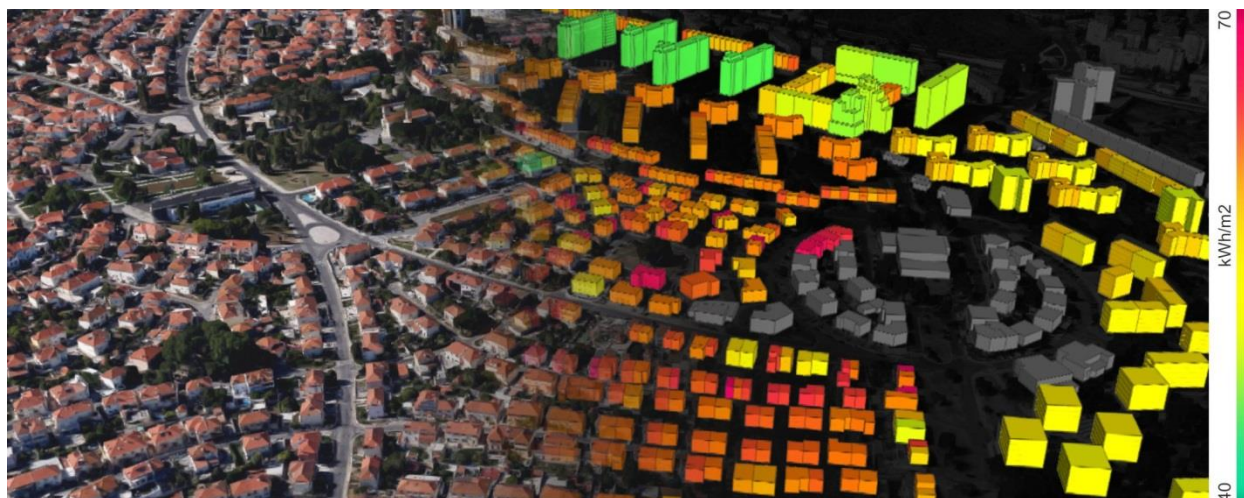


# International Workshop - A New Look into Old Buildings

## A Sustainable Vision for Lisbon

Lisboa, 21 de Março – Centro de Informação Urbana de Lisboa (CIUL)



*Simulated building energy use for Olivais Norte*

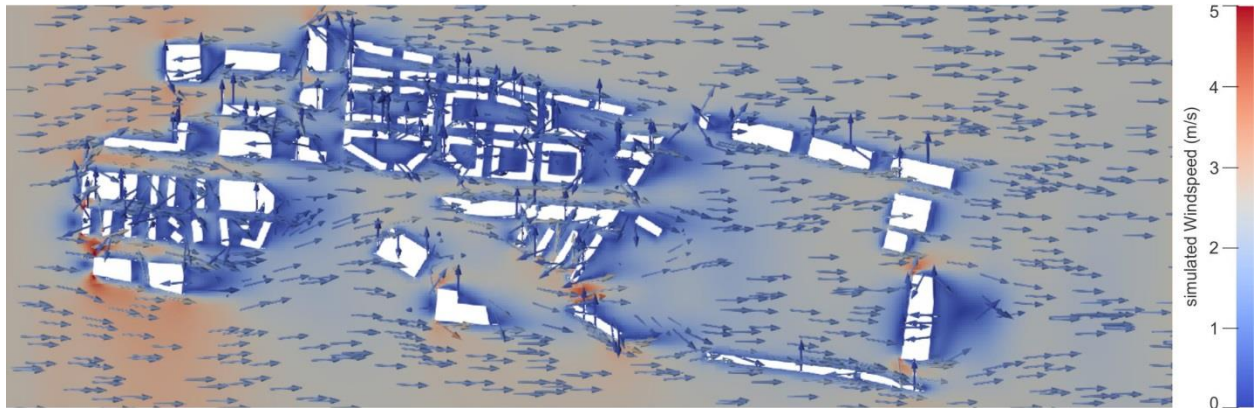
Cities are the center of economic and societal development, consuming 75 % of natural resources and generating 50% of global waste. In order to reduce carbon emissions related to building energy use while keeping neighborhoods livable, vibrant and globally competitive, municipalities need a new generation of planning tools that allow them to evaluate current and future environmental performance of their jurisdictions in a holistic way. During this roundtable, which is geared towards Lisbon's planning community and its peers across Portugal, researchers from the MIT Portugal program will present high level findings of a sustainable neighborhood analysis of Lisbon. The MIT Portugal program is a multiyear collaboration between MIT and leading Portuguese Universities. Topics to be discussed include how the deliberate proliferation of a variety of energy conservation measures could reduce citywide building energy use; the future of natural ventilation in Lisbon's warming climate; how to combine increased density with sufficient access to daylight as well as new modes of urban food production. To give the audience a sense of the required effort level to use the Lisbon model or develop a comparable model in another municipality, the researchers will provide a high-level overview of the data requirements and underlying simulation methods. Following the first part, a diversity of Lisbon municipal decision makers and city top managers, are invited to discuss how challenges and needs of Lisbon residential building stock might boost a shift of paradigm towards a more resources efficiency use and sustainable renewal and how the present Urban Modeling Interface (UMI) can be improved according to the municipal needs for the next years.

