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1 Purpose

The Ecosystem Guide aims to outline best practices for building, developing and maintaining business ecosystems.

The recommendations in this guide were developed collaboratively by participants in the 2022 Collaborative Value Creation in Ecosystems class at the University of Fribourg, based on the analysis of 28 ecosystem cases.

The terms ecosystem and business ecosystem are used interchangeably.

The guide can be considered a work in progress. We welcome feedback and inputs at inputs@ecosystemguide.com.

2 Scope

An ecosystem is defined as a group of individual or institutional actors that interact with each other to create value through the joint offering of services and products which they could not create as efficiently and effectively on their own.

Ecosystem structure depends on design decisions in four dimensions, namely ecosystem strategy, ecosystem architecture, ecosystem governance, and ecosystem culture.

Three types of ecosystems can be distinguished: Innovation ecosystems, interest ecosystems and infrastructure ecosystems.

The following forms of collaboration cannot be considered ecosystems: Joint ventures, bilateral partnerships, multiparty alliances without shared value creation, or coercive partnerships.

3 Core Principles

3.1 Ecosystem Strategy

Definition

Ecosystem strategy sets the overall direction and rationale of an ecosystem at a given point in time. It requires that the ultimate purpose and value proposition of an ecosystem is known to all its members and users. In this regard, it must include a clear understanding of the target audience, their needs, and the capabilities and expected contribution of

each actor to the shared value. At the same time, the strategy must address the competitive position of the ecosystem vis-à-vis other ecosystems or individual actors.

Principles

- Clearly position the ecosystem on the market vis-à-vis other ecosystems or individual players
- Emphasize the purpose and shared value proposition
- Ensure that all players understand the purpose and shared value proposition
- Ensure that all parties fully understand their contribution to creating shared value
- Ensure user-centeredness and clear focus on the value proposition
- Establish a clear plan with short-, medium- and long-term goals
- Regularly review the strategy and adapt to changing circumstances
- Focus on complementary strengths of the different partners to have a competitive advantage as a whole
- Promote flexibility, collaborative learning and innovation
- Be clear on how resources, investments and profits will be shared to provide a clear incentive for each member to join and remain in the ecosystem

3.2 Ecosystem Architecture

Definition

Ecosystem architecture refers to the structure of an ecosystem and the operating model that enables it to function. It describes the various actors, their position in the ecosystem, the activities, and the flows of goods, services, finance, and data. It also describes the underlying technological architecture.

Principles

- Specify the structure of the ecosystem
- Specify the roles and tasks identified in the strategy.
- Specify the relationship for the work between the actors
- Determine who makes what available to the ecosystem and in what form
- Develop a broad basis of trust
- Define criteria for participation
- Some flexibility to allow the architecture to evolve over time as needed

3.3 Ecosystem Governance

Definition

Ecosystem governance refers to the way an ecosystem organizes itself and how decisions are made. It defines the formal and informal decision-making processes that lead to the resolution of operational, strategic, and structural issues that arise in the establishment, development and operation of an ecosystem, such as the definition of admission criteria, conflict resolution mechanisms or strategic direction.

At a high level, there are three modes of governance, namely centralized, decentralized and distributed.

Principles

- Establish a clear governance structure as early as possible
- Ensure that governance also adapts to changes in the ecosystem as it evolves
- Ensure that the interests of all parties in the ecosystem are considered in some way in management decisions
- Create transparency in the transmission of information within an ecosystem
- Make a conscious decision whether the ecosystem follows a decentralized, centralized or distributed structure
- Define clear criteria for the admission and withdrawal of members
- Define clear rules for conflict resolution
- Document the agreements in an ecosystem constitution

3.4 Ecosystem Culture

Definition

The ecosystem culture defines the shared values of the ecosystem actors and the implicit and explicit trust in the ecosystem. It may consist of subcultures shared by sub-groups of the actors.

Principles

- Build a common culture for all ecosystem stakeholders
- Ensure smooth integration of new stakeholders by refining the existing common culture or helping them live the common culture
- Create a basis of tolerance and trust between all partners
- Establish common cultural standards within the ecosystem
- Include and accept different subcultures

4 Integration Principles

The strategy, architecture, governance and culture of the ecosystem must be consistent, cohesive and coherent.

4.1 Consistency

The design of the four ecosystem dimensions shall not contradict each other, i.e. they follow the same design philosophy.

Ecosystems that follow the consistency principle have a chance to emerge.

4.2 Cohesion

The design of the four ecosystem dimensions are designed shall be mutually reinforcing, meaning they can evolve together so that the ecosystem functions.

