Scaling Youth-led Innovations in African Agrifood Systems

Scoping Study

Tokelo Shai

Analysis support: Mpiloentle Zwane

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Unearthing Insights Africa

info@unearthing-insights.org ·

www.unearthing-insights.org

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EXECUTIVE SUMMARY

Why youth-led green innovation matters

10–12 million

market each year

~3 million

formal jobs are created each year

Each year, 10 to 12 million young Africans enter the labour market, but only around 3 million formal jobs are created. Africa's transition to nature-positive, climate-resilient agrifood systems is one of the largest sources of new economic opportunity available to them. Young people are already driving innovation across the sector through regenerative and climate-smart agriculture, sustainable processing, renewable energy solutions, efficient irrigation systems, circular economy enterprises, and digital technologies.

The employment potential of these ventures extends far beyond their founders. As they grow, they can create jobs for young workers, technicians, suppliers, agents, and the farmers they serve. However, evidence from across economies shows that most employment is generated not by the many enterprises that remain small, but by the relatively few that achieve sustained growth. While many youth-led green ventures show strong potential at the pilot stage, only a limited number scale into sustainable, impactful enterprises. Considerable resources have gone into helping young people start businesses, yet far less is understood about what enables youth-led green enterprises to scale, create jobs, and contribute to agrifood systems transformation.

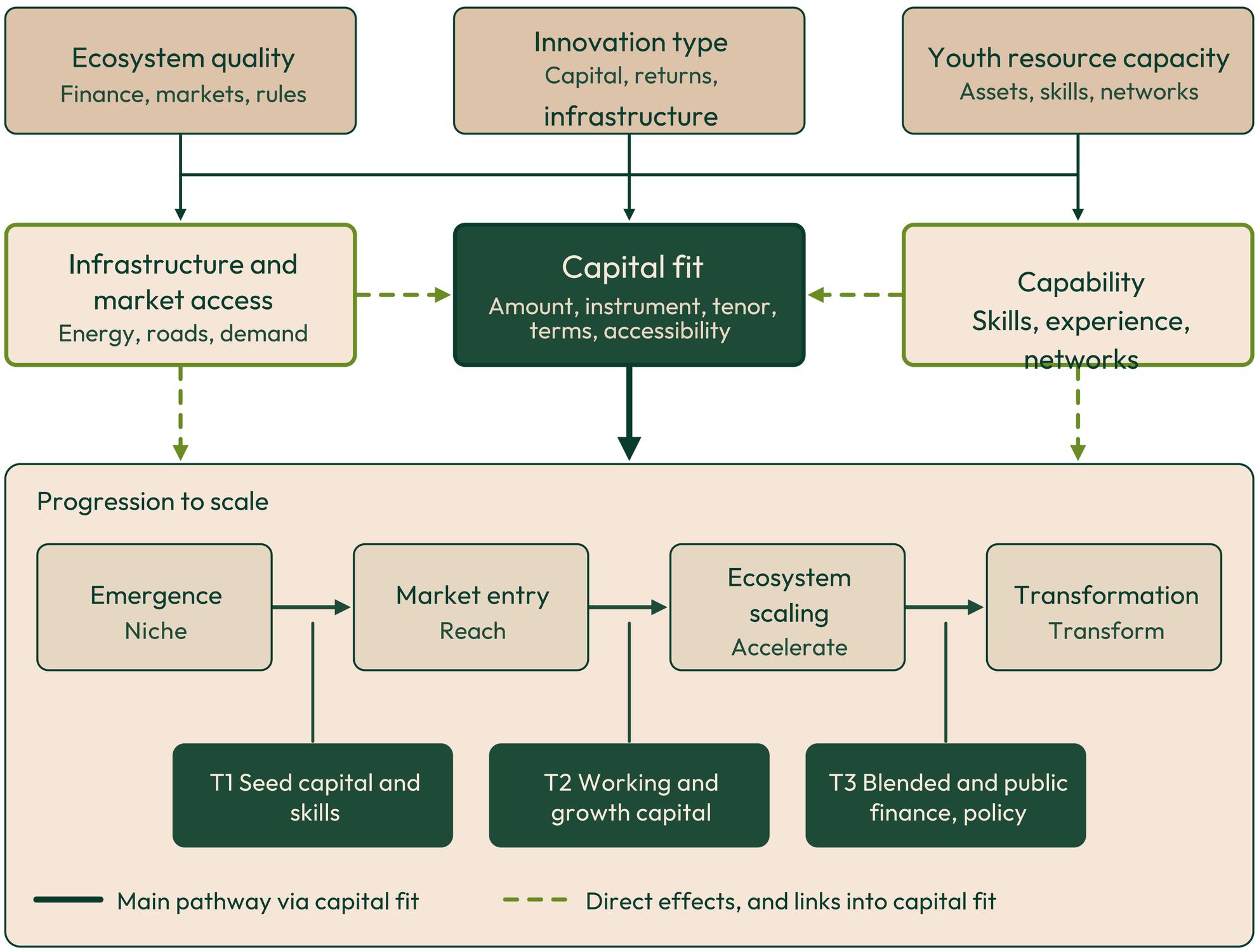
What this paper does

This scoping paper draws on a review of the literature, a survey of 286 youth-led green innovators from 32 African countries, and a validation workshop with young innovators. It proposes an initial framework for how youth-led green innovations scale, identifies emerging patterns in where and why they stall, and sets out an agenda for further work with partners.

EXECUTIVE SUMMARY

Scaling as crossing thresholds

Scaling is understood as crossing successive thresholds: from emergence to market entry, to integration in value chains, and finally to becoming embedded in how agrifood systems work. At each threshold, progress comes to depend on finance, markets, infrastructure, and policy beyond the enterprise's control. Central to crossing them is capital fit: the match between the finance an enterprise needs and the finance available to it.



The initial conceptual framework (see Section 4). Thresholds are hypothesised and illustrative.

FIVE DIMENSIONS OF CAPITAL FIT

Amount | Instrument | Tenor | Terms | Accessibility

A mismatch on any one of them can block access, even where finance nominally exists.

EXECUTIVE SUMMARY

Key messages

1 Most youth-led green innovations stall at early stages, before they can create jobs at scale.

Nearly two-thirds of respondents are at pilot or early implementation stage, and only 15% have reached national scale or beyond.

2 The capital exists, but it isn't reaching young innovators.

59% say the funding they need exists in their country, yet 54% rely mainly on personal savings and only 5% on impact investment.

3 Almost everyone asks for grants.

Seven in ten would choose grants for their next stage, against 12% for equity and 7% for loans. This raises questions about whether the finance on offer fits seasonal, slow-return green enterprises.

4 Young innovators must prove themselves before anyone will back them.

Lack of track record (93%) and lack of credibility with funders (61%) are cited far more often than lack of collateral (30%).

5 The innovations that cost most to start are the hardest to enter.

Renewable energy, irrigation, and mechanisation are most often named as hard to enter, yet they can create skilled rural jobs.

6 As innovations scale, the problem shifts from money to markets.

Limited market demand is cited by 14% of innovators at pilot stage and 34% of those scaling nationally.

7 Young innovators are largely funding themselves, and not all of them can.

The share scaling nationally rises from 6% of 18- to 24-year-olds to 23% of those over 35, and 77% of respondents are men. This raises questions about who gets to take part in the nature transition.

8 Policy matters mainly through finance and markets.

Only 3% see policy reform as their main barrier, though instruments such as Startup Acts could improve capital fit.

EXECUTIVE SUMMARY

Where partners are needed

The survey shows where youth-led green innovations stall, but not what it would take to help them scale, or how many jobs that would create.

The next step is to find out with partners: by identifying youth-led green enterprises with strong job potential, testing what support helps them scale, and measuring the jobs that follow.

Identify
Youth-led green enterprises with strong job potential

Test
What support helps them cross the next threshold

Measure
The jobs that follow, and for whom

The result would be practical evidence on what supporting these enterprises means for job creation, and a model partners could take further.

Partnership is sought with funders, investors and lenders, governments with youth employment and green growth priorities, and incubators and hubs working with young green innovators.

A NOTE ON THE EVIDENCE

The survey captures innovators' own perceptions at a single point in time, and it underrepresents young women, Southern Africa, and North Africa. Its patterns are indicative, not conclusive, which is why further work is needed.

SECTION 1
Introduction

In brief: Africa's nature transition could create economic opportunity for millions of young people. Many youth-led green ventures show strong promise, but few secure the finance, partnerships, and market access needed to scale. As a result, innovations that could create jobs and strengthen climate resilience often remain trapped at pilot stage.



Africa's agrifood systems are at a demographic and economic inflection point. Each year, between 10 and 12 million young Africans enter the labour market, yet only around 3 million formal jobs are created.[2] The transition to nature-positive, climate-resilient agrifood systems represents one of the continent's most significant opportunities for employment creation and economic transformation, with young people already leading innovation across multiple segments of the value chain. However, the scale of this opportunity ultimately depends less on the number of ventures established than on their ability to grow. While substantial effort has been invested in supporting youth entrepreneurship, much less is understood about the factors that enable youth-led green enterprises to scale, generate employment, and contribute to agrifood systems transformation.[3]

Youth-led green ventures are well placed to help. They work at the points where value is created: climate-smart production, processing close to the farm, renewable energy and cold chains that cut losses, circular economy models, and digital platforms that link smallholders to markets.

