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Formation of public value based on existing platform solutions in the public sector

Abstract. The paper offers a substantiation of directions and essence of building up public value by implementing decentralized information platforms within the existing GaaP model based on government centralized platforms. The paper provides a critical analysis of the most resonant and significant foreign government centralized platforms from the UK, India, Estonia, Italy and Ukraine. Their example indicates the technological way of forming new public value using three main mechanisms of adjustment of business processes. While comparing with the existing practice of using centralized platforms, the author proposes a new meaning of building up public value through the introduction of decentralized information platforms. An important conclusion has been made that despite governments being sceptical about integrating state databases with registers based on blockchain, such integration is very likely to happen in 2–3 years, which will be possible due to introduction of new web modules and recognition of trusted private registers based on blockchain.

The configuration of the existing organizational GaaP model allows creating additional public value and mobilizing state and private resources to arrange various configurations of public services. For this purpose, in each country, not only the GaaP model, but the three known mechanisms for its provision should be organized properly. In order to create a greater expected public value, public authorities need to correlate and coordinate the contributions of interested private and state entities to better meet different expectations and needs and avoid the consequences of opportunistic actions by third parties. Without the effective orchestration mechanisms, the GaaP model risks to have a significantly negative impact on society and creation of public value.

The foreign experience shows that adoption of platform organization is not an absolute condition for a greater public value yet. State governance also requires greater functionality of mechanisms for organizing business processes (orchestration, choreography and deployment of small ecosystems) in terms of provision of public value from centralized information platforms for simultaneous support of different service delivery processes to select the optimal configuration of the method of public service delivery, the benefit of which can be appreciated only by its consumers-citizens and only if there is at least one alternative.

Keywords: decentralized information platform, digital platform, organizational model, public sector, public value, GaaP.

Problem statement. The current pace and scale of the spread of platform solutions in the modern countries' governance allow suggesting that the digital platforms introduced by governments are a significant step forward in terms of comfort and ease of communication between citizens and the state. However, the shortcomings and risks peculiar to the most resonant government platform solutions (e.g., the UK's GOV.UK, Indian Aadhaar, Estonian X-Road with a number of related small platforms and even the Ukrainian Diia) as well as objective global technological trends indicate that centralized information platforms will most likely not be the final, but the intermediate format and organizational interface in the interaction of the state with its citizens. However, it should be recognized that the existing centralized platforms already have a conceptually and technologically developed architecture that fits into clear models and certain mechanisms for organizing internal business processes. Therefore, a logical managerial and research question would be to find out how to deal with the existing centralized platforms, if such platforms may not become a desirable format for public services even in the mid-term, but now work well for society, the population and the ruling elite. An important step in finding an answer to this lies in the further analysis of the adopted organizational model of formation of public value in such platforms, appropriate mechanisms for the implementation of well-established business processes and protocols of joint operation of such business processes.

Analysis of recent research and publications. It has become widely accepted that the platform way of organizing government services is more efficient due to the following: a) participation of external actors in the joint production of public services is ensured, which helps the government organization to benefit more at lower costs; b) platforms are built using the modular approach to ensure the stable operation of basic services, which allows easy development and implementation of new, third-party applications for them and simplify the coordination of participants involved in the provision of these services; c) digital platforms are easily accessible and simplify the creation of services.

According to the foreign experience widely represented in foreign literature and analysis of the relevant scientific methodology of platform governance [12; 16; 20], the main accepted concept and organizational model of modern platform governance is Government as a Platform (*GaaP*). GaaP is considered as a "platform of platforms" globally. The modern literature [1; 6; 10; 22; 26; 28] emphasizes that government authorities that accept the GaaP configuration should take into account not only the simplicity and efficiency (for themselves) of forming and delivering a public service, but also the much broader public value that the GaaP model can provide.

The **purpose** of this paper: relying on the best world experience in the use of platform governance, to offer directions and essence of building up public value through the introduction of decentralized information platforms within the existing GaaP model, which is usually based on government centralized platforms.

