

## Section 3: Terms of Reference (TOR)

*Empowered lives.  
Resilient nations.*

### Project Title

“Curbing Corruption through Building Sustainable Integrity in Moldova”

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### Abbreviations

<b>NAC</b>	National Anticorruption Centre of the Republic of Moldova
<b>Hackathon 2019</b>	An event to be organised by UNDP and NAC lasting several days, in which start-ups and software developers meet to engage in collaborative design and/or computer programming.

### A. Background

“Curbing Corruption by Building Sustainable Integrity in Moldova” Project will contribute to achieving a sustainable integrity and anticorruption system in the Republic of Moldova through the strengthened capacities of the public and private sector entities and the civil society for the efficient application and monitoring of national integrity instruments and standards. The project will enhance capacities of the public and private sector actors, as well as of the Civil Society Organisations (CSOs) for the implementation of effective corruption prevention instruments and tools and will strengthen the anticorruption demand side through an increased public awareness on anticorruption and on the means to curb corruption. It will contribute to the progressive implementation of the Sustainable Development Goal 16 that calls for a substantial reduction of corruption and bribery in all their forms and for developing effective, accountable and transparent institutions at all levels. The Project is framed around the National Integrity and Anticorruption Strategy (NIAS) 2017-2020 and responds to the needs of its various actors and stakeholders in addressing the challenges for the effective implementation of the NIAS.

One of the most important corruption prevention tools performed by the NAC is anticorruption proofing of normative acts<sup>1</sup>. Anticorruption proofing of normative acts represents a process of the identification of corruption risks which can emerge in relation to the process of promoting normative acts by public entities, identification of the factors generating such risks and formulating recommendations to exclude such risks in the content of draft normative acts. It was introduced as a mandatory tool in 2006 and is carried out by the National Anticorruption Center. The current methodology for anticorruption proofing expertise was adopted in 2017<sup>2</sup>.

Anticorruption proofing has the following objectives:

- Prevention of corruption acts by excluding the risk factors from the draft normative documents;
- Information of the authors and of the public at large on the risk factors and corruption risks identified in a draft document;
- Offering supplementary guaranties that the legislative process is in compliance to the citizens' interest and the public interest.

According to the Integrity Law no.82/2017, all draft normative acts drafted by public entities shall pass the anticorruption proofing, except:

- a) policy documents;
- b) acts on the staff reshuffle of individual character;
- c) Government dispositions;
- d) Government Decisions on the approval of the reviews of draft laws and the Decrees of the President of the Republic of Moldova;
- e) International treaties, acts of investment with full powers and of expressing the consent of the Republic of Moldova to be bound by an international treaty.

Although NAC carries out the corruption proofing expertise of draft normative acts, in some cases the final adopted document differs from the draft act expertized by NAC. There are also cases when some draft acts elude the corruption proofing expertise. Therefore, some normative acts in force may contain corruption risks. At the same time, the involvement of citizens into the legislative drafting process is rather limited, while citizens as the direct beneficiaries of the adopted laws can identify certain problematic norms at the stage of their implementation and come with solutions and recommendations to exclude some discretionary norms, bureaucratic procedures, excessive requirements and other norms which can generate corruption.

To increase the demand side from the citizens to engage in preventing corruption and promote zero-tolerance to corruption, UNDP, through its project "Curbing Corruption by Building Sustainable Integrity in Moldova" (further the Project), in partnership the National Anticorruption Center aims to provide citizens with a tool of reporting problematic norms creating risks for corruption in the current legislation. For this purpose, the Project intends to contract a company to define through a crowd sourcing event, develop, deploy and support the conventionally called "eNotifier" information system, which will allow citizens to notify NAC on problematic norms creating potential corruption risks in the current normative acts.

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<sup>1</sup> <https://cna.md/reports.php?l=ro>

<sup>2</sup> [https://cna.md/public/files/colgiu\\_3/MetodREAacte\\_norm.dupaSed.Col20.07.18.pdf](https://cna.md/public/files/colgiu_3/MetodREAacte_norm.dupaSed.Col20.07.18.pdf)

## B. Description of services

### 1. Project scope and objectives

The general objective of the project is to increase the demand side from the citizens to engage in preventing corruption and promote zero-tolerance to corruption. Engaging general public and civil society into identification of relation among normative acts that could lead to corruptive activities would contribute to the overall corruption prevention measures. The scope of work is to provide an information solution that can assist general public and civil society in notifying the NAC on problematic norms creating potential corruption risks in the current normative acts.

