SpotLab: Crowdsourcing Diagnosis for Global Health: Videogames and mobile-microscopes for collective telediagnosis

Spain

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https://www.youtube.com/watch?v=Ldiba6ZV98k
https://www.youtube.com/watch?v=WGVC9OpEOb8
https://www.youtube.com/watch?v=Plv4qGjQOA
https://www.youtube.com/watch?v=ns wrA3QSzw
**Concise Summary: Help us pitch this solution! Provide an explanation within 3-4 short sentences.**

More than 1 billion people play videogames. Citizens can contribute to medical diagnosis playing mobile apps with real image samples. We use crowdsourcing, big data and mobiles turned into low-cost microscopes to provide collective diagnosis of global health diseases as malaria or TB.

**WHAT IF - Inspiration: Write one sentence that describes a way that your project dares to ask, "WHAT IF?"**

What if everyone, anywhere, could have access to a proper diagnosis? What if we could have a low-cost, rapid, ubiquitous portable diagnostic system of global diseases based on videogames and mobile phones?

**Problem: What problem is this project trying to address?**

As medicines become increasingly available worldwide, a new key aim of global health today is simple, portable, fast and inexpensive diagnosis. Several global diseases can be diagnosed by inexpensive microscopic analysis, however the diagnosis protocols remain a manual and time-consuming task for specialists. For instance Malaria, with over 230 million cases per year is the disease with the lowest rates of accurate diagnosis in the world.

**Solution: What is the proposed solution? Please be specific!**

Medical samples digitized with state of the art low-cost mobile-phone-microscopy designed with 3D printing technology. Videogames that make players solve the image diagnosis problem: instead of shooting aliens, shooting parasites in real digitized blood samples. Artificial intelligence used to combine the clicks from different people to obtain a single result useful for the diagnosis. Players of all ages worldwide learning and becoming part of a global task force of disease hunters. Making people aware of global health problems and empowering them to be part of the
future - making them part of a medicine revolution.

BI and Spotlab could together mobilize citizens for a better analysis gaps. We could plan together educational activities showing the impact of global health diseases ways we can jointly fight them and distribute identify, target, distribute and scale the Spotlab diagnosis technology worldwide, helping to reach the most vulnerable population and closing BI data

BI’s expertise include global diseases, marketing and medical innovation. A partnership BI-Spotlab could go along several dimensions. BI could help identify, target, distribute and scale the Spotlab diagnosis technology worldwide, helping to reach the most vulnerable population and closing BI data analysis gaps. We could plan together educational activities showing the impact of global health diseases ways we can jointly fight them and distribute spotlab videogames worldwide with the expertise of international marketing departments. BI and Spotlab could together mobilize citizens for a better future - making them part of a medicine revolution.
NEEDS: Based on you response above, please specify which of the following resources, operations or expertise by Boehringer Ingelheim you imagine leveraging to actualize the proposed co-creation opportunity. Please check all that apply. (Hint: while financing is often critical to scale, we are also interested in understanding what other assets or expertise could be leveraged).


EXPLANATION OF NEEDS: Please explain your choices in more detail.

Identify together challenges that require massive medical image analysis, so the crowd will be mobilized to meet them. This requires the use of professional medical networks in different countries to approve and extend the use of the new spotlab technology as a biomedical procedure- that could be piloted together with BI procedures. This will also require establishing relationships with governments and national medical institutions to adapt the technology and methodologies to local contexts. Spotlab has already started the partnership with BI Spain trough the Making More Health alliance.

OFFER: What are the main assets you may contribute in a co-creation partnership with Boehringer Ingelheim that would better serve unmet needs in health?

Deep understanding of an unmet need in a specific market/context, Insights into behavior change.

FOCUS AREAS: Which of the following best describes the main focus of your project? (select all that apply)

- Improving the affordability of healthcare (e.g., microinsurance, reducing the economic cost of care), Increasing physical access to healthcare to people with restricted mobility or restricted access (senior people, people with disability, remote or difficult areas, etc.), Holistic solutions that work across the entire care continuum (including education, prevention, detection, treatment, management, follow-up), Models that engage other industry players (e.g., nutrition, athletic, mobility organizations), Remote care solutions for health management, treatment, and diagnosis.

