



Service Guide

Advancing Engineering Capabilities

Coaching | Training | Process | Reviews | Tools

EDUQUA SE-Training is an EduQua certified training provider.

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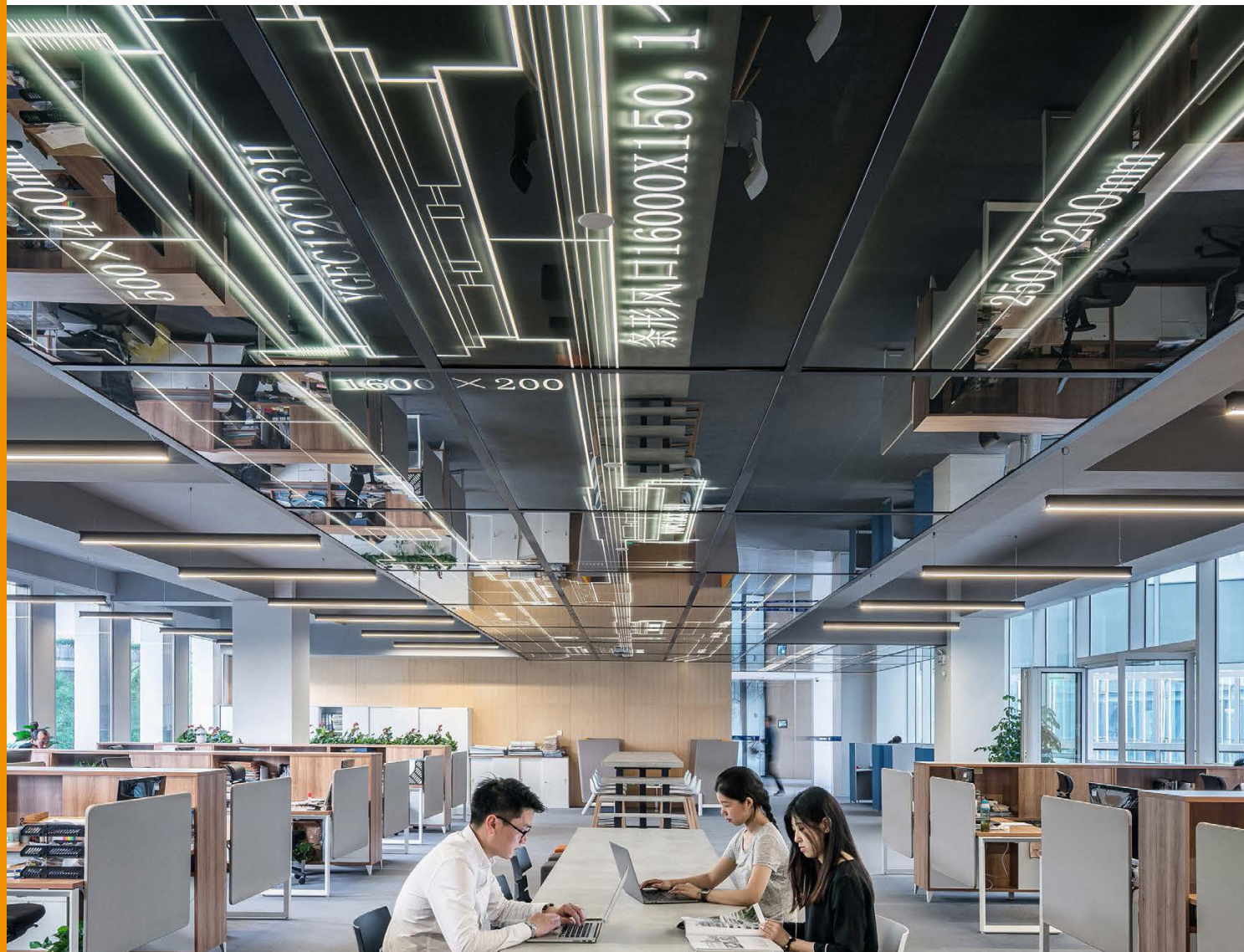
Ready-Made Results
Expert Support

“

We were really content with the course! It was very instructive and allowed us to reflect about our own thinking and especially processes. I liked your rich practical stories. It’s helpful to get insights from 3 different (but all highly regulated) branches of industry (aerospace, medical, military).

