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# DIGITAL INNOVATION FOR SUSTAINABLE DEVELOPMENT

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DIGITAL TECHNOLOGIES AND INNOVATION ARE ESSENTIAL TO DEVELOP ORGANISATIONS, BUSINESSES, COMMUNITIES AND CITIES IN A SUSTAINABLE DIRECTION...

# BUT...WATCH OUT!

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## DIGITAL TECHNOLOGIES ARE ALSO PART OF THE PROBLEM!

- **Technology redundancy / unsustainability**
  - Replacement rather than repair
  - Software development vs. hardware upgrades
  - eWASTE problem is a fact
- **Technology drives electricity demands**
  - Electricity for digital technology use
  - Electricity for new technologies, e.g., 5G/IoT/AI
- **Technology's environment exploitation**
  - Need for rare minerals
  - Mining rare minerals

# SOME NEGATIVE FACTS AND FIGURES...

- The average mobile device creates 55 kilograms of carbon emissions in manufacture, equal to 26 weeks of laundry.
- If we used every phone sold in 2020 for 1/3 longer, we would prevent carbon emissions equal to Ireland's annual emissions.
- Reports in 2019 suggested that there were currently just under 50 million tonnes of e-waste, with only 20% of it being dealt with appropriately.
- From January to February 2020, Bitcoin
  - Had a carbon footprint equivalent to the carbon footprint of Denmark,
  - Consumed an amount of electrical energy comparable to the power consumption of Austria,
  - Produced an amount of e-waste equivalent to that of Luxembourg.
- The ICT sector emits about 2% of global $CO_2$ emissions - it has surpassed the airline industry in terms of the levels of its impact.

Sources The Guardian, Restart, United Nations, Joule, Joule, The Guardian

# OUR PLANET CALLS!

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**We need** greener/better sustainable digital technologies

**We need** digital solutions for the sustainability of our planet

# NEW APPS TO DELIVER A MORE SUSTAINABLE ENVIRONMENT

## Greenhouse Gas Emissions

- Automation systems can reduce GHGE by 3% for both commercial buildings and homes
- Intelligent traffic signals mixed with dynamic pricing can cut energy consumption

## Air quality

- Installing air quality sensors to share real time information with the public can potentially reduce negative health effects by 3% and 15%

## Water conservation

- Deploying sensors and using analytics tools to identify leakages can cut waste by up to 25%
- Water consumption tracking with pricing strategy could potentially save 25-80 liters per person, per day

## Solid waste reduction

- Digital tracking and payment for waste disposal could reduce the volume of solid waste per capita by 10%-20%

**Sources** McKinsey Global Institute

# USE CASES / EXAMPLES

## Intelligent street lighting
### Wädenswil (CH)

Open, cloud-based light management system for street lighting that created added value such as:

- Energy savings
- Environmental protection
- User friendly interface to other intelligent solutions
- Light Control APIs allowing to retrieve and adjust light level

## Waste management solutions
### La Rochelle and Paris (FR)

Waste management optimisation with digital solutions that provide data in real time:

- Customer reduced its collection effort by 30% while maintaining an overflow rate of less than 1% of its fleet
- Organisational time savings for collections, with less CO2 emissions discharged into the city and reduction of truck traffic


ZOOMING INTO SUSTAINABLE CITIES

# DIGITAL FOR SUSTAINABLE CITIES

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## Orchestra Cities

Data and IoT-driven solution designed to connect smart devices, citizens and cities in a collaborative environment.

The platform embraces:

- Open Standards
- Open APIs
- Open Data Models

## Use Case EKZ

Sophisticated multi-dimensional visualisation of data, such as air quality and waste containers, was enabled by:

- Adjustable information sharing
- Leveraging the platform's multi-tenancy and cloud-native
- Elastic architecture
- Geo-tagging
- Pervasive time series
- Analytics and dashboards


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# AT WORK TO MAKE IT HAPPEN!

