G20 Business Advisory Board For The Italian Presidency

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Foreword

Foreword

It is often said that the world is facing "unprecedented challenges". This expression is sometimes abused, but today it seems more apt than ever. The world is truly facing unprecedented challenges, both linked to the Covid-19 pandemic and to the radical economic and social transformation imposed by climate change and the digitization of our societies.

These are challenges that cannot be faced individually. Tackling such complex, pervasive and impactful issues necessarily requires a shared and coordinated effort by all nations.

The G20 is one of the actors most responsible for managing coordination among countries, precisely in this perspective of sharing and common planning. Its role is therefore more important than ever, to address – and hopefully solve – the problems that afflict the world. The Italian presidency in 2021 places a burden and an honor on our country: burden, because the definition of the agenda and the leadership in this delicate moment involves a drastic burden

of responsibility; honor, because it allows Italy to have a direct role in the world and contribute to the improvement of the lives of all people in the world.

There are three major areas of attention around which the work and activities of the G20 in 2021 will necessarily have to develop: People, Prosperity and Planet.

People: in a society in which economic and social inequality is constantly increasing, one cannot but act to bring the planet back on a more inclusive and shared growth path. This issue is even more impelling in light of the pandemic. Economic inequality has serious repercussions on health care (e.g., in terms of access to care), that exacerbates existing inequality.

Prosperity: the digital transition raises additional issues related to the new definition of value, ownership, rights, ethical dilemmas and redesigning the labor market. And, in addition, it goes beyond the territorial dimension. By its very nature, digital is ubiquitous and requires coordination

to seize all the opportunities emerging from this revolution by managing and contrasting the critical issues that it raises.

Planet: climate change is, without any doubt, the most pressing issue of the 21st century. We are now at the breaking point. Either we face the climate emergency with a shared, worldwide, decisive approach, or there is no way back.

People, Prosperity and Planet are the three key words that will dictate the political agenda of the G20 in 2021. In order to assist the Italian government in defining the agenda and ensuing proposals, The European House - Ambrosetti has activated a high-profile Advisory Board, involving 20 CEOs of the most important Italian and international companies, to initiate a path of analysis, dialog and sharing of ideas that has led to the drafting of this report.

It was a real process of co-creation. The European House - Ambrosetti working team and the sherpas of the various groups involved met on a regular basis, working on the same documents and exchanging ideas in a constant flow of dialog. The first important evidence that emerges from this work lies upstream of the content itself and involves the way this content emerged: the sharing of ideas and collaboration are the prerequisites to effectively face any challenge, and this is a wish that I hope will also apply to the work of the G20.

In conclusion of this Foreword, I am pleased to thank all the participants of the Advisory Board whose reflections you will find in the following pages.

Similar thanks go to the support teams of the CEOs involved, who have assisted us with enthusiasm.

A particularly heartfelt thanks goes to Ambassador Benassi, sherpa of the Italian government for the organization of the G20, and to all his team of collaborators at Palazzo Chigi, who followed the development of this work from the beginning.

Finally, a thank you to The European House Ambrosetti working team, which edited this report,
led by Corrado Panzeri and Sara Lelli, and composed
of Diego Begnozzi, Filippo Malinverno,
Giancarlo Bruno, Francesco Di Lodovico,
Carmen Lojacono and Chiara Piloni.

Valerio De Molli

Managing Partner and CEO
The European House - Ambrosetti

Advisory Board



Marco Alverà
SNAM
Chief Executive Officer

Climate change is the existential challenge of our generation. Looking at the interests of our planet and our species overall, any solution would be better than no solution, because the overall costs of climate change are so high. Hydrogen has been touted as an energy solution before. But with new motivation, falling costs and a growing band of supporters, this time is different. Like an internet of energy, hydrogen can connect all the sectors of the economy and society to trigger competition and innovation across sectors and geographies, making energy more affordable, available and abundant for a growing global population. With the potential to be sparked by a single, simple policy move by a small group of countries, the hydrogen revolution can certainly make the energy transition easier. And that is an objective worth pursuing.



Ajay BangaMASTERCARD
Chief Executive Officer

In this period of global crisis, propelling a rapid economic recovery requires a stronger and wider-reaching digital infrastructure. Every government has the right to regulate the digital economy, but the G20 can ensure that those regulations don't create unnecessary barriers that get in the way of trade and slow the spread of technological advances. G20 digital cooperation would help businesses of all sizes to compete and thrive. And giving citizens and small businesses inclusive, privacy-respecting digital identities that are recognized around the world will help to rebuild a global economy based on trust. But, we won't achieve any of that unless we work together to build the system, foster use, offer access, protect it and guide its growth.

SHERPAS

Ruggero Corrias

CEO Diplomatic Advisor and Head of International Relations

Rory MacFarquhar

Senior Vice President International Institutions Engagement



Ornella Barra
WALGREENS BOOTS ALLIANCE
Co-Chief Operating Officer

Making health more inclusive and accessible is a core mission for the global community. The COVID-19 pandemic exposed the vulnerabilities of our current systems, while it also showed the potential of digital healthcare. The G20 has a unique opportunity to help building the future framework for global health, reinforcing global alliances and prioritizing access to healthcare at community level. Pharmacies are an indispensable access point to healthcare for communities around the world and they can serve as a formidable force multiplier within healthcare systems, to help improve health outcomes and reduce costs of care.



Oliver Bäte
ALLIANZ
Chief Executive Officer

Society's global challenges require multilateral solutions. Hence, Italy is presiding over the G20 at a very crucial point in time. The success of this presidency will not only depend on the alignment of ambitious targets in the three well-chosen prioritized policy areas. Particularly important are executable, measurable action plans and performance indicators.

SHERPAS

Giovanni MontiSenior Vice President of Healthcare Services

Andreas Funke Head of Public Affairs



Alberto Bombassei BREMBO Chairman

I consider this event a sort of milestone for Italy, in order to continue its role as a significant contributor to the growth of the world, its sustainability and fruitful multilateral agreements and relationship.



Stefano Cao SAIPEMChief Executive Officer

The G20 is an enormous opportunity to design a sustainable social model in which People can live in Prosperity while being conscious of their responsibility towards the Planet.

SHERPAS

Roberto Vavassori

Chief Business Development and Marketing Officer

Gaetano Colucci

Sustainability Identity and Corporate Communication Director



Valerio De Molli
The European House - Ambrosetti
Managing Partner and CEO

The Italian presidency of the G20 is arriving at a crucial and historical moment for the global agenda.

Not only the G20 will have to address the epochal challenges of our time, but it will have to do so by rebuilding the post Covid world.

The European House - Ambrosetti, leading Italian think tank (no. 1 think tank in Italy, among the top 10 in Europe and among the most respected independents in the world out of 8,248 on a global level according to the University of Pennsylvania) has been involved by the Italian Government and with the support of an international Advisory Board composed by a well balanced mix of leaders representing different and complementary industries, to design an introductory Working Paper to instruct and inspire the G20 proceedings.

The road map we have shared with all the CEOs involved in our Community is based on three key drivers, the so called "3P" (People, Planet, Prosperity). We believe that these are the only three cornerstones on which to build the growth of the future in a way that is fair, inclusive and resilient. On these bases, the following report provides a concrete set of policy measures that G20 Governments shall promote at the international level to achieve these ambitious, but essential, goals.



Claudio Descalzi
ENI
Chief Executive Officer

Presiding over the G20 at a time of such great and unprecedented global transformation is an enormous challenge and opportunity for Italy. The COVID pandemic has changed our lives and our economies. Energy transition is at the center of everything: it will require a profound transformation of industry, enormous technological investments but also changes in our personal behavior in the direction of sustainability and circularity.

SHERPAS

Lapo PistelliPublic Affairs Director



Gabriele Galateri di Genola ASSICURAZIONI GENERALI Chairman



Pietro Gorlier
FCA FIAT CHRYSLER AUTOMOBILES
Chief Operating Officer
Europe Middle East Africa

In Generali we firmly believe that a stronger global coordination is vital to overcome this crisis, as no victory against the pandemic would be possible without a common, long-term view of our future on the planet. Multilateralism should again be the driver of global dynamics: the challenges we face are way too large for single countries to solve alone. In this context, the G20 constitutes the ideal forum to enhance global cooperation on key societal challenges. Starting with the fight against climate change, sustainability should be at the heart of the recovery effort. This crisis should indeed be a catalyst for a new impetus towards modernizing infrastructure, pushing companies towards greener practices and productions, becoming technologically advanced and sustainable at the same time.

Global challenges, such as climate change or the Covid 19 pandemic, require smart, innovative solutions that our G20 economies are surely capable of providing by working closely together. FCA believes that effective and lasting solutions can only be achieved through an integrated approach that combines individual and collective commitment, a supportive and intelligent regulatory framework and consistent investment in enabling processes and technologies, without compromising our social structures or passing the cost of transformation on to citizens who cannot afford to pay. As a leading global mobility company, we are committed to building a sustainable business for the benefit of all our stakeholders; by linking growth to respect and inclusion, economic success with social responsibility, and industrial development with environmental circularity. This is key to our ability to deliver superior value to our customers, employees, suppliers and to the communities in which we operate. It is also at the core of our commitment to building a better future for the generations to come.

SHERPAS

Fabio MarchettiHead of International Affairs

Elisa BoscheriniHead of Institutional Affairs



Patrizia Grieco
BANCA MONTE DEI PASCHI DI SIENA
Chairman

Education and innovation are the tools needed to include in the economic recovery the population groups that are paying the highest costs of the crisis in all our countries. The financial system can and must contribute to the efforts of the G20 governments by directing the collection of savings and credit flows, with the aim of financing the huge and necessary investments needed to facilitate the transition towards a model of sustainable development from an economic, environmental and social point of view.



Ilham Kadri SOLVAY Chief Executive Officer

We are responsible for the future we want. Sustainable growth takes care as much of the Environment as of Society and relies on good state Governance ensuring that we make the best use of human, natural and financial resources. While this crisis of a lifetime is stress testing us, it has also brought the best out of us. Emerging stronger means building a green, smart and inclusive society where diversity, equity and inclusion are conditions for success; where reskilled citizens know how to turn the digital transformation into a sustainable advantage; and where energy is reliable, affordable and environmentally friendly. Creating sustainable shared value for all requires collaboration through innovations, the resolve of society and ambitious visions from governments and fora like the G20.

SHERPAS

Valentino Ianieri

Institutional Affairs

Alexis Brouhns

Senior Executive Vice President Corporate Government Affairs



Antonio Marcegaglia
MARCEGAGLIA
Chairman and Chief Executive Officer

Among the three macro-themes, I give particular importance to the one of inclusion, and the associated challenge of a widespread educational effort. Only with people in the centre of everyone focus, we can aim for a just and more resilient world. It is first of all a question of ethics, but it is also about long term sustainability.



Letizia MorattiUBI BANCA
Former Chairman

G20 guidelines must include an action plan and measurable KPIs so to ensure full application of the interventions. A sustainable and long term action will need to be based on a strong link between public sector, financial institutions and companies. In fact the partnership between public and private sector is key to pursue the goals of: inclusion, environment protection and innovation. Sustainable Finance, if adequately supported by fiscal incentives, can represent an important mean to achieve these goals. Beyond finance, in order to fuel the growth of the entrepreneurial culture and education it is important to broaden the concept of education in addition to primary education and long life learning, in particular with reference to universities and vocational training.

SHERPAS

Gianluca GigliQuality Director

Rossella Leidi

Deputy General Manager



Jean Pierre Mustier
UNICREDIT
Chief Executive Officer

The G20 in 2021 will have to face the medium term pandemic effects on economy and society and take decisive actions for a better future for all stakeholders. As a bank we strongly believe in the increasing importance of stakeholder value: the best way to align the interest of all stakeholders is to have a long term view and create value not just at financial level but also with regard to human capital, society and environment. We can talk of an evolution from shareholder value to stakeholder capitalism.



Douglas L. Peterson
S&P GLOBAL
President and Chief Executive Officer

S&P Global shares Italy's G20 vision for sustainable, inclusive economies and communities. We are ready, with the global business community, to support the G20 agenda focused on "people, planet, and prosperity." Now more than ever, the private and public sectors must come together. This moment requires a renewed spirit of cooperation to develop and deploy a COVID-19 vaccine, to address climate change and to build a better society for everyone. To produce a greener planet, governments, financial market participants and investors can reduce carbon emissions through market-based solutions, including new ways to measure the impact of investments on the environment. And to produce a more inclusive society, we should collaborate on critical issues such as education, workforce development, and access to technology, in turn leading to more fairness, transparency, and equal opportunity.

David Henry Doyle

Head of Government Affairs & Public Policy EMEA

Courtney Geduldig

Chief Public and Government Affairs Officer

John Phipps

Head of Government Affairs and Public Policy for Asia Pacific South Asia and Latin America

SHERPAS

Maurizio Beretta

Head of Group Institutional Affairs & Sustainability



Diego PiacentiniKKR
Senior Advisor - Former Commissioner for
Digital Transformation Italian Government

The COVID-19 epidemic should be used to create more resilient and efficient governments. Any policy and program implementation for managing the social and economic crisis must be supported by an impeccable execution, based on digital services that should be as easy to use by citizens and corporations as any private digital consumer service. Such a tragic event, like the COVID-19 epidemic, should be used to create more resilient and efficient governments. Without a flawless execution, even the best policies will be less effective.



