Update Report of the UK-French Data Taskforce

Data Driven Growth

Innovation, Infrastructure, Skills and Empowerment in the Digital Age

The UK France Taskforce on Data Innovation was commissioned by Minister George Osborne, Minister Emmanuel Macron and Minister Axelle Lemaire on November 20th to produce a report on the data economy and the opportunities for collaboration between our two countries. The UK and France are widely regarded as world-leading in the area of open data, have pioneered the digitisation of public services and are committed to producing an environment in which data driven innovation can flourish.

Henri Verdier, the Chief Data Officer of the French government and Sir Nigel Shadbolt, Principal of Jesus College, Oxford, Professor of Computer Science at Oxford and Open Data Institute co-founder, were appointed co-chairs. The Taskforce was commissioned to focus on the following questions:

- The Economic, social and environmental opportunities that arise from the use of different data types;
- The role of technology in data innovation and the creation of favorable environments to promote such innovation for the benefits of our citizens;
- The tension between the use of data and increasing fears of the misuse of data assets.

The co-chairs selected a small team of experts from each country to drive the work of the Taskforce. We are grateful to:

- Patrick Cocquet - Cap Digital;
- Alban Schmutz - OVH;
- Mokrane Bouzeghoub - Allistene;
- Rand Hindi - Snips;
- Yann Lechelle - Snips;
- Clive Humby - DunnHumby;
- Doug Monro - Adzuna;
- Andrew Lawson - Salesforce;
- Stéphanie Finck - Salesforce.

This update report has been developed by the UK-France Data Innovation Taskforce to provide further detail on how to realise the recommendations in the Taskforce report. It is designed to spark ideas, draw out comment and inform consultation with the UK and French tech and data communities, research organisations, consumer advocates and government departments.

When developing their report, the Taskforce members met with companies, trade associations, public bodies, researchers and volunteers who already contribute to the data economy in the UK and France.

Following these discussions, the Taskforce have put forward further ideas as to how the recommendations might be taken forward by UK and French partners. Whilst a number of agencies and organisations are mentioned explicitly in the recommendations, actions should also include consultation with the wider tech, business and government community to ensure that the actions command the broadest support and the widest participation.

The suggestions are a combination of short-term actions that build on existing UK and French data programmes and future long-term actions will drive transformation in order to keep the UK and France at the forefront of the new global data economy.

It is intended that the report will be used by the UK and French Governments to inform their discussions with partners and stakeholders as they work to implement the Taskforce recommendations. Irrespective of Brexit discussions the Taskforce believes that these recommendations offer opportunities for both countries to build on their flourishing data ecosystems and policies. The recommendations are an excellent basis to continue our work and collaboration together unleashing the potential of the data revolution for individuals and institutions, business and government.

Nigel Shadbolt & Henri Verdier

UK-FRENCH DATA TASKFORCE ON DATA DRIVEN GROWTH

In this report we highlight four major areas where our two countries can build on their existing expertise and work together to deliver economic growth, achieve efficiencies, increase productivity and enhance social welfare. The first of these areas is fostering greater innovation with data. The second focuses on building robust data infrastructure to support services and opportunities that benefit everyone. The third concerns the urgent need to improve data skills and awareness in our societies. The fourth attends to the vital question of trust; trust in the data itself, the way it is used and how its use can be made accountable and proportionate. Today, data touches every aspect of society and our economies. Its benefits should be distributed equitably and fairly.

1 Fostering greater innovation with data

Major innovations are born in ecosystems that are rich in creativity, collaboration, interaction and fair competition. Together, France and UK could harness their existing data organisations and initiatives to build one of the most creative data ecosystems in the world.

2 Building robust data infrastructure

The strategic importance of data as essential infrastructure for our economies is not widely understood. Just as we invest in roads, rail and other public infrastructure to grow businesses, foster new opportunities and improve lives, we need to invest in data infrastructure.

3 Improve data skills and awareness in our societies

We are facing a data skills shortage. Across Europe we are seeing a rising number of data science job vacancies. We need to strengthen our data skills across sectors already using data in various forms - from epidemiologists, statisticians and clinicians to radiographers, sociologists and marketing specialists. Opportunities are being lost every day because companies or administrations aren't fully aware of the value of their data. The USA and China are already training thousands of data scientists with revolutionary educational content. Europe must respond forcefully to this new challenge.

