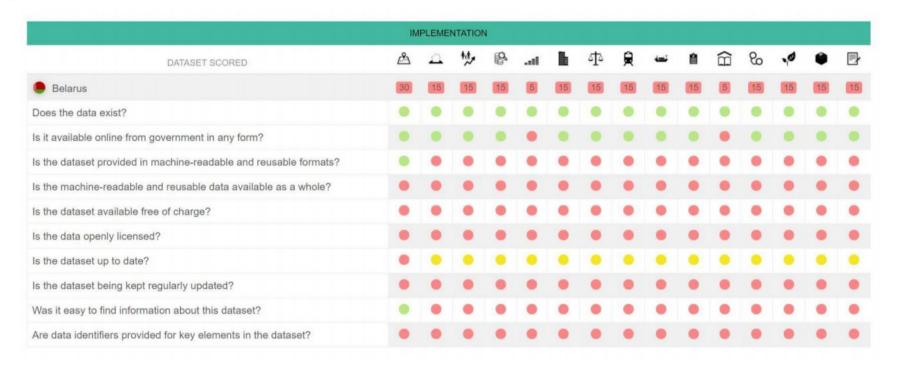
## opendata.by

### Digging for data

Data collection, or what you can do if there is no open data available

## No open data here :(

Open Data Barometer: 93 место из 115



http://opendatabarometer.org/4thedition

### Government data is...

Hard to get/unavailable

Officials don't want to share data because they already have enough of other responsibilities or don't understand the question

- Government data = paid data in many cases
- We aren't EU nor US citizens, hence no "FOI"
- Most people don't know about wiki data api, openstreetmap data, Schibsted...
- Data is purposefully closed (KGB archives)

### Civic data:

- 1 News: parsing data from news
- 2 Urban quality of life: municipal services
- 3 Map of metro, map of transport...

### **Environmental data:**

- 4 Forest data (globalforestwatch.org, FSC)
- 5 Cars in cities (how many/cheap/old/dangerous)
- 6 Classified ads for stuff and homes: what/how many/how cheap
- 7 Commercial companies (shops/cafes/beer/lottery)
- 8 Open source: openstreetmap, wikipedia

## Belarus data

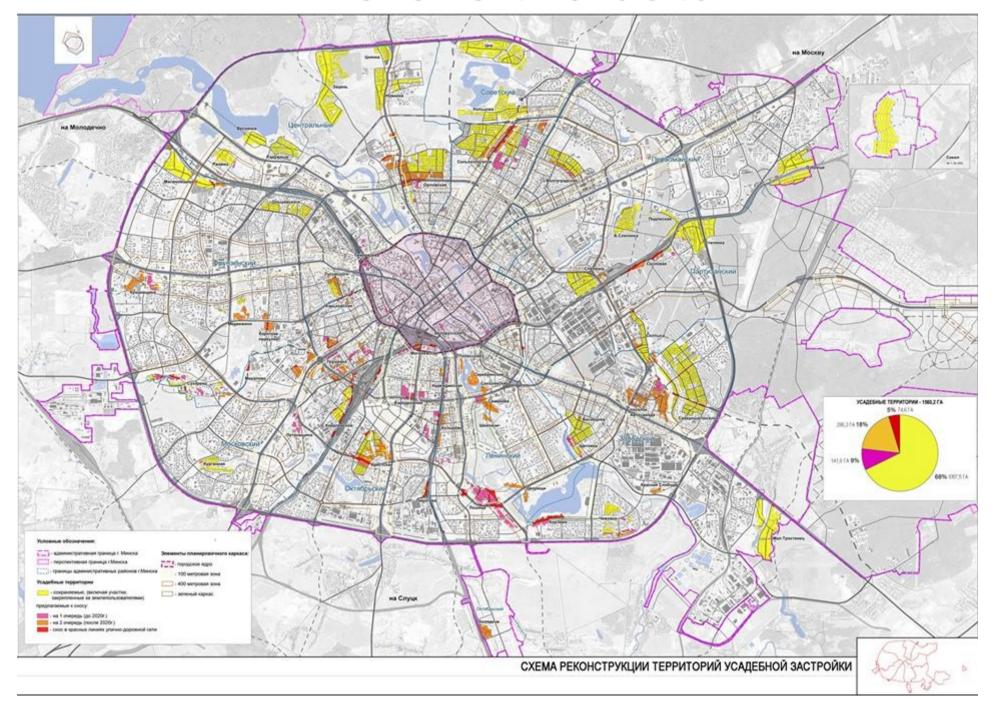
- 9.5 mln population
- 2 official languages
- Five official languages 100 years ago (Belarusian, Russian, Polish, Yiddish, Lithuanian + Hebrew, Esperanto, Old Slavonic in the mix)
- Minorities are not minorities: almost everyone is multilingual
- Cities historically Jewish-Polish-Russian majority populated, rural areas majority Belarusian
- State-dominated economy, but rapidly changing

Huge IT sector

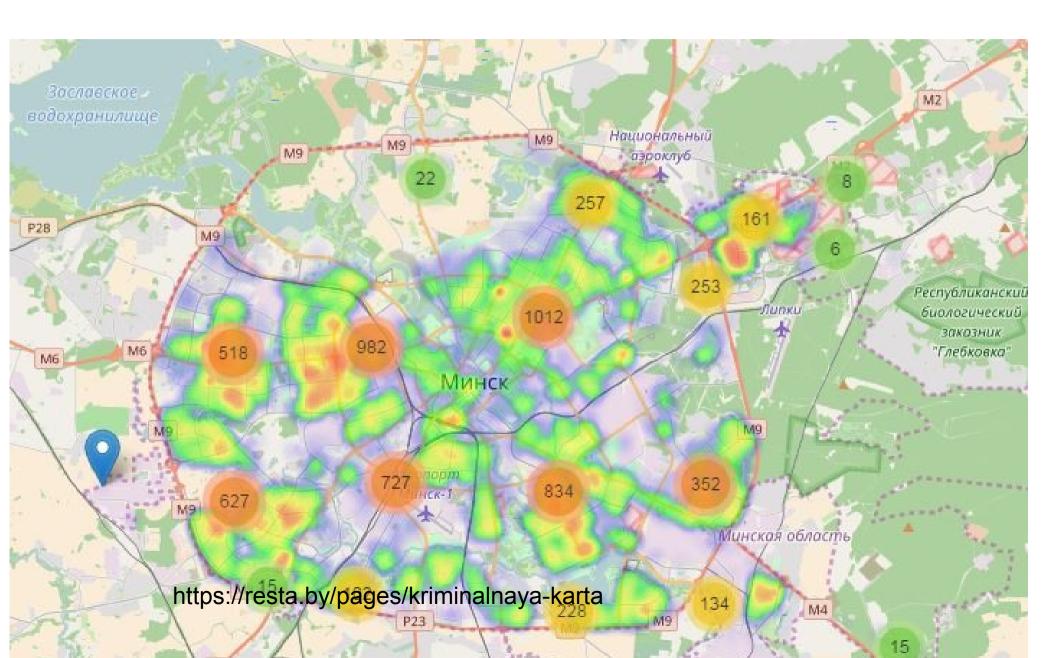
## Belarus fun facts: largest numbers

- most hungry PHDs per capita in Europe and a huge brain drain problem.
- one of the most active Openstreetmap,
   Linux/open science activists groups around.
- most wetlands and largest primal forests in Europe, responsible for bird populations and water supply to both Baltic and Black sea basins
- most polluted area with radioactive fallout (post-Chernobyl) - 3% of land cordoned off
- the largest Open Access scientific community publishing any university lab research papers on all of the above: 600 000 publications over 10 yr

## Where is the data?



# Police reports > Maps



# News > Infographics

### Весна-2017. Задержания и наказания

В Беларуси массовые задержания проходили накануне и во время Дня Воли и «маршей нетунеядцев». Сотрудники милиции и других спецслужб задерживали активистов и журналистов.



#### Аресты

2328 суток на 224 чел. (средний срок **10 суток** на человека)

#### Штрафы

**3325** б.в. на 149 чел. (76 475 Вг. или **513 Вг.** на человека)

Интерактивная версия: https://news.tut.by/society/536800.html

Инфографика: Вадим Шмыгов, ТUТ.ВҮ. Источник: ПЦ «Вясна». Обновлено: 28 марта 2017 г. 15:00



## Data as art

### The visualisation of city and village names in Belarus

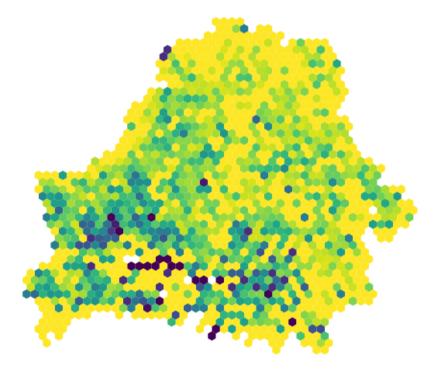




#### Pattern



#### Examples:



A total of 9.8% cities and villages contain pattern <a>-<a>-<a>-<a><a>c</a></a></a></a>
More specifically, 2298 from 23377.

