

Drilling

Casing & Tubing Workshop

Business Opportunities

13th January 2025

This presentation may contain certain forward-looking statements. All statements other than statements relating to historical facts are, or may be deemed to be, forward-looking statements. Forward-looking statements include, but are not limited to, statements related to future events or to the company's future financial or operating performance such as the company's expectations and projections regarding its growth, initiatives and strategies, capital expenditures and investments, customer and partner relationships, major projects and product development. These statements may generally, but not always, be identified by the use of words such as "target," "goal," "aim," "believe," "expect," "commit," "anticipate," "intend," "estimate," "should," "will," "shall," "may," "likely," "plan," "strategy," "initiative," "project," "outlook" or similar expressions, including variations and the negatives thereof.

Forward-looking statements reflect the company's expectations, beliefs, estimates, forecasts, projections and assumptions, only as of the date such statements are made, and are subject to known and unknown risks, uncertainties and other important factors beyond the company's control that could cause the company's actual results, performance or achievements to be materially different from the expected results, performance, or achievements expressed or implied by such statements. Factors that could cause actual results to differ materially from the company's expectations include, among other things, the following: global supply, demand and price fluctuations of oil, gas and petrochemicals; global economic conditions; competition in the industries in which the company operates; climate change concerns, weather conditions and related impacts on the global demand for hydrocarbons and hydrocarbon-based products; risks related to the company's ability to successfully meet its ESG targets, including its failure to fully meet its GHG emissions reduction targets by 2050; conditions affecting the transportation of products; operational risk and hazards common in the oil and gas, refining and petrochemicals industries; the cyclical nature of the oil and gas, refining and petrochemicals industries; political and social instability and unrest and actual or potential armed conflicts in the MENA region and other areas; natural disasters and public health pandemics or epidemics; the management of the company's growth; the management of the company's subsidiaries, joint operations, joint ventures, associates and entities in which it holds a minority interest; exposure to inflation, interest rate risk and foreign exchange risk; risks related to operating in a regulated industry and changes to oil, gas, environmental or other regulations that impact the industries in which the company operates; legal proceedings, international trade matters, and other disputes or agreements; and other risks and uncertainties that could cause actual results to differ from the forward-looking statements in this presentation, as set forth in the latest periodic reports filed by the Saudi Arabian Oil Company ("Aramco") with the Saudi Exchange. For additional information on the potential risks and uncertainties that could cause actual results to differ from those presented please see Aramco's most recent annual periodic report filed with the Saudi Exchange and any subsequent filings thereto.

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iktva Program Overview (1/2)

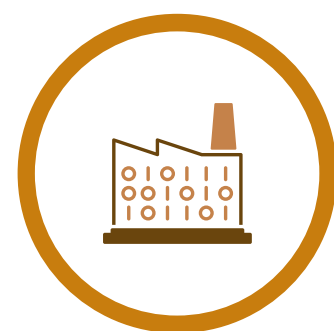
The In-Kingdom Total Value Add (iktva) program is designed to drive increased investment, economic diversification, job creation, and workforce development within the Kingdom

Saudi Aramco aims to achieve 70% local content



iktva in Procurement

2000+ Service Contracts	290+ Corporate Purchase Agreements
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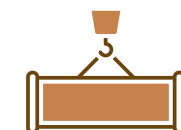


Business Opportunities

12 Sectors	210 Business Opportunities	\$28 bn Annual Market Size
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Anchor Projects

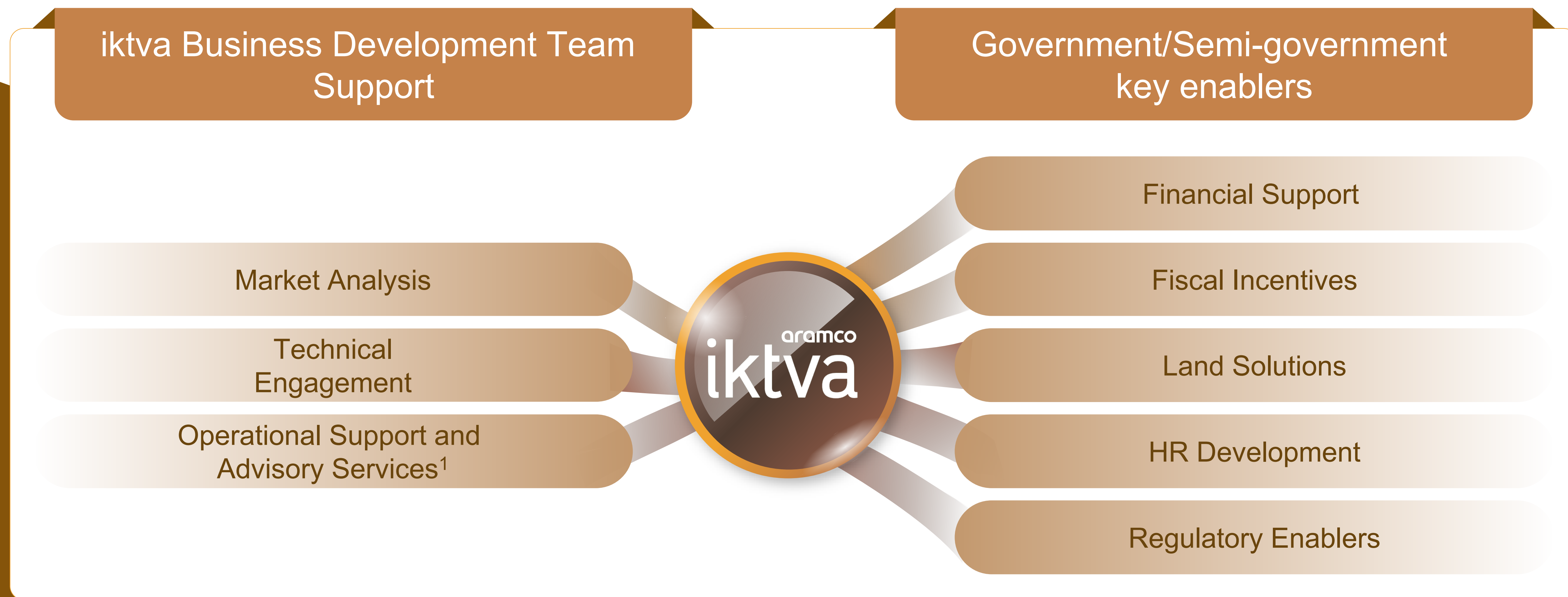
 IMI	 SPARK	 Tuwaiq
6 Anchor projects		



Local Workforce Development

16 National Training Centers	90+ Programs
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Catalyzing Supply Chains



Catalyzing Supply Chains

1. Includes broad range of support services provided by the team: user requirements, advisory on available financial and fiscal incentives, guidance on localization process in line with local regulations and standards, action plan development etc.

Why invest in KSA?

Non-exhaustive

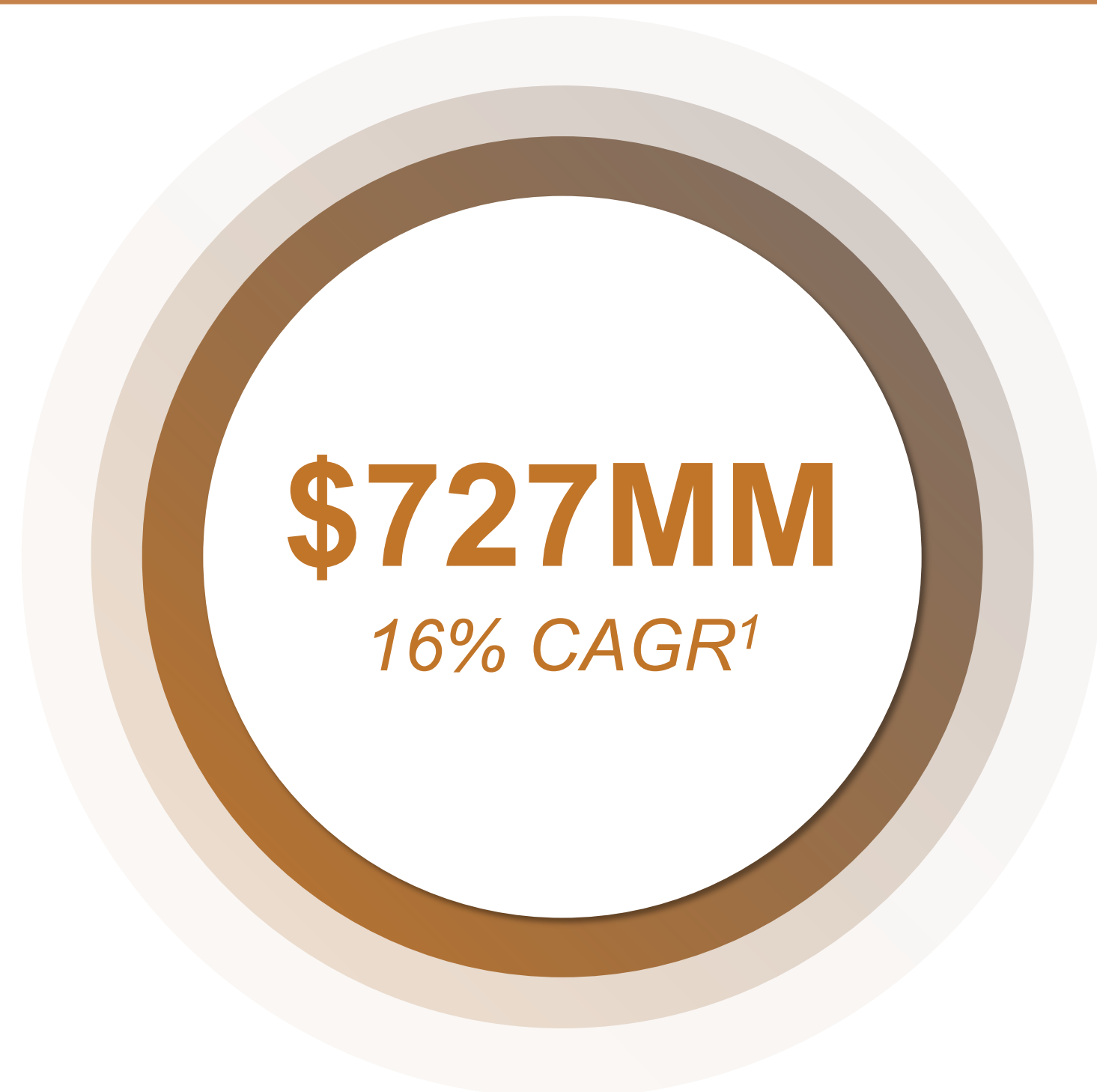
 Strong GDP growth and healthy economy	 Big market and game-changing opportunities	 Government incentives and enablers	 Ease of doing business	 Strategic global location	 Favorable demographics
Top 20 economies globally	5 Special Economic Zones drive innovation	\$1.3T+ invested in private sector by 2030	 one of world's most rewarding tax systems	12-15% of global trade passes via Red Sea	17% population growth from 2013-2023
GDP growth among highest projected in 2025 in top economies	6 giga projects driving urbanization and industry	5.7% contribution of FDI to GDP by 2030	Top 5 in the MENA region for ease of doing business	 KSA container ports are among the most efficient globally	67% of population below the age of 35

Catalyzing Supply Chains

Note: FDI = Foreign Direct Investment
Source: IMF; MISA; Vision 2030 Key Performance Indicators; Shareek Program; World Bank

Tubular Market Overview

KSA tubular market snapshot



2024 KSA market size for opportunities
in today's workshop

Seven opportunities to be discussed today

- 1 Downhole Nonmetallic Casing
- 2 Downhole Nonmetallic Tubing
- 3 OCTG Tubing
- 4 CRA OCTG
- 5 CRA OCTG Accessories
- 6 ERW Tubular Products
- 7 Drill Pipe

How do we define what is an opportunity?



