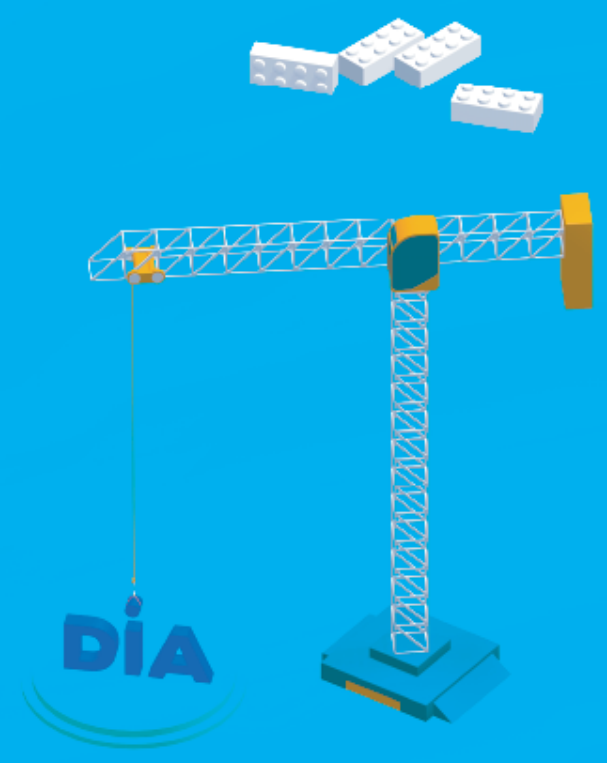


Dnipropetrovsk ^{ua}
region **NOW**

CONSTRUCTION

SECTORAL REVIEW



DIA

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ABSTRACT

The synergy of material production sectors, enterprises and organizations manufacturing construction products for the needs of the region's economy and its export abroad, in their interaction form the construction sector.

This sector includes:

- construction;
- industries for mining and production of construction materials, machinery and construction equipment;
- organizations providing scientific research and development works for the construction sector;
- state and regional regulation authorities for building legal relations, including state architectural and construction control authorities;
- construction education

Constituents of the construction sector are also the entities of the investment sector, namely investors of all forms of ownership, investment banks and insurance organizations, engineering organizations that provide relevant services to members of the construction legal relationships.

The real state of the construction sector, first of all, depends on the situation in the construction industry, the main task of which is the creation and renewal of fixed assets of the

material sector of the economy.

Over the last three years, the volume of products sold by construction companies of the region has increased by a quarter annually. As of the end of 2019, the construction industry accounted for 4% of the region's total sold products in monetary terms.

It's worth noting that according to the definition of the State Statistics Service of Ukraine construction products should be understood as engineering structures, residential and non-residential buildings.

In structure, the construction sector represents the specific economy of the region - the industrial center of Ukraine. In this sector economic activity is carried out by 4200 enterprises, providing employment to 42.4 thousand people. The average salary is \$483.

According to the results of 2019, almost half of all capital investments in Dnipropetrovsk region (\$1.65 bln) is directed to construction and this trend has been maintained since 2013. Almost a third of these funds were invested in the development of the region's infrastructure from the state and local budgets.

In the past year, 414 100 m² of residential real estate was put into operation. In experts

opinion, it is investments in housing construction allow achieving a high multiplier effect.

It is believed that as a result of housing construction volume growth by UAH 1, the total effect of the gross output of the economic sectors is UAH 2.84, and GDP growth in the overall economy is on average UAH 1.06.

This is due to the fact that the development of housing construction is closely linked to other sectors of the economy, which leads to increased demand in related industries and determines the need for their accelerated development, especially in the construction materials industry, engineering, transport, housing and communal services, metallurgy, chemical industry, woodworking and light industry, etc.

The construction sector is a kind of indicator of the region's economy development level, as it determines the state of many spheres for which it is the material basis.

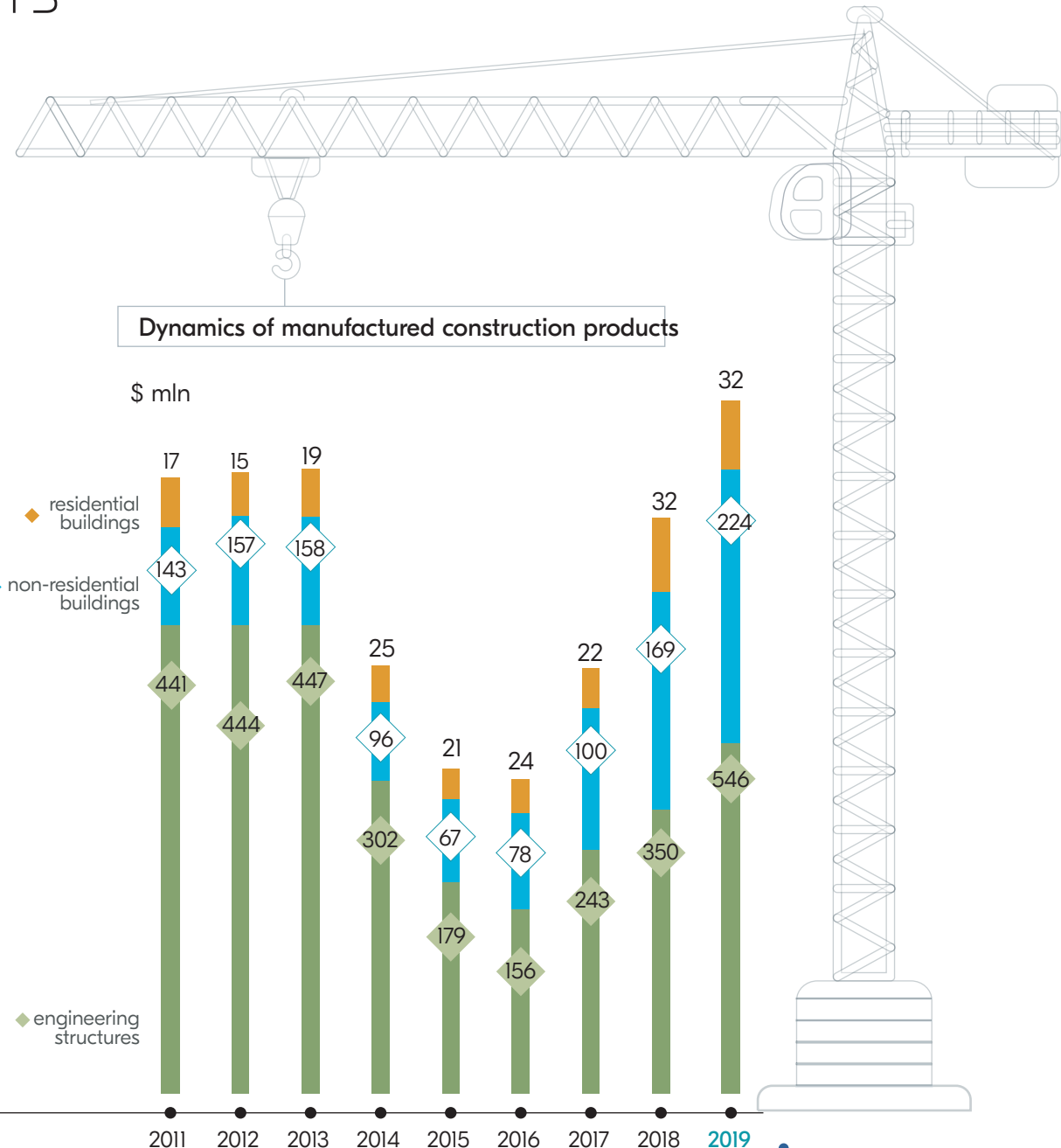
CONSTRUCTION. MANUFACTURED PRODUCTS

Dnipropetrovsk region occupies more than 12% of the Ukrainian production market of construction products (\$802.3 mln). This indicator provides the region with the 2nd place among the regions of Ukraine.

