

URBAN INNOVATIVE ACTIONS

APPLAUSE project

“Engaging citizens in the circular economy”

Zoom-In report 2 by UIA expert Jorgina Cuixart, February 2020



EUROPEAN UNION
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Engaging citizens in the circular economy

REPORT OUTLINE

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 - 5.3. Future outlook, engaging citizens as responsible consumers
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1. Introduction to APPLAUSE

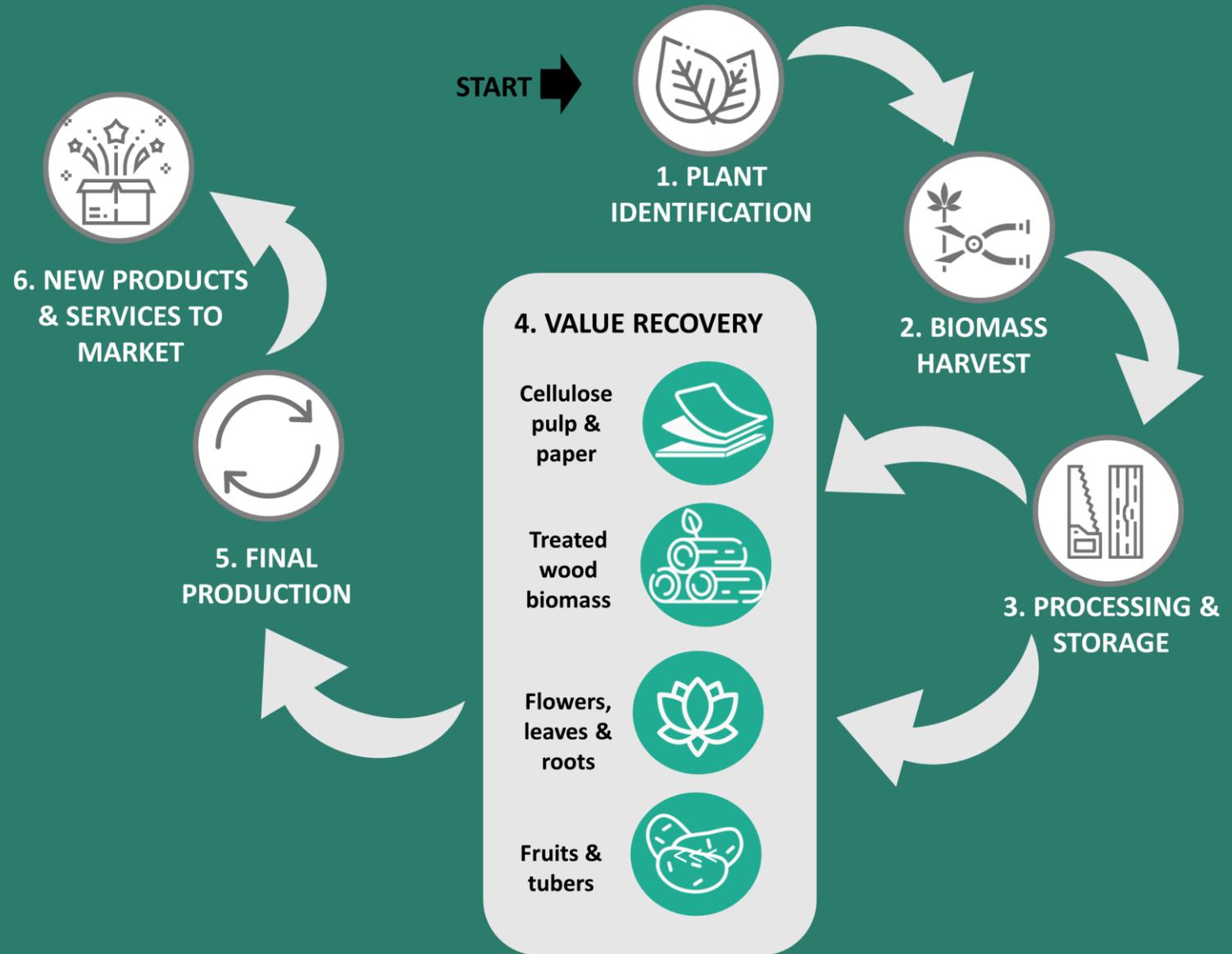
APPLAUSE is a project led by the City of Ljubljana that aims to find a solution to the problems caused by invasive alien plant species (IAPS) in cities. IAPS are a major threat to the local biodiversity. However, instead of considering IAPS as something harmful that needs to be removed, Ljubljana applies the principles of zero waste and the circular economy, to convert IAPS into a useful resource. This resource is starting point of a new circular business model.

