PSLifestyle

# PSLifestyle and PSDataSet exploitation plan and guidelines, including priority topics for further research

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# Abstract

This report summarizes the results of the PSLifestyle stakeholder workshops with Academia and provides an update on the latest developments in the PSLifestyle project. The project aims to support citizens in measuring and reducing their climate impact through the Lifestyle Test, an easy-to-use tool that offers personalized suggestions for adopting positive and sustainable lifestyles. Launched to the public in September 2023, the Lifestyle Test is designed to help citizens across Europe make everyday actions more sustainable.

The workshops aimed to raise awareness among Academia in the eight project countries about the PSLifestyle project, the Lifestyle Test and its initial findings. They also facilitated discussions on new research ideas and opportunities, as well as research gaps arising from the use of the tool. Additionally, the engagement with Academia aimed at identifying potential improvements of the tool's data functions, exploring how the latter can facilitate the Academia in bridging such research gaps.

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# Introduction

## The PSLifestyle project and its exploitation strategy

The European Union Horizon-funded project "Co-creating Positive and Sustainable Lifestyle Tools with and for European Citizens – PSLifestyle" aims to bridge the gap between climate awareness and individual action while increasing citizen participation in sustainability efforts. The project engages citizens through a digital tool, called the Lifestyle Test (Box 1), to collect, monitor, and analyse their environmental and consumption data, as well as co-research, co-develop, and implement everyday solutions for climate change.

The project builds a data-driven movement with and for citizens to enable more sustainable lifestyles across Europe. The goal is to engage four million European citizens, with a particular focus on eight European countries - Estonia, Finland, Greece, Germany, Italy, Portugal, Slovenia, and Türkiye.

The Lifestyle Test is a consumption-based carbon footprint calculator developed and contextualized to align with citizens' local realities in the project countries. This is achieved by co-creating localized versions of the test in citizen science labs (CSLs) to better understand the barriers and challenges, as well as the local capabilities, opportunities, and motivations of citizens in adopting more sustainable lifestyles. For more information on the PSLifestyle CSLs, please see Box 2.

The data collected from the use of the Lifestyle Test are exploited by engaging with policymakers, businesses, civil society organizations (CSOs) and academia, to co-design solutions for enabling positive and sustainable lifestyles. Engaging with stakeholders is an essential aspect of the PSLifestyle project, as governments, industry, civil society and academia are both potential end-users of the data collected via the Lifestyle Test and play a pivotal role for enabling sustainable lifestyle changes.

The exploitation of the PSLifestyle results implies presenting and discussing with stakeholders the data collected with the Lifestyle Test with the aim of:

1) Defining actions and initiatives from stakeholders for enabling change based on consumer needs and preferences, challenges to lifestyle change, and other elements informed by the results. The involvement of actors such as governments and businesses are directed towards systemic changes in support of individual changes.

2) Collecting feedback for improving the Lifestyle Test and its data product, also exploring possibilities for integration with other databases, surveys, or calculators as well as for developing tailor-made applications for different stakeholder cases (e.g., a company that wants to use the tool with their employees, or a local administration wanting to adapt the test to their context, etc.).

After the co-development process in the CSLs and the stakeholder engagement, the project is focusing on the wider deployment of the Lifestyle Test and its expansion into other countries.

This report provides a summary of the results from the PSLifestyle workshops organised with stakeholders from Academia.

**Box 1: The Lifestyle Test and its user journey**

The Lifestyle Test is based on the carbon footprint calculator 'Lifestyle test' designed by the Finnish Innovation Fund Sitra in 2017: https://lifestyletest.sitra.fi/. The Lifestyle Test is available as a **web version** and in **the pilot countries' national languages**.

The users' interaction starts with a **measurement of their lifestyle carbon footprint** through a series of questions pertaining to different lifestyle domains i.e., housing, mobility, food and purchases.

Based on their results, users will be able to **select and commit to a variety of actions**, summarised in a **lifestyle plan** that could support them to reduce their carbon footprint. Users will be able to **keep track of their progress** and highlight the encountered **barriers and drivers** when implementing their lifestyle plans.

The data generated by the users are unified into a data product and a dataset which will be presented to the **stakeholder groups**.

