



How Telcos can Unlock New Value Through Total Societal Impact

MARCH 2020

A large, stylized frame made of overlapping red and blue lines with a dotted texture surrounds a central image of a city skyline at dusk. The frame is set against a dark red background. The city skyline shows various skyscrapers and buildings, some with lights on, under a sky with soft pink and blue clouds. In the foreground of the city view, there are green trees and a road with light trails from cars.

Future
of Mobile



The GSMA represents the interests of mobile operators worldwide, uniting more than 750 operators with almost 400 companies in the broader mobile ecosystem, including handset and device makers, software companies, equipment providers and internet companies, as well as organisations in adjacent industry sectors. The GSMA also produces the industry-leading MWC events held annually in Barcelona, Los Angeles and Shanghai, as well as the Mobile 360 Series of regional conferences.

For more information, please visit the GSMA corporate website at www.gsma.com

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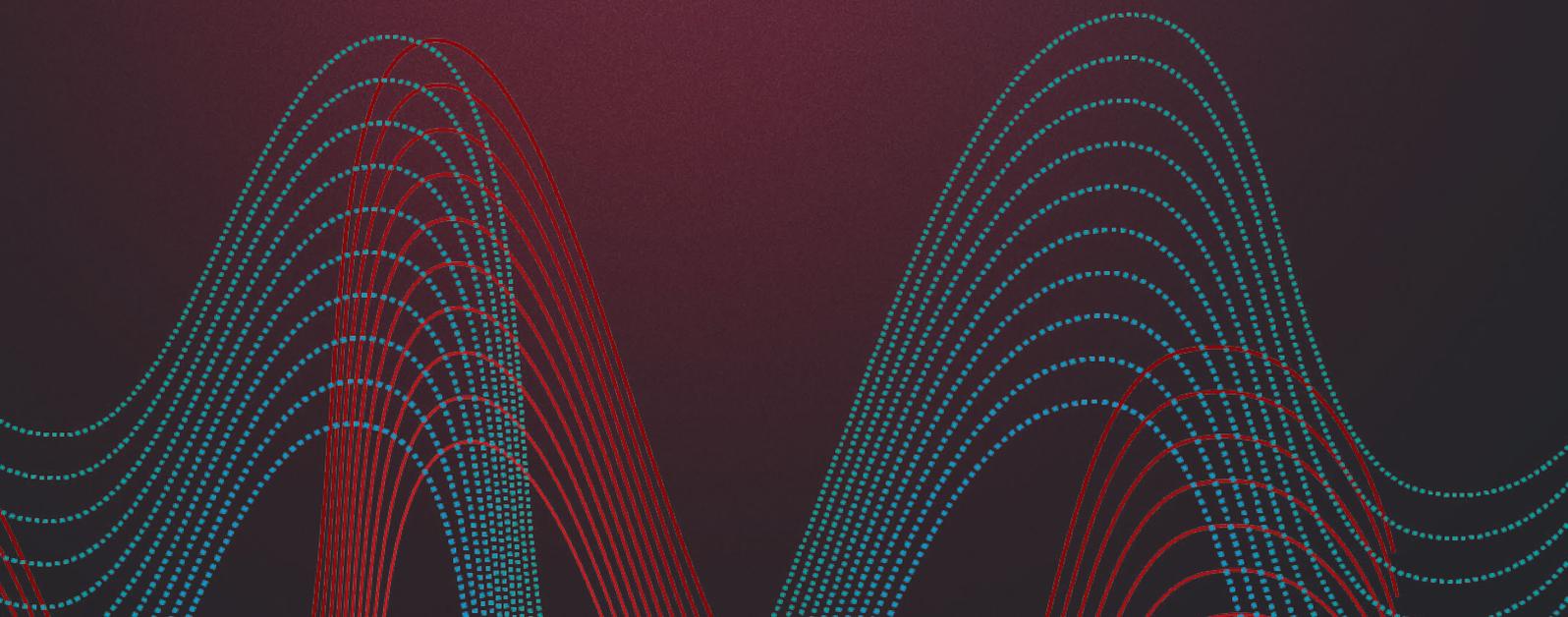


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As you navigate this report, please note that exhibits marked with a **red arrow** are designed to be **interactive**.

You are welcome and encouraged to click on the various visual elements of such exhibits to engage more deeply with the content.



Executive Summary

The coming decade affords mobile network operators a multitrillion-dollar opportunity. Because of their unique combination of core business, customer base, and capabilities, telcos can capitalise on broadening societal expectations for corporate purpose and performance to build new sources of revenue and business.

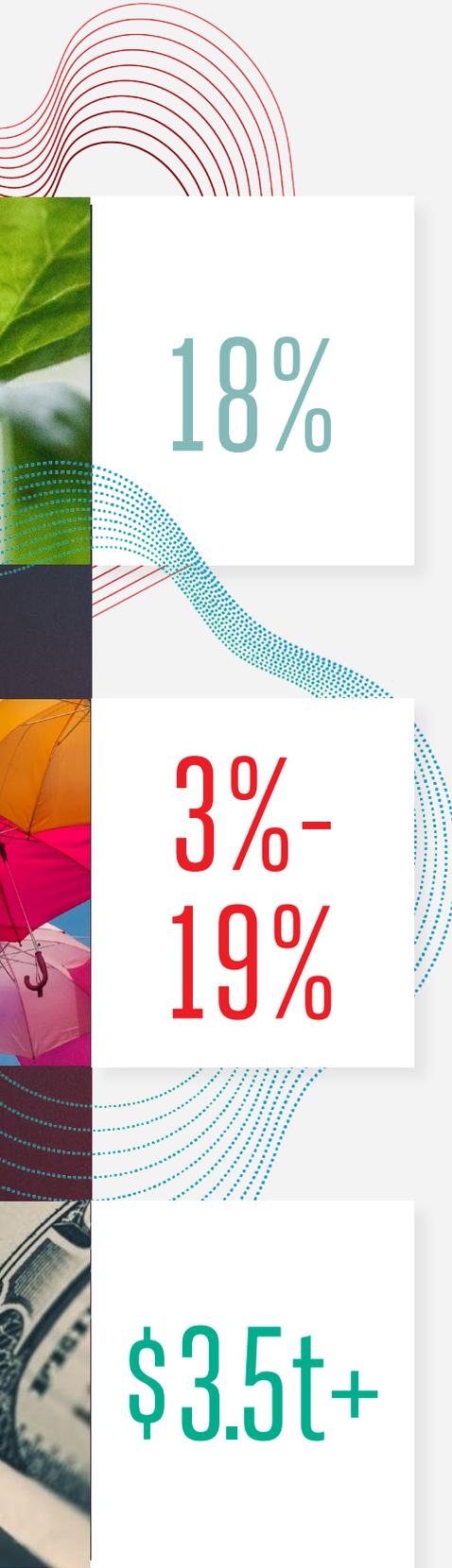
Many operators are already moving to manage their environmental, social, and governance (ESG) risks. Telcos can use their strengths and capabilities to score a double win—with customers and investors by helping companies in other industries address their own ESG issues. We have identified more than 50 such areas of opportunity. We also believe that telcos can use an ESG lens to pinpoint entirely new channels for growth. We highlight more than 20 opportunity areas spanning a half-dozen topics of major ESG relevance. While many of these opportunities are already under exploration by telcos, to capitalise companies will need to bring a new management focus to the effort (see below).

Boston Consulting Group (BCG) analysis shows that a company's total societal impact (TSI) can become an important consideration in valuation multiples today in many sectors and that investors have awarded top TSI companies multiples 3% to 19% higher than sector medians. To date, higher valuations have correlated primarily with factors that reduce ESG-related risks. Over time, however, we believe that investors will also recognise the upside of positive ESG performance on a company's longer-run competitive advantage and value. Investment advisers and managers are already developing data-driven tools that enable clients to create portfolios using a comprehensive set of ESG tools (including methodology, asset classes, and themes) and data on expected performance and ESG impact.



An increasing number of telco CEOs are keenly aware of the shift. “The role that telcos can play in creating new sources of value is very significant; we can utilise our assets to enhance social value as part of our core businesses,” said a senior leader of NTT DOCOMO. “We are entering an era where the value of a company won't just be measured in terms of economic or social performance, but also by its contribution to society,” said Stephane Richard of Orange. With their mix of providing basic connectivity and enabling major technological advances such as the Internet of Things (IoT), telcos are especially well-positioned to deliver value, and there are clear benefits for those that do (see Exhibit 1).

