

**Horizon 2020 Marie Skłodowska-Curie**

**Research and Innovation Staff Exchange Evaluations (RISE)**



**A CybEr range tRaining platform for medicAl organisations and systems Security**

**Exploitation Aspects Questionnaire**

**Editor**

AEGIS

**Exploitation Aspects questionnaire**

Dear partner,

In the context of designing and developing a collaborative business plan for AERAS, you are kindly requested to answer the questions in this questionnaire. By doing so, WP6 tasks leaders will be able to gather insights from many different perspectives including Academia, large industries, technology providers and SMEs. The insights emerged from this process will contribute to better understand and identify AERAS competitive advantage and value proposition and form the preliminary business modelling. Please try to give short and comprehensive answers where possible.

**Introduction – Background Info**

This document aims to gather partners’ input for the formation of project’s Exploitation and Sustainability Plan and investigate the first ideas and paths for sustainability and exploitation of project tools and results. In terms of exploitation, there are two types: i) individual exploitation (how each partner will benefit of project results) and ii) Joint Exploitation (what are the activities to be carried out from the consortium partners to enhance the successful exploitation of the project results in terms of industrial development/creation of the products or processes and its placing on the market). For the latter, we also need to test different business models by utilizing the Business Model Canvas tool.

This questionnaire has two parts:

**Part 1** - Exploitation pathways: The first step of the process aims to support the partners in identifying the exploitable results they are interested in and in defining their exploitation strategy by describing:

* The asset that the partner brings into the project (targeted market, the innovation and differentiation from competitors etc.)
* The individual exploitation plans
* The joint exploitation intentions

**Part 2** – Business Modelling Aspects: The insights that will emerge from this process will contribute to better understand and identify AERAS competitive advantage and value proposition, and form the preliminary business modelling, by taking into account different perspectives including Academia, large industries, technology providers and SMEs.

# **Exploitation pathways**

# **Asset Description**

|  |  |
| --- | --- |
| Exploitable Assets  * *Please give a short description of your assets that you bring into AERAS and how you think they will evolve during the project. [The length of the description per asset should not exceeded half a page].* | |
| As UMIL we bring into AERAS the know-how we get from our participation in THREAT-ARREST. In the previous project, the team was mainly responsible of the development of the Emulation Tool, allowing us to acquire skills on creating emulated environment to be run into a cyber range, on the required hardware and software environments, and the availability of tools and application to be incorporated in a training environment. |
| Please indicate the current TRL of your asset (if applicable) and provide a Contact Point per asset. | |
| N/A |

|  |  |
| --- | --- |
| Target markets  * *Please define the target market and describe the business need that the asset solves.* | |
| As public University our main target is the academic context. However, we plan to exploit our network to present and get involved into AERAS. In particular, we are part of the CONCORDIAH2020 project and we have strict relations with the Khalifa University (Abu Dhabi), that allows us to present our approach also in this area. |

|  |  |
| --- | --- |
| Innovation - Competition  * *How does the asset go beyond existing approaches in relation to this business need (describe a selling point that is unique, according to the best of your knowledge)* | |
| Our experience in THREAT ARREST, that will convey into AERAS, can give a competitive advantage in terms of creating a training environment strictly tailored on pilots’ needs. In particular, we can create virtual environments that replicate, as realistic as possible, the actual working environment trainees find in their workplace. |
| |  |  | | --- | --- | | * *What the customers would get in the end (e.g., a tool, service, knowledge…etc.)* | | | In case of AERAS, customer will get a training platform tailored on their specific training needs, allowing them to get specific cybersecurity knowledge based on their Company cybersecurity profile. | | * *How could customers reach the asset? (GitHub, commercial marketplace, etc)* | | | The asset will be installed directly on customers’ premises, or made available online. The access will happen through a common web application. It is important to note that a preliminary work on the definition of CRSA and CRST models, and of the training contents, is needed. The AERAS team will support customers in that phase |  |  |  | | --- | --- | | * *Name your main competitors (short description of their offering, links etc.)* | | |  | | |

|  |  |
| --- | --- |
| Intelectual Property Rights  * *Describe your current IPR (Intellectual Property Rights) scheme* | |
| As UMIL, we do not have background excluded and we rely on the IPR scheme defined in the Grant Agreement and Consortium Agreement. |
| * *Describe your IPR (Intellectual Property Rights) plans beyond the end of the AERAS project duration* | |
| After the end of the project, we plan to propose to partner a post-exploitation agreement that will define the boundaries of partners’ participation to a start-up (or legal body) that can commercialize AERAS outcome. |

