

# **Use of KPIs to show the impact of geospatial information**

Fabio Bittencourt, Spatineo  
Jaana Mäkelä, Spatineo

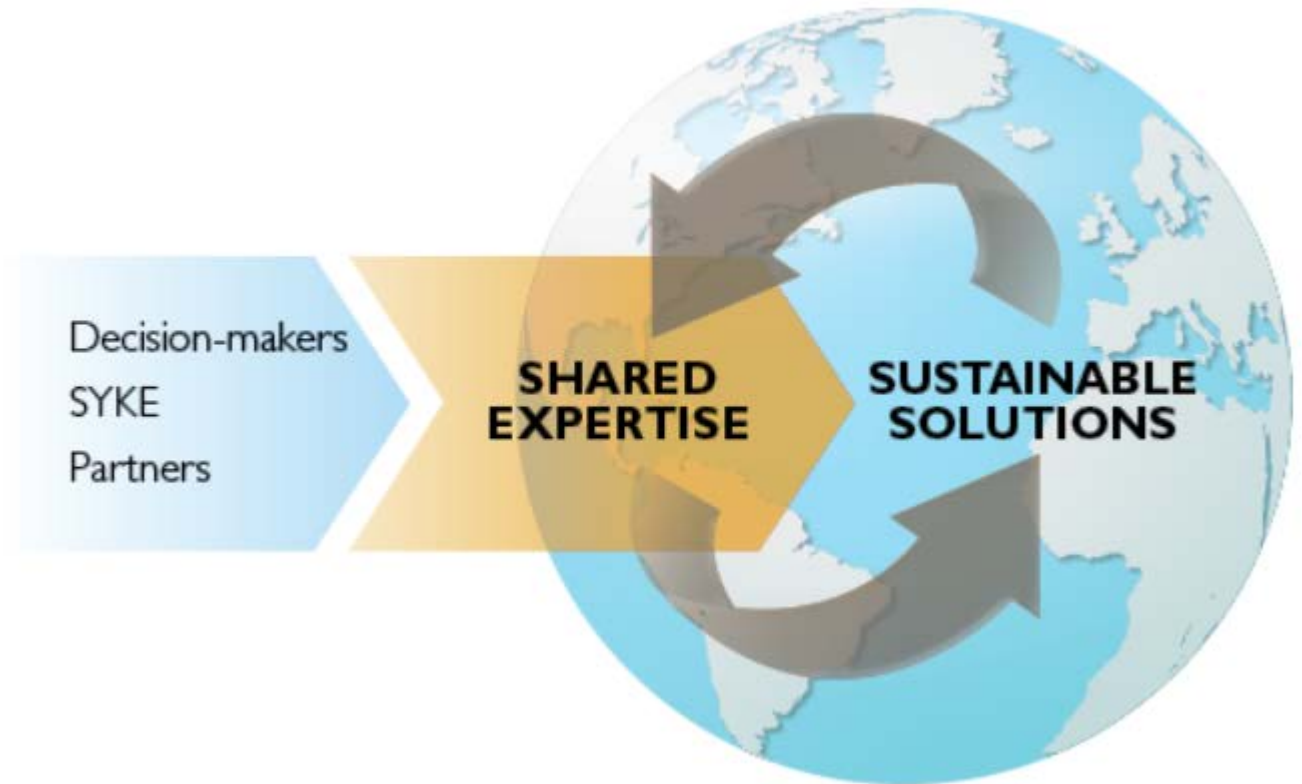
**JIIDE 2019**  
**Cáceres, España**



- My organization has strategic goals related to usage of spatial data...
- How many users are effectively utilizing the spatial information available?
- What are the different profiles of users?
- What datasets are essential to maintain, and available at all times?
- What indicators are relevant to my SDI operation/usage analytics?
- How can I measure the value of my Spatial Data Infrastructure?
- Difference in complying with standards (OGC & INSPIRE) vs providing high quality usage experience to users...

