

# ERA CONFERENCE

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## Conference opening - Inspirational speech by Janez Potočnik

Dear friends,

**Thank you for the invitation** to this ERA conference and for the trust. I was asked to deliver an inspirational speech. And thank you to my Slovenian friends for some valuable inputs related to R&I. So, let me try.

I'm an economist dealing mainly with environmental questions, and I do apologies in advance to those who will find my speech biased and not enough attention given to the areas they are professionally focusing on. I do believe, for example, that health challenges deserve utmost attention, but the purpose of my introduction is not to list all the challenges that deserve your attention, but rather to put all those in the context of the world we are living in ... or heading to.

I will start with some considerations related to the world and humanity, put them in the European context and address the role of R&I and ERA in particular, and end with some remarks concerning policy directions.

**The world** in which we are living is far from "The future we want". We are facing **multiple crises at multiple levels** – from local to global in geographic scope, from acute to chronic in time perspective.

We see multiple conflicts across the globe. Alongside, and connected to this, food and energy security are still at stake for many. Acute crises are exposing our deep fragility. At the same time, we are facing chronic crises and challenges connected to emerging systemic fragility.

We have entered **new geo-strategical reality**, challenging also for so called global north or western countries, but it is new reality one cannot deny and ignore. More equal and more inclusive world is a must.

In 1972 when the Club of Rome released the famous The Limits to Growth there were 3.8 billion people on the planet. Last year, we surpassed 8 billion. We moved **from an empty world, dominated by nature, to a full world, dominated by humans**. In an empty world the limiting factors of human wellbeing were labour and infrastructure, in the full world the limiting factors of human wellbeing are natural resources and environmental sinks. Since we did not listen to wise man decades ago, we have moved from limits to growth ... to the growth of limits.

We are basically the **first generation** in a human history, **facing the emergence of a single, tightly coupled human social-ecological system of planetary scope**. Climate

change, pandemics, internet, inequality, trade, artificial intelligence, security threats and I could continue ... are all global in nature. While pollution, biodiversity loss, water stress might be more of a local character, they are not less systemic in nature.

**How to secure** functioning democracies and prevent prevailing practice of manipulation and disinformation, how to secure that people will be better informed and guided by science, how to strengthen control over unnecessary nuclear weapons, how to prevent that greed and profit motive would not lead the emerging artificial intelligence in the uncharted waters, how to convince policy makers that climate change does not belong among important, but urgent matters ... are just few questions crossing my mind and making me worried.

In short, **our individual and collective responsibility has enormously increased**, and one thing is certain. Taking painkillers to fix the acute crises will not heal chronic ones and solve systemic challenges ... rather hide them and make them worse. And many times, acute crises are just a consequence of not solving the systemic ones.

In this context we should not underestimate the **importance of access to, and use of natural resources**, the topic I'm professionally dealing with inside the UN International Resource Panel. Access to and use of natural resources have been in human history always closely related to the level of the achieved wellbeing of nations. It was also driving the geo-political efforts of consumption countries to politically control the resource rich countries. Just remember the efforts of developed nations related to the access of land, water, oil and gas, various minerals or precious metals like gold in resource rich countries. Unfortunately, all that was many times also connected to the reasons leading to the lack of stability, security, poor democratic systems, resulting in conflicts and wars in those countries. The whole history of, let's call it colonisation of nature, was, and still is, central to fairness and equity.

Management of natural resources is organised through **economic system**. Our economy, designed and championed by industrialized nations, is wasteful and unjust. One could probably best explain it with the novel title of Finnish writer Arto Paasilinna: A Charming Mass Suicide.

**Key challenge is how to shift from an economic system based on the notion of unlimited growth to one that is both ecologically sustainable and socially just.** 'No growth' is not the answer. Growth is a central characteristic of all life; a society, or economy, that does not grow will die sooner or later. Growth in nature, however, is not linear and unlimited. The linear view of economic development, as used by most mainstream and corporate economists and politicians, corresponds to the narrow quantitative concept of economic growth, to GDP, while the biological and ecological sense of development corresponds to the notion of qualitative growth, to the wellbeing.

**Economy should serve humans and not the opposite.** While acknowledging the importance of GDP, we should be driven by wellbeing. Meeting societal needs while

remaining within planetary boundaries to safeguard planet's life-support systems thus remains the key challenge for the global community, Europe included.

