



Interinstitutional EMAS Days 2024

5→8 November 2024

Interinstitutional EMAS Days 2024

Online sessions for all EU Institutions' staff



Sue Panter,

*Director of EC/HR.D: Workplace & Wellbeing
European Commission*

Interinstitutional EMAS Days 2024



Session 1: *Environmental impact of the new ways of working - Greener buildings & workspaces*

5/11/2024

Interinstitutional EMAS Days 2024



***Greening the Commission:
overall context, flexible working
and carbon footprint analysis***

Laure Ledoux, Celso Sanchez Martinez, Michael Rourke,
Elisabetta Tonin, Jessica Howet & Sofia Gregou,
EC EMAS Coordination Team, HR.D.7



*Becoming the **world's first climate-neutral continent** is the greatest challenge and opportunity of our times. We are on track to meet our ambitious Paris Agreement goals and 2030 targets. But we need to go further and faster if we are serious about **climate neutrality in 2050.***

Political Guidelines for the new Commission 2019-2024
by the President of the European Commission,
Ursula von der Leyen



The Commission is also keen to reduce its environmental impact as an institution and as an employer. It will present a comprehensive action plan... to implement itself the objectives of the Green Deal and to become **climate neutral by 2030.**

European Green Deal, COM(2019) 640 final of 11/12/2019

How can we reach climate neutrality by 2030?

Buildings & Workspace

Use more efficient, sustainable, climate-resilient buildings & working space

Greener buildings

Improve the energy efficiency of our buildings; cover emissions linked to construction of buildings, IT equipment, purchased goods/services/own waste.

Conduct vulnerability and risk assessment; promote preventive measures.

Greener working place

Reduction of overall office surface; coherence with the new working time decision.

Factor in environmental impact of telework.

Behavioural change: waste reduction, re-use and recycle material.

Greener mobility

Green our mobility whilst reaching out to citizens
Setting the example for missions & greener travels

Promote videoconferencing as the default option.

Optimise the organisation of missions.

Decrease the environmental impact of travel.

Mix in-person/virtual **experts'** meetings.

Greener commuting

Boost the use of sustainable modes of transport: mobility plan; develop infrastructure; awareness raising campaigns.

Gradual transition to zero emission Commission vehicles by 2027.

Digitalisation

Supporting us in the transition

Optimise IT operations and assets

Develop digital solutions as an enabler of savings from other emission sources (buildings, mobility) and limit their environmental impact/ energy consumption.

Limit environmental impact of data centres; reduce the number of local ones.

More energy efficient devices.

Ensure coherence with the internal digital strategy.

Greener digital behaviours such as online collaboration tools.

Green Deal

Ensure coherence with other policies of the Green Deal

Circular economy

Enhance use of green public procurement; prioritise low life-cycle environmental and social impact; encourage operators to green their offers.

Ecosystems & Biodiversity

Develop projects on urban and non-urban sites; better integration into society.

Fair, healthy, sustainable and good food (from Farm to fork)

Reduce environmental impact of catering; favouring short-circuits, and use of food labels in canteens.

Pro-active engagement

Staff as an enabler to reach climate neutrality

Staff participation as pioneers

of the transition towards climate neutrality; adherence of the Commission to Climate Pact; participation in campaigns; adapt to new ways of working; volunteer as green ambassador.

Implement the sustainability, aesthetics and inclusion objectives of the new European Bauhaus in the Commission.

Communication

Raise awareness among EU citizens showing the benefit of moving to carbon neutrality; exchange of good practices with other institutions.

Carbon removals

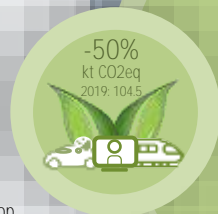
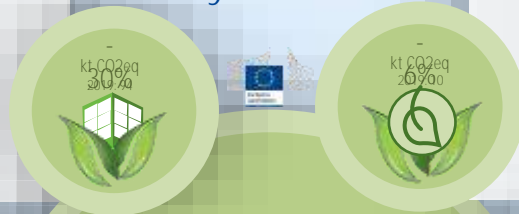
Compensate the remaining emissions with carbon removal to reach carbon neutrality (100% reduction)

Financial cost of carbon removals

Reducing GHG emission reductions should be done whenever possible.

Await the Commission proposal on carbon removal certification to ensure adequate and efficient carbon removals from the atmosphere.

Assess the opportunity for a pilot project in 2024



I. Reduce 60% of emissions



II. Compensate 40% of emissions with carbon removals to reach 100% reduction

European Green Deal
Greening the Commission



Greening: Key Milestones



Achievements to date

- Climate Pact: Institutional pledge + call for individual pledges
- Interinstitutional outreach (GIME; CCA reflection group on greening and missions & Interinstitutional EMAS Online Days 2022)
- New Internal Digital Strategy
- Consolidation of corporate data centers
- Communication: town-halls, articles; communication campaigns (e.g. waste reduction; energy-saving; new year resolution; Climate Fresk);
- Greening learning challenge
- Launch of greening community ("Green Transition Multipliers")
- Mobility pulse survey completed ; Full mobility survey launched
- 79% corporate car fleet low or zero emissions: target exceeded
- Several energy saving actions (15% savings target: reducing heating and air-conditioning hours and adjusting temperature ranges)
- Survey to estimate emissions from teleworking (09/23)
- Greening the real estate park: sales of 23 low energy-efficiency buildings; negotiations for 4 new energy efficient buildings (in addition to L107, L51, C-46, T211 and M034)
- More than 10.000 colleagues (close to 40% of staff in Brussels and Luxembourg) in dynamic collaborative space

- Biodiversity: Brussels management plan; 2 projects completed: B28, ORBAN/L41
- Photovoltaics panels: Feasibility study for Brussels, Installation on DAV1, BERL, SB34 and L-15 completed
- New green commuting policy for Brussels (entering into force 01.2025)

Up to end 2024/early 2025

- Guide to missions: adoption Q4 2024 / Q1 2025
- Preparation of the 2024/2025 greening progress review
- Occupation of **first Brussels 'zero emission in-use' building**, new C-46
- New photovoltaics installations in building C-46 and forthcoming ones
- Further optimisation of buildings energy consumption (BEST 2024/2025)
- Three new biodiversity projects in CSM1/MERO, BERL and CLOV. Continue to develop new green roofs projects in CHAR & ORBAN.
- Corporate fleet: 85% hybrid or full electric vehicles by end 2024
- Communication: mobility week, Waste reduction, Interinstitutional EMAS Days
- Climate Fresk **Facilitators' Training (3rd round) & Large-scale workshops**
- Upgrade reporting of emissions from professional travel



*The Commission wants to lead by example as a modern and attractive public administration. In line with the vision set out in its [HR strategy](#), the [communication on greening](#) and its [digital strategy](#), the Commission is adopting measures to promote **a more flexible, digital, green and efficient workplace.***

New measures on working conditions, bricks and bytes



New rules on [teleworking](#) and [working hours](#) so as to put flexibility and choice at the heart of our working methods



New policy on [buildings and office space](#), as well as [commuting](#), to reduce our environmental footprint and cut unnecessary costs



Upgrading our [digital offer](#) to facilitate this blend of in person and remote work and we are offering staff a [home office package](#) to help them work from home.



Flexible working

- **Working Time Decision - key rules**

- 8 hours per day on average, in principle between 8.00 and 19.00
- Up to 20% of teleworking is a right, between 20% and 60% = to be agreed with line manager
- All staff must come to the office at least 2 days a week - you may be requested to come more, in the interest of the service when needed
- Telework outside the place of employment = up to 10 working days per year

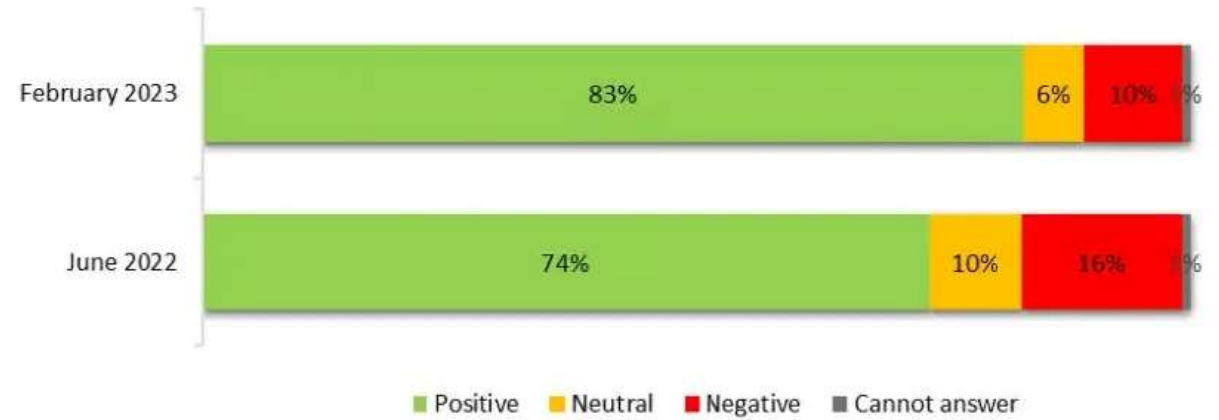
- **Flexible workspaces**

- **Digital tools for collaboration**



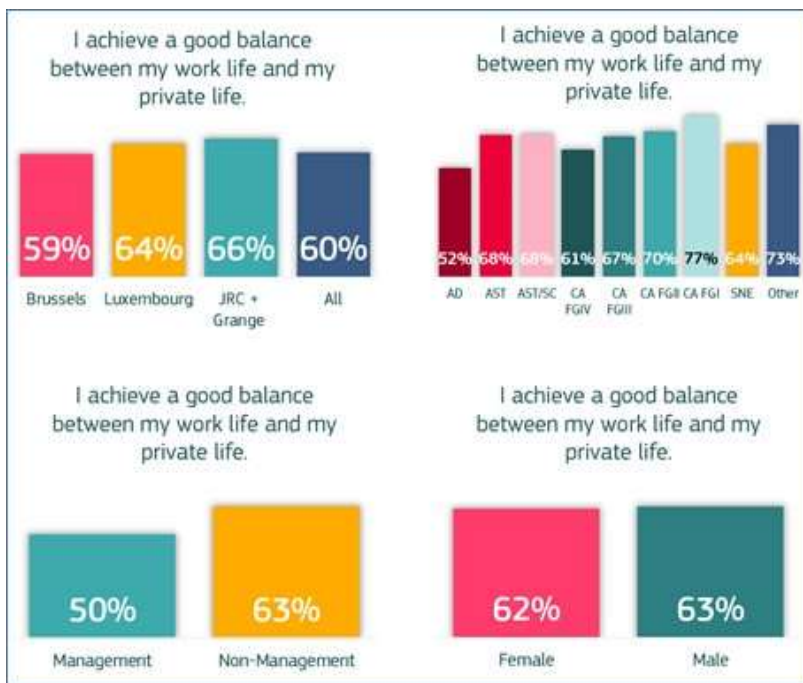
Satisfaction with flexible working overall

