

re:PLACE - REgeneration: PLanning Active Centres

artificial intelligence analytics and forecasting system for urban regeneration, master planning and community planning engagement

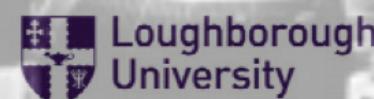
Dr Nicolas Palominos

PhD in Advanced Spatial Analysis, UCL - 2021
MSc in City Design and Social Science, LSE - 2012
BA Architecture, PUC - 2004

Researcher & Lecturer (UCL, LSE), 2012, 2016-2022
Designer & Analyst (The Comptroller General of Chile), 2009-2016
Project Manager & Designer (Ministry of Housing & Planning) 2006-2009



Innovate
UK



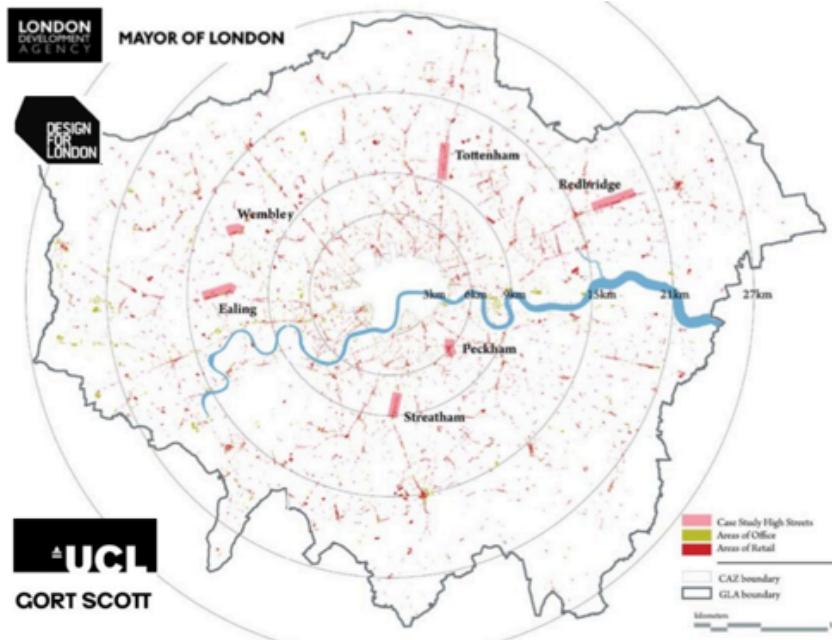
the Oval partnership



KNOWLEDGE &
EXPERTISE

Ordinary Streets, LSE Cities, 2012

What makes a multicultural and diverse street vital and vibrant?



1/3 of trips to High St. are not for consumption



40% of Londoners live within a 5 min. walk of a High St. (3 mill.)



>50% of London's employees work within 200 m of a High St. (1.45 mill.)

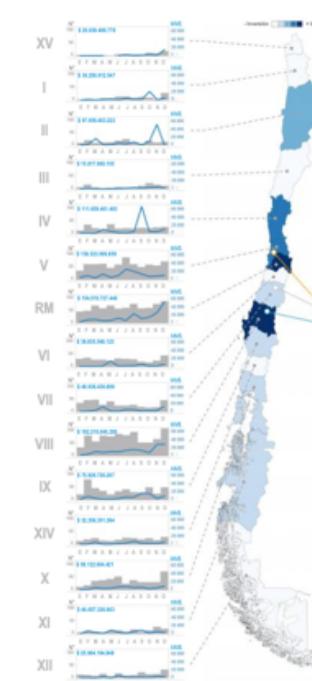
3.6% of London's road network (500 km)

GEO-CGR, The Comptroller General of Chile, 2016

Country wide oversight of public works for civic engagement



EVOLUCIÓN MENSUAL Y CONCENTRACIÓN DE LA INVERSIÓN



OBRA REPRESENTATIVA POR RANGO DE INVERSIÓN



belong to all Chileans.

