



Guide to Business Model Canvas

Methodological notes supporting the PDCA toolbox – Business Model Canvas

Contents

Contents	1
Document control sheet.....	2
Introduction	4
Scope	4
Analytical framework	5
Data collection	6
Annex 1 – Business Model Canvas Template	7
Bibliography.....	8



Co-funded by
the European Union

Co-funded by the European Union (Grant n°101113011) Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or REA. Neither the European Union nor the granting authority can be held responsible for them.

Document control sheet

Project	BIN2BEAN – Boosting the market deployment of safe, effective and sustainable innovations for soil improvement from biowaste, towards regenerative soil systems
Topic identifier	Horizon-MISS-2022-SOIL-01-10
Grant Agreement N°	101113011
Coordinator	Consorzio ITALBIOTEC
Work package N°	5
Work package title	Development of local business models and go-to-market strategies for solutions selected through the scoring system
Work package leader	ITB
Document title	Methodological note: Guide to Business Model Canvas
Activity Abstract	Business Model Canvas
Lead Beneficiary	ITB
Dissemination level	Public
Authors	Joa Patania, Francesca Freddi
Date	31.07.2026

BIN2BEAN project

Methodological note: Guide to Business Model Canvas

Author: Joa Patania, Francesca Freddi (Consorzio Italbiotec)

Date of publication: July 2026

BIN2BEAN - Methodological note: Guide to Business Model Canvas © 2026 is licensed under [Creative Commons Attribution 4.0 International](https://creativecommons.org/licenses/by/4.0/)



CC BY 4.0

Creative Commons Attribution 4.0 International

This license requires that reusers give credit to the creator. It allows reusers to distribute, remix, adapt, and build upon the material in any medium or format, even for commercial purposes.

Document citation: Patania J., Freddi F. (2026): *BIN2BEAN* - Methodological note: Guide to Business Model Canvas

Introduction

The transition towards a circular bioeconomy places municipalities and waste-management operators under growing pressure to divert biowaste from landfill and incineration and to recover value from it, in line with the EU Waste Framework Directive (2018/851). Decision-makers, however, frequently lack a structured way to judge whether a given collection-and-treatment configuration is at once economically sustainable, socially acceptable and environmentally compliant.

Within the BIN2BEAN project, a dedicated Business Model Canvas (BMC) was created as a decision-making supporting tool. This methodological note describes the customised Sustainable and Circular Business Model Canvas developed for this project and applied across the three Living Labs. It sets out the analytical framework, the way data were collected and elaborated for project's purposes, as well as the main limitations affecting the resulting models. The full analysis produced in BIN2BEAN is confidential and not publicly shared; only the methodological approach is made available here.

Scope

This methodological note describes the framework, data sources and analytical steps underlying the Business Model Canvas produced within BIN2BEAN. It covers:

- the structure of the customised Sustainable Business Model Canvas and its theoretical basis;
- the data collected to populate the canvases and the way the local context of each Living Lab was reflected;
- the main limitations affecting the interpretation of the resulting models.

Analytical framework

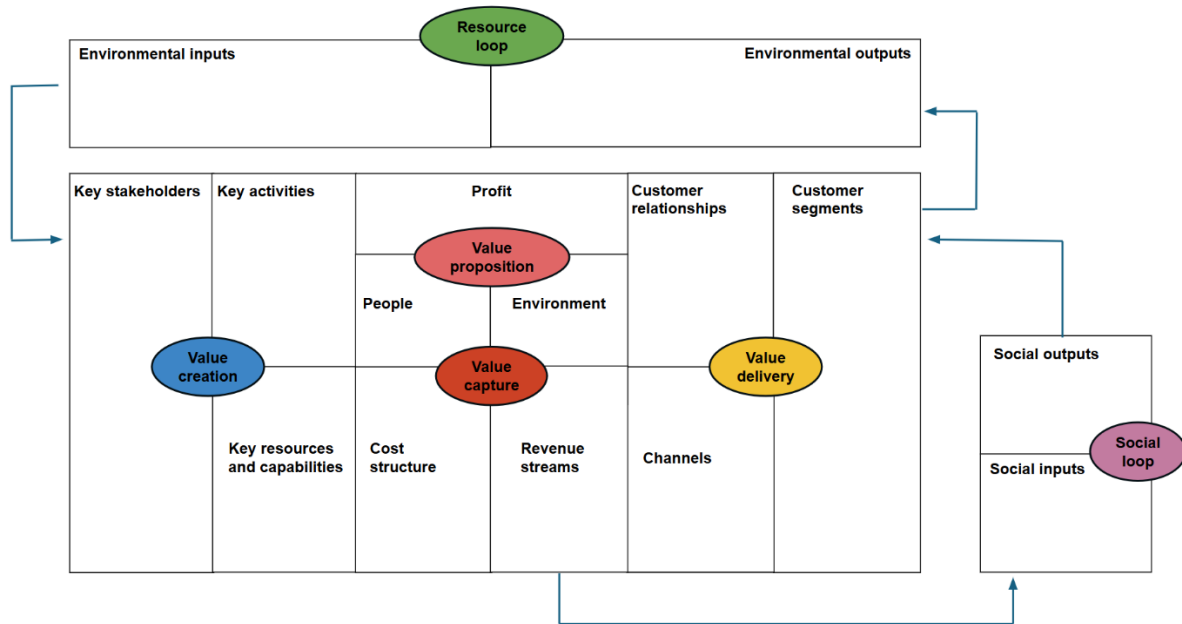


Figure 1. Adaptation based on the 'Sustainable Business Model Canvas' (developed from Bocken et al. (2018), Osterwalder & Pigneur (2010) and Richardson (2008)) and the 'Circular Canvas' (Developed from Osterwalder and Pigneur (2010), Richardson (2008), Bocken et al. (2016) and Ellen MacArthur Foundation (2013a)).