As they grow, they hire young staff, train young technicians, and create work for young suppliers, agents, and farmers. The prize is large. African food and agribusiness markets have been projected to reach around US$1 trillion by 2030,[4] while the continent spends an estimated US$70–100 billion a year on food imports that domestic production could partly replace.[5]

However, the returns on investment are not being realised, while youth-led green innovations successfully emerge and demonstrate measurable impact at the pilot phase, an incredibly small percentage progress into sustainable, large-scale, system-transforming enterprises.[6] This structural stagnation introduces a pattern described in the literature as the Pilot Trap.[7] If promising innovations remain confined to pilots, the jobs, incomes, climate benefits, and food system resilience they promise are not delivered at scale.[8] Part of the explanation is that what it takes to start an innovation differs from what it takes to scale one. Pilots can run on local resources, grants, and community support; scaling requires larger pools of finance, infrastructure, formal markets, and institutional partnerships.[9,10] For green innovations the gap may be wider still, because many carry high upfront costs and slow returns.[11] Existing frameworks provide useful insights on innovation scaling, but they offer limited understanding of how scaling pathways unfold for youth-led green enterprises in African agrifood systems. In particular, little is known about where ventures stall, which ecosystem constraints become binding at different stages of growth, and whether current support instruments, especially financing mechanisms, are aligned with these evolving needs.[12]

In response, governments and development partners have invested heavily in youth entrepreneurship through training programmes, incubators, grants, accelerators, and more recently Startup Acts adopted across several African countries.[13,14] While these initiatives have helped lower barriers to entry, much less is known about whether they address the challenges ventures face after establishment. This question may be particularly important for youth-led green agrifood enterprises, whose expansion often depends on patient capital, infrastructure, market linkages, and regulatory support that go well beyond the needs of early-stage entrepreneurship

1 · INTRODUCTION

This scoping paper addresses this gap by developing a preliminary framework for understanding how youth-led green innovations progress towards scale within African agrifood systems. Drawing on a continental survey and a review of relevant literature, it explores emerging scaling pathways, identifies key ecosystem enablers and constraints, and examines the role of finance across different stages of enterprise growth. The paper is intended as a foundation for deeper research and collaborative action among policymakers, investors, support organisations, and youth innovators. It asks:

RESEARCH QUESTION

What pathways do youth-led green innovations follow as they scale within African agrifood systems, and what ecosystem conditions, including the availability and fit of finance, enable or constrain their progression from local innovation to transformative scale?



SECTION 2

Methodology and analytical approach

This scoping paper adopts a mixed-methods exploratory design consisting of three sequential stages (Figure 1). Its purpose is to identify emerging patterns, knowledge gaps, and priorities for further research rather than to test hypotheses or generate statistically representative estimates.



Figure 1. Methodological and analytical approach

First, a targeted literature review examined scholarship and practitioner literature on innovation scaling, youth entrepreneurship, green innovation ecosystems, institutional voids, access to finance, and responsible scaling. Sources were identified through Google Scholar and Scopus, complemented by grey literature from organisations including FAO, IFAD, CGIAR, the African Development Bank, and the World Bank. The review informed the conceptual framework, survey design, and interpretation of findings.

Second, an online survey of youth-led innovators was conducted between 8 April and 9 May 2026 in English and French. The survey was distributed through partner networks and social media channels. After removing duplicate submissions, the final dataset comprised 286 responses from 32 African countries. The questionnaire collected information on venture characteristics, innovation focus, ecosystem support, perceived barriers, financing experiences, and prospects for growth and scaling. Quantitative responses were analysed using descriptive statistics, while open-ended responses were coded thematically to identify recurring patterns and explanatory themes (see Annex A).

Third, a validation workshop was convened on 4 September 2026 with more than 15 young innovators from different sectors and regions. The workshop was used to assess whether the emerging findings reflected participants' lived experiences, tested the relevance of the proposed scaling framework, and refine key assumptions and interpretations.

Analytical approach. The analysis combined insights from the literature review, survey findings, and validation workshop through a process of triangulation. Evidence from the literature was used to identify established concepts and scaling frameworks, while survey and workshop data were used to examine how these dynamics manifest in the experiences of youth-led green innovators operating in African agrifood systems. Particular attention was given to identifying common growth pathways, ecosystem constraints, and the role of finance at different stages of venture development.

Limitations. Several limitations should be considered when interpreting the findings. The survey sample was self-selected and therefore cannot be regarded as representative of all youth-led innovators across Africa. Respondents were predominantly male (77%), with limited representation from Southern Africa and no responses from North Africa. The analysis is also based on self-reported perceptions collected at a single point in time and therefore cannot track enterprise trajectories over time or establish causal relationships. Consequently, the findings should be interpreted as indicative rather than definitive and are intended primarily to inform further research, policy dialogue, and programme development. The survey's stage categories are based largely on geographic reach, so they capture market expansion more fully than the institutional and systemic change the framework treats as transformation.



SECTION 4

A threshold model of scaling youth-led green innovation

In brief: This paper conceptualises scaling as the crossing of successive thresholds, with capital fit, the match between the finance a venture needs and the finance available to it, central to whether ventures cross them.

4.1 Overview

Scaling is conceptualised here as the sequential crossing of institutional thresholds. As ventures grow, what carried them through one stage, such as local trust, grants, and frugal design, stops being enough, and progress comes to depend on finance, markets, and policy beyond their control.

Figure 2 sets out the framework. Crossing each threshold depends on the interaction of three conditioning factors: ecosystem readiness, innovation type, and youth resource capacity.

Ecosystem readiness shapes the opportunities available to innovators through the presence or absence of finance, infrastructure, markets, supportive institutions, and policy frameworks. Innovation type influences the resources required for growth, since some innovations can expand incrementally while others require substantial upfront investment, specialised infrastructure, or long periods before returns are realised. Youth resource capacity influences an innovator's ability to navigate these conditions through existing assets, skills, networks, credibility, and experience.

These factors operate through three mechanisms. First, capital fit determines whether financing is available in forms that match venture needs. Second, capability influences whether ventures possess the managerial and technical capacity required to grow. Third, infrastructure and market access determine whether innovations can reach customers and operate efficiently at larger scale.

The framework suggests that scaling failures occur when one or more of these mechanisms become binding constraints at a particular threshold. Conversely, progression occurs when venture needs remain aligned with available ecosystem support. Because innovation types, ecosystem conditions, and youth resource capacities differ, ventures are expected to follow different scaling pathways and encounter different barriers over time.

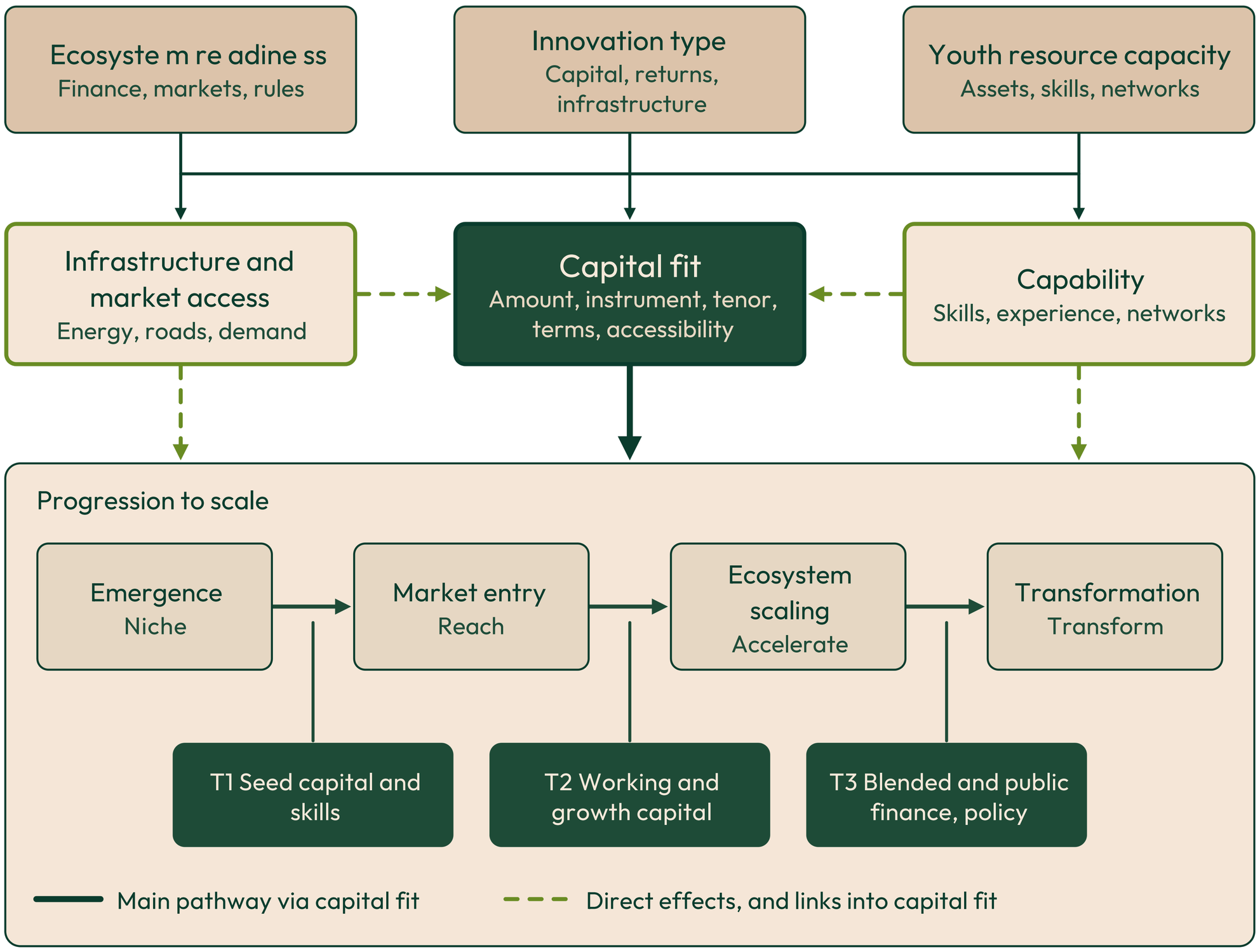


Figure 2. Initial conceptual framework. The framework is a heuristic for organising the evidence and generating questions, not a tested model.

4.2 Capital fit

Capital fit is distinct from the volume of finance. An ecosystem can hold substantial capital and still fit poorly if that capital comes in the wrong amounts, on the wrong terms, or through channels innovators cannot reach.

