ECOMAP

an introductory guide to

Ecosystem-Led Development

How to create **ecosystem-based strategies** that improve the **effectiveness, efficiency, & equity** of community & economic **development initiatives**

A Guide to Ecosystem-Led Development

You've probably heard the term: *Ecosystems.* We're no longer talking about the green type - the concept of 'ecosystems' has exploded in recent years. From [McKinsey's report](#) that the 'Ecosystem' economy could account for global revenues of nearly $70 trillion by 2030 to the surge in federal funding for Entrepreneurship Ecosystem Building, there's an increased interest in ecosystems across industries, roles, and types of organizations.

But what *are* ecosystems? More importantly, how can they be leveraged to drive outcomes in different fields - such as economic development, community building, and organizational growth?

This guide offers an introduction to Ecosystem-Led Development, a step-by-step process for how you can leverage the power of ecosystems to create more effective, efficient, and equitable outcomes in your work.

Who is this guide for?

Anyone charged with creating systems-level change in their organizations, communities, or industry. Systems change is needed across all sectors and organizations. Ecosystem-Led Development principles can be used by **Economic Developers, Community Builders, Entrepreneur Support Organizations, Corporate Executives, Nonprofit Leaders,** and beyond.

Whether you're just learning about Ecosystems or you're a long-time Ecosystem Builder, this guide presents a new paradigm for how to systematically approach development by understanding complex systems and leveraging the power of ecosystems.

Why does it matter?

From personal networks to international economies, we all live and work within numerous ecosystems. Ecosystems are incredibly resilient, but their structure makes them difficult to change. Unfortunately, **some of the hardest problems our communities face are based in & perpetuated by ecosystems of their own:** the decline of urban economies, rural depopulation, the opioid crisis, failing educational systems, rising wealth inequality, worsening health outcomes, and more.

To tackle systems-level problems, we need systems-level solutions. And to implement systems-level solutions, we need to engage and utilize our ecosystems. Ecosystem-Led Development ties all of these concepts together

Core Concepts

This guide will walk you through the following topics:

Ecosystems ─────────────────────

- What Ecosystems are, where they appear, and how they are structured
- Why their structure makes them both resilient and hard to change
- How they can be leveraged to create systems-level change

Discrete vs Systems-Level Problems ─────────────────

- The difference between discrete problems and systems-level problems
- Why using discrete solutions to solve systems-level problems fails
- How we can stop systems from "reverting back to baseline" when change programs are over

Problem Systems & Solution Systems ─────────────────

- How to create a model of the complex challenges that developers are tasked with solving
- How to systematically identify solutions that tackle both challenges and the relations between them
- How to create a solution system to increase the likelihood your development initiative is successful

Ecosystem Mapping & Common Challenges ─────────────

- The importance of mapping your ecosystem to identify all the assets you can leverage
- How to avoid common challenges that ecosystems tend to face during change initiatives
- Where you can go to find more information to support your ecosystem-led change efforts

A Guide to Ecosystem-Led Development

What is Ecosystem-Led Development?

A paradigm for developing effective solutions to complex, systems-level problems. Drawing from areas spanning sociology, economics, and network theory, Ecosystem-Led Development presents simple observations, theories, and practices for how you can leverage ecosystems to create more effective, efficient, and equitable change initiatives.

How is it different from what we do now?

We tend to solve problems using discrete solutions: we identify a problem or a series of problems, and we create solutions to tackle each of them. While this works well for problems with singular and known causes, it's ineffective for systems-level problems, which have complex, unknown, & changing relationships with other problems. Because of this, **even well-researched, well-implemented discrete solutions don't tend to have a lasting effect on systems problems.** Ecosystem-Led Development provides a way to evaluate complex problems and to craft solution systems that have a greater chance at creating sustained positive change.

How does this apply to my work?

Ecosystem-Led Development is simply another tool in your arsenal for understanding systems-level challenges, creating novel approaches to them, and setting up development initiatives for long-term success. It doesn't matter what industry or role you work in - Ecosystem-Led strategies can be implemented at any level, from solving inefficiencies in a single organization to fueling international networks of change.

Ecosystem-Led Development is particularly salient to economic & community developers and entrepreneurial ecosystem builders, because they are often tasked with solving big, hard, systems-level problems - like turning around the economy of a city, addressing increasing rates of homelessness, or reducing substance abuse.

What will I learn in this guide?

1. How to define a Problem System for the challenge you're trying to solve and a Solution System that describes how to effectively address it at scale.
2. The fundamental structure & makeup of ecosystems and why that structure makes them powerful.
3. How to map the assets that exist in the ecosystems around you, and how to mobilize them in effective, efficient, and equitable ways, while avoiding common challenges and pitfalls.

The Structure of this Guide

This guide breaks down the complicated process of imagining, designing, and implementing systems-level change initiatives in a step-by-step process that we call Ecosystem-Led Development. We designed this guide so that the abstract concepts presented in the text are supplemented with separate examples and diagrams:

1. **Written content is on the right-hand pages**, where the core ideas and theories are presented
2. **Definitions, diagrams, and examples are on the left-hand pages**, across from the concepts they correspond to
3. **Different visual cues are used** to highlight and separate different types of content:

Highlighted text calls out the definition of important terms used in the text

■ Green Boxes hold generic diagrams, which present the abstract concepts in the text visually

■ Blue boxes hold diagrams and examples from economic development

■ Orange boxes hold diagrams and examples from community development

⚭ Grey boxes highlight links that you can follow to find additional information

■ Purple boxes highlight important information & clarifications to the text or diagrams

There are a few other important things to know:

- **This guide is available in both a print and digital version**
  For print versions, the pages are not glossy so that you can write on or highlight them. If you are reading the digital version but would prefer a print version, just fill out this form and we will have one mailed to you as soon as possible.
- **Many of the terms used in this guide are defined uniquely in the context of Ecosystem-Led Development**
  Some terms have slightly different definitions in other fields, and we do our best to explain exactly how they are being used in the text.

Table of Contents

This guide begins with the foundations of what ecosystems are and how their structure makes them both incredibly resilient and resistant to change. After a quick discussion about the differences between systems and ecosystems, and why discrete solutions are ineffective against systems-level problems, we launch into the 10 steps of crafting Ecosystem-Led Development Strategies. Finally, the guide concludes with practical ways to apply these strategies to your work, and links to find additional information.

Part 1: Understanding Ecosystems

- Introduction: The Power of the Ecosystem
- Systems vs Ecosystems
- Discrete Problems and Discrete Solutions
- Overview of Ecosystem-Led Development
- The Foundation: Engaging the Community

Part 2: Ecosystem-Led Development

- Step 1: Defining Problem Systems
- Step 2: Creating Solution Systems
- Step 3: Understanding Problem Ecosystems
- Step 4: Mapping Solution Ecosystems
- Step 5: Matching Assets
- Step 6: Identifying Strategic Relationships
- Step 7: Defining the Logistics

Part 3: Overcoming Ecosystem Challenges

- Step 8: Breaking Down Silos
- Step 9: Preventing Misalignment
- Step 10: Maintaining Momentum
- Ensuring Effective and Equitable Solutions

Part 4: Applications & Conclusions

- Applying Ecosystem-Led Development to Your Work
- Conclusion: New Approaches to Hard Problems
- Additional Resources

Part 1: Understanding Ecosystems

Ecosystems surround us, and their structure can both perpetuate and inhibit change.

By understanding what they are, what makes them up, and how they are structured, we can better understand why common approaches to solving hard problems often fail.

What You'll Learn

- What **Ecosystems** are
- The different types of ecosystems and the assets within them
- Why the structure of ecosystems makes them resilient, but resistant to change
- The difference between **Systems** and ecosystems
- The definition of **Discrete Problems** & **Discrete Solutions**
- Why discrete solutions are ineffective against system-level problems
- An overview of the 10 steps of Ecosystem-Led Development
- The different groups to bring to the table to form a robust **Ecosystem Coalition**

Pages in this Section

1. Introduction: The Power of the Ecosystem
2. Systems vs Ecosystems
3. Discrete Problems & Discrete Solutions
4. Overview of Ecosystem Led Development
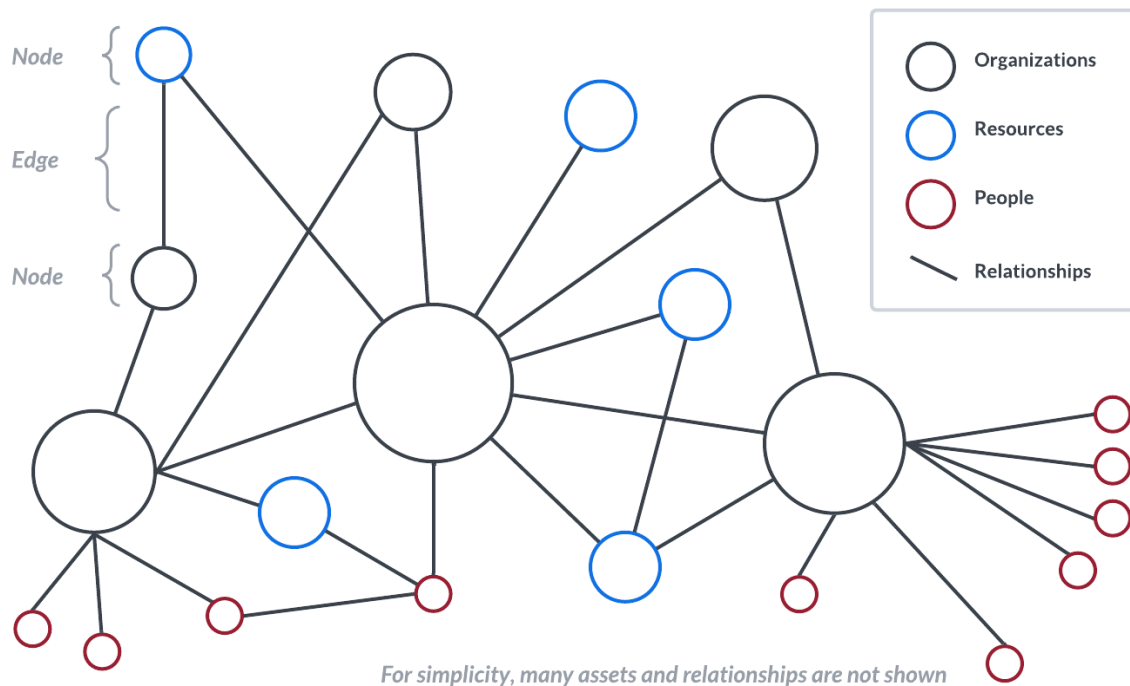5. The Foundation: Engaging the Community

Ecosystems - ever-changing networks of people, resources, organizations, and the relationships between them united by a common characteristic, such as a shared geography, industry, demographic, or combination of those factors

Assets - the generic term for the different people, resources, organizations, events, jobs, and news that make up a given ecosystem. The "things" within an ecosystem, which are represented as "nodes" in our ecosystem graphs

Relationships - the ways different assets relate to each other within an ecosystem, such as whether an organization "sponsors" a resource, a person "is employed by" an Organization, or an Organization is "funded by" another organization. Relationships make up the "edges" in our ecosystem graphs

---

The Basic Structure of an Ecosystem

Node

Edge

Node

Organizations

Resources

People

Relationships

For simplicity, many assets and relationships are not shown

> ⊞ **A Note about Nodes (and other terms)**
> *Nodes* and *Edges* are terms from Graph Theory, with very specific meanings within that field of study. Throughout this guide, what "Nodes" and "Edges" refer to varies slightly based on what system we are considering, and while their working definitions are not always perfectly aligned with the textbook ones, they mirror how most people use the terms in casual conversations about ecosystems. **This is how most terms are defined in this guide** - not by some specific textbook definition, but in a way that provides clarity into how they are being used *in the context of Ecosystem-Led Development.*

Introduction: The Power of the Ecosystem

Years ago, we built a platform to help people navigate what existed & what was happening in different ecosystems. We originally built the tool for entrepreneurial ecosystems, like small business communities or tech hubs. But quickly after launch, we started getting requests to use our tech for all types of ecosystems - industry clusters, affinity groups, partner networks, impact initiatives, and beyond. To meet the needs of such diverse ecosystems, we had to deeply study what made an ecosystem, an ecosystem, and we looked at hundreds of ecosystems of all different types, scales, and stages of development.

The most interesting outcome was not uncovering the vast differences between types of ecosystems, but instead the deep, structural similarities they share. All ecosystems are made up of assets - organizations, resources, people, jobs, news, and events- plus the activity and relationships between them. Whether you're looking at a person's professional network or a country's economy, all ecosystems have the same underlying structure - a complex, constantly changing network of assets and relationships.

In addition to structural similarity, **all ecosystems seemed to face an incredibly similar set of challenges, like silos, misalignment, and sustaining momentum.** This was puzzling - how could it be that a local impact initiative and a multi-national corporate network share such similar challenges when they exist on vastly different scales and layers of complexity? Moreover, the tactics that were successful in changing small ecosystems were likewise effective for changing larger ones, albeit when implemented slightly differently.

It became clear that there was something powerful and influential in the 'ecosystem' structure itself. The inherent stickiness of complex networks meant that ecosystems were incredibly resilient - in good ways and bad. Ecosystems tend to be resistant to change, so even when organizations dedicated large amounts of resources to change them - whether that was trying to improve a small business community, create a new industry, or mobilize a partner network - ecosystems would often revert back to their original state after the active initiatives ceased.

In this way, these ecosystems acted like the "hard" problems faced by communities & economies across the world - things like declining local economies, housing insecurity, substance abuse, or rising crime. All of these problems are multi-faceted, systems-level challenges, involving deep networks of interconnected issues that influence each other, and largely, keep the system immobilized in face of pressure to change. Indeed, despite massive human & capital resources poured into addressing them, they still plague communities across the country. The similarities between the two were not coincidental - these hard problems appear in communities as ecosystems of their own.

Economic & community developers are tasked with tackling hard problems - turning around the economy of a city, stopping the spiral of a homelessness crisis, or reducing the devastating impact of violence. **And while the 'power of the ecosystem' is what makes these problems difficult to solve, it also provides a new paradigm for approaching** *how* **we can solve them.**

Ecosystem-Led Development aims to provide a paradigm for how to leverage the ecosystem structure to enact more efficient, effective, and equitable change. It relies on ecosystems in two ways - first, in understanding that the problems we wish to solve are *ecosystem* problems, and second, by leveraging the ecosystem model to create and execute change initiatives. It's an inductive theory that draws from observations, data, and anecdotes from all types, sizes, and complexities of ecosystems, and we hope that it can be of value to the economic & community developers charged with tackling the hard problems at hand.

Formally:

> **system:** a set of things working together as parts of a mechanism or an interconnecting network
> **ecosystem:** a complex network or interconnected system

In our use:

> **system:** the generic network model for how a set of things relates together
> **ecosystem:** the real-world instances of those systems

Primary Assets - the organizations, resources, and people within an ecosystem. These are the "core" types of assets, and exclude other assets such as events, jobs, or news - while these are also things in an ecosystem, they are smaller, less influential, and more transient.

🟩 **Comparing Generic Systems vs Specific Ecosystems**

Note: most examples in this text are generic, but this specific topic requires utilizing a real ecosystem, so the examples below come from Baltimore's business ecosystem

In a System, there are generic types of assets:

- **Organizations**: Small Businesses, Nonprofits, Startups, Government Agencies
- **Resources**: Technical Assistance Programs, Tax Credits, Marketplaces, Pitch Competitions
- **People**: Entrepreneurs, Mentors, Advisors, Investors, Employees

In an Ecosystem, these generic assets are replaced by the actual "things" in the community:

- **Organizations**: The Bun Shop, ImpactHub Baltimore, the Maryland Department of Commerce
- **Resources**: Empower Baltimore Technical Assistance, Hire our Veteran Tax Credits

Likewise, in Systems there are generic types of relationships between assets:

- A government agency *provides* a tax credit program (Organization - Resource)
- A foundation *funds* an entrepreneur support organization (Organization - Organization)
- A company *employs* an engineer (Organization - Person)
- An early-stage accelerator *funnels* to a later-stage accelerator (Resource-Resource)

In the same way, within an Ecosystem these generic relationships are replaced with real ones:

- The Maryland Department of Commerce provides the Hire our Veterans Tax Credits'
- The Abell Foundation funds Innovation Works Baltimore
- EcoMap Technologies employs CEO Pava LaPere
- The Spark Accelerator funnels teams into the Fuel Accelerator

🔗 **Learn about Types of Ecosystems**
The generic structures and different types of ecosystems is an incredibly interesting, important, and nuanced topic, but is beyond the scope of this guide. Visit Ecosystem.Info/Types to learn more

Systems vs Ecosystems

Ecosystem-Led Development is focused on strategically mobilizing an ecosystem to tackle different facets of a systems-level problem. Core to this the difference between a System and an Ecosystem. A **System is a "set of things working together as part of an interconnected network",** and we use it here to describe the complex but generic networks of challenges that define, create, and perpetuate hard problems, as well as the networks of different solutions and interventions that can be mobilized to address them.

