



**Practice Abstract 7 -
Farmtopia Sustainable Collaborative Business
Model Innovation**

Summary for practitioners

Problem:

Small and medium farmers face significant barriers to adopting Agricultural Digital Solutions (ADSs), including high investment costs, low interoperability with other technologies, and a lack of trust. Current business models often favor large-scale farms, exacerbating power imbalances and limiting smaller farms' ability to benefit from ADSs. This limits the potential for democratizing technology adoption and achieving broader sustainability goals in the agricultural sector. Sustainable Collaborative Business Models (SCBM) offer a promising approach to overcome these barriers by fostering collaboration between farmers, technology providers, and other stakeholders to jointly create and capture value.

Solution:

Through the Farmtopia project, we explored how SCBM can address behavioral, technological, and financial challenges that small farmers face in adopting ADSs. Using interviews, workshops, and structured questionnaires, we identified key interventions and new SCBM patterns tailored to small farms. Such interventions are specific for the phase of the process: namely, ADSs development, ADSs adoption and SCBM consolidation. All phases are based on the involvement of farmers, as this approach empowers them to become active participants in a broader ecosystem, aligning interests and addressing challenges specific to their needs.

In the ADSs development phase, interventions include creating flexible applications of ADSs to suit different farm sizes, ensuring integration of ADSs with existing systems and promoting data-sharing mechanisms. User-friendliness is particularly emphasized to encourage adoption, alongside farmers' autonomy in decision-making.

During the ADSs adoption phase, the SCBM process suggests strengthening dissemination through intermediaries such as ambassador farmers, workshops, and communication campaigns in order to build trust in the technology. Other interventions include facilitating access to subsidies and obtaining premium prices for sustainable practices.

To reduce financial risks in the consolidation phase, the SCBM process suggests considering flexible pricing options (e.g., freemium or pay-per-use), hardware and software as-a-service, or other solutions such as external partners financing ADSs to reduce the financial burden on farmers.

Benefits:

Applying the SCBM approach brings to the following key benefits: better integration of ADSs with existing solutions, more user-friendly and farmers-oriented technologies, lower investment costs and greater affordability of ADSs, higher investment capacity of farmers, data valorization and supply chain optimization.

Practical Recommendations:

To successfully implement the SCBM process, the following actions must be ensured: **i)** fostering collaboration among technology providers, farmers and other supply chain actors to co-design ADSs and explore SCBM opportunities; **ii)** leveraging existing networks, especially farmers' associations and digital innovation hubs, that can facilitate the SCBM development and ADSs adoption; **iii)** enhancing digital literacy with training sessions to improve understanding and confidence in using ADSs; **iv)** conceiving value capture opportunities based on flexible pricing schemes and, where possible, leverage on data valorization to lower the costs, and **v)** advocating for policy support as policymakers should create incentives for adopting ADSs tailored to small farms and establishing SCBM approaches.

Further information

- n/a

About this Practice Abstract and Farmtopia

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Farmtopia: The project is running from September 2023 to August 2026. The overall goal of Farmtopia (**GA No.: 101083541**) is to democratize digital farming to empower small and medium farms.

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POLIMI: As part of the Farmtopia project, POLIMI will be the leader of Task 2.1, dedicated to the development of a set of Sustainable Collaborative Business Models (SCBM) that can enhance the adoption of Agricultural Digital Solutions (ADS) among small farmers.

Website: <https://www.polimi.it/>

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