

**PERSPECTIVES of the
ROMANIAN PRECAST CONCRETE
MARKET | Positioning
compared to other European
countries**

**International Conference
"PRECAST CONCRETE SOLUTIONS"**

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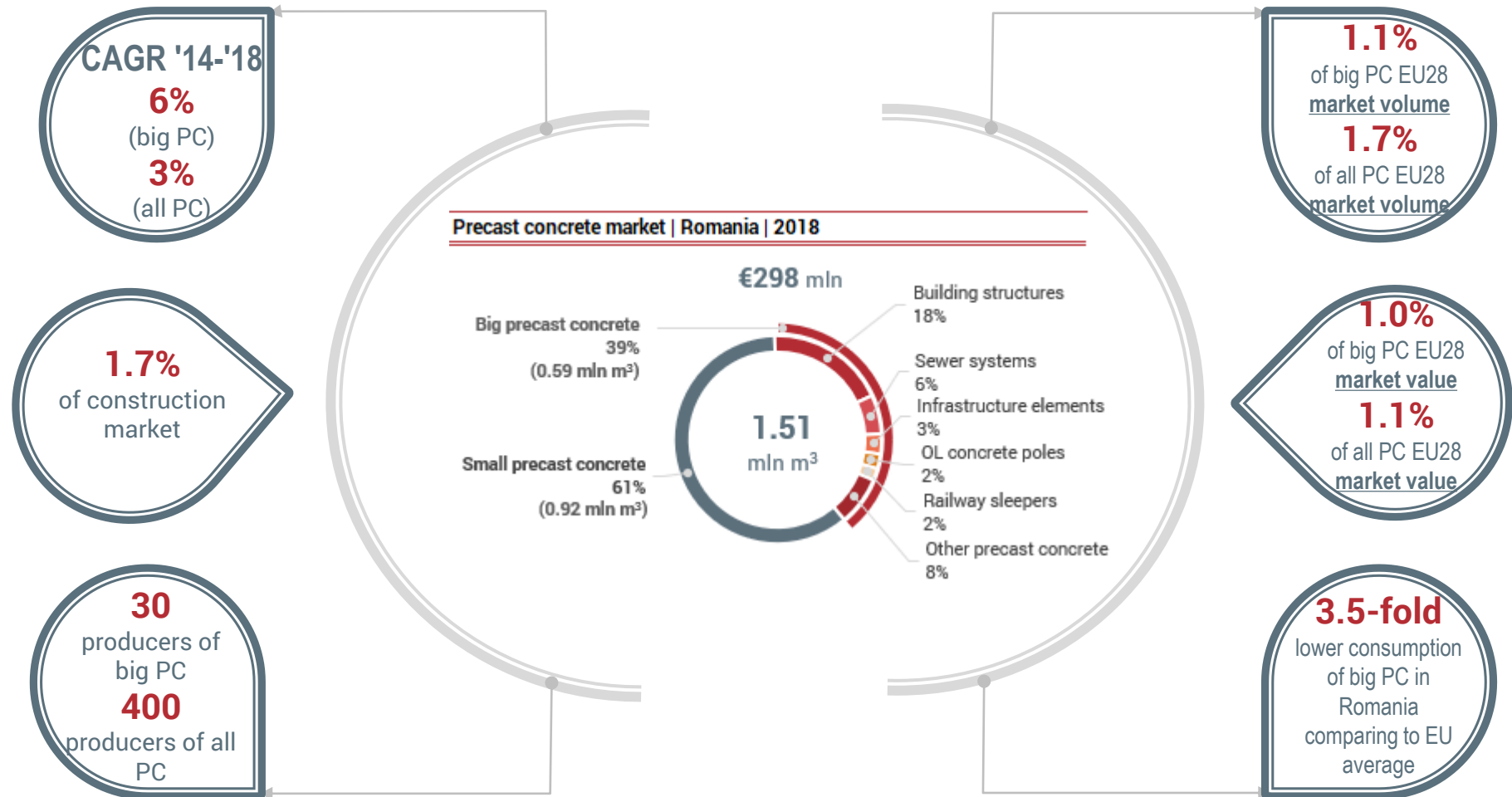
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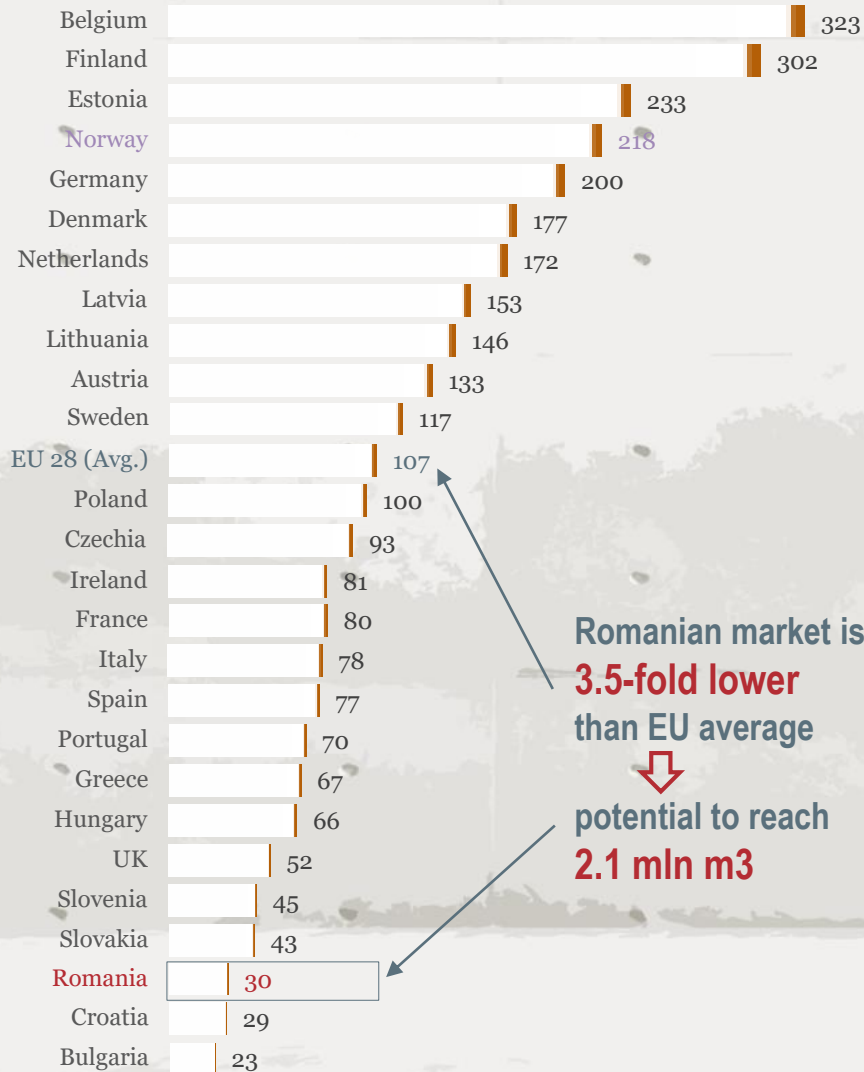
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1. Precast concrete market | Overview