Ecosystems, on the other hand, are the real-world instances of those systems. More explicitly, Ecosystems are networks of organizations, resources, programs, people, activities, and relationships that are united by a common characteristic, whether that is geography, demography, industry, shared goals, or a combination of those. This is how we use the term in our daily work - "Dallas small business ecosystem", or "Baltimore's homeless support ecosystem". While there are numerous *types* of ecosystems - like tech ecosystems, industries, corporate networks, etc - a given ecosystem is a real-life instance of a generic system structure.

Ecosystems are made of different types of Assets, of which three are fundamentally important:

1. **Organizations** - the incorporated entities or unincorporated groups that make up an ecosystem
2. **Resources** - the different programs, tools, and physical objects that exist within an ecosystem or are provided by organizations
3. **People** - the individuals who exist in the ecosystems, who may be a part of an Organization, oversee a resource, etc

There are, of course, other Assets within ecosystems, such as Events, Jobs, and News - but these are byproducts of the interaction of the **Primary Assets** above, and are typically smaller, less influential, and much more transient compared to Organizations, Resources, and People. As such, they are not heavily factored in our discussion.

Importantly, just because a collection of assets are part of the same ecosystem does not mean that they are collaborating, or even aware, of each other. Our towns, cities, states, and country are full of ecosystems - some of them highly-connected & efficient, and others wholly disconnected & inefficient. Common challenges of ecosystems - such as silos and misalignment, are discussed in Part 3; for now, it's just important to know that **the existence of an ecosystem says nothing of the health, characteristics, or effectiveness of the ecosystem.**

In systems theory lingo, ecosystems are complex adaptive systems, with nodes and edges like any system. These **assets make up the nodes within our ecosystems, and the real-world relationships between these assets create the edges within an ecosystem -** which Organization provides which Resource, what Person is employed by what Organization, which Organizations partner together, etc.

A core part of Ecosystem-Led Development is defining four things: a Problem System, a Solution System, the Problem Ecosystem, and the Solution Ecosystem. The Problem & Solution Systems are generic systems that have generally similar structures and relationships across ecosystems, whereas the Problem Ecosystem and the Solution Ecosystem are specific to each community under discussion. Before we define each, let's examine the opposite of a system-level approach: Discrete Problems & Discrete Solutions.

Discrete Problems - any problem with a known and largely singular cause

Baseline - the natural, resting state of a system or ecosystem before it has been changed in a specific way (how the 'baseline' state is defined will vary based on the 'change' that is being applied)

Active Phase - the "force" that is applied by an actively-running initiative or program that tries to move a specific node within that system in a given direction

Reversion to Baseline - the tendency of a system to "move back" to its baseline states once active pressure is removed, because the underlying structure of the system hasn't changed

Diagram: Success after addressing a Discrete Problem with a Discrete Solution

Planned Discrete Solution | Active Discrete Solution | Finished Discrete Solution

Desired Direction of Change

Force applied by Discrete Solution

Lasting change even without force of the Discrete Solution

Baseline State

Focus Problem

Focus Problem

Focus Problem

Initial State (Before Active Phase) | During Active Phase | End State (After Active Phase)
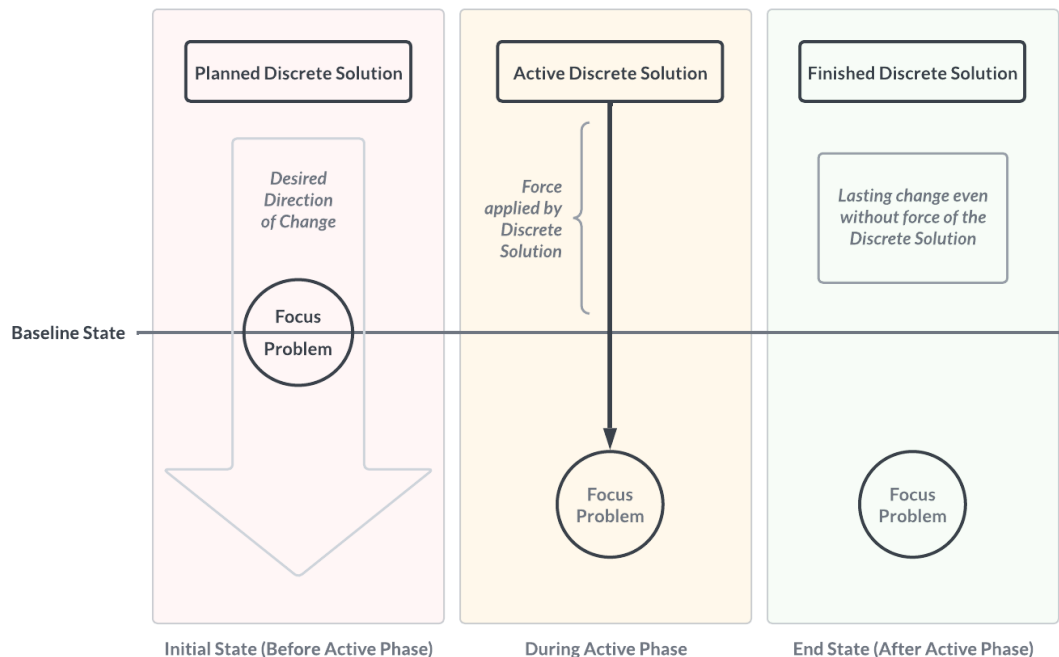
Diagram: Failure after addressing a Systems Problem with a Discrete Solution

Planned Discrete Solution | Active Discrete Solution | Finished Discrete Solution

Related Problem | Related Problem

Focus Problem

Pressure imposed by relationship between Focused Problem and Related Problem

Related Problem

Once the pressure of the Discrete Solution is removed, the system reverts to the baseline state

Baseline State

Initial State (Before Active Phase) | During Active Phase | End State (After Active Phase)

Discrete Problems & Discrete Solutions

When a good development initiative "fails", it tends to follow a pattern: a program is created to address a problem, based on legitimate & science-backed solutions. Initially, the program appears to work. However, often - but by no means always - after the **Active Phase** of the program is over, the gains of the initiative revert when given enough time. Sometimes, the programs that are effective are provided resources to continue, and have great impact - but the gains typically don't extend beyond those immediately touched; that is, they don't scale. Too often, these programs are written off as failures, and the organizations implementing them lose the resources needed to continue. **Studying *how* these initiatives fail provides insights into *why* they do.**

The first key is understanding that **"Hard" problems are systems-level problems,** issues that are not singular in nature, but rather embedded in a network complicated by multiple confounding variables, influences, and dependencies. We all know there is not just one factor that contributes to homelessness or the decline of a local economy. Rather, these problems are embedded in a system of different factors, all interrelated with known, unknown, strong, or weak relationships between them.

The fact that the initiatives are often effective when a solution is being actively applied, but the gains diminish when active pressure is removed, **highlights the fault in using discrete solutions for systems-level problems.**

Many problems can be solved with a **Discrete Solution**. Car out of gas? Fill it up. Lightbulb burnt out? Replace it. **Discrete problems have a known and mostly singular cause**: driving uses gas, running a light burns the filament - and because of this, we can easily apply a discrete solution to address them: fill up the car, replace the lightbulb. Discrete problems and solutions extend beyond the petty or simplistic: if your relationship with a coworker is tense because you're not on the same page, you might have an aligning conversation and watch the tension dissipate. Just because something is discrete does not mean it is simple or obvious.

Because the cause of a discrete problem is known & singular, a discrete solution works wonderfully to solve it. However, hard problems are not discrete: they do not have one singular cause, and the relationship between the multifaceted causal variables is often complex, obscure, and ever-changing. **In the face of systems-level problems like this, discrete solutions stand no chance.**

This is because even if a discrete solution is effective against a specific aspect of a hard problem, if other aspects of the problem and the relationship between that problem and other problems is not addressed, **a singular discrete solution will not be enough to change the larger system that is causing the problem**. No matter how effective a discrete solution is when applied in isolation, in systems-level problems, once the pressure of the discrete solution is removed, the system simply reverts to its baseline state.

This is a concept we're personally familiar with - we know daily exercise isn't enough to undo the harm of a system of unhealthy personal habits, and if we want to improve our health, we have to change not only our exercise habits, but our diet, sleep, and stress as well. To address **systems-level problems, we must lead with systems-level solutions.** In the same way, to develop economic & community development initiatives that successfully address hard problems, we can take a step-by-step approach to identifying the systems that underpin the problems we face, craft system-wide solutions, and mobilize our ecosystems to implement those solutions. Let's look at an overview of the whole process.

Introducing our Running Examples

As you may have noticed, the concepts within this guide can be abstract. To make them more understandable, the rest of the guide draws from two running examples, one more related to Economic Development and one more related to Community Development (although clearly the overlap between these two fields is substantial in both the examples and in real life). We introduce them below, but there are two things to know:

First, we use two consistent examples so you can see how the different concepts relate together as we progress through the steps of Ecosystem-Led Development. However, in an effort to keep this guide (relatively) short, in some sections only one example is used, and the other is omitted with that section. In some sections, neither example is used, and instead generic diagrams or clarifications are provided.

Second, as mentioned in the start of this guide, these examples are drastically oversimplified compared to their complexity in the real world. This is again an effort to keep this guide concise and to boil down the concepts to their most basic parts. To do this, we have to pick what areas of these topics we focus on, and skip other topics - if you work in either of these fields, please forgive these necessary omissions.

🟦 Economic Development Challenge: Revitalizing a Downtown Business District

A once-bustling downtown corridor has gone from a robust business district - with a mix of small business storefronts, larger corporate employers, and residential areas - to a relatively vacant shell. The local economic development organization has been tasked with revitalizing this corridor by bringing back businesses and residents, and now they must come up with a comprehensive plan for how to do that.

The economic development agency is only given funding for their own work creating, coordinating, and overseeing the solution - all individual initiatives that they recommend must be funded independently.

We'll refer to this as the **Revitalize Initiative** throughout the guide

🟧 Community Development Challenge: Reducing Rates of Homelessness

As housing costs have skyrocketed due an influx of new residents following the pandemic, the rates of homelessness have increased as more and more residents cannot afford the rising cost of living. A local nonprofit organization with experience in housing insecurity is asked to create a city-wide approach to addressing homelessness.

The nonprofit is given a large amount of funding to cover both their operational costs and any initiatives that are part of the solution, as well as full flexibility with how they want to approach the challenge. However, they are not allowed to use the funding to simply build additional housing supply - whatever solution they set in place must be sustainable after the initial setup.

We'll refer to this as the **Rehouse Initiative** throughout the guide

Overview of Ecosystem-Led Development

Before we dive into each step in details, here's a summary of the entire process of Ecosystem-Led Development:

1. **Identify the Problem System** Starting with your Focus Problem, identify the core Related Problems and the correlative relationships between them

2. **Define the Solution System** Identify specific, targeted interventions that address each node and edge within the Problem System

3. **Examine the Problem Ecosystem** Understand how the Problem System shows up within your specific ecosystem, focusing only on system-level attributes and not individual assets

4. **Map the Solution Ecosystem** Create a detailed dataset of all the different assets in the community that can be mobilized to support this change initiative as part of a Solution System

5. **Match Assets to Initiatives** Identify which assets are best suited to tackle which initiatives, resourcing existing ones first and creating or attracting new assets where needed

6. **Identify Synergistic Relationships** Identify ways that different initiatives can interact with each other to achieve synergistic outcomes and avoid contradictory ones

7. **Define the Logistics** Figure out the timelines, resources, and progress measurements of the change initiative & get the needed parts in place

8. **Break Down Silos** Aggressively break down silos that exist within the ecosystem by encouraging intense collaboration, robust mapping, and open dialogue

9. **Address Misalignment** Ensure that all participating parties are aligned on the purpose, priority, and plan for implementing change in the ecosystem

10. **Sustain Momentum** As the initiatives start, keep an eye on the common momentum-killers of ecosystem-change efforts & address them early

In this way, the complex process of creating ecosystem-wide change can be turned into a recipe that can be used by anyone who wants to create long-term change in their community. But before we go to the first step, we must gather the needed ingredients.

Ecosystem Coalition - the broad group of individuals representing different parts of your community that will be engaged to help develop, plan, and execute the change initiative. Refers to the entire group of people that will be involved across different stages, and many Ecosystem Coalitions are broken down into smaller subgroups that are involved in different ways and at different parts of the process.

⬜**A Note on Coalition Building** Building the right Ecosystem Coalition is fundamental to any successful change initiative, and while we've included some insights as they relate to Ecosystem-Led Development, we are by no means experts in building representative and effective coalitions.

This is an area that should be informed by further research & recruited expertise into building representative working teams in your specific areas of work - especially when it comes to conversations around proper representation and compensation, which are all beyond the scope of this guide.

🟦 Non-exhaustive Examples of Ecosystem Coalition personas for the **Revitalize Initiative**

- **Formal Experts** - Economic Developers, professors of Urban Development
- **Informal Experts -** small business advocates, leaders of previous similar initiatives
- **Ecosystem Leaders -** leaders from local Entrepreneur Support Orgs, CDFIs, Real Estate Developers, employers on or near the corridor
- **Community Members** - people who have lived, worked or owned a business on the corridor, or those who live/work/owned businesses in nearby successful business corridors
- **Other Development Orgs -** any org who has led a successful (or failed) revitalization initiative

🟧 Non-exhaustive examples of Ecosystem Coalition personas for the **Rehouse Initiative**

- **Formal Experts** - Sociologists, Economic Developers, Residential Developers
- **Informal Experts** - housing advocates, case workers, housing-related volunteers
- **Ecosystem Leaders -** leaders of all housing and housing-related initiatives and organizations
- **Community Members** - nonprofit workers, case workers, those who have experience homelessness
- **Other Development Orgs -** other nonprofits who do similar work or who have led successful initiatives in their own communities

The Foundation: Engage the Community

Most developers understand the importance of engaging the community while creating & implementing different initiatives. But despite this awareness, many times the community is not engaged early, deeply, or widely enough. While it can be hard to bring everyone to the table, it's the most fundamental step in a successful systems-change process. The group of individuals that you recruit to help design, plan, and oversee the change initiative can be thought of as your **Ecosystem Coalition.** Here are some different personas that you'll want at the table:

Formal Experts - individuals with professional or academic experience in the problem areas you are addressing. The Eco-Led process requires defining pretty complex economic and sociological systems, so it's a good idea to have experts in these areas involved. Consider engaging professors or researchers from local colleges or universities.

Informal Experts - just as important are the *informal experts* - individuals who may not have a degree in the focus areas, but who have extensive work or life experience in them. Informal experts may or may not be actively involved in the areas of focus, but they still bring a wealth of real-world expertise to the table.

Ecosystem Leaders - the individuals who lead organizations & programs that are related to your focus problem area. These are the people that typically get engaged with ecosystem-wide initiatives because their importance is obvious & they are easy to identify.

Community Leaders - the individuals who are leading change on the ground, either through grass-led initiatives or as key figures within their communities. They may overlap with, but are not the same as 'ecosystem leaders' - community-led initiatives are overlooked as part of the ecosystem, and so are the people who lead them.