Please share what your organisation and Boehringer Ingelheim will Co-Create together

We could create new games and communication campaigns to fight diseases and increase awareness among general population and target groups. These games will target truly global diseases - from malaria to diabetes and cancer- that affect the most vulnerable populations in every continent and can be diagnosed with medical images. Games that help patients compliance with medication and improve their life styles for diseases such as diabetes or hypertension. Games to help detect pathologies such as diabetic retinopathy in retina images or arrhythmias in electrocardiograms. Games to help diagnose leukemia and other cancers that empower patients- both in developing and developed countries.

Please specify what your Co-Creation will result in:

- a new product, a new service.

If you selected “other” above, please explain:

Please provide a 1-2 sentence summary of your Co-Creation idea

Low-cost gamification solutions for telediagnosing diseases and increase awareness among the population. We use videgames, crowdsourcing and big data to provide collective diagnosis or screening of global diseases of interest for BI - from tuberculosis to diabetes or cancer. And the game is a vehicle to increase awareness and engagement globally.

How does this project link to the core mission of your organisation?

Our core mission is to contribute to universal and global health access harnessing the potential of videogames. A world where everyone, anywhere, can have access to a diagnose as a first step towards treatment and the eradication of global diseases. A world where people are aware of health problems and empowered to fight them.

Beyond social impact, how does this project link to Boehringer Ingelheim’s core business?

BI is committed to the goal of improving health in communities around the world. That is exactly what we can offer: an innovative solution to make diagnosis available anywhere, specially where it is more needed: remote areas so difficult to reach now. We can develop gamification solutions for several diseases BI work at, such as diabetes, hypertension or some cancers.

What are the specific inputs and actions that each side will contribute to this Co-Creation idea based on each of your unique competencies and experiences?

To start with, we have planned together the following actions:

I. Promote MalariaSpot game in Kenya, where BI is starting a co creation pilot with several Ashoka Fellows:

- Link MalariaSpot to the current partners that BI is working with in Kenya to help raise buzz and communication around the game in the Kenya market
- Include MalariaSpot in a promotional campaign with Safaricom to increase awareness around health insurance, as part of an insurance package

II. Work with BI on new games that target chronic diseases:

- Design games where people play with real medical images, contributing to telediagnose pathologies such as diabetic retinopathy, and use gamification to help raise awareness on diseases such as diabetes and help patients change their life styles
- Study the viability of applying the same concept to other NCDs that can be detected with medical images. For example, visualization of electrocardiograms to detect arrhythmia, tumor cells in lung cancer, strokes in PET or CT scans...

Please describe the potential revenue model for this Co-Creation idea.

New revenue streams deriving from social innovation. A hybrid model combining apps and diagnosis models. Or based in awareness- For instance, there is already an ongoing project in Kenya in which teledicine is included in an insurance package. In Kenya malaria is still a huge health problem. Games such as malariaspot could be included in these packages for awareness and engagement purposes.
What possible risks or challenges do you foresee?

Cultural challenges to adopt and understand the new technologies
Medical community skepticism regarding the participation of laypeople
Legal challenges regarding the responsibility of wrong diagnoses

Is there anything else you would like to share about your Co-Creation idea?
How much input do you hope to receive from Boehringer Ingelheim?

I’d like to implement together.

If you selected "other" above, please explain:
Besides Boehringer Ingelheim, what other types of partners might be valuable to carrying out your Co-Creation idea, and why?

Videogames Industry Partners because of their expertise developing and marketing videogames, as well as their distribution channels.
Education Partners because of their expertise developing educational resources targeted to different age groups.
Mobile industry to distribute the games.

Source URL: https://www.changemakers.com/makingmorehealth/entries/spotlab-crowdsourcing-diagnosis-global-health