



# THERMOS

Accelerating the development of low-carbon  
heating & cooling networks in Europe

THERMOS Train-the-Trainer Certification Programme

Instructor Led Webinar No. 3– October 22th, 2019

**Optimising thermal planning with THERMOS**





# Welcome to the THERMOS Train-the-Trainer Certification Programme!

## Agenda for Today

1. 16:00 – 16:00 Welcome *(by Daniela Torres, ICLEI)*
2. 16:05 – 16:20 Optimizing thermal planning with THERMOS – Warsaw Case Study *(by Wojciech Stańczyk, KAPE Poland)*
3. 16:20 – 16:30 Q&A - review of THERMOS FAQ
4. 16:30 – 16:45 Programme Status and Final Exercise *(by Alis Daniela Torres, ICLEI and Martin Holley, CSE)*



# Lets Get Started!

Meet the presenters

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# Wojciech Stańczyk

- THERMOS Specialist and THERMOS Certified Trainer
  - Krajowa Agencja Poszanowania Energii S.A. *The Polish National Energy Conservation Agency*
- Main activities within THERMOS
  - Design and management of Warsaw case study with THERMOS
  - Technical support to build Berlin case study with THERMOS.
  - Support in the development THERMAL planning processes and scenarios with THERMOS.
  - Technical advisor for KAPE, on sustainable energy, urban infrastructure and air pollution management projects with THERMOS.
- Background
  - Electric Engineer ( Technical University of Warsaw)





## Martin Holley

- Senior Technical Project Manager:  
[Centre for Sustainable Energy](#), UK
- Roles within THERMOS
  - Project Coordinator for THERMOS
  - THERMOS Trainer
  - Support for development and delivery of training materials
- Background
  - Senior Technical Project Manager, Centre for Sustainable Energy (2002-present)
  - Project Engineer, PV Systems Ltd./Energy Environmental Technical Services Ltd. (1999-2002)
  - Environmental Researcher, Corporación Oikos (1996-1997)
  - Test Measurement Engineer, Rolls Royce PLC. (1983-1990)



## Tom Hinton

- Software Developer:  
[Centre for Sustainable Energy](#), UK
- Roles within THERMOS
  - Tool designer and software developer
  - THERMOS Trainer
  - Support on technical deliverables
- Background
  - Software Developer, Centre for Sustainable Energy (2012-present)
  - Scientific Software Engineer, Minimax Labs (2010-12)
  - Contracting Software Engineer to CPFR Solutions (2002-03)



## **Alis Daniela Torres**

- Officer Sustainable Resources, Climate and Resilience. ICLEI Europe.
- Roles within THERMOS
  - THERMOS Train the Trainers programme manager.
  - Support to the development of THERMOS Sustainable Adoption Roadmap
- Background
  - International Consultant, Climate Change and Smart Cities. ITU & GSMA (2015-2018)
  - Head of Environment and Climate Change. Telefonica (2006-2015)
  - Environmental Expert. Latin American Energy Organization OLADE. (2002 – 2006)
  - MSc. Sustainable Energy Development & MSc. City Sciences.



## **Alexandra Pfohl**

- Project Assistant, Communications and Member Relations. ICLEI Europe
- Roles within THERMOS
  - THERMOS communications and capacity building manager
  - Support on technical deliverables on communication, exploitation and stakeholder engagement.
- Background
  - European Committee of the Regions, Assistant in the Cabinet of the President (2016-2018)
  - M.Sc International Relations, Political Science Leiden University





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## TtT Pathway B Certification Programme structure and methods

Certificate of  
Completion at the end!

