

PROGRAM

10'00-12'00 - ROUND TABLE

ROLE OF SWISS INDUSTRIES IN NEW ERA OF FUSION ENERGY

The purpose of this closed discussion is to bring together key players in fusion energy today, alongside representatives from Swiss industries and innovation sectors, to explore Switzerland's potential role in the emerging commercial era of fusion energy—beyond the large-scale ITER research project.

In this setting, we have the unique opportunity to project ourselves without constraints, as this is an internal conversation where bold ideas and unfiltered visions can emerge. My dream is that Switzerland could position itself as a leader in fusion energy, leveraging its innovation-driven economy and high-tech expertise to seize the immense opportunities on the horizon. This could not only elevate the country's global competitiveness but also redefine its role in the energy sector, much as it has done in fields like precision engineering, pharmaceuticals, and digital technologies.

Fusion energy holds the potential to be a game-changer on a global scale. Unlike current energy sources, fusion offers a virtually limitless and clean alternative to traditional fossil fuels, which are increasingly under pressure due to environmental concerns. Fusion energy, which replicates the same process that powers the sun, promises to deliver vast amounts of energy with no long-term greenhouse gas emissions and minimal radioactive waste. This makes it not only a critical component in the fight against climate change but also an essential part of ensuring the world's long-term energy security.

The central question we need to address is whether Switzerland should take the leap and invest in the construction of its own commercial fusion power plant. Should we take on the challenge of leading the way in creating a domestic fusion solution? Alternatively, should we collaborate with international initiatives, such as private industries building fusion energy power plants, like those invited to this discussion (Gauss Fusion, Proxima Fusion or Renaissance Fusion) and others, to accelerate global efforts and share the burdens of research and development? Or is there potential for Switzerland to concentrate its efforts on becoming a leading supplier of high-tech components for fusion power plants worldwide, tapping into a growing global market?

Fusion represents a paradigm shift in energy production. It offers the possibility of near-zero emissions, addressing not only the pressing needs of energy demand but also the growing urgency to decarbonize the global economy. It is a critical domain that will determine the future of energy systems worldwide, and Switzerland could be at the forefront of this transformation. If we get this right, fusion energy could be the answer to many of the world's most pressing problems, from energy scarcity to geopolitical instability linked to energy dependence.

To actively engage in the fusion energy revolution, we must identify the necessary next steps to establish a strong and comprehensive framework that ensures Switzerland's industries are ready for this transformative shift. We need to facilitate collaboration between industry leaders, research institutions, and policymakers to create an ecosystem that supports the development, testing, and eventual commercialization of fusion technology.

Equally important is attracting the talent needed for this rapidly expanding field. How can we build a workforce capable of driving this future? We will need to focus on education, creating programs that equip the next generation of scientists, engineers, and technicians with the expertise needed to build, operate, and maintain fusion power plants. Additionally, we must discuss how to increase public awareness, generate societal support, and foster a broader appreciation for fusion energy as a viable, clean, and sustainable energy source. Public engagement and understanding will be essential for the successful commercialization of fusion, as it will require broad societal buy-in to secure political and financial support.

Ultimately, this strategic discussion will lay the foundation for a larger initiative. My vision is that we create a platform uniting Swiss industries, innovation centers, research groups, and all relevant stakeholders to collaboratively push forward the development and commercialization of fusion energy—shaping a future where Switzerland stands at the forefront of this technological revolution. By positioning Switzerland as a key player in this field, we can unlock unprecedented economic opportunities, solidify our global leadership in clean energy technologies, and help pave the way toward a sustainable and secure energy future for

12'00 - 14'00 - APERITIF & FINGERFOOD LUNCH

14'00 - 15'00 - GUIDED TOUR OF TCV TOKAMAK, SPC

ACKNOWLEDGEMENTS

I would like to express my sincere gratitude to Dr. Barbora Bruant Gulejova for her efforts in organizing this event. Her dedication has been key to ensuring the success of this gathering. It has been a privilege to collaborate with her. Thank you, Barbora, for your invaluable contribution in making this event a reality.

