

i.Title

COLOMBIA DIGITAL FINANCIAL SOLUTIONS IN HEALTH

ii.Executive Summary

Describe in one paragraph, for a nontechnical audience, the context under which this application or work plan is being submitted to Digital Square and the expected outcomes. Answer the following questions: What will this investment from Digital Square specifically go toward? What is/are the goal(s) of the project? How will the goal(s) be achieved? How will your organization's expertise contribute to achieving the project goal(s)?

- *Over the past year, our alliance has received support from the Bill & Melinda Gates Foundation to implement health promotion and disease prevention solutions for low income families in Colombia. Moving from a reactive health care system to a proactive health promotion model, our efforts focus on providing digital financial services that addresses the gap in health services in a subsidized health system for low-income families. Access to dental health services and collective purchasing in nutrition for example, are not covered. Nevertheless, we know the lack of access to these services contribute to the proliferation of the main non communicable diseases our healthcare system is trying to address. Our digital solutions leverage the collective purchasing power of 13 million Colombians to offer them access to relevant financial instruments (ie. savings, micro insurance, collective sourcing)*

iii.Consortium Team

This RFA encourages partnering; in particular, it encourages partnerships between global health organizations and digital financial service organizations.

- *Led by GESTARSALUD, our alliance brings together health service providers that reaches more than 13 million Colombians who are receiving subsidized health services. The alliance is further strengthened by expert organizations in blockchain, innovative finance, food distribution (association of foodbanks), retail services, and big data. Gestarsalud and its members work directly with government agencies on improving access to health services for low-income families as well as chairs several global networks for the solidarity economy.*
- *TOPL brings expertise in the implementation of blockchain solutions in order to be able to provide digital financial health services to the targeted population. Our work to-date has focused on the customer interface as well as the processes to leverage the collective purchasing power of low-income families to access health promotion and disease prevention solutions.*

- *Together with QUADRATYX, we will use Artificial Intelligence to run deep learning exercises whereby the system is able to understand what type of information is relevant based on marker detection in the existing dataset. This allows to significantly speed up the process in identifying which affiliates would be a good match, based on their medical expenditure profile. Instead of reaching out to all 13 million affiliates in Colombia we are now able to pinpoint exactly which affiliates are a good fit for the specific financial instrument offered.*
- *Access to economic and social data on more than one-third of the Colombian population provides an opportunity to develop the right solutions with impact at scale.*
- *The team is already working with the Ministry of Health in the promotion of innovative financial solutions supported by AI and Machine Learning.*

iv. Project Description

Describe the project idea in further detail. If you have phases or objective areas in your project, outline those in the project description. Subsections within the project description should include:

1. Problem statement

Put the project/work within the larger context. Detail relevant background information necessary for a third party to understand. Where is the work taking place? What is the current phase/stage of project? Is this an ongoing or discrete project?

- *In multiple reports by multilateral finance institutions, NGO's and even the UN, a number of different financial instruments have been identified to address the social development gap in the most vulnerable communities. The unique context of many middle income countries is painting a fractured picture though. These countries often already have a well developed private sector, a regulated financial sector and a robust public sector able to deliver on implementing the required policy frameworks. Even with the regulatory and executive infrastructure in place, delivering these financial instruments to the most vulnerable people in the communities remains a challenge as adoption rates remain low. What barriers still exist?*
- *What we already learned during the current phase of the project is that the landscape of healthcare, promotion and prevention in low-income communities of middle income countries, like Colombia, is very fragmented. A large number of national programs funded by different Ministries are addressing related health issues in the same communities but due to lack of data sharing and communication, significant gaps in knowledge and understanding exist. This is exactly what we want to address with the support from DFHS.*