Growing market

High growth high spend markets



Limited local players & import driven

*Markets with few local contributors
and high import resilience*



Technological & labor feasibility

*Markets with accessible or
standardized technology and
available skilled labor*

Downhole Nonmetallic Casing (RTR)

Mohammad Dawood

Opportunity profile – Downhole Nonmetallic Casing (RTR)

1

KSA in high need of NM Casing to realize ongoing O&G expansion

2

NM Casing is a high growth market, KSA has the largest regional share

3

Attractive investment opportunities for the NM Casing value chain

Key specifications

Sizes

7", 9-5/8", 13-3/8", 18-5/8"+

Pressure
range

500 – 5,000 PSI

Temp.
range

150 – 250 F

6

Estimated 2024 KSA
market size (\$MM)

145%

Forecasted 5-year
CAGR

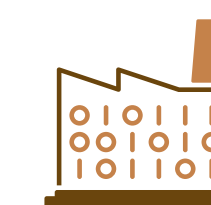
KSA value chain opportunities



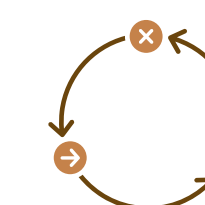
R&D



Raw
Materials



OEM
Mfg.



Lifecycle
Mgmt.

KSA enablers

- Preference for local manufacturing supporting local content goals
- Saudization and tax benefits in special economic zones
- Favorable labor and utilities rates
- Competitive taxes

Catalyzing Supply Chains

Note: \$MM = USD Millions
Source: Aramco; Press releases; Team analysis

Downhole Nonmetallic Casing Technical Overview

Sizes

Pressure Range

Temperature Range



7", 9-5/8", 13-3/8", 18-5/8"+

500 – 5,000 PSI

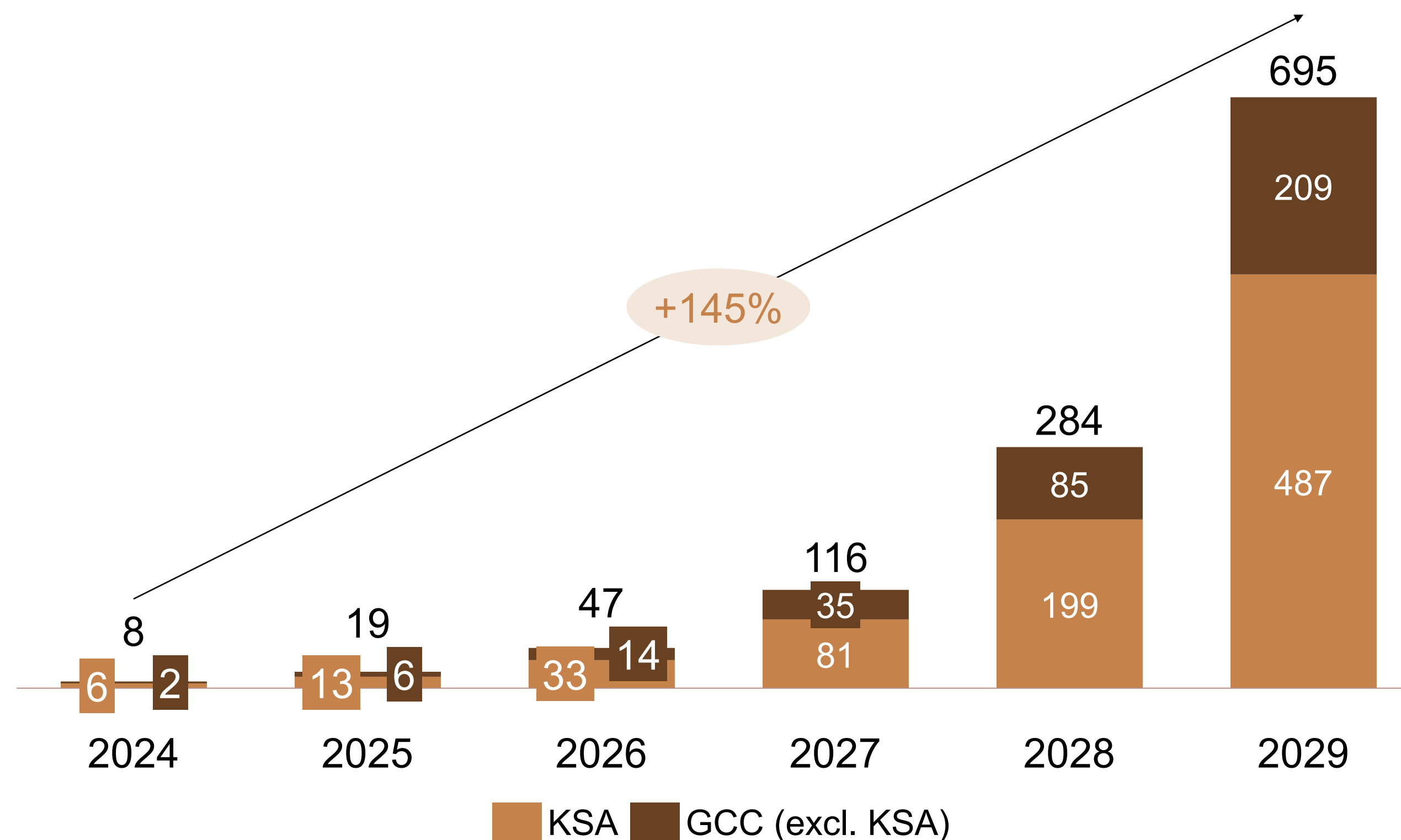
150 – 250 F

Catalyzing Supply Chains

Aramco material number: 1. 6000015141
Source: Aramco; Press releases; Team analysis

Downhole Nonmetallic Casing demand, customers, and drivers

Forecasted KSA and rest of GCC NM Casing market 2024-2029 (\$MM)



Typical NM Casing customers in KSA



Oil producers



Water providers

Key KSA demand drivers

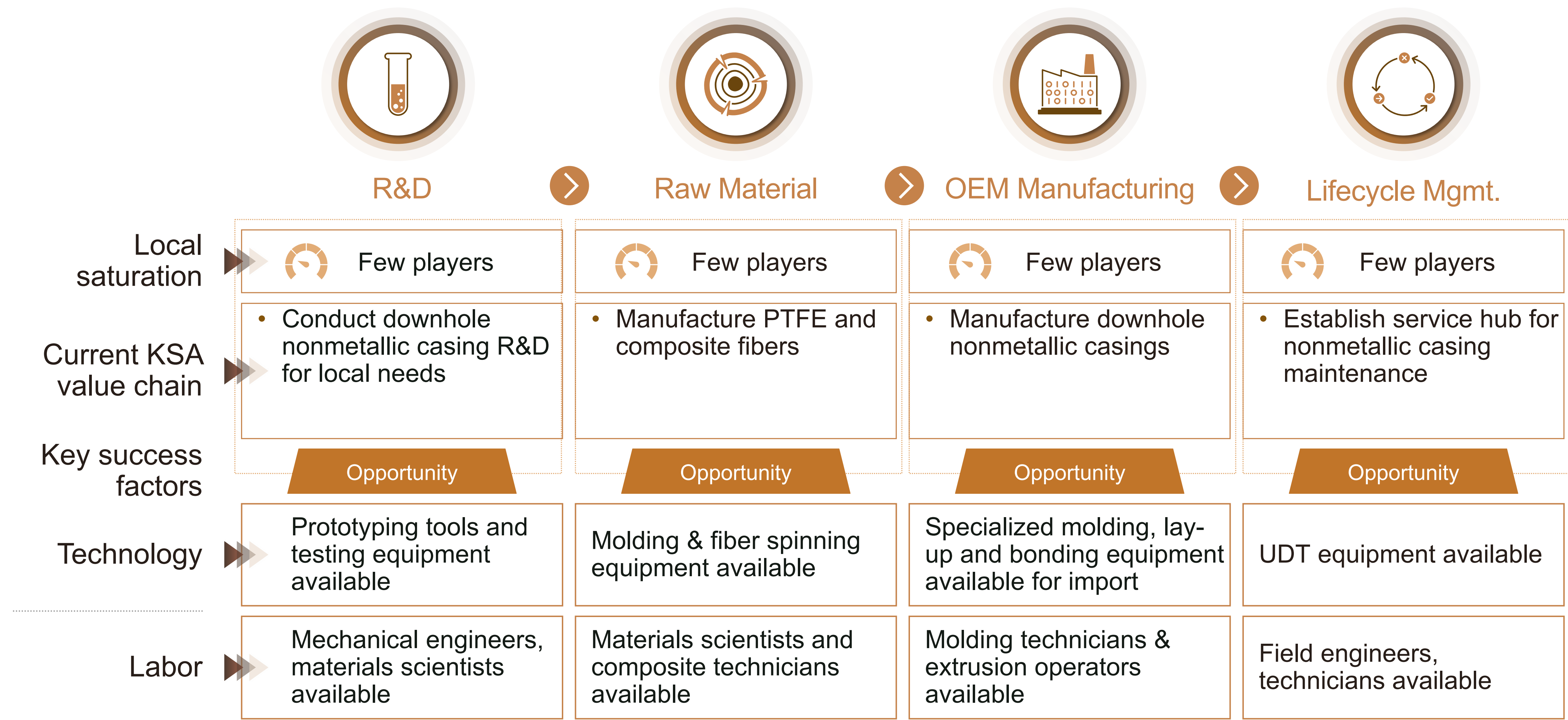
- Rise in upstream activity and growth in water activities:** Bolstered upstream and water well activities require additional downhole NM tubing
- Demand for metallic corrosion-free systems:** Shift towards corrosion-free systems leads to rapid adoption of RTR and RTP products

Catalyzing Supply Chains

Note: \$MM = USD Millions; RTR = Reinforced Thermosetting Resin; RTP = Reinforced Thermoplastic Pipe
Source: Aramco; Press releases; Team analysis



Value chain and key localization opportunities



Catalyzing Supply Chains

Note: PTFE = Polytetrafluoroethylene; UDT = Ultrasonic and Radiographic Testing
Source: Aramco; Press releases; Team analysis

Downhole Nonmetallic Tubing (RTP)

Mohammad Dawood

Opportunity profile – Downhole Nonmetallic Tubing (RTP)

1

KSA in high need of NM Tubing to realize ongoing O&G expansion

2

NM Tubing is a rapid growth market, KSA has the largest regional share

3

Attractive investment opportunities for the NM Tubing value chain

Key specifications

Sizes

2-3/8" to 5-1/2"

Pressure
range

1,500 – 5,000 PSI

Temp.
range

150 – 250 F

12

Estimated 2024 KSA
market size (\$MM)

36%

Forecasted 5-year
CAGR

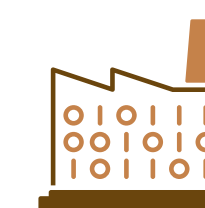
KSA value chain opportunities



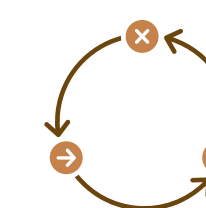
R&D



Raw
Materials



OEM
Mfg.



