

Keeping Them Working

An Insight on Ageing Rigs

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Focus of the Presentation

An insight into the challenges facing the industry in respect of the ageing offshore rigs in the worldwide fleet

- A profile of the Ageing Rigs
- The scale of the challenges facing Drilling Contractors
- Projects to keep them working

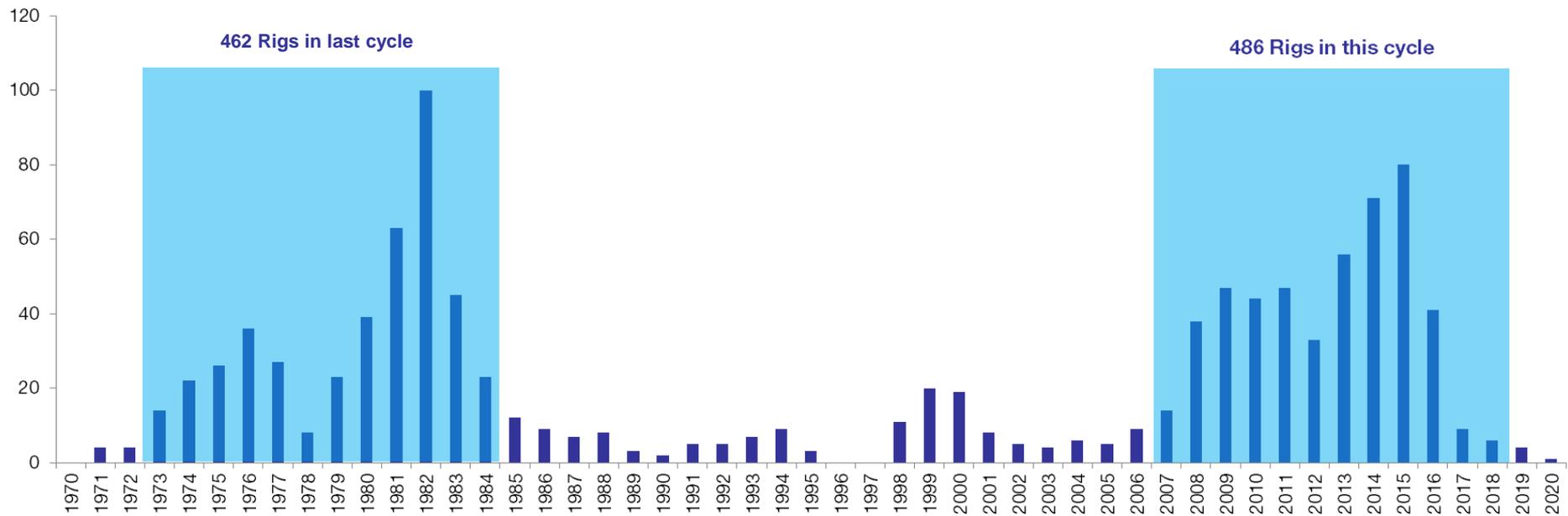
Age profile



The construction boom in the 1980s delivered over 400 MODUs

