

### The French School for Energy and Health Technology



# HUMAN CAPITAL SOLUTIONS

Your workforce is your most valuable asset. Let's develop it together.



### Your workforce is your most valuable asset. Let's develop it together.

At INSTN, we are committed to providing our partners with the best human capital solutions to develop and deliver safe & sustainable projects. Whether your project focuses on low-carbon energy or health care technology, our solutions are designed specifically to address the challenges that you face.

> Our human capital solutions will support the operational excellence of your program, organization, and talents. >>

We believe people are your best assets to drive productivity, ensure safety, and enhance creativity in your organization. If you deserve the best workforce, they deserve the best development opportunities. Our human capital solutions will support the operational excellence of your project, organization, and talents by providing them with career prospects, knowledge management services, skilled trainers, first-rate education & training programs, and innovative learning equipment, resources & tools.

Together with our network of world-class partners in a variety of areas, we offer unique and comprehensive solutions to meet your needs.

All our solutions are compliant with international best practices and standards, such as the Systems Approach to Training (SAT) model. INSTN is ISO 9001-certified and has been an IAEA Collaborating Center since 2016.



Capability development



Human resource development

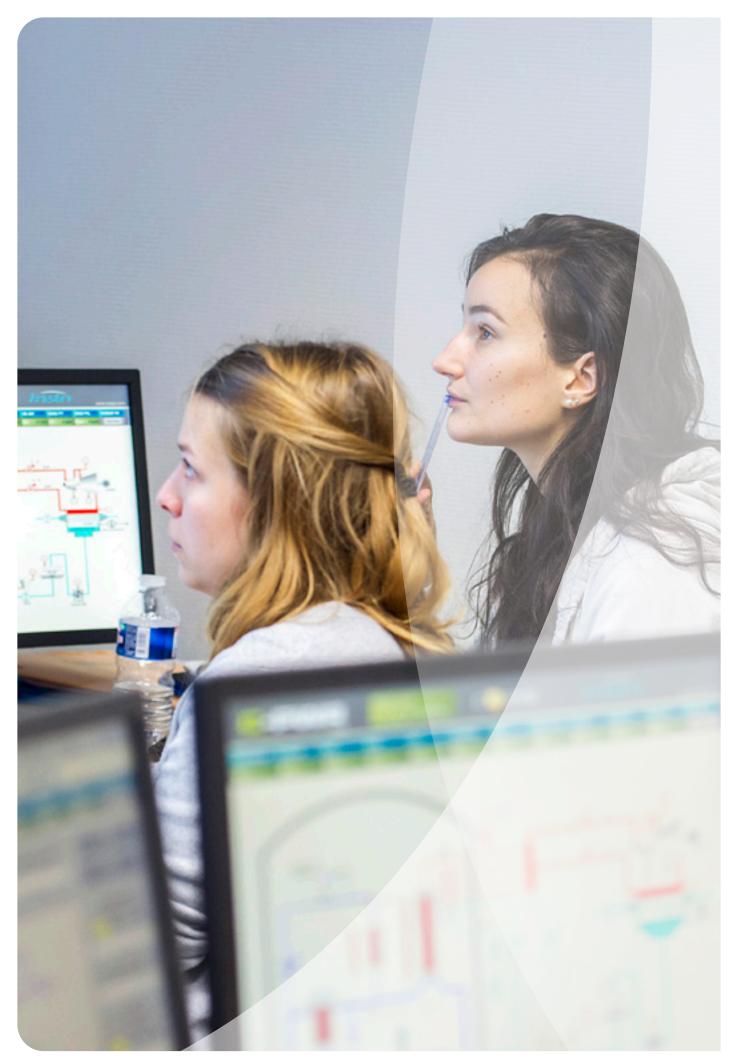


Knowledge management



Digital services

Our services are available in all our areas of excellence





### **Capability development**

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# Analyzing your skills development needs

Ambitious projects often call for ambitious skills development plans. These plans start off with a thorough needs analysis in order to later implement the right solutions, at the right time, and at the right place.



