A CHILD FRIENDLY TECHNOLOGY FRAMEWORK
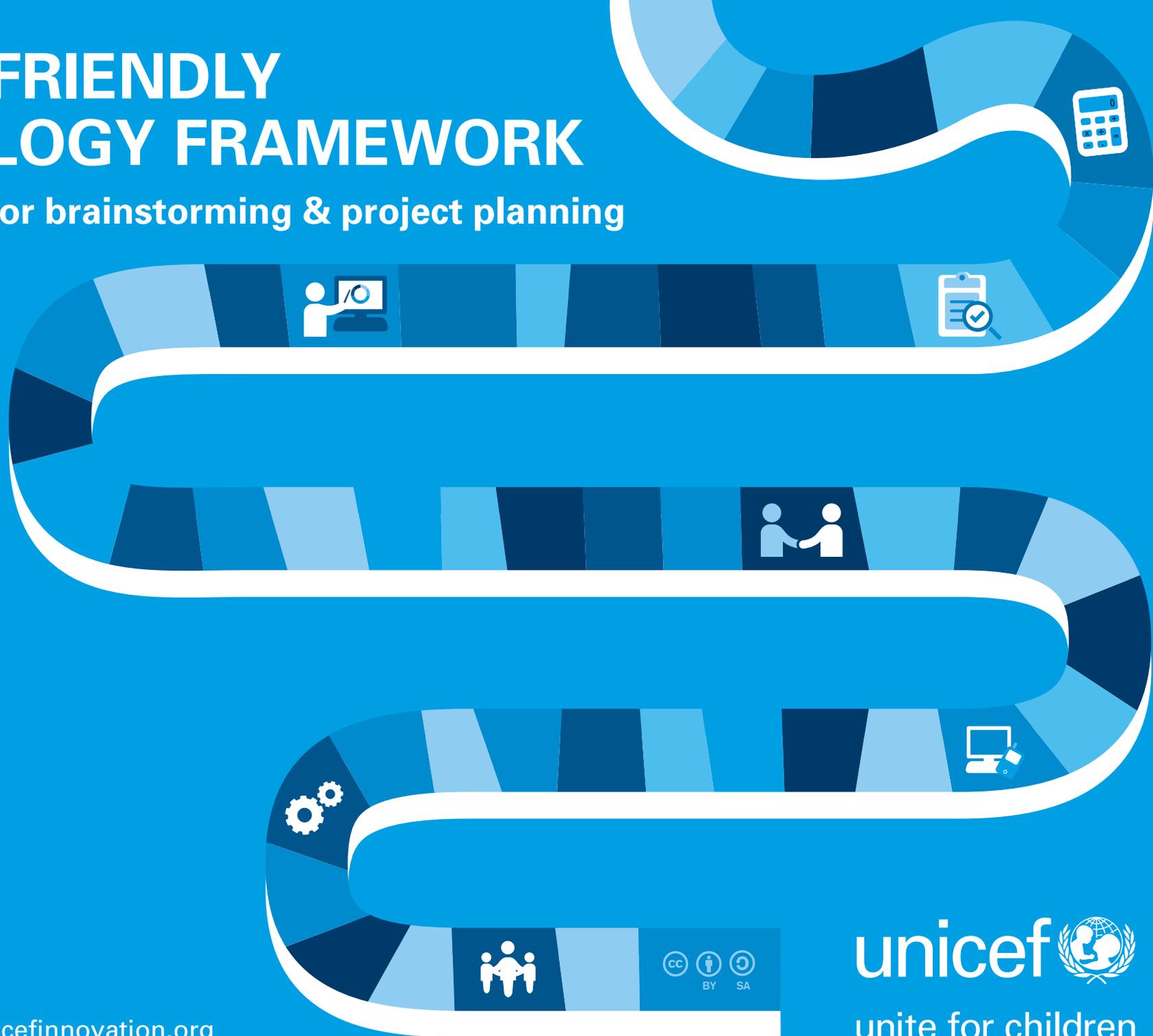
52 worksheets for brainstorming & project planning

UNICEF Volumes #4

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FIVE PRINCIPLES are fundamental to UNICEF's Innovation work.

User-Centered, Equity-Focused

Respond to user needs, be context appropriate and designed in collaboration with end users.

Be developed incrementally, using iterative user testing system models and modified as appropriate.

By designing for the most difficult-to-reach first, we build equitable solutions that scale.

Sustainable

Be viable in the long term, factoring in support infrastructure, maintenance and running costs.

Involve governments in the development of solutions.

Encourage the involvement and training of local experts (technical and otherwise).

Scalable

Be replicable and customizable in other countries and contexts.

Factor in partnerships from the beginning and start early negotiations.

Look towards locally available technologies and use what already exists in the ecosystem.

Built On Experience

Be built upon previous experience and incorporate best practices into the design of products, services and processes.
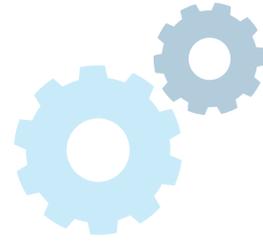
Facilitate open access to information.

Documentation, content and learning can be shared and accessed by anyone.

Open and Inclusive

Make knowledge around the innovation publicly accessible and prioritize openness as an approach to solving problems.

Build technology that is free and open source so that it can be shared with interested parties and adapted by others.

A CHILD FRIENDLY TECHNOLOGY FRAMEWORK

52 worksheets for brainstorming & project planning

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Identify and work with academic, technology, private sector and civil society partners to support your project with the best resources.

SECTION 6: BUDGETING

Factor in all aspects of costs of an innovation that might otherwise slip off your mind.

SECTION 7: MONITORING AND EVALUATION (M&E)

Establish a monitor and evaluation mechanism to ensure your project processes are followed through and evaluated, and your results and lessons shared.

Executive Summary

EXAMPLES OF TERMS OF REFERENCE (TOR)

INTRODUCTION

We are pleased to share the Child Friendly Technology framework. The CFT is a simple way to design education projects that have a technology component and are focused on children and adolescents.

This framework is divided into seven sections. In each section, your team can explore factors that will influence a project plan.

Collaborating to build an innovative project is not a linear process. You can start working on worksheets in the middle of this framework, or at the end. Completing these sheets, together with other stakeholders, should highlight areas of your project that may need more investigation, and help you solidify areas of strength.

THIS FRAMEWORK MAY BE HELPFUL FOR YOU IF:

- You have just come up with a technology and youth related project idea and want to check the basic premise,

- You want to use innovation to improve outcomes for children (learning, play, growth) but do not necessarily have a "technology background",

- You are starting to draft a project plan and wonder where to begin,

- You have just formed or joined a team to work on an innovation project and need resources to brainstorm,

- Your project is being implemented and you are curious about how to evaluate it for impact,

- Your innovation work has encountered some challenges and you want to trouble-shoot or look for options.

IN THIS PACKAGE, YOU WILL FIND FOLLOWING:

52 Worksheets are divided into seven sections, with each section divided specific topics. Every worksheet consists of questions that should be asked and answered in a group, and with consensus, and which will help your project fit your end users.

Some of the questions in this guide will have readily available answers—others will require further investigation or discussion. Each question is intended to flag a major issue in creating innovation projects.

6 Reviews and Summaries at the end of each section. The worksheets will aid you in summarizing the section – as a review of the discussions you've had as a group. The worksheets also stand on their own as foundational documents for project planning.

Finally, the 52 worksheets and their summaries can be used to create a **Executive Summary,** which will help explain your project to others and bring it to life.

Nicholas Alipui
Director of Programmes, UNICEF

Shanelle Hall
Director, Supply Division, UNICEF

= **Review | Summary**, which can be independent

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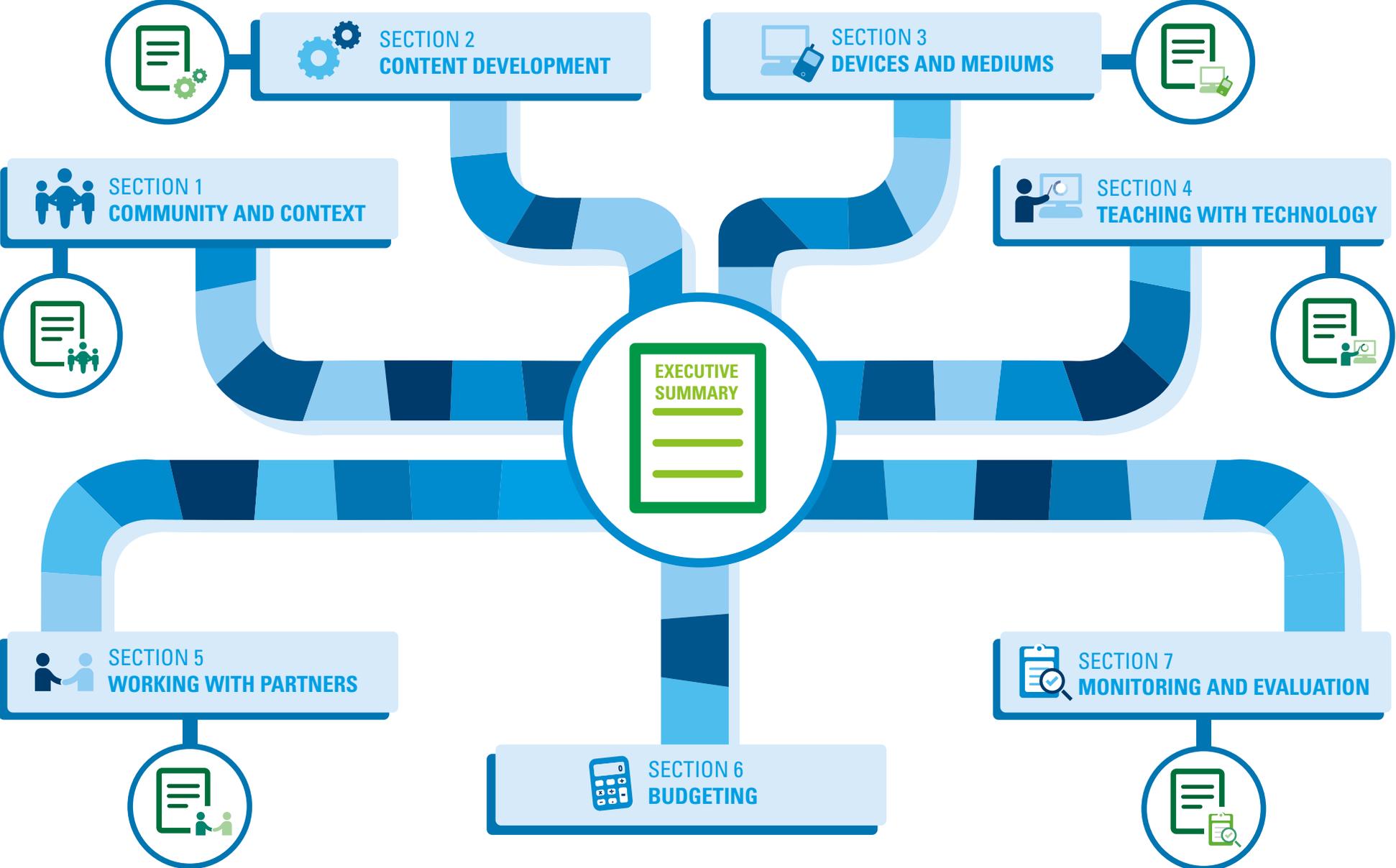
Section 1
COMMUNITY AND CONTEXT

BACKGROUND

Having a holistic and nuanced understanding of the communities and contexts where you will be working is critical to a successful program. The specific characteristics and needs of the community should inform the project design and technology selection. Worksheets in this section focus on attributes of the community that your project will take place in.

TOPICS

Natural Environment

Worksheet 1: Temperature and Climate

Worksheet 2: Shelter, Storage, and Movement

Infrastructure

Worksheet 3: Electricity

Worksheet 4: Inter-Community Connections

Children and Youth

Worksheet 5: Demographic Information

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Worksheet 12: Teachers and Educators

Technology Access, Usage and Literacy

Worksheet 13: Technology Access, Usage and Literacy

NATURAL ENVIRONMENT

Each technological device has its limitations in terms of how far it can withstand natural elements. If the program is targeting more than one community where weather and environment vary perform this evaluation for each community. The particular natural conditions need to be entered into the project concept note as factors that must be considered in sourcing and procuring any hardware solutions.

Worksheets for this area:

Worksheet 1: Temperature and Climate
Worksheet 2: Shelter, Storage, and Movement

WORKSHEET 1
TEMPERATURE AND CLIMATE

QUESTIONS	YOUR ANSWER
1 How many days per year do temperatures in the community exceed the range of 0-35 degree Celsius?	/365 DAYS
2 How many days per year do humidity levels in the community exceed 95 percent?	/365 DAYS
3 How many days per year does the community experience substantial rainfall (>.5cm)?	/365 DAYS
4 How many days per year does the community experience substantial snowfall (>1cm)?	/365 DAYS
5 How many days per year does the community experience dust storms?	/365 DAYS

WORKSHEET 2
SHELTER, STORAGE AND MOVEMENT

If technological devices are to be used outdoors, subject to frequent movement or exposure to harsh weather conditions consider using specialized equipment that is shock resistant or find equipment that is inexpensive to repair and replace within the community.

QUESTIONS	YOUR ANSWER	
1 Will the technological devices exclusively be used indoors?	YES	NO
2 Will a cool, dry indoor shelter be available to house the devices?	YES	NO
3 Will the devices be carried and moved frequently risking drops or shocks?	YES	NO

INFRASTRUCTURE

Technology implementations cannot exist in a vacuum. Accurate evaluation of your community's infrastructure characteristics is critical to determining whether the community can support a particular programme. Responses to the below questions should help you determine what constraints exist for successful deployment of the programme, and where creative solutions to technology design and usage could be helpful.

These considerations will affect decisions on the type of hardware and software solutions used, as well as the frequency and type of training and support that can be realistically accounted for and planned.

Worksheets for this area:

Worksheet 3: Electricity
Worksheet 4: Inter-Community Connections

WORKSHEET 3
ELECTRICITY

A lack of electricity will hinder a technology implementation programme. Consider also if the availability of electricity matches the need for electricity (for example, solar chargers are not useful if users can only charge their devices at night).

