#PrepareFor

VALENCEIA 2019

Academic Preparation Kit
Academic Team of Valencia 2019 - 90th International Session of the European Youth Parliament
European Youth Parliament España and the Academic Team of Valencia 2019 – 90th International Session of the European Youth Parliament presents:

Academic Preparation Kit of Valencia 2019 – 90th International Session of the European Youth Parliament

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The European Youth Parliament (EYP) is a unique educational programme which brings together young people from all over Europe to discuss current topics in a parliamentary setting. As a network of independent associations, EYP is present in 40 European countries and organises almost 600 events every year. The EYP network organises almost 1,500 days of EYP activity every year, involving close to 35,000 participants. Thousands of young people are active as volunteers all over Europe, making EYP a programme truly for young people, by young people. This publication is one of a range of materials produced to support these programmes.

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1. Sailing towards new Horizons together
‘Academic Vision of Valencia 2019’

The academic vision for Valencia 2019 is built on and continues to grow from the foundations of collaboration, gratitude, and support. The theme of Valencia 2019, ‘Horizon 2020 – sailing towards new horizons’ allows for both reflection and action – for moving forward together. It emphasises the importance of research, of investing in and promoting truth, and of innovation in adapting to our changing world. In an era of political uncertainty, the value of debate has never been higher: we hope to offer you a platform to engage with the reality of the problems facing the world, discuss with your peers, and gain new insight into the issues.

Oftentimes, the academic aspect of a session lies predominantly in the result. In Valencia, academic excellence does not only refer to high-level debates and accurate resolutions, but also to the experiences and skills all participants will nurture along the way. One of our main objectives is to enable Valencia 2019 to become a learning platform that allows all participants to grow and develop their personal and academic skills. We will challenge the feeling of academic pressure, and bring it into the realm of personal development. During Valencia 2019 we must consider how everyone can get the most out of the academic process. EYP opens doors for participants and gives them the tools to sail further than they could have imagined. Being well prepared for the topic you are discussing at a session is the base of academic quality. And for those who find that difficult, it shouldn’t be the end. This session will give more to every participant in terms of academics, emphasising and developing the amazing skills that everyone can learn.

Our academic vision will come to life with the 15 topics that the Chairs Team have carefully selected for you, covering some of the most urgent issues facing our world today. The topics compliment the session theme, Horizon 2020, with questions concerning how to continue promoting the values of research and innovation in the future. This will allow delegates to tackle the political scene of 2019 while also focusing on issues of continued relevance to European society: maintaining economic stability, achieving scientific excellence, and facing social challenges. These topics will provide you with challenging, intriguing, and thought-provoking debates and discussions. Real issues, affecting real people.

To enhance the learning experience at the session, you will have the opportunity to offer your insight and input into other committees. A platform for discussing and engaging with all topics will be offered during the session, to enable participants to be aware of the core ideas and key actions proposed, ahead of the General Assembly, where resolutions will be debated.

So take a look around, and explore other topics. You never know what you might learn that will compliment the work of your own committee. In the real world, problems are inextricably linked and connected to each other, and therefore so must we be. We must collaborate if we wish to find solutions - within our own committees and beyond. The world is complex and intertwined, and with heightened globalisation and digitalisation, it is at our fingertips. Every topic being discussed in Valencia impacts you, and we hope that you will have the opportunity to see just how linked each of them are, while also realising how connected we are as well. Every participant working, growing, and sailing further together.
This preparation kit offers you:

(i) Overviews on all 15 topics, covering the core issues, main stakeholders and information on the general context, as well as leads to questions for reflection ahead of the session. You are strongly encouraged to read the topic overview of your own committee. This is meant to ensure minimum knowledge to enable you to take part in discussions.

(ii) Practical and easy tips on how to research for a topic, as well as how to read legislation.

(iii) An explanation of the institutional framework for our debates, as well as brief information on the key stakeholders and their powers.

Your chairpersons are your first point of contact for any questions or ideas you might have, and they are excited to start working with you!

*Are you ready to set sail with us?*

*With thanks to the Chairs Team and all members of the Valencia team who contributed to this booklet. We would like to express particular gratitude to Rafa González Graciani and the organising team of Valencia 2019, without whom publishing this would not have been possible.*

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2. Institutional Framework & Stakeholders

When searching for the best solutions for the key questions of your topic, you can choose the right actor for a specific action. There is no strict rule that resolutions must be implemented only through European Union organs.

The main stakeholders possible are: the United Nations (global level - 193 states out of approx. 195 in the world), the Council of Europe (European states - 47), European Union (28 members, potentially soon to be 27), individual states, civil society and individuals. Several other international organisations exist that might be of relevance to specific topics. Keep in mind that coordinated actions are often needed, and while on the ‘smallest’ scale, actions that individuals can take in their own communities can have a great impact.

You are invited to reflect on the scope needed for your action to be feasible: Who is best to implement it? Who will be most successful in doing so?

The following pages offer brief descriptions of the main stakeholders, topics covered and powers.

The United Nations (UN)

The UN is an international organisation comprising 193 member states. It aims to: maintain international peace and security; develop friendly relations among nations, achieve international cooperation in solving problems of concern to the entire world.

It has 6 main organs, among which the following two are the most relevant:

The General Assembly is the main deliberative, policymaking and representative organ of the UN, where all members are represented. Its resolutions may not be binding on states, but they are useful in understanding the position of states, and carry significant soft power.

The Security Council has primary responsibility for the maintenance of international peace and security. Its decisions are binding on UN member states. It is formed of 15 members, including 10 rotating members and 5 permanent ones (USA, UK, France, Russia and China).

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1. Non-governmental organisations and institutions expressing/advocating for specific causes, promoting the will of citizens.
2. See further UN Charter (1948), article 1.
3. See further, UN, Main organs.
4. In contrast to the coercive nature of hard power, soft power describes the use of positive attraction and persuasion to achieve foreign policy objectives. Joseph Nye’s three pillars of soft power are: political values, culture, and foreign policy.
The UN system consists of numerous specialized agencies, programmes, funds, as well as subsidiary organs of the main UN organs. The topic overviews point out the UN entities that have a mandate in a relevant area.

**Council of Europe**

The Council of Europe is an international organisation comprising 47 member states including non-EU states such as Russia. It promotes and protects human rights, democracy, rule of law and European culture through international cooperation in the areas of human rights, democracy and it is not part of the European Union. The general aims of the Council of Europe are to:

- Protect human rights, democracy, and the rule of law in all its member states;
- Promote awareness and encourage cultural identity and diversity of Europe;
- Seek solutions to (social) problems facing European society;
- Consolidate democratic stability in Europe;
- Promote social cohesion and social rights; and
- Promote and develop a European cultural identity with emphasis on education.

The Council of Europe:

- Is an international organisation;
- It is not a part of the European Union;
- Does not have legislative power - its member states are cooperating on a voluntary basis.

**The European Union**

The European Union currently has 28 Member States. It is a supranational organisation with the ability to create legislation which all members must obey. It is the primary platform for European cooperation. Knowledge of the specific details of how the EU functions is not directly relevant for most of our topics. Instead, this section will cover the actions the main EU institutions can take.

**European Council** - Setting the strategy
Role: Defines the EU’s general political direction and priorities;
Members: Heads of state or government from each member state, the president of the European Council and the president of the European Commission;
Actions you can ask the European Council to take:
• Decide on the direction for the EU and EU foreign policy;
• Ask the European Commission to initiate proposals for legislation.

**European Parliament** - The voice of the people
Role: Directly elected legislative arm of the EU;
Members: 751 directly elected members;
Actions you can ask the European Parliament to take:
• Amends and adopts the proposed legislative acts;
• Supervise other institutions;
• Ask the European Commission to propose legislation;
• Debate on international agreements.

**European Commission** - Promoting the common interest
Role: Executive arm of the EU that proposes laws, policies agreements and promotes the Union’s general interests; it is the political leadership of the Union;
Members: College of Commissioners, one from each member state - each commissioner is assigned a specific policy area;
Actions you can ask the European Commission to take:
• Propose legislation to Parliament and the Council;
• Represent the EU internationally;
• Negotiate international agreements;
• Implement EU policies.

**Council of the European Union** - The voice of the member states
Role: Deciding on policies and adopting legislation, coordinating actions in member states;
Members: Government representatives on a ministerial level from each member state;
Actions you can ask the Council of the European Union to take:
• Pass legislation together with the Parliament;
• Coordinate actions in member states;
• Conclude international agreements.

**Competences of the European Union**
In some policy areas, the EU has exclusive competence, which means that decisions are taken at EU level. In other policy areas, there is shared competence between the Union and the member states. This means that if legislation is passed at EU level, then these laws have priority. If no legislation is adopted at EU level, then the individual member states may legislate at national level.

Note that there is often a nuance in the overlap between these. For example, although fisheries is a shared competence, the conservation of fisheries is an exclusive competence. In all other policy areas, the decisions remain with the member states.
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<td>Development cooperation and humanitarian aid</td>
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3. Tips on Researching

Why research?
At an EYP event you have the exciting opportunity to share opinions on interesting topics which are of concern to our generation and the world. It’s not only about discussing, it’s about coming up together with solutions to the key question of your topic. In order to make discussions more interesting, to enable you to fully take part in them, and to make sure your ideas for solving the problem are feasible, you need to have a good understanding of the current state of affairs and what has already been attempted, what has worked and what has not.

What to research
Start from the Topic Overview. Make sure you understand the concepts and phenomena revolving around your topic. The topic overview should offer concrete leads for you to follow, offering food for thought based on the aim to be achieved and what the situation is, as well as material indicated in the footnotes.

How to research - Tips & Tricks
- Have a system - write down things you want to look into. Do it one at a time. There is so much information, it’s easy to get distracted and lose focus.
- ‘There’s nothing new under the sun’ - chances are, whatever you’re wondering about has already been asked, and potentially already answered. If you can’t find what you’re looking for at the first go, it might be worth rephrasing your search terms.
- If you can’t find it on Google, try Google Books and Google Scholar.
- Make sure to distinguish facts from opinions (even if of experts_academics).
- It’s all in the sources - is the information confirmed by other sources? Are they reliable, trusted sources? Have you ever heard of the website before? Do they make wild claims you can’t find elsewhere? What potential bias should be taken into account (could the source be pushing for a certain side to a story)? Check the (legal) notice at the bottom of the website to find out more about the author/initiator.
- Check the date of the source - if it’s from 2002, chances are more things have happened since then.
- Keep track - you know that website where you found an idea that you thought was interesting but not essential to the topic? The idea that you realised later on it was actually crucial? We’ve all been there. Write it down - keep track. You can add a bookmark folder for the session where you bookmark websites you come across as interesting. Or you can use a word document where you list the links with a few quick words on what you found there. You’ll thank yourself later.
- You’re not alone - your chair is always there for you and happy to assist you throughout your research process. Don’t hesitate to ask what and how and where to research certain things if you feel you are stuck. Share with other delegates what you found and what you’re missing - discussing what you found so far will help you process the information and better identify what else you want to look into.
Step One - Don’t Panic!
Most laws you will find are written in plain, clear, and simple language. You need no prior experience or knowledge to understand them. In fact, most of the Officials learnt to read legislation through EYP, just like you are about to.

Step Two - Be Prepared
Research the context of the law - and read a summary before you read any actual legislation. You can find good summaries for EU law on the europa.eu website, often either beside the text or in a press release. Try searching on Google “(name of legislation) summary”. You can even find decent summaries on Wikipedia and in legal journals and blogs, but be careful about opinions being presented as facts. For this reason, you should also be careful if using news articles to get your legislation summaries.

Step Three - Get a Rough Idea
This may sound obvious, but read the Table of Contents (this might be a list of Articles or similar, depending on what you’re looking at, but you get the idea). This will give you an idea of the structure, and an overview of what is covered. It is useful to know the outline of what is included and what is not, and you can use this knowledge to make decisions in the final step.

Step Four - Get Straight to the Point
Before reading anything, think about what you want to learn. You don’t have to read the whole thing, and legislation is rarely read for fun. You are probably looking for something in particular, like a specific detail. You should already think about what kind of answer will satisfy you. Once you know what you’re looking for, use Ctrl + F to literally find what you’re looking for.

Step Five - So What Does This Mean?
In most cases you can interpret legislation literally - it should mean what it says. If it is not clear what the legislation means, you have to work out the intention behind it, and try to interpret it accordingly.

You might consider:
• Who does this legislation apply to?
• Who would be impacted by this legislation being enforced; or not enforced?
• What was the intention behind setting this?
• Was this replaced by a more recent piece of legislation?
• What is the power of the act: is it legally binding (mandatory) or advisory?

Material made available by the Governing Body based on the academic prep kit for Trondheim International Session. You are more than welcome to make use of this section for any future EYP event, for the purpose of facilitating academic preparation of participants. If you do so, please include this footnote. For any questions, reach out to gb@eyp.org.
5. What will be discussing?

AFET | EU in Space

As space activity and technology is experiencing a spur in growth, with more actors entering the space game, the committee will have to discuss the potential updating of space treaties, the role the EU has in a global actors’ game, as well as international cooperation and sustainable usage of space technology.

DROI I | Refugees

The committee will be discussing the potential reforming of the Common European Asylum System, in general, and the Dublin rules, in particular, in order to solve and prevent future European humanitarian crises and address a serious demand to ensure greater solidarity and fairer sharing of responsibility among Member States.

DROI II | Statelessness

The committee will be discussing what actions can the EU take to help Member States recognise, address, and solve the problem of statelessness in children through the potential implementation of reforming the EU legal standards for the Member States, in order to achieve their obligations to the Conventions and to the UN.
ECON I | Financial Literacy & Pensions

The committee will be discussing how young people, who aspire to work across different EU countries, can best make use of products such as the PEPP, and how the EU can help young people with their pension savings and with financial decisions that require thinking far into the future. What is more, the committee will also touch upon climate change and the sustainability of pension investments.

ECON II | 20 years Euro: Challenges and Perspectives

The committee will be discussing and reflecting on the past 20 years of euro, considering its successes and shortcomings, along with the current opportunities to advance its political and economic goals. The committee will examine proposals that will further the main aims of the single-currency project whilst considering ideas surrounding sustainable governance practices that work for the euro and those who use it.

ECON III | Green Finance

Taking into account that the EU has been a forerunner in environmental action and the fight against climate change, the committee will have to discuss the role of the Union in steering the financial sector towards a green future and how the paradigm shift to a sustainable economy can be fostered.

EMPL | Digitalisation

With ongoing trends such as artificial intelligence or machine learning increasing the demand on the labour market for certain skills, workers will not only need to gain new skills, but also constantly update them. The committee will have to discuss questions concerning the achievement of cohesiveness in the skill supply and demand, focusing on different aspects of the states, social benefits, trainings, and mismatches amongst the Member States and the EU as a whole.
**ENVI I | Green Planet for All**

As the committee will be taking into consideration the EU’s process of mapping out the legislation for its long term 2050 strategy and aligning its policies with the Paris Agreement, they will be discussing what kind of legislation should the EU enact to ensure a fair transition to a cleaner future, taking into consideration global cooperation, climate policy practice exchanges, alongside new research and innovations in low-carbon technology.

**ENVI II | Antimicrobial resistance and antibiotics overuse**

Understanding the danger that antimicrobial resistance poses and the intentionality of the issue, the committee will have to discuss the potential for the EU to build on current legislative frameworks, such as the 2017 One Health Action Plan, as well as further expanding on already made recommendations, in order to find the best specific solutions to combat the threat of AMR.

**IMCO | Horizon Europe: Innovation vs Precautionary Principle**

Taking into consideration the importance of consumer rights, environmental stability and long-term human safety with regards to innovation and emerging technologies, the committee will have to determine the stance the EU should take on the future of innovation in Europe.

**INTA | EU-US trade relationship**

The newly elected European Parliament seems to be headed towards a challenging future concerning the globalised efforts in the national parliaments and in the European Parliament itself, with issues relating to international trade and the EU’s position in the world high on the agenda. With the Commission trying to increase transparency on international trade agreements, the committee will discuss how EU-US trade negotiations can be conducted within the framework of the new mandate, and how the concerns of citizens and politicians can be taken into account.
ITRE I | Digitalisation of the Energy sector

The EU has committed to the 2020 and 2030 climate goals with further digitalisation of the energy sector to promote the more efficient usage and production of – ideally renewable – energy. The committee will be discussing energy management, flow, storage and wastage, finding cost-effective ways to transmit and store electrical energy, as well as empowering consumers of this energy to take their sustainability into their own hands.

ITRE II | The relationship between science and society

This committee will have the opportunity to explore the concept of citizen science and its European potential. Apart from defining and interpreting what citizen science can imply, they will have to answer the question of how they want to navigate the various potentials of and existing projects in citizen science, to determine where to sail, before quite determining how to sail there.

ITRE III | Artificial Intelligence

With the European Commission recently identifying the seven essentials for trustworthy AI, and based on the challenges that artificial intelligence and new technologies represent regarding human rights, the committee will discuss how the EU can ensure an appropriate ethical and legal framework in creating trustworthy AI, whilst protecting human rights, positioning the EU as a global player in the AI industry and inspiring trust around the globe.

LIBE | Privacy and Regulating Big Tech

With big data being a new form of infrastructure, having revolutionised the world we live in, and with the vitality of ensuring that data regulation does not limit the potential of big data technologies, the committee will discuss issues revolving around the openness, transparency, ownership, and process of the data, taking into consideration the already implemented GDPR framework.
Effort and passion of:
“To infinity and beyond: Following the publication of the Space Strategy for Europe in 2016 and the promise of funding for space programmes under the new long-term budget, how can the EU take a scientific and governing lead when it comes to exploring a global framework for the use of space technology?”

Chaired by: Christopher Godina (SE)
“The important achievement of Apollo was demonstrating that humanity is not forever chained to this planet and our visions go rather further than that and our opportunities are unlimited.”


Relevance of the Topic

Ever wandered around a city, lost and not knowing where to go? Then you suddenly realise that google maps is a thing and you can easily find out where you are. Global positioning systems (GPS) such as this, and many other applications that are taken for granted, such as satellite phones, are possible due to space technology.

Modern day society is heavily reliant on space technology, such as satellites, to provide valuable data for meteorological forecasts, crucial data on greenhouse gases, atmosphere pollutants, vegetation, water quality, etc. needed to fight climate change. Additionally, satellites serve as the basis for long distance telecommunication, critical to the ever more global world. Space technology also allows for global positioning that is not only handy for everyday situations, as aforementioned, but is equally, or even more important for disaster aid and security.

Furthermore, the European space economy employs approximately 230,000 people and has an estimated value between 46-54 billion EUR (around 20-21% value of the global space economy), proving to be an important part of EU’s economy. However, space technology is often a costly affair, with few countries being able to provide funding for a space programme alone due to the enormous cost associated with it. International cooperation is necessary to make progress in space. Allowing countries to divide the cost, while often reaping the same benefits as they would alone, is vital for the continued development of space technology.

Moreover, there are over 4987 satellites orbiting Earth already and there will be many more to come. The space debris that comes with it (there are approximately 17,000 objects the size of softball or bigger orbiting space as of 2016) remains one of the biggest threats to proper utilisation of the potential that space and space technology offer, endangering the space systems that modern society is heavily reliant on.

Terms and Concepts

Outer Space - The space immediately outside Earth’s atmosphere¹.

¹ Official Definition of “Outer Space” according to Merriam-Webster.
Space agency - A governmental organisation that is responsible for space activities.

Space mission is a journey into space for specific reasons, by a either manned or unmanned vehicle.

Satellites (artificial) are objects that are intentionally placed into orbit around a planet or a star, and are differentiated from natural ones, such as the moon.

Launch Capability refers to the ability of being able to send objects and vehicles into space.

Celestial body - a natural object located outside Earth’s atmosphere.

Measures in Place

The “Outer Space” treaty came into effect in 1967 and provides the basic framework for space law, underlining the principles of freedom of exploration, the non-violent use of space, and that space is free from national appropriation. Additionally, a further four “space treaties” were adopted elaborating and specifying certain sections of the “Outer Space” treaty.2

International Space Station (ISS) is a joint programme between the European Space Agency (ESA), the United States of America (USA), Japan, Canada and Russia, for the operation, utilisation and development of a space station in Earth’s orbit that is permanently inhabited.

The Space Strategy of Europe is the EU’s strategy for space policy and lays out its goals for ensuring an innovative and competitive space sector, maximising the benefits of space for Europe, ensuring autonomous access for space, and strengthening the EU’s role as a global actor. To further help space technology research, the EU established European Research Infrastructures, which include facilities and resources provided by the EU to conduct research.

The Multi Financial Framework (MFF) 2021-2027 proposal is the next long term budget of the EU, and will provide 16 billion EUR in funding for EU space programmes. In addition, the European Investment Funds helps SMEs by improving their access to finance.

Global Exploration Strategy is the NASA’s strategy on how to get to the Moon.

Horizon 2020 is an EU programme providing 80 billion EUR worth of funding between 2014-2020 for research and innovation in certain “European Research Areas”, one of them being Space.

Competitiveness of Small and Medium Sized Enterprises (COSME) is an EU programme aiming to help small and medium sized enterprises (SMEs) by increasing access to finance and markets, creating an environment favourable to competitiveness and promoting an entrepreneurial culture.

Fundamental Considerations

Space technology has made great strides in recent decades with an increase in space missions and more sophisticated systems, such as Copernicus, being used. Unfortunately, the treaties governing space activity and space in general, have not been updated and therefore do not reflect the evolution of space technology, but remain the same since 1960s-1980s. The treaties themselves can be vague, as they were drafted during the infancy of space technology, when uncertainties made it difficult to regulate. This has led to an

increased militarisation of space, with satellites being sent into orbit for military reconnaissance, and Earth-based missiles being developed to target and destroy satellites\(^3\). The Trump administration has already set in motion the establishment of a Space Force\(^4\) as a part of its armed services, with US House of Representatives approving legislation authorising funding for it\(^5\), which could further escalate the militarisation of space. A potential war that involves space would have disastrous consequences for its future utilisation. A significant amount of debris already exists in the Earth’s orbit, and the destruction of satellites in a space war could lead to a severe increase, potentially rendering space unusable for future generations.

Space is becoming more and more congested with both new countries, such as India, developing their own space programmes, and private actors entering space, such as SpaceX. These actors are now competing in a much more diverse and broad field. With more actors in space, it is no longer “no man’s land”, and those actors are forced to share the limited field that outer space presents. There are already 4987 satellites in orbit, many of them serving the same functions but for different space agencies, for example, GPS and Galileo. There is now the question as to whether everyone can fit, considering the increased risk of collision with more satellites in orbit. While more satellites would bring a lot of benefits and could expand the use and scope of space technologies, the risk of collision must always be considered when launching an object into orbit, a practice that is not always respected due to unclear regulations.

Further complicating matters is the fact that private companies are entering space. There is very little precedent when it comes to how the treaties on outer space apply to them or if they even apply. The “Outer Space” treaty stipulates that national governments are responsible for the actions of non-governmental organisations. This is open to interpretation, and it is up to the national governments to regulate private companies. While every object launched into orbit is supposed to be approved before launching, there have been cases\(^6\) where private companies have bypassed regulators and used loopholes to launch their satellites regardless.

Some national governments, for example the US, want to see as many of their domestic companies in space as possible, as they serve in the country’s interest by helping them to advance soft power in space. A further complicating matter is that many of the private companies operate internationally and are therefore subject to several countries’ national jurisdiction.

Moreover, the cost of a space mission is not feasible for most nations. At one point, the launch of a single vessel could cost upwards of 1.5 billion dollars, which was the case for NASA’s now-defunct space shuttle\(^7\). However, development of commercial launch systems has substantially reduced the cost of space launch. Even so, if countries act alone in space and space technology, with the aim of becoming completely self-sufficient with a fully fledged space programme, almost no country would be able to afford or be willing to pay for it. Cooperation allows for cost sharing, thus lowering the barriers for many countries and private companies to enter the space sector. In addition, international cooperation can provide long term stability in the funding and commitment of space programmes, since the actors will have long term obligations to others, at least partially insulating them from a short-sighted change of mind. Many of the great achievements that have been in space would not have been possible, the most prominent example being the ISS, without international cooperation.

Even though the five treaties governing space are often vague, they also showcase how international cooperation in space should work.

Sustainable usage is essential for the success of the EU in space. With more and more objects launched into orbit, the debris from the objects keeps accumulating. Debris is the single most important threat to the utilisation of space technologies. The small objects orbit Earth can be very dangerous to any satellite since they collide

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\(^3\) “India shows it can destroy satellites in space, worrying experts about space debris”, an article by L. Grush for The Verge, 2019.

\(^4\) “Trump to approve lean Space Force”, an article by J. Klimas for Politico, 2019

\(^5\) “Space Force gets a cautious OK in House defense spending bill”, an article by P. Kelley for RollCall.

\(^6\) “An unauthorized satellite launch in India threatens US regulatory reform in space”, an article by T. Fernholz for Quartz, 2018.

with them, damaging or destroying them, rendering the satellites useless, and creating even more debris. If the current trend continues, with debris piling up in the Earth’s orbit, there would be serious concerns as to whether any satellite could survive in that environment. As a result, most space technology would cease to function, which would cause enormous harm to modern day society, which is so heavily reliant on it. Therefore, there is a need to find new innovative ways to manage the debris and keep it from further accumulating, creating a sustainable use of space that would secure its future use for many generations to come.

Stakeholders

The European Commission has its own space programmes, examples being Copernicus, Galileo and EGNOS, and is the single largest contributor to the space sector in Europe, with the goal of becoming a leader in space.

European Space Agency (ESA) is an international organisation with 22 member states (17 being EU Member States) responsible for much of the operational aspects of the EU’s space programme, as well as its own space missions. The ESA is not a part of the EU.

There are Non-EU countries that have their own space programmes with launch capability, for example China, US, Japan, Canada, Russia and India. These countries are the most important international actors in space.

The United Nations and in particular the United Nations Office for Outer Space Affairs (UNOSSA) is responsible for promoting international cooperation towards the peaceful use of outer space. The Committee on Peaceful Uses of Outer Space (COPUOS) governs space exploration and peaceful usage, in order to benefit all of mankind.

Private companies that operate in space, for example Moon Express, who want to send private spacecrafts to the Moon.

The EU space sector is heavily reliant on any developments in space, and any potential disaster would create severe consequences for the sector and the 230,000 people employed in it.

Some Member States have their own space agencies such as the UK, Germany, France and Italy, and are conducting their own missions to space.
The European High representative for Foreign Affairs and Security Policy is responsible for representing the EU abroad and is the key negotiator (on behalf of the EU) on international agreements between the EU and third parties.

The European Investment Bank (EIB) is the banking arm of the EU and helps finance projects in four priority areas (Infrastructure, Innovation and Skills, Small Business, and Climate and Environment). The EIB has the potential to finance projects involving space.

**Outlook**

Space technology and activity is entering the unknown. Still in its infancy, it is now experiencing a growth spurt, with activity in space set to intensify as more actors enter. New discoveries that have made space technology cheaper, and thus more accessible for new actors, have created the perfect starting point for a great increase in space activity. It is difficult to predict the potential opportunities in or consequences of this new expansion. Although entering unknown territory is not new in the history of space, our society’s increased reliance on space technologies, and the potential that space offers for our future, means that how we navigate the unknown today is crucial. Whatever the consequences of today’s space policies may be, it is sure to have a large impact on the future of the planet.

**Want to know more? The following links will guide you...**

“Private space companies no longer have to follow the law” an article by C. Haskins for the Outline, 2018 - This article briefly explains how the US is trying to promote private companies in space.

“How an international space treaty signed 50 years ago became the the backbone of space law” an article by L. Grush for the Verge, 2017 - This article outlines key aspects of the “Outer Space” treaty and some of the challenges it faces.

“What are the various space policies” an article by S. Paul for the Geospatial World, 2018 - This article briefly summarises the space policies of different nations.

“A Brief History of Space Exploration” an article for Aerospace, 2018 - This article outlines the important milestones in space exploration.

“Changing How We Build Satellites Could Do More Than Reduce Space Junk” an article by S. Clarke for the Astronaut.com, 2019 - This article talks about potential improvements in satellite building and how this could impact space and Earth.

“Why we need to clean up our space debris” a TED talk by Dr. M. Jah for TEDxDayton, 2016 - This TED talk explains why space debris is dangerous and offers some potential solutions to clean up space debris.

“Trouble in Orbit: the growing problem of space junk” an article by Dr. H. Lewis for BBC, 2015 - This article describes why space debris is a growing problem and it will impact space if left unchecked.

“6 space technologies we can use to improve life on Earth” a Ted talk by D. Wood for TED, 2018 - This TED talk
how space technology can be used to improve life on Earth.

“Would a military Space Force accelerate space technology?” a video by CBS News, 2018 - In this video Neil deGrasse Tyson (a renowned astrophysicist) discusses the relationship between the militarisation of space and space technology.

“Proposed Prevention of an Arms Race In Space (PAROS) Treaty” an article by the Nuclear Threat Initiative (NTI), 2017 - This articles outlines the key points of the PAROS treaty, its historical development, and current status.
“Breaking the Dublin deadlock: While talks between Member States on reforming the Dublin system remain deadlocked, the European Court of Justice has ruled that poor living conditions should not be grounds to prevent the relocation of refugees. How should the EU respond to continued calls for reform of the asylum system, given the human rights concerns arising from current policy?”

