ENTREPRENEURIAL ECOSYSTEM DIAGNOSTIC TOOLKIT

EXECUTIVE SUMMARY

INTRODUCTION

In 2013, ANDE published the first edition of the Model for the Diagnosis of Entrepreneurship Ecosystems. Our tool was adopted by various organizations such as governments, foundations, and ecosystem support organizations around the world; however, more than a decade of implementations revealed limitations. The original model did not capture who the actors were operating in each domain nor did it allow for an evaluation of whether the ecosystem was producing results. This second edition integrates 28 international frameworks and learnings from methodological partners such as the Tecnológico de Monterrey and Seedstars to create a tool that maps conditions, identifies actors, measures results, and captures the dynamics of collaboration that determine whether an ecosystem truly functions.

Strengthening an entrepreneurship ecosystem is a coordination challenge among multiple actors, where most operate with limited information about what others are doing. Government programs, foundation initiatives, and support organization services frequently overlap in some areas while leaving gaps in others. This fragmentation does not arise intentionally; it stems from the absence of a shared diagnosis that allows for a comprehensive view of the system.

Most traditional diagnostics produce inventories or mappings that count incubators, funds, and programs, but do not capture whether they work together or generate results. An ecosystem may have all the right actors and still fail if they operate in silos. There is also a persistent temptation to import formulas from other successful models such as Silicon Valley or Tel Aviv. However, these rarely function in different contexts because ecosystems develop unique characteristics based on their history, culture, and resources.

The model organizes the diagnosis around three fundamental questions. For each, it produces a visual tool that synthesizes findings and facilitates the identification of priorities for each ecosystem.

Question	Tool	What It Assesses
What conditions does the ecosystem have?	Domain Radar	Seven domains determining the capacity to generate and scale ventures, constructed with public data, without requiring surveys.
Who can act to improve it?	Actor Map by Domain	Five types of actors, their presence in each domain, levels of activity, and dynamics of collaboration.
Does the ecosystem work?	Ecosystem Coverage Map	Flow of individuals through four stages of entrepreneurial development and capacity to support ventures with social, environmental, or technological impact.

The ultimate goal is to generate conditions for systemic change. This means building a shared understanding among diverse actors, establishing common indicators, and making visible where the actions of different organizations can complement rather than duplicate each other.

THE DIAGNOSTIC MODEL

Seven Domains of the Ecosystem

The domains are conditions that determine the capacity of an ecosystem to generate, develop, and scale ventures. The model assesses seven domains, each addressing different needs of the entrepreneurial process:

Policy: Establishes the rules of the game. It encompasses everything from the procedures to establish a company to intellectual property protection and tax conditions. When the regulatory environment is efficient, barriers to entry decrease, and there is greater legal certainty to invest. Typical indicators include days to register a business, existence of special tax regimes, and active public programs.

Financing: Considers access to capital at all stages, from initial grants to growth rounds. It includes public funds, development banks, angel investors, and venture capital. The model measures annual investment rounds, the number of local funds, and documented exits.

Culture: Encompasses the social norms surrounding entrepreneurship: how it is perceived, whether failure is stigmatized or viewed as learning, and whether there are visible role models. This domain is challenging to measure directly but its influence is decisive. Indicators include ecosystem events, presence of specialized media, and levels of social trust.

Support Services: Includes both support programs (incubators, accelerators, mentors, professional services) and the physical and digital conditions enabling activity (connectivity, workspaces, technology parks). This second edition consolidates the previous domain of "Infrastructure" here, recognizing that infrastructure gains value when it operates as an accessible service.

Human Capital: Refers to the available talent: individuals with technical skills, managerial experience, and entrepreneurial competencies. Talent scarcity is often the most challenging constraint to resolve, requiring years of development. Measures include STEM graduates, university entrepreneurship programs, and technological talent density.

Markets: Represents access to customers and business opportunities: size of the local market, access to international markets, sophistication of demand, and existing value chains. The model identifies startups created, the presence of corporate technology offices, and emerging specialized sectors.

R&D/Innovation: Includes research capacity, mechanisms for technology transfer, and innovation programs that generate marketable knowledge. Indicators cover registered patents, research centers, and indexed publications.

