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CuttingGardens experience

Maximilien Chaumon, Alexandra Corneyllie

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Submitted on 17 Jun 2024

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CuttingGardens experience



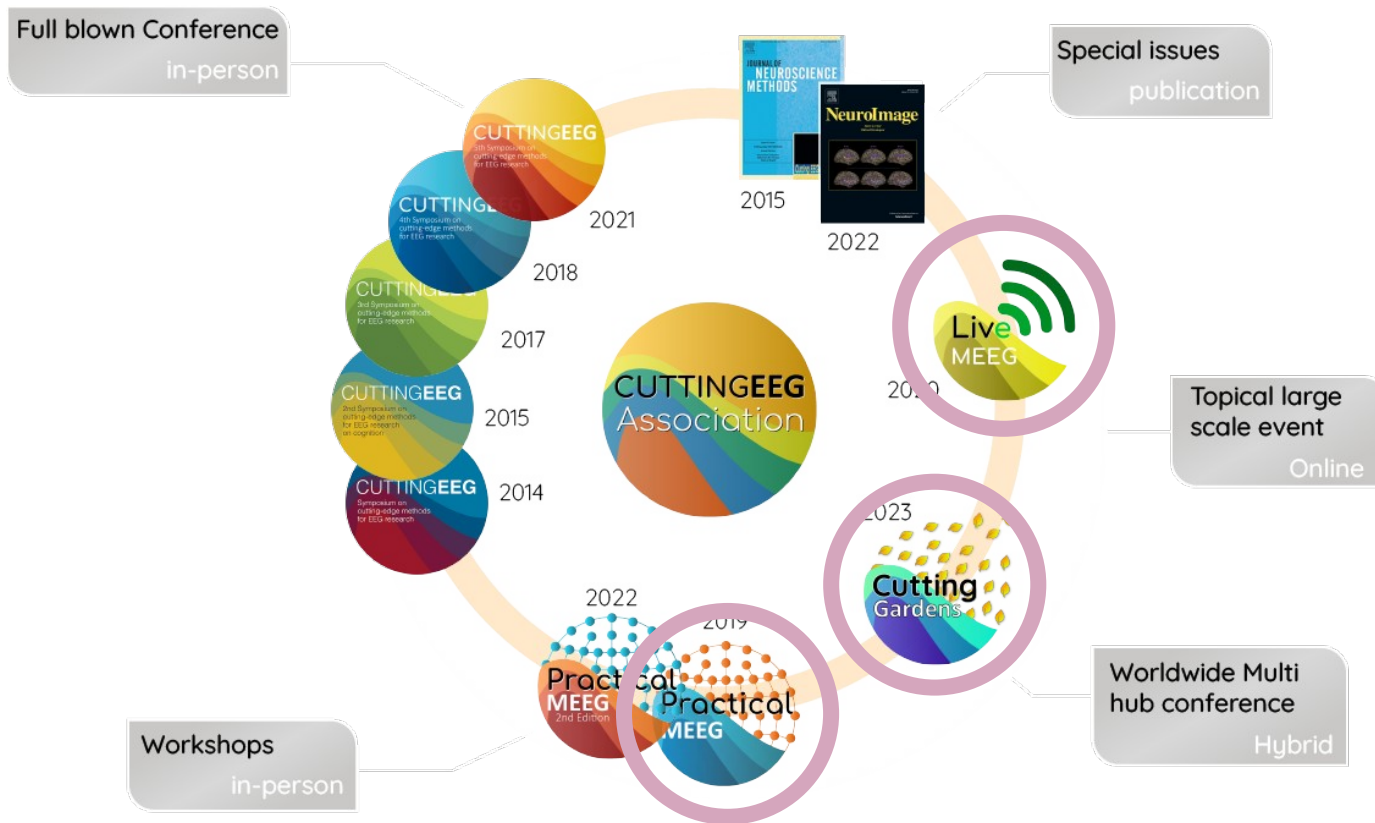
Sharing globally to build locally

Presentation at
Journée conférences éco-responsables
27/05/2024

M.Chaumon - A.Corneyllie



A CuttingEEG story



Responsible conferences @ CuttingEEG

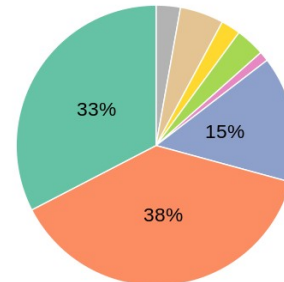
PracticalMEEG 2019 workshop in Paris

- 123 pps → 40 tons (94% plane travel)
- Green travel grants:
 - 100% reimb. train ride longer than 7h,
 - 50% for shorter trips
- Local, vegetarian, plastic-free catering
- Reusable cups at social event...

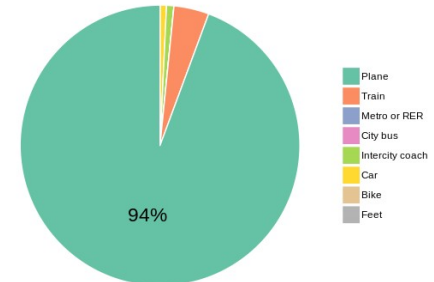
Largest impact
= aerial transportation



Means of transportation used



Proportion CO2 emitted by means of transportation used



2020 happened...

Advantages and disadvantages of online conferences

Advantages over traditional conferences:

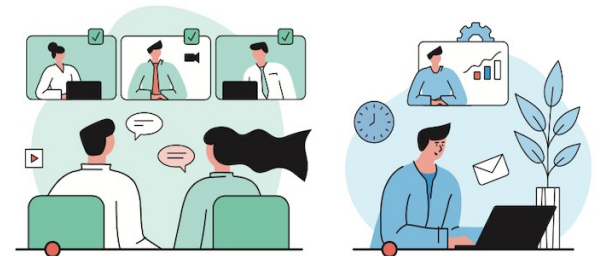
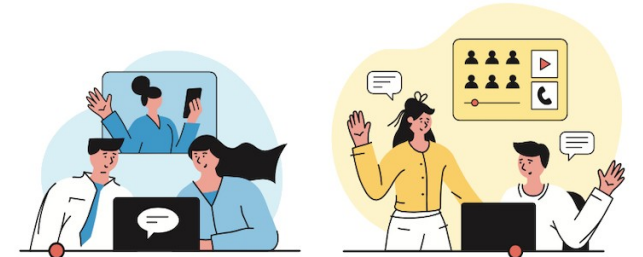
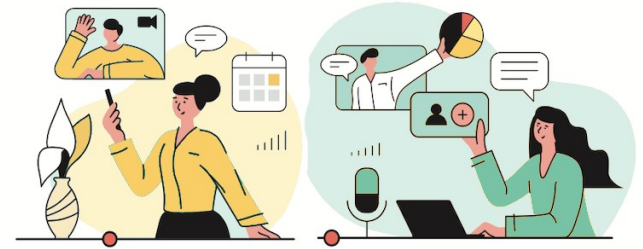
- carbon impact
- accessibility and inclusiveness

But also new problems:

- compartmentalisation of exchanges
- physical isolation
- difficult spontaneous encounters

And some old ones:

- Western language and cultural codes imposed
- It's not easy to get started!



