

Professor Klaus Schwab
Founder and Executive Chairman

H.E. Mr Mark Rutte
Prime Minister of the Netherlands
Office of the Prime Minister of the Netherlands
P.O. Box 20001
2500 EA The Hague
Netherlands

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PVAL/PSO

Dear Prime Minister,

I would like to thank you for confirming your participation in the World Economic Forum Annual Meeting in Davos, taking place from 22 to 25 January 2019.

This letter provides an update on the theme – Globalization 4.0: Shaping a Global Architecture in the Age of the Fourth Industrial Revolution.

The context for global cooperation has changed considerably. What is required is a strategic dialogue to reform and update the present collaboration system and to create new mechanisms to address, in particular, the challenges of the Fourth Industrial Revolution. Included you will find the "Davos 2019 Manifesto" background paper for your reference.

I can assure you that the Annual Meeting will once again assemble 3,000 leaders from government, business, civil society, academia and the media.

I truly look forward to engaging you in this effort and to welcoming you in Davos.

Yours sincerely,

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Globalization 4.0: Shaping a Global Architecture in the Age of the Fourth Industrial Revolution

The Davos 2019 Manifesto

We need a new framework for global cooperation in order to preserve peace and accelerate sustainable progress. After the Second World War, leaders from across the globe came together to design a new set of institutional structures to enable the post-industrialized world to collaborate towards building a shared future. The world has changed and, as a matter of urgency, we must undertake this process again.

This time, however, the change is not merely one of a geopolitical nature, or even of an economic one. Rather, we are experiencing a change to the very fabric of how individuals and society relate to each other and to the world at large. Understanding that this change is already underway, and that we positively and proactively determine its outcome, provides the opportunity – and responsibility – to ensure that we build new institutions, or adapt existing ones, as well as a new society founded on ethics, integrity, and security for important values like inclusivity and privacy.

Doing so requires a neutral actor with the broadest possible reach. Success requires a platform that can act as an honest broker among the competing, and sometimes conflicting, values of nations, global companies, civil society, and academia. The World Economic Forum provides this platform, one where all stakeholders of our shared future come together to forge new global institutions and understandings – namely, a new “global operating system” that will lead to a positive outcome of the Fourth Industrial Revolution.

To start, we need to take stock of our current context. We are living in the age of the Fourth Industrial Revolution (4IR). Economies, businesses, societies, politics are not just changing – they are fundamentally transforming. Reforming our existing processes and institutions will not be enough. Rather, we need to redesign them by anticipating the forces of change and shaping strategies that leverage the abundance of new opportunities and avoid the great risks inherent in such disruptive periods. If we wait, or just apply a “quick fix” to repair the deficiencies of outdated systems, the forces of change will naturally develop their own momentum and rules, and thus limit our ability to shape a positive trajectory and outcome.

How can the 4IR be described and understood?

First, its force is developing exponentially. What was considered science fiction only a few years ago has become today's reality.

Second, its impact is comprehensive and all-encompassing. The innovative force of the 4IR is not just related to some specific products or services, but rather redefines the whole system of how we produce, consume and communicate.

We can describe the 4IR in terms of evolving technologies, such as AI, robotics, precision medicine, autonomous vehicles, Internet of Things, and many more. However, to truly understand its transformative power, we must define **the basic characteristics of the 4IR**:

1. **Digitization**: everything is expressed in terms of data, leading to an economy of unlimited mobility.
2. **Integration**: data becomes integrated into platforms, thereby disintermediating economic interactions.
3. **Smart-ization**: AI transforms data platforms into intelligent systems, which will determine all aspects of life, such as health, education and transportation, to name just a few.
4. **Virtualization**: platforms and systems migrate to the cloud, with cyberspace being the catalytic enabler.
5. **Designation**: systems move from being just analytical to becoming predictive and prescriptive, creating the need for clear ethical rules and guidelines for direction and control.

