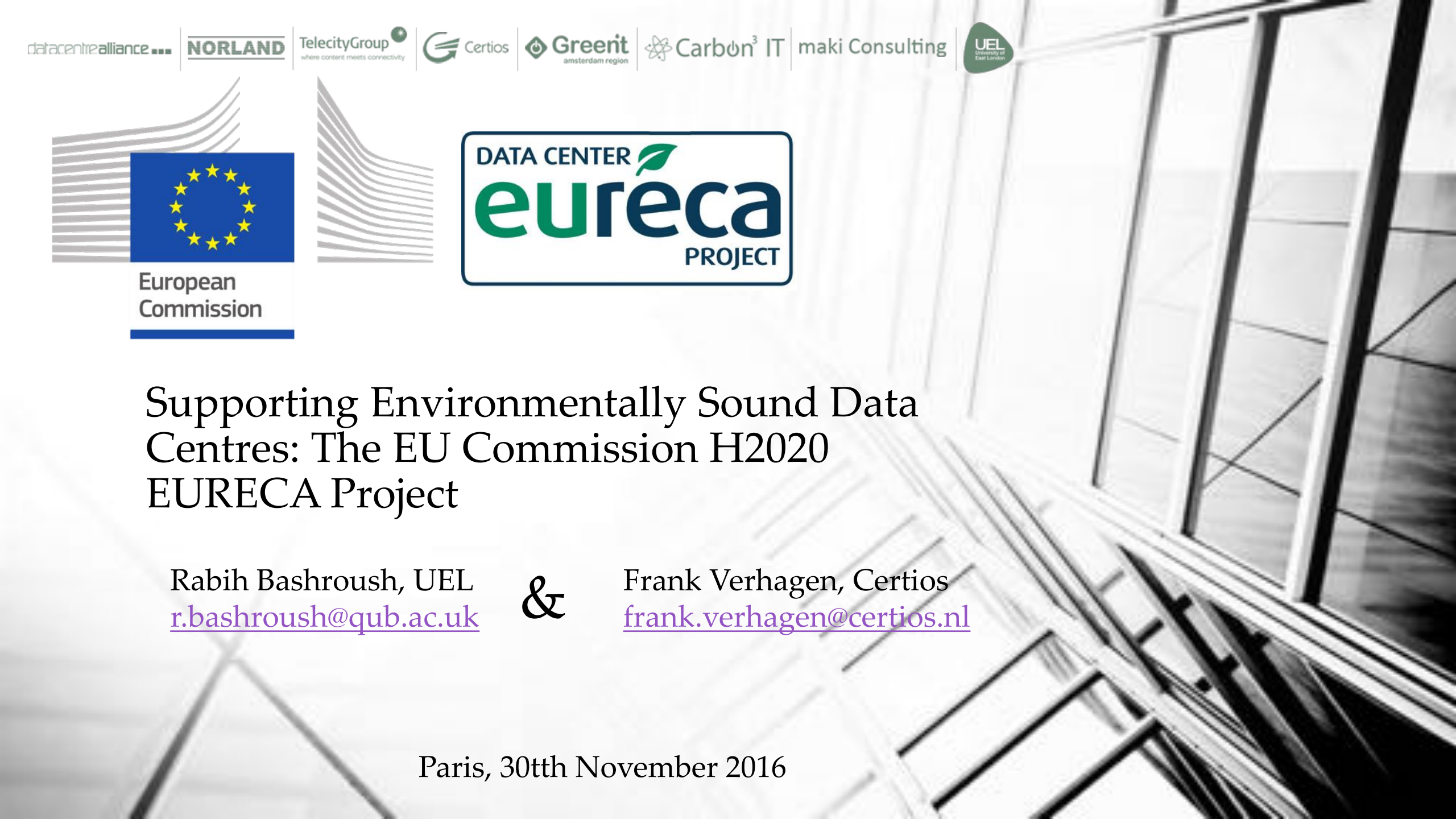

Supporting Environmentally Sound Data Centres: The EU Commission H2020 EURECA Project

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Paris, 30tth November 2016

Project Overview

- Aim: Assist the public sector with the uptake of innovative energy efficient and environmentally sound data centre products and services.
- Project started on 1st March 2015 and will run for 30 months.
- Partners come from three main regions (Germany, Netherlands and UK), with wider EU focus.

Complexity & Legal Uncertainty

- Stakeholders
- Frameworks
- Decentralisation
- Legislations

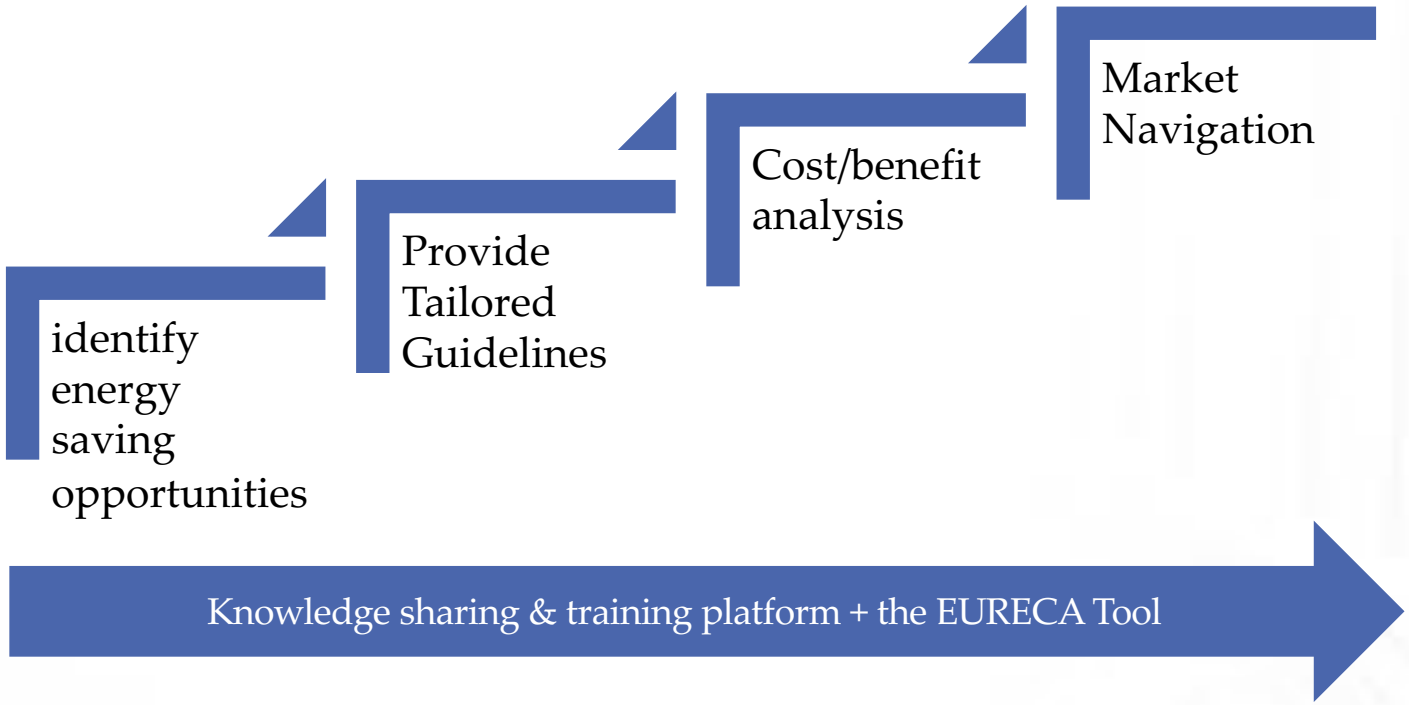
Insufficient Priority

- Low budget (%)
- Split incentives
- Not Core business

Lack of Technical Expertise

- Standards
- Best practices
- Evaluation of Technologies

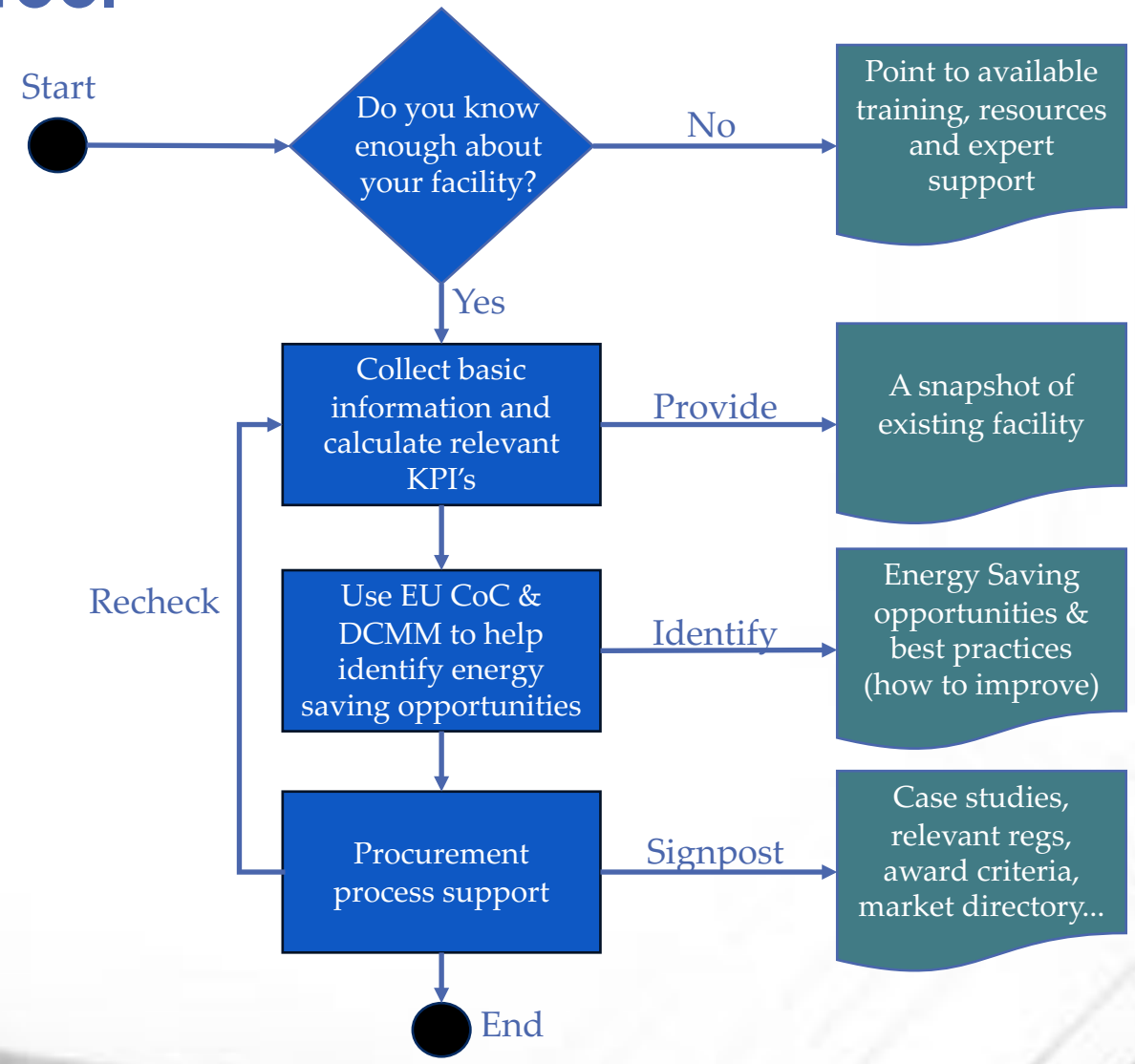
Approach


identify energy saving opportunities
Provide Tailored Guidelines
Cost/benefit analysis
Market Navigation
Knowledge sharing & training platform + the EURECA Tool

