# SAFed Academy Strategy

A Workforce Development Framework for the UK Testing, Inspection and Certification Sector

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# Contents

## Executive Summary

This document presents a phased implementation plan developed by the SAFed N30N Next 30 Network, Cohort 1, in 2025–26. It converts the evidence established in the companion research paper, *The Hidden Sector: Understanding the Engineering Skills Gap and Talent Pipeline Challenge in the UK Testing, Inspection and Certification Industry*, into a structured programme of action. The research established the evidential basis: a specialist sector of Personnel operating across SAFed member organisations, characterised by an ageing workforce, low public visibility, and regulatory entry requirements that limit the available talent pool. This plan addresses those challenges through 21 initiatives across five permanent strategic pillars, phased across three delivery horizons.

SAFed Academy is presented throughout this document as a workforce development framework, a coordination mechanism and a strategic platform. It is not, and is not intended to be positioned as, a training provider, a college, a university, or a certification body. The Academy is the umbrella under which initiatives operate; the individual initiatives are the deliverables that successive cohorts evaluate, develop and implement.

### What This Plan Delivers

- An evidence-based diagnosis of the TIC sector's workforce challenge, supported by 62 referenced sources
- Five permanent strategic pillars defining the scope of SAFed Academy activity
- A register of 21 initiatives, each assessed for purpose, feasibility, cost, complexity, regulatory impact, dependencies, ownership and target milestones
- A phased delivery timeline with three strategic horizons and a specific Year 0 action plan
- A delivery model for successive N30N cohorts to evaluate and advance these initiatives
- An Expert Working Group mechanism — a parallel delivery track for technical and regulatory matters that require specialist practitioner expertise rather than cohort-based development
- Three emerging concepts — Surveyor Time, the SAFed Academy Development Portfolio, and Extended Reality (XR) applications in TIC training — identified for future exploration

### The Five Strategic Pillars

- **Pillar 1: Awareness & Visibility**: Making TIC careers visible in the national engineering careers ecosystem
- **Pillar 2: Entry Pathways & Early Career**: Structured, compliant routes for young people entering TIC
- **Pillar 3: Career Changer & Military Transition**: Enabling professionals from adjacent sectors to move into TIC
- **Pillar 4: Competence & Professional Development**: Infrastructure for ongoing professional development within TIC
- **Pillar 5: Research, Data & Workforce Intelligence**: The evidential base that informs all other pillars

## Executive Summary: Continued

### Governance and Approval

Horizon 1 initiatives are recommended for immediate action and can be initiated within existing SAFed coordination capacity. Horizon 2 initiatives will be developed through feasibility studies and stakeholder engagement, with delivery subject to SAFed governance approval. Horizon 3 initiatives are strategic ambitions that depend on Horizon 1 and Horizon 2 foundations being substantially in place. All expenditure beyond existing operational budgets requires SAFed CEO and/or SAFed Board approval. The role of future N30N cohorts is to take this plan forward: conduct feasibility studies, engage stakeholders, develop business cases, pilot initiatives, and where evidence supports it, scale delivery. Cohort 1 has built the plan. Future cohorts deliver and develop it.

SECTION 1

# 1. The Case for Sector-Level Action

The Testing, Inspection and Certification (TIC) sector employs a specialist workforce across inspection, certification, welding certification, audit, technical assessment, conformity assessment, quality assurance and regulatory assurance activities relevant to SAFed member organisations. Within this wider sector, Engineer Surveyors perform a particularly safety-critical role through the statutory inspection of pressure systems, lifting equipment, power presses, transportable pressure receptacles and other high-risk assets across the national economy. More broadly, TIC professionals provide independent assurance that products, systems, processes, equipment and organisations meet defined standards, legal requirements and safety expectations. Their decisions support public safety, workplace safety, regulatory confidence and market trust. When this workforce contracts, the national safety and assurance infrastructure is placed under pressure.

This is a workforce under structural pressure. The evidence gathered by Cohort 1 indicates a sector characterised by an ageing professional demographic, limited visibility in the national careers ecosystem, and regulatory entry requirements that, while grounded in legitimate safety considerations, present material barriers to expanding the talent pipeline.

| Low | 18–21 | 12–18mo |
|---|---|---|
| PUBLIC VISIBILITY OF TIC CAREERS | MIN. AGE RANGE FOR TIC ENTRY | STRUCTURED TRAINING BEFORE AUTHORISATION |

## 1.1 Why the Talent Pipeline Is Constrained

*Note: While the RG series requirements referenced below are specific to Engineer Surveyors, the workforce challenges described apply particularly to Engineer Surveyor and inspection personnel pathways, and to other TIC roles where similar regulatory and supervisory constraints apply.*

The research paper identified four interlocking constraints on TIC workforce growth, each grounded in regulatory requirements established by UKAS under the international ILAC framework:

- **Minimum age requirements**: UKAS RG documents set minimum ages of 18 (trainees) and 21 (independent inspection) for most TIC categories, meaning significant deviation would require justification and may place accreditation at risk.

- **Qualification requirements**: Reaching Category 2 (Incorporated Engineer), the standard working level for a TIC Engineer Surveyor, requires a minimum Level 4 qualification (HNC or equivalent). Candidates who do not hold a relevant engineering qualification at this level face a longer development pathway and cannot access the full range of inspection work until the threshold is reached.
- **Supervision requirements**: Category 6 personnel are subject to defined supervision requirements, meaning trainees operate under supervisory oversight throughout training: a resource cost that shapes how many trainees employers can support.
- **Authorisation requirements**: TIC bodies are required to formally authorise each inspector before independent operation. This is a substantive competence assurance process that should not be shortened without evidence, governance approval and assessment of accreditation implications.

> **NET REGULATORY EFFECT**
>
> These requirements exist for legitimate safety reasons: they are designed to ensure that individuals making safety-critical inspection decisions possess the maturity, knowledge and experience necessary for reliable professional judgement. The challenge identified by Cohort 1 is not that these controls exist, but whether their current implementation unintentionally restricts entry pathways more than is necessary to achieve the intended safety outcomes. Significant deviation from them would require justification and may place accreditation at risk.

## 1.2 The Visibility Problem

Independently of regulatory constraints, the research found that TIC careers are effectively invisible in the national careers ecosystem. TIC does not appear in standard engineering careers guides, is absent from most careers advisory platforms, and is unknown to the majority of careers advisers, teachers, and parents who influence young people's decisions. This is a solvable problem, and solving it does not require regulatory change.

These two challenges, regulatory barriers and low visibility, require different responses and sit in different strategic horizons. Visibility work can begin immediately, at low cost, and with no regulatory complexity. Regulatory dialogue requires a long-term, evidence-based, relationship-centred approach. This framework initiates both, but makes clear the distinction.

## 1.3 The Economic Stakes

**£5bn+**

**Estimated annual economic cost of the engineering skills gap and gender underrepresentation across the UK engineering sector broadly — not TIC-specific.**
This includes £1.5bn in direct employer costs from unfilled vacancies and £3.5bn in lost economic output from gender underrepresentation. TIC's contribution to the national infrastructure inspection function makes workforce shortfalls in this sector materially different in consequence from those in other industries.

## 1.4 The Representation Problem

The research paper established that approximately 57% of qualified women leave engineering before age 45, and that women represent only 16.9% of the engineering workforce against 52% of the overall labour market. For TIC specifically, this means the visible talent pool is smaller than it should be, and retention: not just recruitment: is a strategic issue. Initiatives under Pillar 1 (Awareness & Visibility) and Pillar 2 (Entry Pathways) should be evaluated for their differential impact on women's entry and retention, and the annual workforce survey (P5.1) should track gender representation explicitly.

## 1.5 The Career Changer Opportunity

While youth pathways attract most attention in workforce discussions, the research identified career changers as the most immediately viable and potentially highest-ROI talent pipeline for TIC. The relevant populations are large, technically qualified, and already motivated by the prospect of career development:

- **Gas engineers**: approximately 150,000 registered gas engineers in the UK, many with directly transferable pressure systems knowledge.
- **Armed Forces leavers**: approximately 13,500–14,000 service leavers annually, many from REME, Royal Engineers and related engineering trades, with directly applicable technical experience and safety discipline.
- **NDT personnel**: non-destructive testing technicians already operating within inspection environments, often familiar with TIC processes, equipment categories and regulatory expectations.
- **Maintenance engineers and industrial technicians**: a large and underutilised population with hands-on equipment knowledge relevant to inspection categories including pressure systems, lifting equipment and electrical systems.


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- **Engineering career changers**: a broader population of qualified engineers from automotive, utilities and manufacturing seeking purposeful mid-career transitions.

These groups represent the most accessible near-term workforce pipeline for TIC. Unlike school-leaver routes, which face regulatory age barriers and long development timelines: career changers can enter structured training immediately, typically completing authorisation within 12–18 months. They should be positioned by SAFed Academy as short-to-medium-term workforce solutions while longer-term youth pipeline work develops in parallel.

