Network-centered Innovation to Fuel Food System Change

Lead author: David Ball  
SecondMuse, San Francisco, CA, USA

Contributing authors:  
Todd Khozein, Rachel Lawley, and Jeremy Kamo  
SecondMuse, San Francisco, CA, USA

A minor change within the food system can have massive implications. An increase in urbanization can alter what customers demand from multinational food companies, add stress on a government’s health care system, and create additional environmental stress.

LAUNCH was constructed to source and accelerate solutions to the challenges faced not only by the rice farmer, but also by the institutions, governments, and companies surrounding them. Many of the innovations that we need in order to adapt to the current challenges and opportunities of our food system already exist. In the first year of working to improve global food systems, LAUNCH sourced 280 of these innovations. Our key challenge is not to source more innovations, but rather to capture the full potential of existing ones.

“Many of the innovations that we need in order to adapt to the current challenges and opportunities of our food system already exist”

LAUNCH

Network-centered innovation is the backbone of LAUNCH. Ten years ago, the LAUNCH platform was developed in partnership with NASA, Nike, USAID, and the US State Department, motivated by the shared belief that understanding and tackling the world’s greatest sustainability challenges requires unprecedented coordination and cooperation. At LAUNCH, we have found that innovation is a valuable fuel in fostering a safe, creative, and collaborative environment to unite different actors with a common cause.

Another key ingredient of the LAUNCH process is aligning economic actors in a collaborative orientation. We have witnessed LAUNCH innovators transcend market pressures to compete with each other, opting to coexist instead. Where effort was previously dedicated to competing, we help in recapturing and enhancing each other’s efforts, resulting in higher potential for innovations and greater systemic efficiency. LAUNCH innovators have opted to work side by side with potential competitors within their cohort to create “collaborative
equilibriums” that have proved beneficial to both the individual company and the ecosystem as a whole.

The agriculture and food sector carries inherent risks that may prevent the investment gap between it and other sectors from ever closing. If investors do continue to shy away from the sector, it will be even more critical that we look to new models like network-centered innovation and collaborative equilibrium to support food system innovators.

Fostering network-centered innovation
The current innovation space is driven largely by individual players focused on predetermined outcomes that deliver benefits for a few, elite beneficiaries. Innovation has not traditionally focused on improving things; it has largely been about winning in the market. This kind of innovation is inherently limited and limiting: it is not designed to meet emerging global challenges that are by definition too complex to be understood, resourced, and addressed by any one individual actor.

However, if framed from a broad enough set of perspectives, “innovation” – the process of introducing new ideas, products, services, and methods – still carries the potential to impact these global challenges. Imagine a network focused on collectively incubating innovations that could help all of humanity. What LAUNCH has created is a collaborative process that promotes innovation as a catalyst for transformational change, attracting and aligning a network in support of a common challenge.

“Imagine a network focused on collectively incubating innovations that could help all of humanity”

Network-centered innovation uses innovation to convene and align diverse networks to act collectively. This need for network collaboration is especially evident when addressing development challenges, which are expressed locally but often have global dependencies and ramifications. The idea that development challenges somehow sit outside the domain of business is a fatal fallacy. Supply chains, especially in food, are truly global, and the way we source and deliver products around the world is not separate from the development agenda: it is the development agenda.

Network-centered innovation recognizes that innovation can come from anywhere and anyone, and considers the voices of beneficiaries to be as valuable as those of powerful organiza-
By growing something more nutritious than fish …

2x protein of beef steak

3x magnesium of mackerel

4x potassium of bananas

10x iron of spinach

1 tablespoon of dry spirulina (10 grams)

Figure 2: Nutritional benefits of dried spirulina

By growing something more nutritious than fish…

2x protein of beef steak

3x magnesium of mackerel

4x potassium of bananas

10x iron of spinach

1 tablespoon of dry spirulina (10 grams)

© EnerGaia

By strategically increasing spirulina production, EnerGaia’s impact is now demonstrated by improved regional food security, a reduction of spirulina’s environmental footprint, and additional economic opportunities for smallholder farmers.
Network-centered innovation is not a simple one-way street; more accurately, it is a complex interconnected series of highways. In the process of supporting EnerGaia, the BEC network, made up of more than 800 individuals, was tinkering with how they could integrate EnerGaia’s innovation into their own work. Major noodle-makers started to think of new spirulina lines, fair trade organizations initiated the first steps for spirulina certification, and at the United Nations Environment Programme (UNEP), Donna Kwan connected the dots between spirulina and the dugong conservation program she manages.

