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The Road Map v.3

ATTENTION, closed document

We are working on this new version

This document has been immortalized HERE

This is a road map for Sensorica, an open value network (OVN) designing, producing and distributing sensing and sensemaking systems.

see also Road Map v.2 to compare

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Contents

The role of this document is to lay out a long-term vision for Sensorica, which will guide our strategies and help focus our activities.

It makes explicit an incremental development, avoiding some of the pitfalls laying ahead of us.

We believe that this vision is compatible with our resources and competences (academia, optics, physiology, 3D design, biochemistry), with the market needs (low price, easy to use/customizable/versatile), and with the threats of competition (niche, rapidly expanding family of products, low-cost structure of developing/manufacturing/distribution)

Philosophy

Build an *open, decentralized, self-organizing value network that* can scale rapidly to global proportions.

- Use the full potential of low-cost communication and coordination tools.
- Take full advantage of the global outreach the Internet provides.
- Build a vast and highly dynamic self-organizing collaborative network, sustained by synergistic relations.
- Learn how to thrive in the *know-how economy* by fully embracing open innovation.

Vocabulary

Sensor: the core of any application, this is our laser and optical fiber-based sensing technology in all its actual and future forms.

Application: a device or method using our sensor to solve a problem.
Prototype: a device that contains our sensor used in a specific application, not ready to hit the market.
Product: a consumer-ready device designed from a prototype.

Partnerships

A partner is an entity that is not an *active member* of Sensorica (see organizational structure). If a partner becomes a member by contributing to the market value of Sensorica, he/she/it will have access to the value generated by Sensorica and will take an active role in governance.

Partnerships with **academic institutions** can help develop new applications, open new markets and can be leveraged in other approaches, to get funding for example. Partnerships with **commercial entities** help productize our prototypes and to bring out products to already established markets.

Our specialty is our sensors. Partnership with non-member academic entities can be seen as a form of externalization of R&D for various applications. Partnerships with non-member commercial entities can be seen as an externalization of manufacturing and distribution, including marketing. We want to remain a locus of know-how, of innovation and design, and of coordination.

With an academic institution

- Concentrate on labs in biology, physiology, medicine, agriculture for which our technology is best adapted.
- Offer our prototypes to academic labs, and in exchange use the lab as a testing ground, as a platform for new applications development, to integrate new prototypes, and to generate scientific publications.
- If possible, sell the prototype to the lab to generate income for Sensorica's members.

Potential collaborators for the Mosquito sensor

With a commercial entity

We engage commercial entities that would provide assistance for manufacturing and for the improvement of the sensor. We also welcome commercial partners which can integrate our sensor into their products, thus giving us access to their market.

Initial funding

Funding helps us to further develop the core technology, to develop new applications, to design new products, to develop the Sensorica's infrastructure, to straighten the Sensorica community, to compensate members, etc.

1) Tactus Scientific Inc (a member of Sensorica) will independently seek grants, which will formally belong to Tactus. Based on our current understanding, Tactus will use a part of these grants to further develop its sensor technology (the Mosquito), and another part to develop Sensorica (its infrastructure, the community, its brand, etc.). Other corporate members of Sensorica can do the same.

2) Sensorica, through its members and in a joint effort with academic partners or members from academia, can seek research funding to fuel development of our prototypes and of new applications.

Sensorica cannot seek funding on its own, it is not a legal entity.

Expansion

Stage 1 - building critical mass and reputation

Engage in niche markets, out of the reach of large manufacturers. Initially, we'll try to develop partnerships with academic labs, or to invite them to become members of Sensorica. These relations can bring different advantages:

- Funding
    - Generate some income from offering a small variety of products and services.
    - Members of Sensorica can team up with academic labs to apply for academic research funding.
    - Members of Sensorica can leverage their relations with academic labs to seek independent funding.
- Development
    - These labs can become testing grounds for our sensors
    - New prototypes can be created
    - New applications can be explored
- Reputation
    - Scientific papers can be produced citing Sensorica and its members
    - These relations can be advertised on Sensorica (social) media outlets.
- Community: Sensorica membership can grow as a result of these relations.

We'll try to use our immediate social network and proximity in order to keep large corporate manufactures at a distance, for the time of our growth to the critical mass. Sensorica will remain vulnerable until it becomes an attractor by the value of its accumulated know-how, by its

capacity of production, and by its reputation. We'll keep our processes transparent and our knowledge open, but we'll keep a low profile.

During this stage, Sensorica will also develop its infrastructure and internal processes. All necessary mechanisms for self organization to support scalability will be put in place: value accounting mechanism, reputation mechanism, role assignment mechanism, governance and decision making mechanism, etc.

Sensorica will also seed different open scientific communities around muscle physiology and agricultural research, and will interface with already existing ones.