A consistent finding in research about ecosystems is that no domain functions in isolation. Weaknesses in one can neutralize strengths in others. An ecosystem may have excellent universities producing entrepreneurial talent, but without available financing, that talent emigrates or seeks employment instead of starting businesses. The weakest domain acts as a bottleneck limiting the overall performance of the system.

Five Types of Actors in the Ecosystem

The diagnosis identifies actors by type of organization, recognizing that each contributes across multiple domains:

Actor Type	Examples	Primary Contributions
Government and Public Sector	Ministries, development agencies, municipalities	Policy and regulation, public financing
Academia and Research	Universities, R&D centers, technology institutes	Human capital, R&D, entrepreneurship education
Entrepreneurial Support Organizations (ESOs)	Incubators, accelerators, foundations, mentor networks	Support services, knowledge transfer
Private Sector	Large companies, mid-sized businesses, chambers	Market access, corporate investment
Capital Providers	Investment funds, angels, family offices, development banks	Financing, validation, strategic mentoring

The diagnostic value emerges from cross-referencing the mapping of actors with the domains. This reveals three key signals: **gaps** (domains where certain actors are absent), **concentrations** (domains where multiple actors report high activity, requiring verification of potential coordination or duplication), and **dependencies** (domains that rely on a single type of actor, representing a risk of fragility).

Four Stages of Entrepreneurial Development

A healthy ecosystem not only has entrepreneurs but also individuals progressing continuously from inspiration to growth. The model distinguishes four stages representing the ecosystem's pipeline:

Stage	Definition	Typical Needs
Inspired Individuals	People considering entrepreneurship as a viable option	Role models, awareness events
Trained Individuals	People developing competencies for entrepreneurship	Training, workshops, pre-incubation
Startups	Companies validating their business model	Initial capital, incubation, mentoring
Small and Growing Businesses (SGBs)	Validated companies seeking to scale	Growth capital, alliances, internationalization

The model uses "Small and Growing Enterprises" instead of "scaleups" for precision. ANDE defines SGBs using operational criteria: commercially viable companies with 5 to 250 employees, with growth potential and ambition, typically seeking capital between USD 20,000 and USD 2 million. This term more accurately describes the reality of ecosystems in developing economies, where the goal is not necessarily to produce unicorns but rather companies that generate quality employment and sustained growth.

The stages serve as outcome indicators. The distinction between conditions (domains and actors) and results (flow through the stages) has concrete implications. An excellent acceleration program is worthless if there are not enough prepared startups to take advantage of it. An abundance of growth capital is irrelevant if startups do not successfully validate their models to reach that stage. When progress is interrupted at any stage, the diagnosis indicates where the problem lies.

Four Levels of Maturity

Ecosystems go through developmental stages with distinctive characteristics. Comparing an emerging ecosystem to the most consolidated ones globally is counterproductive because it generates misaligned expectations and inapplicable recommendations.

Level	Characteristics	Intervention Focus
Nascent (Generation 0)	Incipient and sporadic activity. Few formal actors. High dependence on government or international initiatives.	**Build community and culture.** Foster awareness events to connect dispersed actors. Introduce basic entrepreneurship education.
Emerging (Generation 1)	First, support organizations appear. Initial investor networks form. Significant financing gaps remain.	**Formalize and specialize.** Professionalize support organizations. Attract technical talent. Reduce regulatory barriers.
Developing (Gen 1 → 2 transition)	Functional ecosystem with actors in most domains. Active local investment funds. Startups begin targeting regional or global markets.	**Scale and connect.** Facilitate access to growth capital. Connect the ecosystem with international networks. Foster corporate linkages.
Self-Sustaining (Generation 2+)	High startup density and capital flow. Diversified exit options. Normalized risk culture. Net attraction of talent and capital.	**Maintain and innovate.** Preserve favorable conditions. Avoid regulatory complacency. Support neighboring ecosystems' development.

An important contribution from ecosystem research is the concept of generations. Maturity is not achieved simply by attracting more actors, but when successful entrepreneurs from one generation choose to reinvest their resources (capital, time, reputation) in the next generation. This virtuous cycle distinguishes thriving ecosystems from those that rely permanently on external resources.

HOW TO IMPLEMENT THE DIAGNOSTIC

The model structures the diagnosis in three phases, each building on the previous one. Each phase delivers independent value: completing only Phase 1 provides enough information to prioritize actions, while all three phases together produce a comprehensive intervention plan.

