Digital Product Passport

Playbook

The playbook was developed in collaboration between Sitra and VTT.

13 May 2025

Playbook for implementing a digital product passport

A product passport is a digital information description of a product that contains information about the product, such as the origin of raw materials, carbon footprint and the recyclability of the end product. Although the general specifications of product passports, such as descriptions of content requirements and technical standards, are still being specified, it is important to start preparing proactively. The collection and transmission of product information throughout the value chain and the product life cycle will become a reality in the EU Single Market within the next few years, starting with battery, textile and steel products. Product passports offer data-based tools for improving production chains and product management. In addition, they are also useful for building completely new business models.

The purpose of the playbook is to support companies in the planning and implementation of product passports. It provides perspectives, information and practical instructions to start the product passport development process from the point of view of your own business. The playbook guides companies along a development path that starts with master data management. It then progresses from identifying the value chain and information needs to organising the implementation process. The benefits and development costs of product passports largely depend on the solutions chosen, which encourages a review of the implementation of product passports at different levels, from minimum requirements to significant business benefits.

By following the path of the playbook, you can identify options for implementing product passports and navigate the development environment towards the future of sustainable business. The templates and tasks it contains will help your company in the product passport implementation process and in finding business opportunities. Use the material to inspire your own organisation and take the first steps towards the future!

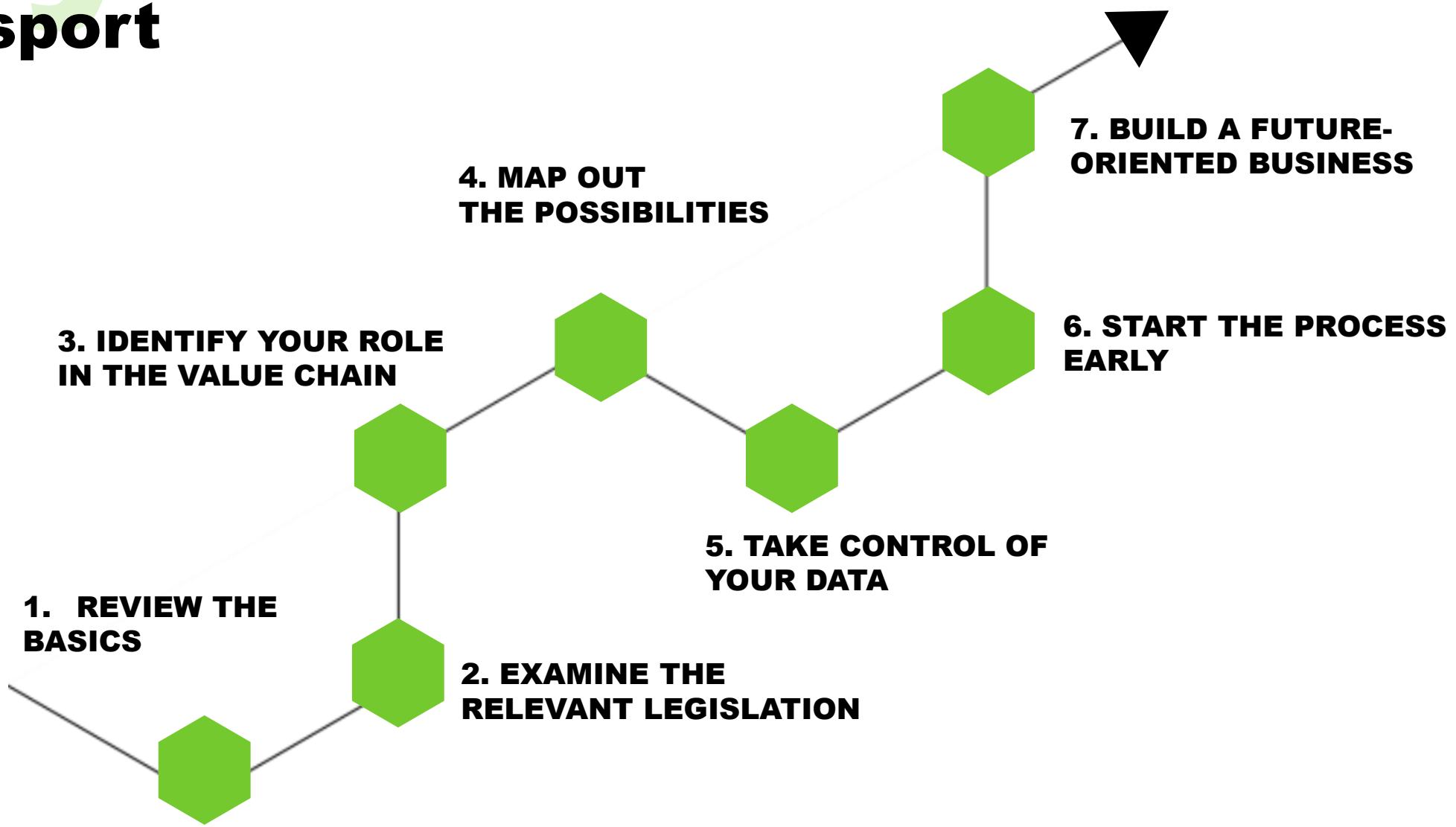
More detailed descriptions of the playbook's models and practices can be found in the background report Implementing the digital product passport - A guidebook for businesses and by joining the FINNPASS network (LinkedIn).

Purpose

Product passports aim to increase the transparency of production chains and the durability and traceability of products throughout their life cycle.

Playbook

The path towards a digital product passport

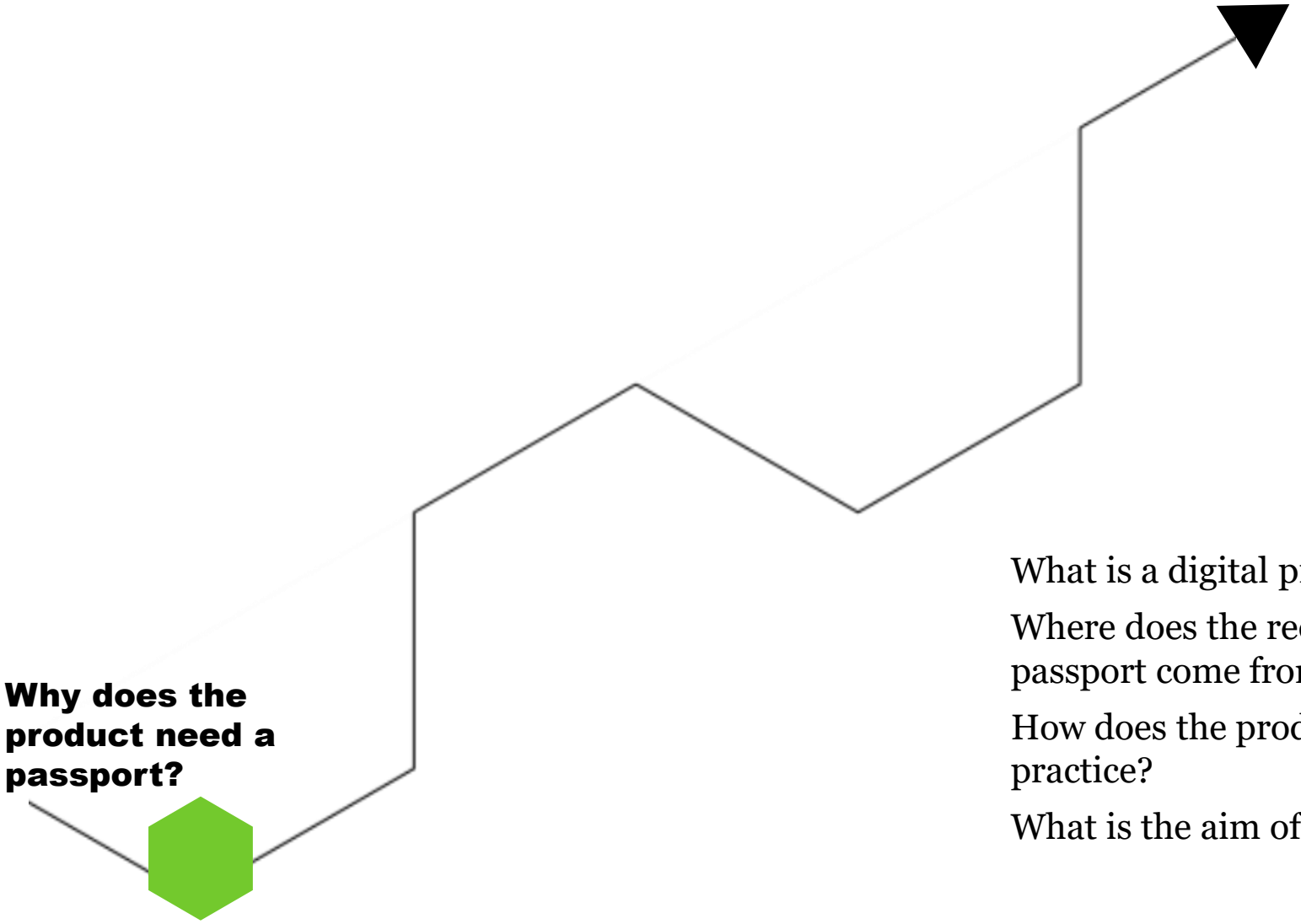


Playbook

Contents

Basic

1. Review the basics



Why does the product need a passport?

What is a digital product passport?

Where does the requirement to build a product passport come from?

How does the product passport work in practice?

What is the aim of the product passport?

Basic

What is a digital product passport?

A digital product passport is a digital information description of a product. It contains key information about the product: the product's origin, materials, environmental impact and recycling instructions.

The product passport can be used to collect information about a product throughout its life cycle. In this way, it increases transparency in the product's value chain, from production to ordering, delivery, use and possible aftermarket. The aim of product passports is to extend the service life of products and promote the circular economy.

In practice, a product passport is an identifier (barcode, QR code or other) that carries the product with it. It allows suppliers, partners, consumers, owners, authorities or any other interested party to view product information. Some of the information in the product passport is public, while access to other information can be restricted.

The information in the product passport must be accurate and up-to-date. The implementation of the product passport requires information from different actors in the product value chain. The product passport is compiled and made available by the operator supplying the product to the market, which in practice means the producer or importer.

Basic

Where does the requirement to build a product passport come from?

The EU's **Ecodesign for Sustainable Products Regulation** (ESPR) contains requirements for sustainable products, including the digital product passport.

The European Commission sets regulations on **product groups** in order of priority and implementation, based on their environmental impact.

The product passport will be introduced **in stages for a variety of product categories**. These consist of more than 200,000 individual products that are sold annually in the EU. The size of a company does not affect the requirement to implement a product passport. The data contents of the product passport are defined separately in delegated acts and are product group-specific.

The requirement to build a product passport applies to products and intermediate products that are placed on the EU markets. **The producer or importer of a product** is responsible for the implementation of the product passport, but the process requires data from all actors in the value chain.

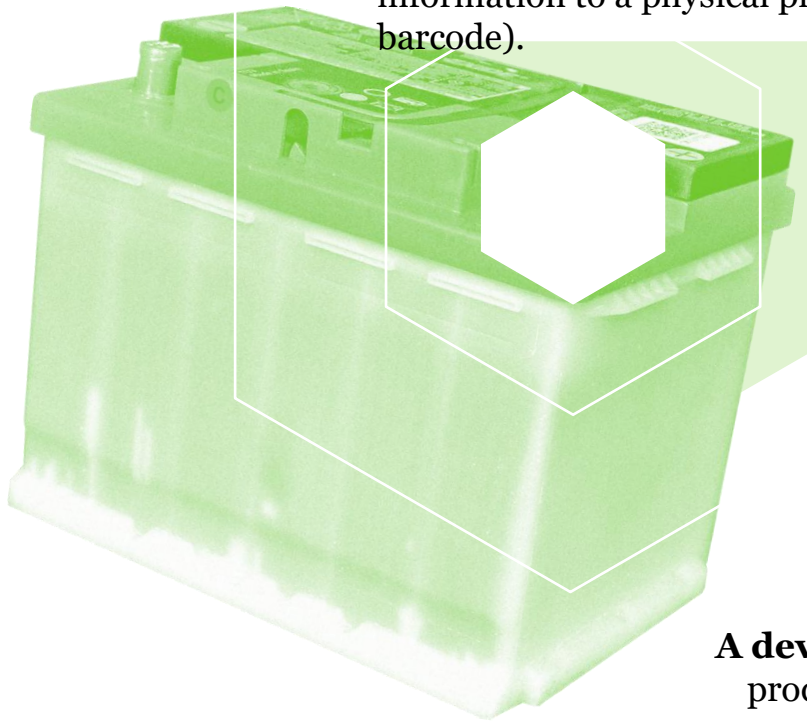
The regulation does not apply to food, feed, medicines, veterinary medicines, live plants, animals and microorganisms.

