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D7.4 Success Stories

Coordinator: Gonçalo Faria
Quality reviewer: Stefano Modafferi

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1. Executive summary

This deliverable is part of WP7, and it is a compilation of success stories and case studies written throughout the program, mostly as an effort of WP6. Their aim is to be a resource of inspiration for future exploitation and further promotion of the results of Data Pitch.

This document presents a set of stories published on Data Pitch blog, stories that were submitted for the BDVA PPP Meetup 2019 in Riga for the Success Story Award. It also includes 2 additional documents concerning success stories and case studies: the Investor Portfolio and the Data Sharing Toolkit.

2. Introduction

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Due to the budget reduction faced by the program partners, the scope of this document has been reduced to a compilation of stories already produced. Therefore no new material has been created for the purpose of this specific deliverable.

3. Success Stories

3.1. Success Stories from Data Pitch blog

3.1.1 Exclusivi

[Popular resort app created by Data Pitch company Exclusivi is a hit with holidaymakers](#)

3.1.2 Pharmawizard

[Data-driven healthcare website expands into new European markets](#)

3.1.3 Ubiwhere | Deutsche Bahn

[What we learned from Data Pitch](#)

3.1.4 Statice

[New Data Pitch startup Statice secures significant investment](#)

3.2. Success Story Award submissions - BDVA PPP Meetup 2019 Riga

3.2.1 Healthcare

From counting sperm to predicting heart attacks: how sharing data improves health outcomes

The potential of Machine Learning in healthcare

Whether it is improving patient care or the discovery of new drugs, deploying Machine Learning (ML) in healthcare has the potential to transform and save lives. The training of ML algorithms requires huge amounts of data, and there is no shortage of medical data - as the BDVA's [Strategic Roadmap and Innovation Agenda \(SRIA\) version 4.0](#) highlights, the amount of already-generated medical data is at the zettabyte scale and will soon reach the yottabyte. Yet unlocking the huge wealth of knowledge hidden in this data comes with a wide range of complex challenges.

These challenges range from data protection to data ethics, all of which must be carefully considered when sharing medical data. What if, for example, an individual has an extremely rare disease that puts them at risk of being identifiable? Or what if an algorithm is only trained to detect skin cancer on patients with a lighter skin tone, but is deployed to treat a more diverse population?

To unlock ML's full potential in healthcare, we need increased data sharing, without sacrificing data quality, data protection or standardisations.

The Data Pitch Healthcare Challenge

At Data Pitch, we believe entrepreneurs, with their natural drive to problem-solve, are the best people to tackle the biggest challenges currently facing the EU. We set a range of Data Pitch challenges relating to the industries that are identified in the SRIA as having shown or predicted significant gains from data innovation.

The 'Health and Wellness' Challenge's aim was to identify and analyse patterns in patients' clinical pathways, allowing healthcare organisations to design patient journeys that provide the best patient care experience possible.

The startup success stories presented below are taken from our first cohort, which ran from February - July 2018. They highlight not only the importance of access to data, but also the importance for startups to work closely with medical data providers in order to manage the challenges surrounding sharing medical data.



Mojo Diagnostics

While there is a wide range of tech solutions aimed at helping women to conceive naturally, the current approach of trying to naturally boost fertility rates in men is still a guessing game.

Mojo Diagnostics want to automate the semen analysis process and remove the guesswork from the diagnostic process to make male fertility testing more accessible and more efficient.

During Data Pitch, Mojo Diagnostics worked with data provided by two health clinics to build a platform to predict sperm concentration issues with 84% accuracy. In addition, they went on to plan a medical study looking at increasing the accuracy of their sperm count prediction algorithm within one of the Data Providers. Mojo now has plans to pilot its products in 10 clinics in London in June 2019.



Radiobotics

While on Data Pitch, Danish health tech startup Radiobotics finalised their prototype, which uses machine learning algorithms to identify joint space, width and rotation of knee bones, as well as an automatic calculation of the Kellgren-Lawrence scale (used to determine the severity of osteoarthritis of the knee in patients).