**Box 2: The PSLifestyle Stakeholder Workshops**

The PSLifestyle stakeholder workshops were designed to **engage a diverse range of stakeholders**, including industry leaders, policymakers, academics, and civil society organizations. These workshops were held across the eight target regions of the project: Estonia, Finland, Germany, Greece, Italy, Slovenia, Portugal, and Türkiye. Each **workshop was tailored** to address the **unique needs and priorities of the stakeholders**, fostering meaningful discussions and actionable insights.

For **industry** participants, the focus was on identifying opportunities for innovative business models, products, and services driven by consumer insights. The data produced by the Lifestyle Test can allow companies to better align their offerings with evolving market demands and sustainability goals.

**Policymakers** explored existing policy gaps and assessed how the Lifestyle Test and data product could serve for identifying policy areas of intervention. The workshops also encouraged the development of new policies and solutions to promote sustainability and effectively address emerging challenges.

**Academics** had the opportunity to discuss pressing research gaps in the field of sustainable lifestyles. The sessions aimed to spark new research ideas and highlighted how the Lifestyle Test and dataset could contribute to advancing scientific knowledge and interdisciplinary studies.

For **CSOs**, the emphasis was on developing more impactful consumer engagement strategies. These workshops focused on empowering organizations to drive behavioral change and foster a deeper connection with sustainability initiatives.

The stakeholder workshops aimed to foster collaboration, inspire innovation, and pave the way for actionable solutions across sectors. Separate reports have been published to share findings and insights from the workshops for each stakeholder group.

# Academia workshops in a nutshell

The aim of the workshops with Academia was to present the project results, **identify how the data product and database can be used in research**, as well as **research gaps** to be further explored, and collect suggestions on how the **test and the data product can be improved**.

In this context, the academia workshops achieved two goals. On one hand, the workshops highlighted how the test can support research by collecting data on the ability and willingness of citizens to engage with positive and sustainable lifestyles, and on the barriers and enablers to change. On the other hand, participants identified data and research gaps, and how the Lifestyle Test and data product can be improved for addressing such gaps.

The **target audience** for the Academia workshops included researchers, universities and research institutes.

The workshops began with an **introduction to the project and its progress to date**. The project team presented **key details about the Lifestyle Test**, including **an overview and demonstration of the test**. Participants were also given a **preview of the data product and the key results that are emerging from the use of the test.**

This introduction was followed by two **interactive sessions**. The first one focused on the use of the Lifestyle Test's results and insights in Academia and on new research ideas and opportunities to make use of the data. The second interactive session explored potential research gaps and how the Lifestyle Test and dataset can be improved for bridging such gaps. The workshops general **agenda** is provided in the **appendix** to this report. The workshop implementers in the different countries have adapted such agenda to their cases. The Academia workshops took place in the eight project countries), where similar workshops have been conducted for other stakeholders, with corresponding reports prepared for each group.

The **workshops collectively engaged 87 participants across eight countries**, with group sizes varying between countries: Finland hosted 15 participants, Germany 6, Greece 32, Italy 4, Slovenia 5, Türkiye 12, Estonia 6, and Portugal 7. Among participants there were university professors, PhD students and senior researchers with focus on areas such as climate change, behavioral economics, ecological economy, sustainable development, agricultural research and sustainable behavior assessment.

# Workshop Results

## Insights on research ideas and opportunities

The first part of the discussion focused on new research ideas and opportunities arising from the use of the Lifestyle Test and was guided by the question *"Would you say the data collected by the Lifestyle test are of use to your research? How? (Please provide examples)"*. Here below we report a summary of the workshop results, with an emphasis on common aspects across countries as well as some key country-specific insights.

### Cross-Country Insights

**Practical Applications of PSL Test Data.** Participants across countries recognize the practical value of the Lifestyle Test, data product, and dataset for research, particularly in research areas related to lifestyle, behaviour, and sustainability. Data exploring the relationship between carbon footprint and income levels, as well as information on structural barriers impeding the adoption of sustainable lifestyles, were identified as highly valuable for advancing research in these areas. The latter is crucial to inform research on policy interventions that could help reduce these hurdles and allow a just transition to sustainable lifestyles, both at the individual and system level. However, several participants expressed concerns about the depth and breadth of the data, suggesting it may not fully address specific research needs.