As depicted in the , the main driver that motivates the need for an information system is:

- Prevent corruptive exploits in normative acts

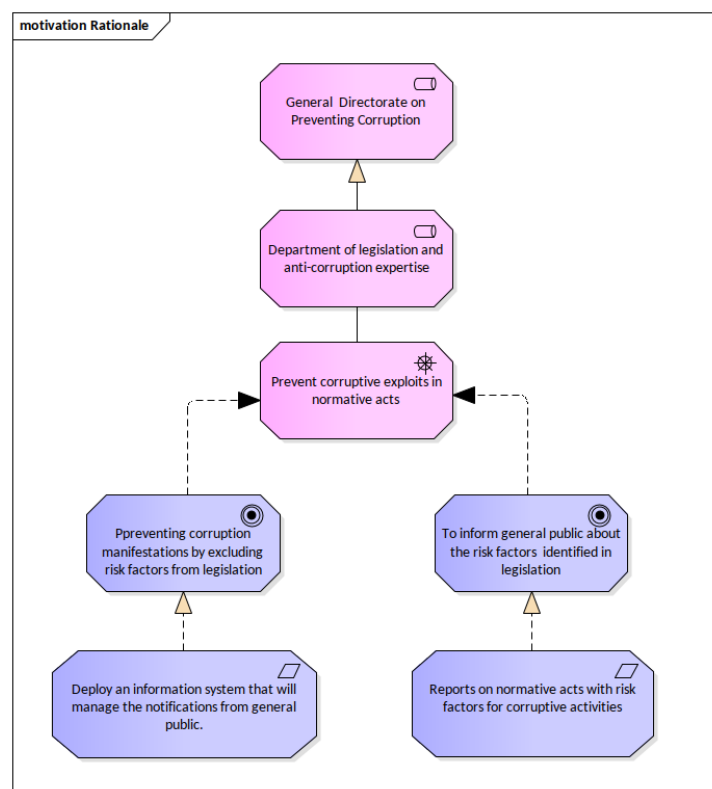


Fig. 1: Project motivation view

Thus, the key objective of this project is to define through crowd sourcing activity, develop, deploy and support “eNotifier” information system that sets the following business objectives:

- Provide a mechanism to manage the submission process of notifications;
- Provide a case management workflow;
- Provide a reporting functions.

Besides the business objectives enumerated above, the system shall provide functionalities related to managing user accounts, internal classifiers/nomenclatures, reports and notification functions described further within this document.

### 2. Expected outcomes

During the project execution the Supplier is expected to provide following deliverables:

No.	Deliverable / Milestone	Duration	Indicative timeframe
	Preparatory stage / Support a crowdsourcing event to define the system - Hackathon. Three hackathon mentors selected; Selected mock-ups and/or prototypes integrated into “eNotifier”; business analysis specification document submitted.	3 weeks	[ 15.10.2019]
	Development stage / System developed. Technical documentation submitted. OWASP Top 10 2019 test output provided.	4 weeks	[15.11.2019]
	Deployment stage / System installation and configuration guidelines submitted.	3 weeks	[30.03.2020]
	12 months of corrective maintenance support provided	12 months	[30.03.2021]

### C. Project development methodology

It is foreseen that the “eNotifier” system is to be developed using iterative development methodology that suggests developing prototypes of the informational system adding the basic functionalities incrementally during the project implementation.

Nevertheless, the methodology to be utilised, the Supplier will take into account ideas and mock-ups (prototypes) developed during the Hackathon. The Supplier is expected to support and mentor start-ups and software developers at the Hackathon.

The outcome of the Hackathon is expected to be the UX (User Experience) artefacts developed in the course of design process. This process will involve the design of the entire activities of information capturing and integrating the system that includes aspects of branding, design, usability and function.