LiveMEEG 2020



100%
On line



1324
Participants



57
Posters



37
Lectures



12
Round Tables



3
Live shows

Advantages and disadvantages of online conferences

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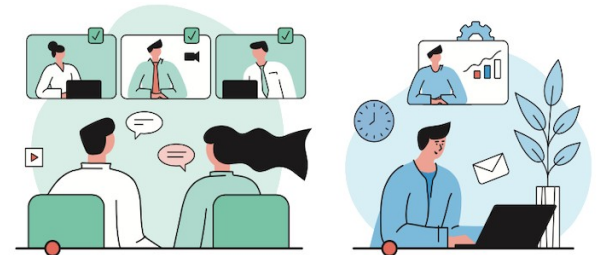
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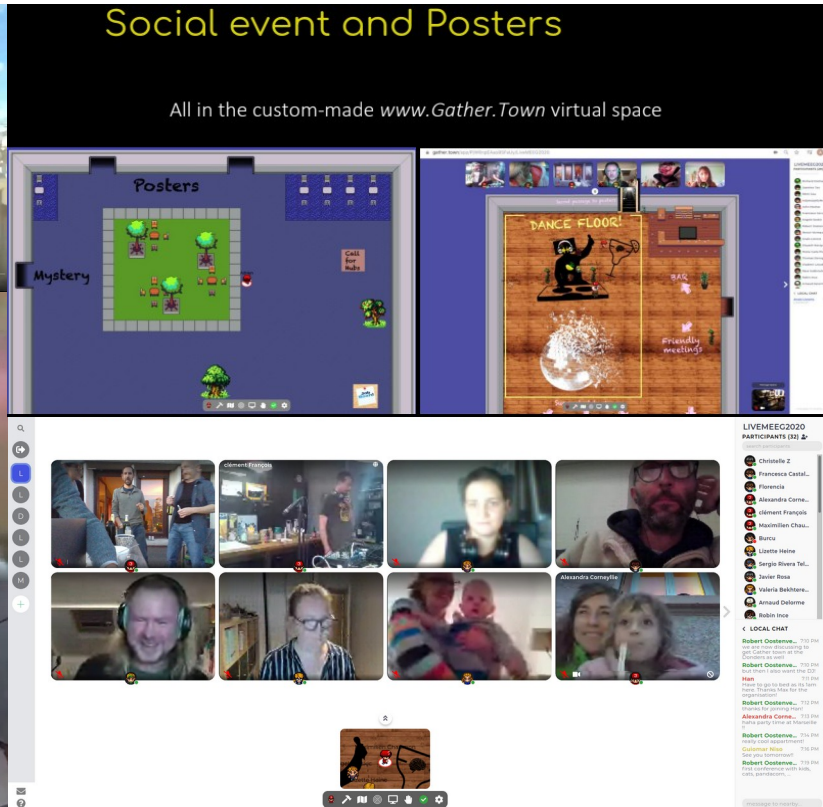
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LiveMEEG 2020

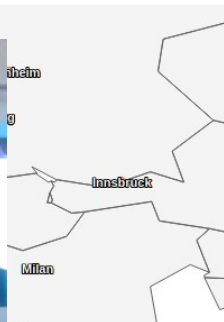
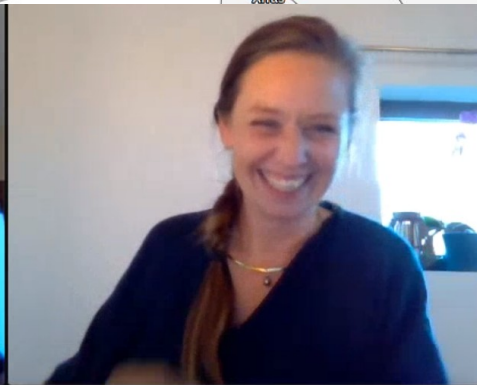


(Flash back Labos 1point5 day, 2020

<https://app.gather.town/app/4Gx04zGbAYETn8tT/Labos1point5>

Lo

15 days
First Lo



THIN

The think tank
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For more inform
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joint



#THINK TANK MEMBERS

551



#RG MEMBERS

273



#GHG INVENTORIES

2510

T5

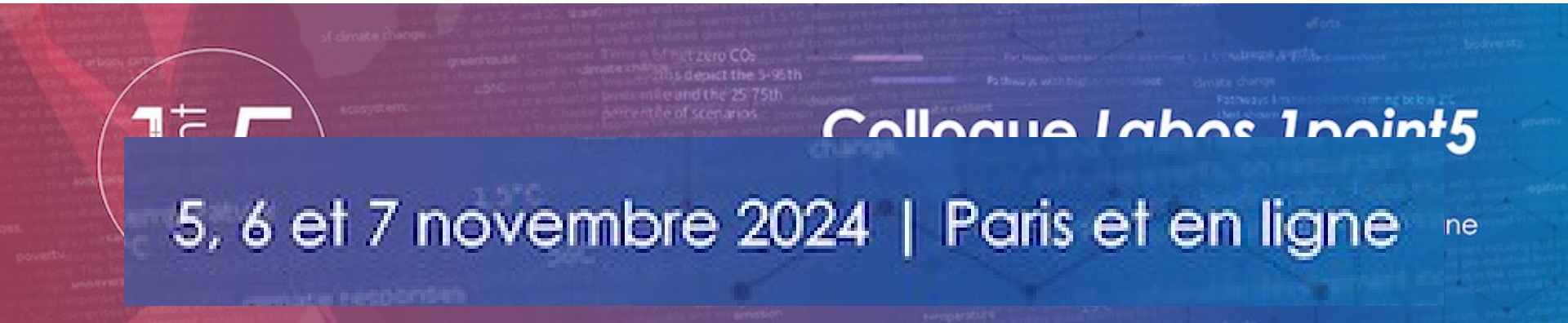
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connected

#LABORATORIES

1227

Flash forward Labos 1point5 day, 2024!



<https://l1p5-2024.sciencesconf.org>



Advantages and disadvantages of online conferences

Advantages over traditional conferences:

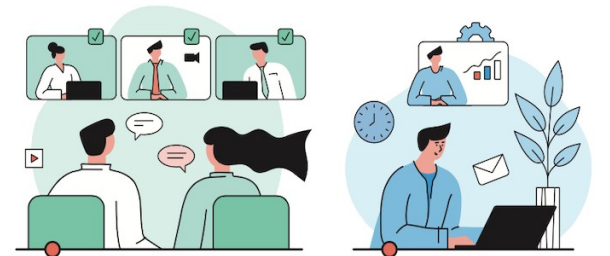
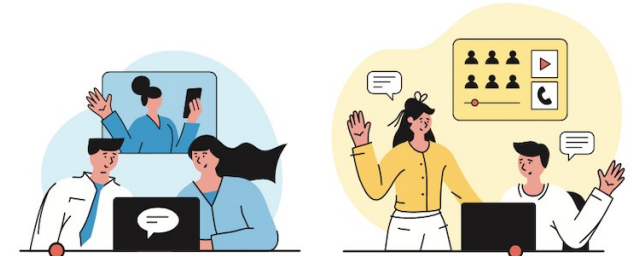
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CuttingGardens



A distributed conference taking place simultaneously in several locations (gardens) around the world, with :