El sistema GEO-CGR, en alianza con las Entidades de la Administración del Estado, está en constante desarrollo y perfeccionamiento de sus funcionalidades y la calidad de la información registrada, con el objetivo de ofrecer nuevas perspectivas para comprender cómo se invierte en obra pública.

Este enfoque territorial abre nuevos campos de acción para la toma de decisiones, el resguardo del patrimonio público y la generación de un canal de comunicación efectivo con la ciudadanía.



is dynamic and constantly updated.

Incluirá a ministerios de OO.PP., Vivienda y, a futuro, municipios:
Contraloría estrenará “portal ciudadano” de fiscalización en infraestructura

Durante el segundo semestre de este año se lanzará la página web. Con esta iniciativa, el contralor Ramiro Mendoza aspira a que las personas se transformen en otro fiscalizador de las obras que afectan la calidad de vida de los usuarios.



El portal será georeferenciado en diciembre, habrá un mapa de Chile donde el usuario podrá saber qué frases se están llevando a cabo y los detalles de ellas.

Quiero Mi Barrio ('I Love My Neighbourhood')

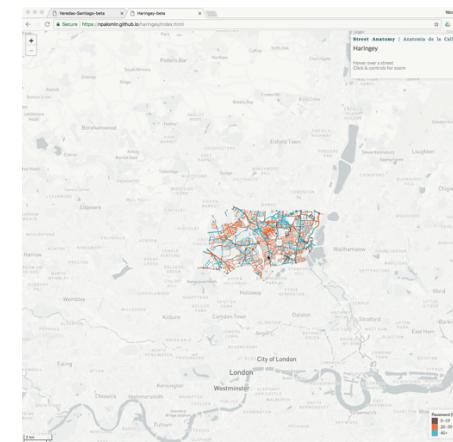
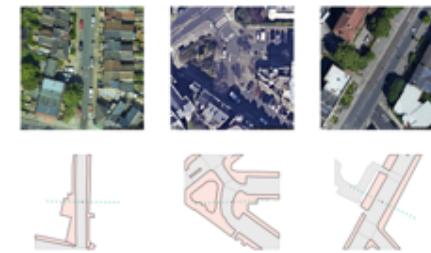
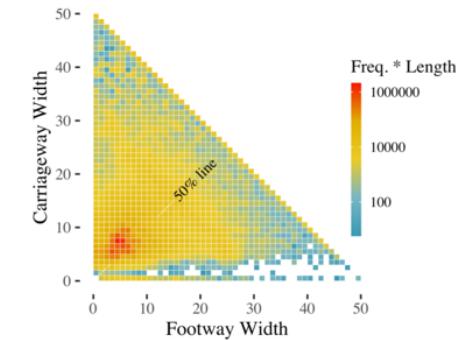
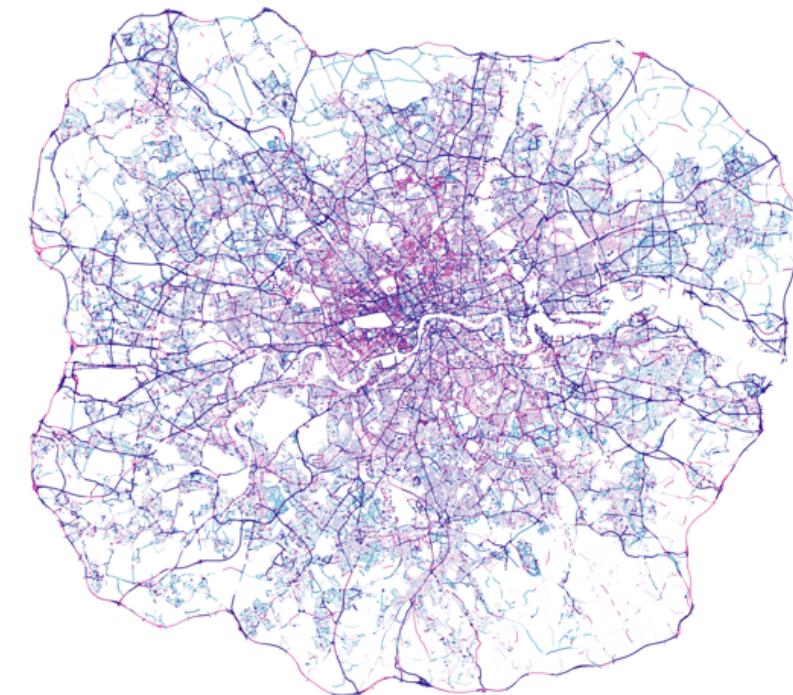
Ministry of Housing and Planning, Chile, 2006

