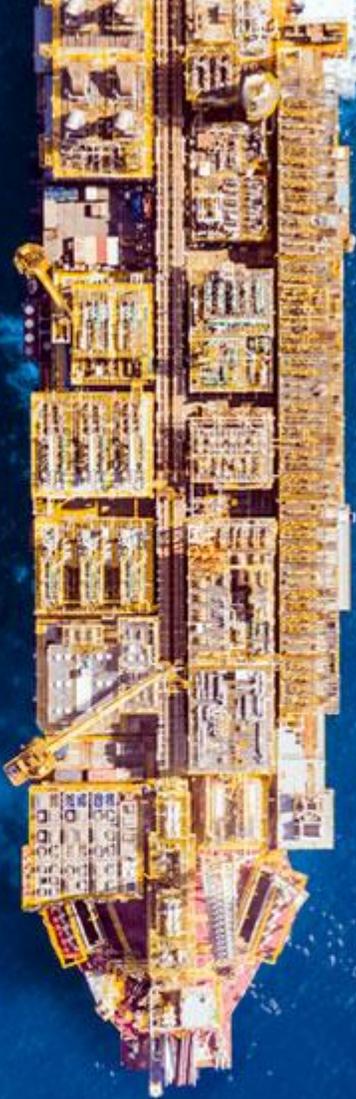




Namibia Oil and Gas Conference

*Technology Transfer for
Sustainable Solutions*

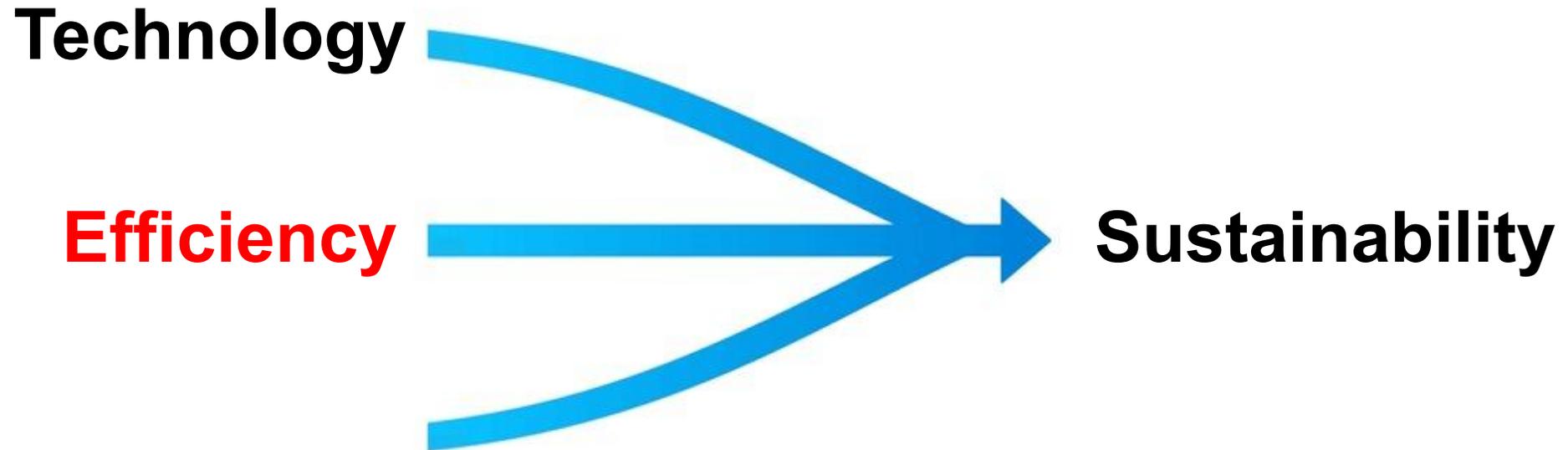
August 2025



SUSTAINABILITY

Technology Transfer for Sustainable Solutions

1. Efficiency is the Denominator
2. MODEC Target Zero
3. Transfer of Technology



Construction / Operations (Local Content)

