



ROYAL BOSKALIS N.V.

(Company Profile)

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prepared for the ITF by Randall Williams

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Royal Boskalis Westminster N.V.

Rosmolenweg 20
Postbus 43
Papendrecht, 3356 LK
Netherlands
+31-78-696-9000
www.boskalis.com

EXECUTIVE SUMMARY

A.1 Description of Operations

Royal Boskalis Westminster N.V. is one of the world's largest dredging company and marine services provider. *Boskalis* organizes the company's operations into three divisions: *Dredging & Inland Infra*, *Offshore Energy*, and *Towage & Salvage*. *Boskalis's* dredging operations include the construction and maintenance of ports and waterways, land reclamation, coastal defense and riverbank protection. The company also provides a variety of marine services and contracting to the offshore energy sector, under the brands ***Boskalis, Dockwise, Fairmount Marine*** and ***VBMS***. Services include the development, construction, transport, installation, inspection, repair & maintenance (IRM) and decommissioning of oil and LNG import/export facilities, offshore platforms, pipelines and cables, and offshore wind farms. *Boskalis* also offers towage services, emergency response and salvage through ***SMIT*** and joint ventures ***Keppel Smit Towage, SAAM SMIT Towage, KOTUG Smit Towage***, and terminal services through ***Smit Lamnalco***.

Boskalis is headquartered in Papendrecht, the Netherlands, and operates in 75 countries across 6 continents. The company's principal customers are governments, port operators, international project developers, oil companies, shipping companies, insurers and mining companies. *Boskalis* has 8,268 employees (not including workers in associated companies) with an active workforce of "nearly 14,000." The company has the largest dredging fleet of any company in the world with approximately 1,000 vessels and floating equipment. The company has been listed in Euronext Amsterdam since 1971.

A.2 Revenue

On 18 August 2016, *Boskalis* reported that their results from the first half of the year were “in line with expectations under difficult market conditions.” Key metrics were:

- *Revenue*: EUR 1.17 billion
- *EBITDA*: EUR 318 million
- *Net Profit*: EUR 148 million
- *Order book*: EUR 2.70 billion

The company described the outlook (by segment) for the remainder of the year, in the following ways:

- **Dredging**: continued challenging market conditions with upside potential for the utilization rate;
- **Offshore Energy**: difficult conditions, particularly in the service-related activities;
- **Towage**: relatively stable market volumes.

The company also said that it expects operating net profits in the second half of 2016 to approach the levels achieved in the first half of the year. If such predictions prove accurate, 2016 revenues would be down 27% from a recent high of EUR 3.2bn (2015), and net profits down 40% from the company’s record-high of EUR 490m attained in 2014 (*Table #1*).

TABLE #1: *Comparison of Financial performance, 2014-2016(projected)*

[EUR]	2016 (projected)	2015	2014
Revenue	2.34 billion	3.2bn	3.17bn
EBITDA	636 million	885m	946m
Net profit	296m	440m	490m
Order book	2.7bn	2.49bn	3.28bn

It is the company’s current half-year performance, and their expectations of tight market conditions over the next few years, that serve as the primary bases upon which the company recently announced the need to reduce costs “to ensure that [it] remains healthy going forward.”¹ As CEO Peter Berdowski put it:

¹ Fleet utilization rates are another key performance metric used to legitimate the company’s new “rationalization” measures, see below Table #19.

After a few very busy years the market outlook for Boskalis has changed dramatically as a result of continuing low energy and commodity prices. The volume of the work has fallen sharply and this is putting pressure on the utilization rate of our vessels. Because we expect these market conditions to persist in the coming years it is essential that we adapt the size and composition of our fleet to this new reality. We are fully aware that this intended decision is drastic and that it will have a major social impact. While we will try to absorb the work force reduction through attrition and redeployment wherever possible, compulsory redundancies unfortunately look to be unavoidable. A reduction of the the number of vessels and jobs is however necessary to ensure that Boskalis remains healthy going forward. (8 July 2016)

In response to this ‘new reality’, Berdowski announced that the company would be phasing in its “rationalization program” over the next two years (2016-18). The key features of the plan involve removing 24 vessels from service and laying off 650 full-time employees (FTEs).

Despite Berdowski’s claims about the ‘unavoidable’ necessity to carry out ‘drastic’ measures, a few critical considerations should be borne in mind when assessing the company’s current performance and its future prospects:

- (1) The projections for FY 2016 are quite conservative. Actual FY 2016 results are likely to be higher, insofar as 2nd half-year data will include all the ongoing projects and contracts from the recently acquired offshore wind-energy related companies of **VolkerWessels** (these include **VBMS**, **Stemat**, and **Volker Stevin International**), as well as revenues and profits from the newly acquired German dredging firm, **STRABAG Wasserbau GmbH** (July 2016).² Additionally, the HY 2016 company report of its “order book” excludes their share in joint ventures and associated companies, as well as not including the contract for the Aberdeen Offshore Wind Farm valued at EUR 100 million. Also, the order book figures for the towing & salvage division “relates solely to the Salvage business unit” as the company has completed the transfer all of its towing operations to its joint ventures.
- (2) The company’s financial performance in 2014 and 2015 established record highs for the company in virtually every financial category. Therefore, while the numbers for 2016 may be down, they hardly constitute a crisis for the business, let alone necessitate ‘drastic measures.’

² In the company’s first half-year, 2016 report, they said the results from the offshore energy segment included their “share from joint ventures ... particularly **VBMS** and **Asian Lift**.” VBMS, however, shifted the execution of projects in the first half of the year to the second half, “for which the outlook appears much more favorable.” And “the results of VBMS will be fully consolidated from the third quarter.” There was no explanation offered for the reporting ‘shift’. Meanwhile, the HY 2016 Order book figures for the Offshore Energy division (EUR 785.1 million) do not include “the order book of joint ventures and associated companies.” [Author’s note: The inconsistencies around what is included or excluded from the company’s financial reporting often remain rather inexplicable.]

- a. For example, while the projected revenue of EUR 2.34 billion for FY 2016 would be a significant drop from the past few years, it would still exceed the company's performance of any year prior to 2010.³ Similarly, while net profits for 2016 are likely to fall for the second straight year, after reaching a record-high of EUR 490 million in 2014, the projected profits of EUR 296 million for this year would exceed those of 2011 and 2012. Indeed, the conservative projections of net profits for 2016 (EUR 296m) would constitute a +450% increase over net profits from a little over a decade ago (2005: EUR 63.3m).
- (3) General expectations of difficult times ahead in the near-term for energy industry-related markets are offset by the fact that *Boskalis's* order book remains "well-filled with high quality projects"⁴ covering the next few years. Moreover, in the midst of the ongoing global oil price crisis, *Boskalis* has been actively expanding its dredging, towing and offshore energy business capacities -- as well as increasing the company's market share in these fields -- by making a number of major acquisitions and by establishing a few strategic joint ventures with other powerful companies (e.g. the recently completed merger of the European harbor towing operations between *Boskalis* and ***KOTUG International***, known as ***KOTUG SMIT TOWAGE***).
- (4) As a number of market analysts have argued, and as the company itself has acknowledged, the future looks quite bright for *Boskalis* with a number of very favorable global trends and market conditions ahead (see section A.4 below). Thus, current 'pressures' are not expected to last very far into the future, raising serious questions about the 'unavoidability' and 'necessity' for mass layoffs after more than a decade of continuous revenue growth and substantial profit-making.

