

## BIG-DATA ANALYSIS TO UNCOVER POTENTIAL CORRUPT BEHAVIOUR IN PUBLIC PROCUREMENT

Over 250,000 public authorities in the EU spend around €2 trillion per year (14% of EU GDP) through public procurement for services, works and supplies, according to European Commission estimations.

<https://analytics.scemaps.eu/>

contains detailed information, analysis and profiling about

# 92,564 tenders

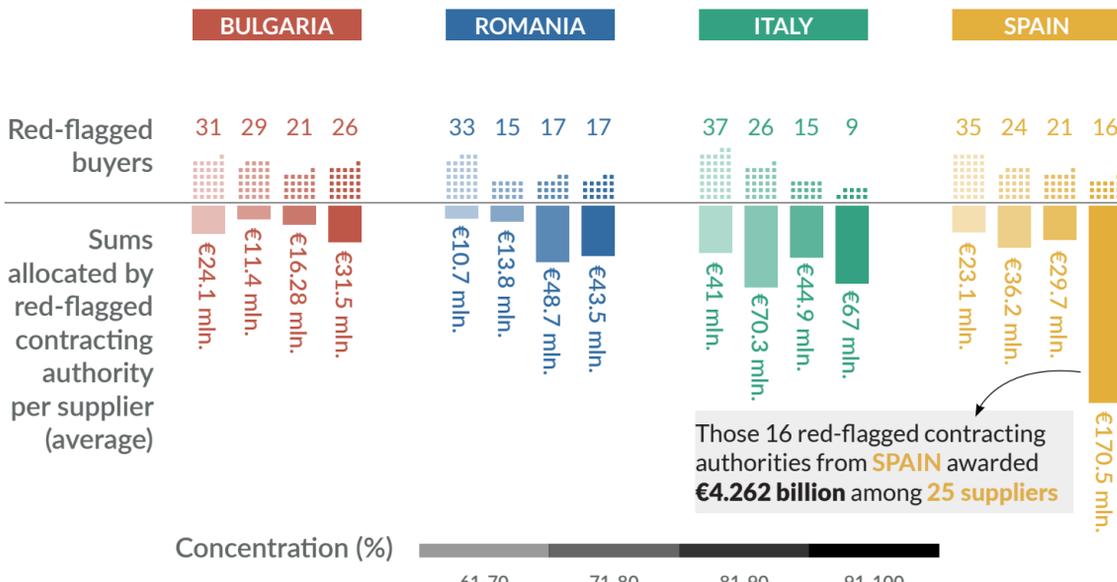
between 2011-2019 in Bulgaria, Romania, Spain and Italy related to **Construction, Pharmaceuticals and Fuels** that represents more than **€317 billion in public contracts**

SceMaps is aimed to demonstrate that an automated, real-time risk assessment of the thousands of public contracts awarded every day in Europe could make it easier to prevent corruption and conflicts of interest in public procurement through calculating

### 17 red flags for detecting suspicious behaviour in public procurement through data analysis

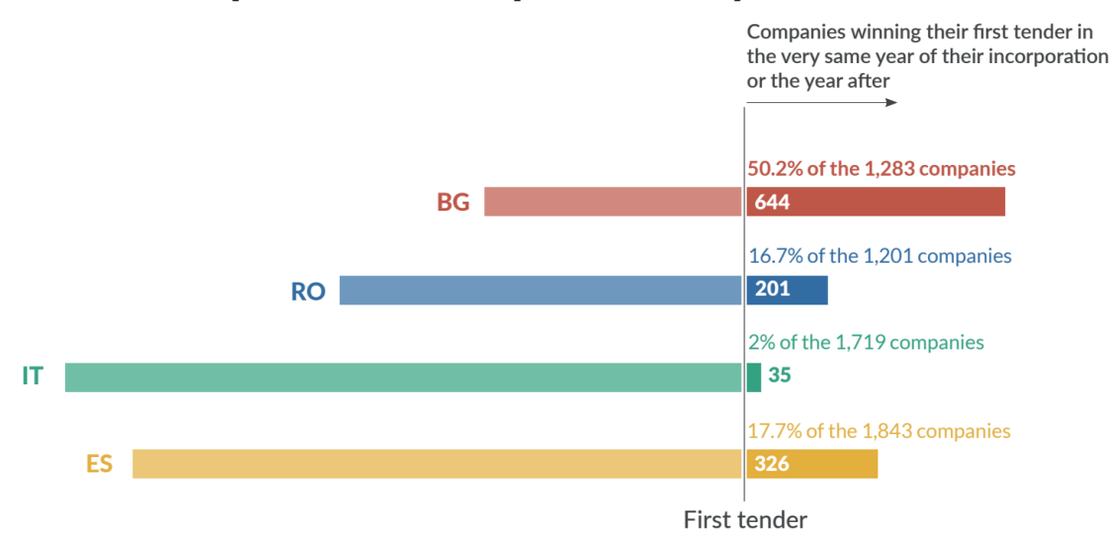
- Procurement exposure by revenue ratio
- Procurement exposure by net income ratio
- Procurement exposure by Number of employees ratio
- Procurement exposure by Total Assets ratio
- Incorporation Time Proximity Index
- Buyer Concentration Index
- Suspicious Activity News
- Government Terms Volatility
- Most Notable Recent Success per Tender Count
- Most Notable Recent Success per Value of Contract
- Most Notable Recent Success per Tender Location (Tender Count)
- Most Notable Recent Success per Tender Location (Value of Contract)
- Most Notable Recent Success per Contracting Entity (Tender Count)
- Most Notable Recent Success per Contracting Entity (Value of Contract)
- Recent Award Activity Increase per Tender Count
- Recent Award Activity Increase per Value of Contract
- Supplier Concentration Index