Basic

How does the product passport work in practice?

A product with a product identity.

A **data carrier** that attaches product information to a physical product (e.g. QR code, barcode).



A device that reads the product passport. The product passport is readable by both machines and humans.

A **data repository** containing the product passport data. Some of the information is public, while access to other information can be restricted.

Basic

What is the aim of the product passport?

Consumer interest. The product passport provides buyers and consumers with information on the origin of products, helps them compare products, and make more informed purchasing decisions. The user and consumer can also add information to the product passport for aftermarket purposes.

Extended Product lifespan and the circular economy. The product passport supports the circular economy and sustainable development by providing information on, for example, the product's origin, recyclability and environmental impacts.

Legal certainty. The product passport, which contains information from the entire product life cycle, guides companies to act in line with regulations and standards.

Supply chain management. The product passport helps companies manage and optimise supply chains. Increasing transparency helps when selecting partners, evaluating subcontractors and developing supplier relationships.

Product development. Evolving data collection and analysis help companies develop new, increasingly sustainable products and services.

Business Models. Product information management and product passport solutions increase the competence and ability of companies to build data-based circular business models and new services.

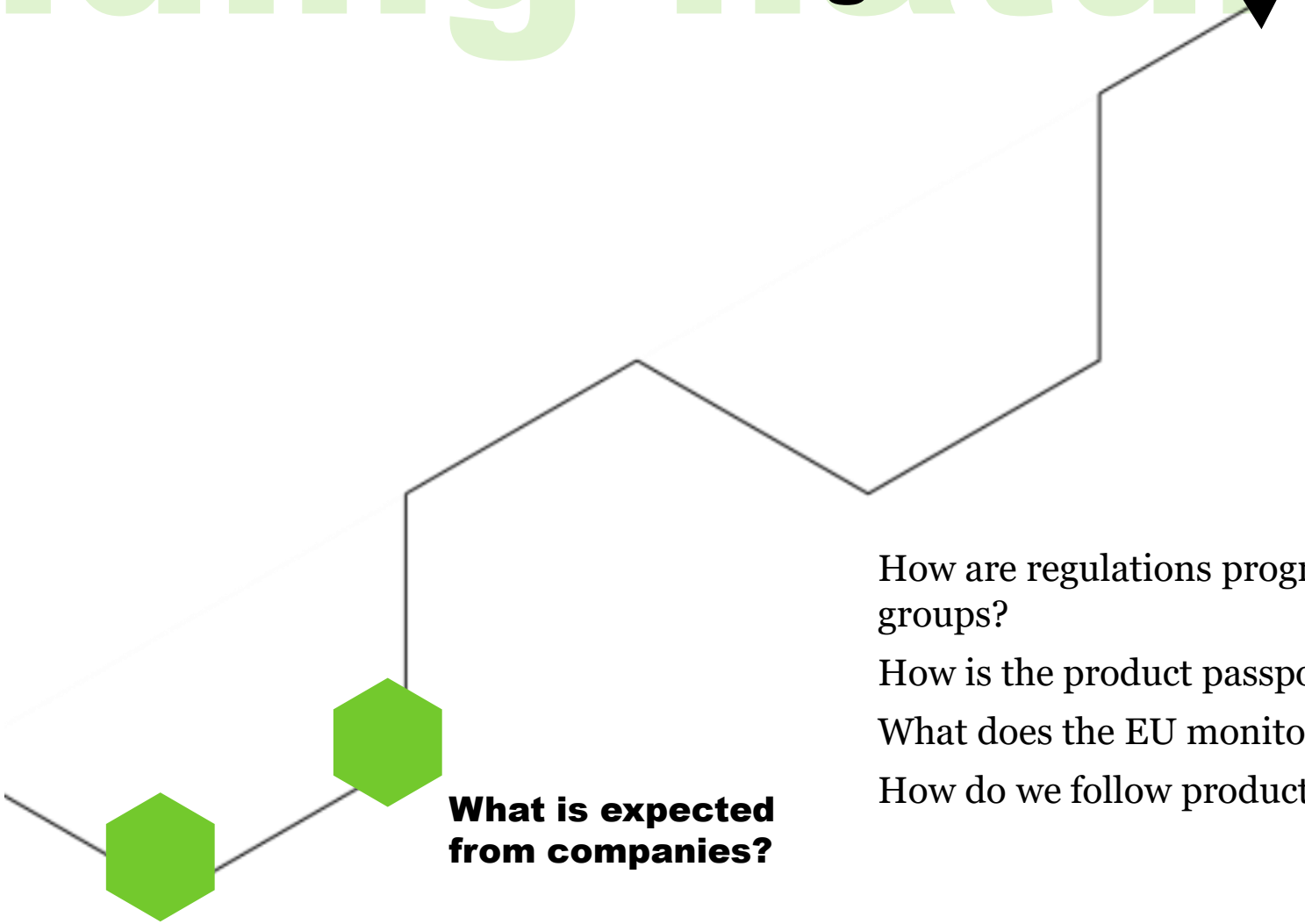
Competitiveness. European markets are being adapted for safer, more sustainable, transparent and innovative products. Finnish companies are relatively advanced in digitalisation, and therefore in an excellent position to turn the product passport obligation into a business benefit.

Basic

In the next few years, several product groups sold in the EU's internal market will be required to have a digital product passport.
These passports convey product information to consumers and between value chain partners e.g. on the origin and recyclability of products.

Binding nature

2. Examine the relevant legislation



What is expected from companies?

How are regulations progressing in different product groups?

How is the product passport progressing over time?

What does the EU monitor?

How do we follow product passport development?

How are regulations progressing in different product groups?

The introduction of product passports by product group is progressing in accordance with the work plan defined by the European Commission, which will be published in spring 2025.

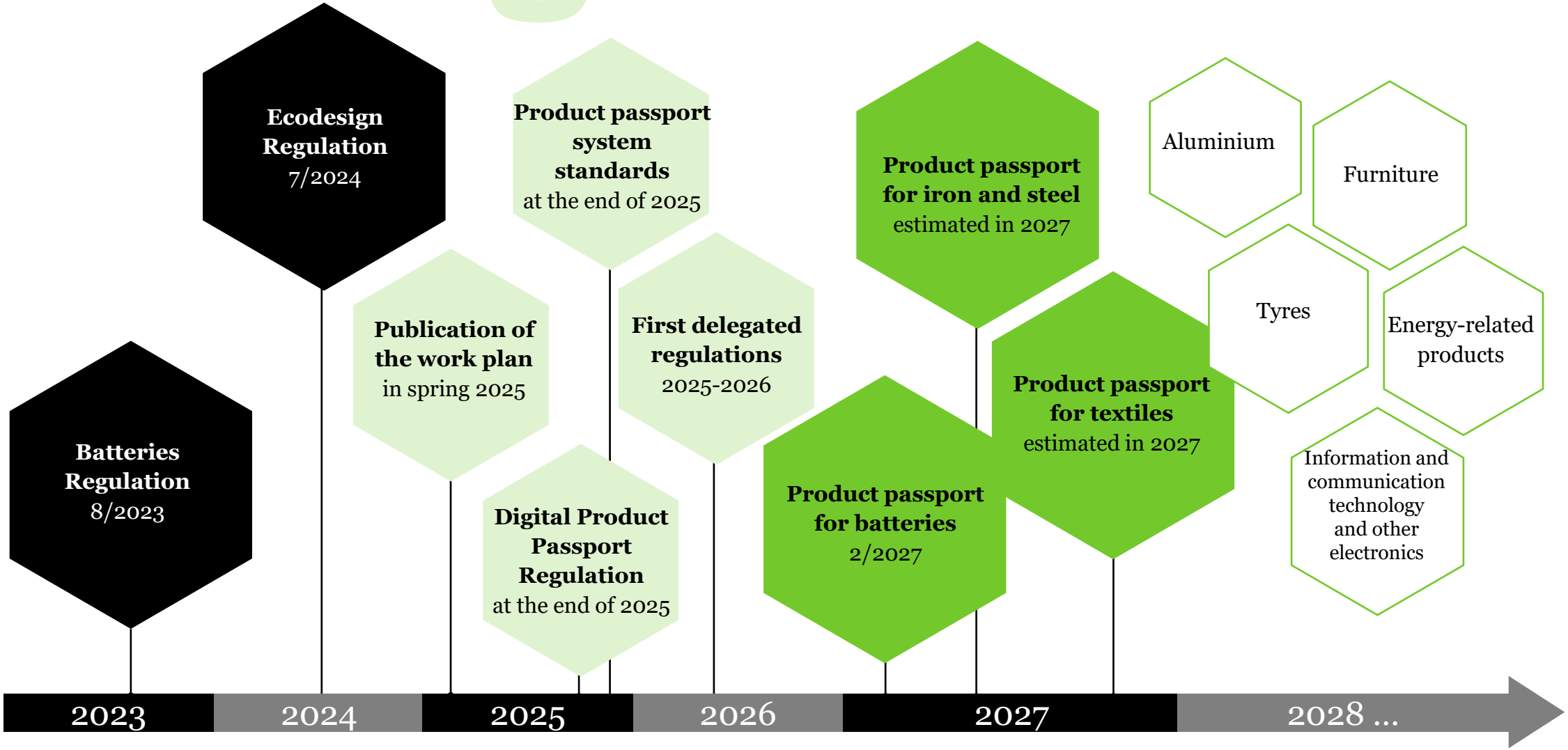
Order of progress in product groups from 2027 onwards:

- batteries
- textiles and clothing
- iron and steel

Later, product passports will be introduced for the following product groups (estimated):

- aluminium
- furniture
- tyres
- energy-related products
- ICT and other electronic products

Timeline for product passports



What does the EU monitor?

The requirements for companies related to the EU's digital product passport are still being specified. Most likely, they will be connected to following areas:

Product registration

A company must create a unique identifier for its product and register this identifier in the EU product passport register. In addition, information about the production site and company (operator) must be registered.

Product identifier

The identifier created for the product must be an internationally unique identifier (URI, Uniform Resource Identifier). If it is not doing so already, the company must provide the information that allows the tag to be converted to this format.

Customs codes and special cases

The customs code must be provided if the product is subject to a customs procedure. In addition, separate identification information is required for special products, such as industrial batteries.

Up-to-date product information

A company must ensure that the product information remains up-to-date throughout the product's life cycle and ensure that the register contains data that guarantees the long-term availability of product passport information.

Note that the legislation and standards are still being developed, and product passport requirements may evolve over time.

How do you follow product passport development?

A more detailed approach to the ecodesign work plan will be provided by the European Commission. In Finland, the Ministry of Economic Affairs and Employment, the Energy Authority and the Ministry of the Environment are responsible for the implementation of the regulations.

- In spring 2025, the European Commission will publish a work plan, which will outline the product groups covered by the delegated acts in the coming years. The product groups are mainly selected based on reports by the JRC (Joint Research Centre).

- The product group-specific information requirements are formulated based on a preliminary study carried out for the product group, and from the comments received from the Ecodesign Forum. You can participate in the preparation of the regulations through industry associations, officials in the Member States or other stakeholders.

- The Ministry of Economic Affairs and Employment, the Energy Authority and the Ministry of the Environment are responsible for the implementation of regulations in Finland. On the Energy Authority's **ekosuunnittelutelu.info website,** you can find useful up-to-date information e.g. on the definition of product-specific information requirements. The authorities may also organise consultations and hearings on the subject.

- A wide range of standards are being developed for the implementation of product passports. **SFS Standards Finland** is the central organisation for standardisation in Finland. It coordinates standardisation work in collaboration with industry communities. By participating in the work, you will receive advance information about future standards and can influence them.

