



HSE
Occupational Health & Safety
and Environmental Protection unit

Year of Environmental awareness: outcome and future perspectives

CERN, 15 September 2022

Luisa Ulrici
HSE-ENV Deputy Group Leader

Year of Environmental Awareness: review of special actions

Focus on the Tidy-up week and the Energy Idea Box





The Tidy-up Week

Thank you for your participation!

Ran from 18 to 22 October 2021

- **Objective:** to raise awareness about reducing waste and properly sort recyclable materials
- Organised in collaboration with **DSOs / TSOs** and operational **support services** (transport and waste management services)
- **15 (+2)** buildings as test
- Centralisation of the communication/requests by the **organising committee.**
- Availability of an **operational team** composed of:
 - 2 transport agents (FOSELEV),
 - 1 mover (SERCO)
 - 1 RP technician (CERAP).



(Image: CERN)

On 18 September, people in 180 countries worldwide will engage in the [World Clean-up Day](#), an annual social action with the objective of tackling the global waste problem. CERN will contribute to this effort through its “Tidy-up Week”, aimed at raising awareness about the need to reduce waste and properly sort recyclable materials.

The week in pictures...



Folder collection

Impressive quantities



And in numbers... collected waste

- 30 m³ furniture (cupboards, chairs, tables)
- 30 m³ plastic
- 8 m³ folders (2 m³ recyclable)
- 4-5 m³ IT material.
- 3 m³ electronic waste
- 5 m³ cables
- 2 m³ aluminium
- 6 m³ metal
- 4 m³ household appliances (fridges, ovens)
- 6 glass pieces
- 35 kg batteries

Cardboard: About 3T (on top of the average 5 to 6 T per week)

Alu cans: about 70 kg (on top of the average 50 kg / week)





The Tidy-up week: lessons learnt

- Improvement of conventional waste collection
- Feedback provided to SCE on simplification of the collection of some specific waste types
- First collection of folders successful
- Occupants of about 15 further buildings have approached the organising team and are on a “waiting list”.
- Maintain the coordination team but simplify the preparatory work by simple exchanges with the TSOs.
- Organise the event in a period of availability for the service involved (transport, waste reception, radiation protection):
 - Outside technical stops and YETS/EYETS and avoiding summer period
- The respect of the ADR transport requirements is mandatory



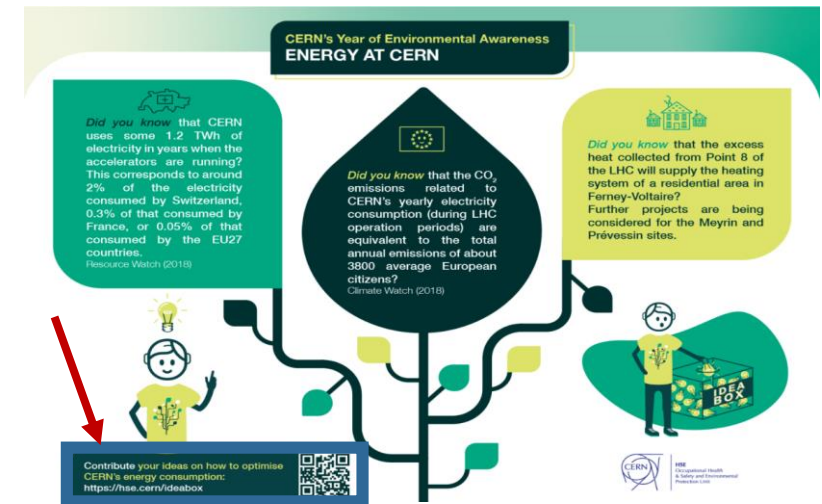
Idea Box: optimising CERN's energy consumption

Thank you for taking part!

