



CENTRE OF  
EXCELLENCE IN  
PROCUREMENT



KYIV SCHOOL  
OF ECONOMICS

# IMPACT OF PROZORRO

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# FOREWORD

Public procurement reform in Ukraine was recognized as one of the most successful reforms in 2016. It generated a lot of support amongst Ukrainians and the international community at large. However, as with many reforms in Ukraine, it was also met with heated resistance and debate.

Information about the IT system is fragmented and incomplete because the legislative base and the electronic system itself were only introduced recently. In August 2016, both became obligatory for above- and below- the threshold<sup>1</sup> procurement. Even though the introduction of ProZorro was publicized and promoted more professionally and aggressively than any policy action in Ukraine's history, there are still a lot of blind spots when it comes to understanding the system and procurement process overall among the public, businesses and some purchasers.

Incomplete information makes it impossible to use the electronic system effectively. For example, the main stakeholders find it difficult to conduct procurement procedures and civil society finds it hard to monitor the process. This problem may lead to mistakes in interpretation and incorrect conclusions.

In this manual we have tried to cover the basics of procurement methodology on the whole as well as in Ukraine in particular. We also conduct a first evaluation of the results of the reform. The manual will be useful for the direct participants of the procurement process, for organizations that monitor public procurement, for media representatives as well as for those who are interested in the problem of public procurement and want to be aware of the reform's impact on the economic and social situation in Ukraine.

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<sup>1</sup>There are several thresholds depending on procurement procedure, type of contracting authority and distinction among goods/services/works according to the Article 2 of the [Law of Ukraine on public procurement](#) and [GPA thresholds](#)



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# EXECUTIVE SUMMARY

Public procurement is a mechanism for the allocation of monetary funds in order to meet the needs of all economic agents and achieve the country's strategic development goals. In every country around the world, government purchases represent a large part of GDP and therefore public procurement is a powerful tool for influencing the market in terms of production and consumption. The effective functioning of this sector is a prerequisite to the formation of a sustainable and efficient economic system.

The reform of public procurement in Ukraine includes the changing of legislation and digitalization of the procurement process through the implementation of an electronic system named ProZorro. As of the beginning of 2017, the system covers the tendering process for seven of the eight procedures described in the law and regulations. The electronic system connects the main portal with a network of private marketplaces. Data generated in the process of interacting with the system is stored in the CDB and used for a monitoring portal which is publicly accessible.

But the Law and ProZorro are not the only results of the reform. Reform has become more visible to the public now and this open system has increased the level of citizen trust in public services. Additionally, Ukraine as a member of the Agreement on Government Procurement (GPA) has become even more open to foreign bidders and received access to procurement abroad. The electronic system has simplified access to the procedures for participants, reduced overall costs and accelerated the procurement process as a whole. As another benefit, the monitoring of the procurement process covered has become easier and more accessible.

Compared with 2015, the volume of the public procurement market grew by 17% in 2016 (up to \$10.4 billion USD). The growth was mainly due to below threshold procedures (they became mandatory to display in the system) number of transactions increased by more than four times. Open and simplified access to the system has increased the inflow of bidders and suppliers and the diversity of suppliers has increased 3x. In the structure of bidders, the share of FOPs increased significantly. The number of contracting authorities increased by 53% up to 20K. This was mainly due to the necessity to display below threshold procedures. In 2016, the number of buyers who abused procurement procedures and signed contracts with only one supplier decreased significantly - 5% compared with 11% in 2015, and the average value of these purchases decreased by 70%.

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# KEY DEFINITIONS

Many people use the terms purchasing and procurement interchangeably, but despite their similarities they do have different meanings. Procurement involves the process of selecting vendors, establishing payment terms, strategic vetting, selection, the negotiation of contracts and actual purchasing of goods. Procurement is concerned with acquiring (procuring) all of the goods, services and work that is vital to an state or organization.

*Public procurement refers to the government's activity of purchasing the goods and services which it needs to carry out its functions.*



- Procurement is wider than purchasing
- Public procurement generally consists of 3 phases
- E-tools make procurement more transparent, optimized, coherent with market conditions

Procurement is, essentially, the overarching or umbrella term within which purchasing can be found. There are three phases of the public procurement process<sup>2</sup>:

- Deciding which goods or services are to be bought and when (procurement planning);
- The process of placing a contract to acquire those goods or services which involves, in particular, choosing who is to be the contracting partner and the terms on which the goods or services are to be provided;
- The process of administering the contract to ensure effective performance.