This leads me to the **importance of the provisioning systems** concept, systems providing for human needs. We do not need cars, we need mobility, you do not need a chair, you need to sit. Provisioning systems can be understood as interlinked complex physical and social systems that mediate the ways in which resources are extracted and transformed into the material and cultural things that contribute to needs satisfaction. Approach is consistent with the doughnut logic, meeting human needs while respecting planetary boundaries. Viewing the economy through provisioning systems allows identification and understanding of solutions that transform the way we meet our needs and avoid silo-based solutions leading to unintended consequences elsewhere. According to IRP **Global Resource Outlook 2024**, four provisioning systems - energy, food, built environment and mobility, are most resource-intensive human needs accounting for 90% of all global material use and deserve most of our policy attention. The good news is that designing these provisioning systems in a much more resource-efficient way is possible, and highly attractive to citizens - and often businesses.

Recent mathematical models demonstrate that in market economies the natural **inclination of wealth is to flow upward** and that only redistribution could set limits on inequality. The wealthiest benefit most from resource use and are also responsible for most environmental impacts. Meanwhile, many low-income countries still do not consume enough resources to meet basic human needs. Club of Rome projects that rising global inequality could already this century lead to increasingly dysfunctional societies. **Standards and behaviour patterns linked to the current economic model were set by high-income countries.** The benefits of natural resource over exploitation substantially contributed to our wellbeing today. We are ethically bound to show the world, that we are willing and able to change a reality created, and to lead the essential transition - at home and globally. While the responsibility for the past is clear, responsibility for future is shared.

**Too summarise this first part, few basic shifts would be needed:**

We must shift away from the prevailing economic logic, which puts humans in function of economic growth, towards an economy that is organised around meeting human needs. Set priorities and the order right.

We must move from an economy considering humans as external and superior to nature, to an economy acknowledging that we are embedded with nature. This is very much relevant also for our prevailing contemporary economics. Destroying nature is destroying ourselves.

We need to move from an extraction-based production to a circular creation-based production. We must stop stimulating extraction based economic success and reward responsible, innovative, creative ways of meeting human needs.

And we must fix our governance structures. Current institutions and related governance are from another times and not fit for purpose. Long-term sovereignty can only be protected through genuine, deep cooperation with the institutional reforms to match.

**Changing human relationship with the rest of Nature**, is not only an environmental, but also an economic, equity, stability, and security imperative to strengthen collective resilience. This relationship is not stable, nor balanced, and it will be resolved either with immediate collective wisdom and cooperation, or in a hard and painful way ... including conflicts, wars, pandemics, severe weather events, the world of chaos and migrations. There is no third way.

More than enough on our plates, before we **move to Europe**.

First, good luck and courage to the incoming new Commission. European Union is visionary concept of visionary people. A model of cooperation, which could today in many ways enlighten and steer also the global community. It is worthy of our efforts and determination to protect and improve it. I do believe that Europe is **on a strategic crossroad**. The sentence I have heard most in the last two decades working in European space was, that we are a major global economic power and the biggest provider of help to those in need, but not really adequately considered as an important geo-strategical political player.

In this context I see **two options**. The likely one, let's call it **defensive**, and the less likely one, let's call it **becoming strategic power**. The first one is more introverted, focusing on security policy, for example putting political power behind speeding up the enlargement process to strengthen a safety belt around existing EU. To be clear, I do very much support future enlargement efforts, even more, we are already lagging behind with some. The second one, becoming strategic power, is calling for a higher level of integration in at least three areas, fiscal, external and defence policy. **Strengthening ERA would belong among powerful tools of this strategic power direction**.

If I just take for **example fiscal policy** ... MS still use taxes to compete against each other and then collectively complain that we are not competitive via the rest of the world. We do not use the power of taxes to change the direction of travel, like agreeing through joint policies at EU level to tax more the things we would like to see less, and tax less the things we would like to see more, using state subsidies and public procurement for making transition possible and in the first place getting rid of tax havens, escape rooms for rich people and rich companies. I can already hear some saying that strategic power orientation is not realistic and too ambitious, but if this would be the thinking of the founding fathers of the EU, we would not have European Union in the first place. At minimum, those in opposition should stop complaining that Europe is not listened to and taken seriously enough by the rest of the world.