4 Attends to the vital question of trust

We have to think about the society we want. There are concerns around the misuse of data to oppress and control individuals. There are concerns about organisations who have exclusive control of data, and can use it for monopolistic purposes. There are concerns about what is happening with our personal data. A collapse in trust of organisations collecting and using data, including our personal data, is a real risk that could prevent us realising the full economic opportunities on offer.

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Recommendations & Possible Actions

In what follows we provide a summary of our recommendations, these are focused around the major data challenges of innovating with data, establishing effective data infrastructures, securing a supply of data skills and ensuring that the data ecosystem is one we trust and one that empowers us all. A more detailed description of the recommendations was presented in the report published in july. A plan to implement the recommendations is presented hereafter following discussions between our two Governments. Going forward, the UK and France should establish an annual Data Summit to showcase successes, share experiences and monitor progress implementing these recommendations.

RECOMMENDATIONS

Possible Actions

1. INNOVATION

Objective: Encourage collaboration and focus our efforts.

Recommendation : Establish a UK-France Data Challenge Programme to bring UK and French organisations together using data to solve common problems.

Commission a new joint programme featuring two high-impact and high-return challenges each year, with a stated aim of demonstrating clear and measurable improvements. Etalab, Cap Digital, the Open Data Institute and the Digital Catapult may be partners for this work. For example, goals might include economic gains, improvements in efficiency, reduction of friction, and new innovative opportunities in areas that could include jobs, healthcare, transport, finance, food and agriculture, energy and environment, education, crime and justice.

Possible action

Short-term action:

Use existing challenge funding pots to develop UK-France data challenges. In France, Cap Digital, Numa, Images & Reseaux, Euratechnologies and Lyon TUBA have been selected to develop a 'Big Data Challenges' programme to support open innovation around big data. The programme brings together sponsors (large companies or public entities that possess large amounts of data, and could experiment on big data) and SMEs (that are developing new big data services). The first 25 challenges have been a real success, and the programme is looking to launch around 100 new challenges over the next 3 years.

This programme could be expanded to include UK organisations such as the Open Data Institute, Nesta & the Digital Catapult.

Cap Digital, NUMA, Euratechnologies, and 12 other organisations, already have the budget to launch French / UK Big Data challenges (approx. 100,000 euros to set up and organise and 70,000 euros for the SMEs per challenge). The total for 3 years is approx. 3.5 million euros, granted by French government, while the tech sector contributes 3.5 million.

Longer-term action:

Source funding for a challenge series designed for and dedicated to UK-France collaboration in key areas. Establish an ambitious new sector-themed UK-France Data Challenge programme that includes mentoring and business development elements for the Challenge winners.

The Data Challenge Programme could be modelled on the UK's Open Data Challenge Series, which ran from 2013 to 2015. A series of challenges could be organised with each focusing on a challenge question within a particular sector. Sectors might be chosen based on availability of data and to reinforce the impact of the recommendations in Chapter 2, the challenge should be ambitious (i.e. solve important issues).

RECOMMENDATIONS

Possible Actions

Objective: Scale up our networks.

Recommendation : Create a 'data innovators passport' scheme, to share best practices and extend startup networks between the UK and France.

Build on, provide support for and connect existing startup programmes between the UK and France, through an accelerator passport programme. Startups that are part of the programme would be able to move between incubators including the Open Data Institute, Digital Catapult, Cap Digital, Etalab, Numa Digital, Tech City UK and Scale Up! Startups will be able to learn about respective French and UK ecosystems and markets in order to facilitate their growth.

Possible action

Short-term action:

Convene a networking summit to bring together UK and French participants in programmes similar to the EU ATALANTA initiative and ODINE (Open Data Incubator Europe), and new contacts, to design next steps.

