CYBEL

SUSTAINABLE LEARNING SOLUTIONS

Services

01 October 2021

Creation & Update
of Sustainable Learning Solutions

9/11 avenue Franklin Roosevelt - 75008 PARIS - contact@cybel.fr
SAS au capital de 505 020 €
Paris B 325 877 405 - SIRET : 325 877 405 00028

SUSTAINABLE LEARNING SOLUTIONS SERVICES

1- CYBEL: Education is our Business

CYBEL is a management & strategy consulting company, headed by Gérard CHEVALIER, and created in 1982. It is also an approved training company (Identification N° 11 75 07 645 75). CYBEL, ISO 9001-2000 certified, is actively involved in the area of knowledge management and specifically in learning and training solutions.

Cybel has 3 locations in France: Headquarters in Paris and two agencies near Toulouse and Marseille.

All Cybel's engineers participate to all steps of the e-learning value added chain, from design to computarization and delivery.

Communication and exchange flow is managed with the enterprise social network system Yammer. E-learning projects are planned and followed up with Microsoft Project. Large files are shared on our servers.

Computerized courses are double checked before delivery.

1.1- Build learning organisation for change & value creation

CYBEL proposes his expertise:

- AS AN ARCHITECT to develop proprietary methodologies:
  - Expert-system for Corporate management seminars (strategy analysis & mapping)
  - Decision support system for mobility management
  - "CYBELWORLD": proprietary educative community (larevuedufinancier.fr on financial innovation, bretagne-mobilite-augmentee.fr on mobility management…)
  - CYBELWAY : electronic on-line platform with training contents 'on shelves' or customised
  - On-line "ready-made" educational centres: educational technology transfers for other countries (Asia, Middle-East, China) with the Foreign ministry and the Educational ministry (EduFrance)

- AS AN INTEGRATOR OF EDUCATIONAL SYSTEMS, we use our methodologies to meet our client demands:
  - Multidisciplinary specification methodologies for knowledge educational databases (European ISO 9001 certified)
  - '109': methodology for inventorying key & strategic competencies and targeting value chains used in the first European groups (PSA, AREVA, CA, CNES, ESA…)
  - Thematic knowledge and competences bases on materials, automotive industry, energy, banking, aeronautics, insurances…
  - Partnership with universities (University of Bordeaux, Paris-Nanterre, Dijon, Toulouse Paul Sabatier) - National education and Foreign ministry.

- AS A PRODUCER, we develop e-content educative knowledge
  - Capitalisation, design, development of digital educative contents
  - Learning platforms, E-learning, Blended learning, Serious games, Rapid learning
  - Community of practices management and animation
  - Maintenance of knowledge interactive databases
  - On-line training development

1.2- References

Some references: AAAF (Association of Aeronautics and Astronautics of France), ADEME, AGAPS (Association of Health Professions), AIDA (Aid to the Defense Industry), Air France Industry, Airbus, ASF (Highways), BFCE (French Bank of Foreign Commerce), Bongrain, CCIP (Chamber of Commerce and Industry of Paris), CCI Rennes, CDC (Caisse des Dépôts et Consignations Group), CNES, Coface Commissariat Général à l'Investissement,, Conseil Régional Midi-Pyrénées, Corse Composites, DGCCRF (Direction Générale Concurrence et la Répression des Fraudes), DRTFP (Ministry of Labor), Direction des Routes/Ministère de l'Equipement, EADS, ESA, ESCOTA (Autoroutes Esterel Côte d'Azur) , Eurocopter, Euromissile, FRAMATOME, ENGIE, Groupe EDF, Groupe France Telecom, BNP Paribas, Groupe Pinault (Rexel, CDME), Groupe PSA, SAGEM, Caisses d'Épargne,TOTAL, IAP (Astrophysics Institute of Paris), IAS (Institute of Spatial Astrophysics), Ministry of the Environment, Department of Industry, Ministry of Finance, Ministry of Health, MSD AGVET, Nikko, SFP, UNIFA, CODIFA, , Conseil régional de Bretagne, …

1.3- Cybel Agencies

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2- CYBEL experience WITHIN AIRBUS

For more than twenty years, CYBEL has been Airbus's partner in e-learning and e-awareness development. CYBEL has been supporting Airbus in providing original and innovating learning solutions to face Academy/Faculty needs (A/C technologies, ABP Processes, Airbus Tools, Aeronautics fundamentals ...). More than 200 training modules are available in the Airbus training catalogue. The mains domains addressed are Engineering and Manufacturing.

