



**EUROPEAN GREEN
DIGITAL COALITION**

Introduction to the European Green Digital Coalition (EGDC)

June 15th

Speakers: Andreas Candido



Funded by
the European Union



GeSI
GLOBAL
ENABLING
SUSTAINABILITY
INITIATIVE



What is the European Green Digital Coalition?



**EUROPEAN GREEN
DIGITAL COALITION**

Launched in 2021, the European Green Digital Coalition (EGDC) is a global initiative of companies, supported by the European Union, that aims to:

- Invest in the development and deployment of **green digital solutions** with significant energy and material efficiency that achieve a net positive impact in a wide range of sectors;
- Develop methods and tools to **measure the net impact of green digital technologies** on the environment and climate by joining forces with NGOs and relevant expert organisations;
- Provide a platform for **cross-sector cooperation** and supports the development of guidelines for deploying green digital solutions in sectors such as energy, transport, manufacturing, agriculture and construction.



Net Carbon Impact Assessment Methodology for ICT Solutions

Phase 1 output

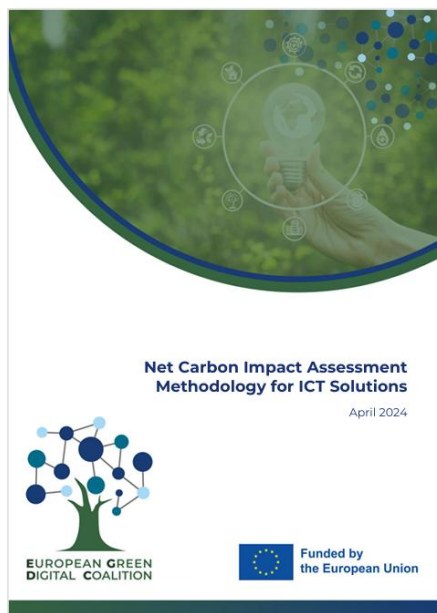
Developed a standardised, science-based methodology to calculate **the net carbon impact of ICT solutions**.

Key elements of the methodology:

- A consistent structure for evaluating direct emissions, avoided emissions and rebound effects designed for a non-technical audience
- Alignment with existing international standards (e.g., ITU-T L.1480 and WBCSD Guidance on Avoided Emissions)

Methodology was complemented by:

- **Case Study Calculators:** Contributed to refining the Net Carbon Impact Assessment Methodology and provided a valuable testing ground for its initial formulation.
- **Deployment guidelines:** Guidance on the deployment of digital solutions to maximise their netpositive impact (e.g. emission avoidance) and minimise negative impacts (solution footprint, rebound effects).



Phase 2: The EGDC Moves to Action



Phase 2 aims to foster a wide adoption and use of the EGDC methodology and guidelines by all relevant stakeholders including those involved in deployment of ICT solutions and public and private financial actors involved in supporting deployment with sustainable financing.

Delivery focus:

Case studies

- Publicly available repository of 50 case studies



Methodology

- Updated version of the net carbon impact methodology



Examples of published case studies:

**Green Digital Coalition**
1,588 followers
2w • 

🌟 Spotlight on EGDC case studies | [Tata Consultancy Services](#): Digital Platform for NextGen Agriculture

[Tata Consultancy Services](#) (TCS) Digital Platform for NextGen Agriculture (DNA) supports rice farmers in adopting Carbon-Smart Crop Protocols (CSCP) through a mobile application that records field operations and integrates weather, satellite and soil data. The platform guides climate-smart practices such as water-saving irrigation, precision fertiliser use and organic soil treatments.

The case study applies the EGDC Net Carbon Methodology to quantify the carbon impact of this digital solution and provides transparent calculations.