Figure 1 shows how the original Business Model Canvas was extended to capture different sustainability dimensions and circularity. Starting from the original canvas (Osterwalder & Pigneur, 2010), other canvases' models from literature were explored to select relevant elements to be added. The new canvas therefore merges the triple-layered sustainability canvas with two additional loops targeting both the environmental and the social layers.

Three key elements were adapted with respect to the traditionally used canvas:

- Extended Value Proposition, articulated along three dimensions: economic (Profit), social (People) and environmental (Environment), integrating social and environmental purposes alongside profit;
- Resource Loop, highlighting the circular nature of the model by linking environmental outputs to the material inputs being processed.
- Social Loop, describing the model's ability to generate collective shared value for the social group contributing through inputs.

The framework was applied iteratively. For each configuration, a business model was drafted from the collected data, reviewed internally and then assessed by external evaluators. The resulting template is reproduced in Annex 1.

Data collection

The canvases were populated using a combination of primary data gathered within the project and secondary data drawn from the literature and comparable European cases. Primary inputs were collected in cooperation with the BIN2BEAN Living Labs and their operators and comprised: the local regulatory and policy context; biowaste generation figures; the existing collection infrastructure and contractual arrangements; the operational workflows and the treatment technologies in use or under consideration; local landfill or incineration gate fees; capital and operational cost estimates for the relevant treatment options. A stakeholder map was compiled for each Living Lab to identify the actors involved in, or affected by, each configuration.

Where primary data were unavailable or commercially sensitive, values were estimated from comparable European cases and sector benchmarks and were clearly flagged as theoretical ranges. Wherever possible, cost and revenue figures were expressed on a consistent net-cost-per-tonne basis, so that each scenario could be compared with the others and against the city's prevailing landfill or incineration baseline.

Annex 1 – Business Model Canvas Template

The table below presents the customised Sustainable and Circular Business Model Canvas as a reusable template. Each building block is accompanied by guiding questions, helping in populating them with the appropriate set of data.

Building block	Guiding questions
Extended value proposition (Profit · People · Environment)	
Value proposition — economic (Profit)	What economic value does the model create, and for whom?
Value proposition — social (People)	What social value does the model create?
Value proposition — environmental (Environment)	What environmental value does the model create?
Economic layer — classic building blocks	
Key partners	Which partners and suppliers are essential?
Key activities	Which core activities does the model require?
Key resources	Which physical, human and intangible resources are needed?
Customer segments	Who are the customers and beneficiaries?
Customer relationships	How are relationships with users and off-takers established and maintained?
Channels	Through which channels is value delivered and communicated?
Cost structure	What are the main cost drivers?
Revenue & benefit streams	Which revenues and avoided costs does the model generate?
Environmental dimension — Resource Loop	
Environmental inputs	Which material and energy inputs enter the system?
Environmental outputs	Which products, residues and emissions leave the system?
Social dimension — Social Loop	
Social inputs	Which social resources does the model draw on?
Social outputs	Which social outcomes does the model produce?

Bibliography

1. Joyce, A. & Paquin, R.L. (2016). The triple layered business model canvas: a tool to design more sustainable business models. *Journal of Cleaner Production*. <https://doi.org/10.1016/j.jclepro.2016.06.067>
2. Bocken, N.M.P., Short, S.W., Rana, P. & Evans, S. (2014). A literature and practice review to develop sustainable business model archetypes. *Journal of Cleaner Production*. <https://doi.org/10.1016/j.jclepro.2013.11.039>
3. Bocken, N.M.P., de Pauw, I., Bakker, C. & van der Grinten, B. (2016). Product design and business model strategies for a circular economy. *Journal of Industrial and Production Engineering*. <https://doi.org/10.1080/21681015.2016.1172124>
4. Boons, F. & Lüdeke-Freund, F. (2013). Business models for sustainable innovation: state-of-the-art and steps towards a research agenda. *Journal of Cleaner Production*. <https://doi.org/10.1016/j.jclepro.2012.07.007>
5. Geissdoerfer, M., Vladimirova, D. & Evans, S. (2018). Sustainable business model innovation: a review. *Journal of Cleaner Production*. <https://doi.org/10.1016/j.jclepro.2018.06.240>
6. Evans, S., Vladimirova, D., Holgado, M., Van Fossen, K., Yang, M., Silva, E.A. & Barlow, C.Y. (2017). Business model innovation for sustainability: towards a unified perspective for creation of sustainable business models. *Business Strategy and the Environment*. <https://doi.org/10.1002/bse.1939>
7. Bocken, N.M.P., Rana, P. & Short, S.W. (2015). Value mapping for sustainable business thinking. *Journal of Industrial and Production Engineering*. <https://doi.org/10.1080/21681015.2014.1000399>
8. Geissdoerfer, M., Bocken, N.M.P. & Hultink, E.J. (2016). Design thinking to enhance the sustainable business modelling process. *Journal of Cleaner Production*. <https://doi.org/10.1016/j.jclepro.2016.07.020>
9. Dyllick, T. & Muff, K. (2016). Clarifying the meaning of sustainable business: introducing a typology from business-as-usual to true business sustainability. *Organization & Environment*. <https://doi.org/10.1177/1086026615575176>
10. Ellen MacArthur Foundation (2013). *Towards the Circular Economy: Economic and Business Rationale for an Accelerated Transition* (Vol. 1). Ellen MacArthur Foundation.
11. Osterwalder, A. & Pigneur, Y. (2010). *Business Model Generation: A Handbook for Visionaries, Game Changers, and Challengers*. John Wiley & Sons.