



The market maturity for public procurement of circular furniture: a study from Latvia

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Public procurement plays an important role in the market e.g. 14% of the Gross Domestic product in European Union therefore it is seen as an important instrument to promote such products and services that better meets society demands, for example, sustainability. Starting from 2015, circularity is an important aspect of sustainability. Furniture is among product groups with significant impact on material footprint therefore approaches to reduce the material footprint and increase circularity are of high value. With this research, authors investigate the market maturity i.e. readiness of suppliers to offer circular furniture and services, as well as readiness of municipalities to uptake it. 20 companies and 27 municipalities took part in the questionnaire. Results show that surveyed companies currently are more ready to offer more circular products and services as municipalities require, and market consultation prior to the purchase might be a good tool for promoting circularity.

Keywords: market maturity, sustainable procurement, green public procurement, circular procurement, furniture.

Introduction

The circular economy is an innovative approach to eliminate emerging environmental problems caused by increasing recourse depletion, accumulation of non-recycled waste, growing environmental pollution and climate change. The development of this new paradigm started nearly half century ago in minds of innovative designers, promoted by the thinktanks such as Ellen MacArthur Foundation (Webster, MacArthur, 2016) or IGES - Institute for Global Environmental Strategies (MoE Japan, 2019), and injected in policies and strategies of different countries in the world. Thus, the circular economy is on rise in European Union, Japan, Canada, USA, China, etc. There are many definitions of the circular economy, and the author would like to forward definition by Geissdoerfer and co-authors that is based on thorough literature review, defining circular economy "as a regenerative system in which resource input and waste, emission, and energy leakage are minimised by slowing, closing, and narrowing material and energy loops. This can be achieved through long-lasting design, maintenance, repair, reuse, remanufacturing, refurbishing, and recycling (Geissdoerfer, 2017)." Circular economy is seen as one of the approaches to reach Sustainable Development Goals defined by the United Nations. European Union launched its first Circular Economy action plan in 2015¹, and further on embanked circular economy as one of the basic stones in the new strategy document for reaching more sustainable economy i.e. "The Green Deal"². Thus, the circular economy is high on the political agenda and now there is a need for the actions to implement it in our life. It shall be noted that the EC Directive on waste³ already in 2008 introduced the waste management hierarchy corresponding to circularity approach setting following priority order for waste management: (a) prevention, (b) preparing for re-use, (c) recycling, (d) other recovery e.g. energy recovery and (e) disposal.

Public procurement is a process where authorities purchase products and services from entrepreneurs in order to fulfil their functions as a public authority, and the volume of the public procurement in the EU makes up 14%. The basic principle of the public procurement is the best purchase for value but not only in the monetary terms but also in more general society needs. There is no doubt among EU and national policy makers that the financial volume of the

¹ Closing the loop - An EU action plan for the Circular Economy, COM/2015/0614 final

² The European Green Deal, COM(2019) 640 final

³ Directive 2008/98/EC Of The European Parliament and of the Council of 19 November 2008 on waste and repealing certain

Directives, 22.11.2008, Official Journal of the European Union L 312/3-30.





public procurement can help to reach strategic policy goals such as promoting innovative and sustainable economy⁴. Public procurement promoting transition towards circular economy is called circular procurement. It can be seen as a specific case of the green public procurement i.e. procurement aiming to seek products and services with reduced material footprint or better recycling options. This aim is fulfilled by including environmental requirements in the selection criteria of bidders, technical specification of the product or service, or contract clause. There are two type of tendering methods allowed by the legislation: lowest price or economically advantageous option applying weighing system applying award criteria, that in their nature correspond to the three types of criteria mentioned above.

Also EU citizens support strategic use of public procurement to achieve sustainability objectives (Keulemans, 2017). Nevertheless, there are many obstacles for such strategic procurement, and one of them also readiness of the market to deliver requested goods and services (Grandia, 2017) i.e. market maturity. Furniture is among product groups with significant impact on material footprint – in 2011 furniture was on 8^{th} place among significant products groups with high material footprint (Giljum, 2016) therefore approaches to reduce the material footprint and increase circularity in this sector are of high value going towards circular economy.