## **Individual Exploitation pathways**

|  |  |
| --- | --- |
| Individual Exploitation goals per Asset  * *State your institution’s goals in terms of exploitation for every exploitable asset (how your organization envisions to exploit its exploitable assets mentioned in 1.1 in general according to your own exploitation strategy).* | |
| As public University UMIL exploitation is mainly academic exploitation.  in particular, we plan to exploit project results through the following points:  - propose the use of the cyber range platform in the context of the Cybersecurity degree of the Computer Science Department  - propose specific Bachelor and Master degree based on AERAS concept, and also on possible improvements of the platform itself  - propose specific research plan to candidate Ph.D students based on AERAS context  - propose AERAS (concept and platform) in the context of the Computer Science Doctorate School, in the context of specific Ph.D courses to be proposed to students |
| Exploitation Channels  * *Explain what channels your unit has at its disposal to exploit your solutions:* * *End user communities which could uptake / review / further disseminate your tool* * *Units and initiatives within your university or company* * *Contribution to existing products or research tools* * *Internal transfer to another unit (which ones may be targeted?)* * *Other, please specify* | |
| We can exploit the following exploitation channles:  - SESAR Lab website (ww.sesar.di.unimi.it)  - IEEE World Congress of Services (<https://conferences.computer.org/services>) research community |
| Indicative Exploitation Scenarios  * *Describe one or more scenarios that demonstrate the use of your asset in real business case life scenarios, in the following form:* * *Scenario scope* * *Prerequisites / market assumptions* * *Scenario evolution* * *Result* | |
|  |

## **Joint Exploitation goals**

|  |  |
| --- | --- |
| Joint Exploitation goals  * *Describe the routes towards joint exploitation of AERAS assets (how will your identified assets add to the exploitation of the final product of the project and how it will be benefited in terms of exploitation by this process).* | |
| To be able to able a commercial exploitation of AERAS assets, first we have to define an agreement among AERAS founding partners. In this agreement, we will finalizing partners contribution and define the IPR, taking into consideration the background that specific partners has contributed and that must be rewarded.  The assets that can be delivered by AERAS are twofold. First, the commercialization of a fully-tailored cybersecurity training platform, focused on the cybersecurity profile of the customers, allowing them to adapt the training activities to the needs and evolvement of their cybersecurity landscape.  Second, the Team can support the customers in the creation of CRSA and CRST models, as well as of the training contents and programmes. |
| * *Describe known/identified obstacles or threats to exploitation* | |
|  |

# **Business Modelling**

This section describes the rationale of how AERAS creates, delivers, and captures value. To develop candidate business models, AERAS consortium will rely on the ‘Business Model Canvas’ (check Annex 3.1). Please, fill in the following questionnaire:

|  |
| --- |
| What problem does AERAS solve? What are the pain-points we are addressing? |
| The main problem addressed by AERAS is the lack of cyber range platform specifically tailored on the healthcare sector. Furthermore, companies often lack of a portfolio of training activities that can fill the actual gaps in their cybersecurity landscape. |

|  |
| --- |
| 1. *Why is the problem important?* |
| Studies highlights that the healthcare sector was ranked as the lowest industry performers group (6th lowest) in terms of “security performance” by the U.S. State and Federal Government in 2017, and was a the most targeted by ransomware [you can find more details on it in the proposal] |

|  |
| --- |
| 1. *What is the answer we are proposing?* |
| The solution we are proposing allows healthcare companies to adopt a training solution, based on cyber ranges, that can be fully tailored on their training needs. Trainee will execute activities in an environment that will be as close as possible to their real working environment, and trainers and admin can see how the improvements in cybersecurity knowledge of their employees directly affect the cybersecurity profile of the Company, that is continuously assessed by AERAS assurance monitoring functionalities. |

|  |
| --- |
| 1. *Describe AERAS product or service in two or three sentences. Put it in terms anybody could understand–no techno speech?* |
| - training platform based on innovative cyber range technologies  - complete solution that links assurance profile of the company with training activities  - model-based training platform |