### Red-flagged contracting authorities (buyers) by the buyer concentration index



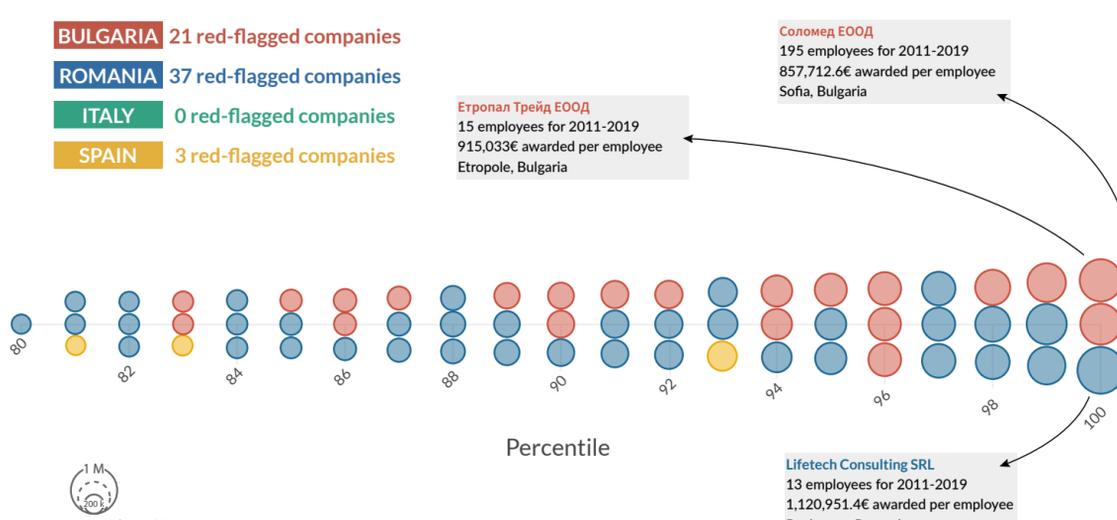
This red flag evaluates the concentration of sums awarded by a contracting authority (the buyer) to a particular supplier over a given period of time. The buyer concentration index represents a sign of a company's possible dependence on a particular public body.

### Red-flagged companies by the incorporation time proximity indicator



This red flag represents the potential risk of an inexperienced company winning a public tender. ¿Were those 1,206 companies created specifically to win a particular tender? This indicator calculates the number of companies winning their first tender in the very same year of their incorporation or the year after.

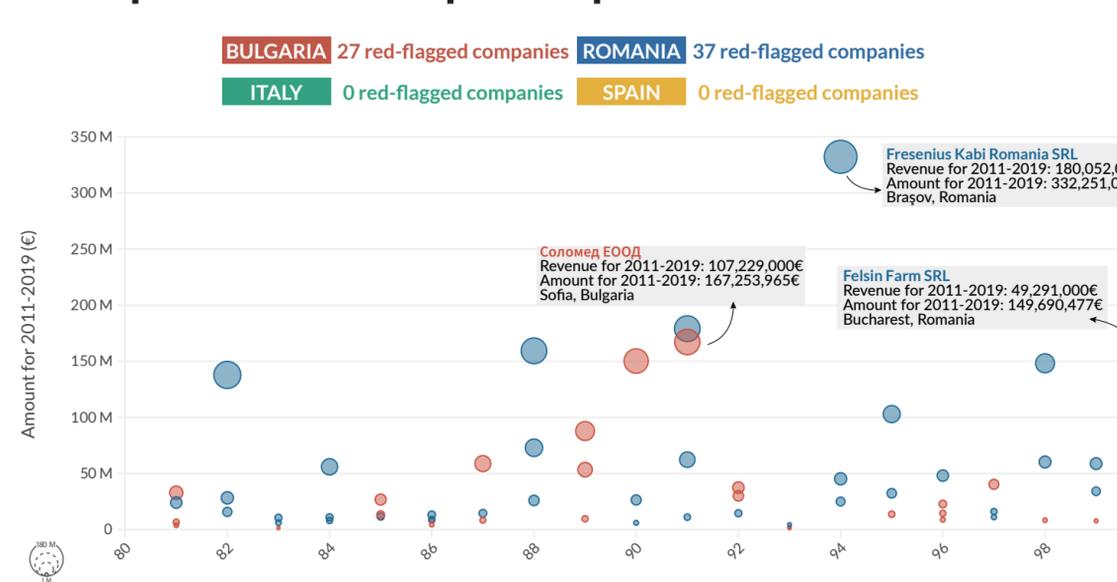
### Red-flagged companies by the procurement exposure per employee ratio



A company's revenue per employee ratio is one indicator of business efficiency. However, when this is too high compared to the peer group of companies, it may also indicate misconduct. This red flag calculates the average amount of tenders awarded per employee over a given period and ranks companies accordingly.

A higher rank means that the company has a lower number of employees compared to its peers with similar revenues from public tenders. This red flag targets the risk of employees compared with an insufficient number of employees winning tenders that require a larger workforce.

### Red-flagged companies by the procurement exposure per revenue ratio



This red flag calculates the share of revenue from awarded public tenders in the company's total revenue over a given period. It represents the risk of some companies do not operate in the free market and therefore cannot demonstrate viability without the support of public money.

Project members: