Ideology-free toolkit for

DIGITAL ECOSYSTEM DESIGN

v0.2.6 (January 2021)

The toolkit is largely based on and inspired by
Simone Cicero's Platform Design Toolkit* (CC 4.0 BY-SA).

Changelog
v0.2.6: Improvements on the layout, descriptions and instructions.

v0.2.5: New Canvas 5: Ecosystem interaction profiles (moved Canvas 5 to Canvas 6)

v0.2: New Canvas 4: Ecosystem activities and interactions map (moved Canvas 4 to Canvas 5)

v0.1: Changes and additions to Cicero's work:
- Canvas 1: Simplifications and generalizations
- Canvas 2: New contribution inspired by Cicero
- Canvas 3: Simplifications and generalizations
- Canvas 4: Ecosystem governance (new contribution)

Want to do ecosystem design without being dictated by Silicon Valley people or blockchain enthusiasts?
Here is a toolkit for you!

This toolkit enables you to design your ecosystem with an open mind. It does not force you to follow "Silicon Valley mantras" or "ideologically inclined decentralization paths". Also, using the tool may reveal that you don't need an ecosystem approach at all in your case! The toolkit keeps your head cool in the ecosystem/platform/DLT bingo!

The kit is based on the following principles:
• Ecosystem designer aims for **orchestrating collective action**.
• Ecosystem **allows new solutions to emerge through the reallocation of existing resources and capabilities in a business network**.
• Ecosystem designer must identify how **ecosystem interactions can be facilitated and steered to desirable directions**.

The toolkit focuses specifically on
1) mapping the ecosystem's members and roles,
2) creating the ecosystem's member profiles,
3) identifying the members' motivations to collaborate, and
4) defining the ecosystem's governance model.

Originally, the toolkit was made to support blockchain (and other DLT-based) projects. Among crypto-enthusiasts, there were a lot of ideological debates on how the next-level digital economy should be organized. While such ideological debates can be extremely interesting, they often shape people's opinions, also impacting ecosystem designs in uncontrolled ways. This toolkit is intended to offer unbiased approach to designing ecosystems for a variety of purposes. It builds on Simone Cicero's wonderful Platform Development Toolkit, which is slightly simplified and edited to offer a more general approach. There are also special components related to ecosystem governance design. And what is the best part? All this is tried and tested in dozens of projects!
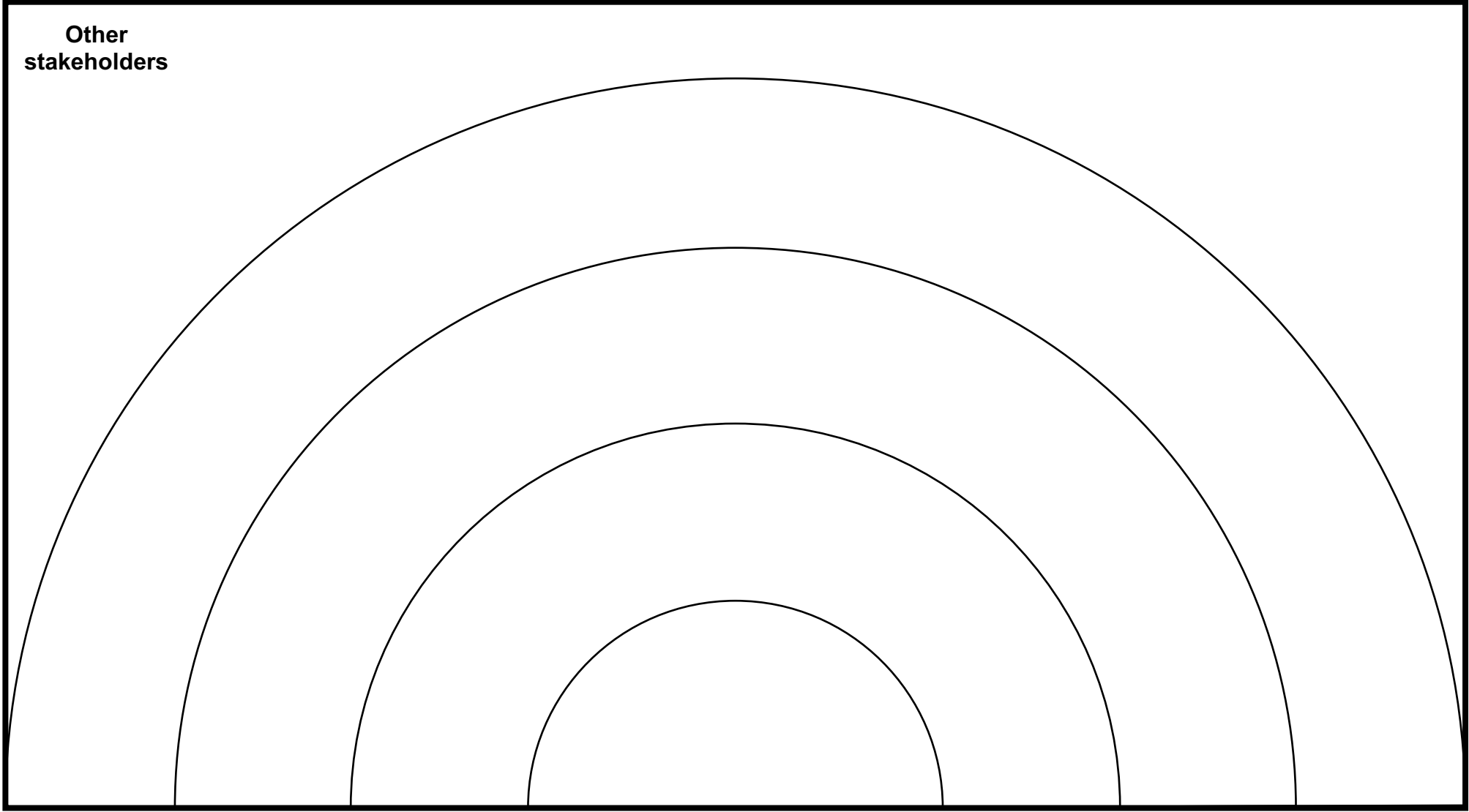
CANVAS 1
ECOSYSTEM MEMBERS
ADAPTED FROM SIMONE CICERO'S PLATFORM DESIGN TOOLKIT