February 2023 vs June 2022 results



Facts & Figures



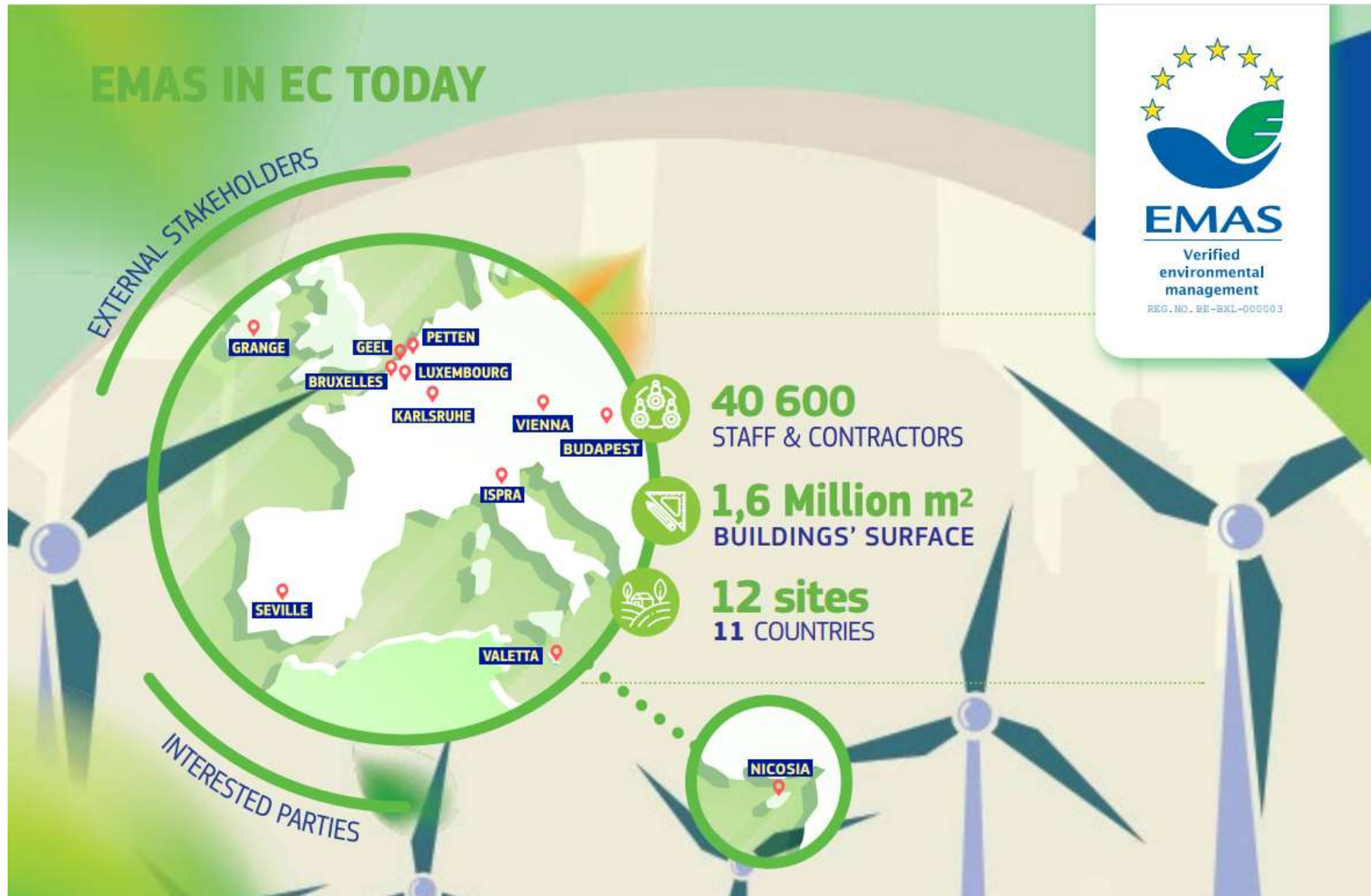


2023 Flexible way of working and worklife balance evaluation report

Sub-themes and questions

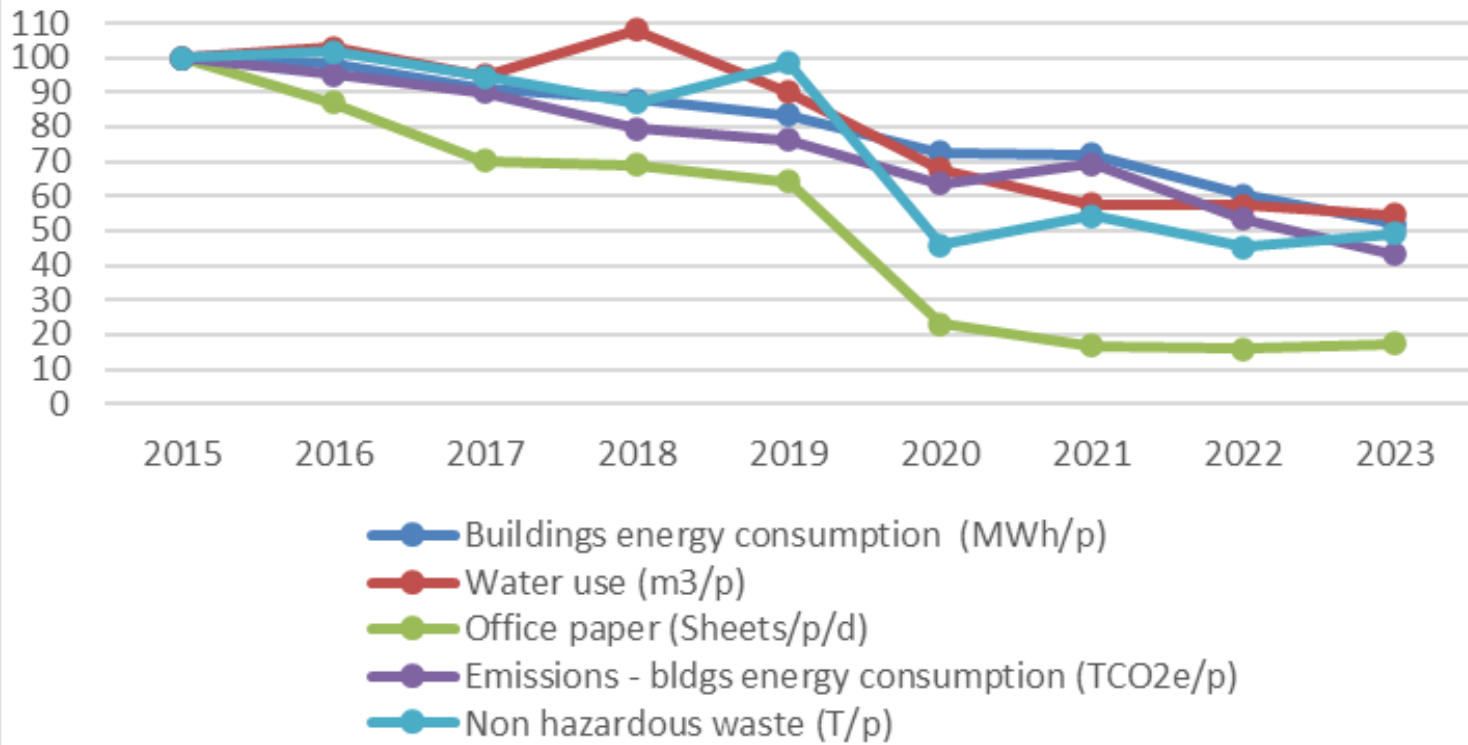
Sub-themes and questions	Positivity score	Delta 2021	DG level score	Institution level score	Respondents 2023
Inclusion & Fairness	56%	↓ -1	56%	57%	23521
Wellbeing & Work-life balance	54%	↑ +2	54%	54%	23535
Working Arrangements	74%	↑ +1	74%	74%	23461
I am satisfied with the physical working environment at the office.	58%	↓ -4	58%	58%	23312
I feel that flexible working arrangements (combining office and remote working) facilitate my work.	84%	↑ +5	84%	84%	23035
The current flexible way of working suits me well.	80%		80%	81%	22960

Eco Management and Audit System in EC



Reducing the environmental impact

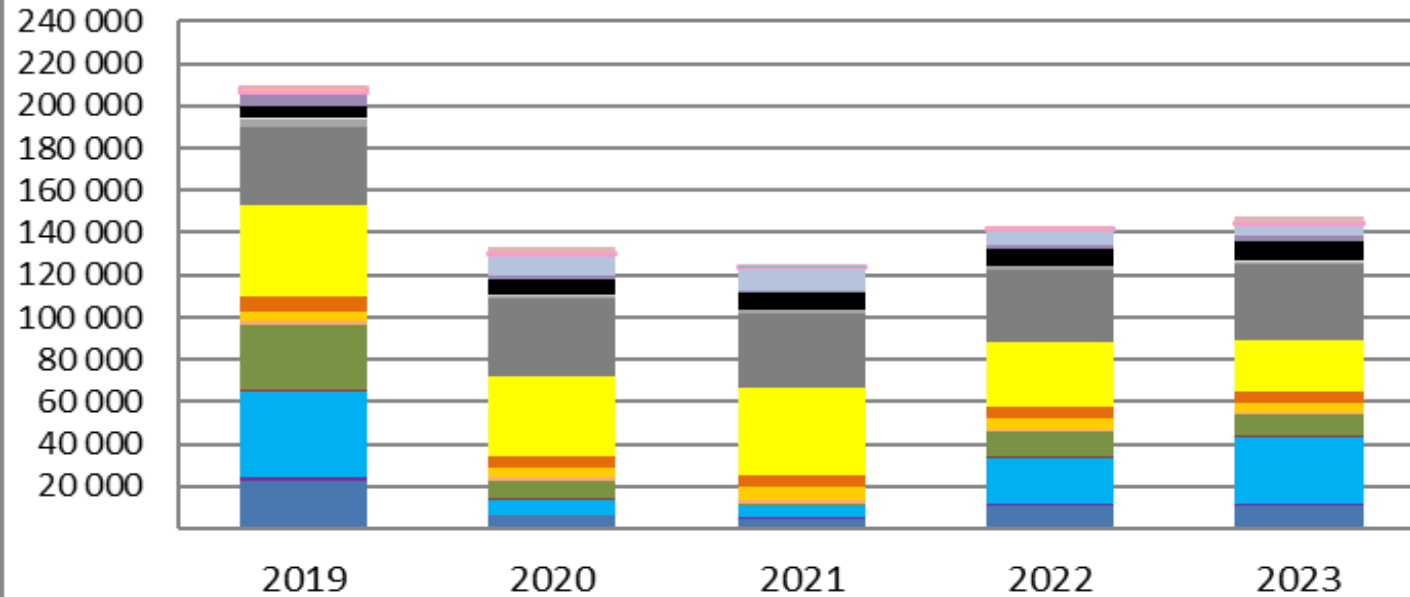
Figure 2.1 Evolution of selected Commission core parameters, 2015 to 2023 (2015 = 100)



- Continue long-term downwards trend
- Buildings' energy, emissions and water consumption all reduced in 2023.
- Slight increase in 2023 in paper consumption, waste generation

Commission carbon footprint, recent evolution

Figure 3.1 Evolution of the Commission's carbon footprint (headline categories), (tonnes CO₂e)



- Staff commuting
- Missions air (RFI=2) and air taxi
- Experts' travel
- Buildings - district heating/cooling
- Buildings - fuel for heating
- Fixed assets - IT
- Paper supply
- Catering
- Own waste
- Fixed assets - Furniture
- Missions excluding air
- Vehicle fleet fuel consumption
- Buildings coolant losses
- Buildings - electricity
- Fixed assets - buildings
- Fixed assets - Commission vehicles
- Service contracts**
- Teleworking
- Other category (Ispra)*

- The post COVID rebound has dampened
- The Commission reduced its carbon footprint **by 30%** from 2019-to 2023

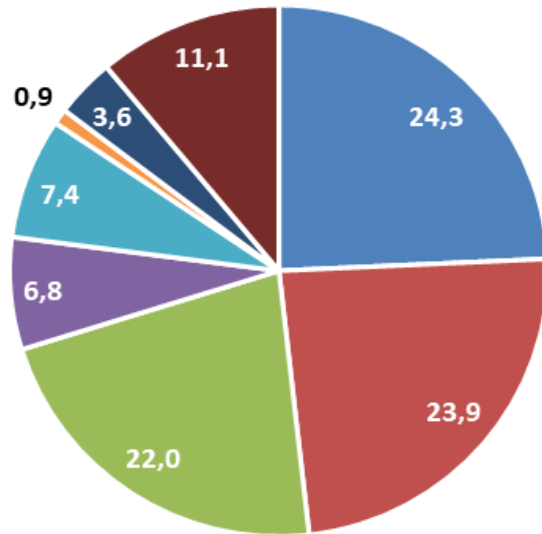
(Greening Communication target for 2019-30 is **-38%**)

- Individual sectors 2019-23:
 - Staff commuting: -52%
 - Staff missions (air and air taxi): -21%
 - Buildings fuel for heating: -42%
 - Own waste: -40%
 - Fixed assets IT: -60% (!)
 - Experts travel: -68% (!!)
 - Teleworking: +399%

Carbon footprint... another perspective

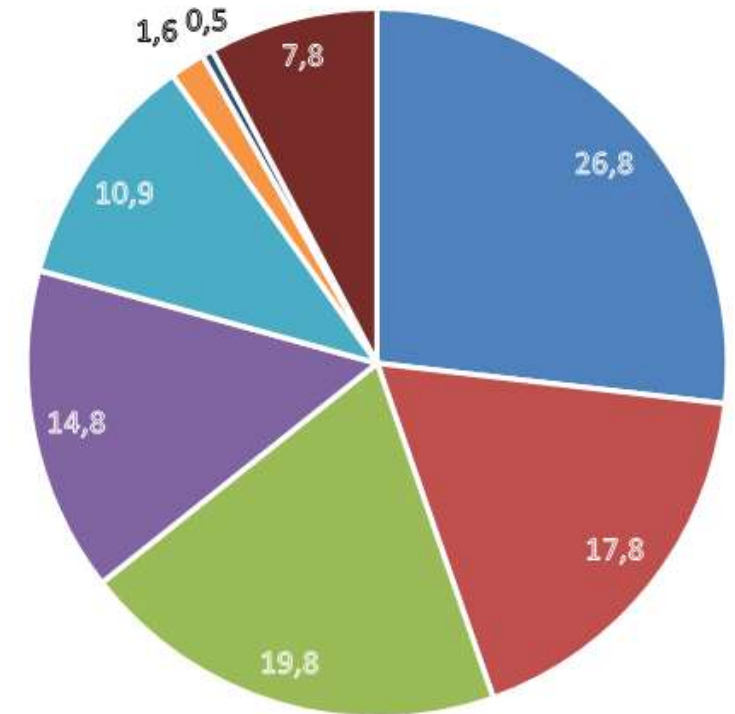
Figure 3.2 Main components of the Commission's carbon footprint in 2023 (%)

- Buildings energy and refrigerant losses
- Buildings fixed assets
- Missions (staff)
- Mission (experts)
- Staff commuting
- IT fixed assets
- Teleworking emissions
- Other (waste, goods/services, vehicle fleet, furniture)



- Buildings energy and construction nearly half
- Mobility slightly more than a quarter
- All other categories, less than a quarter

Main components of the Commission's carbon footprint in 2019 (%)





Overall remarks

- **Emissions from buildings decreased**, mainly due to using less gas for heating buildings.
- However, **relative contribution of buildings** (energy use & construction emissions) increased slightly, representing **nearly half** of the carbon footprint.
- The increase in **emissions due to teleworking** is more than compensated by lower emissions from reduced commuting.



The way forward...

Progress Review of the Communication on the Greening by end 2024 (including 2024 results)

- Evaluate the new context, including the new ways of working;
- Assess results so far and progress against existing targets and actions;
- Review targets and actions, and propose adjustments where necessary;
- Propose a way forward up to 2030 (and beyond – 2040), including an updated action plan and a strategy on compensating remaining in-house emissions (carbon removals);
- An updated vision of the climate neutrality objective in 2030 (Green Claims Directive).



Together we can make a world of difference...

EC-EMAS@ec.europa.eu

See also the latest

[Environmental Statement](#)
[Greening webpages on Europa](#)



Interactions between real estate policy, ways of working and environmental performance

The specific case of the Commission's site in Brussels



Ewa Bednarska, Head of unit
OIB RE.3 Energy, EMAS, and Logistical support

Context

INTERNATIONAL

- UN Sustainable Development Goals
- Paris Climate Agreement COP21
- Post-Covid recovery
- Wars and international instability
- Increased energy prices

LOCAL

- PACE / RENOLution Regional strategic plans
- CoBrACE - **C**ode **B**ruxellois de l'**A**ir, du **C**limat et de la maîtrise de l'**E**nergie
- PLAGE: **P**lan **L**ocal d'**A**ction **G**estion **É**nergétique

