“Having been part of HM Diplomatic Service for over 20 years, I know how important it is that younger generations are actively engaged in steering the future of global foreign policy and ensuring that foreign policy leverages the best innovative technological advances in an ever-changing and complex world. Future Foreign Policy provides an unparalleled forum for those conversations to happen and for younger generations to make a difference and shape our world for the years to come.”

Priya Guha, General Manager Rocket Space UK
Former Consul General for San Francisco, Non-Executive Director of Innovate UK.
Introduction

FUTURE FOREIGN POLICY, is a UK based charity & the first independent International Affairs Think Tank solely dedicated to giving a credible voice to young people in global politics.

Our goal is simple. We help the UK Government to connect with digital native millennials and emerging technology experts to better inform existing decision makers about the challenges and opportunities that technologies such as Artificial Intelligence, Virtual & Augmented Reality, Blockchain and Drones can bring to international affairs. At the same time we proactively prepare young people to be the thought leaders of the future. We do this by fostering fresh thinking and new ideas and bringing a strong understanding of technology to foreign policy decision makers.

Through this mission, we believe we can help to bring about a better informed, more democratic and more effective decision-making process in international diplomacy, to help the world keep pace with the rapidly changing global environment and become more prepared for the opportunities and challenges that lie ahead.

This white paper is a snapshot vision of the future, the types of activities Future Foreign Policy will undertake to deliver our strategic goals and an opportunity to showcase some of the ideas teams of young people have prepared over the course of the last year for our national competition Future United - through our open innovation events, foreign policy hackathons and workshops.

This has been a melting pot of great ideas from existing foreign policy institutions and organisations, university students and academics, young professionals and leading-edge technology experts.

We hope this will serve to be the start of an exciting new step for the future of foreign affairs in the UK. It will help to inspire and incubate new national and international organisations dedicated to solving long standing challenges, bringing new ideas and concepts that can drive UK global leadership and help to deliver the international ambitions of the UK Government’s Industrial Strategy.
The Foundations of Future Foreign Policy

At Future Foreign Policy, we believe that effective decision-making in response to these challenges and opportunities will rely on collaboration between long standing expert institutions, the tech industry and young people. Future Foreign Policy will be the catalyst of this paradigm shift.

By bringing together digital technology experts, millennials and foreign policy professionals we can develop innovative new solutions to long standing global challenges, inform existing decision makers about the opportunities and challenges of emerging technologies and proactively prepare foreign policy and industry professionals of the future - positioning the UK as a global leader in the convergence of digital technologies and diplomacy.

We facilitate Innovation activities like workshops and hackathons to focus technology experts and future thought leaders on current foreign policy challenges. We work with aspirational young people to develop an understanding of the potential impact of digital technologies to these challenge areas and we provide a forum for the communication of new concepts to foreign policy actors.
Emerging Technologies, Emerging Opportunities

The world is currently in an era of phenomenal technological advance and innovation in areas ranging from Cyber and Artificial Intelligence; new immersive experiences such as Virtual and Augmented Reality; next generation connectivity architectures comprised of the Internet of Things and 5G; through to novel data, trust and financial capabilities through technologies such as Blockchain.

Many, if not all of these technologies will alter the fabric of our societies by creating new opportunities to solve existing challenges as well as generating new unforeseen future challenges to solve.

In many of these technology areas, the UK is developing an ecosystem of leading companies and experts. This creates a unique opportunity to harness the potential of technology and bring it to bear in addressing foreign policy challenges and positioning the UK as a global leader both economically and in terms of soft power.
Millennials: Fresh Ideas from Digital Natives

As the first generation of digital natives, millennials think with and through technologies. Born into a digitally connected world, their experiences have made them more aware of political and social issues whilst granting them an unconstrained perspective on the role of technology; demonstrated by the prominent role of young people as emerging leaders and influencers in the tech sector.

Where governments have been uncertain about how to harness the digital revolution to deliver new and better public goods, the millennial perspective starts with technology pre-integrated. When they explore solutions, they do not need to “take technology into account”, because it is an essential part of their world. Future Foreign Policy’s innovation framework encourages millennials to think across the technology and government sectors. We want to harness their innate understanding of our connected, globalised world to help them develop fresh solutions, and support them in integrating their ideas with our existing institutions.
What is Future United?