**Usefulness Varies by Context.** While many researchers found the data useful for exploring new opportunities, others felt its applicability was limited unless supplemented with additional contextual information. Context-based data is crucial for the design of local solutions and the enhancement of sustainable lifestyles (e.g.: sustainable mobility infrastructures in urban versus rural areas).

### Country-Specific Insights

**Finland:** Divergent views emerged regarding the utility of the PSL data product and dataset. Some researchers valued its potential applications, while others found it less relevant to their work. Some participants suggested using the dataset to analyse trends in sustainable behaviours specific to Finnish society. In other cases, participants saw the potential of the Lifestyle Test in capturing swift changes in consumption behaviours that other statistics wouldn't otherwise, providing early insights and ideas for future research.

**Estonia:** Contrasting results have been recorded in Estonia. Some Estonian researchers found the test and data product useful to create consumers personas. These could help identify clearer profiles with behavioural patterns while designing a more targeted and effective communication on positive and sustainable lifestyles for the public. On the other hand, some participants pointed out the lack of data representativeness: the Lifestyle Test respondents tend to belong to a more conscious and knowledgeable group than average, presenting a slightly different profile than the average population.

**Germany:** Several participants recognized the test as a practical tool to collect lifestyle change data. A few highlighted the need for collecting more detailed and comprehensive data for enabling more in-depth analysis of sustainable practices and their societal impacts.

**Greece:** Participants found the data product and the dataset useful for comparing lifestyle and social behaviours across demographics. A few of them suggested using the data to explore regional patterns in the adoption of positive and sustainable lifestyles. Additionally, researchers in Greece indicated the potential of using the test to estimate the impact of policy change on individuals' carbon footprints.

**Italy:** Participants identified potential in the dataset for research related to design and innovation. However, the data's direct relevance to current research was questioned by some participants. On another note, the participants underlined the relevance of local-based information for a just transition.

**Portugal:** Beside recognizing the usefulness of the test, data product and dataset for research in different sustainability areas, several participants expressed their willingness to implement the Lifestyle Test for internal use for informing sustainability plans and strategies in their universities.

**Türkiye:** Researchers saw the Lifestyle Test and its dataset relevant to support research in several areas, such as urban planning and mobility, sustainable food systems and consumption at local and regional level. New research ideas included studies on sustainable diets within the food engineering or gastronomy sector or applied studies on the effects of consumer preferences on companies' production and marketing strategies.

**Slovenia:** Participants recognised the utility of the test, data product and dataset for further research on how consumption behaviours influence people´s carbon footprint. However, the questions of the test were deemed too generic, limiting the capability of the test to be a reference for academic research.

Although diverse research ideas and opportunities were highlighted in all eight countries, common feedback included the low relevance of the current data for research use, indicating the need for more detailed, comprehensive and local-specific datasets.

## Potential research gaps and Lifestyle Test improvement

The second part of the Academia workshops aimed at exploring potential research gaps around sustainable lifestyles and how to address such gaps by improving the Lifestyle Test. The discussion was guided by the following questions:

1) *What do you think are research gaps still existing in understanding feasibility of sustainable lifestyles?*
2) *How would you improve the Lifestyle Test for addressing such research gaps?*

## Cross-Country Insights

**Research Gaps.** A consistent research gap identified across workshops in all countries is the need for a deeper understanding of the motivations and barriers influencing the adoption of positive and sustainable lifestyles. Additionally, there is a critical need to explore ways to bridge the gap between people's attitudes and their actual behaviors.

**Suggestions for Improving the Lifestyle Test, the Data Product, and the Dataset.** After identifying current research gaps, participants shared ideas on how to best address them. Common feedback emphasized the importance of tailoring the test to better reflect local cultural and demographic contexts. Participants widely recommended incorporating open-ended responses and qualitative data collection methods. Additionally, many highlighted the need to enhance the "skip function" by offering more specific options, enabling a clearer understanding of users' needs and barriers to change.

## Country-Specific Insights

**Estonia:** Participants highlighted the disconnect between people's attitudes and behaviours while also noting the absence of systematic data on the consumption and behaviour patterns of the Estonian population. As observed in nearly all case countries, researchers in Estonia emphasized the need for more reliable demographic data, recommending the inclusion of additional information, such as users' education levels.