Francesco Starace
ENEL
Chief Executive Officer
and General Manager

The G20 Presidency agenda is based on three fundamental pillars: People, Planet, Prosperity. These pillars reflect on some of the priorities on which Enel is putting efforts nationally and globally: decarbonisation, digitized and resilient grids, digitisation, electrification of consumptions and circular economy. These represent strategic levers for the transition towards an inclusive and sustainable economic model that benefits our planet, people and economies.

SHERPAS

Daniela Battisti

Head International Relations - Dep. Digital Transformation - Ministry for Technological Innovation and Digitalization Italy

Marco Alberti

Head of International Institutional Affairs



Marco Tronchetti Provera
PIRELLI & C.
Executive Vice Chairman
and Chief Executive Officer

"The goal of the upcoming G20 must be to relaunch and strengthen initiatives towards improved functioning of multilateral institutions in the areas of economic development and eliminating inequality, environmental and social sustainability to slow climate change, and balanced recovery of international trade within a 'fair trade' perspective.

The current crises, from the financial crisis in 2008 to today's public health crisis, require a new and more cohesive approach to governance of globalization processes.

The central banks have made available significant resources for the relaunching of international economies. The EU, thanks to its strategic choice of the 'Next Generation EU' recovery fund and its new EU budget, must play a leading, global role, while reaffirming its public and economic values. And, through focused planning and an effective control of public spending, it is well-placed to take on the economic emergency and, in the medium-term, create development that is balanced and sustainable."



Bill WintersSTANDARD CHARTERED
Group Chief Executive

As Italy prepares to take over the G20 presidency there is an important opportunity to integrate sustainability into economic recovery plans through international cooperation and coordination. As a coalition of the world's largest economies, the G20 can provide leadership to tackle the global threat presented to people and economies alike. While there are encouraging signs of innovative policymaking, much more remains to be done. Banks have an important role to play in not only helping to finance the green transition but also in ensuring that the growing interest in sustainable investing is matched with opportunities to have real impact. A collective effort is needed to help direct financing to those countries that face the biggest risk from climate change but also have the biggest opportunity to leapfrog to low carbon technology, which mainly sit in emerging markets. The G20 under Italy's presidency is uniquely placed to take the lead, and we are here to provide our full support.

SHERPAS

Antonio CalabròSenior Vice President Corporate Culture

Tracy ClarkeRegional CEO for Europe and Americas

Introduction

Introduction

The G20 is an international forum attended by Government officials and Central Bank Governors from 19 countries and the EU. It was founded in 1999, with the aim of discussing pressing international issues, starting from international financial stability.

Over time its scope of action has been extended, and since 2008 the activities of the forum have been broadened to include discussion of many key issues related to the global economy.

The reason for this extension of competences is as urgent as it is crucial: the challenges that the world has to face cannot be tackled individually. This approach would be not only ineffective, but – in many areas – even harmful. Lack of coordination, indeed, often leads to three main problems:

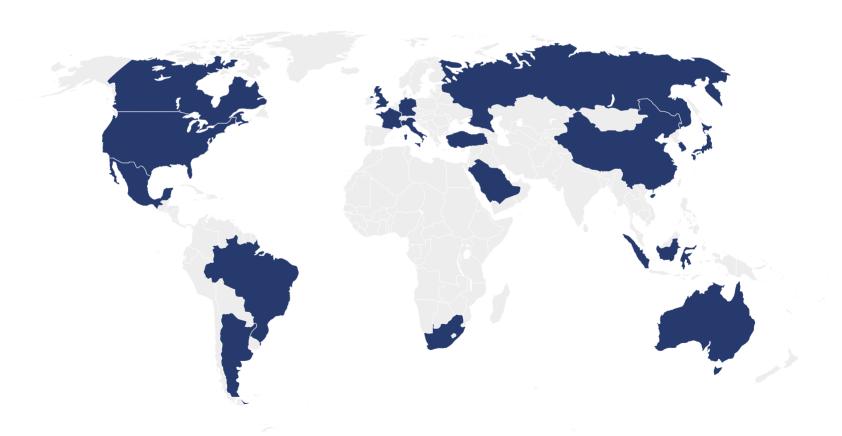
- The absence of economies of scale and duplication of costs.
- Improper management of negative externalities.
- Free riding.

The first area, known to the business world, comes from a simple observation: in most cases it is more economical to operate on a large scale, to reduce the incidence of costs of research, development and implementation. This is not only true in the private sector, but also with regard to issues of national interest. An exemplary case is that of aerospace: even for developed economies, it is more convenient to work together to create a single agency (an example could be represented by the European Space Agency) rather than individually pursuing a separate research strategy. In this particular case, moreover, some of the countries involved would probably not even be able to sustain these investments autonomously: lack of coordination does not just lead to higher costs, but may actually make it impossible to operate.

The second area arises from the worldwide expansion of certain negative externalities. Externalities are, in economics, impacts generated by an action on another subject, impacts that do not pass through the market and are therefore not mediated by a price system.

Figure 1 The G20 Member States

Argentina	China	Indonesia	Republic of Korea	Turkey
Australia	France	Italy	Russia	United Kingdom
Brazil	Germany	Japan	Saudi Arabia	United States
Canada	India	Mexico	South Africa	European Union (EU)



Introduction

The classic case of externalities is pollution: an action (e.g. industrial production) can cause damage (air pollution) to citizens in the surrounding area, for which they receive no monetary compensation — or for which the person or company generating the externality does not pay. At the national level, externalities are addressed by regulation: in the case of pollution, for example, many countries adopt emissions markets or specific taxation schemes, through which polluters pay the community. Externalities, however, are taking on a global scale: many actions do not only have an impact within individual states, but affect the whole world. In this case, collective, multilateral action is indispensable to address them.

The third and final point arises from free riding, the "downward competition" implemented between countries. This is a particularly critical area, in which it is essential to find the correct balance between the free initiative of individual countries and the need to find an optimum for the community, understood on

a global scale. An illustrative, deliberately hyperbolic, example could be tax competition: to attract companies and investments a free riding strategy might consist in reducing taxation on business income. This strategy, however, if pursued by all, can only lead to a progressive lowering of taxation, up to the limit case in which no country pays taxes, which certainly is not the optimum for the community.

In short: **coordination among countries is an indispensable prerequisite for fair, sustainable and resilient growth**. However, in recent years we have
witnessed the opposite dynamic, with the progressive
depletion of the role of multinational institutions
theoretically responsible for ensuring this coordination.

The emergence of so-called "populist" political movements in many developed and developing countries has turned political agendas towards more nationalist positions, sometimes even in open polemic with supranational institutions.

One of the countries most involved in these manoeuvres is the United States: the controversy between former President Trump and the World Trade Organization, the World Health Organization, NATO, as well as the withdrawal from the Paris agreements against climate change are all elements that undermine the principle of collaboration among countries.

It is likely that the change of leadership in the United States will lead to a rapprochement between the U.S. and the aforementioned multinational institutions, as well as a greater effort towards international coordination. In addition, a renewed openness on the U.S side could restore the multilateral dialogue.

Multilateral agreements are not an innovation on the international political scene but a return to the past. The world, in the period 1945-1971, lived in a system based on formally multilateral principles which included the Bretton-Woods agreements, the World Bank, the International Monetary Fund, and the GATT (General

Agreement on Tariffs and Trade). Certainly, it was a world radically different from today's, sharply divided into two opposing blocs, and in which the influence of the Asian countries (India and China first) was negligible.

The idea of supranational institutions responsible for the management of relations between countries is not new, however, but one that originated more than 70 years ago.

The hope today is that there will be a return – or rather, a renewed adherence – to a multinational system, adapted to the reality of the 21st century and to the new relationships of power that have risen on the world's stage. It will have to be a multinational system based on dialogue and on the awareness that some challenges – especially those related to climate change – cannot be faced and won by individual countries. It will have to pursue an agenda based on three pillars: People, Prosperity and Planet, the three words that inspire the proposals for the Italian presidency of the G20, a body that is the bedrock of multilateralism.

This report was prepared in view of the Italian Presidency of the G20 in 2021. It presents **8 macro-proposals** developed on three sectors of endeavour identified by the Italian Presidency of the Council:

- Inclusion: Policies and actions for a sustainable, just and resilient recovery; new social contract for inclusion.
- Environment and energy transition: green transition, renewables, a circular economy, the role of cities.
- Innovation and knowledge: the challenges related to digital transformation and artificial intelligence, and their impact on organizations and work.

To develop these proposals The European House - Ambrosetti has set up an Advisory Board composed of the CEOs of the most important Italian and multinational companies. The Advisory Board met, during 2020, for plenary meetings, as well as for discussions on more specific working tables. The 8 macro-proposals illustrated in the following pages have emerged from the collaboration of all those involved.

Proposal 1

Next generation healthcare systems: affordable high-quality healthcare with no barriers to medical supply chains

Next generation healthcare systems: affordable high-quality healthcare with no barriers to medical supply chains

1.1 Background

Ensuring healthy lives and promoting well-being at all ages is the third Sustainable Development Goal (SDG3) of the United Nation.

At its core, this goal aims to promote structural improvements in the way people live (e.g. nutrition, hygiene and sanitation in residential, work and study areas) and in the way nations care for their populations (e.g. wider access to more efficient and effective health care services, eradication of the most common diseases) so as to increase life expectancy and quality. The most relevant areas of action to reach SDG3 are related to child health, maternal health and some of the most impacting diseases such as malaria, HIV/AIDS and tuberculosis. While some of these areas already seem to be addressed at the level of some G20 countries, many other countries are still strongly affected.

The global crisis generated by COVID-19 has further highlighted the weaknesses of local health care systems and the need for action to strengthen them

and increase their resilience to future pandemics.

On the opposite, during the COVID-19 pandemic, instead of working more closely together in a true spirit of collaboration, many countries preferred remaining in isolation as they think they are stronger than their fellow states. However, the virus itself has proven to us that we need everyone around us to be protected and safe if we are to remain safe: in the globalised and interdependent world, "our" interests are often intertwined with those of "others".

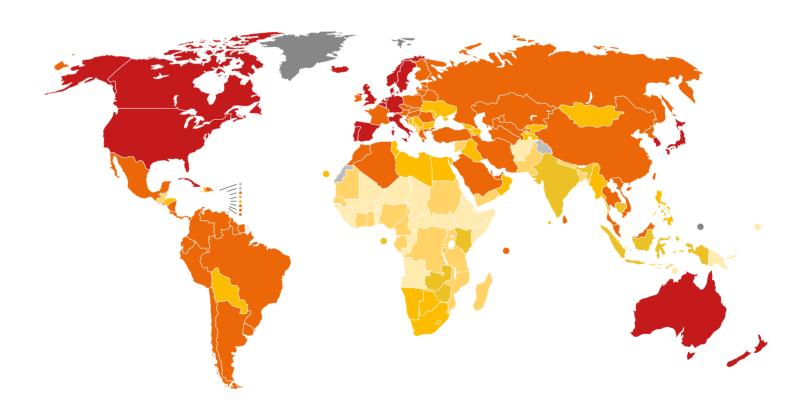
Despite the fact that there is still a lot to be done, and notwithstanding the discontinuity represented by the pandemic, the universal health coverage (UHC) service coverage index (SCI) increased from a global average of 45 (out of 100) in 2000 to 66 in 2017¹; progress has been made in every country, even if in low-income countries there is still much to improve but at least half of the world's population does not have full coverage of essential health services. The positive trend in the percentage of the world's population covered by essential health services is expected to increase, but the progress will be partially

1. Source: WHO, 2019

Figure 1.1

This map has been produced by the World Health Organization (WHO). The boundaries, colours or other designations or denominations used in this map and the publication do not imply, on the part of World Bank or WHO, any opinion or judgement on the legal status of any country, territory, city or area or of its authorities, or any endorsement or acceptance of such boundaries or frontiers. Source: WHO





Next generation healthcare systems: affordable high-quality healthcare with no barriers to medical supply chains

2. Below \$1.90 per person per day in 2011 PPP terms.

3. Below 60% of median daily per capita consumption or income in their country.

offset by the growth in the world population: if this trend is confirmed, in 2030 maximum the 63% of global population (about 8.6 billion) will be covered: much less than the target established by the United Nations to reach universal health coverage (100%). To achieve this goal, coverage rate needs to double.

While a larger share of the world's population is covered by essential health services, still too many people incur financial hardship when spending out of pocket on health. Unfortunately, the share of the population spending more than 10% of its income (12.7%) or more than 25% (2.9%) on catastrophic health expenditures is also increasing. Countries must improve coverage policies and provide more financial protection, even because the lack of it has a significant impact on poverty growth.

According to the WHO, in 2015 out-of-pocket health spending contributed to pushing more people below different poverty lines. 89.7 million people (1.2%) were pushed into extreme poverty², 98.8 million (1.4%) below \$3.20 per person per day and 183.2 million into poverty

defined in relative terms³. The impact of catastrophic health spending on impoverishment is particularly acute in South-East Asia, Africa and Western Pacific.

As our Advisory Board pointed out during the work, ultimately all health policies – wherever they are established – must put the "boots on the ground" in local communities. For this reason, it seems crucial to increase the commitment of local communities and use local resources and assets to serve these communities.

