

Core Group

*Thoughts on the opportunities for software companies
in the Norwegian oil and gas sector*

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October 22, 2014

Agenda



- About Core Group
- Our Analysis Methodology
- Global IT trends
- Software Companies in E&P
- Financial and Qualitative Analysis
- Key Findings

About Core Group



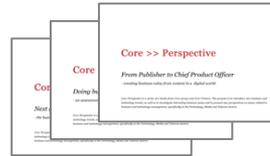
- Core Group is a Norwegian research and advisory firm focusing on the convergence between technology, telecom and media.
- We deliver client focused value propositions, primarily to investors, digital businesses and technology-focused growth companies.
- Our services are based on the combination of in-depth analysis and extensive industry expertise.
- We position ourselves as opinion leaders and challenge established perspectives within our domain.
- Through our subsidiary Core Venture we are investing in early-stage technology companies.

Our services are based on in-depth analysis capabilities and extensive industry insights

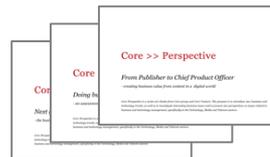
The blog focus on specific issues our consultants are interested in



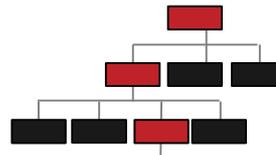
Subject area analysis of targeted issues (Core Perspectives)



Strategic and financial analysis of digital businesses – sectors and subsectors



We have analyzed more than 1750 digital companies and developed our own taxonomy



Show our competencies and engage in current affairs within our domain

Engage customers and partners in domain-specific issues

Build and communicate strategic insight to customers and partners

Basis for normative advice and informed business- and investment decisions

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We base our research on open data sources and industry insights obtained from our advisory services

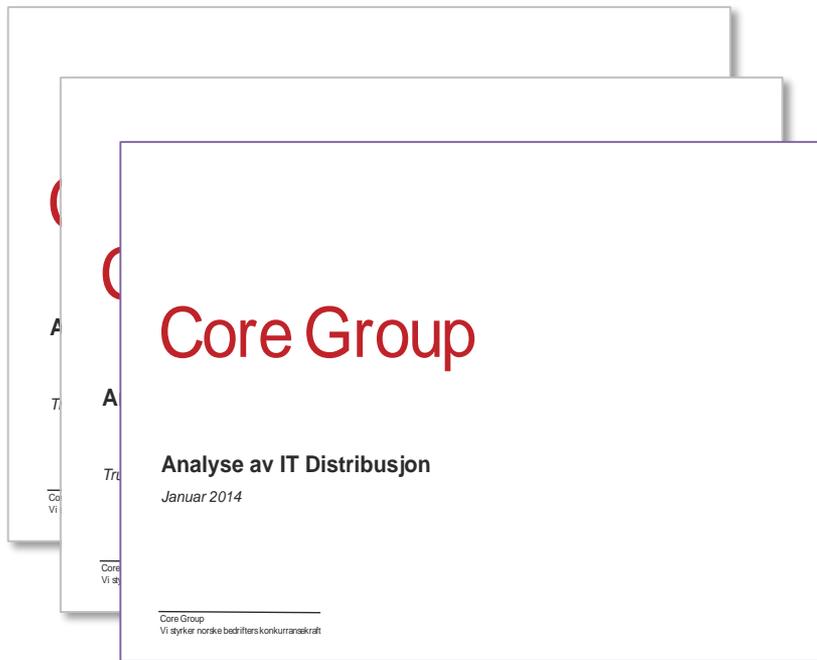


Open data sources forms the foundations for our research:

- Norway:
 - Brønnøysundregisteret
 - Proff Forvalt
- Corporate web pages and interviews
- International media
- Industry trade publications
- Investor analyst reports

Years of industry experience complement the analysis framework as well as guiding the key hypotheses.

Results of the strategic and financial analysis of digital businesses are published in a series of reports

