Design and development of the byRisk tools

Dr Nikolaos Dellas

ICT Abovo

HELLENIC DATA PROTECTION AUTHORITY

UNIVERSITY OF PIRAEUS RESEARCH CENTER

ICT abovo Information & Communication Technologies

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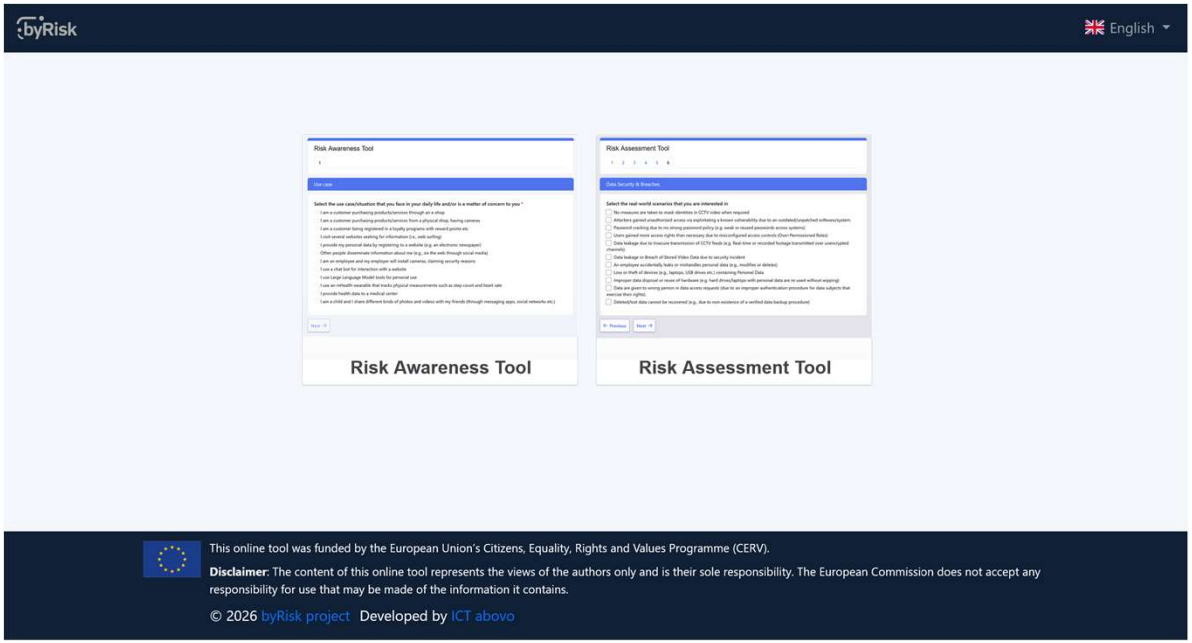
Overview

- Both Risk Assessment and Risk Awareness tools are deployed and configured under the same structure
- Tools are developed as wizards with reporting both online and as downloadable PDFs
- Administration application used for
  - tools configuration
  - metrics

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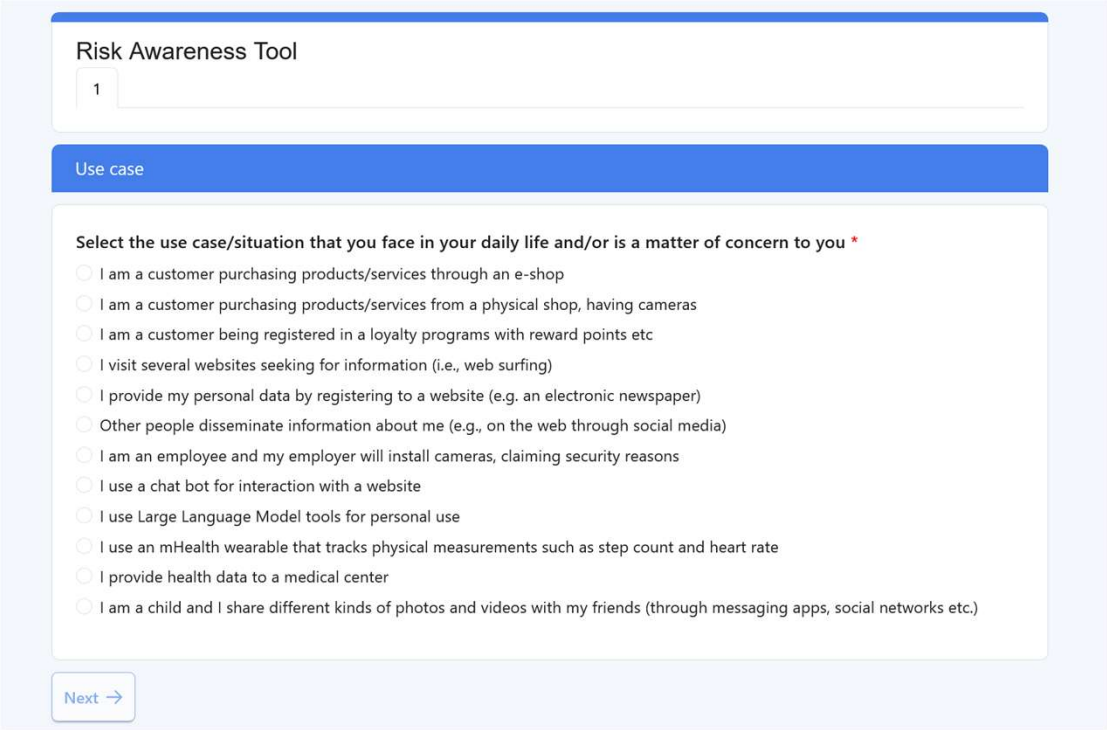
User interface: tool selection



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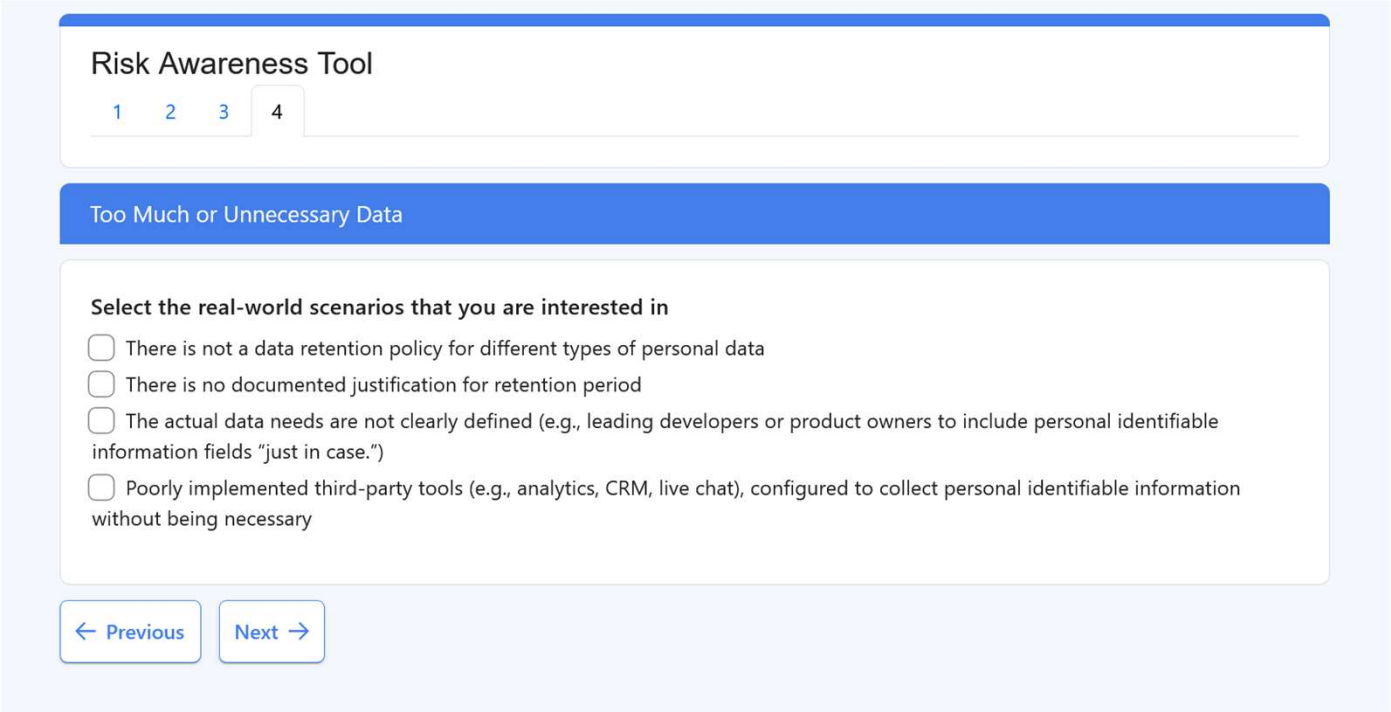
User interface: use case selection



