



# DEVELOPMENT OF POSSIBLE MODELS OF EXTENDED PRODUCER RESPONSIBILITY FOR TEXTILES

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# AGENDA

## 1 INTRODUCTION

2 MATERIAL SCOPE OF APPLICATION "TEXTILES"

3 SELECTED BASIC PRINCIPLES FOR ALL EPR MODELS

4 OPTIONS FOR EPR MODELS FOR TEXTILES

5 CRITERIA, ANALYSIS AND CLASSIFICATION OF POSSIBLE EPR MODELS

# EU STRATEGY FOR SUSTAINABLE AND CIRCULAR TEXTILES



## Objectives of the Textile Strategy:

- Textiles are durable, can be repaired and recycled, are mainly made of recycled fibres, are free of hazardous substances and are produced in a socially and environmentally responsible way
- There are profitable reuse and repair services everywhere
- Manufacturers take responsibility for their products throughout the value chain and create sufficient capacities for recycling



## Legal regulations/binding requirements (2023/ 24):

- Ecodesign Requirements
- Transparency Regulation
- **Extended Producer Responsibility**
- Supply Chain Act
- Textile Labelling Regulation
- Public Procurement Rules

# REFOPLAN PROJECT OF UBA: "ELABORATION OF OPTIONS FOR EXTENDED PRODUCER RESPONSIBILITY FOR TEXTILES". (FKZ 3722 33 305 0)

- Start of project: June 2022
- Researcher:  
cyclos GmbH,  
Project leadership: Agnes Bünemann  
Subcontractor: solutions for business / Nicole Kösegi



Part 1

Definition of "textiles" and application areas for textiles

- Currently no standard definition
- Criteria are required



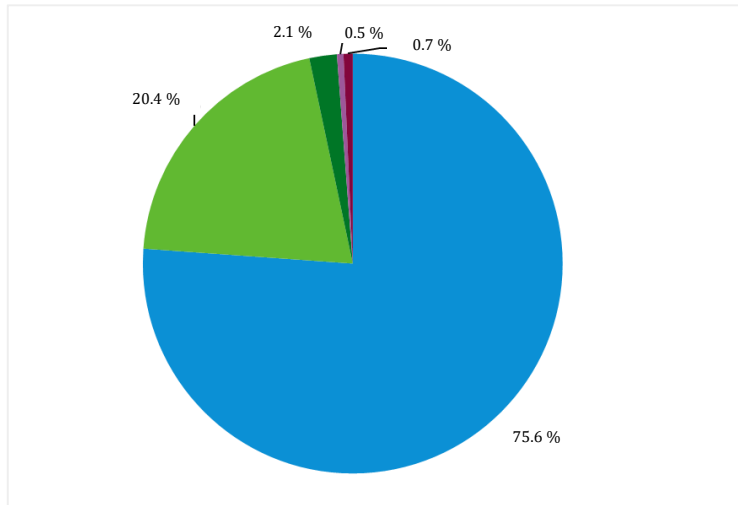
Part 2

Elaboration and critical consideration of possible models of producer responsibility for used textiles

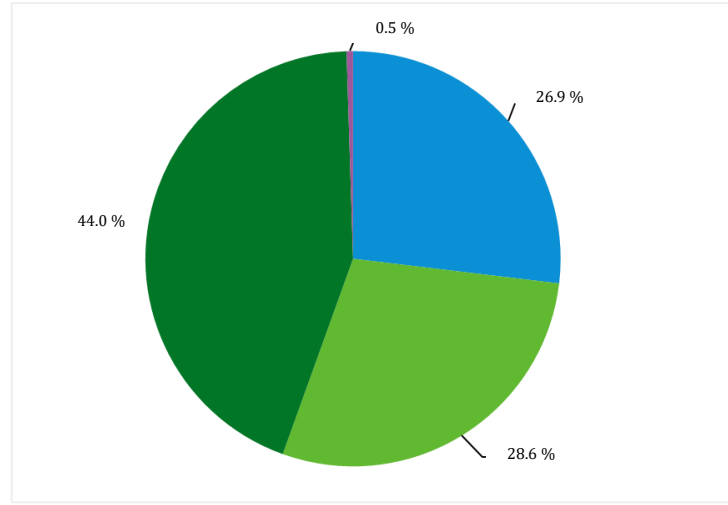
- Development of technical, legal and other criteria
- Consideration of approaches in other MS and already existing systems (e.g. ElektroG, BattG, VerpackG)
- Consideration of the effects of specific models on consumers
- Considering options for incentive effects / eco-modulation
- Analysis of financing approaches for collection and recovery, elaboration of rights and obligations of involved actors
- Organisation of collection systems taking into account the current collection structure (rights and obligations of various actors)
- Examination of qualitative requirements for sorting / treatment
- Elaboration of control mechanisms

# STATUS QUO OF THE COLLECTION OF USED TEXTILES FROM PRIVATE HOUSEHOLDS

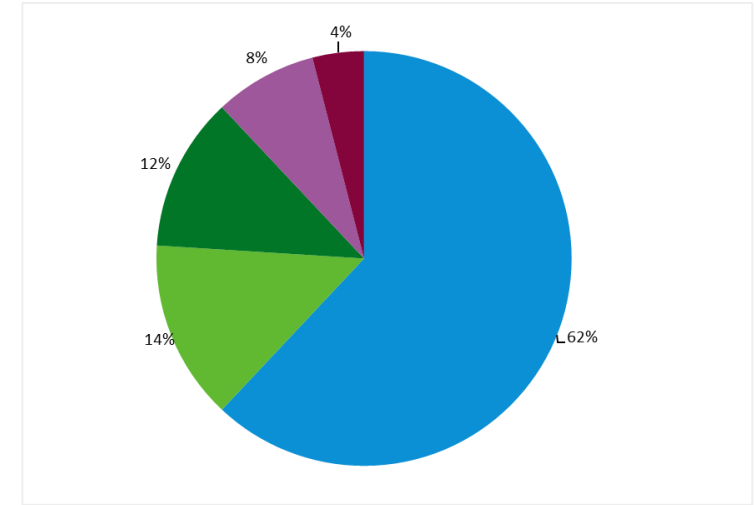
Collection systems for used textiles



Actors involved in the collection of used textiles



Whereabouts of used textiles after collection and sorting



- Depot containers
- Recycling centers
- Curbside collection
- Waste bin
- Other

- Public disposal providers
- Charitable collection
- Commercial collection
- Voluntary take back

- Reuse
- Production of cleaning cloths
- Recycling
- Other recovery
- Disposal

Source: bvse, 2020

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# APPLICATION OF TEXTILES IN COMPARISON BETWEEN COUNTRIES

Country	France	Netherlands	Sweden (Draft)
<b>Final consumer</b>	Private final consumer only	Private and other final consumer	Private and other final consumer
<b>Clothing</b>	yes (no leather)	yes (no leather)	yes (no leather)
<b>Accessoires („Supplement“)</b>	yes (no leather)	Yes (no leather)	yes (no leather)
<b>Other accessories</b>	no	no	yes (suitcases, bags, purses, etc.)
<b>Footwear</b>	yes (including leather)	no	no
<b>Home textiles</b>	Yes, very wide product range without outdoor materials, decorative textiles and upholstery textiles	Yes, limited to bed linen, table linen and household linen	Yes, very wide product range

## Proposal Definition Textiles Eunomia - Study\*

Produkt(e)	incuded	not included	Notes
Clothing	X		Fibre-based textiles, non-fibre-based plastics, leather, etc.
Footwear	X		All materials
Household and professional linen	X		e.g. bed linen, duvet covers, towels
Accessoires		X	e.g. bags, belts etc.
<u>Mattresses, carpets</u>		X	
Duvets, curtains		X	