Regeneration program for marginalized neighbourhoods

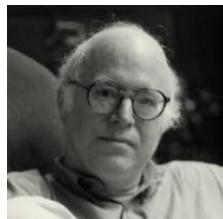


Rethinking Streets, Centre for Advanced Spatial Analysis, 2021

A study of streetspace allocation and street networks in London



APPROACH, METHODS & TOOLS



... today's planner has an arsenal of technological tools ...
we have more resources to use than in the past, but resources we don't use very creatively.

The Open City, 2006



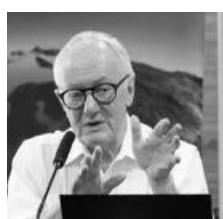
... you plan for the things you have information about ...

The living room of a city (interview), 2015



Cities happen to be problems in organized complexity, like the life sciences. They present “situations in which a half-dozen or even several dozen quantities are all varying simultaneously and in subtly interconnected ways.” ... The variables are many, but they are not helter-skelter; they are “interrelated into an organic whole.”

The Kind of Problem a City is, 1963



We cannot predict future cities, but we can invent them... Cities are largely unpredictable because they are complex systems that are more like organisms than machines.

Inventing Future Cities, 2018



... the design of cities emerges from the complex interaction of socio-economic with spatio-technical processes and practice

