PLAYBOOK for Ecosystem Mapping

The focus of this playbook is entrepreneurship. Other researchers may use ecosystem mapping to study a key stakeholder group and that group's surrounding environment, including what other entities interact with and influence the target demographic. If you are working in the public or non-profit sector to develop an ecosystem map, you may replace the term 'target customer' with 'key stakeholder' throughout this guide.

This playbook pairs with these resources available at ***waterforfood.nebraska.edu/entrepreneurship:***

- Ecosystem mapping workshop at 2021 Water for Food Global Forum
- Customer discovery workshop at 2021 Water for Food Global Forum
- Playbook for customer discovery

What is an ecosystem map?

An ecosystem map is a visual representation of the important entities that have an influence on a target customer and service environment.

Who can create or use an ecosystem map?

An ecosystem map can be created and used by:

✓ Entrepreneurs interested in starting or growing a business to identify potential customers, suppliers, partners, investors, donors, and other resources.

✓ Organizations who want to support entrepreneurs to learn who is involved in a business ecosystem, where current efforts are focused, and where there are gaps or opportunities for services and investment.

Why do we need ecosystem mapping?

We can use an ecosystem map to:

✓ Show the key players (i.e., people and groups) surrounding the target customer and their roles
✓ Visualize what's happening in the landscape and provide a sense of direction of current activities
✓ Identify gaps and opportunities in technology or services
✓ Engage with potential collaborators or partners
✓ Access resources available in the ecosystem
✓ Find funders and financial institutions
✓ Help startups identify competitors
✓ Help venture capitals and other investors find better companies for their portfolio

Version 1.0 2022-08-18 Grace Mukarusagara, Natacha Akaliza, Raissa Urujeni, Lacey Bodnar

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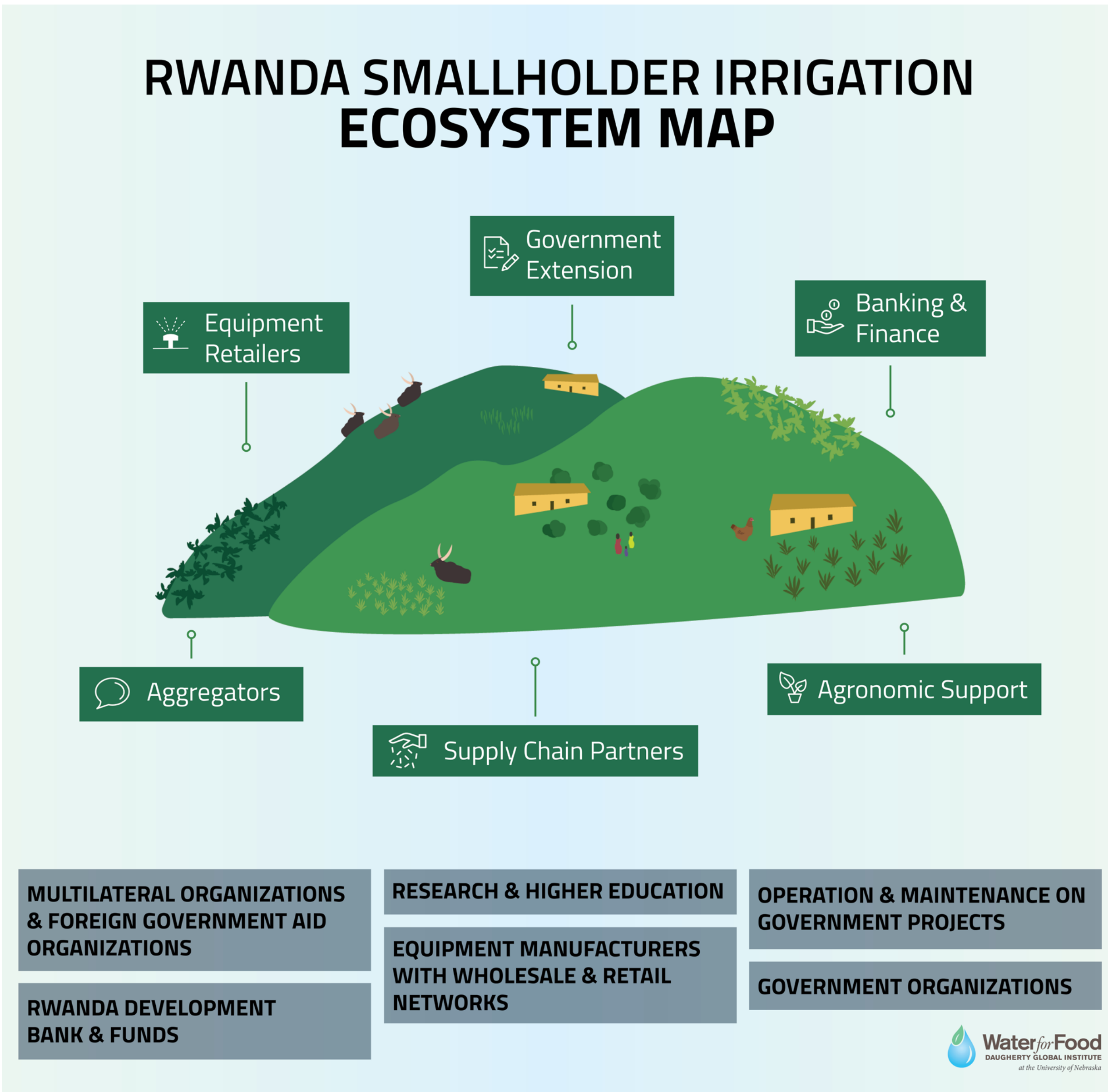
Example ecosystem map