A.3 Profit Centers

Since the establishment of the *Boskalis* company more than a century ago, dredging has been its core activity. In 2015, the Dredging segment continued to produce the most revenue for the company with EUR 1.72bn (or 53% of total revenue). It was followed by the Offshore Energy segment which recorded revenues of EUR 1.23bn (or 38%), while Towage & Salvage brought in EUR 295 million (or 9%). But while the Dredging segment has brought in as much as 67% of total revenues as recently as 2012, over the past three years it is the Offshore Energy division that has experienced the most significant growth and generated an increasingly higher percentage of the company's revenues (up from 15% in 2012 to 38% last year). And, yet more

³ In this broader context, while 2016 revenues are down, it is merely the first decline in more than a decade, as the company has experienced revenue increases each and every year since at least 2005. (See Table #20 in Appendix B.3: "Ten Year overview of Key Financial Data, 2005-2014")

⁴ MBASkool.com

recently, in the first half year of 2016, the Offshore Energy segment outpaced Dredging as the greatest revenue generator for the company.⁵

TABLE #2: Revenue by segment, 2012-present [in EUR million]

	2016 HY	2015	2014	2013	2012
Dredging & Inland Infra	533	1.727	1.665	1.936	2.067
Offshore Energy	567	1.233	1.238	1.084	481
Towage & Salvage	83 ⁶	295	271	531	533

In terms of geographic region, the Netherlands continues to be the single most revenue generating country, with the rest of Europe (mainly Germany, the UK and the Nordic region) constitutes the greatest regional source of revenues. Combined, Europe generated approximately 57% of the company's revenues in the first half of 2016 (EUR 677 million). The Australia/Asia region leads other regions with roughly 15%, while the Americas and Africa are relatively close behind at 12% and 9%, respectively.

Table #3: Revenue by geographical area, 2012-present [in EUR million]

	HY2016	2015	2014	2013	2012
The Netherlands	262	640 (20%)	714	670	763
Rest of Europe (Germany, UK, Nordic)	415	779 (24%)	767	691	570
Australia / Asia	173	540 (16%)	833	783	484
Middle East	64	251 (8%)	174	337	341
Africa	111	615 (19%)	274	436	428
The Americas	146	415 (12%)	405	622	495
TOTAL	1.171	3.240	3.167	3.144	3.081

A.4 Employment Practices & Growth Strategy

As mentioned above, despite current headwinds, *Boskalis* faces a long-term future in which a number of critical, global trends are quite favorable for the company. These include:

- continuing global population growth and increasing prosperity;

⁵ In terms of the order book at the end of June 2016, however, Dredging has orders totaling nearly EUR 1.9 billion, while Offshore Energy has contracts of approximately EUR 785.1 million.

⁶ On 18 August 2016 *Boskalis* announced that "all [Towage] activities have now been transferred to joint ventures."

- increasing demand for larger and deeper ports with associated infrastructure to accommodate larger oceangoing and other vessels with deeper drafts;
- continuing demand for energy and the associated increase in offshore exploration and production, also in vulnerable regions, which in turn increases the need for sustainable solutions;
- greater focus on climate-related issues (partly as a result of the Paris Agreement), which creates opportunities such as new offshore wind farm projects and potentially greater demand for coastal defense and riverbank protection projects

Despite such a positive outlook ahead, on 8 July 2016, *Boskalis* announced that it had completed a “fleet rationalization study” and determined it necessary to initiate a major fleet-reducing, job-cutting program over the next two years. Specifically, *Boskalis* said it would take 24 vessels out of service over this period, ten from its Dredging division and fourteen from offshore energy division.⁷ As a result of this reduction in its fleet, *Boskalis* said it would be cutting approximately 650 jobs.

While the decline in fleet utilization rates in recent quarters (see Table #18) and current energy industry headwinds (i.e. protracted fall in the price of oil) provide some degree of support for the company’s recently announced “fleet rationalization program,” the scope and scale of the program (24 vessels, 650 jobs) seems wholly disproportionate to the short-term market pressures *Boskalis* faces over the next two years. Indeed, there are good reasons to suppose that *Boskalis*’s strategic plan actually has more to do with increasing profits by cutting costs -- particularly labour costs -- by altering its employment practices and reorganizing its workforce.⁸

Such strategic maneuvers would be entirely consistent with the company’s recent moves to transfer the responsibility of employment over to the third party ship management and crewing supplier, **Anglo Eastern** (as it did with its subsidiary *Dockwise* in 2013, and as it intends to do with its long-distance ocean towage subsidiary, *Fairmount Marine*).⁹ In addition to increasing their use of labour outsourcing via *Anglo Eastern*, *Boskalis* has also been expanding its use of temporary, project-based workers. According to the company, “in countries where [they] engage in a large number of projects, the share of temporary employment contracts can almost reach 90%.”¹⁰ Thus, despite establishing new record-high revenues and profits in 2012, 2013, and again in 2014, the total number of company employees actually fell from 15,653 (2012) to 10,977 (2013) to less than 8,500 in 2014 and 2015.

⁷ According to the company, “these will include trailing suction hopper dredgers, cutter suction dredgers, anchor handling tugs and heavy transport vessels.” <https://www.dredgingtoday.com/2016/07/08/boskalis-announces-job-cuts-and-fleet-reduction/>

⁸ Indeed, *Boskalis* has been undertaking just such a reorganization over the past few years, reducing its own labour force from over 15,000 in 2012 to just over 10,000 in 2013 to under 8,500 today.

⁹ A process of outsourcing completed in 2013, and subsequently including the transfer of **Fairstar** employees to **Anglo Eastern** as well.

¹⁰ *Boskalis* CSR report 2015, page 25.

In other words, what is now being cast by *Boskalis* as an ‘unfortunate necessity’ born of ‘difficult times ahead’ is, in point of fact, the continuation (and massive expansion) of a labour flexibilization scheme intended to enhance profits by replacing permanent, decently waged, full-time company employees with a poorly paid, fixed time/project-based, outsourced workforce, drawn from low-wage regions around the world.

The Anglo-Eastern Group*

The Anglo-Eastern Group is one of the world’s largest, independent ship management companies. The third party, global ship management firm has roughly 600 ships under full management, and 100 ships under crew management only. The Group maintains a database with over 27,000 current and potential seafarers. Anglo-Eastern offers its clients contract, day-rate or finder’s fee crews. The company provides training to its seafarers through in-house training centers in India, Philippines, Ukraine and China. It also trains cadets at its own “Maritime Training Institute” in Karjat, Mumbai. The company is headquartered in Hong Kong.

** The full company name is “The Anglo-Eastern Univan Group” following Anglo-Eastern’s merger with Univan Ship Management in late 2015. The merged companies, however, continue to function as separate entities, with Univan Ship Management operating as a distinct brand specializing in quality tech management for the tanker sector.*

PART ONE: Operations

1.1 Brief History

- 1910: **Boskalis** is established by a group of families in Sliedrecht, the birthplace of the Dutch dredging industry
- 1971: **Boskalis** goes public and has acquired a great many companies, receiving the designation “Royal”
- 1970-1990: Increased oil and gas exploration and production, the installation of platforms and pipelines, as well as large infrastructure projects, drive the company’s increasingly global operations
- 1980s: **Boskalis** weathers the economic recession by focusing on its core business (dredging), modernizing its fleet, and acquiring the well-established Dutch dredging companies **Breejenbout** (1985) and **Zanen Verstoep** (1988)
- 1991-2000: **Boskalis** is involved in major projects in the Netherlands and around the world, such as the Oresund Tunnel and Bahia Blanca port construction (Argentina), a number of massive projects in the Middle East and Asia -- the largest being the land reclamation project for Hong Kong’s international airport, as well as various sizable land reclamation projects in Singapore
- Beginning of the 21st Century: **Boskalis** has expanded from being a global dredging company, to also being a marine services contractor
- 2010: **Boskalis** acquires Dutch maritime services provider **SMIT Internationale**.
- 2013: **Boskalis** acquires 50% share in **VSMC**, in partnership with **VolkerWessels**, a leading player in the European market for offshore cable installation¹¹
- 2013: **Boskalis** continues to expand its offshore activities, acquiring heavy marine transport specialist **Dockwise**
- 2014: **Boskalis** acquires **Fairmount Marine**, a world-class provider of long-distance ocean towage services
- 2016 **Boskalis** acquires the dredging activities and assets of **STRABAG Wasserbau**, a market leader in the German dredging sector
- 2016: **Boskalis** acquires 50% of **VolkerWessels** Offshore, a major player in the European wind farm market
- 2016: **Boskalis** enters into a 50/50 joint venture with **KOTUG International** to form **KOTUG SMIT Towage** (KST), a European harbor towage company
- 2016: **Boskalis** acquires the offshore wind energy-related operations from **VolkerWessels**, including **VBMS**, **Stemat** and **Volker Stevin International** (VSI)
- 2016: **Boskalis** announces that it is reducing its fleet by scraping 24 vessels and laying off 650 employees over the next two years

¹¹ **VSMC** was renamed **VBMS** in 2014.

