

> Nibbles from Ireland

> AI for Semantic Open Data

32

International
PX Meeting
2023

RIGA



There is no Innovation without mistakes

2020

- 148 Issues
- 0 Security patch
- 1 Pen Test

2021

- 125 Issues
- 1 Security patch
- 2 Pen Tests

2022

- 100 issues
- 1 Security patch
- 1 Penetration Test

2023

- 199 issues
- 1 Security patch
- 1 Penetration Test (pending)

CSOireland / PxStat



- <> Code
- Issues 18
- Pull requests
- Actions
- Wiki
- Security
- Insights
- Settings

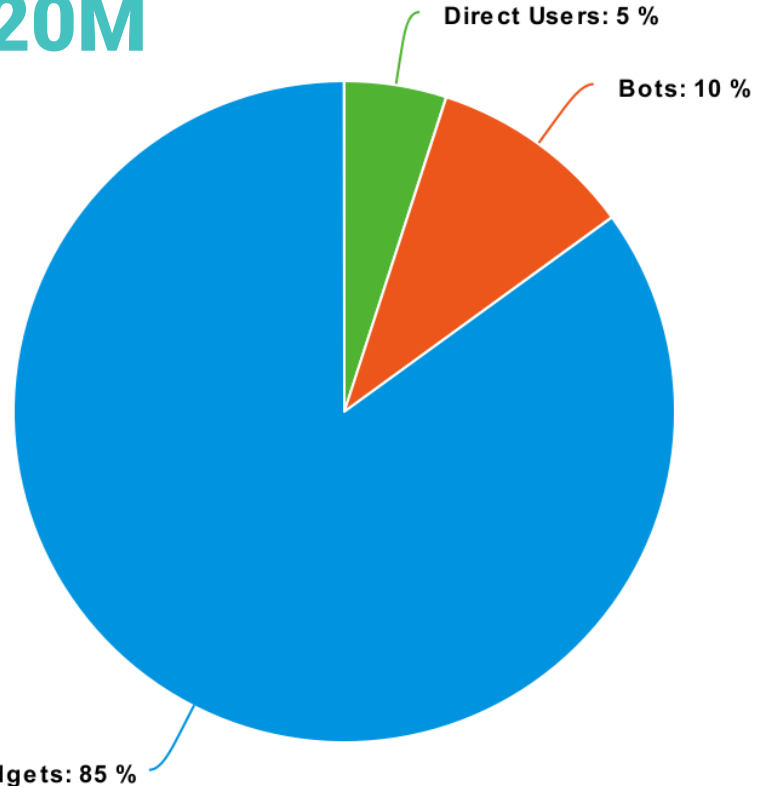


Open Data – Yearly Traffic, 20M

Direct Users 5% (1M)

Bots 10% (2M)

API & Widgets 85% (17M)



Open Data – Yearly Traffic, 20M

JSON-Stat 2.0

71.0% (14.2 M)

CSV

15.0% (3.1M)

JSON-Stat 1.0

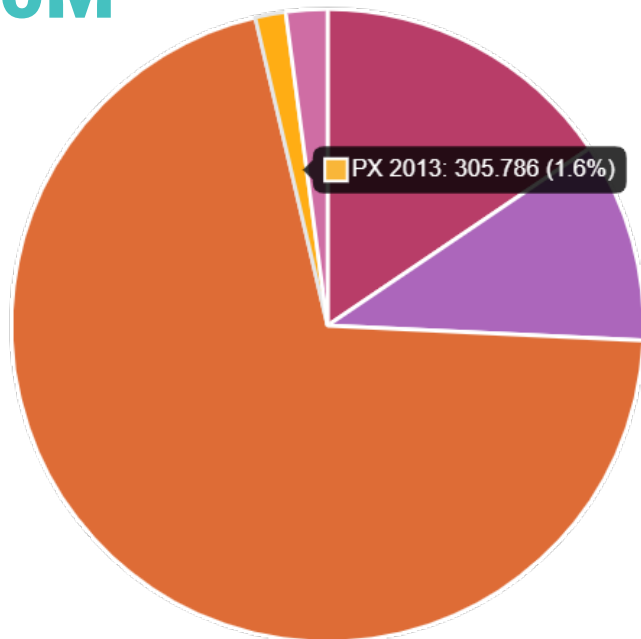
10.2% (2.0 M)

XLSX (Excel)

2.2% (0.4 M)

PX

1.6% (0.3 M)



CSV 1.0 JSON-stat 1.0 JSON-stat 2.0 PX 2013 XLSX 2007





An
Phríomh-Oifig
Staidrimh

Central
Statistics
Office

Who's on PxStat already?



