Opening Remarks/ Introductory Statement

MinDir. Dr. Karl Eugen Huthmacher
German Federal Ministry of Education & Research (BMBF)

Hamburg Sustainable Development Summit (HSDS)

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Dear Ms. Fegebank,

Dear Mr. Lenzen,

Ladies and Gentlemen,

Dear colleagues and dear fellows in our struggle for sustainable development,

On behalf of the Federal Minister of Education and Research, Prof. Johanna Wanka, I would like to welcome you to Germany. It is a pleasure to see you all coming together in the beautiful city of Hamburg in order to collaborate on sustainability at universities.

For the Federal Ministry of Education and Research, it is essential to gather expertise from all over the world, because we have a challenging task to master: achieving the UN sustainable development goals by 2030.
I suppose you are all very familiar with the SDGs. But I'd like to explain, how we understand the SDGs, and especially the role of science in this process.
First of all it was, of course, a great success that, in 2015, 193 countries agreed on the aim of sustainability. As sustainable development by definition deals with global problems, it is absolutely crucial to have a

global consensus on the urgency of these problems. We have, in the meantime, learned the hard way that we cannot take this global consensus for granted, as the powers of counter-transformation took over in one of the most important countries in the world. So we must try to make use of the agenda 2030 as long as we have the overwhelming majority of countries on our side. This is one of the reasons why I repeat: Thank you all for coming to this conference.

In order to make the commitment to sustainability effective, the 17 Sustainable Development Goals (SDGs) will serve as guiding principles for practical measures to be taken by businesses, communities, or administrations. The new goals are unique in that they call for action by all countries, poor and rich, north and south, to promote prosperity while protecting the planet. They recognize that ending poverty must go hand-in-hand with strategies that build economic growth and address a range of social needs including education, health, social protection, and job opportunities, while at the same time tackling climate change and environmental protection.

As a result, the SDGs are extremely ambitious. So how can we achieve these complex development challenges? The Federal Ministry of Education and Research (BMBF) is convinced: **We can only meet the high demands if we manage to give science a new role!**

Science is not addressed directly in a goal of its own, but to achieve almost every single SDG and most of the 169 targets, significant scientific

progress is needed. “Business as usual” will not be enough. We need innovations – both technical and social innovations.

This is why, when we developed FONA3, the framework programme “Research for Sustainable Development”, we equipped it with considerable research funding of over 2 billion € for 5 years. Our main ambition was to create more impact for sustainability.

In a preceding stakeholder process we identified three political priorities for flagship initiatives to tackle societal challenges and to foster sustainable innovations:

- Green Economy,
- City of the Future and
- Energiewende.

The three topics address systems that are key to human coexistence; the transformation of these systems is crucial for the future viability of our way of life and business dealings. In FONA3 we start the funding process with the question: what solutions are required – instead of starting a research process and later searching for questions that we can answer with the results. This results in a shift in the programme’s logic from a supply orientation to a demand orientation – or from science push to societal pull.

The city, the business world and the energy supply are all highly complex, man-made systems. If a research landscape is to contribute to a transformation of these systems, it must transcend the boundaries of established research fields and adopt a systemic approach from the word go.

Maximum openness in all programme areas is a prerequisite in ensuring that the flagship initiatives are continuously geared towards the transfer of

research results. By its very nature, the programme serves as a platform: stakeholders and participants from the fields of politics, industry and administration, and representatives from civil society are involved in the project and research process from day one.
In this way, the flagships aim to achieve the greatest possible relevance for transformation. Since FONA³ regards itself as a learning programme, further flagship initiatives may be identified and researched as required.

But it is probably even more important to have scientific expertise for the bigger picture: the 17 SDGs cannot be achieved separately, in an isolated approach. There are several linkages, interdependencies, trade-offs and conflicts between the goals.
In order to deal with this complexity, politics needs to receive excellent advice. For this purpose the Federal Government established a **Science platform on SDGs**, constituted in May this year.

What are the tasks of the Science platform?
It shall give advice on the implementation of SDGs in and by Germany. The Science platform shall in a first step identify synergies, conflicts, and dynamics between the SDGs. From an independent scientific point of view it shall survey the state of implementation and work on studies in selected areas. It shall develop new options for implementation in various areas, including the issues of transformation and new processes, and governance structures for implementation. And, last but not least, it shall provide the interface to international debate.

Dear participants,

science has to deal with sustainability – not only in other domains, but also with sustainability in science. It is not enough to do research FOR sustainability, the principles of sustainability must also be applied to the research process and institutions. This is true for two reasons:

- Science for Sustainability must be carried out in a sustainable way in order to be *credible*. We cannot tell others how to improve if we don't accept the challenge for our own work and lives.
- Science has to contribute to the SDGs just as much as every other domain in our societies. We decided on very challenging quantified goals concerning greenhouse gas emissions for industrial branches like steel, automotive or chemistry – and they accepted – so why shouldn't science institutions make their own contributions?

This is why we started the initiative SISI – sustainability in science: without an initiative like this, the results of FONA wouldn't be acceptable for others. We want to encourage scientific institutions and individuals to actively take more responsibility for the future of our planet.