This map shows which morphological features are characteristic for different regions of Belarus. The patterns are set up like this:

-čy "čy" at the end of the name

<u>čy-</u> at the beginning<u>-čy-</u> in the middle

čy anywhere

-čy/-šy "čy" or "šy" at the end of name

Use ^ and ' keys to add these nice diacritical marks to the letters.

The color represents how often the name with the pattern comes across in this area: the darker, the more there are.

Click points on the map to see names of all cities and villages with the chosen pattern in the selected area.

## Village names > ethnicity

### Візуалізацыя назваў населеных пунктаў Беларусі



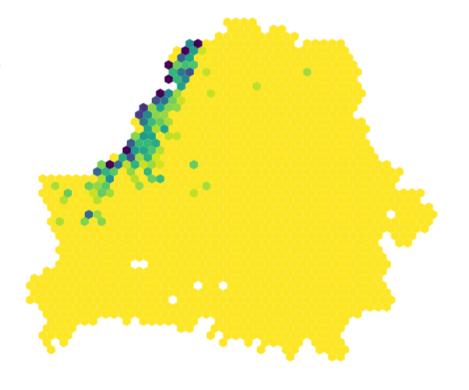


#### Патэрн

#### -ішкі

#### Напрыклад:

```
-чы -кі -ўка -ва -на
-цы -ны -ча -ў -ішк
-шчына -ын/-ін -ты
акцябр --
```



Усяго 1.2% населеных пунктаў утрымліваюць патэрн <u>-ішкі</u> Калі дакладней, то 275 з 23377.

Гэтая мапа паказвае, якія марфалагічныя асаблівасьці ўласьцівыя розным рэгіёнам Беларусі. Шукайце паводле ўзору:

-чы «чы» у канцы назвы

<mark>чы-</mark> у пачатку слова

-чы- у сярэдзіне слова

<mark>чы</mark> у любым месцы

-чы/-шы «чы» альбо «шы» ў канцы назвы

Літары щ, и аўтаматычна пераўтвараюцца ў ў, і.

Па колеры можна ўбачыць, ці часта назва з такім патэрнам сустракаецца на гэтай тэрыторыі: чым цямнейшы колер, тым часцей сустракаецца.

Клікайце кропкі на мапе, каб убачыць назвы ўсіх населеных пунктаў з абраным патэрнам на азначанай тэрыторыі.

## Village names > imagination

### Візуалізацыя назваў населеных пунктаў Беларусі



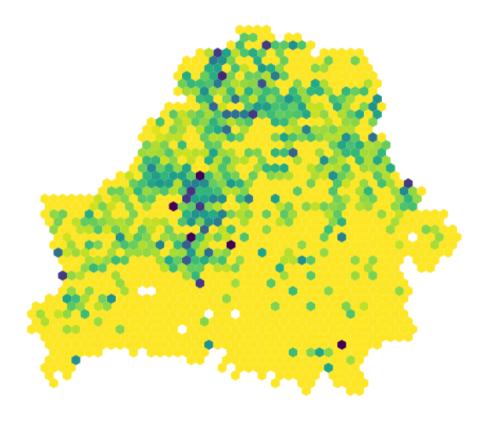


Патэрн

#### -ына

#### Напрыклад:

```
-чы -кі -ўка -ва -на
-цы -ны -ча -ў -ішк
-шчына -ын/-ін -ты
акцябр - -
```



Усяго 5.6% населеных пунктаў утрымліваюць патэрн <u>-ына</u> Калі дакладней, то 1300 з 23377.

Гэтая мапа паказвае, якія марфалагічныя асаблівасьці ўласьцівыя розным рэгіёнам Беларусі. Шукайце паводле ўзору:

-чы «чы» у канцы назвы

<u>чы-</u> у пачатку слова

-чы- y сярэдзіне слова

чы у любым месцы

-чы/-шы «чы» альбо «шы» ў канцы назвы

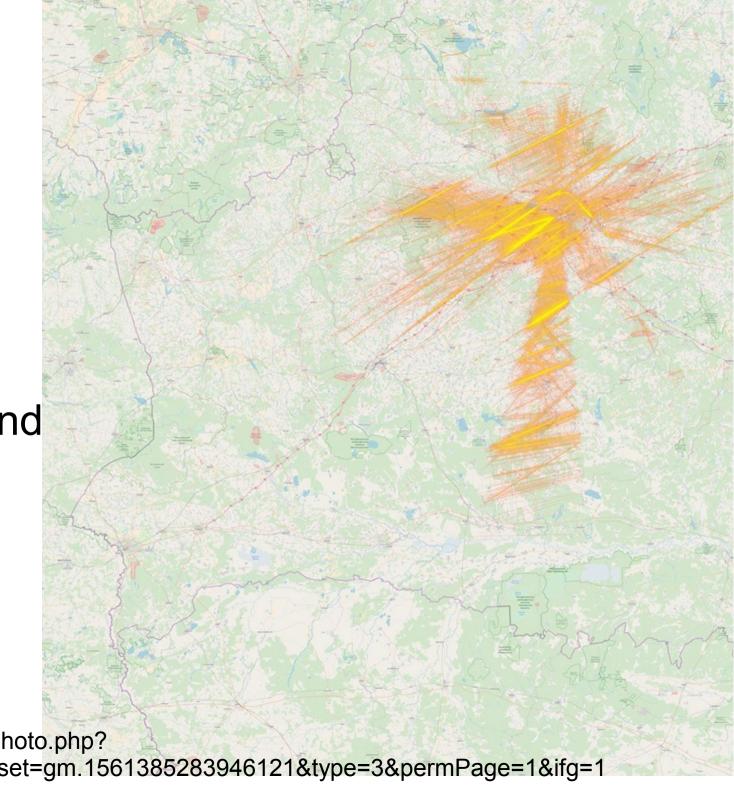
Літары щ, и аўтаматычна пераўтвараюцца ў ў, і.

Па колеры можна ўбачыць, ці часта назва з такім патэрнам сустракаецца на гэтай тэрыторыі: чым цямнейшы колер, тым часцей сустракаецца.

Клікайце кропкі на мапе, каб убачыць назвы ў населеных пунктаў з абраным патэрнам на азначанай тэрыторыі.

## Where is Belarus?

Flyover country between Asia and Europe:)

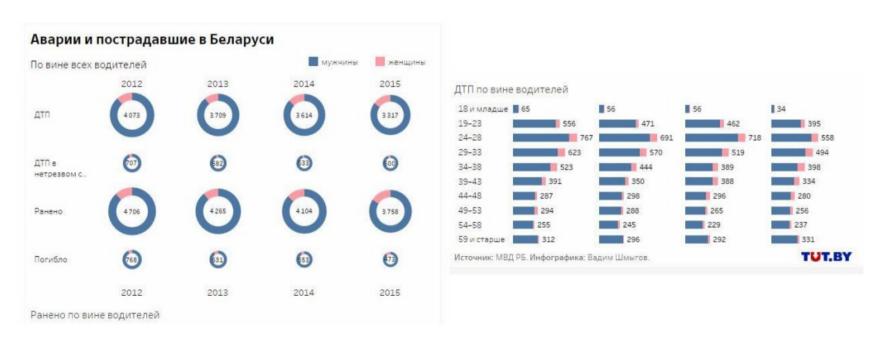


Makarevich Alexander, https://www.facebook.com/photo.php?

fbid=10213224506120237&set=gm.1561385283946121&type=3&permPage=1&ifg=1

# 1. Digging for data: how many people die in car crashes/when?

### Белорусские ОД: ГАИ



Инфографика: Вадим Шмыгов

Источник: МВД РБ

Ссылка: https://public.tableau.com/profile/tut.by#!/vizhome/2 658/Desktop

# 1. Digging for data: how many people die in car crashes/when?

Самые опасные месяцы и дни на дорогах (данные ГАИ)



Автор: Николай Кацук <a href="https://public.tableau.com/profile/nickolay.katsuk">https://public.tableau.com/profile/nickolay.katsuk</a>

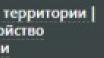
# Municipal hotline + app

NYC uses 311 hotline = Minsk uses 115 hotline



РЕГИСТРАЦИЯ

BXO.