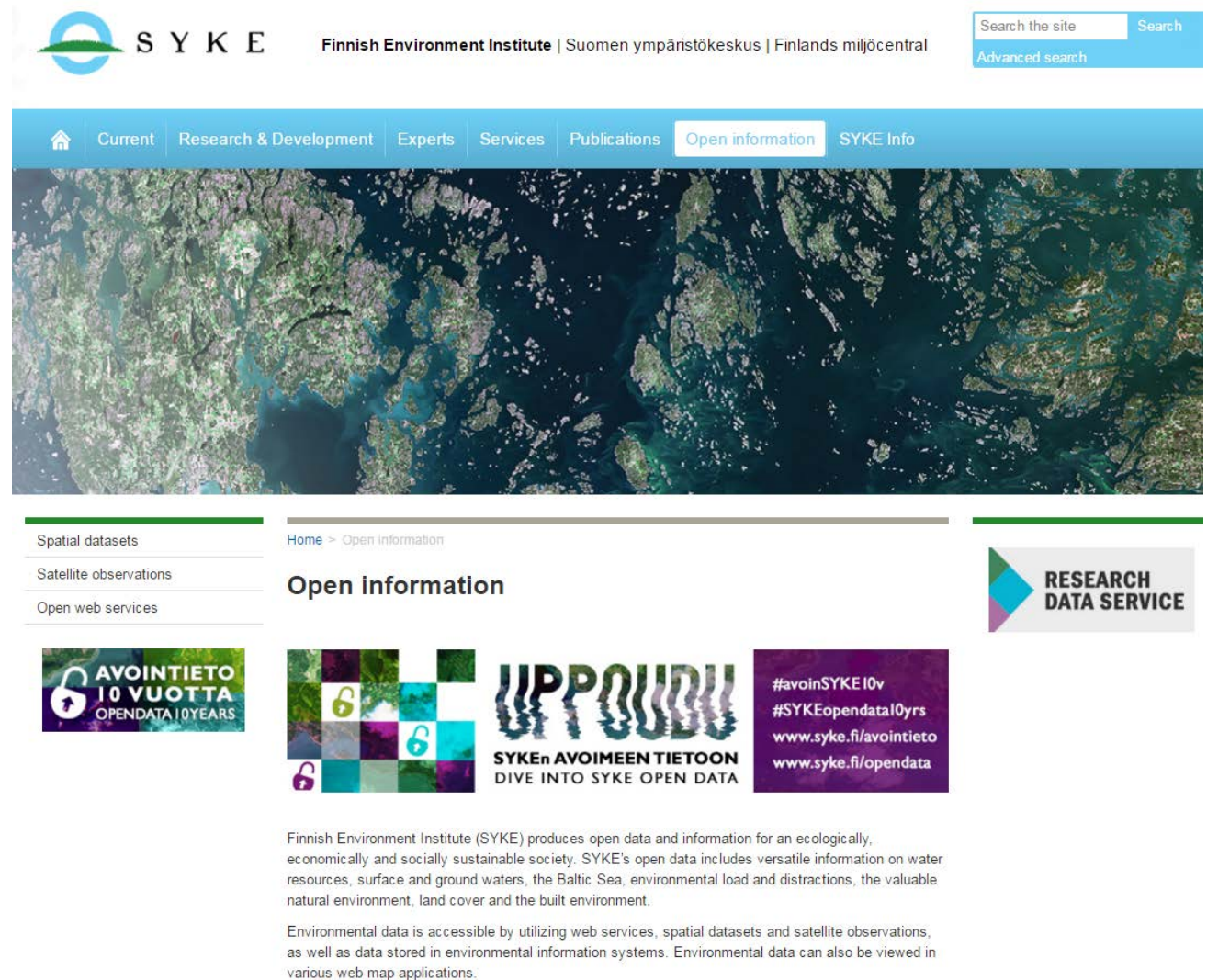
## Crucial information and innovative solutions for a sustainable society

- Respond proactively to society's ever-changing information needs.
- To make a difference for decision-making in the public and private sector through our internationally recognized research and development activities and our high-quality expertise.