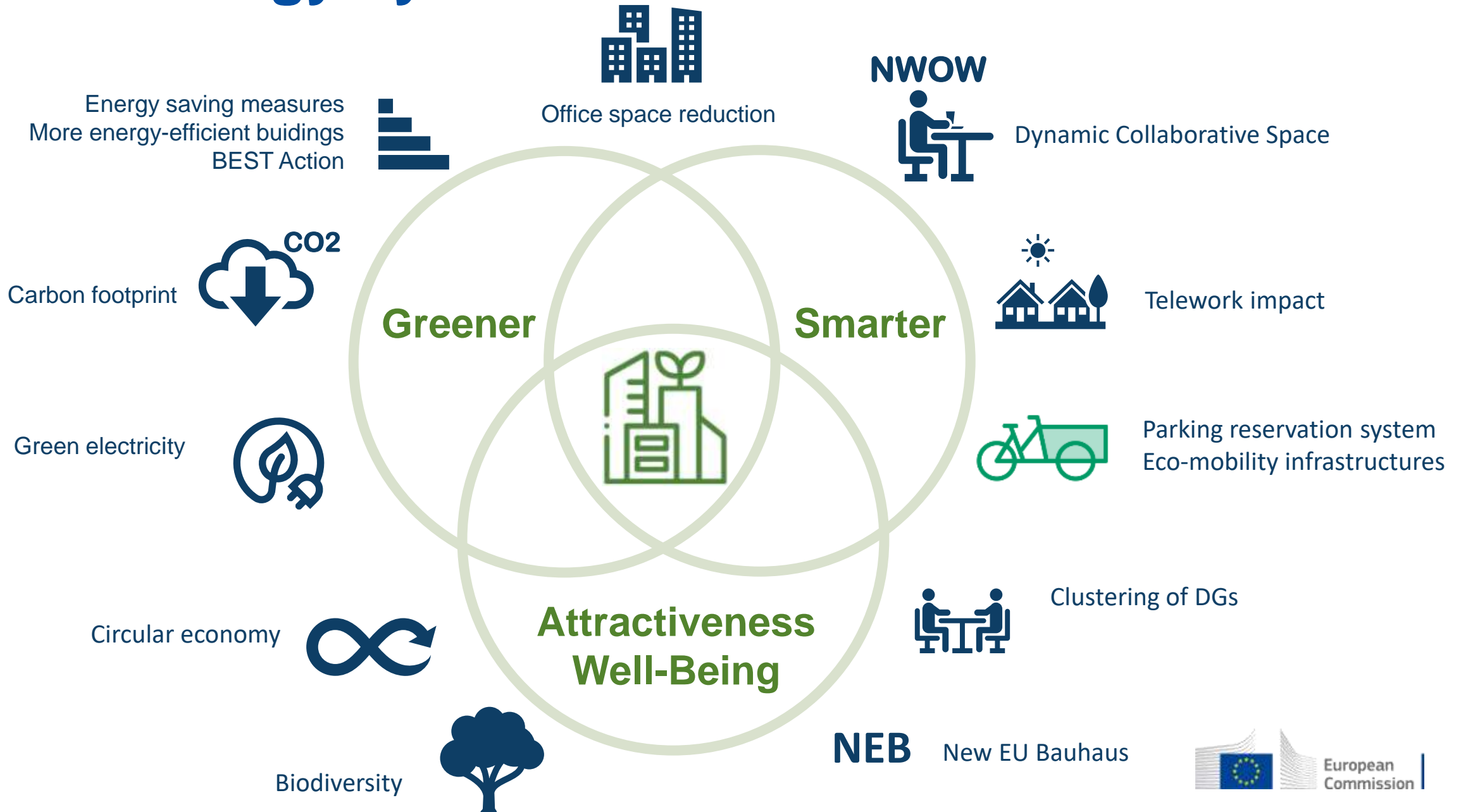
EUROPEAN

- Green Deal & Fit for 55
- Revised Directives on Energy Performance
- Level(s) EU buildings sustainability indicators
- EU GPP criteria for buildings 2024
- EU Taxonomy

COMMISSION

- EMAS
- Greening of the EC Communication
- Exemplary role of the Commission (revolutionary)
- Staff involvement

EC strategy by 2030



EC strategy by 2030 - Real estate assets

Communication 'Greening the Commission' (2022)

'...the Commission aims to reach climate neutrality in its operations by 2030 and reduce its environmental footprint.'



New real estate strategy



GREENER: Make every square meter greener

SMARTER: Optimise the use of every square meter

How?

RE estimated CO₂ savings by 2030/2019 → - 38% = 18.500 tons



Reduce office space

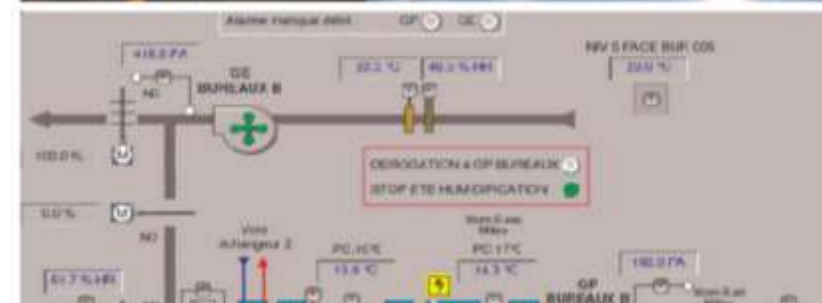
- 200 000 m² (half office buildings)
- 25% of office surface)



Replace buildings

- + 50 % higher energy performance
- 50 % environmental footprint

Building commissioning



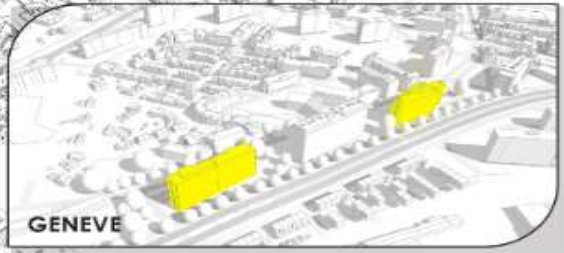
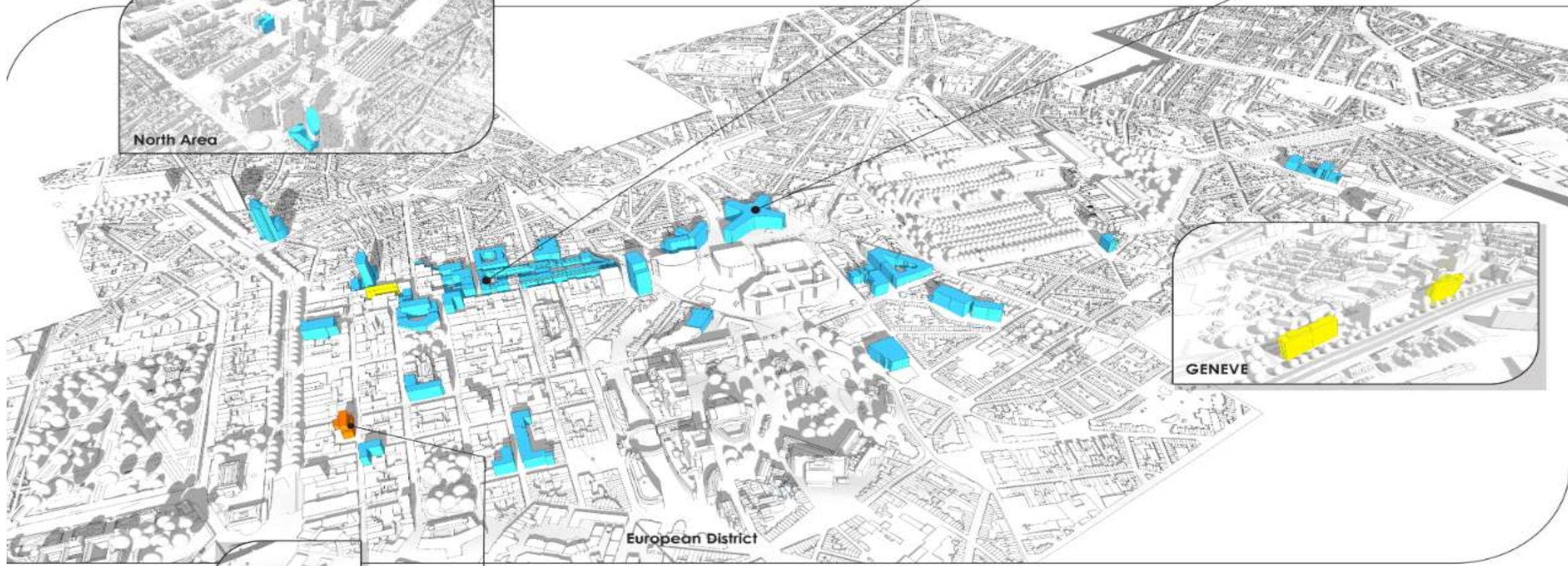
Energy-saving actions

- Close monitoring and optimisation of installations
- Renovation
- Decarbonisation/Renewable energy

- Occupied buildings
- Released buildings
- New buildings



EXECUTIVE AGENCIES POLE



Greener buildings



CO46 © Kardham



CC2.0 © Atenor



L107

New workspaces

- **Office space reduction:** 25% reduction in office buildings
- **Flexible working arrangements:** Transition to dynamic collaborative workspaces + teleworking
- **Well-being & Sustainable:** Combination of staff well-being with the principles of the European New Bauhaus, focusing on beauty, sustainability, and community



Direct impact on the environmental performance of the real estate portfolio





Circular economy actions - Cradle to Cradle

Construction materials and Furniture

OIB stock, reuse + repair, upcycling, reduce waste, etc.



Recycled materials



carpets, made from 100% recycled nylon including discarded fishing nets



Counters made from 100% recycled plastic waste from cosmetic industry



CHAR Visitor center

Energy-saving actions



- **Photovoltaic installations**

2025 estimated EC PV production = 3 800 MWh = 2% of 2023 Brussels Region PV production

- **LED relighting**

Example: Berlaymont - Estimated 9 % BERL electricity savings

- **BEST Winter & Summer:** Closure of buildings = lighting, ventilation, and air conditioning switched off



Sustainable commuting: Reducing parking spaces



Code Bruuxellois de l'air, du climat et de la maîtrise de l'énergie

- Reduce environmental impacts resulting from mobility needs
- Dissuade workers from taking their vehicle for “home-to-work” journeys by reducing the number of parking spaces



50% reduction in parking spaces per WS (2020-2030) + **Increased bike capacity** in all EC buildings + Creation of two large **eco-mobility hubs** for soft mobility: L130 (628 spaces) and L-41 (378 spaces)



- Parking reservation system → helps manage the transition to fewer parking lots
- In use in **24 buildings** (22 BXL + 2 LUX) with about > **13 000 users**



Eco-mobility hubs



-  Bike Racks
-  Electric bikes
-  Cargo bikes (bigger bikes)
-  Service bikes
-  Scooters Racks
-  Eco-mobility facilities (showers, changing rooms, drying room)



Other ongoing actions

- **Biodiversity**

- 2 projects per year + roofs & terraces



- **Waste management**

- New action plan



- **Office supplies**

- Reduction of existing stocks, budgets and number of orders
- Communication action plan to increase awareness and change behaviours



EMAS results (BXL)



	Reference KPI values 2019	Objective 2030 Δ % 19-30	Results 2022 Δ % 19-22	Results 2023 Δ % 19-23
ENERGY BLDGS (MWh/p)	6.39	-40%	-33%	-42%
ENERGY BLDGS (KWh/m ²)	170	-25%	-21%	-32%
WATER (m ³ /p)	11.50	-20%	-47%	-46%
WATER (L/m ²)	307	-15%	-38%	-35%
BUILDING EMISSIONS CO ₂ embodied + in use (tCO ₂ e)	48,103	-38%	-14%	-16%
CO ₂ vehicles (g/km, manufacturer)	119	-40%	-31%	-55%
CO ₂ vehicles (g/km, actual)	280	-15%	-23%	-28%
PAPER (tons/p)	0.021	-60%	-77%	-64%
OFFICE PAPER CONS. (sheets/p/day)	21.28	-60%	-75%	-74%
NON-HAZ. WASTE (tons/p)	0.211	-25%	-58%	-56%
RESIDUAL WASTE (tons/p)	0.083	-20%	-72%	-55%

Some conclusions

- Post-COVID teleworking and rising energy costs ➡ **more sustainable real estate strategy**
- Modernised working methods and infrastructure ➡ **enhanced attractiveness** for environmentally conscious, flexibility-seeking workers
- New office design ➡ prioritise **aesthetics, sustainability, and collaboration**, with a focus on circular economy and recycled materials
- Development of Dynamic Collaborative Spaces ➡ also enables **energy-saving measures** like the BEST action
- Reduced parking capacity ➡ optimise parking infrastructures and promote soft mobility

We are on track to reach our objectives, but let's remain vigilant!

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Thank you



Union 2020

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RENOVATION OF THE VAN MAERLANT BUILDING (VMA)

05/11/2024



Location of the VMA building in the EU quarter



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*Buildings occupied by the
committees in the EU quarter*



- More than 35-year old building
- Renovation from the 3rd to the 9th office floor (6.500m² bruto), including new sanitary facilities, showers and lounge area for Members



VMA building before the renovation works

Main Goal:

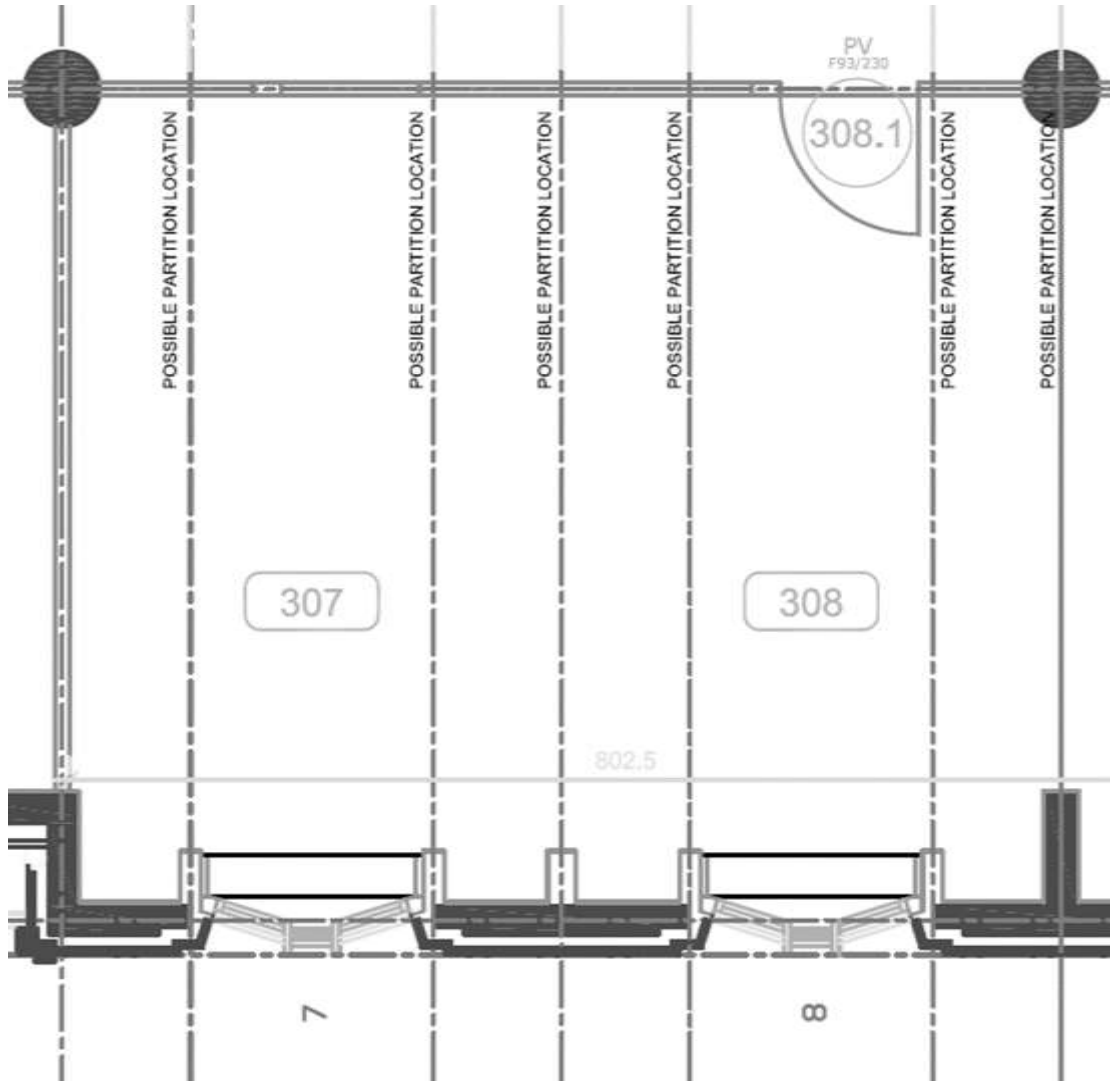
- to create the best possible working conditions, comfort, well-being, functionality and accessibility, in modern, future-proof, sustainable and aesthetic way,



This renovation was a unique opportunity for:

- making this modernisation flexible at all times (reasonable flexibility) so that spaces can easily be adapted to new ways of working (post-pandemic phase)
- modernising the working environment by installing e.g. glass partitions
- taking measures to limit energy and water consumption (EMAS targets/Green Deal)
- Apply the principles of the New European Bauhaus, as well as the principles of design for all and the best available technologies.