Before proceeding to the main provisions, it is necessary to define the key and special terms:

- *information (digital) platforms* can be viewed as a kind of regulating environment and as an anonymous governance subject based on program code. It allows private developers, users and other people to interact, exchange data, services and applications, while governments that have implemented providing certain administrative services through information platforms, may monitor processes more easily and facilitate the development of simple and innovative solutions and services;

- *the idea* of an information platform is to create a society and then support it using digital services, while having getting profit from reduced transaction costs through partially eliminated intermediaries as a managerial consequence [2, P. 278], as well as increasing coverage and ensuring adequate peer supervision by users and owners of such a platform;

- *decentralized information platform* means "a type of digital data accounting system based on a distributed ledger technology, which consists of a service infrastructure and a community of independent users having equal rights or pre-identified rights granted according to the levels of decentralized governance model to make such a system stable" [3];

- key features of a *centralized information platform* are as follows: 1) governance is based on acquired rights in the hierarchy; 2) the centralized coordination method creates additional added value for owners or higher ranks in the hierarchy, which indicates the priority of "economics over politics" [5]; 3) governance based on market rules and rights in the hierarchy; 4) emphasis on hierarchical web networks with or without clear territory relation and on online interest groups; 5) asymmetry of information for participants, owners, "nodes" managers; 6) the main evident benefit is easy, quick and convenient use of services through the platform as an intermediary; 7) it exists in a dilemma of choice between secure transaction protection and personal data protection, confidentiality and censorship [23]; 8) relatively low complexity of building and maintaining the viability of the platform.

Below we summarize how the existing GaaP model creates or does not create public value. Thus, in terms of forming a new public value [8; 19], the GaaP model and digital technologies are ways to create a new organizational configuration for the provision of public services in digital form, which allows creating public values. It should be noted that "public value" is a generalized public opinion about what they consider valuable [27], i.e. it is something around which there is a normative consensus on: a) rights, benefits and privileges to which citizens are (or are not) entitled; b) obligations of citizens to society, the state and each other; c) principles on which the government and political programs should be based [9]. The concept of public value is aimed to answer the question of what valuable and useful things an organization creates

for society, and the decisive factor is the creation of "value" through the assessment and acceptance of this value by society, i.e. the functions of maintaining stability in society and social change are emphasized.

Mark Moore's famous "strategic triangle" [19] suggests that the creation of public value is determined by three main dimensions: the sanctioning (permitting) environment, operational capabilities and the results of society's attitude to public value. The permitting environment consists of individual and collective values of the whole variety of stakeholders involved in the creation of public value, i.e. this is the set of main public values. Operational capacity is the organizational configuration and capacity used to create and deliver public value. The result of this process is public services and public policy, which is assessed by citizens based on their preferences and what determines the permitting environment. Thus, a look through the prism of public value can provide a useful perspective for improving both the configuration of GaaP and its consequential effects on the creation and delivery of public services, even if users of such services have no issues with the current GaaP model.

The existing GaaP model does contribute to a greater public value as it increases the ability of public sector organizations to respond to diverse and changing expectations and needs. It is different and innovative digital platform configurations, rather than a single established one, that can accelerate service delivery processes for new groups of service recipients and reach new groups of citizens. For instance, giving pre-authorized third parties (universities, pharmaceutical companies and IT startups) limited access to the results of anonymous medical data will allow offering both new treatment solutions and new digital applications to choose from, which can help government agencies provide new and better methods of diagnostics and treatment of citizens. However, the information platform configuration may reduce the degree of control of a public governance body over the new value, which will be derived from these services [13]. If personal medical data is not depersonalized, pharmaceutical or insurance companies can use it to pressure and discriminate against citizens, etc. Thus,

in terms of public value, the key task of the GaaP model is to provide, control and manage a dynamic combination of necessary resources, business processes and organizational structures to adapt and respond to emerging and unforeseen needs of citizens so that different expectations of citizens are met.

The GaaP model, examples of which are usually built according to the logic of centralized information platforms, is not designed as a monolithic configuration: it is (or may later be) a set of platforms deployed to coordinate and manage public services in various fields. Since the digital platform organization is a unique configuration of interdependent components that evolve and change over time, this allows the state GaaP model to be a kind of "hybrid" model that can simultaneously implement different levels of control over the service production using three different types of platform configurations [11] (Table 1).