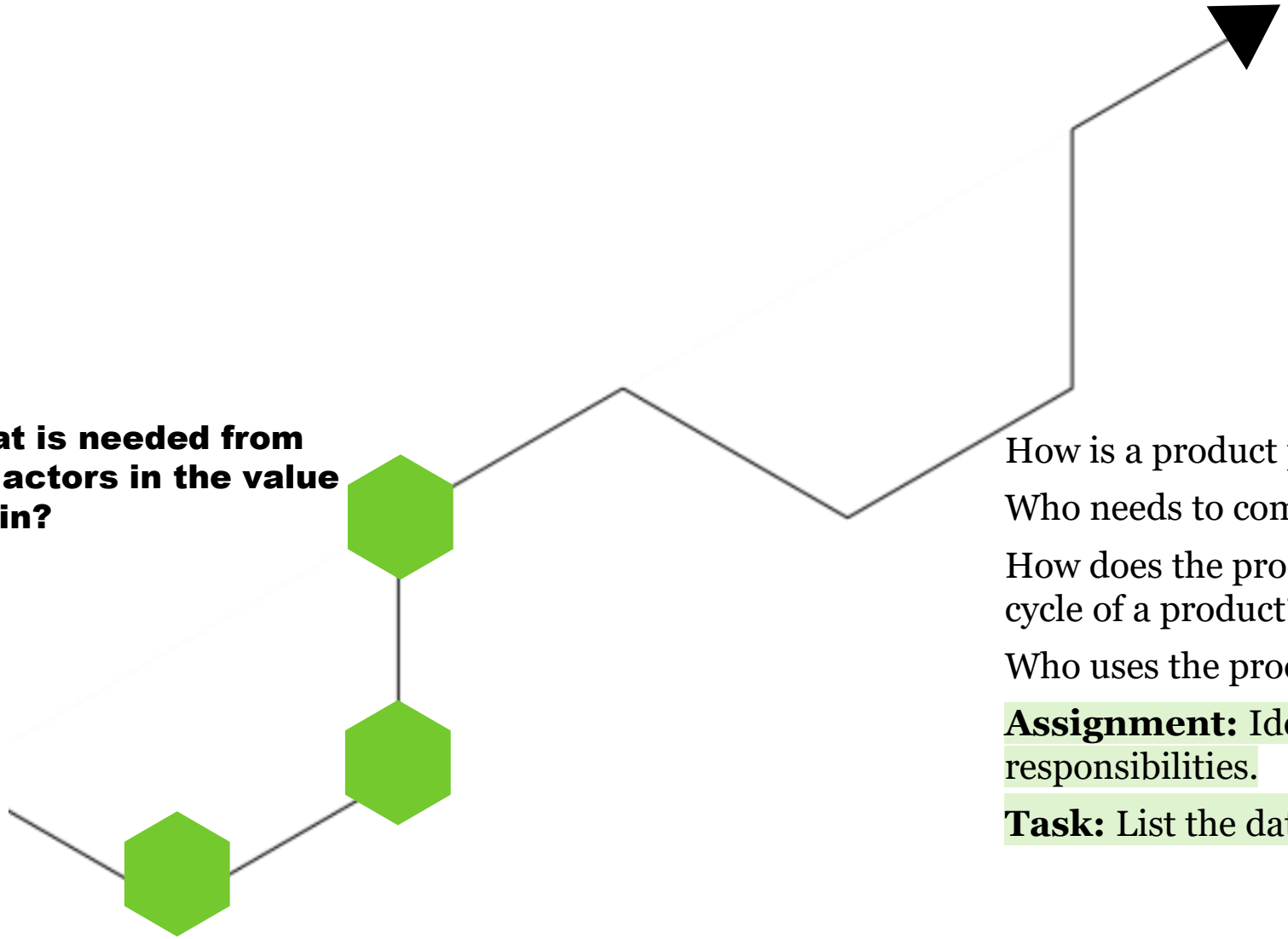
- **Trade associations and interest organisations** are key sources of information and development partners in different product groups. Many also have working groups or concrete development projects and pilots to ensure advocacy, in which members can participate.

Binding nature

The best way to get to grips with the requirements for your own products is through ekosuunnittelu.info
and by participating in the work in your own industry through trade associations or interest organisations.

Roles

3. Identify your role in the value chain



What is needed from the actors in the value chain?

How is a product passport built?

Who needs to compile a product passport?

How does the product passport extend the life cycle of a product?

Who uses the product passport data?

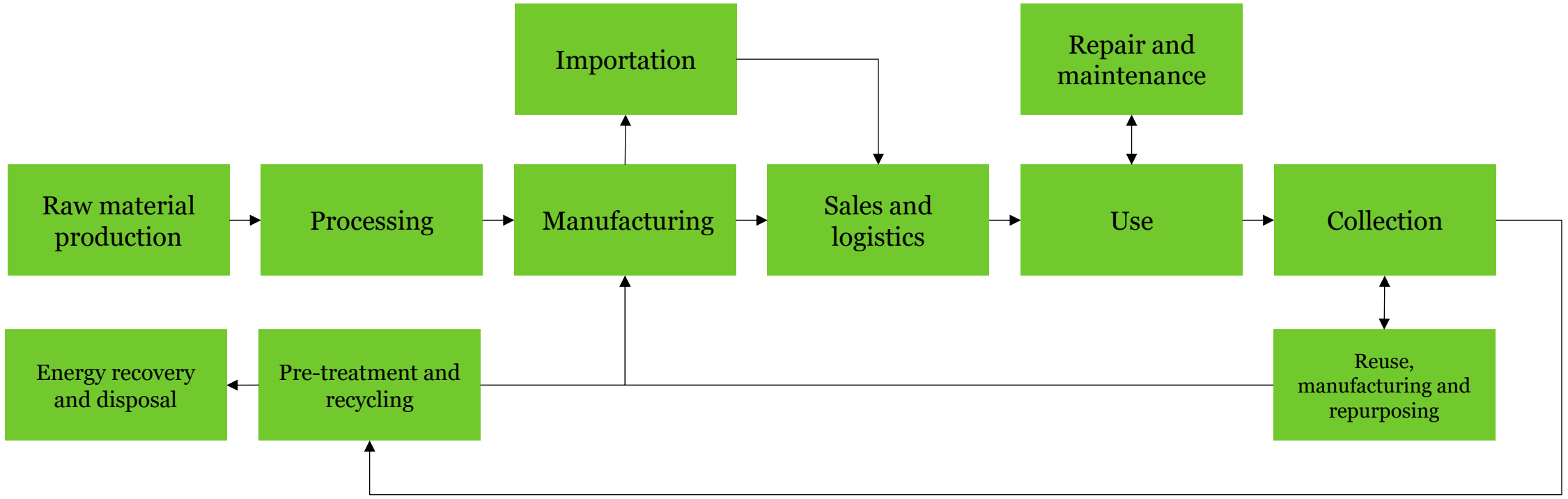
Assignment: Identify your role and responsibilities.

Task: List the data needs related to the products.

Roles

How is a product passport built?

The digital product passport is generated from the data collected and transferred between the actors involved in the value chain. Therefore, its implementation requires collaboration throughout the value chain. The product passport provides a comprehensive view of the entire product life cycle. Based on the product information, improvements can be made to the value chain and new types of business models can emerge.



Roles

Who needs to compile a product passport?

The provision of the product passport is the responsibility of the organisation bringing the product to the EU market – in practice, the producer, manufacturer, importer or brand owner of the product. The producer collects information in collaboration with the other actors in the value chain.

Product life cycle	Data producers and users	Data needed for the product passport
Raw material production	Raw material producers Raw material brokers Raw material processors Further processors	Materials and raw materials Origin and environmental impact of materials
Processing		
Manufacturing	Manufacturers Subcontractors Importers	Manufacturer and place of manufacture Product name, model, and identifier Manufacturing methods and phases Use of energy and resources Product safety and compliance
Importation		
Sales and logistics	Distributors, resellers, brokers	
Use		Use and maintenance instructions Recycling and disposal instructions Opportunities for reuse
Repair and maintenance	Maintainers, repairers, administrators Collectors Dealers Re-processors, remanufacturers Recyclers	
Collection		

How does the product passport extend the life cycle of a product?

In the product passport, the manufacturer or importer provides important data for repairers and maintainers, reusers, recyclers and energy users. Product owners, users and various aftermarket operators can supplement the information content of product passports.

Product life cycle

- Use
- Repair and maintenance
- Collection
- Reuse
- Processing of recycled materials
- Energy recovery
- Final Treatment

Data collectors and users

Users
Resellers
Maintainers
Repairers
Administrators
Collectors
Dealers
Further processors
Remanufacturers
Recyclers

Data needed for the product passport

The producer or importer must describe the following in the product passport:

- use and maintenance
- recycling and disposal instructions
- potential for reuse

This information can be used in product repair, reuse, recycling, and at the end of the product's life cycle.

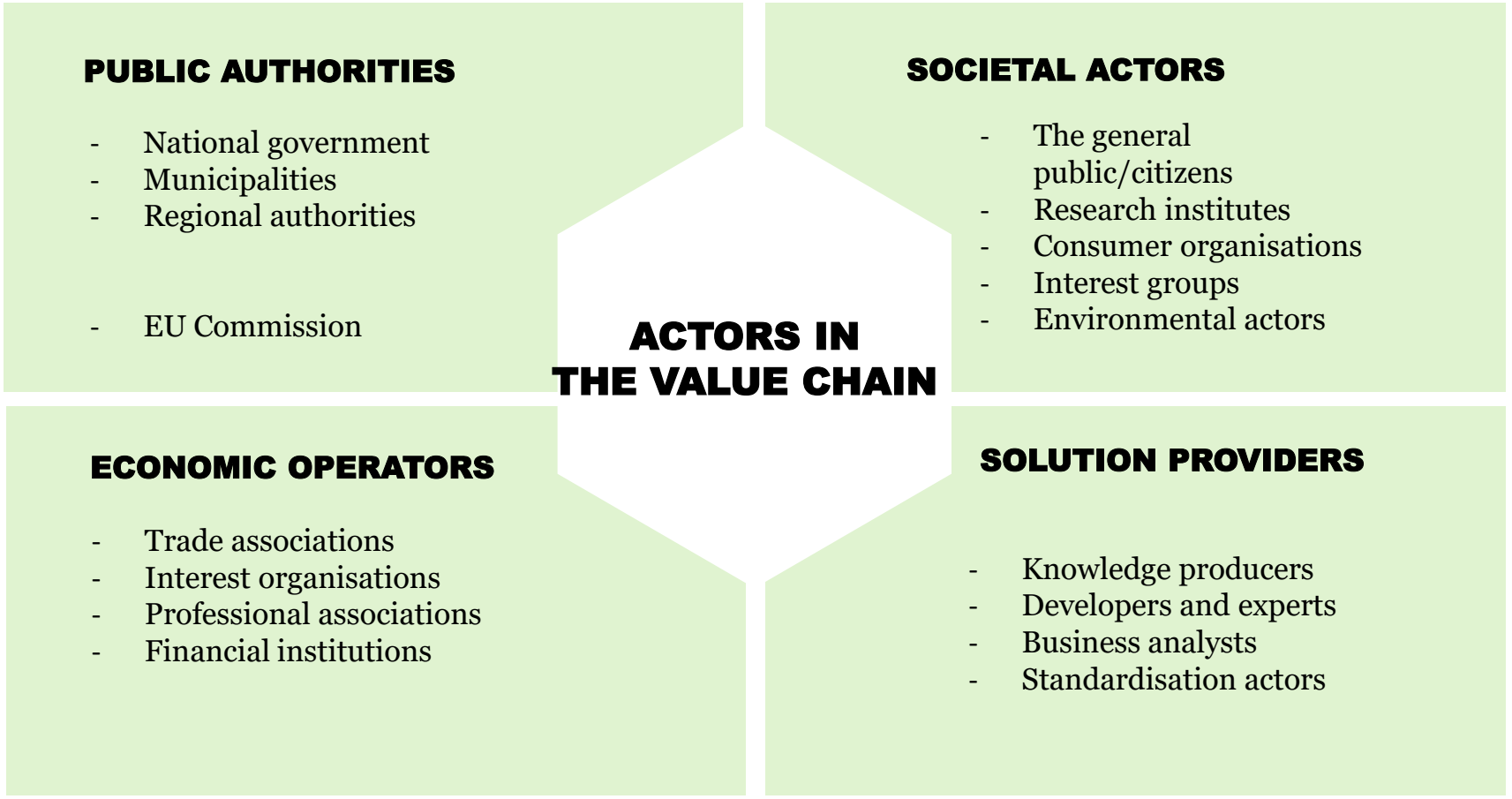
Product users can access information in the product passport. The information provided by users affects, for example, the resale value.

Operators involved in the repair, reuse and recycling of a product may also be obliged to supplement the product passport.

Roles

Who uses the product passport data?

The data included in product passports will benefit not only actors in the value chain, but also public administration decision-makers, various social and economic actors, and actors developing product passport-based solutions.