Lifecycle
Mgmt.

KSA enablers

- Preference for local manufacturing supporting local content goals
- Saudization and tax benefits in special economic zones
- Favorable labor and utilities rates
- Competitive taxes

Catalyzing Supply Chains

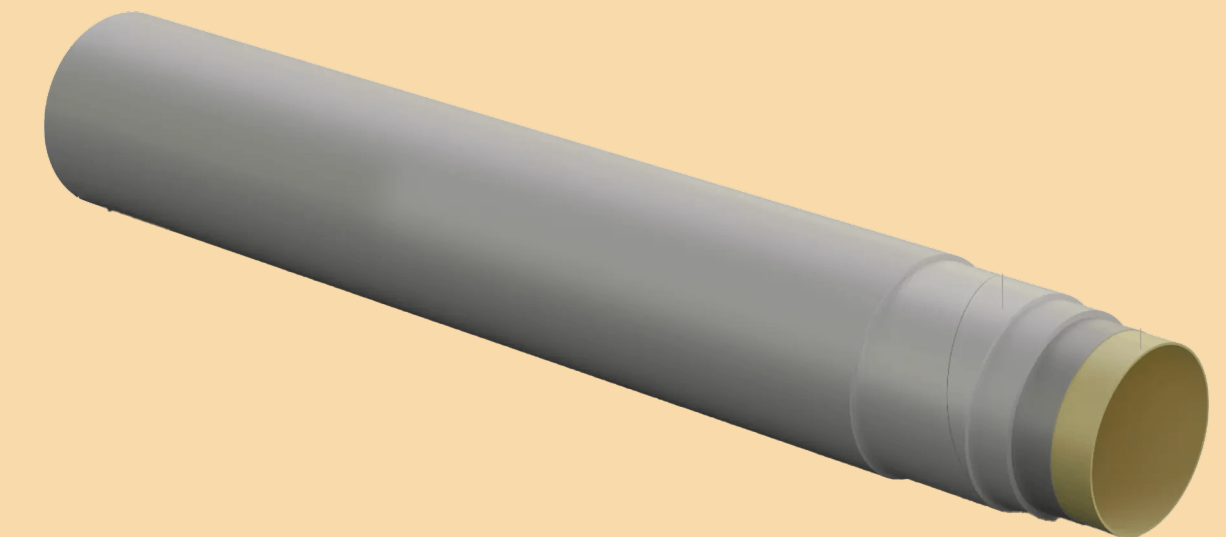
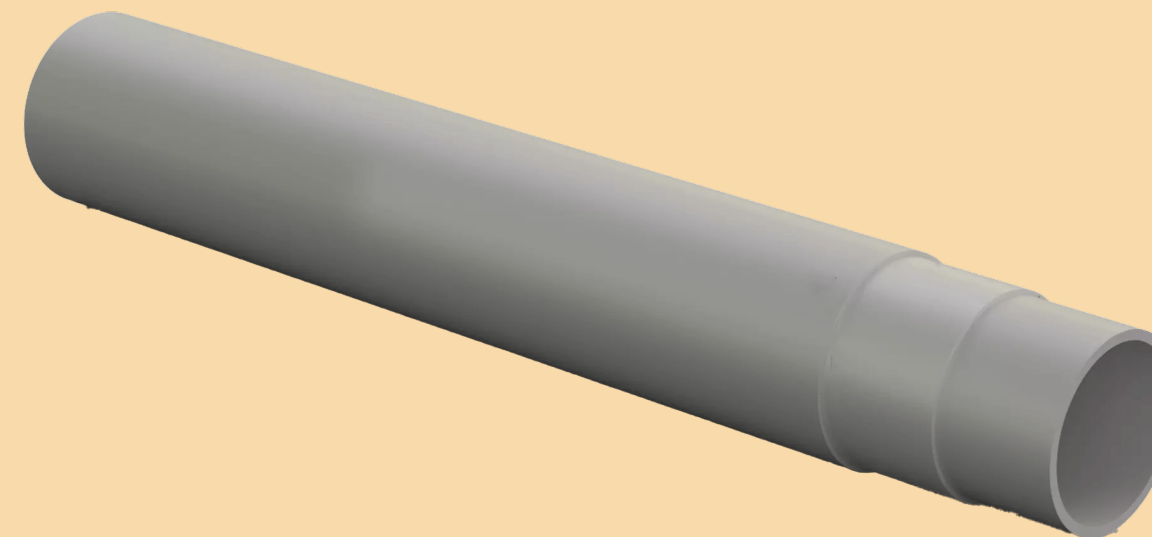
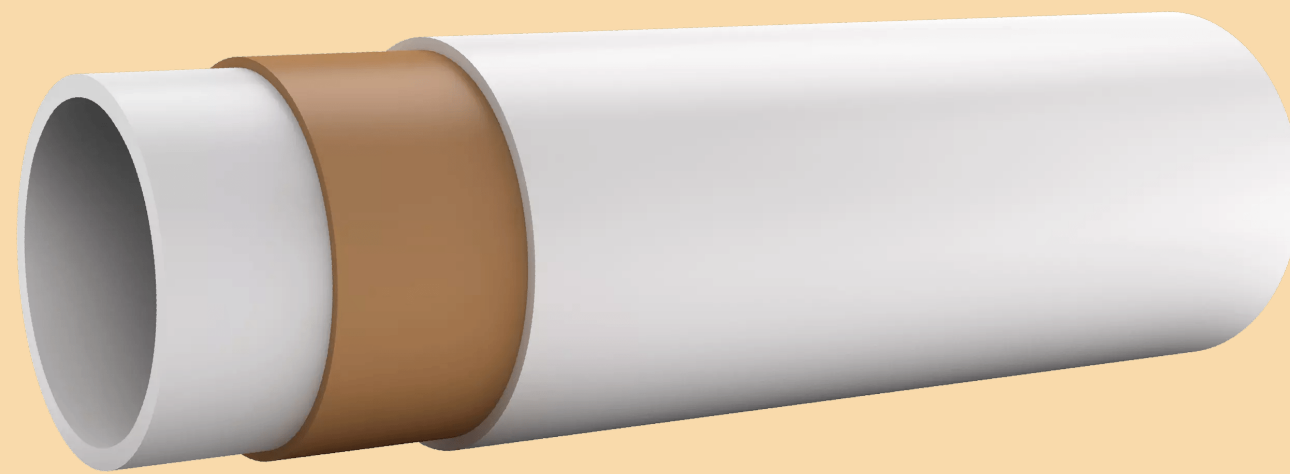
Note: \$MM = USD Millions
Source: Aramco; Press releases; Team analysis

Downhole Nonmetallic Tubing Technical Overview

Sizes

Pressure Range

Temperature Range



2-3/8", 2-7/8", 3-1/2",
4-1/2", 5", & 5 1/2"

1,500 – 5,000 PSI

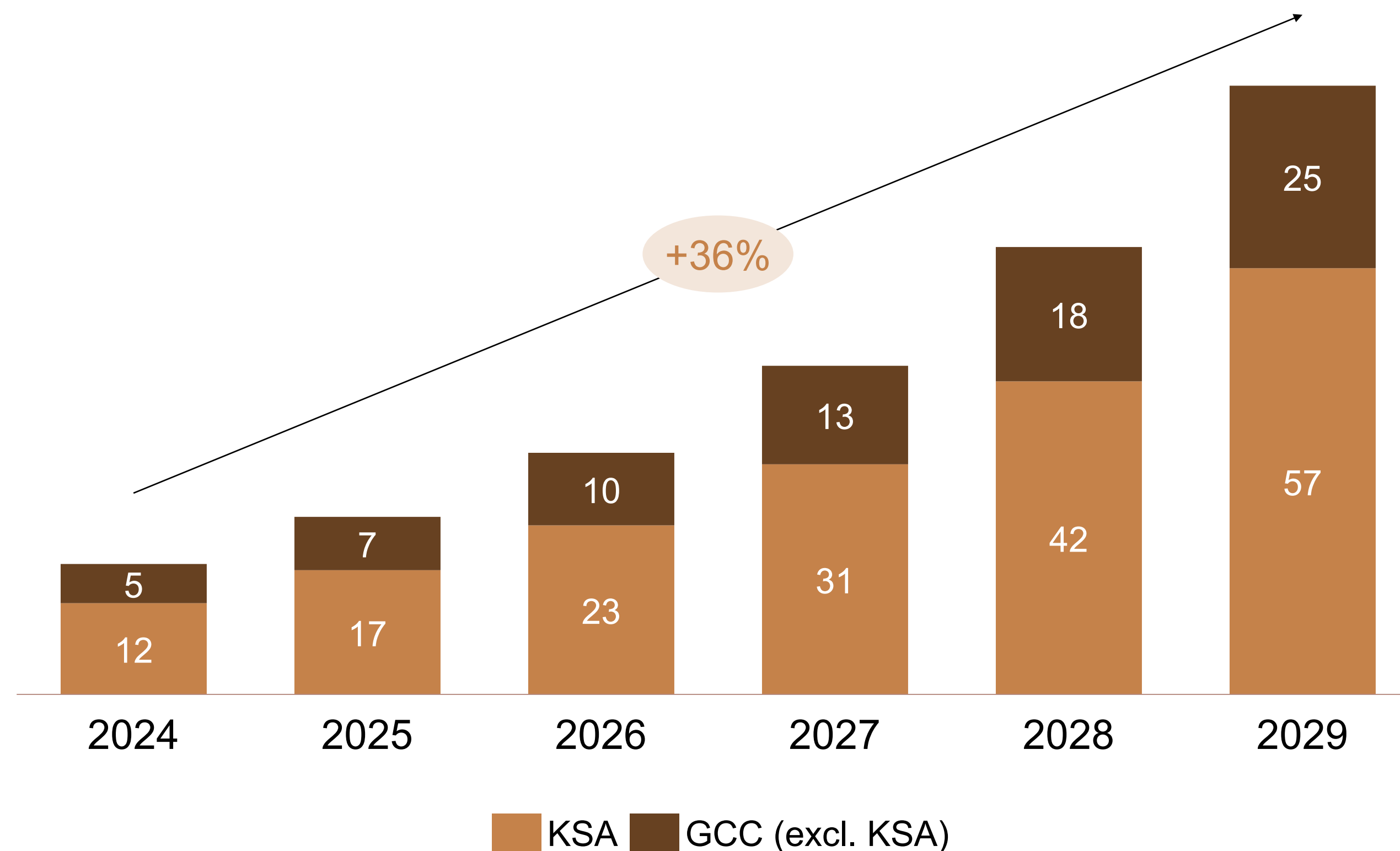
150 – 250 F

Catalyzing Supply Chains

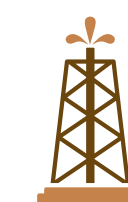
Aramco material number: 1. 6000015141
Source: Aramco; Press releases; Team analysis

