Implementation Strategy Report

Authoring partner:

CATRO Bulgaria

www.smeraldproject.eu

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Introduction – Why SMERALD?

Running a small or medium business today means dealing with constant change – new technologies, new markets, and new ways of working. One of the biggest shifts is the growing importance of **data and artificial intelligence (AI)**. These tools are no longer just for large corporations – they can help SMEs make better decisions, save time, and discover new opportunities.

That's where **SMERALD** comes in. SMERALD is a learning approach designed especially for SMEs and VET professionals to build practical skills in working with digital data and AI.

Our pilot trainings in six countries showed that SMEs are eager to develop these competences but often lack **time, resources, and tailored training**. SMERALD was created to fill that gap by offering flexible, step-by-step learning that fits different business contexts.

What's in it for you?

- Learn how to use data and AI to improve everyday decisions.
- Train your team without big costs or long interruptions.
- Access practical tools and examples tested by real SMEs.

The SMERALD approach explained

The SMERALD approach is based on three simple principles:

1. **Competence-based learning** – focus on what people can actually do with data and AI, not just on theory.
2. **Flexibility** – training can be adapted to your team size, sector, and schedule (face-to-face workshops, blended learning, online self-study, or even hackathons).
3. **Practical relevance** – everything is designed to be applied directly to real business tasks and challenges.

Who is it for?

- SME managers who want to make smarter, data-driven decisions.
- Employees who need to use digital tools more effectively in daily work.
- VET professionals who support SMEs with training and upskilling.

Unlike many "one-size-fits-all" training programmes, SMERALD works with **concrete examples and feedback**. This way, learning is connected to your business reality, whether you run a small local shop, a growing tech startup, or a training center.

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What's available for you

The **SMERALD Learning Platform** is here to support small and medium-sized enterprises (SMEs) and vocational education and training (VET) professionals by offering flexible, competence-oriented training in AI and data analysis. The platform is like a friendly space where you can explore AI-driven innovations and data applications at your own pace. You can choose modules that fit your professional needs, making learning fun and easy!

It is a user-friendly, moodle-based platform where you register for free and pick the courses and learning units you would like to explore. Our platform caters to beginners and experts alike, offering personalised learning in data analysis and AI. It works in 4 simple steps:

1. **Assess your starting level:** Start by taking a look at where you're at right now. Use the SPIDER Questionnaire to assess your AI and data analysis abilities, and think about what you already know. This handy tool will help you see what you're good at and what you need to learn more about, so you can make sure the course is just right for you.

2. **Pick your course**: Have a look at all six courses on offer and choose the ones that suit your interests and needs. The learning offer is divided in two main categories: courses for trainers (focusing more on the training approach) and courses for everyone, incl. SMEs (focusing on the training content). You can choose between:

- Data Analysis - This course provides a comprehensive journey through the data lifecycle, from discovering and cleaning raw datasets to analysing and visualising insights effectively. By mastering these essential skills, learners will be equipped to transform data into actionable, impactful results.
- Artificial Intelligence - This course is modular, specifically designed for SME professionals and trainers who want to explore the potential, usability and responsible integration of AI tools into daily business practices. The course structure follows a practical and reflective learning journey based on the LEVEL5 framework and the SMERALD competency model, ensuring that learners build knowledge, skills, and attitudes in a balanced way.
- Facilitation of Design Thinking Workshops – The Design Thinking method provides us with a systematic and structural approach to solving complex problems from many fields and to find new solutions that meet the needs of those involved. It is often used in the field of idea and innovation development and is based on a multi-step, agile and iterative process. This course explains the steps of the design thinking process and provides a number of tools which can be applied to facilitate each step.

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- SMERALD Competence Framework – This module is based on the LEVEL5 approach, a taxonomic system developed for competency-based learning and validation. The course can be used both for self-study and in trainer-led blended learning settings. Each thematic block provides an introduction to several competence areas, descriptions of the key competences with clear links to practical application in SME contexts, reflection activities that encourage learners to map their personal development journey and guidance for trainers on how to facilitate competence acquisition using real-life projects and LEVEL5 validation tools.
- The LEVEL5 Approach - LEVEL5 uses a three-dimensional model that recognises the development of Knowledge (cognitions): Understanding digital data, data analysis and AI concepts; Skills (actions): Applying digital data techniques and tools in practical business scenarios.; Attitudes (emotions and values): Cultivating a proactive and adaptive mindset towards digital transformation. The model categorises competencies into five quality levels, ranging from novice to competent expert. It provides a structured method for designing and planning informal and non-formal learning experiences, while validating competences in specific practical contexts.
- Competence Oriented Learning and Validation – This module is divided into four learning units with different focuses, which can be worked through individually: 1) Educational trends and background, 2) Competence theory and acquisition, 3) Validation, 4) Planing COL and validation.