For all of these technologies, the need for security and integrity is paramount. Security to ensure that the dynamic characteristics of the 4IR are not used as weapons against individuals, institutions, or society, and integrity to ensure that we can entrust the technology and its users and developers. Here, integrity means two things. First, that we ensure data and information is used for innovative and pro-social purposes. Second, that the data itself has integrity – specifically, that it is collected with respect for human dignity, that it is safeguarded against tampering, and that it is accurate and appropriate for our use. Achieving security and integrity ensures that these transformative technologies do not erode trust in innovation.

The 4IR will transform our economic systems:

- The physical world will shrink in comparison to a new digital, interconnected, integrated and virtual world. This de-materialization of the economy will be accelerated by a transition into a circular and shared economy enabled by the 4IR.
- Manufacturing will be revolutionized by automation, localization and individualization, largely replacing traditional supply chains.
- Competition will be less based on cost, and much more driven by functionality and innovation. In this environment, it will be the fast fish who will triumph over the slow fish, and no longer the big fish over the small fish. Economies of scale will no longer provide the advantages they once did. Talentism will also succeed capitalism, as the most precious resource will be talent over capital.
- The 4IR creates unprecedented power and resources, concentrated in the hands of just a few corporations. These firms are not businesses in the traditional sense, as they are shaping the daily lives of citizens and disrupting traditional social patterns.
- Innovation, the mastery of AI and big data, and the ability to build, curate and master platforms through intelligent systems leadership will determine corporate power, and above all, national power.
- Employment and income patterns will be transformed as large parts of employment are substituted by intelligent automation. Jobs will be increasingly self-created through innovative ecosystems. Traditional labour income will be extensively replaced by accrued returns from creative tasks, venture capital and first-mover advantage.
- Our global economic interactions can no longer be compartmentalized into the trade of goods and services, financial transactions and investments. All economic flows are integrated into a comprehensive system of cross border tangible and non-tangible value exchange.
- Tax systems will have to reduce dependence on the taxation of labour, and instead rely on value creation stemming from activities in the virtual cloud, with the new dimensions of platform monopolies.

- Simultaneously, national budgets will be strained by the need to finance the newly required hard and soft infrastructures to facilitate creative and innovative ecosystems, but particularly for reskilling and upskilling labour forces and other safety nets to support workers through the economic transition underway.
- Our whole system of education will have to be revamped. The age of the 4IR requires new skills and abilities. Emphasis must be placed on nourishing creativity, critical thinking and new digital skills, and above all, on supporting the very aspects that make us human. Cultivating empathy, sensitivity, collaboration and passion are the best way to ensure that we use technology as a tool for mastering our lives and do not become the slaves of algorithms. The educational systems of the future will also need to focus on lifelong learning and provide a blended approach of digital delivery and face-to-face personalized development and coaching.
- Policy making will have to cope with the speed of change to ensure societally-oriented and human-centred progress. The danger here is that a two-speed 4IR transformation could unfold, with government policies continuously lagging behind. New collaboration, agile governance models will have to be developed.

The timely answer to all of these questions will determine the economic relevance and growth of a country. It will also determine welfare and job opportunities for its citizens. It will shape its standing and power in the geoeconomic and geopolitical arena. Ultimately, it will determine the quality of life for the generations to come.

The 4IR is even more borderless, more interconnected and more interdependent compared to the present economy of integrated supply chains. Thus, national policies will have to be even more so integrated into a global system. The concept of globalization, which presently describes the multilateral and/or bilateral agreements to remove trade barriers, will be increasingly tied to the connectivity of national digital and virtual systems and the related flow of ideas and services.

However, to create the necessary multilateral frameworks for the age of the 4IR economy, there are numerous challenges to overcome:

- The speed of change and the general lack of awareness of the scope and nature of the change – namely, that this change is not incremental but rather transformational, and that it's already in full swing.
- The complexity and virtual nature of change makes it difficult to understand the urgent need for agile policy formulation.
- The general resistance to change, exacerbated by the experience of large parts of society, particularly those in developed countries, who have suffered over the last years from eroding incomes and who feel in a precarious situation in terms of job and life security.
- The widening gap between the "winners and losers" of the 4IR, which is undermining social and national cohesion. This gap feeds the notion that the 4IR is reinforcing the "winner takes all" notion of the evolving economic model and social order.
- The growing abundance of communication, information, and entertainment enabled by the 4IR is fuelling the global deluge of content, leaving it to algorithms to parse through according to user preferences. As such, this makes it increasingly difficult for individuals to find diverse, trusted content outside of their current worldview, particularly with the continued propagation of 'fake news'.
- The fusion of the physical, digital and biological realms raises fundamental questions about identity and purpose, and adds to the general sense of anxiety. Gene-editing technologies such as CRISPR, as well as cognitive technologies such as AI and big data, are not only changing what we do, but particularly who we are.

Governments and societies have three basic options:

1. Protect, using all means, the “losers” of transformative change, thereby gaining short-term political advantage but setting the stage for the erosion of competitiveness. Those governments will soon find out that they are operating in the “too late” zone.
2. Follow a laissez-faire policy, which may only succeed if the business community is ready and able to serve as a strong catalyst and mover.
3. Mobilize all forces to fully embrace the 4IR and achieve a leadership position, recognizing that the principle of the future global economy will no longer reflect Adam Smith's division of comparative advantages, but rather a world characterized by a complex interplay between platforms and systems leadership that cross national boundaries.

Many countries are still trying to catch up to the previous industrial revolutions. At the same time, they must be aware that the 4IR is not just the continuation of a sequential process, but rather offers unique opportunities for leap-frogging to the newest innovations.

Having gained from the forces of the first Industrial Revolution, the UK became the dominant global power, followed by the US, which built its global influence by taking ownership in the Second and Third Industrial Revolutions. These three Industrial Revolutions divided the world into industrialized and developing, or even underdeveloped countries, with China declining in significance after having been the central power for so many centuries.

Today, the global landscape is again being redistributed – and at incredible speed. In a world where the means and ability to cause enormous destruction is now available to even a single individual, the world simply cannot afford yet another division between the “haves and the have nots”. This would only result in an environment void of peace or durable security. Therefore, there is an urgent need for global cooperation.

Faced with the reality of fast and fundamental change, the global community has much more at stake than addressing the current trade wars. Patchwork actions are not the solution to reinvigorating outdated systems and revitalizing organizations to make them fit-for-purpose. The context has changed, and we need fresh thinking about what free and fair economic relations in today's world means. Working together requires jointly exploring the enormous potential of the 4IR to lift humankind to a higher level of consciousness.

In this respect, twelve dialogues are urgently necessary on a multilateral level to shape the future framework for global cooperation:

1. The **global dialogue on economic cooperation**: A dialogue to create a new framework of rules and institutions integrating all aspects of global economic cooperation, including intellectual property, movement of people, competition policies, data protection, exchange rates, fiscal policies, state-owned enterprises and national security.
2. The **global dialogue on technology policy**: A common and collaborative effort to define the principles for new and emerging technologies, such as AI and gene editing, and to ensure that they are underpinned by the necessary ethical principles and values-based framework.
3. The **global dialogue on cybersecurity**: A common and collaborative effort to ensure that innovation and the technological backbone of the 4IR are secure and trusted.
4. The **global dialogue on financial and monetary systems**: To jointly shape our monetary and financial systems by not only leveraging new technologies, such as crypto currencies and blockchain, but also making the systems more resilient for achieving sustainable growth and long-term societal well-being.
5. The **global dialogue on the future of the economy**: our economic theories, and therefore many principles for economic and social decision-making, must be redefined to better reflect the structural

changes inherent in the 4IR. For example, how to stimulate productivity in a more circular economy; how to deal with the impact of platform companies; how to move out of the debt trap (currently over 300% of global GDP).