MODU Build Activity between 1970 and 2020

Source: Epeus Analysis, RigLogix Database



Average Capex of US\$44m

302 Jackups
123 Semisubs
20 Drillships

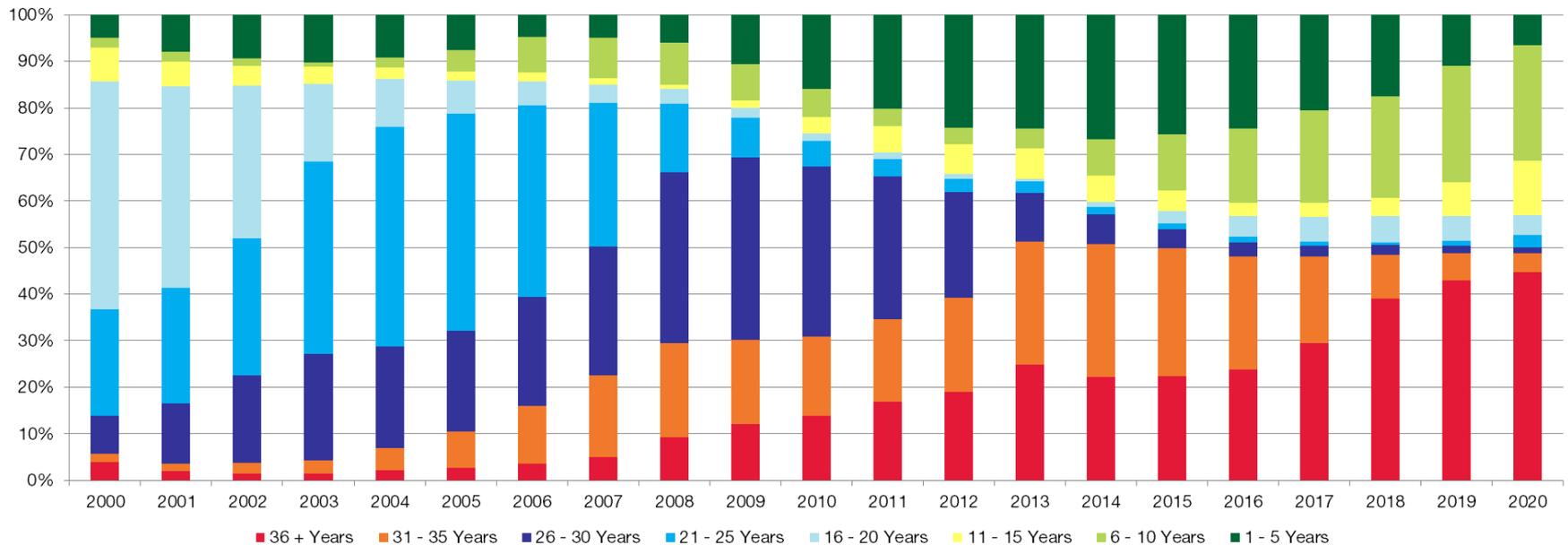
Average Capex of US\$358m

275 Jackups
82 Semisubs
129 Drillships
More speculative build than for specific contracts

The impact of the last boom on the global rig profile can be clearly seen

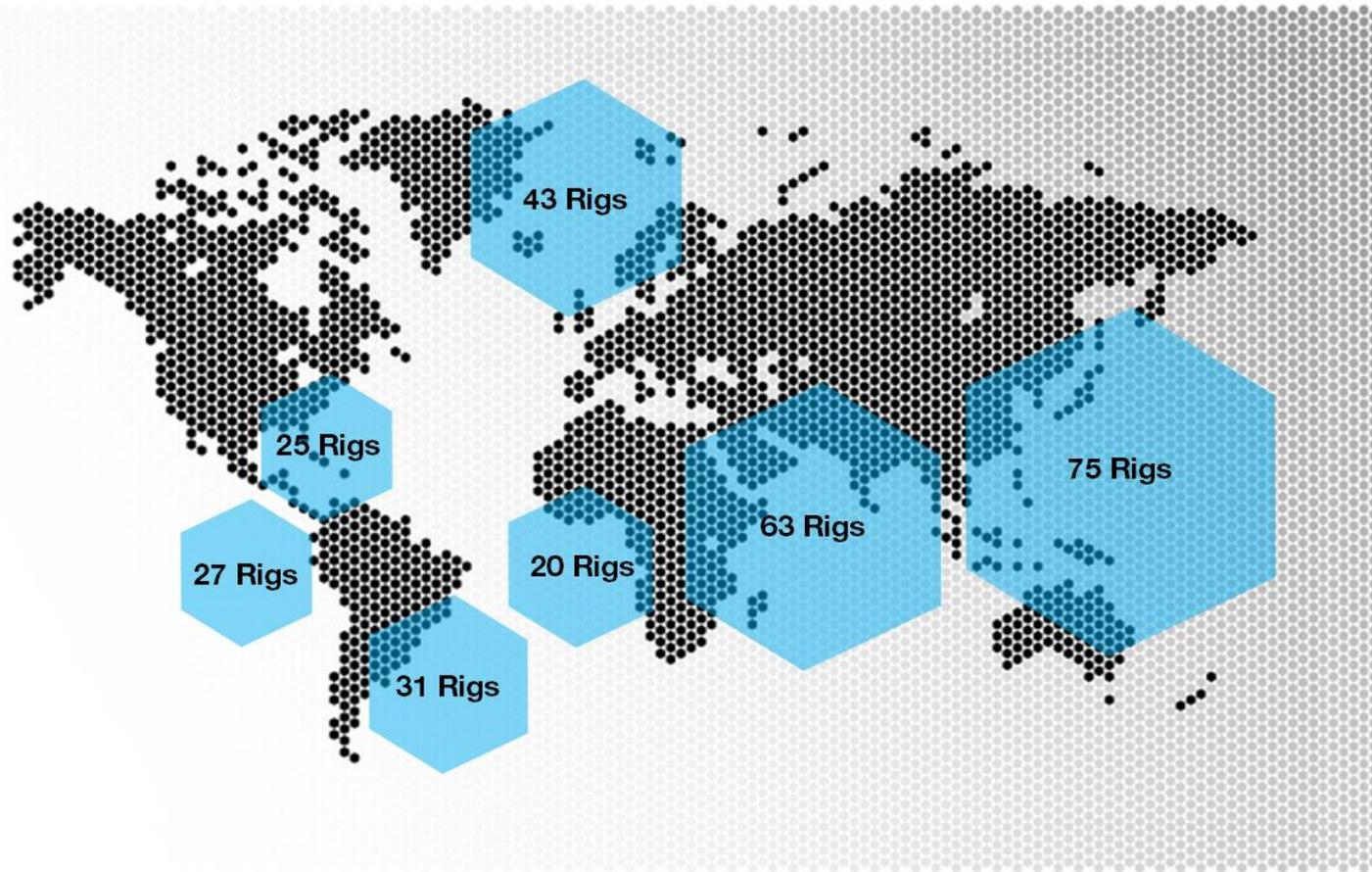
Age Ranges of MODUs between 2000 and 2020

