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## **Kernaussagen / Introduction orale**

**Joint European Disruptive Initiative**

André Loesekrug-Pietri, 17 mai 2018

**Deutsch-Französische Arbeitsgruppe zum Élysée-Vertrag  
Groupe de travail franco-allemand sur le Traité de l'Élysée**

Bundestag / Assemblée Nationale

Merci, Mesdames et Messieurs les Députés, de nous avoir invité à cette importante audition dans le cadre du nouveau Traité de l'Élysée.

Ce dont je vais vous parler, c'est de la situation dramatique dans laquelle se trouve l'Europe en matière d'innovation et de technologie. Dans ce cadre, nous sommes profondément convaincus que J.E.D.I. pourrait être un projet phare qui soit prospectif, intergénérationnel et stratégique, aussi important que l'OFAJ l'a été en 1963. C'est un projet très concret que nous allons pendant ces quelques minutes vous proposer.

### **Qu'est ce que J.E.D.I.?**

La Joint European Disruptive Initiative vise à assurer la survie et le leadership technologique de l'Europe en finançant des innovations de rupture. Clé de la force de nos économies et de notre souveraineté.

J.E.D.I. est aujourd'hui, plusieurs mois après son lancement, très représentatif de l'écosystème technologique en Europe, avec plus de 100 responsables des plus grandes entreprises technologiques, instituts de recherche et start-ups high-tech en Allemagne et en France. C'est la société civile, franco-allemande.

Nous proposons de mettre en place une agence d'innovation de rupture, ultra agile, porté par l'écosystème technologique, financé par le public. Pour financer, au sein de startups, de centres de recherche et de grandes entreprises, des projets trop risqués ou trop long terme pour le secteur privé. Défis technologiques qui seront la clé pour le futur de nos sociétés.

## Qu'est-ce qui nous motive? L'Europe a perdu son avance technologique

L'Europe est en train de perdre pied sur tous les tableaux dans le monde de la technologie : 7 des 10 plus grandes sociétés mondiales sont des géants de la technologie. Elles n'étaient que 3 sur 10 il y a seulement 4 ans: cela signifie que la croissance et les emplois futurs sont de plus en plus déterminés par la technologie. Et les grandes plateformes américaines ont 500 milliards de dollars prêts à être investis dans nos talents et nos entreprises.

Pourquoi est-ce important pour les représentants du peuple que vous êtes ? Car la technologie devient de plus en plus politique. Comme en témoignent les cyberattaques, les Fake News, les plateformes Internet avec des pouvoirs plus grands que les pays moyens et la constitution d'États orwelliens basés sur la notation sociale.

Très inquiétant pour les Européens: l'innovation disruptive devient incontournable car la valeur se concentre sur les leaders, ce qui n'est pas le cas il y a quelques années. Ce n'est pas la dernière mais la première entreprise à mettre sur le marché qui gagne aujourd'hui. « *Winner takes all* »

L'Europe dépense 80 milliards d'euros pour 2014-2020 en matière d'innovation et on peut légitimement se demander ce que ces énormes sommes produisent en terme de résultats significatifs : dans des domaines tels que les semi-conducteurs, l'espace, les télécommunications, le quantum, la génétique, l'Europe a perdu son leadership que nous avons il y a 10 ans. Il y a un vrai enjeu sur l'efficacité de l'argent public.

Enfin, l'état actuel de nos économies ne devrait pas faire illusion: avec la vitesse exponentielle du changement, aucune position de leader n'est acquise.

La rupture était un luxe. Aujourd'hui, c'est essentiel pour survivre. La France et l'Allemagne font très peu pour résoudre ce problème. Et les institutions publiques n'ont pas l'agilité ni la culture d'expérimenter de nouvelles manières d'agir.

## Que devrait-on faire ?

Aujourd'hui, le financement de la recherche en Europe est largement défini par les approches classiques et n'inclut pas l'innovation de rupture.

