

27.11.2023 – 01.12.2023 | KYIV



# BITEC

Building integrity training  
and educational center

**RESULTS OF THE 1st  
HACKATHON ON  
BUILDING INTEGRITY  
AND PREVENTION OF  
CORRUPTION IN THE  
SECURITY AND  
DEFENSE SECTOR OF  
UKRAINE**



# THE ORGANISERS OF THE HACKATHON



Department for Prevention  
and Detection of Corruption  
of the Ministry of Defense of Ukraine  
and  
Directorate of Digital  
Transformation of the Ministry  
of Defense of Ukraine



National Defense  
University of Ukraine  
(BITEC)



Office of the Commander-in-Chief  
of the Armed Forces of Ukraine

## PARTNERS



UK Defence Academy  
BI Programme



NATO Building Integrity  
Programme



Center for Integrity  
in the Defense Sector (CIDS),  
Norwegian Ministry of Defense



Center for Innovations and  
Development of Defense Technologies  
of the Ministry of Defense of Ukraine

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# PREREQUISITES

The 2019 self-assessment of the implementation of the Building Integrity Programme in Ukraine, conducted with the support of the NATO Building Integrity Programme Expert Team, found that the Ukrainian government, with the support of the public and international partners, takes corruption seriously, and has adopted important legislation, approved anti-corruption strategies, policies and plans, and established specialised investigative bodies.

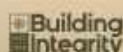
At the same time, the Team of Experts noted that at the state level, there is insufficient information about the concept of integrity and the processes of its education for young people, their parents, and the general public, in particular through the promotion of the introduction of information and communication technologies in various spheres of public activity, the creation of social advertising that voices and enshrines the unconditional (fundamental) norms of the community: morality, honesty, responsibility, and a conscious approach to the performance of duties.

As a result, in 2020, the Scientific Centre for Building Integrity and Preventing Corruption of the National Defence University of Ukraine initiated a youth creative competition "Together Against Corruption! Your Vision Matters" dedicated to the International Anti-Corruption Day. The organisers aimed to demonstrate the importance of building integrity and preventing corruption in modern society, and therefore directly involved military and civilian youth in implementing anti-corruption measures. The success of the 2020 creative competition has turned it into an annual event that brings together an increasing number of participants.

The rapid development of information and communication technologies, which, on the one hand, provides ample opportunities for communication between like-minded people with similar interests, views and worldviews, and, on the other hand, ensures the creation of effective tools for promoting youth initiatives in various fields, prompted the organisers of the youth creative competition to hold the First Hackathon on Building Integrity and Preventing Corruption in the Security and Defence Sector of Ukraine.

From 27 November to 01 December, cadets and students of military and civilian higher education institutions of Ukraine, as well as IT professionals, came together to develop innovative approaches, digital tools, architectural and software solutions to improve the effectiveness of building integrity and preventing corruption in the security and defence sector of Ukraine.

The event was organised by a working group consisting of representatives from the National Defence University of Ukraine, the Department for Prevention and Detection of Corruption of the Ministry of Defence of Ukraine, the Directorate of Digital Transformation of the Ministry of Defence of Ukraine and the Office of the Commander-in-Chief of the Armed Forces of Ukraine in partnership with representatives of the NATO Building Integrity Programme, the UK Defence Academy's BI Programme, and the Centre for Integrity in the Defence Sector (CIDS) at the Norwegian Ministry of Defence.





## Ms. Dr Gerlinde NIEHUS

Director of Building Integrity NATO Programs

**Education serves as a catalyst for changes. Changes always starts in the heads of people and events like this are their driving force**

A quote from a speech at the IV International Forum  
«GOOD GOVERNANCE AND BUILDING INTEGRITY IN THE DEFENCE AND SECURITY SECTOR»



## Oleh BOBOVNIKOV

Commercial director of "ROZVYTOK" LLC

**Despite the short preparation time, the organizers of the Hackathon managed to unite a fairly large number of participants - representatives of various fields of activity, who showed readiness to develop fundamentally new views on some established processes in the Security and Defense Sector of Ukraine. And the involvement of international partners in the event instills faith in the fact that the proposed ideas will be able to be implemented in practice**