To expand our focus beyond our direct customers, we need to map the space we operate in.

"Ecosystem Members" Canvas (Canvas 1) is used to map the members in the ecosystem you are working with. Fill the canvas using your case data.

1. **Write the ecosystem's mission to the center of the canvas**, if you are working with an ecosystem without strong a focal company. **Or** if you have a focal company-centric ecosystem case (like e.g., Uber), write here the **focal company's name** (and mission, if you know it)

2. **Identify the members of the ecosystem**: leaders & partners, contributors (members who provide something to the ecosystem), users (members who just use the services of the ecosystem), and other stakeholders (parties which have an interest to the success of the ecosystem but are not directly involved in it).

3. Then, **limit the number** of members **to 9**. Focus on the most influential but try to address all the relevant ideal types of the members in your ecosystem.

4. *OPTIONAL: If you want to increase your challenge level, you can create many versions of this canvas: one for the initial stages of the ecosystem, one for the upscaling stage, and one for the mature ecosystem.*

Case

**Other
stakeholders**

Users

Contributors

Leaders &
key partners

Ecosystem's mission
(or the focal company's)

This is an edited version of Simone Cicero's work (part of Platform Design Toolkit)

CANVAS 2
ECOSYSTEM MEMBER PROFILES

Our ecosystem – it is our warehouse and our supply chain.

By using many copies of "The Ecosystem's Member Profile" (Canvas 2), you will explore all the members in detail, and identify the potential (valuable assets and capabilities) they provide to your ecosystem.

1. **Illustrate each identified ecosystem member with some details** (e.g., personal details, and the reasons why they would participate in the ecosystem). This helps you to understand the member's characteristics better.

2. For each member, **identify which assets** (e.g., cars, houses, other tangibles) and **capabilities** (e.g., skills, knowledge, other intangibles) the member has, which could be usable with regards to the ecosystem's (or focal company's) mission.

ECOSYSTEM MEMBER PROFILE

Case

Member name

Characteristics

Valuable assets

Valuable capabilities

Ville Eloranta, Aalto University (IDBM)

Inspired by of Simone Cicero (PDT)

CANVAS 3
ECOSYSTEM MOTIVATION MATRIX
ADAPTED FROM SIMONE CICERO'S PLATFORM DESIGN TOOLKIT

You cannot force anyone to cooperate with each other. You can only create attractors.