Phase 1: Classification and Initial Mapping

Purpose: Classify ecosystem maturity and identify the domain that most limits its development.

Data Source: 30 indicators constructed from public sources: investment databases, government records, event platforms, organization directories, and specialized publications.

Domain	Indicators	Examples Measured
Policy and Regulation	3	Days to register a company, existence of special tax regime
Finance	6	Annual investment rounds, VCs with local presence, documented exits
Culture	5	Ecosystem events, specialized media, social trust level
Support Services	5	Active accelerators, incubators, coworking spaces, connectivity
Human Capital	5	STEM graduates, university entrepreneurship programs, tech talent
Markets	3	Identified startups, tech corporate offices, specialized sectors
R&D/Innovation	3	Registered patents, research centers, indexed publications

Result: Visualization of the Domain Radar showing the ecosystem profile. The radar reveals at a glance which domains are strong, which are weak, and what the bottleneck is limiting growth.

Ecosystem domain radar
Illustrative visualization – Relative scale
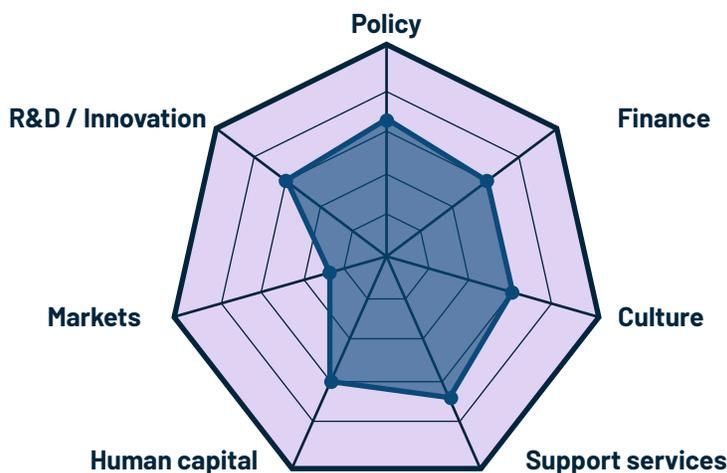
Source: Public data (30 indicators) – Phase 1 of the diagnosis

Interpretation Guide: The sequence matters more than the score. The domain with the lowest score is not always the first that should be addressed. Ecosystems evolve in layers: first culture and talent, then support services, then capital and markets. Investing in venture capital when there are no startups to invest in is just as inefficient as building roads to non-existent cities.

Types of intervention by domain and maturity level:

Domain	Nascent	Emerging	Developing	Self-Sustaining
Culture	Build	Strengthen	Maintain	Maintain
Human Capital	Build	Strengthen	Scale	Maintain
Support Services	Build	Strengthen	Scale	Maintain
Policy	Wait	Build	Strengthen	Maintain
Finance	Wait	Build	Strengthen	Scale
Markets	Wait	Wait	Strengthen	Scale
R&D/Innovation	Wait	Wait	Build	Strengthen

Phase 2: Mapping Actors and Validating Results

Purpose: Reveal who does what, in which domains, with what intensity, and validate whether the activity generates results. While Phase 1 evaluates ecosystem conditions using public data, Phase 2 captures the perspective of the actors themselves through surveys. This allows for identifying the presence of actors, their collaboration dynamics, and perceived gaps.

Data Source: Surveys applied to the actors identified in Phase 1, comprising 53 indicators across four blocks:

Block	Indicators	What It Measures
A: Activity by domain	25	Programs operated, entrepreneurs served, resources deployed, ecosystem perceptions
B: Pipeline / ventures	8	Flow at each stage: inspired, trained, startups, SGBs
C: Types of entrepreneurship	10	Capacity for social impact, environmental impact, or technology-based ventures
D: Cross-cutting dynamics	10	Collaboration, information flows, coordination, connector identification

Results:

Actor Map by Domain: Shows which types of actors operate in each domain and with what level of activity. This tool reveals three key signals: gaps (domains where certain actors are absent), concentrations (domains where multiple actors report high activity, which may indicate duplication), and dependencies (domains relying on a single type of actor, representing fragility).

Actor map by domain
Who operates in each area of the ecosystem?