## Conclusion country comparison:

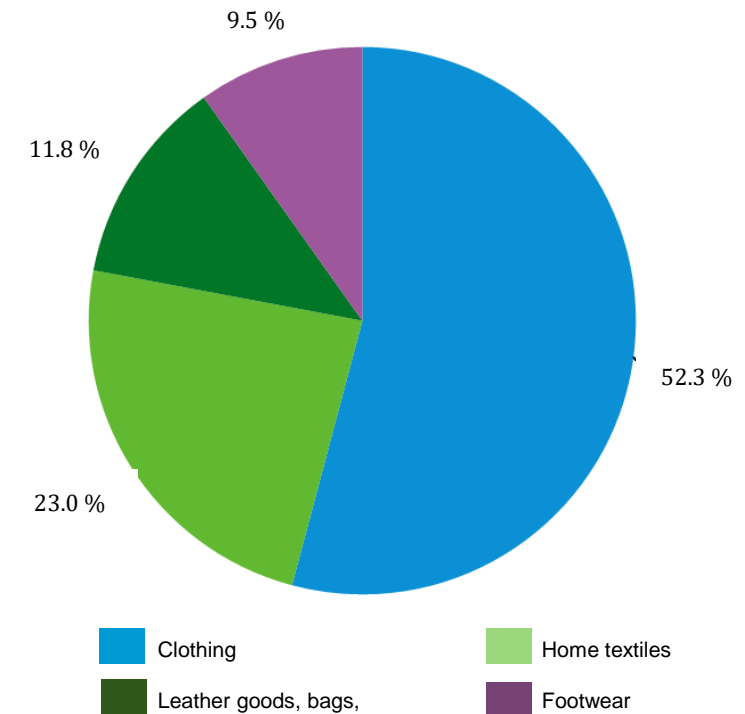
- ▶ Main differences in the classification of footwear and accessories as well as the material type leather in clothing.
- ▶ For home textiles, there are some differences in the classification of individual products, e.g.: mattress protectors, curtains, blankets or duvets.
- ▶ All approaches exclude mattresses, technical textiles and furniture.

\* Source: Eunomia 2022: <https://www.eunomia.co.uk/reports-tools/driving-a-circular-economy-for-textiles-through-epr>

# CONSUMPTION OF RELEVANT TEXTILE PRODUCTS IN GERMANY

Product category	Detailed subdivision	Short description	Amount
Clothing	Other clothings	Pullovers, trousers, nightwear, caps etc.	714.80 Kt
Clothing	Stockings and underwear	Stockings, underwear, tights, etc.	86..70 Kt
Clothing	Sportswear and workwear	Workwear, swimwear, tracksuits, skiwear, etc.	46.80 Kt
Home textiles	Bedding	Pillows, sleeping bags, blankets etc.	174.57 Kt
Home textiles	Towels	Towels, dishtowels, cleaning cloths etc.	50.53 Kt
Home textiles	Textiles für home and garden	Bed linen, curtains, tablecloths, cushions for garden furniture etc.	148.13 Kt
Footwear	Footwear (no leather)	Work footwear, sports footwear, sandals, slippers etc.	83.82 Kt
Footwear	Footwear (leather)	Work footwear, sports footwear, sandals, slippers etc.	70.18 Kt
Leather goods, bags, back packs	Leather goods, bags, back packs		192.00 Kt
Others	Others	Toy accessories, animal cushions, costumes, etc..	53.40 Kt

Distribution of product categories in percent

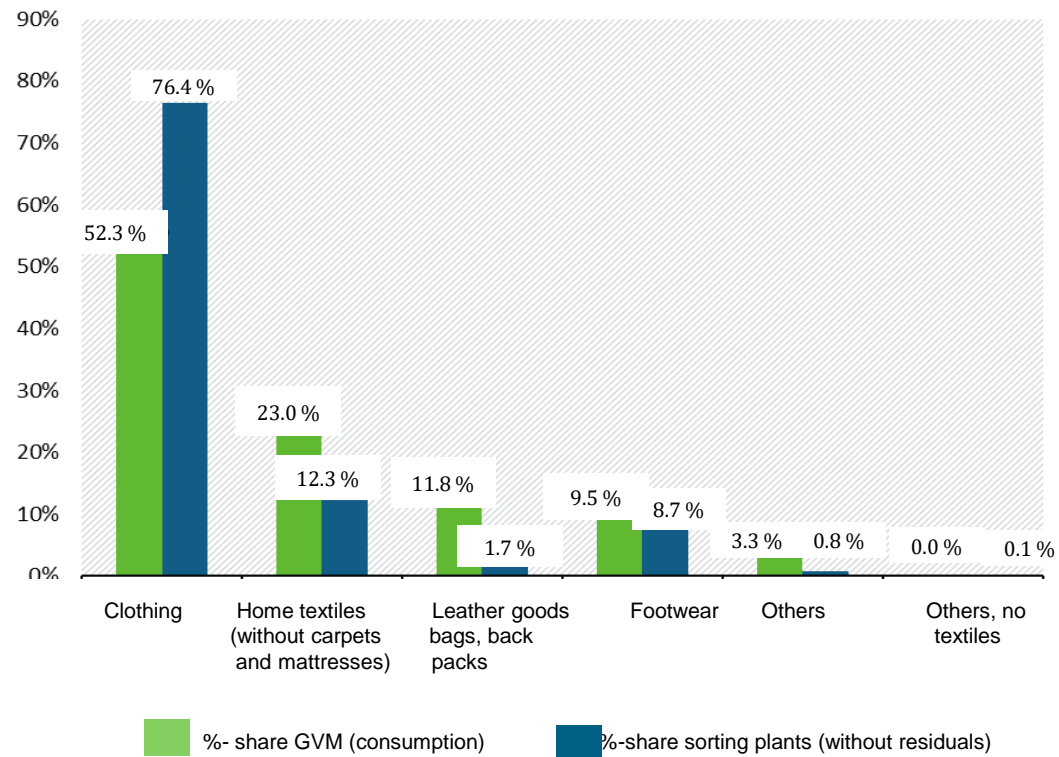


**In 2021, approx. 1.6 million tons of textiles were placed on the market in Germany.**

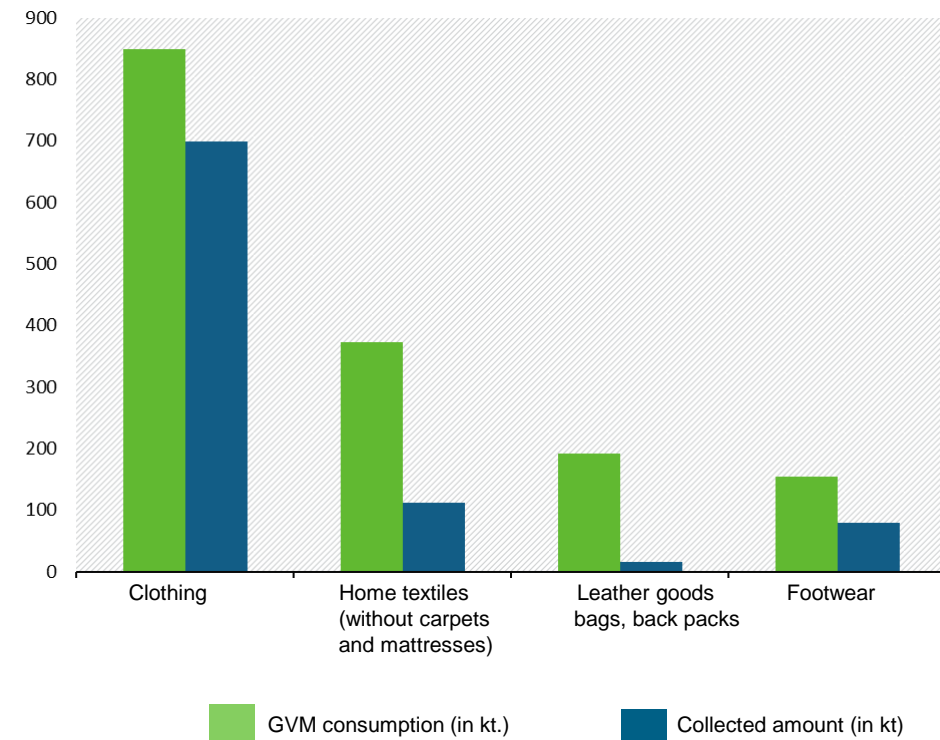


# COMPARISON OF PRODUCT CATEGORIES TEXTILES AND COLLECTED QUANTITIES

Comparison of **percentage share** of product categories of quantity placed on the market versus quantity collected



