Instructions
to
Data Providers and Data Recipients

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1 Glossary

Term/Abbreviation	Definition
CODGiK	Main Centre of Geodetic and Cartographic Documentation (Centralny Ośrodek Dokumentacji Geodezyjnej i Kartograficznej)
Communication Interface	Set of internet services to exchange data in M2M (Machine-To-Machine) mode.
Contract	All agreement and commitments made with GDDKiA to the period of time of implementation and support of the NAP system, according to the „Contract of implementation, support and service of NAP dated on 17 of January 2017”
Critical incident	Incident which disables or obstructs proper operation of critical Functions, excluding events for which the Contractor is not responsible under a clear guidance in this Contract
Data Provider	Entity authorized to transfer Data to the NAP system sending Data to NAP
Data Receiver	Entity authorized to receive data from the NAP system
Datex II	A standard for information exchange on traffic conditions, developed by the CEN Technical Committee 278, CEN/TC278, for the needs of application – exchange protocol of information on traffic conditions via IT network.
Defect	Inconsistency of Documentation with Contract or not being Incidents, inconsistency of the NAP system operation with requirements of Contract and OPZ, as well as inconsistency of delivered devices with their intended use under the Contract, in terms of the described in the Contract aim or other inconsistency of works results with documentation delivered to the Ordering Party
Difficulty	Data on difficulties on traffic made available in the NAP system, provided by Data Providers and enabled to view by Data Receivers
GDDKiA	General Directorate for National Roads and Motorways (Generalna Dyrekcja Dróg Krajowych i Autostrad).

Term/Abbreviation	Definition
Geoportal	Internet portal providing access to spatial data services, operated by CODGIK
Incident	Every Event which causes or may cause a break in delivering the NAP system service or reducing its quality
Inquiry	Officially asked question concerning the NAP system operation or documentation
M2M	Machine-To-Machine
Machine-To-Machine	Direct automatic communication and data exchange between devices
NAP	National Access Point (KPD - Krajowy Punkt Dystrybucyjny)
NAP operator	Entity operating and maintaining NAP on behalf of GDDKiA
Non-critical incident	Incident which disables or obstructs proper operation of non-critical Functions, excluding events for which the Contractor is not responsible under a clear guidance in this Contract
OpenLR	Application library for decoding of local data irrespective of the map. See website link: www.openlr.org
PI	Information Platform (Platforma Informacyjna) – WWW website containing guidelines for Data Providers and Data Receivers, also information about the NAP service.
Standard incident	Incident which disables or impedes proper operation of standard Functions, excluding events for which the Contractor is not responsible under a clear guidance in this Contract
WSDL	Web-Service Definition Language - XML based language used for describing the functionality offered by a web service
XML	Extensible Markup Language – universal markup language used for representing various data in a structured way

TABLE 1 LIST OF TERMS, ABBREVIATIONS AND THEIR DEFINITIONS

2 Information on the document

This document is a part of the KPD - Krajowy Punkt Dostępowy do informacji o warunkach ruchu (NAP – National Access Point to information on traffic conditions), developed by the GDDKiA - Generalna Dyrekcja Dróg Krajowych i Autostrad (General Directorate for National Roads and Motorways).

This document is dedicated to the NAP users – Data Providers/Data Recipients, and it describes ways and conditions on how to obtain connection to the system and how to use the system.

3 Applications available for Data Providers/Data Recipients

Below you will find a short description of two applications, for the access to which Data Providers or Data Recipients may apply.

3.1 Application for Data Providers/Data Recipients

Task of the application for Data Providers/Data Recipients is to provide a possibility to enter data on Difficulties via form and map underlay, as well as a possibility to view data on Difficulties entered to the NAP and received from the NAP on a map and as a list of Difficulties. Data Providers and Data Recipients, as well as the Ordering Party, have access to the application for Data Providers/Data Recipients.

3.2 User Support Application

Application for User Support is a point to which Users can direct e.g. Incidents, Defects and Inquiries. The Ordering Party as well as the Contractor may have access to this application.

4 Rules and procedures of access to the NAP

In order to gain access to the NAP, it is required to fill in a registration form available on the Information Platform website in the tab Files to Download, website: http://kpd.gddkia.gov.pl/ and send it to the address of GDDKiA by a letter or electronically by e-mail to kpd@gddkia.gov.pl.

4.1 Requirements for Entity in order to use the NAP

Below you will find requirements an Entity should meet in order to be able to use the exchange of information from the NAP.

4.1.1 Access via web browser – versions of browsers

Application for Data Providers and Recipients is designed for operation on stationary systems; User Support Application and Information Platform are designed to operate on stationary and mobile devices.

It is advised to use in the NAP the browsers enumerated in the table (in their versions indicated in the table or a more recent version) – they have been tested and verified within the scope of operation with the system by the Contractor performing the NAP:

Application	Chrome 56.x	FireFox 51.x	Chrome Mobile 56.x	MSiE 11.x	Opera 43.x
Application for Data Providers and Data Recipients	X	X		X	X
User Support Application	X	X	X	X	X
Information Platform	X	X	X	X	X

4.1.1.1 Access to the web resources

Access to the following NAP websites is required:

kpd.gddkia.gov.pl via HTTPS protocol.

Access to Geoportal websites is required, from which maps are downloaded:

www.geoportal.gov.pl/

4.1.1.2 Security

The position must be secured from an access by unauthorized persons, it is compulsory that the requirements of the organization security policy are met, password to the NAP should not be disclosed or saved in a browser.

4.1.2 Communication Interface

4.1.2.1 Access to the web resources

Access to NAP websites is required (via the HTTPS protocol): **kpd.gddkia.gov.pl**

4.1.2.2 Certificate

Installing a certificate received from the NAP Operator is required.

NOTE: The certificate should be copied to the location of a user application!

4.2 Gaining access to the NAP

Request to access the NAP must be submitted by an Entity and an Entity on behalf of its employee.

4.2.1 Registration of Entity in the NAP

Data Provider – Data Recipient must register in the NAP its enterprise in order to be able to register its employee in NAP. Data Provider or Data Recipient does not have its actual account in the NAP, but is able to register its employee who will become the NAP user, in order to be able to start receiving or uploading data. One user cannot have simultaneously authorizations to exchange via communication interface as well as access to Application for Data Providers and Data Recipients. For these two purposes, there should be designated separate employees.

4.2.2 Selection of registration form in the NAP

On the Information Platform website, using a drop-down menu on the left hand side of the screen, select "NAP service" and then go to the section "Files to download". Subpage "Files to download" is divided into three sections:

- Instructions for Data Providers/Data Recipients;
- Forms;
- Information.

In the drop-down section "*Forms*", Data Providers/Data Recipients have the following forms to select from:

- Registration form for a Data Provider/Data Recipient in the NAP;

- Registration form for a User in the NAP;
- Request for change of data of a Data Provider/Data Recipient in the NAP;
- Request for change of User data in the NAP;
- Request for deactivation of a User account in the NAP;
- Request for blocking a User in the NAP.

Step 1 After downloading a form on the Information Platform website **http://kpd.gddkia.gov.pl/** Data Provider – Data Recipient first fills in a request for registering Data Providers/Data Recipients available at: **http://kpd.gddkia.gov.pl/index.php/pl/pobierz/**.

Below you can find a correctly filled form:

Warszawa, dnia 03.02.2020

TEST S.A
ul. Storczykowa 23a lok. 34
02-345 Wądroże Wielkie
(adres siedziby)

Generalna Dyrekcja Dróg Krajowych i Autostrad /GDDKiA
ul. Wronia 53
00-874 Warszawa

WNIOSEK O REJESTRACJĘ DOSTAWCY DANYCH / ODBIORCY DANYCH W KPD

Nazwa Podmiotu	**TEST S.A.**				
Ulica	**Storczykowa**				
Numer domu	**23a**	Nr lokalu	**34**	Kod pocztowy	**02-345**

Miejscowość	**Wądroże Wielkie**
Województwo	**mazowieckie**
NIP	**1234567890**
REGON	**112233**
Imię i Nazwisko (użytkownik systemu)	**Jan Kowalski**
E-mail (osoba do kontaktu)	**jan.kowalski@test.pl**
Telefon(y) (osoba do kontaktu)	**123 456 789**
Rodzaj Podmiotu (proszę zaznaczyć jedną lub obydwie role)	☒ DOSTAWCA danych ☐ ODBIORCA danych
Kat. zarządzanych dróg: **gminne, powiatowe, wojewódzkie, krajowe, inne** (wymagane tylko, gdy Podmiot jest dostawcą danych i jednocześnie zarządcą drogi)	**gminne**

Administratorem danych osobowych jest Generalny Dyrektor Dróg Krajowych i Autostrad, ul. Wronia 53, 00-874 Warszawa, tel. (022) 375 8888, e-mail: kancelaria@gddkia.gov.pl. W sprawach związanych z przetwarzaniem danych osobowych, można kontaktować się z Inspektorem Ochrony Danych, za pośrednictwem adresu e-mail: iod@gddkia.gov.pl.
Dane osobowe będą przetwarzane w celu rejestracji konta Podmiotu w KPD, przekazywania informacji o warunkach w ruchu drogowym. Dane osobowe będą ujawniane podmiotom przetwarzającym na podstawie zawartych umów. Dane osób uprawnionych będą przechowywane na czas korzystania przez Podmiotu z KPD, a następnie przez okres 3 lat od dnia dezaktywacji konta użytkownika. Osobie, której dane dotyczą przysługuje prawo wycofania zgody w dowolnym momencie poprzez przekazanie informacji na adres email: kpd@gddkia.gov.pl lub pisemnie na adres Administratora danych osobowych. Wycofanie zgody nie wpływa na zgodność z prawem przetwarzania, którego dokonano na podstawie zgody przed jej wycofaniem. Osobie, której dane dotyczą przysługuje prawo wniesienia skargi do organu nadzorczego.
Podanie danych jest dobrowolne, jednak ich niepodanie uniemożliwia uzyskanie dostępu i korzystanie z zasobów KPD.
"Wyrażam zgodę na przetwarzanie moich danych osobowych zamieszczonych we wniosku przez Generalnego Dyrektora Dróg Krajowych i Autostrad z siedzibą w Warszawie, ul. Wronia 53, 00-874 Warszawa w celu rejestracji konta użytkownika, przekazywania informacji o warunkach w ruchu drogowym."
.

4.2.3 Submitting registration form to GDDKIA

Filled form should be sent to the address of GDDKIA **Generalna Dyrekcja Dróg Krajowych i Autostrad /GDDKiA**, ul. Wronia 53, 00-874 Warszawa (printed in a paper form) or in an electronic version to the e-mail address: kpd@gddkia.gov.pl. – form should be enclosed as an attachment to such e-mail in one of the three formats .docx, .pdf or .jpg.

4.2.4 Return information - notifications

Electronic mails should be monitored, because to the e-mail address of a person designated for contact there will be send respective communicates from the NAP on the status of processing of the sent form.

Data Provider/Data Recipient should receive a notification on *Approval of the registration form of Entity* and in the case when a request is rejected, a respective notification will also be sent to the e-mail address of a person designated for contact. In case of a form rejection, there will also be sent a reason for rejecting a registration form of Entity.

4.2.5 Registration of User in the NAP

When a request of an Entity is approved in the NAP, the next step is submitting a registration form of a User in the NAP. NAP User should be a person – employee of a company of a different e-mail address than the one in a registration form for a Data Provider/Data Recipient.

4.2.6 Selection of registration form for User in the NAP

Step 1 Downloading a registration form for a User in the NAP on the Information Platform website.

Step 2 Completing a registration form in terms of the scope of roles the indicated person will have, Data Provider/Data Recipient can request the following roles for its employee:

- Role of a Data Provider with data transferred via Communication Interface

(Application Programming Interface - API),

- Role of a Data Recipient with data transferred via Communication Interface

(API),

- Role of a Data Provider with access to Application (do not mark the field **"Data transferred via API"),**

- Role of a Data Receiver with access to Application (do not mark the field **"Data transferred via API"),**

The above roles should be understood 1:1, one user registered in the NAP has one role from the ones enumerated above.

Step 3

Below you can find a correctly filled form:

Warszawa, dnia 03.02.2020

TEST S.A
ul. Storczykowa 23a lok. 34
02-345 Wądroże Wielkie
(adres siedziby)

Generalna Dyrekcja Dróg Krajowych i Autostrad /GDDKiA
ul. Wronia 53
00-874 Warszawa

WNIOSEK O REJESTRACJĘ UŻYTKOWNIKA W KPD

Nazwa Podmiotu	**TEST S.A.**	
Imię Użytkownika	**Barbara**	
Nazwisko Użytkownika	**Harasimowicz**	
Nr telefonu służbowego	**+48 600 600 600**	
Służbowy adres email	**barbara.harasimowicz@test.pl**	
Stanowisko służbowe	**Operator Danych**	
Rola w KPD (proszę zaznaczyć tylko jedną)	☒ DOSTAWCA danych	☒ ODBIORCA danych
Sposób wymiany danych	☐ interfejs komunikacyjny	☐ aplikacja WWW
Adres URL (tylko jeżeli rola ODBIORCA i wybrano interfejs komunikacyjny)		
Kategoria dostawcy: • **zarządca drogi** • **wykonawca realizujący prace zlecone przez zarządcę drogi** • **podmiot zewnętrzny** • **inny** (wymagane tylko, gdy Podmiot jest dostawcą danych)		

Administratorem danych osobowych jest Generalny Dyrektor Dróg Krajowych i Autostrad, ul. Wronia 53, 00-874 Warszawa, tel. (022) 375 8888, e-mail: kancelaria@gddkia.gov.pl. W sprawach związanych z przetwarzaniem danych osobowych, można kontaktować się z Inspektorem Ochrony Danych, za pośrednictwem adresu e-mail: iod@gddkia.gov.pl.

Dane osobowe będą przetwarzane w celu rejestracji konta Podmiotu w KPD, przekazywania informacji o warunkach w ruchu drogowym. Dane osobowe będą ujawniane podmiotom przetwarzającym na podstawie zawartych umów. Dane osób uprawnionych będą przechowywane na czas korzystania przez Podmiotu z KPD, a następnie przez okres 3 lat od dnia dezaktywacji konta użytkownika. Osobie, której dane dotyczą przysługuje prawo wycofania zgody w dowolnym momencie poprzez przekazanie informacji na adres email: kpd@gddkia.gov.pl lub pisemnie na adres Administratora danych osobowych. Wycofanie zgody nie wpływa na zgodność z prawem przetwarzania, którego dokonano na podstawie zgody przed jej wycofaniem. Osobie, której dane dotyczą przysługuje prawo wniesienia skargi do organu nadzorczego.