We propose five dimensions (Table 1), and that a mismatch on any one of them can block access.

Table 1. Dimensions of capital fit

Dimension	What must match
Amount	Ticket size relative to the venture's need
Instrument	Grant, debt, equity, asset finance, or blended structures
Tenor and timing	Repayment or exit horizons relative to return timing and seasonal cash flows
Terms	Collateral, track record, and currency requirements
Accessibility	Information, eligibility criteria, and application burden

Different dimensions may bind at different thresholds: amount and accessibility when ventures first seek funding, tenor and terms as they seek working and growth capital, and the choice of instrument at larger scale, where blended and public finance become necessary.

4.3 The institutional threshold model

A threshold is the point at which a venture's needs exceed what it and its immediate networks can supply, so that further progress depends on institutions beyond its control. Thresholds matter because the resources, relationships, and capabilities that enable success at one stage often become insufficient at the next. As ventures grow, they require new forms of finance, market access, infrastructure, partnerships, and policy support. Failure to cross a threshold does not necessarily mean that a venture ceases operating; rather, it may remain trapped at its current scale despite demonstrating technical or commercial promise.

Table 2 sets out the three thresholds and what we hypothesise crossing each requires. The four stages they separate are described in Annex B.

Table 2. Institutional thresholds and capital fit (hypothesised)

Threshold	Crossing requires	Capital that fits	Binding dimension	Constraints finance cannot resolve
T1: Emergence to market entry	Technical skills; seed capital; a validated offering; customers beyond local trust networks	Grants, seed finance, small-ticket working capi tal	Amount; accessibility	Basic technical and business skills; initial market access
T2: Market entry to ecosystem scaling	Positive cash flow; affordable customer reach; growth finance; formal buyers	Working capital, asset finance or leasing, concessional loans, patient equity	Tenor; terms	Man agement capacity; reliable energy, storage, and logistics; user ability to pay
T3: Ecosystem scaling to transformation	Institutional adoption; policy recognition; integration into value-chain governance; public or anchor investment in enabling infrastructure	Blended finance, public co-investment, guarantees	Instrument	Policy access and recognition; public infrastructure pro vi si o n

Three features of the framework are important for interpreting the findings. First, thresholds are co-produced: ventures cannot generate for themselves the growth finance, regulatory recognition, market rules, or infrastructure required at later stages of scaling. Progress therefore depends on interactions between innovators and the wider ecosystem. Second, thresholds differ by innovation type. Asset-intensive innovations may encounter financing constraints early, while digital innovations may be constrained more by infrastructure, connectivity, affordability, or user adoption. Third, thresholds differ by innovator. Ventures led by young people with fewer assets, weaker networks, or shorter track records may face higher barriers wherever financing decisions rely on collateral, experience, or perceived credibility. The thresholds should therefore be understood as analytical propositions. The survey explores whether innovators' experiences align with these propositions and where deviations occur.

Propositions

The framework generates five exploratory propositions. The survey can examine them descriptively but not test them.

- **P1:** Ecosystem support is concentrated at the emergence stage, while the finance, partnerships, and institutional support required for later stages become progressively scarcer.
- **P2:** Asset-intensive green innovations face steeper scaling thresholds than lower-capital innovations, because their financing requirements place greater demands on the amount, tenor, and terms of available capital. Digital and precision innovations face thresholds that arise primarily from infrastructure and users' ability to pay rather than from their own capital requirements.
- **P3:** Youth resource capacity influences threshold crossing both indirectly through capital fit, where access to finance depends on collateral, credibility, and track record, and directly through capability, including formal, informal, and experiential skills.
- **P4**: Where infrastructure and affordability constraints dominate, improvements in capital fit alone will be insufficient to enable scaling.
- **P5**: Policy instruments such as Startup Acts matter to the extent that they improve capital fit for these ventures. This is a secondary question for the paper.



SECTION 5

What the survey shows

In brief: Most youth-led green innovations do not progress beyond local scale. The findings suggest that scaling depends on more than access to finance alone; capital fit, credibility, and market access all shape whether ventures cross successive growth thresholds.



5.1 Who the innovators are

The survey received 286 responses from 32 countries: 36% from Eastern Africa, 30% from Western Africa, 24% from Central Africa, and 10% from Southern Africa, with none from North Africa. The largest groups are from Rwanda, Nigeria, Burundi, and the DRC. Respondents are 77% male, mostly aged 25 to 35 (69%), and mostly founders or co-founders (76%). Their organisations are young and small: 63% have operated for three years or less, and 45% work at local or community level. Most work in more than one innovation area, most commonly climate-smart practices, food processing, and circular economy models. A fuller profile is given in Annex A.

5.2 Most ventures stall before national scale

Nearly two-thirds of ventures are at concept, pilot, or early implementation stage, and only 15% have reached national scale or beyond (Figure 3). Climate-smart agriculture is the largest category at every stage. The sharpest drop is between local and national scale.

This is consistent with the Pilot Trap, but a cross-sectional survey cannot confirm it, since it shows how many ventures are at each stage, not how many tried to progress and failed. In what follows, ventures at national scale and at mature stage are combined into a single "national and beyond" group (n=44).

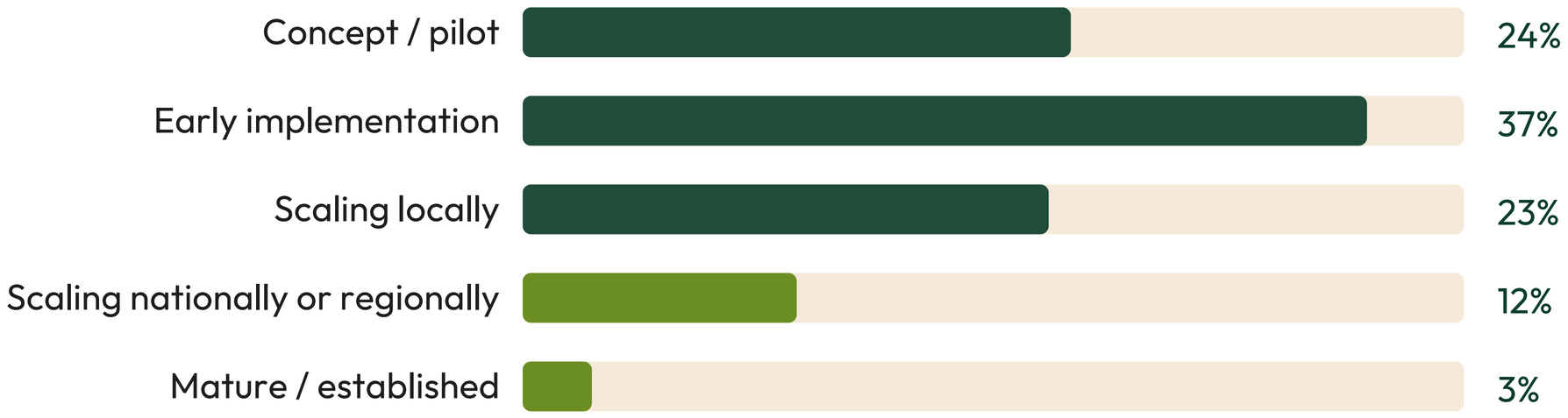


Figure 3. Respondents by stage of development (% of respondents, n=286)

5.3 The capital exists, but it isn't reaching young innovators

The supports innovators most often find available are early-stage ones: technical training (63%), mentorship (53%), and incubators (45%), against 34% for grants and 16% for impact investors (Figure 4). Access to finance is the weakest-rated ecosystem condition: 68% say it is in place "not at all" or only "to a small extent", and 70% find it difficult to obtain funding themselves.

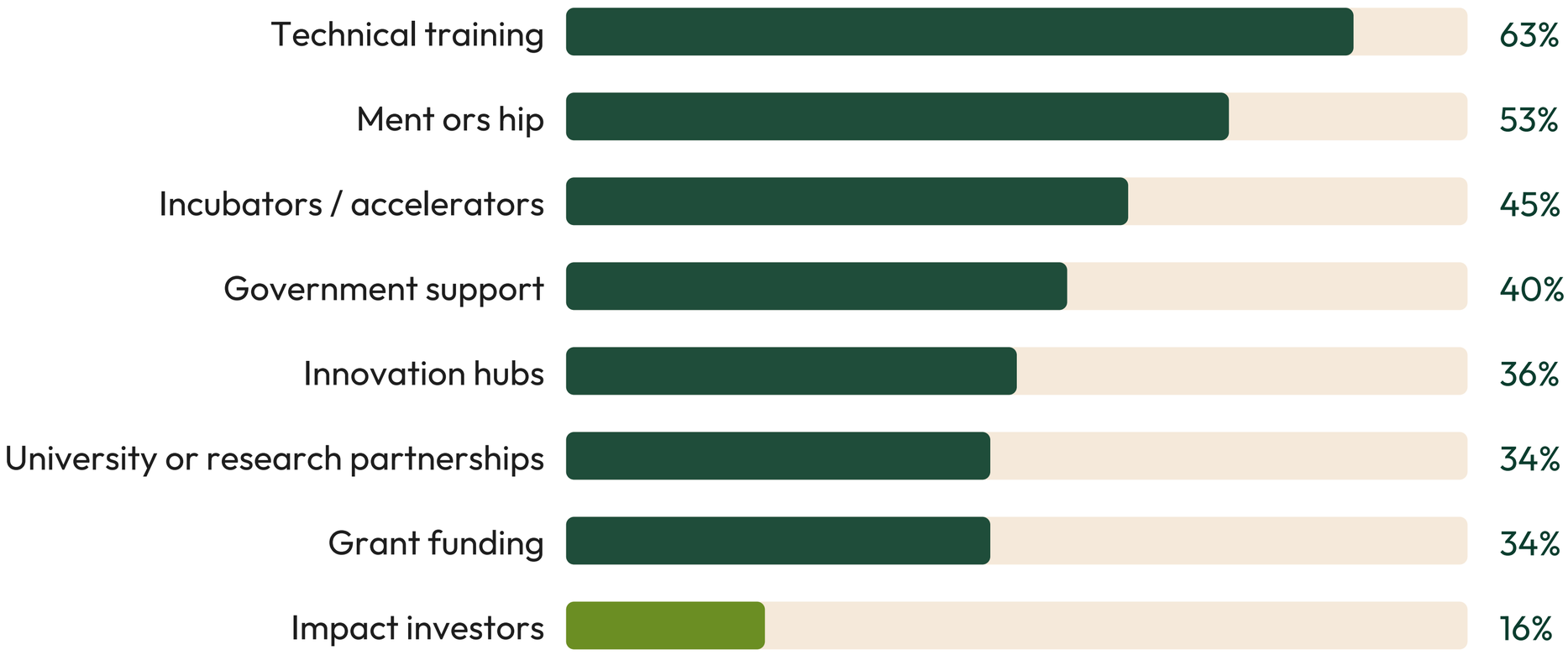


Figure 4. Ecosystem supports most available in respondents' countries (% of respondents)

Most respondents (54%) have relied mainly on personal savings. This falls from 70% at pilot stage to 32% at national scale and beyond, as revenue, grants, and loans take a larger share (Figure 5). Impact investment stays at 7% or below at every stage.

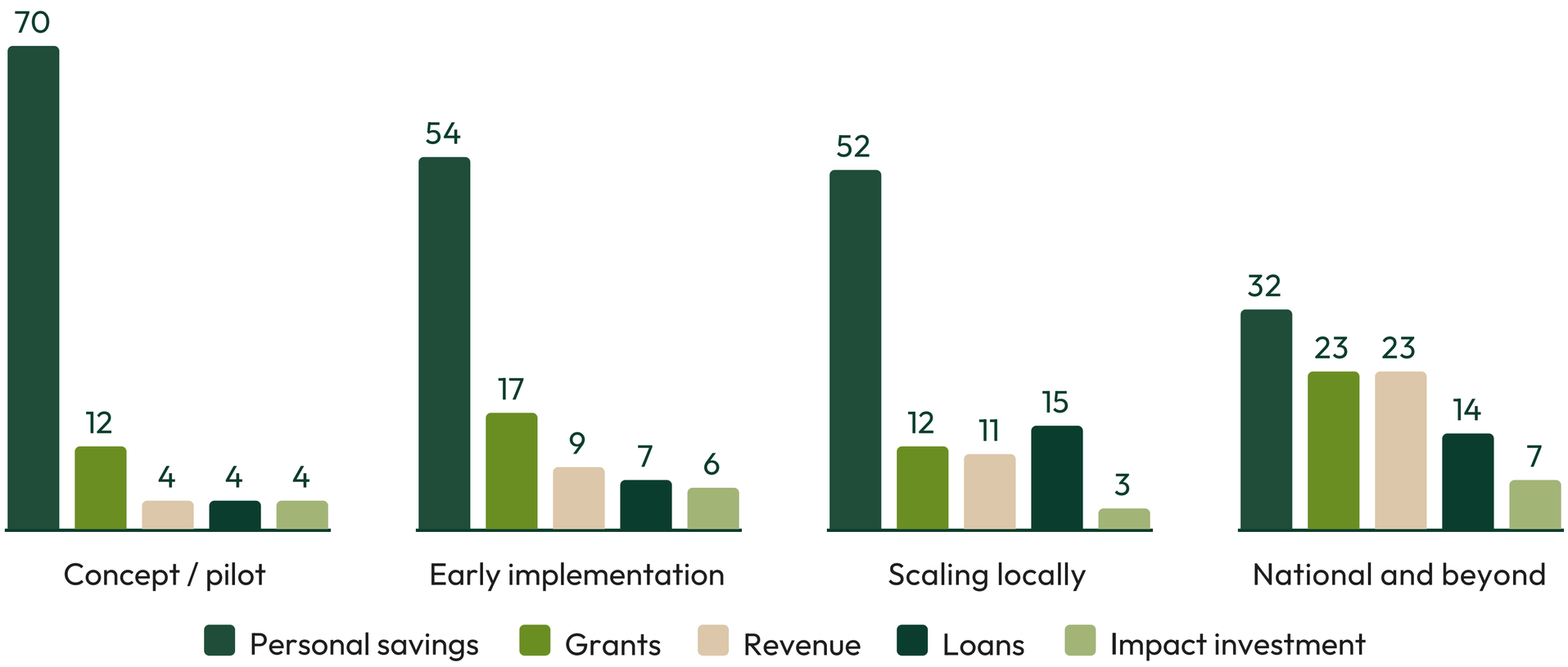


Figure 5. Main source of funding by stage of development (% of respondents at each stage)

However, 59% say the types of funding they need exist in their country, against 14% who say they do not. The most common obstacles are complex applications (22%), strict eligibility (17%), and lack of information (16%). These barriers point less to an absolute shortage of capital, than to a mismatch between available financing and innovators' ability to access it. In the language of the framework, they suggest weaknesses in capital fit, particularly along the dimensions of accessibility and eligibility. The evidence therefore provides preliminary support for the proposition that financing constraints may reflect misalignment between demand and supply as much as limitations in overall funding volume.

These obstacles shift as ventures grow, from application burden towards eligibility and connections to funders (Table 3), consistent with the idea that different dimensions of capital fit bind at different thresholds. The later-stage group is small, so this pattern is indicative.

Table 3. Most-cited funding challenge, by stage of development (% of respondents at each stage)

Funding challenge	Pilot (n=69)	Early impl. (n=107)	Sca ling locally (n=66)	National and b ey ond (n=44)
Complex or lengthy applications	30	21	23	9
Strict eligibility requirements	14	13	20	25
Limited networks or connections to funders	10	12	15	20

Difficulty accessing funding does not rise with stage: 72% to 77% find it difficult up to local scale, against 52% at national scale and beyond. This probably reflects survivorship, since ventures that secured finance are the ones that progressed. It is not evidence that scaling gets easier.

5.4 Almost everyone asks for grants

Asked what would best support their next stage, 69% chose grants, against 12% for equity, 7% for concessional loans, and 3% for revenue-based financing (Figure 6). The preference holds at every stage, from 62% to 73%.

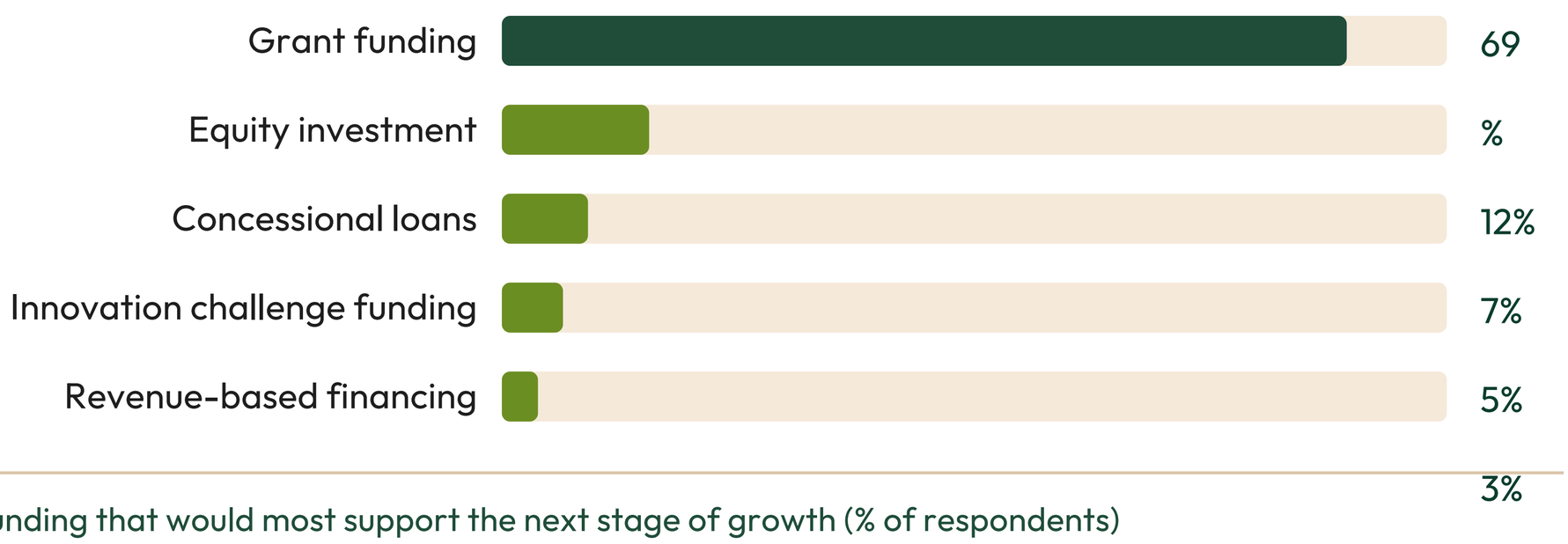


Figure 6. Funding that would most support the next stage of growth (% of respondents)

The overwhelming preference for grants may signal more than simple familiarity. It may indicate that existing debt and equity products are poorly aligned with the risk profiles, return horizons, and cash-flow patterns of youth-led green agrifood ventures. If so, the result supports the framework's argument that the suitability of finance may be as important as its availability.

5.5 Young innovators must prove themselves before anyone will back them

The barriers respondents say weigh most on young innovators are lack of track record (93%) and lack of credibility with funders and partners (61%), followed by limited networks (51%) and limited collateral (30%) (Figure 7). By comparison, only 25% cite limited trust from funders as a barrier affecting innovators of any age. For young innovators, the binding constraint seems to lie less in owning assets than in proving performance.