Ran from 2 to 30 June 2022

Objective: to identify feasible ideas for CERN to optimise our energy consumption

- 42 ideas received
- 39 identified for follow up further to first review by the HSE campaign team
- Submitted for assessment of feasibility and applicability to a jury of 3 people:
 - The chair of the Energy Management Panel,
 - The Energy Coordinator
 - The Infrastructure Section Leader (Site and Civil Engineering group)



The Idea Box – submissions

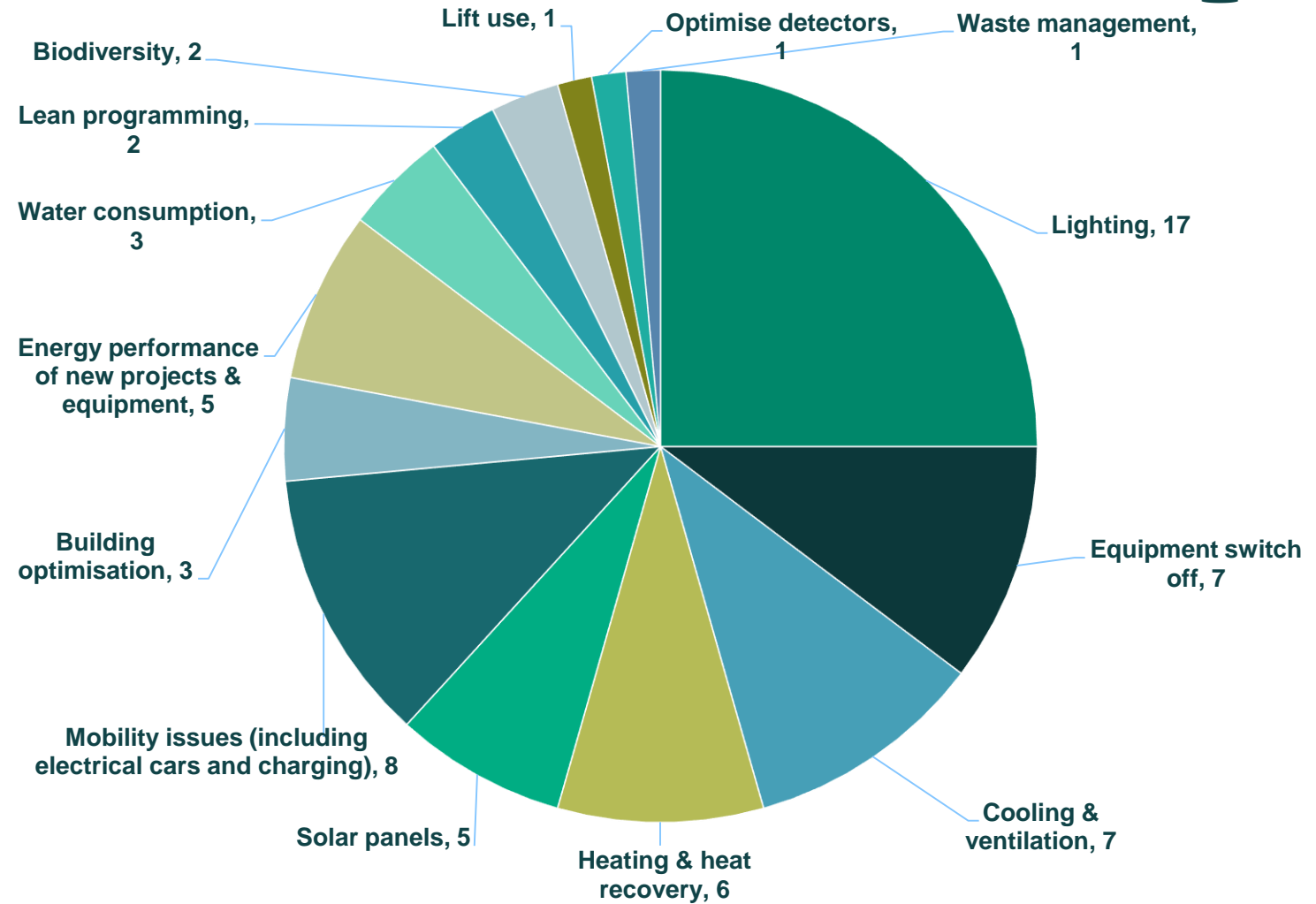


Main feedback:

- Lighting
- Heating/cooling/heat recovery
- Equipment energy efficiency and saving (including IT)
- Responsible behaviour for saving energy

Some concerns (not directly related to energy):

