



FIFTH IEA IEF OPEC SYMPOSIUM ON ENERGY OUTLOOKS

What can we learn from other industries?

Riyadh, Saudi Arabia

March 23rd, 2015

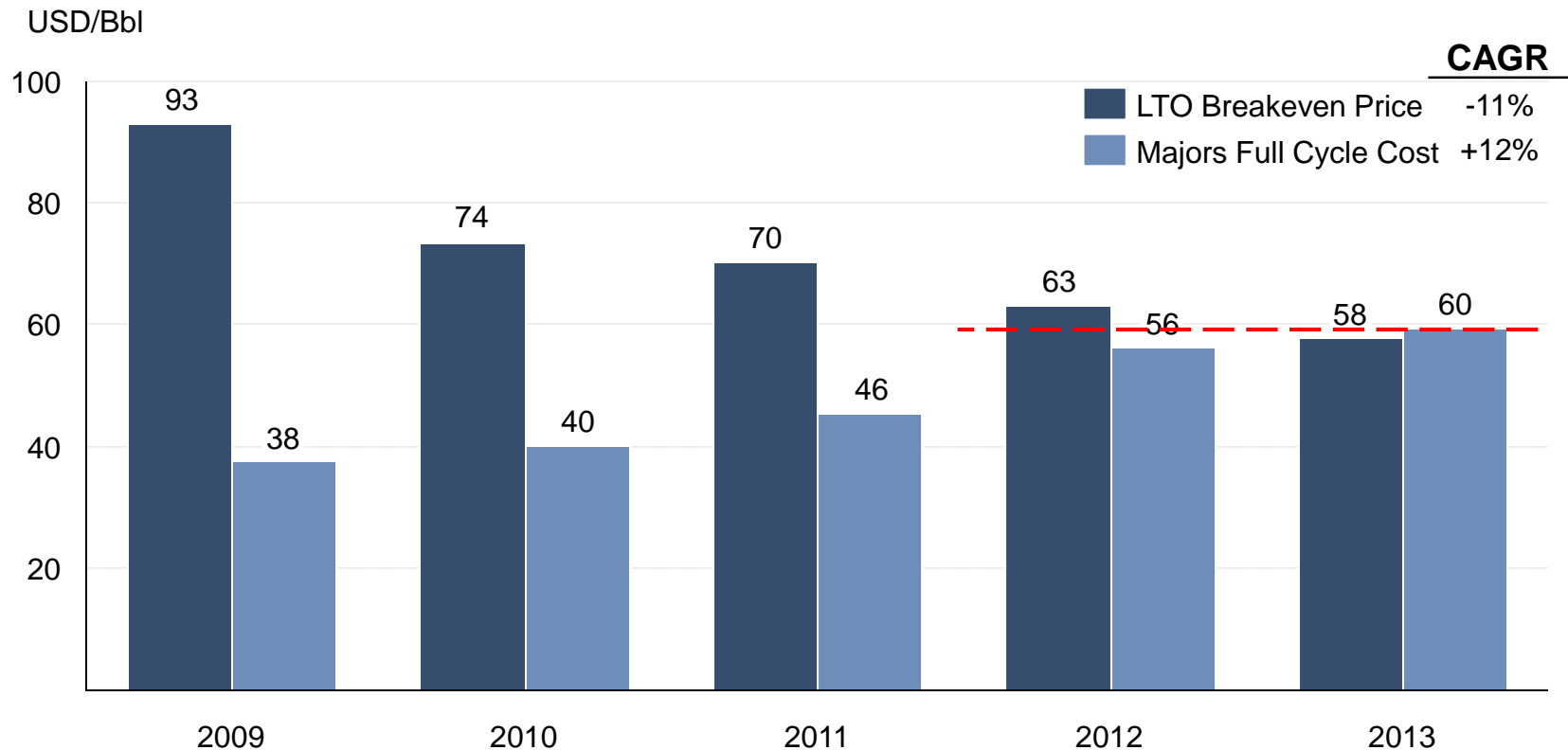
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Light Tight Oil (LTO) breakeven price have reached majors' full cycle cost