Trainers are  
encouraged to  
participate in the TtT  
Workshop in Berlin  
6-Dec-2019

Method	Module / Content
<p>3 Instructor-Led Webinars.</p> <p><i>Hands on with THERMOS tool.</i></p> <p><i>Every 2 weeks</i></p>	<p>Webinar 1: Kick-off &amp; energy system mapping and modelling with THERMOS. <b>COMPLETED Sept 24<sup>th</sup>, 2019 - CET</b></p> <p>Webinar 2: Embedding THERMOS in your city. <b>October 8<sup>th</sup>, 2019 – 16:00 CET COMPLETED</b></p> <p>Webinar 3: Optimizing thermal planning, resources and technologies with THERMOS <b>Oct 22<sup>nd</sup>, 2019 – 16:00 CET TODAY</b></p> <p><i>Dedication: 1 to 1:30 hours per webinar</i></p>
<p>Supporting material 3 Recorded Webinars</p> <p><i>Dedication: 1:15 hours per webinar and questionnaires' response</i></p>	<p>Recorded Webinar 1: Thermal energy supply and demand in Europe. <b>COMPLETED 65 trainers!</b></p> <p>Recorded Webinar 2: Heating and cooling market and finance <b>COMPLETED 48 trainers!</b></p> <p>Recorded Webinar 3: Local stakeholders involvement for adopting THERMOS</p> <p><b>By 15<sup>th</sup>. Nov</b></p> <p><i>+ Follow-up Questionnaire</i></p>
<p>Self-study <i>Dedication: 4 – 6 hours</i></p>	<ol style="list-style-type: none"> <li>1. Innovation catalogue</li> <li>2. THERMOS User Manual</li> <li>3. Scientific Publications</li> </ol>
<p>FINAL EXERCISE</p> <p><i>Dedication: 6 -8 hours</i> <b>By 29<sup>th</sup>. Nov</b></p>	<p>Select your preferred option! <b>COMPLETED 53 trainers!</b></p> <ol style="list-style-type: none"> <li>1. THERMOS tool guided exercise</li> <li>2. THERMOS tool case study development</li> </ol>





# THERMOS TtT Exercise Introduction (2 options)

## Option 1

Guided exercise with  
THERMOS

Pre-defined  
problem to explore  
with THERMOS

Deep Dive videos  
with detailed  
explanations on  
THERMOS features

## Option 2

Case study with  
THERMOS

Trainers case study  
development with  
support of  
THERMOS partners

Practical project  
based on THERMOS  
cases



# **THERMOS TtT Exercise (2 options) as of 22-Oct-2019**

## **Option 1**

**Guided exercise with  
THERMOS**

**41 trainers**

## **Option 2**

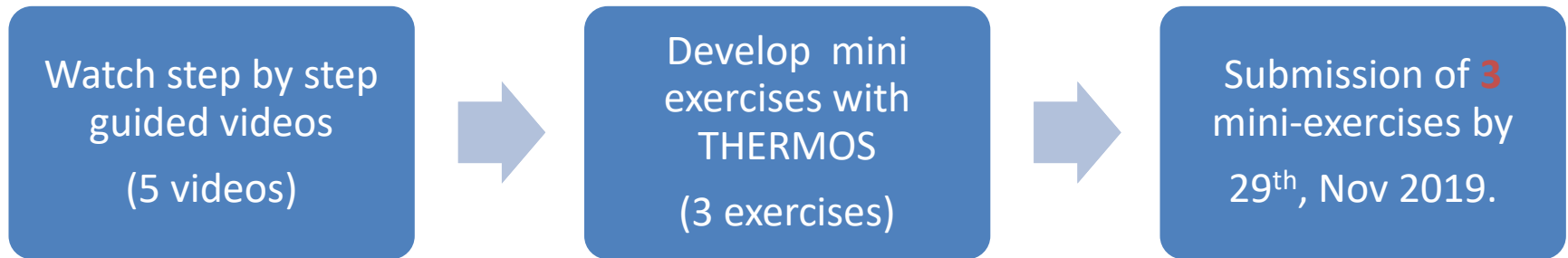
**Case study with  
THERMOS**

**12 trainers**



# Option 1: Guided exercise with THERMOS (process and final deliverable)

NEW!