In light of the shifting landscape of the UK’s place in the world after the decision to leave the European Union in June 2016, Future Foreign Policy announced the launch of its national foreign policy hacking competition, Future United.

Future United brought together young people from across the UK, connecting them with decision makers, technologists, innovators, social entrepreneurs and industry experts to discuss and examine a credible vision of the UK’s future place in the world.

By looking at practical and regulatory steps that can be taken to maximise the opportunities and overcome the challenges facing the International Community in the coming years, young people – perhaps more than ever before – need to have a credible and tangible say in the future direction of UK foreign policy.

THE INITIATIVE CONSISTED OF THREE EVENTS:

International Affairs
Open Innovation Event

Foreign Policy
Hackathon with experts

Final Showcase
To experts and decision makers

EACH OF THE EVENTS WERE FOCUSED AND DIVIDED ACROSS THREE KEY THEMES:

International Security

International Democracy

International Trade

These themes were selected on the basis of their prominence in the debate surrounding the UK’s future relationships with the world.

Each event fostered a collaborative environment where new ideas and opportunities were developed alongside industry experts and innovators to provide exciting yet credible visions for the future of international collaboration. Future United serves as a flagship moment for young people and decision makers alike, by establishing a new approach to foreign policy decision making that drew upon the pillars of innovation in technology and young people, combining it with the expertise, and practicality of existing institutions to create feasible and credible new approaches and opportunities for UK global leadership.

By building a competition based on developing new ideas and initiatives in foreign affairs – we aimed to redefine the way young people, experts, decision makers, technology innovators and social entrepreneurs can disrupt, innovate and collaborate to create a better world.

Below are the papers of our finalists.
POLITICOS
POLITICOS
Driving the use of immersive technology in the field of education to build global citizenship.

Globalisation, technological change and social disruption are increasing around the world. With lower civic participation rates and greater distrust in governments, disillusionment with established institutions is approaching peak levels globally.

As institutions become less stable, the world is becoming a more volatile and unstable environment for international affairs and diplomacy.

The UK has historically had, and should continue to have, a leading role in global cooperation and institutions building. But how it goes about supporting this monumental task will need to change.

If the UK is to effectively adhere to its commitment to support “international efforts to prevent violent conflict, resolve existing conflicts, and build peace,” then it will need to radically recast itself as a radical and innovative agent of change on the international scene.

Our proposal seeks to support these efforts, by reframing what foreign policy is, who it should target, and how it should go about doing so.

We are establishing an organisation to position the UK at the forefront of Global Civil Society education. We will work with the tech community in the UK to help create channels of communication between young people that, while being fun and engaging, will primarily seek to create a stronger sense of global cooperation.

Specifically, we will use immersive technology in the field of education, namely that of global citizenship and establish a cross platform application for immersive content.

By supporting our initiative, the UK Government will help position the country as a leader in digital diplomacy, boosting the country’s soft power credentials and increase its standing in the world.

Global leadership now means embracing change. We should seek to re-shape the model of diplomacy, with the interests and voice of young people at the heart of everything we do. This policy brief sets out how we believe the UK can rise to this challenge.

Realising the UK’s Soft Power Opportunity

The PoliticOs Team believe that to support the future of democracy and civic engagement, we must reach out to digital natives and encourage their active participation in global citizenship.

To that end, we will engage primary school children (7-11 year olds) in global challenges and inspire their recognition of the importance of international cooperation.

We will do this by using classroom-friendly technology that can establish an innovative and sustainable pathway to building future democracy.
Our Vision of the Future

There is justified enthusiasm and excitement around immersive technologies and its potential applications. Immersive technologies include Virtual Reality (VR), Augmented Reality (AR) and Mixed Reality (MR). Education has already been targeted as one of the many fields that will be revolutionised by the development and accessibility of immersive technologies.

Recent experiments in various educational institutions have pointed to highly positive outcomes. Tools such as Google’s ‘Expeditions’ utilise relatively cheap technology (Google Cardboard) to offer VR-based educational experiences. As of summer 2017, Expeditions had 500 narratives that could be categorised as ‘classes’ (and of course, they could be downloaded by anybody with a Cardboard).