The concept of public procurement can be used to refer to all three phases. Regulatory rules on public procurement generally focus on the second stage, since it is in this phase that legal rules and other regulatory measures become important tools of policy; and this is the focus of our present text. Obviously, however, in terms of procurement practice the three stages need to be closely integrated and regarded as separate phases of a single cohesive “life cycle”

*E-procurement used to describe the use of electronic methods, typically over the Internet to conduct transactions between awarding authorities and suppliers<sup>3</sup>.*

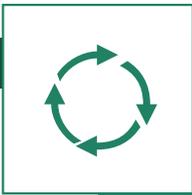
The process of e-procurement can cover every stage of purchasing, from the initial identification of a requirement, through the tendering process, to the payment and potentially the contract management. With digital tools, public spending should become more transparent, evidence-oriented, optimized, streamlined and integrated with market conditions. The use of electronic tools in public procurement offers a range of important benefits such as<sup>4</sup>:

- significant savings for all parties
- simplified and shortened processes
- reductions in red-tape and administrative burdens
- increased transparency
- greater innovation
- new business opportunities by improving the access of enterprises, including small and medium-sized enterprises (SMEs) to public procurement markets.

<sup>2</sup> Arrowsmith, S. Public Procurement Regulation: An Introduction. 2010

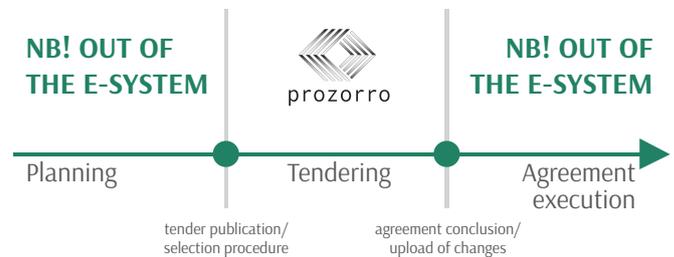
<sup>3</sup> Corsi, M. E-Procurement overview. 2013

<sup>4</sup> European Commission. E-procurement. Retrieved from: [https://ec.europa.eu/growth/single-market/public-procurement/e-procurement\\_en](https://ec.europa.eu/growth/single-market/public-procurement/e-procurement_en)



# PROZORRO IS JUST A PART OF PROCUREMENT LIFE-CYCLE

E-procurement in Ukraine does not cover the whole procurement life-cycle. Planning, needs assessment and agreement execution are left out of ProZorro. This means that questions about budgeting, changes in contracts and quality of goods/services/works can't be directly answered by ProZorro.



Source: based on ProZorro limitations

Within the ProZorro system there are 8 main procurement procedures that can be used by procuring entities depending on the volume and specifications of their needs. The main legislative background of all the procedures is comprised from the Law of Ukraine on public procurement and Regulation of SE "Zovnishtorhydav Ukraine" from 13.04.2016 No 35.

PROCEDURE	REGULATED BY
Open competitive procedure (w/o publ. in English)	Law of Ukraine on public procurement
Open competitive procedure (w publ. in English)	Law of Ukraine on public procurement
Negotiation procedure	Law of Ukraine on public procurement
Quick negotiation procedure	Law of Ukraine on public procurement
Negotiation procedure for defense needs	Law of Ukraine on public procurement for defense needs
Competitive dialogue	Law of Ukraine on public procurement
Below threshold competitive procedure	Regulation of SE "Zovnishtorhydav Ukraine" from 13.04.2016 No 35
Procedure of reporting on concluded agreement	Partly covered by Law of Ukraine on public procurement, partly by Regulation No 35

Source: based on legislation

It's worth mentioning that not all contracting authorities can procure using the e-procurement system. Definition of contracting authorities who can procure through ProZorro appears in the Law of Ukraine on public procurement (Article 1).