At the end of stage 1 we'll have a few products on the pipeline, we'll constitute a locus of know-how, and our reputation will be glowing. At this moment we can stick our heads out.

Stage 2 - expanding into emerging economies

At the end of stage 1 Sensorica will still NOT be powerful enough to go head to head with large manufacturers. Sensorica is not a competitive entity, any organization can join as a member. But classical entities will perceive Sensorica as a threat and will wrongfully try to combat it rather than to join it. This puts Sensorica in danger. Our strategy is to avoid confrontation by going in places where large manufactures cannot go. That is into developing markets, which are in fact mass markets.

In order to penetrate developing markets we'll need to lower the price of our products. We've identified 3 ways to do that.

1. Use open hardware
2. Use open software
3. Use **open and distributed manufacturing**

Sensorica is very well positioned to interface with open software and hardware communities. By integrating open software and hardware into our products we'll dramatically **reduce the cost** and we'll offer **continuity** to our customers. If we need customization of some components we'll utilize the capacity of these open communities in exchange for membership in Sensorica.

We'll design with 3D printing in mind. Inert components of our products, like the body/casing for example, will be 3D printed locally by the customer from a file that accompanies the product. Sensorica will ONLY ship the essential parts, whatever cannot be produced locally. The product will be designed for easy assembly by the manufacturer. (We want to reproduce IKEA's success in selling products to be assembled by its clients!) In doing so, we also let the customer customize its product, by modifying non-functional parts of the 3D model to be printed.

During this phase we expect Sensorica to grow very rapidly. This will be a test of our

technological and social infrastructures. Adjustments might be necessary to allow our open value network to go to the third stage.

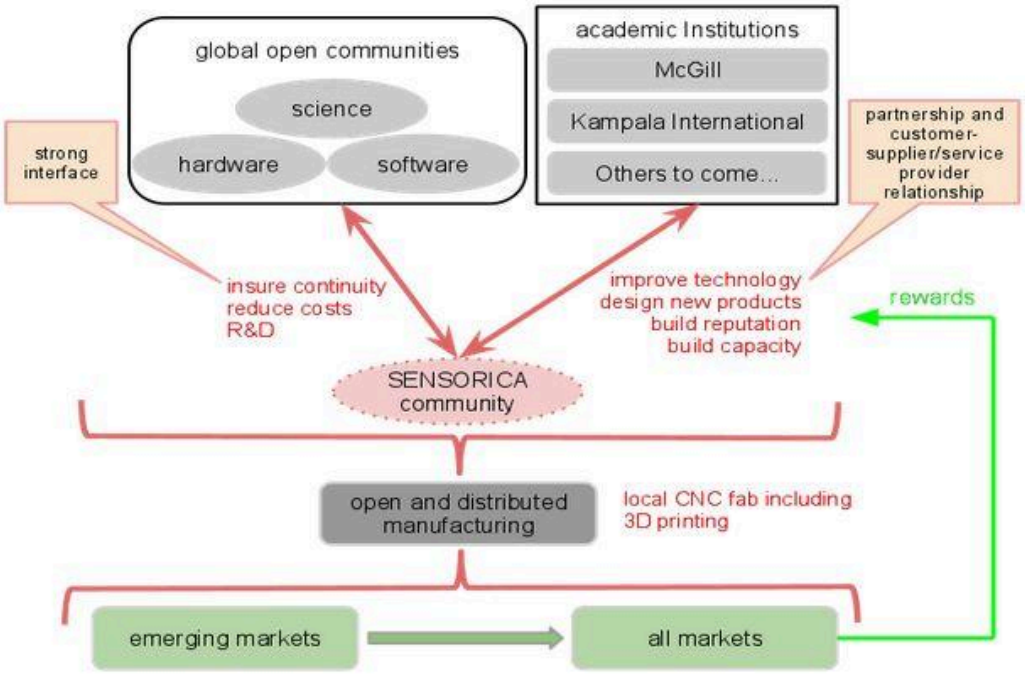
This second stage must be heavily supported by social media. Every major project within Sensorica will become a *social object*[1].

Moreover, during this second stage Sensorica will develop an ecosystem of products and services, which will reinforce each product's market value. This will also make it more difficult for large manufacturers to jump over Sensorica, and will rather incentivize them to join our community.

Stage 3 - a network of networks

At this stage Sensorica will be powerful enough to expand into adjacent fields or to replicate itself. This is when the ability of different networks like Sensorica to interface with each other is put to the test. The *value exchange mechanism* must allow value to flow freely between these structures. Reputation would be used as a social currency within the entire super-network. Roles would be exported from one subnetwork to another.

The super-network will eventually become a super-attractor, capable of swallowing any large manufacturer.



[1] A concept I got from Sebastien Paquet

Sensorica’s strengths

- the technology itself
- he know-how about the technology
- the collaborative network
- out in-depth knowledge about the physiology market
- ...