For career changers aged 21 or over with relevant engineering backgrounds, the regulatory pathway is relatively clear: the 12–18 month structured training period and authorisation process are significant, but not prohibitive for adults who have already chosen TIC as a career. The barrier is awareness, not regulation. Pillar 3 initiatives (P3.1, P3.2, P3.3, P3.4) address this directly.

# 2. The Implementation Plan

## 2.1 Purpose of This Document

This document provides a phased implementation plan for addressing the TIC sector's workforce challenge over time. It has been designed to be inherited, updated and built upon by successive N30N cohorts: each arriving with different skills, contexts and opportunities, but all needing a starting point. This plan is that starting point.

The plan does not prescribe what future cohorts must do. It identifies what initiatives exist, provides an initial assessment of their feasibility, and offers a structured way of thinking about which to pursue first, which to build toward, and which require further investigation before any commitment is made.

## 2.2 Scope and Governance

This plan commits to Horizon 1 actions as immediate priorities for SAFed and the incoming N30N cohort. Horizon 2 initiatives will be developed through feasibility studies and stakeholder engagement, with delivery subject to governance approval at each stage. Horizon 3 initiatives are strategic ambitions that depend on Horizon 1 and Horizon 2 foundations being substantially in place.

All expenditure beyond existing operational budgets requires SAFed CEO and/or SAFed Board approval.

## 2.3 The Five Strategic Pillars

Five permanent strategic pillars define the scope of SAFed Academy activity. These pillars are structural: they will not change between cohorts, even as the specific initiatives within them evolve. They provide the organisational logic for the initiative register and ensure that all Academy activity can be understood within a coherent long-term purpose.

PILLAR 1

### Awareness & Visibility

Making TIC careers known, understood and attractive to young people, teachers, parents and career influencers nationally.

PILLAR 2

### Entry Pathways & Early Career

Creating structured, compliant routes for young people to enter TIC and progress through it in a way that meets regulatory requirements.

PILLAR 3

### Career Changer & Military Transition

Enabling professionals from adjacent engineering disciplines, including Armed Forces veterans, to move into TIC efficiently and without unnecessary barriers.

PILLAR 4

### Competence & Professional Development

Building the infrastructure for ongoing professional development, recognition and career progression within TIC.

PILLAR 5

### Research, Data & Workforce Intelligence

Maintaining the evidential base that informs all other pillars: tracking the workforce, measuring impact, and enabling informed advocacy.

## 2.4 The Three Strategic Horizons

Initiatives within this framework are mapped across three strategic horizons based on their complexity, dependencies and time to first impact:

- **Horizon 1 (H1): 0 to 2 years:** Quick-win initiatives that can be initiated with minimal cost and limited or low-complexity regulatory and partnership dependencies. These are the starting point for any future cohort.
- **Horizon 2 (H2): 2 to 5 years:** Initiatives of moderate complexity requiring active partnership development, feasibility work and potentially modest investment. These should be in active development once H1 foundations are established.
- **Horizon 3 (H3): 5 to 10+ years:** Transformational initiatives that require long-term commitment, significant resource and the completion of prerequisite work in earlier horizons.

SECTION 3

# 3. Initiative Register: All 21 Initiatives by Pillar

The following register defines 21 initiatives across the five strategic pillars. Each initiative has been assessed for purpose, feasibility, cost, complexity, regulatory impact and dependencies, and is positioned within a phased delivery timeline.

> **HOW TO USE THIS REGISTER**
>
> Horizon 1 initiatives are the immediate priorities and should be actioned first. Horizon 2 initiatives should be developed as Horizon 1 foundations are established. Each incoming cohort is expected to select 2–4 initiatives to advance in depth, producing feasibility studies, stakeholder engagement plans and/or business cases as their primary outputs.

## Pillar 1: Awareness & Visibility

| P1.1 Tomorrow's Engineers Code Adoption | H1: 0–2 Years |
|---|---|
| **Purpose** | Register SAFed as a signatory to the Tomorrow's Engineers Code: an opportunity to join EngineeringUK's national employer coalition by adopting minimum standards of employer engagement in engineering careers education. |
| **Strategic Alignment** | Pillar 1: Awareness & Visibility |
| **Anticipated Benefits** | Formal membership of a national employer coalition; access to EngineeringUK's school networks; signal of sector commitment to the careers advisory community. |
| **Potential Risks** | Code commitments require sustained follow-through; adoption without delivery risks reputational damage within the EngineeringUK community. |
| **Indicative Cost** | LOW The commitment is behavioural, not financial. No licence fee. |
| **Indicative Complexity** | LOW Governance approval required; signing process straightforward. |
| **Regulatory Considerations** | None. |
| **Time to First Benefit** | Short: immediate signal value on signing; engagement benefit within 12 months. |
| **Key Dependencies** | SAFed CEO and/or SAFed Board approval; willingness to honour Code commitments over time. |
| **First Action** | Review Code commitments with SAFed leadership; seek Board endorsement to sign. |
| **Success Measure** | Tomorrow's Engineers Code signed; first qualifying engagement activity delivered within 12 months |

| P1.2 STEM Ambassador Programme Registration | H1: 0–2 Years |
|---|---|
| **Purpose** | Register SAFed on STEM Learning to enable member company employees to serve as STEM Ambassadors in schools and colleges, bringing TIC career awareness directly to young people. |
| **Strategic Alignment** | Pillar 1: Awareness & Visibility |
| **Anticipated Benefits** | Low-cost, scalable school engagement; safeguarding infrastructure managed by STEM Learning; direct visibility of TIC careers for the 11–18 age group. |
| **Potential Risks** | Quality and volume depend on member company willingness to release staff; requires sustained coordination to prevent activity becoming sporadic. |
| **Indicative Cost** | LOW Registration is free. Ongoing cost is staff time for ambassador training and school visits. |
| **Indicative Complexity** | LOW Straightforward registration process with established infrastructure. |
| **Regulatory Considerations** | None. STEM Learning manages DBS checks and safeguarding requirements. |
| **Time to First Benefit** | Short: first school engagements possible within 6–12 months of registration. |
| **Key Dependencies** | Member company ambassador volunteers; individual DBS and safeguarding compliance; SAFed coordination lead. |
| **First Action** | Assign a SAFed coordination contact; complete employer registration at stemlearning.co.uk. |
| **Success Measure** | SAFed registered on STEM Learning with 10+ active ambassadors from member companies |

| P1.3 TIC Careers Guide Development | H1: 0–2 Years |
|---|---|
| **Purpose** | Develop a professionally produced guide to TIC careers for distribution through the Career Development Institute (CDI) to qualified careers advisers nationally, addressing TIC's absence from mainstream careers advisory resources. |
| **Strategic Alignment** | Pillar 1: Awareness & Visibility |
| **Anticipated Benefits** | Scalable distribution through established professional network of careers advisers; addresses root-cause invisibility of TIC in the careers ecosystem. |
| **Potential Risks** | Content can become outdated rapidly; requires UKAS accuracy review; CDI partnership subject to negotiation. |
| **Indicative Cost** | MEDIUM Design and production costs; ongoing update resource required. |
| **Indicative Complexity** | LOW–MEDIUM Content development, design, CDI agreement, and accuracy review. |
| **Regulatory Considerations** | Low: factual content should be reviewed against UKAS RG requirements to ensure accuracy, with UKAS factual accuracy review/input where appropriate. |
| **Time to First Benefit** | Medium: 12–24 months for meaningful distribution reach through CDI network. |
| **Key Dependencies** | Content development resource; CDI distribution partnership; UKAS factual accuracy review/input where appropriate. |
| **First Action** | Draft outline content; approach CDI distribution team; obtain UKAS factual accuracy input in principle. |
| **Success Measure** | TIC Careers Guide produced, reviewed for accuracy, and distributed to 100+ careers advisers via CDI |

| P1.4 T Level Industry Awareness Campaign | H2: 2–5 Years |
|---|---|
| **Purpose** | Develop targeted content and outreach for T Level Engineering students, teachers and parents to raise awareness of TIC as a career destination and support the Simulated Placement pipeline. |
| **Strategic Alignment** | Pillar 1: Awareness & Visibility |
| **Anticipated Benefits** | Positions TIC at the point of T Level course choice; creates demand pipeline for the Simulated Placement; supports long-term youth recruitment. |
| **Potential Risks** | Competitive careers communications field; limited budget relative to large engineering employers; requires sustained activity. |
| **Indicative Cost** | MEDIUM Content production and targeted distribution. |
| **Indicative Complexity** | LOW Campaign development; no regulatory complexity. |
| **Regulatory Considerations** | None: awareness activity only. |
| **Time to First Benefit** | Medium: 12–24 months for measurable awareness change in target cohorts. |
| **Key Dependencies** | T Level Simulated Placement (P2.1) operational; member company marketing support. |
| **First Action** | Identify 2–3 pilot schools near member company sites; develop first digital awareness content. |
| **Success Measure** | TIC career content distributed to 3+ T Level providers; confirmed partnerships with at least 2 schools or colleges near member company sites within 24 months |