## CONTRACTING AUTHORITIES

refer to public authorities, local self-governing authorities and social insurance and welfare bodies established under the law, as well as legal entities (enterprises, institutions, organizations) and **their associations that satisfy the needs of the State or a local community**, if such activities are carried out otherwise than on an industrial or commercial basis, and if they have any of the following characteristics:

OR

refer to legal entities and/or economic operators operating in certain areas of economic activity (acc. article 1 of the Law of Ukraine on Public Procurement)

they are public authorities or local self-governing authorities, or other contracting authorities that **have the majority of votes in the supreme governing body** of the legal entity

OR

they are legal entities which are **administrators or recipients of budget funds**

OR

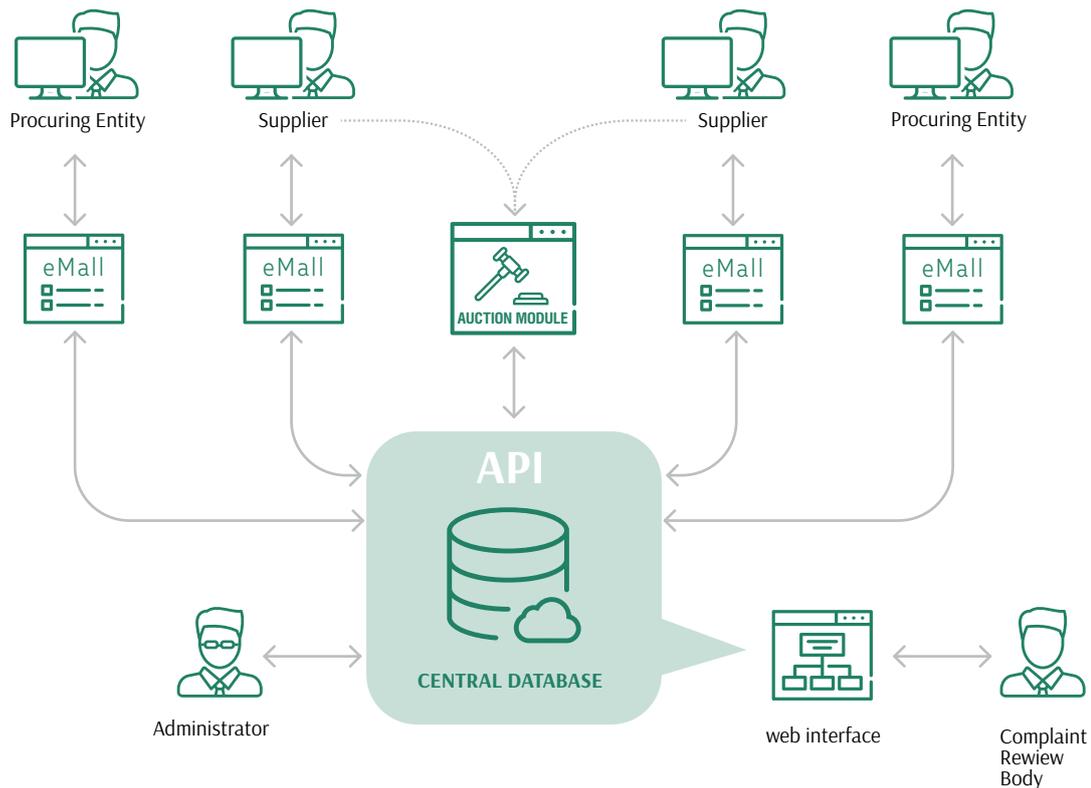
more than 50 percent of shares (interests, participatory interests) of the legal entity's **authorized capital belong to the State or a local community**

Source: based on the Law of Ukraine on Public Procurement



# PROZORRO ARCHITECTURE

Ukrainian electronic procurement system is comprised of the web portal of the authorized body (Stated owned enterprise “ProZorro”) and certified electronic marketplaces. The technical core of the system is comprised of the OpenProcurement toolkit: Central database (CDB) and an API via which specialized eMalls can interact with the CDB. OpenProcurement is an open source e-procurement toolkit which was first applied to ProZorro using the Open Contracting Data Standard (See [OpenProcurement](#) webpage for further details).



Source: Webpage of the company Quinta that developed and applied OpenProcurement toolkit

In the electronic system, the information is centralized in the CDB, but an input interface is located on each of the certified privately owned marketplaces. The government web-portal publishes all the tender notices and allows for e-access and publishing of the procurement plans, but e-awarding is conducted on the marketplaces. All the information is synchronized automatically between the marketplaces, the CDB, and the governmental web-portal.

