



LAYMAN'S REPORT



LIFE FUTURE

Sustainable Urban
FUrniture: Tool design to
perform environmental
assessments in the green
procurement framework



www.life-future-project.eu

LIFE 14/ENV/ES/000703



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Project Data

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Project beneficiaries

— Coordinator beneficiary contact details

AIMPLAS

www.aimplas.es

Parque Tecnológico de Valencia

Calle Gustave Eiffel, 4. 46980 Valencia (Spain)

Phone number: +34 96 136 60 40

Contact person: Enrique Moliner Santiesteve (sostenibilidad@aimplas.es)



— Associated beneficiaries contact details

ACR +

www.acrplus.org

Avenue d'Auderghem 63 · B-1040 Brussels · Belgium

Phone number: +32 2 234 65 00

Contact person: Francesco Lembo (fl@acrplus.org)



AIJU

www.aju.info

Avda. de la Industria, 23. 03440 Ibi, Alicante (Spain)

Phone number: +34 96 555 44 75

Contact person: Raquel Berbegal Pina (raquelberbegal@aju.info)

Encarna Alemañ (encarnaalemany@aju.info)



CITY OF KOPRIVNICA

www.koprivnica.hr

Administrative department for finances, economy and European affairs

Zrinski trg 1, 48 000 Koprivnica (Croatia)

Phone number: 00385 48 279 534

Contact person: Maja Balaško Kiš (maja.balasko@koprivnica.hr)



LAS NAVES

www.lasnaves.com

Carrer de Joan Verdeguer 16-24, 46024, Valencia (Spain)

Phone number: +34 963 910 477

Contact person: Francisca Hipólito (francisca.hipolito@lasnaves.com)



UNIVERSITAT JAUME I (UJI)

www.uji.es

Avda. de Vicent Sos Baynat, s/n, 12071 Castellón de la Plana (Spain)

Phone number: +34 96 472 92 52

Contact person: Rosario Vidal (vidal@uji.es)



www.life-future-project.eu

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1. Introduction

The LIFE FUTURE project involves the development and validation of an online tool to support public bodies on the decision making related to the purchase of more environmentally friendly urban furniture, the Green Urban Furniture Tool, or in simple terms, the **GUF Tool**.

The LIFE FUTURE project aims to promote green public procurement on the urban furniture sector. The LIFE FUTURE project will allow overcoming the current difficulties encountered by persons in charge of public procurement procedures both when they have to include environmental clauses in call for tenders and assess the offers received.

The GUF Tool will assist users along the entire tender process for green public procurement of urban furniture, from the generation of environmental requirements to be included in the call to the comparative environmental evaluation of the products offered by different suppliers.



2. Methodology

For the design and development of the GUF Tool, the following actions have been carried out in the framework of the LIFE FUTURE project:

1. Technical updating to identify the legislation in force and to collect environmental information available for urban furniture.
2. Identification of the products of interest falling under the category of "urban furniture".
3. Development of a database with green public purchase criteria and environmental profiles for these urban furniture products.



4. Graphical design and functionalities implementation of the **GUF Tool**.
5. Developing an environmental assessment multiple criteria decision-making method for obtaining single scores to evaluate award criteria for green public procurement using TOPSIS.
6. Demonstration and validation of the tool through virtual and real tenders: benches and playgrounds were the selected products for the virtual tendering process.

The following diagram schematically shows the main features of the **GUF Tool** (Figure 1):