We will utilise the expertise of the immersive technologies community in the UK, and together design creative content for classrooms that will help inspire global civic participation. “Clouds over Sidra,” an immersive VR 360 experience of a refugee camp in Syria, and organisations such as Unfold Stories (co-founded by Future Foreign Policy advisor Marisol Grandon) hint at the potential virtues of blending immersive technologies, diplomacy and education. We will embolden this vision; our role will be:

- To facilitate collaborative environments, acting as the vital link, between digital diplomacy initiatives, government decision makers, and the education sector.
- To create global channels of communication between children, in order to showcase important stories in countries around the world. A focus will be on creating channels of communication, collaboration and increased understanding across conflict-affected contexts.
- To utilise gamified learning using a cross-platform application that connects the local to the Global, making global issues relevant to local politics.
- To provide a platform to showcase this new type of engagement; the goal is to get it to be utilised in schools across countries (pilot project will be conducted in the UK and another European country). The project will subsequently be scaled-up and utilised in schools in multiple countries.

Facing the Challenges

There are still two main challenges with the use of immersive technologies in classrooms: the first is the cost-effectiveness of the project, and the second is the relationship between immersive technologies and educators.
For the first issue, the reality is better than it initially seems. While it may be that a complete immersion kit for ten students provided by Google costs around $4,000, it is also the case that this kit is the ‘state of the art’ of immersive technology options. There are alternative options: for example, Google suggests how to ‘build your own kit’, thus making the prospect of immersive technologies decisively cheaper (a Cardboard can cost as little as $7). Funding would thus not necessarily be a problem.

Moreover, the Industrial Strategy published by the UK government has specific key policies for our project, including its investment of £725m in the new Industrial Strategy Challenge Fund programmes to capture the value of innovation, which includes the £33m Audiences of the Future challenge fund, the £20m GovTech fund and funding for digital skills.

The second issue is perhaps more challenging to face: as has happened with computers and then smart boards, teachers have been particularly reluctant to move with changing times. The challenge of those who want to appeal successfully to a wide audience of educators lays in offering a solution that is integrative rather than substitutive. There needs to be an understanding within the technological community that the teacher remains an essential part of the educational experience, and that it is their human contact with students that ultimately affects the results.

Civi: A Platform to Inspire Global Civic Engagement through Immersive Tech & Social Media

We are looking to build a cross-platform application named Civi, designed at first to engage primary school children (7-11-year olds). The platform will serve four main purposes: Experience, Relation, Action and Connection.

- **Experience.** The platform is envisioned as a VR/AR content library, built through partnership with tech organisations in the UK. We will be the curators of this library, which is intended to be constantly expanding, and offers the building block of the educational approach, allowing students to experience first-hand the issue under consideration.

- **Relation.** The platform offers gamified learning and suggestions for educators. A wide array of resources tailored to the geographical region and specific context (in order to bridge the global-local and cut-across conflict divides). Teachers will be free to choose to deliver as they see fit, deciding whether and when they want to make use of the resources offered.

- **Action.** A project for the students to further integrate the experience into their life. This project completes the understanding of the relationship between the global and the local.
Connection. The network that we create, between companies, organisations and schools across one or multiple countries is the true aim of the platform. The possibility for students to be in contact, teachers to share best practices and companies to network truly creates the sense of empathy and connection that we are looking for.

Possible KPIs:

- Content gathering - within six months, we aim to have a beta version of the platform, including a medium-size library of content gathered from partnering with national and international organisations.
- Participation in the BETT Show 2019 to expand our network and present our idea to schools and organisations;
- Partnership with schools in the UK (1-5 schools) and in another pilot country to test the platform within a year;
- Expansion of the network and partnership with schools in a third country by the end of the second year;
- Exploration of content creation tools and student-created content within three years;
- 50 schools and at least five countries to use a version of the application in five years.

Delivery Mechanisms

Management

- The platform will be in the hands of the designers (a.k.a us) who will coordinate with partners;

- The enterprise will necessitate partnership with schools in the UK and the other pilot country, tech companies and civil society organisations already active in the field (beneficial both in terms of expertise and social network);
- Partnership with a particular organisation will be necessary to coordinate the translation of the platform in the local language and the co-production of content within the Relation and Action sections, as they will offer insights on the best approaches to linking the global to the local (this will be more easily understood once we have a beta design of what the platform will do);
- Schools have to be persuaded that the platform is beneficial for its students' education. We imagine adoption to be on a voluntary basis (i.e. individual schools decide to adopt the platform), which requires us to take into account the need of a marketing strategy. (The annual BETT Show would be an ideal starting point to make the idea known to the educational and information technology community.)