🔗 Explore the full case study materials:

📄 Methodology report: https://lnkd.in/e_M_mAGX

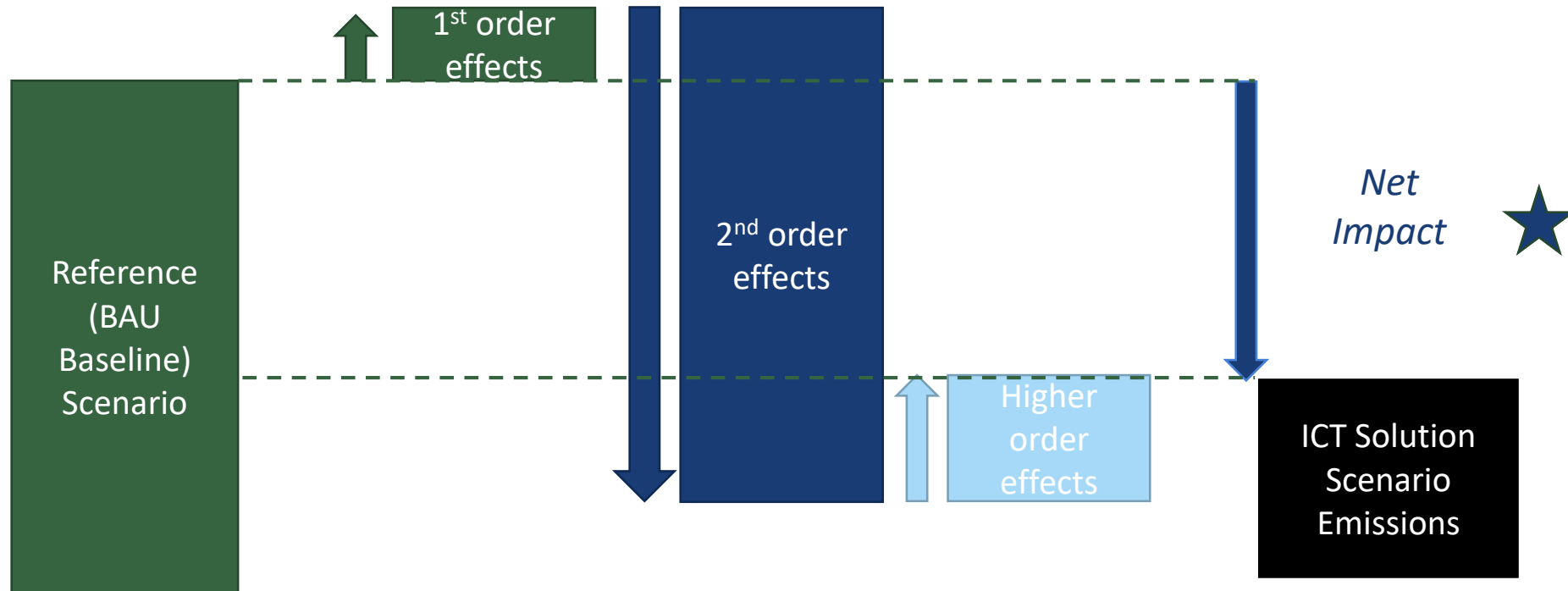
📊 Impact calculator: https://lnkd.in/eC-zAf_Q

This post is part of EGDC's ongoing series spotlighting during the Deployment Phase, showing how digital solutions can deliver measurable climate impact across sectors.

[#GreenDigitalCoalition](#) [#EGDC](#)

**Green Digital Coalition**
1,588 followers
5d • 

How the EGDC calculates avoided emissions



Net carbon impact = Second order effects – (first order effects + higher order effects)



Join us and submit your case studies

We invite organisations to submit digital solutions they are currently deploying, either as users or technology providers, to test and apply the EGDC Net Carbon Methodology (NCM) and calculate the net carbon impact of an ICT solution. Both already implemented and planned (pre-implementation) solutions are welcome. We are seeking digital solutions that:

- Deliver an end-to-end ICT or digital system, using technologies for monitoring, analysis, and communication;
- Demonstrate emissions savings. This may result from reduced resource use, but other emission-reduction mechanisms are also eligible.

A case study includes:

Case study calculator	Case study methodology	One-page summary
A solution-specific tool to measure the net carbon impact of your ICT solution, including emissions across its full lifecycle.	A detailed report explaining the calculation, methodology, variables, lifecycle emissions, and other relevant factors.	A one-page summary suitable for sharing and marketing purposes.