Downhole Nonmetallic Tubing demand, customers, and drivers

Forecasted KSA and rest of GCC NM Tubing market 2024-2029 (\$MM)



Typical NM Tubing customers in KSA



Oil producers



Water providers

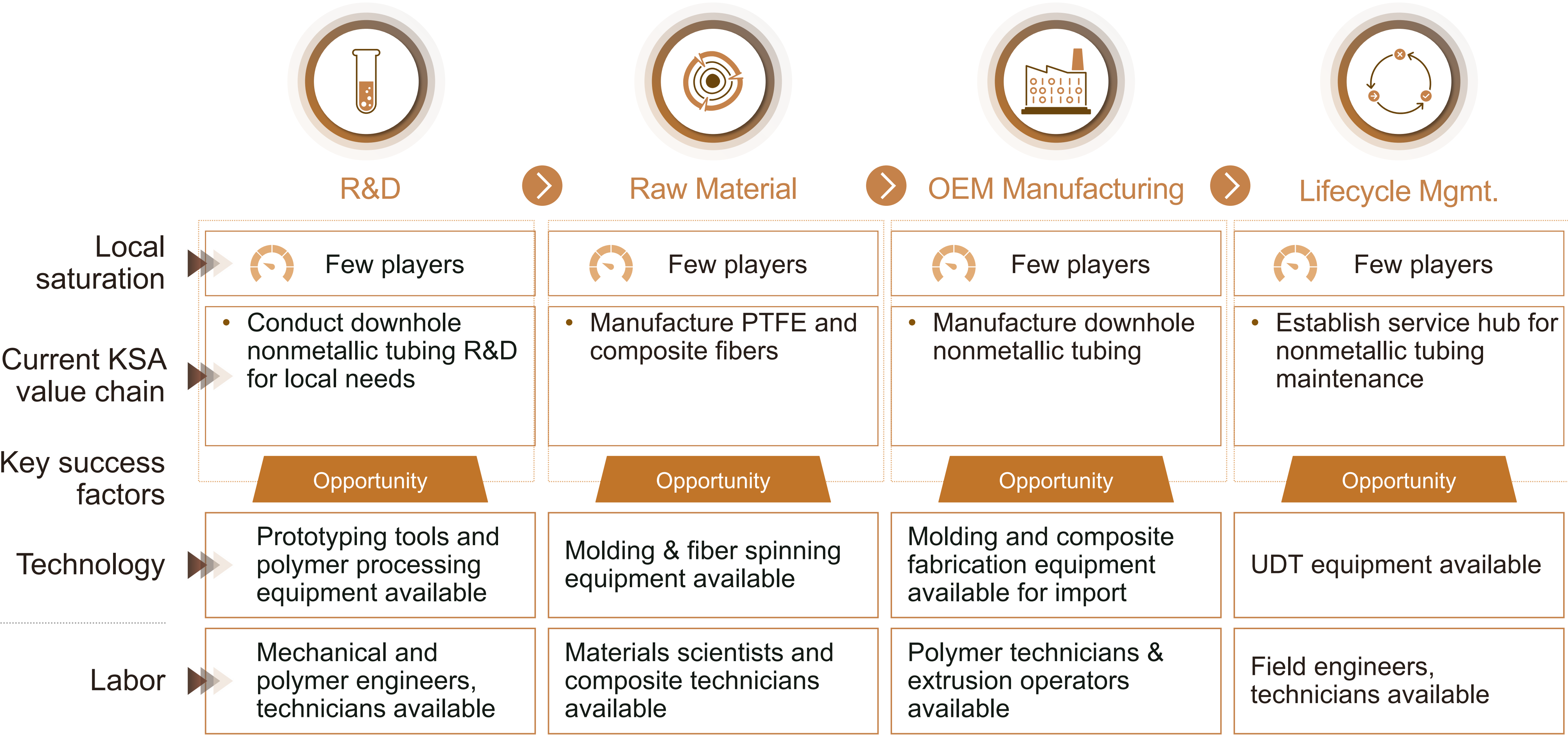
Key KSA demand drivers

- **Rise in upstream activity and growth in water activities:** Bolstered upstream and water well activities require additional downhole NM tubing
- **Demand for metallic corrosion-free systems:** Shift towards corrosion-free systems leads to rapid adoption of RTR and RTP products

Catalyzing Supply Chains

Note: \$MM = USD Millions; RTR = Reinforced Thermosetting Resin; RTP = Reinforced Thermoplastic Pipe
Source: Aramco; Press releases; Team analysis

Value chain and key localization opportunities



Catalyzing Supply Chains

Note: PTFE = Polytetrafluoroethylene; UDT = Ultrasonic and Radiographic Testing
Source: Aramco; Press releases; Team analysis

OCTG Tubing

Faris Al Khrboush

Opportunity profile – OCTG Tubing

1

KSA in high need of OCTG Tubing to realize ongoing O&G expansion

2

OCTG Tubing is a growing market, KSA has the largest regional share

3

Attractive investment opportunities for the OCTG Tubing value chain

Key specifications

Sizes



2-3/8" to 5-1/2"

515

Estimated 2024 KSA market size (\$MM)

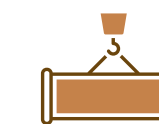
7%

Forecasted 5-year CAGR

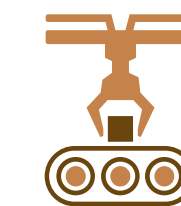
KSA value chain opportunities



R&D



Billet
production



Rolling
mill



Heat &
finishing

KSA enablers

- Preference for local manufacturing supporting local content goals
- Saudization and tax benefits in special economic zones
- Favorable labor and utilities rates
- Competitive taxes

Catalyzing Supply Chains

Note: \$MM = USD Millions

Source: Aramco; Fortune Business Insights; Press releases; Team analysis

OCTG Tubing Technical Overview

Materials

Sizes

Length



J-55, K-55, N-80, L-80, C-90, R95, T-95, Q125



2-3/8", 2-7/8", 3-1/2", 4-1/2", 5-1/2"



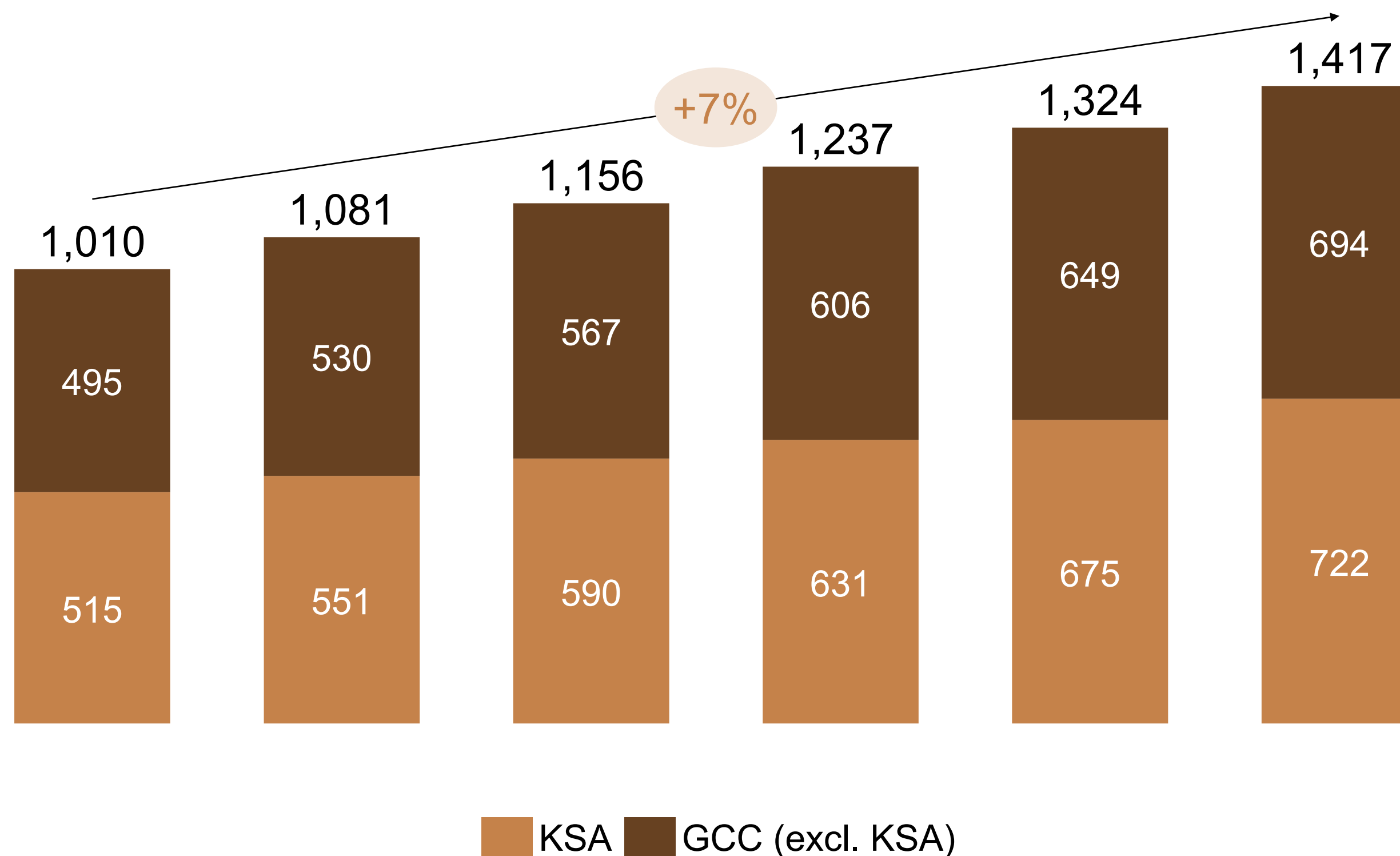
Range 2 (~30 feet)
Range 3 (~40 feet)

Catalyzing Supply Chains

Aramco material number: 1. 6000003877 API OCTG Tubing, 2. 6000003879 Premium OCTG Tubing
Source: Aramco; Fortune Business Insights; Press releases; Team analysis