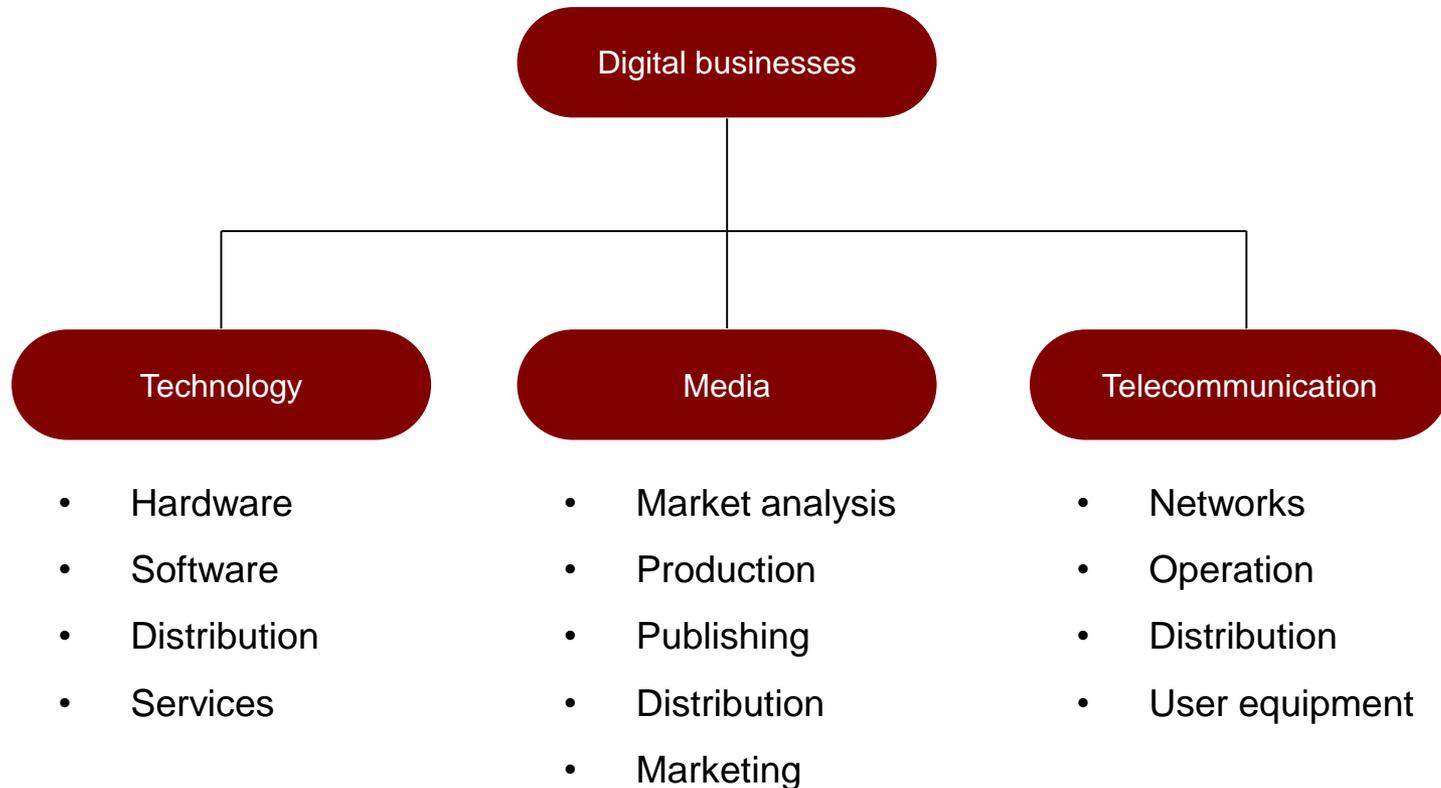


Published reports:

- Analysis of the software sector (2010)
- Analysis of IT-services (2011)
- Analysis of the telecom market (2012)
- Analysis of the media sector (2012)
- Analysis of mobile software (2012)
- Analysis of sector-specific software (2012)
- Analysis of the mobile sector (2012)
- Analysis of administrative software (2013)
- Analysis of basis technology (2013)
- Analysis of Consumer Internet (2013)
- Analysis of IT-distribution (2014)
- Analysis of the market communications sector (2014)
- Analysis of the hardware sector (2014)
- Analysis of “Internet of Things” (2014)

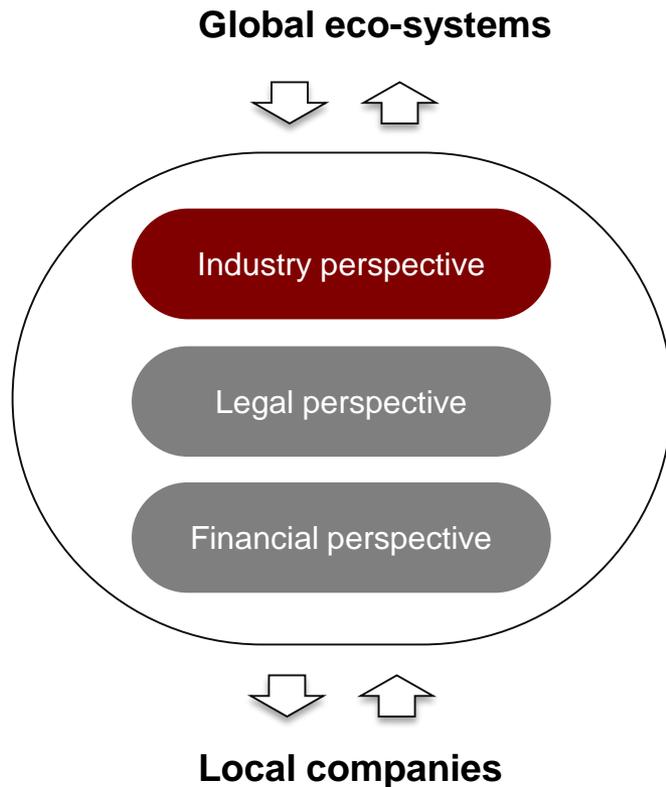
1: All reports in Norwegian; list of reports augmented by a number of client-specific studies

The Core Group taxonomy for digital businesses



Further detailed levels are sub-segments, micro-segments and single companies

The reports and the taxonomy forms the basis for a range of range of services to our clients



- Analysis of global eco-systems
 - Business development and positioning
 - Search for business partners
 - Industry sector consolidation
- Analysis of company competitive position
 - Strategy development
 - Business development
 - Benchmarking
- Transaction support
 - Valuation
 - Funding
 - Deal support

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Key Industry trends



Cloud computing enables the use of internet as platform for IT-systems, which has left in-house installations partly obsolete. In-house installations have better functionality, but cloud services are improving and will substitute in-house installations at some point.