Assignment: Identify your role and responsibilities

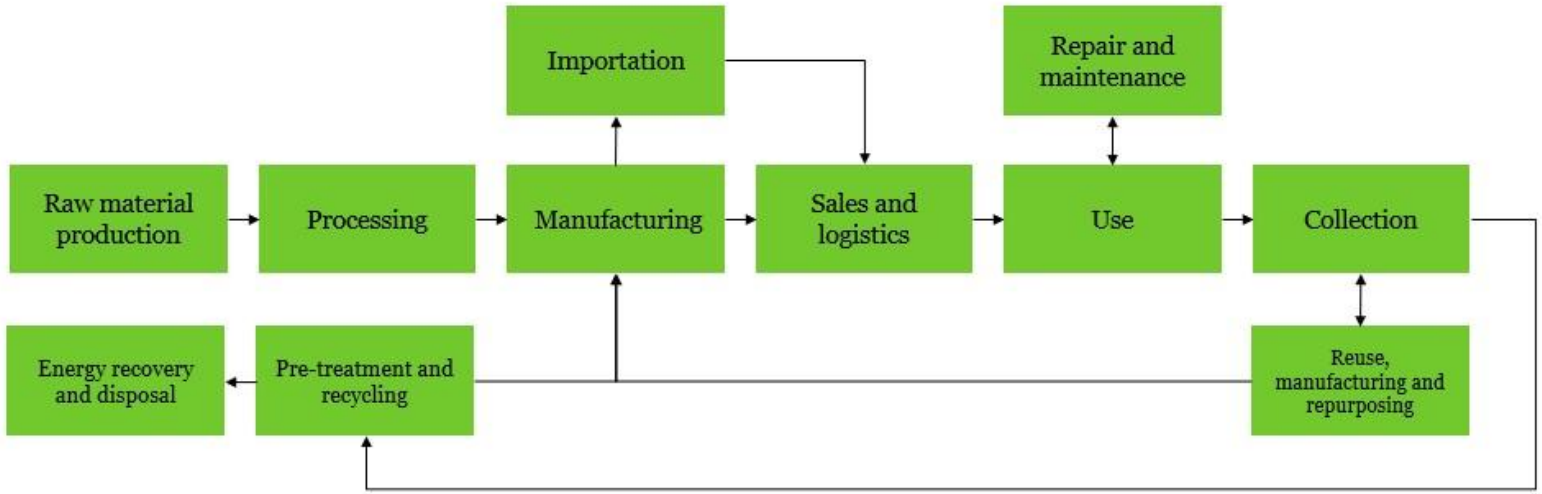
Think about which value chains your company is involved in and in which roles. Use the chart to help you assess roles, responsibilities, and interactions between different actors.

1. List value chains
An operator can be a manufacturer in certain value chains, a subcontractor in others, and an importer or a representative of a product in others. List the value chains your company belongs to and the roles it has in each one.

N.B! Your own product can be a component of another product, or there may be components within your own product that require a product passport. It is worth clarifying the matter carefully.

2. Outline the data needs
Think about the data that is needed for implementation.

3. List your data needs
Write down your ideas on the next page.



Task: List product-related data needs

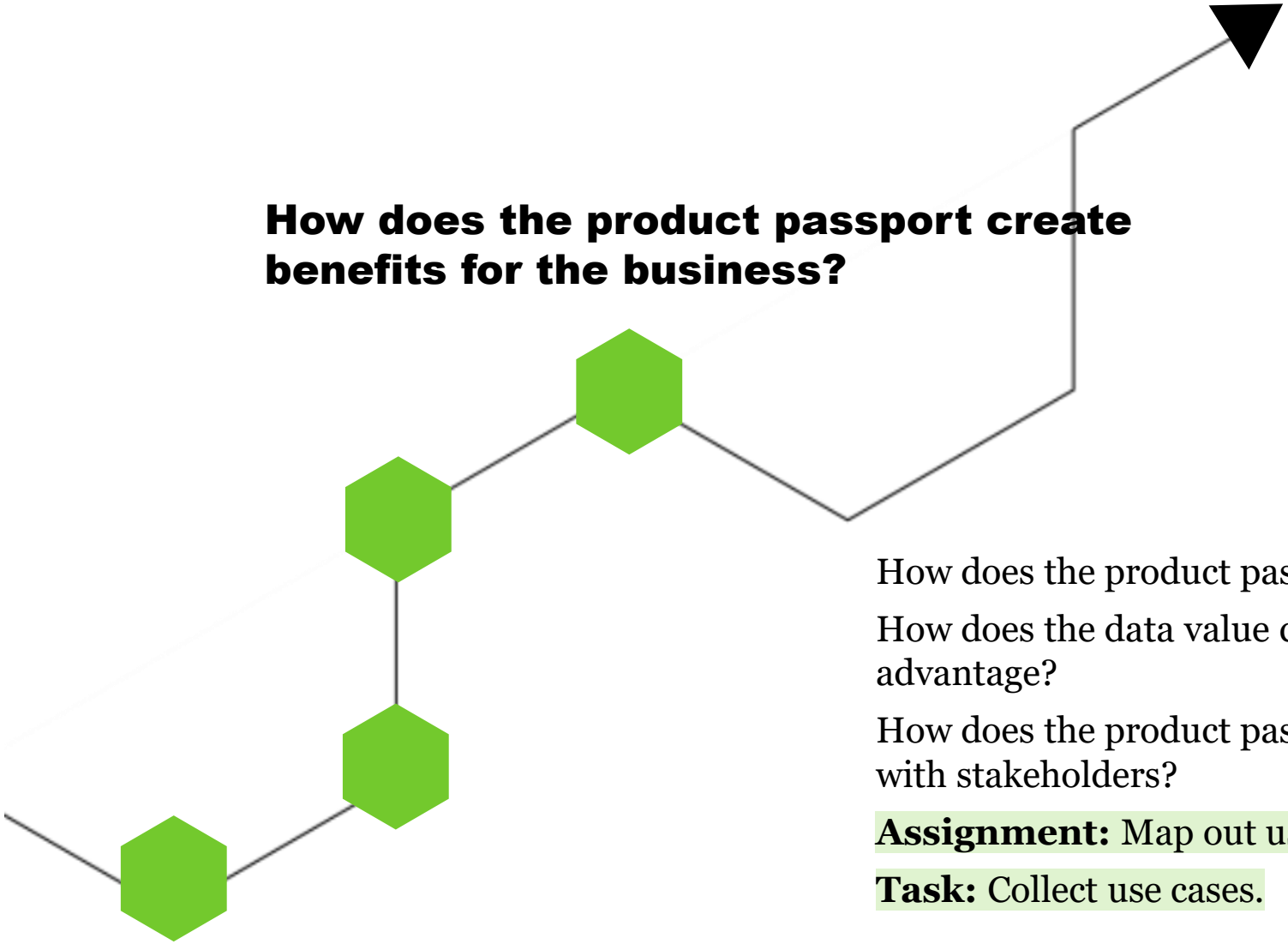
Is your company part of a multi-product supply chain? Map out the responsibilities related to the implementation of digital product passports. List the roles in different production chains in the table and estimate the data needs associated with the roles.

Product	Role in the value chain	What data is required from us?	Who do we get the data from? / To whom do we deliver the data?

Roles

Identify your role in the value chain.
Product information must accompany the product
from the beginning to the end of its life cycle.
The data requirements related to the construction of the product passport concern a significant number of
the operators participating in the chain.

4. Map out the possibilities



How does the product passport create benefits for the business?

How does the product passport benefit value chains?

How does the data value chain create a business advantage?

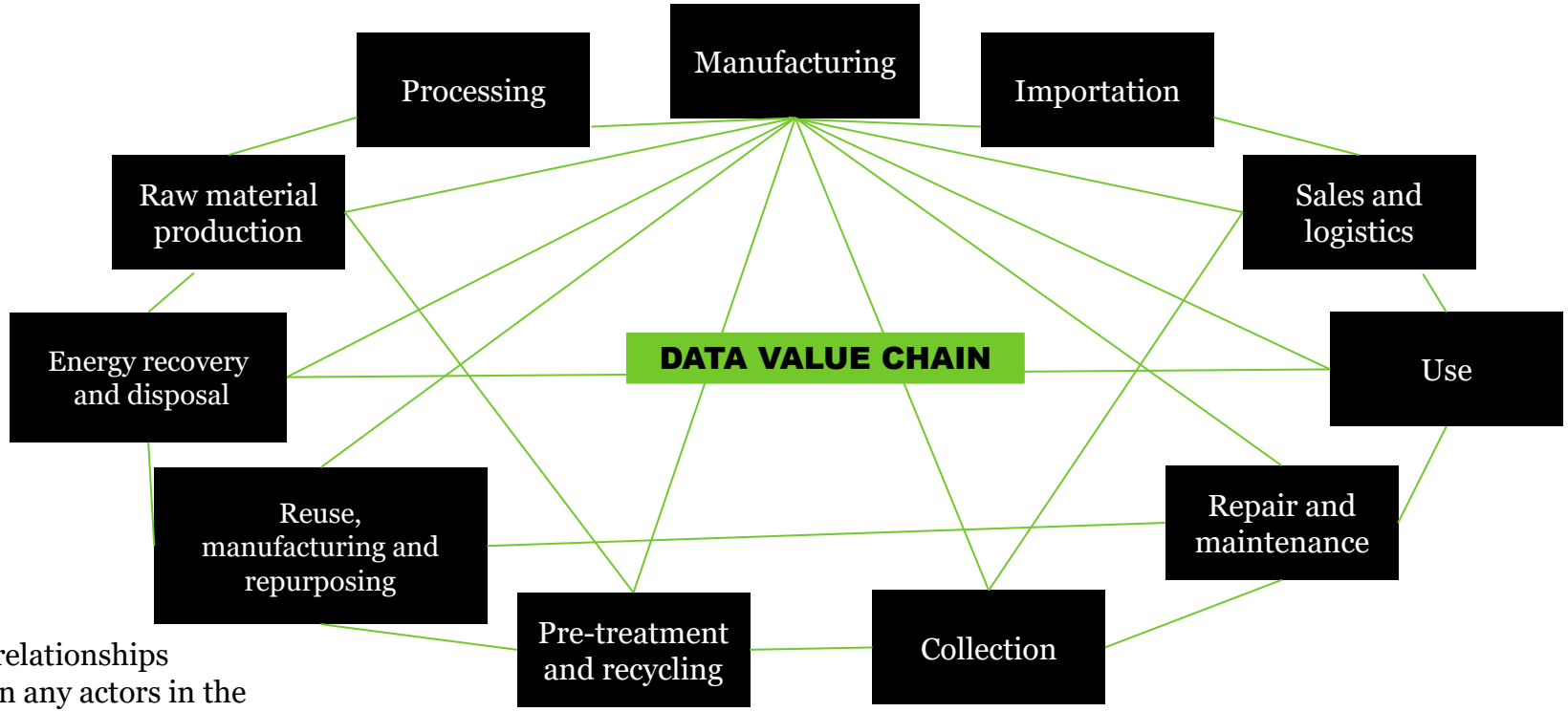
How does the product passport shape the relationship with stakeholders?

Assignment: Map out use cases.

Task: Collect use cases.

How does the product passport benefit the value chain?