At the same time, technology is shaping the future of healthcare, from finding new therapies to a more efficient and effective patient journey to using data to improve healthcare management practices, and with great potential for transforming unsustainable healthcare systems into sustainable and fairer ones. However, the access to and adoption of technology is very different from country to country.

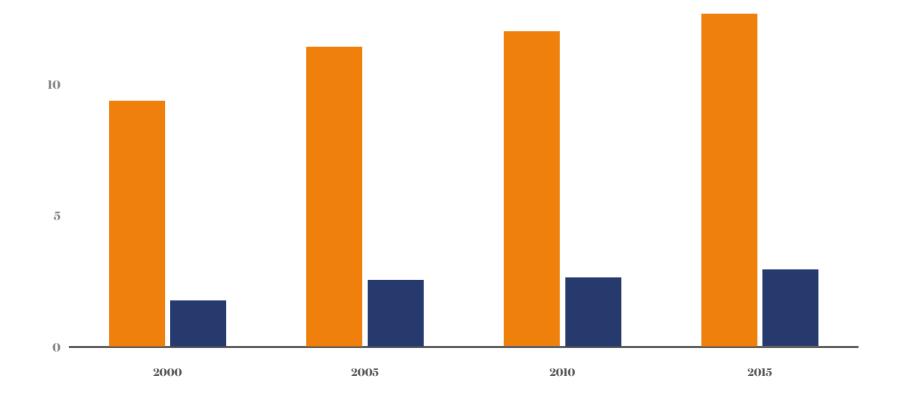
Among the challenges that technology can help us to tackle, we find especially the **training of healthcare**

Figure 1.2 Percentage of the population (SDG indicator 3.8.2) with out-fo-pocket health spending exceeding 10% or 20% of the household budget

Source: WHO, World Bank (2019). Global monitoring report on financial protection in health 2019. World Health Organization and International Bank for Reconstruction and Development / The World Bank; 2019. Licence: CC BY-NC-SA 3.0 IGO



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Next generation healthcare systems: affordable high-quality healthcare with no barriers to medical supply chains

professionals, which must be permanent and not provided *una tantum*, and the **improvement of supply chains functioning**.

One of the main obstacles to the quality and reliability of the health system is indeed the availability of adequate health care professionals, who must remain up-to-date with regular practices and must also embrace emerging technologies in order to remain relevant in the future. On the other hand, supply chains of pharmaceuticals, medical devices and personal protective equipment have been impacted by the uncoordinated choices of different governments with consequences of unavailability and/or uncertainty in different markets. The "vaccine rush" is the last case in order of time, with potentially very negative consequences especially for the poorest countries.

COVID-19, with its unprecedented challenges, gives the G20 the opportunity to build the pillars of the evolution of healthcare, promoting structural changes to ensure an adequate level of primary care access to all the individuals.

1.2 Actions

> Access to basic healthcare

1. G20 shall draft a declaration recommending the promotion of universal access to basic primary care.

- Access to basic healthcare services is a global issue, involving not only least developed and developing countries, but also developed economies. In order to allow a higher percentage of the global population to access primary care, digital technologies can be helpful to further enhance productivity of front line professionals like primary care physicians and pharmacists, as well as to provide the option of a more convenient access when needed (e.g. telemedicine).
- Accessibility to primary care can be improved not only
 by technology, but also by already existing physical
 assets: pharmacies. Leveraging their capillarity,
 efficiency and quality can improve delivery of
 healthcare services to communities and help improve
 patients' health outcomes, in a framework of closer
 collaboration with other healthcare professionals.

> International Task Force

I. G20 shall establish a "Data and Technology in Healthcare Task Force" to promote a broader use of technology (e.g. sensors and communication), data, applications based on data (AI). The Task Force's aim should also be to share knowledge and experiences, define key research challenges and explore collaborations to advance e-health development nationally and internationally.

- The Data and Technology in Healthcare Task
 Force should be part of the Data and Technology
 Board (see proposal 6).
- The Data and Technology in Healthcare Task
 Force should also look at how to enable a
 reopening of societies utilizing COVID-19 related
 personal health information.
- **2.** G20 shall recommend to the WHO a **communication campaign** in order to raise the attention of citizens, patients and caregivers, healthcare professionals and managers and policy makers to the upcoming changes in HC practices and

to establish a "Programme of Investment in Education for a digitally-enhanced and person-centered Health Care System", in order to increase access to healthcare via a digitally enhanced healthcare system, and fully empowered primary care doctors and pharmacist.

- The pillars of this initiative are twofold: incentive programs for investment in education for a digitally enhanced and person-centered healthcare system and increase support to "last mile" healthcare professionals, primary care doctors and pharmacists, which are well positioned in communities to serve as force multipliers by increasing access to critical services
- **3.** G20 healthcare Ministries should conduct analysis to identify the ongoing causes of constraints related to COVID-19 in **healthcare supply chains** and should take steps to address these challenges and remove or manage these constraints. including transport and logistics infrastructure in emerging markets and developing economies.

> COVID-19 Vaccination Global Response

- 4. A global response to the delivery of the COVID-19 vaccination is paramount. While each country will develop their own specific plan, countries should benefit from the global supply chain to help facilitating a truly global response and avoid unnecessary disruptions. Drawing together an international working group led by industry representatives (e.g. pharma manufacturers, wholesalers, pharmacy chains, physicians, pharmacists) could ease this work. The G20 should be the main promoter of this international coordination, in cooperation with the WHO.
 - The diffuse experience of public-private
 partnerships model has worked well for
 COVID-19 testing: this best practice should be
 reproduced also for vaccines, since it could work
 equally well.

Proposal 2

Lifelong education for prosperity: teachers as a key asset and more widespread digitalization

Lifelong education for prosperity: teachers as a key asset and more widespread digitalization

2.1 Background

In a world where inequalities between countries are being reduced but within countries are growing, high-quality and widespread education is essential for the social and economic development of economies. While a basic level of literacy helps people to be involved in socio-economic activities, higher education, continuous learning and knowledge acquisition are crucial in preparing individuals to face the challenges of the work of the future and to be competitive in a job market requiring increasingly specific sets of skills. Despite the impressive improvements made in the last 50 years, at the global level education is still not for all.

Today, globally, only 9% of school-aged children are not in school. Since 2000, 75 million more children have been enrolled in pre-primary education, 89 million more children in primary education and 138 million more in secondary education. This is an excellent result, achieved in only twenty years. However, at least 262 million primary and secondary school-age children still have no access to education.

Education access is, indeed, a huge problem.

Nevertheless, even when children have access to school, it does not mean that they manage to finish their studies and get a diploma. Nowadays, in comparison with the beginning of the century, more children go to school, but the primary completion rate is stagnating, especially in poor economies. In high-income countries, the primary completion rate is around 95%, while in low-income countries it is only 66%.

In particular, progress in low-income countries has stalled since 2010, mainly due to weak government strategies to reach the most disadvantaged and improve access.

Primary and secondary education are certainly more relevant in providing individuals with basic skills to avoid social and economic marginalization. In the digital age, however, where the 4th industrial revolution is quickly disrupting the growth patterns known so far, achieving a satisfactory level of **tertiary education** is becoming increasingly crucial to succeed. Looking at the data, major differences

Figure 2.1 Primary school aged children out of school (%), 1950-2017.

The European House - Ambrosetti elaboration on UNICEF data, 2020.

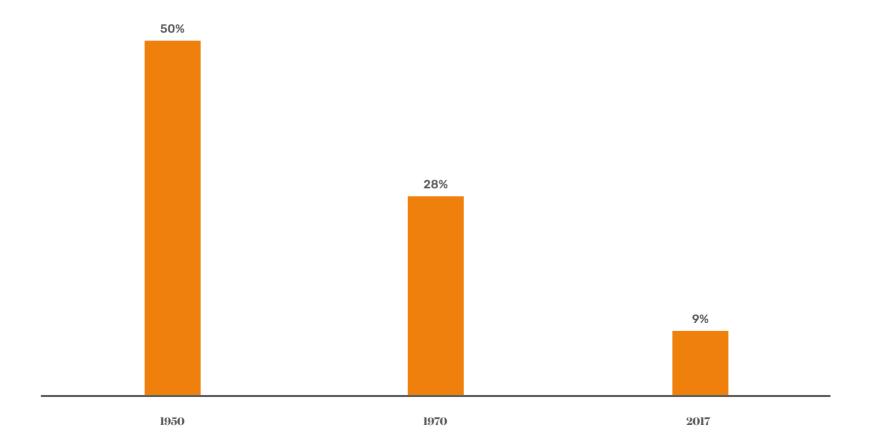
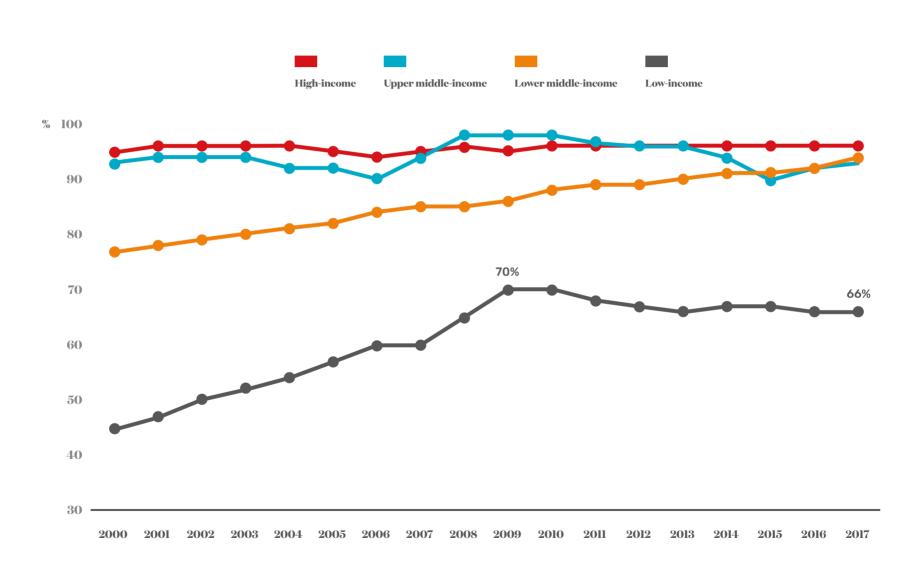


Figure 2.2 Primary completion rate in groups of countries by income (%), 2000 - 2017.

The European House - Ambrosetti elaboration on UNESCO data, 2020.



between developed and developing countries – with least developed economies having almost no tertiary education attainment – exist as well. While in South Korea 69.8% of the population between age 25 and 34 has a bachelor's or master's degree, in Mexico the percentage is only 23.6%, in Indonesia 16.1% and in South Africa 5.6%. Still, many developing countries are improving access to higher education: 55-64 year-olds with tertiary education in Mexico, Indonesia and Brazil are, respectively, 13.6%, 7.2% and 14.3%.

Overall, gaps between developed economies and developing or least-developed countries reflect significant differences in public spending on education. While high-income countries spend, on average, 5.1% of GDP, **low income countries' share of GDP spent on education is only 3.4%**. As an example, Norway and Israel spend, respectively, 7.5% and 5.8% of their GDP on education, Chad only 2.2% and India 3.8%.

Discrepancies, however, do not always derive from different levels of government spending on education.

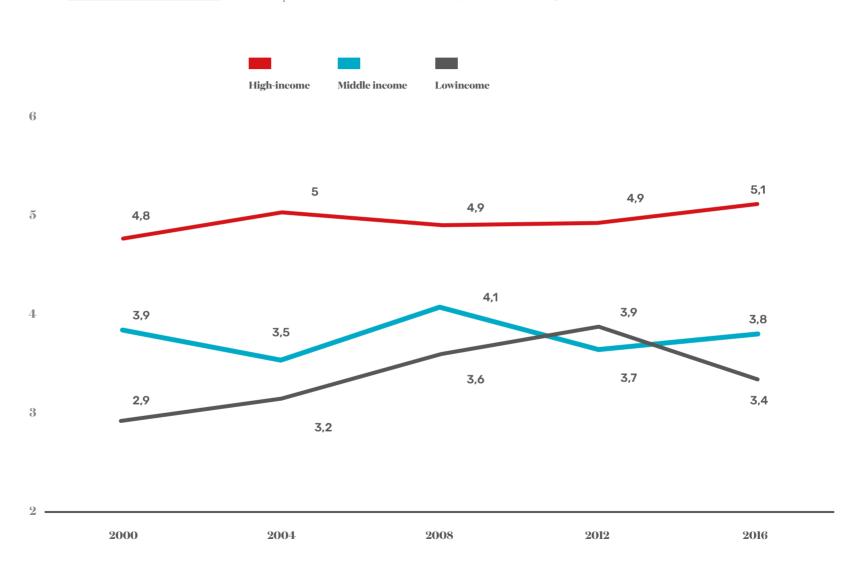
In fact, in the digital age, education is very much linked to the ability of individuals to access adequate internet infrastructures and to utilize online technologies to improve learning and, after coronavirus, also attend classes virtually. COVID-19 is changing dramatically the world of education, and technologies will be even more crucial in the future.

As a consequence, different internet penetration rates and internet use are likely to affect primary and secondary education completion rates and access standards. At the global level, Northern Europe and Northern America have the highest internet penetration rates, with 95% and 92% of the population, respectively, having access to good internet connections. The situation is very different in the poorest regions of the world, namely Western, Eastern and Central Africa, where the penetration share rate ranges from 22% to 36%.

