SPECIFICATION OF REQUIREMENTS

Part 2 – Appendix 1

EduApp4Syria

"Mobile literacy and psychosocial wellbeing resource for children affected by the Syrian conflict"

1. PURPOSE

The objective of this pre-commercial procurement is to develop a highly engaging smartphone application that can build foundational literacy skills in Arabic and improve psychosocial wellbeing for Syrian children (aged 5–10) who use the application regularly.

2. PRINCIPLE DESCRIPTION OF THE METHOD TO BE DELIVERED AND THE DESIRED FUNCTIONS OF THE SOLUTION

The Syrian conflict is disrupting the education of millions of children, in addition to threatening their physical safety and psychosocial well-being. An estimated 2.8 million Syrian children are not receiving any form of education. Syrian children both inside and outside of school are living under the extreme stress of a protracted conflict. Elevated and prolonged stress levels can impede brain development and result in learning disabilities, memory problems and emotional regulation difficulties.

Achieving reading and writing fluency (literacy) is foundational for lifelong learning, and therefore a particularly important skill for all children to acquire. Being literate in the language one uses at home also makes it easier to learn second languages and hence can facilitate integration into host-country education systems.

Given the chaos associated with the crisis, and the continuing displacement of many households, it is in many cases impossible to provide sufficient learning opportunities and learning equipment through traditional delivery methods. Most Syrian households own smartphones, and many parents already allow their children to play games on their phones for entertainment purposes. Syrian parents are also generally literate and well educated, and are keenly interested in providing their children with learning opportunities. Providing alternative digital learning solutions directly to households on their smartphones therefore seems a highly scalable method.

However, it should not be expected that all Syrian children have access to adults who can assist them in their learning process. Any digital learning resource must therefore be highly engaging and intuitive for children to use.

Given unstable and costly Internet access, the digital learning resource should be downloadable for offline use as an application. However, optional online functionalities to improve the experience of the learning resource should also be included.

In sum: Norad and the project collaboration partners are aiming to develop a highly engaging game-based application which builds foundational Arabic literacy skills and improves psychosocial well-being.

3. FUNCTIONAL REQUIREMENTS

3.1 General Information about Functional Requirements

The functional requirements provide a description of the requirements that are set for the end solution to be developed. Many of them will not be relevant for the early prototype to be submitted in the initial competition, but in our assessment we will take into account whether or not these requirements are likely to be met in later phases. The requirements are divided into 1) technical requirements and 2) User experience requirements. The technical requirements are essential and absolute. That is because the learning resource must work on a number of devices and platforms, and for the intended users. The user experience requirements are more flexible, and will be used to compare various submitted proposals given that they fulfil the technical requirements. The user experience requirements are seen as important for achieving the intended impact (improved literacy and psychosocial wellbeing – described in more detail below).

3.2 Technical/Software Requirement (TR) for the End Solution

TR1	The solution shall be a smartphone application (app) that can be used offline (without any network connections).
TR2	The application shall be deployable and executable on smartphones running on iOS version 6.1.1 and Android version 4.1 or newer.
TR3	The application's footprint cannot be larger than 100 MB.
TR4	The application must work on devices of various screen resolutions.
TR5	The application must be downloadable from App Store and Google Play for free.
TR6	All text and audio related to the vocabulary taught in the application shall be in Standard Arabic. The language complexity level should be equivalent to the language used at the primary school level in Arabic speaking countries. Focus should be on building vocabulary that children would hear and use at home and in their local environment, which is also part of the 70-80% basic common core (the vocabulary with the highest resemblance between 'standard' Arabic and local Syrian Arabic forms and structures). Audio instructions given in the App on how to play the game must be easily understandable for most Arabic speaking Syrian five-year olds.

TR7	The application shall provide support for extensions to other written languages and audio.
TR8	The application shall have an inclusive design, meaning that it should be accessible to, and usable by, as many people as reasonably possible without the need for special adaptation or specialized design.
TR9	The software of the application shall be released under a Simplified BSD license (A deviation from this requirement is only possible in exceptional circumstances. In such a case, the supplier must provide an alternative model where the development of the software and digital content is predominantly funded by the supplier.).
TR10	The digital content (assets) of the application shall be released under Creative Common Attribution CC BY license (A deviation from this requirement is only possible in exceptional circumstances. In such a case, the supplier must provide an alternative model where the development of the software and digital content is predominantly funded by the supplier.).

3.3 User Experience Requirements (UR) for the End Solution

After regular use of the end solution, the application should have had the following average impact on target users (Syrian children, aged 5–10, without or with limited access to formal schooling, who cannot read and write).

At least the *first three* of the following five component skills of literacy should have been significantly improved:

- learning that the language is made up of a specific set of individual sounds and that letters and letter combinations represent those sounds
- developing the skill to decode letters, letter combinations and words
- vocabulary
- oral reading fluency (speed and accuracy)
- comprehension

We define literacy as reading and writing, but submissions will be judged based on an assessment of reading skills.

There should be significant improvements in two or more indicators of psychosocial well-being. Relevant indicators include:

- Happiness

- Ability to play
- Cognition (concentration, memory, ability to solve a problem)
- Sadness (including depression, grief, crying)
- Stress reactions (fear, anxiety, arousal, avoidance, sleep problems, regression, etc.)
- Somatic health (self-reported stomach pains, head aches, sleep, tiredness, appetite)
- Helplessness, clinginess, independence
- Ability to regulate emotions, communicate, attachment

Suppliers can also propose additional indicators of wellbeing.

In order to achieve the intended impact, the following are seen as important user experience requirements. They are relative rather than absolute requirements, and will be used to compare various submitted proposals:

UR1	Syrian parents/guardians should consider the game and its content to be appropriate for their children (both girls and boys) to use for Arabic literacy learning and for enhancing psychosocial wellbeing.
UR2	Game interfaces and mechanics should be fun and engaging for children in the target age group.
UR3	Game interfaces and mechanics should be simple enough for children in the target age group to use them with minimal adult supervision.
UR4	The game should provide various stimuli to hold the user's concentration over a period of time.
UR5	The game should match the user's level of literacy skills, and increase the challenge at an appropriate pace as the user's literacy skills improve.
UR6	The user should be rewarded appropriately for her/his efforts and skill development.
UR7	The user should feel a sense of control over the content in the game, and the application should support recovery from errors.
UR8	The overriding goals of the game should be presented early and clearly, and intermediate goals should be presented at appropriate times for the user.
UR9	The user should receive immediate feedback on her/his actions and receive feedback on progress towards the goals of the game.

UR10	The user should feel emotionally and viscerally involved in the game.
UR11	The user should become less worried about everyday life or self while playing the game.
UR12	The game should have features that help parents/guardians monitor their children's progress related to literacy skills development.
UR 13	Optional online functionalities to improve the experience of the learning resource should be included.