1.2 Company Structure

Board of Management

The Board of Management is responsible for the day-to-day management of the business and for setting out and realizing the company's long-term strategy.

- Peter A. M. Berdowski, *Chairman-Management Board* (since 2006)
- Johannes Hendrikus Kamps, *Member-Management Board/CFO*
- Theo L. Baartmans, *Member-Management Board*

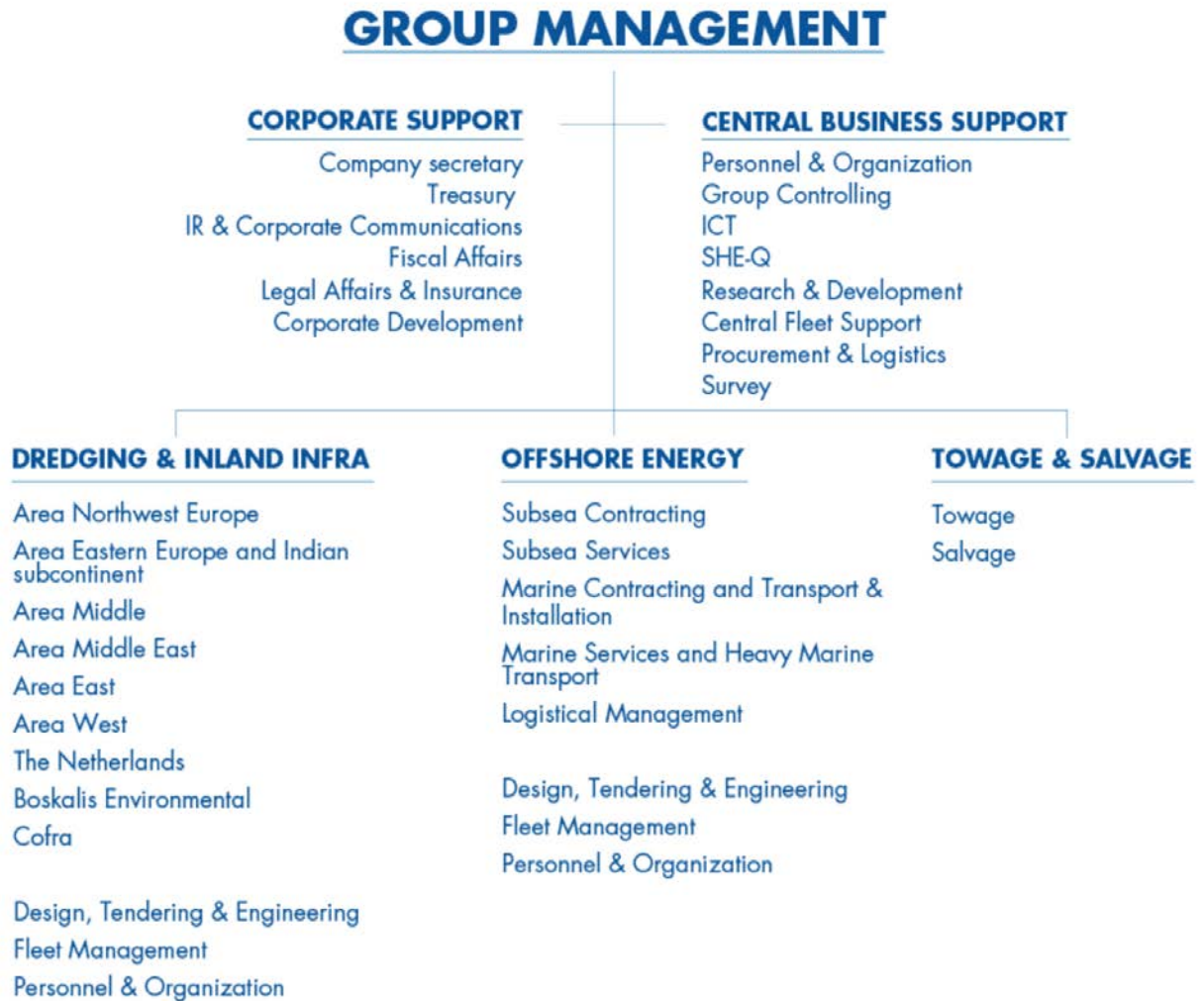
The Board of Management is accountable to the Supervisory Board and the General Meeting of Shareholders.

Supervisory Board

The Supervisory Board is responsible for supervising management performance and advising the Board of Management. Three core committees support the Supervisory Board in its work: the Audit Committee, the Remuneration Committee, and the Selection and Appointment Committee. The Audit Committee advises on matters including risk management, financing and external auditors. The Remuneration Committee on remuneration policy and the remuneration packages for the individual members of the Board of Management. The Selection & Appointment Committee advises on the size and composition of the Board of Management and the Supervisory Board.

- J.M. Hessels, *Chairman*
- H.J. Hazewinkel, *Deputy Chairman*
- M. Niggebrugge
- J. van der Veer
- J.N. van Wiechen
- C. van Woudenberg

