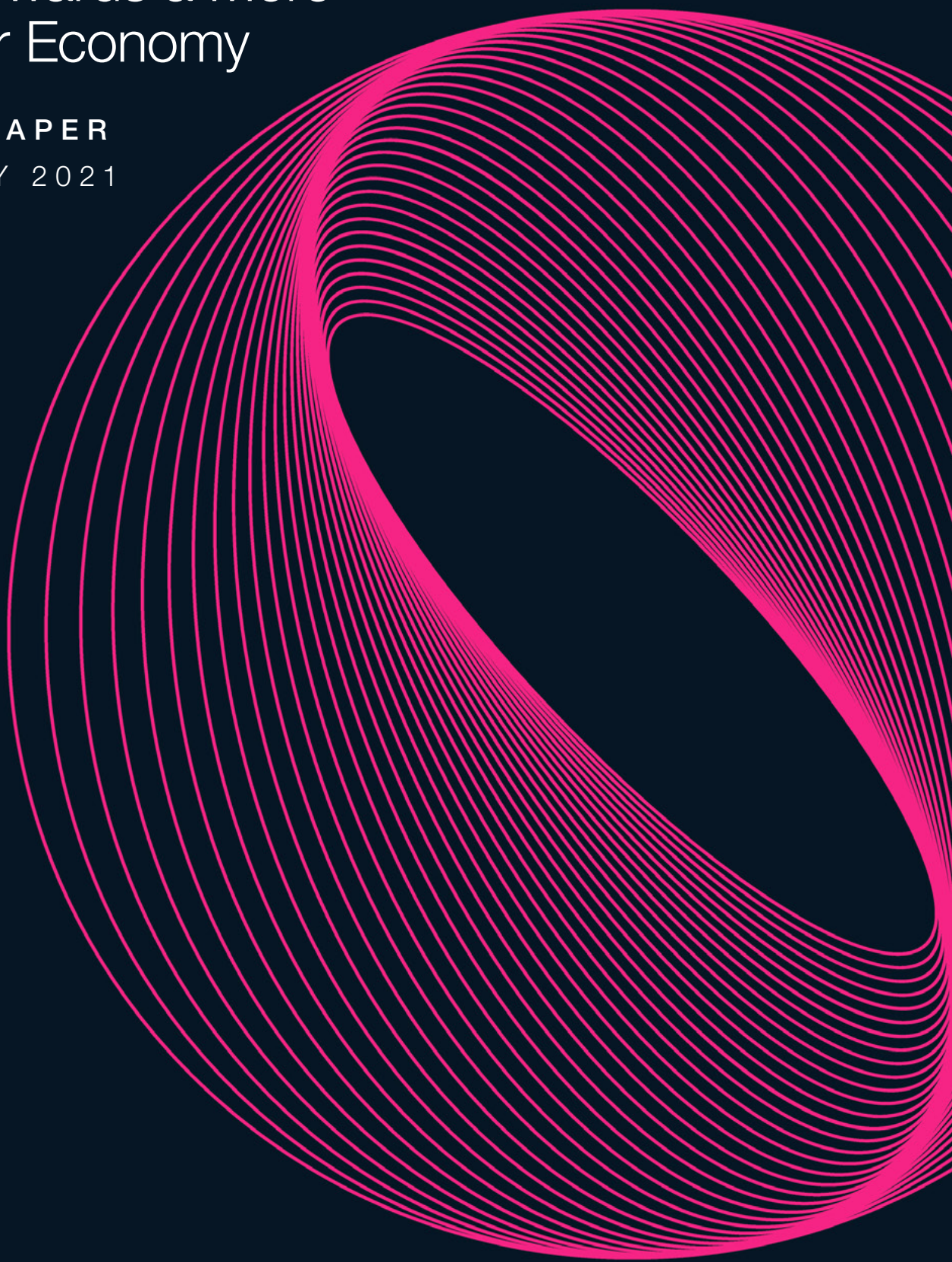


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Circular Trailblazers: Scale-Ups Leading the Way Towards a More Circular Economy

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Executive summary

We need more scale-ups to become circular trailblazers. Trailblazers accelerate the circular economy transition.

2020 was set to kick-start the “decade of action” for the UN Sustainable Development Goals.¹ Instead, the COVID-19 pandemic with its attendant health crisis and economic burden have further slowed and even reversed progress. Forecasts indicate that the pandemic will push 88 million people into extreme poverty in 2020, in what would be the first rise in global poverty since 1998.²

As economies emerge from the immediate crisis, many stakeholders are emphasizing the need to double down efforts to “build back better”, placing environmental protection, climate change and social equity as top priorities. This has inspired leaders to reflect more seriously about the benefits of an economic system redesign, including accelerating the circular economy transition – moving away from the current “take-make-dispose” approach to production and consumption towards a more regenerative model. A more circular economy extracts additional value from the resources already in use, reduces environmental degradation, and offers a \$4.5 trillion estimated market opportunity from 2018 to 2030.³

Building the circular economy requires innovative solutions that transform industries through new materials, energy and ingredients alongside new business models, designs, logistics and recovery solutions. Yet, individual new companies bringing innovative circular solutions are not enough. Concerted action targeted at changing the way industries do business is needed to accelerate the circular transition. Circular trailblazers are answering this call. They are young, pioneering companies that set out to grow not only their own businesses, but also the broader opportunity for circular solutions.

Our research identified five tactics successful trailblazers enact on top of the success factors for scaling up their organizations. To lead industry change, trailblazers:

1. Tell their story of a better future for the industry
2. Show the way with their innovative circular offer that sets a new standard
3. Freely share their insights to inspire informed followership
4. Initiate collaboration to further develop and spread their type of solution
5. Influence public policy to propel circular solutions

Trailblazers operate in local innovation ecosystems. Four elements of ecosystem support show promise to increase chances of trailblazers achieving systemic impact:

1. Platforms for storytelling that help them gain much-needed credibility
2. Knowledgeable investors who provide them with patient capital
3. Consultative policy-makers who enable trailblazers to accelerate the circular transition in an inclusive way
4. A high degree of connectivity throughout value chains to find the right ambassadors, like-minded customers and innovation partners

This report outlines why we need more circular trailblazers, how to spot them and what makes them successful at achieving impact on the circular economy beyond their lockstep growth.

