



LEONARDO CYBER & SECURITY SOLUTIONS

CYBER TRAINER



Cyber Trainer

Cyber-attacks are a growing threat to businesses and institutions of all sizes. In recent years, there has been an exponential growth in the number and sophistication of these attacks. If successful, their consequences can be devastating and have the potential to undermine societal growth and long-term sustainability.

Damages extend far beyond financial losses to include disruption of business continuity, theft of intellectual property, loss or dissemination of sensitive data, damages to corporate image and reputation, injuries, environmental issues.

Cyber threats are constantly evolving. They can originate from various sources, spread using multiple vectors and shaping into different forms. In recent years, we have been experiencing a significant increase in the number and sophistication of cyber-attacks. This is due to a number of factors, including the growing digitalization of our society, the increasing use of emerging and disruptive technologies and the rise of nation-state actors.

As a result of these trends, the demand for cyber security experts has significantly increased. In order to protect themselves from these threats, organizations need to have a strong cyber security team in place, made up of individuals with a variety of skills, including technical expertise as well as relational and behavioral capabilities.

Even the most sophisticated protection system can be vulnerable to human error. This is why, it is vital for organizations to provide also the entire corporate workforce with regular cyber security training to reduce their risk of being attacked.



CYBER TRAINER

To meet this needs, Leonardo has developed the Cyber Trainer, the platform aimed at training and keeping up to date both cyber security professionals and non-expert users. The Cyber Trainer supports users throughout the whole training process: from the identification of training needs - supported by expert Leonardo staff - to formal learning, from the practical application of acquired knowledge, to the certification of skills.

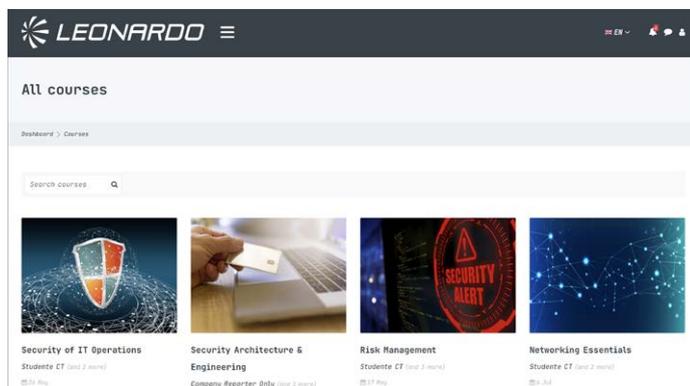
PROPOSED APPROACH

To achieve these goals, the Cyber Trainer consists of two integrated modules:

- **Learning module:** it allows to access the educational contents and activities, offering users the opportunity to enhance their technical skills and monitor their progress in terms of competences acquired.
- **Training module:** it allows to put into practice what has been learned through the Learning module and to acquire additional soft skills thanks to a variety of immersive and gamified training sessions.

LEARNING MODULE

Starting from a preliminary assessment, the LEARNING module offers synchronous and asynchronous learning functionalities and supports the evaluation of the results obtained by students.



Learning module interface example

To define the most appropriate courses and relative contents that perfectly meet the Customers' training needs, an initial assessment is carried out with the support of a dedicated Leonardo team. According to the results of the assessment, the users are assigned with specific learning profiles. Finally, the appropriate training materials are selected from the learning catalogue to fill the platform.

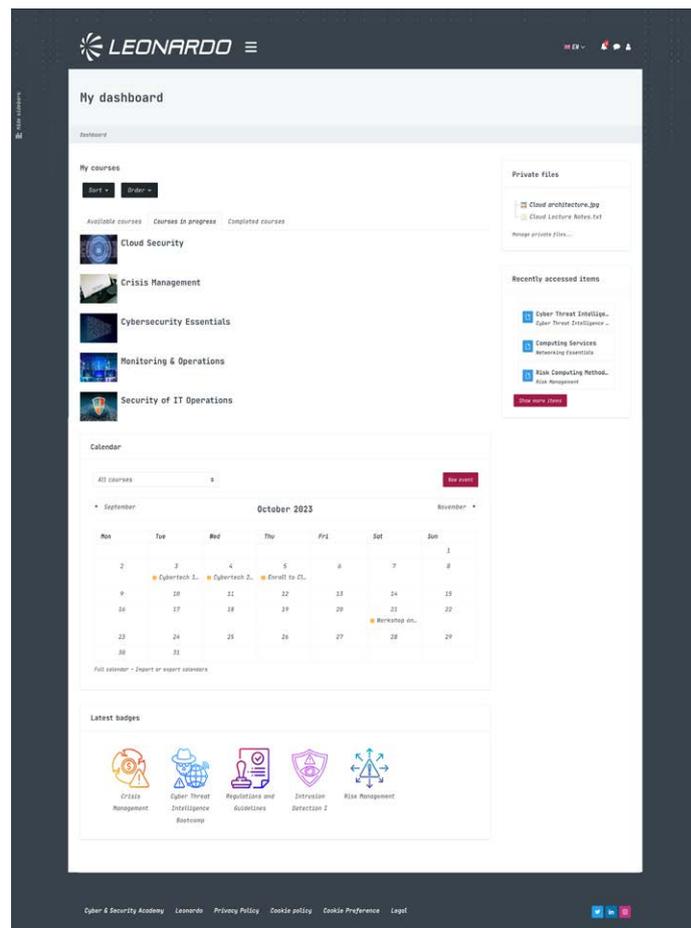
The platform organizes the training material based on a three-level scheme:

- **Course:** an educational path organized in modules.
- **Modules:** macro themes within the Course that include several Activities.
- **Activities:** learning contents having different formats including video, pdf, SCORM and linked contents, Virtual Labs to be completed in the Training Module.

