The future of Work & Skills

A HUMAN-CENTRIC SKILLS DATA SPACE

www.mydata.org/skillsdata

#Whitepaper

The future of Work & Skills

A HUMAN-CENTRIC SKILLS DATA SPACE

The purpose of this document is to summarise the learnings and the potential we have identified from the **MyData Accelerator for Work & Skills**, coordinated by The Finnish State Development Company Vake.

The participants in this program see a great opportunity for global leadership in building an ethical, functioning and profitable skills data ecosystem for the development of services related to work & skills. What started as a Nordic initiative now must expand towards a European strategy.

The European Strategy for Data (19.2.2020) calls for a common EU skills data space. In order to improve the competitiveness of EU's workforce, the strategy identifies a need for high-quality data for qualifications, learning opportunities, jobs and skill sets of people. MyData offers a human-centric approach to answer this need; it includes an alternative vision as well as guiding technical principles. The MyData paradigm aims at a fair, sustainable and prosperous digital society, where the sharing of personal data is based on trust as well as on a balanced relationship between an individual and organisations.

This is a call for action to create a human-centric skills data space! Please join us in building the future of work & skills.

The future of Work & Skills

A HUMAN-CENTRIC SKILLS DATA SPACE

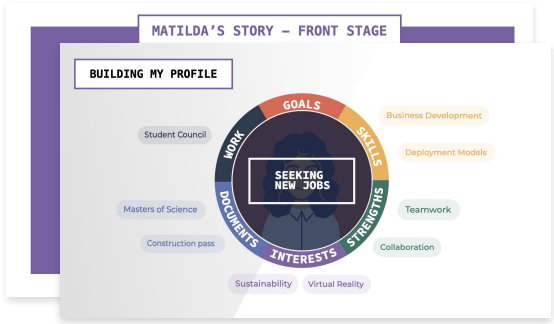
How to understand this work:

We have prepared three key publications so you can use the one most suitable for your needs.

Why should we do this?

A short video explaining how the future of work & skills may look like for an individual under a MyData approach.

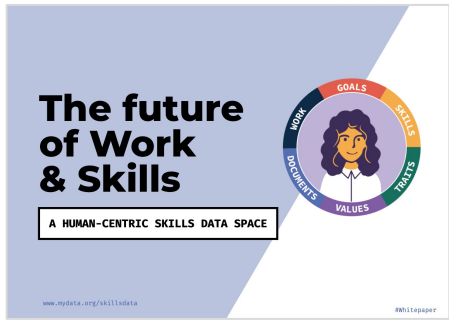
THE EXPERIENCE - INTRO:
3-minutes
For general audiences



Why should I join?

A summary presentation with the stories from the individual perspective and call for action for partners of the ecosystem.

THE OVERVIEW:
21 pages
For general audiences & potential partners



How do we build this?

A detailed document with insights, call for action and relevant initiatives to make this happen.

THE WHITE PAPER:
73 pages
For potential partners & experts

You are here

What is the MyData Accelerator?

Vake launched the MyData Accelerator in November 2019 in collaboration with the Technology Industries of Finland and Sitra.

Built around the themes of employment and lifelong learning, the group aimed to fast-track the development of MyData based services. By means of peer and expert sparring, the goal was to support the build-up of services and an ecosystem around the created concept.

The participants of the Accelerator focused on finding new ways to help jobseekers manage their career, obtain a suitable job or receive recommendations on appropriate education. For employers, it means e.g., solutions for finding the best candidates for open positions while quickly gaining information on their competences.

The participants selected to the Accelerator included Barona Construction (Otso Kivekäs), Headai (Anu Passi-Rauste, Harri Ketamo), Kuntarekry (Misa Leiber, Toni Saalasti), Tampere University (Mira Valkonen, Juha Eskelinen, Katariina Yrjönkoski), Vastuu Group (Petri Tuomela, Jami Haavisto, Mika Huhtamäki) and Jobtech (Jonas Södergren, Marjan Dolatkhahan). The Swedish Jobtech brought the otherwise Finnish group a joint Nordic perspective and international labour mobility opportunities. The organisations were coached by experts Antti 'Jogi' Poikola (Data, Technology Industries of Finland), Jyrki Suokas (Business, Sitra) and Paula Bello (MyData Design). The Accelerator was coordinated by Terhi Marttila and Pia Erkinheimo (Vake).

PARTICIPANTS

VALTION KEHITYSYHTIÖ

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Headai

JOBTECH Dev

kuntarekry

Tampere University

vastuu group

SITRA

Technology Industries of Finland

TABLE OF CONTENTS

Our Approach

We started this Accelerator from a shared belief that MyData would benefit those in the fields of work & skills. The following section describes our approach: why MyData and how we are working.

VISION

A human-centric European common skills data space

MISSION

Empower individuals to achieve their dream job and enjoy lifelong learning opportunities.

GOAL

Create a human-centric approach to data, work and learning.

A human-centric skills data space would enable a future in which people, organisations and society achieve their full potential faster, easier and with complete control over their data.

To make this happen, we are calling for partners from different areas to join the skills data ecosystem: governments, educators, employers, service providers, legislators as well as technology users and business experts.

Together with other initiatives, such as the Skills Alliance, we are creating the common European skills data space in a human-centric way.

MyData Principle	For the individual, this means:
HUMAN-CENTRIC CONTROL OF PERSONAL DATA	*'I know where my data is and how others may use it. I am able to manage, negotiate and control how it is used: I can give, deny or revoke permissions to use it.'*
INDIVIDUAL AS THE POINT OF INTEGRATION	*'I have access and the power to allow or disallow others to use my data A & B together for a specific purpose.'*
INDIVIDUAL EMPOWERMENT	*'I am the agent of my own data as I have the tools, skills & assistance to transform my data into usable information. This leads to better decisions and improves my life. '*
PORTABILITY: ACCESS AND RE-USE	*'I can obtain, move and re-use my own data across different services. I can use my data as I want or enable others to use it for my purposes. I do not fear that my data can be locked somewhere where I cannot access it.'*
TRANSPARENCY & ACCOUNTABILITY	*'I can track the use of my data and hold accountable those using it. I understand how my data is used in services: for decisions, transactions or other purposes'*
INTEROPERABILITY	*'I experience services seamlessly, regardless if they are from different providers.'*

Why MyData?

Because data is a right: MyData enables you to be an autonomous human being with the skills, opportunities and tools to make use of your personal data – the way you want.

The core idea of MyData is that **people** should have an easy way to see where the data about them goes, specify who can use it, and change these decisions over time.

It combines industry needs for data with strong digital human rights.

In order to do that, MyData Global has built a set of principles to guide governments, organisations, experts and individuals. The principles are defined further in the MyData declaration.

MyData Declaration: https://mydata.org/declaration/

Why MyData for Work & Skills?

Because it will make your journey - as an individual - easier, faster & more enjoyable: a map in your path to develop your skills and reach your dream job.

The individual is the 'connector' in the work & skills data space: they produce data about themselves, get data from e.g,. employers, government and educators, and grant access to others to use that data. Individuals experience their journey as a whole, not as fragmented events based on different data sources.

Having a holistic approach based on MyData would enable a person to:

1) Have all their skills and work information as well as data accessible from different sources (e.g., their schools, licences, employers) for their own use and for sharing with relevant parties (such as employers, educational institutions, etc.);
2) Reduce the steps to explore, find and apply for educational programs and jobs by automating many of the steps;
3) Receive recommendations on educational programs and jobs according to their profile.

MyData approach: The BLT Sandwich

The issues around personal data are far too complex for any one person, organisation or sector to solve alone. That's why MyData involves all perspectives: Business, Legal, Tech and Society.

BUSINESS

'Ethical business is profitable business'

How can we innovate new business models to demonstrate that the ethical use of personal data can be the most attractive option for companies?
How can we disrupt the monopolistic status quo with integrity and provide value for all stakeholders, not only shareholders?

VIABLE

LEGAL

'Good governance guarantees ease and compliance'

How can we co-create good governance through balanced engagement across societies?
How do we co-design innovation-enabling and risk-mitigating policy and legislation that is respectful of the rights and accommo-dating of the needs of people and organisations?

COMPLIANT

TECH

'Tech by people, in the service of people'

How do we keep reaching for the stars in our quest for better tech without losing our humanity?
How do we innovate so that people and societies get the benefits to the fullest? How do we ensure that the technological solutions are developed by diverse groups of people to maximise its usability for all?

HUMANE

SOCIETY

'For fair, sustainable & prosperous societies'

How do we remember to keep our eyes always on the prize: better societies for all people?
How do we ensure that personal data is harnessed for the common good and benefits the people themselves?
How do we make sure business, legislation and tech all work together for people and societies?

DESIRABLE

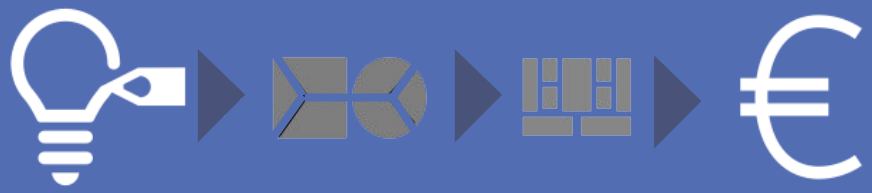
The Individual: Designing for the User Experience

We created a User Formula to ensure that the concepts and solutions developed are desirable from the person/user perspective. A digital solution will provide a great user experience when all these three dimensions are met:

Dimension	PERFORMANCE	EXPERIENCE	ETHICAL
	The user does not face any problems & relies on it.	**The user has a better experience than with anything else.**	**The user understands it, appreciates it and trusts it.**
Your solution	Your solution simply works well every time: It is functional & reliable.	Your solution improves the life of the user: It is simple & easy to use.	Your solution meets all MyData principles: It is understandable & verifiable..
User perspective	**“It works”**	**“I love it”**	**“It is fair and trustworthy”**

The Business: Co-creating a Viable Ecosystem

A viable, sustainable business model requires one to understand, create and deliver value on several dimensions: ideas, value proposition, customer segments, relationships, partners, distribution channels, resources, cost structures and revenue streams.
Today, there is a prevalence of creating value and business for the company: a ‘my’ approach often focused on building platforms or independent services - “egosystems”.



IDEA | VALUE PROPOSITION | BUSINESS MODEL | BUSINESS

Huge potential for ecosystem business models: co-creation, co-development, co-innovation, co-profit...

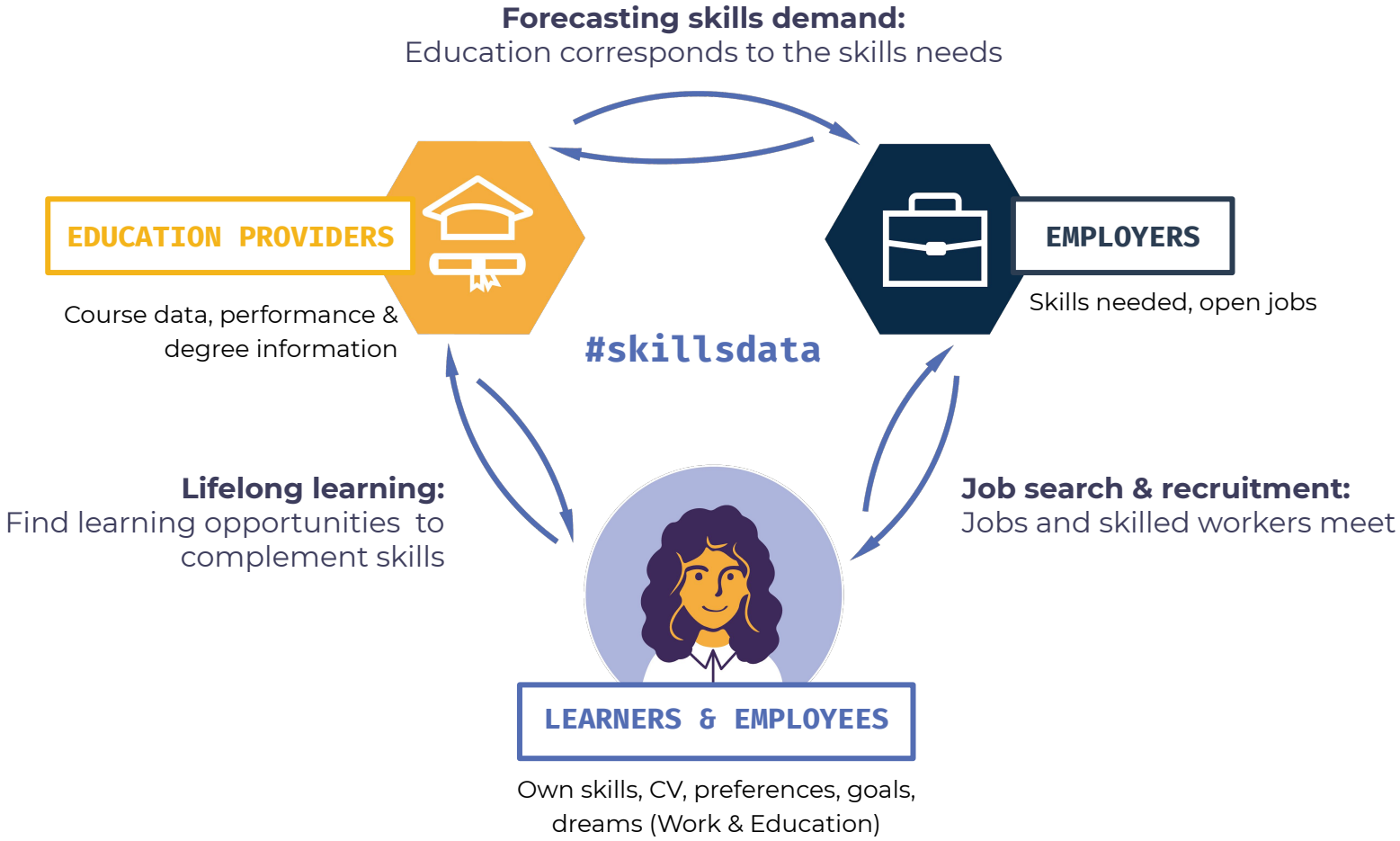
Yet there is not a ready-made recipe. We need to devise new models.