## Maria SHEVCHUK

Executive Director of the "IT Ukraine" Association

**Digitization, as a Ukrainian national idea, is reflected in all spheres of social activity and holding of the First Hackathon on education of integrity and prevention of corruption in the security and defense sector of Ukraine is a clear confirmation of this. We are sure that such measures will have a positive impact on the processes of digitization of the armed forces, ensuring the transparency of human and material resource management systems used by the security and defense sector of Ukraine**



## Volodymyr SHKITSKY

Senior software engineer of the software development and implementation department of EPAM DIGITAL LLC

**The hackathon participants impressed us with their attitude to the event and perseverance in developing their own solutions. There was a sense of struggle and healthy competition between the teams, both in solving problems and in presenting the results. In general, the event inspires further development and improvement of similar initiatives, and the ideas and concepts received should be integrated into existing systems and processes in the context of the implementation of the State Anti-Corruption Programme in the Security and Defence Sector of Ukraine.**







## PURPOSE OF THE HACKATHON

The First Hackathon on Building Integrity and Preventing Corruption in the Security and Defence Sector of Ukraine took place from 27 November to 1 December 2023

### PURPOSE OF THE HACKATHON

To create a platform for effective interaction between talented young people and professional experts to improve the effectiveness of the system of building integrity and preventing corruption in the Security and Defence Sector of Ukraine.

#### OBJECTIVES:



**Development of innovative approaches, digital tools, architectural and software solutions to improve the efficiency of integrity building and corruption prevention in the defence and security sector.**



**Implementation of the best practices of the EU and NATO countries in introducing innovative technologies while building a sustainable system of integrity standards to improve the efficiency of the security and defence sector.**



**Creating conditions for effective interaction between talented young people and professional experts to develop innovative and technological solutions in the context of the implementation of the State Anti-Corruption Programme in the security and defence sector of Ukraine.**



**Promoting standards of integrity, zero tolerance and a negative attitude to any form of corruption among young people.**

# DETAILS THE TASKS OF THE HACKATHON



The first hackathon on building integrity and preventing corruption in Ukraine's defence and security sector followed the format of the NATO TIDE Hackathon competition

The hackathon participants were invited to take part in one of three combined tasks, which included the development of innovative methods, tools, architectural models or techniques to improve the efficiency of building integrity and preventing corruption, as well as to implement the proposed newest solutions in the form of software or hardware that would meet the architectural principles of information systems organisation, taking into account the world experience of NATO member states.

## TASK DESCRIPTION



**Creation of an information and communication platform for actors in the prevention of corruption in the security and defence sector of Ukraine**



**Development of an automated system of housing records for military personnel**



**Development of a system for reservation of cargo transportation services in the logistics support system of the Defence Forces of Ukraine**





# HACKATHON RESULTS

The competition has become a platform for effective interaction between talented youth and professional experts to develop innovative and technological solutions in the context of the implementation of the State Anti-Corruption Programme in the security and defence sector of Ukraine

## PARTICIPANTS:

representatives of the security and defense sector of Ukraine



## TOTAL PARTICIPATED:



**12**

teams



**100**

participants



**11**

mentors



**10**

sponsoring companies

Over the course of the hackathon, the teams proposed 12 software solutions and presented them to the panel, held numerous consultations with hackathon mentors and subject matter experts, and implemented tens of thousands of software code.







## MOST INNOVATIVE HACKATHON SOLUTION



team of the **Military Institute of Telecommunications and Informatization named after Heroes of Krut** won in this category

## PRIZE WINNERS:

### TASK No. 1

Creation of an information and communication platform for actors in the prevention of corruption in the security and defence sector of Ukraine

#### THE WINNER

Team of the Institute of Special Communication and Information Protection of the National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute"

#### SECOND PLACE

Team of the Lviv State University of Internal Affairs

#### THIRD PLACE

Team of the Kharkiv National University of Internal Affairs

### TASK No. 2

Development of an automated system of housing records for military personnel

#### THE WINNER

Team of the Cherkasy Institute of Fire Safety named after the Heroes of Chernobyl of the National University of Civil Protection of Ukraine