The purpose behind the employment of the CDB is twofold: firstly, it creates an all-country market where participants can interact despite the marketplace that they are using, secondly, it allows for more convenient extraction and analysis of the procurement data.

A multiplatform approach, or the integration of several commercial marketplaces into the electronic procurement system, is aimed to establish a competitive market amongst the marketplaces, thus facilitating a persistent contest for quality improvement and competition amongst suppliers.



Public monitoring is represented by the business intelligence module (bi) powered by QlikView software. There are two versions of the module: public (free access) (<http://bi.prozorro.org>) and the professional one (need to have license in order to use it). Both modules are built using the same database, but the professional one allows users to conduct deeper analysis (i.e. download data sets). Each version of 'bi' is an interactive online reporting system, where users can check the overall results of public procurement as well as see more specific things using an intuitive drag-and-drop system.

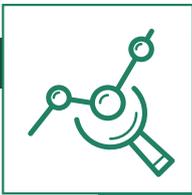
Modules have several tabs in order to group information by logical characteristics. Using the system each user can measure the efficiency of the whole procurement process as well as a particular tender. In the public 'bi', the main measurements of efficiency are:

- Value of Savings as a difference between expected value and price proposal of winner of the auction
- Percentage of Savings as a percent of Value of Savings in Expected Value
- Number of claims
- Number of bidders (i.e. competitiveness)
- Number of unsuccessful tenders/lots

In the professional 'bi', in addition to measurements listed above coefficient "Efficiency of auction" were developed and implemented. The coefficient ranks bids in which the savings after the auction exceeds the mean (expected) value, and tenders in which the average savings is much lower than this value taking into account level of competitiveness. The coefficient is aimed to draw attention to tenders with large differences between the expected value and the price proposal of the winner of the auction (compared to the historical average) as well as ones with a large amount of bidders in order to extract experience for other partners who will have the opportunity to use it in their own practice. At the same time, purchases with reverse characteristics can be of interest to members of the public in terms of research or investigations.



- Core of the system– CDB+API
- Marketplaces are privately owned
- Analytic tool – bimodule (public and professional one)



# PUBLIC PROCUREMENT ACCOUNTS A LARGE SHARE OF ECONOMIC PERFORMANCE

All administrative levels – national, regional or local – purchase goods, work or services in order to deliver public facilities. It is of huge importance to the economy.

The majority of advanced economies have a significant amount of public procurement as a share of gross domestic product. Thus, according to the OECD statistics, the share of public procurement in GDP varies from 8% (Switzerland) to 21% (Netherlands). Such a considerable amount indicates that public procurement can create a market for products and systems, have influence upon expenditures and consumption, stimulate the implementation of innovations and new technologies as well as become a testing ground for innovative products.

In addition, in some sectors, government procurement tends to be one of the most important sources of sales (e.g. defense industry, health industry or research-related industries, construction, energy, transport equipment).

To evaluate shifts on the Ukrainian procurement market before and after the introduction of ProZorro, we conducted a simple descriptive analysis (described below).



Source: OECD statistic (for 2013) and internal calculation (for 2013)

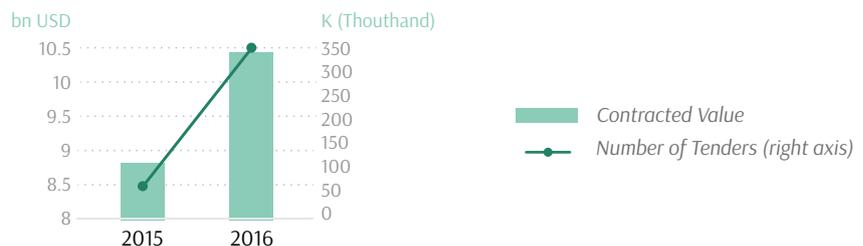


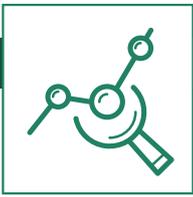
In 2016, the total monetary value of the public procurement market in Ukraine grew by 17%. This was driven both by the under-the-threshold procurement and a higher volume of operations above the threshold. The number of above threshold tenders increased faster than Contracted Value - increase in the Value of concluded agreement (VoCA) was driven by increases in the number of tenders with lower avg VoCA. 64% of below threshold tenders (49% of all tenders for 2016) are with VoCA < 50K

