



## **Energy Epidemiology: using building data to support energy and carbon policy in Latin America**

23-24 April 2018 | Radisson Paulista, Alameda Santos 85, Jardins, SP 01419-000

### ***Monday 23 April 2018***

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**08:30 – 09:00 Registration – tea and coffee provided**

**09:00 – Welcome**

Roberto Lamberts, Laboratory for Energy Efficiency in Buildings, Universidade Federal de Santa Catarina

**09:05 – Workshop introduction**

Paul Ruysevelt, UCL Energy Institute, University College London

**09:25 – British Council Presentation**

Presentation Camilla Almeida, Newton Fund Project Manager, British Council

### ***Morning session I - Energy performance in Buildings***

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**09:40 – Brazil's non-domestic energy and buildings context**

Presentation – Roberto Lamberts, UFSC

**10:10 – UK's non-domestic energy and buildings context**

Presentation – Tadj Oreszczyn, UCL

**10:40 – Workshop instructions**

Ian Hamilton, UCL & Edward Borgstein, Mitsidi

**10:50 – Coffee Break**

**11:15 – Identifying the Challenges**

Presentation – Prof. Gilberto Jannuzzi, Universidade Estadual de Campinas

Presentation – Dr. Kathryn Janda, UCL Energy Institute

**12:30 – 14:00 Lunch Break**

### ***Afternoon session I – Working Groups***

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*Each participant goes to their breakout group*

**14:00 – Identifying the Challenges (for each breakout group)**

Measurement: Jannuzzi / Borgstein

- Fabiana - Mapping urban temperatures
- Carlos - Assessing thermal comfort and IAQ in low energy retrofit dwellings

Benchmarking: Ruyssevelt / Hernandez Neto

- Ing Liang - Energy benchmarking and legislation in Brazilian commercial buildings: challenges and experience
- Lennart - Integrated energy assessment models for city planning tools

Data analytics: Nicholls / Hamilton

- Sérgio – Cost optimality of energy retrofit in buildings
- Pegah – Data for building energy efficiency

Regulations: Oreszczyn / Lamberts

- Karin – Discussing the multi-criterial and systemic character of land use regulation
- Michele – Energy efficiency and zero energy buildings
- Ozlem – Challenges of energy efficiency retrofit optimisation

Users influences: Janda / Soares Gonçalves

- Leticia – Developing user profiles for mixed-mode office buildings
- Martin – Designing smart systems to understand and shape energy use in buildings

Discussion of presentations

### **15:30 – Priority challenges for non-domestic energy and buildings in Brazil**

Group discussions on prioritizing the sub-challenges

### **16:00 – Coffee Break**

## **Afternoon session II – Plenary Feedback**

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### **16:20 – Working Group challenges presentations to plenary & Discussion**

Ian Hamilton, UCL

### **17:30 – Workshop Day 1 Close**

Paul Ruyssevelt, UCL

## ***Tuesday 24 April 2018***

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**08:30 – 09:00 Registration – tea and coffee provided**

**09:00 – Welcome & Recap**

Paul Ruyssevelt, UCL & Roberto Lamberts, UFSC

### ***Morning session I – Addressing the challenge to improving building energy performance***

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**09:20 – Addressing the challenges**

Presentations – Edward Borgstein

Presentation – Mr. Chris Nicholls, UK Dept. of Business, Energy and Industrial Strategy

**10:50 – Coffee Break**

### ***Morning session II – Working groups***

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*Each participant goes to their breakout group*

**11:15 – Identifying the mechanisms to address the challenges (for each breakout group)**

Measurement: Jannuzzi / Borgstein

- Ana - Collecting data from small scale commercial and retail buildings
- Hu - Long-term and short-term building performance evaluation and modelling

Benchmarking: Ruyssevelt / Hernandez Neto

- João - Procel: Resource application plan for the buildings sector
- Ana Paula - Energy simulation tools for early stage design of buildings

Data analytics: Nicholls / Hamilton

- Monica – Daylight performance of office buildings in Sao Paulo
- Oluyemi – The potential of energy storage in rural Latin America households
- Ilias – The role of net metering PV systems for improving energy performance of buildings

Regulations: Oreszczyn / Lamberts

- Larissa – Energy and climate change plans for the state of Minas Gerais
- Xinfang – How can energy use in buildings be part of Brazil's energy system

Users influences: Janda / Soares Gonçalves

- Joana – Environmental performance of climatic responsive office buildings

Discussion of presentations

**12:30 – 14:00 Lunch Break**

### ***Afternoon session I – Working Groups***

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**14:00 – Summarise questions and mechanisms discussed**

Prepare summaries of key questions to be addressed and the mechanisms that can be employed.

*Each participant goes to their breakout group*

### **14.30 – 16.00 World Café: Employing the mechanisms: opportunities, constraints and strategies**

- Three half hour sessions will take place in which the convenors of each group will stay in the group room and host participants from other groups to contribute to further discussion of the themes.
- The objective is to cross-fertilise between groups and to look at the opportunities, constraints and strategies for employing the mechanisms to address the questions.
- Participants don't have to move groups and if they do they can always come back to their 'home' group in the final session.
- The final session should summarise the issues associated with employing the mechanisms

#### **Sessions:**

##### **14.30-15.00, 15.00-15.30 and 15.30 -16.00**

Theme based group discussion

- Measurement: Jannuzzi / Borgstein
- Benchmarking: Ruyssevelt / Hernandez Neto
- Data analytics: Nicholls / Hamilton
- Regulations: Oreszczyn / Lamberts
- Users influences: Janda / Soares Gonçalves

##### **16:00 – Coffee Break**

#### **Afternoon session II – Plenary Wrap up**

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##### **16:20 – Working Group presentations on mechanisms and supporting proposals**

Edward Borgstein, Mitsidi

- Measurement: Jannuzzi / Borgstein
- Benchmarking: Ruyssevelt / Hernandez Neto
- Data analytics: Nicholls / Hamilton
- Regulations: Oreszczyn / Lamberts
- Users influences: Janda / Soares Gonçalves

##### **17:00 – Panel discussion for workshop findings**

Roberto Lamberts, UFSC

Panel Members: Group convenors

##### **18:00 – Workshop Day 2 Close**

Paul Ruyssevelt, UCL

## **Workshop theme challenges:**

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M&E – what are the metrics of success for demand-side energy actions and how can ongoing data gathering be structured for feedback and evaluation?

Benchmarking – how can building energy data be captured and structured to provide useful information to building owners, users and policy makers?

Regulations – what are the key enabling factors for development of successful regulatory regimes related to building energy consumption?

Data analytics – what enabling factors can allow improved data availability to be used to improve energy performance?

User influence on performance – how do different user expectations and service levels – such as increasing expectations of comfort and environmental quality – affect consumption?

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