

“Green Urban Solutions” - A reflexive approach for sustainable business models in the agricultural sector

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A small but increasing interest is emerging in “sustainable business models,” (Schaltegger et al., 2016), “sufficiency-driven business models” (Bocken et al., 2015; Bocken et al., 2016), or simply “new business models” (Jonker, 2014). These innovative approaches to business models draw a direct connection between the potential of business for sustainability and they share several criticisms on business science approaches such as Osterwalder's (2004) business model ontology, arguing that sustainability issues have specific demands for business models; indeed: how can a business model strengthen niches instead of the regime? How can it foster the transformative change that is part and parcel of transitions?

Criticisms on traditional business model approaches include (Beers, 2016):

- The rather limited conceptualisation of value, mainly in financial terms, while sustainability approaches often use broad value orientations such as people, planet and profit.
- The limited set of relevant stakeholders in the business model, including only the producer, his/her production partners, chain partners and the consumer, while transition science advocates the inclusion of a broad set of stakeholders that also include societal stakeholders such as government actors, NGOs and citizens.
- Traditional business models offer little in terms of conceptualising the societal environment of a business, implying that the environment will be relatively stable, while societal change is at the core of transition science.

Still, a conceptual relation between business model concepts and transition science is mostly missing. In this contribution, we build on the above criticisms by adding reflexivity (cf. Grin, 2006; Beers & Van Mierlo, 2014) to the business model concept. Reflexivity may help to conceptually grasp the societal change that is so characteristic for transition, and can act a means for entrepreneurs to more successfully navigate their changing societal context. We apply the resulting concept to innovative agricultural solutions to urban issues: “Green Urban Solutions.”

Methods

We conducted an exploratory study in the Dutch agricultural sector. We analysed three transformative business models concerning agricultural solutions related to urban issues such as climate mitigation and public health – “Roof Park B.Bylon” in Amsterdam, an edible roof park with water retention functions, “Stelling 2.0” in Amsterdam, an initiative that produces plants with enhanced capabilities to filter particulate matter from the air, and “Roof Park Rotterdam,” a park on top of a shopping mall with both public / social and water retention functions. We conducted 21 semi-structured interviews and we collected written documentation for the cases.

In our analysis, we used a mostly traditional business model approach as a basis, but we added a reflexive orientation by adding four categories (cf. Beers & Van Mierlo, 2014):

- *Discourses*: Changing discourses regarding, for example, climate change, nature, the metropolis, health care, mobility, etcetera, that may offer opportunities as well as obstacles to a business model;

- *Relations*: As societal networks change, old relationships may give way to new partnerships with previously unexpected allies, such as farmers allying with environmental NGOs.
- *Practices*: Emerging and fading practices provide opportunities and obstacles to new business models, such as logistics, ICTs, maker spaces and energy transition.
- *Institutions*: Changing rules and regulations offer shifting market patterns, such as the Dutch greenhouse sector signing a covenant to reduce CO₂ emissions or supermarkets ceasing to sell eggs from battery cages.

Preliminary results

Results suggest that a reflexive approach to business models may help entrepreneurs to better focus on their changing societal context, of which our research includes several examples. For instance, in case of the Roof Park Rotterdam:

- The Roof Park fits well with local *discourse* about improving the urban societal climate, as well *discourses* about climate change, public health and minorities.
- Potential *relations* with shops in the shopping mall have been explored to a small extent only. Also, the Roof Park may strike relations with government to yield profit from water retention and heat reduction.
- Our analysis indicates many *practices* that can benefit from the Roof Park. To name a few: local cultural activities, workshops, education, sports and leisure, which all have some business potential for the park.
- Initially, relevant *institutions* include a subsidy for the Roof Park, the end of which now necessitates strengthening the business model more.

Our findings suggests that a reflexive approach can contribute to the transformative potential of sustainable business models by drawing attention to the specific opportunities and obstacles that go with a changing societal environment. In so doing, it provides leverage to entrepreneurs that wish to take into account the changes brought by transition and accelerate change.