Ce que nous proposons est une agence tournée vers l'avenir, s'inspirant de modèles à succès dans le monde. Cette agence ne se sera pas prescriptive - parce que le monde est imprévisible. Elle voudra coacher les projets une fois financés - ce qui n'est pas fait aujourd'hui, ce qui entraîne un gaspillage de fonds publics. Elle voudra mettre au même niveau les startups, les grands groupes, les instituts de recherche - aujourd'hui les grandes organisations sont grandes gagnantes du fait de la complexité administrative et de la longueur des démarches. L'agence voudra mettre l'accent sur les prototypes - aujourd'hui, nous nous arrêtons souvent à un *research paper* – qui reste difficile à financer, aboutissant à ce que les innovations restent 'coincés' dans les laboratoires. Elle voudra être en mesure de dire stop à tout moment - aujourd'hui, nous ne savons souvent pas arrêter les projets une fois lancés, même s'ils n'atteignent pas de résultats. L'agence voudra être d'une très grande diversité - les comités d'experts d'aujourd'hui ne sont pas capables de sortir des sentiers battus « *think out of the box* » : ce n'est pas un problème pour l'innovation incrémentale, c'est toxique pour l'innovation de rupture, comme en témoigne la situation dramatique du secteur spatial européen qui n'a pas vu venir les fusées réutilisables. L'agence voudra concentrer l'argent public SEULEMENT là où l'argent privé n'est pas présent. J.E.D.I. propose une méthodologie unique, une 'voie franco-allemande', européenne, originale

pour l'innovation de rupture, en répondant aux grandes missions sociétales de notre temps. Et de voir comment la technologie peut changer le statu quo: décarbonation de nos sociétés, amélioration massive de la santé, construction d'un monde numérique centré sur l'humain. Des thèmes que sont explicables, compréhensibles et qui enthousiasment nos concitoyens. Ce serait une voie originale, bien différente de la technologie pour la technologie (assez présente aux USA), ou à la technologie servant parfois des visées politiques (comme en Chine)

Nous sommes profondément convaincus que J.E.D.I. pourrait être un projet phare, aussi important que le DFJW / OFAJ l'a été dans le premier traité de l'Elysée.

J.E.D.I. ce serait 50 à 70 projets par an, avec une moyenne de 15 millions d'euros chacun, soit 1 milliard d'euros en vitesse de croisière. L'année 1 serait axée sur 10 à 15 défis, donc 200 millions d'euros. Ne sommes-nous pas capables de cela ?

### **Qu'attendons nous de vous ?**

Trois étapes concrètes sont actuellement nécessaires :

1 / Faire confiance à la société civile et inclure l'écosystème technologique dans la mise en œuvre du projet d'agence d'innovation de rupture. C'était le sens de notre proposition à l'automne 2017, proposition que le Président a repris dans son discours à la Sorbonne. Les plans actuels de mise en œuvre sont réalisés dans le secret des cabinets ministériels : cette méthode ne marchera pas.

2 / Financer très rapidement un 'Prototype' de notre proposition plutôt que de passer trop de temps à discuter des concepts théoriques et risquer de ne pas saisir la chance de l'Europe. JEDI lancera cet été plusieurs 'Challenges' grandeur nature, avec un financement qui est en cours de confirmation par des grandes fondations et de régions françaises et allemandes mobilisées sur le sujet. Cela permettra d'affiner le concept, démontrer que cela marche, et d'encourager la puissance publique de démultiplier sa taille une fois testé, avec un niveau de risque politique et financier maîtrisé. Nous sommes prêts : l'Assemblée Nationale et le Bundestag devraient soutenir politiquement et financièrement ce Prototype. C'est une opportunité de démontrer que les démocraties peuvent encore être capable d'expérimenter de nouvelles manières de travailler. Très concrètement un Challenge serait centré sur l'intelligence artificielle, un autre sur les technologies de stockage/batteries.

3 / Fortement soutenir politiquement pour contrer la résistance des structures administratives de 'contrôler' un outil qui au contraire doit être ultra agile. Et contrer la tentation actuelle de démarrer en national – ce qui condamnerait une réelle approche continentale, à la hauteur des enjeux.

### **Conclusion**

Tous les membres de J.E.D.I. sont extrêmement mobilisés. Nous croyons en un nouveau «pacte de confiance» entre la société civile - représentée par J.E.D.I. - et le gouvernement. Nous sommes animés par un sentiment d'urgence car nous ne voulons pas que nos pays ne deviennent qu'un énorme marché pour les grandes entreprises technologiques, dans un monde où la technologie déterminera les souverainetés économiques et stratégiques de nos pays.

Je vous remercie pour votre attention, et vous encourage à proposer un nouveau traité de l'Elysée disruptif et tourné vers l'action !