3-Day Company In-House Bespoke
SE-Foundations Course

Medical Technology Manufacturer



What can we do for you?

Our mission is to deliver high-quality Engineering Services through international experts to enhance, support and develop your Enterprise Engineering Capabilities.

Advancing Engineering Capabilities

Coaching, Process Development, Reviews and Tools Selection.

We provide tailored solutions to support your work within complex product development and build your organisational capabilities.

Are you a medium to large Enterprise? Have you noticed one or more of the following:

- Becoming aware that the increasing technical complexity of your products is causing delays in schedules and cost overruns.
- Identifying a need for greater technical leadership in your development teams.
- Realising that there are benefits to modelling complex systems and enabling more efficient and effective systems architectures.
- Considering the benefits of integrating a tool to optimally support the objectives of Systems Engineering.

Then our expertise can help.

Training Solutions

Targeted to your organisational needs.

We offer a broad range of Engineering training solutions. From our advertised in-house training courses (see website), which cover principal and specialty topics of Engineering to fully integrated professional development training programmes, targeting specific project and organisational roles (junior to senior).

What makes us different is our flexible approach. We will tailor the content, integrate course modules or develop new material to deliver a unique blended training solution that meets your requirements.



Training

In-house training, developed to the specific needs of your organisation.

Our Engineering courses and training programmes are the ideal solution for Enterprises who want to foster innovation, improve multi-functional collaborations, and enable complex product development.

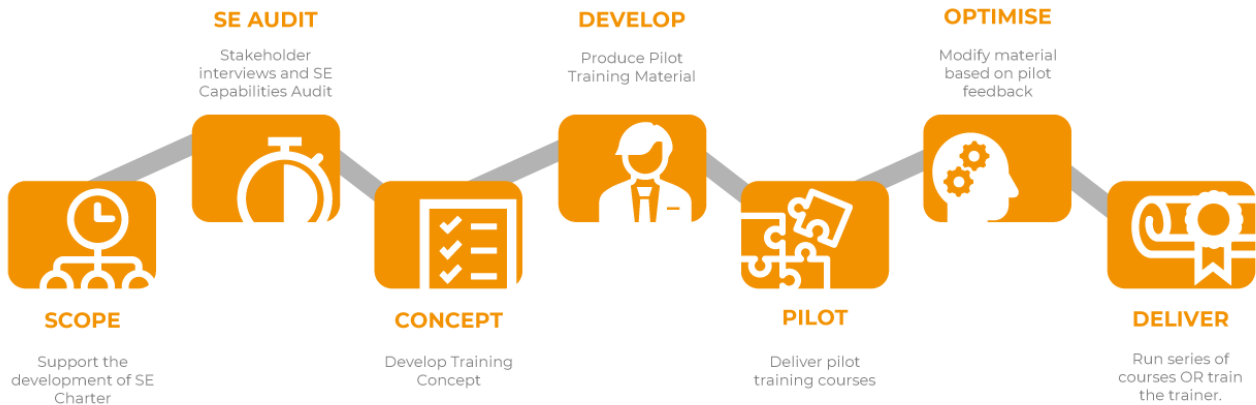
Working with you, we establish your required outcomes to determine which training options would be most beneficial to your team/project/or Organisation e.g. attending one of our existing training courses or developing a specific training programme which is targeted to your unique needs.

We will find the most suitable and complete training solution to ensure you address professional development universally and efficiently across your teams.

Training Benefits



Tailoring Process



Interview and Audit

Creating a tailored training programme is initiated with interviews of the project sponsors, leading to a thorough assessment of your team’s training needs.

Key factors considered are:

- Enterprise goals and constraints
- Industry needs
- Education, skills and experience of employees
- Level of complexity of Systems under development

Proposal and Recommendations

Following our assessment, we propose a training programme, designed to meet your specific requirements.