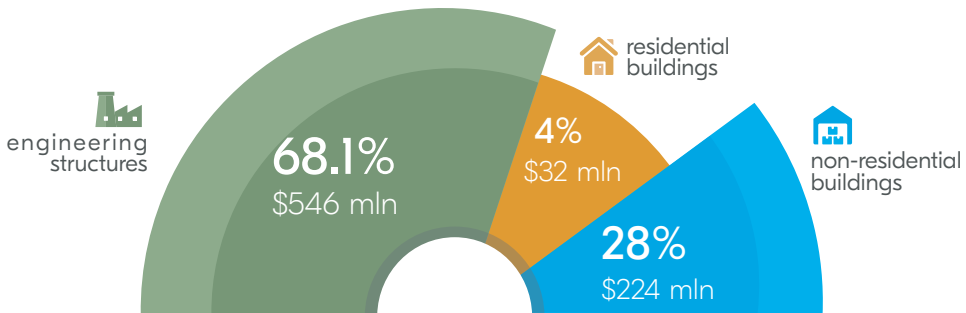
In 2014, with the beginning of the military conflict in Eastern Ukraine, there was a decline in production. The most crisis years for the industry were 2015-2016, when the decline in production volumes was more than 2.5 times.

Currently, for the fourth year in a row, the positive dynamics of production volume growth is observed - by 25% annually. Indicators for 2019 far exceed the pre-crisis.

Engineering structures are leading in the structure of manufactured construction products for the last year - almost 70%.



Structure of manufactured construction products



CONSTRUCTION. FOREIGN TRADE

The foreign trade turnover of construction (\$2 862.1 thous.) is only 0.36% of the region's production volume of construction products. A low indicator of this ratio testifies the orientation of the industry entirely towards the domestic market.

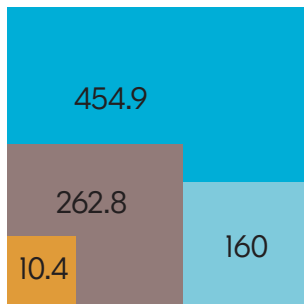
In 2019, the region's construction companies entered the EU market. Preparatory and construction works amounting to \$717.7 thous. were carried out. During the construction abroad, under subcontracting, the companies ordered construction products (installation works and equipment of buildings) from non-residents of Ukraine in the amount of \$1.974 thous. This fact has formed a negative trade balance of the industry.

Key factor for the full entry of Ukrainian construction companies into the EU markets is compliance with the relevant Regulations and the use of EU-certified materials and works.

The improvement of the situation will be facilitated by the implementation of EU Regulation № 305/2011 in Ukrainian legislation, within the framework of the adoption of a separate law in the field of construction, harmonized with EU norms.

It is worth noting that exports of construction products decreased by 45% compared to the previous year, while imports increased by 9 times due to the ordered construction abroad.

EXPORTS OF CONSTRUCTION \$888.1 thous.



0.6% from the region's exports
0.9% from the all-Ukrainian indicator

Construction in Ukraine to order by non-residents

- Construction works
- Electrical installation works

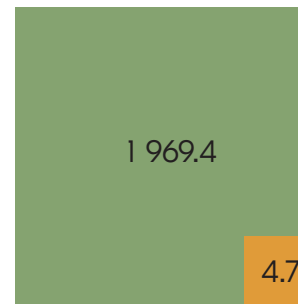
Production abroad

- Preparatory for construction works
- Construction works

Exporting countries:

- Moldova
- Lithuania
- Slovakia
- Poland
- Bulgaria
- USA

IMPORTS OF CONSTRUCTION \$1 974 thous.



0.8% from the region's imports
5.5% from the all-Ukrainian indicator

Ordering of construction from non-residents abroad by enterprises of the region.

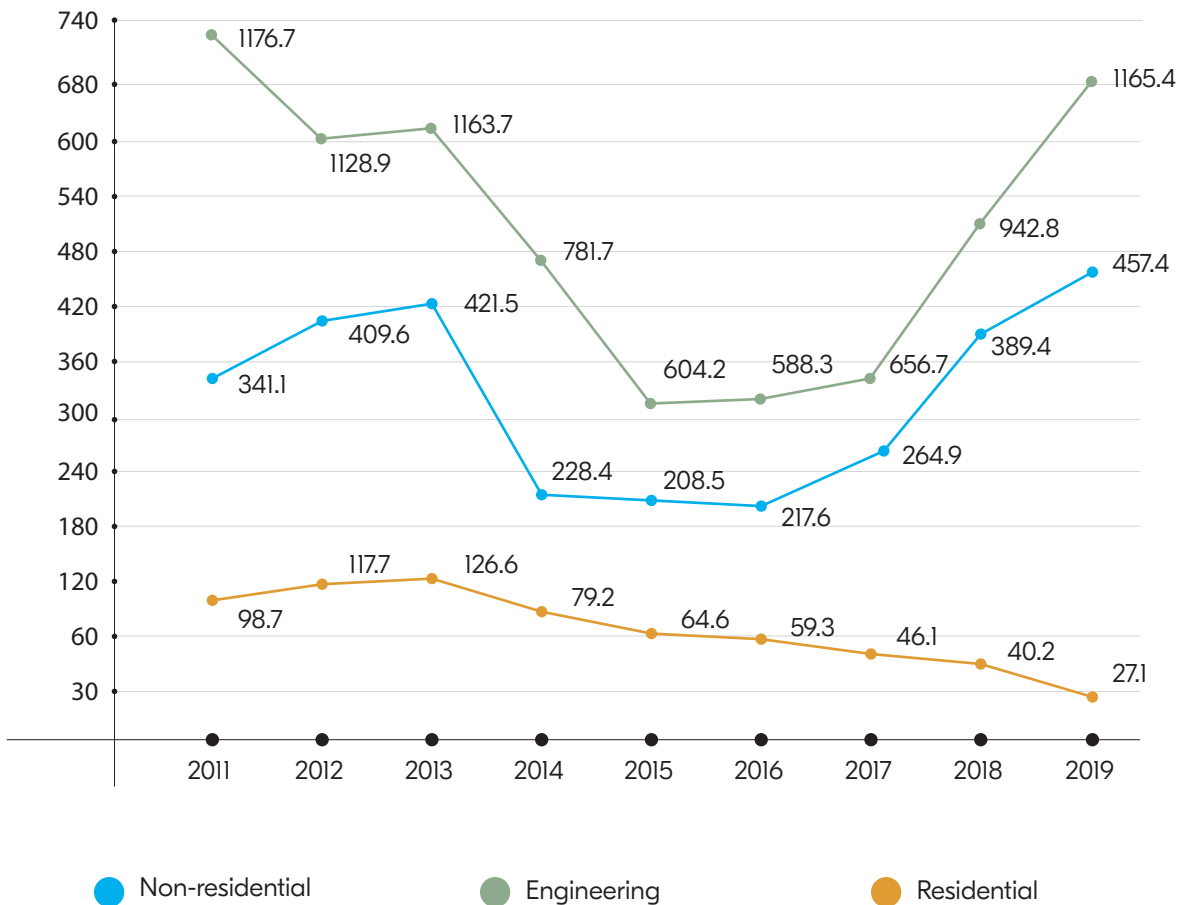
- Installation works
- Equipment of buildings

Importing Countries:

- Switzerland
- Slovenia
- France
- Poland
- Sweden

CONSTRUCTION. INVESTMENTS

Dynamics of capital investments in construction products manufacturing, \$ mln



Capital investment in construction is the leader (44%) of the types of assets that are most invested in Dnipropetrovsk region. In 2019, for the first time since 2011, the total amount of investments in construction exceeded the pre-crisis level and reached \$1.65 bln. The growth rate of construction of buildings and non-residential buildings is preserved, where companies of the region (80%) and budgets of all levels (12.9%) are the investors.