| P1.5 EngineeringUK / Neon Platform Content Partnership | H2: 2–5 Years |
|---|---|
| **Purpose** | Develop TIC career content for the EngineeringUK Neon platform: the primary online destination for engineering careers information for young people in the UK. |
| **Strategic Alignment** | Pillar 1: Awareness & Visibility |
| **Anticipated Benefits** | Access to EngineeringUK's established audience of young people and careers advisers; positions TIC within the mainstream engineering careers ecosystem. |
| **Potential Risks** | Content production requires sustained resource; platform requires ongoing maintenance partnership. |
| **Indicative Cost** | LOW–MEDIUM Staff time and content production; no platform licence fee anticipated. |
| **Indicative Complexity** | LOW Partnership agreement; content development and submission. |
| **Regulatory Considerations** | None. |
| **Time to First Benefit** | Medium: content live within 6 months of agreement; audience reach builds over time. |
| **Key Dependencies** | EngineeringUK partnership agreement; content quality and accuracy approval process. |
| **First Action** | Make initial contact with EngineeringUK partnerships team; share companion research paper as credibility evidence. |
| **Success Measure** | TIC career content published on the Neon platform; EngineeringUK partnership confirmed; at least one co-produced resource available to school careers advisers |

## P1.6 Smallpeice Trust TIC-Themed Residential Course

H2: 2–5 Years

| | |
|---|---|
| **Purpose** | Develop or sponsor a residential engineering course (typically 4–5 days) for 12–18-year-olds delivered by the Smallpeice Trust, with TIC as the engineering application context. Virtual delivery options are also available at significantly lower cost. |
| **Strategic Alignment** | Pillar 1: Awareness & Visibility; Pillar 2: Entry Pathways |
| **Anticipated Benefits** | High-impact immersive experience for motivated young people; Smallpeice Trust's established delivery infrastructure and school relationships de-risk execution. |
| **Potential Risks** | Sponsorship cost is material; requires member company technical expert engagement for course content. |
| **Indicative Cost** | HIGH Residential course sponsorship, materials, hotels and subsistence |
| **Indicative Complexity** | MEDIUM Course design, logistics, expert recruitment, and Smallpeice Trust agreement. |
| **Regulatory Considerations** | Low: educational, off-site context. No live inspection activity. |
| **Time to First Benefit** | Medium: first course deliverable within 18–24 months of agreement. |
| **Key Dependencies** | Corporate sponsorship commitment from member companies; Smallpeice Trust agreement; technical expert volunteers from member companies. |
| **First Action** | Approach Smallpeice Trust to scope options; assess member company appetite for sponsorship. |
| **Success Measure** | Residential course scoped and costed with Smallpeice Trust; sponsorship commitment secured; first cohort of young people enrolled within 3 years of initiation |

| P1.7 CREST Award Programme: TIC Project Pathway | H2: 2–5 Years |
|---|---|
| **Purpose** | Partner with the CREST Award scheme (administered by the British Science Association) to develop TIC-themed project briefs, enabling 11–18-year-olds to complete science and engineering investigations in TIC application areas (inspection, materials testing, quality assurance) and gain a nationally recognised award. |
| **Strategic Alignment** | Pillar 1: Awareness & Visibility |
| **Anticipated Benefits** | Provides structured, nationally recognised project-based engagement beyond a single event; builds TIC interest through independent investigation; CREST infrastructure handles delivery; SAFed develops the project briefs only. |
| **Potential Risks** | Project briefs must meet CREST Award standards; member company volunteers needed to mentor students; uptake depends on teacher and school engagement. |
| **Indicative Cost** | LOW–MEDIUM Project brief development; no licence fee for student participation. |
| **Indicative Complexity** | LOW CREST has established school infrastructure; SAFed's role is project brief authorship and mentor coordination. |
| **Regulatory Considerations** | None: educational project activity only. |
| **Time to First Benefit** | Short–Medium: first TIC project brief available within 12–18 months of engagement. |
| **Key Dependencies** | British Science Association partnership; member company volunteers to mentor student projects; STEM Ambassador network (P1.2) as outreach channel. |
| **First Action** | Contact the British Science Association to explore TIC-themed CREST project brief development; identify 2–3 member company volunteers as initial mentors. |
| **Success Measure** | At least one TIC-themed CREST Award project brief published; first student completions achieved within 18 months of launch |

## Pillar 2: Entry Pathways & Early Career

| P2.1 T Level Simulated Placement (Pilot) | H2: 2–5 Years |
|---|---|
| **Purpose** | Establish a controlled, off-site training environment enabling T Level students (aged 16–19) to experience TIC work without placing them in live regulated inspection environments, creating a compliant entry-level sector experience. |
| **Strategic Alignment** | Pillar 2: Entry Pathways & Early Career |
| **Anticipated Benefits** | Intended compliant pathway for under-18 engagement, subject to provider, safeguarding, employer and regulatory review; aligns with DfE T Level industry placement requirements; builds early sector affinity; creates a direct pipeline into employer consideration. |
| **Potential Risks** | Significant logistics and content development; facilities and supervisory resource required; content must be clearly educational: not commercially relevant inspection activity. |
| **Indicative Cost** | MEDIUM Facilities access, content development, supervisory staff time. |
| **Indicative Complexity** | HIGH Requires off-site facilities, DfE qualification provider relationship, and member company commitments. |
| **Regulatory Considerations** | Simulated (not live) inspection activity is the appropriate model for under-18s. |
| **Time to First Benefit** | Medium–Long: 18–36 months to first operational pilot placement. |
| **Key Dependencies** | off-site facility; DfE T Level qualification provider relationship; member company host commitments; safeguarding framework. |
| **First Action** | identify potential host facility; review NDT sector's existing simulated placement models for reference. |
| **Success Measure** | Pilot placement completed with at least 2 T Level students in a compliant off-site training environment; participant feedback gathered; recommendation issued to Project Sponsor on whether to scale |

| P2.2 TIC Apprenticeship Standard Development | H3: 5–10+ Years |
|---|---|
| **Purpose** | A TIC/Engineer Surveyor apprenticeship standard exists and is recognised by Skills England, but is not externally funded: costs fall entirely on the employer, limiting participation to large organisations. The purpose of this initiative is to build the case for levy-funded eligibility with IfATE/Skills England, or explore extending the existing NDT standard, enabling SME participation and broadening entry routes. This is a long-term strategic aspiration dependent on external stakeholders and government approval processes. |
| **Strategic Alignment** | Pillar 2: Entry Pathways & Early Career |
| **Anticipated Benefits** | Creates a funded training route; signals industry investment in structured entry; standardises baseline training requirements; opens the sector to apprenticeship-route candidates. |
| **Potential Risks** | IfATE/Skills England standard development typically takes 18–36 months; requires sustained employer consortium commitment; alignment with UKAS RG requirements must be formally demonstrated. |
| **Indicative Cost** | HIGH Staff time, employer working group, potential external advisory support. |
| **Indicative Complexity** | HIGH Multi-employer process; regulatory alignment; IfATE approval process. |
| **Regulatory Considerations** | High: any standard must demonstrably align with UKAS/ILAC competence requirements for relevant inspection categories. |
| **Time to First Benefit** | Long: 3–5 years from initiation to first apprentice intake. |
| **Key Dependencies** | Employer consortium commitment; IfATE/Skills England engagement; UKAS alignment confirmation; NDT apprenticeship standard feasibility analysis. |
| **First Action** | Commission feasibility analysis on NDT standard extension versus new TIC standard; consult employers who developed the NDT apprenticeship for lessons learned. |
| **Success Measure** | Formal engagement with IfATE/Skills England initiated; feasibility assessment completed; business case for levy-funded route presented to SAFed CEO and/or SAFed Board within 5 years |

| P2.3 TIC Degree Apprenticeship | H3: 5–10+ Years |
|---|---|
| **Purpose** | Explore the feasibility of a degree apprenticeship for the TIC sector in partnership with an engineering faculty. This is a long-term strategic aspiration: not an estimated deliverable. It depends upon university partners, IfATE/Skills England processes, employer consortia and government policy, none of which SAFed can unilaterally direct. Its inclusion in the register signals ambition, not commitment. |
| **Strategic Alignment** | Pillar 2: Entry Pathways & Early Career |
| **Anticipated Benefits** | Attracts degree-route candidates; integrates academic and workplace learning; provides a structured route from entry to professional registration. |
| **Potential Risks** | Highly complex; requires university partner, IfATE approval and sustained employer consortium; 10+ year horizon to graduates at scale. |
| **Indicative Cost** | HIGH University partnership, curriculum design, employer consortium coordination. |
| **Indicative Complexity** | HIGH |
| **Regulatory Considerations** | High: must align with UKAS/ILAC category-specific competence standards. |
| **Time to First Benefit** | Very Long: 7–12+ years from initiation. |
| **Key Dependencies** | P2.2 (apprenticeship standard) should precede or run in parallel; university engineering faculty partnership; employer consortium. |
| **First Action** | Horizon-scan only at this stage: identify comparable degree apprenticeships in related sectors (utilities, energy, defence) and note for H3 development by future cohorts. |
| **Success Measure** | Horizon-scan completed and documented; at least one comparable sector degree apprenticeship benchmarked; findings included in cohort handover document for future consideration |