Reasonable flexibility :



- Reasonable flexibility which allows an easy change of layout of offices without the need to modify technical installations in false ceilings (smaller or larger offices, individual or shared offices, or open-plan offices can be easily created without any technical intervention in the ventilation, heating, lighting, fire detection installations or sprinklers):
 - Partitions can be placed (or not) on every dotted line between offices (plan).
 - sprinkler installation on all floors
 - 1 fixed installation of the devices in the false ceiling incl the horizontal distribution of their output so that they provide the best working conditions for all possible wall layouts

Reasonable flexibility :



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Floor plan with « reasonable flexibility » applied to the floor layout.

Modernising the working environment:



Glass partitions between the office spaces and the circulations to bring as much as possible natural light inside.

Taking measures to limit energy and water consumption (EMAS targets/Green Deal)

Every meeting room as well as every office has been equipped with a presence/absence detector. These multi-criteria detectors are equipped with an integrated light sensor, a temperature sensor, a humidity sensor and a CO2 sensor, with a view to automating all of these rooms individually

This allows to achieve a 30% estimated reduction in electricity consumption and a 9% estimated reduction in gas consumption for the renovated floors.

- Ventilation controlled by a CO² measurement;
- Heating control with an automated valve and regulating system KNX;
- Sun protection system to prevent overheating through intelligent glazing. Automatic colour change in case of direct sunlight and too hot but full daylight in case of no direct sunlight;
- Half-open false ceiling to use thermal capacity of concrete floors to prevent overheating;
- Additional cooling through ventilation and possible high flow ventilation at night with outside or cooled air.

Water savings measures

The installation of a rainwater collection system as well as a rainwater tank in the car park is ongoing. The rainwater will be used to flush the toilets on floors 3 to 9.



Touch panel and sensors in each room

ACCESSIBILITY / INCLUSIVITY

Application of the 'Design for All' principle:

- ↓ Installation of toilets for PRM on each floor
↓ A shower for PRM on the third floor



- ↓ Automation of the entrance doors to the footbridge to the JDE building



- ↓ Redesign of corridors and doors for PRM

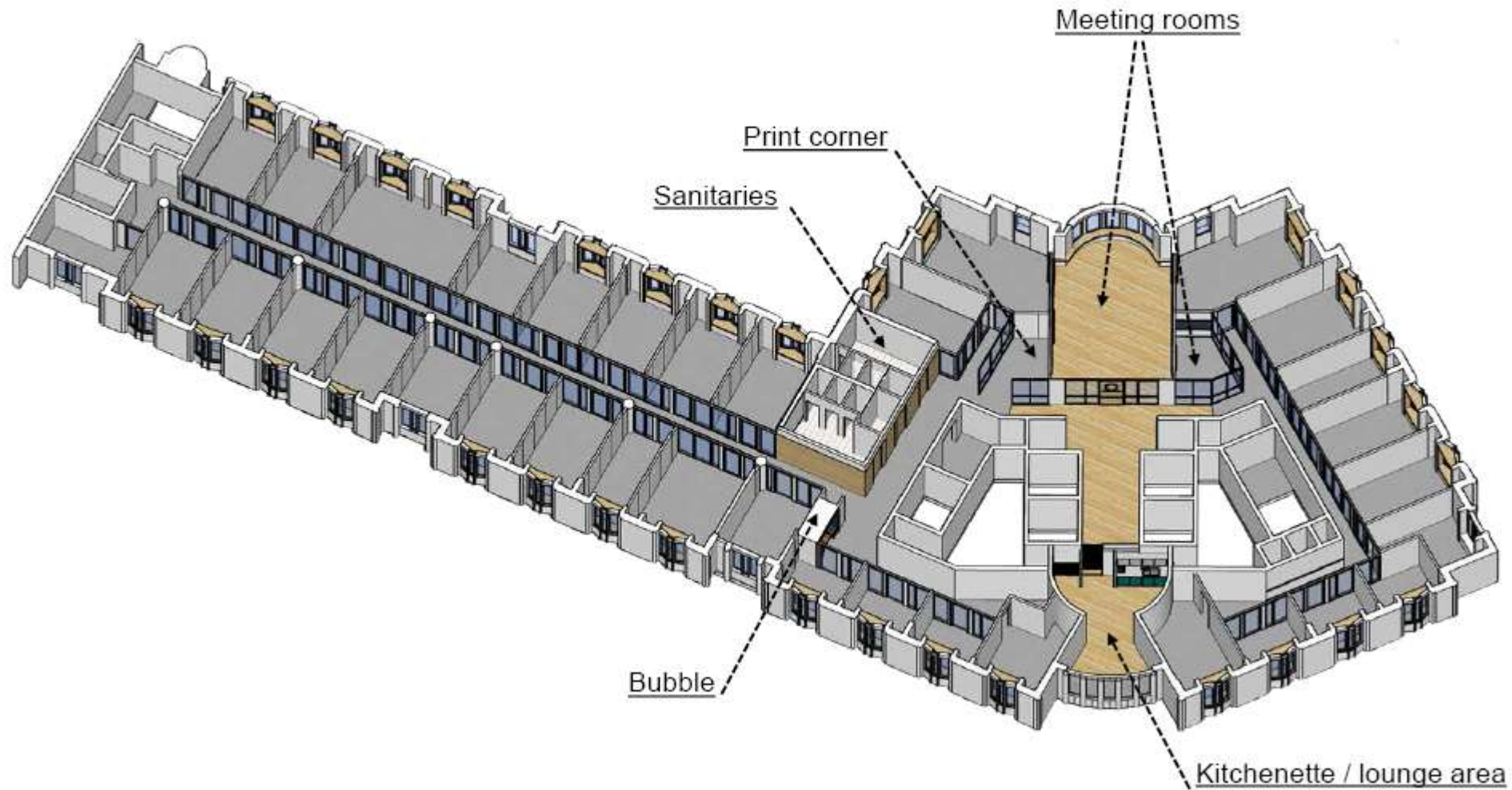


- The sirens of the fire protection system are equipped with light flashes for deaf people.
- Physical passageway of every floor of the VMA building to every floor of the B100 building
- Physical passageway with a slope on the second floor of the VMA building to the ground floor of the B100 building

All rooms of all floors of all Committees' buildings are accessible for PRM without leaving Committees' premises

ACCESSIBILITY / INCLUSIVITY

Giving options of uses and encouraging interactions between colleagues



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ACCESSIBILITY / INCLUSIVITY

Giving options of uses and encouraging interactions between colleagues



Shared spaces

SUSTAINABILITY

Preserving existing materials

- Renovation of existing wooden floors;
- Upgrade of existing radiators;
- Upgrade of existing wooden windows.

Prefer Natural materials

- (wood, stone, metal, glass) rather than fake (plastics / vinyl)

Choosing "Cradle to Cradle" certified materials

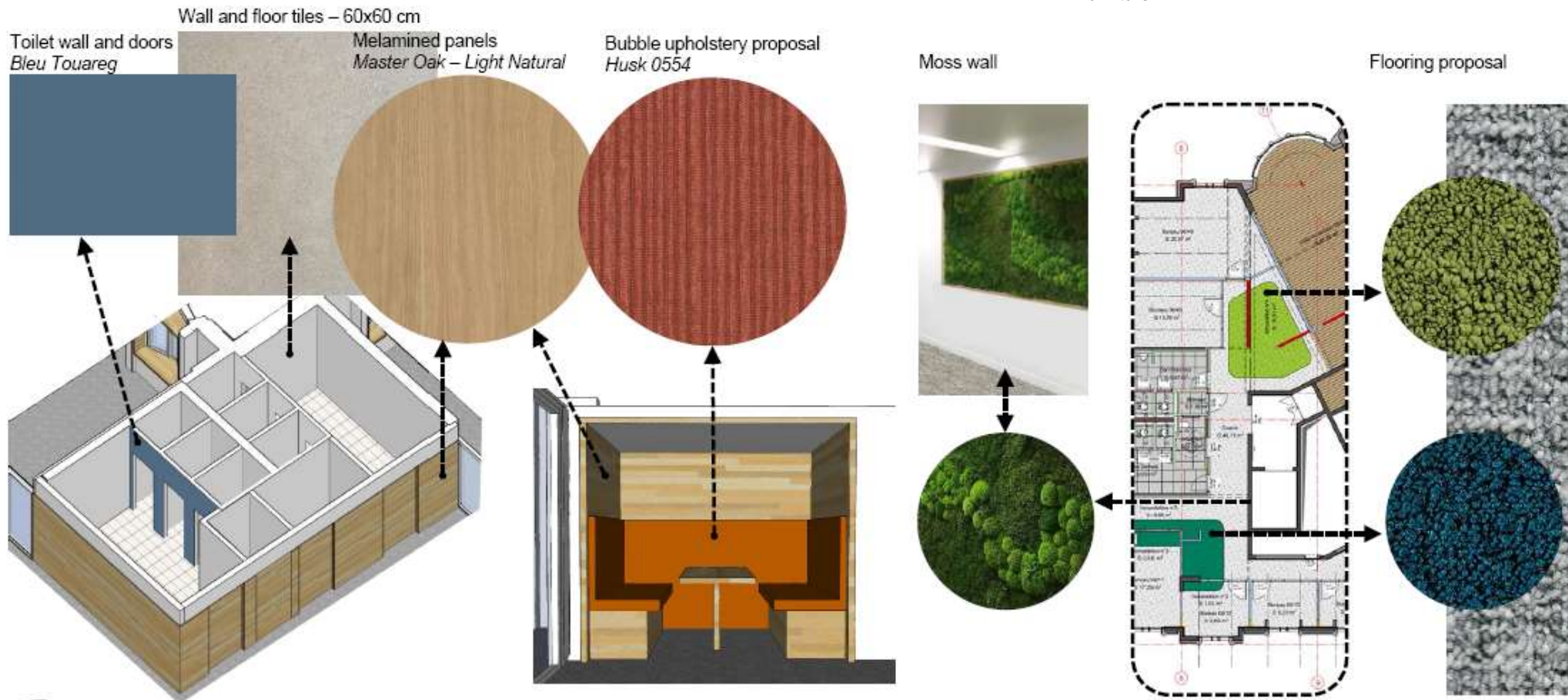
- Carpet;
- Glass partitions;
- Metal false ceilings;
- Acoustic panels (*GreenGuard* certified).



AESTHETICS

A mood board has been established with the desired colours, shapes and materials defining an aesthetic style before choosing the building materials and furniture included their colour. This is reflected the most in:

- Carpet;
- Sealing of existing parquet floor;
- Space made lively by colourful as well as by wooden accents on walls and floors;
- Modern glazed partitions;
- Colours of the walls in shades facilitating the distribution of light;
- False ceiling;
- Living plants wall;
- Furniture.





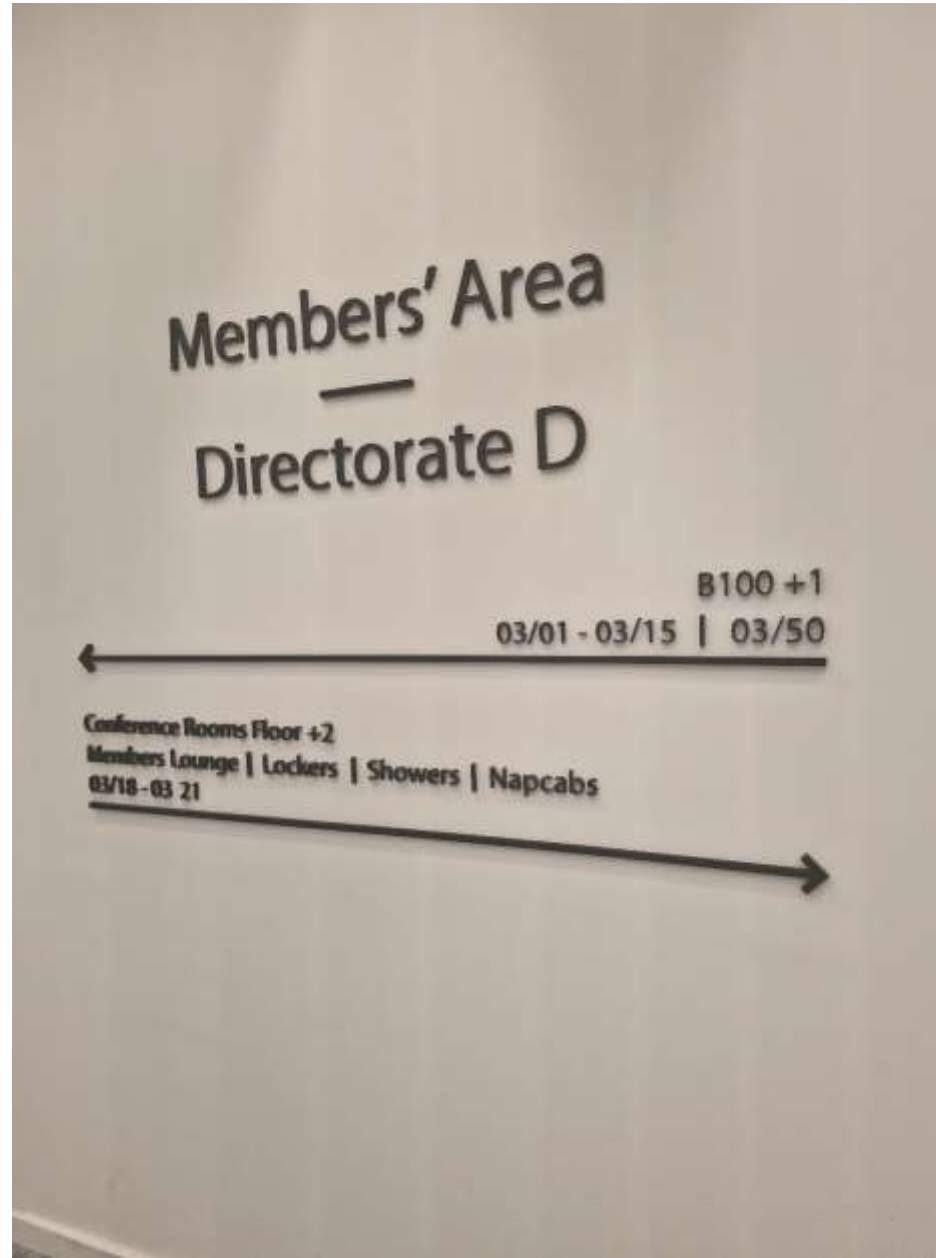
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Thank you!



