Stimulating the Digital Economy
by introducing the Principle of "Data Sovereignty"

Data exchange – enabled by technology – is the focal point around which business is now conducted across the globe. New types of data, new technology platforms and new data management practices are being introduced continually. Globally, the revenue opportunities from the transactional data ecosystem are estimated at 4 trillion US dollars.

But a systemic problem has evolved which prevents many individuals and businesses from exploiting the value of their data. The people and organisations that generate the data are not receiving a fair share of the benefits. Instead, a handful of global players have a virtual monopoly on the exploitation of data.

And this monopoly is severely limiting opportunities for commercial growth, for healthy competition, and for the types of vibrant innovation which will ultimately super-charge the digital economy.

For example, have you ever wondered why there is so little choice when it comes to platforms for social media, e-commerce, travel and instant messaging? Why are we all making the few global digital service providers bigger and bigger? What are they doing with all this data, and how are they monetising it? How can people stay in control of their data and benefit by sharing it with different types of companies? And how can companies trade digitally through different platforms?

The solution is a concept called **Data Sovereignty**. It is possible to create a level playing field in today's digital economy by using Data Sovereignty to realign the 'data benefit balance' and put the power back in the hands of the people and organisations that create it.

The Principles & Benefits of Data Sovereignty

Data Sovereignty is based on the principles of enabling people and organisations to manage their own personal and business data. This means creating a simple, uniform and secure way to re-use their decentralised data whenever and wherever they wish.

They can control who has permission to access the data and for which purposes, and they have the right to withdraw that permission at any time. They can also appoint someone to do this on their behalf and optimise the impact and proceeds from the data. This rebalances the data benefits back towards individuals and companies.

By making Data Sovereignty the central design principle of the data economy, we can realise significant benefits, for example:

- All parties holding data can offer consistent functionality and ways of working to their customers, suppliers and employees

- Individuals can easily switch providers, and enable their data to be commercialised by businesses (with the benefits being shared)s
- Companies can trade more securely, easily and cost-effectively with other companies (even those outside their regular physical supply chains)
- More digital competition naturally occurs because customers are no longer locked in with their data
- Greater and faster commercial innovation is stimulated.

And we know this is possible because it is already happening in domains like payments, telecommunications and email. We can all pay, call and email one another, regardless of which provider we use and where our data is stored.

Putting Practical Solutions in Place

We already have a good starting point because GDPR provides many of the fundamental rights concerning data control. But in practical terms, we still need the capabilities to support people and organisations in managing their data. They have the rights but they still lack the means to exercise these rights. And to achieve this, we need to break down the invisible barriers between silos that restrict control over data.
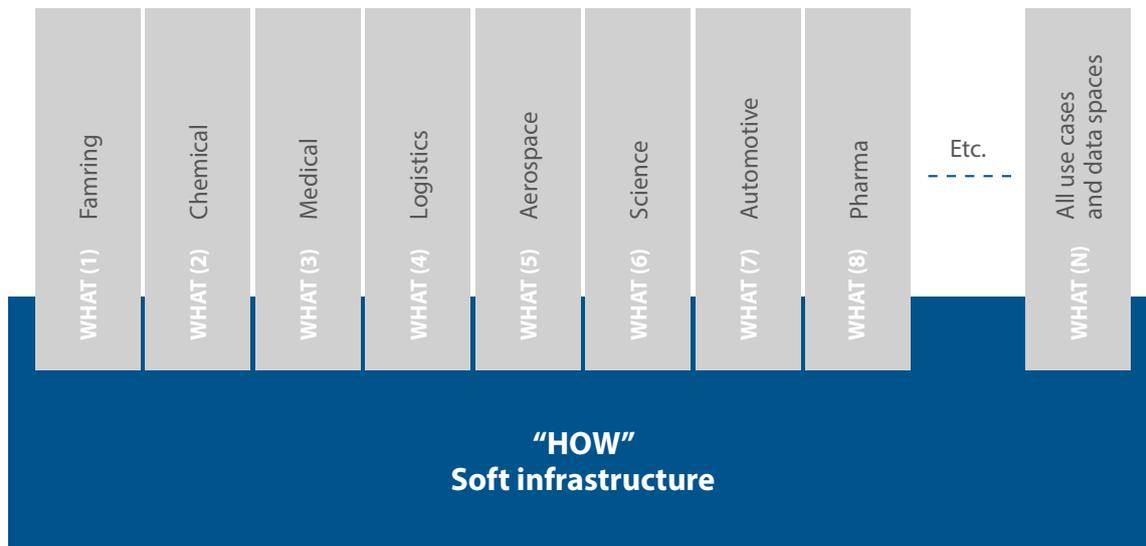
The key is to collaborate to build standardised ways of working together in functional, legal, technical and operational terms. These common ways of working will allow us to securely connect multiple data silos, and enable people to give consent, to provide access to others, and to manage their data.

The sum and network of implementing these common ways of working is referred to as a **soft infrastructure**. It is invisible, made up of agreements, and immensely powerful because it is built on strong foundations of shared convention and community adherence.

Just as the unified Global System for Mobile Communications standard paved the way for decentralisation, collaboration and competition in telecommunications, so soft infrastructures are now needed to establish Data Sovereignty in other domains.

And when planning and implementing soft infrastructures, we need to think more laterally than simply one sector at a time. Data Sovereignty is driven by practical use cases in many sectors. In order to reduce fragmentation and increase speed and impact, the sectoral development of these so-called 'data spaces' should be done in a coordinated fashion. Much of the data sharing functionalities and requirements are similar across sectors, just like other forms of infrastructures are sector agnostic (e.g. roads, power, telecoms & internet).

In practice we will see many data spaces which become interoperable because they use common Data Sovereignty standards and practices.

Famring — WHAT (1)
Chemical — WHAT (2)
Medical — WHAT (3)
Logistics — WHAT (4)
Aerospace — WHAT (5)
Science — WHAT (6)
Automotive — WHAT (7)
Pharma — WHAT (8)
Etc.
All use cases and data spaces — WHAT (N)

"HOW"
Soft infrastructure

Three Practical Steps to Building Effective Data Sovereignty

In very practical terms, there is a three-step approach to delivering Data Sovereignty through soft infrastructures:

1. Develop functional, legal, technical and operational agreements that support the most pressing needs of people, businesses and governments in the various data spaces. These agreements should be co-created with the most eager participants, and form the initial version of the soft infrastructure. Much of the thought-work has been done already by researchers and business practitioners throughout the world. It is now a matter of agreeing on the optimal and coherent approach across all relevant disciplines.

2. The organisations which have created the agreements should roll out and implement the first version of the soft infrastructure.

3. The soft infrastructure should be extended across all sectors. And remember, soft infrastructures should be allowed to evolve over time. They are a 'living' form of standardisation, and the common way of dealing with data must continuously respond to the needs of the market and its applications. This is secured through the set-up of a sound governance model which represents both private and public interests.

Conclusion

We believe that the digital economy as it is known today is at risk and that it is essential to release the full potential of data and build a solid and sustainable foundation for the next phase of the digital economy by:

- Making Data Sovereignty the central design principle of the data economy as a whole and a prerequisite for every organisation's own data architecture

- Creating a soft infrastructure for decentralised data sharing based upon European values, built on a sound consent mechanism that works every entity, a person, business or government

- Focusing on the adoption of Data Sovereignty by organisations and end users. Instead of prescribing technology solutions, we need to support businesses, governments and their IT functions / partners in developing their own implementations

The European Commission should take a decisive step forwards by making Data Sovereignty a legal prerequisite for every data initiative in Europe.