Energy Saving Lighthouse Cities in the NPA region (e-Lighthouse)

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Background:

• 2010 – 2013 IEEB (Increasing Energy Efficiency in Buildings)

• 2012 - 2014 Resca (Renewable Energy Solutions in City Areas)

• 2014 – 2016 Future buildings and renewable energy

• 2016 – 2019 e-Lighthouse
Team Oulu

• Facility management services:
  - Janne Karhu, project manager
  - Johanna Mäkelä, energy expert
  - Pirkko Partanen, communication specialist

• Building Supervision:
  - Pekka Seppälä, director of Oulu building supervision
  - Tarja Törrö, economic coordinator
  - Heidi Tauriainen, project manager
  - Eveliina Tackett, quality manager
  - Olli Teriö, renovation specialist
  - Ilkka Räinä, leading HVAC engineer
  - Eero Kannisto, HVAC engineer
  - Esa Ervasti, energy consultant

• Kiertokaari Oy:
  - Helmi Riihimäki, Environment manager
Actions in Oulu

Bachelor Thesis:

- Kasper Åman: Energy efficiency in retrofitting of buildings
- Tapani Ajaoja: Energy saving potential in public swimming pool by decreasing temperature during summer months
- Markku Sunnari: The effect of EcoSmart on heating energy consumption at Kaakkuri’s school and Kaakonpoika’s day care center
- Timo Alakontiola: Energysolution of Asemakylä’s school
- Janne Kurvinen: Energy concept for efficient commissioning of real estate
More actions

• Renovation specialist for permanent → Renovation team: permit architect, renovation specialist, engineers (HVAC and structure)
• More quality guidance material for customers
• Events, seminars, etc..
Cooperation with building users

Do you need energy?
Why do you need energy?

- main target groups day care centers and schools
- trying to teach children and teachers wise ways to use water and electricity
- recycling waste (material efficiency)
- users are interested in their energy consumption

3-year-old is using public buildings daily for the coming 15 years.
Actions

- annual meetings with premises users
- how to use water wisely
- saving heating energy e.g. by closing doors to the hallway
- using sunlight instead of lighting
- motion detectors in lighting
- innovating new ways to show users, how they are using energy
- energy saving competitions
Mäntyrinne Day Care Center

- users were eager to find ways to save energy
- procedures weren’t shown in the energy report $\Rightarrow$ electric heating consumed all the savings
- Facility Management Service set up a new tool that controls heating: if the building is empty, heating is lower
  $\Rightarrow$ energy consumption decreased by 36%
Smart Solutions:

• Proactive quality management in Permit Process of Building Supervision
• Enhancing qravity ventilation for old buildings
• Gas purification for biogas, used as fuel for transport
• Oivapiste collection point for households
• Incineration – municipal waste to energy generation
Experience

• Team members changed
• Different practices – implementation is challenge
• Native language
• Not enough time
More info:

- http://www.rescaoulu.fi/in-english/
- https://www.tulevaisuudentalot.fi/english/
- https://ouka.fi/tilapalvelut
- https://kiertokaari.fi/
- http://www.elighthouse.eu/
Thank You!