#### SECOND PLACE

Team of the Military Institute of Telecommunications and Informatization named after Heroes of Krut

#### THIRD PLACE

Team of the Lviv State University of Life Safety

and

Team of the Military Institute of Telecommunications and Informatization named after Heroes of Krut

### TASK No. 3

Development of a system for reservation of cargo transportation services in the logistics support system of the Defence Forces of Ukraine

#### THE WINNER

Team of the Military Institute of Telecommunications and Informatization named after Heroes of Krut

#### SECOND PLACE

Team of the National Academy of the State Border Service of Ukraine named after Bohdan Khmelnytskyi

#### THIRD PLACE

Team of the Lviv State University of Life Safety





## THE MOST INNOVATIVE SOLUTION



The **JAM Team** won in the Most Innovative Hackathon Solution category, offering a fundamentally new vision of the processes of housing registration of military personnel and their automation using the «HomeWay» information system.

**Team** Military Institute of Telecommunications and Informatization named after Heroes of Krut

**Team captain** – Yevhen Redziuk

**Team members:** Oleksandr Sachuk, Artur Iskenderov, Ilya Tsyunyak, Stepan Starodubtsev

### HOMEWAY

The essence of the solution proposed in the HomeWay system is to create a centralised information system for apartment accounting and improve the existing legal component of the apartment accounting process. The proposed solution includes:

- 1 exclusion of garrison-level housing and maintenance departments from the process of applying for a housing placement;
- 2 establishing the Unified Central Hub of Housing Records of the Ministry of Defence of Ukraine (hereinafter referred to as the UCHRU) to maintain housing records;
- 3 user authentication using Diia Sign technology;
- 4 full automation of submitting documents to the MoD's ECSCC through the implementation of Diia Sharing technology and automated generation of documents (templates) issued directly by military units;
- 5 automation of the personalised calculation of the number of residential premises (rooms) to be received, monetary compensation for the housing to be received or sublease (lease);
- 6 full automation of the apartment queue;
- 7 preventing fictitious data from being entered into apartment files by using append-only databases, which will ensure data versioning;
- 8 introduce services for notifying servicemen about the status of the queue or the need to update data.



# THE MOST INNOVATIVE SOLUTION



Unlike the existing apartment accounting system, which is defined by the Order of the Ministry of Defence of Ukraine "On Approval of the Instruction on Organisation of Provision of Housing for Military Personnel of the Armed Forces of Ukraine and Their Family Members" No. 380 as of 31.07.2018, the solution offered by HomeWay allows to:

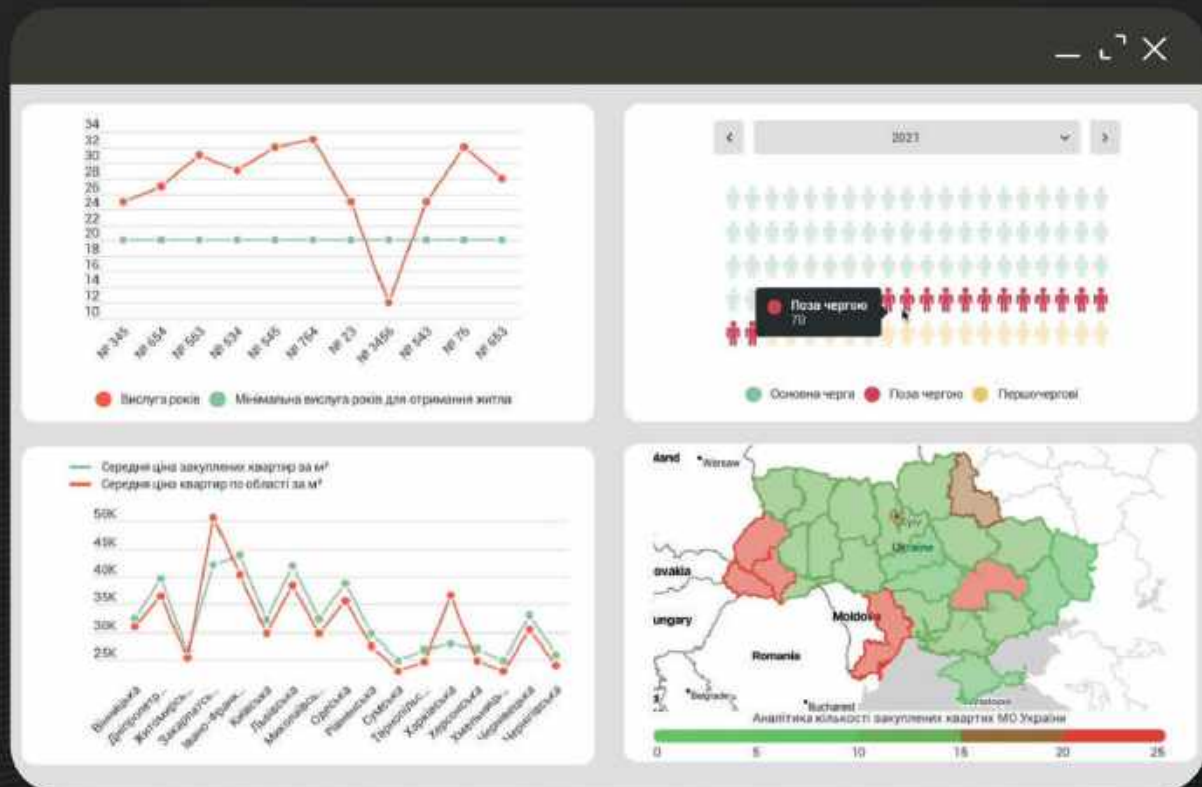


minimally involve legally responsible persons in the functioning of the system and makes it impossible for certain officials to influence the stages of the life cycle of an apartment case in order to commit any corrupt acts;



provide transparent analytics of the state of the queue, the register of issued residential space, the distribution of apartments, etc., in order to identify anomalies.

The use of solutions provided by the HomeWay system will help to move away from paper-based document management and, as a result, speed up the process of submitting documents for the housing waiting list. In addition, the system provides the ability to monitor the apartment registration processes, which will help to ensure their transparency and reduce the impact of the human factor as the main source of corruption.





## TASK 1: THE WINNER



The **LAPSY team** won in the category «Creation of an information and communication platform for actors in the prevention of corruption in the security and defence sector of Ukraine» with a solution using the «**Automated Anti-Corruption Platform**» information system.

**Team** Institute of Special Communication and Information Protection of the National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute"

**Team captain** – Yevhen Lukyanchuk

**Team members:** Yevchuk Oleksandr, Pustovoit Yaroslav, Azza Yulia, Senich Olga

### AUTOMATED ANTI-CORRUPTION PLATFORM

The essence of the solution proposed in the Automated Anti-Corruption Platform system is to develop an advanced multitasking anti-corruption resource that will serve as an auxiliary service for preventing corruption, as well as a training and communication platform for users. The proposed solution includes:

- 1 creation of an information and communication platform in the form of a website containing sections of an online form for reporting a corruption offense, a legal framework and an educational platform with a chat forum;
- 2 automation of the online form with the possibility of anonymous and registered sending, where the data processor is artificial intelligence technology;
- 3 the use of an electronic digital signature for registration of submitted applications and the possibility of legal use of submitted applications in future court cases;
- 4 impossibility of human intervention in the database created on the basis of the online form to correct submitted applications or obtain data about the applicant, which makes the system protected from the corrupt influence of officials;
- 5 a chatbot that helps with navigation and use of the site, answers users' questions and puts the most common questions and answers to them in a separate section of the resource;
- 6 adding a user notification system about the status of questionnaires sent by them.

The use of the presented solutions will contribute to the spread of integrity in society and the acceleration of the process of filing complaints about corruption offenses. In addition, the system ensures the impossibility of human intervention in data, which will contribute to the prevention of corruption crimes in the middle of the system and ensures the safety and privacy of users by combining modern methods of data protection and encryption.



## TASK 1: PRIZES



The **IT-3 team** took second place in the category «Creation of an information and communication platform for actors in the prevention of corruption in the security and defence sector of Ukraine» with a solution using a new service in the «DIIA» - «**No Corruption**» application.