2.1- Architecture and Integration faculty

CYBEL has been working for 10 years for Architecture and Integration Faculty. During this period of time, we have been developing e-learning for EI domains (around 50) but also experimenting innovative approaches to anticipate, elaborate and disseminate skill & knowledge.

Below are some examples:

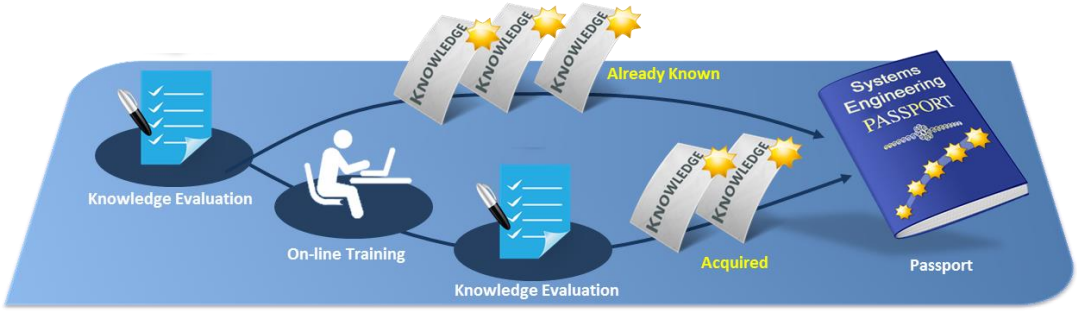
Systems Engineering training programme:

- 8 e-learning modules focused on "know" and "know-how": 9 hours

This training is used to grant access to DOORS (requirement management tool) and is a prerequisite to DOORS Author practical training to become a DOORS Author.

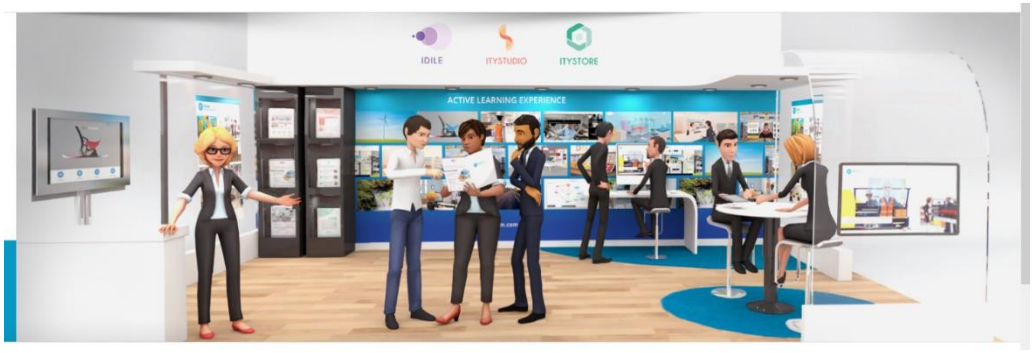
- Systems Engineering Passport

To take into account trainees' knowledge and don't ask them to complete all the modules, a passport has been developed. It assesses the trainee knowledge, proposes the necessary modules to complete and ensure the good acquisition.



Just focus on the necessary

Efficient Collaboration Serious Game (knowledge-to-be / Attitudes)



In the frame of e-motion projects, Cybel has developed an e-learning to understand the fundamental mechanisms for an efficient collaboration and recently a first part of a serious game. The aim of this "simulation game" is to put trainees into representative situations. They will live typical project management situations and make decisions that should lead the project to the success. They will appreciate their ability to efficiently collaborate.

Efficient Collaboration Serious Game has been developed with ITyStudio©. It is a software-author of simulations Serious Game.

Community of Practices experimentation

Business needs led the Architecture & Integration faculty to experiment the community of practices. The objective is to gather in the same learning/training environment experts of a domain and engineers willing to improve their skill and knowledge in this domain.

CYBEL participated to the specification of the CoP platform (Moodle based) and has been playing the community manager's role to organize and animate CoP activities. It mainly consists in supporting the experts in the on-line material creation and animation of the learning group (collaborative workshop, Small Private Open Course, Good Practices sharing, Business issue analysis, Lesson learnt…). Key success factor is to keep a high level of communication and emulation.