The platform permits the **definition of competencies, arranging them hierarchically in a tree structure.** It's possible to link one or more competencies, even if they belong to different branches of the tree, to specific activities within a course. Students can access the course dashboard to see the competencies they've gained.

Thanks to the adoption of a **Continuous Assessment** approach, students' skills are continuously tested in order to identify new training needs to perfectly meet the specific Customer's requirements.

Upon completion of each course, students have the opportunity **to earn certificates and badges**, which are visible on the personal dashboard and exportable outside the platform. In addition to the overview of all the badges earned, the **Student Dashboard** will also feature a calendar of marked training events and the list of courses the student is taking.



Student Dashboard

Furthermore, on top of assigned courses, each user will have the possibility to view the entire course catalog and request enrollment in new courses of interest.

Finally, a **Reporting module integrated in the Learning module** allows teachers to monitor the students' progress and results in all the learning activities, also having the possibility to access the information in aggregate format by selecting a group of students of interest.

TRAINING MODULE

The TRAINING module, thanks to variety of Virtual Labs, allows students to put in practice the knowledge and skills acquired in the Learning Module.

Thanks to an **immersive, challenging and gamification-driven environment**, this module resembles the structure of an online multiplayer game where users can join different game modes and acquire new concepts and skills.

Indeed, the use of the **cooperative learning approach** allows users not only to acquire or strengthen technical knowledge, but also to develop **decision-making and lateral skills** in an environment which is really close to real operational situations.

Virtual Labs

The Virtual Labs supported by the platform can be both individual or multi-player, and they are grouped into four game modes.

“Lone wolves”, eager to measure their skills against a specific technology or software, can participate in single player mode in the “**Specialty**” Virtual Labs by completing all assigned tasks. The more tasks completed, the more points accumulated.

Additionally, users will have the opportunity to play with other players in the “Deathmatch”, “Monochrome” or “Free For All” categories.

“**Monochrome**” Virtual Labs are collaborative games in which members of a team will have to cooperate to achieve assigned goals and bring home as many points as possible.

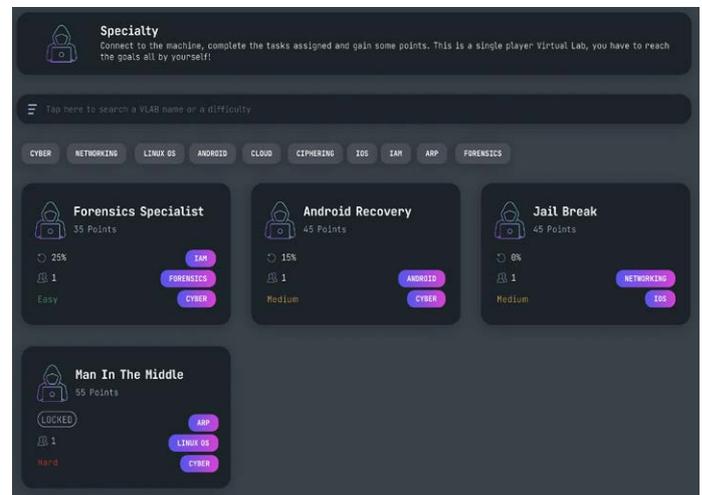
“**Deathmatch**” allows competition between different teams, which compete against each other, pursuing different objectives.

Finally, “**Free For All**”, corresponds to the free-for-all category, where what counts is speed in achieving different objectives.

Regardless of the type, the goals assigned in the Virtual Labs, are not only specifically about advanced topics related to the cyber world, but range, without distinction, within the IT world (Cloud, Awareness, Networking, etc.).

To successfully complete a virtual lab, users are required to complete multiple tasks and answer a variety of questions. For each correct answer or successfully completed task, users are awarded a set of points, which are useful for leveling up and climbing the platform’s overall user ranking.

Virtual labs completion determines the **acquisition of badges that formalize and certify the skills acquired by the student** and that can be used to indicate the level of education achieved. Badges include both Custom Badges, which are neither exportable nor recognized externally, and Open Badges which are standardized and exportable.



Training module-Interface example

SERVICE DELIVERY MODELS

The Cyber Trainer is fully on cloud and it is offered with an as-a-service delivery mode. It provides two different portals:

- **The Student Portal** aimed at the end users for accessing all the educational contents and training activities.
- **The Administrator Portal** aimed at the organisers for the definition and management of all the contents. This activity is directly supported by a dedicated Leonardo team according to the specific agreements made with the customer.

KEY BENEFITS

- A unique platform supporting the whole training cycle, from the identification of the training needs - supported by expert Leonardo staff - up to the certification and updating of skills.
- Access to training sessions in individual and multi-player mode to put in practice acquired knowledge in simulated yet realistic operating contexts.
- Immersive and gamified interface designed to be attractive and user-friendly to perfectly meet the needs of both non-expert personnel and specialized technical profiles.
- Acquisition of custom and open badges and certificates to certify the skills and capabilities acquired.

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