1 Introducing circular trailblazers

Young, innovative companies can change the way business is conducted and pave the way for others to follow.



Impact *at scale* calls for systems change – changing an entire industry towards new product standards, operating practices and business models.⁴ The circular economy transition requires far-reaching change within and throughout systems.

A particular subset of innovators go the extra mile to shape circular solutions, often ahead of their time, before the market is fully ready. Even small enterprises can achieve systems change when they

function as **trailblazers**: impact scale-ups that aim to transform industries and show that new ways of doing business are possible. They pave the way for others to follow, reshaping policy and market conditions, while appealing to a new and emerging consumer base. The paths they open towards the transition to a circular economy create significant opportunities for investors, innovation enablers, businesses and the trailblazers themselves.

BOX 1

Identifying impact scale-ups

Impact scale-ups are commercial organizations that:

- Are between 3 and 10-years-old
- Employ between 10 and 100 full-time employees

- Have a yearly full-time employee growth rate of more than 20%
- Have an innovative offer or concept
- Have a lock-step model, i.e. an offer that creates profit and positive societal impact

BOX 2

Recognizing circular trailblazers

Trailblazers are impact scale-ups that employ tactics to change market conditions with the aim of opening and developing the space for positive (in our case), circular solutions. Trailblazers can be recognized by the activities they undertake, which can include:

- Raising awareness of the societal challenge
- Developing a movement for the type of solution that is best positioned to tackle it

- Licensing the technology they develop to other organizations to help raise the level of circularity in their industry
- Building an alliance with a range of strategic partners to raise the collective standard of circular solutions
- Initiating a circular pledge among fellow entrepreneurs
- Taking an active role in influencing public policy that enables the adoption of circular solutions

Note: “Impact scale-ups” are young enterprises that use innovation to bring societal value along with financially viable products or services. They are commercial businesses that have attractive business models, have developed beyond the ideation and start-up phase, and are transforming into fully-fledged enterprises. Not only do these young, innovative organizations have major potential for positive societal impact, scale-ups also account for a disproportionate amount of job creation.

Our research indicates that only 1% to 2% of organizations in the scale-up phase enact a trailblazing strategy, only 25% of these will successfully scale up beyond this phase, and even fewer will accomplish their ambition of changing their industry. Trailblazers are rare and research related to their impact and activities is emergent. The findings in this report are drawn from an

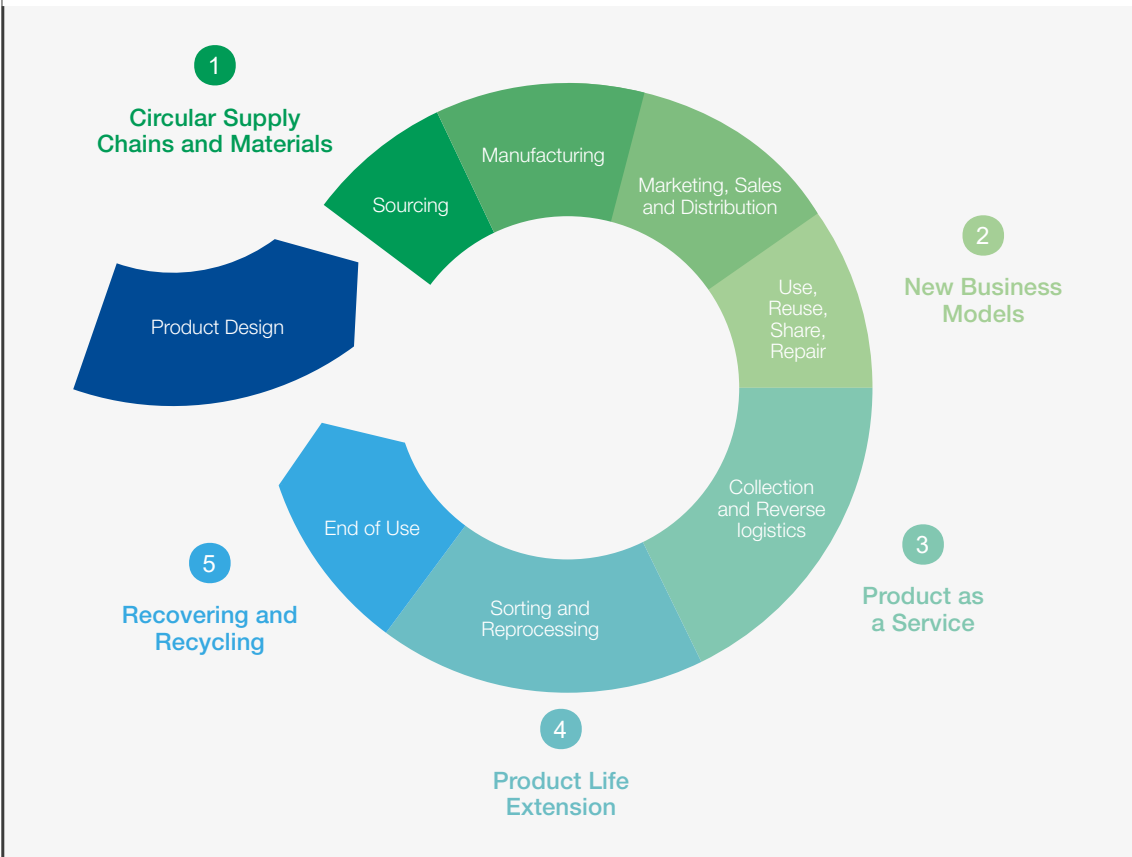
analysis of 40 interviews with impact scale-up chief executive officers and experts, a reflexive dialogue with five chief executive officers of trailblazers, database review of more than 3,500 organizations in the scale-up phase, three workshops with circular trailblazing experts and survey-based input from 25 stakeholders verifying our results.

1.1 The need for impact-oriented scale-ups

As evidenced by the rapid emergence of Fourth Industrial Revolution innovations and recognized by authors like Clayton Christensen⁵, Richard Foster and Sarah Kaplan⁶, game-changing solutions often come from new companies. The technology world is full of examples, from Facebook, which scaled up into a major global player in less than a decade to Zoom, which achieved unicorn status in six years and has scaled up further since the onset of the COVID-19 pandemic.