Podanie danych jest dobrowolne, jednak ich niepodanie uniemożliwia uzyskanie dostępu i korzystanie z zasobów KPD.

"Wyrażam zgodę na przetwarzanie moich danych osobowych zamieszczonych we wniosku przez Generalnego Dyrektora Dróg Krajowych i Autostrad z siedzibą w Warszawie, ul. Wronia 53, 00-874 Warszawa w celu rejestracji konta użytkownika, przekazywania informacji o warunkach w ruchu drogowym."

4.2.7 Submitting registration form to GDDKIA

Filled form should be sent to the address of GDDKIA (printed in a paper form) or in an electronic version to the e-mail address: kpd@gddkia.gov.pl. – form should be enclosed as an attachment to such e-mail in one of the three formats .docx, .pdf or .jpg.

4.2.8 Return information – notifications

Contact person (on the side of an Entity), e-mail address of which is indicated in the form, and a User whose e-mail address is indicated in the form, can monitor on his/her e-mail generated and sent notifications from the NAP on the form status (approved or rejected).

- If there was submitted a registration form for a User with access to API, the user will receive three e-mails in total:

- *First e-mail* with information on approval of the registration form with a link to a schedule of tests (schedule of tests is available on the Information Platform main page);

- *Second e-mail* including a test certificate to be installed by the User – Data Provider or Data Recipient and a link to completion of tests, which should be entered after performing tests of messages exchange. The Contractor will know if the test was successfully completed and will generate an e-mail with production data;

- *Third e-mail* including a production certificate.

- If there was submitted a registration form for a User with access to the Application, the User will receive two e-mails:

- *First e-mail* on approval of a form sent to the Entity as well as to the User; and the next e-mail will be sent only to the User;

- *Second e-mail* including information on logging in to the NAP and changing password (changing password is in fact setting a password), in the e-mail there will be sent a link to enter in order to change password. User login is e-mail address given while the User registration.

4.3 Loss of access to the NAP

Loss of access to the NAP is divided into:

a) Loss of access to the NAP due to breaching rules indicated in a request to the Ordering Party - GDDKiA
   - User can lose access to the NAP on Request of an Ordering Party – GDDKiA
   - User can lose access to the NAP in case of breaching rules binding in the NAP– exchange of improper information with NAP, such access is blocked by the Contractor.

In particular, access to the NAP can be blocked for a User immediately if the User's actions cause a threat to the NAP functioning or elements and systems connected to the system.

In case of a blocked access, you should contact the NAP Operator, best via contact form on the Information Platform website in the section **Contact**;

b) Loss of access to the NAP due to the loss of password

If a User forgets his password and enters to the form a wrong password 3 times, then this User's account will be blocked. A User should notify his employer on the loss of access to his account. A request for recovery of access to the account can be sent through a contact form on the website kpd.gddkia.gov.pl only by a contact person indicated during the Entity's registration. Only then it will be possible to generate again a link to change password for the employee;

In case of password loss there is also a possibility to reset it via a form. The form is available by clicking on *Zapomniałem hasła* (Forgot password) link on the login page. In Password Reset Form is require user's e-mail address (Figure 1).

Figure 1 Reset password form

If given e-mail address belongs to User, after submitting the form, an e-mail with link to Change Password Form (Figure 2) is sent.

Figure 2 Change Password Form

c) Entity can submit a request for blocking a User in the NAP.

4.3.1 Request for blocking User in the NAP

a) Selection of a form

Selection of a form by analogy to registration forms. Form can be downloaded on the website of Information Platform after selecting *NAP service* in side menu located on the left hand side of the screen, and then select *Files to download* and later section *Forms*. Form should be filled in an electronic form and saved in one of the following formats .docx, .pdf or .jpg, or printed out and completed in a paper form.

Below you can find a correctly filled form:

Warszawa, dnia 02.02.2020

TEST S.A
ul. Storczykowa 23a lok 34
02- 345 Wądroże Wielkie
(adres siedziby)

Generalna Dyrekcja Dróg Krajowych i Autostrad /GDDKiA
ul. Wronia 53
00-874 Warszawa

WNIOSEK O ZABLOKOWANIE UŻYTKOWNIKA W KPD

Nazwa Podmiotu	**TEST S.A.**
Adres	Storczykowa 23a lok 34 02- 345 Wądroże Wielkie
Imię Użytkownika	**Jan**
Nazwisko Użytkownika	**Kowalski**
Stanowisko służbowe	**Operator**

b) Submitting a form

Filled form should be sent to the address of GDDKIA (printed in a paper form) or in an electronic version to the e-mail address: kpd@gddkia.gov.pl. – form should be enclosed as an attachment to such e-mail in one of the three formats .docx, .pdf or .jpg.

c) Return information - notifications

To the given e-mail address there will be sent a notification on approving or rejecting the form. In case of a rejection of a form, there will be sent a reason for the rejection.

4.4 Other forms available for Data Providers/Data Recipients

Request for change of data can be submitted by an Entity as well as by User of the NAP. Request for blocking a User in the NAP or a request for deactivation of a User account in the NAP can be submitted only by a User – employee. Entity has no such possibility.

4.4.1 Request for change of data in the NAP

a) Selection of a form

Selection of a form by analogy to registration forms. Form can be downloaded on the website of Information Platform after selecting *NAP service* in side menu located on the left hand side of the screen, and then select *Files to download* and later section *Forms*. Form should be filled in an electronic form and saved in one of the following formats .docx, .pdf or .jpg, or printed out and completed in a paper form.

b) Submitting a form

Filled form should be sent to the address of GDDKIA (printed in a paper form) or in an electronic version to the e-mail address: kpd@gddkia.gov.pl. – form should be enclosed as an attachment to such e-mail in one of the three formats .docx, .pdf or .jpg.

Below you can find a correctly filled form:

Warszawa, dnia 10.03.2020

TEST S.A.

ul. Skoroszewska 26D / 34

02-495 Warszawa

(adres siedziby)

Generalna Dyrekcja Dróg Krajowych i Autostrad /GDDKiA

Warszawa

ul. Wronia 53

00-874 Warszawa

WNIOSEK O ZMIANĘ DANYCH DOSTAWCY DANYCH / ODBIORCY DANYCH w KPD

DANE DOSTAWCY DANYCH / ODBIORCY DANYCH

Nazwa Podmiotu	**TEST S.A.**
REGON	013311522
NIP	526-11-11-735
E-mail	alina.malinowska@test.pl

☒	Nazwa Podmiotu	**TEST S.A.**				
☒	Ulica	**Skoroszewska**				
☒	Numer domu	**26d**	Nr lokalu	**34**	Kod pocztowy	**02-495**
☒	Miejscowość	**Warszawa**				
☒	Województwo	**mazowieckie**				
☒	NIP	**526-11-11-735**				
☒	REGON	**013311522**				
☒	Imię i Nazwisko (osoba do kontaktu)	**Jan Kowalski**				
☒	E-mail (osoba do kontaktu)	**jan.kowalski@test.pl**				
☒	Telefon(y) (osoba do kontaktu)	**22 333-44-55**				
☒	Rodzaj Podmiotu (proszę zaznaczyć jedną lub obydwie role)	☒ DOSTAWCA danych	☐ ODBIORCA danych			
☒	Kat. zarządzanych dróg: **gminne, powiatowe, wojewódzkie, krajowe, inne** (wymagane tylko, gdy Podmiot jest dostawcą danych i jednocześnie zarządcą drogi)	**wojewódzkie**				

c) Return information and notifications

To the given e-mail address there will be sent a notification on approving or rejecting the form. In case of a rejection of a form, there will be sent a reason for the rejection.

4.4.2 Request for change of User data in the NAP

a) Selection of a form

Selection of a form by analogy to registration forms. Form can be downloaded on the website of Information Platform after selecting *NAP service* in side menu located on the left hand side of the screen, and then select *Files to download* and later section *Forms*. Form should be filled in an electronic form and saved in one of the following formats .docx, .pdf or .jpg, or printed out and completed in a paper form.

Below you can find a correctly filled form:

Warszawa, dnia 25.02.2020

TEST S.A

ul. Skoroszewska 26D/ 34

02-495 Warszawa

(adres siedziby)

Generalna Dyrekcja Dróg Krajowych i Autostrad /GDDKiA

Warszawa

ul. Wronia 53

00-874 Warszawa

WNIOSEK O ZMIANĘ DANYCH UŻYTKOWNIKA W KPD

DANE UŻYTKOWNIKA

Nazwa Podmiotu	**TEST S.A.**
Adres	Ul. Skoroszewska 26D/34 02-495 Warszawa
Imię Użytkownika	526-11-11-735

Nazwisko Użytkownika	barbara.harasimowicz@test.pl
Stanowisko służbowe	Operator Danych

☐	Imię Użytkownika	
☒	Nazwisko Użytkownika	**Harasimowicz - Słota**
☐	Nr telefonu służbowego	
☐	Służbowy adres email	
☐	Stanowisko służbowe	
☐	Rola w KPD (proszę zaznaczyć tylko jedną)	☐ DOSTAWCA danych ☐ ODBIORCA danych
☐	Sposób wymiany danych	☐ interfejs komunikacyjny ☐ aplikacja WWW
☐	Adres URL (tylko jeżeli rola ODBIORCA i wybrano interfejs komunikacyjny)	
☐	Kategoria dostawcy: • **zarządca drogi** • **wykonawca realizujący prace zlecone przez zarządcę drogi** • **podmiot zewnętrzny** • **inny** (wymagane tylko, gdy Podmiot jest dostawcą danych)	

b) Submitting a form

Filled form should be sent to the address of GDDKIA (printed in a paper form) or in an electronic version to the e-mail address: kpd@gddkia.gov.pl. – form should be enclosed as an attachment to such e-mail in one of the three formats .docx, .pdf or .jpg;

c) Return information and notifications

To the given e-mail address there will be sent a notification on approving or rejecting the form. In case of a rejection of a form, there will be sent a reason for the rejection.

4.4.3 Request for deactivation of User account in the NAP

In the NAP there is a possibility to deactivate a User account. There is no possibility to deactivate an Entity, because an Entity does not have any authorizations in the NAP.

a) Selection of a form

Selection of a form by analogy to registration forms. Form can be downloaded on the website of Information Platform after selecting *NAP service* in side menu located on the left hand side of the screen, and then select *Files to download* and later section *Forms*. Form should be filled in an electronic form and saved in one of the following formats .docx, .pdf or .jpg, or printed out and completed in a paper form.

Below you can find a correctly filled form:

Warszawa, dnia 25.02.2020

TEST S.A

ul. Skoroszewska 26D / 34

02-495 Warszawa

(adres siedziby)

Generalna Dyrekcja Dróg Krajowych i Autostrad /GDDKiA

Warszawa

ul. Wronia 53

00-874 Warszawa

WNIOSEK O DEZAKTYWACJĘ KONTA UŻYTKOWNIKA W KPD

Nazwa Podmiotu	**TEST S.A.**

Adres	**ul. Skoroszewska 26D/34**
Imię Użytkownika	**Barbara**
Nazwisko Użytkownika	**Harasimowicz - Słota**
Stanowisko służbowe	**Operator Danych**

b) Submitting a form

Filled form should be sent to the address of GDDKIA (printed in a paper form) or in an electronic version to the e-mail address: kpd@gddkia.gov.pl. – form should be enclosed as an attachment to such e-mail in one of the three formats .docx, .pdf or .jpg;

c) Return information and notifications

To the given e-mail address there will be sent a notification on approving or rejecting the form. In case of a rejection of a form, there will be sent a reason for the rejection.

5 Application for Data Providers and Data Recipients

Application for Data Providers and Data Recipients serves for registration of Difficulties. Data Provider via form or Communication Interface enters data on difficulties, then the data is transferred to Data Recipients. Data Provider and Data Recipient can also view difficulties in the same application (map and tabular view), filtering and export of difficulties functions are also available.

PICTURE 1 MAIN MENU OF DP AND DR APP

Main menu of application includes main functions:

- Mapa utrudnień (Map of difficulties) – map, on which Data Provider can view his/her difficulties, and Data Receiver all defined difficulties;
- Przeglądanie utrudnień (Viewing difficulties) – list of difficulties registered in the NAP system;
- Utrudnienia przeterminowane (Expired difficulties) – list of expired difficulties of a given Data Provider.

Viewing difficulties is available in two modes. View on a map and view in a table. If a User in the role of a Data Provider is logged to the application, he/she has a direct access to view only his/her data (data entered by users of an entity to which he/she is connected), and a user in the role of a Data Recipient can view all current difficulties. Data Provider can view also difficulties of other entities using a search function.

PICTURE 2 PREVIEW OF DIFFICULTIES ON A MAP

In a top right corner a user has several icons for use:

- Nowe utrudnienie (New difficulty) – button visible only for a user in the role of a Data Provider;
- Wybór warstw i podkładów (Select layer and base);
- Przybliżenie do obszaru (Zoom to area);
- Przesuwanie mapy (Moving the map);
- Moje utrudnienia (My difficulty) – button visible only for a user in the role of a Data Provider;
- Podaj adres (Insert address) and button *Szukaj (Search)* – enables finding an address or a city.

Additionally, in a top left hand side corner there is a slide button to change the scale of a map. Available scope of scale change is from 1:2000 to 1:4000000.

Moreover, after pressing an icon difficulties in a top left hand side corner, a panel with details of a given difficulty shows up, and in a top right corner there is a

button *Szczegóły utrudnienia (Difficulties Details).* After pressing it, a user will be directed to the form *Szczegóły utrudnienia (Difficulty Details)*.