3. **Start learning:** You can learn at your own pace. You'll have access to all sorts of interactive learning materials, like videos, presentations, real-world case studies, and hands-on activities.

4. **Get practical:** You'll also get to engage in practical activities, like applying your learning through exercises, simulations, and real-world challenges designed to bridge theory and practice.

What else you will find on our website

The SMERALD Business Cases inventory

In today's rapidly evolving digital landscape, small and medium-sized enterprises (SMEs) stand at the forefront of harnessing the power of data analytics and artificial intelligence (AI) to drive innovation and competitiveness.

This interactive inventory presents a comprehensive analysis of **53 best practices and case studies across Europe**, delving into the strategies and approaches adopted by SMEs to leverage data analysis and AI on a global scale. Check it out and dive into the entrepreneurial landscapes across various European countries.

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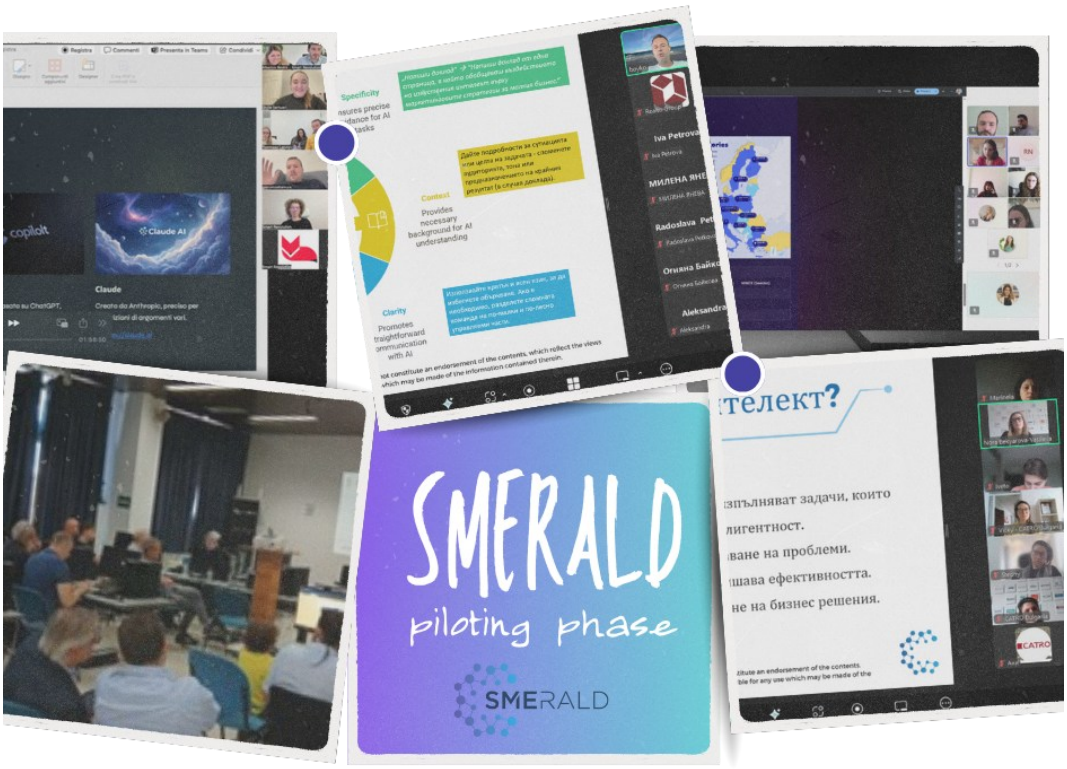
Virtual Information Session on AI and Data for SMEs

Check-out the video recording from our online event held within the Erasmsus days 2024, designed to help European SMEs harness the power of artificial intelligence and data analysis for business growth. Don't miss the part (starting at 37:00) by our keynote speaker Dr. Lisa Hilte from VAIA - Flanders AI Academy – one of the business cases included in our inventory. Dr. Hilte holds a PhD in linguistics and serves as a lecturer and researcher at the University of Antwerp. Her research integrates sociolinguistics with computational linguistics, and she teaches vital skills such as statistics for the humanities and courses on digital tools and AI in business. As VAIA's liaison for the University of Antwerp, she connects academia with the business sector, promoting AI knowledge among Flemish professionals and researchers.

