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How growth can help Europe's companies face the coming economic crisis

CEOs can draw on the region's spirit of innovation to recover revenues, and even grow, after COVID-19. It'll take some big bets.

by Philipp T. Ernst, Matthias Evers, Ivan Ostojic, and Sebastian Stern

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The great social imperative of the COVID-19 human crisis is the need to both save lives and protect livelihoods. The threat to both has become increasingly clear: too many people are still suffering and dying—though, at this writing, according to the European Union Centre for Disease Prevention and Control, "the initial wave of transmission has passed its peak."[1] For businesses, however, the threat still looms large. The longer doors are shuttered and workers remain locked down, the greater the risk of severe economic distress. The question for business leaders is how to emerge from the crisis with fortitude, recover revenues, and accelerate growth.

That's one area where Europe may be well positioned to thrive. The innovative spirit once responsible for blockbuster inventions like the automobile, jet engine, computer, television, and the worldwide web responded quickly to the current healthcare crisis. Bosch Healthcare Solutions[2] developed a fully automated molecular COVID-19 test, inventor and entrepreneur Sir James Dyson designed an innovative ventilator for coronavirus patients in just ten days,[3] and a Spanish consortium repurposed its 3-D printers to make emergency respirators.[4] And with the region's unique innovative assets and ideas, and its long-standing commitment to research and development as a source of differentiation, so much more is possible.

If there's an impediment to that promise, it's the region's ticklish aversion to the kinds of big bets needed to bolster an economy reeling from the pandemic. Once the home of entrepreneurs who started companies that went on to achieve global dominance—including Allianz, BP, Daimler, Royal Dutch Shell, and Volkswagen—the region today struggles to launch and scale up new ventures. No European company established in the past 30 years has yet joined the ranks of the world's top 100 companies by market capitalization, compared with three in China and seven in the United States. SAP, established in 1972, was the last European entrant to the global top 100, and all top 100 European companies are more than 30 years old.

In this article, we examine why Europe lags on commercializing its ideas, review its assets for innovation and future growth, and consider how executives can build on the assets to meet the fundamental economic challenge of the pandemic crisis.

Why Europe lags at commercializing innovation

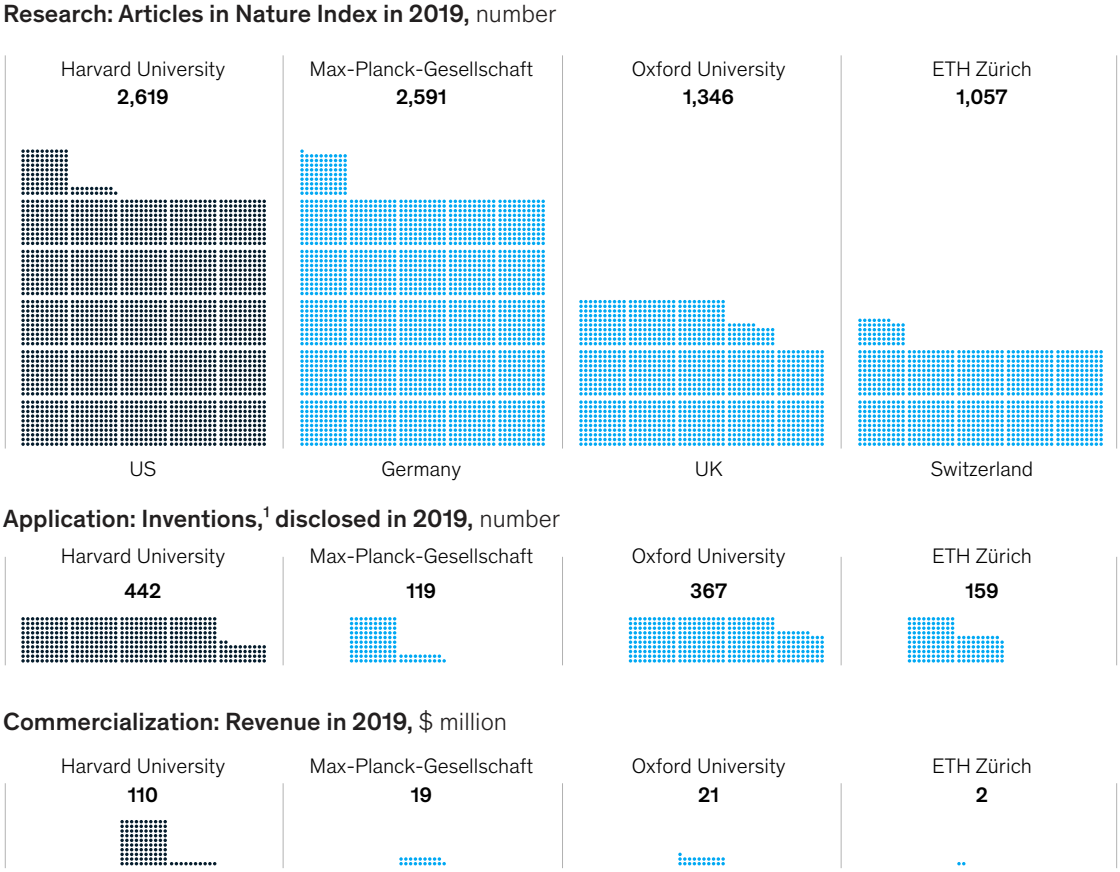
A lot of good ideas that originated in Europe, in areas such as big data, robotics, and artificial intelligence (AI), for example, are often not scaled at all or adopted and brought to market by foreign investors. That can reduce the impact and return of the inventions or take them out of the region, which can work against the kind of regional growth Europe will need in the wake of the pandemic. And generally, European academic institutions are more successful in research than they are in application and monetization (Exhibit 1).