Comparison of **quantities** of product categories of quantity placed on the market versus quantity collected



# OVERVIEW OF THE "TEXTILES" APPLICATION AREA ACCORDING TO GERMAN LAGA M40

Product	Included	Not included	Notes
Clothing	X		<ul style="list-style-type: none"> <li>- Outerwear (including leather and furs) and underwear</li> <li>- - Shoes and footwear</li> <li>- - Other accessories (belts, hats, caps, scarves, shawls, gloves)</li> </ul>
Bags	X		Handbags, cloth bags and backpacks etc.
Bedding	X		Down duvets, quilts, pillows, mattress protectors etc.
Home textiles	X		Bed and table linen, flannels, hand, dry and bath towels, decorative fabrics, other blankets, curtains with drapes and net curtains, etc.
Stuffed animals	X		
Upholstery fabrics and mattress covers		X	
Mattresses and foams		X	
Carpets and carpeting		X	
Technical textiles		X	such as protective clothing, diving suits, dressing materials, tents and tarpaulins, etc.
Clothing, footwear and other textiles with built-in electrical functions		X	These products are within the scope of the ElektroG.
Other commodities		X	

The scope of application was deliberately broadly interpreted and reflects current practice. If one compared the product range with the current composition of the collected goods, only accessories such as umbrellas, suitcases, etc. are included as non-related products, which are also regarded as interfering materials by the sorting companies.

# CRITERIA FOR THE DELIMITATION OF THE "TEXTILES" SCOPE OF APPLICATION

1. Suitability (size, hygiene, safety aspects)
2. Quantity relevance in the collection and use of the current collection system for used textiles
3. Consumer acceptance, consumer behaviour (practicality / comprehensibility)
4. Sorting
5. Recycling
6. Coherence with European and national regulations

## Assumption for the assessment of the criteria

- ▶ If a product is not suitable, it falls outside the scope of application in total (= exclusion criterion).
- ▶ With the exception of suitability, all criteria are weighted equally

## Further specifications

- ▶ The (future) requirements of the EU are to be considered
- ▶ Interpretation-free, clear definitions should be possible, e.g. through:
  - Clear allocation via customs tariff numbers
  - No differentiation criteria within a product (large/small, material-related)

# SUMMARY AND EVALUATION OF ALL CRITERIA

Criteria / Products	Clothing		Footwear	Home textiles <sup>1)</sup>	Bedding	Other Accessoires	Stuffed animals
	<i>Fibre-based</i>	<i>Not fibre-based</i>					
Quantity relevance	●●●●	●○○○	●●○○	●●○○	●○○○	●○○○	●○○○
Consumer acceptance	●●●●	●●●●	●●●●	●●●●	●●○○	●●○○	●●○○
Sorting	●●●●	●●○○	●●○○	●●●●	●●○○	●●○○	●●○○
Recycling	●●●●	●●○○	●●○○	●●●●	●●○○	●○○○	○○○○
Coherence with European and national regulations	●●●●	●●●○	●●○○	●●●●	●●○○	●○○○	●○○○

1) without bedding, mattresses and carpets

Here, the symbolism from „●●●●“ to „○○○○“, illustrates whether the option of a positive assignment of the product to the definition of textiles is considered positive or negative. „●●○○“ signals medium or neutral assessment or irrelevance.

# SUGGESTION FOR APPLICATION OF TEXTILES THAT TYPICALLY ORIGINATE IN PRIVATE HOUSEHOLDS

Products / Categories	Included	Not included	Notes
Clothing (incl. accessories such as hat, gloves, scarf, belt)	X		All materials
Footwear	X		All materials
Home textiles (without bedding, mattresses and carpets)	X		e.g. bed linen, duvet covers, towels, curtains, table linen (all materials)
Bedding	X		All materials
Other accessories (e.g. backpacks, bags, purses, umbrellas, etc.)			Not clearly allocable
Stuffed animals			Not clearly allocable

Note: products with built-in electrical functions are electrical appliances and are within the scope of the ElektroG.

# OVERVIEW OF AREA OF APPLICATION ACCORDING TO POINT OF ORIGIN

## Differentiation of textiles with regards to the point of collection due to different collection structures or collection systems

	Private households	Other area of origin
Textiles that typically originate in private households	X	X
„Special textiles“ (textiles with personal protective equipment, uniforms etc.)		X

Separate consideration necessary

### Basic assumption::

In principle, all textiles that typically arise in private households, i.e. both privately (b2c) and commercially (b2b) used textiles, should be included in the scope of application, as they only differ in the collection structure.

- ▶ No differentiation problems due to different use.
- ▶ It can be assumed that these textiles will be also in the scope at EU level.
- ▶ Recycling potential is given by bundling quantities at "large accumulation points" or service providers (textile leasing, etc.).

# SCOPE OF APPLICATION OTHER AREAS OF ORIGIN – FOR “SPECIAL TEXTILES”

## Analysis and classification

### 1. Clothing and footwear with personal protective equipment

- ▶ Textiles are specially equipped with heat protection, cut protection, electrostatic properties or protection against liquid chemical
- ▶ Textiles are made of special high-performance fibres
- ▶ Great need for safety in terms of functionality (reuse tends to be ruled out)
- ▶ As of today, there is no recycling infrastructure for these textile wastes

### 2. Uniforms, official clothing

- ▶ Strong need for security with regards to possible abuse of authority
- ▶ No reuse possible, rather secure product destruction is required
- ▶ Recycling is possible due to the textile composition (rather "cost problem")

## Summary

- ▶ Special textiles have different requirements at the end of life and must be considered separately in principle (such as collection targets, reuse and recycling).
- ▶ A quantity analysis and evaluation of the current disposal practice is missing to show resource saving potentials; in principle, "special textiles" can also contribute to resource saving.
- ▶ The allocation of "special textiles" to an EPR system can have positive effects in connection with the design (recyclability) and the establishment of a recycling infrastructure.

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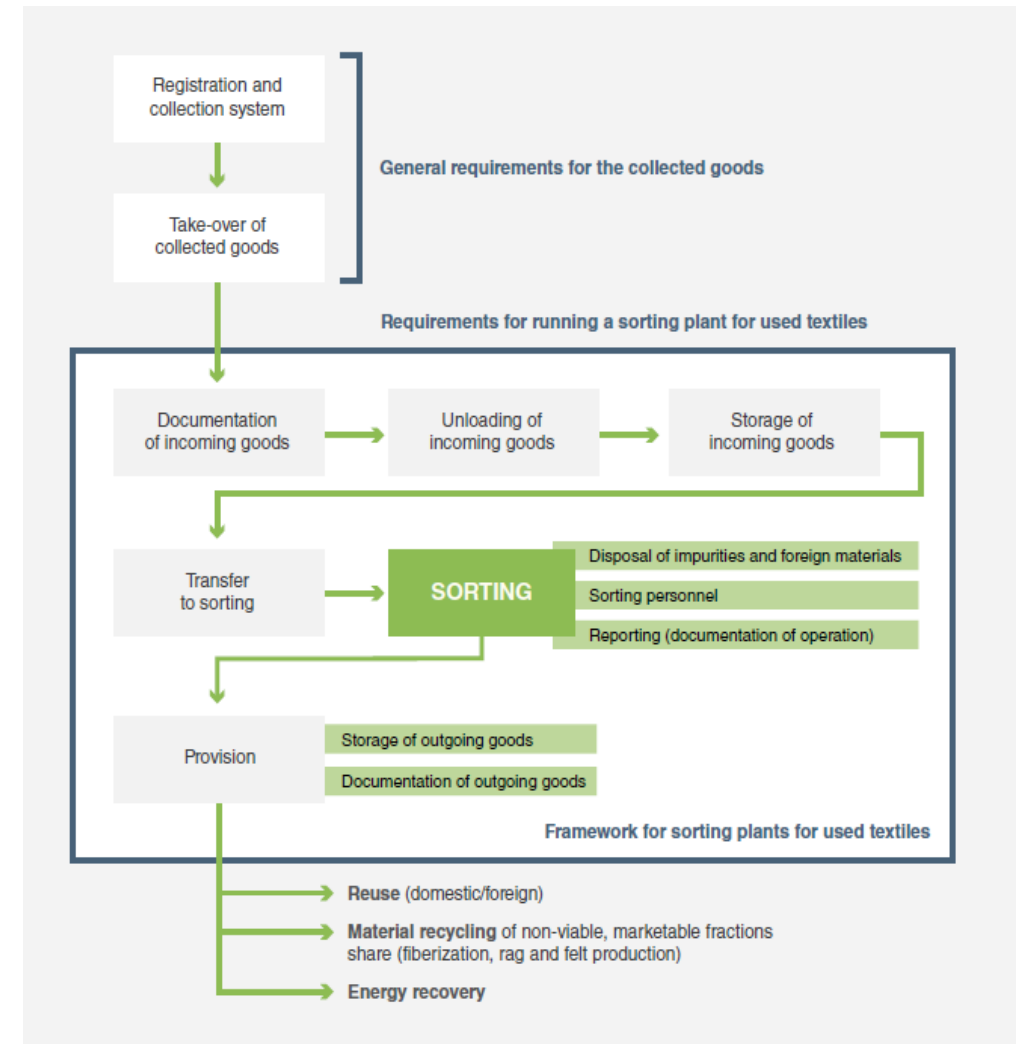