Looking at the statistics related to individuals using the internet per 100 inhabitants, the picture does **l.** "Education at a Glance", OECD, 2019.

Figure 2.3 Government spending on education by country income (% of GDP), 2000 - 2016.

The European House - Ambrosetti elaboration on UNESCO and World Bank data, 2020.



not change: **in Africa, only 28.2 out of 100 inhabitants use the internet**, while in Europe the proportion is almost three times higher.

In most countries, also within G20 members, teachers do not receive adequate compensation in relation to their basic duties and role of knowledge and education providers, and they face a tremendous challenge in updating their skills as required by digitization. In this area, major differences exist both between developed countries and developing countries and among high-income countries themselves. Considering the top pay scale in selected economies, it can be seen that elementary school teachers and high school teachers are paid differently across the world, with salaries being even four times higher in top income states than in bottom income situations.

Elementary school teachers receive an annual salary of \$124,000 in Luxembourg and a \$75,000 salary in Germany, while in Mexico and Costa Rica they get paid only \$40,000 and \$37,000 respectively.²

The same dynamic is seen in high school teachers' salaries: while in Switzerland a high school teacher earns up to \$109,000 per year, in Lithuania he/she earns only \$20,000. These dynamics are present also within the European Union, where Dutch teachers earn annually much more (\$84,000) than their Polish counterparts (\$27,000).

In an increasingly multicultural and international global context, with new challenges and opportunities, the focus should therefore be not only on students, but also on teachers. Digitalization, continuous learning and increasing interaction between education systems and job markets must be promoted from the standpoint of both perspectives: the one of those who teach, and the one of those who learn.

2. OECD, 2019.

Figure 2.4 Individuals using the Internet per 100 inhabitants, 2019.

The European House - Ambrosetti elaboration on International Telecommunication Union data, 2020.

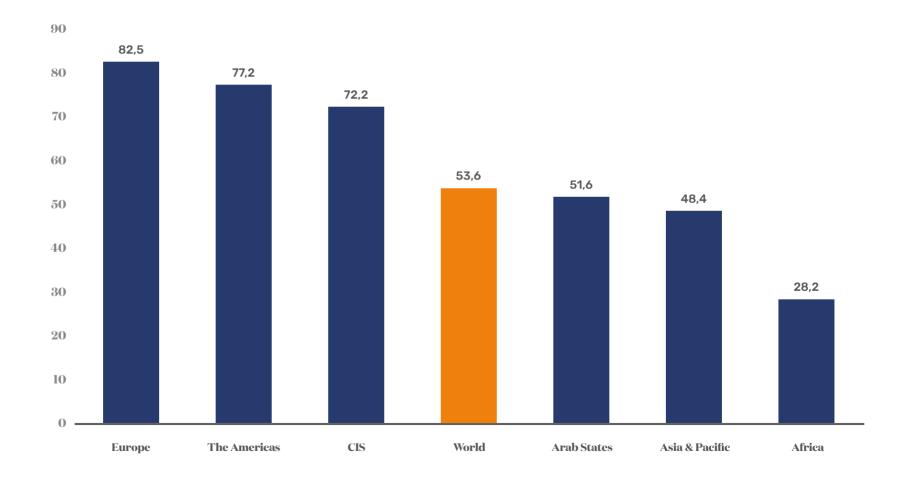
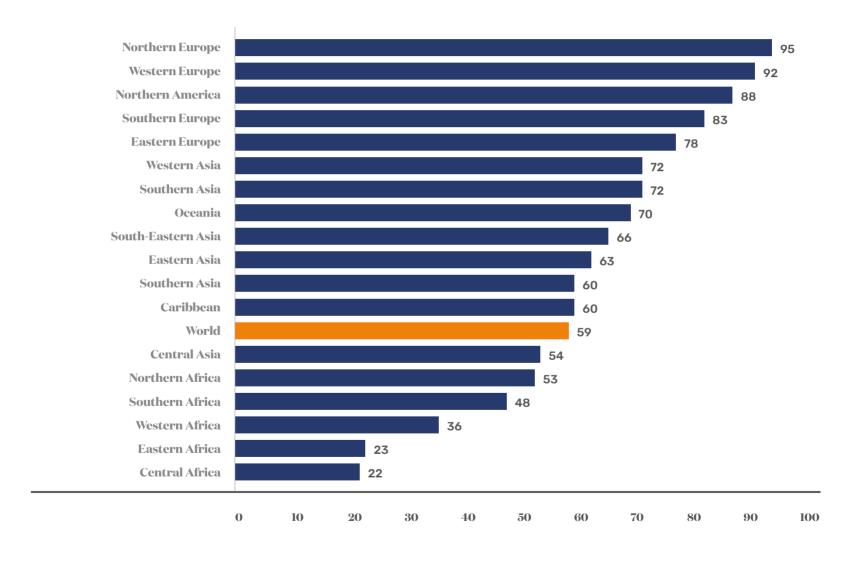


Figure 2.5 Internet penetration rate, (%), 2020.

The European House - Ambrosetti elaboration on International Telecommunication Union data, 2020.



Lifelong education for prosperity: teachers as a key asset and more widespread digitalization

2.2 Actions

> Lifelong learning and new skills

1. The G20 will recommend to the International Labour Organization a **communications campaign** to channel the attention of managers, employees and students towards the growing importance of lifelong learning. The campaign should be built as a key action to raise awareness of this issue, which is a basic action to implement other measures afterwards.

2. The G20 will encourage the creation of a "Lifelong Learning Alliance" (LLA), whose goal should be to provide platforms and content at least for training some specific categories, especially those most affected by weak and unstable access to education. Poor families and the elderly should be at the center of this proposal. The composition and funding schemes of the LLA will be agreed by G20 member states. Initially, it may be composed of G20 members and then enlarged to involve non-G20 countries.

3. The G20 will focus strongly on the future of work and the skills that will be necessary to access the global labor market in the 4.0 era. Because of this, the G20 may agree to develop an **international list of top skills** officially recognized by its members which would encourage countries to invest more in the development of those competencies. The constant application of new and faster technologies like AI can be a driver of digital division within society, excluding the less digital-savvy from individual opportunities and social prosperity. To enable their access to a transformed job market, it is of utmost importance to strengthen digital literacy and the soft skills required, such as adaptability and a multidisciplinary approach, to be an integral part of a digitalized society.

→ Teachers

4. The G20 will encourage, among its member states, the creation of a "**Teachers of the Future Task Force**" to promote better treatment for teachers, the drafting of a common declaration highlighting the importance of the role and authority of teachers to reiterate the need to

respect their category, and the development of guidelines and tools to promote digital literacy and proficiency among teachers. This should be done to meet the challenge of digitalization and the data economy.

5. To ensure adequate salary levels across the globe, the G20 will call for the creation of a common policy framework or a **global pact to establish minimum salary standards for teachers**, according to the GDP per capita of each country.

A metric such as ratio of investment in education to GDP could be useful to set a general target for increased investment in education. This measure could be accompanied by a declaration highlighting the importance of the role and authority of teachers to reiterate the need to respect their category. If we want to relaunch education and enhance its positive effects on the population and society, we first need to re-establish the prestige of being a teacher. By doing so, competence, study and science will result the main focus for growth.

> International education mobility

6. The G20 shall propose the creation of a **Worldwide Exchange Program** (WEP) – blending virtual and physical experience – as a tool to promote student exchange, skills flow, knowledge sharing and cultural dialog. In comparison with the already-existing Erasmus Mundus promoted by the European Union, the WEP would involve more countries and would not exclusively include exchange programs only between non-European countries and EU member states. The WEP's main goal would be to include in the network of exchange programs countries that are now excluded, encouraging multilateral agreements to promote study abroad.

7. Eventually, the WEP program could be extended to include **teachers** to facilitate their international mobility.

> Access to Education

8. The G20 will propose an **education investment target in each country** to be combined also with massive investment in digitalization, the use of which can reduce costs for families and ease access to education.

The target proposed by the G20 should be a minimum ratio of investment in education to GDP, calculated according to average government spending for education in high-income countries: between 4.5% and 5.5% of GDP. Of course, a minimum standard of public expenditure dedicated to education is not sufficient to achieve satisfactory literacy levels and increase access to education. Combining investment with good, comprehensive and forward-looking management policies is necessary.

Proposal 3

A sustainable world: shaping a set of globally shared principles to measure circularity and green transition, to promote a stable, forward-looking regulatory framework and enable resilient infrastructure

A sustainable world: shaping a set of globally shared principles to measure circularity and green transition, to promote a stable, forward-looking regulatory framework and enable resilient infrastructure

3.1 Background

Over the last 30 years, CO₂ emissions have increased by 62% and so have the consumption and production of plastic, even if at a slower rate in the last ten years. Responsibility for this is widely shared by all the world economies, especially if we consider that richer countries are unloading tons of plastic into poorer countries. Between 1988 and 2016, the top ten plastic exporting countries transferred more than 168 million tonnes of plastic abroad, most of it to China, which banned waste imports in 2018, setting off a chain reaction in the global plastic waste system. Consequently, South East Asia has become the new global dump, with plastic imports increasing by 1,388% in Thailand, 260% in Malaysia, 193% in Taiwan and 103% in Vietnam.

In this context, global awareness towards the necessity of changing development patterns thanks to a virtuous energy transition and better circularity has grown. In fact, climate change, waste management and low emissions are at the top of most political agendas across the world. Looking, for instance, at the share of renewable energy in the world, it can be seen that, since 2000, the share of energy generated through renewable sources rose from 18.5% to 24.4% in 2017. In the same period, the share of renewable energy production in G20 countries grew from 15.7% to 23.2%.

The last edition of the World Energy Outlook published by the International Energy Agency confirms this trend. Indeed, "the average annual level of energy sector investment in the late 2020s in the Sustainable Development Scenario (SDS) is around 60% higher than in the past five years. More than three-quarters of the average annual \$3 trillion that is required over the 2025-30 period in the SDS goes to clean energy and electricity networks". At the same time, IEA reports that investment on renewables-based power is currently doubling to \$640 billion a year, also thanks to massive spending on the improvement of battery storage infrastructures and electricity networks.

1. World Energy Outlook 2020, IEA, 2020.

Figure 3.1 Global CO_2 emissions (Gt CO_2), 1990 – 2019.

The European House - Ambrosetti elaboration on IEA data, 2020.



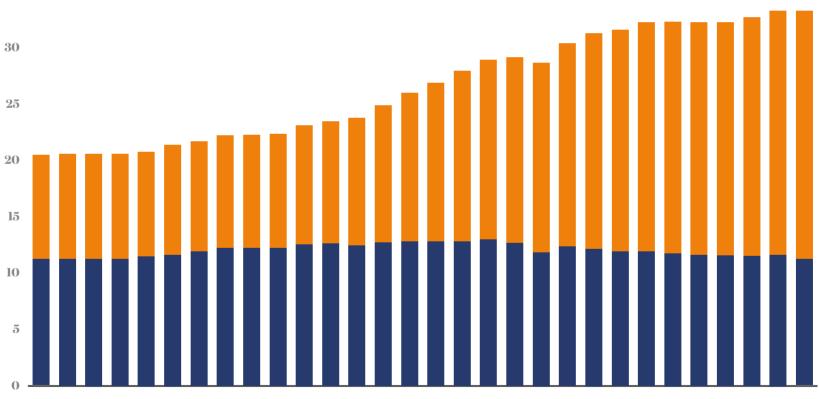
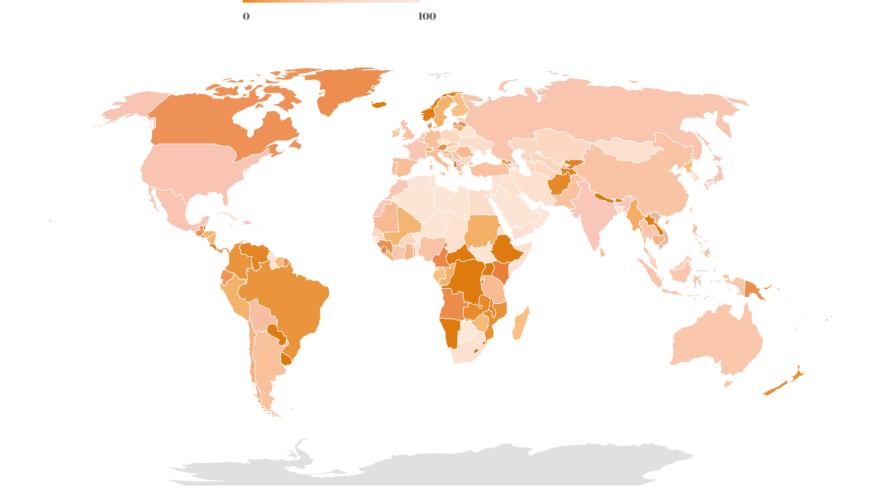


Figure 3.2 Renewable energy generation across the world (% of energy generated with renewable sources on total), 2017.

The European House - Ambrosetti elaboration on IRENA data, 2020.