## Pillar 3: Career Changer & Military Transition

| P3.1 | Career Transition Partnership (CTP) Employer Registration | H1: 0–2 Years |
|---|---|---|
| **Purpose** | Register TIC sector employers (via SAFed) on the Career Transition Partnership: the MOD's official resettlement service: establishing TIC as a recognised destination for Armed Forces leavers. | |
| **Strategic Alignment** | Pillar 3: Career Changer & Military Transition | |
| **Anticipated Benefits** | Direct access to REME veterans and other technically qualified leavers; MOD-endorsed pathway; minimal cost; immediate visibility to a high-quality talent pool. | |
| **Potential Risks** | Low risk. Benefit realised only if member company HR teams follow through with vacancies and active resettlement engagement. | |
| **Indicative Cost** | LOW Registration process; staff time to brief HR contacts. | |
| **Indicative Complexity** | LOW | |
| **Regulatory Considerations** | None. | |
| **Time to First Benefit** | Short: TIC visible to CTP job seekers within 3–6 months of registration. | |
| **Key Dependencies** | Member company HR awareness of CTP process; job vacancies being listed through CTP job finder. | |
| **First Action** | Register SAFed/member companies at ctpjobfinder.com; circulate guidance to HR contacts across member companies. | |
| **Success Measure** | SAFed registered as employer partner with CTP; TIC roles visible on CTP job platform | |


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| P3.2 SOE Armed Forces Skills Recognition Pathway | H2: 2–5 Years |
|---|---|
| **Purpose** | Work with the Society of Operations Engineers (SOE) to develop a formal pathway recognising Armed Forces engineering experience (particularly REME) against TIC/Engineer Surveyor competence requirements, reducing entry barriers for qualified veterans. |
| **Strategic Alignment** | Pillar 3: Career Changer & Military Transition; Pillar 4: Competence & Professional Development |
| **Anticipated Benefits** | Removes a material entry barrier for veterans without reducing safety standards; leverages existing SOE professional body infrastructure; demonstrates sector commitment to the Armed Forces community. |
| **Potential Risks** | Skills and experience mapping requires precision; risk of overstating equivalence; UKAS must be comfortable with any resulting pathway. |
| **Indicative Cost** | LOW–MEDIUM SOE partnership development; skills and experience mapping analysis. |
| **Indicative Complexity** | MEDIUM Requires SOE and possible UKAS cooperation; detailed technical skills and experience mapping against TIC entry and development requirements. |
| **Regulatory Considerations** | Medium: skills mapping output must not conflict with UKAS RG inspection authorisation requirements. Informal UKAS briefing recommended before finalising any mapping. |
| **Time to First Benefit** | Medium: pathway operational within 2–3 years of agreement. |
| **Key Dependencies** | SOE willingness to engage; UKAS review of mapping methodology; member employer adoption. |
| **First Action** | Arrange formal introductory meeting with SOE; share companion research paper; scope the partnership framework. |
| **Success Measure** | SOE partnership agreement in place; formal skills recognition pathway mapped against TIC entry requirements; at least 5 veterans referred through the pathway annually once operational |

| P3.3 Structured Career Changer Conversion Programme | H2: 2–5 Years |
|---|---|
| **Purpose** | Develop a standardised 12–18 month structured training programme for career changers from adjacent engineering disciplines (gas engineers, automotive technicians, REME veterans), providing clear development milestones and employer guidance. |
| **Strategic Alignment** | Pillar 3: Career Changer & Military Transition |
| **Anticipated Benefits** | Standardises what many employers currently run informally; reduces training time and cost through shared best practice; creates a credible public signal that accelerated TIC entry is possible for the right candidates. |
| **Potential Risks** | Employers may resist standardisation of what they consider proprietary training; programme design varies significantly by equipment category and employer context. |
| **Indicative Cost** | MEDIUM Programme design, documentation, employer consortium facilitation. |
| **Indicative Complexity** | MEDIUM–HIGH Cross-employer coordination; category-specific variation; regulatory compliance review. |
| **Regulatory Considerations** | Medium: programme structure must comply with UKAS RG category-specific supervision and authorisation requirements. |
| **Time to First Benefit** | Medium: first programme version operational within 24–36 months of initiation. |
| **Key Dependencies** | Employer consortium agreement on structure; SOE CPD accreditation (P4.1); UKAS RG compliance review. Funding mechanisms to explore: Growth and Skills Levy, Lifelong Learning Entitlement, and Enhanced Learning Credits (ELCAS) for Armed Forces leavers. |
| **First Action** | Survey member employers on current informal conversion approaches; identify common elements suitable for standardisation. Map available funding routes (Levy, LLE, ELCAS) to reduce employer cost of conversion. |
| **Success Measure** | Programme framework developed and endorsed by at least 3 member employers; first pilot cohort of career changers completed structured programme; funding route identified and documented |

## P3.4 Engineering Skills Mapping and Transition Programme

H2: 2–5 Years

| | |
|---|---|
| **Purpose** | Develop a structured process for mapping military engineering skills (particularly REME and Royal Engineers) against TIC entry requirements, identifying gaps, developing bridging modules, and supporting veterans into inspection careers. |
| **Strategic Alignment** | Pillar 3: Career Changer & Military Transition; Pillar 4: Competence & Professional Development |
| **Anticipated Benefits** | Creates a replicable entry pathway for veterans; reduces the skills gap to TIC authorisation; provides a credible framework for CTP and MOD to recommend; increases the supply of qualified candidates. |
| **Potential Risks** | Skills and experience mapping is technically complex and must not overstate equivalence; UKAS must be comfortable with any resulting framework; requires sustained MOD and employer cooperation; risk of creating expectations that cannot be met without employer commitment. |
| **Indicative Cost** | MEDIUM Skills and experience mapping analysis; bridging module development; MOD, SOE and employer consultation. |
| **Indicative Complexity** | MEDIUM–HIGH Multi-party technical coordination; regulatory alignment with UKAS; detailed discipline-by-discipline skills mapping. |
| **Regulatory Considerations** | Medium: any skills mapping output must be consistent with UKAS RG authorisation requirements and must not imply formal competence certification or inspection authorisation. Informal UKAS engagement is strongly recommended before finalising any transition framework. |
| **Time to First Benefit** | Medium: first mapped pathway available within 2–3 years of initiation; broader employer adoption longer-term. |
| **Key Dependencies** | CTP registration (P3.1); SOE partnership (P3.2); career changer programme (P3.3); MOD cooperation; UKAS informal briefing; employer consortium participation. |

| P3.4 | Engineering Skills Mapping and Transition Programme — Continued | H2: 2–5 Years |
|---|---|---|
| **First Action** | Commission an initial scope paper identifying the military engineering trades most closely aligned with TIC requirements; engage CTP and SOE to validate the concept and identify MOD contacts. | |
| **Success Measure** | Skills mapping tool developed and validated with at least 3 member companies; individual transition plan template available for use by veterans and career changers; MOD and CTP endorsement of the framework | |

## Pillar 4: Competence & Professional Development

| P4.1 SOE CPD Accreditation Partnership | H1: 0–2 Years |
|---|---|
| **Purpose** | Establish a formal partnership with the Society of Operations Engineers to develop and accredit a continuing professional development framework for TIC/Engineer Surveyors. |
| **Strategic Alignment** | Pillar 4: Competence & Professional Development |
| **Anticipated Benefits** | Professionalises ongoing development; supports Engineer Surveyor chartership route; enhances sector reputation for professional standards; provides a natural framework for the Development Portfolio (P4.2). |
| **Potential Risks** | Requires sustained governance; partnership scope must be carefully agreed to avoid conflict with existing employer CPD programmes. |
| **Indicative Cost** | LOW Partnership development; SAFed governance time. |
| **Indicative Complexity** | LOW–MEDIUM |
| **Regulatory Considerations** | Low: CPD accreditation does not affect UKAS inspection authorisation requirements. |
| **Time to First Benefit** | Medium: first accredited CPD activities within 12–24 months of agreement. |
| **Key Dependencies** | SOE partnership agreement; baseline CPD needs assessment from member companies. |
| **First Action** | Arrange introductory meeting with SOE; scope CPD framework and accreditation requirements. |
| **Success Measure** | SOE CPD accreditation partnership discussions initiated; formal agreement in place within 18 months |