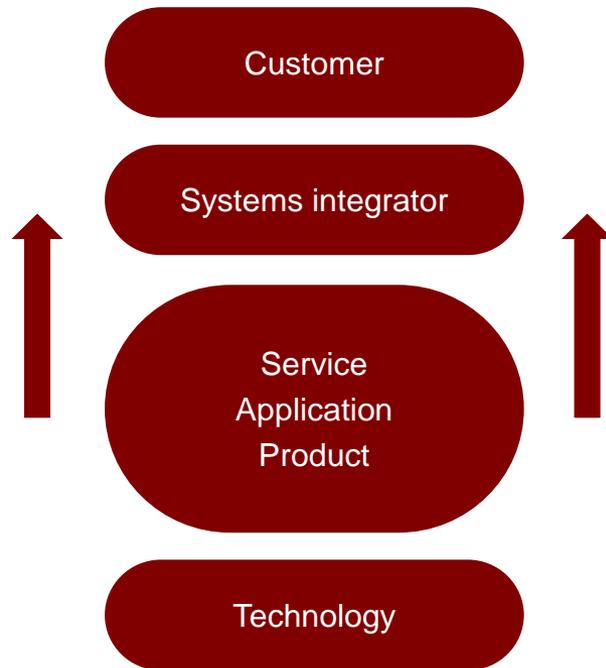
New business models are emerging in the global market. Subscription and transaction based models are cost effective solutions to suppliers and facilitate the acquisition of new customers.

Outsourcing of support functions, such as IT management, is becoming increasingly common in the Scandinavian market. So is involving foreign IT service companies in the development process. Indian IT service provider companies are well established on the Scandinavian market.

Offshoring parts of the business is an effective way of cutting costs, and several Norwegian companies have facilities in cost effective countries such as India, etc

Standardization of IT infrastructure and integrated solutions that allow various system integration.

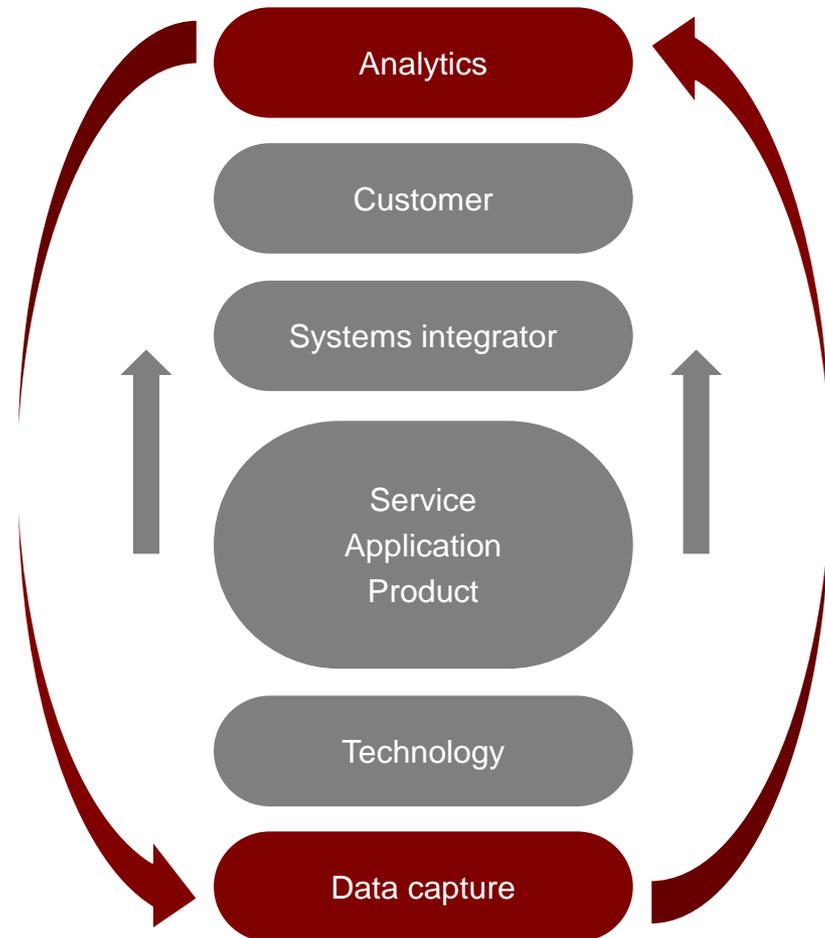
Key trends dictates new customer value propositions and revenue models for the software companies