Through this approach, Ljubljana is shifting from a linear model for managing IAPS (collect, transport and incinerate/compost) to a truly circular one that delivers value to the environment, the economy and citizens.

APPLAUSE circular model is divided into six main stages: plant identification, biomass harvest, processing & storage, value recovery, final production and market introduction of new IAPS-based circular products and services.

APPLAUSE

circular model for
the management
of IAPS





In APPLAUSE circular model, the recovered material is used to produce a wide range of items (timber and wood furniture, handcraft paper products, natural dyes, food, organic pesticides...) available to the local community as well as to tourists. Also, the project's research partners are taking any waste residues produced during this process to convert it into useful components for industry (biochemical compounds, bioplastics...).

Timber and wood products



Paper making



Dyes



Food components



Organic pesticides



Chemical compounds





Through a variety of educational and awareness raising actions, citizens are encouraged to participate in different stages of APPLAUSE circular model.

To do so, Ljubljana implements a participatory model that adapts to the needs and interests of different target groups. Such tailored approach is proving successful in ensuring a high level of participation. Its success and the lessons learned during the first two years of implementation are presented in the following pages.



Ljubljana's IAPS festival, October 2018



2. Why engaging citizens?

Since the very start, the team in Ljubljana knew that the involvement of citizens was key for the success of the APPLAUSE project.

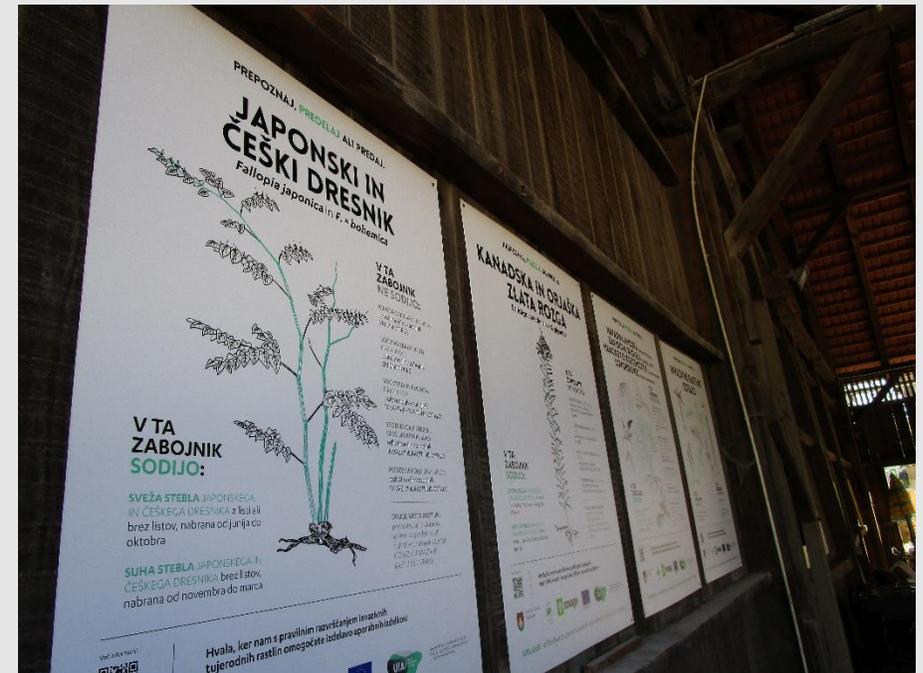
IAPS is a widespread problem that goes beyond the city's limits. In Slovenia, the LIFE-funded project ARTEMIS (2016-2020) is already working on raising the awareness of forest owners about the problems posed by IAPS. APPLAUSE would complement such efforts by focusing on tackling this issue within the city's limits.