- *During the landscaping assessment we therefore first want to understand how consumers in low-income communities are dealing with health related expenses, how are they able to cover these expenses currently and on what type of health related issues do they tend to spend their time and money on. Having the knowledge on the consumer's behaviour, we are able to determine current spending and eventually predict future spending. This allows us to understand what financial instruments would be a good fit for which consumer.*
- *The current generic approach by the financial sector in middle income countries on health related spending is not considering the wide disparity in social development in the different communities. High social strata and low social strata are by definition not homogenous on their spending behavior. Health care cost for people in low economic strata takes up a much larger percentage of their disposable personal income, compared to people in high economic strata.*
- *Colombian counts with one of the highest rates of inequality in the Latin America. While 95% of low-income families receive subsidized health services in Colombia, the program doesn't provide opportunities for the 13 million Colombians to receive dental services, micro insurance, collective savings, and access to affordable and healthy food. With one of the highest rates of labor informality, low-income individuals do not have access to social programs (i.e. for women to stay at home after childbirth, or workers who have suffered an injury on the job). Our alliance has been working with a diverse group of partners to gauge access to digital financial solutions for low-income families.*
- *Building on investments from the government of Colombia as well as a grant from the Bill & Melinda Gates Foundation, this initiative is nearing the end of the initial phase. The opportunity to receive a grant from Digital Square would help implement the blockchain technology solutions to a large pool of identified families as well as cover expenses on Big Data analysis and deep learning tasks. That investment from Digital Square would serve as catalytic funding to actors that are able to crowd in private capital.*
- *Cultivate an understanding that nutrition, early childhood development, dental hygiene and other programs are proactive solutions for disease prevention and health promotion. We now have the opportunity for subsidized health services providers in Colombia to provide digital financial instruments to cover health services that provide benefits to the health system as a whole. Being able to reduce the burden of chronic diseases through health prevention frees up resources that can then be reallocated to improve coverage.*
- *Several studies have demonstrated that investment in Early Childhood Education, dental hygiene, and nutrition will positively impact health outcomes. Preventive measures and access to such services are not accessible to low-income families with limited financial resources. The legacy financial service providers often argue that the lack of financial*

resources with low-income families would not make for a sustainable business model to offer these type of services.

2. Approach

What is the technical approach or anticipated activities to address the problem statement and anticipated outcomes? Provide a short description of monitoring and evaluation approach, techniques, and/or process.

- *Building on our recent study of needs in the target population, we are crossing multiple sets of data from Health Service Providers and government agencies in order to inform the deployment of potential digital financial solutions in health services. The funding from Digital Square would be invested in applying blockchain solutions for the delivery of digital financial services.*
- *Using our theory of change offers several benefits. In particular, it helped to construct an evaluation framework focused on relevant outcomes and not just activities. The process of reflecting on intended goals and pathways will help staff to review the design of engagement activities. Challenges included practical considerations around time to consider evaluation plans among practitioners (a challenge for evaluation more generally regardless of method), and more fundamental difficulties related to identifying feasible and agreed upon outcomes*
- *Together with Gestarsalud and its members, the subsidized health care insurance companies in Colombia, we have direct access to over 13 million unique data points. We would be able to place markers in their datasets and within the sample group follow over a fixed period of time the consumers' behaviour (ie. affiliates of the health insurance companies).*
- *During the First Phase of the project we are able to collect the raw data in real time from the field study. This phase of the project allows us to provide a general understanding on health care expenditure. It allows us to formulate different hypotheses around specific health care cost categories like for example dental care, health prevention, and noncommunicable diseases related to nutrition. To test these hypotheses during the Second Phase, Inputs and Outputs are identified, Indicators tested and Valuations determined.*
- *Now during the Second Phase we are to run multiple (likely 4) separate test groups in different parts of the country which provides a different mix in social structure, geography and ethnicity. This allows us to test our hypotheses with the input of real life data under different circumstances. After the fixed term of the test period we expect to be able to determine on the basis of the collected dataset whether the hypotheses hold or not. If inconclusive we would loop the same process until we can dismiss or confirm.*

- *Finally, based on the confirmed hypotheses in Phase 2, we will now be able to design in detail the financial instruments that best suit the needs of the health care consumer during the Third and final phase. As part of the community oriented service sector, we would be able to leverage existing knowledge and experience from Financial Service Providers and regulators. A minimal viable product of the financial tool is tested with a sample population during a test period and determine for example adoption rate, claim rate, risk profile, and financial sustainability. Also we will conduct 'in app' polls with users of the tools, as well as periodic meetings with consumer focus groups to understand user experience and ways to improve on instruments with a strong focus on usability and affordability.*

3. Risk Mitigation

Are there potential obstacles or risks? What is the mitigation strategy and/or plan to overcome them?

- *The diversity of individuals and organizations that form part of the alliance provide opportunities to mitigate risk associated with the implementation of blockchain solutions. Engagement of government agencies and private sector partners can help address changes in government's priority.*
- *The project and interventions are built on a (results based financing) model that would offer a pathway to financial sustainability; hence reducing the risk associated for ongoing funding required to guarantee operational continuity.*
- *We will be making use of blockchain technology to be able to tag users, track activities and record health care stats. Blockchain ID's are linked to Social ID numbers. Reporting will only be performed on the complete dataset without disclosure of individual data. Considering the nature of the information collected and analysed, we will obtain consent from all users in test and control groups. We expect to mitigate this risk through users accepting General Terms & Conditions when installing the app.*