The Data Dividend in France
A comparative perspective on governments' usage of data to tackle key societal challenges

A WPI Economics Report for Splunk

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About Splunk:

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Acknowledgements:

Introduction to the project

This report focuses on the French results from a wider research project on the importance of data analytics in solving some of the most pressing socio-economic challenges that society faces, from reducing education and health inequalities to tackling organised crime and enhancing the natural environment.

Governments face a data divide – the use of data for societal benefit has significantly lagged behind its use for commercial profits. But this also means there is a potential data dividend – the opportunity to close the divide and reap all the benefits of data and emerging technologies which the private sector is already accessing.

We have assessed four key European governments (France, the Netherlands, the UK and Germany) on their use of data, benchmarking their performance to identify best practice, and areas for development. We have also considered the wider context of data use at the heart of government, and what best practice looks like according to the multinational institutions monitoring government data use and innovation, pulling out key insights and policy recommendations.

Based on these principles of best practice, we defined a framework for benchmarking the four target countries in our study and placing them within country typologies. To do so, we analysed them against two dimensions of what makes for effective use of data for policymaking:

- How much **strategic emphasis** do governments put on data use within policymaking, with a focus on the extent to which a government is "data-driven" as well as on their level of data innovation.

- Whether governments have the right **data governance** foundations to enable a better use of data from an operational perspective, including the quality of data, security and the level of data integration within government.

This analysis found that governments are increasingly aware of the data divide and aim to embody a data-driven approach, although these ambitions are not always translated into the necessary actions and resource commitments. All the countries in our sample are looking at how to improve data use in their public sector, though some (specifically the UK and France) are much more ambitious in their aims to put data at the very heart of government. The governments in our sample are also taking their first steps towards data innovation, with a focus on artificial intelligence over other emerging technologies.

Most countries have made good progress in the area of data quality, albeit with varying degrees of policy commitments and implementation of open and accessible data. Data sharing on the other hand has seen less success, with ambitious plans often difficult to implement as a result of inconsistencies in the data produced by different departments, and a lack of organisational capabilities and skills.

The following report will consider the French findings within this context and the implications for France's data use for policymaking.

Snapshot on France

Data-driven government		Data Innovation		Data Quality		Data Sharing	
Centralised data roadmap	✓	Centralised AI Strategy	✓	Best in openness of data	✓	Middling integration of data	–
15 coordinated ministerial roadmaps	✓	National strategy has an innovation focus	✓	Strong availability of data	✓	Strength in eIDs	✓
DINUM acts as Chief Data Officer	✓	ETALAB – policy innovation lab	✓	Strong transparency of data	✓	Average in authentic sources	–
Strong performance in metrics	✓	Medium performance on metrics	–	Improvement needed in security of data	✗	Strategy aims to reduce fragmentation	✓
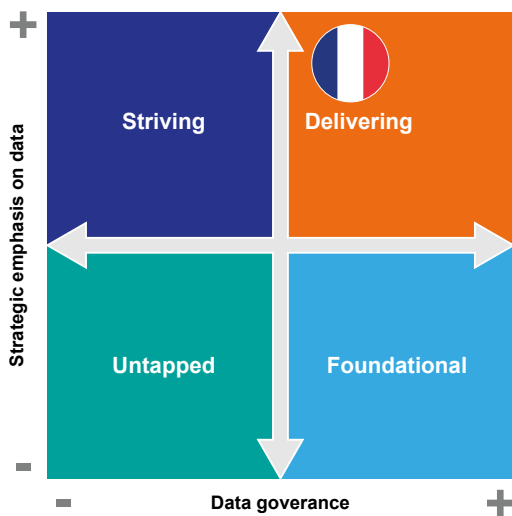
Our analysis of the French government's performance in the use of data for policymaking places it in the **Delivering Country category, those which are actively tapping into their data dividend.** This is driven by having both a strong strategic emphasis on data and good data governance, with particular strength in the data-driven government and data innovation metrics. Security and sharing of data are the only areas of relative weakness in data use for policymaking.

Coping with Covid19 – How did France leverage data to manage the Covid19 crisis?

A private citizen, Guillaume Rozier, created CovidTracker, a website aggregating data about Covid19 in France. An open-source code tool, the website contains a dashboard offering a consolidated view of all of the official data about the progression of the epidemic in France. This brought together data from across different levels of government. The openness of the data at multiple levels of government which allowed this dashboard to be built is emblematic of France's strength in data openness and availability. However, this was driven by a private citizen not the government, showing a lack of data understanding or initiative at the heart of government to make best use of the data it was sharing.

The Covid 19 pandemic showed the French government the power of data and resulted in a cultural shift within government to do more with the extensive data it holds.