Community Members - the people who are directly impacted by or involved in your focus problem area. Community *members* are often overlooked in favor of engaging ecosystem or community *leaders*, but the perspective of individuals who face these challenges - not just those who lead the charge against them - is just as important.

Other Development Organizations - finally, engage other ecosystem-building or development organizations, either within or outside of your ecosystem, doing similar work. Within your ecosystem, this is key to avoiding duplicative efforts. Outside of your ecosystem, you can learn from the past successes & failures of others.

Engaging the community is akin to gathering the ingredients needed for a recipe. If you skip it, you can still follow the steps - but the end result is not going to be what you're looking to achieve. With this in mind, let's dive into the first step of Ecosystem-Led Development: **identifying the Problem System that creates & perpetuates the challenge you want to solve.**

Part 2: Ecosystem-Led Development

Ecosystem-Led Development can be thought of as a recipe for creating sustainable systems-level change.

The first steps of Ecosystem-Led Development center around deeply understanding the problems you are facing, the solutions that are needed to address those problems, and how the assets within your ecosystem can be mobilized to do that.

What You'll Learn

- What a **Problem System** is, and how you define one
- What a **Solution System** is, and how you create one
- Detailed examples of how you create problem & solution systems
- What a **Problem Ecosystem** is and what you can learn from it
- What a **Solution Ecosystem** is and how you map it
- How to best **Match Assets** in your ecosystem to the solutions you've identified
- How to identify **Ecosystem Gaps** and how to address them
- How to define **Synergistic Relationships** between different initiatives
- How to avoid **Contradictory Relationship**s between initiatives
- The different logistics needed for setting up ecosystem efforts
- How to measure the success of ecosystem-change efforts

Pages in this Section

1. Defining the Problem System
2. Creating the Solution System
3. Deeper Dive: Creating Problem & Solution Systems
4. Understanding the Problem Ecosystem
5. Mapping the Solution Ecosystem
6. Matching Assets
7. Identifying Strategic Relationships
8. Defining the Logistics

Problem System - the network of challenges & the relationships between those challenges that cause and perpetuate a specific problem

Focus Problem - the core problem you're trying to address with your change initiative

Related Problems - the problems and challenges related to your focus problem. Many of these can be intuitively brainstormed, and others will require the expertise of the coalition to uncover

Nodes & Edges in a Problem System - the set of Focus & Related Problems (nodes), and the correlative (sometimes causal) relationships between two given problems that describe how they are related and influence each other (edges)

🟩 **Diagram: A Generic Problem System**

Related Problem

Relationship between Focus Problem & Related Problem

Related Problem

Focus Problem

Related Problem

Related Problem

In reality, there are typically multiple relationships between problems with different causes and directions

Related Problem

Relationships between two Related Problems, both individually connected to the Focus Problem

🟧 **Diagram: A (simplified) Problem System for Homelessness**

Disclaimer: this is an incredibly simplified example which excludes many nodes & edges for the sack of simplicity

Individuals leaving the prison system may not have anywhere to live after they are released

Prison or Jail Time

Availability of Affordable Housing

An individual who cannot find affordable housing may experience homeless

A rising number of high-paying jobs in an area can increase in market rents, reducing housing affordability

A victim of domestic violence may leave their housing to escape violence

🟦 **See PAGE 24 for a Deeper Dive on defining the Solution System for the Revitalize Initiative**

Homelessness

An individual who experiences homeless may lose their job

Domestic Violence

Domestic violence can drive a victim towards substance abuse

Access to Well-Paying Jobs

An individual who loses their job may not be able to afford their rent

Income that would otherwise go to housing may be used to purchase substances

Substance Use Disorders

Substance use can increase aggression, leading to increased domestic violence
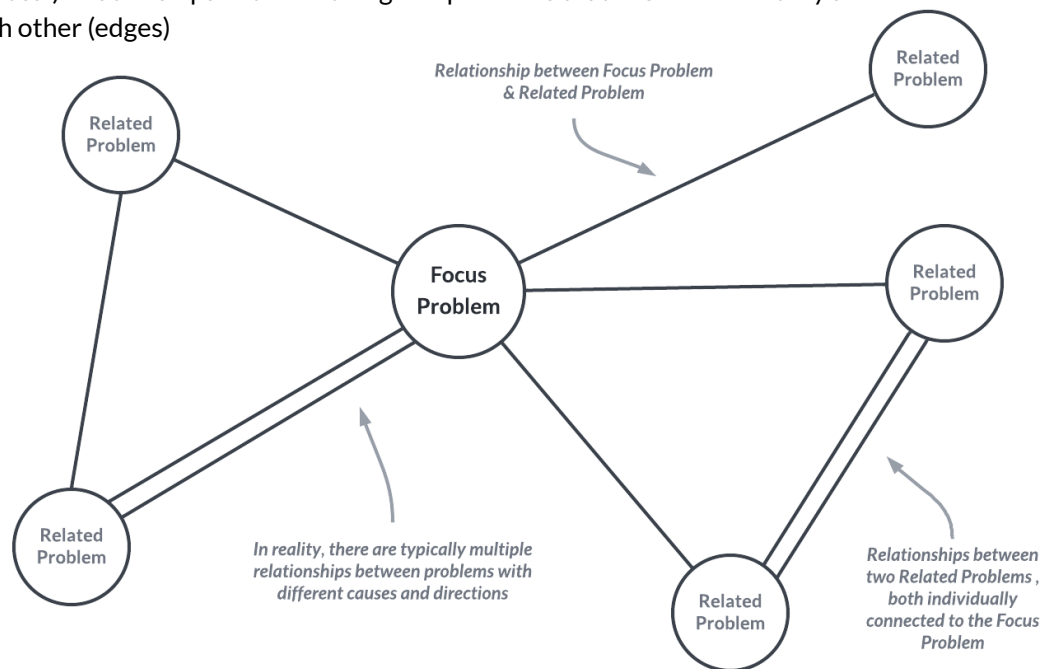
Defining the Problem System

A **Problem System** is the network of challenges & the relationships between those challenges that cause and perpetuate a specific problem

We have an inherent familiarity with Problem Systems. We understand that the decline of a downtown business district is typically caused not by one thing, but by a multitude of interrelated factors: the reduction of headcount for employers contributes to the closing of storefronts, contributing to a decline in residential density, contributing to the decay of local buildings, etc. Each of these problems have causes and relationships to other challenges as well; that is, **Problem Systems are nested within other Problem Systems.**

Despite their vastness and complexity, **it is possible to identify the Problem System that is immediately contributing to the challenge at hand. This is the first step in formulating an Ecosystem-Based Development Strategy:** understanding the greater system that is causing, perpetuating, and influencing the problem you are trying to solve.

As with any system, to define a Problem System, you need to identify the nodes and edges. In **Problem Systems, the nodes are the challenges that are related to your Focus Problem, which is the challenge you're aiming to address with your initiative. The edges are the correlative (sometimes causal) relationships between these Related Problems.** There may be more than one edge between any node, and the edges may be directional, in one or both ways.

Because of the interconnected nature of problems, **these Problem Systems can extend seemingly infinitely,** bringing in challenges so far removed from your Focus Problem that the effort to define it seems futile. However, there are a few things you can do to make the process of defining a Problem System feasible, targeted, and effective.

First, limit the set of Related Problems to first or second degree nodes of your Focus Problem. For example, a 'declining business district' is related to 'residential density' which is related to 'homelessness', but if your Focus Problem is a 'declining business district', you shouldn't try to define the Problem System for 'homelessness'.

Second, limit the edges to the relationships that are most common and influential. There are typically multiple relationships between two problems with varying degrees of commonness and influence. For the sake of defining a Problem System, you may need to exclude the less common or less influential relationships - not because they are unimportant, but because they are so numerous.

Finally, recruit help. Understanding these problem systems is core to the work of sociologists, community leaders, and beyond. Your Ecosystem Coalition will be crucial to this step, but especially the Formal Experts, Informal Experts, and Community Members, because they can often give more unbiased and robust perspective into the problems that exist and the relationships between them than leaders of organizations or initiatives who are already working on these problems in a specific way.

Once you have diagramed the generic Problem System, now we turn to the next step in Ecosystem-Led Development: The Solution System.
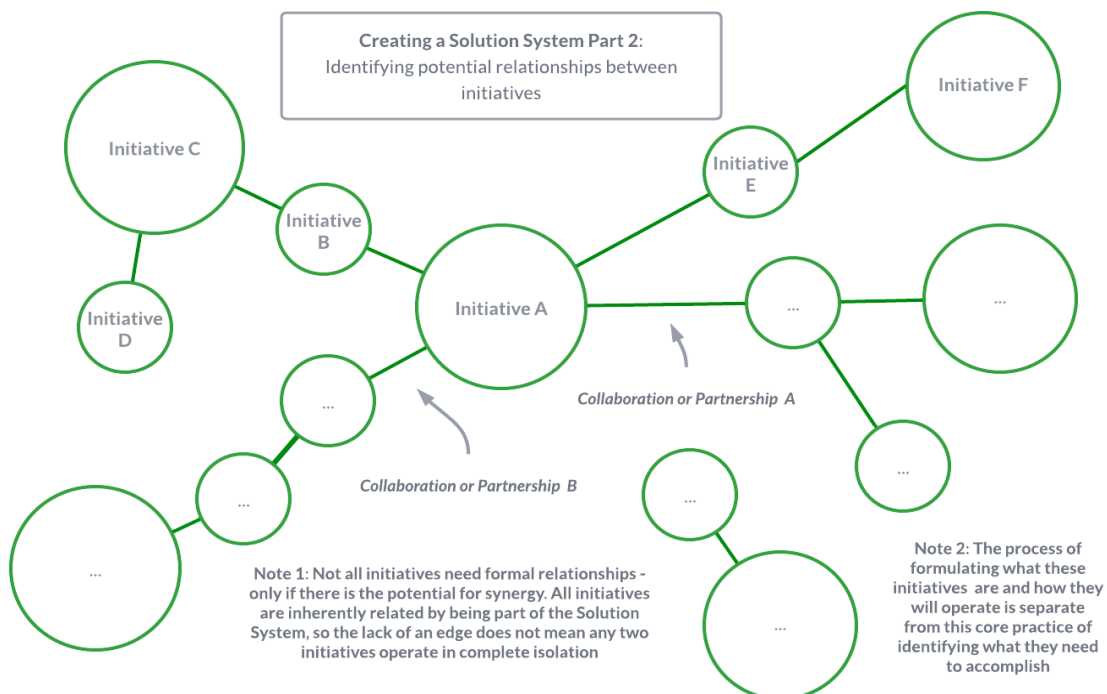
Solution System - The network of initiatives and relationships between those initiatives that is created & mobilized to address the nodes and edges of the Problem System

Nodes in a Solution System - represent the discrete initiatives that are formed to address either a node or edge of the Problem System. The characteristics of these initiatives can vary in size, scope, and complexity

Edges in a Solution System - The Edges of a Solution System describe the relationships between different solution initiatives - how two programs support or undermine each other (note: there may be no edge between any two given nodes)

🟩 **Diagrams: (1) Creating the Nodes of a Solution System based on the defined Problem System, (2) Identifying potential edges between Nodes of the Solution System**

Creating a Solution System Part 1: Identifying initiatives to address nodes & edges within the Problem System

Related Problem

Related Problem

Focus Problem

Related Problem

Related Problem

An initiative that targets a specific edge in the Problem System (the relationship between two Related Problems)

An initiative that targets a specific node in the Problem System directly (a Related Problem)

Related Problem

Related Problem

Creating a Solution System Part 2: Identifying potential relationships between initiatives

Initiative C

Initiative B

Initiative D

Initiative A

Initiative E

Initiative F

Collaboration or Partnership A

Collaboration or Partnership B

Note 1: Not all initiatives need formal relationships - only if there is the potential for synergy. All initiatives are inherently related by being part of the Solution System, so the lack of an edge does not mean any two initiatives operate in complete isolation

Note 2: The process of formulating what these initiatives are and how they will operate is separate from this core practice of identifying what they need to accomplish

🟦 **See PAGE 24 for a Deeper Dive on defining the Solution System for the Revitalize Initiative**

Creating the Solution System

A Solution System is the network of targeted solutions that address both the nodes and edges of the Problem System.

As discussed in Part 1, it is not enough for a development initiative to apply a single discrete solution to the Focus Problem, because once the "pressure" of the solution is removed, the Focus Problem Node will simply be pulled back to its original state by its relationships to the Related Problems. **In order to move the Focus Problem in the desired direction permanently, you must either move the Related Problem nodes in the same direction, or break the relationship between the related nodes & the focus nodes**. The best Solution Systems do both.

Thankfully, there exists well-researched and evidence-based solutions for the majority of challenges within these systems. These solutions typically address either a specific problem (node), or they work to weaken, break, or change the direction of the relationship between a problem and related ones (the edges). These are often the solutions that we attempt to apply in isolation to challenges, to little avail. But when they are strategically combined to target different aspects of the Problem Systems, the impact can be massive.

The second step in formulating Ecosystem-Led development strategies is identifying the array of Solutions that are needed to both move the nodes and change the relationships within the Problem System. Compared to Problem Systems, the structure of a Solution System is a bit different. The nodes of the Solution System are the actual programs and initiatives that address the nodes or edges of the Problem System, and the edges are the relationships *between* these initiatives, if they exist at all.

What's important to call out is that in a Solution System, the entire system itself is the real "solution" to the Problem System - not the independent nodes within it. Those nodes are better defined as "interventions", and the **ensemble of these strategically-placed interventions and how they interact with each other is what constitutes an effective Solution System.**

To define a Solution System, you simply start placing the nodes (the interventions) on the nodes and edges of the Problem System. Again, this is where engaging both experts and the community is fundamental - there are already studied interventions known to be effective for specific problems. Keep in mind as you do this, however, **you are not identifying the specific organizations, programs, or people who will do this work -** that comes later. For now, you are just laying out the generic initiative that can impact the challenges.

Once the nodes are established, you can now define the edges of the Solution Systems - the ways that these initiatives interact with each other. This is one of the more overlooked and underutilized concepts in crafting development initiatives. If you have two programs with great goals that contradict each other in practice, no one benefits. On the other hand, if you create a novel way for two programs to support and supplement each other, the impact can be drastic. **Synergistic Edges** are interactions between two programs that supplement their impact, while **Contradictory Edges** are interactions between two programs that make each program less effective (examples of these are described in detail later on the "Identifying Strategic Relationships" section). Once you have defined the nodes and edges of the Solution System, **it's time to bring it home by defining the Problem and Solution Ecosystems: the real-world instantiations of the generic systems you have just defined.**

🟦 Deeper Dive: Creating Problem & Solution Systems - Part 1

In a series of four diagrams, these pages illustrate the process of defining a Problem System and using it to create your Solution System, based on the Revitalize Initiative. While the Problem System here is slightly simplified from its real-world complexity, it also reflects a realistic example of one you may create. The first step is identifying your Focus Problems, the Related Problems, and then defining how they relate to each other:
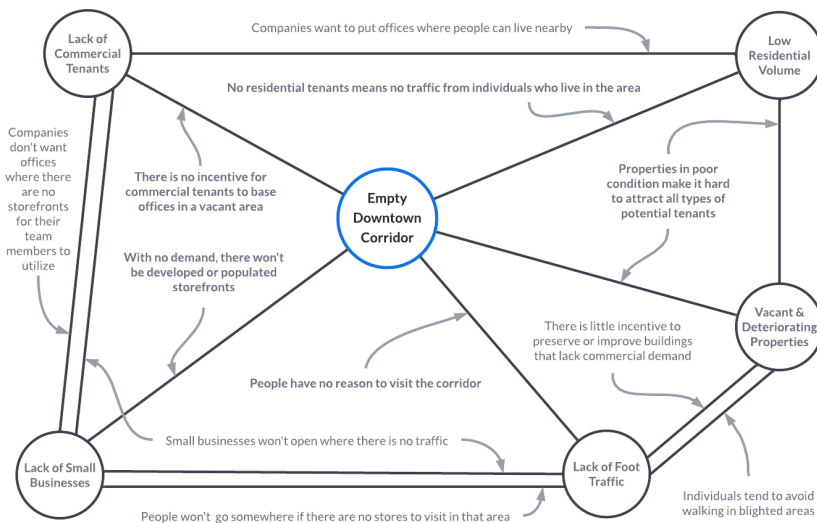
🟦 Diagram 1 (to the left): Defining the Problem System

Once you have defined your Problem System, the next step is to place Solution System nodes on each Node and Edge. The diagram on the left shows the intermediate step between identifying where the Solution Nodes *go* and what the Solution Nodes *are for*. In practice, you may not need to make a diagram for this step, but it helps here to demonstrate how the Problem System translates to the Solution System.

