

Doing Good By Approaching Well:

Enhancing a System Thinking Mindset and Ecosystem for Student Entrepreneurs Tackling
Systemic Issues in Growth Markets.

By

Raul Briceno Brignole

Submitted to the Department of Urban Studies and Planning on May 15, 2024 in Partial
Fulfillment of the Requirements for the Degree of

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at the

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A client-based thesis for the Legatum Center at MIT

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ABSTRACT

According to the United Nations, if current trends persist, the Sustainable Development Goals (SDGs) will not be met until 2082. The social, environmental, and economic issues behind these goals are inherently systemic and have often been inadequately addressed by governments, companies, and nonprofits. A systemic lens is essential for tackling these root causes and fostering strategic collaboration among stakeholders to achieve a systemic shift. Combining entrepreneurship with systemic thinking emerges as a powerful approach to drive this change. The Legatum Center at MIT has been at the forefront of empowering aspiring student entrepreneurs to address pressing issues in growth markets, fostering innovation and prosperity. This thesis delves into the concept of system thinking, system change entrepreneurship, and proposes tailored frameworks and recommendations for the Legatum Center. These proposals aim to cultivate a systemic change entrepreneurial environment, equip aspiring student system change entrepreneurs, and further position Legatum as a central force in MIT promoting prosperity and change through a systemic approach to purpose-driven entrepreneurship.

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Preface

Before embarking on my journey at MIT as a dual degree candidate in MBA and Master in City Planning three years ago, I spent seven years working on various social impact projects and with social enterprises across Latin America. My roles in diverse social organizations—including NGOs, social enterprises, and social innovation labs—taught me the importance of embracing uncertainty, collaborating with multidisciplinary teams, and engaging with stakeholders from both the public and private sectors to advance impact and contribute to the social economy. I worked extensively in the field, constantly interacting with communities and families, and gained firsthand experience in the complexities of scaling social projects and striving for social change amidst issues such as access to water and sanitation, public school education, and economic development for vulnerable communities.

Despite the ambitious, inspiring, and well-defined visions of these organizations, which were often composed of smart, purpose-driven, and hands-on young professionals, and despite receiving awards, grants, and investments recognizing their potential for impact, significant challenges persisted. I consistently observed difficulties in truly scaling their work, creating financially sustainable services or products that could generate long-term value while remaining self-sustaining. There was also a noticeable disconnect between the specific, narrowly focused work of these organizations and the broader, complex, and multidimensional problems they aimed to address.

On the other hand, even as the social entrepreneurship and impact ecosystems were growing in various countries in Latin America, the efforts of these organizations seemed isolated from the work of other key players in the issues they were trying to solve. Additionally, the support from ecosystem organizations such as incubators, accelerators, or governmental impact programs seemed too standardized, as if a one-size-fits-all approach could suffice.

I came to MIT with the goal of understanding the key elements that need to be in place for an entrepreneurial ecosystem to successfully support entrepreneurs, to immerse myself in that ecosystem, and to learn how to use innovation and entrepreneurship as tools to create social change. During my three years here, I worked on a social enterprise to build a new solution from scratch to address the qualitative housing deficit in Latin America. As co-founder, along with the other founders, I spent a significant amount of time understanding the problem, the pain points of users, the roles and perspectives of other players in the ecosystem, engaging with potential partners, and building a tech-driven service that could create value and impact with a scalable revenue model. We leveraged the valuable

resources MIT provides to aspiring entrepreneurs and purpose-driven leaders through various programs, awards, and courses to advance our venture. However, this journey was not easy. Even though resources were available, they felt fragmented, and we, as aspiring purpose-driven entrepreneurs, had to navigate them, make the right connections, and tailor various entrepreneurial programs to our needs as social leaders aiming to create scalable impact.

As a Legatum Fellow at MIT, I quickly realized that I share their perspective of using entrepreneurship to foster, nurture, and create prosperity in growth markets. As a fellow, I had the opportunity to meet others working on solutions for complex issues across Latin America, Africa, Asia, and the Middle East, such as financial inclusion, informality, housing, climate justice, racial justice, and gender equality. I've had the opportunity to engage with social leaders and social entrepreneurs from around the world who had set ambitious goals to generate social transformation in their countries and regions. I learned that seeking social change can take many forms and be pursued in various ways through different vehicles. My experience has made me a firm believer that entrepreneurship is one, albeit not the only, powerful tool to push for these transformations in growth markets.

My time meeting these leaders and learning from impact ecosystems in various growth markets inspired me to seek further collaboration with The Legatum Center and contribute to their work by creating a set of tools to better equip future student entrepreneurs who believe that entrepreneurship can drive systemic change.

This thesis is an effort to contribute to Legatum's belief and vision, and to MIT, by providing a set of recommendations on how to connect various existing but fragmented resources in favor of student entrepreneurs from growth markets who are committed to creating systemic changes. I aim to use my experience as an MIT student, a purpose-driven entrepreneur, and an active member of the MIT innovation and entrepreneurship ecosystem to lay the groundwork for a more customized entrepreneurial and impact ecosystem for these types of student entrepreneurs.

As Margaret Mead, a famous American anthropologist, once said: "Never doubt that a small group of thoughtful, committed citizens can change the world; indeed, it's the only thing that ever has."

I. Introduction

Principled purpose-driven entrepreneurship, represents a pivotal force in addressing urgent social and environmental challenges. The Legatum Center for Development and Entrepreneurship at MIT has been at the forefront of this movement since its establishment in 2007, fostering innovation and entrepreneurship in growth markets. These markets, characterized by rapid economic expansion, young and growing populations, and increasing technological adoption, present unique challenges and opportunities for systemic interventions .

The Center's emphasis on growth markets aligns with MIT's broader mission of advancing knowledge and fostering innovation to address global challenges. By integrating purpose-driven frameworks and mindsets developed at the Legatum Center with MIT's robust technological and business resources, the Center aims to cultivate an environment where student entrepreneurs can thrive and become principled leaders capable of driving impact.

System change entrepreneurs are defined as leaders that use a systemic lens as a foundational tool to contribute to an ambitious, urgent and complex systemic change. They differ from traditional entrepreneurs in that their primary goal is to address the root causes of these systemic problems through collaboration, partnership, advocacy and market-based solutions. These entrepreneurs are not merely focused on achieving market traction or profitability but are driven by the ambition to create lasting, transformative shifts within their communities and beyond.

A critical aspect of fostering systemic change is understanding the complex, interconnected nature of the systems these entrepreneurs aim to transform. Systems are composed of various elements whose interactions produce unique behaviors and outcomes over time . This complexity necessitates a holistic, systems-thinking approach, which enables entrepreneurs to identify leverage points and design interventions that address underlying systemic issues rather than merely treating symptoms. Moreover, these entrepreneurs need to develop key capabilities and skills related to innovation-driven business strategies, negotiation, adaptability, storytelling and partnership development. All these are critical as part of their journey of seeking a systemic shift through collective efforts and interventions.

Holistic support for system change entrepreneurs extends beyond financial backing. It includes access to networks, mentorship, and strategic guidance, which are crucial for navigating the complexities of their markets and embracing a systems-thinking approach.

Such support helps entrepreneurs develop tailored technical and business guidance, robust networking opportunities, and access to patient and risk-tolerant capital necessary for testing and advancing their ventures .

Drawing on systemic thinking theories developed by D.H. Meadows and David Peter Stroh, alongside insights from several reports and frameworks by The Skoll Foundation, Ashoka, The Schwab Foundation, and the United Nations Development Program, as well as interviews with academics and entrepreneurs in residence from MIT Centers such as the Martin Trust Center, CoLab, and Legatum Center, this report proposes frameworks and models designed to serve as essential tools for aspiring system change entrepreneurs. These tools are intended to better equip and prepare entrepreneurs to navigate the complexities of addressing systemic shifts in emerging markets. Additionally, these frameworks and models will assist The Legatum Center in fostering environments tailored to the unique needs of these entrepreneurs, supporting and enabling them to thrive.

II. The Legatum Center for Development and Entrepreneurship at MIT: Advancing Prosperity in Growth Markets

i. Legatum Center's history and approach to entrepreneurship and prosperity

The Legatum Center for Development and Entrepreneurship at MIT, established in 2007, has emerged as a significant force in fostering entrepreneurship with a distinct focus on global growth markets. The Center's mission is underpinned by the belief that entrepreneurial innovation is vital to driving prosperity in these rapidly evolving economies (Legatum Center, 2024).

The Legatum Center at MIT, through its unique positioning within the MIT entrepreneurial ecosystem, has had a significant and measurable impact on global growth markets by empowering principled entrepreneurs. Over its first 15 years, the center has cultivated an environment that not only fosters innovation but also nurtures the entrepreneurial spirit across diverse sectors and geographies.

From its inception, the Legatum Center has been driven by a mission to advance global prosperity through entrepreneurship. With a robust endowment from the Legatum Group and leadership insights from co-founder Iqbal Quadir, the center has strategically focused on developing entrepreneurial leaders in growth markets. This focus is reflected in the substantive support provided to the Legatum Student Fellows, which includes financial aid, educational programs, and a community that sustains their growth and amplifies their impact (Legatum Center, 2024).

The center has developed various programs tailored to nurture the entrepreneurial skills of students and professionals from growth markets:

Legatum Student Fellowship: Provides scholarships, mentoring, and resources to MIT students from developing countries to help them build ventures that will contribute to their home economies.

Foundry Fellowship: Targets seasoned entrepreneurs aiming to enhance their leadership skills and expand their business impact.

Market-Creating Innovation Bootcamps: Collaborates with the Clayton Christensen Institute to deliver bootcamps focused on creating new markets and transforming sectors.

Bridging Research and Innovation Bootcamps: Supports researchers in turning scientific advances into commercial opportunities.

USADF Accelerator: A program for tech entrepreneurs in Africa, featuring mentorship and guidance on scaling businesses and raising capital.

The Legatum Center's influence is mainly exemplified through its Legatum Fellowship programs, which have supported 326 student fellows from over 57 countries. These fellows have collectively raised over \$932 million in funding and their ventures have created more than 17,000 jobs (Legatum Center, 2024). The emphasis on growth markets is evident in the fellows' impact, with ventures spanning across 170 countries and serving over 17 million people. This global reach not only highlights the Center's impact on individual entrepreneurs but also its broader influence on economic development and innovation dissemination.

These numbers not only highlight the economic impact but also underscore the transformative effect these entrepreneurs have had on their respective sectors. Many of these ventures have introduced innovative solutions to critical problems, showcasing the center's emphasis on innovation-driven entrepreneurship. For instance, ventures have revolutionized healthcare in Nigeria, enhanced agricultural practices in Thailand, and promoted fintech solutions in Mexico. Each of these enterprises exemplifies how the Legatum Center's fellows have harnessed technology and innovation to create substantial market impact.

ii. Strategic Focus on Growth Markets

Central to the Legatum Center's strategy is its focus on global growth markets, which are identified as regions possessing untapped potential. Growth markets, often found in regions like Africa, Asia, Latin America, and parts of Eastern Europe, are characterized by their rapid economic expansion, young and growing populations, and increasing technological adoption. These markets are not only burgeoning hubs for consumer activity but also present a fertile ground for addressing systemic challenges through innovation. These markets present unique challenges but also vast opportunities for scalable and impactful innovations. The decision by the Legatum Center to concentrate on growth markets stems from a nuanced understanding of the global economic landscape and the unique opportunities these markets present to address some of the world's most urgent and complex social and environmental problems (Legatum Center, 2024).

The Center's thesis is that entrepreneurship in these markets offers a viable pathway to substantial economic and social development. By focusing on these regions, the Legatum Center aims to harness and amplify the entrepreneurial spirit to tackle pressing local challenges such as access to healthcare, education, and sustainable agricultural practices.

This focus is predicated on the belief that entrepreneurship can drive substantial change by creating job opportunities, fostering technological advancement, and enhancing the overall quality of life.

The Legatum Center's strategic focus on growth markets is pivotal for a few key reasons.

Realization of Unmet Needs and Market Potential: Growth markets, characterized by their developing economic landscapes, are ripe with unmet needs and have a substantial capacity for rapid growth. The Legatum Center recognizes that these markets are not only underserved but also offer vast potential for scalable, sustainable ventures that can drive significant economic and social benefits.

Building Prosperity Through Bottom-up Innovation: The Center's focus is on supporting entrepreneurial leaders at MIT who are committed to leveraging innovation to create prosperity in these markets. By fostering bottom-up innovation, the center aims to catalyze sustainable economic growth and build resilient local economies that are capable of withstanding global economic shifts.

Empowering Local Entrepreneurs: A key aspect of the center's strategy is to empower local entrepreneurs. The Center fosters this idea and combines it with a bottom-up approach to provide education, mentorship, and access to a global network of advisors and investors to entrepreneurial leaders that are related and/or come from these growth markets to develop the transformative entrepreneurial ideas their local contexts need. These individuals understand their markets intimately and are uniquely positioned to solve local problems and contribute to local and global economic stability, which is crucial for long-term sustainable development.

The Center's efforts extend beyond individual entrepreneurship. It plays a pivotal role in shaping the entrepreneurial ecosystems within which these ventures operate. By fostering a network that includes seasoned entrepreneurs, investors, and policymakers, the Center facilitates the exchange of ideas and resources that are vital for nurturing innovation and driving economic growth.

The ethos of the Legatum Center is not just about creating successful entrepreneurs but also about instilling values that promote sustainable and inclusive growth. This approach is evident in the ongoing relationships between the center and its alumni. A significant majority of the fellows remain engaged with the center and continue to contribute to its growing community, ensuring a legacy of innovation and impact (Legatum Center, 2024).

iii. The Legatum Center within the broader MIT Entrepreneurship & Innovation Ecosystem

The MIT entrepreneurial ecosystem plays a significant role in fostering innovation and economic growth both locally and globally through its extensive network of alumni entrepreneurs. The ecosystem is underpinned by a wide array of programs and initiatives aimed at supporting the commercialization of innovative ideas and the formation of new ventures. This ecosystem is supported by MIT's culture of practical, hands-on learning, which encourages students and alumni to engage in entrepreneurship. Key components of this ecosystem include:

Education and Training: MIT offers a robust curriculum in entrepreneurship that includes +70 courses as of the 2023-2024 academic year, catering to a diverse student body from all MIT schools.

Support Programs: MIT provides a wide range of entrepreneurial Initiatives and programs that target different stages of the entrepreneurial journey. Students can start with opportunities to experiment and ideate through StartMIT, FUSE and Sandbox and also look for more robust programs to solidify a market opportunity and get ready for fundraising through DeltaV. Other programs and competitions are targeted at different areas of interest and industries like the AI Competition, the Energy Prize and the Healthcare Innovations Prize and provide unique opportunities and exposure for students interested in further developing their ideas in those industries. All these different programs and initiatives, mainly led by the Martin Trust Center, provide mentoring, funding, support and the opportunity to develop hands-on entrepreneurial skills and experience to MIT students.

Global Outreach: Programs such as the MIT Global Startup Workshop and the Regional Entrepreneurship Acceleration Program extend MIT's support for entrepreneurship globally, fostering international collaboration and constant learning across different environments.

The impact of MIT alumni on the global economic landscape is profound, with alumni-founded companies significantly contributing to job creation and economic output:

Scale of Entrepreneurship: MIT alumni have founded approximately 30,000 active companies, which employ around 4.6 million people and generate annual global revenues of \$1.9 trillion—comparable to the world's 10th largest economy (Murray, F., 2015).

Geographical Distribution: While a substantial number of these companies are based in Massachusetts and California, MIT alumni have founded companies across the globe, reflecting the international diversity of its student body.

Survival and Growth: Companies founded by MIT alumni tend to have higher survival rates compared to national averages, with about 80% surviving at least five years and 70% lasting ten years or more (Murray, F. 2015).

Innovation and Patenting: A substantial proportion of MIT alumni are involved in high-level innovation, with 31% having filed patents. This illustrates not only the creation of new companies but also the advancement of technology and innovation (Murray, F., 2015).

Increased Company Formation: There has been a significant increase in new company formation among MIT alumni over the decades, with younger alumni engaging in entrepreneurship soon after graduation.

Serial Entrepreneurship: Many MIT alumni are serial entrepreneurs, with about 40% having founded more than one company, which enhances their cumulative impact on innovation and job creation (Murray, F., 2015).

Diversity and Inclusion: Efforts to increase participation among underrepresented groups, including women and international students, are ongoing, though challenges remain in achieving parity in entrepreneurship rates and outcomes.

The Center's approach aligns seamlessly with MIT's broader entrepreneurial ecosystem, which is renowned for its rigorous, innovation-driven focus. The Legatum Center enhances this by integrating a strong values-based and community-oriented framework, ensuring that its fellows are equipped not only with technical skills but also with a deep understanding of the socio-economic landscapes they operate within. This dual emphasis on cutting-edge innovation and socio-economic sensitivity enables the Center to uniquely contribute to MIT's overall mission of advancing knowledge and educating students in areas that will best serve the world in the 21st century.

The integration of the Legatum Center's activities with the wider MIT entrepreneurial ecosystem occurs at many levels and enriches the educational experience by providing a global perspective, preparing students not just to become entrepreneurs but to be leaders on the world stage. This alignment ensures that the principles of innovation, rigor, and impact remain at the core of the entrepreneurial initiatives fostered by MIT.

Education and Mentorship: The Legatum Center's programs are designed to provide a combination of rigorous academic education and practical entrepreneurial experience. This approach is deeply aligned with MIT's philosophy of 'Mens et Manus' — mind and hand — which emphasizes learning and doing. The Center's focus on growth markets complements MIT's broader entrepreneurial initiatives by bringing diversity of thought and experience into the ecosystem.

Global Impact and Network Expansion: By focusing on growth markets, the Legatum Center not only expands MIT's global impact but also enriches its entrepreneurial ecosystem with diverse perspectives and opportunities. This strategic focus allows MIT to foster a more inclusive global network that spans multiple continents and cultures, aligning with MIT's mission of building a better world.

Research and Innovation Synergies: The center's emphasis on innovation-driven enterprises in growth markets aligns with MIT's strength in science and technology. This synergy enhances the capacity for impactful research and development activities that are practical, scalable, and market-driven. The focus on growth markets also offers unique challenges and opportunities that can drive forward-thinking research and innovation at MIT.

Community Building: Similar to MIT's broader ecosystem, the Legatum Center places a strong emphasis on community and network building. This is crucial for nurturing support systems for entrepreneurs who can learn from and support each other, fostering a collaborative environment that is essential for innovation and enterprise success.

iv. Legatum Center's Future Directions and Aspirations and the Ask for this Report

As the Legatum Center for Development and Entrepreneurship at MIT continues to refine its role within MIT's vibrant ecosystem, it is uniquely poised to advance its mission of cultivating an environment where student entrepreneurs from growth markets can thrive. These students are not only aiming to launch ventures but are driven to create lasting systemic changes in sectors such as affordable housing, water access, financial inclusion, and gender disparity. To better equip them for these formidable challenges, the Center is focusing on expanding specific resources and support mechanisms tailored to their unique needs.

By placing purpose, innovation, and a systemic lens at the core of their programs, the Center is not only preparing these entrepreneurs to become leaders but also principled change-makers who are capable of transforming their societies. The dual approach of combining MIT's robust technological and business resources with the Legatum Center's focus on socio-economic impact continues to provide a fertile ground for these entrepreneurs. This integration ensures that they are well-prepared to lead ventures that are not only economically viable but also socially impactful.

Looking forward, the Legatum Center aims to deepen its impact by continually adapting its support structures to meet the evolving needs of entrepreneurs from growth markets (Legatum Center, 2024). This includes expanding its educational offerings to include more targeted training and skill development on systemic change and innovation, increasing its capacity to offer practical experiences in growth markets, and enhancing its global network to include more partners and stakeholders involved in systemic change.

Recognizing the complexity of the challenges faced by these entrepreneurs, the Legatum Center is committed to continue refining the value they deliver to these entrepreneurs with comprehensive resources that address several critical needs: technical resources, mentoring, networking, collaboration and negotiation skills, and access to risk capital.

The Legatum Center is keen to explore methods to better identify and support student entrepreneurs who are adopting, or will adopt, a systemic approach to foster systemic transformation in growth markets. The Center aims to foster, enhance, and create a system-thinking environment at the core of their work. This strategic focus is intended to improve opportunities for these student entrepreneurs and position the Legatum Center as a leading hub for system change entrepreneurship, further enhancing a community and environment conducive to nurturing aspiring system change entrepreneurs.

Accordingly, this report will offer practical and strategic recommendations to cultivate such environments. It will also introduce new frameworks that could serve as essential tools for student entrepreneurs to design, implement, and scale market-oriented solutions that tackle systemic issues. These frameworks and recommendations are meant to merge an entrepreneurial mindset with a system thinking approach, better preparing upcoming student entrepreneurs to achieve the transformation they seek in growth markets.