While most of the project's activities to remove IAPS take place in publicly-owned land, APPLAUSE aims to empower private land owners to take action against IAPS. Only in this way, APPLAUSE can achieve a much wider impact.



However, the participation of private owners is only essential for the first two stages of APPLAUSE circular model: plant identification and biomass harvest.

For the entire model to operate, it is necessary to mobilise a “critical mass” of citizens. In the end, they are the ones who will make use of the new IAPS-based products. This “critical mass” will produce and consume such products, but first they need to be well aware of the problems caused by IAPS; know which IAPS are present in their local environment; and learn how a more circular management can turn such waste into a useful resource. Only through this process, citizens will be able to understand the value of the products offered and create a demand that ensures the sustainability of APPLAUSE circular model over time.



Public information on IAPS, displayed at a Ljubljana’s waste collection centre



Why is citizen engagement important for Ljubljana?

Ljubljana has a long tradition in citizens' engagement. Environmental awareness already started in the 70s and 80s, specially in schools. Also, since 1991, every spring Ljubljana hosts the "Za lepšo Ljubljano" ("For a more beautiful Ljubljana") campaign. This campaign involves many stakeholders including the Tourist Board, the Municipality, NGOs, district authorities, divers (who clean the riverbed), fisherman, fire brigade, botanical garden, The campaign always starts on 22nd March – World's Water Day, and ends on 22nd of April – World's Earth Day.

As a result of all these efforts, Ljubljana is the European Capital with the highest separate waste collection rate (69%). Also, winning the European Green Capital award 2016 made people realise they live in a really green city and raised even more their awareness of environmental issues. This means they also become more demanding regarding new policies and initiatives aimed at protecting the environment. So in APPLAUSE, they cannot be disappointed.





And why is citizen engagement important for the circular economy ?

Citizens are at the core of our economic system as consumers of goods and services. The circular economy aims to transform such economic system towards one that phases out waste, keeps materials and products in use for longer and regenerates our natural systems. Key for its success is then to make it easy for citizens to:

- Make sustainable choices
- Minimize waste
- Buy locally
- Use products for longer by reusing, repairing, sharing, upgrading or upcycling
- Shift from product ownership to shared services and products



3. APPLAUSE approach towards citizens' engagement

The City of Ljubljana has put in place a very ambitious citizen's engagement plan that goes beyond awareness raising. Its approach is really smart as it allows citizens to get engaged at three different levels depending on their degree of commitment, time availability, interests, etc.

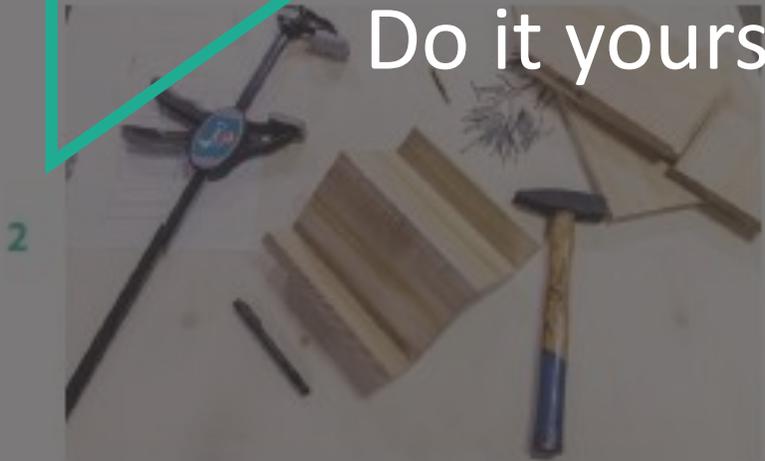
These three levels of engagement are:

1. Do it yourself
2. Let's do it together
3. Hand over



Level 1

Do it yourself



2

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OBLIK

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1. Glede
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The “Do it yourself” (DIY) level empowers citizens to take independent action on IAPS identification, removal and use.