территории | е состояние

отирные дома | облемы, ости, ния

отирные дома | боты

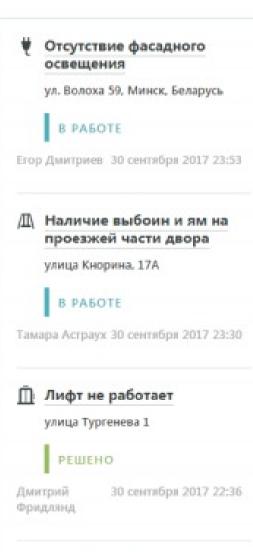
отирные дома | ительные работы

отирные дома | емонт жилфонда едств

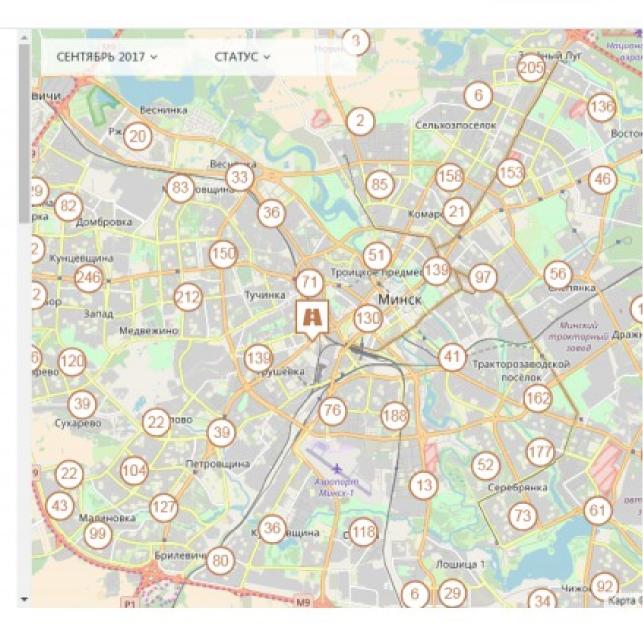
отирные дома | юсть лифта

отирные дома | е состояние

иктура города [



Отсутствие дворового



## 115 hotline - Municipal services 2.0

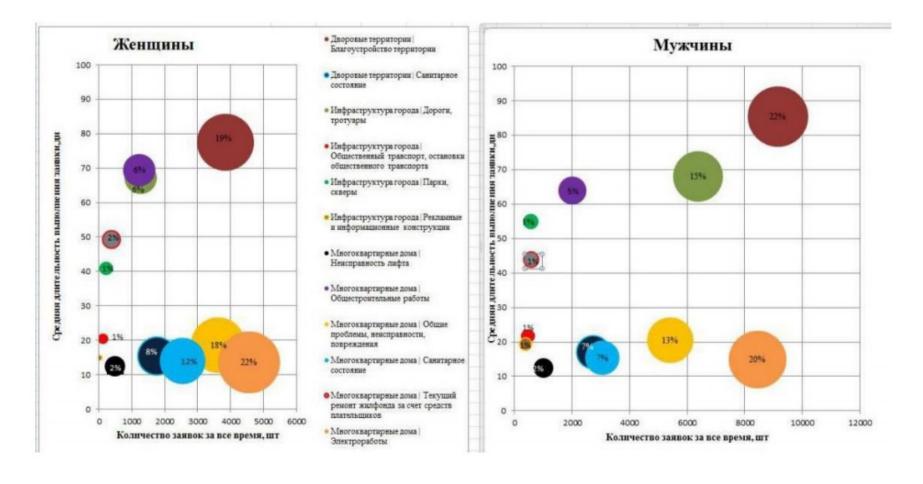
- ~600 000 active annual users: legacy system
  - 7 000 000 problems solved annually (!)
- 92000 users, 35 000 active users: app and online version
- Data (accidentally) published as a JSON with fields:
  - UserID
  - Name
  - Address
  - Coordinates
  - Type of problem





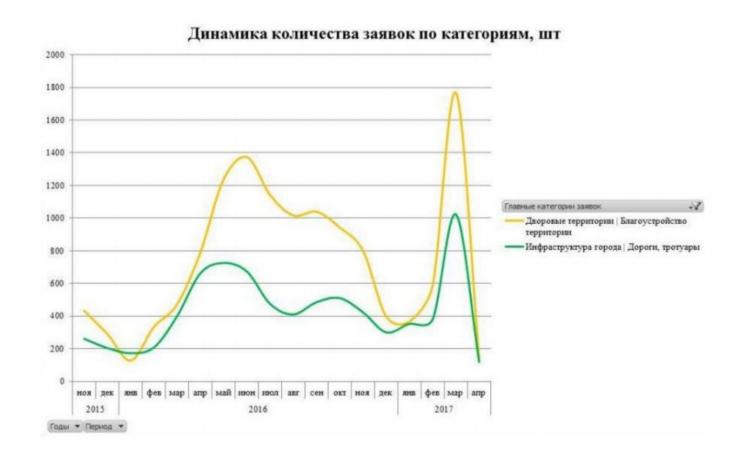
# 2. Municipal services 2.0

Среднее время исполнения: 10, 90 или 180 дней?

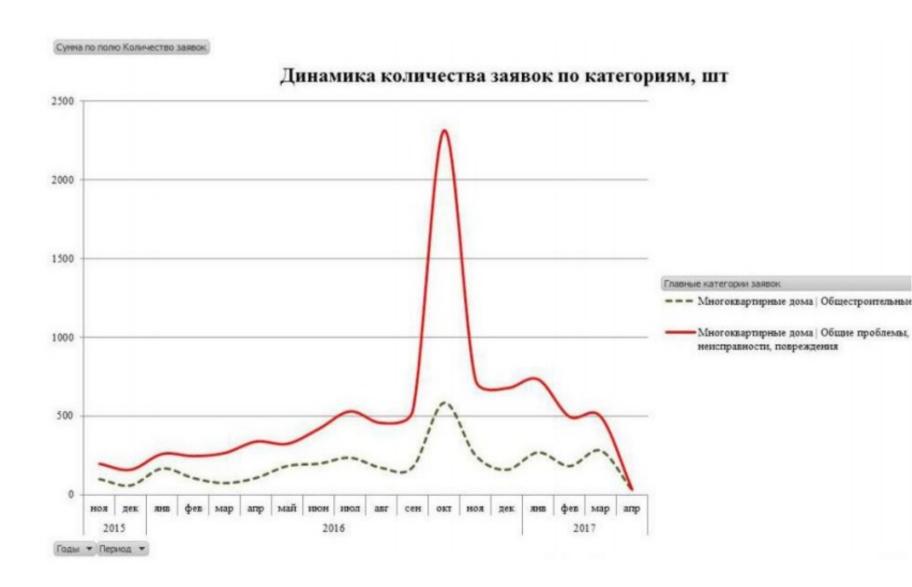


# 2. Municipal services: why is my (part of the) city so filthy?

Пиковые нагрузки на городские сервисы: 115.бел



# Пиковые нагрузки на городские сервись 115.бел



# New: interactive dashboard! Wow, my district sucks



Open Data: Визуализация на основе данных портала «Мой Горад» 115.бел. Автор: Станислав Литовко

soft Power BI

# 2. Municipal services: why is my (part of the) city so filthy?

Планирование развития городов с помощью открытых данных

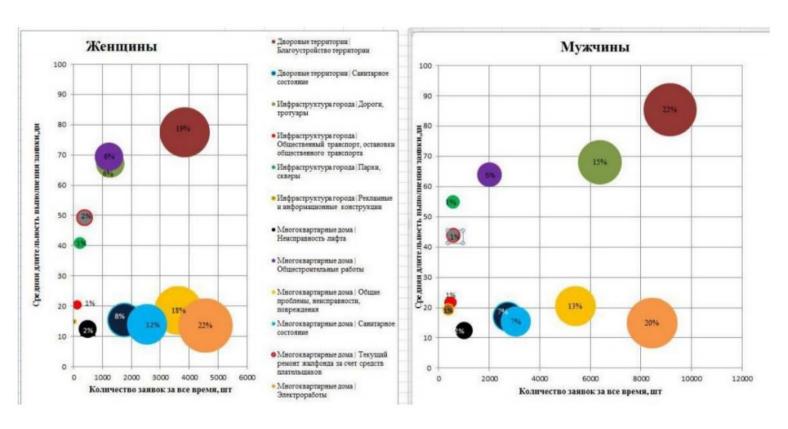
- Как справляются разные городские службы с разными задачами и насколько они важны для горожан:
- текущие трубы,
- слишком высокие ступеньки,
- неудобные проходы для родителей с колясками,
- грязные подъезды,
- отсутствующие пандусы и тп

# Closed data: KGB archives (Memorial)

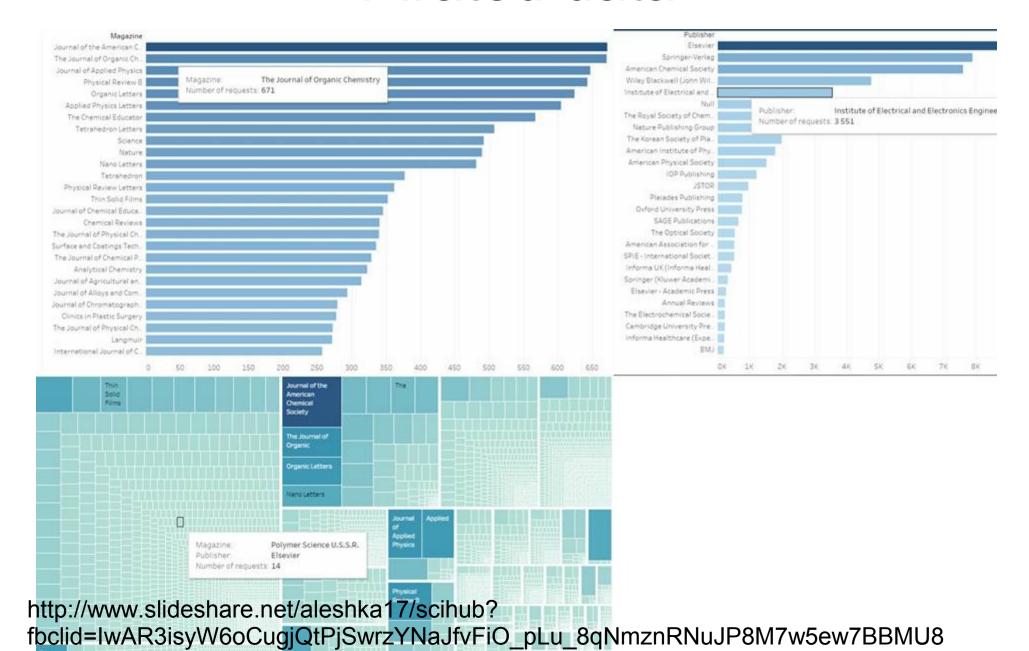


# 2. Municipal services: why is my (part of the) city so filthy?

Среднее время исполнения: 10, 90 или 180 дней?