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## Schriftliche Stellungnahme / Observations écrites

**André Loesekrug-Pietri, May 2018**

For Bundestag / Assemblée Nationale

### **What is at stake ? Why is this highly relevant for France, Germany, Europe ?**

The Joint European Disruptive Initiative (J.E.D.I.) is a very concrete proposal to set up an ultra-agile agency for disruptive innovation, co-managed between the public hand and the innovation ecosystem, and focused on financing technological challenges that are too risky or too long term for the private sector. It is a contribution to the self-assertion of the European economy, with the aim to secure Europe's technological leadership by financing & accelerating the development of breakthrough innovations.

In the current complicated context for French-German initiatives to emerge, this agency for disruptive innovation is a future-looking, cross-generational, societal, strategic project, that could be very rapidly implemented. It is getting strong support from all side of the political spectrum. A rare opportunity.

Moreover, it is a test for our democracies to address a challenge by authoritarian states that understand how much technological sovereignty will determine the strength of our economies & societies.

It is also a test for democratic states to show they are still able to 'experiment' new ways of having impact, for the trust they are ready to put in the Civil Society, and for innovative ways of having German-French leadership in Europe that is inclusive and open to all member states.

This agency would use inspiration from successful models and develop a unique European way by addressing societal missions, for which technology can change the status-quo: decarbonation of our societies, massively improving healthcare, building a human-centric digital world.

We are deeply convinced this could be a flagship project, as important as was the DFJW/OFAJ in the first Elysée treaty, and we urge the Public Hand to support it wholeheartedly in words and in deeds.

3 concrete steps are needed: 1/ trust in the civil society and the technology ecosystem to implement this efficiently and rapidly, in close cooperation with the Governments 2/ finance very rapidly -in the next couple of weeks/months- a 'prototype' to test the initiative rather than spending too much time discussing theoretical concepts 3/ strongly endorse politically to counter resistance from administrative structures defending either national approaches or existing structures

## **What is J.E.D.I.: a European agency for disruptive innovation**

The Joint European Disruptive Initiative is a contribution to the self-assertion of the European economy, it aims to secure Europe's technological leadership by financing and accelerating the development of breakthrough innovations.

Inspired by the model of DARPA but with a civilian focus, it will be a remarkably agile, lean and fast-moving tool (not a classical agency). It aims to help solve the major challenges of our time or 'Missions', through technological breakthroughs, for the good of the European society and economy. Practically, it will determine the technology bricks needed to achieve those Missions, launch calls and actively coach (through 'program managers') selected innovation teams to push technology frontiers, in the minimal possible time. A project can be stopped at any moment if unsatisfactory.

The challenge is posed by continental powers like the US and China – our response and strategy need to be continental, as national initiatives alone wouldn't have the scale, the talent pool, the necessary financial means, nor above all the signaling effect that Europe is back and ready to take bold, disruptive, decisive action. At the same time, waiting for a EU-27/28 decision would take too long and not be effective before 2021 – therefore it is time for the fastest and boldest like France and Germany to show leadership, while remaining inclusive from day one.

J.E.D.I. is today, only 6 months after launch, highly representative of the tech ecosystem in Europe, as it is bringing together over 100 heads of the largest technology corporates, research institutions and high-tech startups in Germany and France, as well as from other European countries (Italy, Estonia, Belgium...).

## **What is driving us : The technological situation for Europe is dramatic**

Europe is losing foot on all fronts in the current technology acceleration we are witnessing: no European is in the top 10 largest companies in the world of which 7 are tech giants. They were only 3 out 10 only 4 years ago: this means growth and future jobs are increasingly driven by technology.

Disruptive innovation becomes a must as value is concentrated on the leaders, which was not the case a couple of years ago. Technology becomes increasingly political as demonstrated by cyberattacks, fake news, Internet platforms with powers larger than medium sized countries, and the constitution of Orwellian states based on social scoring and IA.

All members of J.E.D.I. are driven by a very high sense of purpose and urgency. Sense of purpose as we believe in a new 'pact of trust' between civil society – represented by J.E.D.I. – and government, as traditional technocratic structures in our national countries or at European level are not well equipped to achieve the much higher level of speed, agility and disruptive thinking needed for technological leadership.

Sense of urgency as we do not want to just become a provider of incredible talent and a huge market for major technological companies from the United States or from Asia, in a world that accelerates and where technology will increasingly determine countries' economic strength and national sovereignties.