**Team** Lviv State University of Internal Affairs

**Team captain** – Diana Romanyuk

**Team members:** Victoria Skalotska, Alina Saprun, Volodymyr Ternavskiy

## NOCORRUPTION

The essence of the solution proposed in the NoCorruption system is to create/develop/improve the existing Diia application. The proposed solution includes:

- 1 creation of a separate service in the "Diia" application, namely "NoCorruption";
- 2 creation of an automated system for generating and analyzing reports using artificial intelligence technologies;
- 3 a simple and effective system for submitting requests;
- 4 the possibility of receiving public responses to requests;
- 5 integration with the regulatory framework;
- 6 access to specialized courses and webinars for citizens, activists and officials.

Unlike the existing separate systems, the solution proposed in the "NoCorruption" service allows you to create a comprehensive approach to the disclosure, prevention and elimination of corrupt practices and to expand the interaction between the public and the authorities, contributing to the creation of a transparent and responsible society. The use of solutions presented in the "NoCorruption" service will make it easier for citizens to report corruption and prevent it.





## TASK 2: THE WINNER



The **Fire Safety** team won in the category «Development of an automated system of housing records for military personnel» by offering a solution using the information system «**Automated housing queue**».

**Team** Cherkasy Institute of Fire Safety named after the Heroes of Chornobyl of the National University of Civil Protection of Ukraine

**Team captain** – Udovenko Maksym

**Team members:** Dyadyushenko Oleksandr, Dendarenko Vladyslav, Vykhristenko Viktor, Tarasov Serhiy

### AUTOMATED QUEUE FOR HOUSING

The essence of the proposed solution is the automatic formation of a queue of servicemen who are on the apartment registration, taking into account the preferential categories and the date of registration. The proposed solution provides for:

- 1 entering information about the serviceman using a form where (if available) all preferential components are indicated;
- 2 uploading necessary copies of documents, which will be permanently stored in the system and updated by the user if necessary;
- 3 formation of a summary table of the garrison's apartment queue in three categories: general queue, preferential queue, out-of-order queue.

Unlike the existing apartment accounting system, the proposed solution allows:

- 1 avoid the situation when there are several people with the same place in the queue (the presence of this problem in practice was revealed during the analysis of queues of garrisons that are in public access);
- 2 to centrally store certified copies of the military serviceman's documents, which give him the right to enter the apartment register;
- 3 to receive a justified place in the garrison queue in case of transfer of a serviceman between garrisons.

**In addition, it is possible to register for the relatives of a military employee (in the case of his death) to submit all the necessary documents for placement in the apartment register. In the proposed prototype of the information system, it is possible to keep records of available housing within the garrison.**





The **BitFlow team** took second place in the category «Development of an automated system of housing records for military personnel» having proposed a solution using the information system «**Web application for automating the accounting of the military personnel housing queue**».

**Team** Military Institute of Telecommunications and Informatization named after Heroes of Krut

**Team captain** – Zerov Oleksandr

**Team members:** Oleksiy Safonov, Volodymyr Vozny, Anton Kurochka, Maksym Tsimbalyuk

### WEB APPLICATION FOR AUTOMATING THE ACCOUNTING OF THE MILITARY PERSONNEL HOUSING QUEUE

The essence of the solution proposed in the system "Web application for automating the accounting of the military personnel housing queue" is to improve the existing system of servicemen's apartment accounting, to prevent cases of corruption and abuse of office during the distribution of apartments among servicemen. The proposed solution provides for:

- 1 creation of an information platform (scalable web application) that will enable automated management of apartment queues and processing of all related data;
- 2 authorization using EDS (Signature Action or Bank ID) to confirm identity and prevent manipulation of accounts;
- 3 generation of necessary documents using Diia API and signature of documents uploaded to the personal account using EDS (Diia Signature or Bank ID);
- 4 automated creation of an apartment file and a verification mechanism that minimizes the intervention of officials in this process;
- 5 a fundamentally new algorithm for calculating and moving the apartment queue, which is based on the use of a system of coefficients that are automatically calculated by the system depending on the available data about the person
- 6 the ability to see the current state of the apartment queue for any of the garrisons at any time;
- 7 exclusion of the possibility of making changes to the apartment queue data at the application level

The use of the solutions presented in the system «Web application for automating the accounting of servicemen's apartment queue» will contribute to moving away from paper document circulation and, as a result, increasing the transparency and efficiency of decision-making in the security and defense sector of Ukraine. The system will also make it possible to keep an automated, transparent and unchanging account of the state of the apartment queue and minimize the impact of the human factor on this process.