So why has Europe lagged when it comes to commercialization? Both cultural and structural impediments take a toll. Culturally, the mindset of many Europeans is more conservative than that of most Americans and many Asians. Europeans are deeply devoted to preserving the continent's rich heritage over big, society-defining invention. Generally, risk taking is not valued nearly as much as it is in the United States or China. While many parts of the world see trying, failing, and learning from failure as a virtue, Europeans tend to play it safe. In a recent survey, European respondents said that they consider sustainability, fairness, and equality to be more important than the sheer speed of innovation.[5] And according to a study conducted by the European Central Bank, European investors are less

[1] *Rapid Risk Assessment: Coronavirus disease 2019 (COVID-19) in the EU/EEA and the UK– ninth update*, European Centre for Disease Prevention and Control, April 23, 2020, ecdc.europa.eu.
[2] Joern Ebberg, "Combating the coronavirus pandemic: Bosch develops rapid test for COVID-19," Bosch, March 26, 2020, bosch-presse.de.
[3] Sir James Dyson, "Ventilator update," Dyson, April 24, 2020, dyson.co.uk.
[4] Carlota V., "Medically approved emergency 3D printed ventilator goes into production," 3-D Natives, March 23, 2020, 3dnatives.com.
[5] "Innovating Europe: CEOs need to take the lead on bold missions to foster innovation at scale," McKinsey & Company, January 2020, plateforme-attractivite.com.

Exhibit 1

Europe leads in research but lags behind in application and commercialization.



[1] An invention disclosure is a confidential document written by a scientist or engineer for use by a company's patent department, or by an external patent attorney, to determine whether patent protection should be sought for the described invention.

Source: Nature Index; annual reports.

willing to take risks and hold fewer risky assets than their peers do in the United States.[6] "Europe has to do more, and move faster, if it doesn't want to be left behind," as Margrethe Vestager, executive vice president of the European Commission for a Europe Fit for the Digital Age, sums up the challenge.[7]

Structurally, one of the biggest obstacles is the European Union's high degree of market fragmentation in many industries. In terms of population, the region is nearly twice the size of the United States. But while the United States is a single market, Europe comprises dozens of countries that all have their own legislative and regulatory parameters. For example, by our calculation there are 81 value-added-tax (VAT) regimes in the European Union alone, a number likely to grow as the United Kingdom begins implementing its own priorities. The EU legislation that governs labor, competition, and bankruptcy is no less complex and can be a deterrent for entrepreneurs. In a recent McKinsey survey, European start-up founders mention the burden of regulation and administration as one of their biggest woes.[8]