By using "The Ecosystem's Motivation Matrix" (Canvas 3), you will identify, what each member has potentially to give to the other entities.

1. **List the ecosystem members** to the **rows and columns** of the matrix (so that both row and column headings have the same entries in the same order).

2. For all cells of the matrix (all the connections between members) – identify what is the **potential value** the member can give to another member (if there is something). Remember, money is also valuable.

3. Then, you can **define the value propositions** for each ecosystem member. Put differently, what X gets from participating in the ecosystem? Based on the potential value each member can get from others (e.g., money, goods, services, etc.), fill out a **description that summarizes these benefits for each member on the highlighted diagonal**.
   Hint: Note the observations you made for each column and try to summarize them.

4. *OPTIONAL: In a similar way as with the ecosystem member canvas (1), if you want to increase your challenge level, you can create many versions of this matrix: one for the initial stages of the ecosystem, one for upscaling stage, and one for the mature ecosystem.*

ECOSYSTEM MOTIVATION MATRIX IDEOLOGY-FREE TOOLKIT FOR DIGITAL ECOSYSTEM DESIGN 0.2.5
ADAPTED FROM SIMONE CICERO'S PLATFORM DESIGN TOOLKIT

Case

gives to ↱									

This is an edited version of Simone Cicero's work (part of Platform Design Toolkit)

CANVAS 4
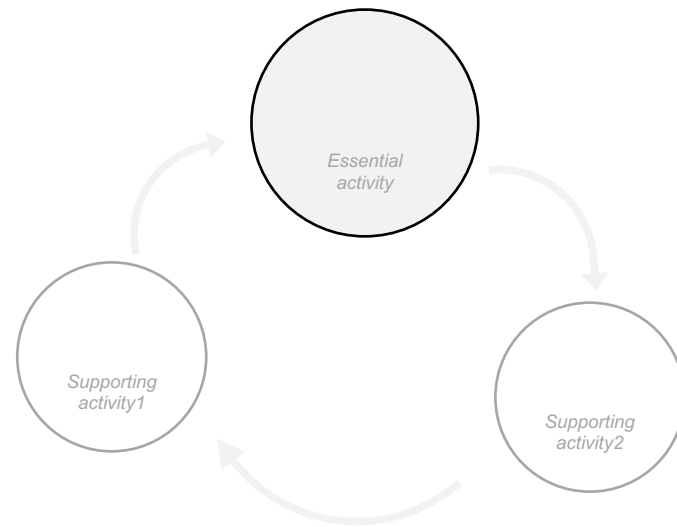# ECOSYSTEM ACTIVITIES AND INTERACTIONS MAP
IDEOLOGY-FREE TOOLKIT FOR DIGITAL ECOSYSTEM DESIGN 0.2.6

Next, instead of actors, we'll look at the specific actions that take place in the ecosystem.

So far, the canvases have focused on the different member profiles and roles in the ecosystem. For the next canvas, put the personalities aside. So instead of *who* does something, focus simply on *what* is being done. You can utilize ideas you have generated so far, to figure out the different activities that take place in the ecosystem.

1. To start, **focus on the most essential activity** that is in the heart of the ecosystem. Mark that to the middle balloon. *Hint: this activity is most likely connected to the ecosystem's mission. You can also use the motivations matrix to pinpoint one or two most important activities in your ecosystem. For example, if the mission is to provide more efficient travel accommodation to people, the essential activity may be to "rent a room".*

2. Next, **identify and mark activities that are necessary** or prerequisites **for the essential activity** to happen. Mark the activity inside the balloon, and the form of interaction on the arrows between the bubbles (again, you can refer to the motivations matrix if needed). Feel free to list more activities and interactions (add balloons and arrows).

3. **Continue** the exercise, until you have **listed all activities that are needed** for a self-sustaining ecosystem, creating virtuous cycles that strengthen its operation.

ECOSYSTEM ACTIVITIES
AND INTERACTIONS MAP IDEOLOGY-FREE TOOLKIT FOR DIGITAL ECOSYSTEM DESIGN 0.2.5

Case

Essential activity

Supporting activity1

Supporting activity2

CANVAS 5
ECOSYSTEM INTERACTION PROFILES
IDEOLOGY-FREE TOOLKIT FOR DIGITAL ECOSYSTEM DESIGN 0.2.6

Let's bring back the actors. Use Canvas 5 to link back the different actors to each interaction that takes place in the ecosystem.