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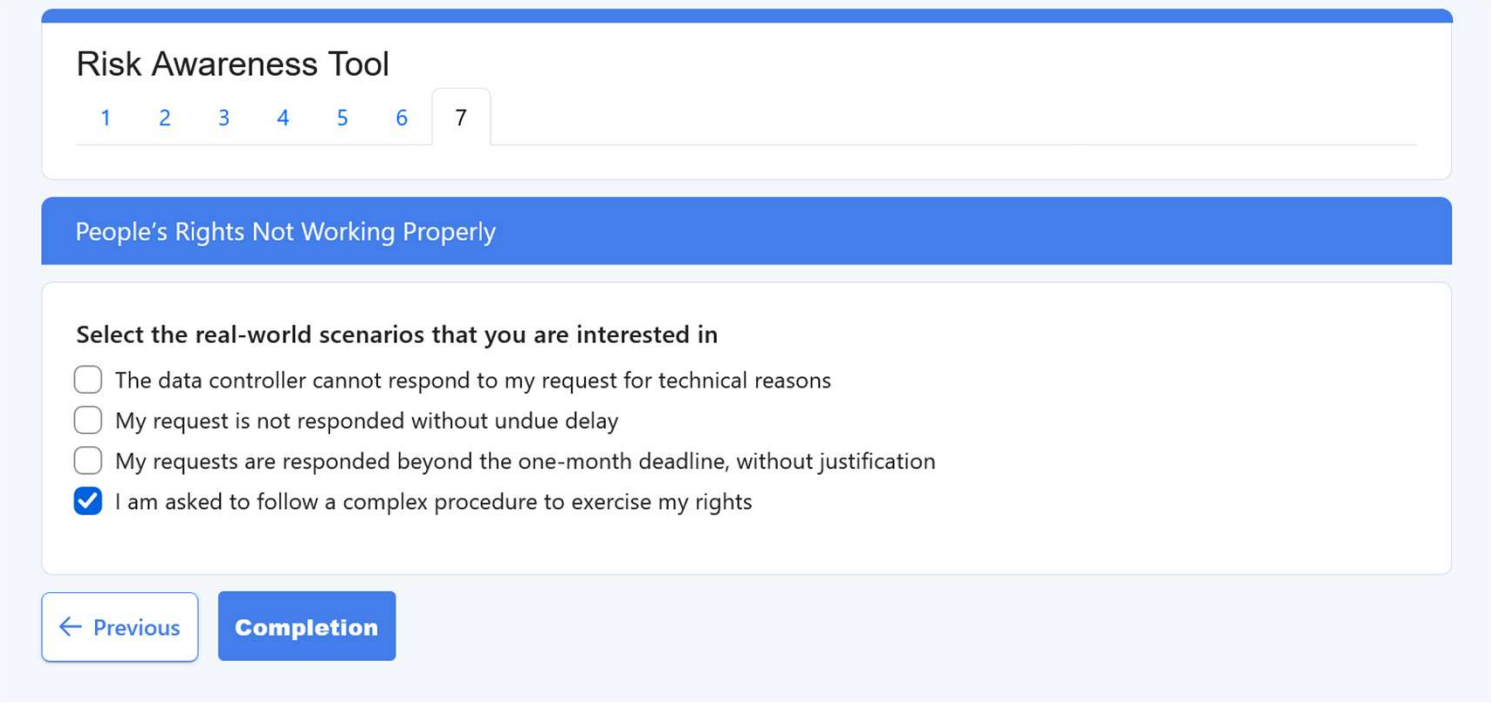
User interface: real world scenarios selection



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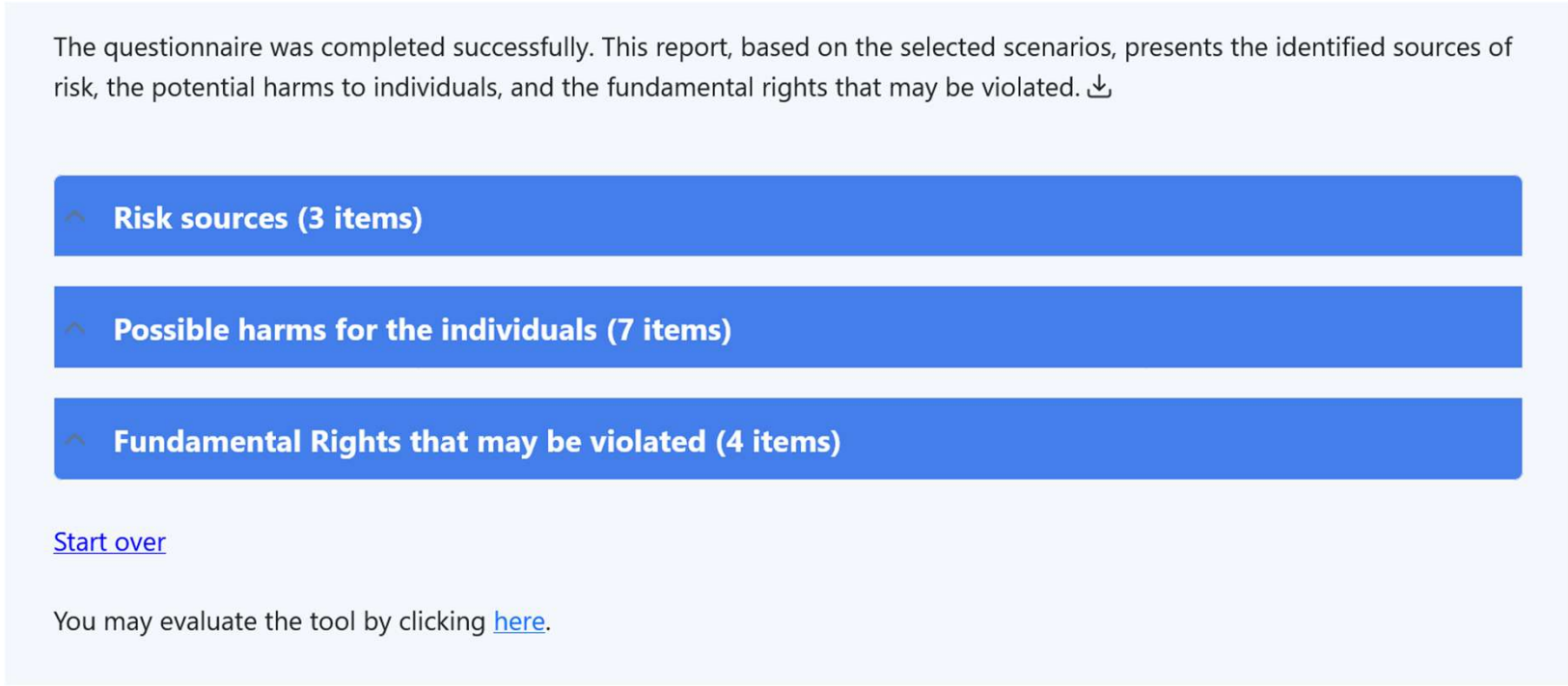
User interface: real world scenarios selection



