Capgemini

LEVERAGING DATA IS A SUPERPOWER

The public sector can use data insights to create citizen well-being
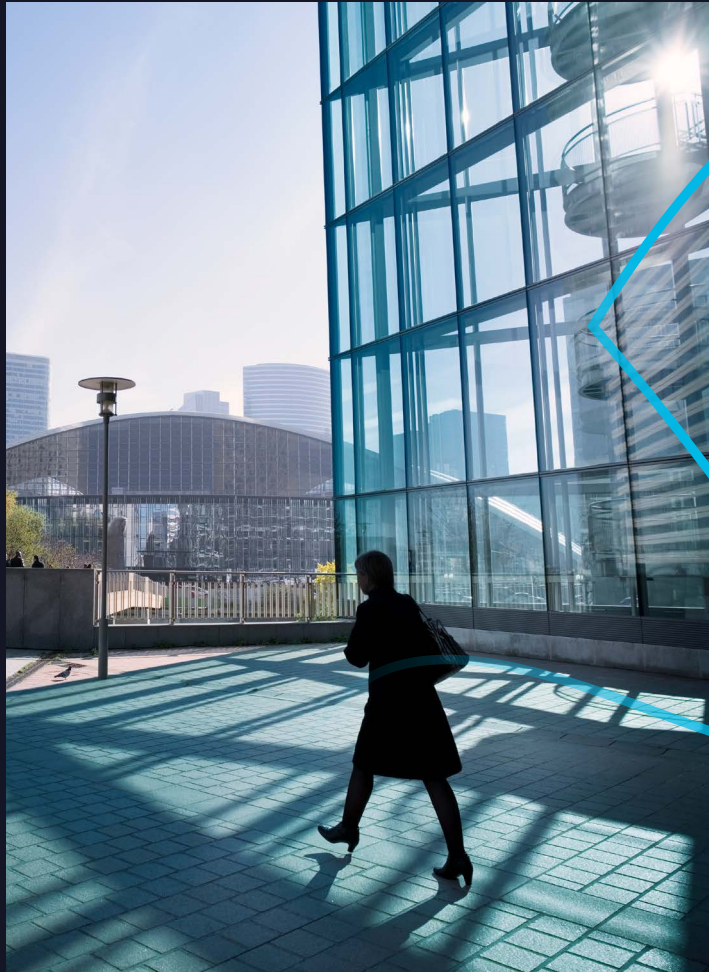
TABLE OF CONTENTS

02

IT'S A TOUGH JOB, BUT SOMEBODY'S GOT TO DO IT

The public sector exists to improve the lives of citizens. Its role is not dissimilar to that of a superhero; to protect individuals, maintain order, support the community, and serve society at large. Yet, unsurprisingly, there are far more movies made about superheroes than about the day-to-day workings of government agencies.

Away from the glitz of Hollywood, public sector organizations around the world strive to perform their function while faced with constant pressure to improve their performance. And they must do this with limited resources.

But they do have one secret asset available to them. Where superheroes get their powers from radioactive spiders or ill-fated science experiments, the public sector can draw strength from data.

Building from data leads to new ways of addressing people's needs, anticipating their wants, and improving citizen happiness.

03
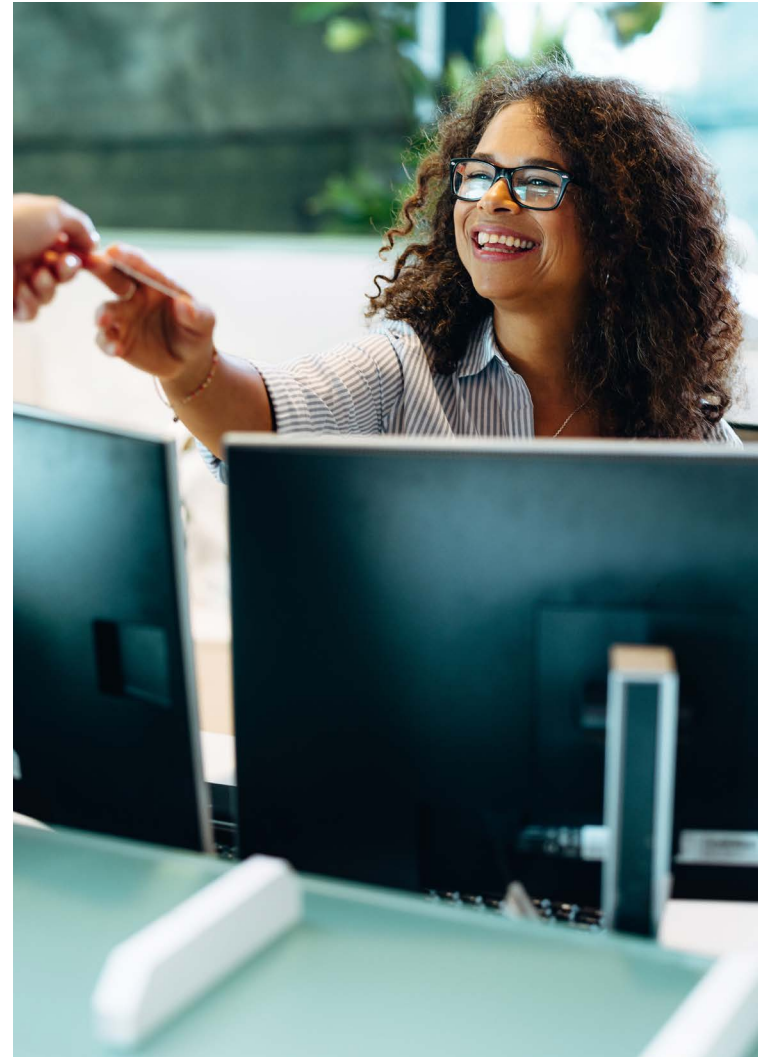
WHAT DOES CITIZEN HAPPINESS LOOK LIKE?