#### You are

- An international organization
- A safety organization
- A utility
- ✓ An R&D organization
- ✓ A health care organization
- A government department or organization
- ✓ A supplier
- A waste management organization
- ✓ A NEPIO

INSTN has been developing skills development solutions in regard to the needs of industry and R&D for over 60 years. Our long-standing experience enables us to guide you on this analysis so you are sure to consider all elements, taking into account a series of national and organizational characteristics such as your education system and available academic resources, existing training or reskilling programs, workforce data, and of course the scope and timeframe of your project. A comparative analysis of similar projects might set you on the right path as well. Our experts will guide you to start off your project on the right foot.



### Method, Tools & Standards

Our thorough approach spans the following stages:

- ▶ 1. Define your skills development plan and its characteristics;
- 2. Identify your current capabilities in relevance with your project;
- 3. Carry out gap & SWOT analyses;
- ▶ 4. Determine your needs in terms of:
  - Academic and continuing professional development programs to re-design or develop (skills, qualification level, assessment, etc.),
  - Training of trainers,
  - Learning tools, training platforms, or centers to acquire or develop partnership(s) to set up.
  - Implementation schedule with regard to the timeframe of your project.



### Delivrables

▶ Needs analysis report complete with recommendations.

# **Designing academic** and continuing professional development programs

Education & training programs provide the basis of your workforce development plan. Whether in need for workers, technicians, engineers, or researchers, you will need to provide them with the necessary background suited to their future jobs.



- An international organization
- ✓ An education & training organization
- A safety organization
- A utility
- An R&D organization
- A health care organization
- A government department or organization
- A supplier
- A waste management organization
- A NEPIO

So that your students and trainees are readily operational and aware of the latest technology developments, programs need to be built in close cooperation with R&D and industry. Our experts can guide you on the development of:

- worker and technician training programs (degree or non-degree awarding);
- associate's, bachelor's, and master's degree programs;
- continuing professional development programs.

Depending on your needs, programs can be developed either as face-to-face programs, blended learning programs, or 100% digital learning programs.



### Method, Tools & Standards

We work with you to:

- ▶ 1. Define the purpose of the program(s): general objectives, targeted job(s), target population, etc.;
- 2. Select relevant program committee members from academia, industry, and R&D;
- 3. Identify the type(s) of program to develop: degree or non-degree awarding, academic or CPD, levels (beginners or advanced), etc.;
- 4. Establish a job-skills analysis (skills taxonomy), learning objectives and outcomes, prerequisites;
- 5. Define program curriculum : contents, learning methods, assessment methods, teachers' profiles;
- Optional: 6. Develop syllabi of courses.

Prerequisite: We recommend you to carry out a needs analysis (CD01) prior to embarking on the design of programs.



- Skills taxonomy;
- Program curriculum;
- Optional: Syllabi of courses.

# Training your trainers

### Gain in efficiency and autonomy!



- An international organization
- An education & training organization
- A safety organization
- A utility
- An R&D organization
- A health care organization
- A government department or organization
- A supplier
- A waste management organization
- A NEPIO

With our train-the-trainer program, we train your future pool of trainers so they can in turn train your future talents. It is entirely customizable to best meet your needs: focus on the issue which is giving your staff the most trouble, choose your topic so we can adapt case studies to your organization's field(s) of expertise, tell us about the profile of your trainers-to-be and how much time you've got on hand ...we'll make it possible. Train-the-trainer programs are a real asset to your workforce transformation as they allow you to train more, faster, and are a key step forward towards a learning organization. Our train-the-trainer program is available as a face-to-face program, blended learning program, or 100% digital learning program.



### Method, Tools & Standards

Our approach to build your customized experience:

- Analyze your needs;
- Propose a set of terminal objectives and a provisional program;
- Fine-tune the program and outline the lesson plan;
- Implement the program with a balanced mix of theory and practice and experience feedback;
- Assess the level of participants prior to the training and after the training.

If you're unsure of your precise needs, our experts can work out your specifications with you based on an analysis of your current capabilities, context, and issues.

Courses comprise both theoretical and practical sessions in the form of discussions, group work, lectures, and real-life-condition training.

Group works are based on case studies prepared with the client. For case studies to be as relevant as possible and make the course ever more efficient, we recommend you to provide us with input data built on your operational needs.