Speaking about the Healthcare challenge, Radiobotics CEO Mads Jarner Brevadt said: “We have an opportunity to make a big difference, helping not only doctors and healthcare systems, but also to benefit patients who could receive more precise timely diagnosis and treatment.”

Radiobotics have since received further European funding, securing an SME instrument phase 1 grant of €50k and winning a Eurostars grant totalling €800k for the consortium, with €300k of the funds going directly to Radiobotics. In January 2019, they closed a DKK 10M (\$1.5M) investment round with investors including inQvation, and PreSeed Ventures.



Pharmawizard

Italian startup Pharmawizard is a digital platform supporting people to manage their daily healthcare issues. They have created a set of tools enabling companies to reach, engage and retain their target audiences, and services which increase the efficiency of the patient-doctor-pharmacist relationship.

pharmawizard

With the support of Data Pitch, Pharmawizard expanded their platform into the Spanish market. As a result of working on a variety of consortium projects in the digital health field, they have substantially increased their European network, as well as increasing their client-base to include insurance companies such as Generali and Blue Assistance.

Lucia Comnes, International Business Development Programme Manager, said: “Thanks to Data Pitch we have had more opportunities to progress on an international scale.”

3.2.2 Informing research into Data Trusts

Impacting the European data-economy requires more data to be made available for innovation. One of the blockers to this is the lack of trust between organisations. Data Pitch is addressing both by increasing access to data and helping to build trust between organisations that share data and those who use it.

[Data Pitch](#) aims to create a legacy by informing other work within partner organisations - specifically in relation to the unique attributes of our data sharing approach that can create successful data infrastructure services. One successful example of this is Data Pitch's involvement in the recent groundbreaking research conducted by the Open Data Institute (ODI) and the UK Government.

In 2018, the ODI joined forces with the Office for Artificial Intelligence and Innovate UK to [assess data trusts](#) as a potential approach to increasing access to data whilst retaining trust. This followed the [2017 Independent review of AI](#) for the UK government, which recommended the exploration of data trusts. As part of this work, the ODI created The Data Trust Exploration Group (DTEG), which included members from the European Commission. The purpose of this group was to:

- provide third-party input into the ODI's pilot data trust work;
- share its emerging findings;
- help bring together people and organisations working on similar initiatives around the world.

The group examined and discussed existing approaches to increase access to data, including data sharing models such as Data Pitch, which focuses on building relationships and trust between large corporations, public sector organisations and startups.

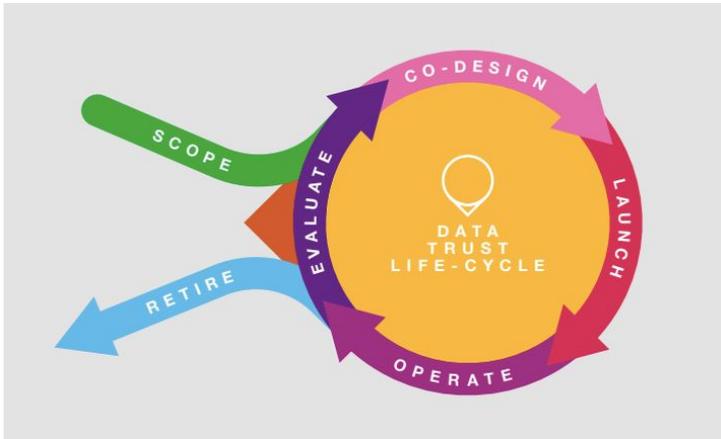
By understanding how this model supports data sharing, the ODI was able to exploit lessons and learnings from Data Pitch to help inform the definition and [framework](#) for what a trust is, defining it as "A legal structure which provides independent, third party stewardship of data for the benefit of a group of organisations or people".