Simplified SW delivery value chain

- Hardware and software is increasingly purchased directly from the producer
- The systems integrators derive more and more of their value creation from services
- Cloud computing changes the role of software companies

These changes will accelerate as the value creation moves towards the edges of the value chain



- .
- The global O&G analytics market is prospected to grow from \$4,29bn in 2014 to \$19,65bn in 2019. This constitutes a compound growth rate (CAGR) of 35,5%
- Data capture through improved sensors and real-time diagnostics extends product life time and reduces maintenance costs, replacement costs and operational risks

The software industry in numbers

- Core Group conducted our first study of the Norwegian software companies in 2010-2011, with the following key findings
 - 81% companies were less than 10 years old
 - 42% of the companies with less than 20 MNOK in revenue had been in operation more than 10 years
 - 26% of the companies had a negative operational margin last year
 - As we now revise the study in 2014-2015, our main hypothesis is that these conclusion still hold true
- The global software market reached \$554,5bn in 2013, and the compound annual growth rate (CAGR) between 2009 and 2013 was 11,3% (Reuters)
 - The software market is expected to reach \$860,9bn in 2018, with a CAGR of 9,2%
 - There will be more than 212 billion devices connected to networks by 2020
 - The future global value value creation from Internet of Things products and services is estimated to \$1900bn

Source: IDC, Gartner, Reuters

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Software in the E&P industry



- E&P software providers projects 3X growth rate, as companies compensate for talent retiring
- Current archived data in the E&P industry is estimated to be in the range of 150-200 petabytes, growing at 6-10 petabytes per year
- The 2012 the global E&P software spending was estimated to be \$2,8 billion, less than 3% of the global E&P spending of \$600 billion
- Software spending on the NCS (Norwegian Continental Shelf) is estimated to reach \$200m in 2014

Source: Barklays, The Pohlman report, Reuters, Rystad

E&P software comprise the following strategic groups

Drilling operations	Software suppliers that support drilling engineering and modelling.	
E&P Information management	Software suppliers that support E&P information management.	
E&P Production engineering -	Software suppliers that support E&P production engineering.	
E&P Operations management	Software suppliers that support E&P operations management.	
Geology / Reservoir	Suppliers of geological interpretation software.	
Support systems	Suppliers of support systems for the O&G industry.	

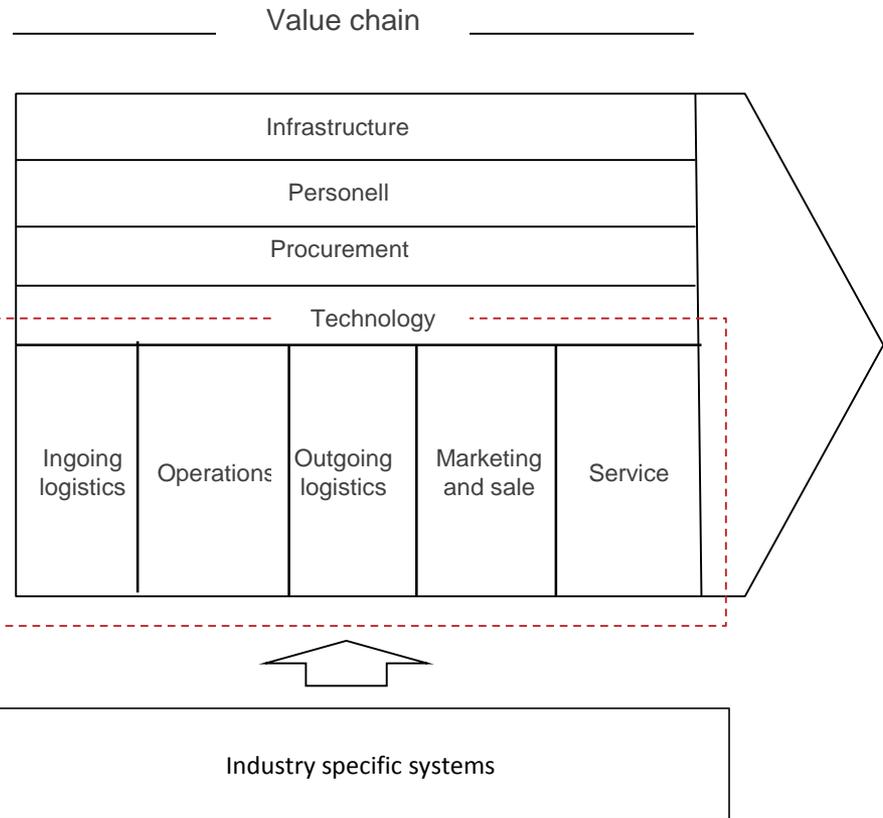
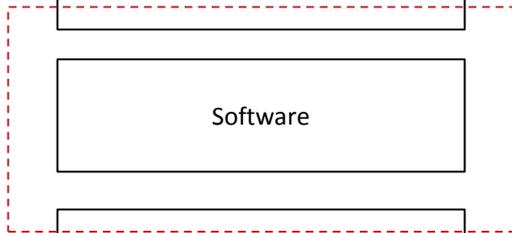
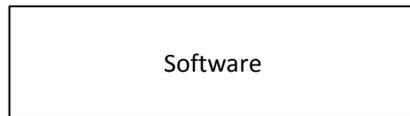
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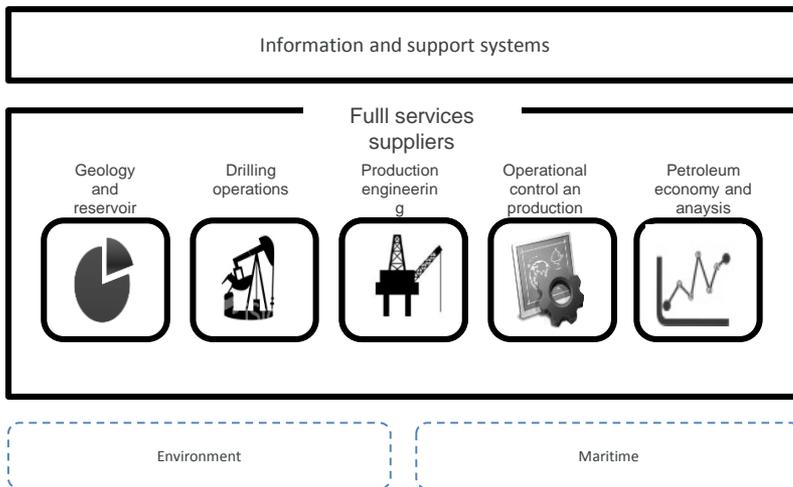
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We have focused on software that support the key processes in the E&P industry