LTO BREAKEVEN PRICE¹ AND MAJORS FULL CYCLE COST²

USD per Barrel of Oil Equivalent, 2009-2013



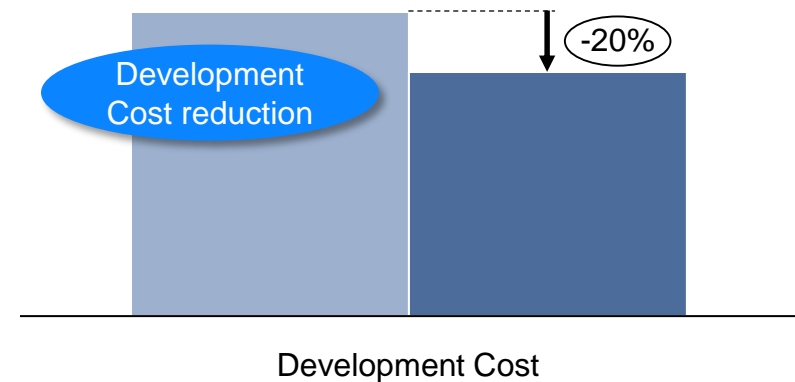
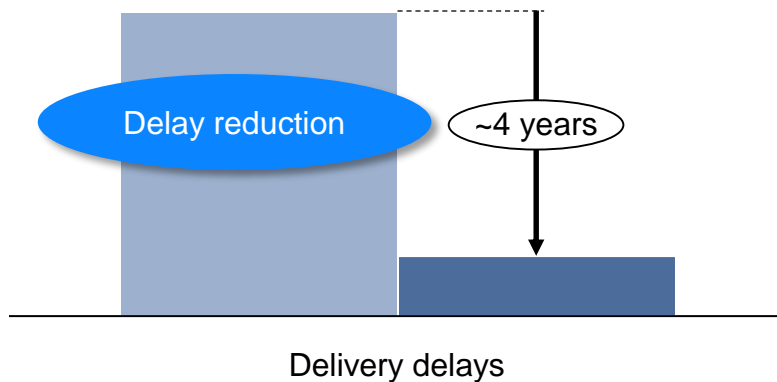
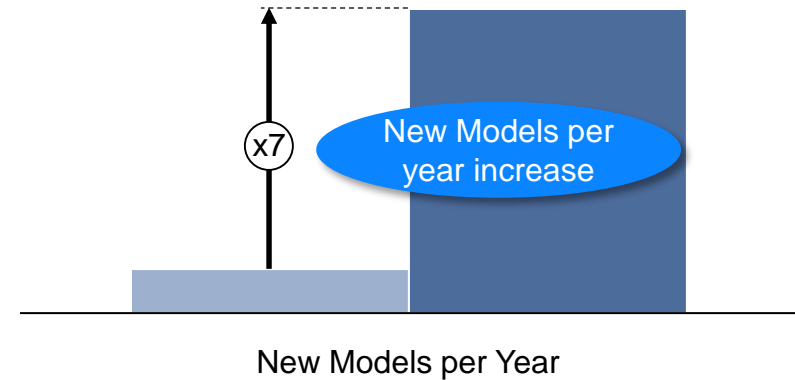
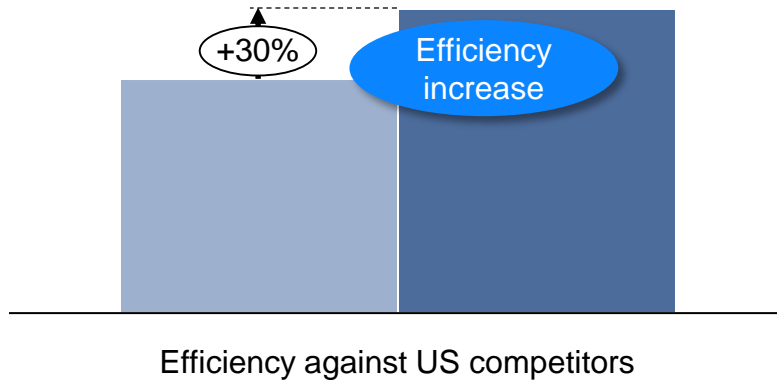
1: F&D + Lifting costs. Pure unconventional NAM players