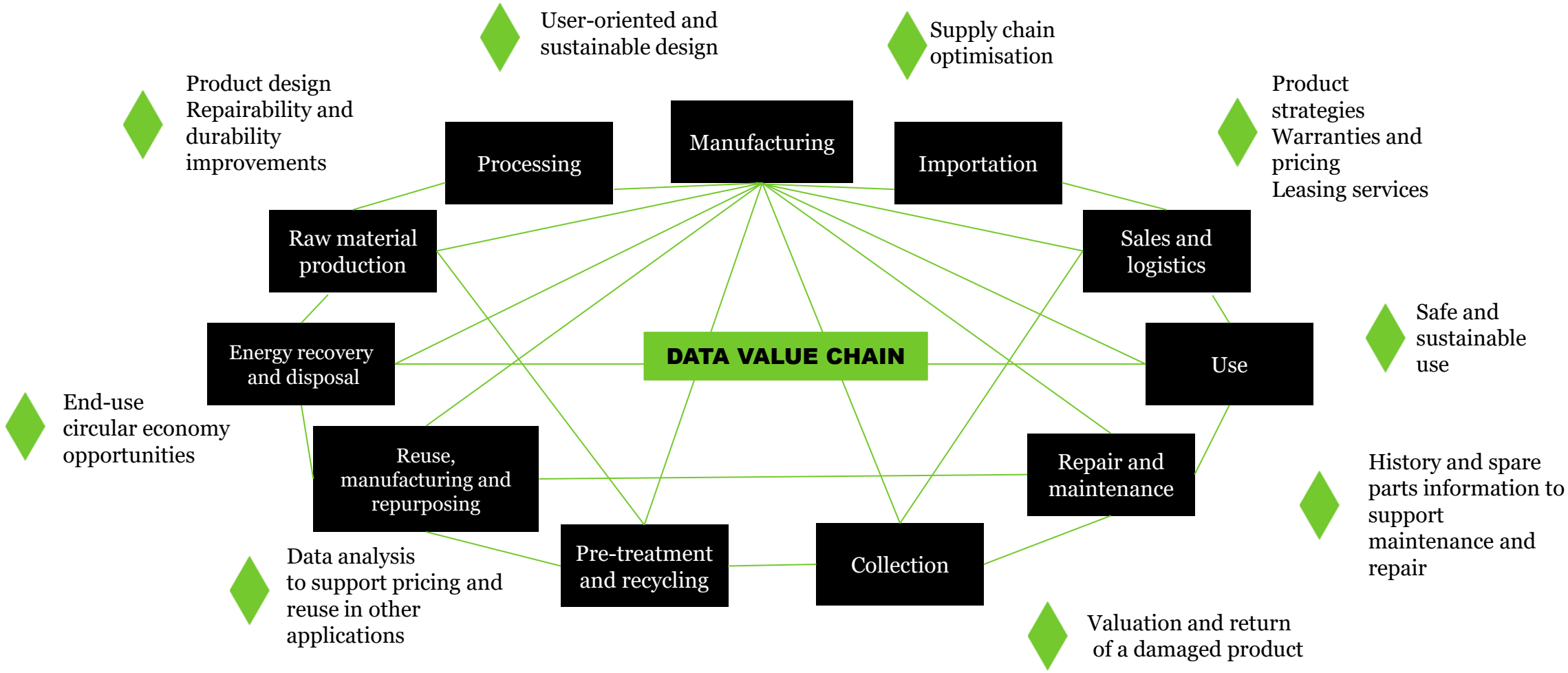
With the help of product passports, companies share more data within the value chain. Collaboration is essential to ensure the reliability and quality of the data. Collaboration creates a data value chain or data ecosystem alongside the production chain, which can contribute to the development of new business ideas, operating models and product offerings. At the same time, the product passport itself can give access to completely new partnerships and value chains e.g. in the secondary market.



Data utilisation relationships can arise between any actors in the data value chain.

How does the data value chain create business benefits?

A forward-thinking company transforms the product passport requirement from a cost into a business benefit. Below are some ideas as to how product passport data can help you build a winning product or service strategy.



How does the product passport change the relationship with stakeholders?

Product passports shape a customer’s relationship with products. Passports do not guarantee that customers will buy the most ethical and sustainable product, but they improve transparency, revealing the actual properties of the product. Data accumulated throughout the product's lifecycle can help a company build an even better relationship with customers, meeting their values, expectations and needs.

Sustainability reporting

Product passport data can be directly used for sustainability reporting leading to higher quality reporting.

Brand value

The product passport enables you to highlight positive differentiating factors in customer communications and showcase the product’s excellence from a deeper, more insightful perspective.

Market analysis

Product passports help customers to compare market offerings – while for you, they serve as a powerful tool for competitor analysis.

Strengthening ethics

The product passport process can make you think about the ethics of your value chain and what fairness and sustainability mean to your customers.

Verifying authenticity

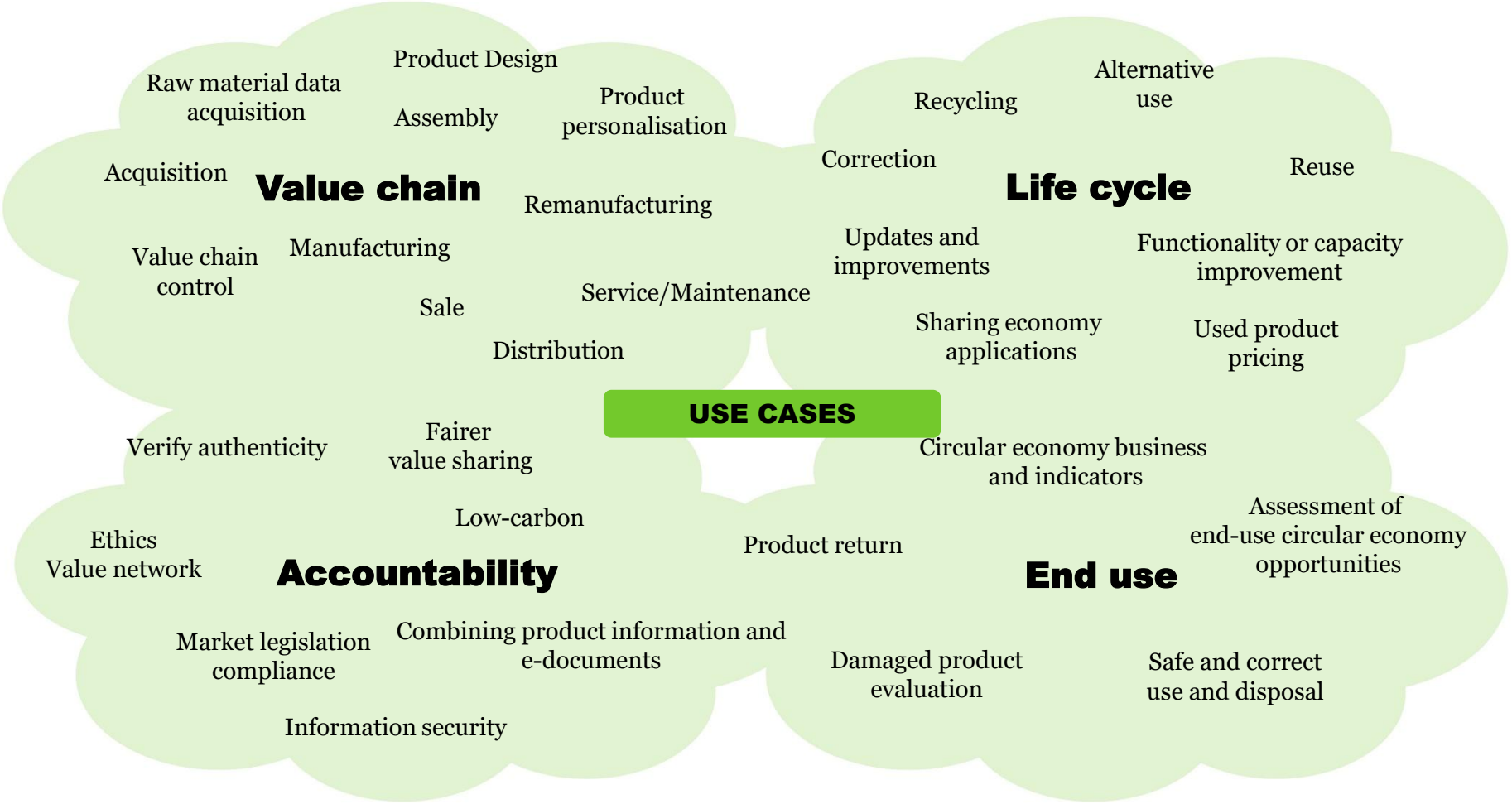
The desired product has an aftermarket – the passport ensures that your product is reliably identified throughout its life cycle.

Analysis of customer needs

Product passport data, which is updated throughout the life cycle, helps you analyse the relevance of your product to different customers and develop your product accordingly.

Task: Map use cases

Increased transparency opens up new opportunities. Product passports bring partners' businesses closer to each other through data. They also open up a view of other manufacturers' product information. Identify use cases to map out business opportunities.



1. Map out the use cases
Brainstorm and circle the use cases on the map that are important and/or have potential for your company.

2. Assess the need for data
Think about what data would be needed for implementation.

3. Brainstorm partnerships
Think about who you would need as partners to implement the use cases.

4. Collect use cases
Write down your ideas on the next page.

Task: Collect use cases

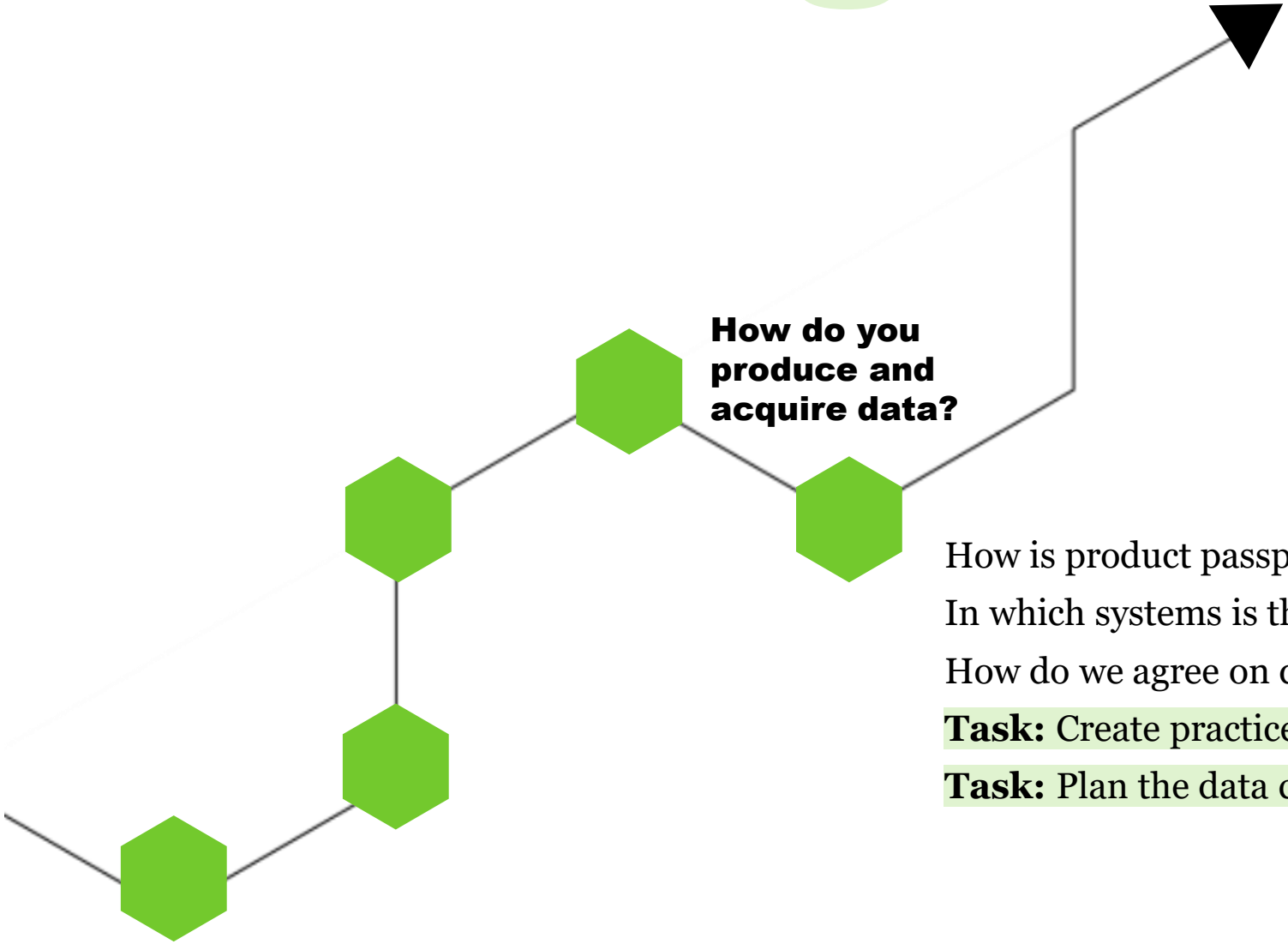
Write down the use cases you have created. List your initial thoughts about the data, partners and next steps in the table below.

Use case	Required data	Potential partner	Next steps

Chances

Actively explore your business opportunities.
Outlining the use cases for product information enhances your expertise and uncovers new areas for growth.

5. Take control of your data



How is product passport data collected and shared?