Future of Mobile at a glance



18%

Sustainable investing market is growing rapidly; ESG integration category grew 18% in the last two years

3%-
19%

valuation premium versus median peers for companies across sectors with strong TSI performance

\$3.5t+

opportunity for telcos to participate in by enabling other sectors with ESG challenges or entering new adjacencies



Telcos can create new value by executing a **three-stage** agenda:

- 1 **Establishing their own “license to lead.”**
Addressing material ESG topics, such as climate impact, data security, and digital inclusion, and communicating how they are improving, are essential first steps. Many operators are already demonstrating significant progress and success.
- 2 **Enabling companies in other industries to better address their ESG issues.**
Telcos can build new business models that leverage their strengths to tackle industry-specific ESG topics and deliver new solutions for others. Education, health care, and financial services are three fertile fields, but there are many others. This will drive innovation and diversify operators' business portfolios.
- 3 **Creating new businesses that address environmental and societal challenges.**
Telcos can establish ventures that leverage their capabilities to build products and services that take them into new markets and lead to additional innovation, diversification, and sources of financial opportunity.

Achieving this agenda will require telco managements to deliver on **five imperatives** for success:

- 1 **Bold vision and purpose.**
Companies need to articulate a vision and purpose that connects value creation with broader environmental and societal impact.
- 2 **Clear strategy.**
Companies can identify the most profitable, scalable, and high-impact opportunities that link to the value drivers of the business.
- 3 **TSI business model innovation.**
We have laid out seven avenues of sustainable business model innovation (S-BMI) with ESG impact.
- 4 **Partnerships and ecosystems.**
In addition to working with current customers—especially enterprise customers—to secure positions as valued partners on ICT matters, telcos will need to mobilise partnerships or entirely new ecosystems of players that combine to deliver the desired product or service and enable operators to own the customer relationship.
- 5 **New capabilities.**
Achieving success will require investment in new capabilities, talent, and technologies. It will also need to be supported by aggressive communication with investors, employees, customers, the public sector, and communities, specifying new goals and the metrics on which progress should be measured.

Introduction: A New Paradigm

A new paradigm is taking shape for business—faster than many anticipated. The defining expectation is this: good companies will deliver competitive financial returns in a manner that does not harm—and actually helps—the economic, social, and environmental ecosystem in which we all live.

Investors, consumers, business leaders, and others are all paying more attention to what constitutes a good company, a good investment, and a good leader. The concept of total societal impact (TSI) is ushering in [a new era with new benchmarks](#) for the [total benefit to society](#) from a company's products, services, operations, core capabilities, and corporate social responsibility initiatives, including the explicit decisions a company makes to adjust its core business to generate positive societal benefits.

Consumers were among the first to want “good products doing good.” Research in the US has shown that 73% of consumers are altering buying habits with the environment in mind.¹ Sustainable products account for about 50% of sales growth in the last five years.

Institutional investors are integrating ESG measures into their decision-making, and they are expecting companies to report on how they deliver on these metrics. In January 2020, the world's largest asset manager told company CEOs, “In the near future—and sooner than most anticipate—there will be a significant reallocation of capital. ... we believe that sustainable investing is the strongest foundation for client portfolios going forward.”²

Business leaders have taken note. Last August the US Business Roundtable, long an advocate of shareholder value as the primary corporate purpose, declared, “Each of our stakeholders is essential. We commit to deliver value to all of them, for the future success of our companies, our communities, and our country.” Telcos are taking their own steps. “We focus on a few key questions and ensure they are easy for our stakeholders to understand. How many jobs are being created? How many more farmers are now financially included? These simple yet insightful questions get to the crux of the value we create,” said Bolaji Akinboro, co-founder of Cellulant.



1. Unpacking the Sustainability Landscape, Nielsen.
2. A Fundamental Reshaping of Finance, BlackRock Investment Management Company



Sustainable products account for about **50%** of **sales growth** in the last five years

The rising importance of TSI presents a significant opportunity for network operators, even more so than companies in other industries. Telcos' unique mix of core business (providing connectivity), customer base (most of the world's consumers and businesses), and capabilities (ICT skills and technology) puts them in an unmatched position to help companies in other industries address their ESG issues (provided that telcos can demonstrate ESG leadership in their own organisations). The opportunity extends to such issues as affordability and access, data security, environmental impact management, and supply chain management. Telcos can also open up entirely new revenue streams in ESG-related areas such as education, health care, urbanisation, and financial inclusion.

Our analysis indicates that these revenue opportunities could exceed \$3.5 trillion in total market size over the coming decade. There is also potential for telcos to influence how they are valued by redefining the ways in which capital markets, applying a TSI lens, view them, their industry, and their role in business and society.

This report examines what these opportunities mean for the telecom industry and its companies. Operators can score big wins with their customers (both consumer and enterprise) and their investors—if they move quickly. The opportunities are here. Is the industry ready to seize them?

The Total Societal Impact (TSI) Opportunity

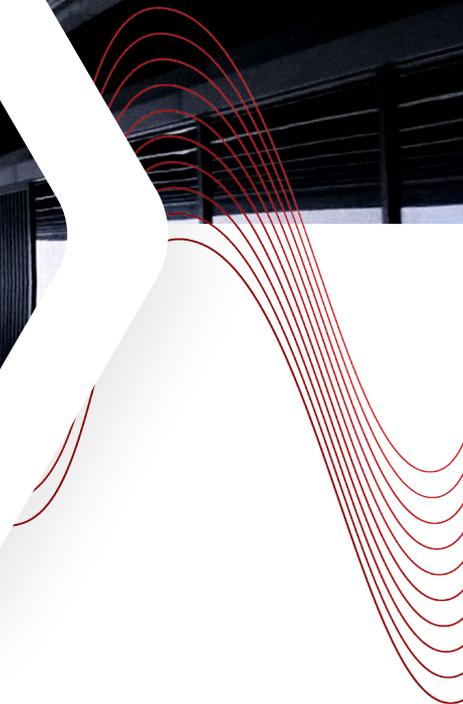
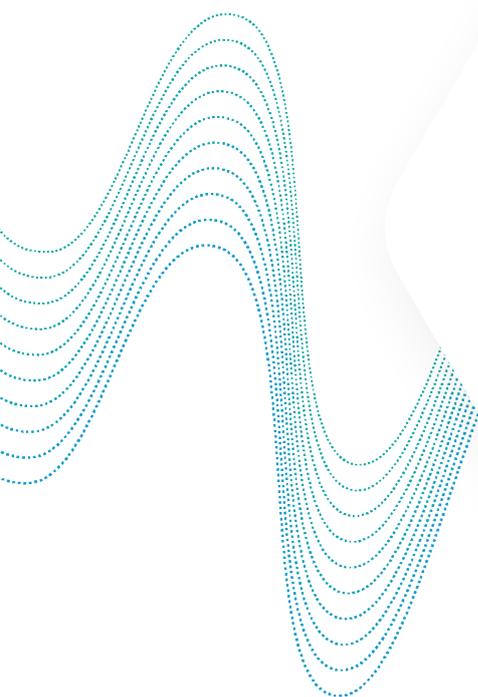
Around the world, there is broad and increasing interest in TSI topics. Consider some fundamental shifts in the way society and capitalism are working in the exhibit below.