Chaired by: Elisavet Sidiropoulou (GR)
“There is no wall you would not climb, no sea you would not cross if you are fleeing violence and terror. We have a moral duty to offer protection.”

- Dimitris Avramopoulos, European Commissioner for Migration, Home Affairs and Citizenship

Relevance of the Topic

Harrowing images of dead children, thousands of refugees in overburdened camps and hotspots, countless asylum applications, unwelcoming national policies, fences and fortress-like borders. Those are the images that have been circling the news since 2015, when more than a million migrants and refugees made an unanticipated arrival in southern Europe.

Over the last four years, around 4 million people have requested asylum in the EU, bringing to light the weaknesses of the asylum seeking process, as laid out by the Dublin Regulation, which establishes the Member State responsible for examining an asylum application based primarily on the first point of irregular entry. Naturally, this regulation put a strain on entrance countries, such as Greece and Italy, which were unable to handle taking responsibility for all illegal entries that took place through their borders. Had the EU strictly proceeded based on the Dublin system, asylum seekers would either remain trapped in their original country of entrance or would be sent back there if they managed to reach a third Member State.

Overburdened entrance countries have been characterised by human rights concerns that include extreme bureaucracy, police violence and extremely poor living conditions for the overwhelming number of people that had to be accommodated. As the situation called for humanitarian aid, the EU attempted to adapt to the circumstances, reform the Dublin Regulation and introduce emergency resettlement procedures in order to share the responsibility amongst all Member States. Many opened their borders, with the striking example of Germany welcoming more than a million refugees, who would, otherwise, not have the right to settle there due to Dublin provisions. Nevertheless, Czech Republic, Hungary, Poland and Slovakia constitute notable examples of Member States that denied taking in refugees.

Despite human rights concerns having initially provided grounds for refugees not to be relocated, the European Court of Justice recently ruled in favour of Germany’s eligibility to deport refugees to EU countries with poor living conditions. The creation of such a precedent has been a cause for concern and raises the issue of refugees being sent back to the Southern Member States of their initial entrance.

Caught in the middle of a divisive political challenge, the EU is facing its moral duty to provide humanitarian aid while balancing its lack of shared responsibility. Policy makers are now asked to focus on reforming an asylum system that could cater to the simultaneous calls for national sovereignty and European cooperation.
**Terms and Competences**

An **asylum seeker** is someone seeking international protection, whose request for asylum has not yet been finally decided on by the country in which he or she has submitted it. Should their claim be accepted, they will be legally recognised as a refugee.

A **refugee** is any person who, owing to well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside their country of nationality and is unable or, owing to such fear, is unwilling to avail of the protection of that country and return to it.

**Non-refoulement** is a fundamental principle of international law according to which no country can expel or return a refugee in any manner whatsoever to the frontiers of territories where their life or freedom would be threatened on account of their race, religion, nationality, membership of a particular social group, or political opinion.

**Subsidiary protection** is the protection given to a non-EU national who does not qualify as a refugee, but in respect of whom substantial grounds have been shown to believe that if returned to his or her country of origin would face a real risk of suffering serious harm and who is unable or, owing to such risk, unwilling to avail of the protection of that country.

**Resettlement** is the process of transferring refugees from an asylum country to a third State that has agreed to admit them and ultimately grant them permanent settlement.

**Measures in Place**

Full credit for the infographic goes to Weronika Betta (PL) as part of her academic work for the 88th International Session of the European Youth Parliament in Rotterdam, the Netherlands.
The Common European Asylum System is fundamentally built on the Dublin III Regulation. The Regulation serves the purpose of determining the Member State that is responsible for examining an asylum seeker’s application. Said responsibility is established through a set of criteria that are evaluated in a hierarchical order, taking greatly into consideration the age of the applicant (e.g. unaccompanied minors), family reunification, the possession or lack of residence documents and/or visas, and finally, the regular or irregular entry to the EU. The country responsible to examine the application is usually the first country of entrance, unless any of the above criteria apply to justify the residence of an applicant in another Member State. In connection with Dublin III, the EURODAC Regulation is part of the identification process for asylum seekers. Any person who enters the EU and applies for asylum has to register their fingerprints to the EURODAC database, thus providing the relevant authorities with fingerprint comparison and identification evidence in order to complement the implementation of the Dublin system.

In response to the overburdened entrance countries, the EU attempted to move towards the redistribution of refugees amongst Member States. In 2015, the EU adopted the European Agenda on Migration, a document containing short- and long-term measures, amongst them an emergency temporary mechanism to redistribute, within the EU, persons in need of international protection and the establishment of an EU-wide resettlement scheme. The European Resettlement Scheme was then issued and the European Commission announced that it aimed to resettle 22,504 persons. The scheme was later followed by the EU-Turkey Statement, according to which migrants arriving in Greece would be sent back to Turkey if they didn’t apply for asylum or if their claim was rejected, while for every Syrian returned to Turkey, another Syrian would be resettled from Turkey to the EU.

Eventually, in July 2016, the Commission proposed a permanent Union Resettlement Framework to establish a common set of standard selection procedures and a common protection status to streamline European resettlement efforts. In 2017, the European Commission followed up with a new resettlement pledging exercise, asking EU Member States to resettle at least 50,000 persons by October 2019. This action aimed to address the gap that was created due to the ending of the resettlement scheme and the anticipated adoption of the Union Resettlement Framework.

Fundamental Challenges

It was in May of 2016 that the European Commission proposed the reform of the Dublin system as a response to the weaknesses in regulation, exposed by the outburst of the refugee crisis. So, why is the reform still on hold 3 years later? The Commission’s proposal does not change the existing criteria of the Dublin Regulation but aims to increase its efficiency with a corrective allocation mechanism that would automatically be triggered if a Member State faced disproportionate numbers of asylum-seekers. The main elements of the proposal are a new automated system to monitor the number of asylum applications received and the number of persons effectively resettled by each Member State, a reference key to determine when a Member State is under disproportionate asylum pressure, and a fairness mechanism to address and alleviate that pressure.

As soon as the proposal began being examined by the co-legislators, a study requested by the Parliament’s LIBE Committee argued that the reform relied on coercion and thus, raised human rights concerns. What was recommended instead was to pay more attention to quick access to asylum procedures by focusing more seriously on the asylum seekers’ preferences and de-bureaucratisation of the process. Furthermore, six Member States (Hungary, Slovakia, Czech Republic, Poland, Romania and Italy) came forward with opinions highlighting that the Commission’s proposal does not comply with the principle of subsidiarity and national sovereignty.
Once the LIBE Committee adopted a report with necessary amendments, the European Parliament proceeded with a mandate for interinstitutional negotiations. Nevertheless, the Council has yet to adopt its own mandate due to the concerns that continue to be raised by several delegations, regarding areas such as the Member State responsible, the definition of the term “family members”, potential shorter deadlines for detention and transfers, the corrective allocation mechanism, the financial solidarity contribution, as well as questions of practical, operational and financial nature in relation to the new automated system. With discussions still ongoing, the Council aims to reach a final compromise between the two principles that have been causing the most controversy; solidarity and responsibility.

Nevertheless, a small number of countries have been blocking the mandate of the Council to enter interinstitutional negotiations with the Parliament. Among them, the Hungarian government, which demands a strict expulsion policy and rejects any mandatory quota, while Cyprus, Greece, Italy, Malta and Spain submitted a position paper, which asks for a reduction of the share that indicates the number of applicants each Member State would be expected to handle and calls for the alleviation of procedural burdens for the countries that are under pressure.

Stakeholders

The United Nations High Commissioner for Refugees (UNHCR) is mandated to assist and protect refugees by providing aid regarding the repatriation, local integration or resettlement of refugees in third countries. A United Nations actor, the UNHCR has the ability to expand beyond EU-level and assist the Union’s efforts for international cooperation with non-EU States, considering that third neighbouring countries constitute a crucial factor in terms of international dialogue, bilateral agreements and cooperation for a better management of migration flows.

The European Commission constitutes the executive body of the EU responsible for proposing and implementing legislation. The Commission’s Directorate-General for Migration and Home Affairs (DG HOME) is further responsible to ensure the EU’s security and build a common migration and asylum policy while promoting dialogue and cooperation with non-EU countries. With immigration falling under the shared competence of the area of freedom, security and justice, EU legislation on the matter has priority over national law.

The Member States’ national governments work in cooperation with the EU, based on the common agreements that have been established and in combination with their individual refugee policies. They have a key role in granting asylum and providing a home for resettled persons, as well as ensuring their integration. The opposing opinions regarding the implementation of a common asylum system among Member States have a significant impact on the lack of progress regarding the reform of the Dublin Regulation.

Non-Governmental Organisations (NGOs) provide assistance regarding humanitarian aid locally, collect and monitor information about migration, and facilitate the integration of refugees in their host countries. As a wider network, the European Council on Refugees and Exiles (ECRE) is a pan-European organisation of 99 refugee-assisting NGOs that protect and advance the rights of refugees and asylum seekers.

Outlook

By the end of 2017, the record-high migratory flows that the EU was faced with during 2015 and 2016 had subsided, and they haven’t increased again in 2018 or halfway through 2019.
Arrivals have halted and asylum requests have more than halved - the crisis appears to be over. However, Europe’s geographical position and reputation will not stop attracting asylum seekers and refugees that are caught in the middle of international conflicts, poor living conditions and human rights abuses. The EU is likely to continue to be a pole of attraction for many years to come, and for any future humanitarian crisis that strikes the international scene. Therefore, increasing preparedness for receiving yet another large influx through reforming the Common European Asylum System, in general, and the Dublin rules, in particular, is a serious demand to ensure greater solidarity and fairer sharing of responsibility among Member States.

Want to know more? The following links will guide you...

This executive summary highlights the key aspects of the evaluation of the Dublin III Regulation - “Evaluation of the Dublin III Regulation”, a report by the DG Migration and Home Affairs, 2016

This database contains a plethora of factsheets regarding all topics and aspects of the European Agenda on Migration, including all the measures mentioned above - “European Agenda on Migration - Factsheets”, factsheets by the European Commission

This article provides an overview of opinions of the political debate that has been taking place regarding the reform of the Dublin Regulation - "Why are we not reforming the Dublin Regulation yet?”, an article by L.Achilli for EURACTIV, 2018

This report makes several observations in relation to human rights and asylum in the EU - “World Report 2019: European Union”, a report by the Human Rights Watch, 2019, Migration and Asylum

This video briefly explains how immigration works in the EU - “EU immigration rules - in 90 seconds”, a video by the BBC News, 2015

This infographic highlights the process followed by the CEAS - “Common European Asylum System (CEAS)”, an infographic by the European Commission

This timeline presents the progress of the asylum system reform - “Timeline: reform of EU asylum rules”, a timeline by the European Council

This “legislative train” is a tool that presents the progress of every piece of legislation in the EU for each separate field - “Towards a new policy on migration”, a list of initiatives on the reform of the asylum system by the European Parliament
“I am Here, I Belong: The UNHCR estimates that up to one third of the world’s stateless people are children. How should the EU address the issue of child statelessness and ensure that the fundamental rights of these children are respected across the Union?”

Chaired by: Laura Jöel (NL)
“How I wished during those sleepless hours that I belonged to a different nation, or better still, to none at all”

Winfried Georg Sebald

Relevance of the Topic

It is hard to imagine wanting to belong to no nation at all. In a world with state borders, passports, and citizenship, why would you not want a sense of identity, community, and the travelling privileges that accompany your nationality? Why would we want to belong to no nation at all? Perhaps when your nationality adds more difficulties to your life than privileges, you would wish to live in a world where there are no borders or states at all.

600,000 people in Europe live that way, officially belonging to no country: 600,000 people are stateless. While for you, your nationality might be something you think about only when you show your passport for travelling, for these people their lack of nationality poses a real problem on a daily basis. You can imagine that not having a nationality or passport means you cannot easily travel across borders, for example. However, the problem of statelessness is much bigger than that. While we may not always think about the benefits of our nationalities, stateless people are painfully aware of them: access to healthcare, a right to education, the right to employment, marriage, and family life, all depend on you having a valid document that shows your nationality. Even a funeral requires this—from the cradle to the grave, statelessness affects people. They probably would prefer to belong to a different nation—any nation—to be able to access the facilities to fulfil their basic needs. To be stateless as an adult is already a challenging situation; to be stateless as a child is to face all these problems whilst not having the legal position or resources to tackle them.

Why should we care now? The office of the United Nations High Commissioner for Refugees (UNHCR) is determined to end statelessness by 2024. In order to do this, they have set three general goals: 1) resolve the major situations of statelessness that exist today; 2) prevent the emergence of new cases of statelessness; and 3) improve the identification and protection of stateless populations. These may seem like ambitious goals, however, humans created statehood and citizenship, so they should be able to create the solutions to the problems that flow from them, like statelessness. According to the UNHCR, statelessness can in fact be solved, but only if we tackle statelessness among children. If no child is born stateless, or if their statelessness is tackled soon after their birth, nobody will grow up stateless, and the objectives of the Global Action Plan to End Statelessness will be realised. If 2024 is the year we end statelessness, 2019 should be the year we take active, concrete steps towards solving childhood statelessness.

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1 A quote from Sebald’s novel entitled ‘Vertigo’, published in 1990
Terms and Concepts

Statelessness/stateless person: The term “stateless person” means a person who is not considered as a national by any State under the operation of its law.

Nationality/citizenship: The legal status of belonging to a particular nation (state); being a citizen of a particular country.

Birth registration: Birth registration is the process through which a child’s birth is recorded in the civil register by the government authority. It is a legal recognition of the child and is generally required for the child to obtain a birth certificate and as a result, any other legal documents and rights.

Naturalisation: The legal process through which a non-national in a country can obtain citizenship of that country.

Measures in Place

Ending childhood statelessness is seen as one of the pathways to resolving statelessness across Europe. Before discussing what can be done to solve it, we should look at what has already been done. Generally, there are three levels on which people can address the issue of statelessness: International, European, and national.

On the international level, general frameworks of human rights are important. Besides those, there are four treaties that are relevant. Two of them address statelessness in particular: The 1954 UN Convention Relating to the Status of Stateless Persons (Convention on Stateless Persons) and the 1961 Convention on the Reduction of Statelessness. The 1954 Convention sets out the legal status of stateless persons and the rights that they should have; for instance their rights to employment, welfare, and education. States that have signed this treaty can still determine their nationality laws themselves, but have to do so whilst keeping in mind the treaty’s principles. This Convention declares that States can prevent statelessness by granting nationality through two pathways: birth registration and naturalisation. Even in the 21st century, these prove to be problematic in EU Member States: children are not registered at birth, or when children apply for the naturalisation process, the determination of their statelessness is complicated. The 1961 Convention focuses on ways in which states can prevent this from happening, with a particular focus on the prevention of statelessness at birth. In other words, the international legal framework tells us that prevention of childhood statelessness is the key to reducing statelessness as a whole.

Two other international treaties that are important are the International Covenant on Civil and Political Rights (ICCPR) and the Convention on the Rights of the Child (CRC). The ICCPR is based on the idea that every human-being deserves dignity, and social and political rights to protect that dignity. Rights and liberties, such as gender equality, the right to freely manage your financial resources, the right to life, the right to work, and many others, are listed in the ICCPR. States that have signed and ratified this covenant commit themselves to give their people these rights.

The CRC is a widely ratified human rights treaty that sets out particular political, economic, and social rights for children. It is built around four core principles: non-discrimination; devotion to the best interests of the child; the right to life, survival and development; and respect for the views of the child. CRC Article 7 states that every child has the right to a nationality, which legally binds signatory states to this obligation.
On European and national levels, statelessness is difficult to address. Nationality legislation is determined by the Member State, as it is part of their culture and identity. Many Member States have different types of birth registration procedures and citizenship/nationality legislations. Some Member States facilitate access to their nationality for children born stateless on their territory through the principle of *ius soli* (having been born on the territory leads to automatic or conditional nationality). Other Member States facilitate access to nationality under different procedures. However, in most Member States, there are gaps in the legal framework which means that some children born stateless on their territory cannot have access to nationality.

Member States differ widely in this respect. The EU cannot force Member States to change their legislation, but they can remind them of their international obligations if they have signed the above-mentioned international agreements. EU institutions do this regularly. For instance, in the important 2010 decision (Janko Rottmann v. Freistaat Bayern) by the Court of Justice of the EU (CJEU), it was decided that deprivation of nationality that results in statelessness can only happen if it is a proportional and justified move. The European Court of Human Rights (ECtHR), though not an EU institution, has concluded that nationality, as part of your identity, is protected under European human rights law. This means that individuals can call upon human rights law to address their statelessness issues. Unfortunately, although the UN has a definition, the CJEU has not officially defined what a stateless person is in EU law. This leaves a *legal “grey area”*: gaps in the protection of the rights of statelessness exist across the EU, because it is unclear how the concept of a stateless person should be applied. Legal status/definitions are very important in this topic. When are you stateless? How is this determined? The CJEU could define it in the future, if a case is brought before the Court. Until that happens, the EU legal order does not have a definition, nor clarity on what Member States have to do to avoid and reduce statelessness.

**Stakeholders**

Due to the sensitive nature of nationality, national governments, represented in the Council of the EU and the European Council, are key actors in this topic: they alone can determine who becomes a national, and as such, they can determine who is left stateless. They might be more or less inclined to change their rules due to the particularity of their national legislation. The EU, represented in this issue by the Commission and the Court of Justice, aim to respect and uphold international standards, such as those on the status of stateless people or reduction of statelessness. For this reason, the Commission has empowered the European Migration Network (EMN) to set up a Platform of Statelessness, to raise awareness, for example. The UN, and specifically the UNHCR, is involved in this issue, as it is their standards that form the international legal framework to address statelessness.

The UNHCR can work beyond the EU-level, and facilitates the efforts for international cooperation with non-EU States. Additionally, the Council of Europe, with its interest in protecting and improving human rights in Europe, wants stateless people to be treated in accordance with international human rights. Recently, they have specifically focussed on migrant and refugee children and their birth registration and naturalisation in Europe. Lastly, civil society organisations, such as the European Network on Statelessness have taken the task of raising awareness of statelessness, conducting research, and strongly encouraging policy measures to reduce and ultimately eliminate statelessness in Europe.
Childhood statelessness has several causes and effects that have to be taken into consideration when discussing potential solutions. Generally, it can be said that childhood statelessness is the product of four different phenomena: gaps in national legislation; loss or deprivation of nationality due to discriminatory legislation/legislative changes; emergence of new states and borders; and migration. Migration is a cause, but it is important to bear in mind that statelessness is not the same as refugee status. Although refugees can be stateless people, not all stateless people are refugees. Take a look at the examples given above, of stateless people and the problems they face. Some of them fled war, some “inherited” statelessness, some of them were citizens of a state that no longer exists, and some of them faced issues with the registration of their birth for different reasons. Children who are born stateless in Europe include children of migrants, those who cannot inherit their parents’ nationality due to gender discrimination and gaps in nationality laws, those who are stateless because their parents are, but also those whose births are not registered, including children in vulnerable minority populations, like the Roma. Statelessness comes to be in different circumstances.

The problematic effects of (childhood) statelessness are summarised by the UNHCR in four words: education, health, being a child, and employment. When it comes to education, access to secondary and tertiary education in particular is difficult. Schools require documentation for a child to be registered, and even when a school is willing to admit a non-national, organising loans or scholarships is often impossible. As a consequence, finding a job is more difficult. There are a lack of jobs for young adults that match their abilities and ambitions, caused by the barriers they face in their freedom of movement and their right to education. And employers, as well as banks, often need some type of nationality documentation in order to pay employees. In a similar way, access to healthcare is restricted: in some parts of the world, children do not receive medical care or even vaccinations, due to a lack of nationality documentation. Lastly and related to health, children are robbed of the chance to be a child when they are stateless: being stateless has proven to have devastating psychological effects, as a product of discrimination and living in insecure conditions. This, along with the above-mentioned barriers in life, directly impacts one’s self-esteem and quality of life.

Obstacles include the lack of stateless determination procedures, differences in national legislation, and that several Member States have not ratified or signed relevant international treaties.
The simple fact remains that employers, schools, hospitals and governments cannot be expected to register someone whose identity they cannot verify. So how does a stateless person get access to living in society? One of the key issues in the fight against statelessness is the establishment of a statelessness determination procedure, but this procedure is sorely lacking in most EU Member States, with the exception of France, Italy, Spain, Latvia, Hungary, United Kingdom, Slovakia and Belgium. For instance, if you want to apply for “statelessness registration” (to have your statelessness officially recognised so you can work, live, and get healthcare) in the Netherlands, it is not fully clear what the criteria are for applying. How can someone apply when they do not know the conditions they are obliged to fulfil? Other issues in this process are the verification of documents: what if a person is technically a national of a state whose government or documentation the Member State does not recognise? How do you prove you have no link at all to a state? Once again, the lack of a definition is damaging: what if one is a national of a state that does not grant you protection and rights as a citizen? According to the simple definition, you are not stateless, but you are de facto stateless. It is surprising and unacceptable that few EU Member States have dedicated statelessness determination procedures and protection mechanisms, when they are essential for meeting their international obligations towards stateless people. As a result of widely differing national approaches, the collection of data on stateless population becomes very difficult: most states do not record statelessness numbers or have different categories, which makes it hard to compare and contrast data internationally. Keep in mind, though, that differences in national legislation are only one of several causes of the problem. One cause that might surprise people is climate change. Any solution to the problem of statelessness will have to take into account all these different causes.

Differences in legal protection are not only a consequence of differing national legal systems, but also of the international level. Not all EU Member States are signatories to the 1954 UN Convention and the 1961 UN Convention; therefore, they are not legally bound to the obligations of these conventions. So the EU cannot take action that depends on Member States complying with the conventions, nor can the EU force them to sign them. States have their reasons not to: Spain contend that its national law offers sufficient protection to stateless people, Latvia argues that the conventions breach their national law, and France wants to retain the possibility of retracting the French nationality, which is not allowed by the conventions. The conventions do call for automatically granting nationality, which is something some states are uncomfortable with. In short, even with a robust international framework and EU legislation, in practice, Member States violate the standards set for them or interpret them very differently.

**Outlook**

Two sentences sum up the problem: Children should not be stateless. However today in the EU, children suffer legally, socially, physically, psychologically, and economically from statelessness. So what can and should the EU do about this?

Nationality might fall within the Member State’s competence, but there are good reasons for taking action at a European level. European-wide standards would ensure that not all stateless people flock to the Member State with the clearest legislation — this would especially help in the case of migration. Implementing EU legal standards would help Member States achieve their obligations to the Conventions and to the UN. In fact, the Common European Asylum System already makes references to a stateless status, without a solid definition of it. EU action might be worth it.

The EU can help the Member States in different ways. It goes without saying that the EU can continue to remind Member States of their international obligations, through the work of the CJEU or creating EU legislation that sets standards for Member States to stick to.
To truly tackle statelessness, Member States will have to change their naturalisation processes or birth registration. The EU can also take a more proactive stance, through setting EU-wide standards, facilitating national solutions or helping raise awareness, for example. The EU might not have competence over nationality, but it can rely on different provisions in the EU's foundational Treaties, such as those on EU citizenship, asylum, immigration, and the general provisions of an Area of Freedom, Security, and Justice. Whatever the action taken, Europe must ensure that no child is born stateless.

**Want to know more? The following links will guide you...**

A booklet explaining the main issues in childhood statelessness and potential solutions, with infographics and a list of keywords, "**Childhood Statelessness**," by the Institute of Statelessness and Inclusion, 24 pages.

A report on statelessness in Europe, contains a lot of anecdotes, "**Statelessness in Europe: Ordinary People in Extraordinary Circumstances**," by the UNHCR, 20 pages.

A video explaining childhood statelessness, "**#StatelessKids - None of Europe’s Children should be Stateless**," by the European Network on Statelessness, 1 minute and 29 seconds. (video)


Explains the main problems of childhood statelessness by telling real stories, "**I Am Here, I Belong: The Urgent Need to End Childhood Statelessness**," by the UNHCR, 28 pages.

Communication about the identification/determination of stateless people in Europe, "**Identifying stateless persons in the European Union**," by the UNHCR Director of the Bureau for Europe, 10 pages.

Good Practices Paper explaining how to potentially solve statelessness, "**Ensuring that no child is born stateless**," by the UNHCR, 22 pages.

Report about the current state of statelessness in Europe, what Member States do and do not do for stateless people, "**Statelessness in the EU**," European Migration Network, 17 pages.

Study of international/European standards and what each Member State does/does not do to prevent statelessness, "**Practices and Approaches in EU Member States to Prevent and End Statelessness**," by the European Parliament, 121 pages.

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2 These articles are from the Treaty on the Functioning of the European Union in order: Article 21(2), Article 78, Article 79, and Article 67(2).
Me, my pension, and I: With legislation on the Pan-European Personal Pension Product (PEPP) laying the foundation for easier cross-border retirement savings, what should the EU do to increase financial literacy among young people to ensure they benefit from such initiatives and are better equipped to save and invest for retirement, with a long term perspective and in a sustainable way?

Chaired by: Samuel Hönle (AT)
Relevance of the Topic

Retirement still seems an eternity away for most young people and they often struggle with long term financial decisions. At the same time, an ageing population is putting a heavy strain on pension systems all around Europe, with more and more people cashing out pensions and less and less people paying into them. Therefore, it is necessary to keep improving the pension system so that it can provide a good retirement income for everybody in the future.

While state-organised systems funded by taxes or mandatory contributions are and should be the main solution, more and more people are looking for additional ways to put some money aside for retirement. Currently, all pension systems are organised at the Member State level. There is no European pension system, which is concerning for people who work in different countries over the span of their life, as they have no choice but to look for national retirement saving products in every country they work in if they want to set aside additional money for retirement. However, the EU is taking steps towards creating a pan-European solution through the introduction Pan-European Pension Products (PEPP). This would create a European market, on which anybody could pick a saving plan, pay into it from any Member State and also cash it out from any Member State. As young people are expected to be more mobile workers, pan-European saving options are in your interest if you are young and consider working in a country in the EU that is not your home country.

However, in order to be able to make an informed decision about where and how to invest extra money for retirement young people require knowledge about how such plans and the financial market in general work. This is a skill known as financial literacy, and raising this is commonly associated with lower rates of poverty and inequality in a country. There are no one-size-fits-all approaches on how best to implement financial education, without the exception that it’s best to start as early as possible. Young people have also shown themselves to be more environmentally conscious, which could raise demand for sustainable pension fund portfolios.

Terms and Concepts

Financial literacy is defined by the OECD as ‘a combination of awareness, knowledge, skill, attitude and behaviour necessary to make sound financial decisions and ultimately achieve individual financial well-being.’ It is usually measured as a combination of financial knowledge, financial behaviours and attitudes to longer-term financial planning, with people more akin to saving achieving higher scores. According to experts, some 30-40 percent of retirement wealth inequality is accounted for by variation in financial knowledge, i.e. financial knowledge enables individuals to better allocate lifetime resources. The less-educated, those with lower incomes, the rural population, women, migrants and young people score worse on financial literacy tests.

The three pillar pension system is the predominant model of pension systems in Europe and is based on three pillars that share the weight of retirement income. The first pillar is the state-organised public pension plan, funded by taxes. It is the basic and main source of pensions, designed to provide all citizens with a secured income after retirement. The second pillar consists of occupational pension funds, including IORPs, which are usually organised at the company level and offered by private companies. Often, employees and employers split the contributions, which are tax-free. Such pension plans may be mandated by national legislation in some cases, but are more commonly established in employment contracts or profession-based collective agreements. They are regulated on the European level by the IORP Directive which leaves freedom of implementation to Member States. The revision of the IORP Directive in 2016 was also the first step in removing some of the obstacles in cross-border activities. The third pillar is private pension plans. They are completely voluntary and savers have the freedom to choose the pension product that fits them best. Also, these contributions are often tax-incentivised. The main idea is that a retiree’s pension is sufficiently covered by the first and second pillar alone, providing everybody with a secure income after retirement. However, if someone wants to save more of their income towards retirement, they can voluntarily invest in a third pillar scheme in order to receive an extra pension after retirement.

Private second and third pillar pensions schemes can take one of two forms. In a defined benefit (DB) pension scheme, savers have a secured payout when they retire (usually a continued payment of some percentage of their wage) and their contributions may fluctuate. Pension providers maintain the value of their fund by investing it. In a defined contribution (DC) scheme on the other hand, contributions of a fixed amount are made by employees and employers, and the payout depends on the amount that has been paid in as well as any investment earnings in the money in the account. In a DC system, more spending and investment decisions lie with the saver, e.g. by choosing a portfolio.

Pan-European Pension Product (PEPP) describes a third pillar pension plan for which the regulatory groundwork is currently being laid. Pension product providers can offer a PEPP in all Member States, and savers can pay into and cash out the PEPP in any Member State, making it a mobile pension product. The aim of PEPPs is to expand private savings options and establish a European market for them. It is expected to raise competition in countries with established third pillar pension markets and establish such a market in countries where they currently do not exist.

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2 Institutions for occupational retirement provision
4 “Pensions at a glance 2017: OECD and G20 Indicators” by OECD, 2017
do not exist. At the same time, the PEPP regulation has strong consumer protection provisions in place, such as transparency rules, easy product switches and a cap on fees.

PEPPs have however also been criticised by financial institutions and NGOs. They argue that while they could be a good addition for Member States without a functioning private pension market, they could also negatively hinder or even reverse recent developments in strengthening the first and second pillar. Third pillar pensions, especially PEPP, must be seen as a voluntary addition to the first and second pillar, which are the primary pension solutions.