Nevertheless, if, on the one hand, the international community seems ready to tackle these challenges, on the other hand there are awareness gaps, policy discrepancies and lack of coherency of measures among countries that deeply hinder the transition process. In brief, everybody knows that it is necessary, but only a few know how and have the will to do it. As an example, enormous differences still exist between high-income countries and low-income countries with regard to recycling practices, with Europe as a global best practice and South Asia and Sub-Saharan Africa being at the bottom of recycling shares.

Another clear domain where framework discrepancies across the globe deeply hamper the transition to more virtuous resource management is that of Emissions

Trading Schemes (ETS). In the last decade, several countries have activated – or are developing – some sort of externalities control. However, with some exceptions (such as the EU), this development has not been coordinated and is fragmented. Furthermore, these policies cover only 22.3% of global GHG emissions.

ETS management is a clear example demonstrating the interdependence that exists between countries. Emission schemes could be virtuous in one country, but not adequate in another and this lack of international coordination inevitably leads to **inefficient emissions management**. Similarly, circular economy models or waste disposal can be more developed in some regions such as Europe – where circularity is clearly associated with positive impacts on the economic and industrial dimension – and less or not at all developed in others.

The reality is that without a transformation of our energy system towards net-zero and without better circularity there will be virtually no sustainable solution within G20 economies. The transition towards green energy and circularity is not only taking place in one sector, it involves the whole economic structure, requiring a **multi-stakeholder approach**: a key requirement to achieve the objective without compromising the social structure and to encumber specific classes of workers with the burden of transformation.

Figure 3.3 ETS diffusion across the world, 2020.

The European House - Ambrosetti elaboration on World Bank data, 2020.



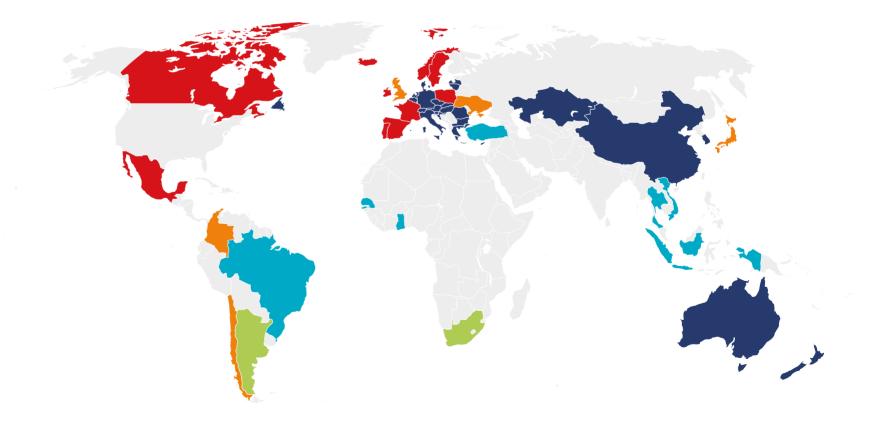


Figure 3.4 Circular Economy impacts on the economic and industrial dimension in the EU27+UK, 2018.



The European House - Ambrosetti and Enel Foundation elaboration, 2020.

Moreover, it is important to underline that decarbonisation is not only a matter of energy and renewables: it is rather a process that involves the entire economy, promoting the transition towards **net-zero emissions** across all industrial sectors.

All the economic sectors and actors should be committed to the decarbonisation of the economy.

Transition is also about infrastructure. The availability of adequate enabling infrastructure with a high level of digitization and wide use of new technologies are crucial to maximize the benefits of circularity and ease utilization and green energy. Technology neutrality should be the leading principle in promoting a more sustainable mobility of goods, people and data to ensure that innovation triggers the best solutions

for consumers. Eventually, promoting culture and awareness on the benefits associated with circular economy and green energy is crucial, as well as fostering their development within society.

Every economy has its own equilibrium and its own characteristics and, consequently, different approaches towards energy transition and circularity.

All these features must be considered to harmonize divergent regulatory frameworks and favor the implementation of international standards to incentivize green energy sources and manage waste cycles through a circular approach. The more global economies are coordinated, the better the international community will be able to create virtuous, widely-shared and sustainable development models.

A sustainable world: shaping a set of globally shared principles to measure circularity and green transition, to promote a stable, forward-looking regulatory framework and enable resilient infrastructure

3.2 Actions

> Regulatory framework

1. The G20 should encourage the creation of a **High-Level Working Group** to identify areas of regulatory harmonization and therefore promote a **globally-shared and forward-looking regulatory framework** for the regulation of the sectors most affected by the green transition (e.g., automotive, energy, and aviation). The High-Level Working Group should be comprised of representatives from G20 members and by selected experts in the field of energy transition and circularity.

a. The regulatory framework should also consider enabling resilient infrastructure. In specific situations, mandatory targets pushing governments to invest in transition-related infrastructures could be considered (e.g., the case of green mobility, often hampered by the lack of recharging infrastructure and digital network as enablers of transition).

b. The regulatory framework should be adequate to the harmonization of the management systems of a range of environmental externalities (e.g., carbon tax and cap & trade carbon markets) to counterbalance forms of carbon leakage. This is useful to achieve a consistent and realistic global roadmap for the mitigation of carbon emissions.

An example: the Task Force for Scaling Voluntary Carbon Markets

In view of the 2021 United Nations Climate Change Conference, the UN Special Envoy for Climate Action has launched, with the support of the Institute of International Finance, an high-level Task Force aimed at finding concrete solutions to promote the creation of a large, transparent, verifiable and robust voluntary carbon market. Since the scaling up and growth of markets could help attracting financial flows to developing economies and enhance efficiency, the G20 shall monitor the Task Force's action and considering the findings to integrate its actions.

2. Basing itself on the promotion of a global regulatory framework, the G20 shall encourage the development of internationally harmonized technical standards in target sectors (e.g., automotive, energy and aviation), with shared long-term objectives and regulation tailored to specific markets that is easier to enforce, simpler for consumers to understand and more efficient for manufacturers to implement. This would facilitate attracting investment in these sectors and accelerate the green transition to carbon neutrality, strengthening main value chains (e.g., the hydrogen value chain).

Focus: hydrogen

The challenges faced for unlocking hydrogen's potential are cross-sectoral and, to overcome, require close cooperation between policy makers and relevant private stakeholders. Early measures are being adopted, including incentives to stimulate commercial demand for clean hydrogen as well as guarantees to limit the risks for first movers; but these dedicated policy mechanisms should be extended to support private sector investments.

As reflected by the "Clean Hydrogen Alliance", launched as part of the new industrial strategy for Europe, all hydrogen needs is a policy "nudge" to get it to its tipping point.

Focus: e-mobility

Within the global roadmap towards energy transition and green mobility, e-mobility represents a crucial milestone as well as a more developed technology if compared to the early-stage of hydrogen. In the effort to promote common regulatory frameworks and harmonized technical standards, electricity and hydrogen shall not be alternatives, but complementary elements of the green transition. A transition that, as for e-mobility, cannot take place without a proper and adequate physical network of recharging infrastructures on the territories: addressing the issue of infrastructural coverage and capillarity to support sustainable mobility is therefore pivotal.

> Technology neutrality

3. The G20 shall release a joint declaration in which it reiterates that **technology neutrality** should be the leading factor to promote a more sustainable mobility of goods, people and data, to ensure that innovation triggers the best solutions for consumers.

> Infrastructure

4. The G20 should recognize and explicitly reiterate that the availability of efficient, highly digitized and climate resilient physical infrastructures digital tools is essential for the promotion, management and monitoring of green transition and circularity. IT infrastructure and physical infrastructure play an important role in these processes only if they are well-integrated and governed.

Proposal 4

ESG finance: increase transparency and sustain resource allocation

ESG finance: increase transparency and sustain resource allocation

4.1 Background

One of the issues that has transformed, and is transforming, the business structure, public policies and society as a whole is the awareness of the importance of sustainability issues, both environmental and social.

Moreover, one of the biggest challenges – if not the main challenge – facing the world is the fight against climate change and the containment of emissions. This requires a commitment from all global players, as well as massive investment aimed at radically transforming production, consumption and lifestyle systems.

The amount of financial resources to be channeled to support the transformation of the production system is impressive. The OECD estimates that more than 100 trillion dollars will be needed between 2016 and 2030 to reduce by two-thirds the probability of a global temperature increase of 2°C, the threshold limit.

This leads to two complementary problems:

- a. mobilizing sufficient economic resources to ensure the transformation process of production systems;
- b. directing these resources in a conscious and efficient manner.

While in developed countries there is growing attention to financial products centered on sustainability (e.g., ESG), in developing economies the channeling of capital is still too low to meet the modernization exigencies felt in these areas (e.g., South-East Asia and Africa).

The vast majority of sustainable investment is still concentrated in the most developed areas of the world. Figure 4.2 below presents the most up-to-date and comprehensive data available. As can be seen, sustainable investment is only statistically significant in developed countries.

Figure 4.1 Global infrastructure investment needed for a 66% chance of 2° C (\$ trillion, 2016-2030).

The European House - Ambrosetti elaboration on OECD, IEA and Investing in Climate data, 2020

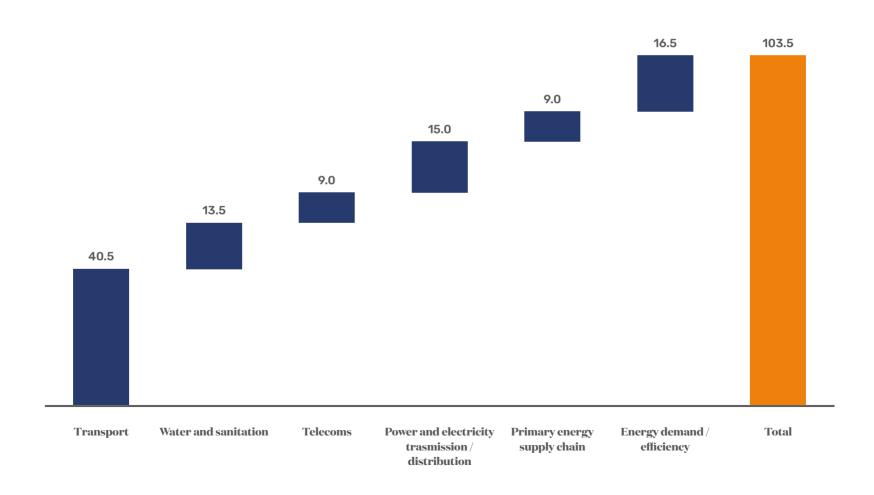
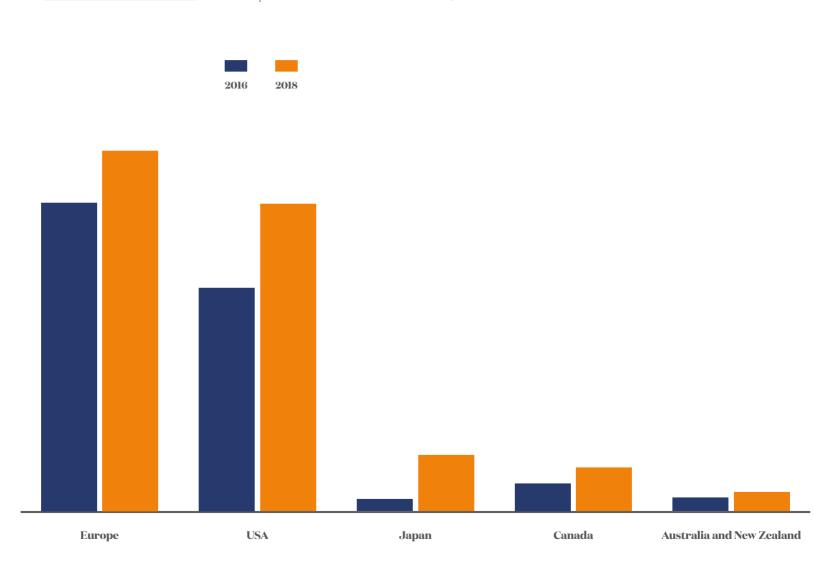


Figure 4.2 Global sustainable investing assets (\$ billion).

The European House - Ambrosetti elaboration on GSIA data, 2020.



Moreover, the very definition of sustainability is not unambiguous and is subject to wide variation. Many companies have adopted environmental, social and governance (ESG) sustainability criteria and have obtained certifications attesting to this commitment.

The literature on the heterogeneity of ESG rating criteria is quite extensive. By way of example, ESG ratings issued by the two main rating agencies with reference to the top 20 US companies by capitalization have a correlation of 0.76, an average of a high correlation between the environmental pillar (for which quantitative assessment metrics are more common) and a low correlation in the social and governance pillars, where there is still wide variation in the assessment criteria.

Currently, the most detailed legislative system for classifying sustainable economic activities is the EU taxonomy regulation, published on June 22, 2020.

Transparency and clear and comparable information are essential to stimulate investors to channel their capital

towards sustainable initiatives. Investors should be able to better identify risks and opportunities in this regard.

4.2 Actions

Harmonization of the evaluation framework

L. The G20 shall call for a better science-based negative externality evaluation framework to increase transparency, promoting the inclusion of sustainability as a parameter to evaluate financial decisions. In this direction, the G20 should support and encourage the finalization and adoption of the COP26 Private Finance Agenda. A common approach to reporting on sustainability information could help achieve this goal. This result should not involve the establishment of a single legislative framework (such as the extension of the EU taxonomy to other countries). Each economic system should adapt the regulation to its local situation. However, it is essential to define homogeneous assessment metrics and to lay down shared guidelines

ESG finance: increase transparency and sustain resource allocation

that can be used to draw on national legislation.