The companies in the analysis deliver partly Hardware and Services, but the focus is on Software

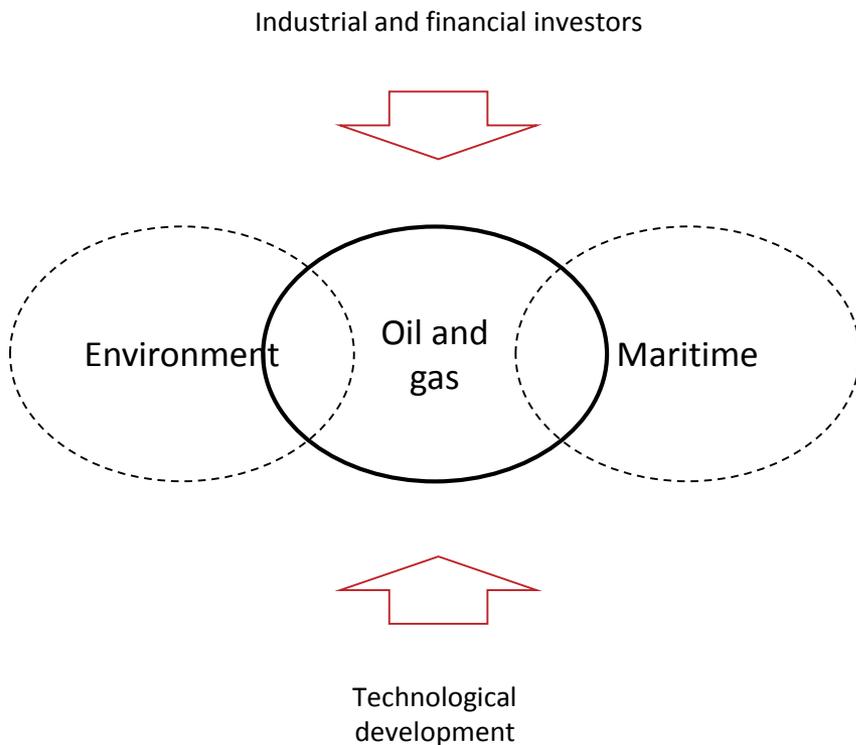


Industry structure



- The E&P software market is B2B
- Local suppliers have both local and international customers
- The customers are major players within the industry. Their focus is on HSE and allocating sufficient resources to invest in technology.
- The local customers are technologically mature
- A key trend is in-house technology development with a purpose of sales to third parties
- Strong competition within the local market.
- Entry barriers are linked to know-how, access to potential customers and industry processes.

Industry development



- Focus on full exploitation of existing reservoirs
- Statoil and Statoil Venture are investing resources into E&P software
- Schlumberger has invested in several software companies. Ex. Blueback Reservoir (value increase of Schlumberger technological platform)
- Pareto Staur Energy invested 50 MNOK in Numerical Rocks for internationalization purposes
- Axon has a proactive approach with regards to acquiring software companies, ex. Oiltec Solutions and eDrilling Systems

Stakeholders in the E&P software sector



- Industrial stakeholders of E&P software include Axon, Kongsberg Group, Statoil and Schlumberger
- Financial stakeholders of E&P software include Investinor, Proventure, Seed, Såkorninvest, Nunatak and Viking Venture
- R&D based stakeholders of E&P software include Sintef and IFE Venture