[6] For more, see Karim Bekhtiar, Pirmin Fessler, and Peter Lindner, *Risky assets in Europe and the US: Risk vulnerability, risk aversion and economic environment*, European Central Bank, April 2019, ecb.europa.eu.
[7] Alexander Armbruster, Niklas Záboji, and Uwe Marx, "Weniger Innovationen trotz Digitalisierung" [in German], *Frankfurter Allgemeine*, Febrary 21, 2020, faz.net.
[8] *EU startup monitor*, European Commission, 2018, startupmonitor.eu.

Another obstacle to innovation-led growth is the relative shortage of venture capital in Europe (Exhibit 2). From 2017 to 2019, for example, there were roughly twice as many venture capitalists in the United States as there were in Europe. In the same time, total venture capital in Europe increased from $18 billion to $36 billion,[9] compared with $86 billion increasing to $132 billion in the United States, keeping a significant gap.[10] When it comes to later stages of financing, the gap is even more dramatic. In Europe, there is a total of $6.7 billion invested in later-stage funding, compared with $39 billion in the United States in 2017. At European start-ups, the share of foreign capital jumps from 17 percent in the early stage (financing round A) to 70 percent in later stages. Because of the high degree of market fragmentation, valuation of new ventures is also more conservative in Europe than in more homogenous markets. In the United States, privately held start-up companies valued over $1 billion, known as "unicorns," were valued at an average of 46 times their annual revenue in 2019, compared with only 18 times for those founded in Europe.[11] Over the five years from 2015–19, Europe's share of global unicorns had stagnated at around 10 percent, while China was able to double its share from 15 to 29 percent since 2015.

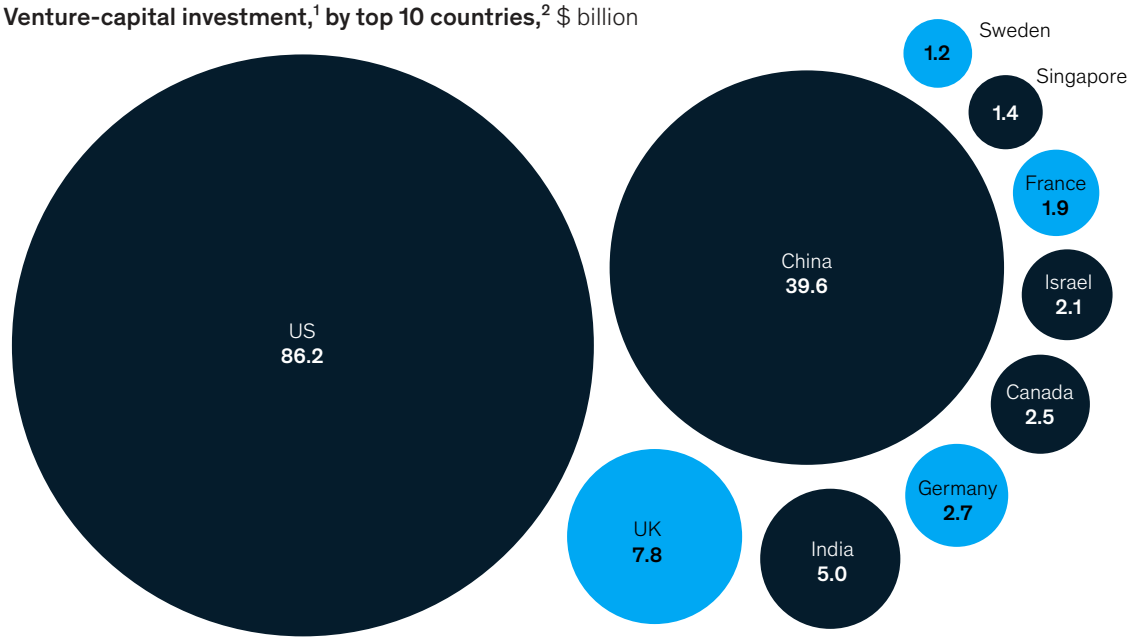
Europe's assets for growth through innovation

Europe's innovative spirit stems from its strong foundation of research and invention. The region leads the world in public R&D spending and accounts for a quarter of global industrial R&D spending. Its educational system includes 31 of the

Exhibit 2

Compared with the United States and China, venture-capital funding in Europe is low.