2: S&GA + F&D + Total Production + WACC. Majors

Source: Rystad; IHS; Evaluate Energy; Goldman Sachs

What can we learn from other industries?

GROUND BREAKING TRANSFORMATIONS FROM AUTOMOTIVE AND AEROSPACE INDUSTRIES



Note: Normalized Values

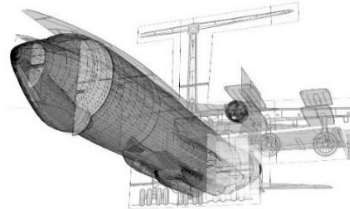
Source: IMVP World Assembly Plant Survey-1989; NESTA Total Innovation Report; SBC interviews with PSA and Airbus executives, SBC analysis

Are IT systems integrated within and outside companies?

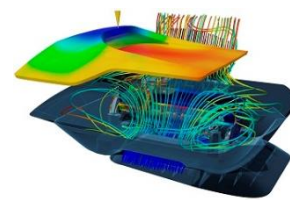
FUNCTIONALITY



3D
Design



3D Digital Mock-up
(DMU)



3D Product Lifecycle
Management (PLM)



3D Simulation and
Interactive Environment

Oil & Gas industry



Automotive



Aerospace



1980

1990

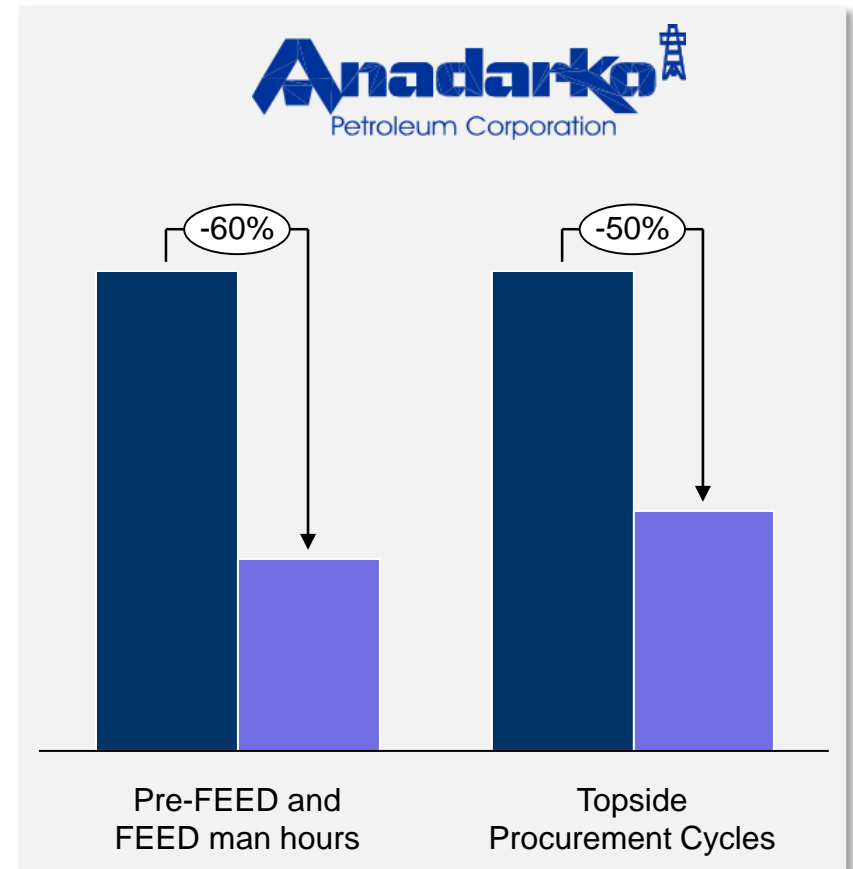
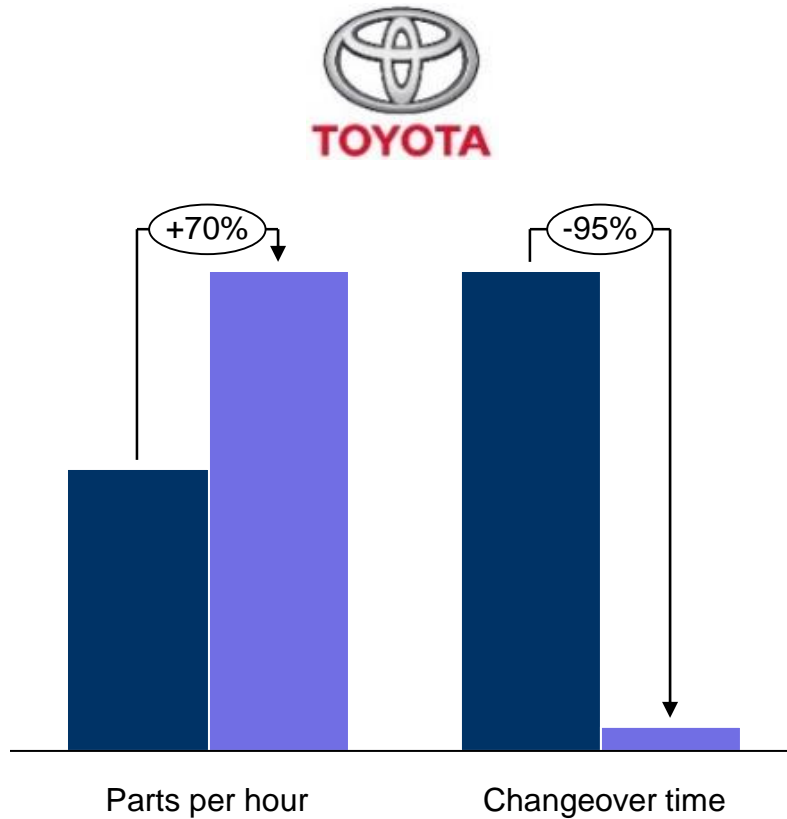
2000

2010

Time of technology availability

Do we take advantage of lean benefits?