Automatic
Catalogue
Feed



DATA.GOV.IE

- **Central Statistics Office**
- Central Bank
- Dep. Of Agriculture, Food and Marine
- Dep. Of Children, Equality, Disability...
- Dep. Of Education and Skills
- Dep. Of Health
- Dep. Of Housing, Planning, Community...
- Environmental Protection Agency
- Health research Board
- IMDO Shipping Statistics
- Residential Tenancy Board
- Revenue Commissioners Tax...
- Road Safety Authority
- Sustainable Energy Authority
- Transport Infrastructure

Subscribe, “OAuth” made easy ;-)

Login ✕

Stay logged in

Saved Queries

Show entries Search:

Table	Name	Type	Fluid time	Delete
<input type="checkbox"/> AVA42	Animals	Map	<input checked="" type="checkbox"/>	<input type="button" value="Delete"/>
<input type="checkbox"/> TEM24	Car trend	Table	<input checked="" type="checkbox"/>	<input type="button" value="Delete"/>
<input type="checkbox"/> TEM24	Car chart 01	Chart	<input checked="" type="checkbox"/>	<input type="button" value="Delete"/>
<input type="checkbox"/> WPM26	energy crisis	Table	<input checked="" type="checkbox"/>	<input type="button" value="Delete"/>
<input type="checkbox"/> WPM26	energy Gas and Elecricity	Chart	<input checked="" type="checkbox"/>	<input type="button" value="Delete"/>

Showing 1 to 5 of 5 entries

Previous **1** Next



Widgets to enhance news stories

RTE NEWS SPORT ENTERTAINMENT BUSINESS LIFESTYLE CULTURE PLAYER TV RADIO

NEWS ► BUSINESS ► Business of Climate Future of Work Brexit Watch and Listen Your Money Technology

Number of companies involved in rental market rising - CSO

Updated / Wednesday, 17 Nov 2021 15:31



The number of properties rented by companies has gone up from just under 17,000 in 2016 to just over 25,000 in 2020, new CSO figures show



By **Robert Shortt**
Economics Correspondent



Number of companies involved in rental market rising - CSO



By Robert Shortt

The appetite of investors for rental is getting stronger and the number of companies involved in the rental market is increasing.

More of the renter population of tenants is being let by tenants in Dublin and 75% of tenants nationwide are in employment.

These are amongst the findings in a report today on the rental sector from the Central Statistics Office.

The report is based on data from several sources and is part of the CSO's quarterly 'Rental Sector' publications.

Today's report paints a picture where small landlords still dominate the rental sector but are being challenged by investors.

Between 2017 and 2020, the proportion of landlords of tenancies under the age of 45 fell from 35% to just over 25% as younger landlords left the business and fewer entered it.

At the same time, the number of rental properties owned by companies and investors has risen from just over 26,000 in 2015 to just over 25,000 in 2020.

In terms of landlords, their primary source of income was still self-employment with nearly half (46%) of the population of landlords by profession in the Financial Services sector.

The mid-point gross rental income of landlords was €3,100 in 2021, rising to €3,102 in 2020.

However, 10.9% of landlords had net rental income, which is after expenses are deducted, of less than €10,000. 76.7% had net rental income of less than €20,000.

The rent survey, which is the benchmark of rental income, spent more time in the 'rent' category than in the 'rental' category. Dublin's South Inner City spent over 37% of their disposable income on rent in 2020, the CSO said.

Tenants over the age of 65 in the age cohort with the highest disposable income spent the most on rent in absolute terms, at 19.7% of the cohort's spend, more than 20% of their income on rent.

The report also noted that 24% of tenants had gross income of less than €20,000 a year.

It also found that 55% of rental properties were built between 2000 and 2010. Just over 28% of rental properties were apartments in 2020.

The report also has extensive information on the RPI in an average of rental properties. It also notes the rise in the proportion of approved housing bodies that have over three times the proportion of RPI in their homes, at 32%, compared with individual landlords at 9.5%.