QUESTIONS	YOUR ANSWER		
1 What is the electricity capacity of the community?	SUFFICIENT	VIABLE	SCARCE
2 How many hours per day is electricity available?			/24 HOURS
3 Is the voltage of devices and electrical input the same?	YES		NO
4 Is there an alternative device that fits the electrical input?	YES		NO
5 If there is an alternative device can adapters be acquired?	YES		NO
6 At what cost can adapters be acquired?			
7 Can electricity capacity be expanded, if necessary?	YES		NO
8 At what cost can the electricity capacity be expanded?			
9 Could solar panels be deployed to increase capacity?	YES		NO

WORKSHEET 4
INTER-COMMUNITY CONNECTIONS

The extent of community interconnectedness (both physical and social) informs how widespread the impact of this particular implementation can be, in addition to helping define if it might be difficult to secure supplies or replacement parts.

The social cohesiveness of a particular community is also helpful to consider: challenges will always occur in any technological programme implementation.

Has this community worked together to overcome difficult challenges in the past?

	QUESTIONS	YOUR ANSWER		
1	Are other communities, supplies, or support reachable?	YES		NO
2	How can the support be reached?	BY ROAD	BY BOAT	OTHER
3	At what cost can the support be reached?			
4	What is the frequency by which citizens of one community travel to another?	DAILY	WEEKLY	MONTHLY
5	Does the community have existing access to fixed-line phones?	YES		NO
6	Does the community have existing access to mobile phones?	YES		NO
7	Does the community have existing access to the internet?	YES		NO
8	What is the penetration rate of these connection technologies in the community?	0-30%	30-60%	60-100%
9	Would you describe inter-community dynamics as friendly and mutually helpful?	YES	NEUTRAL	NO

CHILDREN AND YOUTH

Exploring the target community to answer the questions in this subsection will give you a better sense of the day-to-day realities of a child's life, and the role education (formal and informal) plays in their lives. When designing a technology intervention, it is important to understand the competing forces for a child's attention in order to determine an education programme that accounts for these realities.

These questions are the beginning of a continued engagement process. Assign someone on your team to be the champion of children and youth as users throughout the project. He/she should have frequent contact with children, and should engage in continuous design research and test proposed ideas and solutions against them to determine their feasibility and appropriateness.

For all the following questions in this section, consider how answers may differ by gender, economic class, and parents' levels of education, special needs, and other factors.

Worksheets for this area:

Worksheet 5: Demographic Information

Worksheet 6: School and Community

Worksheet 7: Self-Perception and Aspirations

WORKSHEET 5

DEMOGRAPHIC INFORMATION

The answers here should help determine the various demographics for targeted educational interventions, as well as inform possible curricular and programme goals. Who are the groups that are particularly marginalized or disabled in some way? How are their needs being addressed? Consider what other groups are working with specific vulnerable groups. See "Section 5: Working with Partners".

	QUESTIONS	YOUR ANSWER		
1	At what age do children generally enter school?	UNDER 7	AGE 7-10	ABOVE 10
2	In each grade, are there children from a wide array of age groups?	YES		NO
3	If there is a wide array of age groups in each grade, how does this impact their interactions inside the classroom?			
4	If there is a wide array of age groups in each grade, how does this impact their interactions outside the classroom?			
5	At what age do children generally leave school?	NEVER ENTERED	AGE 7-10 / AGE 10-15	ABOVE 15
6	What are some common reasons for children leaving school?			
7	Do social classes exist within the community?	YES		NO
8	If social classes exist within the community, how much awareness is there among children of the target community?	SUFFICIENT	SOME	LITTLE
9	Are there children in the targeted group who come from families that have just migrated to the community?	YES		NO
10	How would you describe the level of integration of migrated children with other children?	FULLY INTEGRATED	SOMEWHAT INTEGRATED	NOT INTEGRATED
11	How many children with disabilities are there in the community?			___PERCENT
12	What are the main disabilities?			
13	Is there a difference of school participation between boys and girls?	YES		NO

WORKSHEET 6
SCHOOL AND COMMUNITY

These answers will help shape where a technology intervention might fit into an established community routine, as well as inform what goals are more pressing or achievable.

	QUESTIONS	YOUR ANSWER		
1	What are the class attendance rates for students? (What is the percentage of students attending class every school day?)	<50%	50-80%	>80%
2	What are the class attendance rates for teachers? (What is the percentage of teachers attending class every school day?)	<50%	50-80%	>80%
3	What are common reasons for students to miss school?			
4	What are common reasons for teachers to miss school?			
5	How is a typical school day structured?			
6	How is a student's progress evaluated?			
7	What are, if any, the incentives beyond education for students to attend school (i.e. free lunches or cash benefit to the family)?			
8	How do the incentives beyond education impact children's learning?			
9	How do the disincentives beyond education impact children's learning?			
10	How do parents' perception of schooling impact children's school enrollment?			

WORKSHEET 7
SELF-PERCEPTION AND ASPIRATION

The answers to these questions help you understand how schooling is perceived by children. They should also help to shape the project around the needs and aspirations of the community, rather than force solutions that run against local culture. If there is a great disconnect between what children say they want to be and what the education system is grooming them to be, consider which side may need to be revised.

	QUESTIONS	YOUR ANSWER		
1	What kinds of jobs do children commonly say they WANT to have "when they grow up"?			
2	What kinds of jobs do children commonly say they realistically WILL have "when they grow up"?			
3	What responsibilities (to their families or communities) do children generally have?	FINANCIAL	HOUSEWORK	OTHER
4	How much time do they spend each week on responsibilities to their families and communities?	___DAY(S)/WEEK		
5	How does participation in pastimes and leisure affect their self-perception?			
6	What other activities (besides schooling and responsibilities) do children generally have?			
7	How much time do they spend each week on pastimes and leisure?	___DAY(S)/WEEK		
8	How does participation in family and community work affect their self-perception?			
9	Is participating in family and community work critical for the child's family's livelihood?	YES	NEUTRAL	NO
10	What skills do children think are important for them to have to be successful in the future?			
11	What skills do students acquire outside the classroom?			

PARENTS AND COMMUNITIES

A community's preconceptions about education can help or hinder educational programming efforts. Parents are often the gatekeepers to children's education, it is critical to understand the attitudes families have towards education and whether they perceive a correlation between education and future opportunities. If parents largely have negative attitudes towards education, an education programme would need to educate and sensitize the community and to win its buy-in, or reconsider the curriculum and see whether revisions need to be made there.

The attractiveness and utility of education varies widely by country, community, and family. Understanding preconceptions about education helps determine the design and implementation of programmes.

Worksheets for this area:

Worksheet 8: Parents
Worksheet 9: Access to Education
Worksheet 10: Perception of Education

WORKSHEET 8
PARENTS

In order to determine how best to win parental buy-in, it is important to first make an accurate assessment of what parents are seeking from the educational system. They may be able to articulate their aspirations for their children, and provide unique insights on its strengths, weaknesses, and evolution of the education system.

	QUESTIONS	YOUR ANSWER		
1	What percentage of adults in the community has received at least primary school education?	10-30%	30-60%	60-100%
2	What percentage of parents in the community has received at least primary school education?	10-30%	30-60%	60-100%
3	On average, what is the age up to which adults were educated?	<12	12-18	>18
4	On average, what is the grade level up to which adults were educated?	<GRADE 6	GRADE 6-12	>GRADE 12
5	What are the common reasons as to why schooling was discontinued for adults in the community?			
6	How do parents view formal education?	SUPPORT	NEUTRAL	AGAINST
7	What do parents seek when they send their children to formal schooling?			
8	What are common professions among the parents in the community?			
9	What level of education do these jobs require?	PROFESSIONAL TRAINING	SOME SCHOOLING	NO SCHOOLING REQUIRED

WORKSHEET 9
ACCESS TO EDUCATION

Determining the accessibility of education will inform the demographics of the curent school-going population. Just as importantly, it may also identify groups of the population that may benefit most from a technology implementation. Finally, the answers here can inform whether a programme will be effective within or outside of formal education systems.

QUESTIONS	YOUR ANSWER			
1 Do parents perceive that trade-offs need to be made to send their children to school?	YES	NEUTRAL	NO	
2 What does a family have to do to be able to send their children to school?				
3 What are the alternatives to formal, in-school education?	HOME SCHOOLING	DISTANT LEARNING	OTHER	NONE
4 How are the alternatives to formal education utilized?				
5 What are the perceptions of alternative education options vis-à-vis the formal education system in terms of accessibility?	BETTER	NEUTRAL	WORSE	
6 Is alternative education more affordable than formal education?	YES	SAME	NO	
7 Do people consider alternative education more practical than formal education?	YES	SAME	NO	
8 Is alternative education considered less prestigious than formal education?	YES	SAME	NO	

WORKSHEET 10
PERCEPTION OF EDUCATION

These questions should help you think about how a programme can improve education without being vulnerable to rejection by members of the community. Consider ways to frame a programme around existing perceptions.

	QUESTIONS	YOUR ANSWER		
1	Is education generally perceived to be a useful, worthwhile endeavour?	YES	NEUTRAL	NO
2	Why is education perceived to be useful by parents and adults in the community?			
3	Why is education perceived to be not useful by parents and adults in the community?			
4	Does the perception of education defer along the lines of gender?	YES		NO
5	How do genders differ in the view of education?			
6	Does the perception of education defer along the lines of economic status?	YES		NO
7	How do different economic classes differ in the view of education?			
8	Does the perception of education defer along the lines of parents' levels of education?	YES		NO
9	How do parents' levels of educations impact their views of education?			
10	What other factors impact people's views of education?			
11	Who generally holds negative attitudes towards education?			
12	Are there channels where the value of education is discussed or demonstrated?	YES		NO
13	If there are channels where the value of education is discussed, what are they?			

MARGINALIZED COMMUNITIES

Ensuring equal access to education and protecting the rights of marginalized communities are core to UNICEF's equity-based approach. Identifying disenfranchised communities and examining data that illustrate this aspect can help UNICEF better plan budget allocations, identify gaps in current programming, and focus on new efforts for reaching traditionally neglected communities.

Worksheets for this area:

Worksheet 11: Marginalized Communities

WORKSHEET 11
MARGINALIZED COMMUNITIES

Questions here should help you understand specific obstacles to education for marginalized communities.

QUESTIONS	YOUR ANSWER	
1 How many children with disabilities are there in the community?		___PERCENT
2 Is there school or alternative learning environment accessible to children with disabilities?	YES	NO
3 If there aren't education opportunities for children with disability, what are the main barriers?		
4 Are there significant differences in access to education or educational achievement along the lines of gender?	YES	NO
5 Are there significant differences in access to education or educational achievement along the lines of religious beliefs?	YES	NO
6 Are there significant differences in access to education or educational achievement along the lines of physical ability?	YES	NO
7 Is distance to school a significant differentiator for access to education?	YES	NO
8 Is family's economic status a significant differentiator for children's education achievement?	YES	NO

TEACHERS AND EDUCATORS

Training more and better teachers is key to provide access to quality education for children. This challenge is greater in rural areas where teachers receive little professional trainings, get paid less and commute more. In addition, teachers seek ways to leave from rural areas to urban ones as frequently as possible, resulting in high teacher absenteeism and an overall low motivation to perform. This jeopardizes children's education. Further, many innovation projects require that facilitators of children's learning already know how to use certain technologies, which is often not the case. It is critical to determine teachers' existing technological habits and aptitudes.

Worksheets for this area:

Worksheet 12: Teachers and Educators

WORKSHEET 12
TEACHERS AND EDUCATORS

QUESTIONS	YOUR ANSWER		
1 How long is a teacher's commute on average?	<1 HOUR	1-3 HOURS	>3 HOURS
2 How are teachers evaluated?			
3 Are teachers rewarded for positive performance and penalized for poor performance?	YES		NO
4 What are the forms of rewards?			
5 What are the forms of penalties?			
6 How much professional training do teachers have?	<1 YEAR	1-2 YEARS	>2 YEARS
7 Are there opportunities for teachers to receive more training?			
8 What are teachers' levels of education?	PRIMARY SCHOOL	HIGH SCHOOL	COLLEGE & UP
9 Is teaching the main livelihood for teachers?	YES		NO
10 What is the proportion of teachers' income that comes from teaching?	MAJOR PART	HALF	MINOR PART
11 What is the proportion of teachers' time devoted to teaching?	MAJOR PART	HALF	MINOR PART
12 What skills do teachers say they need?			
13 What supplies are teachers provided with?			
14 What supplies do teachers say they need?			
15 How many students is a teacher responsible for?	<20	20-50	>50
16 Is the financial compensation adequate for teachers to meet their day-to-day needs?	YES		NO
17 Is the financial compensation adequate for teachers to save for future?	YES		NO
19 What non-financial compensations do teachers receive?			
19 Do teachers feel that these aggregated rewards are sufficient for their contributions?	YES		NO

TECHNOLOGY ACCESS, USAGE AND LITERACY

Understanding and building upon a community's existing technology habits help to develop an approachable, sustainable programme. Once patterns of the community's technology usage have been identified, draw out the most common themes and behaviors. These should form the basis of your programme design, as education programmes pilots are most effective when they build upon the technologies that people are already using.

Worksheets for this area:

Worksheet 13: Technology Access, Usage and Literacy

WORKSHEET 13
TECHNOLOGY ACCESS, USAGE AND LITERACY

Users are more likely to utilize technology interfaces that are similar to those that they are already accustomed to. Assessment and articulation of the technological literacy of students and teachers will yield a technology implementation with a minimal learning curve and high adoption rate.

	QUESTIONS	YOUR ANSWER			
1	What types of technology interfaces do adults interact with most frequently?	RADIO	TV	COMPUTER	OTHER
2	What types of technology interfaces do children interact with most frequently?	RADIO	TV	COMPUTER	OTHER
3	What are your estimates of mobile phone coverage?	<10%	10-30%	>30%	
4	What are your estimates of landline phones coverage?	<10%	10-30%	>30%	
5	What are are your estimates of internet coverage?	<10%	10-30%	>30%	
6	How much do households in the community spend on hardware per year?	___LOCAL CURRENCY/DOLLAR			
7	How much do households in the community spend on software and services per year?	___LOCAL CURRENCY/DOLLAR			
8	How much do households in the community spend on technology services per year?	___LOCAL CURRENCY/DOLLAR			
9	What are, if any, the activities around technology in the community that are communal?				
10	What are, if any, the negative perceptions about any particular technologies?				