Table 1

Groups of public services provided through different government centralized information platforms depending on the type of platform configuration

Differentiation parameters	Platform configuration type		
	Internal platform	Supply chain platform	Sectoral platform
1. Data control level	High	Medium	Low
2. Groups of public services	The platform is suitable for providing services that require a high level of control over the end result	The platform is suitable for providing services that require a high level of control over the end result and facilitate cooperation between government agencies	The platform is suitable for providing services that do not require a high level of control and require the involvement of significant resources from several entities of different forms of ownership
Examples of services	Fight against crime, state procurement, electronic account management, property registration, etc.	Payments, e-identification of users, personnel management, tracking the effectiveness of management decisions, voter registers and local registers of residents, etc.	Public transport services, control of educational programs, auxiliary services for identification of people, etc.

*Source: made by the author based on [12, P. 5].

In order to be able to create public value, state governance as a platform must meet the three technical properties that make state governance architecture adapted and capable of supporting different processes of service production [7]:

1) decomposition — it must always be possible to decompose into components by levels and basic functions. This is necessary to minimize the overall complexity of architecture and the interdependence between the various components;

2) modularity — each modular component must be independent of other subsystems to avoid changes in modules that affect the implementation or functionality of platforms or other modules;

3) common arrangement rules — modules of interaction with the platform in accordance with documented and pre-defined rules and common standards. All external developers must adhere to known design rules, which should be stable but not universal in the long run, so as not to limit the diversity and flexibility of the ecosystem.

Modules that organize ecosystems allow different public authorities to coordinate the provision of hundreds of public services and the resource participation of state and private entities in the provision of these services to ensure a greater public value. The modular nature of the platform organization ensures redistribution of scarce resources and the order of access to them [14] of both state and private participants in the ecosystem, and, consequently, the necessary level of control.

As the experience of India, Ukraine, Estonia and the UK shows, the greater public value through platform solutions in the GaaP model is achieved owing to at least three mechanisms for establishing business processes in it:

1)   orchestration is a way of organizing business processes which can interact with external and internal web services and thereby continuously form technological and institutional configuration of GaaP. Interactions based on messaging have business logic and order of tasks. They can go beyond programs and enterprises, defining a multi-step transactional business model [12, PP. 7–9]. For centralized information platforms, such a business model typically does not provide for a minimum number of

participants and co-performers, i.e. the business model includes agents and certain intermediaries in the provision of services;

2) choreography is an organizational way of coordinating several business processes simultaneously through technological protocols of joint work in the form of requests and confirmations between different branches of business processes and small ecosystems of services that are coordinated and "orchestrated" [4] (Figs. 1 and 2). Its main effective element is artificial intelligence algorithms and algorithmically regulated order of execution of various web services (tasks) within one or several ecosystems and platforms (uninterrupted operations);

3) deployment of small ecosystems. This can be provided primarily by two key properties of the state GaaP model: a) modularity; b) small ecosystems being in the area of responsibility of a central authority and availability of corresponding digital sub-platforms for them. We should note that at the initial stage of the platform's operation, the government centralized platform may function without any connected modules at all, and they may appear over time, as was the case, for example, in Estonia.
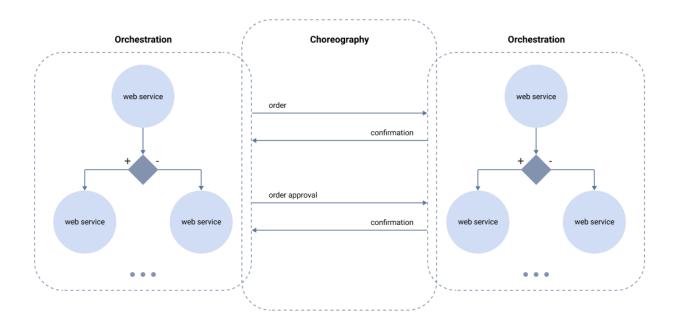

Fig. 1. Complementary relationship between orchestration and choreography of web services in the operating GaaP model
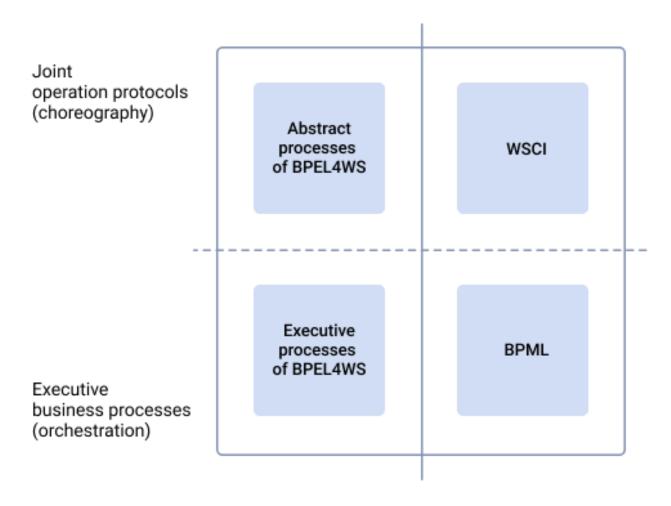
Fig. 2. An example of the relationship between the standards of orchestration and choreography in the languages of processing and execution of business processes using BPEL4WS, WSCI and BPML web services in the operating GaaP model [4]