The CSO does point out, however, that of the 205,582 rental properties, 100,000 through the Residential Tenancies Board (RTB) and 105,582 through the Residential Tenancies Board (RTB) and 105,582 through the Residential Tenancies Board (RTB) and 105,582 through the Residential Tenancies Board (RTB).

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All Static Content



Creating a Map as a Widget

Search for Data

TRSS22 Rent as Percentage of Disposable Income and Percentage of Tenants who Pay 30% or More of Their Disposable Income on Rent

Local Electoral Area Rental Year 2019

Table Chart Map

Local Electoral Area

Statistic Percentage of Tenants who Pay 30% or More of Their

Rental Year 2019

Widget

Auto-update

Copyright

Link

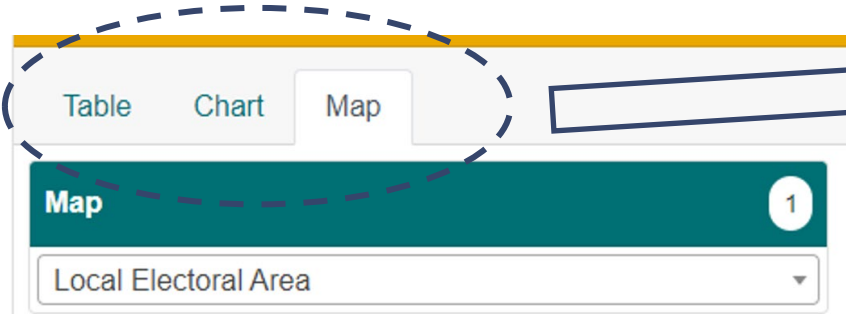
Title

[Include borders]

Custom JSON

Snippet code

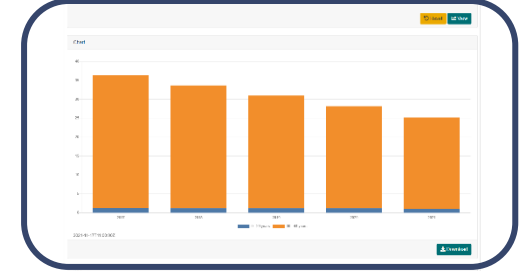
```
1 <script src="https://cdn.jsdelivr.net/gh/COSIreland/PwKiddget@0.1.2/js/issogram.min.js"></script>
2 <script src="https://data.cso.ie/api/v1/issogram.min.js"></script>
3 <script src="https://data.cso.ie/api/v1/issogram.min.js"></script>
```



Creating a Chart as a Widget

The screenshot shows the Central Statistics Office dashboard. The main content area displays a widget configuration for 'Evaluation of RTB Landlords'. The configuration includes a title, a description, and a 'Type' dropdown menu. Below the configuration, there is a preview of the widget, which is a bar chart showing the evaluation of RTB Landlords. The chart has five bars of varying heights, representing different categories. The y-axis is labeled 'Value' and ranges from 0 to 100. The x-axis is labeled 'Category' and has five categories. The bars are colored in shades of orange and red. The chart is titled 'Evaluation of RTB Landlords' and has a subtitle 'Number of RTB Landlords'.

This close-up shows the 'Type' dropdown menu set to 'Bar'. Below it, the 'Custom JSON' field is visible, containing a JSON object: `{ "autoupdate": true, "type": "bar", "copyright": "CSO" }`. The 'Autoupdate' checkbox is checked.



This close-up shows the 'Snippet code' field, which contains the following code:

```
<script src="https://cdn.jsdelivr.net/gh/CSOireland/PxWidget@2.1.2/js/isogram.min.js"></script>
<script>pxWidget.queue('chart', 'pxwidget4487565931', { "autoupdate": true, "type": "bar", "copyright": "CSO" });
</script>
<div id="pxwidget4487565931" class="pxwidget"></div>
```

This screenshot shows the 'Widget' configuration interface. It includes a 'Widget' section with four toggle switches: 'Auto-update' (True), 'Title' (True), 'Copyright' (True), and 'Link' (True). Below this is the 'Custom JSON' field, which is empty. The 'Snippet code' field contains the same code as shown in the previous close-up. A dashed blue arrow points from the 'Snippet code' field to the 'Snippet' label.