## P4.2 SAFed Academy Development Portfolio

H2: 2–5 Years

| | |
|---|---|
| **Purpose** | Develop a voluntary career-development and transition-support tool to assist individuals: particularly career changers, Armed Forces personnel and those exploring TIC careers: in recording development activities, skills mapping, mentoring, placements and professional development throughout their journey into the sector. |
| **Strategic Alignment** | Pillar 3: Career Changer & Military Transition; Pillar 4: Competence & Professional Development |
| **Anticipated Benefits** | Supports structured career transition; assists individuals in understanding potential routes into TIC; provides a personal record of development activities for career planning and mentoring purposes. |
| **Potential Risks** | Must be clearly positioned as a development tool only: not a competence record or certification instrument. Must not create confusion with employer competence management systems, authorisation processes or UKAS requirements. |
| **Indicative Cost** | LOW–MEDIUM Concept design and format development; digital or document-based format options available at low initial cost. |
| **Indicative Complexity** | MEDIUM Positioning, governance and communication design are the primary complexity factors. |
| **Regulatory Considerations** | Low–Medium: the Development Portfolio is not a regulatory document and does not interact with UKAS accreditation requirements. Care is required only in communication, to ensure it is never presented as competence evidence or a substitute for employer authorisation processes. |
| **Time to First Benefit** | Medium: concept and format could be developed within 2–3 years; adoption would grow organically through Academy activity. |
| **Key Dependencies** | SOE CPD framework (P4.1); career changer and Armed Forces engagement activities (P3.1–P3.4); Academy mentoring programme. |

| P4.2 | SAFed Academy Development Portfolio — Continued | H2: 2–5 Years |
|---|---|---|
| **First Action** | Define scope and format; determine whether a simple document-based format or digital tool is more appropriate at this stage; develop clear positioning statement before any external communication. | |
| **Success Measure** | Portfolio tool designed and piloted with at least 10 individuals; feedback incorporated into final version; tool endorsed by SAFed and available to all Academy participants and sector entrants | |

| P4.3 Digital CPD and Resource Portal | H2: 2–5 Years |
|---|---|
| **Purpose** | Develop a digital platform providing TIC professionals with access to CPD resources, training pathways, career development tools and sector information in a single, maintained location. |
| **Strategic Alignment** | Pillar 4: Competence & Professional Development |
| **Anticipated Benefits** | Centralises currently dispersed resources; supports remote professional development; scalable across member companies with low incremental cost. |
| **Potential Risks** | Ongoing content maintenance requirement; technology cost; engagement depends on member company promotion and adoption. |
| **Indicative Cost** | MEDIUM–HIGH Platform development or licence; content production; ongoing maintenance. |
| **Indicative Complexity** | MEDIUM |
| **Regulatory Considerations** | Low. |
| **Time to First Benefit** | Medium: platform accessible within 18–24 months; content quality builds over time. |
| **Key Dependencies** | CPD framework (P4.1); hosting and maintenance resource; member company content contributions. |
| **First Action** | Scope minimum viable product; assess whether existing SOE or SAFed digital infrastructure could host to reduce cost. |
| **Success Measure** | Portal launched with minimum viable content set; 50+ registered users from member organisations; at least 3 CPD resources or modules available within 24 months of launch |

| P4.4 Surveyor Time: Professional Development Resource Concept | H3: 5–10+ Years |
|---|---|
| **Purpose** | Explore whether member organisations could designate a defined proportion of Engineer Surveyor time for professional development, structured training and Academy contributions: creating a sustainable resource base for the Academy from within the existing workforce. |
| **Strategic Alignment** | Pillar 4: Competence & Professional Development; Pillar 5: Research, Data & Workforce Intelligence |
| **Anticipated Benefits** | Would provide sustainable non-financial resource for Academy activity; embeds a professional development culture within member organisations; creates capacity for feasibility work and cohort contributions. |
| **Potential Risks** | Commercial inspection workloads make consistent release time difficult; inconsistent implementation risks between employers; regulatory activity time cannot be redeployed without direct business impact. |
| **Indicative Cost** | LOW to define the concept. HIGH opportunity cost to employers if implemented at scale. |
| **Indicative Complexity** | HIGH Requires cultural and commercial change across multiple independent employers. |
| **Regulatory Considerations** | Low: does not directly affect inspection activity. |
| **Time to First Benefit** | Long: cultural change requires sustained advocacy and demonstrable ROI evidence before widespread adoption. |
| **Key Dependencies** | Employer cultural alignment; demonstrable return on investment model; governance model for how the time is structured and used. |
| **First Action** | Present the concept to member employers for initial feasibility discussion; benchmark against sectors with established CPD time models. |
| **Success Measure** | Concept presented to SAFed CEO and/or SAFed Board and at least 3 member employers; feasibility assessment completed; decision made on whether to progress to formal proposal |

## Pillar 5: Research, Data & Workforce Intelligence

| P5.1 Annual Workforce Intelligence Survey | H1: 0–2 Years |
|---|---|
| **Purpose** | Establish an annual structured survey of the TIC workforce to track demographics, entry routes, retention, training and sector size: building on the baseline survey conducted by Cohort 1 in 2025–26. Converts the one-off diagnostic into an ongoing intelligence mechanism enabling SAFed to measure year-on-year progress. Core workforce metrics should remain consistent across survey years to enable meaningful trend analysis. |
| **Strategic Alignment** | Pillar 5: Research, Data & Workforce Intelligence |
| **Anticipated Benefits** | Builds the evidential base for advocacy and planning; tracks Academy progress and sector trends year on year; establishes TIC career awareness baseline for communications evaluation; informs future cohort priorities. |
| **Potential Risks** | Response rates may be low without active member company engagement; some workforce data commercially sensitive. |
| **Indicative Cost** | LOW Survey design and analysis; member company circulation via SAFed secretariat. |
| **Indicative Complexity** | LOW |
| **Regulatory Considerations** | None. |
| **Time to First Benefit** | Short–Medium: first data within 12 months; trend data meaningful after 3+ years. |
| **Key Dependencies** | SAFed secretariat support; member company participation. |
| **First Action** | Draft survey instrument based on Cohort 1 research gaps; circulate for member endorsement; run first survey in Year 1 of next cohort. |
| **Success Measure** | First annual survey completed with 50%+ member organisation response rate; baseline metrics established |

| P5.2 Cohort Handover Protocol and Institutional Memory | H1: 0–2 Years |
|---|---|
| **Purpose** | Establish a structured handover document and institutional memory system ensuring each N30N cohort inherits predecessors' work and builds on it, rather than starting from scratch with each new cohort cycle. |
| **Strategic Alignment** | Pillar 5: Research, Data & Workforce Intelligence |
| **Anticipated Benefits** | Preserves institutional knowledge between cohort cycles; enables cumulative progress; ensures Academy momentum persists independently of individual cohort membership. |
| **Potential Risks** | Document quality depends on each cohort's commitment; no external enforcement mechanism without governance ownership by SAFed. |
| **Indicative Cost** | LOW Document template and process; SAFed secretariat ownership. |
| **Indicative Complexity** | LOW |
| **Regulatory Considerations** | None. |
| **Time to First Benefit** | Short: the first handover document is this document. |
| **Key Dependencies** | N30N programme structure; SAFed secretariat willingness to own and maintain the document repository. |
| **First Action** | Agree repository location and access protocol with SAFed; produce formal handover package from Cohort 1 comprising this document and the companion research paper. |
| **Success Measure** | Handover document template created; Cohort 1 handover completed and held by SAFed |