SECTION 1: **COMMUNITY & CONTEXT**

You have brainstormed various aspects about your target community. This is an optional step to help you review and summarize the 13 worksheets into 1 page. Fill in the blanks or circle one option provided.

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1. What are the main infrastructural and natural constraints and opportunities in your target community? (Refer to worksheet 1 – 4)

The community is located _____, its climate is_____. The community has (fairly developed/poor) infrastructure, with _____ road access, _____electricity coverage, _____mobile coverage and _____internet coverage.

2. What is the key demographic information? (Refer to worksheets 5 – 12)

Boys generally enter school at age_____ and leave school at age_____, mostly for the following reasons: _____, _____, and _____. Girls generally enter school at age_____ and leave school at age_____, mostly for the following reasons: _____, _____, and _____.

In general, parents' main livelihood is _____. They have an education level of (primary/high school/college or higher). They see education as (useful/not useful). _____ and _____ are main perceived trade-offs that have to be made in order for children to attend school.

Teachers have (primary/high school/college or higher) level of education and (some/no) professional training, which is (sufficient/insufficient) to complete their tasks. Teachers receive _____ compensation and generally have (high/low) incentives.

3. What are technology literacy rates and usage patterns? (Refer to worksheet 13)

The community has access to _____, _____ and _____ technology. Community members are familiar with _____, but aren't familiar with _____.

OTHER INFORMATION

- _____% of children migrated from other communities, which affects their learning in _____way.

- _____% of children live with disabilities.

- _____ and _____ groups are perceived to be marginalized in the community, and call for special consideration.

- In each grade, there (is/isn't) a wide array of ages, which affects children's learning in _____way.

- Apart from formal schooling, there are _____ and _____opportunities for alternative education.

Section 2
CONTENT DEVELOPMENT

BACKGROUND

New technologies have greatly enhanced our ability to create and disseminate educational content. These changes have great impact on inclusive access to education. Content development is a critical process in developing a child-friendly technology project.

The content development process should start from the examination of current learning styles and needs, and existing content and materials. Educational content can take many forms, including printed materials, electronic and interactive materials and live performances etc. This should be followed by the inspection of evaluation methods, technology availability, and content review/approval policies.

Remember: The requirements and ideal designs generated by this section may need to be altered based on what is possible as outlined in Section 3 (Devices and Mediums). Environmental and community considerations (Section 1) and budgetary considerations (Section 7) will also impact the format and medium of educational content.

TOPICS

Learning Styles and Needs

Worksheet 14: Needs

Worksheet 15: Teacher-Student Interaction

Performance Evaluation

Worksheet 16: Aptitude Testing: Students

Worksheet 17: Aptitude Testing: Teachers

Existing Curriculum and Delivery Methods

Worksheet 18: Existing Curriculum and Delivery Methods

External Resource Libraries

Worksheet 19: External Resource Libraries

Technical Resources

Worksheet 20: Technical Resources

Testing and Approval Process

Worksheet 21: Testing and Approval Process

LEARNING STYLES AND NEEDS

There are a variety of learning materials designed to enhance learning outcomes through many distinctive ways, be it audio-visual aids or syllabus printouts. The needs and technical abilities of students and teachers will be critical to determining which type of content the project should focus on. This will have significant implications for programming, choice of device, and software development. Note: This could be part of the Section 1: Community and Context, Worksheet 13 - Technology Access: Usage and Literacy.

Worksheets for this area:

Worksheet 14: Needs

Worksheet 15: Teacher-Student Interaction

WORKSHEET 14
NEEDS

Before developing the progamme and content, these questions can help determine which subjects are in critical need to be added or strengthened in the existing curriculum.

	QUESTIONS	YOUR ANSWER	
1	Will audio-visual aid materials be used for in-school learning?	YES	NO
2	Will audio-visual aid materials be used for out-of-school learning?	YES	NO
3	Will self-study materials be used for out-of-school learning?	YES	NO
4	What subjects are considered difficult for students?		
5	Will poor performance in any these subjects prevent students from continuing education?	YES	NO
6	Does poor performance have other extended negative impacts in their educational experience?	YES	NO
7	What knowledge or skills do students need to have but are not getting in the current educational system?		

WORKSHEET 15
TEACHER-STUDENT INTERACTION

When using technology to support teaching and learning, we need to first consider the needs of each group, how they are currently performing their roles, and their interactions among each other. The choice of medium for content such as printed materials, audio-visual aids, interactive materials, etc. varies widely depending on these considerations.

	QUESTIONS	YOUR ANSWER		
1	How many students is a teacher responsible for?	<20	20-50	>50
2	How effective is the teacher-student ratio on student experience?	EFFECTIVE	NEUTRAL	NOT EFFECTIVE
3	How effective is the teacher-student ratio on student learning outcome?	EFFECTIVE	NEUTRAL	NOT EFFECTIVE
4	What is the impact of the teacher-student ratio on teacher experience?	POSITIVE	NEUTRAL	NEGATIVE
5	How frequently do students and teachers interact?	DAILY	WEEKLY	MONTHLY
6	What is the main subject for student-teacher interactions?	EDUCATIONAL CONTENT	STUDENT PERFORMANCE	STUDENT EXPERIENCE
7	Do students help each other with educational content?	FREQUENT		INFREQUENT

PERFORMANCE EVALUATION

Being able to track student and teacher attendance, performance and progress is critical to monitoring and evaluation and a feature that software solutions can offer. Doing so would only be constructive if there was ability to action.

Worksheets for this area:

Worksheet 16: Aptitude Testing: Students

Worksheet 17: Aptitude Testing: Teachers

WORKSHEET 16
APTITUDE TESTING: STUDENTS

QUESTIONS	YOUR ANSWER		
1 How is student aptitude currently being tested?			
2 How often is student aptitude being tested?	___TIMES / SEMESTER	___TIMES / YEAR	
3 Who develops the school testing systems?	MINISTRY OF EDUCATION	LOCAL EDUCATION	TEACHERS
4 What are the metrics currently used to test student performance?			
5 Do current approaches to testing take into consideration students' educational experience holistically?	YES	NO	
6 Do current approaches to testing try to discern relationships in performance across different fields?	YES	NO	
7 How are test results for students currently being used?			
8 Will failing the tests prevent a student's continuation in school education?	YES	NO	

WORKSHEET 17
APTITUDE TESTING: TEACHERS

Accurate evaluation of teacher performance is critical to both content development, and interventions. Teachers' usage of software can help you determine if the technology innovation is effective in classrooms in the particular context, and highlight areas where teachers may need extra support and counsel.

	QUESTIONS	YOUR ANSWER		
1	How is teacher performance currently being assessed?			
2	How often is teacher performance being assessed?	EVERY SEMESTER	EVERY YEAR	EVERY 2 OR MORE YEARS
3	Who develops the teacher performance evaluation systems?	MINISTRY OF EDUCATION	LOCAL EDUCATION AUTHORITY	SCHOOL ADMIN
4	What are the metrics currently used to evaluate teacher performance?			
5	Do current approaches to teachers' evaluation consider teachers' educational experience holistically?	YES		NO
6	Do current approaches to teachers' evaluation try to discern relationships in performance with other life considerations?	YES		NO
7	How are evaluations for teachers currently being used?			

EXISTING CURRICULUM AND DELIVERY METHODS

After examining existing learning styles, needs and curriculum, it is important to build on them. Creating new educational material is a good opportunity to assess existing curriculum on whether it fits with the needs of the targeted community.

In answering these questions, consider soliciting the views of each of the relevant stakeholders: students, parents, teachers and educators, Ministry of Education, etc.

Worksheets for this area:

Worksheet 18: Existing Curriculum and Delivery Methods

WORKSHEET 18
EXISTING CURRICULUM AND DELIVERY METHODS

If responses to the existing content are overwhelmingly negative, consider reviewing with the Ministry of Education (MoE) how your content development can learn from and incorporate feedback from the existing curriculum, and explore new ways of developing learning content. Such feedback may also feed into other ongoing discussions with the MoE.

	QUESTIONS	YOUR ANSWER		
1	How do teachers evaluate the current curriculum content?	SATISFACTORY	NEUTRAL	UNSATISFACTORY
2	How do students evaluate the current curriculum content?	SATISFACTORY	NEUTRAL	UNSATISFACTORY
3	How do parents evaluate the current curriculum content?	SATISFACTORY	NEUTRAL	UNSATISFACTORY
4	Does the current curriculum content fit with the students' and families' longer-term objectives?	YES		NO
5	How is the curriculum content currently structured?			
6	How effective is the written content in delivering knowledge and concepts?	EFFECTIVE	NEUTRAL	INEFFECTIVE
7	How effective is the visual content in delivering knowledge and concepts?	EFFECTIVE	NEUTRAL	INEFFECTIVE
8	How effective is the verbal content in delivering knowledge and concepts?	EFFECTIVE	NEUTRAL	INEFFECTIVE
9	What do teachers dislike about the current curriculum content?			
10	What do students dislike about the current curriculum content?			
11	Are different curriculums used in different communities targeted in your project?	YES		NO
12	What skills do children need but the current curriculum does not provide?			

EXTERNAL RESOURCE LIBRARIES

Online libraries and other resources are useful for understanding the wealth of digital learning content already in the market. These systems provide resources for a whole host of needs, from supporting teachers' lesson planning and activity preparation to helping students get supplementary learning resources.

Worksheets for this area:

Worksheet 19: External Resource Libraries

WORKSHEET 19
EXTERNAL RESOURCE LIBRARIES

As developing digital learning content can be a long, costly process, consider using and building on existing content. Some of these resources are free, others are under copyright. Be sure to check their licenses before going too far down on planning track for content. It is the strong recommendation of the UNICEF Innovation Unit and the UNICEF Education Section that all content must be open source. See Section 3, Worksheet 28 - License.

	QUESTIONS	YOUR ANSWER	
1	What existing sources of learning content, if any, is the community using?		
2	Do the large content repositories online have materials that are available in the language of instruction in your country?	YES	NO
3	Are the content and images online culturally appropriate for your operating environment?	YES	NO
4	Do the existing materials online run on the devices you already have or could easily acquire?	YES	NO
5	If the content is not free and openly available, is it possible to review the content for free and test it for a low fee?	YES	NO
6	Is support offered by the content provider in case of functional difficulties in using the software?	YES	NO
7	What is the cost of service from the content provider in case of functional difficulties in using the software?		
8	If the content is not free and openly available, what are the costs to license its use across multiple devices?	___LOCAL CURRENCY/DOLLAR	
9	Does the cost to license present an obstacle for your plans to scale?	YES	NO
10	Does existing educational software have the ability to track learner performance and outcomes?	YES	NO
11	Can the existing educational software be continuously updated based on usage statistics?	YES	NO

TECHNICAL RESOURCES

Content development is a complicated process that requires the participation of multiple stakeholders: children, teachers, educators, and the relevant government counterparts. It also requires technical resources, such as designers, web developers and programmers. Assessing the type of resources available would help define a project plan.

Worksheets for this area:

Worksheet 20: Technical Resources

WORKSHEET 20
TECHNICAL RESOURCES

Having experts on hand to support content development is beneficial for the process. Yet if they don't have specific applied experience – meaning they have not been involved in a deployment – the project team should invest more resources in the design research and testing phases to ensure that theory actually translates into practice in the specific context.

	QUESTIONS	YOUR ANSWER	
1	Are there any experts in learning theories that can add broader theoretical perspectives to the content development process?	YES	NO
2	Are there experts with technical capability and past experience available from the Ministry of Education?	YES	NO
3	Do identified experts in curriculum or pedagogy have applied experience in digital or computer-assisted learning for the target user group, and in the specific operational context?	YES	NO

TESTING AND APPROVAL PROCESS

Content and delivery channels need to be tested with users (students, teachers, and community stakeholders) to ensure they are easy to use and suitable for the context. Similarly, any educational content – whether as part of or outside of the formal curriculum – will need to go through a similar approval (review and iteration) process with the relevant MoE counterparts to ensure political buy-in.

Worksheets for this area:

Worksheet 21: Testing and Approval Process

WORKSHEET 21
TESTING AND APPROVAL PROCESS

Determine a content testing plan that does not strain community members, and ensure the testing period is long enough to ensure adequate review and feedback cycles, but not too long for the inconvenience of test subjects.

	QUESTIONS	YOUR ANSWER	
1	Are there members of the target user groups that are available for testing the preliminary content?	YES	NO
2	Would the test group be available throughout the course of the content development phase to ensure consistency in test results?	YES	NO
3	Are there any social frictions or tensions due to particular community members being selected to test the content?	YES	NO
4	Who are the relevant government groups that would need to be consulted for the development of the content?		
5	What does the government consultation and content approval process look like?		
6	Is there an existing established process for consultation and approval?	YES	NO
7	Is the project team free to propose a consultation and approval process?	YES	NO

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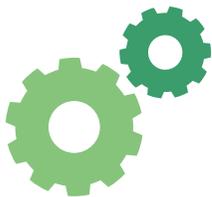
SECTION 2: **CONTENT DEVELOPMENT**

You have brainstormed various aspects about the most useful education content to be developed for your project. This is an optional step to help you review and summarize the 8 worksheets into 1 page. Fill in the blanks or circle one option provided.

1. What is the evaluation of existing curriculum, and what content is most in need to be developed? **(Refer to worksheets 14-15)**

Existing curriculum is structured as (text only/text and visual/combination of text, visual and audio content). Students, teachers and parents consider the quality of education content (high/medium/low) in general. (Text/visual/verbal) content is perceived to be the most effective approach. (Audio/visual/other) aid(s) should be developed to improve learning outcomes.

Students and teachers are most happy with (text/visual/verbal) aspect, and least happy with (text/visual/verbal) aspect. The existing curriculum (is/isn't) aligned with the long-term goals of students and their families.

. The student-teacher ratio is _____, which has (positive/negative) impact on student experience and (positive/negative) impact on teacher experience.