Difficulty - icons

Icon	Name
Temporary Slippery Road	
	Flooding
	Danger of aquaplaning
	Surface water hazard
	Petrol on road
	Mud on road
	Black ice
	Icy patches
	Oil on road
	Loose chippings
	Slippery road
	Snow drifts
	Ice on road
Animal/people/obstacles/debris on the road	
	Shed loads
	Obstructions on the road
	Fallen trees
	Avalanches
	Rockfalls
	Landslips
	Large animals on roadway
	Herds of animals on roadway
	Animals on the road

	Broken down vehicles
	Broken down vehicles
	Children on roadway
	People on roadway
	People throwing objects onto the road
	Cyclists on roadway
Unprotected accident area(s)	
	Unprotected accident area(s)
Short term road works	
	Road marking work
	Clearance work (removing obstacles)
	Maintenance work
	Slow moving maintenance vehicle(s)
Reduced visibility	
	Smoke hazard
	Dense fog
	Patchy fog
	Blowing snow
	Visibility reduced
	Low sun glare

Wrong-way driver	
	Vehicle(s) on wrong carriageway
Unmanaged blockage of a road	
	Blocked
	Bridge blocked
	Tunnel blocked
	Connecting carriageway blocked
	Exit blocked
	Entry blocked
	Entry blocked
Exceptional weather conditions	
	Heavy snowfall
	Crosswinds
	Storm force winds
	Strong winds
	Heavy rain

OTHER DIFFICULTIES	
	Construction disaster
	Other (other accidents)
	Other (disasterts)

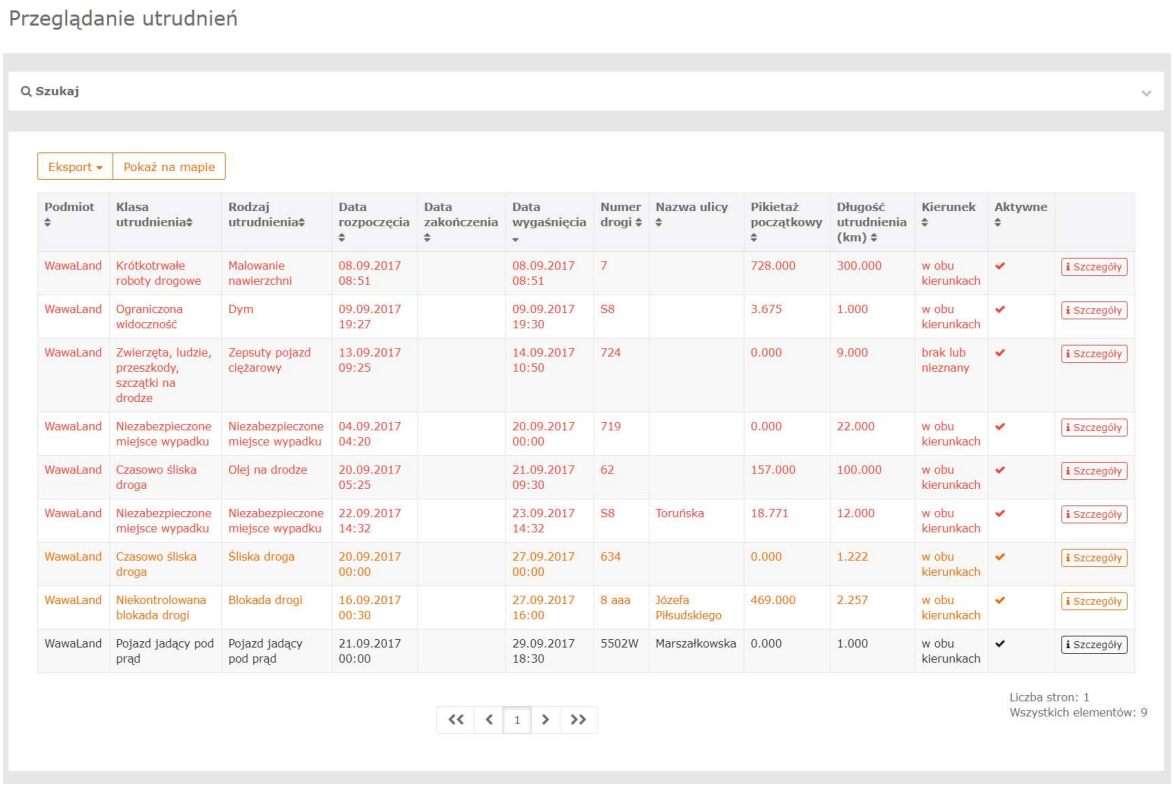
When viewing difficulties in a table form, the following colors are applied:

Name	Description
Red	Difficulty, data of which expired and it had not been closed.
Orange	Difficulty, data of which will expire in 7 days from current date.
Black	Valid difficulties which are not expired and are not close to expiry.
Green	Planned difficulties, i.e. the ones with a start data in future.
Grey	Difficulties that ended (archived).

TABLE 2 COLORING OF LIST OF DIFFICULTIES

In addition, there are available functions of data export to various formats (.xlsx, XML and csv), narrowing down a list of difficulties and view of difficulties details.

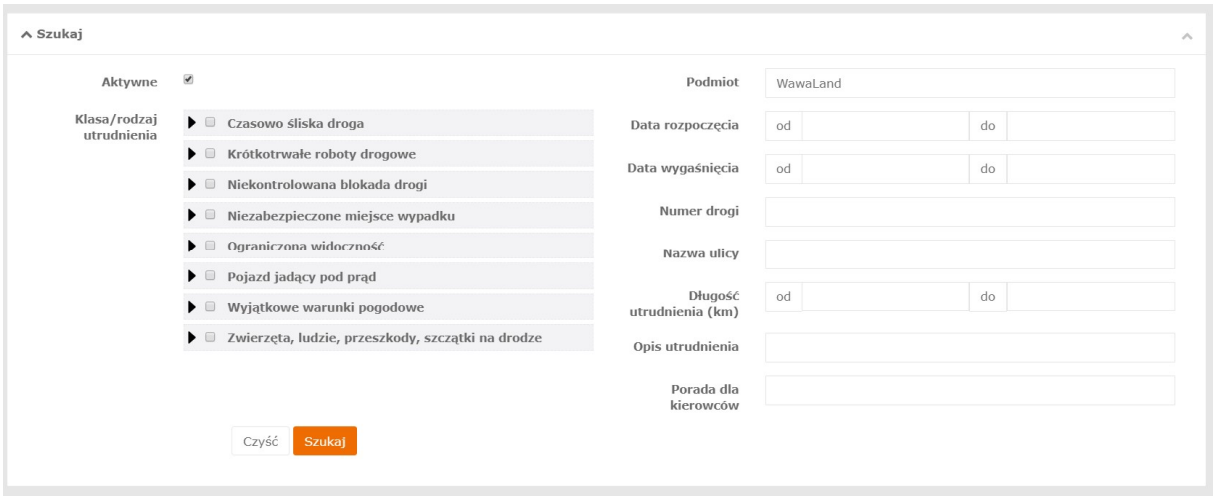
Button *Pokaż na mapie (Show on map)* allows to show on a map all difficulties which are on a list of difficulties. This enables displaying on a map any narrowed down list of difficulties.



PICTURE 3 LIST OF DIFFICULTIES

Pressing *Szczegóły utrudnień* (*Difficulties Details*) button moves a user to the form *Szczegóły utrudnienia (Difficulty details).*

Entering parameters of search and pressing a button *Szukaj* (*Search)* narrows down a list of difficulties to the entries which meet the entered criteria.



PICTURE 4 PANEL OF SEARCHING FOR DIFFICULTIES

After logging in of a Data Provider, in the case an entity to which the user is connected submitted difficulties that expired, then the communicate will be displayed:

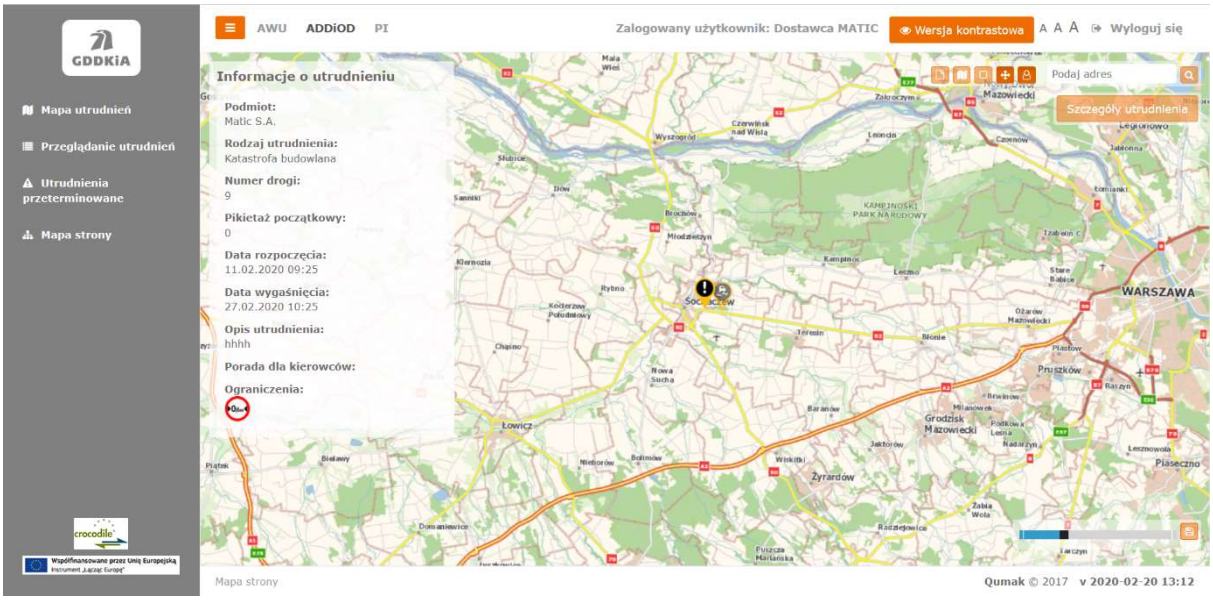
PICTURE 5 NOTIFICATION ON EXPIRED DIFFICULTIES

If a user presses a button *Zobacz (View)* then he/she will be moved to the list of expired difficulties. Additionally, in a main menu of the application there is a function *Utrudnienia przeterminowane (Expired difficulties)*, in which a user can also view his/her expired information.

5.1 Displaying details of difficulties

Details of difficulties can be displayed through pressing a button *Szczegóły utrudnień (Difficulty details)* in a function *Przeglądanie utrudnień (Viewing difficulties)* and after clicking on a given difficulty on a map.

In the display of details, apart from detailed data on a difficulty, there is also a map displayed with location of a given difficulty (there are no other difficulties displayed on the map at the same time).



PICTURE 6 DETAILED DESCRIPTION OF DIFFICULTIES WITH LOCATION ON A MAP

User has the following functions for use:

- *Historia utrudnienia (Difficulty history)* – user will be directed to a form where he/she can view the history of all changes in a given difficulty;
- *Drukuj utrudnienie (Print difficulty)* – prints out detailed data of a given difficulty;
- *Edytuj (Edit)* – user will be directed to a form of editing a difficulty. This function is available only for users of an entity which uploaded a given difficulty.
- *Pokaż na mapie (Show on map)* – user will be directed to a view of a map where a given difficulty is in the center of the map. Other difficulties are also visible.
- *Wróć (Back)* – user will be directed to a form from which there was selected a function of view of data on a difficulty.

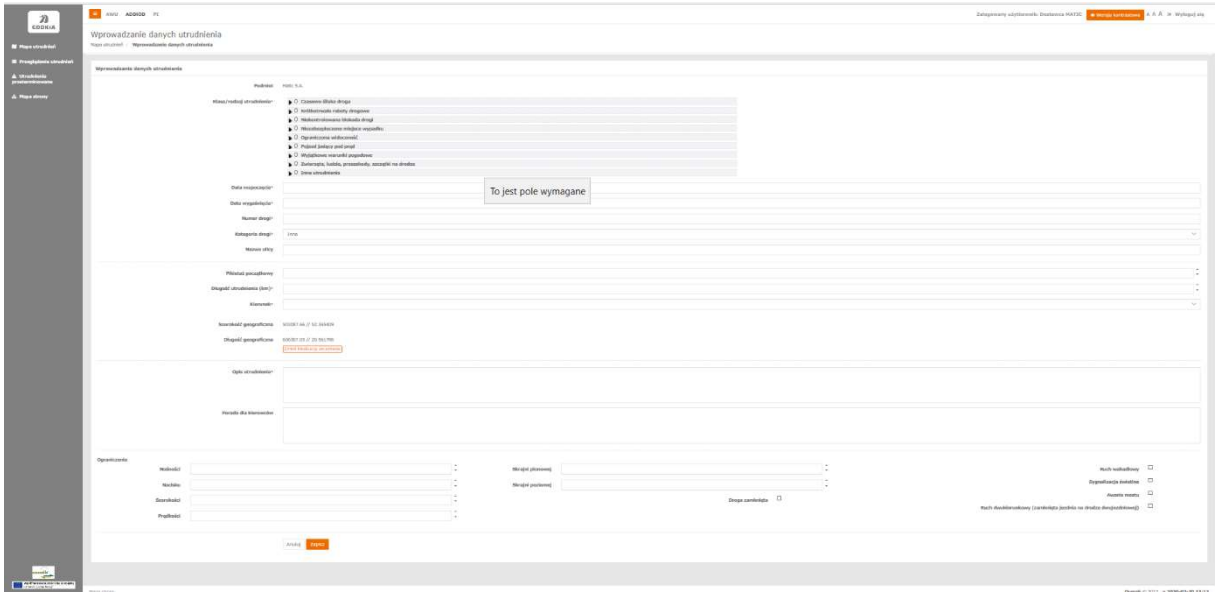
5.2 Adding difficulties

Adding a new difficulty can be done through filling in an appropriate form by a user in the role of a Data Provider. Other way is transferring data on difficulties through the Communication Interface – procedure described in section *6 Communication Interface*.

In order to enter a new difficulty a user has to be in the function *Mapa utrudnień (Difficulty map)*.

In a top right corner you should select a function *New difficulty* marked as an icon .

After selecting this option, cursor will change and at the end of a standard arrow an orange dot will appear. You should place the dot on the location of a newly defined difficulty. After clicking on an appropriate place there will be displayed the following form:



PICTURE 7 FORM FOR ADDING NEW DIFFICULTY

To the form there is automatically transferred data concerning the location (geographical longitude and latitude) and optionally: number of a road, initial road numbering signs, road category, name of the street.

In addition, in the case of impediments to road works, restrictions specific to that impediment should be introduced.

