White Paper on Artificial Intelligence Regulation in Ukraine:

Vision of the Ministry of Digital Transformation of Ukraine

Version for Consultation

June 2024

The White Paper on Artificial Intelligence Regulation in Ukraine: Vision of the Ministry of Digital Transformation of Ukraine is an analytical material that aims to propose an approach to the regulation of artificial intelligence technologies in Ukraine. It shall not be considered as an analytical document of public policy in the sense of the Law of Ukraine on Law-Making Activity.

This document is a translation from the Ukrainian language and may contain some omissions.

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Content

Opening Speech by Mykhailo Fedorov

The Deputy Prime Minister of Ukraine for Innovation, Education, Science and Technology — Minister of Digital Transformation

From the moment of the creation of the Ministry of Digital Transformation to the present day, our goal has remained unchanged – to build the most convenient digital state in the world. We believe that the future of Ukraine lies in the development of the digital economy and innovations. Artificial intelligence (AI) is an important part of this journey. Nowadays, AI is already being used in Ukraine in various areas, from military technologies to GovTech. We also see an important focus in the development of AI technologies in education, healthcare, economics, urban planning, and many other areas. This will allow our country not only to adapt to global trends but also to become a leader in this field.

As further progress on this journey, we are presenting a White Paper that describes in detail Ukraine's approach to AI regulation. The document is open for public discussion. To develop it, we engaged experts from various sectors: public sector, business, government officials, and academic community. This made it possible to incorporate suggestions and needs of specialists from various sectors.

I would like to emphasize that we take into account the challenges of our reality, and therefore the defence sector remains unregulated. We should not limit such AI products, but rather introduce more innovations that help to fight the enemy. We also understand that Ukraine's development requires maximum deregulation and reduction of bureaucracy to get rid of obstacles to the introduction of technologies.

At the same time, the risk of the rapid development of artificial intelligence and its potential impact on human rights is now recognized worldwide. To maintain the balance, we have developed

an approach that addresses the challenges without introducing mandatory regulation in the next 2-3 years. Ukraine relies on flexibility and adaptability. We give businesses time and tools to prepare for future national legislation.

The White Paper provides for specific tools, some of which businesses can use right now. They will allow us to prepare for entering the EU market, where the relevant regulations will soon be approved. The next step is to harmonize our legislation with the EU legislation. This is not only necessary for European integration but will also allow attracting more investment to the Ukrainian market. In particular, through identical legal regimes.

I thank everyone who will contribute to the development of the document and provide their suggestions. Join the discussion of the proposed approach and share your feedback!
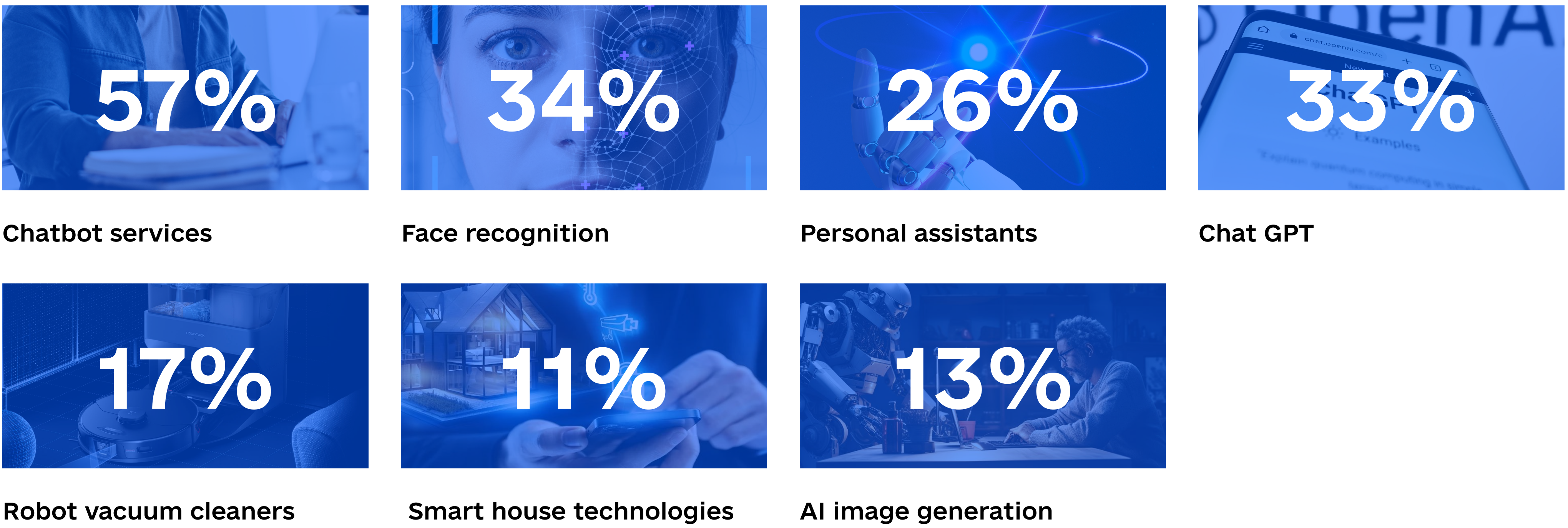
Introduction

Use of AI in Ukraine

Artificial intelligence has recently become a mainstay around the world. This is largely due to the degree of development of such technologies in recent years and the fact that AI technologies have reached a level where a large number of people around the world have begun to interact directly with AI. AI technologies open up many new opportunities, can simplify a wide range of tasks, and have significant potential to improve many areas of public life and human development in general. This potential of the technology has naturally led to a surge in new AI projects, its active implementation in the private sector, and the active use of AI systems and applications for personal and professional purposes by users around the world.

Ukraine is not an exception to the global trend, and according to the January survey by Kantar Ukraine, 78.7% of citizens know what artificial intelligence is. At the same time, only 7.6% said they did not know what AI was, and another 13.7% had difficulty giving a definitive answer. Also, a significant number of Ukrainian citizens have already had experience of using AI technologies, ranging from interacting with chatbots to using household appliances that incorporate AI technologies. According to the latest survey in January 2024, 29.1% of respondents said they use AI in one area or another, 16.6% were not able to give an unambiguous answer, and 54.3% said they do not use AI.

Top AI products in Ukraine

57%
Chatbot services

34%
Face recognition

26%
Personal assistants

33%
Chat GPT

17%
Robot vacuum cleaners

11%
Smart house technologies

13%
AI image generation
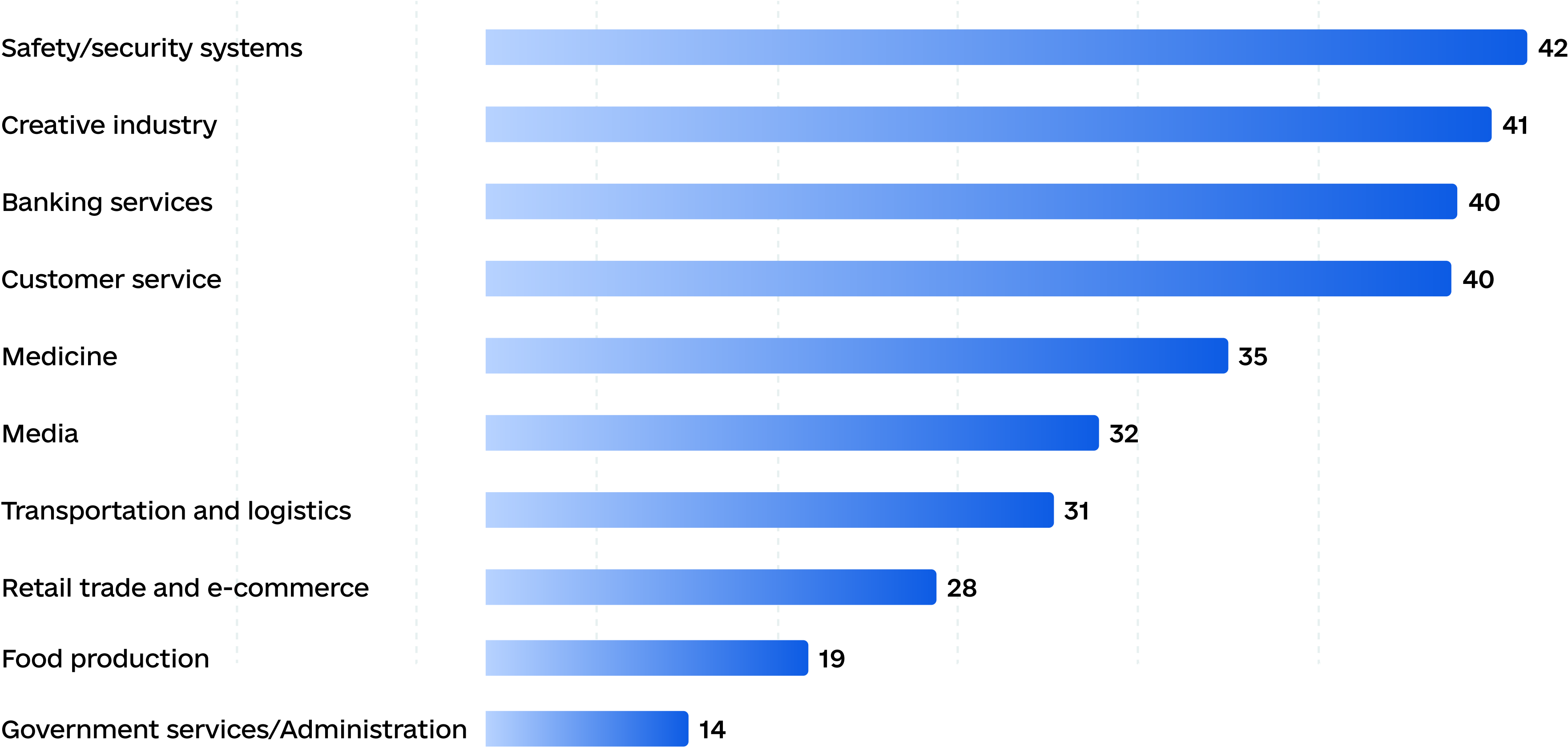
Kantar Panel Ukraine survey for January 2024.