Transaction overview

- 2014 : Cegal Newco AS acquired Blueback Reservoir
- 2012 : Schlumberger acquired SPT Group
- 2012 : DNV acquired Norwegian Petro Services
- 2012 : Numerical Rocks merged with Digital Core
- 2011 : DNV Software acquired Synergi Solutions
- 2011 : BakerHughes bought minority share of Verdande
- 2010 : Omega acquired Omniware
- 2009 : Fugro acquired Sea Development

Scope of the financial analysis

Companies included in the analysis

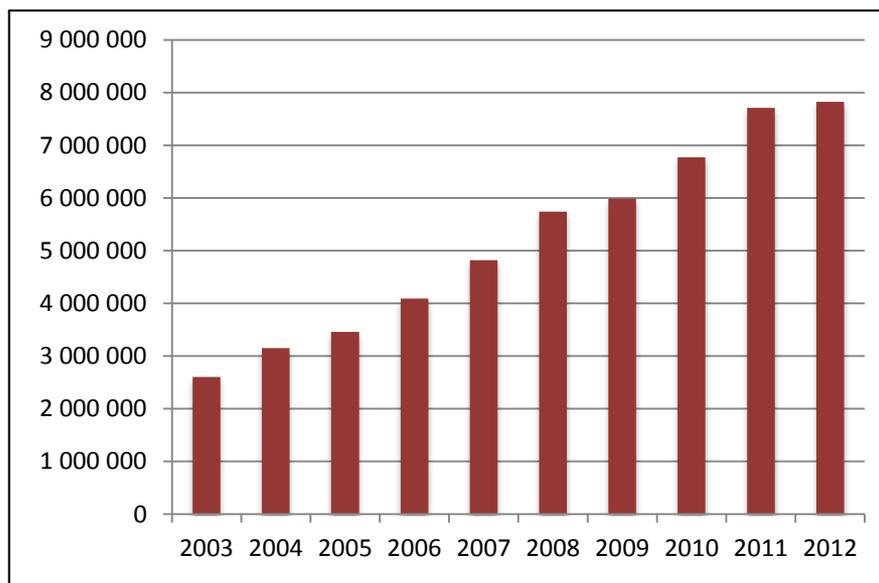
- Software companies with over 5 MNOK in revenue in 2013
- Local distributors of international software (where these have play a major role)
- Companies acquired, but who continues to deliver independent financial figures
- Companies acquired after 2012

Companies excluded from the analysis

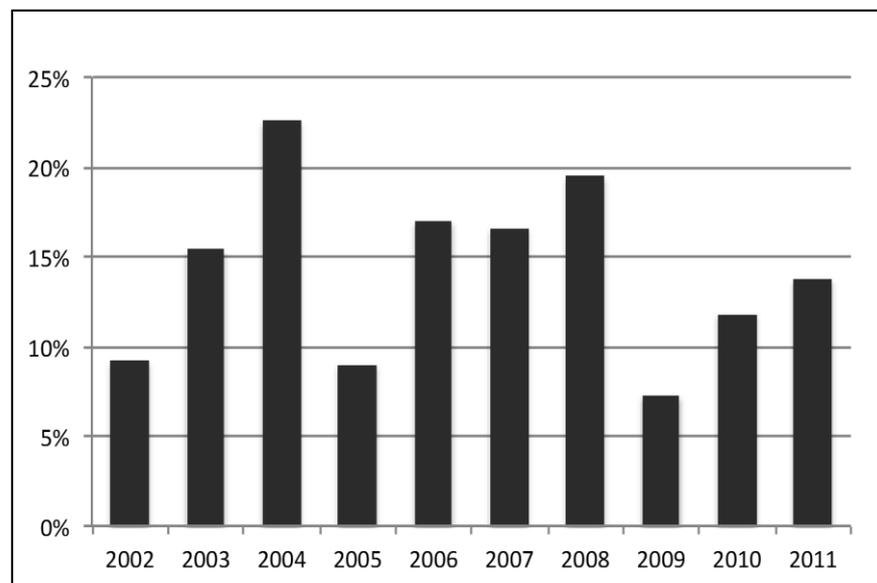
- Suppliers of hardware
- Companies delivering industry-specific software as a small part of their product range
- Local software companies that have been acquired by international industry players and integrated
- Local distributors of equipment
- Local service providers with own software

Turnover and growth for sector-specific software

Total turnover for sector-specific software (in NOK 1000)
(2003 til 2012)