2.2- MANUFACTURING ACADEMY / ME FACULTY

CYBEL has been working for 4 years for the Manufacturing Engineering Faculty. Around 40 e-learnings have been delivered focused on:

- ME ABP processes: *FU.IN.03.01, FU.IN.03.02, FU.IN.03.03, FU.IN.03.06, FU.IN.06.01, DE.PA.01.05, DE.PA.03.03 …*
- ME and Shopfloor business tools: *MiRA, APPEAR, ME-DMS, ADOPT, C@pture …*
- Industrial fundamentals knowledge: *Metrology, SOI, Routings and BoMs…*

2.3- OTHERS FACULTIES

CYBEL supports as well others faculties such as:

- Systems Faculty: TrackDev, Human Factors, ASD Operability, BRIDGE
- Test Faculty: LTM, VISAGE, Integration simulator…
- Airworthiness Faculty: DOA, DOA Score Card, SARAA, ZSA, Safety Process …
- S Academy: Writing to Customers

<u>To conclude on our experience:</u>

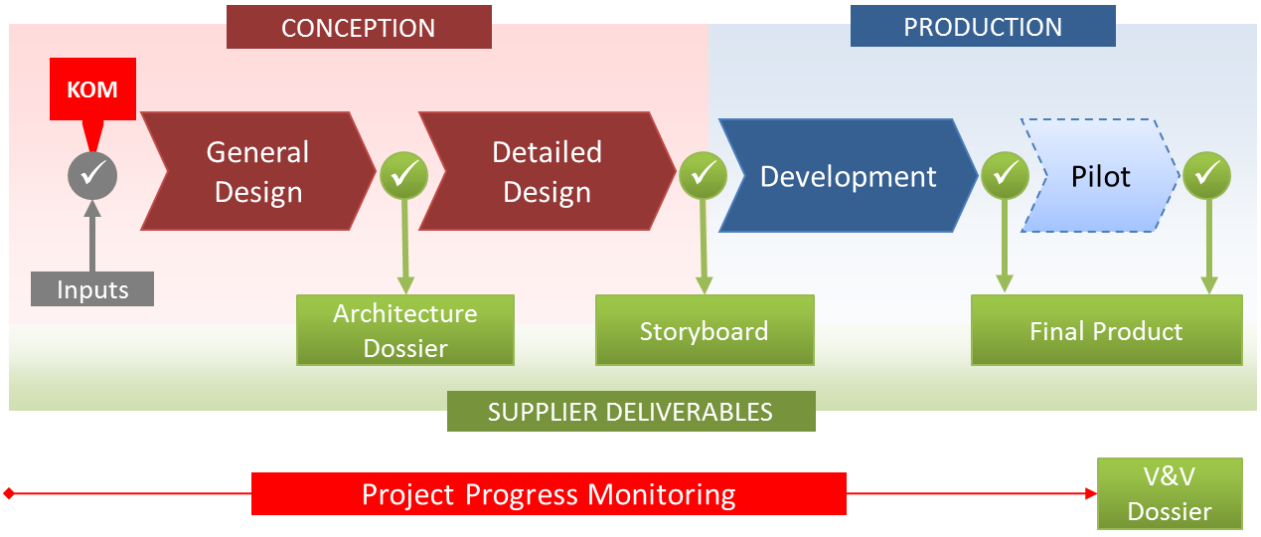
CYBEL has capitalized a deep Business knowledge in Engineering and Manufacturing topics. We know very well the Faculty context and have built a good business network. Quick content understanding and efficient collaboration with the business team are our key success factors. CYBEL is thus ready to support AGLC in the project of creating Digital Learning Solutions.

SUSTAINABLE LEARNING SOLUTIONS SERVICES

3- Technical Proposal

3.1- Learning Solution development process

CYBEL will apply the development process described in the work specification, which is roughly the process currently operated.
Process from the supplier point of view:



3.1.1- GENERAL DESIGN

General Design step consists in creating the **Architecture Dossier**. It is a complete description of the training to be developed. It has to describe all the functionalities and pedagogical paths. It identifies the means (existing content, experts involved), builds the detailed course plan (in terms of objectives) which is the main deliverable of this step and provides a project plan.

Some key points to address:

- Course objectives, targeted audience and duration shall be introduced
- Detailed course architecture and pedagogical approach shall be defined
- The training graphic charter shall be defined
- Course navigation shall be user-friendly and self-explanatory.
- A course menu shall provide an overall vision of the content and an easy way to access to it

3.1.2- DETAILED DESIGN

Detailed Design step consists in creating the storyboard. Based on the detailed course architecture, the designer has to gather all the information necessary to produce the learning solution. This storyboard is, in the early stage, used to work with the experts in order to capture the content and will be afterwards the main document for software engineers. The storyboard is usually a Power-Point file (easy to share and amend by all the stakeholders).