From ride-sharing to home-sharing, the emergence of the sharing economy demonstrates it is possible for innovative companies like DiDi, Ola, Uber, Lyft, Airbnb and Sonder to transform the linear economy. Only those, however, that scale up to a point of changing the status quo will achieve wider system-level impact, unless they’re trailblazers.

FIGURE 1 | Circular Economy Approaches



Source: Figure adapted from World Economic Forum and Accenture (2018)

This level of systemic change is needed to reign in growing resource extraction and related environmental impacts. Over the past 200 years, burgeoning economic and population growth shed previous circular practices for a move towards the current take-make-waste model,⁷ with 45% of emissions coming from how we make and use products and how we produce food.⁸ The OECD Global Material Outlook projects that in the absence of new policies, global material use will almost double from 89 Gt in 2017 to 169 Gt in 2060.⁹ In the past two years, despite growing efforts to

increase reuse and curb consumption, the world became less circular, as measured by the overall share of materials input into the system that are reused.¹⁰ The year-on-year increase in consumption and related resource extraction is outstripping current material recovery efforts.

The potential of the circular economy is clear, yet the truly innovative business models and solutions that have the possibility to delink economic progress from environmental impacts have yet to scale up and achieve system-wide transformation.



1.2 From impact start-up to scale-up

For most businesses, the odds of scaling up beyond the start-up phase are very low. In fact, only 0.4% of start-ups are able to quickly scale up their company to a substantial size. By contrast, young innovative ventures that combine economic and societal goals have a 43% higher chance of scaling up than purely commercial companies (see Figure 2: Impact orientation as a success factor for scaling up). This indicates that despite heightened challenges that impact scale-ups face,¹¹ like the increased level of scrutiny for measuring impact, dual aims of commercial growth and societal impact lead to improved odds of success.

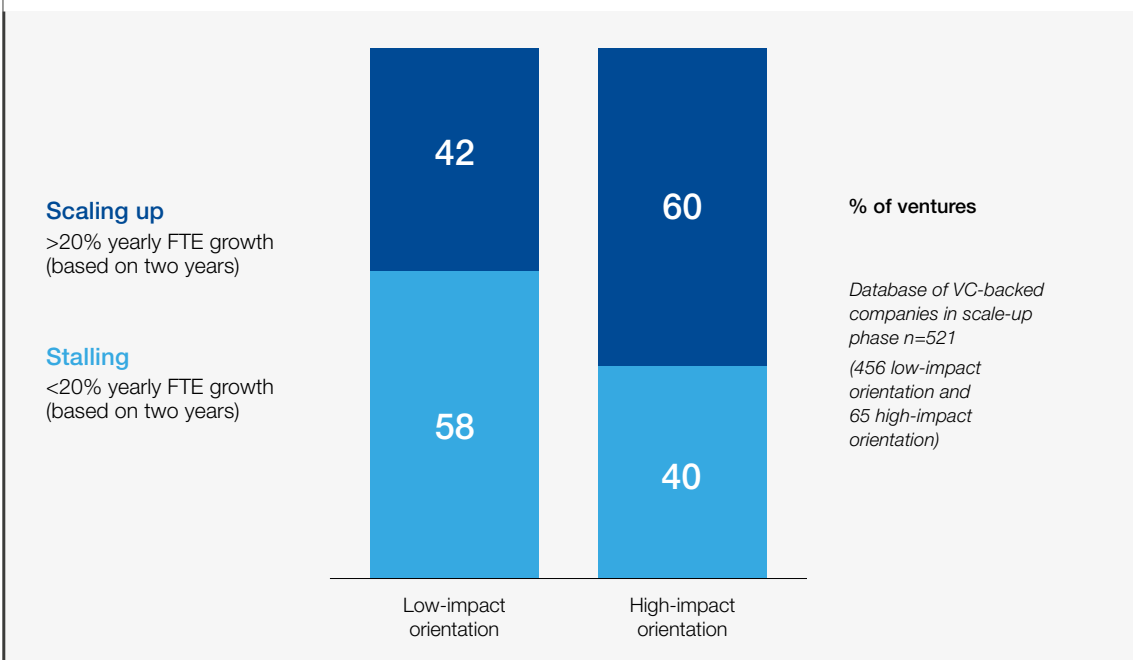
Winnow, a circular scale up that deploys AI technology to enable clients like IKEA and Hilton to reduce their food waste and related costs, espouses this in its marketing claim that its solution is: "Pioneering technology that halves food waste, with results the boardroom will love." Despite the boost that impact can bring, it is still no easy feat to cross the threshold from a start-up to a scale-up (see Figure 3: Scale-ups, impact and trailblazing).

BOX 3 Investing with impact

Investing in young, innovative firms with an attractive business model *and* a product or service that makes the world a better place, can support a superior investment class. This is an improvement over investing in commercial-only ventures as these have a lower probability of scaling up. An impact-first approach to scale-ups is superior

to philanthropy as investing in real businesses leverages customer orientation, entrepreneurial drive and focus on efficiency. Investing in the subset of these impact scale-ups that are trailblazers further elevates the game: it brings "investing for impact" within reach.

FIGURE 2 Impact orientation as a success factor for scaling up



Source:
ScaleUpNation Research

Crucially, scale-ups are not *just* larger start-ups, but the result of a major transformation from entrepreneur to chief executive officer, from informal scrum to well-organized enterprise, and from a first minimum viable product launch to efficient and convincing product delivery at scale (see "Scale-ups, impact and trailblazing" infographic). To become a purpose-driven scale-up requires many success factors to be in place: a compelling vision, a competitive edge, delighted customers, a large market, a scalable business model, an innovation

pipeline, a clear sales focus, production efficiency, ongoing R&D, a strong performance culture and an experienced, entrepreneurial leadership team with a learning mindset and an appetite for serendipity.¹²