Exhibit 2

Changing societal context for business in the '20s

INTERACTIVE EXHIBIT:
CLICK THROUGH TO EXPLORE





These opportunities could exceed **\$3.5 trillion** in total market size over the coming decade

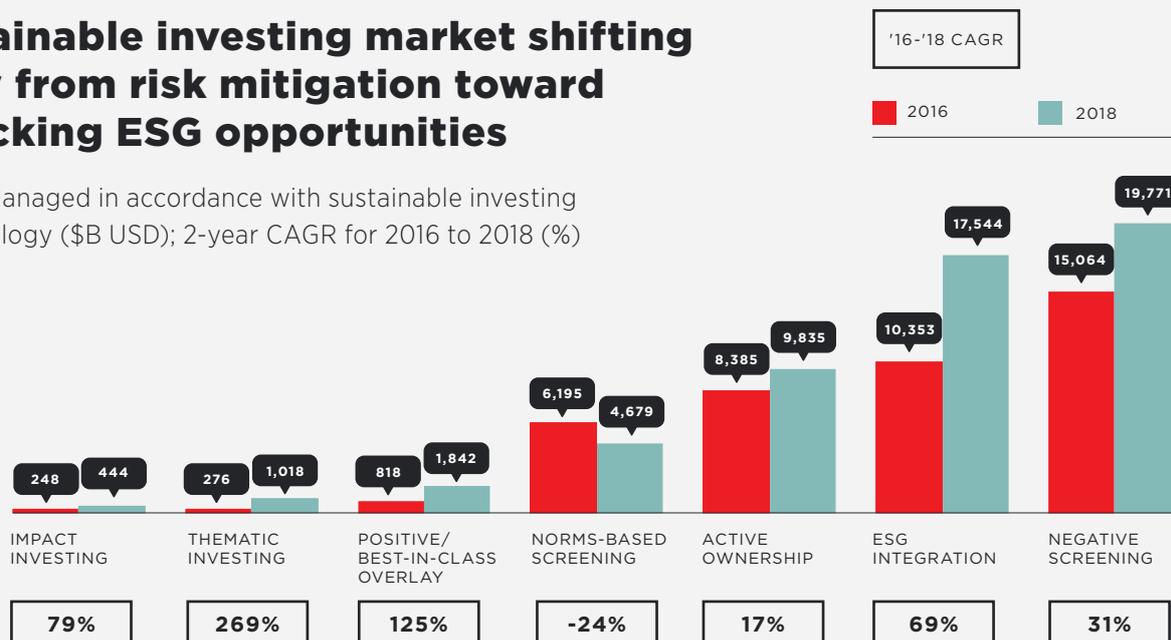
Follow the Money

The rising interest in TSI is not lost on financial markets, and they see both risk and opportunity. Most of the commentary today is still focused primarily on companies' ESG risks, such as climate impact. And in carbon intensive industries, such as energy and mining, we are seeing investors assign higher valuations to ESG leaders who are taking concrete steps to mitigate their ESG risks. But investors, customers, and others are also looking for companies that have moved beyond risk management and are seizing ESG issues as the defining reason for their corporate purpose and business portfolio (see the sidebar, Key TSI Topics). "We are entering an era where the value of a company won't just be measured in terms of economic or social performance, but also by its contribution to society," said Stephane Richard, CEO of Orange. See Exhibit 3 for additional context.

Exhibit 3

Sustainable investing market shifting away from risk mitigation toward unlocking ESG opportunities

Assets managed in accordance with sustainable investing methodology (\$B USD); 2-year CAGR for 2016 to 2018 (%)



Source: 2018 Global Sustainable Investment Review. Note: All figures represent Europe, US, Canada, Japan, Australia, New Zealand; assets can be managed using >1 methodology, and figures cannot be added to get total AUM

7 forms of Sustainable Investing

1

ESG integration

Building in ESG factors and data into traditional investment analysis and decision-making for each security

2

Best-in-class ESG overlays

Selecting companies or tilting entire portfolios toward higher ESG performance

3

Thematic funds

Using sustainability themes (e.g., climate) as a basis for allocation towards industry sectors or companies

4

Impact investing

Investing in entities that have the intention to generate ESG impact alongside a financial return

7

Norms screens/exclusions

Excluding specific companies that breach international conventions

6

Negative screens/ exclusions

Excluding specific industries or companies with negative ESG impact (e.g., tobacco)

5

Active ownership engagement

Using dialogue, voting, and other shareholder actions to urge issuer to improve ESG practises

Source: Eurosif, Global Sustainable Investment Alliance (GSIA), Global Impact Investing Network (GIIN), Impact Management Project, Principles of Responsible Investing, "Why and how investors use ESG information" by George Serafeim, Amir Amel-Zadeh

The reason that the money is on the move:

the data shows that ESG can have a positive impact on equity performance...

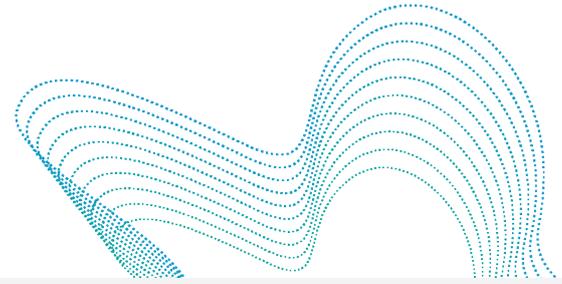


Exhibit 4

ESG can have a positive impact on equity performance

In a review of 200+ studies, industry reports, articles, and books...



26 of 29 studies on the cost of capital indicate ESG standards contribute to **lower cost of capital**



45 of 51 studies show ESG practises result in **better operational performance**



33 of 41 studies demonstrate that good ESG practises **positively influence stock price performance**

Note: This exhibit represents all 2,027 companies in the BCG value creators sample.
Source: S&P Capital IQ; company disclosures; BCG analysis

...and on company valuations. BCG analysis has found that ESG factors have become a key driver of valuation multiples in many sectors today, and that investors have awarded top ESG companies multiples 3% to 19% higher than sector medians (see Exhibits 4 and 5). In the telecom sector, when Telefónica issued the first green bond (about €1 billion), the offer was oversubscribed by about five times.³

Investors have awarded top ESG performers multiples **3% to 19% higher** than **sector medians**

3. Telefónica Issues First Green Bond of the Telco Sector, Amounting to 1 Billion Euros, Telefónica



Exhibit 5

ESG factors a key driver of valuation multiples today across sectors

	OIL AND GAS	PHARMACEUTICALS	CONSUMER	BANKING
VALUATION PREMIUMS¹	+19%	+12%	+11%	+3%
EXAMPLE OF METRIC THAT IS STATISTICALLY SIGNIFICANT	Maintaining robust occupational health and safety programs	Expanding access to drugs	Embracing socially-conscious sourcing	Promoting financial inclusion

1. Average valuation premium of top versus median TSI performers, all else equal.
 Note: All results are statistically significant at the 5% level. Pharma results represent mature pharma only; consumer results represent FMCG only. Detailed description of topic scores provided in full report. A complete list of variables aggregated for each industry is also available in the report. Source: MSCI ESG Research LLC, OEKOM research AG, BCG analysis

Much of the attention so far has been on carbon-related issues (see Exhibit 6), which will affect telcos more in the future as their electricity usage increases.

Exhibit 6

Carbon intensity impacts valuation multiples across industries

Difference in valuation (Price:Sales) from median, all else equal



Note: Uses category 1+2 emissions data from 2014-2018
 Source: BCG analysis

While we have yet to see similar positive correlations in telecommunications, companies are addressing their energy use and sources in their sustainability reports. There has also been a significant increase in discussion of ESG issues on company earnings calls. Our analysis of the earnings calls of 30 large telcos between the first quarter of 2015 and the third quarter of 2019 found that

topics related to cyber security and energy are discussed most often (about 60% of the total) and that climate topics have also grown in importance.⁴ A similar analysis of terms related to how telcos can help enable other industries found that topics related to mobile money and smart cities were most common (about 75% of the total).⁵

4. Quarterly earning calls transcripts (Q1 2015 to Q3 2019) of America Movil, American Towers, ATT, BCE, BT, CenturyLink, Charter, Chunghwa telecom, Comcast, CCI, Liberty Global, NTT DOCOMO, Orange, Proximus, Rogers, SBA, Shaw, Singtel, SK Telecom, Swisscom, Telefónica, Telenor, Telus, Veon, Verizon and Vodafone. Analysis powered by Quid NLP engine
 5. See prior reference.

Key TSI Topics⁶

The below exhibit contains some of the upside topics that telcos can address—either on their own or by helping other companies work through their ESG issues.



Exhibit 7

INTERACTIVE EXHIBIT:
CLICK THROUGH TO EXPLORE



Several key global challenges that telcos can and are playing a role in solving

SOCIETAL

ENVIRONMENTAL

ECONOMIC

ETHICAL

6. Based on BCG analysis of UN, WEF, other established public data sources and published industry reports
Source: BCG analysis, GSMA

How Big is the TSI Opportunity for Telcos?

Telcos have a threefold opportunity. They must first establish their own ESG credentials, which many are doing following the GSMA's Sustainability Assessment Framework. They can then look to the revenue opportunities they have in enabling companies in other industries to better address their ESG issues, and in creating new businesses that address environmental and societal challenges (see the next chapter).