### D. System definition

The “eNotifier” system will support the following main business functions:

- Notification management
- Reporting function

**Notification management** - function will consist of the following business processes:

- a) *Capture information* – will support the steps necessary for the user to fill out the mandatory information fields, will filter and guide user throughout the process;
- b) *Notify stakeholders* – will inform all participants within the case;
- c) *Draft resolution* – will support users to take an informed decision taking into account information provided within notification.

**Reporting function** - will provide ad-hoc reporting functionalities.

Following image depicts the overall business architecture that defines the main aspects of the “eNotifier” system.

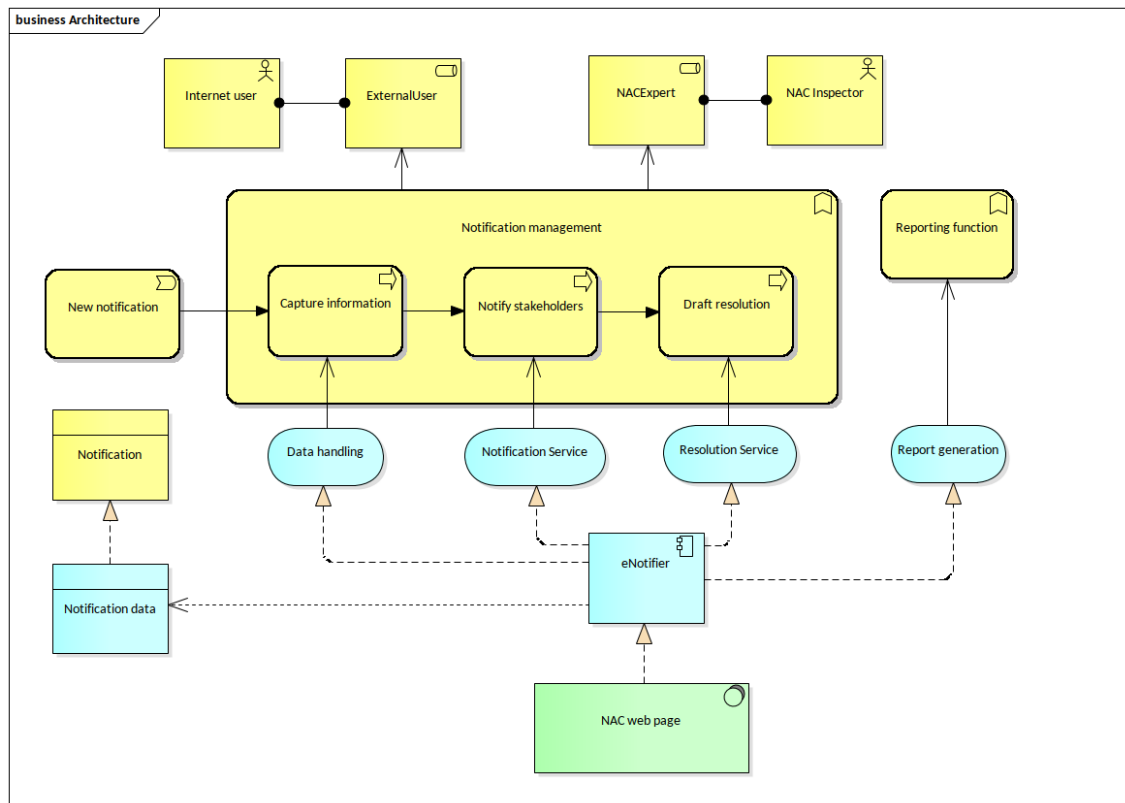


Fig. 2: eNotifier business architecture

### 3.1 Capture information

Capture information process will consists of two (2) main business functions.

a) Provide guidance and hints during the notification submission. This merely implies structuring and presenting the information provided. In addition all normative acts that might be submitted shall fall into following categories:

- Constitutional and administrative law, justice and home affairs, human rights and freedoms;
- Economy and Trade;
- Budget and Finance;
- Education and culture, culture, cults and the media;
- Labour legislation, social security, health and family protection.

b) Find similarity to already recorded cases. By performing this function, the process will suggest user to provide additional rationale to an existing case. This function will diminish the risk of cases that were previously overlooked by NAC experts because of poor argumentation. Having additional info might help experts to revise their previous decisions.

Following Use Case depicts the functions to be supported by the system.