Source: Epeus Analysis, RigLogix Database



By 2022 more than 50% of the global rig fleet is forecast to be more than 30 years old

Many of these rigs are still working around the world



And performing valuable work for Field Operators

	Jackups	Semisubs	Drillship	TOTAL
Built	313	129	20	462
Drilling	210	84	12	306
Inspection or Modification	23	11	3	37
Ready Stacked	29	6	3	39
Cold Stacked	45	19	1	65

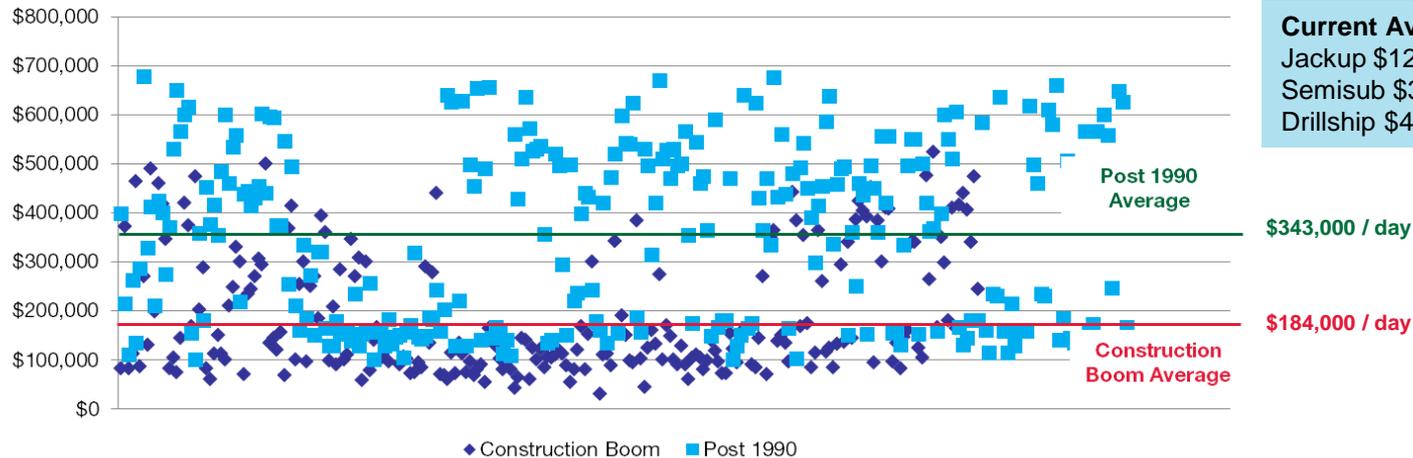
Source: Epeus Analysis, RigLogix Database