- Flexible access to videos and mini exercises (weekly release)
- Availability to interact with THERMOS partners for questions and clarifications.
- Around 10 hours of dedication (2 per video + exercise)

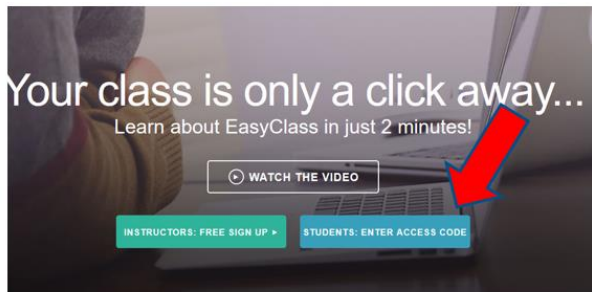
5 VIDEOS + 3 MINI EXERCISES

VIA EASY CLASS PLATFORM

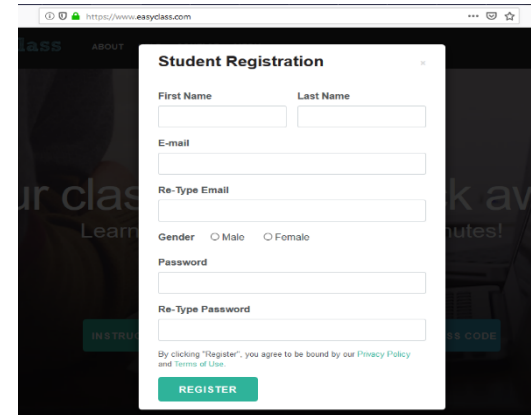
# Option 1: Guided exercise with THERMOS

[EasyClass](https://www.easyclass.com/). Course code: MMJT-9FUY

1 Go to <https://www.easyclass.com/>



2 Create an account.

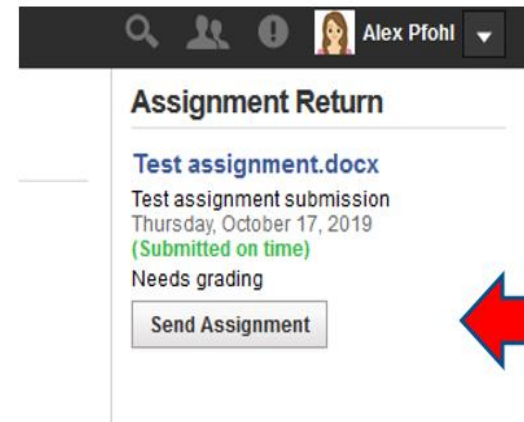


3 Join the course



Note: You will be able to see the status of your submission and can pose questions, or start discussions with other trainers and instructors in the discussion / comments section.

4 Submit your Mini Exercises





## Option 2: Case study with THERMOS (process and final deliverable)



- Definition of THERMOS case to be developed based on trainers' interests and tool features available.
- Technical guidance and companionship by THERMOS partners (CSE, CREARA, AALBORG UNIVERSITY, and KAPE)
- Around 16 - 32 hours of dedication based on the type of case study

LINK WITH THERMOS PARTNER (by November 4<sup>th</sup>)





# Option 2: Case study with THERMOS (choice of 3 use-cases)

**1**

Expansion of existing district heating and cooling networks to find the best buildings, streets or neighbourhoods to bring into the network

**1 TRAINER**

**2**

Identifying local energy demands for known energy sources and find the best route for the pipework

**2 TRAINER**

**3**

Optimising networks between known energy sources and demands. An optimal network solution is sought that matches up available energy sources and demand

**9 TRAINERS**



# THERMOS Train-the-Trainer Certification Programme – Status and Next Steps

- ✓ Webinars Completed
  - E-mail communicating trainers participation.
  - Your evaluation! Quality assessment of the Training Programme. Please respond!
  
- ✓ Option 1: Guided Exercise (Via Easy Class)
  - All three mini exercises to be submitted by November 29<sup>th</sup>, 2019 latest.
  
- ✓ Option 2: Case Study with THERMOS
  - Communication of case contact to trainers by November, 4<sup>th</sup>
  - Submission due by November 29<sup>th</sup>, 2019
  
- ✓ Final Workshop in Berlin (6<sup>th</sup> of December, 2019) - *optional*
  - THERMOS certificate delivery
  - Interested trainers invited to Berlin!



THANK YOU

Train-the-Trainer Certification Programme  
Pathway B!



# THERMOS



web

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This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement no 723636. The sole responsibility for the content of this presentation lies with its author and in no way reflects the views of the European Union.