In our Youtube channel you can also find several interviews with experts from Italy, Greece and Poland working in the fields of AI and data analysis. Check them out to see how AI and digital data are being utilized in different sectors, the relevant key competences required in SMEs, and the challenges faced in integrating these technologies.

Lessons from the pilots



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The SMERALD approach was tested across **four European countries**: Bulgaria, Germany, Greece and Italy in the form of pilot trainings implemented by **six different organisations** over the period April – June 2025. We reached **86 people in total** from various backgrounds:

- **Bulgaria** - **11** SME managers and employees – mostly HR consultants and trainers, specializing in different business services (related to career consulting & training) – but also a global programme manager, a business partner, managing director, HR senior expert from larger companies.
- **Germany** – **16** project coordinators, learning designers, communication and content creators, administrative and support staff, financial administration + **4** people with background in film production, art direction, and 3D visualisation.
- **Geece** – **12** experts involved in EU project management, networking, proposal creation, and IT development.
- **Italy** – **9** SME managers, employees and interns + **9** SME manager, project managers, education specialists, administrative staff + **25** SME managers and employees (mainly from the tech and consulting sectors), VET professionals (trainers and coordinators), representatives from public administrations (local and national level), civic tech experts, and members of the open data community.

BULGARIA

What happened

CATRO ran two pilots – one internal hybrid workshop for their own team (as an SME) on April 2nd 2025 and one external online workshop with other companies, which took place on June 12th 2025. Both were short workshops (2 hours), focusing on AI tools and prompt engineering, with interactive exercises adapted from the SMERALD platform.

What worked well

- **Strong demand:** registration for the external pilot exceeded expectations, showing high SME interest in AI skills.
- **Interactive tasks**, such as using ChatGPT for data analysis, helped participants immediately connect theory to real business practice.
- The internal pilot proved that SMERALD can **strengthen SMEs from the inside**, as a capacity-building tool for staff.
- Peer-led delivery by the CPD-trained team ensured **high-quality facilitation and ownership.**

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Challenges & how they were handled

- Many more people registered than actually attended, reflecting the reality of SME schedules. Smaller groups, however, turned out to encourage deeper discussion and easier facilitation.
- With only 2 hours per session, the workshops had to focus on core skills (prompting and basic AI use), leaving little time for advanced exploration.
- Participation was entirely female, pointing to the need for broader outreach in future trainings.

Key takeaways

The Bulgarian pilots confirmed that SME staff are eager to explore AI, provided training is short, practical, and scenario-based. Internal peer-learning formats work just as well as external workshops, while trainer collaboration and preparation are key success factors.

Case example: Role Play

In the external pilot, participants role-played as employees of a printer company struggling with monthly sales analysis. By working in groups with pre-prepared datasets, they used ChatGPT to streamline reporting tasks. Even first-time users quickly saw how AI can reduce workload and improve accuracy, making the benefits of SMERALD training tangible.

GERMANY

What happened

The German partner also executed two pilots: one internal for the company and one external for a video production company, whose employees were invited to join the CPD training in Palermo. The first pilot was structured as a one-day blended training session, combining face-to-face elements with video conferences. The session was designed around a modular concept that allowed colleagues to engage hands-on with AI tools, reflect on their potential, and test their application directly in relation to daily business tasks. The other pilot unfolded across several key phases: Half-Day Onboarding Workshop, CPD training, Post-Training Follow-up (2 Remote Sessions).

What worked well

- The blended format was effective: participants valued the flexibility of online learning combined with hands-on group work.
- Practical exercises, such as role-playing business scenarios, helped learners see the direct application of AI in their companies.

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- Trainers reported strong engagement and curiosity, with learners actively testing tools during the sessions.