### ORGANIZAÇÃO



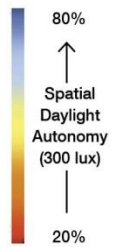
## Agenda

- 09:00 OPEN SESSION (30 min)
- José Sá Fernandes, Deputy Mayor of Lisbon Municipality**  
**Mário Patrício** President of the Freguesia do Parque das Nações  
**Paulo Ferrão**, President of Fundação para a Ciência e Tecnologia
- 09:30 **Carlos Silva** (IST Lisboa) 20 min  
Lisbon context and project framework
- 09:50 **Christoph Reinhart/Khadija Benis/Claudia Sousa Monteiro** (MIT, IST) - 90 min  
A new look into old buildings: A sustainable vision for Lisbon
- Christoph Reinhart (MIT SDL)**  
Introduction: Enabling decision makers with environmental urban modeling (10 min)
- Claudia Sousa Monteiro (IST Lisboa) –**  
Building data accessibility in Lisbon: Challenges and opportunities (15 min)
- Christoph Reinhart (MIT SDL)**  
Current and future building energy demand in Lisbon (15 min)  
Natural ventilation and public health in Lisbon's warming climate (15 min)  
Putting a price to daylight access: Light taxes and real estate value (15 min)
- Khadija Benis (IST Lisboa) –**  
Productive neighborhood landscapes: Harvesting solar, food and materials
- Christoph Reinhart (MIT SDL) - Tools and metrics for urban design: Introduction to Urban Modeling Interface - UMI** (10 min)
- 11:20 COFFEE BREAK - 15 min
- 11:35 **Paulo Ferrão/Christoph Reinhart/Pedro Grilo** (Moderators) 70 min  
Challenges and needs of Lisbon residential building stock regarding a shift of paradigm towards more resources efficiency use and sustainable renewal
- **Representative of the Municipal Directorate of Urbanism**
  - **João Tremeceiro**, Chief Data Officer of Lisbon Municipality
  - **Pedro Pinto de Jesus**, President of the Administration Board of GEBALIS (Tbc)
  - **Representative of the Administration Board of ADENE** (Tbc)
  - **Maria Joao Rodrigues**, Technical Director of Lisboa E-nova
  - **Catarina Selada**, Head of City Lab at CEiiA – Centre for Engineering and Development
- 12:45 CLOSING REMARKS (**Christoph Reinhart/Pedro Grilo**) - 15 min
- 13:00 CLOSING SESSION **Deputy Mayor of Lisbon City** (Tbc)

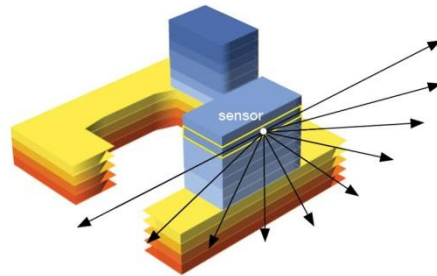


Future wind modeling natural ventilation in Parque das Nacoes

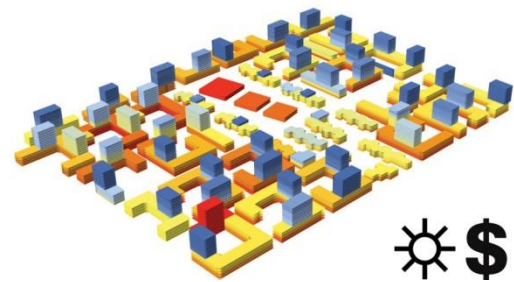
**SPATIAL DAYLIGHT AUTONOMY**  
Percentage of a floor area that receives adequate daylight (300 lux) for at least 50% of occupied hours



FLOOR-BY-FLOOR DAYLIGHTING ANALYSIS FOR EACH BUILDING



BUILDING-LEVEL RESULTS AGGREGATED AT THE URBAN LEVEL



Modeling real estate value of access to daylight in Parque das Nacoes



Consortium Partners