SISI was started in 2012 as a bottom-up process with representatives from academia, business, politics and students [after the attempt of a top-down approach had failed]. SISI focuses on three major pillars:

- Responsible Research and Innovation
- Sustainable Campus Infrastructures (Building and Management)
- Linking Research and Education for Sustainable Development.

The idea of the SISI Initiative is to foster networking between the pioneers of sustainability in science, and enable them to act as multipliers.
To avoid any misunderstandings: the BMBF does not want to tell science how to do their research sustainably. Nor do we think there is a “one-size-fits-all” solution for every scientific institution. Instead we support the scientific community, to develop an appropriate understanding and an effective practice of sustainable research in each institution.

From our point of view, sustainable research shall contribute in many ways by:

- improving stock-taking to keep us informed about the state of affairs;
- providing scenarios of possible future developments to enable more informed, better decisions;
- and helping us develop a new understanding of transformation as a process, as well as a better understanding of normative orientation and how to get social consensus on the most important values and norms.

In this sense, a new transformative understanding of science has to be implemented. But in terms of science policy, we don’t need a large number of new “sustainability universities”, that exclusively dedicate their work to sustainable transformation. Instead the most important thing, is to integrate the principles, methods, issues and instruments of sustainable research into the existing disciplines and institutions, so that every researcher can contribute to overcoming these great challenges – whenever it makes sense.

Our first experiences with this approach were gained through a process called “LeNa” “Sustainability management in non-university research organizations”. For three years (2014-2016) the BMBF funded 25 research institutes with approximately 90 active participants from three major non-university research organizations: Fraunhofer, Helmholtz and Leibnitz with approx. 1,7 Mio. Euros. In October 2016 the major outcome of this project, a manual for sustainable research in non-university research institutions, was officially handed over to the federal minister of research.

The manual describes: what sustainability in science means for everyday work, and how it can be put into practice. This bottom-up initiative is characterized by an extraordinary cooperation between different research organizations, between scientists and non-scientific staff and an intense participation of stakeholders. The governing board with presidents and management boards discussed the implementation of the results and the research process was accompanied by early pilot implementations in different institutes.

Since November 2016 we have been trying to transfer the LeNa experiences to Higher Education Institutions and support a network of eleven universities from 8 German *Länder,* the so called HOCH N project. The project is led by the University of Hamburg, and I want to congratulate the university of Hamburg for taking this pioneer role for sustainable science in Germany while at the same time applying as a “University of excellence”.

The ambitious plan of HOCH-N is to develop a manual „sustainability in higher education“. In order to make this manual relevant for Higher Educational practice, they want to gather a network of 100 German Universities, that bring in their experiences, needs and visions for sustainable Higher Education. In terms of transformation this network represents a critical mass in the Higher Education Landscape on the path to sustainable development.

A “critical mass” is needed, in order to adapt sustainable research to the “mainstream science” system. Of course we do not aim to create a science system that only delivers sustainable research: the federal minister of research has clearly stated, that funding of fundamental research will not decrease. And of course the freedom of science that is guaranteed by our constitution will not be restricted in any way.
But today we see that sustainable research is not yet integrated in the basic structures and processes of science in Germany: the reward systems and career options for researchers are still very limited, if they concentrate on inter- or transdisciplinary science, if they aim for political impact instead of publishing in scientific journals.
Therefore I strongly welcome the initiative of the research center Jülich, one of the largest in Germany and active participant of the LeNa Project: they made a top level decision to offer interdisciplinary topics for doctoral research studies more often, which will (hopefully) lead to better career options for the graduates.
I hope we will find more institutions in Higher Education or non-university institutions which will follow this example. I hope that more individuals and

institutions in science join in committing their work to sustainable development.

Another issue that we want to address is the question of quality: for the German science landscape the urge for “excellence” is the most important criteria for success, reputation and finance. Sustainable research means, to add the criteria of relevance to the system. But if we ask for acceptance of our new approach, we do have to become clear on our understanding of quality: How do we distinguish between good and bad sustainable science? If we do not consider the counting of peer reviewed articles as sufficient criteria for sustainable research – what is our suggestion for sustainable quality criteria? How do we measure “impact for sustainability”?
I think we have to solve these problems, if we want the scientific communities in every discipline to commit to sustainable development, to collectively contribute to overcoming the global challenges.

Ladies and Gentlemen,
As I cannot participate in the following panel discussion, I’d like to give my vision for 2030 at the end of my speech:
For 2030 I have the dream that we have achieved most of the SDGs – and that science has helped us to do so.
I hope that sustainable research is an important, highly reputed part of the global science community. There is a common sense of what sustainability means at Higher Education Institutions and how to implement it in research, education, campus management and transfer of

results. There is a forum where upcoming challenges are discussed, both at a national and an international level.
And most of all I hope that every student who graduates from a German University, has learnt about the concept of sustainable development and is able to consider his coming duties in his career, within the context of sustainable development.

And this is exactly what I wish you for this conference!
Thank you for your attention!