III. Systems: A Holistic Way of Understanding Our World

i. An Overview Of a System and The System's Theory

In her seminal work *Thinking in Systems: A primer*, Donella H. Meadows (2008) defines a system as a set of interconnected elements—such as people, cells, or molecules—that produce their own patterns of behavior over time. While external forces can influence a system, the system's response to these forces is characteristic of its inherent nature. Moreover, the system itself drives its own behavior. Systems are inherently complex due to

their composition of multiple elements, the interactions among these elements, and their non-linear behaviors. They self-correct and adapt, with their overarching purpose often being difficult to discern. Systems are continually influenced by both external and internal forces, responding uniquely to each, which makes understanding them through simple pattern recognition challenging (Meadows, D.H., 2008). Their simultaneous and multidirectional connections further complicate their analysis and control.

Meadows (2008) proposes to think about the following questions to identify a system:

Can you identify parts? *Is the entity you are observing composed of various elements? Are there multiple components and players you can identify?*

Systems are not isolated elements behaving independently. A system is defined by its various parts, and without these interconnected components, the system would not exist.

Do these parts affect each other?

Do the observed elements interact with each other, or do they function independently? Do these interactions lead to unique behaviors?

Systems are not a series of isolated parts. They exist and function through the interactions between their elements, creating unique dynamics and behaviors.

Do the parts together produce an effect that is different from the effect of each part on its own? *Can you observe the different parts interacting with each other? How do these interactions differ from the behavior of each part independently?*

The components of a system continuously interact, resulting in unique dynamics and outcomes that differ from those produced by individual parts.

Does the effect persist in a variety of circumstances? *How do the parts collectively react to external forces? Does the overall behavior change in different contexts or environments? Does the system adapt or persist?*

Systems react and adapt to external forces and varying circumstances. The observed behavior of a system reflects its adaptive nature.

The dynamic nature of systems makes it unrealistic to aim for full control, permanent change, or definitive solutions. Systems are inherently adaptable, continuously adjusting to each new intervention and external influence. Shifting a system towards a desired goal is feasible, but it cannot be achieved with a one-time action or solution; such changes require ongoing efforts and coordination among various actors within the system to sustain the

desired state. This need for persistent intervention and adjustment contributes to the complexity of effectively managing and altering systems.

Our typical view of the world is predominantly linear, focused on cause and effect and segmented into short, mid, and long-term outcomes and strategies. However, real-world systems do not conform to this linear thinking. They are constantly evolving, with new dynamics between elements emerging, new elements being introduced, and new behaviors developing in response to external forces. Concurrently, existing elements of the system interact with each other and with longstanding forces that either support or constrain their overall purpose. All these interactions occur simultaneously.

Breaking down a system reveals three main components: elements, interconnections, and a purpose. Some of these components are more apparent and easier to understand than others, and they vary in their influence on the system's behavior. Nonetheless, identifying, evaluating, and thoroughly understanding these components are crucial for effectively influencing the system toward a desired change.

Elements constitute all parts of a system, both tangible and intangible, and can be further divided into sub-elements. The interconnections between these elements, often through the flow of information, are vital as they hold the system together and play a significant role in its functionality. The purpose of the system, which influences and is influenced by the behavior of the system, is not always intentionally designed by humans. For example, systemic issues like poverty and climate change emerge from the complex dynamics and interconnections within the system, despite being undesirable outcomes. Within these systems, sub-purposes may conflict with the overall purpose, yet the system manages to maintain a balance between them.

The mechanisms through which behaviors remain consistent and persist over time within a system are called feedback loops. It is the consistent behavior pattern over a long period of time that is the first hint of the existence of a feedback loop (Meadows, D.H., 2008). Feedback loops come in two main forms: reinforcing and balancing. Reinforcing feedback loops are self-reinforcing mechanisms within a system. In these loops, an initial change in one part of the system triggers a sequence of events that amplify or reinforce the initial change, leading to exponential growth or decline. Depending on the nature of the loop, these mechanisms can cause rapid and accelerating changes, either positive or negative. Conversely, balancing feedback loops counteract change and promote stability or equilibrium within a system. When an initial change occurs, these loops trigger a response

that opposes or counteracts that change, leading to a stabilizing effect. Balancing feedback loops help systems maintain a desired state or equilibrium by resisting changes and counteracting deviations. The complex behaviors of systems often emerge as the relative strengths of feedback loops shift, causing one loop to dominate behavior and then another (Meadows, D.H., 2008).

The reason why systems work so well is because of its three main characteristics: resilience, self-organization and hierarchy. Resilience can be defined as a system's ability to recover from perturbation, the ability to restore or repair themselves, it is a measure of a system's ability to survive and persist within a variable environment (Meadows, D.H., 2008). Self-organization is a system's ability to self-correct, learn, diversify, and complexify. It refers to a system's capability to form patterns or structures without the need for external direction or centralized authority. Systems are composed of smaller subsystems, resulting from their complex interconnections and feedback loops. This composition creates a hierarchical structure that enables efficiency and resilience. For a system to be highly functional, its hierarchy must balance the welfare, freedoms, and responsibilities of both the subsystems and the overall system. There must be sufficient central control to achieve coordination toward the system's overarching goals, while also allowing enough autonomy for subsystems to flourish, function, and self-organize (Meadows, D.H., 2008).

ii. The Most Challenging Issues Today Are Systemic

Based on recent projections, if current trends, efforts and investments towards the Sustainable Development Goals (SDGs) continue the world won't achieve them until 2082 – missing the 2030 target by more than a half-century (Social Progress Imperative, 2023). The SDGs are a blueprint developed by the United Nations to raise awareness about the major social and environmental challenges humanity faces today and to align global efforts toward overcoming these issues. Similarly, other governmental agreements, such as the Universal Declaration of Human Rights and the Paris Climate Accord, have been established to set collective goals and coordinate actions toward achieving better and more aspirational societal objectives. While some may argue that these goals are overly ambitious, they remain relevant and persistent. Numerous actions and initiatives have been implemented since their inception, leading to progress toward these objectives. However, these efforts have not been sufficient or effectively approached to fully achieve the desired outcomes.

Commitments to addressing issues such as poverty, climate change, and gender disparity are challenging to achieve because they involve systemic problems that transcend individual

policy portfolios and cannot be effectively addressed by single government institutions (Ashoka, et al., 2018). Governments often wrongly focus on the outcomes of these challenges because they are easier to observe and measure. As a result, the interventions and programs developed fail to tackle the root causes and create lasting change, acting merely as temporary solutions that reduce symptoms in the short term.

Addressing symptoms of societal issues is an easier route for governments because it typically involves lower investments and offers more immediate and attractive returns. In contrast, systemic interventions rely on complex causal mechanisms, making the effects of structural changes difficult to model, predict, and anticipate. These interventions also require higher investments, as they involve a series of short- and long-term actions that need to be revisited frequently.

Inequalities are rising across societies, and environmental crises disproportionately impact the poorest and most marginalized individuals. Many societies, not just the poorest, are experiencing increased governance crises, marked by political and social instability, general strikes, and a further erosion of public confidence in government (Sustainable Development Solutions Network, 2022). These inequalities and crises are the result of an interconnected economy and a globalized world and must be addressed at multiple levels: global, national, organizational, district, and household.

The climate crisis, in particular, requires alignment and cooperation among countries and stakeholders. Accountability, responsibility, and constant communication are essential for achieving a systemic shift at all levels. Governments, social organizations, and companies should aim to transform the policies, practices, power dynamics, social norms, and mindsets that underlie the societal issues at hand. This can be achieved through a better understanding of the issues, recognizing their roles within the system, and fostering collaboration among all players (Catalyst2030, et al., 2022).

IV. System Thinking: A Lens to Better Approach Our World

i. What Is System Thinking and To How Practice It

Having defined and explained the concept and relevance of systems, we can better understand why the major social and environmental challenges we face today are so complex and difficult to overcome. The next step is to transform this concept into a practical tool that allows decision-makers—such as entrepreneurs, activists, policy designers, and others—to deepen their understanding of systems and make more informed decisions. Embracing systemic thinking is a good starting point.

Building upon the seminal contributions on using systemic thinking for social change in his work *System Thinking for Social Change*, David Peter Stroh (2015) describes system

thinking as the capacity and ability to evaluate, understand, and intervene in a system effectively to create substantial long-term shifts toward a desired purpose. The evaluation and actions taken to shift the system may vary depending on the methodologies and schools of thought within systemic thinking that one chooses to follow. However, the desired goal, understanding of the system, and identification of its root causes for effective interventions must be commonly acknowledged and accepted by the players within the system who are collaborating toward a long-term shift.

System thinking allows decision-makers to break down their understanding of a system in a more structured and effective way. It involves identifying the system's elements and players, understanding their interactions, recognizing different types of behaviors within the system, and being aware of the mental models that reinforce the system's purpose. This approach also involves testing and challenging common assumptions about the system and acknowledging its history to comprehend its current state. By applying system thinking, decision-makers can achieve better results with fewer resources in more lasting ways, as it encourages them to focus on "why things are happening" instead of merely "what is happening" (Stroh, D.P. 2015). It allows them to see the structures underlying complex situations and understand the interrelationships between different components.

As explained in the previous chapter, there is a high risk in intervening in systems without a proper understanding of their elements, history, and purpose. Interventions based on superficial evaluations and an incomplete understanding of systems often push in the opposite direction of the intended goals and cause more harm in the long term. These interventions typically seek immediate, direct, and short-term effects to either enhance a system's positive outcomes or quickly diminish its negative ones (from the decision-maker's perspective) without identifying and addressing high-leverage points. Consequently, these interventions often act as short-term bandages without the power to shift the system. In the worst cases, they exacerbate the system's unintended purpose, making it more challenging to shift the system over time.

System thinking not only enables a better, more holistic, and less biased understanding of a complex systemic issue, but it is also a powerful tool for articulating and mobilizing stakeholders toward common goals. Assuming that a single entity can change a system contradicts the principles of systemic thinking and demonstrates a lack of understanding of what a system entails. Due to the nature of a system, any plans, interventions, and strategies for systemic change must involve articulating and including other players who already have a role in the system. This requires a collaborative approach based on

accountability, constant communication, and awareness of all participating parts. In systemic thinking, there are no competitors, nor are there good or bad players—only different entities that shape and influence the system through their interactions. Systemic thinking requires each player to recognize that intentions alone are insufficient and to be aware of how they positively or negatively influence the system and the short- and long-term effects of their actions. Collaborating players must ensure that each individual part is empowered and capable of taking the necessary actions to achieve the common goal.

A systemic approach to achieving a systemic shift serves as a tool to enhance the effectiveness and efficiency of actions taken toward intended goals. Every player and element within a system is acting with a purpose. As explained, these actions and strategies, implemented over time, can either support or oppose specific forces within the system. Regardless, these players have limited resources (time, money, skills) to implement their strategies. Systems are dynamic and constantly evolving because the elements, interactions, and players within the system are also in flux. Therefore, being effective with limited resources is crucial when taking action. How does systemic thinking enable more effective and resourceful actions? It provides a framework to uncover the root causes of the system (not just symptoms) by identifying and understanding high-leverage intervention points.

Moreover, it is essential to recognize that the idea of a single, pivotal solution capable of changing an entire system is a myth. Actions viewed through a systemic lens must be coordinated, targeted, and implemented over time to influence systemic change. Only a few targeted and collaborative interventions will produce significant shifts (Stroh, D.P., 2015). In this sense, the resourcefulness that systemic thinking brings operates on two levels: i) players have limited resources, and using them for ineffective interventions is a significant loss, and ii) well-targeted and coordinated interventions do not guarantee a systemic shift; only the cumulative effect of several well-structured interventions does.

Systems are constantly changing, so the understanding of these systems cannot be static; this knowledge must be continuously updated and revisited. A well-targeted and coordinated intervention that has the potential to affect the system today may not be effective years later. The macro environment in which systems operate changes, all elements within the system evolve over time, and the behavior and actions of players toward short- or long-term intentions continuously transform these systems. System thinking involves maintaining an open approach to understanding the system and creating mechanisms for continuous learning.

ii. Key System Thinking Considerations and Principles

Worse Before Better

The principle known as "worse-before-better" describes the concept that long-term success often necessitates short-term investment and sacrifice (Stroh, D.P., 2015). Adhering to this principle helps decision-makers avoid quick fixes or short-term solutions that merely address the most observable and measurable outcomes of a system. It provides a more realistic approach and grounded expectations. Decision-makers will recognize that expecting quick and effective results when addressing a system is unrealistic and unreasonable. They understand that short-term actions may not always yield positive outcomes but are necessary steps toward achieving desired long-term results.

Systems Nested Within Systems

As described above, one characteristic of systems is their hierarchical nature. Systems are often composed of smaller subsystems, which themselves consist of even smaller components or systems. Each level of the hierarchy builds upon and emerges from the level below. Systems thinking must consider that each of these subsystems has unique properties and behaviors that emerge from their interactions with other subsystems. This consideration is crucial for properly evaluating interventions and understanding the factors that influence a system's behavior.

Sum of Its Parts vs. Isolated Efforts

Systemic shifts cannot be achieved through interventions that target a single element, interaction, or feedback loop. Similarly, systemic changes will not occur through the efforts of a single individual or organization, even if that organization targets various elements simultaneously. Moreover, a series of interventions executed only at a certain point in time will not generate the necessary changes to shift a system in the long run. These are the three levels at which the principle of the sum of its parts applies to systems thinking. Achieving systemic change requires various players implementing multiple interventions that target different components, while continuously adapting these interventions over extended periods.

Information Availability Challenges

Players within a system and the collaborators working towards a systemic shift will not always have access to all the necessary information at any given time. Decision-makers who

practice systems thinking must accept this as a given. All strategies, interventions, and collaborations will be executed with limited information and knowledge. Information available at one point might not be accessible in the future. A holistic approach to systems thinking requires considering this challenge in the process of understanding a system and structuring interventions. Additionally, decision-makers must acknowledge that other players will also act under this limitation.

Identifying High-Leverage Points

High-leverage points are the cornerstone for structuring any effective intervention. These are specific areas within a system where relatively small changes can lead to significant and lasting impacts on the behavior of the entire system. Donella H. Meadows (2008) identifies twelve high-leverage points in ascending order of importance and their potential to affect a system (see Appendix 1 for details of these high-leverage points) and emphasizes that the most impactful leverage points are often the least obvious and involve altering the underlying structure, mindsets, or paradigms that govern the system's behavior.

Identifying leverage points alone does not necessarily help decision-makers organize their strategy. It is crucial to connect these leverage points into a coherent path forward—one that links and sequences interventions over time, considers the short-term consequences of possible actions, and shapes feedback loops (Stroh, D.P, 2015).

There Are Always Trade-offs

Given the dynamic nature of systems, the numerous interconnections occurring simultaneously, and the inherent feedback loops, any intervention will have various effects on different parts of the system, both intended and unintended. Decision-makers must be aware that targeting a specific part of the system for a desired outcome will induce changes in other elements, creating new dynamics and influencing feedback loops. Approaching a complex system necessitates understanding and accepting trade-offs. Short-term interventions will produce short-term shifts, which must be embraced to achieve long-term change. Attempting to structure interventions without trade-offs is fundamentally un-systemic.

iii. Key Elements of a System Thinking Mindset

Holistic Perspective

Systems thinking allows decision-makers to reclaim their intuition about a whole system and refine their ability to understand its parts, identify interconnections, evaluate possible future

behaviors, and creatively redesign systems and interventions (Meadows, D.H., 2008). It's impossible to comprehend a complex system and its behavior by evaluating each part independently or by trying to make sense of why each part acts as it does. Systems thinking requires a holistic perspective to evaluate a system as a complex, interconnected set of elements and address issues within their broader context, recognizing the relationships and interactions among the various moving parts of the system.

A holistic perspective involves dissecting the system's elements and their connections to understand them in isolation, in their interactions, and in the function or purpose they serve. This perspective helps anticipate and mitigate unintended consequences by considering the broader system at all times. Donella Meadows indicates that effective systems thinking necessitates abandoning a reductionist approach, which focuses on individual parts in isolation. Solely concentrating on the behaviors and purposes of each element independently will not provide a genuine understanding of the system nor the types of interventions needed for a significant shift.

She emphasizes that systems are inherently interdisciplinary, and their components are linked through feedback loops and non-linear relationships. Therefore, a holistic view is essential to capture the emergent properties that arise from these interactions. By understanding and leveraging these interconnections and feedback loops, decision-makers can identify high-leverage points—specific areas within a system where small changes can lead to significant and lasting impacts. Recognizing and targeting these points is crucial for effective intervention and systemic change.

In essence, systems thinking equips decision-makers with the tools to see the bigger picture, understand the complexity of interdependent elements, and devise strategies that address root causes rather than symptoms. This approach ensures that interventions are more effective, sustainable, and capable of producing meaningful, long-term change.

Openness and Collaborative Mindset

Achieving a systemic shift requires articulating and collaborating with different players toward a common goal through a shared path. A collaborative mindset, as emphasized by John Kania and Mark Kramer in their collective impact approach, fosters a common agenda, shared measurement, continuous communication, and mutually reinforcing activities among all participants (Kania et al., 2011). Systems thinking highlights that systematic shifts are inherently collaborative efforts, and isolated interventions can be limiting or even detrimental to the desired outcome. When addressing complex, dynamic, and interconnected issues, no

single organization can be solely responsible for major social problems, nor can any single organization solve them alone (Kania et al., 2011).

Kania and Kramer (2011) emphasize the importance of shifting from isolated impact to collective impact when tackling adaptive and systemic issues. While isolated impact may suffice for technical problems that require a single, concrete intervention, it is inadequate for systemic problems. For technical problems, organizations often possess the information and knowledge needed to guarantee that an isolated intervention will resolve the issue. However, systemic problems do not have a single solution, and there is no definitive data or information that identifies the "best" way to address them. Tackling systemic problems requires a systemic approach to social impact, focusing on relationships between organizations and progress toward shared objectives, rather than merely encouraging more collaboration (Kania et al., 2011).

Openness is crucial for thinking beyond one's role in the system and for challenging preconceived ideas, assumptions, and mental models. It helps to move away from a biased understanding of the system. Openness facilitates the alignment of various players by promoting more empathetic and objective interactions within the system. This, in turn, fosters the development of synergies toward a common agenda. Without openness, people can miss emerging opportunities, like a sailor so committed to an initial course that he fails to adjust to shifts in the wind (Senge et al., 2015). The conscious acts of creating space, engaging people with genuine questions, and convening around a clear intention without hidden agendas generate a different type of energy than trying to get people committed to a pre-set plan (Senge et al., 2015).

Ownership and Accountability

By fostering a sense of ownership and accountability, decision-makers and organizations can facilitate and promote collaboration, commitment, and shared responsibility in addressing complex systems. Effective systems-level interventions necessitate a sustained effort of responsibility and shared ownership among the collaborating parties. This ensures coordinated efforts, lasting impact, and a higher likelihood of following through on agreed-upon actions and interventions.

Moreover, ownership and accountability empower the collaborating parties to take an active role in shaping, measuring, and evaluating their strategies and actions, ensuring they remain vigilant and responsive. This active engagement helps maintain focus and adaptability, critical for achieving meaningful and lasting systemic change.

Continuous Learning

Continuous learning is a crucial component of systems thinking, as systems are constantly evolving and often characterized by uncertainty and non-linear behaviors. A dynamic system requires an interactive process of learning. By embracing continuous learning, decision-makers can develop a deeper understanding of the systems, better prepare to respond to changing conditions, and continuously refine strategies and interventions. This approach ensures that decision-makers' efforts towards the intended shift remain relevant and effective in both the short and long term, even as internal and external conditions change the system itself.

This learning mindset involves consistently gathering feedback from stakeholders, evaluating the impact of interventions, and iteratively using these insights and new knowledge to revisit, refine, and adjust the understanding of a system. A commitment to continuous learning means staying open to new information and being curious about different perspectives, integrating them effectively to adapt to changing circumstances.

Prioritization Root Causes

Would-be world-changers too often get so caught up in the tough problem's complexities that they forget to seek and then address the root cause, or core reason, why a problem has gone unsolved (Shah, R., 2024). Having a holistic perspective to understand a systemic problem can be overwhelming due to the complexity of its elements, interactions, forces, moving parts, and unintended consequences. Additionally, numerous ideas on how to approach the problem may emerge, especially when addressing it through collaboration and synergies. Compounding these challenges is the reality that organizations often have limited resources for intervening and executing their strategies. Therefore, it is crucial to learn how to prioritize interventions effectively.

Systems thinking enables decision-makers and organizations to prioritize interventions by identifying and understanding the root causes of a problem. Instead of merely addressing the symptoms, systems thinking deconstructs the systemic issue to uncover the underlying reasons for why things are happening. This process involves peeling back the layers of the problem to reveal its deeper, more fundamental causes. Once these root causes are identified, decision-makers can prioritize interventions more effectively, ensuring that their actions are targeted and impactful, ultimately facilitating a systematic shift.