Not too long ago, the Finnish Government submitted a report to Parliament which stated that they wanted to build Finland up as an attractive operating environment for the data economy.[1] As part of this objective, Finland has embraced data to improve citizen services in an exemplary way over recent years. Online government services cover everything from filing taxes on a smartphone and electronic identification to eHealth services and information on registering a business.

It is interesting to note that since 2018 Finland has been ranked the happiest country in the world six times in a row.[2]

Data can be used to help deliver citizen service excellence. And it has been found that "government delivery quality is significantly correlated with national happiness." Of course, data alone cannot create a utopia. But it can be used to improve citizen well-being. This may take

various forms, ranging from day-to-day conveniences like allowing users to renew their driver's license through a mobile app to less visible but impactful improvements, such as making better decisions on defense, climate change, or health matters. By embracing proactive, transparent, and real-time public service delivery, the public sector can reach higher proficiency and create leaner government agencies that align with budgetary constraints.

Using data effectively enables government agencies to enhance:

- **Decision-making**
- **Operational efficiency and**
- **Citizen services**

[1]Digital Government Factsheet 2019, Finland, European Commission

[2]The world's happiest countries for 2023, CNN, March 20, 2023

IMPROVED DECISION-MAKING

Relying on intuition will not produce optimal decisions. But by leveraging and combining the relevant data, multifaceted considerations can be taken into account. This allows public sector agencies to make informed choices and efficiently plan for the future.

Governments that effectively use data can make better decisions, especially when faced with the need to respond quickly to crises and challenges or when different factors such as economic or societal trends need to be taken into account. Take the decision to build schools over the next decade, for instance. There are lots of aspects to consider, for instance, whether new schools are necessary in terms of demographics, what locations are suitable, especially considering (future) traffic and transportation patterns, what the right building size is, and whether there will be an adequate number of teaching staff to meet the demands of these schools.

Planning a more efficient future with combined infrastructure insights

To support its future infrastructure planning, the UK government has embarked upon an ambitious project to bring together relevant infrastructure data and models in one place, including population demographics, energy supply and demand, transportation utilities, and environmental factors. The Data and Analytics Facility for the National Infrastructure (DAFNI) will become a cloud-based digital twin of the UK's national infrastructure to help plan the allocation of £460 billion of investments set aside as part of the UK's National Infrastructure Plan for the next decade.[3]

DAFNI is implemented and hosted by Science and Technology Facilities Council (STFC) on behalf of the UK Collaboratorium for Research on Infrastructure and Cities (UKCRIC).

[3]Data & Analytics Facility for National Infrastructure to advance UK infrastructure research, dafni.ac.uk

OPERATIONAL EFFICIENCY

Using available tax funds efficiently is one of the key performance indicators for government agencies worldwide. With ever more policy challenges, budget cuts, staff shortages, and concerns around resource footprints, ensuring operational efficiency is perhaps more important than ever.

Yet, there are many legitimate political, economic, and legal reasons why maintaining and reducing expenditures often presents a challenge for government agencies.