As part of our research, we assessed revenue potential in the second two areas: opportunities for network operators to help others and opportunities to develop businesses that extend beyond connectivity. While our analysis is not exhaustive—we estimated overall market size (based on existing sources) rather than telco-specific revenue streams—our select set opportunities illustrates the scale of what can be achieved. We estimate the aggregate market at more than \$3.5 trillion in this decade in sectors that include health care, education, environmental impact management, and financial services and economic inclusion ⁷ (see Exhibit 8).

Take mobile education, for example. This represents approximately a \$250 billion market opportunity, involving new revenue from the digitising of texts and books to reach wider audiences, as well as the providing of lesson plans, videos, and other educational programming via mobile networks.⁸ Markets for these services range from developed countries to remote or rural areas in developing countries.

Or consider utility deployment for smart cities, about a \$400 billion opportunity by the mid-2020s, primarily in urban areas in developed countries.⁹ It includes the deployment of IoT smart sensors and associated infrastructure (including for 5G) to monitor vehicle traffic, utility usage, air quality, and other relevant metrics that a municipality may want to track.

The Sustainability Accounting Standards Board has identified a broad range of material ESG topics across multiple industries. We based our analysis of these on interviews with more than 30 global telecom experts, telco operators, and investors, and a review of media coverage of areas where the telco sector is starting to play. Without trying to be exhaustive, we pinpointed more than 20 opportunities for telcos to serve customers in other industries in various ESG topics based on network operators' customer base (and customers' trust), data assets, last-mile advantage, and technological capabilities. Assisting banks and others with digital payments platforms, providing digital identity authentication and data security services, and developing IoT services for a host of applications from buildings to water and waste management are a few examples. Various operators are already exploring many of these.

These potential opportunities represent total market estimates. Operators will have to carve out their positions through innovation, partnerships, and building on their inherent advantages and capabilities. They will face competition from tech companies and industry incumbents, among others. In many areas, they will likely need to pursue a platform model involving partnerships that bring expertise and capabilities telcos do not have. For example, in order to fully realise the scale of smart agriculture, telco expertise in last-mile rural connectivity will be essential. However, operators will need to partner with others to develop the software and hardware solutions.

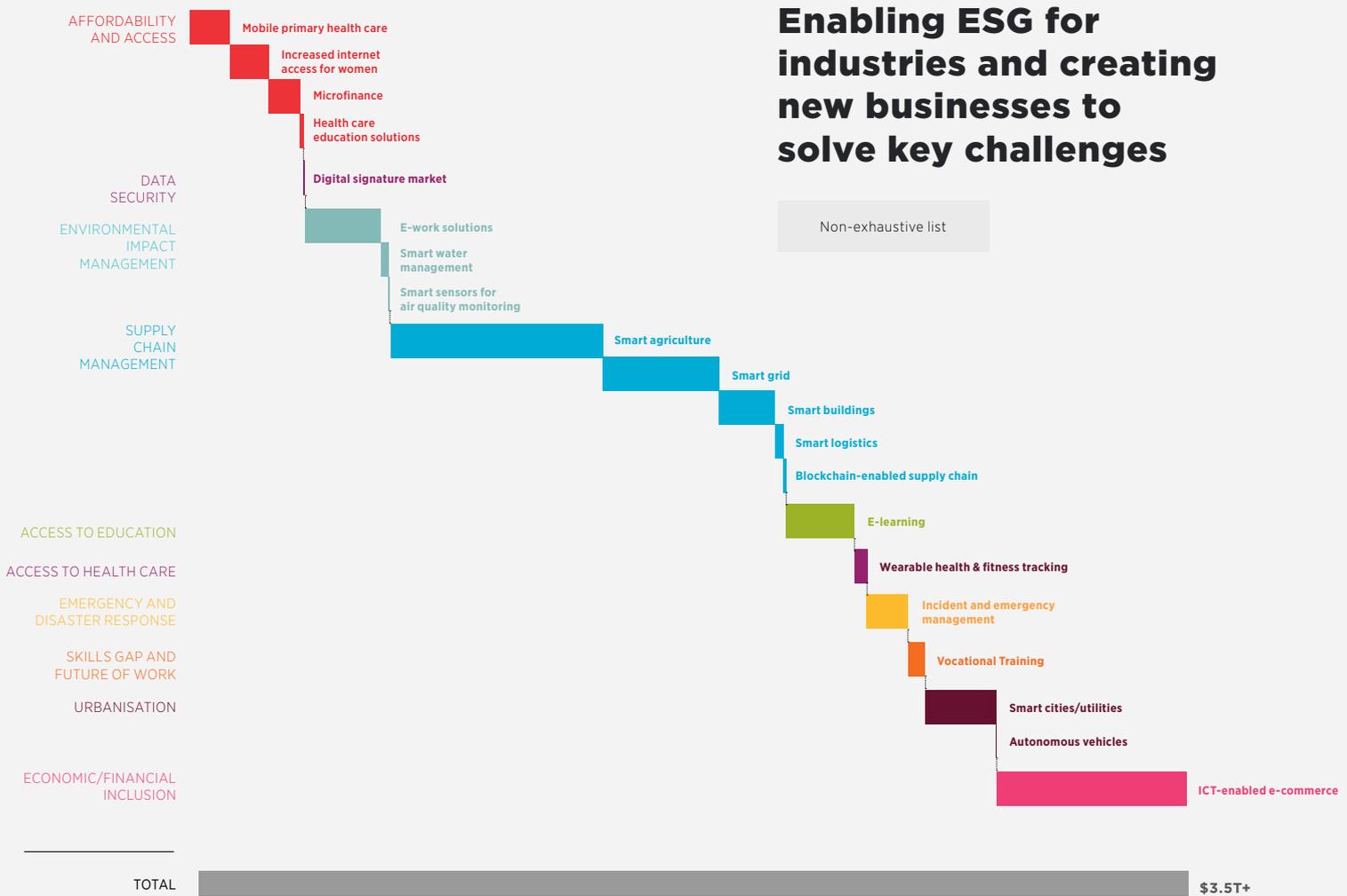
By way of comparison, another organisation, GeSI, which specialises in sustainable ICT solutions, and which we used to source a size for several opportunity spaces, estimates a total market opportunity of \$6.5 trillion for ICT-enabled revenue in this decade across a selection of sectors that span agriculture, energy, and buildings, among others, and a further \$4.9 trillion opportunity in potential cost savings from reduced electricity and fuel usage, water, and waste. Their analysis further underscores the substantial aggregate size of the opportunity.

7. Based on BCG analysis with input from GeSI, GSMA, BNP Paribas, etc.

8. GeSI

9. GeSI

Exhibit 8



Source: Based on secondary research of market spaces identified through interviews (e.g., GeSI, Bloomberg, etc.)

Telcos may also be able to convince investors to reassess their businesses and prospects based on a well-formed ESG agenda. As the CEO of Blackrock highlighted in his 2020 letter to CEOs, “because capital markets pull future risk forward, we will see changes in capital allocation more quickly than we see changes to the climate itself.” Upside opportunities can be tougher to convey. They tend to be newer concepts

for which the relevant metrics might be difficult to collect or of weaker quality. This presents an added challenge for telcos pursuing a TSI-based strategy. They will need to pair business initiatives with aggressive and persistent communications and education so that all stakeholders—but especially investors—understand what the companies are doing and why, and who benefits and how.

Seizing the Opportunity: A TSI Agenda

Telcos are perhaps uniquely advantaged to pursue ESG goals on their own and working with others collectively. The mobile industry is deeply integrated into society, the global economy, and all manner of commercial value chains.

Telcos are perhaps uniquely advantaged to pursue ESG goals on their own and working with others collectively. The mobile industry is deeply integrated into society, the global economy, and all manner of commercial value chains. Mobile broadband covers 90% of the world's population, and 66% of the population subscribes to a mobile service.¹⁰ Mobile economic activity contributes almost \$4 trillion a year to global GDP, and mobile's share of GDP is growing at 10% to 20% a year.¹¹ The industry drives productivity for others, especially small and medium sized businesses. The 25% of SMEs that use mobile services intensively see revenues grow twice as fast as their peers and they add jobs up to eight times faster.¹²

Telcos have technical advantages as well. They have access to a vast and growing amount and variety of data (even if they are often more constrained by regulations than other companies in how they can use this data), including real-time information about network traffic, which is estimated to increase from 29 exabytes a month in 2019 to more than 77 exabytes a month in 2022.¹³ Advanced 5G networks are estimated to cover around 45% of the global population by 2025, according to GSMAi.¹⁴ Since many artificial intelligence (AI) algorithms "train" on data, operators' data access puts them in a strong position to support customers' AI programs and to provide AI as a service. Operators also have unique access to spectrum, the IoT, and smart device connectivity.