Ukrainians have also begun to notice the use of AI more and more, and according to surveys, such applications of AI are most common in security systems, creative industry, banking, and customer service:

Areas in which Ukrainians notice the use of AI

Area	Value
Safety/security systems	42
Creative industry	41
Banking services	40
Customer service	40
Medicine	35
Media	32
Transportation and logistics	31
Retail trade and e-commerce	28
Food production	19
Government services/Administration	14

April 2023. Kantar Panel Ukraine, online survey, men and women 18-55, cities of 50 thousand – excluding temporarily occupied territories and war zones. n = 1000.

At the same time, 50% of respondents have a positive attitude towards AI in general and 73% agree with the statement that AI can improve the life of humanity:

April 2023

50%
of Ukrainians have a positive attitude towards AI in general

April 2023. Kantar Panel Ukraine, online survey, men and women 18-55, cities of 50 thousand - excluding temporarily occupied territories and war zones. n = 1000.

October 2023

73%
agree that artificial intelligence can make life easier for humanity

80%
are young people aged 18-29

82%
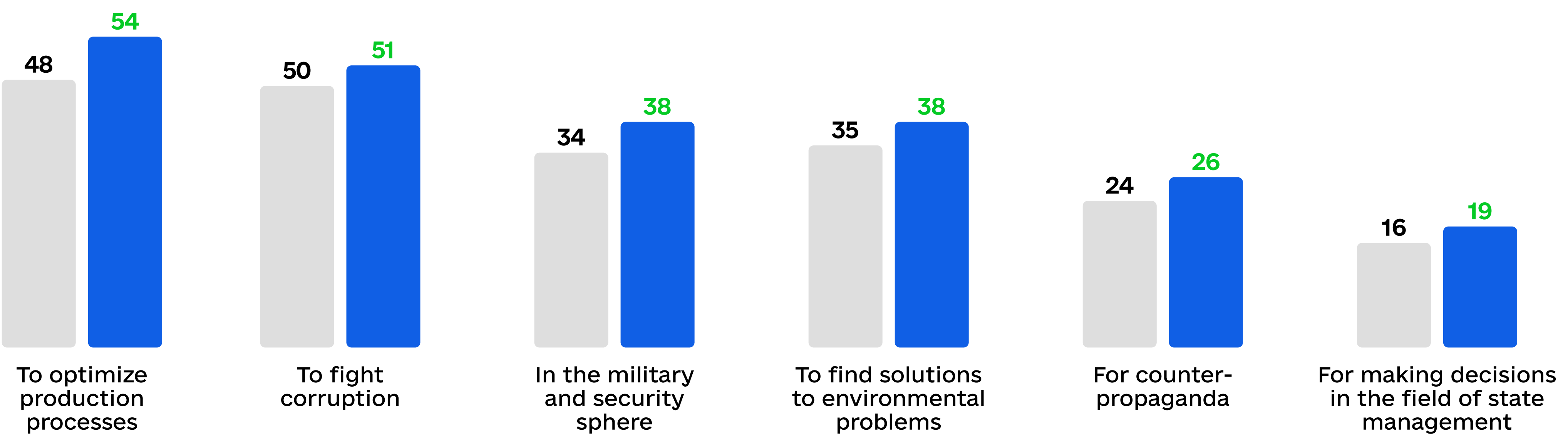of respondents have higher education

- 76%
- 24%

■ do □ do not

October 2023. Kantar Panel Ukraine, online survey, men and women 18-55, cities of 50 thousand - excluding temporarily occupied territories and war zones. n = 1000.

Ukrainians also see the potential of using AI to optimize production processes and fight corruption in Ukraine.

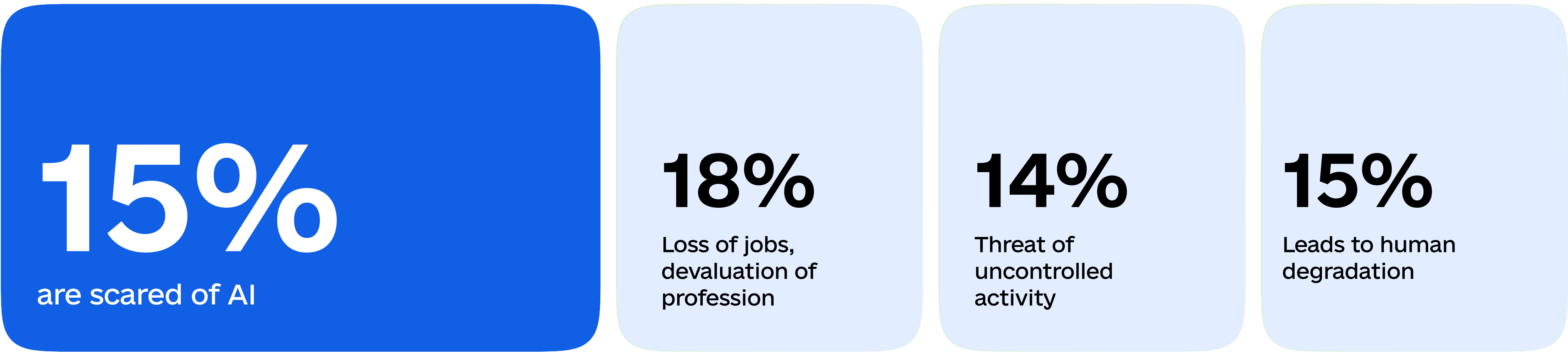|	To optimize production processes	To fight corruption	In the military and security sphere	To find solutions to environmental problems	For counter-propaganda	For making decisions in the field of state management
Grey	48	50	34	35	24	16
Blue	54	51	38	38	26	19

April 2023. October 2023. Kantar Panel Ukraine, online survey, men and women 18-55, cities 50 thousand - excluding temporarily occupied territories and war zone. n = 1000.

Despite a generally favorable attitude toward AI, citizens also perceive risks associated with AI, including ethical, socioeconomic, and existential ones.

The main fears of Ukrainians about AI

January 2024

15% are scared of AI	**18%** Loss of jobs, devaluation of profession	**14%** Threat of uncontrolled activity	**15%** Leads to human degradation

Answering the question about the ability to recognize text written by ChatGPT or another AI-based program (rather than a human), only 19.6% of respondents said they could recognize such text, while 42.2% said they could not. At the same time, when asked whether a person trusts text written by ChatGPT or another AI-based program, 34.1% said they do, compared to 25.4% who do not. Such data indicate that there are significant risks of manipulating human behavior with the help of AI, which should be addressed.

Background of the Approach Development

The discussion about the risks associated with the rapid development and use of AI has also become one of the key issues, along with general discussions about the benefits and potential of artificial intelligence technologies. This, in turn, inevitably led to the question of the need for legal regulation of AI. According to the Kantar Ukraine survey, 45% of Ukrainian citizens believe that a law on artificial intelligence is needed, while only 14% oppose it and 41% are undecided. At the same time, the share of supporters of the law among respondents with above-average financial status and higher education is 53% and 51%, respectively.

Attitude of citizens towards the regulation of AI

45%
believe that a law on artificial intelligence is needed

14%
oppose to a law

41%
undecided

Although the discussion on AI legal regulation in Ukraine actually became public only in 2023, certain processes and discussions on legal regulation were already active in 2020 and 2021. For example, in 2020-2021, Ukraine participated in the Ad Hoc Committee on Artificial Intelligence (CAHAI) of the Council of Europe, which was tasked with assessing the need and possibility of legal regulation of AI at the European level. The work of the Ad Hoc Committee resulted in the establishment of the Council of Europe's Committee on Artificial Intelligence, which has been tasked with drafting of the Council of Europe Framework Convention on Artificial Intelligence and Human Rights, Democracy and the Rule of Law, in which Ukraine is also participating. In recent years, similar processes have been taking place at the level of other international and supranational organizations, including the European Union, and other countries.

At the beginning of such discussions, the very need, feasibility, and possibility of introducing special legal regulation of AI were actively considered: primarily, two alternatives were considered – relying on advisory tools on the ethical use of AI (the "ethical AI" period) and applying existing legislation to AI. In the second case, it was mainly about legislation related to the AI sector, in particular, personal data protection legislation. At the same time, the consensus on AI regulation has come down to the need for legally binding regulation (the "responsible AI" period) in a significant number of countries and the European Union at the time of writing this White Paper, and is likely to remain so in the future.

Realizing the importance and relevance of the issue, intense discussions on the legal regulation of AI in Ukraine have recently begun and are ongoing in the Ukrainian expert community. The publication of this White Paper is the next stage of such discussions, in which we aim to structure the results of the discussions and offer the vision of the Ministry of Digital Transformation regarding Ukraine's approach to AI regulation. During the discussions and attempts to find the optimal solution for AI regulation, various possible approaches were considered, including the option of relying on existing legislation without adopting a special law. Based on the results of the discussions, the Expert Committee on AI under the Ministry of Digital Transformation developed a Roadmap for AI regulation in Ukraine, which laid the foundation for our approach to AI regulation.