🟦 Diagram 2 (on the right): Adding Solution Nodes on the Nodes & Edges of the Problem System

Once you have defined your Problem System, the next step is to place Solution System nodes on each Node and Edge. The diagram on the right shows the intermediate step between identifying where the Solution Nodes *go* and what the Solution Nodes *are for*. In practice, you may not need to make a diagram for this step, but it helps here to demonstrate how the Problem System translates to the Solution System.
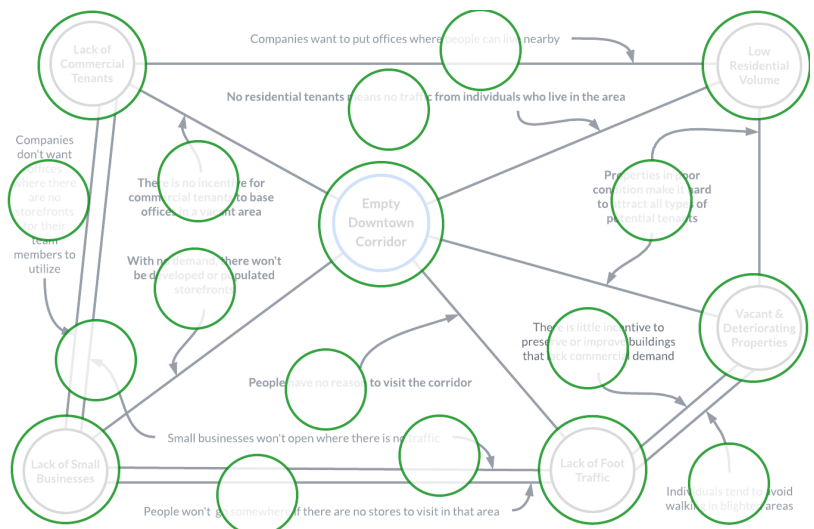
Note how in the Solution System, you place nodes over both the nodes *and* edges of the Problem System. This is crucial to developing change initiatives that not only address the problems themselves, but also the relationships and "sub-problems" that cause and perpetuate the Related Problems. Tackling both the root problems and the relationships that keep them in place is one of the core tenets of successful systems-change initiatives.

🟦 Deeper Dive: Creating Problem & Solution Systems - Part 2

After you have identified your Solution Nodes, it helps to remove the underlying Problem System and summarize what each specific Solution Node is meant to do. Instead of jumping immediately to defining the actual initiative for each node, this intermediate step helps ensure there is a conceptual understanding of the purpose of each node, and makes it easy to identify those that are duplicates (which can be merged together):

🟦 Diagram 3 (on the right): Removing the Problem System & summarizing what each Solution Node is for

Finally, it's time to define what the actual Solution Initiatives are, and how they should relate to each other. Remember: these are based off of their defined purposes (from the diagram on the right), *not what programs or initiatives currently exist within your ecosystem.* The initiatives below are examples, but are based off of real-world programs we've seen across ecosystems for similar challenges:
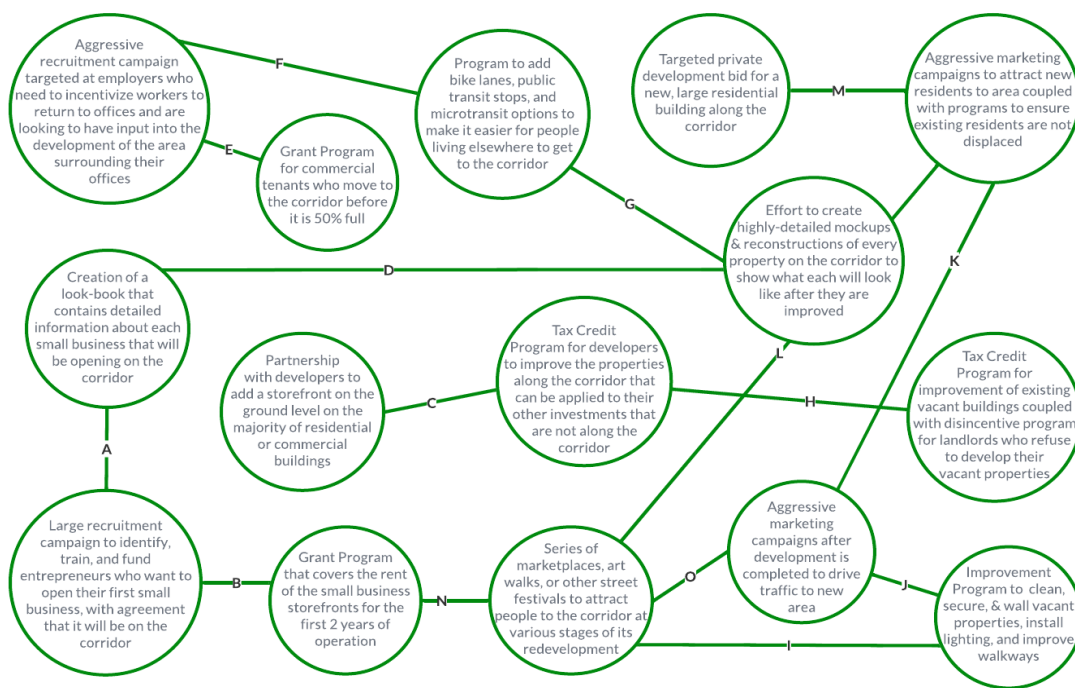
🟦 Diagram 4 (on the left): Describing the Solution Nodes & adding Edges between them

We don't define the relationships above for sake of simplicity, but many of them follow basic patterns. Edges A/B/G/I/J/L/M/N are all temporal relationships, where one initiative should logically happen before or after another. Edges C/D/E/F/K/H/O are collaborative relationships, where the initiatives work together in some form. More detailed examples of synergistic relationships are defined in later sections.

Problem Ecosystem - the collection of assets within a specific community that are involved with or contribute to a specific problem; the real-world instances of a given Problem System

Individual Problem Ecosystems - the Problem Ecosystem of a specific person or organization, which are important but generally not strongly considered for the purpose of systems-level change
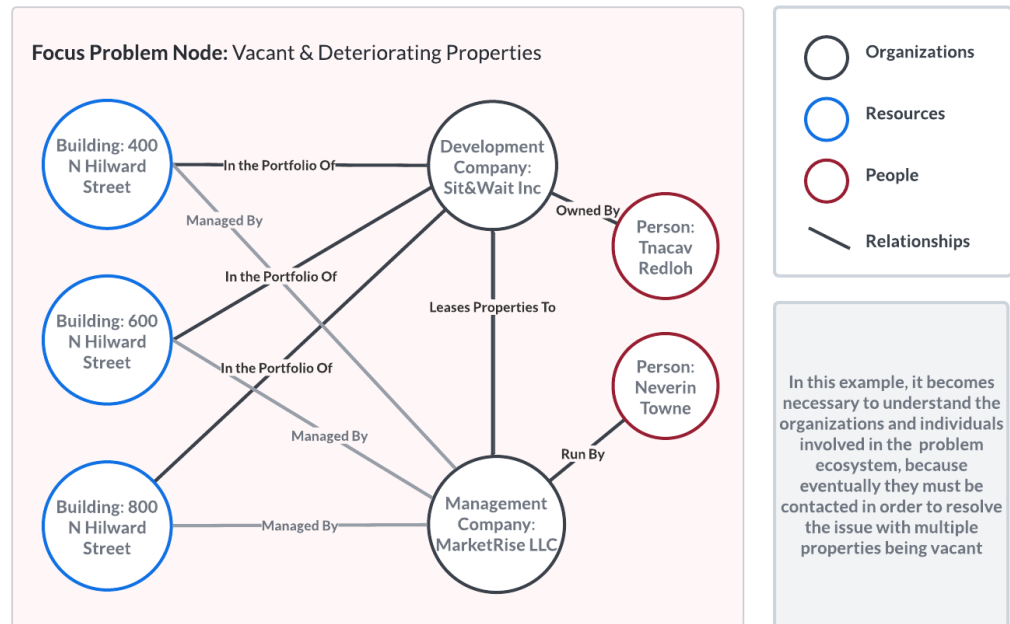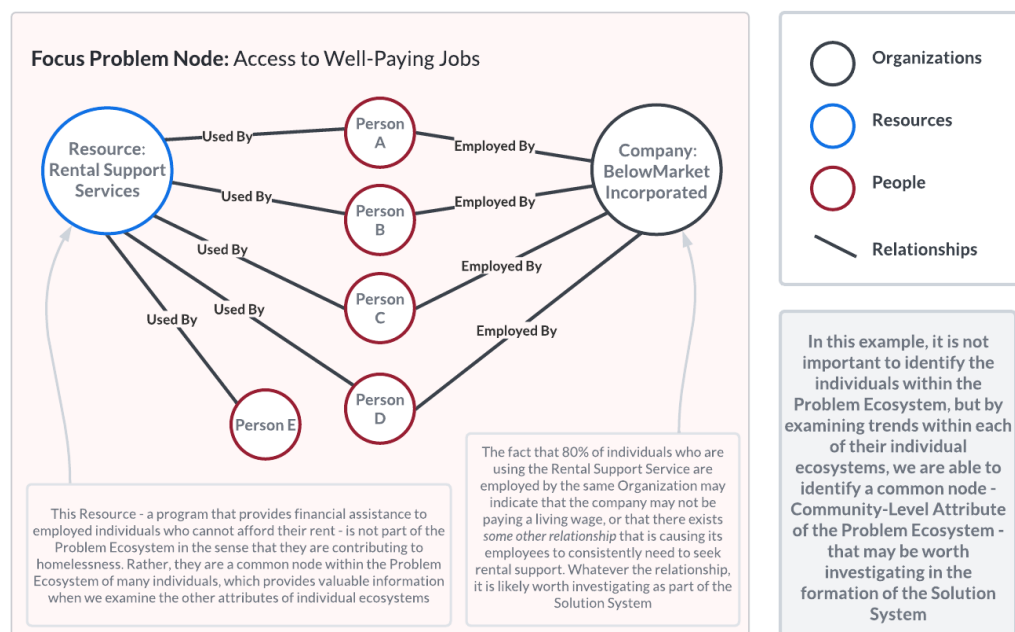
Community-Level Attributes - the characteristics of a Problem Ecosystem that are common between numerous individual problem ecosystems, create trends within a problem ecosystem, or otherwise constitute an aspect of a Problem Ecosystem that should be addressed on a systems-level basis, instead of on an individualized basis

🟦 **Diagram: When individual assets in Problem Ecosystems need to be identified**

Focus Problem Node: Vacant & Deteriorating Properties

Building: 400 N Hilward Street —In the Portfolio Of— Development Company: Sit&Wait Inc

Managed By — Owned By — Person: Tnacav Redloh

In the Portfolio Of

Building: 600 N Hilward Street — Leases Properties To

In the Portfolio Of — Person: Neverin Towne

Managed By — Run By

Building: 800 N Hilward Street —Managed By— Management Company: MarketRise LLC

Legend:
- Organizations
- Resources
- People
- Relationships

In this example, it becomes necessary to understand the organizations and individuals involved in the problem ecosystem, because eventually they must be contacted in order to resolve the issue with multiple properties being vacant

🟧 **Diagram: When trends in individual Problem Ecosystems indicate a Community-Level Attribute**

Focus Problem Node: Access to Well-Paying Jobs

Resource: Rental Support Services —Used By— Person A —Employed By— Company: BelowMarket Incorporated

Used By — Person B — Employed By

Used By — Employed By

Used By — Person C — Employed By

Used By — Person D

Person E

Legend:
- Organizations
- Resources
- People
- Relationships

This Resource - a program that provides financial assistance to employed individuals who cannot afford their rent - is not part of the Problem Ecosystem in the sense that they are contributing to homelessness. Rather, they are a common node within the Problem Ecosystem of many individuals, which provides valuable information when we examine the other attributes of individual ecosystems

The fact that 80% of individuals who are using the Rental Support Service are employed by the same Organization may indicate that the company may not be paying a living wage, or that there exists *some other relationship* that is causing its employees to consistently need to seek rental support. Whatever the relationship, it is likely worth investigating as part of the Solution System

In this example, it is not important to identify the individuals within the Problem Ecosystem, but by examining trends within each of their individual ecosystems, we are able to identify a common node - Community-Level Attribute of the Problem Ecosystem - that may be worth investigating in the formation of the Solution System

Understanding the Problem Ecosystem

A **Problem Ecosystem** is the collection of people, resources, and organizations within a community that cause, influence, or perpetuate a specific problem as well as the problems that are directly related to it. **Problem Ecosystems are simply the real-world instances of the Problem Systems** previously defined. If the Problem System under question is homelessness, then the Problem Ecosystem will involve the network of all people, organizations, and resources that relate to, influence, and perpetuate homelessness in a given community.

Problem Ecosystems are even more vast than Problem Systems, with thousands of nodes and hundreds of thousands of edges within even a small community. Unlike Problem Systems, the task of defining the entire Problem Ecosystem is likely not going to be possible or productive for most problems in most communities, because they are so giant. **However, an understanding of Problem Ecosystems is vital to not only crafting effective development initiatives, but avoiding incredibly dangerous ones.**

Problem Ecosystems exist & operate both on the individual basis and on the community basis. For example, a single unhoused individual has an entire network of other people, organizations, life events, resources, and relationships that have contributed to them being unhoused. These networks are ecosystems themselves, and are incredibly influential on that individual in both good and bad ways. However, when trying to tackle challenges at scale, addressing the nodes and edges of a specific person or businesses' ecosystem is not feasible. This is not to say that individual problem ecosystems are not important - only that with limited resources, systems-level solutions should be applied instead.

While you can't map the Problem Ecosystem for every individual or business you *can* **learn a lot from the commonalities between them**. Are certain types of businesses more likely to be suffering? Are individuals from a certain neighborhood, or income level, most affected? What do all of these independent assets, who face similar challenges, have in common?

In other words, you can **identify the community-level attributes of a Problem Ecosystem.** These may be specific assets (nodes) that have an unproductive influence, such as a vacant property that is causing people to avoid an entire section of a main street, or a major organization who employs a bunch of people in an area but doesn't pay a living wage. Or, these might be common relationships between nodes (edges), such as a large number of people who use a specific rehousing program becoming unhoused again at higher rates than those who use other programs. **The goal with understanding the Problem Ecosystem is not to identify specific assets** - rather, it is to identify how they intersect in a way that systemically perpetuates the challenge under question.

Often, this is where many development initiatives start - identifying specific challenges involving specific assets within a community. This approach not only leads to the development of discrete solutions that are ineffective when applied towards a systemic problem, but **more nefariously, it can lead to strategies & approaches that assume the individual assets - people, businesses, neighborhoods - are the problem, rather than the system itself. It cannot be understated how dangerous this mentality is.**

Instead, by starting with defining the Problem System and Solution System, Ecosystem-Led Development Strategies are able to contextualize these issues by understanding *what* is contributing to the problem, and *how* those problems can be addressed in a systemic fashion. **It removes the focus from the individual assets, and places it on the system itself.**

Solution Ecosystem - the real network of people, resources, and organizations that are either working on, or can be mobilized to work on, addressing the specific challenges within a given Problem Ecosystem

Ecosystem Mapping - the process of systematically identifying, categorizing, and collecting information on the different assets within a given ecosystem

Data Paradigm - the array of different types of information you want to collect about each Asset in your ecosystem to tell you what that asset is, what it does, who it serves, and what it's currently involved with

Ecosystem Dataset - The database of all the different assets that currently exist within your ecosystem. It's important that the dataset is **robust** (contains all applicable assets), **specific** (contains the specific information outlined in your data paradigm for each asset), and **updated** (has continually-updated information about the assets and ecosystem)

Keywords - the list of standard tags that you draw from when categorizing assets in your dataset - having a standard, well defined list is key to being able to find the right assets to fit the solution initiatives defined in your Solution System

🟩 **Example: Data Paradigm** For each asset in your dataset, you might want to collect:

- Name
- Website
- Contact Email
- Short Description
- Keywords about what this asset *is, does, and serves*
- List of relationships to other assets in the ecosystem
- Type of asset (Resource, Organization, Person, etc)

🟩 **Example: Keywords** (tiny sample from the EcoMap Data Paradigm - our Keyword list has over 4,500 values)

For describing what an asset *is*

- Keyword Types: "Resource Type"; "Org. Category"
- Sample Keywords: "Funding Source", "Educational Program"; "Government Agency", "Nonprofit Org."