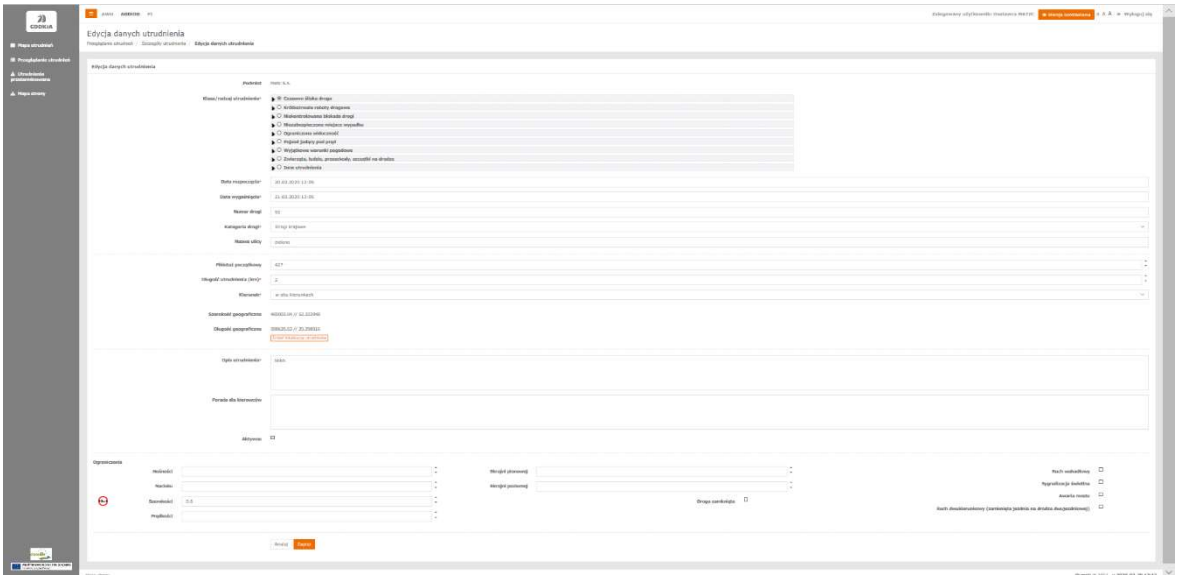
PICTURE 8A GRADATION OF THE LIMITS

After filling in all the required fields and pressing *Zapisz (Save)* button the difficulty is added and a user is directed to a form of viewing details of the difficulty.

If during entering a difficulty a user realizes that the entered spatial data is not correct, he/she can correct it through the use of a button *Zmień lokalizację utrudnienia (Change the difficulty localization).*

5.3 Modification of existing difficulties

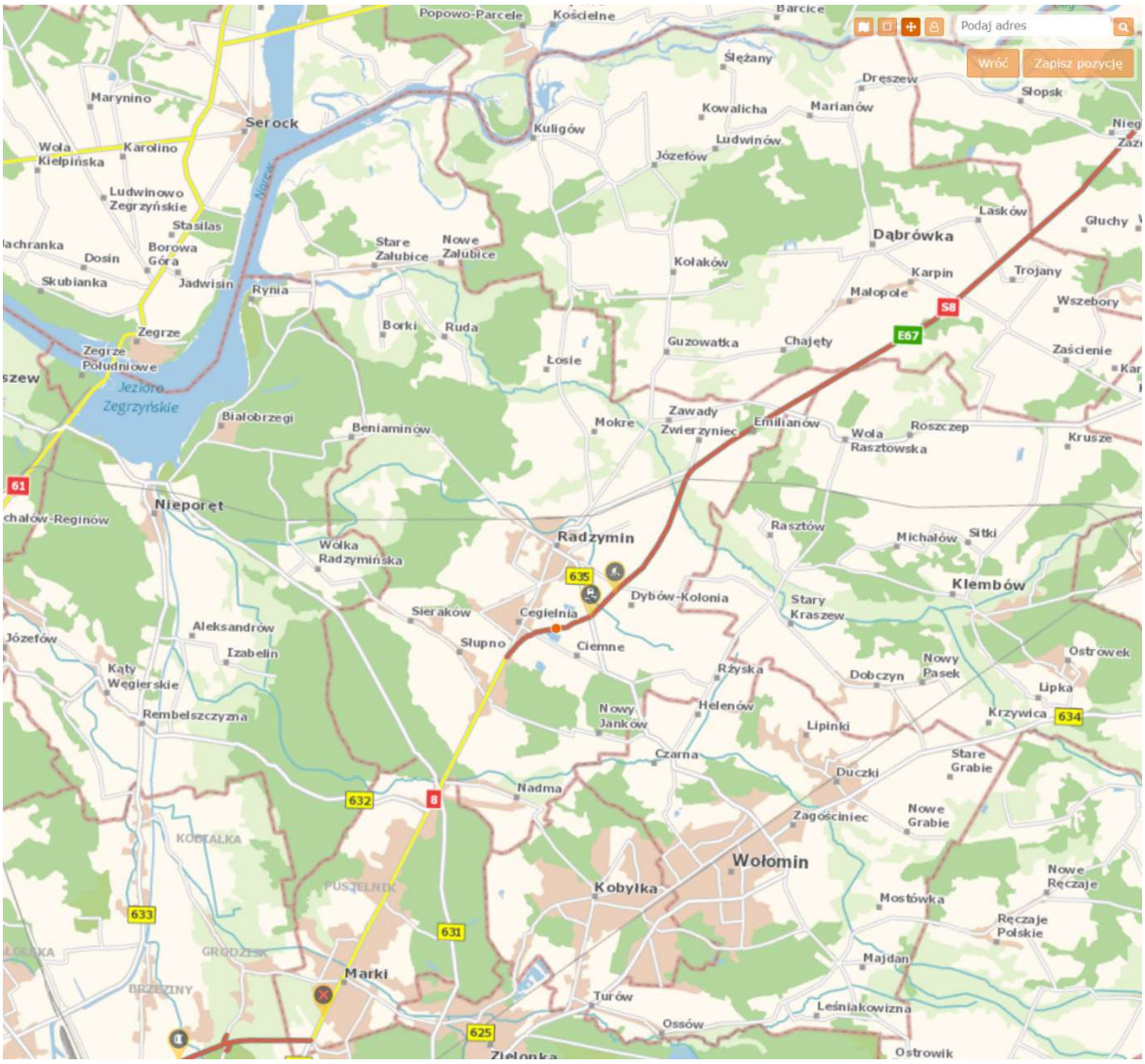
Only a user connected to the same entity as the author of a difficulty can modify a difficulty. Editing a difficulty is available from the level of viewing a difficulty. After pressing the button *Edytuj (Edit)* a user is directed to the form *Edycja danych utrudnienia (Edit difficulty data)*.



PICTURE 9 FORM FOR EDITING DATA ON DIFFICULTY

If also a change of location of a difficulty requires editing, you can make such a correction through the use of a button *Zmień lokalizację utrudnienia (Change the difficulty localization).*

After pressing this option, a user is directed to a map view, where in the central part there will be placed an edited difficulty. Additionally, it is marked with an orange dot. After the change of location, a user is confirming changes with a button *Zapisz pozycję (Save the position).*



PICTURE 10 EDITING LOCATION OF EDITED DIFFICULTY

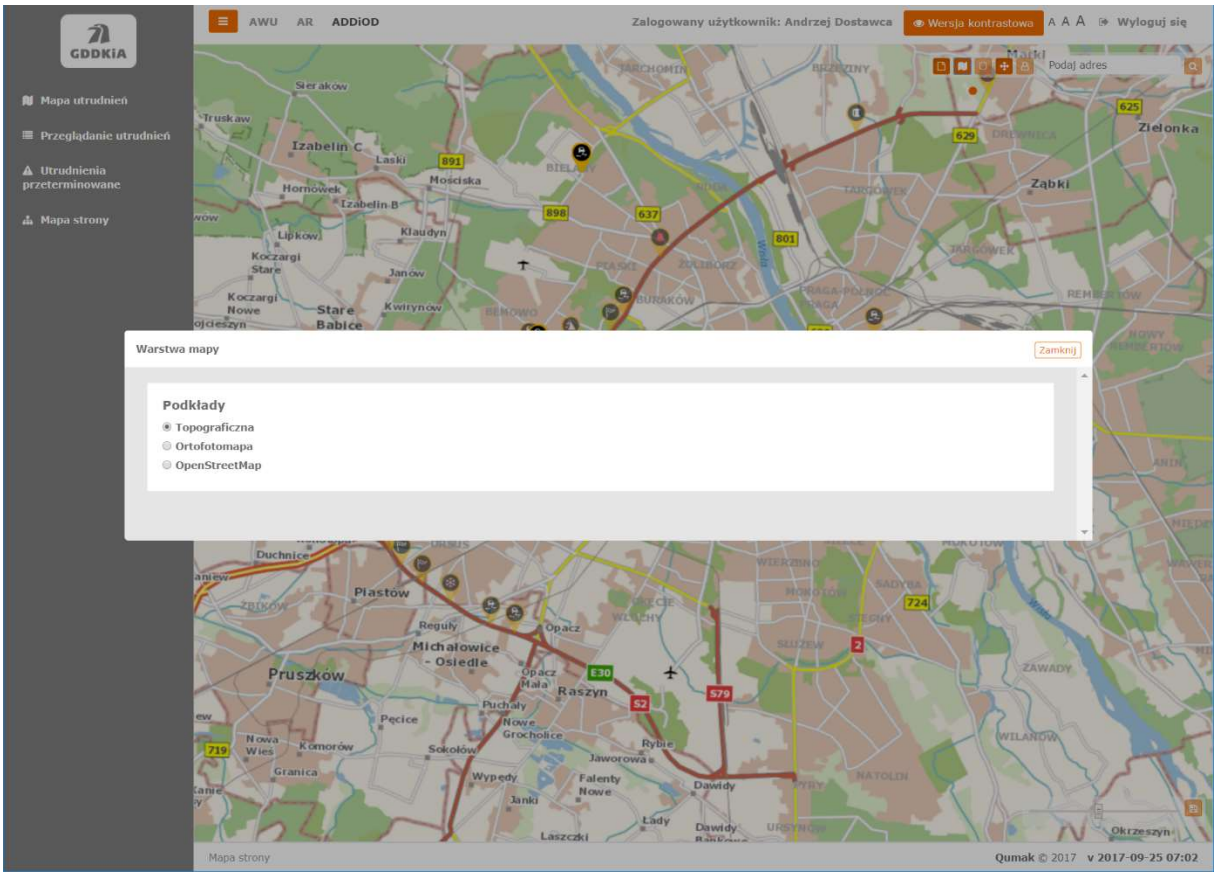
When a map view is closed, data edit form appears and in the form there is automatically transferred data concerning location (geographical longitude and latitude) and optionally: numer drogi (number of a road), pikietaż początkowy (initial road numbering signs), kategoria drogi i nazwa (road category and name of the street). After defining all required fields and pressing *Zapisz* the difficulty is added and a user is directed to a form of viewing details of a difficulty.

If within the scope of editing, a user unmarks the field *Aktywne (Active)* it will mean that the difficulty stopped being active and will be treated by the system as closed. If a given difficulty is closed by accident, then also through editing the difficulty it can be made active again.

5.4 Change of map underlay

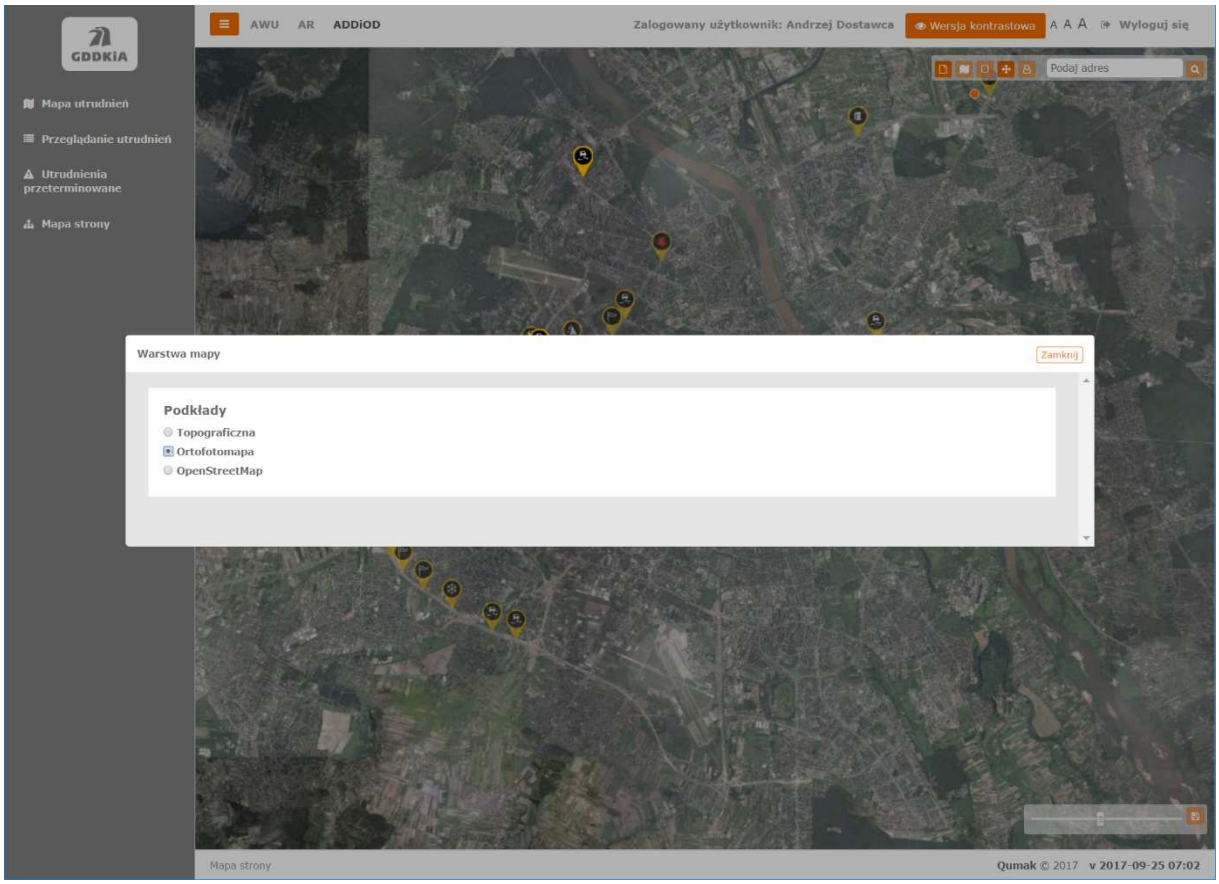
User has a possibility to change the view of a map through changing map underlays. For this reason, a user should use a function available from the level of *Mapy utrudnień (Difficulty map)*. For this purpose use the icon .