## P5.3 Regulatory Dialogue with UKAS (Entry Pathway Review) — H2: 2–5 Years

| | |
|---|---|
| **Purpose** | Engage UKAS in a structured, collaborative dialogue about whether current RG document requirements unintentionally restrict entry pathways more than is necessary to achieve the underlying safety objectives, and develop a sector position on whether any calibration is warranted. This initiative operates in two phases: preparatory groundwork in H1 and formal regulatory engagement in H2. |
| **Strategic Alignment** | Pillar 5: Research, Data & Workforce Intelligence |
| **Phase 1 — H1 (Years 1–2)** | **Expert Working Group formation and analysis.** TC 11 and TC 6 convene a dedicated Expert Working Group (open to other Technical Committee members with relevant expertise) to map current RG series requirements against actual workforce entry constraints, identify where requirements may have a disproportionate restricting effect relative to their safety purpose, and produce a structured SAFed Regulatory Alignment Position Paper. This phase is deliverable within the H1 window and should begin with Cohort 1. The position paper is the formal output of Phase 1 and the foundation for Phase 2. |
| **Phase 2 — H2 (Years 2–5+)** | **Formal UKAS engagement.** Using the position paper as the evidential foundation, SAFed initiates formal dialogue with UKAS. The approach should be collaborative and evidence-led throughout. Any substantive regulatory outcome requires ILAC international alignment and is a multi-year process; the goal of Phase 2 is to establish the relationship and present the case, not to guarantee a specific regulatory change. |
| **Anticipated Benefits** | May identify low-risk adjustments that broaden the entry pool without reducing safety; demonstrates sector maturity and evidence-based engagement; builds the long-term regulator relationship that all other initiatives depend upon. |
| **Potential Risks** | UKAS may be unwilling to revisit established standards; any change would require ILAC international alignment; premature or adversarial engagement could damage the regulator relationship significantly. |
| **Indicative Cost** | LOW Relationship development and professional regulatory advice. EWG participation is voluntary practitioner time. |
| **Indicative Complexity** | HIGH Multi-year regulatory engagement; international alignment required; sensitive positioning essential. Phase 1 complexity is moderate; Phase 2 is high. |

| P5.3 | Regulatory Dialogue with UKAS (Entry Pathway Review) — Continued | H2: 2–5 Years |
|---|---|---|
| **Regulatory Considerations** | High: any change to UKAS RG standards would be a formal multi-year regulatory process. This initiative initiates the dialogue; it does not initiate or imply the outcome. | |
| **Time to First Benefit** | Phase 1 output (position paper): 1–2 years. First UKAS engagement: 2–3 years. Any substantive regulatory outcome: 5–10+ years. | |
| **Key Dependencies** | Companion research paper as evidential foundation; SAFed CEO and/or SAFed Board formal mandate; TC 11 and TC 6 commitment to EWG participation; professional regulatory advice. | |
| **Delivery Route** | Expert Working Group — led by TC 11 and TC 6, with open invitation to members of other Technical Committees holding relevant expertise. This initiative should not be progressed through the N30N Cohort; it requires practitioners with direct operational experience of UKAS assessment and the professional standing to represent the sector credibly. The N30N Cohort's role is to provide its research findings as Phase 1 input. | |
| **First Action** | TC 11 and TC 6 to confirm appetite for EWG participation; convene initial working group meeting; begin mapping RG series requirements against workforce entry constraints using the companion research paper as the starting point. | |
| **Success Measure** | Phase 1: SAFed Regulatory Alignment Position Paper completed and approved by SAFed Council. Phase 2: First formal UKAS engagement meeting held; findings reported to Project Sponsor. | |

SECTION 4

# 4. Strategic Horizons: Initiatives Mapped by Timeframe

The 21 initiatives in this register have been mapped across three strategic horizons. The horizons are not rigid timescales: they reflect the relative complexity, dependency and time-to-benefit of each initiative. Future cohorts should treat H1 initiatives as the natural starting point and build toward H2 and H3 as foundations develop.

## H1 Horizon 1: Foundation and Exploration

0–2 Years · Low cost · Low complexity · Quick to initiate

These seven initiatives will be initiated as immediate priorities, with minimal cost and limited or low-complexity regulatory and partnership dependencies. They build the foundations: visibility, professional relationships, and evidential infrastructure: that all higher-horizon initiatives depend upon. Each incoming cohort should expect to progress at least 2–3 of these.

| CODE | INITIATIVE | PILLAR |
|---|---|---|
| **P1.1** | Tomorrow's Engineers Code Adoption | Pillar 1: Awareness & Visibility |
| **P1.2** | STEM Ambassador Programme Registration | Pillar 1: Awareness & Visibility |
| **P1.3** | TIC Careers Guide Development | Pillar 1: Awareness & Visibility |
| **P3.1** | Career Transition Partnership Employer Registration | Pillar 3: Career Changer & Military Transition |
| **P4.1** | SOE CPD Accreditation Partnership | Pillar 4: Competence & Professional Development |
| **P5.1** | Annual Workforce Intelligence Survey | Pillar 5: Research, Data & Workforce Intelligence |
| **P5.2** | Cohort Handover Protocol and Institutional Memory | Pillar 5: Research, Data & Workforce Intelligence |

## H2 Horizon 2: Development and Testing

2–5 Years · Moderate complexity · Partnerships required · Feasibility studies needed

These eleven initiatives will be developed through feasibility studies, active partnership engagement and modest investment as Horizon 1 foundations are established. Each warrants a dedicated feasibility study as the primary output of the cohort that takes it on.

| CODE | INITIATIVE | PILLAR |
|---|---|---|
| **P1.4** | T Level Industry Awareness Campaign | Pillar 1: Awareness & Visibility |
| **P1.5** | EngineeringUK / Neon Platform Content Partnership | Pillar 1: Awareness & Visibility |
| **P1.6** | Smallpeice Trust TIC-Themed Residential Course | Pillar 1: Awareness & Visibility |
| **P1.7** | CREST Award Programme: TIC Project Pathway | Pillar 1: Awareness & Visibility |
| **P2.1** | T Level Simulated Placement (Pilot) | Pillar 2: Entry Pathways & Early Career |
| **P3.2** | SOE Armed Forces Skills Recognition Pathway | Pillar 3: Career Changer & Military Transition |
| **P3.3** | Structured Career Changer Conversion Programme | Pillar 3: Career Changer & Military Transition |
| **P3.4** | Engineering Skills Mapping and Transition Programme | Pillar 3: Career Changer & Military Transition |
| **P4.2** | SAFed Academy Development Portfolio | Pillar 4: Competence & Professional Development |
| **P4.3** | Digital CPD and Resource Portal | Pillar 4: Competence & Professional Development |
| **P5.3** | Regulatory Dialogue with UKAS (Entry Pathway Review) | Pillar 5: Research, Data & Workforce Intelligence |

## H3 Horizon 3: Scale and Transformation

5–10+ Years · High complexity · Long-term commitment · Transformational impact

These three initiatives define what the sector could achieve over a generation. They require H1 and H2 foundations to be substantially in place before meaningful progress is possible. Current cohorts should note their existence, contribute to the evidential base, and not attempt to commit to delivery.

| CODE | INITIATIVE | PILLAR |
|---|---|---|
| **P2.2** | TIC Apprenticeship Standard Development | Pillar 2: Entry Pathways & Early Career |
| **P2.3** | TIC Degree Apprenticeship | Pillar 2: Entry Pathways & Early Career |
| **P4.4** | Surveyor Time: Professional Development Resource Concept | Pillar 4: Competence & Professional Development |

SECTION 5

# 5. Delivery Through Successive N30N Cohorts

## 5.1 The Cohort Model

SAFed Academy will not be built by a single group of people in a single year. It will be built incrementally, through the cumulative contributions of successive N30N cohorts: each inheriting the work of their predecessors, possibly selecting 2–4 initiatives to advance in depth, and leaving a better-documented foundation than they found.

This model has two critical requirements: that each cohort takes the handover seriously, and that SAFed provides the continuity that prevents knowledge being lost between cohort cycles. Without both, the cumulative model fails.

## 5.2 What Each Cohort Contributes

C1 2025–26

### Cohort 1: Foundation and Framework

Identified the workforce challenge through original research. Produced an evidence-based research paper with 62 referenced sources establishing the regulatory, structural and visibility barriers. Developed this implementation plan: five pillars, 21 initiatives with feasibility assessments, three strategic horizons, and the cohort delivery model. The companion research paper and this document are Cohort 1's primary outputs.

C2 +

### Future Cohorts: Evaluation, Development and Delivery

Each future cohort will: review the handover document and update their assessment of where the roadmap stands; select 2–4 initiatives from the register to advance during their programme; conduct feasibility studies or stakeholder engagement for their chosen initiatives; produce at least one tangible deliverable (a campaign, a partnership, a feasibility study, a pilot proposal, a survey result); and complete a handover document that leaves the Academy in better shape than they found it.

## 5.3 The Handover Protocol

At the conclusion of each N30N programme, the outgoing cohort will produce a handover document comprising:

- An updated assessment of each initiative in this register (status: not started / in development / active / complete)
- A summary of the cohort's specific contributions: what was done, what was learned, what is in progress
- Updated stakeholder contacts and relationship notes
- Honest recommendations for the incoming cohort's priorities
- Any updated feasibility assessments based on experience or new information

This document should be held by SAFed and provided to each incoming cohort at the start of their programme. It is the instrument of institutional continuity.