**Demographic transition** refers to higher life expectancy and lower birth rates, mostly caused by medical advances and societal changes, leading to an ageing population. This puts pressure on pension systems, as the payments into the pension system of less and less people in the workforce need to sustain more and more people receiving pensions after retirement. In order to avoid pension black holes\(^5\), there is a trend for pension providers to switch from defined benefit to defined contribution systems.

**Financial advice** is individual advice given to private people by professional advisors. It usually includes an extensive review of a client’s financial situation and the development of investment proposals. Since Member States have regulations in place to ensure that financial advisers have sufficient knowledge, the price for this service is usually very high and is only used by those with a lot of capital to invest.

**Sustainable finance** is an overarching term, indicating the provision of finance to investments taking into account environmental, social and governance factors, leading to increased investments in sustainable activities. **Green finance** is one aspect of this, referring to financial investments into projects, products and companies that support the development of a more environmentally friendly, low-carbon and climate-resilient economy.

**Measures in Place**

Every Member State is solely responsible for managing their own pension framework across all pillars, while the EU supports national efforts and coordinates between them. There is however EU legislation to protect pensions across borders to ensure citizens’ right of free movement. In an effort to provide a transnational pension option, the legislative process for introducing PEPPs was started in 2015 and is currently still ongoing\(^6\). It was proposed in 2017 as Regulation (COM/2017/0343) as part of the Capital Markets Union. The European Parliament approved an amended version on 4 April 2019\(^7\). As soon as the Council approves it, it enters into effect (which has not yet been done as of 26 May 2019).

The OECD is a big advocate of increasing financial literacy and has put effort into several initiatives to tackle the issue. Besides regularly measuring the financial literacy in reports as well as part of the Programme for International Student Assessment (PISA), multiple recommendations for countries were created to assist them in creating their national frameworks. Especially relevant are the OECD Good Practices for Financial Education relating to private pensions as well as the OECD Guidelines on Financial Education in Schools which recommend countries to include financial education in their school curricula as early as possible.

According to the European Commission, PEPPs will be sustainable pension products. PEPP providers are encouraged to consider environmental factors when developing their products, and to transparently inform consumers about environmental and social aspects of their investment portfolios.

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\(^5\) A “pension black hole” is when a defined benefit pension provider does not receive enough contributions to pay out all promised future pensions.

\(^6\) You can follow the legislative process at the proposal’s legislative train website.

\(^7\) Amendments include smaller maximum fees and stronger rights for savers as well as a call to Member States to provide tax benefits for PEPPs.
There is however no requirement for them to do so.

**Stakeholders**

The European workforce: Citizens who are currently working in a Member State of the EU are interested in securing their retirement income. They are expected to benefit from a more competitive pan-European market of PEPPs. Those who work in different Member States while saving for retirement (mobile workforce) are especially expected to benefit from a pan-European third pillar pension solution. As the workforce is expected to become more mobile in the future, young people especially have an interest in good cross-border retirement solutions. Financial education efforts would be targeted at these savers to help them make sound financial decisions.

Member States of the EU are overseeing their national third pillar pension markets. All financial education efforts are also the competence of Member States.

The OECD has developed a method of measuring financial literacy in order to continuously assess its member states’ performance and make these comparable. The OECD International Network on Financial Education (OECD/INFE) has developed reports and recommendations for improving financial literacy in its member states.

Third pillar pension providers are private financial institutions who offer complementary retirement income saving products to individuals. They would be the ones to develop and offer PEPPs on the market. Due to the nature of their service, they hold large amounts of capital that needs to be invested in order to sustain their value.

The European Insurance and Occupational Pensions Authority (EIOPA) would be charged with overseeing PEPPs at the European level, including their authorisation. It would also be charged with acting as a central information hub on PEPP for all European citizens and competent authorities.

**Fundamental Challenges**

The demographic transition is putting great pressure on pension schemes all around the EU. In order to avoid pension black holes, more and more private pension providers (second or third pillar) are shifting from DB to DC systems. This means that financial decisions related to retirement are further shifting towards the saver. Additionally, the strain being put on first and second pillar schemes by the demographic transition increases the importance of third pillar pensions for savers, and many turn to them to secure a good retirement income.

These developments put pressure on the individual and demand a certain degree of financial literacy. Consequently, those who are disadvantaged when making financial decisions will also be the ones who will then be disadvantaged in retirement, while also having less money to put aside while working. This development is a high risk for widening the socio-economic gap between the rich and the poor after retirement. While the most effective way to counter this development might be to strengthen first and second pillar pensions, improving financial literacy could also be a way to reduce inequality, as high financial literacy correlates with less socio-economic division.

Introducing financial education alone is not sufficient, as there is only a weak relationship between the mere availability of financial education and financial literacy scores. An overload of information and education

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might actually make decisions more complicated and ultimately discourage people from making a decision. Therefore, the success of financial education ultimately depends on its quality. However, in general, according to experts, “economics education is a strong predictor of sophisticated financial literacy (the more financially sophisticated individuals are, the more they think about retirement)”. Additionally, financial literacy rates across Member States vary vastly\(^\text{10}\), suggesting that programmes need to be tailored to specific communities and that a one-size-fits-all approach would not take into account this fragmentation. It is universally supported that financial education should start as early as possible.

Young people might not have much to save on average, but encouraging sound financial behaviour early on increases the chance of them being able to make sound financial decisions once they start earning significant money\(^\text{11}\). Pension advisers say young people should be putting away as much as 12% of their salary for a comfortable retirement. However, young people generally score worse on financial literacy tests, and getting traditional financial advice is almost never an option. Either financial advisors turn down advising young people due to the small amount of money to invest, or young people cannot afford the high fees that go up to about 200 EUR per hour. This is why recently low-level financial advice services appeared with the goal to provide millennials with easy, less tailored but affordable financial tips, aimed at getting them on track financially and investing on a smaller scale.

Pension funds try to maintain or even grow their value by investing their contributors’ savings. The contributors usually have a say in where their money should be invested by choosing a portfolio for their funds. Sustainable investment is gaining more and more traction, especially for young people: according to a survey in the US in 2017, 90% of millennial investors were interested in investing their retirement funds sustainably. Pension plan providers will need to respond to this demand, and it remains to be seen whether the force of the market will be enough to create sustainable pension plan choices or whether regulatory steps need to be taken.

### Outlook

In a pension environment in which the ageing population is putting a heavy strain on public pension systems and therefore more and more responsibility is being put on the individual, a high level of financial literacy is quintessential for the European workforce in order to secure a good retirement income. Additionally, young Europeans are expected to be even more of a mobile workforce than their parents, as the EU makes it easy for them to take on jobs in a different Member State. PEPPs do not yet exist, and their regulatory groundwork is being laid right now. As with every new concept, there is some freedom of implementation. How should PEPPs fit into the European pension framework in the future? How should they be implemented concretely to fit especially the needs of a young, mobile European workforce?

It is apparent that a high level of financial literacy is highly beneficial when planning and saving for your retirement. Unfortunately, the levels of financial literacy vary vastly across Member States. Also, socio-economically vulnerable groups consistently score lower in financial literacy studies. The OECD has issued many recommendations, the most prominent one being to start with financial education as soon as possible. There is however no plan on the EU level to tackle this problem specifically.

How can we ensure that every person, regardless of their background and the country they live in, make informed choices about how and where to invest their money for retirement? Should there be an EU-wide approach, such as coordinated national strategies, and if yes, what would be important for that?

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\(^{10}\) Denmark, Germany, the Netherlands, and Sweden have the highest literacy rates in the EU: at least 65 percent of their adults are financially literate. Romania, with 22 percent financial literacy, has the lowest rate in the EU. “Financial Literacy Around the World: Insights From The Standard & Poor’s Ratings Services Global Financial Literacy Survey”, a report by Klapper, Lusardi, van Oudheusden (2015).

\(^{11}\) 35.7% of 15-24 year olds are employed according to the OECD.
And how should continued financial support or advice for young people look, considering that “traditional” financial advice does not seem to be an option?

Young people are arguably the most environmentally conscious group in European society. Millennials will have an interest in having their retirement funds invested in a sustainable way. How can we make sure that these sustainable options exist in an adequate fashion?

The better and more robust the pension system is when we’re young, the more secure our pensions will be when we retire. While retirement still seems an eternity away for most young people, it is absolutely necessary that we ask ourselves these questions and find answers for them now. We will thank ourselves for it in a few decades.

Want to know more? The following links will guide you...

“Financial literacy and inclusive growth in the European Union”, a policy contribution by Uuriintuya Batsaikhan and Maria Demertzis (2018) – a perfect starting point for a deeper understanding of the topic, summarising the situation and key concepts


“Financial education and youth”, a website by the OECD – summarising OECD efforts to promote financial education for young people


“Where millennials turn for financial advice”, an article by the Financial Times (2019) – exploring the idea of alternative financial advice for young people

“Pension advice for the twenty-somethings: start early and save big”, an article by The Guardian (2013)

“Pension Schemes”, a study for the EMPL Committee by CEPS (2014)

“Personal pensions”, a website by the EIOPA


“Legislative Train Schedule – Framework for an EU Personal Pension Product (Pan European Personal Pension – PEPP)” – current status of the PEPP legislation
“Euro turns 20: While the euro celebrates its 20th anniversary this year, aspects of the Economic and Monetary Union (EMU) still remain incomplete. With the Commission’s stated ambition of finalising the work by 2025, what further steps should the EU take to ensure a robust governance structure for the euro area?”

Chaired by: William Eddershaw (IE)
Relevance of the Topic

As Member States willingly pursue further European integration on issues such as climate change and security, efforts to establish universal economic policies and programmes, a core component of the European Project, continue to be frustrated. Meanwhile, valid questions and apprehension remain surrounding the common currency project of the euro. People fear these pursuits risk further financial pain for their country following the financial crisis of 2008 and 2012 with little to gain. Equally, others argue that failing to advance the EMU places people’s livelihoods and economic prosperity at stake. In either case, an unaccountable and incomplete EMU and lacklustre governance of the euro area is not in the best interest for any EU citizen. Moreover, a failure to reconcile both sides’ worries provides even more oxygen for eurosceptic rhetoric throughout the continent. It is thus incumbent for those deciding on these issues to reflect the history of the euro and the EMU and attempting to establish clear goals and structures of the EMU and euro area the opportunity to reimagine European integration, and how it should be achieved.

Key Terms and Concepts

**Optimum Currency Area**: The theory where the community that uses fiat currency may extend beyond a single nation state. The four key conditions in which such an area may be conceived are: an integrated and frictionless labour market; Flexible pricing and wages and the free movement of capital; a central mechanism to account for areas affected by poor labour and price mobility; and in step business cycles. The euro area project has been cited as supporting evidence by proponents and critics of this theory since the project began in 1999, even though it does not meet all of the above criteria.

**Economic & Monetary Union (EMU)**: A process launched in 1992 in the Maastricht Treaty to further integrate Member States’ economies. Under the current EMU, all Member States coordinate economic and fiscal policies, mostly related to deficit spending, whilst those who have pursued further integration share a common monetary policy along with a shared currency, known as the euro. The rules regulating the core aspects of EMU are decided in treaties and legislation devised separately from Member States, whilst Member States are given the freedom to establish and coordinate economic policies with one another that adhere to these fundamental conditions.

**Fiscal Union**: Similar to the EMU, this type union attempts to integrate Member States’ fiscal policies such as setting tax rates and public spending levels through some sort of central European mechanism or process. Unlike the EMU, a Fiscal Union would attempt to convene Member States’ political preferences in deciding these policies which each government is bound to.
Central Bank Mandate: The written authority and purpose given to a Central Bank to operate and pursue policy. Most Central Banks outside of the euro area pursue either a dual or hierarchical mandate concerning price stability/trust in the currency and assisting the government of the day’s attempts to facilitate economic growth and prosperity. For instance the Federal Reserve of the USA has equal goals of providing “maximum employment, stable prices and moderate long-term interest rates”. The EU has a strict, hierarchical mandate, which is most concerned by price stability and “Without prejudice to the objective of price stability... support the general economic policies in the Community”.

Independence of Central Bank: In order for a Central Bank to pursue its mandate, it needs to avoid direct government influence, which possess different motivations from the Central Bank. A classical example is a government wanting to artificially increase the base supply of money to stimulate growth, causing short term inflation and diluting debt proportions, weakening trust in the currency. It is often argued that Central Banks with high levels of independence are best suited to prevent volatile inflation, yet this theory is not without its cynics. The ECB has one of the greatest levels of independence, given its mandate is enshrined in treaty and no Member State may seek to influence its actions. Additionally, nominees for the Governing Council of the ECB stem from the Council of Finance Ministers and the directly elected European Parliament only holds an advisory role in the selection process.

Spillover Effects: The idea that economic shocks contained only within one country may have knock-on effects for other neighbouring countries. As a result of close economic and trade ties as well as a having a common currency and shared monetary policy, many Member States are incredibly susceptible to this phenomena.

International Risk Sharing: Efforts made by states to protect levels of consumption in their economies in response to shocks. When states are limited in utilising domestic risk sharing through increasing public debt or welfare programmes, their governments may attempt to preserve consumption flows through investing in and borrowing from other states, or may seek to establish mechanism for fiscal transfers between states during times of shocks.

Moral Hazard: An unintended consequence of policy/system design where an individual is incentivised to act improperly at the expense of other parties.

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Stakeholders

The European Central Bank (ECB): The ECB is responsible for all monetary policy of the euro area, which includes controlling the base level of money that is available as well as setting official interest rates of the euro and minimum reserve ratios banks must abide by. These forms of actions fall in line with the ECB’s mandate of maintaining price stability, keeping inflation across the euro area close to but not above two percent. Additionally, the ECB is the main body responsible for overseeing banking practices across the EU. The ECB also has a seat as part of the Eurogroup meetings in co-ordinating national economic policies and possessed executive power as part of the Troika, which is responsible for offering bailouts to European countries following the financial crisis. In recent years with the potential threat of deflation occurring across the EU, the ECB has also conducted non-standard policy measures with an asset purchasing programme from 2015-2018, which many commentators believed to step outside of its mandate, orchestrating a fiscal stimulus, and had to defend its actions in the EU Court of Justice. Clearly, the ECB’s role has grown in protecting the strength of the EMU following the 2008 and 2012 economic shocks in Europe.

The European Commission: The Commission is directly responsible for generating initiatives for further EMU integration and has put forward a number of new policies related to the EMU in its past term such as the Single Supervisory Mechanism, the Single Resolution Mechanism, as well as the European Stability Mechanism. Whilst the Commission will be changing in October, a number of agreed upon targets have been laid out regarding further integrating and strengthening the EMU on issues such as the European Deposit Investment Scheme (EDIS) as well as establishing a European Investment Stabilisation function to combat economic shocks. The Commission also acts as the watchdog for Member States’ economic policies to ensure that each national government is adhering to the agreed upon rules regarding debt and deficit levels. The Commission has devised a number of regulations related to fiscal policy. This entitles the Commission to levy fines against Member States for spending and deficit violations, yet it has not chosen to fine a Member State despite numerous instances of such behaviour.

Euro area Member States’ governments: Whilst Member States are somewhat limited in their ability to interact with certain bodies, with the EMU they still have a large amount of autonomy over their fiscal policy. Euro area Member States are able to set their own tax and spending levels in addition to labour and capital market conditions provided they follow the Sustainability and Growth Pact regulations. It is under these conditions that states can exist with distinctly tailored fiscal policies where Corporation tax in Hungary is less than a third compared to the French rate. For these reasons, Member States, governments value this independence and would be unprepared to trade their fiscal autonomy for an ineffective centralised alternative. Currently, states are only encouraged to coordinate economic policies amongst one another, often at the monthly Economic and Financial Affairs Council and Eurogroup meetings, along with the Euro Summit and European Council Meetings for heads of state. From this perspective, Member States can effectively control the rate at which EMU integration is pursued. This is why the EDIS has yet to be voted on as finance ministers of certain states, namely Germany, have wanted further confirmation of risk-reduction as part of the policy even though both the Commission and Parliament have called for its quick implementation.

Euro area citizens: Whilst the governments of Member States have a significant role to play in the further integration of the EMU, their citizens are equally and can give clear direction to their governments as to how to approach these processes. A clear example where euro area citizens have had this effect is in Italy. Both the Lega Nord and Movimento 5 Stelle were elected on a platform of aggressive public and economic investment, disregarding the Commission guidelines on debt increases. Most recently, Salvini has pushed for deficit regulations to be reconsidered, articulating that the Italian government may willfully violate these laws. Similar
citizen influence on EMU integration can be equally seen across mainstream parties that directly oppose further integration initiatives such as the EDIS and can slow the process down. Ultimately, if euro area citizens do not believe an equitable and robust system of governance for the EMU is attainable, institutional barriers for further integration will continue to exist.

**Non-EU dependents of the euro:** The 60 countries that voluntarily peg their own currency value to the euro are beholden both to the ECB monetary policy along with the policies adopted aimed to enhance the EMU, which in turn maintain the health of the euro area. Quite clearly, these states rely heavily on the euro as a means to trade with European businesses as well as maintaining price stability both at the domestic and international level, providing a level of security for its citizens. Equally, having a large proportion of the globe using the euro removes the risk for European businesses of trading with a foreign currency in addition to a greater international confidence in the currency, reducing interest rates. However, Non-EU states rely on the euro due to the ECB’s dedicated pursuit of price stability which may not always be in line with optimal economic and monetary policy required for Member States. Furthermore, certain policies adopted to strengthen the euro area may test the willingness of non-EU users if these actions were to compromise price stability.

**Multinational Corporations (MNCs):** Driving factors for the development of the euro project were the potential advantages for international trade. Economic analysis indicates that countries, both Member States and otherwise, experience significant increases in Foreign Direct Investment as a result of adopting and using the euro. A motivating factor for MNCs to operate in states using the euro is clearly linked to the ECB’s efforts to maintain price stability and its apolitical relationship with Member States. Any policy or institutional developments that reduce the ECB’s stringent commitment to price stability may dissuade large companies to invest and trade with the euro and likewise reduce its international power as a currency.

**Stakeholders**

One of the core pieces of legislation that structures how Member States may operate within the EMU is the Sustainability and Growth Pact (SGP), signed as part of the Maastricht Treaty in 1992. The SGP required states to keep budget deficits below 3% Gross Domestic Product (GDP) and 60% GDP of national debt. Since then a number of additions and alterations have been made to the SGP, including Member States being given Medium-term Budgetary Objectives along with a 0.5% limit of a structural deficit for each Member State. In addition to this, one has the Fiscal Compact, which binds all signatories (19 euro area Member States along with Bulgaria, Denmark, and Romania) to establish a law for a balanced budget in their respective state.

Additionally, the 2011 and 2013 Six Pack and Two Pack regulations set reporting requirements for a state submitting their annual budget to the Commission. If a Member State is to violate the SGP they would be placed in the Excessive Deficit Procedure, in which they are given a deadline to provide a plan in order to meet their Medium-term Budgetary Objectives.

The consequence of the SGP, especially with recent economic shocks in 2008 and 2012, limited Member States’ abilities to respond with counter-cyclical policies to stabilise the region, instead installing budgets with severe spending cuts and tax hikes. Many experts believed these policies were short-sighted risking increases in unemployment and potentially jeopardising the state’s economic recovery.

Following the 2008 and 2012 crises, the Commission has generated policies through EMU integration that aim to protect states against economic shocks. A clear example of this is the Single Supervisory Mechanism and
the Single Resolution Mechanism which respectively give the ECB and national central banks direct oversight over banks across the EU, aimed at ensuring appropriate practices are employed as well as a providing a Single Resolution Board to manage failing banks across the EU.

The European Stability Mechanism has also been established and directly funded by euro area Member States to provide emergency relief loans in times of economic crisis, which is conditional to a state adopting fiscal policies that seek to severely reduce debt and deficit levels within that Member State.

From 2015-2018 the ECB pursued an asset purchasing program worth over 2.6 trillion EUR involving corporate loans and debt. This process known as "quantitative easing" aims to boost output whilst maintaining higher inflation levels, given that banks now have large injections of capital to lend. Whilst the EU has, in aggregate economic terms, steadily recovered in step with this expansive monetary policy, the causal effects of this approach are hotly contested. Some experts would argue that this strategy did very little to raise GDP given that lending rates to consumers remained roughly consistent, rather, banks sat on this new influx of capital to improve their balance sheets or invest them in other financial instruments.

![Quantitative Easing Diagram](image)

**Fundamental Challenges**

A key reason why certain Member States are unwilling to commit to risk-sharing is a lack of trust. To some, the states who would have benefited most from these integrated policies will become dependent on them due to continued economic mismanagement and further encourage these short-sighted practices. This stems from the belief that there are fundamental differences across each Member State’s economy, due to political, social, and cultural factors in each country. Given that growth and stability levels, as well as the economic structures of Member States, vary considerably, one may argue that prudent and competitive economies are subsidising those that are poorly run. From this perspective, further integration of the EMU seeks to increase either the fiscal contribution or dilute the fiscal autonomy of Member States, for which these states see no benefit.

Similarly, since the EMU process is looking towards further fiscal integration through proposed initiatives such as a European Investment Stabilisation Function, some Member States equally question the efficiency of a centralised body to act on their behalf. Even with democratic processes for developing and organising the EMU it is unclear whether these structures really stand to benefit euro area Members.
One also has to reckon with the the euro and the ECB’s mandate and structure. As we have seen, the ECB’s strict commitments to price stability have clearly influenced the fiscal policy options for Member States, especially in times of economic shocks. Without a European institution on the same level as the ECB to design and implement fiscal policy along with the more developed SGP, the EU and its Member States have been found lacking in providing policies to deliver a robust economic recovery. Moreover, many have accused the EU and Member States of failing to protect its citizens who suffer most from economic downturns. This clearly threatens the viability of the euro-currency project and support for further EMU integration. However, a core motivation behind the concept of a common currency was that it would encourage trade within the EU and with other countries, since inflation levels would carefully be managed across the Union. Altering the ECB’s mandate through a new treaty and changing how the EU selects its members may compromise this source of strength that the currency provides and lead to the international role of the euro, for which Member States benefit from, being diminished.

Another fundamental issue is the levels of policy speed and intensity in furthering the EMU. Many believe that the EU’s 2025 targets do not ultimately tackle the challenges that having a shared currency entails. To some, a failure to develop a Fiscal Union puts the euro area at risk whereas others have argued the need for more democratic institutions and structures for operating the EMU. However, as recognised earlier, many Member States are not wanting to commit to the further integration that both the European Commission and European Parliament have called for. Furthermore, when considering strengthening EMU and euro area governance one must recognise the choice between policies that attempt to optimise or rework the current institutional framework.

Outlook

The core issue that underlines this topic is that the EU and its Member States are the first to establish and run Economic and Monetary Union of this kind. Without any real precedence to guide this political and economic project, obstacles and challenges are naturally met with fear. However, with a blank canvas there is an equally present opportunity to build a system of governance that attempts to foster cohesive economic development amongst Member States whilst acting on behalf of European citizens. Many calls for a Fiscal Union across the continent have been made, yet exactly how such a process would function remains open to exploration, deciding if it simply mirrors the European Stability Mechanism as a contribution-based, emergency fiscal mechanism potentially as an EMU wide unemployment insurance scheme to protect private incomes, a body funded by the EU Budget to offer fiscal stimulus through green investment in times of shock, or whether a fiscal union should contain a centralised body that institutes EMU-wide fiscal policies.
In any of these approaches to the EMU and euro area, an equally important point of consideration is **democratic accountability**. This issue relates to the space provided for **Member States to be properly represented** and have influence over how the EMU is run. Most recently French President Emmanuel Macron argued for a euro area finance minister to be established along with a euro area parliament of elected officials, yet there are **many other conceptions** of how Member States can be equitably involved in this process. This issue of democratic accountability relates to how **individual citizens** influence EU Institutions to act with their best interests in mind. For instance, calls for the European Parliament to be **granted the power to recommend candidates** to the ECB's General Council have been made as a means to increase the democratic legitimacy of the process. Striking this balance where leaders of institutions have the necessary freedom to make and implement non-biased economic decisions whilst still having a **mandate informed by the people** is essential for sustainable governance.

**Want to know more? The following links will guide you...**

- **Completing the EU's Economic and Monetary Union** — The Five Presidents’ (Commission, Eurogroup, Parliament, Council, and ECB) Report in 2015 which outlined the core goals and processes for the EMU up until 2025
- **Deepening Europe’s Economic and Monetary Union** — A Commission note ahead of the June 2018 Euro Summit outlining policy goals set out for further integration along with the institutional willingness for implementing them.
- **Fiscal Policy and Stimulus: Crash Course Economics #8** — Informative video explaining the theoretical concepts and disputes surrounding Keynesian Economic Theory by the online educational channel Crash Course
- **Strategy for the Adoption of the Euro** Croatian Government and Central Bank's 2018 cost/benefit analysis report of euro area membership, which helps inform one of how governments see the value of the euro. Sections, 1,2,3, & 6 are necessary.
- **How the euro caused the Greek Financial Crisis** — Vox video from 2015 illustrating some of the challenges facing the euro area and its members.
- **Former Greek Finance Minister, Yanis Varoufakis, describing how Eurogroup meetings are conducted** — excerpt from talk held by the Society for Plural Economics Vienna.
- **Democratisation of Europe begins with ECB nominations** — Le Monde op-ed from 2018 written and undersigned by numerous professors of economics and political science including Thomas Piketty.
- **Political legitimacy in a non-optimal currency area** — Discussion Paper from the Max Planer Institute for the Study of societies which examines whether the post-financial crisis approach in the EMU would have helped lessen the effects of the economic shocks and the possibilities and risk of a more integrated political union for the EMU.
- **On the limits of EU economic policy coordination** — Working Paper from the ‘A Dynamic Economic and Monetary Union’ examining developments and limitations tied to the current framework for policy coordination along with possible alternatives.
Public opinion on the Eurozone fiscal union: evidence from survey experiments in Italy — Article from the Journal of European Public Policy assessing citizens’ feelings towards a more integrated Fiscal Union analysing them with other subject information such as income level, political ideology, EU support, trust in national government as well other Member States governance.

ADEMU explained: An unemployment insurance system for the euro area? — Short video from ‘A Dynamic Economic and Monetary Union’ explaining the role unemployment insurance could have in the EMU and the challenges surrounding it.

What kind of Fiscal Union? — Bruegel Policy Brief mapping out how a Fiscal Union could be achieved and what it would look like.
“Green investment gap: It is estimated that in Europe alone an additional 180 billion EUR in private investment will be needed yearly to meet the goals set out in the Paris Agreement. How should the EU seek to bridge this investment gap and use the financial system as a tool to reach its climate targets?

Chaired by: Sam Van Hoof (BE)
Relevance of the Topic

Climate change is real and it is happening right now. A recent report by the Intergovernmental Panel on Climate Change (IPCC) warns that urgent and unprecedented changes are needed to limit global warming between 1.5 °C and 2 °C above pre-industrial levels. The United Nations is calling for action within the framework of the Sustainable Development Goals (SDGs), urging states to combat climate change and its impacts, to use sustainable energy and to build sustainable cities.

In December 2015, almost 200 countries agreed to undertake ambitious efforts to combat climate change by signing the Paris Agreement. The aim is to keep the rise of global average temperature well below 2 °C above pre-industrial levels, and pursue efforts to further limit the increase to 1.5 °C. The EU for its part has set up an agenda ‘Towards a Sustainable Europe by 2030’, including a 40% cut in greenhouse gas emissions.

However, the question remains of how we can achieve these goals and, more specifically, how the necessary investments will be financed. The European Commission estimates that 180 billion EUR of additional investments are needed per year to achieve the EU’s 2030 targets. Public funds need to be better orientated towards the pursuit of the SDGs, but we cannot meet our needs without the private sector shifting to sustainability as well.

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1 “Towards a sustainable Europe by 2030”, a reflection paper by the European Commission, 2019, p.24
Interestingly, individual citizens play an important role in this regard. The money that is used by the financial sector to make investments often comes from individuals’ pension funds, savings accounts or insurance contributions. Many individuals are not aware that they are lenders, and that the decisions on how to invest this money can therefore be influenced by citizens themselves.

In the end, we all have a lot to gain from the paradigm shift to a green economy. Climate change is said to be the most urgent threat facing the human species, and it is in our own interest to limit its impacts.

**Fundamental Challenges**

The most fundamental challenge behind green investments is to **combat climate change before it is too late**. The report of the IPCC shows that some of the most severe impacts of climate change can be avoided by limiting global warming to 1.5 °C. For example, the likelihood of an Arctic Ocean free of sea ice during the summer would be once per century with global warming of 1.5 °C, compared to at least once per decade with 2 °C. Coral reefs would decline by 70–90 percent with global warming of 1.5°C, whereas virtually all (>99 percent) would be lost with 2°C. But the time to act is running out quickly.

A shift in the private financial sector towards sustainability is needed. The main question that arises is how the **impact on the environment can be included in investment decisions**. Investments with environmental objectives require a long term orientation. However, investors are often focused on making the highest profit over a short timeframe, leaving out long term non-financial factors such as the impact of the investment on the environment. The challenge is thus to find a balance between short-termism and long-termism, allowing investors to make responsible decisions by taking into account both short term results and long term impacts on the environment.