- A common global program broadcasted live
- Local programmes to suit all tastes

	Mon. October 16th	Tue. October 17th	Wed. October 18th	Thu. October 19th	
Local programs					
South America (GMT -4)	Theoretical Advances in Cognitive Neuroscience made through MEEG	Challenges and Opportunities in Real Time EEG processing and classification tools for Brain Computer Interfaces	Reproducible Processing Pipelines and Multiverse Analysis	Deep Neural Network Analysis of MEEG data	Europe (GMT +1)
9:20	Introduction	Introduction	Introduction	Introduction	14:20
9:30					14:30
	The Gut-Brain-Consciousness Axis --Catherine Tallon-Baudry--	Geometric Deep Learning meets BCI --Reinmar Kobler--	EEGManyPipelines --Elena Cesnaite--	Learning M/EEG Representations with Self-Supervision --Hubert Banville--	
10:15	Tracking Attentional Dynamics Across Vision, Working Memory, and Action --Freek Van Ede--	Facing the Small Data Reality --Michael Tangermann--	The Data-Processing Multiverse of Event-Related Potentials --Peter Clayson--	Classic Machine Learning versus Deep Learning: Is there a Clear Winner? --Maarten De Vos--	15:15
11:00	break	break	break	break	16:00
11:15	Emergence of language during early development --Clément François--	Conducting BCI Protocols with Patients --Theresa Vaughan--	Agreed Reporting Template for EEG Methodology - International Standard --Anđela Šoškić--	Using Artificial DNN to Predict and Understand Human Vision --Radoslaw Martin Cichy--	16:15
12:00	Discussion	Discussion	Discussion	Discussion	17:00
Local programs					



Attendee badge

Speaker badge

Tutorial badge

Poster badge

Satellite badge

Variety of commitments depending on opportunities

21 gardens, from ~10 to ~120 participants

BELGRADE, SERBIA

<https://cuttinggardens2023.org/belgrade>
University of Belgrade

More information



CAEN, FRANCE

<https://cuttinggardens2023.org/caen>
Caen University

More information



HAIFA, ISRAEL

<https://cuttinggardens2023.org/haifa>
Developmental psychopathology lab at the University of Haifa

More information



LONDON, UK

<https://cuttinggardens2023.org/london>
Wellcome Centre for Human Neuroimaging, UCL

More information



BOURNEMOUTH, UK

<https://cuttinggardens2023.org/bournemouth>
Bournemouth University

More information



DONOSTIA – SAN SEBASTIAN, SPAIN

<https://cuttinggardens2023.org/donostia>
Basque Center on Cognition, Brain and Language

More information



HAVANA, CUBA

<https://cuttinggardens2023.org/havana/>
Cuban Center for Neuroscience

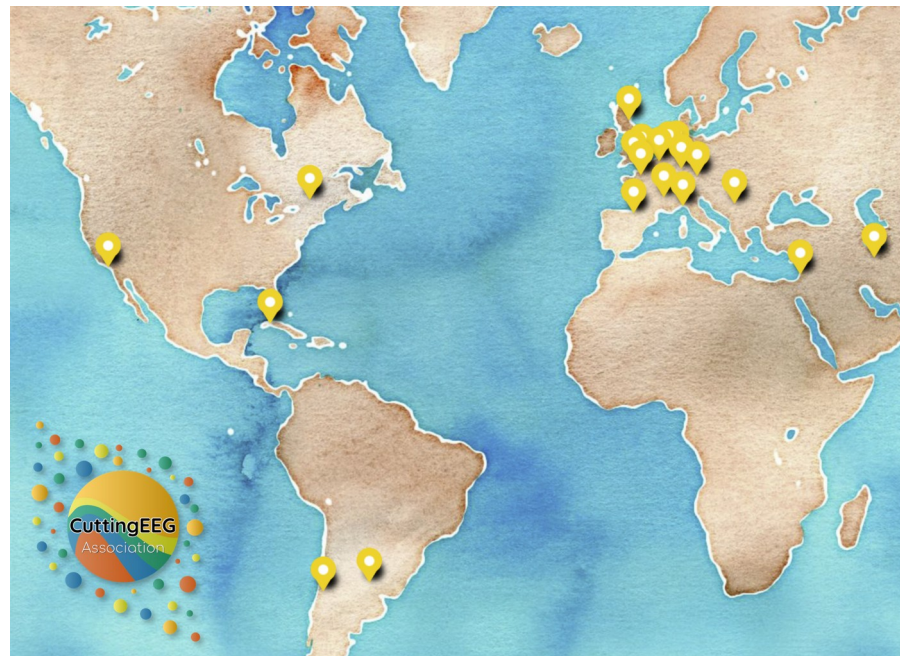
More information



LOS ANGELES, CA, USA

<https://cuttinggardens2023.org/los-angeles>
EEB, University of Southern California

More information



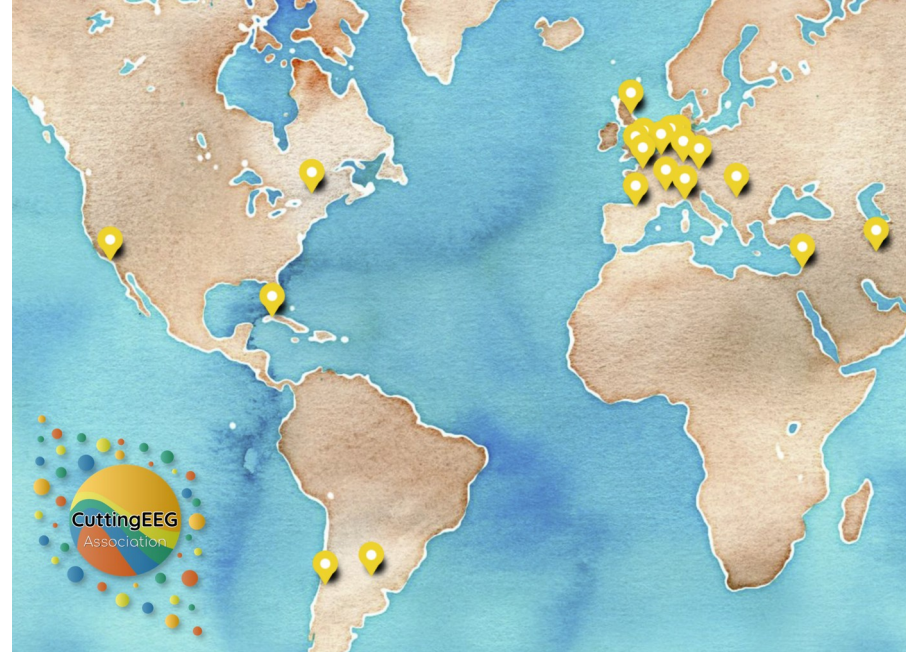
Governance and funding

Federal governance → each Garden manages its own event and benefits from the global programme.

Global tasks carried out by dedicated working groups.

Participants = members of the association (50€).

Fees waived upon request.



