

Subjectification of Russian and UK Smart Cities

Researcher Links Workshop

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**City as a system of activity
centres**

Concept

Activity centre is a combination of 2 main factors – (1) concentration of people, (2) economic activity

Idea An attractive residential neighbourhood is functionally diverse (based on the surroundings and socio-economic context)

Data New types of big data for urban planning – mobility, consumption, semantics, POI (cell phone signals, financial transactions, social networks etc.)

Focus Economic activity, allocation and co-location of businesses, balance of functions – sufficiency and undersupply

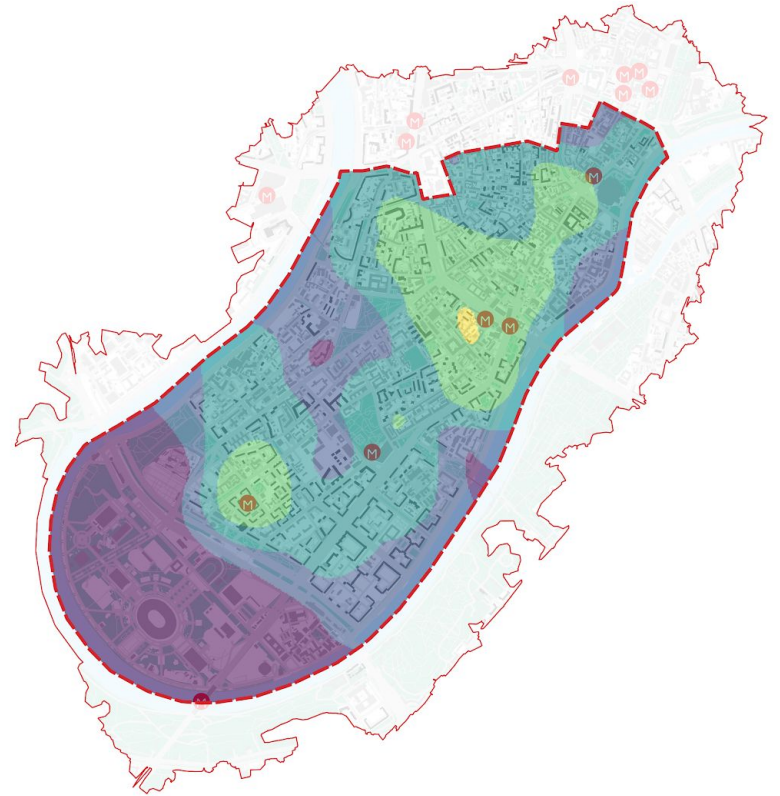
Lacking commercial infrastructure – the deficit of functions

The functional deficiency index is a complex metric that allows to assess the area in terms of the availability of functions and services there. A *comfortable* place is on where residents have the widest possible range of various functions, and the distance to them is small.

The index is calculated on the basis of two equal components:

- the minimum required diversity (how many different functions are in a walking distance from a building);
- the minimum required availability (how the distance to the function differs from the average distance to such in the city).

If a building *has access* to all the functions and the distance to them is sufficient / comfortable / below average, then the index is close to 0. If there are just a few functions or the distance to the nearest ones is above average, then it is close to 1.

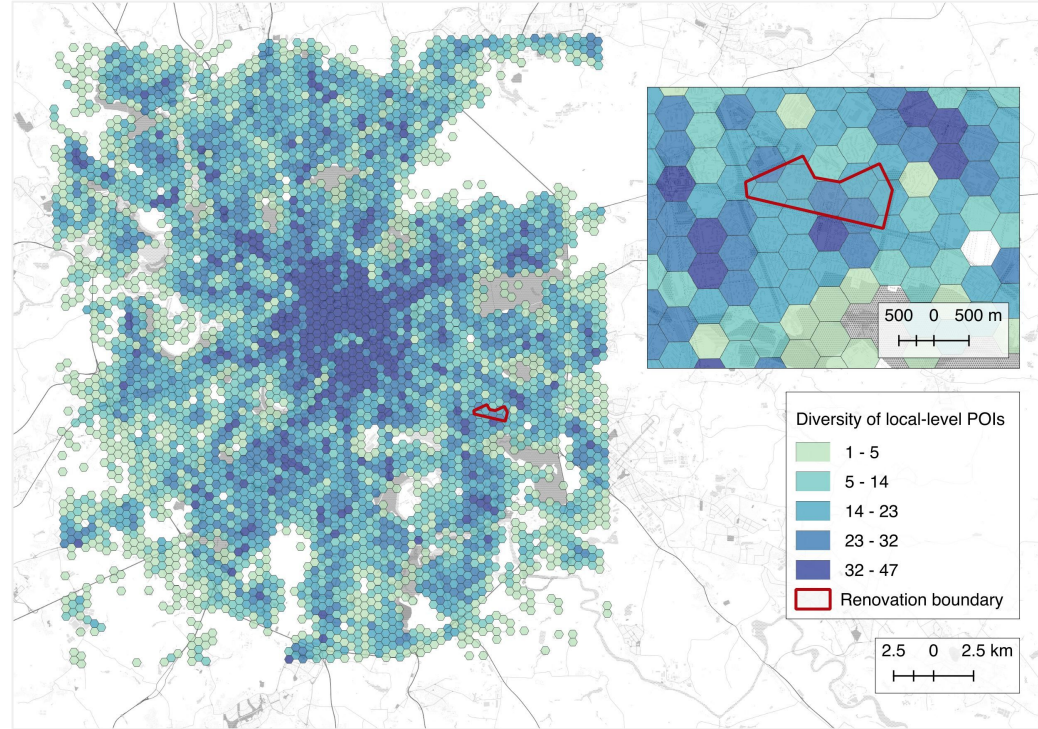


Local, neighbourhood and city-level functions

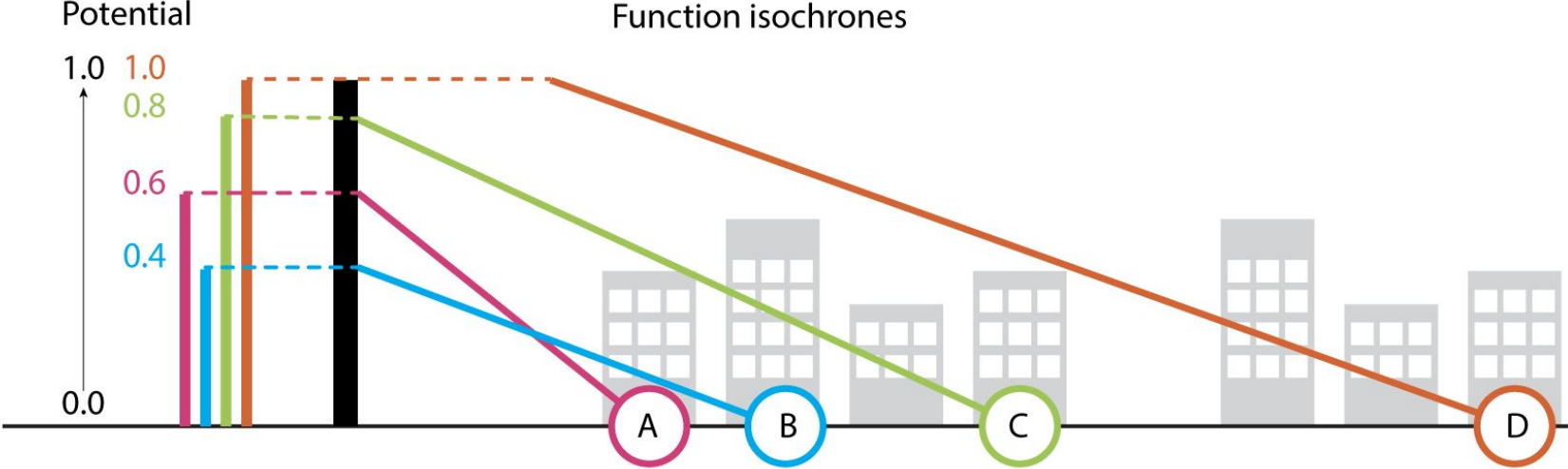
Based on the level of importance (L) of a function in the area.

L indicates the average minimum distance (accessibility) of a function in the city. The higher is L, the higher is function's ranking in the city and the further people can go to get it, it divides in 3 groups:

- local (< 500 m distance);
- neighborhood (< 1 km distance);
- city-level (over 1 km).