Although they do not have the same scale as the global tech giants, telcos can still rapidly deploy and push solutions given the digital nature of content delivery.

As TSI grows in importance and relevance, this combination of attributes could provide telcos with the opportunity to reverse sliding shareholder returns and take leadership positions in both market activity and financial performance.

¹⁰ GSMAi

¹¹ See prior reference.

¹² Telecommunications Technology Industries: The Mobile Revolution, BCG

¹³ Cisco Visual Networking Index 2018

¹⁴ GSMA Intelligence

High Barriers

Telcos should not underestimate the barriers, which include:

The need for deeper customer insight capabilities.

Telcos must mine and explore new opportunities to assess the unmet needs and behaviors of both existing and new customer segments.

Some opportunities are already crowded with tech companies and incumbents, and other industries already lead in innovation.

Operators have limited investment budgets.

The massive infrastructure investments required for new technologies like 5G leave little headroom for new bets.

Tightening regulatory environment in some markets.

New opportunities (in financial services and health care, for example) involve highly regulated industries with high barriers to data access and usage, and are also under increasing regulatory scrutiny.



Monetisation.

Although many opportunities for social impact exist, clear business models and paths to monetisation have not yet been developed in the telecom industry. For example, telcos have an opportunity to play a useful role in advancing digital education, but what will the revenue model among the content creator, content deliverer, and network operator look like?

Cultural bias.

For a range of reasons that include the high cost of failure and the integrated nature of their portfolios, companies tend to be risk averse, not as agile as they could be, and not particularly strong at creating products that serve specific market segments as opposed to the public at large.

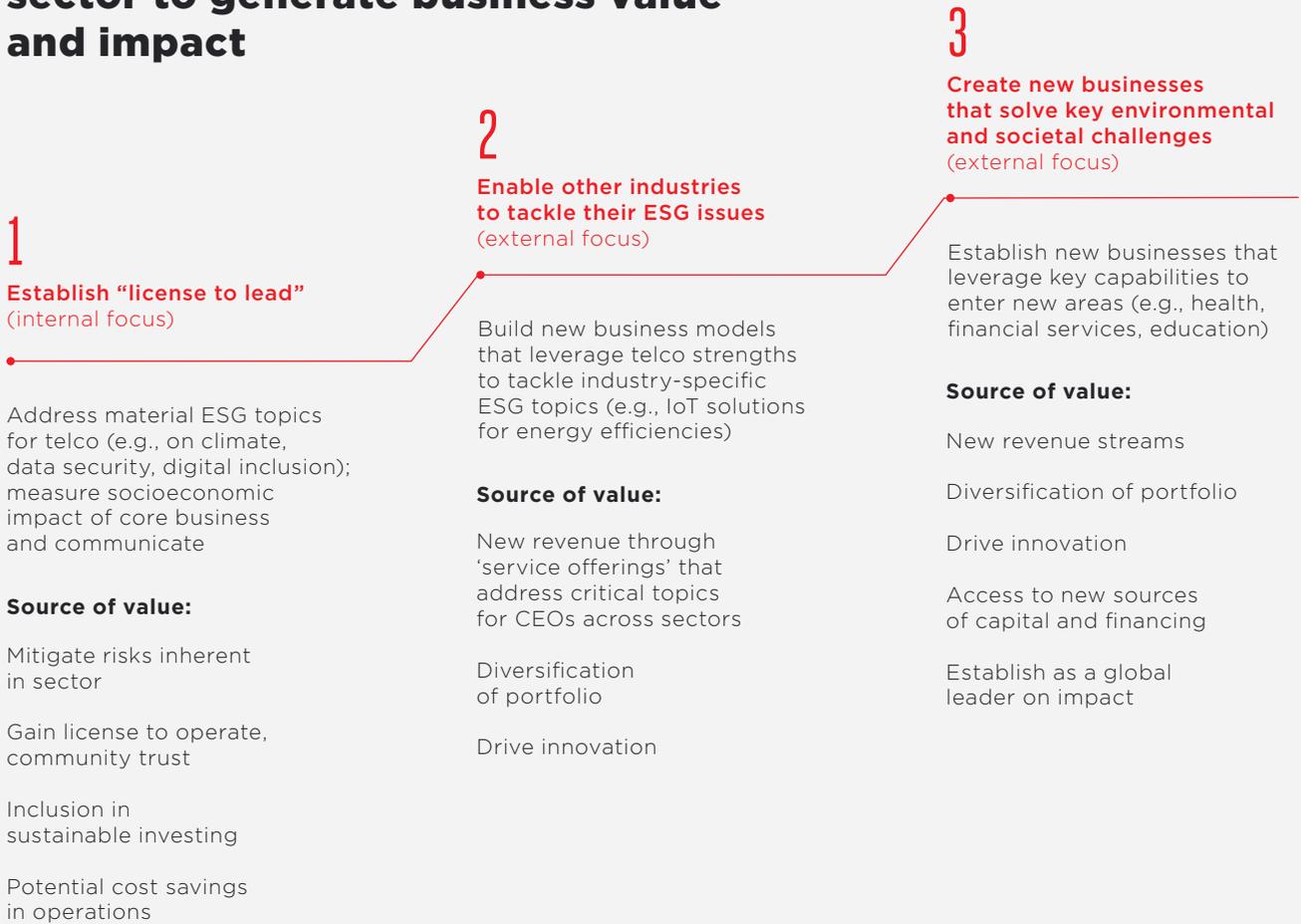


A Three-Stage Agenda

We believe companies can overcome the barriers and embed a TSI-based approach with a three-stage agenda as outlined in the next exhibit.

Exhibit 9

3 potential ways for the telecom sector to generate business value and impact



Source: BCG analysis

License to Lead

As they look to other industries and new businesses, telcos need to address their own ESG issues (see Exhibit 10)—so they can demonstrate to customers, investors, and other stakeholders that they are acting on problems beyond pure business demands and that they are prepared to lead the way for others in relevant areas. In 2018, the GSMA

created a Sustainability Assessment Framework to better understand the landscape of operator efforts in social and environmental sustainability. The framework assesses operator performance, including their transparency and disclosure, on 14 material issues. See results of the [2019 assessment](#).¹⁵

15. GSMA Sustainability Assessment Framework

Several key ESG themes material to telecom business

SOCIAL

Digital inclusion

Protecting digital human rights through digital access

Providing affordable communications for all through telecommunication services

Cybersecurity

Enforcing privacy through data security and systems stability

Ensuring customer data protection (incl. fraud)

Promoting safe and responsible use of technology

ENVIRONMENTAL

Energy efficiency

Reducing energy consumption that powers communication networks, data centers, and operations

Increasing energy efficiency (e.g., FTTH deployment)

Carbon intensity

Minimising greenhouse gas emissions

Reducing carbon emissions of telecom infrastructure in light of climate change

OTHER

Other themes...