# REQUIREMENTS FOR THE STORAGE AND SORTING OF USED TEXTILES

Sorting is the key interface for the fulfilment of (recovery) requirements.

The following aspects and verifications are of particular importance for the implementation of an EPR system:

- ▶ Proof of (technical) suitability with regards to the equipment.
- ▶ Proof of quantities received with origin (including registration number of collector, areas, quantities, date, stocks)
- ▶ Sorting intensity, mass balance
- ▶ Proof of the concrete whereabouts of the sorted / recycled used textiles
- ▶ Fulfilment of all requirements (quotas) in relation to the collection quantity taken over with regards to preparation for re-use, fibre-to-fibre recycling, recycling
- ▶ Support of regional marketing structures for second-hand textiles.



Source: GftZ 2022

## TAKE BACK BY THE PRODUCERS THEMSELVES

In the context of the study, “take back by the producers themselves” is understood to mean all manufacturers' own take-back systems. This includes in particular:

- ▶ Take-back in the shops or at the "place of delivery",
- ▶ Sector solutions,
- ▶ Collective solutions (e.g. in consortia) that have been contracted (but not within the framework of an authorised system).

# ROLES AND RESPONSIBILITIES IN AN EPR SYSTEM

Actors	Roles and responsibilities under EPR schemes
Actors within the production chain	Use of sustainably produced raw materials and secondary fibres. Consideration of recyclability. Focusing the design on durability, harmlessness, recyclability and the use of recycled fibres.
Producer / manufacturer	Producer / manufacturer are the crucial interface for extended producer responsibility for textiles, as they import to Germany or produce in Germany and also sell or make available here.
Consumer	Buying "sustainable textiles", long use and use of second-hand offers, minimizing consumption, use of leasing offers. After using the textiles, they must keep them separate and clean and dispose of them properly in the designated collection system.
Actors to promote waste prevention	Establishing leasing offers, increasing the value of used textiles, repairing, cleaning, local reuse.
Municipalities	Municipalities agree on the collection systems, support them and inform consumers (further participation if necessary).
Collection of used textiles	Material-friendly collection in order to obtain the highest possible proportion for reuse. Consideration of existing infrastructure and non-profit collections.
Sorting and marketing of used textiles	Decision on the further destination of the used textiles. Important interface for compliance with the waste hierarchy or specific recycling requirements. Priority is given to the marketing of second-hand goods (in regional structures).
Recycler of used textiles	Within the framework of the waste hierarchy and on the basis of possible requirements, recovery should be aimed for at the highest beneficial level.

## OVERVIEW OF FURTHER BASIS FOR ALL EPR MODELS

Further basis for all EPR models are in particular:

- a) Personal scope of application (concept of manufacturer, specific cases)
- b) Aspects for obligated companies (e.g. online trade)
- c) Eco-modulation
- d) Collection and recovery requirements (quota calculation)

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# MODEL OPTIONS - OVERVIEW



**Model 1 "fund model":** All obligated producers pay a contribution, graded according to ecological criteria, into a fund for the textiles they put on the market. This is used to finance certain measures, such as sorting and recycling, as well as fund administration.

In this model 1, one option can be that the public disposal providers are responsible for the collection (shared responsibility; model 1 b))



**Model 2 „Producer-led model“:** The organisational and financial responsibility of fulfilling all requirements lies in the hands of the obligated companies (producers). A "central register" is established for control purposes.

In this model 2, one option can be that the public disposal providers are responsible for the collection (shared responsibility; model 2 b))



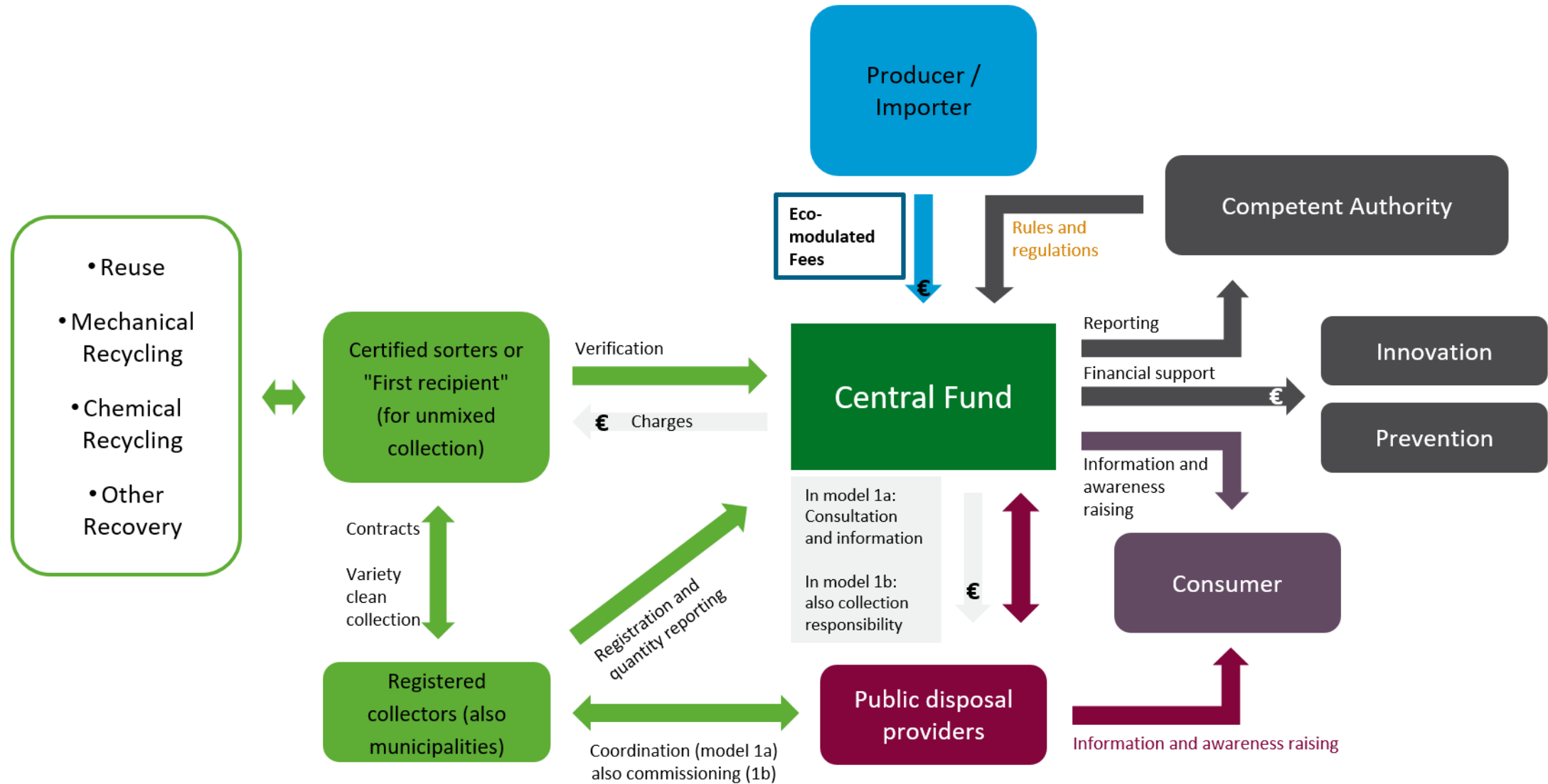
**Model 3 "Systems in competition“:** Several systems may be established in competition to fulfil all requirements. They require approval by the competent authority. Obligated companies (producers) must participate in one or more systems with all quantities.

