Welcome to the

19 OCTOBER 2023

FESTIVAL OF DISRUPTION

PWRD BY EINDHOVEN ENGINE

Program

09:00 — **Walk-in and registration**

10:00 — **Welcome** | MAIN STAGE

Opening by Maarten Steinbuch and Janne Brok

10:15 — **Keynote** | Transformative changes to address complex issues | Floris Alkemade | MAIN STAGE

11:15 — **Break**

11:40 — **Disrupt your Mind workshops**

DIFFERENT ROOMS

Pick a workshop:

- The Walkable City Revolution: Shaping a Brighter Tomorrow Together
- Moving beyond the edge of our known solution space: accelerating transitions via disruption?
- (Re)Design with nature's genius
- Design Doing
- Advancements in Energy Efficiency: Unveiling Innovations of the Smart Heat Shed
- Crafting equality by building inclusive bridges with the Emergence Lab of Eindhoven Engine
- Documentary 1+1=3: Overcoming the barriers of interdisciplinary research

12:40 — **Lunchbreak**

13:40 — **Deep Dive Pitches** | DIFFERENT ROOMS

Choose the Deep Dive project pitches that sound interesting to you and learn more about the projects at Eindhoven Engine.

15:45 — **Disruptive Wrap-up Show** | Tom Sligting | MAIN STAGE

16:15 — **Closing with drinks, bites & networking**

17:00 — **End**

Disrupt your Mind

workshops

A THE WALKABLE CITY REVOLUTION: SHAPING A BRIGHTER TOMORROW TOGETHER

Golnoosh Sabahifard

Eindhoven Engine

At the Livable City Emergence Lab, we're all about creating a brighter future for our society. Our vision extends far beyond just technology – it's about the well-being of every individual. In this journey towards a better tomorrow, we're focusing on something close to home: the walkability of our city. We invite you to share your personal experiences and insights as we harness the power of cutting-edge technology to enhance not only my life but your life too! Join us in shaping a more livable, connected, and prosperous city.

B MOVING BEYOND THE EDGE OF OUR KNOWN SOLUTION SPACE: ACCELERATING TRANSITIONS VIA DISRUPTION?

Amber Geurts

TNO Vector, Centre for societal innovation and strategy

The magnitude and complexity of the global societal challenges requires fundamental, radical and disruptive changes in our society and economy. We should, therefore, pay more attention to the concept of 'disruption' to facilitate such systemic changes. However, little is known about what kind of role disruption plays in transitions and, especially, what it means beyond technological disruption. In this workshop, we debate the value, potential and pitfalls of 'disruption' towards accelerating transitions and broad prosperity. Can we leave the long-established solution space, and dare to move beyond?

C (RE)DESIGN WITH NATURE'S GENIUS

Yvonne van Lith

Fontys Expertise Centre Circulair Transition

Discover what can be the benefits of Biomimicry and how to start your (re)design inspired by nature. In this workshop Yvonne will give an introduction to Biomimicry, a design tool and methodology that incorporates lessons from nature into your design. Explore what Biomimicry can bring your company or organization and discover common challenges to start a (re)design process inspired by nature. How do we open up, connect with and tap into Nature's genius?

D DESIGN DOING

Walter Baets

Eindhoven Engine

As the keynote speaker nicely indicated: we need to change our way of life and choices. How can we do that? Let us find out what it means in this workshop. In a first step we are going to identify (individually) the choices we make ourselves, and that contribute to the major challenges of society. Next we bring the ideas of the participants together in order to, finally, connect some of the choices in order to make a systems map of the necessary attitudinal changes. In a short period of time, we see the problem as it is, and we can start dealing with it. Experience first-hand how useful it is to love your problem.

Timetable Deep Dive project **pitches**

E ADVANCEMENTS IN ENERGY EFFICIENCY: UNVEILING INNOVATIONS OF THE SMART HEAT SHED

Michiel Brebels

Eindhoven University of Technology

We will delve into the forefront of energy efficiency innovations, featuring the Smart Heat Shed project. This project is poised to address the accelerating energy transition by synergizing two groundbreaking international technologies: the heat façade and the heat battery. You will gain insights into how these pioneering advancements can revolutionize our approach to energy efficiency.

