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Interview Of The Week

Interview Of The Week: Andre Loesekrug-Pietri, JEDI

by Jennifer L. Schenker • 10 min read

Andre Loesekrug-Pietri is Chairman & Scientific Director of the Joint European Disruptive Initiative (JEDI), a precursor to a European Advanced Research Projects Agency (European ARPA), which brings together more than 6000 leading scientists, startup founders and industrialists from 29 European countries -to accelerate the continent's leadership in disruptive innovations, in climate and digital technologies, life sciences and space.

Loesekrug-Pietri, who holds dual French and German citizenship, previously held leadership positions in private equity, industry as an entrepreneur and in government (as former special adviser to the French Minister of Defense). Earlier in his career he was named a Young Global Leader by the World Economic Forum, He is a reserve colonel with the French Air & Space Force, sits on the Innovation Board of the Munich Security Conference and on the Advisory Board of the €3 billion Transformation Fund of Saarland. He recently spoke to The Innovator about what it will take for Europe to achieve tech sovereignty.

Q: Europe is widely seen to behind of technology. What needs to be done to help it catch up?

ALP: The situation is dire. Europe is losing on all technological fronts. We have been saying for some time that it is not more money but being bolder and focusing on the Next Big Thing that is needed. The biggest areas of tech in future are around AI, quantum, materials or biology. Deep tech is all about science and scale: while there is as much risk in investing in fundamental science in Menlo Park as there is in say Paris, the upside is continental in California while often limited to national borders in Europe. This impacts the capacity of making big bets, the future potential and therefore the valuation of companies. As of now, the single market is an illusion in most future looking sectors, a fact confirmed by a recent report of former Prime Minister of Italy Enrico Letta. We need to fix that. It is easier for governments to announce billions than to solve this fundamental issue which has been holding back Europe's tech sector.

Another issue is the method that Europe has used to approach the tech market. Billions have been spent trying to imitate big U.S. tech companies like Cloud providers. with little to show for it. As of Q1 2024 Amazon Web Services, for example, has grabbed 31% of the global market share, followed by Microsoft Azure and Google Cloud. The largest European player has barely 1% of global market share. The good news is that by focusing on the next generation of technologies, in AI, synthetic biology and energy, Europe has the chance to disrupt the market. Look at how OpenAI burst onto the scene, making Google Search seem a little bit old-fashioned and helping Microsoft bounce back – and increase its market cap by 1000 billion dollars in two years. There is a reshuffling of the cards, creating huge opportunities. The same is true for energy but Europe needs to seize the day. Take the case of fusion energy. There are currently over 50 nuclear fusion startups in the world, but 90% are in the U.S ,while it is Europe the continent with an energy problem. If we don't take big bets, it is sure we will not win.

Q: How is JEDI helping?

ALP: Europe needs to focus on what comes next; that means making hard choices and it requires leadership. Europe has the habit of trying to pick the winner, the 'pépite' as we say in French, the golden nugget. But if you try to shoot the target it is fairly sure you will miss it, it will have already moved. Instead, we need a portfolio of approaches, to experiment and to place more emphasis on deep science and technology. That is why JEDI has created a precursor agency for advanced research similar in nature to what the U.S. created 66 years ago. It was a huge surprise in 1957 when Russia launched Sputnik, and made the U.S. continent vulnerable to the USSR with its launchers. Sputnik's launch caught the United States off-guard, beginning a space race between the two countries. Dwight Eisenhower, the U.S. President at the time, summed up the U.S. response with one sentence: ' No more technological surprises.' So, the country launched a research program with a very clear societal and strategic purpose. JEDI, which includes hubs in all EU countries but also the UK, Switzerland and Norway, is ng

next big thing in AI, beyond GenAI ? We consider speed as important as the money we spend and try to achieve results in one or two years, knowing that we will fail in 80% to 90% of the cases. We will push the frontiers of knowledge and tech.