Network and service quality and reliability

Consumption of social media and related externalities

Employee diversity, mental health and wellness, safety

Waste management and circular economy

Ethics and anti-corruption

Source: BCG analysis, SASB. Materiality assessments of several telco providers

Enabling Other Industries to Meet Their ESG Goals

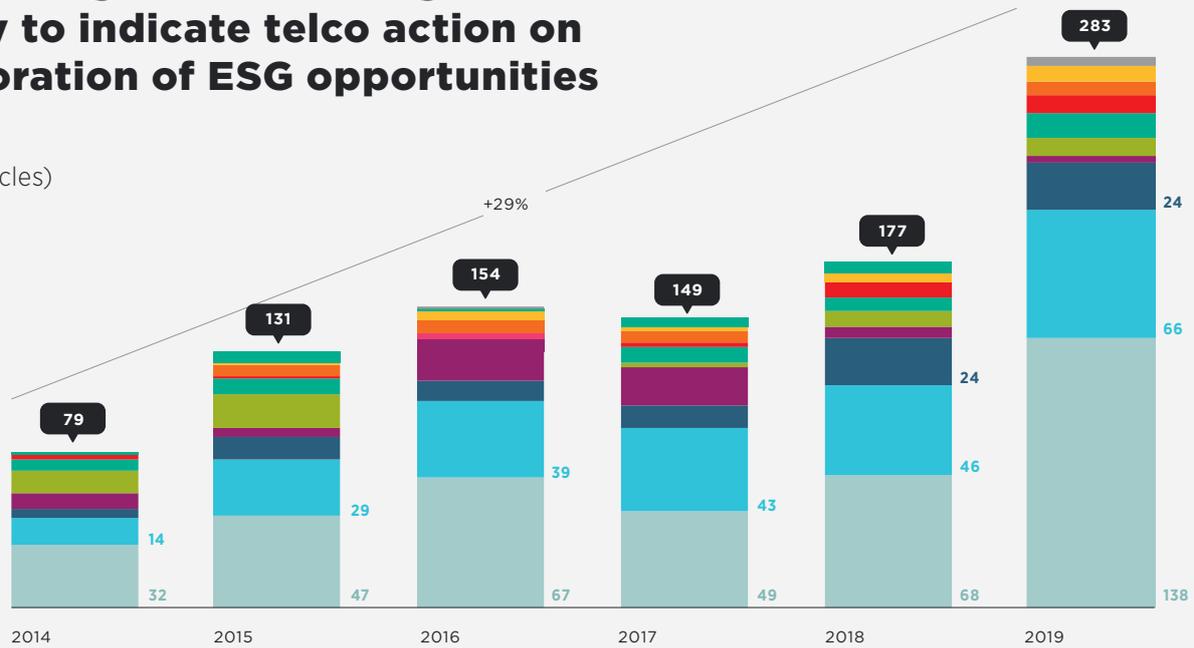
Telcos can further address ESG issues in two ways. One is by using their capabilities and client base to enable companies in other industries to develop solutions for ESG problems, the other is by developing new businesses and business models. As Serhat Demir, Turkcell Executive Vice President of Law and Regulation put it, “At Turkcell, through our digital and IoT solutions, we enable energy efficiency and cost reduction in a variety of areas including but not limited to finance, entertainment and publication, agriculture and livestock breeding, manufacturing, smart transportation and cities. Our efforts to enable the use of digital signature for subscriptions or to establish AI principles promise to contribute to ESG goals of several sectors.”

BCG’s analysis of one news aggregator’s content since 2014 reveals active coverage of mobile enabling other industries and creating new businesses. We found almost 1,000 stories involving business opportunities for telcos, with the volume of relevant news stories increasing steadily over the last five years. Overall, smart cities and mobile money represent almost two-thirds of the coverage. The Internet of Things is receiving rising attention. Regionally, mobile money is the most covered topic in Africa and Southern Asia (it is also big in other developing countries), while telemedicine stands out as a prominent topic in Australia and New Zealand. The Internet of Things is a major topic across Asia. See the following three exhibits for more detail.

Exhibit 11

Increasing media coverage likely to indicate telco action on exploration of ESG opportunities

(# of articles)

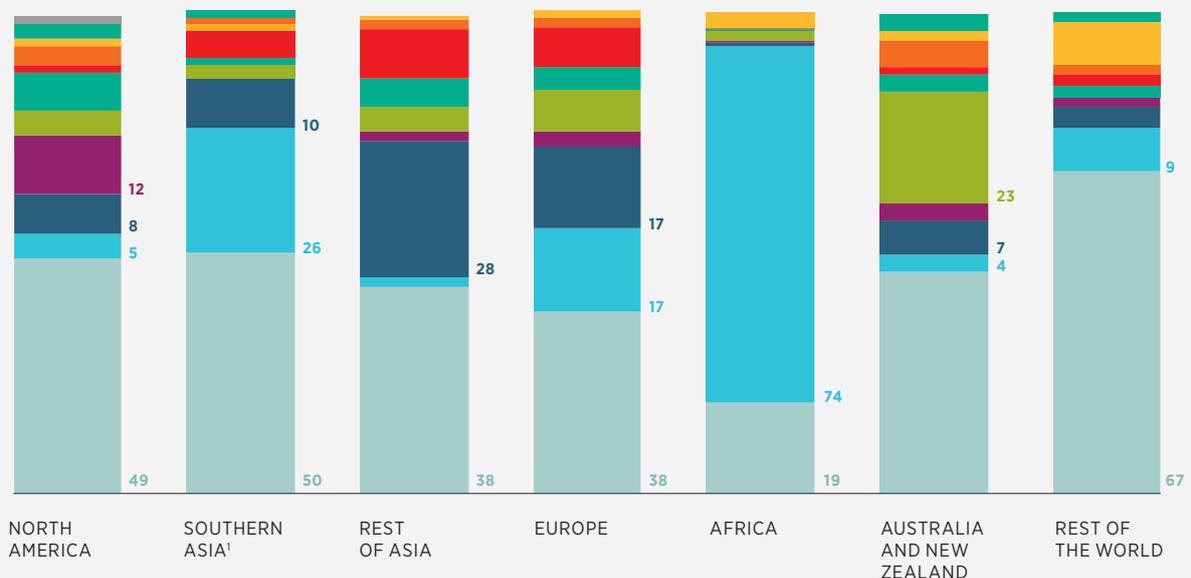


- Smart cities
- Mobile money
- Internet of Things
- Health care/telemedicine
- Electric vehicles
- Smart transport
- Smart agriculture
- Teleconferencing
- Digital authentication
- Disaster preparedness
- Smart utilities

Source: BCG analysis using Quid analytics

Mobile money with most coverage in Africa and Southern Asia, Telemedicine dominant in Oceania

(% of articles)



Note: 1. India, Pakistan, and Bangladesh
Source: BCG analysis using Quid analytics

The ESG issues faced by other industries represent a big and growing potential market for telcos.



Exhibit 12

Potential for telcos to enable multiple sectors to solve their ESG challenges

✓ Potential telco opportunity ■ Material issue for less than 50% of sector ■ Material issue for more than 50% of sector

	Consumer	Retailers	Mining	Oil & Gas	Infra.	Energy	Tech.	Financials	Food & Beverage	Health Care	Renew & Alt.	Mfg.	Services	Transport
ENVIRONMENT	GHG Emissions		✓	✓	✓	✓	✓		✓	✓	✓	✓		✓
	Air Quality		✓	✓	✓	✓					✓	✓		✓
	Energy Management	✓	✓	✓		✓	✓		✓	✓	✓	✓	✓	✓
	Water & Wastewater Management	✓		✓	✓	✓	✓		✓		✓	✓	✓	
	Waste & Hazardous Materials Management			✓		✓	✓		✓	✓	✓	✓		✓
	Ecological Impacts								✓					
SOCIAL CAPITAL	Human Rights & Community Relations													
	Customer Privacy	✓					✓	✓						✓
	Data Security	✓	✓				✓	✓	✓	✓		✓	✓	
	Access & Affordability					✓		✓		✓				
	Product Quality & Safety	✓							✓	✓				
	Customer Welfare													
	Selling Practises & Product Labeling													
HUMAN CAPITAL	Labor Practises													
	Employee Health & Safety													
	Employee Engagement, Diversity & Inclusion													
BUSINESS MODEL & INNOVATION	Product Design & Lifecycle Management													
	Business Model Resilience													
	Supply Chain Management	✓		✓			✓		✓	✓	✓	✓		✓
	Materials Sourcing & Efficiency													
	Physical Impacts of Climate Change					✓								
LEADERSHIP & GOVERNANCE	Business Ethics													
	Competitive Behavior													
	Management of the Legal & Regulatory Environment													
	Critical Incident Risk Management													
	Systemic Risk Management													