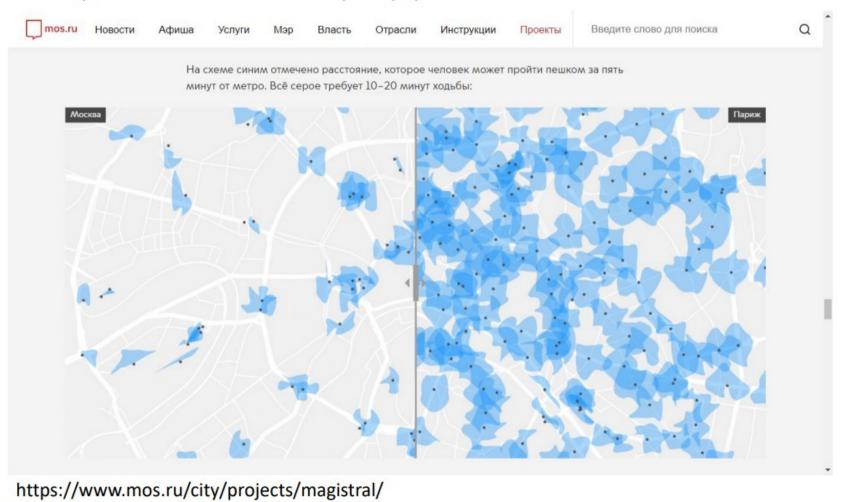


## Pirated data



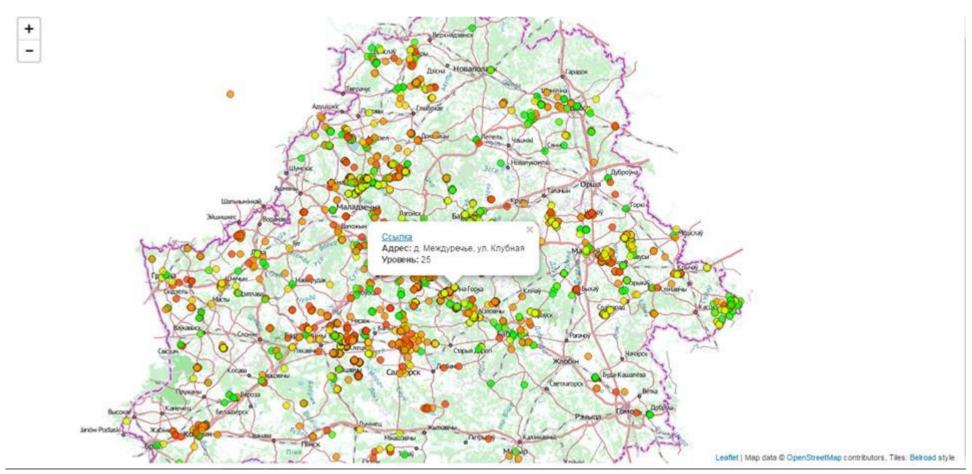
## 3. Traffic hell

Пешая доступность+карта метро=где нужны новые маршруты



# Civic environment action, watercontrol.by

Measuring Nitrate pollution: 6000 data points



https://opendata.by/pada/151

# 4. Can we save our forests? Globalforestwatch.org



LOCATION OF TREE COVER LOSS IN BELARUS

In **Belarus**, the top **4** regions were responsible for **55%** of all tree cover loss between **2001** and **2016**. **Minsk** had the most relative tree cover loss at **8.1%** compared to an average of **6.6%**.

TREE COVER LOSS IN BELARUS COMPARED TO OTHER AREAS



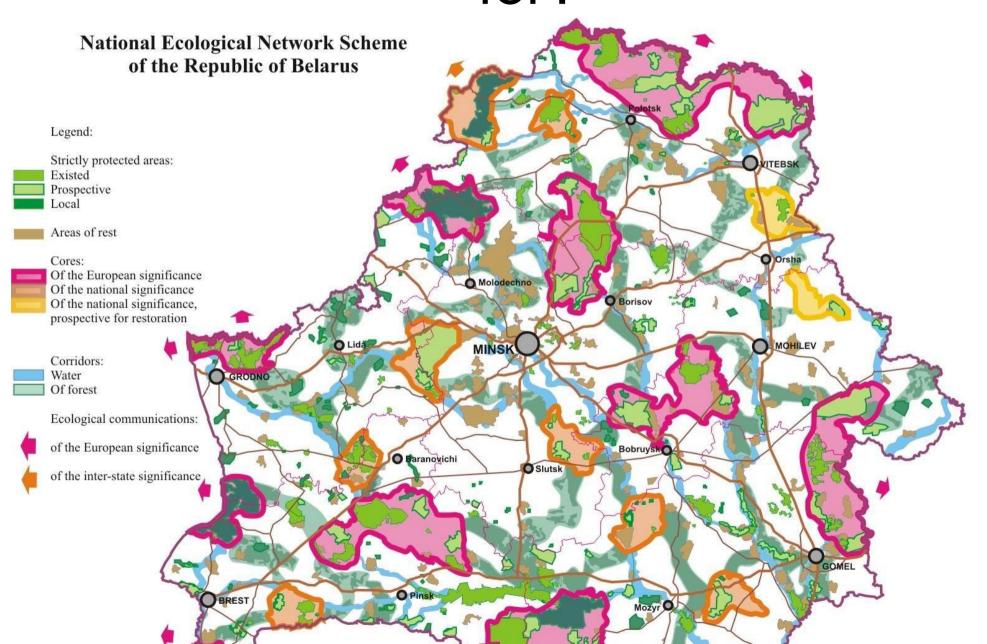
From 2001 to 2016, Belarus lost 604kha of tree cover region-wide, equivalent to a 6.6% decrease since 2000 and 0.20% of global tree cover loss.