Explore a Sustainable Future with Innovation

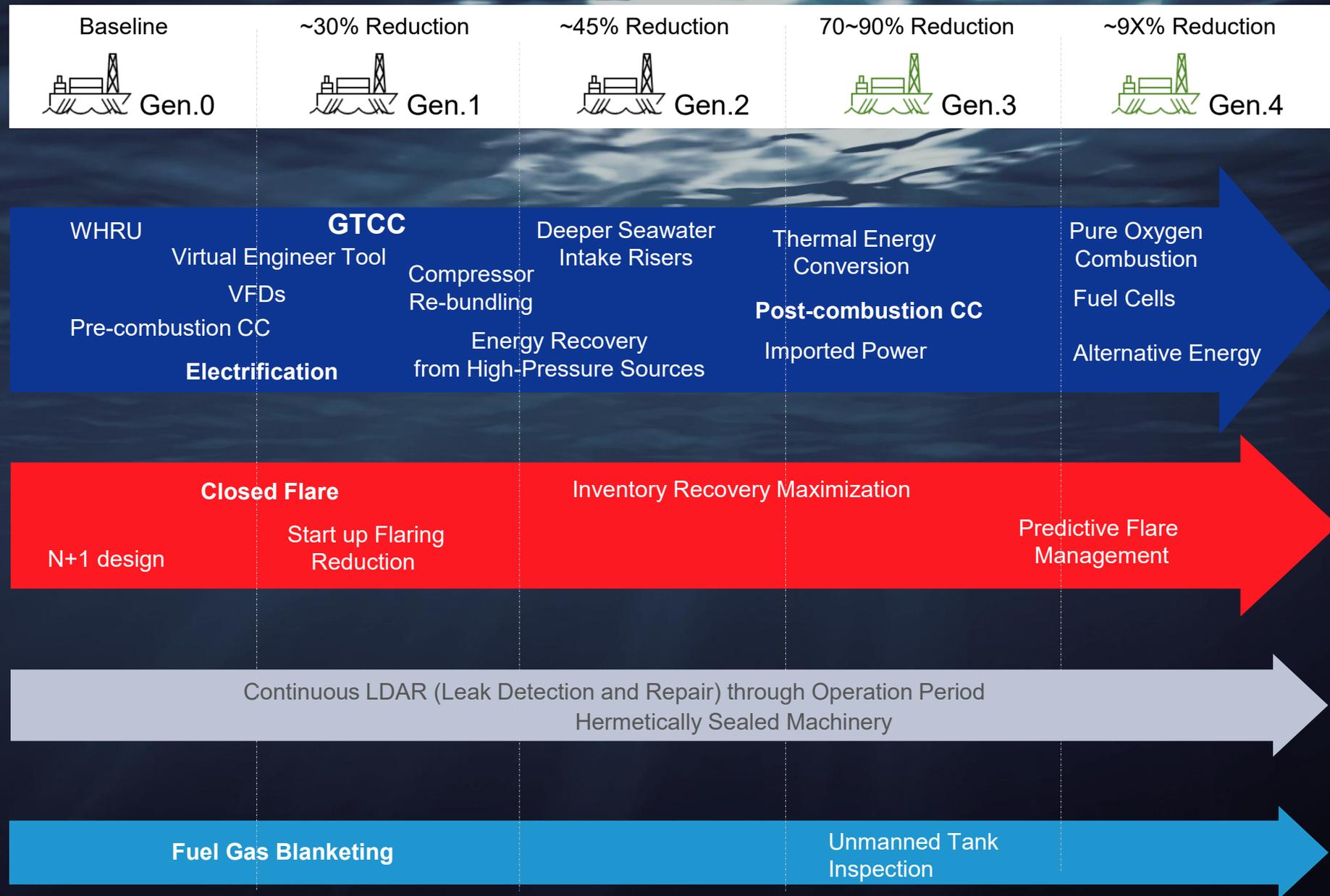
1. GTG/STG Combined Cycle
2. Compressor Re-Bundling
3. Variable Frequency Drives (VFD)
4. Cargo Tank Blanketing with Fuel Gas
5. Closed Flare System
6. Low Pressure (LP) Gas Recovery
7. Offloading Pump Options
8. All Electric Toppides incl Cranes / Compressors
9. Heat Integration
10. Flowmeters for Promotion Production Efficiency
11. Fugitive Emission Monitoring
12. Energy Saving Features
13. Offspec Produced Water Management
14. Start-up VFDs
15. Digital Monitoring and Solutions