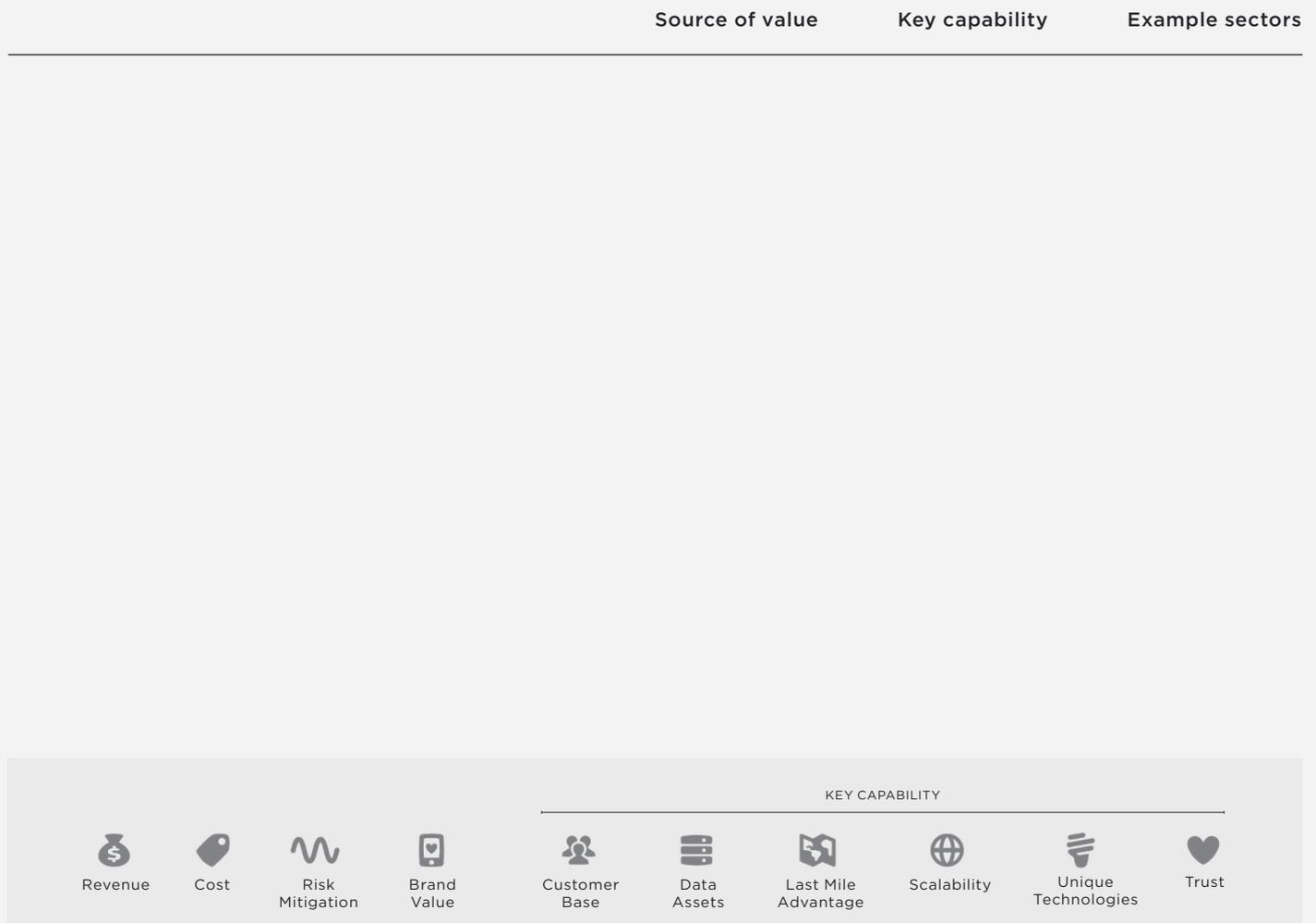
Source: BCG analysis based on interviews, media research, SASB

Exhibit 13

INTERACTIVE EXHIBIT:
CLICK THROUGH TO EXPLORE



Example opportunity areas: enabling industries on ESG



Source: BCG analysis

Creating New Businesses

Telcos also have plentiful opportunities to create new business revenue streams by addressing environmental and social issues (see Exhibit 14). Consider personalised health tracking and time-sensitive remote health applications, digital platforms for vocational training, mobile financial trading platforms, and mobile platforms for disaster preparedness and post-disaster response.

While many of these opportunities will need to be pursued with partners, often from other industries, they are all rooted in network operators' existing advantages such as their large customer base (and customers' trust), data assets, last-mile advantage, and technological capabilities.

Exhibit 14

INTERACTIVE EXHIBIT:
CLICK THROUGH TO EXPLORE



Example opportunity areas: adjacent business opportunities to solve key environmental and societal challenges

Source of value Key capability Market context



Source: BCG analysis

A Roadmap for Success

The transformation to a new model is never easy. While telcos' core business will continue to be connectivity, companies can leverage the rising importance of ESG issues to build new revenue sources, as well as shift the basis on which investors value their prospects and customers and on which

policy makers and regulators assess companies' roles in the economy, the planet, and society. The rewards in terms of new customers and market positions, untapped profit pools, and brand and reputation can be transforming for those that succeed (see Exhibit 15 and the sidebar, Learning from Unilever).

Exhibit 15

Substantive rewards for telcos who succeed in driving impact



PURPOSE

Create a strong sense of meaning and impact in your organisation

STRATEGIC AND FINANCIAL BENEFITS FOR YOUR BUSINESS

TRUE IMPACT

A lasting and meaningful impact on the world

Resilience in your business:

Diversified revenue streams, strong and sustainable business models

Access to new sources and forms of capital (e.g., green bond, blended finance)

Strong brand: Global presence that is inspiring and purposeful

License to lead:

Trust with regulators, communities, public sector, customers, investors

Substantial size of potential prize:

Opportunity spaces total \$3T+ potential market size globally

Revitalised organisation:

Attract top-tier talent and engender a motivated and engaged workforce

Source: BCG analysis



How Unilever Embeds Purpose in the Core Business

Companies in other industries provide instructive examples on how to embed sustainable living principles and practices into corporate organisations and core businesses. One such company is the consumer products giant Unilever.

Unilever says it has “a simple but clear purpose—to make sustainability living commonplace. We believe this is the best long-term way for our business to grow.” It backs its purpose with a clear strategy, which it launched in 2010. The Unilever Sustainable Living Plan (USLP) seeks to achieve change through a shift in the company’s portfolio to address three key pillars: improving health and wellbeing, reducing environmental impact, and enhancing livelihoods.

Unilever has executed a range of innovative initiatives to meet its goals. For instance, in an effort to reduce plastic in their products, the company introduced Cif eco-refills which allows consumers to add concentrated refill to an old spray bottle and mix it with water. This results in 75% less plastic and will remove 1.5 million plastic bottles from UK supermarkets.

It has also pursued partnerships. For example, alongside 9 major palm oil producers and buyers, Unilever is funding the development of a new, publicly available radar-based forest monitoring system known as Radar Alerts for Detecting Deforestation (RADD). This will allow companies and other stakeholders to see deforestation happening in near-real-time and with greater accuracy. With this information, action can be quickly mobilised on the ground to improve the sustainability of commodity supply chains.

Divisional leadership is ultimately responsible for the company’s USLP and sustainability goals. A Corporate Responsibility Committee monitors progress and risks of USLP and reports to Board. Led by the CEO, Unilever’s Leadership Executive is tasked with implementation of USLP.

The business impact of USLP has shown that responsible business is good business: Unilever’s 28 sustainable living brands have consistently outperformed the company’s overall average growth rate, growing 69% faster than rest of business in 2018. There is also increased trust: in 2019 Unilever became the number one FMCG employer of choice in 51 out of 54 markets. The company has also achieved significant cost savings by cutting waste and reducing input. For example, about €800 million energy, waste, water and material costs avoided through eco-efficiency since 2008.

With a new CEO, and with the business landscape evolving the business has created the Unilever Compass—their new blueprint for growing the business through achieving their purpose of making sustainable living commonplace. The company’s growth and sustainability strategies will be intertwined in to the Unilever Compass to ensure the company grows by achieving its purpose to make sustainable living commonplace.

Achieving Success

Capturing the opportunities will require new ways of working. Here are five imperatives for achieving success:

Exhibit 16

Capturing these opportunities will require a new way of working

5 key imperatives for success



2 A clear strategy embedded in core business with strong business cases

Aspire beyond providing a “parallel CSR offering”—truly integrate in the core business

Identify the most profitable, scalable, and impactful opportunities across the three categories of “opportunity spaces”

Based on a clear understanding of “material topics” in the context of current and potential customers, communities, investors, regulators, etc.



4 Impactful partnerships to enable capability-building and scaling

With companies (e.g., technology, financial services)

Public sector bodies (e.g., health systems)

Social sector actors
(e.g., impact measurement organisations)

Potential role as the “orchestrator of the ecosystem”

Source: BCG analysis



1 A bold vision and purpose

Need to establish a “North Star” linked to company purpose



3 Sustainable business model innovation to go beyond “being the pipe”

Innovations that evolve your product and service lineup and revenue models, enable you to layer onto new value chains, expand beyond your value chain, etc.