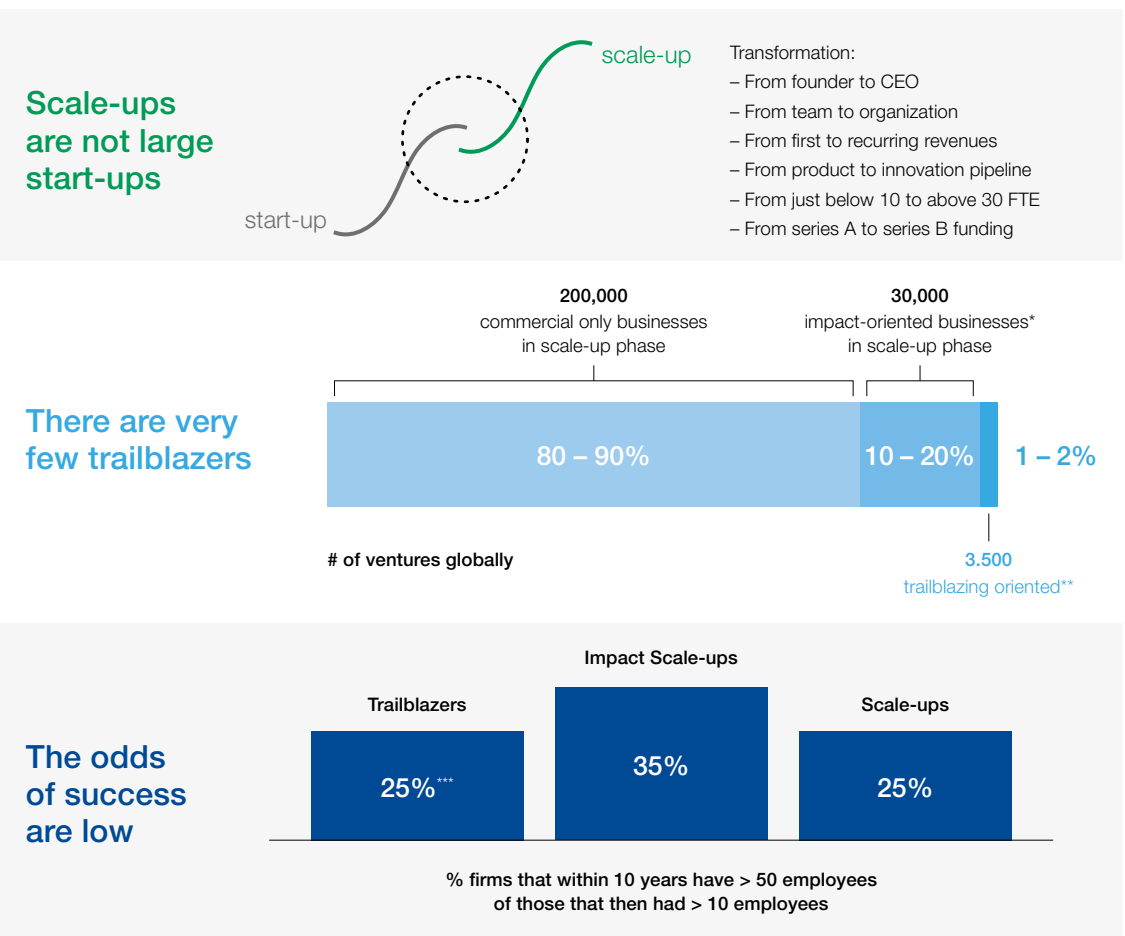
Scale-ups that have a lockstep model grow their impact by expanding their market share. Therefore, their positive societal impact is directly tied to their growth. Trailblazers increase impact beyond the size of their operations by enacting strategies to shift the broader marketplace.

1.3 The need for more circular trailblazers

Entrepreneurial and intrapreneurial innovators alike lament that scaling up a new idea is challenging. Enacting a strategy aimed at impact beyond the scale of their business is even harder. Being a trailblazer requires additional time and resources, especially at the leadership level. In addition, trailblazers are not always appreciated by ecosystem partners as they are sometimes seen as upsetting the status quo or distrusted for perceived selfish intent.

Our analysis shows that only one in 10 impact scale-ups currently enacts a trailblazing strategy, and that out of all companies in the scale-up phase, only 1% to 2% percent enact a trailblazing strategy.¹³ This means that worldwide, there are only 3,500 young, impact-oriented companies actively aiming to change their industry (see “Scale-ups, impact and trailblazing” infographic).¹⁴ The pool of active circular trailblazers is currently small.

FIGURE 3 Scale-ups, impact and trailblazing



Source: Dealroom, ScaleUpNation Research

Notes: * Defined as for-profit businesses that provide a product or service, which contributes positively to the SDGs

** Defined as impact-oriented businesses in scale-up phase that enact trailblazing strategies

*** Insufficient data: assumed to be lower than for impact scale-ups

Founders and chief executive officers of trailblazing businesses have significantly more entrepreneurial and overall professional experience than those of other impact scale-ups.¹⁵ Still, the odds of success are low. Although trailblazers can rely on hard-won expertise and connection, the additional effort and resources needed to enact a strategy aimed changing the entire industry is likely to bring their chances of successfully scaling up throughout the scale-up phase back down to the average level of about 25% (see “Scale-ups, impact and trailblazing” infographic).¹⁶ On top of this, even though scaling up their own organization and market share will position them well for their trailblazing activities, actually triggering an entire industry to change their ways will be something

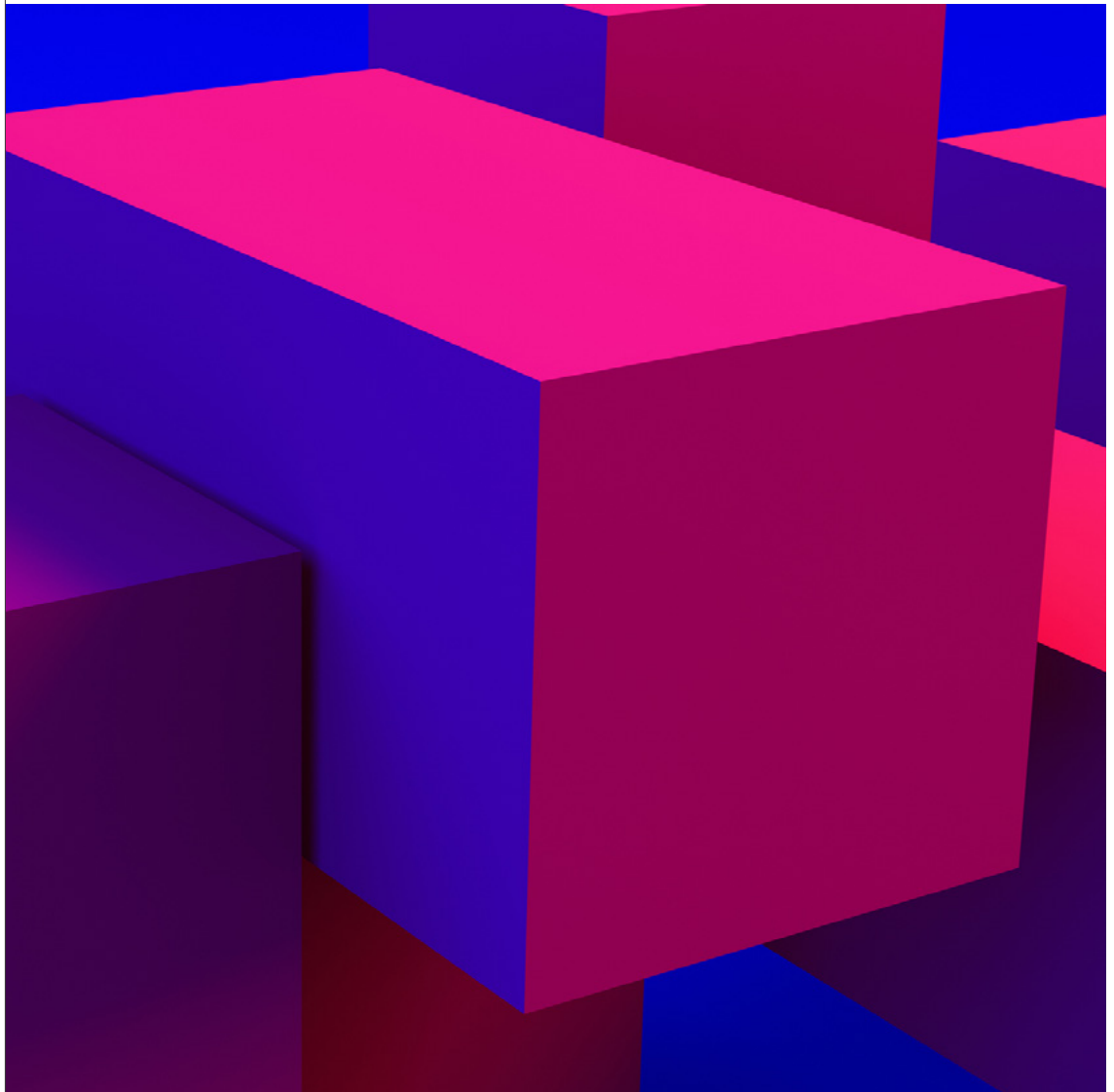
only a few impact scale-ups enacting a trailblazing strategy will accomplish.

Despite the low odds of success, the potential of circular trailblazers for huge impact makes them our best bet for the transition to the circular economy. Start-up and scale-up valuation relies on future potential, not the simple extrapolation of current revenue or cash flow. Similarly, the value of trailblazers lies in their potential to change an entire industry, not merely in the results they have already achieved. We need more impact scale-up management teams, investors, corporate partners and innovation enablers to start seeing the potential of circular trailblazers to trigger systems change and work together to bring it to life.

2

Tactics for trailblazing

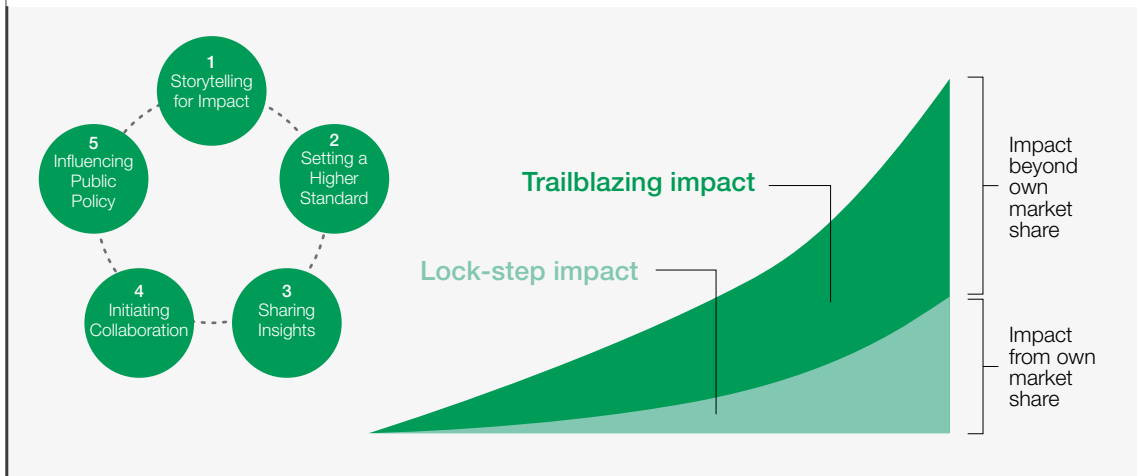
Five key strategies help trailblazers create impact, which is not possible through lockstep growth alone.



Circular trailblazers set out a clear strategy of achieving commercial growth and affecting systems change. In addition to impact scale-up success factors,¹⁷ this report identifies five

trailblazing tactics that expand circular economy impact: 1. Storytelling for impact; 2. Setting a higher standard; 3. Sharing insights; 4. Initiating collaboration; 5. Influencing public policy.

FIGURE 4 Tactics for trailblazing impact



2.1 Storytelling for impact

Storytelling is the most effective way to merge meaning and emotions. We know this instinctively, thanks to a lifetime of listening to stories in the form of books, fables, movies, lyrics and the sharing of life events. Opting for direct messaging (stating that business needs to work in such a way, or outlining what values drive a company's mission), can lose an audience's trust or interest because these types of messages fail to connect with audiences. In some cases, audiences don't appreciate being told what to believe, won't follow the logic and could even disagree with the conclusions. True storytelling goes beyond "because I said so," and connects on a universal, human level.

Trailblazers use high-leverage storytelling opportunities to attract public attention and raise awareness about an issue, including media campaigns, public speaking, events that trigger broad attention to an issue, and opportunities to educate customers, such as via blogs, workshops and training programmes. For instance, Dutch circular mobile phone manufacturer Fairphone shares the stories of its circular solutions and efforts to change the industry by raising the voices of internal and external change-makers through blogs, podcasts and at events. Another circular trailblazer, Mud Jeans, uses organic and recycled cotton, and invites customers to become brand ambassadors to spread the word about its mission to change the denim industry.

2.2 Setting a higher standard

Circular trailblazers set new standards for their product category by offering a 10 times better product or even creating new categories altogether. The standard is set once customers start buying the product at volume and praise it. Incumbents will initially try to protect their existing product offering, but as scale-ups continue to grow and do so at a positive product margin, older businesses follow by launching their own versions of the new standard.

Disruptive innovations initiated by trailblazers face initial resistance from incumbents that see them as a threat and can also create suspicion among academics, NGOs and philanthropic

foundations. "When people see that you are successful commercially, they think that you are only here for the profit," explains Pablo van den Bosch, Founder of Dutch circular construction materials platform Madaster.

So trailblazers need to not only prove their product, but also their integrity and legitimacy. In this, actions speak louder than words. For instance, Polymateria, is setting a higher standard for tackling plastic waste with its innovative biodegradable solution for conventional plastic packaging. Its offer comes with a "recycle by" date, and they involve the general public in its #RecycleBy campaign.

Such efforts allow all stakeholders to experience the company's commitment to sustainability.

Transparency underpins integrity and legitimacy. Trailblazers have nothing to hide. They are working towards a better future and are transparent as to how their product road map will lead to better

solutions over time. For example, Waste2wear, a China-based producer of innovative textiles made from recycled plastics, uses blockchain technology to trace all its products. Such transparency naturally tracks with the values of the circular economy as these entrepreneurs trace the flow of their products through the circular loop.

2.3 Sharing insights

Trailblazers share their technological knowledge and intellectual property with other players in the industry. They recognize that it is more important to increase the pie than to increase only their share of it. From creative commons and open-source tools to commercial arrangements, such as commercial licensing or training and support services, trailblazers find ways to push the market with their

knowledge. They do this in a way that enables others to follow them towards a higher standard without compromising their competitive position.

For instance, Teemill, has made the circular supply chain of their own brand, Rapanui, open access by inviting other t-shirt brands to use their platform for real-time production after client orders come in.

2.4 Initiating collaboration

Trailblazers know they will not change their industry on their own. They build alliances with scale-up peers, multinationals, organizations within their value chain and throughout industries; and they collaborate with academia and non-profits. These collaborations help them combine resources for technology advancement, develop new industry standards and increase distribution and market access.

Collaboration with partners also helps circular trailblazers to clarify the financial, social and environmental value that their innovation

can deliver beyond their customers. Having outgrown the scale-up phase, former trailblazer Ginkgo Bioworks continues to pursue this strategy through partnering with incubator programmes such as Y Combinator and Petri.¹⁸

Trailblazers receive opportunities from large players to participate in or even orchestrate these collaborations. At the same time, they need to have in-house capabilities (e.g. technical expertise) to be credible as well as an understanding of the complex decision-making and management processes within large corporates to be effective partners.

2.5 Influencing public policy

Making a new practice widely adopted in the industry often requires public policy changes, but enacting policy reform is an enormous undertaking for any organization, much less a scale-up. Trailblazers influence favourable conditions for systems change by building consortiums and advocating for policy changes, including regulation, certification, taxes, subsidies for beneficial practices, fines to restrict harmful practices or pricing of externalities (such as CO2 credits). By pushing through a change that enables their business, a trailblazer can pave the way for large and small businesses to adopt more circular approaches.

For example, Outerknown, a US-based circular clothes brand, published a call to action for others

in the industry to join it in lobbying for preferential tariffs for benefit fibres (i.e. recycled, regenerated, reused and organic fibres).¹⁹ One step further along in the process of influencing public policy, Polymateria, provided the benchmark²⁰ for the new British standard for biodegradability.

Founders and chief executive officers of trailblazers operate in three worlds: the private sector, public sector and civil society. The chances of building an impact scale-up are best among those with an entrepreneurial background in the private sector. To influence public policies, however, these entrepreneurs will need to become well versed in the public sector too.

3

Ecosystem support

Circular scale-ups need supportive innovation ecosystems to undertake trailblazing tactics.