Cultivating Conditions For Systemic Change

Systemic thinkers cultivate conditions where collective wisdom emerges over time, leading to new ways of thinking, acting, and being. System leaders create spaces where those affected by the problem can come together to speak truthfully, delve deeply into what is truly happening, explore options beyond conventional thinking, and seek higher leverage changes through ongoing cycles of action, reflection, and learning (Senge et al., 2015).

To cultivate these conditions, systemic thinkers must implement strategies to share, teach, and facilitate the embrace of the systems thinking approach at various levels: personal, team or organizational, and ecosystem. Systems change is impossible without shifts in individual and collective "habits of mind" (Gopal et al., 2015). In other words, all leaders, teams, and organizations working towards a systemic shift must understand and practice systems thinking. They need to recognize how their efforts are interconnected (or not) and be able to identify potential synergies, redundancies, and opportunities (Gopal et al., 2015). Systemic leaders must ensure that the principles of systems thinking are adopted by all components to guarantee a cohesive approach towards the common goal.

Non-Linear Mentality

Complex systems exhibit non-linear behaviors, where the relationships between causes and effects are disproportionate or counterintuitive. Changes in one part of the system can trigger reinforcing or counteracting effects in other parts. A linear mindset fails to account for these non-linear dynamics, potentially leading to unintended consequences and making it difficult to anticipate how interventions might produce minimal or counterintuitive outcomes. Embracing a non-linear mindset enables a more realistic and nuanced approach to addressing complex issues, increasing the likelihood of effective and sustainable solutions.

Complex systems are characterized by intricate relationships and interdependencies among their various components, rarely exhibiting linear cause-and-effect dynamics. Systems consist of feedback loops that shape their behavior, representing the circular causality within a system where changes in one part influence other parts, which in turn can reinforce or counteract the initial change. A non-linear mentality is crucial for systems thinking, helping decision-makers observe and understand the interconnectedness and circular dynamics within a system.

V. System Change Entrepreneurs: Creating change through An Entrepreneurial Mindset

i. Understanding The Concepts Behind The Term: Entrepreneurs, Innovation-Driven Entrepreneurs, Purpose-Driven Entrepreneurs and System Changers

Entrepreneurship, innovative entrepreneurs, social changers, impact entrepreneurs, are terms commonly used in media, entrepreneurial ecosystems and academia to describe individuals and ventures that apply business and entrepreneurship in different ways. There are commonalities between them but each entails a particular mission or goal they're aiming at, and unique ways in which entrepreneurship is used as a tool to achieve that mission. Nonetheless, all these entrepreneurs are able to identify and leverage a market opportunity that is worth exploring and addressing. Rigorous definitions of these concepts are important to understand each entrepreneurial need and focus resources on building and strengthening a concrete and identifiable field. In the absence of this, proponents and supporters of different types of entrepreneurship run the risk of giving the skeptics an ever-expanding

target to shoot at, and the cynics even more reason to discount certain types of entrepreneurs and those who drive it (Martin et al., 2007).

Based on definitions by seminal authors on entrepreneurship like J. Schumpeter, P. F. Drucker, H. H. Stevenson, and R. D. Hisrich, entrepreneurship involves transforming existing resources into new wealth-producing capacities to create something innovative or creative in pursuit of a market opportunity. This entrepreneurial process requires dedicating time and effort, while assuming financial, psychological, and social risks, to create something new that generates and captures value. Entrepreneurs are commonly classified into two categories: innovation-driven entrepreneurs (IDEs) and small and medium-sized enterprises (SMEs). SMEs are essential to the vitality of 'main/high streets' and play a crucial role in the health of communities. They are typically the ballast of local economies and often responsible for a sizable portion of employment and local value creation (Murray et al., 2012). IDEs are a subset of high-growth, high-potential start-ups that use innovation as a basis for new products and services, and are fundamentally different from the outset, needing different resources to thrive (Anderson, J.E., 2011).

Innovation-driven entrepreneurship is a subset of entrepreneurship that focuses on leveraging innovation to create ventures and seize market opportunities. This approach enables entrepreneurial endeavors to capture and retain value in three primary ways: through novel business models, innovative products or services, and disruptive technologies. Innovation-driven ventures often challenge and disrupt existing markets or industries, possessing the potential for rapid growth and scaling. They can tap into new markets, create entirely new ones, or transform existing ones. The nature of these entrepreneurial endeavors often require higher investments and assumes higher risks as they face the particular challenge of commercialization and adoption of novel ideas or technologies before experiencing experimental growth. Growth is what they seek (Autlet, B., 2024).

The innovation part of IDE does not necessarily refer to the creation of a novel product or service nor the development of a new technology, innovation can come in many varieties and in many areas including (but not limited to), processes, business models, positioning, go-to-market strategies and more (Autlet, B., 2024). Taking as reference Bill Aulet's framework to entrepreneurship, innovation is the product of the capacity of invention times commercialization. If there is commercialization but no invention (invention = 0), or invention but no commercialization (commercialization = 0), there is no innovation.

Bill Drayton, Ashoka founder and CEO, is the one that pioneered the term social entrepreneurship in the 1980s. His definition of social entrepreneurship described a type of entrepreneur willing to change market dynamics and/or create a completely new one to tackle the opportunity of transforming a social distress. Social entrepreneurship signals the imperative to drive social change, and it is that potential payoff, with its lasting, transformational benefit to society, that sets the field and its practitioners apart (Martin et al., 2007). He stated four main pillars that characterize social entrepreneurs: creativity, a big, new idea, entrepreneurship, and a strong, ethical fiber. The term has expanded and become more inclusive over the last couple of decades and it is also used to describe purpose-driven individuals and leaders that work to create social or environmental change through different models: for-profit, non-profit, grass-root organizations. Due to the fact that social entrepreneurship has become an umbrella concept, the term purpose-driven entrepreneurs will be used here to define individuals with a strong ethical fiber, a clear purpose to tackle a social or environmental challenge and a commitment to tackle the challenge through a business model and an entrepreneurial mindset.

One of the most recognized figures in social entrepreneurship is Muhammad Yunus, who received the Nobel Peace Prize in 2016 for his pioneering work in microfinance. His venture, based on the concept of "the bottom of the pyramid" (BoP), provided low-income individuals with access to affordable loans, thus empowering small businesses. The BoP concept highlights the significant market opportunity available by addressing the needs of the low-income population through affordable products and services. By focusing on this demographic, these ventures can directly and indirectly contribute to poverty alleviation and economic empowerment. Yunus' work and the BoP concept have catalyzed a paradigm shift in business and economic development, recognizing the potential of lower-income communities as active participants in the global economy and emphasizing the importance of inclusive and sustainable business models.

However, Yunus' approach has faced ethical, viability, and systemic change criticisms. From a systemic perspective, the BoP concept tends to oversimplify the complex and multidimensional nature of poverty. The issue is not merely one of affordability due to a lack of financial resources; it also involves interconnected and persistent structural challenges that contribute to affordability issues. Furthermore, a single market-based solution is often insufficient and unlikely to scale to the point of addressing and overcoming these structural problems.

On the other hand, system changers, or system change leaders, are individuals who use systems thinking to achieve or contribute to systemic shifts. These leaders adopt a collaborative approach, maintain a non-linear mindset, and emphasize the importance of systems thinking to create synergies towards the desired systemic change. They use systems thinking as a primary tool to raise awareness about the systemic problems they aim to address and to engage with other organizations to develop and implement plans for systemic shifts. Achieving a systemic shift requires engagement from various sectors, including academia, government, policy, regulation, business, and civic engagement. System changers operate across diverse fields and industries, each playing their part from their respective positions.

For example, a policy-maker can use systems thinking to better understand the short and long-term effects of certain policies, including trade-offs, success metrics, public communication strategies, and mechanisms to adjust and mitigate undesired policy outcomes. Similarly, a professor can use and teach systems thinking to help students understand why certain issues persist over time, why past efforts have failed to address them, what factors have exacerbated specific issues, what the most evident societal symptoms are, and how to identify their root causes. System changers are integral to driving overall systemic change. They stay vigilant, persistent and proactive in favor of that goal and they display critical thinking skills, flexibility, and adaptability (Catalyst 2030 et al., 2022), emphasizing a collaborative and open mindset.

ii. Defining a System Change Entrepreneur

Entrepreneurship is fundamentally an ethical activity that addresses multidimensional problems. Ethical entrepreneurs, through the execution of their ventures, inherently bring societal benefits. This concept is integral to the definition of entrepreneurship: the mobilization of resources in pursuit of value creation. Throughout this process, entrepreneurs generate positive societal and environmental impacts, both directly and indirectly. These impacts include job creation, the dissemination of new knowledge or technologies, reduction of carbon footprints, and promotion of economic mobility. However, the primary intention behind the entrepreneurial endeavor is what primarily defines the type of entrepreneurship, as illustrated in the table below:

	The “Why”	The “How”	Type of focus	Role of Entrepreneur
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Innovation-driven entrepreneurs	Tap a market opportunity in an innovative way and add greater value differently	Introduce innovation (in the business processes, model, the development of a new technology or product) to leverage the market opportunity	Grow and scale the entrepreneurial endeavor to gain market and provide greater value at a massive scale	Leverage a market opportunity that could generate value to customers through an innovation
Impact-driven entrepreneurs	Solve or reduce the effects of a specific social or environmental problem	Develop, commercialize and scale a market solution	Direct impact in a set of social or environmental problems	Lead the reduction of an specific social/environmental issue through a new market solution
System Change Entrepreneurs	Tackle a pressing and complex environmental or social systemic issue to aspire to achieve a systemic shift	Play a role in the achievement of a systematic shift by developing and scaling a solution addressing a broken market.	Collaborative approach to make sure impact and interventions are aligned to the bigger agenda needed for the systemic shift.	Use entrepreneurial strengths to scale a market solution that will contribute to the system shift.

Table 1: Comparison of key entrepreneurial terms.

Note: Developed by Briceno Brignole, R. (2024)

System Change Entrepreneurs develop structural solutions and design approaches that effectively create benefits or prevent follow-on costs for society. – and these are also economically attractive from a societal perspective (Catalyst 2030 et al., 2022). At its core, the main intention of the entrepreneur is to tackle a complex issue aspiring to contribute to a systemic shift while using the market as a vehicle. Their business model, entrepreneurial strategy and overall decision-making will put this intention at the center. They are impact-driven and innovative-driven and utilize the system thinking framework as a main tool for understanding the system and pushing for change.

To achieve systemic change, system change entrepreneurs ensure they address the root causes and barriers of systemic issues rather than merely treating the symptoms. Their primary focus is on influencing the social system itself, moving beyond simply delivering solutions to concentrate on the system's overall architecture (World Economic Forum et al., 2017). While scalable solutions can generate significant societal or environmental impact, they are not always what is needed for systemic change. This distinction sets apart impact-driven entrepreneurs from system change entrepreneurs: the former seeks scalable, impactful solutions for societal benefits, while the latter seeks scalable solutions that are essential components for driving systemic change.

Even though system change entrepreneurs and impact-driven entrepreneurs share a business mindset, their primary motivation is not to scale for impact or profit, achieve market

traction, or gain market recognition. Instead, their main drive is to develop and commercialize scalable solutions that can improve the lives of millions or billions, fulfilling their role in the systemic change journey. This need for scalability and creativity in leveraging market or business frameworks for growth and commercialization is where the innovation-driven mindset from IDEs comes into play. As mentioned earlier, they do not necessarily need to come up with a novel idea or develop a new technology; the venture must be based on some form of innovation—ranging from the product to the business process or model—that can be scaled globally or across regions. The systemic issues they face likely have existed for decades, with numerous unsuccessful attempts to resolve them. Complex problems defy conventional approaches to problem solving (Schwab Foundation et al., 2017).

System change entrepreneurs often operate in broken markets, characterized by limited availability on both the demand and supply sides due to dysfunctional or emerging market systems. These markets are typically associated with low-income consumers who face affordability challenges arising from structural issues that hinder value creation (Budinish et al., 2024). System change entrepreneurs use their entrepreneurial skills to understand why these broken markets exist, why previous attempts to create value have failed, and how to identify and overcome systemic market barriers. They encounter market-level affordability challenges, barriers, and customer-value perception problems.

From the outset, system change entrepreneurs recognize that the products, services, strategies, and business models they develop will not, by themselves, solve the root causes of the systemic issues they aim to address. They are aware that their role is crucial in pursuing the desired systemic shift, addressing particular challenges within the system, bringing unique skills to the process, and strategically leveraging market-oriented solutions. However, they understand that achieving a systemic shift requires the involvement, alignment, and collaboration of many other players. Their operations focus on influencing the linkages and interconnections within the system rather than providing a predefined solution to all intended beneficiaries (Schwab Foundation et al., 2017). Part of their work involves conveying action, building a common agenda, and exchanging capabilities to facilitate a collaborative route forward involving many players. Like a central gear, they act as the catalytic force that creates momentum among all other actors (Geneva Global, 2023).

The collaborative component extends beyond building a common agenda and a path forward with external partners; it also involves applying the same principles and mindset to

develop a team with the necessary capabilities and perspectives for the solution's success. Successful ideas require a mix of talents that are rarely found in a single individual (Light, P.C., 2006). Like all entrepreneurs, a system change entrepreneur is continuously engaged in building a venture, deploying, adjusting, and scaling a solution. Thus, constructing a capable and committed team that shares the vision and values is fundamental.

An important internal role of a system change entrepreneur is to cultivate an environment that inspires learning and empowers action. Building the team's capability to think systemically, ensuring they comprehend the system they are working within, and making certain they understand their roles in the systemic shift is just as crucial as the articulation and collaboration needed with external players.

VI. System Thinking As A Tool To Approach Systemic Challenges Through Entrepreneurship: Two Proposed Frameworks

Based on the characteristics of system change entrepreneurs, the fundamentals and principles of systemic thinking, and already proven entrepreneurship methodologies, the following key frameworks for system change entrepreneurs have been developed and proposed for the Legatum Center. These frameworks are expected to be used as tools for system change entrepreneurs to take on systemic challenges, contribute towards changing elements of the system at task, collaborating with different players in a continuous and effective way, and leveraging the business opportunities of a broken-market in the process.

“The Journey Towards Change Framework: A Practical and Disciplined Canvas for System Change Entrepreneurs” - This framework adds and adapts the Disciplined Entrepreneurship methodology and canvas developed by Bill Aulet at The Martin Trust Center at MIT and converts it into a practical canvas focused on the needs of system change entrepreneurs. It takes the entire 24 step entrepreneurial process, dissects it into different sections and then adds new ones at the beginning of the process to make sure the system change entrepreneur is setting the right approach from the beginning towards a desired

system shift. The framework will not change the 24 steps proposed in the Disciplined Entrepreneurship book,. it'll just create a new journey that will enable system change entrepreneurs to better combine a system thinking approach, a IDE mindset and entrepreneurial skills during their journeys.

“Circular Process for System Thinking” - This framework is designed to assist system change entrepreneurs in maintaining a consistent systemic thinking approach throughout their endeavors. It is applicable regardless of the specific systemic shift being targeted or the market-oriented solution being developed. The framework is circular, facilitating continuous reflection and analysis through a systemic lens. This structure is straightforward and easy to follow, ensuring that critical elements of system thinking are considered and applied correctly and timely. This methodical approach guarantees that entrepreneurs consistently integrate systemic thinking into their strategic planning and decision-making processes.

i. The Journey Towards Change Framework: A Practical and Disciplined Canvas for System Change Entrepreneurs

This framework's objective is to guide the future system change entrepreneurs through the most important and distinct phases of the entrepreneurial journey. The framework aims to combine, throughout the various phases, the tools and mindsets a system change entrepreneur needs: collaborative, IDE, impact-driven and systemic mindset. This framework is based mainly on theories developed by Meadows (2008) and Stroh (2015). The steps and process have been also influenced by various other frameworks and theories developed by the Skoll Foundation and the Schwab Foundation for Social Entrepreneurship. For the portion of the framework that suggests a more entrepreneurial approach, the 24 steps from the Disciplined Entrepreneurship guide developed by Bill Aulet has been taken as the main reference (See Appendix 2 for details).

The Journey Towards Change Framework is structured into four distinct phases, each designed to assist entrepreneurs as they tackle complex social issues using an entrepreneurial approach to instigate systemic shifts. This framework is inherently iterative, providing a structured approach to help entrepreneurs maintain pace, rhythm, and discipline as they address structural problems through a systemic lens and strive for successful execution. Throughout this framework, system change entrepreneurs are encouraged to think, plan, and act with both a systemic perspective and an entrepreneurial mindset. At

certain points, a systemic view may prove more advantageous and predominant, while at other stages, leaning into and prioritizing an entrepreneurial and business mindset will be essential to advance the project and to ensure progress.

This document will delve into expanding and elaborating on the main sections of Phase 0 and Phase 1, along with an additional section introduced to Phase 3. Phases 2 and 3 form the core of the Disciplined Entrepreneurship methodology, encompassing 10 sections ranging from Raison d'Être to Scale. These sections include 24 steps that serve as the primary guidance for an IDE journey. Phases 0 and 1, which are preliminary phases with additional sections, help system change entrepreneurs gain a deeper understanding of the system, strategize their approach, navigate systemic shifts, and define their roles within the process. The concluding section of Phase 3 serves as a capstone, positioning the entrepreneur to continue pushing for broader change.

The summary of the framework in [Appendix 3](#) outlines each phase and their respective parts, with detailed explanations to follow in subsequent sections of this work.

Phase 0: A moment of reflection - *Are you willing to be a system change entrepreneur?*

The inception of the framework marks the critical moment at which aspiring system change entrepreneurs must ensure they are undertaking a journey aimed at addressing a genuine systemic issue. Furthermore, they must ascertain that their motivations and expectations align with the implications of effecting and addressing a systemic change as entrepreneurs. There are trade-offs, challenges, responsibilities of each route and there is no correct route. There is only a recommended way to lead and take action if the answer for the three main questions is yes.

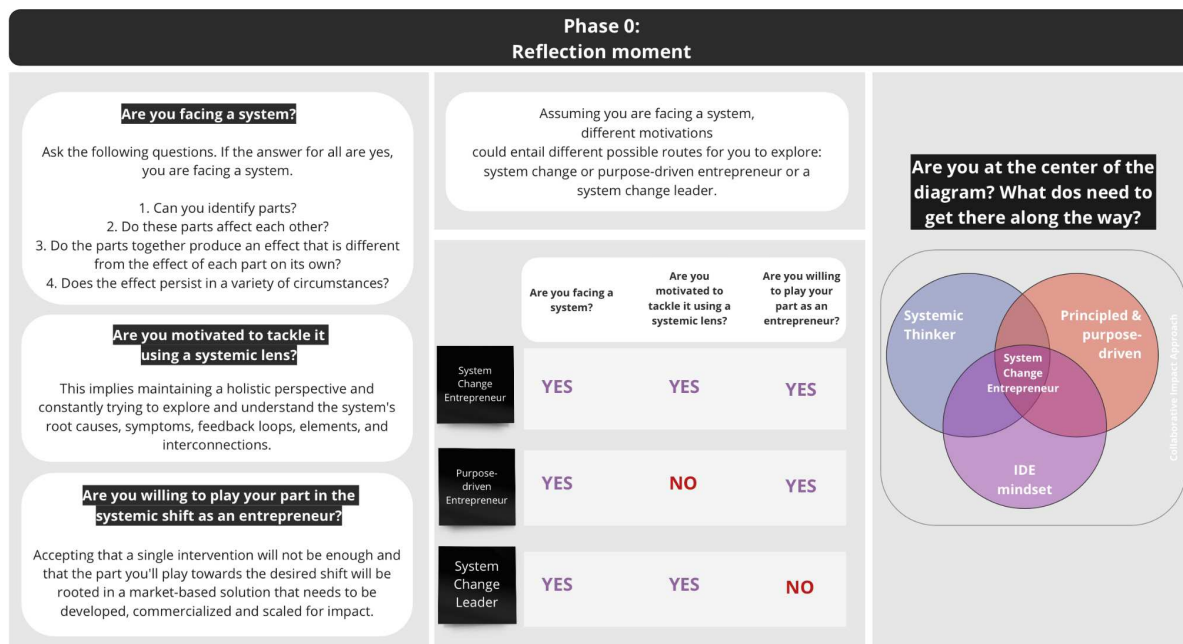


Figure 1: Details of Phase 0 - A reflection Moment.

Note: Developed by Briceno Brignole, R. (2024)

As previously articulated, adopting a systemic approach to addressing the underlying issue requires a commitment to thoroughly comprehend the intricate dynamics of the entire system. This entails recognizing that the interventions and initiatives implemented by the aspiring entrepreneur serve as incremental contributions toward systemic transformation. Embracing the Innovation-Driven Entrepreneurship (IDE) mindset, entrepreneurs leverage innovative business solutions with the potential to: i. significantly impact a large demographic, ii. contribute to a comprehensive strategy aimed at influencing the system, iii. address market inefficiencies.