Foreign direct investment in construction is mainly carried out by companies that cooperate with the enterprises of the mining and metallurgical complex, are contractors in the implementation of infrastructure projects and build their own logistics and retail facilities. FDI in construction has been at a level \$30 mln since 2015.

TOP 5 construction companies that made capital investments:

- LLC "KRYVORIZKA BUDIVELNA KOMPANIIA"
- PISC "SCIENTIFIC PRODUCTION ASSOCIATION"SOZIDATEL"
- LLC "DONBAS INDUSTRIAL-TRANSPORT COMPANY"
- LLC "SK "STROYINVEST"
- PISC "STROITEL-P"

Construction companies with foreign investments:

- LLC "BUDIVELNA KOMPANIIA "OLVIIA"
- LLC "KOKSOKHIMREMONT"
- LLC "PIVDENNO - SKHIDNA BUDIVELNA KOMPANIIA"
- LLC "BUDIVELNE UPRAVLINNYA AGLOBUD-4"

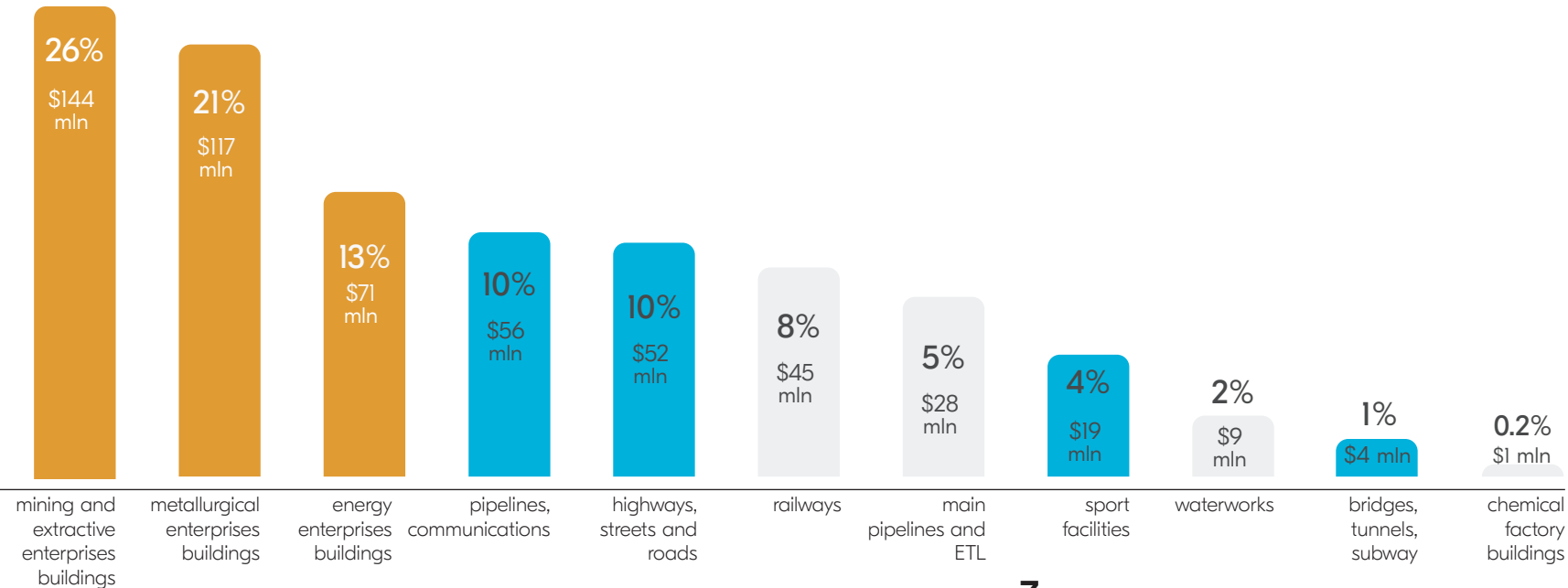
CONSTRUCTION. ENGINEERING STRUCTURES

The total volume of manufactured engineering structures in 2019 increased by more than 33%, amounting to \$546 mln, which is almost 14% of the all-Ukrainian indicator.

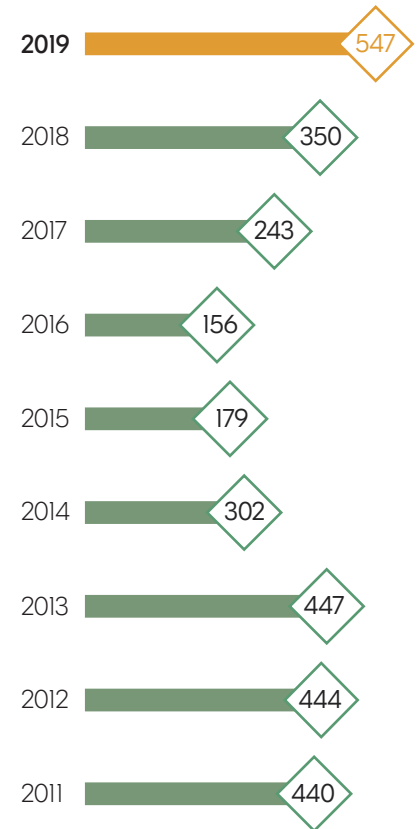
The region's priority in the production of engineering structures is ensured by investments of enterprises of mining and metallurgical and energy complexes (about 50%) and financing of infrastructure development by local and state budgets (about 25%).

Annual growth of 30% since 2017 allowed to exceed pre-crisis indicators in 2019.

Considerable volume of budgetary funding is directed towards the reconstruction of road infrastructure and water supply. Pointed tendency will continue in the future, as this issue remains relevant both for the development of amalgamated territorial communities and for the region as a whole.



Dynamics of engineering structures construction, \$ mln



CONSTRUCTION. NON-RESIDENTIAL BUILDINGS

The section of non-residential construction objects is mainly focused on the industrial and agricultural sectors, where more than 61% of non-residential buildings were constructed in total.