For describing what an asset *does*

- Keyword Types: "Ecosystem Function"; "Offerings"
- Sample Keywords: "Provides Resources to Businesses", "Creates Policy"; "Accounting Services", "Marketing"

For describing who an asset *serves*

- Keyword Types: "Audience"; "Impact Range"
- Sample Keywords: "Women-Owned", "Low-Income Populations"; "Hyperlocal", "State-Wide"

🗒️**Get Support with Ecosystem Mapping**
The full process of Ecosystem Mapping is beyond the scope of this guide. However, witnessing ecosystems across the world struggle with the ecosystem mapping was what led us to develop powerful technologies & processes to reduce the cost & complexity of this important task. **We're happy to provide free consultation on the best strategies for mapping your ecosystem.** Schedule this at EcoMap.Tech

Mapping the Solution Ecosystem

Now that we understand both the conceptual and real systems that a problem is rooted in, we can move towards mobilizing the Solution Ecosystem to address it. As you might expect, the **Solution Ecosystem is the network of people, resources, and organizations that are either working on, or can be mobilized to work on, the initiatives identified within a given Solution System.**

Solution Systems allow you to understand all of the different interventions and relationships between those interventions that are needed to tackle a given Problem System, but Solution Ecosystems are the structures that are actually created and mobilized towards solving these problems in real life. Unlike with Problem Ecosystems, the **foremost goal of defining a Solution Ecosystem is to identify all of the different assets that exist within a community that can or do fill a role in the Solution System,** or otherwise do work related to the Problem System.

This is a difficult task. The practice of **Ecosystem Mapping - systematically identifying, categorizing, and organizing information on the different assets within a given ecosystem** - is incredibly time and resource-intensive to do correctly. You must not only devise a way to identify these assets reliably at scale, but then you must create a Data Paradigm that allows you to collect important information about each asset, and after all of that, you have to keep the dataset continuously up to date, otherwise, it becomes worthless. Despite the challenges, this process is vital - if you don't have a full understanding of what exists in your ecosystem, you won't be able to properly identify the correct assets to engage for implementing the Solution System, and you won't be able to see all the gaps that may exist within the ecosystem.

However you decide to map your ecosystem, the **end goal is a robust dataset of all the organizations, resources, and in some cases, individual people that can be mobilized to execute on the initiative nodes of the Solution System.** There are two things to keep in mind while you go about this process:

First, it's important your dataset includes often overlooked assets, including community-led organizations, unincorporated initiatives, and informal resources that are not embedded in the core social or professional networks of the development organization and leaders. You should engage the broader community to participate in the asset identification process to ensure you have a full understanding of what can be mobilized in the ecosystem, and importantly, what is already being done to address these problems within your community.

Second, **you want to ensure that you are collecting helpful data about these assets: what they are, what they do, who they serve, and what they are currently doing.** You'll need to develop a set of Keywords in your Data Paradigm that categorize these consistently. Despite the term "ecosystem map", you don't have to put or store this data in an actual map - while the location of assets can be important (and the address of Organizations & Resources should be part of your paradigm), for now, it is more important that you can access the data in an easy-to-use directory or visual database.

Collecting this data is a core element of Ecosystem-Led Development - identifying assets that can execute on the initiatives that are defined in the Solution System. The next step is structuring programs that deploy these assets in the most effective way, by matching assets to the solution nodes you have identified, creating Synergistic Edges between them, and avoiding Contradictory ones.

Matching Assets - the process of identifying which assets within your ecosystem can be mobilized to create & execute the different initiatives outlined in your Solution System

Asset Absence - describes whether or not a needed asset even exists within your community (if you have identified a needed solution initiative but there is no asset in the ecosystem that could execute that initiative, the needed asset is *absent*)

Asset Availability - describes whether or not an asset is currently available and has the capacity to contribute to the solution initiative under consideration

Asset Applicability - describes whether or not an asset is the *best fit* for the solution initiative under consideration or if there are other assets that may be a better fit
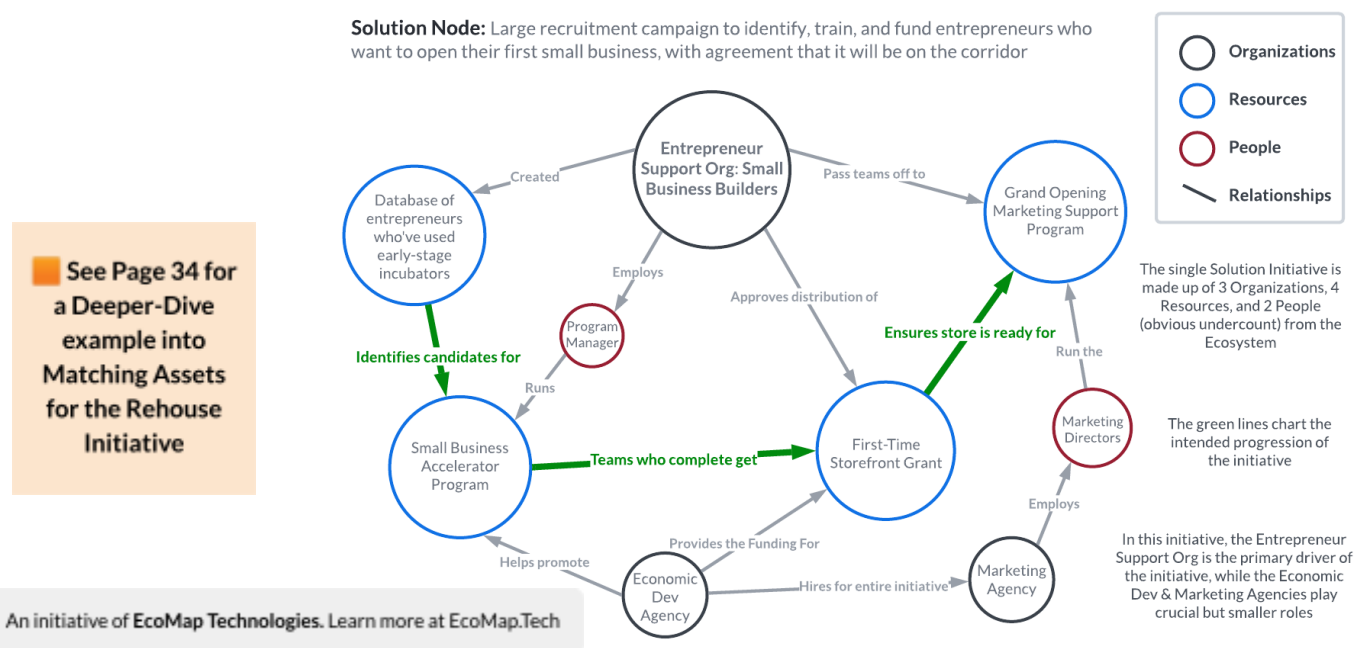
Asset Ability - Describes whether or not a given asset has the financial & human resources (expertise, manpower, funding) to properly create and execute the given solution initiative, assuming there is no other source of those resources that the asset can use to implement the initiative

Ecosystem Gap - Describes the situation when there are no assets that are available, applicable, and able to execute on an identified solution initiative. If you have an ecosystem gap, you should fill it by either creating a new asset (such as a new program putt together by multiple organizations), or helping an existing asset acquire the resources they need to execute on the initiative (such as training, recruiting talent, or providing funding)

🟦 **Analyzing an Asset in the Revitalize Initiative**

- **Asset**: a Facade Grant for new Small Business Storefronts (a Resource)
- **Absence**: the grant program (offered by a local economic dev organization), is still running
- **Availability**: the program only accepts applications in the fall, so it is only available part of the year
- **Applicability**: the grant is intended for improving existing storefronts, not new ones, so it's not super applicable for new businesses who are opening on the corridor
- **Ability:** there's $500k remaining in the grant program budget, so it has the resources needed to be utilized. The organization providing it has the staff capacity to take applications & allocate funds

---

🟦 Diagram: Matching assets to a specific Solution Node

Solution Node: Large recruitment campaign to identify, train, and fund entrepreneurs who want to open their first small business, with agreement that it will be on the corridor

🟧 **See Page 34 for a Deeper-Dive example into Matching Assets for the Rehouse Initiative**

The single Solution Initiative is made up of 3 Organizations, 4 Resources, and 2 People (obvious undercount) from the Ecosystem

The green lines chart the intended progression of the initiative

In this initiative, the Entrepreneur Support Org is the primary driver of the initiative, while the Economic Dev & Marketing Agencies play crucial but smaller roles

An initiative of **EcoMap Technologies**. Learn more at EcoMap.Tech

Matching Assets

By this point, you have four parts of your Ecosystem-Led solution:

1. A **Problem System** that clearly defines all of the nuanced nodes and relationships that influence your Focus Problem
2. A **Solution System** that identifies the generic interventions & relationships between them needed to address the problems
3. An understanding of the **Problem Ecosystem** and the community-level assets attributes that perpetuate the Problem System
4. A dataset of your **Solution Ecosystem**, containing all the assets in the community that can be mobilized to execute the Solution System

Finally, it's time to tie them all together by identifying the following three things:

1. **Matching Assets** - Which ecosystem assets should be deployed to which nodes of the Solution System
2. **Identifying Relationships -** How these assets can collaborate or relate to drive synergistic outcomes, instead of contracting each other
3. **Defining Logistics -** When these initiatives will occur, how they will be funded, and how progress will be measured

Each of these steps is incredibly complex, and the details of them extend beyond an introductory guide. More information on each step will be published on Ecosystem.Info, but for now, we'll dive into an overview of the most important parts of each, starting with Matching Assets.

Matching Assets & Solutions

Here is where you look at all of the different assets in your ecosystem dataset to identify which organizations, resources, and people would be most effective at implementing the initiatives outlined as the nodes of the Solution System. **More simply: you're identifying which assets in the ecosystem are the best fit to tackle different aspects of the problem at hand.** We use the term asset since the "thing" doing the work on a specific solution node might be a Person, Resource, Organization, or a combination. But assets themselves are not the actual initiatives that are executed - for simplicity, you can call the initiatives which are created to address a specific challenge "programs".

When creating programs, you want to consider four variables: the absence, availability, applicability, and ability of assets.

- **Absence** - are there existing assets in the ecosystem that can create and execute an effective program?
- **Availability** - are these assets currently available (or will be when they are needed)? Do they have the capacity to contribute?
- **Applicability** - are these assets the best fit for the job at hand? Are there other assets that may be a better fit for this specific need?
- **Ability** - do these assets have the financial & human resources needed to implement a program? Are they willing to be involved?

If there are no assets that are available, applicable, and/or able to execute a specific program, you have an **Ecosystem Gap, where there are no obvious assets that can be utilized to implement a solution.** In this case, the conversation should center around "How do we make assets available, applicable or able?" rather than deciding to not deploy a solution to address a problem. Remember - t**he purpose of identifying the Problem System and Solution System first is to understand what is** *needed* **to properly address a challenge,** unbiased by what is *available* within the ecosystem currently.

Synergistic Relationship - a relationship between two initiatives that is mutually beneficial to each, where the success of one initiative either increases or maintains the success or momentum of the other

Pipelines - relationships between initiatives where the outputs of one are the inputs of another, where there is a linear and directional pathway for these outputs

Flywheels - relationships between initiatives where the outputs of one sustain, fuel the growth of, or increase the momentum of another, but there is not a linear pathway for these outputs

Small Wins - relationships between initiatives that are structured so that the positive outcomes of those initiatives form a continual chain of small but visible wins, driving momentum of the initiative

Contradictory Relationship - a relationship between two initiatives that is harmful to either one, where the success of one initiative undermines or nullifies the success or momentum of the other

Competitive - describes situations where the success of one initiative has a negative impact on the reputation of another, or they must compete for the same scarce resources

Mistimed - describes situations where initiatives are not timed properly, such that the outputs of one can dissipate before another is able to pick those up and maintain forward progress

Counterproductive - describes situations where the outputs of a successful initiative create unproductive conditions for another initiative, or generally worsen the problem system

> 🟦 **Examples of Synergistic Relationships in the Revitalize Initiative**
>
> - **Pipelines:** three programs are established to support small businesses opening on the corridor: a grant to open the storefront, a technical assistance program that teaches them how to set up a digital presence, and a coalition of orgs that provide marketing assistance when they open. Those who receive the grant must participate in the TA program, and only those who finish the TA program receive the marketing assistance
>
> - **Flywheels:** the city creates a real estate investment vehicle which receives a proportion of rental revenues from the buildings invested in; the returns from that vehicle are used to provide the grant funding for the small businesses that open in the ground floors of those buildings
>
> - **Small Wins**: the announcement of a large employer moving to the corridor is followed a month later by the announcement of 6 small businesses opening in the area, which is followed by the groundbreaking of a new building on a previously vacant lot three weeks later. The intentionally-timed announcements (for programs at different stages of execution) creates buzz around the initiative, attracting other interested organizations to engage with the corridor revitalization effort

Identifying Strategic Relationships

Once you have identified which assets will be deployed, and gotten their consent to participate, now it's time to identify how all of these various programs can work together to achieve the most desired outcomes. This is the most challenging aspect of Ecosystem-Led Development, and is often overlooked entirely in development practices because it can be so hard to both conceptualize and execute. However, **properly implementing Synergistic Edges and avoiding Contradictory ones can vastly influence the success of a change initiative.**

Remember, the edges discussed here are how different programs relate to each other through formal structure, informal collaboration, resource sharing, communication, and beyond - the ties that relate different nodes in the Solution Ecosystem. Not all nodes within the ecosystem will have a relationship with all other nodes; but in the most effective Solution Ecosystems, as many potential relationships between different nodes are explored as possible to see whether they could be Synergistic or Contradictory.

While there are dozens of ways that programs can work together, there are three important relationships that create Synergistic Edges:

1. **Pipelines -** ensuring there is a clean handoff between the work of one initiative and another, so no progress is "lost" in transition
2. **Flywheels** - using the funding, attention, or other outputs of one initiative to feed into another that needs those as inputs
3. **Small Wins -** temporally spacing initiatives so that, if successful, it creates a series of "small wins" that provide momentum & attention

Relationships are Contradictory when the success of one program makes it harder for another to succeed because the implementation of one program works against, or nullifies, the effect of the other. These can create tension and resource strain within the ecosystem, and in some cases, can incapacitate the whole Solution System. These are different from the Ecosystem Challenges discussed in Part 3; however, those challenges often lead to or result from the impacts of Contradictory Edges.

There are three common relationships that form Contradictory Edges:

1. **Competitive**- if one program succeeding poses a reputational or attentional threat to another, or two programs are drawing from the same pool of limited resources, there will be competition within the ecosystem, which can result in reduced collaboration and effectiveness
2. **Mistimed -** if the results of programs are not timed correctly, the impact of one can dissipate before the impact of another has a chance to affect the ecosystem (ie, the system can revert to its normal state because the solutions are not "synced")
3. **Counterproductive -** when the outputs of a successful initiative create negative inputs that perpetuate the Problem System. This is slightly different than the other relationships, because it occurs between the Problem Ecosystem and the Solution Ecosystem, instead of within the Solution Ecosystem itself

Once you get through defining strategic relationships, take a sigh of relief. Compared to that, putting the logistics in place is a breeze.

