Fair Trade at Risk of Disruption
Digital First Mile

Picture credit: Yann Arthus Bertrand

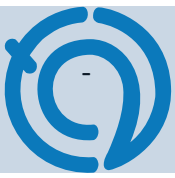Monday July 30, 2018   2217 words

Good morning,

In this article I will outline *why* the certification business is at risk of being disrupted. In part two of this series I suggest *how* digitization can be harnessed and *who* is most likely to lead the transformation. You can read it [here](#).
Since the 2015 Paris Agreement gave the world Sustainable Development Goals (SDGs), the number of big brands that pledge to source 100% from sustainable origin has been growing. But can consumers trust the promise?

Partly, this is in the hands of an organization most people in the world have never heard of, the ISEAL Alliance. The organization sees itself as the guardian of sustainability by upholding the highest certification standards for its members. ISEAL's founding members created the bedrock for sustainable goods in the late nineties. Today they certify anything from coffee to cotton to rice. Familiar names include Fairtrade International (FLO), Forest Stewardship Council (FSC), Marine Stewardship Council (MSC) and Rainforest Alliance/UTZ.

Idea in brief

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The certification business is prone to disruption. Producers and buyers in the global supply chain are frustrated with inefficiencies that can be improved with digital technologies.	Momentum is building to ensure transparency and traceability by digitizing the first mile of the supply chain, as this enables buyers to source more sustainably.	In the first mile, the demand-side (e.g. big buyers), may well outperform non-profit certification organizations that were founded on more idealistic principles.

Disruption, before you know it

Over the years the Fair Trade market has turned into big business. FLO alone, certified US$7.9bn worth of goods in 2016, compared to $830mn in 2004. Consumer demand for sustainable goods is expected to grow further. Two-thirds of consumers say they are willing to pay more for sustainable produce[1] and a third of consumers is now buying accordingly. Unilever believes the market is worth more than $2.5trn[2].

Even so, ISEAL members still have a lot of ground to cover. Ethical production methods haven't quite become the norm. In 2017, certified cocoa for instance, represented only a third of business for the top three traders - 36% (Barry Callebaut), 26% (Olam) and 42% (Cargill). Because the current certification system is costly for farmers to join, without economies of scale, certified produce is mostly supplied by cooperatives. It fails to reach a much larger group of unconnected, distant small-holder farmers.

When ISEAL supporters from around the world gathered in Sao Paolo at the annual Sustainability Standards Conference, the topic on the agenda was: *What's next for ISEAL?* Perhaps a more urgent question is: *Who will be the next ISEAL?*

There are a number of drivers that could cause trouble for the certification business:
- Typical writing on the wall for disruption is the nagging *frustration* that stakeholders experience. Controversy over efficiency, impact and relevance of traditional certification, although not new, is growing[3]. Several actors have different roles to play: standard bodies (e.g. FLO, FSC and Rainforest Alliance/UTZ) that set requirements, auditing organizations, traders/buyers and marketing bodies[4]. The world needs leadership to transform the supply chain, from farm to fork, in support of a sustainable, circular economy.
- The dynamics of *who controls certification* on the ground are shifting towards demand-driven initiatives[5]. Big buyers are increasingly exploring ways to ensure that production in the first mile is sustainable. For example, in the last decade, Starbucks invested $100mn in certifying its 380.000 farmers on the basis of its Coffee and Farmer Equity (C.A.F.E.) scheme. It says it now sources 99% of its beans "ethically", C.A.F.E. certified. Impressive results. But concerns exist over the lack of transparency of company-owned schemes.
- And finally, now it is easier than ever for *new players* to stir things up digitally, providing greater value than incumbents who insist on certifying sustainable production the old-fashioned way.
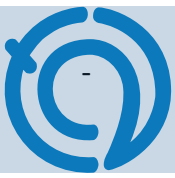
The human touch

The purpose of auditing is to verify the truth on the ground, so consumers can trust that the standards at origin are meeting the promise on the label. Data is collected through an inefficient process of field visits. Why?

- Not all advanced technology *fits the rural context* of the first mile. Farmers of certified crop are often in remote places, with minimal infrastructure. People in the poorest parts of the world do not benefit from new technology fast enough, despite technology leapfrogging.
- Until now, certification bodies were not really pushed to be more innovative. They are surrounded by digital laggards in the supply chain. Logistical operators, for instance, still create mountains of paperwork as they move certified goods around the world. The Economist describes this as secondary shipping and it leaves produce sitting aimlessly in international ports, waiting for paperwork and customs clearance[6].
- Certification premiums benefit cooperatives through capacity building programs, like training. An extra pair of eyes, during periodic audits, can help to sense soft impact and signal risks if investments do not reach small-holders or workers.