After clicking on the icon, a user will have a window displayed with the selection of underlays:



PICTURE 11 CHANGE OF MAP UNDERLAY

After selecting an appropriate underlay, a map placed under the window will be changed.



PICTURE 12 DISPLAY OF MAP AFTER UNDERLAY CHANGE

Pressing a button *Zamknij (Close)* will close the window.

In order to save the change of a map underlay and scale as well as the displayed view, a user may select an option *Zapisz ustawienia mapy* (*Saving map settings,* bottom right part of a map). After pressing this option the system displays an appropriate notification, approval of which will cause attaching a given map configuration to the user. After logging out and logging in again, a user - when going to a map module – will have the selected display settings.

PICTURE 13 ACCEPTING MAP SETTINGS

6 Communication interface

Communication interface allows automatic exchange of data (M2M) and is designated to connection of the NAP with systems of Data Providers and Data Recipients.

Through the Communication Interface there are transferred messages in accordance with the Datex II protocol – basing on XML European format of data transfer on traffic conditions.

6.1 Exchange of messages in the NAP

Exchange of messages via Communication Interface takes place through the NAP. Data Providers send messages to NAP in Datex II Publisher Push on Occurrence mode. After receiving a message, the NAP sends it to all Data Recipients in a Push on Occurrence mode. Recipients also have the possibility to download information on all difficulties in a Client Pull mode.

6.1.1 Format of messages

Datex2 messages are exchanged via documents in the format XML compliant with the XML scheme:

http://www.datex2.eu/schema/2/2_3/DATEXIISchema_2_2_3.xsd

Exemplary message has the following form:

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<d2LogicalModel xmlns="http://datex2.eu/schema/2/2_0" modelBaseVersion="2">
  <exchange>
    <supplierIdentification>
      <country>pl</country>
      <nationalIdentifier>GDDKiA KPD</nationalIdentifier>
    </supplierIdentification>
  </exchange>
  <payloadPublication                    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:type="SituationPublication" lang="pl">
    <publicationTime>2017-09-21T14:35:18</publicationTime>
    <publicationCreator>
      <country>pl</country>
      <nationalIdentifier>GDDKiA KPD</nationalIdentifier>
    </publicationCreator>
    <situation id="d1e0a418-0420-4168-b575-8fa8801b297f" version="1">
      <headerInformation>
        <areaOfInterest>national</areaOfInterest>
        <confidentiality>noRestriction</confidentiality>
        <informationStatus>real</informationStatus>
      </headerInformation>
      <situationRecord  xsi:type="GeneralObstruction"  id="d1e0a418-0420-4168-b575-8fa8801b297f"
version="2017-09-21T14:33:35.463">
```

```
<situationRecordCreationTime>2017-09-21T14:33:35</situationRecordCreationTime>
<situationRecordVersionTime>2017-09-21T14:33:35</situationRecordVersionTime>
<probabilityOfOccurrence>certain</probabilityOfOccurrence>
<validity>
 <validityStatus>active</validityStatus>
 <validityTimeSpecification>
  <overallStartTime>2017-09-22T14:33:00</overallStartTime>
  <overallEndTime>2017-09-23T14:33:00</overallEndTime>
 </validityTimeSpecification>
</validity>
<generalPublicComment>
 <comment>
  <values>
   <value lang="pl">Opis</value>
  </values>
 </comment>
 <commentType>description</commentType>
</generalPublicComment>
<generalPublicComment>
 <comment>
  <values>
   <value lang="pl"/>
  </values>
 </comment>
 <commentType>other</commentType>
</generalPublicComment>
<groupOfLocations xsi:type="Point">
 <pointAlongLinearElement>
  <linearElement xsi:type="LinearElementByPoints">
   <roadName>
    <values>
     <value lang="pl">Toruńska</value>
    </values>
   </roadName>
   <roadNumber>S8</roadNumber>
   <linearElementReferenceModel>Pikietaż</linearElementReferenceModel>
   <linearElementNature>road</linearElementNature>
   <startPointOfLinearElement>
    <referentIdentifier>referentIdentifier</referentIdentifier>
    <referentType>referenceMarker</referentType>
    <referentDescription>
     <values>
      <value lang="pl">18.757</value>
     </values>
    </referentDescription>
   </startPointOfLinearElement>
   <endPointOfLinearElement>
    <referentIdentifier>referentIdentifier</referentIdentifier>
    <referentType>referenceMarker</referentType>
   </endPointOfLinearElement>
  </linearElement>
  <distanceAlongLinearElement xsi:type="DistanceFromLinearElementStart">
   <distanceAlong>300.0</distanceAlong>
  </distanceAlongLinearElement>
 </pointAlongLinearElement>
 <pointByCoordinates>
  <pointCoordinates>
   <latitude>52.302258</latitude>
   <longitude>21.04272</longitude>
  </pointCoordinates>
 </pointByCoordinates>
 <pointExtension>
  <openlrExtendedPoint>
   <openlrPointLocationReference>
    <openlrGeoCoordinate>
     <openlrCoordinate>
      <latitude>52.302258</latitude>
      <longitude>21.04272</longitude>
```

```
            </openlrCoordinate>
          </openlrGeoCoordinate>
          <openlrPointAlongLine>
            <openlrSideOfRoad>onRoadOrUnknown</openlrSideOfRoad>
            <openlrOrientation>both</openlrOrientation>
            <openlrPositiveOffset>670</openlrPositiveOffset>
            <openlrLocationReferencePoint>
              <openlrCoordinate>
                <latitude>52.304577</latitude>
                <longitude>21.051817</longitude>
              </openlrCoordinate>
              <openlrLineAttributes>
                <openlrFunctionalRoadClass>FRC0</openlrFunctionalRoadClass>
                <openlrFormOfWay>undefined</openlrFormOfWay>
                <openlrBearing>246</openlrBearing>
              </openlrLineAttributes>
              <openlrPathAttributes>
                <openlrLowestFRCToNextLRPoint>FRC0</openlrLowestFRCToNextLRPoint>
                <openlrDistanceToNextLRPoint>952</openlrDistanceToNextLRPoint>
              </openlrPathAttributes>
            </openlrLocationReferencePoint>
            <openlrLastLocationReferencePoint>
              <openlrCoordinate>
                <latitude>52.301296</latitude>
                <longitude>21.038906</longitude>
              </openlrCoordinate>
              <openlrLineAttributes>
                <openlrFunctionalRoadClass>FRC0</openlrFunctionalRoadClass>
                <openlrFormOfWay>undefined</openlrFormOfWay>
                <openlrBearing>67</openlrBearing>
              </openlrLineAttributes>
            </openlrLastLocationReferencePoint>
          </openlrPointAlongLine>
        </openlrPointLocationReference>
      </openlrExtendedPoint>
    </pointExtension>
  </groupOfLocations>
  <obstructionType>shedLoad</obstructionType>
 </situationRecord>
</situation>
</payloadPublication>
</d2LogicalModel>
```

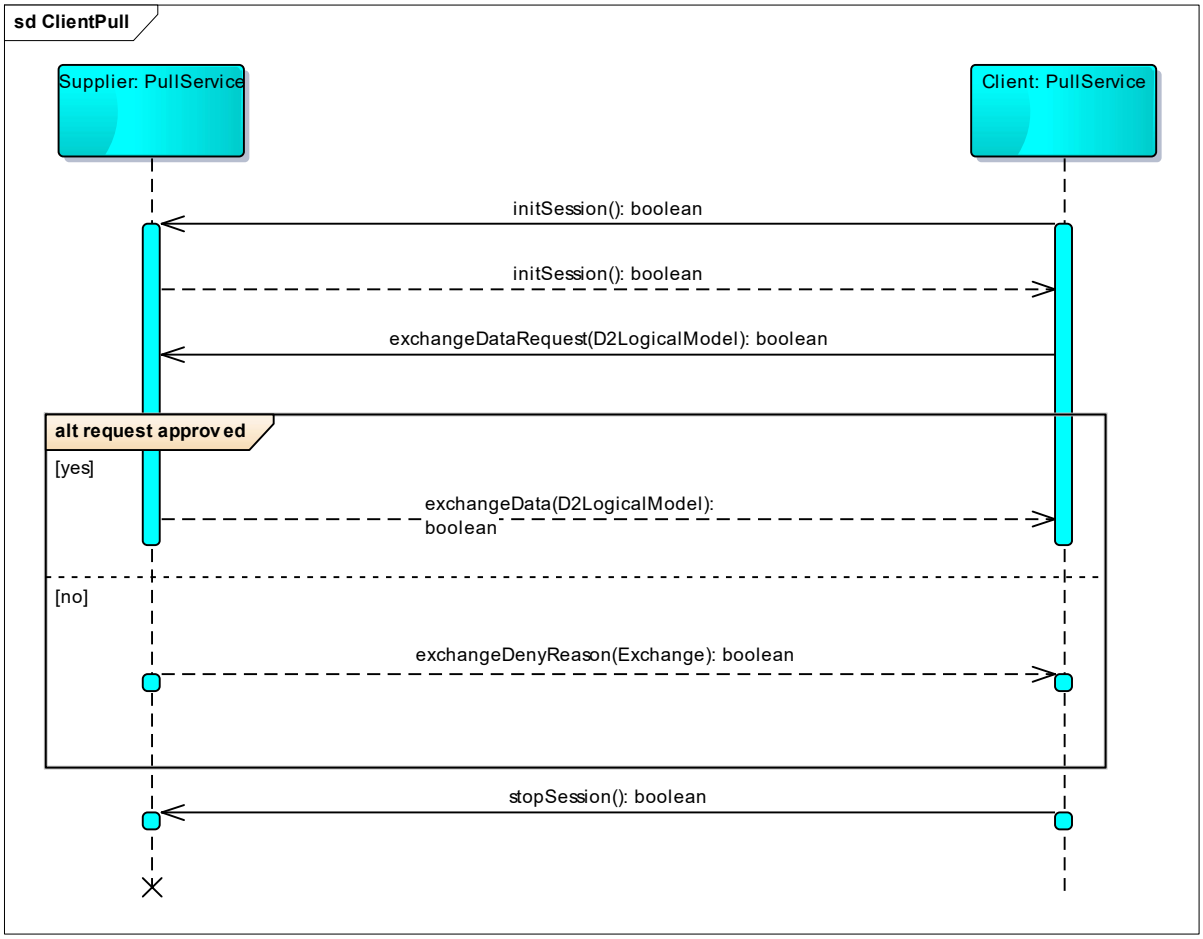
PICTURE 14 EXAMPLE OF DATEX II MESSAGE

6.2 Datex Client Pull mode

In this mode, a user downloads information on all events which in a given moment are active (meaning, does not download information on difficulties which had ended or their start date and hour are later than the date and hour of browsing the data).

Description is available in the documentation of Datex II v2.0 Software Developers Guide on the website:
http://www.datex2.eu/sites/www.datex2.eu/files/DATEXIIv2.0-DevGuide.pdf

Diagram of sequences for this mode is presented in the picture:



PICTURE 15 DIAGRAM OF SEQUENCES, DATEX II CLIENT PULL

NOTE! This work mode, because of large quantities of data transfer, is an EMERGENCY mode – its use is limited to two downloads per 24h for every user.

Exemplary code downloading data in a Pull mode:

```
public class PullService extends WebServiceGatewaySupport {

    /* … */

    public void callWebService(SpringApplicationBuilder builder) {
        Client wsClient = builder.context().getBean(Client.class);
        D2LogicalModel request = createD2();
        D2LogicalRequestToXml(request);
        D2LogicalModel response = wsClient.pullRequest(request);
        D2LogicalResponseToXml(response);
    }
```

PICTURE 16 CODE TO DOWNLOAD BY PULL METHOD

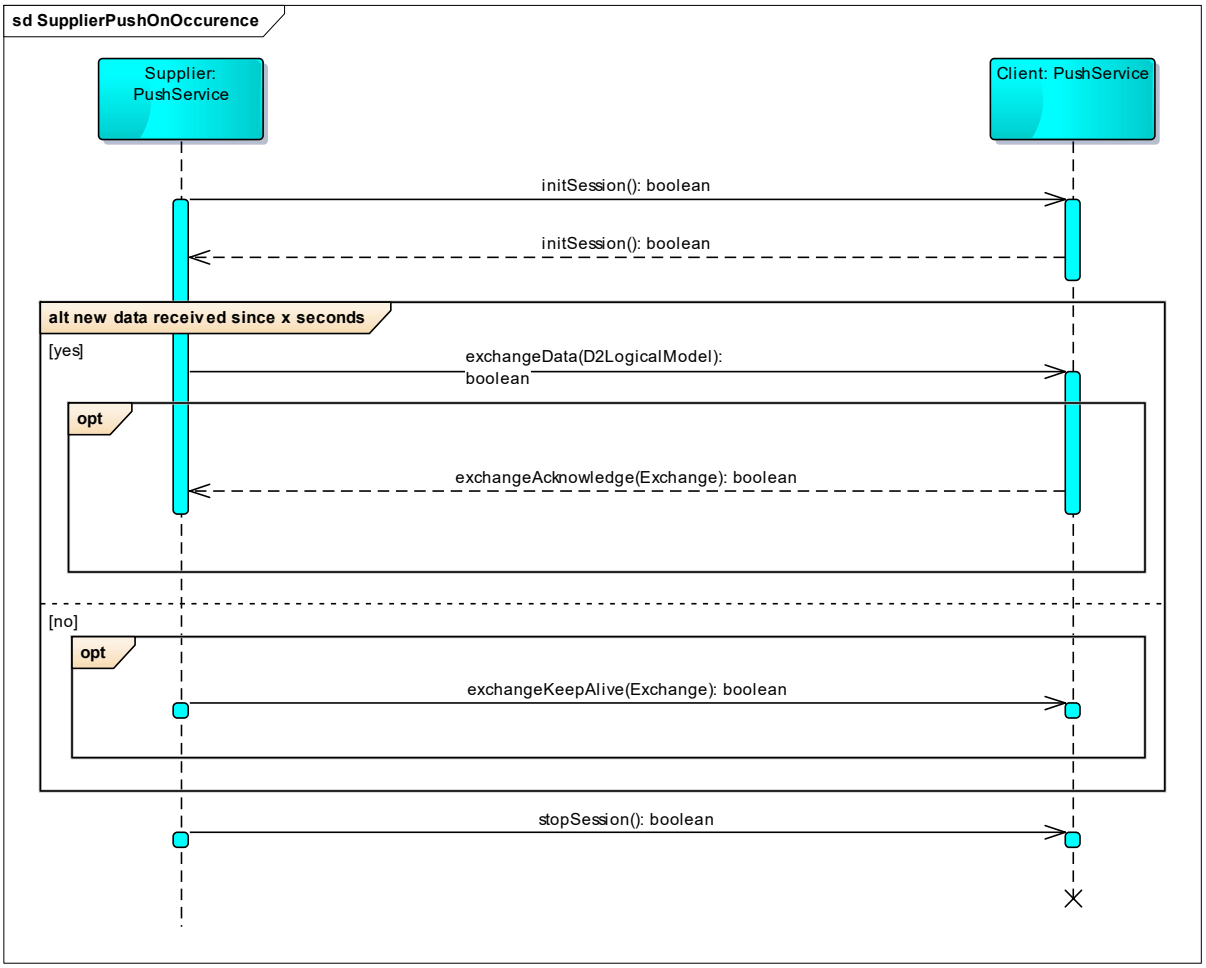
6.3 Datex Publisher Push on Occurrence mode

Datex Publisher Push on Occurrence is a basic work mode of the NAP.

This mode works in a way that a user registers in the service and will receive information on all new events and modifications of events from the moment of registering.

Description is available in the documentation of Datex II v2.0 Software Developers Guide, on the website:
http://www.datex2.eu/sites/www.datex2.eu/files/DATEXIIv2.0-DevGuide.pdf

Diagram of sequences for this mode is presented in the picture:



PICTURE 17 DIAGRAM OF SEQUENCES, DATEX II PUBLISHER PUSH ON OCCURENCE

Sending messages via a push method is made by the following NAP service:

PICTURE 18 CODE TO SEND NOTIFICATIONS