We are convinced, it is NOT JUST a question of financing: Europe is spending 80 billion Euro 2014-2020 on innovation and one can legitimately ask whether these huge sums are producing meaningful results: in areas like semiconductors, space, telecom, quantum, genetics, Europe has lost its leadership it had 10

years ago. We believe it is a question of methodology and of focus: we need to take maximum risks, decide very quickly, and be very demanding about the results of the money invested – rather than as of today deciding slowly (an average of 6-12 months for H2020 calls), and have very little follow-up on the money invested. This is often similar at national levels. Regarding focus, we need to be aware that last year 48% of all AI-linked VC investments were in China, 38% in the United States., leaving 12% for the whole rest of the world, including Europe. This is massively disturbing.

Finally, we believe the current positive state of our economies should not be an illusion on our future strengths: the big difference in the time we are experimenting is the exponential speed of change: no position is acquired, no world leadership position if for certain.

At the contrary, incumbents are less and less able to disrupt themselves and invent the next big thing (except those who can buy any emerging promising technology – as the large European and Chinese platforms are doing with the cash they amass through their incredibly profitable core business).

And even more worrying for Europeans, the differentiation between firms is increasing with the “winner takes us an effect” : it is not the last but the first company to put a product on the market that has today, with globalized markets and quasi-instantaneous global distribution in particular for software based products, the capacity of acquiring large markets. And therefore, an over-proportional part of the value creation (as an example, Google and Facebook represent 90% of the US online advertising market)

Disruption used to be a luxury. Today it is essential to survive. Europe is doing very little to address this. And the European institutions don't have the agility nor the culture of experimenting new ways.

### **What is unique in J.E.D.I, ? What is our detailed proposal?**

For Europe, the unique character of the JEDI project lies in its transformative funding model geared towards obtaining superior, substantive results in the field of disruptive innovation.

JEDI aims to encourage a winning mindset through a radical step change in terms of risk-taking, project funding and speed of execution. The goal is to regain our technology leadership and thus restore our strategic and economic independence.

Like the US DARPA, JEDI will base its approach on meeting key technology challenges rather than on prescriptive specifications, with a view to developing dozens of operational prototypes every year within timeframes of months rather than years. Contractors selected and funded by JEDI—research centres, starts-ups, innovative mid-tier firms and large industrial groups—will have total freedom to innovate.

Time is of the essence and the goal is to stay ahead of the game rather than follow where others lead, as technology development cycles are getting shorter, while the United States is giving fresh impetus to DARPA and China is also developing a similar approach.

The idea is to push the envelope as far as it will go: like for DARPA, if the success rate is more than 10-20%, then *not enough* risks are being taken. It is this culture of maximum risk that has brought groundbreaking advances like GPS, the Internet, driverless cars, stealth, SpaceX and Siri.

The entity created to execute this unique methodology will be as agile and lean as possible, drawing almost all of its human resources from the best visionary technology talents (to form the Executive Team)

and research project support talents (to form the Programme Managers team). The aim is to create a 'cockpit' entity to raise the bar and spur disruptive innovation. Any other existing entity would be constrained by current practices and thus unable to accomplish this transformative vision.

JEDI will, in the immediate run, be built on a French-German platform. Once the impetus is built, it could then be extended to other European nations to achieve the required critical mass (which is a key success factor in technology), to increase available financial resources, to leverage nations' complementary human and industrial skills, and to be able to secure European funding.

### **Missions – the 'Big Goals' that J.E.D.I. would address with technological breakthroughs**

While DARPA inspired us in terms of methodology, JEDI's customer is not the Department of Defense, and is not targeting military applications. Being publicly funded, we expect JEDI to deliver on key missions meeting its customer's expectation: the French, German, EU citizen.

We've identified the following four Missions – covering the priorities of key sponsors :

- Decarbonating the world - Make our planet great again
- Massively improving healthcare - Human lives, health, working conditions
- A human centric Digital transformation - 4th industrial revolution
- Exploring our oceans and our universe – Pushing the frontiers

J.E.D.I. will then regularly identify and launch Challenges that could address and bring a contribution to one or multiple missions (e.g. challenges combining health and digital transformation).

J.E.D.I. proposal is to have an agency able to launch 50 to 70 challenges per year, with an average of 15 million Euro each, ie 1 billion Euro once fully established. Year 1 would be focused on 10 to 15 challenges (depending on the number of program managers recruited').