A few key figures

21 Gardens -
112 Gardeners

1 online forum
1 online cloud

26 online sessions,
available for replay

1000 participants worldwide
20% online

Gardens' local programs overview



129 Lectures
42% women



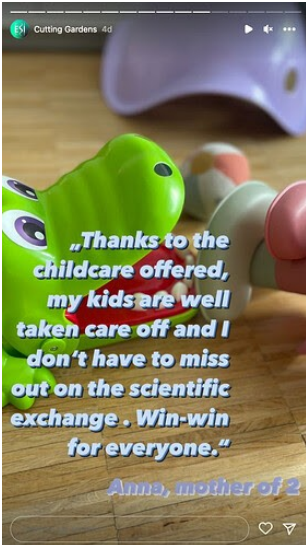
53 Tutorials



137 posters

Positive feedback

"The participants enjoyed both scientifically and socially, and we had the opportunity to create a local network that we hope to keep alive :) I am very happy with this magical experience and all the seeds we planted!"
Genova Garden



Hamburg Garden

"it was a wonderful opportunity to get involved with the greater EEG community, especially the CuttingEEG organization and try our hand at organizing a conference."
Ghent Garden

"This gave us the chance to showcase the science developed by our center in the field and delve into an exceptional local setup. We advanced good practices, nurtured a sense of conviviality, and addressed the ethical and professional responsibilities specific to our context, related to ecological emergency."

Lyon Garden

"It would be difficult to assemble such a programme, and to organise everything else that happened on the local level, if we were only organising an isolated local event, not to mention that we probably would never think to try."
Belgrade Garden

"We got a chance to make new connections and strengthen old ones, as well as to make Belgrade more visible on the map of neuroscience, which is not easy when you work in a community as small as ours."

Belgrade Garden

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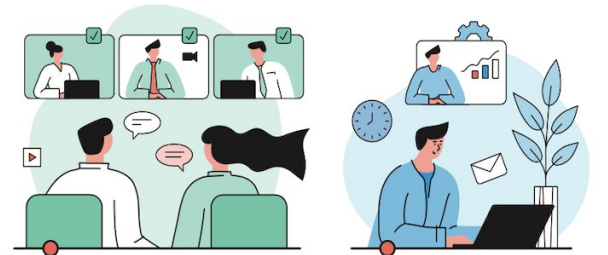
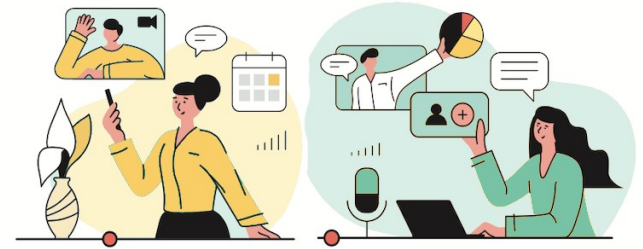
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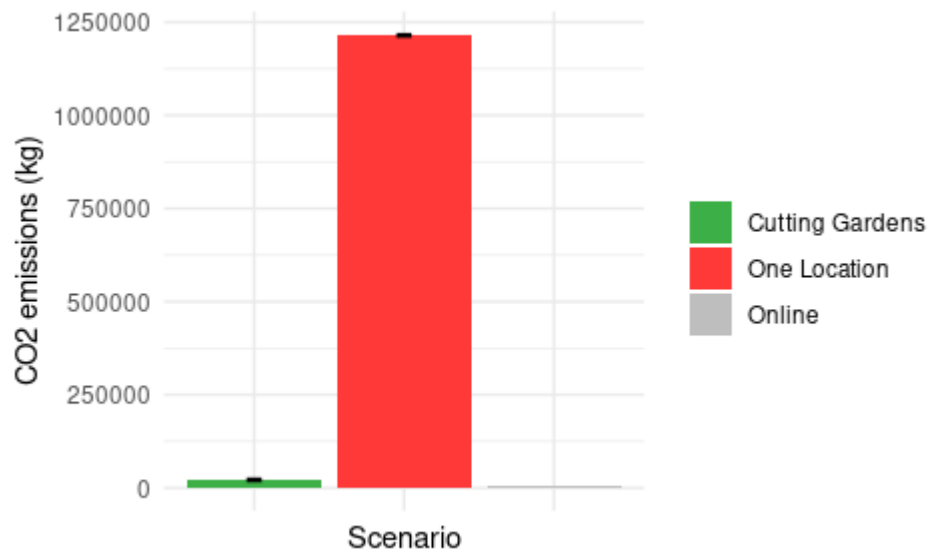


Carbon footprint analysis

Comparing three carbon footprint scenarios:

- CuttingGardens scenario:
Participants converge to local hubs
- Single Hub scenario:
Participants converge to Paris
- Fully online scenario:
Participants all watch the full online content

Scenario	CO2 emissions (kg)	Standard deviation (kg)
CuttingGardens	21645	2779
Single Hub	1214645	2810
Fully Online	11000	NA



Enforcing short distance with train

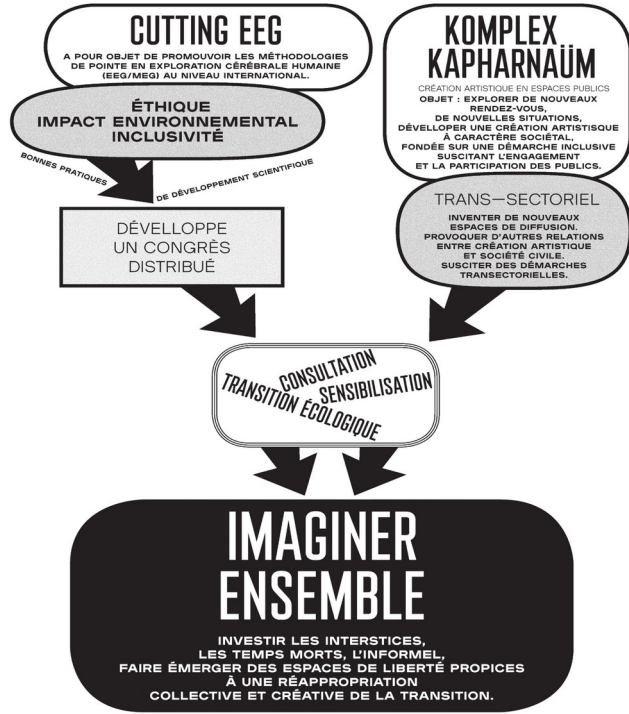
Conference CO2 emissions as a function of distance for switching from train to plane



- 10% decrease by enforcing all short distance travel by train
- 90% emissions from distance above 1400 km

What diversity allows...

Lyon Garden (France)