Venture-capital investment,[1] by top 10 countries,[2] $ billion



[1] Including pre-seed and seed investment.
[2] Analysis considered only countries with at least 1 venture-capital investment deal reported in 2017.
Source: Fuel by McKinsey

[9] Sophia Kunthara and Gené Teare, "European venture report: VC dollars rise in 2019," Crunchbase news, January 14, 2020, crunchbase.com.
[10] "US venture capital investment surpasses $130 billion in 2019 for second consecutive year," PR Newswire, January 14, 2020, prnewswire.com.
[11] Sophia Kunthara and Gené Teare, "European venture report: VC dollars rise in 2019," Crunchbase news, January 14, 2020, crunchbase.com.

Large parts of the economies of highly dynamic countries around the world still rely on products masterminded, engineered, and designed in Europe.

world's top 100 science and engineering universities as well as five of the world's leading research institutions. The result is an impressive talent pool. For example, Europe is home to 5.7 million software developers, compared with 4.4 million in the United States.[12] And European authors account for nearly a third of high-quality scientific and scholarly papers, such as those published in *Nature*. Oxford University alone adds more than five new inventions or developments to its innovation portfolio each week. Indeed, large parts of the economies of highly dynamic countries around the world still rely on products masterminded, engineered, and designed in Europe.

According to our analysis, these fundamentals are mirrored by global leadership of European companies across many sectors that rely on innovation:

— **Automotive.** One in two premium cars sold in the United States is European. In China, the share is even higher. Top brands include Aston Martin, Audi, BMW, Ferrari, and Mercedes.

— **Specialty chemicals.** Half of the annual revenues of the world's top 20 players are generated by European players such as BASF, Evonik, Henkel, and Solvay.

— **Food and beverage.** Almost 60 percent of the annual revenues of the world's top ten players are generated by European companies such as Anheuser-Busch InBev, Danone, Diageo, Heineken, and Nestlé.

In each of these sectors, European companies account for more than 30 percent of the market capitalization of the world's top 30 companies. Across sectors, 48 of the world's 200 biggest traditional companies in terms of market capitalization are European.

Meeting the post-pandemic economic imperative

There is no doubt that Europe has room for improvement on the infrastructural and regulatory fronts, and the European Union has been taking steps in this direction. For example, former EU President Jean-Claude Juncker appointed First Vice President Frans Timmermans to improve the coordination of regulation across Europe.[13]

But even while harmonization is still in process, there is significant room for growth through innovation—including a number of white spaces in Europe that have been neglected by companies and investors so far. In the context of the current crisis, for example, remote medical solutions suddenly seem much more important. The pandemic adds

[12] Jacques Bughin, Bernhard Gürich, Jan Mischke, Pal Erik Sjatil, Sven Smit, and Eckart Windhagen, "Reviving innovation in Europe," October 2019, McKinsey.com.

[13] Specifically, the mandate of the vice president is to ensure that every legislative or regulatory proposal respects the principles of subsidiarity (no EU intervention when an issue can be dealt with effectively by EU countries) and proportionality (EU action must not exceed what is necessary to achieve the objectives). For more, see "Better regulation," European Commission, ec.europa.eu.

to the impetus to take full advantage of innovative technology to drive faster responses to future crises and set the European healthcare system up for greater resilience. In addition, many European politicians are advocating to bring manufacturing of critical equipment back to Europe after decades of offshoring.[14] "There's a strong appetite from some governments to make sure this kind of shortage does not happen again," says one executive of a medical-equipment supplier. [15]

Another promising direction for innovation-led growth in the wake of the pandemic is digital health. A McKinsey study prepared in partnership with the German Managed Care Association (BMC) suggests that German healthcare providers and insurers could have saved up to 12 percent of their costs, or €34 billion, in 2018 alone if the German healthcare system had been fully digitized.[16] Frontrunners under the digital care act (DVG) have already introduced integrated nationwide electronic health records. In Estonia, for example, 99 percent of health data is digitized, 99 percent of prescriptions are digital, and all healthcare billing is electronic. Data integrity is protected by blockchain technology.[17]