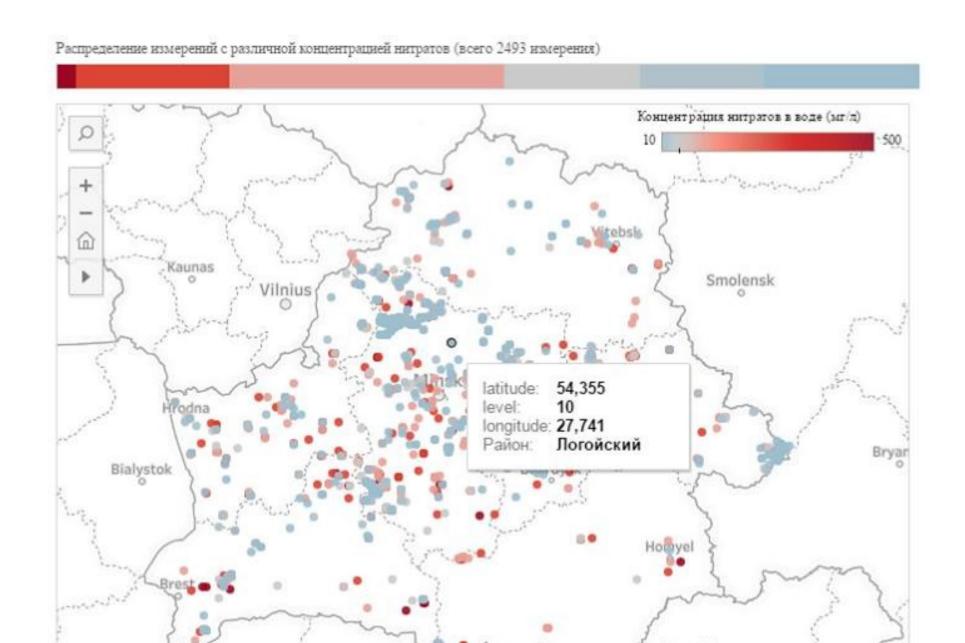
5. Can we save our forests? FSC



# What are the forest protection areas for?



## Is the water safe? Watercontrol.by



# https://info.fsc.org/certificate.php

SC INTERNATION	AL   SMALLHOLDER PO	ORTAL	STAKEHOLDER PORTAL	NEWSROOM	RESOURCES	S EVENTS	English <b>▼</b>
FSC-C130198	NC-FM/COC-021596	Valid	<b>②</b>	2016-07-20	2021-07-19	GLHU Molodechnensky leshoz	Belarus
FSC-C130239	NC-FM/COC-017323	Valid	<b>Ø</b>	2016-07-25	2021-07-24	GOLHU Vileiski experimental leshoz	Belarus
FSC-C130240	NC-FM/COC-017331	Valid	<b>Ø</b>	2016-07-25	2021-07-24	GLHU Krupski leshoz	Belarus
FSC-C130241	NC-FM/COC-017326	Valid	<b>Ø</b>	2016-07-25	2021-07-24	GLHU Logoiski leshoz	Belarus
FSC-C130242	NC-FM/COC-017328	Valid	<b>Ø</b>	2016-08-09	2021-08-08	GLU Minski leshoz	Belarus
FSC-C130287	SCS-COC-005591	Valid	<b>Ø</b>	2016-05-18	2021-05-17	GrandWood LLC	Belarus
FSC-C130302	NC-COC-025993	Valid	<b>Ø</b>	2016-06-02	2021-06-01	Belarustorg (branch Mulyarovka), Republican Production Trade Unitary	Belarus
FSC-C130742	SCS-COC-005640	Valid	<b>Ø</b>	2016-06-17	2021-06-16	Foreign Enterprise Budorama	Belarus
FSC-C130778	NC-COC-026120	Valid	<b>Ø</b>	2016-06-21	2021-06-20	SHKREDOFF, Private Trade Unitary Enterprise Production	Belarus
FSC-C130791	SCS-COC-005642	Valid	<b>②</b>	2016-06-21	2021-06-20	Private Enterprise «Sergeeva S.Z.»	Belarus
FSC-C131687	NC-COC-026494	Valid	<b>Ø</b>	2016-09-09	2021-09-08	NavarichLes, Private production- commercial enterprise	Belarus
FSC-C131751	NC-FM/COC-016952	Valid	<b>②</b>	2016-09-13	2021-09-12	GPU National Park Pripyatsky	Belarus
FSC-C131807	NC-COC-026489	Valid	<b>Ø</b>	2016-09-01	2021-08-31	BirZheks, Closed Joint Stock Company	Belarus
FSC-C132095	NC-COC-016952	Valid	<b>Ø</b>	2016-09-14	2021-09-13	GPU National Park Pripyatsky	Belarus
FSC-C132798	SGS-FM/COC-010859	Valid	<b>②</b>	2016-10-31	2021-10-30	Brest State Forest Enterprise	Belarus
FSC-C132863	NC-FM/COC-026922	Valid	<b>②</b>	2017-03-14	2022-03-13	GLHU Dyatlovsky leshoz	Belarus



#### **CERTIFICATE**

Print

IONE

Information from 2018/06/02 - 13:48 UTC Certificate Code NC-FM/COC-016952 License Code FSC-C131751

#### **PUBLIC SEARCH HOME**

# Certificate Search Project Certificate Search Trademark Service license holder search

Certificate Holder Login

FM Evaluations

#### MAIN ADDRESS

Name GPU National Park Pripyatsky Address village Lyaskovichi Gomel region 247946 BELARUS

#### CONTACT(S)

Petr Marchenko +375 2350 57008 el\_lyaskovichi@tut.by

#### **CERTIFICATE DATA**

Status Valid
Forest Area 163504.00 ha
First Issue Date 2016-09-13
Last Issue Date 2016-09-13
Expiry Date 2021-09-12

#### **GROUP MEMBER/SITES**

No group member/sites found.

#### **PRODUCTS**

Product Type	Trade Name	Species	Primary Activity	Secondary Activity	Main Output Category
W1 Rough wood W1.1 Roundwood (logs)	Roundwood (logs)	Alnus glutinosa; Betula pendula; Carpinus betulus L.; Fraxinus exoelsior; Pioea abies; Pinus sylvestris; Populus tremula; Querous robur	Logging		FSC 100%
W1 Rough wood W1.2 Fuel wood	Fuel wood	Alnus glutinosa; Betula pendula; Carpinus betulus L.; Fraxinus excelsior; Picea abies; Pinus sylvestris; Populus tremula; Quercus robur	Logging		FSC 100%

#### **DOCUMENTS**

File	Туре
GPU National Park Pripyatsky FM audit 17 RUS public.pdf	Public Summary Report (available on website)

## 5. Old cars = pollution?



Автор - Стас Литовко - bit.ly/carpollutionby

## 5. Old cars = pollution?

Стас Литовко

https://datastudio.google.com/u/0/reporting/1p-BCR4-

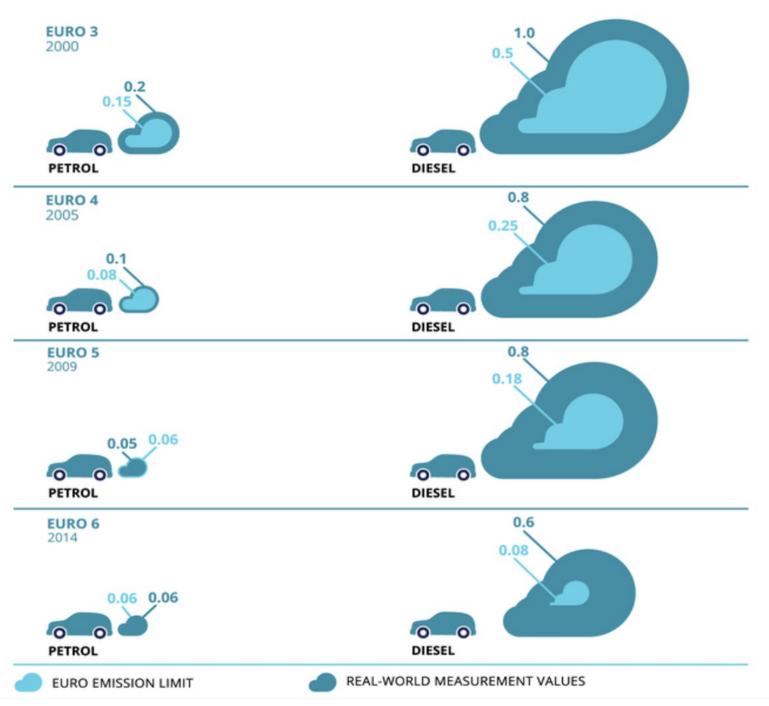
P6oXaW6ZzgdHAmRSrzz9II5S2/page/oxnP

## 5. Forest stewardship council: fsc.org

- 75% of forests certified in Belarus, growing to 100%. Works in Ukraine, Kazakhstan, Georgia
- You can get a list of certified companies and what they are doing with forests: fsc monitoring
- If a company is cutting down trees in an UNSUSTAINABLE way (killing birds/destroying nests/cutting down rare trees), YOU can complain
- If a complaint is not addressed, they'll lose opportunity to sell/export products!

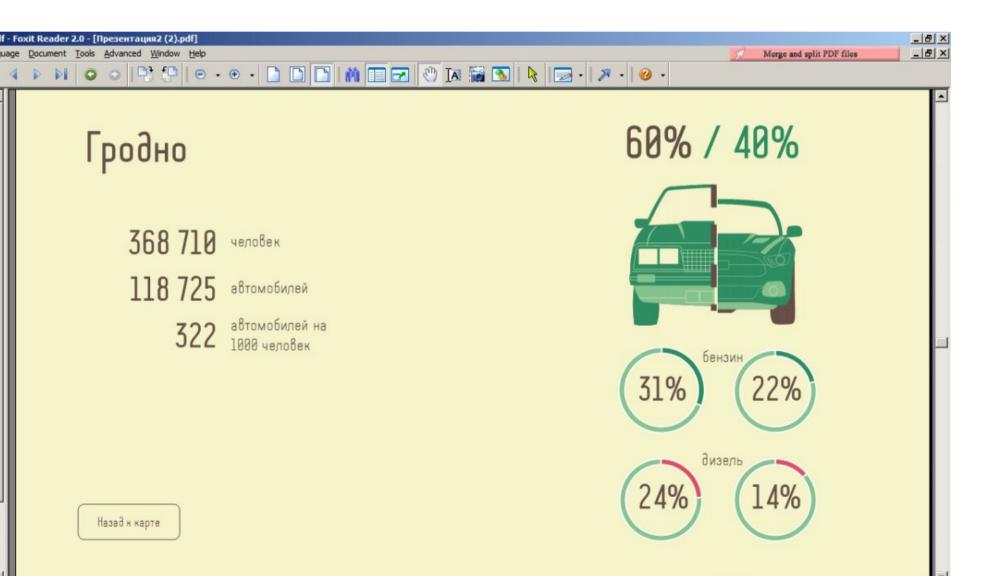
## We've identified cities with the oldest cars