6. The **global dialogue on risk resilience**: we need joint efforts to make the world more resilient in view of the many new risks threatening our security and welfare, and that of the future generations. Here in particular, we have to use systems thinking and the 4IR, to radically improve our collective and integrated management of the key environmental systems (climate, ocean and biosphere), upon which our societies and economies depend.
7. The **global dialogue on human capital**: with the notion of work substantially changing, we need a global brainstorming on the future of work and the relevance of human capital.
8. The **global dialogue on a new societal narrative**: we need to shape a new narrative for societies, moving from a materialistic fixation to a more idealistic, humanistic focus. Similarly, it also calls for shifting the locus from producing and consuming to one of caring and sharing. We have to ensure greater awareness of the opportunities of the 4IR, while also addressing the fears that it may generate. The 4IR has the potential to lift humankind to a higher level of life fulfilment, providing the narrative that the 4IR can help reunite humanity for a better future.
9. The **global dialogue on industry systems**: The 4IR provides us with the great opportunity to substantially enhance the availability and delivery of services in the area of health, energy, communication, transportation, and many more. Global stakeholder cooperation is fundamentally necessary for improving systemic coherence.
10. The **global dialogue on the geopolitics and a multi-conceptual world**: we are clearly witnessing shifts in both the conduct of international relations, as well as in the attendant undercurrents of the distribution of power globally. There's an urgent need to articulate these changes and enable honest dialogue on how to drive future cooperation; to prevent events and accidents from "designing" this new era for us.
11. The **global dialogue on peace and reconciliation**: we need to catalyse large-scale, multi-stakeholder support for diplomatic efforts around key fault lines around the world, especially at a time when strategic geopolitical shifts create the danger of vacuums and/or unilateralism and escalation.
12. The **global dialogue on institutional reform**: we need to rethink our global institutional frameworks (created over 70 years ago) and adapt them to ensure they are relevant for the new political, economic and social context for the next seven decades to come.

All of these dialogues have to be interconnected and integrated into a comprehensive platform to ensure a holistic, meaningful approach. Each of these twelve dialogues, and possibly more, must be integrated into a comprehensive framework which reflects the interconnectivity of politics, economics, technology and society. In all of these dialogues, we must focus not just on reforms, but much more on what is missing in order to adapt to the new reality.

Five principles should lead such dialogues:

1. The dialogue must be multistakeholder-based. Governments, business and civil society have to work together in agile ways to experiment, innovate and adopt that policies are aligned with the latest scientific and technological developments. The traditional path whereby something is first invented and then, with long legislative delays, the necessary regulatory system is created is no longer able to keep pace with the speed of technological progress. And the continuation of this will only result in policies further lagging behind and loopholes being further exploited.
2. To be successful in the age of the 4IR, the support and co-ownership of all parts of society is essential. Governments have a key leadership role to play, one which requires the sophistication and ability to develop the necessary knowledge and insights. Business must also recognize the path of

dialogue as a key means for facilitating innovation. And civil society serves a critical role in being the custodian for a human-centred application of innovation. The young generation should be the first movers in leveraging opportunities for driving new economic and social progress. We need to make social entrepreneurship main stream.

3. The forces of the previous industrial age, which have largely determined economic progress until very recently, saw open markets as the primary means for creating welfare in industrialized and developing countries alike. With the structure of income generation and wealth distribution changing in the 4IR, the preservation of social coherence and national cohesion has now become the primary objective. Safeguarding and strengthening the pillars of social justice and equity will be for any government the key objective in the coming period. To sustain national social contracts, and to simultaneously preserve an open world, are the paradigms to be integrated into a new concept of globalization: responsible and responsive.
4. At the same time, we must close the social gap on a global level. The world can no longer tolerate those left far behind. With the unprecedented advances in communication and mobility, disenfranchised individuals will try, at any sacrifice, to generate attention (i.e. through acts of terrorism) or at any distance, to access greater opportunities through migration.
5. In a world which has become more complex, multipolar and multiconceptual, the ability to manage global collaboration may be increasingly based on coordination and less on cooperation. Coordination implies a means of achieving the same objectives while providing freedom for different national views, concepts and value systems. The ability to manage global cooperation, as we have come to know it, usually means aligning national systems to the common purpose. The Paris Climate Agreement and the United Nations Sustainable Development Goals provide a good example of such a coordinated approach, particularly in a world where cohabitation is less based on shared values and more on shared interests.
6. The future cannot be based on the dangerous duality of nationalism versus globalism. We are all part of a local, national and global community. This means that in the modern world we exercise three different but complementary identities. We should not pit one of these identities against the other, but rather look for the right balance to sustain all three. We have our local roots, our lives are mainly integrated into a national framework of rights and duties, and we also share opportunities and threats which can only be addressed by exercising a global identity.