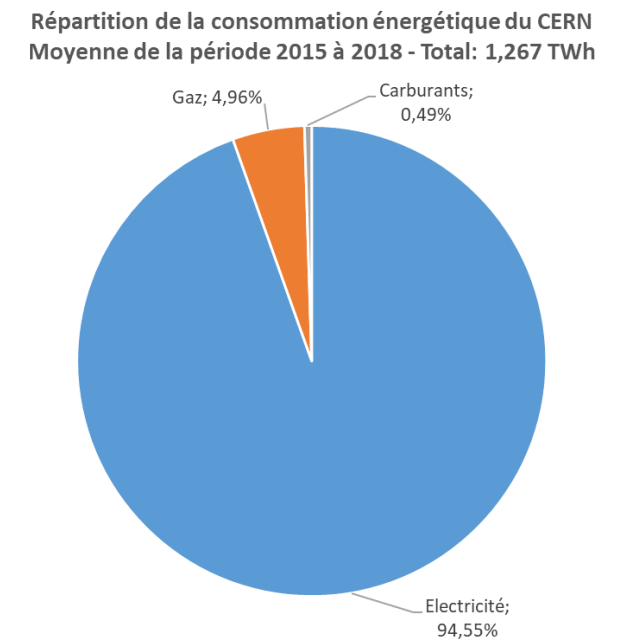
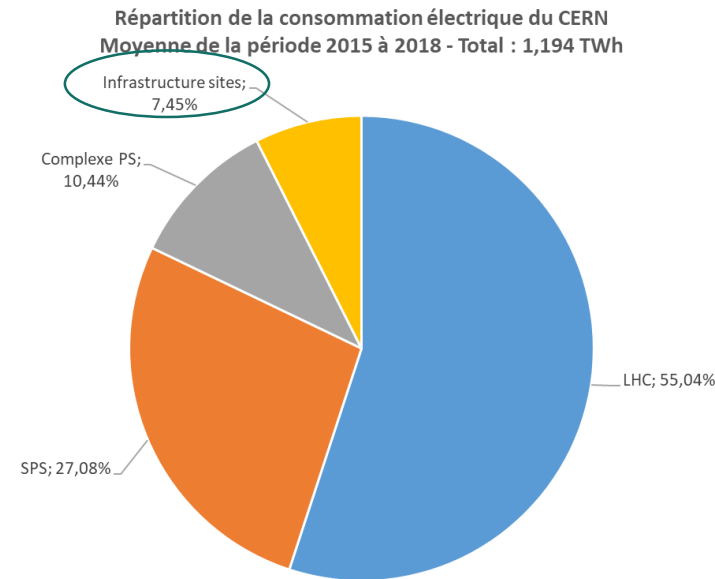
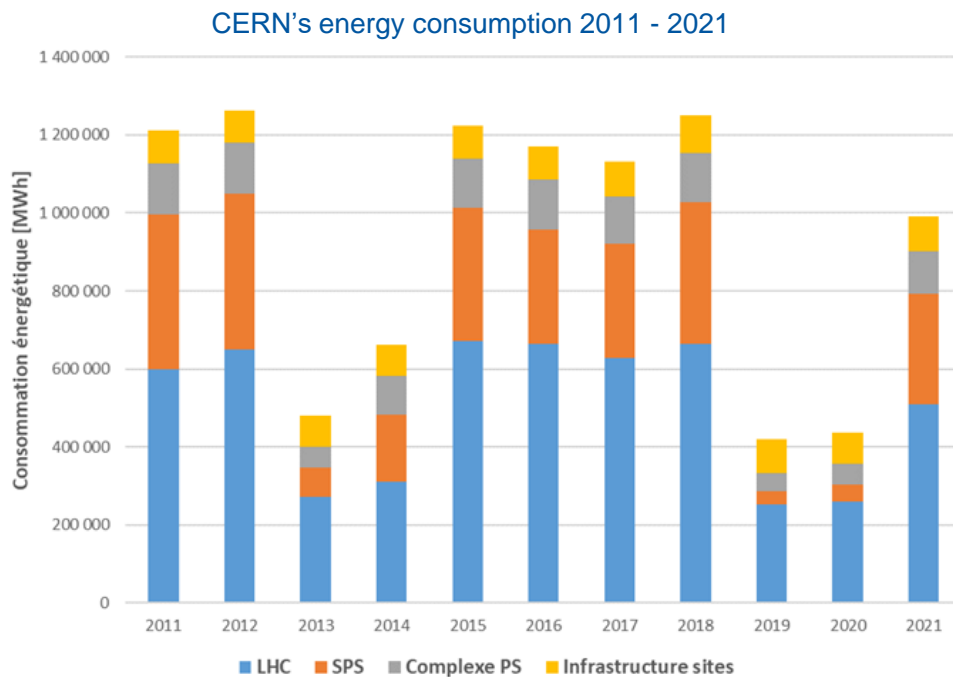
- Mobility
- Water consumption