- Oldest diesel cars (Volkswagen brand is the leading polluter)
- Oldest gasoline cars
- Largest share of pre-2005 cars
- Largest share of cheapest cars...
- Calculating the number of cars by emissions standard per year yields the worst polluters (e.g. Euro 1 2 3 4 5 emissions groups)



https://images.cdn.autocar.co.uk/sites/autocar.co.uk/files/images/car-reviews/first-drives/legacy/mag-news-906.png

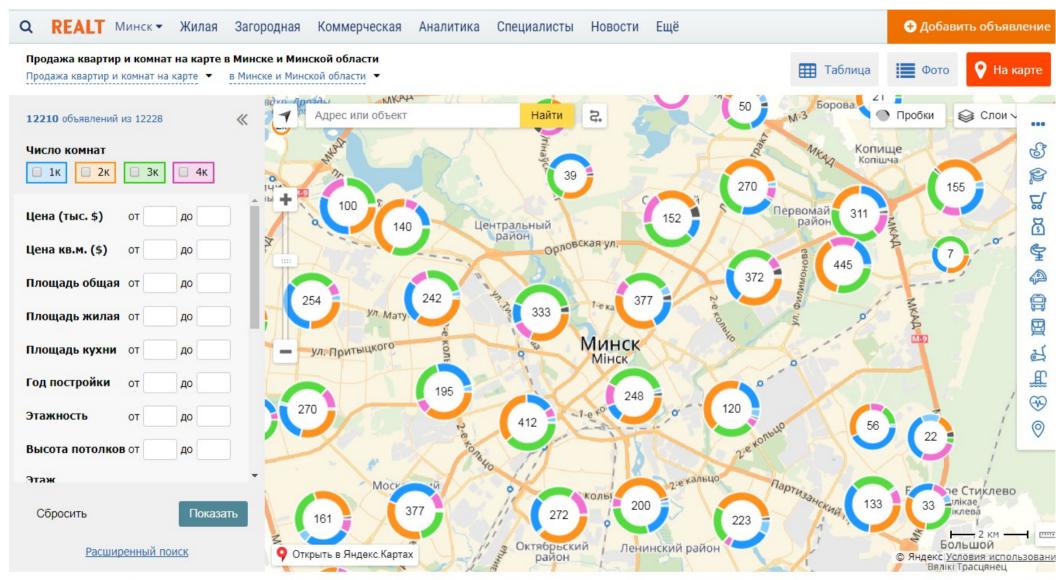
## Old (over 10 years) vs new cars



### 7. Classified ads as source of data

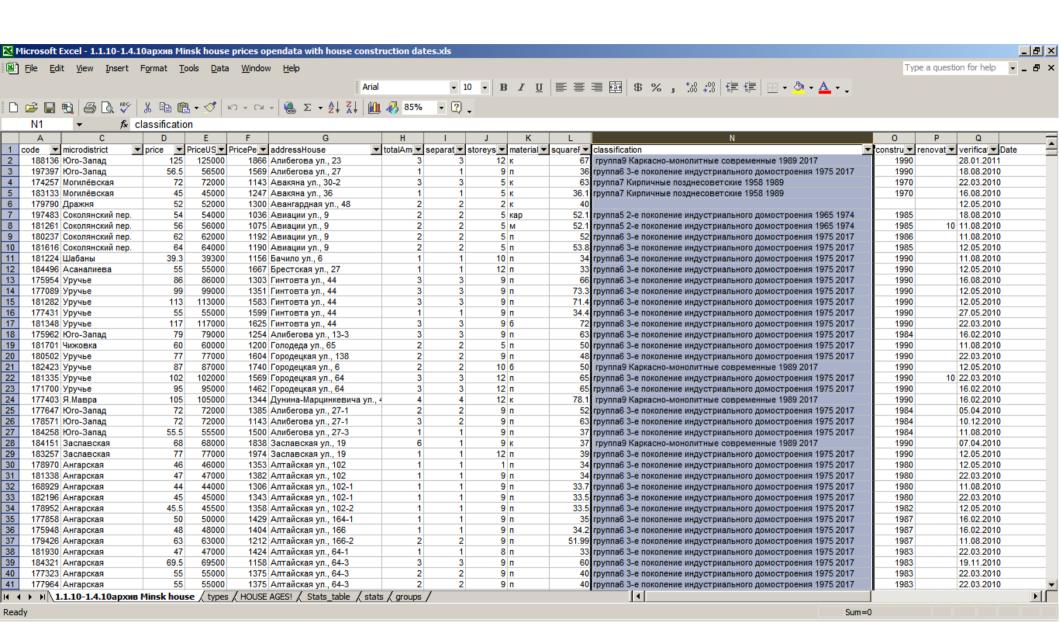
- People are selling stuff online!
- Selling cars
- Selling houses in the countryside
- Selling apartments
- Selling parking slots
- Selling

## Realty websites: realt.by

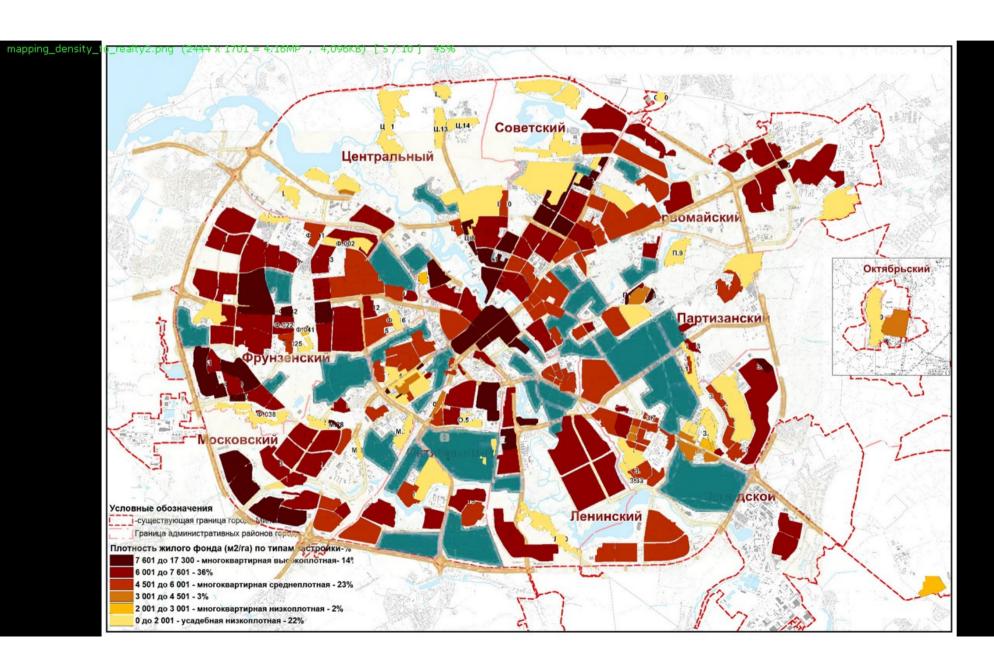


### Data collected

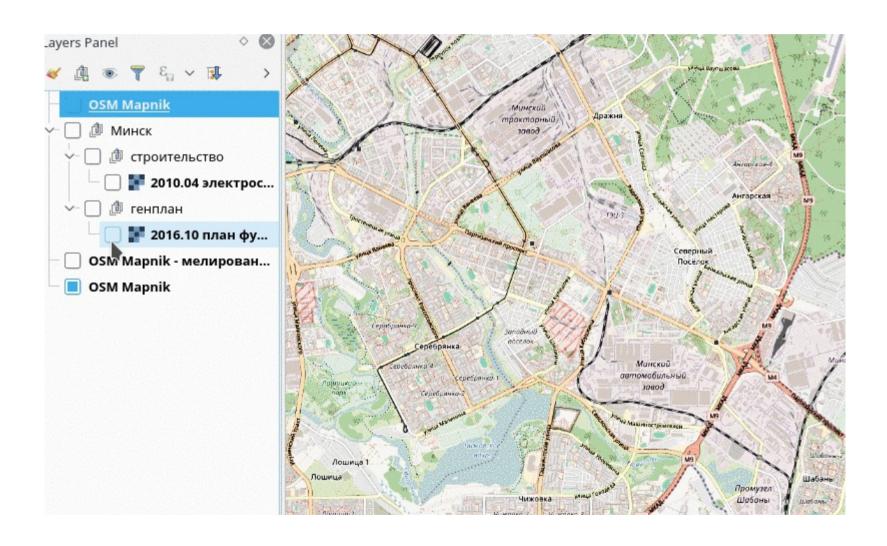
- 4200 FOR SALE addresses harvested
- Price
- Number of floors in building
- Sq footage
- number of rooms
- year of construction
- type of building (brownstone, pre-1917, modern, soviet-era apartment building, cottages...)
- lat-lon coordinates