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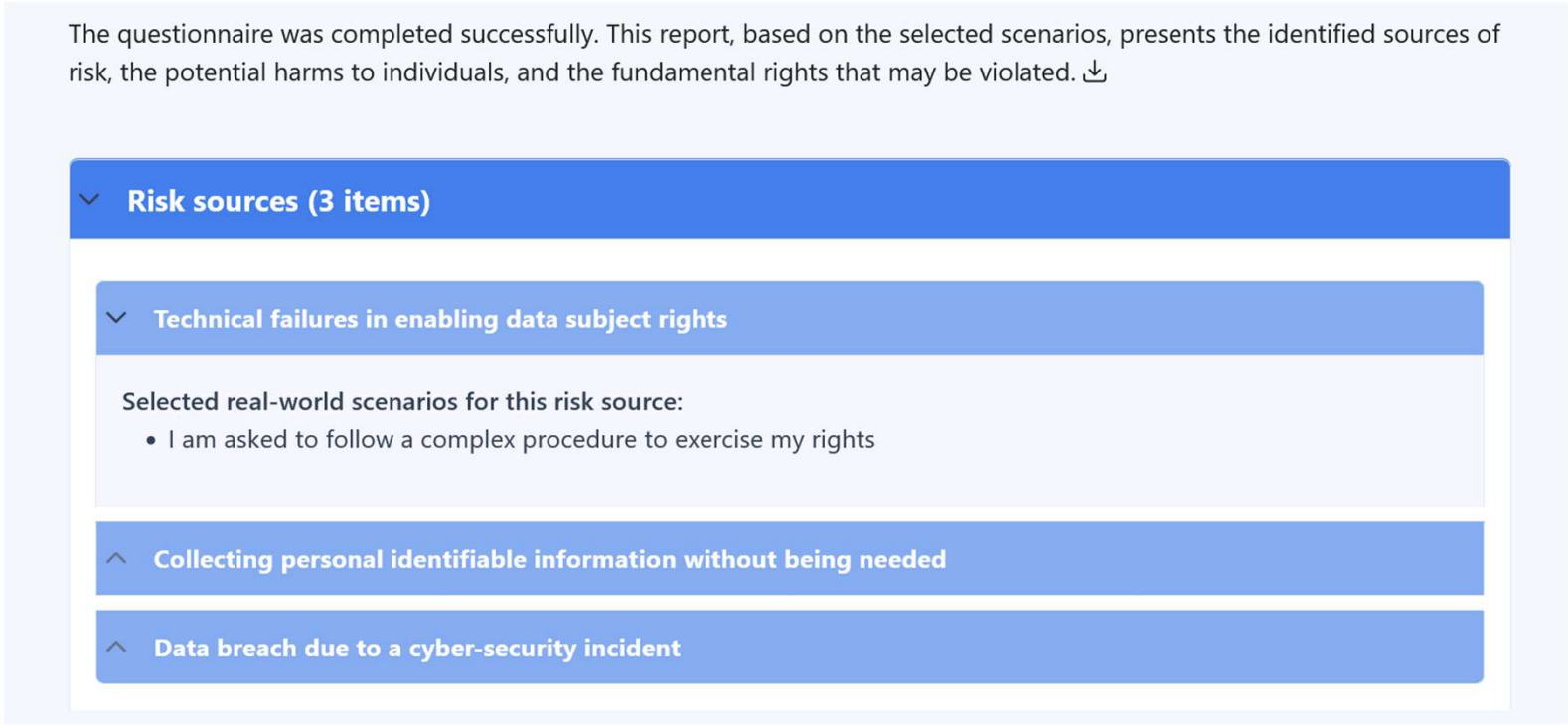
User interface: online report



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User interface: online report



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User interface: online report

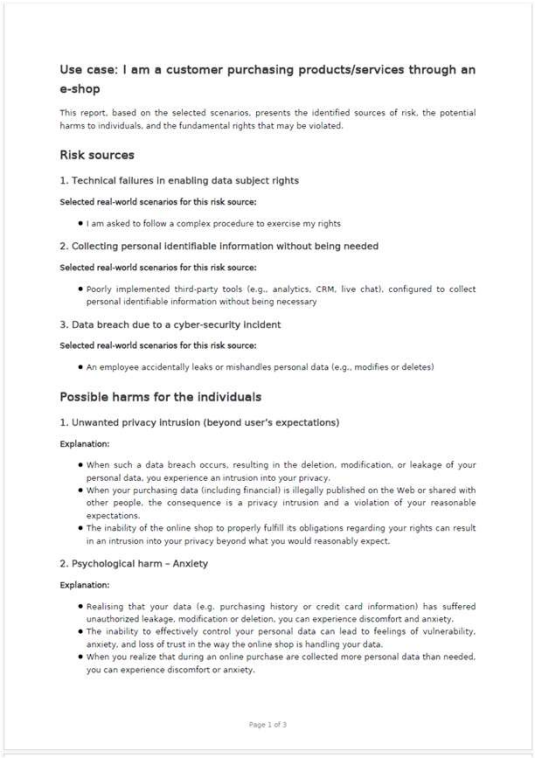
- Risk Assessment tool also shows related regulatory issues



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User interface: PDF report



Use case: I am a customer purchasing products/services through an e-shop

This report, based on the selected scenarios, presents the identified sources of risk, the potential harms to individuals, and the fundamental rights that may be violated.

Risk sources

1. Technical failures in enabling data subject rights

Selected real-world scenarios for this risk source:

- I am asked to follow a complex procedure to exercise my rights

2. Collecting personal identifiable information without being needed

Selected real-world scenarios for this risk source:

- Poorly implemented third-party tools (e.g., analytics, CRM, live chat), configured to collect personal identifiable information without being necessary

3. Data breach due to a cyber-security incident

Selected real-world scenarios for this risk source:

- An employee accidentally leaks or mishandles personal data (e.g., modifies or deletes)

Possible harms for the individuals

1. Unwanted privacy intrusion (beyond user's expectations)

Explanation:

- When such a data breach occurs, resulting in the deletion, modification, or leakage of your personal data, you experience an intrusion into your privacy.
- When your purchasing data (including financial) is illegally published on the Web or shared with other people, the consequence is a privacy intrusion and a violation of your reasonable expectations.
- The inability of the online shop to properly fulfill its obligations regarding your rights can result in an intrusion into your privacy beyond what you would reasonably expect.

2. Psychological harm – Anxiety

Explanation:

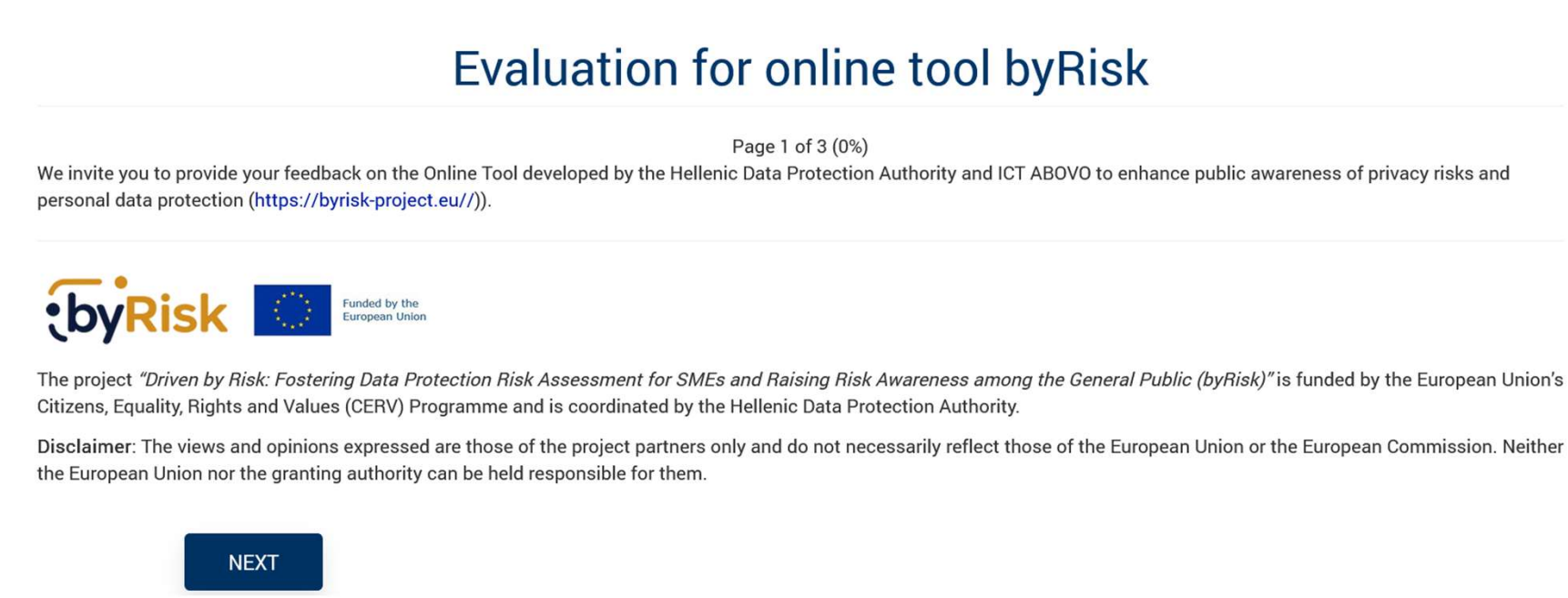
- Realising that your data (e.g. purchasing history or credit card information) has suffered unauthorized leakage, modification or deletion, you can experience discomfort and anxiety.
- The inability to effectively control your personal data can lead to feelings of vulnerability, anxiety, and loss of trust in the way the online shop is handling your data.
- When you realize that during an online purchase are collected more personal data than needed, you can experience discomfort or anxiety.