In developing our approach, we engaged experts in artificial intelligence, ethics, law, and other relevant sectors to provide expert advice and participate in the development of the regulation. Our priority was to establish transparent decision-making processes and use public engagement mechanisms to ensure openness and trust. We are convinced that the involvement of all stakeholders – business, public sector, and government institutions – allowed us to take into account different points of view and find the right balance of interests. We also had the opportunity to present our vision and receive feedback from representatives of national

delegations to the Council of Europe's Committee on Artificial Intelligence, representatives of EU institutions, European think tanks, and leading non-governmental organizations.

Defence Sector is Not Subject to Regulation

While implementing our approach during the full-scale invasion of the Russian Federation, we remain aware of the importance of developing innovative solutions to repel aggression and in no way intend to propose regulation of AI systems in the defence sector. This is due to both the national interests of the state and the real state of affairs in the security sector – unilateral regulation (restriction) of the use of AI in the defence sector at the level of national legislation will only put our country in a less favorable position compared to the aggressor, which will not implement such regulation.

We are convinced that the effective and efficient implementation of the responsible use of AI in the defence sector is possible only at the level of international (humanitarian) law, in particular, by developing and adopting a relevant convention or updating existing conventions with relevant provisions and introducing an effective mechanism for overseeing compliance with such a convention.

Interaction with Other Fields of Law

In proposing to move towards the adoption of general and comprehensive law in the final stage of our approach, we would like to emphasize two important aspects. First, certain social relations that may be affected by AI, in our view, should still be covered by relevant sectoral legislation. This is relevant primarily where the scenarios or ways of using AI are secondary to determining the legal consequences of such use. Therefore, for example, the legal consequences of creating a work by artificial intelligence and determining the ownership of such a work should be regulated by the relevant intellectual property law.

Secondly, in the absence of a legally binding and special law on artificial intelligence, it is important to comply with applicable national legislation that partially addresses the use of AI systems. This primarily concerns personal data protection legislation. An example of such norms is the right of a personal data subject to be protected from automated decision that has legal consequences for him or her. Of course, with the introduction of mandatory AI regulation at the second stage, the relevant provisions will be significantly expanded and detailed. At the same time, the absence of such a law does not give the right not to comply with the provisions of the applicable laws, including the law on personal data protection.

To help comply with the law on personal data protection in the AI sector, the Office of the Ombudsman and the Ministry of Digital Transformation of Ukraine have also developed recommendations on managing AI intelligent systems in accordance with the national laws and international standards.

> 🔗 The recommendations on compliance with the law on personal data protection in the AI sector are available <u>here</u>

Bottom-Up Approach: Summary, Prerequisites and Implementation Goals

Before moving on to an overview of the approach proposed by the Ministry of Digital Transformation to the regulation of AI in Ukraine, we would like to set out the goals for which regulation is needed and, more broadly, the goals we seek to achieve through our approach. The order (numbering) of the goals below does not reflect their priority – all the goals are equally important.

💰	🔒	🇪🇺
Support Business Competitiveness	**Protection of Human Rights**	**European Integration**

Goal 1: Support Business Competitiveness

Supporting business competitiveness and ensuring access to global markets. This goal logically follows from the basic understanding of the approach developers and authors of this White Paper that it is necessary to apply a regulatory approach that will not only not harm business development and innovative products in the AI sector, but will also help Ukrainian businesses enter international markets. This will be achieved, among other things, by ensuring that our approach to regulation is broader than just implementing regulation and includes the creation and provision of tools for business to prepare. The development and implementation of such tools will allow businesses not only to prepare for future national legislation, but also to meet the requirements of the EU Artificial Intelligence Regulation and to enter the European market.

Goal 2: Protection of Human Rights

Protecting human rights from the risks posed by AI and the misuse of such technologies. The basic principle of human rights protection in the digital environment is that human rights should be equally well protected both offline and online. AI cannot only become another area or environment where human rights can be violated, but also significantly increase the number of human rights violations. A vivid illustration of this point is the human right not to be discriminated against. Thus, in the learning process, AI technologies can reflect institutional discrimination, existing prejudices against representatives of different nationalities, skin color, and other characteristics. Integration of such biases into AI systems will lead to a violation of the said right, which becomes even more dangerous when the systems are used to make decisions that may have significant consequences for human life. For example, in the case of an automated decision to hire a person, grant state aid, or provide a loan. No less risky and dangerous are the scenarios of malicious use of AI. There are already known cases of artificial intelligence being used for online fraud, creating deep fakes, and manipulating human behavior in general. In order to protect citizens from such risks and to protect

human rights when interacting with AI, there is a need to introduce legally binding and comprehensive regulation, which is proposed in the second stage of our approach.

Goal 3: European Integration

Ukraine's integration into the European Union has long been not only an economic issue, but also a matter of values. The state pays a very high price for these values, including human lives. In recent years, Ukraine has made significant progress on our way to joining the European Union. Further integration, of course, also implies the adaptation of national legislation to EU legislation, including legislation in the digital sector. While respecting the different opinions on the regulation of AI in the EU and the EU's approach to digital regulation in general, the developers of the proposed approach see no moral right to stand in the way of the Ukrainian people's goal of joining the EU, in particular, by introducing provisions that would contradict or go against the EU legislation just to ensure that a certain sector of our digital economy has certain economic advantages. In addition, based on the consultations with business, the skepticism about the EU AI Regulation reflects the position of only a certain share of business, while the majority of them understand this component of our approach. This understanding depends to a large extent on understanding the nature of the domestic AI market in Ukraine and other considerations, which we will try to convey in the relevant section. Therefore, we are convinced that the implementation of the EU AI Regulation is important not only for Ukraine's smooth integration into the EU, but also has strong market and economic prerequisites.

Summary

Having regard to the arguments and proposals of public authorities, representatives of relevant businesses, civil society organizations, and representatives of the scientific and technical community, the Ministry of Digital Transformation of Ukraine proposes to use the gradual introduction of AI regulation. By gradual introduction of AI regulation, we mean moving from extra-legal tools and initiatives over the next few years to the adoption of a special law on artificial intelligence at the final stage. Thus, the essence of the approach is to divide the path to mandatory regulation into two stages: the preparatory stage and the stage of implementation of the law analogous to the EU Artificial Intelligence Regulation.
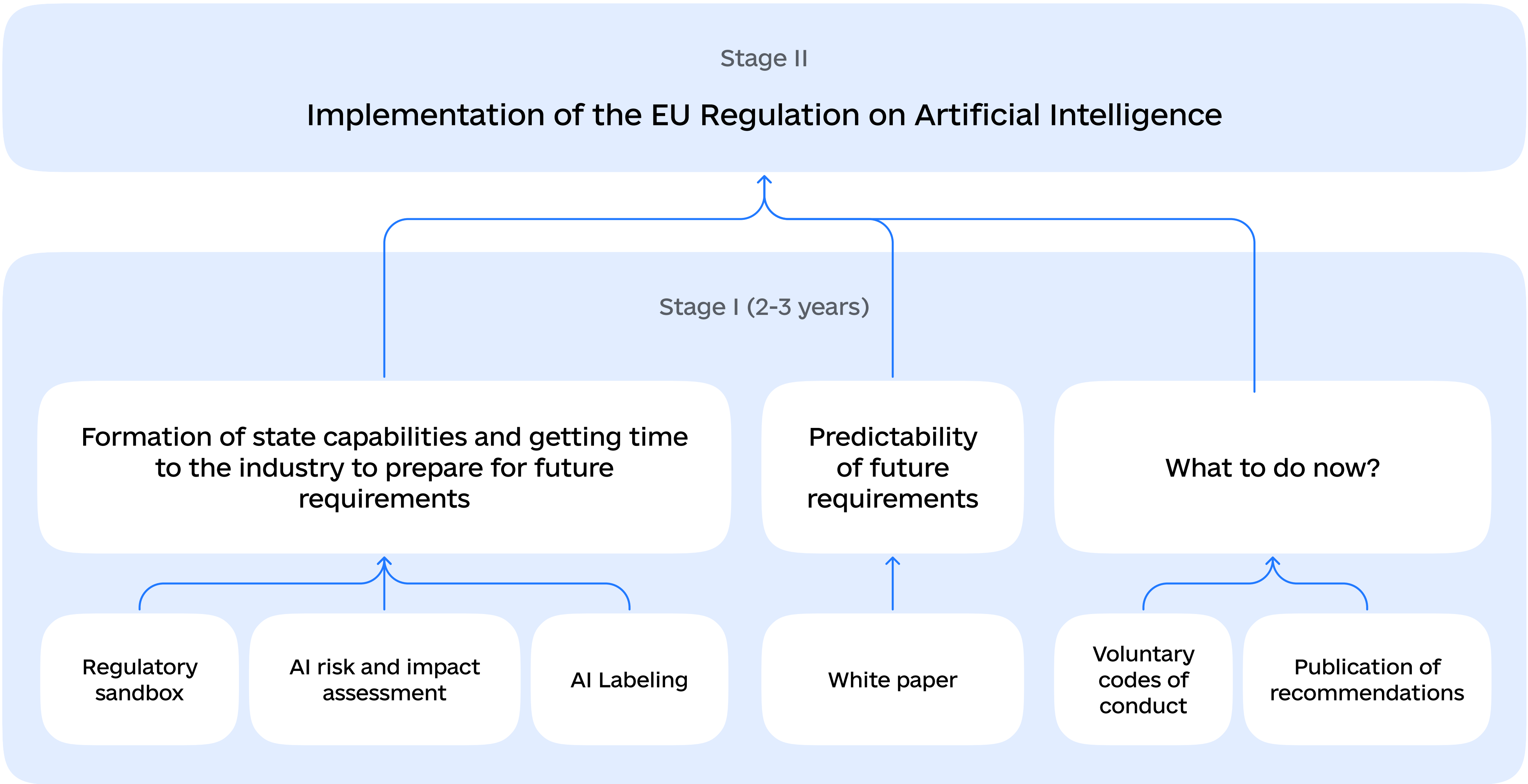
The first stage (preparatory) involves the creation and implementation of extra-legislative tools to help relevant businesses and other stakeholders prepare for future mandatory regulation. Currently, it is planned to develop, adapt, and implement such tools as a regulatory sandbox, a methodology for assessing the AI impact on human rights, AI labeling tools, and soft law tools: voluntary codes of conduct and general and sectoral guidelines. An important element of the first stage and the approach in general is the creation of responsible AI web portal where such tools will be collected and integrated. Another important element should be the final version of the White Paper, which will be revised and finalized based on the results of consultations as part of the current publication. It is expected that the final version of the White Paper on Artificial Intelligence will become a commonly agreed guideline for both the state and business and will ensure predictability of the rules of the game in the sector of artificial intelligence for the coming years.