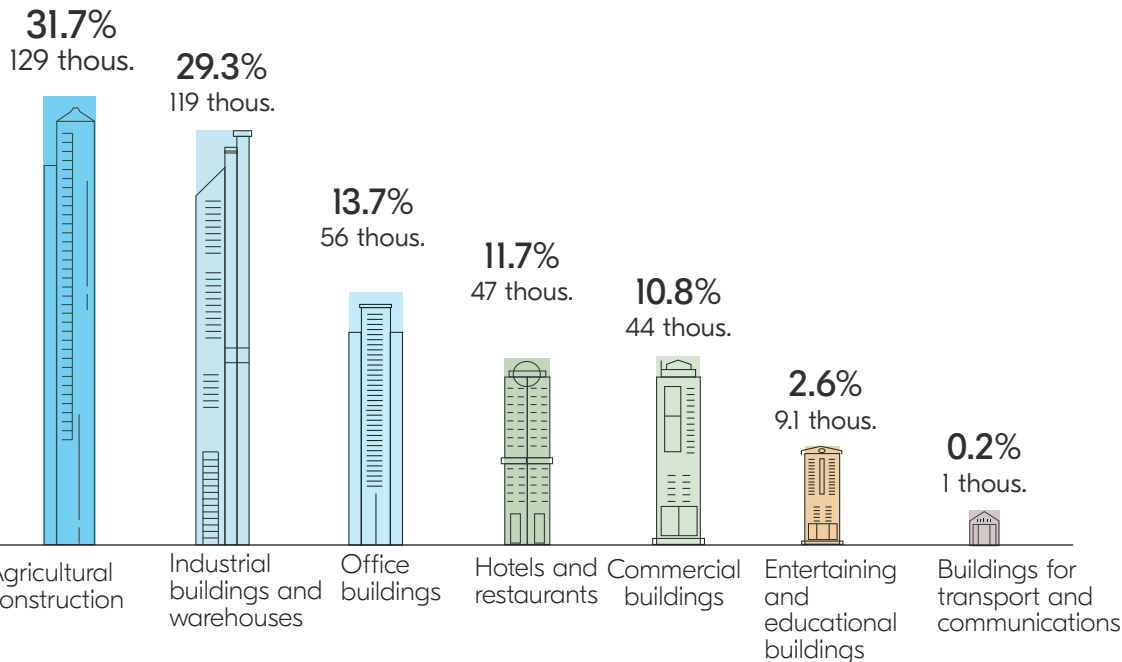
The leading positions of non-residential construction objects in the agricultural sector are determined by the Government support programs and development of enterprises' own industrial, logistics and processing infrastructure (in particular, granaries, refrigerators for fruit, berry and meat products storage).

Low vacancy rate of free space and the strategy of the majority of companies to implement investment projects in new, modern and technologically advanced non-residential real estate objects caused setting into operation almost 30% of non-residential buildings.

Pointed tendency is confirmed by the price growth rate, which amounted to 14.8% last year.*

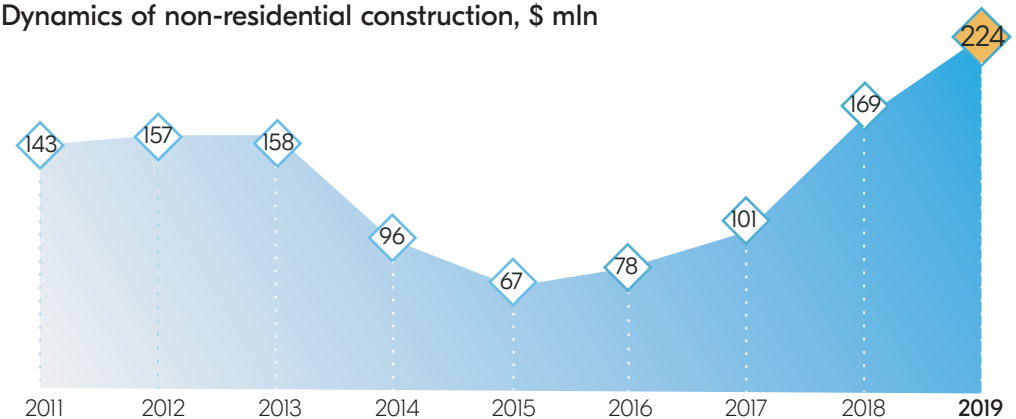
At the same time, construction in the office and hotel-restaurant segments became advanced in terms of growth, including renovation. Each of them increased by 11% in 2019 and, accordingly, took the first and second places in Ukraine by the volume of put into operation areas.

Structure of put into operation non-residential buildings



*Decrease in inflation rate had a positive impact on the rate of price increase for non-residential construction: 2018- 40%, 2019-14.8%.

Dynamics of non-residential construction, \$ mln



CONSTRUCTION. RESIDENTIAL BUILDINGS

Housing construction is the only one in the industry, showed a decrease in production and according to results of 2019 it amounted to \$31.9 mln

At the same time, the number of put into operation housing construction areas increased by 31.6%. Their volume amounted to 414.3 thous. m² and exceeded the pre-crisis indicators.

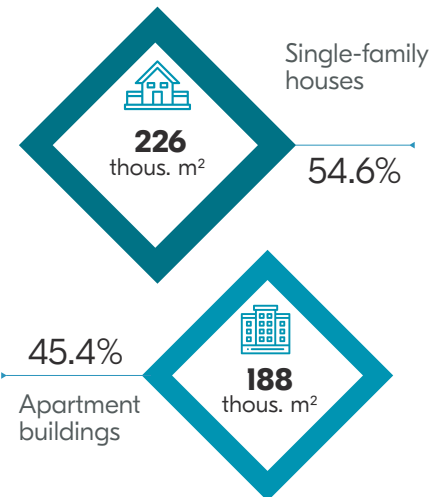
In 2019, there was a 2.3-fold increase in the segment of single-family houses construction. This was due to the putting into operation of previously constructed housing under a simplified system of legalization of private construction.

Deferred demand will be a prerequisite for growth, first of all, in the segment of affordable but modern housing. It should be competitive relatively to housing on the secondary market and include the advantages of the latest planning of additional housing infrastructure.

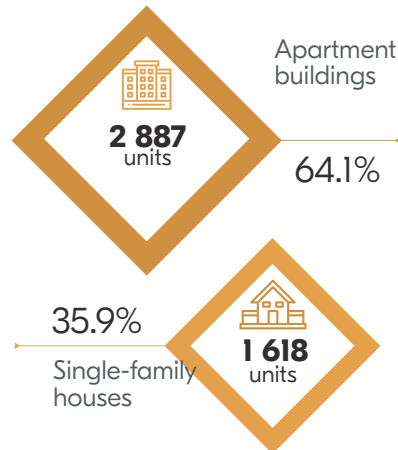
This is confirmed by a significant impact of the population on the development of housing construction. According to the results of 2019, 50% of investments in housing (\$16 mln) were provided by residents.

