



INNOVATIVE DIGITAL WATERMARKS AND GREEN SOLVENTS FOR THE RECOVERY AND RECYCLING OF MULTI-LAYER MATERIALS

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DELIVERABLE N°1.1 Consumer survey questionnaire

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DELIVERABLE
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Page 2 of 14

Table of Contents

2	<i>Introduction</i>	3
3	<i>Proposed Sequence of actions</i>	4
4	<i>Plastics Recycling Survey Questionnaire</i>	5



2 Introduction

Work package 1 of the Sol-Rec2 project has a focus on consumer surveys and consultation with industrial players. This is because it is acknowledged that public engagement is critical to the successful implementation of any new recycling strategies that necessitate changes in consumer behaviour. The work package will establish an on-going dialogue with both the public and key industry stakeholders in order to ensure acceptance of the proposed innovative Sol-Rec2 sorting and recycling strategies. Key objectives are to:

- Generate baseline data regarding current public attitudes and behaviour towards recycling and disposal of multi-layer packaging waste,
- Consult with key players in the food and pharmaceutical industries to identify barriers that currently restrict the recycling of laminate food packaging pouches and pharma blister packs,
- Establish positive public and industry perceptions of the Sol-Rec2 technology.

One of the first tasks (T1.1) is to carry out consumer surveys to determine plastic recycling behaviours in the European public. The survey is being undertaken by IPM2 with assistance from AIMPLAS, Plastigram Industries and TWI. The survey will be carried out across Europe to enable the Sol-Rec2 team to gain a thorough understanding of current consumer attitudes towards multi-layer packaging and the options available for disposal and recycling of these materials. The questionnaire will be promoted at places with high consumer activity where multi-layer packaging is available, like local grocery stores or supermarkets, pharmacies, and with other stakeholders on a regional level to gain a truly representative picture of the consumer audience. Demographic data will be collected in the surveys, allowing the consortium to undertake a detailed statistical analysis of differences in behaviour based on factors such as age, gender, ethnicity, and level of education. To obtain an informed picture of how recycling and waste management attitudes vary across different regions of Europe, the surveys will be carried out in at least eight different countries. These are France, Spain, Italy, Germany, The Netherlands, Czech Republic, Hungary and the United Kingdom. A minimum of 300 participants will be sampled per country.



3 Proposed Sequence of actions

The survey questionnaire comprises thirty questions which should take no more than **five minutes** to complete.

It is being made available both digitally and in hard copy.

The survey will be in English but also translated into the native language of the eight countries being surveyed.

The content of the survey questionnaire has been compiled and agreed by the Sol-Rec2 team and it is included below in this document.

The survey was finalised on schedule at the end of month 2.

The next stage is to undertake a small field trial in the UK to gather a user response and to collect recommendations for any final changes or improvements.

Once the results of the initial field trial have been reviewed, the survey will be issued on a wider scale in English and also translated into the native language of the seven countries whose first language is not English.

The results will be collected and compiled into a suitable database. They will then be analysed country by country.

The information obtained will be used to inform the ongoing Sol-Rec2 strategy and also help to focus the dialogue for the consultation with key industrial players that is being led by TWI immediately following this initial consumer survey. Anonymity is a survey requirement, and it is ensured by the careful choice of questions. It will not be possible to identify any respondents from the information they provide.



4 Plastics Recycling Survey Questionnaire

SOL-REC2

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Plastics Recycling Survey Questionnaire

Sol-Rec 2 is a European Commission funded research project, that is developing new ways to recover and recycle multi-layer plastic materials used in medicine and food packaging. The project team is interested in better understanding the opinions of the general public about plastic recycling.

This short survey is being conducted to determine current consumer attitudes towards multi-layer plastic packaging, the materials used and the options available for its disposal and recycling.

It is aiming to identify differences in attitudes and behaviour based on factors such as age, gender, ethnicity, and level of education. It will also examine variations in behaviour across different European countries.

All information is collected anonymously and it will be aggregated for analysis. We are expecting to collect between 2000 and 3000 responses. The summary results may be made publicly available, but individual questionnaires will be kept confidential by the Sol-Rec2 team. We are fully committed to anonymity and it will not be possible to identify individual respondents from their responses.

There are thirty questions and the survey should take around five minutes to complete.

Thank you for your cooperation and help.

The Sol-Rec 2 team.



Section 1 - About You and Your Location

1) How old are you?

- 15-24
- 25-34
- 35-44
- 45-54
- 55-64
- 65-74
- 75-85

2) To which gender do you identify?

- Female
- Male
- Other
- Prefer Not to Say

3) What is your ethnicity?

