

investiamo nel vostro futuro



# Smart Cities in one indicator!!!



+ 14

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**Puglia Smart Lab**



**PSLab** is a newborn LL, a space of innovation in which citizens, Government and enterprises collaborate together to co-create services derived from concrete needs in our territory.

PSLab is one of the first outcomes of **Puglia@Service**, a research project funded by the Italian Ministry of University and Research. The aim of P@S is providing a 15-young professionals group with multidisciplinary skills necessary for smart territory strategic development.



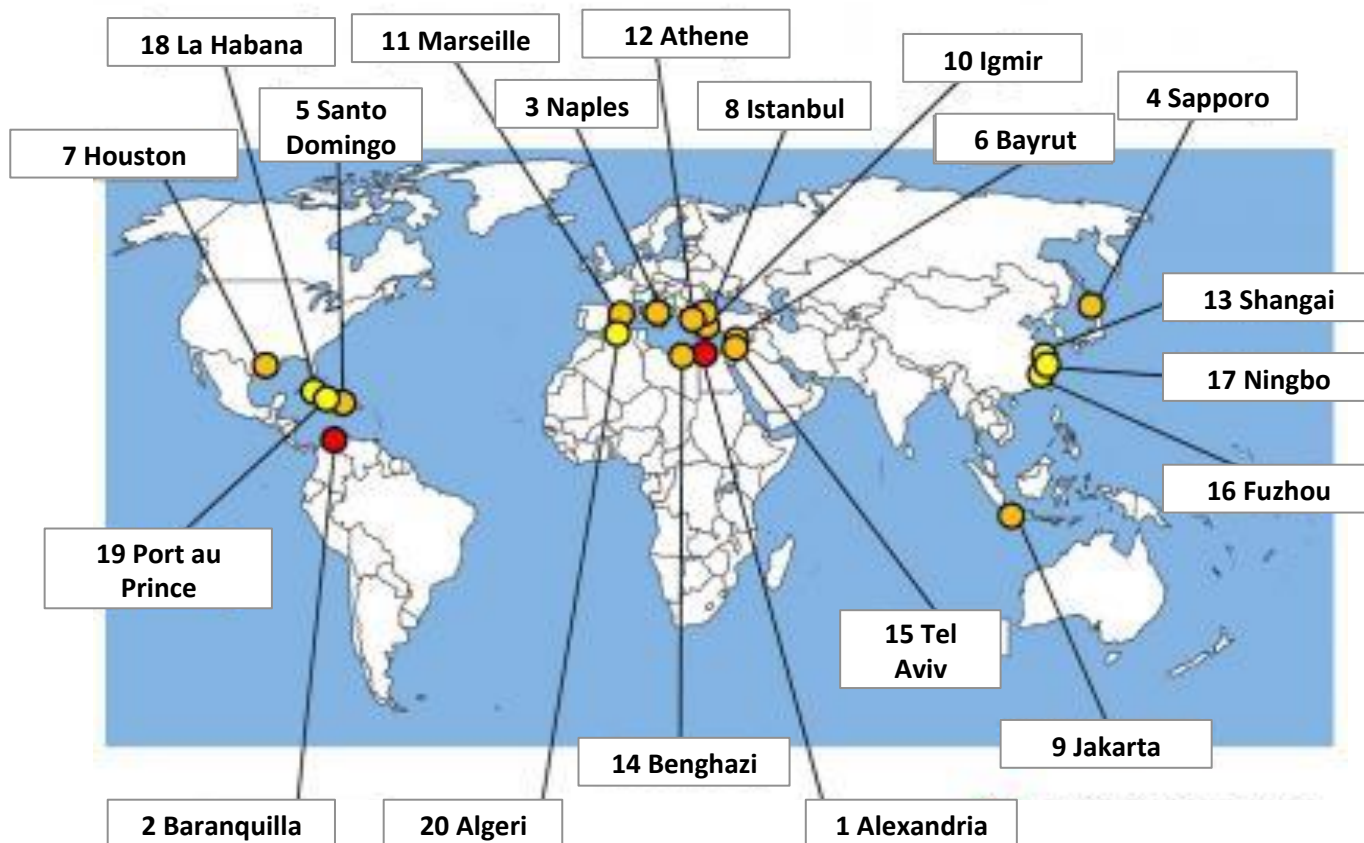
Puglia@Service project is supervised by **Dhitech Scarl**, a High Tech District (established since 2005 in Apulia).