PARTNERS OF THE EVENT



Role of the Swiss Industries in FUSION

ENERGY

PROF. BENOIT DUBUIS
CHAIRMAN OF THE SWISS ACADEMY OF ENGINEERING SCIENCES
CHAIRMAN OF THE INARTIS FOUNDATION

GUESTS | PANEL DISCUSSION

- A** BARBORA BRUANT GULEJOVA
PRESIDENT S4SF
STRATEGIC ENGAGEMENT LEAD CHIEF
- B** AMBROGIO FASOLI
EUROFUSION CEO AND FORMER DIR. SPC
- C** PAOLO RICCI
DIRECTOR OF SWISS PLASMA CENTER (EPFL)
- D** YVES MARTIN
DEPUTY TO THE DIRECTOR OF SPC
- E** LEONARDO BIAGIONI
HEAD OF PROJECTS (COO) FUSION F4E
- F** LUIGI SCIBILE
CERN FUSION TECH. HEAD COORDINATION UNIT
- G** JOHN P. VERBONCOEUR
PAST PRESIDENT OF NUCLEAR AND PLASMA
SCIENCES SOCIETY NPSS of IEEE
- H** RALF KAISER
STRATEGY BOARD MEMBER OF RENAISSANCE
FUSION, PROGRAMME DIRECTOR ICTP, FORMER
HEAD OF PHYSICS SECTION IAEA
- I** MICHEL HUEBNER
SWISS INDUSTRY LIAISON OFFICER WITH INTER-
NATIONAL RESEARCH ORGANIZATIONS
- J** MILENA ROVEDA
CHAIR OF THE EUROPEAN FUSION ASSOCIATION
(EFA) EXECUTIVE BOARD
- K** FRÉDÉRIC BORDRY
GAUSS FUSION CTO
- L** LUCIO MILANESE
PROXIMA FUSION CO-FOUNDER AND COO
- M** PHILIPPE CORDONIER
SWISSMEM RESPONSIBLE FOR FRENCH-SPEAK-
ING SWITZERLAND
- N** ERNST JAN VAN HATTUM
INNOSUISSE ENTERPRISE EUROPE NETWORK

A BARBORA BRUANT GULEJOVA
PRESIDENT S4SF (SCIENCE FOR SUSTAINABLE FUTURE)
STRATEGIC STAKEHOLDERS ENGAGEMENT LEAD CHIEF



Barbora holds a PhD in thermo-nuclear fusion from Swiss Federal Institute of Technology EPFL, and master's in management from Comenius University in Slovakia. She has a multidisciplinary career spanning science, education, industry, government and UN. After 2 years at IAEA as scientific editor for fusion energy tutorial, since 2014 she held several roles within CERN community, namely in knowledge transfer (High Energy Physics Technology Transfer Network HEPTEch), communication, education and outreach (International Particle Physics Outreach Group IPPOG). She is a former Industry Liaison Officer of CERN with Slovakia. Barbora has been a STEM ambassador at University of Bern since 2018, and currently works as strategic stakeholders' engagement lead of Swiss experimental research for Future Circular Collider of CERN (CHEF) at University Zurich. She is also an MBA professor of Innovations for Sustainability at Swiss School of Business and Management in Geneva. Since 2023 she is a founder and president of NGO based in Geneva, Science for Sustainable Future (S4SF), that aims to leverage an efficient dialogue between science and society. The flagship project Youth@STEM4SF attracts the next STEM generation and inspires future society leaders on the value of science for society with sustainable future.

B AMBROGIO FASOLI
EUROFUSION CEO
FUTURE PROVOST OF EPFL



Professor Ambrogio Fasoli is the Programme Manager (CEO) the European Consortium for Fusion Energy, EUROfusion, member of the board of the Swiss Plasma Center at EPFL, and future (2025) Provost (EPFL). As of January 1st 2025, Prof. Fasoli will assume the role of the Vice President for Academic Affairs at EPFL. Prof. Fasoli, an honorary member of the American Physical Society, studied at the University of Milan and obtained his Ph.D. at EPFL. After conducting experiments on the European JET tokamak in the United Kingdom, he became a professor at MIT (US), where he worked from 1997 to 2001, before being appointed at EPFL. From 2014 through 2020 he has been the Editor-in-Chief of the Nuclear Fusion journal, of the International Atomic Energy Agency and has published over 400 articles and is active in several international groups on fusion education and research.