Data presents a powerful, albeit still underutilized, lever for government agencies to optimize their operational efficiency in two ways: Firstly, data can be used to streamline and automate government activities, for example via the process automation of routine operations in civil services or procurement. Secondly, data is crucial to further optimize the allocation of tax funds and resources. Looking at expenditure and resource consumption patterns is only the first step. Collecting data on the impact of the patterns on, say, defense or social benefits is just as important. After all, you can't manage what you don't measure.

Connecting citizens, infrastructure, and services for efficiency and cost-reduction

The city of Dijon, France, has embraced data and digital technology to become a smart city. Dijon worked with technology partners to establish a state-of-the-art digital platform that connects its residents with urban infrastructure and public services. This has resulted in better coordination between emergency response services and maintenance activities, the remote management capabilities for urban equipment, enabling efficient monitoring and control, and has streamlined the organization of citizens' mobility. All this has been achieved with a 40% reduction in costs for providing the same services through increased responsiveness to citizen activity.

BETTER CITIZEN SERVICES

Many government agencies are trying to respond to increasing service demands of citizens, businesses, and other organizations. These demands can be quite varied and multifaceted. One way to systematize and address them is by using the classic SERVQUAL approach, which presents five service categories.

1. Responsiveness
Delivering service reliably and on time.

2. Assurance
Building trust in an organization and providing security through knowledge and service.

3. Tangibles
The external impact of equipment, personnel, and means of communication.

4. Empathy
Responding to people individually and empathizing with them.

5. Reliability
Providing citizens and customers with fast and outstanding service.

By applying these dimensions to, say, the provision of social benefits or the issuance of business licenses, it is easy to see the potential of data for government agencies. Indeed, one wonders how government services can meet contemporary demands on their service quality without it.

## A view from the European Commission: proactive government services as the "peak" of user-friendliness:

"Proactive service delivery means that no action is required from the citizen to obtain the service. By connecting data sources in the back end, governments know automatically which services citizens are entitled to. Moreover, proactive service delivery ensures that all citizens and entrepreneurs get what belongs to them. Examples of proactive services in Europe:

Netherlands: Automatically obtain child allowances after registering a new-born child

Luxembourg: Proactively receive unemployment benefits after registering as unemployed

Malta: Automatically receive a state pension when reaching the retirement age"

Source: "eGovernmenr Benchmark 2023: Insight Report: Connecting Digital Governments", September 2023"
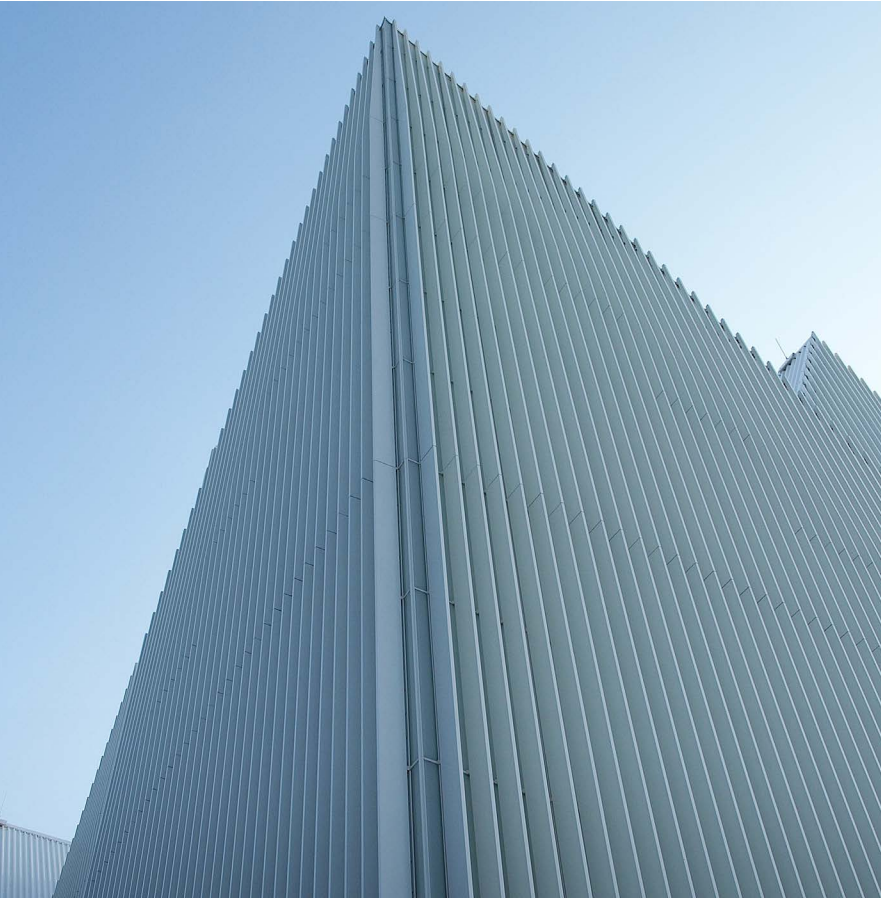
THE BUILDING BLOCKS TO UNLOCK THE POWER OF DATA