Challenges & how they were handled

- Some participants struggled with the online platform initially, but extra guidance and technical support resolved most issues.
- Balancing different levels of digital competence required careful facilitation, with more advanced learners helping others.

Key takeaways

The German pilot showed that the SMERALD approach works well in mixed learning settings and that real-world exercises are essential for connecting digital skills to SME needs. Peer support, both among participants and trainers, played a crucial role in success.

Case Example: KanalVier (Creative SME, Germany)

KanalVier, a small media company, joined the SMERALD training to explore how AI could support their client work. Over four days, they developed a prototype **AI-powered client assistant** that helps visualise concepts and storyboards faster. This gave them a concrete tool to test in real projects, saving time in early client interactions. However, they also discovered challenges around data protection and limited staff capacity — showing that **AI adoption needs both creativity and careful planning.**

GREECE

What happened

EUROTRAINING ran an online pilot on April 28, 2025, with 12 employees (project managers, networking officers, and IT developers). The 2-hour workshop combined a guided introduction to the SMERALD platform with practical activities in AI tools, prompt writing, data cleaning, and data visualisation.

What worked well

- All participants registered on the SMERALD platform beforehand, which made it easier to integrate the online content with the live session.
- The Competence Spider and LEVEL5 assessments helped participants see their progress, giving a clear sense of competence development.
- Hands-on practice — from creating AI-generated quizzes to visualising real EUROTRAINING project data with Flourish — made the session highly relevant to their daily work.

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- The modular, micro-credential approach was well received, as participants could personalise their learning path.

Challenges & how they were handled

- The 2-hour slot was enough for an overview but limited deeper discussion on topics like ethics and sustainability.
- Online delivery reduced informal exchanges but allowed immediate tool testing through screen-sharing and live feedback.
- The Competence Spider and LEVEL5 tools were initially unfamiliar, causing some confusion. Trainers clarified their purpose, and participants appreciated the personalised insights after trying them.

Key takeaways

The Greek pilot confirmed that the SMERALD approach works well in a fully online format. Learners valued the mix of autonomy (choosing modules) and structured guidance. Competence validation tools not only measured progress but also boosted motivation. Flexibility, combined with practical application to real company data, proved essential to learner engagement.

> **Case example: From data cleansing to data visualization**
> Using data from EUROTRAINING's own projects, participants grouped initiatives by themes (e.g., Green Transition, Digital Transformation) and cleaned the dataset in Excel. They then used Flourish to create interactive visualisations, making it easy to explore projects by category. This exercise showed how open data and simple tools can turn raw information into clear, engaging stories for stakeholders.

ITALY

PILOT 1

What happened

The SMERALD pilot at DataNinja was conducted remotely between April and May 2025. Nine internal participants, including the SME manager, project managers, education specialists, and admin staff, joined the pilot. Facilitators were team members who had attended the SMERALD CPD in Palermo. The pilot combined self-paced learning on the SMERALD platform with live online reflection meetings to discuss experiences, integrate learning, and explore practical applications.

What worked well

- **High engagement:** All participants completed the Competence Spider self-assessment and explored relevant modular content on the platform.
- **Flexible learning:** The micro-modular structure allowed participants to select content most relevant to their roles.

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- **Effective reflection:** Live sessions encouraged discussion on integrating SMERALD content into Dataninja's external training offers and strengthened internal collaboration.
- **Pedagogical value:** The approach provided inspiration for designing future learning experiences, especially around data and AI literacy.

Challenges & how handled

- **Time constraints:** Ongoing project work limited deep exploration; participants managed this by focusing on the most relevant modules.
- **Limited interactivity in self-paced modules:** Recognized as an area for improvement; follow-up reflection meetings helped reinforce learning.
- **Navigation clarity:** Some participants found the sequencing of modules confusing; facilitators guided participants and shared tips for smoother progression.

Key takeaways

- The Competence Spider effectively guided learners in choosing modules aligned with their skills and interests. A self-paced, modular approach suits digitally mature, multidisciplinary teams. Live reflection meetings complement self-paced learning, enhancing collaborative understanding and practical application. Minor platform refinements could further improve usability and engagement.

Case example: Gaining inspiration and building on SMERALD
During the reflection meetings, participants brainstormed ways to incorporate SMERALD content into DataNinja's client-facing training services. This led to concrete ideas for creating AI literacy modules tailored for external clients, demonstrating how the pilot both built internal capacity and inspired practical extensions beyond the organization.