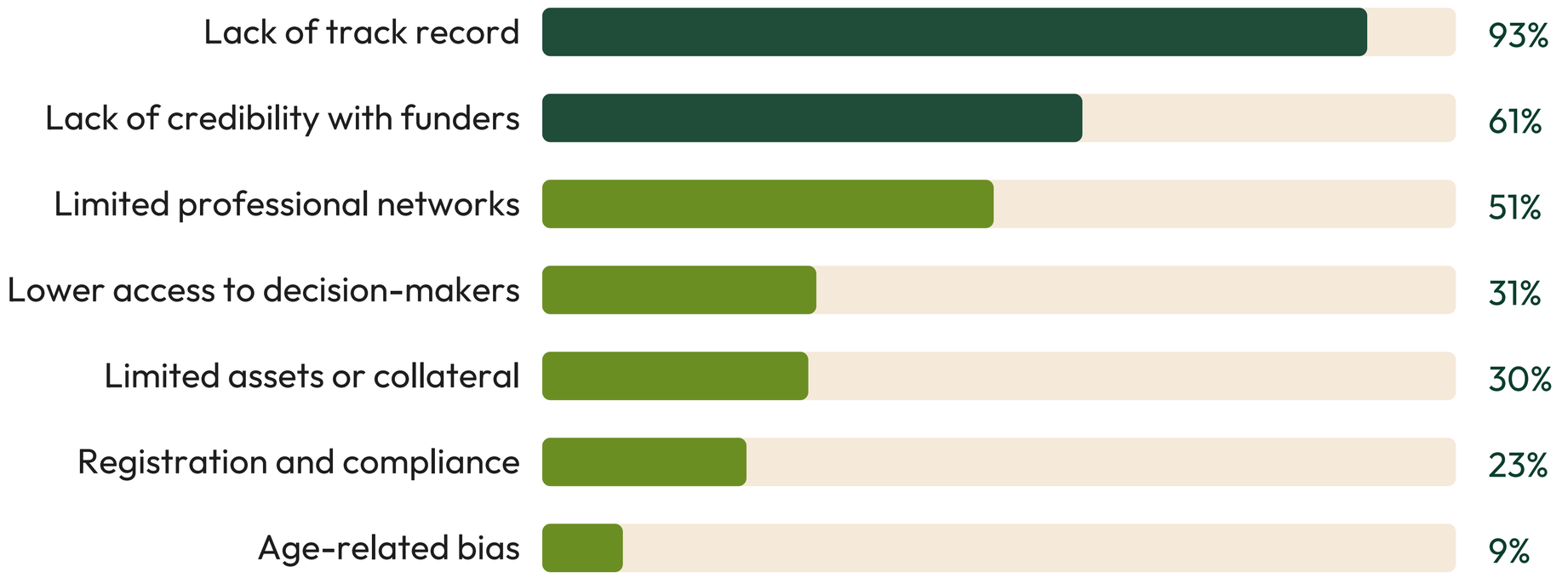


Figure 7. Barriers that disproportionately affect young innovators (% of respondents)

The share at national scale and beyond rises with age, from 6% of 18- to 24-year-olds to 23% of those over 35. Interestingly respondents over 35 report the credibility barrier most often (71%), which suggests it reflects a venture's track record more than the founder's age.

Few respondents name skills as their main barrier (2%), but many credit partnerships (61%), community trust (56%), and leadership (56%) with their progress, more than funding (44%). Capability seems to work as an enabler more than as a binding constraint. The 66 women in the sample report similar barriers to men, though they rate funding as slightly harder to obtain; their small number limits firmer conclusions.

These findings suggest that credibility rather than collateral may be the primary threshold facing young innovators.

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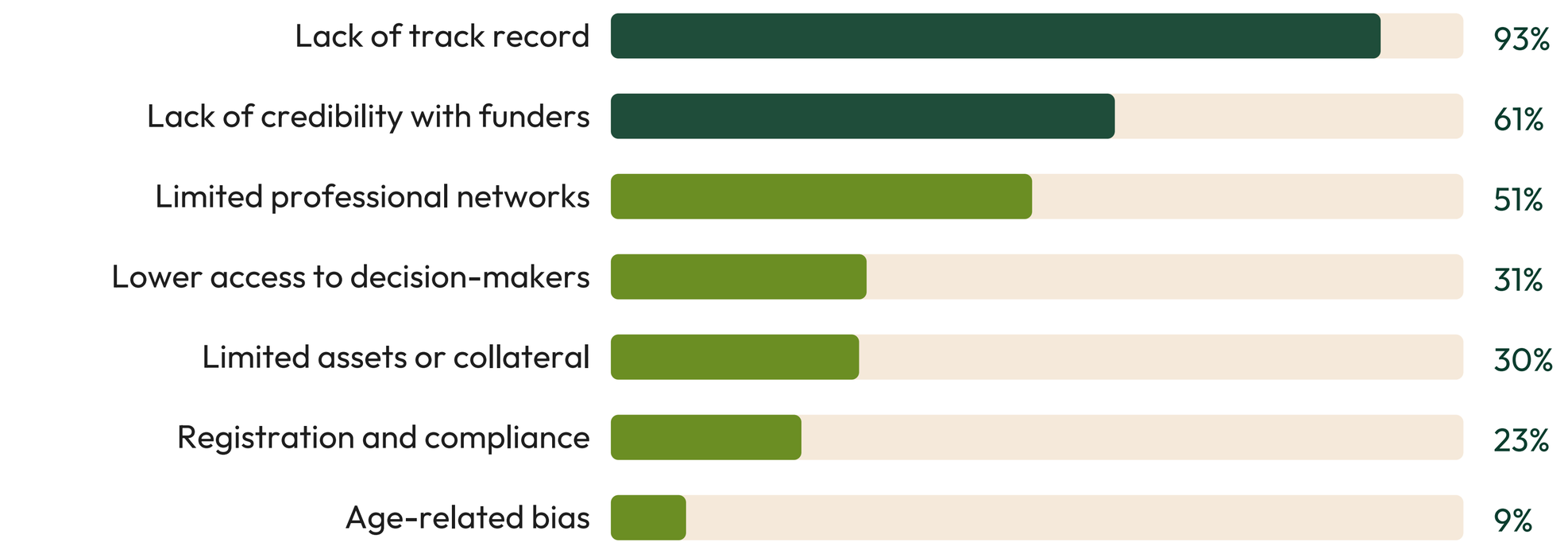


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Lack of track record is cited far more frequently than limited assets, indicating that access to finance and partnerships may depend less on ownership of resources than on the ability to demonstrate performance and reduce perceptions of risk.

5.6 The innovations that cost most to start are the hardest to enter

Respondents clearly separate low-capital from asset-intensive areas (Table 4). Circular economy models, agroecology, and digital tools are most often named as easier to enter, mainly because of lower start-up costs (74%). Renewable energy, irrigation, and mechanisation are most often named as harder, mainly because of capital and cost (52%).

Table 4. Green innovation areas named as easier or harder for young people to enter (% of respondents)

Innovation area	Named as easier	Named as harder
Renewable energy, solar, and cold storage	17	36
Irrigation and water	10	19
Mechanisation and equipment	2	15
Processing	15	20
Waste, circular economy, and composting	34	10
Agroecology and climate-smart practices	23	4
Digital and precision tools	29	15

Coded from open-ended responses; respondents could name several areas.

Among those who did enter, however, outcomes differ little by innovation type. Asset-intensive, digital, and low-capital innovators have almost identical stage distributions, with 15% to 16% of each at national scale or beyond. Asset-intensive innovators more often cite the high cost of technology (62%, against 51% to 53%) and limited market demand (30%, against 16% to 22%). Because the survey captures only those who entered, the evidence points more clearly to a steeper threshold at entry than to a steeper threshold to scale.

The small digital group (n=45) more often cites weak infrastructure (53%, against 39% of asset-intensive innovators) and technology or equipment (22%), consistent with scaling constraints that arise from infrastructure more than from the venture's own capital needs.
This finding partially supports the framework. Innovation type appears to shape who enters different sectors, but among ventures that successfully enter, innovation type appears to have less influence on subsequent scaling outcomes. The survey therefore suggests that the most significant threshold for asset-intensive innovations may occur at entry rather than during later growth.

5.7 As ventures grow, the problem shifts from money to markets

Limited market demand is cited by 14% of innovators at pilot stage, rising to 34% at national scale and beyond. Over the same range, finance as the single biggest barrier falls from 73% among local scalers to 50%, while technology and equipment rise from 12% to 25% (Figure 8).