## 5.4 Expert Working Groups and Technical Committee Delivery

SAFed Academy operates through two parallel delivery mechanisms. The **N30N Cohort Programme** is the primary vehicle for developing and advancing initiatives through successive cohorts of practitioners. The **Expert Working Group** mechanism addresses matters that require deep specialist expertise, direct regulatory engagement, or practitioner authority that cohort-based development cannot provide. Both mechanisms sit under SAFed Academy governance; neither is subordinate to the other.

Initiatives should always be aligned to the most appropriate delivery route. The cohort model and the Technical Committee or Expert Working Group route are complementary, not competing: the choice follows from the nature of the initiative, not from convention.

### Expert Working Group: Regulatory Alignment

**Status:** Established as a SAFed Academy priority action. Reporting to SAFed Council.

**Purpose:** To assess whether the current implementation of UKAS RG series requirements unintentionally restricts TIC entry pathways more than is necessary to achieve their intended safety outcomes, and to develop a SAFed position on regulatory alignment for formal engagement with UKAS.

**Why this cannot be a cohort task:** N30N cohort members are, by design, at an early stage of their TIC careers. Engagement with UKAS on regulatory interpretation requires practitioners with direct experience of RG series requirements in operation, familiarity with UKAS assessment practice, and the professional standing to represent the sector credibly. The Expert Working Group model provides this.

**Core membership:** TC 11 and TC 6, with open invitation to members of other Technical Committees who hold relevant expertise. Membership is by practitioner experience, not by committee affiliation.

**Scope:**

- Map current RG series requirements against actual workforce entry constraints, with particular focus on age, qualification, supervision and authorisation thresholds
- Identify where requirements may have a disproportionate restricting effect relative to their safety purpose
- Develop a structured, evidence-based SAFed position paper for submission to UKAS
- Engage UKAS in formal dialogue, building on SAFed's existing relationship as an accreditation scheme owner and SAFed member organisations' status as UKAS-accredited bodies

**Expected output:** A SAFed Regulatory Alignment Position Paper, suitable for submission to UKAS and publication as a sector document. This is a formal SAFed deliverable, not an internal working document.

**Governance:** The working group reports directly to SAFed Council. It is not managed through the N30N cohort structure. The N30N cohort's role is to provide its research findings as input: the expert group takes those findings forward.

**RELATIONSHIP TO THE 21 INITIATIVES**

The Regulatory Alignment Expert Working Group is a discrete Academy action that sits alongside the 21 initiative register. It is not numbered within the initiative register because it is a governance and advocacy function rather than a programme initiative. It is, however, a first-class SAFed Academy commitment and should be treated with the same visibility and accountability as the Horizon 1 initiatives.

Where other initiatives are identified as better suited to Technical Committee delivery than to cohort development, the same principle applies: establish a clear working group mandate, define membership by expertise, set a concrete output, and report through SAFed governance. TC 9 and TC 11 are identified as particularly relevant for technically-focused initiatives, but appetite from other Technical Committees should be confirmed through direct engagement rather than assumed.

# 6. Concepts Identified for Future Exploration

Three strategic concepts have been identified during Cohort 1's research that warrant dedicated exploration by future cohorts, but which are not yet sufficiently developed to be treated as fully-formed initiatives. They are presented here to ensure they are not lost between cohort cycles.

## 6.1 Surveyor Time

### The Concept

Surveyor Time is an opportunity identified for future exploration: the possibility that member organisations could designate a defined proportion of Engineer Surveyor time (analogous to professional development allowances in other sectors) for CPD, structured training, Academy contributions, and feasibility work.

In a sector where the Academy's resource base is currently limited to cohort volunteer time, creating a structural resource of professional development time within member organisations could provide a sustainable engine for Academy activity over the long term.

This is a concept at an early stage of definition. Its commercial viability, governance model, and return on investment have not yet been assessed. It would require significant employer cultural alignment and demonstrable benefit before any formal adoption could be considered.

**Recommended treatment by future cohorts:** Benchmark against sectors with established CPD time norms (NHS, engineering consultancies, professional services). Present the concept to member employers for informal feasibility discussion. Do not commit to or advocate for this concept without prior employer and governance consultation.

## 6.2 The SAFed Academy Development Portfolio

### The Concept

An opportunity has been identified to develop a **voluntary career-development and transition-support tool**: provisionally titled the SAFed Academy Development Portfolio: to assist individuals in recording development activities, skills mapping, mentoring, placements and professional development throughout their journey into the TIC sector.

This concept is identified as Initiative P4.2 in the initiative register and is assessed as an H2 initiative. It is primarily intended as a supporting tool for career changers, Armed Forces personnel and others exploring routes into the sector. It is a future option for exploration, not a primary strategic deliverable.

**The Development Portfolio IS NOT:**

- A demonstration or certification of competence
- Personnel certification of any kind
- An authorisation to inspect independently
- A replacement for employer competence management systems
- A replacement for employer authorisation processes
- A UKAS-recognised document for regulatory purposes
- A replacement for SS01 or RG-series requirements
- A tool that supports inspection authorisation decisions

**The Development Portfolio IS:**

- A voluntary record of Academy development activities
- A skills-mapping and gap-analysis tool for career changers
- A record of mentoring activities and professional relationships
- A record of placements and Academy-facilitated experiences
- A career pathway planning aid for individuals exploring TIC
- A structured record of professional development milestones
- Owned by the individual, not by their employer or SAFed

**POSITIONING NOTE**

The TIC sector already operates within established competence management frameworks under ISO/IEC 17000 Series UKAS RG guidance, SS01 and individual company competence management systems. The Development Portfolio is not intended to replace, supplement or duplicate those frameworks. Any communication about this tool must be clear that it is a career-development aid only: not a competence record.

## 6.3 Extended Reality (XR) in TIC Training and Careers Engagement

### The Concept

The SAFed N30N Emerging Technologies project group is exploring the application of extended reality (XR) and augmented reality (AR) technologies in engineering training. Cohort 1 has identified a number of areas where these developments may be relevant to SAFed Academy's longer-term work:

- Immersive simulation of inspection environments to support pre-authorisation training, potentially compressing the structured training timeline
- XR-based careers engagement tools for use at events such as the Big Bang Fair, making TIC roles tangible for young people before career commitment
- Simulation-assisted onboarding for career changers entering the sector from adjacent disciplines

This concept is presented for awareness only. It is not yet sufficiently developed for treatment as a standalone initiative, and any development in this area should follow, rather than duplicate, the work being undertaken by the SAFed N30N Emerging Technologies project group.

**Recommended treatment by future cohorts:** Monitor project programme output and further discussion with TC10 when the project is handed over to them. Identify specific points of alignment between XR simulation capability and training pathway requirements before investing independently. Collaborative development is the preferred route.

# 7. Communicating the TIC Story: A Framework for Future Cohorts

This section provides narrative frameworks developed through Cohort 1's research. These are the stories that the evidence supports: tested against what motivates young people, career changers, parents, teachers and the media. Future cohorts are encouraged to use, adapt and build on these frameworks in their outreach activity.

## 7.1 For Young People: "CSI Engineering"

TIC professionals are the people who ensure that the world does not fail. They are the engineers who inspect the bridge before the lorry crosses, who assess the pressure vessel before it goes into a chemical plant, who inspect the lift before it carries its first passenger, who evaluate the offshore wind turbine before it generates its first megawatt. When they get it right, and they almost always do, nothing happens. That is the point. They are engineers who prevent disasters, not engineers who respond to them.

This is not only regulatory compliance work. It is applied engineering at the intersection of materials science, failure analysis, and increasingly, artificial intelligence. The equipment they inspect now increasingly includes AI-assisted monitoring systems, autonomous diagnostics, and remote sensing technology. An engineer who can evaluate both the pressure vessel and the AI layer governing its monitoring is not a box-ticker. They are operating in a technically demanding and increasingly sophisticated discipline.

The framing that works with young people: particularly those drawn to purpose-driven careers and to technology: is **CSI Engineering**: sophisticated diagnosis, real consequences, detective-level problem solving. That is TIC. Tell that story.

## 7.2 For Career Changers: "Your Skills Already Work Here"

Gas engineers, REME veterans, and automotive technicians are not being asked to start over. They are being asked to apply what they already know in a sector that values it enormously. A gas engineer who has spent ten years working safely with pressure systems may already have relevant practical pressure-

systems experience that directly supports TIC work. A REME corporal who has maintained complex military engineering systems under pressure already has the discipline, technical maturity, and safety awareness that TIC employers spend years developing.

The career changer story is one of lateral movement, not starting from scratch. The 12-to-18-month structured training builds on that foundation, not replaces it. The foundation they already have. That needs to be said clearly, because most potential career changers do not know that their background is exactly what TIC needs.

## 7.3 For Career Changers: The International Dimension

One of the most powerful and least-communicated aspects of TIC careers is that experience gained within a UKAS-accredited inspection environment can support international career mobility, particularly where employers, regulators or accreditation bodies recognise comparable competence and accreditation frameworks. This is a valuable career message for Armed Forces leavers and mid-career professionals who value the portability of their skills. Future cohorts should explore this carefully in career changer outreach: choosing TIC may expand career options rather than narrow them.