The G20 should leverage on existing projects,
such as the FSB Task Force on Climate-related Financial
Disclosures (TCFD) and Network for Greening
the Financial System (NGFS).

2. An **international alignment of non-financial reporting** as well as a high degree of connectivity between financial and non-financial reporting is essential to achieve a high degree of comparability of data and to evaluate a company's development and performance holistically.

A global sustainable project pipeline

3. The G20 should consider the creation of a global sustainable project pipeline. The project pipeline should being open to investment from private capital and (innovative) finance and funding options and being founded on transparency in common risk/return parameters and standards aligned to the UN SDGs (to

allow for investment comparison). The project pipeline should fulfill a minimum set of criteria, e.g.:

- Openness to investment from private capital and (innovative) finance and funding options;
- Transparency in common risk/return parameters and standards (to allow for investment comparison);
- Careful use of public financing for the purpose of crowding-in private finance through deliberate division into risk tranches (with possible "seed investment" by public entities via blended finance);
- One-stop administrative implementation line to reduce implementation time and costs as well as attract projects/ideas.

Proposal 5

Nothing must go to the end of life: moving from managing waste to effective resource utilization

Nothing must go to the end of life: moving from managing waste to effective resource utilization

- **1.** 2020 is an exception: Overshoot Day fell on August 22nd, almost a month later than 2019, when it fell on July 29th. However, this result is not due to a more careful management of resources, but to the numerous lockdowns and interruptions in human activity due to COVID-19.
- 2. Middle East and North Africa.
- 3. "What a waste 2.0.

 A global snapshot of solid waste management to 2050."

5.1 Background

An essential pillar in the fight against climate change and achieving a better equilibrium on our planet is the reduction in the use of materials by encouraging recycling and the second life of goods.

The amount of resources that the planet makes available is not infinite. Every year, Overshoot Day – the day in which humanity will consume more resources than the planet produces in a year – is brought forward: December 29^{th} in 1970, November 4^{th} in 1980, October 11^{th} in 1990, September 23^{rd} in 2000, August 7^{th} in 2010 and July 29^{th} in 2019.

There are two elements that contribute to aggravating the situation: on the one hand, the amount of man-made waste produced every year; on the other, the scarce capacity to recycle it and return it to the production process.

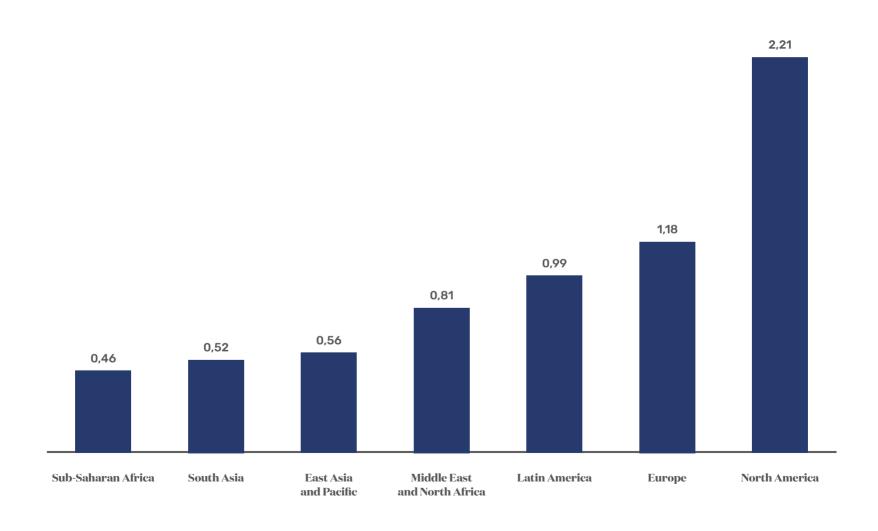
Globally, 2.1 billion tonnes of waste are produced each year, albeit in a very heterogeneous way in different geographical areas.

In North America, per capita production is almost double that of Europe, the second area in this ranking. This is followed by MENA², the Pacific area, South Asia and, last, Sub-Saharan Africa. There is, therefore, a not-unexpected correlation between average income and wealth levels and waste production: proportionately, more developed economies produce more waste.

There is a further critical element. The combination of economic growth in now developing areas, combined with population growth, will create further pressure on waste generation. In fact, the World Bank estimates³ that at the current rate, the world will produce 2.6 billion tonnes of waste a year in 2030 and 3.4 billion in 2050.

Figure 5.1 Waste generation (kg/per capita per day), 2016.

The European House - Ambrosetti elaboration on World Bank data, 2020.



Nothing must go to the end of life: moving from managing waste to effective resource utilization

4. The main exporter of plastics has been Hong Kong, mainly because of its very limited territorial size and population density, which makes disposal within the country extremely complex.

In addition to the growth in waste production, the second key element is the inability to dispose of waste efficiently and, above all, to reuse it in the production process.

The disposal of waste through recycling is, in fact, a widespread practice almost exclusively in North America (33.3% of recycled waste) and Europe (20%). In other parts of the world, this percentage falls significantly, to the detriment of less-ecological and less-efficient disposal solutions, such as open-air landfills which, in South Asia, is how 75% of total waste produced is disposed of.

Although a "virtuous" pattern seems to emerge from this figure in developed countries, it should not be forgotten that the export of waste, destined for landfills in less developed countries, has long been the practice in Western countries. For instance, between 1988 and 2016, the top ten plastic exporting countries transferred more than 168 million tonnes of plastic abroad, most of it to China.

Plastic is not the only waste that fits into this pattern: it is used here because it offers a clear example of waste management dynamics.

In fact, in March 2018, China banned plastic imports, setting off a chain reaction in the global plastic waste system with South East Asian countries becoming the new global dump. Plastic imports have increased by:

- 1,388% in Thailand.
- 260% in Malaysia.
- 193% in Taiwan.
- 103% in Vietnam.

while the plastic exports of G7 countries have dropped by 20%.

The implementation of a true circular economy paradigm would bring significant benefits from several points of view.

Figure 5.2 Waste disposal (% on total), 2018.

The European House - Ambrosetti elaboration on World Bank data, 2020.

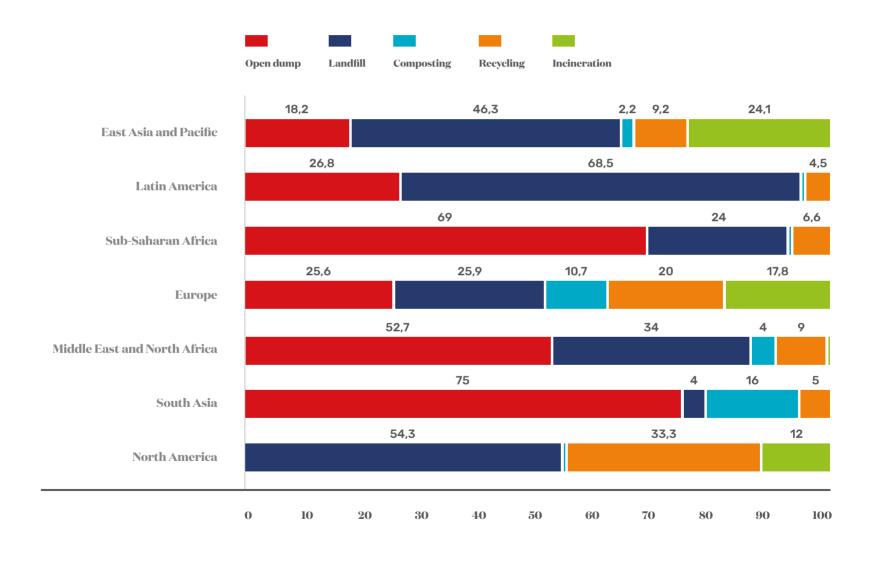
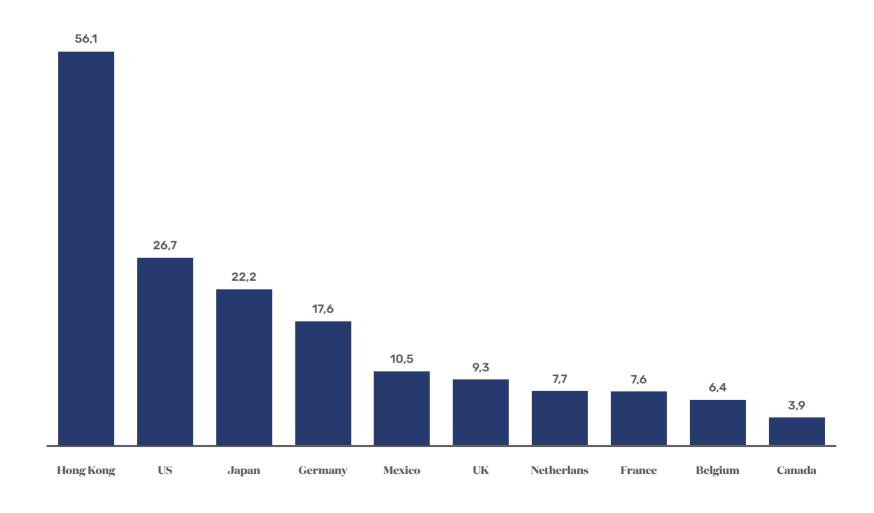


Figure 5.3 Cumulative plastic export from 1988 to 2016 (million tonnes).

The European House - Ambrosetti elaboration on UN Statistics Division data, 2020.



First of all, the reduction in resource waste would lower the pressure on disposal systems, bringing with it environmental and social benefits.

Moreover, a key element associated with the use of secondary materials – materials obtained from recycling – instead of primary materials involves the reduction of GHG emissions connected to the use of virgin raw materials. An increase of 10 percentage points in the circular materials use of iron, aluminum, zinc and lead could bring a reduction in GHG emissions related to their production of 15.6% for aluminum, 14.1% for iron, 16.7% for lead and 13.7% for zinc.

Lastly, the implementation of a circular economy paradigm could bring economic benefit, due to the development of a sector which could increase Europe's GDP alone by between 300-350 billion euros and Europe's employment by 2.5 million jobs.⁵

Developing such a market on a global scale would therefore not only lead to significant environmental benefits, but would also be a real driving force for the economy.

5.2 Actions

> Encouraging collective awareness

1. The indispensable prerequisite for achieving true circularity is an awareness of necessity and opportunity. It is therefore essential that the G20 publicly take a position in support of it, encouraging **collective awareness** and also promoting ad hoc incentive campaigns, targeted communication and opportunities for dialog.

> A call for an international market of recycled materials

2. Currently, most recycling occurs at local level, a fact that does not always result in a profitable market and, as a result, a system that is not fully efficient. The turning point would be the creation of a global

5. "Circular Europe. How to successfully manage the transition from a linear to a circular world." The European House -Ambrosetti and Enel Foundation, 2020. market, which would make recycling an economically sustainable market. The G20 shall promote a call for an international market of recycled materials elaborating a set of "environmental safeguards criteria" to protect the environment from a "race to the bottom" for recycled materials pricing.

- **3.** To do so, **international science-based standards** must be established to define and subsequently price the waste to promote the creation of an efficient global market. **Standards to define materials and products** must also be established from production and disposal to re-introduction into the production process and new uses, allowing for circular planning of the life of the good.
- **4.** The G20 should encourage the establishment of a shared international set of guidelines and standards to define and measure circularity, thus providing guidelines that allow the upgrading of product recovery for suitable applications.

Proposal 6

Building trust towards new technologies through internationally-recognized ethical standards: the Data and Technology Board

Building trust towards new technologies through internationally-recognized ethical standards: the Data and Technology Board

6.1 Background

As all the revolutions of the past, the 4th industrial revolution is having disruptive effects on our economy and society, with winners and losers emerging from the enormous shifts that technology brings with it. Sometimes changes happen slowly, and sometimes quickly. In the case of the current technological revolution, changes are taking place extremely rapidly. The world is going digital at an ever-faster pace, with people and machines increasingly connected and, therefore, **extraordinary amounts of data generated** and managed thanks to decreasing costs in computational and storage capacity.

Considering the latter, for instance, the cost decrease is unbelievable. While in 1965 the data storage cost was over \$1 million per gigabyte, in 2017 it was only \$0.02 cents. Again, the latest figures from the World Trade Organization (WTO) – from 2016 – on the value of e-commerce transactions puts the total at \$27.7 trillion, \$23.9 trillion of which came from B2B transactions. At the same time, trade in physical IT accounted for \$1.6 trillion, three times the total it stood at ten years earlier.

These data-related numbers are impressive, but also vulnerable. There are a number of warnings from various bodies around the world, such as the Swedish Board of Trade, which argues that data flow restrictions threaten to "fragment the global digital economy", while the European Centre for International Political Economy (ECIPE) warns that a "restrictive regulatory environment for digital trade will weigh down many non-digital sectors".

Many of these risks can be likened to the warning lights flashing yellow in the financial system before the 2008 global financial crisis. Among the causes of the crisis were:

- the inability of government regulation to keep up with financial market innovation.
- a failure of both the public and private sectors to fully understand and mitigate the risks building up in the system.
- and weak international cooperation mechanisms for governments to address effectively the global nature of these risks.