Snippet



Plug & Play

Let users engaging with Open-Data

- Open Data (link)
- Source / Copyright attribution
- Interactive content
- Better analytics (no cookies)

The Irish Times - example

Number of companies involved in rental market rising - CSO

Updated / Wednesday, 17 Nov 2021 15:31



The number of properties rented by companies has gone up from just under 17,000 in 2016 to just over 25,000 in 2020, new CSO figures show

By Robert Shortt
Economics Correspondent

The age profile of individual landlords is getting older while the number of companies involved in the rental market is increasing.

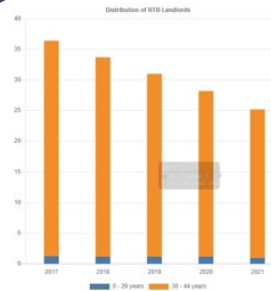
Meanwhile, rent as a proportion of income is highest for tenants in Dublin and 71% of tenants nationwide are in employment.

These are amongst the findings in a report today on the rental sector from the Central Statistics Office.

The report includes data from several sources and is part of the CSO's so-called "Frontier Series" of publications.

Today's report paints a picture where small landlords still dominate the rental sector but where change is underway.

Between 2017 and 2021, the proportion of individual landlords under the age of 45 fell from 35% to just over 24% as private landlords left the business and fewer entered it.



2021-11-17T15:00:00Z

© Central Statistics Office, Ireland
<https://data.cso.ie/table/TRS11>

By contrast, the number of rental properties owned by companies and pension funds has gone up from just under 20,000 in 2019 to just under 30,000 in 2020.

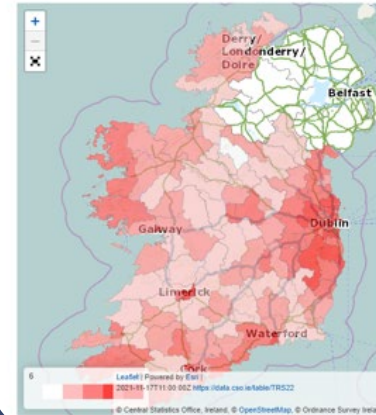
For 44% of landlords, their primary source of income was paid employment with Health and Social Work the top job type followed by Finance and Real Estate activities.

The mid-point gross rental income of landlords was €13,800 in 2017, rising to €15,352 in 2019.

However, 50.5% of landlords had net rental income, which is after expenses are deducted, of less than €10,000. 79.1% had net rental income of less than €20,000.

The rent burden, which is the percentage of disposable income spent on rent, was highest for tenants in Dublin. 40.4% of tenants in Dublin's North Inner City spent over 35% of their disposable income on rent in 2019, the CSO said.

Rent as Percentage of Disposable Income and Percentage of Tenants who Pay 30% or More of Their Disposable Income on Rent



Tenants over the age of 65 are in the age cohort which spends the greatest proportion of their incomes on rents. Almost half, or 49.4% of the over-65's spend more than 35% of their income on rent.

Today's report also noted that 36% of tenants had gross income of less than €20,000 a year.

Download CSV



cso.ie

2023, busier than ever!

PxStat DEMO App
<https://demo-pxstat.cso.ie>

.NET6 Upgrade

- Assessment **DONE**
- Development **DONE**
- Testing **WIP**
- Pen Test **TODO**

Moving to Public Cloud

- Specs **DONE**
- PoC **DONE**
- Migration **>> 2024**



PxStat in the AWS
Market Place (?)

Publishing Census 2022

- Data **ON GOING**
 - Releases **ON GOING**
 - Maps **September 21st**
- <https://visual.cso.ie>

Automated Data Ingestion

- Weekly / Daily stats
- API based, code free (R, SAS, Python...)
- Design **DONE**
- Development **>> 2024**