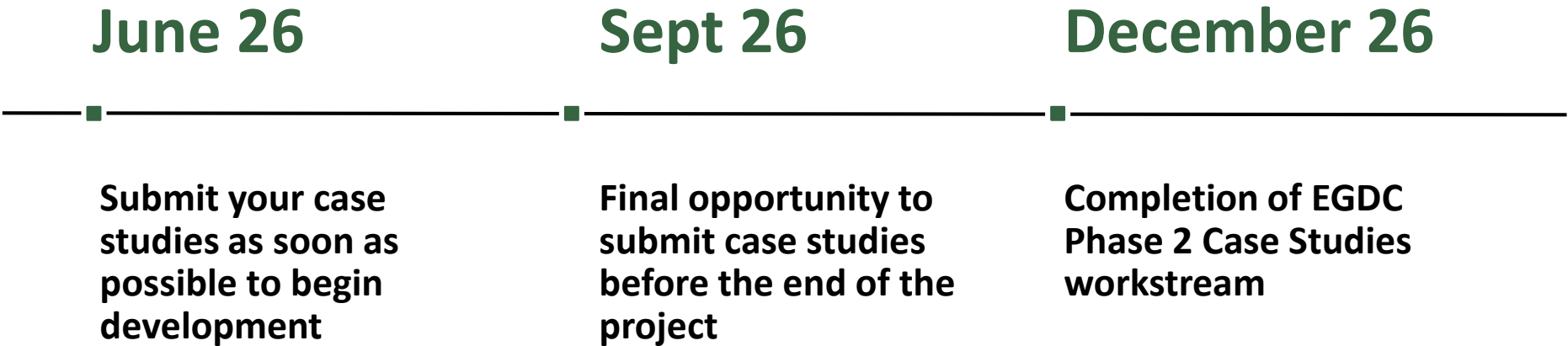
What are the benefits of participating?

- **Personalised Carbon Calculator:** You will receive a calculator showing **the net carbon impact** of your digital solution across its entire lifecycle, this includes impact, first order effects, uncertainty & sensitivity analysis.
- **Free advisory support:** Measuring the impact of digital solutions can be complex and time-consuming. We will handle these calculations and analyses at **no financial cost** for you, providing accurate avoided emissions using the methodology. The project is already fully funded.
- **Grow your solution's audience or customer base:** Having your solution assessed provides credible proof of its carbon impact. Once a calculator is developed for a solution, it can be adapted to reflect the specific conditions of other customers.
- **Gain visibility & proof as a leader in sustainability:** Use your case study to demonstrate your impact and commitment to green initiatives. Your company will be featured on the EGDC website, invited to EGDC events, and can leverage the case studies in your marketing and communications.
- **Alignment with leading standards:** The methodology aligns with the ITU, The World Business Council for Sustainable Development & with the EU Taxonomy.



Key dates to be aware of

We are now in the final 10 months of the project, so we encourage you to submit your case study as soon as possible to ensure there is sufficient time to develop it ahead of the end of the project in March 2027.





What we consider when assessing case studies

Data availability & quality	Maturity of the solution & case study	Other factors
To be accepted, data on the GHG emissions impact must be available for the assessment. Where this is not yet available, EGDC will support. Data collection: • Solutions that already have primary data available will be prioritised. • Where data collection is required, organisations must confirm data collection timelines and any need for stakeholder collaboration. Data quality: • Primary data is preferred, but other data sources will be accepted in some cases.	Deployment of the solution: • Both implemented solutions and solutions pre-implementation, will be considered – note – solutions pre- implementation should still provide primary data (e.g. lab/pilot test data). • Solutions that have been implemented will be prioritised. Maturity of the case study: • Submissions will be accepted from organisations at any stage of case study development: completed, in progress, or not yet started. • Complete and partial case studies will be prioritised.	If further prioritisation is required, the following factors will be considered to understand the solution's impact: • Geography – whether the solution's impact ranges across multiple geographies. • Scalability – whether the solution has a high potential for scalability. • Alignment with a net-zero economy



Reasons why case studies may not be suitable

- **Timeframe:** the case study won't be completed within the timeframe of the project.
- **Connection to solution:** The case study owner's connection to the solution is not sufficient to claim avoided emissions for example if the organisation provides a generic component:
 - Generic hardware component: Contributing the same standard printed circuit board for a building management system (BMS) that was already being used by the previous lower functionality BMS system.
- **Unsuitable reference scenario:**
 - The solution can be classed as market average – e.g., generic B2B teleconferencing
 - The solution is an incremental version of an existing ICT solution – e.g., Gen 1 vs Gen 2
- **Unsuitable data:** The submitter cannot supply or collect the necessary data for calculation of the reference scenario or the solution scenario, e.g.,
 - Footprint or footprint estimate of the ICT solution
 - No primary data to calculate the emissions avoided by the solution



Phase II Case Examples

Case studies published in phase 2



14 case studies have been published to date in Phase 2, covering a range of solution types, sectors, and geographies.