Our hypothesis is that the highest potential is in creating new business based on ecosystem value creation, rather than on individual platforms.

However, we are still far from that. We need a shift from ‘me’ to ‘us’, from self-centric ‘egosystems’ to ecosystems creating value together; from platform-centric to human-centric. Instead of viewing other companies only as e.g., suppliers or competitors, we should see them as partners.

Skills Data: the Common Language

Skills data connects the employers and education providers with individuals looking for learning and employment opportunities. Skills data is used in recruitment processes and when matching people with learning opportunities. It is also used for analysing the current and future skills demand of the employers.



Our Insights

We have learned a lot in the past 9 months and want to share our top insights.
We hope that these help us have conversations with all of you.

KEY INSIGHT 1

We cannot talk about independent digital services, but of building ecosystems

In order to develop digital solutions that are truly delivering value to the actors, we need to understand the ecosystem and manage its complexity.

In this ecosystem, we see public and private organisations working as partners to build the infrastructure and deliver interconnected services that, as a whole, radically change the experience of the people developing their skills and finding jobs.

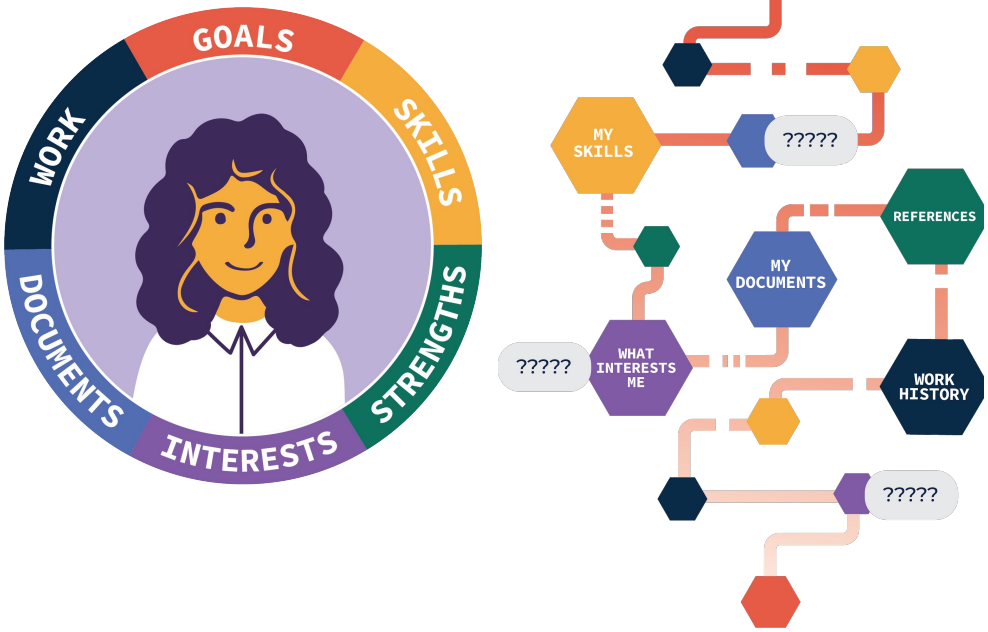
At the moment, we have a small group representing key parts of the ecosystem. Still, we need to identify all the key actors, such as governments, employers, educational institutions, and engage them to collaborate as part of a whole. We need to create a common set of rules to work together, and we need to conceptualise concepts and business models as a whole.

REFERENCE:

Mapping data ecosystems: methodology
The Open Data Institute, March 23, 2018

KEY INSIGHT 2

The user experience, for it to be successful, must integrate different services that are currently lacking or fragmented



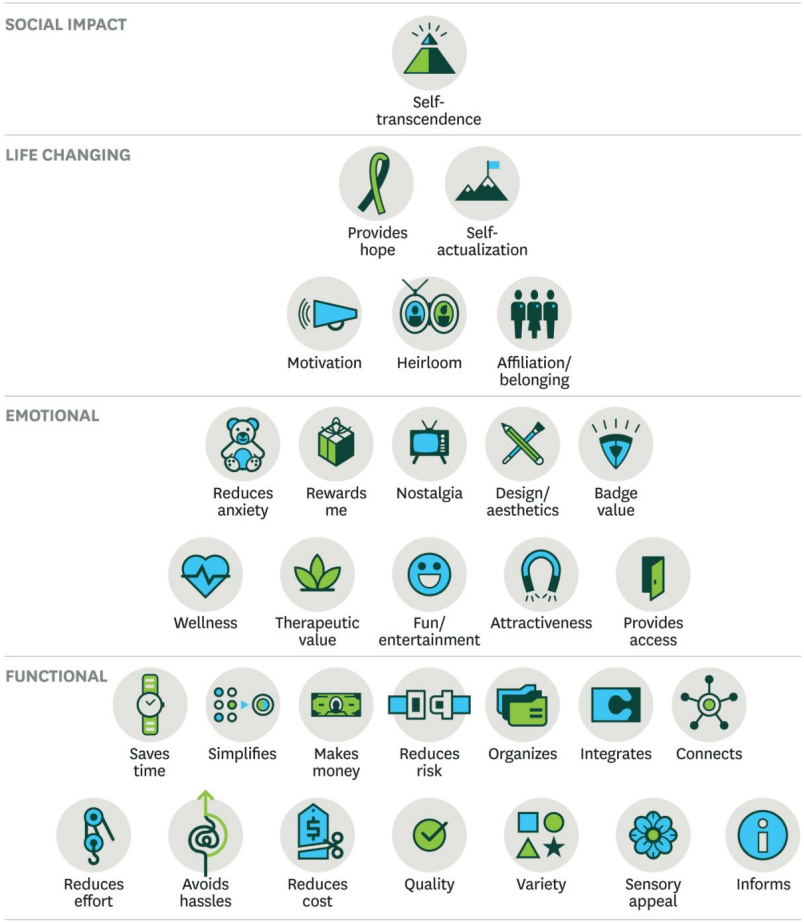
The individual - anyone of us - is the one that will experience the ecosystem as a whole. In the end, it is not about how data flows but how to improve skills and how to find jobs - in the best way possible.

However, when we talk about user experience, we not only refer to the end-person (Matilda) but to the experiences of all the actors within the ecosystem: lifelong learners, jobseekers, employers, educators, public servants, service providers...

For this ecosystem to succeed, it must provide an experience that excels what the people in these various roles have today. The experience must be enjoyable, functional and ethical.

KEY INSIGHT 3

Value is complex. We must recognise different ways value is created, transferred and compensated for



Value exchange in this ecosystem takes different forms and has different types of currency. For example, for some data is the key currency while for others reducing costs, time, number of tasks, or unemployment may be the main attraction.

We need to understand the different types of value creation and flows to enable a value-driven ecosystem.

When we have done this, we can identify the type of partnerships needed to create valuable and integrated digital services - and in turn, conceptualise new business models.

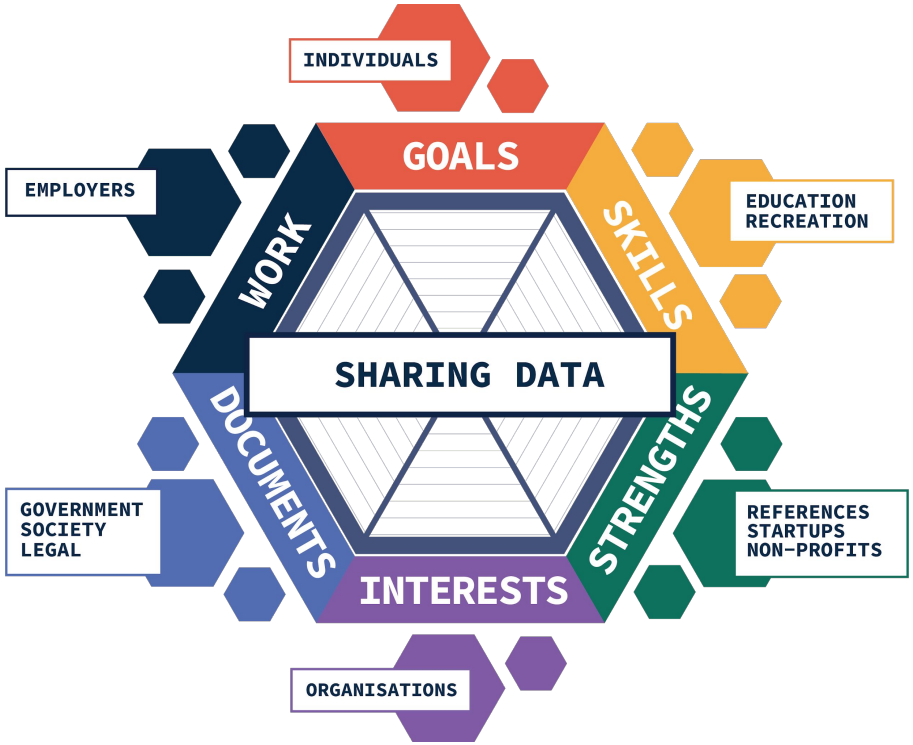
CREDITS:

Image source: © 2015 Bain & Company Inc.

Published in:
'The Elements of Value'
by Eric Almquist , John Senior and Nicolas Bloch, HBR, September 2016

KEY INSIGHT 4

New business models are needed within the ecosystem, considering value co-creation through partnerships

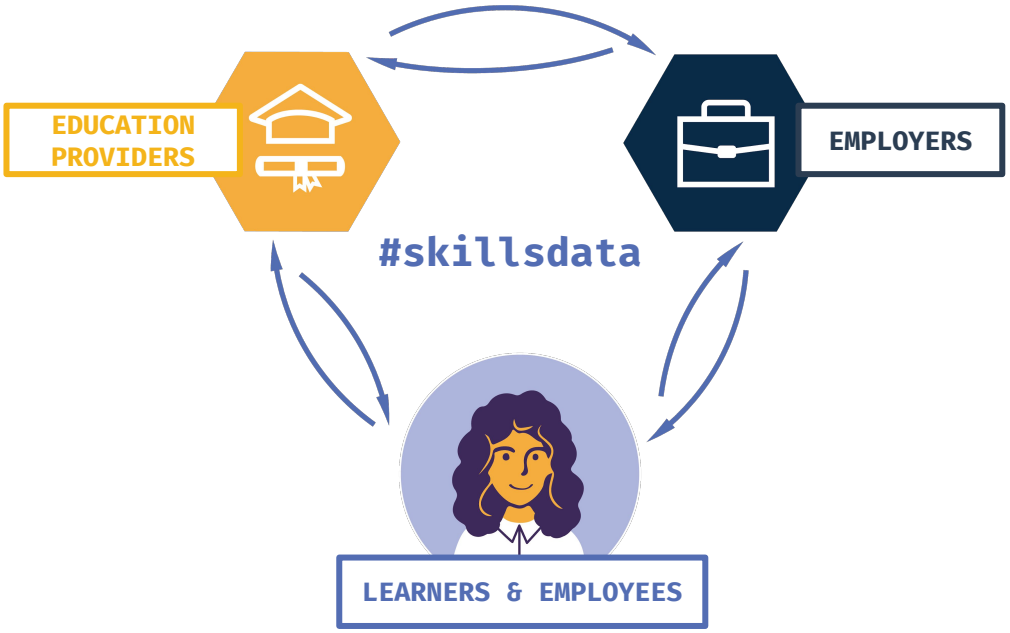


Creating business models in the traditional sense ('I built this, you can buy it for XX euros') is challenging when talking about transformative ecosystems of digital services. Instead, we ought to create new business models for the ecosystem.

This means that partnerships are needed to develop the ecosystem. We need to figure out new models of revenue flows aligned with the transfer of value. We need an understanding of how the different beneficiaries in the ecosystem are willing to do the transactions. ('If I get this value from your solution, I am ready to pay you for X, you for Y and you for Z. I also expect to get paid for A and B which I offer).