F CRAFTING EQUALITY BY BUILDING INCLUSIVE BRIDGES WITH THE EMERGENCE LAB OF EINDHOVEN ENGINE

Low Literacy team

Eindhoven Engine

Discover and connect, through a tangible experience, how you can become an innovative bridge builder within your own community or company to promote equality.

G DOCUMENTARY I+I=3: OVERCOMING THE BARRIERS OF INTERDISCIPLINARY RESEARCH

Max Birk

Centre for Unusual Collaborations

This documentary takes you along on a 1-year journey of interdisciplinary collaboration, presented by the Centre for Unusual Collaborations. The Structures of Strength project team encounters the challenges, pitfalls and the great joys of exploring an out-of-the-box collaboration. Discover which tools, methods and approaches are out there to foster interdisciplinary ways of working together. Prepare for a unique insight of what it means to be a young academic longing to think unusually!

	ENERGY TRANSITION & CIRCULARITY AREA ROOM 0.04	HEALTH TECH AREA I ROOM 0.01	HEALTH TECH AREA 2 ROOM 0.37	SMART CITIES AREA ROOM 0.35	HIGH TECH, SMART MOBILITY & ENERGY AREA ROOM 0.45
13:40			• Medicaid • AUXSTENT • So-Strap • WECARE	• Brains4-Buildings • DynaPopeX • CM-FDD-HVAC/ ECoS-IAQ • VIPNOM	
14:05	• Direct Air Capture 2.0 • iHeat@Home • NEON EE • Smart Heat Shed • CoLLidE	• IntelLight+ • PerStim • POWEr FITTing • Wombath			
14:30				• Brains4-Buildings • DynaPopeX • CM-FDD-HVAC/ ECoS-IAQ • VIPNOM	• Advanced piezo-electric wafer stage • Smart TWO+ • SmartMan • PowerLift • GEM-Stage
14:55	• Direct Air Capture 2.0 • iHeat@Home • NEON EE • Smart Heat Shed • CoLLidE		• Medicaid • AUXSTENT • So-Strap • WECARE		
15:20		• IntelLight+ • PerStim • POWEr FITTing • Wombath			• Advanced piezo-electric wafer stage • Smart TWO+ • SmartMan • PowerLift • GEM-Stage

Floorplan

WORKSHOPS

- **A** BROAD PROSPERITY IN THE BRAINPORT AREA
- **B** MOVING BEYOND THE EDGE OF OUR KNOWN SOLUTION SPACE: ACCELERATING TRANSITIONS VIA DISRUPTION?
- **C** DESIGN DOING
- **D** (RE)DESIGN WITH NATURE'S GENIUS
- **E** ADVANCEMENTS IN ENERGY EFFICIENCY: UNVEILING INNOVATIONS OF THE SMART HEAT SHED
- **F** CRAFTING EQUALITY BY BUILDING INCLUSIVE BRIDGES WITH THE EMERGENCE LAB OF EINDHOVEN ENGINE
- **G** DOCUMENTARY I+I=3 : OVERCOMING THE BARRIERS OF INTERDISCIPLINARY RESEARCH

