

Does the Pandemic Reframe Political Data Science and AI in the Public Sector?

Originally published at <https://www.iflexion.com/blog/political-data-science>

Published: May 18, 2020 | By Martin Anderson



Until the advent of the coronavirus outbreak, the chilling effect of the Cambridge Analytica scandal constituted a long-term roadblock for data science in the government sector.

With the power of machine learning successfully turned against the electorate for the purposes of astroturfing and political manipulation, the drive to implement AI in government and the civic sector was now impacted by a huge crisis of confidence from the public.

Something quite extraordinary would seem necessary in order to reframe political data science in a friendly context.

COVID-19 is reframing data science and AI in the public sector

COVID-19 Rebrands Political Data Science

That startling event came in the form of the COVID-19 outbreak. The first high-level unifying global event to occur in the age of big data and [machine learning](#), the coronavirus pandemic required urgent statistics-based analysis that would soon comprise an unprecedented international effort to quantify, analyze and interpret a new phenomenon.

With no other useful tools immediately available, [data science consulting](#) in politics has received a locus of interest, funding and intra-sector cooperation across the world, which seems unlikely to have occurred in any other circumstances, and which has endowed the field with a global showcase and a disruptive environment that is changing the previous circumspect approach to public sector AI — perhaps even for the long term.

The Future of Political Data Science in the Light of COVID-19

Though COVID-19 is proving an exciting instrument of change for public sector data science, what evidence is there that these boons will survive the crisis and transform the culture in the long term? And in what ways has the pandemic already disrupted the existing frameworks?

The OECD's Recommendations for AI-Driven Government Data Science

In 2019, the Organization for Economic Co-operation and Development (OECD) published [a report on AI and emerging technologies](#) in the public sector, outlining the approach of governments around the world to AI integration and deployment.



All of the report's six key recommendations have since been impacted by the advent of the coronavirus crisis:

1: Governance

The OECD report recommends *'Establishing a suitable governance framework to facilitate the use of technology in [the] public sector'* and *'Reassessing existing legal and regulatory frameworks'*. Since such frameworks ordinarily take years or even decades to formulate, data governance has in many parts of the world been forced into a secondary position under logistical pressure from COVID-19.

Though the hard-line approach of some authoritarian Asian governments [has captured headlines recently](#), the occident is also beginning to prioritize health-related intelligence over traditional concerns around governance.

Among hundreds of similar stories from governments around the world:

- The GDPR has been relaxed for European public sector organizations responding to the coronavirus crisis.
- Some states in the USA have suspended or relaxed oversight procedures and enforcement of privacy regulation in the public healthcare sector.
- The USA's HHS Office of Civil Rights also relaxed HIPAA compliance for healthcare during the COVID-19 crisis.
- In Germany, Deutsche Telekom has passed anonymized location data for the German populace to the government's Robert Koch Institute for analysis with the coordination of data protection officers.
- In the UK, rules on sharing confidential patient information were relaxed.
- Hong Kong and other municipalities around the world have also exempted the health crisis from previous privacy regulations.

Long-term Indications

It's possible that many of these exceptions will be reversed when the pandemic abates, and that reluctant public compliance in the west will once again be tempered, if not defined, by privacy concerns.

At this point the public debate may resume around initiatives such as the UK's Data Ethics Framework and the US Government's pending memorandum on *'Guidance for Regulation of Artificial Intelligence Applications'*.

Nonetheless, this global frenzy of information-sharing and data analysis will leave behind a high volume of open and actionable national and global public data, along with new cooperative frameworks whose usefulness cannot be ignored.

Additionally, government data science frameworks set up to address the crisis will continue to evolve, either to gain value from functional systems created at great public expense and under tremendous pressure (circumstances ordinarily difficult to bring about), or in the context of vigilance against a similar health threat in the future.

The global frenzy of information-sharing and data analysis will leave behind a high volume of open and actionable national and global public data along with new cooperative frameworks.

2: Cooperation and Agile Innovation

The remaining four challenges from the OECD have been largely overcome in the current urgent spirit of global technological collaboration: the report recommends *'Promoting synergies across public sector organizations'*, as well as *'Jointly participating in international and/or regional projects'*, *'Stepping up collaboration with the private sector'* and *'Experimenting and piloting'* agile approaches to emerging technologies such as machine learning.