As the study of the experience of the UK, Ukraine, Estonia and India has shown, the responsible central authorities began introducing radical reforms of the digital transformation of state governance to address previously unresolved technical, organizational and economic problems of the civil service. The GaaP model was introduced in these and other countries (e.g., Italy, Australia, France, Norway, Germany [15], etc.) to increase the efficiency of government services and comfort as well as to offer people customized public services, which would improve meeting the needs and expectations of its citizens.

The current organizational model of the UK's, Estonian, Indian and Italian (see [12, P. 8]) platform state governance in the form of GaaP is characterized as an "operating system" that can be developed and adjusted. It is supported by a physical (data centers, cloud and telecommunication infrastructures) and a soft infrastructure. Soft infrastructure includes all data of non-governmental organizations and several subplatforms (e.g., electronic ID card, digital identification, payments, HR management, electronic account, national register, electronic procurement, etc.)

The accepted method of interaction of participants in the GaaP model ensures data exchange and interaction between all ready (involved) subplatforms and between data processing centers maintained by various government authorities. It consists of certain design rules and resources, i.e. documents and software developer toolkits. The accepted method of interaction facilitates and coordinates the access of government and private organizations to data. The core of the interaction structure is a data analysis structure that collects and processes data from government agencies and external entities in order to unify and make it available to the user through a special interface. Data confidentiality is ensured by a special data protection authority or third-party cloud infrastructure (such as the Ukrainian Diia and the cloud hardware infrastructure of the American Amazon); this authority also assesses how other government agencies use this data. Various ecosystems and API protocols are developed and managed according to the principle of vertical (i.e. by levels of hierarchy in the structure of public authority) and horizontal (i.e. while cooperating with civil society) subsidiarity.

Thus, each authority and state governance level gets its own area of responsibility for regulating access to registers in accordance with its powers. Data from state registers is available owing to an open data platform that has publicly available API interfaces. In some countries (e.g., Estonia, Italy and India), responsible teams of their digital transformation ministries have even launched online communities to involve developers in testing software and creating new modules for GaaP (e.g., Developers Italia [12]). Such communities are for developers of digital public services only. They

include a list of all available public and private APIs, source code, a modern document management system and interactive tools that help developers from government authorities and private companies develop new digital services. A ministry may organize hackathon to support them, as it was in Italy in December 2017 with 116 teams to improve publicly available services on existing platforms or for the available API protocols [12, P. 9].

In existing government centralized information platforms, time of delivery and characteristics of public value are aligned beforehand at the design stage as well as according to the certain parameters. A central authority responsible for digital transformations while being an "owner" of digital platforms, forecasts or checks a forecast of effects of a public service delivered through the government digital platform. It is crucial that the existing GaaP model based on centralized platforms may utilize useful capabilities of several ecosystems, which is due to their interaction based on data from state public registers. It is clear that implementation of such technical properties of the GaaP model as decomposition and modularity will provide citizens even more capabilities for personal use of the government and non-government digital service infrastructures. This indicates that responsible government authorities should pay much more attention to these properties in order to create a greater public value. However, useful capabilities from using some national GaaP models (e.g., from the UK, Estonia, India and Ukraine) also cover several politics spheres as well as a number of government and private entities involved in online service delivery.

Each state ecosystem that is usually built around major state functions (state finance, national security, government property management, etc.) covers a certain industry sector according to such characteristics as uniformity and functional belonging. It includes government authorities as well as may include certain entities such as business associations, which may have different functions in the ecosystems for various reasons. For instance, state finance ecosystem includes such official entities as the Ministry of Finance and the Treasury, Audit Chamber, Tax Administration, regional

administrations, tax police as well as private organizations as auditors, tax advisors, etc. Thus, developing various ecosystems allows different government authorities to manage the delivery of public services in accordance with their competence [11; 19; 24].