LEAN BENEFITS IN THE AUTOMOTIVE AND OIL & GAS INDUSTRY SELECTED EXAMPLES

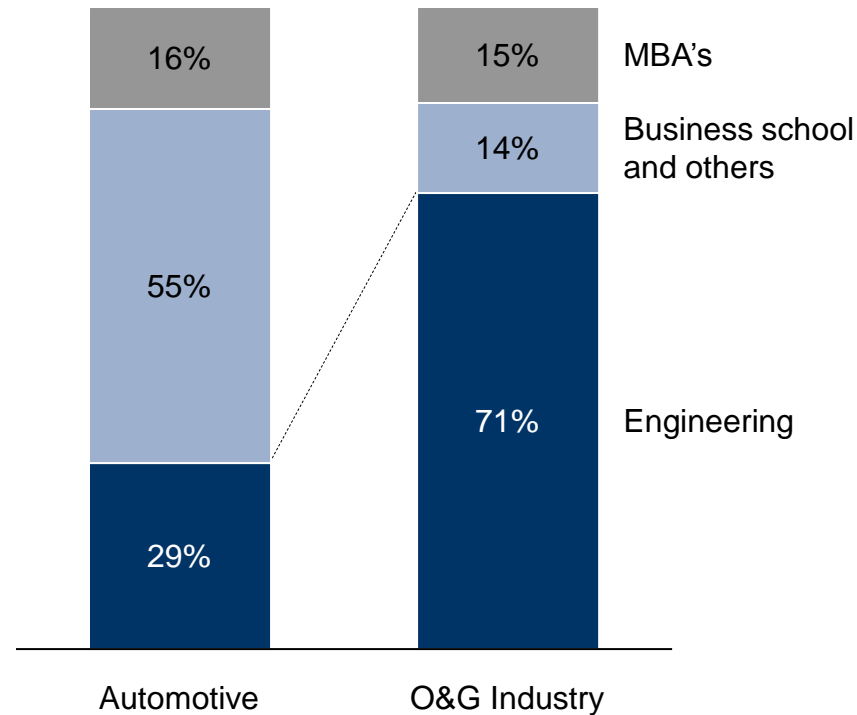


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Are our educational and professional backgrounds sufficiently diverse?

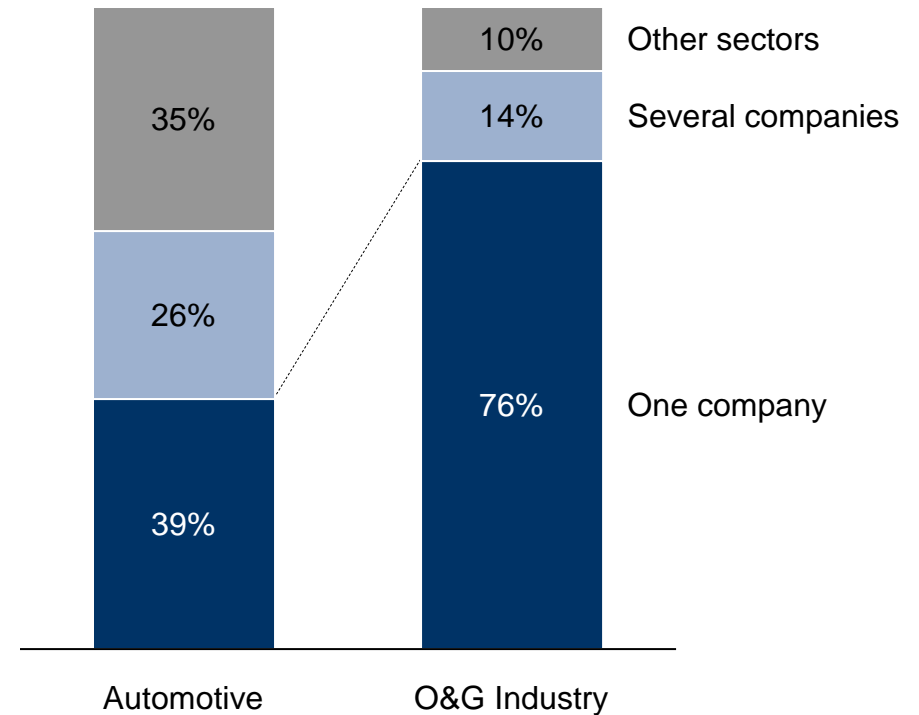
AUTOMOTIVE¹ VS. O&G² EDUCATION BACKGROUNDS