As part of these programmes, the ODI run a series of pilots to test initial assumptions. The pilots, which includes some lesson learnt in Data Pitch, were built around real challenges that could be solved with data and were launched in February 2019

- Reducing illegal wildlife trade by making wildlife data from across the world more accessible so that new services can be built
- Tackling food waste by using data to track and measure how much food is wasted in supply chains so that better decisions can be made about how to reduce it
- Improving city services by exploring whether new services for citizens could be developed through data on areas like energy consumption, parking spaces and charging bays for electric vehicles

One of the results of these pilots is a series of recommendations that describe how data trusts can be a useful way of increasing access to data while retaining trust. Based on these findings and outcomes, the ODI was able to develop a data trust lifecycle to help people build them.

1. Data Trust Lifecycle



This Data Trust Lifecycle offers a sustainable legacy to the Data Pitch programme and its approach to sharing data. The framework for this model was built on the foundations of the way in which Data Pitch enables data sharing to take place between individuals and organisations. This informative tool will support data sharing practices for years to come, including supporting the wider objective of The Big Data Value PPP and the European Commission in creating a

functional Data Market within Europe.

This can be seen by the recognition this work has received within the UK data community. Some highlights include: media coverage from data-related publishers with a readership of over 500,000 stakeholders, including a tweet from the Mayor of London who has a personal following of over 3.25M users on Twitter.

Media Coverage:

- [Computer Business Review](#),
- [UKAuthority](#)
- [Smart Cities World](#)
- [Data IQ](#)



Theo Blackwell

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3.2.3 Legal and Privacy Toolkit - Data Pitch: using the GDPR to support innovation

Developing tools to mitigate the risk of sharing data is one aspect of Data Pitch's GDPR work, but using that shared data to create innovative solutions to challenges is the other. The big question is, can the GDPR support innovation?

Data-driven innovation (DDI) often involves the secondary use of personal and/or anonymised data. So we needed to adopt a dynamic and risk-based approach to data protection law.

“The GDPR is intended to support the free flow of data between organisations in Europe”

Sophie Stalla-Bourdillon,
Data Pitch and Chief
Privacy Counsel, Immuta

By adopting a dynamic approach to data protection law, we showed it remains possible, whatever the type of data analytics practice being used, to apply key data protection principles (such as purpose limitation and data minimisation). It's also possible to frame plans for future processing activities to ensure compliance.

Ultimately, reconciling data analytics with data protection requires a strong commitment to purpose preservation over time. For that reason, our view is that the key to unlocking the enabling functionalities of the GDPR edifice is the setting up of robust data governance structures, i.e. the effective arrangements of processes governing the way data is dealt within and between entities and their monitoring.

Three fundamental principles should be at the core of any data governance structure: purpose specification preservation, dynamic protection adaptation, and data quality assurance.

Success in supporting innovation via the GDPR



“We want to show how companies can perform highly complex statistical analysis on anonymous, privacy-preserving data. This ensures entire GDPR compliance and unlocks sensitive data for companies. We're thrilled Data Pitch is supporting us.” - Sebastian Weyer, CEO and Co-Founder, Statice

The Data Pitch challenges address societal issues across Europe. Managing data to be compliant with the GDPR is a major hurdle facing many organisations, so we presented a privacy consent and control challenge. One of our winners, Statice, from Germany, has already attracted 7 figure financing from 2 venture capital companies.

<https://datapitch.eu/challenges/challenges-2018/sc6-2018/>



Sharing knowledge on how GDPR can support innovation

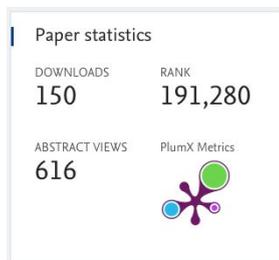


Image: SSRN

[Data Analytics and the GDPR: Friends or Foes? A Call for a Dynamic Approach to Data Protection Law](#)

As the download statistics show, this is of great interest to the GDPR community - that's a download every 1 1/3 days since it was uploaded!