# SYKE's Open Data Services

- Open environmental data available since 2008
  - 6602 Spatial datasets
  - Environmental information systems
  - Web map applications
  - Web services (77\*)
  - Satellite observations
- Usage of open data increases every year → impact?
- [www.syke.fi/openinformation](http://www.syke.fi/openinformation)



The screenshot shows the SYKE (Finnish Environment Institute) website's 'Open information' section. At the top, the SYKE logo and name are displayed alongside the text 'Finnish Environment Institute | Suomen ympäristökeskus | Finlands miljöcentral'. A search bar is located in the top right corner. Below the header, a navigation menu includes links for 'Current', 'Research & Development', 'Experts', 'Services', 'Publications', 'Open information' (which is highlighted), and 'SYKE Info'. The main content area features a large satellite image of a coastal region. On the left side, there is a sidebar with links to 'Spatial datasets', 'Satellite observations', and 'Open web services'. The main content area is titled 'Open information' and includes a breadcrumb trail 'Home > Open information'. Below the title, there are three promotional banners: one for 'AVOINTIETO 10 VUOTTA OPENDATA 10 YEARS' (Open Information 10 Years Open Data 10 Years), another for 'UPPOUDU SYKEÄ AVOIMEEN TIETOO DIVE INTO SYKE OPEN DATA', and a third for 'RESEARCH DATA SERVICE'. The bottom section contains a paragraph about SYKE's open data and information, followed by a paragraph about the accessibility of environmental data through various web services and applications.

**SYKE** Finnish Environment Institute | Suomen ympäristökeskus | Finlands miljöcentral

Search the site Search  
Advanced search

Home Current Research & Development Experts Services Publications **Open information** SYKE Info

Spatial datasets  
Satellite observations  
Open web services

Home > Open information

**Open information**

**RESEARCH DATA SERVICE**

**AVOINTIETO 10 VUOTTA**  
OPENDATA 10 YEARS

**UPPOUDU**  
SYKEÄ AVOIMEEN TIETOO  
DIVE INTO SYKE OPEN DATA

#avoinSYKE10v  
#SYKEopendatal0yrs  
[www.syke.fi/avointieto](http://www.syke.fi/avointieto)  
[www.syke.fi/opendata](http://www.syke.fi/opendata)

Finnish Environment Institute (SYKE) produces open data and information for an ecologically, economically and socially sustainable society. SYKE's open data includes versatile information on water resources, surface and ground waters, the Baltic Sea, environmental load and distractions, the valuable natural environment, land cover and the built environment.

Environmental data is accessible by utilizing web services, spatial datasets and satellite observations, as well as data stored in environmental information systems. Environmental data can also be viewed in various web map applications.

- Spatineo Platform
- Customer's data
- Automated surveys
- Third party data (IPs)

## Automated Data Collection

## Assess Impact

- Real-time dashboards
- Automated reports
- Transparency

Strategic goals

Measurable indicators

Recognize your Success

## Implementation

## Recommendations

- Technology transfer
- Improvement of Indicators

- Evaluate all options
- Specific technologies
- Communication with stakeholders







## How actively citizens are contributing to monitoring, observing and producing of data on nature? (F)

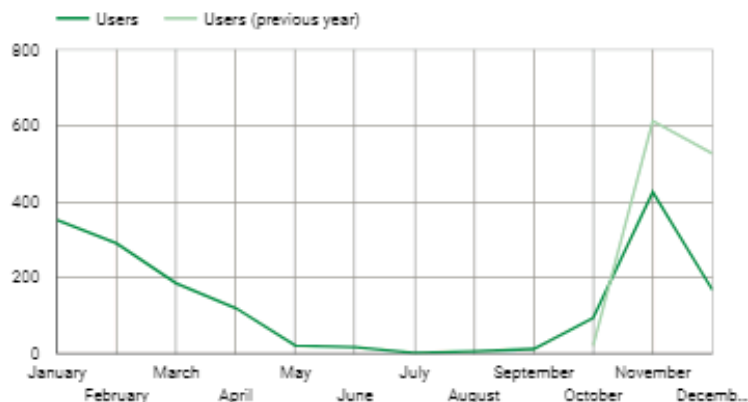
Number of Users and Unique Pageviews vs previous year