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C PAOLO RICCI
DIRECTOR OF SWISS PLASMA CENTER (EPFL)



Paolo Ricci earned his Master's degree in nuclear engineering at the Politecnico di Torino, Turin (Italy) in 2000. His doctoral studies were conducted at the Los Alamos National Laboratory. He spent two-and-a-half years as a postdoctoral researcher at Dartmouth College Department of Physics and Astronomy. He joined the EPFL Swiss Plasma Center, as a EURATOM fellow in 2006, was named Tenure Track Assistant Professor in June 2010, Associate Professor in August 2016, and Full Professor in October 2023. He is the Director of the Swiss Plasma Center and he heads its theory group. Paolo Ricci is the recipient of the 2016 Section de Physique Teaching Prize, of the 2021 Craie d'Or award from the EPFL physics bachelor students, and of the 2021 Polysphère d'Or award from AGE-Poly.

D YVES MARTIN
DEPUTY TO THE DIRECTOR OF SWISS PLASMA CENTER SPC



Yves Martin obtained his master's degree in physics in 1986 at EPFL and went straight on to do a doctoral thesis at the Swiss Plasma Center (SPC, called Centre de Recherche en Physique des Plasmas at that time). After a postdoc in the US, he came back to SPC to work on the TCV tokamak. In addition to his scientific tasks, Yves was an operator of the tokamak. He also participated in different international working groups, in particular in a group, which made predictions for ITER, during its conception phase, based on existing tokamaks' data. More recently, he contributed to the ITER Operations Network. He is currently deputy to the Director of SPC with, among others, the specific task of setting up Public Private Partnerships for the development of fusion as an energy source.

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E LEONARDO BIAGIONI
HEAD OF PROJECTS (COO) FUSION FOR ENERGY F4E



Dr Leonardo Biagioni is Head of Projects (Chief Operating Officer) at the European Joint Undertaking for ITER and the Development of Fusion Energy (F4E), based in Barcelona (Spain) and Cadarache (France). He is responsible for EURATOM's contribution to the ITER international fusion project, to the JT60SA joint EU-Japan tokamak and to other fusion construction projects funded under the EURATOM treaty in the EU and Japan. He joined F4E in late 2008, where he was initially in charge of procurement, supply chain and industrial policy during the first ITER construction phase of ITER international fusion facility in France and the construction of the JT60SA, IFERC, IFMIF-EVEDA joint fusion facilities in Japan. Between 2016 and 2024 he was Deputy Chief Financial Officer and since 2023 he was the head of the EU ITER contribution programme. He took up duties as Head of Projects in July 2024. Before joining F4E he worked in engineering, project and corporate management positions in the aeronautical, defence and space sectors. His career developed in both private and public organizations, in several European countries and the United States. Dr Biagioni earned a MS in Aerospace Engineering and a PhD in Plasma Engineering from Università degli Studi di Pisa; he further earned post-graduate degrees in Applied Mathematics from Scuola Normale Superiore in Pisa, Business Administration from Wharton/University of Pennsylvania and IESE in Barcelona. He is an Associate Fellow of the American Institute of Aeronautics and Astronautics and a licensed professional engineer in Italy.

F LUIGI SCIBILE
CERN FUSION TECHNOLOGY COORDINATION UNIT, HEAD



Dr. Luigi Scibile is a senior scientist and technical coordinator at CERN. He earned his degree in Engineering from the University of Naples in 1992 and completed his PhD in Control Engineering at the University of Oxford in 1997. His career began at the JET Joint Undertaking in 1992, where he contributed to advancements in nuclear fusion research on tokamak control systems. In 1997, he joined CERN where he held key managerial roles in the domain of safety and general infrastructures, including leading the Site Engineering Group and overseeing critical site infrastructure projects valued at hundreds of millions of Swiss Francs. Between 2008 and 2010, he also served as a Responsible Officer and Project Manager for ITER at Cadarache in France, where he played a pivotal role in the design of machine interlock and nuclear safety systems compliant with French regulatory requirements. He is also a member of the Fusion Technology Coordination Unit at CERN. Renowned for his innovative approaches to management and technical problem-solving, Dr. Scibile has introduced advanced methodologies in control design and resource optimization across diverse and transversal technical domains. In addition to his work at CERN, he is a visiting professor at the University of Milano-Bicocca and a prolific author, with numerous contributions to international journals and conferences on safety, automation, and control systems.

