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TERMS OF REFERENCE

Job Title:	National mathematics consultant to support Moldova Social Innovation Lab (MiLab) in organising the EduSoft Hackathon
Type of Contract:	Individual Contract (IC)
Duty Station:	Chisinau, Moldova
Expected workload:	up to 15 working days
Expected duration of assignment:	August – October 2015

BACKGROUND

There is a fast shift taking place in the realm of public policy and development program design around the world. Rise of democracy, spread of new technologies and knowledge, but also shrinking resources of the public and development organizations in the face of increased complexity and interconnectedness of the social challenges, mean that design and implementation of public policies and development programs has seized to be under the exclusive remit of the selected few.

Along with the opening up of the public policy space, the rise of civic activism have changed the way the Governments approach public policy development, service delivery and engage with the citizens. The Government has increasingly looked to tap into expertise and solutions from other sectors and wants to move towards 'networked governance' solutions to the issues it faces daily.

UNDP Moldova itself, through MiLab - joint project with the E – Government Center, has supported national counterparts in embarking on several innovative projects that seek to apply new approaches to engage with citizens and enable people to contribute stronger to the country's development. Some previous examples include: gaming for youth employment; applying behavioral insights for TB treatment; Modern School Open Challenge, etc.

MiLab acts as a multilateral platform serving to engage actors from different sectors (public, private, non-profit, etc.) to seek and experiment with innovative approaches to the society's problems. Its work is structured around three interlinked components, i.e. public services redesign, applying people's solutions, and mainstreaming social innovations. The **public participation component** includes creating the channels or outlets for engagement, setting the rules, specifying the issues that would engage people to participate in solving them. Also screening the horizon, and subsequently connecting social innovation initiatives with government and private sector counterparts that could enable the implementation of those initiatives.

Under this component falls the **EduSoft** hackathon initiative, which aims to involve university students in developing applications for a more effective and motivating study of mathematics in school.

According to the Ministry of Education, in 2014 only 50.74% of high school students have passed the baccalaureate in mathematics. At the same time, during the past three years the Ministry has advanced in computerizing the science classrooms in about 100 schools with the support of private sector partners such as Intel, Microsoft, StarNet, Soros, and others.¹ However, the production of educational software aligned with Moldovan curricula is still lagging behind. The implementation of localized and engaging IT applications for the study of mathematics could be a solution to increase both the quality of education as well as the students' performance.

EduSoft is planned as a month-long contest that will take place between September and October 2015. University students from IT specialties, but not limited to, will form teams with school teachers of mathematics and with the assistance of experienced mentors will develop educational apps. The Hackathon will be organised as follows:

1. Will be launched with the presence of partners from the Ministry of Education, E-Government and IT companies, followed by kick-off training sessions. Participating teams will receive training that will enhance their capacity to work as teams, manage their time and produce qualitative products. Each team will be provided with instructions for building their apps and 5 TORs for scoping them, from which they will be able to pick one.
2. During the first two weeks' time, the teams will meet each Saturday for a Working Day, and will develop an Alfa version of their apps. During Saturday working day they will have the chance to meet and get feedback or instructions from their mentors and math teachers.
3. The first part of the hackathon will end with a reality check (user acceptance testing) by the potential users (teachers, pupils).
4. The next two weeks, teams will continue developing their apps and will incorporate the feedback from users. The working schedule will be flexible, but students will continue meeting for Saturday working days, during which they will interact with their mentors and math teachers.
5. Finally the teams will present their products to an Evaluation Jury that will decide on the winning apps. The winning teams will be invited to finish up the work and prepare their final products at a two-day Hack camp.

OBJECTIVES AND EXPECTED DELIVERABLES OF THE ASSIGNMENT

The **national consultant** is expected to provide support to MiLab in organising the EduSoft hackathon through:

- Ensuring the development of hackathon instruction and scoping materials in collaboration with the Hackathon coordinator
- Creating a team of mathematics teachers that will assist the students' teams in development of educational applications

Key deliverables:

Deliverables	Deadlines

¹ "Connect! Information technology for learning success "(2013), <http://www.edu.gov.md/en/evenimentele-saptaminii/14725/>

5 Terms of References (scoping instructions) for building 5 different educational apps developed in collaboration with the hackathon coordinator (up to 7 w/d)	Beginning of September 2015
A team of 6 to 8 mathematics teachers to work voluntarily and closely with the teams of developers during the hackathon, set-up (up to 5 w/d)	By mid-September 2015
Evaluation of 8 to 10 developed apps during the hackathon, focusing on their applicability and usefulness for the study of mathematics (up to 3 w/d in total)	October 2015

SKILLS AND EXPERIENCE REQUIRED

Education:

- University degree in Mathematics, Information Technology or related areas. Additional training and certification in IT or alternative educational tools is an asset.

Experience:

- At least five (5) years of experience is required in teaching gymnasium and high school students the mathematics subject.
- Proven experience in developing educational software or applications is a strong advantage.
- Working experience using IT, multimedia applications and educational hardware such as smart boards is an advantage.
- Previous experience in development assistance or related work for a donor organization, governmental institutions, NGO/think-tank or private sector / business consulting firm is a strong advantage.

Competencies:

- Fluency in both oral and written Romanian and Russian is a must; knowledge of English is an asset.
- Working knowledge of one or more additional languages relevant for Moldova, including Bulgarian, Gagauzian, Romani, Ukrainian or sign language is an asset.

Personal qualities:

- Proven commitment to the core values of the United Nations, in particular, respecting differences of culture, gender, religion, ethnicity, nationality, language, age, HIV status, disability, and sexual orientation, or other status;
- Excellent communication and teamwork skills;
- Responsibility;
- Flexibility.

PERFORMANCE EVALUATION

Contractor's performance will be evaluated against timeliness, responsibility, initiative, creativity, communication, accuracy, and overall quality of the delivered products.

ORGANIZATIONAL SETTING

The consultant will work under the supervision of MiLab Communication and Outreach Officer. Will meet with the project team twice per week and will provide a monthly report on the work progress. Otherwise the communication will be conducted via email and phone.

FINANCIAL ARRANGEMENTS

Payments will be disbursed in several installments, upon submission and approval of deliverables, and certification by Alex Oprunenco, UNDP Moldova Policy Specialist, that the services have been satisfactorily performed.