	Policy	Finance	Culture	Support services	Human capital	Markets	R&D / Innovation
Government	●●●	●●	○	●●●	●	○	●
Academia	●	○	●●	●●●	●●	○	●●●
Support Organizations (ESOs)	○	●	●●	●●●	●●	●●	○
Capital providers	○	●●●	○	●●	○	●	○
Private sector	●	○	●	●●	●	●●●	●●

○ Absent   ● Present   ●● Active   ●●● Very active   Source: Public data (30 indicators) – Phase 2 of the diagnosis

Ecosystem Coverage Map: Shows which actors serve each entrepreneurial stage and what types of entrepreneurship the ecosystem can support (social impact, environmental impact, technological/digital). This tool reveals where the flow of entrepreneurs is interrupted between stages and allows for identifying whether the ecosystem truly has the capacity to support the types of ventures it seeks to promote.

Ecosystem coverage map
Which actors serve each stage and type of entrepreneurship?

By stage of the entrepreneur

	Inspired	Trained	Startups	PEC
Government	●	●	●●	●●●
Academia	●●●	●●	●	○
ESOs	●	●●	●●●	●●
Capital providers	○	○	●●	●●●
Private sector	○	●	●●	●

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By type of entrepreneurship

	Social impact	Environmental impact	Tech/ Digital
Government	●●	●●●	●
Academia	●	●●	●●
ESOs	●●●	●●	●●●
Capital providers	●	●	●●●
Private sector	○	○	●●

Source: Surveys of ecosystem actors – Blocks B and C

Findings Interpretation: High activity in several domains may indicate a coordinated ecosystem or a fragmented system where each actor works independently, wasting resources. The survey captures collaboration dynamics to differentiate these scenarios. It also identifies **articulators:** individuals or organizations frequently mentioned as connectors who facilitate information flows, mobilize resources, and convene joint initiatives.

Phase 3: In-Depth Interviews (Optional)

Purpose: Explain the causes behind the observed patterns. Phases 1 and 2 identify what exists and how it works; Phase 3 answers why.

Data Source: Semi-structured interviews with three groups of informants:

— **Institutional Actors** (8-12): Those with atypical responses in surveys requiring explanation.
— **Entrepreneurs** (5-8): Founders of startups and SGBs describing their experience navigating the ecosystem.
— **Articulators** (3-5): Those frequently mentioned as connectors within the ecosystem.

Categories of Questions: Causes (What originated this pattern?), Barriers (What prevents it from changing?), Dynamics (How do actors interact?), History (How did the ecosystem evolve?), Opportunities (What would change the situation?).

Findings in Phases 1–2	Suggested Interview Questions
Low-scoring domain	What structural barriers explain this weakness? Has it always been this way?
Actor absent in the domain	Why are they not participating? What incentives would they need?
Bottleneck in the pipeline	Why are entrepreneurs not advancing beyond this stage? Where do they go?
Duplication detected	Is there coordination among actors? Is there real differentiation?
High activity, low results	Why is the level of activity not translating into new ventures? What is failing?

Validation stage: Present preliminary findings to a representative group of actors. This verifies the accuracy of the interpretation and begins to build the consensus necessary for coordinated action.

TRANSLATING FINDINGS INTO ACTION BY ACTOR TYPE

Foundations and Development Institutions

Foundations occupy a privileged position: they can invest long-term, take risks others avoid, and catalyze changes the market alone wouldn't generate. Their main role is not replacing private sector or government but filling temporary gaps while the ecosystem develops its own capacity.

Maturity	Priority Role	What to Avoid
Nascent	Fund community building and first awareness programs. Support events connecting dispersed actors.	Funding sophisticated programs without an audience. Importing models without adaptation.
Emerging	Professionalize existing support organizations. Fund pilot programs that can be scaled.	Duplicating programs that already work. Competing with local ESOs.
Developing	Facilitate international network connections. Fund specific gaps the market doesn't cover (patient capital, impact entrepreneurship).	Continuing to fund basic programs the ecosystem can sustain.
Self-Sustaining	Document and disseminate lessons learned. Help the ecosystem support younger ones.	Continuing to intervene where the ecosystem already functions independently.

Key diagnostic questions: What is the weakest domain that, if addressed, would unlock the entire system? What programs already exist, and how can they be strengthened rather than duplicated?