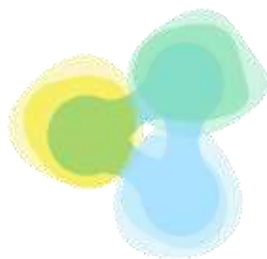
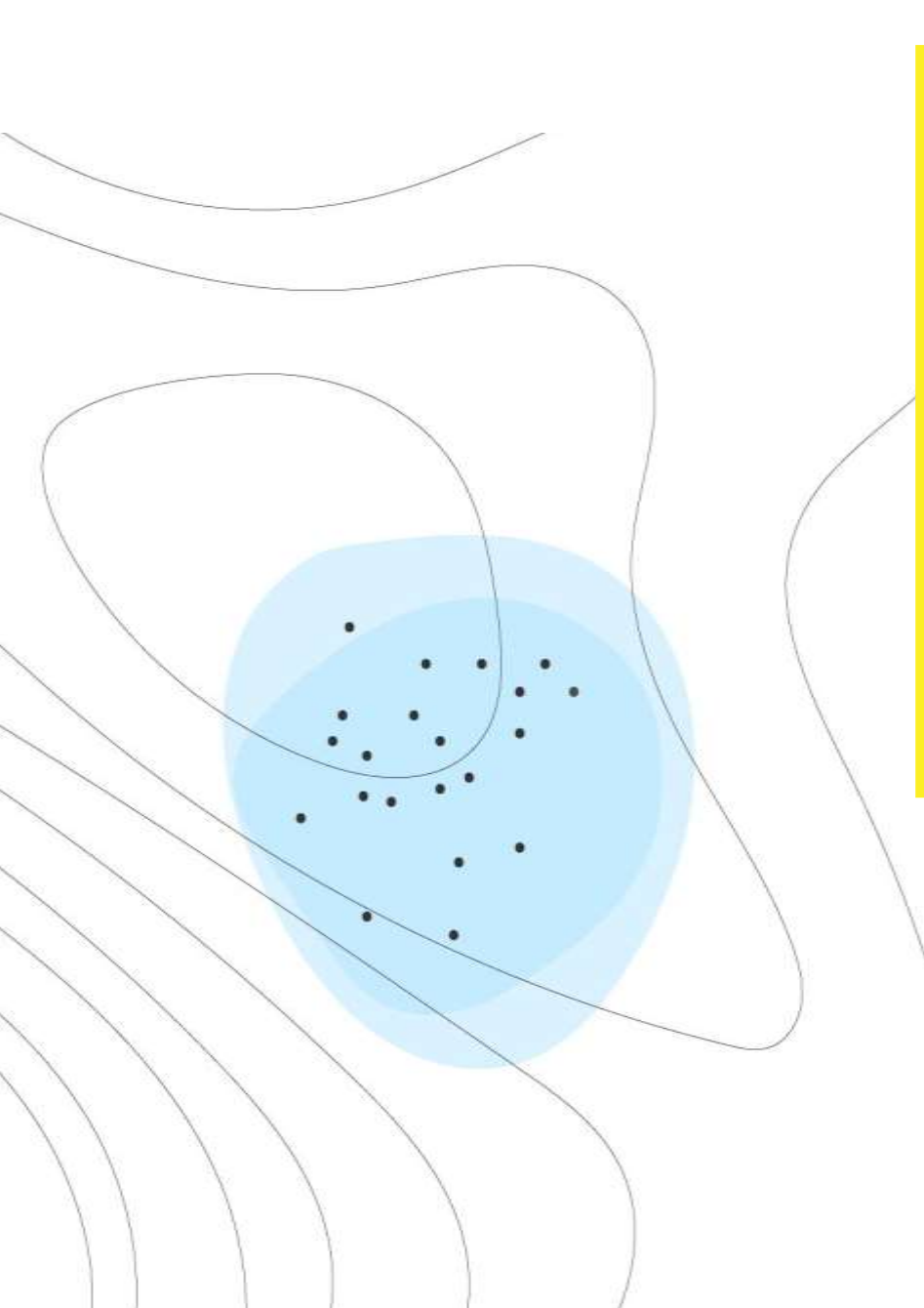
*Interinstitutional EMAS Days 2024:
Environmental impact of the new ways of working - Greener buildings & workspaces*

New European Bauhaus Success Building Stories from JRC-Ispra and JRC-Geel

New European Bauhaus & Beyond Community of Practice @ Dir R

Evangelia BEKTASIADOU, architect, Support Services Geel, R.6

Elena VILLARES OJEA, architect, Support Services Ispra, R.I.4.



New European Bauhaus
beautiful | sustainable | together

What is the New European Bauhaus?

Firstly announced: 16 September 2020

State of the Union Address at the European Parliament Plenary, by President von der Leyen



"The New European Bauhaus combines the big vision of the European Green Deal with tangible change on the ground. Change that improves our daily life and that people can touch and feel – in buildings, in public spaces, but also in fashion or furniture. It aims at creating a new lifestyle that matches sustainability with good design, that needs less carbon and that is inclusive and affordable for all."

URSULA VON DER LEYEN President of the European Commission



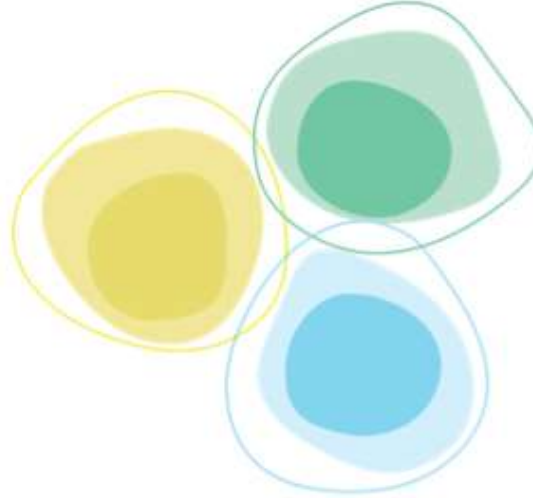
supporting the “soul” of the European Green deal

https://europa.eu/new-european-bauhaus/about/about-initiative_en

Three values

Together

- AMBITION I: to include
- AMBITION II: to consolidate
- AMBITION III: to transform



Sustainable

- AMBITION I: to repurpose
- AMBITION II: to close the loop
- AMBITION III: to regenerate

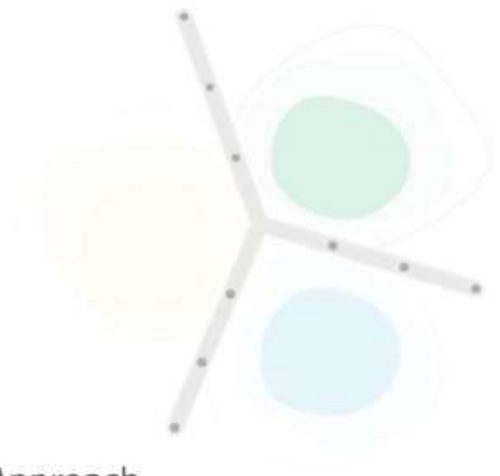
Beautiful

- AMBITION I: to activate
- AMBITION II: to connect
- AMBITION III: to integrate

Three principles

Participatory Process

- AMBITION I: to consult
- AMBITION II: to co-develop
- AMBITION III: to self-govern



Transdisciplinary Approach

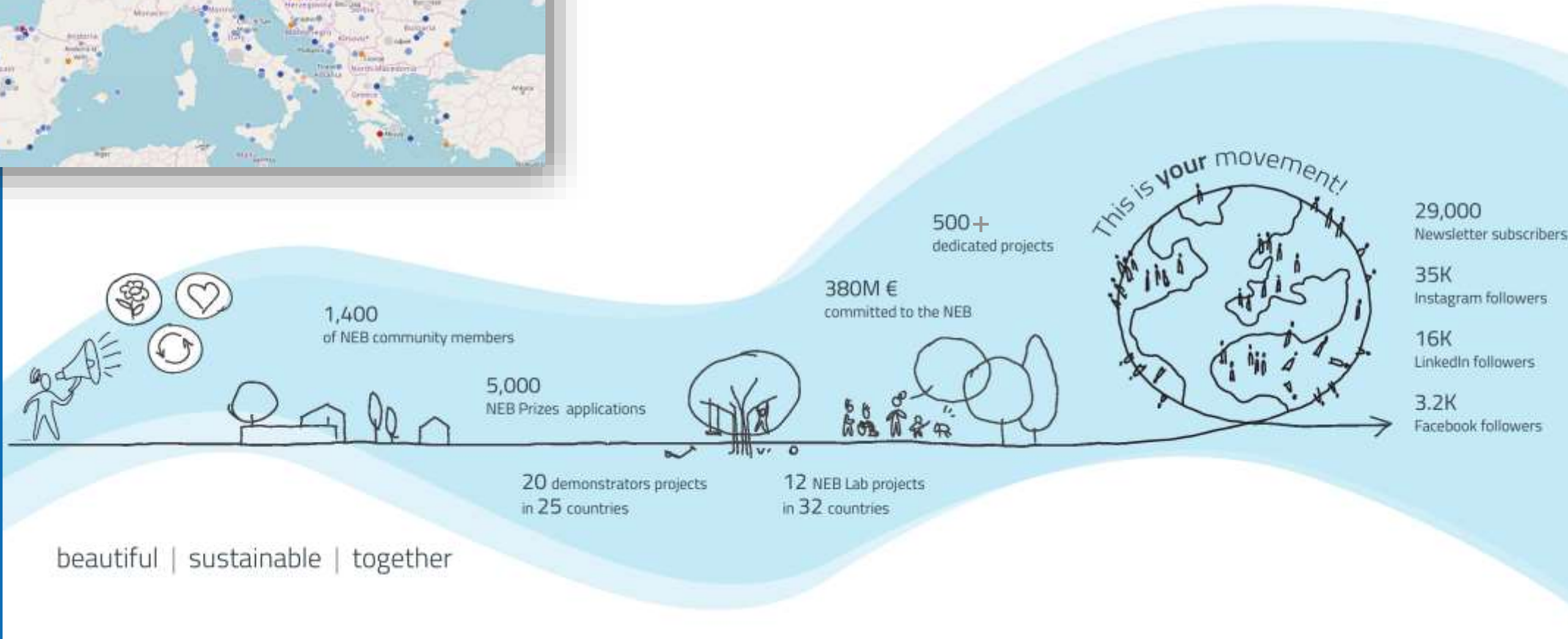
- AMBITION I: to be multidisciplinary
- AMBITION II: to be interdisciplinary
- AMBITION III: to be beyond-disciplinary

Multi-Level Engagement

- AMBITION I: to work horizontally
- AMBITION II: to work vertically
- AMBITION III: to work across levels



<https://web.jrc.ec.europa.eu/dashboard/NEB/index.html>



New European Bauhaus & Beyond Community of Practice @ JRC Dir R.



NEB @ JRC



at JRC- Sevilla



at JRC-Geel



at JRC-Petten



at JRC-Ispra

B100: the conference building at JRC-Geel



Re-activate the existing building stock
@ JRC-Geel site

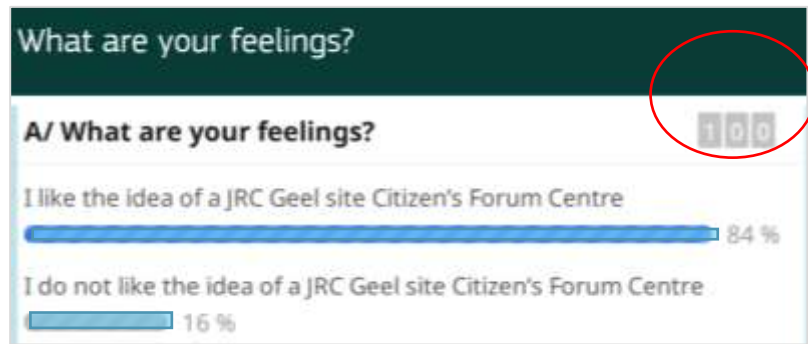
the Co-creation journey

Launching the “Citizen's Forum” project

Launching the "Citizen's Forum" project



December 2019



October 2020

In collaboration with archipelago architects

Co-creation process

Your ideas count!

Any ideas on how the building should be organized and how it should be designed?

Give your ideas now, by filling the online idea box

Deadline 13 November 2020



Purpose?

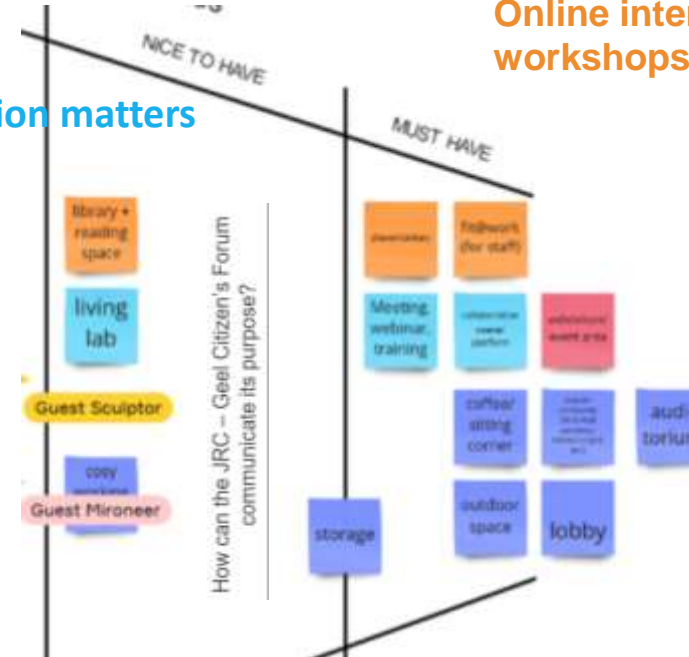
Your opinion matters

HOW?