Structure of housing construction

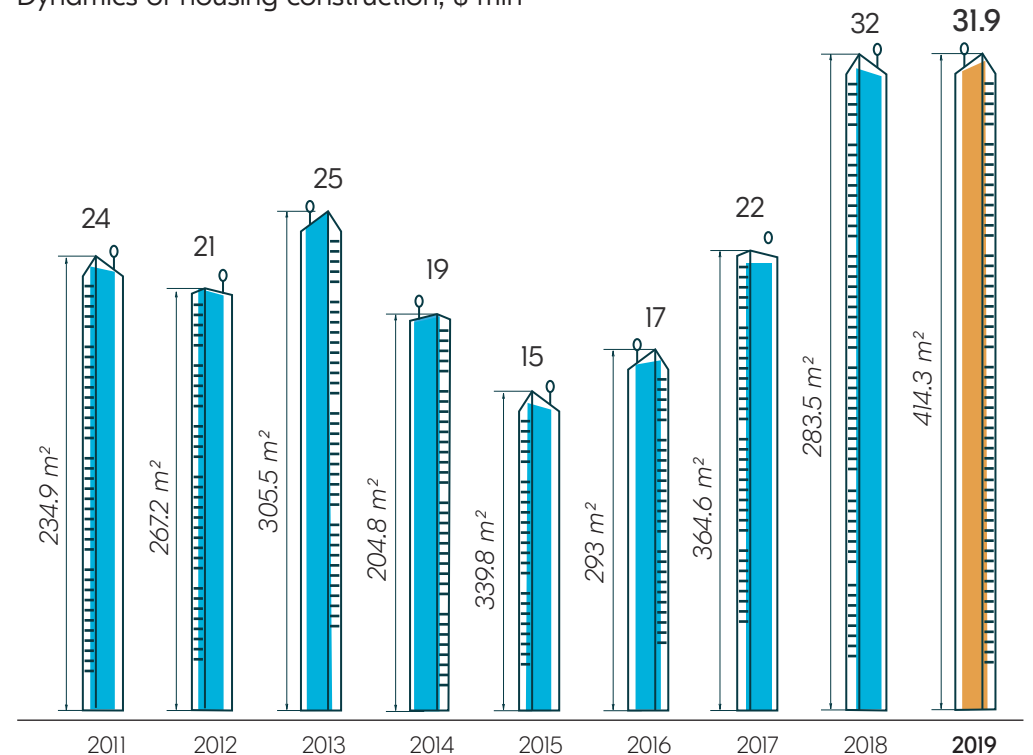
By area



By quantity

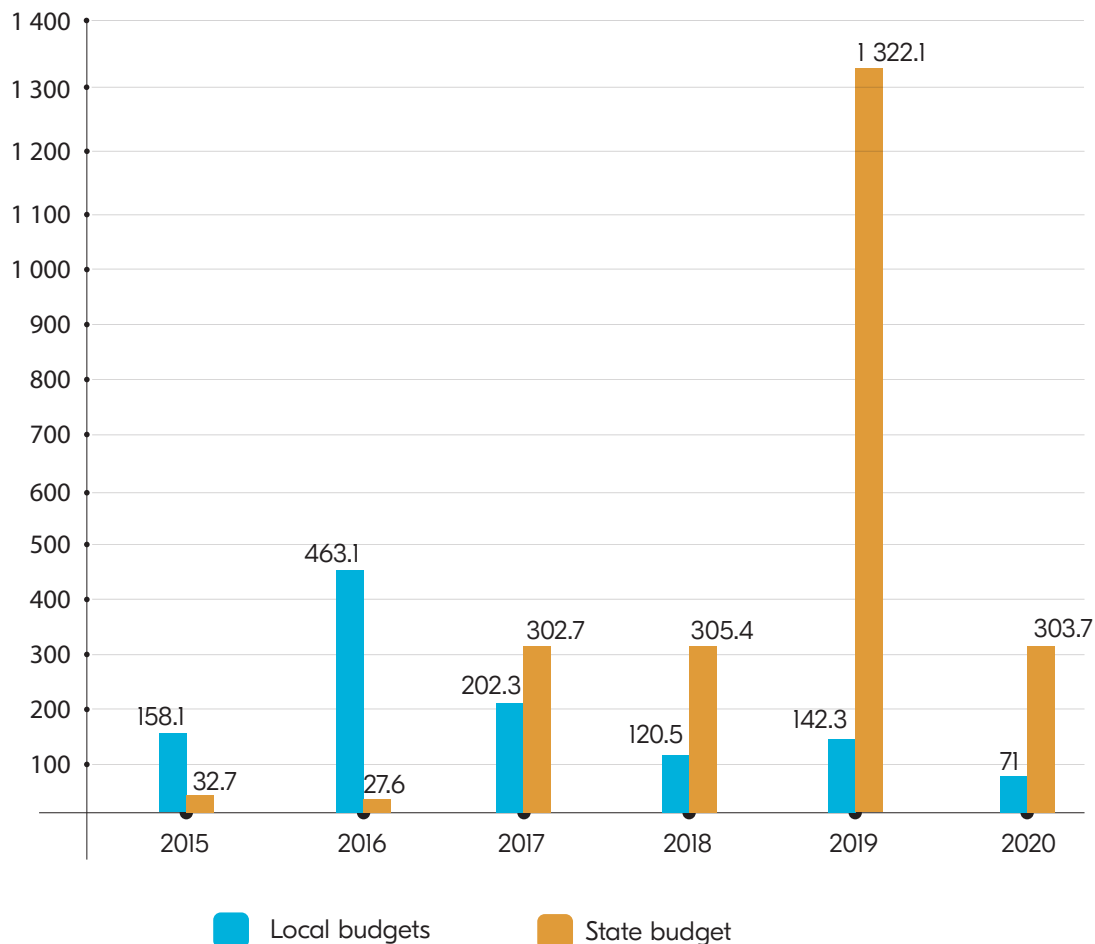


Dynamics of housing construction, \$ mln



CONSTRUCTION. GOVERNMENTAL SUPPORT

Financing the «Affordable Housing» program from state and local budgets, \$ thous.



The existing governmental programs are aimed at providing affordable housing for specific population groups and have no significant impact on market development.

The coordinator of these programs in Dnipropetrovsk region is the regional department of State Fund for Support Youth Housing Construction, offering 286 apartments in 8 residential buildings, which are built by private companies. In 2020, there was a sharp reduction in funding of these programs from the state budget. In particular, the provision of affordable housing programs in Dnipropetrovsk region decreased by 4.3 times and amounted to \$303.7 thous. Accordingly, the implementation of these programs in the future will be focused on local budgets, the share of which increased by 23.5% in affordable housing provision.

This year, the regional program of housing construction development (preferential loans for youth) in Dnipropetrovsk region will be continued. The program allocates \$48 thous.in 2020.

A similar program at the expense of the city budget is implemented in Kryvyi Rih.

Announced by the government, the "Affordable Mortgage" program is intended to improve the situation in the segment of affordable housing and provides for reducing the lending rate to 10%.