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Tool evaluation questionnaire



Evaluation for online tool byRisk

Page 1 of 3 (0%)

We invite you to provide your feedback on the Online Tool developed by the Hellenic Data Protection Authority and ICT ABOVO to enhance public awareness of privacy risks and personal data protection (https://byrisk-project.eu//)).

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The project *"Driven by Risk: Fostering Data Protection Risk Assessment for SMEs and Raising Risk Awareness among the General Public (byRisk)"* is funded by the European Union's Citizens, Equality, Rights and Values (CERV) Programme and is coordinated by the Hellenic Data Protection Authority.

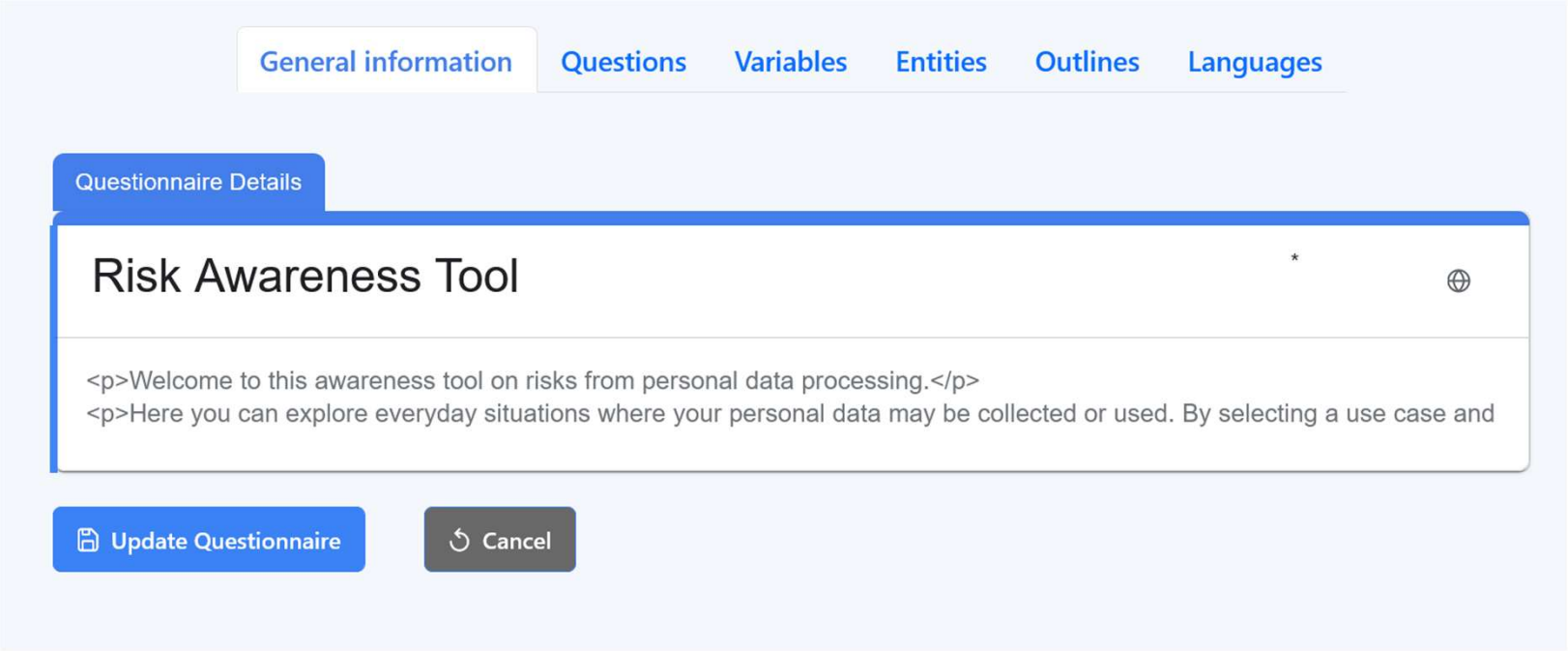
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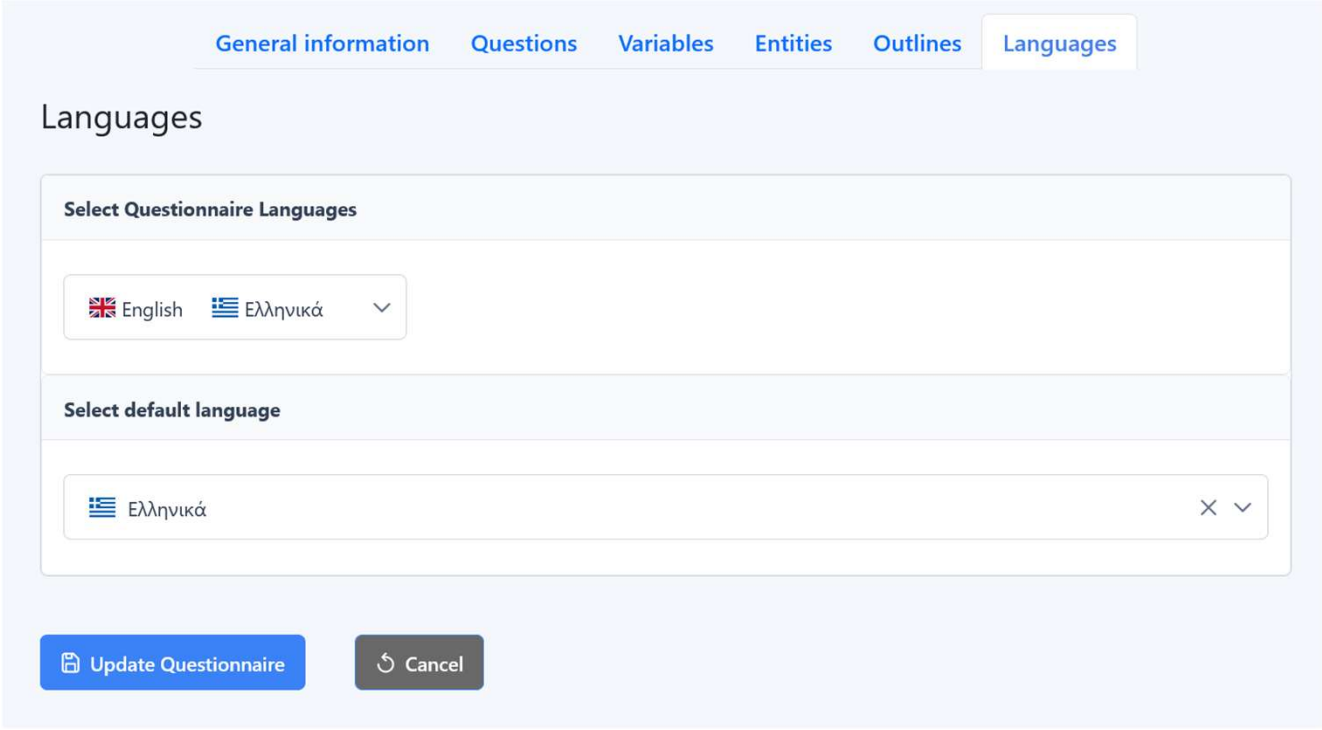
Admin: general information



