

Deloitte.

In partnership with



Launched by:



Under the championship of:



PETROFUND

Oil & Gas Industrial Baseline Survey – Namibia

Summary Report

August 2024



Namibia's recent Oil and Gas discoveries in the Orange Basin have been a driver for new opportunities and a potential for economic growth, with significant investment across the lifecycle

OIL AND GAS POTENTIAL IN NAMIBIA

 **NEW DISCOVERIES**

The **discoveries of light oil by TotalEnergies and Shell Namibia** confirm the potential of the deep-water Orange Basin.

 **INCREASED INVESTMENT**

The significant investment, **if development is confirmed**, could play a pivotal role in **accelerating the development of other industries** i.e. services, goods and workforce

 **KEY FIGURES**



4 OFFSHORE BASINS



**USD 12.9B
NAMIBIAN GDP (2022)**



**USD 10B – 20B
TYPICAL DEEP WATER
DEVELOPMENT INVESTMENT**

NAMIBIAN OFFSHORE HYDROCARBON MAP

NON-EXHAUSTIVE



Legend:
 ★ Offshore Basins
 ★ Basin with hydrocarbon potential

Sources: NAMCOR(Sedimentary Basins); Ministry of Mines and Energy; International Energy Agency (IEA)

...TotalEnergies and Shell made decision to launch a comprehensive and independent Industrial Baseline Survey (IBS) to identify potential Local Content (LC) opportunities ...

WHAT IS THE IBS

An **Industrial Baseline Survey (IBS)** is intended to evaluate a country's **industrial** and **workforce readiness** for oil and gas projects, assessing resources and future development needs, and **identifying potential opportunities** for **capacity and capability improvement**.

Note: *Generally, an IBS is commissioned once the FID milestone has been reached. To be proactive, this IBS was launched early to aid in guiding policy development and assisting government in prioritization when setting long term economic objectives. It also gives Namibian industry and workforce time to develop local content potential.*

In the interim, project scenarios are used to estimate potential demand for goods, services and workforce. Following FID, these project demand estimates would be refined.



WHY IS AN IBS IMPORTANT

- 1 To **prepare communications and public awareness campaigns** for stakeholders to manage expectations of the industry and the unique requirements of the industry.
- 2 To better **understand the Namibian O&G ecosystem and identify potential Local Content (LC) opportunities for suppliers and workforce**.
- 3 To assess a **realistic level of LC potential in the short-to-long term**, based on O&G project demand and local capabilities
- 4 **To identify key investments or changes that are required soon**, as local content development involves a long-term strategy, with short-term actions.
- 5 To better understand the **Namibian investment case** to support the FID.

...and to assess the state of Namibia's local supply chains and workforce needed to meet the standards of the Oil & Gas industry, taking into account their core and fundamental requirements

CORE REQUIREMENTS



HSSE standards

- Need for high Health, Safety, Security and Environment (HSSE) standards, as defined by the International Association of Oil and Gas Producers (IOGP), to be met by local companies and the workforce
- Given the high risk of certain O&G activities, this is a non-negotiable requirement that needs to be met by suppliers
- Requirement of robust monitoring and reporting



Ethics, Compliance and Transparency

- Need for robust processes to ensure compliance with O&G Industry's internal policies and external regulations regarding ethical and anti-corruption practices
- Requirement of robust monitoring and reporting

FUNDAMENTAL REQUIREMENTS



Capacity

- **For supply chains:** Need for a sufficient volume of local goods and services to meet significant need of O&G projects
- **For workforce:** Need for enough labor across multiple skills and positions to address O&G project requirements



Quality

- **For supply chains:** Need for right quality standards and product reliability to meet the exacting requirements of O&G projects
- **For workforce:** Need for well-trained workers with adequate competency and experience, technicians and engineers, holding certifications required by the O&G industry



Competitiveness

- **For supply chains:** Need for local goods and services to be competitive when compared with equivalent international sources
- **For workforce:** Need for local workers, technicians and engineers to be accessible and trainable at competitive costs to recruiting expats

The four-phase project was successfully executed based on 4 key activities, extensive secondary research, communication & outreach campaigns, stakeholder engagement and in-depth analysis



Extensive Desk Research

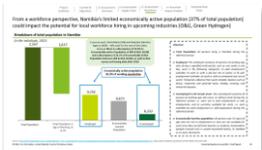
An in-depth exploration of both **legal and socio-economic dynamics** was conducted to **gain insights into the challenges and opportunities**