Lacking commercial infrastructure – potential of functions



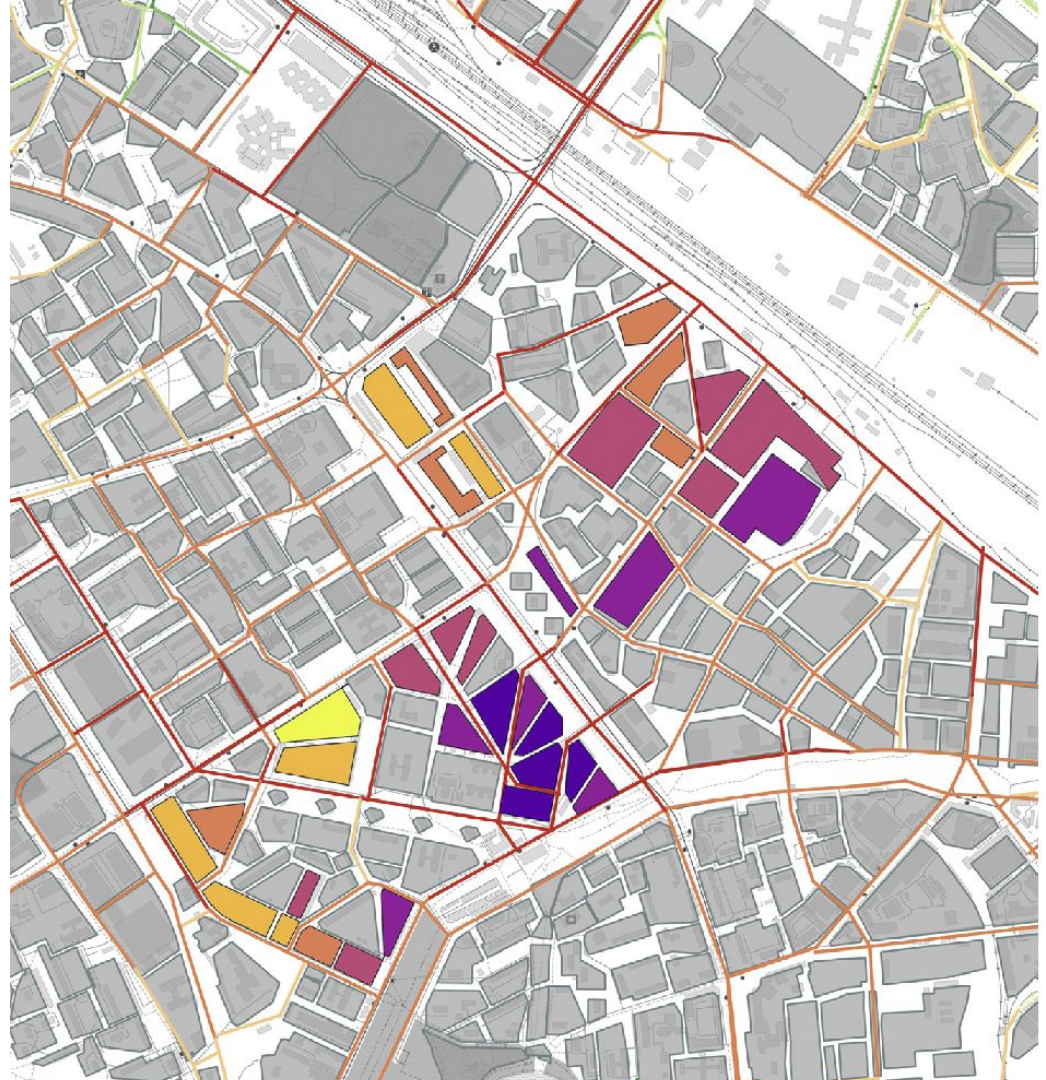
Pedestrian flows analysis

Analysing routes locals and visitors take in the study area. To estimate the existing pedestrian traffic there, the metric of road network connectivity is calculated.



An example of connectivity modelling for a new development area on the periphery of Moscow