In this model 3, one option can be that the public disposal providers are responsible for the collection (shared responsibility; model 3 b))



**Model 4 „Contract Model“ (without collective systems requiring approval):** The obligated producers contract with certified collectors, sorters and/or recyclers who must ensure that all legally regulated requirements are met (collection, sorting, recycling) for the contractually agreed quantity of used textiles for disposal.

# MODEL 1 "FUNDMODEL"



# KEY ELEMENTS OF THE FUND MODEL

The main characteristics of the fund model are that all obligated companies that place textiles on the market in Germany pay a contribution based on ecological criteria for the textiles they place on the market. This is used to finance certain measures, such as z. e.g. sorting and recycling. In this model, one option can be that the public disposal providers are responsible for collection (model 1b).

## Key elements and framework conditions in the "fund model"

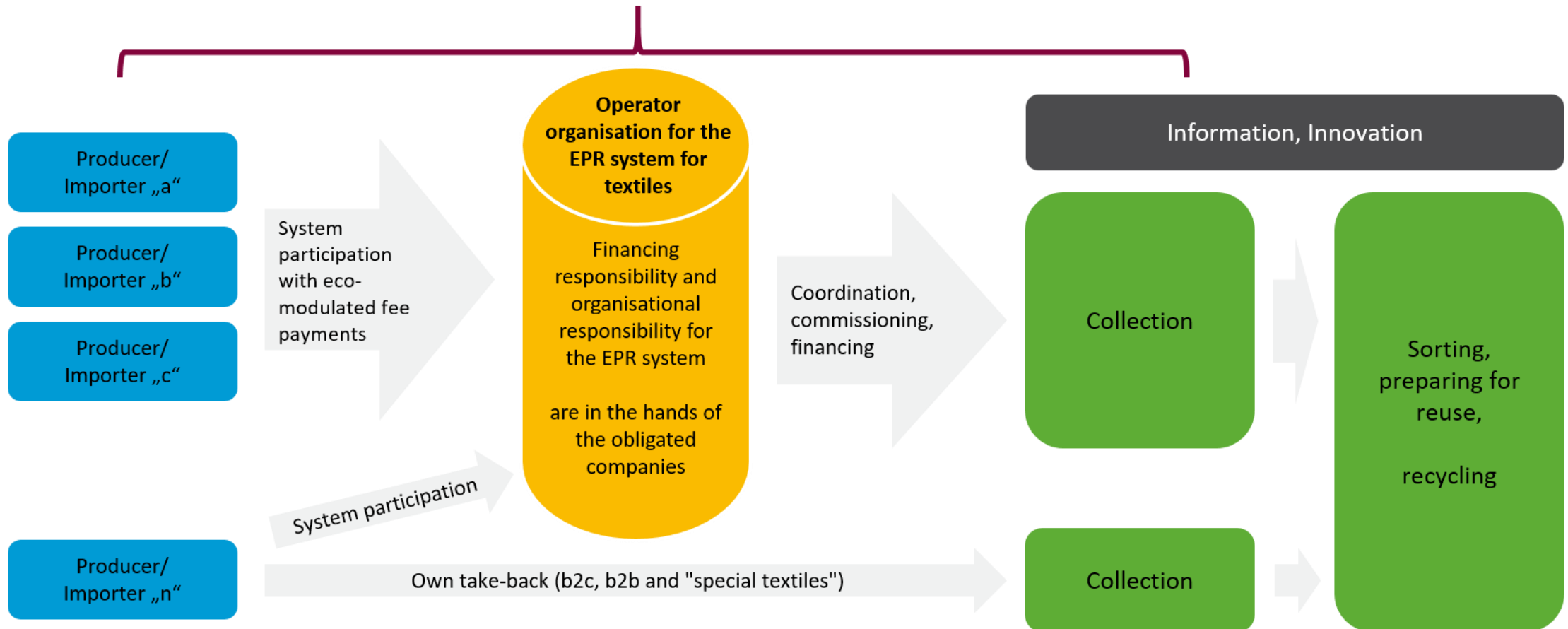
- ▶ Establishment of a central fund administration unit (e.g. within the framework of a "special fee" or an entrusted authority with a fund organised under private ownership).
- ▶ The fees of the obligated producers / importers are based on the textiles placed on the market and are differentiated according to ecological criteria and are intended to cover in total the costs for which the eligible recipient receives payments.
- ▶ When determining the amounts, the cost coverage requirement, the prohibition of cost overruns, the principle of cost efficiency and the transparency requirement must be observed. Direct funding from the fund is provided to the entities and organisations and enterprises where (financial) support is needed. The unauthorised use of fund resources must be sanctioned.
- ▶ The apportionment of costs to producers and a fair distribution of costs require that the amount of the costs to be apportioned is determined. For this purpose, it must first be determined where the costs are incurred.
- ▶ Producers / importers of "special textiles" with their own collection system must also register in the fund and provide verification.



# MODEL 2A “PRODUCER-LED MODEL WITHOUT SHARED RESPONSIBILITY”

## Central Register

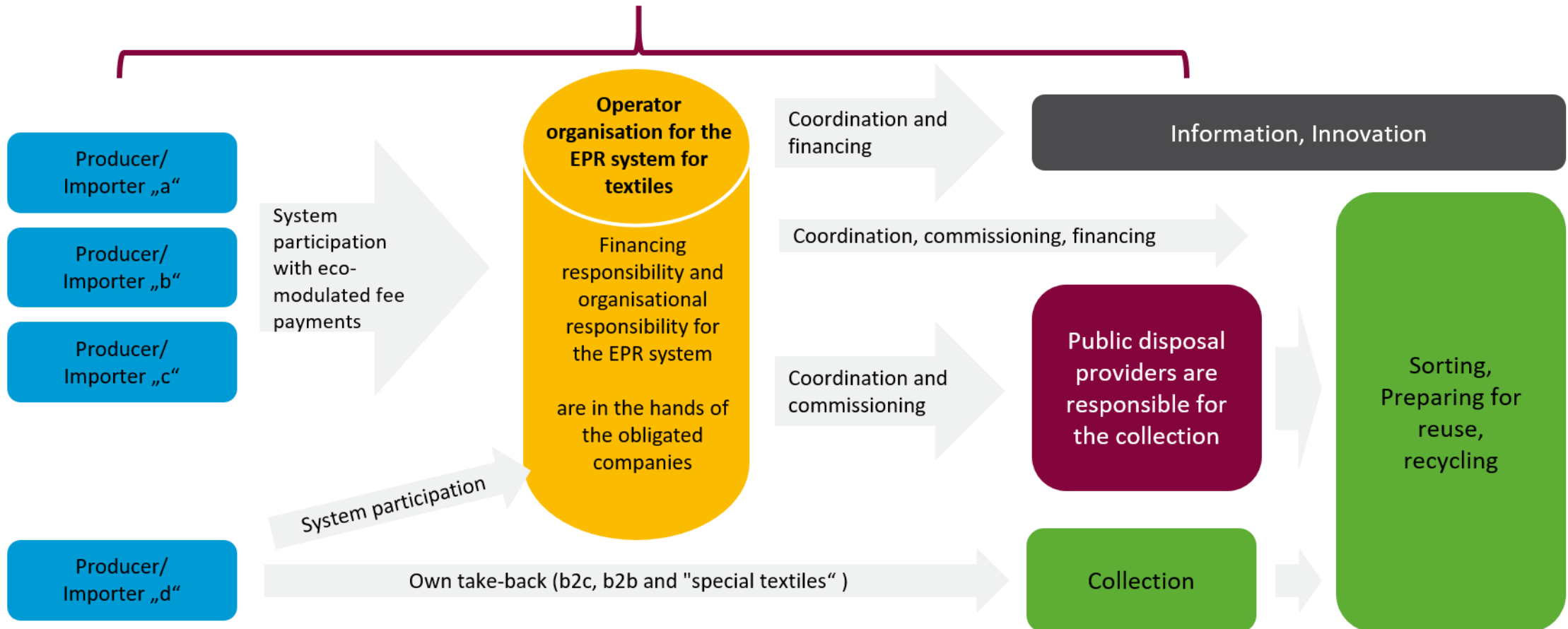
The central registry is the competent control authority. It checks, among other things, registration, system participation, all data and data reports and the fulfilment of all requirements for collection, sorting, recycling and other obligations.