Taking into account platforms such as the American Artificial Intelligence Initiative, Germany's Artificial Intelligence Strategy, Britain's appointment of a Ministry for Artificial Intelligence, and various EU public sector AI projects, the report's core challenges are characterized in terms of long-standing departmental rivalry; unrelated or incompatible data frameworks; a culture of protectionism among government sectors; a circumspect relationship between government and the private sector; and industry leaders' reluctance to pool their resources outside of the reciprocal benefits of open source development.

The coronavirus crisis has cut through nearly all these barriers at a stroke:

- Two of the world's largest pharmaceutical manufacturing rivals, GSK and Sanofi, have joined forces to develop a COVID-19 vaccine.
- Rolls Royce has gathered together government scientific advisors and notable IT industry leaders (such as IBM and Google Cloud) in the EMER2GENT initiative.
- Germany's government united 28,000 participants from the private and civic sector to organize a COVID-19 Hackathon that has produced 1,500 possible solutions to date.
- Italy's Presidency of Council of Ministers at the Department of Civil Protection has provided an open data statistical analysis dashboard.

DASHBOARD ON COVID-19 COVERAGE IN ITALY

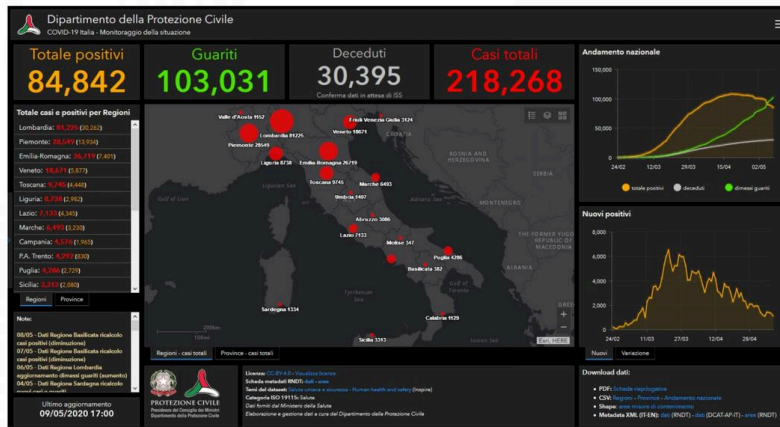


Image source: Dipartimento Della Protezione Civile, 2020

IFLEION

- The United Nations Global Working Group on Big Data for Official Statistics (in association with the IMF and the World Bank) has developed a cloud-based ecosystem to support international statistics projects, with a stunning range of government and private sector collaborators from around the world.
- Industry rivals Apple and Google have created on an open-source contact tracing app framework with a common code-base for their respective platforms, now being implemented by various governments across the world.
- Pressure is intensifying for more unified federal oversight frameworks to cope with COVID-19 and future national emergencies, notably from the Center for American Progress (a clamor for cohesive strategy that has already seen congressional progress toward national AI regulation for self-driving cars in the USA).
- 24 universities from countries including Italy, UK, Germany, France, Switzerland, Austria, Spain, Slovenia, Romania, and Ireland are developing a machine learning model to unify and interpret global logistical and policy response to COVID-19.
- Facebook's AI and data science experts have collaborated with Columbia University to produce new maps of COVID-19 hotspots for relief workers, with the data made available on UN OCHA's Humanitarian Data Exchange and Amazon's AWS Open Data Sets.

