Internal security is vulnerable to a number of serious criminal threats. The increasing threat to security from organised crime groups, a real danger of terrorist attacks and mass events all bring about the need for a new look at the equipment of state agencies responsible for upholding internal security. In the presence of such threats one of the major factors determining effective commanding of a police operation is providing up-to-date information on environmental factors (the surroundings, topography, and infrastructure), casualties and participants, means of transport, the location and involvement of particular security authorities. Such information may be gathered from documents, reports, CCTV footage, the mass media, administrative and police databases, etc. The complexity of those undertakings, dynamic changes affecting an operation, insufficient information, the necessity to predict how a situation develops, and taking action ahead of events imply the need for constant information inflow, information processing and sharing.

Since all decisions in crisis situations are made under time pressure, the best spot for a commanding officer in charge of an operation is the incident scene. Therefore, it becomes inevitable that purpose-built vehicles are introduced to the police arsenal, allowing for swift execution of commanding tasks as well as combat operations carried out by counter-terrorist units and riot police squads. Such vehicles, being fully compatible with the command support centers, should facilitate both area reconnaissance and command functions, along with protecting police officers against enemy attacks.

**Keywords:** post, combat, vehicles, commanding position, mobile, operation, facilities

1. **INTRODUCTION**

The notion of a workplace is a frequently discussed work organisation concept which continues to attract the attention of technologists, economists, sociologists and psychologists. What should be noted is that there is no explicit definition of the concept as there are differences in points of view of various experts in this area. It is used interchangeably with the term 'workstation' or 'organisational post'.

A command post is a workplace for a commanding officer, adequately equipped and adapted to the scope of their professional duties. It should make it possible to directly observe the operation area and to monitor the course of action. In addition, its location allows for frequent and direct contact between the commanding officer and the people under his/her command. In order for this non-stop contact to be maintained, a command post is equipped with communications facilities and systems. An adequately equipped command post should guarantee personal safety of a commander and their subordinate staff, as well as provide them with proper working conditions. To put it simply, it can be assumed that a commander at the command post is a person working at a workstation.

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The development of work organisation as a new branch of knowledge was under immense influence of industrial revolution along with its further consequences, i.e. mechanisation and automation of the production process. F.W. Taylor, F.B. Gilbreth and H. Fayol - founders and classics of the scientific work organisation - referred their studies, findings and generalisations first of all to the basic component of the production process, i.e. a human being at their workstation. Thus, what lies at the roots of the contemporary organisational expertise is research whose main focus of interest has been the workplace.

In the art of war, according to some standard documents of the USA army, command posts can be perceived as elements of the command system, such as communications (facilities and communications networks), equipment (means of automation and command) and workplaces (posts providing the commanding officer and other command staff with safe working conditions). In the light of other documents, however, command posts are considered as command facilities, along with the command structure and process, understood as workplaces for the command (command posts), together with automation systems of command and communications. In Bundeswehr these are command facilities which are supposed to guarantee efficient and uninterrupted flow of information essential for being in command of subordinate forces.

Regardless of how the workplace or workstation related notions are formulated, it is vital that all components of the triad – the human being (commander/s), tool (command automation tools and others providing support for the decision-taking process) and material (information to be processed) - are taken into account. Equally important are links between the triad and the environment, thanks to which the triad can be regarded as an element of the working system. Data is here a kind of raw material which is subject to various operations – receiving, recording, processing (reducing, verification) and distributing.

2. DETERMINANTS OF POLICE ACTION

Determinants of police action are, in other words, factors which have impact on possible variants of the course of action. Since such determinants considerably influence the performance of action, they need to be assessed on a regular basis. The assessment should include:

- assessment of a particular event and possible threats (legal and factual basis for undertaking the action, forecast about the situation development, choice of the variant considering the escalation of threat);
- assessment of police resources (preparedness for action, morale and level of training, weaponry and technical support resources, logistic support, possibilities for reconnaissance to be carried out, cooperating stakeholders’ potential, executives’ training and experience);
- assessment of the environment of action (the size of the area where the action is to be performed, territorial and weather conditions, visibility, public feelings);
- assessment of a time factor (calculation) for proper synchronization of the following three elements – powers, space and time – in order to have appropriate forces and resources at the right time and the right place.