- Lesson plan;
- Course implementation;
- Participants handouts;
- Certificate of completion for participants;
- End-of-course summary;
- Assessment feedbacks for all participants.

## Designing your training center

Designing, building, or revamping a training center is not something you do every day. Not only do you want it to fully meet your current needs but it should also be easily adaptable to your future needs and contain all the necessary equipment to train your students and trainees in the most efficient way.



- An education & training organization
- A safety organization
- A utility
- ✓An R&D organization
- A health care organization
- A major industry player/Tier 01 supplier
- A waste management organization
- A NEPIO

Because students and trainees need to acquire both sound theoretical background knowledge and practical know-how, we will help you find the right balance between classroom, lab, and platform or simulator capability. We believe the best way to achieve learning outcomes is through active, interactive, and participatory methods and will guide you to choose the right tools and equipment to do so from basic to digital tools, technical equipment or cutting-edge learning platforms.. Whatever your budget, we have at heart to make education and training available to the many and will strive to find the solution that suits you best.



### Method, Tools & Standards

We will work with you to:

- 1. Analyze your needs: the purpose of your training center, its target population (students, professionals, or both), the number of students and trainees you expect to attend, the types of programs and courses;
- 2. Analyze your existing capability: infrastructures, equipment, human resources, software, international cooperation agreements, etc.;
- 3. Draw up a gap analysis;
- 4. Draft specifications or a business case based on your needs, existing capability, and available budget.



### **Delivrables**

> Specifications or business case for the design and operation of a training center.

# Certifying your training programs

Have you already set-up your in-house training programs but want to make sure they meet industrial and academic requirements? Our accreditation system provides a neutral third-party assessment for ever more quality assurance.



- A training organization
- ✓An R&D organization
- ✓ A health care organization
- ✓ A Tier 01 supplier
- An engineering firm
- **✓** A NEPIO

Based on our 60 years of experience in designing and running education programs and training courses for students and professionals, we will check that your programs are in line with your operational objectives. Do they meet your skills needs? Do your employees reach their learning objectives? Are your program curricula regularly updated to include the latest advances in research and technology? Our assessment system guarantees that you achieve the desired results through an in-depth analysis of your programs' scientific and technical contents as well as their pedagogical approaches.



### Method, Tools & Standards

Get accredited!

- ▶ 1. Provide us with your self-study report;
- 2. We will review your program on the basis of unbiased assessment criteria. The review process includes interviews with your teaching staff, management team, and course participants, analyses of learning outcomes, lesson plans, assessment systems, syllabi, and course observation;
- ▶ 3. We will convey our findings and, if necessary, issue a series of recommendations;
- ▶ 4. Depending on these, we will award the accreditation either directly or after you have implemented the recommendations.



- Assessment report & recommendations;
- Accreditation certificate.

# **Accessing INSTN's learning platforms**

Since its creation in 1956, INSTN has always made it a point of honor to provide its students and trainees with cutting-edge learning equipment and tools and to have a head start in these fields. These considerable investments are now made available to a larger community.



- An international organization
- An education & training organization
- A safety organization
- A utility
- ✓ An R&D organization
- A health care organization
- A government agency
- ✓ A Tier 01 supplier
- An engineering firm
- A waste management organization
- A NEPIO

If you're looking to train your students and trainees on state-of-the-art learning platforms we have the solution for you. Our mock-up training facilities-designed to replicate nuclear reactor, fuel cycle, and research systems, flow-loops, and equipment-enable students and workers to acquire or perfect their techniques and develop or maintain safe behaviors using real tools and wearing full protective equipment. Mock-up gloveboxes, robotic remote manipulators, and haptic arms also give learners the opportunity to complete hands-on practice. With the active participation of our professors and trainers, this service includes both access to the platform of your choice for you and your learners as well as educational support from our experts before and during the training session.



### Method, Tools & Standards

The following platforms and equipment are available to third parties:

- Mock-up training facilities (for radiological controls, nuclear maintenance [flowloop simulators], complete with changing/lockers room);
- Gloveboxes & HVAC training equipment;
- Training hot cells with robotic remote manipulators
- Labs for practica complete with scientific and technical equipment similar to those used in research and industry (for metallurgy, materials characterization, biology, radiochemistry, detection and measurement of radiation, Scanning Electron Microscopy, etc.);
- Simulators such as the VERT (Virtual Environment of a Radiotherapy Treatment room) 3D platform for cancer therapy training;
- Our latest add-on: the Enhanced Virtual Open Core (EVOC), a mixed-reality platform for reactor physics and reactor operation training.