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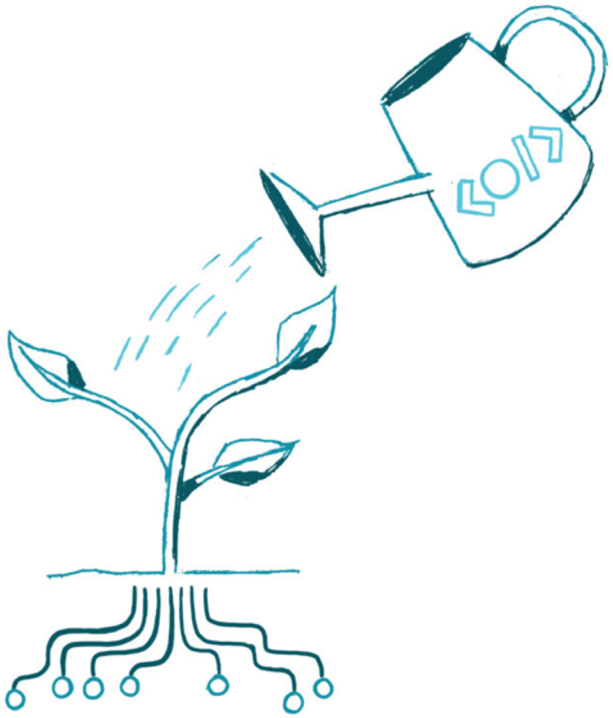
## DIGITAL FOR PLANET - D4P -

is a not-for-profit association that aims to create a **strong network** of private, public and research institutions that advance the adoption of **sustainable digital technologies** for the good of our planet.



# DIGITAL FOR PLANET – THE ESSENTIALS

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**D4P** aims to gather small, medium and large public and private organisations that are at work to boost the positive impact of a **responsible** and **ethical digital transformation** on society and on the planet's ecosystems.

# VISION AND AMBITION

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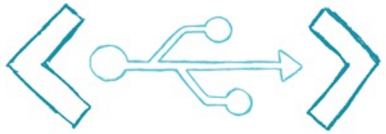
## A digitally empowered society that is ethically responsible and strives to honour planetary and technological boundaries for a sustainable evolution of humanity

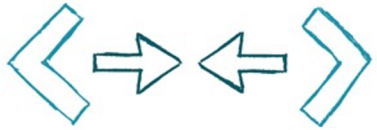
### JOINING FORCES

to foster collaboration and knowledge sharing to increase access to and development of sustainable digital technologies.



### AVOID THE WIDENING

of the global digital divide and instrumental exploitation of information asymmetry for unethical purposes.



### PAVE THE WAY

to a sustainable digital and resource-efficient economy and society that creates value to all, while protecting limited resources.

### BOOST, SHAPE AND SUPPORT

the growth of a global community of players, at work for a digitally empowered society in the respect of our planet.

# MISSION / OBJECTIVES

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## D4P aims to...

- **Foster collaboration** and knowledge sharing among private, public and research institutions in the area of sustainable ICT.
- **Increase access** to, development and adoption of sustainable digital technologies.
- **Raise awareness** for the positive impact (e.g., economic potential, environment protection) of sustainable digital technologies.
- **Facilitate liaisons** between D4P members and legislative institutions to build a roadmap for future policy actions in the context of sustainable technology.

# MEMBERSHIP PROGRAMME / BENEFITS / PLANNED IMPACT

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## As a member you...

Become part of a **large and strong ecosystem** of private and public organisations engaged in the development and adoption of sustainable digital technologies.

**Liaise and network** with major industry players, innovative Startups/SMEs, academic, research and educational organisations, NGOs, public authorities.

Learn about and gain access to **public funding opportunities** (e.g., European Green Deal Calls) that can help financing the transformation of your business and organisation for the sustainable development of our planet.

Get privileged access to **knowledge and tools** (market studies, technical reports, regulations, green IT resources, etc.) for your organisation to become more environmentally sustainable.

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# As a member you...

Learn, contribute, influence and amplify **policy and regulatory-driven efforts** by participating in dedicated initiatives and debates.

Participate in expert workshops, **policy-driven discussions** engaging top level experts on green digital transformation for the sustainability of our economies and societies.