For those not inclined towards entrepreneurial endeavors but still wish to adopt a systemic perspective, alternative avenues exist. These may include leadership roles in non-profit organizations, spearheading social awareness campaigns for civic engagement, engaging in policy design, or serving within governmental institutions. Each path, including entrepreneurship, presents distinct challenges centered around rectifying market deficiencies. Entrepreneurs, alongside other stakeholders, collaborate towards a shared vision of systemic change.

Entrepreneurs eager to leverage the entrepreneurial route to drive impact but are not interested in playing the part in a bigger system shift may opt for a purpose-driven approach. This entails a focus on alleviating specific symptoms or consequences of the systemic issue

rather than solely contributing to a broader systemic shift. While purpose-driven entrepreneurs identify market opportunities and develop scalable solutions, they acknowledge that their efforts may not necessarily align with a broader common agenda shared by multiple stakeholders.

Phase 1 (Section 1): System's Overview - *How well do you understand the system?*

The primary objective of this initial phase is to cultivate familiarity with, comprehend, and navigate the intricate complexities inherent in the system that the entrepreneur aims to address. As elucidated in preceding sections, systems are characterized by their profound intricacy, stemming from the multitude of elements, connections, and feedback loops operating simultaneously. Consequently, the entrepreneur's journey involves an ongoing and perpetual process of learning about the system. Given the dynamic nature of systems, assumptions and knowledge held by the entrepreneur at one juncture may swiftly become outdated or irrelevant. Thus, investing time and effort to grasp the underlying reasons for the system's current state and comprehending the intricate interplay of its components are pivotal prerequisites for formulating hypotheses regarding root causes and envisioning systemic transformation.

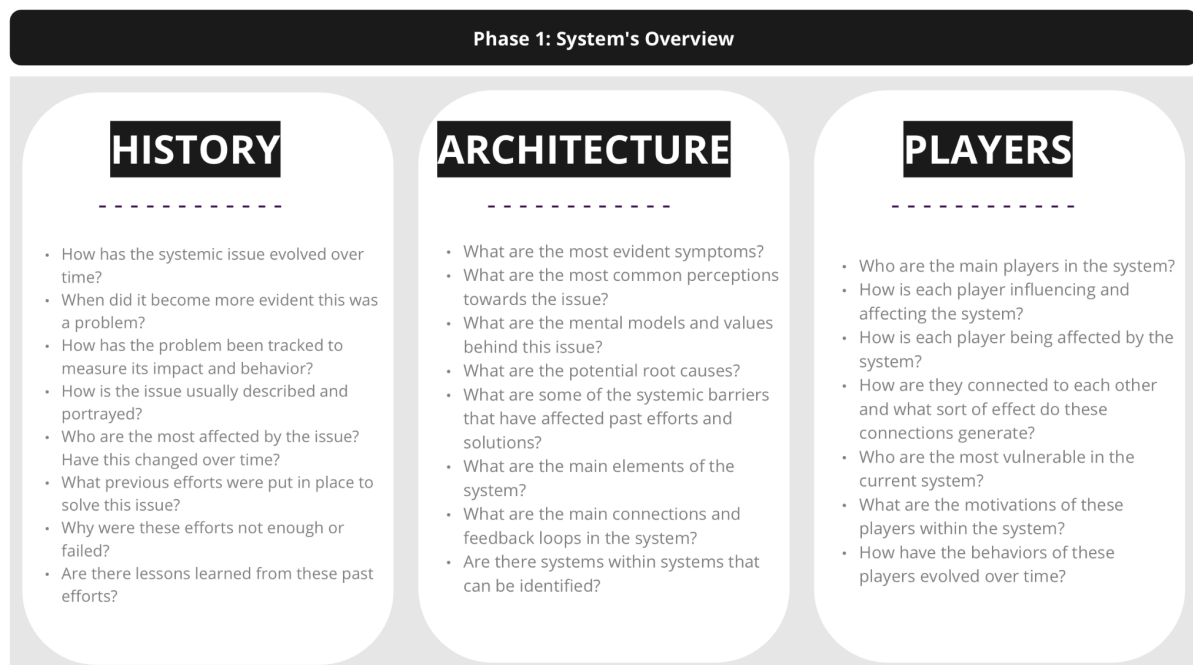


Figure 2: Details of Phase 1 - System's Overview.

Note: Developed by Briceno Brignole, R. (2024)

The historical analysis component of this phase equips entrepreneurs with insights into both the manifestations of the system's behavior and its evolutionary trajectory. Concurrently, the architectural examination facilitates the identification of key constituents comprising the system and their roles in shaping its behavior. Lastly, the stakeholder mapping aspect enables entrepreneurs to delineate the most influential actors within the system, discern their roles, assess their susceptibility to the system's effects, and evaluate the impact of their actions and decisions.

Understanding the historical evolution of the system entails delving into its past to elucidate its present state. Most systemic issues do not materialize overnight; rather, they evolve over time, becoming increasingly complex and conspicuous. While pinpointing the inception of systemic issues may not always be feasible, tracing their evolutionary journey is imperative. Examining past attempts to address these issues offers valuable insights into the current behavior of the system.

Identifying and comprehending the fundamental components of the system provides a holistic view of its architecture. As previously emphasized, a system comprises numerous interrelated elements, all dynamically interacting and forming feedback loops that shape its behavior. Accordingly, this phase necessitates a focus on identifying and comprehending these elements, interconnections, feedback loops, mental models, paradigms, subsystems, and structural barriers within the system.

Mapping out the stakeholders associated with the system is vital not only for understanding its behavior but also for formulating a cohesive strategy for systemic change. Stakeholders exhibit varying degrees of vulnerability and empowerment within the system, with some significantly influenced by its dynamics while others exert considerable influence over it. This comprehensive mapping exercise equips entrepreneurs with the insights needed to strategically engage with stakeholders, elucidate the rationale for collaboration, and discern the roles these stakeholders have played throughout the system's evolution.

Phase 1 (Section 2): The System's Deep Structures - *What is accentuating the system's behavior?*

The main goal of the second section is to equip the entrepreneur with the tools necessary for articulating and comprehending the intricacies of the system. This entails employing two principal instruments: The Iceberg and High-Leverage Points. Once entrepreneurs have gained a comprehensive understanding of the system's historical evolution, the

manifestation and progression of its challenges, the essential constituents influencing its dynamics, and the pivotal stakeholders shaping and being shaped by its behavior, the subsequent step involves embracing the systemic narrative by delving into the deeper underlying structures.

The Iceberg metaphor serves as a straightforward method for distinguishing between surface-level problem symptoms and their deeper underlying or root causes. It delineates three or four tiers of insights, each prompted by specific inquiries and necessitating tailored actions or responses. Events, positioned at the surface level, depict the immediate occurrences or ongoing phenomena within the system. While events offer a simplistic and superficial understanding of the situation, they merely represent the outward manifestations of deeper structural issues. Often, individuals tend to focus their attention and allocate significant time and resources to responding to these events, driven by the urgency to address immediate crises. While reacting to events is imperative, it is insufficient in effectively addressing the systemic challenges at hand.

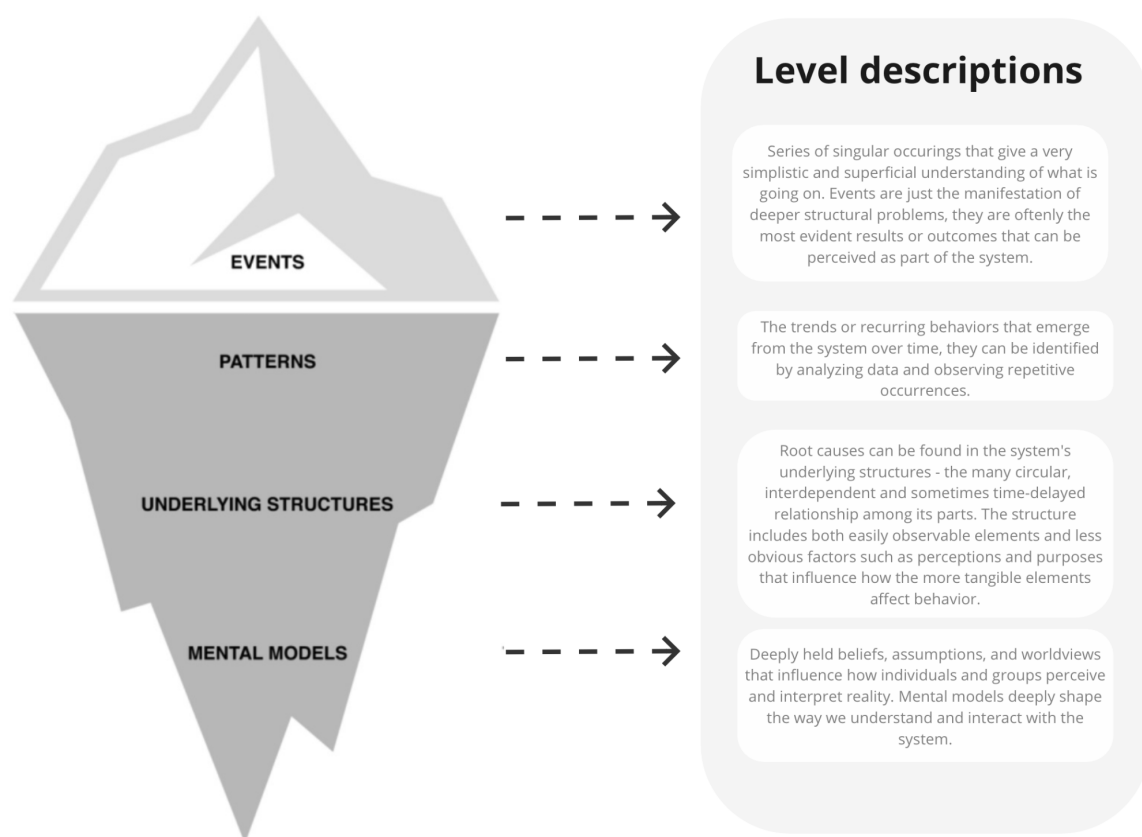


Figure 3: Details of The Iceberg Tool.

Note: Developed by Briceno Brignole, R. (2024)

High-leverage points are the places within the system where a relatively small change can create a disproportionately large impact. Identifying high-leverage points is crucial because it'll allow the entrepreneur to start to understand and envision where potential small interventions or changes could lead to significant and lasting impacts on the overall system. By targeting high-leverage points, entrepreneurs can achieve maximum impact with minimal effort and resources. Instead of trying to change multiple aspects of the system simultaneously, they can focus their efforts and investments on the most critical areas relevant to them.

High-leverage points often target the underlying structures, mindsets, or feedback loops that drive system behavior so by addressing these root causes, the interventions introduced can be more sustainable and self-reinforcing, rather than temporary or superficial. This will help entrepreneurs overcome the natural resistance of the system by targeting the key drivers or constraints that maintain the system's current state. Identifying high-leverage points also facilitates and foster the collaborative mindset that system change entrepreneurs seek. These points can trigger ripple effects throughout the system, aligning and amplifying the impact and efforts of different players leading to transformative changes in multiple areas of the system simultaneously.

Phase 1 (Section 3): Theory of Change - *What would lead to a systemic shift?*

A theory of change (ToC) is a comprehensive description of how and why a desired change is expected to happen in a particular context, and what are key actions and interventions that could potentially lead to that desired change. It is a tool used to map out the logical sequence of events, interventions, and expected outcomes that are necessary to achieve the specific long-term goal or change. By developing a theory of change, entrepreneurs and other system thinkers can better understand the complexities of the system they are operating in, anticipate potential challenges, and design more effective interventions that address the root causes of the problem.

A theory of change is not meant to be set in stone nor be developed before putting effort and time into understanding a system's history, its elements, key players, mental models and behaviors. A rigid theory of change lacks the flexibility that entrepreneurs will need to quickly adapt and adjust strategies and decisions along the process to be sure they are back on track to contributing to a systemic shift. A theory of change that is taken lightly and is written without a comprehensive analysis of the system will misguide the entrepreneurial efforts to achieve a systemic shift and will be detrimental for the collaboration with other players. In that sense, a theory of change must be driven by sound analyses, consultation with key

stakeholders and learning on what works and what does not in diverse contexts. It helps to identify solutions to effectively address the causes of problems that hinder progress and guide decisions on which approach should be taken, considering an organization or the entrepreneur's comparative advantages, effectiveness, feasibility and uncertainties that are part of any change process (United Nations Development Group, 2015).

A theory of change also enables entrepreneurs to better articulate and communicate their visions and strategy clearly to other stakeholders and key players. It is also a powerful internal tool to align the expectations and goals of their team as well as to be used as the north star to guide all decisions and actions. This is especially crucial as the journey towards working for that desired shift will take many turns and will be limited and challenged by various limitations and unpredictable events along the way.

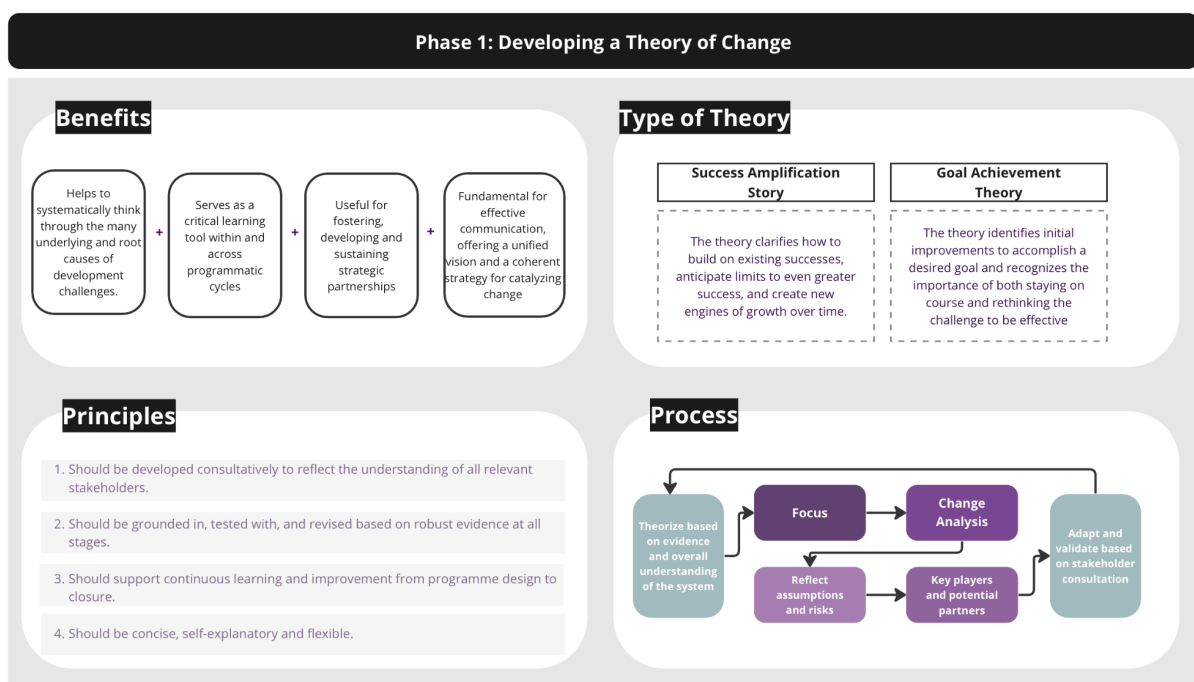


Figure 4: Details of Phase 1 - Theory of Change

Note: Developed by Briceno Brignole, R. (2024)

According to the United Nations Development Group (2015), there are four main benefits and three main principles that are useful when developing a theory of change for complex and urgent social problems:

A theory of change can help to systematically think through the many underlying and root causes of development challenges, how they influence each other, and how to

determine what a specific stakeholder or entrepreneur should do and prioritize to maximize their contributions.

Within and across programmatic cycles, a theory of change serves as a critical learning tool. It articulates the factors driving a development challenge and clarifies the underlying assumptions of the chosen strategic approach. By continuously evaluating these assumptions against empirical data and past experiences, the theory of change not only validates the logic underpinning the initiatives but also facilitates necessary adjustments in strategy or approach in response to emerging challenges or evident risks. Moreover, regular updates to the theory of change are imperative, particularly in response to crises or as part of ongoing monitoring efforts.

In terms of fostering and developing strategic partnerships, the theory of change is invaluable. The process of developing a consensus on a theory of change brings together various perspectives and presuppositions from a diverse set of stakeholders—including program planners, beneficiaries, donors, and staff. This consensus-building enhances engagement, motivates stakeholders by clearly delineating how their contributions foster broader impacts, and augments understanding and support for each participant's role in systemic transformation. It also bolsters collaboration with and among organizations pursuing similar outcomes, thereby enhancing the effectiveness and coordination of partnership strategies.

A well-crafted theory of change is fundamental for effective communication, offering a unified vision and coherent strategy for catalyzing change. It can be succinctly represented through diagrams or brief narratives that summarize an organization's or an entrepreneur's objectives, thereby enhancing communication among stakeholders. This focused representation aids in shifting the emphasis from mere resource allocation and activities to the actual impacts and changes being targeted.

There are also a set of key principles that should guide organizations and entrepreneurs in the process of developing their theories of change:

First, it should be developed consultatively to reflect the understanding of all relevant stakeholders. As described along the document, many players simultaneously contribute and are affected by the behavior of a system. Developing a theory of change in isolation is un-systemic. The development should tackle the roles that other players have in the current system and the roles they could have in the process of working towards systemic change.

Second, it should be grounded in, tested with, and revised based on robust evidence at all stages. The theory of change should be a reflection of a comprehensive understanding of the system: its history, its elements, the main interactions and interconnections between those elements, past interventions, main players and their roles, mental models, paradigms, root causes, assumptions and behaviors.

Third, it should support continuous learning and improvement from programme design to closure. A comprehensive understanding will not be enough for a flexible and adaptive theory of change. The understanding and evaluation of the system should continue at all times so organizations and entrepreneurs could revisit it, revise and adjust it as the system evolves.

When developing a theory of change, it is also helpful to apply system thinking prospectively - to create a roadmap going forward that accounts for the complexity of having to navigate so many interdependent factors over time. In moving to prospective system thinking, an entrepreneur should consider two core theories of systemic change described by Stroh (2015). These core theories could help to conceptualize and articulate the theory of change: i. Success Amplification Story - a theory of change that amplifies success, ii. Goal Achievement Theory - a theory of change that seeks to correct a shortcoming and achieve a goal.

The Success Amplification Story

The Success Amplification Story begins by identifying one or more reinforcing loops—these are critical elements that build upon each other to progressively achieve greater success. This approach must also consider potential obstacles that could hinder initial improvements and develop strategies to overcome these barriers by introducing new drivers of success over time. A key aspect of this model is the identification of significant time delays that impact both achieving and sustaining success. If systems thinkers find it challenging to pinpoint existing successes to leverage, or if the potential for establishing a positively reinforcing dynamic appears weak, it becomes more prudent to formulate a systemic theory of change that effectively bridges the existing disparities between current realities and the desired vision (Stroh, 2015).

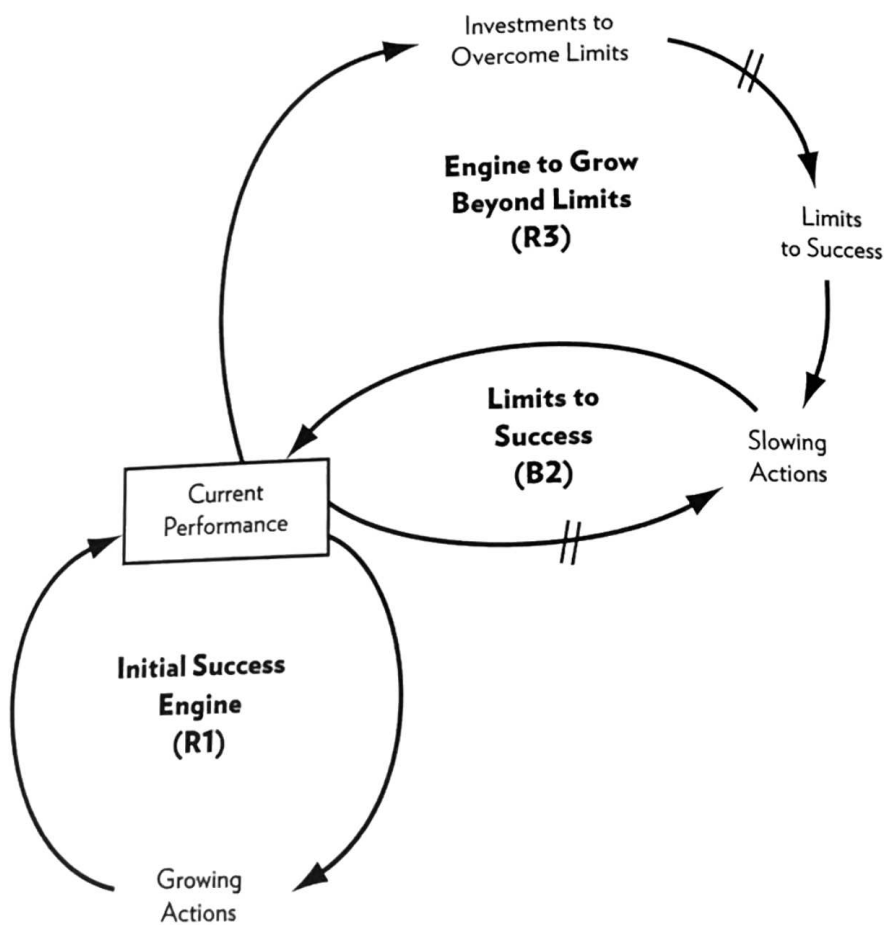


Figure 5: Success Amplification Feedback Loop.