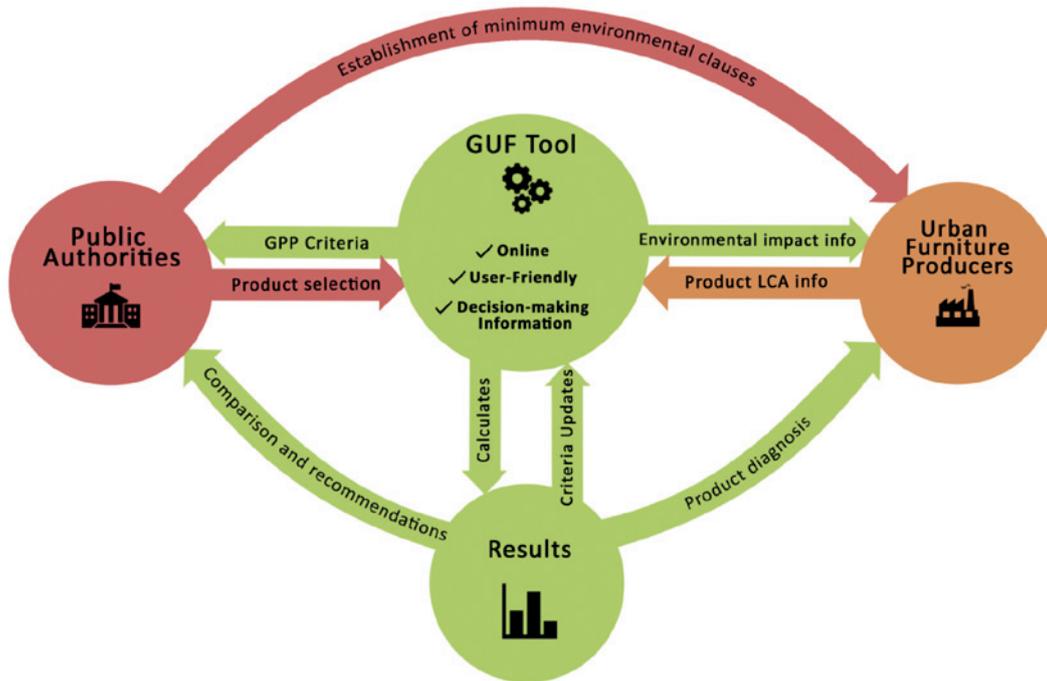


Figure 1: GUF Tool main features

3. Results

The main result coming from the work of the LIFE FUTURE partners is the GUF Tool to be used by both prescribers and manufacturers of urban furniture dealing with Green Public Procurement. This online tool makes environmental criteria selection for urban furniture easier (Figure 2) but also provides a tool for calculating and comparing the impacts these products have.

The selection of urban furniture products with lower environmental impacts is facilitated for public bodies and the inclusion of such benefits linked to their products is straightforward for manufacturers (Figure 3 and 4).

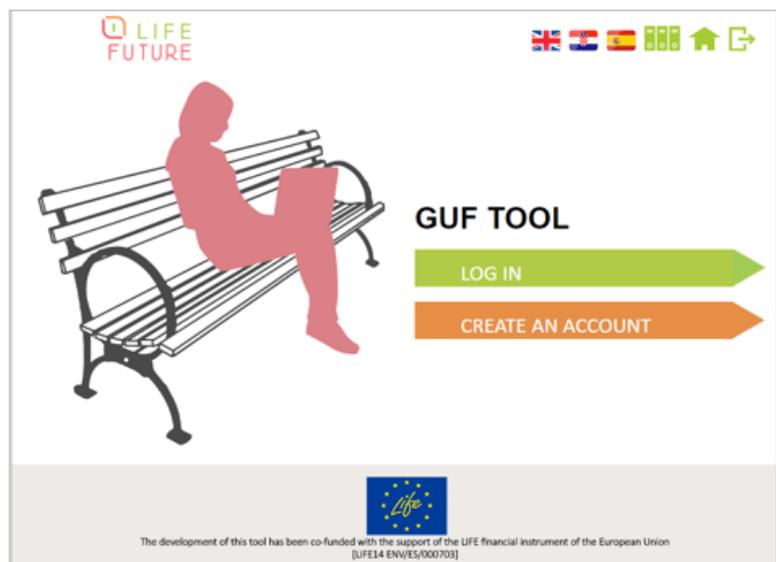


Figure 2: GUF Tool First screen

Figure 3: Selection of environmental criteria by urban furniture product in the GUF Tool