Digital Monitoring | Efficiency for a sustainable future



MODEC's FPSO Decarbonization Roadmap



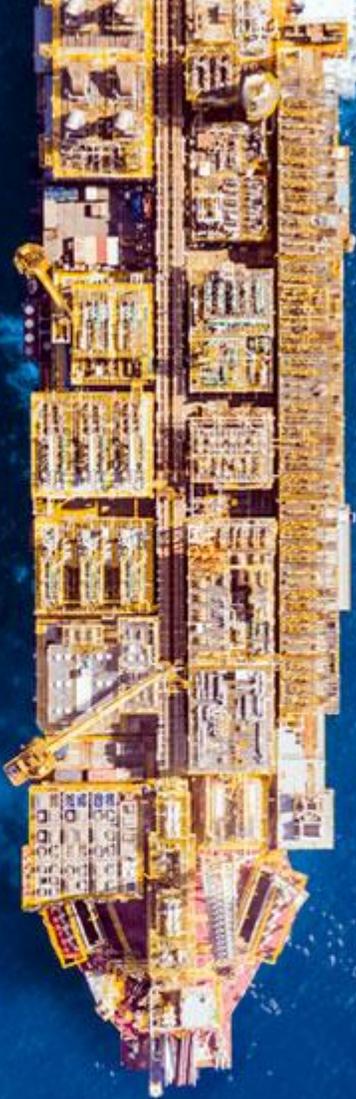
- Combustion**
- Thermal Efficiency Improvement
 - Energy Consumption Reduction
 - CO2 Capturing
 - Substitution of conventional ICEs

- Flare**
- Flare Gas Capturing
 - Combustion Efficiency Improvement
 - Flaring Scenarios Reduction

- Fugitive**
- Leak Detection and Repair
 - Leak Sources Reduction

- Tank Vent**
- Flashed Gas Capturing
 - Venting Scenarios Reduction

- Emissions during EPCI**
- Emissions Concerned Constructability



PROCUREMENT

Activities Classification and Requirements

Classification of Local Content regimes		
Regime	Requirements	
Exclusive	<p>Local company definition:</p> <ul style="list-style-type: none"> • At least 51% Senegalese ownership, • >80% Senegalese management, and • At least 51% Senegalese staff. 	Percentage of Senegalese ownership may vary for certain specific activities
Mixte	<p>Partnership options:</p> <ul style="list-style-type: none"> • Option 1 : Joint Venture Company <ul style="list-style-type: none"> - Set up a new company co-owned by foreign company and a local company as defined in the Exclusive Regime - 5% minimum of share capital held by the local company - Provide for a local content plan (training, transfer of know-how/technology...) • Option 2 : Partnership Agreement (published in 2022) <ul style="list-style-type: none"> - Subcontract between foreign and local companies - 5% minimum of share scope allocated to the local company - Provide for a local content plan (training, transfer of know-how/technology...) 	Classification of activities requiring a highly technical work
Non Exclusive	<ul style="list-style-type: none"> • Activities with low local content potential • Allow free competition between local and foreign companies • Incorporation of a local entity in Senegal except for services or good provided during a cumulative duration over the last two years that is less than or equal to 12 months. 	Open to all companies without the obligation to set up a partnership with a local company.

Local Content efforts and exchanges with the CNSCL

+ 200 letters exchanged with the CNSCL

+200 authorizations from CNSCL

 **All tendering processes launched via CNSCL platform**



+400 companies registered in MODEC Senegal portal

With a **local content vetting** done

Documentation shared with the CNSCL

- ✓ Annual local content Plan
- ✓ Annual local content Report
- ✓ Annual Procurement Plan



Meetings and workshops

- Local Content Day (CNSCL)
- Workshops on technical SOW (MODEC)
- Procurement day (MODEC)
- Regular meeting on local content (WES-MODEC)
- Regular meetings with CNSCL (MODEC-CNSCL)



Supply Chain and Procurement Success stories

Onshore Supply Base

- 
- 1
- ❖ **SENTRAK LOGISTIC/SILS 100% local companies** specialized in logistics solutions.
 - ❖ **Economic Impact:** 75% revenue increase, new business unit created.
 - ❖ **Adherence to Industry standards:** ISO 9001/14001/45001
 - ❖ **Training:** Annual training program at the beginning, HSSE performance.