Our nuclear mock-up training facilities are certified by EDF, the French nuclear operator.



- Design of the hands-on-training session or practicum;
- Training or practicum on the learning platform of your choice with our experts.





### **WD01**

# Designing and implementing your integration pathways

Integration pathways enable you to train young graduates, talents from adjacent industries, and job seekers and train them to operate in compliance with your needs and regulatory requirements.



- ✓ A safety organization
- A utility
- ✓An R&D organization
- ✓ A health care organization
- A government agency in charge of workforce or employment development
- ✓ A supplier
- ✓A waste management organization
- ✓ A NEPIO

Integration pathways target distinct jobs and offer your future workforce the opportunity to join customized work training schemes to learn and practice the unique set of skills that are specific to your organization. Work training schemes are entirely customizable and alternate classroom training and on-the-job training. Integration pathways usually last between 6 months and 1 year. They are a huge asset to fill in your skills gaps, to upskill your workforce, and to foster attractiveness of your jobs and business.



### Method, Tools & Standards

Our skills development experts will help you build your integration pathways according to the following process:

- ▶ 1. Identify your target population, target end-jobs, and specific regulatory requirements:
- ▶ 2. Select or develop the training programs best suited to the selected end-jobs;
- 3. Define the work training schemes;
- 4. Design the integration pathways leading to selected end-jobs and implement them.

Skills assessments will be carried out upon completion to make sure candidates have reached the expected learning objectives and are fully operational.



- Job-skills analysis;
- Curriculum description;
- Curriculum implementation;
- Skills assessment.

### WD02

# Designing your career pathways

### You are

- A safety organization
- A utility
- ✓ An R&D organization
- A health care organization
- A supplier
- An engineering firm
- A waste management organization
- A NEPIO

### Inspire, attract, retain! Offer your current and future talents career prospects and opportunities.

Displaying clear career pathways will enable you to showcase the professional development potential within your business or industry and to increase your attraction and retention rates. Career pathways are an extremely useful tool for Human Resources staff to identify their recruiting grounds, to spot development opportunities for current employees, and to accompany them in their career change or growth. They can therefore be used both as promotional material for your business or industry and as a tool to help you manage your staff's development.



### Method, Tools & Standards

We will work with you to:

- ▶ 1. Select the departure-jobs and end-jobs for which you want to design career
- 2. Establish skills taxonomy for selected departure-jobs and target end-jobs and compare the skills (skills gap analysis);
- 3. Identify the relevant education & training programs to fill in the gap;
- ▶ 4. Design a set of example career pathways leading to selected end-jobs complete with their training pathways.



- Job-skills analysis for departure-jobs and end-jobs;
- Job descriptions;
- Career pathways descriptions & diagrams including corresponding training pathways.

### **WD03**

# Assessing your current and future workforce's skills

### Make safer recruitments and empower your staff thanks to our skills assessment modules.



- A safety organization
- A utility
- ✓An R&D organization
- ✓ A health care organization
- A supplier
- An engineering firm
- ✓A waste management organization
- ✓ A ŇEPIO

Whether you are looking to hire new recruits, retrain some of your staff for a career change, or make them advance in their careers, you might want to gauge precisely their levels in a variety of fields. Our skills assessment solutions will support you in determining accurately the skills of your future and current staff and their level in each of these skills. It will also enable you to design and implement skills development plans in line with your business' strategic goals. The outcome of these assessments will enable you to make safer recruitments and guide your staff more efficiently in their career change or growth. Our solutions can be implemented in traditional digital-free ways, with your own HRIS, or with an LMS.