Cities by Design, 2014

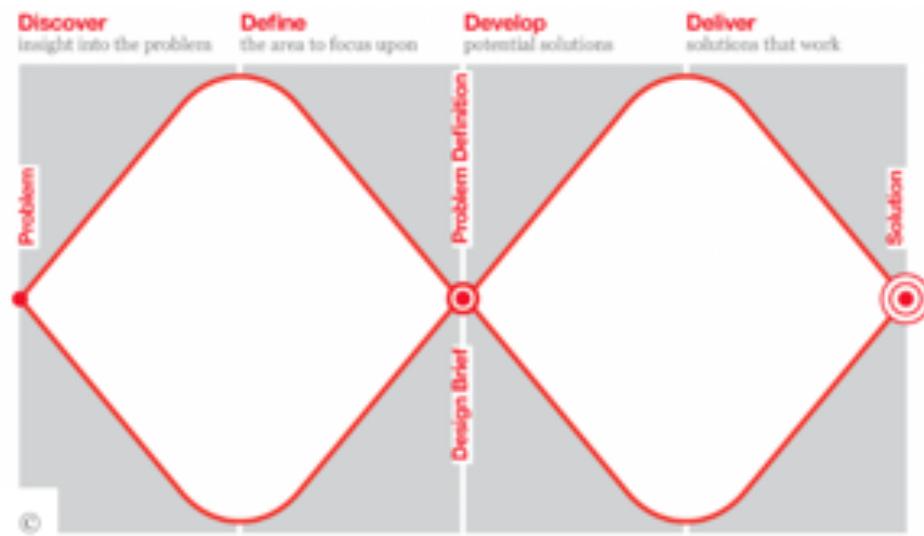
Data Science Deconstructed



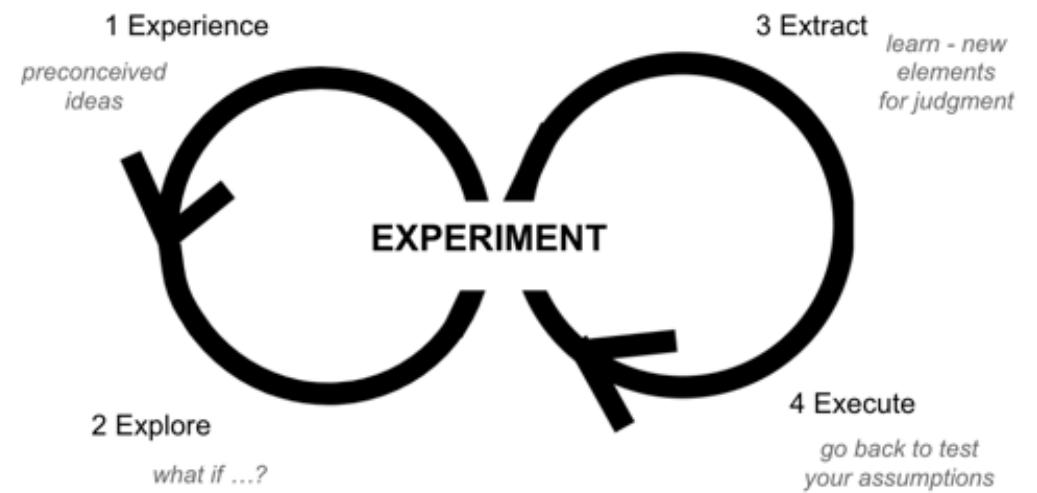
iterative process