With this research, author wanted to investigate the market maturity i.e. readiness of suppliers to offer circular furniture and services, as well as readiness of municipalities to uptake it.

Methods

As a method for the research the author performed an online questioning of furniture suppliers and municipalities. The circular options author developed based on the EU Waste hierarchy, sorting the existing approaches from literature and experience of the project team of the Circular PP project⁵, as well as EU Green Public Guidelines for furniture, see table below:

Hierarchy of circularity	Priority	Potential actions	Potential for new business models
Waste prevention	1	Prolongation of life span of the furniture Intensification of the use (e.g. by more users/ or by multifunctionality) Design for repair and maintenance Reduction of material used to achieve the functionality needed Restrictions to toxic substances	Maintenance services of furniture Leasing or rent, or sharing of furniture Product – service system
Reuse	2	Reuse of existing furniture Reuse of product parts: renovation Design for reuse (easy adjusting)	Collection of used furniture, reselling or renting
Recycling	3	Choice of materials that are recyclable Restriction for toxic substances Use of recycled materials	Collection of outdated furniture, delivering to furniture producers Producing new furniture, using recycled materials Renovation and refurbishment of the clients furniture
Energy or material generation	4	Collection of materials for combustion Collection of materials for material generation	Use of regenerated material in design of new furniture

Table 1. Circular options for furniture sorted according to the EU waste management hierarchy

⁴ Making Public Procurement work in and for Europe, COM(2017) 572

⁵ Interreg Baltic Sea Region Program enabling project called "Using innovation procurement and capacity building to promote Circular Economy" (Circular PP)



The questionnaire contained questions about demographic characterisation of companies and municipalities, circular approaches with regard to production (and purchase) of furniture, application of new business models and circular approaches at the end-of-life cycle of the furniture, see the questionnaire in the Annex.

The questioning was performed in Spring 2020, approaching companies and municipalities via Circular PP project contacts, as well as help of the Latvian Chamber of Commerce and Industry (LCCI), as well as Association of Latvian municipalities.

Results

In the questionnaire participated 27 municipalities and 20 enterprises.

The majority of municipalities (63%) spend for procurement of furniture from 1 - 10 thousand Euro per year for needs of municipality. For subordinated organisations, such amount spends 54% of municipalities. Only 26% spend for needs of municipality from 10- 50 thousand Euro. For the needs of subordinated organisations, 20% of municipalities spend 10 - 50 thousand Euros. Majority of the municipalities (63%) apply partly centralized approach in procurement e.g. the purchased is municipality, but each institution (recipient of the furniture) sets its own requirements. 18% of municipalities allows their subordinated institutions to procure separately, and only 11% apply centralised approach.

Enterprises that participated in the questionnaire mostly represented micro and small size of enterprises (56% employed less that 10 persons, 22 % employed from 10 till 49 persons). The yearly turnover for 65% of participating companies was below 2 million euro, for 30% of companies from 2-10 million. The most important markets were Latvia (35%), Baltic States (24%), Scandinavia (17%) and other European countries (20%). Most of the participating companies identified themselves as furniture producers (48%), 18 % as furniture refurbishers, and 6% as providing repair services. 9% identified themselves as furniture suppliers.

Comparing the answers of the municipalities and furniture producers and suppliers, one can see, that the companies are much more open toward circular approaches than the municipalities. However, majority of the municipalities (>60%) are maintaining and repairing the furniture by themselves i.e. without outsourcing. Only small part of municipalities have requested circular approaches, but did not received a reply from the market, see Figure 1.