Institutional Relationship

- We prefer to take a bottom up approach rather than a top down, this means that at least at first we will mostly work with tech companies, and civil society organisations in the UK and the other pilot country, as well as the democracy and prosperity teams at the FCO.
In the longer term, as the success of the product builds, we would hope to work directly or indirectly with countries’ governments;

**Delivery Model**

- The local organisations in the pilot countries and representatives from our enterprise will reach out to every candidate school to offer them the possibility to implement our platform. We believe that by carefully selecting our partner local organisation, we will be afforded legitimacy and optimise our position to persuade local schools that our platform has something unique to offer;
- Once we have established a relationship with a school in the UK and another pilot country, the platform will be set up for use in a few classes at the primary level.

**Platform set-up:**

- A short training session for the teachers who will be in charge of supervising the use of the platform and equipment (delivered by a member of the partner organisation and a representative of our social enterprise);
- A testing period during which the trainers will be available around the school to support with any technical difficulties that may incur at the beginning;
- Because the platform is meant to be user-friendly and offer a great deal of student-led activities, the testing period will also serve to individuate a nucleus of students who are particularly comfortable with the platform and instruct them to become trainers, thus ensuring the scalability of the use of the platform in the school without the need of external intervention;
- This whole process is likely to last about two weeks.

This model will be repeated in all partner schools.

**Next Steps**

- We envisage the FCO taking a strategy lead on targeting the pilot countries, based on the FCO’s countries of interest;
- The role of the Government is to push for the technological revolution inside schools, following the directives of the Industrial Strategy;
- The Department of Education should collaborate to devise workshops for teachers, to help us collaborate with schools across the country;
- We aim to fund the design of the platform through different sources: public grants (directly from the FCO or from other institutions) and start-up like investments;
- The FCO could be responsible for co-curating the platform;
- The FCO should support our attempts to connect with local organisations and form a triangular partnership (in the sense that we will collaborate with the local organisation directly and not through the FCO).
ARTIFICIAL INTELLIGENCE
AND INTERNATIONAL AID
AI FOR INTERNATIONAL AID
Driving the use of AI technologies to solve global challenges through challenge led competitions.

Artificial Intelligence technologies have seen an increase in capabilities and applications in recent years. Innovations in machine learning have driven the use of algorithms to analyse large sets of data, recognising patterns and making effective decisions. AI has the potential to make aid programmes more effective, by analysing data to better prioritise and allocate aid resources. However, international development experts who do not come from technical backgrounds may struggle to understand these possibilities.

Our solution is a funding competition to incentivise the use of artificial intelligence and big data, to maximise the efficiency and effectiveness of international development spending. Entrants will be tasked with developing a software system which calculates how cost-effective given development projects are likely to be and thus helps improve the targeting of aid. There will be a requirement for cooperation between appropriate actors across academia, industry and NGOs.

The opportunity for realising our solution is clear. The UK is committed by law to contribute 0.7% of GDP to official development assistance. The Department for International Development has already recognised the value of technology for supporting its work; it funds accelerator programmes applying emergent technologies to a range of challenges, such as developing more efficient agriculture. However, it could be doing more to harness the power of technology to achieve the objective, stated in its Single Departmental Plan, of driving ‘efficiency and effectiveness in all [its] programmes’.

Looking to the future, we envisage that as innovation continues apace and data continues to proliferate, the options available to governments and NGOs will broaden. Developing new modes of cooperation and ensuring that the insights to be gained from burgeoning datasets are acted on will increase in relevance as the pace of technological change accelerates.

Realising the UK’s International Development Opportunity

Our solution is a funding competition to incentivise the use of artificial intelligence and big data to maximise the efficiency and effectiveness of international development spending.