PILOT 2

What happened

The SMERALD pilot at Smart Revolution ran internally across its Turin and Massa offices from February to mid-April 2025. Nine staff members participated, testing AI tools in selected work areas: proposal writing, external communication and marketing, and presentations. Two facilitators, previously trained in the SMERALD CPD in Palermo, guided the pilot, designing materials (a PPT "AI Introduction", a

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Vademecum on AI tools, and a shared learning diary) and delivering synchronous training sessions. Participants also had access to SMERALD online modules relevant to prompt engineering and GenAI workflows.

What worked well

- **High engagement and adoption:** All participants tested at least three new AI tools, integrating at least one into daily work.
- **Broadened scope:** Beyond the initially identified areas, participants explored AI in project revision, reporting, translation, and brainstorming.
- **Training materials utility:** Developed resources became part of onboarding for new staff and interns.
- **Relevance and satisfaction:** Staff considered the pilot highly useful, appreciating its tailored, practical approach.

Challenges & how handled

- **Time management:** Busy schedules required reminders to update the learning diary; bi-weekly meetings provided structured feedback and sharing opportunities.
- **Tool updates:** Maintaining current knowledge of AI tools was noted as a challenge; regular review and adaptation of materials were used to address this.

Key takeaways

The SMERALD methodology can be contextualized to specific organizational needs while remaining modular and flexible. Combining synchronous training, self-paced learning, and hands-on experimentation promotes competence and confidence in AI use. Replicability and scalability are strong: materials can be reused for onboarding and in similar SMEs with minimal adaptation.

Case example: AI for Project Management
Participants tested 10 AI tools including ChatGPT, Canva AI, Notion, Gemini, and Claude AI. One participant integrated ChatGPT for drafting proposals, reducing preparation time, while another used Canva AI for social media content creation, demonstrating immediate workflow improvements and practical applicability of the pilot's learning approach.

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PILOT 3

What happened

The third Italian pilot consisted of a one-day, face-to-face workshop held in Palermo on June 13, 2025, organized by CNR-ITD with support from experts in open data, digital policy, and AI-driven technologies. Participants included 25 professionals from SMEs, VET providers, public institutions, and civic tech organizations. The workshop combined keynote-style presentations, live demonstrations, and a hands-on Datathon, progressing from policy and regulatory frameworks (e.g., the Data Governance Act, AgID standards) to practical applications of AI and open data. Participants collaborated in groups to experiment with Large Language Models (LLMs) for data extraction, text analysis, and workflow creation.

What worked well

- **High engagement across sectors**: participants actively collaborated in group exercises, demonstrating strong interest and motivation.
- **Clear integration of policy and practice**: contextualizing AI tools within European and national frameworks helped participants understand relevance and compliance considerations.
- **Hands-on, experiential learning**: the Datathon format allowed non-technical participants to gain practical experience with LLMs and open data workflows.
- **Modular approach**: even in a single-day intensive session, content could be broken into replicable learning modules suitable for future workshops or VET programs.

Challenges & how they were handled

- Diverse prior knowledge: participants had varying familiarity with AI and open data, making it difficult to maintain a uniform pace. The facilitators mitigated this by grouping participants and providing tiered guidance during exercises.
- Limited time for personalized support: the intensive format constrained one-on-one mentoring. Facilitators focused on group-based learning and peer support to maximize practical exposure.
- Lack of formal evaluation tools: the pilot did not use Competence Spider or LEVEL5 validation, making it harder to measure learning outcomes. This limitation was noted for future iterations.

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- Need for post-workshop follow-up: some participants requested additional resources to consolidate learning; facilitators recommended creating supplementary materials and follow-up sessions.

Key takeaways

SMERALD's competence-oriented, modular approach is effective for cross-sectoral, non-technical audiences. Short, intensive workshops can successfully raise awareness and build foundational skills when structured progressively from theory to practice. Hands-on, collaborative exercises empower participants to experiment with AI tools even without prior technical knowledge. Future pilots could benefit from integrating assessment and micro-credentialing mechanisms, as well as hybrid or preparatory online phases to improve readiness.