It is clear that today each government authority fully manages data registers according to its competence, however, similar data from different registers often differs for various reasons. At the same time, data from one register will be requested by any other authority and local council. In the case a state finance ecosystem is introduced, the ministry of finance (or through subordinate central authorities as in Ukraine) will manage almost all data that is within its competence regarding financial policy, tax administration will manage tax data, etc. In order to provide public services, government authorities must have access to data of the registers that belong to other government authorities in a shared or other state ecosystem as well as to data of the government agencies that are of other spheres of politics and their ecosystems. In accordance with the powers of authorities and cooperation rules, a government authority owning data is to determine which data is open and which is restricted. This means that through managing data from state registers authorities directly impact the delivery of public services in various ecosystems, i.e. determine whether to create additional public value or not.

Public values are brought into accordance not only within an ecosystem, but between ecosystems as well. Effective harmonization between various state institutions is ensured both through official and unofficial institutional data exchange channels — this is required to maintain contact among all government authorities and to avoid potential damage from initiatives of one authority to others. In addition, engaging new additional (small) ecosystems to business processes around major state functions (i.e. it is a "mechanism for deploying small ecosystems") allows government authorities to coordinate contribution of state and private entities in accordance with their

competence and state governance needs, but subject to the other two mechanisms — orchestration and choreography within the GaaP model — functioning well.

Below is a brief description of two examples of using the principle of common use of public registers through small ecosystems in GaaP and cooperation of private, utility and state participants — an example from public transport and an example from healthcare.

Example No. 1 is related to the system of digital mobility services that can develop owing to services and data flows from different small platforms. A good example of this is OpenTrasnporti (Fig. 3) — Italian centralized digital platform, which is the first industrial example of this kind in the EU.

It is useful for this research and Ukraine for the following reasons: 1) it covers numerous relatively "small" not only state and municipal, but also private ecosystems with their own registers and data sources; 2) it has one coordination (but not governing as in the Diia platform) state center, which in a certain way collects and processes transport data and sends managerial signals to other participants; 3) it directly impacts business activities of independent private entities as users. These features differ it from other "flagship" government platforms such as the UK's, Ukrainian, Indian and Estonian ones.
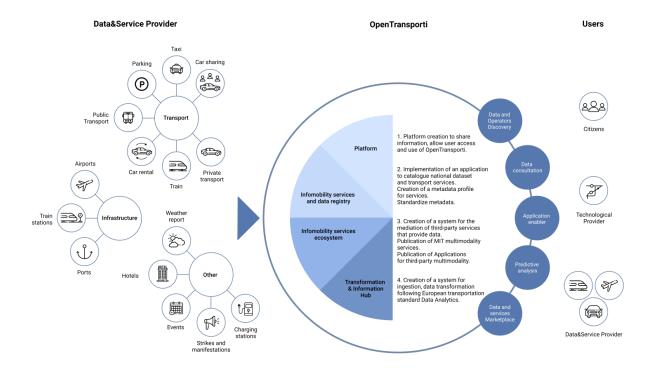
Fig. 3. Operating infrastructure of the Italian centralized platform OpenTransporti [25, P. 2]

Hence, instant availability of mobility data of all transport companies provided by the Italian centralized digital platform OpenTransporti allows such programs as Google Maps, Moovit and Citymapper to offer several options of planning multimodal transportation, which includes various transport services (e.g., buses, car sharing, underground railway, bicycle and car rental, taxi). Introduction of additional government platform pagoPA by mobile companies allows:

a) citizens to choose between transport service payment options in a mobile application or on a website, get access to transport services using QR code or document number, etc.;

b) authorities to meet citizens' needs by monitoring vehicle traffic and to create the common wealth. Since every API-based mobility service used in OpenTransporti is a module and every payment option in pagoPA is a module as well, in case of

developing any new mobile services or online payments, they can be instantly available to developers through these two platforms.