The Idea box – some figures

Consolidated global figures – established in the framework of the energy performance plan prepared in view of the ISO 50001 Certification



- Main tool to monitor electricity use – WebEnergy (energy.cern.ch)



The Idea Box – feedback

Action plan for the next 5 years includes:

- Optimisation of energy consumption for accelerators: ~ 50 GWh for LHC cryogenics in 2022 to start with, adjustment of YETS (length & timing) for up to ~100 GWh/yr
- 75 building consolidation projects: ~ 10 GWh/year of expected savings (thermal + electrical)
- Heat recovery projects:
 - Ferney-Voltaire: ~ 20 GWh/year made available for neighbours
 - Meyrin and Prévessin: 30+ GWh/year of expected savings on gas consumption

- Many other studies (with ROI) to be done to assess potential future savings
- As part of the ISO 50001 certification, occasions will be provided to the CERN community to provide ideas and feedback

CERN & the environment workshop October 12-13:

will include presentation of axes for reducing energy consumption, improving efficiency and increase energy recovery.

Events (survey outcome 1/2)

Event	Participation (over 232 answers)	Satisfaction (1-4; 4: very satisfied)
Launch event	5%	2.43
Tidy-up week	16%	2.63
Energy consumption idea box	4%	2.54

Satisfaction was above average for every event.

*NB: answers from the survey are not representative of the **actual participation**.*



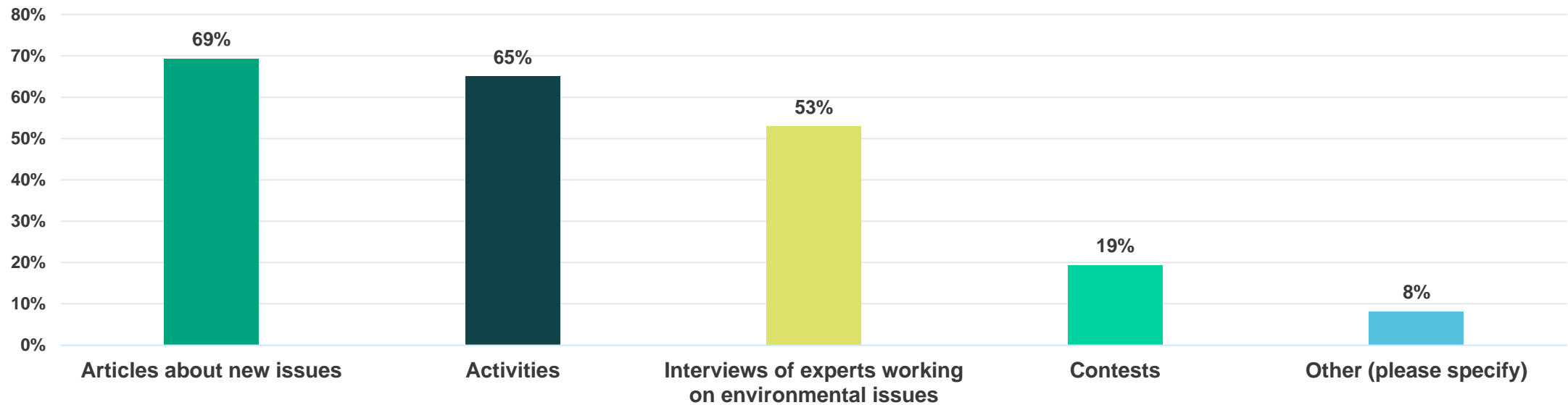
Contribute your ideas and energy to creative solutions to optimise CERN's energy consumption





Perspective on future events (survey outcome 2/2)