The ATALANTA initiative will finish in 2016 after three years of cooperation. There have been significant success stories. Numa will continue its exchange programme with F6S in the UK and invite the Digital Catapult and ODI to join them, with the following programme refinements:

- convening start-ups around a particular sector (instead of receiving 1 by 1 start-ups);
- work with other national incubators to go beyond 2/3 cohorts per year.

Longer-term action:

Establish a multi-year programme, using knowledge of programmes like ATALANTA and ODINE, to include other UK-France incubators. Explore if the programme can be further developed to include new components such as peer networking and guidance materials on how to expand into overseas markets.

A coordinating entity will be necessary to manage this programme. This should be an existing entity who has strong networks and experience in delivering successful incubation and peer networking programmes.

The coordinating entity will establish a network of start-up incubators across the UK and France. It will have a regular set of calls for start-ups to join the data innovators passport scheme. On joining, start-ups will be hosted within two incubators of their choice over the course of a year, with the proviso that one must be in the UK and one in France. The scheduling of incubation and making information available about each hosted start-up will enable start-ups with common interests to overlap with each other. The coordinating entity will work with incubators to ensure they have the resources they need to support this programme.

The coordinating entity will play a key role in identifying linkages and areas of opportunities for the start-ups, and provide guidance and materials to support market expansion such as advice about how to operate internationally.

Case studies for each start-up on the scheme, as well as an independent assessment of the overall impact of the scheme, should be part of the package.

RECOMMENDATIONS

Possible Actions

Objective: Connect data innovators and innovation across regions.

Recommendation : Establish a data twinning programme - cities in regional areas with common industries and/or demographics, and strong startup communities.

Data innovators aren't only in London and Paris. Regional business clusters and incubators are supporting UK and French firms outside the capital cities - like French Tech in Lille, French Tech Culture Avignon-Provence, TechNorth in Manchester and the Leeds Data Mill. The French Tech mission and Tech City UK could be the initiators of this new regional collaboration.

Possible action

Short-term action:

DGE in France and FCO and UKTI in the UK could work with organisations like French Tech mission, Tech City and Tech North to promote closer collaboration between French and UK cities and clusters.

The French Tech mission and Tech City UK could be possible initiators of this new regional collaboration with cities interested in sharing their ecosystems, resources and opportunities regarding specific themes (transport, tourism, culture, agriculture, etc.).

Longer-term action:

The French Tech mission and Tech City UK & Tech North could run the data-twinning programme. A series of workshops and events would bring together cities to share their experiences with data, and how their communities' currently access and use available data.

Pairs of cities would then bid into the programme to receive funding on joint projects and encourage business innovation in the respective regions, through activities such as incubators, hackdays, data challenges, the development of data platforms etc. Twinned cities would be encouraged to include exchanges of personnel and other activities that ensure a close working relationship is maintained.

The results of the collaborations between the twinned cities would be assessed and documented. In addition an independent third party will assess and quantify the impact of the data-twinning programme. The programme should have close links with the data innovators passport scheme recommendation.

RECOMMENDATIONS

Possible Actions

2. DATA INFRASTRUCTURE

Objective : Make using and exchanging data easier.

Recommendation : Develop the use of API's in the data economy, learning from the UK Open Banking experience.

APIs are the nervous system of the 21st century. To that extent, we need to encourage and collaborate on common open APIs in sectors of shared importance. As commerce moves across country borders, how we exchange and access data must be fluid too. The UK has already begun work on an Open Banking Standard for the consumer banking sector. This work should be expanded on.

Possible action

Short-term action:

Explore lessons learnt from open source and open API projects for storing and exchanging personal data, including Cozy Cloud in France (a personal secured cloud service) and the UK Open Banking Group (open APIs for exchange of personal data between service providers). Projects like these could be used to develop recommendations around open source, open APIs and open standards in other UK and French sectors.

Longer-term action:

Commit funding to three to five open standards setting and technology-developing projects designed to enable more efficient sharing within sectors, inside and outside government. Funding would support the appointment of a coordinating entity for each project who will convene key stakeholders (businesses, start-ups, government departments) within a sector to solve a common data sharing problem.

