Section 3

CONSIDERING YOUR PROJECT

Incorporating technology

The role and impact of technology in both our personal and working lives is ever changing. Technology is about taking action to meet a real world issue and providing the solution.

This in turn has enabled us to understand and analyse our day to day working in greater detail. Whether this is using project management software to coordinate live projects or using collaborative spreadsheets to improve invoicing workflows, technology can provide many benefits to your volunteering journey.

Technology is ubiquitous and, during your time volunteering, whether in person or remotely, there will be a variety of ways in which it may enhance your ability to work with partners and deliver your project. Despite this, it is important to carefully consider if, when and how to use technology, especially as your partner's experience may be different from your own.

Learning objectives

1 Improving your project

Any transformation should be formed around this key aim. Digital enhancements should not be made for your own benefit but for the benefit of all parties. It is important to include Gender Equality and Social Inclusion (GESI) considerations.

2 Increased collaboration

Aim to improve your communication and workflow processes through technology.

3 Enhance processes

Streamline your workload by limiting manual and repeated tasks.

4 Be more flexible

Technology can assist in data gathering and analysis which improves your project agility and allows for a more open approach with your colleagues.

Benefits

Technology has improved both the quality of volunteering and the experience of the volunteers themselves. By opening up access of various sources, collaborative tools and online communication, technology can have a positive impact on both the country host and the volunteer. Both hardware and software can be used in an innovative way to address real life problems in a volunteering situation which can have long lasting impacts on the community. Internet and mobile phone texting can enable individuals and members of marginalized groups to consult with medical professionals and receive information on medications.

TECHNOLOGY CAN HAVE A POSITIVE IMPACT ON BOTH THE COUNTRY HOST AND THE VOLUNTEER

Risks/costs

There are numerous barriers to technical access and usability in LMIC countries. Although it may seem easier and less time consuming to utilise solutions which you are already comfortable with, there is a strong possibility that these technologies will either be inaccessible, unfeasible or exclusive. In order to ensure that no one is left behind, you should therefore research and engage with local stakeholders to analyse potential technologies which your colleagues are used to and happy to use. You may also need to consider possible inequalities in access to such technologies often called "digital divide", which may widen disparities and social exclusion of specific groups along specific social stratifiers.

Tools

When deciding on which technology to use, both hardware and software, it is important to consider the following scenarios:

Instant messaging

- To avoid cluttering your inbox with short emails, utilize free instant messaging solutions such as Slack, Google Hangouts or Discord to send quick IM's and calls. Research which technologies are more popular in the region for better results.

- Use IM for informal communications and receive quick real time responses rather than more formal or detailed communication.

Email

- Email should be used to keep an audit trail of any correspondence between parties unlike instant messaging where messages can be deleted more easily.

- To streamline your workload, make best use of folders, tags and labels for better organisation.

- Free email extensions such as Grammerly, Gmail Offline and Rapportive can provide key improvements to your emailing capabilities (https://uk.pcmag.com/migrated-2510-productivity/3725/the-best-chrome-extensions-for-gmail)

Video conferencing

- Use video-conferencing to carry out training, group or one to one meetings and events with geographically dispersed partners.

- Tools such as Zoom, Google Hangout, Skype and Jitsi offer free videoconferencing solutions

- Record live sessions to build a repository of training videos, project walkthroughs and more.

Digital principles

Technology is becoming more and more utilised within global health projects, however, it is important that you consider not just how technology can be used but also if it is required in the first place and if the benefits will outweigh the costs. For example, does the benefit and cost of a new mobile app outweigh the usability and training required for its success? Does the use of the new technology potentially exclude certain groups of your stakeholders?

When conducting any form of digital collaboration, it is important to follow some basic principles. The Principles for Digital Development aims to establish strong and effective participation in international development:

Design with the user
Engage in conversation and cooperation with your partners to design a mutually beneficial system, which enables stakeholders to equally participate.

Understand the existing ecosystem
Research the current systems in place to understand where improvement is required and what current solutions can be carried forward.