OCTG Tubing demand, customers, and drivers

Forecasted KSA and rest of GCC OCTG Tubing market 2024-2029 (\$MM)



OCTG Tubing customers in KSA



Oil producers



Gas producers

Key KSA demand drivers

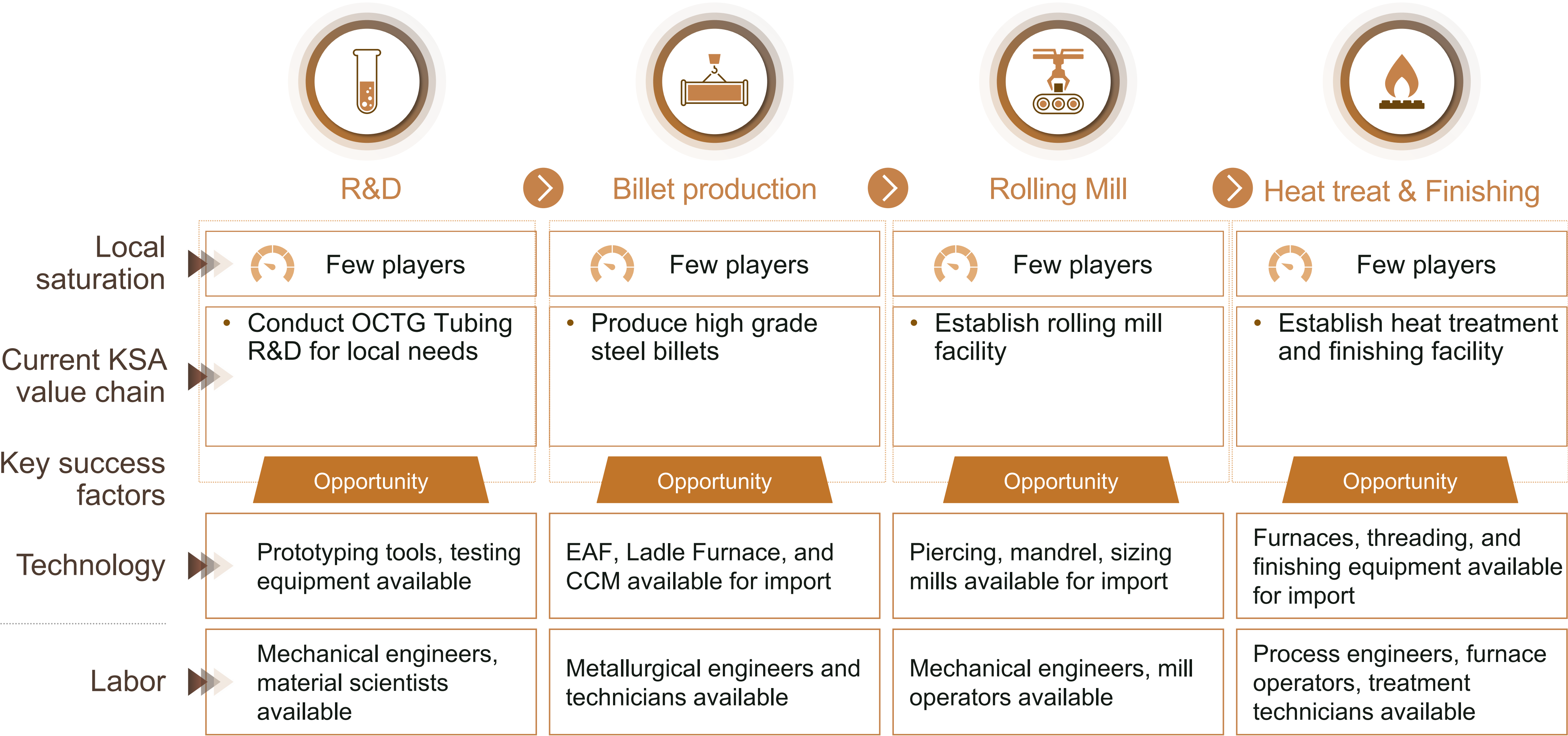
- **Increase in well depth:** Deeper wells requires additional OCTG tubing
- **Rise in upstream activity and growth in gas production:** Bolstered upstream and gas production activities require additional OCTG tubing

Catalyzing Supply Chains

Note: \$MM = USD Millions

Source: Aramco; Fortune Business Insights; Press releases; Team analysis

Value chain and key localization opportunities



Catalyzing Supply Chains

Note: EAF = Electric Arc Furnace; CCM = Continuous Casting Machine
Source: Aramco; Fortune Business Insights; Press releases; Team analysis

CRA OCTG

Abdulaziz Al Yani

Opportunity profile – CRA OCTG

1

KSA in high need of CRA OCTG to realize ongoing O&G expansion

2

CRA OCTG is a rapid growth market, KSA has the largest regional share

3

Attractive investment opportunities for the CRA OCTG value chain

Key specifications



Size

4-1/2", 7", 9-5/8"

50

Estimated 2024 KSA market size (\$MM)

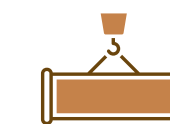
4%

Forecasted 5-year CAGR

KSA value chain opportunities



R&D



Processing



Finishing

KSA enablers

- Preference for local manufacturing supporting local content goals
- Saudization and tax benefits in special economic zones
- Favorable labor and utilities rates
- Competitive taxes

Catalyzing Supply Chains

Note: \$MM = USD Millions

Source: Aramco; Mordor Intelligence; Press releases; Team analysis

CRA OCTG Technical Overview

Material



13CR, S13CR, UNS
N08028, N08535, and
N08825

Size



4-1/2", 7", 9-5/8"

Length



Range 2 (~30 feet)
Range 3 (~40 feet)

Accessories

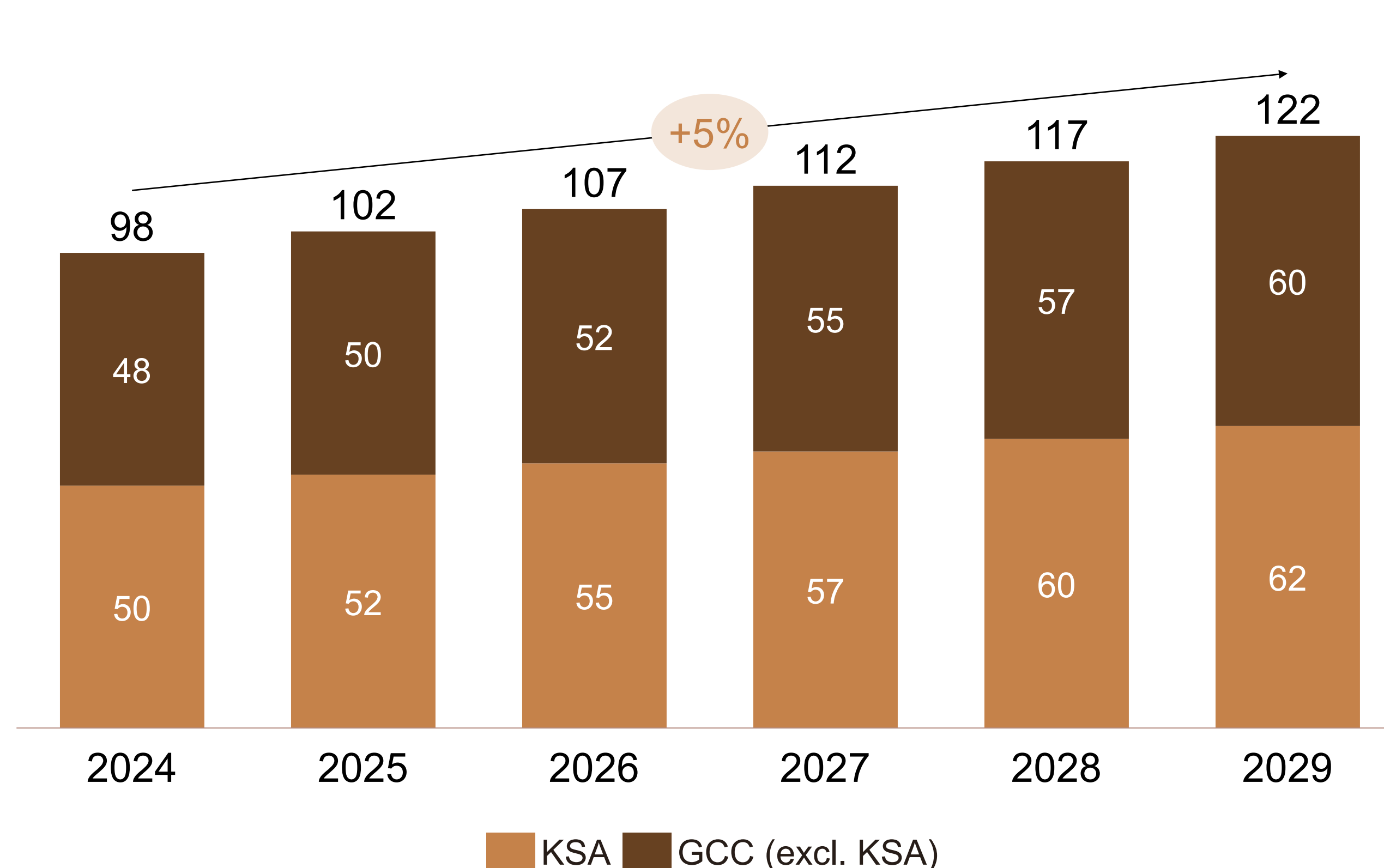
- 1 Pup joints
- 2 Couplings
- 3 Crossovers

Catalyzing Supply Chains

Note: Aramco material numbers: 1. 6000007303; 2. 6000007293; 3. 6000007305; 4. 6000007352; 5. 6000007350
Source: Aramco; Mordor Intelligence; Press releases; Team analysis

CRA OCTG demand, customers, and drivers

Forecasted KSA and rest of GCC CRA OCTG market 2024-2029 (\$MM)



CRA OCTG customers in KSA



Oil producers



Water providers

Key KSA demand drivers

- **Rise in gas & upstream activities:** Rise in gas & upstream activities require further use of coiled tubing
- **Abrasive local conditions:** High proportion of H₂S and CO₂ in KSA O&G fields require robust anti-corrosive systems, particularly for HPHT and deepwater applications

Catalyzing Supply Chains

Note: \$MM = USD Millions

Source: Aramco; Mordor Intelligence; Press releases; Team analysis

Opportunity profile – CRA OCTG Accessories

1

KSA in high need of CRA OCTG to realize ongoing O&G expansion

2

CRA OCTG is a rapid growth market, KSA has the largest regional share

3

Attractive investment opportunities for the CRA OCTG value chain

Key categories



Pup Joints



Couplings



Crossovers

5

Estimated 2024 KSA market size (USD Millions)