Fig. 1. Application of circular criteria in furniture procurement by municipalities

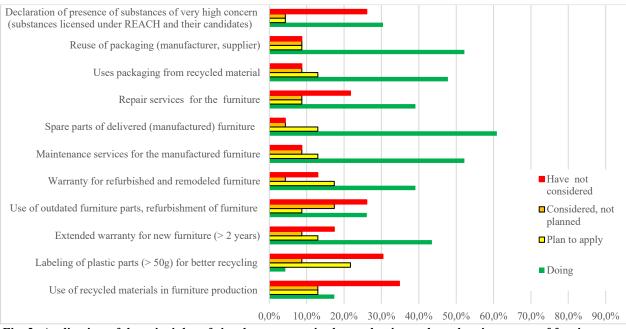


Fig. 2. Application of the principles of circular economy in the production, sale and maintenance of furniture

Comparing to the municipalities, companies are more open for provision of circular products and circular services. For example, more than 50% of companies are reusing the packaging, but only 15% of the municipalities have requested such service from the companies. Majority of companies offer spare parts, but only one third of municipalities request for this.







Comparing the readiness for the new services that can help to prolong working life and intensify the use of furniture, also here the companies are more ready to offer new services – refurbishment, leasing, rental at taking back unnecessary furniture.



Fig. 3. Application of the principles of circular economy in the procuring new services in the furniture procurement by municipalities

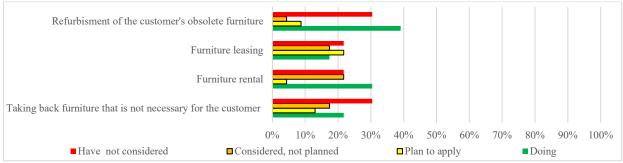


Fig. 4. Application of the principles of circular economy by the offering new services by companies. Also with regard to the end of life of the products, majority of municipalities have not considered circular options yet.

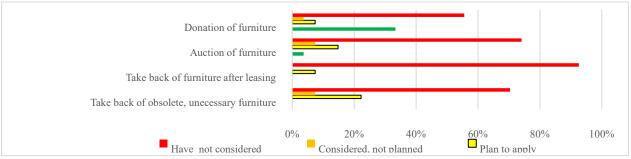


Fig. 3. Application of the principles of circular economy in the procuring new services at the end of life of product.

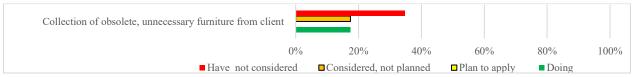


Fig. 4. Application of the principles of circular economy by the offering new services by companies at the end of life of product.





Some circular practices, however, exist: a quarter of the municipalities have donate outdated furniture (assumingly to other municipal institutions) and sometimes perform auction but there is willingness to try out more options. The discussion with the municipalities during the Circular PP project shows that companies see many bureaucratical and legal barriers for choosing more circular end of life approaches.

Discussion

Although the number of companies is too small to create a representative picture with this research, one can see that a number of companies are ready to offer more circular services as municipalities require yet: it might be related to the fact, that companies serve also private persons and other businesses which might be quicker to use new approaches if they are economically beneficial. Most of the companies that participated are micro and small size companies which might be more ready to offer new services for getting market access.

These findings show how important are market consultations prior to tenders to see what the market can offer. However, money that municipalities spend for the furniture is too small to really impact the market and also to make strategic procurements. Current practice that municipalities have decentralised or partly decentralised procurement allowing development of tender specifications by the subordinated institution might be a barrier for the strategic procurement. Such approaches as joint procurements, where several municipalities participate and thus enlarge financial volume, framework contracts for longer period might be solutions for this problem. The ongoing administrative reform that will unite part of municipalities might have a good impact to the procurement practices in municipalities by increasing the volumes of single procurements.

Conclusions

20 companies and 27 municipalities took part in the questionnaire about their readiness to offer/and uptake circular furniture and services. Although the number of participants among companies cannot represent the market it is sufficient for indicative evaluation. Results show that surveyed companies currently are more ready to offer more circular products and services as municipalities currently require. Thus, the market consultation prior the tendering can be recommended for developing more circular contracts.