Other examples of promising white spaces include space exploration, decarbonization, and cross-platform mobility. In these areas, there is a wealth of innovative ideas in Europe, but many of them have not been brought to market or scaled up so far, be it because of general risk aversity or a lack of funding. Corporations that take advantage of these opportunities will face less competition from venture-capital (VC) or private-equity (PE) investors than in other, more crowded sectors, such as e-commerce, telecommunication, or media and entertainment. Generally, the less established, less mature VC scene in Europe leaves more leeway for corporate investments in innovation than in the United States—if they have the right mindset to succeed.

Countries like the United States and China may be top of mind for investors, entrepreneurs, and corporate decision makers today. But past experience shows it can be risky to put all eggs in one basket. Across the world, there is growing concern regarding the protection of intellectual property as China tightens its cybersecurity regime.[18] And in the current crisis, companies are struggling to uphold their supply chains as suppliers of components and pre-products in many industries get back to business as usual.

Companies aspiring to achieve growth through innovation in Europe should pursue two complementary courses of action:

— build an **in-house innovation system** anchored by risk capital, entrepreneurial talent, and appropriate governance

— build **partnerships or consortia** to overcome fragmentation and take advantage of unique opportunities and structures in the European context

Building an in-house innovation system

The starting point for successful innovation-led growth is an ambitious goal. But ambition is not enough in an era of short decision cycles and fierce competition for talent. Turning innovative ideas into viable businesses also takes clear choices backed by sufficient funding, entrepreneurial talent, and appropriate governance. That allows companies to accelerate new business development and scale up prioritized applications.

Companies will need to align their risk-capital choices with their ambitions. In times of uncertainty, risk aversion tends to go up. And funds for innovation will be even scarcer in any postpandemic recession than they were before the virus broke out. But European corporations that still have deep

[14] Marshall Auerback and Jan Ritch-Frel, "Pandemic opens curtains on next economic model," *Asia Times*, April 4, 2020, asiatimes.com.
[15] Tom Simonite, "How decades of offshoring led to a mask shortage in a pandemic," *Wired*, March 29, 2020, wired.com.
[16] "Digitalisierung im Gesundheitswesen: die 34-Milliarden-Euro-Chance für Deutschland" [in German], mckinsey.de; and Steffen Hehner, Stefan Biesdorf, and Manuel Möller, "Digitizing healthcare—opportunities for Germany," October 31, 2018, McKinsey.com.
[17] "Healthcare," e-Estonia, e-estonia.com.
[18] Yoko Kubota, "American tech shudders as China cyber rules are expected to get tougher," *Wall Street Journal*, July 29, 2019, wsj.com.

Turning innovative ideas into viable businesses also takes clear choices backed by sufficient funding, entrepreneurial talent, and appropriate governance.

pockets can fill the gap left by VCs to support the commercialization and scaling of promising ideas in their field of interest and expertise. The time to act on the funding front is now, given that foreign VCs and growth-focused PE players are expanding their footprint in Europe. This has driven a narrowing of the later stage funding gap, with the number of large deals (>$100 million) increasing from 2 in 2015 to 14 in 2019.

Companies will also need to attract and deploy new entrepreneurial talent. CEOs should act now to build teams with the right, sufficiently broad set of experience, including internal innovation leaders ("intrapreneurs"), with a balanced set of traits and skills, including a bold vision, a spirit of collaboration, the willingness to learn, and the determination to see growth initiatives through to execution. Frameworks such as the Talent Wheel can be used to guide recruiting and people development. In particular, companies should consider hiring, or partnering with, serial entrepreneurs who have a track record of scaling up businesses. By our reckoning, 56 percent of Europe's top 50 start-ups, and 60 percent in the United States, respectively, are founded by serial entrepreneurs, highlighting the importance of experience and mindset for success. Since the entrepreneurial talent pool in Europe is smaller than in the United States, European corporations will have to shape a strategy and portfolio of businesses that draw entrepreneurs to unique challenges and opportunities. This is a question of governance—hiring the talent, investing in the training, and creating the environment for entrepreneurial talent to develop.