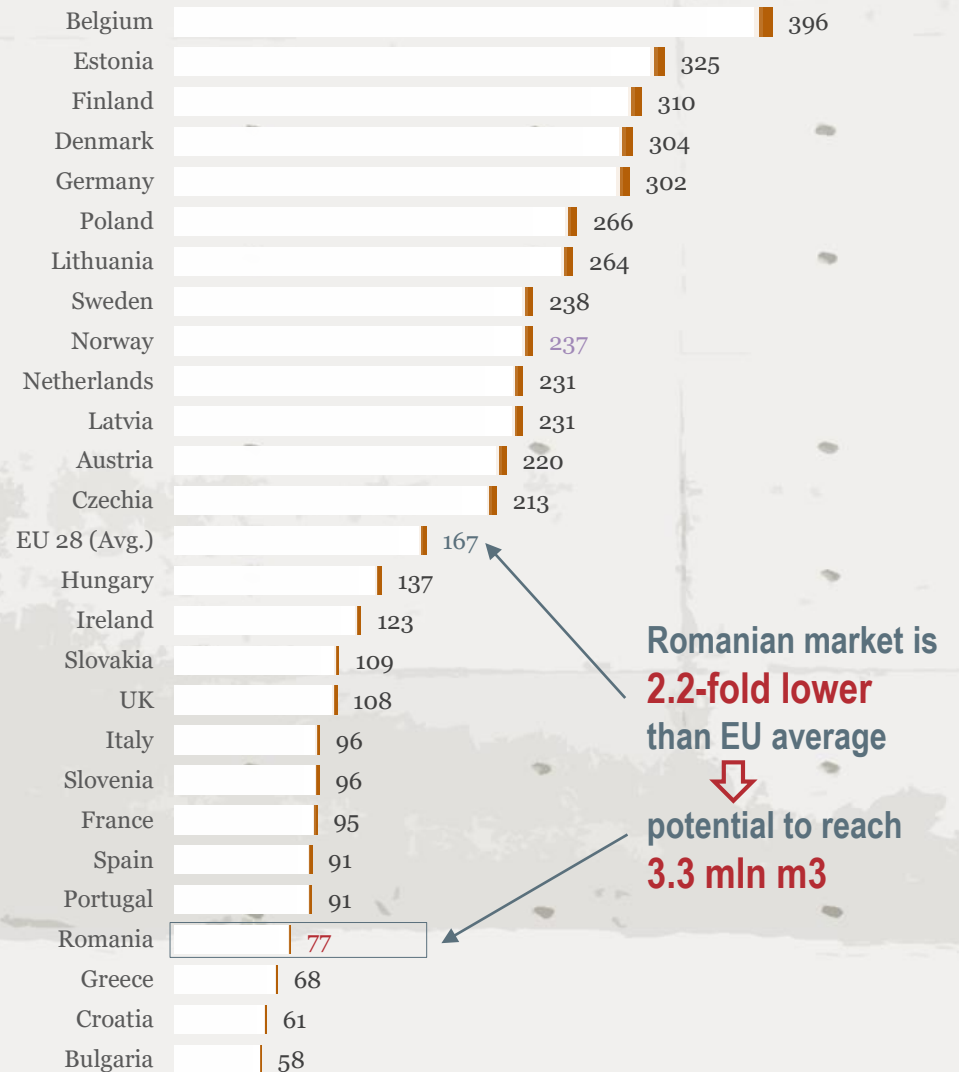


2. Position of Romanian market in Europe | 2018

Consumption of BIG precast concrete | M³/000 inhabitants



Consumption of ALL precast concrete | M³/000 inhabitants



3a. Road network development potential | positioning of Romania in Europe

Motorway density km/1 000 sqkm 2017	Road density km/100 sqkm year 2017
Netherlands → 66.5	→ 312.4
Belgium → 57.8	→ 505.0
Slovenia → 38.6	→ 188.0
Germany → 36.4	→ 65.5
Portugal → 33.3	→ 12.2
Spain → 30.7	→ 29.9
Denmark → 30.3	→ 170.3
Italy → 23.3	→ 82.8
France → 21.4	→ 200.7
Austria → 20.8	→ 165.7
Hungary → 20.8	→ 224.6
Greece → 19.1	→ 89.4
EU 28 (Avg.) → 18.3	→ 101.6
Czech R → 15.7	→ 164.1
UK → 15.6	→ 171.8
Ireland → 13.0	→ 139.4
Slovakia → 9.8	→ 89.8
Bulgaria → 6.6	→ 17.2
Poland → 5.2	→ 135.1
Lithuania → 5.0	→ 128.6
Sweden → 4.7	→ 47.4
Estonia → 3.4	→ 130.5
Romania → 3.2	→ 35.8
Finland → 2.6	→ 31.8
Macedonia → 10.1	→ 56.0
Serbia → 8.9	→ 51.4
Kosovo → 7.3	→ 15.3
Montenegro → 0.0	→ 49.6
Moldova → 0.0	→ 32.5

To reach the EU average, Romania should have **4,360 km of motorways (3,600 km more than now)**

To reach the EU average, Romania should have **242,200 km of modern roads (157,000 km more than now)**

Note: blue colored = non-EU countries

Sources: National Statistic Institutes and Eurostat

Importance of a big motorway project in precast concrete industry.