Image: Data for Policy

[Data Protection by Design: Building the foundations of trustworthy data sharing](#)

This paper was downloaded 22 times within the first week of being available on-line, before it was even presented at the conference. This is an area of real interest where Data Pitch is undoubtedly playing a leading role.

CPDP 2018/2019

On 24 January, at the Computers, Privacy & Data Protection [Conference](#) in Brussels, Belgium, Data Pitch ran a panel on data protection and innovation acceleration.

Data Pitch: using the GDPR to support innovation

It's one thing to launch the most ambitious, cross-border European data sharing project yet. It's quite another when a game-changing data protection law comes into effect 19 months into a 36-month-long project - leaving data providers and innovators looking for leadership.

Data-driven emerging businesses, in particular SMEs and start-ups, do not necessarily have the resources to fully understand the change of practices the GDPR requires. However, compliance with this is crucial to create a fully interoperable data ecosystem. Data-driven innovation (DDI) often involves the secondary use of personal and/or anonymised data. Data Pitch has not only guided our own data sharers and users, but also anyone who wanted to share or use shared data, via the creation of our Legal and Privacy Toolkit.

| What does the toolkit involve? | | |
|--|---|--|
| Version1 (Previous) | Version 2 (Current) | Version 3 (Future) |
| <p>Maps some of the key issues across six legal areas. <i>Follows a dynamic risk-management approach.</i> Offers guidance on pseudonymisation and anonymisation. <i>Provides a 7-point data sharing and re-usage checklist of interest to both data providers and recipients.</i></p> | <p>Raises awareness of the data spectrum. <i>Raises awareness of high risk situations</i> Introduces the basics of mapping data flows for GDPR compliance. <i>Develops content for training workshops and prototype e-learning tools</i></p> | <p>Creates four additional Legal Decision Trees. <i>Continues to develop the <u>prototype e-learning tool.</u></i> Produces a preliminary structure for the final toolkit. <i>Explores related areas.</i></p> |

Who is using the toolkit, and how?

Visitors to our website, other projects, data providers

Our own startups - we have run webinars on how to use the GDPR while innovating with shared data in both our accelerators

Other open innovation data projects, such as the Interreg 2Seas project Smart Cities Innovation Framework Implementation (SCIFI).

“Data Pitch’s knowledge of how to apply data protection effectively while ensuring innovation is invaluable to the cities and start-ups we work with.” **Judith Stiekema, Marketing and Business Development Manager, Faubourg Numerique**



3.2.4 Data Pitch makes data sharing a win-win

Artificial Intelligence can help to tackle many of modern society's challenges; but it is dependent on the availability of data. The [OECD](#) considers data sharing as “an effective means through which the social and economic value of data can be maximised.” This maximisation may not be achieved with one single instance of data sharing. Rather, sharing data can unlock [Big Data Value chains](#), where large amounts of data are collated, processed or transformed in several interdependent steps. Data Pitch supports organisations that have data to share their data with innovators to unlock economic, societal and environmental benefits, creating concrete evidence to inspire further sharing.

Economic benefits

The most obvious benefits of data sharing are economic. Working with data promises not only a variety of new products and services, but also jobs, business intelligence, efficiency savings, or tax revenue. Different stakeholders benefit from data sharing in different ways.

Supply Chains: Sonae and Next Question



Portuguese retailer Sonae shared their data to improve supply chain management, avoid stock-outs and minimise logistics costs. Once Next Question started to work with their data, they were able to identify a more important need at Sonae, they pivoted to address it and delivered a solution to pre-process data for future use.