Turning public sector organizations into a data powerhouse does not happen overnight and involves many tasks and lots of moving parts, but we believe that three key areas to focus on are:

- **Data habits**
- **Data products**
- **Data platforms**

It is important to note that these elements are not sequential steps, but rather the foundation for effectively tapping into data.

Data habits can be compared to a hero honing their extraordinary skills. Being given a superpower doesn't mean you know how to use it.

Data products are the tools that allow employees to do their job. The cape to help them fly.

Data platforms can be seen as the headquarters; the Batcave. They are the infrastructure where the data lives.

08

DATA HABITS

Many civil servants don't readily see how data relates to their daily routine – others do, but often do not have the respective skills or tools to leverage data to help with their tasks. Developing data skills is important and there needs to be a shift in the data culture from the bottom up. But this cannot be achieved by persuasion alone. The key is to build small-scale data habits across the entire organization. A major lever to achieve this is via data democratization, where everybody may easily access all data

they may need for their professional needs and opportunities. This requires data to be readily available. As employees continue to refine their expertise and see the benefits of data, organizations will start to think of themselves as data-positive or even data-driven. Cultivating a bottom-up shift in how data is thought about and used is necessary for government agencies that want their civil servants to fly.
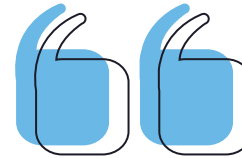
Data habits cannot not be mandated by decree, but need to be enabled – by allowing non-specialists to discover, access and to use data as comfortably as possible. The idea is to let data habits change data culture, not vice versa."

PHILIPP FUERST

VP Data-Driven Government, Global Public Sector, Capgemini

09

DATA MANAGEMENT & DATA AS A PRODUCT

In many government organizations, there are legacy systems and data silos in place that lead to challenges when it comes to accessing data. Often data is stored across various and some times outdated machines, and extracting and analyzing data is a complex and time-consuming process. Legal compliance, particularly in relation to General Data Protection Regulation (GDPR), also poses challenges when it comes to retrieving and sharing data and tracking sources. The process of becoming compliant requires a lot of time and effort. All this serves as a major impediment for data habits to emerge at scale.

Many public sector organizations understand that data governance and data management are an essential means of overcoming the barrier of leveraging data to enhance decision-making, improve

operational efficiency and provide better government services. Yet, to many non-experts, data governance and data management are arcane topics.

Data governance establishes and manages the "rules of the game" regarding the creation, collection, storage, use, protection, access, sharing and deletion of an organization's data. Data management is, in essence, the technological implementation of the respective rules and decisions. Just as superheroes adhere to moral codes and self-imposed rules, data governance and data management make sure the public sector stays on top with its data use while staying on the right side of the law.

To help answer the question of what data governance and data management should be geared towards practice, some

government agencies are starting to treat data as a "product". Here, the main idea is for organizations to apply key product development principles in data projects, considering the individual data users' exact data needs in terms of access rights, quality, and substantive needs.

The provision of "data as a product…" with the following: "Prepackaged "data as a product" and prebuilt insights unburden data users from having to hunt down all the data they need. Instead, they can focus more on the project at hand, be it to run an analysis or build a dashboard to enhance decision-making, infuse and (semi-) automate internal operations with data or leverage data to offer new and enhanced government services.

DATA PLATFORMS

As pointed out above, the ability of many government agencies to utilize the power of their own data is hampered by the pervasiveness of legacy systems and data silos, which make it difficult to retrieve data.

Moreover, many agencies struggle to tap into third-party data such as from other government agencies, private sector organizations, social media, or data ecosystems because they lack the technical ability to do so.

Building a modern data platform means to enable government agencies to leverage the data they need. There are various architectural options available here: depending on the organization's maturity level and goals, this might include the migration of data onto for data warehouse or data lake for centralized storage and processing. More decentralized approaches that do not require moving data into a centralized location include the data fabric or the organizational idea of a data mesh, which is strongly associated with the "data as a product" approach.

These different approaches are not necessarily mutually exclusive and can be combined. But regardless of what an organization's architectural choice is, one

thing will be true: the future of data-driven government platforms lies to a large extent in the cloud.