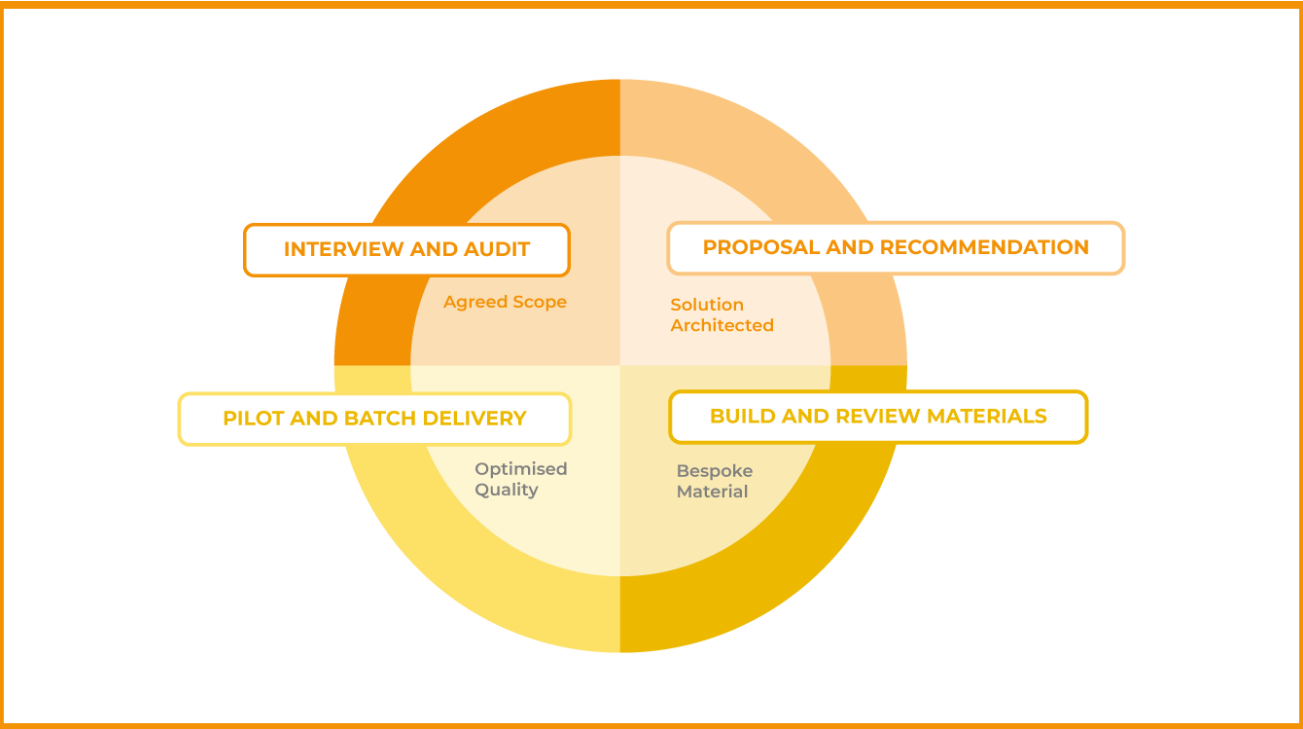
We may suggest:

- Technical training is delivered by several experts, so you receive the highest quality teaching in each identified area.
- Integrating or tailoring one/or more of our existing training courses into your overall training programme.
- Employing a project coach to further boost the implementation, development, and continuous improvement of your Enterprise’s capabilities

We can also tailor the content of any of our existing in-house courses by:

- Including activities in the modules specific to a given domain, such as MedTech, Aerospace etc.
- Tailoring the workshop to a domain specific example (our standard workshop is the Colonisation of Mars).
- Integrating modules from other SE-Training courses, for instance on Systems Reliability, MBSE or Configuration Management.
- Developing new modules on unique subjects, such as Acoustics Systems Engineering.