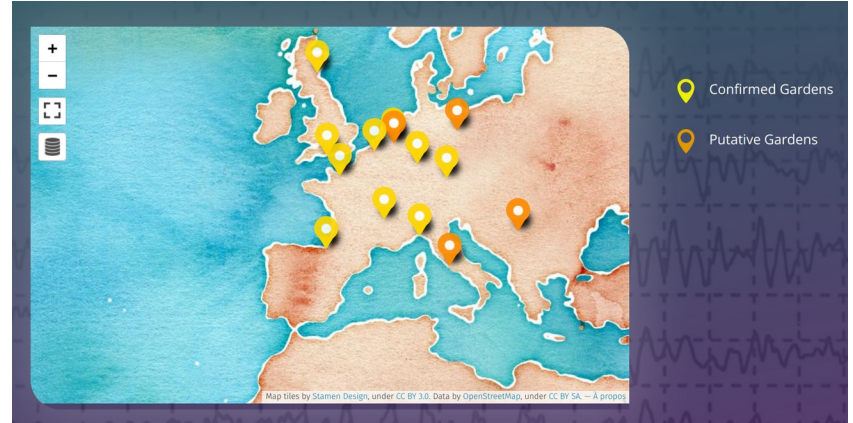


CUTTING-KAPHARNAÛM



Lyon Garden

CUTTING—KAPHARNADJUM



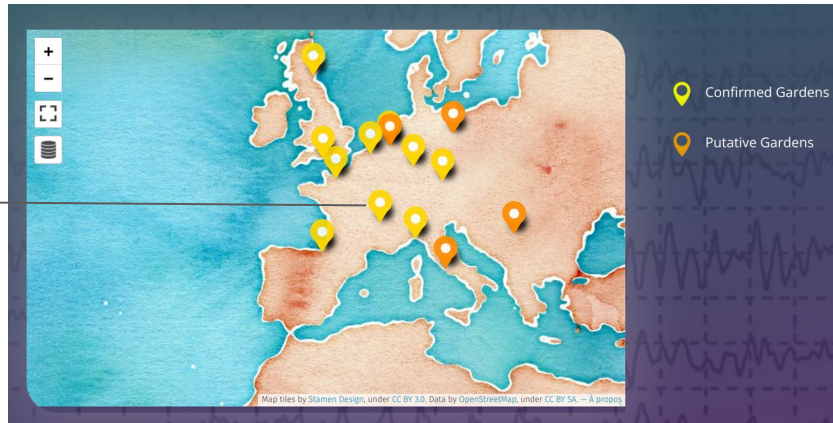
Granularity ?

Lyon Garden

CUTTING—KAPHARNADJUM



France's main garden



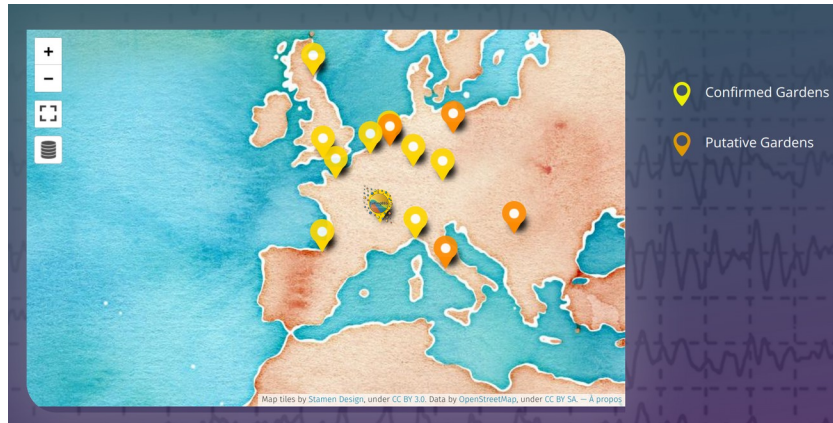
Granularity ?

Lyon Garden

CUTTING—KAPHARNADJUM



France's main garden



Granularity ?

Hosting international organizers
Expected: ~100 participants



Lyon Garden

CUTTING—KAPHARNADUM

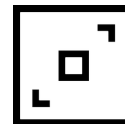


Centre de Recherche
Neurosciences Lyon

~450 personnes



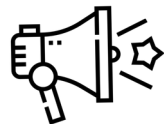
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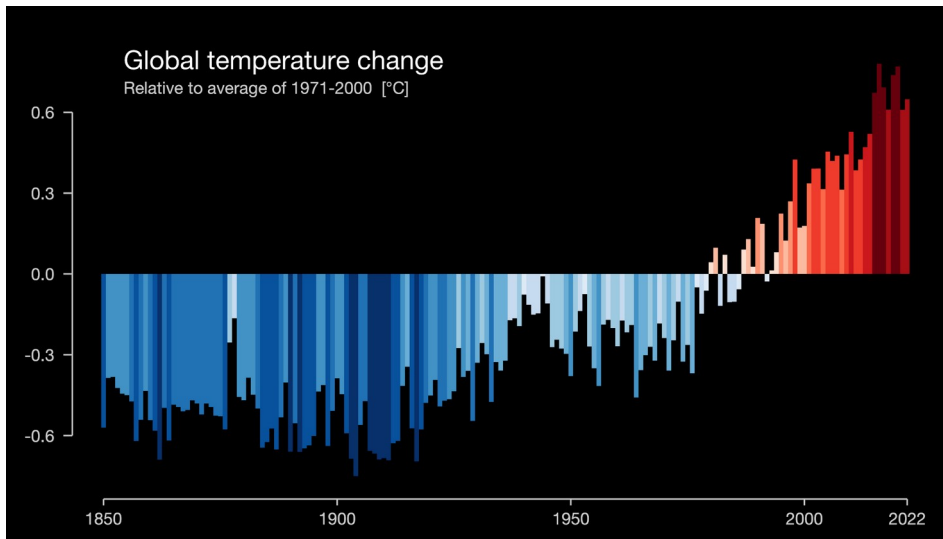
Extend space

Lyon Garden

CUTTING—KAPHARNADJUM

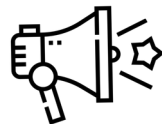


Raise awareness
sustainable + equitable future



Lyon Garden

CUTTING—KAPHARNAIUM



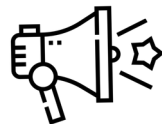
Raise awareness
sustainable + equitable future

MONDAY 16/10/2023	TUESDAY 17/10/2023	WEDNESDAY 18/10/2023	THURSDAY 19/10/2023	FRIDAY 20/10/2023
8:30 Breakfast @CRNI	8:30 Breakfast @CRNI	8:30 Breakfast @CRNI	8:30 Breakfast @CRNI	8:30 Breakfast @CRNI
9:00 Open science: a dynamic ecosystem Gaëlle Leroux Ecological Emergency: What labs can't do. Maximilien Chauxon	9:00 Advanced toolbox for sEEG Jean Philippe Lachaux Deep learning meth. for epileptic spike detection in MEG Pauline Mouchès	9:00 MNE Introduction Anne Cheylus	9:00 Modeling the complexity of brain oscillations Matteo Di Volo	9:00 Motor imagery Aymeric Guilloit
10:00 Opportunities for OPM neuroscience Gareth Barnes The 4He-OPM: First neuroscience applications Tjerk Gutting Intercal spikes with Helium OPM & intra-EEG Christian Benar	10:00 Bayesian theories of perception in autism Francoise Lecaignard Break	10:00 Break	10:00 Do travelling waves reflect predictive coding processes? Andrea Alaimia Break	10:00 Sensorm. oscill.: relation to excitability & funct. significance Vadim Nikulin ERD/ERS modulations in BCI Sébastien Rimbart
11:00 Adopting OPMs for cognitive neuroimaging Robert Costenveid <i>Live from Nijmegen</i> Technical advancements in the OPMs Niall Holmes <i>Live from Nijmegen</i>	11:00 EEG metrics to assess consciousness dynamics Florent Gobert Comas (decoding, machine learning) Marzia De Lucia	11:00 Break	11:00 Neural Dynamics and Cortical Hierarchy Julien Vezoli	11:00 Break
12:00 Lunch	12:00 Can BCI help consciousness disorders? Perrine Séguin	12:00 MNE Decoding Romain Quentin & Pauline Mouchès	12:00 Network communication based on nested rhythms Mathilde Bonnefond	12:00 The AVANCER trial Claudia Bigoni
13:00 Lunch	13:00 Lunch Posters * Flash talks	13:00 LOCAL Lunch and Posters	13:00 Lunch * Flash talks	13:00 Lunch
14:00 Lunch	14:00 Lunch	14:00 Lunch	14:00 Lunch	14:00 Sources & roles of motor cortical low/high beta rhythms Bjorg Kilavik
15:00 The Gut-Brain-Consciousness Axis Catherine Tubon-Baudry Tracking Attentional Dynamics Across Vision, Working Memory, and Action Freek Van Ede	15:00 Geometric Deep Learning meets BCI Reinmar Kobler Facing the small data reality Michael Tangermann	15:00 EEGmyppelines Elena Cesnaite The Data-Processing Multiverse of Event-Related Potentials Peter Clayton	15:00 Learning M/EEG representations with self-supervision Hubert Banville Classic machine learning versus deep learning: is there a clear winner? Maarten De Vos	15:00 Beta Bursts: detection and function James Bonaiuto Break
16:00 Break	16:00 Break	16:00 Break	16:00 Break	16:00 Decoding Beta Bursts for BCI Sotiris Papadopoulos
17:00 Emergence of language during early development Domenico Franciosa	17:00 Conducting BCI protocols with patients Theresa Vaughan	17:00 Agreed Reporting Template for EEG Methodology - International Standard Anđela Šošaić	17:00 Using artificial DNN to predict and understand human vision Radoslaw Martin Cichy	17:00 Round table & Discussion
17:30 Discussion	17:30 Discussion	17:30 Discussion	17:30 Discussion	17:30 Discussion
18:00 Welcome cocktail	18:00 Discussion	18:00 Discussion	18:00 Discussion	18:00 Discussion
19:00 Welcome cocktail	19:00 Discussion	19:00 Discussion	19:00 Discussion	19:00 Discussion