CONSTRUCTIONAL MATERIALS. PRODUCTION

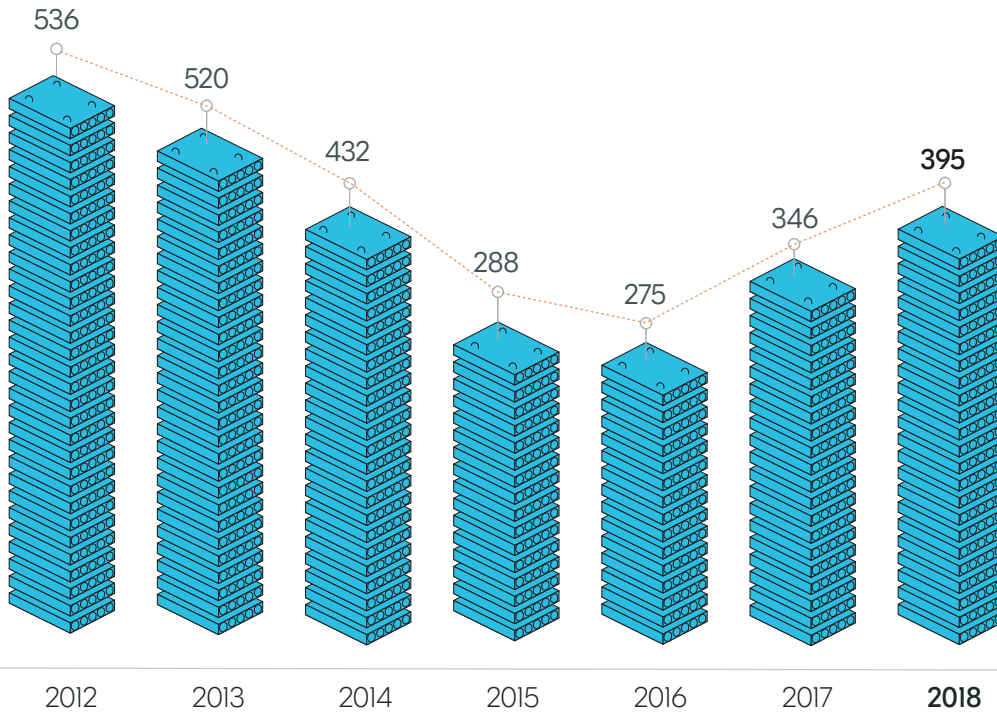
Enterprises of Dnipropetrovsk region in 2018 * sold construction materials worth \$394.5 mln, which is 16.7% of the total market volume of Ukraine.

The dynamics of realization of building materials fully conforms to the dynamics of construction, which is the main customer of the industry. At the same time, the growth rate of sold construction materials is lower than the growth rate of construction, which is compensated by construction materials import.

Enterprises of the region produce crushed stone, reinforced concrete and metal structures, wallpaper, dry mixtures, insulation and roofing materials and ceramic products.

Construction materials in which Dnipropetrovsk region has a significant market share of Ukraine:

Dynamics of sold construction materials volume, \$ mln



*Information on volumes of sold products for 2019 will be published by the statistical authorities in June 2020.



36% varnishes and



25% windows and doors, plastic and aluminium glass units



16.8% concrete



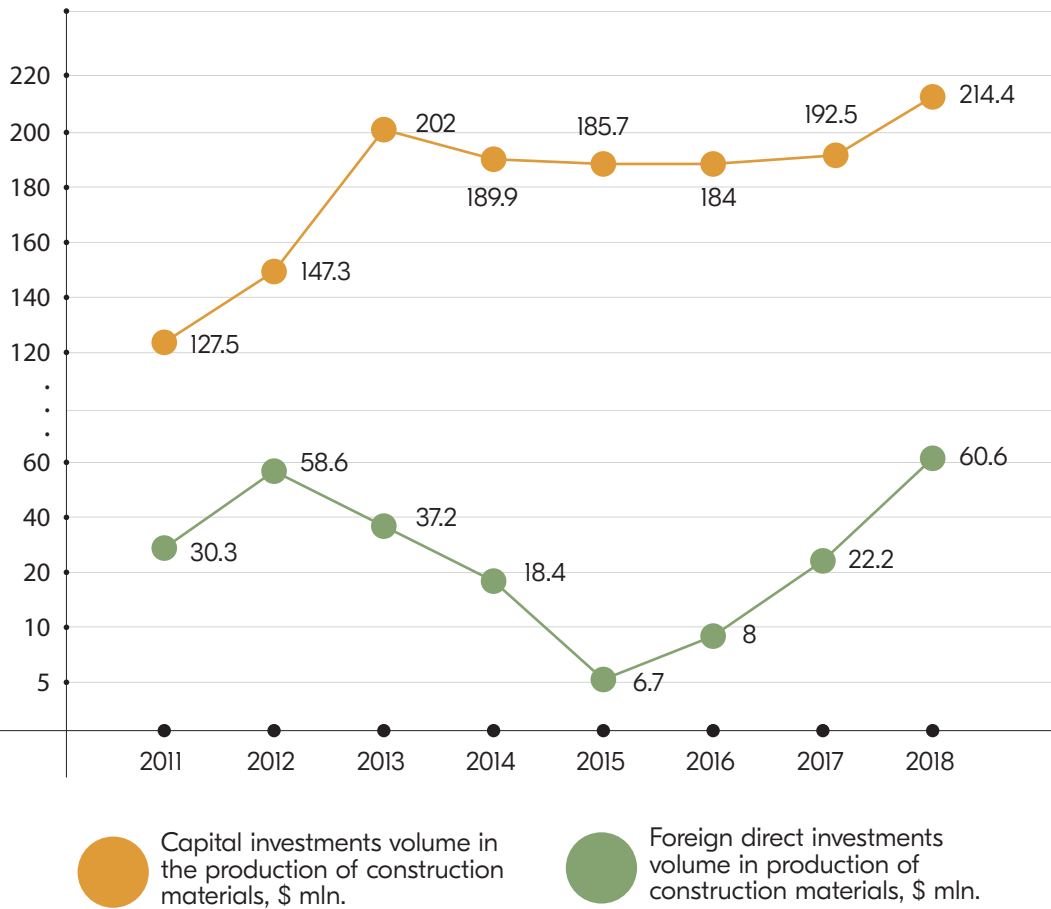
10% construction sands



6.7% brick and concrete blocks

Production of construction materials is a promising area for investment, as a significant part of them is imported.

CONSTRUCTIONAL MATERIALS. FOREIGN ECONOMIC ACTIVITY



Production of construction materials is a sector in which a wide range of foreign investors are represented and actively invest in creating of new innovative products. In 2018, Sweetondalle (construction roofing and insulation materials) and Beta Kimyasal Maddeler Yatirim A.S. (plastic windows and fittings) entered the Ukrainian market. In 2019, the investment project for production of construction mixes was implemented by Caparol.

Foreign trade in construction materials has negative indicators. Due to the high share of imports, which amounts to 34.3% of the volume of construction materials sold by the companies of the region, the deficit or lack of these products manufacture in Ukraine is compensated.

Export		Import	
\$5.1 mln	Articles from stone, gypsum, concrete	\$62.8 mln	Ceramics
\$15.1 mln	Ceramics	\$44.3 mln	Glass and glassware
\$20.4 mln	Glass and glassware	\$28.3 mln	
Total:	40.6	135.4	
Belarus Moldova The Russian Federation Spain	Germany Poland Romania	China Austria The Russian Federation Bulgaria	Germany Poland Spain Italy

*Information on capital investments for 2019 will be released by the statistics authorities in May 2020

- Articles from stone, gypsum, concrete
- Ceramics
- Glass and glassware

ARCHITECTURE AND ENGINEERING

Engineering companies of Dnipropetrovsk region that are engaged in designing of buildings and structures, have both a wide spectrum of performance of design works, and are concentrated on certain branch of economy. In particular, the region has the largest engineering companies in Ukraine, which carry out the enterprise design of mining and chemical industry, metallurgy, agro-industrial complex and transport infrastructure.

Engineering includes the provision of design and engineering design services in the construction of buildings and structures of various industries, providing systems for these objects, as well as activities in the field of geodesy.