For each learning unit, designers shall:

- Identify main slides (Menu, Content, Exercises, Glossary…)
- Specify slides objectives
- Write slide's content
- Prepare materials (text, drawings, pictures, videos, animations…)
- Describe the media to be created (animations, drawing, scans, videos, specials effects…)
- Describe pedagogical scenarios
- Specify evaluation exercise (if necessary)
- Define interactive objects and areas and associated scenario
- Define sound messages (if necessary)
- Attach screen to the course structure

When requested, the designer shall produce a demonstrator in order to validate Airbus requirements.
At the end of this step a validated **storyboard** is provided as the Design deliverables.

3.1.3- DEVELOPMENT

Development is the step of the process in which software engineers program the training code.
Main production activities:

- Prepare and customize course model
- Gather and Create Media (pictures, drawings, animations, videos…)
- Design slides in accordance with the storyboard.
- Record and insert sound messages
- Develop Exercise (questions + answer analysis)
- Link slides to course structure
- Develop Pedagogical path

At the end of Development phase the **Final Product** is delivered as a development version for validation.

3.1.4- PROJECT PROGRESS MONOTORING

Follow up and validation meetings are organised to:
- Drumbeat the training development,
- Ensure that the deliverables verify Airbus requirements,
- Validate the learning solution content and decide of modifications.

If modifications are required they will be amended in the storyboard, applied on the software and will lead to further validation meeting until complete agreement.

A pilot session can be organised to invite some representative trainees to participate to the validation process.
A V&V dossier and the Airbus Project Monitoring form will be built all along the project progression to ensure the Final Product meets the Airbus requirements.

3.1.5- LEARNING SOLUTION MAINTENANCE

When the development process is operated to update an existing learning solution, it should be reduced to the key steps to apply the modifications.

Even if not mentioned in the work specification, learning solutions update should be taken into account. In the previous CYBEL's work package catalogue, 3 levels of maintenance were defined and often used to maintain learning solutions up to date.

Here are, for information, the descriptions:

- Maintenance Level 1 for major modifications:
  - Content amendments on maximum 120 existing slides.
  - Or development of a subpart of max 40 slides with an impact on the course structure
- Maintenance Level 2 will be applicable to:
  - Content amendments on maximum 60 existing slides.
  - Or development of a subpart of max 20 slides with an impact on the course structure
- Maintenance Level 3 applicable to content amendments on maximum 10 existing slides.

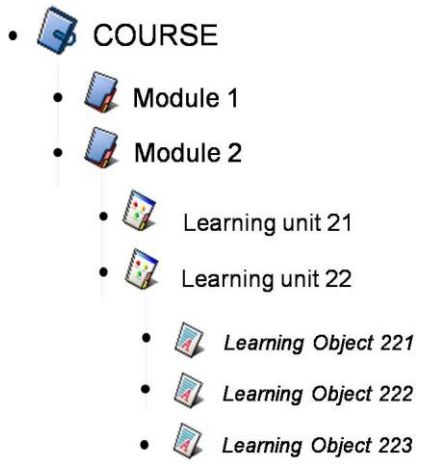
3.2- Final Product standard

When the final product requested is an e-learning, a serious game or e micro-learning, it will be delivered as a full HTML5 Scorm1.2 package.

3.3- Pedagogical approach & Quality Requirements

Our pedagogical approach to knowledge acquisition is realized by means of learning units which can be implemented with Learning Objects with a variety of structures and aims.

A course structure designed to achieve training objectives:



Most of the learning solutions is compliant to this 3 levels course structure:

Course: Achieve a general training gaol

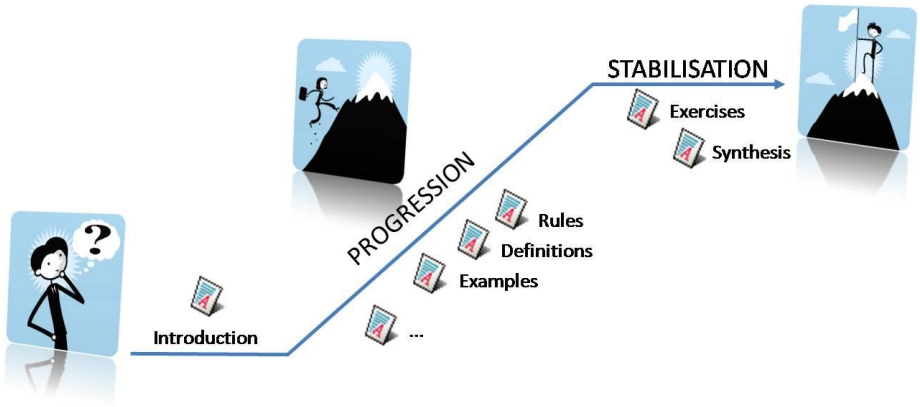
Module: Achieve a intermediary training gaol