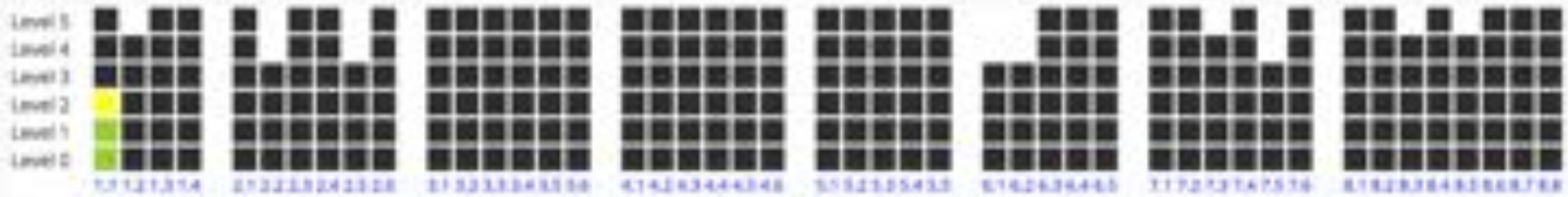
Knowledge Sharing & Training Events

Date	Location
June, 2015	London
November, 2015	Riga
February, 2016	Turin
May, 2016	Dublin
September, 2016	Amsterdam^
November, 2016	Paris^
February, 2017	Stockholm^
May, 2017	Barcelona^
August, 2017	Brussels^

The EURECA Tool



DCMM Equaliser



1.1 - Critical Power Path Efficiency - Building Entrance to IT load

FACILITY FACILITY POWER

Critical Power Path Efficiency - Building Entrance to IT load

Level 0	Level 1	Level 2	Level 3	Level 4	Level 5
Mid to low efficiency <90% based on your typical utilisation	90% efficiency based on your typical utilisation	92% efficiency based on your typical utilisation	94% efficiency based on your typical utilisation	95% efficiency based on your typical utilisation	96% efficiency based on your typical utilisation
Current Target	Current Target	Current Target	Current Target	Current Target	Current Target

Help Load DCMM Data Previous Next Save Finish

Please note the EURECA tool is in beta testing. You can provide your feedback using the Give Feedback button

Give Feedback

Report Of Technology Data Centre

Demo site November 7, 2016

Report | DCMM Equaliser | Recommended Actions | DC Site Details | Transactions

4.1.13 - Select free standing equipment suitable for the data centre - Airflow direction

When selecting equipment which is free standing or supplied in custom cabinets the air flow direction of the enclosures should match the airflow design in that area of the data centre. This is commonly front to rear or front to top. Specifically the equipment should match the hot / cold aisle layout or containment scheme implemented in the facility. Equipment with non standard air flow can compromise the air flow management of the data centre and restrict the ability to raise temperature set points. It is possible to mitigate this compromise by segregating such equipment according to Practices 5.1.11, 5.1.12 and 5.1.13 Note: Try to avoid free standing equipment as it usually does not allow a well organised airflow through the data centre especially if the major part of the room is equipped with well organised IT equipment mounted in cabinets.

5.3.1 - Review and if possible raise target IT equipment intake air temperature

Data Centres should be designed and operated at their highest efficiency to deliver intake air to the IT equipment within the temperature range of 10Â°C to 35Â°C (50Â°F to 95Â°F). The current, relevant standard is the ASHRAE Class A2 allowable range for Data Centres. Operations in this range enable energy savings by reducing or eliminating overcooling. Note: Some data centres may contain equipment with legacy environmental ranges as defined in 4.1.2, the maximum temperature for these facilities will be restricted by this equipment until segregation can be achieved as described in Practices 5.1.11, 5.1.12 and 5.1.13. Note: Additional Best Practices for airflow management as defined in section 5.1 may need to be implemented at the same time to ensure successful operations. Note: Some, particularly older, IT equipment may exhibit significant increases in fan power consumption as intake temperature is increased. Validate that your IT equipment will not consume more energy than is saved in the cooling system.

5.3.2 - Review and widen the working humidity range

Reduce the lower humidity set point(s) of the data centre within the ASHRAE Class A2 range (20% relative humidity) to reduce the demand for humidification. Review and if practical increase the upper humidity set point(s) of the data floor within the current humidity range of 21Â°C (69.8Â°F) dew point & 80% RH to decrease the dehumidification loads within the facility. The current, relevant standard is the ASHRAE Class A2 allowable range for

Please note the EUROCA tool is in beta testing. You can provide your feedback using the Give Feedback button. Give Feedback

Working together

- Looking for public sector “champions” in this field
- To drive knowledge sharing and networking
- Help steer and tailor the EURECA tool design and results
- Please register your interest at:
  http://www.DCEURECA.eu
- EURECA Tool: https://tool.dceureca.eu
- Email: r.bashroush@qub.ac.uk