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ANNEX. Questionnaire of buyers (municipalities) of possible products and services for municipal furniture

The survey was developed by the Latvian Environmental Investment Fund to study the maturity of the market and the public sector for the circular economy. Its length is 15 minutes. We will only use the information you provide in aggregated form, without specifying the source of the information. If you want to contact us, write to: zane.bilzena@lvif.gov.lv.

The Green Public Procurement Guidelines of European Commission and the experience of other countries in furniture procurement have been used to develop the questions of this survey.

We will be happy to receive your answers by April 17.

Provide information about yourself:

 Name, Surname

 Position

- 1. Name of the municipality
- 2. What is the number of employees in your municipal council?
- <10
- □ 10-49 □ 50-250
- Other

3. Describe how the procurement process for furniture in your municipality takes place?

Procurement is centralized: procurement requirements are developed centrally and common to all subordinate institutions.

Procurement is partly centralized: procurement is centralized, but each institution sets its own requirements.

Procurement is decentralized: each institution sets its own requirements and procures for the institution individually.

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	Other		

4. Expenditure on furniture per year (average over the last five years) for the municipal council?

Less than 1 thousand euros
Not less than 1 thousand euros, not more than 10 thousand euros
Not less than 10 thousand euros, not more than 50 thousand euros 50 thousand euros or more
Other

5. Expenditure on furniture per year (on average over the last five years) for institutions subordinated to the municipal council?

Less than 1 thousand euros	
Not less than 1 thousand euro	s, not more than 10 thousand euros
Not less than 10 thousand eur	os, not more than 50 thousand euros 50 thousand euros or more
Other	

6. Expenditure on furniture per year (average over the last five years) municipalities

Less than	1	thousand	euros
Less man	1	unousand	euros

- Not less than 1 thousand euros, not more than 10 thousand euros
- Not less than 10 thousand euros, not more than 50 thousand euros 50 thousand euros or more
- Other

6. Application of circular economy principles in furniture procurement

Question	Applied	Asked, have not received an offer	Plan to apply	Consi- dered, not planned	Other
1. Do you require to use recycled materials in furniture production?					
2.Do you require the labelling of plastic parts (> 50 g) for better recycling?					
3. Do you request an extended warranty for new furniture (that is, more than 2 years)?					
4. Do you buy furniture made with used furniture (such as refurbished chairs or tables)?					
5. Have you asked a furniture supplier to carry out maintenance on your furniture (ie preventive maintenance during the warranty period, such as					

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		have not received an offer	apply	dered, not planned	
checking machinery)?					
6. Have you asked the supplier for repair services for the furniture he has supplied?					
7. Have you requested the availability of spare parts for manufactured furniture?					
8. Have you requested the use of recycled packaging?					
9. Have you asked the supplier to collect used furniture packaging?					
10. Have you requested the presence of substances of very high concern (substances licensed under REACH and their candidates)?					
11. Have you outsourced furniture maintenance and repair?					
12. Do you carry out maintenance and repair of damaged, worn-out furniture on your own?					

7. If you have considered the above requirements but do not plan, what are the main reasons why you decided not to do so?

8. Application of the principles of circular economy in the use of new services

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Question	Applied	Asked, have not received an offer	Plan to apply	Consi- dered, not planned	Other
1. In your furniture purchase, have you asked furniture suppliers to take back their furniture if you no longer need it?					
2.Have you rented furniture?					
3. Have you used furniture for leasing (installment)?					
4. Have you asked (purchased a service) to renovate obsolete furniture?					
5. Have you requested a guarantee for refurbished and remodeled furniture?					

9. If you have considered the above requirements but do not plan, what are the main reasons why you decided not to do so?





10. Application of the principles of circular economy in the disposal of obsolete, unnecessary furniture

Question	Applied	Asked, have not received an offer	Plan to apply	Consi- dered, not planned	Other
1. Have to required/ used take back service of unnecessary / obsolete furniture to the supplier?					
2. Do you envisage in the procurement that at the end of the leasing period the supplier will take back the furniture supplied by him?					
3 Have you auctioned or sold furniture that you no longer need?					
4 Have you donated or sold furniture that you no longer need?					