# MODEL 2B “PRODUCER-LED MODEL WITH SHARED RESPONSIBILITY”

## Central Register

The central registry is the competent control authority. It checks, among other things, registration, system participation, all data and data reports and the fulfilment of all requirements for collection, sorting, recycling and other obligations.



## KEY ELEMENTS OF MODEL 2 - “PRODUCER-LED MODEL“

The organisational and financial responsibility of fulfilling all requirements lies in the hands of the obligated companies (producers).

### Key elements and framework of model 2 - “Producer-led Model 2a) and 2b)

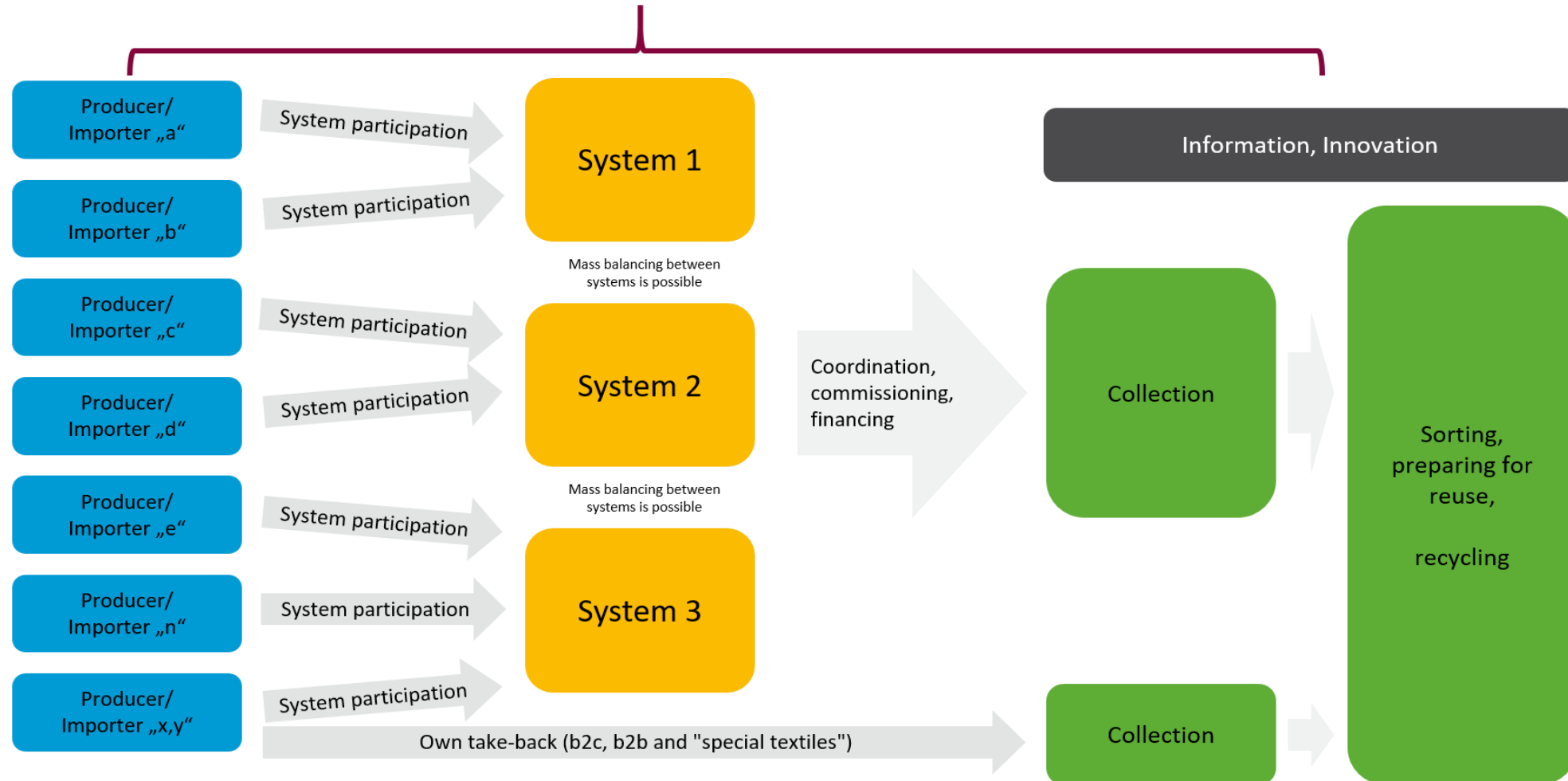
- ▶ Within the legal framework, requirements are set for all obligated actors. This concerns in particular collection, preparation for reuse and recycling, as well as communication, information and innovation. Only those companies that meet these requirements are allowed to bring textiles onto the market in Germany.
- ▶ The requirements for collection, sorting and recovery can be fulfilled by a producer's own take-back system or by participation in a collectively operated system. Also, in the case of own take-back, producers must register with a central register and pay fees for communication, information and innovation to the centrally supported system.
- ▶ The system, which is jointly operated by the producers, is set up as a non-profit organisation.
- ▶ The control and merging of all information from own take-back and system participation is handled by a central register.

In one model option (model 2 b), the possibility of shared producer responsibility is taken into account: In this variant, the public disposal providers are responsible for the collection of the used textiles that are assigned to the community system. However, the producers remain free to take back their own textiles.