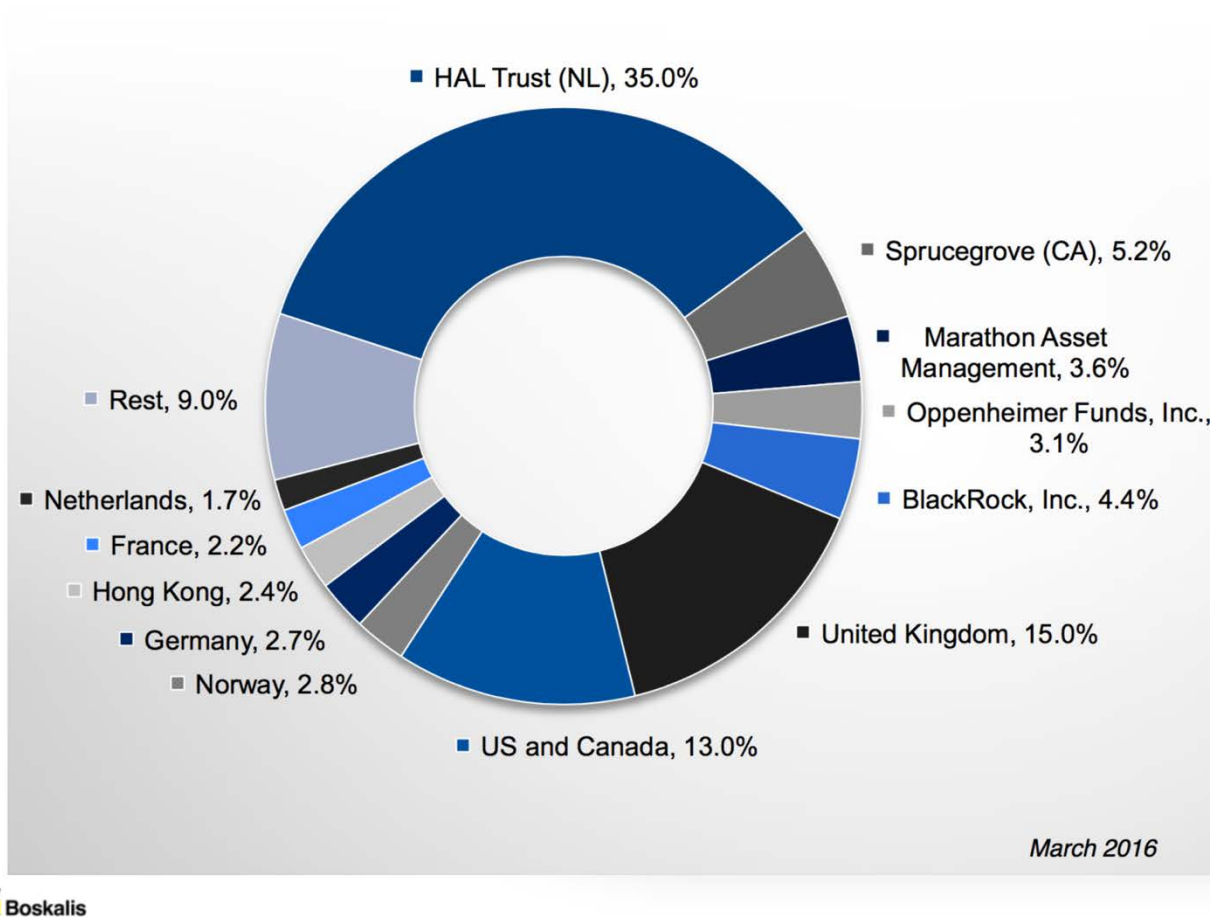
CHART #1: Boskalis Management Structure¹²



¹² All towage operations have now been transferred to the joint venture, *KOTUG Smit Towage*.

Company Shareholders

Chart #2: Shareholders



1.3 Services and Geographic Footprint

Dredging and Inland Infra

Traditionally, dredging has been the core activity of *Boskalis*. Dredging involves all activities required to remove silt, sand and other layers from the water bed and reusing it elsewhere. *Boskalis* provides various dredging-related services, including the construction and maintenance of ports and waterways, land reclamation, coastal defense and riverbank

protection. In addition, *Boskalis* is active in the extraction of raw materials using dredging techniques and dry earthmoving. In the Netherlands, *Boskalis* also operates as a contractor of dry infrastructure projects (such as the construction of roads and railroads, bridges, dams, viaducts and tunnels).

Offshore energy

Boskalis's offshore services support the activities of the international energy sector, including oil and gas companies and providers of renewable energy such as wind power. The company is involved in the development, construction, maintenance and decommissioning of oil and LNG import/export facilities, offshore platforms, pipelines and cables and offshore wind farms. These operations involve heavy transport, lift and installation work, as well as diving and ROV services complemented with dredging, offshore pipeline, cable and rock installation.¹³ *Boskalis* provides the various marine services and contracting to the offshore energy sector under the brands ***Boskalis***, ***Dockwise***, ***Fairmount Marine*** and ***VBMS***.



Towage & Salvage

[*Towage*] In ports around the world, *Boskalis* provides various forms of assistance to incoming and outgoing ocean vessels. This service is provided in joint venture with regional partners: ***Keppel Smit Towage*** (Asia), ***Saam Smit Towage*** (Americas), and ***KOTUG SMIT Towage*** (Northwest Europe). In addition, the company offers a full range of services for the operation and management of onshore and offshore terminals through ***Smit Lamnalco*** (50% owned by *Boskalis*). These services include assistance with the berthing and unberthing of tankers at oil and LNG terminals and additional support services such as pilotage, subsea inspection and maintenance, firefighting, and the coupling and uncoupling of terminal connections. With a fleet of over 450 vessels in over 90 ports in 38 countries, including oil and chemical tankers, container ships, reefers, RoRo ships and mixed cargo ships, *Boskalis* has a capacity well-suited to provide assistance to vessels all over the world.

[*Salvage*] Through ***SMIT Salvage***, *Boskalis* provides services related to the salvage of ships and wreck removal. It also provides assistance to vessels in distress most anywhere in the world, having strategically established its salvage operations in four strategic locations situated in relation to the main international shipping routes: Houston, Cape Town, Rotterdam and Singapore.

¹³ With the recent total acquisition of ***VBMS***, *Boskalis* is a leading player in the European market for offshore cable installation.

CHART #3: Activities, Brands, and Markets

SEGMENT	DREDGING &	INLAND INFRA	OFFSHORE ENERGY	TOWAGE & SALVAGE
ACTIVITY	Construction and maintenance of ports	Earthmoving in conjunction with civil infra	Subsea Contracting & Services	Harbour Towage
	Land reclamation	Soil remediation and soil improvement	Transport	Terminal Services
	Coastal defense		Logistical management	Salvage
	Extraction of minerals		Installation	
KEY BRANDS	 Boskalis	 Boskalis Hirdes	 Boskalis	 SMIT
	 Boskalis Westminster	 Boskalis Terramare	 Boskalis Environmental	 DOCKWISE
	 Boskalis Dragamex	 Boskalis Rock Fall	 Cofra	 Fairmount marine
MARKETS (PRIMARYLY) SERVED	Energy Ports Infra	Infra	Energy	Energy Ports

Boskalis's operations are global in scope. In terms of financial importance, however, the Netherlands stands out the single highest revenue generating country, with the rest of Europe (mainly Germany, UK and the Nordic region) constituting the greatest *regional* source of revenues. Combined, Europe brought in approximately 57% of the company's revenues in the first half of 2016 (EUR 677 million), up from 44% the previous year (see above, *Table #3*). The Australia/Asia region leads all other regions with revenues constituting roughly 15% of the company total, while the Americas and Africa are fairly close behind at 12% and 9% respectively.

1.4 Subsidiaries and Joint Ventures¹⁴

Key Subsidiaries

- Boskalis Australia
- Boskalis Dragamex (Mexico)
- Boskalis Environmental
- Boskalis Hirdes (Germany)
- Boskalis Nederland
- Boskalis Rock Fall¹⁵
- Boskalis Russia
- Boskalis Sweden
- Boskalis Terramare (Finland)
- Boskalis Westminster UK
- Nigerian Westminster Dredging
- Cofra¹⁶
- Fairmount Marine
- Irish Dredging
- Llanelli Sand
- SMIT
- Terramare Oy (Finland)
- VBMS

Key Joint Ventures¹⁷

- Keppel Smit Towage
- Saam Smit Towage¹⁸
- KOTUG Smit Towage

¹⁴ For a more extensive list, see "Appendix #2: The Boskalis Group."

¹⁵ Rock Fall is a drilling and blasting specialist.

¹⁶ Cofra is a civil engineering contracting company based in Amsterdam specializing in ground improvement techniques and liner construction. Cofra is the European market leader in installation of vertical drainage.

¹⁷ The towage JVs have a combined total of 450 vessels, operate in 90 ports and in 35 countries. Revenue from the towage JVs was EUR 764m (2015) and EUR 641m (2014).

¹⁸ JV with **SAAM S.A. Chile**

- SMIT Lamnalco
- Offshore WindForce

Key Partnerships and Associates

- Fugro¹⁹
- Asian Lift²⁰
- Maju Maritime²¹

1.5 FINANCES

In each successive year over the past decade, *Boskalis* established a new record-high revenue mark for the company (see Appendix B.3: “Ten-year overview of key financial data, 2005-2014”). This extraordinary record of consistent and continuous revenue growth over the past 11 years appears to be in jeopardy at the halfway point of 2016. However, with 2016 revenues projected to be over EUR 2.3 billion, net profits expected to exceed EUR 300 million, and a well-filled, mid-year order book (EUR 2.7 billion), the company is solidly positioned, despite current energy and shipping industry troubles.