Percentages of participants interested in other forms of engagement

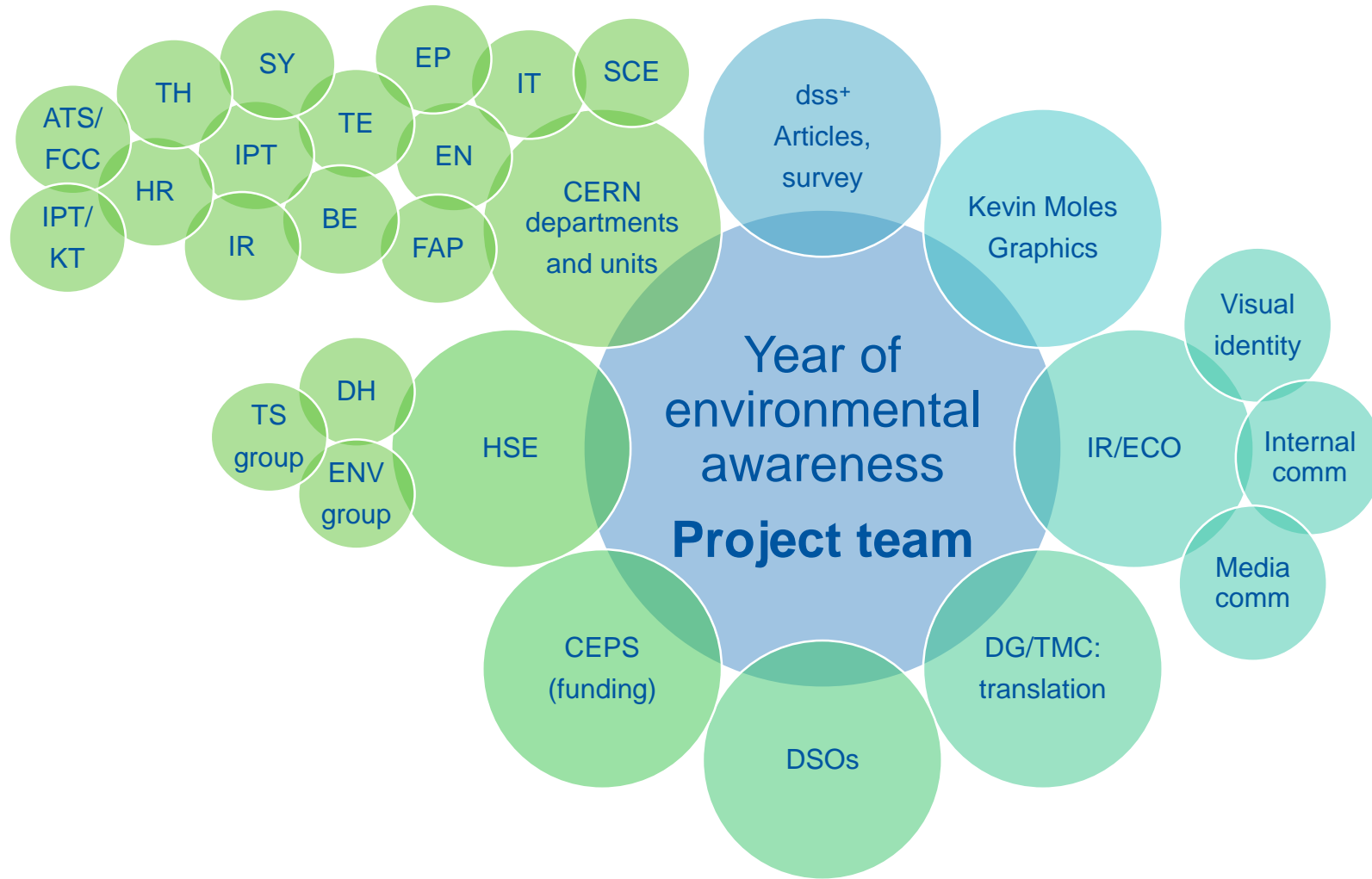


«Other» includes: explanations of CERN's strategic development goals and targets for new projects (and existing facilities), *ad hoc* workshops and campaigns to raise awareness about specific issues, concrete initiatives engaging the groups/sections, more hackathons.

Percentages do not add up to 100% as participants could provide several answers



Excellent collaboration: A BIG THANK YOU!





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