# MODEL 3A - „SYSTEMS IN COMPETITION“ WITHOUT SHARED RESPONSIBILITY

## Central Register

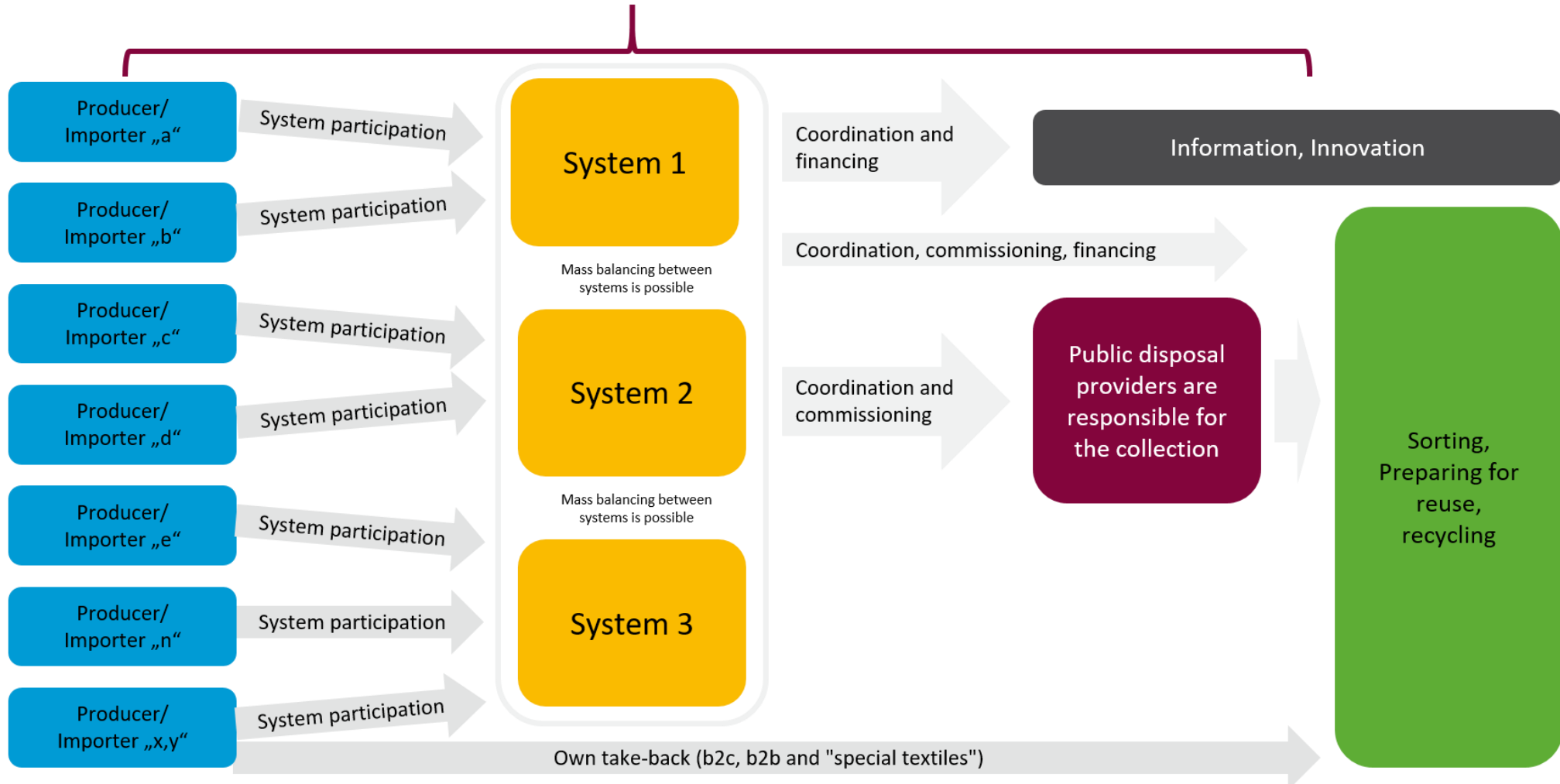
The central registry is the competent control authority. It checks, among other things, registration, system participation, all data and data reports and the fulfilment of all requirements for collection, sorting, recycling and other obligations.



# MODEL 3B “SYSTEMS IN COMPETITION“ WITH SHARED RESPONSIBILITY

## Central Register

The central registry is the competent control authority. It checks, among other things, registration, system participation, all data and data reports and the fulfilment of all requirements for collection, sorting, recycling and other obligations.



## KEY ELEMENTS OF MODEL 3 – “Systems in Competition”

Obligated producers must in principle participate in one or more systems with all textiles they place on the market in Germany. Several systems can be set up in competition to meet the EPR requirements. They need to be approved by the competent authority. Exceptions are specified for individual cases. Criteria are defined for a coordination obligation with the public authority. This model does not include any collection responsibility on the part of the public disposal providers (shared responsibility), but this would be possible as an option and with the corresponding framework conditions. In this case, the system solution in the competition would start after the collection.

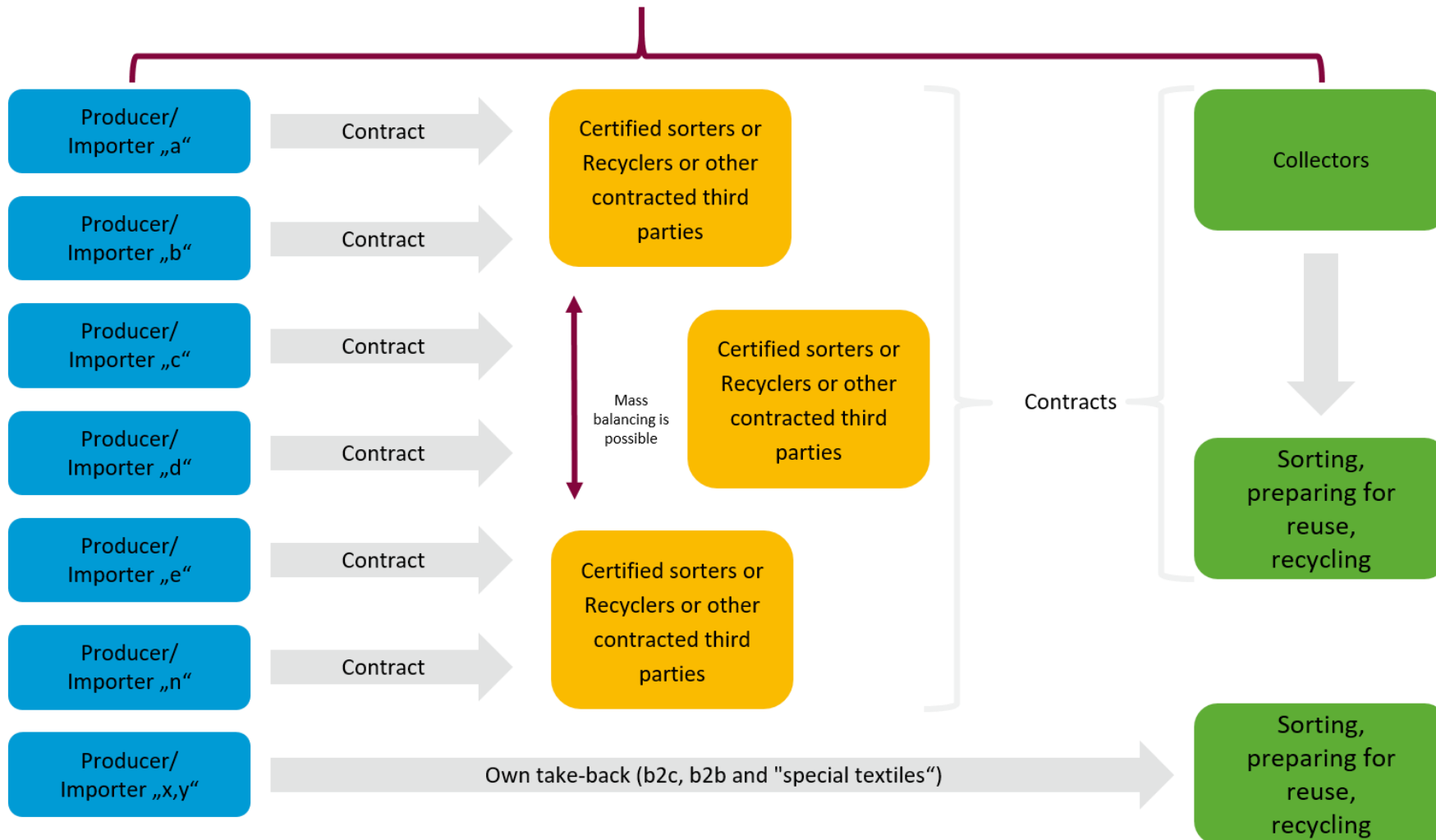
### Key elements and framework of model 3 - Systems in competition 3a) and 3b)

- ▶ Establishment and system operation requires permission from the competent authority in accordance with legally specified requirements.
- ▶ Within the framework of a legal regulation, all obligated companies are generally required to participate in a system. Exceptions exist only for "special textiles" that cannot be collected through a nationwide system, as well as for individual situations that require approval in individual cases.
- ▶ A central register collects all information about producers, systems, collectors, sorters, recyclers and the implementation of other requirements (communication, information, innovation).
- ▶ Very specific and verifiable requirements for systems are laid down by legislation.
- ▶ Very concrete and restrictive as well as auditable requirements for own take-back are set by legislation. There are separate legal requirements for "special textiles".
- ▶ Systems in competition can generate profits.