Design for scale
Plan for future growth by ensuring any solutions can cope with major changes in users, data and content.

Build for sustainability
Ensure that any solutions provide maximum long-term impact on the project going forward.

Be data driven
Create quality information and ensure that it is provided to the correct people for when they need it.

Use open standards, open data, open source and open innovation
Conduct an open approach to the wider community to ensure there is no duplication in work.

Reuse and improve
Work with your community to use project solutions on a wider scale to improve efficiency.

Address privacy and security
Be careful of which data is collected and how it is used, stored and shared. Make sure you comply with data protection laws.

Be collaborative
Share your information, insights, strategies and success to improve implementation efficiency.

Scenario

A volunteer notices that data held on a patient is not collected or analysed on GESI indicators which demonstrates a bias in patient treatment. As a result, they decide to use a customizable application to collect data on patients. However, the application is only available on Apple iPhones which are not common in the region. The volunteer then looks to purchase iPhone's for the key staff in the department who will be trained to collect the data. What could be some of the challenges of this approach?

- Staff will need training to use the phones
- Phones/accessories (charging cables) could break and there is no local maintenance available
- A potential lack of ongoing software support for the application once the volunteer leaves
- Information can not be integrated with hospital or national data systems
- Staff who don't receive phones could see the provision as favouritism
- Phones could be stolen
- Sensitive data may not held securely
- No oversight on quality of data inputs

Digital checklist

When you have identified a use for technology, the check list below will help you to consider some key factors.
If you answer no to any of these, this could be a sign that you should reconsider the use of technology in your project.

Key considerations	Checklist
Will the technology be effective in solving the issue at hand?	☐
Will end users on the ground have access to the technology?	☐
Will the technology be compliant with the country's laws and regulations?	☐
Will the partner be required to bear any potential costs to the technology?	☐
Does the technology fit or integrate with existing technology on the ground?	☐
Are there alternative solutions exist which are more widely used within the country?	☐
Will the technology handle low bandwidth in the area?	☐
Is the technology accessible by all regardless of gender, race, disability, geographical location, etc?	☐
Is the technology sustainable and able to be used after the project is complete?	☐
Does the local authority have the financial means to support the technology after the project?	☐
Have you engaged with any local staff prior to implementation to ensure their acceptance?	☐

Key considerations	Checklist
Have you engaged with a diverse group of end users along your main GESI stratifiers prior to implementation in order to ensure broad access to avoid a digital divide?	☐
Is data stored collaboratively to streamline processes and prevent data build up?	☐
Is there local support available for the technology you are using if it goes wrong or breaks?	☐
If you require additional hardware delivered to the region from abroad, is this feasible? (duty fees)	☐
Can additional hardware be procured locally?	☐
Will the technology require any major maintenance?	☐
Is any hardware stored in a secure location?	☐
Have local staff received the appropriate training to use the technology effectively (e.g. do you need to provide training in local languages, etc.) ?	☐
Is the way you handle data compliant with the local regulations?	☐
Is data stored securely to prevent leaks?	☐
Is data accessible to all stakeholders involved including trainees, trainers and beneficiaries as appropriate?	☐

Dealing with bandwidth issues

A common issue you may come across in your digital volunteering may be dealing with poor connectivity, especially with colleagues in LMICs. Below is a list of tips which may be helpful in improving connection speeds in your working day:

Turn off HD video in your videoconferencing

- In Zoom, click Settings (the gear icon).
- Click Video in the left-hand menu.
- In the My Video section, uncheck the box beside 'Enable HD' if necessary.

Turn off video and screen sharing if not necessary

- Live streaming video requires a large amount of bandwidth. By turning off your video and muting yourself, this will improve connection.
- Screen sharing can place the largest amount of pressure on your internet connection. Sharing a resource in the chat section can be an easy alternative to screen sharing and reduce the impact on your connection.

Change your meeting times

- As most meetings are scheduled on the hour or at 30 minutes past, you are likely to be met with high traffic congestion on your gateway. Scheduling meetings at 15 minutes past or to the hour can help with better connections.