Note: Developed by Stroh (2015)

The Goal Achievement Theory

The theory initiates with one or more balancing loops that pinpoint necessary corrections to diminish the disparity between current realities and desired outcomes. To effectively identify these corrections, it is essential to first understand the underlying structures contributing to the discrepancies. Additionally, acknowledging and monitoring time delays in the progress toward closing these gaps is crucial as well as to exercise persistence and stay the course in making the corrections (Stroh, 2015). The Goal Achievement Theory assists decision-makers and entrepreneurs in outlining strategies for continual improvements and gradual progress in bridging these gaps. This theory supports the maintenance and reinforcement of efforts over time to achieve set objectives.

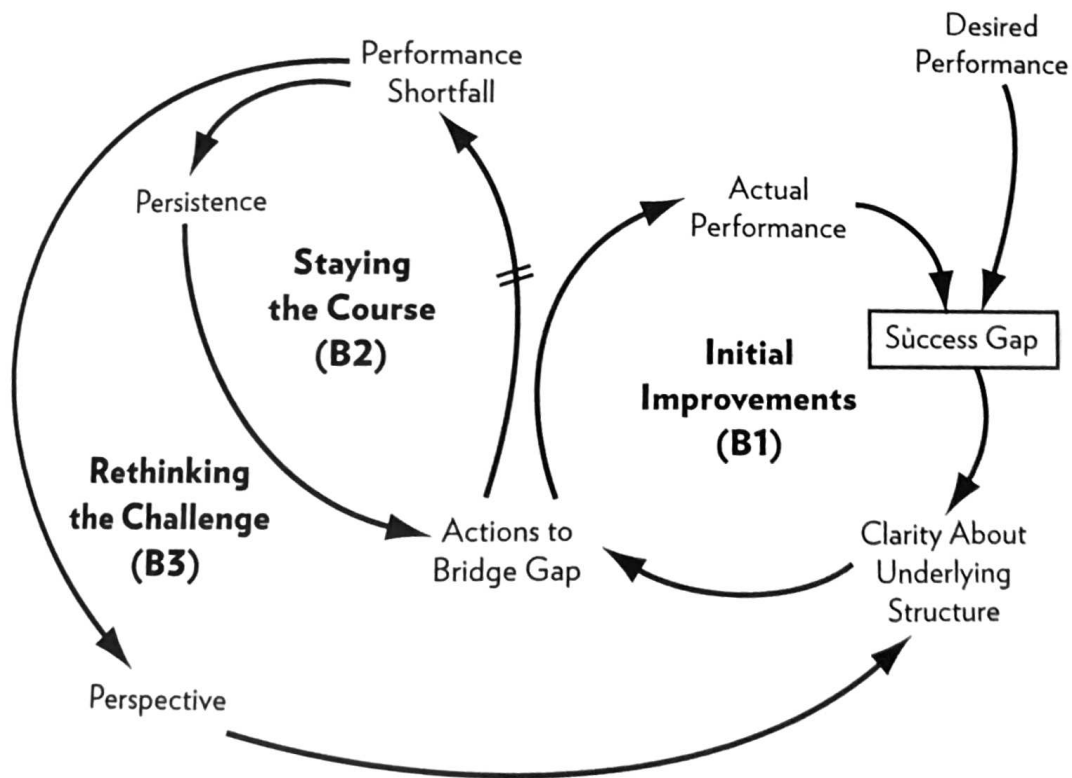


Figure 6: Goal Achievement Feedback Loop.

Note: Developed by Stroh (2015)

Upon recognizing the most pertinent theory and understanding the significance of developing a theory of change, the following steps provide a structured approach for entrepreneurs to conceptualize their theories of change. This methodology, originally developed by the United Nations Development Group for articulating theories of change within the United Nations, has been tailored to suit Phase 1 of the System Change Entrepreneurial Framework. This adaptation facilitates the prioritization and articulation of change initiatives effectively and shows that is a iterative process through which the entrepreneur must continuously theorize based on evidence and understanding of the system while constantly adapting and validating based on stakeholder interactions and consultations on the prioritized matters:

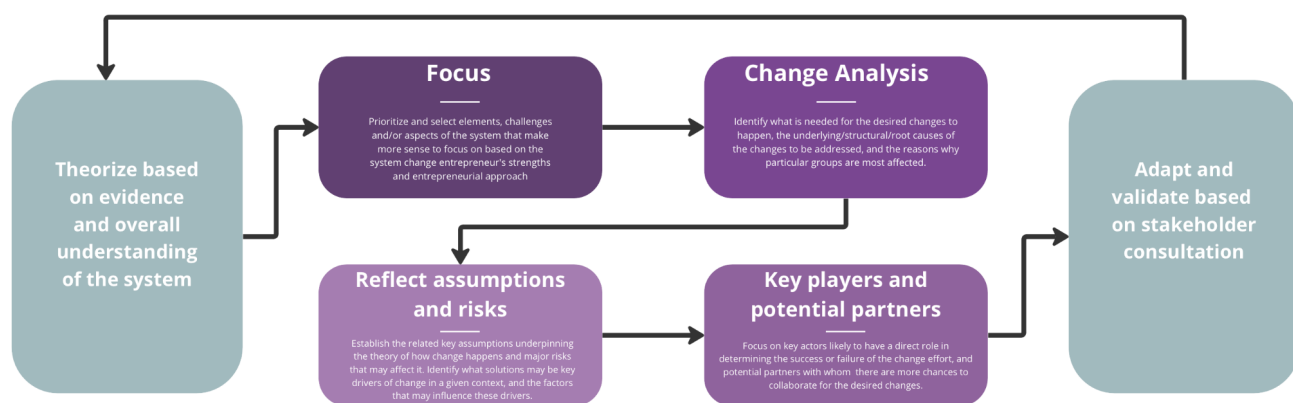


Figure 7: System Change Theory Process for System Change Entrepreneurs

Note: Developed by Briceno Brignole, R. (2024)

Focus

Prioritize and select elements, challenges and/or aspects of the system that make more sense to focus on based on the entrepreneur's strengths and entrepreneurial approach. As part of the selection process, the entrepreneur should ask if they, as an entrepreneurial endeavor, have the strengths and ability to develop lasting capacities in the selected areas and which are the key areas and/or challenges in which they could have the greatest impacts.

Change Analysis

Determine what is needed for the desired high-level prioritized changes to happen. Identify the immediate, underlying and structural/root causes of the changes to be addressed, the reasons why particular groups or players are most affected. Point out specific areas of work, which can be organized in pathways linking various levels of causes (immediate, underlying and structural) and which can show interlinkages among each other. Also identify expected solutions for each level of causality (immediate, underlying and structural) and maintain a logical flow of solutions to achieve the desired changes. This analysis should include identifying the proven and potential enablers of change in the to tackle protracted problems and bottlenecks, and building on and going beyond what was achieved in previous efforts (United Nations Development Group, 2015).

Reflect Assumptions and Risks

Establish the related key assumptions underpinning the theory of how change happens and major risks that may affect it. Identify what solutions may be key drivers of change in a given context, and the factors that may influence these drivers. Assumptions vinculated to the proposed causal relationship between different results and other factors have to be made

explicit and assessed against available evidence. During the preparation of a theory of change, it is not always possible to anticipate and prepare for the full range of risks. But it is essential to isolate the most important ones so that when certain risks materialize (United Nations Development Group, 2015).

Identify Key Players and Potential Partners

Focus on key actors likely to have a direct role in determining the success or failure of the change effort, and potential partners with whom there are more chances to best collaborate for the desired changes. The entrepreneur should identify specific players or stakeholders able to work on different results based on strengths, capacity and available resources. The theory of change should help clarify which key partner does what, in which areas players are expected to work together, where collaboration is necessary to achieve the expected change, and how to avoid overlapping to maximize the use of available resources. Entrepreneurs may also identify opportunities to address via engagement strategies in order to leverage the resources and capacities of other players (United Nations Development Group, 2015).

Theorize, Adapt and Validate

To begin formulating a theory of change, it is essential to have a comprehensive understanding of how the system operates. The four main steps outlined previously are designed to help entrepreneurs consider the critical elements necessary when developing a theory of change. As entrepreneurs deepen their understanding of the system through interactions and consultations with other key stakeholders, and as they identify or validate assumptions, their theory of change will need ongoing revisions and updates.

However, it is crucial that the core challenges being addressed, the changes aimed for, and the entrepreneur's role in this process remain relatively stable over time. Frequent or drastic changes can undermine the entrepreneur's effectiveness and success in achieving the desired outcomes. Such variability can also disrupt communication, collaboration, and alignment with other key players and partners involved in the process.

Phase 1 (Section 4): Initial Ecosystem - *How are you going to navigate the current ecosystem?*

Understanding the system, identifying a desired shift, developing a theory of change, and identifying potential partners are crucial initial steps in an entrepreneur's journey. Developing a theory of change allows system change entrepreneurs to gain a deeper understanding of the current system, including its underlying structures, root causes, and key leverage points

for effective intervention. However, it's essential for entrepreneurs to recognize that crafting solutions aligned with this theory will be constrained by various limitations within the ecosystem where the entrepreneurial venture operates.

Entrepreneurs addressing systemic issues often operate in growth markets, which are marked by significant opportunities for impact and change. Yet, these markets are also fraught with uncertainties such as political and economic instability, social tension, corruption, and an underdeveloped regulatory framework that does not support the creation and growth of new enterprises. In many cases, these markets feature entrepreneurial and impact ecosystems that are nascent, still evolving, overcoming initial hurdles, and lacking a cohesive agenda for stakeholders to collaborate on fostering innovation and impact.

Trends show that innovation tends to be most focused in geographically-bounded hubs which are characterized not only by dense concentrations of resources and capacities to support innovation but also a network of human agents and organizations facilitating rapid resource exchange and circulation to create an 'eco-system' of interdependent entities (Budden et al., 2019). The reality for system change entrepreneurs is that they frequently navigate environments lacking clear leadership to advance innovation ecosystems. They work in settings where deficits in resources, infrastructure, research and development, and regulatory frameworks can restrict their impact potential, their strategies for systemic change, and their overall ability to understand and address the needs and challenges associated with the desired shift. In such contexts, collaboration across key stakeholders becomes even more vital for generating collective impact and accelerating ecosystem-level growth, differing markedly from traditional economic development approaches.

System change entrepreneurs will begin to set their intervention and entrepreneurial plans in motion based on their theories of change. Before further developing their ideas and plans, it's important to gain a better understanding of the ecosystem they'll take part in, recognize its limitations and identify potential key challenges related to their role and theory of change to anticipate drawbacks and constraints when trying to design, implement and scale their market-based solutions. Some of the main challenges may include (but are not limited to) the following:

Access to Capital

Securing funding is a challenge in emerging markets, where financial systems can be less mature and less accessible to entrepreneurs, especially the ones trying to solve complex issues that will not generate significant returns of investment for the financial entities in the short or mid term. Traditional venture capital, angel investing and/or philanthropic grants may

be limited for impact and innovation focused entrepreneurs that are going to take much higher commercial risks without a proven track record. This lack of financial support can stifle growth and scale.

Regulatory Challenges

Emerging markets often have complex, unclear, or inconsistently applied regulations that can impede or slow down business and entrepreneurial operations. Entrepreneurs may face bureaucratic red tape, lengthy procedures for business registration, intellectual property protection issues, and unpredictable changes in policy that complicate compliance and operational planning. When trying to innovate, regulatory challenges, corruption and bureaucratic processes may also represent a burden for entrepreneurs as it will be more costly (in terms of time and money) to test, launch and produce innovations at massive scales. When trying to change the status-quo with innovative approaches and solutions for complex social issues, corruption will be the main barrier for regulatory reforms and reconsiderations and that could limit the system change entrepreneurs capacity for change or at least the entrepreneur's initial assumptions for achieving the desired vision.

Limited Market Data

There is often a lack of reliable market data, which can make it difficult for entrepreneurs to conduct market research, quickly validate their business models, and tailor their products or services to the local context at a lower cost. This uncertainty can lead to suboptimal business decisions and strategies.

Infrastructure Deficiencies

Inadequate physical and technological infrastructure can pose significant challenges. Issues such as unreliable power supply, poor transportation networks, and limited internet connectivity can disrupt entrepreneurial operations and growth strategies, affecting everything from production to customer engagement and acquisition. These physical and technological deficiencies could completely change the entrepreneur's unit economics and capacity to scale.

Talent Acquisition and Retention

Finding and retaining skilled workers can be difficult in markets where the educational system may not produce enough graduates with the necessary skills. Furthermore, competition for highly skilled workers can be intense, and retaining them can be challenging without the ability to offer competitive compensation or career growth opportunities typically available in more developed ecosystems.

Dependency on External Factors

In many emerging markets, political instability, economic volatility, and susceptibility to global market fluctuations can pose risks to predict and sustain business plans and strategies. Such environments make long-term strategic planning more difficult to control and manage and can abruptly alter any business landscape.

Navigating this reality implies that the entrepreneur recognizes, embraces and accepts the unpredictability, volatility and opportunities that are embedded in the ecosystem they'll be immersed in. Although the ecosystem will also evolve over time, many external factors will likely affect it and many other internal ones will further accentuate certain challenges, it's important for the system change entrepreneur to navigate it by:

Evaluate and embrace the current state of the ecosystem: its opportunities, its main deficits and uncertainties.

Identify and understand the main challenges and limitations that the ecosystem poses for the entrepreneur and how these challenges could be detrimental or work against their initial theory of change. Group those challenges into categories to find patterns and have a better evaluation of risks.

Identify the key stakeholders of the ecosystem and how they relate to the challenges that represent big threats or limitations to the entrepreneur.

Anticipate any major changes that may happen in the near future that could affect the entrepreneur's vision and theory of change.

Determine an initial plan on how to overcome the challenges or barriers identified to reduce the risk that they pose. Think about the needs in terms of partnerships, collaborations, resources, capabilities, infrastructure, regulations, etc, to overcome those barriers

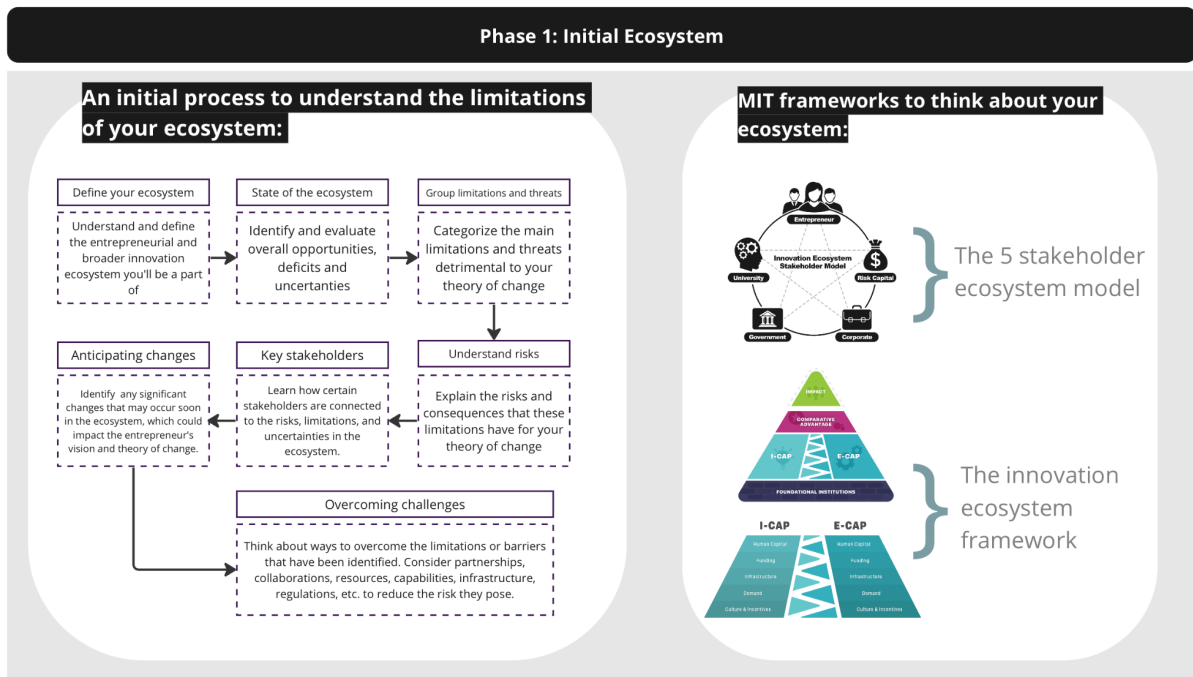


Figure 8: Details of Phase 1 - Initial Ecosystem

Note: Developed by Briceno Brignole, R. (2024)

Phase 1 (Section 5): Common Agenda - *Who will contribute to the shift and how?*

Systemic change requires a collective commitment and a continuous learning process involving all stakeholders (Senge, P., 1990). As highlighted in earlier sections, isolated efforts and interventions are un-systemic. Systemic change emerges from the coordinated operation of various parts, each understanding its specific role, acknowledging its strengths, recognizing its responsibilities, and comprehending how deeply its function and contribution is intertwined with, affected by, and influenced by others in the collective journey toward systemic transformation.

In this final section of Phase 1, the entrepreneur begins the ongoing process of interacting, aligning, and collaborating with other key players previously identified. Up to this point, the entrepreneur has primarily focused on mapping these players to understand the system's dynamics, evaluating how these players interact within the system, influence one another, are shaped by the system, and how their roles impact overall outcomes.

The system change theory developed by the entrepreneur in section 4 takes into account the dynamics and interconnections between these stakeholders. It acknowledges that while the entrepreneur assumes a specific role, the alignment of other key players is essential for jointly advancing a shared vision. However, turning this framework into reality requires the

entrepreneur to initiate and maintain continuous dialogues and interactions to establish a common agenda.

This common agenda involves creating a collective vision for the desired systemic shift and fostering a mutual understanding of the system's underlying principles and structures. It requires an open dialogue about the system's elements, its root causes, previous interventions, leverage points, and a shared mapping of the main players in the system, outlining their potential roles, interests, and risks. Moreover, it entails collaboratively defining roles and responsibilities based on each player's capabilities, resources, strengths, and motivations, and implementing accountability mechanisms to track progress, ensure alignment of impact, and address any deviations or failures from any stakeholders along the way.

For effective collaboration, all parties must share and discuss their theories of change, explaining how they were developed, the key assumptions they are based on, and the evidence supporting them. Establishing a basic agreement on each other's theory of change is critical for aligning efforts and setting realistic expectations. These theories of change will continue evolving and changing over time, as well as specific interventions and efforts from each stakeholder working together. However, the most crucial aspect of these initial interactions is to establish a common vision for the desired change and agree on the best methods for intervention.

To determine the most effective methods of intervention, it is essential for all stakeholders to collaboratively analyze the high-leverage points within the system. This dialogue, enriched by diverse perspectives, enhances the collective understanding of the system. Each stakeholder brings a unique viewpoint in analyzing symptoms, mental models, and root causes through their distinct lenses. Integrating these perspectives fosters deeper discussions on strategic interventions and how to optimally utilize each stakeholder's capabilities, resources, and strengths for maximal impact.

Establishing a common agenda involves reaching consensus on various agreements, which presupposes that all stakeholders are open to collaboration and dialogue, understand the importance of joint efforts, and are committed to taking action toward systemic transformation. However, achieving this level of collaboration is not always straightforward. The initial challenge in this phase involves successfully engaging with other players, capturing their attention, and persuading them to participate in crafting a common agenda.

Engaging stakeholders and fostering consensus can be particularly challenging when addressing complex social and environmental issues.

Furthermore, open discussions and collaborations are contingent upon the development of trust among participants. Therefore, building trust, maintaining transparency, and promoting open dialogue are crucial challenges that must be addressed to even consider the possibility of establishing a shared vision and common intervention strategies. To facilitate open discussions, engagement, and common understandings, it is essential to strategically appeal to both emotion and logic.

Appealing To Emotion Through Storytelling

Entrepreneurs can utilize storytelling techniques to effectively communicate the motivations behind addressing a significant challenge and the urgency of a collaborative approach. The narrative should be compelling and articulate, explaining why this approach to the system is sensible and how it differs from past efforts. It should also convey the critical nature of the opportunity that lies ahead for all involved. Additionally, the storytelling should clarify the specific reasons each stakeholder has been approached, highlighting their indispensable roles in the desired transformation and how the systemic shift will benefit from their unique capabilities and characteristics.