© The European House - Ambrosetti 81 Proposal 6

Figure 6.1 Volume of data generated each year (zettabytes = 1 billion terabytes), 2010-2025e.

The European House - Ambrosetti elaboration on Statista and IDC data, 2020.

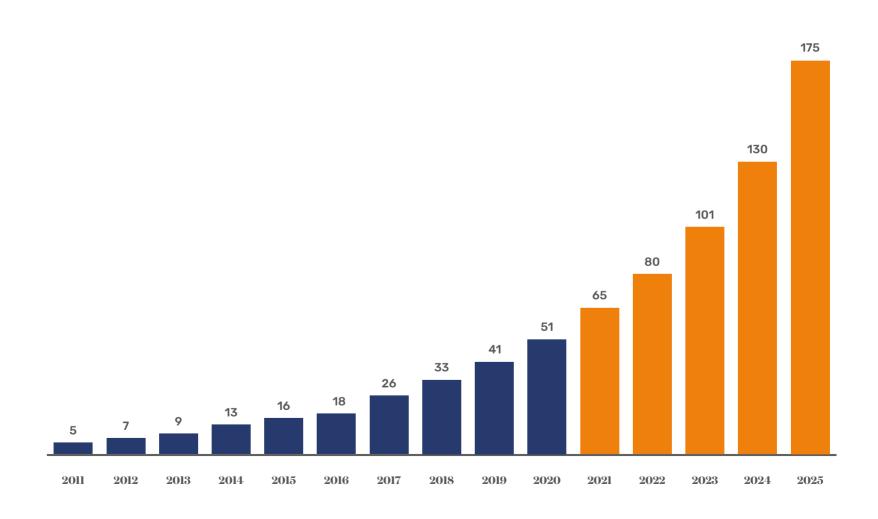
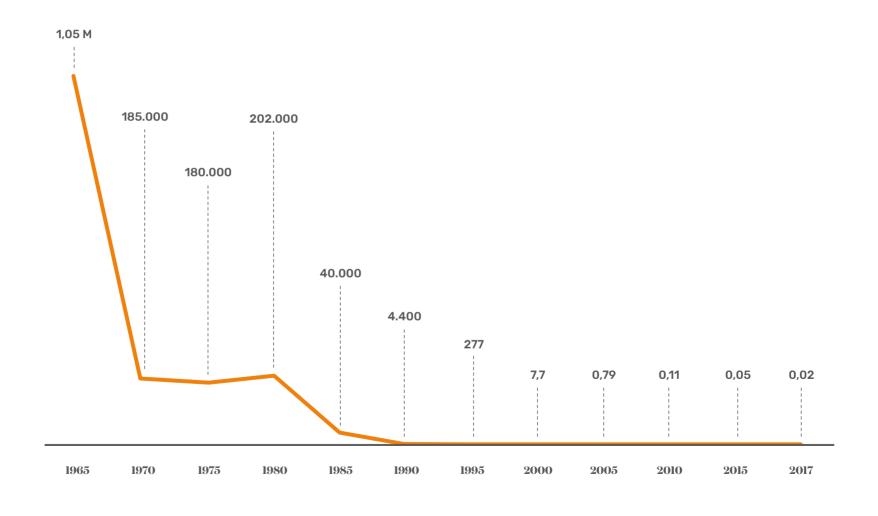


Figure 6.2 Storage capacity cost (\$/gigabyte), 1950 - 2017.

The European House - Ambrosetti elaboration on AI Impacts Computerworld data, 2020.



Similar factors are at play today in the data and technology space where governments must address important questions about privacy, ethical AI practices, cybersecurity and a host of other policy issues. And the crisis precursors are familiar:

- regulation lags behind innovation.
- companies do not fully appreciate cumulative risks and governments lack expertise in these new technologies.
- and governments have not established effective channels for international cooperation to assess and address risk across borders.

The global financial crisis revealed that the existing architecture for international regulatory cooperation was ill-equipped to rebuild confidence and reform the global financial system. At the first G20 Summit in Washington in 2008, leaders agreed on a blueprint for action to address key financial stability risk factors such as bank capital, leverage and liquidity. In 2009, the London G20 Summit established a Financial Stability

Board (FSB) to address vulnerabilities in the global financial system and develop principles for regulatory reform. The FSB and its constituent representatives from central banks, finance ministries, bank supervisors and market regulators became a robust body for international cooperation.

Working through the FSB and by tasking wellestablished international standard-setting bodies such as the Basel Committee, the G20 countries embraced the need for supra-national coordination and cooperation on financial regulatory reform, including forwardlooking assessments of globally systemic risks and vulnerabilities. Notably, they took this action despite longstanding divergences on policy issues and regulatory approaches on financial services issues.

In the case of the digitally-driven technology ecosystem, governments should not wait for a crisis to erupt to pursue this kind of international cooperation. Given the volume, speed and complexity of data-driven systems, global coordination and consistent standard

setting on digital regulations is crucial for sustained growth in digital economy and globalization. A collapse freeze or failure of GPS navigational, power grid or telecommunication systems could trigger program trading decisions on global stock markets or be misperceived by autonomous cyber-defenses as a hostile attack that triggers countermeasures against the putative adversary. Or widely shared data sets could yield divergent medical diagnostic, product or drug safety results in different countries because of the adoption of differing standards on data analytics, data management and machine learning.

In the face of such tremendous risks, countries cannot be unprepared.

Building trust towards new technologies through internationally-recognized ethical standards: the Data and Technology Board

6.2 Actions

Data and Technology Board

1. Premise

To prevent a global digital crisis, governments should act now to strengthen coordination and cooperation on risk assessments and solutions to technology-related public policy concerns. Governments can appropriate and adapt for tech the post-financial crisis regulatory architecture for international cooperation and standard setting. The global nature of the digital ecosystem further underscores the need for a regulatory architecture for international cooperation and standard setting on digital issues.

G20 countries could take the initial step of endorsing in 2020 a **Data and Technology Board** (DTB) and commit to establish work plans and committee structures to carry it forward.

2. Participation

A DTB could include policymakers, national regulators and standard-setters responsible for data-related issues, as well as law enforcement and financial regulatory and competition authorities. The DTB would establish and oversee workstreams in key areas, such as privacy, cybersecurity, artificial intelligence and machine learning, and crossborder data flows. And just as the FSB drew on the work of pre-existing standard setting bodies, the DTB could draw on and empower the relevant work of existing international fora such as the OECD, APEC or the WTO and international standard setting bodies like the ISO.

3. Objective

The intent of the DTB mechanism is **not to create global regulation, but rather to facilitate international cooperation and coordination on digital and technology-related public policy issues** and address the proliferation of overlapping or conflicting measures. The DTB would seek to enhance

cooperation among national supervisors and regulators, with the aim of building consensus on (i) taxonomies; (ii) policy principles; or (iii) specific standards or regulatory approaches, all with an eye to facilitating international cooperation, data connectivity, and commercial interoperability.

The DTB also would serve an important function as a coordinating forum for governments to consider policy matters affecting the digital economy from a horizontal, cross-industry, cross-border perspective, with a focus also on technology ethics. This will better enable governments from like-minded countries to find common ground on regulation of the digital economy on the basis of shared democratic values, instead of allowing policy or technical divergences on specific issues to stymie progress in other areas.

4. Market Access: Opt-in Model Based on Trust

Establishing a formal channel for global cooperation could also help address one of the principal concerns about cross-border access to data and sensitive infrastructure: trust. The Japanese government highlighted this concern during its G20 presidency in presenting Prime Minister Abe's concept of "Data Free Flows with Trust". On issues where governments reach consensus on regulatory principles or standards, national implementation of DTB-developed principles or standards could facilitate cross-border market access or interoperability regimes through mutual recognition agreements or regulatory deference decisions.

The Data and Technology Board would be a **tool designed to help governments regulate the sector, not a regulatory body per se** – although, due to the high-profile structure hypothesized here, the Data and Technology Board will be a subject strongly devoted to institutional advocacy. For this reason, its main task is twofold: firstly, to focus on digital issues, stimulating awareness in national governments; secondly, to promote the exchange of information and the development of effective interoperability.

 An area on which the DSB can focus its action is healthcare. As highlighted in proposal 1, a "Data and Technology in Healthcare Task Force" shall be created within the DSB to promote a broader use of technology (e.g. sensors and communication), data, applications based on data (AI) in healthcare.

Proposal 7

Supporting SMEs to access global value chains thanks to digitalization

Supporting SMEs to access global value chains thanks to digitalization

- I. Constantinescu, C.,
 A. Mattoo, and M. Ruta. 2017.
 "Does Vertical Specialization
 Increase Productivity?",
 World Bank Policy Research
 Working paper 7978.
- 2. Cusolito, A. P., R. Safadi, and D. Taglioni. 2016. "Inclusive Global Value Chains: Policy Options for Small and Medium Enterprises and Low-Income Countries.", OECD and World Bank Group.

7.1 Background

SMEs are a key player in the international production fabric, both in developed and developing countries. The figure below summarizes the main economic data worldwide and provides a detailed picture of how fundamental SMEs are to the economy and society.

However, in a world where production processes have transcended national borders and are now – in most cases – on a global scale, the inability or difficulty to fit into Global Value Chains (GVC) is one of the main obstacles to the growth and sustainability of SMEs.

Inclusion in GVC would bring considerable economic and social benefits to SMEs, as is well-known in the economic literature. For example, Constantinescu and Ruta¹ highlight how a 10 percent increase in GVC-related trade boosted labor productivity by almost 2 percent on average, and Cusolito, Safadi and Taglioni² estimate that in developing economies with the fastest-growing GVC integration, GDP per capita growth rates are 2 percent higher than the average.

There are several obstacles that hinder the effective participation of SMEs in GVCs, the two main ones being



SME account for 2/3 of jobs worldwide



SME generate 50% of global GDP



SME represent 90% of total global business

Figure 7.1 GVC participation (% of gross exports), 2001 and 2011.

The European House - Ambrosetti elaboration on World Bank data, 2020, Kowalski et al. (2015), and Cusolito et al. (2016).

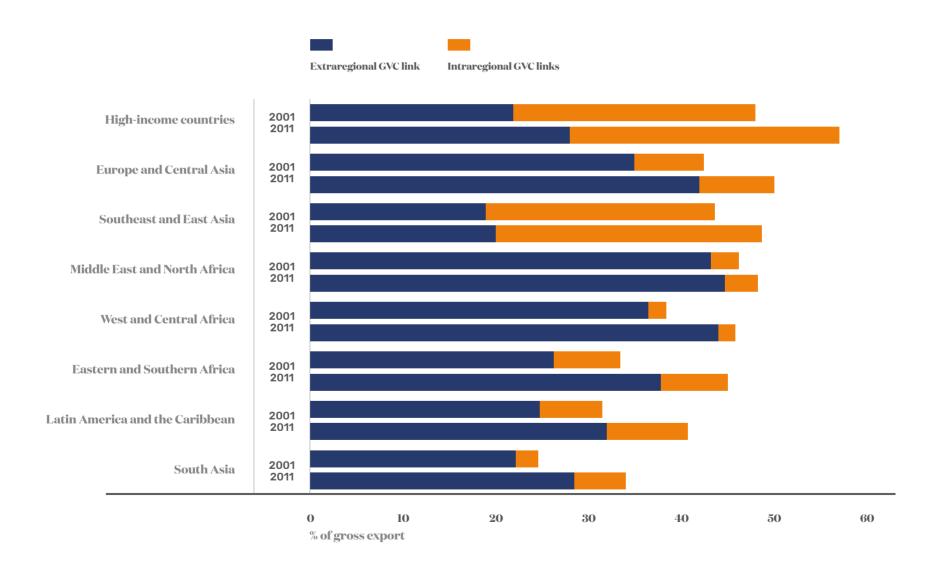
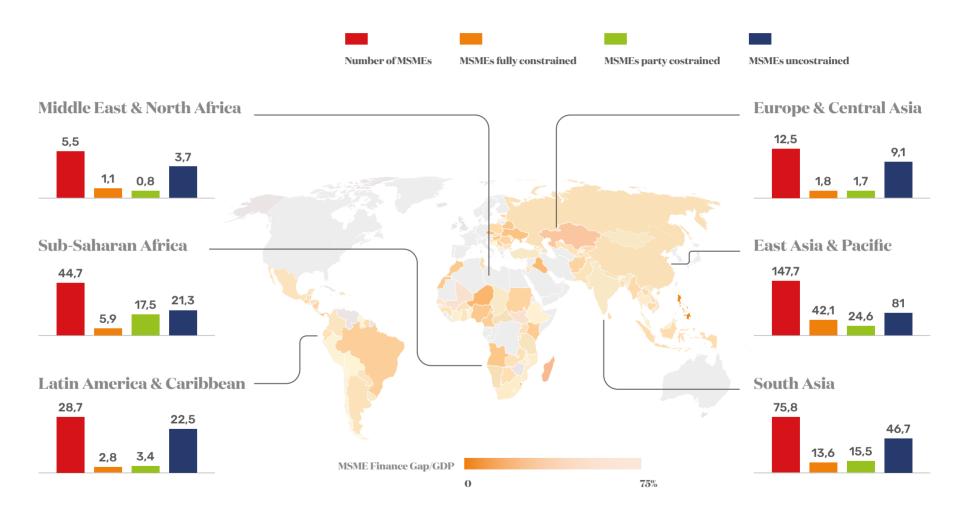


Figure 7.2 Histograms: MSME access to credit (millions of MSMEs); map: MSME Finance Gap/GDP (percentage), 2019.