## Extracting density...

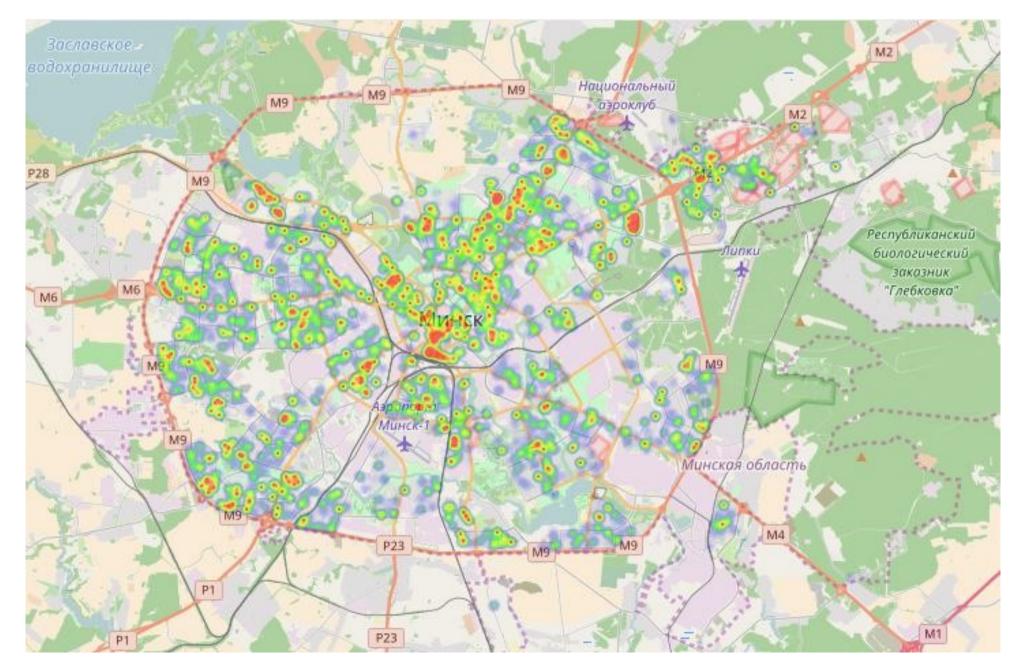


# OSM community: Extracting density data from official zoning JPEG



https://github.com/osm-by/bygis-maps/blob/master/animation.gif

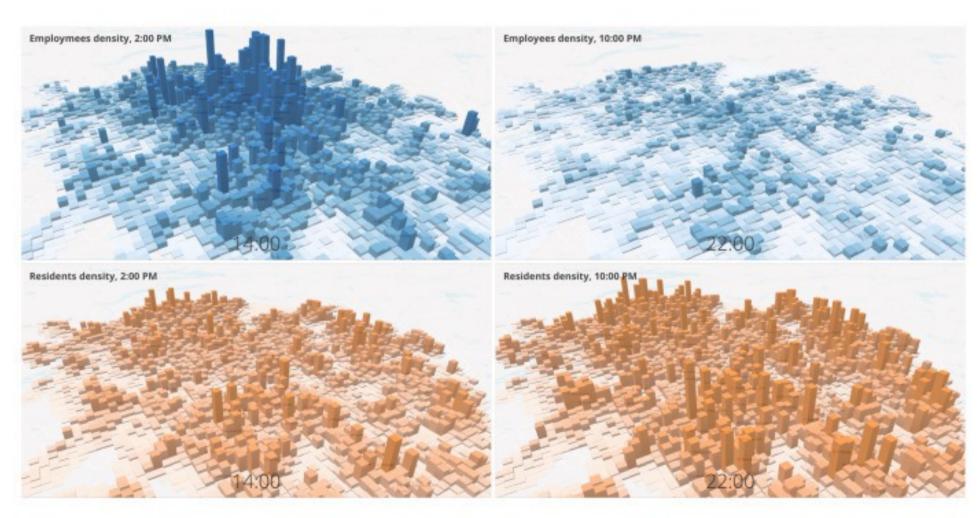
## Prices of apartments



### Sources of urban data

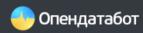
- Open street map: list of pharmacies
- Open street map: list of supermarkets
- Open street map: list of transport stops
- Realt.by: list of apartment prices
- Architects: type of buildings

## Density of jobs vs density of residents



https://agglomerations.ru/data/moscow/density\_man

### Ukraine: govt company registry



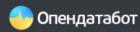
Відкриті дані Юристам Бізнесу 1С АРІ Журналістам Як відкрити

Найбільше жінок працюють як підприємці у Хмельницькій (50%) і Одеській областях (49.5%). На третьому місці Миколаївська область — 48.5%.

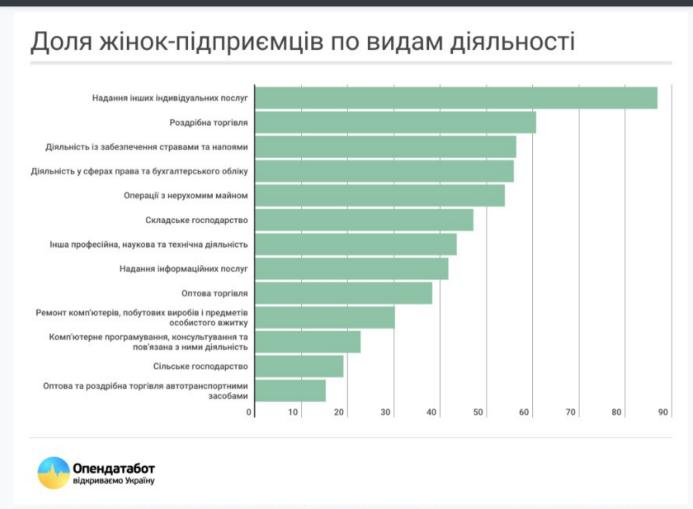




## Types of companies run by women



Відкриті дані Юристам Бізнесу 1С АРІ Журналістам Як відкрити



Більше всього жінки-підприємці працюють у сфері діяльності домашніх господарств як роботодавців для домашньої прислуги — 94.44%. На другому місці — надання інших індивідуальних послуг, в цю групу в основному входять

### Is this data useful? YES!



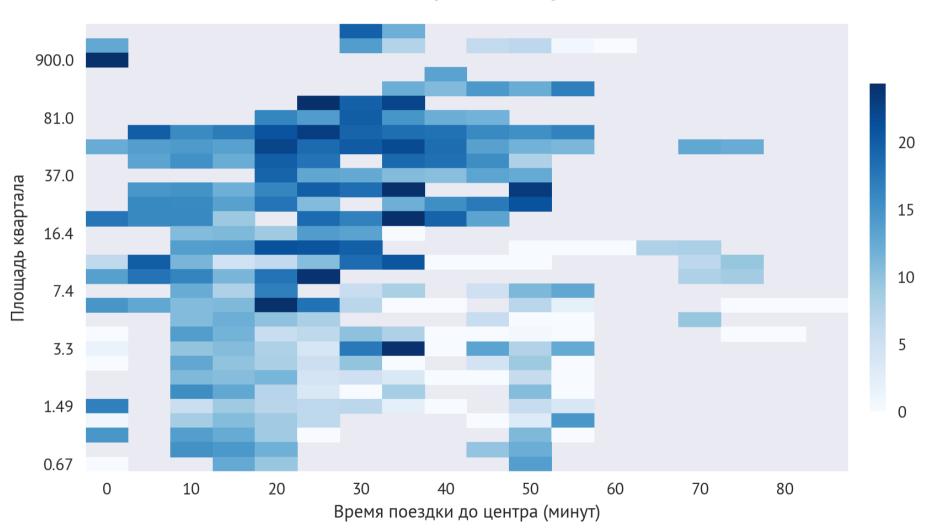
https://case-belarus.eu/fair-and-efficient-urban-developement-a-compact-city-concept-for-belarus

## Beer or coffee? Good or bad city?



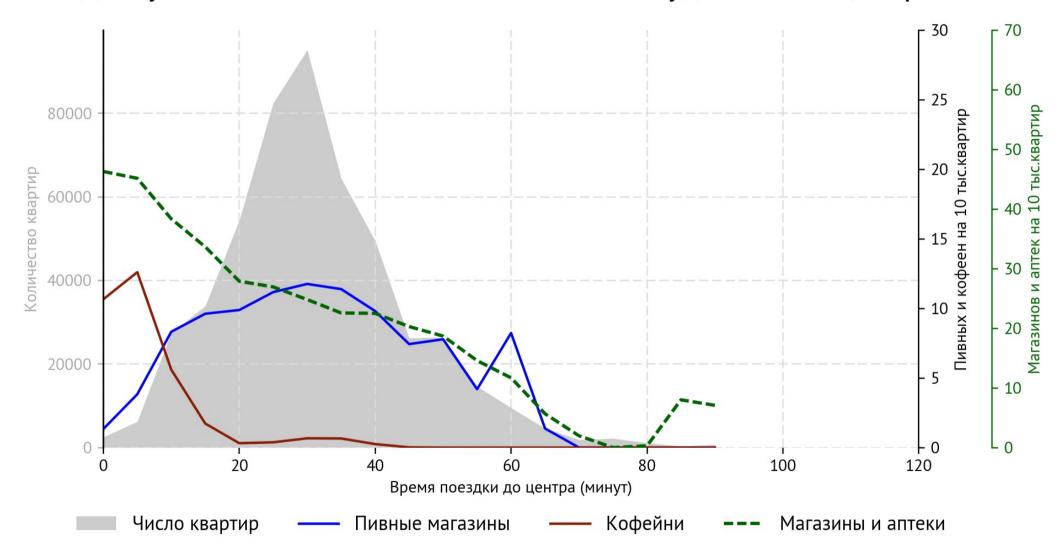
http://beercoffee.peshemove.org/full-report/