Results of benchmark analysis

Strategic emphasis on data

We have assessed the benchmark countries on how much strategic emphasis they put on data use for policymaking, focusing in particular on the extent to which the government is "data-driven" as well as on their level of data innovation. France has a national strategy in place to improve the use of data at the heart of government, with monitoring and tracking of progress against that strategy, as well as structure and strategy in place to improve and monitor innovation in data use.

A roadmap towards a data-driven government

The French government's digitalisation strategy "TECH.GOUV – the program for acceleration of the digital transformation" has several elements relating to the use of data in policymaking. The focus is to improve the digitalisation of public services; however, this is applied quite broadly, with some parts of the strategy specifically focusing on data for policymaking.[1] One of the aims is to have an ambitious data public policy. One whole pillar of the strategy is the use of data to improve the effectiveness of public action, so the French government are directly focused on realising their data dividend.

Not only is there an articulated roadmap with the aim to incorporate data use more effectively into policy making, there is also a body set up to monitor progress against it, provide inter-ministerial coordination and act as a dedicated data agency within government. DINUM acts as the Chief Data Officer for the government through the ETALAB department, in charge of the TECH.GOUV program.[2,3] A milestone for France's data policy was the publication in December 2020 of the Bothorel report on "Public Policy on Data, Algorithms and Source Codes" where Eric Bothorel MP made concrete recommendations to strengthen "France's fragile advance" on data policy.[4] The French Prime Minister Jean Castex responded to the report with a government circular on the opening and sharing of data by Government services.[5]

Operating under the authority of the Ministry for Transformation of Public Action, and in response to the Government's circular, DINUM has collaborated in the creation of 15 ministerial roadmaps drawn up in September 2021 for the following 2-3 years. This makes France the most data-driven government out of the countries we have considered, with plans in place both at the national and ministerial levels, and a body in place to monitor action on those plans.[6]

Case study – Health and wellbeing

Context: 475 inspectors from the Directorate General for Food (DGAL) carry out 15,000+ safety inspections each year from a selection of 400,000 establishments

Action: Replacing targeting of inspections via historical knowledge with targeting based on internet visitor comments mined through AI

Benefit: This doubled the effectiveness of checks carried out by agents, increasing findings of noncompliance from 18% to 36% of visits, improving hygiene and visitor wellbeing

Each ministry has its own strategy highlighting how data can improve public policies, the actions to be taken, timetables for actions and governance set up to ensure their implementation. The interministerial framework for the administration of data, algorithms and source codes has also been drawn up by the General Administrator of Data, Algorithms and Source Codes, defining the overall vision and doctrine within which the ministerial roadmaps must sit. Of the 500+ actions created by the collation of these roadmaps, 15% relate directly to data exploitation.[7]

It is worth noting that France has been building towards a more data-driven government for some time – in 2010, departmental data administrators (DDAs) were appointed in all departments.[8] They aid in the coordination work that ETALAB does and are tasked with leveraging data through data science and AI to improve public action and decision making.

Our assessment of a strong data-driven government is supported by the quantitative metrics we benchmarked our target countries against. France performs strongly across the areas considered:

• Offering data literacy programs for its personnel (OECD OURdata Index) – France has the top score, outperforming all other countries in our benchmark.[9]

• Promotion of data reuse in government (OECD OURdata Index) – significant outperformance. The development of data skills and attracting the right personnel is also a specific target of the TECH.GOUV roadmap.

• Data-driven public sector (OECD Digital Government Index) – strong score just behind the UK.

Mainstreaming data innovation in policymaking

The BETA action in the TECH.GOUV roadmap focuses mainly on innovation in public services, but also includes the incorporation of new technologies into government. This is enabling the development of expertise in emerging technologies such as AI. ETALAB plays an essential role in this, acting as a policy lab, monitoring pilot programs and disseminating best practice.[10] There is an emphasis throughout the strategy on developing partnerships with the research world in AI as well as investigating the use of new technologies, including automation, edge computing, IoT, etc. Since 2019, ETALAB also has its own AI Lab, helping administrations deploy AI projects across Government ministries.[11]

The TECH.GOUV roadmap calls for a Public Innovation Chair (CIP) - new space to cocreate a 21st century administration through a multidisciplinary and iterative approach to policy making.[12] An explicit aim is to mainstream innovation, including amongst public sector leaders. The roadmap aims to create a culture of piloting by data, with analysis, forecasting and dashboards emphasised as important. They highlight the need for a general toolbox to be mobilised for specific needs based on best practice of ministries. This includes data scheme repositories, reference data, API bases, AI components.

Case study – Environmental Sustainability

Context: 1800 agents conduct thousands of water quality controls per year – but only 23% of checks find water pollution.