Our Vision of the Future

- To use the power of artificial intelligence to end poverty.
- To establish the UK as a world leader in using artificial intelligence and big data to solve global challenges.
- To foster stronger cooperation between government and technological experts.
Idea: Emergent Technologies & Aid Spending

Entrants in the competition will be tasked with developing a software system which calculates how cost-effective given development projects are likely to be and thus helps improve the targeting of aid. Possible datasets entrants could use to train their algorithm include:

- Business cases from all DfID-funded projects (showing expected benefit-cost ratios)
- Independent Commission on Aid Impact reports, which review all DfID projects and rate them on a RAG scale for effectiveness and Value for Money
- J-PAL’s randomised controlled trial evaluations (currently 884 from 80 countries)
- Post-2015 Copenhagen Consensus research on the benefits of more than 100 proposed development targets, and their recommendations for the 19 targets that would deliver the highest value for money
- AidData’s project-level database, which includes commitment information for over 1.5 million development finance activities funded between 1947 and 2013, covering 96 donors
- Development Experience Clearinghouse, which provides access to over 10,000 USAID evaluations
- 3ie impact evaluation database, which comprises over 4260 impact evaluations

Possible KPIs:

- Average estimated benefit-cost ratio of portfolio of UK-funded international development projects should increase to at least 5:1 by 2025 (this is the estimated benefit-cost ratio of cash transfers according to the Post-2015 Copenhagen Consensus Centre)
- Portfolio Quality Index should stay above 100, indicating that on average DfID’s outputs are meeting expectations (for reference, PQI was 104 in March 2017)

Delivery Mechanisms

- Work with DfID to confirm the scope of the competition and criteria for winning entries, which could include quantity and quality of data used to train the algorithm, robustness of methodology used, etc.
- Once the details have been confirmed, work with DfID to launch the competition, actively publicising it through industry events and social media. The Data for Development Festival in March 2018, co-hosted by the UK Government, DfID and the Office for National Statistics, could be a good occasion to launch the competition.
- Actively solicit entrants to submit project plans over a 6-8-month competition period, describing their expertise and the methodology and data they
would use to create their algorithm. Each entry should be submitted by a collaborative group consisting of at least two out of these three categories: private company, research organisation and third-sector organisation.

- After the competition closure date, score all entries on the agreed criteria, with the top 10 in the scoring process going forward to a final judging panel, consisting of representatives from government, industry and academia.

**Next Steps**

- Add the winning algorithm to DfID’s set of tools for taking funding decisions.
- Promote the winning algorithm and competition format to other donor countries to improve the effectiveness of their aid spending and as an example of UK innovation.
THE INTERNATIONAL CYBER SECURITY NETWORK
Establishing an international body dedicated to solving global cyber threats

Presently the UK faces a range of issues that stem from cyber-attacks that host both short and long-term effects.

Nearly seven in ten large companies identified a breach or attack (Cyber Security Breaches Survey 2017) the government has invested £860 million over 5 years (UK Cyber Security Strategy). International ransomware attacks in news and public concern recently - May 2017 WannaCry ransomware attack. The cost of repair and instalment of protection is ever increasing. We have found that the average cost of a data breach in 2020 has been forecasted to exceed $150 million by 2020 (Juniper research, 2015).

With a change in approach and policy the UK will be able to take a leading role in smarter cyber protection and management.

The focus is currently on enhancing training of those planning to enter or in the I.T. profession/organisations working within this field directly within the UK, or enhancing security for the purposes of defence/security, and not trade nor the increase in resilience of the private/public sector internationally (UK Cyber Security Strategy 2016-2021). The lack of readiness and dependence on a “one size fits all” model that is not tailored to a country is merely raising awareness which is necessary but not enough to build and maintain resilience against ever evolving cyber-attacks. and not training.

Therefore, our focus is on reactive and not preventative training which will range from threats such as unmanaged supply chains, corporate espionage, with internal threats not being taken into account. Mixed information and guidance will be available to both the public and private sector. E.g. National Cyber Security Centre, Cloud Security Alliance, FAFT, SWIFT.

Currently it is clear to see that present cyber security strategy, not only in this country, will begin to stagnate and later become redundant with objective to neutralise all cyber threat. The treatment of the internet should no longer approached as an infection. Cyber threats are similar to viruses and the treatment for a virus is continuous juxtaposition between management and preventative action.

Post-Brexit will call for a slight void within security discourse to be filled and with the UK changing “reactive cyber security strategy” into a “preventative cyber security strategy” that post-Brexit void can be filled. This is an opportunity that the UK cannot miss.