For data holders, the main benefit of sharing their data is usually that they can gain efficiency savings, develop new or improve existing products and services, or solve existing or future business problems. The data holders either do not have the expertise to develop these solutions internally, or it would not be economically sensible for the data holders to work on themselves. By sharing data they can also get a glimpse into a developing market, in order to remain competitive. A side effect will often be an improved internal data structure, increased legal compliance and skill development, all of which are valuable in the long-term, irrespective of the outcome of an innovation project.

For innovators, the main benefit of data sharing is gaining access to data in order to develop new or improve existing products or services, and establishing themselves in the market. The relationship with the data holders who supply this data may prove fruitful for future business, be that as clients or investors. In a wider sense, the entire data community benefits from data sharing, as new jobs are created. If the results are published, the ecosystem can benefit further as learning is accelerated. This will increase awareness, as well as the quality of data and data processing.

Societal benefits

While innovation through data is typically motivated by sales, the public also benefit from having new and better products and services available. For example, many of the projects in Data Pitch aimed to improve customer service experience by improving chat bots or recommendations. Another area in high demand among both data holders and innovators was health, and we supported a number of developments that attempted to either improve diagnoses or provision of care, and make health services more efficient and customer-focused.

The area of mobility was very popular among innovators in Data Pitch, and many of the projects aimed to improve traffic flows or maintenance works, both of which could contribute to better services and a safer urban environment. For public sector data holders in particular, data sharing can help to achieve goals that are of interest to the public, such as more secure roads.

Transport flows: Deutsche Bahn and Ubiwhere



“We want to improve the punctuality of our bus services based on outside influences such as traffic flows, weather, events and unforeseen incidents and how they impact schedules, and to see what we could do to be not only reactive, but also proactive – so for example if a car breaks down on one of our routes we can find out in advance and address it with diversions for following buses. Ubiwhere used external data points to see how they affected journey planning. This included traffic light networks, crowdsourced data for traffic flows and weather patterns.”

Stuart Walker, Senior Product Manager, DB/Arriva

Environmental benefits

Data sharing can also contribute to a safer, cleaner environment, and even help tackle climate change. Many of the social benefits double as environmental. As we saw above, data sharing can help improve supply chains, which in turn reduces the unnecessary transport of goods. Similar gains can be made through increased efficiency of buildings or public transport. If traffic can be reduced, or energy consumption made more efficient, this also means a reduction in emissions. The innovators working with MET data provided through Data Pitch are developing services to improve the use of pollen and air pollution data, therefore having an impact on public health. [Another project enhances business intelligence so that decision-makers can make more environmentally-friendly decisions for long-term investments.](#)

Addressing air quality: Met Office, GoSweat and Hop Ubiquitous



“We believe in sharing our data and enabling others to use it. We see our involvement with Data Pitch as a key to making data more available and useable. [The ideas developed through Data Pitch should support] UK citizens, by making life easier, protecting them, helping them prosper or improving well-being.”

Richard Carne, Chief Digital Officer, Met Office

Although the concept of these benefits is not new, Data Pitch has successfully demonstrated they can, with the right infrastructure, be realised.

3.3. Investor Portfolio

The [Investor Portfolio](#) showcases a selection of the 47 startups and SMEs that participated in Data Pitch, with detailed information on the problem they are addressing, their solution, the market and their current traction.

3.4. Data Sharing Toolkit

The [Data Sharing Toolkit](#) has been developed to help organisations that want to generate value by sharing data or facilitating data sharing. We explain the concept, challenges, and processes to enable successful data sharing, and provide resources and recommendations. It is derived from experience collected in the Data Pitch programme and related national and international initiatives, such as the Smart Cities Innovation Framework Implementation (SciFi), the European Data Incubator (EDI), as well as several recent pilots for data trusts in the UK.

Part of this toolkit are a series of case studies, namely:

- Dawex
- Greiner Packaging International GmbH (GPI)
- iPlytics and Spazio Dati
- Alan Turing Institute Data Study Groups
- Met Office, GoSweat and Hop Ubiquitous
- Deutsche Bahn / Arriva and Ubiwhere
- Data Pitch