**Finland:** Researchers stressed the importance of addressing knowledge and data gaps to better understand the feasibility of sustainable lifestyles. They recommended potential applications of the test, the data product, and the dataset for monitoring progress towards policy goals. In Finland, participants emphasized the need for improving the collection of qualitative demographic data.

**Germany:** Participants to the Academia workshops in Germany stressed the need to address the attitude-behaviour gap and understand people's motivations and barriers to positive and sustainable lifestyles. In this vein, some suggested to include a wider range of options to choose from when indicating the reason for skipping certain actions during the design of the action plan (the ´skip feature´). Participants suggested incorporating engagement features into the test, such as email reminders to help users follow up on their plans and additional recommendations in support of new lifestyle choices.

**Greece:** Participants criticized the fact that the Lifestyle Test relies on background national data and misses sub-national variations in the factors affecting lifestyles. Another gap to address is the need for clearer and more accessible quantification of the cumulative impact of widespread individual changes. After discussions about the structure of the data product, it was suggested that a more detailed format would be more useful

for researchers. A more local customisation of the Lifestyle Test questions was indicated by a few as one area of improvement to better inform the design of local solutions.

**Italy:** Researchers in Italy highlighted the need for a better understanding of the trade-off between people's attitudes and behaviours, and the identification of indicators of adoption of behaviour changes. To improve the Lifestyle Test, participants suggested the inclusion of open-ended questions to collect qualitative data on barriers and enablers, as well as the creation of online platforms or support groups for knowledge and experience-sharing among users.

**Portugal:** Participants to the Academia workshop in Portugal noted the potential for the test to make evident individual and community-level behavioural patterns. However, despite its usefulness, the Lifestyle Test does not provide enough region-specific data, critical to identify local needs and barriers in Portugal. Participants suggested the addition of more locally relevant questions in the test. User engagement and gamification features (such as a "sign-up guideline" or "currently active users" notifications) were also mentioned.

**Slovenia:** Slovenian researchers indicated the need to further expand on the interconnection between citizens' income, motivations and actions. Moreover, participants proposed the inclusion of more specific questions and answer options, leading to clearer, more detailed and more context-relevant information. An example could be the change in the frequency of some actions (e.g. drink/food consumption), or the reasoning behind certain actions (e.g. fly for business versus pleasure).

**Türkiye**: Participants highlighted the need for more research on sustainable consumption and policy solutions, noting that while supply-side studies on emissions reduction abound, demand-side studies on lifestyles and consumption remain scarce. They identified research gaps on the impact of consumers' carbon footprint in different sectors (especially in transportation and energy).

The insights shared by participants across all countries on research gaps and potential tool improvements are useful to outline recommendations for the refinement of the Lifestyle Test and to increase its value and applicability for stakeholders in Europe.

# Key recommendations for Academia

The PSLifestyle workshops for Academia highlighted the test, data product and dataset potential as a powerful set of resources for advancing research on sustainable lifestyles and behaviours. Participants appreciated the ability of these resources to gather data on carbon emissions, income, and structural barriers to the adoption of sustainable lifestyles, allowing to perform analysis that explore the relationships between these factors. The results of the workshops provide key insights on how to improve the Lifestyle Test, the data product and the dataset to meet diverse research needs and to make sure important socio-economic and cultural factors are considered. These improvements to the test will enhance the ability of the data product and dataset for supporting scenario development on sustainable consumption trends, informing more targeted solutions for sustainable living. The following recommendations are intended as **a set of actions to maximise the level of utility and applicability** of the Lifestyle Test and its data to research.

**Localize data at the sub-national level.** There is a need to further localize the Lifestyle Test beyond the national level to reflect more local differences. This allows considering urban and rural disparities in opportunities and willingness to adopt more sustainable lifestyles and aligning the test with specific socio-economic and cultural dynamics. Additional contextual data should be collected and integrated in the test and the data product to make it more useful for policymaking and interventions. Such data improvement would allow the design as well of locally relevant research to further inform decision makers at all levels. More localized adjustments also create a more engaging and relatable experience for users.

**Improve the Lifestyle Test features.** To improve the utility of the test, participants suggested several enhancements. **Expanding the demographic** variables to include education level, employment type, and others would allow for a deeper understanding of users' behaviours and constraints. **Adding qualitative data collection features**, such as open-ended questions and more detailed options for the ´skip-function´, could provide richer insights. Moreover, **integrating user engagement tools**—like reminders, gamification elements, and personalized lifestyle tips—was proposed to encourage users to act on their plans and track progress over time. These features would also support longitudinal studies, enabling researchers to monitor behavioural changes over extended periods.