# MODEL 4 "CONTRACT MODEL"

## Central Register

The central registry is the competent control authority. It checks, among other things, registration, system participation, all data and data reports and the fulfilment of all requirements for collection, sorting, recycling and other obligations.



# KEY ELEMENTS OF MODEL 4 “CONTRACT MODEL”

In the "contract model", binding targets and obligations for producers are defined, as well as requirements for collectors, sorters and recyclers. However, no specific organizational structures are defined by legislation.

## Key elements and framework of model 4 - Contract model

- ▶ Very specific and auditable requirements for producers are set by legislation, which must be documented by the producers or by commissioned third parties.
- ▶ There are no system approvals or system participation obligations, but every producer must choose his contractual partners and structure the contracts with third parties in such a way that the legal requirements addressed to the producer are fulfilled. Consortia could also be formed for this purposes.
- ▶ A central register collects all information about producers, systems, collectors, sorters, recyclers and the implementation of other requirements (communication, information, innovation). Commissioning of third parties is possible.
- ▶ For "special textiles" there are separate legal requirements.



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# OVERVIEW OF THE EVALUATION CRITERIA OF THE MODELS 1, 2, 3 AND 4

Criteria for the implementation and evaluation of different EPR models	Explanation
a) Feasibility in practice and complexity of implementation	The model is suitable for practical application, i.e. for implementation. Complexity is an important and central aspect here.
b) Required bureaucratic and organisational effort	Aspects for assessing the effort are in particular time, money, personnel and expertise in the preparation and in the implementation of the model.
c) Possibilities for control / monitoring	The duties of the actors involved and the responsibilities are clearly regulated and corresponding control rights can be realised at all interfaces.
d) Possibilities for sanctioning	Sanction options are closely linked to the control options and must be enforceable if misconduct is detected.
e) Taking into account the objectives of the EU Strategy for Textiles	In the model, it must be possible to regulate and control all the requirements necessary to achieve the goals in legal specifications.
f) Compliance with the requirements of the EU Waste Framework Directive (WFD)	In the model, it must be possible to regulate and control all the necessary requirements of the WFD in legal specifications.
g) Building on existing infrastructure	Existing collection systems remain in operation. Further collection structures are added additionally.
h) Area-wide collection of all affected used textiles	All consumers in each area can return their used textiles separately in reasonable proximity.
i) Strengthening preparation for reuse and recycling	Incentives are created to strengthen preparation for reuse and recycling. Legally prescribed requirements are demonstrably achieved.
j) Consumer friendliness	Disposal options are provided within a reasonable distance and incentives for appropriate purchasing behaviour are created through eco-modulation.
k) Involvement of non-profit organisations	There are no market restrictions for non-profit organisations, but rather supportive approaches.
l) Secured funding for all necessary services	The model is designed in such a way that all legally regulated requirements are securely financed.
m) Eco-modulation for the charging of fees	Within the framework of the assessment of participation fees, monetary incentives are created for the producer to comply with certain criteria (e.g. for sustainable circularity).
n) Cost-benefit analysis/proportionality	A broad classification of certain efforts (especially in terms of personnel, money, time) is made for the achievement of given requirements.

# OVERVIEW OF THE EVALUATION OF MODEL 1 „FUND MODEL“

Many criteria are evaluated as positive or very positive in this model. In particular, the criteria on eco-modulation, consumer friendliness, building on existing infrastructure and thereby achieving the goals of the EU textile strategy. In the context of shared producer responsibility, the sanctioning options are ranked one point lower, as the options for sanctioning public waste disposal providers are limited.

All positive or neutral aspects are subject to the assumption that the fund model can be implemented in the first place. Moreover, the bureaucratic and organisational effort is considered extremely high:

When implementing a fund model, a comprehensive analysis and specification is necessary to be able to determine the entitled payees. In the process, unjustified financial claims are to be rejected, justified payment recipients (domestic, foreign, which prerequisite, etc.) and procedures for reimbursement of costs are to be determined, and questions of anti-trust law are to be clarified. When determining the respective amounts, the principle of cost recovery, the prohibition of cost overruns, the principle of cost efficiency and the principle of transparency must be adhered to.

Consequently, the feasibility and complexity of implementation are considered negative. Thus, the weak points of the model are very fundamental in the area of implementation. These criteria should therefore be weighted to a greater extent, as they concern the foundations for implementation. Compliance with the WFD therefore cannot be unconditionally rated as positive and is therefore rated as neutral.

- ▶ The Model 1 "fund model" is assessed as less suitable based on these criteria. This also applies to model variant 1b, in which responsibility for collection remains with the public disposal providers.

## OVERVIEW OF THE EVALUATION OF MODEL 2 „PRODUCER-LED MODEL”

The evaluation of model 2 "producer-led model" based on the evaluation criteria is classified as positive or very positive in most cases. This positive assessment includes the aspects of feasibility and complexity, the required bureaucratic effort, the area-wide collection, the strengthening of the preparation for reuse and recycling, the consumer friendliness as well as the possibility of eco-modulation of financial contributions. It applies to both a purely private producer-led model as well as the model option with a shared responsibility. In the latter case, the collection responsibility lies in the hands of the public disposal providers. In the scheme in which collection is carried out by public disposal providers the possibilities for sanctions are assessed as somewhat less positive, since possibilities for sanctioning a public disposal provider are limited.

In the case of a producer-led model, it is assumed that the goals of the EU textile strategy are taken into account and the specifications of the WFD are complied with. Due to the great relevance of own take-back, the control options are assessed as somewhat less good and thus as neutral.

The general admissibility of such a model with regards to questions of antitrust law was not considered.

- ▶ Assuming that the Model 2 „Producer-led model“ will also be feasible when considering antitrust aspects, this model without shared responsibility is classified based on the criteria as suitable.
- ▶ In the scheme in which collection is carried out by public disposal providers, it is to clarify which instruments and options would be available to the enforcement authorities or the producer-led system in case the public disposal providers do not meet the specific requirements.

## OVERVIEW OF THE EVALUATION OF MODEL 3 „SYSTEMS IN COMPETITION“

The evaluation of Model 3 is classified as positive for important criteria and neutral for other criteria.

In particular, the rating of feasibility and complexity is positive, as are the possibilities for sanctions and the strengthening of preparation for reuse and recycling.

On the other hand, the possibility of eco-modulation is rated negative, as individual contracts are entered into in the case of several systems in competition.

The case that the goals of the EU strategy for textiles were considered as well as the compliance with the requirements of the WFD are also seen as positive. However, since eco-modulation is constrained, the assessment is less positive than in Model 2 "producer-led model".

Clarification and further decisions will be required with regards to the approval of systems under the aspect of coverage. A slight advantage is seen here in ensuring area coverage if the responsibility for collection lies in the hands of the public disposal providers. Differences compared to Model 2 "producer-led model" are particularly that no anti-trust concerns are expected and that the model is considered to be easily implemented.

- ▶ Model 3 "Systems in competition" without a shared responsibility is therefore classified based on the criteria as suitable with no fundamental restriction. Instruments for eco-modulation, however, must be considered separately.
- ▶ For the option in which collection falls into the responsibility of the public disposal providers it has to be clarified which instruments and options would be available to the enforcement authorities or the system operators if the public disposal providers do not fulfil the intended requirements.

## OVERVIEW OF THE EVALUATION OF MODEL 4 „CONTRACT MODEL“

In Model 4, no specific organisational structures are defined by legislation. Therefore, the possibilities for control and sanctions are limited due to the complexity of the different possible contract constellations.

Likewise, it is not ensured that an area-wide coverage takes place.

Eco-modulation is also not possible or only possible to a very limited extent.

It is therefore assumed that the objectives of the EU Textile Strategy and compliance with the WFD cannot be fully met with implementation in Model 4 "contract model".

- ▶ The Model 4 „Contract Model“ (without collective systems requiring approval) is therefore considered less suitable based on the criteria.

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