APPLAUSE is developing a set of tools to support them in their efforts:

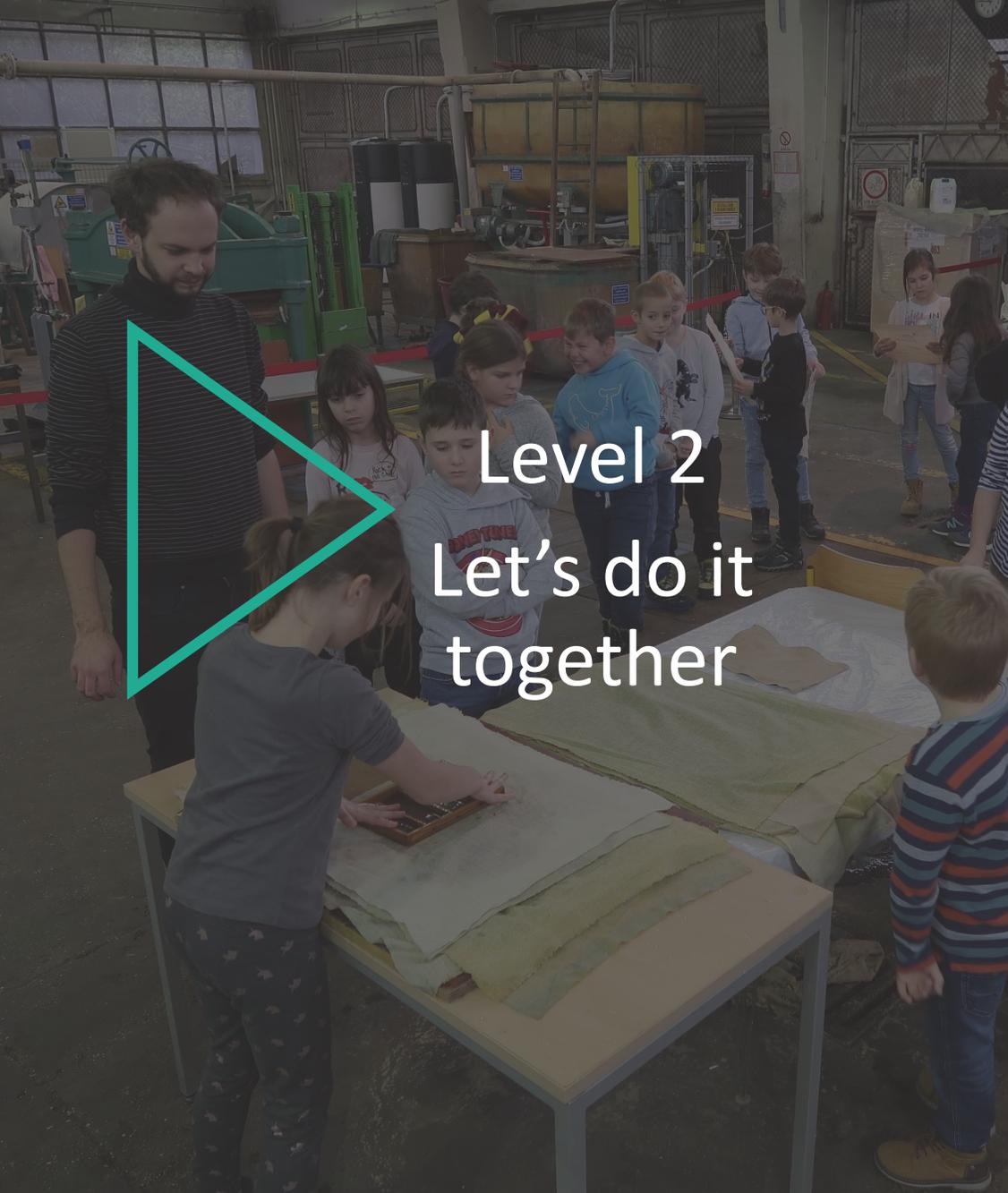
- A printed and electronic catalogue to help identify and remove IAPS.
- A printed and electronic DIY catalogue with instructions on DIY handcraft paper making, DIY wood working projects and on how to make home formulations for organic pesticides and extract natural dyes.
- Short video clips that help citizens recognise 25 selected IAPS. For 15 of them, they have also produced interactive 3D models.