**Bridge the Attitude-Behaviour gap.** A significant theme that emerged from the workshops was the need to address the discrepancy between individuals' attitudes toward sustainability and their actual behaviours. The Lifestyle Test could play a pivotal role in identifying the motivations, barriers, and enablers that influence

sustainable lifestyle adoption. The test could provide more actionable insights for designing strategies that foster meaningful behaviour change.

**Improve inclusivity.** To address concerns about data representativeness, the Lifestyle Test should prioritize inclusivity. Collaborating with local organizations to ensure demographic diversity and relevance would be a key strategy in achieving this goal.

**Engage with stakeholders.** Building partnerships with local governments, academia, and civil society organizations would help co-develop local solutions. Feedback from stakeholders should be systematically integrated to refine the test and align it with local research priorities.

**Focus on future research priorities.** Future research efforts should aim to provide actionable insights for policy design, particularly in overcoming barriers to sustainable lifestyle adoption. Longitudinal data collection could track the evolution of behaviours over time, offering valuable information for measuring the impacts of interventions.

In conclusion, although the PSLifestyle project and its products have a high potential to enhance behavioural and system change and advance research in these areas, additional actions could be considered to improve the Lifestyle Test and expand the quality of its data outputs for future application.

The inclusion of more **granular questions and answers** in the test that reflect different local realities would help improve the quality and relevance of data collected. This could be achieved as well by requiring additional demographic information from the users, allowing to build a more representative dataset.

Moreover, the inclusion of **open-ended questions and more detailed skip-function options** would allow the collection of information on users' motivations and barriers to sustainable lifestyles, which are critical for the design of effective solutions.

For retaining users and keeping them motivated to interact with the Lifestyle Test, engagement and gamification features should be added. Besides, the tool should provide additional resources and spaces for information and knowledge sharing to support users implementing the action plans in the medium-long term.

# Conclusion

The PSLifestyle project has demonstrated significant potential to drive transformative change in sustainable living through its innovative test. By engaging diverse stakeholders across eight European countries, the project has successfully highlighted the importance of a collaborative, data-driven approach to sustainability. Academia has been a crucial partner in identifying research opportunities, gaps, and actionable insights that can shape future strategies for sustainable lifestyle adoption. Academia also plays a key role in integrating the Lifestyle Test into green campus strategies in various universities, promoting its adoption among students and staff.

The workshops revealed the utility of the Lifestyle Test in academic research, particularly in understanding barriers to and enablers of sustainable behaviours. Suggestions for improving the test, data product, and dataset, including enhanced localization, qualitative data collection, and user engagement features, underscore its potential for wider applicability and impact. These improvements, coupled with an inclusive approach to data collection, can enable more comprehensive insights into the socio-economic and cultural dynamics influencing sustainability.

As PSLifestyle moves towards broader deployment and integration, its ability to inform policy, support academic inquiry, and empower individuals remains central. By continuing to refine the Lifestyle Test and strengthening collaborations with academia and other stakeholders, the project is well-positioned to lead the way in fostering sustainable lifestyles across Europe and beyond.

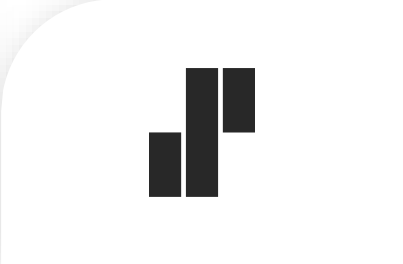
# Annex

**Suggested agenda for the Academia workshop series**

| Timing | Agenda item |
|---|---|
| 30' (before the meeting) | Registration & Coffee |
| **Setting the scene** | |
| 20' | Welcome, agenda and objectives of the workshop |
| | The PSLifestyle project<br>• Project goals and activities so far (focus on data collection and exploitation plans – e.g. other SH workshops)<br>• Presentation of the test, dashboard and DoS with key results [Including benefits for academia in using PSLS data] |
| 15' | Presentation of use cases (15'):<br>The team presents a few **ideas on how the tool results can be used** in Academia (*use cases* or *research ideas*). |
| 10' | Quick Q&A |
| **Discussion \| Part 1: research ideas and opportunities** | |
| 30' | This discussion is focused on the **use cases** (research ideas) proposed during the introduction. Participants will be asked to give their suggestions/feedback on the proposed ones and on new additional ones. |
| **20' Coffee Break** | |
| **Discussion \| Part 2: research gaps and tool improvement** | |
| 45' | Collect feedback on data and research gaps in the sustainable lifestyle domain and how they can be addressed by tool improvement (data collection, processing, and use) |
| 15' | Q&A |
| 5' | Next steps for the project after workshop |

