maternal and child health, using front-line community workers, or community organizers, to gather data from each home. The data collected included the number of houses visited, height and weight of a newborn infant and immunization records. At the time, data collection was a paper-based method, which required the community organizer to collect information in Hindi, English or Marathi and handover the paperwork to a data officer. This officer would then manually enter the information into a computer and translate into English, where applicable. This process was time consuming and it would often take several days (or at times, several weeks) to prepare the data for analysis.

Around 2012, SNEHA started rapidly scaling its program, leading to an increase in beneficiaries and community organizers. SNEHA's growth plan increased data collection requirements to approximately 65,000 households. With this new reality, the existing manual data collection process would prove to be very slow and prone to inaccuracies. Therefore, the organization needed an automated process for data collection to enable real-time analysis and decision-making, so as to improve intervention strategies. An automated process would also help their community organizers gather more data as well as improve the quality of interaction with beneficiaries.

## 02. DESIGN

In collaboration with its technology provider (Dimagi), SNEHA drew up their technology requirements:

- A web and mobile-based platform to collect data.
- Easy-to-use technology for both frontline and research teams.
- A platform that allows data to be easily analyzed and monitored in real-time
- A technology solution that allows edits to data questions/fields and sends notifications to individual community organizers based on data collected.
- A platform that supports multiple languages such as Hindi, Marathi and English.

Initially, SNEHA piloted two platforms with two vendors. This enabled them to assess both the vendors' solutions against their requirements. After selecting one platform, SNEHA rolled out the technology in a phased approach — one program or sub-program at a time.

## 03. IMPLEMENT

Successful implementation of the technology solution required a number of critical factors such as:

- Senior management buy-in
- Two people who were familiar with the CommCare technology to be assigned to the project implementation. During this implementation phase, these team members were also able to learn the procedure for creating new forms and modifying the platform, which helped SNEHA to continuously improve the solution.
- Demonstrations to show end users how it would change their way of working.
- Comprehensive training sessions for community organizers to help mediate any apprehension over the use of technology. For many community organizers this was the first time they were using a tablet device.

## 04. EMBED & IMPROVE

The involvement of Dimagi in the ongoing maintenance and modifications of the data platform varies by program. Depending on the program and how well trained the supporting staff are, either Dimagi or SNEHA may be responsible for creating new forms or making changes to existing forms. The most important thing is that engagement with the TSP has developed into an ongoing professional relationship.

The next step for SNEHA is to explore technology to improve other manual internal processes, for example, Finance, HR and Admin. Using the lessons learned from the data collection solution, SNEHA will continue to expand their understanding and usage of technology to support future ambitions and increase operational effectiveness.



# DIMAGI TECH-ADOPTION SAMPLE

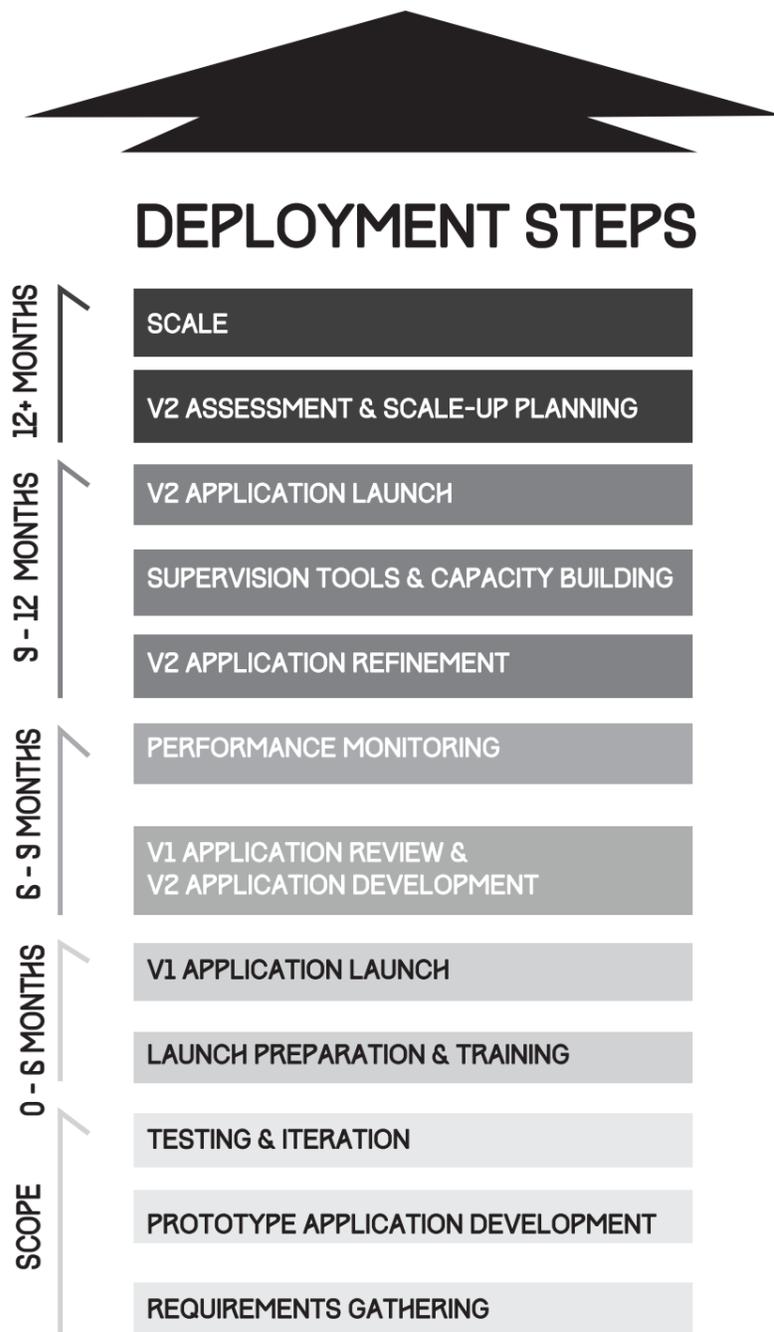
To foresee and address implementation challenges, you first need to understand the steps involved in a typical technology implementation cycle.

## How to Develop a Roadmap to Scale

Once you have evaluated your positioning on the Maturity Matrix, develop or refine a project roadmap with your team. Dimagi uses the template below with its partners to:

- 1) Build a project deployment roadmap.
- 2) Plan how organizations should develop their maturity levels along the way.

*NOTE: This is the typical timeline that Dimagi follows when working with a partner organization. Each project and timeline is different.*



## FIVE STAGES OF MATURITY

STAGE 1 STAGE 2 STAGE 3 STAGE 4 STAGE 5

### SCALE THE SYSTEM

**Goal:** Scale the system over time. Monitor scale. Ensure the system is not just functioning at scale, but adding value.

**Scale:** Entire user base

**Timeline:** 6+ months

### EXPAND THE VALUE OF THE SYSTEM

**Goal:** Develop and test the support systems required to scale.

**Scale:** New geographic areas

**Timeline:** 6 more months

### DEMONSTRATE VALUE WITH THE SYSTEM

**Goal:** Develop and test iterations of the technology solution with a small number of users.

**Scale:** At one project site (10 - 50 users)

**Timeline:** 3 - 6 months

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# ENDNOTES

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