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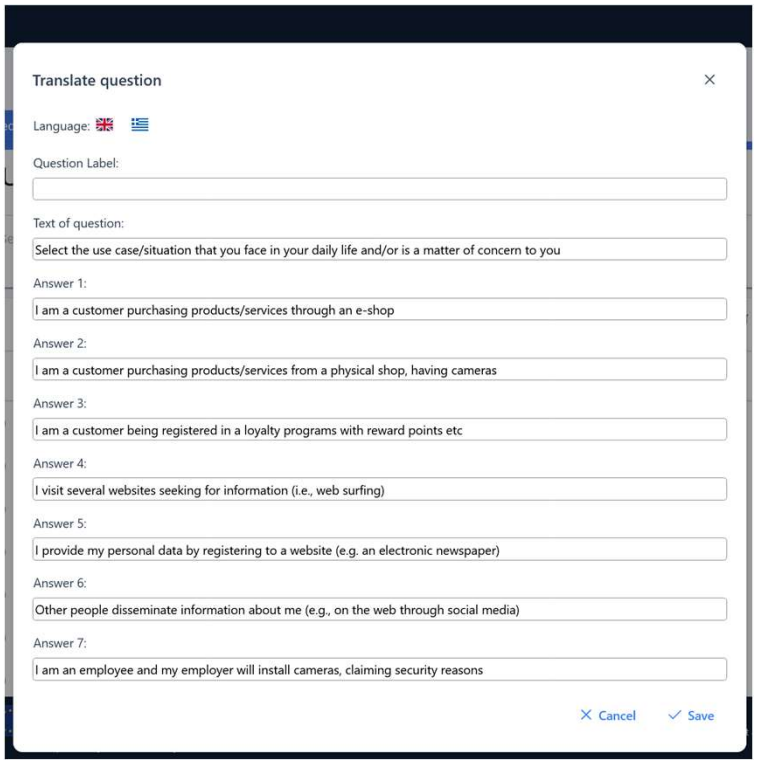
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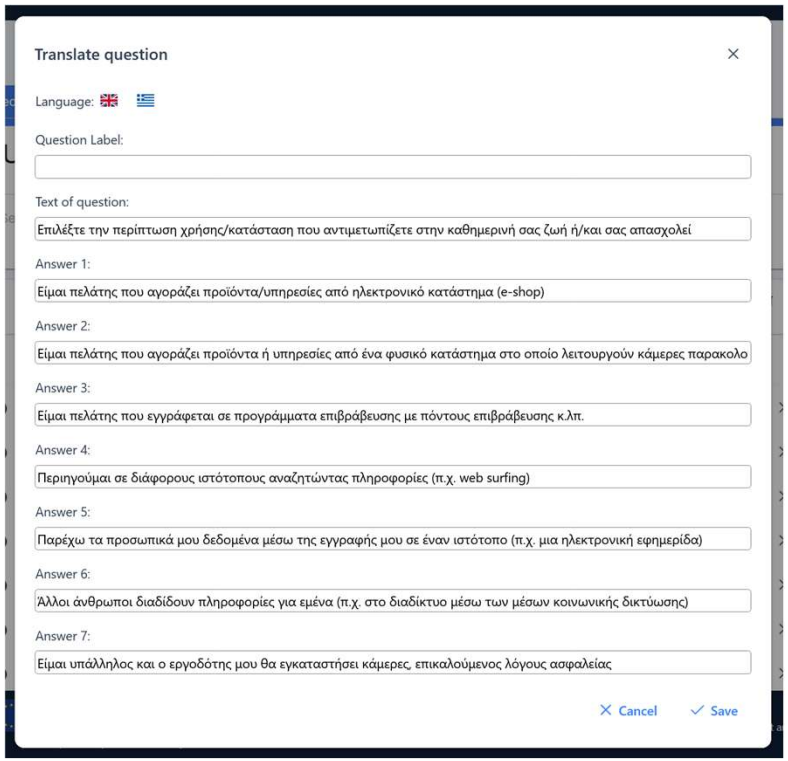


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Admin: localization

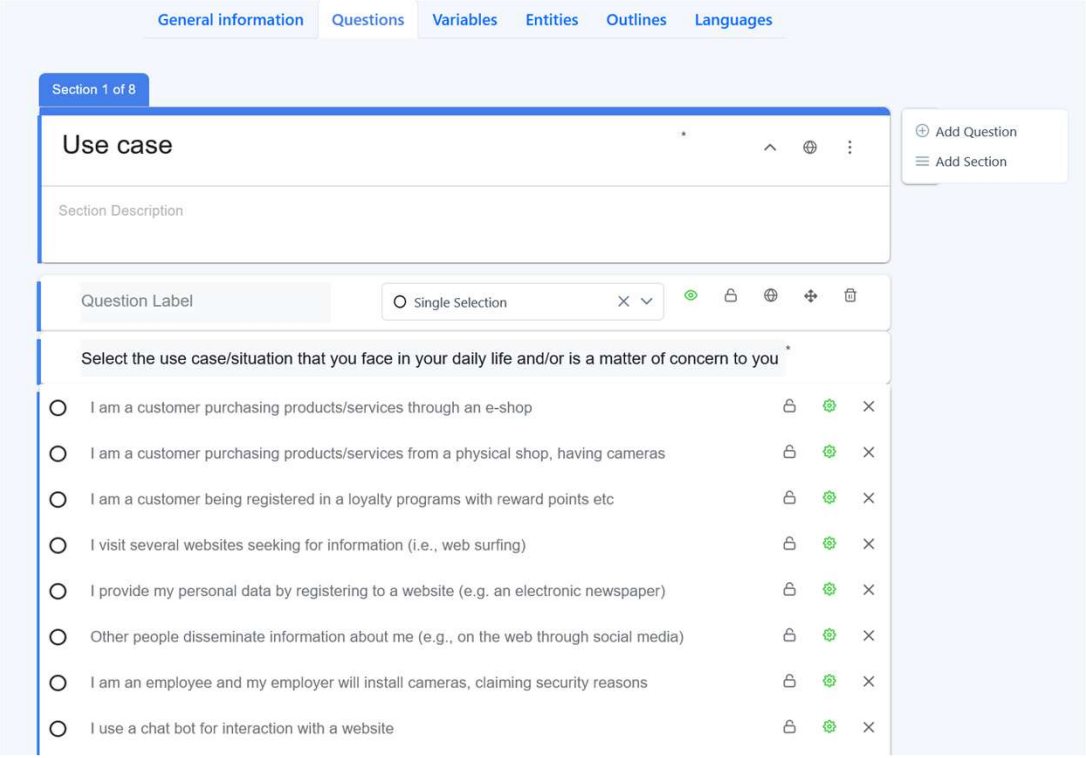




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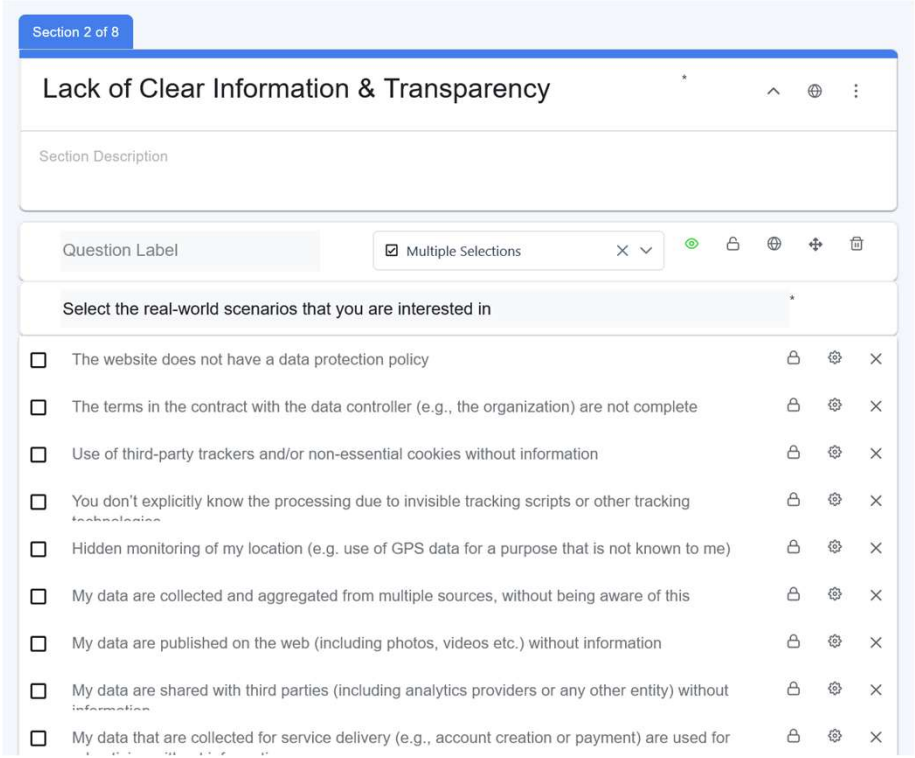
Admin: use cases