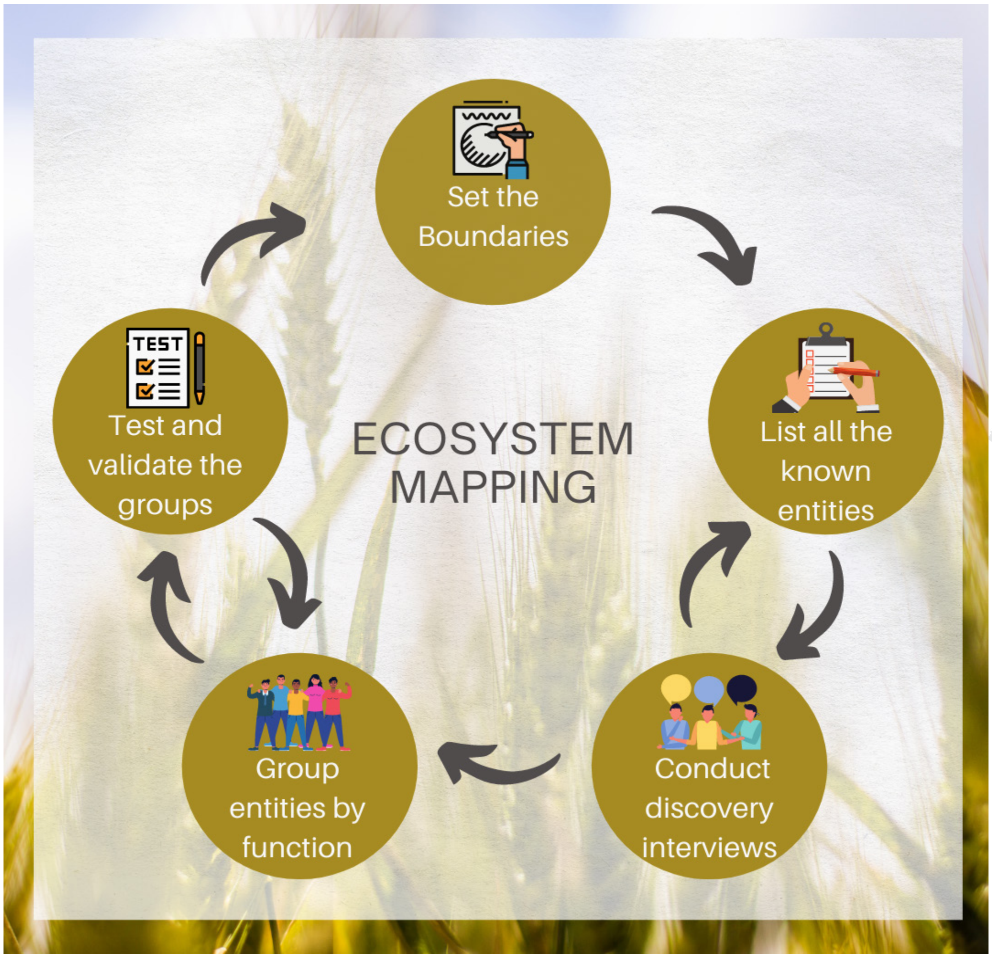
Our "Rwanda smallholder irrigation ecosystem map" captures irrigation businesses serving smallholder farmers as well as the broader irrigation ecosystem in the country. It includes a range of partners, funders, industries, university programs, and advocates that intersect with and support local businesses. At the center of the map is the smallholder farmer who irrigates, the target customer for our study of entrepreneurship. The surrounding entities are categorized into different functional groups based on how they primarily provide value to the customer. Those entities shown in green have direct contact with farmers. Organizations shown in gray have an influence on the irrigation ecosystem but are not primarily working directly with farmers.



See the detailed version of this map at waterforfood.nebraska.edu/entrepreneurship.

PART 2: RUNNING THE PLAY

The ecosystem mapping process is iterative, not linear, and takes time over multiple meetings. As you progress through these steps and gain additional information, you will likely find you need to go back and adjust the map boundaries, add more known entities, or add and modify functional groups. Once created, an ecosystem map should be updated periodically, such as once a year or when there are significant changes to the ecosystem.



PRO TIP: While we use an example developed for Rwanda, the steps below are not location or context-specific and may be generalized to any ecosystem map.

Who should be involved in creating the ecosystem map?

Every team member on the project knowledgeable about the target ecosystem.