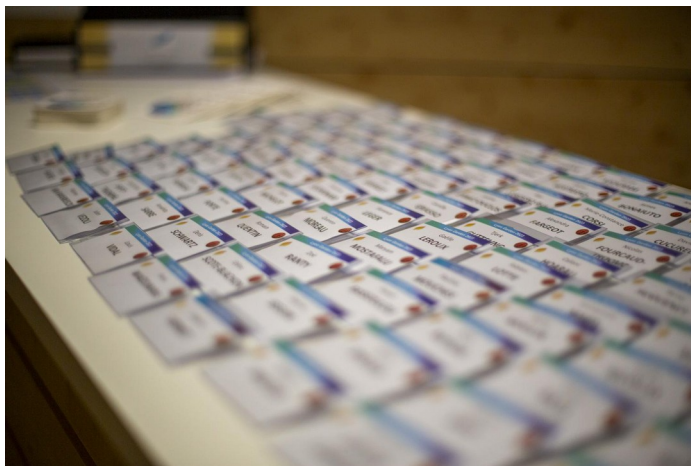
SATELLITE

Lyon Garden

CUTTING—KAPHARNADJUM



Raise awareness
sustainable + equitable future



Transition choisie plutôt que subie
Saisie collectivement



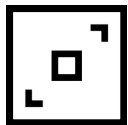
Congress = Key moment

Informing / Experiment

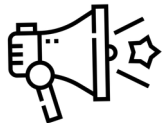
Participants + CRNL Local staff

Lyon Garden

CUTTING—KAPHARNAUM



Extend space



Raise awareness

KOMPLEX KAPHARNAUM



Lyon Garden

CUTTING—KAPHARNAUM



KOMPLEX KAPHARNAUM

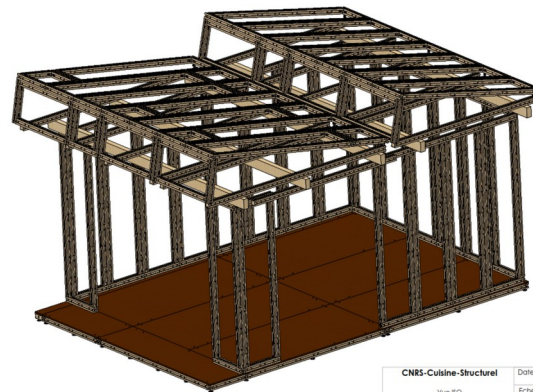


migra
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Architectural

Artistic Exploratory

mobile