4%

Forecasted 5-year CAGR

KSA enablers

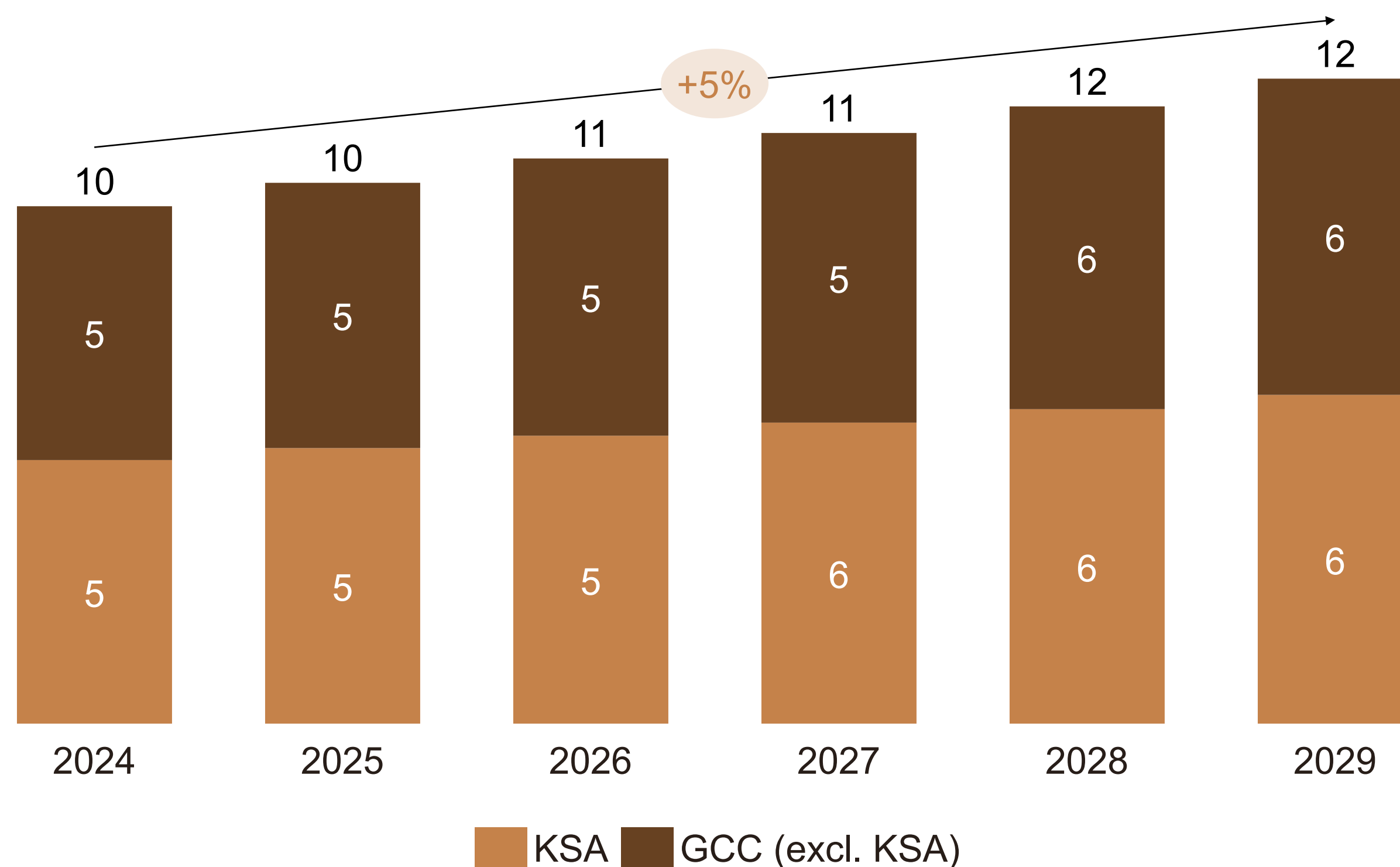
- Preference for local manufacturing supporting local content goals
- Available financing (SIDF)
- Saudization and service access benefits in industrial parks
- Competitive taxes

Catalyzing Supply Chains

Note: \$MM = USD Millions; SIDF = Saudi Industrial Development Fund
Source: Aramco; Mordor Intelligence; Press releases; Team analysis

CRA OCTG Accessories demand, customers, and drivers

Forecasted KSA and rest of GCC CRA OCTG Accessories market 2024-2029 (\$MM)



CRA OCTG accessories customers in KSA



Oil producers



Gas producers

Key KSA demand drivers

- **Rise in gas & upstream activities:** Rise in gas & upstream activities require further use of coiled tubing
- **Abrasive local conditions:** High proportion of H₂S and CO₂ in KSA O&G fields require robust anti-corrosive systems, particularly for HPHT and deepwater applications

Catalyzing Supply Chains

Note: \$MM = USD Millions

Source: Aramco; Mordor Intelligence; Press releases; Team analysis

Value chain and key localization opportunities



Catalyzing Supply Chains

Note: EAF = Electric Arc Furnace; CNC = Computer Numerical Control; CRA = Corrosion Resistant Alloy; NDT = Non-Destructive Testing
Source: Aramco; Mordor Intelligence; Press releases; Team analysis

ERW Tubular Products

Jasem Al Moyaibed

Opportunity profile – ERW Tubular Products (ERW TP)

1

KSA in high need of Drill Pipes to realize ongoing O&G expansion

2

Drill Pipe market is growing, KSA has the largest regional share

3

Attractive investment opportunities for the Drill Pipe value chain

Key specifications



Size



24"

11

Estimated 2024 KSA market size (\$MM)

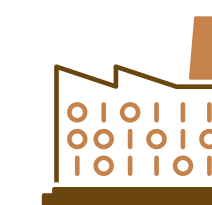
5%

Forecasted 5-year CAGR

KSA value chain opportunities



R&D



Mfg.
Expansion

KSA enablers

- Preference for local manufacturing supporting local content goals
- Saudization and tax benefits in special economic zones
- Favorable labor and utilities rates
- Competitive taxes

Catalyzing Supply Chains

ERW Tubular Products technical overview

Size

Grade & Length

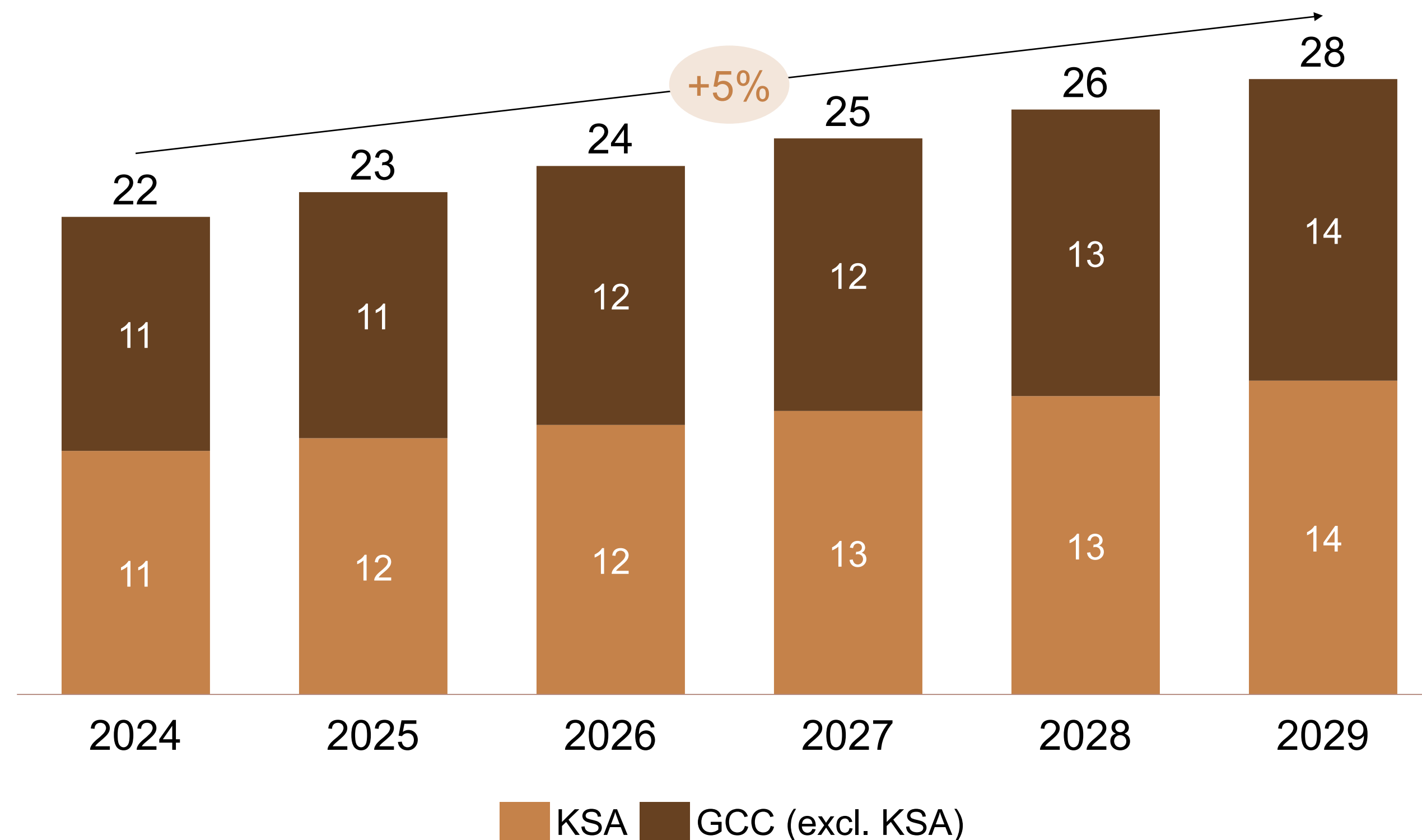


24"

API 5L
Range 3 (~40 feet)

ERW Tubular Products demand, customers, and drivers

Forecasted KSA and rest of GCC Drill Pipe market 2024-2029 (\$MM)



Typical ERW TP customers in KSA



Oil producers



Gas producers

Key KSA demand drivers

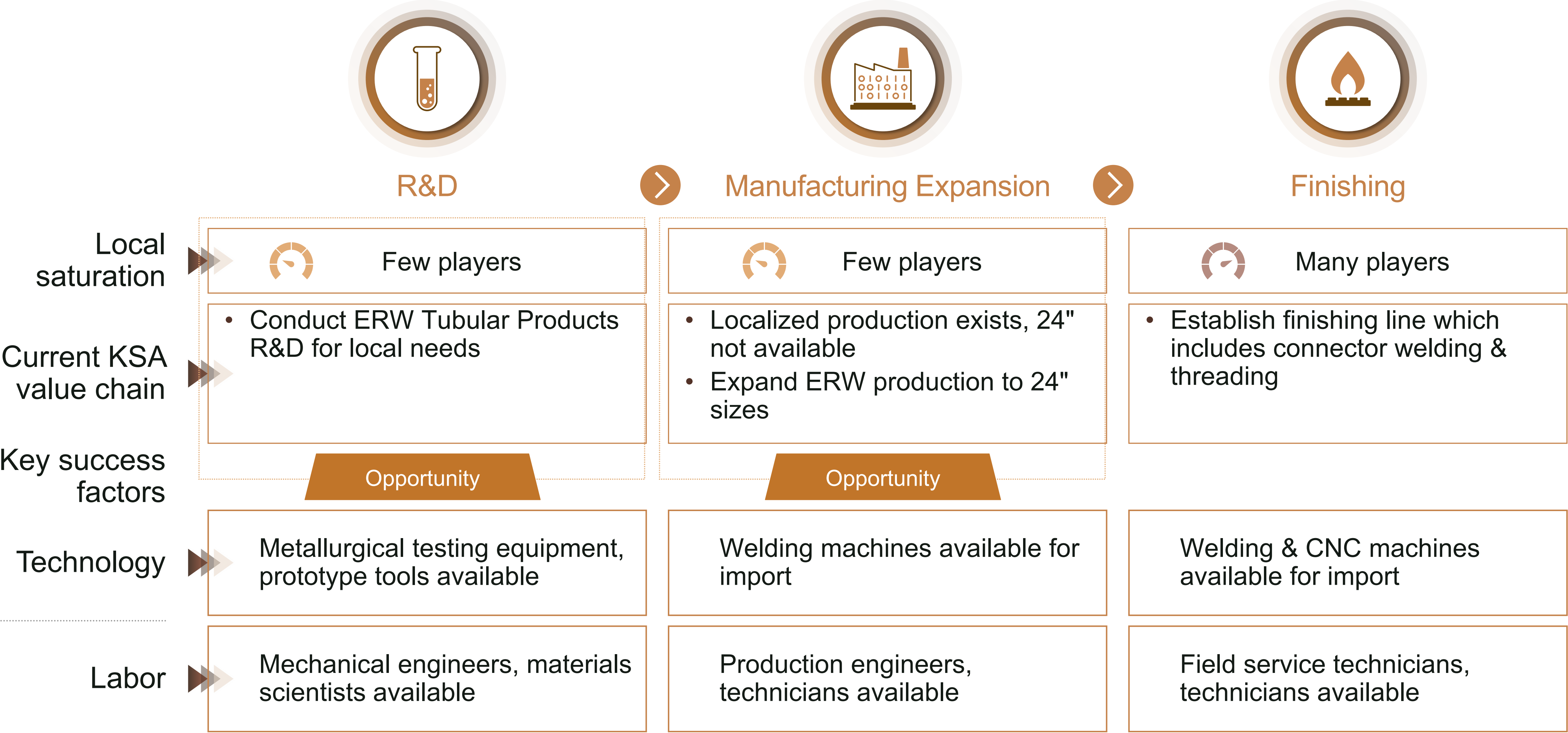
- **Rise in gas & upstream activities:** Rise in gas & upstream activities require further use of large ERW pipe
- **Increase in offshore drilling:** Large ERW pipe needed due to application in expanding offshore drilling operations

Note: \$MM = USD Millions

Catalyzing Supply Chains

Source: Aramco; Global Industry Analysts (Inc.); Press releases; Team analysis

Value chain and key localization opportunities



Catalyzing Supply Chains

Note: CNC = Computer Numerical Control
Source: Aramco; Global Industry Analysts (Inc.); Press releases; Team analysis

Drill Pipe

Abdulaziz Al Yani

Opportunity profile – Drill Pipe

1

KSA in high need of Drill Pipes to realize ongoing O&G expansion

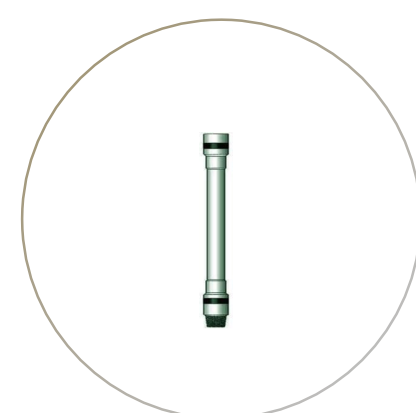
2

Drill Pipe market is growing, KSA has the largest regional share

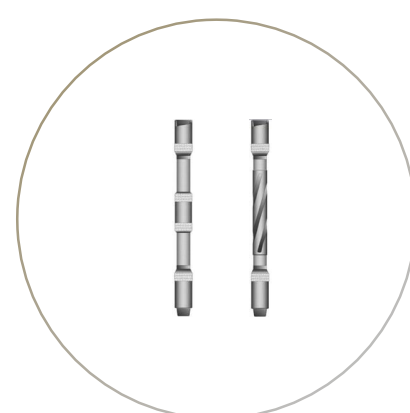
3

Attractive investment opportunities for the Drill Pipe value chain

Key types



Standard



Heavy Weight

38

Estimated 2024 KSA market size (\$MM)

5%

Forecasted 5-year CAGR

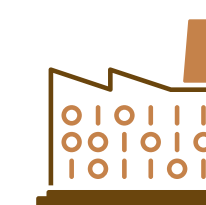
KSA value chain opportunities



R&D



Ecosystem Mfg.



OEM Mfg.

KSA enablers

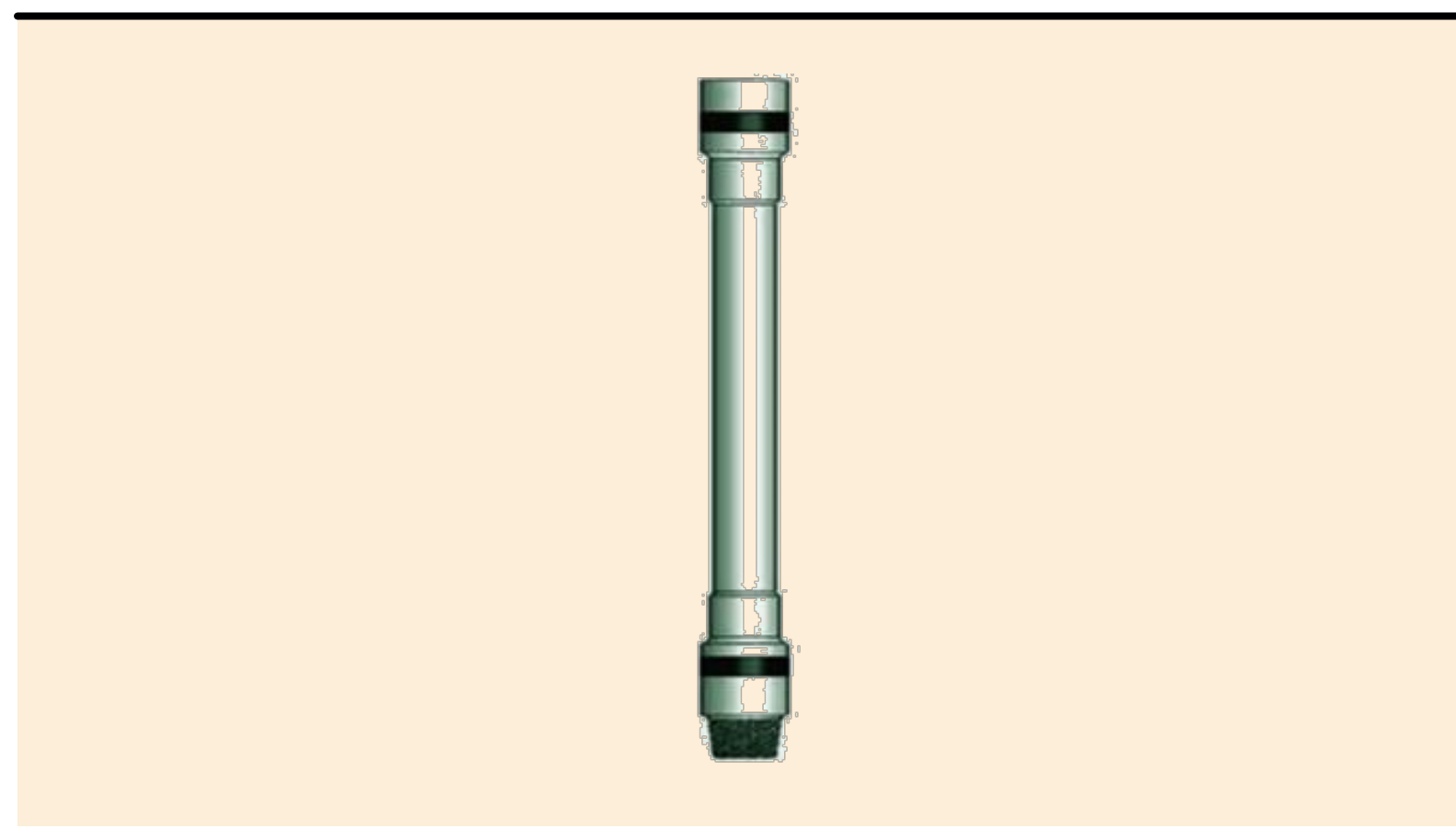
- Preference for local manufacturing supporting local content goals
- Saudization and tax benefits in special economic zones
- Favorable labor and utilities rates
- Competitive taxes

Catalyzing Supply Chains

Note: Note: \$MM = USD Millions; SIDF = Saudi Industrial Development Fund
Source: Aramco; Transparency Market; Press releases; Team analysis