Specific public campaigns and events are implemented to encourage citizens to use IAPS at home. Also, the project is developing a new public App that automatically recognizes IAPS by taking a photo, helping citizens’ to identify and safely remove IAPS.



Another activity that promotes DIY culture are the culinary recipes' contests. Some parts of invasive species found in Ljubljana are edible such as the Jerusalem artichoke tubers or the cherry plum fruits. Each year, APPLAUSE organises a culinary contest that uses these IAPS as ingredients. The awards are given during the annual IAPS festival in October. A recipe booklet will be produced by the end of the project.





Level 2 Let's do it together

The “Let’s do it together” level is targeted to enthusiasts who are interested in doing activities together with the community. It also targets schools and university students who tend to be more willing to participate in guided activities.

The main citizen’s engagement activities carried out by the APPLAUSE team are:

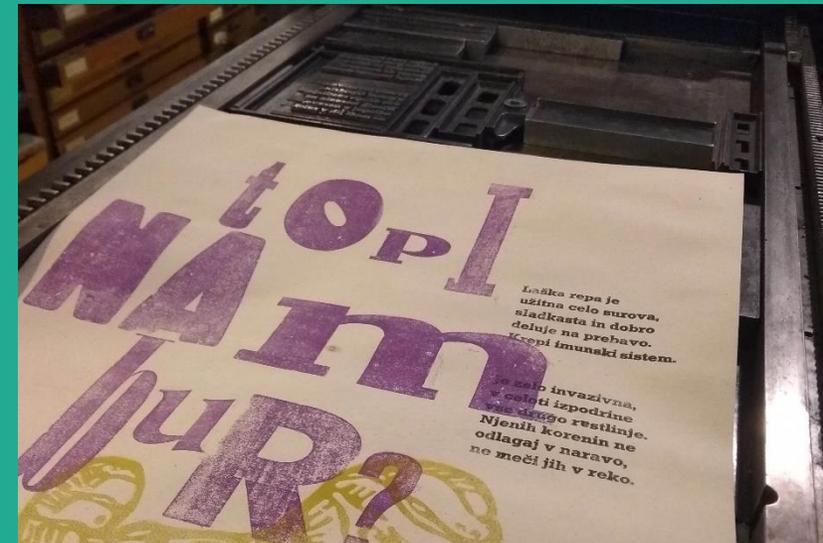
- Harvesting campaigns of selected IAPS at given locations
- Handcraft paper-making and wood workshops
- Wood letterpress printing and poster design workshops
- Workshops on home preparation of dyes and home dyeing textile
- Culinary workshops

These activities always start with an educational workshop on the importance of an adequate IAPS management.



Paper is now digitally printed, but not too long ago, printing was carried out through letter-pressing, a process which uses inked raised surfaces (for example metal and/or wood moveable types) against sheets or rolls of paper.

TipoRenesansa is a nonprofit studio for typography and printing heritage located in Ljubljana. In APPLAUSE, they organise poster design workshops for school children using wood letters and inks made of IAPS. This is a unique example that invites citizens to participate in the circular economy while supporting creative design and cultural heritage preservation.



Poster printed using IAPS wood letter types



Level 3 Hand over

The last level of citizen's engagement is the "Hand over". In this case, citizens are only asked to voluntarily bring the IAPS found in their gardens to a collection point as they would normally do for any bulky item they want to dispose. The biomass is then pre-processed and used by any of the partners in APPLAUSE.

Appropriately labelled containers (for a total of 11 IAPS) have been placed at one of the city's waste collection centre.

Information leaflets have been widely distributed among citizens to inform them about these new collection points. The City has also launched promotional campaigns in spring, coinciding with the beginning of the growing season.



4. How is this approach implemented?

APPLAUSE goes beyond raising citizens' awareness about IAPS. Its entire engagement plan revolves around collaboration and relationship building.

When engaging any individual, APPLAUSE considers three main touch points:

- The time when a citizen makes the decision to participate
- The first time they participate
- Their continuous participation

The following pages provide an example of such approach for community activities, organised as part of the “Let’s do it together” level.

PARTICIPATION IN COMMUNITY ACTIVITIES



TOUCH POINT 1

A citizen makes the decision to participate in the activity



TOUCH POINT 2

Participating for the first time



TOUCH POINT 3

Continued participation

KEY CONSIDERATIONS:

- Make citizens aware of the opportunity. Main channels used: City of Ljubljana's mainstream communication tools; key collaborations with environmentally conscious associations, garden centres, Natura 2000 and similar projects.
- Make sure the proposed activity is appropriate to them. APPLAUSE promotes different activities to different target groups. Harvesting campaigns are targeted to associations and high school or university students. While the paper making workshop is mainly promoted to schools.
- Motivate citizens by appealing to their environmental values. The campaign "For a more beautiful Ljubljana", where preserving biodiversity and environment protection is a core idea, has been very successful.
- Provide clear guidance on the purpose of the activities and how to get involved.

PARTICIPATION IN COMMUNITY ACTIVITIES



TOUCH POINT 1

A citizen makes the decision to participate in the activity



TOUCH POINT 2

Participating for the first time



TOUCH POINT 3

Continued participation

KEY CONSIDERATIONS

- Ensure that tasks and objectives are consistent and do not lead to confusion.
- Provide rewards for first attendance (e.g. gloves, T-shirts or booklets).
- At the start of the activity, establish personal contact to identify the reason why the participant is attracted to the activity. The main reasons expressed by participants have been: wanting to know more about IAPS and how to remove them; willingness to participate in physical activities (in the case of harvesting campaigns); or wanting to do something nice for their city.

PARTICIPATION IN COMMUNITY ACTIVITIES



TOUCH POINT 1

A citizen makes the decision to participate in the activity



TOUCH POINT 2

Participating for the first time



TOUCH POINT 3

Continued participation

KEY CONSIDERATIONS:

- Collect citizen's contact information with consent in order to build a community and maintain regular communication.
- Contact them to praise their contribution and thank them for the time spent.
- Establish tools so that participants can provide feedback (website and email).



MAKING USE OF EXISTING COMMUNICATIONS CHANNELS TO MAXIMISE EXPOSURE

APPLAUSE has opted to use existing communication channels, specially those from the City of Ljubljana, to reach out to citizens. Such approach has proved to be more efficient and effective in engaging a wider audience than creating completely new communication channels.

The main channels used to make citizens aware of the opportunities to participate (Touch Point 1) have been:

- Dedicated page on City of Ljubljana official website and regular posts on City of Ljubljana's social media accounts (Facebook, Instagram and YouTube). Results so far: 25k unique visitors to the project's website (Feb18 – Feb20); 20,4k Facebook followers; 10,3k Instagram followers; and more than 16K views of the project's videos on YouTube.
- E-newsletter sent to 560 municipal employees and printed district and city-wide bulletins posted to all households (121,800 free copies distributed 10 times a year).
- 570 digital displays in 158 public buses. E.g. 12 days of showing the invitation to the IAPS festival for 15 seconds translates into 228,000 showings.
- 39 educational videos produced; 2 of them broadcasted 26 times (approx. 70.000 viewers) on 4 different regional TVs around Slovenia.



THE ANNUAL IAPS FESTIVAL

A major citizen engagement activity of APPLAUSE is the IAPS Festival, a day-long event that takes place each October. At a stand located in the city centre, citizens can learn about all activities taking place in APPLAUSE, from plant identification, to scientific studies on industrial uses of the plants, wood properties or food recipes. Workshops on paper making, letterpress printing or sustainable design are organised all day long. In the afternoon, the festival hosts an awards ceremony for the culinary contest.

Two editions have already taken place, in 2018 (500 participants) and in 2019 (650 participants). The City of Ljubljana has realised that as important as reaching out to citizens, the festival is an opportunity to gather all APPLAUSE partners and spend the day together talking to citizens about the activities they develop in the project. It is a great day to foster team spirit.



IAPS festival 2019



5. Results of citizen's engagement activities according to APPLAUSE circular model

As mentioned earlier on, the APPLAUSE circular model for IAPS management is divided into 6 stages that start with plant identification and harvest, and finish with the use and consumption of products made of IAPS.

Different activities have been designed to invite participants to take part in different steps of the process. The following sections showcase the results obtained so far and key lessons learned.



5.1 Citizen's engagement in plant identification and harvest

The main activities aimed at encouraging citizens to identify and harvest IAPS are:

- Educational campaigns (workshops, short videos, articles).
- An App, still under development, that enables citizens to use the camera on their mobile phone to identify selected IAPS present in the environment.
- Voluntary harvesting actions.
- Collection point for IAPS disposal at a waste collection centre.



The most important activity is the organisation of the voluntary harvesting actions. They consist of a 2–3 hour action in a city location where presence of IAPS has been identified. Protective gloves and garden bags are provided. Citizens, supported by professional staff, identify and remove the IAPS they find. At the end, the biomass collected is transported to be pre-processed and stored.

These campaigns are often organised during winter and early spring when the biomass is optimal for further processing. The campaigns continue regularly throughout autumn.

Initially, the project aimed at organising 30 voluntary actions each year to remove IAPS, however, this target has been reduced since finding volunteers has been more difficult than initially foreseen.

Number of actions organised:

- **2018:** 9 actions with 140 participants
- **2019:** 15 actions with 282 participants
- **2020 (planned):** 11 actions with 220 participants



Lessons Learned

- Harvesting requires volunteers to undertake physical activity, which means that it is not suited to everyone. So the focus has been on engaging certain groups such as high school students and university students, specially those interested in natural sciences and forestry, as well as associations interested in outdoor activities,
- While spring is the right time for these actions, the weather can be unpredictable. Last year, some actions had to be cancelled in May and June due to rain. July is not a good month since many people are on holidays. But, some additional actions can be planned in winter as it is the right time to collect dry material needed for paper-making.



Students during a harvesting action in 2018.



Lessons Learned (continuation)

- The project has reduced the target number of voluntary actions since it has been difficult to find sufficient volunteers. Simply, people prefer to work on their gardens during weekends or afternoons. Also, other APPLAUSE activities such as the paper making workshop are much more popular among citizens.
- To organise a voluntary action, it is necessary to find a location which is big enough and has sufficient presence of IAPS. This has been particularly challenging as IAPS sometimes are found in small quantities and are too scattered in different areas.



Volunteer harvesting action, 2019.



Lessons Learned (continuation)

- Some volunteers are willing to repeat the experience. The team in charge of these actions has established good relationships with those who have participated, making much easier the organisation of subsequent voluntary actions with the same group of people.
- Finally, the team has realised that not much biomass is collected during voluntarily harvesting campaigns. Instead, the main benefit of these actions is to raise awareness and show citizens how to identify and remove these plants so that they can do it in their own land or garden. Consequently, the circular model cannot rely too much on IAPS biomass collected by citizens. Instead, biomass needs to be properly harvested by VOKA SNAGA, the public company in charge of green area management.



Volunteer harvesting action, 2018.



5.2 Citizen's engagement in value recovery and use of IAPS for other purposes

In the pre-processing and value recovery phases, there is not much opportunity for citizen's engagement. Once the IAPS biomass has been collected, it needs to be pre-processed and properly stored. This task is handled by VOKA SNAGA, TISA and its contractors. Other APPLAUSE partners are then responsible for turning this pre-treated biomass into materials that can be used such as cellulose paper pulp, treated wood or dried flowers.

However, thanks to the DIY catalogue, some citizens may opt to transform the biomass into a useful resource themselves. Easy practices that citizens can do at home include using IAPS as organic pesticides or extracting natural dyes.



With the recovered biomass transformed by APPLAUSE partners into a useful resource, citizens are invited to participate in the following activities, free of charge:

- Handcrafted paper-making workshops
- Wood workshops
- Letterpress printing and poster design
- Culinary workshops

Key results:

- 71 handmade paper workshops
- 6 wood workshops
- 13 letterpress printing and poster design workshops
- 6 free culinary workshops

Total number of participants: 2,260 approx.



Lessons Learned

- Getting people interested in such community activities is much easier than the voluntary harvesting actions. Given the high demand, the team is organising more workshop activities than initially planned.
- In particular, the handcrafted paper workshop is very popular. Many pupils from primary schools and kindergartens have participated as well as families and senior citizens.
- During the first part of the workshop, all participants receive a short educational talk about IAPS, the problems they cause and how Ljubljana is trying to find a solution using the principles of the circular economy. This part is really important to raise awareness and make them value the workshop even more.



Making handcraft paper at the workshop



Lessons Learned (continuation)

- Both the paper-making and the wood workshop have a small showroom where different wood and paper products are exhibited. This showroom is a great opportunity for citizens to see the new products that later on will be able to purchase.



Showroom at the paper-making workshop



5.3 Future outlook, engaging citizens as responsible consumers

The circular model of APPLAUSE will eventually work if citizens (both locals and tourists) value the end result. This end result can be the handcrafted paper that they can take back home along with the fun experience of the workshop, a small furniture item made of IAPS wood purchased in a local shop or a Christmas decoration made of IAPS paper.

Considering citizens as consumers is part of the business model the APPLAUSE team is working on. In this business model, it is crucial to plan how to market the products and services to citizens, bearing in mind that the true value is not the product itself but the green story behind it (e.g. protecting local biodiversity, turning something harmful into useful, preserving heritage handcrafted techniques, etc.).

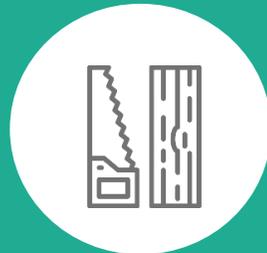
SUMMARY – Level of importance of citizens’ participation in each stage of APPLAUSE circular model



PLANT IDENTIFICATION



BIOMASS HARVEST



PROCESSING & STORAGE



VALUE RECOVERY



FINAL PRODUCTION



USE OF NEW PRODUCTS & SERVICES

High				High	High
	Medium		Medium		
		Low			

6. Conclusions of the second Zoom-in report

RECOMMENDATIONS FOR OTHER LOCAL AUTHORITIES

- Citizens play a key role in the circular economy as consumers of goods and services. Any activity promoted by a local authority needs to make it easier for citizens to make sustainable and responsible choices.
- APPLAUSE proves that its focus on a local problem (IAPS) works. And that making something useful from waste achieves much more (in terms of environmental awareness, preservation of cultural heritage, scientific discovery, artistic expression) than simply disposing that waste.
- Compared to other environmental issues that are well known to society, APPLAUSE is undertaking an arduous job in raising awareness and engaging citizens in a topic such as IAPS that is quite unknown. And it does it in a really smart way proposing to citizens three levels of engagement: the DIY, the “let’s do it together” and the “hand over”. The “let’s do it together” level is the most resource intensive. Therefore, it is important to plan ahead the future continuation of such activities once the project reaches its end.
- Finally, some of the activities, such as the harvesting campaigns, might not be as popular as one may have hoped. But gaining that experience is part of the project. The APPLAUSE team has been capable of limiting its scope (reducing the number of campaigns) without affecting the rest of project activities. Also, it has managed to establish a good partnership with the most committed actors, in particular the Biotechnical Faculty, to increase participation.

Credits

ICONS AND IMAGES

Icons provided: by www.flaticon.com

Photos taken by: Branka Trčak, Simona Berden, Zala Strojín Božič, Jorgina Cuixart, N.Rovan, Pexels

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