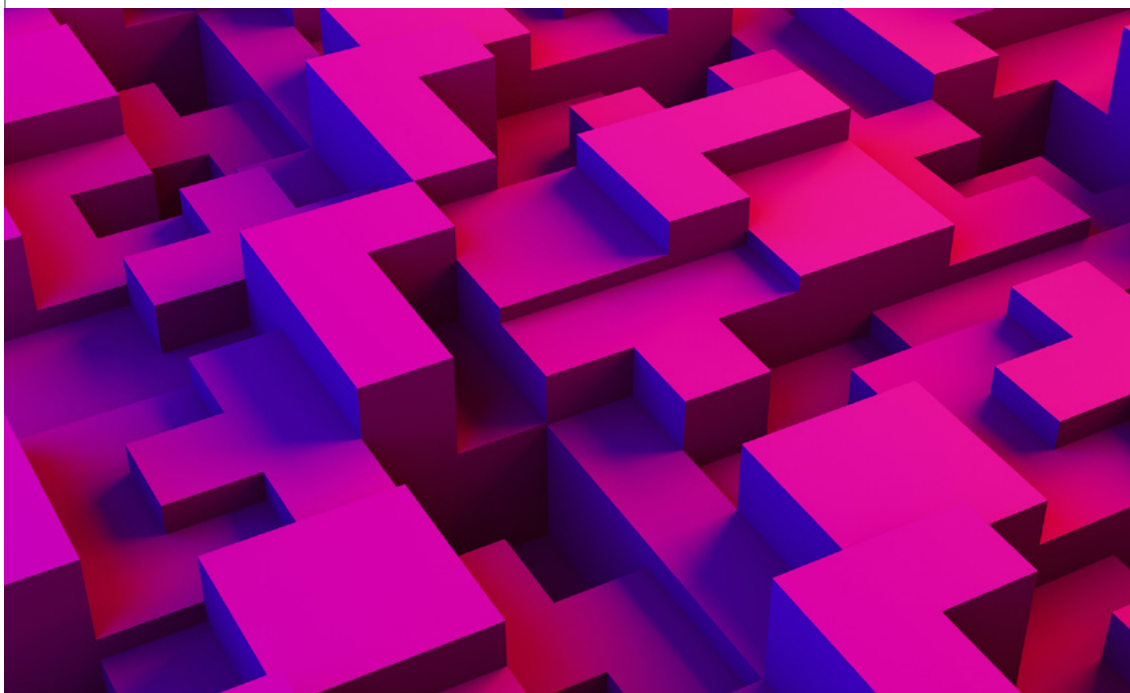


In this context, *ecosystem* refers broadly to interconnected stakeholders and organizations exchanging knowledge and value, each with their own role in the greater whole. No one, central party controls the ecosystem, but rather, it is mutually nurtured and supported for collective health. Trailblazers need to operate in supportive ecosystems to scale up their innovative circular solutions.

As impact scale-ups, trailblazers have proven product-market fit and are fast-growing commercial

companies. This report identifies four elements of supportive ecosystems to help trailblazers achieve impact beyond their size of business:

1. Platforms for storytelling
2. Knowledgeable investors
3. Consultative policy-makers
4. Market connectivity



3.1 Platforms for storytelling and partnership

Trailblazers need to be seen and recognized as such within their industries. Prizes, awards, notable clients or investors, or digital platforms like [UpLink](#) showcase trailblazers for their activities and help them build supportive networks.

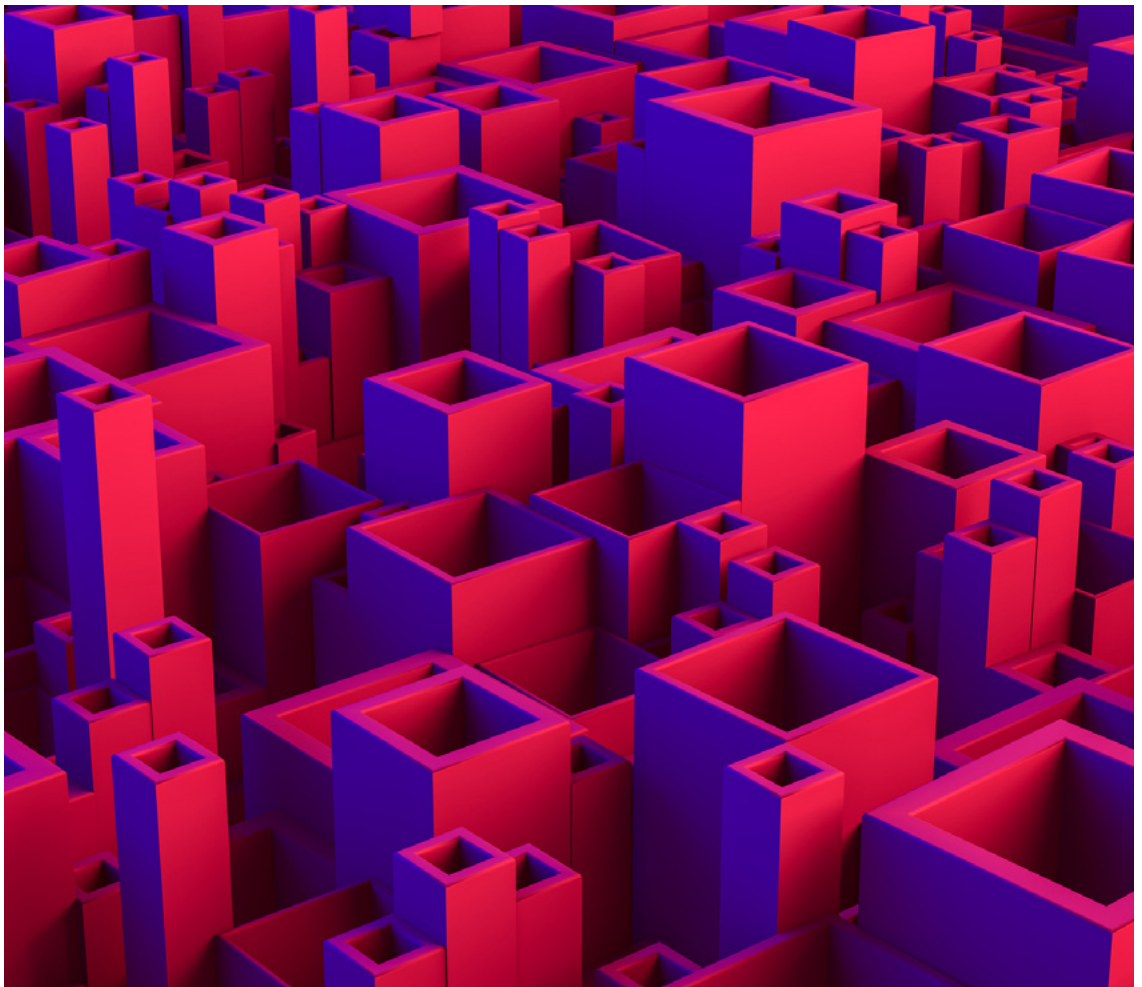
Innovation ecosystems need to create opportunities for trailblazers to tell their story and connect with customers and investors as well as captains of industry, associations, world leaders, policy-makers, large NGOs and grant giving foundations. Credibility is invaluable in building brand reputation and inspiring others in the industry to follow their lead.

3.2 Knowledgeable investors

Trailblazing can be seen as the holy grail for investors looking to enable systems change. Trailblazing is, however, a strategy with a long-term horizon and is high risk, making it a tough sell for Venture Capital investors. At the same time, foundations can be uncomfortable financing enterprises with a commercial business model.