WHAT?

WHEN?

For who?

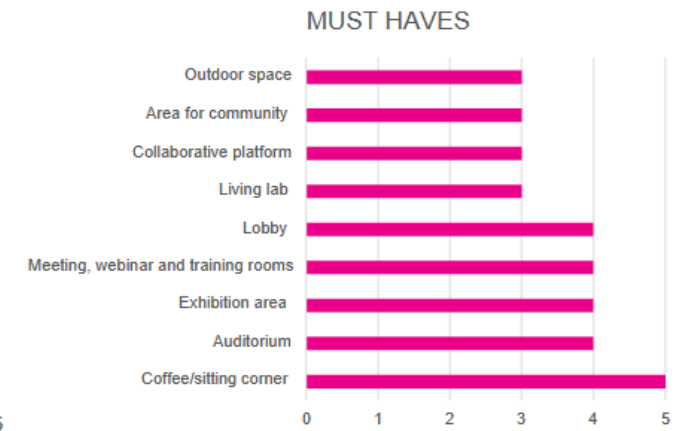
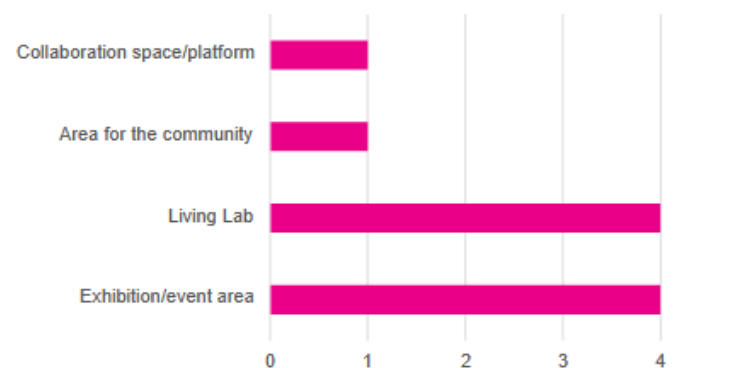


March 2021

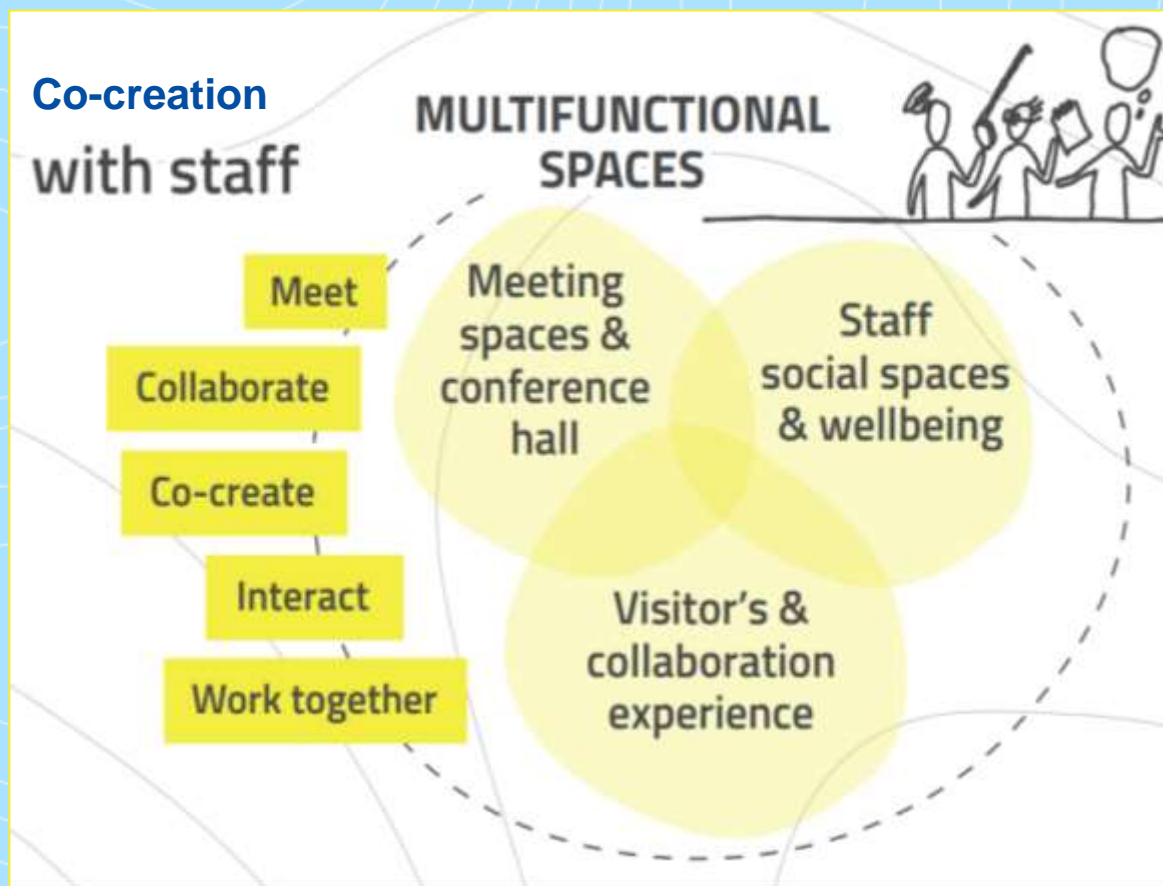
Online interactive workshops

Design Drivers?

What is the target group that you would like to attract?



Needs and functionalities



September 2021

“COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS on the New European Bauhaus”.

The Commission's building strategy

The Commission has started integrating all three dimensions of the New European Bauhaus in the development of its presence and actions in the places where its services are established. In Brussels, those values will be implemented in the renovation of the Commission Visitors' Centre, and the Commission will propose a partnership in the design of the new European Quarter Urban planning to the relevant authorities of the Brussels region. Consultations are to be launched in autumn 2021 and will ensure a citizens dialogue around the European neighbourhood. The New European Bauhaus values will also be implemented in the new construction and refurbishment projects proposed by the Commission for the Joint Research Centre sites' in Sevilla and Geel.

The JRC- Geel refurbishment project will be a part of the Commission's Building Strategy.



New European Bauhaus
beautiful | sustainable | together

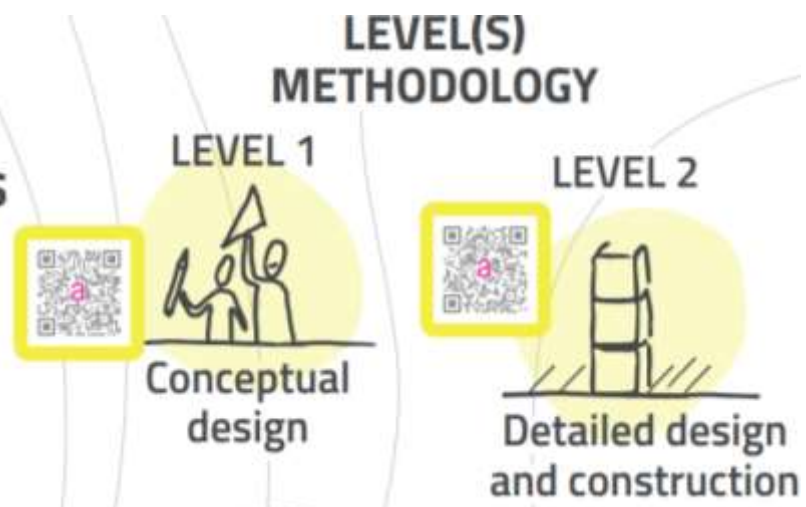
Design

phase

Co-creation

with
identified
stakeholders

architects
engineers
academia
industry
research centres



- Assess sustainability
- Discuss materials and construction options
- Brainstorm on technologies and innovative solutions
- Discuss on life cycle considerations
- Brainstorm on beauty and accessibility
- Work on dynamic simulations for the user's well-being)
- Research and justify our choices
- Set our benchmarks aligned and beyond the national norms



New European Bauhaus
beautiful | sustainable | together

Level(s)






European framework for sustainable buildings

- assessing and reporting on the sustainability performance of buildings (residential and offices)
- applying circular economy principles
- measuring and supporting design improvements, from design to end of life.

Additional methodology

To examine and evaluate a variety of materials and construction options for the building's envelope (walls, floors, roofs), through simulation models, MMG* methodology, etc.)

*MMG methodology: cost to prevent or repair the environmental damage" in €/m²

Macro-objective	Indicators	Level 1 Conceptual design	Level 2 Detailed design and construction	Level 3 As-built and in-use	
Macro-objective 1: Greenhouse gas and air pollutant emissions along a buildings life cycle		1.1. Use stage energy performance	x	x → Ima Ice, dynamic simulation	
		1.2. Life cycle Global Warming Potential	x	x → LCA MMG method	
Macro-objective 2: Resource efficient and circular material life cycles		2.1. Bill of quantities, materials and lifespans	x	-	
		2.2. Construction & demolition waste and materials	x	x → demolition follow-up plan	
		2.3. Design for adaptability and renovation	x	x → 2.3 table Level(s)	
		2.4. Design for deconstruction, reuse and recycling	x	x → 2.4 calculator Level(s)	
Macro-objective 3: Efficient use of water resources		3.1. Use stage water consumption	x	x → 3.1 calculator Level(s)	
Macro-objective 4: Healthy and comfortable spaces		4.1. Indoor air quality	x	x → Ima Ice, dynamic simulation	
		4.2. Time outside of thermal comfort range	x	x → Ima Ice, dynamic simulation	
		4.3. Lighting and visual comfort	x	x → Deluminae, daylight simulation	
		4.4. Acoustics and protection against noise	x	-	
Macro-objective 5: Adaptation and resilience to climate change		5.1. Protection of occupier health and thermal comfort	x	x → Ima Ice, dynamic simulation	
		5.2. Increased risk of extreme weather events	x	-	
		5.3. Increased risk of flood events	x	-	
Macro-objective 6: Optimised life cycle cost and value		6.1. Life cycle costs	x	x → LCC	
		6.2. Value creation and risk exposure	x	-	

https://environment.ec.europa.eu/topics/circular-economy/levels_en

A new lease of life - a new era towards beautiful, sustainable and inclusive multifunctional spaces

beautiful



sustainable



inclusive



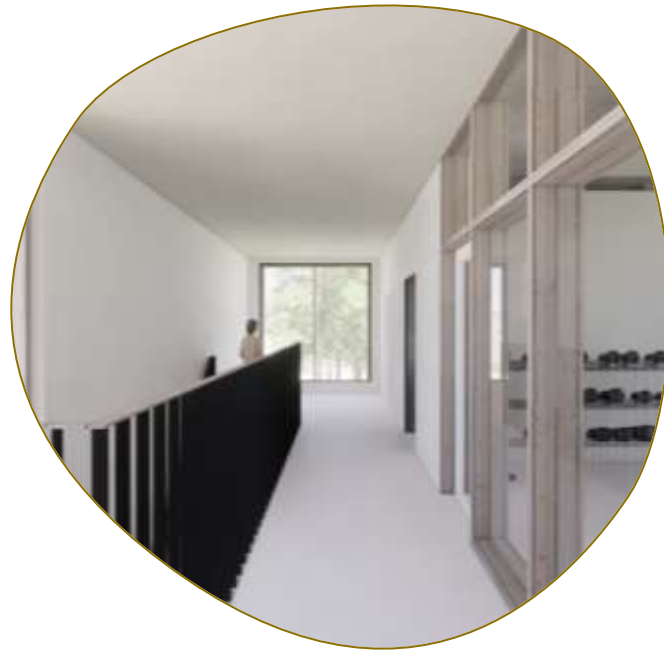
A new lease of life - a new era towards beautiful, sustainable and inclusive multifunctional spaces



Working / meeting
spaces

A new lease of life - a new era towards beautiful, sustainable and inclusive multifunctional spaces