When considering tools to prepare businesses, such as a regulatory sandbox or impact assessment methodology, we expect that such tools will also prepare domestic businesses to enter the EU and other global markets. For example, the development of AI products within the regulatory sandbox will be based on the EU Artificial Intelligence Regulation. At the same time, we remain aware that similar and new tools will appear in the near future. That is why the proposed tools do not constitute an exhaustive list, but rather a starter kit with which we propose to start our journey. We intend to actively monitor the emergence of new tools and initiatives on responsible AI at the international level, in other countries, as well as at the level of public sector and industry initiatives.

After giving businesses time and tools to prepare and build the state's capacity to regulate AI, it is planned to develop and adopt a law analogous to the EU Artificial Intelligence Regulation. This should be a logical and timely continuation of our efforts in the first stage. Like the EU, we intend to consider the possibility of postponing the entry into force of certain provisions of the future law. That is, certain provisions of the future AI law will come into force only after a certain period of time after the future law comes into force. This will likely primarily apply to provisions that will impose obligations and cover the vast majority of AI systems.
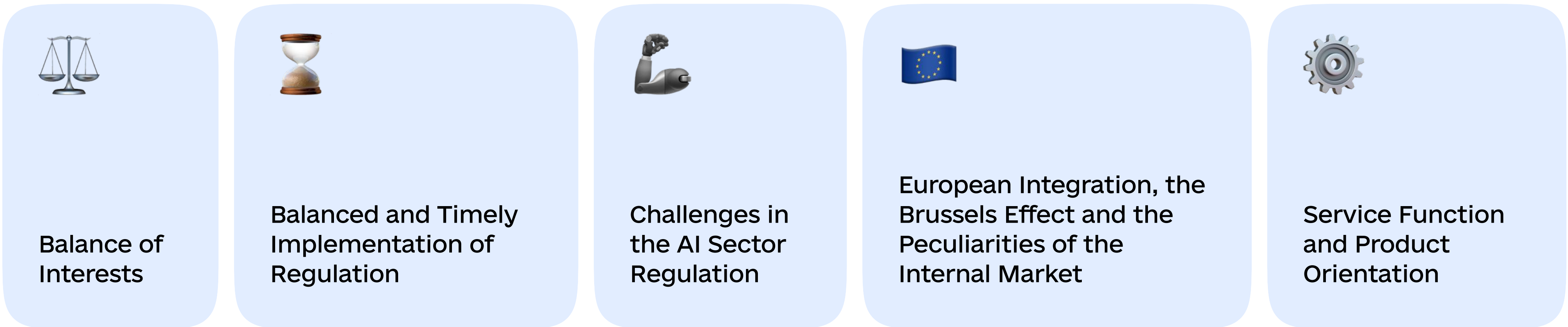
Our approach is also in line with the Bletchley Declaration signed by Ukraine at the AI Safety Summit 2023, which supported the idea of creating a framework to ensure that AI technologies are developed and used responsibly and safely around the world.

Bottom-Up Approach

Stage II

Implementation of the EU Regulation on Artificial Intelligence

Stage I (2-3 years)

| Formation of state capabilities and getting time to the industry to prepare for future requirements | Predictability of future requirements | What to do now? |

| Regulatory sandbox | AI risk and impact assessment | AI Labeling | White paper | Voluntary codes of conduct | Publication of recommendations |

Prerequisites for Developing a Bottom-Up Approach

For a comprehensive perception and understanding of the proposed approach, we suggest considering the background, considerations and actual circumstances that were taken into account by the developers of this White Paper and the proposed approach to AI regulation.

| Balance of Interests | Balanced and Timely Implementation of Regulation | Challenges in the AI Sector Regulation | European Integration, the Brussels Effect and the Peculiarities of the Internal Market | Service Function and Product Orientation |

Balance of Interests

The need to strike the right balance between the interests of society and citizens and the development of innovation and business interests was one of the key principles taken into account when developing the approach. By trying to ensure the maximum protection of human rights in the AI sector and considering regulation exclusively from this perspective, there is a high risk of harming the development of AI innovations in the country and burdening the relevant business. This will lead to Ukraine falling behind in the technology sector in general and in the AI sector in

particular. Focusing exclusively on innovation and business development, we run the risk of another danger – an uncontrolled environment where human rights in interaction with AI are unprotected and scenarios of irresponsible and malicious use of AI are not protected by appropriate legislative safeguards. This becomes especially dangerous in light of the significant impact that artificial intelligence can have on social relations. Unfortunately, it is impossible to come up with an approach that would protect both human rights and the interests of business and innovation development to the fullest extent possible. The more safeguards there are against human rights violations, the more obligations the public and private sectors have when developing and using AI. We do not dare to talk about a unique approach that would resolve this contradiction. Instead, we offer our own version of where we are ready to put the balance on the Human Rights-Innovation scale.

Balanced and Timely Implementation of Regulation

When considering certain approaches to regulate artificial intelligence, it is important to give proper attention to the actual capabilities of the state. If we take a closer look at the actual situation within the country and the global context, we can see a set of potential dangers that we may face when choosing one or another approach.

The first and most important risk is the novelty, complexity, and constant development of artificial intelligence technologies, and, accordingly, the difficulty in developing effective and sustainable regulation (law) in the long term. Despite all the available expertise and potential of the Ukrainian scientific, technical, and legal environment, we must realize the complexity of the task of developing effective regulation. Artificial intelligence as we have been interacting with it over the past few years is a completely new phenomenon for Ukrainian society and humanity in general.

If we look at other legislative acts in the digital sector, we will admit that many social relations that are currently regulated by certain "digital" acts existed before the current level of digitalization or the Internet in general (offline). This allowed lawmakers to apply their previous experience and extend it to the relevant social relations in the digital sector (online). For example, e-commerce legislation is based on the principles, foundations and approaches that have long existed in the regulation of social relations in trade and commerce. Another example is personal data protection legislation. Of course, a direct comparison between handwritten hospital files or library catalogs that existed several decades ago (and sometimes still exist today) and modern personal data processing systems would not be correct. However, the relevant personal data protection legislation has had a long history of being updated in line with the growing level of digitalization. AI in the form we have now and in the sector we seek to regulate did not exist offline. For sure, certain elements of it, such as algorithms and algorithmic systems, have been known to mankind for quite some time, but their use has not had a significant impact on society and human rights. That is why we have not gained significant experience in this sector, which we could use as a basis for developing AI regulation. We are starting almost from scratch.

If we look at similar regulatory development processes in other countries, we see that the lawmakers of such countries or the EU are fully aware of the level of complexity of the task they are facing.

That is why we believe that the idea of becoming one of the first countries to introduce AI regulation is somewhat bold and misguided. Especially in the context of the state's actual regulatory capabilities, which are discussed in the next paragraph.

> ☝️ Summarizing the above considerations, we propose to abide by the following rule: **learn from other people's mistakes, not your own.**

Challenges in the AI Sector Regulation: State Capacity to Regulate and the Need to Create a Regulatory Authority

Another equally important factor that influences the choice of a particular way to regulate the sector of artificial intelligence is the available resources and capacity of the state to implement and regulate AI in accordance with the chosen approach. The capacity should be understood as the total financial, human, and organizational resources that the state is ready to use for the purposes of both implementation and enforcement of regulation.

A special feature of the social relations that need to be regulated in the AI sector and in the digital sector in general is their dynamism. This leads to a situation where effective regulation becomes impossible without the creation of an appropriate regulatory authority that is empowered to eliminate certain violations of the law in real time. If, for example, a certain practice of using AI violates the human right to non-discrimination, then without a timely order to eliminate the violation, we get the problem of recurrence of such a violation. The mere existence of a ban and the ability to defend one's right by applying to court is not an effective mechanism in the digital sector. A striking example of this in the already regulated sector of public relations is the problem of rapid removal of illegal content on the Internet. For example, if child pornography is not removed from the Internet in a timely manner, a child becomes a victim every time someone views the content. That is why in this area the old approach of removing illegal content based on a court decision is considered ineffective and subject to revision.

We should consider similar considerations when choosing our approach to AI regulation. For example, without creating a regulatory authority in addition to the law, we risk not only face similar situations with multiple and repeated violations of a particular human right, but also risks with much greater and deeper negative impact and consequences. For example, human profiling and automated decision-making by AI systems can lead to one unfair decision against a person, which will have significant negative consequences and violations of rights in other areas.