The European House - Ambrosetti elaboration on SME Finance Forum data, 2020.



bureaucratic red tape and the impossibility of ascertaining the identity of the counterparty and restrictions on access to credit.

Historically, building trust between counterparts has required a high level of physical interaction, and in the post-COVID-19 era, this level of physical interaction is unlikely to return.

Moreover, the more complex the supply chain, the more complex paperwork and bureaucratic procedures become. Despite high standards and attempts to innovate, commercial finance is still primarily a paper-based process, with an impact on costs and complexity, resulting in lower revenues and difficult access to foreign markets.

The elongation of GVC and the fact that they are spread over several countries also makes the efficient use of data less likely. The inability to benefit from the information disseminated along the supply chain leads to higher operational costs, reduced flexibility and speed.

On the other hand, SMEs face more constraints while attempting to access credit. Smaller firms are less likely to possess the collateral required by bank requirements. Moreover, especially in emerging countries, SMEs may lack formal credit histories, adequate business plans and so on.

This is reflected in less access to credit. The International Finance Corporation (IFC) estimated that SMEs in emerging countries suffer from a financing shortfall in excess of US \$2 trillion. This generates a negative impact on society as a whole: underfunded SMEs grow little and do not support employment as much as they could.

7.2 Actions

> Establish a Digital Identity Task Force

1. The G20 should establish a **Digital Identity Task Force** within the Data and Stability Board in order to enable SMEs to prove their identity to counterparts in other countries using data flows from national digital business registries. Greater interoperability of

Supporting SMEs to access global value chains thanks to digitalization

3. See, for instance, IMF Departmental Paper No.19/02.

data would allow all economic actors to interact with each other by having access to more information, thus facilitating the building of the confidence needed to operate on a global scale. It will be important to support related digital innovations that can enhance such assessment processes.

Once a mechanism has been established to guarantee the certainty of the counterparty's identity – using the same digital tool – the certification process can be expanded, ensuring credit worthiness and reliability of the parties involved.

A call for diagnostic exercises to identify the ongoing causes of financial exclusion

2. G20 Finance Ministries and Central Banks should commission diagnostic exercises to identify the specific ongoing causes of financial exclusion and informality in their country, as well as lack of financial appeal and should take steps to address these challenges and incentivize small businesses to formalize

and financial institutions to include this segment.

As evidenced in the economic literature, the causes leading to financial exclusion for SMEs are numerous, cover a wide range of actors (both public and private), and can be fiscal, bureaucratic, regulatory and cultural in nature. A policy of overcoming these critical issues can only adopt a holistic, broad-spectrum approach, focusing on the different spheres of intervention, which must necessarily be previously mapped.

The G20 should therefore decisively promote the objectives of the Global Partnership for Financial Inclusion (GPFI), also through greater integration with the Data and Stability Board.

> Assess the trade finance obstacles

3. The G20 should require the Financial Stability Board to assess the trade finance obstacles and bottlenecks **that make it difficult for SMEs to access global value chains** and/or foreign markets and call for guidelines to reduce market frictions.

Proposal 8

Digital identity for citizens, companies, things, and bots

Digital identity for citizens, companies, things, and bots

8.1 Background

In the future, we have to expect that bots and things will take an increasingly leading role in our lives, starting from the economic and social sphere: they will become — and are already becoming — social and economic actors influencing our world. The **growth of data economy**, indeed, seems unstoppable. Just to give an example, in the EU, nowadays, data economy is worth €477 billion, 177 more than four years ago and more than two times less than in 2025, when the total value is expected to overrun €1 trillion. In terms of GDP, data are increasingly relevant to the economy: in 2018, they represented 2.6% of EU's total GDP, while in 2025 they will represent the 6.3%, with a concrete impact also on employment. In five years, in the EU will work **10.9 million data professionals** (in 2018 they were just 5.7 million).

As data economy grows, so does AI market size. In the last three years, **the number of patents related to AI processes for robotics has grown by 55%**: this is a much higher growth in comparison with the rate observed for patents across all areas of technology, which was 10%.

Equally, deep learning showed an impressive average annual growth rate of 175% from 2013 to 2016, reaching 2,399 patent filings in 2016. The same goes with neural networks, which grew at a rate of 46% over the same period, with 6,506 patent filings in 2016.

The diffuse use of AI and other technologies is certainly beneficial since they clearly improve our lives. Lastly, these technologies have been very useful in the fight against COVID-19 to overcome the emergency. At the same time, however, the disruptive consequences of the digital era on labour market and entrepreneurship have to be taken into consideration, since they often tend not to be really inclusive.

Looking for instance at data regarding the five largest firms in 1980 and 2020, both in terms of turnover and number of employees, we find out that **the first largest firms of forty years ago had a market capital of about \$483 billion, against the over \$6,2 trillion of today's top players** (Apple, Microsoft, Amazon, Alphabet and Facebook)¹. Similarly, while the former top companies (IBM, AT&T, Exxon, Standard Oil of Indiana and

 The European House -Ambrosetti elaboration on Bloomberg and United Nations data, 2020.

Figure 8.1 Data economy value in EU27+1 (€ bln), 2016-2018 and projections 2020-2025.

The European House - Ambrosetti elaboration on European Commission data, 2020.

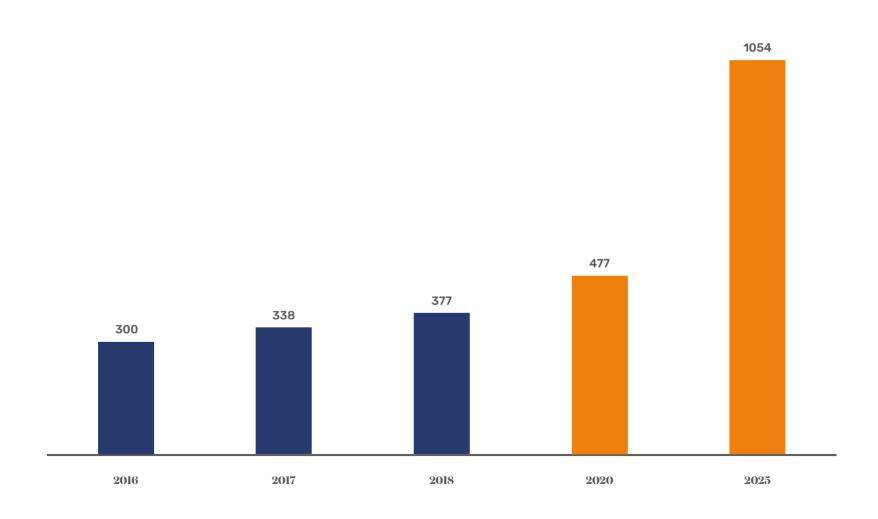
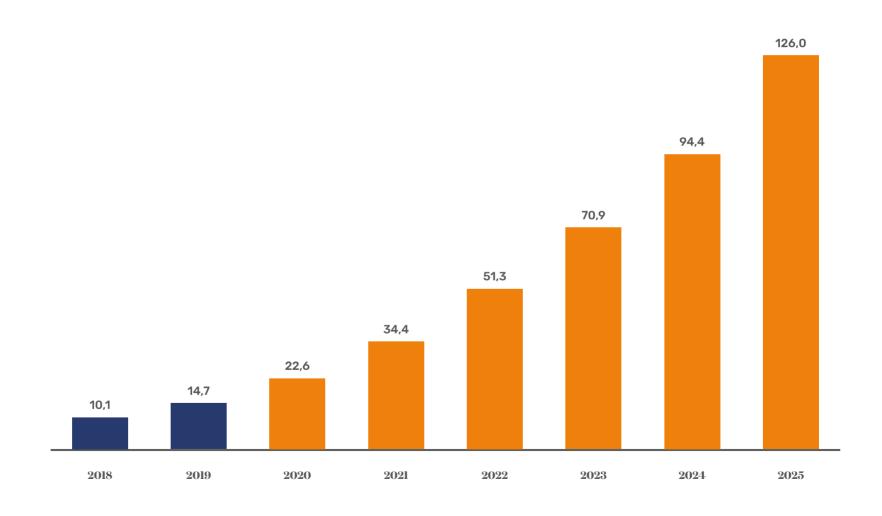


Figure 8.2 Artificial Intelligence market size (\$ bln), 2018-2019 and projections 2020-2025.

The European House - Ambrosetti elaboration on WIPO and Tractica data, 2020.



Schlumberger) employed more than 1,6 million people, those of today have only 943,000 employees. What does it mean? First, that data firms are structurally less labour-intensive and therefore less likely to generate employment. Second, that due to absent market prices of data, large data firms are capturing all surplus values created by data, amassing unprecedented wealth and exacerbating income and wealth inequality. Third, data-driven businesses can create 'winner-takes-all' markets. Therefore, in the absence national and global regulations, large data firms increasingly dictate the terms and conditions of data availability and use.

Regarding the labour market, instead, transformation is even more evident. Considering the skills and competencies that will be increasingly requested by companies in the future, it emerges that the **85% of the jobs that will be needed in 2030 still do not exist today**. Indeed, 4 out of 10 enterprises Europeans are already struggling to find suitable talent to fill

vacant positions, mainly due to a low availability of profiles with adequate skills. This gap will necessarily have to be filled soon, otherwise the existing skills mismatch will worsen. Already, 67% of employees in the EU need advanced ICT skills to carry out their work tasks associated with their profile, but only 30% have digital skills that can be considered above the basic level.

The increasingly important role of bots brings along, as main consequence, the necessity to identify them not only under an economic and social perspective, but also under a **juridical perspective**: with no identity, they will not be recognized as social and economic actors as citizens and companies.

In this context, digitalization can provide a useful solution. Rather than to create a global system/ database of digital identities including all the actors involved in social and economic processes,

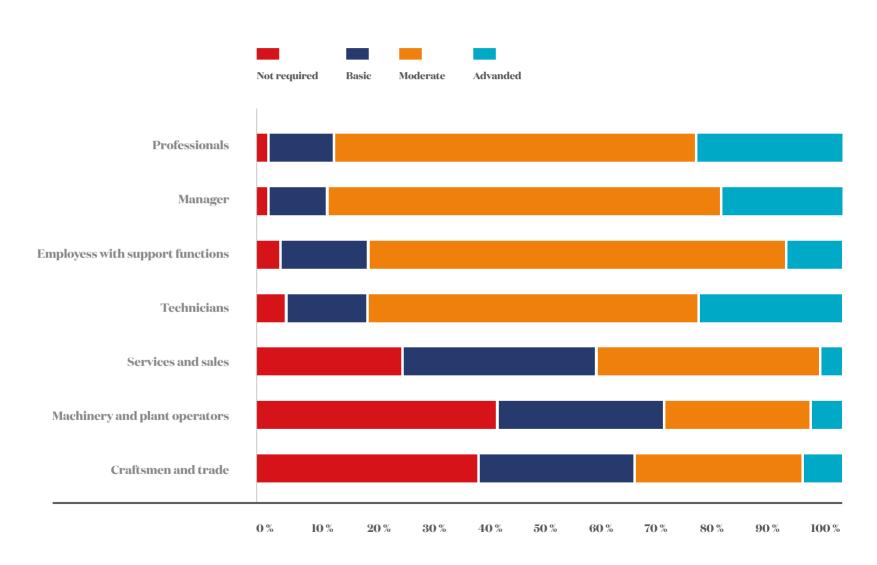
Governments and companies should work closely to promote a level of interoperability where citizens can give permission for the release of a specific data field to a specific recipient, leading to a query of the relevant one of many distributed data bases. The data is indeed dispersed to respect the recipient's privacy, to reduce the risk of cyber intrusions, and reduce the abuse of personal data by either companies or Governments.

Thanks to such interoperability between national system, as well as the easiness in exchanging secure information digital identities including all the actors involved in social and economic processes (citizens, companies, bots and things), countries would be able to align different identification schemes and make them more compatible. This would tremendously ease processes and patterns in several areas: that is why the G20 should promote homogeneity of rules for the acquisition and verification of digital identity.

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Figure 8.3 Level of ICT skills required in the years ahead.

The European House - Ambrosetti elaboration on Edelman, CEDEFOP, European Commission and OECD data, 2020.



8.2 Actions

Data Identity Task Force

a. G20 should establish a Digital Identity Task
 Force within the Data and Stability Board,
 initially composed by G20 members'
 representatives but to be enlarged in the future.

The Task Force would have three main goals:

 advocate for G20 governments to provide their citizens with a secure, privacy-respecting biometric digital identity that is interoperable with those of other countries to facilitate crossborder travel and commerce, by promoting common international standards for

- government-provided digital identity, taking inspiration from the EU's *eIDAS* standards;
- enable SMEs to prove their identity
 to counterparts in other countries using data
 flows from national digital business registries
 (see proposal 7);
- evaluate the ethical, legal and technical issues
 related to assign identity to non-human network
 entities (machines, things, bots), encouraging
 the private sector to cooperate in this regard.

On this basis, the evaluation of ethical, legal and technical issues related to assign identity to non-human network entities (machines, things, bots), encouraging the private sector to cooperate in this regard, would follow.

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