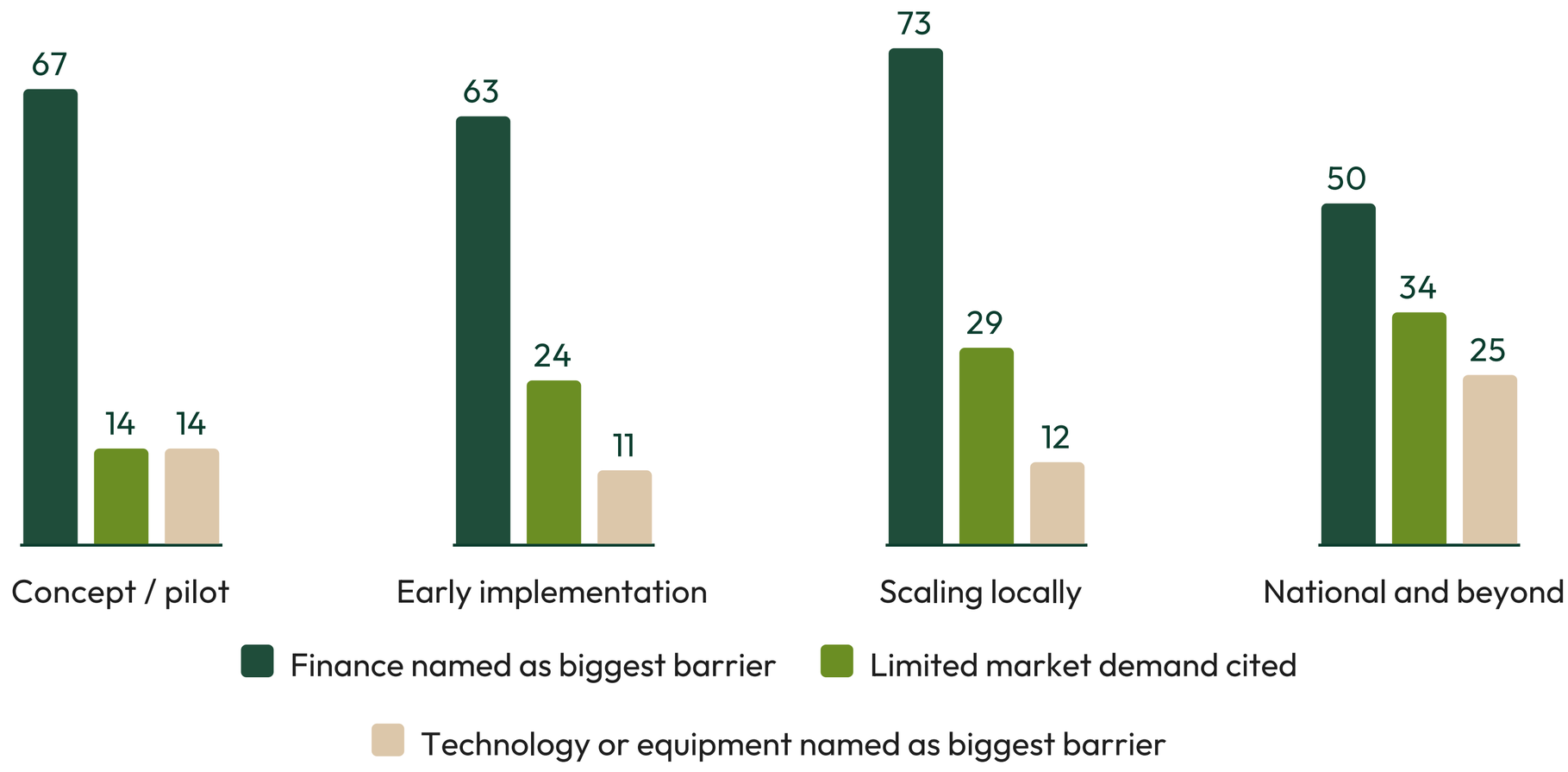


Figure 8. Barriers by stage of development (% of respondents at each stage)

Infrastructure is widely seen as weak, with 45% citing it as a structural barrier, but only 3% name it as their main barrier.

One reading is that infrastructure gaps are felt as equipment costs, and therefore as a need for finance, when ventures must buy generators, solar systems, or storage themselves. The findings therefore support the importance of capital fit, but also indicate that financial constraints may become less dominant as ventures grow. As scale increases, market access, demand, and commercial integration appear to become increasingly important determinants of progression. This suggests that ecosystem scaling is likely to depend on a broader set of institutional conditions than finance alone.

Innovators are optimistic about what removing these barriers would achieve, with 60% believing they could reach at least five times their current scale within three to five years.

5.8 Summary

Several findings are consistent with the framework proposed in Section 4. First, many reported financing constraints relate to application requirements, eligibility criteria, and information gaps, lending support to the proposition that capital fit may be an important determinant of scaling. Second, youth-specific barriers appear to be associated most strongly with track record, credibility, and networks, suggesting that access to opportunities often depends on demonstrating performance and legitimacy. Third, innovation type appears to shape entry barriers, particularly in more asset-intensive sectors, although differences in scaling outcomes among innovators already operating in these sectors are less evident. Fourth, the nature of reported constraints changes across stages, with finance featuring most prominently at earlier stages and market-related barriers becoming more important as ventures grow.

These patterns are consistent with the idea that scaling involves a sequence of evolving thresholds. They also suggest that the alignment between venture needs and ecosystem support, including but not limited to finance, may be more important than the absolute availability of support. As ventures progress, market access, institutional integration, and broader ecosystem conditions appear to play an increasingly important role. These findings remain exploratory but provide preliminary evidence that the threshold framework offers a useful lens through which to understand the scaling experiences of youth-led green innovations. A summary of the evidence against each of the framework's propositions is given in Annex B.

SECTION 6

Discussion

In brief: The findings suggest that ecosystems are better at helping young people start green innovations than helping them grow, that finance alone becomes less sufficient as ventures scale, and that which young innovators ultimately scale may depend in part on who can mobilise the resources, networks, and credibility needed to cross successive growth thresholds.

This section considers what the survey patterns might mean for youth-led green innovation in African agrifood systems. The evidence is descriptive and can be read in more than one way, so the aim is to explore the implications of the findings for the framework rather than to draw firm conclusions.

6.1 Is the problem capital scarcity or capital fit?

The findings are consistent with the framework's proposition that ecosystem support for youth-led green innovation is concentrated at emergence, while later-stage support becomes scarcer. Training, mentorship, and incubation were reported as more available than grant funding or impact investors. Ecosystems appear better equipped to help young innovators establish and pilot new ventures than to help them cross subsequent thresholds associated with growth. These later thresholds require resources and relationships that lie beyond the venture itself, including growth finance, formal market access, commercial partnerships, and integration into value chains, standards, and policy processes. The survey suggests that support thins precisely as ventures become more dependent on these wider institutional conditions.

The findings also highlight the importance of youth resource capacity. Track record, credibility, and networks were the barriers cited most frequently by young innovators, suggesting that access to finance depends not only on the availability of capital but also on the ability to demonstrate performance and legitimacy.

This challenge may be particularly acute for green innovations, whose benefits, such as improved soil health, reduced emissions, or lower post-harvest losses, often take time to materialise and are rarely reflected in the financial indicators funders assess. One interpretation is that finance exists but young innovators have not yet accumulated the evidence and relationships needed to access it. Another is that the supply of suitable capital remains too limited to meet demand.

Whether the problem is scarcity or fit matters for the economic case, because the employment potential of youth-led green innovation grows as innovations cross successive thresholds. The question is not simply how far a venture reaches, but whether it develops the capabilities, partnerships, and market position needed to generate sustained economic activity. A young entrepreneur operating a pilot biofertiliser enterprise may employ only a small team. As the enterprise crosses into ecosystem scaling, it can create additional jobs through production, distribution, technical services, and supplier networks, while increasing the productivity and incomes of the farmers it serves. At the transformation threshold, employment effects extend beyond the enterprise itself, as its model becomes embedded in value chains, influences market practices, and stimulates complementary services and businesses. At that point, the innovation contributes not only to enterprise growth but also to wider agrifood systems change. When youth-led green innovations stall before these later thresholds, both their employment potential and their contribution to the nature transition remain unrealised.

The preference for grants raises a further question. It may reflect familiarity, a rational reluctance to take on repayable finance, or a mismatch between conventional financial products and the realities of green enterprises whose revenues are seasonal, earned in local currency, and slow to build. It may also reflect the green premium associated with innovations such as solar cold storage, mechanisation services, and renewable energy systems, where high upfront costs are combined with relatively slow returns. If so, the challenge lies less in the quantity of finance available than in whether it suits what each threshold requires.



6.2 What can finance not resolve?

The framework proposed that improving capital fit alone would be insufficient where infrastructure and affordability constraints dominate. The findings are broadly consistent with this proposition, while also suggesting that market demand becomes increasingly important as youth-led green innovations approach later thresholds.

Two constraints stand out. The first is markets. Limited demand becomes more prominent at later stages, suggesting that once some financing barriers are overcome, progression depends increasingly on whether enough customers can and will pay for green products and services. This may be a particular challenge where benefits such as improved soil health, reduced emissions, or greater climate resilience are not reflected in market prices. Without standards, certification schemes, procurement mechanisms, or other ways of rewarding these benefits, additional finance may increase risk rather than reduce it. More fundamentally, this is where the transition from expansion to embedding begins; the market rules and value-chain arrangements that reward sustainable practices are themselves part of the institutional change associated with transformation.

The second constraint is infrastructure. Young innovators operating cold-storage, processing, or irrigation enterprises often need to provide their own energy, transport, and storage. When these gaps are experienced primarily as equipment costs, part of what appears to be demand for venture finance may in fact be demand for public or shared infrastructure. Financing individual enterprises to compensate for missing infrastructure may therefore be an inefficient response to a systemic problem, leaving the underlying constraints unchanged.

Innovation type also shapes how these constraints are experienced. Digital innovations, such as climate advisory platforms and precision agriculture tools, appear more dependent on connectivity, electricity, and users' ability to pay, although the digital sample is relatively small. Asset-intensive innovations, including renewable energy, irrigation, and mechanisation, face higher capital requirements. Yet among innovators who had already entered these sectors, differences in progression were less apparent than differences in entry barriers. This suggests that innovation type may shape the threshold to entry more strongly than the thresholds that follow.

6.3 Which young green innovators do ecosystems select for scaling?

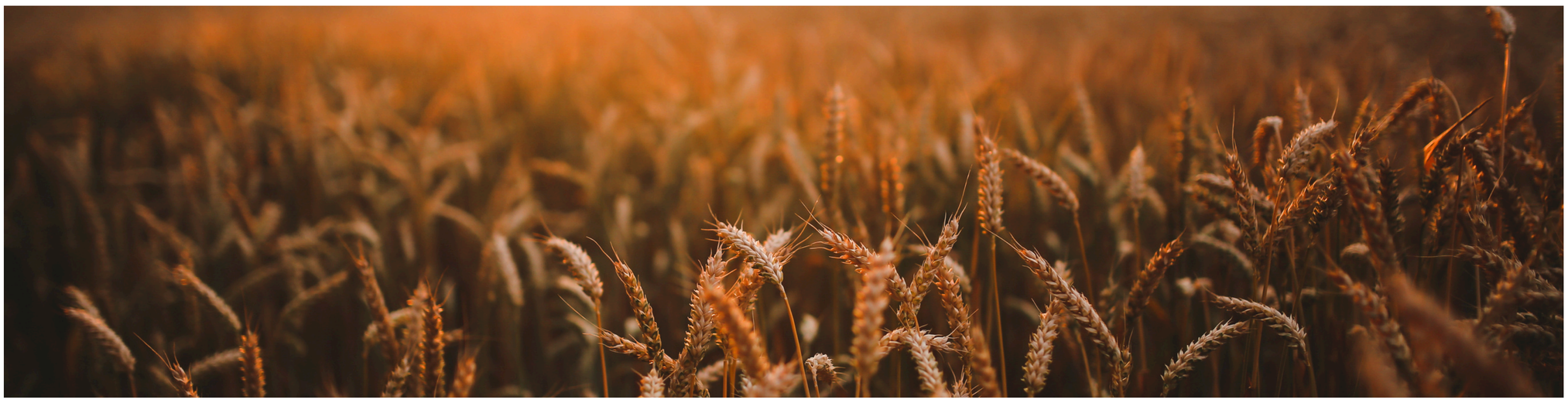
Several patterns suggest that ecosystems may influence not only whether youth-led green innovations cross scaling thresholds, but also which young innovators are able to take them across.