Table #4: Financial performance (key data), 2011-present [in EUR million]

	HY2016	2015	2014	2013	2012	2011
Revenue	1.171	3.240	3.167	3.144	3.081	2.801
Order book²²	2.696	2.490	3.286	3.323	4.106	3.489
EBITDA	317.6	884.7	945.9	757.2	568.2	590.5
Net result from joint ventures and associates	-7.6	43.3	56.4	63.7	x	x
Operating result	182.4	562.8	652.3	463.4	336.9	354.1
Net Profit²³	167.4	440.2	490.3	365.7	253.1	254.3
Net group profit	148.5	443.5	492.2	365.3	252.0	261.0
Depreciation, amortization and impairment loss	-135.2	321.9	293.5	293.8	231.3	261.0
Cash flow	506.7	765.4	785.7	659.1	484	497.4
Capital expenditures	99.6	230	313	245	314	292

¹⁹ In 2015 *Boskalis* increased its stake in *Fugro* from 19.9% to 28.6%.

²⁰ Keppel company, Singapore

²¹ Keppel company, Singapore

²² Order book figures do not include joint ventures. 1.534bn (2015)/ 1.515bn (2014)

²³ In 2015 profit before tax was EUR 531m. After taxes, profit was EUR 440.2m, a deduction of EUR 90.8m (or 17%).

In terms of segment performance, *Offshore Energy* has had a very solid first half of 2016. The Offshore segment came close to matching its' own record-setting revenue performance of the 1st HY 2015 (off by EUR 52 million). generated the highest amount of revenue in the first half of 2016 (EUR 567 million), despite the general industry downturn precipitated by the ongoing and protracted fall in global oil prices. The increasing growth of this segment over the past few years, from generating 15% of the total company revenues in 2012, to 38% last year, suggests that the company's core activities can now be said to include both dredging operations and the services of its Offshore division (*Tables 2 & 5*). *Towage & Salvage* suffered a significant decline in revenues and overall performance in HY 2016, however this "was primarily attributable to the falling away of revenue from European harbor towage services" as those were transferred to the joint venture KOTUG SMIT Towage. The *Dredging* segment has also seen a significant downward turning (HY 2016), which the company attributes to three factors:

- weak market conditions;
- the completion of the Suez Canal project (which contributed substantial revenues in both 2014 and 2015);
- the suspension of work on the Pluit project in Indonesia.

In short, what this breakdown of revenues by segment suggests, is that only the Dredging division appears to have been significantly (and negatively) impacted by weak market conditions. And even here, the specter of "deteriorating market conditions" adversely affecting *Boskalis* is diminished by other contingent factors that have little or nothing to do with 'challenging market conditions (e.g. Suez Canal completion, Pluit project suspension).

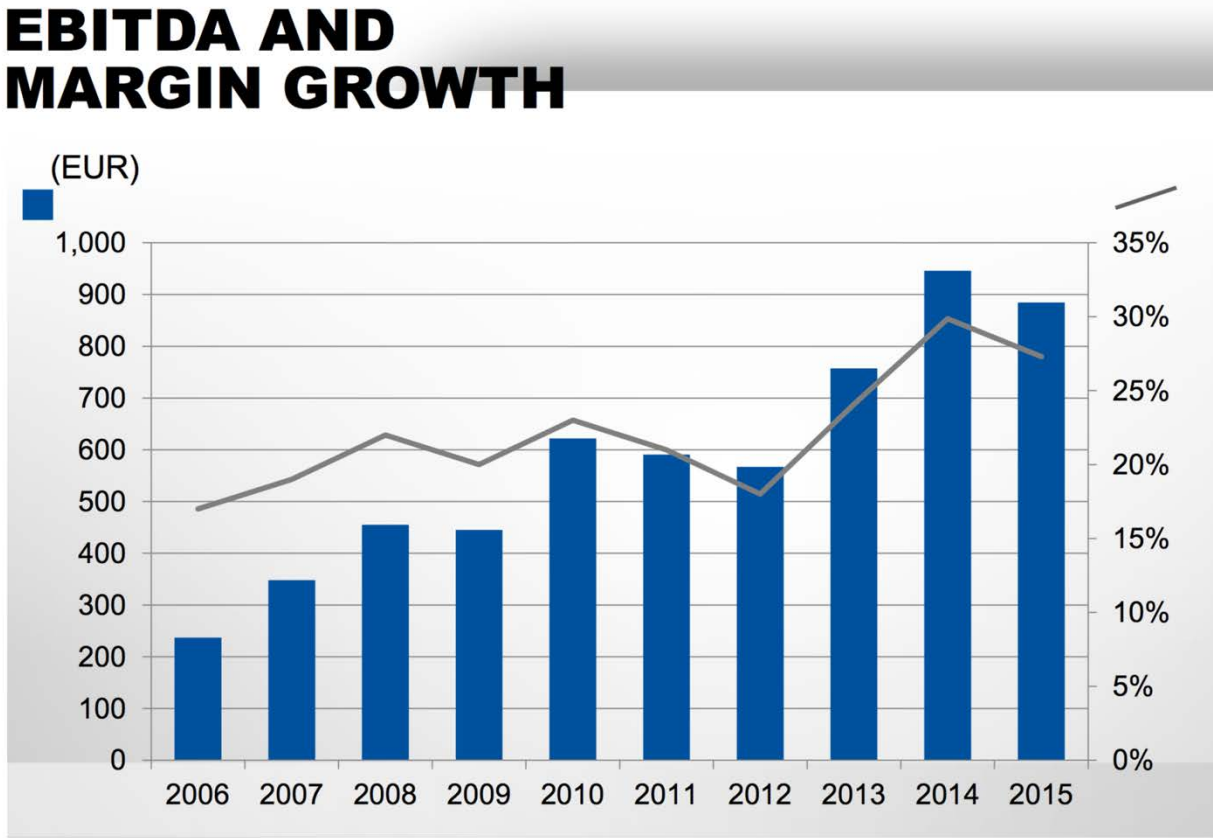
(Table #2)²⁴: *Revenue by segment, 2012-present* [in EUR million]

	2016 HY	2015	2014	2013	2012
Dredging & Inland Infra	533	1.727	1.665	1.936	2.067
Offshore Energy	567	1.233	1.238	1.084	481
Towage & Salvage	83	295	271	531	533

²⁴ This Table previously appears in Section A.3 above.

The company's EBITDA and operating margins remain solid and have grown substantially over the past decade.

Chart #4: EBITDA and Margin Growth, 2006-15



There has been a modest dip in the order book over the past year-and-a-half, however, in the words of one analyst, it remains “well-filled, with high quality projects.”²⁵

Table #5: Order Book by segment [in EUR million]

	31/06/2016	31/12/2015	End of 2014
Dredging & Inland Infra	1,895	1,507	2,014
Offshore Energy	785.1	975	1,208
Towage & Salvage	16.8	8	64
TOTAL (as of 31 December)	2,696.9	2,490	3,286

Table #6: Order Book by geographic region, 2014-15 [in EUR million]

	HY 2016	2015	2014
The Netherlands	732.9	747.1	865.0
Rest of Europe	578.9	219.8	188.9
Rest of the world	583.2	540.0	960.3
Total	1,895.0	1,507	2,014

As solid as *Boskalis's* order book numbers have been in recent years (and continue to be in the first HY2016 at EUR 2.7bn), these figures do not include project orders for the company's joint ventures. If these contracts had been included, the order book figures would have been higher in 2014 by EUR 1.51bn (-50%), and by EUR 1.53bn (-50%) in 2015.