### Turn off background applications on any device connected to the wifi

- Running desktop applications in the background which uses large amounts of CPU (Central processing Unit) will impact the quality of your calls. This will include any program running videos, large databases, interactive content or uploading files to the internet in parallel.
- Mobile apps such as Facebook, Instagram, Netflix, Snapchat, Spotify, Twitter and YouTube will also use large amounts of bandwidth.
- Configure your PC to start device updates when you are not using your computer. You can read more here.

Use collaborative software to share files rather than email attachments

- If you do need to share files with a colleague, sending the link to the file stored in Sharepoint or GoogleDrive should be encouraged. Sending files as attachments require the file to be uploaded to the mail server and will require considerable bandwidth.
- Sharepoint and GoogleDrive also allows more than one user to edit the same document in parallel, reducing the need to send updated versions back and forth.

Revise the devices connected to your network

- By logging in to your router, you can see which devices are operational and which devices are using the most internet. There is a high chance that many of these devices do not require 24/7 internet access. You can read more here.
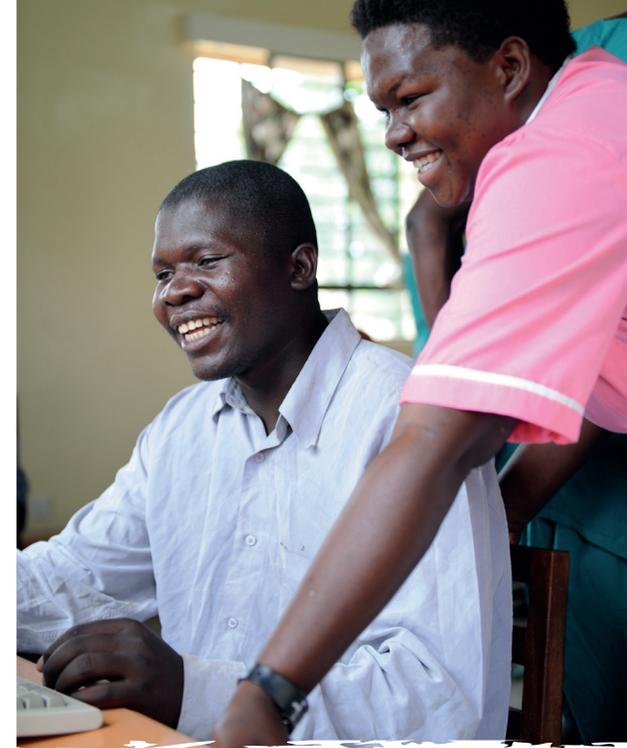
- For mobile phones with unlimited data packages, disconnect them from the network if not needed.
- If your router supports both 2.4GHz and 5GHz channels, ensure that devices are spread across both channels, reducing congestion across one channel.

Use lower bandwidth software

- Web browsers such as Opera and Dolphin (for mobile) are specifically built for slower internet connections
- Use low data mode on mobile devices to ease the pressure on your desktop/laptop
- i. support.apple.com/en-gb/HT210596
- ii. source.android.com/devices/tech/connect/data-saver

Conclusion

In the current climate, technology is fundamental to your volunteering experience. When planning your digital transformation, it is important to remember a key principle: technology is simply a tool.

When you identify a problem, be careful in your approach to finding a solution. Many solutions will claim to solve all your problems, but it is imperative that you are led by the problem, not the technology. After identifying the problem, use your Digital Principles and checklist to ensure that you are open and inclusive as to which solution you chose.

Be aware, that technological change and innovation can serve as critical tools for social inclusion; but if you do not build on GESI considerations, the inequality in access to the new technologies might also foster "digital divide" and perpetuate social exclusion.

You should be constantly analysing your technology and ensure that even after implementation, you continue to review your objectives. There are thousands of helpful resources and community groups available to you online and using best practices learned by others can help you make a successful impact on your voluntary experience.