The trouble with analog

An alternative approach is to rely less on the human touch and allocate human resources based on a data-driven system of warning signals and priority setting. This requires a shift to digital data to gain insights that are timely and reliable.

Traditional auditing is expensive and time consuming. It does not scale. Auditors visit sites to collect data. The mostly paper-based process, even when transferred to excel, is not accessible remotely, in a central location. Insights from analog data are labor intense, prone to human error and fraud, and unpredictable.

ANALOG	DATA INSIGHTS	DIGITAL
LABOUR INTENSE		AUTOMATED
UNPREDICTABLE		CONTROLLED
HUMAN ERROR		REAL TIME
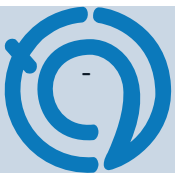
The reality of sustainable origin is that it is not static. Certification audits provide an annual snapshot of compliance. They offer no insight in real-time conditions.
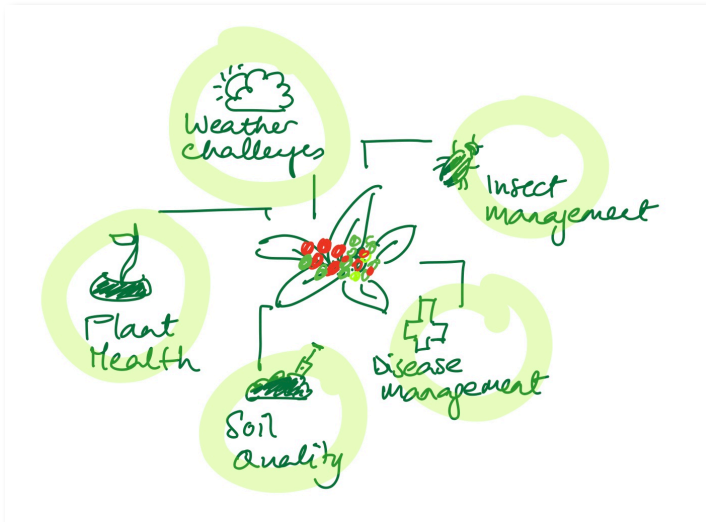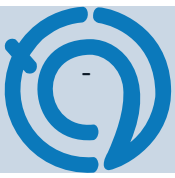
Digitization of the First Mile

Our collective failure to make progress towards sustainable origin cannot be ignored. We need to adopt an effective approach that is scalable, urgently. The 2018 Cocoa Barometer concludes:

> „Sector-wide efforts to improve the lives of farmers, communities and the environment made in the past decades have not led to significant impact. The scope of proposed solutions is not even in the ballpark of the scope of the problem."

A new dawn is rising. Now it is easier than ever to stir things up in the certification business. Recent studies, like Sensing Reality, argue that digital technology will make traditional auditing irrelevant[7]. As a verification tool of the true condition of nature (environment) and people (social/economical), digital technology combines multiple data inputs in a more reliable, timely and efficient way. Digital data sources include:

1. *Apps and digital templates* on smartphone or tablet: people "taking note" of what is going on, complete digital workflows or register transactions (e.g. payment) to their origin. Risk of human error, although not eliminated, is reduced. Collected data is stored in the cloud for remote access and real-time analysis. For some examples of new apps that are introduced to citizens, workers, farmers and auditors, see the notes[8].
2. *Fixed and mobile sensors*, Internet of Things (IoT): the ability to pinpoint conditions on the ground. Sensors collect data on anything, from the use of equipment, levels of agro chemicals, water management, environmental damage. This data is automatically sent to the cloud through an Internet connection, with ID#, GPS location and timestamp.
3. *Remote-sensing* (e.g. satellites, drones): *eyes in the sky* register environmental and agricultural changes (e.g. deforestation, water scarcity or flooding) on the earth' surface with increasing detail, even registering a hyper spectrum, beyond what the human eye can see[9].

A digital first mile can help monitor and predict the truth on the ground, more timely and reliably, than an auditor could do by visiting once a year.

IoT technology

Insights in real-time conditions in the first mile enable data-driven decision-making and targeted resource allocation, when investing in sustainable production and capacity building. This is driving digitization in the first mile.