- Namibia's O&G policies
- Regulatory frameworks
- Local content policies
- Economic policies



- Namibian Economic Background



- Namibian Labor Background



Stakeholder Communication

An **extensive communication and outreach campaigns** were launched, spanning major media channels in local languages to **create awareness across diverse communities**



425

Post interactions



99

Airings on 9 radios



8

Major Newspapers



3

Townhalls (webinars)



1

Interview on NBC Business Today



Mapping & Stakeholder Engagement

In-depth interactions with key O&G stakeholders to gather insights, validate supplier information, and gather perspectives on key challenges and expectations



437

Stakeholders identified in 7 categories



254

Supplier survey responses received



45

Supplier site visits conducted



33

Interviews with non-supplier stakeholders

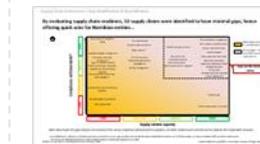


In-Depth Analysis

A **comprehensive analysis** that combined both quantitative and qualitative approaches to assess **local supply chains and workforce** and estimate **key gaps and LC potential**



- Scenario and timeline definition
- Demand estimation*



- SC volume and compliance gap analysis
- LC assessment

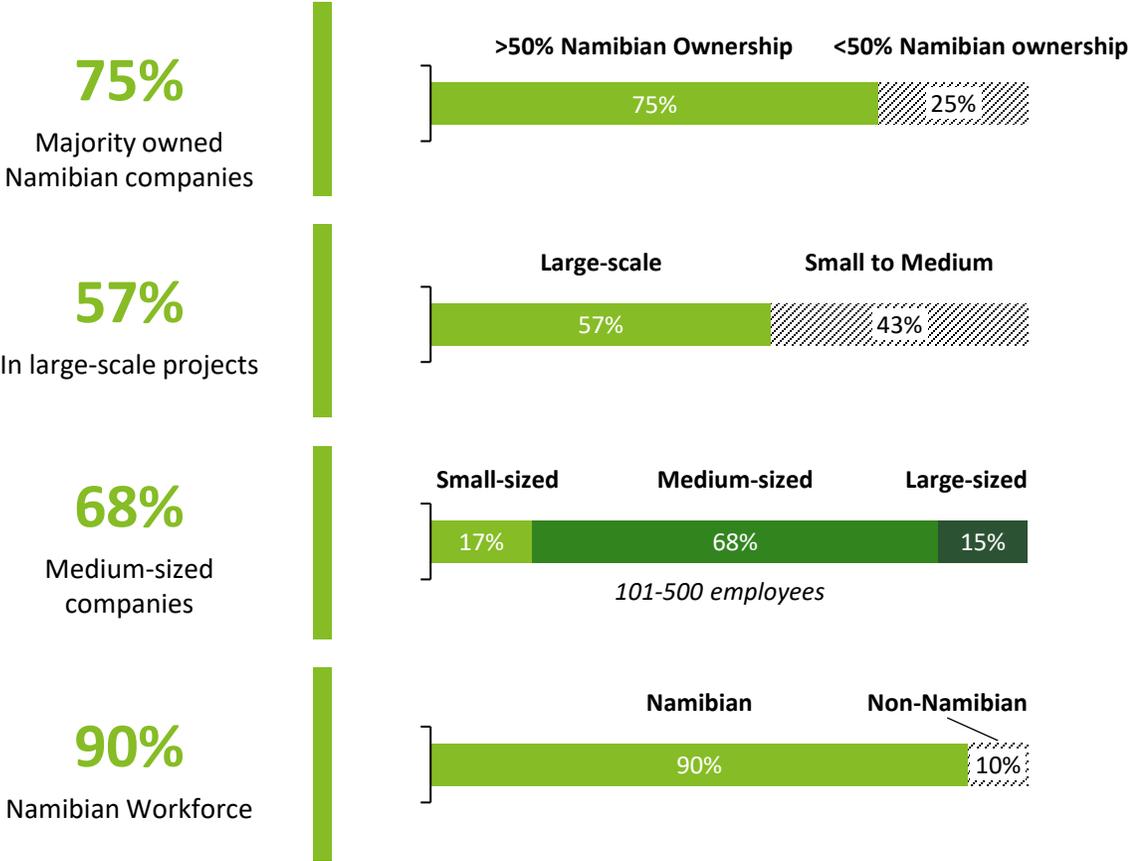


- WF supply and gap analysis
- LC assessment

Focus of this section

In parallel, the online survey and site visits of suppliers gathered insights from 254 suppliers, majority being medium-sized majority owned Namibian companies, with a strong interest in the O&G industry

SUPPLIERS' PROFILE



Note: *Response rate is based on # of responses on the initially identified companies
 *Results for the supplier profiles are based on the survey responses obtained from suppliers, no other actions were carried out to validate the respondent answers.