Appealing To Logic Through Fact-based Analysis

On the logical front, conducting fact-based cost-benefit analyses is crucial. Creating a matrix that outlines and compares the scenarios of change versus maintaining the status quo, including the costs and benefits of each, helps stakeholders better understand the risks involved. This matrix should detail the implications of change and inaction, not only in terms of financial costs but also regarding opportunities, social inequalities, environmental impacts, and more. While some of these factors might be quantifiable, others might not be as easily measurable and could have varying effects on different groups or organizations, particularly impacting minorities or the most vulnerable populations.

In order to align stakeholders most powerfully around their avowed purpose, it is important to help them make an informed choice to commit to this purpose in full light of what might take to get there. Making this choice is pivotal to aligning people's energies in service of meaningful change (Stroh, 2015).

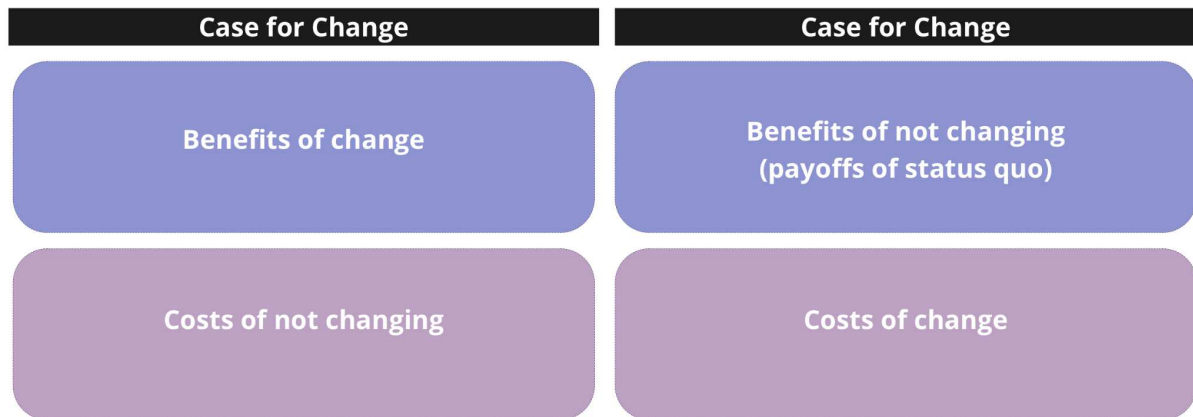


Figure 9: Comparisons and The Case For Change.

Note: Stroh (2015)

Together, these evaluations and comparisons provide stakeholders with a comprehensive view of what intervention and collaboration entail, equipping them with the necessary information to make informed decisions. This dual approach of engaging both the heart and the mind ensures a well-rounded understanding and fosters a more robust commitment to the shared goals.

Overall, the entrepreneur could create and sustain alignment and engagement among different parts by: i. Making them understand that there are payoffs to the existing system (a case for the status quo), ii. Compare the case for the status quo with the case for change, iii. Propose solutions that serve both their long term and short term interests - or propose a tradeoff with the recognition that meaningful change often requires letting something go, iv. Make an explicit choice in favor of their higher purpose by weakening the case for the status quo and strengthening the case for change (Stroh, 2015).

Phase 2 to 3 (Section 6 to 15): The 24 steps for a Disciplined Entrepreneurship

In the previous sections, the system change entrepreneurial process more focused on understanding the system and possible ways of intervening was covered. For these sections, it was clear that there was a predominant system thinking approach that was necessary for the entrepreneur to develop a deeper understanding of the systemic issue, create a theory of change, understand the most effective intervention points and start engaging with potential partners to share and work towards a common vision.

The next phases of the framework and IDE predominant and require a stronger focus on various business and entrepreneurial tools to enable the entrepreneur to understand the

customers needs, develop a value proposition, formulate a market-oriented solution, structure the unit economics of the solution and build a business model around it. All these elements are key for the journey of the system change entrepreneur. As explained previously, the system change entrepreneur will face a broken-market and will take an entrepreneurial role as part of the contribution towards the collective efforts to transform the current system. As part of the role, this entrepreneur must build solutions with the potential to commercialize, gain market traction, scale and generate impact. To do this, the entrepreneur must pay attention to the market opportunity, its size, what the market is missing, narrow-down the potential market, understand the needs of the potential customers, how they behave, how they acquire products as well as understanding the unit economics, long term value, use cases, pricing, among others.

Combining the more system change oriented process in the previous sections with the more robust and practical business and entrepreneurial tools is key for the success of the system change entrepreneur. A purpose-driven entrepreneur without the proper understanding of the system and how to intervene in it for a systemic transformation will lack the vision and the knowledge to achieve any sort of systemic change. On the other hand, a purpose-driven entrepreneur with a systemic understanding of the social issues at hand that lack the business acumen and entrepreneurial skills to design, implement, deploy and scale a market-oriented solution will not be able to grow and sustain its business and generate impact at a massive scale. These business and entrepreneurial tools that the entrepreneur must be aware of can be found in the 24 steps of the Disciplined Entrepreneurship Framework.

While system change entrepreneurs can adhere to the steps of the Disciplined Entrepreneurship Framework and apply the tools and theories outlined within, it is crucial for them to focus closely on specific sections and steps that necessitate a systemic perspective. This focus is particularly important due to the unique challenges and limitations that entrepreneurs encounter when addressing systemic problems and developing entrepreneurial solutions within broken markets of unstable and emerging ecosystems.

Phase 3 (Section 16): Impact & Alignment

Because system change entrepreneurs do not operate in isolation or pursue isolated agendas to achieve the desired systemic change, it is crucial for these entrepreneurs, along with their partners, to establish mechanisms that enable them to: (i) measure success both

at a collective level and at an organizational level; (ii) ensure continued alignment in their collective approach and strategy toward their common vision; (iii) quickly adapt and make changes if results or outcomes negatively impact their collective vision or organizational responsibilities and strategies; (iv) ensure each organization measures the impact they are generating accurately so others can understand and build upon these implications and outcomes; (v) understand how successful or unsuccessful strategies from one organization affect the overall plan and the efforts of other organizations.

Establishing mechanisms to guarantee alignment throughout the process is key to creating a transparent, effective, and adaptable path forward. Setting up systems to measure impact ensures every partner is aligned and comprehends the implications of intervention efforts and strategies at both collective and organizational levels. Once these mechanisms are in place, the social change entrepreneur must ensure they are evaluated and addressed. This allows for quick adjustments to strategies (such as models, markets, value propositions, and scaling plans) to continue growing as an entrepreneurial endeavor while advancing the necessary impact for the desired systemic shift in collaboration with other players and partners.

ii. Circular Thinking Framework: A System Thinking Process for System Change Entrepreneurs

The circular nature of the process is a response to the dynamic and ever-changing nature of systems and the necessity to revisit the assumptions, elements, feedback loops and overall understanding of the system over time. This framework is meant to assist system change entrepreneurs in maintaining a consistent systemic thinking approach throughout their endeavors. The framework is circular, facilitating continuous reflection and analysis through a systemic lens. This methodical approach guarantees that entrepreneurs consistently integrate systemic thinking into their strategic planning and decision-making processes.

This system thinking process is aligned to Phase 1 of the Disciplined Framework for System Change Entrepreneurs. Phase 1 primarily focuses on the foundational tools and elements necessary when first analyzing a system and beginning to develop a market-oriented intervention. In contrast, this framework introduces a circular process that the entrepreneur will continuously engage with while exploring the systemic thinking aspects of their entrepreneurial journey.

This circular process complements and builds upon the tools and elements outlined in Phase 1. It provides a structured method for entrepreneurs to apply these insights systematically. By following this logical sequence, entrepreneurs can ensure they are addressing all crucial aspects necessary for comprehensively understanding the system and initiating targeted actions through a systemic lens. This approach helps maintain a consistent focus on systemic thinking throughout the development and implementation phases of their venture.

The framework consists of fourteen parts, outlining the key steps an entrepreneur will follow, starting from the initial observation of the system to understand its dynamics, through to the execution of actions and subsequent revisiting of the system to refine initial observations and deepen understanding of its elements, connections, and purpose. Each part of the process builds sequentially upon the previous one, forming a cycle that will be iteratively revisited over time (see Appendix 4 for details).

Observing and Understanding the System

Observing the system involves examining its components to comprehend its overall behavior, patterns, outcomes, and unintended consequences. This evaluation requires an understanding of how different stakeholders interact within the system, the system's historical evolution, common perceptions surrounding it, and the impact of past interventions on its outcomes.

Dissecting Elements and Their Connections

Deconstructing the system is essential to clearly identify its elements, moving parts, feedback loops, system barriers, and potential subsystems. This process allows for a deeper understanding of how each component functions independently and how its interactions with other elements lead to various outcomes.

Identifying the System's Purpose

With a thorough understanding of the system's history, behaviors, feedback loops, players, and subsystems, it becomes easier to discern the system's purpose. The purpose, whether intended or unintended, can either enhance or hinder desired outcomes or systemic changes. Articulating the system's purpose is vital for clarifying the underlying rationale and desired outcomes, anticipating the impact of past and future interventions, and developing a shared vision and common agenda among organizations aiming for systemic change. Without a shared understanding of the system's purpose, organizations risk reactive measures that stray from the most effective paths toward the desired systemic shift.

Understanding the purpose also helps address constraints that either limit or enable the system's performance.

Determining the System's Root Causes

Identifying a system's root causes is a fundamental component of systems thinking. It involves pinpointing the deep-seated factors that drive the system's behaviors and designing sustainable solutions. Observable events or problems are typically manifestations of deeper behavioral patterns, systemic structures, and mental models. These root causes are often interconnected within the system. To effectively address complex issues and develop comprehensive solutions, it is crucial to look beyond surface-level symptoms, which may only lead to temporary fixes or unintended consequences if the deeper causes are not addressed. The most impactful way to transform a system is through interventions at high-leverage points that target these root causes or shift the underlying mindsets and paradigms driving the system's behavior.

Identifying high-leverage points

Identifying and subsequently acting on high-leverage points in a system necessitates a thorough understanding of the system's components, dynamics, feedback loops, and the interrelationships between various elements. These high-leverage points are strategic spots within a system where even a small shift can result in significant and widespread changes. This knowledge not only serves as a strategic guide for better allocating resources and efforts but also helps in designing interventions that are more likely to achieve desired outcomes and less likely to cause unintended consequences.

Furthermore, high-leverage points help to simplify the inherent complexity of systems, aiding decision-makers, organizations, and entrepreneurs in effectively navigating these challenges. By pinpointing these critical points, stakeholders can more efficiently plan and prioritize their actions. This strategic approach directs energies towards areas with the maximum potential impact, significantly influencing policy decisions and strategic initiatives. This process ensures that interventions are both effective and efficient, maximizing the return on investment in terms of both resources and effort.

Identifying key players

Mapping out key players is essential for understanding the various ways in which a system's behavior is influenced, as well as how the system impacts the behaviors of those within it.

This understanding is crucial for grasping how these interactions affect the system's feedback loops and overall dynamics. Additionally, identifying key players as well as recognizing their needs, interests, strengths, and limitations of each participant is vital for establishing and preparing the groundwork for partnerships that will collaboratively develop a common vision later in the process. By understanding stakeholders' motivations and needs, decision-makers and entrepreneurs can later design interventions that align with their interests, increasing the likelihood of stakeholder buy-in and support for system-wide changes. On the other hand, identifying and considering stakeholders' behaviors, challenges and motivations, systems thinkers can anticipate resistance to change or unintended consequences.

Developing a theory of change

This is one of the most important aspects of the process as it enables decision makers and entrepreneurs to conceptualize their vision for the systemic shift and take into account all the knowledge they've gathered about the system they are trying to tackle. The theory of change is designed to map out the logical sequence of events, interventions, outcomes and pathways necessary to achieve a desired transformation or vision. It emphasizes the importance of clearly articulating the underlying assumptions about how and why change is expected to occur within a system.

A well-developed theory of change can help identify high-leverage points, guide a set of actions and interventions accordingly, and articulate the solution and type of contribution the decision-maker or entrepreneur will have in the desired shift. This theory of change will serve as a main tool to communicate, engage and collaborate with other players as it will set the foundation for setting a common agenda, shared measurement systems, and mutually reinforcing activities among stakeholders.

As it will be mentioned in the following steps of the process, this theory of change is not set in stone and needs to be flexible. As decision-makers and entrepreneurs start to engage with other players, as they set partnerships and as they spend more time on the field to understand the nuances of the system they are tackling, the theory of change will evolve. External events and factors as well as internal ones will also affect the system over time and the approach, solutions and interventions from the entrepreneur and system changers will be adjusted and modified.

Engaging with key players and building collaborative capacity

Creating change through a systemic lens is an ongoing, collaborative effort. Leaders must leverage the strengths, resources, and capabilities of various stakeholders who play integral

roles within the system. The actions and behaviors of these stakeholders directly influence the system's outcomes. Each player also brings their own motivations, needs, and challenges, which can either hinder or facilitate the transformation of the system.

A successful systemic shift requires active engagement and the formation of partnerships with key players. It is essential to understand how these stakeholders operate within the system, identify their struggles, and recognize their ultimate goals. This understanding is crucial for building effective partnerships and establishing a shared agenda for collaboration.

To persuade other stakeholders to join this change pathway, it is necessary to promote a systemic approach within their actions and teams. Implementing mechanisms for accountability and collaboration can help ensure that all contributions are coordinated and that efforts collectively drive the desired change. System changers must consider these components carefully when initiating engagement and onboarding processes with potential partners.

Exploring the field

Once system changers have developed and shared their vision and begun forming partnerships to advance a collaborative path, it is crucial for them to spend time in the field. This enables them to continuously grasp the dynamics, behaviors, and limitations of the system. Engaging with stakeholders and learning from these interactions are essential for validating and incorporating new information.

The behaviors and dynamics of systems, both tangible and intangible, manifest in various ways. System changers should adopt a continuous approach of observing, validating, and conducting field research. This ongoing process is vital for learning, confirming, and refining their understanding of the system. It also helps them to better comprehend the behaviors, influences, and impacts that key players exert on each other and on the system as a whole.

Adjusting the theory of change

Engaging with stakeholders, developing partnerships, and field exploration are crucial activities that provide system change entrepreneurs with new insights. These insights help refine and evolve their theory of change, making it more accurate and realistic. It is essential for entrepreneurs to continually revisit and update their theory of change. While this theory

should be flexible enough to accommodate adjustments, it must also remain robust, consistently reflecting the overarching sentiment, vision, and intended transformational outcomes over time.

Prioritizing high-leverage points and creating a common agenda

Creating a common agenda is essential for developing and refining a robust theory of change. It ensures that all stakeholders share an understanding of the desired outcomes and the strategies to achieve them. A common agenda helps to minimize duplication of efforts, conflicting initiatives, and wasted resources. It also mitigates resistance to change, which can arise from various feedback loops, inertia, and entrenched mindsets.

Prioritizing high-leverage points involves careful trade-offs. Once these points are identified and a shared vision is established, it is crucial to assess the implications, benefits, viability, risks, and potential effects on different stakeholders and parts of the system. This evaluation helps to foster a common understanding of the necessary actions at different times, the resources required, and the anticipated outcomes. This understanding forms the foundation for a more detailed strategy and defines specific roles moving forward.

The process of identifying high-leverage points and creating a common agenda should engage stakeholders through dialogue and co-creation. This approach enhances collaboration, builds shared understanding and accountability, and fosters a sense of ownership among all participants, thereby increasing their commitment to the initiative.

Setting a path forward

Once priorities have been established and the necessary trade-offs have been thoroughly discussed and considered, it is time to develop an action plan. The common agenda should clearly articulate the shared vision, as well as define the roles, interventions, responsibilities, and overall strategies required to put this vision into action, both at individual stakeholder levels and collectively.

Creating a path forward involves outlining the strategies and actions for the short, medium, and long term. It includes setting the milestones and goals each organization aims to achieve, and understanding how these actions and milestones interact with, depend on, or are necessary for the subsequent actions of other players within the system.

Questions of capacity, scope, priority, timing, time delay, unintended consequences must be part of the conversation when setting a path forward. This approach ensures a coordinated effort towards the common objectives.

Executing actions

Once a path forward has been established, system changers, partners, and organizations should proceed with implementing their respective actions. Each stakeholder will have a defined set of actions, priorities, and strategies that align with and complement the collective actions agreed upon. During the implementation phase, challenges and unintended consequences are likely to arise. It is important for system changers and partners to anticipate and be prepared to address these challenges as they occur. Effective communication among collaborators is essential to understand the nature of the challenges faced by each party, any new factors that have emerged, and the strategies being considered to overcome these obstacles.

Measuring, evaluating and discussing results with stakeholders

Defining measurable indicators and benchmarks to monitor progress and evaluate the effectiveness of interventions is as important as deciding on those. Evaluating and measuring the system's performance against the stakeholder's action must be a continuous effort to acknowledge the effectiveness of actions and interventions at a stakeholder and collective level.

Effective communication channels and methods are needed for openly and appropriately discussing the results among stakeholders and then refining the theory of change, surfacing new assumptions, and adapting the interventions as needed.

Revisiting the system based on lessons learnt and results

The continual process of revisiting the system significantly enhances the effectiveness, responsiveness, and accountability of system changers in their efforts to drive change. This iterative practice aids in understanding system dynamics, refining strategies, and improving interventions.

Throughout this process, every observation, stakeholder interaction, and intervention generates valuable data and insights. These insights and data serve as tools for increasing the adaptability and resilience of system changers and the stakeholders they're collaborating with in response to the system's shocks and stresses. Additionally, regularly reviewing the system allows leaders to identify and comprehend the positive and negative

feedback loops initiated by their actions, providing the opportunity to either leverage these effects to their advantage or mitigate any adverse consequences.

VII. Fostering a System Change Entrepreneurial Ecosystem and Enhancing Growth for Future Legatum System Changers

The complex, long-term nature of systems change brings considerable uncertainty – but it is well worth it. Historical examples for successful systems change range from the abolition of

slavery in the United States to campaigns for women's right to vote across the world. Precisely because they tackle the root causes of entrenched problems, systems change efforts have an impact potential that goes beyond what can be achieved through direct service (Ashoka et al., 2020).

According to several reports by Ashoka, the Schwab Foundation and the Skoll Foundation, as well as insights derived from interviews conducted with entrepreneurs and academics in residence from the Martin Trust Center at MIT and the Legatum Center there's an urgent need for tailored funding approaches to support system change entrepreneurs in growth markets and to foster a more tailored ecosystem that supports their needs. These entrepreneurs need a robust and innovative funding ecosystem that aligns with the unique challenges and opportunities to tackle broken markets in growth economies. On the other hand, many aspiring purpose-driven entrepreneurs haven't adopted a systemic approach yet because their current and most proximate ecosystems are not well set up to support systems change. So they find themselves not only fighting for change in the social challenges they target but also struggling to bring along the organizations and institutions they are dependent on to support their work (Community Fund et al., 2019).

The landscape of funding is gradually evolving, with an increasing number of funders adopting a systemic approach, while many others are considering its merits. Billions of dollars are allocated annually to address some of humanity's most critical issues. In 2017, 22 of the world's largest philanthropic foundations contributed over USD 6.1 billion to development initiatives, while members of the OECD-Development Assistance Committee (DAC) provided a combined total of USD 434 billion in development assistance (Ashoka et al., 2020). Despite these substantial investments, effectively solving these complex problems requires a shift from traditional activity-based funding to approaches that target the root causes and seek to transform systems fundamentally.

To maximize the impact of these available funds, it's crucial to promote the systems change approach among organizations in the sector and disseminate best practices. Systemic initiatives often do not require massive financial inputs. Instead, they thrive on smaller, agile teams that can adapt and learn quickly. Many strategies essential for systemic change, such as open-sourcing methodologies, creating secretariats for collective action coordination, or collaborating with activists, demand a more strategic allocation of funds rather than extensive financial resources. The real challenge lies not in acquiring new funding but in redirecting existing funds more effectively. By reevaluating and addressing the shortcomings

of current funding models, resources can be redirected in ways that significantly enhance systemic impact (Community Fund et al., 2019).

Systemic challenges necessitate systemic solutions, yet prevailing funding practices are predominantly designed to support projects that deliver short-term, quantifiable outcomes rather than those that foster collaborative and adaptive approaches necessary for enduring change. System change leaders frequently face difficulties because traditional funding mechanisms do not align with the needs of long-term, transformative projects (Ashoka et al., 2020).

The following are some key challenges, opportunities and strategic recommendations to foster such ecosystems and provide more innovative and effective funding opportunities for future Legatum Center system change entrepreneurs. Based on these, an ecosystem and funding framework is proposed and explained below. As Ashoka and the Skoll Foundation state (2020): funding and fostering system change ecosystems for entrepreneurs should focus more on the 'how' and not just the 'how much'.