Ecosystems that follow the consistency principle have a chance to survive.

4.3 Coherence

The design of the four ecosystem dimensions shall deliver the best possible outcome based on common intent, i.e., they are optimized to work together.

Ecosystems that follow the consistency principle have a chance to thrive.

5 Application Principles

5.1 Innovation Ecosystems

Definition

An innovation ecosystem aims to promote the development of new products, services or technologies. It is based on the assumption that a particular innovation can only or better be achieved by joining forces. Innovation ecosystems can be *open*, i.e., inviting all actors to participate, or *closed*, i.e., limited to some actors. At the same time, such ecosystems focus on joint exploration, leaving their actors to focus on exploiting the commercial benefits of the innovation. As a result, ecosystem partners can also be competitors when it comes to offering products and services based on a common technology, for example.

Principles

- Make sure you have a clear innovation process to address the four innovation challenges, i.e. creativity, commercialization, complexity and continuity
- Determine how upcoming innovation risks will be shared among ecosystem partners
- Diversify your partners and players in the ecosystem
- Foster a proactive and social relationship between partners to create innovation
- Share your knowledge with the entire ecosystem so that everyone can benefit and innovations can be implemented faster.
- Define the process of how new parties are integrated and how knowledge about innovations is shared with them
- Get clear on whether you need an open or closed innovation ecosystem

5.2 Interest Ecosystems

Definition

An interest ecosystem aims to promote a particular idea based on a common interest to achieve a particular goal, such as changing public perception or influence regulation. The common interests are either *broad*, meaning they share an underlying philosophy, or *narrow*, meaning they focus on a single issue. In an interest ecosystem, all stakeholders have a common interest and message that they believe they can better communicate together. As a result, collaboration is limited to the common message, while all other aspects are addressed independently by each actor.

Principles

- Gather diverse stakeholders with common goals
- Define the common goal and the motivation of all participants from the very beginning
- Integrate new members into the ecosystem by ensuring that the same values are shared
- Clarify whether the ecosystem is offensive or defensive

5.3 Infrastructure Ecosystems

Definition

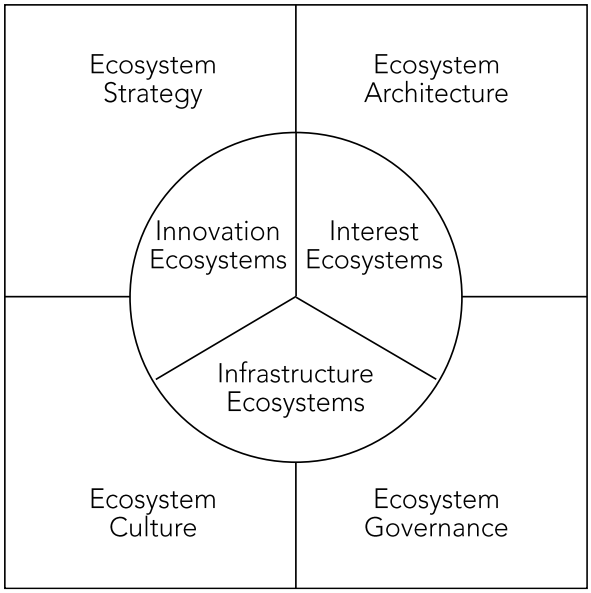
An infrastructure ecosystem aims to build and provide a common infrastructure that is built and can be used by all actors. An ecosystem can refer to both *hard* infrastructure, e.g. platforms, pipelines or roads, and *soft* infrastructure, e.g. standards, rules or certifications. Infrastructure ecosystems emerge when different actors recognize that building an operational backbone would not be feasible, or at least detrimental, for them to do alone. However, this also means that the players hope to gain a competitive advantage with services and products on the front end.

Principles

- Create and establish an infrastructure that enables value creation for all ecosystem partners
- Use of standards to make the infrastructure accessible
- Give every partner the opportunity to benefit from the ecosystem
- Build a flexible infrastructure that can evolve over time
- Adapt the infrastructure to the defined strategy and architecture
- Ensure that the credibility of the infrastructure is visible to external and internal parties

6. Appendix

6.1 Framework



6.2 Cases

Alibaba, Android, annanow, Autosens, BRAC, Cisco Fog, Compassana, Diem, Discover Swiss, disinfectant player, Drakkensberg, Escher, Ethereum, eMove, F10, facility management player, Hydrospider, IBM Eclipse, ISO, localsearch, MagicPass, Matter, Ping An, R4, Samsung, Swisslex, Tradelens, Xiaomi

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