### Method, Tools & Standards

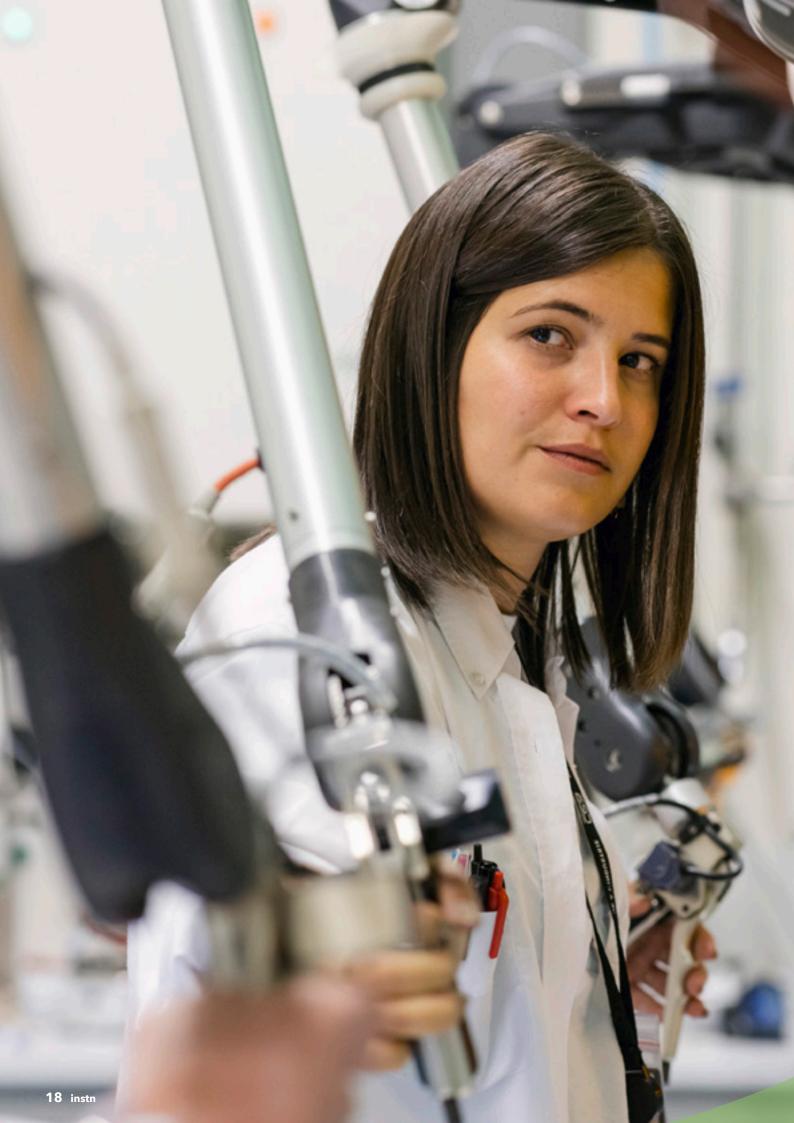
Our approach to build your customized experience:

- ▶ 1. Define and identify with you the assessment method best adapted to your needs based on the purpose of your evaluation, your target population, and the skills to assess. We will also select together the most relevant tools;
- ▶ 2. Design the assessment framework (skills, levels, and criteria);
- ▶ 3. Develop and implement the (off- or online) assessment solutions;
- ▶ 4. Provide results analysis & propose action plans to improve attainment wherever necessary.



- Assessment framework;
- ▶ (off- or online) Assessment modules;
- Assessment implementation;
- Detailed and individualized results & action plan to improve attainment wherever necessary.







### KM01

# Designing a knowledge management plan

In the past years, knowledge management has become an increasingly critical issue as we have come to consider the knowledge and information of our organizations as a most-valuable resource.



- A utility
- An R&D organization
- A supplier
- An engineering firm
- A NEPIO

With 60 years of expertise in the fields of defense, nuclear energy, safety and security, and health care-among others, CEA has always been at the forefront of knowledge management to maintain its critical knowledge, know-how, and know-why and ensure its transfer within the organization. Drawing on this experience, and to support the global effort in capturing this resource (both explicit and tacit) and passing it on to the next generations, INSTN has developed a knowledge engineering service to guide organizations in the design of sound knowledge management plans. Building on this capital and maximizing its potential are key conditions to develop and achieve sustainability and innovation.