		CATEGORY		CRITERION
SPECIFICATION	1	Wood and wood-based materials	1	Legal Origin of Wood
	2	Hazardous Substances	2	Preservatives in Wood
			3	Formaldehyde Emissions of wood-based panels
			4	Surface Coating
			5	Cadmium and Nickel restrictions
			6	REACH Candidate List Restrictions
	3	Fitness for Use	7	Fitness for Use
4	Packaging Materials	8	Specific characteristics for Packaging Materials	
5	Warranty, Disassembly and Spare Parts Availability	9	Design for Disassembly and Repair	
		10	Warranty and Replacements	
AWARD	6	Recycled Materials	11	Included in product
			12	Included in Packaging
	7	Facility to Recovery	13	Recovery of Plastic Parts
	8	Extended Warranty Periods	14	Extended Warranty Periods
	9	Reduced Resource Use	15	Weight Reduction
			16	Volume Reduction
			17	Clean Energy Use
			18	Reduction of Energy Consumption
	10	Impact Reduction During Use	19	Consumables Reduction

Figure 4: Selected environmental criteria to be applied to urban furniture products.



Environmental criteria for the different categories of urban furniture products have been selected (Figure 4), arranged and detailed inside the GUF Tool. Users aiming to include them in a tender just need a couple of clicks to do so: select the product, chose the criteria to be fulfilled and save these criteria in a PDF file.

Depending on the criteria being selected for a tender, two different levels of bidding would apply on the basis of the GUF Tool and it will be accordingly labelled:

GUF **“Silver GUF”**: for those public administrations willing to merely perform a Green Public Procurement process. This level requires that products offered by suppliers comply with the selected mandatory “Specifications” criteria for being accepted in the bidding process.

GUF **“Gold GUF”**: for those public administrations that want to show a higher level of environmental commitment in the Green Public Procurement process. In addition to fulfil mandatory “Specifications” criteria, products offered by suppliers are environmentally scored and compared

to others by means of their inputs for voluntary “Awards” criteria. The results of this comparison allow public administrators to identify those products with better environmental performance.

Manufacturers can then navigate the GUF Tool, browse across the active biddings and apply for them with their products. The GUF Tool provides the fields to be filled by the characteristic of the product for fulfilling the selected criteria. The GUF Tool also provides templates to help manufacturers and suppliers to justify that these criteria are met for their products.

Public authority can check if a product complies with the selected criteria by means of a checklist also provided by the GUF Tool.

The comparison of environmental assessment for the products offered to a tender (Figure 5) will only exists for green public purchases of “Gold GUF” level. Then, the public administration which have post the bidding is the only user that can see the product details for this comparison. After the deadline of the tender, suppliers that applied for this tender are able to look at the results, where its product will be compared to others presented in an anonymous way.