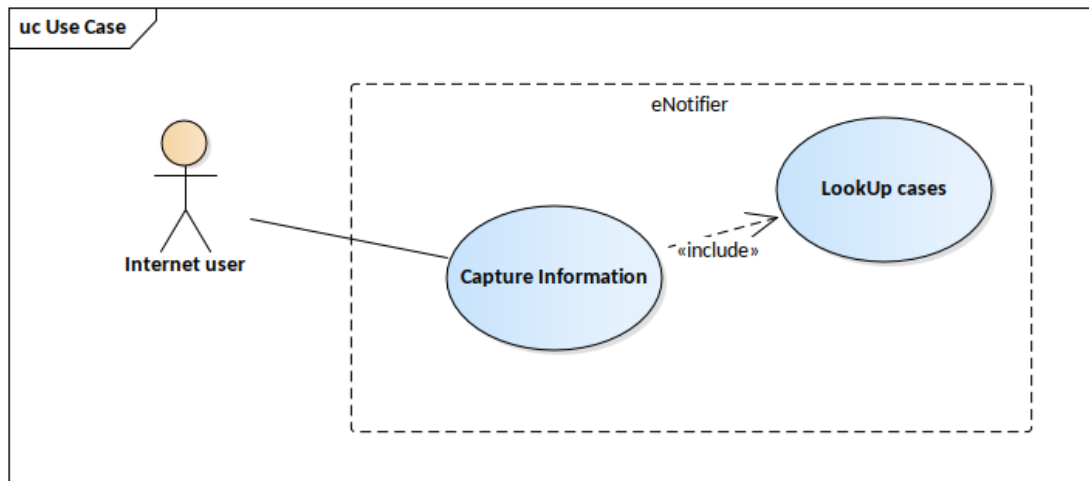


Fig. 3: Capture information use case

Following scenario complements the Use Case in

<b>Use case name:</b>	Capture information	
<b>Scenario:</b>	Provide information related to normative acts in question	
<b>Triggering event:</b>	Ad-hoc request by internet user.	
<b>Brief description:</b>	This function guides internet user during submission of a new notification. The function looks up within the stored records to find possibly similar cases.	
<b>Actors:</b>	All stakeholders.	
<b>Related use cases:</b>	None	
<b>Stakeholders:</b>	Internet user, NAC Inspector	
<b>Preconditions:</b>	None	
<b>Post conditions:</b>	All provided information is structured and respective record is stored.	
<b>Flow of activities:</b>	<b>Actor</b>	<b>System</b>
	1.1. User accesses app	2.1.1 System provides user respective user interface
	3.2. User enters information according to information blocks.	4.2.1 System looks up into stored records and provides hints and/or similar cases. 5.2.2 If similar cases are found the list is presented to the user.
	6.3. User has the option to select and provide additional information to an existing case or continues with their new case.	7.3.1 System adjust existing case or store a new case.

The sequence of actions are illustrated in the following diagram.