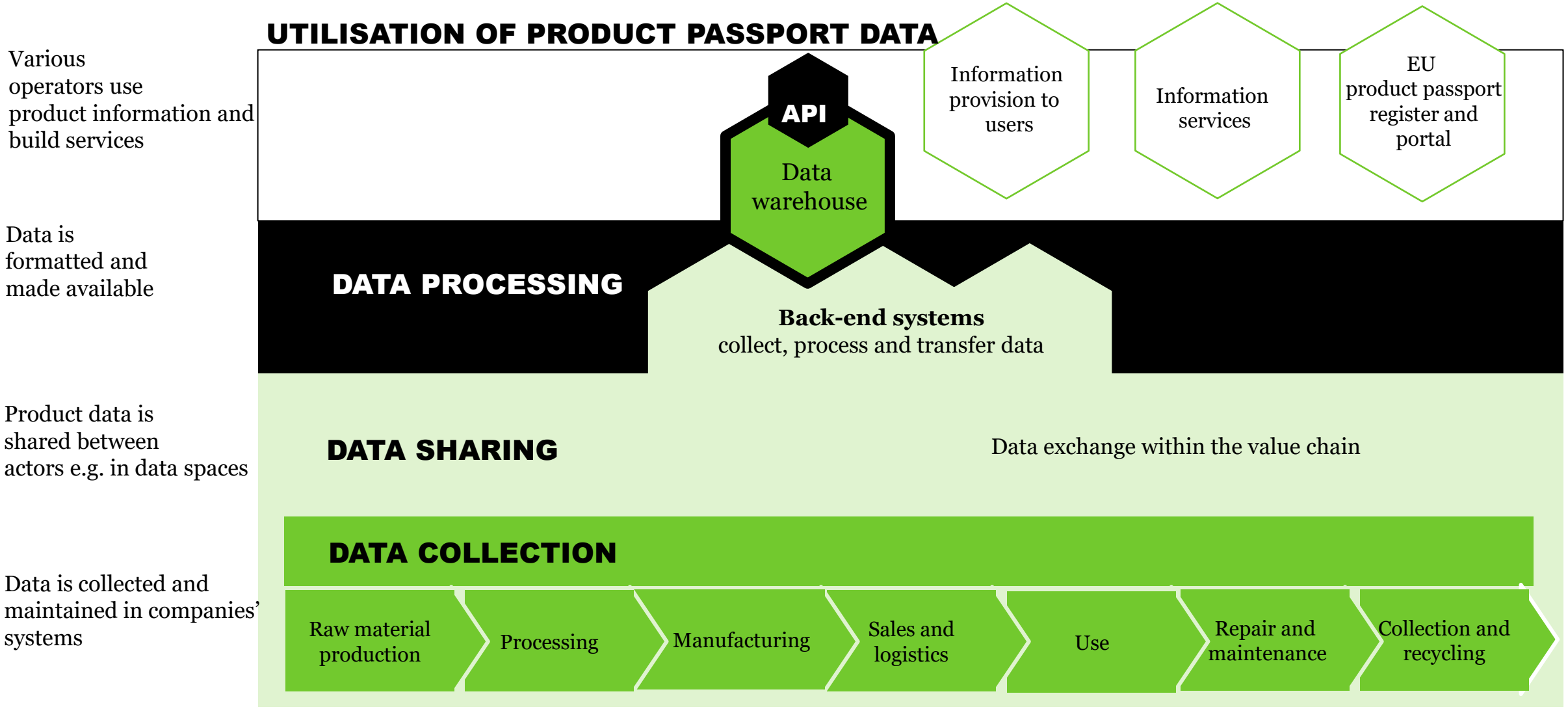
In which systems is the data managed?

How do we agree on data sharing?

Task: Create practices for data sharing.

Task: Plan the data collection.

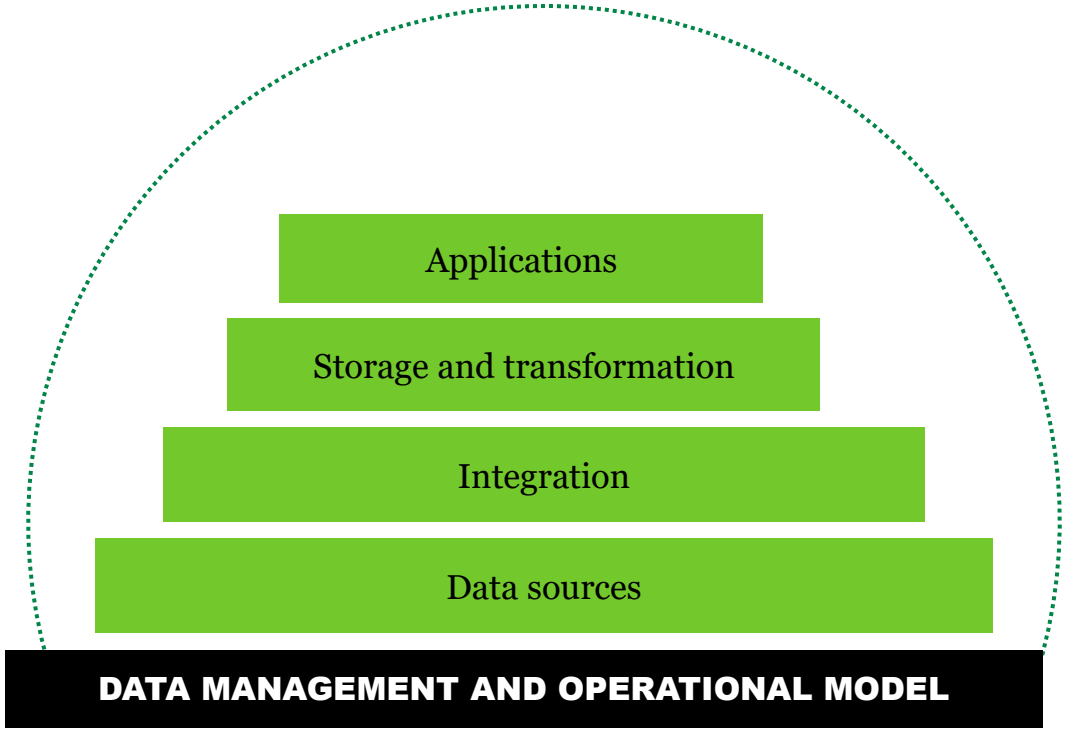
How is product passport data collected and shared?



In which systems is data managed?

Product information is often scattered across the organisation's information systems. Information can also be obtained as a service, such as LCA calculations related to the carbon footprint or the life cycle of products. Efficient information systems and methods for processing, transferring and maintaining data reduce manual work and improve decision-making.

- **Product information management systems** (PLM or PIM system) are used to collect and store product information. They are used to manage, maintain, update and share information across different channels, ensuring uniformity, accuracy and enriched information.
- **Enterprise resource planning** (ERP) systems are used to manage and integrate information in business processes. For example, data on manufacturing processes and inventory management can be imported into the product passport.
- **Logistics systems are used** to optimise supply chains. For example, they provide sources for emissions data and traceability-related information.
- **Financial management systems** and the related **procurement messages** can be used to produce information in orders, deliveries and invoices. They can also transmit product information, for example, between a subcontractor and the manufacturer implementing the product passport.
- Combining data requires **conversion software and the development of interfaces**.



How do we agree on data sharing?

When collecting, processing and sharing data, the most important thing is to ensure that the rights, responsibilities and obligations related to the data, as well as the costs and benefits, are shared between all parties in a fair and profitable way. Practical instructions and models for implementing data sharing can be found, for example, in Sitra's ‘Rulebook model for a fair data economy’ and in the materials of the Data Spaces Support Centre (DSSC).

Rulebook model for a fair data economy

The rulebook published by Sitra contains tools and contract templates that facilitate the construction of a data network.

Latest English version 3.0:
Rulebook model for a fair data economy

Finnish and French version 2.0 and Portuguese version 1.2:
Rulebook for a fair data economy 2.0

Data space tools

European data spaces facilitate data sharing within industries by creating common rules and standards for sharing.

The Data Spaces Support Centre (DSSC) helps organisations manage data sharing by providing contract templates and tools related to standards. In addition, DSSC provides guidance on how to create smart contracts, enabling the automatic execution and management of contract terms.

Data management

Task: Create practices for data sharing

The collection and use of data should be clear between the members of the value chain. This also means that the costs and benefits of data must be fairly distributed between the parties. To plan your data sharing rules with your partners, find answers to the following questions.

VALUE CHAIN PARTNERS	AGREE ON THESE	PRODUCT PASSPORT USERS
Which operators are needed to collect data to meet the product passport requirements?	What data do we already get from the value chain?	Who is most likely to want to use my product passport data?
What information is needed from partners for the product passport?	What common rules do we have for sharing data in the value chain?	How do my customers benefit from product passport information?
What should the quality of the information be?	Is everyone committed to the rules and is the accuracy of the data trustworthy?	What would encourage customers and users to scan product passports?
How often should the information be updated?	Should we update our operating models?	In what format do different users need my product passport data?

Task: Plan data collection

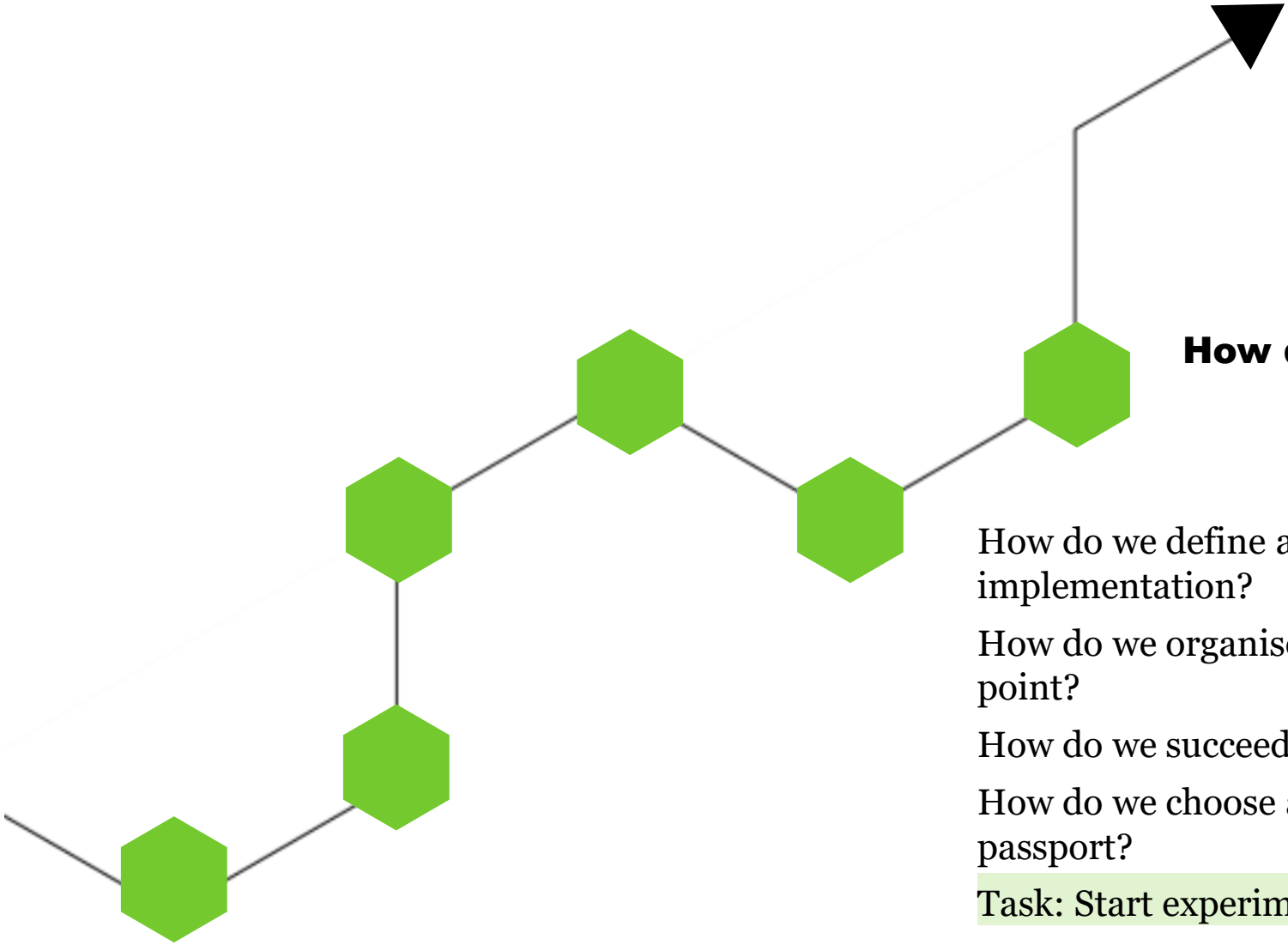
The content of the product passport must be reliable and up-to-date. The table helps you to plan the collection of the necessary data and assess its quality.