**People**, be it farmers, teachers, doctors or those already retired, always **aspire for a safe, predictable and secure future**. Unfortunately, times we are living in are not providing for that and many are concerned about their future and the future of their families. Unsecure future and despair lead them on the streets and lower level of tolerance is accumulating in more extreme political views. Politicians are of course not immune to these developments. Short-term crisis management, coupled with rising social, financial, and political tensions, is a dangerous path we see evolving also in Europe.

**Europe's Choice: Political Guidelines for the next European Commission 2024 – 2029** are stating that "Our focus must now be on implementing what we have agreed, working closely with all stakeholders and focusing on our big challenges ... defence and security; sustainable prosperity and competitiveness; democracy and social fairness; leading in the world and delivering in Europe. All necessary and important, but ... only implementing what we have agreed, even if very much needed, will not be enough. It belongs to the defensive vision of Europe, lacking the critically needed ambition.

Since **competitiveness** is again central stage, it is important to clarify some facts. Starting with the **report prepared by Mario Draghi**.

"Europe is facing an "existential challenge" to increase its productivity. The productivity gap between the EU and the US is largely explained by the tech sector. EU is weak in the emerging technologies that will drive future growth. At the heart is a demand for a massive private and public investment, the like of which has not been seen in Europe since the 1960s and 1970s. European funding for R&D shall be "increased and concentrated on common initiatives. At the core of Europe's economic woes is the cost of energy for industry. To reduce energy prices, Europe needs all available solutions. The EU will not be able to secure enough copper, lithium and other raw materials if it does not emulate China's powerful mining-to-shipping vertical integration. We have reached the point where, without action, we will have to either compromise our welfare, our environment or our freedom." he concludes.

There are interesting and important messages and orientations in the report, also concerning R&I, yet, not much unknown for years. It looks like our problem is more how to agree about the needed funding, how to get the political support for the already known. This calls for a better governance on EU level with a focus on improving the ability and efficiency of adopting decisions. I also wonder if emulating US in energy prices in a race to the bottom, and emulating China in CRMs approach is really the Europe we want. Report is for my taste written too much in the silo centered economic logic, which basically led us to some of the challenges we currently face.

For years it is known that Europe is very import dependent and fragile when it comes to energy and materials - everything that matters for our economic success and wellbeing. But ... the times were good, and when the times are good, not many really care about that fact. Resource use and management, including fossil fuels, are thus critical not only for the environmental impacts, but also for the competitiveness. And we know that success of energy transition depends on securing the access of increased

material needs. Critical Raw Materials Act is for example addressing what R&I will do, from geological exploration to substitution of the CRMs. But **it should not only be about critical raw materials, rather about all materials**, all natural resources, which must be used and managed responsibly, if we want to meet all our targets. All the above is leading to the conclusion that **providing human needs by using less energy and materials is critical also for European competitiveness**.

Many are calling for **strengthening economic security of EU** due to the shifting geopolitical climate, which is likely unavoidable. **Strategic autonomy**, ability to act independently, for example in the Chips Joint Undertaking to reinforce the EU's strategic position in electronic components; **technological sovereignty**, independently developing, producing, and controlling critical technologies, which leads to limiting participation to a subset of eligible countries; or **research security**, protecting the integrity, confidentiality, and availability of research data and processes, are all likely needed, but double-edged sword solutions, and should be used carefully.

**Europe is still vastly overstepping its planetary boundaries and climate change related extreme weather events are increasing across our continent**. Human and economic costs related to them are unfortunately unavoidable, they are already high and increasing. The recent floods in central Europe and last year in my country Slovenia are a clear warning one should not disregard. One could notice a worrying trend of shifting attention primary to adaptation, while mitigation is somehow being set aside. We know exactly where this leads - to even higher costs and more adaptation, not to mention how life would look like.

**European Green Deal** kickstarted EU-wide efforts for a very much needed whole economy and society transformation. The direction set should be the north star also in the future. Any departure would be fatal mistake.

And now to the **research and innovation**, the area which brought us here today.

As you are aware this was **my responsibility during the first mandate** in the EC. We have done together many interesting things, from introducing public-private partnership models to separating the policy from the programme management. But if I would be asked what R&D footprint, I'm most proud of, I would certainly put on the first place European Research Council (ERC) followed by the idea of European Research Area (ERA) and the Fifth Freedom, free movement of knowledge to complement the four freedoms in the EU space.

**Basic research** will always be necessary and critical. We have to move the boundaries of science in all the scientific areas ahead. Not many were in the process of ERC creation actually supportive, in Commission, in Member states and even among researchers. But ERC proved to be a very much needed and successful instrument supporting the excellence in science. It also led to a similar instrument on the innovation side of the R&I spectrum – European Innovation Council.