Our Vision of the Future

The reduction of cyber-crime is not only a domestic priority but also a global one. What the UK can do is fill the gap that is present by leading an initiative that will grow and produce a humanitarian effort towards security online. The ambition of the International Cyber Security Network is to eventually hold the same legitimacy as current international organisations, such as NATO, the World Trade Organisation and to rival /
collaborator partnership with the International Security Management Association. The outcome of this will leave the UK with global recognition in cyber security thus supporting the Great Britain campaign in a post-Brexit climate; bringing in opportunities not only political in nature but also for British industry and trade.

**The International Cyber Security Network**

The solution is to build the International Cyber Security Network (ICSN) working with the FCO existing links/diplomatic channels abroad:

- Creating tailored and innovative cyber security readiness programmes (MOOCs, SANS/UK Government Cyber Retraining Academy, conferences etc.).
- Providing cyber-readiness level programmes (CRLPs) and building resilience for internationally-based SMEs/start-ups in partnership with UK private sector.
- Focus on basics of cyber security (UK National Cyber Security Centre 10 Steps) for SME and start-ups employees (CEOs, COOs).
- Solution in line with current UK strategic objectives to increase international trade and foster UK leadership in cyber security education innovation.
- Opportunity for UK to create secure new trade links in target markets (Cyber Growth Partnership target markets).

![The structure of the International Cyber Security Network (ICSN)](image)

**The KPI'S**

1. **The service is meeting user needs**
   Establish cyber security training schemes in 20 foreign states by 2030.

2. **The service allows users to easily complete the task it provides**
   5000 members in the network by 2030.

3. **There are enough people using the service to make it cost-efficient**
   Organise 20 cyber-readiness level programmes (CRLPs) minimum in first year of scheme, 50 minimum in second year of scheme.

4. **People know about the service and are choosing to use it.**
**Delivery Mechanisms**

- Establish the network through meetings with the British government, UK private cyber security training companies such as MOOCs, SANS etc., and international SMEs.

- As using readily-available, existing systems and government will be acting as facilitator/coordinator with UK private sector contributing to the majority of funding, funding is primarily needed for venue catering costs and marketing; this could be the GREAT campaign fund (£113.5m of initial funding for the 2012-15 period allocated by the Cabinet Office to five partner organisations: DIT, FCO, British Council, VisitBritain and VisitEngland. Increased funding by 50% in 2016. Target return to UK economy of £1.9bn by 2019-20.

- Since the funds required for setting up the meetings and establishing the network are likely to be small, any leftover funds will go towards arranging more partnerships, and further along, towards the development of a training app (which will be funded primarily by UK-cyber security private companies).

- Cyber security resilience training governance and delivery would be targeted to the needs and size of the SME/start-up sector in the state in question, including MOOCs, SANS/UK Government Cyber Retraining Academy, conferences etc. The focus is on basics of cyber security (UK National Cyber Security Centre 10 Steps) for SME and start-ups employees (CEOs, COOs) so they can cascade to their companies/employees.

**Next Steps**

- The outcome of this would be a cyber security resilience training governance and delivery would be targeted to the needs and size of the SME/start-up sector in the state in question, including MOOCs, SANS/UK Government Cyber Retraining Academy, conferences etc. The focus is on basics of cyber security (UK National Cyber Security Centre 10 Steps) for SME and start-ups employees (CEOs, COOs) so they can cascade to their companies/employees.

- Set up a scheme using UK private sector to ‘export’ cyber security resilience training and norms through UK private sector (CSR etc.) partnerships with SMEs/start-up in middle-income countries in an exclusive network, employing established diplomatic and economic links.

- FCO, in addition to DIT/BEIS, would act as facilitator in the provision of venues, local partnerships, diplomatic and trade links etc. and implementation would be led by the UK private sector. Solution in line with current UK strategic objectives to increase international trade and foster UK leadership in cyber security training innovation via UK FCO Strategic Programme Fund.

- Opportunity for UK to create secure new trade links with states outside the EU to replace links potentially reduced with Brexit (Commonwealth etc.) in target markets (Cyber Growth Partnership target markets: [https://www.techuk.org/cyber-growth-partnership](https://www.techuk.org/cyber-growth-partnership) and [https://www.asiapacific.ca/research-report/sector-specific-initiative-uks-cyber-growth-partnership](https://www.asiapacific.ca/research-report/sector-specific-initiative-uks-cyber-growth-partnership))