#	Solution	Company	Implementation	Sector
1	Dispatch Screening	Bell	Canada	Transport
2	Smart Building	Colt	London Office, UK	Buildings
3	Heata distributed cloud heat reuse	Heata	UK, Residential	Energy
4	CropScope	NEC	Corn, Hokkaido, Japan	Agriculture
5	CropScope	NEC	Winter wheat, Hokkaido, Japan	Agriculture
6	CropScope	NEC	Spring wheat, Hokkaido, Japan	Agriculture
7	GaiaSense	NeuroPublic	Olive Grove, Crete, Greece	Agriculture
8	Apartment Heat Optimisation	City of Stockholm	Stockholmskem Municipal Housing	Smart city
9	Next Gen Agri DNA	TCS	Rice, Tamil Nadu, India	Agriculture
10	Edge AI district heating optimisation	Ericsson & Kiona	Residential buildings, Sweden & Finland	Buildings
11	Mobile Application for Bike Sharing System	Opsis Research SRL	Pilot study in Botosani, Romania	Transport
12	LinuxOne	IBM	Office Poughkeepsie, New York, USA	ICT
13	QUHOMA	Future Intelligence	Olive Grove, Sparta, Greece	Agriculture
14	AI Digital Platform for desalination plants	SAWACO	Saudi Arabia, Jeddah, Store City	Smart city

Net carbon impact of Apartment Heat Optimisation Solution – City of Stockholm (Smart City)



The solution

- AI-based control system that uses indoor and outdoor temperature data to reduce district heating energy consumption.

Data

- Ex-post assessment based on data collected from 21,678 apartments (Stockholmskem, Stockholm) in 2021 and 2024.

Results

- -276 to -545 tCO₂e
- -0.3 kgCO₂e/m²

Other identified impacts

- **Economic benefits** - cost savings, which, if not ringfenced for further energy efficiency initiatives, could reduce the total net impact by ~16%.
- **Further energy savings** – more stable indoor temperatures, reducing energy at peak times and reducing the use of fossil fuel powered “peaker” plants.

Net Carbon Impact of CropScope Precision Fertiliser Solution – NEC (Agriculture)



NEC

The solution

- Precision fertiliser platform using VRF maps to optimise input use while maintaining yields.

Data

- 3x ex-post assessments in Japan covering corn, winter wheat, and spring wheat across their crop cycles.

Results (Spring Wheat)

- -2,953 to -4,613 kgCO₂e
- -0.12 kgCO₂e/kg of product

Other identified impacts

- **Biodiversity impacts** - improved water quality, healthier ecosystems, better soil health, and reduced input costs for farmers
- **Economic benefits** – initially invested into the solution

Net Carbon Impact of Smart Building Solution – Colt & Nuuka (Building)



colt

The solution

- AI and machine learning optimises existing HVAC ventilation systems in real time, reducing energy use and emissions compared to conventional systems designed for worst-case occupancy conditions.

Data

- 1x ex-post assessment based on data collected from Colt's own building in London ~ 4 months.

Results

- -5 to -8.5 tCO₂e
- -0.9 kgCO₂e/m²

Other identified impacts

- **Economic benefits** – reduced energy consumption leads to cost savings, which, if not ringfenced, could reduce the total net impact by ~20%.
- **Improved air quality and working conditions** - contribute directly to occupant's well-being and comfort.

Net Carbon Impact of AI Digital Platform for SWRO – SAWACO (Smart City)



The solution

- AI-powered optimisation tool for desalination plant which analyses operational data to adjust system setpoints, reducing energy use compared to manual, fixed-setting operation.

Data

- 1x ex-post assessments in SAWACO's CFRO + BWRO seawater desalination plant in Jeddah, Saudi Arabia

Results

- -141.6 to -175.4 tCO₂e
- -0.2585 kgCO₂e/m³ of potable water

Other identified impacts

- **Further energy savings** - Reduced electricity consumption lowers Scope 2 emissions and operating costs, while improved control of process setpoints enhances efficiency, stabilises performance, and may reduce equipment stress and maintenance needs.