# Project partners

















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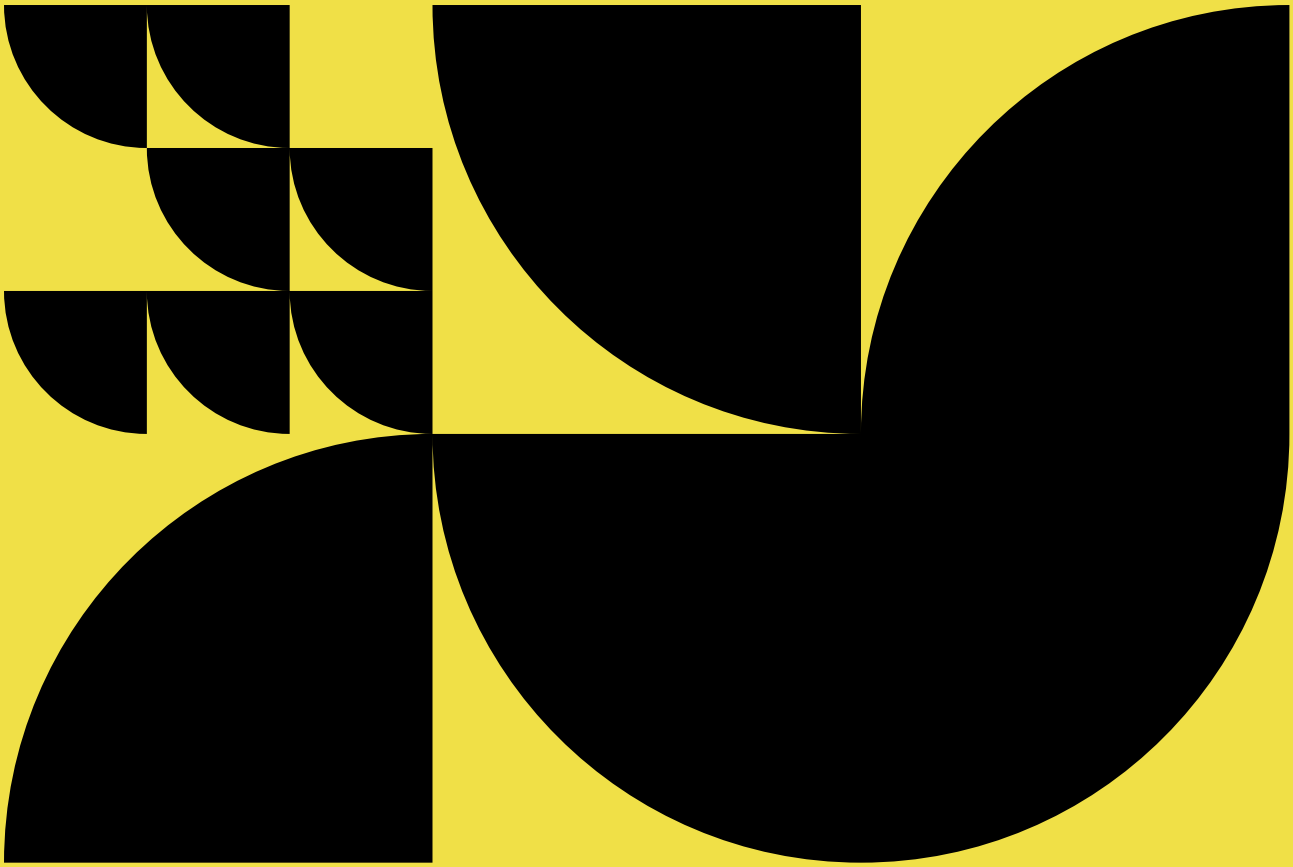

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