Some of the Key Needs and Opportunities

Need for understanding systemic issues through a systemic lens

Growth markets are marked by complex social and environmental challenges that demand systemic interventions beyond mere surface-level solutions. Entrepreneurs in these markets frequently face high levels of uncertainty, limited resources, and nascent entrepreneurial ecosystems. Aspiring system change entrepreneurs must invest significant time and effort into grasping the complexities and nuances of the systems they aim to impact. It's crucial for them to understand and continuously improve the capabilities and tools necessary to approach these complex systems through a systemic lens.

Hence, support is essential for these entrepreneurs to develop these capabilities, learn how to leverage them effectively during pivotal stages of the entrepreneurial process, and to promote a systems thinking approach within their teams. Additionally, when interacting with other stakeholders, these aspiring system change entrepreneurs must serve as ambassadors of systems thinking to enhance collaboration opportunities and lay a stronger foundation for developing a shared agenda.

Need For Holistic Support

Aspiring system change entrepreneurs need comprehensive support that extends beyond financial backing. They require access to networks, mentorship, capability development, and strategic guidance to effectively navigate the complexities of their markets and adopt a

systems thinking approach. Holistic support is crucial for these entrepreneurs, encompassing tailored technical and business guidance, robust networking opportunities to facilitate collaboration, capital to test and advance their entrepreneurial journey, and customized learning opportunities. These resources are essential to equip them with the skills needed to become system change leaders and to drive transformation within their specific markets and systems.

Moreover, holistic support involves continuous interaction and learning within a community of both aspiring and established system change entrepreneurs. Navigating entrepreneurship through a systemic lens is a complex, time-consuming task that targets ambitious goals on both individual and collective levels. A community of like-minded entrepreneurs provides not only technical and entrepreneurial guidance but also the emotional support needed to persevere and succeed in such challenging endeavors. This network is invaluable for sharing experiences, learning from others' journeys, and reinforcing the commitment to systemic change.

Need For Patient Funding Opportunities

The long-term, uncertain, and complex nature of systems change does not easily align with traditional funding practices, which were established decades ago during the early stages of social entrepreneurship. These conventional practices typically focus on financing well-defined projects that are expected to deliver visible results within a short timeframe. Consequently, such funding practices impose requirements and timelines that are ill-suited for systems change efforts. This misalignment often leaves systems change leaders lacking crucial non-financial support and discourages the experimentation and innovation necessary due to funders' low risk tolerance.

Current funding practices often lack the necessary time and flexibility that systems change leaders require to effectively tackle the root causes of complex social issues. This is particularly ironic given that the philanthropic sector is ideally positioned to absorb risks, yet it remains notably risk-averse. There exists a substantial, untapped potential within the funding community to better support systems change initiatives, which are characterized by greater uncertainty and require longer timeframes to achieve meaningful outcomes. Enhancing support for systems change should not be the sole responsibility for large foundations but for all types of funders. By adopting more flexible and risk-tolerant funding approaches, these entities can play a crucial role in fostering significant social transformations (Ashoka et al., 2020).

To better support and equip system change entrepreneurs, enabling them to thrive within a more conducive system change ecosystem, two models are proposed. The first model focuses on enhancing growth opportunities through improved and more tailored funding mechanisms. The second model aims to cultivate a more suitable environment for future system change entrepreneurs at the Legatum Center. These approaches are designed to address the three main needs and opportunities identified for system change entrepreneurs, ensuring they receive the necessary support to succeed.

i. A Model to Enhance Growth and Opportunities for System Change Entrepreneurs Through Funding

This model outlines strategic and targeted funding mechanisms designed to enhance opportunities for aspiring system change entrepreneurs (see Appendix 5 for details). These mechanisms aim to help them learn, experiment, share, and develop strategic skills and capabilities, thereby equipping them to undertake the challenging and ambitious journey of driving systemic change through entrepreneurship.

The proposed funding mechanisms operate on two levels: the leadership level and the collective level. At the leadership level, the focus is on building the capabilities and skills necessary for system change entrepreneurs and their teams. This includes embracing systemic thinking, building business and entrepreneurial capabilities, gaining a deep understanding of the systems they aim to change, and developing essential skills for fostering collaboration, engagement, and adaptation.

At the collective level, the funding targets support for building a close-knit community of system changers, establishing strong and relevant global and local networks, expanding access to patient and risk-tolerant financial instruments, and creating an environment conducive to learning, sharing, and experimenting.

Funding both levels is crucial, as it ensures that leaders and their teams can develop while simultaneously enhancing the environments and communities they operate within. This approach creates a reinforcing feedback loop: funding at the collective level bolsters opportunities and growth at the leadership level, which in turn enhances and amplifies the outcomes of collective-level funding.

Funding at a Leadership Level:

Funding at a Leadership Level	Investing in:	Notes
	Developing a systematic mindset and system thinking skills	Find leaders and teams with a clear vision, and help them improve their critical thinking skills about the systems they want to change. Invest in their learning about system thinking and how to use system thinking tools to bring about change.
	Developing specialized technical knowledge about the systemic issues they are tackling	Invest in the leaders' deep understanding of the systemic issues they are trying to address. Enable them to gain technical knowledge about those issues, industries and topics through engagement with experts, interviews, academic resources, etc.
	Developing entrepreneurial and business skills	Build the key business and entrepreneurial capabilities and skills that these leaders need in order to design, build, and scale their market-oriented solutions. They need to be prepared to adapt their business models as they encounter challenges along the way. Invest in their understanding of business frameworks and relevant business strategies.
	Developing ethical leadership skills and a strong moral compass	Ethical leadership skills, such as transparency, accountability, empathy and civic responsibility, are essential for ensuring that decision-making processes are aligned with ethical principles and promote the long-term viability of the system. These leaders will face ethical dilemmas and face challenges such as corruption when moving their venture forward. Building and having a strong ethical compass is fundamental for their decision-making process.
	Developing negotiation, public advocacy and public engagement skills	Entrepreneurs should be equipped and encouraged to engage in policy advocacy, negotiations, and public dialogue to influence systemic policies and practices. This not only raises awareness of the issues they are addressing but also helps shape the regulatory and cultural landscape in which they operate.
	Impact measuring and adaptation methodologies	Supporting system change entrepreneurs in developing robust methods for measuring impact and learning from outcomes is vital. This enables continuous improvement and adaptation of strategies to ensure they are effective and responsive to the system's dynamics.

Funding at a Leadership Level:

	Investing in:	Notes
Funding at a Collective Level	Developing tailored financial instruments	Promote, provide and/or enable access to flexible funding models: incorporate grants, equity, and debt in a manner that reflects the diverse needs of system change initiatives. Hybrid models that blend philanthropic and investment capital could provide the necessary flexibility and risk tolerance needed.
	Fostering global and local networks	Leverage Global Insights for Local Impact. Utilize the global reach of networks to bring international best practices and innovations to growth markets. Encourage local entrepreneurs to adapt these insights to address specific local challenges effectively.
	Strengthening collaboration platforms	Invest in building multi-stakeholder platforms to enhance collaborations between academia, industry, civil society, and government and create supportive ecosystems for system change entrepreneurs. This involves facilitating knowledge exchange, policy advocacy, and market access.
	Facilitating and encouraging risk-taking and innovation	Support high-risk, high-impact endeavors by allocating a portion of funds to back high-risk initiatives innovations and/or innovative teams. Encourage by providing the financial support and environment for experimentation and learning from failure, which are crucial for discovering effective solutions to complex problems.
	Building a close-knit and cooperative community of system changers	Fostering communities that connect system change entrepreneurs with peers, mentors, and other stakeholders, and can constantly enhance learning and resource sharing. These networks serve as vital support structures that can amplify individual efforts, foster collective action and provide both technical and emotional support.

ii. A Model to Enhance a System Change Entrepreneurial Environment

This second model is designed to develop and enhance a more conducive environment for future system change entrepreneurs at the Legatum Center (see Appendix 6 for details). Innovation-driven and purpose-driven entrepreneurs each have distinct characteristics and motivations, using an entrepreneurial mindset to achieve vastly different goals. These variations present unique challenges and needs, similar to those faced by system change entrepreneurs. Such entrepreneurs encounter specific challenges due to the complexity of the systems they aim to reform, the inherent uncertainty and vulnerability of their growth markets, and the need for specialized technical and financial support tailored to their unique journey of pursuing long-lasting systemic change.

To better support these entrepreneurs and enhance their chances of success, it is crucial to create an entrepreneurial environment that acts both as a supporter and an amplifier of their transformative visions. The proposed model introduces eight principles aimed at fostering a robust and suitable system change entrepreneurial environment. These principles are designed to directly benefit the entrepreneurs, their teams, and the community they seek to build. Collectively, these principles create an optimal environment that enables system

change entrepreneurs to flourish. Each principle will be detailed in the following sections, illustrating how they collectively contribute to a supportive ecosystem for these change-makers.

Learning Opportunities for Applying Systems Thinking Skills

Aspiring system change entrepreneurs must be equipped with the tools and skills necessary to grasp the importance of systems thinking, nurture these skills, and apply them in an entrepreneurial context. Providing coursework and theoretical knowledge on how systems work, how to approach them, and how to model them is crucial. Continuous education on systems theory and practice will help these entrepreneurs adopt a holistic perspective, using systems thinking to better understand the complex issues they aim to address.

Enabling Collaboration at Various Levels

Once aspiring system change entrepreneurs understand the importance of developing partnerships to create and advance a common agenda, they should also be provided with tools to develop skills in public advocacy and negotiation. A robust network should be established to facilitate partnerships at various levels. Strong connections with ecosystems and major players from different growth regions—ranging from academia to public institutions, think tanks, and other purpose-driven entrepreneurs—will provide these entrepreneurs with a platform to engage with potential stakeholders and put their skills into practice. Navigating ecosystems in growth markets can be an exhausting task, so providing strong networks and connections at various levels will significantly advance their efforts.

Building Networks of Experts

System change entrepreneurs often witness or experience the consequences of systemic issues firsthand. However, they may lack technical expertise regarding these issues. Systemic problems are complex, and entrepreneurs need to develop a deep technical understanding of these issues, both generally and contextually, as they manifest differently in each country. Building a network of experts will enhance their understanding of the system, allowing them to start their entrepreneurial journey with more information and confidence to make informed decisions and adopt the correct approaches.

Fostering Systemic Mindsets Among Teams

System change entrepreneurs must act as ambassadors of systems thinking, cultivating this approach within their working environments. Providing them with tools to propagate systems

thinking to their teams and partners will increase the chances of success, as key individuals and players will also adopt a holistic approach when developing strategies to change the system. An entrepreneur who cannot get their team to embrace, understand, and apply systems thinking will likely struggle to mobilize the venture towards the desired transformation. It is a collaborative effort that requires a shared understanding and use of a systemic lens throughout the journey.

Providing or Facilitating Tailored Financial Funding Opportunities

System change entrepreneurs require patient funding, as it takes time to understand how to play a role in systemic change, form necessary partnerships, gain massive scale, generate returns, and achieve significant impacts. These entrepreneurs often need more investment to implement their strategies, achieve massive scale, and leverage economies of scale. Traditional impact funding focuses on short-term returns or impact, neglecting the long-term vision and strategies needed for systemic transformation. Facilitating or providing financial mechanisms, especially in growth markets, will support these aspiring system changers in their entrepreneurial journey.

Enabling Human-Centered Design Tools

System change entrepreneurs need to understand systemic issues from various perspectives to develop their theory of change and vision for systemic shifts. They must avoid biased perspectives, understand different stakeholders' views, and grasp the market value they could create with a product or service. Using human-centered design tools and capabilities can broaden their perspective, enhance empathy, and adopt an iterative approach to developing valuable solutions that address pain points and create value.

Developing Entrepreneurial Skills and Business Acumen

Focusing solely on developing theories of change, measuring impact, understanding systemic issues, and using human-centered design tools is insufficient. Aspiring system change entrepreneurs must also be strategic in their business and entrepreneurial approaches. They need to understand markets, unit economics, pricing, product-market fit, revenue models, financial strategies, and more. Generating impact is neither the end nor the means; they must ensure they are prepared to build scalable models that leverage market opportunities for systemic change. Without solid business strategy and entrepreneurial capabilities, it is unlikely they will achieve market traction and scalability.

Negotiating, Storytelling, and Partnerships

Aspiring system change entrepreneurs must create partnerships, constantly engage with various players, and develop strategic plans to work together towards a common goal. To achieve this, they need to develop negotiation and storytelling techniques. Effective communication, engagement, and persuasion are essential to generating a common understanding and motivation towards systemic change. Entrepreneurs must learn to communicate effectively with diverse stakeholders, each with different ways of thinking, operating, and unique motivations, needs, limitations, and challenges. Confidence in these processes will be foundational for their success.

VIII. Suggestions for Legatum

Identify and Support System Change Entrepreneurs

It is crucial to carefully identify, engage, and support students who exhibit system thinking

characteristics and are genuinely committed to becoming system change entrepreneurs. These students must have a strong desire to address systemic issues and be willing to adopt a systemic lens and entrepreneurial mindset. Their focus should be on contributing to systemic shifts through market-oriented solutions, rather than attempting to solve problems independently or through isolated efforts.

Leverage and Integrate MIT Resources

MIT has a wealth of resources related to system thinking, system dynamics, entrepreneurship, and business strategy dispersed across various programs and centers, including Sloan, the Martin Trust Center, PKG, Legatum, and DesignX. Legatum should identify and leverage these resources, utilizing the expertise of professors and program teams to create more customized courses, workshops, and experiences. These should be designed to intersect business strategy, innovation, entrepreneurship, and system change.

Develop Customized Frameworks

Once these resources are leveraged and integrated, Legatum can create and promote unique, customized frameworks at MIT. These frameworks will serve as essential tools for aspiring social change entrepreneurs at various stages of their entrepreneurial journey. They will help entrepreneurs understand systems and how to utilize them in venture development, as well as comprehend the implications of scaling and generating impact through a systemic approach.

Build Essential Soft Skills

It is essential to develop key 'soft skills' that system change leaders need throughout their journey, such as empathy, collaboration, negotiation skills, public advocacy, and storytelling. These skills are critical for aspiring system change entrepreneurs to fully embrace the systemic approach to entrepreneurship. Without them, entrepreneurs may struggle to collaborate, create common agendas, and successfully engage and partner with others.

Provide Collective and Individual Funding

To foster a robust system change entrepreneurial ecosystem, it is important to provide both collective and individual funding at different levels. This will enable teams, organizations, networks, and stakeholders to come together with a shared understanding of what scaling and generating impact for systemic change means through the entrepreneurial approach.

Facilitate Access to Patient Financial Investments

Patient financial investments are essential for system change entrepreneurs, who often take

longer to set their strategies for systemic shifts. They need to achieve massive scale to generate real impact, and their unit economics are usually tighter, making short- to mid-term revenue models more challenging. Legatum should ensure that investors and funding mechanisms understand these conditions and opportunities, facilitating the necessary financial support for aspiring system change entrepreneurs.

Provide Hands-On, In-The-Field Experience

Connecting aspiring system change entrepreneurs with mature system change entrepreneurs and allowing them to visit their operations in growth markets is invaluable. Understanding how these entrepreneurs operate in the field, scale their businesses, establish partnerships, and engage with customers and beneficiaries provides motivation and practical knowledge. These experiences create opportunities for networking and learning essential for success.

Cultivate a Community of System Change Entrepreneurs

Gradually build a community of aspiring, student, and alumni system change entrepreneurs at the heart of MIT. By implementing the previous recommendations and continuing with Legatum's current approach, work, and mission, the Center will cultivate a focused community at the intersection of system change and entrepreneurship. This will position Legatum as the go-to organization for this type of entrepreneurship and approach, establishing it as a global leader in these topics.

Appendix 1: High-Leverage Points

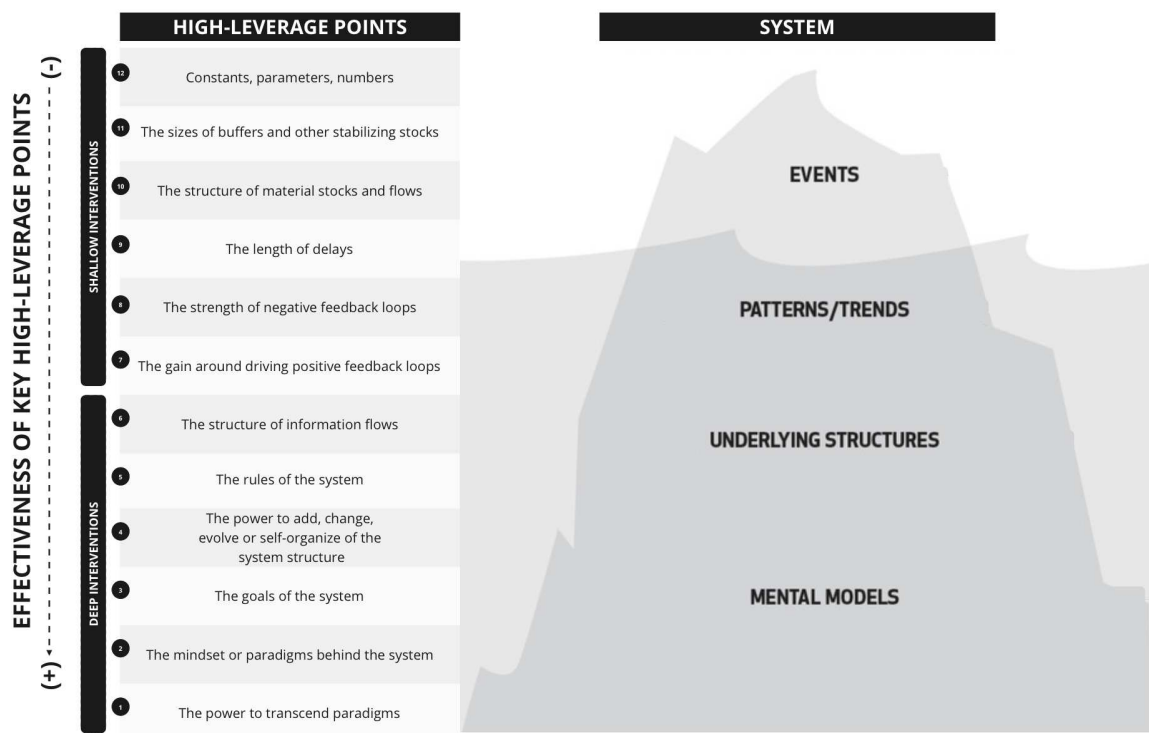


Figure 10: High-Leverage Points and The Most Effective Interventions
Note: Figure developed by Briceno Brignple, R. (2024)

Appendix 2: Disciplined Entrepreneurship Canvas and Framework

Who Is Your Customer?	What Can You Do for Your Customer?	How Does Your Customer Acquire Your Product?	How Do You Make Money off Your Product?	How Do You Design and Build Your Product?	How Do You Scale Your Business?
Step 1 Market Segmentation 2. Select a Beachhead Market 3 Build an End User Profile 4 Calculate the Total Addressable Market Size (TAM) for the Beachhead Market 5 Profile the Persona for the Beachhead Market 9 Identify Your Next 10 Customers	6 Full Life Cycle Use Case 7 High-Level Product Specification 8 Quantify the Value Proposition 10 Define Your Core 11. Chart Your Competitive Position	12. Determine the Customer's Decision-Making Unit (DMU) 13 Map the Process to Acquire a Paying Customer 18. Design a Scalable Revenue Engine	15. Design a Business Model 16. Set Your Pricing Framework 17. Calculate the Lifetime Value (LTV) of an Acquired Customer 19 Calculate the Cost of Customer Acquisition (CoCA)	20. Identify Key Assumptions 21. Test Key Assumptions 22. Define the Minimum Viable Business Product (MVBP) 23. Show That "The Dogs Will Eat the Dog Food"	14. Calculate the Total Addressable Market Size for Follow on Markets 24. Develop a Product Plan

Figure 11: Main Sections of the Disciplined Entrepreneurship Framework.
Note: Figure developed by Autlet, Bill (2024).

1 Raison d'Être <i>Why are you in business?</i> Mission: Passion: Values: Initial Assets: Initial Idea:	4 Competitive Advantage <i>Why you?</i> Moats: Core: Competitive Positioning:	5 Customer Acquisition <i>How does your customer acquire your product?</i> DMU: Process to Acquire Customer: Windows of Opportunity: Possible Triggers:	8 Overall Economics <i>Does your product make money?</i> Estimated R&D Expenses: Estimated G&A Expenses: LTV/COCA Ratio High Enough:	9 Design & Build <i>How do you produce the product?</i> Identify Key Assumptions: Test Key Assumptions: MVBP: Tracking Metrics:
2 Initial Market <i>Who is your customer?</i> Beachhead: End User Profile: TAM: Persona: First 10 Customers:	3 Value Creation <i>What can you do for your customer?</i> Use Case: Product Description: Problem Being Solved: Quantified Value Proposition:	6 Product Unit Economics <i>Can you make money?</i> Business Model: Estimated Pricing: Short Term LTV: Short Term COCA: Medium Term LTV: Medium Term COCA: Long Term LTV: Long Term COCA:	7 Sales <i>How do you sell your product</i> Preferred Sales Channel: Sales Funnel: Short Term Mix: Medium Term Mix: Long Term Mix:	10 Scaling <i>How do you scale your business?</i> Product Plan for Beachhead: Next Market: Product Plan beyond Beachhead: Follow-on TAM:

Figure 12: Canvas for the Disciplined Entrepreneurship Framework.
Note: Figure developed by Autlet, Bill (2024).