01 Frame the Problem, 04 Explore the Data, 06 Communicate Results

Design Process

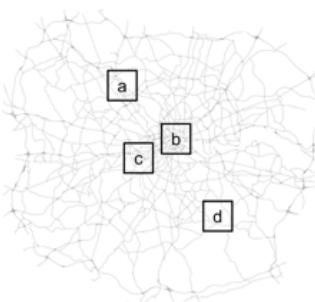
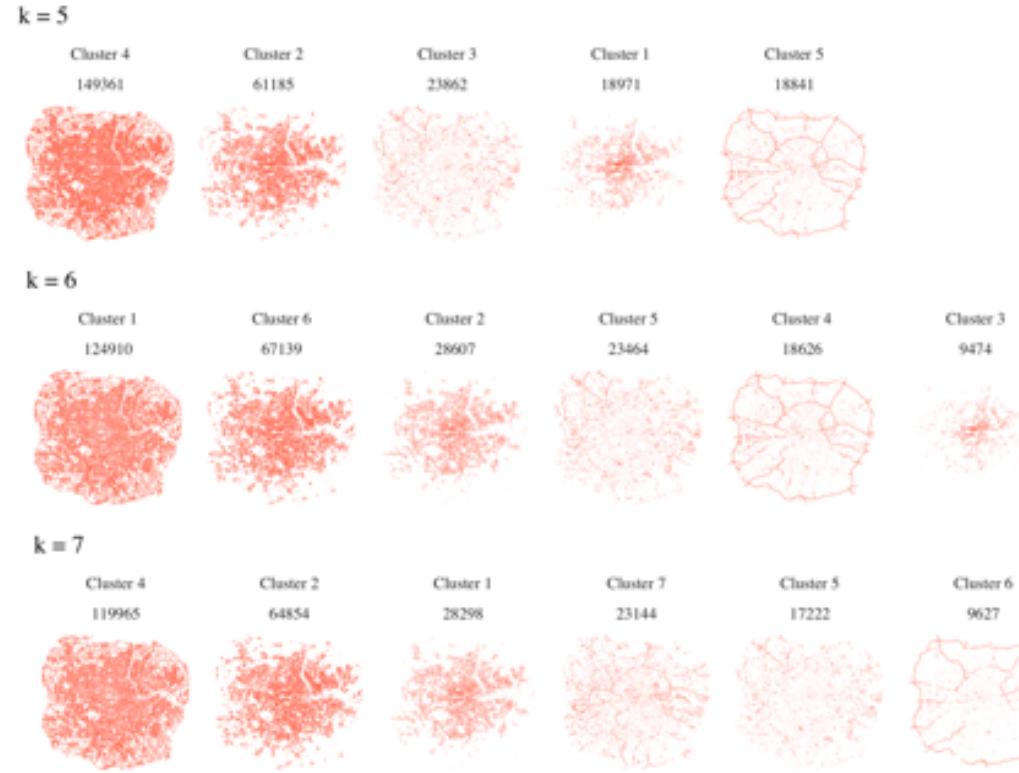