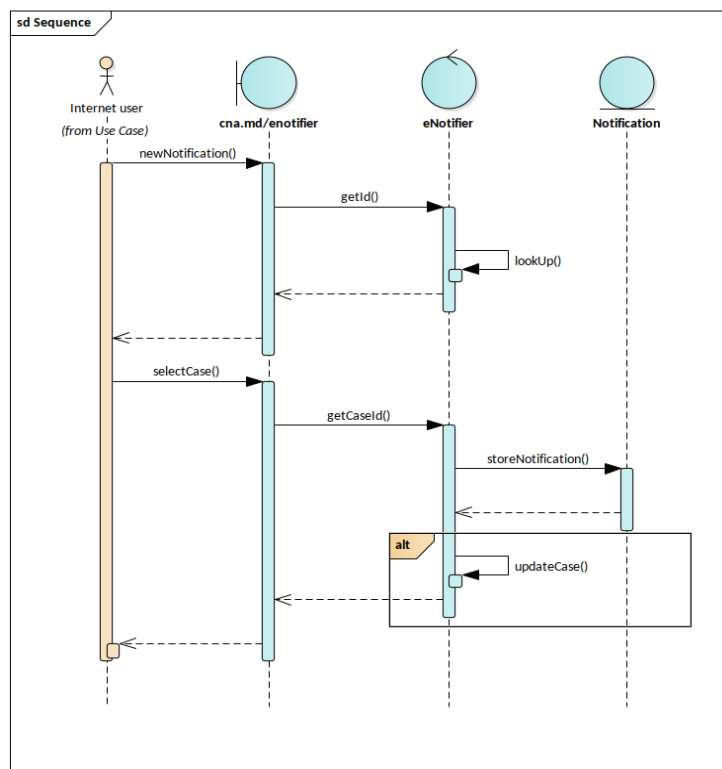


Fig. 4: Capture information sequence of actions

### 3.1.1 Notification object

Following diagram depicts the relations between system' objects. A notification object will contain the relations to corresponding objects from .

The class *normative act* will encapsulate the following attributes:

- Normative act ID (e.g. LPO1125/2012\*<sup>3</sup>)
- Article (e.g. 26)
- Paragraph (e.g. 2)
- Letter (e.g. a)
- FreeText (text entered by user)

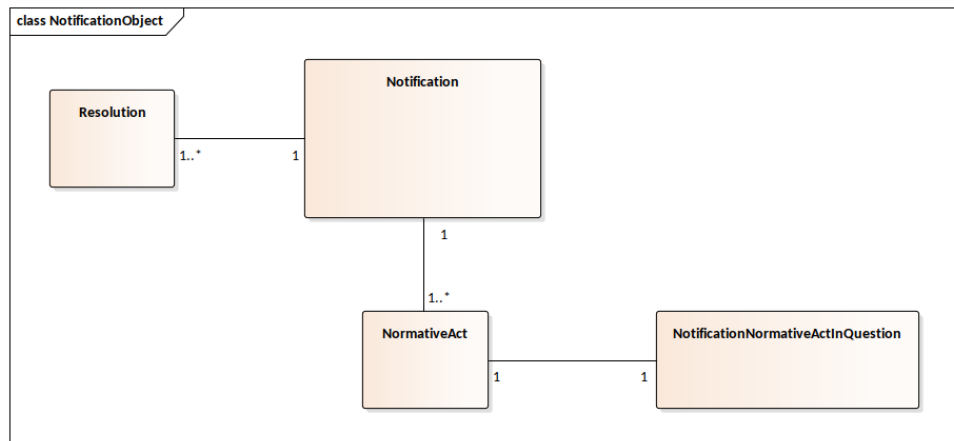


Fig. 5: Notification class diagram

Each *normative act* notified by the user will have mandatory one *normative act* in question as depicted in . Notification object will contain a resolution per each normative act notified by the user. It should be noted that a normative act can have more than one corresponding normative act in question and each such relation shall have a resolution drawn by the NAC expert.

### 3.2 Notify stakeholders

This step will notify NAC experts (based on juridical domain) about a new or updated case that seeks attention. The main notification channel would be a mail message; however, during the Hackathon other ideas might arise that shall be taken into consideration by the Supplier when designing this function.

### 3.3 Draft resolution

This activity will present NAC expert a dashboard that contains information submitted by the Internet user. Following main information blocks to be available within the dashboard are:

- Date of submission;
- Domain of the legislation (according to nomenclature);
- Legal act in question;