**ERA and the Fifth Freedom** are of course connected. I was very much supporting both ideas and the introduction of ERA into the Treaty presented an immense opportunity for R&I. I will recall some groundbreaking new approaches we were able to introduce in its context, but some of its potential still remains unexploited. As already mentioned, when discussing the future of Europe, ERA and Fifth Freedom are for me essential components of ambitious strategic vision for Europe. But let's look first briefly back in the history.

**Some of the successes of ERA so far** with emphasis on development of joint activities and funding were related to research Infrastructures and the ESFRI roadmap, to the partnerships like the technology platforms and SRIAs developed into the first institutionalized European partnerships - Joint undertakings, based on A187, and holistic governance approach introduced through the Ljubljana Process, followed by the vision during FR presidency, and governance during SE presidency.

**I have always considered ERA as a process**, even if my successors decided that ERA has been completed and MS in 2014 stated that conditions for the completion of ERA have been achieved and further work is only needed that it functions in an optimal way. Further work was indeed needed.

In 2020 Vision of ERA was renewed by the DE presidency with the launch of ERA pilot on hydrogen, followed by the governance council conclusions during the SI presidency in 2021 focusing on renewed ERA governance. You know the rest, about the role of ERA Forum, ERA Policy Agenda and ERA Actions. It is too early to talk about the success of this latest revamp, but some actions, such as renewed research assessment, knowledge valorisation, the revamp of the Strategic Energy Technology plan and gender equality already show effects.

**Which leads me now to the future of ERA and to the Letta's Report.** The report "Much More Than a Market" by Enrico Letta emphasizes the need to empower the European Single Market to achieve a sustainable future and prosperity for all EU citizens. It discusses the evolving nature of the Single Market in response to crises and external challenges, advocating for its continuous development and adaptation. Key proposals include introducing a "fifth freedom" for research and innovation, enhancing financial integration through a Savings and Investments Union, and improving the regulatory framework for a more dynamic market. The report also highlights the importance of addressing barriers to market access, promoting social cohesion, and ensuring all citizens benefit from the Single Market. It calls for collective action among EU institutions, Member States, and citizens to revitalize the Single Market and strengthen European competitiveness. It short, important report one should consider seriously.

**ERA is in Letta's report considered as an important lever of enhancing research, innovation, and education within the Single Market.** It emphasizes the need for a "fifth freedom" that focuses on research, innovation, knowledge, and education to boost the Single Market's capabilities in these areas. It highlights that the seamless mobility of researchers across Europe is crucial for a vibrant exchange of expertise and

to open doors to unique research opportunities. It calls for dismantling administrative and legal barriers to enhance collaboration and integration within the ERA. Additionally, report suggests that empowering research infrastructures and facilitating access to laboratories, digital platforms, and cutting-edge equipment are essential for the research community to address complex challenges. The establishment of a European Knowledge Commons is proposed as a centralized digital platform to provide access to publicly funded research, data sets, and educational resources, thereby fostering innovation and societal progress. Overall, the report envisions a more integrated and dynamic European Research Area that can drive advancements benefiting the entire continent.

The recognition of R&D and Innovation, ERA and Fifth Freedom could hardly be clearer, and **I hope this will be recognized also in future EU directions and policy framing.**

Personally, I am convinced that **we need a big framework programme, with a bigger focus on the ERA delivery.** Examples from the past, like boosting the partnership in electronics and supercomputing, are showing that significant investment from the EU side towards a joint priority attracts also national investments. And this could also convince the countries that a bigger budget for R&D and Innovation is logical and needed. We have clear arguments coming also from a recent competitiveness angle of Draghi report. He sees lessons to be learned from research hubs like California recommending that EU should focus funding on developing a limited number of “world-class innovation hubs”.

I would plea that among existing pillars covering Excellent Science, Global challenges and European Industrial Competitiveness and Innovative Europe, the horizontal pillar of widening and deepening ERA should be a powerful coordination driver of all EU framework programmes.

**You are touching many important ERA related questions during the conference,** from inclusive gender equality, scientific freedom and research security to biomedical research and engaging citizens, to energy and AI questions, R&I link to competitiveness and industrial transformation, importance of research infrastructures, climate and circular economy, attracting talents and developing skills and bioeconomy solutions. All those questions are important, and all will certainly receive proper attention during next two days.