Modularity allows creating a new configuration of public services, for instance: a) adding an electronic ID card to the mobility service configuration for the purpose of meeting new counter-terrorist demands, b) enabling or disabling certain API protocols, for example, if heavy rain and wind are expected in Rome, the traffic administration of Rome may block API for the services of shared use of scooters and bicycles, and these services will be temporarily unavailable in such applications as Google Maps and Citymapper to ensure people's safety, which is another new important service that should be provided along with the transport ones. In relation to the latter, refusal to provide a certain service is also a valuable combination of a public service and the well-known public value. However, some other examples also show [12] that when harmonizing public values, one should take into account the potential impact of new configuration on other known services and public value. As there are dozens of different methods of orchestration and using opportunities of new small private ecosystems, it is clear that each new application of orchestration will lead to different outcomes with a new public value, which will be formed through choosing a certain technical and institutional configuration and will emerge during service provision.

Example No. 2 is about arranging a visit to a doctor. Most EU countries have long ago adopted a doctor's appointment booking service, which offers a great public value through comfort, safety and predictability, but also contains threats that should be countered. The national healthcare ecosystem makes APIs for making an appointment in state and private hospitals available for developing a doctor's appointment booking service. A special-purpose mobile application shows real-time data on available appointment time in all state and private hospitals. For instance, in Italy, before showing which hospitals are available, the application identifies a citizen through SPID — a government centralized platform integrated into this mobile

application; then it checks whether this person has a health insurance and then it shows prices for each doctor's appointment option.

All private and state healthcare services in Italy are displayed in a different way in modules, and owing to this mobile application, public governance can benefit society more, since citizens can choose a test that meets their needs and expectations in the best way. This system may provide the ministry of health with an additional technological tool to better meet its citizens' expectations. For example, the ministry may adopt a decision to shorten the medical treatment line in state hospitals relying on spare resources of private ones. For this purpose, the state system will have to change the rules of the national healthcare ecosystem so that the citizens could use medical services of private hospitals for free. This could be adjusted in a way that citizens could get access to services of private hospitals, but only after they undergo medical check-up online to determine their real need for medical services and confirm that state hospitals cannot provide the required treatment.

However, such service configuration will definetly cause additional government spending society is sensisitive to. If private hospitals can get access to the list of those who wait in line in real time, they can also quickly change their prices so that the government pays them for the most wanted services. This requires significant antimonopoly control and everyday state supervision over the legitimacy of use of government data by other institutions or companies, which may result in limiting access of private hospitals to a certain API in order to avoid citizens' loss.

Thus, in order to efficiently create a greater public value, one should not only take into account how interdependent services reach a compromise, but also consider the way third parties use the services offered. Configuration of production of generally accessible services should avoid the repercussions for society, which may be caused by third parties using the generally accessible services offered by the GaaP model configuration using the three main mechanisms of its support. A promising way of ensuring a greater public value is involving the capabilities of decentralized platforms

in public governance, which may be integrated with centralized platforms in the form of at least modules (Table 2). The key motto of GaaP — "doing more for less" — may be transient and not final. In any case, any form of platform governance is aimed at the main public value, which is to increase the ability of public sector organizations to respond to the society's expectations and needs.

Table 2

The current and expected essence of building up public value through introduction of information platforms

within the existing GaaP model

Centralized information platforms based on the existing GaaP model			Ways of building up public value for a state in case of using decentralized information platforms	Points of gradual coordination (alignment) of decentralized and centralized platforms
Characteristics ensuring public value from centralized platforms	Involved elements of public governance system	Problematic aspects		
• Ability to deploy to coordinate and manage public services in various spheres; • a unique configuration of components — hybrid of several types of platform organization — is possible; • ability to manage and provide access to state data to citizens; • modules are developed by private entities according to the government authority's requirements; • modularity provides more opportunities to all participants; • coordination of contributions and participation of state and private participants; • new configuration of services provides new services and value, but may also limit other customary services; • shifting part of a state's focus from resources and service quality to legitimacy of use of	• State governance technologies (making of managerial decisions, coordination of public interests, distribution of resources, etc.); • professional activities of state officials; • regulated functions of authorities; • professional standards and legal norms of governance; • objectives and normative goals of public authorities	• Further complicated solving of social problems without extensive participation of society; • slow adaptation of public services by state institutions to public demands; • further consolidation of the elected power of the elites as the main expression of democracy; • lack of public trust in the state and financial non-transparency of public entities; • lack of citizens' personal initiative for the common	• Keeping people concerned citizens, not statistical inhabitants; • building an environment of trust through blockchain solutions in new forms of cooperation of authorities with citizens and businesses; • giving fundamentally new properties of stability to the state and public governance in the digital era; • extending the cooperation mechanisms and developing innovations as a result of network coordination of information flows and mobilization of private platform participants; • enlarging the group of public activities participants with agents that have previously been not active in this due to being focused on private interests (e.g., private	• Additional modules and small ecosystems based on blockchain (for storing a person's digital profile based on data from various registers); • modules using trusted private registers, for instance, to bridge the gap between the real economy and tokenized economy that has developed and exists without any state support; • new form of information exchange between businesses and the state; • digital assets [17; 18]; • new mechanisms of broad participation in common non-government financing of socially significant projects; • recognition of the status of trusted private registers (blockchain-based) and