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JOHN P. VERBONCOEUR

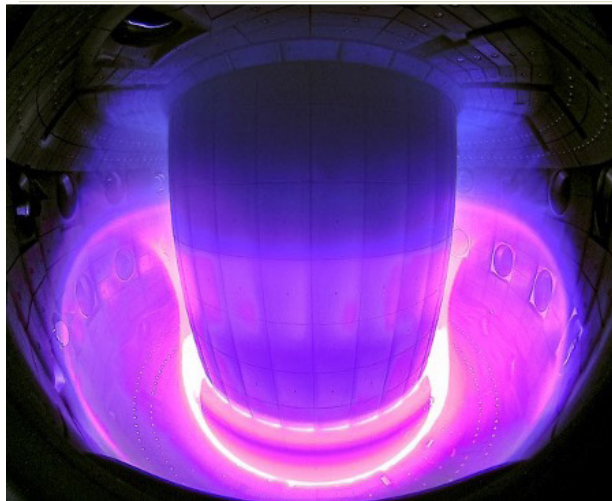
FORMER DIRECTOR OF INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS IEEE, AND FORMER PRESIDENT OF NUCLEAR AND PLASMA SCIENCES SOCIETY NPSS OF IEEE



John P. Verboncoeur received a Ph.D. (1992) in nuclear engineering from the University of California at Berkeley (UCB). After a postdoc at Lawrence Livermore National Lab and UCB, he was appointed Associate Research Engineer at UCB. He joined the UCB Nuclear Engineering faculty in 2001 (Full Professor in 2008), where he cofounded and chaired the Computational Engineering Science program (2001-2010). In 2011, he was appointed Professor of Electrical and Computer Engineering, and Professor of Computational Mathematics, Science, and Engineering (added in 2015) at Michigan State University (MSU), where he currently serves as Senior Associate Dean for Research and Graduate Studies in the College of Engineering. His research interests are in theoretical and computational plasma physics, with a broad range of applications spanning low temperature plasmas for lighting, thrusters and materials processing to hot plasmas for fusion, from ultra-cold plasmas to particle accelerators, from beams to pulsed power, from intense kinetic nonequilibrium plasmas to high power microwaves. He is the author/coauthor of the MSU (formerly Berkeley) suite of open source particle-in-cell Monte Carlo (PIC-MC) codes, including XPDP1 and XOOPIC, used by over 1000 researchers worldwide with over 450 journal publications in the last decade. He has authored/coauthored over 500 journal articles and conference papers, with 7,000 citations. He was President of the IEEE Nuclear and Plasma Sciences Society (2015-16), IEEE Director (2019-20), past Acting VP of IEEE Publications, Services, and Products Board (2020), VP-IEEE Technical Activities (2023) overseeing over \$450M in revenues, and served on the Board of Directors for IEEE, the American Center for Mobility national proving ground, Physics of Plasmas, and serves on the US DOE Fusion Energy Science Advisory Committee and recently on the Sandia National Laboratories Grand Challenge LDRD External Advisory Board. He has led a number of successful startups, including computerized fitness equipment, digital health systems, distributed publication software including the consumer credit report for a big-three credit bureau, and a role in the US Postal Service mail forwarding system.

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RALF KAISER

STRATEGY BOARD MEMBER OF RENAISSANCE FUSION, PROGRAMME DIRECTOR ICTP, FORMER HEAD OF PHYSICS SECTION IAEA

Ralf Kaiser is an experimental nuclear physicist, former Head of the Physics Section at the IAEA and founder of an award-winning high-tech startup company. Ralf Kaiser studied Physics and Mathematics at the University of Münster, Germany, and Simon Fraser University, Vancouver. After a postdoctoral fellowship at the German National Laboratory DESY in Hamburg, he was appointed to a faculty position in the Nuclear Physics Group at the University of Glasgow in 2001. For almost 20 years his research was focused on the fundamental structure of matter and on the design and construction of the detectors required for this research. In 2010 he joined the IAEA as Head of the Physics Section, responsible for the IAEA programmes on Nuclear Fusion, Accelerator Applications and Nuclear Instrumentation. In this role he represented the Agency on the ITER Council and was the main organiser of the IAEA Fusion Energy Conferences from 2012 to 2016. After the accident in Fukushima, he participated in a series of Missions to Fukushima, as leader and expert member, and he led the development of a UAV-based radiation monitoring and mapping system for Fukushima Prefecture. In 2016 he founded Lynkeos Technology as a spin-off from the University of Glasgow, to commercialise the use of cosmic-ray muon imaging for nuclear waste containers. Lynkeos has deployed the first CE-marked muon imaging system at Sellafield in the UK in 2018, and has won a series of awards including the 2018 Institute of Physics Business StartUp Award. Since 2022 Ralf is Senior Coordinator for Programmes and Advancement at the International Centre for Theoretical Physics (ICTP) in Trieste. ICTP is a UNESCO Category 1 Institute and involved e.g. in the International Decade of Sciences for Sustainable Development. In this role he is responsible for about 70 conferences, workshops and schools with more than 6000 participants per year, graduate student programmes with 150 students, the Associates programme for more than 200 guest scientists from developing countries, IAEA partner institutes in Africa and South America and public outreach in basic physics and mathematics around the globe. Ralf is a member of the Research, Development and Innovation Committee of the EU project ATTRACT and of the Strategy Board of Renaissance Fusion. Ralf is a Fellow of the Royal Society of Edinburgh since 2020.