KEY INSIGHT 4

Quality of skills data and infrastructure enabling data flows are the prerequisite for building the ecosystem



Skills data is a common language to describe people's skills as well as learning and job opportunities. Thus, we need to develop a shared vocabulary for skills data that all actors in the ecosystem understand. Such vocabulary must be live and automatically updated as multiple services in the ecosystem use and develop it; a static committee deciding the semantics will not do.

Skills may be declared by the person or verified by some institution. Often, skills have different degrees and levels.

With natural language technologies, raw skills data may be automatically mined from masses of text (job advertisements, educational curricula or personal data) and then refined and validated by interactive tools.

Methods to handle consents are also a fundamental part of the infrastructure, and therefore, there is a need for MyData operators.

REFERENCE:
MyData Operators White Paper: https://mydata.org/operators/

Opportunities for key stakeholders: People, employers & educators Enablers & supporters

High value for lifelong learners & workers.

Based on scenarios and journeys, we have identified great value for all stakeholders: high reduction of pain-points, more accurate directions for development, higher possibilities to find the dream job.

From the perspective of the lifelong learner or jobseeker, a skills data ecosystem would enable faster, easier and more enjoyable journeys for anyone of us.

People grow, companies grow,countries grow, regions grow.

We believe that for this ecosystem to succeed and bring significant benefits to society, we need to start from the individual: learner, employee, jobseeker - anyone.

We seek to empower each person to become their best self using data and AI-based services. As individuals benefit, it leads to the benefit of the private sector, governments and society.

Public & private cross-collaboration.

The ecosystem must bring together public and private actors, both big and small. This requires openness from both sides to establish new models of cooperation.

Common goals must be defined, and trust needs to be built. Initiatives to conceptualise and test new service solutions will enable public and private actors to come together.

Europe leading a global common skills data space.

We have Finland and Sweden represented in the group. However, we firmly believe this should be scaled up towards an EU-wide model - leading the way towards a global common skills data space.

The existing structures, reputation and services in the Nordic countries give us a good head start to become the global leaders in work & skills.

Completely new services & new business models.

We can develop more than a single service targeted for work & skills. With an ecosystem approach, we can provide an interconnected set of services to transform the person's experience completely.

We expect that this could result in new business models in which transfers of value are multi-directional.

Challenges building a European skills data ecosystem

No data, no opportunities.

Legal frameworks, openness of service providers, MyData operators and personal data are indispensable elements of the infrastructure.

Data, as the key currency, must be available. In addition, AI applications require high-quality data to be able to deliver good results.

Breaking the silos internally & externally.

A change of mindset is a must: organisations and people need to shift from a 'box' to a flow approach. As we have noticed, so much more can be achieved if we can get the data flowing between organisations.

Moreover, functional, concrete and operational ecosystems are needed to achieve this, building on the basis of networks and other forms of collaboration.

New services, new business models… which are not yet clear.

Understanding the value this ecosystem can bring to each actor is the first step to figure out how the actors are willing to pay for the services of the ecosystem.

This is the biggest challenge we face: co-creating for profit. However, it is already evident that there will be co-existing different revenue and business models.

How should we move forward? How do we engage all the actors?

The Accelerator group is a small representation of the skills data ecosystem: it is clear that having the key enablers and actors of the ecosystem engaged makes the crucial first step.

We need a public-private partnership to lead the building of an operational ecosystem - that is why we ask you to join building the skills data ecosystem.

Communicating the value the MyData approach is creating.

High value can be created with the MyData approach: it empowers the individual, improves productivity, and it is ethical.

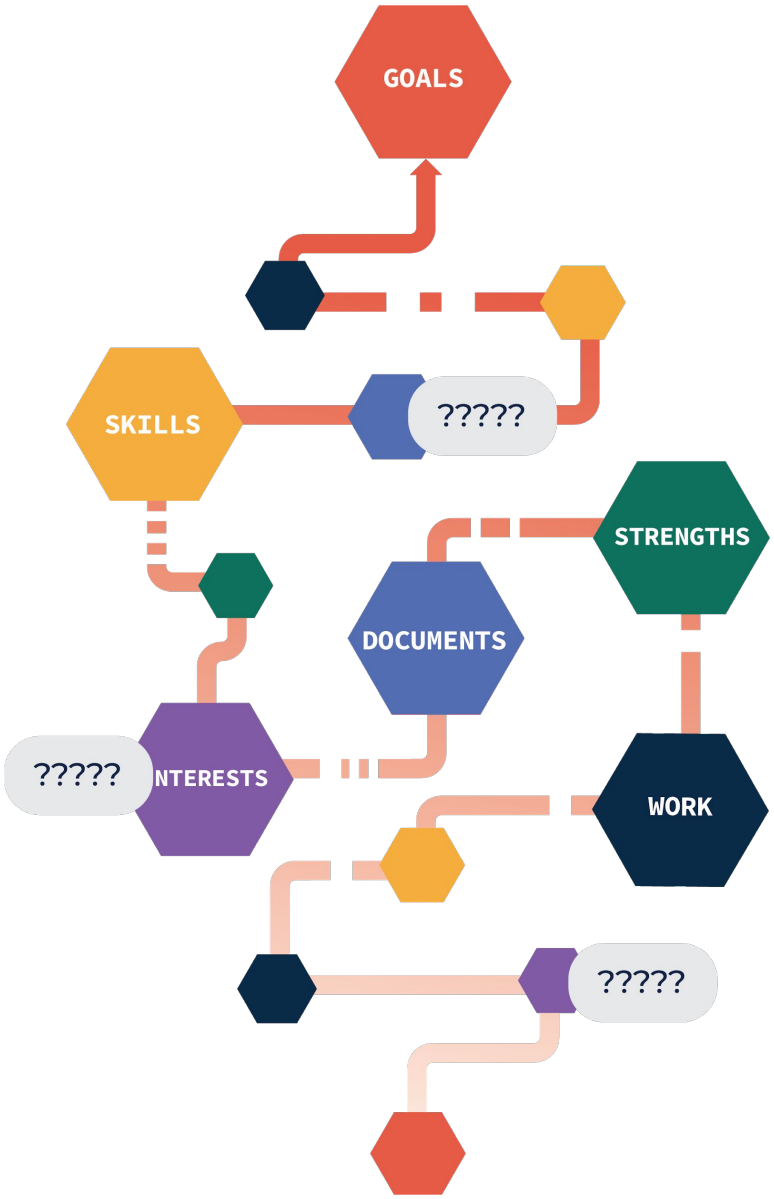
However, it is a complex technological approach that is difficult to explain. We need to expand the communication to clearly express how it will improve the lives of people, e.g., at the times of certain life events or in everyday life.

The Future Scenario

We want to make the future concrete enough as the first stage in our call for action. Matilda is one of us: she wants to reach her full potential. We envision this future for Matilda when adopting the MyData approach.

Work & Skills Data Today

Fragmented	In multiple different systems...
Time consuming	Writing every single application manually...
Lack of control	Not knowing where my data is and how it is used...



We imagine a future that is...

Transparent

Have your work and skills information combined in **one view** so you have full awareness and control over your data.

Fast

Reduce the steps it takes to find opportunities and apply for work and learning.

Personalised

Receive relevant recommendations based on your holistic work and skills profile and your interests.

OUR CONCEPT

The future of work & skills guides people to achieve their goals easier, faster and smarter.

WORK & SKILLS PROFILE

2028
My dream is to provide safe, and affordable housing for society.

- Trainee, Build IT
- Volunteer
- Student Council

- Business Development
- Deployment Models
- Statistics

- Driver's License
- First Aid
- Passport

- Leadership
- Teamwork
- Collaboration

- Sustainability
- Service Design

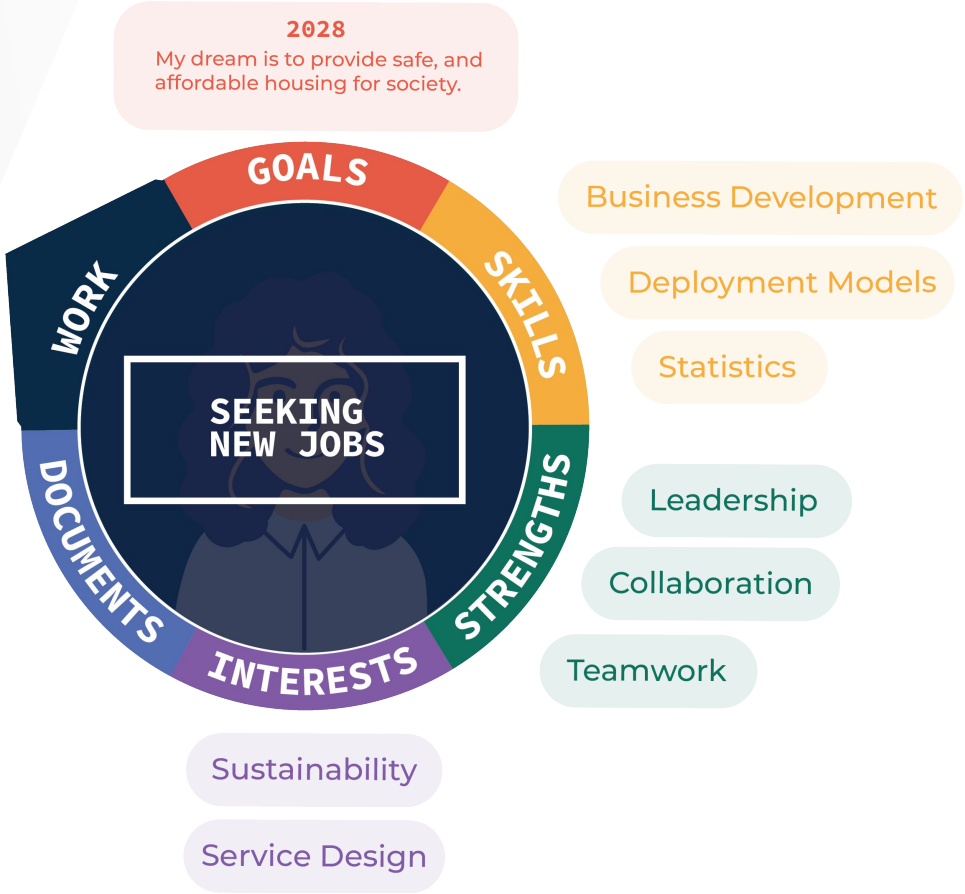
MATILDA'S STORY - FRONTSTAGE

Imagine it's 2025 and Matilda is using the skills data space.

BUILDING MY PROFILE

Matilda is graduating university as a Civil Engineer. Throughout her education, she has been exploring different options for her future by taking an interest in topics around business, development and sustainability.

As she transitions into job-seeker, she reviews her work and skills profile. She adds interests, strengths and her future goal.



PERSONALISED CAREER PATH

Matilda starts the skills data ecosystem experience by using her profile. She gets recommendations on potential opportunities and options on routes to reach her goal.

She can choose the fastest path, or explore and take a more scenic route offering her experiences she wouldn't consider herself.

PROACTIVE SUGGESTIONS

As Matilda moves forward, the map offers relevant and interesting opportunities and scenarios based on her experiences and interests.

Matilda can steer her course depending on her own preferences. She can choose to focus on gaining new skills, finding hidden strengths or get involved with her interests.