Case example: AI for non-technical users – mission possible?
During the Datathon, participants worked in small teams to use LLMs for analyzing open datasets, extracting key insights, and producing simple visualizations. One team successfully created a workflow to classify project data by thematic areas, demonstrating how AI could assist SMEs and VET providers in managing and interpreting complex information efficiently. This practical exercise highlighted both the accessibility of AI tools for non-technical users and the potential for cross-sector collaboration.

More on each pilot you can find in the **Piloting Experience Reports** that can be provided upon request.

Guidelines for implementation in your SME

The SMERALD methodology has been tested across different contexts and SMEs. The pilots showed that its flexibility and competence-oriented design make it highly adaptable, but also highlighted where refinements help make it more usable in everyday SME realities. Based on these lessons, here is a **step-by-step guide for SMEs** that want to bring data and AI-related skills into their organization. With these steps, SMEs can implement SMERALD in a practical, low-barrier way — starting small, involving staff from different roles, and building competence in manageable increments, while ensuring reflection and validation anchor learning into real business impact.

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Step 1: Prepare and onboard your team

- **Clarify why it matters**: Start by identifying areas in your business where AI or data competences could bring immediate value (e.g. marketing, HR, operations, customer service).
- **Provide orientation**: Share simple onboarding materials before training begins — a short video, FAQ, or case examples to show what SMERALD is and what tools (e.g. LEVEL5, Competence Spider) will be used.
- **Set expectations**: Make clear how much time is needed, what format will be used (online, blended, or F2F), and what practical outputs will result.
- **Secure leadership support**: Involve managers or team leads early to foster buy-in and help staff see training as a priority, not an "extra task."

Step 2: Choose the right learning path

- **Adapt to roles and skills**: Offer examples relevant to different SME functions (project managers, marketing staff, creative employees, trainers, etc.).
- **Modularize**: Break content into small, digestible units (e.g. 30–60 minutes) that staff can complete during work breaks or in short sessions.
- **Differentiate levels**: Provide basic and advanced tracks, or optional "deep-dives," so both beginners and experienced staff benefit.
- **Blend formats**: Combine self-paced online units with short face-to-face or live sessions to deepen learning and enable reflection.

Step 3: Organize learning efficiently

- **Plan for limited time**: SMEs often cannot spare full training days. Organize learning in short modules (e.g. 2-hour workshops, "lunch-and-learns").
- **Use ready-to-go materials**: Toolkits, editable exercise templates, or pre-made scenarios save trainers and teams time.
- **Encourage prototyping**: Have participants apply tools to small, real company problems — e.g. testing an AI tool for customer feedback analysis, or creating a prototype workflow. This bridges theory and practice quickly.
- **Support trainers**: If training is delivered externally, ensure trainers are familiar with the SMERALD platform and have example lesson flows aligned with competences.

Step 4: Support practice and reflection

- **Create space for reflection**: Add structured moments where learners answer prompts like "How could I apply this tomorrow in my role?"

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- **Peer learning**: Encourage small group exchanges or short reflection meetings. This was one of the most appreciated elements across pilots.
- **Provide follow-up resources**: Offer short guides, recorded demos, or FAQs so staff can refresh knowledge after the training.
- **Mentoring and feedback**: Where possible, organize optional mentoring or check-ins to help consolidate new skills.

Step 5: Validate and recognize learning

- **Use light-touch validation**: Even simple self-assessment checklists, reflection templates, or peer-feedback forms help staff see their own progress.
- **Apply competence tools**: The LEVEL5 framework and Competence Spider can be used for deeper evaluation, supporting both self-reflection and external validation.
- **Micro-credentials**: Break larger training into micro-modules that award badges or certificates. This increases motivation and helps staff build a visible competence portfolio.
- **Embed into HR processes**: Where possible, link competence validation to internal recognition systems (e.g. performance reviews, promotion criteria).

Step 6: Ensure sustainability

- **Update content regularly**: AI tools evolve fast. Assign someone to check for updates or integrate fresh case examples every few months.
- **Address legal & ethical aspects**: Include short sessions or resources on data protection, bias, and responsible AI use — key for long-term acceptance.
- **Reduce barriers**: Provide troubleshooting guides (login, connectivity, tool setup) and ensure staff know where to turn for help.
- **Promote a culture of experimentation**: Encourage staff to keep trying small AI-based solutions after training. Celebrate successes and share lessons across teams.