Between 1980 and 2017, disasters caused by weather and climate-related extremes accounted for some 83% of the monetary losses in the EU Member States, amounting to a total of 426 billion EUR\(^2\). Climate change clearly comes with a price, but the question remains of how this can be incorporated in investment decisions from the beginning. If the environmental impact should be taken into account when making an investment decision, **how can we put a price on it?** Since investors aim to minimise the risk of their investments in the long term, environmental considerations are starting to become an important factor in their decisions. But how do we measure the risk of an investment in terms of the impact on the environment and **how do we make sure this information is available to investors?**

Another challenge is to **connect green finance to the real economy**. An increased demand for sustainable products and services from investors is only useful if matched with an increased supply. Furthermore, it needs to be clear which investments can be considered ‘sustainable’ and which cannot. In other words, a **classification system is needed** to indicate which economic activities are ‘sustainable’ in order to allow investors to make responsible decisions. However, specific attention is required to prevent **greenwashing**: a phenomenon where a company appears to be more environmentally friendly than it is in reality, for example, to attract more investments. Last but not least, it is important to inform citizens about the role they can play in the shift to green finance. **Increased transparency empowers citizens** to compare the environmental impact of their investments and allows investors to make informed investment decisions.

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\(^2\) *Economic losses from climate-related extremes in Europe*, a report by the European Environment Agency, 2019, p. 4
Terms and Concepts

First of all, it is important to note the difference between sustainable finance and green finance. **Sustainable finance** is an overarching term, indicating the provision of finance to investments, taking into account environmental, social and governance factors, leading to increased investments in sustainable activities. **Green finance** is one aspect of this, referring to financial investments into projects, products and companies that support the development of a more environmentally friendly, low-carbon and climate-resilient economy.

The **financial market** is the area where green finance can take place. The financial market consists of organisations, such as banks, insurance companies and pension funds, who make profit by gathering money from investors and lending this money to borrowers. Essentially, it is all about providing a financial flow from people who have excess money, to companies and governments, who need money to run their activities.

The two main financial markets are money markets and capital markets. Money markets refers to short-term investments, where the money is only borrowed for a year or less and then returned to the lender. **Capital markets** refers to longer term investments, from a year to twenty years or even more. On the capital markets, most investments are being conducted through equities or bonds. When someone invests in **equity**, it means that he/she is giving money to a company in return for becoming a shareholder of that company. The investor will then get shares of the company, also called stocks, and thus become the ‘owner’ of part of the company. An investor could also give money to a company without becoming the owner of shares. The company will then simply have a debt towards the investor, which it will pay back after a certain period. This is what we call a **bond**.

Some of the most important players in the financial markets are **pension funds**. These are entities to which employers or employees pay a contribution on a regular basis during their career, in order to build a pension. When the employee retires, the pension fund pays him/her a pension based on the contributions he/she paid during their career. Pension funds thus hold large amounts of money, which they use to make investments. How this money is invested depends on the pension fund’s investment decisions, but can also be influenced by the pensioner’s preferences.

Other recurring terms in the field of green finance are disclosures, benchmarks and divestment. **Disclosures** refers to the information that needs to be made available to investors about their investment. In the context of green finance, this usually refers to information on the environmental impact of the investment. ** Benchmarks** are standards against which the performance of a financial instrument can be measured. For example, by using a benchmark one could assess and compare the growth of different companies in relation to the growth of the overall market. **Divestment** is the opposite of an investment: it simply means getting rid of stocks, bonds, or investment funds.
Stakeholders

There are three types of stakeholders on the financial markets: lenders, borrowers and financial intermediaries. **Lenders** are the providers of the capital, usually individuals or companies. As mentioned before, individuals lend more often than they think, for example by putting money on a savings account at a bank, by contributing to a pension plan or by paying premiums to an insurance company. The interest of lenders is mainly to make profit from their investment, but the environmental impact thereof can also play a role. The **borrowers** are mainly companies and governments, who for example need funds to set up a business or build new infrastructure. Their interest is essentially to get access to funding. Thirdly, **financial intermediaries** are institutions like banks, pension funds and insurance companies, who build the bridge between lenders and borrowers and make profits from this activity.

Governments also have another role to play: they create the regulatory framework surrounding the financial markets. Clear and long-term policy frameworks are needed for investors to be able to assess and manage climate-related risks, to support innovation and to make sustainable investments. Investors are willing to make the shift to green finance, but a strong signal from governments is crucial to indicate that a green economy is the way forward.

Sustainable finance has recently been a key priority for the **European Commission**. In a [2017 report](#), the European Political Strategy Centre, the EU’s in-house think tank, highlighted that private investments will be crucial in the shift to a green economy and that the EU can take up a leading role in sustainable finance. The European Commission established a **High-Level Expert Group on Sustainable Finance (HLEG)** to map out the challenges and opportunities of sustainable finance and to suggest reforms to the EU’s financial policy framework. The HLEG consisted of 20 experts from civil society, the finance sector and academia. Additionally, the Commission has also established a **Technical Expert Group on Sustainable Finance (TEG)** to give more detailed advice on specific aspects of sustainable finance, such as a green taxonomy, an EU green bond standard, or climate-related disclosure. It is expected to publish a report on European Green Bonds Standards in June 2019.

The **European Supervisory Authorities (ESAs)** ensure that the rules applicable to the financial sector are being followed, and oversee individual financial institutions. The European Commission has proposed to strengthen the role of the ESAs to take environmental factors more into account. The proposed amendments would enable the ESAs to monitor how financial institutions identify, report, and address risks that environmental, social and governance factors may pose to financial stability.

On the international level, the topic of green finance has come up within the framework of the **United Nations (UN)**.
Under the UN Framework Convention on Climate Change (UNFCCC), the 197 state parties meet on a yearly basis to assess progress in dealing with climate change. The issue of investments from business and industry in the fight against climate change has been discussed at the 2015 Conference of the Parties (COP) in Paris and was also one of the main points in the discussions at the COP23 in Bonn.

In addition, there is a wide range of organisations, both governmental and non-governmental, working on the topic of green finance. Some examples include ShareAction, Green Finance Initiative and Climate Action 100+.

**Measures in Place**

In the EU, the focus has - until recently - been on **sustainable investments by the public sector**. The Commission has integrated climate action into all major EU spending programmes, making the EU budget a driver of sustainability. Approximately 20% of the EU expenditures currently contribute to climate objectives. Since 1992, the EU’s **LIFE programme** has co-financed some 4,000 projects supporting environmental and nature conservation projects throughout the Union. From 2021 onwards, the **InvestEU programme** will provide for at least 650 billion EUR in additional investment in four key areas, one of which being sustainable infrastructure.

However, the investments needed go beyond the capacity of the public sector alone. In order to investigate the challenges and opportunities of green finance in the private sector, the European Commission established the **High-Level Expert Group on Sustainable Finance** in December 2016. The HLEG published its **final report** in January 2018 and presented 8 key recommendations ranging from the establishment of a common sustainability taxonomy to the inclusion of sustainability in the supervisory mandate of the European Supervisory Authorities.

Two months later, in March 2018, the European Commission presented its **Action Plan on Financing Sustainable Growth**. The action plan has three main objectives: (1) to reorient capital flows towards sustainable investment; (2) to manage financial risks stemming from climate change, environmental degradation and social issues; and (3) to foster transparency and long-termism in financial and economic activity.

In May 2018, the Commission proposed a **package of legislative proposals** implementing some of the key actions announced in the Action Plan. The package includes:

- a proposal for a Regulation on the establishment of a framework to facilitate sustainable investment, which would create an EU classification system (“taxonomy”) of what can be considered an environmentally sustainable economic activity.
- a proposal for a Regulation on disclosures relating to sustainable investments and sustainability risks and amending Directive (EU)2016/2341. This regulation aims to incorporate sustainability in investment advice and introduces obligations to provide information for investors on environmental, social and governance (ESG) factors of the investment.
- a proposal for a Regulation amending the Benchmark Regulation. The proposed amendment will create low-carbon and positive carbon impact benchmarks, which will provide investors with better information on the carbon footprint of their investments.

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3. "Eu Budget For The Future: Sustainability, Environment Protection And Fight Against Climate Change", a publication by the European Commission, 2018

Both the benchmarks and disclosures proposals have been formally adopted by the European Parliament and are now waiting for formal adoption by the Council of the EU. The Taxonomy proposal is a more sensitive topic and negotiations are only expected to start in September 2019 at the earliest.

A few other EU financial policies already take environmental considerations into account. The EU Directive on non-financial reporting requires large companies to publish regular reports on the social and environmental impacts of their activities. However, the directive only applies to large public-interest companies with more than 500 employees. Pension funds or Institutions for Occupational Retirement Provision (IORPs) have to consider taking into account environmental risks in their investment decisions under the revised IORP Directive.

EU Member States are also taking action at a national level. For example, France issued 9.7 billion EUR worth of sovereign green bonds in 2017\(^5\). Some Member States have joined the Coalition of Finance Ministers for Climate Action and endorsed the Helsinki Principles, which includes mobilising private sources of climate finance.

The Paris Agreement aims to strengthen the global response to the threat of climate change, including by making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development (see article 2). While this general objective has been agreed upon by the state parties, it remains unclear how these financial flows will be ensured in practice. Green finance was one of the three main topics at the COP24 in Katowice, but little progress has been made.

**Outlook**

In 2016, global fossil fuel investments still accounted for 825 billion dollars, compared to 410 billion dollars for climate related projects\(^6\). And while the green bond market has been expanding rapidly in recent years, it still accounts for less than 1% of total bonds outstanding worldwide\(^7\). States parties to the Paris agreement have agreed to direct finance flows towards green investments, yet it remains to be seen whether ambitious measures can be taken on the international level to live up to this objective.

The EU has been a forerunner in environmental action and the fight against climate change. The fast rate at which the EU institutions have worked on the action plan on sustainable finance shows that the topic is high on the agenda for policy makers. But is it enough to bridge the investment gap of 180 billion EUR a year? The Commission is showing ambition and has proposed a target of 25% for climate expenditure in the future EU budget\(^8\). Will the financial sector follow in this shift to a sustainable European economy?

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1. “Action Plan Financing Sustainable Growth”, a factsheet by the European Commission, 2019
2. “Finance for climate action is rising, but still a long way to go”, an article by Aymone Lamborelle and Claire Stam for Euractiv.com, 2018
3. “Green Bonds”, a website by the European Commission, 2019
4. “Eu Budget For The Future: Sustainability, Environment Protection And Fight Against Climate Change”, a publication by the European Commission, 2018
Want to know more? The following links will guide you...

“An introduction to financial markets”, a video by Tim Bennett for Moneycontent, 2010 - This youtube video explains the financial system and some of the main terms and concepts in a simple way.

“Sustainable Finance”, a website by the European Commission, 2019 - On this website, the European Commission explains what sustainable finance is and what the EU has been doing so far.

“Action Plan Financing Sustainable Growth”, a factsheet by the European Commission, 2019 - This factsheet gives a visual overview of the action plan’s priorities and shows some other initiatives in the field of sustainable finance.

“Green Bonds”, a newsletter by the European Commission, 2019 - In this short newsletter, the European Commission gives a brief introduction to green bonds.

“Finance for climate action is rising, but still a long way to go”, an article by Aymone Lamborelle and Claire Stam for Euractiv.com, 2018 - This infographic shows some facts and figures on the topic of green finance and the investment gap.

“The beacon of sustainable finance in Europe must not lose its flame”, an article by Catherine Howarth for Euractiv.com, 2019 - This article describes the potential and the shortcomings of the Commission’s action plan.

“Expert group recommends setting up European standards for ‘green bonds’”, an article by Jorge Valero for Euractiv.com, 2018 - This article sums up some of the key findings of the final report by the High-Level Expert Group.

“Climate Breakdown and Sustainable Finance”, a podcast by Giulio Gipsy Crespi and Erica Duffy for Burst the Bubble, 2019 - For those who like to listen rather than read, this podcast includes an interview with MEP Molly Scott Cato on the topic of green finance, discussing the legislative proposals of the Commission.
"A new social contract: Following on from the publication of the High-Level Expert Group report into the digital transformation of EU labour markets, how should the completion of the European Pillar of Social Rights take into account the changing nature of work?"

Chaired by: Luka Kvatchrelishvili (GE)
Relevance of the Topic

Day by day digitalisation is driving rapid changes in the labour market, influencing the entire nature, overall quality and productivity of work. Irrepressible change raises the challenge of making use of these developments to foster economic growth and employment while at the same time ensuring decent working conditions, social protection and equal opportunities for all. Those challenges leave a huge burden on policymakers to make relevant decisions. Nevertheless, the main goal is to keep people employable in the future.

Digitalisation is ubiquitous and has impacted the demand and supply of labour. Accordingly, digitalisation has also influenced the organisations on the labour market that determine how employees and employers find each other, and what kinds of relationships they engage in. In particular, digital technologies have made it much more affordable for employers to disaggregate some jobs into individual tasks distributed via ‘gig platforms’ rather than to hire full time employees.

Over the course of several years, priorities for labour market demands have changed. The reason for such change is because some jobs mainly involve doing routine tasks that can be, to a greater extent, done through automation. Accordingly, these jobs will gradually cease to exist, with well known examples including machine operators at car assembly lines. As of yet, digitalisation is not capable of automating all tasks currently done by individuals, but is instead being used to complement some workers in doing their jobs, leading also to the creation of many new job positions for workers.

Hence, digitalisation also enhances labour supply through the introduction of new technological intermediaries. Such change lowers barriers of entry to labour markets and thus reaches more people in the market. The mass benefit for such a shift in labour supply is that it is doing certain work that is no longer tied purely to location, with online platforms allowing, for instance, Western European technology firms to hire skilled software developers in Eastern Europe.

Digitalisation also carries profound consequences for workers’ social protection systems. The European workforce has experienced a rise in the diversity of working arrangements, however, today’s social protection organisations and existing schemes continue to largely focus on standard, full-time work. In general, employment laws favour full-time employees by obliging employers to fund their benefits, such as sick pay, holiday pay, pensions and parental leave, for anyone on a permanent contract. The laws do not always extend to cover non-standard workers, who often receive little or no benefits. Additionally, women and minorities are likely to be disproportionately affected, as well as a larger proportion of them being in non-standard forms of employment.
The disruption brought by digitalisation to job security, employee tenures and ways of working is also likely to further increase the risks for the workforce. It has been shown that digital transformation could have effects on workers’ stress levels and mental health issues. Constant stress, on-the-job burnouts and job insecurity are no strangers to the independent worker. A recent survey conducted by Epson in the UK, found that 48% of non-standard workers from home admitted that they find themselves “lonely” at times, and 46% claim working independently is “isolating.”

Overall, the European Commission has already proposed a number of strategic measures, such as the Digital Single Market strategy and the European Pillar of Social Rights, that are meant to address the double challenge of increasing European competitiveness while raising social standards across the continent, including for the digital economy. Yet, fresh thinking and bold ideas are needed.

**Stakeholders**

- **The European Commission** has the right of legislative initiative, which means that they can propose laws to the European Parliament. They aim to create a Single Digital Market. The Commission has identified the Digital Single Market strategy as one of its ten political priorities, which aims to open up digital opportunities for people and businesses and enhance Europe’s position as a world leader in the digital economy. The Commission has set up different advisory expert groups, such as the European Multi Stakeholder Platform (MSP) on Information and Communication Technologies (ICT) standardisation, and forums, such as the Strategic Policy Forum on Digital Entrepreneurship, to determine how best to reach its goals. Additionally, with the proclamation of the European Pillar of Social Rights in November 2017, the European Commission highlighted the importance of the rights of its citizens in a fast-changing world. The Pillar of Social Rights focuses on delivering new and more effective rights for citizens. It builds upon 20 key principles.

- **Citizens of the EU**: to get a job and to keep it, citizens need relevant skills. For many jobs, having at least basic digital skills is becoming more and more of a requirement. Additionally, Science, Technology, Engineering and Mathematics (STEM) and ICT professionals are increasingly required to have highly developed skills in areas such as foreign languages, management, communication, problem-solving, and project management.

- **Member States** need to work on implementing the measures suggested by the EU, as the areas related to this topic fall into shared or supporting competences of the EU, meaning the EU cannot legislate and adopt binding acts alone in these areas. It is in the interest of Member States to work on this issue to ensure economic growth.

- **Companies** in all fields need or will eventually need employees with sufficient digital skills, as a result of the global digital transformation. In addition to needing more ICT and STEM professionals to enter the workforce, companies should work on upskilling their existing employees. Many large internet companies officially have their headquarters in the EU (e.g. Google in Ireland). However, this rarely results in a large amount of jobs, because a lot of the hands on work gets done in countries with cheaper labour, like Vietnam or Bangladesh, whereas a lot of intellectual work gets done in Silicon Valley.
Terms and Concepts

- **Digital transformation** entails the permanent adoption of digital technologies in production and consumption activities that rely significantly on data development and data analysis. Digital technologies are considered to be General-Purpose-Technologies (GPTs) characterised as a high potential for technical improvements that will fundamentally change how businesses operate.

- **Digital Single Market (DSM)** is a market where online activities are exercised under conditions of fair competition and a high level of consumer and data protection, irrespective of the consumer’s nationality or place of residence.

- **Neutral social protection** is a fundamental part of the European social model that ensures the equal distribution of rights against unemployment, sickness and other life circumstances independent of employment status. A large number of Europeans in non-standard employment do not have access to social protection such as social insurance, pensions, social assistance, however details vary between EU Member States.

- **Small and medium-sized enterprises (SMEs)** are the category of micro, small and medium sized enterprises which employ fewer than 250 people, and which have an annual turnover not exceeding 50 million EUR, and/or an annual balance sheet total not exceeding 43 million EUR.

- **Basic Information and Communication Technologies (ICT)** skills are needed to efficiently use the elementary functions of information and communication technologies to retrieve, assess, store, produce, present and exchange information, and to communicate and participate in collaborative networks via the internet.

Measures in Place

**The European Pillar of Social Rights** delivers on principles and rights around three main categories such as equal opportunities and access to the labour market, fair working conditions and social protection and inclusion as a single joint responsibility of the EU institutions and Member States. European institutions help set the framework and give guidance on the way forward for implementation of the Pillar, through legislation where needed, in full respect of Member States’ competences and taking into account their diversity. Some of the 20 key principles in the Pillar include rights to training and lifelong learning, secure and adaptable employment, wages, information about employment conditions and protection from dismissals, work-life balance, unemployment benefits, minimum income and a healthy, safe and well-adapted working environment.

**The New Skills Agenda** also calls on Member States to develop comprehensive digital skills strategies. To support this, the European Commission has, together with national experts, developed a shared concept for national digital skills strategies.

**Grand coalition for Digital Jobs** was launched by the European Commission in 2016 as one of the ten initiatives of The New Skills Agenda for Europe. It brings together Member States, companies, social partners, NGOs and education providers who pledge to take action to tackle the lack of digital skills in Europe. Its actions range from training unemployed people and giving Massive Open Online Courses (MOOCs) for teachers to giving coding classes for children and cutting-edge training for ICT specialists.
The Digital Skills and Jobs initiatives repository lists some of Europe’s best digital skills projects, including initiatives by the Member States, such as Mobile Learning in Austria.

**Startup Europe** is an EU initiative and part of the Horizon 2020 programme, which aims to improve the startup system by improving communication between founders and entrepreneurs, and by funding new and innovative startups.

**The European Coding Initiative** launched in 2014 and led by Microsoft, SAP, Liberty Global and Facebook with European Schoolnet acting as secretariat, aims to bring coding skills to teachers, kids, and adults. The campaign uses a mixture of online and offline, real-life activities, to establish coding as a key competence within every education system in Europe. It will also play a central role in a number of Europe-wide advocacy and awareness-raising campaigns, including EU Code Week and the Grand Coalition for Digital Jobs.

**Fundamental Challenges**

**Social protection**

The European social model works to try to ensure an equal society among workers by ending poverty wages, guaranteeing fundamental human rights and essential services, as well as an income that enables every individual to live in dignity. With an increasing number of independently working Europeans, EU institutions are challenged to make relevant changes that would enable the equal distribution of social protection benefits among all workers. Nowadays, self-employed workers are individually responsible for enrolling to and paying for sufficient unemployment insurance, disability insurance, and pensions. Many, especially younger workers, take this as given as they lack awareness of how poorly they are protected. Businesses have been incentivised to hire independent contractors over regular employees, as it reduces their overhead costs. Additionally, for workers with fluctuating incomes, multiple contribution payments can be so inflexible as to carry a huge financial risk in themselves. In some cases, self-employed workers, through online platforms, bypass large insurance payments by maintaining part-time service sector jobs on the side just to qualify for social protection. Nevertheless, this is a temporary solution as it may result in friction and skills mismatches.

Most of the tools to deliver on the equal distribution of rights, as stipulated in European Pillar of Social Rights, are in the hands of Member States. EU institutions and the European Commission in particular can help by setting the general framework rules and guidance.

**Net job creation**

The effect of the digital transformation on job markets is an issue at the forefront of policy discussions and political debates across the world. While some studies claim that up to half of US jobs are automatable within the next two decades, for example, Frey and Osborne state that 47% of US workers are at huge risk, other studies, such as Arntz et al, have shown that occupation-level studies severely exaggerate the potential for automation, because they neglect the fact that workers have been able to adjust to those changes ever since they came to existence. Additionally, their study shows that the share of existing US workers with high automation potential has a chance to decline to only 9%. Therefore, automation should not be taken as something that necessarily leads to net employment losses but rather viewed as a change in labour market that can greatly enhance state economies if taken care of correctly. It should not be overlooked, change caused by digitalisation is inevitable.

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and it is individual Member States’ responsibility to keep up with ongoing trends by reducing prior income inequality and sustaining labour demand.

**Diversity in working arrangements**

Digitalisation also presents an increase in new and non-standard forms of employment that diverge from standard full-time jobs. Part-time jobs and task based employment has increased from 12.5% to 15.8% in the EU since year 2002. Meanwhile, self-employment grew significantly in some Member States, such as the Netherlands and the UK. This includes transport, delivery, care, and other on-site services mediated by ‘gig economy’ apps, as well as software development, translation, data entry, and other knowledge work delivered remotely via online platforms.

Workers that seek non-standard employment arrangements do so increasingly out of a desire for workplace flexibility. For example, such jobs are more common among older workers and more highly educated workers. Increasing concerns about work-life balance may also have contributed to the trend. Due to digitalisation and thanks to digital services such as e-commerce and online labour platforms, the barriers of entry to offering goods and services to international markets are drastically lower today than ever before, opening up new opportunities for skilled individuals to start micro-businesses. Digital platforms in themselves also avoid the middleman, and give everyone an equal chance to be hired for what they are most specialised in.

In a recent survey of European freelancers, 77% of respondents said that they were freelancers by choice and 43% said they found work through online labour platforms. However, self-employment in the UK for example has been classified as ‘hidden unemployment’, meaning that sometimes outright joblessness is partly replaced with ‘gig work’ type jobs. Likewise, just as in any industry transformation, new forms of work open up through digitalisation that will bring about both winners and losers, leading to a polarisation of the labour markets, unless suitable policy responses are adopted.

**Worker well-being and work-life balance**

While on the one hand digitalisation is a great opportunity to improve work-life balance, on other hand it can also create increased amounts of pressure, which in some cases be reflected and cause severe mental health issues. Consequently, such complications may put workers out of the labour market for a large period of time.

Mental health and physical health issues are often caused by an impact on diet and behavioural issues, which can be preventable and reversible if managed effectively early on. According to studies, one in six working EU citizens experience some form of mental health problem (84 million people), and one in five people aged 15 years or older reports heavy episodic drinking at least once a week. Furthermore, diabetes is now an increasing issue as almost 10% of the population having type 2 diabetes, and 53.1% of adults across the EU suffering from overweight and obesity.

Day by day, It is becoming clear that mental health and stress at work comes at a significant cost for Member States. Due to its long term effect, issues as such does not carry direct financial liabilities, but may result to a huge financial burden.

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According to estimates from the Lancet Commission in the UK, between 2010 and 2030, mental health issues will cost the global economy 16 trillion USD if the current trend keeps on growing.

**Outlook**

It has been established that the digital transformation is making significant changes to the labour market. This transformation contributes to an uneven distribution of social protection against unemployment, sickness and other life circumstances independent of employment status. Thus, an increasing number of Europeans with non-standard employment should have access to social benefits just as standard workers. Jobs that are expected to grow in employment in the near future will be in urgent need of digital skills because of the base requirements of such jobs. Therefore, skills mismatches and shortages require investments in employee training. With ongoing technological trends such as artificial intelligence or machine learning there is increasing demand on the labour market for certain skills. This means workers will not only need to gain new skills but also constantly update them.

In light of this, the key question for the future is how to achieve better cohesiveness in the skill supply and demand, with a focus on: a) understanding how states distribute social benefits among all workers; b) investing in training and possible labour market policies to battle skill mismatches and shortages; and c) setting up a database of skill needs.

**Want to know more? The following links will guide you...**

- Short summary on Impact of the Digital Transformation on EU Labour Markets by High-Level Expert Group, 8 April, 2019
- Reflection paper on the social dimension of Europe, 26 April 2017
- Video on Digital Leadership vs Digital Transformation by Nelson Phillips, 5 Oct 2018
- European Pillar of Social Rights in detail, 2018
- The Digital Economy and Society Index (DESI), 2018
- Video on Digital Transformation and Platform Economy, European Innovation Day, 2017
- ‘Digital Agenda Scoreboard key indicators’ - Different charts about Digital Agenda Scoreboard indicators, giving comparisons of progress across European countries as well as over time.
- Europe 2020 indicators - R&D and innovation by Eurostat, 2016
“Green planet for all: As students and civil society movements march for a more ambitious climate policy, the ‘gilets jaunes’ (yellow vests) movement illustrates a growing discontent among those who feel constrained in their mobility and budget by ‘green’ regulation. How should the EU look to achieve its 2030 and 2050 climate and energy targets while ensuring the transition is fair and manageable for all socio-economic groups?”

Chaired by: Milla Lehtimäki (FI)
Relevance of the Topic

Since the industrial revolution began in 1750, mankind has learned many ways to harness power and nature for our needs. Unfortunately, the decades of using fossil fuels and neglecting the environment have led to a situation in which the climate is rapidly changing due to human action. The dangers of global warming that once seemed remote are now affecting our planet at such a rapid pace that only immediate action could eventually control its effects. Both globally and in Europe extreme heat waves, droughts, wildfires, storms and floods are getting increasingly common, deadly and costly. Globally the strongest effects of the climate crisis will continue to be experienced disproportionately by populations in developing countries, which is further estimated to cause climate induced migration flows, causing millions to be displaced.

Beneath international agreements and EU-wide strategies lie masses of consumers that carry the costs of transitioning to stricter climate policy and renewable energy sources. Although these measures are desperately needed, their burden can fall disproportionately on lower-income groups. For example, climate policies, such as carbon tax, impact prices and availability of individual goods and services. Basic goods, like heating or food, form a much higher share of low-income households’ budget than of high-income households’ budget and thus low-income households pay proportionately more despite the initial carbon tax being the same for all1.

Climate policies can also make expenditure on consumer durables that reduce the carbon footprint of households very beneficial. Such policies often include subsidies for low-carbon purchases, like electric vehicles or solar panels, or for investments in energy efficiency. However, in many cases it is unlikely that low-income households will be able to make such investments due to budget constraints. This creates a risk that subsidies with only benefit households with a larger income. These considerations are a major drawback for the equality and distributional effects of climate legislation and decarbonisation, and have received limited attention so far in policy discussions.

In the wake of the 2018 IPCC special report on the impacts of global warming of 1.5°C our global society has never seen as many petitions and marches for instant climate crisis action. And no wonder, global warming has reached 1°C above preindustrial levels and is continuing to increase around 0.2°C per decade. Unless measures to tackle the climate crisis are taken further, the planet will simply become uninhabitable.

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1 The distributional effects of climate policies, Bruegel, November 2018
Fundamental Challenges

Despite existing national measures and international agreements, the progress towards effective climate action and a green economy is too slow, and current measures around the world are widely insufficient. According to the UN, there is only 11 years of time to prevent irreversible damage of the climate crisis, making the need for action urgent, but there is little sign that such strong global action will happen on time.

The unequal division and lack of action in the past is demonstrated through the 1997 Kyoto Protocol not demanding enough from developing economies like China, and the United States pulling out of the 2015 Paris Agreement. Although the EU has made progress in cutting its emissions since the 1990s, not all Member States are equally on track to reach the targets of the 2020 Climate and Energy Package. Additionally there are disparities in ambition and weak areas between Member States, according to the Climate Action Network Europe’s report.

Furthermore, although there is growth in the clean economy and stricter regulations on fossil fuels, we are now faced with a growing discontent among consumers and taxpayers. These new energy frameworks and taxation policies can cause increases in everyday living costs, such as housing and fuel, which thus constraints consumers’ mobility. The ‘gilets jaunes’ movement in France highlights the anger that low-income groups feel towards this type of transition to clean energy.

What makes this unequal burden of climate legislation tough to tackle is the number of characteristics determining how different income groups are affected by a given climate policy. Characteristics that can play a role include gender, nationality, wealth, income, ethnicity, region, job and educational level. The level of these inequalities also vary from country to country.

One of the key factors contributing to the extent of global greenhouse emissions is the use of non-renewable energy sources. Though renewable energy sources are becoming cheaper and more accessible, the energy sector is still very much dependant on fossil fuels. This makes the transition to clean energy tough for all socio-economic groups, but especially for those already at a disadvantage. Estimates explain that between 2014 and 2016 the use of fossil fuels in Europe has been supported by 112 billion euros.

And while the renewable energy industry is growing at a rapid pace, jobs are lost in the fossil fuel industries. The fossil fuel sector provided jobs for 30 million people globally in 2017, and is set to lose 8.6 million jobs by 2050, presenting the challenge of transitioning millions of workers to new jobs. The fossil fuel industry has not stopped lobbying either, the world’s five largest listed oil and gas companies have spent more than 1 billion US dollars lobbying for their industry since the Paris Agreement was signed. Additionally, despite sustainable business models and new technologies gaining momentum in private companies, the course of action in the financial sector has not shifted hugely towards sustainability.

Terms and Concepts

- **Global warming** is a long-term rise in the average temperature of the Earth’s climate system. It is an aspect of climate change demonstrated by temperature measurements and the multiple effects of said warming. The term is mostly used to refer to the human-caused observed warming since pre-industrial times and its

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2 Countries such as Ireland and Malta are still struggling to achieve parts of the 2020 climate and energy targets according to Overall progress towards the European Union’s ‘20-20-20’ climate and energy targets, European Environmental Agency, August 2018

3 10 Trends Reshaping Climate and Energy, European Political Strategy Centre, December 2018
projected continuation. Although there have been previous periods of global warming, they have not been caused by human actions.

- **Greenhouse gases (GHGs)** are gases that contribute to the greenhouse effect by absorbing and emitting radiation within the thermal infrared range. Carbon dioxide, chlorofluorocarbons and methane are common examples that are present on Earth.

- **Greenhouse effect** is a process whereby radiation from the Earth’s atmosphere warms the surface to a temperature above what it would be without its atmosphere. This process is needed to support life on Earth, as greenhouse gases in the Earth’s atmosphere radiate energy back towards the surface, thus warming it. Human actions such as the burning of fossil fuels and deforestation have intensified the greenhouse effect, causing global warming.

- **Decarbonisation** of the power sector refers to the reduction of its carbon intensity (the emissions per unit of electricity generated). A gradual decarbonisation of the power sector can be achieved by increasing the share of low-carbon energy sources like renewables.

- **Green or clean economy** refers to an economy in which economic growth and environmental responsibility work together in a mutually reinforcing fashion while supporting progress on social development.

- **Carbon footprint** is the full quantity of greenhouse gases that can be attributed to an individual, a plant, a company, a product or an economy.

- **Carbon markets** are organised and bilateral transactions through which countries trade credits received for greenhouse-gas emission reductions, such as the EU ETS.

- **Clean energy or renewable energy** refers to energy sources that do not pollute the atmosphere when used, such as solar or wind power. These types of energy sources are also naturally replenishable.

- **Green regulation or climate legislation** are terms used to describe legislation that either is directly in line with existing climate strategies or legislation indirectly tackling climate change.

### Stakeholders

**The European Commission** is an institution of the European Union that is responsible for proposing legislation and implementing decisions, such as the 2020, 2030 and 2050 climate and energy frameworks. The European Commission carries out various projects and legislation regarding climate change and renewable energy, in different policy areas such as transport emissions, climate and energy targets and climate change adaptation.

**Countries all across the globe** are all part of the bigger puzzle of tackling climate change effectively. Each nation has its own legislation, targets to reach and interests regarding climate change, the transition to clean energy and green economy. Globally, national governments’ efforts vary greatly. EU Member States are tackling global warming and carrying out many preventative measures, whereas many developing countries do not have the same legislation in place. The varying histories of each country have shaped the circumstances in which each currently operates and their scope for action. This must be taken into account.

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4 Definition outlined in the ‘Green Economy Roadmap’, published by the International Chamber of Commerce (ICC), June 2012

5 European Union’s Climate policy areas
For example, many Member States vary in terms of energy consumption by fuel type⁶ and have access to different types of renewable energy sources.

The Intergovernmental Panel on Climate Change (IPCC)⁷ is a major international body for assessing the science related to climate change. They provide policymakers with regular assessments of the scientific basis of climate change, its impacts and future risks, and options for adaptation and mitigation. IPCC produces scientific reports such as the ‘Special Report on Global Warming of 1.5 °C (SR15)’ for governments at all levels to develop climate-related policies.

The United Nations Framework Convention on Climate Change (UNFCCC)⁸ is a part of the United Nations (UN) framework. The UNFCCC secretariat was established in 1992 when countries adopted the UN Climate Change convention. It aims to strengthen international cooperation on climate change and keep global warming to a minimum. Their work includes the Kyoto Protocol in 1995 and the Paris Agreement in 2015.

The European Environment Agency (EEA) is an agency of the European Union, which provides independent information on environmental issues in Europe. The EEA provides timely, targeted, relevant and reliable information to policymakers and the public via both publications and data, such as the report tracking progress towards Europe’s 2030 climate and energy targets.

Measures in Place

The 2020 climate and energy package of the European Union is a combination of climate and energy targets for the year 2020 and the binding legislation to ensure those targets are met. The latest figures show that the EU is on track to meet the targets. The key targets are to achieve a 20% cut in greenhouse gas emissions from 1990 levels, 20% of EU energy coming from renewable energy sources, and a 20% improvement in energy efficiency. The targets were set by EU leaders in 2007 and enacted in legislation in 2009. The relevant legislation to the 2020 climate and energy package consists of Revised Emissions Trading System Directive (ETS) (2003/87/EC, 2009/29/EC), Effort Sharing Decision (ESD) (406/2009/EC), Carbon Capture and Storage Directive (2009/31/EC) and the Renewable Energy Directive (2009/28/EC).

The EU’s Emissions Trading System (ETS) works on the ‘cap and trade’ principle. An EU wide cap is set on the total amount of certain greenhouse gases that can be emitted by installations covered by the system. The cap is reduced over time so that total emissions fall. Within the cap, companies receive or buy emission allowances which they can trade with one another through the carbon market. Participation in the EU ETS is mandatory for companies in the sectors that the ETS covers, but in some sectors only plants above a certain size are included. Smaller installations can be excluded if national governments put in place fiscal or other measures that will cut their emissions by an equivalent amount.

The system is currently in phase 3 (2013-2020), and phase 4 (2021-2030) was revised in early 2018 to enable it to achieve the 2030 emission reduction targets in line with the 2030 climate and energy policy framework, and as part of the EU’s contribution to the Paris Agreement.

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⁶ Primary energy consumption by fuel, European Environmental Agency, December 2018
⁷ The website for Intergovernmental Panel on Climate Change (IPCC)
⁸ The website for United Nations Framework Convention on Climate Change (UNFCCC)
The 2030 climate and energy framework commits the EU to reducing total greenhouse gas emissions by at least 40% by 2030, compared to 1990. The share of renewable energy in the EU is to be increased by 32% and energy efficiency improved by 32.5%. The framework was adopted by the European Council in October 2014.

It is the EU’s contribution to the emission reductions expected by the Paris Agreement. The target is divided between the emissions trading sector at an EU level and in non-emissions trading sectors at a national level. The reduction target compared to 2005 in the emissions trading sector is 43% and 30% in the non-emissions trading sector. The 2030 package also contains the targets and measures for the land use, land use change and forestry sector (LULUCF), unlike its predecessor.


The Paris Agreement was adopted in December 2015, and presents long-term goals to limit global warming to 1.5°C, since this would significantly reduce risks and the impacts of the climate crisis, and the need for global emissions to peak as soon as possible. It also aims to undertake rapid reductions in said emissions in accordance with the latest science. Countries signing the agreement have also submitted national climate action plans. However, these self-assigned national targets are not legally binding, unlike those of its predecessor, the Kyoto Protocol. Furthermore, there are currently no punitive measures in place in case of non-compliance, but the regular review and submission of emission reduction targets of the agreement are binding.

The 2050 long term strategy is the European Commission’s call for a climate-neutral Europe and competitive low-carbon economy by 2050. The strategy’s aim is to reduce greenhouse gas emissions by at least 80% below 1990 levels by 2050. The ‘Clean Planet for all’ vision of the European Commission defines a vision towards a low-emission, climate-friendly and competitive Europe. Despite the targets’ alignment with the Paris Agreement, there is still very little legislation in place to achieve these goals.

The European Union’s Clean energy for all Europeans package consists of eight legislative acts and is set to enter into force during 2019. The package will aim to ensure a clean and fair energy transition at all levels of the economy to facilitate the necessary public and private investment in the energy transition towards renewable energy sources. The policy areas of the strategy are energy performance in buildings, renewable energy, energy efficiency, governance regulation and electricity market design.

The package includes a requirement for each Member State to draft integrated 10-year national energy and climate plans (NECPs) for 2021 to 2030, outlining how they will achieve their respective targets on the climate and energy strategies, including a longer-term view towards 2050. With the regulation in force since December 2018, all Member States have submitted their draft NECPs, and the European Commission is currently analysing each draft NECP and will provide country-specific recommendations.

Outlook

Despite the climate crisis being an incredibly complex matter, it is an issue that countries globally must tackle. While climate policies can have their drawbacks, non-action cannot be the answer.
Non-action will make everybody worse off and put low-income groups in an even more vulnerable position. Drafting strong but fair climate and energy legislation is now needed more than ever, alongside new research and innovations in low-carbon technology. As the EU is currently in the process of mapping out the legislation for its long term 2050 strategy and aligning its policies with the Paris Agreement, **what kind of legislation should it enact to ensure a fair transition to a cleaner future?**

How can the EU foster global cooperation and climate policy practice exchange? Can compensation address the inequalities of carbon taxes? What kind of support schemes should be in place to ease the transition to clean energy? What kind of new low carbon technologies could help the matter? What kind of role will innovation and research play in tackling the climate crisis?

**Want to know more? The following links will guide you...**

- [A video explaining current situation of American climate policy and how emissions trade works](Last Week Tonight Youtube channel, May 2019)
- [10 trends reshaping climate and energy in Europe](by European Political Strategy Centre, December 2018)
- [An interactive article on Paris Agreement targets](by The New York Times, December 2018)
- [A report on the distributional effects of climate policies](by Bruegel, November 2018)
- [Watch Bill Nye explain the climate crisis](National Geographic Youtube channel, 2015)
- [Where are we at with all these targets, European Environmental Agency tells you](European Environmental Agency, November 2018)
- [Current National Energy and Climate plans by EU Member States](European Commission website, 2019)
- [Euractiv article on innovations as part of a climate neutral Europe by 2050](Jakop Dalunde and Peter Sweatman for Euractiv, December 2018)
- [The IPCC special report on Global Warming of 1.5 °C](by the Intergovermental Panel on Climate Change, October 2018)
“Be careful what you medicate for: With antimicrobial resistance (AMR) being responsible for an estimated 33,000 deaths per year in Europe, how should Member States and the EU respond to the overuse of antibiotics?”

Chaired by: Tim Weber (SI)
“By 2050 Antimicrobial resistance will be the leading cause of death worldwide.”
- Federico Kukso, Editor Scientific American ES

Relevance of the Topic

Since the discovery of penicillin by Alexander Fleming in 1928, the medical field has gone through a revolution. Before the discovery, bacteria-borne diseases, such as strep throat or an infected paper cut could have resulted in death, and routine surgical procedures such as a biopsy posed a high risk due to possible infections. However, the bliss and prospect of living in a bacteria-free world quickly faded.

Fleming warned of the misuse of antibiotics and the threat of growing antimicrobial resistance (AMR) as early as 1945 but not much was done to prevent it. Antimicrobial resistance is a natural phenomenon that occurs due to selection pressures of cohabitating microbial species; however, it is greatly propagated by human activities. Even today AMR is annually responsible for 33,000 deaths in the EU, costing 1.5 billion EUR in lost productivity. The World Bank has warned that AMR could cause an economic crisis on par with the 2008 recession. In general, more antibiotics in the environment lead to a greater number of AMR, as about 90% of antibiotics consumed by mammals do not get absorbed by their metabolism. Since the 1990s there has been an observable decline in the number of new classes of antibiotics being discovered. In fact, since 2009 and the introduction of Lipoglycopeptide class1 there have been no new discoveries of antibiotic agents. Figure 1 shows the timeline of the development of the most successful antibiotic classes and their modifications, as well as their first documented resistance. It should be noted that scientists have now documented resistance to all known antibiotics. With the decline in medical trials, lack of research papers published and limited resources, it is now clear that the existing classes of antibiotics are probably the best we will ever have.

1 Lipoglycopeptides are a class of antibiotic. Antibiotics are biochemically divided into classes by their structure.
These resistance genes could, in theory, spread, and could lead to a “superbug” that would have the potential to cause as much harm as the black death in the 14th century, cutting the population in half.

Furthermore, it is important to consider the modern healthcare system in the context of antimicrobial resistance. Before antibiotics, healthcare was mainly preoccupied with treating and managing infections; however, since the “elimination” of the microbial threat, antibiotics have become a foundation to treating chronic diseases. Antimicrobials are given routinely to prevent infections during surgical care, caesarean section and are a pivotal component of cancer treatment. Saying that AMR will return us to the pre-antibiotic era is an optimistic statement. Throughout our entire life span antibiotics safeguard the health of our societies. Any cost-benefit analysis needs to consider all treatment beyond primary infection.

Terms and Concepts

“A population of organisms that show hereditary variation in reproductive capacity will evolve by natural selection” - Charles Darwin (paraphrased)

Antimicrobial resistance (AMR): the ability of a microorganism (like bacteria, viruses, and some parasites) to stop an antimicrobial (such as antibiotics, antivirals and antimalarials) from working against it. As a result, standard treatments become ineffective, infections persist and may spread to others.

Commensal flora/microflora: (normal microflora, indigenous microbiota) consists of those microorganisms, which are present on body surfaces covered by epithelial cells and are exposed to the external environment (gastrointestinal and respiratory tract, vagina, skin etc.) and normally does not cause harm or is even beneficial to the host.

Hospital acquired infections: An infection caught while hospitalised. The medical term for a hospital-acquired infection is nosocomial. Since antibiotics are frequently used within hospitals, the types of bacteria and their resistance to antibiotics is different than bacteria outside of the hospital. Nosocomial infections can be serious and difficult to treat. Infections acquired outside a hospital setting are described as Community acquired infections.

Antibiotics (antibiotic agents): Any substance that inhibits the growth and replication of a bacterium or kills it outright can be called an antibiotic. Antibiotics are a type of antimicrobial designed to target bacterial infections within (or on) the body. Importantly the term antibiotic refers to medicine targeting bacteria exclusively. They are generally divided into broad spectrum and narrow spectrum antibiotics.

Bacteria are generally divided via their cell structures into Gram positive and Gram negative; the difference being in their membrane structure.
Broad spectrum antibiotics target large bacterial groups not discriminating between commensal flora and harmful bacteria; whereas narrow spectrum antibiotics target a specific strain or group of bacteria by exploiting a specific biochemical mechanism that the strain needs to function normally.

**Horizontal gene transfer:** also known as lateral gene transfer, refers to nonsexual transmission of genetic material between unrelated genomes; hence, horizontal gene transfer involves gene transfer across species boundaries. Figure 4 shows an example of conjugation, a common method of horizontal gene transfer.

**Mutation:** a spontaneous change in the DNA sequence within the gene that may lead to a change in the trait which it codes for. Any change in a single base pair may lead to a corresponding change in one or more of the amino acids for which it codes, which can then change the enzyme or cell structure that consequently changes the affinity or effective activity of the targeted antimicrobials.

Primary care: healthcare provided in the community for people making an initial approach to a medical practitioner or clinic for advice or treatment.

**Stakeholders**

The World Health Organisation (WHO) is the international organisation offering technical support for countries that request it in the fields of data collection and response preparation. It is also focused on promoting awareness on responsible antimicrobial agent use in collaboration with the Food and Agriculture Organisation (FAO) and the World Organisation for Animal Health (OIE).

The EU through its treaties upholds a level of human health protection, as well as its implementation and harmonisation within the Member States. The European Commission shares the legislative competence in the medical and veterinary sectors with the Member States through the article 4 of the Treaty of the Functioning of the EU.

Companies in the agricultural and pharmaceutical sectors are also key actors of the issue and need to be taken into account when considering new measures, as any legislation will have a direct effect on their day to day operations.
Measures in Place

In 2011 the European Commission committed to a 5-year plan that focused on key issues regarding AMR. Even though at the time it was praised as a step in the right direction and predicted to be a great success, subsequent studies and analyses have shown that the measures taken have not produced the sought-after results. A European Commission prepared review found that it was, and still is relevant, yet the approaches taken were misguided or yet to be implemented. Eurostat has independently corroborated some of the claims as well.

The European One Health action plan against AMR is the newest legislative framework proposed by the European Commission in June 2017. It aims to fix all the problems regarding AMR in the EU and further position the Union as the world leader in the fight against AMR. It is vast and encompasses important areas; however, it is also extremely vague and leaves a lot of room for improvement.

The Davos Declaration is a declaration under the patronage of The International Federation of Pharmaceutical Manufacturers & Associations (IFPMA) signed by over 100 parties (companies and industry associations) from 21 countries with the aim of focusing private interests in order to combat AMR.

Fundamental Considerations

People who should know better.

The main driving forces behind the growing AMR are misuse of antibiotics by the agricultural sector and irresponsible/ill-informed use of antibiotics in medicine. Although the EU banned the use of antibiotics in animal husbandry back in 2003, farmers circumnavigated the ban by heavily relying on veterinary prescriptions to supplement prophylaxis. In 2013 German pig farmers administered 1734 tonnes of antibiotics to livestock - twice as much as was received by the German population and, even though the situation is improving year by year, experts agree it is still not enough. Further, it has been suggested that use of some pesticides may contribute to AMR and calls for regulation on the subject have largely been ignored. Many studies have also discovered a positive correlation between the usage of antibiotics and increasing antimicrobial resistance. Many doctors and scientists are alarmed by the fact that most antibiotics prescribed are broad spectrum, meaning that there was a lack of proper diagnosis. Statistics show that 1/3 of Europeans have taken antibiotics in the last 12 months and even though on average the usage of antibiotics is declining, some Member States reported increased consumption. Further, nearly 2/3 of Europeans were not aware that antibiotics are ineffective against viruses and nearly 1/2 said they would take antibiotics to treat cold and flu (both viral diseases).
Lack of Consensus.
Telling patients to stop taking antibiotics when they feel better may in fact be preferable to instructing them to finish the course, according to a group of experts who argue that the rule long embedded in the minds of doctors and the public is wrong and should be overturned. The study recently published in the prestigious British Medical Journal is one of the best examples of lacking data, as progress is painfully slow despite the urgency of the matter. It should be noted that the claims are yet to be independently corroborated.

Lack of financial incentive in the private sector.
Developing new medicine is an expensive and long lasting, but also lucrative business, with a successful drug being able to bring up to a billion euros to the company that has developed it. It is often a high risk – high reward game, as not all developed drugs pass the rigorous testing and bureaucracy to reach the market. Companies are thus incentivised to develop drugs which will be used as often as possible generating profits in the process. As awareness grows, demand for antibiotics falls, and companies lose interest. This has resulted in the fact that 15 out of 18 global pharmaceutical companies have terminated all antibiotic research.

Antivax to the max.
Although several interventions have been put in place in healthcare systems to mitigate the effects of AMR vaccinations, probably none have as large of a success as vaccination. It is a valuable tool as it trains the immune system to rapidly respond to any future infection preventing the disease from taking root and decreasing its severity. This can further protect individuals who have a compromised immune system by providing herd immunity. Herd immunity is described in epidemiological terms as the state at which 90% (some cases 95%) of the populations is immune to an infectious agent, thus preventing the spread of the disease. However, with the increase in the vaccine hesitancy movement across global communities, this sure-fire way of antimicrobial defence is now listed as one of the biggest global health threats by the WHO. Many parents lack access to accurate information regarding vaccination and are subject to the spread of malicious influence of disinformation campaigns on social media.

Outlook
"We have reached a critical point and must act now on a global scale to slow down antimicrobial resistance" – Professor Dame Sally Davies, UK Chief Medical Officer

Understanding the great peril that AMR poses is only the first step that will hopefully lead to further actions. The 2017 One Health Action Plan is a great stepping stone and serves as an excellent legislative framework for the EU to work in. As AMR does not respect borders, it should be treated as not only an international, but a truly global issue. Thankfully, in the last 5 years the issue is being discussed more and more, and awareness among European citizens is spreading. Regrettfully, as we have seen with issues such as climate change, the problem continues to take a back seat in the face of more “pressing issues”. Research and development focused at helping to solve the issue could, in addition to maintaining our current lifestyles, help with the further economic growth. Alternatives to antibiotics already exist and adapting them to the wider marked could present a unique opportunity for the EU to lead world innovation. Nevertheless, antibiotics are so cheap, readily available and ingrained into our society that their replacement will take significant efforts.

Mandate of the ENVI II committee
The 2016 Report and recommendation by the UK AMR review commission together with the 2017 One Health Action Plan represent the framework for tackling the main issues related to AMR. They represent the culmina-
tion of research done by leading experts on global healthcare, veterinary science, agriculture experts, etc. The goal of the committee will be to further expand on the aforementioned recommendations in order to find the best specific solutions to combat the threat of AMR.

Want to know more? The following links will guide you

**LET’S GET YOU STARTED**

*How Bacteria Rule Over Your Body* – The Microbiome, a video by Kurzgesagt, 2017 - An overview of the collaboration between microbes and humans.

*The Antibiotic Apocalypse Explained*, a video by Kurzgesagt, 2016 - A short introduction video covering the basics of AMR.

*Attack of the Super Bugs*, a video by SciShow, 2014 - A Short history of Antibiotics and the rise of AMR.

**WORKBOOK LINKS**

*Maryn McKenna: What do we do when antibiotics don’t work any more?,* a talk by Maryn McKenna, 2015 - A summary of the current AMR situation.

*The Antibiotic Resistance Crisis, a paper by C. Lee Ventola, 2015* - A scientific paper discussing causes and threats of AMR.

*Antimicrobial Resistance: The End of Modern Medicine? with Dame Sally Davies*, a lecture by Dame Sally Davies the chief medical officer in the UK, 2017 - An excellent lecture discussing modern medicine in the context of AMR.

**SEMINAL DOCUMENTS**

This is what we will base our committee work on.

*TACKLING DRUG-RESISTANT INFECTIONS GLOBALLY: FINAL REPORT AND RECOMMENDATIONS*, a report by AMR Review, 2016 - final report on the state of AMR and measures to be implemented.

*A European One Health Action Plan against Antimicrobial Resistance*, an action plan by the European Commission, 2017 - The action plan of the EU to tackle AMR long term

**THINKING OUTSIDE THE BOX**

*The Virus That Kills Drug-Resistant Superbugs*, a video by Motherboard, 2017 - A short video detailing the application of phages as an antibiotic alternative.
Committee on
INTERNAL MARKET AND
CONSUMER PROTECTION

“Precautionary vs innovation principle: With some businesses calling for Horizon Europe to move away from the precautionary principle to the innovation principle, how should the EU look to balance stimulating market and scientific innovation while ensuring consumers remain protected?”

Chaired by: Alexandru Raicu (RO)
Relevance of the Topic

More than 60 years of the European Union’s history have shown its predisposition to favour safety and precaution over risk-taking, an essential quality that has since been enshrined in the EU treaties under the name of the precautionary principle. In essence, this standard requires regulators to carefully consider whether a technology or activity is safe or not, before making it available to the public. This has meant stricter regulations and slower implementation of emerging technologies, much to the displeasure of highly regulated industries, whose products can prove harmful to human health or the environment: tobacco, pesticides, fossil fuels, plastics, etc.

In response, the European Risk Forum (ERF), a think tank that addresses the risks and benefits of new technologies, has pushed the adoption by the EU of the innovation principle, as a means of boosting innovation in all new policies and plans. This standard could lift the supposed barrier to scientific and technological development, which has caused economic loss for the EU. While promising to establish “a framework more geared to invention”, the principle would also approve of products and substances with yet unknown effects on human health, to the detriment of the precautionary principle.

Already part of Horizon Europe, the EU’s next research programme, the innovation principle poses a threat to citizens’ wellbeing by deregulating the so-called “risky industries”. At the same time, it is through this principle that many hope the EU will be more open to innovation and change, leading to economic growth and job creation. To strike the balance between innovation and precaution is to ensure the complementarity between the two principles, paving the way for a European Union that is ready for the future, while respecting its citizens’ safety.

Measures in Place

Precautionary principle - Formally adopted in the Maastricht Treaty¹ in 1992 and enshrined in the Article 191(2) of the Treaty on the Functioning of the EU² in 2007, this legal standard encourages modernisation, in a rational and prudent manner, prioritising citizens’ health and wellbeing over scientific development. It enables regulators to take action against possibly unsafe products without the need to wait for absolute scientific certainty on their risks. It is one of the main principles on which EU environmental policy is based, and has four central components:

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¹ The Maastricht Treaty (officially the Treaty on European Union) is the legal agreement which founded the EU and adopted the precautionary principle.
² The Treaty on the Functioning of the EU (originating as the Treaty of Rome) is the legal protocol that forms the detailed basis of EU law. Article 191(2) imposes an obligation on EU institutions to ensure that EU environmental policy is based on the precautionary principle. Together with the Maastricht Treaty, they form the constitutional basis of the European Union.
1. Taking preventive action in the face of uncertainty;
2. Shifting the burden of proof to the proponents of an activity;
3. Exploring a wide range of alternatives to possibly harmful actions;
4. Increasing public participation in decision making.

**Innovation principle** - Introduced by the ERF in 2013 "with the support of CEOs from twenty-two of the world's largest corporate investors in innovation", this principle functions as a tool to shape legislation in a way that favours advancements. It promises that the European Commission will take into account how much its initiatives affect innovation, and ensures that the regulatory framework in Europe is innovation-friendly: "whenever legislation is under consideration, its impact on innovation should be assessed and addressed".

**Terms and Concepts**

**Deregulation** - The removal of regulations and restrictions from a business or other activity. In the context of innovation, deregulating very restricted industries refers to laxer market authorisation of possibly high-risk products.

**Risky industries** - Tobacco, chemicals, fossil fuels, pesticides, plastics, pharmaceuticals, novel foods\(^3\), nanoproducts, mining, are all industries which seek deregulation as a means to keep their products on the market, showing a lack of proper concern towards environmental hazards. Together they form corporate lobby groups that can pressure the EU into more business-friendly legislation.

**Corporate lobbying** - The act of attempting to influence the actions, policies and decisions taken by high officials and government leaders to favour one or more companies. The existence of corporate lobbying on EU policy making has long been a reality\(^4\) and risky industries have played a significant part in lobbying the EU to adopt the new innovation principle. While lobbying is an important and integral part of decision-making in the EU, it is used by corporations and organisations, such as the European Chemical Industry Council, to undermine key policies protecting human health and the environment, giving emerging technologies greater legislative leeway.

**Emerging technologies** - A term defining the technologies that are currently being developed, or that are expected to be available within the next 5 to 10 years, which are likely to create significant social or economic effects. Together with the new opportunities that they generated, these developments can also cause legal, environmental and health challenges.

**Business experimentation** - The idea that businesses should carry out rigorous experiments to test new products or business programmes, before officially launching them\(^5\), as a means of assessing their possible risks. If encouraged and financially supported, the notion of careful testing could not only boost innovation and economic growth, but do so securely.

**Risk assessment** - A term used to describe the process of identifying, evaluating and eliminating the risk factors that are involved in any given activity. Formally a task of the ERF, risk assessment is a valid application of the precautionary principle.

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\(^3\) As defined by the European Commission, novel food is “food that had not been consumed to a significant degree by humans in the EU before 15 May 1997”. The term covers food produced using new technologies, which need pre-market authorisation to ensure consumer protection.

\(^4\) Lobbying is a billion-euro industry in Brussels and this [guide](#) explains the many methods of corporate lobbying in the EU.

\(^5\) ‘The Discipline of Business Experimentation’.
**Stakeholders**

**European Risk Forum (ERF)** - Officially a not-for-profit think tank, the ERF is a corporate lobby platform that supports risk assessment and risk management decisions by EU institutions. It introduced the innovation principle in 2013, as a way for Europe to weigh up approvals of digital technologies which would be beneficial for the general public. This intent is doubted by many, as members of the ERF include US oil giant Chevron, Russia’s largest precious metals producer and pesticide producers, such as DowDuPont, Bayer and BASF, all multinational corporations from the risky sectors. In addition, members of the ERF have, in the past, sought to apply the innovation principle in order to weaken the REACH regulation which is intended to regulate dangerous chemicals, as well as to prevent the ban of potent pesticides, which were ultimately banned by the EU.

**Consumer Protection Cooperation (CPC)** - A network of authorities seeking to protect consumers’ rights in the EU and the European Economic Area (EEA). The collaboration is created by linking national authorities to form a European enforcement network, which together seek out and identify breaches of EU consumer law in a particular sector. In the case of deregulation of a particular product or activity to the point that it affects the consumer, the CPC can urge the guilty party to take corrective action.

**European Research Council (ERC)** - A public body responsible for funding quality research in Europe, driven by investigators, not politicians, taking special interest in research targeted at new and emerging issues confronting society. It is also part of the Open Science pillar for Horizon Europe, which supports research projects that are “defined and driven by researchers themselves”. Such a body could boost European innovation, moving the spotlight away from risky practices and towards safe and useful advances in all sectors.