Comparative results

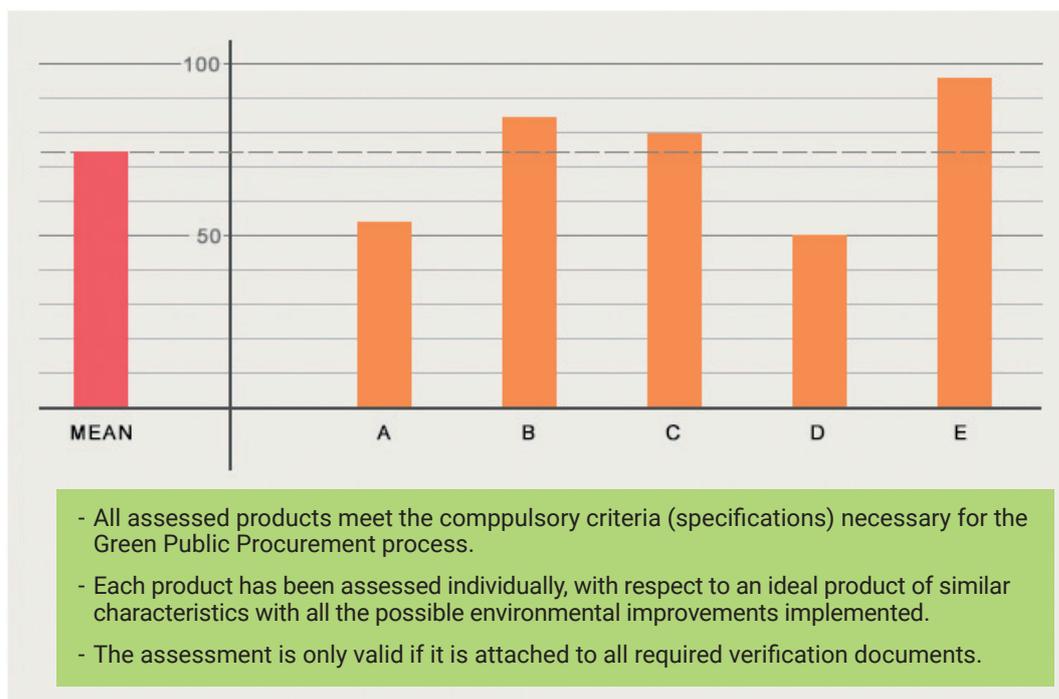


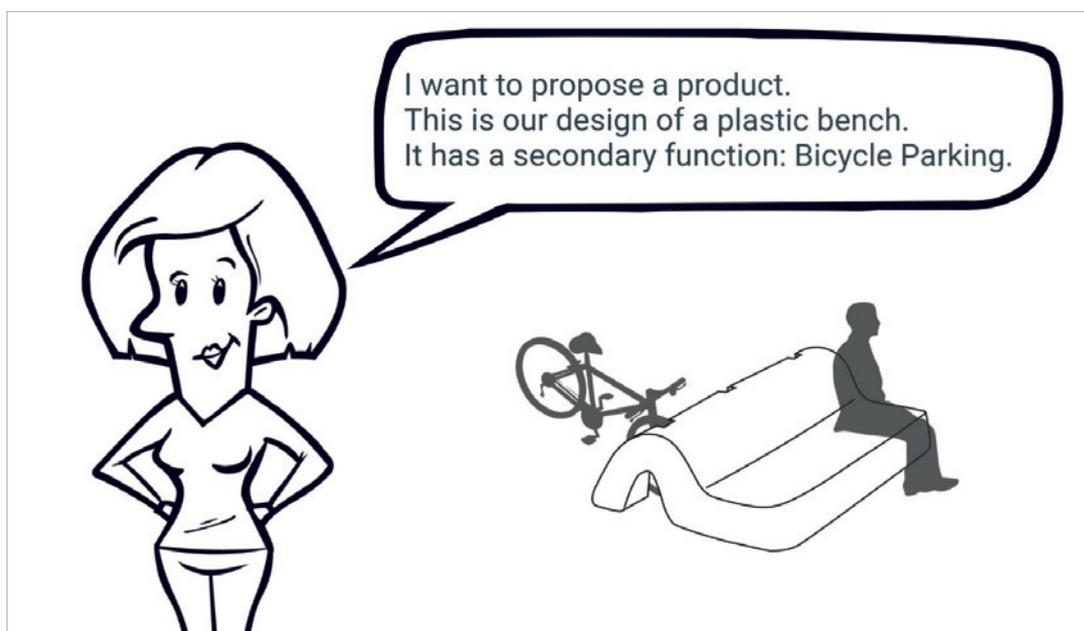
Figure 5: Example of the comparison of products presented based on the Awards achieved.

The GUF Tool also provides a personal space (entitled MyMenu) for all users, may they be prescribers or manufacturers, where they can manage their tenders/offers, documents and personal data.

All the steps for posting both biddings and offers are described in detail in the user manuals available inside the GUF Tool. A video-tutorial on “How to use the GUF TOOL” can also be consulted within the GUF Tool and is also available here (<https://www.youtube.com/watch?v=oSjrArQfCuk&t=3s>).