Based on: Kręcicki, J., Analiza procesu decyzjnego w organizacji z hierarchizowanej pod kątem jego algorytmizacji, Akademicka oficyna Wydawnicza EXIT, Warsaw 2006, pp. 142-146.
The commanding officer has to consider both other determinants such as a long-term nature of action (which requires the continuity of command and introduction of shift work for subordinated forces) as well as temporary operations if logistic support cannot be provided. The success of the whole undertaking, as a concentration of all stakeholders’ efforts, is first of all conditioned by the ability of the command system to cooperate with other stakeholders.

On a basic level of police action (intervention), a police officer in charge of command is responsible for the displacement of forces at an initial stage of operation and for the safety of other police officers. The police officer communicates on regular basis with the duty officer and specialist rescue services, and his/her command post is placed inside the police car, which is as close as possible to the scene of incident. Following safety requirements, a police car should be located in a place from which the incident scene can be closely observed, and where cooperation with other services can be effective.

In more complex activities (police operation), often performed in huge areas, using considerable forces and resources, the commanding officer should occupy the post where the most crucial activity has to be performed. Direct supervision of the area of operation makes it possible to effectively manage the subordinated forces and to eliminate the existing threats. The command and control posts are of great help here. Depending on the type of operation, they can be stationary or mobile. Stationary posts are organised when the operation is carried out in a relatively small area and is of static nature (e.g. major events such as a rock concert or football match). In such circumstances, commanding officer can control the situation at every stage of the operation.

Mobile posts are organised when a dynamic operation is carried out in a vast area and vital elements of the operation are performed at different locations and times.

3. INFORMATION SCOPE FOR THE NEEDS OF COMMANDING

The effectiveness of management in every institution depends largely on the efficiency of the information system. The value of information itself depends on the aim, form, way and time of making it ready. The commanding officer and subordinate executors when being on duty they constantly create the picture of their situation using their own experience, intuition and information coming from external sources. Received information may result from activities specially carried out with the use of various technologies or can be received in a natural (uncontrolled) way when the decision-makers and executors are not active. When performing the motivating function, the commanding officer should try to create and send to the lower level the information which influences the level of executors’ involvement and the quality of their performance. A competent commanding officer should have the ability to obtain and use information needed for the decision-making process. One of the most difficult tasks is to establish the scope of information essential for taking a decision, but having extensive knowledge allows us to take decisions burdened with lower risk.

When commanding a police operation (action) one of the most important factors determining its effectiveness is providing up-to-date information about the environmental factors (surroundings, topography, infrastructure), casualties and participants of events, means of transport, location and involvement of particular security authorities, sources of threats and their effects and many more which are essential for management. Having constantly up-to-date information means you need not only numerous but also diverse sensors
in the field, which gather information systematically. You also need receivers which process information and make the overall information available at the scene of incident (operation).

Documents, reports, CCTV footage, mass media, administrative and police databases, etc. can be the source of the information in question. Highly complicated undertakings, dynamic changes of the operation situation, insufficient information, the necessity to predict how the situation develops and taking actions in advance entail the need for such information to be provided on continuous basis, to be combined and made available in a combined form.

Among the primary responsibilities of the commanding officer in charge of a police operation one can find:

- threat assessment and its scope;
- predicting how the situation develops;
- defining the goal of actions;
- systematic analysis and assessment of the situation;
- determining the place of action (forward stationary post or mobile command post);
- delegating tasks to sub-executors who are responsible for particular sectors and supervising their performance;
- organisation and coordination of activities performed by the units involved;
- establishing cooperation with other stakeholders involved in an operation;
- cooperation with government organs and local authorities;
- preparing information about the situation and the actions taken for the superiors.

In commanding, which is a form of management, the commanding officer should do everything to keep independence and self-sufficiency in solving serious problems (to eliminate the so-called expert power), in establishing relations between an organization and the surroundings (to eliminate the liaison power), or in compliance between the information needed to accomplish the task and the information available (to eliminate the informer’s power).