**Fundamental Challenges**

The underlying conflict that gives legitimacy to the issue is the EU’s simultaneous necessity of both innovation and precaution. 2018 has shown that, despite the steady increase in the Union’s innovation performance, closing the gap between the EU and its key competitors (the United States, Canada, Japan) is still a far cry from actually happening. As such, innovation actually needs more support from the EU, if the Union wants to remain competitive. At the same time, the precautionary principle is not applied enough, with the Commission deliberately ignoring scientific uncertainty and the irreversible harm that some chemicals might cause, because the ERF is trying to keep them on the market. The EU needs innovation, but it needs to tread carefully.

One of the first steps towards a more advanced economy, supported by emerging technologies and research-driven products, is the supporting of entrepreneurship and of founding new companies. None of the world’s ten most innovative firms are based in the EU - 9 are in the US and 1 is South Korean. The reason: the EU is not a sufficiently entrepreneur-friendly environment. While insufficient venture capital greatly contributes to the issue, the problem mainly stems from the administrative hurdles that businesses have to face in order to start their activity and put their products and services on the market. What prevents the EU from reducing the amount of administrative obstacles regarding innovation is, on account of the precautionary principle, the insufficient scientific data on the possible risks of new technologies. One example is the EU’s position in regards to genetically modified crops, for which certification is almost impossible to obtain. As such, the EU is lagging behind the US and Asia in this field, despite there having been “no incident of unsafe food stemming from GMOs”, according to Dirk Hudig, Secretary General of the ERF.

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2. The European Innovation Scoreboard in 2018.
3. ‘The innovation principle trap’.
Hindered by the precautionary principle or not, EU companies have less incentive to invest towards innovation compared to their American and Asian counterparts.

Simultaneously, safeguarding public health and the environment is as essential as the push for development and change. While every measure taken to protect consumer rights is adopted to the benefit of the public, not the same can be said about emerging technologies: not all innovation is good innovation. The past has shown the hazards of seemingly beneficial technologies, such as chlorofluorocarbons (CFCs), asbestos and insecticides containing DDT, whose destructive effects still wreak havoc worldwide, despite all three being banned almost globally. Since the start of the century, thousands of extra skin cancers have surfaced as children grow up exposed to the higher levels of ultraviolet radiation penetrating the protective ozone layer through the hole created by CFCs, and the inhalation of asbestos dust has and continues to lead to thousands of cases of mesothelioma, one of the most painful and terminal cancers. Reports published by the European Environment Agency (EEA) have shown that significant damage could have been prevented with issues like asbestos and DDT, if a more precautionary approach had been followed.

Nevertheless, the great strides that have been made towards precaution in Europe, as a result of the aforementioned health hazards, are now at risk of becoming undermined, on the basis of them hindering innovation. In reality, industry has had a hard time proving that innovation is hampered by regulation or by the precautionary principle. On the contrary, regulation can encourage innovation and is beneficial for the public interest, as shown in this 2013 study by the Centre for International Environmental Law (CIEL), affirming that stricter laws bring new chemicals that are safer to the market. In spite of this evidence, the ERF and its members continue to cement the idea that risk-taking and deregulation are key methods to the issue of innovation in the EU and follow a strategy that can spell disaster for the future of the EU.

“Industry has very cleverly and quietly managed to get something that sounds like it could be legitimate into mainstream thought. You know: who’s against innovation, growth and jobs?” - Geert Van Calster, co-author of a paper on the dangers of the innovation principle.

**Outlook**

What is essential to remember is that innovation was never a goal, but rather a means to achieving social, economic or environmental purposes. Promoting any idea that undervalues the importance of consumer rights, environmental stability and long-term human safety defeats these purposes and one of the founding principles of the EU.

And yet, are the innovative aspects, commercial applications and consumer benefits of emerging technologies never worth the risk of decreasing the amount of regulations? Is there no chance for a scientific breakthrough to be so beneficial to society, that its risks, although dangerous, could be overlooked? What if that breakthrough has already been made, but strict regulations stop it from even reaching democratic debate, let alone the public eye? Has the EU single-mindedly torpedoed its future of innovation?

These questions and more are some of the disputes that the delegates of IMCO should consider in order to determine the stance the EU should take on the future of innovation in Europe.
Want to know more? The following links will guide you...

“Big business circles EU’s consumer protections”, an article for Politico, updated in April 2019 - This article presents the origins of the innovation principle, as well as its detrimental effect on the precautionary principle.

“The precautionary principle: decision-making under uncertainty”, a briefing by the Science Communication Unit for the EC, 2017 - This report details the role of the precautionary principle in law and policy, mentioning its past uses and possible future applications.

“The innovation principle is a regulatory Trojan horse from the industry”, an article written by the Greens/European Free Alliance, 2018 - This article pinpoints the exact risks involved with adopting the innovation principle, reaffirming the political group’s stance regarding safety in the EU.

“The EU dilemma: Precautionary Principle or Innovation?”, an article by GYT Analytics, 2017 - Written by a firm that consults companies on innovation, this article presents the other side of the story, specifically the precautionary principle’s impact on the EU’s economic loss.

“Comparing American and European Innovation Cultures”, a study by Stephen Ezell and Philipp Marxgut, 2015 - This study explains the concept of innovation culture and presents the differences in innovation between the US and the EU, with a focus on the importance of policy.

“European Businesses Need to Embrace Automation Before It’s Too Late”, an article for Entrepreneur Europe, 2018 - This article explains how emerging technologies such as Artificial Intelligence (AI) can support entrepreneurs and businesses in the EU, highlighting its slow adoption in the EU.

“Late lessons from early warnings: the precautionary principle 1896–2000”, a study by the European Environment Agency, 2001 - This study recounts the past hazards of human economic activities, which could have been avoided by applying the precautionary principle.
Committee on INTERNATIONAL TRADE

“TTIP repeat or clean slate: With the Council having adopted two new mandates for the European Commission to begin negotiating a trade agreement with the US, how should the EU approach the negotiations to avoid talks breaking down while not compromising its commitment to the multilateral rules-based system?”

Chaired by: Realdo Silaj (AL)
Relevance of the Topic

“... we have the legal right to impose tariffs on each other but the best would be not to do that, but to sit down together and say: ‘How can we manage this in the future? How can we set norms and standards for [airplane] subsidies also vis-à-vis the rest of the world?’”


Trade is a crucial activity that not only has shaped the course of development of our societies, but that plays an important role in maintaining our globalised system. International trade has an effect on employment, consumption, the environment. The impact trade is felt directly in the pockets of citizens across the globe. To facilitate the flow of trade, states party to the World Trade Organisation (WTO) have agreed on a set of regulations that allow parties to trade amongst each other without prejudice to individuals and entities. The European Union (EU) has one of the largest economies on the planet, and participates not only in the WTO but also follows its own standards in trade through the the European Single Market (ESM) and the Customs Union, making it one of the most sustainable markets in the world. As a trade actor in its own right, the EU has through the years signed trade agreements with several countries, allowing easier access to the markets of these countries for European goods and vice versa. Whilst the EU has signed a variety of other bilateral or multilateral trade agreements, a trade agreement between the EU and one of the world’s largest economies, the United States of America (US), has been on hold for at least the past 15 years.

Following the end of the Cold War the Transatlantic Agreement between the US and the EU in 1995 laid the groundwork for trade cooperation between the two entities. After years of discussions, it was in 2013 that the first tangible agreement was initiated in the form of the Transatlantic Trade and Investment Partnership (TTIP). This document enlisted a number of goods and services from the respective markets that would become more easily available for the citizens in the EU and the US. However these negotiations were met with controversy and many in the EU raised concern about the inclusion of some products, such as agricultural and manufactured goods, that would not adhere to the high quality and environmental standards set in the EU. This opposition eventually led to the delay, and ultimately collapse, of the negotiations.

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1 EU-US should find ‘negotiated solution’ to trade tensions, says Cecilia Malmström, an interview by EuroNews, May 7th 2019
2 Which are the world’s most sustainable investment markets?, a research by Schroders, May 17th 2019
Since the new US Administration under President Trump, tensions have further escalated with Trump immediately declaring in 2016 that he was walking away from the TTIP negotiations. Various measures on both fronts to pressure and balance the stakes in the negotiations followed until the July 2018 meeting between European Commission President Jean-Claude Juncker and President Trump, where a preliminary agreement for opening negotiations for a new EU-US trade deal was made.

The European Commission, following parliamentary opposition in the European Parliament and also pressure from European civil society, has already coined the provisions of TTIP as outdated. The opposing actors of the original agreement stand strong on defying trade agreements in the likes of TTIP as a threat to European standards when it comes to labour rights, food safety and the environment. They are also persistent in wanting more transparency in the negotiations. In March 2019, the Council approved new mandates for the European Commission to negotiate a limited trade agreement with the US. The new mandates move away from TTIP and represent the will of the Union to create a new, limited, trade agreement with the US which excludes agricultural goods, a much contested point from the original texts. In the light of the European Elections and formation of a new Commission, it remains important to see the new perspective of the EU-US trade agreement negotiations, building from the interests around the TTIP.

The real benefits for European citizens from the original TTIP deal are estimated to be comparatively low compared to the assessment of the possible negative effects on food safety, environment and labour safety. Noting this assessment, while keeping in mind the strategic relationship that the EU and US have in establishing a safer global environment for trade and the movement of goods and people, what form should the new draft-agreement between EU and US take? How should the European Commission lead the negotiations of a new trade agreement with the US, taking into account the diversity of voices inside the Union, with an emphasis on the positions of France and Germany? Particular attention towards these new negotiations is cast over the sustainability provisions of the deal, following the declaration by President Trump that the US will withdraw from the Paris Agreement while the EU is pushing towards sustainability in trade through the inclusion of Trade and Sustainable Development (TSD) clauses in its most recent trade agreements.

With the new European Commission and Parliament leading the Union towards new horizons in trade and international cooperation, this is the right moment for European citizens to make their voice heard. With the future of the Union under scrutiny following challenges to the core of its existence, the sail towards new Horizons becomes the headline of current and future issues at hand for the European Union and its leading institutions.

**Stakeholders**

**The Directorate General for Trade (DG Trade)** is the responsible department of the European Commission that manages the trade policy of the EU with countries beyond its borders. DG Trade and its head, the Commissioner on Trade (currently Cecilia Malmström) are in the lead of the negotiating group for the EU-US free trade agreement. As trade policy is an exclusive competence of the Union, DG Trade is the key referent from the European Commission for any issue related to trade agreements in place or in the process of being negotiated.

**The European Parliament** plays a crucial role in approving and amending the final forms of trade agreements with countries outside the EU. The Parliament’s Committee on International Trade (INTA) is responsible for overlooking trade agreements and presenting the Parliament’s opinion on them. As the voice of the European citizens, the Parliament is also part of the co-legislative process of approving the mandates of
the European Commission for negotiating trade deals, together with the Council. As part of the co-legislative procedures in the EU, the Council represents the voice of the Member States which are equally important in approving the next steps of the Commission towards new trade agreements.

The World Trade Organisation (WTO) is the international body that is responsible for the protection of international standards of trade and the offering of permissible specific exceptions. Its work is based upon the agreements of its members regarding the protection of trade regarding goods, services and intellectual property. In its core rests the commitment of WTO members for liberalisation of trade offering lower customs tariffs and other trade barriers. WTO is also the referent body for dispute settlement on issues of trade for its members.

Department of Commerce of the US Government is the responsible department for drafting and managing negotiations of trade agreements of the US Government. The International Trade Administration (ITA) is the institution within this department that has the mission and duty to represent the interest and values of the US businesses in international trade agreements. The US Senate is the Upper House in the US Congress which has the responsibility to give a final decision on the signing of new trade agreements which would later decide on the transposition of the agreement into US Federal Law.

Trade lobbies are professional groups of interest representation for international businesses and MCNs. These institutions represent the voice of the business industries to policymaking institutions such as the European Commission or the US Congress. Trade lobbies from the EU and the US most interested in the negotiations of the EU-US trade agreement are those representing the agricultural, pharmaceutical and industrial sectors.

European Non-Governmental Organisations (NGOs) are the main civil society actors that express the voice of European citizens to the policymaking institutions. NGOs have a crucial role in referring the public’s opinion on the most recent policy initiatives of the Union. With different areas of interest and missions, there are different NGOs from across the EU Member States and also European NGOs that have raised their concerns on the civil impact of a possible EU-US trade agreement in the fashion of TTIP.

European Ombudsman is an independent and impartial body that holds the EU’s institutions and agencies to account, and promotes good administration. The Ombudsman is active in assisting citizens, businesses and organisations face problems that might arise with the EU’s administration, by investigating complaints about maladministration by EU institutions and bodies, but also by proactively looking into broader systemic issues.

The Court of Justice of the European Union interprets EU law, ensuring it is applied in the same way in all EU countries, and settles legal disputes between national governments and EU institutions.

European Committee for Standardisation (CEN) is an association that brings together the standardisation agencies of 34 European countries and is recognised by the EU as the responsible institution for developing and defining voluntary standards for different products and services. The mission of CEN is to define the standards of operation for European actors in order to enhance competitiveness, facilitate global trade, improve the welfare of citizens and protect the environment.

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TTIP: No to backroom deals that would imperil our health, environment and welfare, article by Corporate Europe, April 2014
Terms and Concepts

A free trade agreement (FTA) is an agreement between two (bilateral) or more countries (multilateral) that establishes a free trade area where the trade of goods and services can be conducted across borders without tariffs or technical barriers. Member countries of such agreements usually impose a uniform tariff (common external tariff) on trade of goods and services with non-member countries.

Trade and Sustainable Development (TSD) are the overarching principles in the EU to promote sustainable development. EU trade policy aims to ensure that economic development goes hand in hand with social justice, respect for human rights, high labour standards, and high environmental standards. The promotion of TSD from the EU is achieved through the signing of trade agreements that encompass these values and principles, applicable also to the negotiation of the new EU-US trade agreement.

Regulatory cooperation is the defined process of interaction between US and EU regulators, founded on the benefits regulators can achieve through closer partnership, in order to achieve beneficial results for the citizens, societies, the environment, businesses and institutions of both parties. This regulatory cooperation aims at facilitating the process of the negotiation and agreement of the free trade deal between the EU and US, and serves as an overarching principle. It includes the concept of regulatory coherence which aims at good regulatory practices, transparency, and stakeholder engagement in a domestic regulatory process.

European Common Market or European Single Market (ESM) is the free area for trade and movement of goods, services, capital and labour across borders of the Members States of the EU and 4 other European countries. This area provides a single internal market for all the countries and it is managed and supervised closely by the Union itself. Under the ESM the European countries apply a common international trade policy which is ultimately governed by the will of Member States and the European Commission. The internal market has a rigorous set standards towards the quality of products and services offered across Member States with a highlight on the protection of local products and the sustainability of production and consumption. These European standards are considered as the highest in the world economy and are taken as an example in the drafting of international standards.

A mandate to the European Commission is the instruction given by the Council to the Commission on the scope of negotiations, as the body responsible for negotiating international agreements, which are then submitted to the Council with a view to their conclusion. Trade agreements are negotiated by the European Commission through the mandate provided by the Council in co-legislation with the European Parliament.

Fundamental Challenges

The nature of the TTIP agreement was as political as it was economic. The geostrategic importance of the deal was marked by the will of the EU to strengthen its transatlantic position with the US and to set a global standard on trade. While the agreement would have served the political aims of the EU and US, it overlooked aspects of the character of political decision making in the EU. After the draft agreement in 2014 was leaked, there were various demonstrations against the nature of the agreement inside the Union. The Commission was faced with criticism from MEPs and various civil society movements for its lack of full transparency in regards to the negotiations. A statement from the European Ombudsman solidified the concern of European citizens by stating that the Commission is indebted to publishing more information regarding the negotiations.

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4 European Economic Area (EEA) Countries: Lichtenstein, Norway, Iceland and Switzerland
of an agreement that might fundamentally affect the lives of European citizens. While Commissioner Malmström insisted that there had been full transparency on the different discourses with lobbies and interested actors on the new deal, documents published by the Commission itself reveal numerous unpublished meetings with US lobbyists. Following the collapse of the TTIP negotiations, transparency over the negotiations of the new EU-US trade agreement has been set as a cornerstone for political action in the Union and it remains a key issue to be faced during the negotiation of the new trade agreement.

Given the geostrategic importance of the agreement, the political discourse between the EU and the US escalated to a trade conflict once talks were discontinued. Following the 2016 halt of negotiations, President Trump issued tariffs on aluminium and steel imported from the EU as a way of pressuring the EU into the re-opening of the negotiations under US terms. The response from the EU was the adoption of a set of rebalancing measures by targeting the increase of tariffs for a mix of American goods including aluminium and steel, agricultural products and more. This rebalance, though justified by the Safeguards Agreement of the WTO, has spurred a new era of political tension between the EU and the US that continues to this moment. The most recent tweets from President Trump threatening the increase of tariffs on cars from the EU to enter the American market is a demonstration of the continued trade conflict. The EU and US represent the two largest markets in the globe (making up almost 40% of the world’s market share) and the increased tensions between the parties threatens the sustainability of global economy. To date, the risks of a full-on trade war are mitigated by the awareness, on both sides of the Atlantic, that a possible economic and political fracture could cause irreversible consequences in the world economy. With the measures and counter-measures from the US and the EU deterring imbalanced positions in the negotiation table, there is an increased importance in assessing what a political solution to the conflict might look like.

One of the most disputed aspects of the TTIP was the infringement of EU standards on food and agricultural products and the environmental risks they pose. Although with the halt of TTIP talks and the exclusion of agricultural products from the new negotiation mandates, the ghosts threatening the environmental standards of the EU have arisen following the Commission’s expressed will of importing US fracked gas and biofuel, as a means to attract the US to the negotiation table. As of September 2018, the EU is the main importer of US liquefied gas which has major negative effects to the environment and public health. With rising imports of US GMO soy into European factory farms, the public in the Union has also drawn attention to the unsustainability of such products for the environment. Furthermore the Commission’s will to clear the way for producing biofuel from such products states a clear movement towards satisfying US requests in the new trade deal, a position that is in contrast with the TSD principles of the Union.
Different civil society actors note that GMO soy and liquefied gas imports from the US lower the environmental standards in trade and have supported protests against such actions. European NGOs and institutes’ continue their efforts in the European Parliament to propose recommendations to the Commission against the increased import of environmentally dangerous US products, but with the European Elections having taken place at the end of May, and with the new mandates already approved, it may take some time for them to be able to voice their concerns.

A major concern across Member States is job security in Europe following the green light of a new EU-US agreement. Various European civil society organisations have argued that job security was undermined by the original EU-US deal, highlighting the risks posed to minimum labour standards agreed in the EU. Analysts in the Union have raised concern about the possible transfer of power to Brussels and corporate interests which would result in unfavourable conditions for European labourers going as far as coining the previous attempts of TTIP leading to modern-day serfdom. Research from the German Federal Ministry of Economics (through the Ifo Institute for Economic Research) estimated that up to 400,000 jobs could be created in the EU by TTIP but the real numbers of how many positions and where these would be created were very uncertain. Previous studies on the impact of a TTIP-like agreement on labour security in the EU have resulted in very low expectations or vague optimism on the effects of a TTIP-based deal. With the nature of the agreement including only the free movement of goods and services between the markets, labour conditions have been a detail that has received less attention during previous negotiations. This has amplified the voice of trade unions across Member States when it comes to the impact of a future trade deal for job standards. With the US only having ratified 3 out of the 8 WTO core labour standards regulations by 2017, the concern is real amidst the actors in the Union.

An investigation commissioned by the European Parliament in 2013 from the Ecologic Institute revealed a number of legal implications resulting from TTIP. With TTIP already discarded, the hot issue at hand for the new negotiations is the investor-state dispute settlement (ISDS) system. Although the Commission has pointed out its interest in moving away from ISDS and towards the utilisation of the new multilateral investment court system, civil actors in the Union are in distress over the final form of the dispute settlement provisions in the new EU-US trade agreement. ISDS mechanisms provide the right of private actors to bring their possible claims over violations of the agreement from states in forums outside the national courts of the Member States. Civil society and research institutions in the EU highlight the threat of ISDS’ on creating ‘private courts’ for corporations drawing from the Good Regulatory Practices (GRP) included in the EU-Canada, US-Mexico-Canada trade agreements and previously part of the TTIP. Most typically GPR chapters in trade agreements foresee voluntary or mandatory close collaboration of public servants on reducing or eliminating differences in domestic laws, policies, standards, regulations and testing procedures — including health, environmental and consumer protection, which might be factors that impede free trade. Various voices in EU and US are highlighting the risks of removing political or ethical considerations in the settlement of differences between international private investors and states, while the EU and the US executives have been careful in highlighting that the good regulatory practices serve the protection of interests of local businesses operating abroad and provide fairness and efficiency in dispute settlements.

Measures in Place

In November 2016, President Trump halted the negotiation process of the TTIP following the delays to the process. Between then and March 2019 there have been various attempts at re-opening the negotiations between the two sides due to political pressure from across the Atlantic. The meeting between President of the
European Commission Jean-Claude Juncker and President Trump in July 2018 concluded with the opening of a new era for the trade agreement between EU and US. In January 2019, the Commission proposed the draft mandates for the re-opening of the negotiations to the European Parliament and Member States. These mandates were focused on the negotiation directives for a trade agreement focused solely on industrial goods, excluding agricultural products, and conformity assessment, a measure that would help the removal of technical barriers for trade between the parties. Following the Commission’s proposals, the European Parliament voted in March 2019 against a resolution that sought to recommend to Member States not to endorse the new mandates. This failure means that the European Parliament does not issue an opinion on this particular matter and the decision to start negotiations is left to the Member States of the EU. This particular vote was the culmination of a long process of internal debate within the main institutions on the content and nature of the new trade agreement with the US.

The European Parliament and European Commission have issued investigations into the effects of the original TTIP agreement on the European Single Market. Research issued by the Ecological Institute has revealed that the implementation of TTIP could have had several legal implications including the superior role of the European Treaties over private investors in the ESM, probable issues regarding the regulatory differences for product treatments between the EU and US, and potential obstructions to the EU or Member States following the ISDS provision, with this having an an environmental impact. Another study issued by the Industry, Research and Energy Committee (ITRE) in the European Parliament in 2015, analyses the character of impact TTIP would have on the energy market and manufacturing industries. This study points out that the real impact of TTIP on the ESM might be limited and therefore have vague positive implications on the energy and manufacturing sectors. The European Commission in 2017 published a position paper on the Sustainability Impact Assessment (SIA) of the proposed TTIP, which highlighted the valuable effects of the original agreement for the European market. This position paper represents the official positive stance of the European Commission on the original TTIP texts while it underlines that the Commission has been open for further recommendations in the proceedings towards the conclusion of a trade agreement with the US.

The EU-Canada Comprehensive and Economic Trade Agreement (CETA) is the free trade agreement between the EU and Canada signed in October 2016. Parts of the agreements have entered into force following 21 September 2017, while the full agreement waits for ratification by all the national parliaments of Member States to enter into force. The provisions in CETA are similar to TTIP but with some crucial differences in the provisions regarding one of the most contested aspects of TTIP, non-tariff barriers. CETA does not alter the EU non-tariff barriers, while it reserves Canada and the EU the right to regulate freely in areas of protection of environment and public health. This agreement also includes provisions for ISDSs that could result in a precedent for the new free trade agreement between the EU and US. In principle, CETA provides Investment Protection to foreign investors, and guarantees a “fair and equitable treatment and full protection and security”

**Outlook**

The new trade agreement between the EU and US represents the initiative to set a global standard in trade, by opening the free movement of goods and services to nearly half of the global market. The nature of this proposed agreement comes as an economic pact that would support growth in both markets while it operationalises the strong political message behind strengthening the transatlantic position in the world. Following the historic cooperation of Europe and the US since the Second World War as a strong alliance providing stability in the international arena, the new transatlantic trade agreement would follow on such steps to open a new chapter in global trade.
The movement of China as a global economic superpower has drawn attention to the EU and US’ political and economic relations as a means to provide balance in the global economic and political map. While the personal positions of the EU and US take effect due to different internal and regional concerns, there are various reasons that deem the future EU-US trade agreement as a new era in global politics.

All the while different social and political movements inside the EU continue to maintain their opposition towards non-transparent international trade agreements. The efforts from the Commission to increase transparency by publishing several texts of negotiation processes at hand have for the moment made the process more transparent. What keeps the issue of transparency alive is the question of whether publishing such documents is enough or whether considerations should be taken for more inclusive practices that would boost transparency. With the European Elections having just taken place, the new Parliament seems to be headed towards a challenging future, with the rise of prominent conservative voices that are against globalised efforts in the national parliaments of Member States and the European Parliament itself. The effort to determine a fruitful and satisfactory agreement with the US has now shifted towards the public’s end with the Commission under scrutiny for its next steps. European citizens are following what comes next in the new negotiations process, while once more it is your voice as a European citizen that determines the common values for transparency, democracy and sustainability in local and international matters.

Want to know more? The following links will guide you...

“TTIP for dummies”, an article by Daniela Vincenti for Euractiv, 2015 – this article from 2015 explores in detail the TTIP and provides extensive background to the agreement around the time when the draft agreement was leaked and the European citizens were in need of thorough information about the deal.

“TTIP Explained” The Transatlantic Trade and Investment Partnership (TTIP), a video by IBT Partners, 2014 – this video explains the TTIP through a series of interactive graphs and includes objective insights into the agreement and the positions of the EU and US.

“Benefits of TTIP”, “Upholding Standards in TTIP” and “Transparency in TTIP”, a series of videos by the European Commission, 2014 – this series of short videos by the European Commission have been created with the aim to inform and assure the European public on the commitment of the Union to a fair deal for European citizens. Viewed after the long road to today’s situation of the new EU-US deal, it provides insights on the position of the Commission on the original TTIP.

“TTIP: What the US-EU trade deal means for your food”, a video by BBC News, 2015 – this video explains the possible effects of the original TTIP on the food products and market for European citizens, and stands as a medium to raise critical thinking of the public towards the provisions of the original deal.

“What is the Transatlantic Trade and Investment Partnership?”, a video by 38 Degrees, 2014 – this video represents the position of various European civil groups on the potential concerns and risks posed to EU citizens by the original TTIP.

“Report - Assessing the claimed benefits of TTIP”, a report by the Confederal Group of the European United Left/Nordic Green Left in the European Parliament (GUE/NGL), 2019 – this report analyses and discusses the claimed benefits of the TTIP.
“US: Economic indicators and trade with the EU”, an infographic by the European Parliament and GlobalStat, 2016 – this infographic is a detailed introduction of the relationship between EU and US and the factor driving to the negotiation of a trade agreement between the parties.

“Stop ISDS!”, a campaign by War on Want, 2019 – this is a campaign from the civil society organisation War on Want that not only strives to repair the ISDS provisions in the future trade deals of the EU but to eliminate ISDS arrangements from any such deals including the future EU-US one.

“Reasonable and Balanced Trade Agreement with the United States”, the legislative train by the European Parliament, 2019 – this interactive page from the European Parliament demonstrates the legal proceedings and the current state of progress through the European Union system of the different sections and chapters included in the original TTIP texts.

“Transatlantic Trade and Investment Partnership (TTIP)”, a web section by the Transatlantic Business Council, 2019 – this web section is referent to the overall positions, opinions and news on the view of TTIP from US institutions and policy-makers.

“TTIP reloaded: big business calls the shots on new EU-US trade talks.”, an article by Corporate Europe Observatory, 2019 – this article explains the concerns raised by civil society groups in the EU towards the larger access of corporations in the negotiation process of the new EU-US trade agreement and the lack of transparency from the Commission.

“Will corn, chicken and Champagne scuttle a US-EU trade deal?”, an article by Chuck Grassley for Politico Europe, 2019 – this article stresses the importance of the exclusion of agricultural products from the new mandates for negotiating the new deal of the European Commission, and the impact such measure can have for the future of the agreement.
"Digitalising Energy: To meet the rising demand for energy while still reaching emission reduction targets, technological innovation in the energy sector will be needed. How should the EU encourage digitalisation of the energy sector while preserving the cyber resilience of vital infrastructure?"

Chaired by: Jago Lynch (GB)
Relevance of the Topic

The digitalisation of the energy sector is something that the EU has committed to as part of the SET Plan, supported by the Strategic Energy Technologies Information System (SETIS). The process of digitalisation includes a few main areas. Firstly, the EU wants to give consumers more control over their usage and influence over power; secondly, the EU wants to create a system whereby energy can be stored, managed, and distributed in the most efficient way; and thirdly a commitment has been made that this must be achieved whilst also safeguarding against cyber attacks on these new digital energy systems, such as that seen in Ukraine in 2015, where hackers caused severe outages across the country.

The two main impacts the Union hopes to effect with this new plan are a reduction in energy wastage, and empowering consumers when it comes to controlling their own power usage. The former aim is a move in the direction that the EU has set out in its climate targets in the 2030 Climate and Energy Framework, and the commitment to radically reduce carbon usage by 2050. If – through digitalisation – the EU is able to reduce the wastage of energy and improve the sustainability of the energy sector it will help significantly in meeting its climate targets. This move towards sustainability will also be cemented in the minds of consumers by new digital energy systems allowing citizens to monitor and manage their own power usage and thereby be more conscientious with regards to their carbon footprint.