2. What is the evaluation mechanism for students and teachers? **(Refer to worksheets 16-17)**

The aptitude testing for students is based on the metrics of _____.
The aptitude testing for teachers is based on the metrics of _____.

3. What is the content approval process like? **(Refer to worksheet 21)**

User groups (are/aren't) available for testing. Ministry of Education (has/hasn't) an established formal approval process. _____ and _____ agencies need to be consulted.

OTHER INFORMATION

- _____ and _____ subjects are considered difficult for most students in the community.

- Interaction between teacher and students (is/isn't) frequent.

- External content resources in the form of _____ exist for the target community. The content (is/isn't) open source, (is/isn't) appropriate for the cultural context, and (is/isn't) available in the (local/official) language. External experts (are/aren't) available to assist the content development process).

(Refer to worksheets 18-19)

Section 3
DEVICES AND MEDIUMS

BACKGROUND

STOP. DO NOT DO THIS SECTION FIRST.

The most common pitfall of a technology project is to put the technology before the project.

Child-friendly technologies represent an extremely flexible and robust set of tools. However, it is important to remember that CFTs are just that—tools. Like any other project, it is important that you choose the right tool for the problem at hand. The questions in the previous sections have been designed to help define the problem and requirements for a potential solution. The selection of technology should be based on answers to those questions.

There are a number of factors that impact the appropriateness of a particular device selection, including reparability and connectivity needs of the devices. Failing to consider these factors in conjunction with the device selection can lead to a wider project failure.

TOPICS

Users and Usage

Worksheet 22: Users and Physical Usage

Worksheet 23: Programmatic Usage

Worksheet 24: Maintenance Requirements

Software Applications

Worksheet 25: User Needs

Worksheet 26: Monitoring Mechanisms

Worksheet 27: Maintenance Requirements

License

Worksheet 28: License

Management and Security

Worksheet 29: Management

Worksheet 30: Community Usage and Controls

Worksheet 31: Barriers

USERS AND USAGE

Hardware refers to physical objects, such as a computer or a mobile phone. This subsection is meant to help crystallize hardware specifications that are critical for a successful implementation, with the goal of maximizing the quantity and quality of hardware solutions that will meet the needs of the project.

Worksheets for this area:

Worksheet 22: Users and Physical Usage

Worksheet 23: Programmatic Usage

Worksheet 24: Maintenance Requirements

WORKSHEET 22
USERS AND PHYSICAL USAGE

Estimating primary user and usage will inform technical requirements of the hardware solution, include dimensions, weight, mobility, durability and electricity needs etc. Make sure your community has adequate access to electricity, and that your proposed hardware has indicators showing battery and connectivity status.

Devices may also suffer from wear and tear over use, so do take maintenance and replacement into consideration. See Section 1, Worksheet 1-4 - Natural Environment and Infrastructure for a holistic analysis.

	QUESTIONS	YOUR ANSWER			
1	What are the types of devices deployed in your project? (Be sure to include peripherals as well)	TABLET	LAPTOP	MOBILE PHONE	OTHER
2	Who (students, teachers, administrators, other stakeholders) will be interacting with the device?	STUDENTS	TEACHERS	ADMIN	OTHER STAKEHOLDERS
3	Who will be using the device most frequently?	STUDENTS	TEACHERS	ADMIN	OTHER STAKEHOLDERS
4	Who has special requirements for using the devise?	STUDENTS	TEACHERS	ADMIN	OTHER STAKEHOLDERS
5	Will the use of a single device be shared among students?	YES		NO	
6	Will the use of a single device be shared among teachers?	YES		NO	
7	How many hours per day will the hardware be used?				
8	How many days per week will the hardware be used?			___DAY(S)/WEEK	
9	How many months per year will the hardware be used?			___MONTH(S)/YEAR	
10	Will the hardware exclusively be used in the school?	YES		NO	
11	Are the devices portable?	YES		NO	

WORKSHEET 23
PROGRAMMATIC USAGE

Projecting the usage, storage, and connectivity needs of hardware devices can help project partners to determine adequate specifications. The usage in particular, may affect specifications such as the processing power (determined by processor type and speed, compatibility with other processor, and the possibility to upgrade) and memory requirements. Storage requirements and processes will determine the necessary memory needed to run applications and store data.

QUESTIONS	YOUR ANSWER	
1 Will the device be used for basic word processing?	YES	NO
2 Will the device be used for educational software?	YES	NO
3 Will the device be used for basic internet surfing?	YES	NO
4 Will the device be used for online video streaming?	YES	NO
5 How much content will need to be stored on the device?	YES	NO
6 Will content need to be transferred among devices?	YES	NO
7 Does the device have to connect to other devices?	YES	NO
8 Does the device have to connect to the Internet?	YES	NO
9 Does the device have to connect to hardware peripherals such as USB stick?	YES	NO

WORKSHEET 24
MAINTENANCE REQUIREMENTS

Technology devices are subject to wear and tear, which requires replacement parts. Sometimes users may be able to do simple replacements, but diagnostic may require expertise. Consider the availability of technical expertise in a community, and how that might dictate both the user-reparability of devices and technical training needs. Alternately, it might be more efficient to repair and replace systems from one central location.

Many large technology companies certify individuals and organizations to repair and to service their hardware and software platforms. These companies might also be able to make available lists of certified individuals and organizations within a particular country, or even offer technical support themselves.

	QUESTIONS	YOUR ANSWER	
1	Do any members of the local community have technical expertise in particular technology platforms, either to repair broken machines or provide other technical support?	YES	NO
2	What documentation might be needed to orient users or help users fix simple problems?	YES	NO
3	Are there companies in the country or community, including local branches of large multinational companies, willing or able to provide local expertise?	YES	NO
4	At what cost can you get local expertise from companies?	___LOCAL CURRENCY/DOLLAR PER DAY	

SOFTWARE APPLICATIONS

Software refers to programmed code that performs a specific function or set of functions on a hardware device. This subsection is designed to help curate a set of objectives for a software developer project partner to create.

Worksheets for this area:

Worksheet 25: User Needs

Worksheet 26: Monitoring Mechanisms

Worksheet 27: Maintenance Requirements

WORKSHEET 25
USER NEEDS

Rather than considering a specific interface or specific design features, conceptualize software goals in terms of user needs of the software or the device. At heart, software programs process different user inputs and return new outputs for the user. A good software developer will be able to translate this into action.

Consider also that particularly intensive software programs, such as graphics-heavy games, may require more advanced hardware. Finally, keep in mind the cultural context, which may demand that software have particular features, such as language localization.

	QUESTIONS	YOUR ANSWER			
1	What is the name of the software your project will be using?				
2	Who is the primary user group of this software?	STUDENTS	TEACHERS	ADMIN	OTHER
3	Who are the secondary groups that may use this software?	STUDENTS	TEACHERS	ADMIN	OTHER
4	What will a primary user need to accomplish with this software?	BASIC DOCUMENT	AUDIO/ VISUAL CONTENT	INTERNET	OTHER
5	What will a secondary user need to accomplish with this software?	BASIC DOCUMENT	AUDIO/ VISUAL CONTENT	INTERNET	OTHER
6	What will be the user input to the software program? For example, student information or homework.	USER INFORMATION	HOMEWORK		OTHER
7	What should users expect to receive from the program? For example curriculum materials, grades or teacher feedback.	AUDIO/ VISUAL CONTENT	TEXT & EXERCISE	USER REPORT	OTHER

WORKSHEET 26
MONITORING MECHANISMS

Some software applications have extremely flexible and robust monitoring and reporting capabilities, but in order to be usable in programming, additional software capabilities and user interfaces may need to be designed. In addition to typical student progress data, properly designed software can also track more advanced metrics that were not possible to be tracked before, such as how frequently a student engages with a particular lesson plan or type of assignment. Consider connecting with partners who may have an interest in different types of academic data in order to help build solutions that are both effective and groundbreaking. (For more on this, see Section 5: Working with Partners.)

	QUESTIONS	YOUR ANSWER			
1	What feedback mechanisms should be built into the software?				
2	What information on student experiences should the software collect?	USAGE LENGTH FREQUENCY	CONTENT USED	CONTENT RATING	OTHER
3	What information on teacher experiences should the software collect?	USAGE LENGTH FREQUENCY	CONTENT USED	CONTENT RATING	OTHER
4	Are there existing work streams or programs that this new data would feed into?	YES		NO	
5	If there is an existing work stream/program, what formats should the collected information be in?				
6	If there is not an existing work stream/program, who should be consulted about what formats the new data will be in?				

WORKSHEET 27
MAINTENANCE REQUIREMENTS

Consider the update needs of the software and how difficult that might be in the selected community. If updating is difficult, more course material might have to be identified, created and installed ahead of time, or hardware might require more memory in order to store a larger amount of material. Hardware and software updates may not coincide. It is therefore important that the software outputs (such as file formats) can be easily used across a wide variety of devices, and that the software.

QUESTIONS	YOUR ANSWER			
1 How frequently will the software need to be updated?	DAILY	WEEKLY	MONTHLY	YEARLY
2 What formats may updating materials come in?				
3 What technical resources exist locally to support maintenance of the software?				
4 At what cost can you obtain technical support locally?	___LOCAL CURRENCY/DOLLAR			
5 At what cost can you obtain technical support externally?	___LOCAL CURRENCY/DOLLAR			

LICENSE

Worksheets for this area:

Worksheet 28: License

Ensuring that the software and content being developed use open-source code is one way of ensuring that content is easy to update free or at a low-cost. Using open-source software and content is also an approach strongly advocated by UNICEF. Any content created or contracted out to be create by UNICEF.

Open-source software has its source code available in the public domain. This means that the source code is accessible by anyone free of charge, which sets open-source software apart from public domain software. As such, anyone or any groups of people can modify, improve and redistribute the software.

Open-source licenses apply to source codes. Content on your website or software needs its own open content license.

It's important that you check the software's license before committing to any contract.

Some open-source license include: Apache License 2.0, BSD 3-Clause "New" or "Revised" license, BSD 2-Clause "Simplified" or "FreeBSD" license, GNU General Public License (GPL), GNU Library or "Lesser" General Public License (LGPL), MIT license, Mozilla Public License 2.0, Common Development and Distribution License, Eclipse Public License

Some open content license include: Creative Commons Licenses (CC-A, CC-A-SA, CC Zero), Open Publication License, GNU Free Documentation License

Remember that specialized tailoring of open-source software will still require spending on expertise.

If an international software solutions provider must be used due to a lack of local technical capacity, consider incorporating a local software development firm into the project development process in order to train them on the technology being used for the particular project. This will build local technical capacity that can continue to support and update the software long into the project's future, as well as support other innovation projects in the future.

WORKSHEET 28
LICENSE

QUESTIONS	YOUR ANSWER	
1 Is the software open-source?	YES	NO
2 What is the software's license?		
3 Is the source code available in public domain, which can be accessed and obtained at reasonable cost?	YES	NO
4 Is the content open-source?	YES	NO
5 What's the content's license?		

MANAGEMENT AND SECURITY

Worksheets for this area:

Worksheet 29: Management

Worksheet 30: Community Usage and Controls

Worksheet 31: Barriers

WORKSHEET 29
MANAGEMENT

Technology systems generally require some degree of top-level management in order to ensure the upkeep and security—physical and digital—of each device. It is important to consider how these responsibilities are going to be doled out in each community implementation. If the device is portable, consider that this increases the risk of theft. Methods of theft mitigation and deterrence may be simple, such as using functionally specialized or visually distinctive devices. Insurance may also be available as a means to protect against theft and loss.

QUESTIONS	YOUR ANSWER			
1 Who is responsible for the devices overall?	MINISTRY OF EDUCATION	LOCAL EDUCATION AUTHORITY	NGO/IGO	OTHER
2 Who is responsible for the devices financially?	MINISTRY OF EDUCATION	LOCAL EDUCATION AUTHORITY	NGO/IGO	OTHER
3 Who is responsible for the devices programmatically?	MINISTRY OF EDUCATION	LOCAL EDUCATION AUTHORITY	NGO/IGO	OTHER
4 What is the mediation process should there be a dispute over the devices?				
5 How will the devices be secured?				

WORKSHEET 30
COMMUNITY USAGE AND CONTROLS

Some communities may have existing technology implementations of variant quality, or may have independently developed technology use patterns. Consider how your project can build upon these habits and implementations in order to increase familiarity with the new implementation and encourage rapid adoption.

Data is critical to any technology implementation, and certain implementations may wish to take steps to preserve or back up critical student and school data that could be lost in the event of a broken or stolen device. Consider the journey of a technology device through a school year or from when a student acquires the device to when he/she returns it.

	QUESTIONS	YOUR ANSWER	
1	Are there any existing technology platforms in the community that the software or hardware must be compatible with or be able to interact with?	YES	NO
2	How is a new user of device brought in?		
3	How is a user's data secured?		
4	How is a user's data backed up?		
5	Is there a necessity for certain users be restricted from performing certain tasks or modifying certain settings on a device?	YES	NO
6	Is there an arrangement to secure the devices after users leave?	YES	NO

WORKSHEET 31
BARRIERS

Some countries may have certain restrictions over the import of particular goods and services, including electronics and software. Keeping abreast of these restrictions will be important to preventing unforeseen delays.

QUESTIONS	YOUR ANSWER	
1 Are there political barriers to sourcing software or hardware from particular locations?	YES	NO
2 Are there legal barriers to sourcing software or hardware from particular locations?	YES	NO

SECTION 3: **DEVICES AND MEDIUMS**

You have brainstormed various aspects about the most appropriate device and medium for your project. This is an optional step to help you review and summarize the 10 worksheets into 1 page. Fill in the blanks or circle one option provided.

1. How will the device be used and maintained? **(Refer to worksheets 22-24 and 29)**

The device will be mainly used by (students/teachers/administrators/other_____), _____hours per day, _____days per week. The device will be mainly used for (basic document processing/advanced programming/internet browsing/other_____) purposes. The device (does/doesn't) need to be portable, (does/doesn't) need Internet connectivity, and (does/doesn't) need peripherals.

(Students/Teachers/Administrators/Other), will be responsible for managing and securing the device. External technical support may be obtained at the cost of _____(local currency/dollar).