## Ch.1. 2015 vs 2016

**+17%** by Contracted Value  
Number of tenders increased **4-fold**

Source: calculated based on ProZorro data and old system data

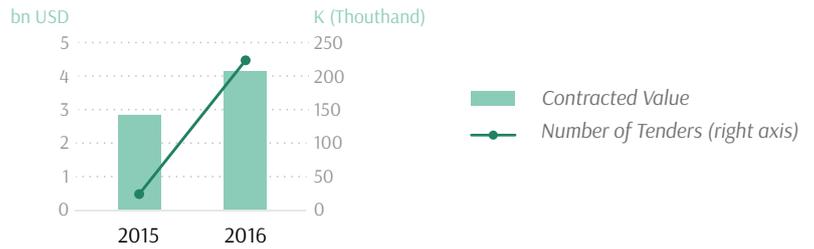




## Ch.2. Aug-Dec 2015 vs Aug-Dec 2016

**+52%** by Contracted value  
 Number of tenders increased 11-fold

Source: calculated based on ProZorro data and old system data

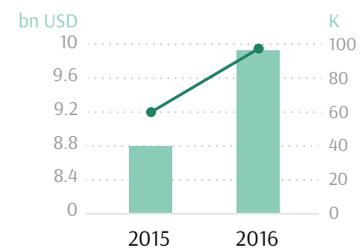
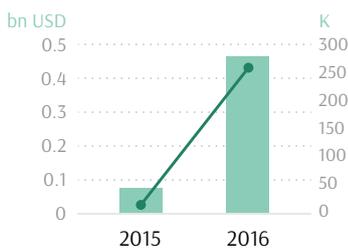


### Structure of Number and Contracted Value 2015 vs 2016 (continue)

**Below threshold (< 200K UAH)**  
 Contracted Value increased 6 times  
 Number of Tenders - 19 times

**64%** of tenders (by number) in 2016 are tenders with VoCA < 50K UAH

**Above threshold (> 200K UAH)**  
 Contracted value increased by 12%  
 Number of Tenders - by 60%



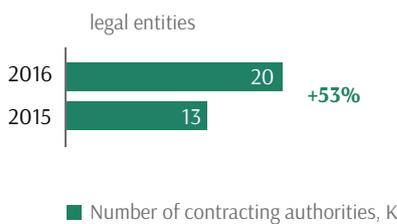
Contracted Value Number of Tenders (right axis)

Source: calculated based on ProZorro data and old system data

The number of contracting authorities increased by 53% in 2016 mainly due to new authorities in the below threshold group. The number of contracting authorities in the above threshold group increased by 11%.

## Ch.3. Number of contracting authorities by groups

**40%** of organizers participated in tenders with VoCA < 50K UAH



*Below threshold*



*Above threshold*



Source: calculated based on ProZorro data and old system data



# REFORM ACHIEVEMENTS

The reform of public procurement is one of the most successful Ukrainian reforms as of now. The modern hi-tech e-procurement system reform brought several obvious positive changes. It increased Ukrainian citizens general awareness about the importance of public procurement. This is crucial because they are the final consumers of public goods/services/works procured under the system (as well as people who actually pay for procured goods through taxes). Transparent information about all of the stages of the procurement process and the teams that put the reform into practice (highly motivated Maidan activists, business, NGOs) raised the level of trust in government services.

The implementation of the e-procurement system became possible due to reform, so all of the benefits of the e-system (high speed of operations, increase in competition and other derivatives) as well as the capability to raise questions and complaints aimed at improving the mechanism became more feasible.

Reform bound the whole procurement market around a single esystem (for all type of procedures and all stages). This aspect makes the Ukrainian approach unique and differs from common European practices to apply digital approach for each stage differently<sup>5</sup>.

As part of the reform, a market approach was applied to the eprocurement processes. There was a decentralization of procurement marketplaces – as of end of December 2016 there are 8 privately owned marketplaces instead of one single state marketplace. The commercialization of this area brought additional competition amongst platforms and as the result – continuous improvement of the services provided.