KEY TAKEAWAYS

STRONG O&G INTEREST DESPITE LACK OF CLARITY

- 80% of suppliers have a clear interest in the Oil & Gas sector
- However, there is a need for information on where companies fit into the O&G project lifecycle, the specific needs, standards and overall project timelines

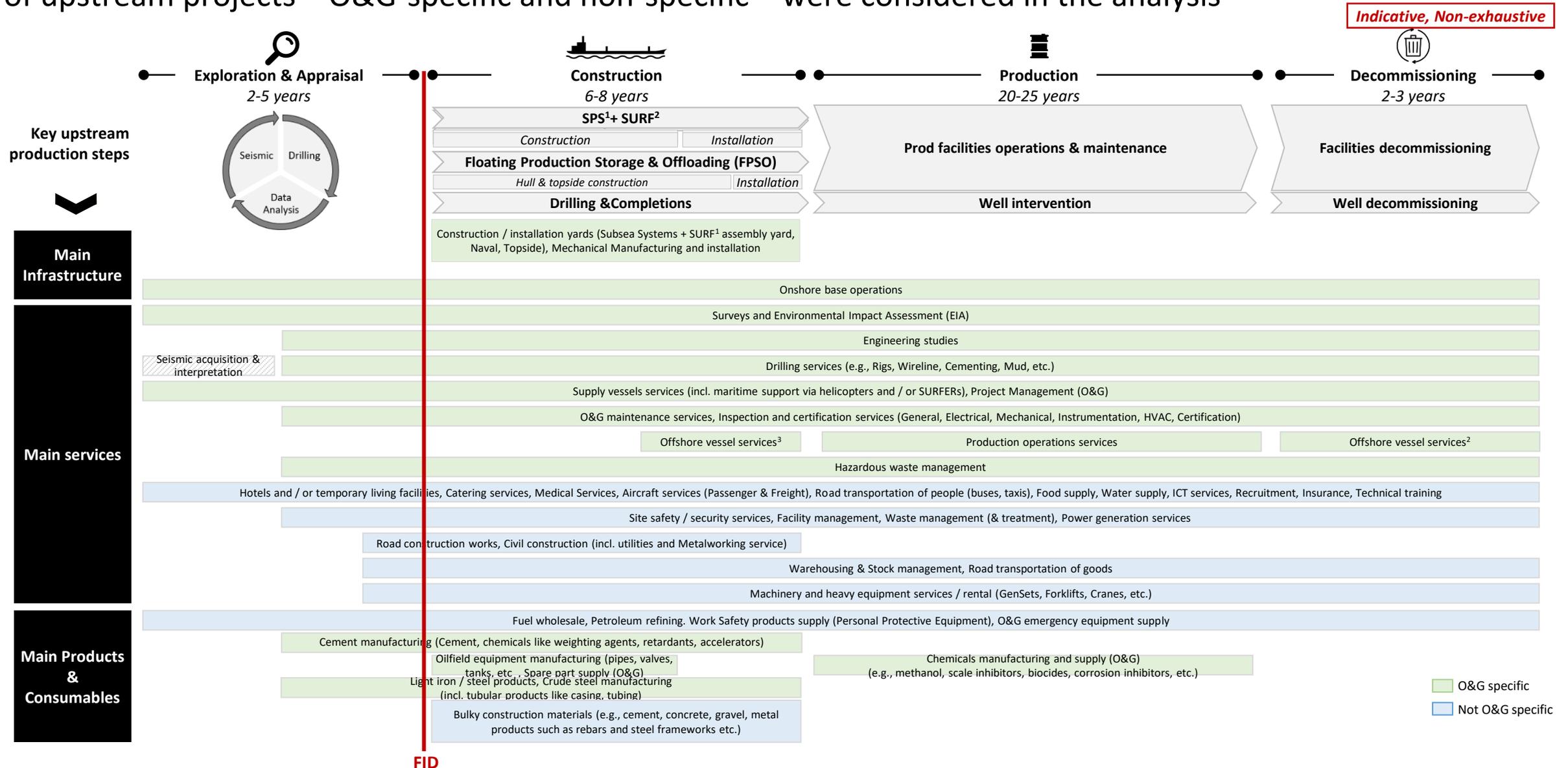
WORKING CAPITAL, BUREAUCRACY AND PEOPLE ARE KEY ROAD BLOCKS

- Top 5 challenges faced by suppliers were:
 1. Payment timelines
 2. Administrative approvals/bureaucracy
 3. Shortage of skilled people (Namibian)
 4. Shortage of skilled people (all nationalities)
 5. Lack of infrastructure

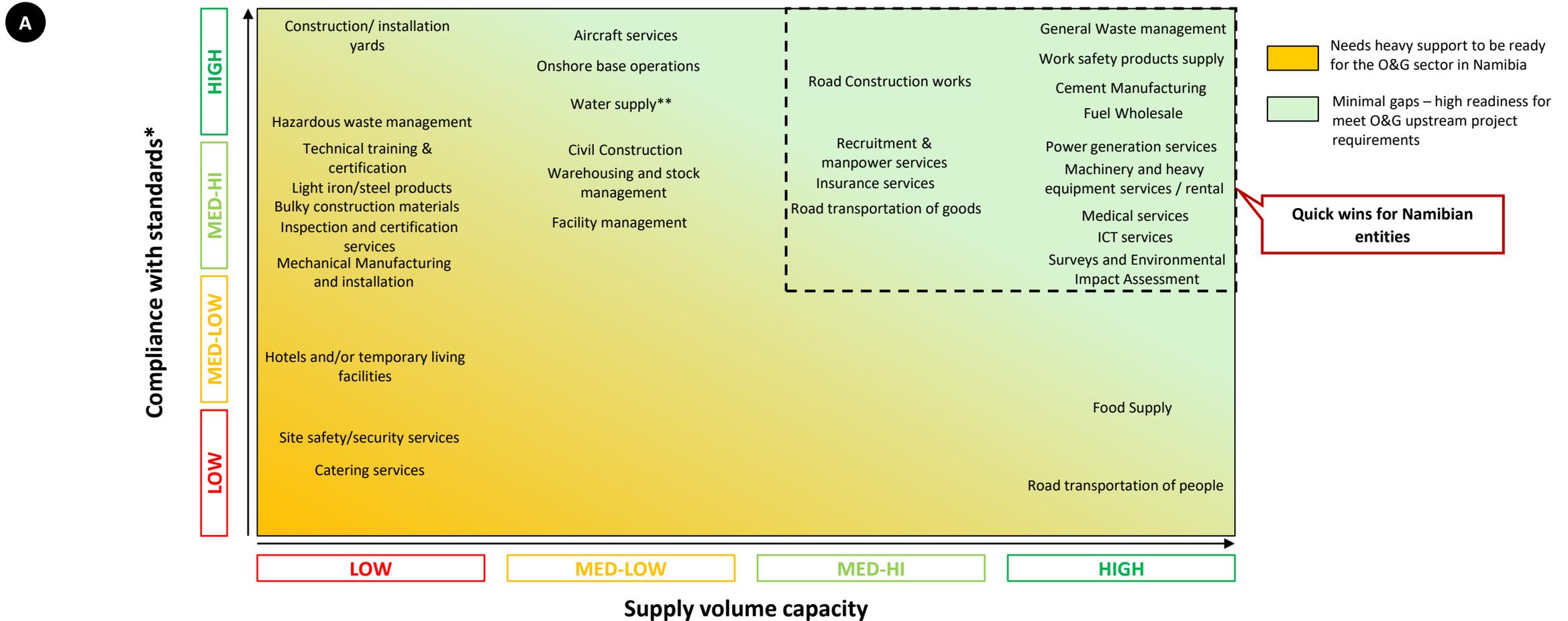
NEED FOR INVESTMENT IN HSSE STANDARDS

- While 82% of respondents currently have some elements of HSSE in place, only:
 - 14% do annual reporting
 - 29% monitor HSSE processes
 - 57% provide trainings or receive inspections
- Therefore, local suppliers will require upskilling to be part of the O&G sector.

To conduct a detailed supply chain assessment, the varying supply chain needs across the 30+ year lifecycle of upstream projects – O&G-specific and non-specific – were considered in the analysis



By evaluating supply chain readiness, 13 supply chains were identified to have minimal gaps, hence offering quick wins for Namibian entities...