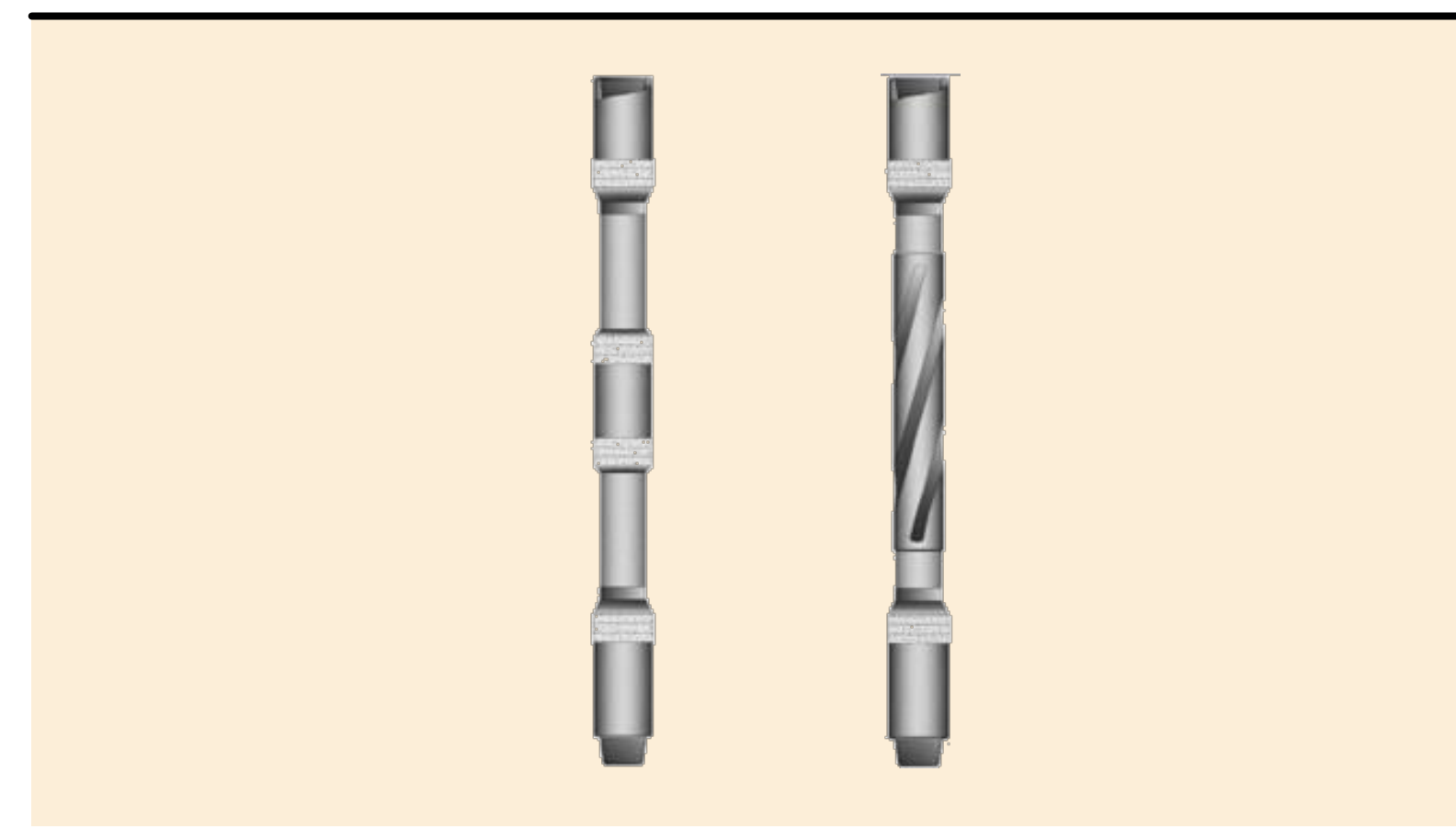
Drill pipe technical overview

Standard type



- Long tubular pipes that comprise majority of drill string
- Usually ~31 feet long

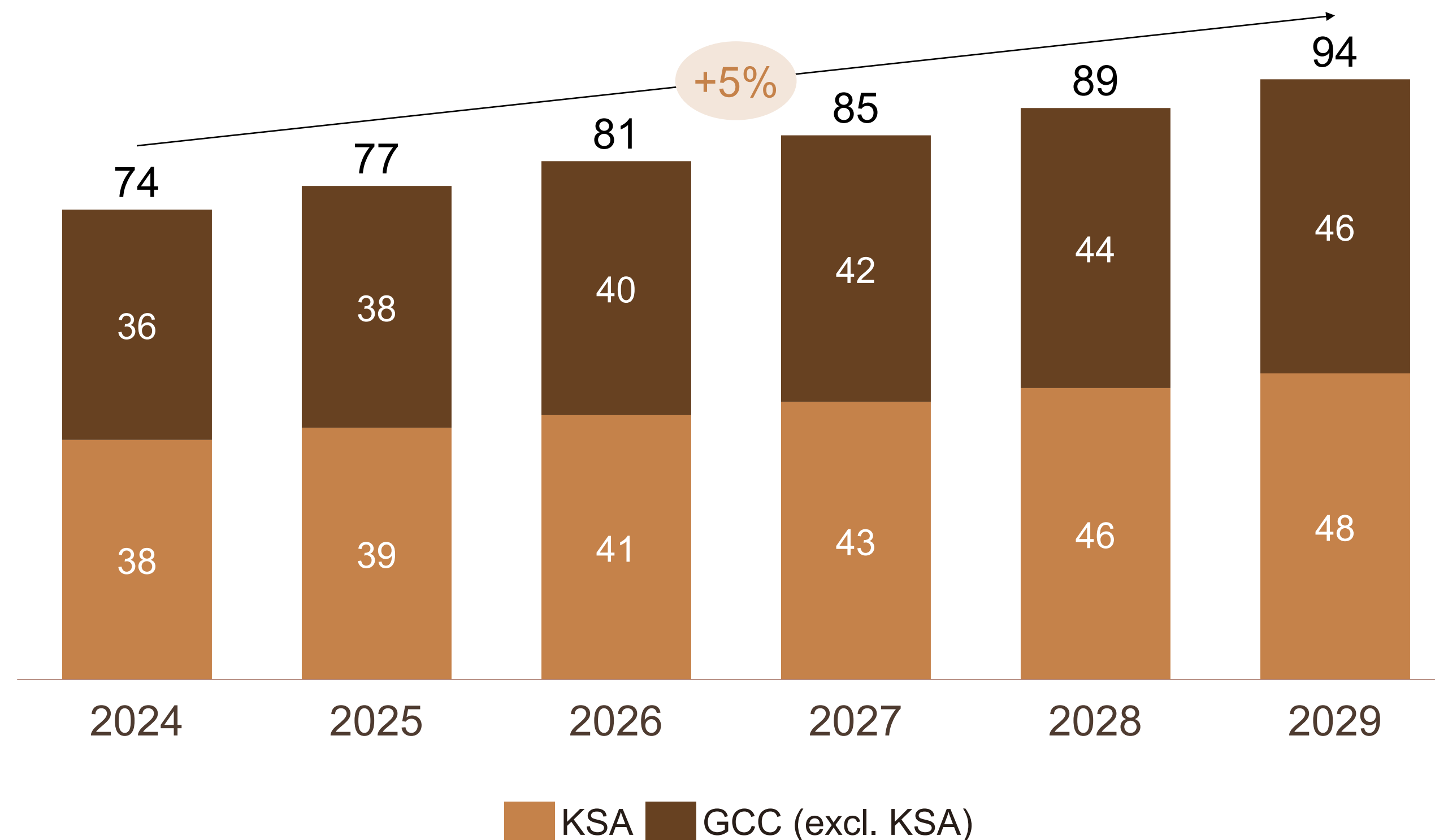
Heavy weight type



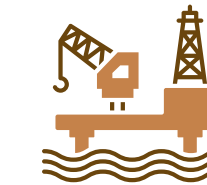
- Pipe that adds weight or acts as a transitional piece in drill string (standard or spiral)
- Placed between drill collar and standard drill pipe to reduce fatigue failure

Drill pipe demand, customers, and drivers

Forecasted KSA and rest of GCC Drill Pipe market 2024-2029 (\$MM)



Typical Drill Pipe customers in KSA



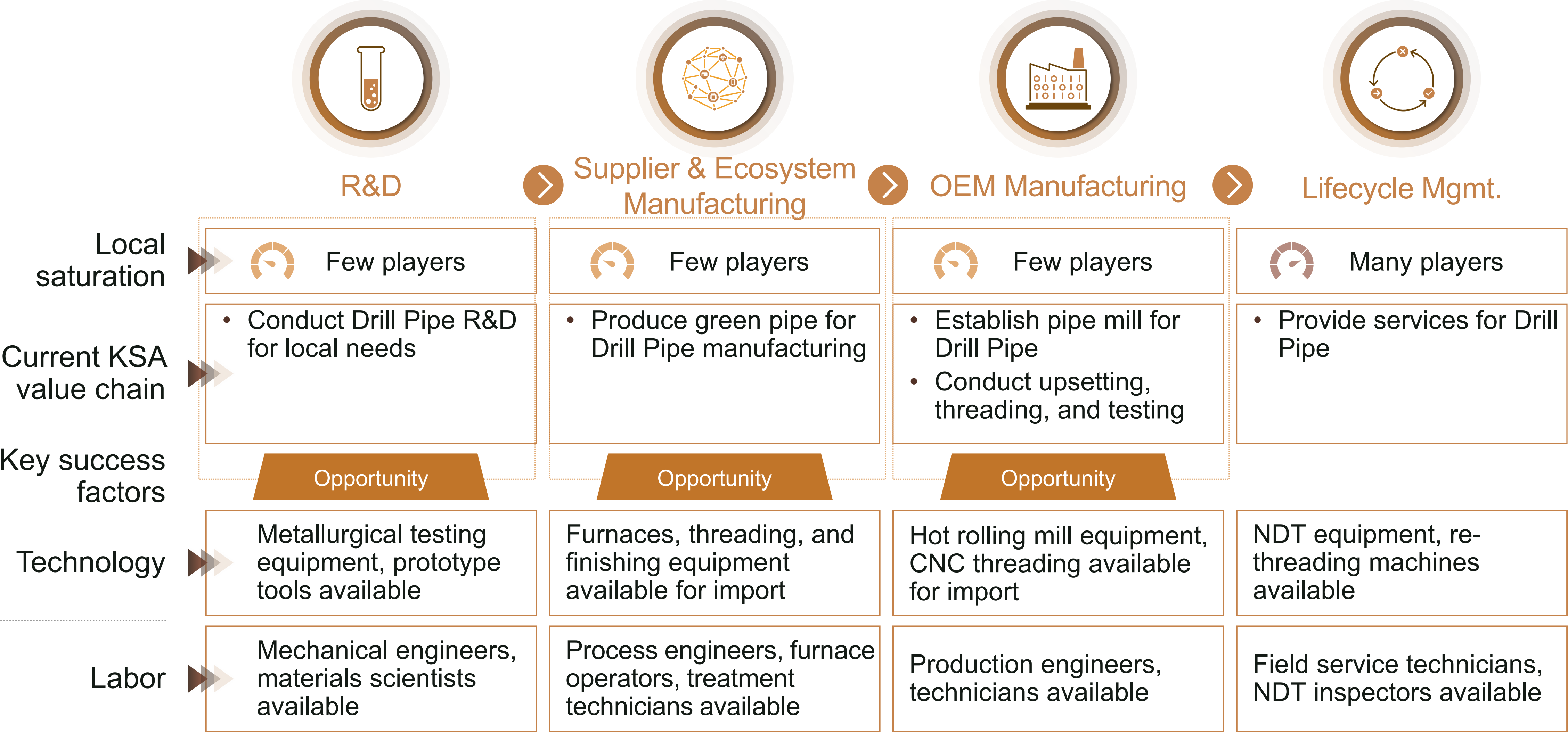
Drilling contractors

Key KSA demand drivers

- **Expansion in oil and gas activities:** Rise in oil & gas activities require further use of drill pipe
- **Increase in well depth and longer laterals:** Increase in well depth and longer laterals requires use of additional drill pipe

Catalyzing Supply Chains

Value chain and key localization opportunities



Catalyzing Supply Chains

Note: CNC = Computer numerical control; NDT = Non-Destructive Testing
Source: Aramco; Transparency Market; Press releases; Team analysis

Please direct Business Opportunities inquiries below:



We invite you to engage with us and send us your Expression of Interest by scanning the QR code or visiting:

Website: <https://iktva.sa/english/opportunities/opportunity-submission-form>

Email: local-content@Aramco.com