Jan 1, 2017 - Dec 31, 2017

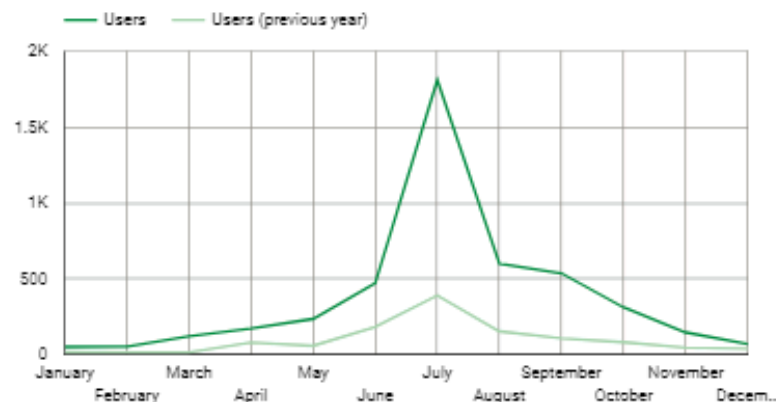
| Page Title  | Number of users | % Δ      | Unique Pageviews | % Δ      |
|---|-----------------|----------|------------------|----------|
| 1. Järviwiki  | 33,068          | -14.6% ↓ | 46,964           | -12.5% ↓ |
| 2. Jäätilanne – Järviwiki                           | 13,416          | -28.5% ↓ | 18,537           | -28.9% ↓ |
| 3. Levätilanne – Järviwiki                          | 12,370          | -29.6% ↓ | 17,248           | -28.8% ↓ |
| 4. Järvien nimet – Järviwiki                        | 9,694           | -16.9% ↓ | 10,417           | -17.9% ↓ |
| 5. Levävahti/Miten tunnistaa sinilevää? – Järviwiki | 6,653           | -55.4% ↓ | 7,437            | -55.2% ↓ |
| 6. Itämeri – Järviwiki                              | 5,498           | 0.7% ↑   | 6,286            | -1.2% ↓  |
| 7. Pintaveden lämpötila – Järviwiki                 | 5,101           | -20.1% ↓ | 6,759            | -20.1% ↓ |
| 8. Suomen kunnat – Järviwiki                        | 3,384           | -19.5% ↓ | 3,763            | -20.6% ↓ |
| 9. Järvitilastot/Syvämmät järvet – Järviwiki        | 2,802           | 58.4% ↑  | 2,982            | 54.0% ↑  |
| Grand total   | 323,933         | 0.7% ↑   | 908,124          | -4.6% ↓  |

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Monthly distribution of users of Talviseurantalähetä vs. previous year\*\*



Monthly distribution of users of Havaintolähetä vs. previous year\*\*



Data source: Google Analytics data from Järvi&Meri wiki

\*\* See remark on last page

Goal:

Citizens' participate more widely in observing and collecting data from environment

Impact indicator:

Citizens' activeness in providing observations



## Are all the municipalities in the risk of flooding using flood risk data? (T)



Total number of Tulvariskikunnat

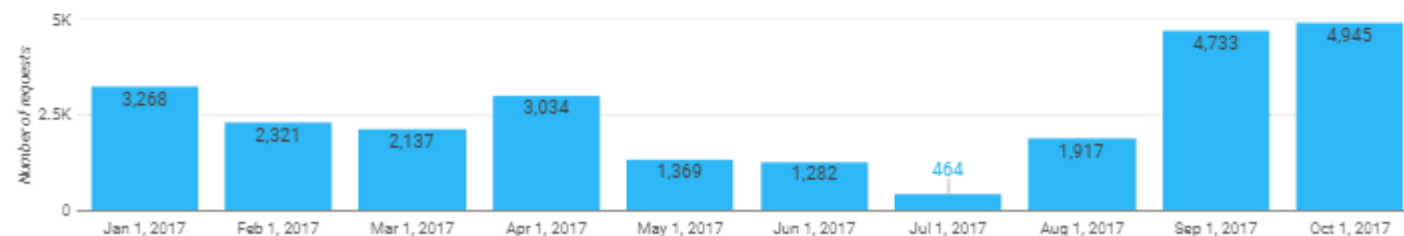
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Municipalities on the list TulvariskiKunnat using the data Jan 1, 2017 - Dec 31, 2017

| Name           | Number of requests (%) |
|----------------|------------------------|
| 1. Helsinki    | 46.9%                  |
| 2. Ylivieska   | 11.4%                  |
| 3. Pori        | 11.3%                  |
| 4. Vaasa       | 10.1%                  |
| 5. Seinäjoki   | 9.4%                   |
| 6. Jyväskylä   | 6.7%                   |
| 7. Kotka       | 1.9%                   |
| 8. Turku       | 1.1%                   |
| 9. Kirkkonummi | 0.7%                   |
| 10. Sipoo      | 0.3%                   |
| 11. Lapua      | 0.1%                   |