### Method, Tools & Standards

We help businesses and organizations:

- ▶ 1. Define and organize their knowledge management objectives;
- ▶ 2. Define knowledge domains and build the knowledge domains map;
- ▶ 3. Determine critical knowledge and skills to be handled;
- ▶ 4. Determine the objectives related to these domains and critical skills;
- ▶ 5. Define the resources, organization, and tools to implement the KM plan;
- ▶ 6. Prepare communication elements for the decision-making process;
- > 7. Prepare internal communication/training for the implementation of the KM plan within the organization.

All our KM services are based on the ISO 30401:2018 standard.



- ▶ Support in the design of a knowledge management plan;
- Recommendations on KM tools.

### KM02

# **Extracting and digitalizing** knowledge: how-to (training)

Train your own staff to the processes of knowledge extraction and digitalization to gain in autonomy and productivity!



- A utility
- An R&D organization
- A supplier
- An engineering firm
- **✓** A NEPIO

Extracting knowledge is a major and critical operation in the implementation of your knowledge management plan. It will enable you to collect not only the explicit knowledge of your workforce, but also its tacit knowledge, that is all knowledge often unspoken and difficult to formalize, rooted in practice, experience, intuition, judgement, and individual skills. This task can be extremely time-consuming and our training program will enable your staff to acquire the necessary skills to implement efficiently the extraction and digitalization methodology. Our training program will enable your KM staff to make the knowledge of your researchers, engineers, or technicians accessible and available for you to transfer to the right people, at the right time, and at the right level.



### Method, Tools & Standards

Our approach to build your customized experience:

- Analyze your needs based on your KM plan and existing skills within your organization;
- Propose a set of terminal objectives and a provisional program to achieve your operational goals;
- Fine-tune the program and outline the lesson plan;
- Design & implement the program with a balanced mix of theory and practice and experience feedback;
- Assess the competences of participants (prior and after the training).

If you're unsure of your precise needs, our experts can work out your specifications with you based on an analysis of your current capabilities, context, and issues. Courses comprise both theoretical and practical sessions in the form of discussions, group work, lectures, and real-life-condition training. Group works are based on case studies prepared with the client. For case studies to be as relevant as possible and make the course ever more efficient, we recommend you to provide us with input data built on your operational needs.



- Course implementation;
- Course documentation;
- ▶ Summary of participants' knowledge assessments.

### KM03

# **Methods & tools:** from knowledge recording to knowledge transfer

One of the ultimate goals of knowledge management is to be able to transfer the knowledge within your organization to your people or the next generations. Whatever your reason for initiating this transfer process, we've got your back!



- A utility
- An R&D organization
- A supplier
- An engineering firm
- ✓ A NEPIO

In line with your KM plan and based on previously recorded and digitalized knowledge, we will help you find the right methods & tools that are most adapted to your staff, processes, and operational objectives: tailor-made training programs, knowledge books, knowledge networks, corporate Wikis, innovation methods...Our experts can guide you on implementing this last stage of your KM plan at the service of your operational ex-



### Method, Tools & Standards

- 1. Needs analysis (objectives, target(s), budget, schedule);
- ▶ 2. Identification of resources such as existing knowledge recordings or knowledge
- ▶ 3. Support in the selection of additional knowledge transfer solutions.

All our KM services are based on the ISO 30401:2018 standard.



#### **Delivrables**

Guidance report on the most adapted methods & tools for your organization, such as knowledge base, digital recording (tutorial and/or interview), datavisualization, training programs for students and professionals, knowledge books, knowledge and skills recording software, and prospective & open innovation methods.











# Digital services

Digitalizing your education and training program: feasibility study

### **DS02**

Designing, developing, and integrating your digital learning program

#### **DS03**

Training your trainers to digital learning engineering

### **DS01**

# Digitalizing your education and training program: feasibility study

If you're looking to transform an existing face-to-face program into a fully digital program or adapt it as a blended-learning program, our experts can guide you on the preliminary study process.



- An international organization
- ✓ A health care organization
- A safety organization
- A utility
- ✓An R&D organization
- A government department or organization
- A supplier
- A waste management organization
- ✓ An education & training organization

This study process consists in a thorough analysis of your project in order to identify the digital learning solutions best adapted to your learning objectives and learning audience. We will help you decide on the type of digital solution (asynchronous vs synchronous e-learning, video learning, serious game, simulator, Learning Management System, etc.), provide you with a budget estimate, and draw up a provisional production schedule. If you're looking to develop a program from scratch, start with our "CD02 service: Designing academic and continuing professional development programs" to design your program curriculum first. Both services can be offered either for full programs or single courses.