Investors that recognize the high bar trailblazers face and plan to support them through the

journey are best poised to support circular trailblazers – patient capital. Trailblazers find this most readily in boutique investment firms like Circularity Capital, that have aligned values and understand the challenges circular impact scale-ups are facing. Trailblazers also use storytelling and collaboration with their competitors to communicate their core needs with decision-makers at large financial institutions.



3.3 Consultative policy-makers

Circular trailblazers need avenues to engage with public-sector decision-makers who are willing to listen: an invitation for advice or platform where their input is valued. For example, the United Arab Emirates has formed

a national Circular Economy Council made up of senior public, private and civil society leadership, which actively prioritizes innovation and creates a platform for trailblazer input.

3.4 Market connectivity

Trailblazers introduce breakthrough innovations and continually improve quality and cost competitiveness as they scale up. Throughout this evolution, they depend on like-minded customers and partners who are willing to buy into the future potential of the innovation and who are excited to make introductions or even co-create.

For example, a small team within Unilever responsible for collaboration with scale-ups supported a Dutch data company Orbisk that develops solutions for food surplus to save resources and increase sustainability. The circular scale-up now has a potential to reach 95% of kitchens in the world through Unilever's customers.

Conclusion:

How to support circular trailblazers

What can you do to accelerate the circular economy transition and help trailblazers?

Circular trailblazers are a highly valued and valuable subset of innovators with huge ambitions and potential. This paper is an early effort in gathering and developing knowledge on circular trailblazers, effective trailblazing tactics and the core supportive elements needed in the ecosystem.

Trailblazers can benefit from the same support that any growing business needs, namely access to customers, talent, supporters and capital. As trailblazers undertake ambitions larger than their individual business growth, however, more targeted support for their trailblazing tactics and ecosystem needs can accelerate the circular economy and incentivize more businesses to undertake trailblazing tactics.

Knowledge of the tactics of trailblazing and trailblazers' critical needs is still emergent, and more empirical research is needed to identify the practices that consistently generate impact. From what we know now, market actors can support trailblazers in the following ways.

Corporate partners can advance trailblazers by becoming their ambassadors, like-minded customers and innovation partners. In doing so they can stay ahead of the game and push the development of circularity together by co-creating solutions, scaling up the reach of the solution, lending credibility and inspiring more industry followership. Inclusive support includes stimulating trailblazers to also serve competitors and bringing scale-ups into standard-setting consortia. The role of inclusivity is particularly

important in furthering the circular economy: closing the loop requires all actors to participate.

Innovation enablers (scale-up accelerators, universities, governments) can pave the way for solutions that have trailblazing potential. This can be achieved by advancing legitimacy of trailblazers through public recognition or through setting up circular innovation support activities through initiatives like [Scale360°](#). Another route is advising and coaching trailblazers and facilitating business partnerships. Finally, government can help trailblazers by listening and making sure trailblazers are included in policy changes to support the circular economy transition.

Investors can play a crucial role in systems change by financing trailblazers with patient capital and knowledgeable support. Their support can take different forms throughout the investment process. In due diligence, it means applying the appropriate selection criteria, i.e. scale-up success factors and trailblazing potential. As portfolio support, it means earmarked financing to implement trailblazing activities, and making more patient capital available, as trailblazing impact can take much longer than the three to five year average holding period for classic venture capital. Portfolio support may also mean adapting success indicators and impact KPIs to include industry change metrics instead of only company metrics. At exit, it means taking a broader view of strategies, aiming not for the highest financial value alone, but for the largest leverage towards a systemic change.

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13. These results are based on our analysis of a set of 1,711 Dutch organizations in the scale-up phase throughout all industries found in Crunchbase, from which we developed a database of 225 impact-oriented organizations in the scale-up phase in four industries (i.e. more than 13% impact oriented), 23 of which enacted a trailblazing strategy (1 trailblazing oriented in 10 impact oriented). In addition, our analysis of 521 venture backed-companies showed 65 (12.5%) with high-impact orientation.
14. 1.5% of the 235,172 companies in the scale-up phase worldwide found in Crunchbase.
15. This is based on our analysis of 30 trailblazers (impact scale-ups pursuing a trailblazing strategy) and 30 matching impact scale-ups (with an offer that shows similarity to that of the trailblazer in terms of solution or societal problem addressed, yet without enacting a trailblazing strategy). Entrepreneurial experience is 5.5 years on average for founders/chief executive officers of trailblazers and two years for founders/chief executive officers of the matching impact scale-ups (this difference is significant at the 95% level). Overall professional experience is 20.6 years on average for founders/chief executive officers of trailblazers, and 14.9 years for founders/chief executive officers of the matching impact scale-ups (this difference is significant at the 99% level).
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Appendix

BOX 4

Methodology

This white paper is based on research by ScaleUpNation and the World Economic Forum. The results are derived from our analysis of a literature review, interviews, databases, workshops and a survey.

Step 1: Research on trailblazing

The ScaleUpNation research into scale-ups and trailblazers was supported by Goldschmeding Foundation and included a review of the academic and practitioner literature, 40 interviews with impact scale-up chief executive officers and experts, a reflexive dialogue with five chief executive officers of trailblazers and database reviews of more than 3,500 organizations in the scale-up phase (including – partly overlapping – databases of 3,585 EU-based deep technology companies in the scale-up phase, 1,711 Dutch companies in the scale-up phase, 521 Dutch venture-backed companies, and 30 trailblazers from throughout the world and their matched pairs of impact scale-ups with similar offers). Next to being used as the basis of the current white paper, the findings of this research are translated into papers, training programmes and due diligence tools.

Step 2: Workshops on circular trailblazing to deepen understanding

To move from trailblazing to circular trailblazing in specific and from a focus on trailblazers to include elements of ecosystem support three workshops were organized by World Economic Forum and ScaleUpNation with circular trailblazing experts. In these workshops emerging insights from the research by ScaleUpNation were discussed to identify the success factors and critical needs of trailblazers in the circular economy.

Step 3: Surveys among experts to validate results

A survey based on the results of the research and the workshops was distributed among a wider group of circular experts and the founders/ chief executive officers of circular trailblazers to verify the results. The results from 25 respondents confirmed the importance of the success factors and critical needs identified for circular trailblazers.



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