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### Monthly distribution of data access requests by municipalities using flood risk data:



*Goal:*

Decrease the vulnerability of cities in climate change

*Impact indicator:*

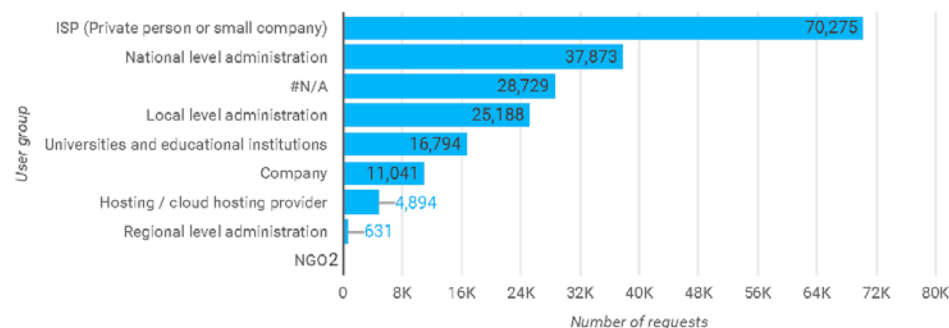
All municipalities that have flood risk areas use data of flood risks



## Who are the specific users of data on built environment? (F)

Jan 1, 2017 - Dec 29, 2017

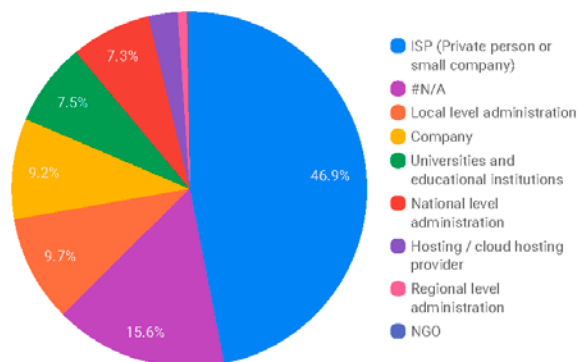
Amount of requests per user group



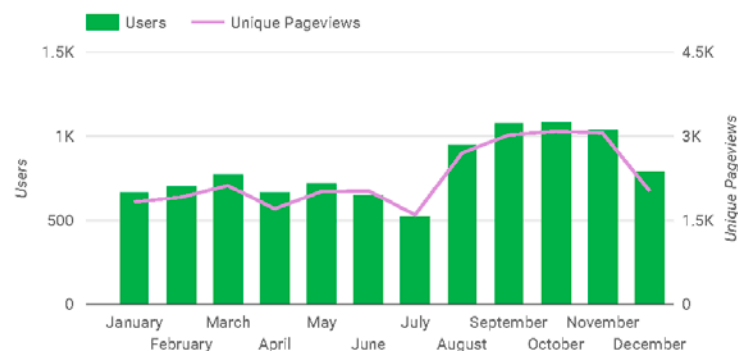
**Goal:**  
Comprehensive information on built environment to authorities, companies and citizens