The use of mobile command post by the police, which provides information and is universal to such an extent that it can manage and coordinate actions by various authorities at the crime scene, and can take all police needs into consideration, has the potential for filling the gap in police equipment.

4. INDISPENSABLE AND POTENTIAL RANGE OF COMMAND SUPPORT

In military activities there is a concept of the Network Centric Warfare, according to which strengthening military power is generated by combining sensors, decision-makers, executives and fighting systems into an information network. During the Iraqi campaign in 2002, the computer system of commanding the battle field – FBCB2 (the Future Battle-field Command Brigade and Below) was for the first time commonly applied in the American army. The system uses existing tactical communications structures used for transmitting a tactical situation image (Situational Awareness), taking reconnaissance data as well as location of home armies into consideration.

By analogy, the implementation of a similar concept into police operations could bring about considerable effects in the form of:

- increasing the situational awareness,
increasing the commanding efficiency and stability,
increasing the pace of activities being conducted,
increasing the efficiency of available resources (coercive measures included),
better synchronization of actions.

Accumulation of these effects will finally result in what is of the biggest importance to every (police) commander, i.e. in achieving more with fewer forces and resources.

The fundamental task related to increasing the situational awareness consists in providing up-to-date, selected information according to a function and position of a receiver, using an efficient system which allows for collecting, processing and passing on information. For the needs of police team activities, the system should support and automatise fundamental tasks in the area of command and control as well as make it possible to position one’s own resources (people and vehicles), exchange reports and orders, visualize a tactical situation and report medical information.

It is obvious that the use of such a system has its shortcomings. Excessive reliance on the available information resources, together with the loss of the ability to conventionally obtain and transmit data for the use of performed activities can lead to the loss of commander’s analytical skills. Interrupted information flow or disturbed transmission (time delay, distortion) can, in turn, result in decisions being made on the basis of false or out-of-date data. Another threat is the loss of control over transmitted data (including sensitive ones) with an effect in the form of e.g. unauthorized penetration of the information area.

5. TACTICAL AND TECHNICAL REQUIREMENTS FOR POLICE MOBILE COMMAND UNIT

The analysis of carried out by the police actions (operations), research\(^3\) conducted among police commanders in the Police Academy in Szczytyno (Poland) and experts’ opinions\(^4\) have confirmed that there is a need to design a command vehicle of a particular type. In respondents’ and experts’ opinion, a command unit is a key, technical measure of supporting police actions in the field, allowing for effective performance of tasks by police action (operation) commanders through providing safe working conditions for a commander and a possibility to integrate information technology, communications and optoelectronics components. The most essential function of a command unit should be to support decision-making processes by means of monitoring a situation in its real time. The examination of subject literature, documents, solutions and opinions of police and military experts in managing police operations make it possible to determine in more detail the functions each command unit should have, and those are as follows:

- to coordinate activities of subordinated forces, police departments and non-police agencies,
- to provide efficient communication with superiors, subordinates and cooperating parties,
- to provide access to databases,
- to provide mobility for commanding teams,

\(^3\) The research was conducted using the method of focus group interview and external surveillance exploited during major events in Poland and Europe.

\(^4\) Expert opinions were given by police and military commanders, officers of Government Protection Bureau and of special forces unit GROM.
to provide safety for commanding team members,

- to receive, process, update and make the information available,
- to visualise a situation, including relevant tasks.

Such a unit should meet the requirements of mobility so that activities can be conducted in urban areas as well as in incidental places to enable the command of allocated police divisions anywhere in the whole country.

In order to monitor the operation environment, the vehicle needs to be equipped with a network of sensors gathering information about the environment in which the activities are performed.

From a network centric perspective an element of visual recognition can include a mobile command unit video recorder, urban monitoring system, or each police officer at the scene who is a ‘carrier’ of a camera, GPS transmitter or mobile terminal.

Fig. 1. Example of reconnaissance organisation for the purpose of police actions based on the network of sensors placed on stationary, mobile, floating and air platforms. PSS – stationary platform, PPS – foot platform, PMS – mobile platform, PLS – air platform, PPLS – floating platform.