Government and Public Sector

Government holds a unique position: it can remove barriers no other actor can eliminate and can convene actors who wouldn't otherwise collaborate. Its main role is creating conditions that make entrepreneurship viable, not creating businesses or replacing the private sector.

Maturity	Priority Role	What to Avoid
Nascent	Simplify basic procedures (incorporation, permits). Legitimize entrepreneurship through public communication. Connect actors who aren't yet networked.	Creating investment funds without a critical mass of startups.
Emerging	Co-finance initiatives the private sector can't yet support. Create tax incentives for angel investment. Reduce specific regulatory barriers.	Duplicating efforts ESOs already carry out.
Developing	Act as coordinator between agencies. Institutionalize policies surviving administration changes. Create frameworks for new business models (fintech, sharing economy).	Competing with the private sector in financing.
Self-Sustaining	Maintain favorable conditions. Act as international ecosystem promoter. Support less mature neighboring ecosystems.	Over-regulating emerging sectors.

Key diagnostic questions: How many days and procedures to incorporate a company, and how does this compare to the national average? Which agencies operate entrepreneurship programs, and is there coordination or duplication?

Entrepreneur Support Organizations (ESOs)

ESOs are the ecosystem's operational muscle: incubators, accelerators, mentor networks working directly with entrepreneurs. Their value lies in specialization and agility responding to changing needs.

Maturity	Priority Role	What to Avoid
Nascent	Build community through events and spaces. Offer basic awareness programs. Document local success stories, however small.	Offering sophisticated services without demand. Competing when the market is small.
Emerging	Professionalize methodologies and measure results. Specialize in specific stages or sectors. Build alliances with other ESOs.	Focusing only on awareness when critical mass exists.
Developing	Scale proven programs. Connect entrepreneurs with external markets and capital. Develop financial sustainability models.	Depending exclusively on grants. Ignoring impact metrics.
Self-Sustaining	Innovate with frontier services. Export methodologies. Facilitate successful entrepreneurs reinvesting.	Stagnating in models that worked but are no longer needed.

Key diagnostic questions: What service gaps can our organization fill? What stage of entrepreneurial development is least served?

Academia

Academia (universities and research centers) plays a dual role: training talent the ecosystem needs and generating commercializable knowledge. The Human Capital domain frequently appears as a bottleneck because talent shortages require years of development.

Maturity	Priority Role	What to Avoid
Nascent	Introduce basic entrepreneurship education in existing programs. Organize events exposing students to entrepreneurship.	Creating entrepreneurship master's programs without demand.
Emerging	Develop formal entrepreneurship training. Create university-business linkage mechanisms. Train technical talent aligned with ecosystem needs.	Operating in isolation. Ignoring skills gaps reported by employers.
Developing	Strengthen technology transfer and spin-off creation. Collaborate with corporations on applied R&D.	Measuring success only by academic publications.
Self-Sustaining	Lead frontier research with commercial application. Become a regional training reference.	Remaining stuck in outdated training models.

Key diagnostic questions: What skills does the ecosystem demand that academia isn't providing? Is university research reaching the market?

Capital Providers

Investors play a role extending beyond providing capital. They validate business models, bring network access, and strengthen management practices. Their presence or absence frequently determines whether startups can scale.

Maturity	Priority Role	What to Avoid
Nascent	Participate as mentors before acting as investors. Educate the ecosystem about what investors look for.	Expecting quality deal flow that doesn't yet exist.
Emerging	Formalize angel networks. Make first documented seed investments. Collaborate with ESOs on preparing companies for investment.	Concentrating all capital in few companies.
Developing	Diversify instruments (debt, equity, hybrid). Lead rounds and attract external capital. Invest in emerging sectors.	Creating destructive competition among investors.
Self-Sustaining	Lead growth rounds. Facilitate exits recycling capital back. Invest in new generations of local funds.	Focusing only on the most obvious deals.

Key diagnostic questions: Does this ecosystem have the maturity for the type of investment we want to make? Where is the gap in the funding continuum?

Entrepreneurs and SGBs

Entrepreneurs are direct ecosystem beneficiaries and also actors who shape it. Their decisions about where to locate, with whom to collaborate, and how to grow have ripple effects beyond their own company.