**Impact indicator:**  
Who are the specific users of data on built environment

Distribution of users in user groups



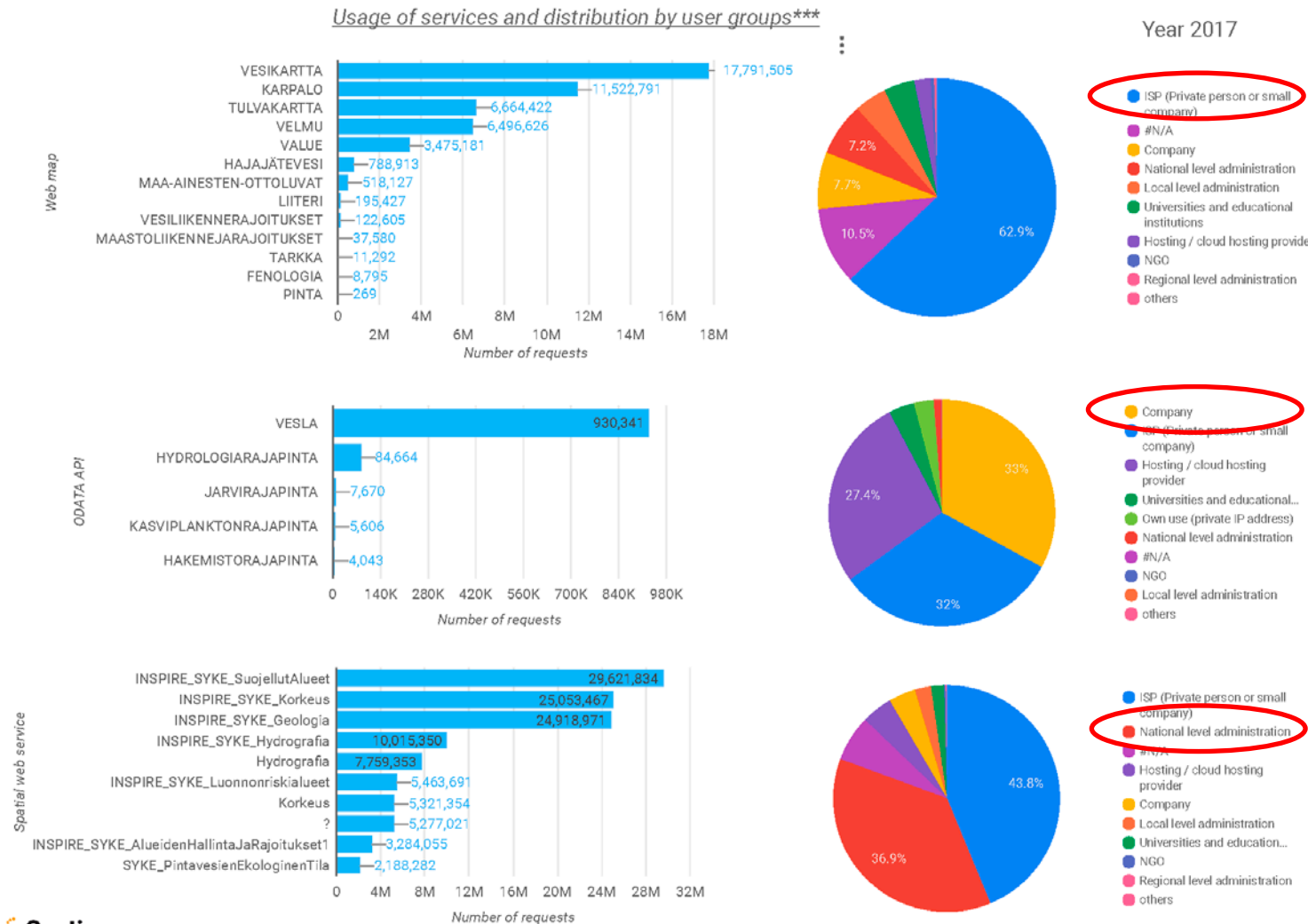
Monthly distribution of Users and Unique Pageviews







## Who are the users and how much environmental information services are used? (F)



**Goal:**  
Key information user groups use environmental information

**Impact indicator:**  
Division of usage of environmental information in user groups

- Ensure that all information from web maps, data downloads and citizens' submissions of observations **are collected**
- A **further study** to understand why there are so significant differences in the amount of users of web maps
  - Natural? Potential users do not find web maps?
- **Better communication** of flood maps and flood information to municipalities
- Impact assessment can be developed based on **user experience** of SYKE:
  - Which **indicators** are most beneficial?
  - Do **new information** needs will arise along the year?
- Focus future work on **the use** of data

**Contact info:**  
**[spatineo.com](http://spatineo.com)**

**Fabio Bittencourt**  
**fabio@spatineo.com**  
**Tel +358 40 632 6828**



**FB\_Spatineo**