Pitești-Sibiu motorway project

2020-2023

122 km

€ 1.3 bn

- road nodes: 8
- tunnels: 9 (8 km)
- bridges: 71 (26 km)
- viaducts: 58 (20 km)
- sound absorbing panels: 42 localities (117 km)
- small bridges: 130

+ 2.2 mln to cement, 2.2 mln m³ RTU concrete, asphalt mixtures 1.1 mln to, steel 1 mln to

3b. Sewerage network development potential

Population connected to sewerage network | share by country | 2015

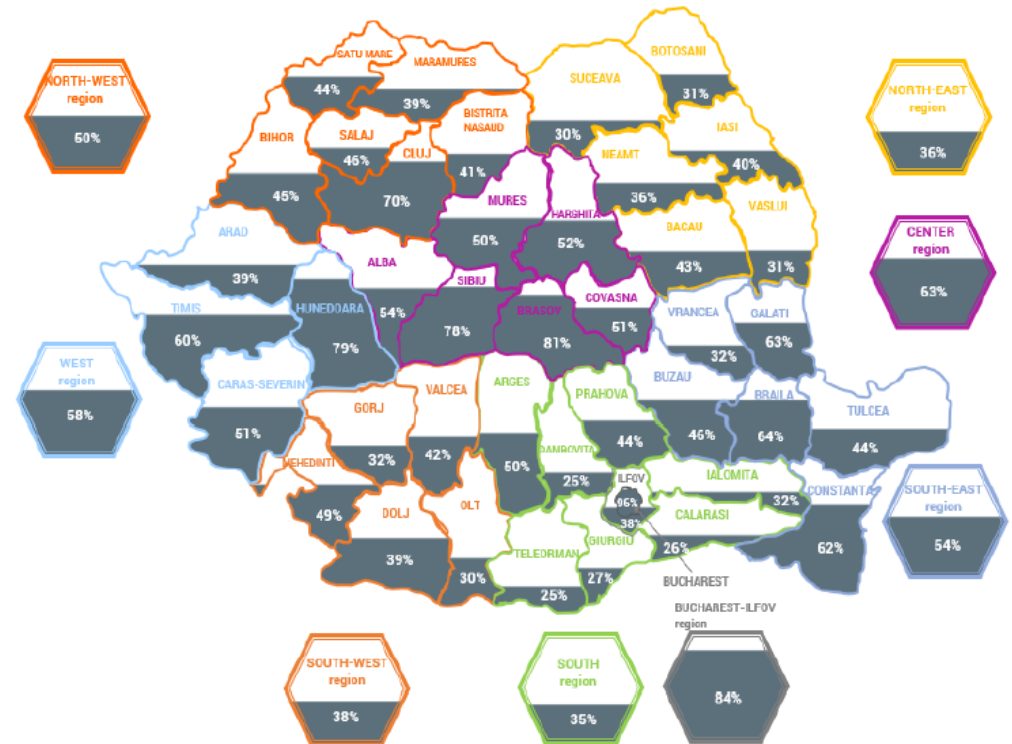
Netherlands	> 99.4%
UK	> 97.5%
Spain	> 97.2%
Ireland	> 97.0%
Germany	> 96.4%
Belgium	> 95.8%
Austria	> 95.2%
Poland	> 94.2%
Italy	> 94.0%
Greece	> 92.8%
France	> 92.1%
Denmark	> 91.3%
Sweden	> 88.0%
Czechia	> 85.2%
Portugal	> 83.4%
Finland	> 83.0%
Estonia	> 82.2%
Hungary	> 78.8%
Bulgaria	> 75.5%
Lithuania	> 72.5%
Slovakia	> 65.2%
Slovenia	> 62.6%
Croatia	> 54.6%
Romania	> 47.8%
Norway	> 86.2%
Serbia	> 58.7%
Bosnia H.	> 37.3%
Albania	> 19.0%