Note: Results for the gap analysis are based on the survey responses obtained from suppliers, no other actions were carried out to validate the respondent answers.

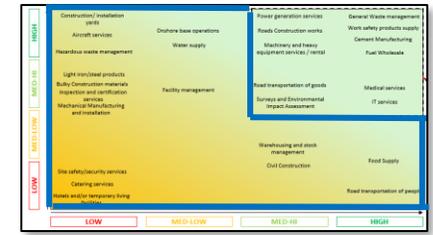
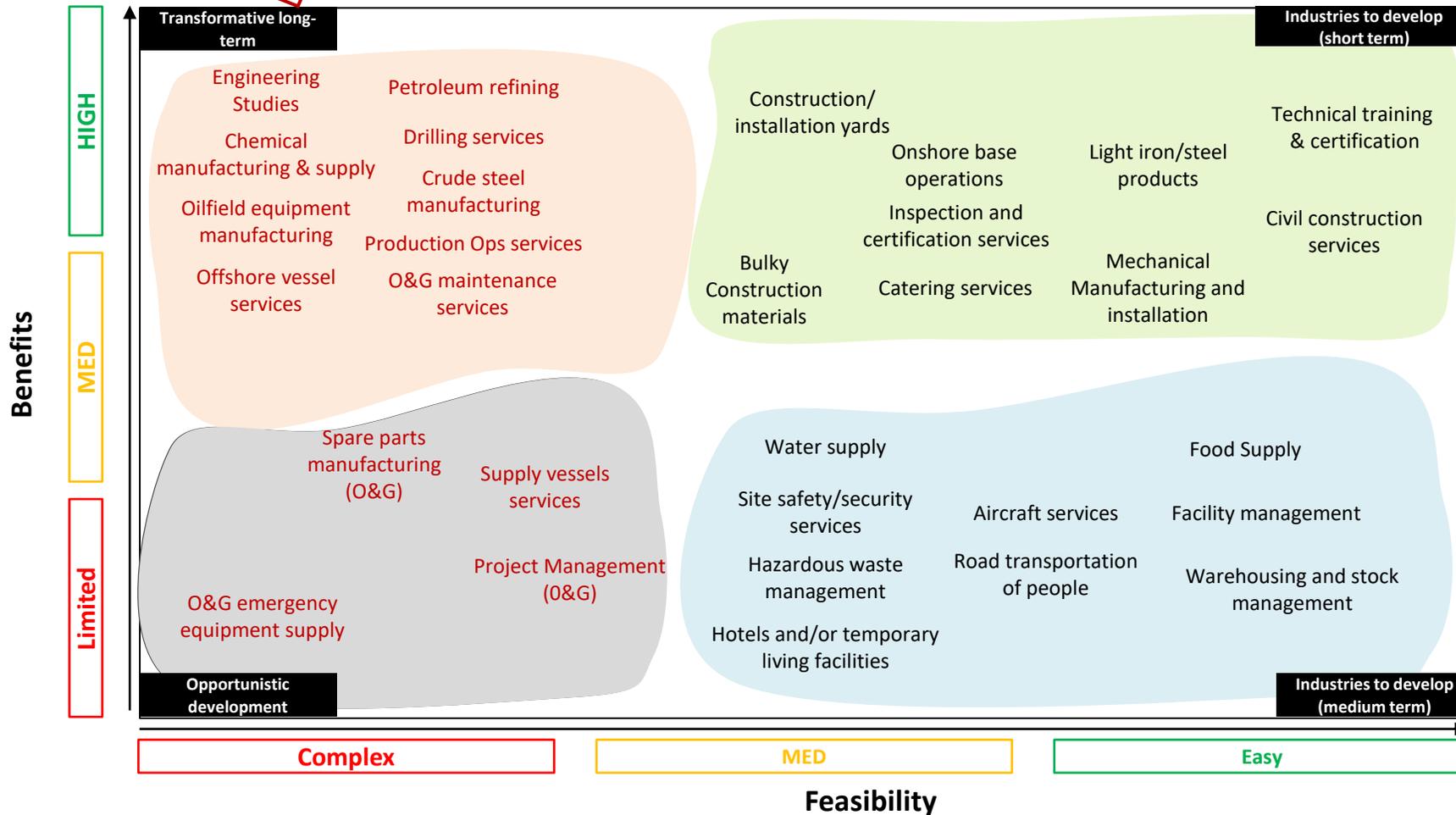
*As the O&G sector in Namibian is relatively new, local companies with current high compliance with standards may still need additional support from Oil & Gas Industry to meet the necessary O&G compliance requirements.