PROJECTS & PITCHES

ENERGY TRANSITION & CIRCULARITY AREA
ROOM 0.04

- Direct Air Capture 2.0
- iHeat@Home
- NEON EE
- Smart Heat Shed
- CoLLidE

HEALTH TECH AREA I
ROOM 0.0I

- IntelLight+
- PerStim
- POWErFITTing
- Wombath

SMART CITIES AREA
ROOM 0.35

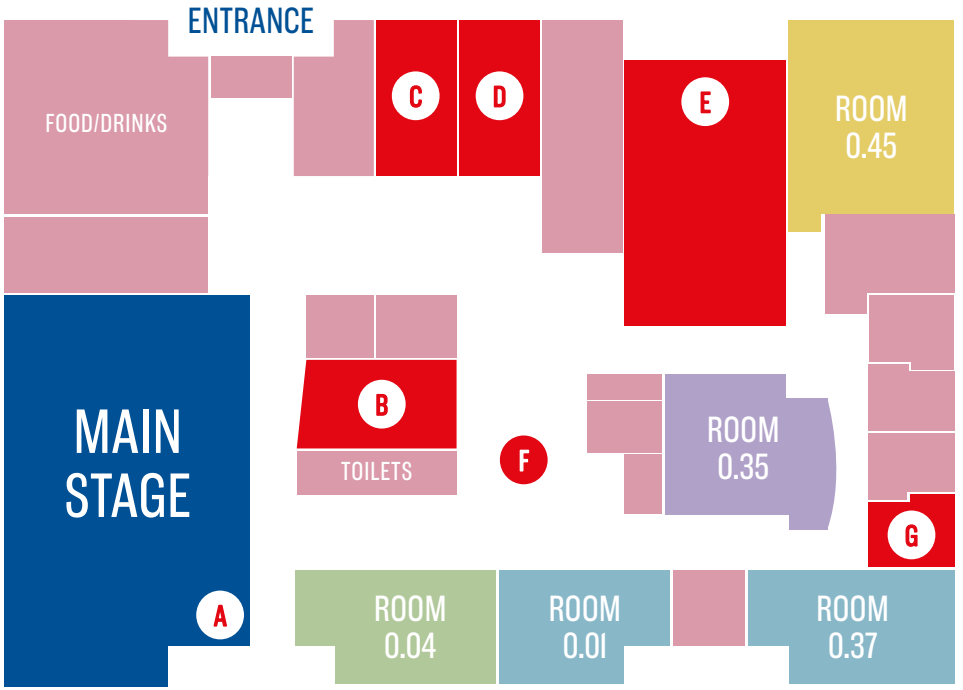
- Brains4Buildings
- CM-FDD-HVAC
- DynaPopeX
- ECoS-IAQ
- VIPNOM

HEALTH TECH AREA 2
ROOM 0.37

- AUXSTENT
- Medicaid
- So-STRAP
- WECARE

HIGH TECH, SMART MOBILITY & ENERGY AREA
ROOM 0.45

- Advanced piezo-electric wafer stage
- PowerLift
- GEM-Stage
- Smart TWO+
- SmartMan



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Projects

ADVANCED PIEZO-ELECTRIC WAFER STAGE

This project 'Advanced piezo-electric wafer stage for next generation lithography and metrology application' aims to demonstrate feasibility of an ultra-short stroke stage using light-weight and compact piezo-electric actuators instead of current electromagnetic actuators.

AUXSTENT

In the fight against cardiovascular disease, stents and grafts are implanted in patients to support or repair damaged or high-risk vessels. AUXSTENT focuses on the development of functional prototype of 3D-printable and bioresorbable stents.

BRAINS4BUILDINGS

Brains4Buildings is developing a self-learning module that can monitor and diagnose climate systems in large buildings.

CM-FDD-HVAC

Continuous Monitoring (CM) and Fault Detection and Diagnosis (FDD) are complex, but important technologies in detecting inefficiencies in Heating Ventilation Air Conditioning (HVAC). This project is developing a new approach based on data analytics and machine learning.

COLLIDE

CoLLidE focuses on the market introduction of reusable food packaging. The Circulware system, developed by project partner Haval, replaces single-use food packaging with reusable and recyclable, bio-based packaging and will be applied in a living lab.

DIRECT AIR CAPTURE 2.0

Carbyon is developing technology to capture CO2 directly from ambient air (Direct Air Capture, DAC). The captured CO2 can be converted into a renewable carbon source in various ways.

DYNAPOPEX

This project brings the many information on population dynamics, such as commuting traffic and air pollution together and uses visualization techniques to make connections to the sources of air pollution.

ECOS-IAQ

Installations in buildings are responsible for around 35% of all energy consumption, approximately 20% of which is due to inefficient operations. Using insights into sensors, data interpretation, trend signaling, continuous monitoring, fault detection/diagnosis and predictive maintenance, problems can be identified in the Heating Ventilation Air Conditioning (HVAC) systems of schools.

GEM-STAGE

Large events, such as festivals, consume more electricity than the main grid can supply. The tall GEM-Stage tower is a large battery that controls the storage and distribution of renewable wind and solar energy. In this project, GEM-Stage wants to complete the supply of renewable sources in the GEM-Stage by adding hydrogen.