Besides helping public authorities to select and validate environmental criteria for urban furni-

ture products, the GUF Tool provides manufactures with a methodology for submitting offers to each tender, then asking for different documentation to be provided and finally providing an environmental score for the submitted product: the aim is to improve the environmental impacts of urban furniture products. In that sense, virtual and real green public procurements are being conducted for different urban furniture products including several environmental criteria to be fulfilled. Manufacturers are invited to apply to them. Prescribers have an adapted and efficient tool for selecting and assessing the environmental aspects of urban furniture.





4. Long-term environmental benefits

The average percentage of environmental savings of the urban furniture procured is, in general, higher than the values estimated in the project, Figure 6:

	Acidification	Eutrophication	Global warming (GWP100a)	Abiotic depletion, fossil fuels	Waste
Project	28.7%	25.5%	26.5%	15.5%	10.8%
End of LIFE FUTURE	43.1%	12.2%	40.2%	40.8%	56.1%
% Achievement	150.0%	48.0%	151.8%	263.2%	519.4%

Figure 6. Environmental progress achieved

The achievement of impact savings during project execution is very low, Figure 7, because there was an error in its estimate in the proposal. In addition, the real number of items procured is less than the planned number, and the items procured are relatively small and they have low environmental impacts.

	Eutrophication (kg PO4)	Global warming (GWP100a) (kg CO2eq)	Waste minimisation (kg)
Project	1.800	374.000	232.000
End of LIFE FUTURE	4	5.323	1.953
% Achievement	0.22%	1.42%	0.84%

Figure 7. Achievement of the impact savings during project execution

	Eutrophication (kg PO4)	Global warming (GWP100a) (kg CO2eq)	Waste minimisation (kg)
Project	1.800	3.740.000	232.000
End of LIFE FUTURE	2.352	3.963.642	704.143
% Achievement	130.6%	106.0%	303.5%

Figure 8. Achievement of the impact savings after project execution

5. Long-term socio-economic impact

Employment and social inclusiveness issues are considered essential by the public authorities, who promote these priorities through their procurement processes. Some of the social impacts are directly targeted by tenders, such as the participation of companies that could employ disabled persons or the fight against illiteracy. Moreover, by taking into account environmental aspects in the procurement processes, some of the local businesses could be favored because they help to minimize the impact pro-

duced by the transport and distribution of urban furniture products.

To obtain valid information to monitor this impact in the case of the LIFE FUTURE, in the case of the type of product, the type of purchases made (quantities, reason for purchase, etc.) and mainly in municipal management (involvement of one or several departments, etc.), it would be necessary to do a greater follow-up in the temporary escalation.

6. European Added Value

Lately, public procurement in Europe is facing important new challenges: high public deficits and the resulting need for a more efficient use of public money, a growing demand that public purchasing contributes to the achievement of overall societal goals (such as fostering innovation, fighting climate change, promoting social inclusion), etc. In 2013, the European Commission in its Communication on Integrated Product Policy (IPP) encouraged EU Member States to draw up publicly available National Action Plans for greening their public procurement. Despite the efforts made by the European Commission, the implementation of GPP has not been as successful as expected.

Recently, the EU has carried out a legislative update to help public procurers cope with the new challenges of public procurement (Directive 2014/23, Directive 2014/24, and Directive 2014/25): The LIFE FUTURE project is aligned with these challenges since it aimed to boost the GPP of urban furniture in Europe.

The LIFE FUTURE project has been implemented at local level in Spain and Croatia, providing a good experimentation basis, but the problems addressed by the project occur in many other European countries (e.g. Portugal, France, United Kingdom, etc.). In addition, the environmental problem associated with the non-implementation of GPP and the solutions provided by this project can be the same or similar in any EU country, thus constituting a chance for transferring the project results to other European cities outside Spain and Croatia. For this reason, the project contemplates a broad plan just dissemination, communication is while the project is still implemented to guarantee the visibility and transferability at the EU level, allowing the public and private sectors to be aware of the project's results and promoting the use of such results in the field of EU policy and legislation.