```
public class PushService {

   /* … */

   public void callWebService(SpringApplicationBuilder builder) {
       Client wsClient = builder.context().getBean(Client.class);
       D2LogicalModel request = createD2();
       D2LogicalRequestToXml(request);
       D2LogicalModel response = wsClient.pushRequest(request);
       D2LogicalResponseToXML(response);
   }
```

Description of services made available via the NAP, in the format WSDL, is available on the Information Platform in the section *Technical specifications.*

6.4 Communication interface

6.4.1 NAP glossaries

Data class DATEX II	**Data type DATEX II / Type of a Difficulty**
Temporarily slippery road	Flooding
	Danger of aquaplaning
	Surface water hazard
	Slippery road
	Mud on road
	Loose chippings
	Oil on road
	Petrol on road
	Ice
	Black ice
	Snow drifts
	Icy patches
Animal, people, obstacles, debris on the road	Objects on the road
	Obstructions on the road
	Fallen trees
	Avalanches
	Rockfalls
	Landslips
	Animals on the road
	People on roadway
	Children on roadway
	Cyclists on roadway
	Large animals on roadway
	Herd of animals on roadway
	People throwing objects onto the road
	Broken down vehicles
	Broken down vehicles
Unprotected accident area(s)	Unprotected accident area(s)
Short term road works	Clearance work
	Maintenance work
	Slowly moving maintenance vehicle(s)
	Road marking work
Reduced visibility	Visibility reduced
	Smoke hazard
	Dense fog
	Patchy fog
	Blowing snow
	Low sun glare
Wrong-way driver	Vehicle(s) on wrong carriageway
Unmanaged blockage of road	blocked

	bridge blocked
	tunnel blocked
	exit blocked
	Connecting carriageway blocked
	Entry blocked
Exceptional weather conditions	Heavy snowfall
	Heavy rain
	Storm force winds
	Strong winds
	Strong winds affecting high-sided vehicles
Others	Others (disasters)
	Construction disaster
	Others (others events)
	Passage of abnormal vehicle
	Increased traffic

Data class	**Data type**
Limits	Bearing capacity
	Pressure
	Weight
	Speed
	Vertical gauge
	Horizontal gauge
	Road closed
	Ruch wahadłowy
	Light signalization
	Bridge failiure
	Two-way traffic (one road closed on a dual carriageway)

Data class	**Data type**
MOP	MOP I category
	MOP II category
	MOP III category
	Private parking

Data class	**Data type**
Border crossing	personal
	freight
	personal, freight
	personal, freight, bus

6.4.2 Mapping NAP glossaries on XML DATEX II elements

In the below table there is presented mapping of a NAP glossary on elements of DATEX II message. Type of event saved in a glossary impacts the element **situationRecord** and elements that are lower in a hierarchy of XML message elements.

On the basis of the below mapping, two processes take place:

- For outgoing messages there is built an XML message on the basis of the type of a difficulty;
- For incoming messages a type of a difficulty is being defined.

Data class DATEX II	**Data type DATEX II / type of a Difficulty**	**Message – XML element.**
Temporarily slippery road	Flood	<situationRecord xsi:type="EnvironmentalObstruction">
		<environmentalObstructionType>flooding</environmentalObstructionType>
		</situationRecord>
	Aquaplaning threat	<situationRecord xsi:type="WeatherRelatedRoadConditions">
		<weatherRelatedRoadConditionType>surfaceWater</weatherRelatedRoadConditionType>
		</situationRecord>
	Surface water threat	<situationRecord xsi:type="WeatherRelatedRoadConditions">
		<weatherRelatedRoadConditionType>surfaceWater</weatherRelatedRoadConditionType>
		</situationRecord>
	Slippery road	<situationRecord xsi:type="NonWeatherRelatedRoadConditions">
		<nonWeatherRelatedRoadConditionType>slipperyRoad</nonWeatherRelatedRoadConditionType>
		</situationRecord>
	Slush	<situationRecord xsi:type="NonWeatherRelatedRoadConditions">
		<nonWeatherRelatedRoadConditionType>mudOnRoad</nonWeatherRelatedRoadConditionType>
		</situationRecord>
	Loose gravel	<situationRecord xsi:type="NonWeatherRelatedRoadConditions">
		<nonWeatherRelatedRoadConditionType>looseChippings</nonWeatherRelatedRoadConditionType>

		</situationRecord>
	Oil on the road	<situationRecord xsi:type="NonWeatherRelatedRoadConditions">
		<nonWeatherRelatedRoadConditionType>oilOnRoad</nonWeatherRelatedRoadConditionType>
		</situationRecord>
	Gas on the road	<situationRecord xsi:type="NonWeatherRelatedRoadConditions">
		<nonWeatherRelatedRoadConditionType>petrolOnRoad</nonWeatherRelatedRoadConditionType>
		</situationRecord>
	Ice on the road	<situationRecord xsi:type="WeatherRelatedRoadConditions">
		<weatherRelatedRoadConditionType>ice</weatherRelatedRoadConditionType>
		</situationRecord>
	Black ice	<situationRecord xsi:type="WeatherRelatedRoadConditions">
		<weatherRelatedRoadConditionType>blackIce</weatherRelatedRoadConditionType>
		</situationRecord>
	Winter slippery road	<situationRecord xsi:type="WeatherRelatedRoadConditions">
		<weatherRelatedRoadConditionType>snowDrifts</weatherRelatedRoadConditionType>
		</situationRecord>
	Irregular ice	<situationRecord xsi:type="WeatherRelatedRoadConditions">
		<weatherRelatedRoadConditionType>icyPatches</weatherRelatedRoadConditionType>
		</situationRecord>
Animals, people, obstacles, remains on the road	Objects on the road	<situationRecord xsi:type="GeneralObstruction">
		<obstructionType>objectOnTheRoad</obstructionType>
		</situationRecord>
	Large objects on the road	<situationRecord xsi:type="GeneralObstruction">
		<obstructionType>shedLoad</obstructionType>
		</situationRecord>
	Trees laying down on the road	<situationRecord xsi:type="EnvironmentalObstruction">
		<environmentalObstructionType>fallenTrees</environmentalObstructionType>

		</situationRecord>
	Avalanches	<situationRecord xsi:type="EnvironmentalObstruction">
		<environmentalObstructionType>avalanches</environmentalObstructionType>
		</situationRecord>
	Rock avalanches	<situationRecord xsi:type="EnvironmentalObstruction">
		<environmentalObstructionType>rockfalls</environmentalObstructionType>
		</situationRecord>
	Landslides	<situationRecord xsi:type="EnvironmentalObstruction">
		<environmentalObstructionType>landslips</environmentalObstructionType>
		</situationRecord>
	Animals on the road	<situationRecord xsi:type="AnimalPresenceObstruction">
		<animalPresenceType>animalsOnTheRoad</animalPresenceType>
		</situationRecord>
	People on the road	<situationRecord xsi:type="GeneralObstruction">
		<obstructionType>peopleOnRoadway</obstructionType>
		</situationRecord>
	Children on the road	<situationRecord xsi:type="GeneralObstruction">
		<obstructionType>childrenOnRoadway</obstructionType>
		</situationRecord>
	Bicyclists on the road	<situationRecord xsi:type="GeneralObstruction">
		<obstructionType>cyclistsOnRoadway</obstructionType>
		</situationRecord>
	Large animals on the road	<situationRecord xsi:type="AnimalPresenceObstruction">
		<animalPresenceType>largeAnimalsOnTheRoad</animalPresenceType>
		</situationRecord>
	Herd of animals on the road	<situationRecord xsi:type="AnimalPresenceObstruction">
		<animalPresenceType>herdOfAnimalsOnTheRoad</animalPresenceType>

		</situationRecord>
	People throwing objects on the road	<situationRecord xsi:type="DisturbanceActivity">
		<disturbanceActivityType>attackOnVehicle</disturbanceActivityType>
		</situationRecord>
	Broken vehicle	<situationRecord xsi:type="VehicleObstruction">
		<vehicleObstructionType>brokenDownVehicle</vehicleObstructionType>
		</situationRecord>
	Broken truck	<situationRecord xsi:type="VehicleObstruction">
		<vehicleObstructionType>brokenDownHeavyLorry</vehicleObstructionType>
		</situationRecord>
Unsecured accident area	Unsecured accident area	<situationRecord xsi:type="GeneralObstruction">
		<obstructionType>unprotectedAccidentArea</obstructionType>
		</situationRecord>
Short-term road works	Cleaning works (removing obstacles)	<situationRecord xsi:type="GeneralObstruction">
		<obstructionType>rescueAndRecoveryWork</obstructionType>
		</situationRecord>
	Maintenance	<situationRecord xsi:type="MaintenanceWorks">
		<roadMaintenanceType>maintenanceWork</roadMaintenanceType>
		</situationRecord>
	Slowly moving maintenance vehicle	<situationRecord xsi:type="VehicleObstruction">
		<vehicleObstructionType>slowMovingMaintenanceVehicle</vehicleObstructionType>
		</situationRecord>
	Pavement painting	<situationRecord xsi:type="MaintenanceWorks">
		<roadMaintenanceType>roadMarkingWork</roadMaintenanceType>
		</situationRecord>
Limited visibility	Reduced visibility	<situationRecord xsi:type="PoorEnvironmentConditions">
		<poorEnvironmentType>visibilityReduced</poorEnvironmentType>

		</situationRecord>
	Smoke	<situationRecord xsi:type="PoorEnvironmentConditions">
		<poorEnvironmentType>smokeHazard</poorEnvironmentType>
		</situationRecord>
	Dense fog	<situationRecord xsi:type="PoorEnvironmentConditions">
		<poorEnvironmentType>denseFog</poorEnvironmentType>
		</situationRecord>