Experimentation Loop



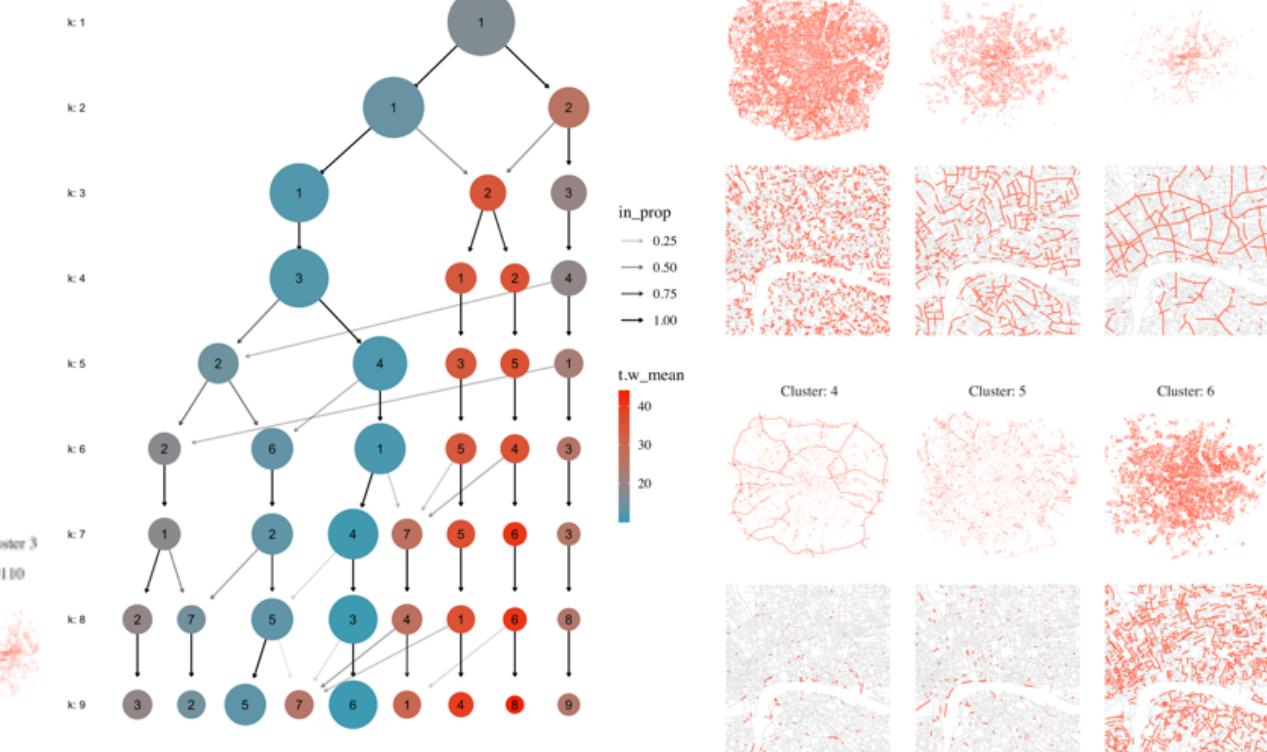
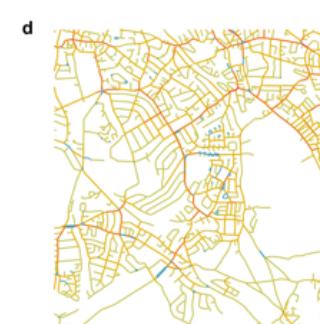
04 Explore the Data, 05 Perform In-Depth analysis, 06 Communicate Results

A typology of town centres



Cluster id

- 1
- 2
- 3
- 4
- 5
- 6



03 Process the Data, 04 Explore the Data, 06 Communicate Results

Interactive Notebooks, Web Apps, Data Visualizations

CASA 0005 GIS and Science Seminar 1

1 Learning outcomes

- 1. Understand and apply basic service area analysis in R.
- 2. Conduct point-in-polygon queries.
- 3. Use of the mapdeck package.
- 4. Understand basic concepts of accessibility analysis and diversity.
- 5. Knowledge of the Points of interest data set from Ordnance Survey.