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Recommendations for success

The SMERALD pilots across multiple SMEs demonstrated that success depends not only on the quality of the learning content, but also on **how training is delivered, supported, and integrated into daily workflows**. This chapter summarizes key insights from the pilots and translates them into actionable guidance for SMEs.

By following these practical do's and don'ts, tailoring delivery to team size and sector, and actively motivating staff, SMEs can maximize engagement and successfully integrate AI and data competences into their operations.

Practical Do's and Don'ts from pilots

Do's:

- **Start with clear objectives:** Identify where AI or data competences add tangible value in your company. Tailor training content accordingly.
- **Use modular learning paths:** Short, focused units allow staff to engage without interrupting core operations.
- **Include reflection moments:** Build in structured prompts or discussions so participants can connect learning to real work.
- **Leverage hands-on exercises:** Encourage learners to apply tools in actual projects or business scenarios.
- **Provide guidance and support:** Onboarding materials, FAQs, and tool walkthroughs reduce confusion and improve uptake.
- **Involve leadership early:** Managers or team leads endorsing and participating in training increases internal acceptance.
- **Integrate competence validation:** Use self-assessment, LEVEL5, or micro-credentials to make learning progress visible and motivating.

Don'ts:

- **Don't overload sessions:** Pilots showed that too much content in a single session can reduce engagement and retention.
- **Don't neglect interactivity:** Purely passive or lecture-style content risks low attention and minimal practical uptake.
- **Don't ignore diversity of experience:** Avoid one-size-fits-all approaches; consider prior knowledge and roles when designing modules.
- **Don't assume technical familiarity:** Always provide simple instructions for accessing platforms and tools.
- **Don't skip follow-up:** Learning loses impact if there are no opportunities for practice, reflection, or mentoring.

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Adapting to different SME contexts

Small teams (up to ~10 staff):

- Use highly flexible, self-paced modules.
- Encourage peer discussion and sharing experiences, as informal reflection works well in small groups.
- Opt for short, intensive workshops or "mini-sprints" that fit around day-to-day tasks.

Medium or larger teams (10–50+ staff):

- Blend online self-paced content with scheduled live workshops to ensure consistency and engagement.
- Provide role-specific learning paths and modular content so each department can focus on relevant skills.
- Introduce mentoring or internal champions to support staff across teams.

Different sectors:

- **Service-oriented roles (marketing, communications, HR):** Emphasize AI-assisted content creation, automation of repetitive tasks, and data visualization.
- **Project-driven or technical roles:** Focus on AI tools for workflow optimization, data analysis, and reporting.
- **SMEs in regulated sectors:** Include modules on data protection, ethical AI, and legal compliance.

General principle: The SMERALD methodology is inherently flexible; success depends on matching content and delivery to the organization's size, structure, and sector-specific needs.

Tips for motivating staff to engage with training

- **Highlight relevance:** Show staff concrete examples of how AI-related learning will improve their daily work or solve real problems.
- **Empower choice:** Allow participants to pick learning modules aligned with their role and interests.
- **Recognize achievements:** Use micro-credentials, badges, or certificates to make progress visible.
- **Celebrate experimentation:** Encourage trying new tools even if results are imperfect; share lessons across teams.
- **Provide quick wins:** Start with small, actionable exercises that show immediate impact.

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- **Foster a learning culture:** Leadership endorsement, peer exchange, and regular check-ins reinforce that digital upskilling is valued.
- **Keep it dynamic:** Regularly update training materials to reflect evolving AI tools and company needs.

Beyond the pilot: future opportunities

The pilot activities carried out in Germany, Bulgaria, Greece, and Italy confirmed that the SMERALD methodology is **not only relevant for SMEs but also highly adaptable to different contexts and needs**. The pilots were an important first step. Looking ahead, there are multiple opportunities to further scale, integrate, and valorise the approach, ensuring that its benefits extend beyond the project lifetime.

Scaling and valorisation

The SMERALD methodology has proven effective across diverse SME environments, from small remote teams to larger, multidisciplinary organizations. Its modular and flexible design makes it **highly transferable**:

- **Across sectors** – from project management and marketing to HR, training, customer service, or data-driven operations.
- **Across company sizes** – whether in a micro-team or a medium-sized firm, the approach can be scaled up or down.
- **Through partnerships** – chambers of commerce, business associations, and digital innovation hubs can act as multipliers, helping more SMEs discover and adopt the methodology.