LIFELONG LEARNING

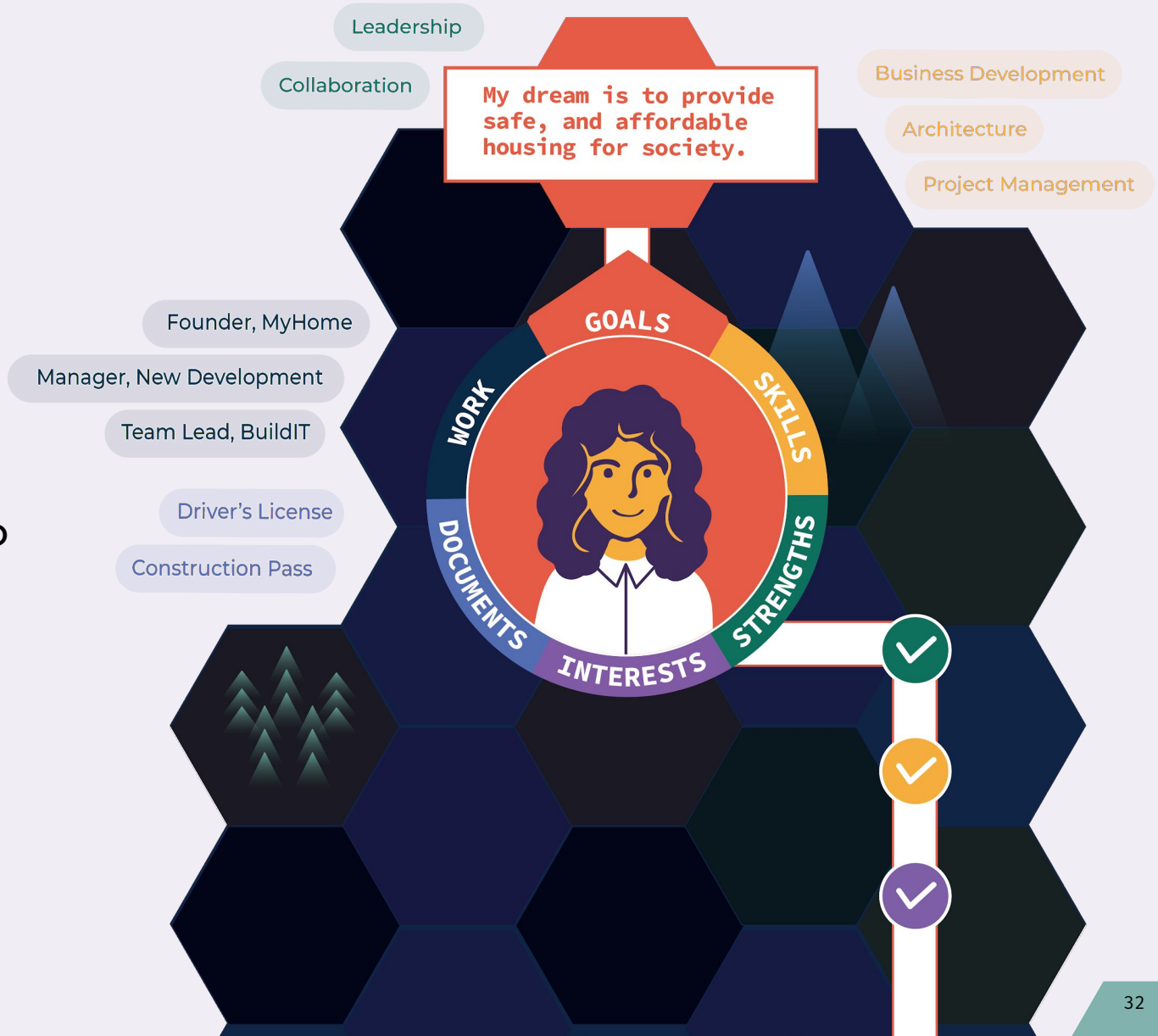
She achieves milestones, learns new skills or can even take a career break.

Her profile automatically stays up to date and adapts to her profile. Throughout her journey, she maintains control over her data.

SEAMLESS EXPERIENCE

Whichever route she chooses to take, Matilda's journey in work and skills is transparent, smooth and personalised.

Enabled by a broad range of partners, services and data, Matilda can achieve her goals in work and skills easier, safer and better by having access to her work and skills in one seamless experience.

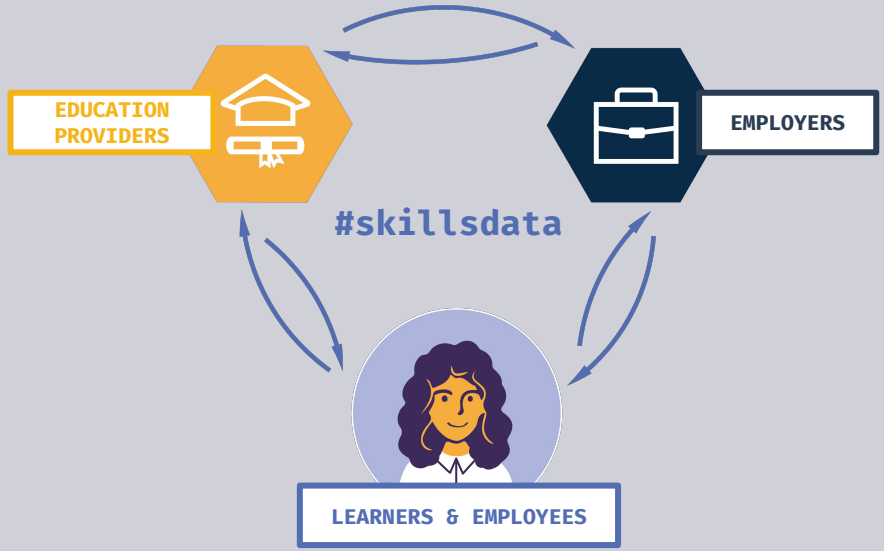


The Ecosystem

To deliver that experience for an individual, we need to start from building the skills data space, ecosystem and infrastructure.
The ecosystem is complex but possible to accomplish when there is will. In the next section, we seek to describe the initial way to make sense of the ecosystem.

The future is built on the skills data ecosystem effort, not independent digital services.

FRONT & BACKSTAGE: Two sides of one story



FRONTSTAGE: THE EXPERIENCE

What individuals experience:

- Writing a CV and articulating their skills, aspirations and dreams
- Identifying appropriate educational programmes (formal and informal)
- Finding the best job
- Applying for a job
- Validating and authenticating skills and certifications

BACKSTAGE: THE SKILLS DATA ECOSYSTEM

What enables that experience:

- Partners
- Personal data
- Data from service providers
- MyData operators
- Standards
- Technical infrastructures
- Business models

BACKSTAGE: Mapping data flows

Understanding the complexity and the critical nature of the data flows is a real challenge. Headai identified that we need tools to conceptualise and map different paths to transform data into actionable solutions.

This is the first sketch of Headai's tool using the data sources from the Accelerator participants.

Illustration of Headai Data to Action: Gamifying AI and Data Flows
Case: MyData skills ecosystem from data operations point of view:
Tampere-Headai-Jobtech-Vastuu

In order to deliver an excellent experience for the individual, we need to build the backstage: **its building blocks are skills data originating from different sources.**

We need to understand what are the building blocks and how the data needs to flow.

The Partners

(A call to action)

We need partners to come together and start building the ecosystem. In the next section, we have identified some of the partner groups that are fundamental to move forward.

Join us!

Benefits for partners

COST SAVINGS

- ❏ Reduce time of unemployment and manual work with verifications
- ❏ Faster responses

EMPOWERMENT

- ❏ Individual control over preferences and values
- ❏ Data accessibility and transparency
- ❏ Safer data sharing

INSIGHTS

- ❏ Data accuracy
- ❏ Insight and foresight into work and skills market
- ❏ Better matchmaking

GROWTH

- ❏ Developing the labour market
- ❏ New opportunities and ahead of the trend
- ❏ Skilled and motivated people and society

Join the skills data ecosystem

Partnerships

Institutions, government, education, organisations, companies and individuals.

Data

MyData operator. The network to easily share and access data.

Commitment

Desire to challenge today's world and make positive change.

www.mydata.org/skillsdata

GOVERNMENT

“Lead the way & open up”

BENEFITS

- Estimated yearly savings of **€260 million** in Finland & Sweden by shortening the average time between jobs by 1 day
- Ability to respond real-time and even anticipate job market needs in order to skill people accordingly
- Understand people’s skill set as well as dream jobs to create education and labour strategies
- Enable organisations and people to share their personal data for a joint benefit

- [ ] Commit to MyData Principles
- [ ] Support and enable the publication of a ‘MyData’ rulebook to set the parameters for collaboration
- [ ] Open data sources & enable the transfer of data: a single standard
- [ ] Create a MyData sandbox for agile experimentation & value validation
- [ ] Develop public services with MyData
- [ ] Transform persons’ data (with consent) into actionable knowledge for forecasting & better decision-making
- [ ] Support new business models (e.g., public-private partnerships)
- [ ] Drive legal reforms to modernise the legal data frameworks and enable data transfers

SUBSCRIBE

EDUCATION

“Articulate & forecast”

BENEFITS

- Facilitate finding employment to graduates by match-making their skills to the real job market
- Respond quickly to disruptions in job markets by fastly adapting the curriculum to re-skill people
- Make it easier for learners to find their right ‘learning blocks’ for their actual needs and wants and/or the needs of the market

- [ ] Commit to MyData Principles
- [ ] Create and open up descriptions and data about programmes, contents and services
- [ ] Create a standardised skills ontology for the use of educational institutions, governments, public and service providers and organisations
- [ ] Enable the transfer of certifications to a person’s own data management system
- [ ] Standardise the access or API for educational institutions
- [ ] Transform personal data into actionable information for people and society in order to provide better education according to existing and future needs of work and skills

SUBSCRIBE

EMPLOYERS

“Empower your people”

BENEFITS

- Reduce recruitment and management time by having all the verified information from your candidates already validated
- Gather HR intelligence by having data from the job market and from your employees
- Empower your employees to share their own data

- [ ] Commit to MyData Principles
- [ ] Create skills-based descriptions of needs and open up for sharing
- [ ] Use ‘MyData operators’ to manage permissions
- [ ] Share anonymised employee data for analysis
- [ ] Enable the transfer of data between people, internal functions, organisations and service providers
- [ ] Support the personal development of employees through self-evaluation and upgrading of skills
- [ ] Enable flexible work models to fulfil personal development plans

SUBSCRIBE

EMPLOYMENT AGENCIES

“Matchmake dreams & jobs”

BENEFITS

- Have access to 'live' accurate data instead of soon to be outdated snapshots (traditional CVs)
- Find faster and more accurately the right person for the job, and vice versa
- Reduce manual work of verification of skills and licenses
- Better understand the job market needs as a whole

- [ ] Commit to MyData Principles
- [ ] Describe the open positions based on skills
- [ ] Matchmake positions and jobseekers based on the definition of needs and wants
- [ ] Enable the transfer of data between individuals, agency and employers through standardised interfaces or MyData operators
- [ ] Translate the benefits of MyData to their customers and sell them MyData solutions
- [ ] Utilise anonymised data to plan recruitment strategies

SUBSCRIBE

TECHNOLOGY PROVIDERS

“Build the infrastructure”

BENEFITS

- Create new concepts and solutions to gather, manage, analyse and deliver better services for all people in the ecosystem
- Potential for public-private partnerships to build the ecosystem
- Potential for many start-ups to develop innovative solutions

- [ ] Create open data ecosystems following MyData Principles
- [ ] Create matchmaking algorithms for skills, experiences and dreams of individuals with the job market
- [ ] Create blockchain-based decentralised actor identifiers
- [ ] Create interoperable data models simulation (language-based)
- [ ] Incorporate MyData capabilities in every software solution
- [ ] Create standardised, centralised or interfaced IT systems in companies and organisations
- [ ] Implement MyData operators' or companies' permissions systems
- [ ] Create self-assessment analysis tools

SUBSCRIBE

DATA SOURCES

“Open up & share”

BENEFITS

- Having access to personal data that is otherwise unavailable
- Sharing data between services to deliver better solutions to customers (win-win-win)
- Analyse and use personal data in new ways to deliver more value to your own customers

- [ ] Commit to MyData Principles
- [ ] Enable access to your customers’ and users’ personal data
- [ ] Enable authorised transfers of data to other service providers
- [ ] Receive access to personal data from your customers, users and other service providers
- [ ] Cooperate with MyData Operators to manage the authorisations of data transfer and use according to your wishes

SUBSCRIBE

MYDATA OPERATORS

“Be the concierge”

BENEFITS

- Having a central, neutral service to manage access to data based on personal wishes
- Create new partnerships between public and private actors that deliver extra value to themselves and to the people involved
- Encourage actors to join the MyData approach by making it easy

- [ ] Identify and verify individuals
- [ ] Centralise the individuals' data, including importing it from different service providers, organisations and people themselves
- [ ] Manage the handover of data, including granting, denying or revoking consents
- [ ] Ensure interoperability between different MyData operators

SUBSCRIBE

The Path Ahead

This is just the beginning! The future of work & skills belongs to all of us. We have mapped our ideas for the next steps and identified those in our team who want to liaise with like-minded organisations and people on specific topics.

Next Steps

The immediate next steps are to find and engage key partners, including an ecosystem leader or coordinator, and together specify the aims, objectives, and ways of working. A common skills data ecosystem open for interested parties to join - together working for shared aims - would be the way to move forward.

For example, cities could be potential key partners, sharing the needs and will to make finding both education and jobs easier and faster, with MyData as a guiding principle. However, all types of organisations are welcome to join the development.

What exists today?

If you want to be a partner in building the skills data ecosystem but you are concerned about resources needed, rest assure that there is already a lot done to help you take steps forward and coordinate the efforts.

Expertise & networks

There are plenty of MyData and Skills experts in data, technologies, business, user experience and legal matters.

MyData Global facilitates the 2000+ community of people representing a diverse range of expertise. All coming together to advance human-centric approaches for personal data.

Ongoing initiatives

Several projects and initiatives are already in place. All participants in this Accelerator have ongoing projects and are already building MyData work & skills solutions.

As an example, to build the EU Skills Data Space announced in the 2020 EC Data Strategy, the Skills Alliance (skills-alliance.org) is uniting European stakeholders to standardise efforts and create the necessary ecosystem.

Funding opportunities

The EU Data Strategy has 1 billion euros of funding over seven years to support 9 data spaces, the skills data space being one of them. Starting in 2021, consortiums and initiatives can apply for these funds.

In addition, there are public and private funding mechanisms in place for digital solutions. For example, Vake can participate in public and private partnerships.