- 15% of rigs from the period have been either retired or are cold stacked
- 67% are performing drilling operations
- 16% are undergoing modifications or are ready stacked

The commonly held view is that these rigs earn a lower day rate than new rigs

Spread of MODU Day Rates based on Construction Period

Source: Epeus Analysis, RigLogix Database



Current Average Day Rates in 2015

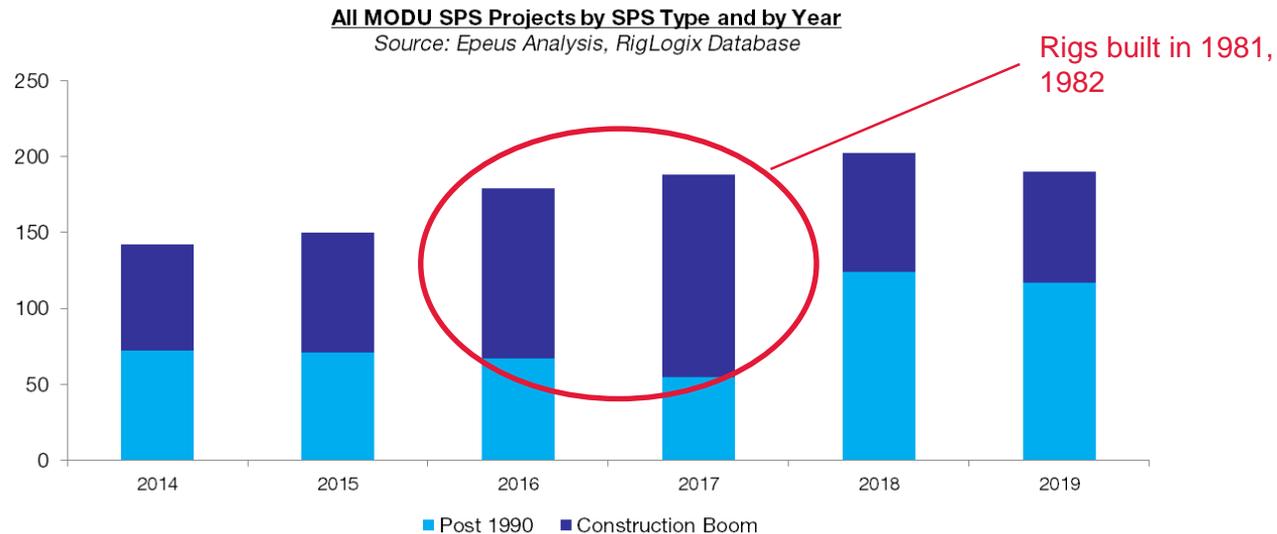
Jackup \$122,000 / day
Semisub \$394,000 / day
Drillship \$469,000 / day

- Between 15% and 20% below the market average
- This increases to between 25% and 30% below the average day rate for rigs built since 2000

The scale of the challenge



The challenge to upgrade the older rigs and keep them working is an industry wide issue



- Between 2015 and 2017 there will be 285 Special Periodic Surveys on rigs that are either 35 or 40 years old
- This is driven by 1981 and 1982 being major construction years in the last boom

The burden is shared around the industry

	2015	2016	2017	2018	Total
Transocean	16	14	10	25	65
Noble	3	8	2	7	20
Paragon Offshore	6	11	18	1	36
Seadrill (inc NADL)	7	5	10	20	42
Diamond	6	9	7	9	31
ENSCO	13	14	21	9	47
Hercules	5	9	11	5	30
COSL	9	7	6	10	32
Shelf Drilling	6	7	16	6	35
Rowan	9	10	2	5	26

Source: Epeus Analysis, RigLogix Database

- The major drilling contractors obviously have a large share of the challenge due to the size of their fleets and historical merger and acquisition activity
- However other drilling contractors including Shelf Drilling, Paragon Offshore and Hercules have the challenge that these old rigs represent a high proportion of their overall fleets

What to do with the older rigs?