Source: author’s own

Efficient communication should enable a commander operating from the mobile command unit to exchange information related to command (giving commands and orders, receiving reports) and cooperation (exchange of information between cooperating parties), as well as to transmit and receive alarm signals. Access to various databases, appliances and programs used to verify and reduce data, as well as the application of suit-

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1 Network Centrism constitutes a combination of forces and resources in the form of a network which is used to provide information about a situation in the area on regular basis. It supports processing of information for decision-making processes.
able software ought to aid the decision-making processes. The protection of personnel requires the application of essential ballistic and mine protection solutions, of self-extinguishing systems, and also of solutions preventing unauthorised persons from mounting the platform or from getting inside the vehicle. The optimal commanding team should comprise of 5 persons:

- a commanding officer,
- communications operator,
- IT expert,
- CCTV monitoring operator – reconnaissance equipment operator,
- driver – technical operator (special driving rights holder).

Fig. 2. Manning organisation structure of the mobile command unit

D – commanding officer of the operation/action
M – CCTV monitoring operator
L – communications operator
I – IT expert
K – driver, technical operator

Because of the fact that performing police tasks in a form of an action or operation calls for many hours of work without logistic support, it was essential to provide all the team members with a proper level of security and comfort. The requirements of this area related mostly to providing a sufficient working space (with a possibility to make it bigger), thermal comfort (air-conditioning, heating, filter ventilation) and safety (ballistic resistance, fire-fighting systems).
6. PROTOTYPE OF THE POLICE MOBILE COMMAND POST

In the Police Academy in Szczytyno, the OR 00000111 project was carried out under the consortium agreement with the AMZ Kutno company which specializes in the production of special car bodies designed for vehicles of various purposes. In order to determine tactical and technical requirements of the designed mobile command post, research of three stages was conducted as:

- theoretical research in terms of functioning conditions of the mobile command post,
- survey of representatives of police units as well as the focus group interview of Police actions/operations commanders’ opinions – the potential users of the mobile command post,
- verification research of experts’ opinion in the area of needs and requirements of the police mobile command post,
- verification research of opinions of the experts using similar mobile platforms.

The result of the conducted research was creating a conceptual model, and then producing fully functional reconnaissance mobile command vehicle which is resistant to destructive conditions and external factors resulting from the public order threats. The prototype was built with the use of the Iveco Eurocargo body and the Żubr modified military car body. The „Argus” (it is the prototype’s name) has the Iveco Tector six-in-line diesel turbocharged engine with an intercooler of 5880 cm³ capacity and of 279 HP, a 4x4 drive and 9-gear automatic box.

Inside the vehicle (the armour according to the STANAG 4569: level 3, mine protection level 2) there are 5 posts for the command team members.

Picture 3. Spatial visualization of the posts’ structure in the mobile command post

Source: the project documentation of the AMZ Kutno company

The „Argus” mobile command post is equipped with autonomous systems of video monitoring, but there is also a possibility to use external sources depending on circumstances and a current operational situation. This includes applying the existing municipal and inside-the-building video monitoring system as well as cameras installed on foot, mobile, floating and air platforms. Moreover, cameras installed on the set of three tactical mobile robots make it possible to carry out operational reconnaissance activities or perform tasks in dangerous conditions.
The installed communications devices provide a permanent contact with all persons involved in an action, an operation command and control unit of a supervisor (headquarters), duty officers of basic services and rescue institutions, as well as receiving information from universally available media (television, radio, Internet). The IT specialist operator post gives an access to external databases:

- KSIP (National Police Information System),
- SPP (Police Searching System),
- CEPiK (Central Vehicle and Driver Register),
- CEL (Central Population Register),
- REGON (National Business Registry Number),
- SIS (Schengen Information System),
- NoeNet Osadzony (Database of convicts),

The command process is supported by such equipment as: a computer with office software, multifunctional devices (fax, scanner, printer), GPS for locating RSD, as well as, locating dispatched forces and cooperating units, the system of recording conversations and issued commands and the sound registration of the staff work.