Similarly, *Boskalis's* capital expenditures are reflective of the company's sound financial position (*Table #7*). Indeed, the current estimate of EUR 200 million for 2016 does not include the company's acquisitions, which have been substantial in the first half of this year and which the company financed from their own cash flow.

Table #7: Capital expenditure, 2011-15 [in EUR million]

	2016 (est)	2015	2014	2013	2012	2011
Capital expenditure	200	230	313	245	314	292

²⁵ MBASkool.com

The company was taxed EUR 18.9 million on revenues from the 1st half of 2016. The tax rate, excluding the result from joint ventures and associates was 10.8%, compared to 13.1% in the first half of 2015. According to the company, “this lower tax rate is mainly due to the fact that a larger portion of the project results was achieved in countries with lower tax rates or is exempt from tax....”

Table #8: Taxation, 2014-15

11. TAXATION

	2015	2014
CURRENT TAX EXPENSE		
Current year	- 89,565	- 141,288
Over / under(-) provided in prior years	5,566	7,696
Reclassification of deferred taxes regarding prior financial years	1,830	- 1,044
	<u>- 82,169</u>	<u>- 134,636</u>
DEFERRED TAX EXPENSE		
Origination and reversal of temporary differences	- 3,685	9,277
Reclassification of deferred taxes regarding prior financial years	- 1,830	1,044
Movement of recognized tax losses carried forward	232	152
	<u>- 5,283</u>	<u>10,473</u>
TAXATION IN THE CONSOLIDATED INCOME STATEMENT	<u><u>- 87,452</u></u>	<u><u>- 124,163</u></u>

PART TWO: The Boskalis Market

2.1 The Boskalis Market (overview)

Boskalis operates in the ports, offshore energy and infrastructure markets. These markets anticipate structural growth over the longer term as a result of several key global trends -- the growth in world population, global trade and the resulting increase in demand for raw materials and energy, including sustainable solutions to meet the challenges of climate change. The key market segments are:

- Energy (oil, gas, wind and decommissioning)
- Ports
- Climate change-related (coastal defense and riverbank protection)

2.2 Acquisitions, Assets for Sale, Joint Ventures finalized (2016)

Acquisitions

- July 2016: Acquisition of the dredging operations of **STRABAG Wasserbau GmbH** (German dredging firm)
- April 2016: *Boskalis* completes merger of its European harbor towing activities with those of *KOTUG International B.V.* The new joint venture operates under the brand name **KOTUG SMIT Towage (KST)**. (KST has a fleet of 65 tugboats)
- March 2016: *Boskalis* acquires the maritime and offshore wind energy-related activities of *VolkerWessels*. The acquisition gives *Boskalis* full ownership of **VBMS, Stemat, and Volker Stemat International (VSI)**

Assets held for sale

- **SMIT AMANDLA Marine** (*Boskalis* currently holds a 70% stake)

Joint Ventures finalized

- **Saam Smit Towage**
- **Kotug Smit Towage**

2.3 Customers and contracts

Boskalis's main customer groups are national, regional and local governments, or associated institutions such as port authorities, private port operators and major international oil and gas companies and wind companies (operators as well as contractors). Other customer types are (container) shipping companies, mining companies, and (infrastructure and real estate) project developers.

In the first half year of 2016, *Boskalis* received new contracts worth EUR 921 million, including:

- the Offshore Balance of Plant contract from **Vattenfall** for the construction of the Aberdeen Offshore Wind Farm (the contract is well in excess of EUR 100m)
- a contract to work on the construction of five artificial islands off the coast of Makassar (Indonesia) from **KSO Ciputra Yasmin**. The project has a duration of two years and was signed for EUR 80 million
- a contract from the **National Petroleum Construction Company of Abu Dhabi** to perform dredging work related to the installation of an offshore gas pipeline for the *Abu Dhabi National Oil Company*. (Completion date: late 2017)
- **Fehmern A/S**, a subsidiary of the Danish state-owned *Sund & Baelte Holding*, awarded a EUR 300 million contract to the *Fehmern Belt Construction Consortium*, which includes **Boskalis, Hochtief AG, Ed Zublin AG, and Van Oord**, for a project involving the building of a tunnel connecting Denmark and Germany, known as the Fehmernbelt Project (this project is expected to commence in 2018 at the earliest, once the required environmental permits have been issued by the German authorities)

2015-16 Other major projects (ongoing)

[Dredging]

- Construction of Pluit City artificial island in Jakarta Bay (Indonesia)²⁶
- Construction Punta Pacifica 2 artificial island, off coast of Panama City
- Maintenance dredging River Elbe (Germany)
- Baltic II Offshore wind farm (Germany)
- Coastline reinforcement Clacton-on-Sea (UK)
- Port maintenance works in Germany, South Korea, UK, Qatar, Angola, Mexico and Colombia
- Construction of the Marker Wadden nature reserve island (Commissioned by Dutch environmental organization **Natuurmonumenten**)
- The Wadden Sea dike of Texel and Wadden Sea dike between Eemshaven and Delfzijl
- *Boskalis* has also been active during the first half of 2016 with projects in Melbourne (Australia), Kuwait, Mexico (various port-related activities)

²⁶ This project has been suspended due to a dispute between the government and the client.

[Offshore Energy]

- Wikingen wind farm project (Germany)
- Veja Mate offshore wind park project (Germany, 67 wind turbines)
- Transport and installation of modules for the Hebron (Canada) and Clair Ridge projects (UK)
- Offshore energy projects in Azerbaijan (Shah Deniz), Germany (DoWin 2), the Philippines (Makarapaya), and Argentina (Vega Pleyade)
- the Logistical Management subdivision of Offshore Energy has been heavily involved with work on LNG developments in Australia

[Towage & Salvage]²⁷

- SMIT Salvage was involved in a number of emergency response assignments. One involving the rescue of a RoRo carrier that had gone adrift in the Bay of Biscay and refloating a container ship on the Elbe River near the port of Hamburg

2.4 Suppliers

Boskalis has relationships with around 1,375 suppliers for the procurement of machinery and hydraulics, electro and survey equipment, wearing and construction parts, and facility goods and consumables. Around 260 of these are regarded as strategic suppliers who account for roughly 90% of the Corporate Procurement department's purchasing volume. Over half of the 1,375 suppliers are Dutch companies, 15% are established in other European countries and 30% are based outside of Europe.

2.5 Key Competitors

Main competitors

- **SMB Offshore**
- **Dragados**
- **Royal BAM Group**

²⁷ All harbour towage activities have been placed in joint ventures, and so they are no longer recorded as *Boskalis* contracts.