What are we missing?

Obviously, there is a lot of work to be done. We have identified some of the most critical building blocks in order to move forward.

Cooperation

There are a lot of independent initiatives and projects. If we come together, we will be able to move faster and achieve more.

Building an ecosystem requires that partners are open towards a cooperative model. This demands new levels of unity and co-creation.

Use cases

We need to apply what we believe and what we know in real-life use cases in order to test the approach and validate the value.

We need different cases related to work and skills from different contexts, including public-private partnerships. We must develop concrete concepts and test them with users.

Scaling up

We have identified lots of interest and work at the local level, but we strive to scale up towards a national, Nordic and subsequently a European approach.

We believe in building a Europe-wide coalition to take the lead globally towards a human-centric approach to data.

CONTACT US

If you are interested in...	...please contact:
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PARTNERS FOR THE SKILLS DATA ECOSYSTEM

We are looking for those that endorse the idea and want to join.
For signing up, please contact skillsdata@mydata.org

THE FINNISH STATE DEVELOPMENT COMPANY

mydata.org

Technology Industries of Finland

SITRA

Skills Alliance

JOBTECH Dev

Headai

Tampere University

vastuu group

barona

kuntarekry

Sources of Information

The following section contains a glossary of terms as well as a list of publications, projects and initiatives related to data, work & skills that have influenced the work of this project.

GLOSSARY (1/2)

Actor An organisation or an individual performing one or more roles.

Continuous learning, continuous education The process of learning new skills and knowledge on an ongoing basis. It can take place on an organisation level, or in this context, on a personal level (lifelong learning).

Data governance A system that employs interoperability components (standards and policies) to ensure the acceptable use and high quality of data within a specific ecosystem. Manages the availability, usability, consistency, integrity and security of the data used.

Data portability The ability of data to be easily moved across interoperable applications and domains. The legal right to data portability, granted in some jurisdictions to individuals, can be delivered through a range of technical mechanisms and varies in scope according to the jurisdiction. The MyData Principle of data portability encompasses the ease of both access to and reuse of data.

Data source The role responsible for collecting, storing and controlling personal data which persons, operators and data using services may wish to access and use.

Data using service The role responsible for processing personal data from one or more data sources to deliver a service.

Ecosystem The overall system created by the activities and connections of a set of actors and infrastructure interacting according to a common set of rules. Multiple ecosystems can exist, overlap and collaborate.

Governance A system of rules, practices, and processes used to direct and manage an ecosystem. The four pillars of good governance are transparency, fairness, accountability, and security.

Individual A natural, living human being.

Interoperability Ability of actors, processes and information systems that are connected to an activity to act and communicate together in such a way or scope that they can routinely use and understand each other's data.

Lifelong learning See Continuous learning

MyData A principle according to which a person has the right to manage and utilise data (machine-readable information) that pertains to them.

Open data Data (machine-readable information) that can be freely reused by anyone in accordance with its terms of use.

GLOSSARY (2/2)

Operator The role responsible for operating infrastructure and providing tools for the person in a human-centric system of personal data exchange. Operators enable people securely to access, manage and use personal data about themselves as well as to control the flow of personal data within and between data sources and data using services.

Operator network A group of operators with some degree of mutual interoperability.

Person The role of data subject as represented digitally in the ecosystem. Persons manage the use of personal data about themselves, for their own purposes, and maintain relationships with other roles.

Personal data Information that is connected to an identified or identifiable natural person.

Proto-operator A product, service or organisation that is in one way or another performing the role of an operator in personal data ecosystems or offers related tools, services or technologies. Proto-operators come in many forms and under many different names and may cover one or more functional elements in the MyData operator reference model. They constitute the first generation of real-world MyData operators.

Role A function or set of responsibilities for a particular purpose.

Skills data Data about one's skills, experiences, licences, etc.

PUBLICATIONS

European Commission (2020) *'European Data Strategy'*. European Commission. Available at: https://ec.europa.eu/info/sites/info/files/communication-european-strategy-data-19feb2020_en.pdf (Accessed: 02 July 2020).

Langford, J., Poikola, A., Janssen, W., Lähteenoja, V. and Rikken, M. (2020) *'Understanding MyData Operators.'* MyData Global. Available at: https://mydata.org/wp-content/uploads/sites/5/2020/04/Understanding-Mydata-Operators-pages.pdf (Accessed: 02 July 2020).

Poikola, A., Kuikkaniemi, K. and Honko, H. (2015) *'MyData – A Nordic Model for human-centered personal data management and processing.'* Ministry of Transport and Communications. Available at: http://urn.fi/URN:ISBN:978-952-243-455-5 (Accessed: 02 July 2020).

Sitra (2020) *'Rulebook for a fair data economy'*. Sitra. Available at: https://www.sitra.fi/en/publications/rulebook-for-a-fair-data-economy/ (Accessed: 02 July 2020).

Vastuu Group (2020) '*A MyData Operator White Paper*' Vastuu Group. Available at: https://www.mydatashare.com/whitepaper (Accessed: 12 August 2020)

PROJECTS & INITIATIVES

Finnish Defence Forces: Military digital skills profile for education and career paths
https://bit.ly/Finnish-Defence-Forces-AI-recognize-military-skills

Ministry of Economic Affairs and Employment, Confederation of Finnish Construction Industries, Finnish Construction Trade Union, Vastuu Group: Digitaalinen työllistyminen (Digital Employment) project (2020)

Ministry of Education and Culture: Continuous Learning parliamentary group https://minedu.fi/en/continuous-learning-reform

MyData Global: MyData Global is an international nonprofit with the purpose to empower individuals by improving their right to self-determination regarding their personal data. It is based on the MyData Declaration. https://mydata.org/

Sitra: IHAN® project on fair data economy (2018-2021) https://www.sitra.fi/en/topics/fair-data-economy/

Universities in Finland: Digivisio 2030
https://www.unifi.fi/uutiset/kaikki-suomalaiset-korkeakoulut-vahvasti-mukana-digivision-toteuttamisessa/

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Kuntarekry:	Misa Leiber, Toni Saalasti
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Vastuu Group:	Petri Tuomela, Jami Haavisto, Mika Huhtamäki

‘THE FUTURE OF WORK & SKILLS’ PUBLICATIONS:

The publications were co-created with the contribution of all the participants of the Accelerator program.

Production team:

Storytelling:	Paula Bello, Karoline Kwon
Graphic Design:	Karoline Kwon
Video:	Karoline Kwon
Short presentation:	Karoline Kwon
White paper:	Paula Bello

List of Resources

The list of resources contains a growing selection of relevant organisations, initiatives, cases, tools and resources to help you gather a deeper understanding of data, work & skills.

EU Data Strategy
https://ec.europa.eu/info/sites/info/files/communication-european-strategy-data-19feb2020_en.pdf

EUROPEAN
COMMISSION

Brussels, 19.2.2020
COM(2020) 66 final

COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS

A European strategy for data

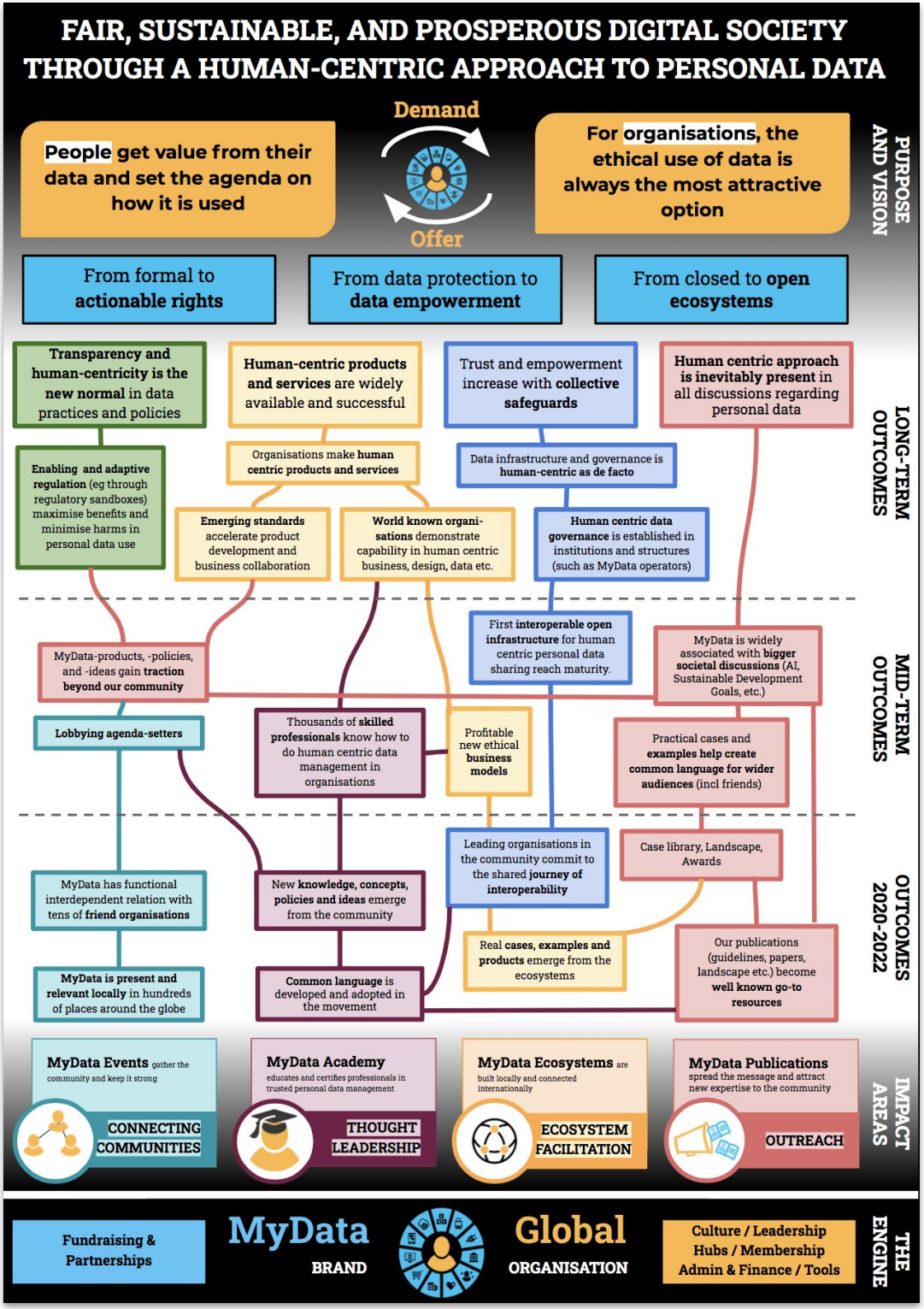
MyData Global Organisation
https://mydata.org/

The core idea is that individuals should be **in control of the data about themselves.**

The MyData approach aims at strengthening **digital human rights** while opening new opportunities for businesses to develop innovative **personal data based services** built on mutual trust.

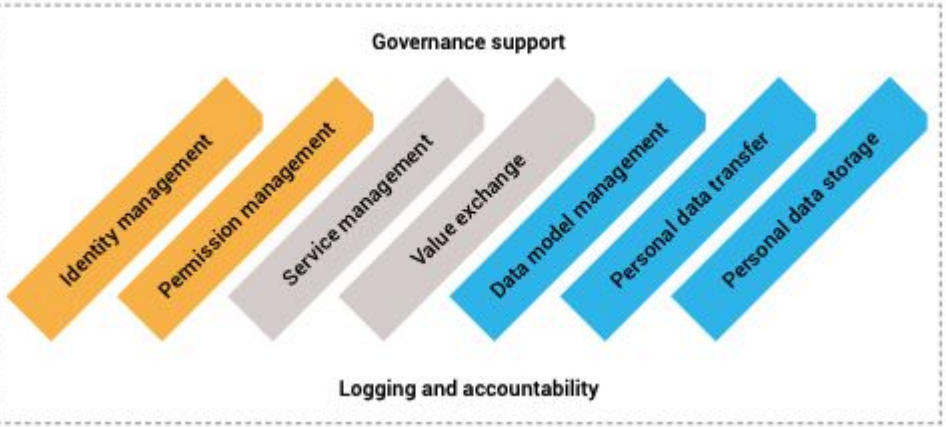
MyData Global's mission is to **empower individuals by improving their right to self-determination regarding their personal data**.

The human-centric paradigm is aimed at a fair, sustainable, and prosperous digital society, where the sharing of personal data is based on trust as well as balanced and fair relationship between individuals and organisations.



MyData Operators
https://mydata.org/
https://mydata.org/wp-content/uploads/sites/5/2020/04/Understanding-Mydata-Operators-pages.pdf

Figure 1: Illustration of a multi-operator ecosystem with the five roles of Person, Operator, Data Source, Data Using Service and Ecosystem Governance.