MICHEL HÜBNER

SWISS INDUSTRY LIAISON OFFICER WITH INTERNATIONAL RESEARCH ORGANIZATIONS

Michel Hübner has 12 years of experience as the Head of the Swiss Industry Liaison Office (Swiss ILO) with Big Science International Research Organizations (IRO) hosted at EPFL, Lausanne, Switzerland, and reporting to Swiss Industry Liaison Office Steering Committee (EPFL, PSI, UNIGE, SwissMEM, SERI). He is responsible to identify and support Swiss suppliers to engage in International Research Organisations procurement and knowledge transfer and anticipate R&D to production transfers. He has been working 25 years with different high-tech industries in France and Switzerland. He holds an Engineer master's degree from EPFL, from Ecole Nationale Supérieure des Télécommunications, Paris and a MBA master's degree from University Aix-Marseille.



MILENA ROVEDA

CHAIR OF THE EUROPEAN FUSION ASSOCIATION (EFA) EXECUTIVE BOARD, CHIEF EXECUTIVE OFFICER, GAUSS FUSION



As Chief Executive Officer (CEO), Milena Roveda has been driving since early 2023 Gauss Fusion's vision of industrializing renewable fusion energy to ensure energy independence and supply for generations to come. With her entrepreneurial drive and innovative thinking, Ms. Roveda champions groundbreaking ideas and forges alliances to blaze new trails for fusion, enabling sustained success. Milena Roveda brings with her more than 30 years of experience in the management, development and expansion of companies worldwide. Her experience speaks for itself: she has worked for leading global players such as Bayer and Thyssenkrupp and has in-depth expertise in finance and the strategic alignment of businesses through her work at C-level for portfolio companies of the Carlyle Group, EQT and Investcorp, all leading private equity firms. Milena Roveda has sound know-how as well as the leadership skills needed to successfully implement transformation processes. Her diverse industry background includes IT and software solutions as well as the healthcare, chemical and automotive sectors. Thanks to her long-standing expertise and deep understanding of the specifics of a wide range of industries, Ms. Roveda has successfully implemented several growth and transformation initiatives for companies in both Europe and North America and will continue to do so at Gauss Fusion.

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FRÉDÉRICK BORDRY

CHIEF TECHNOLOGY OFFICER OF GAUSS FUSION, FORMER DIRECTOR OF ACCELERATORS AND TECHNOLOGY OF CERN



As Chief Technology Officer (CTO) at Gauss Fusion, Frédéric Bordry mission is to build the first European fusion power plant (FPP) in a public-private partnership. Bordry has gained extensive expertise during his long career and convinces with innovative thinking and a clear vision. He is a driving force in reshaping Europe's energy future. Frédéric Bordry's professional career started in 1986 at CERN, the European Organization for Nuclear Research, after more than a decade of teaching and research in the field of energy conversion. In his position as former Director of Accelerators and Technology, he was responsible for the smooth operation of the entire CERN accelerator complex, with a focus on the world-famous Large Hadron Collider (LHC). Since January 2021, Bordry has been an honorary member of CERN as well as an advisor to the Director General. He is also a strategic and scientific advisor to various institutions, companies and start-ups. In this role, he has led major innovative projects covering a wide range of cutting-edge technologies from superconductivity to power conversion and control of complex processes.