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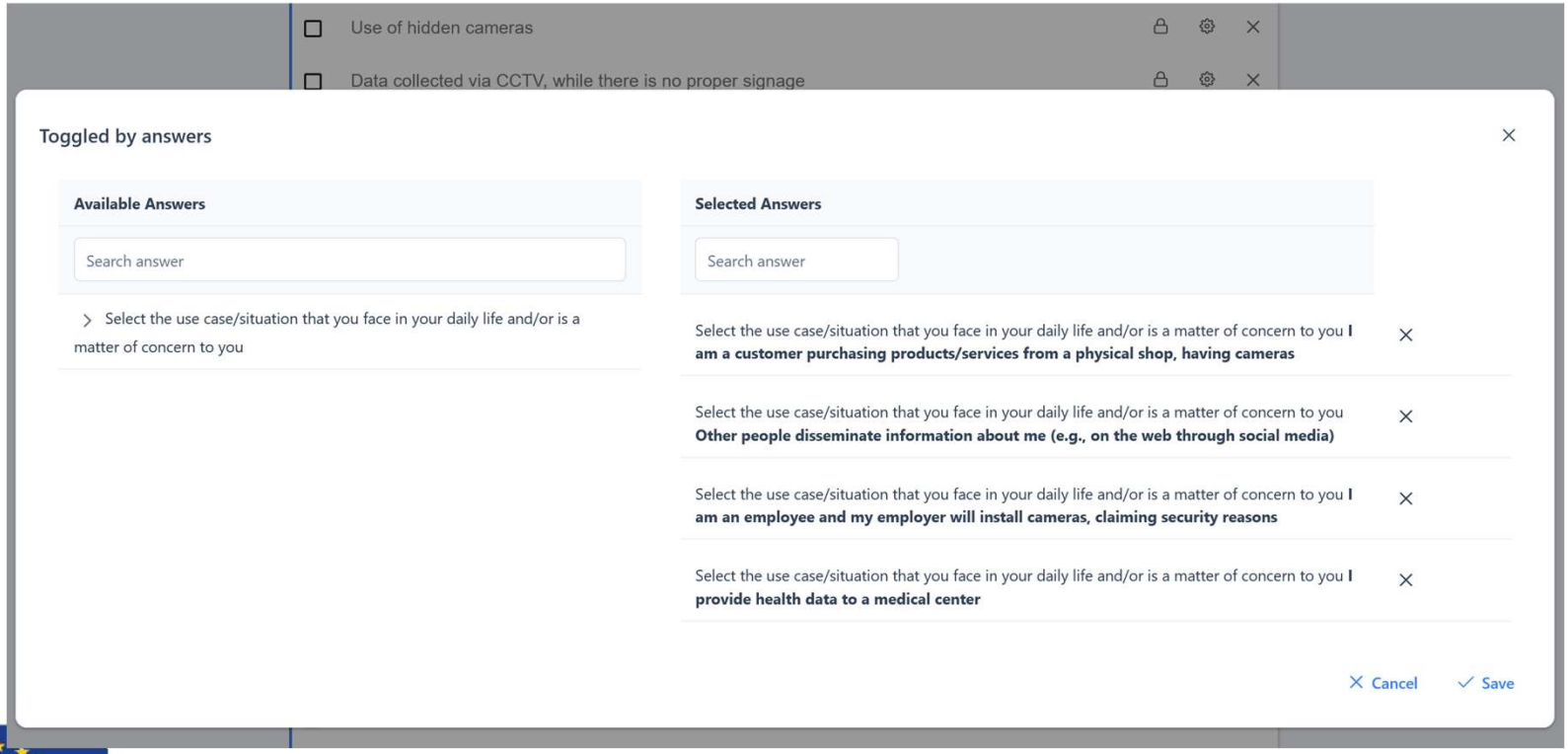
Admin: real world scenarios



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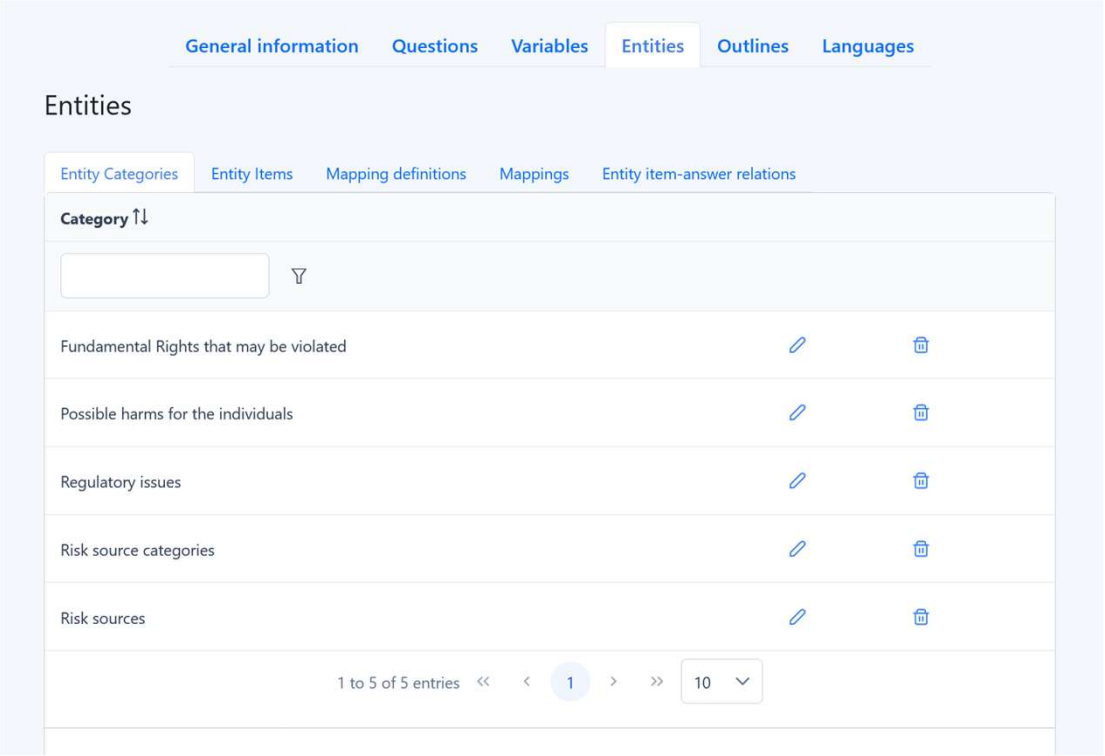
Admin: real world scenarios to use case dependency



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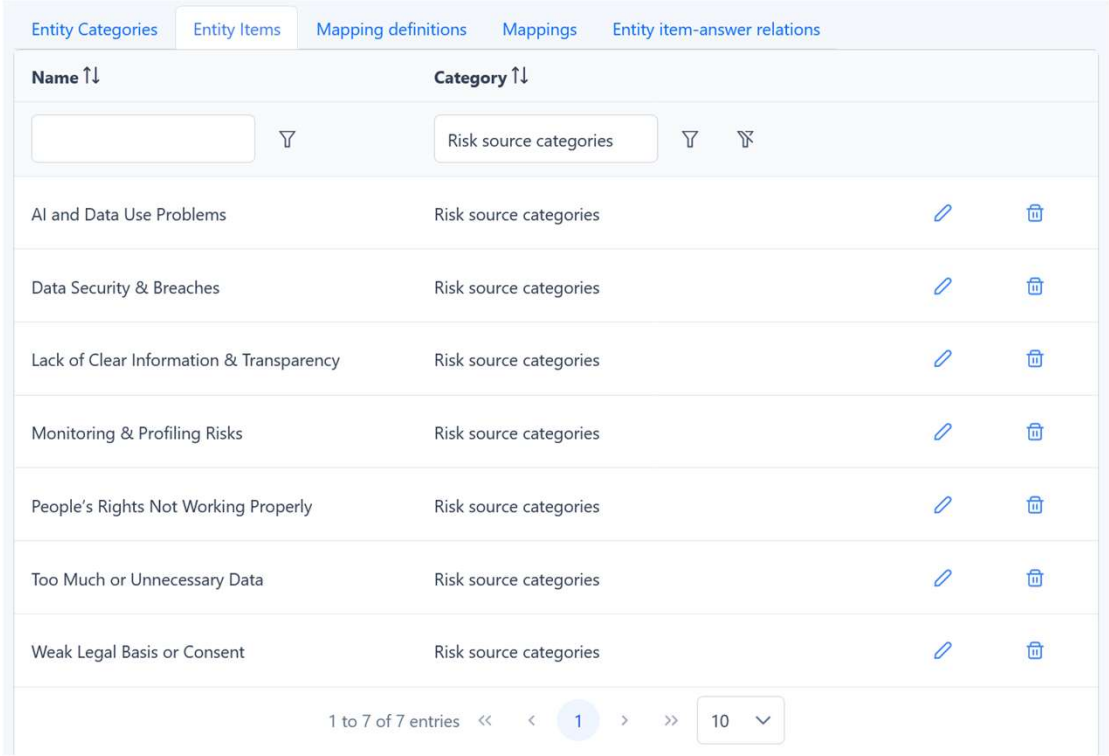
Admin: entity categories