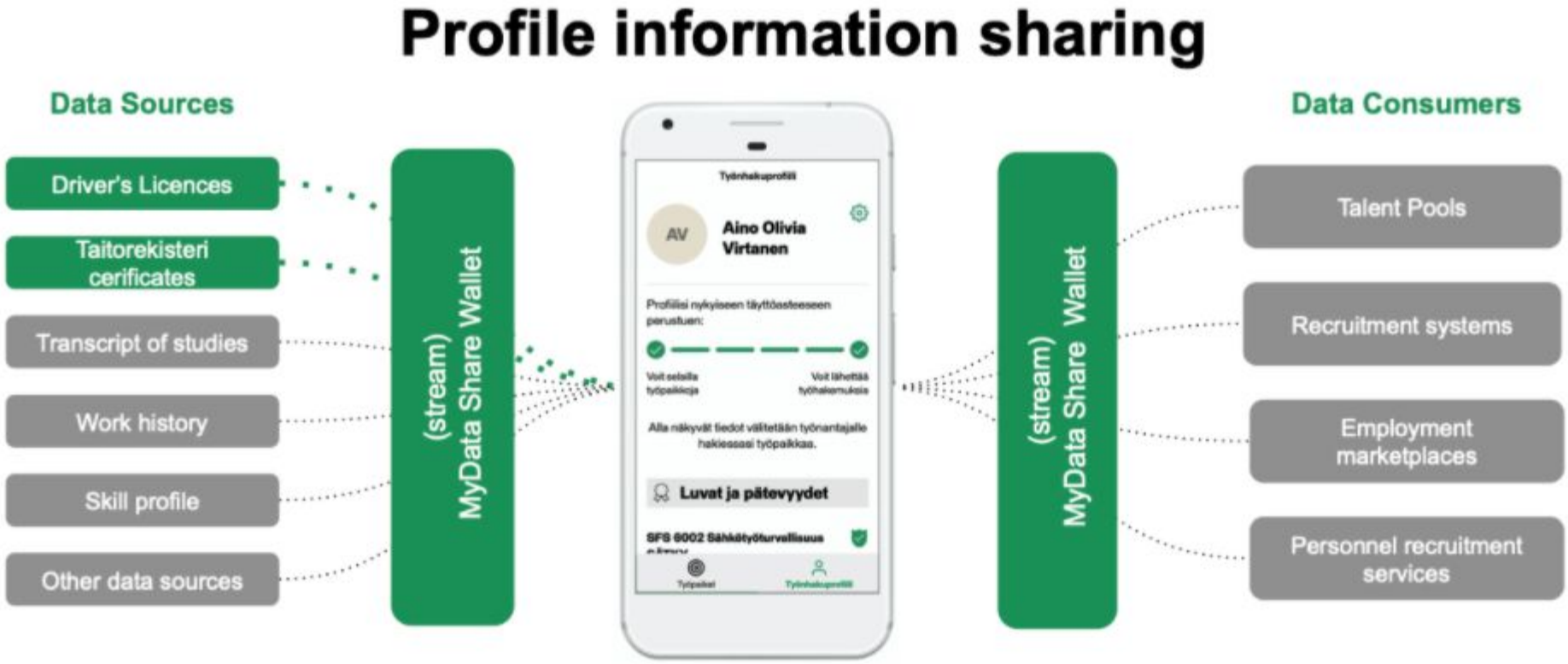
MyData operators are actors that provide infrastructure for human-centric personal data management and governance.

Below you can find 16 organisations awarded the inaugural status of a MyData operator and the white paper *"Understanding the MyData operators"* defining the concept further.

MyData operators 2020

cozy.io · Datafund · DATAYOGI · digi.me
DIABETES.SERVICES · MYFAIRDATA · mylife digital · iGrant.io Your data, your choice.
Meeco · mydata share · numbers · OCKTO
OYD OwnYourData · Personium · schluss · SELF

MyData Case Library: MyData Share Wallet by Vastuu Group
https://mydata.org/mydata-case-digital-employment-and-life-long-learning-the-reliable-worker/



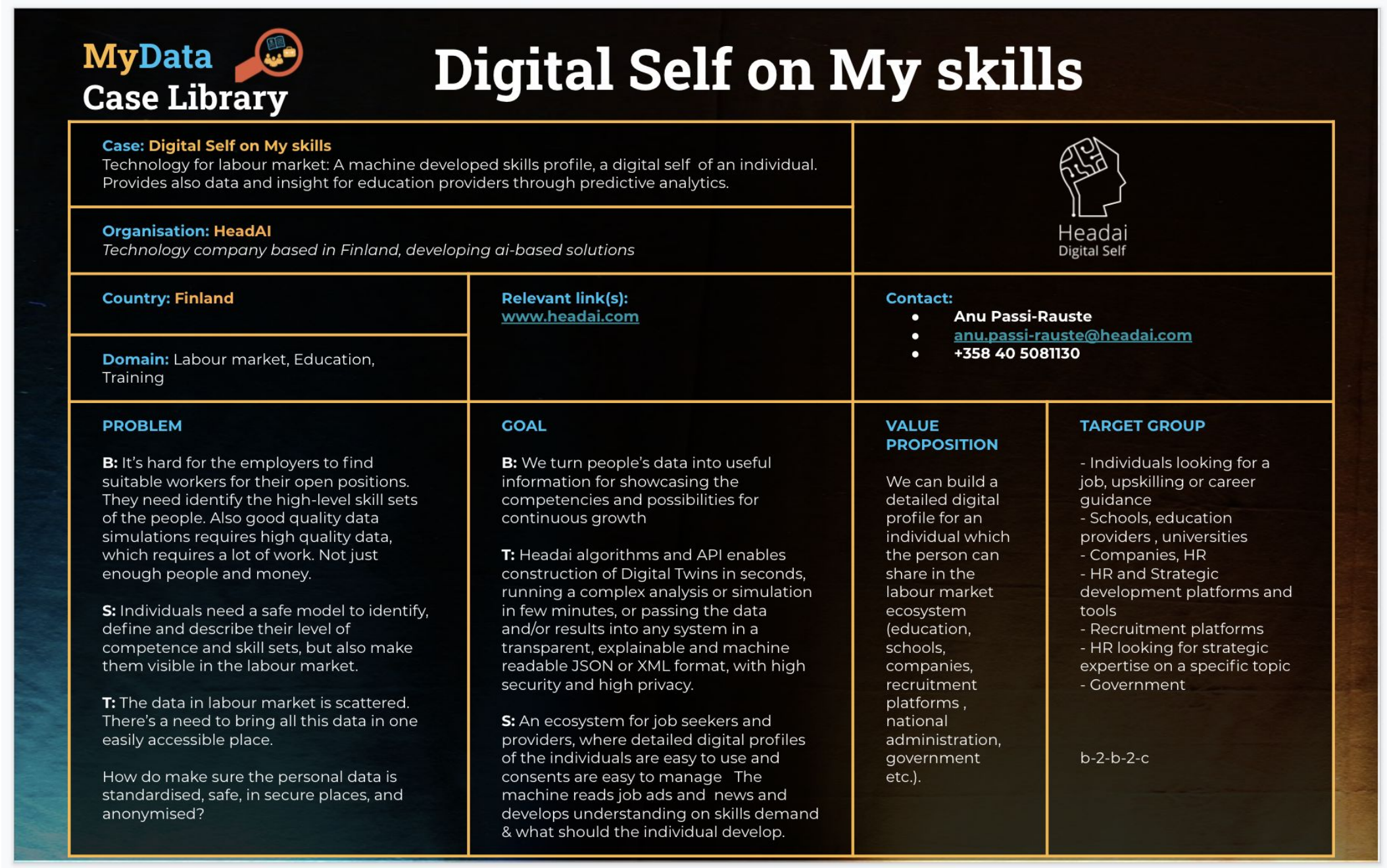
The profile can be aggregated as the user gives consent for the selected data sources. If the user signs in with the MyData Share wallet, the consent can be given through federation without separated authentication.

The service generates an aggregated profile based on the data sources. Verified information is indicated in the data.

The selected information on the profile can be shared with consent to an employer's recruitment system, a talent pool, an employment marketplace or a personnel recruitment service.

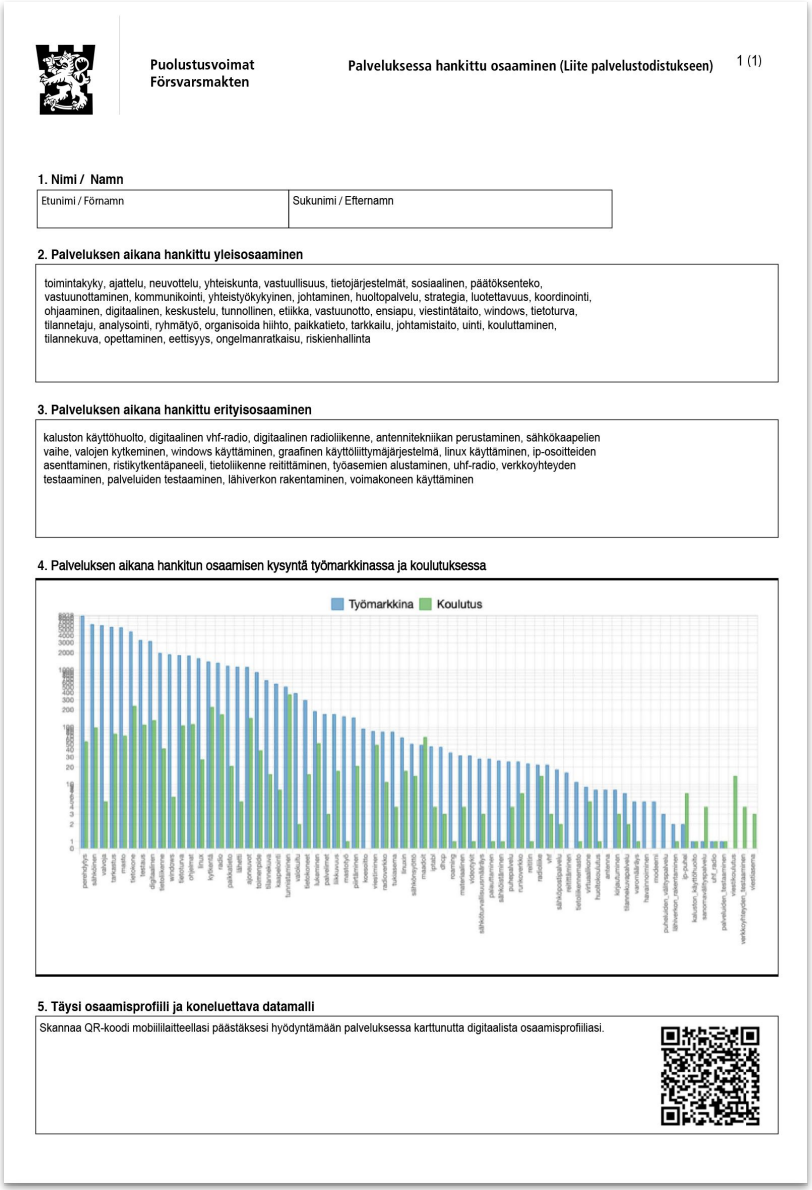
vastuu group

MyData Case Library: Digital Self on My Skills by HeadAI
https://docs.google.com/presentation/d/1uWf9JLA-KlcfqqGEmS9vfoO-L0L4eIgoa9tnHq8nXWw/edit#slide=id.g5ca360e



Digital Self on My Skills by HeadAI

A Finnish Army Unit Pori Brigade piloted Headai tech to recognize skills learned during the military service



Puolustusvoimat
Försvarsmakten

Palveluksessa hankittu osaaminen (Liite palvelustodistukseen) 1 (1)

1. Nimi / Namn

Etunimi / Förnamn	Sukunimi / Efternamn

2. Palveluksen aikana hankittu yleisosaaminen

toimintakyky, ajattelu, neuvottelu, yhteiskunta, vastuullisuus, tietojärjestelmät, sosiaalinen, päätöksenteko, vastuunottaminen, kommunikointi, yhteistyökykyinen, johtaminen, huoltopalvelu, strategia, luotettavuus, koordinointi, ohjaaminen, digitaalinen, keskustelu, tunnollinen, etiikka, vastuunotto, ensiapu, viestintätaito, windows, tietoturva, tilannetaju, analysointi, ryhmätyö, organisoida hiihto, paikkatieto, tarkkailu, johtamistaito, uinti, kouluttaminen, tilannekuva, opettaminen, eettisyys, ongelmanratkaisu, riskienhallinta

3. Palveluksen aikana hankittu erityisosaaminen

kaluston käyttöhuolto, digitaalinen vhf-radio, digitaalinen radioliikenne, antennitekniikan perustaminen, sähkökaapelien vaihe, valojen kytkeminen, windows käyttäminen, graafinen käyttöliittymäjärjestelmä, linux käyttäminen, ip-osoitteiden asenttaminen, ristikytkentäpaneeli, tietoliikenne reitittäminen, työasemien alustaminen, uhf-radio, verkkoyhteyden testaaminen, palveluiden testaaminen, lähiverkon rakentaminen, voimakoneen käyttäminen

4. Palveluksen aikana hankitun osaamisen kysyntä työmarkkinassa ja koulutuksessa

5. Täysi osaamisprofiili ja koneluettava datamalli

Skannaa QR-koodi mobiililaitteellasi päästäksesi hyödyntämään palveluksessa karttunutta digitaalista osaamisprofiiliasi.