Centralized information platforms based on the existing GaaP model			Ways of building up public value for a state in case of using decentralized information platforms	Points of gradual coordination (alignment) of decentralized and centralized platforms
Characteristics ensuring public value from centralized platforms	Involved elements of public governance system	Problematic aspects		
state data (against price misuse and monopolization) and control over state financial obligations		good (personal and nationwide; • much government spending for delivery of public services; • traditional service channels will remain for those who will not be able to use online ones	and state businesses, international financial funds, citizens who have created business communities (crowdfunding and crowdsourcing), issuers of secured virtual tokens [18], etc.); • forming social ideals; • broader introduction of meritocratic governance principles; • conditions for satisfying all legal interests in society, especially in terms of implementation of a new social agreement between citizens and the state	putting them into circulation in the public sphere; • automatic execution of contracts (smart contracts); • optimizing new orchestration mechanisms for new online public services; • transparent accounting of state resources and reporting [18]

*Source: author's development.

Conclusions. The above research allows drawing the following generalized conclusions:

1. The government's opting for the organizational model of providing public services in form of a digital platform is a response to fragmentation and segmentary structure of the traditional organizational structure of state governance of almost any country that faces such a choice as well as a response to inefficiency and high cost of traditional ways of receiving public services at the national and local levels.

2. Centralized information platforms as a modern form of communication of authorities with people are viewed as an interim stage in technological modernization of the public governance system and digital transformations of the state, while the stage of modernization based on decentralized platforms may be the next evolution stage after centralized platforms. Today, government centralized platforms are rapidly spreading around the globe, and governments place numerous digital transformation hopes on them. This will not allow refusing them in the mid-term, even if there is an objective public interest in blockchain-based decentralized platforms and they spread around the state sector. However, the objective limitations of centralized platforms, their challenges, the mechanism of democratic values manipulation concealed within them, the current world trend to fragment society into international virtual interest communities and other points collectively indicate that a large-scale alternative to centralized platforms may appear soon. Therefore, in order to gradually integrate decentralized platforms into the existing centralized platforms, it is suggested to extend the modular capabilities of the current concept and organizational model of GaaP at least through adding modules to decentralized information platforms in the short term of 2 to 3 years. At the first stages of their implementation, these modules need to operate data from state public electronic registers, but offer broader capabilities and high level of security.

3. The configuration of the existing organizational GaaP model allows creating additional public value and mobilizing state and private resources to arrange various configurations of public services. For this purpose, in each country, not only the GaaP model, but the three known mechanisms for its provision should be organized properly.

The GaaP model improves coordination within the system of public authorities required to offer a greater number of government services to meet numerous needs of citizens. Change of one government service delivery policy may impact the value of other government services. In order to create a greater expected public value, public authorities need to correlate and coordinate the contributions of interested private and state entities to better meet different expectations and needs and avoid the consequences of opportunistic actions by third parties. Without the effective orchestration mechanisms, the GaaP model risks to have a significantly negative impact on society and creation of public value.

4. The foreign experience shows that adoption of platform organization is not an absolute condition for a greater public value yet. State governance also requires greater functionality of mechanisms for organizing business processes (orchestration, choreography and deployment of small ecosystems) in terms of provision of public value from centralized information platforms for simultaneous support of different service delivery processes to select the optimal configuration of the method of public service delivery, the benefit of which can be appreciated only by its consumers-citizens and only if there is at least one alternative.

Prospects for further research. The last conclusion is key for further research, which is definitely expected in the area of formation of mechanism of modernization of the public governance system based on decentralized platforms and development of related guidelines for Ukraine.

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