As well as supporting the administration of each project, funding would go towards developing policies and standards, coordinating events, developing and testing technical solutions, and driving implementation of new standards. For example, a two year concrete project looking to act on the recommendations of the UK's Open Banking Working Group and market analysis undertaken by the UK's Competition & Markets Authority would be tasked deliver open APIs for the consumer banking sector. It would also be important to facilitate further work on the legal aspects of data exchange between UK and French enterprises.

RECOMMENDATIONS

Possible Actions

Objective : Support the basic infrastructure for linked services.

Recommendation : Invest in and share experiences building core data registers, learning from the French National Address Database experience.

Registers provide an authoritative source of core reference data for linking and improving services. France collaborated with the OpenStreetMap community to develop the National Address Database - a commons based on data crowdsourcing, which is freely accessible and usable by anyone. The UK and France should collaborate and share lessons learned from that experience, as the UK explores building its own open address database.

Possible action

Short-term action:

In France, the Digital Republic law which passed in June 2016 reaffirms the "service public de la donnée" assuring the accessibility, quality and maintenance of core data registers deemed to have important social and economic potential. In the UK, exploration of a National Information Infrastructure has informed the Government Digital Service's commitment to developing core authoritative registers for data. Both countries have invested in open address registers. The teams working on these address registers should convene to share their experiences, and strive to make these registers compatible and interoperable across country borders.

Longer-term action:

Create new entities responsible for coordinating, maintaining and making accessible certain core public data infrastructure needed in sectors within the UK and France. These entities would work with private and public sector providers of data that is identified as essential for underpinning public and private services, and to design data infrastructure that meets the evolving needs of our two countries.

Objective : Make it easier for citizens to get the services they need anywhere.

Recommendation : Continue to invest in and share experiences of e-identification schemes to enable smoother access to public & private sector services in each country.

France and the UK have been working on strengthening pervasive government mechanisms, like e-identification, that stretch across every government service. Privacy should be integrated in the public system by design, building on lessons learnt from projects like France Connect (France) and Verify (UK).

Possible action

Short-term action:

Convene a workshop between France Connect and Verify to share their experiences of building e-identification schemes to date, and publish lessons learnt and discussion points from this workshop with a roadmap for future collaboration.

RECOMMENDATIONS

Possible Actions

3. SKILLS

Objective : Support senior leaders understanding the power of data.

Recommendation : Support data literacy programmes for leaders inside and outside government.

To realise large scale data transformation, we need to engage at the very top. Trainings could be developed for 'high potential managers' (business leaders, politicians, government officials, etc.) to inspire and equip them with the data awareness, skills and strategies they will need to transform their organisations. These leaders can come from public and private sector organisations. The programmes should involve both in person workshops and a peer network and have a focus on solving specific problems or challenges.

Possible action

Short-term action:

Organisations like the Alan Turing Institute, Saclay University, TektosDATA (a spin off start-up from Saclay), and the Open Data Institute could be convened by government to explore a standard e-learning set of materials/modules for leaders inside and outside government on data transformation.

Longer-term action:

UK and French learning programmes could work in partnership to develop new courses, exchange best practices and promote similar courses between the UK and France. They also could be scaled up to focus on key sectors e.g. for senior managers in UK & French health organisations and include workshops, peer learning, and new webinar and online learning materials.

Objective : Overcome a chronic data skills shortage.

Recommendation : Embed new data and problem solving skills for existing analytical professions; and create common data apprenticeship schemes and conversion courses to provide a sufficient workforce of data practitioners in the UK and France.

Existing data related disciplines, including management, marketing, engineering sciences, economics and statistics would benefit from curricula that combines basic data training, problem solving and collaboration coding, data ethics and data visualisation. Alongside this, create new entry paths for aspiring data practitioners. There are initiatives in both France and UK, which aim to upskill developers and data scientists, but generally with a focus on security and high end research. There are sectors struggling to attract and/or utilise data skills. Investment in apprenticeships and conversion courses for aspiring data practitioners are needed. The number of data trainings, courses and other forms of data education need to increase significantly, so it is important to be able to "train the trainers". These could be coupled with a funded secondment programme placing data practitioners in organisations who make a case for data support on a project.

Possible Actions

Possible action

Short-term action:

French and UK governments could collaborate to exchange best practices from schemes such as Cap Digital's EdFab programme and the UK's new Degree Apprenticeship programme.

Longer-term action:

Bring industry, education and government partners together to develop curricula and metrics - for example for existing analytical professions in government. Explore the creation of a data specific course out of the UK's existing Degree Apprenticeships scheme, which is designed by industry and Higher Education institutions.

Objective : Promote basic data literacy.

Recommendation : Develop initiatives to bring basic data literacy into primary and secondary education.

Just as students learn how to be good citizens and be 'cyber-wise', so they need to be 'data-wise' if we're going to make smarter choices about how organisations use our data. Several experiences have proven to be effective and could be easily encouraged and scaled up. For instance, france-ioi.org proposes free gamified activities and contests to students through a bottom-up and independent approach. Basic understanding of the potential of data could be included in the curricula of "civic life and ethic" courses for students.

Possible action

Short-term action:

Adapt France IOI content and work being done in the UK to include data literacy elements. Associations in France such as France IOI or AniMath could also work with UK organisations like Nesta, the Open Data Institute and the Digital Catapult to use the Data Challenge programme identified in recommendation 1 to create new on-line tools that could be used in UK and French schools to help develop greater data literacy and create a 'project oriented' data challenge as outlined below:

- interactive activities where pupils discover the fundamentals of data literacy and become familiar with some well-chosen tools at their own pace. This could be completed each year to gradually form a reference for learning in this field for the pupils;
- for those pupils who have completed a minimum of activities in this course, launch a project-type team competition (using the knowledge and tools discovered in earlier activities). Projects are done online, and all participants can see and test the projects of other participants or vote for a public prize. Presenting the accomplishments of the best teams would be a way to inspire other participants and the wider public.

RECOMMENDATIONS

Possible Actions

4. TRUST AND EMPOWERMENT

Objective : Empower citizens through their data.

Recommendation : Refine and extend MesInfos and MiData best practices to support citizen data empowerment.

Data ownership, portability, accountability and control are fundamental principles behind MesInfos and MiData as they are reflected in the GDPR. How organisations will comply in practice with the incoming GDPR remains unclear. A citizen data empowerment scheme could be built on the experiences of MesInfos (France) and MiData (UK). Research into technology and regulation aiming at helping businesses empower citizens to better control and be able to take decisions regarding their personal data should be encouraged.

Possible action

Short-term action:

An event could be arranged for French and UK industry, academic and government partners to examine lessons learnt from programmes such as Mes Infos and MiData, and changes that will be introduced under the new General Data Protection Regulations that are due to come into effect in the UK and France in May 2018. The event could also be used to scope out a future programme of collaborative work to put France and the UK at the forefront of the development of new personal data technologies and services.

Objective : Plan for future data policy challenges.

Recommendation : Commission research into algorithmic transparency and accountability.

There are emerging questions for policy makers and organisations about decision making using data, for example via algorithms. In some sectors, algorithmic decision making is already a part of our everyday interactions with services. How do we ensure our data driven decision making is fair, and doesn't discriminate? France and the UK should commission research into how organisations could be more transparent about algorithms, data sources and the data analytics process used to make decisions that affect consumers and citizens.

Possible action

Short-term action:

Build on work in the UK and France by organisations like the Royal Society, British Academy and INRIA to develop guidance for organisations in both countries around transparency of automated decision making.

Longer-term action:

Work with a group of public and private actors to explore the opening of particular source code. Lessons could be drawn from recent events in this area, like the opening of source code used to calculate taxes in France and the "Code Impôt" hackathon that followed that announcement. This action would involve the tech community in validating and revising algorithms to improve their effectiveness, and also strengthen the accountability of decisions made using algorithmic processes.

ONGOING

Possible Actions

Going forward, the UK and France should establish an annual Data Summit to showcase successes, share experiences and monitor progress implementing these recommendations.

Possible action

The first annual Data Summit could take place in the UK in late-February or March 2017.

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This update report was made possible thanks to the support and advice of many individuals and organisations. The Taskforce would like to thank everyone who contributed to this endeavour.

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