STEPS TO CREATE AN ECOSYSTEM MAP

STEP 1: Set the Boundaries

The first step in creating an ecosystem map is to set the boundaries, to determine what will be inside and outside the scope of your map. One way to do this is to determine who is the target customer in the ecosystem and who will be using the map. These two concepts are related. For example, if you are an entrepreneur interested in starting your own company or a business owner interested in growing your customer base, at the center of the map will be your target customer, the type of person or group that will buy and use your product or service.

Another way to set the boundaries is to decide the title of your map. Consider the example entitled "Rwanda smallholder irrigation ecosystem map." This tells us key points about the map boundaries:

- ✓ First, we are focused on Rwanda.
- ✓ Secondly, we are interested in smallholder farmers, not medium farms or large commercial agricultural enterprises.
- ✓ And finally, we are focused on smallholder farmers who irrigate, not all smallholder farmers in general.

STEP 2: List all Known Entities

Once you have defined the boundaries of your ecosystem, the next step is to make a list of all the entities that have an interest in, influence on, or interaction with your target customer. At this point, you should not try to limit or condense your list because you can do that later.

PRO TIP: It is always helpful to do this in a group setting, so that you can brainstorm as a team.

STEP 3: Conduct Discovery Interviews

The ability to create a comprehensive list of entities comes from having knowledge of how systems work "in the real world," meaning you have to "get out of the building" and talk to people to truly understand the ecosystem. You can use the list of entities you created to identify your first round of interview subjects. The point of a discovery interview is to learn about the needs of your customers, and the business models of other entities around your customer, including their unique value propositions, customer segments, marketing channels, and key resources and partners. This information will be necessary to group entities by their function in the ecosystem. Use discovery interviews to expand your network and awareness of ecosystem actors. See our playbook on Discovery Interviews for more information.

STEP 4: Group Entities by Function

Once you have a good understanding of the actors in the ecosystem and what they do, you should start to group these people and organizations by their function. This is usually the hardest part of creating an ecosystem map because you want to avoid superficial similarities between groups, such as similar names or business structures. Instead, focus on how entities provide similar value propositions to the target customer. Value proposition help solve a customer's problem(s) or satisfy a need.

To create these functional categories, ask the following questions: "How do these entities relate to my target customer? What is the primary value they are providing to my customer? Are they working directly with my customer or are they one or two steps removed?"

You will create the first draft of your map at this point. Organizations that work directly with customers should be placed closest to the map center, and those that do not should be placed further from the center (example of green and gray boxes on the Rwanda smallholder irrigation map).

In step 2, we said not to eliminate entities yet. You may now decide that a stakeholder is irrelevant if:

- ✗ It is outside the boundaries of the map.
- ✗ Its role or influence in the ecosystem is quite small.
- ✗ It is an outlier or a group of one.
- ✗ It is no longer functioning or goes out of business.

For example, you may notice that there is no group on the Rwanda smallholder irrigation ecosystem map called "sensor technology." This was initially on the map but was eliminated because we only identified one such company serving smallholder farmers, indicating that category was an outlier. However, this reveals a gap in services to smallholders, which may be a future business opportunity for other entrepreneurs.

Sometimes an entity may seem to fit into more than one functional group. In this instance, it is necessary to focus on the primary value the organization is providing to the target customer, based on the insights from your customer discovery interview. What you determine to be the primary value may not be the obvious choice. For example, on the full version of the Rwanda map (available at waterforfood.nebraska.edu/entrepreneurship), the European Cooperative for Rural Development (EUCORD) is listed as an Aggregator, meaning it combines information and resources in one place. While EUCORD provides agronomic support, fosters supply chain partnerships, and facilitates access to finance, its primary value proposition is not found in one of these individually but in combining all three together.

PRO TIP: One strategy to help when grouping organizations is to create short, descriptive names for the categories you are developing and to make these names reflect the key action or service, such as "agronomic support" or "supply chain partner."

STEP 5: Test and Validate the Groups

Finally, once you have created and filled functional groups and created the first draft of your ecosystem map, you need to test and validate your map. In doing this, you should ask yourself the following questions:

- ✓ Are there any entities missing from this map? As you add more entities to your list, are you able to fit these entities into the functional groups you have identified? If an entity does not fit, then do you need to add a new group to the map?
- ✓ Do the organizations in the categories truly have similar functions? Are there too many organizations in this category that we should consider splitting into two categories? Conversely, are there too few examples of the category to merit it being a separate group or being on the map?
- ✓ Do you think the organizations listed on the map agree with their categorization? If not, why? How can you justify the grouping if someone disagrees? Can you back this up with a source from your discovery interviews? If there is anything you believe may be controversial about where you placed organizations on the map, consider asking your interview source follow-up questions to confirm your decision.

PRO TIP: Knowing when to stop working on this map development process, and to finish the ecosystem map, is a matter of professional judgement based on if you have enough detail to inform your needs that you decided on in the beginning stages described in the playbook.

3 FREE Online Tools for Virtual Work that Helped Us:

- Etherpad – an online collaborative text document (useful in Step 2)
- Miro – a virtual whiteboard (useful in Step 4)
- Canva – an online, user-friendly graphic design site (useful in Step 5)