In this canvas, you will consider both the actors behind the activities and the intermediaries that facilitate their interaction.

1. Start with the most essential activity from the activities and interactions map. Place that on the first row. Then, **consider who needs to interact with whom** to realize that activity. In the middle column, you should **note the intermediaries** through which the interaction happens or is possible. These may be practically anything, from **actors** to **mediums** (i.e., people, firms, platforms, or technologies).

2. **Place each activity** that you identified in the activities and interactions map **on one row**. Continue the exercise, until you have placed all the identified activities in the table. If you have a detailed and complex map of activities (i.e., many bubbles), you may use more than one page.

3. When filling the table, consider the previously identified ecosystem members. These are most likely candidates for actors in the ecosystem.
   Hint: You can add new member profiles (in Canvas 2) as well. That only indicates you now comprehend your ecosystem and its members better than before.

4. Last column is reserved for **notes**. These can include anything that you find worthwhile (e.g., key network effects, new member profiles, impact of external stakeholders, risk for disintermediation, etc.).
   Hint: Desirably, this exercise will list many important prerequisites for the activities and interactions in your ecosystem.

ECOSYSTEM INTERACTION
PROFILES IDEOLOGY-FREE TOOLKIT FOR DIGITAL ECOSYSTEM DESIGN 0.2.6

Case

ACTIVITY (refer the map)	FOR THAT ACTIVITY TO HAPPEN,			NOTES (Missing member, control point, etc?)
	WHO	INTERACTS THROUGH	WITH WHOM	

Esko Hakanen & Ville Eloranta, Aalto University (DIEM & IDBM)

ECOSYSTEM GOVERNANCE IDEOLOGY-FREE TOOLKIT FOR DIGITAL ECOSYSTEM DESIGN 0.2.6

Considering decentralized governance?

This step is for ecosystems that want to explore non-centralized governance models. And it is a good extra exercise for all cases - you can see whether the ecosystem needs a strong central coordinator, or whether mode decentralized ways of organizing could be possible.

1. **Answer the questions of the first column and write them to the second column.** The shaded texts provide you inspiration and help.

2. **Compare your answers in column two and the theory in column three***. Is your answer aligned with the theory? If it is, your case has the potential to maintain decentralized governance. If not, then your case most likely needs a centralized coordinator.

* Theory is based on Elinor Ostrom's work on commons-based governance. Ostrom identified eight conditions that must be met to commons-based governance to work. Check the references for more information.

ECOSYSTEM GOVERNANCE IDEOLOGY-FREE TOOLKIT FOR DIGITAL ECOSYSTEM DESIGN 0.2.6

Case

Question	Your ecosystem	Theory-based check: Decentralized governance is possible it...
How (precisely) it is defined who is ecosystem's member and who is not?	*Relatively vs. strictly? How, why?*	*Group boundaries are clearly defined.*
How generic or localized / customized are the rules governing the actions in the ecosystem?	*Very customized vs. very generic? How? Why?*	*Rules governing the use of community resources are matched to local needs and conditions.*
Who can participate in modifying the rules?	*Only one member vs. all members? Who? How?*	*It is ensured that those affected by the rules can participate in modifying the rules.*
What is the ecosystems legitimacy / authority toward external stakeholders/regulators?	*Not respected vs. very respected? By whom, how, why?*	*It can be made sure that the rule-making rights of community members are respected by outside authorities.*
How ecosystem member behavior and rule compliance is monitored?	*By whom? How?*	*Community members can sustain a system for monitoring member's behavior.*
How are member misbehaviors sanctioned?	*By whom? How?*	*There are graduated sanctions for rule violators*
How are disputes (misbehaviors, sanctions) resolved in the ecosystem?	*By whom? How?*	*There are low-cost means for dispute resolution.*
What kind of (community resource) governance layers there are in the ecosystem?	*Who are operating in which layers? Why? what is the interplay of the layers?*	*The ecosystem can maintain responsibilities for governing common resources in nested tiers from the lowest level up the entire interconnected system.*

Based on the work of Elinor Ostrom

REFERENCES

Toolkits which have inspired this work:

https://platformdesigntoolkit.com
https://www.strategyzer.com/canvas/business-model-canvas

Theory and concepts:

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