Action: The French Office for Biodiversity guides monitoring using 93 physico-chemical, socioeconomic and geographic variables to determine risk and target searches

Benefit: Better targeting means infractions are 3x more likely to be caught, resulting in improved environmental outcomes for water and more efficient use of resources

The French AI strategy predates but buttresses the TECH.GOUV roadmap, emphasising public policy based on data, and calling for public authorities to introduce new ways of producing, sharing and governing data by making data a common good.[13] The strategy explicitly mentions the public sector's role, both in using emerging technologies and in coordinating between the private and public sector in key areas, such as healthcare, transport mobility, defence and the environment. These sectors align neatly with the key societal challenges we have identified. The strategy's own analysis emphasises a data divide that needs to be bridged, outlining how the private sector has made enormous profits and dividends from data and the use of AI, whereas a wider benefit to the people and the government has not yet been achieved.[14] The French government is clearly cognizant of the significant societal benefits available to France and the wider EU from closing their data divide, which they are working to deliver.

One of the many roles of ETALAB is to monitor innovation efforts, as well as share best practice. An update to the TECH. GOUV roadmap highlights the current status and barriers of the goals of the project, which includes the goal to adopt emerging technologies and become more innovative.

With regards to ethical considerations, 2 of 6 pillars of the AI strategy focus on the ethical and diversity challenges of advanced data use. This means a whole third of France's AI strategy is dedicated to the ethics of AI. It is also worth mentioning the emphasis placed in both the TECH.GOUV and AI strategies on the sovereignty of data. One goal is for the EU to become a competitor to the USA and China in this space, with the recognition there will be challenges in doing so. Whilst the emphasis on sovereignty may involve some barriers to rapid adoption, such as resistance to using foreign clouds, it also means a lot of investment into innovation. This includes public-private partnerships in universities for research and pooling of data to enable its use across the four key sectors mandated by the strategy.

France performs strongly in most of the quantitative metrics considered:

- Within a middle range in the Oxford Insights' Government AI Readiness Index alongside Germany and the Netherlands, and trailing the UK.[15]

- Outperforms all the countries in the benchmark for stakeholder engagement for data quality and completeness, stakeholder engagement from data release and government support for data reuse (OECD OURdata Index).[16]

Data governance

The second element of our analysis looks at whether the governments have the right data governance foundations to enable a better use of data for policymaking. We consider the quality of data, including its security, as well as the level of data integration within government.

High data quality, but challenges around security

Given there is little measurement of government data use in policymaking, we have used some metrics which apply to overall government data, citizen data and government website security as proxies.

- **Openness** – in both variables considered from the OECD OURdata Index ("content of open by default policy" and "implementation of the open by default policy") France performs the highest out of our benchmark countries.[17]

- **Availability** – Also from the OECD OURdata Index, the "content of the unrestricted access to data policy" metric has degraded slightly between 2017 and 2019. However, France still scores highly, and in the "implementation of the unrestricted access to data policy" it is the highest out of our benchmark.

- **Transparency** – Another strong performance, second only to the Netherlands in our benchmark in the "transparency of personal data" variable of the European Commission eGovernment benchmark.[18]

- **Security** – The only area of weakness is security, where France performs worst out of our benchmark in the security variable of the European Commission eGovernment benchmark which means government websites are not sufficiently protected against cybersecurity threats.[19]

France has the best data quality in the benchmark according to the metrics we considered. There are many measures in the TECH.GOUV strategy to further improve the already advanced position of France in this arena.[20] Many of the six challenges laid out in the strategy (simplification, inclusion, attractiveness, control, savings and alliances) directly address data quality. In addition a whole pillar of the strategy, the DATA objective, is about the provision of quality data, leveraging the open by default principle and facilitated by the use of APIs.

The control section has some specific security implications, highlighting the need to be assured of control over any information systems used by the state, as well as infrastructure, software and data assets. There is a goal for the state to be digitally autonomous and for digitalisation to reinforce national sovereignty. The "Cloud au Centre" strategy and the

French Government's support for the GAIA-X project are part of this effort to reaffirm digital sovereignty. As part of its 2021 National Cyber Strategy, the French Government also announced financial support to public administrations and local entities to build up their cyber defences.[21]

Ongoing efforts needed in data sharing

Similarly to data quality, there are no direct measures of government data sharing for policymaking, however there are some useful proxies which we have used to consider France's performance in this arena. These include metrics designed to capture:

- How integrated government data use is (digital by design, government as a platform from the OECD Digital Government Index)[22]

- How extensively eIDs are used for citizen's data (EC eGovernment benchmark for eIDs)[23]

- The extent to which personal data is pre-filled by online services (Authentic sources from the EC eGovernment benchmark)

France is not quite as strong in the data sharing metrics we considered compared to other benchmarked countries. In terms of **data integration** they had a middling performance in both "digital by design" and "government as a platform". In **citizens data** France was relatively average in the authentic sources variable but had a very strong performance in the use of eIDs.