Increasingly, there are examples of smart-farming applications that fit the rural context of the first mile, *and* make commercial sense to farmers. For example, in field-labs, farmers can compare harvest results from one plot that benefits from cultivation advise based on data from soil sensors, and a neighboring plot without sensors. The data is gathered in African soil, but analyzed remotely using Dutch agronomical algorithms. The resulting advise is targeted to the farmer's unique conditions, climate-smart and available at the right time, via text message[10]. Harvests can be doubled through a simple service.
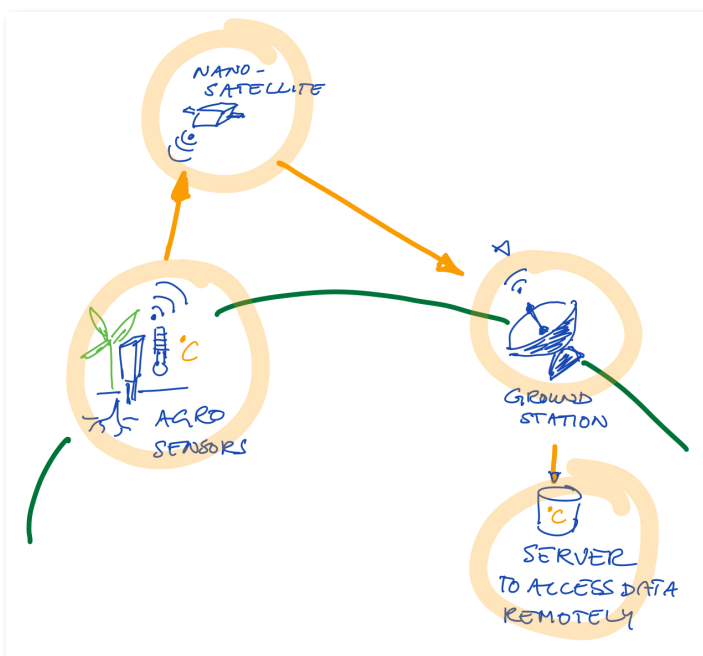
Internet-of-Things devices generate digital data. This enables automated, controlled and real-time insights. These applications improve the livelihood, not of one, but of millions of small-holders simultaneously. For IoT to work it needs internet connectivity. Many small-holders, working farmland in remote places, do not have reliable connectivity or it is absent.
But there is advanced technology on the way. Soon, some say by the end of this year, data from sensors can be sent every day to the cloud, for a few dollars per year.

Thanks to the relative affordability of these IoT newcomers, nano-satellite technology can unlock smart-farming solutions for millions of small-holders[11]. Anywhere in the world. Since, direct-to-satellite connectivity does not rely on the presence of local telecom operators.
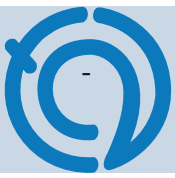
Internet-of-Things (IoT) solutions like smart-farming, that combine local data with remote analysis - instantly - are potential game-changers for the UN's SDGs[12].

Further up the chain big buyers, traders and financial service companies, also see the potential of digital harvest predictability to reduce financial risks. As a result, businesses are gearing up to digitize the first mile. For example, through a service called OptiCrop, Swiss Re enables risk mitigation through data-driven insurance of previously uninsurable farmland. Farmers can monitor soil moisture and directly request parametric insurance policies for their fields [13].

A related product, called AgRISE, is using satellite imagery to protect Indian small-holders against the risks of flooding[14]. In combination with IoT, additional data can be automatically gathered on the ground. This allows pinpoint accuracy for individual smallholders. Analyzing this data enables automated claim handling, adding further efficiencies to the process. These digital tools have the potential to lift individual farmers out of poverty. A roll-out out on a grand scale can have a significant impact on farmers' livelihoods with a cascading effect on protecting their basic human rights.
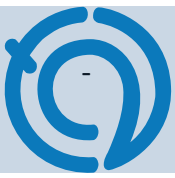
Transparency and traceability

For years ISEAL members have invested time and effort to gain a clearer view on the supply chain's origins. Together, they are well positioned to identify synergies in digital initiatives that improve reliability through transparency. As well as traceability (i.e. provenance), since a digitized first mile more easily connects to a digitizing supply chain.

The Achilles' heel of the global supply chain is a severe lack of transparency and traceability. This only persists with a remote and unconnected first mile.