Thus, it becomes obvious that there is a need to create a regulatory authority that will implement and monitor compliance with the relevant AI legislation. The creation of such a regulatory authority requires sufficient human and financial resources, which, despite the importance of the AI sector, is obviously extremely unlikely in times of war. For example, the UK government intends to allocate 10 million pounds to strengthen the capacity of existing regulatory authorities to regulate the AI sector only. Based on current priorities of the state, it is impossible to allocate funds comparable or even proportional to Ukrainian realities. In addition, the creation of such an authority will require time to go through all the necessary procedures, including the development of a separate law on

the procedure for creating, powers and functions of such an authority. Another important problem is the availability of appropriate level of expertise and professional human resources that can be involved in the operation of the regulatory authority. That is why we emphasize capacity building in our approach, where capacity building means not only the ability of business to meet future requirements, but also the ability of the state to regulate. And, therefore, for example, the approach of rapid implementation of mandatory regulation with the creation of a regulatory authority (implementation of the EU Regulation immediately after its adoption) is virtually impossible.

European Integration, the Brussels Effect and the Peculiarities of the Internal Market

As already outlined in the goals we intend to achieve through the introduction of regulation, EU integration is a cross-cutting element that should be taken into account when formulating any policies or implementing legislation. In our case, European integration is both a factor that was taken into account when formulating our approach and one of the ultimate goals – the introduction of regulation similar to the EU Regulation in the second stage.

At the same time, we propose to consider the introduction of EU-like regulation at the second and final stage not only in terms of a certain imperative that we must follow to fulfill the requirements for EU accession, but also as an appropriate step in view of our other goals: an appropriate level of human rights protection and access of Ukrainian AI products to global markets. First, the introduction of similar legislation will help us achieve our goal of ensuring a high level of human rights protection when interacting with AI. The EU regulation will be one of the most effective human rights protection mechanisms in the world, which can be confidently stated given the final version of the regulation, the progress of the discussion on its adoption, and the previous experience of implementing EU legislation in the digital sector.

Secondly, the introduction of regulations other than the EU Regulation would be inappropriate given the peculiarities of our domestic market. Thus, according to the study entitled AI-Ecosystem of Ukraine: Talents, Companies, Education, 94 of the surveyed companies (43%) have their headquarters in Ukraine, while the remaining 125 (57%) are foreign. This indicates the predominant focus of Ukrainian business on international markets. It is also important in this context that 34 surveyed companies (15%) create a joint AI product/element for another AI product (this includes outsourcing companies with AI departments and companies whose products or services allow them to help clients develop AI). Such cooperation with international partners will also require compliance with the European legislation – it will be difficult for EU companies to engage Ukrainian companies in partnership or create a joint product if such a Ukrainian partner does not meet the requirements of the EU Regulation, as there is a high risk that the joint product will be subject to regulatory sanctions from supervisory authorities in EU member states.

That is why, for example, we cannot follow the path of the United Kingdom or Japan, which are not only unconstrained by European integration commitments but also have a large domestic market. This allows the governments of such countries to focus on domestic needs when formulating an approach to regulating the AI sector. For objective reasons, we must take a comprehensive approach, taking into account the specifics of our AI market.

Also in this context, it is important to emphasize such an important feature of the global regulatory landscape in the digital sector as the Brussels effect. The essence of this feature is that, given the size and importance of the EU market, companies operating in many different markets, including the EU market, do not see the expediency of complying with "lower" standards than those provided for by the relevant EU legislation. This is primarily due to economic, technical and legal considerations. One example is the complexity of differently customizing a company internal processes and practices or technical product settings for different markets, if in any case, the product must comply with the high standards of the relevant EU legislation in order to access the EU market. In other words, if a certain product is simultaneously targeted at the EU market and markets X and Y (with lesser requirements), the resources required to separately adjust processes for different markets will be more expensive than to simultaneously adjust processes to meet the more demanding EU standards, even if this is not necessary to access markets X and Y.

Service Function and Product Orientation

The Ministry of Digital Transformation has always focused on creating specific products for citizens and society. This, in particular, is reflected in our desire to create specific tools that will help businesses prepare for the introduction of mandatory regulation. It is important to emphasize that preparation means both preparation for future national legislation and EU Regulation and access to global markets. With this in mind, and fulfilling one of the main functions of the state, which is to provide services, we emphasize product orientation and tools. It is this feature of the first stage that allows us to characterize our approach as a two-stage one: the first stage is a much broader and more substantive set of steps than just relying on soft law tools (recommendations) before introducing mandatory regulation.

Stage 1

As outlined above, the idea of the first stage of the approach is to introduce specific tools that will help both business and the state prepare for the implementation of future regulation. The introduction and use of such tools will have a positive impact on the level of human rights protection against the risks posed by AI and its misuse. We propose to take a closer look at each of the tools and then move on to the benefits that the use of such tools will have for each of the three key stakeholders: citizens, businesses, and the state.

Methodology for Assessing the Impact of AI on Human Rights

A key tool, which is also necessary for the other two – the regulatory sandbox and the legal advisory platform – is the development and/or adaptation of a methodology for assessing the AI impact on human rights. An impact assessment methodology is a set of questions and derived refinements that allow assessing the impact of a particular AI product on human rights (low, medium, high). The methodology can be applied to both private sector products and those produced or used by the state. Determining the human rights impact of an AI product is a key element in preparing for both future national regulation and EU market access. Both regulations will be based on a risk-based approach: the degree of requirements for an AI product will depend on the degree of risk it poses to human rights.

Having a methodology in place is also an initial step in the use of the other two proposed tools. The methodology, along with the internal selection rules, is one of the two key criteria for determining whether a product will be approved for participation in the regulatory sandbox. Given the somewhat limited resources available to the state to process products within the sandbox, as well as the goals of its operation, only a certain share of AI products will be of interest for its processing. It is expected that these will be primarily AI products that have a medium or high impact on human rights. The methodology will also be a key element and entry point for such a tool as a legal aid platform for compliance – without determining the degree of impact (risk) of a particular product on human rights, further work on bringing such an AI product into compliance with (future) legislation is not possible. The methodology can also be used by companies on their own at their own discretion (without participating in any of the tools) or serve as a guide for internal legal departments or compliance officers.

By methodology implementation, we mean not only and not so much the development of our own Ukrainian methodology, but also the adaptation and/or elaboration of the methodology in accordance with the domestic Ukrainian context. We remain aware of the considerable amount of work done by experts to develop similar methodologies in other countries and organizations, including the EU and the Council of Europe, and plan to use the best international experience for our purposes. In addition to the actual existence of such a methodology, it is also important that the state will assist in the application of the methodology, in particular, within the framework of the two aforesaid tools. Such assistance is extremely important, as the process of determining the degree of risk in the AI sector is a rather difficult task. According to the developers of the approach,

this is a more complex and resource-intensive process than, for example, assessing the impact of personal data processing or other apparently similar assessment methodologies in other areas. To strengthen the state competence in conducting such an assessment and using the methodology, Ukraine will also participate in a pilot project on the use of a similar methodology being developed within the framework of the Council of Europe's Artificial Intelligence Committee for the Framework Convention on Artificial Intelligence and Human Rights, Democracy and the Rule of Law.

Regulatory Sandbox

The Ministry of Digital Transformation intends to create and is already working on creating a regulatory sandbox for high-tech products and industries. In addition to artificial intelligence, the regulatory sandbox is expected to cover such areas as WEB-3, blockchain, and some other innovative areas. A regulatory sandbox is a controlled environment within which, in our case, AI products will be able to be developed or tested under the supervision and with the involvement of expert (and other types of support) of the state for compliance with future regulation. An important feature and difference between the sandbox and the impact assessment methodology is that within the sandbox, products will be "screened" for compliance with the entire range of (future) regulatory requirements. In other words, the regulatory sandbox is a broader and more far-reaching tool than the methodology, which actually serves as an entry point. Considering this and limited resources of the state to put a significant number of AI products through the sandbox, the sandbox will primarily include those products whose development within the sandbox will be of sufficient interest to the state (medium and high impact on human rights), as well as those that meet other selection criteria. These are expected to include, for example, criteria such as the social significance of the product. There will also be certain selection privileges for small and medium-sized businesses and startups. The goal of the sandbox is not only to help participating products, but also to build the state capacity to evaluate products, in particular, in the context of future regulation and the subsequent need to create a regulatory authority.

AI Legal Advisory Platform

As noted in the overview of the previous tool, not all AI products will be eligible for the regulatory sandbox, and the state is likely to have limited resources to provide access to the sandbox tool to everyone. Recognizing this and trying to help as many AI products as possible prepare for regulation, we aim to create a platform for legal aid in compliance with (future) legislation. The idea is to provide recommendations for companies based on the results of the the impact assessment of a particular product, which can be implemented by the company internal resources (legal departments, compliance officers/responsible persons) or by engaging law firms that will provide certain services pro bono.

Voluntary Labeling of AI Systems

Labeling of AI systems is the provision of clear and structured information about the design, functions, algorithms, and other aspects of artificial intelligence systems. This process is aimed at ensuring transparency and openness regarding the way intelligent systems operate. Following the disclosure of information about the system by the developer, such a system receives the appropriate labeling tags. The labeling of artificial intelligence systems can be compared to food

labeling, as both processes aim to provide consumers with information to make informed decisions. Labeling AI systems and transparently disclosing how they are constructed is crucial to the safety and control of AI from the bottom up for the following reasons.