The drilling contractors have a choice on what to do with their older rigs

- Divest them one by one
- Divest them as a group
- Spin them off into another business
- Retire them
- Upgrade them
- Replace them

Which option is best will depend on a number of factors including

- Contract backlog and pipeline
- Client profile
- Fleet profile
- Company strategy

Considerations for each option

	Financial Considerations	Upsides	Downsides
Divest Them	<p>Moves asset and liability for modifications off the balance sheet</p> <p>Falling costs of newbuilds (in particular Jackups) mean many speculators will build new rigs rather than acquire older ones</p>	<p>Frees up capital for other investment</p> <p>Reduces cashflow for maintenance and ongoing support</p>	<p>Loss of stable contract revenue that some older rigs generate</p> <p>Likely to have to accept sale price that is lower due to market conditions</p>
Spin Off	<p>Restructuring of the parent and child businesses requires capital</p> <p>Investment in people, processes and systems for the child business</p>	<p>Generation of large capital into the parent business if spin off is floated or divested</p> <p>Removal of cash flow and ongoing expenses required to support the older rigs in the fleet</p>	<p>Loss of stable revenue</p> <p>Loss of asset value off the balance sheet of the parent company</p>
Stack	<p>Costly to manage and for the actual stacking costs</p> <p>Reactivation projects can be complex and costly</p>	<p>Removes a large portion of Opex and ongoing maintenance costs</p>	<p>Adds in Capex for any reactivation and Special Periodic Surveys to get the rig working again</p>

Considerations for each option

	Financial Considerations	Upsides	Downsides
Upgrade Them	<p>Requires a capital investment programme over a period of time that may require raising of funds</p> <p>Managing the upgrade projects requires investment in people, processes and skills</p>	<p>Maintains day rate revenue and contract backlogs</p> <p>Makes the assets more saleable</p> <p>Adds value to the assets on the balance sheet</p>	<p>Projects are complex and more susceptible to fail against time and budget targets</p> <p>Current market conditions mean upgrading to meet a specific contract is not as likely</p>
Replace Them	<p>High capital investment up front and financing required</p> <p>Payback period on newbuilds is longer due to build time and lag</p> <p>Additional project management and delivery costs to be factored in</p>	<p>Higher day rate revenue</p> <p>Netter fleet utilisation</p> <p>Lower initial maintenance costs and upgrade activity required</p>	<p>Delays to newbuild delivery currently being seen</p> <p>Influx of high spec newbuilds likely to impact demand</p>

Upgrading and modifying these rigs are major projects

- Capex requirements in excess of US\$100m for major upgrade and modification
- Recent Semisub upgrade works in excess of US\$200m in some cases
- Keeps the rig working for another 5 years and potentially secures contract revenue
- US\$100m for an upgrade of a 35 year old Semisub would produce the following financials

	Metric	Compare with Newbuild
Capex	US\$100m	US\$580m
Day Rate	\$250,000 / day	US\$550,000 / day
Payback Period	3.65 Years	6.3 Years

- However this assumes a contract can be secured and a high level of utilisation for the rig which in the current market is a risk

Industry statistics also suggest that these projects are likely to run over time and over budget

- When they do fail they have serious impacts on financial performance on a company level as the example below shows
- Fleet utilisation of 99%, revenue up 3% from the previous quarter, day rates up 9%
- But two upgrade and modification projects over ran by 3 and 4 months respectively and the share price dropped 3.5%



Conclusions

- The issue of Ageing rigs looms large for the industry
- Current market conditions mean that the decision on what to do with older assets becomes more critical
- Many of these rigs are still undertaking valuable operations around the world and the build activity to replace them is no longer certain
- Drilling contractors need to consider carefully which strategy and approach they take and think about the risks and financial considerations

The Epeus Group

We are an international Project Risk Management Consulting Firm providing Advisory, Assurance, Technical Support and Project Rescue services to our clients in the Upstream Oil and Gas Industry. We work extensively on Drilling Rig and Specialty Vessel projects and help our clients to feel more secure about their prospects and to manage their financial and reputational risks. Our clients include those organizations that own, operate, invest in and hire Drilling Rigs and Specialty Vessels.

Offshore rigs are dirty great beasts that demand respect. We understand exactly what's needed to get one 'drill ready'—and to maximize the 'up time' of a whole fleet.

We can advise on all aspects of your asset's operation, from its offshore installation and maintenance to day-to-day drilling operations and upgrades. Our insights can also help you manage your supply chain and issues of construction, health and safety, and quality as well as the contracts that underpin everything.

We also have considerable experience in the specialty marine sector, from support vessels to full-scale 'floating hotels' for crews

For more details visit our website at www.epeusconsulting.com

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