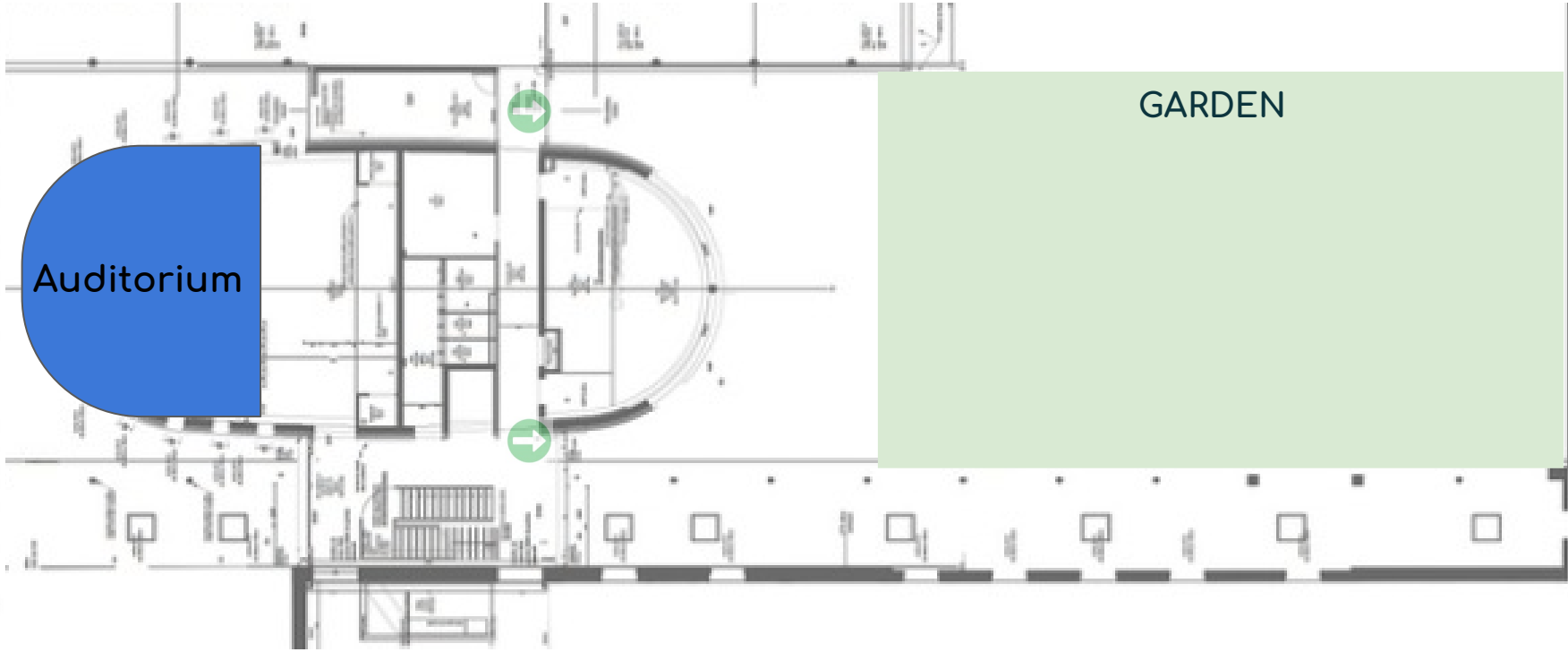


Lyon Garden



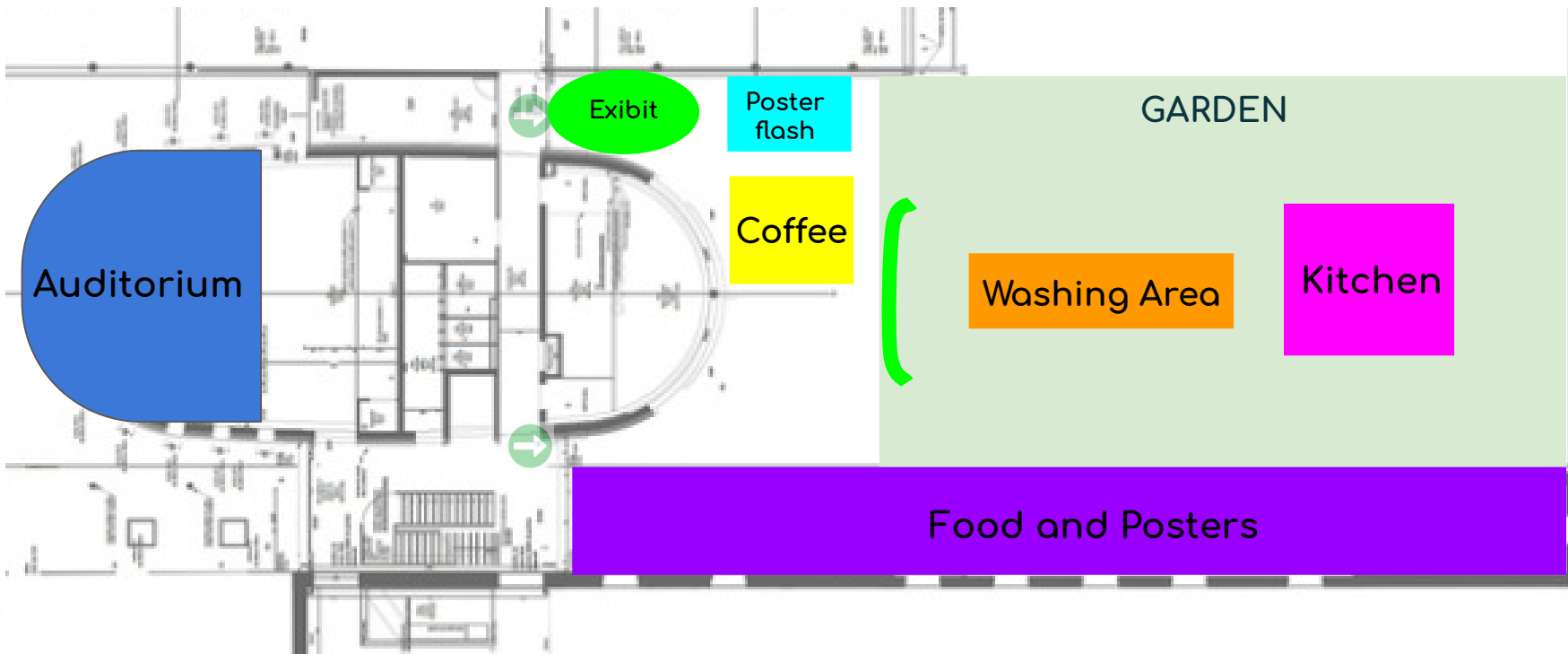
Lyon Garden

CUTTING—KAPHARNAOUM



Lyon Garden

CUTTING—KAPHARNADUM



Lyon Garden

Attendees



Food and Posters

Lyon Garden

Attendees



100 meals * 5 days
vegi

Kitchen

Lyon Garden

Attendees



water -> garden

Washing Area



Lyon Garden



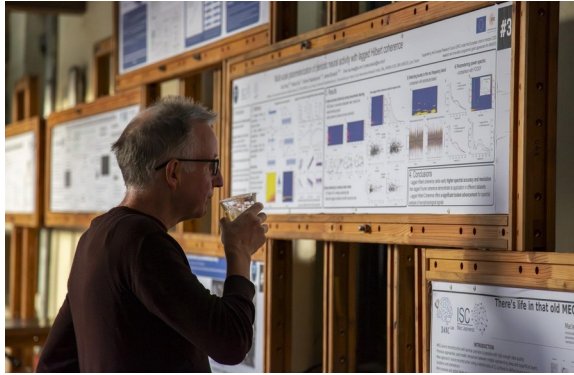
Attendees
+ CRNL members



Coffee

Lyon Garden

Attendees

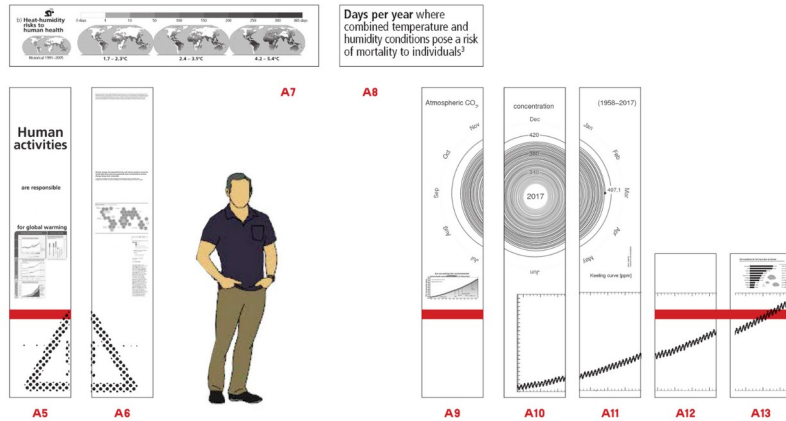


Poster Flash

Lyon Garden

Attendees
+ CRNL members

'Meaning infrastructure'

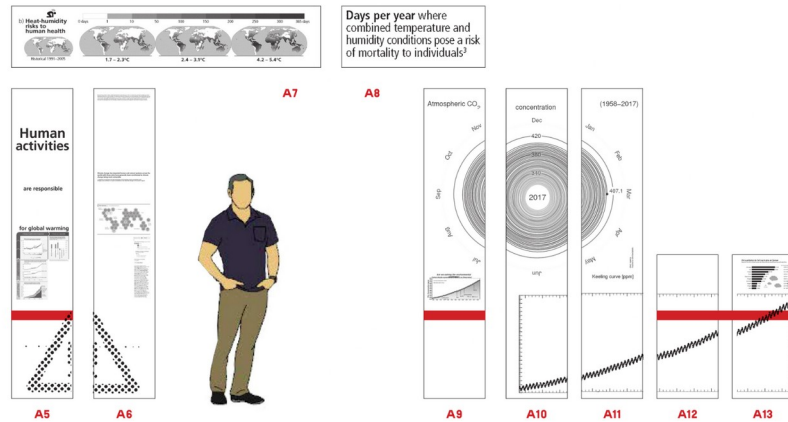


Exhibit

Lyon Garden

Attendees
+ CRNL members

'Meaning infrastructure'