PSLab has officially joined **ENoLL, European Network of Living Labs**, as an adherent member, since August 2013 at "The 7th wave of ENoLL members".



**European  
Network of  
Living Labs**

- In the **USA urbanization** was minimal until 200 years ago; today it's above **82%**
- China will be building **300 new cities in 20 years**
- **One million people a week** will be moving in cities until **2050**



Source: [www.befan.it/entro-il-2050-136-citta-a-rischio-scomparsa-ce-anche-napoli/](http://www.befan.it/entro-il-2050-136-citta-a-rischio-scomparsa-ce-anche-napoli/)



Source: [www.internazionale.it/la-formula-che-spiega-le-citta/](http://www.internazionale.it/la-formula-che-spiega-le-citta/)

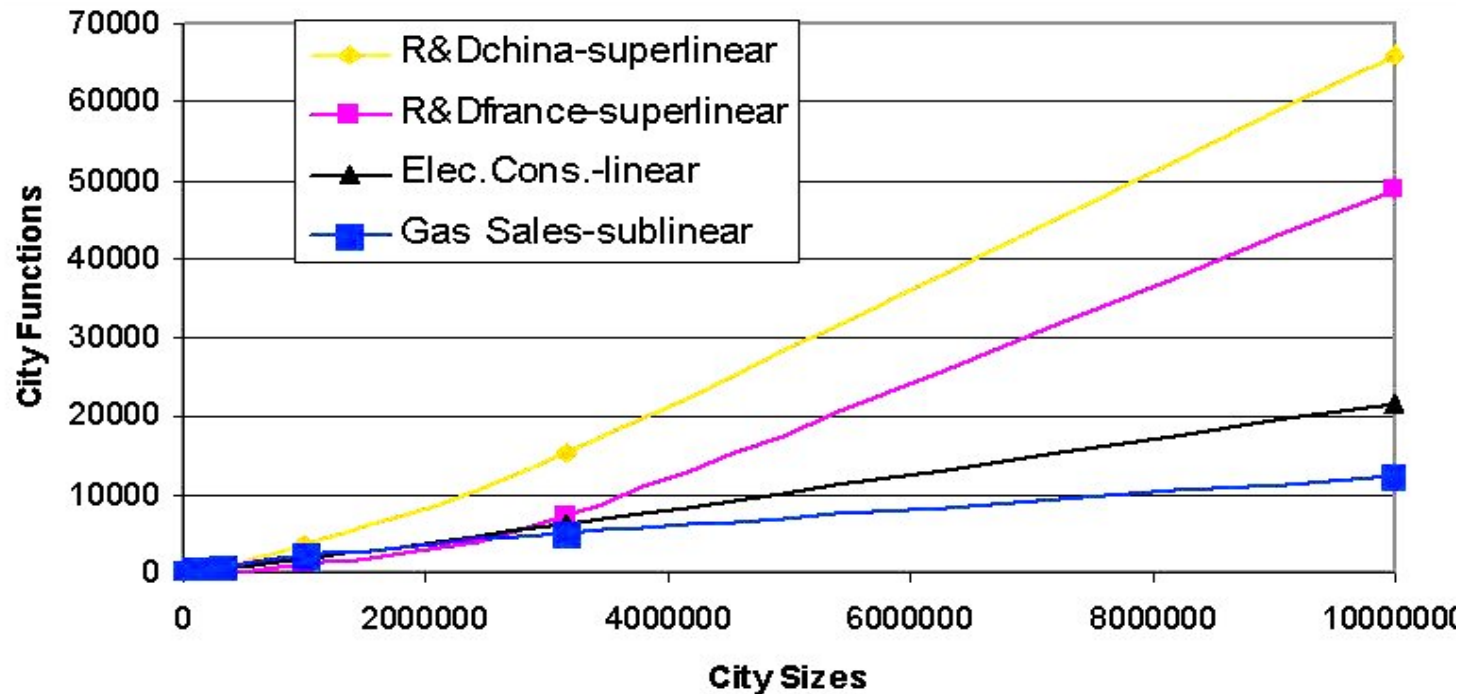
“...bigger species require less energy per Kg when compared to smaller species.

As an example, an elephant needs 1000 times more energy than a guinea-pig despite being 10000 times bigger...”



