Yenergy

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Where is the data mined from?

- VTT, building energy efficiency dataset
- NIAML device, calculate impact the bottlenecks of the buildings in terms of electricity and the impact of each electrical appliances ; can be used electrical equipements and lights
- 720°, measures the indoor air quality (temperature, humidity and particles)
- Utilize information from the social media
  - "Experience" of the neighborhood, "noise" reports, comments
- Mbrain
  - Newspapers, websites, Semantic Search etc.
- Insulation eg. Paroc, calculating the energy consumption for heating or cooling compared to the temperature, so to know how much heat is leaking outdoor
- If companies want to show some external information in marketing purpose (not open data)

User cases

- A professional checking a hotel in destination city according to the air quality in the building…
- A young couple buying an apartment according their efficiency standards…
- Realtors/real estate agencies evaluating the buildings…
- A student going to a fitness center…

- The solution for each case would be to know and discover places that are the most sustainable, cost effective, pleasant and safe.

Benefits

- A map that shows efficency rate of each building for anyone.
- A combination of Google maps, eat.fi, Booking.com
- Partner Airbnb (possibl e target group)
- Benefits for Companies and other building owners:
  - Marketing purposes and channels
  - Find out the bottlenecks
  - Finding new office locations
- Benefits for Individual person
  - Buying appartments
  - searching for job
  - Tourism
- Incentive/ Motivate building owners to increase the efficiency of the building, which also increases the value of the properties.
  - Lower energy consumption enables to lower rent prices
- Making the city more welcoming for tourists / Accompanying the stategies of municipalities and the city planners.
- Good marketing/ attracts customers and the demand enables a higher price.
- Cities, Real estate/Construction companies: An information bank for future construction plans.

Finding the bottlenecks

- The owner can find which section of the building is lagging behind from the detailed information on the map or (ask from the information provider.)
  - Why the neighbour building is better ranked than mine?
- Construction companies would improve their planning/construction processes.

Benchmarking/Weaknesses

- Who cares of the efficiency of the buildings? Who cares of sustainability?

- We can use the open data, but there is also private information and building owners don't necessary want to publish them, but hiding something might give bad reputation
  - Why hide excellent results?

- Is a map boring? There is already many services and apps, so why to use?
  - It would be easier to use if combined

Competitors

- ## Repowermap
  - Shows renewable energies and energy efficiency in your neighbourhood
  - Aim is the same, but there is only scattered information, because the users must update the map by themselves
  - http://www.repowermap.org/index.php?ln=en

- ## Codegreensolutions
  - Web based program that puts building sustainability and energy performance in your mobile phone. Enables to view and analyze buildings.
 - Is not using a map as platform
  - http://www.codegreensolutions.com/cg-software/

- ## Black Sheep
  - Helps home buyers to find energy efficient homes by combining real estate listings with energy efficiency and energy consumption data.
  - Only for home buyers and lacks the perspective of companies.
  - http://energychallenge.energy.gov/a/dtd/Black-Sheep/57315-26122

Experiment of the University of Colombia

Total Annual Building Energy Consumption for New York City
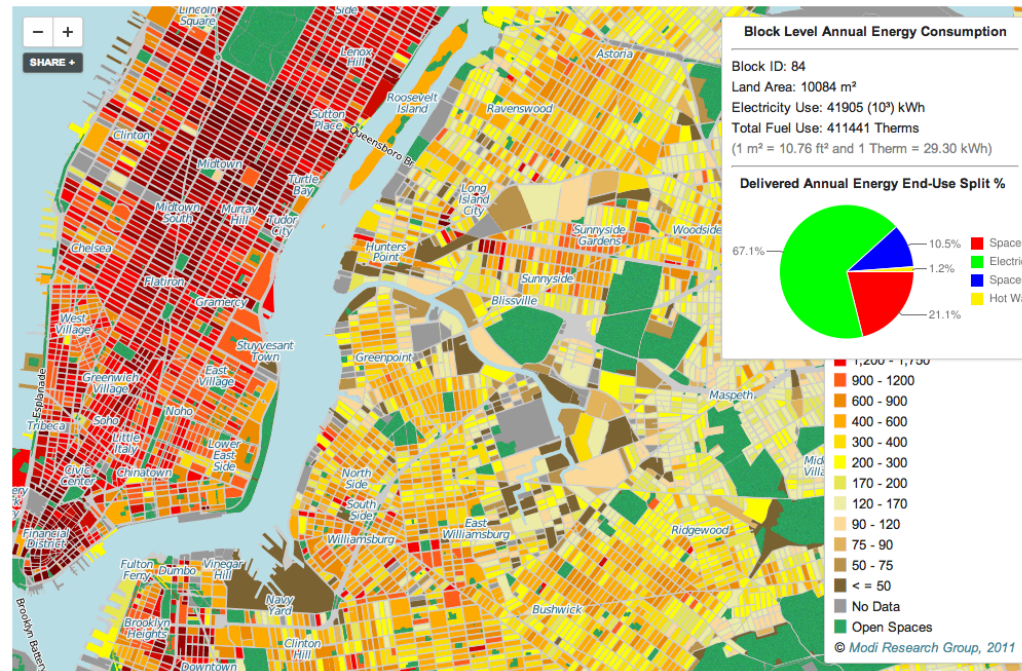
Data Source: Spatial distribution of urban building energy consumption by end use
B. Howard, L. Parshall, J. Thompson, S. Hammer, J. Dickinson, V. Modi

The map represents the total annual building energy consumption at the block level (zoom levels 11-15) and at the taxlot level (zoom levels 16-18) for New York City, and is expressed in kilowatt hours (k Wh) per square meter of land area. The data comes from a mathematical model based on statistics, not private information from utilities, to estimate the annual energy consumption values of buildings throughout the five boroughs. To see the break down of the type of energy being used, for which purpose and in what quantity, hover over or click on a block or taxlot.

How does it work?

- Rating system/calculation
- Comparison to other buildings and EPC, guidelines for efficieny
  - Comparison to similar kind of buildings
- What to do?
  - The buildings are colored according to the rating.
  - The user can see main information placing the mouse on top of the building (computer) or touching (phone or tablet). (This will be explained in the next slide.)
  - And get additional and detailed information by clicking it.
- The application could be combined with some other already map application like eat.fi, airbnb or Booking.com.

Info "Pop-up"

- Name of the building
  - Energy consumption and form
  - Lights
  - Year of construction, m2
  - Floors
  - Transportation connection
  - Air quality
  - Tell that how much CO2 is storaged, mainly how much wood is used in the building (it functions as a useful carbon sink)
  - Insulation and air conditioning keeping the heat
- EPC for commercial, residental and governmental
- ISO certificates

”The Code”

- https://github.com/daureg/yenergy