🟧 Deeper Dive: Matching Assets

The first two diagrams show the process of matching ecosystem assets to the different solution nodes of the Solution System. The dataset of ecosystem assets comes from the Mapping of the Solution Ecosystem, and if each one is properly tagged about what the asset does, who it serves, and how it is related, this process should be relatively straightforward:

🟧 Diagram: Identified Solution Nodes and Unmatched Ecosystem Assets

Example Solution Initiatives from the Rehouse Solution System (not previously diagrammed)

- Expansion of transition shelters so employed individuals who experience homelessness are less likely to lose their jobs
- Program focused on helping citizens about to be released from prison find stable transitional housing
- Program focused on helping low-income renters become homeowners

Sample Assets identified during the Solution Ecosystem Mapping Process

○ Organizations
○ Resources
○ People

For simplicity, relationships between assets are not shown, and relatively few "people" are identified

- Equitable Mortgage Loan Officers
- Grant Funding for Shelter Administration
- Local Mortgage Lender
- Halfway House for Returning Citizens
- Transition Shelter for Employed Individuals
- Credit Improvement Program
- Case Workers for rehousing efforts
- $1,000,000 Homeowner Lending Fund
- Nonprofit supporting Returning Citizens
- Unused Building, Previously a Boarding School

🟧 Diagram: Matching Assets and Identifying Ecosystem Gaps

- Expansion of transition shelters so employed individuals who experience homelessness are less likely to lose their jobs
  - Transition Shelter for Employed Individuals
  - Grant Funding for Shelter Administration
  - Unused Building, Previously a Boarding School
  - Case Workers for rehousing efforts

  This initiative has many of the needed assets, but there may not be enough People to support all the work to be done. This Ecosystem Gap can likely be filled by increasing funding for additional staff at existing assets

- Program focused on helping citizens about to be released from prison find stable transitional housing
  - Halfway House for Returning Citizens
  - Nonprofit supporting Returning Citizens
  - Ecosystem Gap: Funding

  This initiative does not appear to have all of the assets needed - there is no funding identified and there are not enough people. This Ecosystem Gap may need a new asset created

- Program focused on helping low-income renters become homeowners
  - Local Mortgage Lender
  - Equitable Mortgage Loan Officers
  - $1,000,000 Homeowner Lending Fund
  - Credit Improvement Program

  This initiative appears to have all of the assets that it needs to be successfully implemented, and there are no clear ecosystem gaps. This initiative is ready to move to the "identifying relationships" stage of the process

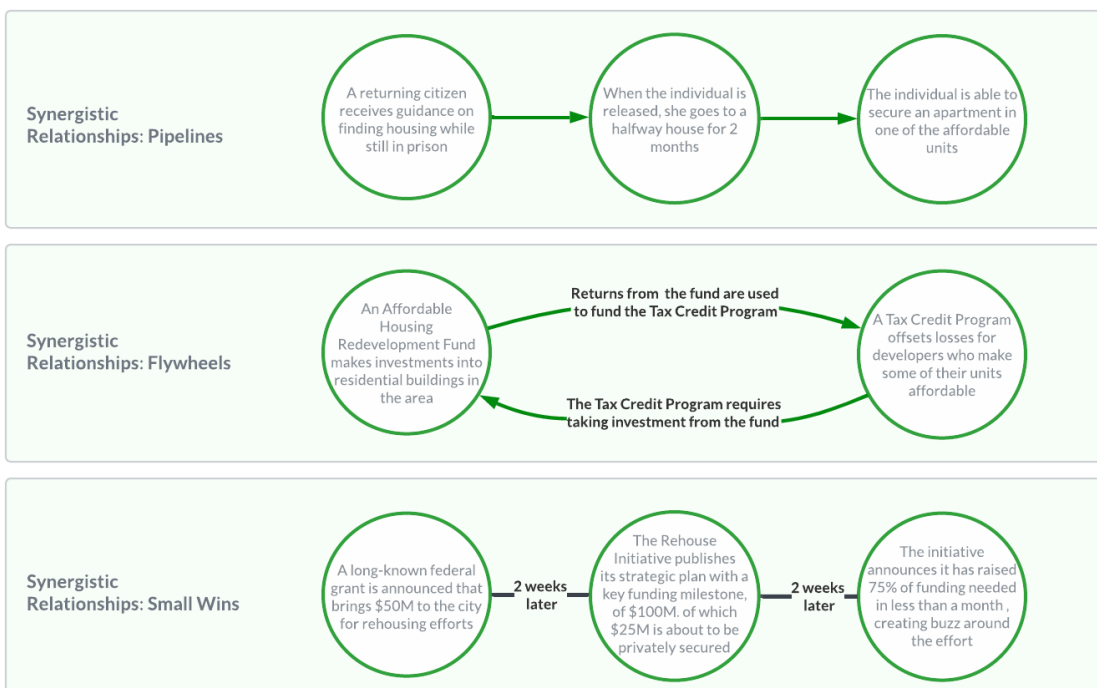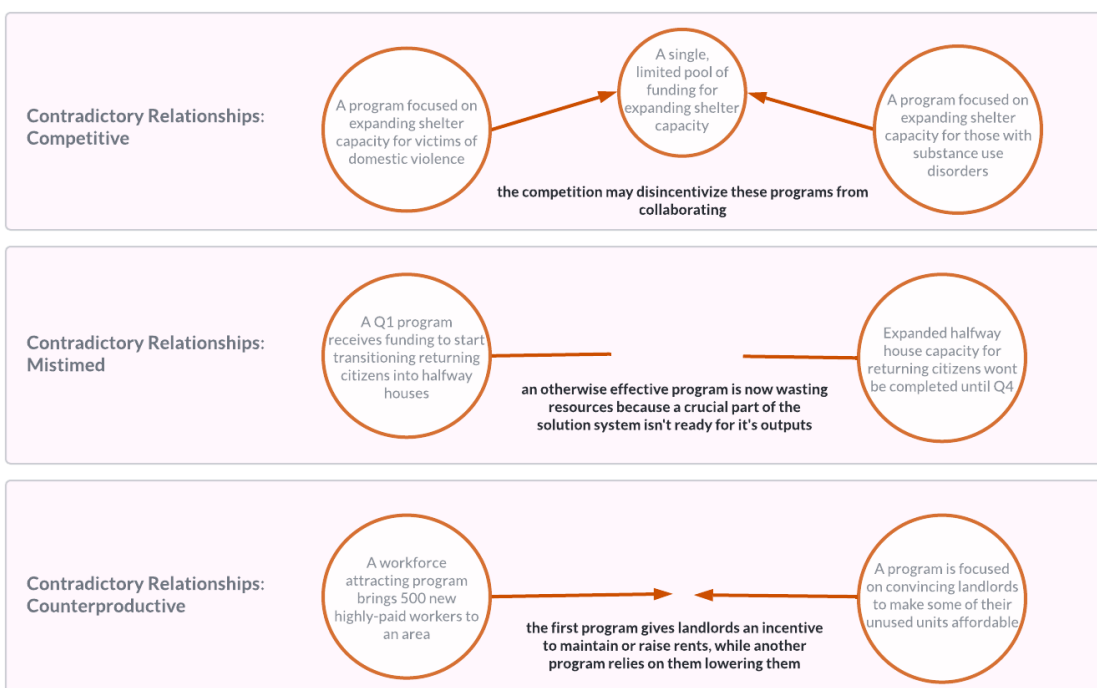An initiative of **EcoMap Technologies.** Learn more at EcoMap.Tech

🟧 Deeper Dive: Identifying Strategic Relationships

These diagrams provide examples of both synergistic and contradictory relationships between different solution initiatives. What may be striking is that many of these edges are obvious - it is often very simple mechanisms that make relationships either beneficial, nullifying, or harmful. The key to identifying strategic relationships is thinking through all the possible ways any initiative could work for - or against - the interests of others:

🟧 Diagram: Examples of the different types of strategic relationships between Solution Nodes

Synergistic Relationships: Pipelines
A returning citizen receives guidance on finding housing while still in prison → When the individual is released, she goes to a halfway house for 2 months → The individual is able to secure an apartment in one of the affordable units

Synergistic Relationships: Flywheels
An Affordable Housing Redevelopment Fund makes investments into residential buildings in the area — Returns from the fund are used to fund the Tax Credit Program → A Tax Credit Program offsets losses for developers who make some of their units affordable — The Tax Credit Program requires taking investment from the fund →

Synergistic Relationships: Small Wins
A long-known federal grant is announced that brings $50M to the city for rehousing efforts — 2 weeks later — The Rehouse Initiative publishes its strategic plan with a key funding milestone, of $100M. of which $25M is about to be privately secured — 2 weeks later — The initiative announces it has raised 75% of funding needed in less than a month , creating buzz around the effort

🟧 Examples of Contradictory Relationships in the Rehouse Initiative

Contradictory Relationships: Competitive
A program focused on expanding shelter capacity for victims of domestic violence → A single, limited pool of funding for expanding shelter capacity ← A program focused on expanding shelter capacity for those with substance use disorders
the competition may disincentivize these programs from collaborating

Contradictory Relationships: Mistimed
A Q1 program receives funding to start transitioning returning citizens into halfway houses — Expanded halfway house capacity for returning citizens wont be completed until Q4
an otherwise effective program is now wasting resources because a crucial part of the solution system isn't ready for it's outputs

Contradictory Relationships: Counterproductive
A workforce attracting program brings 500 new highly-paid workers to an area → ← A program is focused on convincing landlords to make some of their unused units affordable
the first program gives landlords an incentive to maintain or raise rents, while another program relies on them lowering them

Ecosystem Change Logistics - the details about when initiatives are going to run and in what order, how they are being funded, and how the success of the entire change effort is measured

Aggregated Measurement - the process of measuring the success of the entire change initiative as an aggregate of the success of each individual initiative

🟧 **Aggregated Measurement of the Rehouse Initiative**

Let's assume there are only 3 programs in the initiative:

- **Program A** is measured on the number of individuals experiencing homeless that they are able to rehouse
- **Program B** is measured on the number of apartment units that they make affordable
- **Program C** is measured on the volume of grant funding they are able to attract to the rehousing initiative

Each of them sets goals that measures the success of their specific program:

- **Program A** aims to rehouse 500 individuals. Six months in, they have rehoused 400 individuals (80%)
- **Program B** aims to make 6,000 units affordable. Six months in, they have made 3,000 units affordable (50%)
- **Program C** aims to attract $5 million in grant funding, and six months in they have attracted $6 million (120%)

Simply averaging the percentage doesn't give us a very clear idea of whether or not the entire Rehouse Initiative is successful. **Instead, there are two ways to get a good Aggregated Measure of success.**

First, we can use a **Weighted Average.** Let's say the change initiative decides that:

- 60% of the success of the initiative is based on how many individuals are rehoused
- 30% is based on how much affordable housing there is
- 10% is based on the volume of funding available

If we take the Weighted Average, the initiative is 75% of the way towards its goal at the six month mark.

Or, we can use **multiple metrics** to measure success. Let's say the three goals of the Rehouse Initiative are:

1. Rehousing Individuals
2. Increasing Affordable Housing
3. Attracting Additional Funding

In this case, **each program of the initiative is bucketed under which goal it works towards, and the percentage success of each program within those buckets is averaged to get the percentage success towards that specific goal.** (In this example, we only defined three programs, so the percentage success of each goal would be the percent success of the one program that aligns with that goal. In reality, there will be multiple programs per goal, so the unweighted average can be taken between them)

🔗 **Resourcing Ecosystem Initiatives**
Where to get the funding for ecosystem change initiatives is one of the most challenging questions of the field, that process is beyond the scope of this guide. We're building a database of different ecosystem-building resources - information about it when it launches will be posted on EcoMap.Tech and Ecosystem.Info

Defining the Logistics

By this point in the process, you know what you need to do, who is going to do it, and how they are going to interact. Now, you have to define how it all gets done. Compared to identifying complex patterns in hard problems, identifying a bunch of solutions, and mapping your ecosystem, this part is relatively straightforward, and most organizations already have structures in place that describe how the logistics are handled.

In general, there are three main questions to consider: **When** are these programs going to take place? **Where** are we getting the resources needed to execute them? **How** are we measuring the success of the initiative?

Deciding when different programs are going to take place is largely up to each ecosystem and the current circumstances at hand, like personnel availability or grant deadlines. In the same way, how you get the funds to implement these initiatives is a largely situational question. The important thing is that the funding pool is non-competitive (you don't have programs that need to be working together fighting for funds), equitable (funds are distributed to assets not just based on the cost of the programs, but also in consideration of the historical funding - or underfunding - of the assets), and flexible (needs will change and the unexpected will happen. Ensure here that there is not only wiggle room in the budgets but that the process of requesting more funds will not substantially slow down an intentionally-timed initiative).

The big question is **how you measure the success** of ecosystem-based initiatives, and this is often the topic of much debate in communities. When you are dealing with a systems-change effort, there are two types of progress to be measured: **how impactful is each of the individual interventions being implemented, and to what degree did the entire solution initiative succeed in its goals?**

In general, it's **ill-advised to measure ecosystem-wide initiatives with a single metric**: it is simply too hard to define a given value - such as the number of new businesses started or the number of individuals rehoused - that fully captures whether or not systems-level change has been implemented. However, specific measures of progress are often needed to prove the efficacy of the program and secure future resources.

One approach is to measure the success of the ecosystem-change as an aggregate of the success of each individual program. For those familiar with the OKR structure, the concept is similar: measure each program independently using some quantitative scale, and then weighted average the percentage success of each program to get the relative percent of successful completion of the entire change initiative (more precisely, of a specific aspect of the change initiative).

The measurement of each program should be defined by the assets who are deploying it; they should be the experts in those problems and how to measure impact. Ideally, each program has 1-3 metrics used to measure different aspects of success. If they are quantitative, the end number is the % progress towards a target value. If they are qualitative, progress can be quantified using a 0-10 scale: 0 indicating no progress, <5 indicating progress but not meaningfully so, >5 being meaningful progress, and 10 being the goal was fully achieved.

While it may seem more complicated, **Aggregated Measurement i**s a better metric of whether an ecosystem-level change has occurred than selecting a single value (or even a handful of values) that seemingly represents ecosystem progress, but is overly narrow or confounded by other circumstances.

Part 3: Overcoming Ecosystem Challenges

The final steps in Ecosystem-Led Development involve overcoming common challenges faced by all ecosystems: silo, misalignment, and sustaining momentum. We describe their causes here, and provide insights into how you can avoid and mitigate them in your efforts.