2. What kind of software applications will be needed? **(Refer to worksheets 25-27)**

Software applications will be mainly used by (students/teachers/administrators/other_____) for (basic document processing/advanced programming/internet browsing/other_____) purposes. The software will collect (user information/user experience feedback/other_____) information in the format of _____. Information collected will be used for (monitoring/evaluation/software improvement).

3. What is the license of the software and its content? **(Refer to worksheet 28)**

The software has a (GPL/GNU/other_____) license. It (is/isn't) open-source, and will be updated (weekly/monthly/yearly/never) at the cost of _____ (local currency/dollar).

The content has a (CC/GNU/other_____) license. It (is/isn't) open-source, and will be updated (weekly/monthly/yearly/never) at the cost of _____ (local currency/dollar).

OTHER INFORMATION

- The device has to meet technical specs _____, _____, _____, and special requirement _____.

- User data will be secured by _____ and backed-up by _____. (Refer to worksheet 30)

- There may be _____ and _____ barriers when sourcing devices and mediums. (Refer to worksheet 31)

Section 4
TEACHING WITH TECHNOLOGY

BACKGROUND

It is critical to consider a wide array of possible content delivery channels and identify the ones that are most appropriate for children in your particular cultural context. Different channels have different benefits. You will need to find out whether children in your target communities are best served by broadcast, online or in-person teaching methods, and whether narrative, game-driven, or more traditional pedagogical content is most suitable.

The incentives, capability and needs of teachers, administrators and policy makers should not be overlooked, especially in communities where these foundations are weak. Low teacher morale poses a key challenge for education systems globally; it is often acute in rural regions. Making the day-to-day lives of teachers easier and more rewarding is critical to decreasing teacher turnover and absenteeism, increasing teacher engagement and performance, and ultimately enhancing student experience and learning outcomes. Attempts to introduce technology innovations may fail because teacher's capacity to use technologies themselves is lacking, thus the importance for teaching training.

Educators and policy makers often bemoan the lack of reliable, real-time and inexpensive data for effective program design. An electronic data management system, enabled by technologies such as the basic mobile phone and SMS, can address many challenges

of data collection in difficult locations and paper-based information transfer system. So that it makes data collection and analysis faster, more accurate, and more cost-effective in the long run.

This section explores opportunities to use basic technologies to improve teacher engagement and performance, and to generate critical data for better planning and evaluating the education sector.

TOPICS

Students

Worksheet 32: Delivery Channel

Worksheet 33: Delivery Approach

Teachers

Worksheet 34: Availability and Attendance

Worksheet 35: Attitude

Worksheet 36: Technical Ability

Educators and Government Administrators

Worksheet 37: Information Needs

Worksheet 38: Content Requirements

STUDENTS

Content and delivery channels need to be tested with users (students, teachers, and community stakeholders) to ensure they are easy to use and suitable for the context. Similarly, any educational content – whether as part of or outside of the formal curriculum – will need to go through a similar approval (review and iteration) process with the relevant counterparts to ensure political and programmatic support.

Worksheets for this area:

Worksheet 32: Delivery Channel
Worksheet 33: Delivery Approach

WORKSHEET 32
DELIVERY CHANNEL

Understanding the benefits and shortcomings of current technologies will help us choose the ideal delivery channel for new educational content and, as such, how teachers should be trained to leverage the content and get the most of the new approaches. The best solutions don't have to be technologically advanced – face-to-face interaction remains a powerful way of engaging children; curricula broadcast over radio can penetrate hard-to-reach areas, educate children with disabilities, and provide unique content; and books remain the gateway to improving literacy and a vehicle for the transmission of information on a broad array of subject.

	QUESTIONS	YOUR ANSWER		
1	What are students' levels of interest with in-person lectures at present?	HIGH	MEDIUM	LOW
2	Do the teachers deliver lively and engaging lessons?	YES	SOMETIMES	NO
3	What is the average length of lessons?	<30MIN	30-60MIN	>60MIN
4	What proportion of children has access to radio in their family?	MINORITY	HALF	MAJORITY
5	What proportion of children has access to computer in their family?	MINORITY	HALF	MAJORITY
6	What proportion of children has access to mobile phone in their family?	MINORITY	HALF	MAJORITY
7	How many radio channels exist in the targeted community?	0-5	5-10	>10
8	How many television channels exist in the targeted community?	0-5	5-10	>10
9	How many textbooks do each student have access to, either one child per book or two children sharing one book?	0-2	3-5	>5
10	Is the content (both written and visual) in these books culturally appropriate and relevant to the community?	YES		NO
11	Are the textbooks that students own generally in good shape?	YES		NO
12	Are the books written in student's mother tongue or national official language?	YES		NO
13	Do teachers speak the national curriculum language fluently?	YES		NO

WORKSHEET 33
DELIVERY APPROACH

Understanding what kind of content delivery forms are familiar and popular is important, as we can try and transfer some of the popularity over to educational content. In various forms, games have the ability to educate as well as entertain. For example, the ability for students to communicate with others through technology can accelerate mastery of both technology and content. Further, understanding their habits across platforms and delivery approaches can help us build a pedagogical system that is wide-ranging, modular, and accessible via variant mediums.

	QUESTIONS	YOUR ANSWER			
1	What games are traditionally popular among children in the community?	PHYSICAL	ELECTRONIC	INTERNET-BASED	OTHER
2	What games are popular today among children in the community?	PHYSICAL	ELECTRONIC	INTERNET-BASED	OTHER
3	Do any of the educational software programs students have available (if they do) contain a game component?	YES		NO	
4	How is the educational software program with game components rated among students?	EFFECTIVE	NEUTRAL		INEFFECTIVE
5	Do the target demographics currently engage in any kind of digital social networking, whether via mobile phones or computers?	YES		NO	
6	What kind of digital safety tools exist to protect children from dangerous/inappropriate content online?				
7	Is there an educational program for children to protect themselves from dangerous/inappropriate content?	YES		NO	
8	What kind of software do students use as part of their education?	YES		NO	
9	Do the students currently use any interactive software as part of their education?	YES		NO	
10	Do students consider the software effective for learning?	EFFECTIVE	NEUTRAL		INEFFECTIVE
11	Are there channels other than software that students can experience interactive content?	YES		NO	

TEACHERS

The operating environments for teachers are extremely difficult, especially in rural or low-income communities. Understanding how teachers are feeling emotionally – in both the personal and professional contexts – is a critical first step to designing an effective education solution. As teachers are the actors who often deliver, guide, or facilitate innovation programs, their needs, capacities, and constraints are equally important for program design as those of the students.

Worksheets for this area:

Worksheet 34: Availability and Attendance

Worksheet 35: Attitude

Worksheet 36: Technical Availability

WORKSHEET 34

AVAILABILITY AND ATTENDANCE

Understanding the availability and presence of teachers in the community is an important step to assessing where technology may be helpful to fill the capacity gaps. It is helpful to know what incentives or disincentives may sway a teacher to attend or miss class, as the introduction of technology into an education system can work positively or negatively.

	QUESTIONS	YOUR ANSWER		
1	What is the availability of teachers in the target community?	AVAILABLE ALWAYS	AVAILABLE SOMETIMES	AVAILABLE RARELY
2	Is it common for teachers to be absent from class?	YES		NO
3	What is the average length of time that a teacher misses class per week?	<1 DAY	1-2 DAYS	>2 DAYS
4	Are there any incentives for teachers to attend all their classes?	YES		NO
5	Are there any incentives for teachers to perform exceptionally well?	YES		NO
6	Are there any negative consequences if teachers miss their classes?	YES		NO
7	Are negative consequences for teachers' missing classes enforced?	YES		NO

WORKSHEET 35
ATTITUDE

Understanding teachers' attitudes is the next important step to be able to design an effective child friendly technology system. If you have identified a community where teachers largely feel isolated, without agency, overworked, and/or under-supported, you may have to focus more on how to re-energize and re-motivate teachers – through an innovation initiative or otherwise – before focusing on how to deliver better education to children. Without teachers on board, it will be difficult to be programmatically or financially effective in serving students. If there are specific audiences or benefits they prioritize, there may be benefits of targeting support in those specific areas first to win teachers' early support which will then benefit future programming.

	QUESTIONS	YOUR ANSWER		
1	Are the teachers in the target community generally from within the community?	YES	NO	
2	If teachers are from outside communities, did they choose to be stationed in the community?	YES	NO	
3	If teachers are from outside communities and did not choose be stationed in the community, how do they feel about the placement?			
4	How has teachers' feelings about their placements impacted their teaching in the classroom and engagement with the community?			
5	How do teachers rate the support they receive in their jobs, from other teachers?	SUFFICIENT	NEUTRAL	INSUFFICIENT

WORKSHEET 35
ATTITUDE CONTINUED

QUESTIONS	YOUR ANSWER			
8 Do teachers think they are compensated enough for teaching?	SUFFICIENT	NEUTRAL	INSUFFICIENT	
9 How do teachers want to be supported?				
10 What benefits do teachers wish they had?				
11 What is teachers' education level generally?	PRIMARY SCHOOL	HIGH SCHOOL	COLLEGE AND ABOVE	OTHER
12 Do teachers receive any professional development training?	YES		NO	
13 How do teachers feel about the integration of technology in teaching?	HELPFUL	UNNECESSARY	INTIMIDATING	

WORKSHEET 36
TECHNICAL AVAILABILITY

There are ways in which innovation programs can be used for teacher training and teacher motivation – all with the goal of improving teachers' attitudes towards and engagement in the education system, so they can be better educators for their students. Teachers often need basic training in technology tools to be able to participate in a child friendly technology project.

	QUESTIONS	YOUR ANSWER	
1	What subjects do teachers think are difficult to teach?		
2	Are there channels for teachers to improve their knowledge or training in the areas that they are weak?	YES	NO
3	Do teachers know about channels to improve their knowledge or training in the areas they are weak?	YES	NO
4	Are the channels for teachers to improve their knowledge and stills accessible to the majority of teachers?	YES	NO
5	Are there any subjects about which teachers want to receive more training?	YES	NO
6	Are there teachers specifically trained to work with children and youth with physical, mental, or learning disabilities?	YES	NO
7	Do teachers have exposure to basic digital technologies such as mobile phones and computers?	YES	NO
8	Do teachers have their own mobile phones?	YES	NO
9	Do teachers have their own computers?	YES	NO

WORKSHEET 36
TECHNICAL AVAILABILITY CONTINUED

	QUESTIONS	YOUR ANSWER			
11	Are teachers comfortable using mobile phones and computers?	YES		NO	
12	Do teachers welcome the idea of introducing digital technology tools into classroom teaching?	YES		NO	
13	Are teachers evaluated on their work?	YES		NO	
14	Who evaluates teachers on their work?	MINISTRY OF EDUCATION	LOCAL ED AUTHORITY	COMMUNITY	STUDENTS
15	How often are teachers evaluated on their work?	NOT EVALUATED	EVERY SEMESTER	EVERY YEAR	
16	What are the metrics and mechanisms by which teachers are evaluated? (Refer to worksheet 17)				
17	How do evaluations on teachers work affect their career trajectory?				

EDUCATORS AND GOVERNMENT ADMINISTRATORS

Educators and government administrators often don't have the information or resources they need to effectively do their jobs. Technologies can support them in their service of the education sector, and can help them better design, evaluate, and plan education programs and ancillary services.

Worksheets for this area:

Worksheet 37: Information Needs

Worksheet 38: Content Requirement

WORKSHEET 37
INFORMATION NEEDS

QUESTIONS	YOUR ANSWER		
1 What kind of data are educators currently collecting from their schools?			
2 How are educators currently collecting performance data about the education system?			
3 Are performance data timely collected?	YES	NO	
4 How frequent is performance data collected?	EVERY SEMESTER	EVERY YEAR	EVERY OTHER YEAR
5 What format does the current education system performance data come in?			
6 Is it reasonably easy to analyse and map performance data against other performance data/indicators or larger trends?	YES	NO	
7 Are there any data gaps in the target communities in terms of geographic locations?	YES	NO	
8 Is data collected about how the education system serves marginalized populations – for example, children with disabilities or girls in remote areas?	YES	NO	
9 Is it possible to disaggregate data of marginalized populations from the larger trends?	YES	NO	
10 What kind of data do educators think is missing in order to make education policy or teaching plans?			
11 What is the difficulty of collecting the data needed to make educational policy or teaching plans?			
12 Are educators able to prioritize the data needed to be more effective in managing the education system?	YES	NO	

WORKSHEET 38
CONTENT REQUIREMENTS

New content development ventures should be informed by the government's current thinking about and approach to developing content and curriculum, to ensure materials developed are approved and deemed usable. Even if there are perceived shortcomings to the current approach, the engagement and collaboration processes with the Ministry of Education provide a good opportunity to evolve and enhance current thinking.

	QUESTIONS	YOUR ANSWER	
1	What is the current review process for new educational content being developed?		
2	Does the review process for educational content differ for in-school versus out-of-school education?	YES	NO
3	Is there a different review process for educational content developed for children with disabilities?	YES	NO
4	Is there a different review process for digital educational content?	YES	NO
5	Does the review process for educational content differ for formal curriculum versus supplementary content?	YES	NO
6	Is there a particular branch of Ministry of Education that is assigned to deal with digital educational content?	YES	NO
7	If there is a particular branch of Ministry of Education that is assigned to deal with digital educational content, what is its approach and principle in developing and reviewing content?		
8	How much research and development is being done by the Ministry of Education to develop and review digital educational content?		

SECTION 4: **TEACHING WITH TECHNOLOGY**

YYou have brainstormed various aspects about how to teach with technology. This is an optional step to help you review and summarize the 7 worksheets into 1 page. Fill in the blanks or circle one option provided.

1. What is the current teaching methodology? (Refer to worksheets 34-36)

Teachers are from (local/outside) communities. It's (common/uncommon) for teachers to miss classes. There (are/aren't) negative consequences when teachers miss classes, which (are/aren't) enforced. Incentives for teachers to perform well are _____ and _____. Teachers receive support mainly from (educational authority/community/civil society/other_____). They consider the support (sufficient/insufficient) and hope to receive (financial compensation/professional training/ teaching materials/other_____) most urgently. Teachers have technical ability to use (computer/ internet/education software). They can access professional training through (educational authority/civil society organization/other_____).