FACEBOOK AI ESTIMATES BUILDING LOCATION

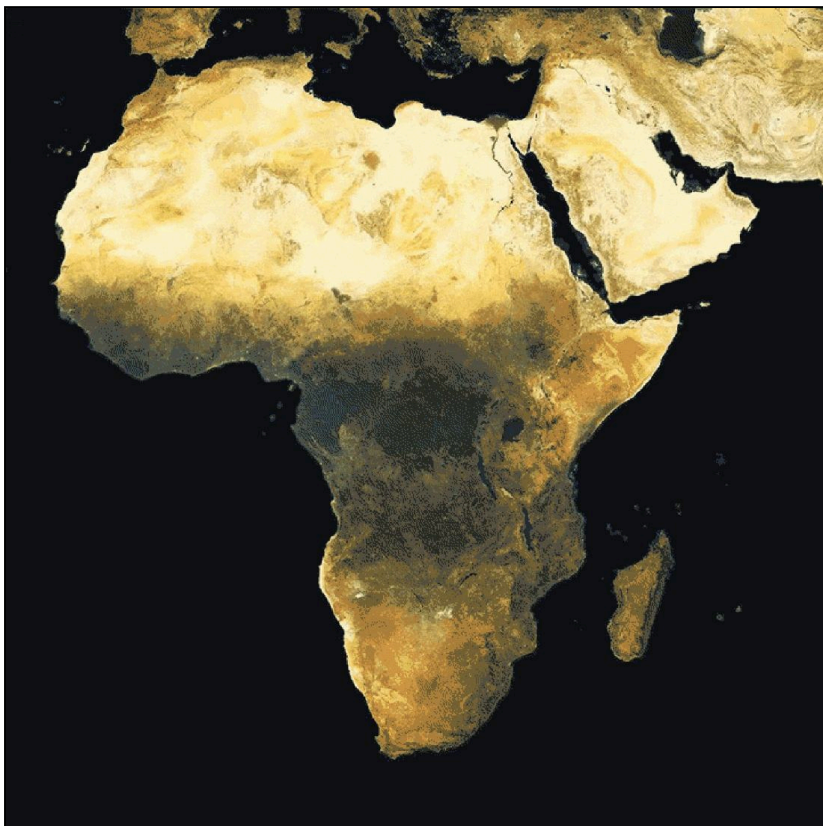


Image source: Facebook AI—Mapping the world to help aid workers, with weakly, semi-supervised learning, 2019

IFLEION

Long-term Indications

The growing global agenda toward protectionism has been put aside, at least in terms of the need for cross-sector and international cooperation in data science and related [artificial intelligence development](#).

Public/private collaborations that might have gone out to tender at length have been formed in weeks, sometimes days, on the most casual terms; committee-driven or political resistance has all but evaporated, as fully funded initiatives are forming organically and rapidly; and, generally, the public health mandate overrides nearly all other concerns.

The growing global agenda toward protectionism has been put aside, at least in terms of the need for cross-sector and international cooperation in data science.

How Long Can the Sudden Ascendancy of Government Data Science Last?

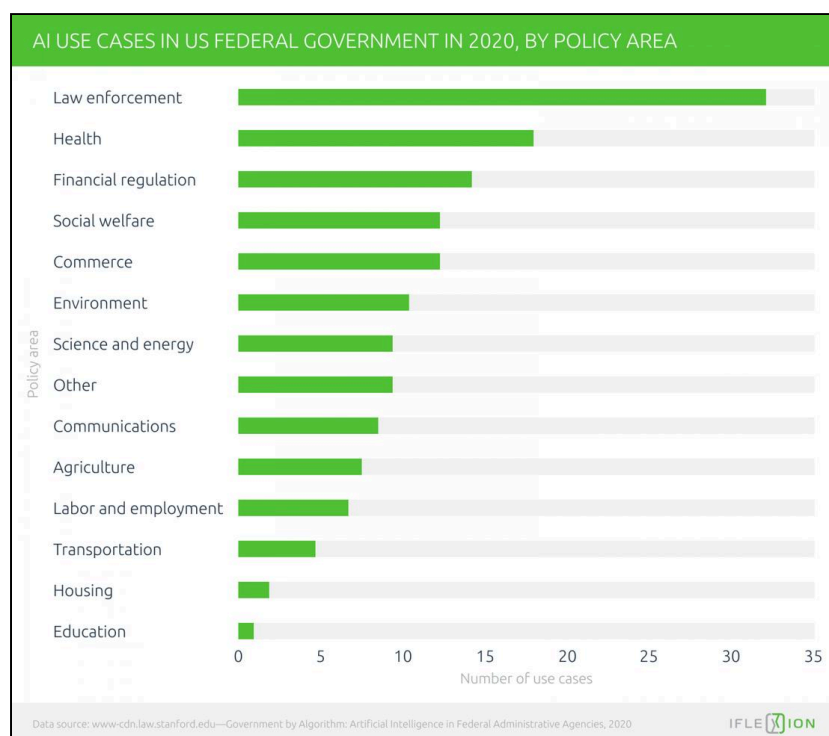
Even the most optimistic coronavirus roadmap doesn't foresee widespread *logistical* availability of an effective and safe vaccine worldwide until late 2021. Most scenarios predict several years or even decades of coping with the economic effects of the breakout.