What You'll Learn

- What it means for an ecosystem to be **Interconnected**
- How ecosystem **Silos** form and why they are dangerous
- The common ways that ecosystems become **Misaligned**
- What **Individual Optimization** means and how you can mitigate it
- Why maintaining **Momentum** within ecosystem initiative is important
- Common momentum-killers and how to avoid them
- How to ensure your ecosystem-led solution is effective, efficient, and equitable

Pages in this Section

1. Identifying Silos
2. Correcting Misalignment
3. Maintaining Momentum
4. Ensuring Effective, Efficient, and Equitable Solutions

🔗 **Ecosystem Challenges**

The challenges faced by ecosystems and the best strategies for addressing them are numerous, and details about them are beyond the scope of this guide. The most salient challenges related to Ecosystem-Led Development are summarized here, but you can find more information about all ecosystem challenges - and the strategies to tackle them - at Ecosystem.Info/Challenges

Interconnectedness - the degree to which different assets within an ecosystem are connected; the number of edges relative to the number of nodes in the network

Ecosystem Clusters - groups of assets within an ecosystem that have high interconnectedness or strong relationships between them

Silos - when an asset or cluster is working on a specific initiative or direction of change without much involvement from other parts of the ecosystem

Diagram: The underlying structures of ecosystems with high & low interconnectedness

An Ecosystem with High Interconnectedness

Most nodes are connected to many other nodes

An Ecosystem with Low Interconnectedness

Most nodes are connected to few other nodes
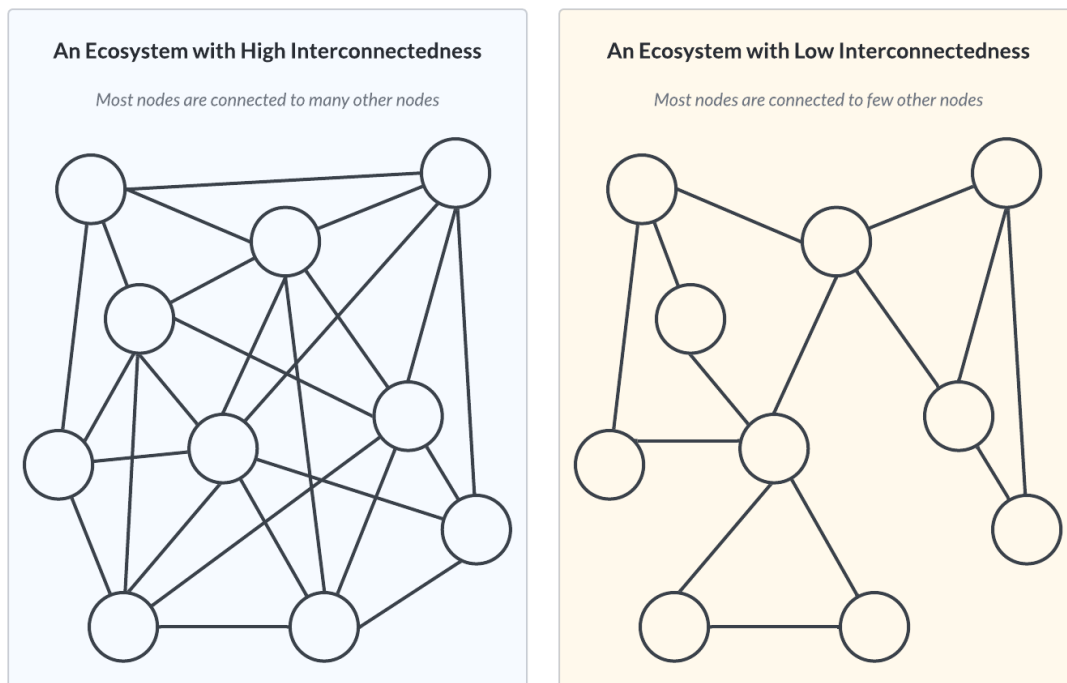
Diagram: The relationship between interconnectedness, clusters, and silos

Even though there are nodes with strong relationships, because of the high degree of interconnectedness of the ecosystem, they don't form meaningful clusters or silos

While there is clearly a cluster in this part of the ecosystem, it's not at a high risk for becoming a silo because many of the nodes are connected to many other nodes within the ecosystem

This cluster is at a high risk for becoming a silo, because it is only weakly connected to the rest of the ecosystem through a single relationship

Takeaway: Clusters within an ecosystem are at the greatest risk of becoming silos when there is low interconnectedness with other parts of the ecosystem

Identifying Silos

Nothing was more consistent in our observations across ecosystems than the challenges they face. Whether we were mapping a tech community or a corporate network, **three challenges impeded the development or change of the ecosystem: silos, misalignment, and momentum,** all related in significant, but not always obvious, ways. We'll start with the biggest: silos.

We know that ecosystems are made up of assets (nodes) and the relationships between those nodes (edges). While all ecosystems share this core structure, there is variation between ecosystems in how many (and what types) of nodes exist, but more importantly, in how many edges exist between nodes and how thick those edges are. This is how you measure the **interconnectedness of an ecosystem: how many relationships exist between assets, and to what degree those relationships are strong** (thick edges) **or weak** (thin edges).

In ecosystems with low interconnectedness, there are a large number of nodes compared to the number of edges - that is, there are a lot of people, resources, and organizations that exist, but relatively few relationships between them. These ecosystem assets could be working in a **Silo**, which can mean they are working independently as a disconnected node, or they are working in small **Clusters** of nodes, with strong relationships between those nodes, but with low connectivity to other nodes & clusters in the ecosystem.

How does this happen? The size of ecosystems plays a big role - it's simply *harder* to know who is doing what within the larger ecosystem. This is why creating a robust ecosystem map is so important - you must understand all the assets that exist before you can create the most effective strategy to mobilize them. Unfortunately, **knowing what assets exist is hard, because the information is often shared through interpersonal and professional networks** - talking to your friends and colleagues creates your picture of the ecosystem.

The challenge is that if an asset is not embedded in those networks, they tend to be excluded from the conversation. This is why community-led initiatives, especially those led by underrepresented and under-resourced populations, are often overlooked when new initiatives are created. Most of us have witnessed this - a new organization comes in to do the work that a community-led group has been doing for years. That community group is often then deprived of both funding and recognition, despite greater expertise & direct experience.

Silos are created when the picture of an ecosystem is formed only through interpersonal and professional networks. This is why it is so important to engage the community as broadly and as early as possible when doing ecosystem mapping or creating ecosystem initiatives. If you don't have enough community representation at the table, modify and continue doing outreach efforts until your Ecosystem Coalition is representative.

You can also engage an outside firm to do the initial ecosystem mapping; because they are not embedded in any of the existing networks, their processes for identifying assets are more likely to turn up a more robust set representing different parts of the community (At EcoMap, we call this the "outsider advantage" - we don't know what we're looking for, so we have to look much harder and formulaically). This initial dataset can then be shared with and supplemented by, members of the Ecosystem Coalition to ensure it is robust and accurate.

Silos are damaging to an ecosystem for a few reasons. **First, they result in Duplicative Efforts** - if an organization doesn't know that a given program exists, they will often create a new one. This can cause not only tension but resource strain and gaps within the ecosystem, when programs targeted toward the same problem & populations draw from the same limited resource pool. But the **deeper problem with silos is that they lead to misalignment of an ecosystem, undermining any change initiative that attempts to move the ecosystem in a given direction.**

Misalignment - when there is a lack of consensus around the direction an ecosystem should go, how it should get there, how it prioritizes change initiatives, or what the successful outcomes of those initiatives are

Misalignment on Direction - when assets in the ecosystem don't agree on the general change direction the ecosystem should head towards

Misalignment on Mechanism - when assets in the ecosystem don't agree on how the ecosystem should pursue a given direction of change

Misalignment on Priority - when assets in the ecosystem don't agree on the order of change initiatives, which ones are more important than others, or which should receive the most resources

Individual Optimization - when individual assets are pushing towards their desired outcomes and directions of change. This is a natural process and not negative per say, but it can be problematic if the desired direction of those assets is different than the general direction the ecosystem is trying to move in

Ecosystem Buy In - the state of having all or most assets within an ecosystem generally agree with, or comfortably disagree with but agree to support, the general direction, mechanisms, and priority of ecosystem change

> 🟦 **Examples of Misalignment in the Revitalize Initiative**
>
> - **Direction** - half of the big organizations involved think the district should be a tech hub full of startups, and the other half think it should be a mix of small businesses and corporate employers
> - **Mechanism -** some people think that the small business storefronts on the corridor should be offered to existing small businesses, while others think the program should target the creation of new small businesses
> - **Priority -** the real estate developers won't clean up their vacant properties until there is a corporate tenant, but the corporations won't consider the vacant spaces until they are cleaned up

> 🟧 **Example of "Individual Optimization" creating Misalignment in the Rehouse Initiative**
>
> 1. **Organization A** is focused on attracting a higher-skilled workforce to the region, so they create an incentive package that will bring high-paid jobs in the city. They measure success by the number of people moved to the city who have these high-paid jobs
> 2. **Organization B** is focused on convincing landlords to offer affordable units, one of their core arguments being there is not enough market-rate demand to fill their buildings at the current rates. They measure success by the number of landlords offering affordable units
> 3. **Org A's** program succeeds and attracts 5,000 high-paid workers to the city. The landlords **Org B** was working with hear about the program and decide to not offer any affordable units, anticipating a rise in market-rate demand
> 4. *By no fault* of either organization, and *despite the logical structure* of both of these programs, the success of Org A undermined the success of Org B
>
> Did you notice? We just described a *Contradictory Relationship* between two assets in the ecosystem.

Correcting Misalignment

Misalignment occurs when there is a lack of consensus in how an ecosystem should change. There are three challenges in which Misalignment appears within an ecosystem:

1. Lack of consensus on the **Direction** the ecosystem should go
2. Lack of consensus on *how* the ecosystems should pursue an agreed-upon direction (the **Mechanism**) or on the **Priority** of change initiatives
3. Contradictory efforts stemming from the **Individual Optimization** of different assets

In this guide, we avoid discussing topics that are not generalizable across ecosystems, and whether a community is aligned on the general direction of an ecosystem is a challenge that has to be solved on a situational basis. However, challenges 2 & 3 can be discussed using the principles of Ecosystem-Led Development.

One of the reasons for defining the Problem & Solution System *before* identifying the Solution Ecosystem is that it allows individuals to come to consensus on how different problems *should* be addressed outside of considering the assets of the actual ecosystem. While people will still have their own biases & priorities, the Problem Systems and Solution Systems are largely data-based - there are real sociological and economic studies that describe problems, the relationships between them, and the interventions effective in addressing them.

If the whole Ecosystem Coalition contributes to developing the Problem & Solution Systems, a productive discussion on the right priority of change initiative tends to arise when defining the Solution System nodes and the edges between them. In this way, collaborative design of these change initiatives is fundamental in not only producing **Buy-In** from the ecosystem, but also avoiding misalignment arising from silos.

When operating in a silo, it's natural for assets or clusters to execute programs that move specific nodes in a given direction. Individual assets often have this as part of their edict and they are measured on to what degree they move a specific metric in a specific direction. While this **Individualized Optimization** works well for achieving desired results for a specific asset or cluster, it's not effective for ecosystem-level change.

As described earlier, the results of Individual Optimization efforts are often undone, or reduced, by the natural reversion of the otherwise unchanged ecosystem after active efforts end. Additionally, Individual Optimization can result in programs within the same ecosystem that contradict each other's progress. Finally, Individual Optimization reduces synergistic alignment, one of the most powerful parts of Ecosystem-Led Development.

Momentum - the abstract concept of energy and excitement around an ecosystem change initiative, which often results in quicker movement towards the goal and in the best cases, attention on the change initiative that generates additional resources or support

Momentum Killers - different conditions and scenarios that dampen momentum within a change initiative. If too many of these conditions exist, the change initiative can fail even if the individual initiatives within it are succeeding

🟦 **Examples of Momentum Killers in the Revitalize Initiative**

- **Lack of Consensus** - the economic development agency wants the corridor to be a mix of small businesses and corporate employers, but another key organization believes it should focus on tech companies, and the foundation funding the effort won't provide funds until that disagreement is resolved
- **Lack of Buy In -** the biggest employer in the area doesn't think that portions of the street should be shut off to cars, so they refuse to ceed their parking spaces, which halts plans for a dedicated outdoor seating area, which was a "nice to have" that other orgs were very excited about
- **Lack of Clarity -** the small businesses opening on the corridor are unclear about when the corporate employees will be moving in, and they can't make effective grand opening plans without that timeline

🟧 **Examples of Momentum Killers in the Rehouse Initiative**

- **Lack of Collaboration** - the organization focused on helping individuals find housing is not talking to the person who convinces landlords to offer affordable units, so all the affordable units end up being located in separate neighborhoods from the people who need them
- **Lack of Recognition** - a nonprofit has been making incredible progress with their initiative, but the local newspapers are covering the new organizations being brought to the ecosystem instead, demoralizing the first nonprofit & causing them to reduce focus on the project
- **Lack of Resources -** the coordinating nonprofit decides that the bulk of the funds should be given to the outside organizations coming into the ecosystem, and expects the local organizations to use their own funds to run their programs that already existed, but are being asked to now serve more individuals
- **Lack of Coordination -** the coordinating nonprofit never set up a clear channel of communication for all of assets involved, so its hard for the initiatives to move quickly because they don't know how to get in touch

🔗 **The Role of Ecosystem Building Organizations**

The core function of a well-structured Ecosystem Building Organization (EBOs) is to serve as the "coordinating" body within the ecosystem. There is so much to say about the role of EBOs in different types and stages of ecosystems, but all are beyond the scope of this guide. More information about EBOs will be posted on the [Ecosystem Information Center](#)

Maintaining Momentum

As we've established, the very structure of ecosystems makes changing them difficult. To overcome this, a good deal of **Momentum is needed for successful ecosystem change, in a way that balances visible short-term wins with fundamental long-term changes.**

Momentum is the hardest of the three challenges to define, because it can take so many different forms. Strong momentum can look like intense collaboration between assets driven by the shared energy & excitement over the change initiative. Momentum can bring external attention to the ecosystem, highlighting its efforts and generating interest from outside parties in supporting those efforts. **The best type of momentum helps move the ecosystem towards the desired direction of change, independent of the movement of the individual nodes**.

While it's hard to define what good momentum looks like, it is possible to identify **Momentum Killers** that can impede the success or speed of the ecosystem-change initiative:

Lack of Consensus - if different parts of the ecosystem don't agree on the direction and priority of change, it will be hard to generate the excitement and collaboration to move the initiative forward

Lack of Buy-In - Even if there is consensus on the direction of change, if the individual solutions were not developed with the community, or feedback and ideas from a part of the ecosystem were ignored, it will result in a lack of buy-in from core members of the ecosystem and the communities they represent

Lack of Clarity - Even if everyone is aligned on the direction and mechanisms of change, if there is not clarity around who/what/where/why/when/how these initiatives will occur, it's harder for individuals to contribute - when people feel like they don't know what is going on, they are much less likely to dive in and get involved

Lack of Collaboration - if collaboration is not built into the design & execution of the change initiative, overtime misalignment will naturally sneak back into the ecosystem as assets work within their own focus areas. Bringing the whole ecosystem together continually to update each other on progress and challenges is key to avoiding this

Lack of Recognition - If assets are not recognized for their contributions - especially if other assets, or the coordinating body, receives ample recognition - they may become demoralized and less likely to engage

Lack of Resources - obviously, if the resources needed are not provisioned (funding, expertise, and manpower), even well-structured initiatives will run out of gas. Assets cannot operate without resources, and assuming they can is a quick way to generate tension or abandonment as assets need to focus on sustaining their own work

Lack of Coordination - if the change initiative are not structured carefully, with a robust Ecosystem Coalition, clear goals, milestones, measures of success, and systems for knowledge storage, communication, and collaboration, a general lack of coordination can sink the whole thing

You'll notice that we don't include 'Lack of Leadership'. **Ecosystem-Led change efforts are made possible by the work of independent assets coming together to execute on a shared vision.** The "leading" organization should therefore focus on "coordinating" the effort by bringing together the Ecosystem Coalition, setting up the structure to define these systems, finding ways to provide the resources, ensuring communication & collaboration continues, providing structure for measurement, and highlighting the work of the individual assets.