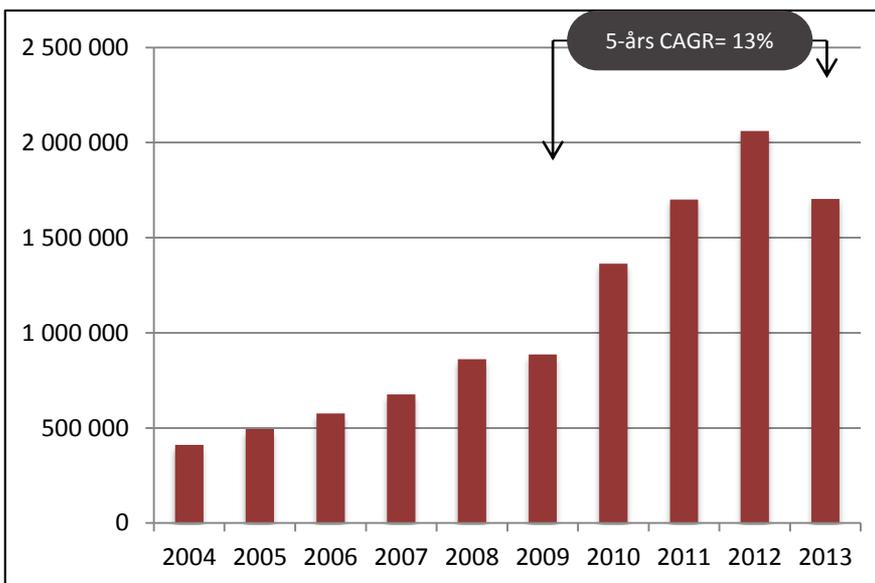
Growth rates for sector-specific software
(2003 til 2011)



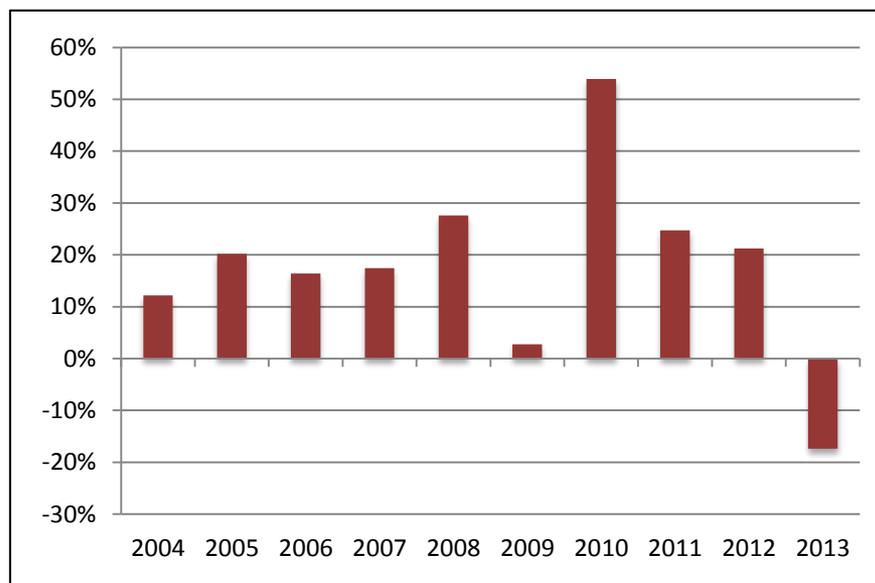
More than 200 Norwegian companies have been classified as providers of sector-specific software

Turnover and growth for E&P software companies

Total turnover for oil and gas software companies (in NOK 1000)
(2004 til 2013)



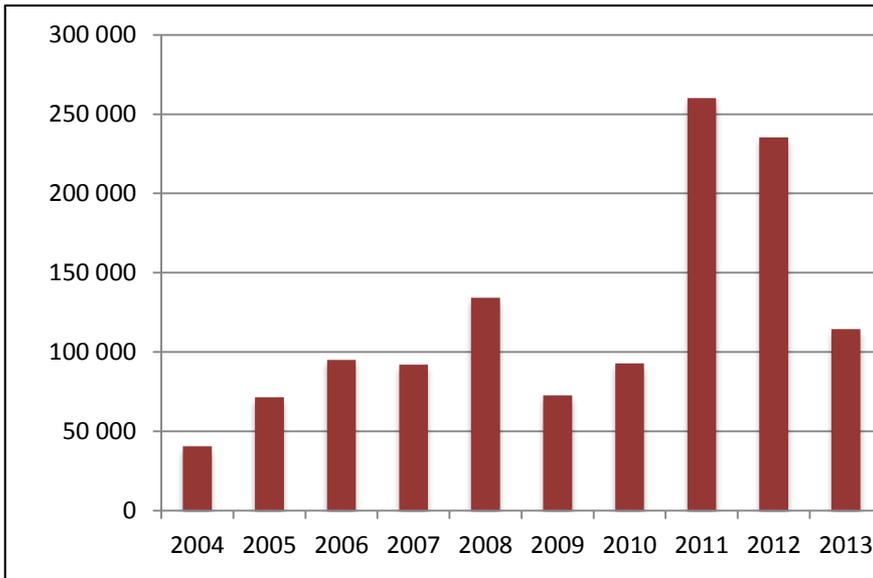
Growth rates for oil and gas software companies
(2004 til 2013)



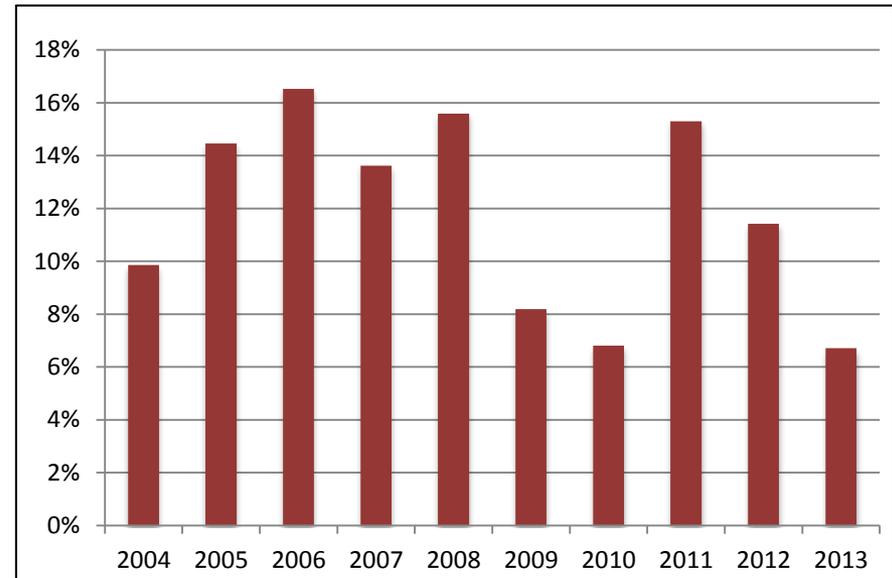
We have analysed 27 Norwegian software E&P companies (est. 18% of the total turn-over for sector-specific software)

Profit and margin, E&P software companies

Total profit for oil and gas software companies (in NOK 1000)
(2004 til 2013)



Profit margin, oil and gas software companies
(2004 til 2013)



The profit margin fluctuates between 7% and 17% from 2004 to 2013

The Qualitative analysis is based on combination of interviews with key players supplemented by open sources



- We contacted 36 of the major players in the oil and gas industry for the interview process
- The list includes among others
 - Kongsberg Oil & Gas, Aker Solutions, Det Norske Oljeselskap, Marathon Oil, Aibel, Halliburton, Blueback Reservoir, EDR Medeso, Dof Subsea, Rignet, TraclD Systems, Verdande Technology, Marine Cybernetics, Oiltech Solutions, Roxar Software Solutions AS, Sharecat

We asked them how they plan to use new technologies to meet structural industry changes



- Do you consider it likely that increased expectations to productivity will entail structural changes in the industry? If yes, how do you expect these changes to impact your business?
- Is new technology relevant to the realization of benefits for your clients? If yes, in what way?
- How do you envisage your client's need for new IT solutions will develop the coming 5 years?
- Do you have a preferred supplier system for your suppliers?
- Do you consider there to be any market entry barriers for new suppliers? If yes, what do you consider them to be?
- How to you meet new companies/new potential suppliers?

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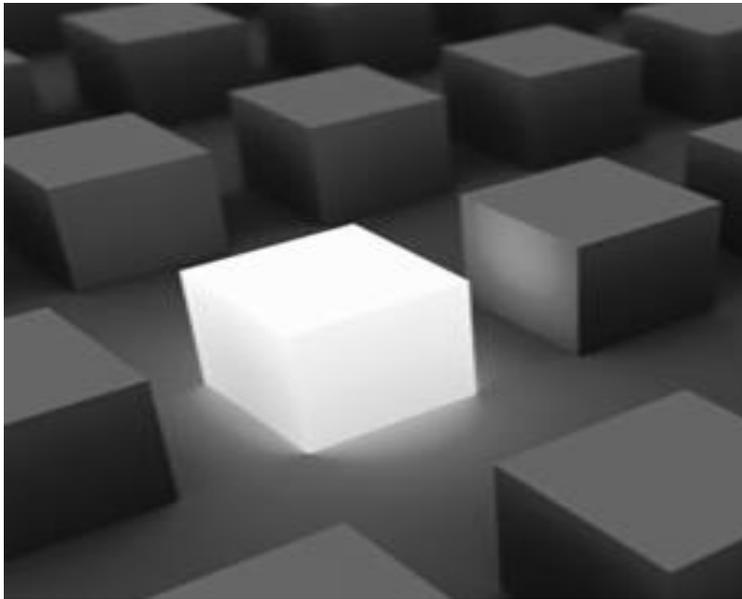
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Key challenges for software companies planning to enter the E&P market



- “Pre-qualified supplier” practices in certain companies represent a market entry barrier for start-ups
- Network is usually crucial in order to get contracts
- Operators and key contractors tend to hire companies that have a track record
- Must prove that they can allocate sufficient resources, human and financial, to follow-up big projects

Key findings from our qualitative survey



- Network and established relationships are essential to enter the industry
- Companies with designated M&A and Corporate Venture units are more likely to be interested in investing time and money in new companies than those with a pre-qualified supplier practice
- All of the companies that contributed to the survey mentioned offshoring as an industry trend
- There is a need for new software solutions that address the operational challenges related to IT infrastructure, storage capabilities and applications

Key findings from our dialogue with investors



- The E&P sector will experience significant changes as the macro-economic outlook indicates higher degree of volatility and uncertainty
- After many years with strong growth, the E&P sector will need to re-think procedures and operational structures as the competition increases
- There is a need for new software solutions that address the operational challenges related to IT infrastructure, storage capabilities and applications

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