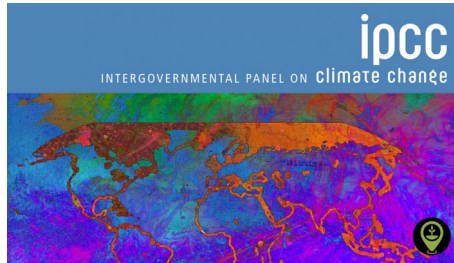
- ➔ Raise awareness on ecological emergency
- ➔ Question the scientist position / neutrality

Exhibit

Lyon Garden

Attendees
+ CRNL members

- Climate change
 - water
 - soil
 - air



Exhibit

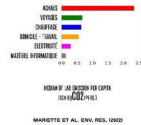
Lyon Garden

Attendees
+ CRNL members

- Climate change
- Scientists in laboratory



EMISSIONS OF RESEARCH LABS IN FRANCE



TAKING ACTION IN THE LAB

WHAT CAN (NEURO)SCIENTISTS DO TO HELP AVERT CLIMATE AND ECOLOGICAL BREAKDOWN ?



KICKSTARTING A TRANSITION GROUP IN THE LAB



« LES LABORATOIRES DE LA TRANSITION »

PODCAST D'AEF INFO
EN PARTENARIAT AVEC LABOS IPOINT5



Exhibit



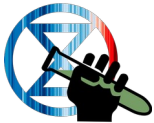
Lyon Garden

Attendees
+ CRNL members

- Climate change
- Scientists in laboratory
- Scientists in society



« SCIENTISTS IN REBELLION :
TESTIMONIES »



« RÉSISTANCE CIVILE :
DES SCIENTIFIQUES EN REBELLION »

EXTRAITS DE L'ÉMISSION
« DE CAUSE À EFFET,
LE MAGAZINE DE L'ENVIRONNEMENT »
FRANCE CULTURE, 20 DÉCEMBRE 2022

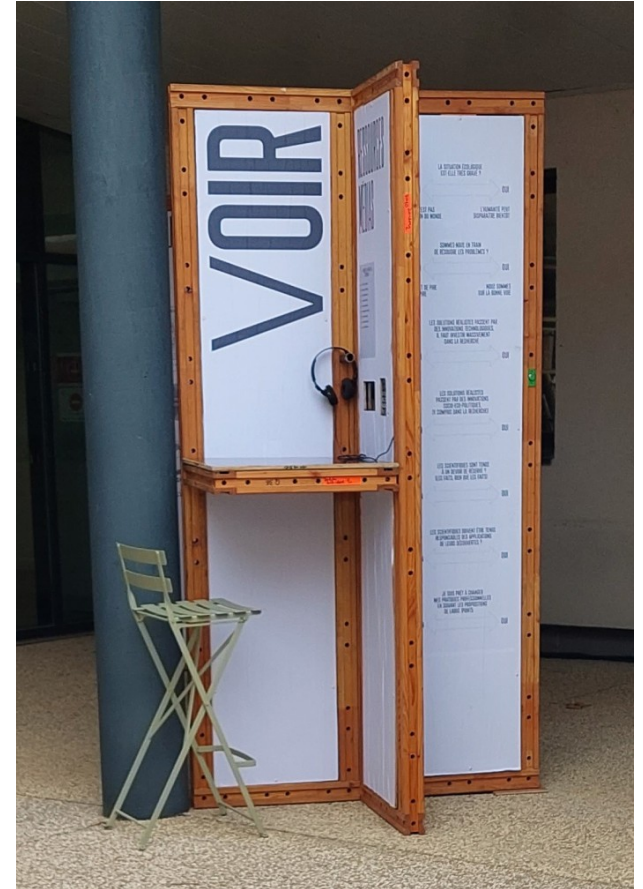


«
LA RESPONSABILITÉ
DES CHERCHEURS
ET CHERCHEUSES
EST PROPORTION
DE LEUR SAVOIR

»

MANIFESTE
DE L'ATÉCOPOL

Exhibit

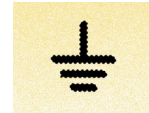


Lyon Garden

- Climate change
- Scientists in laboratory
- Scientists in society
- Windows on civil actions



Attendees
+ CRNL members



Exhibit



[resources](#)



[movie](#)

CUTTING—KAPHARNAÛM

Lyon Garden team



Scientific committee



Mathilde Bonnefond



Jérémie Mattout



Françoise Lecaigard



Fabien Perrin



Romain Quentin

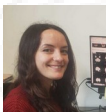


Anne Cheylus



Nicolas Fourcaud-Trocmé

GT Science & Climat



Right-hand



Hervé Hugueney



Alexandra Corneylie

Gestion & Com



Florence Leger



Alexandra Fargeot

Professional organizer



Adrien Schramm

Green coach



Maximilien Chaumon



CuttingEEG association



Anais Llorens
CRA
(Executive board)



Christelle Zielinski
CRA
(Executive board)



Adrien Schramm
Independent
Executive manager



Alexandra Corneille
CRA
(Executive board)

Advisory board



Sophie Herbst



Clément François



Robert Oostenveld



Aina Puce



Anne-Sophie Dubarry
Co-President



Maximilien Chaumon
Founder and
Co-President



François Tadel
Inspirational
consultant

Les Gardeners !

- Manuela Ruzzoli (Donostia, Espagne)
- Svetlana Pinet (Donostia, Espagne)
- Xun He (Bournemouth, UK)
- Anđela Soškić (Belgrad, Serbie)
- Raquel London (Ghent, Belgique)
- Natalie Schaworonkow (Frankfurt, Allemagne)
- Felix Klotzche (Frankfurt, Allemagne)
- Julia Chauvet (Nijmegen, Pays Bas)
- Yu Fang Yang (Berlin, Allemagne)
- Annalisa Pascarella (Genova, Italie)
- Chris Benwell (Dundee, UK)
- Vladimir Litvak (London, UK)
- Aygun Badalova (London, UK)
- Elio Balestrieri (Münster, Allemagne)
- Marius Zimmermann (Regensburg, Allemagne)
- Thomas Hinault (Caen, France)
- Jelena Mladenovic (Belgrad, Serbie)
- José Luis Ulloa Fulgeri (Santiago, Chili)
- Takfarinas Medani (Los Angeles, US)
- Christian Mista (Oro Verde, Argentina)
- Boris Lucero (Talca, Chile)
- Nastaran Darjani (Tehran, Iran)
- Gil Shner Livne (Haifa, Israel)
- Eduardo Martines Montes (La Havana, Cuba)
- Janet Perodin Hernández (La Havana, Cuba)
- Hamza Abdelhedi (Montreal, Canada)

Perspectives



Inspire others

[Labos 1point5](#)

[Shifters](#)

[Conference Inference](#)

Be inspired by others

[QCVN](#)

[Highlights HCRW](#)



Papers in preparation

- Environmental
- Social

Trudie Walters
Social sciences framework
Lincoln University New Zealand



... CuttingGardens 2026!

Connecting more labs, learning from different people / communities

Driving scientific meetings off the highway, on the socio-ecological trail.



Thank you!