Accountability and Responsibility. Clear labeling demonstrates that AI developers and system integrators are responsible for their products and their implementation is transparent in terms of disclosing information about the system. If an AI system causes damage or behaves in an unexpected way (not in line with predefined expectations), it is important to know who is responsible in order to remedy the situation. Transparency of the design and functionality of an AI system allows stakeholders to understand the choices made during the development and training of the system.

Building Trust. User trust: labeled and therefore transparent AI systems help to build trust among users. Knowledge of AI system operations and information about its capabilities and limitations allow users to make informed decisions about their interaction with the technology, similar to how end users can choose their diet through food ingredient labeling. Industry Trust: in the industry, transparency fosters trust between companies, researchers, and developers of safety policies and regulations. Open sharing of information about AI systems encourages collaboration and the development of best safety practices.

Ethical Considerations. Avoiding bias and discrimination: transparent labeling can help to identify and eliminate bias in AI systems caused by training data. Understanding the principles of training data annotation, algorithms, and decision-making processes allows for careful identification and correction of biases, helping to mitigate possible discriminatory outcomes of AI systems. Human Rights and Privacy: clear labeling that provides information on how AI systems may affect human privacy rights allows for an assessment of whether the system is being used ethically and demonstrates that such systems are in line with societal values in terms of personal data protection.

Compliance with Regulatory Requirements: many of the above requirements (accountability and transparency of systems, anti-discrimination, etc.) will be provided for in future national and EU legislation that will soon come into force. Thus, by voluntarily publishing the necessary information, labeling can be used both by system owners to prepare for future mandatory requirements and by the state to plan safety and accountability measures for AI systems in a particular sector or area.

Approach to System Labeling

The developer undergoes the labeling procedure voluntarily, for example, using a web form. The web form allows the developer or owner of the system to share about the AI system in a standardized form, voluntarily providing information about three key elements: training data, algorithms, and decision space. The depth of disclosure is voluntary and is determined by the developer, which allows for a balance between transparency and intellectual property considerations. As a result of the disclosure process, the automatically generated visual label and accompanying code can be integrated by the developer into the system website, providing transparency to end users and providing access to the disclosure in the open data format. It is important to note that the presence of voluntary labeling marks does not imply any certifications or permits, but is an indicator that the developer has voluntarily taken appropriate measures to increase the transparency of the system.

Elements of system labeling:

- Training data (describe the process of marking up data for training)
- Algorithms (describe the principles of using the main components and related risks)
- Decision space (describe the output decision space of the system)
- Privacy (measures to ensure the protection of personal data)
- Monitoring (involvement of people in the validation of automatic processing results)
- Interpretation (additional information for interpretability of automatic processing results)
- Bias (measures to reduce the risk of bias)

> " We intend to provide users with convenient tools for such voluntary labeling and popularize this mechanism among the industry.

General and Sectoral Recommendations

Despite the tools already proposed and outlined (as well as those that will be developed and implemented in the near future) to prepare for the entry into force of our future regulation, a natural question arises: "What should we do in the period before the introduction of legally binding regulation?" Understanding such a request, both from private sector representatives and our citizens, in particular, in a slightly different light: "How will my safety be guaranteed in interaction with AI?", we see the importance of using other tools – soft law tools (as opposed to training tools). These are primarily general and sectoral recommendations. Of course, given their advisory nature and the absence of legal obligation to follow such recommendations, these tools cannot and in no way are considered in our approach as an alternative to legally binding regulation in the future. At the same time, for objective reasons (premature introduction of mandatory regulation at the current stage, a high probability of lack of resources to create a regulatory body, etc.), we do not currently have a better tool.

We intend to and have already started the process of developing, adapting and planning the implementation of both general and sectoral recommendations together with other government agencies and non-governmental organizations. It is important to emphasize that general recommendations mean the development of recommendations that will address the vast majority of challenges in the AI sector across the board. In other words, there may be several general recommendations, for example, for the public and private sectors. At the same time, sectoral recommendations mean a set of norms of a recommendatory nature in a specific area or several related areas at the intersection: the sector of journalism, healthcare, law enforcement etc. With a high degree of probability, such recommendations will "survive" the introduction of mandatory regulation and will be finalized and updated in light of relevant changes.

At the same time, the importance of such a tool as recommendations will not disappear with the introduction of mandatory regulation, which, although it will cover many areas and nuances of AI development and use, will not cover everything and will not answer all questions. The global approach is that even if there is legally binding regulation, there are a large number of additional recommendations and guides that detail the norms and principles of legally binding regulation in a particular area. The role of sectoral recommendations will become especially important after the law is implemented.

Voluntary Codes of Conduct

In an effort to offer more and somewhat strengthen the legally non-binding role of general and sectoral guidance, we would like to propose another tool – a set of voluntary commitments in the form of codes of conduct. In our approach, codes of conduct will serve as an intermediate point between the realm of general and sectoral recommendations and legally binding regulation. In this area, we have high expectations for responsible businesses that are willing to participate in the development and signing of such codes.

Although voluntary codes of conduct will not be legally binding, it is expected that compliance will be enforced not through coercive elements, as in the case of regulation, but through reputational considerations. Without wishing to interfere with the internal processes of building a culture of self-regulation (for example, by forming a self-regulatory body) or to shape such a culture from the top down, the Ministry of Digital Transformation is ready to develop and offer such a code(s) for signature upon request from the industry. We believe that an important element of such an ecosystem of self- or co-regulation is the availability of a tool for monitoring the fulfillment of obligations. Without in any way forcing business to any mandatory reporting (which we do not have the authority to do in the absence of regulation), we are considering various forms of such monitoring (periodic voluntary reports, quarterly meetings of signatory companies, etc.) and would like to encourage readers of this White Paper to share their thoughts and suggestions on the form of monitoring the fulfillment of voluntary commitments.
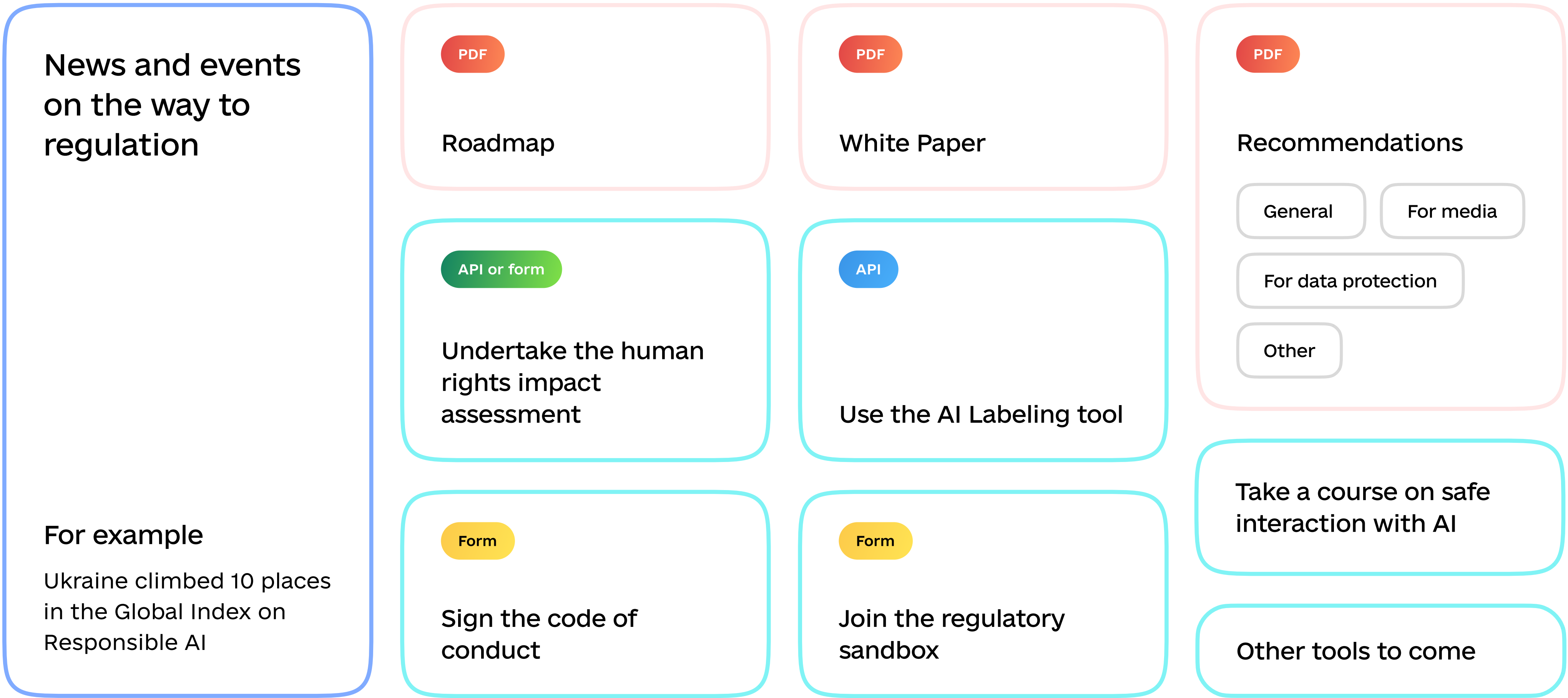
Responsible AI Centre

The last but not least tool in our approach is the web portal of the Responsible AI Centre. The goal is to provide convenient access to all the previously described tools, as well as to keep all our key stakeholders informed about how Ukraine is moving towards mandatory regulation and how we are implementing it.

By providing convenient access to existing and future tools, we mean integrating them as much as possible into the portal as technically and practically possible. Our goal is to build a one-stop shop web portal where stakeholders can use the tools, get access to all available recommendations, and learn about the latest news in the AI sector regulation in Ukraine. We also envisage an information and education component, in particular for citizens, through the publication of information and reference materials on how to protect themselves from the risks and misuse of AI.