**An
Phríomh-Oifig
Staidrimh**

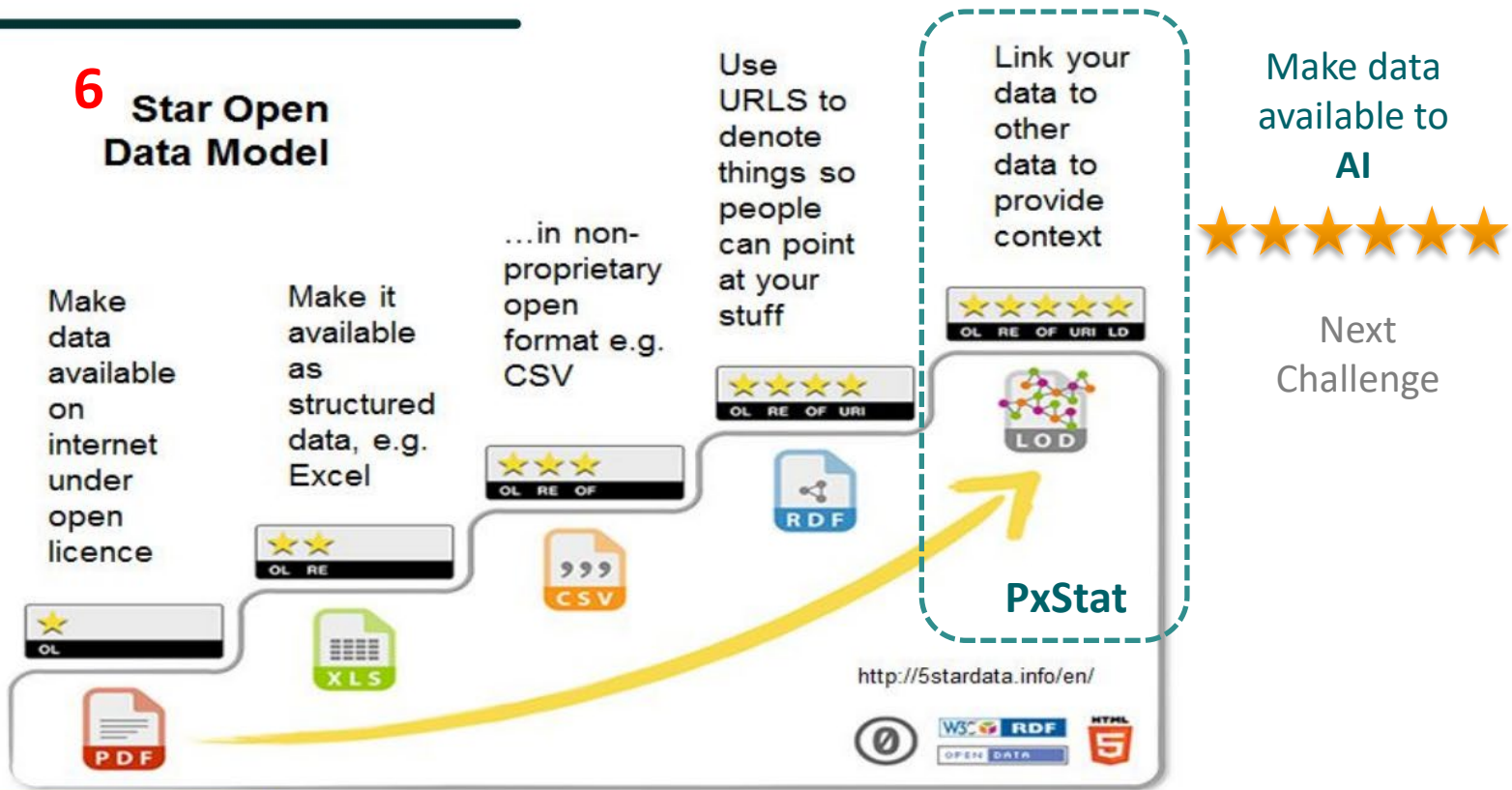
Central
Statistics
Office

Next Challenge...

AI for Semantic Open Data

No more ontology barriers

6 Star Open Data Model



Vectors, Semantic, Ontology

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0.00020772657,0.006752224,0.0029663735,-0.012217666,0.016850084



ChatAI Assistant

- Where are users searching for stats?
Google, Bing, ChatGPT, etc...
- What if we could generate an AI friendly output, to assist all AI engines?
 - ✓ Where/How become irrelevant
 - ✓ Maximise access to (official) stats
 - ✓ Minimise errors / hallucinations

StatAI Assistant



Remote PoC

- What if we could feed metadata to an AI Model, so users can search via a natural language model?
- Shifting the **Linked Open Data** paradigm from a **hard-link** to a **soft-link**





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Staidrimh

Central
Statistics
Office