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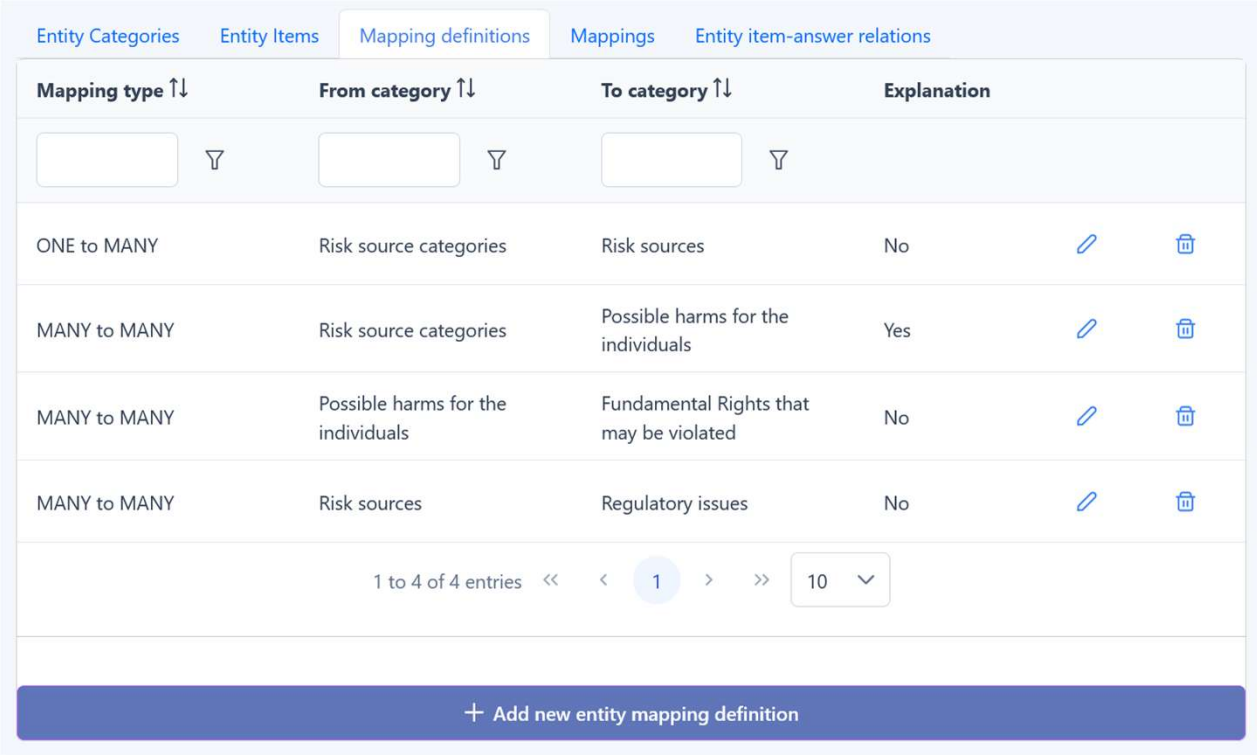
Admin: entities



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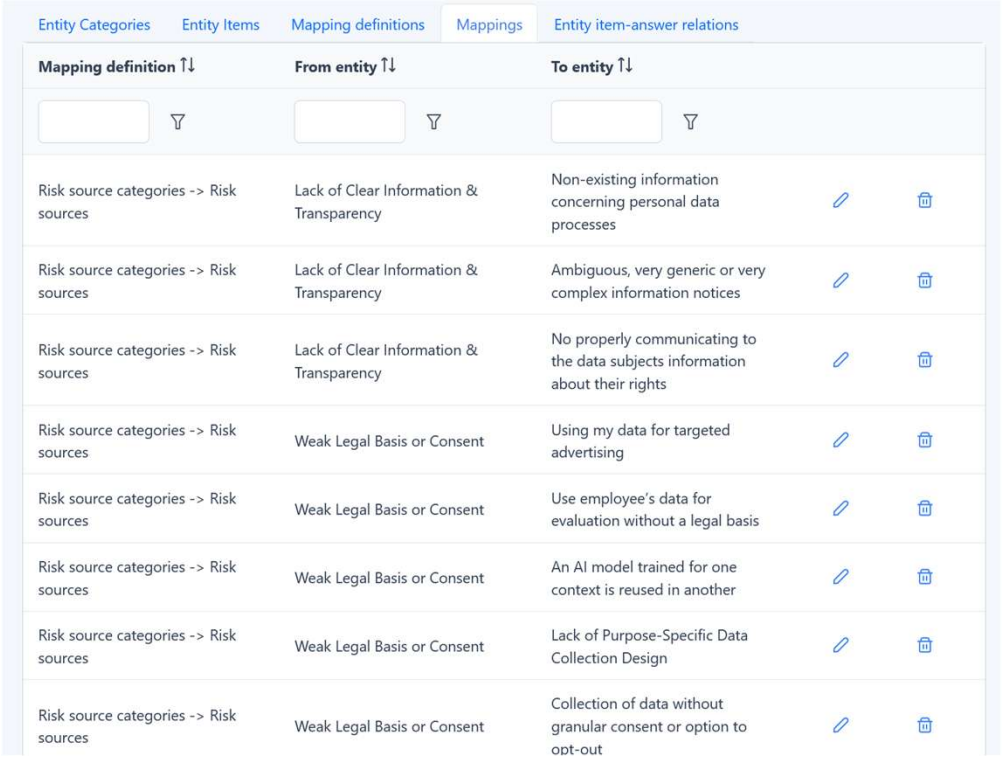
Admin: mapping definitions



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Admin: entity mappings



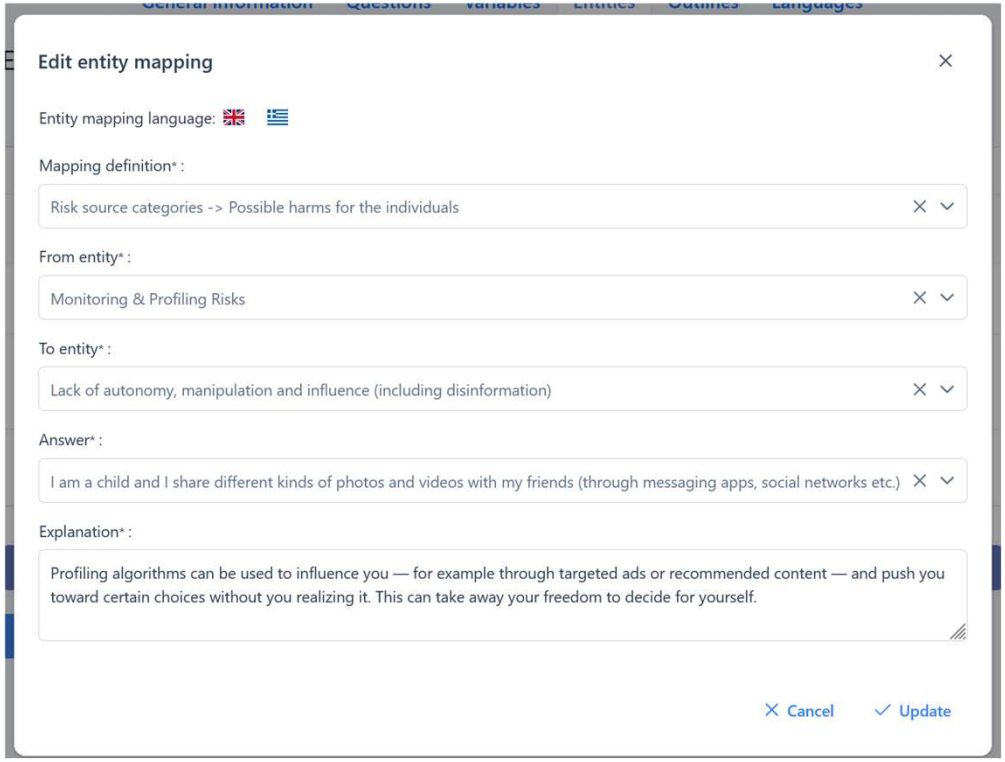
Entity Categories | Entity Items | Mapping definitions | Mappings | Entity item-answer relations