Exploration, monitoring and corruption seeking open data standards were chosen as an essential part of the e-system design in order to engage more key players into participating. It creates equality in access to information and allows all parties to monitor the process.

With this reform, Ukrainian procurement can go global. On the 18th of May 2016, Ukraine joined WTO's Government Procurement Agreement (GPA) and got free access to government procurement markets for its 45 member countries. According to a WorldBank estimate<sup>6</sup>, the GPA market covers about 2.5% of the global economy (1.7 trillion USD)

The complexity of the procurement stages requires the wellcoordinated work of all participants incl. other governmental structures (Antimonopoly committee or State audit service). In this case, the reform in public procurement becomes a source and starting point of other reforms and changes.



## REFORM

- increases awareness
- raises the level of trust
- made eprocurement possible applied market approach to procurement platforms design
- established open data standards
- made GPA possible
- pushes other reforms

<sup>5</sup> European Commission. e-Procurement Uptake Final Report. 2015. Retrieved from: <http://ec.europa.eu/DocsRoom/documents/10050/attachments/1/translations/en/renditions/native>

<sup>6</sup> WorldBank. The revised GPA and electronic procurement. Retrieved from: <http://pubdocs.worldbank.org/en/396361482429231813/WTO.pdf>



# OPEN DATA EFFECT

“Everyone sees everything”. Open data standards in the procurement process have an effect on information accessibility, new interoperability goals and the perception of transparent authorities. Information accessibility can be understood as equal access to information for all participants and stakeholders. Such access decreases asymmetry of information and gives equal opportunity at participating in the procurement process. This results in intensified competition which leads to better pricing and quality overall. Information accessibility also makes monitoring easier and more user-friendly. Up-to-date monitoring can be a powerful tool for detecting problems and for system optimization in the long run. At the same time, one should remember, procurement data can be linked to other sources of information (EDR register, KOATUU register and etc.) in order to increase transparency, accountability and the quality of procurement data. Therefore, open data in procurement sets new goals of interoperability and open information in other spheres. Public control with the help of open data increases the likelihood of “dark horses” being exposed in corruption. There is a correlation: countries with the lowest levels of corruption (top-17 by Corruption Perception Index) can also be found in the top 20 of either the Web Development Index or the Open Data Index<sup>7</sup>.

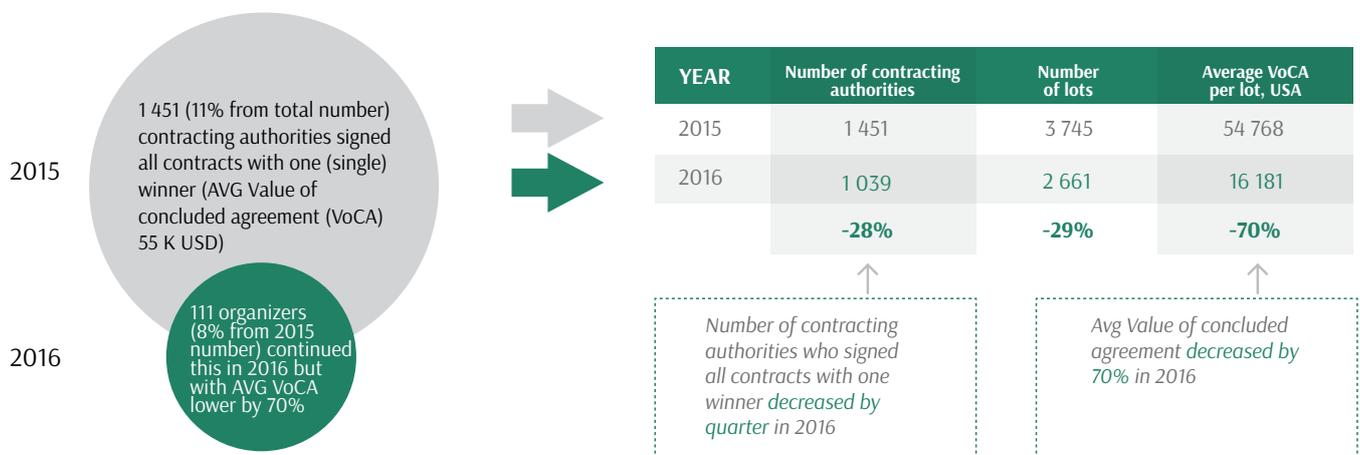


## OPEN DATA RESULTS

- lower information asymmetry
- more easy to monitor
- risky to be corrupt



To reflect the possible effect of open data, we calculated the percent of contracting authorities who signed contracts with a single winner (with the condition that the number of contracts >1) during 2016 compared to 2015. The flawed tendency to procure everything from only one supplier diminished significantly, from 11% of all contracting authorities to 5%. Among those committed to this practice in 2015, 92% stopped doing so.