IHEAT@HOME

The iHeat@Home project contributes to a breakthrough innovation in thermal energy storage: a heat battery which is better, cheaper, smaller and greener than any competitor.

INTELLIGHT+

This project takes an integrative approach to developing algorithms to infer and even predict user context to accommodate user needs and preferences as well as innovative lighting and new design methodologies that allow optical designs which promote optimal efficiency, higher optical quality and better utilization.

MEDICAID

Early-stage detection is critical to halting the rise in cardiovascular diseases. Within MEDICAID (Medtech solutions for Earlier DetectIon of CArdIovascular Disease) a research team is working on unobtrusive sensing, monitoring and data analysis for earlier recognition and improved treatment.

Projects

NEON EE

NEON EE, part of the NEON research program that focuses on the societal challenges of climate change, clean energy and smart mobility.

NEUROTREND*

For mental disease depression, there is an urgent need for objective diagnostic techniques, because the current diagnosis, based on subjective psychiatric tests, falls far short of being reliable. The aim of this project is to arrive at a reliable objective diagnostic technique based on functional MRI scans of the patient, and ultimately to apply these in decision support systems for diagnosis, patient stratification and therapy selection.

PERSTIM

Using EEG- and MR-imaging based transcranial electrical stimulation, the PerStim (Personalized neurostimulation) investigates how treatments for patients with refractory focal epilepsy and prevalent co-morbid disorders can be personalized effectively.

POWER FITTING

POWEr FITTing optimizes the relationship between vitality and the (home) office environment through the combination of data acquisition, integration and applicati-on for the validation and acceleration of user-oriented solutions.

POWERLIFT

In the PowerLift project, research is being done on a sustainable battery for the electric aviation industry (eFlight). This battery will not only have a long lifetime, but will also store an extraordinary amount of energy and will deliver a lot of energy when used.

SMART MOBILITY*

The goal of the Smart Mobility project is to develop new perception technology for the next-generation automated driving systems.

SMART HEAT SHED

The Smart Heat Shed (smart heat storage) project addresses the rapid energy transition by combining two international breakthrough technologies, a heat façade and a heat battery.

SMARTTWO

This follow-up project to SmartONE investigates the possibilities of achieving a more integral systemic framework for the previously established lines of research.

** Not present at Festival of Disruption 2023*

SMARTMAN

Smart Manufacturing aims to improve factory efficiency by optimizing production processes. Student projects will be executed at SMEs with the goal of developing knowledge, technology and methods for combining quality, automation and flexibility in manufacturing.

SO-STRAP

So-STRAP aims to develop a data collection and diagnosis platform which supports behavioral changes in cardiac patients through social connectedness.

VIPNOM

VIPNOM focuses on the development of an advanced noise measurement method and experiencing noise in acoustic virtual reality.

WECARE

The WECARE project focuses on extending human care by applying the Warm Technology concept to interactive agents, such as chatbots and companion robots.

WOMBATH

The Wombath consortium is developing a medical device – an artificial womb – that supports the safe development of extremely premature babies outside of the womb.

Notes

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FOUNDERS

Fontys TNO TU/e EINDHOVEN UNIVERSITY OF TECHNOLOGY

INDUSTRIAL PARTNERS

BRAINPORT EINDHOVEN ASML VDL signify PHILIPS NXP NTS

BUILDING DISRUPTOR

KADANS Science Partner

OUR NEXT EVENTS IN 2024

DISRUPT YOUR LIFE! EVENT JANUARY 31, 2024

KEEP ON DISRUPTING IN 2024!

Continue your journey of personal transformation and innovation with us by joining our next Disrupt your Life!-event

FEATURING Chiara Treglia from TiniStudio

LOCATION
Eindhoven Engine

GET READY FOR HACK2IMPACT 2024 ENERGY TRANSITION!

HACK 2IMPACT 2024

29 FEBRUARY 2024
BUILDING DISRUPTOR | HORSTEN I | EINDHOVEN

What are the common challenges that we face now and in the future? Do you want to take up these challenges with many others? Mark this hackathon down in your calendar. More info is yet to come.

STAY TUNED TO OUR SOCIALS FOR MORE EXCITING UPDATES
THE DISRUPTION CONTINUES

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