The beauty of emphasizing innovator support that goes beyond providing capital is that creative collaborations emerge. Donna Kwan met with Saumil Shah, the founder of EnerGaia, at the BEC Kickoff Summit. Over the four-day summit, Donna and Saumil designed an initiative for UNEP’s program in Southern Thailand. Economic and food insecurity were driving local fishermen to hunt the endangered dugong. Donna believed that engaging the fishermen as contract farmers for EnerGaia would provide a necessary alternative to dugong poaching. The web of collaboration went one step further. Together, Donna and Saumil brought in a local hotel to participate in the conservation initiative and start utilizing spirulina in their restaurants.

“Entrepreneurs are arguably the most important protagonists in spawning innovation in an economy”

Creating collaborative equilibrium
Entrepreneurs like Saumil are arguably the most important protagonists in spawning innovation in an economy. They are also the most economically vulnerable innovators and are conditioned to compete with one another for survival. In conventional economic arrangements, they are required to expend substantial resources – time, strategy, and capital – defending their position and dominating or even undermining their competitors.

Although economies have benefited tremendously from this competitive equilibrium, which has spawned numerous large-scale, highly profitable enterprises, competitive equilibrium is structurally limited. Its beneficiaries are not the generality of entrepreneurs, but a small handful who survive the crucible of innovation. Figure 3 shows that this structure arbitrarily excludes those who cannot afford to take on significant personal financial risk or do not have access to the right networks, as

---

**Figure 3:** Landscape model visualizing the exclusive nature of a competitive equilibrium

Only a small percentage of entrepreneurs fit a mold and have the prerequisite knowledge and skills to receive traditional support.
In contrast to Figure 3, the landscape of opportunities for an entrepreneur in a collaborative equilibrium is much greater. Economies and sectors flourish when the number of thriving, interdependent businesses increases.

Interdependence over independence

Collaborative equilibrium is founded on the hypothesis that maximizing the interdependence of businesses both with each other and with the broader social and economic context is what leads to thriving economies (Figure 4). Competitive equilibrium, by contrast, seeks to establish and maintain maximum independence of individual businesses in order to consolidate economic power.

Collaborative equilibrium focuses on nurturing the entrepreneurs themselves. We posit that economies flourish as the number of thriving businesses within an interdependent ecosystem increases, regardless of their size. This requires minimizing friction in the exchange of knowledge, ideas, goods, and services within a local context, while maximizing the agency of entrepreneurs. Instead of priming them to engage in a battle for survival, entrepreneurs are instead seen as indispensable agents of innovation, knowledge, and investment, enhancing their capacity both individually and collectively. Investing in the human and social capital of entrepreneurs as the basis for innovation is, at its core, a resilience strategy: when an individual venture fails, this does not spell the demise of the entire sector, and the capacity developed in the interim is retained by the ecosystem and can be redeployed.

well as those who have to acquire business acumen through their own efforts rather than as part of their knowledge capital endowment from birth.
“We posit that economies flourish as the number of thriving businesses within an interdependent ecosystem increases, regardless of their size”

LAUNCH innovators

Even before we started to build programs around collaborative equilibrium, we saw our hypothesis play out organically within the cohorts of LAUNCH innovators. A cluster of companies working on alternative fish feeds (both plant- and insect-based) worked together to raise awareness, as well as capital, for the subsector. A group of four companies, producing ingredients ranging from coffee flour to cricket powder, started a monthly meeting in which they shared best practices and ideated around a joint product to pitch to consumer product companies. Now, with more intentionality around fostering collaboration, we have been able to go to scale. In New York City, through SecondMuse’s Futureworks program, 85 companies are interconnected in the common pursuit of building up the city’s advanced manufacturing and hardware sector. Our ambition is to replicate Futureworks’s collaborative equilibrium model for sectors like aquaculture, alternative proteins, and green technology, starting in Indonesia and quickly expanding to Vietnam, Tanzania, and across the United States.

Never before have we had the knowledge, technology, and capacity to solve the world’s most pressing problems. Through innovation, and the collaboration that it can fuel, we have the ability to create the food system of the future – one that is healthy, sustainable, and just.

Correspondence: David Ball,
LAUNCH Food Director, SecondMuse, 643 Mission St.,
San Francisco, CA 94105, USA
Email: David.ball@secondmuse.com

References
[FAO Fisheries and Aquaculture Circular No. 1034.]