2. What is the potential for the use of educational software and gaming in improving learning experience? (Refer to worksheets 32 and 33)

Children have (high/medium/low) level of interests in classroom lectures, which lasts _____ minutes at a time. Lectures are considered (engaging/boring).
The most popular local game among children is _____. Children (do/don't) have access to education software with gaming components. These software are rated (effective/ineffective) among children. Apart from software, children may also engage in interactive content through _____ and _____ channels.

3. 3. How can government and educators be involved in teaching with technology? (Refer to worksheets 37, 38 and 21)

_____ and _____ data are collected in the format of _____ at a frequency of _____. These data may be disaggregated by (age/gender/location/___), and be used to (map geographic gaps/track performance data/analyze trends). _____ and _____ aspects of data collection/analysis should be revised to improve program management

OTHER INFORMATION

- The percentage of children and their families that have access to radio, mobile phone, TV and internet are respectively _____, _____, _____ and _____ percent. (Refer to worksheet 32)

- Textbooks (are/aren't) written in national official language, (are/aren't) taught in official language; Textbooks (are/aren't) written in target community's mother tongue, (are/aren't) taught in mother tongue. (Refer to worksheet 32)

- _____ and _____ digital safety tools are available to protect children when using software and internet content. (Refer to worksheet 37)

- • The review process for digital education content is _____.

Section 5
WORKING WITH PARTNERS

BACKGROUND

It is critical to consider a wide array of possible content delivery child friendly technology projects, because of their often technologically complex, programmatically innovative, and politically important natures, tend to involve a diverse group of partners. While a host of interested stakeholders can support project development, it may also hinder it if partnerships are not well managed. Thus, it is important to assess each partner's capacity before inviting them to join the consortium, and to define roles, responsibilities as well as governance structure at the outset.

This section covers issues to consider for each type of partners that may be brought on board. For example, what each partner's relative strengths are and what role each partner shall play.

TOPICS

Academic Partners

Worksheet 39 : Academic Partners

Technology Partners

Worksheet 40: Technology Partners

Civil Society Partners

Worksheet 41: Civil Society Partners

Private Sector Partners

Worksheet 42: Private Sector Partners

ACADEMIC PARTNERS

As the use of technology in education projects in the developing world is a relatively young field, the academic community can be a tremendous asset in conducting research, designing a new pilot (especially the technical component that requires specialized expertise), or evaluating and disseminating the results from a new programme.

It is advisable to consult industry experts and practitioners in the case that your academic partners do not already possess deployment experience.

Worksheets for this area:

Worksheet 39: Academic Partners

WORKSHEET 39
ACADEMIC PARTNERS

Academic partners who have worked in the community may be able to provide unique insights on conditions in the community or on specific knowledge areas related to your project. They may have an interest or additional productive uses for the data that your project produces. Partnerships with local institutions can further strengthen a project's ties with the target community. There are often graduate students that are eager and excited to support a project in the research, design, or implementation phases.

	QUESTIONS	YOUR ANSWER	
1	Are there academic institutions that operate in the community?	YES	NO
2	Are there academic institutions that have shown an interest in projects similar to yours?	YES	NO
3	Are there experimental parts of your project that could benefit from experienced evaluators, such as those in academia?	YES	NO
4	Would the broader community of practice be interested in the results of your programme?	YES	NO
5	Would your programme serve as a case study to benefit the field in general?	YES	NO
6	Are there areas of your project that are substantially unknown and might benefit from academic expertise?	YES	NO
7	Are there any academic institutions locally that have programmes for the use of technology in education?	YES	NO

TECHNOLOGY PARTNERS

Procuring technology for innovation projects can be a costly undertaking. As such, partnering with technology firms to provide in-kind support (goods or services) can be extremely valuable in reducing project risk and cost. Worksheets for this area:

Worksheet 40: Technology Partners

WORKSHEET 40
TECHNOLOGY PARTNERS

Technology partners are valued resources for expertise, training, procurement, maintenance and support. It is advisable to verify professional certifications before initiating the partnership. When large companies are not present in your target community, consider working with trained community members.

QUESTIONS	YOUR ANSWER	
1 Does your project have maintenance costs (i.e. SMS fees or network connectivity fees) that would benefit from the support of a technology provider?	YES	NO
2 Are there businesses or organizations in the target country or community with verifiable expertise in technology development or repair?	YES	NO
3 Are there businesses or organizations in the target country or community with verifiable expertise in technology training for teachers and adults?	YES	NO
4 Can you reliably verify the expertise of potential technology partners? For example through checking of certification?	YES	NO
5 Are there members of the community or in country who are certified specialists in a given hardware or software area?	YES	NO
6 Is it possible for you to engage with large technology companies for technical support?	YES	NO

CIVIL SOCIETY PARTNERS

Civil society can be an invaluable partner for the design, implementation and M&E of your innovation projects, in part because they may have been in the field and closely working with community stakeholders. Consider consulting with civil society in the design and planning processes and incorporate it in your program implementation.

Worksheet 41: Civil Society Partners

WORKSHEET 41
CIVIL SOCIETY PARTNERS

In all likelihood, your project is not the first to be deployed in the community. Valuable lessons can be learned from organizations and individuals within the community that have struggled with education programmes in the past. Concurrently, developing local advocacy for your project could be critical to the project's ultimate acceptance by the community at large.

	QUESTIONS	YOUR ANSWER	
1	Are there non-profits or NGOs with a history of supporting education in or near the community?	YES	NO
2	What kind of educational projects have the non-profits or NGOs participated in?		
3	Has the non-profits or NGOs' participation been effective?	YES	NO
4	Are there media outlets in the community that may have an interest in promoting education?	YES	NO
5	Are the media outlets willing and able to help spread the word about the project?	YES	NO
6	Who are the leaders and key individuals in the community?		
7	How do you plan to obtain support from leaders and key individuals in the community?		
8	How can leaders and key individuals help the project proceed?		

PRIVATE SECTOR PARTNERS

Private corporations often have the interest and means to accelerate the development of innovation programs. Whether through philanthropic contributions, in-kind donations, or other means of support, their technical and financial resources can greatly benefit education programs.

Worksheet 42: Private Sector Partners

WORKSHEET 42
PRIVATE SECTOR PARTNERS

Identify companies that are interested in supporting educational initiatives, and those that can provide in-kind support either through technical expertise and/or the provision of equipment. While financial contributions can be helpful, there are many diverse sources from which to fundraise. Far fewer, however, are those with experience and technical ability in this field. If companies are interested in providing financial support, pay particular attention to whether or not the funding is a one-time donation or ongoing. Consider how different schedules of support may affect project timelines and sustainability.

QUESTIONS	YOUR ANSWER	
1 Are there companies to partner with in software development?	YES	NO
2 Are there companies to partner with in providing hardware such as textbooks or devices?	YES	NO
3 Are there companies accessible who have been involved in education or human development?	YES	NO

SECTION 5: **WORKING WITH PARTNERS**

You have brainstormed various aspects about how to work with partners. This is an optional step to help you review and summarize the 4 worksheets into 1 page. Fill in the blanks or circle one option provided.

1. What are potential academic partners and how would you work with them? (Refer to worksheet 39)

The education partner identified is _____.

_____ has interests and expertise in the topic area and the target community. The project may benefit from having the academic partner through _____, and may serve as a case study for _____ to contribute to the field in general.

2. What are potential technology partners and how would you work with them? (Refer to worksheet 40)

The technology partner identified is _____.

_____ has interests and verified expertise in supporting technical aspects of the project in the target community. The project may benefit from having the technology partner through _____.

3. What are potential civil society partners and how would you work with them? (Refer to worksheet 41)

The civil society partner identified is _____.

_____ has been working on education in the target community, and has expertise on _____.

_____ is a media outlet that may be used to help with advocacy.

_____ and _____ are key individuals in the community; the project may obtain support from them through (conversations/collaboration/providing financial and other incentives).

4. What are potential private sector partners and how would you work with them? (Refer to worksheet 42)

Near the target community, _____ company's core business is related to the project; _____ company has interests in supporting the project (financially/logistically/_____).

OTHER INFORMATION

- Community members _____ (names of people identified) have certain technical proficiency that can be used when large technology partners aren't available. (Refer to worksheet 40)

Section 6
BUDGETING

BACKGROUND

Budgeting correctly can make the difference between success and failure and affects sustainability. Technology projects often assume that the hardware is the major cost. IT IS NOT. Estimates of initial costs to overall costs vary widely; typically it lies between 10-25% of total cost. There are also other considerations: start-up costs and operational continuity, and the cost of necessary complementary initiatives to ensure sustainability.

With this in mind, this section is created for your consideration when you plan the financial aspects of a child-friendly technology project. Individual contexts, for example the scope of project, beneficiary groups, logistic issues and will together determine the costs of a project. By the end of this section you may not have a budget document, but you will have a workable framework for real financial planning.

TOPICS

Equipment Costs

Worksheet 43: Set-up Costs and Project Lifetime Costs

Implementation

Worksheet 44: Set-up Costs and Project Lifetime Costs

Cross-cutting Costs

Worksheet 45: Cross-cutting Costs

EQUIPMENT COSTS

Budgeting properly at this stage will ensure that the project is sustai
able during the lifetime of the equipment, and will also support your
working through options for e.g. maintenance of equipment, which can
be managed in multiple ways.

Worksheet 43: Set-up Costs and Project Lifetime Costs

WORKSHEET 43
SET-UP COSTS

QUESTIONS	YOUR ANSWER	
1 What's the number of people who need access to it for training, support and development?		___PEOPLE
2 What do you have in place for additional students and teachers joining the school?		
3 What is a reasonable depreciation rate?		
4 What is a reasonably forecasted replacement cost?		
5 Do you have an inventory for potential future needs?	YES	NO
6 Do you have resources to purchase parts that are more prone to wear and tear?	YES	NO
7 Is there availability in country to purchase spare parts?	YES	NO

WORKSHEET 43
PROJECT LIFETIME COSTS CONTINUED

	QUESTIONS	YOUR ANSWER	
8	Do you have financial resources for maintenance?	YES	NO
9	Will you have a consultant or an agreement with a local technical support person on an occasional basis?	YES	NO
10	What are possible issues/damages during device installation and daily use?		
11	What consumables, such as DVDs, ink and paper will you need?		
12	What does your target community expect to have?		
13	Do you have resources for upgrades?	YES	NO
14	How long is the lifespan of your devices?	___MONTH(S)/YEAR	
15	Can you test if the device lifespan is different in your particular context?	YES	NO
16	Do you have a plan for unusable or out-dated devices to capture their remaining value?	YES	NO

IMPLEMENTATION

Budgeting properly at this stage will ensure that the project is sustainable during its lifetime.

Worksheet 44: Set-up Costs and Project Lifetime Costs

WORKSHEET 44
SET-UP COSTS

QUESTIONS	YOUR ANSWER	
1 Are there taxes to be paid internally for distributing equipment?	YES	NO
2 Do you have options to compare time, cost and security for shipping the equipment?	YES	NO
3 Do you have partners who can help with shipping the equipment?	YES	NO
4 Do you have fragile or high-value equipment that requires additional care in shipping?	YES	NO
5 Do you have space for storage?	YES	NO

WORKSHEET 44
PROJECT LIFETIME COSTS CONTINUED

	QUESTIONS	YOUR ANSWER	
6	Is energy and power sufficient locally?	YES	NO
7	Do you have resources to generate power with, for example electricity generators and solar panels?	YES	NO
8	Do your target beneficiaries expect internet access?	YES	NO
9	Do you have resources to provide internet access?	YES	NO
10	For how long do you need to provide internet access?	_____HOURS/DAY, _____DAYS/MONTH, _____MONTHS/YR	
11	Do you have partners for satellite provision if you need it?	YES	NO
12	Do you have a plan for additional training programs to protect children from dangerous/inappropriate content online and on TV?	YES	NO
13	How many people will need training to use the device?	___PEOPLE	
14	How much will the training program cost including venue, handbook, per diems?	___LOCAL CURRENCY/DOLLAR	
15	Do you need a refresher workshop or helpline after the training program has concluded?	YES	NO
16	Is there an open-source platform or software available?	YES	NO
17	Are your devices compatible with the open-source platform or software?	YES	NO
18	How does the open-source platform/software fit into your project objective?		

CROSS-CUTTING COSTS

Budgeting properly at this stage will ensure that the project is
sustainable. It will also give you accurate
information for decision-making in terms of project management.

Worksheet 45: Cross-cutting Costs

WORKSHEET 45
CROSS-CUTTING COSTS

	QUESTIONS	YOUR ANSWER	
1	Do you have human and financial resources for monitoring and evaluation?	YES	NO
2	Do you need specialists with technical expertise to help with monitoring and evaluation?	YES	NO
3	Do you have resources to collect and share data on a daily or weekly basis?	YES	NO
4	Do you have resources for monitor's traveling and related subsistence costs?	YES	NO
5	Do you have resources to customize the project to fit into your particular context, for example translation of software?	YES	NO

Section 7
MONITORING AND EVALUATION (M&E)

BACKGROUND

This section aims to provide some guidance on how to monitor and evaluate a child-friendly technology project, from embedding an M&E strategy from the project start-up phase to the final evaluation and sharing of lessons learned.

When developing an M&E strategy, the two most important issues in M&E are considering:

- **What do you want to achieve with your project?**
- **What do you want to learn from your project?**

TOPICS

Specific Processes/Products and Contextualized Requirements

Worksheet 46 : Targets of M&E

Worksheet 47 : Reasons for M&E

Data/Information Needs and Gaps

Worksheet 48: Data/Information Needs

Worksheet 49: Data/Information Gaps

Sharing of Lessons Learned

Worksheet 50: Links with Other Projects

Worksheet 51: Shared Lessons Learned

Worksheet 52: Internal Lessons Learned

SPECIFIC PROCESSES/ PRODUCTS AND CONTEXTUALIZED REQUIREMENTS

The decisions made here will determine the kind of M&E you need to undertake. These worksheets will contribute to your project planning, both in terms of activity and staff scheduling, but also when looking at gaps and opportunities for leveraging new relationships. By thinking about the research and development aspects of your project, you can also move onto develop joint action plans for engagement with partners, which will contribute to preparing formal agreements to work on the project with them. Linking into the work, or potential work, done by others will save time and money in terms of data collection; clearly attaching your M&E to existing research can lend credence to your analysis and enable you to effectively contextualize this project within the wider environment.