Get privileged access to **events showcasing green ICT technologies** and solutions giving you the opportunity to promote, exhibit, present and learn about digital sustainable development.

**Save our planet!** It's a privilege and opportunity we cannot afford to miss.

# ACTIVITIES

## Networking

summits, workshops, symposiums, matchmaking events

## Technical Innovation

support in research, product development and adoption

## Insights & Trends

news, use cases, white papers and research findings

## Strategic Roadmapping

political and economic representation and influence

# HOW TO JOIN D4P

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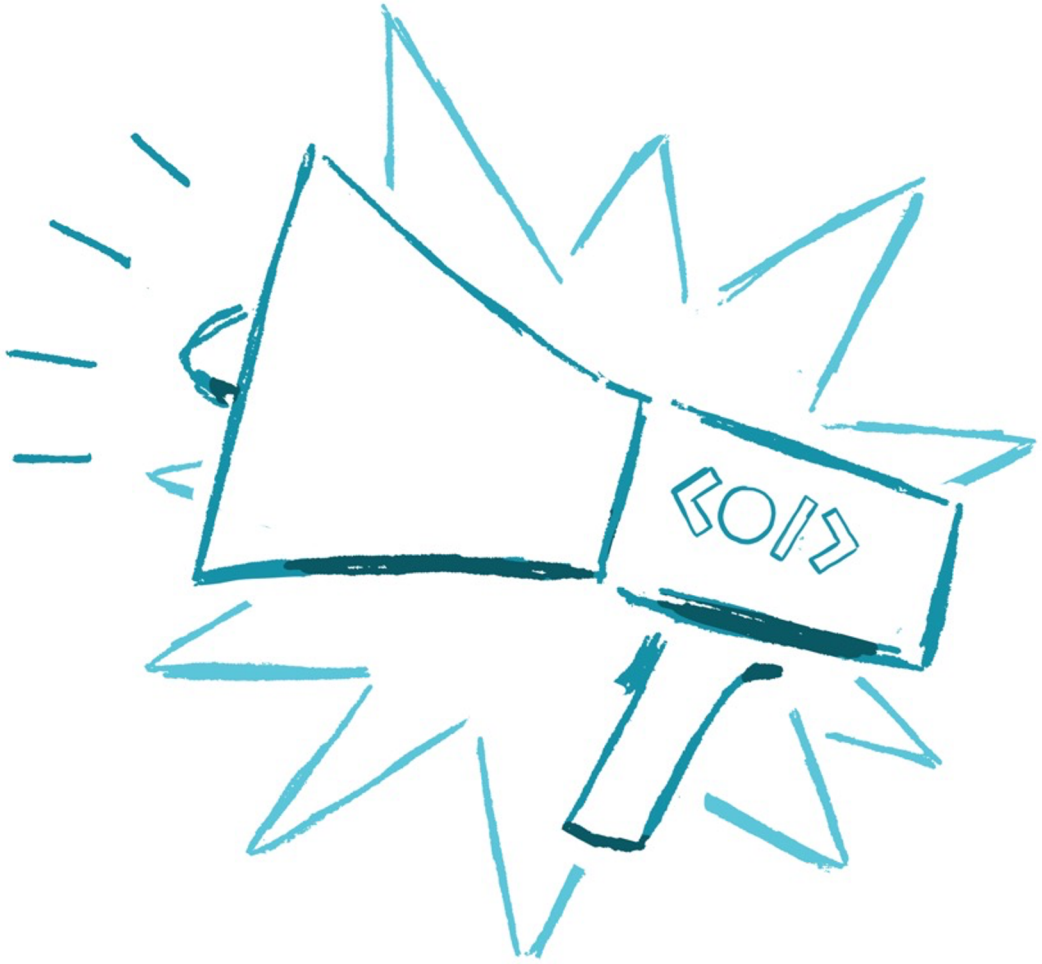
digital4planet.org

info@digital4planet.org

@Digital4Planet

digital4planet.org/newsletter



# THANK YOU FOR YOUR ATTENTION

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