## 7.4 For Parents and Teachers: "Stable, Purposeful, Well-Paid"

Parents are the most influential people in a young person's career decision. They respond to different signals than the young people themselves. For parents, the TIC story is one of employment security, professional status, and purpose: the work keeps people safe. These are the three signals that parents respond to most strongly.

Teachers respond to the same signals, plus one more: evidence that a career pathway exists and is accessible. The T Level Simulated Placement, the clear route from engineering technician to Engineer Surveyor, and the SOE professional chartership route give teachers the information they need to advise with confidence rather than guesswork.

## 7.5 The Technology Story: AI and Modern TIC

The research paper identified an underused communications asset: TIC is increasingly a technology-forward discipline. Modern TIC involves technologies such as drone inspection systems, thermal imaging, robotic crawlers, acoustic emission sensors, and AI-assisted analysis tools. The equipment they inspect increasingly includes AI-assisted monitoring and diagnostic systems. A TIC professional who can evaluate both the pressure vessel and the AI layer governing its condition monitoring brings a distinctive and valuable combination of technical skills.

This story works particularly well with two groups. For **young people**: it repositions TIC from "clipboard engineering" to "CSI meets AI": purposeful, technological, and increasingly sophisticated. For **career changers from tech and engineering backgrounds**: it signals that TIC is not a retreat from technical complexity but an advance into a field where AI literacy will command increasing premium. Future cohorts developing campaigns under P1.1, P1.3 or P1.4 should build this technology dimension into the messaging from the outset.

## 7.6 The Long-Term Vision

> In ten years, when a young person searches for an engineering career, Testing, Inspection and Certification appears. When a gas engineer asks what they can do next, TIC is the first answer. When an Armed Forces leaver with a REME background looks for a civilian career that values everything they have built, SAFed Academy is there. When a school in a former industrial town asks for an engineer to talk to their students, a TIC professional answers. That is what SAFed Academy is building toward. Not a quick win. A transformed sector.

# 8. Governance and Accountability Framework

This section defines the governance model for SAFed Academy.

## 8.1 Continuity and Cohort Handover

The governance of SAFed Academy is built into the cohort cycle itself. Each N30N cohort inherits the framework from the previous cohort via the formal handover document, selects its priorities from the initiative register, and reports progress through the handover process.

Between cohort cycles, the Project Sponsor and SAFed CEO provide strategic oversight: ensuring each incoming cohort receives the handover document, maintaining Academy momentum, and reporting progress to the SAFed Board. The Project Sponsor is responsible for ensuring the Academy framework remains live and that each cohort transition is properly supported.

## 8.2 Annual End of Cohort Reporting

An end of cohort report: brief, honest and specific: could serve as the Academy's primary accountability mechanism. Suggested contents:

- Progress against the potential KPIs below
- A summary of each active cohort's contributions against the initiative register
- Qualitative evidence: partnerships formed, engagements conducted, outputs produced
- An honest assessment of what did not work and why
- Updated priorities for the incoming cohort

An honest failure analysis is more useful than a polished success narrative. The audience for this report is SAFed's CEO and future cohorts: not a marketing audience.

## 8.3 Potential KPIs for Consideration

The following indicators are offered as a starting point for the Project Sponsor to select and adapt. They should be reviewed annually as the initiative portfolio evolves.

| INDICATOR | INITIATIVE(S) IT TRACKS |
|---|---|
| Number of active STEM Ambassadors registered via SAFed | P1.2 |
| Number of school and college engagements per year | P1.2, P1.4 |
| Tomorrow's Engineers Code: signatory status | P1.1 |
| TIC Careers Guide: distribution reach (careers adviser count) | P1.3 |
| T Level Simulated Placement: placements per year (when operational) | P2.1 |
| Armed Forces / career changer hires reported by member companies | P3.1, P3.2, P3.3, P3.4 |
| SOE CPD accreditations issued to TIC professionals | P4.1 |
| End of cohort workforce survey: response rate and key findings | P5.1 |
| Number of initiatives in active development (H1 and H2) | All |
| Gender representation in annual workforce survey (% women in TIC) | P5.1 (baseline then trend) |
| TIC career awareness: perception survey score (baseline then trend) | P5.1 |

As the initiative portfolio matures beyond Horizon 1, outcome metrics: including the number of career changers entering TIC employment through Academy-supported pathways and measurable shifts in TIC career awareness among target audiences: will be introduced alongside these activity indicators. The SAFed CEO and/or Project Sponsor should review and update the KPI set annually.

APPENDIX A

# Key Partners for SAFed Academy

The following organisations have been identified as priority partners for SAFed Academy across the initiative register. Relationship development with these organisations is itself a valuable output for future cohorts.

| ORGANISATION | ROLE IN SAFED ACADEMY | FIRST RECOMMENDED ACTION |
|---|---|---|
| **EngineeringUK** | Tomorrow's Engineers Code; Neon platform for career content; Big Bang Fair access | Sign the Tomorrow's Engineers Code (P1.1) |
| **STEM Learning** | STEM Ambassador Programme: free registration, school matching, safeguarding | Register SAFed as employer on stemlearning.co.uk (P1.2) |
| **Society of Operations Engineers (SOE)** | CPD accreditation; Armed Forces skills recognition; professional chartership route | Arrange introductory meeting to scope partnership (P4.1, P3.2) |
| **Career Transition Partnership (CTP)** | MOD official resettlement service: employer registration, job board, resettlement events | Register TIC as recognised employer sector on CTP job finder (P3.1) |
| **Careers and Enterprise Company (CEC)** | Enterprise Adviser network; employer-school connections; Gatsby Benchmark support | Register as employer partner; seek first Enterprise Adviser matches (P1.2, P1.4) |
| **Smallpeice Trust** | Residential engineering courses for 12–18-year-olds: TIC-themed course opportunity | Approach as corporate sponsor or commission new TIC course (P1.6) |
| **Arkwright Engineering Scholarships** | Industry mentor partnerships for high-achieving sixth-form students | Register as industry partner; commit mentors from member companies |

| ORGANISATION | ROLE IN SAFED ACADEMY | FIRST RECOMMENDED ACTION |
|---|---|---|
| **IfATE / Skills England** | Apprenticeship standard development and approval: route to funded TIC apprenticeship | Early conversation on NDT standard extension vs. new TIC standard (P2.2) |
| | | |
| **UKAS** | Regulatory clarity on Simulated Placement; factual accuracy review of careers content; long-term regulatory dialogue | Informal briefing on Simulated Placement concept and companion research (P2.1, P5.3) |

APPENDIX B

# Regulatory Reference: UKAS and ILAC Constraints

This summary is provided for future cohorts who may not have read the companion research paper in full. Understanding the regulatory constraints is essential context for any Academy activity: it shapes what is possible, what requires UKAS engagement, and what can be pursued without regulatory complexity.

| DOCUMENT | SCOPE | KEY CONSTRAINT FOR WORKFORCE STRATEGY |
|---|---|---|
| **ILAC P15** | International overarching standard | Requires competence requirements to consider professional judgement where appropriate. This supports the wider competence, supervision and authorisation frameworks applied by UKAS-accredited inspection bodies. |
| **UKAS RG 0** | UK overarching competence guidelines | Requires understanding of failure mechanisms and ability to make independent safety decisions before authorisation. |
| **UKAS RG 1** | Power Presses | Minimum age 21 for Category 6 personnel; Category 5 personnel must meet Category 6 criteria. RG1 requirements differ from some other RG disciplines. |
| **UKAS RG 2** | Pressure Systems | Minimum age thresholds apply; Category 6 personnel are subject to frequent supervision and are not authorised for independent certificate issue. |
| **UKAS RG 3** | Transportable Pressure Receptacles | Minimum age 21 for Category 5 inspectors. |
| **UKAS RG 6** | Lifting Equipment | Defines qualification categories, equipment classes and minimum supervision levels, including frequent supervision for lower-category personnel in specified activities. |
| **SAFed SS01** | Engineer Surveyor competence standard | 12–18 months structured training required before authorisation, even for candidates with relevant engineering qualifications. |

### DESIGN PRINCIPLE FOR ALL ACADEMY ACTIVITY

Any engagement with young people under 18 must be awareness and inspiration, not work experience in live inspection environments. Simulated Placements in controlled, off-site training environments are the preferred proposed model, subject to provider, safeguarding, employer and regulatory review, for 16-to-19-year-olds. Direct trainee entry is generally for adults aged 18 or over, and wider independent inspection authority is typically from age 21, subject to the applicable RG discipline and employer authorisation. Design all Academy activity with these boundaries clearly understood; consult UKAS if in any doubt.