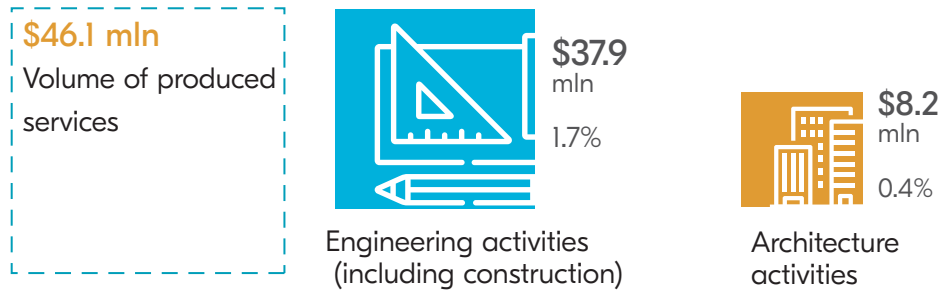
Statistical authorities provide information on engineering as a whole, without dividing it into the specified areas (i.e. engineering in construction, mechanical engineering, electrical engineering, etc.).

Engineering services of the region occupy 6.3% of the Ukrainian market. In the region 1630 design engineers (10% of all-Ukrainian indicator) and 391 experts (7.1% of the total amount in Ukraine) are certified.

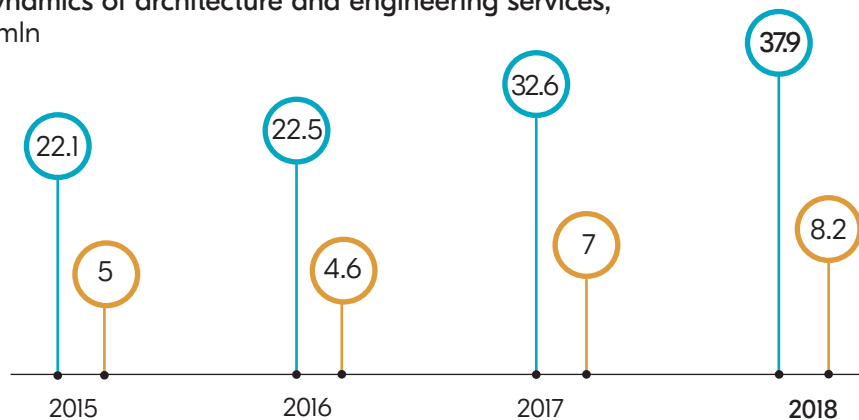
Region's architectural studios and bureaus form 5% of the market for the mentioned services of Ukraine and are focused on the renovation of community territories, formation of new "faces" of cities and provision of comfortable living conditions.

The priority for the development of the industry is the transition to design in accordance with world practice, using the latest software products and based on

Structure of construction services in 2018, \$ mln



Dynamics of architecture and engineering services, \$ mln



Engineering companies :

- SE "Dniprovsky Project Institute"
- SE "Ukrainian Institute for Iron & Steel Works Designing"
- Project Institute " PRYDNIPROVSKYY PROMBUDPROEKT "
- SE "State Institute for Design of mining enterprises "Krivbassproekt"
- LLC SPE "Intechproekt"
- Danieli Heavy Machinery LLC
- Firefly Aerospace Ukraine
- Skoda Transportation Company

Architectural companies

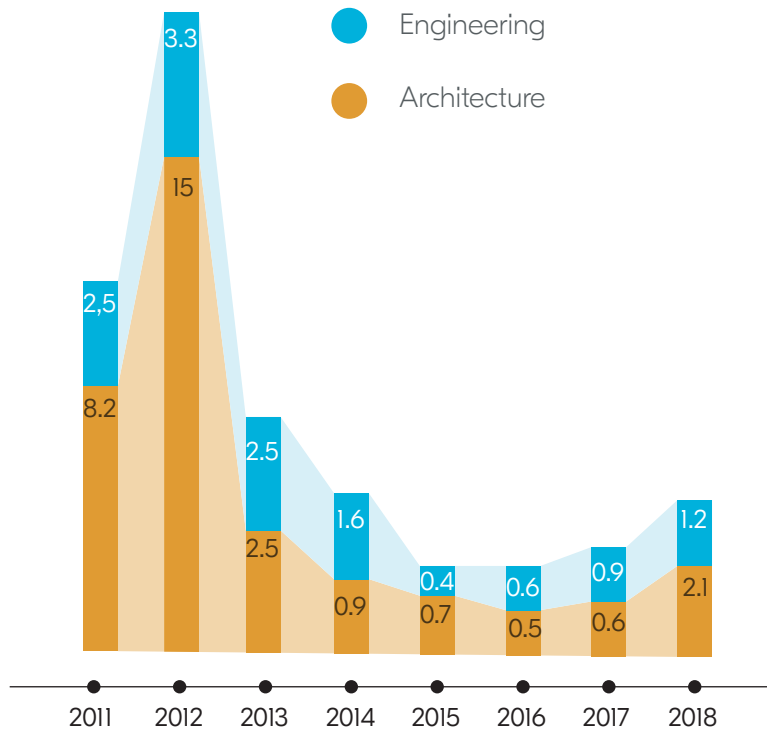
- Architectural company "MART"
- Architectural company TT
- IDEOMA architecture studio
- Architectural and design studio "Gratage-Visual"
- Home Transformer
- Valentirov@Partners
- DP-INVEST

ARCHITECTURE AND ENGINEERING. FOREIGN ECONOMIC ACTIVITY

Relevance of the architecture development is supported by the industry leadership in terms of capital investments in architecture and engineering, as well as its entry into foreign markets.

At the same time, the foreign trade balance in the field of engineering is negative; this is evidenced by the openness of the pointed market. In 2018, all 58 parts of EUROCODE came into force in Ukraine, which removed restrictions on design according to construction codes harmonized with EU regulatory documents.

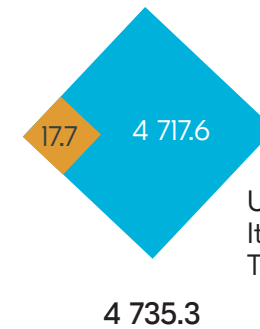
Volume of capital investment in architecture and engineering, \$ mln



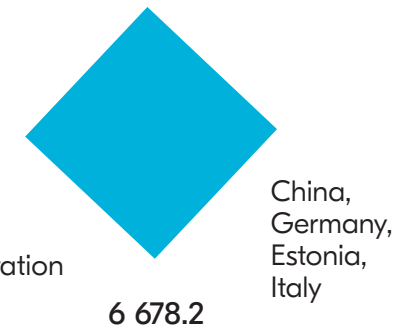
This fact has simplified the access of European designers to the Ukrainian market.

Higher education institutions of Dnipropetrovsk region have already started training specialists according to EUROCODE standards.

Exports, \$ mln



Imports, \$ mln



◆ Engineering ◆ Architecture

Companies that have made capital investments in architecture and engineering.

LLC "Lenhiprommez- Dnipro "

*Information on capital investment for 2019 will be released by the statistics authorities in May 2020.

CONSTRUCTION SECTOR. PROFESSIONAL TRAINING

The labor market in construction is characterized by certain features and industry professional specificity.