Tailoring Process



Develop and Review Materials

Based on the agreed proposal, we will develop and refine your training programme so it is comprehensively tailored and targeted to your project needs (processes, methods, skills etc.).

Pilot Batch and Delivery

Depending on the scope, content, and size of the training programme, we may propose developing *pilot courses as part of the overall series course development.

How we deliver the pilot and series delivery is assessed on an individual case-by case-basis.

**These offer added value and assurance to our customers, by acting as highly effective risk mitigations. We advise they are attended by experienced employees to give early feedback on the quality of the content.*



Coaching

Expert support that is tailored, targeted and timely.

Our coaching will provide you, your project, and your team with a supportive, incremental, and multi-phase structure to effectively aid the implementation, development, and continuous improvement of your Enterprise's capabilities.

We meet you where you are.

Irrespective of your Enterprise's Engineering maturity, our coaching approach enables us to adapt and enhance your capabilities to your required goals.

Areas of Coaching

We provide coaching across many areas of Engineering, for example:

- Technical Leadership
- Requirements Engineering and Management
- Model Based Systems Engineering
- Systems Engineering Management
- Systems Architecting
- Configuration Management
- Design for Reliability Service Outcomes
- Extensive Design Trade-Offs
- Lifecycle Management
- Risk Management
- Integration, Verification & Validation Strategy
- Project Tracking

Our Approach

Our coaching structure provides intense, effective, and focused blocks of time (days, weeks, or months) for phased activities, tailored to your specific needs.

- We allocate you the expert coach(es) best suited to support you and your unique needs.
- Your coach(es) will be available to you for an agreed period, with time dedicated for documenting, reviewing, and planning.
- Your coach(es) will work alongside your team in their normal working environments.
- You and your coach(es) will implement a flexible working style with minimal resource dependencies.

Service Outcomes



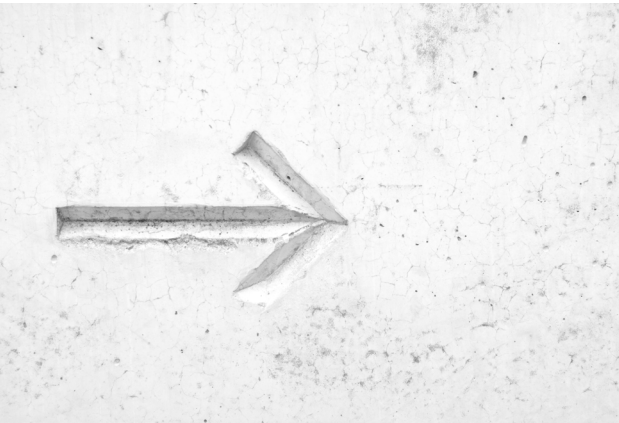
Improved Team Performance

Ensure confident and motivated teams by promoting opportunities for them to grow; identifying their strengths and expertise, and leveraging them to effectively apply cross-functional Engineering disciplines on your project.



Tailored Processes

We work alongside or integrate within your project team to tailor and optimise your processes, tools, and organisational management - creating a streamlined and systematic development approach.



Reduced Complexity

We implement and optimise processes to help reduce and effectively manage the Systems complexity across the Lifecycle.



Process Development

Optimising your technical and organisational processes.

In our work, encountering complexity is inevitable and can become all consuming. By optimising and streamlining processes we are more able to focus on innovating products.

The Importance of Processes

Processes help to align and orientate Organisations. Processes are the pathways that lead us to our goal; they allow us to overcome obstacles, adapt to changes and take different directions. Therefore it is imperative to have a strong, strategic, and harmonic network of processes which support and enable efficient and effective working practices

Process Development for Effective Working Habits

Processes should help you, not hinder you. Yet, too often, the opposite is true. Organisations can find themselves operating with ineffective processes due to:

- Outgrowing traditional operations.
- Overly designed processes that do not account for operational day-to-day reality.
- ‘Processes’ that have become cultural habits, formed because there were no alternatives in place.

Assessment

We make an initial assessment of the current status of your Organisation’s Engineering processes to identify processes that can be optimised, replaced and/ or retired.

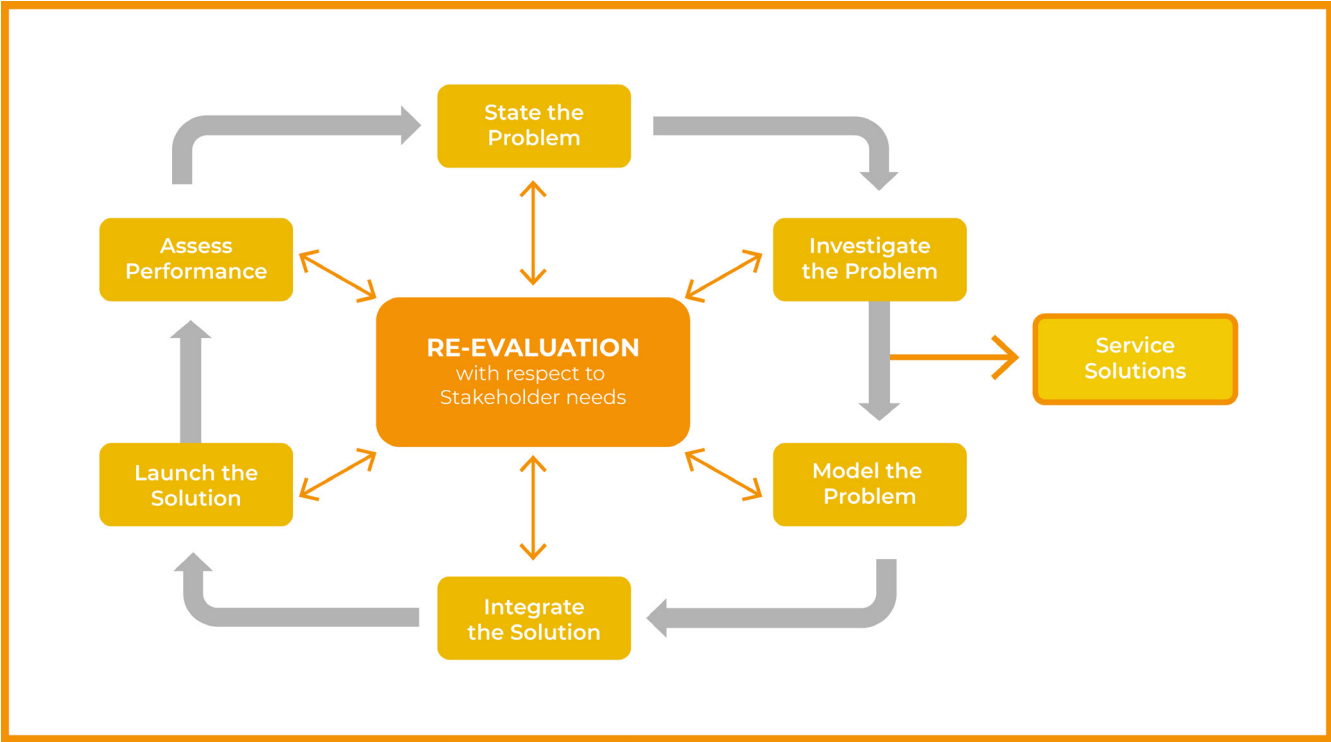
Workshops

We devise a training workshop (circa. 5 days) to address pain points and train your team on SE Methodologies and processes with specific references to current tools and systems used. We will explore how the process changes will impact on current work practices and build your foundational knowledge of SE principles to support all other areas.

Development

Together we will monitor the system changes and ongoing deployment of process development, adjusting until work practices are optimised and established.

Desired Service Outcomes



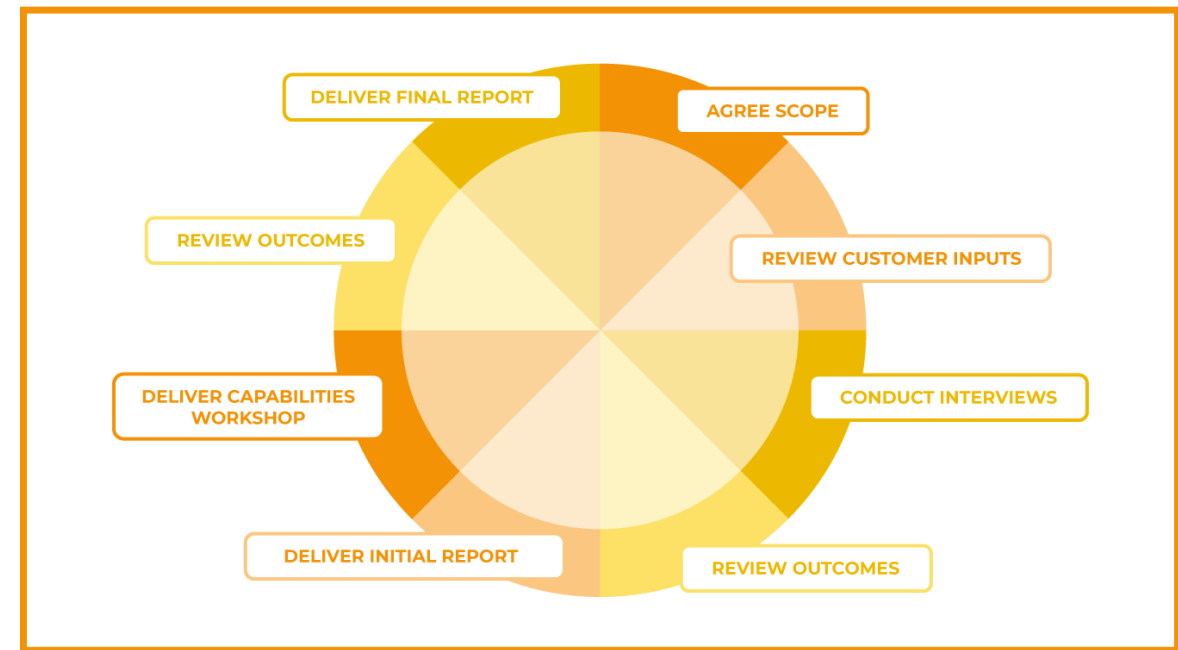
Before	After
Process is misaligned with business strategy.	Processes are highly valued and adhered to by the team.
Reductionist approach to product development.	Holistic approach to product development.
Poor expectations of key stakeholders.	Key stakeholders have confidence in the team.
Unidentified technical risks frequently occur causing cost overruns and delays.	Confidence in cost and schedule estimates.



Engineering Reviews

The first step in maturing your Enterprise's capabilities: Identify where you are.

We have a flexible approach when it comes to conducting our reviews. Adapted to your circumstances, we focus on multiple or single areas depending on your Engineering, Organisational and Project Needs.



Engineering Reviews: FAQs

What do we do?

We provide unbiased assessments and reviews of your Organisation against its business strategy, focusing on specific areas such as: your organisational set-up, the skills of the employees, current business processes, company culture, and reward systems.

What's the value of a review?

Having an objective and independent review will:

- Provide validation, assurance, and credibility in specific areas.
- Confirm if your processes are correctly implemented and meet organisational objectives and/or standards.
- Uncover areas where you need additional assistance e.g. product delivery.
- Provide innovative ideas for process improvements.
- Develop capabilities.

Who conducts the review?

One or more of our experts will carry out your review. This will be dependent on their areas of expertise to ensure you have the most suitable person(s) assigned.

How will it be conducted?

Depending on the scope of work we offer reviews in several means and durations e.g. as half-days focusing on a specific area, or in blocks of 1 to 2 weeks offering in depth reviews of the organisational set-up. In addition, we offer reviews against the ISO 15288 standard and other relevant Engineering standards to provide assurances of consistency within these guidelines.



Capabilities and Competencies

Development of competencies is only meaningful once we have defined the capabilities you want to have as a team or Organisation, aligned with the desired project outcomes or organisational mission. Once these are identified we will then compile a comprehensive and realistic map of the resources available to you, so you are able to achieve your goals. We can guide you through the tricky process of defining capabilities, maximizing existing resources or acquiring new ones, and ensuring you are complying with standards.



Capabilities

The essence of what an Enterprise needs to establish and mature, enabling itself to remain innovative and competitive. Difficult to define tangibly.

Competencies

These can be targeted to realise capabilities. These are measurable, extensively described, and documented. They are tangible.

Resources

Development of competencies is achieved through many means, e.g., training, tailored processes, establishing effective tool-chains, and designing systems which are supportive of the competencies.

Enterprise SE Effectiveness	--	-	0	+	++
Strategy					
Capabilities					
Structure					
Processes					
People					
Culture					
...					

Tool Selection

Determine the optimal ‘tools suite’ for your technical and organisational needs.

Identifying the optimal tool integration for your Organisation can be an intimidating and challenging process. There is no one-size-fits-all-systems modelling tool.

An accurate and systematic analysis of needs is vital to the tool selection process. Our experts will lead you through a thorough exploration of your requisites and match you with the correct tools for your Organisation.

Key Criteria	Option 1	Option 2	Option 3	Option 4	Option 5
Performance	+	0	-	-	0
Functionality	0	0	0	0	+
Cost Per User	-	+	-	0	-
Integration Cost	-	+	+	0	+
Usability	+	+	+	+	+
Scalability	+	+	+	+	+
Integration to Existing Tools	+	+	+	+	-

The Selection Process

Initial Assessment

- Identify gaps and limitations of the current Engineering tool environment.
- Understand the business case for tool integration.
- Capture the expectations of internal and external stakeholders.
- Document conclusions for ‘as is’ status and validate findings.

Definition

- Define the ‘to-be’ tool environment.
- Capture the expected features of the ‘to-be’ tool environment.
- Derive and define the detailed tool requirements and their attributes.
- Define and document the user roles, use cases and the ‘to-be’ Tool architecture.

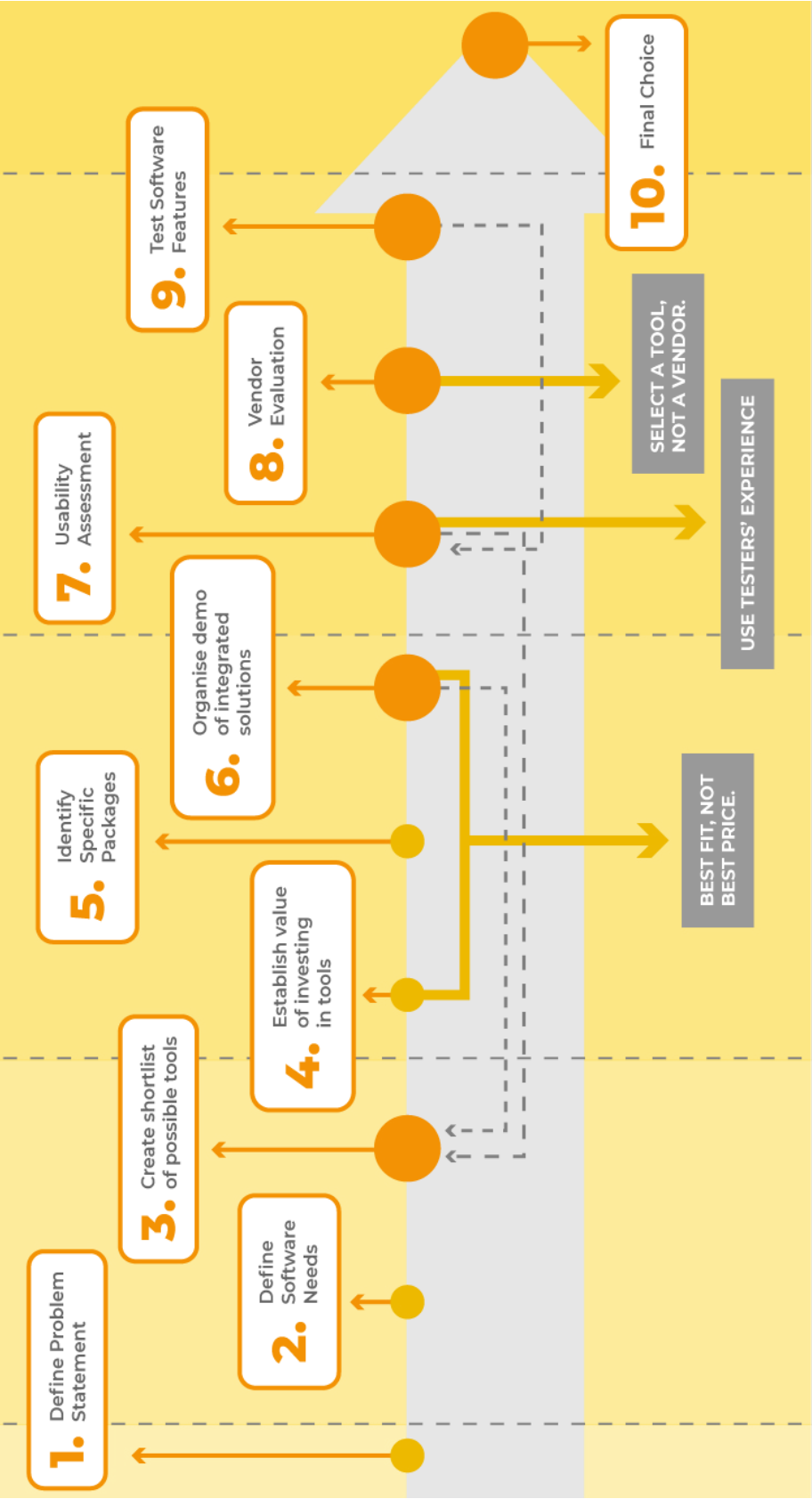
Procedure

- Document the traceability between the availability of tools and defined requirements.
- Develop a use case example to be used during tool vendors evaluation workshops.
- Manage tool vendor evaluation workshops to demonstrate tool capabilities and create usability assessment.
- Test software features before making a final decision on which tools to implement.
- Document findings in the ‘Request for Proposal’ with tool selection decision.

Implementation

- Working with trusted partners we can implement your specific ‘tools suite’ to ensure an optimal end-to-end solution for your Organisation.

10 Checkpoints for Tool Selection



SE Solutions

Solutions to help you deliver the results you need in less time.

Ready-Made Results

We provide a range of downloadable, off-the-shelf, solutions that are designed to fit and adapt to your environment and deliver the results you need.

- These include:
- Document templates
 - SE Guides
 - Recruitment resources

Documents simplified

We provide specific, structured, in-depth templates which give you the steppingstone to completing high quality, standard compliant documents. With pre-designed, comprehensive formats that are easily modified and ready to personalise you can avoid document disorder and begin streamlining work practices.

Let us guide you

Our downloadable guides and manuals are an essential resource for your Organisation and an effortless way to seamlessly maintain your records. You can be assured that they are up to date, relevant and reliable.

Recruitment resources

We offer a range of solutions to support your Systems Engineering recruitment process, including job descriptions and interview activities and questions. These are written to ensure you select the most suitable candidate for your Organisation.



Expert Support

In need of some inspiration?

Often, we are too close to our own projects and could benefit from someone objective to impart their knowledge and perspective to give us a steer in the right direction

We offer expert advice for your System Engineering issues. You can arrange an exclusive session with one of our SE-Experts who will offer you invaluable and objective advice to any of your questions.

In addition, we offer:

- Expert Peer review of a document, Engineering process, design solution etc.
- Expert advice for recruitment of Systems Engineers.
- Expert moderation for project workshops e.g. for the development of a Functional Architecture.



WHERE CAN WE TAKE YOU?

 SE-Training GmbH

 info@se-training.net