The GUF Tool needs to be disseminated in order is fully understood by public bodies and manufacturers aiming to use it, focused on their own scope: making environmental selection of criteria and product easier for the firsts and checking the environmental benefits applied to their products for the lasts.

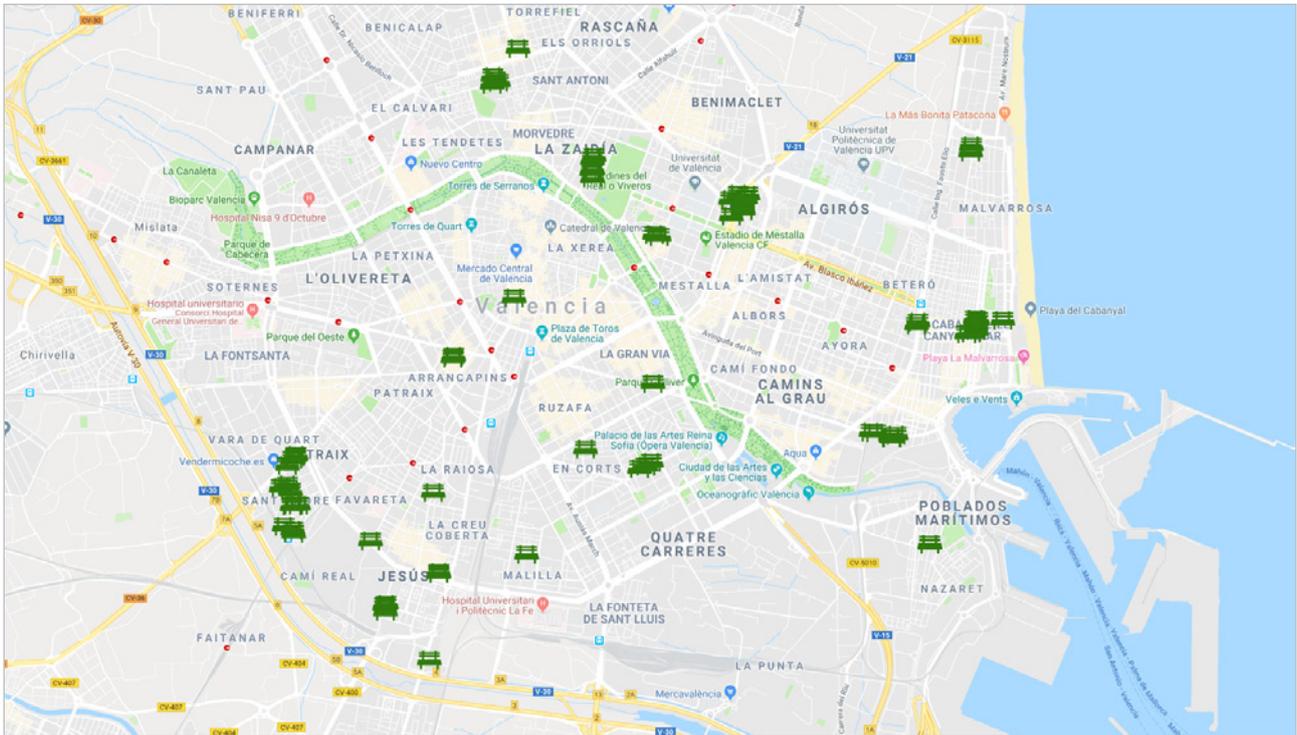


In that sense, the GUF Tool has been showed to different audiences in dedicated Capacity Building Seminars.



7. GUF Tool in action

The GUF Tool has been used for real green public procurement in València. A tender has been proposed for benches and those fulfilling the criteria were purchased. Here it is a map (<https://www.google.com/maps/d/viewer?mid=1CXL0cqRGDFjRQ-9llqcvg0l9xJJ7rcJg&ll=39.471922169011854%2C-0.3654355232655462&z=14>) of these 71 benches:



In the same line, Koprivnica made this effort for purchasing 2 benches, 3 flower pots, and 2 waste bins as they are installed along Koprivnica.





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