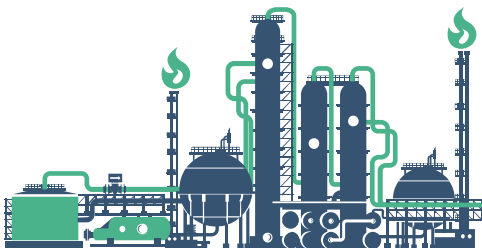
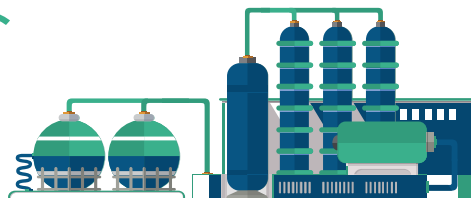


# Introduction to Investment Opportunities - Engineering Services

Presented by: Jeffrey Brown

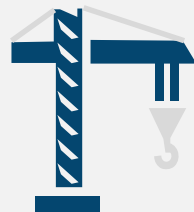


# Engineering services are required across the entire energy value chain, for new project development as well as everyday operations



## Pre-EPIC

- Conceptual and feasibility studies
- Pre-bid engineering
- Front-end engineering design (FEED)



## EPIC

- Detailed engineering related to construction activities



## Operations

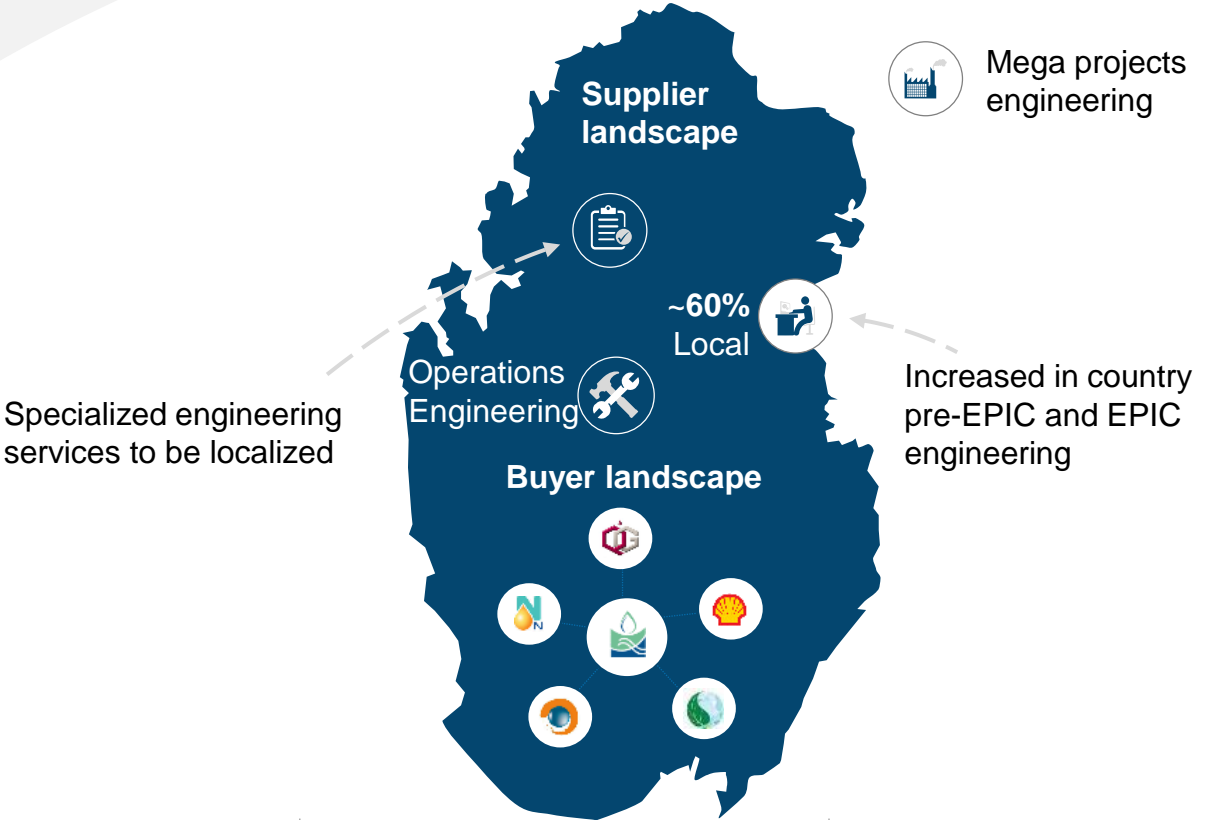
- Process optimization
- Maintenance engineering
- Compliance engineering

# The aspiration for engineering is to increase the number of engineers in Qatar as well as level of in-country skill-sets and capabilities

**Future of Engineering Services in Qatar (2023):**  
*Ensure top local talent pipeline and high capability skill-sets to deliver projects in Qatar*

## Vision

~60% local spend by 2023  
 with ~2,000 engineers in country



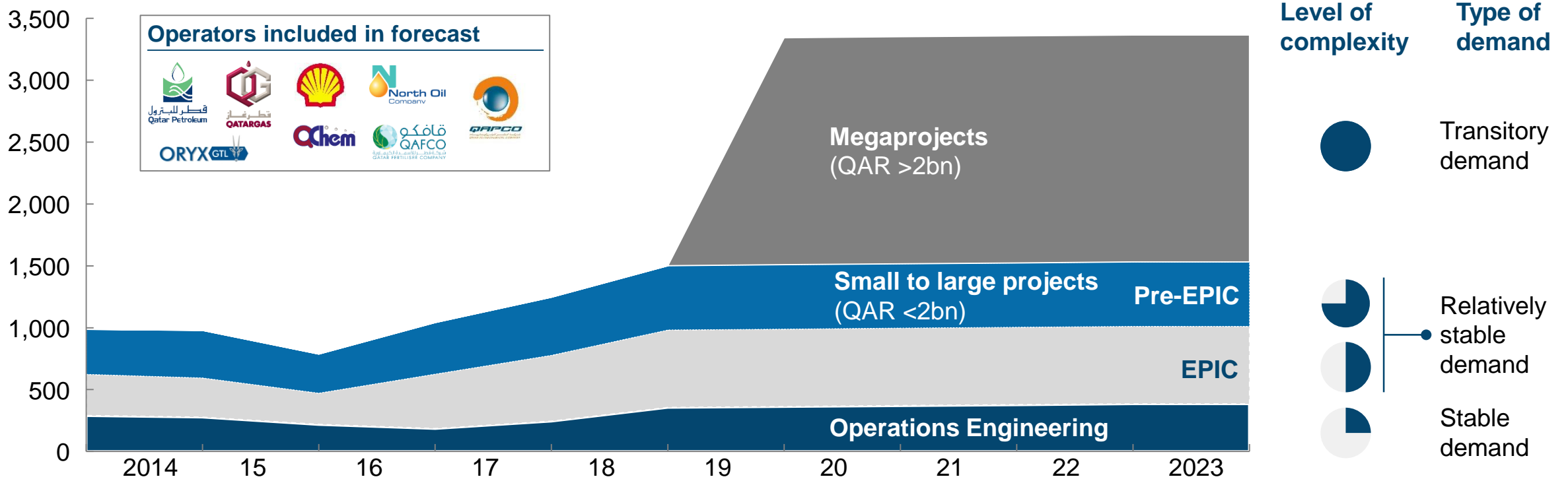
- 1** Localize **medium complexity work** and **upgrade local capabilities** over time with partnerships and JVs
- 2** Demand **visibility and predictability**
- 3** **Long-term commitments** with strategic partners
- 4** Sector wide **performance management**

Higher quality of in-country engineering work to support enhanced project delivery

# Engineering services spend is expected to reach an average QAR ~3.4 billion per annum for the following five years

Engineering services spend in Qatar Energy Sector\*, QAR M

● High ● Low





Qatar Petroleum is moving forward with its plans to increase Qatar's LNG output by 30% – from 77 million to 110 million tons per year.

– Saad Al-Kaabi, His Excellency, the Minister of State for Energy Affairs, President and CEO of Qatar Petroleum

# Today, TAWTEEN is announcing 6 specific opportunities to support localization of engineering services

■ High ■ Medium ■ Low

Category	Opportunities	Cumulative spend QAR M <sup>1</sup> 19-23	Required capital intensity, QAR M
 <p><b>End to end engineering services</b></p>	① Design of Process Control Domain (PCD) and Advanced Process Control (APC)	685	0-5
	② Design of integrated water management systems	250	5-15
	③ Engineering for modifications to piping and tankage systems	205	0-5
 <p><b>Studies and assessments</b></p>	④ Power system studies	150 <sup>2</sup>	0-5
	⑤ Environmental, social and health studies	150	5-15
	⑥ Lifecycle assessment studies	125	5-15
<b>Total</b>		<b>~1,565</b>	

<sup>1</sup> Total cumulative spend expected in 2019-23 from participating operators – figures rounded to nearest QAR 5 million

<sup>2</sup> Does not include additional upside from Kahramaa and independent power producers



# What Next?

## Visit exhibition booth

to discuss investment opportunities and register your interest

## Call our service center

to speak with a TAWTEEN representative  
(Qatar Navigation Tower;  
Ph: +974 4013 6477)



## Visit [Tawteen.com.qa](http://Tawteen.com.qa)

to download opportunity eBrochures and for information on our application process

## Continue in Al-Rayyan

to listen to more speakers and learn about other aspects of TAWTEEN