	Irregular fog	<situationRecord xsi:type="PoorEnvironmentConditions">
		<poorEnvironmentType>patchyFog</poorEnvironmentType>
		</situationRecord>
	Blizzard	<situationRecord xsi:type="PoorEnvironmentConditions">
		<poorEnvironmentType>heavySnowfall</poorEnvironmentType>
		</situationRecord>
	Glare	<situationRecord xsi:type="PoorEnvironmentConditions">
		<poorEnvironmentType>lowSunGlare</poorEnvironmentType>
		</situationRecord>
Vehicle driving wrong way	Vehicle driving wrong way	<situationRecord xsi:type="VehicleObstruction">
		<vehicleObstructionType>vehicleOnWrongCarriageway</vehicleObstructionType>
		</situationRecord>
Uncontrolled road blocking	Road blocking	<situationRecord xsi:type="GeneralObstruction">
		<obstructionType>obstructionOnTheRoad</obstructionType>
		<impact><trafficConstrictionType>roadBlocked</trafficConstrictionType></impact>
		</situationRecord>
	Blocked bridge	<situationRecord xsi:type="GeneralObstruction">
		<obstructionType>obstructionOnTheRoad</obstructionType>
		<impact><trafficConstrictionType>roadBlocked</trafficConstrictionType></impact>
		</situationRecord>

	Blocked tunnel	<situationRecord xsi:type="GeneralObstruction">
		<obstructionType>obstructionOnTheRoad</obstructionType>
		<impact><trafficConstrictionType>roadBlocked</trafficConstrictionType></impact>
		</situationRecord>
	Blocked exit	<situationRecord xsi:type="GeneralObstruction">
		<obstructionType>obstructionOnTheRoad</obstructionType>
		<impact><trafficConstrictionType>roadBlocked</trafficConstrictionType></impact>
		</situationRecord>
	Blocked adjacent road	<situationRecord xsi:type="GeneralObstruction">
		<obstructionType>obstructionOnTheRoad</obstructionType>
		<impact><trafficConstrictionType>roadBlocked</trafficConstrictionType></impact>
		</situationRecord>
	Blocked entrance	<situationRecord xsi:type="GeneralObstruction">
		<obstructionType>obstructionOnTheRoad</obstructionType>
		<impact><trafficConstrictionType>roadBlocked</trafficConstrictionType></impact>
		</situationRecord>
Exceptional weather conditions	Heavy snowing	<situationRecord xsi:type="PoorEnvironmentConditions">
		<poorEnvironmentType>snowfall</poorEnvironmentType>
		</situationRecord>
	Heavy raining	<situationRecord xsi:type="PoorEnvironmentConditions">
		<poorEnvironmentType>heavyRain</poorEnvironmentType>
		</situationRecord>
	Hurricane	<situationRecord xsi:type="PoorEnvironmentConditions">
		<poorEnvironmentType>stormForceWinds</poorEnvironmentType>
		</situationRecord>
	Strong wind	<situationRecord xsi:type="PoorEnvironmentConditions">
		<poorEnvironmentType>strongWinds</poorEnvironmentType>

		</situationRecord>
	Cross wind	<situationRecord xsi:type="PoorEnvironmentConditions">
		<poorEnvironmentType>crosswinds</poorEnvironmentType>
		</situationRecord>
Others disasters	Others (disasters)	<situationRecord xsi:type="InfrastructureDamageObstruction">
		<infrastructureDamageType>damagedRoadSurface</infrastructureDamageType>
		</situationRecord>
	Construction disaster	<situationRecord xsi:type="InfrastructureDamageObstruction">
		<infrastructureDamageType>damagedRoadSurface</infrastructureDamageType>
		</situationRecord>
	Others (other events)	<situationRecord xsi:type="InfrastructureDamageObstruction">
		<infrastructureDamageType>damagedRoadSurface</infrastructureDamageType>
		</situationRecord>
	Passage of abnormal vehicle	<situationRecord xsi:type="VehicleObstruction">
		<poorEnvironmentType>vehicleWithOverwideLoad</poorEnvironmentType>
		</situationRecord>
	Increased traffic	<situationRecord xsi:type="AbnormalTraffic">
		<abnormalTrafficType>heavyTraffic</abnormalTrafficType>
		</situationRecord>

TABLE 3 MAPPING NAP GLOSSARIES ON XML DATEX II ELEMENTS

FRC Attribute (OpenLR)	Road category
FRC0	National roads S and A
FRC1	Other national roads
FRC2	Voivodship roads
FRC3	Poviat roads

TABLE 4 FRC ATTRIBUTES

FOW Attribute (OpenLR)	Road category
UNDEFINED	All roads

TABLE 5 FOW ATTRIBUTES

7 Application for User Support

User Support Application is a central point of a first line support to Users of the NAP. User has a possibility to notify on errors of the application and the Communication Interface, as well as other inquiries. In addition, in case of doubts concerning how to perform operations in the system, the application includes also a database in which there are answers to the most frequently asked questions.

Notifications can be registered by users:

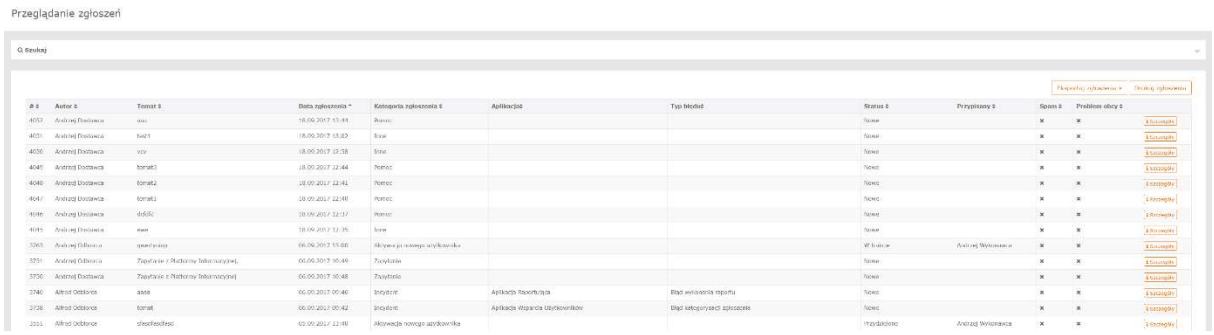
- Not logged in, via contact form available on the Information Platform;
- Logged in to the NAP with the use of an appropriate form in the User Support Application;
- Via sending a message to an appropriate e-mail address KPD_zgloszenia@matic.com.pl

Within the frames of an emergency procedure, in the case of a lack of possibility to register a notification via the enumerated above forms, there is a possibility to submit the Incident via phone.

After launching the User Support App, a user on the left hand side of the screen has the following menu:

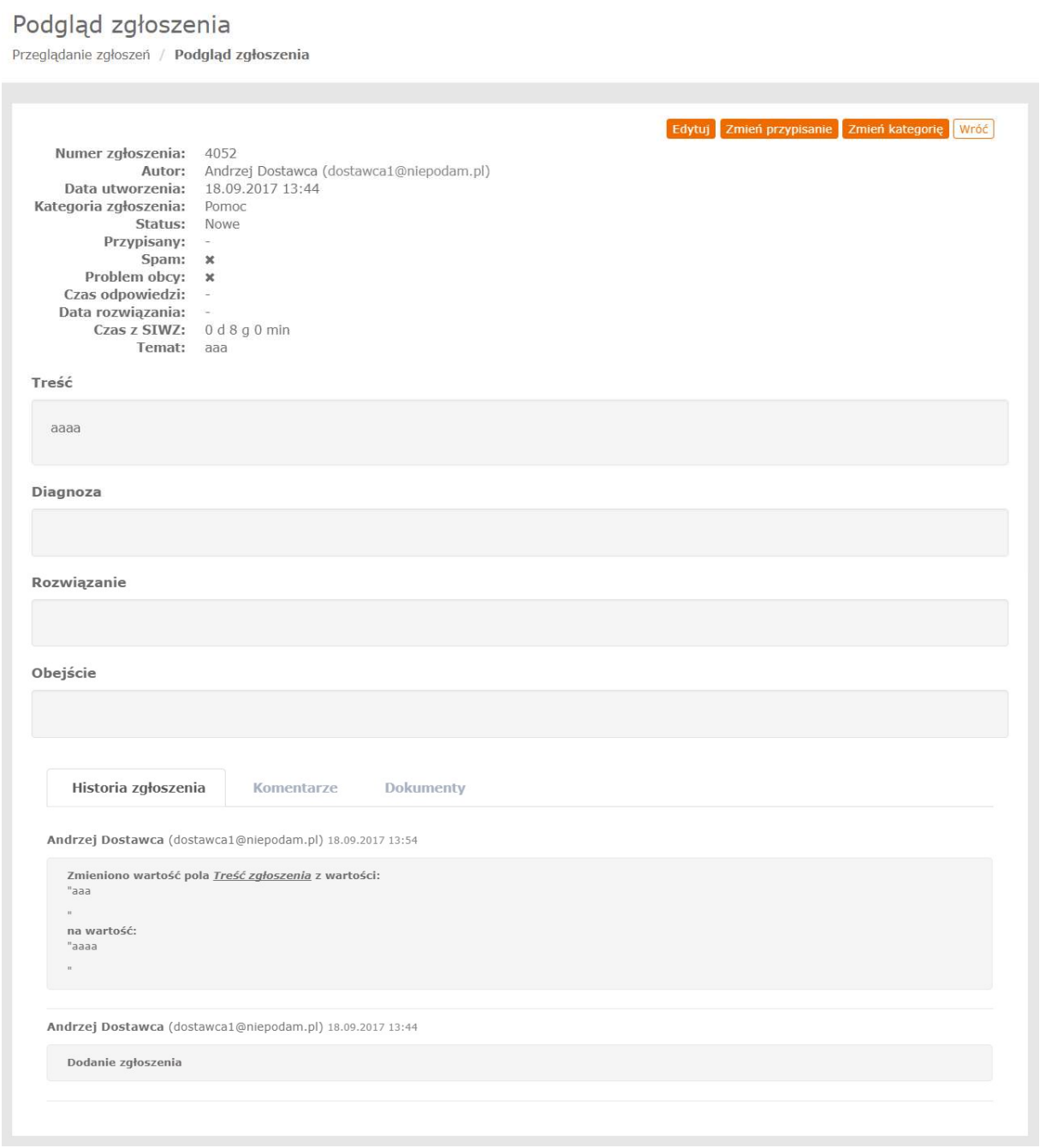
PICTURE 19 MAIN MENU OF USER SUPPORT APP

Moreover, in a central part of the form there is a list of messages submitted by all users who are connected to the same entity as the logged in user.



PICTURE 20 LIST OF NOTIFICATIONS

In every line there is a button *Szczegóły*, after pressing it, a user is directed to a form *Podgląd zgłoszenia* with details of a given notification.



PICTURE 21 DETAILS OF NOTIFICATIONS

Author can make all changes in notifications, provided a notification has a status *New* or *Adding Information*. And at all times, the Author can add a commend to his/her notification.

7.1 Rules for notification on errors and questions

User should apply the below rules on notification on errors and questions through a form available in the User Support Application:

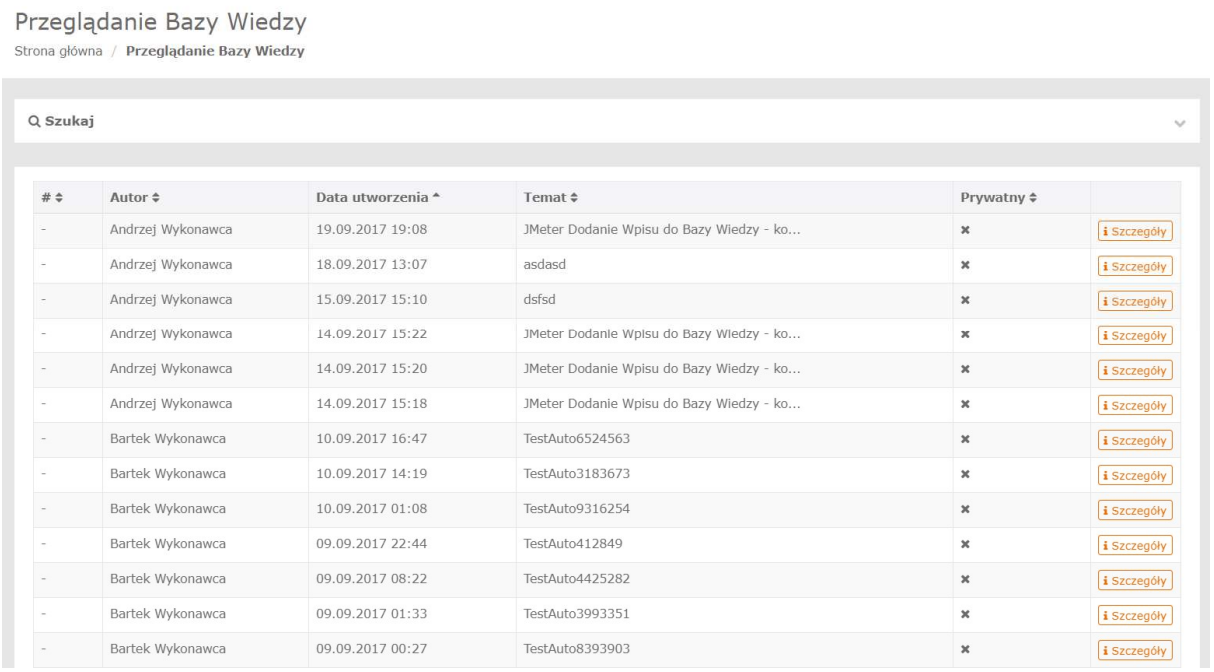
1. Notification should concern one case, multiple case notifications should be avoided as they complicate solving these cases and prolong the time of fixing them.
2. Every error notified should include the following information:
    a. Name of the application the problem depicts (selection from a list);
    b. Type of error;
    c. Description of the problem, allowing its recreation by the service; if possible a set of data at which the problem occurred;
    d. Window in which the problem occurs;
    e. Print screen if possible.
3. If the delivered information does not allow undertaking actions, e.g. it is required to add data to the notification, it received a status "Uzupełnienie; in such a case a user received such information via e-mail.
4. After resolving a notification, there is sent a message to the notifying user's address.

7.2 Knowledge Database usage

In the User Support Application a *Baza wiedzy* (*Knowledge Database)* is available, in which there are stored answers to frequently asked questions. *Baza Wiedzy* is available from the Information Platform and User Support Application.

Before asking any question or sending a notification, it is advised to check if the problem has not been already described in the Knowledge Database.

User gains access to the Knowledge Database through the below form.

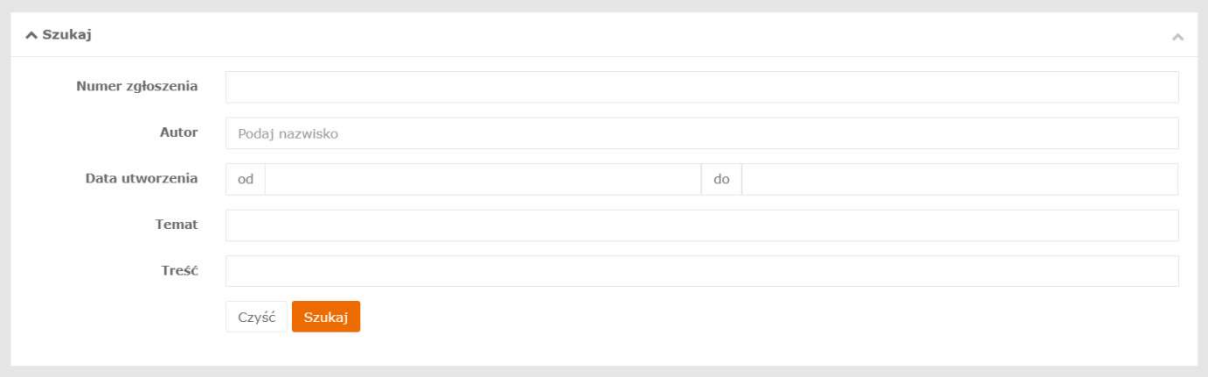


PICTURE 22 DATABASE SEARCH

In every line there is a button *Szczegóły,* which directs a user to the form *Podgląd szczegółów zapisu Bazy Wiedzy*. User can also use a print function.

PICTURE 23 DETAILED VIEW IN DATABASE

In order to search for answers to questions in the database, user can use a function of search for entries. This function is available from the level of a Przeglądaj *Bazę Wiedzy*. After pressing *Szukaj* button the panel expands:

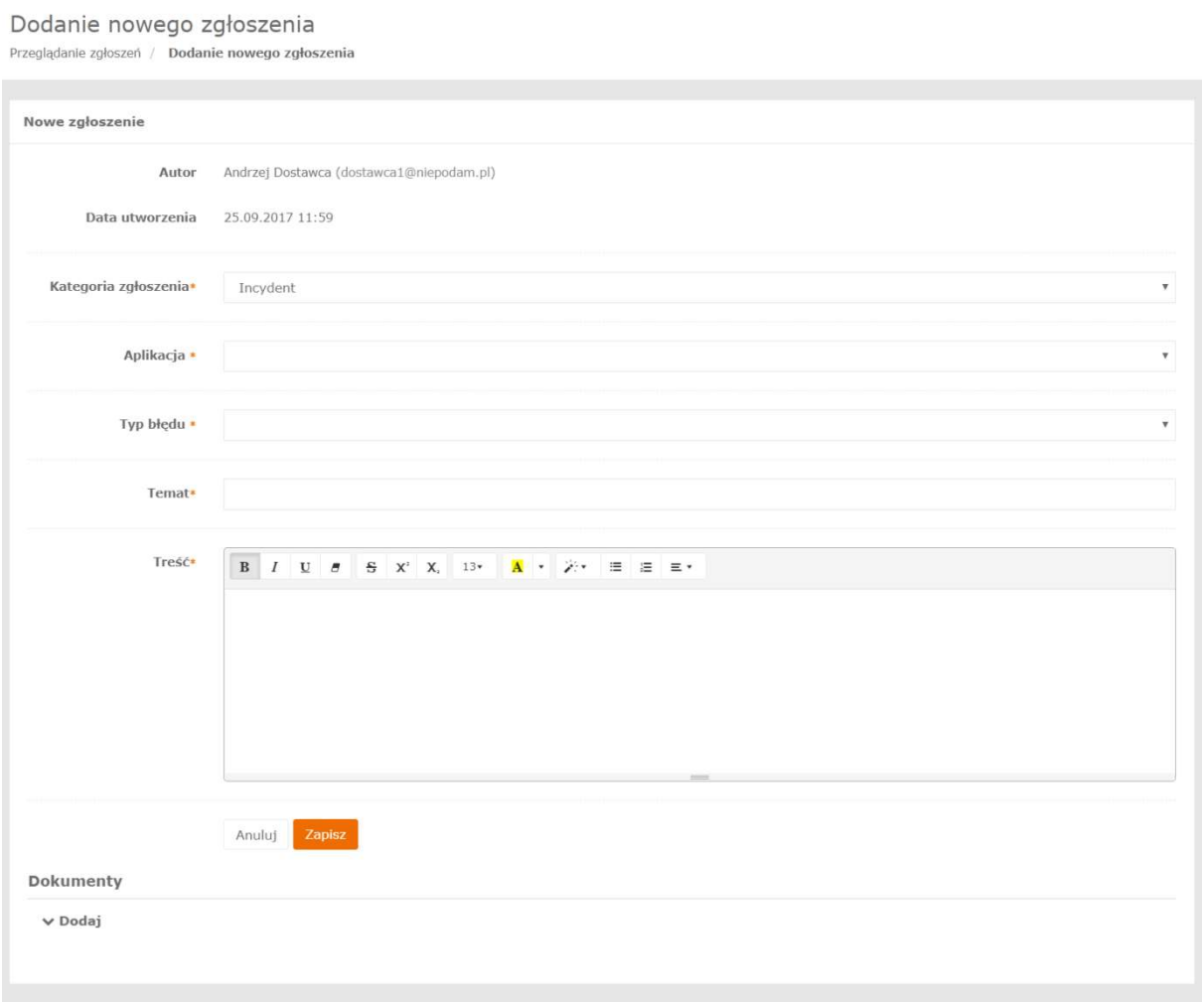


PICTURE 24 SEARCH PANEL OF DATABASE ENTRIES

After entering searched for information and pressing a button *Search*, a list of Knowledge Database entries is limited only to entries meeting all the parameters.

7.3 Notification via User Support Application

Sending notifications through the User Application is available only to users logged in to the NAP. In a side menu select an option *Notifications* and after it expands select *Nowe Zgłoszenie*. After these actions a form will show up to enter a new notification:



PICTURE 25 FORM FOR ADDING NEW NOTIFICATIONS IN USER SUPPORT APP

After selecting in a section *Kategorii zgłoszenia* value Incydent, user must select *Aplikację* and *Typ błędu*, which will precisely detail the notification. In other categories these fields are not visible.

List of error types that are assigned in particular applications:

Name of application	Error type
Data Providers/Data Recipients Application	Error in adding or editing difficulty
	Error of map module operation
	Error of Difficulties export
	Error in logging in