More than half of respondents relied primarily on their own savings, while access to external finance appeared closely linked to credibility and track record. This favours young innovators who can sustain a green enterprise long enough to build that record, often those with savings, family support, or other income. The higher share of national-scale ventures among older respondents may therefore reflect both time and accumulated resources.

Innovation type may shape selection as well. Renewable energy, irrigation, and mechanisation, among the green innovations with the greatest potential to raise productivity and resilience, are widely seen as the hardest for young people to enter because of their capital requirements. Some potential young innovators may never cross the first threshold. Because the survey includes only those who entered, these deterrent effects remain largely invisible. Similarly, the predominance of men among respondents suggests that opportunities in green innovation may be unevenly distributed, particularly for young women, who often face additional constraints related to land, assets, and collateral.

These patterns connect the investment discussion to the concerns of responsible scaling introduced in Section 3.1: which innovations scale, who scales them, and who benefits from their growth. The survey suggests that capital fit may influence all three. It may shape which green innovations young people enter, with more capital-intensive activities presenting the highest barriers. It may shape which young innovators progress, favouring those able to rely on personal savings, family support, or established networks. And it may influence whose innovations become embedded in agrifood systems and accumulate wider impacts over time.

Who benefits also depends on how innovations scale. Different innovations create different forms of value and employment. Some, such as processing, renewable energy, or advisory services, may generate new jobs directly.



Others, such as mechanisation, may create new opportunities in equipment supply, maintenance, and service provision while reducing demand for some forms of manual labour. If capital fit shapes who participates in, and benefits from, the nature transition, improving it is a question of inclusion as well as efficiency.

6.4 What role can policy play?

The survey offers only limited evidence on the framework's proposition that policy matters insofar as it improves capital fit. Few young green innovators identified policy as their principal barrier, but policy may operate indirectly, through the finance, infrastructure, and markets it shapes.

At the earlier thresholds, instruments such as Startup Acts could support youth-led green innovation by giving young enterprises credibility with funders, reducing administrative burdens, and broadening access to innovation funds. Policy matters most, however, at the final threshold, where scaling becomes transformation. Green procurement, standards for organic or climate-smart products, and public investment in rural energy and storage are among the mechanisms through which youth-led green innovations could move from successful enterprises to established parts of how agrifood systems work. Because few respondents have reached this stage, the survey says little about it. Whether current policy instruments reach capital-intensive, seasonal, and rurally based green agrifood enterprises, and whether they create the conditions for transformation rather than only for start-up, remain open questions and important areas for further research.



SECTION 7

An agenda for partnership

In brief: The survey shows where youth-led green innovations stall, but not what it would take to help them scale, or how many jobs that would create. We propose a focused programme to find out: a jobs study, a feasibility assessment of selected enterprises, and a funded pilot that supports those enterprises to scale and tracks the jobs they create.

Each year, 10 to 12 million young Africans enter the labour market, and the nature transition is one of the largest sources of new opportunity available to them. This survey of 286 youth-led green innovators across 32 countries suggests that most of their enterprises stall at the early thresholds, before they can create jobs at scale. What it cannot show is what happens when they are supported to cross those thresholds: which support makes the difference, at what cost, and with what result for employment. That is the question we propose to answer with partners.

7.1 What we don't yet know

Where are the jobs?

Which youth-led green innovations have the greatest potential to create and sustain jobs, directly and through suppliers, agents, and the farmers they serve?

What does it take?

What combination of finance, technical support, and market access helps these enterprises cross the next th r e sh old?

What is the return?

How many jobs does that support create and sustain, of what quality, for whom, and at what cost?

7.2 Proposed programme

STAGE 1
Identify where the job potential lies

STAGE 2
Assess enterprises and feasibility

STAGE 3
Pilot support and track the jobs

Based on the learnings from this study, we propose a programme in three stages. First, it would build on the survey to identify where youth-led green innovations hold the greatest potential for job creation. Second, it would assess a selected group of enterprises and the feasibility of supporting them to scale. Third, it would pilot that support with a funding partner and track the jobs it creates. Each stage builds on the last, and young innovators are involved throughout.

The result would be practical evidence on what supporting youth-led green enterprises to scale means for job creation, and a model that partners could take further.

7.3 Who we are looking for

A funding partner to back the programme, including the pilot.

Investors and lenders interested in a pipeline of youth-led green enterprises.

Governments and public agencies with youth employment and green growth prioritie s.

Incubators, hubs, and technical partners working with young green innovat ors.

To discuss partnership: Unearthing Insights Africa · info@unearthing-insights.org

SECTION 8

Conclusion

Africa's growing youth population makes the question of how youth-led green innovations scale an economic question as much as an entrepreneurial one. Their capacity to create jobs for other young people grows as they cross successive thresholds, from local experimentation and market entry, to integration within value chains, and ultimately to influencing how agrifood systems function. This survey provides preliminary insight into where that progression appears to stall and why. The findings suggest that finance often exists but does not fit, that the constraints innovators face change as they grow, and that markets and institutional conditions become increasingly important at later stages.

What remains uncertain is how these thresholds can be crossed, which combinations of finance, infrastructure, markets, and policy support are most effective, and how many jobs and wider transition benefits could result. Answering these questions will require deeper research and collaboration between innovators, investors, funders, policymakers, and support organisations. This paper is intended as a starting point. We invite partners to help build the evidence needed to ensure that more youth-led green innovations not only start, but scale.



ANNEX

Annex: Technical detail

A. Survey design and respondent profile

The survey covered:

- respondent and organisation characteristics, innovation area, and stage;
- ratings of ecosystem quality, and the ecosystem supports available;
- structural barriers, and barriers that disproportionately affect young innovators;
- the meaning of scaling, and what has helped or hindered it;
- funding sources, ease of access, funding preferred for the next stage, and challenges in accessing funding;
- perceived entry barriers by innovation type, and expected scale if barriers were removed.

Closed questions were analysed using frequencies and cross-tabulations, for example by stage of development. Multi-select questions are reported as the share of respondents selecting each option, so percentages do not sum to 100. Open-ended responses were analysed through inductive thematic coding. Initial codes were generated from recurring patterns in the data and iteratively grouped into broader thematic categories. French-language responses were translated into English using AI-assisted translation prior to coding and analysed using the same coding framework.

The survey was administered online, which may have excluded innovators with limited connectivity, and some nuance may have been lost in translating French responses. The validation workshop assessed the resonance of preliminary findings; it did not independently validate the framework.

Organisations are mostly young and small. Two-fifths (41%) have operated for one to three years, and a further 22% are at pre-startup stage or less than a year old. Non-profits make up 36% of the sample, for-profit SMEs 27%, cooperatives and social enterprises 17%, and informal enterprises 8%.

Close to half (45%) operate at local or community level.

Respondents' overall view of their ecosystems is lukewarm. Close to half (45%) rate their green innovation ecosystem as moderate, 32% as weak or very weak, and 22% as strong or very strong.

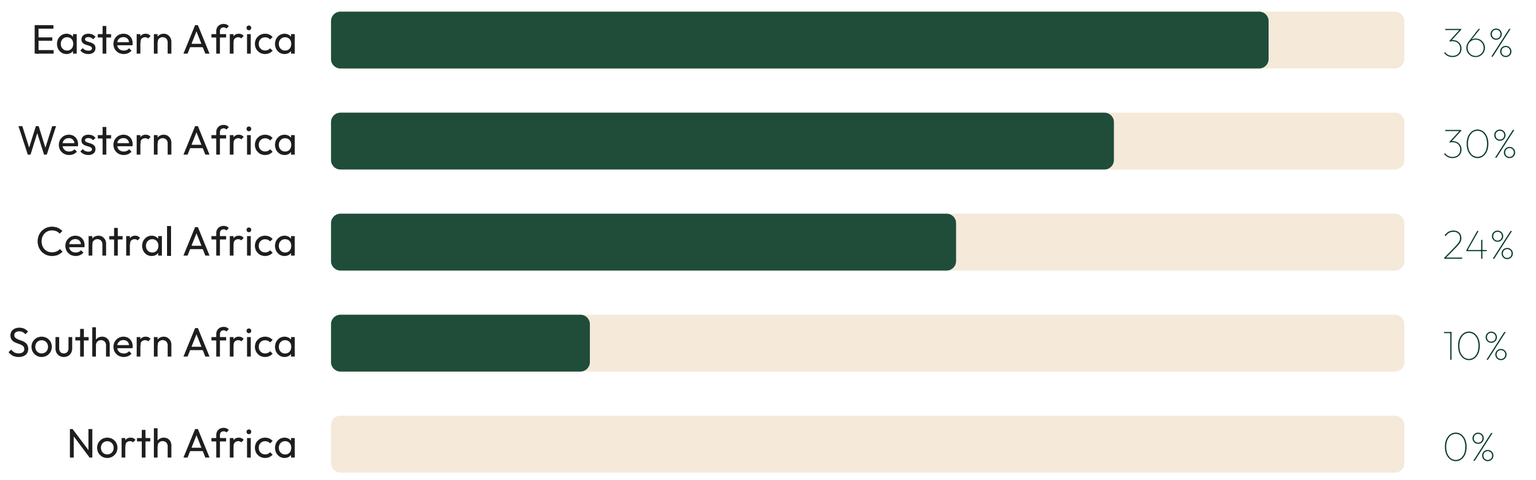


Figure 9. Respondents by sub-region (% of respondents)



Figure 10. Respondents by age group (% of respondents)

B. Framework detail

Table 5 describes the four stages of the institutional threshold model.