To start such a comprehensive dialogue and develop a new framework for global cooperation is the objective of the World Economic Forum, and particularly of the next Annual Meeting in Davos. As the foremost global multistakeholder platform and the recognized International Organization for Public-Private Cooperation, the Forum has the ability, capacity and responsibility to curate such an informal but outcome-oriented dialogue. The Forum can also act as a catalyst for new ideas through its scientific and academic networks. Such a dialogue will require sustained engagement and follow-up to align consensus and yield actionable results. The Forum is committed and prepared to provide the "operating system" for such a global effort in the coming years.

After the Second World War, leaders from all sectors of society came together to help create the global frameworks needed for living together in an environment of continuous peace, security and prosperity. And they designed the organizations and institutional processes that would work together to achieve this. Since that time, however, the world has radically changed. A new approach is now called for, one where – together – we shape our global future through our sustained commitment to improve the state of the world.

*By Klaus Schwab,
Founder and Executive Chairman*

*Endorsed by the Board of Trustees of the World Economic Forum
23 August 2018*

World Economic Forum Annual Meeting 2019 Overview



COMMITTED TO
IMPROVING THE STATE
OF THE WORLD

Davos-Klosters, Switzerland 22-25 January



Globalization 4.0: Shaping a Global Architecture in the Age of the Fourth Industrial Revolution

Shaping the global, regional and industry agendas at the beginning of 2019 will take place in a context of unprecedented uncertainty, fragility and controversy. In a world preoccupied by crisis management at a moment of transformative change we will use the spirit of Davos to build the future in a constructive, collaborative way.

"Transformation" best describes the geopolitical, economic and environmental outlook globally. We are shifting from a world order based on common values to a "multiconceptual" world shaped by competing narratives seeking to create a new global architecture. We live in a world with new planetary boundaries for its development. We are entering into a Fourth Industrial Revolution shaped by advanced technologies from the physical, digital and biological worlds that combine to create innovations at a speed and scale unparalleled in human history. Collectively, these transformations are changing how individuals, governments and companies relate to each other and the world at large. In short, we are fast approaching a new phase of global cooperation: Globalization 4.0.

But, will the arrival of Globalization 4.0 result in our acknowledging these changes and working together to create new opportunities for humankind? Or will globalization suffer from multiple geopolitical, economic and environmental crises that strain multilateral institutions and hinder efforts to collaborate towards a shared future? Progress in either instance will require a platform that can act as an honest broker among the competing and increasingly conflicting values and ambitions of nations, industries and societies.

As the International Organization for Public-Private Cooperation, the World Economic Forum will focus its convening power, community engagement, insight generation and platform technology to shape a new framework for global cooperation. The 49th World Economic Forum Annual Meeting will focus on the strategic ramifications of Globalization 4.0 and its future impact on global cooperation and the Fourth Industrial Revolution.

The programme in Davos will aim to foster systems leadership and global stewardship while recognizing the actuality of a more complex, "multiconceptual" world. In this regard, the development of the forthcoming Annual Meeting will be based on five working principles:

1. Dialogue is critical and must be multistakeholder-based
2. Globalization must be responsible and responsive to regional and national concerns
3. International coordination must be improved in the absence of multilateral cooperation
4. Addressing the biggest global challenges requires the collaborative efforts of business, government and civil society
5. Global growth must be inclusive and sustainable

Under the rubric of Globalization 4.0, a series of "Global Dialogues" in Davos will focus on the following interrelated areas:

- *A global dialogue on the geopolitics and a "multiconceptual" world* to understand major ongoing changes in international relations and to enable candid and constructive discussion on how to drive future cooperation along with a *global dialogue on peace and reconciliation* to catalyse large-scale, multistakeholder support for diplomatic efforts on key fault lines around the world, especially at a time when strategic geopolitical shifts create the danger of vacuums and/or unilateralism and escalation.
- *A global dialogue on the future of the economy* to review principles for economic and social decision-making that need to be redefined to better reflect the structural changes inherent in the Fourth Industrial Revolution along with a *global dialogue on financial and monetary systems* to jointly shape our monetary and financial systems by not only leveraging new technologies, such as cryptocurrencies and blockchain, but also making the systems more resilient for achieving sustainable growth and long-term societal well-being.
- *A global dialogue on industry systems* that anticipates how the Fourth Industrial Revolution provides opportunities to substantially enhance the availability and delivery of services in the areas of health, energy, communication and transport, among others, along with a *global dialogue on technology policy* to define the principles for new and emerging technologies, such as artificial intelligence and gene editing, to ensure that they are underpinned by the necessary ethical principles and values-based framework.
- *A global dialogue on cybersecurity* to ensure that digital innovation and the technological backbone of the Fourth Industrial Revolution are both secure and trusted along with a *global dialogue on risk resilience* to promote systems thinking to radically improve our collective and integrated management of the key environmental systems (climate, ocean and biosphere) upon which our societies and economies depend.
- *A global dialogue on human capital* to revisit the notion of work substantially changing and to rethink its future and the relevance of human capital along with a *global dialogue on a new societal narrative* to shape a new narrative for societies, moving from a consumption and materialistic fixation to a more idealistic, humanistic focus.
- *A global dialogue on institutional reform* to rethink the global institutional frameworks that emerged in the 20th century and adapt them to ensure they are relevant for the new political, economic and social context for the remainder of the 21st century along with a *global dialogue on economic cooperation* to create a new framework of rules and institutions integrating all aspects of global economic cooperation, including intellectual property, movement of people, competition policies, data protection, exchange rates, fiscal policies, state-owned enterprises and national security.

Recommendations and proposals from the "Global Dialogues" will be integrated into the Forum's 14 System Initiatives, which curate, align and advance the efforts of the most globally relevant and knowledgeable individuals and institutions that are shaping the future.

- *System Initiative on Shaping the Future of Consumption*
- *System Initiative on Shaping the Future of Digital Economy and Society*
- *System Initiative on Shaping the Future of Economic Progress*
- *System Initiative on Shaping the Future of Education, Gender and Work*
- *System Initiative on Shaping the Future of Energy*
- *System Initiative on Shaping the Environment and Natural Resource Security*
- *System Initiative on Shaping the Future of Food Systems*
- *System Initiative on Shaping the Future of Financial and Monetary Systems*
- *System Initiative on Shaping the Future of International Trade and Investment*
- *System Initiative on Shaping the Future of Health and Healthcare*
- *System Initiative on Shaping the Future of Long-term Investing, Infrastructure and Development*
- *System Initiative on Shaping the Future of Information and Entertainment*
- *System Initiative on Shaping the Future of Mobility*
- *System Initiative on Shaping the Future of Production*

Participation in the Annual Meeting is by invitation for the following Forum communities:

- Chief executive officers and chairs of our 1,000 Partner and Member companies actively engaged in the International Business Council, Community of Chairmen, Industry Governors, Regional Business Councils and System Initiative Stewardship Boards
- More than 250 political leaders from the G20 and other countries and heads of international organizations engaged in high-level dialogues facilitated by the Informal Gathering of World Economic Leaders (IGWEL)
- Members of the Forum's Global Future Councils, Expert Network and Global University Leaders Forum collaborating with spiritual and cultural leaders and representatives from major civil society, labour and media organizations
- Technology Pioneers, the Global Shapers Community, the Forum of Young Global Leaders and the Schwab Foundation for Social Entrepreneurship, communities representing a new generation of innovators and entrepreneurs

The Annual Meeting remains the foremost gathering of top leaders from politics, business, civil society and academia to shape global, industry and regional agendas in the context of Globalization 4.0 and the Fourth Industrial Revolution. In the true "Davos Spirit", the aim is to advance these agendas with bold ideas and exciting opportunities to consider in the year ahead.