#### Пивные по площади квартала и удалённости, Тольятти

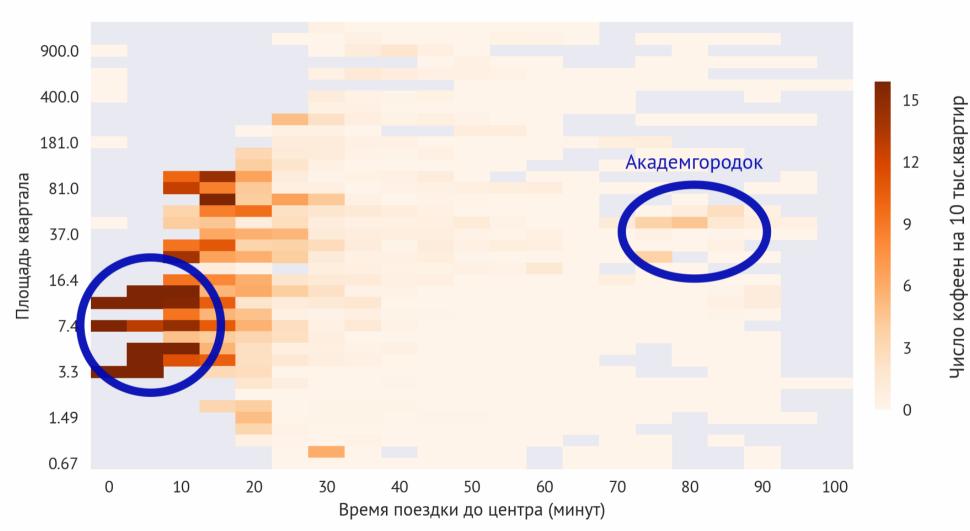


Число пивных магазинов на 10 тыс.квартир

#### Доступность объектов в зависимости от удалённости, Воронеж



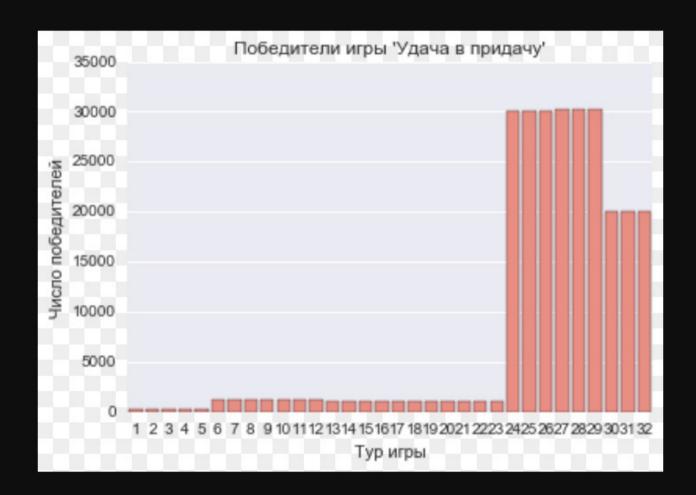
#### Кофейни по площади квартала и удалённости, Новосибирск



# 7. Lottery: 1.7 mln participants, 300 000 winners, 5000 cities/villages



Автор: Алексей Медвецкий. Данные: Евроопт



# Is this civic data? Or is it data exploitation?

- Address
- Phone number
- Name, surname,
- Amount won
- There were 32 lottery draws, with 263 170 winners from 4 729 cities and villages,
- Around 71% are women
- Around 2mln people filled in their data to take part in the prize draw, which constitutes 20% of the population!

### 9. Yes! Open data exists even here!

TED talk: Tim Berners Lee

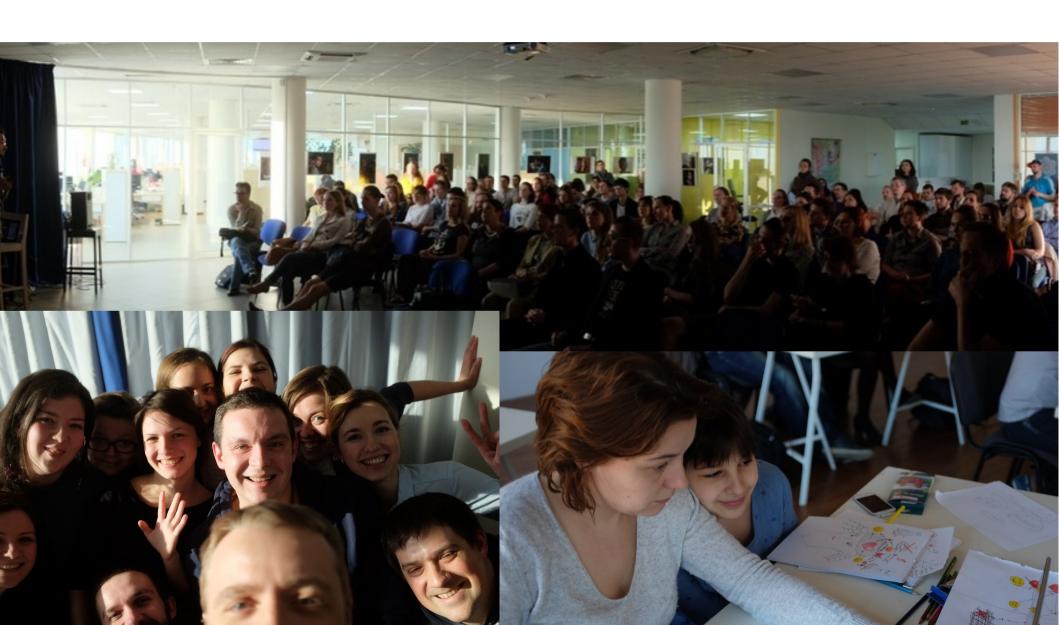


https://www.ted.com/talks/tim\_berners\_lee\_the\_year\_open\_data\_went\_worldwide

## School of infographics

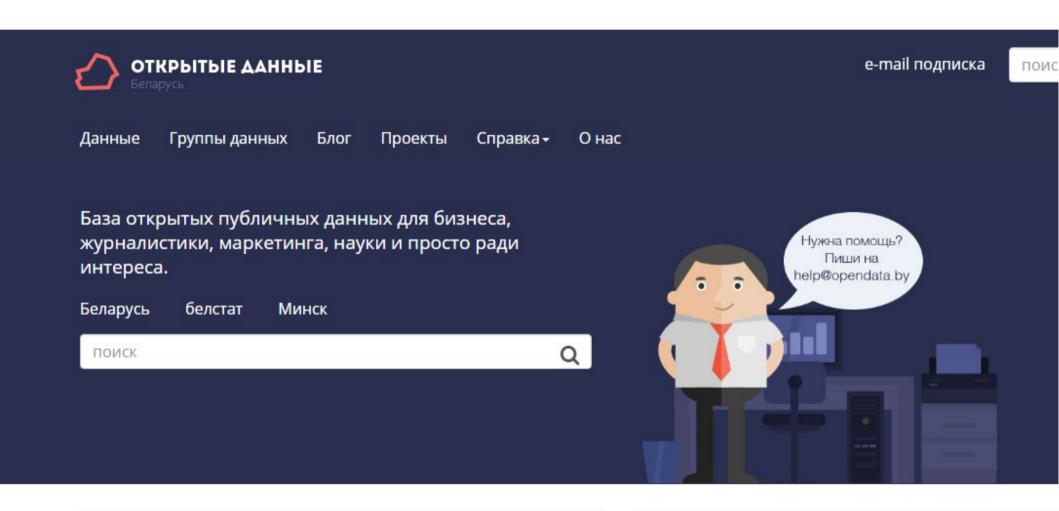


## Five years, 7 annual 5-month courses!



### Help is out there

help@opendata.by



# This presentation is a community highlight!

Featuring inspiration and creative work:

- infograf.by: Infographics community school
- Vadim Shmygov
- opendata.by community
- Nikolay Katsuk, Anatoly Babenia, Alina Radachynskaya, Katerina Gerasimovich, - Igor Yanovsky (czrt.by), many other talented people!
- Bygis community / Openstreetmap community
- opendatabot.ua/blog