Clearly identifying value capture mechanisms (e.g., market expansion, new revenue streams, cost reduction)



5 Strong structural supports

Investment in new capabilities, talent, technologies; (e.g., big data analytics, innovation acquisitions)

Governance and accountabilities around new initiatives

Measurement of business value and impact

Engagement within and outside the organisation (incl. with investors, public sector, communities, etc.) on sustainability and impact creation

Bold Vision and Purpose.

Companies need to articulate a TSI vision and purpose that clearly connects value creation with broader environmental and societal impact.

A Clear TSI Strategy.

The goal is to move beyond ESG risk management by providing a parallel environmental and social impact offering that integrates a TSI approach in the core business. This means identifying the most profitable, scalable, and high-impact opportunities at each stage of the TSI agenda.

TSI Business Model Innovation.

[Sustainable business model innovation](#) (S-BMI) takes a much wider perspective than traditional business model innovation. To generate value in the new paradigm managers will need to think more broadly than in the past. For example, can they enable circular economies for precious resources, provide assets that are shared rather than owned, broaden access and inclusion, or multiply positive societal impact? Both the value proposition for customers and the company's operating model may need rethinking.

We have identified seven ways in which companies can pursue innovative TSI business models (see Exhibit 17).

Exhibit 17

How can business model innovation drive sustainability?

INTERACTIVE EXHIBIT:
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For example, Telefónica has pursued innovative business models to support [commitment to social impact](#). The company partners with technology start-ups, providing funding for their ventures. It puts itself at the center of a community of start-ups and helps incubate their ideas and finance their development, offering access to resources such as connections, customers, and supply chain services. These ventures typically are linked with Telefónica's core business. The company also backs "moonshots"—long term bets that require upfront investment and may take years to pay off. It allows these ventures to dedicate time and talent towards large, structural problems. In the long run, it hopes to create real differentiation for the company. "Telefónica supports the creation of a world where digital technology contributes to protecting the planet," said COO Ángel Vilá.

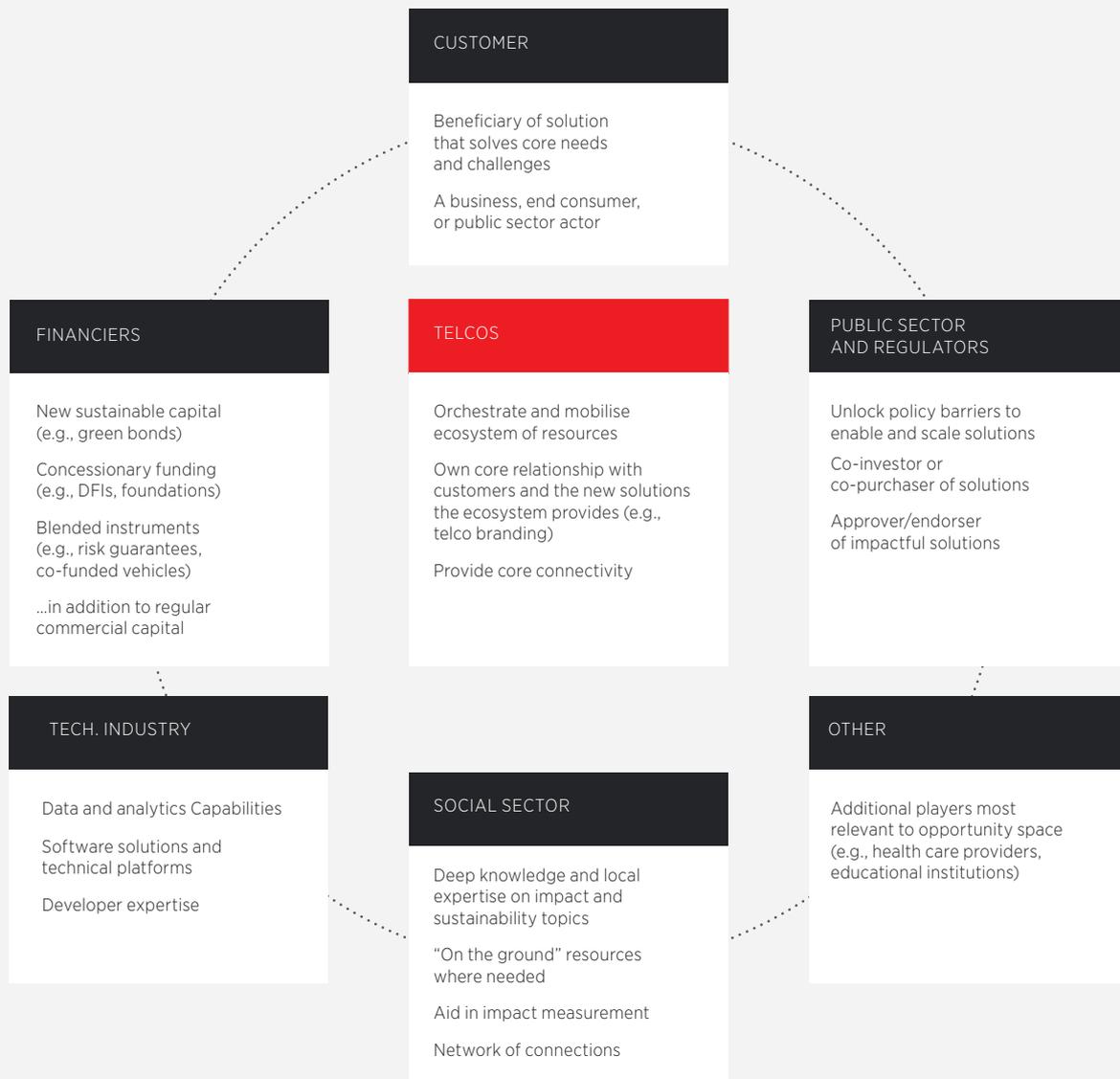


Our sustainable business model is based on **transforming our networks** for the future, increasing capacity and offering better services with lower environmental impact.

Partnerships and Ecosystems.

To capture business value in the new paradigm, more often than not telcos will need to mobilise partnerships or entirely new ecosystems that combine to deliver the desired product or service and enable operators to own the customer relationship (see Exhibit 18). Prospective partners include tech companies, start-ups' applicable technology, app developers, and industry incumbents. Working with others is hardly a new model for telcos, but companies will want to look for the chance to play the role of orchestrator—the player at the center of the ecosystem that coordinates the activities of the other participants, aggregates their data and expertise, and delivers a consolidated data product or service to the end customer. They will also need to work with current customers, especially enterprise customers, to secure positions as valued partners on ICT matters. A senior executive of NTT DOCOMO puts it this way: "Traditionally, telcos have developed offerings on our own. But this approach is insufficient. It is essential that we work together with partners and companies in various industries to combine our strengths; precisely why DOCOMO has established its partner program to solve social challenges."

In order to capture business value, telcos will need to mobilise an ecosystem and own the customer relationship



Strong Structural Supports.

Achieving success will require investment in new capabilities, talent, and technologies as well as establishing governance and accountabilities around new initiatives. Measurement of business value and impact will be essential, as will be continuous engagement and communication inside and outside of the organisation with investors, employees, customers, the public sector, and communities.

In the consumer products sector, for example, Danone has defined a unique ambition centered on societal impact: "Danone, One Planet. One Health." It has established targets on both societal and

business metrics and it measures progress towards them. To support its objectives on "healthier choices," Danone measures the percent of sales volume from healthy categories, the percent of products it has nutritionally improved, and the percent of products sold which have been fortified. The targets are quite specific, such as nutritional targets for product formulations for each consumer segment (e.g., the fermented milk sugar content target for adults vs. children aged 7-12 vs. children aged 3-6), and directly linked to business divisions. Danone communicates goals and progress regularly to consumers, investors, media, and other stakeholders.



The world is not standing still. Countries, capital, and competitors are already defining new concepts of value and exploring the models that can achieve them. These efforts will only accelerate in the coming years.

Telcos need to accelerate their own TSI initiatives. Early movers have opportunities for advantage as they establish new capabilities, develop new revenue streams, and move into new markets. Laggards will find themselves increasingly at odds with customers, investors, and regulators looking for more from the industry than simple pipes.

There's no time like
the beginning of a new
decade **to get started.**



GSMA HEAD OFFICE

Floor 2

The Walbrook Building

25 Walbrook

London EC4N 8AF

United Kingdom

Tel: +44 (0)20 7356 0600

Fax: +44 (0)20 7356 0601