Learning Unit: Achieve an operational goal - ensure knowledge acquiring

Learning Object: Could be considered as a set of slides illustrating a rule, a definition, an exercise, an example …

Learning Unit: Success pedagogy:

To ensure knowledge acquisition the learning unit is built on the following principle.



Quality Requirements:

In the frame of the Manufacturing Engineering Faculty, CYBEL's e-learnings have already gone through the AGLC Quality Check.

3.4- Planning

A detailed planning will be provided at the beginning of each new WP, subjected to the availability of Airbus content and Expert. By experience, it takes 2 months, in full time activity, to develop 1 hour e-learning.

SUSTAINABLE LEARNING SOLUTIONS SERVICES

4- Work packages

In order to provide a good understanding of the work package perimeter, CYBEL would like to bring further information.

4.1- Extended Project Management

Cybel has a long experience in working autonomously with the business to develop learning solutions and is ready to handle, when requested, the extended project management activities.

4.2- E-Learning

CYBEL will apply the Learning Solution development process described in section §3 to develop eLearnings and will provide the main deliverables:

- E-learning Architecture dossier (Simplified for additional e-learning)
- Progress meeting report
- Storyboard
- Demonstrator (when requested and 1st eLearning only)
- Final Story Board document acceptance report
- Full html 5 Scorm 1.2 package (as Final Product)
- V&V Dossier
- Final delivery & acceptance report

1st e-learning Vs Additional eLearning:

It is assumed that the "1st e-learning" item is applicable for all new development. The "additional e-learning" item can be used to complete a work package or to reuse an existing e-learning to build a new one.

Regarding "Additional eLearning" work parckage, a simplified Architecture Dossier will be delivered (mainly focused on the course structure). As we will be in "reuse" mode, there is no need for a demonstrator.

Easy Vs Medium Vs Difficult

There are several criteria to select the level of difficulty for the development.
Most of them are related to the complexity to create the eLearning: advanced functionalities, complex exercises, specific pedagogical path, complex pictures and media to create….
Cybel would like to point out a very important one: the maturity of the business inputs. It is not easy to appreciate the maturity of the inputs at the beginning of the project. Sometimes the lack of maturity is discovered late during the detailed design step. Choosing the easy option should be made carefully. Easy option could also be foreseen for "difficult" subject if a draft of an eLearning storyboard has already been matured by the business or the Faculties.

30minutes eLearning

30 minutes represent the duration a trainee would spend, in training condition, to consult the overall course content.

With the benefit of almost 20 years of hindsight, Cybel has matched these times to an approximate amount of slides. That is to say, full development of half an hour e-learning is about 60 storyboard slides development.

These figures are obviously an average and may vary depending on the context but are good indicators to define work packages.

4.3- Virtual Classroom

The virtual classroom work package consists in developing all the relevant on-line material the instructor will use during the session. It is not a matter deploying it.

CYBEL will apply the Learning Solution development process described in section §3 to develop virtual classroom and will provide the same deliverables as for eLearning except the Final Product. In CYBEL's previous experience the Final Product was directly implemented on the LMS platform for all the "interactive" activities and the content was provided in PowerPoint or pdf (to allow modifications by the instructor).

Compare to the classroom, the virtual classroom needs to be well structured in short chapters. Each chapter should include some collaborative activities, at least at the beginning (to catch the attention) and at the end (to ensure the understanding).

1st Virtual Classroom Vs Additional VC:

Same principle as for eLearning, additional virtual classroom is related to the reuse of an existing one.

Easy Vs Medium Vs Difficult

The level of difficulty will mainly be driven by the content availability. Easy option will be selected when the content is available and ready to be reorganized for VC.
In Medium of Difficult options there might be some inputs to capture and formalize.