DARPA (The U.S.'s Defense Advanced Research Projects Agency) says that if it succeeds with more than 20% of their products it means they didn't take enough risks. We are taking a very similar approach. We consider that there are VCs or other players who can invest in tech companies. We are not trying to crowd them out; we instead focus on moonshots, on things where there is no return today but that can be a game changer in the future. Contrary to the way the big government-funded research programs work, we don't wait for people to participate. We reach out to make sure we get the best brains from the deep tech ecosystem, from science and from industry, on one given problem. Our worry is that increasingly the best don't apply to participate in publicly funded programs due to the bureaucracy involved. I recently spoke to a Nobel Prize winner who told me he spends 35% of his time doing grant applications. Not the best use of time of a Nobel.

We consider what we do to be complimentary to public instruments. We also are working with governments to fund us, with slow success so far. For example, France has budgeted €54 billion for its France 2030 program. If they were willing to work with JEDI, what we are currently discussing, and put aside 1% of that €54 billion to be bolder, and not go through public tenders, it would be a big win in all cases: of course if we achieve together a breakthrough, and even if not, it would stimulate a system that is not focused enough. The European Innovation Council, which has a budget of €10 billion to support innovations was recently the subject of a damning report by economists including Nobel Prize Jean Tirole, that accused it of falling into 'the middle tech trap' and not delving in what it should be doing, which is disruptive innovation. What JEDI has done over the last two and a half years is to bring together the best of Europe's science and deep tech ecosystem with 6000 of the brightest minds in 43 hubs. We spend 50% of our time identifying the right topics which produces some of the best technology foresight that exist and launch moonshot programs on the real game changers for the future. Our ambitions are high: we now need to massively scale our efforts.

Q: Both governments and corporates struggle with how to anticipate the future. Tell us about JEDI's plans for a Future Institute.

ALP: Anticipating the future is about asking the right questions. This is what we do with our moonshot councils. We have 40 of them focused on topics such as fusion, AI, GPUs, synbio, decarbonization of industry, etc. We bring together quarterly 20 to 80 people in each of the councils across countries and disciples. Our focus is three to 10 years out. We realized we could boost our impact by bringing people from these different councils together in a physical space -an Institute of the Future -where we could spend a few days together, exchange thoughts about technology trends and bottlenecks, and let the magic work. It is inspired by Princeton's Institute of Advanced Studies, created as a place for scientists fleeing Europe in the 1930s or CIFAR [the Canadian Institute for Advanced Research] which has brought together some of the greatest AI scientists, like Yoshua Bengio and Yann LeCun. We want to create that in Europe. We are currently selecting a physical location in Europe and will build a campus that can serve as a lighthouse for public and private leaders.

Europe is currently playing defense so we need to look at how can we shape the agenda for tomorrow, with a clear perspective. U.S. President John F. Kennedy famously said in the 1960s "We choose to go to the moon in order to test the best of our abilities." We need to define our own vision and a rallying cry that will inspire all Europeans citizens, and not just a small elite.

Q: What is corporates' role in all of this? Can they/should they do more to support the scaling of deep tech technologies?

don't, you are sure to lose. The C-Suite needs to focus on foresight and learn how to make big bets. This often creates a tension with the company's financial obligations. We need to reinvent what return on investment means. Companies like Google or Meta, which are still controlled by the founders, are able to think five to 15 years into the future. Some of them outsource their bets. Microsoft has done this with OpenAI. What we are saying is European companies and government should consider creating new structures for their bets to be truly bold. JEDI wants to be one of the entities that they turn to.

Nvidia alone is worth more than all the companies listed on the French stock market, or the companies on the German exchange. In the last 15 years Europe's GDP per capital has been falling 30% behind the U.S. It really is code red for Europe, and we aim at JEDI to contribute to changing that.

Q: What, in your opinion, is the cost of inaction?

ALP: Massive. Democracy itself is at risk. We need to inspire our citizens with a clear vision. We can build our own future or others will shape it for us.