However, this digitalisation comes with the threat of compromised cyber security. Thus the European Union needs to not only focus on the efficiency that these new systems will bring, but also provide the necessary safeguards against potential attacks on energy networks. These attacks could prove to be catastrophic for business as they would result in huge power cuts and would essentially shut down the target grid or country for an unknowable amount of time. Therefore the question remains: how can the digitalisation of the energy sector be achieved whilst also being guarded against the kind of attacks that naturally come with a move towards a completely digital energy sector?

Terms and Concepts

Firstly it is important to note that this topic focuses on digitalisation rather than digitisation, both terms used by the EU in different sectors. Whilst digitisation refers to the concrete process of turning something – whether it be a document or a program – into a form of digital storage, digitalisation is more loosely defined but is generally accepted to describe a move towards a more digital society, where systems of governance and aspects of society become more reliant on Information Technology (IT).

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1 Digitalisation of the Energy sector, European Commission SETIS Magazine, May 2018
2 2030 climate & energy framework, European Commission
3 2050 long-term strategy, European Commission
Within the context of this topic digitalisation thus refers to the movement of European societies towards an energy sector that is controlled and monitored by digital systems.

This can include the increased use of technology such as **smart grids**. The European Union Commission Task Force for Smart Grids defines this technology as “an electricity network that can cost efficiently integrate the behaviour and actions of all users connected to it – generators, consumers and those that do both – in order to ensure economically efficient, sustainable power system with low losses and high levels of quality and security of supply and safety”. This includes the application of digital processing and communications to the power grid. Smart grids can include measures such as smart meters, smart appliances and renewable energy resources. With smart grids being able to automatically monitor energy flows, adjust to supply and demands, as well as monitor weather to better integrate renewable energy to the grid, they create the potential for consumers to lower their energy, as well as sell excess power back into the grid.

The movement to reliance on digital technology in the energy sector also leads to a greater risk to the **cyber security** of this new infrastructure. Within the context of the topic cyber security refers to the ability of digital technology to withstand attacks from governments and lone hackers such as the aforementioned 2015 Ukraine grid attack, which wiped out much of the country’s energy sector, with 225,000 homes being left without power.

Cyber security has to act as a safeguard for national **markets**, which rely heavily on the upkeep of the energy sector in order to run efficiently. Within the context of the topic there are multiple markets that are affected by the further digitalisation of the energy sector. Firstly, existing markets will undoubtedly be affected by the digitalisation of energy, and secondly, a new market focused on the management of a digitalised energy sector will also be made possible.

These companies are therefore key in the development of the digital sector, and especially in the further development of **sustainable** digital energy. As a part of the SET Plan the EU has not only committed to the digitalisation of the energy sector, but also the furthering of the sustainability of the sector. Within the context of the topic sustainability refers to the furthering of renewable energy infrastructure such as solar and wind power, these being the two major sources of renewable power in the EU.

**Stakeholders**

The primary stakeholder with regards to actually interacting with new energy measures are **consumers**. One of the EU’s main aims within its framework for the digitalisation of the energy sector is in allowing consumers to monitor and control their energy usage in order to make people more conscious with regards to their consumption of energy and also have more control over energy storage and wastage with regards to powering their homes and workplaces.

**Member States** are also major stakeholders in innovation within the energy sector, however energy is a shared competence of the EU, meaning Member States can only act if the EU has chosen not to. Both can adopt legally binding acts however Member States can only do this where the EU has not decided to exercise its competence. This means the **EU and its institutions** are naturally key stakeholders and the Commission has initiated legislation in a variety of areas when it comes to the internal market and clean energy. The Commission has so far also utilised various expert groups and bodies to contribute to work in this area such as the **Smart Grids Task Force, European Network and Information Security Agency (ENISA)** and the **Energy Expert Cyber Security Platform (EECSP)**.

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4. Expert Group 1: Functionalities of smart grids and smart meters, EU Commission Task Force for Smart Grids, September 2010
5. Smart grids and meters, European Commission
The **European Energy Research Alliance (EERA)** has also been set up as an association bringing together European public research centres and universities that work on low-carbon energy research. Its aim is to help streamline research efforts in order to facilitate the EU reaching its commitments under the Paris Agreement. It currently works on a number of joint programmes aligned with the SET-Plan.

However, whilst the EU and Member States both have power over how energy is produced and distributed in Europe, in many cases it is **private companies** that control the energy sector. Examples of companies such as these are 220 Energia in Estonia, and British Gas in the UK. If the digitalisation of the energy sector is to be successfully enacted in Member States then the cooperation of these companies is of the utmost importance. Cyber security companies may also need to be involved in this process in order to successfully protect these new systems of digital energy against attacks.

The relationship between these private companies and Member States also means that the **energy markets** and **digital markets** in European countries will have to change to a certain extent in order to make themselves fit for renewables, and for digitally managed energy production and usage. There are, however, questions as to how this market will manifest itself, with some plans focusing on local markets facilitating digital energy, whilst SETIS has instead proposed the need for a fully integrated European energy market.

### Fundamental Challenges

The main challenge of the topic is balancing the digitalisation of the energy sector with the natural technological risks that come with the movement away from traditional energy infrastructure. As proven in the case of the Ukraine attack a digitalised energy sector is at great risk of becoming compromised by cyber attacks, whether they be from a foreign governments targeting a country’s infrastructure, or from a lone hacker. As stated by SETIS, the digitalisation of the energy sector is central to the development and modernisation of Europe’s energy. However, this bold step forward cannot be achieved without the necessary safeguards that need to be in place to ensure that the digital energy systems can run efficiently without interference from third party malcontent.

This in turn throws up the challenge of finding a body that can provide cyber security for digital energy systems across Europe, whether this be a private company or an EU body. The new **EU Cybersecurity Act**, voted through by the European Parliament in March 2019, creates a permanent mandate for the ENISA to support the EU in achieving a common and high level of cyber security. The Act also establishes the first European-wide cyber security certification framework approach for the internal market. The main challenge now is to ensure this is properly implemented and utilised when it comes to energy systems. The Union needs to find a way to drive action when it comes to the development of cyber security within the new energy sector. The EECSP, was tasked with preparing an energy specific strategy on cyber security, and the Commission has also suggested developing a Network Code on Cyber Security to complement existing national rules as well as tackle cross-border issues. Further to this data protection will also be a challenge, given that connected systems will gather information about consumption patterns.

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7 Digitalisation of the Energy sector, European Commission SETIS Magazine, May 2018
8 Digitalisation of the energy system: why does it matter and how can Horizon 2020 contribute?, SETIS Magazine, European Commission, May 2018
9 Digitalisation of the energy system: why does it matter and how can Horizon 2020 contribute?, SETIS Magazine, European Commission, May 2018
10 SETIS in the Energy Union landscape, European Commission, May 2019
11 The Cybersecurity Act strengthens Europe’s cybersecurity, Digital Single Market, European Commission, March 2019
12 Smart grids and meters, European Commission
However, whilst there needs to be an in depth consideration of the cyber threat to the digitalisation of energy, there is also a sense that the development of the sector is to a certain extent urgent. With the climate changing rapidly and global warming being more of a danger year on year, any measures that might be able to aid decarbonisation and the responsible use of energy are in need of immediate attention. As demonstrated by the May 2019 call for immediate climate action a number of Member States and other European stakeholders, there is a call for the EU to undertake immediate plans to end the use of fossil fuels. Taking steps to aid this movement away from traditional fuel is therefore of urgent importance.

However, the fact that this development needs to happen so quickly means that governments and society will have to adapt quickly too, with regards to legislation and regulation. Not only will governments have to adapt to the need to protect and preserve new infrastructure, they will also need to adapt to the challenges that will come with the development of a new market and new opportunities for managing the usage of energy. Therefore one can see that whilst it is desirable for the Union to foster the movement towards the digitalisation of energy, there are also a number of challenges that stakeholders face in being able to support this innovation. Some of the more specific challenges relate to the fact that, from a technology perspective, many of the solutions already exist. Therefore the key is to find ways for these to operate so as to bring benefits to consumers. This includes building an ecosystem for innovation and supporting the implementation of initiatives such as the Clean Energy Package.

Measures in Place

The Energy Union is an EU framework designed to ensure the safe, viable and accessible supply of energy to all Europeans. It was launched by the European Commission in 2015, with the aim of providing consumers with secure, sustainable, competitive and affordable energy. The Energy Union strategy consists of five dimensions. These are security, solidarity and trust; a fully integrated internal market; energy efficiency; climate action; and research, innovation and competitiveness. In its Fourth Report on the state of the Energy Union, published in April 2019, it was stated that the Commission had fully delivered on its vision for the strategy.

The Clean energy for all Europeans package is part of the Energy Union Strategy and includes changes made to EU legislation to update the energy policy framework to bring this into line with the EU’s commitments under the Paris Agreement. The package consists of a total of eight legislative acts covering areas such as the energy performance of buildings, renewable energy, energy efficiency, governance and electricity market design.

A Clean Planet for All is a Commission Communication setting out a strategic long-term vision for how the EU will achieve a carbon neutral economy by 2050. The strategy outlines how the EU can lead the way by investing in realistic technological solutions. The strategy looks at action across seven areas: energy efficiency; deployment of renewables; clean, safe and connected mobility; competitive industry and circular economy; infrastructure and interconnections; bio-economy and natural carbon sinks; and carbon capture and storage to address remaining emissions.

The 2030 Climate and Energy Framework sets out the EU-wide targets and policy objectives for the period 2021-2030. The key targets include a 40% cut in greenhouse gas emissions, at least 32% share for renewable energy and at least a 32.5% improvement in energy efficiency. As part of the Framework, Member States are also obliged to adopt National Climate and Energy Plans (NECPs) for the same time period, 2021-2030, with the final versions to be submitted by the end of 2019.
The Strategic Energy Technologies Information System (SETIS) provides support for the effective strategic planning, conception and implementation of the European Energy Technology policy as well as monitoring and assessing the actions in the SET-Plan. The SET-Plan outlines the energy related research and innovation agenda for the EU. The 10 actions in the plan look to address the innovation chain and its finance and regulation. The Smart Appliances REFerence ontology (SAREF) sets out the reference language for energy-related data and will allow devices in the home to exchange information with any energy management system.

**Outlook**

There are a number of promising signs that we can effectively digitalise the energy sector in Europe in order to make it more sustainable and better suited for efficient energy management. However, there needs to be a wide ranging commitment to it in order to realise the goals set out by SETIS and the SET plan. Furthermore, whilst some of the technology to achieve digitalisation already exists, there is still a structural challenge when it comes to the creation of markets and platforms where network operators can buy services from connected consumers. In order to effectively achieve the aims of the topic there not only has to be the aforementioned commitment by Member States to digitalisation, but also a commitment to the research needed to create the requisite technology for widespread energy digitalisation.

Another key challenge will be how to best manage interoperability and data sharing. This applies to both smart homes and data exchange between consumers, suppliers, aggregators or service providers and network operators. As the energy grid moves to a model where it consists increasingly of heterogeneous interconnected systems, it will generate large volumes of data. This means that sectors such as electricity will need to be able to utilise big data tools to manage these flows. Technologies such as Artificial Intelligence (AI), High Performance Computing and blockchain could also be used to monitor and improve the efficiency of the energy system. Therefore the outlook for the topic centres largely around how to best facilitate the use of these technologies and enable a more wholesale review of business models.

The EU has already set out broad visions and targets when it comes to reducing emissions and tackling climate change, as well as promoting innovation in the energy sector. The question the committee should focus on is how to make these goals a reality whilst also mitigating against new threats that will arise from wide ranging systems transformation.

**Want to know more? The following links will guide you...**

This [article](#) offers the reader a very easy-to-read introduction to the idea of digitalising the energy sector, and is a good introduction to the topic.

[Issue 17](#) of the SETIS Magazine covering the digitalisation of energy in Europe: This text both covers the topic at a level for the everyday reader whilst also going on into more depth on the topic. This is a perfect introduction to all the major issues of the topic, whilst also offering a large amount of more in-depth information to be used during the session.

One of the major parts of European Legislation which will be covered in the consideration of the topic is SETIS. This page gives an introduction to what [SETIS](#) is and what it aims to do, whilst also giving further links for more in-depth reading.
The EU Cybersecurity Act is another piece of legislation that will be key to the discussions around safeguarding the new digital energy systems. It might be useful to familiarise yourselves with it here:

This web page from the international energy agency provides a very easily digestible explanation of the impact a digitalised energy sector could have on temperature and the climate, demonstrating what is at stake when discussing this issue.
Science and society: With citizen science listed as a key policy orientation under the current Horizon 2020 Work Programme for ‘Science with and for Society’ (SwafS), what should the shape of civic participation in science be at the European, national and local level, and how can it be best implemented?

Chaired by: Aïcha Bouchelaghem (CH)
Relevance of the Topic

Science was not widely conceived as a fully-fledged profession requiring formal training until the 19th century. The word ‘scientist’ was first coined by Reverend Dr. W. Whewell in the Quarterly Review in 1834, when talking about the “want of any name by which we can designate the students of the knowledge of the material world collectively” and alluding to himself as the “ingenious gentleman” who put this term forth. As such, being passionate about and making a worthwhile contribution to science did not always come down to the pursuit of a degree in science - and it never completely has ever since.

However, over the last few years, it has become increasingly popular for people who are not ‘students’, as W. Whewell called them, to do science. For example, on September 18th 2011, the scientific journal Nature, Structural & Molecular Biology featured an article co-authored not only by scientists, but also by video gamers who had provided these researchers with “crucial insights” into solving the structure of an HIV enzyme. The gamers’ input was retrieved by means of a computer game in which the problem of protein folding is presented as a puzzle for players to solve. No less than 236,000 amateurs without an advanced degree in science got involved. Through their participation, it took only three weeks to solve an issue scientists had struggled with for 15 years.

This illustrates the increasingly attractive concept of citizen science.

In light of the impressive potential of the involvement of civilians in the scientific process, the understanding of professional endeavour as inherent to scientific interest and development is being debunked. In the EU, this opening of perspectives is especially happening in the context of Horizon 2020 and the growing will to strengthen a mutually beneficial relation between science and society as part of that framework. To a broader extent, citizen science also embraces the overarching movement towards greater civic participation, and the world we live in being shaped by collaborative effort.

Terms and Concepts

Citizen science is also sometimes called amateur science, crowdsourced science, volunteer monitoring or public participation in scientific research. The appellation used to refer to this concept, and therefore its definition, is fluid and unfixed, and reflects the alternative interpretations of what makes it special. To have a general basic grasp of the idea, could be viewed as being based on the premise that scientific research in its numerous aspects and steps employs skills which are also granted regular people without formal training in science (i.e. puzzle-solving, as seen with the example of the video game).
The core of citizen science is the overarching idea that basic human skills can go a long way, and that when it comes to scientific progress as well as anything else, we are stronger together - regardless of how one chooses to visualise citizen science.

Crowdsourcing is a way of obtaining information, data or any kind of input by appealing to a large number of people across the general public, often via internet platforms. Crowdsourcing is an important part of citizen science (though only one of many ways of getting involved in citizen science), in that many citizen science projects precisely call on citizens at a large scale to record data for the purpose of specific research being conducted.

The democratisation of science is a key aim of citizen science, according to most of its advocates. It is about making science “accessible to a wide range of people” and making it “less elitist, pretentious, etc.”. This is key to making citizens confident in and unlocking their potential to contribute to the advancement of science through participating in citizen science projects.

The fundamental difference between career scientists and citizen scientists lies in their respective relation to science, in other words in the type of scientific education they get or have gotten through their involvement in research. So, it is useful to differentiate between formal and non-formal education. Formal education or formal learning, which professional scientists undergo as students, is education obtained through the institutionalised education system of a country. The acquired qualifications are certified by a degree recognised by national authorities. In opposition, informal learning then refers to learning acquired through “activities in everyday situations and interactions (...), i.e. it is without external support and is not institutionalised”. Thus, participating in citizen science can be seen as a means of informal scientific education.

The notion of co-creation is central to citizen science, since it describes an approach where different types of stakeholders take part in a process, which would yield beneficial outcomes for all of them. In the context of scientific research and innovation, co-creation entails:

- co-production; this refers to the actual research and results produced through the collecting and processing of data. Back in 2016-2017, the European Commission’s vision for citizen science was limited to the aspect of co-production. According to the Horizon 2020 Work Programme for 2018-2020, however it seems to have enlarged its vision for citizen science to include co-construction.
- co-construction; this aspect in turn refers to the political and economic aspects which build around the actual scientific research, such as funding and evaluating citizen science projects, building political agendas, and writing “science related” policies from research.

**Stakeholders**

In a first instance, professional/career scientists are scientists who are either pursuing or have obtained formal education in any scientific field. Their involvement in science is professional, i.e. it is their main occupation; and they have gathered extensive knowledge about the scientific process and significantly invested in harnessing the skills relevant to ‘doing science’, including methodological and analytical skills. Career scientists are generally grouped under bigger entities like universities and science centres or other research bodies.

Citizen scientists are citizens without a prior formal relationship to science, hence they are also sometimes referred to as citizens or the lay population. Citizen scientists can participate in different ways and engage to their preferred extent. Different projects presuppose different types of participation - ranging “from ‘crowdsourced’ citizen science, in which lay people contribute data or volunteer computing power, to ‘co-created’ and ‘collegial’ research, in which members of the public actively engage in most aspects of a project, or even con-
duct research on their own”. They therefore also possess **skills relevant to scientific research**, which citizen science projects precisely seeks to enhance and use.

**Citizen Science organisations** - which have namely come together to form the [Citizen Science Global Partnership](#) - are entities who specifically tackle the advancement of citizen science. Thus, they look to have wider awareness of what goes on in regard to citizen science projects and enhance the movement at a certain scale. Noteworthy citizen science organisations include, but are not limited to, the [Citizen Science Association (CSA)](#), the [European Citizen Science Association (ECSA)](#), and [Scistarter](#).

**National governments** and their relevant agencies also have a stake in **collaborating** with and **supporting** citizen science actors and projects. Governmental actors are not only interesting in regards to their “funding arms”¹, but also in that they might take further **concrete action** to support citizen science in their country. For example, several Members States’ governments have created online platforms dedicated to increasing the visibility of citizen science and often providing overviews of projects carried out in their country, such as Austria, Germany, and the United Kingdom (though the UK has mostly focused this in the medical field). With this said, citizen science is still not yet a **widespread** concept in other Member States like Italy and Ireland.

Meanwhile, at the EU level, the [European Commission](#) is very much attracted by the concept of citizen science and willing to **fully explore and support it** (financially and beyond) at the continental level. Enhancing citizen science goes completely hand-in-hand with the ideas of [Responsible Research and Innovation (RRI)](#), [Science with and for Society (Swafs)](#), both reflecting a **socially conscious and inclusive approach to science** which is central to the EU’s **vision** for how to conduct research and innovation from now on.

**Measures in Place**

Citizen science projects enable a **large variety of research** to be conducted and allow a variety of **people** to participate in such research; the key lies in career scientists, i.e. researchers, identifying **skills** or **circumstantial advantages** in certain groups of people which can be of **use** for research. We mentioned the protein puzzle computer game - called [Foldit](#) - where some people’s **gaming skills** have proven insightful. Another interesting example is how research on slow-growing mosses is being conducted at a **prison**. This project is about harnessing the **scientific potential** of citizens who have **time** to spare and **effort** to invest.

A further potential, which citizen science projects have glaringly demonstrated so far, is the **scope** of research which can be achieved. Namely “in areas such as biodiversity, where citizen science first thrived, projects are breaking boundaries through the sheer volume of participants and data”². Indeed, citizen science projects often call on **large amounts of citizens** to participate, which again allows for the obtention of unparalleled quantity and quality of data. No less than 50,000³ citizens got involved in a Belgian project called Curieuze Neuzen⁴, which aimed to investigate the air quality at nose level - a height **not within the reach** of satellites, hence the need for citizens’ participation. To an even greater extent, some projects are based on the use of **phone applications**, which citizens can use in order to send in their observed data - such as iNaturalist, an app used for the exploration of biodiversity.

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¹ See [nature.com article](#) hyperlinked above: “No PhDs needed: how citizen science is transforming research”, by Aisling Irwin.
² Same as above
³ Same as above
⁴ Curieuze Neuzen translates into curious noses, a play on the word nosy, since the study investigates air quality at nose level.
As of now, though quite widespread, citizen science is a rather decentralised field in the EU (with the majority of citizen science projects carried out at national scale), although the latter intends to further support it. The European Environment Agency namely seems interested to pick up on the abovementioned Belgian project and “apply the approach more widely”. In light of such intentions, it will be interesting for the ITRE II committee to discuss quite what it can mean to apply citizen science at EU level, whether the EU should provide an actual framework, like some national governments have, and what the shape of such a framework should be. As of now, according to a Science Europe Briefing Paper on citizen science, “the US appears to be more advanced than any other nation or indeed the EU as a whole in policy supporting citizen science activities”, with an important growing network with federal agencies. And at the national level in the EU, “Germany is arguably the most advanced” Member State when it comes to citizen science policy. The German research and capacity building project GEWISS, which is funded by the government, has namely issued the ‘Citizen Science Strategy 2020 for Germany’, a Green Paper which “introduces the current role of citizen science, identifies pertinent challenges and recommends a series of actions to foster citizen science in Germany”.

Fundamental Challenges

A number of societal and logistic obstacles lie in the way of fully realising the potential of citizen science. To begin with, the European Commission already highlights a few challenges in its Horizon 2020 Work Programme for 2018-2020. It namely mentions potential difficulties “in terms of (...) linking the various governance levels, from local to global”.

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5 see Irwin’s article.
6 see briefing paper hyperlinked above.
7 full name: Bürger schaffen Wissen, Wissen schafft Bürger (GEWISS), ‘Citizens create knowledge, knowledge creates citizens’.
8 Same as above
It also points out the challenge when it comes to ensuring a balanced participation of citizens in citizen science projects. That is, it believes citizen science should be inclusive, and an opportunity for all to engage in civic participation regardless of ethnic or socio-economic background, gender or age.

The Work Programme also mentions the importance of making sure “reliable data is received from citizen scientists” - especially when it comes to addressing huge amounts of data. This underlies one of the biggest obstacles which is yet to be fully overcome in citizen science, namely trust issues between career scientists and governments, and citizens. On the one hand, the quality of data collected by citizen scientists is often considered insufficient, as pointed out in a study relating to citizen science projects. The acceptance of citizen science data is even more problematic when it is at odds with government data, as it is still difficult at this point to impose results obtained by non-professional scientists in the face of such authoritative sources. In that respect, it is argued that citizen science needs to undergo a real legitimisation process in order to be fully beneficial for all parties involved: “it needs to be not just bottom-up - it needs also to be accepted as some kind of official data stream”. However, not everyone believes in governments overly organising or institutionalising citizen science. Sociologist Michiel van Oudheusten says that “citizen science can be especially valuable when it is unaligned with the establishment and that "subversiveness can be very productive".

In any case, a lack of belief in citizen science on the part of authoritative entities is tightly linked with a further issue which the Commission has also pointed out, which is the need to recognise “the work of citizens participating in citizen science initiatives” (Horizon 2020 Work Programme), as there tends to be a lack of acknowledgement of amateur researchers in wide circles of the scientific community.

On the other hand, there are also anti-intellectual sentiments and a lack of trust in science on the part of the lay population, which also impedes the full potential of citizen science. In fact, this popular negative perception of science precisely tends to discourage citizens from seeking formal scientific education in the first place, which all in all accounts for detrimental shortages on the job market in the science, technology, engineering and mathematics (STEM) sectors. At the moment, skills shortages are estimated to affect 89% of STEM businesses, amounting to an economic loss of £1.5 billion in the United Kingdom alone. Although the prospect of getting a formal education in science is not necessarily the finality of citizen science, projects can still spur motivation in lay citizens to embark on STEM careers. After all, as highlighted by Leesa Ricci in her TEDx talk on the citizen science revolution, Clyde Tombaugh discovered Pluto before ever getting formal degrees in astronomy. His scientific career began with, and was probably incentivised by, scientific citizenship.

Irrespective of the different parties’ mutual perception and acceptance, significant issues remain concerning the collection of data in citizen science projects, namely biases - that is, systematic errors in data collection - and data protection. Though, according to an article on the assessment of data collected by citizen scientists, “most types of bias found in citizen-science datasets are also found in professionally produced” ones, there still needs to be ways of ensuring the reliability of citizen science data. On a different note, the use of citizen science data stands in an ethically grey area. As of now, there is still a lack of control over what is done with participants’ personal data, especially in projects related to medical research or where citizen scientists need to participate from their homes, and for example need to be sent a kit for collecting certain data. In addition, even non-personal data can be put to “nefarious” use. For example, animal sightings recorded by tourists might very well be used by illegal animal hunters.

\[9\] see Irwin’s article.
\[10\] see the aforementioned study recounting different citizen science projects: “die Anerkennung von Amateurforschern fehlt in weiten Kreisen der wissenschaftlichen Community”.
\[11\] see video hyperlinked in the introduction.
A final but fundamental aspect to consider, which the Commission has insisted on as well, looks at how to keep citizen scientists who participate in projects motivated, especially throughout long-running research. Environmental consultant and citizen-science advocate Martin Brocklehurst argues that “too much of citizen science is like a fireworks display: it’s great science, but it’s short-lived. (...) We need to start embedding it into the routine way that we do science to support the policy-making process”\textsuperscript{12}. All in all, citizen science needs to be structured in a way that is sustainable and has a long-lasting effect.

**Outlook**

Of all the stakeholders discussed here, the EU is probably the one with the widest interpretation of what citizen science can imply, spanning from co-production\textsuperscript{13} through co-construction\textsuperscript{14}, all the way to educational potential: “from raising public knowledge of science, encouraging citizens to participate in the scientific process by observing, gathering and processing data, right up to setting scientific agenda and co-designing and implementing science-related policies. It could also involve publication of results and teaching science” (2018-2020 Work Programme, p. 35).

However before tackling some of the wider fundamental challenges in the topic to do with the quality and reliability of citizen science derived data, one would first have to solve issues of definition and vision-building for citizen science. In order for a call for action to be best tailored to those practical challenges, some overarching questions need to be addressed. These include the question of what type of citizens can and should be a citizen scientist? How would the need for inclusivity be considered in this? How broadly should citizen science be considered in terms of its socio-political potential? Which goals should be achieved in the process of developing citizen science?

So, what will first need to be approached is the question of how ITRE II wants to navigate the various potentials of and existing projects in citizen science, to determine where to sail, before quite determining how to sail there.

Want to know more? The following links will guide you...

**Alternative explanations of what citizen science is**

“Citizen Science Policies in the European Commission: Research Agendas towards Issues of Concern to Citizens", a policy brief by SiS.net. This policy brief summarises the potential and main aims of citizen science as envisioned by the European Commission. A useful source to consolidate your basic understanding of citizen science.

“The Awesome Power of Citizen Science”, a video explanation of citizen science delivered by Hank Green. This video also provides a fundamental explanation of citizen science and why it’s exciting in a very engaging way.

**A few successful projects**

“Mystery of deadly Indonesian tsunami cracked using social-media videos”, an article by Michael Marshall for international science journal Nature, 16th May 2019. This article explains how the cause of a tsunami which killed thousands in Indonesia last year could be identified partly thanks to amateur videos.

\textsuperscript{12} see Irwin’s article.
\textsuperscript{13} collecting and processing data
\textsuperscript{14} agenda setting, policy making, funding and evaluating research
“Could a cell phone game detect who is at risk of Alzheimer’s?”, an article by Lauren Sharkey for Medical News Today, 5th May 2019. This article explores how a smartphone game could advance efforts for earlier Alzheimer’s diagnosis.

“Dutch national research agenda. Questions. Connections. Prospects.” This illustrates another facet of citizen science explored in the Netherlands, whereby citizens are not only solicited in the actual production of research and results but also at an anterior stage of the scientific process; when we define the very scientific questions we need to answer.

A few websites attempting to put citizen science project in the same place
Spacehack.org, “is a directory of ways to participate in space exploration”.

The Scistarter Project Finder is a browsing option of Scistarter which allows one to do a filtered research of citizen science projects.

Zooniverse, another large citizen science projects database. This one apparently “started the whole citizen science revolution”.

"Could a cell phone game detect who is at risk of Alzheimer's?", an article by Lauren Sharkey for Medical News Today, 5th May 2019. This article explores how a smartphone game could advance efforts for earlier Alzheimer's diagnosis.

"Dutch national research agenda. Questions. Connections. Prospects." This illustrates another facet of citizen science explored in the Netherlands, whereby citizens are not only solicited in the actual production of research and results but also at an anterior stage of the scientific process; when we define the very scientific questions we need to answer.

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Spacehack.org, "is a directory of ways to participate in space exploration".

The Scistarter Project Finder is a browsing option of Scistarter which allows one to do a filtered research of citizen science projects.

Zooniverse, another large citizen science projects database. This one apparently "started the whole citizen science revolution".
Committee on
INDUSTRY,
RESEARCH AND ENERGY III

“The Digital Mind: As the application of Artificial Intelligence (AI) for neuroscience continues to be explored, concerns still remain on the implications for privacy, liability, consent, agency, identity, augmentation and bias. How should the EU look to develop ethical guidelines into policy to address the possible human rights implications of such technological developments?”