Top 10 Global Dredging & Reclamation Companies²⁸

- 1. Royal Boskalis Westminster N.V.:** *Boskalis* is the world's largest dredging company
- 2. CHEC (China Harbour Engineering Company):** *CHEC* is the leading dredging company in China, and second-largest in the world
- 3. Van Oord:** A Dutch company, jointly owned by an investment conglomerate, comprised of *NPM Capital*, the Van Oord business family, and the construction giant *Royal BAM*. Van Oord has an extensive international presence
- 4. DEME (abbreviation for Dredging, Environmental, and Marine Engineering):** a Belgian dredging consortium.
- 5. Jan de Nul:** A Belgian business family-owned, dredging corporation
- 6. Weeks Marine Inc.:** the largest North American dredging conglomerate with a major presence in both the USA and Canada
- 7. Great Lakes Dredge and Dock:** Located in Chicago, Illinois, Great Lakes Dredge is the United States' largest dredging contractor, with a small international presence
- 8. Inai Kiara.** A Malaysian giant that started in 1997, the largest among a growing list of Asian dredging companies outside of China
- 9. National Marine Dredging Company:** Based in Abu Dhabi, with a significant presence across the Middle East, *National Marine* was established in 1976 and is an ancillary of the *National Petroleum Company of Abu Dhabi*
- 10. Hyundai Engineering and Construction:** A South Korean based giant with a significant presence around the world

PART THREE: Employment and Safety

²⁸ This ranking comes from Peyman Moazzen, Engineering Manager at HSL, <https://www.linkedin.com/pulse/20140826103053-63488664-top-10-dredging-companies-in-the-world>. For a slightly different ranking order, but still including the same group of companies, see Erik Wildeman's assessment at <https://www.youtube.com/watch?v=Z8Khak45p6o>

3.1 Workforce & Employment Policies

This is how *Boskalis* described their labor practices in the CSR report 2015:

We endorse the guidelines of the International Labour Organization (ILO). Of our employees 38% are covered by a Collective Labour Agreement, including most of our maritime and project workers. Corporate and operational staff are covered by separate agreements reached in consultation with the employee representation. Boskalis engages in close and structural consultation with the employee representation regarding topical subjects relevant to our employees, in accordance with the laws of the countries where we are based. The dialog with the Works Council was once again open and constructive in 2015. As an important stakeholder group the Works Council was closely involved in preparing the materiality analysis that resulted in the fine-tuning of our CSR agenda.

Contract type and staff turnover

Of our employees 75% have a permanent appointment (2014: 71%). Most of these permanent employees have been with us for many years and staff turnover is low at 8.28% (2014: 9.19%). Turnover within the Dutch organizations was even lower at 4.83% (2014: 5.65%). For projects our core of staff is supplemented by employees drawn from a flexible shell. Depending on the project requirements these employees are hired locally where possible and/or appointed on a temporary contract, which in many cases ends at the conclusion of the project. In 2015 we were able to welcome 1,454 new employees (2014: 1,666) while 2,072 employees left Boskalis. Of these 2,072 employees 1,187 were from the flexible shell and 226 left Boskalis as a result of divestments.

The number of “*Boskalis* employees” has been declining in recent years and will drop substantially under the company’s proposed “rationalization program” with 657 FTEs expected to be laid off. Despite the decline, the number of workers actually working on *Boskalis* projects has been increasing. The main reason for this discrepant rise and fall is that Boskalis has increasingly been outsourcing the hiring of workers to external, third party companies,

particularly *Anglo-Eastern*. Consequently, as Boskalis says in its annual report, “*these employees are not formally employed by an entity belonging to Boskalis.*”

For example, *Boskalis’s* wholly-owned subsidiary, *Dockwise* currently employs some 3,000 workers. However, since *Dockwise* employees are ‘formally’ employed by *Anglo-Eastern*, they are not reported as *Boskalis* employees (*Table #9*). This is why *Boskalis* currently claims to have around 8,200 employees while having an active workforce of more than 14,000.

Table #9: Number of employees, 2012-15²⁹

	<u>2015</u>	<u>2014</u>	<u>2013</u>	<u>2012</u>
Boskalis	8,268	8,446	8,607	8,751
Dockwise	n.a.	n.a.	1,119	n.a.
Smit Lamnalco	n.a.	n.a.	1,251	1,109
Archirodon	-	-	-	5,794
TOTAL	8,268	8,446	10,977	15,653

Under the proposed “rationalization program,” *Boskalis* intends to lay off all of their employees currently employed by *Fairmount Marine* and turn the hiring responsibilities for the subsidiary over to *Anglo-Eastern*. In short, the company intends to replace its current full-time employee *Fairmount Marine* crews with fixed-term, project-based crews sourced and supplied by *Anglo-Eastern*. This labor outsourcing model will reduce *Boskalis’s* labor costs substantially by replacing FTEs (from high wage countries) with lower paid, fixed term employees (drawn from low wage countries).

Therefore, despite *Boskalis’s* claim that they are laying off employees due to difficult market conditions, they are in fact simply replacing one type of workforce (decently-paid, full-time, etc) with another type of workforce (poorly paid, project-based, etc).

All of the workforce data as appears in the tables to follow are heavily skewed by the fact that *Boskalis* is only counting those employees who are directly employed by *Boskalis*. For all the others which may make up as much as 40% of the actual *Boskalis* workforce, they are not reported on because “*these employees are not formally employed by an entity belonging to Boskalis* [i.e., *Anglo-Eastern*].” So when *Boskalis* reports, for example. that 94% of its workers

²⁹ The employees of *Anglo Eastern*, crew of the *Dockwise* vessels, are included in the overall reporting in view of the group’s substantial size. However, these employees are not formally employed by an entity belonging to *Boskalis* and are not included in the detailed reporting.

are employed full-time (Table #13), or 75% are permanently employed (Table #12), these numbers do not count all those working on Boskalis projects who are 'not formally employed by an entity belonging to Boskalis.'

Table #10: Employees by country (2012-15 excluding AE)

	2015	2014	2013	2012
The Netherlands	3,555	3,754	3,404	3,375
Singapore	425	654	1,001	1,001
Belgium	590	587	604	597
South Africa	531	586	608	588
Philippines	439	462	426	359
UK	298	325	327	321
Nigeria	111	128	383	395
UEA	127	125	440	420
Brazil	59	114	333	355
Mexico	157	87	170	275
Other	1,048	1,136	2,162	2,175
Total	7,340	7,958	9,858	9,860

Table #11: Type of employee contract (fixed term/permanent), 2012-2015 (%)

	2015	2014	2013	2012
Fixed term/project based	25%	29%	35%	32%
Permanent/indefinite	75%	71%	65%	68%

TABLE #12: Part-time/fulltime ratios, 2012-15

	2015	2014	2013	2012
Fulltime	94%	95%	96%	96%
Part-time	6%	5%	4%	4%

TABLE #13: Collective Bargaining Agreements Yes/No, 2012-15

	2015	2014	2013	2012
No	62%	x	58%	57%
Yes	38%	x	42%	43%

Table #14: Outflow by reason, 2012-15

	2015	2014	2013	2012
Divestments	11%	6%	x	x
Voluntary resignation	18%	24%	27%	38%
End of project/contract	57%	49%	44%	47%
Termination	8%	15%	24%	11%
Retirement/death	6%	6%	5%	4%

3.2 Training

Table #15: Training hours, 2012-15

	2015	2014	2013	2012
Management	5,600	3,455	2,542	2,646
Office staff	24,730	28,677	24,474	28,312
Project staff	40,657	40,251	43,201	27,155
Crew/yard staff	58,516	72,164	81,635	116,757
Total	129,503	144,547	151,852	174,870

Table #16: Development by position, 2012-15 (%)

	2015	2014	2013	2012
Management	2%	2%	2%	2%
Office staff	27%	25%	19%	19%
Project staff	19%	19%	16%	16%
Crew/yard staff	51%	54%	63%	63%

Table #17: Recruitment by age, 2012-15 (inflow by age)

	2015	2014	2013	2012
Age <30	389	560	695	882
Age 30-50	845	885	1,401	1,470

Age 50>	220	220	362	378
Total	1,454	1,666	2,458	2,731

3.3 Health & Safety

The year 2015 marked the 5th anniversary of Boskalis's safety program called "NINA" (No Injuries, No Accidents).



SAFETY STATEMENT

Our people are our most valuable assets, making safety a core value. Our goal is: No Injuries No Accidents. This is embedded in our company's culture and supported through Values and Rules. All employees, including our sub-contractors, are expected to take these values and rules to heart.