**...AND, INSTEAD, WHAT HAPPENS IN CITIES?**

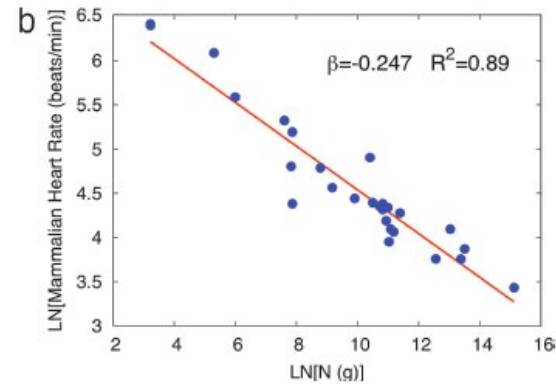
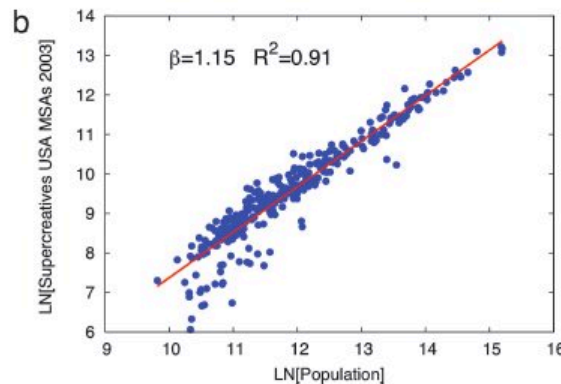
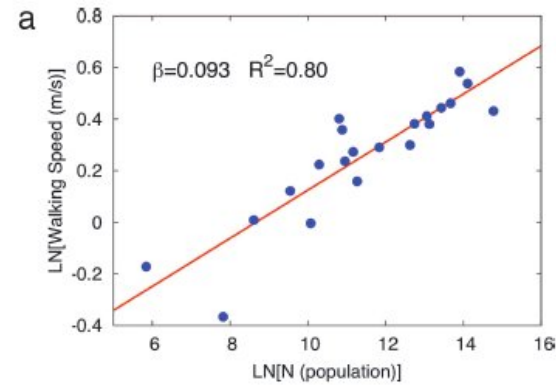
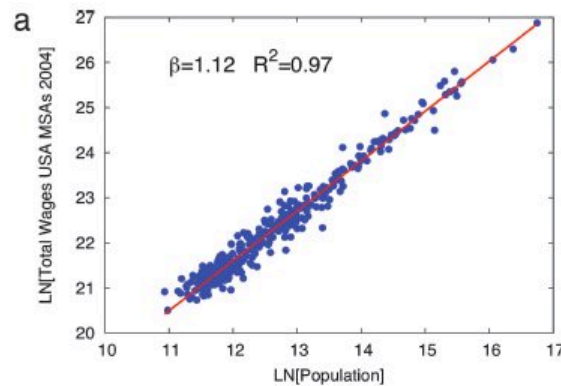
Every living being gets slower as its size increases. This is called **sublinear** behaviour. However cities are different: when their size increases, every social aspect speeds up. **There is no equivalent model in nature!**



# 15% RULE – CITY SUPERLINEAR SCALING

There are two different trends due to city size increase

- **Superlinear** - raising social interactions means more innovation and wealth, but higher crime rates as well ( $\beta = 1.15$ ).
- **Sublinear** - less investment per capita infrastructure required such as streets, cables, sewage, etc. ( $\beta = 0.85$ ).