Non EU

- ▶ public utility, water and sewerage networks, not reaching >30% households
- ▶ new sewerage network annually = 2% of total population

Population connected to sewerage network | by county & region | 2017

- total ROMANIA: 51% -

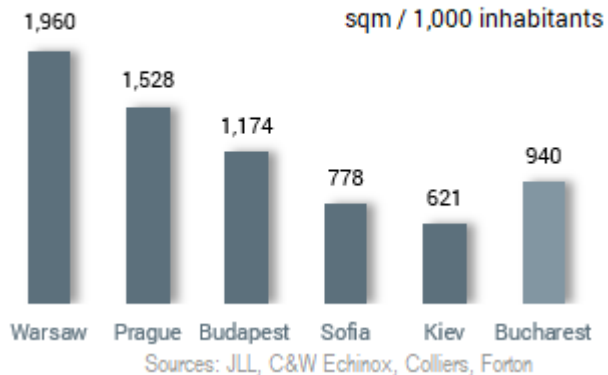


Source: InterBiz calculation, based on NIS data

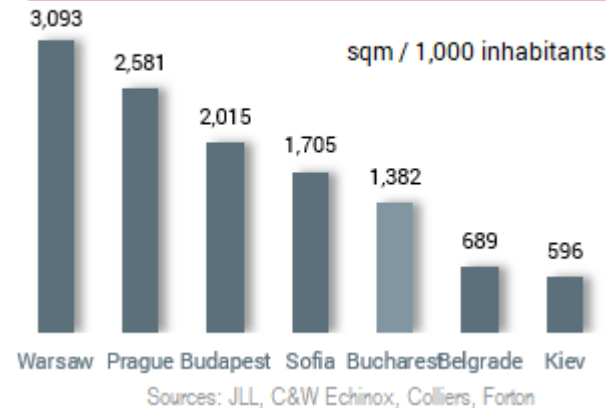
3c. Growth potential for buildings (logistics, offices, stores, dwellings)

...non-residential buildings

Stock of logistic spaces, Dec 2018



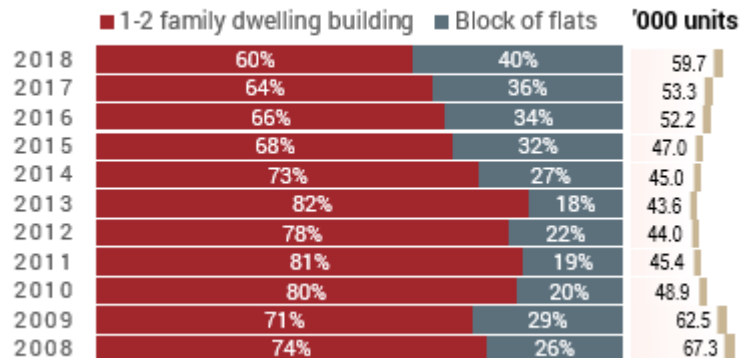
Stock of office buildings, Dec 2018



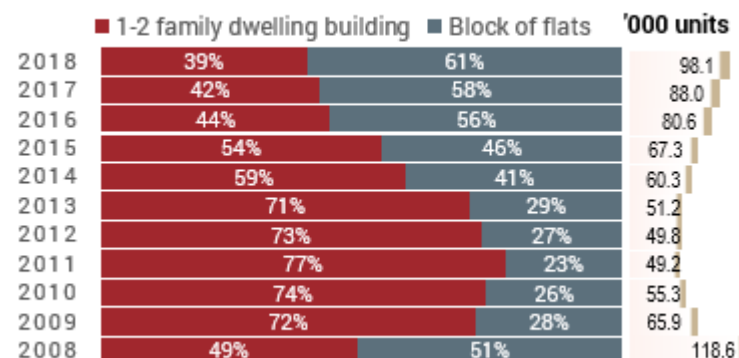
- ▶ Increasing retail & eCommerce market requires new modern stores and logistic spaces
- ▶ Further development of non-residential buildings

