What is your idea?

Inspire Challenges are about solving big problems using next-generation ideas. We're looking for novel high-risk big data and ICT ideas that have the potential to lead to new scientific discoveries, or enhance the efficacy of development efforts. We want to see innovative ideas with promising potential for social impact that use open data to solve development problems faster, cheaper and with greater efficiency. Use this section to briefly describe your idea.

- Indicate in one or two sentences **in bold** the essence of the idea.

Our mission is to empower smallholder farmers by providing access to valuable information and services through technology.

- Why is the idea an unconventional or creative approach to the problem outlined in the topic?"

Smallholder farmers have limited access to information. Both independent farmers and those that belong to producer organizations rely on third parties to learn important information such as market prices, weather forecasts, available services, and more. Farmers in remote locations have to travel many hours to access such information. Once information is gathered, it is usually a one-way stream meaning farmers receive static information from newspapers or PO newsletters, and often do not send information back to interested parties.

Our idea is to develop an app that will help bring together different data streams to provide our members access to the best information to support decision-making. The app will also allow farmers to send real-time data to Aldea Global, technical assistants, support organizations and other interested parties. This two-way communication will allow us to offer valuable services to farmers based on their individual, real-time needs. It will also strengthen the decision making process of Aldea Global for better investments as a private rural enterprise, and complement the current project "Modelo Agro Forestal de Alta Diversificación para el café en Nicaragua" executed by FOMIN/Aldea Global/CIAT 2017 to 2021 (ATN/ME-15915-NI). The app will initially focus on the following components:

1. Credit Portfolio (Credit score; Balance (interest/ principal); Interest rate; Loan payment mechanism; Loan application). In 2017, Aldea Global's credit portfolio totaled USD 8.4 million with a default rate of 3%. Lenders: FOMIN/IDB, Triodos Bank, Responsibility, Impact Finance
2. Agricultural input (Receive recommendations for the use of products based on soil analysis and technician recommendation; Buy products at lower prices; Order products)
3. Technical Assistance (Summary of recommendations; Schedule a visit; Chat with a technician)
4. Production and Markets (Market prices; Prices paid by AG; Matchmaking producers and buyers based on quantity, quality and prices; production volume; purchase history (volumes, prices))
5. Meteorological information (Link to the national weather forecast database; Receive recommendations of when to plant, harvest, apply fertilizer, etc.)
6. Aldea Global Foundation (Information on services provided by the foundation; Application to receive those services).

The app will work on smartphones, and also function on basic mobile phones through the use of SMS technology. Farmers will also access the app through computers. Those farmers who prefer not to use

technology will be able to print their information in stations located in strategic locations determined by Aldea Global.

- Describe the hypothesis for the proposal and why it is expected to succeed.

If smallholder farmers can easily access valuable information and services, they are capable of making better decisions, improving production, and increasing profitability. Farmers, especially younger generations, are increasingly adopting new technologies, which are accessible to low-income individuals. This app will revolutionize the way farmers communicate with Aldea Global or other support organizations. It is the missing link in existing data streams.

How will you pilot it?

Beyond simply great ideas, we're looking for great impact as well. We want ideas that can be put into practice in a short timeframe - to start making a real difference for real people today. Use this section to briefly describe how the idea will be put into practice.

- Describe the implementation plan, including any new technologies or tools that will be developed.

Design: Aldea Global and COSA implemented a Data Mining, Integration and Visualization project where we created a benchmark/dashboard with information on our 8000 active members in 469 communities that produce coffee, fresh vegetables and basic grains. By analyzing information on producer household, production/ agricultural inputs, sales and commercialization we were able to develop a credit score for each member as well as identify the information and service needs of individual producers. The app design will be based on these needs.

Data integration: Existing data on members will be integrated into the app. We will also define mechanisms to collect ongoing, real time data from users on the field.

Testing and Piloting: Aldea Global will test and pilot the app with 100 members to receive feedback and make necessary corrections. These users will receive training on the app.

- Explain how the work will be performed within the budget (USD$100,000) and time (12 months) allowed?

COSA and AG will develop the app in house with the help of external tech experts. Data has already been collected and the service needs of members identified, decreasing costs and time for app design. 12 months is enough for piloting the app.

- What essential data will be generated during this pilot?

Producer profile around KPIs; risk scoring for Aldea Global; Portfolio management; App relevance and effectiveness (number of users; number of services delivered, needs for additional functions, number of members who perceive app has increased their access to information and services).

- If the pilot is successful, what are the next steps?

AG will organize an event to launch the app to all members .The app will be constantly updated and developed based on feedback received from users. It will also be made public for the use of other producer organizations.