Non linear behaviour in urban transport networks

Decentralized networks for people connectivity



## City Behaviours

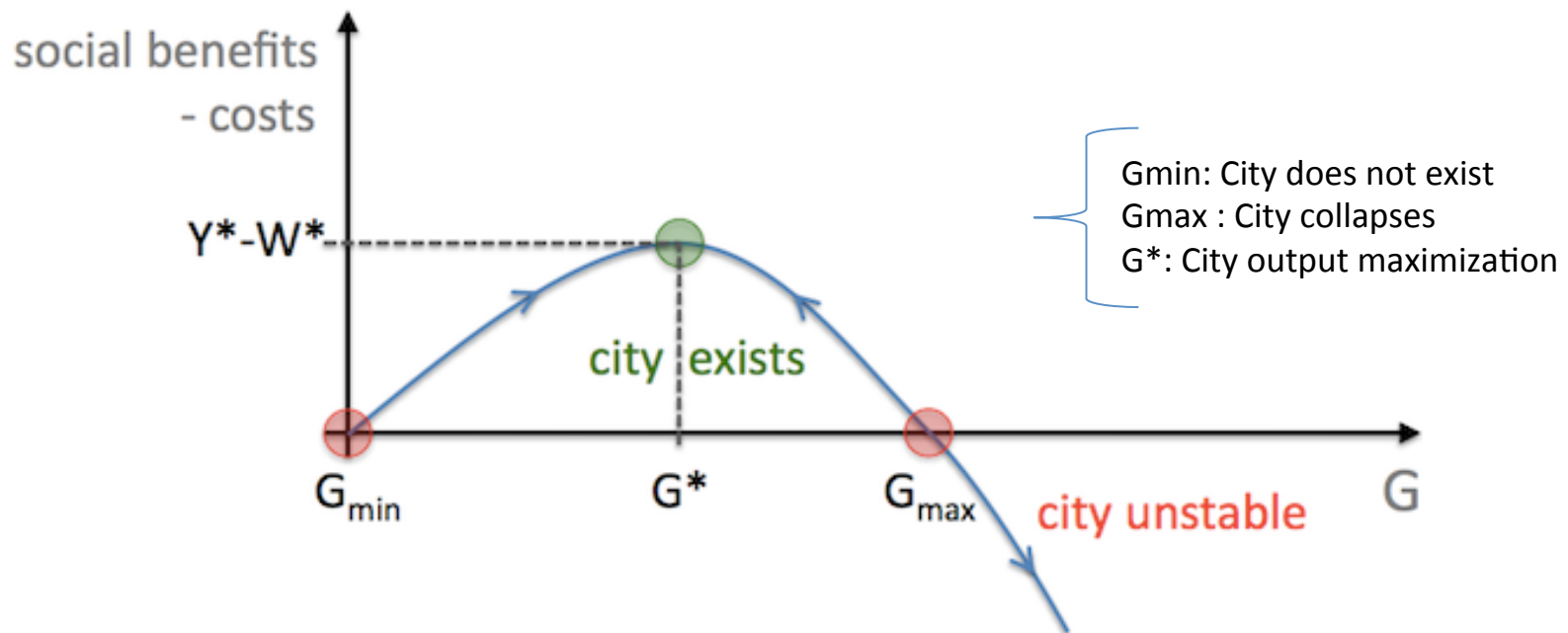
The bigger the city, the more mental/physical effort but social interactions as well

Socio-economic outputs are proportional to local social interactions



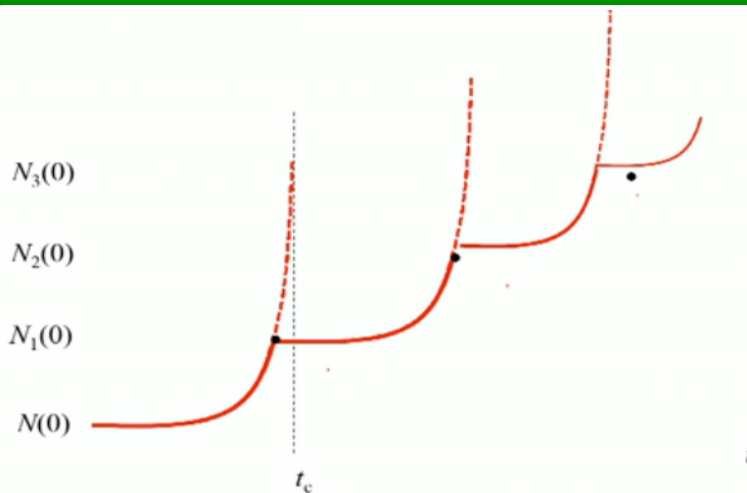
**G is the output that represents the entire set of urban aspects as well as the condition for existence and enhancement of cities.**

$$G = Y \text{ (Social interaction outcome)} - W \text{ (dissipation)}$$



It is necessary to **shift G\* forward**, in order to improve city users' life conditions, in spite of city dimension increasing. This would result in better socio-economic outcomes and more social interactions.

## How?



- Citizenship proactive participation
- Innovative urban planning
- Balancement between density, mobility and social connectivity

- ⚽ **An innovative analytic assessment way to exploit cities' full potential**
- ⚽ **A tool to provide support to Government for a better understanding of cities**
- ⚽ **A new methodology for long term strategical planning of cities**

...**Involve** you, **stimulate** your **partecipation** to Puglia Smart Lab, experiment together this **new** methodology.



Next year, in **Smart City Exhibition 2014**, we would like to present outstanding.

**Do you wanna team up with us?**



# Thank you!

[www.pugliasmartlab.it](http://www.pugliasmartlab.it)



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