Responsible AI Centre

Responsible AI Centre from the Ministry of Digital Transformation is a one-stop-shop web portal

News and events on the way to regulation

For example

Ukraine climbed 10 places in the Global Index on Responsible AI

PDF
Roadmap

PDF
White Paper

PDF
Recommendations

General | For media
For data protection
Other

API or form
Undertake the human rights impact assessment

API
Use the AI Labeling tool

Take a course on safe interaction with AI

Form
Sign the code of conduct

Form
Join the regulatory sandbox

Other tools to come

Impact of Tools on Stakeholders

Having examined each of the instruments in more detail, we propose to address the question: "What positive impact will they have on the interests and capacities of all three key stakeholders?"

Citizens

At first glance, it may seem that the tools we have described are aimed solely at helping businesses prepare for the introduction of future national regulation and access to global markets, including the EU market. And while this is certainly the reasoning behind the creation of the tools, we also expect a positive impact on the level of human rights protection against AI risks. First of all, this applies to soft law tools: general and sectoral guidelines and voluntary codes of conduct – we provide clear guidance on what needs to be considered when developing and using AI products. In the case of voluntary guidelines, this impact is reinforced by a form of reputational obligation, including through our proposed monitoring of companies compliance with their commitments. The positive impact on human rights of training tools is less obvious. But if we take a closer look, it becomes clear that this positive impact of training tools can be no less, and perhaps even greater. Such an impact will be indirect: the more responsible and implementing elements of the future legislation of AI products we have on the market, the higher the level of human rights protection within the country. We are convinced that such an indirect impact will be much more effective than, for example, the early introduction of legally binding regulation without providing time and tools for business to prepare. In such a scenario, imposing sanctions for violations would not be an effective defence mechanism – the state, not being able to track all offending companies, would simply not be physically able to fine or ban all products that would violate the requirements of such prematurely introduced legislation.

Business

Given the detailed objectives and nature of the assistance that businesses will receive through the use of the proposed tools, we will not repeat ourselves and review each of them in detail. At the same time, we would like to emphasize a few common points and features that are inherent in all of our tools. Firstly, all of our instruments are designed to be compliant with both future national legislation and the EU Regulation. This is crucial for entering the EU market and avoiding penalties, including significant sanctions from the regulatory authorities of the member states. Secondly, the use of our tools will reduce the cost of legal support services for the development and implementation of a product. Even those tools that do not cover the full range of (future) legislation requirements allow to assess the state of compliance of a product and assess the risks of non-compliance, for example, with the EU Regulation and the nature and amount of potential sanctions. Thirdly, the use of the tools will allow cooperation with potential foreign partners, even if a particular enterprise is not aimed at entering global markets. Thus, getting access to certain technical solutions or other cases of interaction and involvement of technologies will not be complicated, as companies using the tools will be able to demonstrate to their potential partners a certain level of ethics and responsibility. The requirement to demonstrate such a level may be contained in the legislation of the partner company's country or, for example, in the requirements for donor funds or external financing. The reputational aspect is equally important: the responsible use of AI is a great opportunity to show your users the benefits of using this particular AI product and to set yourself apart from competitors.

State

Although the state does not have a vested interest in implementing a particular approach and the main goal of the state is to balance the interests of business and citizens, as well as to fulfill our future obligations for EU accession, we expect a positive impact on the capacities of the state as well. First of all, it is about building the capacities of the future regulatory body, understanding the AI market in the country and the degree of risk of products, as well as the ability to assess the effectiveness of certain provisions of future legislation based on empirical experience. Thus, the formation of the state regulatory capacity is planned to be achieved through the involvement of governmental authorities to the work of the regulatory sandbox and the deployment of a methodology for assessing the AI impact on human rights. Practical consideration of AI scenarios will help to develop approaches and experience that will allow for better and more efficient supervision of compliance with future regulation. It is also important to understand the market for AI products within the country and, in particular, the number and ratio of products with different degrees of human rights risk. This will allow the state to develop approaches to regulating (or, in certain cases, banning) such products that pose unacceptable risks to society, national security, law and order, etc. Assessing the effectiveness and efficiency of the provisions of future legislation based on practical experience will allow the state, if not to change the relevant provisions, to adapt their application, for example, by publishing additional explanations or recommendations, or to introduce additional provisions where the relevant nature of social relations requires it and/or where legislative gaps exist.

To summarize, we can responsibly expect a comprehensive and multifaceted positive impact from the use of the instruments and confidently approach the second stage – the introduction of mandatory regulation.

Stage 2

The second stage of our approach, the introduction of mandatory regulation through the implementation of the EU Regulation, is a logical, consistent, and objectively determined step. It is determined both by the goal of Ukraine to join the EU and the necessity to ensure an adequate level of human rights protection. At first glance, this step seems to be about adapting the EU Regulation and does not require detailed explanations, but rather consistent technical and legal work. This view is not incorrect – we propose to start the process of drafting of the law immediately after the final adoption of the Regulation in the EU. At the same time, there is one feature that gives us reason to expect the bottom-up approach to be applied at the second stage. This feature is the partial and gradual implementation of the EU Artificial Intelligence Regulation and deferring of entering into force of certain AI Act's provisions in order to provide even more time for both business and the state to prepare, in particular, to establish a regulatory body.

In April of this year, an explanatory meeting was held between Ukraine, Moldova on the one hand, and the EU on the other, during which the EU's vision and position on how the candidate countries should implement EU legislation, in particular, in the digital domain, was received. During the meeting, the EU side emphasized the need for Ukraine to implement (transpose) the EU Artificial Intelligence Regulation.

During the meeting, it was emphasized that Ukraine should not simply expect to join the EU when the EU Artificial Intelligence Regulation will apply directly, leaving the field of AI outside of any regulation in the interim. Early transposition of the EU Regulation into national legislation is necessary. There is a need for a supervisory body to already exist at the time of accession and direct application of the Regulation in Ukraine: this is necessary so that when the Regulation comes into force in Ukraine, we already have a competent body that could effectively apply the legislation. The EU side also emphasized the importance of building the capabilities and experience of such a future body, which we plan to achieve at the first stage as described in the relevant sections of this document.

Also, during the meeting, the EU side emphasized the inadequacy of relying on other legal frameworks, for example, on the Council of Europe Framework Convention on Artificial Intelligence and Human Rights, Democracy and the Rule of Law as an alternative to the transposition of the EU Regulation. At the same time, there were no requirements from the EU regarding the terms of entry into force of provisions identical to the Regulation. Accordingly, we may leave some flexibility as to when and which provisions come into effect.

At the same time, this possibility of phased implementation should not lead to cases where certain provisions of the EU Regulation that we do not immediately introduce into national regulation and/or defer entering into force will be replaced by similar (in terms of scope/direction) provisions of other countries legislation. It is important to avoid mixing up the provisions of the EU Regulation and national laws of other countries, as this may lead to complications in the further implementation of the EU Regulation.

Preparation of the draft law

Start the process of preparing

Immediately after the final approval of the EU Regulation on AI

Principles of development and implementation

- Avoid developing of provisions contradictory to the EU Regulation

- Avoid trying to combine provisions of the legislation of other countries

- Progressive and step-by-step implementation of the EU AI Regulation is possible