The team of Lviv State University of Life Safety took third place in the category «Development of an automated system of housing records for military personnel» by proposing a solution using the «KvartBot» information system.

Team Lviv State University of Life Safety

Team captain – Dmytro Babich

Team members: Serhiy Kmyta, Pavlo Barabach

### KRARTBOT

The essence of the solution proposed in the KvartBot system is to create a chatbot that simplifies user interaction with the system by providing access to the necessary functionality in a convenient form. The proposed solution includes:

- 1 access to the system only for authorised users who have logged in through the Diia app;
- 2 convenient presentation of the list of documents required to receive compensation;
- 3 access to the system from any device with a display of the apartment queue status;
- 4 automation of the personalised calculation of compensation for subletting (renting) housing, as well as compensation for the housing to be received;
- 5 introducing services for notifying servicemen about the status of the queue or the need to update data.

Unlike the existing apartment metering system, the solution offered in the KvartBot system allows you to:

- 1 minimise the involvement of legally responsible persons in the functioning of the system and to prevent the influence of certain officials, which reduces the risk of corruption offences;
- 2 ensure transparency of the queue, the register of allocated housing, the distribution of apartments, etc., reduce the influence of external factors.

The use of the presented solutions will help move away from paper document circulation and, as a result, speed up the processes of obtaining documents and necessary data related to housing provision. The system provides the possibility of monitoring apartment accounting processes, which will contribute to their transparency and reduce the influence of the human factor as the main source of corruption, as well as reduce the need for human resources to serve the client base.





The **csd33 team** took third place in the category «Development of an automated system of housing records for military personnel», having proposed a solution using the information system «Automated system of military personnel housing records».

**Team** Military Institute of Telecommunications and Informatization named after Heroes of Krut

**Team captain** – Nescheret Volodymyr

**Team members:** Danylo Nesterenko, Maria Denisyuk, Oleg Yavorskyi, Yaroslav Kyrylovych

### AUTOMATED SYSTEM OF MILITARY PERSONNEL HOUSING RECORDS

The essence of the solution proposed in the system "Automated system for military personnel housing records" is to develop an automated system of apartment registration of servicemen/women. The proposed solution provides for:

1

creation of the Unified central hub of housing accounting of the Ministry of Defense of Ukraine (ECHKO MOU): a centralized system for accounting of military personnel, their queue for housing and other important data;

2

automated collection of documents: the system will automatically collect packages of documents for signing a sublease, entering the apartment queue;

3

data privacy: the use of unique identifiers that are generated using personal information and a timestamp of queuing;

4

transparent queue system for military personnel: implementation of the service for viewing the status of the queue;

5

use of technologies: client-server architecture, Spring Framework, Rest API and PostgreSQL to ensure efficient and reliable operation of the system.

In contrast to the existing apartment accounting system, the solution proposed in the system allows to minimize the participation of legally responsible persons in the functioning of the system and to reduce the influence of certain officials on the stages of the housing life cycle in order to commit any corruption, as well as to ensure transparent analytics of the queue, the register of allocated housing, distribution apartments, etc. in order to detect anomalies.

The use of solutions presented in the system will contribute to the management of information online. This approach will also help save time and reduce costs for keeping and processing paper documentation. In addition, the system can provide the possibility of automated data analysis and processing, which will avoid errors and ensure greater accuracy and reliability of the apartment registration process for military personnel.





## TASK 3: THE WINNER



The **r-DNA-skelo team** won in the category «Development of a system for reservation of cargo transportation services in the logistics support system of the Defence Forces of Ukraine», by proposing a solution using the «**E-Vantazh**» information system.

