

RUN-EU STUDENT WEEK I GENERAL ASSEMBLY

RUN-EU GREEN CHALLENGE SAP's

1. RUN-EU FOOD Challenge

Food loss and waste represent massive systemic inefficiency and are unsustainable. Shall we do something about it?

Global stability in the 21st century is underpinned by the ability to mitigate the effects of climate change, resource scarcity and food security. A major factor in all these issues is the food waste (FW) generated from the food supply chain, which can account for up to 1.3 billion tonnes per annum, equivalent to a third of the world's total food production, estimated that one-third of all food produced globally for human consumption is lost or wasted. The current levels of food waste generation are unsustainable. The European Waste Directive commits EU member states to reduce their food waste by 25% by 2025. This aligns with one of the UN's critical sustainable development goals (SDGs) "Responsible consumption and production". SDG number 12.3 and 12.5 target transformation of "the entire food value chain from farm to fork", calling for a 50% cut in per capita global food waste at retail and consumer levels and the reduction of food losses along production and supply chains, including post-harvest losses, by 2030.

Food loss is the decrease in the quantity or quality of food resulting from decisions and actions by food suppliers in the supply chain, excluding retailers, food service providers and consumers. Food waste refers to the decrease in the quantity or quality of food resulting from decisions and actions by retailers, food service providers and consumers. Food loss and waste represent massive systemic inefficiency. This inefficiency contributes to many significant national and global issues such as land degradation, declining soil fertility, unsustainable water use, overfishing, food insecurity, malnutrition, inequality and GHG emissions. The RUN-EU Food Challenge seeks applications from interdisciplinary teams proposing novel, potentially disruptive, sustainable solutions to reduce food loss and waste across the full breadth of the food supply chain from "farm to fork". Under this challenge, we are asking teams to propose cutting edge solutions to this global challenge, this could be through the creation and development of cutting-edge and disruptive technologies in a range of areas or through radical public policy formation. The Food Challenge should be visionary drawing on insights relating to current trends and future possibilities where Europe and the world could benefit significantly. The Food Challenge should be inspirational and provide the basis for strong engagement between public and private sector stakeholders, and with the public and address barriers to innovation, which, if overcome, can create significant benefits for society.

- You may wish to consider how your challenge idea is going to inspire those involved and others to be involved?
- How will this challenge support engagement between the public/private sectors and with the general public?

- What current barriers are associated with this challenge and how they might be addressed, as well as, what resources would be required to address them?
- A PESTEL analysis of your selected challenge idea

The Food Challenge should be ambitious in terms of its potential impact but should also be achievable allowing outputs and outcomes to be delivered within a prescribed timeframe.

- You may wish to consider how your challenge idea is ambitious?
- What will the impact of this challenge be should it be successfully addressed?
- Who are the beneficiaries of this challenge?
- How will they benefit?
- Why will it require a novel, interdisciplinary-led solution?
- How can it be achieved in the timeframe?
- What resources are needed?
- What is the opportunity and why now?
- A SWOT analysis of your challenge idea should be carried out.

Areas for consideration could include:

- Sustainable, low-waste production in marine, land and non-soil systems
- Supply chain innovations to minimise food loss
- Creation of circular bioeconomic opportunities from food waste
- Functional foods (fortified, enriched or enhanced foods) that provide health benefits beyond the provision of essential nutrients (e.g., vitamins and minerals)
- Social innovation in food waste redistribution
- Public Policy change

Challenge Structure

1. Describe clearly the societal challenge?
2. Why is it important?
3. What's the opportunity for Europe?
4. How is it visionary and inspirational?
5. Identify which stakeholders/beneficiaries you would need to include to validate the challenge?
6. What are the key barriers that your team will address?
7. Describe clearly the solution proposed? This should not only be technical but also societal.
8. How is it novel and/or unconventional?
9. How will the proposed approach (technical/non-technical) lead to disruptive innovation?
10. How feasible/viable is the solution? What are the risks?
11. What outcomes will your solution deliver and when?
12. How will your solution transform society?

Learning Outcomes

At the end of this challenge-based SAP students will be able to

- Apply critical thinking, creative problem-solving concepts and design thinking models and tools for solving learning challenges
- Work in multidisciplinary, multicultural and co-creation environments
- Communicate information, ideas, problems and solutions to both specialist and non-specialist audiences clearly
- Propose solutions for societal real problems and challenges that demand innovation and a varied set of skills

Further Pre-Reading Information

- [State of Food and Agriculture \(SOFA\), The Food and Agriculture Organization \(FAO\) United Nations](#)
- [Bio-waste in Europe — turning challenges into opportunities](#)
- [The EAT-Lancet Commission on Food, Planet, Health](#)
- [Horizon Europe Sustainable Development Goals | European Commission \(europa.eu\) - The EU Research & Innovation Programme](#)
- <https://www.bordbia.ie/industry/news/food-alerts/frightening-facts-on-food-waste/>
- <https://www.ecologic.eu/16395>

SAP Structure

1. Welcome
2. Project Objective
3. Team Building
4. Learning / Teaching Strategy (Design Thinking, Challenge-Based experience, Double-Diamond, Collaborative Learning, co-creation...)
5. Introductory Sessions / Pre-reading / Master classes
6. Discovery of the Challenge! (Building understanding through data collection, analysis and immersion)
7. Define a Problem Worth Solving! (Problem Statement, Point of view)
8. Develop Solution!
 - Brainstorm, Designing, Visualising, Sketching
 - Designing and making a low fidelity prototype. Testing and experimenting the prototype. Designing MVP/Solution

9. Delivering Solution!
10. Finalising Solution and Presentation
11. Final Presentations / Pitches
12. GA assembly presentation of winner
13. Learning Reflection (during the following week when they are already home).

SAP requirements

Tools and Collaborative Platforms (canvases, Miro, Teams, etc...)

Invited Guests / External Partner / Visits / Field Work

RUN-EU coaches