Chemicals

- 
- 2
- ❖ **BAKER HUGHES SENEGAL** will provide chemicals and services for onshore and offshore oilfield operations.
 - ❖ **Partnership with TERANGA OIL AND GAS**, a **local company** that focus in developing local competency to support the international operators, service companies.

Catering

- 
- 3
- ❖ **O2 Catering** a **100% local company** specialized in catering services.
 - ❖ **Economic impact:** more than 3,000,000 USD and increased operational scale.
 - ❖ **Adherence to Industry standards:** Food and safety Hygiene aligned with HACCP principles.
 - ❖ **Training:** food hygiene, safety procedures and offshore readiness trainings.

Waste Management

- 
- 4
- ❖ **SEPCO INDUSTRIES** a **60% local company** specialized in providing services to the Oil and Gas Industry, equipment and products, vessels and marine services, customs clearance and freight handling, management of supply bases, waste management & disposal.

Scaffolding

- 
- 5
- ❖ **PROMETRIC** a **30% senegalese owned company** specialized in painting and fabrics maintenance.
 - ❖ **Economic Impact:** more than 600,000 USD.
 - ❖ **Adherence to industry standards:** Adherence to all OPITO certifications required to work offshore.
 - ❖ **Training:** Over 15 senegalese new personnel trained to offshore international standards.

Vessel Quayside

- 
- 6
- ❖ **SSB** a a consortium of **100% Senegalese companies** with the participation of the Senegalese state operating in port logistics activities specialised in Oil and gas activities.

Achievement | Local content Partnerships



SERVICE	COMPANY	PARTNER
Mooring Installation	HAVFRAM SENEGAL SA	NAVITRANS
Cultural Relations and HR Consulting Company	RMO ENERGY SERVICES SAS	Senegalese shares % upgraded
Chemicals Management & Lab Services	BAKER HUGHES CAMEROON S.A.	TERANGA OIL AND GAS
Fabric maintenance, Painting, Tank Cleaning Services and Repair	PROMETRIC OFFSHORE SERVICES SENEGAL	Senegalese shares % upgraded
Scaffolding	PROMETRIC OFFSHORE SERVICES SENEGAL	Senegalese shares % upgraded
Integrated Control Safety Systems - ICSS services	HONEWELL PTE LD	ENERGY PLANET
Drop, Cranes, Lifting Gears Certification And Rigging Services	AXESS GAINDE	GAINDE MARINE OFFSHORE
FPSO Towing (SG - SN)	ALP MARITIME SERVICES B.V.	SENTRAK / SAHEL....
Piping Repairs And Replacement	ORSEN SA	FREIDLANDER
Provision of Station Keeping Vessels (In-Country)	TIDEWATER MARINE INTERNATIONAL INC.	SENTRAK / SAHEL....
Heat Exchange Cleaning and Refurbishment	SOUTHEY CONTRACTING LIMITED	ECSEN
Station Keeping Vessels	ALP MARITIME SERVICES B.V.	SENTRAK / SAHEL...
Provision of Construction Support Vessel (In-Country)	OLYMPIC HOLDING CHARTERING A.S.	SENTRAK / SAHEL...
Tank Inspection and Facility Wide NDT	GLOBAL ENERGY VENTURES	GOREE OFFSHORE

Achievement | Local content Partnerships



SERVICE	COMPANY	PARTNER
Risk Based Inspection (RBI)	CODEX WISE SENEGAL	WISE SENEGAL
VSAT Technical support	MARLINK	XELCOM SERVICES
Gas Turbine Generator Commissioning	BAKER HUGHES	TERANGA OIL AND GAS
Fugitive Emission	CODEX-WISE	WISE SENEGAL
Small Bore tubing and flexible hose management	HYDRASUN	CAMMACH
Pressure Test	SOUTHEY CONTRACTING LIMITED	ECSEN SHORELINE LOCAL SERVICES
Tank Gauging System (Aut. Instr. Readings)	EMERSON PROCESS MANAGEMENT MARINE	OCEAN MARINE SERVICES
Marine Manpower	RMO ENERGY SERVICES	Senegalese shares % upgraded
Lifting Accessories	GLOBAL ENERGY VENTURE	GOREE OFFSHORE
Cultural Adaptation program	RMO ES	Senegalese shares % upgraded
Gas Turbine Generator	BAKER HUGHES	TERANGA OIL AND GAS
Valves Aftersales	EMERSON	OCEAN MARINE SERVICES
Topside valves signature	EMERSON	OCEAN MARINE SERVICES