|  |
| --- |
| 1. *Which is AERAS value proposition? What is the value that AERAS solution is creating?* |
| The overall value of AERAS resides in its capabilities of being fully-tailored on customers’ needs and to provide a continuous monitoring of trainees’ cybersecurity skill applied to the improvement of cybersecurity company profile. The more they learn, the more cybersecurity they can apply to the company, the better the cybersecurity profile of the Company. |

|  |
| --- |
| 1. *Why is AERAS value proposition important to the customer?* |
| AERAS can be important because it merge in an unique solution the advantages of a training framework with the functionalities of an assurance platform, giving a real-time assessment of the effectiveness of cybersecurity training on the security profile of the Company. |

|  |
| --- |
| 1. *Who are the key people with the key skills needed to do this (in your organization. Doesn’t have to be by name could be a role)?* |
| AERAS will require only effort by the Company in defining the training activities and the underlying models. Representative of all categories should be involved to identify actual training needs. During the execution of training activities, only few selected trainers are needed to run the platform. |

|  |
| --- |
| 1. *Who are our competitors?* |
| All cyber range platforms can be considered competitors, as well as Consultancy company that provide services for the definition of training activities. [more details in the proposal] |

|  |
| --- |
| 1. *What do competitors sell and how does it compete against us?* |
| Competitors sell solution comprising cyber range platform, or assurance platforms, but not a combination of the two. |

|  |
| --- |
| 1. *Describe how AERAS products/services differ from the competitors?* |
| As above, we differ because we provide customers with a solution that mixes the functionalities of a training platform with the monitoring aspects of an assurance framework, combining the results of the two in a single products. Furthermore, AERAS is fully model-base, allowing an easy reuse of training activities within different organization. We will offer a portfolio of standard training activities that can be sold or made available to customers and that can be easily customized to their needs. |

|  |
| --- |
| 1. *Which are AERAS targeted markets? How large are these markets?* |
| In particular AERAS targets the Healthcare sector, but being fully model-based we can easily adapt our solution to any different sector who need a training platform based on cyber ranges. |

|  |
| --- |
| 1. *Who is our target customer? Provide a fairly detailed description of the target customer (b2b and/or b2c)?* |
|  |

|  |
| --- |
| 1. *How do we communicate with our customer? How do we deliver the value proposition?* |
| We can exploit the communication channels the enterprises and the University that are part of the Consortium can offer. Small workshop can be organized and boots in international conferences or events can be exploited to spread the word, as well as with a concrete presence on the social media. |

|  |
| --- |
| 1. *How do we maintain the relationship with customers?* |
| As above, exploiting the networks that partners have, and using all the possibilities social media give us. |

|  |
| --- |
| 1. *What is a reasonable pricing model for AERAS offering?* |
| We can think to a “Freemium” approach, where a limited subset of functionalities can be given for free, with limited training activities available, and supply the full platform only upon payment. Or we can design a Training-as-a-Service platform, where all is supplied online and people customers pays for the creations of tailored courses.  In both solution the price creation should take into consideration the effort needed to configure and define the training activities, and the infrastructure cost (hardware and/or Cloud) needed to run it. |

|  |
| --- |
| 1. *What are the revenue streams?* |
| We can have different streams:  - configuration and definition of training activities  - supply of training activities  - full platform with training and assurance monitoring |

|  |
| --- |
| 1. *What are the main costs? Are the costs mostly fixed or variable? Do the costs change with scale?* |
| We have fixed cost needed to run the platform (rent of Cloud server or buying of real hardware), and variable cost to fundthe design and the analysis work to create the CRSA and CRST models, as well as the training contant. |

# **Annex**

## **Business Model Canvas**

The Business Model Canvas (BMC) gives the structure of a business plan. It is a shared language for describing, visualizing, assessing and changing business models. It describes the rationale of how an organization creates, delivers and captures value. The Canvas has nine elements:

Table

Description automatically generated with medium confidence

1. Customer segments: List the top customer segments. Look for the segments that provide the most revenue.

2. Value proposition: what are AERAS products and services? What is value that AERAS offers to customer?

3. Revenue streams: List AERAS top revenue streams (including free offerings).

4. Channels: How do you communicate with your customer? How do you deliver the value proposition?

5. Customer relationships: How does this show up and how do you maintain the relationship?

6. Key activities: What do you do every day to run your business model?

7. Key resources: The people, knowledge, means, and money you need to run your business.

8. Key partners: List the partners that you can’t do business without (not suppliers).

9. Cost structure: List your top costs by looking at activities and resources