Appendix 3: The Journey Towards Change Framework

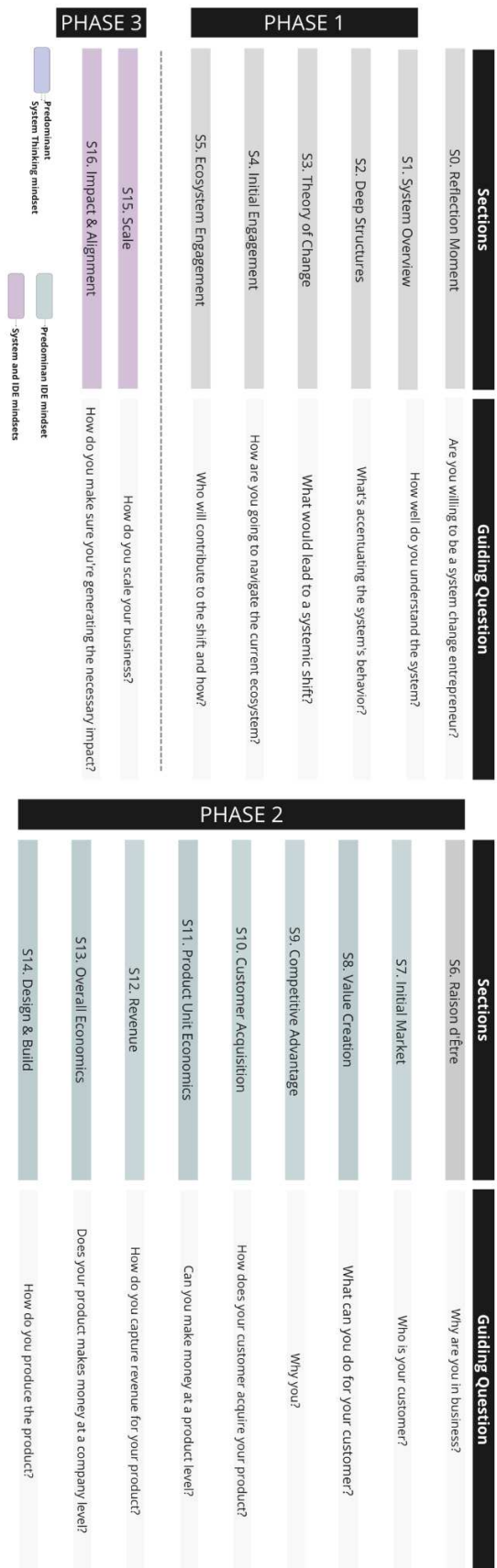
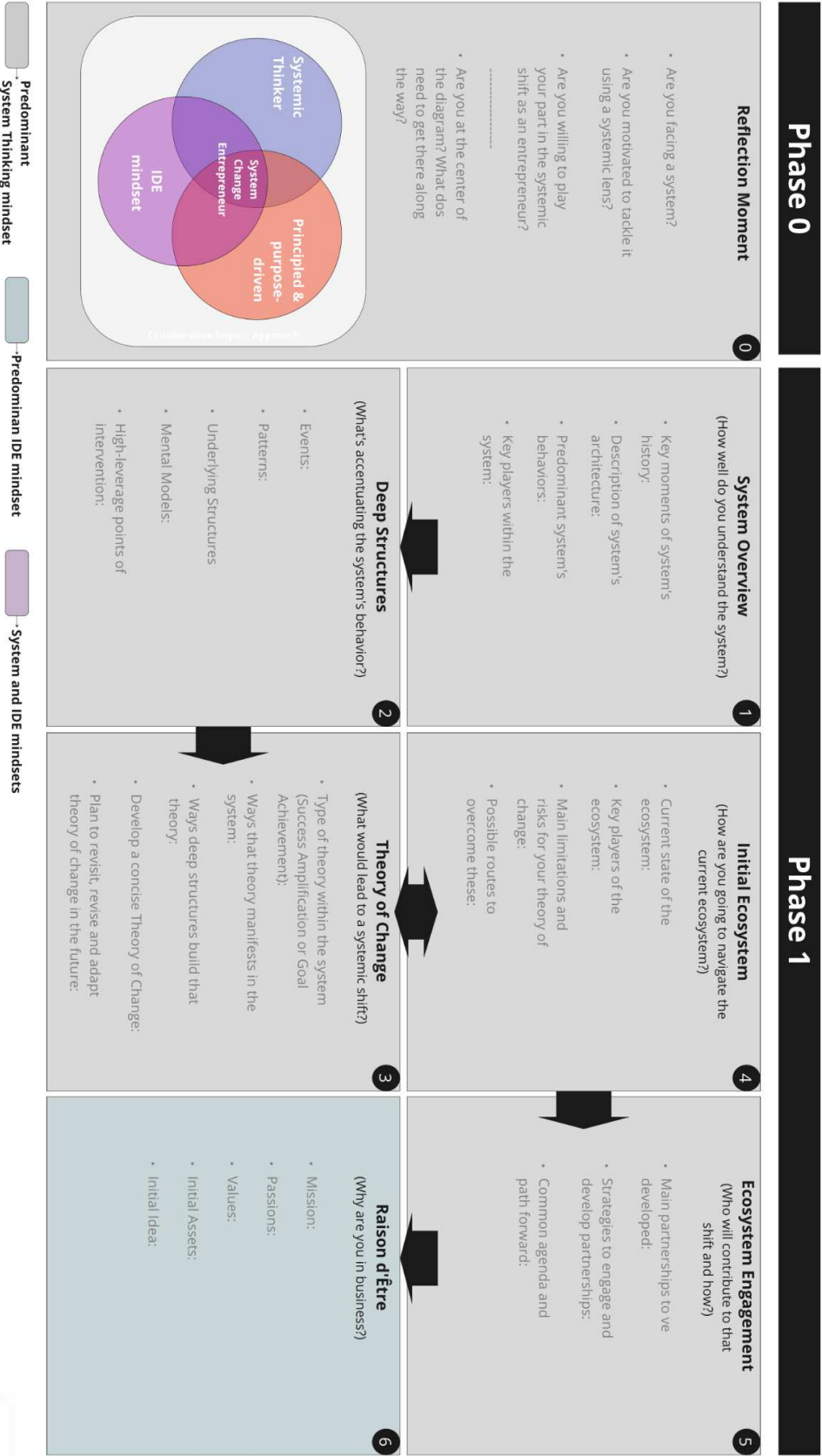


Figure 13: Summary of Phases, Sections and Descriptions of The Journey Towards Change Framework
Note: Figure developed by Briceno Brignole, R. (2024)



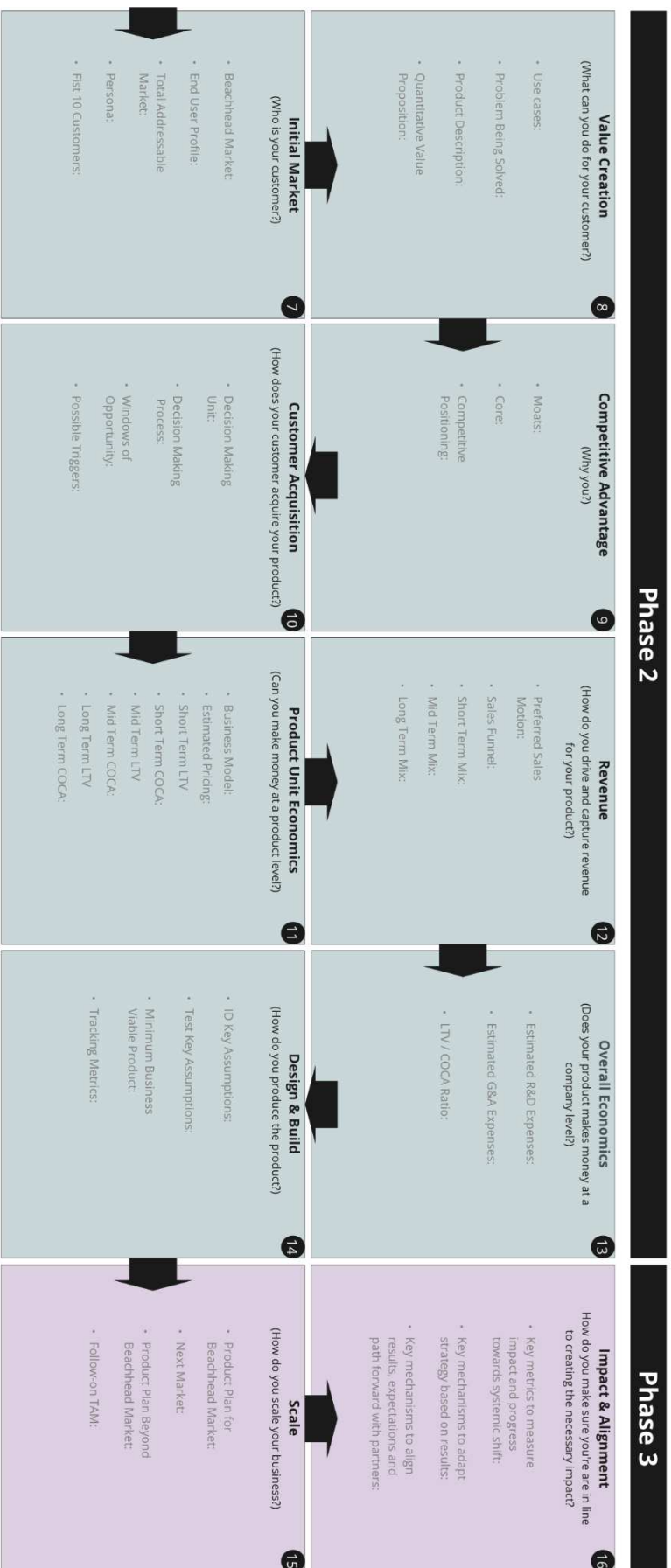


Figure 15: Phase 2 and 3 The Journey Towards Change Framework
Note: Figure developed by Briceno Brignole, R. (2024)

Appendix 4 : Circular Thinking Process for System Change Entrepreneurs

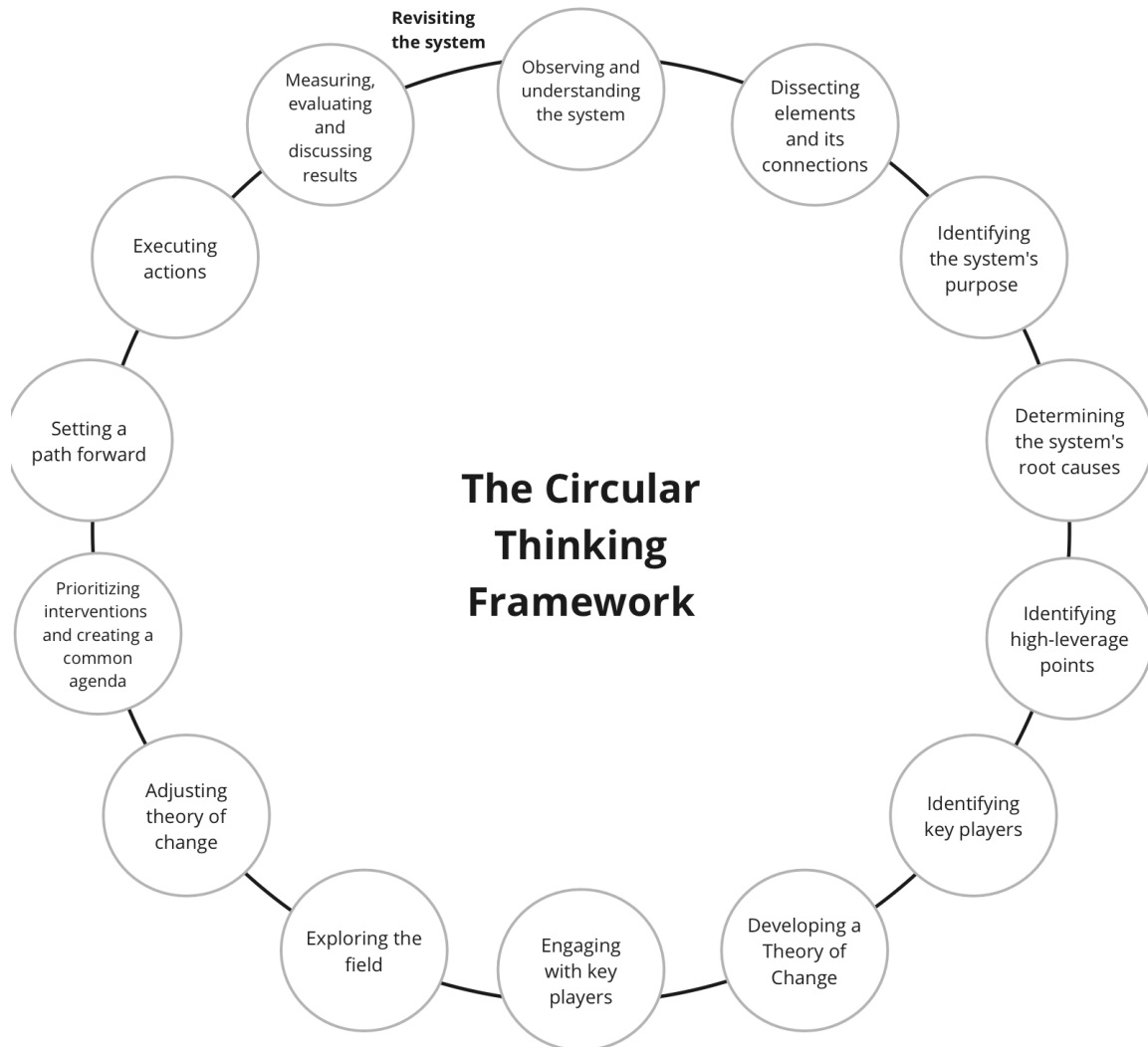


Figure 16: The Circular Model for System Thinking.
Note: Figure developed by Briceno Brignole, R. (2024)

Appendix 5: A Model to Enhance System Change Entrepreneurial Growth Through Funding

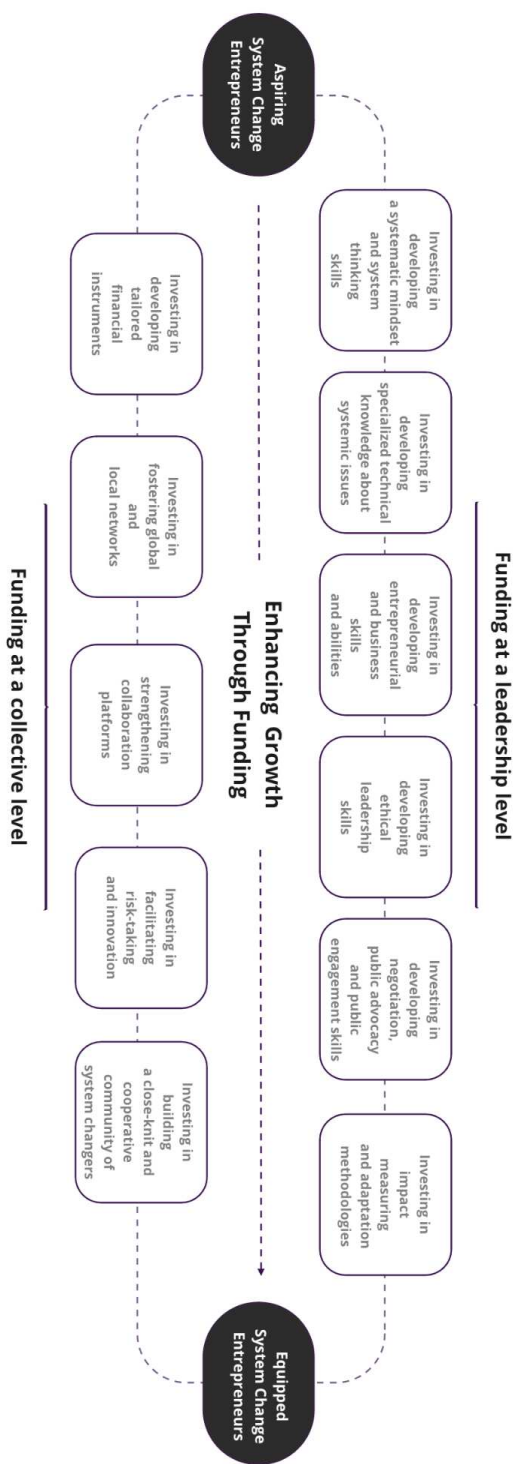


Figure 17: A Model to Enhance Entrepreneurial Growth and Success Through Funding Levels
Note: Figure developed by Briceno Brignole, R. (2024)

Appendix 6: A Model to Enhance an System Change Entrepreneurial Environment

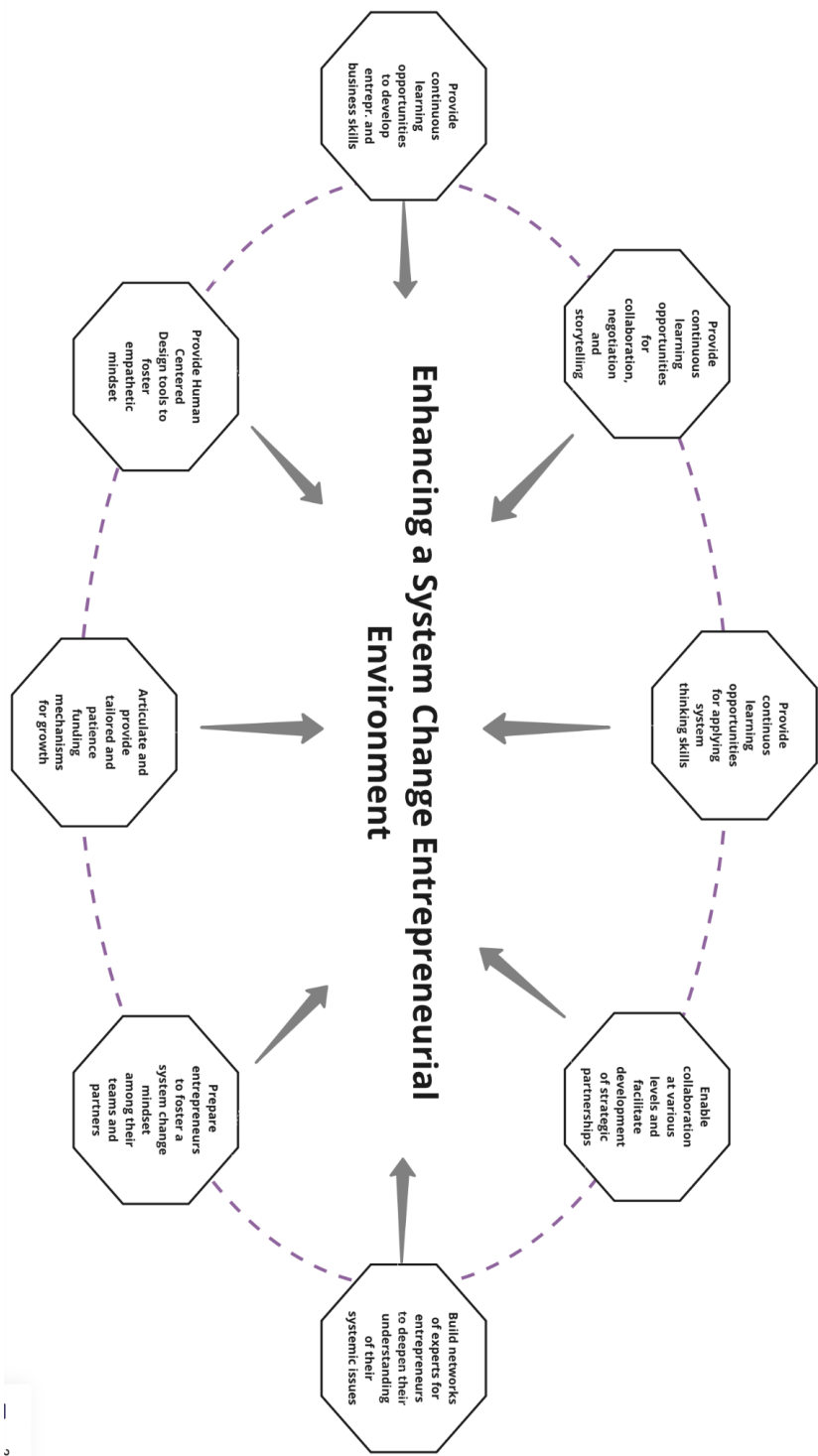


Figure 18: A Model to Enhance a System Thinking Entrepreneurial Environment
Note: Figure developed by Briceno Brignole, R. (2024)

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