Mapping definition	From entity	To entity
Risk source categories -> Risk sources	Lack of Clear Information & Transparency	Non-existing information concerning personal data processes
Risk source categories -> Risk sources	Lack of Clear Information & Transparency	Ambiguous, very generic or very complex information notices
Risk source categories -> Risk sources	Lack of Clear Information & Transparency	No properly communicating to the data subjects information about their rights
Risk source categories -> Risk sources	Weak Legal Basis or Consent	Using my data for targeted advertising
Risk source categories -> Risk sources	Weak Legal Basis or Consent	Use employee's data for evaluation without a legal basis
Risk source categories -> Risk sources	Weak Legal Basis or Consent	An AI model trained for one context is reused in another
Risk source categories -> Risk sources	Weak Legal Basis or Consent	Lack of Purpose-Specific Data Collection Design
Risk source categories -> Risk sources	Weak Legal Basis or Consent	Collection of data without granular consent or option to opt-out

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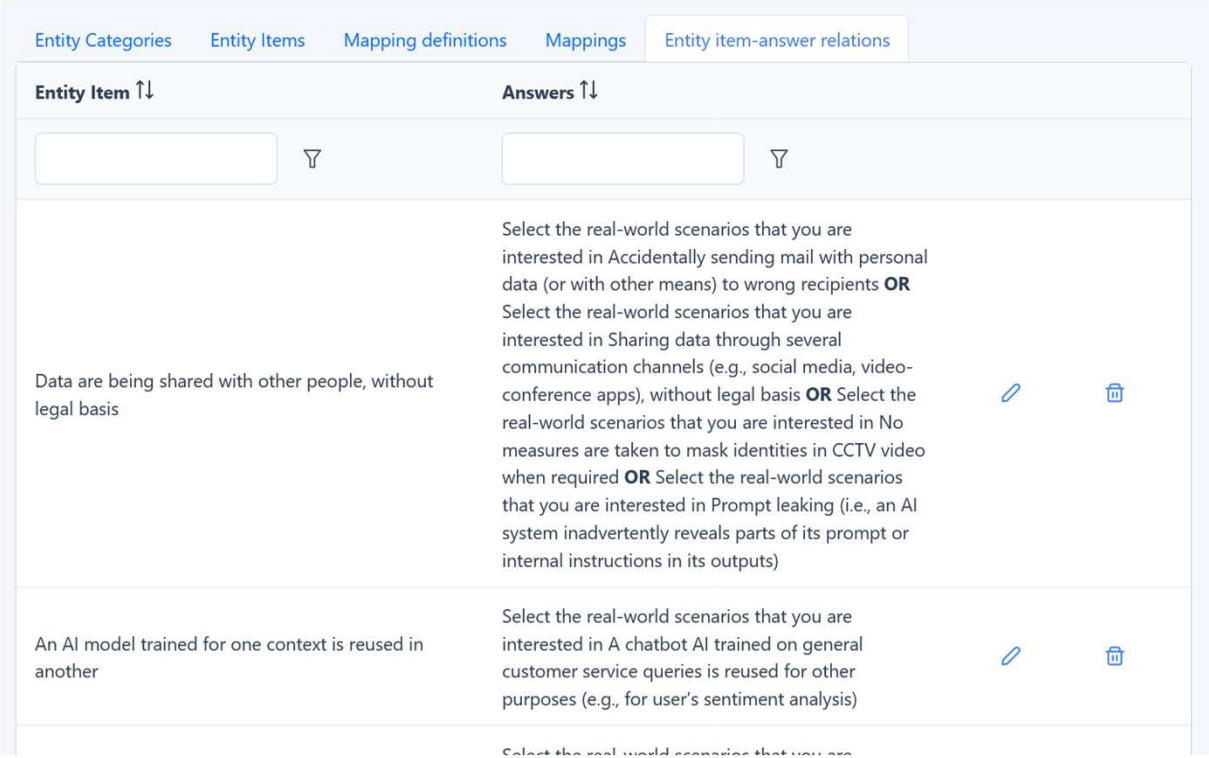
Admin: entity mapping details



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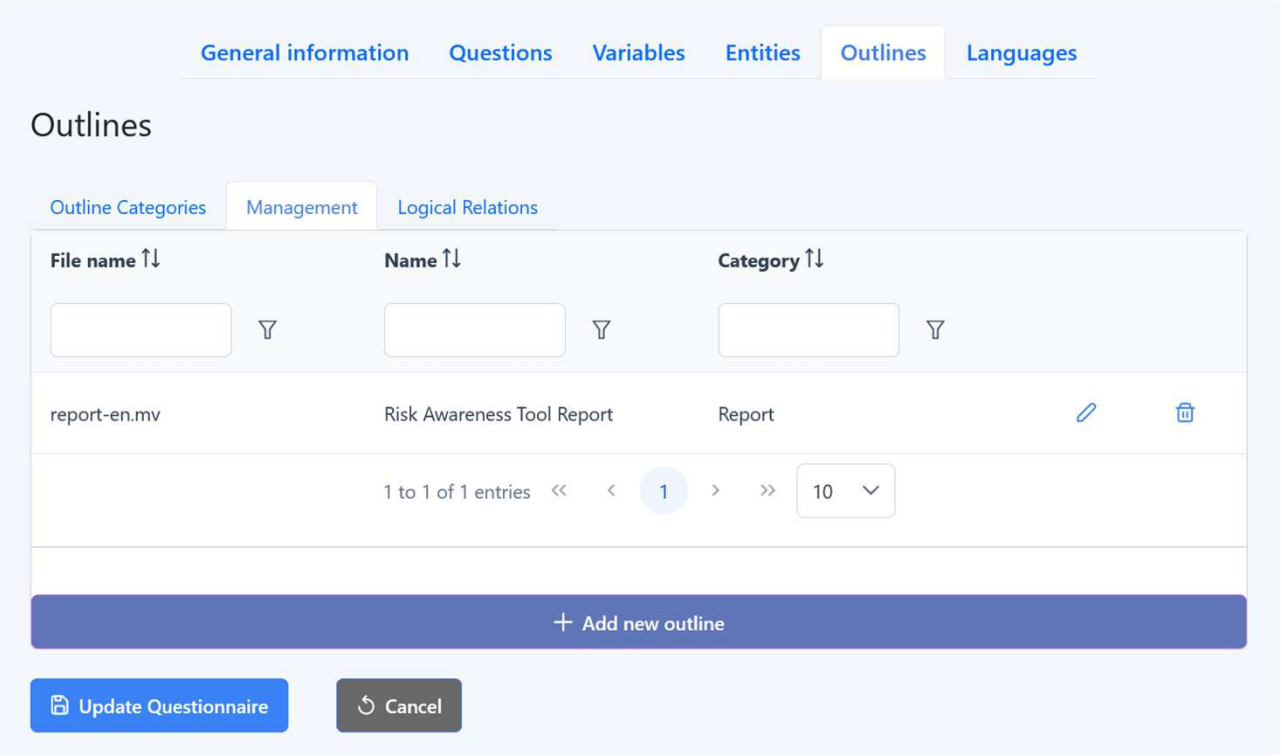
Admin: risk sources to real-world scenarios mapping



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Admin: PDF report templates



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Admin: PDF report templates

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        <meta charset='UTF-8' />
        <style>
        body { font-family: 'DejaVuSans', sans-serif; font-size: 12px; text-align:
         /* Footer with page numbers */
            @page {
              @bottom-center {
                content: "Page " counter(page) " of " counter(pages);
                font-size: 10px;
                  font-family: 'DejaVuSans', sans-serif;
                color: gray;
              }
              margin: 20mm;
            }
        h1, h2, h3 { color: #333; }
        h2 { margin-top: 20px; }
        p { margin: 4px 0; }
        </style>
    </head>
    <body>
    @if{isdef USE_CASE && USE_CASE != null}
        <h2>Use case: ${USE_CASE}</h2>
    @end{}
    @if{isdef SECTOR && SECTOR != null}
        <h2>Sector: ${SECTOR}</h2>
    @end{}
    @if{isdef CONTEXT && CONTEXT != null}
        <h2>Processing context: ${CONTEXT}</h2>
    @end{}
    This report, based on the selected scenarios, presents the identified sources o
    the fundamental rights that may be violated.
        <div></div>

        @foreach{ category : entityCategoryMetadata }
            <h2>${category.name}</h2>
```

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Technologies used

- Frontend applications
  - Angular
  - PrimeNG Angular UI component library
  - Bootstrap for responsiveness
- Backend Java application
  - Spring Boot framework
  - RESTful web services
  - MVEL Java library for evaluation of conditions in PFDs

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Thank you for your attention

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