Just FYI: About Gauss Fusion <https://gauss-fusion.com>

Gauss Fusion's mission is to accelerate the industrialisation of fusion energy, to make it scalable and to turn it into a reality in Europe. The green energy company was founded in 2022 by private industrial companies from France, Germany, Italy and Spain. It brings together a combination of cutting-edge scientific research and industrial expertise in fusion energy that is unique in Europe. The company is thus playing a key role in shaping a sustainable and independent energy supply in Europe with stable prices and high availability. The founding companies are among the leading European companies in the fusion industry. As such, they have decades of experience, expertise and an extensive track record in the manufacture of components and technologies for the industry. At the same time, Gauss Fusion combines its entrepreneurial and engineering expertise with the excellence of Europe's leading research institutes. The company is closely linked to science and co-operates with renowned research institutes. These include CERN in Switzerland, the Max Planck Institute for Plasma Physics (IPP) and the Karlsruhe Institute of Technology (KIT), ENEA in Italy and Eindhoven University of Technology.



LUCIO MILANESE

CO-FOUNDER AND COO OF PROXIMA FUSION



Lucio Milanese is Co-Founder and COO of Proxima Fusion, and a theoretical plasma physicist with an academic career spanning three continents. After undergraduate studies in physics at Imperial College London and short research stints at the California Institute of Technology and EPFL, he joined the Nuclear Science and Engineering department at MIT in 2016, where he carried out research on computational plasma turbulence with applications to fusion and astrophysical environments, publishing results in top academic journals. In 2021-2022 he pursued, as a Schwarzman Scholar, a Master of Management in Global Affairs at Tsinghua University in Beijing.



PHILIPPE CORDONIER

RESPONSIBLE OF SWISSMEM FOR FRENCH-SPEAKING SWITZERLAND

Born in 1964, Ph. Cordonier spent his childhood and compulsory schooling in Valais, where he obtained a scientific baccalaureate. After spending 1.5 years in California as a student, he earned his degree in mechanical engineering at EPFL, followed by a European Master of Science in Energy. He began his professional career at the engineering firm CSD SA in Lausanne and later worked as a project manager at Von Roll Environment SA in Zurich. He then served as the operations manager of the Vouvry Thermal Power Plant (VS) before joining the Swiss Directorate of the Petroleum Union (UP) and Swissoil for nearly 14 years. Since April 2013, Ph. Cordonier has been part of the Swissmem leadership team, where he established the Romandy office of the umbrella association for the MEM (Mechanical, Electrical, and Metalworking) industries. His excellent knowledge of the political, media, and economic landscape in Romandy enables him to effectively advocate for the interests of Swiss tech industry companies within Swissmem.

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ERNST-JAN VAN HATTUM

KNOWLEDGE TRANSFER & INTERNATIONAL COLLABORATIONS, INNO-SUISSE (SWISS INNOVATION AGENCY); INNOVATION & TECHNOLOGY ADVISOR, ENTERPRISE EUROPE NETWORK - SWITZERLAND



Ernst-Jan studied Industrial Design Engineering at the Technical University Delft, NL. He worked as Manager R&D and Industrial Design Engineer for a SME, Promech Sorting Systems BV, active with sorting systems for clothing, books, CDs etc. within logistic centres of f.e. Sears, Benetton, SSD. 95% was exported worldwide; Joint R&D projects with other companies in USA, Japan and Europe. He is inventor on several patents. He used Ecodesign himself from part level up to system level, as well concept-development of services of the clients. A new developed sorting system called FSU (multiple patents) was selected as one of the best Ecodesign examples in the Netherlands and was presented on a demonstration video of the ministry of Economic Affairs. With a length of more than 250 meters the consumption of electricity was the same as 2 vacuum cleaners (!). It was also selected for the Aluminium Technology Transfer project in the Netherlands. After that Ernst-Jan was (senior) project advisor and deputy manager of the Innovation Relay Centre Netherlands (Technology Transfer within Europe) at Senter. He was active for Suspronet - The sustainable product-service-design network (Thematic Network of industries and institutes under EU FP5). He was one of the driving forces behind the O2 Global Network (o2.org - international network on sustainable design). End of 2007 Ernst-Jan started as Innovation and Technology Consultant EEN - Enterprise Europe Network - Swiss access point at Euresearch, Switzerland. Since 2018 at Innosuisse. Initiator & chair of the TG Circular Economy 2017 'till October 2021.

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