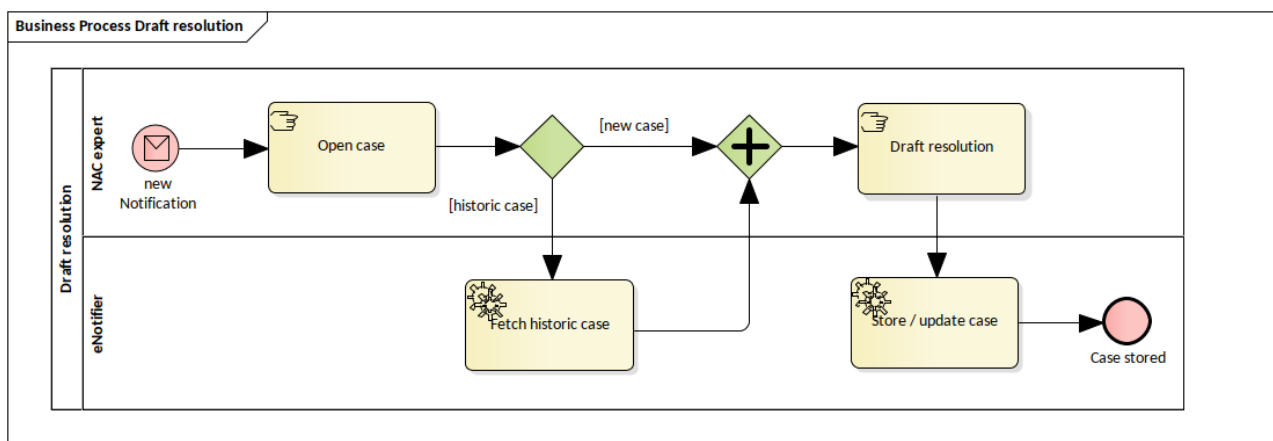


Fig. 6: Draft resolution subprocess

- Cross legal act/-s that permit corruptive exploits of the legal act in question;



By receiving a notification message from “eNotifier” the subprocess of drafting a resolution begins. NAC expert will have the option to comment their resolution. When the case is based on previously historic cases, the system will signal the expert and provide corresponding direct links and/or will show corresponding information blocks from the historic case/-s. The exact appearance of dashboard elements and other UX aspects will be defined during the Hackathon 2019 event.

### 3.4 Reporting function

The eNotifier system will provide NAC experts the possibility to extract reports based on the following reporting periods:

- Monthly;
- Cumulative;
- Specifying start and end dates;

Report generation functionality shall be based on system's internal classifiers. The depth of the classifiers shall be at least three (3) levels deep, i.e. class:sub-class:sub-class. The Supplier will develop initial report template based on the following minimum sets of information blocks.

Level 1	Level 2	Level 3	Number of cases
Juridical domain	Normative act	Resolution	

The system will permit authenticated and authorized user to generate and export reports in a predefined data format. One of the data formats will be easily viewable like PDF (Portable Document File) the other format will be editable, i.e. in free text and/or tabular form.

## 4. User management and system administration

The eNotifier system will provide the functionality of user management. This function will allow system administrator to register and/or update users within the system. Registered users will be able to sign into the system and benefit from its provided functions according to their role. User management component will support user roles function.

### E. Supplier profile

Minimum five (5) years of solid experience in design and develop ICT solutions.

At least 3 similar ICT solutions developed and deployed;

Proven experience in developing and/or customizing Content Management Systems;

The Supplier shall prove local backstopping capability to provide Beneficiary assistance and fix system deficiencies.

The Bidder shall provide following information within its offer:

- Detailed description of the company;
- Copy of registration documents;
- Company portfolio, specifying similar implemented projects;
- Descriptions of at least 3 similar ICT solutions.

### F. Key personnel

The Bidder shall describe the proposed key personnel taking into consideration following positions:

- Project Manager;
- Technical Coordinator / Mentor;

- 2x Developers / Mentors.

Minimum requirements for the Project Manager position:

- University degree, with at least five (5) years of professional experience, specifically in project management;
- Working knowledge of Romanian is essential;
- Proven professional experience in project management by conducting at least three (3) projects in IT development;
- Recognized certificates in project management will be an advantage;

Minimum requirements for Technical Coordinator / Mentor:

- University degree in ICT field, with at least five (5) years of experience in development of IT projects;
- Working knowledge of Romanian;
- Proven experience as Technical Coordinator /Team Leader in ICT projects;
- Recognized certificates in the field of technologies proposed within the offer will be an advantage.

Minimum requirements for Developer/Mentor position:

- University degree in ICT field, with at least three (3) years of experience in developing applications;
- Proven professional experience with developing/customizing content management systems (minimum 1 developer);
- Recognized certificates in the field of technologies proposed within the offer will be an advantage;
- Experience in mentoring teams within the Hackathon-type events will be a considerable advantage.
- Working knowledge of Romanian language.

## G. Technical specifications

This chapter contains the list of requirements, which shall be met by the Bidder. All requirements are Mandatory, hence, not meeting these requirements leads to disqualification of the proposal.