Worksheets for this area:

Worksheet 46: Targets of M&E
Worksheet 47: Reasons and Requirements of M&E

WORKSHEET 46
TARGETS OF M&E

What are you expecting to change? What are the indicators for expected outcomes?
There may be long-term objectives such as educational achievement, parents'
engagement in their children's schooling etc.

QUESTIONS	YOUR ANSWER
1 What do you want to monitor?	
2 What are donor expectations?	
3 What are community expectations?	
4 What are your team's expectations?	
5 What in the project is research or experimental?	

WORKSHEET 47
REASONS FOR M&E

Many technology projects have an element of research and development (R&D). If you want to include specific objectives, such as investigating the true cost per beneficiary of this kind of initiative, then add it here and consider thoroughly how to mesh your research and monitoring so you can collect and share the right information.

Do you have agreed outputs with donors? Does the project aim to contribute to particular indicators within the host government, or wider organizational objectives?

QUESTIONS	YOUR ANSWER		
1 What are the contractual elements of the project?			
2 What is strategic added value (unexpected elements which may lead to future success)?			
3 How to report on strategic added value?			
4 What will the community consider a success?			
5 What would the direct beneficiaries, especially children, consider a success?			
6 Does the project have lasting impact five years after?	YES	NO	UNSURE
7 How does your project link in with other similar work?			
8 What are you trying to learn from the project?			
9 Which elements of you project are setting precedence or breaking new grounds?			

DATA/INFORMATION NEEDS AND GAPS

Data and information collection helps set baseline, choose indicators, track progress, monitor and evaluate. Overcoming data and information gaps may required looking into the culture, resources and other issues of the target community.

Worksheets for this area:

Worksheet 48: Data/Information Needs

Worksheet 49: Data/Information Gaps

WORKSHEET 48
DATA/INFORMATION NEEDS

Consider both qualitative and quantitative indicators and areas where one may be converted to another (e.g. creating a grading mechanism for soft issues such as confidence). Consider the financial elements that have to be researched or reported on.

QUESTIONS	YOUR ANSWER		
1 Will you seek further funding for another phase of the project?	YES	NO	UNSURE
2 How might the M&E of this project affect your other partnerships?			
3 How can you create a baseline to assess the impact of your project?			
4 What relevant data is the your team and partners collecting already?			
5 What data is separate to the data needed for project success?			
6 What other data or opinions do you need to gather?			

WORKSHEET 49
DATA/INFORMATION GAPS

What are the logistic, resources and cultural issues to be considered and how can you manage them? What resources (time, personnel, financing) will you need to allocate to mitigate these risks? How can you engage communities or other partners to address issues or concerns? There may also be ways of monitoring the technology itself, e.g. software that monitors the use of the device and highlights particular areas where users spend the most time or get stuck.

	QUESTIONS	YOUR ANSWER	
1	How would you consider qualitative and financial tracking (issues around sub-grants, project cooperation agreements etc.)?		
2	Is data needed to report on specific outputs/outcomes a constraint?	YES	NO
3	How labour intensive is data collection?		
4	Do you have the capacity to collect data and information needed?	YES	NO
5	Do you have the budget for M&E?	YES	NO
6	Do you have a plan in place for M&E?	YES	NO
7	How would collect and sharing data/information during the project processes?		

SHARING OF LESSONS LEARNED

Linking in learning and communication will contribute to planning the internal M&E cycle, and should contribute to project planning through commitment to regular internal analysis and communications. By creating a space to let the information and lessons shape the project lifecycle, these discussions will also help to ensure that the project responds to changes or challenges, and is more effective and sustainable.

Apart from information shared internally, what else is being monitored and shared with other projects and partners? What would need to be done to agree on common indicators? Taking into consideration what and how data is collected by partners would benefit research and contribute to wider learning.

These questions will ensure that your M&E has a wider purpose than proving that you reached your objectives.

Worksheets for this area:

Worksheet 50: Shared Lessons Learned
Worksheet 51: Internal Lessons Learned
Worksheet 52: Links with Other Projects

WORKSHEET 50
SHARED LESSONS LEARNED

QUESTIONS	YOUR ANSWER	
1 Is there space for a formal process for reporting?	YES	NO
2 Is there a plan to share learnings with donors and partners from other projects?	YES	NO
3 How did asking beneficiaries directly what they want changed your project design?		
4 How would you include lessons learned in a much larger-scale project?		
5 Which elements of UNICEF can you feed back to?		
6 Which of your failures are you prepared to share?		
7 What specialists can you engage with on particular issues?		

WORKSHEET 51
INTERNAL LESSONS LEARNED

QUESTIONS	YOUR ANSWER
1 What is the most useful way to conceptualise cost of such projects – by individual, community?	
2 What can you learn about your partnerships with civil society organizations or communities?	
3 What issues came up about the collection and analysis of baseline data?	
4 What could be valuable to other offices or to the development of their systems?	
5 What structures did you create at the outset for your planned use of the research?	
6 How can you capture your learning as an individual practitioner?	

WORKSHEET 52
LINKS WITH OTHER PROJECTS

	QUESTIONS	YOUR ANSWER	
1	Is it feasible to link your project into other systems in the country?	YES	NO
2	Is it feasible to use M&E templates from similar projects?	YES	NO
3	Is it feasible to share your project as a case study?	YES	NO
4	Who else is working in your target community?		
5	Who else is working on Innovation in your target community?		
6	Is it feasible to link your project to other organizations' projects in order to reduce "consultation fatigue"?	YES	NO
7	Is it feasible to embed your project into local partners' M&E to observe long-term impact?	YES	NO
8	How can you leverage the collection and sharing of data?		
9	How can you use information from observers (people in contact with the project)?		

SECTION 7: **MONITORING AND EVALUATION**

You have brainstormed various aspects about monitoring and evaluation. This is an optional step to help you review and summarize the 7 worksheets into 1 page. Fill in the blanks or circle one option provided.

1. Why M&E is needed and what to monitor and evaluate?
(Refer to worksheets 46 and 47)

Contractual aspects of the project include (deliverables/procurement/other_____). General expectations from the community, donor and managing team are _____(deliverable), _____ (deliverable) and _____(timeline). The following aspects will need to be monitored and evaluated: (quality of deliverable/outcome/budget execution/timeline/other_____)

2. What data and information need to be collected?
(Refer to worksheets 48 and 49)

Information and data of _____, _____ and _____ are needed to create a baseline for assessment. The following information needs to be collected for M&E: _____, _____ and _____. _____data is currently being collected by (project team/partner/local authority/other_____).

There (is/isn't) an M&E plan in place. There (is/isn't) budget for M&E. There (is/isn't) human capacity to carry out the M&E plan.

3. How will you share lessons learned internally and externally?
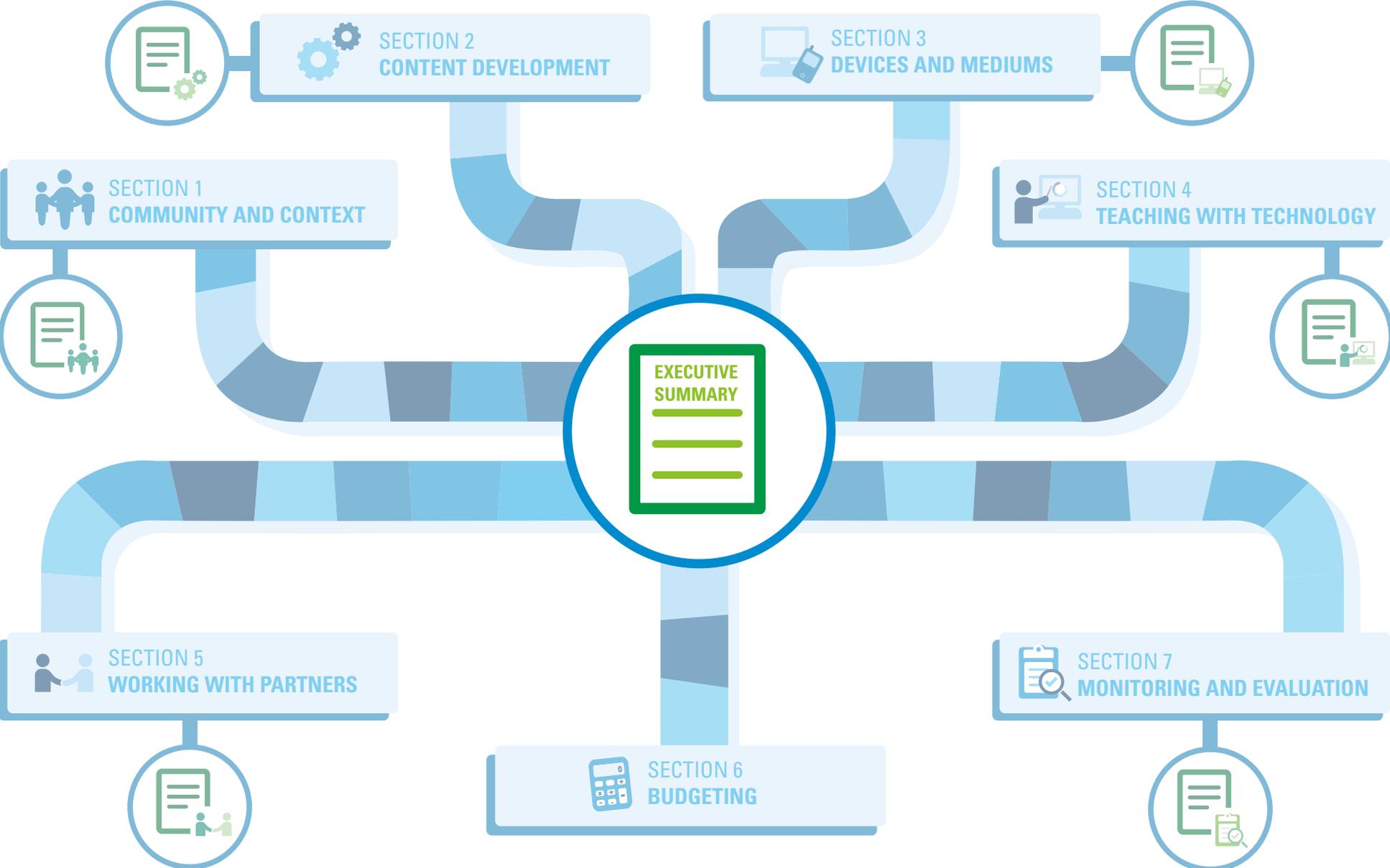### (Refer to worksheets 50-52)

Lessons captured are (community context/technology/team management/partnership/other_____). (Community context/Technology/Team management/Partnership/Other_____) aspects are most valuable to share. The formal channel to share lessons learned is _____. Failures may be shared with (internal team/partner/community/public) through _____. Additionally, working with (academic/technology/community/other_____) experts on _____ may facilitate the process.

OTHER INFORMATION

- The project has an (experimental/ground breaking) aspect of _____, which may benefit broader knowledge sharing.

- The collection of information may affect partnerships by (financial arrangement/sharing of responsibility/future collaboration/other_____).

- The data collection is (labour/capital/technology) intensive.

EXECUTIVE SUMMARY

SECTION 2
CONTENT DEVELOPMENT

SECTION 3
DEVICES AND MEDIUMS

SECTION 1
COMMUNITY AND CONTEXT

SECTION 4
TEACHING WITH TECHNOLOGY

EXECUTIVE SUMMARY

SECTION 5
WORKING WITH PARTNERS

SECTION 7
MONITORING AND EVALUATION

SECTION 6
BUDGETING

EXECUTIVE SUMMARY

The questions below will prompt you for key information to structure your Executive Summary. Pull the information asked for below from your completed Concept Notes. Try to keep each answer to three sentences or less.

TITLE
What is the name of your project?

TIMELINE
What are the key phases and estimated duration?

OBJECTIVE
Why are you creating this project? What are the goals of the project?

DESCRIPTION Section 2-4
In a few short sentences, describe the project. What are you creating?

Who is it for?

Where and when will the project take place?

BACKGROUND Section 1

In a few short sentences, describe the community and context.
What is the environment like?

What is the community like?

What are the advantages and disadvantages for implementing the project?

PARTNERS Section 5

Who will you be partnering with to make this project happen? (i.e. foundations, institutions, organizations, community members, etc).

BUDGET Section 6

How much will it cost to create and implement this project?

MONITORING & EVALUATION Section 7

Who will be managing and executing this project?

Who will see it through?

What is the metrics for success?

Examples of
TERMS OF REFERENCE (TOR)

Here are some UNICEF terms of reference (TOR) for your reference to clarify roles and responsibilities of your project team.

Some of these are extracted from "UNICEF Innovation Labs: A Do-It-Yourself Guide".

PDF LINK FOR DIY GUIDE

http://www.unicefinnovationlabs.org/wp-content/uploads/2012/12/DIY_Guide_v1_interactive.pdf

INNOVATION LEAD (TOR)

1. **Objective and targets (Attach background documents, if necessary)**

Background:

A UNICEF scoping mission to look at strengthening emergency response and programming in June 2013, identified the urgent need to invest in innovations (such as Rapid SMS and other innovative technologies) to help accelerate positive results for children and women, particularly in the areas of health and education for UNICEF Lebanon.

In this regard, innovation technical assistance is required to work closely within the Social Policy, Planning, Monitoring and Evaluation (SP, PM&E) Section in UNICEF Lebanon, to support the development of new innovations together with the program teams and partners. The technical assistance will develop and support a few key projects that will enhance the effectiveness of the emergency response while building capacity for longer-term systems in support of child rights, including a focus on real time data collection and promoting children and young people's participation while creating wider platforms for discussion and sharing of information.

Justification:

UNICEF Lebanon requires a dedicated Innovation Officer (Consultant) to support the development and adaptation of a few key INNOVATION projects that focus on effective Humanitarian Performance Monitoring and real time monitoring of child rights. Starting with application of innovative technology in the areas of health and education will accelerate the existing structures, systems and service delivery in timely manner.