...residential buildings

Dwellings completed, by type of building | 2008 - 2018



Dwelling permits, by type of building | 2008 - 2018



- ▶ Very low utilization rate (<0.5%) of precast concrete in new residential buildings (especially block of flats)
- ▶ Low utilization of precast concrete in urban design of residential zones

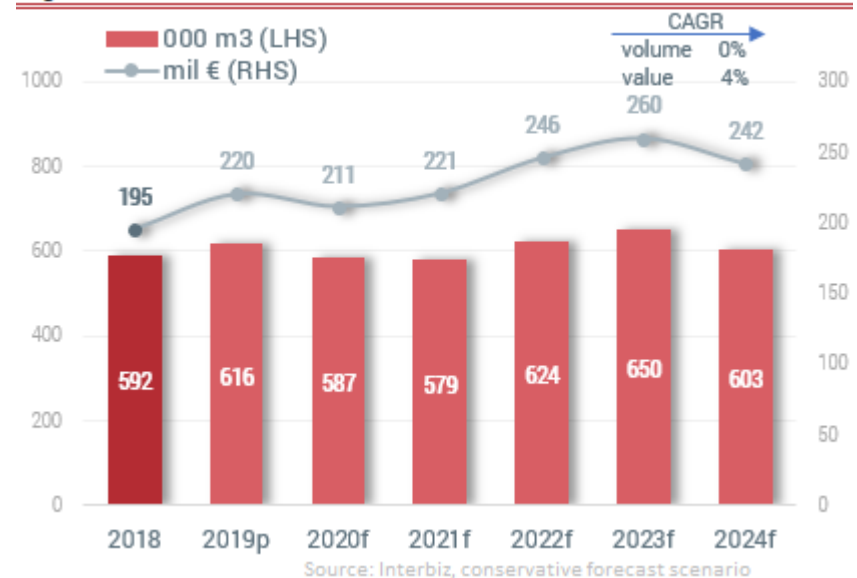
4. Perspectives of Big Precast Concrete Market in Romania

...conservative scenario

Premises

- ▶ decline of new industrial & logistic spaces in 2020 & 2021; the market reaches already the peak of this economic cycle
- ▶ starting of new motorway Pitesti-Sibiu, construction during 2020 - 2023 (3 sections)
- ▶ EU funds for the 2014-2020 program; absorption rate increasing "n+3" as the previous programming period
- ▶ ongoing Ro-NET project (broadband connection of villages)
- ▶ railway network improvement will record the same oscillating evolution, but will continue
- ▶ Investments in new sport arenas (especially football stadiums)
- ▶ the residential market remains reluctant to use prefabricated concrete

Big Precast Concrete market | volume & value | 2018 - 2024

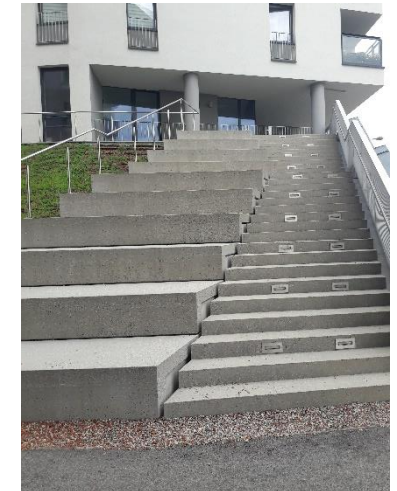


Different evolution, by range of product

CAGR 2018 - 2024

- ▶ building structures -3%
- ▶ infrastructure elements +15%
- ▶ sewerage systems +1%
- ▶ OL concrete poles -6%
- ▶ railway sleepers -4%
- ▶ other big precast concrete +1%

5. Samples of potential new precast concrete products for residential sector in Romania (urban design, stairs, balconies)



...all questions are welcome.
Thank you for your time!

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