



**Gaining industry commitment
to new technology**

How government can support

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Introduction

Impact of money on customers and investors






Customer

The Oil & Gas Industry has some potentially dangerous behaviors

-  Full of engineers with an enthusiasm for technology
-  In better times will invest speculatively in technology
-  Can have a very long technology adoption curve




Customer

Beware of accepting the technology team interpretation

-  They are very busy people
-  They too have to navigate vast organisations
-  Inevitably they have preferences born of personal experience

Customer

You must have a robust business case

-  Built with Technology, Projects and Executives
-  Clearly understand how you save operator and supply chain money
-  Clearly understand whether the saving is large enough for them to care

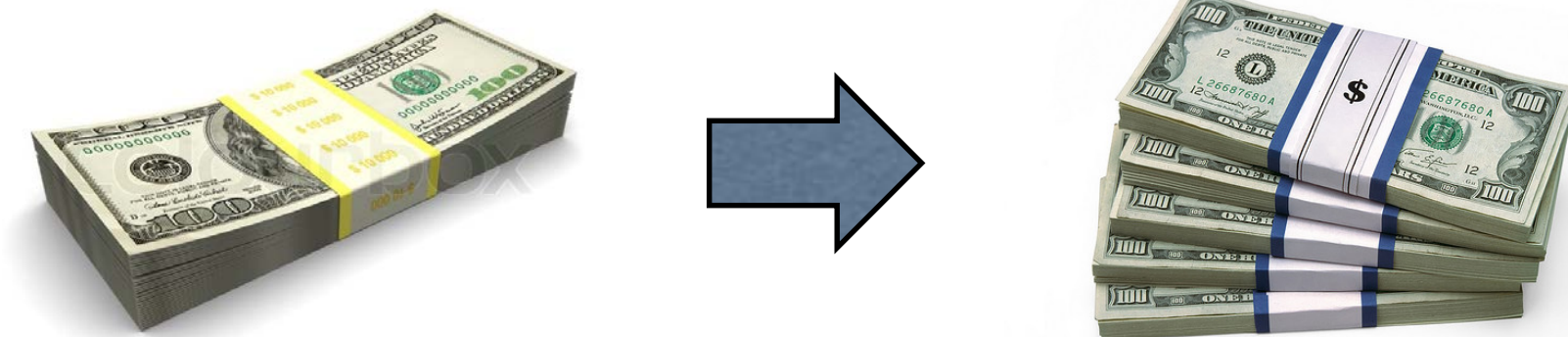
Customer

An ‘enabling’ technology that is delivering a step change in subsea economics

Deep water SLOR cost summary and comparison – steel versus m-pipe [®] riser system				
System of 8 x SLORs in 3,000m Water Depth	Steel SLOR (US\$)	m-pipe m-SLOR (US\$)	Steel SLOR oncost (%)	Steel SLOR oncost (US\$)
Riser, jumper and pipe materials	224,855,400	226,126,208	-1 %	-1,270,808
Equipment – buoyancy and connectors	67,298,000	36,269,501	86 %	31,028,499
Fabrication – piles, rigging and logistics	51,590,000	17,055,500	202 %	34,534,500
Engineering and Project Management	27,720,000	16,632,000	67 %	11,088,000
Offshore Construction	177,092,300	17,560,620	908 %	159,531,680
Construction all risks insurance	16,456,671	9,420,699	76 %	7,088,640
Total Cost for 8 x SLOR Riser System	565,012,371	323,053,144	75 %	241,959,227
Typical total project field development cost	2,500,000,000	2,258,040,773	11 %	241,959,227

Investor

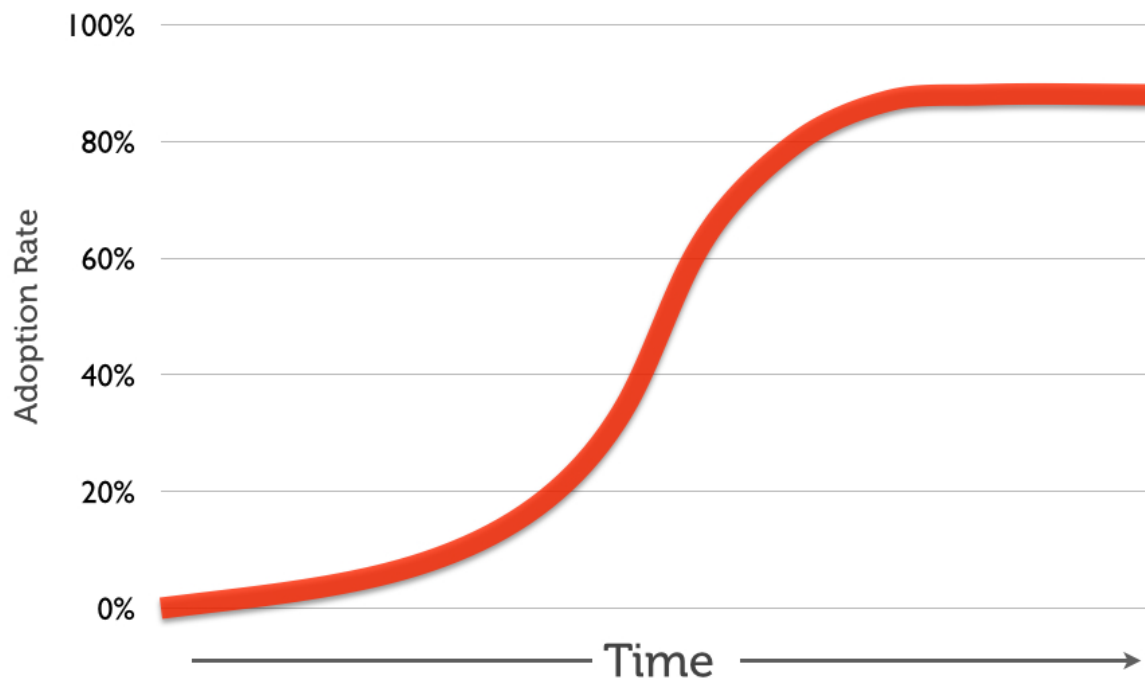
You are just another asset class fighting for capital



Investor




Scale is straightforward, rate of adoption is not

— S-Curve Adoption Model






Investor

Must find a way to accelerate adoption

-  Strong business case
-  Find early commitment to deploy
-  Remove money as a barrier to deployment

Investor

Grants can provide a valuable catalyst

-  Deadline for commitment
-  Drives a commitment to deploy
-  Reduces or removes cost to customer

Investor

Magma was able to use this approach to accelerate the deployment of large subsea pipes





subsea 7



Innovate UK
Technology Strategy Board

Conclusion

Current disruption offers a huge opportunity

-  Engagement in robust business case
-  Support to accelerate adoption