Effective - describes a change initiative what is successful at achieving its broader goals by moving the ecosystem and specific nodes within it in the desired direction of change

Efficient - describes a change initiative that utilizes resources in the best way possible by properly identifying the assets that the ecosystem has before forming new ones to fill ecosystem gaps, that leverages synergistic relationships to drive change, and avoid contradictory relationships that can undermine it

Equitable - describes a change initiative that properly serves all of the populations that is is hoping to serve in ways that are beneficial for and agreed upon by those communities, and also is fair to all ecosystem assets who are involved by taking to account both current and historical resourcing of those initiatives and correcting any imbalances as part of the active change

🟦 **Examples of Effective, Efficient, and Equitable outcomes in the Revitalize Initiative**

- **Effective**: After two years, the downtown corridor is a thriving business district full of small business storefronts, corporate offices, and residential occupants

- **Efficient:** After analyzing the ecosystem, we realized that the only asset missing was an incubator program to help small businesses with launch marketing. Since no other assets in the ecosystem felt they could do this, we recruited an outside firm to support. Otherwise, all initiatives were implemented by assets already in the ecosystem

- **Equitable:** No residents who lived on the corridor originally were displaced as it developed, the small businesses are owned by individuals who reflect the communities in the area, and for all initiatives that required additional funding to implement, the economic development agency did the legwork to provide them with these additional resources

🟧 **Example of Ineffective, Inefficient, or Inequitable outcomes in the Rehouse Initiative**

- **Ineffective**: Even though the change initiative reduced homelessness for the first two years, after the funding for direct housing subsidies lapsed, rates of homelessness increased again because the amount of housing, the market rate of that housing, and the jobs in the area remained relatively unchanged

- **Inefficient**: Organizations from outside of the ecosystem were brought in to implement most of the initiatives, even though local organizations have done similar work before. Additionally, there were multiple initiatives focused on providing housing subsidies, but only one initiative focused on increasing the amount of housing available

- **Inequitable:** Despite the abundance of funding, the Nonprofit leading it asked many of the community organizations to provide their own funding so that they could fund the outside organizations. Additionally, the initiative disrupted the work of organizations that were actively supporting individuals experiencing homelessness, which caused these individuals to lose that needed support

Ensuring Effective, Efficient, and Equitable Solutions

How does Ecosystem-Led Development produce more effective, efficient, and equitable outcomes compared to other models of system change? A large part of the success of an initiative is situational, and there are many things that could lead an initiative to not achieve its goals: the Problem System could be poorly defined, the Solution nodes could be wrong, the Problem Ecosystem could be misunderstood, the Solution Ecosystem could be incomplete, or the assets in the ecosystem could not work together for reasons a theory can't predict.

However **Ecosystem-Led Development strategies, even when applied only partially, increase the *likelihood* that a systems-level change initiative will be effective, efficient, and equitable.** Here's why:

Effective: Does it work?

The premise of Ecosystem-Led Development is that systems-level solutions are necessary to tackle systems-level problems, which is hardly a controversial statement. However, if systems-level change initiatives were easy to do, we would have tackled many of these hard problems long ago. Ecosystem-Led Development simply breaks down the process of creating these complex, systems-level solutions into understandable and actionable steps.

This way, communities can focus on creating systems-change initiatives, instead of trying to understand the incredibly complex topic of systems-change theory. **Systems-level change is what works - Ecosystem-Led Development is just a paradigm for understanding how to create & implement this type of change.**

Efficient: Does it use resources well?

By taking into account the Problem System upfront, *then* defining the appropriate solutions, *and then* mobilizing assets within the ecosystem to address them, you identify exactly what you need to enact change, evaluate if you have it, and then only recruit or create what you are missing. **Ecosystem-Led Development is like using a recipe to look at what's in your cabinet and *then* buying the ingredients you don't have.** Common modes of development tend to either look at the ingredients they have on hand and toss them together with the vague intention of making something edible, or, they go to the store and buy all of the ingredients without examining what they already have. In both scenarios, resources are not used efficiently.

Beyond the process, a **big benefit to efficiency is in the careful examination of how different initiatives can interact with each other** to perpetuate the success of the initiative, and avoid unintentionally undermining it. This is how the best chefs cook - saving scraps to make a sauce, reusing an already-hot pan, and timing everything perfectly so that nothing is cold by the time it hits the table.

Equitable: Does it do right by all those impacted?

More so than the previous two questions, **the equity of Ecosystem-Led Development is predicated on the effort made to form a robust, diverse, and inclusive Ecosystem Coalition,** to engage them at all steps in the process, to involve them in the solution, and to provide them the resources needed for them to do what they are asked to do. Engaging your immediate networks is not enough - intentional outreach must be done.

This must be done with deliberant intention and due acknowledgment of the fact that the communities who experience problems are the ones best suited to solve them - but only if provided with the respect & resources needed to do so. This, more than anything else, is the most fundamental step in the process - and if it is skipped, it won't matter how carefully the rest of the strategy is crafted - the change initiative is unlikely to work.

Part 4: Applications

Now that you understand the process of Ecosystem-Led Development, how can you apply this to your daily work? This section provides recommendations for how you can integrate Ecosystem-Led thinking into your initiatives no matter what step of the development process you're in.

🟩 **Ways to use Ecosystem-Led Strategies from the start**

1. **If you're leading** - Design your change initiative using the Ecosystem-Led Development process from the start
2. **If you're collaborating** - Share this guide with those you are working with to have a discussion about what elements you may want to incorporate into your change initiative design
3. **If you're following** - as the change initiative progresses, do some of the Ecosystem-Led Development steps on the side to see how well the initiative aligns with the concepts

🟩 **Ways to add Ecosystem-Led thinking in the middle**

1. **Define the Problem System and Solution System** for the problem your initiative is tackling, to see if you have considered all the different challenges involved
2. **Create an Ecosystem Map** to see what assets exist in the ecosystem and if there are ways you can engage them to support the initiative
3. **Evaluate** if your initiative is at risk of, or running into, any of the **common ecosystem challenges**, and have a conversation about them with those you are working with

🟩 **Ways to reflect on a completed change initiative that did not originally incorporate Ecosystem-Led Strategies**

1. Did the initiative address the core nodes and edges of the Problem System? If not, is there a risk that the ecosystem will **revert back to its baseline** over time?

2. Did we properly **engage all assets** in the ecosystem to support this initiative? Did we create or attract new assets to address something, even when an existing asset could have been "up-skilled" to address it?

3. If this change initiative was effective, **was it also efficient and equitable**? Is there a way that any of those three measures could have been increased?

We want to hear from you!

If you used Ecosystem-Led development to create a change initiative, or have recently run a change initiative that used Ecosystem-Led strategies before you read this guide, we would love to hear from you! Likewise, if you recently ran a successful change initiative that used processes that were *contradictory* to those in this guide, we would *love* to hear about it! The best way to improve a strategy is to know the cases where it doesn't work.

If you want to share in either scenario, please email us at eic@ecomap.tech

Applying Ecosystem-Led Strategies to Your Work

The best part about Ecosystem-Led Development is that it can be applied to all scales and types of change initiatives across all types of ecosystems. Whether you're a community developer tasked with addressing homelessness, an economic developer tasked with revitalizing a business district, or an individual trying to mobilize your organization's partners, these strategies can be helpful for driving change large and small.

Here are ways to leverage Ecosystem-Led Development based in where you might be in a change initiative:

1. **If you're just starting to design a new initiative**
Try running the process from scratch! If the steps in this guide make sense, give them a whirl with whatever new initiative you are formulating. If others are involved, you can share this guide with them to see if the strategies are something they want to try, or you can follow the steps on your own to see whether or not the proposals that are being crafted align with the steps of Ecosystem-Led Development and avoid the common ecosystem challenges. Testing the system for yourself may not only generate new insights but also help you feel more comfortable proposing the model to others.

2. **If you're in the middle of an initiative**
Whether things are going well or they could be better, try applying specific parts of the Ecosystem-Led Development model to what you are currently working on to see if you can identify what is happening and why. You can create a Problem System and see how well the solutions you are implementing align with the nuances of the challenges; you can identify if there are any Synergistic or Contradictory Edges between initiatives, or you can simply be aware of common challenges within the ecosystem and see if you recognize them within your work. If the initiative isn't working and you go back to the drawing board, consider integrating some of the Ecosystem-Led Development strategies into the redesign.

3. **If you're reflecting on a failed initiative**
Postmortems - the process of examining a failure to identify why it didn't go well and how it could have gone better - are one of the most helpful practices out there. They encourage us to learn from our mistakes so we can avoid them the next time. The best-run postmortems take focus away from the actions of individual assets and events, and places it on system-level failures. In this way, the steps of Ecosystem-Led Development can be helpful as a guide for identifying why a given solution didn't work - was it a discrete solution applied to a systems problem? Was the Problem System not correctly defined? Was there misalignment between the parties? Use the different steps to see if you can identify a pattern that could have been prevented by implementing one or more of the strategies outlined.

4. **If you're celebrating a successful initiative**
First off, congratulations! Whatever the initiative was, we're happy that it worked and hope you're taking the time to celebrate that. If an initiative was successful, what do you think made it successful? Did it utilize any of the elements outlined here, even if not intentionally or explicitly? If the initiative did not utilize any strategies similar to those outlined in this guide, could they have made the initiative more impactful, or achieved the goal more quickly? These can be helpful reflection questions if you are interested in Ecosystem-Led Development but unsure if it would apply to your work.

Conclusion: New Approaches to Hard Problems

While we have more knowledge, connectedness, and technology than ever before, none of those things on their own can unwind the complicated, systemic problems that continue to plague our communities, economies, and organizations. It can feel like every time we make a dent in a challenge, it pops back up the moment we turn away; or, we exhaust our resources creating real change in a small part of a system, only to see the progress undone by other parts of the system that remain unmoved.

The best way to address systemic challenges is meeting them with systemic solutions. But the formulation of those systematic solutions is no easy task - it requires an understanding of sociology, economics, behavioral science, organization psychology, systems theory, change theory, and more. We do not have time to become experts in these fields individually, so we must look to the ecosystems around us to supply the expertise, energy, and execution needed to tackle these complex problems.

We are at a point in society where we've decided we no longer wish to tolerate some of the systemic problems that have followed our communities for centuries; **but to solve century-old problems, we must arm ourselves with a new set of solutions.** There is no one way to solve a hard problem, but there are many ways that we can learn to approach them to increase the chance that our solutions succeed not just by applying pressure in the short term, but by creating structural changes in systems that modify their trajectories well into the future.

Ecosystem-Led Development is one tool of many that can be used to imagine, study, and implement these solutions. The purpose of this guide was to unwind the complicated nature of systems-level change into discrete, understandable, and achievable steps, so that Ecosystem-Led solutions can be created more easily. While the concepts may seem complicated, they boil down to basic ideas we already accept:

- Hard problems are systems-level problems
- System-level problems require system-level solutions
- System-level solutions require understanding & engaging the ecosystems around us
- Ecosystem-wide solutions must be crafted with, not for, the communities impacted and involved

By crafting strategies, programs, and policies with these ideas in mind, we increase our ability to design system-level solutions that tackle hard problems. We hope that this guide provides you with new ideas, tools, and perspectives that are helpful in your work as an ecosystem builder, developer, or community leader. If you have any stories, insights, or suggestions that you wish to share, we would love to hear them. You can get in touch with the team who prepared this by emailing eic@ecomap.tech.

Thank you for your time & for the work you do each day! We're rooting for you and the change you will create.

Author's Note

I spent the first 18 years of my life convinced I'd be a surgeon. The thought that each day I could save a life led me to spend all of middle & high school doing everything I could to get into the best university to study medicine, Johns Hopkins. But two weeks before arriving, I realized that being a doctor - however important and impactful - wouldn't be enough to make a lasting dent in the suffering our world faces. No surgery can undo the effects of war, systemic racism, or environmental destruction. **These were systems-level problems, and they needed systems-level solutions.**

Since then, I've been obsessed with systems: how money flows through the world, how communities exchange resources, and how societal structures keep hard problems in place. At university, I was lucky enough to study sociology and get involved in the field of entrepreneurial ecosystem building, helping Hopkins go from having very little support for student entrepreneurs to having a thriving ecosystem. I then started another nonprofit that worked across university ecosystems and launched & running multiple accelerators at JHU and beyond.

Through this work, I noticed a common problem: despite the fact that nearly every ecosystem wanted to "map" the assets within them, it was too complex, expensive, and time consuming to collect the data, standardize it, keep it updated, and display it in a way that was easy to navigate. We looked at ecosystems worldwide - from universities to countries - to see if anyone had created a scalable, robust, updated, and affordable Ecosystem Platform, but found none. So we built one, called the EcoMap. We had no idea just how much demand there would be for this technology. We expanded rapidly with all types of customers mapping all types of ecosystems, growing from an unpaid team of 3 to nearly 30 full-time team members from 2020-2022.

It was through this work - creating detailed maps of all types of ecosystems coupled with an interest in systems, that led me to formalizing the theory of Ecosystem-Led Development, after witnessing it being applied - or not - in many different contexts across many diverse ecosystems. We share these insights in hope they are helpful to those tasked with leading ecosystem-change initiatives, which we know to be no easy task, and to raise awareness that ecosystem building has applications far beyond entrepreneurial communities alone.

All ideas, insights, and inferences in this text are my own - as are all mistakes, misassumptions, and misapplications. Any similarity to previously published work is unintentional; references and examples are intentionally hypothetical to avoid misattributing the work of others. If there is anything in this guide you believe to be incorrect or in violation of your IP, please reach out to us and we will rectify it immediately.

Thank you for taking the time to read both this guide and this note. If you have any questions, comments, concerns, or grievances - feel free to email me directly at pava@ecomap.tech

~Pava LaPere | CEO, EcoMap Technologies Inc.

About [EcoMap](#) Technologies

Using technology to make the information around us more accessible

EcoMap Technologies creates platforms that enable people to navigate what exists & what is happening in the ecosystems around them. We do this by using powerful algorithms & processes to identify the different assets important to an ecosystem (the organizations, resources, events, jobs, and news), standardize & tag that data with Keywords so that it can be easily understood, and then put that data into an easy-to-navigate platform called an EcoMap. EcoMaps can range from simple resource or business directories to robust Ecosystem Management platforms, with features that can be turned on & off based on a community's changing needs.

Everything about EcoMap was built based on what we learned studying ecosystems. We know ecosystems are made of so many different assets, so we created robust data processes & paradigms to help us identify them. We know ecosystems change constantly, so we built algorithms that let us monitor those changes and update the data accordingly. We know organizations need platforms that reflect their brand & audience, so we created a tool that can match the design, language, and feature needs of any ecosystem. And we know organizations want to work with real people who understand their needs, not just software - so we built a team that does that.

Today, EcoMap is a 30+ person company located in our favorite ecosystem, Baltimore, MD. As a female and Black-Led tech company, we knew we needed to build a different kind of company - one with a human-first culture, dedicated to solving hard problems, and that treats diversity not as a checkbox but as a foundational principle: 74% of our team identifies as female, 45% as a person of color, and 30% as neurodivergent. This is what allows us to build solutions that serve so many ecosystems in so many places.

As we've grown rapidly in the 4 years since our founding and 2 years since launch, we've learned so much about ecosystems - through talking to ecosystems across the world, witnessing how stakeholders interact, and examining the highly-detailed data we collect about them. Like with each ecosystem we're in, we wanted to make the information we've learned about all ecosystems more accessible, so anyone can use it to inform their work, expand their toolkit, or simply learn about a topic fundamental to our daily lives. This guide is part of that mission.

Additional Resources

Learn More About Ecosystems

The Ecosystem Information Center is a one-stop shop to learn about all things about all ecosystems. Visit Ecosystem.Info to learn more about:

- What Ecosystems Are
- The different Types of Ecosystems
- Common Ecosystem Challenges
- More details on Ecosystem-Led Development including deep dives into parts of this guide

Share Ecosystem-Led Development

If you found this guide helpful and want to share Ecosystem-Led Development with members of your community, here's some easy ways to do that:

- **Share this Digital Guide:** Simply send anyone this link
- **Request Physical Copies:** Fill out this form, and we'll mail physical copies wherever
- **Request a Presentation:** We're happy to present Ecosystem-Led Development to your organization, community, or conference for low or no-cost. Get in touch with us here to learn more.

Get Support Mapping Your Ecosystem

One of the most important, but challenging, parts of Ecosystem-Led Development is creating a robust dataset of all the assets that exist within your ecosystem, and creating a way to easily navigate & present that data to your stakeholders and community.

EcoMap Technologies was created to bring down the cost & complexity of the Ecosystem Mapping process. We've invested years of research and millions of dollars into developing an expert team, proprietary algorithms, and an award-winning Ecosystem Platform to do just that.

We've worked with dozens of ecosystems across the world, removing the burden of ecosystem mapping from organizations and saving them hundreds of thousands in consulting and custom development fees. We can do the same for yours - get in touch with us at EcoMap.Tech/Contact

Want to learn more about:

Ecosystem-Led Development

Why Ecosystems are Important

Different Types of Ecosystems

Components of Ecosystems

Common Challenges Faced by Ecosystems

The Process of Ecosystem Mapping

The Role of Ecosystem-Building Organizations

and more?

Visit the Ecosystem Information Center

to learn all things about all types of ecosystems

(except the green ones)

Ecosystem.Info