Nr.	Requirement
1.	The proposed solution shall be based on current technological infrastructure managed by NAC and using the same operating system and development frameworks.
2.	Each component/module or any other software part that form "eNotifier" system will be license free or be provided as a life time (perpetual) license to the NAC.
3.	The "eNotifier" system will be compatible with most of the popular browsers (at least with Chrome, Firefox, Opera, Safari and Internet Explorer).
4.	Depending on the device used to access the "eNotifier" system: <ul style="list-style-type: none"> <li>• PC (Web browser);</li> <li>• Tablets;</li> <li>• Mobile phone (mobile web browser).</li> </ul> "eNotifier" system shall customize the user interface according to the device's display size (responsive design).

5.	The project implementation shall not take more than seven (7) months up to the technical support stage.
6.	he Supplier will take into account ideas and mock-ups (prototypes) developed during the Hackathon.
7.	The Supplier is expected to support and mentor start-ups and software developers during the Hackathon.
8.	User interface of “eNotifier” system will be available in Romanian language.
9.	“eNotifier” system will have validation instruments (validation rules, filters) to enable the verification of the information entered in terms of their completion and consistency.
10.	<p>“eNotifier” will have a search functionality including but not limited to:</p> <ul style="list-style-type: none"> <li>• Cases structured under a juridical domain according to <b>Error! Reference source not found.</b>;</li> <li>• A combination of date, period of dates and other criteria;</li> <li>• Other search criteria and/or filters defined together by the Beneficiary and the Supplier.</li> </ul>
11.	“eNotifier” system shall notify, via email or any other delivery channels agreed with the Beneficiary, all the events related to notification submission.
12.	<p>“eNotifier” system will allow system administrator to:</p> <ul style="list-style-type: none"> <li>— Create a user account [NAC expert];</li> <li>— Modify user accounts [NAC expert];</li> </ul> <p>The system administrator role will have the following functionality:</p> <ul style="list-style-type: none"> <li>— Administer system' nomenclatures and classifiers;</li> </ul>
13.	“eNotifier” system will have the functionality to generate and export reports according to <b>Error! Reference source not found.</b>
14.	The Supplier shall take into account the tentative development plan outlined in section <b>Error! Reference source not found.</b> when planning the development activities of this assignment.
15.	The Supplier shall test the security of the system according to OWASP Top 10 2019 vulnerabilities. The respective output test is to be provided to the Beneficiary.
16.	<p>The Supplier shall run the performance testing in terms of:</p> <ul style="list-style-type: none"> <li>- load testing;</li> <li>- stress testing.</li> </ul>
17.	The Supplier will perform and present to the Beneficiary the report of system performance testing outputs.
18.	The Supplier will provide warranty that includes technical support and corrective maintenance during the twelve (12) months after the operational acceptance of the system by the Beneficiary.

## H. Implementation schedule

The following table describes a tentative plan to develop the system

	Implementation stages	Installation (weeks from effective date)	Acceptance (weeks from effective date)
1.	Preparation stage	--	W3
2.	Development stage	W3/W4	W6/W7
3.	Deployment stage	W7/W8	W18
4.	Technical corrective support stage	W19	W67

### H.1 Preparation stage

	Implementation Sub stages
1	Preparation stage.
1.1	Definition of the project goal.
1.1.1	Support Hackathon
1.1.2	Review of system's functional and non-functional requirements taking into account outputs from Hackathon 2019.
1.2	Development planning.

### H.2 Development stage

	Implementation Sub stages
2.	Development stage.
2.1.	Design review.
2.2	Iteration #1
2.2.1	Review of the functional requirements, capture information, notify stakeholders, system administrative functionalities.
2.2.2	Implementation,
2.2.3	Testing.
2.2.4	Evaluation.
2.3	Iteration #2
2.3.1	Review of the functional requirements, draft resolution, reporting functions.
2.3.2	Implementation.
2.3.3	Testing. OWASP Top 10 2019 test output.
2.3.4	Evaluation.
2.4	Final integration of functionalities.
2.4.1	Final solution integration.

### H.3 Deployment stage

	Implementation Sub stages
3.	Deployment stage.
3.1.1	Testing of "eNotifier" system on the Beneficiary premises.
3.1.2	Testing of system security on the Beneficiary premises.
3.1.3	Roll out of "eNotifier" system.