A possible implementation timeline

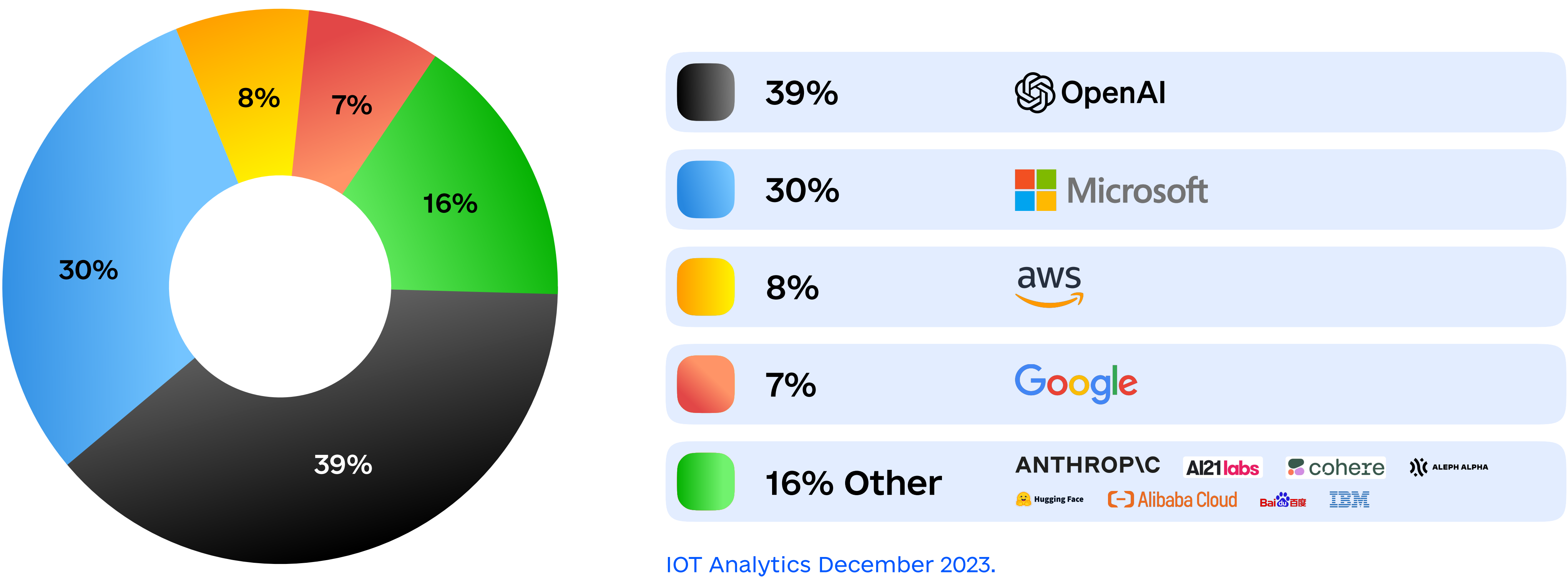|		EU AI Regulation 20%	EU AI Regulation 50%
EU AI Regulation	Draft Law	Draft Law	Draft Law
2024	2024	2026	2027
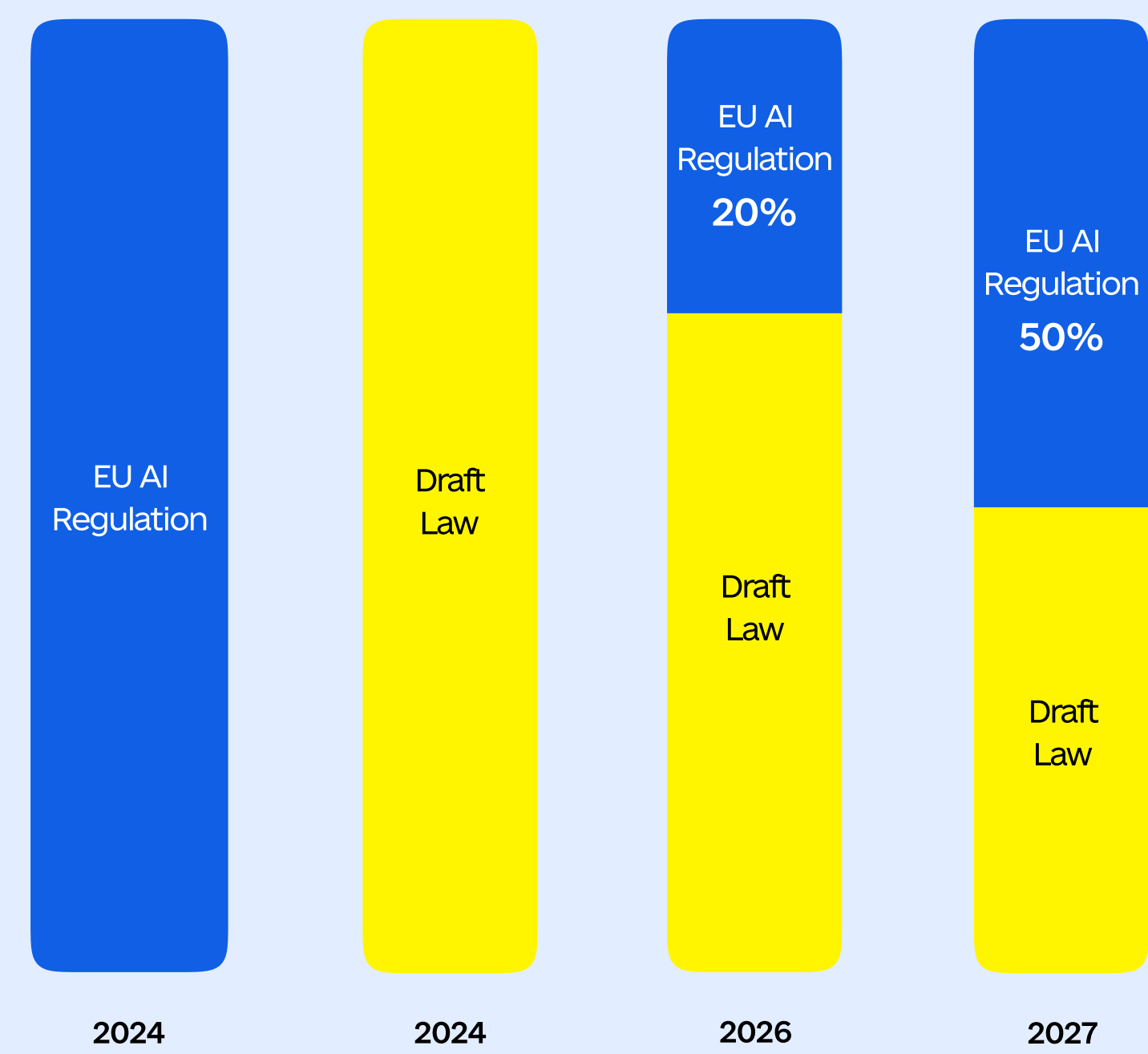
Cooperation Offer for Large AI Platforms

In the absence of mandatory regulation during the first stage, we aim to use all available opportunities, including partnerships. In this context, we have high expectations for responsible businesses and, above all, for large AI platforms.

The structure of the global generative AI market in terms of models and platforms tends to crystallize into 5 major AI players, which, according to IOT Analytics 2023, collectively occupy 84% of the AI platform market. It is possible to cover ≈ 84% of possible human rights violations by signing 4 partnership agreements: Open AI, Microsoft, AWS, Google.

Generative AI market share '23: Models and platforms

Color	Share	Platform
⬛	39%	OpenAI
🟦	30%	Microsoft
🟨	8%	aws
🟥	7%	Google
🟩	16% Other	ANTHROP\C, AI21labs, cohere, ALEPH ALPHA, Hugging Face, Alibaba Cloud, Baidu, IBM

Pie chart values: 39%, 30%, 8%, 7%, 16%

IOT Analytics December 2023.

We propose to apply the Trusted Flagger concept (used in another landmark regulation in the digital sector – the EU Digital Services Regulation). The essence of the concept is to involve leading Ukrainian civil society organizations in the function of Trusted Flagger, a trusted observer who takes on the function of filtering complaints about violations of the user terms of each platform in terms of human rights violations in connection with the use of AI. Upon receipt of a complaint, such a trusted observer reviews the complaint for possible violations and, if it concludes that a violation has occurred, transmits the complaint directly to the platform, which is reviewed on a priority basis. We are convinced that such a mechanism will be mutually beneficial for all parties: the user – quick consideration of the complaint in case of violation; platforms – reducing the volume of complaints to be processed (filtering by a third party); the state – another tool for protecting human rights here and now. The Ministry of Digital Transformation has already reached preliminary agreements to engage two leading Ukrainian NGOs with extensive experience in the sector of digital rights: NGO Digital Security Lab and Center for Democracy and Rule of Law. These organizations have already expressed their willingness to join the work as Trusted Flaggers, and other organizations, if interested, can express their desire to cooperate by responding to the White Paper.
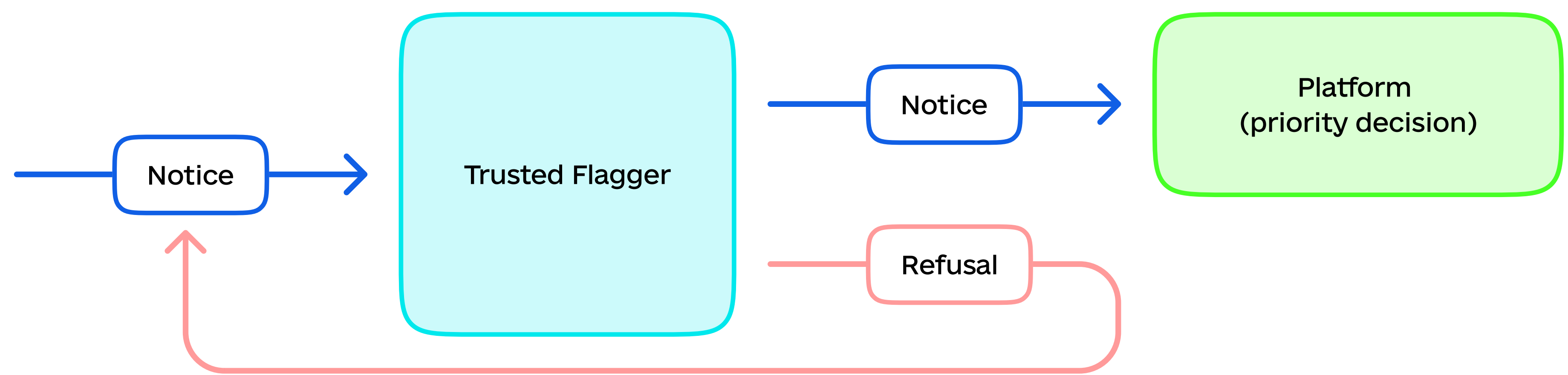
The above considerations for cooperation with AI platforms are an open call for cooperation from the Ministry of Digital Transformation. We are also open to discussing possible proposals to revise the proposed cooperation scheme, as well as to consider alternative mechanisms to protect the rights of users.

Conclusions: Further Plans, Give Feedback

This White Paper reflects the vision of the Ministry of Digital Transformation regarding the optimal approach to the regulation of artificial intelligence systems in Ukraine and serves as a document for consultation and receiving feedback. We welcome suggestions, comments and feedback from other government bodies, businesses, academia, representatives of the public sector and all other interested parties.

The expected term for giving feedback is 3 months from the date of publication. We reserve the right to extend the consultation period.

You can provide feedback in any form by sending an e-mail to the e-mail box: hello@thedigital.gov.ua (please specify "White Paper on AI" in the subject of the e-mail) or by filling out the appropriate forms at the link.