PRODUCT	Information provider	Source of data	Data form and reliability
	Manufacturer, place of manufacture, product name, model, and unique identifier		
	Materials, raw materials and the origin and environmental impact		
	Manufacturing methods and stages, and the use of energy and resources at different stages		
	Product safety and compliance		
	Use and maintenance		
	Recycling and disposal instructions		
	Opportunities for reuse		

Data management

Discover and evaluate the data you have access to and what you need from partners. Share the costs of collecting, using, and maintaining data in a fair way.

6. Start the process



How do we start the process?

How do we define a target level for implementation?

How do we organise and assess the starting point?

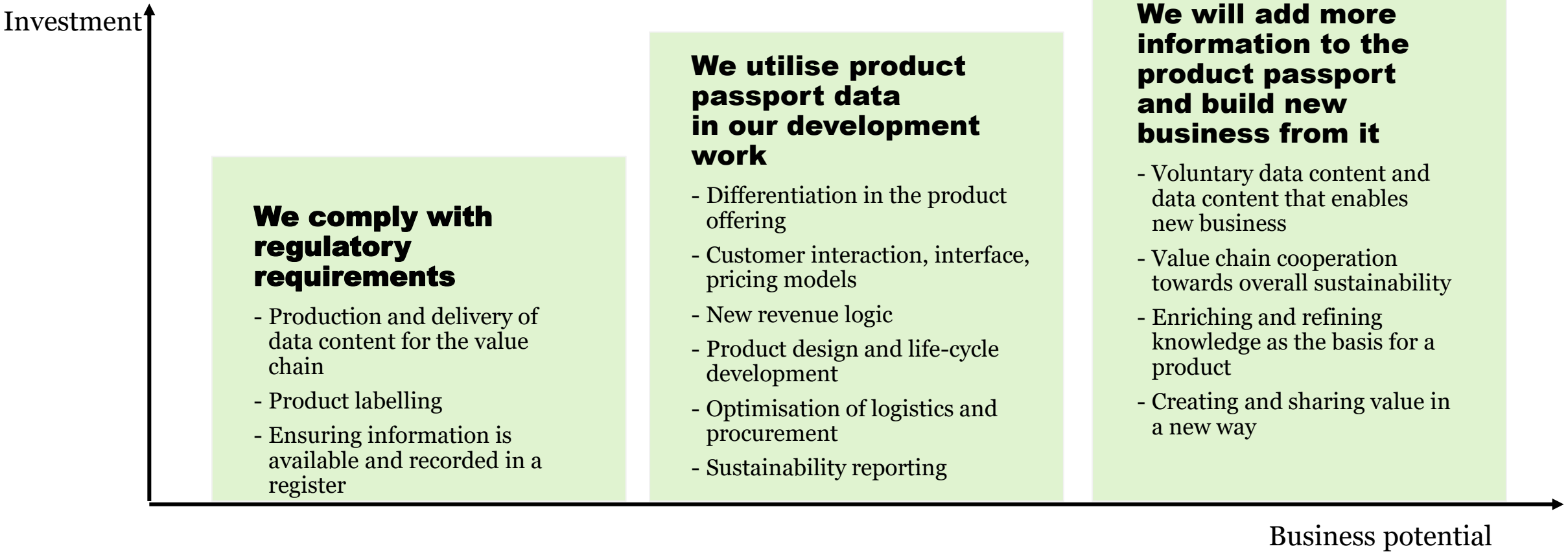
How do we succeed in technical implementation?

How do we choose a data medium for a product passport?

Task: Start experimenting

How do we define a target level for implementation?

It is important that the company has sufficient discussions about the requirements and opportunities brought about by product passports. The minimum level plan is drawn up for meeting the minimum requirements. Long-term development work should be considered at the beginning and preparation made for the necessary investments. Concrete business opportunities become clearer as the process advances and ambition levels rise.



Process

How do we get organised at the start?

Appoint the owner

Defining the owner of the product passport in the organisation is an important step in a successful implementation.

Suitable owners can be, for example, a product manager, a sustainability manager, a quality manager or an IT manager.

Clear ownership and division of responsibility makes it easier to communicate with both external suppliers and internal stakeholders.

Identify the actors and start cooperation

Find out if your industry already has digital tools or platforms in place that support the product passport.

Talk to your potential information system suppliers about the solutions they offer for product passports.

Initiate collaboration with suppliers, customers, and other partners to align efforts and share resources and information for effective preparation.

Clarify your data needs and resources

Ascertain which information in your product group should be saved in the product passport and redistributed.

Find out the standards in your field and any other requirements for product passports.

Ascertain which information has already been collected about the products and their manufacture and in what form. For example, a product's bill of materials (BOM), manufacturing description or life cycle analysis (LCA) can provide a good starting point.

Examine quality of data

If the data is scattered in different places (e.g. in different departments or on paper), try to bring it together in one digital platform, such as a spreadsheet or cloud-based tool.

Consider implementing digital product, project, and/or document management systems.

With these tools, you can manage and update your product data more easily.

Process

How do we succeed in technical implementation?

Choose suitable data formats and systems

Adopt industry standards and data models to ensure consistency.

When you acquire or update systems (e.g. databases and ERP systems), ensure that they are able to collect and store the data in accordance with your industry's product passport requirements.

Verify data quality

Pay attention to the quality and timeliness of the information. Product passport information must be accurate, complete, relevant and traceable.

The company must be able to demonstrate where each data entity came from, how it has been used, and when it was updated.

Information requires regular updating and quality monitoring. Plan how you will maintain the information and carry out appropriate responsibilities.

Invest in interoperability

The owner should compile the product passport and ensure that all product information, consisting of several parts and components, is interlinked with the data passport.

Producing a product passport usually requires integration with external systems. If necessary, implement application programming interfaces (APIs) allowing data access connecting the supplier and customer systems.

Build in a continuous manner

Consider using graph-based databases to improve data aggregation, enhance search functionality, and increase flexibility.

Ensure that your company has security measures in place to protect data.

Plan how you will manage access to the data you share so that certain information is openly available, while other information is only accessible to authorised partners.

Process

How do we choose suitable data medium?

The choice of data carrier (e.g. QR codes, RFID and NFC tags) depends on the product and the environment in which it is used, as well as the identification needs for the specific product group. Unknown or unclear future uses may also affect the choice.

Standards	Apply the standards and requirements in your industry or purpose of use to ensure interoperability.
Capacity	Secure sufficient capacity (e.g. cloud storage) to comply with information requirements.
Upgradability	If the information needs to be updatable, RFID and NFC tags are preferable to QR codes.
Durability	The data carrier must be able to withstand the product's operating conditions (e.g. RFID tags are durable).
Data protection	For proprietary data requiring access rights, RFID or NFC tags are recommended.
Costs	QR codes are cost-effective in large volumes.
User-friendliness	QR codes are more common in consumer products, whereas RFID is more suitable for B2B use.
Legislation	Data protection requirements and regulations (e.g. GDPR) can influence the choice.
Scalability	Are there ready-made readers? Is the media sufficiently scalable?
Sustainability	Sustainability goals can guide material choices.
Circular economy requirements	In automated recycling processes, a data carrier enabling remote reading is useful.

Task: Start with experiments

Trials are the way to start implementing a product passport, especially if there are many products or several roles in different value chains. The experiments provide learning for solutions and for a broader transition to product information lifecycle management.

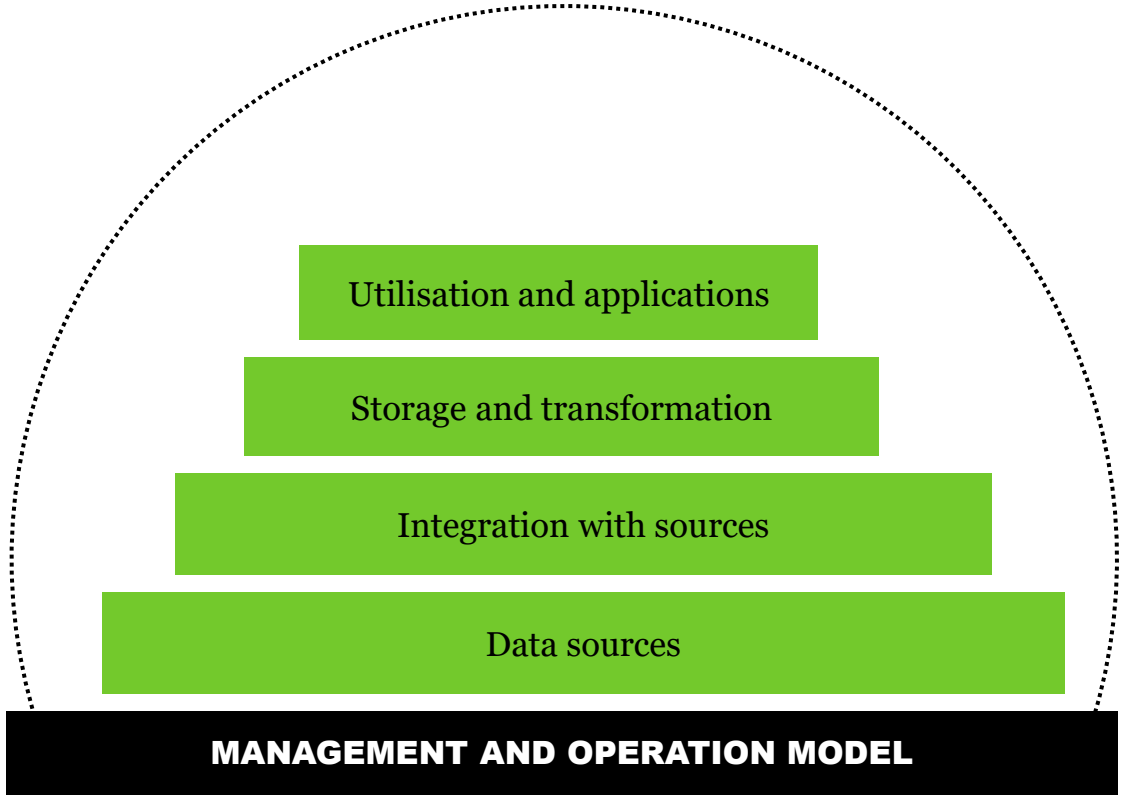
Small pilot projects can be used to test the solutions for product passports and data collected to give feedback on operations. Experimentation steps:

1) **Ascertain the reliability and quality of data** you have for the digital product passport.

2) Export the data you already have **to the data repository** and create access to it.

3) Get a new data source from the value chain for the product passport and organise the data flow into your product passport warehouse.