But change is hard and transformation is even harder. Many organizations are struggling to scale their digital initiatives. Alignment around a common vision and digital strategy is a major challenge, even more so in partnerships. That's why the *current* ISEAL might struggle to transform into the *next* ISEAL.

If so, then WHO will set the standard for sustainable sourcing and HOW will it take shape?

Given the dynamics of the first mile, digital disruption of the certification business is more likely to be buyer-driven. My article *"Aggregation or Platform: A Trader's Digital Choice"* describes my take of how this may unfold in more detail.
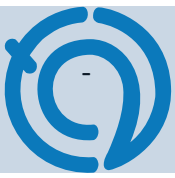
So where does this leave ISEAL?

It is essential to consider the demand-side of the supply chain in a new digital landscape. One scenario for ISEAL is to align interests around a common vision of the four actors that have a key role to play in addressing sustainability pain-points: standard bodies, auditing organizations, traders/buyers and marketing bodies.
If trust sells to consumers, reliability of sustainability is in the interest of all stakeholders. ISEAL is in a unique position to establish their common ground and articulate new ways that embed the standards for reliable sustainable production in this new digital landscape.

Further reading: In Part II of this series, "Aggregation or Platform: A Trader's Digital Choice",
I suggest HOW the digital landscape for sustainable sourcing unfolds and WHO might drive change.

About Marijn Driessen

Marijn Driessen is strategy consultant. In 2009, she founded FluidNations to focus on digital strategy and marketing, through internet-driven business models and brand building. FluidNations works closely with partners who are thought-leaders in Internet of Things, the Global Supply Chain and Sustainability. If you'd like us to check out your value chain, feel free to reach out to Marijn at marijn@fluidnations.com.

[1] Nielsen (2015), The Sustainability Imperative
[2] Unilever (2017), Making purpose pay; Inspiring sustainable living
[3] Changing Markets Foundation (2018), The false promise of certification.
[4] Fountain, Huetz-Adams (2018), Cocoa Barometer 2018. Abstract: "*In the critique on certification, the various components are often mistakenly used interchangeably, or seen as a single issue. The first component is that standard bodies (such as Fairtrade, UTZ, or Rainforest Alliance/SAN) set a standard for cocoa, outlining requirements for sustainable cocoa production. The second is that auditing organisations conduct an audit to certify that the requirements of the standard are met. The third is that cocoa companies purchase the certified cocoa. The fourth component is the marketing body, liaised to the standard body, which promotes the label*".
[5] Grabs, et al (2016), Understanding Coffee Certification Dynamics
[6] Economist (2018), The Global Logistics Business is going to be Transformed by Digitization
[7] Gale, et al (2018), Sensing Reality
[8] Profound NI CheckApp offers a single template to auditors to verify certification compliance more efficiently; Smart Agriculture Myanmar (SAM) will offer rice paddy farmers real-time and personalized crop calendars; Earth Observation uses remote sensing data and personal tracking devices to trace the journey of tropical hardwood from the place of origin; BlocRice enables verifiable direct payments to smallholders, for their role in the global supply chain. It uses Blockchain technology to register transactions and payments to ensure transparency and traceability.
[9] New innovation in remote sensing means small satellites can see what the human eye cannot. Applications include flood warnings, early warning systems for wildfires and harvest crisis predictions.
[10] Medium by Hiber (2018), part of a new generation of IoT space entrepreneurs. *Sowing the Seeds of Change* describes a use case on harvesting data to boost crop yields.
[11] SpaceITBridge (2018), The 2018 Summer of IoT, 18 Startups, over, 1600 Satellites.
[12] WEForum (2018), The effect of Internet of Things on sustainability
[13] Swiss Re launched "OptiCrop". A fully white-labelled web-based application. It allows farmers to assess current and past conditions of their crops, compare their fields to their neighbours', track index policies and receive precipitation forecasts. The solution is already being used in parts of China, Africa, Ukraine and Latin America.
[14] In collaboration with SwissRe a service called AgRISE (Agricultural Remote sensing Insurance for Security and Equity) was launched in July 2017 using satellite imagery and crop insurance to boost India's smallholder farmers gain: "*Of $140 billion reported for damages in all economic sectors between 2003 and 2013, agriculture reports an estimated loss of $30 billion. Smallholders are particularly vulnerable to crop damage from extreme weather events. They stand to benefit greatly from affordable insurance products.*"