Since these secondary effects are related to the pandemic, they are likely to benefit to some extent from the same unifying spirit of urgency that has defined public sector response to the health aspects of coronavirus.

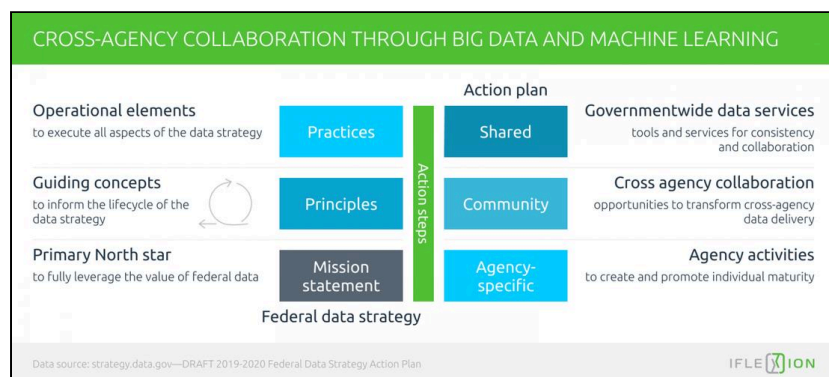
This means ongoing nationalization of private sector resources and expertise, and continuing casual collaborations between government, academia and industry. It indicates a halo effect for political data science that's unrelated to COVID-19; to an extent, it means that the future of government data science is already here and should be considered on its current favorable terms.

Government Data Science Sectors on the Rise

The 2020 survey of AI use across the US Federal Government has found that machine learning is already implemented across a broad range of public areas, and especially in the police sector.



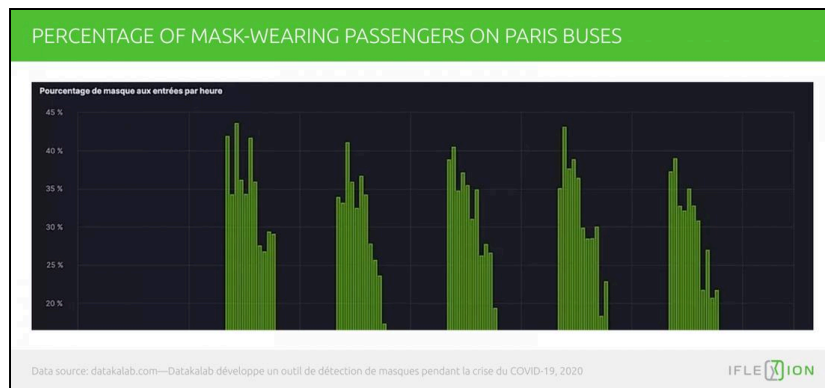
The Federal Data Action Plan also envisions a new era of cross-agency collaboration enabled by data science:



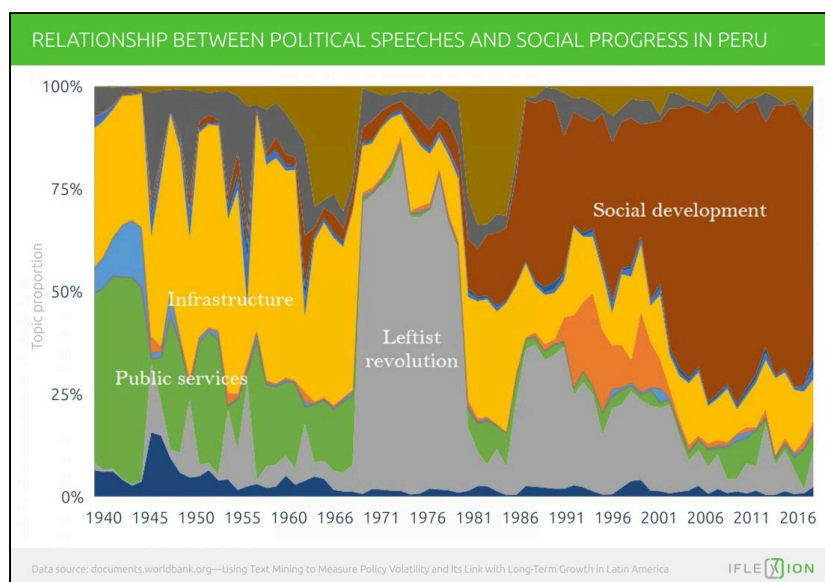
A November 2019 report by the OECD found that 36 of the 50 countries studied had active or pending strategies for integrating AI into public sector services and practices. Though these projects are too numerous to list, we can look at some current schemes:

- China's COVID-19 tracking system for citizens

- Pandemic detection in Australia with NLP
- Named Entity Feature Representation (NEFR) enabling unsupervised public health event detection in Germany
- The Paris Metro authority using [facial recognition](#) to determine if passengers are wearing PPE.