beautiful



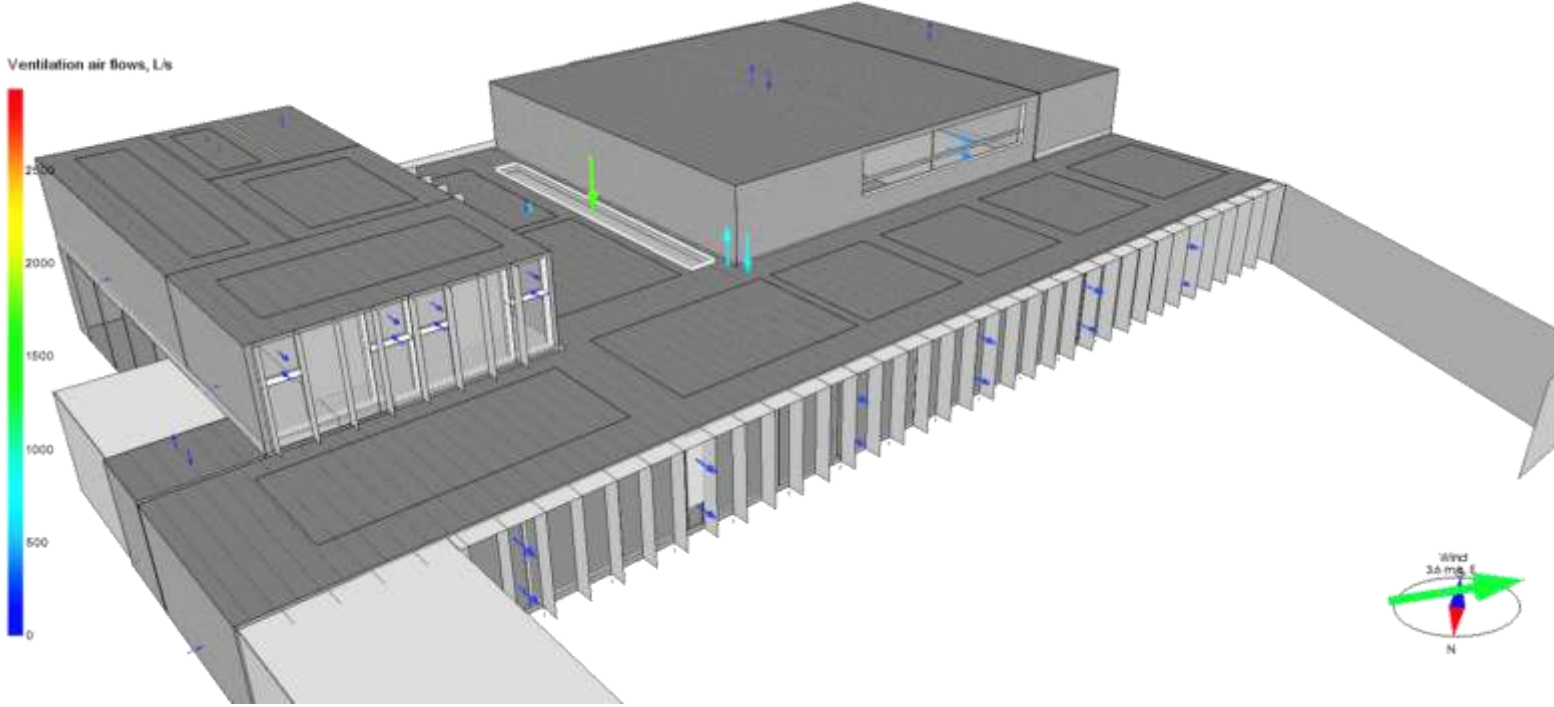
sustainable



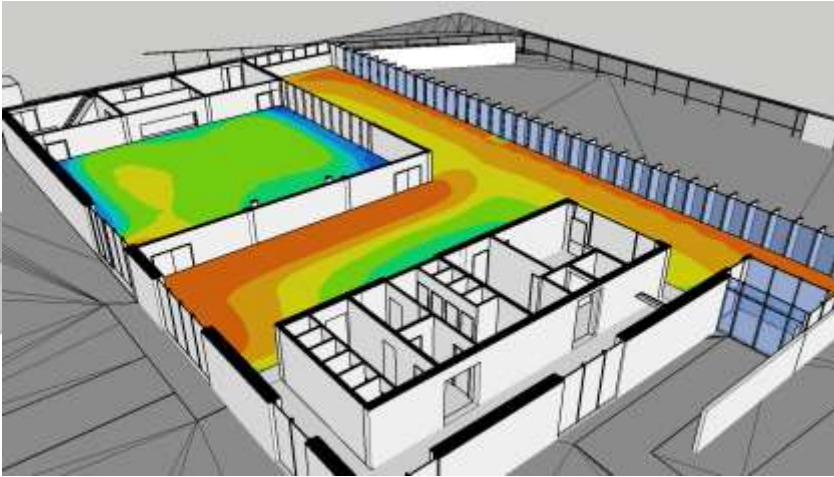
inclusive



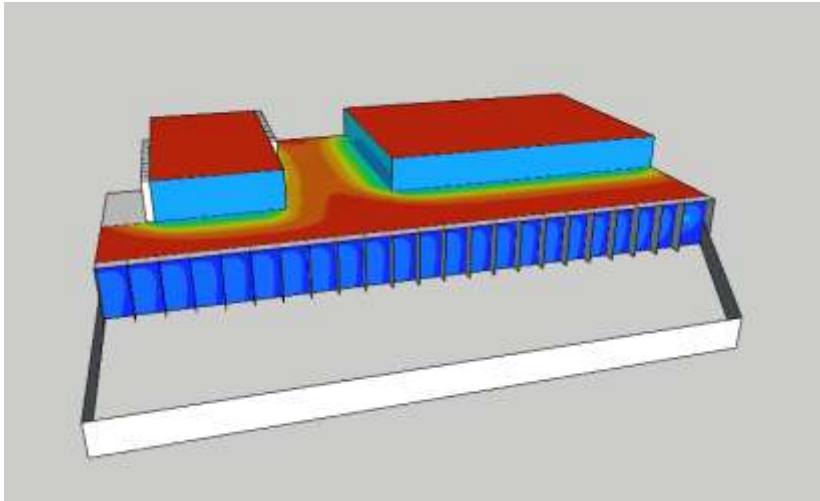
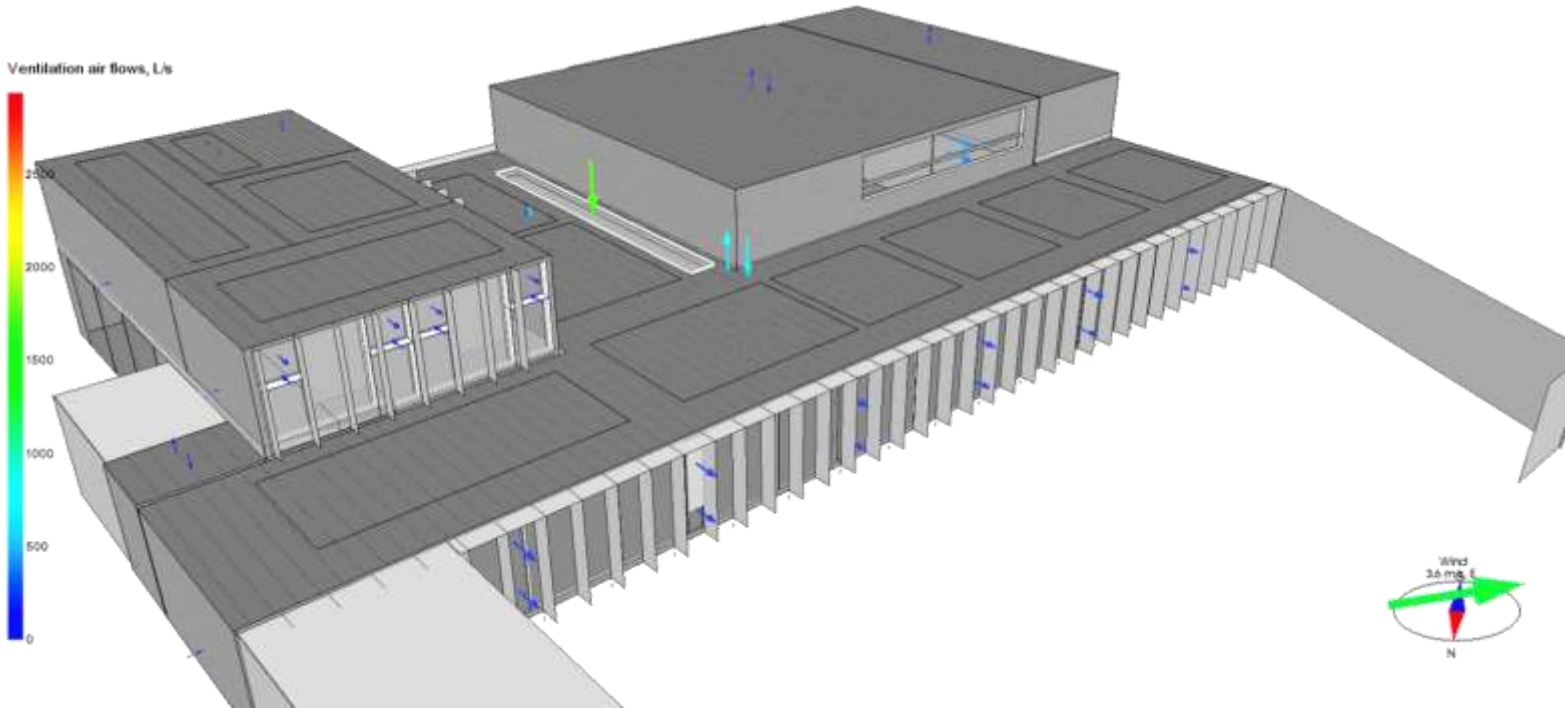
Healthy spaces – Healthy daylight



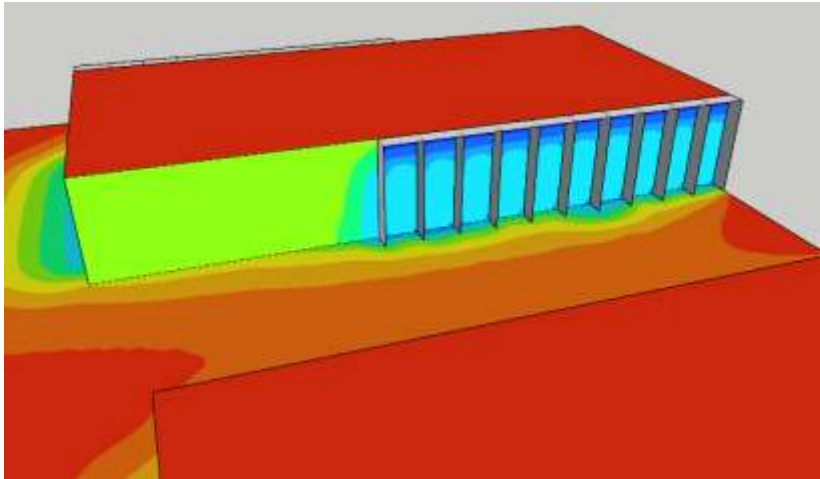
Archipelago architects



Healthy spaces – Comfortable spaces

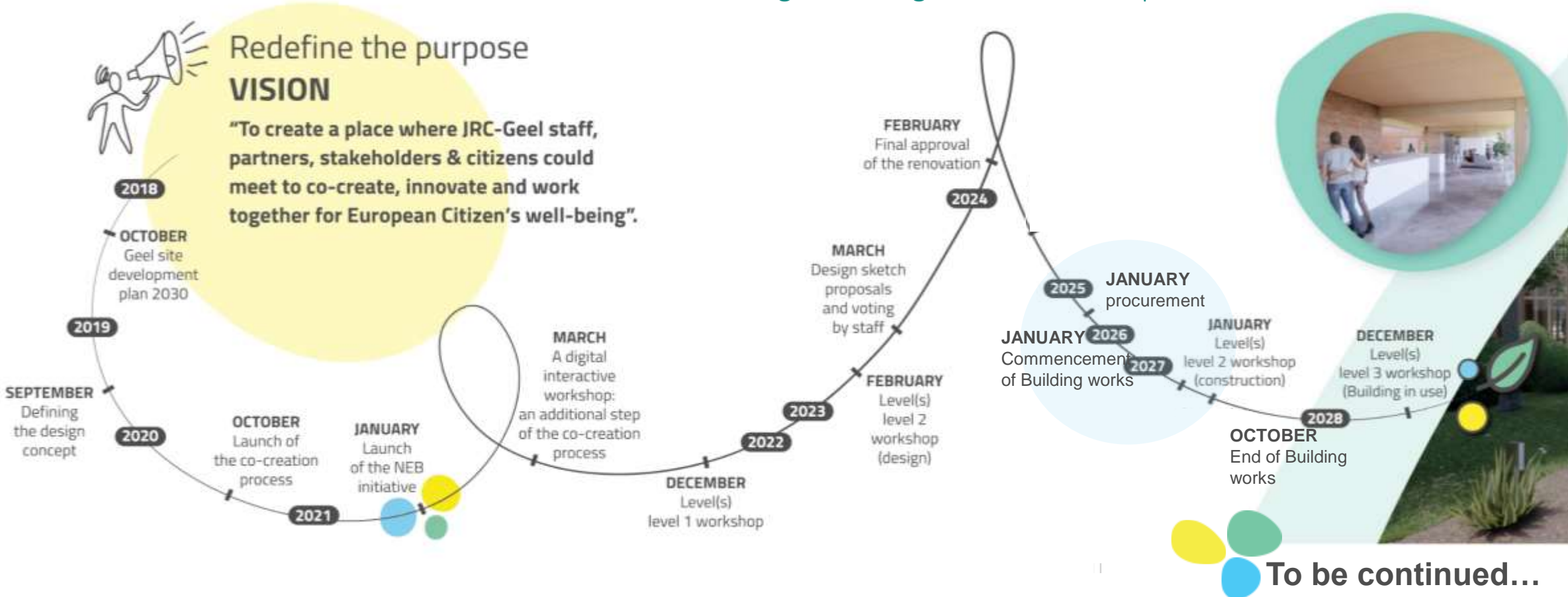


Archipelago architects



The journey...

This co-creation journey can inspire future building projects and serve as a role model in practice towards buildings resilient to future challenges and aligned to New European Bauhaus





Curious about experiencing a 360° view?





Revamping bd.102's atrium THE PROCESS



European
Commission

R.I.4 Infrastructure Unit

STARTING POINT

ISPRA'S PROJECT INSPIRED BY THE



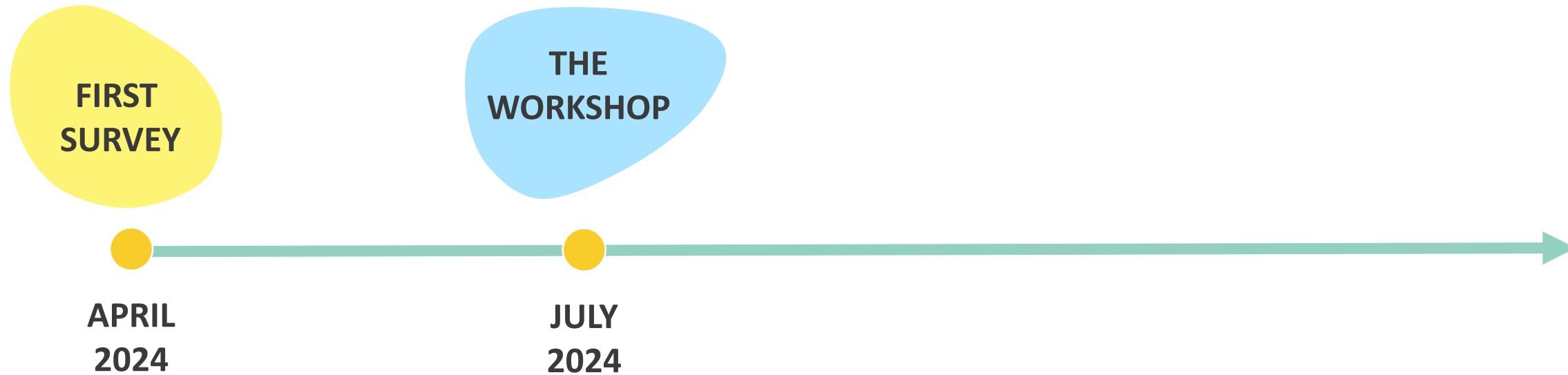
TEAM

DG JRC Directorate R
(Support Services)

+

DG JRC Directorate E
(Societal Resilience and Security)