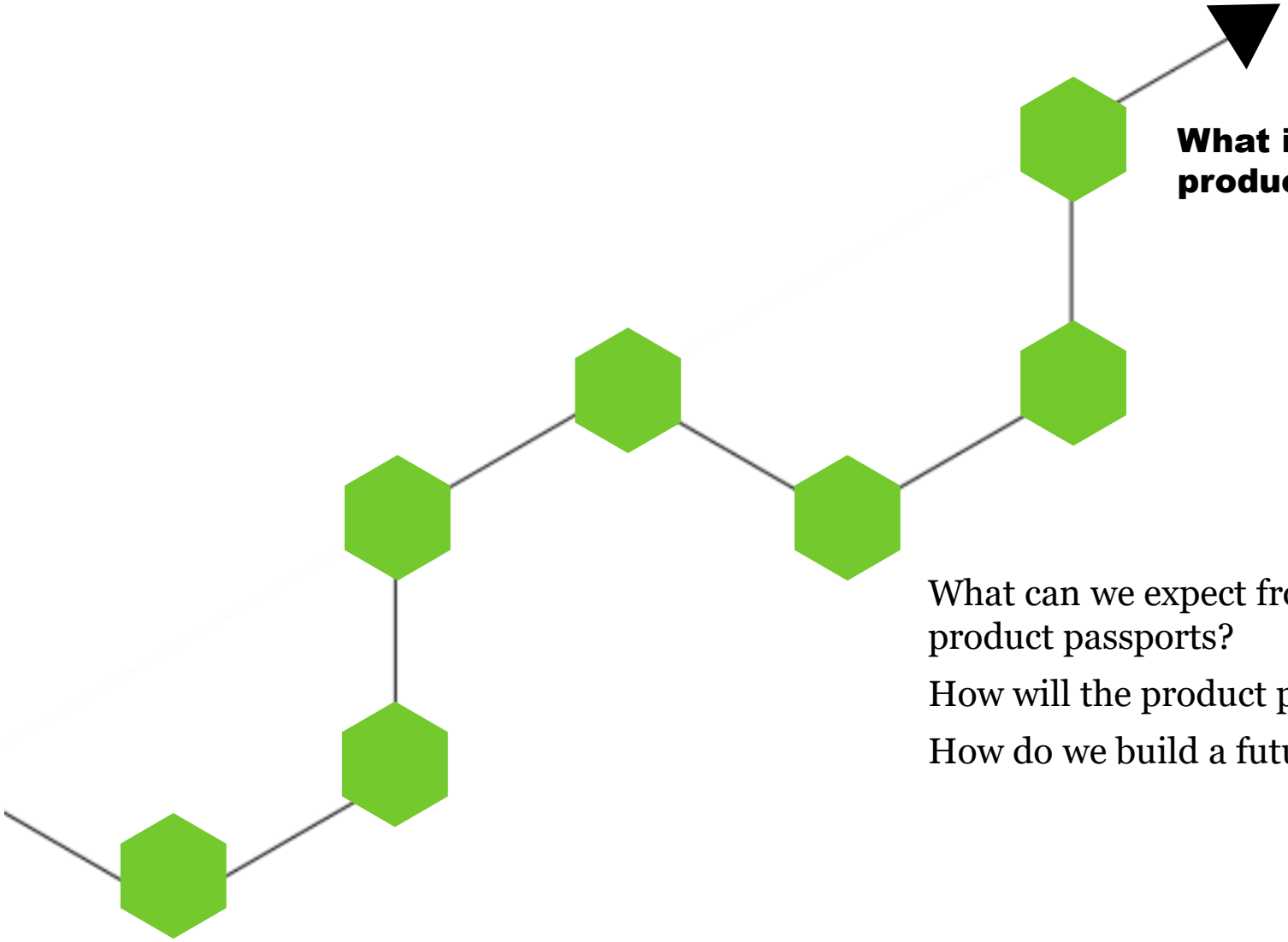
After initial experiments, the ability to compile the product data from the supply chain is created. Feedback is gathered on the use of data from the value chain, **including users**. The pilot project helps to identify possible **data or process deficiencies** and brings additional ideas for development and further utilisation.



Process

Clear organisational roles, experimentation and capacity building are the route towards a successful product passport introduction. The implementation requires investment in capabilities and systems. Calculate the investment in relation to the benefits.

7. Build a future-oriented business



What is the future of product passports?

What can we expect from the development of product passports?

How will the product passport work in the future?

How do we build a future-oriented business?

What can we expect from product passports?

In 2035, product passports will operate on the basis of reliable, interoperable data. This will enable more efficient data management, sharing and automation throughout the product lifecycle. Artificial intelligence and other advanced technologies support the use of data in a wide variety of use cases. Consumers become active users and enrichers of product information.

Active consumers

- Consumers and manufacturers have increased their knowledge of the origin, recyclability and environmental impact of products with the help of artificial intelligence. Consumers actively use product passport data to make purchasing decisions.

- Product users can enter usage information into the product passport. They can buy and sell second-hand products on platforms where pricing is automatic. Products become distinguishable and are appreciated and used for longer.

Better products

- The appreciation of long-lasting quality products increases and is reflected in pricing. The information can be used in repair and remanufacturing services, which generate new business.

- Reliable data helps companies make better decisions regarding materials, production, logistics, recycling and more.

- AI systems utilise data from the life cycle to optimise product design and material procurement based on actual environmental impacts.

Flexible operations

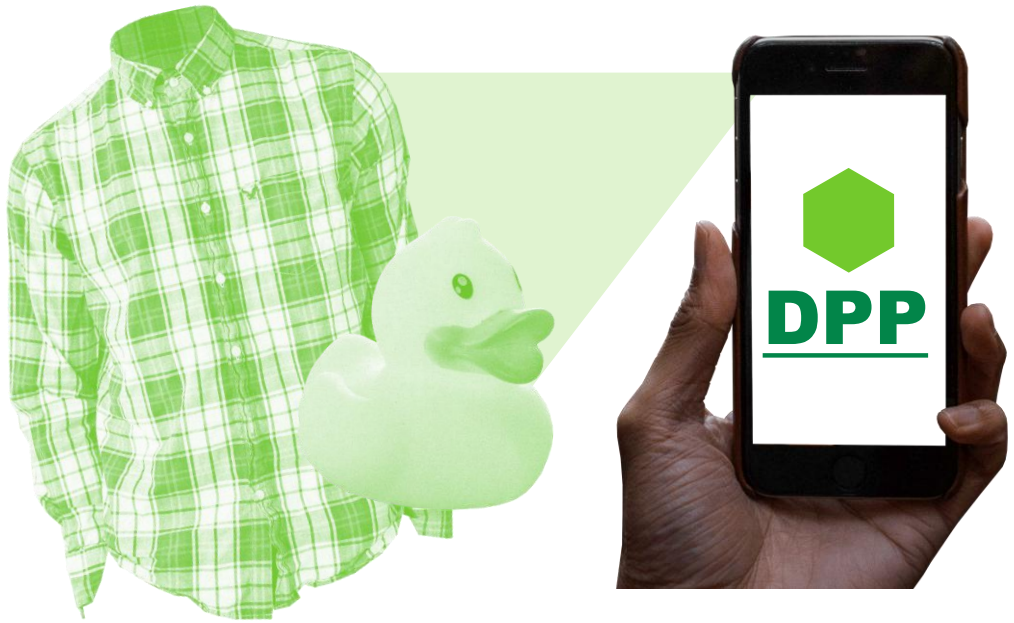
- Real-time data analysis helps companies to react quickly to changing situations and needs.

- AI agents solve product-related questions, compile summaries and comparisons, and produce reports on the environmental impacts of different products.

- For example, if components prove to be defective, it is possible to quickly find out which products the component in question has been used in and make the necessary repairs.

How will data carriers work in the future?

The data carrier is seamlessly integrated into the product in new ways and collects in-use data.



Data as part of the product

- The data carrier of the product passport is embedded in the structure of the product, and the information it contains is easy to read and update.

- There is no risk of the codes wearing out or becoming detached from the product.

Examples:

Textile products contain fibre that carries essential information related to the product's origin, use, repair and recycling.

Products manufactured using casting or extrusion techniques, such as various plastics and subsequent bio-based products, contain granules that include product information.

How do we build the business? 1/2

Product passports open new views on product development, building services and customer experience around product information. Always pay attention to data protection and other rights when processing data. Below are some of the use cases that we expect to realise with product passports:

Additional services from product information

- The customer can be offered additional information about the product, such as user manuals or updated maintenance instructions.
- Additional services can be linked to the product passport, such as product warranty registration and discounts on additional services and maintenance contracts.

User feedback and condition assessment

- The product passport can be used to collect user feedback and ratings on areas such as the condition and functionality of the product.
- By analysing the data, you can get more information about the durability of the product and possible areas for product design and service design improvement.

Utilisation of usage data

- The product's usage data can be utilised in preventive maintenance service models.
- Usage data analysis enables the automatic pricing of used products, as well as the sharing of value within the partner network.
- Data aggregation can be used to provide customers with tailored recommendations meeting their specific needs.

Monitoring environmental impacts

- Product carbon dioxide emissions can be monitored and reported throughout the product life cycle.
- The information can be used for environmental impact assessments, product design and reporting.
- Consumers can be provided with information for value-based consumption choices.

How do we build the business? 2/2

Product passports open new views on product development, building smart services and customer interaction around product information. Always pay attention to data protection and other rights when processing data. Below are some possible use cases with product passports:

Deposit models

- The data carrier can enable a deposit to be reimbursed to the customer for the return of the product for recycling or reuse.
- Returns can be monitored over a longer period by attaching the identification information to a customer loyalty program.

Selling and compensation models

- To support the sale and purchase of used products, repair and brokering platform activities can be developed with the help of product passports.
- Pricing can also be automatic, based on product information. This can increase the value of the new product.

Data enrichment and data marketplaces

- Enriched product passport data can be used to provide personalised recommendations and dynamic pricing.
- This can improve the customer experience and increase sales.

Future

Build product passports in a future-proof way. The benefits to the business will emerge as product information becomes available and the conditions for enriching the information develop.

Familiarise yourself with the key vocabulary 1/2

Digital Product Passport (DPP)
A digital data set that is electronically available for a specific product, component, and materials.

ESPR Regulation
Ecodesign for Sustainable Products Regulation (EU 2024/1781). The Ecodesign Regulation entered into force in summer 2024. It defines the requirements for the ecodesign of sustainable products. The aim of the regulation is to strengthen the circular economy and improve the energy efficiency, recyclability and sustainability of products. The regulation includes a requirement to build digital product passports for different product groups.

The product passport reform will be implemented in stages and by product group. An environmentally important product group, with more than 200,000 individual products sold annually in the EU, will receive *a delegated regulation*. The delegated regulation of the product group contains detailed requirements for the data content of the product passport and how the product passport should be made available.

Familiarise yourself with the key vocabulary 2/2

Importer
In product legislation, an importer is a company located in the EU that imports a product to the EU market from outside the EU.

Authorised representative
A person or company who has a written authorisation from the manufacturer to carry out certain tasks on behalf of the manufacturer, such as importing a product if a suitable customer is found.

Data carrier
A way to make the content of the product passport machine-readable and thus also understandable to humans. In practice, this can be a barcode, QR code, RDIF code, or other implementation that serves as a link to a data source.

API, Application programming interface
Product manufacturers provide access to product passport data through an API i.e. a programming interface. An API is a predefined and published procedure that allows software applications to make requests for information and action to each other.

Data space
An entity formed based on commonly agreed principles and rules for the sharing and exchange of data in a specific sector or between sectors.

Thank you to the creators and partners

- The playbook has been produced in the Finnpass project in collaboration with experts from Sitra and VTT.

- The content of the playbook has been collected in workshops organised during the Finnpass project, in which dozens of experts and business developers from companies from different fields have participated.

- The steering group of the Finnpass project has focused on the development of the playbook.

- We warmly thank everyone who contributed their work to the project, and for their valuable views and comments on building the playbook.

- The partner in usability design was Futurice Oy.

Sources 1/4

1. REVIEW THE BASICS

- The playbook on the digital product passport has been compiled during the FINNPASS project. Read more on the project website and follow the discussion on LinkedIn

- Implementing the digital product passport - A guidebook for businesses.

- You can follow the Ecodesign Regulation and the progress of product passports on the European Commission website.

2. EXAMINE THE RELEVANT LEGISLATION

- The product groups will be selected for the application of ecodesign requirements and the digital product passport based mainly on reports by the JRC (The Joint Research Centre). Read more about the progress of the preparation of the ecodesign work plan (PDF).

- Ekosuunnittelu.info serves as an official information channel for regulations related to ecodesign and product energy labelling requirements. The website contains information on regulations that have already been issued, current news, and information on regulations that are being prepared.

Read more

References 2/4

4. MAP OUT THE POSSIBILITIES

- Domestic product passport pilots have already been carried out. The first pilots examined the value chains of battery and textile products, and logistics. Sitra's website contains information on product passport trials.

- A development project by the Finnish Textile & Fashion Association and Technology Industries of Finland has created the concept of a digital product passport. There is more information about the product passport on the website of the Finnish Textile & Fashion Association.

- European cooperation will support the implementation of product passports and illustrate the related business opportunities in the CIRPASS2 project. More examples can be found in the materials of the CIRPASS – Digital Product Passport project, which ended earlier.

References 3/4

5. TAKE CONTROL OF YOUR DATA

- Sitra's Rulebook for a Fair Data Economy 2.0 contains tools and contract templates that facilitate the construction of a data network. The newer version 3.0 has been released in English.

- The EU Data Strategy highlights the importance of data spaces in data sharing. Sitra has compiled lessons learned from data space projects. Read more about the current situation of Finnish data space work (PDF) and views on how to reap the benefits of data spaces as quickly as possible in the coming years.

- The Data Spaces Support Centre (DSSC) supports the management of data sharing by providing guidance and tools, especially in contract models and standards related to data sharing. DSSC also promotes the automation of data-sharing contracts by leveraging digital mechanisms such as smart contracts to facilitate the execution and management of terms.

Sources 4/4

6. START THE PROCESS EARLY

- ISO/TC 323 Circular economy is responsible for international circular economy standardisation. The standards help companies and public sector organisations to implement the principles of the circular economy in their own operations.

- In Finland , SFS/SR 239 acts as a national expert group on circular economy standardisation. As a member of the group, you can follow international work and influence the content of future standards.