Finnish Defence Forces, Pori Brigade, applied AI to recognise skills learned during the military service. For the first time, cognitive technology enables real-time comparisons and simulations in-between multidisciplinary military service training and educational offerings, or labour market skills demand. The solution helps individuals in transition to civilian employment or education and gives insights for educational institutions to assess how to give credit for military service.

See the press release from Pori Brigade.

Headai digital twin enabled identifying the skills from the leadership courses, turning them into civilian skills and storing them into a personal digital skills profile which the conscripts can download as part of their service certification (see the Skills Profile in the image).

From The Future of Work & Skills ecosystem point of view, the Skills Profile is a machine-readable xAPI/JSON file and interoperable to any system, service and platform.

Everyone owns their personal data and gives consent for employers and educational institutions to use the data when needed.

Headai's tech makes sure that no confidential details are leaked into the mydata, which makes it safe to share it.

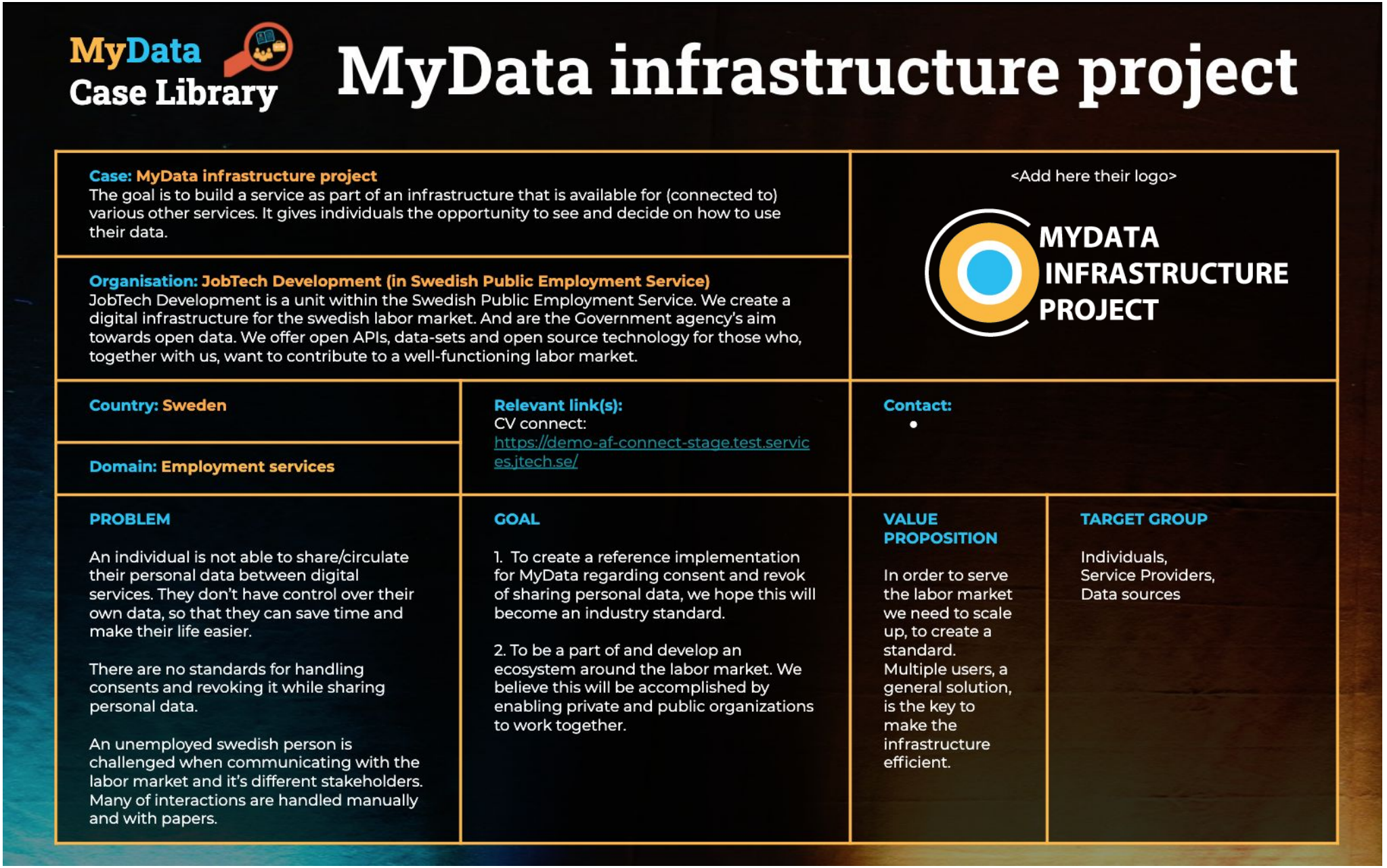
For further information on Headai tech, read the whitepaper: Future-proofing Skills with Open Data and Semantic AI

Tampere University: Identifying skills and competences with the help of AI
https://www.tuni.fi/en

Article about the project:
https://www.tuni.fi/en/news/ai-making-students-competency-profiles-compatible-job-market-needs
https://www.tuni.fi/fi/tutustu-meihin/jatkuva-oppiminen (Page in English available 1.9.20)

Tampereen yliopisto
Tampereen ammattikorkeakoulu

MyData Infrastructure Project by JobTech
https://docs.google.com/presentation/d/15Bj4jfFLt3UxEBuR3sTpQGJ7FkGvtXXqHZ2igWpxnSw/edit?usp=sharing



Data to Action: Gamifying AI and Data Flows by Headai

www.headai.com

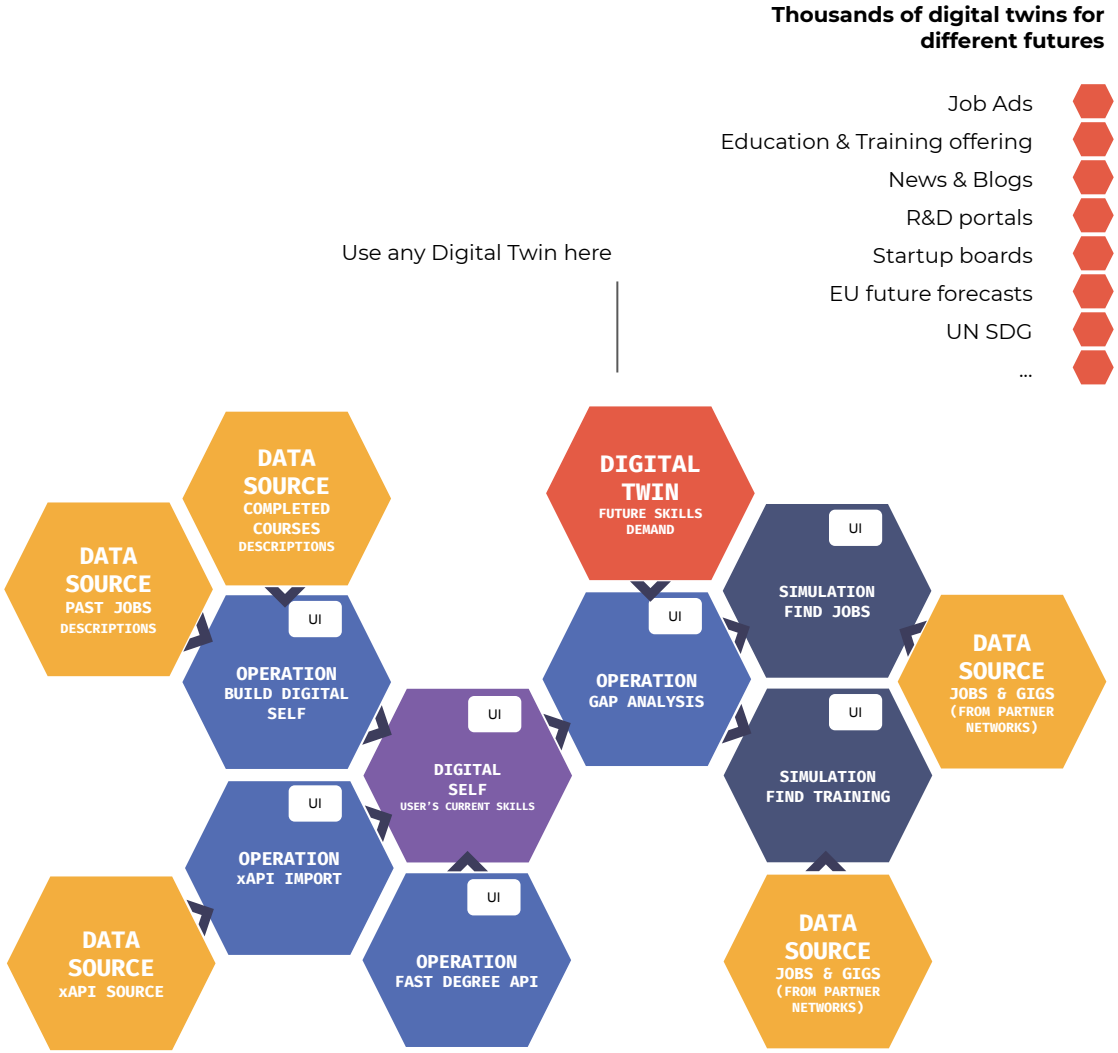
Headai has developed a toolkit to concretise how data flows in between the infrastructure partners for the benefit of the person e.g., Matilda.

Data is power, but cannot be the solution without action. Data to Action is the ecosystem solution.

A skills data ecosystem is a complex system that combines a collection of data sources, platforms, service providers and applications used to capture and analyse data.

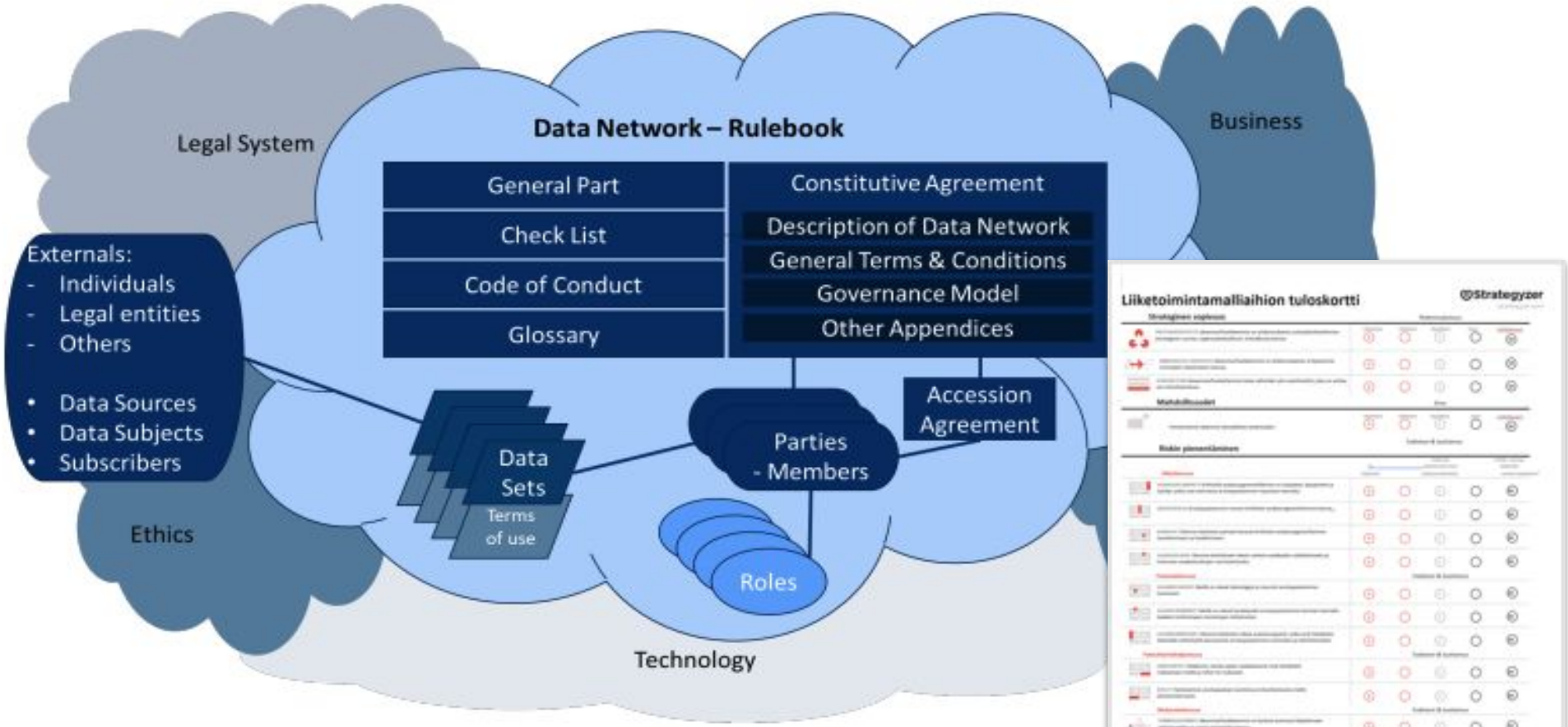
We all own and build the ecosystem together; its main principle is the distribution of power.