**supply can potentially face disruptions in case of adverse weather conditions (droughts) at country level

...while the prioritization of supply chains with moderate to significant gaps helped identify 9 supply chains that offered high benefits with potentially reasonable development efforts and investments

B

These industries could be developed in the long term



X No presence in Namibia

© 2024. For information, contact Deloitte Touche Tohmatsu Limited.

Industrial Baseline Survey (IBS) for the Namibian upstream oil & gas industry

Based on the demand-supply analysis, some qualifications were found to have sufficient local availability, however further upskilling will be required to meet O&G standards.

	High supply qualifications	Medium - High Supply qualifications	Low supply qualifications	No local supply qualifications
Criteria	Supply / Demand ratio >200% For each year After FID ¹	100% < Supply / Demand ratio <200% On at least a year After FID ¹	Supply / Demand ratio <100% On at least a year After FID ¹	Supply / Demand ratio =0% For each year After FID ¹
Skilled	<ul style="list-style-type: none"> Accounting / finance studies Architecture Business studies Computer engineering Environmental health sciences HR studies Law studies Marketing studies Transport and logistics engineering 	<ul style="list-style-type: none"> Civil engineering* Geology 	<ul style="list-style-type: none"> Electrical engineering* Mechanical engineering* Chemical / industrial engineering* 	<ul style="list-style-type: none"> Petroleum engineering
Semi-skilled	<ul style="list-style-type: none"> Accounting & Finance Business Administration/Services Bricklaying and Plastering Carpentry & Joinery Construction Engineering Data technician Electrical technician Food and Beverage Forklift Instrumentation Mechanical Occupational Health and safety Office Administration Paralegal Paramedics Plumbing Real Estate Surveying Tractor Loader Backhoe (TLB) Welding (construction) 	<ul style="list-style-type: none"> Civil Construction management Commercial Cookery Construction carpentry Logistics management Tiling 	<ul style="list-style-type: none"> Maritime Studies 	<ul style="list-style-type: none"> Diving certificate Laboratory / chemistry Pipefitting Welding (specific to O&G) Industrial process Petroleum studies

Note: *some job types are O&G-specific and would require upskilling / training specific to the industry upon recruitment; 1. The FID was anticipated to occur by Year 5, hence Year 5 is the starting point of this analysis. Furthermore, the period of year 5 to year 22 was focused on as it is considered to be sufficiently representative of the construction and production phase of the project
© 2024. For information, contact Deloitte Touche Tohmatsu Limited.

In the 1 FPSO scenario, the economic impact assessment estimates ~1% GDP growth and 5K jobs created during Construction, and 5.8% GDP growth and 7k jobs created in the Production phase



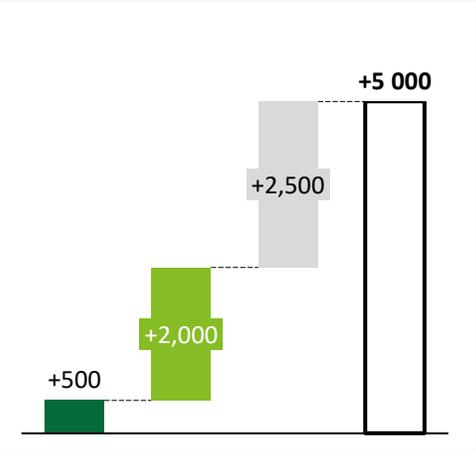
Employment creation

CONSTRUCTION PHASE
6-8 years

5,000 jobs are expected to be created across the Construction phase, incl.:

- 500 direct jobs
- 2,000 indirect jobs
- 2,500 induced jobs

- Primary drivers would be Transport industry (+953 jobs), Wholesale and retail trade (+598 jobs), and Private households services (+595 jobs)