**Lacking functions &
Road network
connectivity**



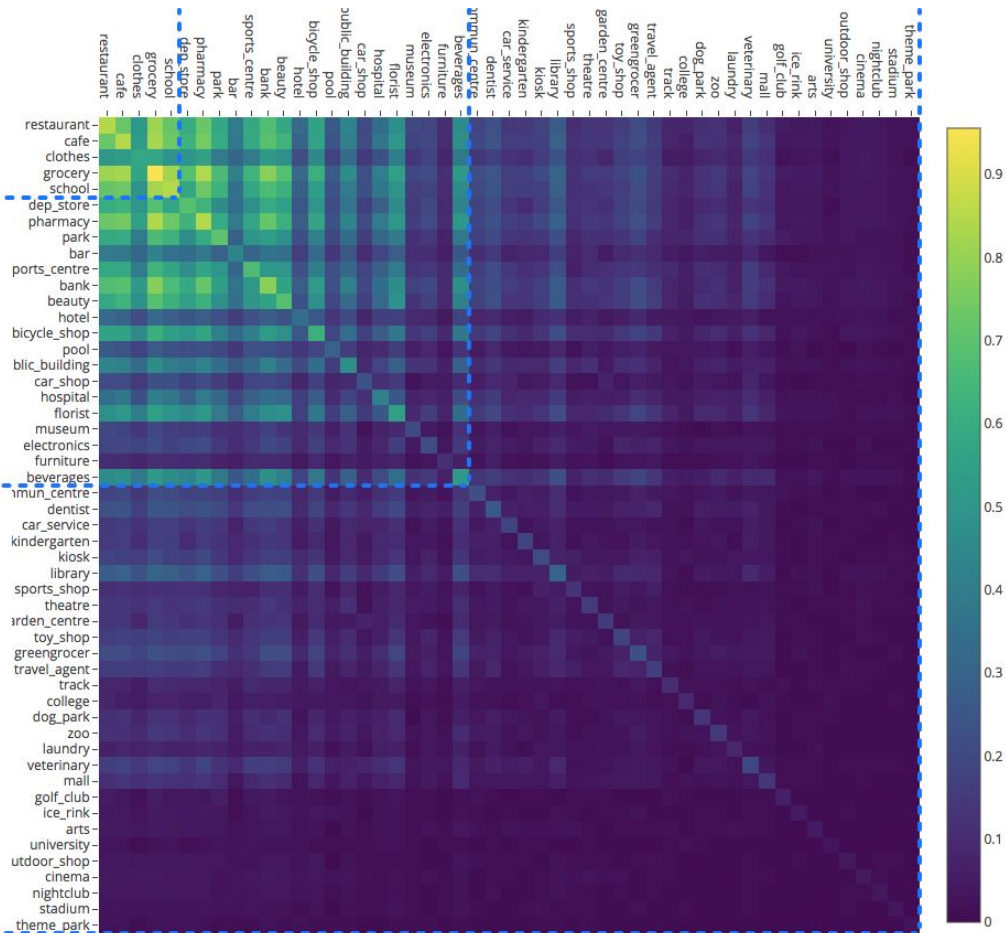
Co-location of businesses

Functional groups by its main location factor

Functional mix related location is determined by functional mix in the area

Density related location is defined by the optimal/normative service area

Footloose can locate pretty much everywhere within city scale



**Concepts/projects examples
with the method applied**

Chronotope Planner



Mobility
Demographics
Economics
Opinions



Connectivity
Activity patterns in space and time
Functional density, diversity and deficit



Centrality clusters
Hierarchy levels
Potential for business development



Businesses collocations
Demand for businesses, functions and services



Functional profile
Area development program
Effects modeling

Business Performance: location service for SMEs



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Чеки Кассы Магазины Аналитика Профиль Документы Пользователи Баланс

Рекомендации по открытию торговых точек

Дата заявки: 04.09.2018 17:48
 Категория бизнеса: Вино-водочные
 Ожидаемый оборот/мес, руб.: 500 000
 Тип объявлений: Аренда, продажа

Предложенные варианты: 1 2 3 4 5

Данные о точке

Адрес: Тверская ул., 6 строение 1, Москва, Россия, 125009

Ожидаемая выручка в месяц (руб.): 566100.00
 Расстояние до метро (м): 476.00
 Ежедневный оборот соседних бизнесов (руб.): 142450.00
 Средние расходы человека в час (руб.): 4130.00

В радиусе 200 м:

- Супермаркеты: 1
- Автомобильные остановки: 1
- Алтеки: 2

Банкоматы:

- В радиусе 400 м: 1
- Супермаркеты: 4
- Автомобильные остановки: 9
- Алтеки: 8
- Банкоматы: 8
- Станция метро: 1

Предложения по аренде

Предложения по аренде помещений действительны только на момент формирования рекомендации, при работе с архивом предложений уточняйте актуальность рекомендаций по ссылкам в таблице.

Стоимость аренды в месяц /

Дата до	https://www.cian.ru/ent/commercial/191752284/?utm_source=habidatum&utm_medium=cpc&utm_campaign=partner	руб.
10.08.2018	Аренда	Тверская улица, 6С3 70 000,00 35,00 2 000,00
10.08.2018	Продажа	Тверская улица, 6С6 30 000 000,00 87,00 344 827,00
10.08.2018	Аренда	Тверская улица, 6С1 699 985,00 55,00 12 727,00
10.08.2018	Продажа	Тверская улица, 6С6 26 250 000,00 87,50 300 000,00
10.08.2018	Аренда	Тверская улица, 6С1 1 000 005,00 818,00 1 222,00
10.08.2018	Продажа	Тверская улица, 6С6 26 250 000,00 88,00 298 295,00
10.08.2018	Аренда	Тверская улица, 6С1 999 979,00 817,70 1 222,00
10.08.2018	Продажа	Тверская улица, 6С6 30 000 000,00 87,00 344 827,00

*Based on anonymized and aggregated data on base stations loads.