Finally, CEOs should act now to evaluate and redesign their governance systems and innovation culture to handle risk and identify ways to support high-risk, fast-growing projects. One option is to create independent innovation units, such as BP's Launchpad. Its mission is to build five billion-dollar businesses that tackle the energy challenge. More generally, corporate incentive systems should be adjusted to encourage and reward entrepreneurship, for example, by introducing stock-option remuneration policies. Given the constraints of large corporations in areas such as target setting and reporting, most organizations will need some form of "multispeed" model to balance the requirements of steady-state businesses with the needs of fast-growing new ventures (Exhibit 3). An example of a multispeed model is SAP's innovation ecosystem, comprising the Innovation Center Network, Venture Studio, and Fund & Foundry. Once a new venture reaches a certain size or a predefined threshold of profitability, it could switch track from "scale up" (top-line focus) to "steady state" (bottom-line focus).[19]

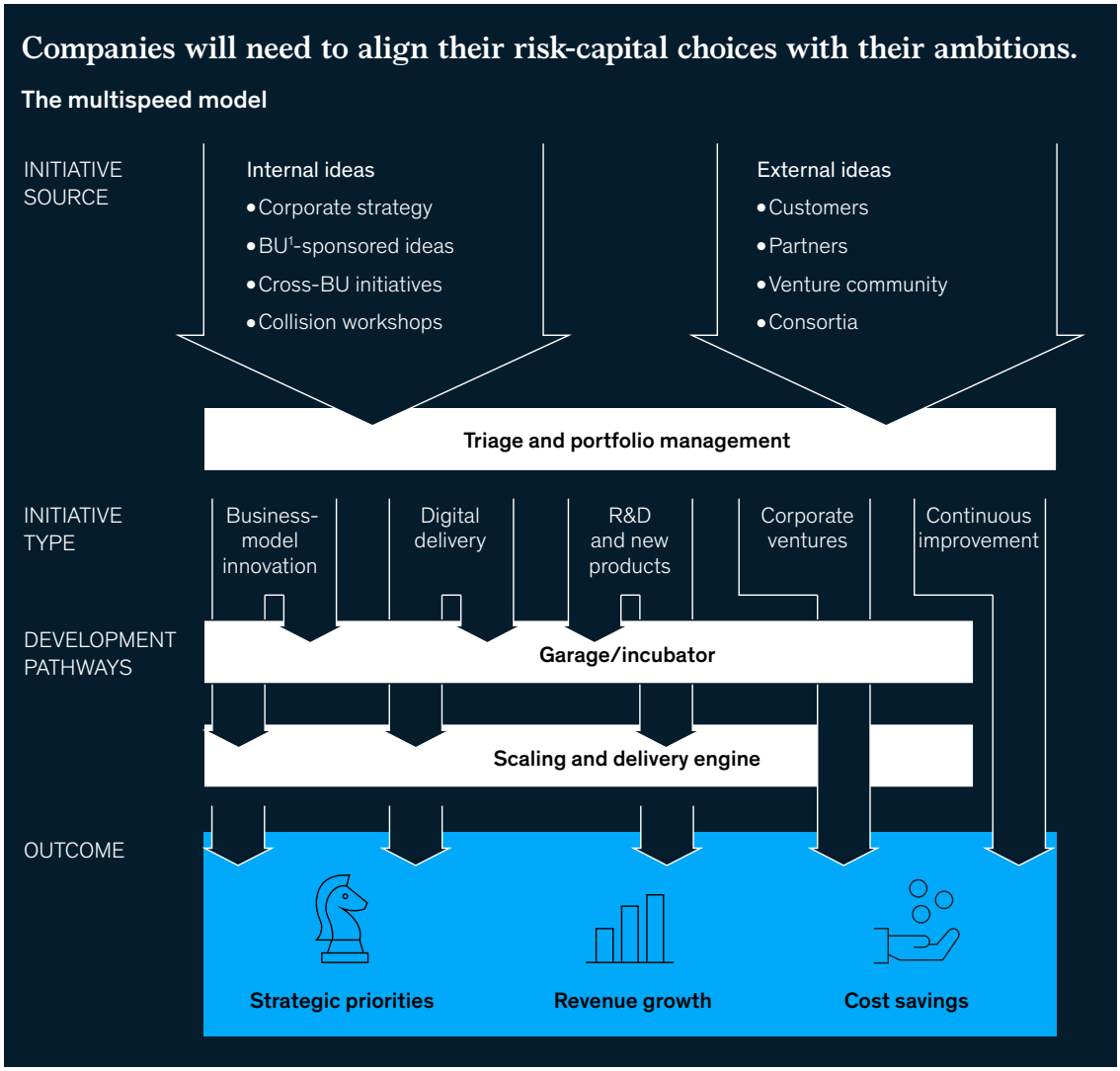
Building partnerships to overcome fragmentation