Percentage



AUTOMOTIVE¹ VS. O&G² PROFESSIONAL CAREERS

Percentage



1: Based on 15 largest Automotive companies

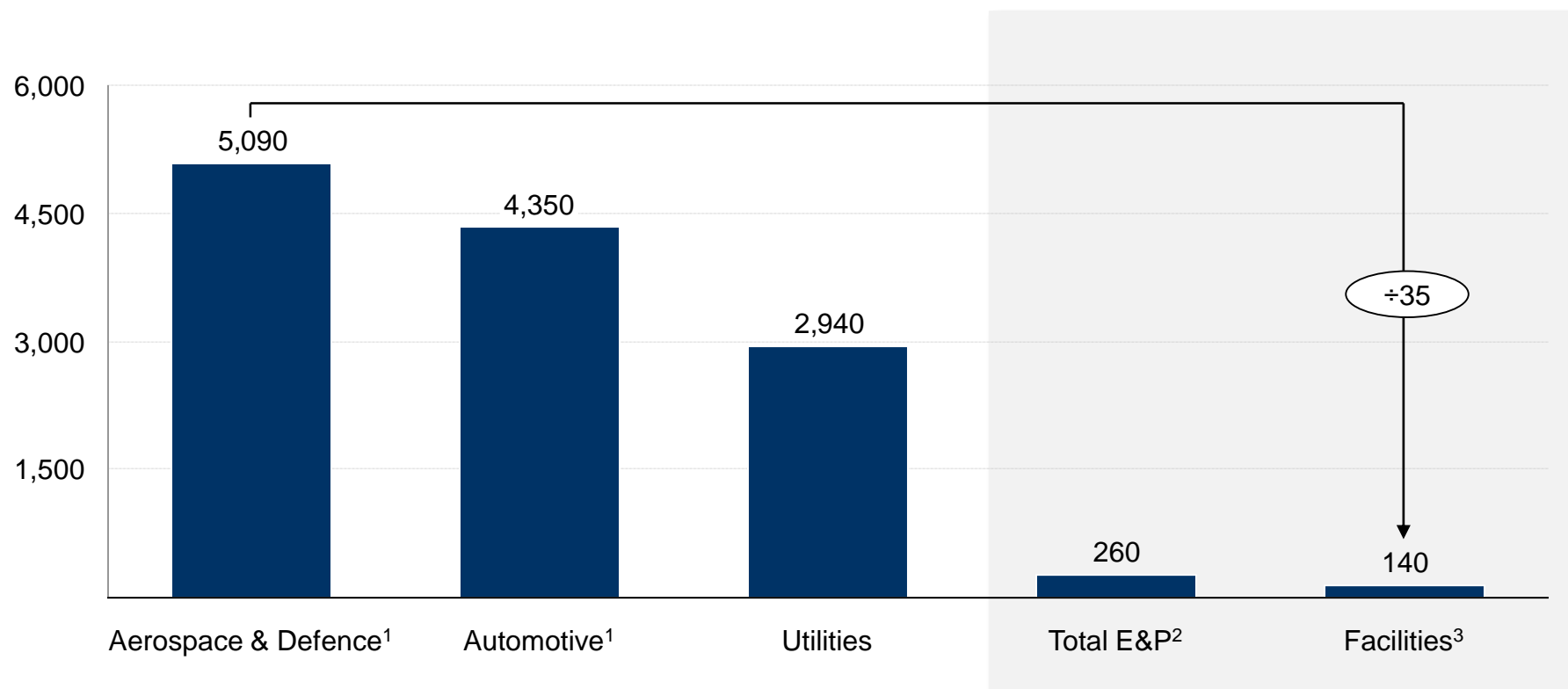
2: Based on 15 largest Oil and Gas companies

Source: SBC analysis

Are we investing enough in our engineers?

TECHNICAL STAFF TO CAPEX RATIO

Staff members per Billion USD spent, 2013



1: Based on a sample of representative companies on each sector. Considers industry engineers

2: E&P Capex/(PTPs + Capital Projects Eng. + Maintenance & Inspection Eng.)

3: Facilities Capex/(Capital Projects Eng. + Maintenance & Inspection Eng.)

Note: PTPs include Geologist, Geophysicist, Petrophysicist, Drilling Eng., Completion Eng., Production Eng., Reservoir Eng.

Source: Aviation Week; SBC interviews with Airbus executives; SBC HR Benchmark 2014; IHS Upstream Spend Report; SBC Analysis