The platform can evolve into a **shared open educational resource**, continuously enriched by contributions from SMEs and VET providers who adapt and exchange materials.

Integration with formal and non-formal learning

Beyond stand-alone workshops or pilots, SMERALD can be **embedded in ongoing learning pathways** such as:

- **VET programs:** Training providers can adopt SMERALD modules into existing professional development courses.
- **Company training schemes:** SMEs can use SMERALD as part of onboarding, continuous learning, or team development.
- **Cross-border adaptation:** The methodology's competence-based structure allows for easy integration into different national and cultural contexts, supporting European cooperation and knowledge transfer.

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Micro-credentials and recognition

Recognition of competences is key to sustaining motivation and demonstrating the value of training:

- **Competence validation:** Tools such as LEVEL5 and the Competence Spider offer SMEs practical ways to document staff development.
- **Micro-credentials:** By linking modules to digital badges or certificates, SMEs can formally recognize new competences, supporting HR processes such as appraisals and career progression.
- **Alignment with EU policy:** The approach resonates with the European Commission's agenda on micro-credentials, ensuring future relevance and compatibility with European skills frameworks.

Future development needs

To ensure long-term impact, the SMERALD methodology should continue evolving. Some possible ways to do this are through:

- **Content updates:** AI and data tools evolve rapidly; training materials need regular updates to remain relevant.
- **Enhanced interactivity:** Integrating gamified tasks, case simulations, or collaborative online activities can increase learner engagement.
- **Legal and ethical awareness:** Growing importance of data protection, transparency, and ethical AI use should be embedded into future iterations.
- **Community of practice:** Establishing an online space where SMEs, trainers, and experts share experiences, updates, and best practices will strengthen sustainability.

Looking ahead

SMERALD is more than a training platform — it is a **framework for building a culture of digital and AI literacy in SMEs**. By scaling its use, embedding it in professional development pathways, recognizing competences through micro-credentials, and keeping the content fresh and relevant, SMERALD can continue to empower SMEs to innovate and thrive in a fast-changing digital economy.

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Conclusion: call to action

The SMERALD pilots have demonstrated that **SMEs are both willing and able to strengthen their competences in data use and AI** — provided that training is accessible, practical, and directly relevant to their work. The experiences in Germany, Bulgaria, Greece, and Italy highlight a shared reality across Europe: **SMEs cannot afford to remain passive in the face of rapid digital transformation**.

Why now?

The urgency is clear. Data-driven decision-making and the adoption of AI are no longer reserved for large corporations. SMEs that build these competences today will gain a competitive advantage through:

- **Increased efficiency** – automating repetitive tasks and streamlining processes.
- **Stronger customer insights** – using data to tailor products and services more effectively.
- **Enhanced resilience** – being able to adapt to market shifts with agility.
- **Better collaboration** – using AI tools to support knowledge sharing, project management, and communication across teams.

Those who delay risk not only falling behind competitors but also missing out on opportunities for innovation, funding, and growth.

Your next step?

Investing in data and AI skills may seem like a big leap, but the SMERALD methodology proves it can **start small**. Even a single short module can spark curiosity, build confidence, and open new possibilities for individuals and teams. The flexible structure allows SMEs to **pick a focus area** that matches current challenges, **start with a micro-module** to test the approach and **gradually scale up** by adding further modules or embedding SMERALD into wider training.

Every journey begins with a first step. By piloting one SMERALD activity with your team, tailored to your own needs and context, you begin cultivating a **culture of digital competence and innovation.**

A call to action

The future of work is already being shaped by AI and data. SMEs cannot stand on the sidelines. The SMERALD project has shown that **with the right tools and methods, even small organizations can build the competences** they need to thrive.

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Now is the time for SMEs, VET providers, and business support organizations to act. **SMEs,** you could take the first step by piloting a SMERALD module within your teams, and see immediate benefits. **VET providers,** you could adopt and adapt the SMERALD approach to enrich your training offers. Even you, **business associations and policymakers**, do your best to support wider adoption to strengthen SME competitiveness across Europe.

Together, we can turn digital challenges into opportunities. The SMERALD methodology is a practical, flexible, and proven pathway to empower SMEs with the data and AI competences that will define the future of business.

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