	Error in transferring difficulties via Communication Interface
	Other
	Data on difficulties does not come via Communication Interface
Reporting Application	Error of access to function of statistics analysis of using Information Platform

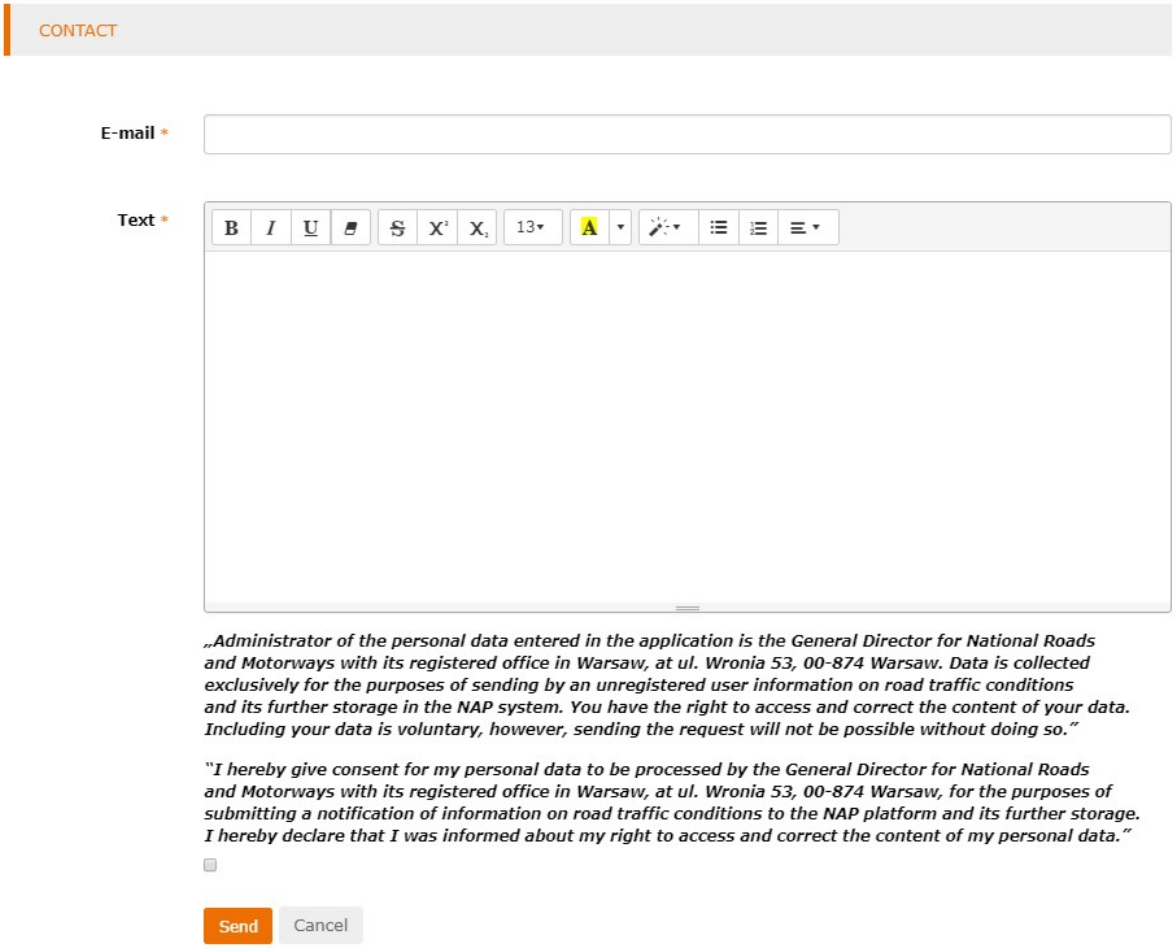
	Error in printing a report
	Error in exporting a report docx
	Error in exporting a report xml, xlsx, csv
	Error in logging in to the system
	Error in viewing reports catalogue
	Error in previewing print
	Error in viewing diagram
	Error in generating report
	Error in generating additional report
	Other
User Support Application	Error in adding document to notification
	Error in adding comment to notification
	Error in editing notifications
	Error in categorizing in notification
	Error in Knowledge Database operation
	Error in downloading data from mail
	Error in viewing notifications
	Error in registering a notification
	Error in changing notification category
	Error in sending notifications on the planned break in the NAP operation
	Other
Application Managing NAP	Error in adding a request status
	Error in adding a request
	Error in adding attachment to a request
	Error in logging in
	Error in checking realization status of requests
	Other
Information Platform	Error in map module operation
	Error in downloading archived data on difficulties
	Error in downloading data on MOP
	Error in downloading Instructions for Data Providers and Data Recipients
	Error in registering a notification
	Lack of current archived data on difficulties
	Other

TABLE 6 LIST OF ERROR TYPES IN PARTICULAR APPLICATIONS

In case of such a need, user may attach a file to a notification. File cannot be larger than 10 MB.

7.4 Notification via Information Platform

Notification to the User support Application can be also entered by users not logged in to the NAP. On the Information Platform from a side menu a user should select an option *Contact.* After selecting it a form shows up in a central part.



PICTURE 26 FORM FOR ADDING NOTIFICATIONS VIA INFORMATION PLATFORM

All fields in a form are compulsory. It is important that the entered e-mail address is correct, because an answer will be sent to this particular e-mail.

This form can be used by users registered in the NAP, in order to submit requests on unblocking an account.

8 NAP security

8.1 ICT security

The NAP is equipped with modern security means, ensuring safety in case of failures and hacker attacks. The system incorporates for instance:

(1) Policy of granting access to the system;
(2) Access to resources after logging in;
(3) Security certificates;
(4) Secure data exchange in the M2M mode;
(5) Password policy;
(6) Reacting to incidents.

8.2 Personal data protection

In the system there is stored personal data for reasons of security of data processed in the NAP, accountability, and for contact reasons.

Data is protected in accordance with the regulations of law within this scope.

9 Downtime situations

In case of a need to conduct planned maintenance, the NAP operation may be suspended. On such occasions, all active users will receive an appropriate information via e-mail.

During the system operation, there may occur two types of downtime situations:

9.1 Downtime on the side of the NAP

The NAP is equipped with series of systems preventing from downtimes, however, as in the case of any complex system, they cannot be ruled out.

On such occasions, the NAP will not accept or provide access to messages, instead of application websites there will be displayed the static web pages informing on a downtime:

PICTURE 27 NOTICE ON DOWNTIME OF NAP

After restoring the NAP operation, there will be launched uploading and sending messages. Systems of Data Providers should in such cases suspend transferring messages and renew sending them after the system is restored.

9.2 Downtime on the side of Data Providers

In case of a downtime on the side of a Data Provider, after restoring the system he/she should transfer to the NAP the messages on difficulties which have not been delivered and are still valid.

9.3 Downtime on the side of Data Recipients

The NAP sends out a message on event in the Datex Publisher Push on Occurrence mode – only once, until transferring a complete content or until receiving an error notification (e.g. exceeded time limit).

In the case of a lack of availability of a Data Recipient, the message is not stored for re-sending it. After a Data Recipient's availability is restored, the NAP sends current messages. In such a case a Data Recipient faces a threat of losing the data which was added or underwent changes during the time his/her system has not been receiving messages.

In order to prevent the problem of a partial data loss, downloading current data in the mode Datex Client Pull can be applied. This mode is described in *Section 6.1 – Exchange of messages in the NAP*.

10 Test scenarios

After gaining GDDKiA's approval and receiving information from the NAP Operator that an access to account and the test environment is ready, a user should perform verification tests. The purpose of such tests is checking the M2M automatic messages exchange between NAP and a user's system. Application for Data Providers and Data Recipients is also available in the test environment, in order to verify exchange of data. Other applications, such as User Support Application and Information Platform, are not subject of tests – these applications are available in the production system only.

Parameters required for connecting to the test environment (such as http address of a service) are provided to a user along with the information about a test environment being ready for tests.

Schedule of tests is placed on the Information Platform website in a tab *NAP Service.*

Below you will find scenarios which should be verified in a test environment.

10.1 Scenario 1: Logging in to Application for Data Providers/Data Recipients

After receiving from the NAP Operator the www address, log in to the provided web page using the account ID and password received in an invitation to the system. Change the password at the first log in.

10.2 Scenario 2: Exchange of messages via Application for Data Providers/Data Recipients

After logging in, the Application for Data Providers and Data Recipients window will be displayed. Then within the planned test scenario you should:

(1) Analyse the displayed information, move the map, zoom in/out the map;
(2) Click on the difficulty and display the detailed info about it;
(3) Add new difficulty with randomly selected parameters, and:
- Start data the same as the current day;
- Expiry date later than the start date by five minutes.
  Check if a new difficulty displayed on the map. Click on the difficulty to view its detailed info.

(4) Change the difficulty parameters, excluding start data and expiry data;
(5) Change the location of a difficulty;
(6) Observe whether the disruption expired by itself;
(7) Add a new difficulty with randomly selected parameters and:
- Start date the same as current day;

- Expiry date later than the start date by two days.

(8) Delete the difficulty;
(9) Observe whether the difficulty is deleted from the map;
(10) Observe whether on the difficulty list a colour and display position of the difficulty changed.

10.3 Scenario 3: Exchange of messages via Communication interface in a push mode

Purpose of this test is to verify the operation of the application created by a Data Provider (hereinafter referred to as the "User Application").

(1) With the user app send a difficulty of randomly selected parameters, and:
- Start date the same as current day;
- Expiry date later than the start date by two days;
- Description of a difficulty "Test message Datex2 #n" where n is a number of a test message.

(2) Using the Application for Data Providers and Data Recipients observe if the difficulty shows up on a map;
(3) With the user app register to the system (for receiving messages in a push mode);
(4) Enter a new difficulty in the Application for Data Providers and Data Recipients;
(5) Check whether the system sent a new message to the user app on a new difficulty.

10.4 Scenario 4: Downloading data via Datex Client Pull

Purpose of this test is to verify the operation of the application created by a Data Recipient (hereinafter referred to as the "User Application").

(1) Using the Application for Data Providers and Data Recipients or the user app (or a test app) send a message about a new disruption of randomly selected parameters, and:
- Start date the same as current day;
- Expiry date later than the start date by two days;
- Description of a difficulty "Test message Datex2 #n" where n is a number of a test message.

(2) Download data using a pull method.

Check whether the system notified on the submitted difficulty.