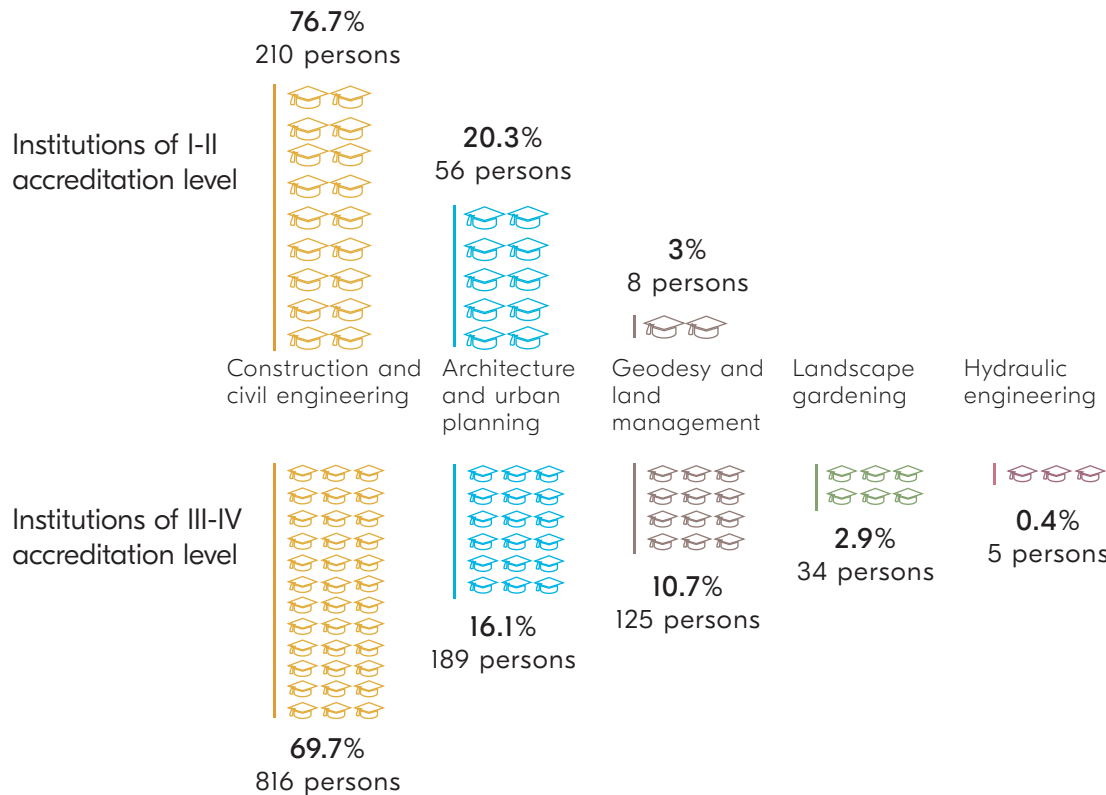
An important problem is the lack of skilled staff. Firstly, there is the opinion among young people that the constructional occupations are not prestigious because of low wages compared to high labor costs. Secondly, there is the degradation of vocational education in this area and external migration.

At present, the Government of Ukraine is implementing reforms in the field of education, which should improve the quality of training of both vocational professions specialists and engineering and management staff.

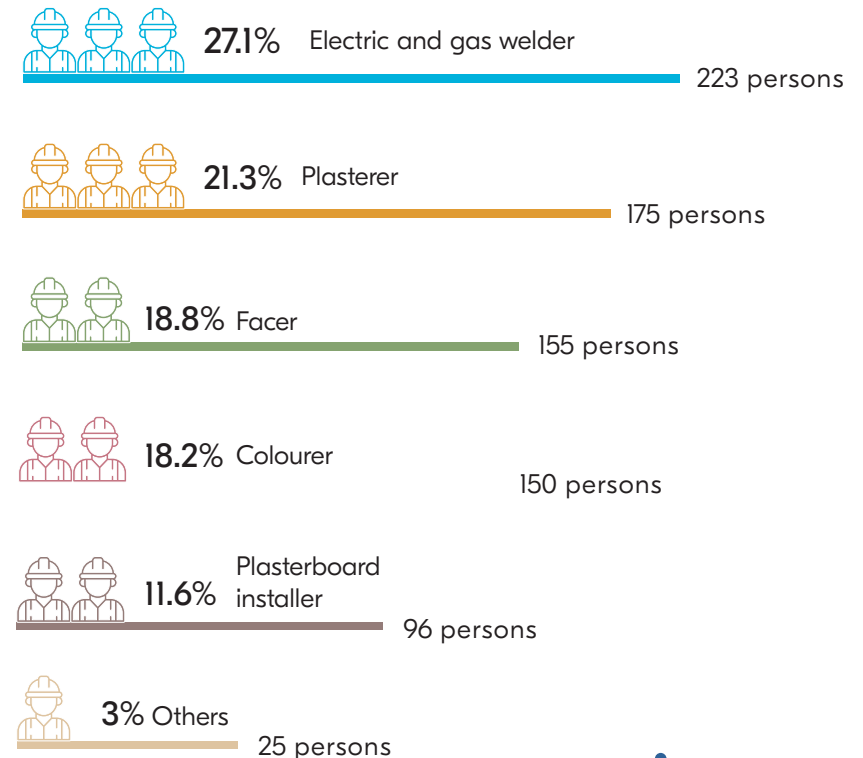
There are 8 higher education institutions in the region that prepare builders, architects and designers.

Also, there are 20 vocational education institutions. The number of students in the field of "construction" was more than 820 persons (in 2019).

Higher education institutions Graduated specialists in directions, 2019


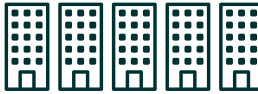



Vocational education institutions Graduated workers by directions, 2019



CONSTRUCTION SECTOR. STAFFING

Number of construction enterprises by size and employed persons

	CONSTRUCTION	CONSTRUCTION MATERIALS	ENGINEERING AND ARCHITECTURE
 Medium-sized enterprises	93 13 300 employed persons	21 3 400 employed persons	12 1 400 employed persons
 Small-sized enterprises	402 7 900 employed persons	63 1 500 employed persons	63 1 260 employed persons
 Micro-enterprises	1 734 4 900 employed persons	130 400 employed persons	462 1 340 employed persons

	Average salary, \$	
	Average for the region	Construction sector
2019	483	387
2018	387	340

Classification of enterprises

	Number of staff	Annual income, € mln
Micro-enterprises	≤ 10	≤ 2
Small	≤ 50	≤ 10
Medium	<i>Companies that by their characteristics cannot be classified as small or large enterprises.</i>	
Large	≥ 250	≥ 50

There are 2 large enterprises registered in Dnipropetrovsk region, which produce constructional materials. In total, about 2 thous. people are employed at these enterprises.

DIRECTIONS OF INVESTMENTS IN CONSTRUCTION SECTOR

Transferring of design according to Eurocodes

- entry into EU markets
- use of modern projects and technologies
- improving the quality of materials and energy efficiency of buildings



Renovation of industrial and residential buildings

- inactive industrial buildings
- outdated housing
- inactive public buildings



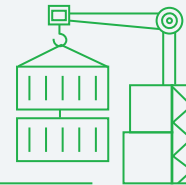
Infrastructure

- transport
- urban
- rural



Logistics infrastructure

- storage centers of fruit and vegetable products
- aggregation and trans-shipment centres
- river transport infrastructure
- air transport infrastructure



Industrial production

- construction of typical fast-built buildings
- construction of industrial facilities by typical projects of investor companies