2 Introduction

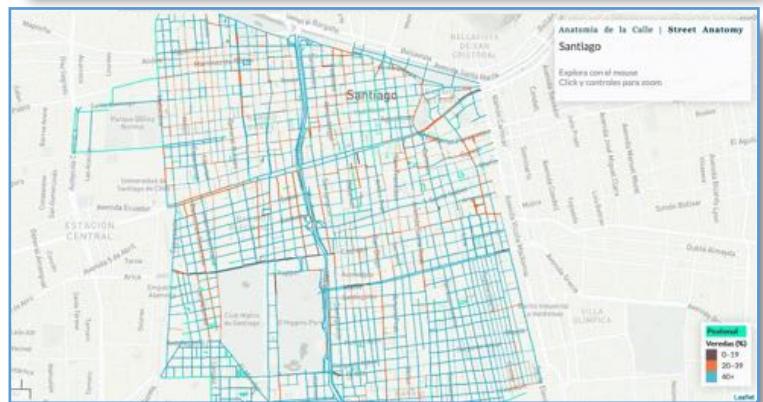
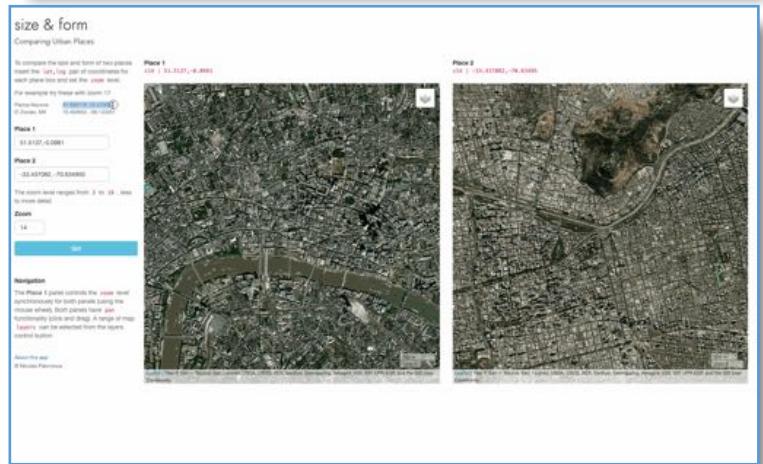
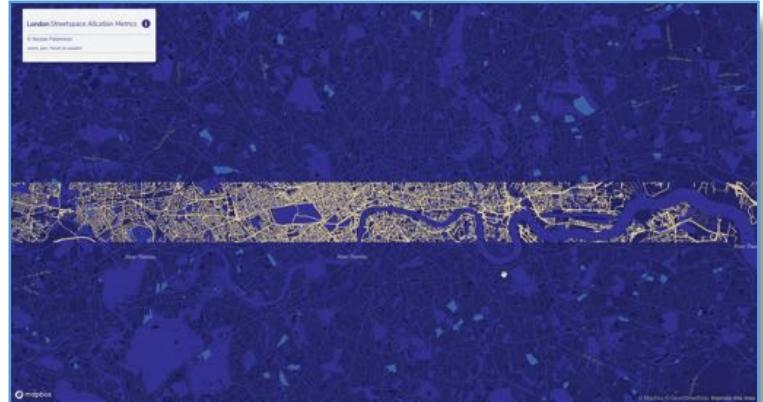
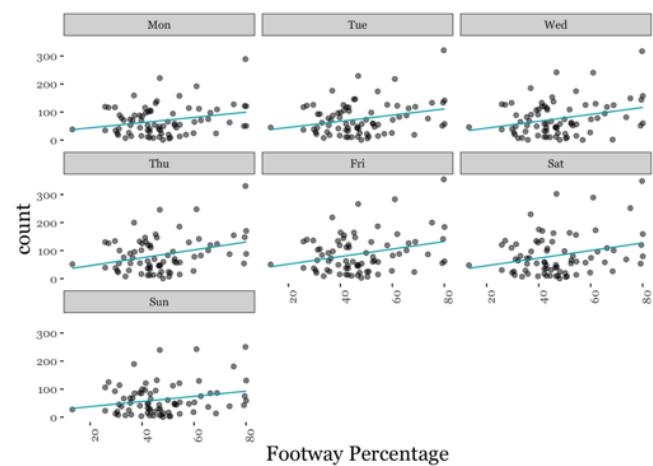
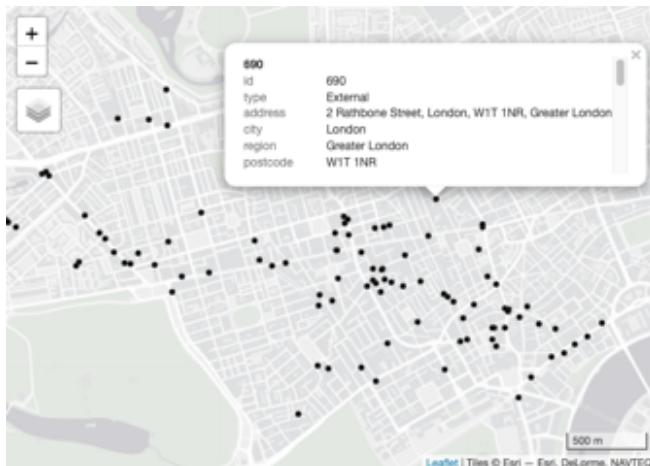
The concept of 15-minutes cities has gained traction as a sustainable city planning strategy to promote liveable and sufficient neighbourhoods. More recently, with the several urban mobility restrictions and lifestyle transformations originated from Covid-19, it has emerged as an urban planning framework for pandemic response and recovery.