THE PROCESS



ATRIUM Bd.102
ISPRA'S PROJECT
INSPIRED BY THE



New European
Bauhaus



THE PROCESS

FIRST SURVEY

APRIL 2024

THE WORKSHOP

JULY 2024



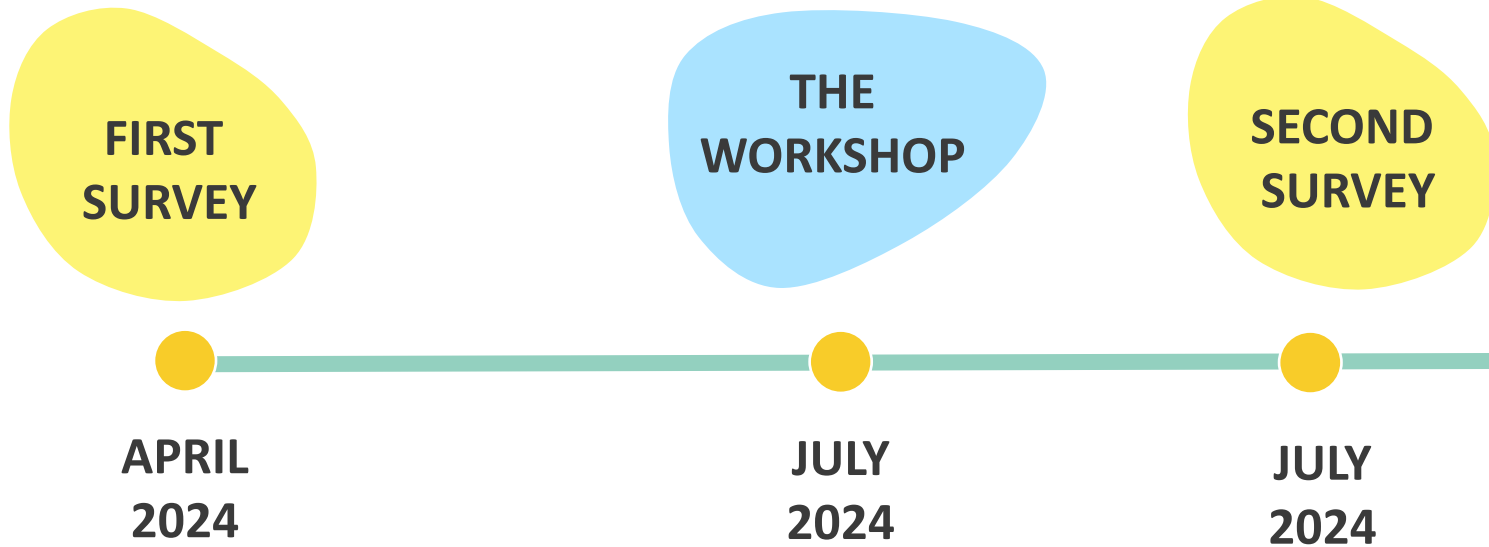
ATRIUM Bd.102
ISPRA'S PROJECT
INSPIRED BY THE



New European Bauhaus



THE PROCESS



COFFEE CORNER

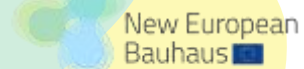


GREEN PIAZZA

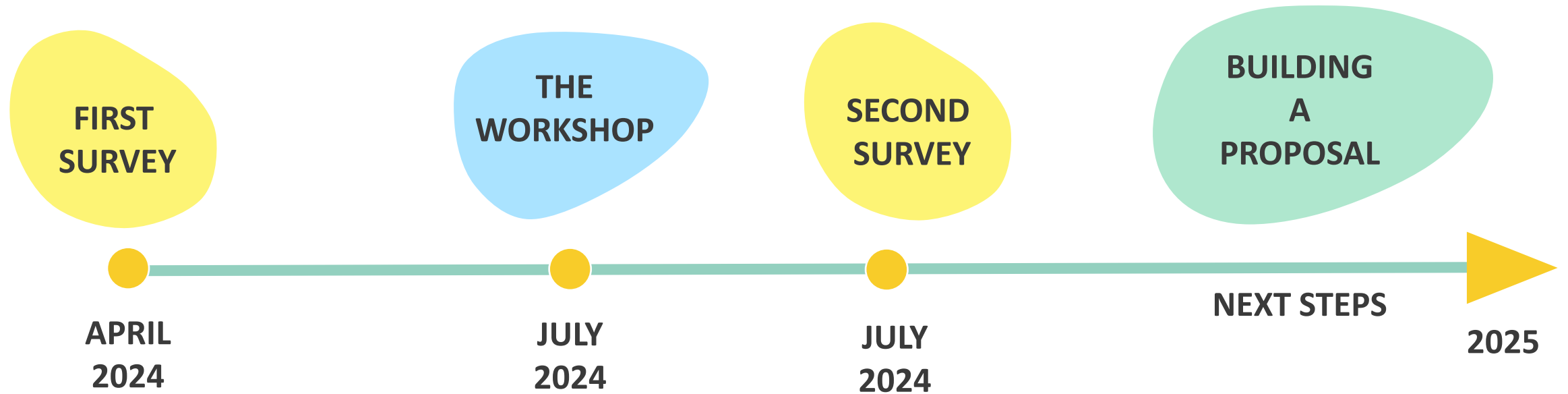


COMMUNITY GARDEN

ATRIUM Bd.102
ISPRA'S PROJECT
INSPIRED BY THE



THE PROCESS



ATRIUM Bd.102
ISPRA'S PROJECT
INSPIRED BY THE





Revamping bd.100's atrium THE PROJECT



European
Commission

R.I.4 Infrastructure Unit



ISPRA'S PROJECT INSPIRED BY THE

New European
Bauhaus 

INCLUSIVITY

ATRIUM OF BUILDING 100



2018 Workshop



ATRIUM OF BUILDING 100

ATRIUM OF BUILDING 101

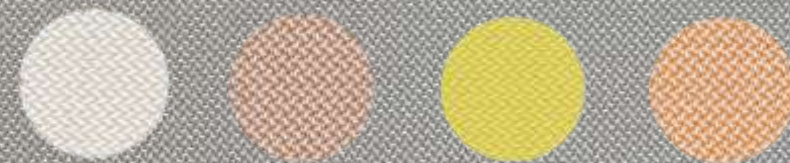
USE OF RECYCLED MATERIALS & REUSE

SUSTAINABILITY

R.I.4 Infrastructure Unit. Revamping atrium bd. 100 Ispra

USE OF RECYCLED MATERIALS & REUSE

LABORATORY



KVADRAT UPHOLSTERY 100% RECYCLED POLYESTER

SUSTAINABILITY

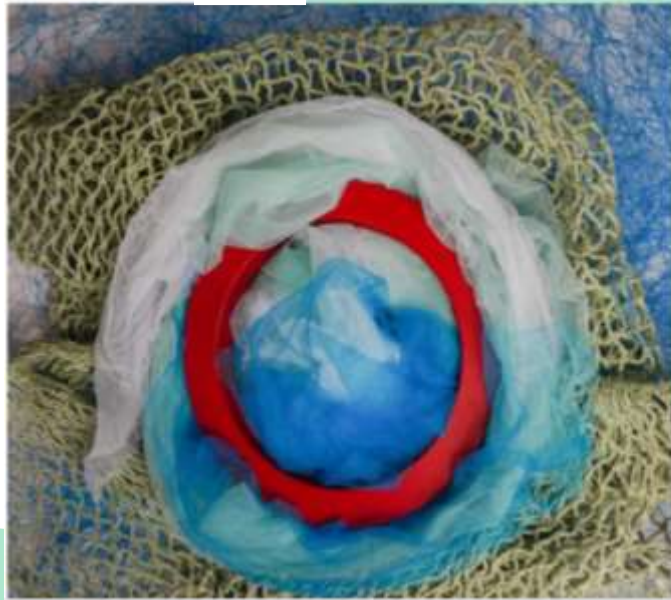
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European
Commission

USE OF RECYCLED MATERIALS & REUSE

ECONYL®



SUSTAINABILITY

R.I.4 Infrastructure Unit. Revamping atrium bd. 100 Ispra



USE OF RECYCLED MATERIALS & REUSE



SEAQUAL® MARINE PLASTIC



SUSTAINABILITY

R.I.4 Infrastructure Unit. Revamping atrium bd. 100 Ispra



USE OF RECYCLED MATERIALS & REUSE



SUSTAINABILITY

R.I.4 Infrastructure Unit. Revamping atrium bd. 100 Ispra

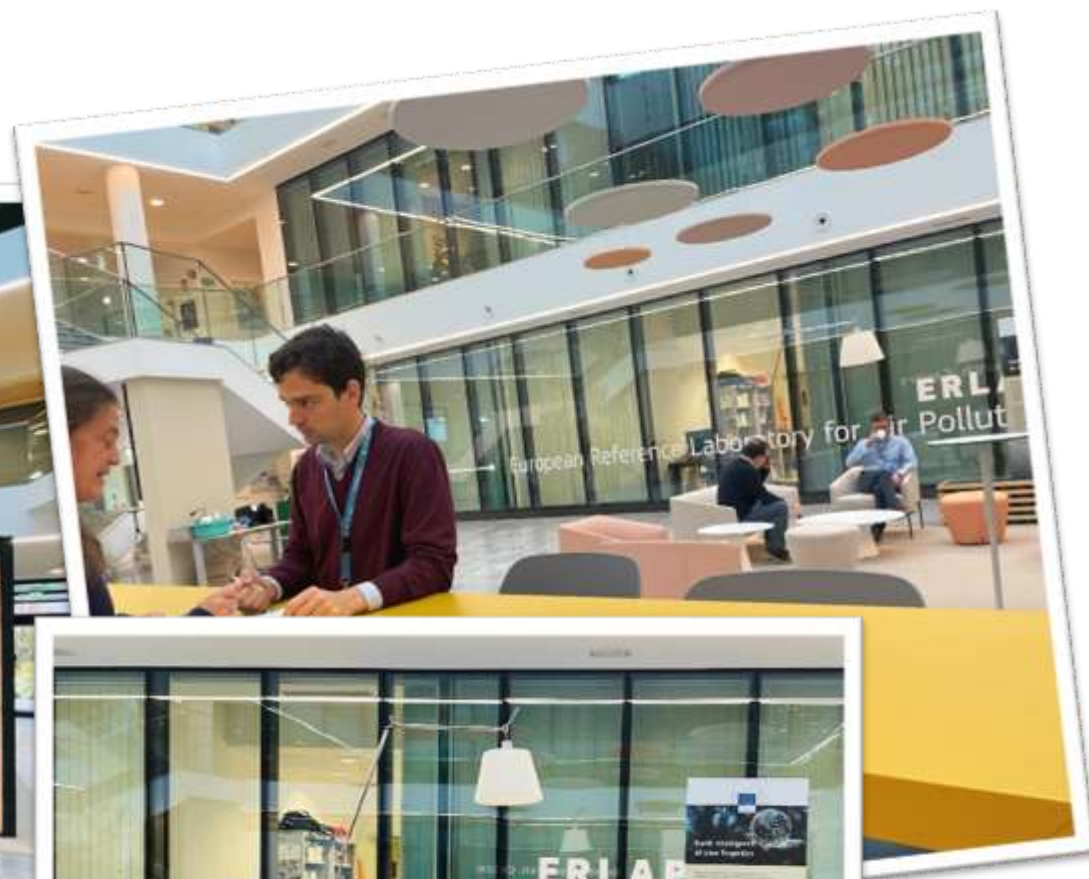
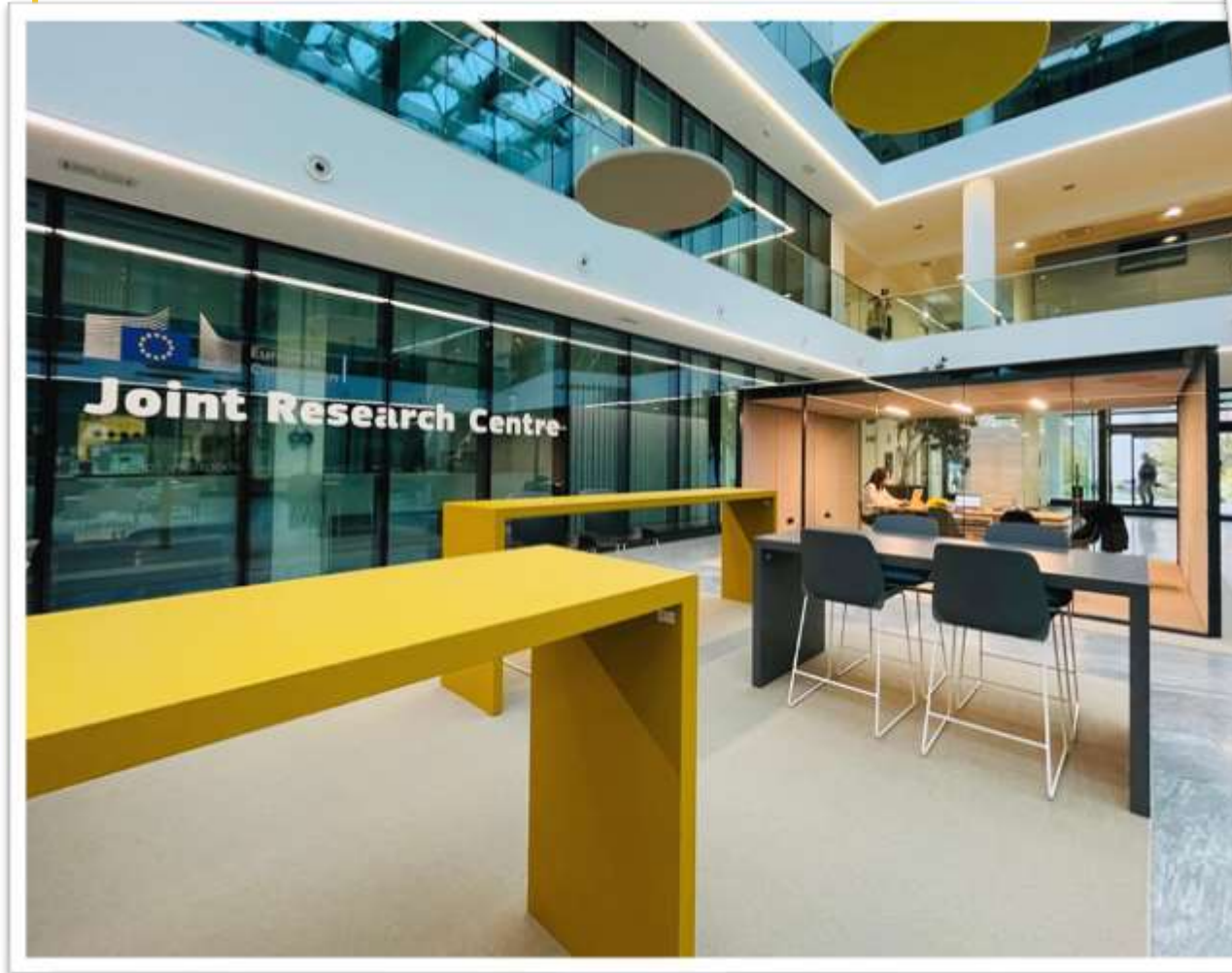


BEAUTY

TRANSCENDS AESTHETICS



COFFEE AREA



R.I.4 Infrastructure Unit. Revamping atrium bd. 100 Ispra

Projects of
JRC Directorate R

NEW WAYS OF WORKING ON

COLLABORATION
CREATIVITY
SUSTAINABILITY