Photo 1: “Argus” as a mobile command post

Source: author’s collection

7. CONCLUSION

A well-organized point of command enables the commanding officer to have a direct access to the area of activity as well as to efficiently command the subordinate staff. The commanding post which is properly equipped in the technologically advanced means of communication, gathering and processing information allows for the improvement of the quality parameters of the information and limiting the number of staff. Especially the
teams responsible for the reconnaissance, analyses, IT and communication can be reduced.

During the European Football Championships UEFA EURO 2012 the prototype of the command vehicle was at the disposal of the Bureau of Antiterrorist Operations. According to the police officers it provided a great support in securing a high-risk mass event. It was also suggested that the entire range of these types of special use vehicles should be created (commanding, assault and rescue vehicles) for the police and other forces.

Photo 2. "Argus” – assault version

Source: AMZ Kutno records

In the same year on the 12th Video Surveillance Conference and Exhibition ALARM in Kielce, the project of a mobile, multifunctional command center was awarded a medal. Currently the vehicle is based at the Police Academy in Szczytno and it provides an effective didactic help by the realization of management courses, especially courses for commanders of police operations. There are 8 editions of these courses planned this year. According to the decision of the directorate of the Police Headquarter, further tests, aiming at estimation of usefulness of platforms of that appropriation at the Polish Police will be run at the Warsaw Metropolitan Police Headquarter.
In connection with the fact, that high ability of command is influenced by the possibility of gaining, possessing and processing of information during an accurate period of time, supporting people involved in realization of command processes of the modern technical devices, enables in a short period of time generation of multioptional solutions with the possibility of choice of the most profitable, leading to the achievement of the set target. Therefore, the economic condition of ministry (state) has a great influence on the effectiveness of the police operations in the scope of implementation of modern technologies.

Mobilne policyjne stanowisko dowodzenia

Bezpieczeństwo wewnętrzne narażone jest na wiele poważnych zagrożeń ze strony działalności przestępczej. Rozwój współczesnego zagrożenia bezpieczeństwa ze strony zorganizowanych grup przestępczych, realność zagrożenia terroryzmem, niosące ryzyko duże imprezy o charakterze masowym powodują konieczność nowego spojrzenia na wyposażenie sił odpowiedzialnych za bezpieczeństwo wewnętrzne. W przypadku wystąpienia tych zagrożeń jednym z najważniejszych czynników warunkujących skuteczność dowodzenia jest zapewnienie aktualnej informacji o czynnikach środowiskowych (otoczeniu, topografii, infrastrukturze), ofarach i uczestnikach zdarzeń, środkach transportu, położeniu i zaangażowaniu poszczególnych podmiotów bezpieczeństwa. Źródłem tych informacji mogą być dokumenty, meldunki, obrazy z kamer monitorujących, środki masowego przekazu, administracyjne i policyjne bazy danych, itp. Wysoki poziom komplikacji niektórych przedsięwzięć, dynamiczne zmiany sytuacji operacyjnej, deficyt informacji, konieczność prognozowania rozwoju sytuacji i podejmowania działań wyprzedzających implikują potrzebę zapewnienia ciągłego dopływu takich informacji ich przetwarzania oraz udostępnienia.

Ze względu na to, że w sytuacjach kryzysowych wszelkie decyzje są podejmowane pod presją czasu, najlepszym usytuowaniem dowódcy kierującego operacją jest miejsce zdarzenia. Nieodzowne zatem staje się wprowadzenie do arsenału Policji pojazdów specjalistycznych pozwalających na realizację zadań związanych z dowodzeniem oraz dotyczących akcji bojowych przez jednostki kontrterrorystyczne oraz oddziały prewencji Policji. Pojazdy te w pełni kompatybilne ze stanowiskami wspomagania dowodzenia powinny umożliwiać realizację funkcji rozpoznania i dowodzenia, a także zabezpieczać policjantów przed rażeniem ze strony przeciwnika.

Słowa kluczowe: dowodzenie, stanowisko, działania, pojazd, środki dowodzenia

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