There is a growing realization that a need exists to expand innovative programming to embrace the demand for real time data collection, management and dissemination. This is consistent with the broad objective of the UNICEF Lebanon to impact real-time data collection, thus enabling quick, small course corrections to on-going programming as well as to have better, faster data about specific indicators for planning purposes. The office has identified a specific need to add a technology, development and innovation capacity to the existing team.

Objective and activities

Working within the Social Policy, Planning, M&E Section and with support from the UNICEF NY Innovation Unit, the Innovation Officer will interact across all sections in the UNICEF Lebanon Country Office and network with other experts from sister agencies, NGOs and within the Government of Lebanon.

2. **Duration:**

11 months

3. **Duty station:**

UNICEF Lebanon

4. **Supervisor (must be a staff member):**

The consultant will report to the Chief of Social Policy, PM&E with close collaboration with the SP,PM&E team, the HQ Innovation unit and other INNOVATION specialists in other CO's.

5. **Description of assignment: (provide detail and in quantitative terms, add pages if required)**

   Technical oversight and coordination of UNICEF INNOVATION initiatives. The Innovations Officer will work within the Social Policy, Planning, Monitoring and Evaluation (SP,PM&E) Section and will work directly with colleagues in that section, as well as linking to other Section Focal Point for innovations and the IT section.

   ## Main Activities

   - Articulate in documents the approach to rolling out a system for community based, participatory information loops in emergency response areas, with a focus on gathering and disseminating health and education information for action.

   - Together with the SPPM&E team and in close coordination with Health and Education Sections, explore development of innovations in reporting on children and vital statistics – particularly setting up a RapidSMS system (using the existing U-report platform as a foundation) for engaging health workers, teachers, young people and parents in getting and sending information about delivery of health and education services.

   - Together with the Chief, SP, PM&E explore partnerships with the private sector such as mobile company strengthened through at least 1 pilot initiative (bulk SMS, voice SMS, USSD etc.).

   - Provide support for other initiatives, such as partner agreement tracking, performance monitoring, and third party monitoring.

   - Connect to other UNICEF offices and the the global Innovations Unit for support and feedback on innovations roll out.

   ## Specific Activities

   The coordinator will

   - Assist programme counterparts in Health and Education to identify Real Time Data management needs for registration and reporting.

   - Identify other local partners including NGOs, FBOs and the government partners, to ensure synergies in the mobiles for development area.

   - Support training and roll-out of a pilot project for a Rapid SMS system using u-report as a basis for real time monitoring of the situation of children and women).

   - Support the roll out and correct system fixes as needed for the PCA and activity monitoring systems.

   - Support the strengthening of partnerships with the private sector such as SMS service provider or mobile network providers to enhance project delivery through a mobile phone platform.

6. Tangible and measurable outputs of the work assignment (e.g. end products):

- Establish prototype health RapidSMS network for health and education real time situation reporting using the U-report platform as a basis
  o Adaptation of U-report for real time monitoring purposes for health and education conducted, including a bi-lingual system to be able to work with SMS' in Arabic and analysis in English.

- Scale up of RapidSMS system to address the situation of children's rights in general and to ensure the beneficiary reporting at the national level and prepare it as a system for alerts and respons
  o National-scale up of Rapid SMS system for health and education. System for alerts and response using the RapidSMS platform established.

- Provide oversight for national scale
  o National scale completed, lessons packaged and disseminated for emergency work

7. Performance indicators for evaluation of results:

- Delivery of products on dates as specified with supervisor

- Routine communication with supervisor and team about work

- Quality of products (do they fit the needs as defined)

8. Qualifications or specialised knowledge/experience required for the assignment

- It is required that the Project Officer has at least 3 years experience with demonstrated results in the majority of the following areas:

- Degree-level qualification or equivalent. Preferably, the degree should be in a relevant field or discipline such as computer sciences, Information Technology, Information Systems, Engineering or statistics although experience can replace qualifications

- Excellent understanding of software development, and familiarity with Python, Django, Github etc.

- Innovative uses of technology for development, particularly in the areas of data, mobiles, open source and health.

- Needs identification, and measuring improvements in project coverage and uptake, geographic expansion, etc.

- Training experience

- Background experience with the UN is desirable

- Languages: Fluent written and spoken English and Arabic.

TECH4DEV COORDINATOR (TOR)

1. **Objective and targets (Attach background documents, if necessary)**

   UNICEF **[Country_Name]** wishes to hire a "Mobiles for Development" coordinator to manage the various T4D projects across the Country Office.

   Objective: Coordinate and launch various T4D initiatives for UNICEF **[Country_Name]**. Project coordinator will need to work across all sections in UNICEF Sudan, and interact with necessary Government, UN, NGO and private sector partners.

   Targets: T4D initiatives demonstrate value and utility for the UNICEF

   [Country_Name] country programme. (Baselines = rapid development of projects, partnerships, new data sets, failures, successes, national scalings)

2. **Duration:**

   _____months Starting date: _____

3. **Duty station:**

   [City_Name], **[Country_Name]**, with possible travel

4. **Supervisor (must be a staff member):**

   The developer will be supervised by the Deputy Head of Office for UNICEF **[Country_Name]**, with support from the UNICEF Technology for Development Unit in New York.**[Supervisor_Name]** will provide supervision at regular intervals in consultation with _____

5. **Description of assignment: (provide detail and in quantitative terms, add pages if required)**

   - Technical oversight and coordination of UNICEF **[Country_Name]** Technology for Development initiatives:

   - Coordinate the pilot with programme counterparts in UNICEF **[Country_Name]**, and in consultation with UNICEF NYHQ Tech Innovation

   - Coordinate with other local partners in the mobiles for development area to look and exploit synergies.

   - Coordinate with programme colleagues, local and international developers to ensure that technical components are identified and developed, partner relationships forged and maintained, mechanisms for sustainability developed and addressed, and other programmatic goals met in a timely manner.

   - Consult, coordinate and achieve buy in from open source mobile system of choice on technical and non-technical community during the duration of the pilot

   - Advise on negotiation with mobile phone providers, in consultation with UNICEF NYHQ Tech Innovation efforts in this area

   - With Country Office, coordinate training and roll-out of demonstration project

   - Provide ongoing and final documentation of implementation and scale up process, including challenges encountered and lessons learned, and Government and partner involvement in provision of technical, financial, and other programmatic support.

- Coordination and sharing of lessons learned across the organization in consultation with supervisor and UNICEF NYHQ Tech Innovation

- Contribute to overall monitoring and evaluation framework of the UNICEF country programme

- Documentation and setting up of clear monitoring and evaluation mechanisms for the projects including baseline data collection, necessarily on-going monitoring, as well as end of pilot phase data collection and analysis.

- Feeding of lessons learned into UNICEF knowledge management process:

- Input information on process, lessons learned, outcomes etc into relevant communities of practice.

- Participate and feed in to guidelines on how to standardise the process of using mobiles for development to amplify programmatic outcomes for other Country Offices

- Will be asked to travel in line with UNICEF rules and regulations to perform tasks outlined.

- May be asked to work weekends

6. **Tangible & measurable outputs of the work assignment (End Products):**

- Online documentation – in blog format of process and key findings
- Monitoring and evaluation framework

- Support to UNICEF **[Country_Name]** for T4D scaleup

- Ongoing and final documentation of implementation and scale up process, including challenges encountered and lessons learned, and Government and partner involvement in provision of technical, financial, and other programmatic support.

- Integrated, deployed and hosted systems in UNICEF **[Country_Name]**

- Local developer(s) hired and mentored through project deployment sustainabilitymeasures planned and budgeted for

- End user focused tool and documentation that can be relayed using Training-of-trainers

- Costed plan for scale up endorsed by UNICEF and appropriate partners

- Use of SMS to strengthen realtime reporting operational in various districts

- Delivery dates and details as to how the work must be delivered (e.g. electronic submission, hard copy, what computer program should be used, etc.): <To be determined by UNICEF [**Country_Name**]>

- Consultant will provide weekly delivery of materials (or delivery based on schedule arranged with supervisor, if other than weekly)

- Will ensure that any and all system code used in **[Country_Name]** CO's T4D projects are submitted to GitHub, as well as on accessible servers.

- Work will be licensed in the public domain (Creative Commons or other appropriate licenses)

- Monthly report on the progress of work to both UNICEF **[Country_Name]** and NYHQ

7. **Performance indicators for evaluation of results:**

- Delivery of products on dates specified to [Supervisor_Name]

- Communication with **[Supervisor_Name]** and team about work

- Quality of products (do they fit the needs as defined)

8. **Qualifications or specialised knowledge/experience required:**

   It is required that the project coordinator has at least 5 years experience with demonstrated results in the majority of the following areas:

- Innovative uses of Technology for Development, particularly in the areas of data, mobiles, open source and health.

- Identifying a baseline, and measuring improvements in coverage and uptake, geographic expansion, etc.

- Training experience

- Programme communication / Communication for Development experience

- Background experience with the UN, especially UNICEF is desirable

- It is required that the project coordinator have:

- Demonstrated communication and relationship building skills

- Good oral and written presentation skills

- Experience in creating spaces and environments that are conducive to team participation and effective coordination

- Proven capacity to work with and lead collaborative teams across different locations and with different technical skills

- Experience in budgeting and coordinating large scale projects

- Clear upward communication and management skills

PROGRAMMER (TOR)

1. **Objective and targets (Attach background documents, if necessary)**

Background

Within the framework of the 2012-2015 Government of Zimbabwe-UNICEF Country Programme of Cooperation the use of Technology for Development (T4D) has been identified as a critical strategy to help accelerate positive results for children and women, in the areas of knowledge management, health, education, protection and participation. In this regard, T4D technical assistance is required to add technology, development and innovation capacity to the existing Communications Cluster and the Collaborative Centre for Research and Evaluation (CCORE).

The technical assistance will provide the capacity in the Country Office to create and support at least three IT platforms for prototype projects with projected quick wins. This engagement will prove the value of this additional capacity in a Country Office, in collaboration with ongoing work being done in Tech4Dev and real-time monitoring at HQ. It will support the set up and roll out of Technology for Development initiatives aimed at real time data collection.

The ZCO has identified a specific need to add a technology, development and innovation capacity to the existing work of CCORE. This additional capacity will be modeled on other successful Tech4Dev engagements – where small teams have been created in Country Offices to support specific programme needs. The objectives will be lined up directly with the organisational priority of real-time monitoring and management of Programmes within the ZCO.

Objective(s)

To support the set up and roll out of Technology for Development initiatives aimed at real time data collection.

2. **Duration:**

11 months

3. **Duty station:**

UNICEF office in Zimbabwel

4. **Supervisor (must be a staff member):**

The developer will be supervised by the Deputy Head of Office for UNICEF **[Country_Name]**, with support from the UNICEF Technology for Development Unit in New York.[Supervisor_Name] will provide supervision at regular intervals in consultation with _____

5. **Description of assignment: (provide detail and in quantitative terms, add pages if required)**

Working under the direct guidance and supervision of the Chief of Social Policy and in collaboration with the IT Manager and the Communications Section within UNICEF, the T4D Specialist will add a technology, development and innovation capacity to the ZCO to develop and support IT platform for three prototype projects.

6. **Tangible and measurable outputs of the work assignment (e.g. end products):**

   - Development of Real-time Systems for Programme monitoring and children's participation.

   - Development of appropriate technology to address identified needs for children with disabilities – such as "hard of hearing"

   - Analyze software requirements and develop paper prototypes

   - Develop software using agile methodology

   - Analyze software partners' code, on both a technical and a strategic level

   - Develop and implement software and technology innovations on a national scale (understanding constraints of working with various partners, but also the strengths of representing an international organization)

   - Set-up and administer servers, networks and mobile gateways

7. **Performance indicators for evaluation of results:**

8. **Qualifications or specialised knowledge/experience required for the assignment**

   - A recognised T4D/IT professional with proven experience in designing and implementing Technology for Development initiatives, including social media programming and use of digital media. Prior experience in similar assignments with the UN system including UNICEF is an advantage.

- Minimum 5 years hands-on software development experience with a mix of the following frameworks, tools and languages:
  - Python or Ruby
  - Django (or experience with a framework such as Cheetah, Camping, Rails)
  - Source code management / Version control systems (Git)
  - AJAX and JavaScript including libraries (such as jQuery and Mootools)
  - mySQL (postgres)
  - XHTML and CSS
  - XML
  - Mapping (Google Maps API/ Openlayers)
  - Lightweight libraries for interacting with graphing, photos.
  - Linux
  - Apache
  - Windows

- Strong, proven developing country experience in T4D including negotiating agreements with ICT private sector.

- Existing personal and professional network of technology partners

- Self-motivated, responsive and innovative

- Proficiency in object oriented back-end programming languages; specifically Python

DESIGNER (TOR)

1. **Objective and targets (Attach background documents, if necessary)**

   The main focus of the Designer is to design the Innovations Lab's promotional and visibility materials.

2. **Duration:**

3. **Duty station:**

4. **Supervisor (must be a staff member):**

   Project Coordinator

   Supervisor and frequency of performance reviews:

5. **Description of assignment: (provide detail and in quantitative terms, add pages if required)**

   - Responsible to design the Innovations Lab's promotional materials, such as: leaflets, brochures, posters, portfolio, webpage and other promotional and visibility materials of the lab

   - Advising and helping By Youth for Youth project leaders to design the promotional materials for their projects

   - Designing materials for the overall Innovations Lab's functionality

   - Working on and editing videos, such as interviews, short documentaries etc.

   - Working closely with the Innovations Lab and UNICEF Communication Officer to implement the lab's communication strategy.

   - The designer will work on different aspects of the Innovations Lab and will be brought to design material for various projects led by the Innovations Lab or young people.

6. **Tangible and measurable outputs of the work assignment (e.g. end products):**

7. **Performance indicators for evaluation of results:**

8. **Qualifications or specialised knowledge/experience required for the assignment**

   - At least 3 years working on Graphic Design

   - Skills in video editing – strongly desirable

   - The ability to work as part of a small and a big team including responding to ad hock request outside the job description

   - High level of motivation, ability to show initiative, creativity and work independently

   - Excellent interpersonal and representational skills

   - Fluency in written and spoken Albanian and English – Serbian (desirable)

   - Academic degree in Graphic Design or other relevant field

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Apologies to anyone who is not listed here.