Maturity	Priority Role	What to Avoid
Nascent	Participate actively in community, even if small. Share lessons with other entrepreneurs. Be visible as a reference case.	Working in isolation waiting for the ecosystem to mature.
Emerging	Professionalize operations and measure results. Actively seek available support programs.	Waiting for resources to materialize. Ignoring mentorship opportunities.
Developing	Seek markets beyond local territory. Prepare professionally to raise investment. Begin giving back (mentorship, talks).	Remaining in the comfort zone of the local market.
Self-Sustaining	Reinvest in the ecosystem as angel, mentor, or sponsor. Hire local talent. Create the next generation of entrepreneurs.	Disconnecting from the ecosystem after success.

THE GOAL: SELF-SUSTAINING ECOSYSTEMS

The vision behind this toolkit points to ecosystems that eventually sustain and manage themselves.

In early stages, resources come primarily from external sources: international cooperation agencies, global foundations, government programs. This dependence is natural at the beginning but cannot be permanent. An ecosystem depending indefinitely on external resources is fragile.

As ecosystems mature, external sources should complement and eventually be replaced by internal resources:

— Entrepreneurs who achieve success become angel investors and mentors
— Accelerators develop self-sustaining business models
— Corporations establish innovation programs as business strategy
— Governments allocate recurring budget because they see measurable returns

Signals of movement toward self-sustainability:

The self-sustainability cycle
When successful entrepreneurs reinvest in the next generation.
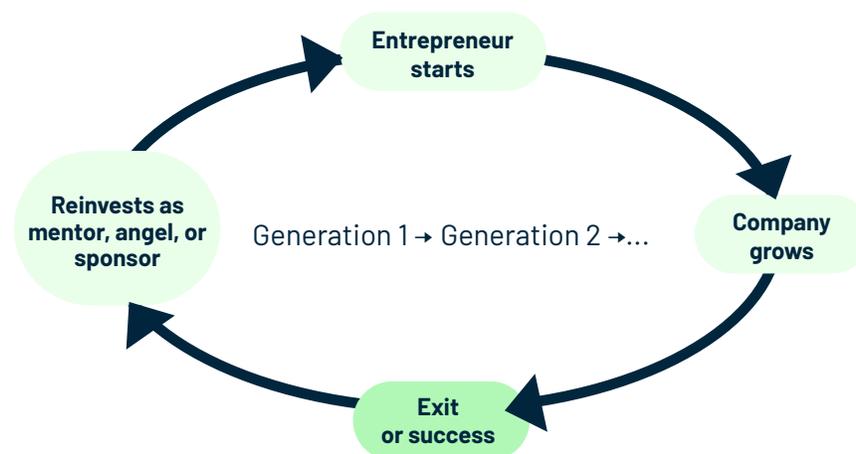
Signals of self-sustainability

- Successful entrepreneurs remain in the ecosystem.
- Support organizations diversify their income streams.
- Local capital emerges leading funding rounds.
- Government institutionalizes support.
- Created companies remain and grow locally.

Time horizon for change: several years are required to observe significant results.

Source: ANDE Model – Chapter 5: Toward Self-Sustainability

— Successful entrepreneurs stay, invest in new startups, mentor the next generation, and sponsor programs.
— Support organizations diversify revenue sources beyond single donors.
— Local capital emerges, with regional investors participating in rounds rather than only international ones.
— Government institutionalizes support for entrepreneurship beyond administration cycles.
— Companies created in the ecosystem remain and grow locally.

Ecosystems do not transform quickly. A reasonable timeframe for observing significant changes is 24 to 36 months. ANDE recommends repeating the diagnostic after this period to assess whether implemented actions had effect and to adjust priorities based on actual evolution.

This horizon of self-sustainability represents the most concrete form of systemic change in entrepreneurial ecosystems. The goal is for the entire system to function differently: resources circulating, actors coordinating without external facilitation, knowledge passing between generations of entrepreneurs. No single organization can transform an ecosystem by itself, but the diagnostic creates conditions for many organizations to do so together.

The diagnostic alone does not strengthen the ecosystem. The decisions made based on it will determine whether it does.

ANDE offers additional resources for diagnostic implementers, including survey templates, analysis guides, and access to a community of practice. More information at **andeglobal.org**