We propose that the budget comes mainly from public sources in order to avoid any short term financial return on investment bias, and fully focus J.E.D.I. on what today is not/very insufficiently done in Europe, financing 'moonshots': projects that are massively risky but that could potentially completely disrupt an industry and/or lay the technological foundations for a completely new sector.

Going further, financing through large foundations that see technological leadership as a key public good would be highly desired. A three-year rolling budget would allow both flexibility as well as capabilities to launch Challenges with a duration of 6 months to 3 years.

We propose a governance with a Supervisory Board composed of participating Governments, regional entities, member states as well as the European Union that would set the large missions to achieve by the agency and nominate the executive team.

The Executive Team, recruited within the tech ecosystem on a 3 year non renewable contract, would have full flexibility to determine the technological challenges needed to achieve these goals (like '10x more powerful batteries', 'GHG-free agriculture', 'injectable curative agents', 'privacy-respectful public space surveillance'...) by engaging massively and permanently with the technology ecosystem and disruptors. A Scientific Advisory Board would also support the definition of the right challenges.

The Supervisory Board would have full transparency on the use of funds, receive a highly detailed annual report by the Executive Team and would handle any potential conflict of interest.

Challenges would be launched to ensure that there is real level playing field between all players (large companies, startups and SMEs, research centers and universities), which is not the case today, so that only excellence and breakthrough proposals win.

There would be no geographical-return policy, but funds would only be allocated to entities whose ultimate beneficiary is located and paying taxes in the countries funding J.E.D.I. The IP would remain entirely the property of the research project, with potentially a royalty once the resulting technology generate profits, and a right of first refusal in case of a sale to a non-European entity.

### **What have we achieved so far ?**

J.E.D.I. has led the charge to make disruptive innovation a key political topic in France and at EU level: its proposal early September 2017 directly led to the proposal made by President Macron during his Sorbonne speech on Europe on September 26, 2017. The European Innovation Council, promoted by Commissioner Carlos Moedas and initially focused on 'scaling up', added a second priority with disruptive innovation since J.E.D.I. became public in October 2017.

In Germany, J.E.D.I. accelerated existing discussions that led the new Research Minister to announce Germany backs the principle of an agency for disruptive innovation in April 2018. Finally both countries' Parliaments agreed in January to make a joint agency for disruptive innovation art of the new Elysee treaty to be signed between the two countries.

J.E.D.I. has presented its goals to more than 50 large audiences since autumn 2017 and has generated widespread enthusiasm among innovation stakeholder but also the general public, as it represents a positive and offensive way to respond to the current technological transformation of our societies.

We have worked hard to determine 30+ possible technological challenges, pre-identified 15 potential program managers, and finalized this ready to go Action plan.

Our goal is to launch a fully operational prototype of J.E.D.I. by Summer 2018: with proper governance, program managers, execution, size (10-15 ME/project) but with a limited number of projects.

A fully operational J.E.D.I., building on the experience and possible adjustment derived from the prototype phase, should be implemented by late 2018/early 2019.

We are ready.

### **What do we need ?**

The main obstacle comes from the core J.E.D.I. proposal: an agency where execution is led by the ecosystem and not by a ministry, which obviously challenges traditional administrative structures.

The second obstacle comes from J.E.D.I. vision to start day on from a French-German base: to achieve continental scale needed to compete with North America and Asia (talent pool, creativity pool to respond



to challenges, resources), while keeping speedy implementation, which would not be possible at EU level before 2021 (start of the next framework program).

We believe J.E.D.I. could be the precursor to the European Innovation Council disruptive innovation arm. J.E.D.I. challenges traditional EU decision making, as well as strong tendency to first implement at national level. We believe that if started on national level, it will be quasi impossible to reach the scale needed.

We need strong political endorsement and a budget to launch J.E.D.I. Prototypes – 3 to 5 first Challenges that we intend to launch by Summer 2018 to kickstart J.E.D.I. This can be done by sponsoring part or all of a single Challenge (around 10 M Euro each, injected directly in the winning project if a suitable one is selected in Q3 2018, over a period up to 3 years). This support would receive very high public recognition.

In addition to National budgets, we are currently in active discussion with Regions/Bundeslaender, Foundations as well as individual Corporations, that are committed to support the long term technological leadership of Europe and see their support to J.E.D.I. as an active contribution to this public good.

[jedi@jedi.group](mailto:jedi@jedi.group)

twitter @eurojedi