I will be contributing tomorrow to the **climate and circular economy** session. Just one quick remark today. **Climate change** challenge could not be solved only by energy transition helped by technological development. Climate breakdown is a symptom of ecological overshoot. The material footprint is dangerously underdiscussed. Most climate “solutions” proposed so far only tackle symptoms rather than the root causes of the crisis. Climate solutions often centre on carbon emissions, while focus on overshoot highlights the materials usage (including fossil fuels), waste output and growth of human society all of which affect the Earth’s biosphere. If I would be provocative ... providing humans with abundant, cheap, mainly renewable energy, but



not asking for what that energy will be used, and not addressing the current behaviour patterns, would be like providing us with the license to kill. Hart Hagan, environmental journalist, has nicely summarized this by saying: 'A species causing the extinction of 150 species per day doesn't need more energy to do more of what it does'.

### **Let me finish with few thoughts related to policy making.**

**Science-based policy making is a must.** I have never heard anybody opposing that, but I have rarely met anybody practicing this without some additional interest-based reservations.

In our policy efforts **three mayor blind-spots could be identified.**

First, the **lack of holistic system change approach.** Silo logic and the lack of capacity or knowledge how to translate system change visions into concrete policies and investments, results in conflicting actions and policies that hinder the real systemic transformation.

Second, by **failing to go to the roots of the problems, addressing the fundamental drivers and pressures,** we lack focus on natural resource use as well as market signals leading consumers and producers' behaviour. Our current system does not incentivize sustainable resource use, in fact quite the opposite. To avoid over-regulation, we need in the first place to set market signals right. Signals to producers to avoid destroying natural capital, and contradictory signals to consumers, who still routinely pay more, for example for food with a lower environmental impact, instead of the reverse. Sending policy signals one way, and market signals the other, is just creating confusion on the markets and leading to the resistance and lobbying by affected companies, in particular here in Brussels.

And third, **lack of demand side focus.** Policy attention, also in climate efforts, is mainly given to the supply side of the economy, to the cleaning of the existing economic system. It is lacking the attention to the demand side. We must stop ignoring the inherent wastefulness of our production and consumption systems and ask the question who is exceeding the planetary boundaries and living out of safe operating space. This is essential also for equity and fairness related efforts. Efficiency should be thus complemented by sufficiency policies and decarbonisation and dematerialisation policies should walk hand in hand.

In short, if we want to protect elephants in nature, we must first to extinct some elephants in our rooms.

**And you, the research and innovation community?** I have learned that as politician **one can only be ahead of time, fighting for the necessary changes, or behind of time, protecting existing interests of various stakeholders.** Present time is among politicians somehow absent. European Commission, with all the respect I will always have for the professionalism and strategic vision it poses, has still not found optimal relationship with the MS that would facilitate implementation of this shared vision.

Logically since it is not operating in the vacuum. **RTD (and JRC) should exploit its specific role** being less on a political radar than other directorates and be ahead of time. This is your opportunity and your responsibility. You must drive the change; you must help us providing solutions to the challenges we collectively face, and you must simultaneously push the boundaries of knowledge to new frontiers.

**ERA is a wonderful concept.** It is part of the Europe we want. With the revival of fifth freedom concept, you have a major opportunity to play a role in providing a leadership beyond the pure research area, innovating also in the governance area, providing evidence that funding and cooperation in your area makes sense and, providing argumentation that you deserve even more attention and support in the future comparing to the one you are receiving today.

**Dear friends, was this enough inspirational?**

I'm not sure. It was certainly long. And it was certainly biased, we all are ... it was maybe more my story than your story, but it was also our story. It was sincere and I hope helpful. I also know that many of the solutions of the mentioned problems are above the pure scientific advice in a turbulent social and political waters, but still, you can help. You must help.

I like to end my presentations with a quote from the most known Belgium, inspector **Hercule Poirot**. When he was once asked why he speaks about himself only in a third person, he replied something like that: "If one is such a genius like me, it is very important to establish a healthy distance to himself."

We are **indebting future generations**, financially and by depleting the Nature. We know this is wrong. Apparently, we humans are the most intelligent species on this planet. It is high time to prove it. More than an economic or a technological choice, this is a moral choice.

**The future will be green and more equal** ... or there will be no future. And yes, stay optimistic. It is optimists who change the World, and it is optimists who live longer and better. And life is too beautiful to be wasted.

Thank you.