The main idea behind the concept is that work, study, leisure, shopping and other basic human activities are available within a 15-minute trip mainly using active travel modes (walking and cycling).

This way longer commutes are avoided originating important benefits to urban quality of life by both re-organising the use of dwellers' time and reducing the externalities of urban transport among others.

Because of the predominant high dependency of private car transportation it is possible to analyse the spatial distribution of people and point quality local environments across different urban domains (commercial and service activities, housing, public services, transport infrastructure, open and public spaces, employment).

Fig. Diagrammatic representation of a 15-minute city from RT.com



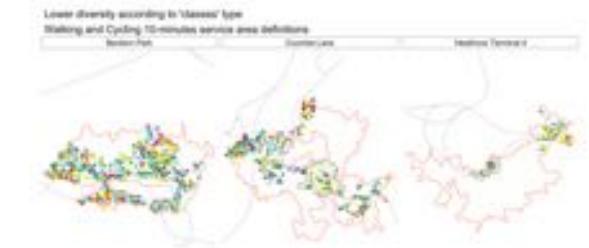
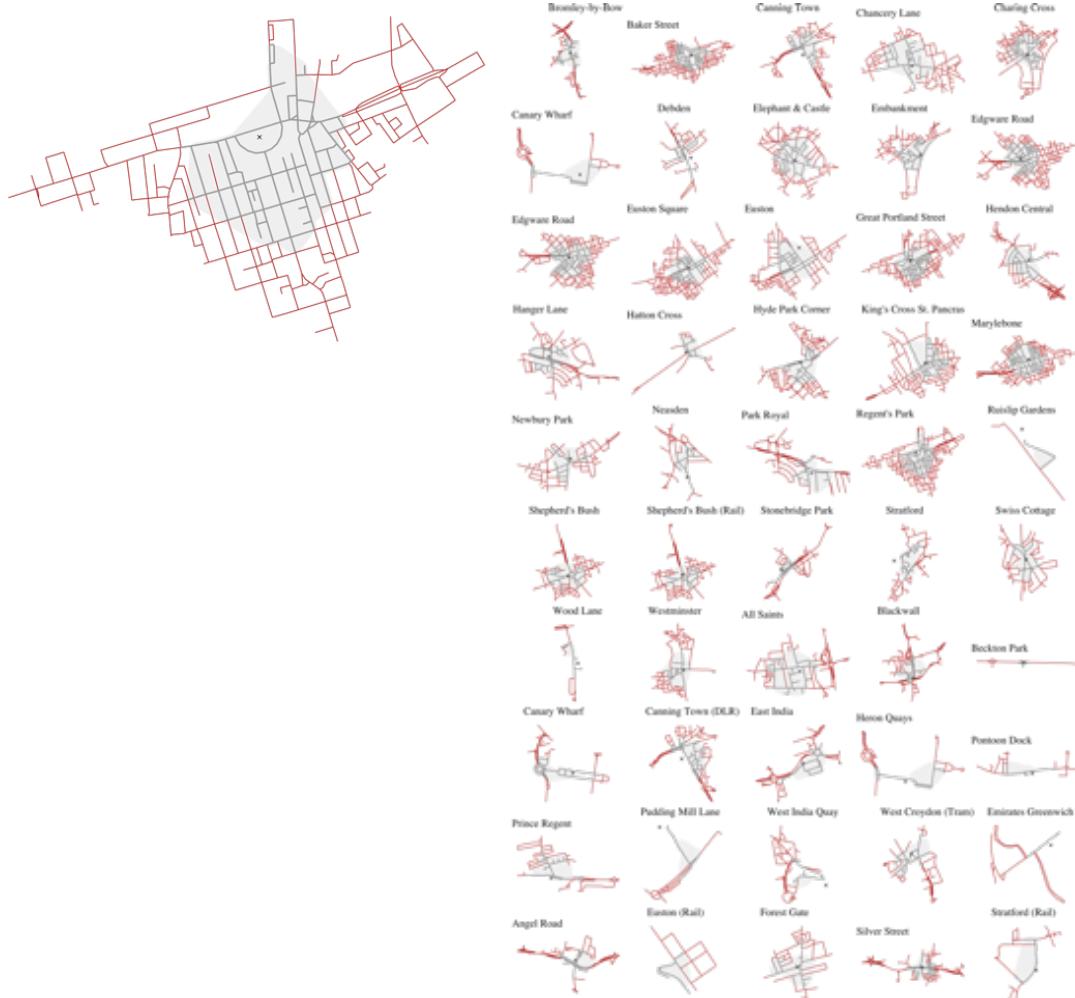
02 Collect Raw Data, 03 Process the Data, 04 Explore Data, 05 Perform In-Depth analysis , 06 Communicate Results

Secondary data

Geocomputation – Replicable & Scalable

Urban Analytics – Quantitative, Computational, Visual and Design methods

Regent's Park

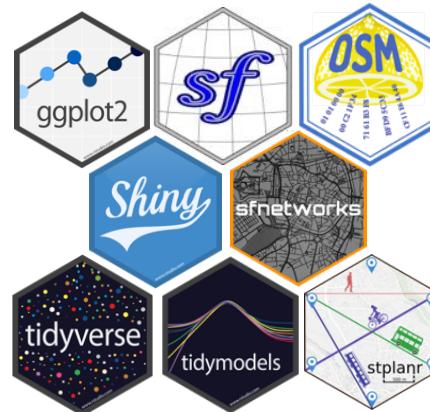


dataset London Businesses Directory (LBD) Business Register and Employment Survey (LBSOA) Industrial Land Designations (ILDA)

map series n=22,329 Design Group/Group Number

Design sector is left position
n=15 of Manufacturing jobs
> 40 jobs

Bridge Number of jobs



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**Thank you
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