- A US-based early warning system for adverse drug reactions with NLP techniques
- Australia predicting patient readmission with convolutional neural networks
- The State of Washington using machine learning to analyze urban neighborhoods for levels of 311 (non-emergency) citizen calls to government
- Under a government scheme in New Delhi, AI analyzing vehicle movement patterns to manage traffic
- The World Bank demonstrating the use of Latent Dirichlet Allocation (LDA) in NLP to correlate presidential speeches with civil insurgency (image below)



- AI-driven predictive scores are being used to plan election campaign fundraising in the US, as well as campaign tour strategy
- Machine learning and behavioral analytics are used to identify potentially fraudulent benefit claims in the UK and the US
- The US Bank uses ML for onboarding and fraud detection
- The state of Maryland has improved its tax fraud detection rate with analytics modelling
- Machine learning as a tool against election fraud is a notable area of study in the USA

Further examples of active public sector machine learning implementations abound in education, parking enforcement, the military, crime prevention, and an ever-increasing range of government departments.

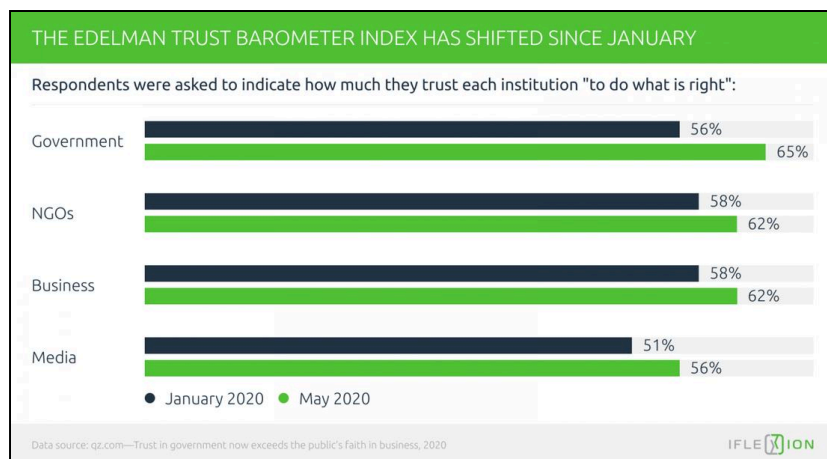
Improvement in the Public Perception of Government Data Science

Besides Cambridge Analytica, reports prior to the epidemic indicate general skepticism around AI-related government initiatives:

In 2018, according to a UK YouGov study commissioned by the RSA, the majority of respondents mistrusted AI-driven solutions in spite of the government's enthusiasm for data-driven approaches.

In the same year, only 21% of US executives and customers polled in the Guardians of Trust report by KPMG reported high level of trust in data science applications such as analytics.

Since the coronavirus outbreak, however, trust in science and research [has increased by 36%](#) in Europe and the UK, while the respondents across 11 markets surveyed for the 2020 Edelman Trust Barometer have shown an all-time high level of trust in government institutions, which exceeded that in the business sector:



The more crisis-driven governments associate themselves with data science, the more they rise in the public's estimation.

Government and influential private companies have always received greater public support in times of national or global crisis. The coronavirus pandemic is no exception: according to the April 2020 Coronavirus Research by Global Web Index, public-sector sources of information were ranked higher than information from journalists or any other source.

This is an astonishing six-month recovery from the November 2019 Ipsos MORI Veracity Index, which found politicians to be the least trusted executives in the USA — lower, even, than advertising executives.

Thanks to unusual circumstances, there is a strong role for data science in politics and government for the foreseeable future. How that future will play out long-term depends on the developing tension between the political private interest and the perceived public interest.

The pandemic revealed a strong role for data science in politics for the foreseeable future. How that future will play out depends on the tension between the political private interest and the perceived public interest.