### Method, Tools & Standards

Our approach spans the following stages:

- ▶ 1. Analyze your needs: purpose of your digitalization process, identification of your learning audience and learning objectives, study of your current or future information system, etc;
- ▶ 2. Identify the suitable digital approach and a set of solutions, including software;
- 3. Draw up recommendations for a digitalization plan: budget estimate, schedule, etc.



#### Delivrables

Report including pedagogical and technical recommendations for various digital solutions, budget estimates, and preliminary schedules for each recommended solution.

### **DS02**

# Designing, developing, and integrating your digital learning program

### An entirely customized and customizable experience for you to modernize your learning offer!



- An international organization
- A health care organization
- A safety organization
- A utility
- An R&D organization
- ✓A government department or organization
- A supplier
- A waste management organization
- ✓ An education & training organization

You have already identified the digital learning solution(s) best adapted to your needs and need experts to develop them? Our teams are here to support you in your digital engineering process and the development of your solution(s)-preparation, creation, follow-up, and help with the integration onto the host platform of your choice. Our solutions range from traditional video-presentation synchronization to more technologically advanced solutions such as interviews, motion design, or in-situ video recording. These techniques can be applied to all types of online courses such as e-learning modules, blended learning courses, and serious games.



### Method, Tools & Standards

We offer two different packs for each type of solution:

- ▶ The 'Standard' pack provides a mid-range service in designing video content and supporting integration of your contents by providing templates and double-checking all settings;
- The 'Premium' pack provides a top-of-the range service in designing video content and integrating all contents for you so you have a ready-to-use solution.



### Delivrables

Your brand new digital learning program.

### **DS03**

# Training your trainers to digital learning engineering

In a world engaged in a global transition, academic education & professional training have to take the turn of digitalization to meet economic constraints and adapt to trainees' and organizations' operational constraints.



- An international organization
- ✓ An academic institution
- ✓ A safety organization
- ✓ A utility
- ✓An R&D organization
- A government department or organization
- A supplier
- ✓ An engineering firm
- A waste management organization
- ✓ A ŇEPIO

Our program aims at developing the skills of your current and future trainers in learning engineering and the implementation of part or fully digitalized learning programs. Your trainers will acquire the methods and tools to design a digital learning program from scratch or transform an existing face-to-face program into a digital program. Our program includes both the creation and broadcast of digital contents and the presentation of a range of Learning Management Systems, remote learning and content creation tools.

Our program includes:

- ▶ E-learning modules;
- ▶ Tutorials;
- Practical workshops.



### Method, Tools & Standards

Courses comprise both theoretical and practical sessions in the form of discussions, group work, lectures, and real-life-condition training. Practical workshops can be customized to best meet your needs. They are based on case studies prepared with the client. For case studies to be as relevant as possible and make the course ever more efficient, we recommend you to provide us with input data built on your operational needs.



- Lesson plan;
- Course implementation depending on your needs, can be implemented as a faceto-face program, blended learning program, or 100% digital learning program;
- ▶ Participants handouts including templates for further implementation;
- Certificate of completion for participants;
- End-of-course summary;
- Assessment feedbacks for all participants.



# ESIGN GRAPHIQUE **EFIL** WWW.EFIL.FR / PHOTOS ® P. DUMAS, L. GODART, E. DE LAVERGNE, Y. AUDIC, A. AUBERT / CEA

# The French school for energy and health technology is an IAEA collaborating centre



For more than 60 years, INSTN has been delivering highly specialized education programs and continuing professional development courses for operators, technicians, engineers, and scientists in France and abroad. INSTN also supports businesses and government agencies in enhancing their skills development capacity. Thanks to our affiliation with CEA, we maintain strong ties to industry and R&D and are constantly evolving to meet the needs of students and businesses alike. Today more than ever, INSTN is committed and ready to help you respond to the strategic societal challenges that are energy and health care.

### They trust us:











