Designing and Managing IVV – Integration, Verification and Validation

"Mastering a key discipline for successful complex projects"

Key benefits of this training course

This training course enables participants to take ownership of the full Integration, Verification and Validation (IVV) approach, from needs analysis through to solution delivery. It combines theoretical input with practical application on a representative case study.

Learning objectives

This training course enables participants to understand and effectively implement the IVV process as a collective capability serving business performance and competitiveness:

- Understand IVV terminology and concepts
- Understand and implement IVV activities within the development of a complex project
- Understand and apply the interactions between the different systems engineering roles and their collaboration with other processes, disciplines and areas of expertise
- Understand and develop the main IVV deliverables (IVV strategy, IVV plan, compliance matrix, test reports) within a project context
- Establish the link between requirements and the expected verification/validation evidence
- Raise awareness of the importance of planning IVV activities (strategy, plan, testing of equipment, facilities and resources)
- Apply best practices to successfully conduct IVV activities
- Use test management tools, KPIs and metrics

Teaching approaches

The course combines theoretical sequences (30%) with practical application (70%) on case studies representative of complex system development.

Target audience

This training course is intended for anyone working, or expected to work, on system development: project managers, systems engineers, architects, IVV engineers, design engineers and technical experts.

In-house training

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Duration: 2 days

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Presential or remote learning
Customisation available

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Language: French or English

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Prerequisite: none

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Recommendations: a good knowledge of Systems Engineering fundamentals

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Access timeframe: 2 weeks

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Implementation timelines:
Based on the analysis of the client's needs

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Evaluation:
Self-assessment of prior knowledge at the start of the training program
Self-Assessment form upon completion of Training

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Methods used for the workshop:
In full-group and sub-groups, role-playing based on a central case study

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8 to 12 participants

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Disability access:
Yes – please contact us to discuss possible arrangements

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Prices: please contact us

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Program

Presenting the IVV process within a Systems Engineering approach

- Reminder of the definition of Systems Engineering
- Overview of the Systems Engineering approach
- Challenges and key issues of Systems Engineering
- IVV terminology

Understanding and applying interactions between the different roles

- IVV roles and interactions with other Engineering Systems roles
- IVV deliverables
- IVV activities

Building the IVV plan and development lifecycle

- Lifecycle / engineering reviews / IVV activities
- Main deliverables expected for each engineering review

Applying IVV best practices

- Acceptance
- Validation
- Verification
- Integration

Managing IVV

- Test management tool
- IVV metrics and KPIs
- Prioritization of functions and impact on requirements

Sharing best practices to conduct IVV effectively

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Key Figures

More than **20,000 participants** worldwide over nearly **20 years**.

For **90%** of participants (*), the training pedagogical progress is perfectly matching their needs.

97% of participants (*) highlight our trainers' ability to bring knowledge to life, drawing on their real-world professional experiences.

Our training programs meet the objectives (**) for **93%** of the participants (*)

(*) January 2025 – December 2025 period
(**) usefulness of the content for progress and overall satisfaction with the training course