There is clearly still some work to do in the arena of data sharing and integration, however this is also recognised within the TECH.GOUV strategy, which mentions some fragmentation between ministries.[24] The Bothorel report even mentions that "the sharing of data between State administrations is scandalously weak".[25] This is a common issue in Government services, due to a lack of training, compliance concerns, fears of doing something wrong, etc. Sharing is actively being worked on in France, and a central resource has been set up where data can be collected in the same format, with help available from DINUM for the ministries to achieve a more cohesive data environment.[26] [27]

Case study – Economic prosperity

Context: The Departmental Directorate of Territories and the Sea previously prioritised checks for irregularities in land use through scouting in the field and satellite images

Action: Training an AI called Aigle (eagle) to automatically locate irregularities through the analysis of aerial and satellite images

Benefit: Facilitates the identification of illegal constructions in areas that are difficult to access, or which are high risk; this improves efficiency and allows intervention

The ministerial roadmaps also have the specific mission to integrate data better across government, with DINUM monitoring this integration. Part of their targets include the improvement of data sharing, as well as encouragement for adding their data to a central resource. However this is not an obligation, which could be hindering progress being made in this arena.

Conclusion and recommendations
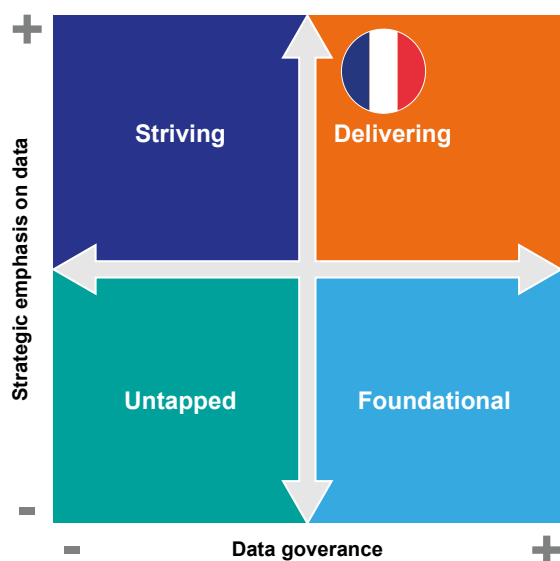
Our analysis of the French government's performance in the use of data for policymaking places it in the **Delivering Country category, those which are actively tapping into their data dividend**.

Strong performance across both the dimensions places it in the top right quadrant. However, it is worth noting that France is stronger in strategic emphasis, only just crossing into Delivering.

France is the top performer in the **strategic emphasis on data** dimension, alongside the UK. With roadmaps in place at the national and ministerial level driving the adoption of a data-driven model, and a well-developed AI strategy, it is clear that importance is being placed on data and its use for policymaking.

Much work has already been done on the quality of data, and there are further action points on this within the TECH.GOUV roadmap, which pushes France into the higher part of the **data governance** axis, despite weaker performance around security.[28] Data sharing has a more middling performance, in line with most of the other countries in the benchmark, but there are many actions addressing this in the roadmap. We expect to see improvement in the coming years should the roadmaps be followed.

Based on our assessment, we believe France to be delivering on the promise of its data dividend. The strong centralisation of the country has clearly been an asset here, as French administrations have benefited from mutualised functions. Ongoing work to avoid silos and fragmentation is essential, and the role of ETALAB in monitoring progress in the use of data for policymaking will be of utmost importance, especially as political priorities shift. One area to flag is the potential for a pushback against the centralised data policy. If this can be avoided, the essential infrastructure and strategy are in place for making the most out of France's data dividend. Recommendations from our findings include:

- **To invest in cybersecurity** – a lot is being done on data and cloud sovereignty, however France is still performing poorly on security. Looking at partnerships which could boost capabilities in this area may be the most effective way to improve in the short term.

- **Continued improvement of data sharing** – it is important to ensure that the ambitions of the ministerial roadmaps to improve the integration of data across government are upheld and monitored. Instilling an obligation to share certain data could be a next step, though may also be politically challenging.

- **Maintain political momentum** – the French government has shown exceptional leadership in promoting and thinking about making best use of data, however, there has been a slowdown in momentum in 2022. Our final recommendation is to maintain that momentum through continued funding and emphasis on the role of ETALAB – without this essential coordinating role France may start to backslide in its digital and data maturity.

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