11. If you have considered the above requirements but do not plan, what are the main reasons why you decided not to do so?

12. Do you have any comments or questions?

13. We would be very grateful if you could provide your telephone number or e-mail address so that we can contact you if you have any further questions. We will use this information for communication purposes only within the framework of this survey. If you provide an e-mail address, we will send you the collected survey results (anonymized) for both furniture manufacturers and municipalities.

Thank you for participating in the survey and for your time! If you want to contact us, please, write to: zane.bilzena@lvif.gov.lv.





Questionnaire for the furniture manufacturers for potential products and services for municipalities

The survey was developed by the Latvian Environmental Investment Fund to study the maturity of the market and the public sector for the circular economy. Its length is 15 minutes. We will only use the information you provide in aggregated form, without specifying the source of the information. If you want to contact us, write to: zane.bilzena@lvif.gov.lv.

The Green Public Procurement Guidelines of European Commission and the experience of other countries in furniture procurement have been used to develop the questions of this survey.

We will be happy to receive your answers by April 17.

Provide information about yourself:

Name, Surname				
Position				
Education	Primary school	Secondary education	Higher Education	
2. Name of the	enterprise			

- 2. What is the number of employees in the enterprise?
- \Box <10
- \Box 10-49
- 50-250
- > 250
- П Other

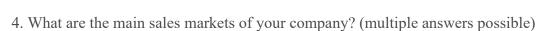
3. What is the annual turnover of the company?

Π

Less than 2 million euros

Not less than 2, not more than 10 million euros





Latvia	
Baltic States	
Scandinavia	
Other European countries	
Other	

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5. What are the types of products and services you produce? (multiple answers possible)

Furniture production	
Furniture distribution	
Furniture repair and maintenand	e
Furniture renovation and refurb	ishment
Other	

7. Application of circular economy principles in furniture procurement

Question	Already doing	Plan to apply in future	Consi- dered, not planned	Not consider ed	Other
1. Do you use recycled materials in the production of furniture?					
2. Do you label plastic parts (> 50 g) for better recycling?					
3. Do you offer an extended warranty for new furniture (that is, more than 2 years)?					
4. Do you use in production outdated furniture parts, i.e., do you renovate or refurbish furniture?					
5. Do you offer a guarantee for your refurbished and renovated furniture?					
6. Do you offer renovation and refurbishment of the customer's outdated furniture?					
7. Do you offer maintenance of your furniture?					
8. Do you provide repair services for your manufactured furniture?					
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Question	Already doing	Plan to apply in future	Consi- dered, not planned	Not consider ed	Other
9. Do you provide furniture repair services?			F		
10. Do you offer spare parts for your furniture?					
11. Do you use packaging made from recycled material?					
13. Can you provide your client the information about the presence of substances of very high concern (substances licensed under REACH and their candidates)?					

7. If you have considered those services and products but do not plan, what are the main reasons why you decided not to do so?

8. Application of the principles of circular economy by offering new services

Question	Already doing	Plan to apply in future	Consi- dered, not planned	Not consider ed	Other
1. Do you offer the customer to take back the furniture you have produced if the customer no longer needs it?					
2. Do you rent furniture?3. Do you offer furniture leasing?					

9. If you have considered those services and products but do not plan, what are the main reasons why you decided not to do so?

10. Support for the customer in the disposal of obsolete, unnecessary furniture

Question	Already doing	Plan to apply in future	Consi- dered, not planned	Not consider ed	Other
1. Do you take back / buy unnecessary / obsolete furniture from the client?					





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11. If you have considered those services and products but do not plan, what are the main reasons why you decided not to do so?

12. Do you have any comments or questions?

13. We would be very grateful if you could provide your telephone number or e-mail address so that we can contact you if you have any further questions. We will use this information for communication purposes only within the framework of this survey. If you provide an e-mail address, we will send you the collected survey results (anonymized) for both furniture manufacturers and municipalities.

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