- Asian
- Black or African American
- White European
- Other
- Prefer not to say

4) Where do you live?

- Czech Republic
- France
- Germany
- Hungary
- Italy



- Spain
- The Netherlands
- United Kingdom
- Other (specify) :

5) What is your level of education?

- Primary School/Technician/Apprentice
- Secondary School/High School Diploma/Technologist
- Bachelors Level Graduate Degree
- Masters or other Post Graduate Degree
- Doctorate Degree



Section 2 - Your Opinions on Plastics, Pollution and Recycling

6) Are you aware of plastic pollution and the impact it has on the environment?

- Yes
- No
- Aware but don't know the impact

7) Do you think that plastic pollution affects you or just the environment?

- Affects me and the environment
- Just the environment
- Don't know

8) Do you know what happens to plastic waste?

- It is a biodegradable material so it eventually disintegrates
- It never fully goes away; it just breaks into little pieces
- There is no such thing as plastic waste, all plastic is recycled
- Part of it is recycled, the rest goes into landfill or pollutes the environment
- It is dumped in rivers, lakes and the sea
- I don't know what happens to it

9) Where does the majority of European plastic waste end up?

- Rivers and oceans
- Burned for energy
- Landfill
- Recycled
- Don't know

10) Do you help at all with reducing plastic pollution?

- I help a lot
- I help a little
- I don't help



- I would like to help but don't know how

11) Is there much plastic pollution around where you live?

- A lot
 A moderate amount
 A little
 None at all
 Don't know

12) Do you think that your government is doing enough to address plastic pollution?

- Yes, they are doing enough
 No, they aren't doing enough
 Don't know



Section 3 - Plastics in Blister Packs for Medicines

13) Do you know if plastic medicine blister packs are recyclable using normal recycling methods?

- Yes
- No

14) What share of medicine blister packs do you think are recycled at the moment?

- Not recycled
- 0 to 25%
- 26 to 50%
- 51% to 75%
- 76% to 100%

15) Would you like to see plastic medicine blister packs replaced with a more environmentally friendly alternative packaging approach?

- No
- Yes, as long as the cost didn't increase
- Yes, as long as the cost increase was no more than 20%
- Yes, along as the cost increase was no more than 50%
- Yes, I am not concerned about the additional cost.

16) Would you be willing to recycle your plastic blister packs via a suitable scheme?

- No
- Yes



17) Would you be willing to drop off blister packs at your local pharmacy for recycling?

- Yes
- No

18) Would you agree with increasing taxes to encourage the recycling of more medicine packaging?

- Yes
- No

19) Would you support a deposit scheme to encourage recycling of medicines and packaging ? A refund would be given when the unused medicine and packaging is returned for recycling.

- Yes
- No



Section 4 - Plastics in Food Packaging

20) Would you prefer the use of biodegradable (compostable) food packaging over the use of traditional fast-food packaging?

- No
- Yes, as long as the cost didn't increase
- Yes, as long as there was no impact on the food lifetime
- Yes, as long as the cost increase was no more than 10%
- Yes, along as the cost increase was no more than 20%
- Yes, I am not concerned about the additional cost.

21) Would you be willing to pay a little more for environmentally sustainable food packaging.

- Yes
- No

22) How effective do you believe recycling is in preventing plastic multilayer food packaging waste?

- Very effective
- Somewhat effective
- Not very effective

23) What reasons would discourage you from recycling food packaging? Please tick all that apply.

- Unsure how to recycle
- Don't have time
- Not important
- No access to recycling facilities



24) Would you like to see plastic-free aisles in shops/supermarkets?

Yes

No

25) Do you look at food packaging to see if it can be recycled?

Yes

No

26) Would you support the introduction of tax/surcharge system to encourage the recycling of more food packaging?

Yes

No



Section 5 - Final Questions About Your Views on Plastics

27) **We use too much plastic; alternatives should be used where possible.**

- Agree
- Disagree
- Neither agree or disagree

28) **Europe must take urgent action to protect the environment and reduce the amounts of plastic waste and waste mismanagement.**

- Agree
- Disagree
- Neither agree or disagree

29) **I would be willing to pay more for alternatives to current plastic packaging.**

- Agree
- Disagree
- Neither agree or disagree

30) **There should be stricter legislation to ensure more plastic is recycled.**

- Agree
- Disagree
- Neither agree or disagree

General Data Protection Regulation (GDPR) Statement and Ethics rules

This is an anonymous survey and we are not collecting personal data, so the GDPR regulations do not apply. The questionnaire has been compiled in such a way as to prevent respondents from being identified. We are fully committed to maintaining the anonymity of respondents.