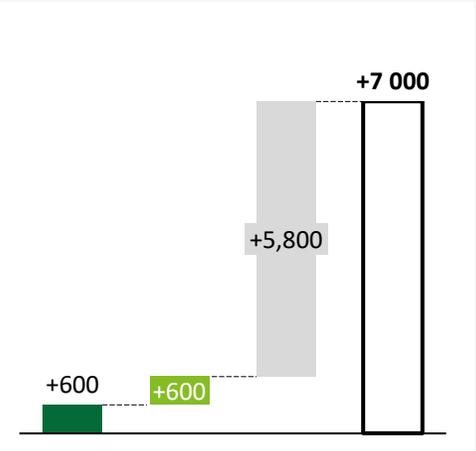


PRODUCTION PHASE
20-25 years

An estimated 7,000 jobs are expected to be created, incl.:

- 600 direct jobs
- 600 indirect jobs
- 5,800 induced jobs

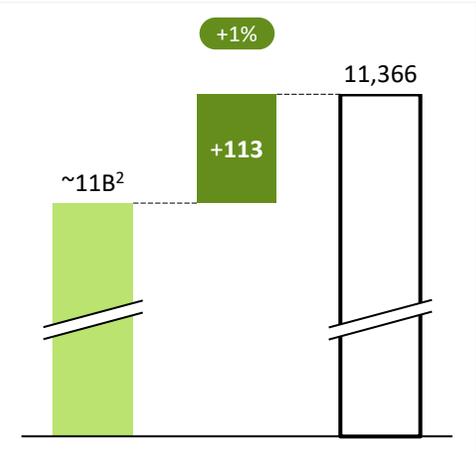
- Primary drivers would be Private household services (+1,707 jobs), Wholesale and retail trade (+1,671 jobs), and Transport industries (+880 jobs)




Economic growth

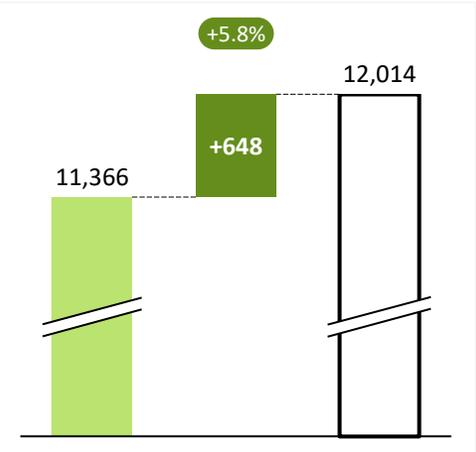
Namibian GDP is expected to grow by +1%:

- Estimated GDP average impact of +113M USD, contributed by O&G every year
- +1% of GDP growth compared to the baseline
- Primary drivers would be increase in Gross Operating Surplus (GOS)¹ and additional income for skilled labor



Namibian GDP is expected to grow by +5.8%:

- Estimated GDP average impact of +648M USD, contributed by O&G every year
- +5.8% of GDP growth compared to the baseline
- Primary drivers include Gross Operating Surplus (GOS), additional income for skilled labor, as well as a significant impact of government take from oil production



Notes: 1. GOS: portion of income derived from production by incorporated enterprises that are earned by the capital factor; 2. Model output based on SAM 2013, adjusted at factor cost of 2023

Disclaimer

- This IBS is an **independently commissioned study**. Results for the supplier profiles are **based on the survey responses obtained from suppliers**, no other actions were carried out to validate the respondent answers.
- As the FID stage of the Oil and Gas (O&G) project is still pending, concrete figures regarding project spend, workforce requirements, etc. were not available. Hence, a **hypothetical project estimation was developed to simulate the potential demand from this O&G project**. Therefore, all figures should be considered as directional.
- The hypothetical project **estimation is built on several hypotheses on the project scope, scale, and operational specificities** that significantly impacts demand estimation in terms of:
 - **The project spend**, as well as the consequent demand for varied goods and services, across the varied phases of the project lifecycle – which, in turn, impacts the project requirements from varied supply chains
 - **The workforce requirement** in terms of scale and scope of roles and seniority levels across the varied phases of the project lifecycle
- The **supply side assessment of the capacity and quality standards was driven by different stakeholder interviews, supplier survey responses, supplier site visits, as well as research** into varied industries. However, **no on-site technical evaluation of supplier capabilities was conducted** within the scope of activities. Although best efforts were made to cross check varied information sources and adjust the supply chain assessment, the results should be considered as directional.
- **In the estimation of local content potential, a conservative approach has been adopted** to account for the hypothetical nature of demand estimates and variability in local supply chain capabilities. Therefore, the results – local content potential and economic impact – **allow for upside potential for higher localization of spend** – subject to variations in project needs, supplier development, government policies, industry investments, etc.