0,5 day Virtual Classroom

Cybel estimates to 20 to 25 the interactive activities requested for a half day virtual classroom: quiz, survey, chat, choice, feedback, forum, workshop …

4.4- Canned Classroom

CYBEL will apply the Learning Solution development process described in section §3 to develop canned classroom and will provide the same deliverables as for e-learning except the Final Product.
The Final product will mainly be composed of videos and quizzes. CYBEL proposes to create the course structure and the quizzes directly into the LMS.

CYBEL can perform the recording inside Airbus with its own equipment but will need specific security agreement for it.

0,5 day Canned Classroom

Cybel estimates to 10 quizzes of 5 questions each the interactive activities requested for a half day canned classroom.

4.5- Serious Game

Not any more in the scope of round2.

4.6- Voice Over

When requested, CYBEL will integrate voice over in its learning solutions.

Synthetic voice over

CYBEL uses the Text to Speech tool "**Natural Reader**" to generate the synthetic voice.

It proposes a set of voices with different accent.

CYBEL has developed an application to quickly listen and select the voices.

Actor voice over

When requested, CYBEL can propose audio messages recorded by actors. This specific activity will be subcontracted to PrimeVoices studio that proposes a set of voices in the four Airbus languages.

1 hour voice over

By "1 hour voice over" CYBEL understands: voice over for an eLearning of one hour.
By experience, 1 hour voice over corresponds to 300 to 350 audio messages of 5s each corresponding to an average of 7000 words.

4.7- Micro-Learning

CYBEL will apply the Learning Solution development process described in section §3 to develop the Micro-Learning and will provide the same deliverables as for e-learning.

Regarding this short learning sequence, CYBEL proposes to deliver the final product in responsive format to facilitate its deployment. It will be possible to watch it in landscape or portrait format on all devices (laptop, tablet, smartphone) with an automatic layout readjustment.

4.8- Classroom

The classroom work package consists in developing the training material the instructor will use during the session. It is not a matter deploying it.

CYBEL will apply the Learning Solution development process described in section §3. For classroom, the development process should stop after the detailed design phase. The storyboard will be the training material.

Easy Vs Medium Vs Difficult

The level of difficulty will mainly be driven by the content availability. Easy option will be selected when the content is available. In Medium of Difficult options there might be some inputs to create.

4.9- Translation

Translation will be based on a first version of the learning solution developed in English. To avoid multiple loops, it is better to wait for the final acceptance of the English version before launching the translation process. Translation will be performed based on a text extract from the software version plus the storyboard.
Technical translation is a very specific activity; it will be subcontracted to the main Airbus technical translation suppliers: STUDEC and AMPLEXOR.

Translation work package takes into account the creation of the new language version including all the relevant content adaptation (text, screenshots…).

4.10- Pilot

When requested, CYBEL will organize a pilot session in Airbus premises, will invite the target population and will handle the session as a review meeting.

If modifications are required they will be amended in the storyboard, applied on the software and will lead to further validation meeting until complete agreement. Modifications of the learning solutions will be taken into account in the frame of the development work package.

4.11- Biyearly Steering

CYBEL will participate, in addition to project development reviews, to biyearly steering as required in Airbus work specification.

CYBEL will also provide a reporting dashboard compiling all the information of the work package progress achievements.

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SUSTAINABLE LEARNING SOLUTIONS SERVICES

5- commercial Proposal

5.1- Pricing

CYBEL proposes the pricing below in accordance with the Work Packages definition and perimeter. As mentioned in Airbus specification, CYBEL shall be responsible for independent of time, quality and cost execution of the WP in compliance with relevant Airbus contracts, methods, procedures and rules.

For pricing, please consult the "CYBEL Complexity Matrix Bundle V22.xlsx"

6- General provisions

Technical Contacts:
CYBEL Service Coordinator and Site Manager will be:

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Location:
Although the subcontracted activity is performed on the Supplier's premises, we need to participate to workshop and review meeting inside Airbus on a regular basis. CYBEL would like to keep its current access badge for Airbus Operation and Central Entity in Toulouse. It facilitates the access to the experts and to the Airbus network (when working on e-learnings focused on Airbus Tools). Reactivity and efficiency are really improved when access badge is granted.

Equipment:
CYBEL will carry out its activity in an autonomous and independent way. All the On-site activities will be performed with CYBEL's equipment.
For design phases, CYBEL is already working on its own Airbus standard Laptops XP07masterized and several Airbus Email accounts are available. This configuration is still required to carry out this learning solutions development activity.

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