In Europe's highly fragmented market, cross-industry collaboration can help facilitate the region's growth. For example, there are 113 telco players across Europe, compared with only eight in the United States.[20] To overcome that challenge, CEOs should consider establishing joint ventures, form consortia, or pursue cross-industry projects, to foster development in promising areas that require substantial investments, or common standards, to come to fruition.

[19] SAP.io.

[20] "Bekanntmachung der Kommission über die Definition des relevanten Marktes im Sinne des Wettbewerbsrechts der Gemeinschaft" [in German], *Official Journal of the European Union*, December 9, 1997, eur-lex.europa.eu.

Exhibit 3



[1] Business unit.

One example of cross-industry collaboration at scale is the French biofuel consortium that comprises Airbus, Air France, Safran, Suez, and Total. The consortium provides an investment frame, aligns on key measures, and seeks to secure government support for its initiatives. Its aspiration to promote the production and use of sustainable airline fuel is a key lever to achieve the goal to reduce net life-cycle carbon emissions from air transport by up to 80 percent.[21]

Additionally, CEOs seeking to generate net new growth through innovation in Europe should partner with European academic institutions whose research lends itself to commercialization. European universities tend to focus on fundamental research, rather than application or commercialization. For example, US PhD holders are twice as likely to become founders as their European peers. To help close this gap, corporations should build bridges between the scientific community and free enterprise. One example in this field is the IMEC

[21] "Air industry leaders and fuel producers support sustainable aviation fuel in France," *Biofuels International*, January 27, 2020, biofuels-news.com.

hub for nanoelectronics and digital technologies. Headquartered in Belgium, IMEC convenes private companies, research facilities, and public institutions.

Finally, companies can also make use of unique EU funding and support structures. Pioneers of corporate innovation will be able to take advantage of public funding, including funds the European Commission had set aside previously for research and innovation.[22] In many countries, there are also dedicated national funds for specific areas of innovation. For example, France has set up a $13 billion investment fund to finance disruptive technology innovation. In Germany, the government has set aside €200 million annually (through 2024) for public investments to drive the implementation of the digital care act alone.[23] The Danish government has pledged up to 500 million krones annually (€66 million, or $72 million) for investments in green growth, focusing on sustainable mobility.[24] In Italy, the government is partnering with private investors to make €2 billion available to fund innovative small businesses and start-ups.

To recover from the economic fallout of the coronavirus pandemic, Europe will need to double down on growth. The region has no shortage of brains or innovation. What it needs is to have the heart and guts to bring innovative ideas to market and scale them into the businesses that will provide purpose and prosperity to future generations. We are convinced that companies blazing a trail to lead Europe out of the current crisis can count on the support of governments, business partners, employees, and customers alike.

[22] Innovation and networks executive agency, European Commission, ec.europa.eu.
[23] "Digital Healthcare Act: Driving the digital transformation of Germany's healthcare system for the good of patients" [in German], German Federal Ministry of Health, December 3, 2019, bundesgesundheitsministerium.de.
[24] *Energy agreement*, Danish Ministry of Climate, Energy and Utilities, June 29, 2018, en.efkm.dk.

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