Table 5. Stages of the institutional threshold model

Stage (ASEco function)	Dominant logic	Primary enablers	Where ventures stall
Emergence (niche)	Survival and proof of concept	Bricolage, frugal innovation, local trust networks, grants	Lack of basic technical training or initial seed funding
Market entry (reach)	Commercialisation and validation	Customer acquisition, early revenue, local market linkages	Cash-flow friction; high cost of reaching customers beyond local networks
Ecosystem scaling (accelerate)	Value-chain integration	Growth finance, industry standards, business-to-business links	The missing middle; supply chain disruption
Transformation (tran sf o rm)	Institutionalisation	Policy integration, governance alignment, public investment	Regulatory misalignment; exclusion from policy processes; symbolic support

Table 6 summarises how far the survey patterns are consistent with P1 to P4. P5 is discussed in Section 6.4.

Table 6. Summary of survey evidence against the propositions

Proposition	What the survey sug g est s	Main evidence
P1: Support concentrated at emergence; later-stage capital scarce	Broadly consistent	Early-stage supports dominate; impact investment at 7% or below at every stage; funding mostly exists but is hard to access; challenges shift from application burden to eligibility
P2: Asset-intensive innovations face steeper thresholds	Consistent for entry; not evident for scaling	Clear perceptions of harder entry, driven by capital cost; little difference in stage outcomes by innovation group
P3: Youth resource capacity acts through capital fit and capability	Consistent through capital fit; weak on capability	Track record and credibility are the main youth barriers; capability credited as an enabler but rarely named as binding
P4: Infrastructure and market constraints limit what capital fit can achieve	Partly consistent	Infrastructure widely recognised but rarely binding; market demand rises steadily with stage

C. Additional survey results

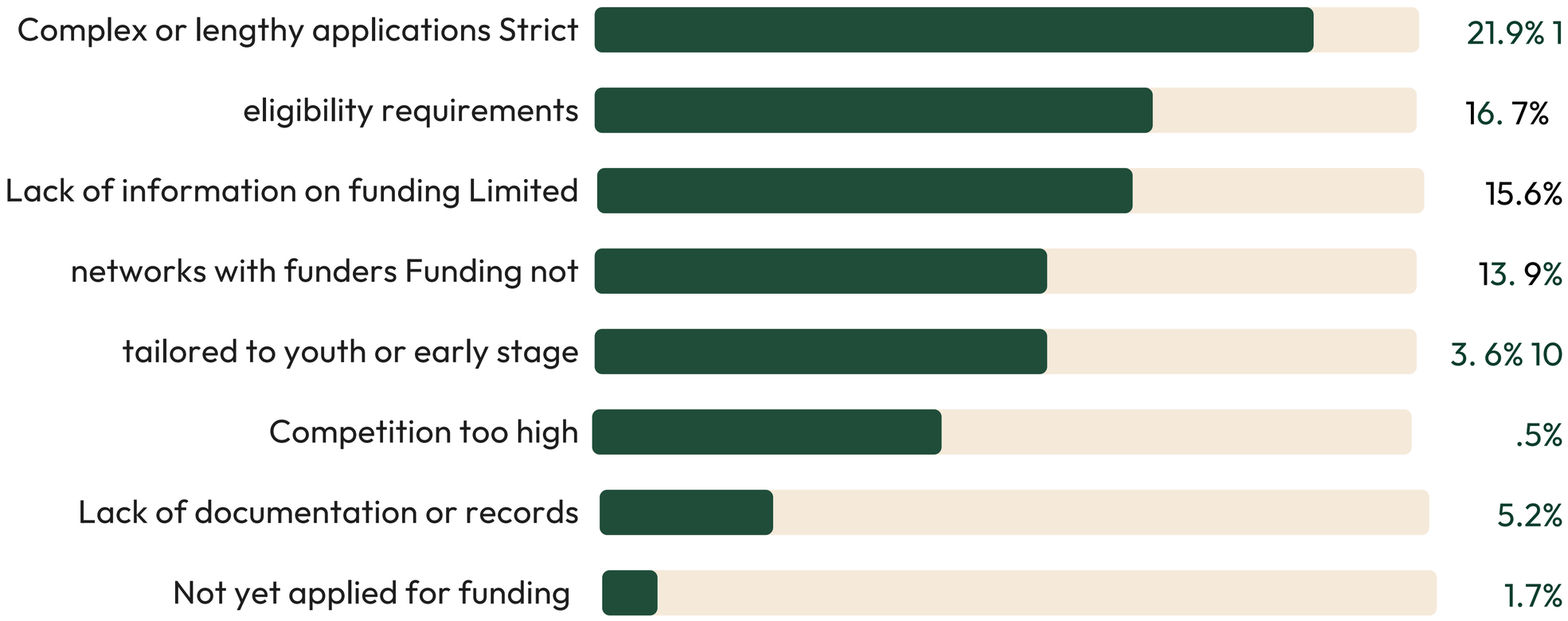


Figure 11. Most-cited challenge in accessing preferred funding (% of respondents)

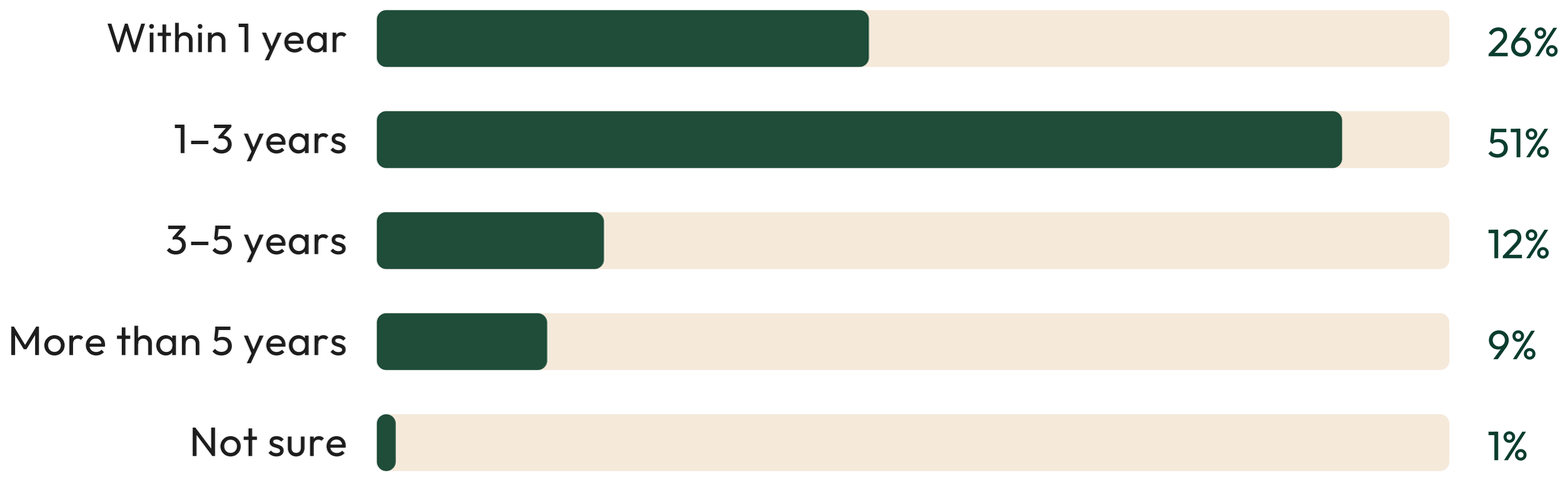


Figure 12. How quickly innovations could scale to the next level if barriers were removed (% of respondents)

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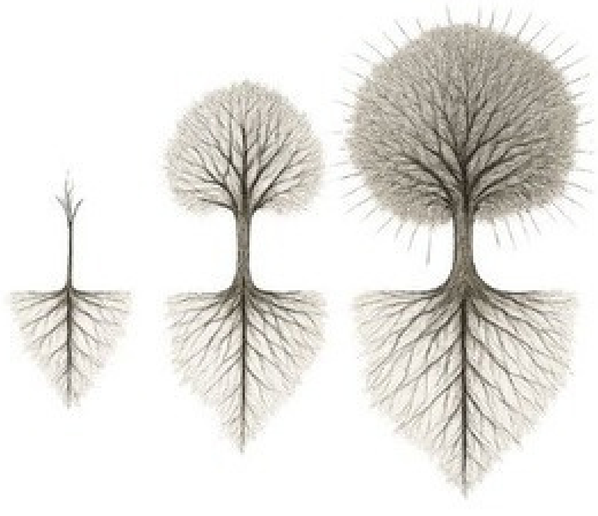
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About Unearthing Insights Africa

Unearthing Insights is a youth and women-led organisation that is dedicated to unlocking economic opportunities in the nature-based economy by strengthening ecosystems, generating locally grounded insights, and enabling businesses, SMEs, and youth-led initiatives to grow, scale, and compete in the global economy.

Vision

A regenerative economy where all groups can participate equally, with fair access to opportunity, resources, and growth.

Our Approach

- Generate Insights: We identify where real opportunities exist through locally grounded, evidence-based analysis. This provides clarity on viable sectors, geographies, and pathways for growth.
- Build Ecosystems: We connect organisations, funders, and enterprises to shape coordinated pathways for opportunity. This creates the conditions for collaboration, investment, and growth.
- Enable Implementation: We work with partners in key locations to implement and scale solutions on the ground. This ensures opportunities translate into real economic outcomes.

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