Chaired by: Ilvija Mežiņa (LV)
Do Androids dream of Electric Sheep? The short answer would be not yet. But AI and the research conducted therein is not far from remarkable developments that could potentially outsmart human intelligence as such. Predictions say that this could happen as soon as 2045. Neural networks capable of producing dream-like imagery, machine learning models that mimic humans to make dinner reservations, and algorithms learning Chess in less than 4 hours, are just a few examples of these growing technological advancements.

Like every technology or tool, AI can be used to positive but also malicious ends. Whilst AI clearly generates new opportunities, it also poses challenges and risks, for example, in the areas of safety and liability, security (criminal use or attacks), bias and discrimination. In June 2004, Matthew Nagle became the first human to be implanted with a Brain Computer Interface (BCI), Cyberkinetics BrainGate thus creating a beginning of a new era, one that links neuroscience and AI, and can potentially improve many tasks that would otherwise be impossible. However, the question of injuries, impairments and other technological mistakes persists, and creates profound implications for human rights, ranging from freedom of expression, privacy, to right to equality and participation. Thus, a human rights based approach must be mainstreamed to guide the development AI through inclusive multi-stakeholder participation, and address the seven essentials of trustworthy AI created by the European Commission, namely: human agency and oversight; robustness and safety; privacy and data governance; transparency; diversity, non-discrimination and fairness; societal and environmental well-being; and accountability.

The European Union is home to a world-leading AI research community, and a great actor in the startup and entrepreneur community. It has a strong industry, producing more than a quarter of the world’s industrial and professional service robots (e.g. for precision agriculture, security, logistics), and is leading in manufactur-
ing, healthcare, transport and space technologies – all of which increasingly rely on AI. Europe also plays an important role in the development and exploitation of platforms providing services to companies and organisations (business-to-business), applications to progress towards the “intelligent enterprise”, and e-government.

Although no law can encode the entire complexity of technology as it is, let alone predict its future development, the EU should look at ensuring appropriate instruments to anticipate or even shape technological trends, and ensure that disruptive technologies are deployed in a way that is consistent with the EU ethical acquis. Like the steam engine or electricity in the past, AI is transforming our world, our society and our industry. Growth in computing power, availability of data and progress in algorithms have turned AI into one of the most strategic technologies of the 21st century. The stakes could not be higher. The way we approach AI will define the world we live in. Amid fierce global competition, a solid European framework is needed, one that ensures Siri and Alexa still allows us - humans, to dream and count real sheep.

Terms and Concept

**Artificial Intelligence (AI)** - refers to systems that display intelligent behaviour by analysing their environment and taking actions – with some degree of autonomy – to achieve specific goals. AI-based systems can be purely software-based, acting in the virtual world (e.g. voice assistants, image analysis software, search engines, speech and face recognition systems) or AI can be embedded in hardware devices (e.g. advanced robots, autonomous cars, drones or Internet of Things applications).

**Artificial General Intelligence (AGI)** - AGI is intended to be a system that can perform most activities that humans can do. Narrow AI systems are instead systems that can perform one or few specific tasks.

**Human Rights** - rights that all human beings are entitled to. They are enshrined in a variety of legal documents, such as Universal Declaration of Human Rights, European Convention of Human Rights and Charter of Fundamental Rights of the European Union. Human rights include the right to life and liberty, freedom from slavery and torture, freedom of opinion and expression, the right to work and education, and many more. Everyone is entitled to these rights, without discrimination.

**Neuroscience** - a field of biology based on the study of the anatomy and physiology of the human brain, including structures, neurons and molecules. It studies how the brain works in terms of mechanics, functions and systems, in order to create recognisable behaviors.

**Machine and deep learning** - Machine Learning is the field of artificial intelligence that gives computers the ability to learn without being explicitly programmed. Deep learning occurs when an algorithm is able to process larger datasets and solve more complex issues, because it teaches itself the rules. Deep learning uses information layers, thus the algorithm builds off from the findings of a layer of information to create a deeper “network” understanding of the data. So, it needs massive amounts of data to truly work.

**Brain-Computer Interface (BCI)** - device that enables its users to interact with computers by means of brain-activity only, this activity being generally measured by ElectroEncephaloGraphy (EEG) - a technique for recording and interpreting the electrical activity of the brain.

The Internet of Things (“IoT”) is an ecosystem of electronic sensors found on our bodies, in our homes, offices, vehicles, and public places. “Things” are any human-made object or natural object that is assigned an internet
address and transfers data over a network without human-to-human or human-to-computer interaction.

**Big Data** - are data sets whose size or type is beyond the ability of traditional relational databases to capture, manage and process the data without a large delay. Artificial intelligence, mobile, social and the Internet of Things (IoT) are driving data complexity through new forms and sources of data. Big data comes from sensors, devices, video/audio, networks, log files, transactional applications, web, and social media — much of it generated in real time and at a very large scale.

**Smart Information Systems** - a set of technologies and techniques that are often referred to as artificial intelligence, machine learning and big data analysis.

**Fundamental Challenges**

AI depends on the collection and processing of vast amounts of data which can potentially include personal and even sensitive data, thus privacy becomes a major challenge when addressing AI and the human rights implications. “We value your privacy” can be a symbolic statement when visiting websites, even if current privacy regulations address such issues1. The autonomy of AI, the quality of the data it uses, and the non transparency of the algorithms employed can lead to inadvertent interferences with human rights, such as prohibition of discrimination linked with the right to privacy, the right to employment, the right to liberty and security, the right to a fair trial, and the right to freedom of expression and information. There is concern that AI can result in unintended consequences for human rights and even has the potential to harm. Furthermore, current mechanisms for giving informed consent in the internet show that most consumers give consent without much consideration. This involves an ethical obligation to develop entirely new and practical means by which citizens can give verified consent to being automatically identified by AI or equivalent technologies.

The question of how to ensure AI systems are transparent and accountable in their operation relates closely to allocating liability in the context of AI. As AI operations carry unpredictable character, questions about cause, unforeseen circumstances, and unclear attribution of liability can be asked. Due to the rapid development of the autonomos and cognitive features, the law must treat this technology differently, and possibly depart from its traditional liability theories, such as product liability, negligence and strict liability models. Responsibilities among designers, manufacturers, service providers and end users should be developed in a proportional civil liability regime.

Artificial Intelligence should act as enablers to a flourishing and equitable society by supporting human agency and fundamental rights, and not decrease, limit or misguide human autonomy. To nourish the safeguarding of this, appropriate systems should be in place to ensure responsibility and accountability. Furthermore, it is necessary to defend the human identity, as the status quo shows that, currently, AI interacts with humans, not vice versa. Thus, fear of human augmentation also enhances.

Although some believe that AI systems can detect and correct bias in data, the collective data often reflects socially constructed biases, or contain inaccuracies, errors and mistakes. Furthermore, bias can often be reflected in the artificial intelligence products themselves thus containing inaccuracies, errors and mistakes and leading to further liability issues. These existing biases must be addressed prior to enabling AI systems, and appropriate testing and training should be deployed and implemented.

The main questions that should be addressed in regards to this topic are: How can the EU create more comprehensive AI mapping, update existing legislation, evaluate current enforcement mechanisms and establish new

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1 See for example, Article 22 and Article 29 of General Data Protection Regulation.
consumer rights in regards to AI, whilst protecting human rights?

Stakeholders

The **European Commission** puts forward a European approach to artificial intelligence and robotics. It deals with technological, ethical, legal and socio-economic aspects to boost EU's research and industrial capacity and to put AI at the service of European citizens and economy.

The **High Level Expert Group on Artificial Intelligence** - works to support the implementation of the European strategy on Artificial Intelligence. It serves to work as a catalyst for the European AI Alliance’s work, as well as work with other stakeholders to improve the current AI goals. It consists of 52 experts, selected by Commission.

The **European AI Alliance** acts as a multi-stakeholder forum which engages and creates a broad and open discussion of all aspects of AI development and its impact on the economy and society. It is guided by the High-Level Expert Group.

**European Group on Ethics in Science and New Technologies (EGE)** - is an independent, multi-disciplinary body that advises the Commission on policies where ethical, societal and fundamental rights issues intersect with the development of science and new technologies.

**Fundamental Rights Agency** - is the European Union’s centre of fundamental rights expertise. It is one of the EU's decentralised agencies. The agency is set up to provide expert advice to the institutions of the EU and the Member States on a range of issues, and helps to ensure that the fundamental rights of people living in the EU are protected.

Measures in Place

The **Digital Single Market** works to enhance the digital economy, denotes the strategy of the European Commission to ensure access to online activities for individuals and businesses under conditions such as fair competition, consumer and data protection. It also confines Artificial Intelligence and the priorities set therein. Within the strategy, many programmes have been proposed and invested upon, such as **Digital Europe**.

**Ethical Guidelines for trustworthy AI** are provided by the High Level Expert Group. These guidelines focus on maximising the benefits of AI while minimising its risks, and ensuring that a human-centric approach to AI is worked on. According to the guidelines, trustworthy AI should be lawful, ethical and robust. It consists of three chapters, focusing on: (1) ensuring AI’s ethical purpose; (2) guiding the realisation of AI trustworthiness; and (3) operationalising the requirements by providing a concrete but nonexhaustive assessment list for Trustworthy AI.

The Commission published a **European Strategy** in April 2018. The strategy places people at the centre of the development of AI — thus focusing on the human-centric AI. The strategy focuses on three approaches to boost the EU’s technological and industrial capacity and AI uptake across the economy, prepare for socio-economic changes, and ensure an appropriate ethical and legal framework. To address the strategy created in April, the Commission created a **Coordinated plan on AI** together with Member States, which focuses on more specific goals, and national strategies to be implemented to further strengthen and implement the priorities set previously.
As privacy is an important aspect of AI in regards to human rights implications, the General Data Protection Regulation regulates the processing by an individual, a company or an organisation of personal data relating to individuals in the EU. Thus, many of its articles relate to the privacy of artificial intelligence and how they apply to a person’s data.

In collaboration with many stakeholders, the SHERPA project investigates, analyses and combines smart information systems that impact ethics and human rights issues, in order to raise better understanding. It develops ways of understanding and addressing SIS challenges (e.g. by case studies), as well as advocates the most desirable and sustainable solutions.

AI4EU project will mobilise the whole European AI ecosystem. It unites 79 partners in 21 countries, thus creating a collaborative network across Europe and providing access to relevant AI resources in the EU for all users.

**Outlook**

The science fiction works *NeuroMancer* of 1984 and *Do Androids Dream of Electric Sheep* of 1968 could have been oddly true in their writings and the current world. However, even though the potential threats of AI are closer than ever, the current stakeholders can still address the ethical issues raised with these growing technologies.

The EU offers great advancements and opportunities, as well as the environment to develop AI. As it is largely based on fundamental research, the EU can further master it and address the ethical aspects it presents. Creativity and innovation come from collaboration among multidisciplinary and diverse teams — diversity being one of the core characteristics of the EU. The EU also has a strong foothold in traditional industries, those that have not yet been digitised and therefore offer a huge margin for digitalisation and profit from the productivity improvements brought about by AI. But to succeed, the EU must realign its current AI-related initiatives and focus them on mission-based innovations — and these AI projects need to be human-centred in order to augment the human intelligence in a computer–human symbiosis to solve the societal problems of our time. The ethical dimension of AI is not a luxury feature or an add-on: it needs to be an integral part of AI development. By striving towards human-centric AI based on trust, safeguarding the respect for the core societal values, the EU can become a global player in the AI industry and create trust around the globe.

**Want to know more? The following links will guide you...**

- Factsheet - Artificial Intelligence for Europe
- Four ethical priorities for neurotechnologies and AI
- Building trust in human-centric AI & Guidelines for Trustworthy AI
- Council of Europe, Safeguarding Human Rights in the Era of AI
- Can Artificial Intelligence be considered a person under the law?
Artificial Intelligence and the future of humans

How Neuroscience enables better Artificial Intelligence Design

Neuroscience, Artificial Intelligence and its future

Requested study by ITRE Committee - how Europe could seize the opportunity of progress made in AI

Communication from the Commission: Artificial Intelligence for Europe
“It’s my data: Following on from the Cambridge Analytica scandal exposing the extent of commercialisation of personal data by technology giants such as Facebook, how should the EU look to respond to the remaining gaps in the system to protect its “people first” approach to data and privacy?”

Chaired by: Elena Odysseos (CY)
Relevance of the Topic

In the digital era we live in, each of us almost has a digital replica. Every click generates a new piece of information. We create a huge amount of data with every move and every interaction with each of our devices. Personal information is the commodity that fuels the big data economy and like all commodities, there is a fight for its control. Personal data is collected, shared and used not just through the use of the internet, but in our day-to-day interactions, from contactless payments to streaming your favourite show online. Organisations use personal data and customer preferences to develop an understanding of their customers, and offer a personalised service, ranging from ‘Your Weekly Discover’ on Spotify, to your personalised news feed on Facebook.

Recent studies show that a total of 90.2% of Europeans use the internet, with people between the ages of 15-24 making up 25% of Internet users. The large number of digital interactions generate 2.5 quintillion (a million trillion) bytes of data per day, creating unlimited potential for our society and our economies.

Younger generations are clear in what they value, with a recent survey showing that 75% of millennials and GenZ are willing to share their personal information in exchange for an experience that is unique and personalised. That experience is only enabled by the data gathering and analysis that is associated with it. Data processing and data analytics drive improvements in the service provided both by the company, as well as third parties.

Recent developments and privacy scandals have led to the development of a negative feeling around the capabilities and potential benefits of data usage. The Cambridge Analytica scandal and the rumours of the influence it had on the US election of 2016 illustrate that privacy has real-world consequences and has the potential to affect our lives. Personal information from 50 million Facebook profiles was sold to Cambridge Analytica, without the consent or the awareness of those individuals, and the data was then used to predict and influence their choices.

However, there are numerous benefits from data being analysed and shared. National governments can use data to support developments in health, medical research and national security. Data enables informed decision making and streamlining of processes to deliver more efficient and effective services and products and fuel economic growth and productivity.

Because of the unlimited possibilities and potential that huge data sets offer to organisations around the world, personal data becomes a commodity that is highly valued. Therefore, the question should not be how to limit the amount of data that is collected and analysed, but rather, how to regulate what data is collected and how this data is analysed.
Terms and Concepts

Privacy: the state in which one is not observed or disturbed by other people; being free from public attention.

Data Privacy: Data privacy is a branch of data security concerned with the proper handling of data in terms of consent, notice, and regulatory obligations. Data privacy concerns are often based on who has access to the data, how the data is legally collected or stored and any regulatory restrictions resulting from relevant legislation.

Big tech (also referred to as the Frightful Five): refers to the five multinational technology companies, namely Google, Apple, Facebook, Amazon and Microsoft.

Big data: Big data is a term that describes the large volume of data – both structured and unstructured – that inundates a business on a day-to-day basis. The four V’s of Big Data, as illustrated in this infographic, describe the four dimensions of data, as described by data scientists.

Personal data: any information that relates to an identified or identifiable living individual. Different pieces of information, which collected together can lead to the identification of a particular person, also constitute personal data. Personal data that has been de-identified, encrypted or pseudonymised but can be used to re-identify a person remains personal data and falls within the scope of the General Data Protection Regulation (GDPR).

Personal data breach1: a breach of security leading to the accidental or unlawful destruction, loss, alteration, unauthorised disclosure of, or access to, personal data transmitted, stored or otherwise processed;

Sensitive personal data2: The following data are considered sensitive
- Personal data revealing racial or ethnic origin, political opinions, religious or philosophical beliefs;
- Trade-union membership
- Generic data, biometric data processes solely to identify a human being;
- Health related data

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1 Based on Article 4(12) of the General Data Protection Regulation (GDPR)
2 Based on Article 4(13), (14) and (15) and Article 9 and Recitals (51) to (56) of the General Data Protection Regulation (GDPR)
Data concerning a person's sex life or sexual orientation

**Data controller:** determines the purposes and means of processing personal data. Responsible, according to the GDPR for ensuring that the contracts with processors comply with the GDPR.

**Data processors:** responsible for processing personal data on behalf of a controller. There are specific legal obligations on data processors, like for example maintaining records of personal data and processing activities. Data processors are legally liable if they are responsible for a breach.

**Explicit consent:** any freely given, specific, informed and unambiguous indication of the data subject's wishes by which he or she, by a statement or by a clear affirmative action, signifies agreement to the processing of personal data relating to him or her.

**Legitimate Interests:** the most flexible lawful basis for data processing, but not always the most appropriate. It is likely to be most appropriate where using people's data in ways they would reasonably expect and which have a minimal privacy impact, or where there is a compelling justification for the processing.

**Data analytics:** the science of analysing raw data, inspecting, cleansing, transforming, and modeling data in order to draw conclusions about that information. Many of the techniques and processes of data analytics have been automated into mechanical processes and algorithms that work over raw data for human consumption, revealing trends and metrics that would otherwise be lost in the mass of information. This information can then be used to process optimisation to increase the overall efficiency of a business or system.

**Artificial Intelligence:** The simulation of human intelligence processes by machines, especially computer systems. These processes include learning, reasoning and self-correction. Commonly known as the ability of a machine to intimate human behaviour.

### Measures in Place

**Europe**

The most relevant piece of legislation is the EU **General Data Protection Regulation** (GDPR) also known as Regulation (EU) 2016/679. The GDPR replaces the Data Protection Directive (DPD) 95/46/EC that came into effect in 1995. According to Article 8 of the EU Charter of Fundamental Rights every individual has the right to the protection of personal data. The 2018 reform of EU data protection rules has provided a new set of rules for businesses and organisations and has given clarity on the rights of citizens, in order to ensure that right is not violated.

The GDPR legislation addresses two main pillars: (1) the protection of natural persons with regard to the processing of personal data; and (2) the free movement of such data. The aim of the legislations is to harmonise data privacy laws across Europe, protect and empower all EU citizens’ data privacy and reshape the way organisations approach data privacy. The GDPR enables individuals to access data that companies hold about them and ask for companies to erase any data that is held against them, also known as the right to be forgotten.

Certain articles in the GDPR allow for some manoeuvre to introduce more specific national laws, like for example Article 9(4) which allows Member States to maintain or introduce further conditions, including limitations, with regard to the processing of genetic data, biometric data or data concerning health.

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1. Based on Article 4(11) of the General Data Protection Regulation (GDPR)
European Economic Area (EEA)
The GDPR was incorporated into the EEA agreement by the EEA Joint Committee in July 2018. The EEA agreement brings together the 28 EU Member States and the three EEA EFTA states (Iceland, Liechtenstein and Norway), creating an internal market with the same basic rules around free movement of goods, services, persons and capital. The GDPR now applies to the EEA in order to ensure harmonisation and to prevent fragmentation in the implementation of data protection, to remove legal uncertainty and to ensure the free flow of personal data throughout the EU and EEA.

Switzerland
The GDPR legislation is also relevant for Switzerland, irrespective of the country not being part of the EU or the EEA. The scope includes organisations processing personal data of EU citizens, or organisations that monitor the (online) behaviour of EU data subjects, and therefore also applies to Swiss companies and organisations that target EU customers. Additionally, the GDPR is expected to influence the Swiss Federal Data Protection Act (FDPA).

United States of America
While most of legislation in the US around data protection and data privacy was drafted around the same time as the Data Protection EU Directive of 1995, it seems that there has not been an update in legislation, similar to the GDPR. There are a number of regulations addressing the area of data privacy, however not very recent, with the California Consumer Act being an exception. It is worth noting that US data protection laws are not considered sufficient by the EU to provide adequate protection, and only organisations certified under the EU-US Privacy Shield agreement are GDPR compliant.

The Health Insurance Portability and Accountability Act (HIPAA) of 1996 sets standards for how US citizens’ Personal Health Information (PHI) records are stored, secured, and used while still enabling high quality healthcare.

Gramm-Leach-Bliley Act (GLBA), also known as the Financial Modernization Act of 1999, is a US federal law that requires financial institutions to justify how they use, share and protect their customers’ private information.

The California Consumer Privacy Act (CCPA) can be considered to be the outcome of GDPR, which was signed into law in 2018. It is set to go into effect on 1 January 2020 and it gives California residents the rights to transparency, opt-out, right to be forgotten and the ability to receive the same service irrespective of the amount of data they are willing to hand over to a company. A detailed comparison between the CCPA and the GDPR can be found here.

Japan
The GDPR equivalent in Japan is Japan's Act on the Protection of Personal Information. Even though this was modelled based on the EU legislation, there still remain considerable differences between the two.

Stakeholders

Industry, private organisations and research
Big tech companies are the biggest data controllers and data processors. Even though Google, Apple, Facebook, Amazon and Microsoft are not in the same industry and do not collaborate in any way, the large amount of data they interact with, process and control means they have similar interests in this topic and also face similar challenges.
Besides the commercial value of data, it is important to understand the potential of the data in terms of new technologies and digital trends. Research groups, both in the academic and the commercial space, offer a new perspective as to how and why we use data. Better decision making and automated AI would not be possible without accessibility to large data sets and therefore require an open data space in order to develop.

The GDPR legislation has also had an impact on smaller companies and NGOs. NGOs are having to rethink their data governance processes, which might prove to be challenging and may cause disruption in the short-term. On the other hand, this process offers the opportunity to create synergies with other organisations and networks that bridge NGOs and technology.

There are a number of companies and organisations, whose aim is to support the creation of an ecosystem in which the benefits of data are realised, whilst any associated harmful impacts are minimised, if not eliminated. One such example being the Open Data Institute.

**Local authorities and regulatory bodies**

Data Protection Authorities (DPA) are national independent authorities that supervise the application of data protection laws. There is one DPA per Member State such as the Data Protection Commission (DPC) in Ireland.

European Data Protection Board is an independent European body, which contributes to the application of data protection rules throughout the EU, with investigative and corrective powers. It also promotes cooperation between the EU's data protection authorities.

The European Data Protection Supervisor (EDPS) is the EU's independent Data Protection Authority. The EPDS is a supervisory authority that:

- Monitors and advises EU institutions and bodies on the processing of personal information;
- Monitors new technology that may affect the protection of personal information;
- Provides advice on data protection law before the Court of Justice of the European Union; and
- Cooperates with national supervisory authorities to improve consistency in protecting personal information.

**The people**

The recent developments in EU legislation have influenced data protection and privacy legislation around the world. The same benefits that are now available to European citizens, and data creators, also apply to non-EU countries. Legislation should take a ‘people first’ approach and should deliver the best offering to citizens to ensure data privacy.

The following diagram gives a visual representation of the stakeholders assessed against a number of variables:

- **Expertise** denotes the level of information and expertise of a particular stakeholder, as well as the legitimacy of their engagement, i.e. do they have a say, and do they know what they are saying?
- **Willingness** illustrates the willingness of the stakeholder to engage with this theme
- **Value** is represented by the size of the bubble, and derived from the influence a particular stakeholder can have on the topic, as well as the necessity of the stakeholder to be involved.

It would be important to engage with stakeholders that have a high level of expertise and willingness to get in-
volved. Simultaneously, it would be valuable to communicate and involve stakeholders that rank high on each end of the spectrum.

**Fundamental Challenges**

**Owning the data vs. controlling the data**
Organisations and researchers use the data that is gathered to derive trends and patterns, predict behaviours and deliver a personalised service. There is therefore a clear distinction between the data that is collected and the data that is modelled and predicted from other data. Our data might evolve and develop during the process. The question therefore arises as to the level of due diligence that is reasonable to expect, i.e. the level to which the companies we originally trust with our data can control and influence how the data is analysed downstream of the process. Therefore, it is not only important to have knowledge of who primarily owns the data but who has access to process the data and subsequently how the data is used.

**Personalisation vs. Reluctance to share data**
A ‘people first’ approach can be conflicting in this case, given that there are significant benefits to be delivered by having bigger and more open data sets. Algorithms and AI require access to big data sets in order to predict our choices and offer a tailored service. A personalised news feed, a suggested new purchase or a personalised medical treatment, make our lives easier and more enjoyable every day. To what extent will these benefits be hindered by restricting access to data, and can data minimisation adversely affect our society?

**Attractiveness competition for GDPR non-compliance**
*Politico* highlights one of the significant loopholes of the GDPR legislation as the fact that sanctions depend on the authorities of the country in which the tech firms have their “data controller”. Marie-Laure Denis, France’s new chief privacy regulator, warned the French parliament earlier this year, that “we need to be careful and ensure that the margin for manoeuvre given by the GDPR doesn’t lead to an attractiveness competition between EU countries, as is already the case for taxation,” saying she does not “want to see a race [between EU countries] to attract or keep the headquarters of the big tech actors.” At the same time it is worth mentioning *that awareness of the GDPR* and and the associated benefits of it vary greatly among Member States.

**The ripple effect**
Even though it seems like the US legislation in the area of data privacy has not been recently updated, with the exception of the CCPA, *people across the world* are benefiting from EU legislation around data privacy. Com-
companies are reluctant to deliver two sets of interfaces for EU and non-EU users. Even though some organisations operate in countries outside the EU, as long as they are processing EU consumer data, they need to be compliant with the GDPR legislation, resulting in a ripple effect across the world.

**Ethical considerations**

Withdrawing permission of access to data can have significant adverse effects, even for public goods. Data is the fuel in a wide variety of sectors and thus restricting access could influence medical studies, decision making algorithms, behavioural studies, all of which can have a significant impact on the lives of people. Additionally, individuals restricting access to their data might introduce bias to the sample. Would it be possible to regulate some areas while leaving some other areas open?

Furthermore, the provision of consent as well as transparency with regards to the data held are vital in ensuring ethical interactions. In other words, holding and processing data from individuals that are not even aware such data is held and processes is simply a violation of someone's fundamental rights.

**Outlook**

Big data is a new form of infrastructure and has revolutionised the world we live in. Technological developments and innovations have enabled data to be collected, analysed and used in bigger volumes and at faster rates. Data analysis and data manipulation has resulted in more automated decision making and AI, and has improved the efficiency and effectiveness of systems across a wide range of industries, ranging from manufacturing to retail, health and national security. Data is constantly transforming the world we live in and there is huge potential for further developments. Giving individuals exclusive control of data about them means that wider society cannot benefit from it. It is therefore vital to ensure that data regulation does not limit the potential of big data technologies. How can we make sure that data remains as open as possible for innovation to thrive, whilst still ensuring the protection of personal data?

It could also be argued that data privacy violation is partly caused by the lack of transparency. Once a company receives explicit consent for data collection, the data enters a black box, and there is no clarity as to how the data is used and by whom. Therefore, more transparency as to how firms are using and sharing data would result in companies being held accountable for their actions.

“It’s my data”, but is it always just my data? Data can often be about multiple people. It is therefore difficult to determine how to share ownership between data that is not just about a single individual but about a group of people. How much power should an individual have to determine how the data is processed?

The GDPR is an example of a good rights framework that increases the control we have over the data about ourselves. In order for this framework to be successful, public, private and third sector organisations need to respect it. If the best interests of each of these actors are not represented, this framework is set for failure.

The GDPR came into force on 25 May 2018. It revolutionised legislation around data privacy and handed control from the data controllers and processors back to the data owners. Not only did this regulation challenge the status quo in the EU, but it challenged data privacy around the world, inspiring a renewal of relevant regulation in the EEA countries, Switzerland, the US, Japan and more. Yet there still seems to be something missing. On 25 April 2019, Politico reported that in Ireland 1,928 complaints of data privacy violations have been lodged, with Irish authorities reportedly not having taken action on any of these cases. Therefore, the big question is: why is the GDPR failing? Is all of this just an empty promise?
Want to know more? The following links will guide you...

One country blocks the world, an article by Mike McQuade for POLITICO - 2019 - this article investigates European Data Privacy regulations and the role of the Data Protection Commission in Ireland

Reality Check: Who controls your data?, an article by Lora Jones for BBC News - this article gives an overview of what the GDPR is, why it is important and who the legislation applies to

What is GDPR?, a video from BBC news

One country blocks the world on data privacy - a video about ‘How Ireland became Silicon Valley’s best friend’

Timeline of events by eu.gdpr.org - this page gives an overview of the legislative procedure that was followed in order to reach GDPR

Facebook acknowledges concerns over Cambridge Analytica emerged earlier than reported, an article by Julia Carrie Wong for The Guardian - 2019 - this article comments on the Cambridge Analytica case and the involvement of Facebook

The Cambridge Analytica scandal changed the world - but it didn’t change Facebook - an article by Julia Carrie Wong for the Guardian - 2019 - this article comments on how Facebook data privacy has developed with GDPR

How Cambridge Analytica Sparked the Great Privacy Awakening, an article by Issue Lapwoski for Wired - 2019 - this article explains how the Cambridge Analytica case was the trigger for the new data privacy legislation and GDPR

Can we increase access to data while retaining trust?, an article from the Open Data Institute - 2018 - this blog post touches on the themes of data infrastructure, data ethics and privacy as well as data publishing and use

What is personal data and how can I control what is shared?, an article from the Open Data Institute - 2018 - this blog post gives a definition of personal data, as well as how data may be collected and shared and used

Your Guide to GDPR Compliance: Roles and Responsibilities, a blog post by Ivana Kotur for platform.sh - 2018 - this article scopes the difference in responsibilities between a data controller and a data processor.

Data Protection Laws of the World, Switzerland - 2019, a publication by DLA Piper giving an overview of the Swiss Data Protection Act

Everybody Lies: Big Data, New Data, and What the Internet Can Tell Us About Who We Really Are, by Stephens-Davidowitz, book on the topic of big data and big data capabilities for some more background reading (if interested)
‘Ships are safe in harbour, but that’s not what ships are for’