Source: calculated based on ProZorro data and old system data

<sup>7</sup> European Public Sector Information Platform. Open Data as a Tool to Fight Corruption. Retrieved from: <https://ofti.org/wp-content/uploads/2014/05/221171136-Open-Data-as-a-Tool-to-Fight-Corruption.pdf>



# DIGITALIZATION (E-SYSTEM) EFFECT

A Booz & Company analysis discovered “that an increase of 10 percent in a country’s digitization score fuels a 0.75 percent growth in its GDP per capita”<sup>8</sup>.

Digitalization of procurement brings a lot of benefits and optimizes the process through increasing the speed of operations (there is no need to be present during tendering), reductions in red-tape and administrative burdens (less paperwork and time for tender preparation), providing higher level of security of documents placed via Internet and of course through increasing the competitiveness (i.e. number of bidders).

Short term effects on competition are reflected through the number of bidders, similarity of bidders and ability and incentive of bidders to be engaged in collusion. In healthy economies, more bidders make competition more intense and as the result – prices go down and quality becomes better. Despite the fact that the marginal benefits of having one more bidder decrease, in general each new bidder increases the level of competition. Competition in the procurement process tends to be more intense when bidders tend to be more similar (with similar selling power) – bidders known to be weaker can’t be active and have proper influence upon final price. The procurement process can also decrease the likelihood of collusion because, on average, increasing the number of bidders makes collusion less sustainable<sup>9</sup>.

The long term effect captures changes in technology (you have to be more effective to compete) and market structure (increasing share of services and works procured).

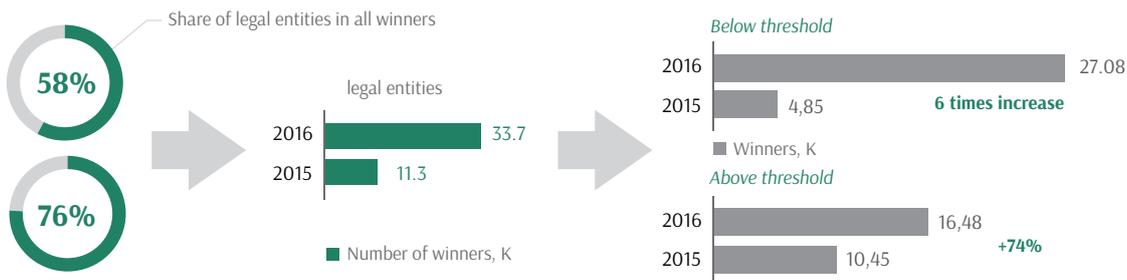


## E-SYSTEM

- speeds up operation
- decreases paper work
- provides additional security of documents increase competitiveness:
  - number and similarity of bidders
  - prevents collusion
  - pushes changes in technology
  - changes market structure (share of services and works)



To access changes in competition we compared the number and structure of suppliers during 2016 vs 2015. Share of legal entities in the total number of suppliers decreased to 58% (more FOPs are entering the market). At the same time number of suppliers-entities increased more than twice. The main increase is driven by below threshold tenders.



Source: calculated based on Prozorro data and old system data

<sup>8</sup> Booz & Company. Digitization for Economic Growth and Job Creation: Regional and Industry Perspectives. Retrieved from: [http://www3.weforum.org/docs/GITR/2013/GITR\\_Chapter1.2\\_2013.pdf](http://www3.weforum.org/docs/GITR/2013/GITR_Chapter1.2_2013.pdf)

<sup>9</sup> Assessing the impact of public sector procurement on competition. Retrieved from: <https://www.dotecon.com/assets/images/oftmain.pdf>



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