To make this happen, we need collaboration and unifying mapping tools for co-creating the ecosystem.

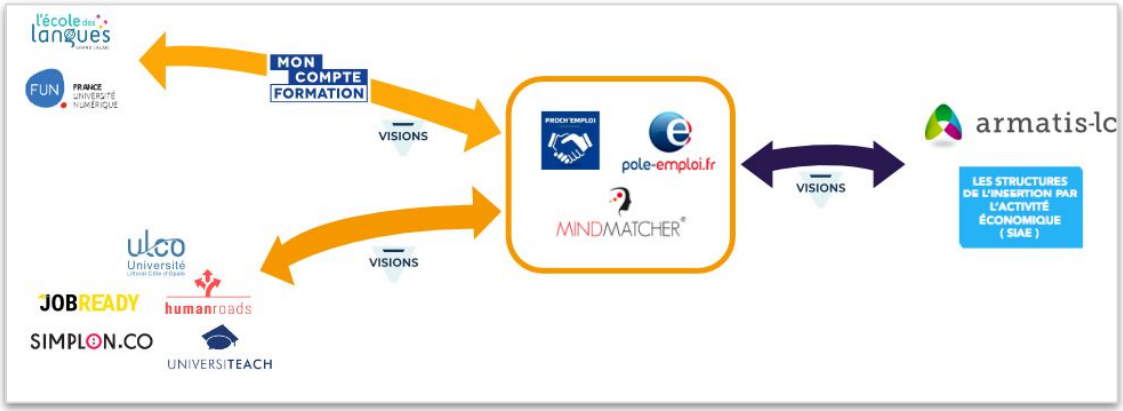


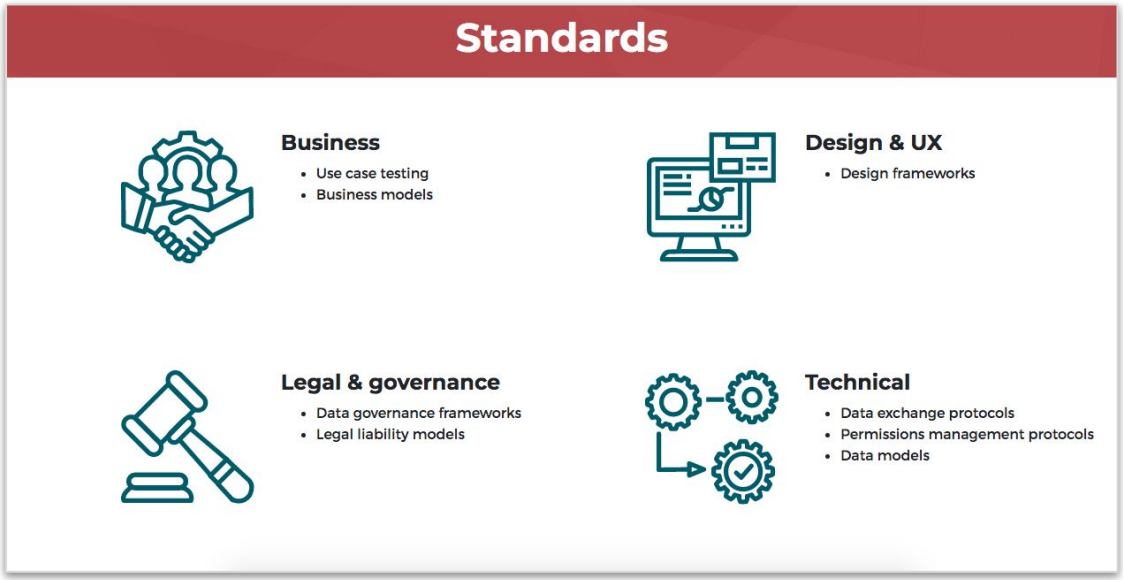
Sitra: Rulebook for a Fair Data Economy
https://media.sitra.fi/2020/06/01093003/rulebook-for-a-fair-data-economyversion1-1.pdf

The following picture illustrates the relations between the different parts of a rulebook implemented from this Template.



Skills Alliance & Skills Data Network
visionspol.eu/project/grand-calais
skills-alliance.org

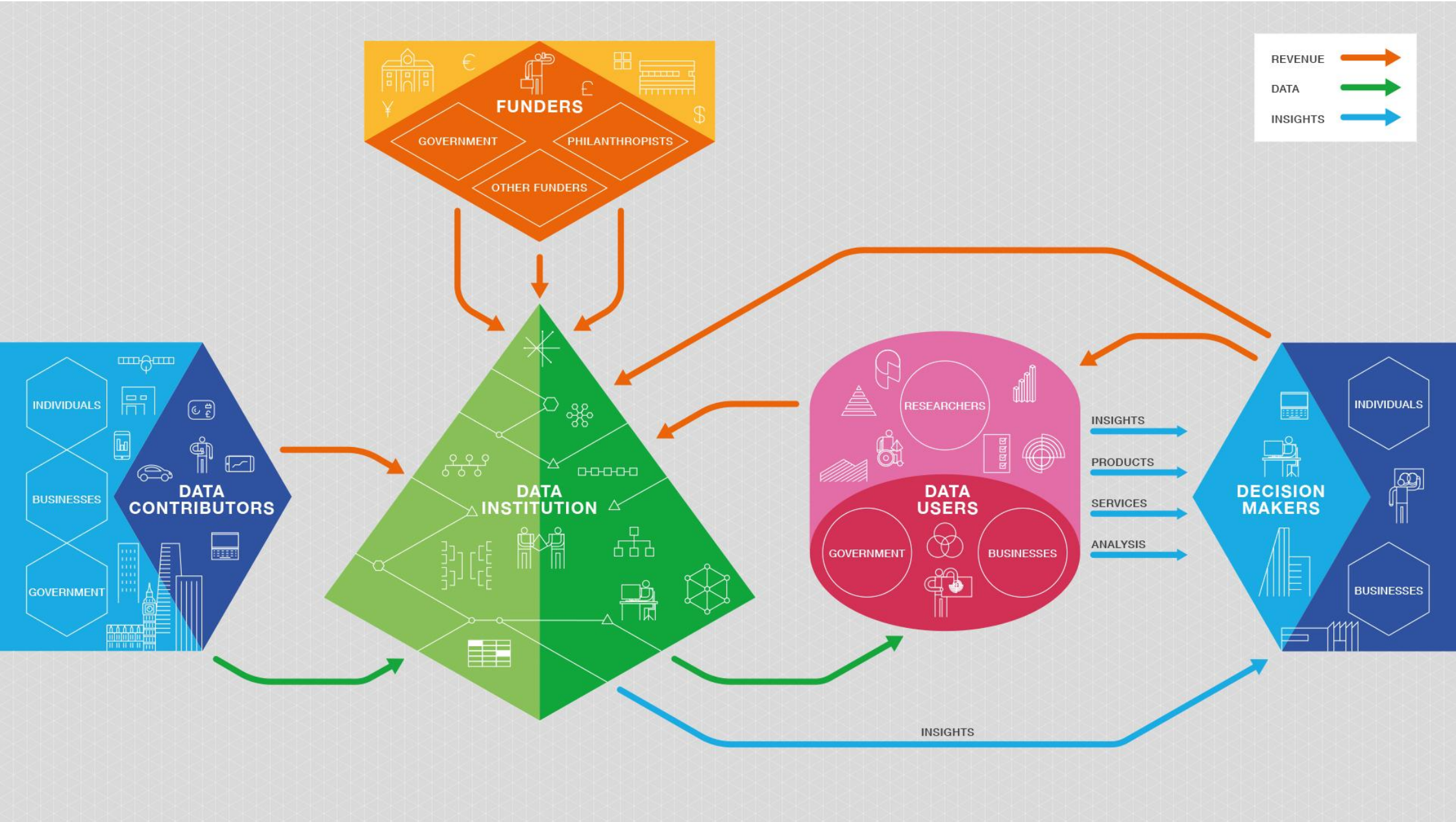




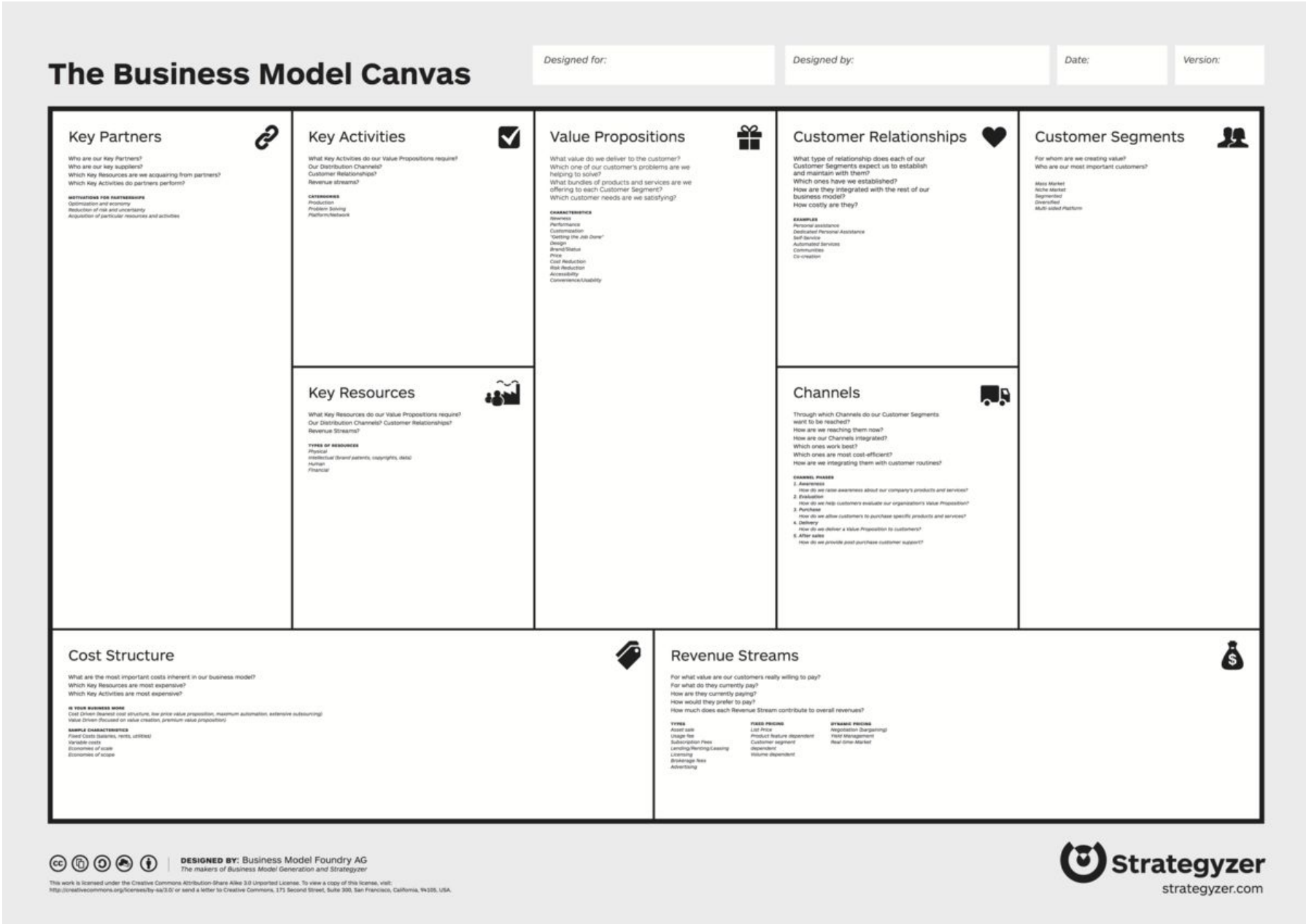
Pôle Emploi (French National Employment Agency), Hauts-de-France (North of France region), ULCO (university), Simplon (training organization), CapGemini (employer), Artemis-lc (employer), SIAE (20 employers), Fabrique DÉFI (social inclusion public stakeholder), Proch'Emploi (regional employment agency), Visions (MyData operator): creating a human centric skills data network to accelerate the recruitment time of unemployed people.
visionspol.eu/project/grand-calais

Skills Alliance : 40 members from 8 countries uniting to create , share and govern open standards (legal, technical, business, UX) to create human centric skills data networks.
Join us!
skills-alliance.org

The Open Data Institute: Designing sustainable data institutions
https://theodi.org/article/designing-sustainable-data-institutions-paper/



Strategizer: Business Model Canvas
https://www.strategyzer.com/canvas/business-model-canvas



PLACEHOLDER FOR YOU!

If you have a relevant reference (organisation, project, initiative), please send a message to skillsdata@mydata.org to be included in this list