MODEC engagements with local suppliers

MODEC Senegal continuously works towards reinforcing international companies' **commitments to local content** and encouraging ongoing collaboration with all stakeholders to achieve mutual goals of **safe and excellent performance of operations**



MODEC engagements with local suppliers



- Enhancing **local capabilities** by investing in trainings and development program to build a skilled workforce.
- Promoting **local procurement** : Prioritize sourcing from local suppliers and facilitate partnerships with international companies to stimulate economic growth
- Fostering innovation : Encourage the development and **transfer of technologies and practices** that leverage local expertise and resources



Look ahead | Workshop Nationalization Plan

Purpose: Centralize key maintenance and repair services in a dedicated workshop located and operated in Senegal.

Scope of services to be performed in the local Workshop:

- Valve repair
- Machining (Rotating & Static Equipment)
- Hydraulic systems maintenance & repair
- Electrical equipment Ex repair
- Instrumentation maintenance & repair
- Plate & frame exchangers inspection & repair
- Mechanical seal refurbishment

Local Content implications:

- **Job Creation:** Significant local workforce required for diverse services
- **Technology Transfer:** Collaboration ensures knowledge and skills are shared with local partners
- **Industry Impact:** Enhanced expertise can benefit other sectors in Senegal
- **Economic Growth:** Increased employment, in-country tax benefits, and local business development

PEOPLE



Development of New Talent

In order to **develop new local talents**, MODEC Senegal launched in 2022 an **intern and training program** for its employees in partnership with other MODEC entities around the world.



Trainee Programs | Pre-Operations trainee program

In order to support the development of **local talent**, MODEC Senegal recruited and invested in the **development of Trainees** during the **Pre-Operations phase** of the **Sangomar Project**.

2022/23 — **14** Offshore trainees recruited and developed in various MODEC locations in Brazil and Singapore

~ 1 Million USD spent on training and development



8 Local Offshore Production Operator Trainees recruited
12 months spent on training with MODEC do Brasil (MdB)



6 Local Offshore Maintenance Technician Trainees recruited
8 months spent on training with MODEC do Brasil (MdB)



Operations | New trainee program

To support the long-term success and sustainability of its **Operations phase**, MODEC SENEGAL has launched a **new Trainee Program** from *October 2025* to *September 2027* in collaboration with the **National Institute of Oil and Gas (INPG)**.

Positions targeted

- 8 Offshore Production Operators
- 2 Offshore Mechanical Technicians
- 2 Offshore Electrical Technicians
- 2 Offshore Instrumentation Technicians

Training program with INPG

- Intensive six-month program developed with international Oil & Gas training centers
- Other technical training upon their return to Senegal, in collaboration with national companies

Offshore Assignment

- After the 6-month initial training, trainees will join the FPSO Leopold Sedar Senghor (LSS)
- Additional on the job training and coaching sessions with Offshore Supervisors



Estimated budget
~2,7 Million \$

Training & Development | Onshore Employee training



Strongly committed to the **development of local talent**, MODEC Senegal offers regular internal and external trainings to its **local employees**.



Trainings for the Onshore Personnel

More than **2,000 hours** of training provided on

- Health, Safety, Security and Environment
- Incident Management and Emergency Response
- Cultural Adaptation Awareness
- Getting Things Done methodology
- Security Strategy for Sensitive Data
- Oil and Gas Fundamentals
- Legal and compliance trainings

BEYOND



Visit of the Senegalese President on FPSO LSS



His Excellency, **President Bassirou Diomaye Faye** with the local team offshore FPSO LSS team

June 26, 2024

Presentation of FPSO LSS operations by a Senegalese engineer from the MODEC Trainee program, during the presidential visit offshore

June 26, 2024



Engagement with local communities



MODEC Senegal is engaged in **local communities via a CSR project** as a contribution towards reaching the **United Nations Sustainable Development Goals**

Partnership with Shine to Lead, association supporting young girls' education

Support of orphanages in North and Southwest regions of Senegal

- Provision of food, education and medical supplies
- Staffing reinforcements
- Amenities and living conditions improvements

MODEC Senegal volunteer employees have visited one of the orphanages in **February 2025**, as a way to strengthen our support and engagement towards the structure.

