

# Final Technical Delivery & Impact Report

**National Occupational Standards Development, Competency-Based Curriculum Design & Workforce Development for Oil & Gas Inspection Occupations.** South Refineries Company (SRC), Iraq | 2023–2025

## Executive Summary

From the end of 2023 to April 2025, UniHouse led the full design, implementation, and transfer of Iraq's Technical and Vocational Training Center (TVTC) for the South Refineries Company (SRC), under Iraq's Ministry of Oil. Delivered in partnership with JGC Corporation (Japan), Hyundai Engineering & Construction, and funded by the Japan International Cooperation Agency (JICA), the initiative included the development of National Occupational Standards (NOS) for oil & gas inspection occupations aligned with the UK National Occupational Standards (UK NOS) framework, the design of full competency-based curricula derived from those standards, and the production of comprehensive training manuals for each occupation. These outputs strengthened institutional and workforce readiness aligned with a \$2.7 billion refinery expansion across the 17-month engagement.



SRC trainees and instructors at the launch of the TVTC Program

## Project Objectives

- Deliver end-to-end institutional consultancy and advisory services for the establishment and operation of the TVTC.
- Build public-sector leadership capacity to manage training centers and drive continuous quality improvement.
- Develop National Occupational Standards (NOS) for oil & gas inspection occupations aligned with the UK NOS framework, design full competency-based curricula derived from those standards, and produce comprehensive training manuals for each occupation.
- Respond to sector-specific skills gaps with targeted training.
- Promote sustainable, locally led TVET delivery systems.
- Training Management Framework: Standardized curriculum, scheduling, and performance tracking.
- Quality Assurance Framework: Embedded M&E, self-assessment, and key performance indicators.
- NOS & Curriculum Development Framework: Full National Occupational Standards developed for civil, piping, electrical, and welding inspection occupations — structured in alignment with the UK NOS framework and covering occupational profiles, competency units, performance criteria, knowledge and skills descriptors, and assessment evidence requirements. Each NOS informed a full competency-based curriculum and a comprehensive training manual used for delivery and institutional reference.

## Consultancy & Strategic Advisory

### Institutional Frameworks Development

UniHouse designed and operationalized three institutional frameworks:

- Management & Governance Framework: Defined roles, administrative processes, and decision-making structures.

### Baseline Skills Gap Assessment

A comprehensive assessment identified key workforce gaps:

- Limited familiarity with international standards
- Deficiencies in civil, piping, electrical, and welding inspection
- Weakness in HSE protocols
- Gaps in digital skills and training center management

## Consultancy & Strategic Advisory

### Equipment Specification Aligned to Training Content

UniHouse developed full technical specifications for:

- Welding stations, inspection tools, AutoCAD labs
- International standard alignment
- Practical, scenario-based learning integration
- Delivered staff training on equipment operation and maintenance

### NOS Development, Curriculum Design & Training Delivery

Developed National Occupational Standards aligned with the UK NOS framework, designed full competency-based curricula, produced comprehensive training manuals, and delivered modular training for:

- Civil, Electrical, Piping Inspection
- Welding
- Scaffolding Erection
- Information Technology & AutoCAD
- Occupational Health & Safety (HSE)

*Our experience in welding was limited before the training course and the large number of activities we applied in the welding workshop added practical experiences in different welding situations.*

Ali Nazir Hussein, Welding Technician

### Operational Management and Capacity Building

UniHouse managed TVTC operations, implemented frameworks, and prepared for handover. Leadership received a six-month mentorship program focused on sustainability and performance tracking.

### Leadership Coaching

- Six-month embedded mentorship program
- Capacity-building for SRC leadership
- Performance tracking, outcome planning, and sustainability protocols

### North-to-South & South-to-South Knowledge Transfer

- Localization of international practices into Iraq's public-sector training system
- Long-term institutional memory and ownership embedded

*This course allowed me to connect the theoretical side I studied at university to the practical side as a tube inspector.*

Amna Sajjad Hamid, Pipe Inspection Engineer



### Monitoring & Evaluation (M&E) Approach

UniHouse applied its Capacity Development Evaluation Framework (CDEF) to structure the M&E approach, integrating results-based management and KPIs co-developed with SRC. Data collection included surveys and dashboards. Regular evaluations informed improvements, and a sustainability protocol was established for post-handover monitoring.



## Training Outputs

Course Area	Duration (Weeks)	Training Hours	Trainees
Information Technology & AutoCAD	3	240	18
Civil Inspection	4	320	10
Electrical Inspection	4	320	22
Piping Inspection	4	320	20
Scaffolding Erection	1	80	12
Welding	4	320	16
Occupational Health & Safety	3	240	3
Total	—	1,840	101

- 39% of participants were women

## Outcomes & Impact

- Project concluded in 2025 with validated NOS documents, full competency-based curricula, and comprehensive training manuals for oil & gas inspection occupations — formally adopted by SRC as the institutional competency and training baseline NOS documents structured in alignment with the UK NOS framework and used to anchor all subsequent training design, assessment, and certification processes within the TVTC
- Improved alignment between training outcomes and refinery expansion requirements
- Enhanced engineering compliance, HSE performance, and technical readiness
- SRC now models sustainable public-sector-led training in Iraq

## Alignment with National Priorities

- Supports Government of Iraq’s energy, construction, and human capital development goals
- Strengthens institutional leadership and public-sector sustainability
- Promotes inclusive workforce participation, including women in technical fields
- Facilitates knowledge transfer and local capacity retention in critical infrastructure sectors

*In the past, we relied on our personal efforts in studying specifications, but now the study of specifications has become systematic and within a training program.*

Ahmed Jassim Mohamed, Civil Inspection, Engineering and Planning Department

## Looking Ahead

The SRC TVTC now stands as a nationally replicable model for:

- Institutional TVET reform
- Sustainable workforce development
- Strategic leadership and governance in public training systems

UniHouse remains available to support next-phase scaling, digital transformation, and regional knowledge exchange.



Joint project team from UniHouse, JGC, and Hyundai advancing TVET in Iraq