**Team** Military Institute of Telecommunications and Informatization named after Heroes of Krut

**Team captain** – Vitaly Dolgushyn

**Team members:** Pryshchepa Anton, Marchenko Vladlen, Ogorodnii Borys, Musikhin Vladyslav

### E-VANTAZH

The essence of the solution offered in the "E-Vantazh" system is the creation/development/improvement of a light, transparent and reliable innovative product. The proposed solution provides for:

- 1 integration with the public procurement system "Prozorro", which provides transparent coverage of transportation tenders. This promotes competitive selection and prevents corruption schemes;
- 2 integration with the "Diia" service will avoid fraud and dishonest behavior, ensuring a high level of trust in the information system;
- 3 integration with insurance services allows operators to ensure their transportation in accordance with insurance, which reaches the level of confidence of customers in the reliability of services;
- 4 using the "Google Maps" service allows you to easily plan optimal routes and track the status of transportation in real time;
- 5 inspection and identification of the operator's vehicles. This ensures safety and compliance with transportation standards;
- 5 integration with "Google Calendar" services contributes to timely reminders about orders, planning the execution of announcements, which in turn has a positive effect on time and resource management.

In contrast to the existing systems of reservation of cargo transportation services, the solution proposed in the "E-Vantazh" system allows:

- 1 integration with "Prozorro" and "Diia", because today the lack of integration with the electronic system of public procurement (Prozorro) and the service "Diia" limits the possibility of ensuring transparency and combating fraud.
- 2 use the "Google Maps" service for effective routing and tracking of transportation status, which ensures more accurate and efficient management of logistics.

**The use of solutions presented in the "E-Vantazh" system will contribute to the efficiency and optimization of processes, the absence of fraudsters and dishonest purchases, the optimal use of routes, timeliness and planning, and innovative development.**





The **DPSU\_IT\_HUB** team took second place in the category «Development of a system for reservation of cargo transportation services in the logistics support system of the Defence Forces of Ukraine», offering a fundamentally new solution using the **H.O.S.T. (Honest Open System of Transportation)** information system.

**Team** National Academy of the State Border Service of Ukraine named after B. Khmelnytskyi

**Team captain** – Oleksandr Zhuk

**Team members:** Markiyany Ilnytskyi, Kobzar Oleh, Valko Vitaliy, Kozhushko Vitaliy

### H.O.S.T. (HONEST OPEN SYSTEM OF TRANSPORTATION)

The essence of the solution proposed in the H.O.S.T. (Honest Open System of Transportation) system is to develop a software and hardware solution to the problems in the field of the booking system for the logistics of the Ministry of Defence of Ukraine. The proposed solution includes:

- 1 reliable identification and verification of participants and customers through advanced methods, including biometric verification (ECS and FaceID);
- 2 convenient access to the system for customers and contractors, where they can manage their applications and offers, as well as enter all the necessary data that is provided by law for the organization of tenders;
- 3 revision of tender procedures in compliance with the principles: anonymity and transparency, hiding information that identifies customers, performers, and also hiding "sensitive" information about services;
- 4 automatically analyzes the data of performing companies, taking into account their historical performance, reputation and financial indicators;
- 5 uses blockchain technology to create immutable and automated contracts.

In contrast to the existing systems of reservation of cargo transportation services, the solution proposed in the H.O.S.T. (Honest Open System of Transportation) system allows:

- 1 solve existing challenges and problems inherent in the field of logistics;
- 2 solve problems related to non-transparent selection criteria, conflict of interests, manipulation of documentation, subjective formation of price policy, shortcomings in the post-tender process, manipulations when paying for services.

**The use of solutions presented in the "H.O.S.T (Honest Open System of Transportation)" system will contribute to the automation of the specified existing challenges and problems inherent in the field of logistics transportation. With the use of modern solutions, platforms and technologies that are currently available for use, the system makes it possible to eliminate the occurrence of corruption in the field of reservation of cargo transportation services.**





The **BitBurst Innovations team** took third place in the category «Development of a system for reservation of cargo transportation services in the logistics support system of the Defence Forces of Ukraine», with a solution using the information system «**Freight services booking**».

**Team** Lviv State University of Life Safety

**Team captain** – Dumas Martin

**Team members:** Ilyasevych Nazar, Oleg Malanchuk, Yuri Len, Ruslan Gren

### FREIGHT SERVICES BOOKING

The military sector in Ukraine faces a number of challenges, such as the need to effectively adapt to strategic and tactical challenges, accurately forecast and optimise resources, ensure the safety of logistics transport and process large amounts of data to make strategic decisions. In addition, it is necessary to have flexible and integrated systems to effectively respond to changes in the operational environment.

The team solved these problems through the development of an innovative service for the logistical support of the Defense Forces of Ukraine.

The system is built in the Java programming language using the Spring Boot framework and other technologies to ensure a high standard of efficiency and security.

The functionality of the system includes the possibility of registering and selecting carriers, interaction with insurance companies to minimize risks, authorization and registration to ensure the security of data processing, forming a rating of operators based on the quality of services and the relevance of requests, as well as a transparent electronic register of operators providing transportation services and informing them about procurement plans.

Project logic:

- 1 the customer publishes information about the cargo and expected requirements on the platform;
- 2 carriers respond to the request with the price and conditions of transportation;
- 3 the customer chooses the optimal carrier, taking into account various criteria;
- 4 after the successful completion of the transportation, the customer marks the task as completed and rates the quality of the services.

**The BitBurst Innovations project is an important contribution to Ukraine's military logistics, providing a transparent, secure and efficient process for the transport of goods for the Defence Forces. With the help of innovative technologies and system functionality, we hope to solve key problems faced by military logistics systems.**



# AWARDING THE WINNERS



On 12 December 2023, the winners of the First Hackathon on Building Integrity and Preventing Corruption in the Security and Defence Sector of Ukraine were awarded.





## WORDS OF GRATITUDE

Holding the Hackathon would not be possible without the appropriate technical and organizational support from dedicated representatives of business and commercial structures, as well as international organizations that acted as patrons of the competition.

### FROM AMONG ALL THOSE WHO CONTRIBUTED TO THE HACKATHON, WE EXPRESS OUR GRATITUDE TO:

**Association «IT Ukraine»** (FAVBET Tech, DAN.IT education, GoIT, Hillel IT School and Logitech)

represented by its executive director Mrs. **Maria SHEVCHUK**

**LLC «Rozvytok»**

represented by the commercial director Mr. **Oleh BOBOVNIKOV**

**The «Cisco» company**

represented by the head of the Cisco Representative Office in Ukraine, Mr. **Serhiy MARTYNCHUK**

**The «Grandstream Networks Inc» company**

represented by the head of the department Mr. **Volodymyr GOLOVKO**

**LLC «MUK DISTRIBUTION»**

represented by the regional manager Mr. **Volodymyr IVLEV**

**The Ukrainian State Center of Radio Frequencies**

represented by the General Director Mr. **Volodymyr KORSUN**

**The «Index Systems» company**

represented by the director, Mrs. **Ellina SHNURKO-TABAKOVA**

**The «Vega» company**

represented by the director of corporate management Mr. **Denys PLACHYNDA**



# THE ORGANISERS OF THE HACKATHON



Department for Prevention  
and Detection of Corruption  
of the Ministry of Defense of Ukraine  
and  
Directorate of Digital  
Transformation of the Ministry  
of Defense of Ukraine



National Defense  
University of Ukraine  
(BITEC)



Office of the Commander-in-Chief  
of the Armed Forces of Ukraine

## PARTNERS



UK Defence Academy  
BI Programme



NATO Building Integrity  
Programme



Centre for Integrity  
in the Defense Sector (CIOS),  
Norwegian Ministry of Defense



Center for Innovations and  
Development of Defense Technologies  
of the Ministry of Defense of Ukraine

## SPONSORS



Future Economics  
Development

"IT Ukraine"  
Association



Cisco representative  
office in Ukraine



CONNECTING THE WORLD

GRANDSTREAM NETWORKS  
corporation



"MUK DISTRIBUTION"  
LLC company



"ROZVYOTOK"  
LLC company



JSC  
"OXI BANK"



Monitoring, analysis  
and forecasting service



Vodafone Ukraine



Ukrainian  
Specialized Logistics



link to the hackathon site  
[www.hack.bitec.com.ua](http://www.hack.bitec.com.ua)



**BITEC**  
Building integrity training  
and educational center