Although public sector organizations raise legitimate questions and concerns regarding data protection, they cannot afford to to miss out on cloud computing's flexibility, and scalability in their efforts to modernize their data estates.

When planning planning data on the cloud, each government agency must determine the approach that best suits its needs: public cloud, private cloud, or hybrid cloud.

The issue of data storage is highly individual, dependent on the agency responsible for the data, the data type, and the country in which the organization is operating. Generally, scalable and innovative public cloud solutions should be taking into serious consideration for non-personal and non-sensitive data, while hybrid and private cloud/on-premise solutions gain in attractiveness with increasing levels of data sensitivity and confidentiality.

11

BECOMING A DATA-DRIVEN ORGANIZATION

Not all heroes wear capes. In government departments across the globe, there are civil servants who are quietly and diligently trying to make the world a slightly better place. Data is an attainable resource that can be used to make leaps toward better citizen services. The public sector needs to harness the power of data to enable their workforce to deliver next-generation government services. Support to employees can come in the form of data democratization, the promotion of data habits, and the availability of effective data products and platforms.

Capgemini has deep expertise as a technology and consulting partner for the public sector organizations internationally. We serve as a "sidekick" for government agencies; helping them realize their data's potential to improve citizen experiences, create new digital tools, increase operational efficiency, and drive transformation.

12
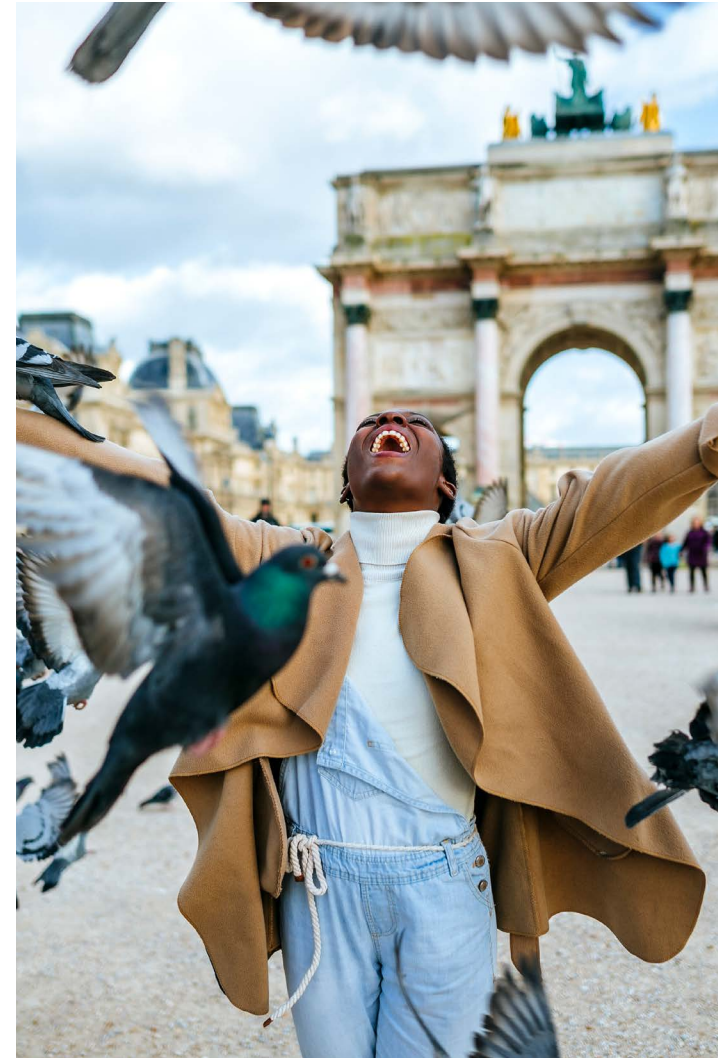
About Capgemini

Capgemini is a global leader in partnering with companies to transform and manage their business by harnessing the power of technology. The Group is guided every day by its purpose of unleashing human energy through technology for an inclusive and sustainable future. It is a responsible and diverse organization of nearly 350,000 team members in more than 50 countries. With its strong 55-year heritage and deep industry expertise, Capgemini is trusted by its clients to address the entire breadth of their business needs, from strategy and design to operations, fueled by the fast evolving and innovative world of cloud, data, AI, connectivity, software, digital engineering, and platforms. The Group reported in 2022 global revenues of €22 billion.

Get the Future You Want | www.capgemini.com

Contact

PHILIPP FUERST

VP Data-Driven Government,
Global Public Sector, Capgemini

philipp.fuerst@capgemini.com