VALUES

- I AM RESPONSIBLE FOR MY OWN SAFETY**
- I APPROACH OTHERS ABOUT WORKING SAFELY**
- I TAKE ACTION IN CASE OF UNSAFE OPERATIONS IF NECESSARY, I WILL STOP THE WORK**
- I ACCEPT FEEDBACK ABOUT MY SAFETY BEHAVIOUR REGARDLESS OF RANK AND POSITION**
- I REPORT ALL INCIDENTS, INCLUDING NEAR-MISSES, TO INFORM OTHERS AND BUILD ON LESSONS LEARNED**

RULES

- PREPARE A RISK ASSESSMENT FOR EACH PROJECT, VESSEL OR LOCATION**
- OBTAIN A PERMIT TO WORK FOR DEFINED HIGH-RISK ACTIVITIES**
- MAKE A JOB HAZARD ANALYSIS FOR HAZARDOUS NON-ROUTINE ACTIVITIES**
- BE INFORMED ABOUT RISK & CONTROL MEASURES**
- BE FIT FOR DUTY AND WEAR THE PPE REQUIRED**

MY ROLE ACCORDING TO NINA

AS AN EMPLOYEE

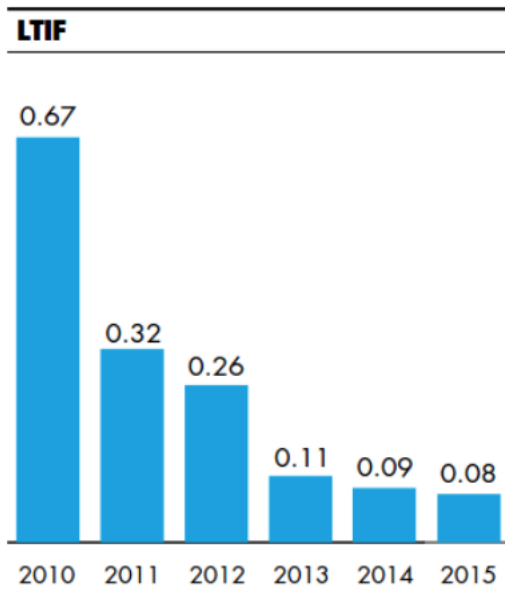
- Always check the safety of Yourself, Equipment and Surroundings (YES)
- Ensure that you are informed about risks and control measures for the job and work environment
- Inform your supervisor of hazardous situations
- Always follow the values and rules

AS A MANAGER/SUPERVISOR

- Lead by example by demonstrating safety leadership
- Create an atmosphere and conditions within the organization where employees are encouraged to work safely and to address safety issues
- Ensure compliance with the values and rules for the area of control

LOST TIME INJURY FREQUENCY (LTIF) BOSKALIS

Number of incidents resulting in absence from work for every 200,000 hours worked.



	2015				2014		
	TRIR	LTIF	HOURS (MILLION)	LTI'S	LTIF	HOURS (MILLION)	LTI'S
Dredging & Inland Infra	0.83	0.09	19.6	9	0.07	20.54	7
Offshore Energy	0.37	0.05	11.8	3	0.13	15.77	10
SMIT Amandla Marine	0.44	0.07	2.71	1	0.07	2.96	1
Towage (Northwest Europe) & Salvage	2.15	0.09	2.33	1	0.12	3.30	2
Offices & Fleet Management	0.42	0.14	4.3	3	0.07	2.99	1
GROUP TOTAL	0.70	0.08	40.8	17	0.09	42.60	20

APPENDIX B.1**Fleet Utilization Rates****Table #18: Fleet utilization (in weeks per annum), 2012-15**

	2015	2014	2013	2012	2011
Hoppers	43	40	44	41	39
Cutters	34	36	16	25	19
Heavy transport	40	44	43	x	x

Table #19: Dredging Fleet utilization (annualized # weeks), last 4 quarters

	2016 Q2	2016 Q1	2015 Q4	2015 Q3
Hoppers	18	31	39	47
Cutters	4	15	19	24

APPENDIX B.2

The Boskalis Group (Full list of subsidiaries, joint ventures, and associated companies)

GROUP COMPANIES

The following are the most relevant active Group companies, presented in accordance with the Operational segment (division) where the entity concerned primarily performs and reports its activities.

COMPANY	CITY OF INCORPORATION	COUNTRY OF INCORPORATION	2015	2014
DREDGING & INLAND INFRA				
Boskalis International B.V.	Papendrecht	The Netherlands	100%	100%
Boskalis Nederland B.V.	Rotterdam	The Netherlands	100%	100%
Boskalis Westminster International B.V.	Papendrecht	The Netherlands	100%	100%
Boskalis Westminster Shipping B.V.	Papendrecht	The Netherlands	100%	100%
BW Marine B.V.	Papendrecht	The Netherlands	100%	100%
BW Soco B.V.	Slidrecht	The Netherlands	100%	100%
Hydronamic B.V.	Slidrecht	The Netherlands	100%	100%
Boskalis Dolman B.V.	Dordrecht	The Netherlands	100%	100%
Boskalis Transport B.V.	Rotterdam	The Netherlands	100%	100%
Cofra B.V.	Amsterdam	The Netherlands	100%	100%
Aannemingsbedrijf De Jong & Zoon Beesd B.V.	Beesd	The Netherlands	-	100%
Zuurmond Groen B.V.	Acquoy	The Netherlands	-	100%
Aannemingsmaatschappij Markus B.V.	Halfweg	The Netherlands	100%	100%
Zinkcon Dekker B.V.	Papendrecht	The Netherlands	100%	100%

COMPANY	CITY OF INCORPORATION	COUNTRY OF INCORPORATION	2015	2014
Wassenaar Recreatie Hedel B.V.	Hedel	The Netherlands	100%	100%
Zandwinningsbedrijf Ahoy B.V.	Rotterdam	The Netherlands	100%	100%
G. Markus & Zonen B.V.	Halfweg	The Netherlands	100%	100%
Boskalis Dolman Mineraal Recycling B.V.	Rotterdam	The Netherlands	100%	100%
Boskalis Secundaire Grondstoffen B.V.	Rotterdam	The Netherlands	100%	100%
MNO Vervat B.V.	Nieuw-Vennep	The Netherlands	100%	100%
Boskalis Nederland Infra B.V.	Rotterdam	The Netherlands	100%	100%
MNO Grand- Weg- en Waterbouw B.V.	Rotterdam	The Netherlands	100%	100%
J. van Vliet B.V.	Warmerveer	The Netherlands	100%	100%
Heinrich Hirdes GmbH	Bremen	Germany	100%	100%
Heinrich Hirdes EOD Services GmbH	Hamburg	Germany	100%	100%
Heinrich Hirdes Kampfmittelräumung GmbH	Duisburg	Germany	100%	100%
Rock Fall Company Limited	Fareham	United Kingdom	100%	100%
Boskalis Westminster Limited	Fareham	United Kingdom	100%	100%
Cofra Limited	Fareham	United Kingdom	100%	100%
Westminster Dredging (Overseas) Limited	Fareham	United Kingdom	100%	100%
Westminster Gravels Limited	Fareham	United Kingdom	100%	100%
Irish Dredging Company Limited	Cork	Ireland	100%	100%
Atlantique Dragage SARL	Nanterre	France	100%	100%
Sociedad Española de Dragados S.A.	Madrid	Spain	100%	100%
Dragapor-Dragagens de Portugal SA	Alcochete	Portugal	-	100%
Boskalis Italia S.r.l. Unipersonale	Rome	Italy	100%	100%
Terramare Oy	Helsinki	Finland	100%	100%
Boskalis Sweden AB	Goteborg	Sweden	100%	100%
Boskalis Polska Sp. Zo.o	Szczecin	Poland	100%	100%
Terramare Eesti OÜ	Tallinn	Estonia	100%	100%
Limited Liability Company "Boskalis"	St. Petersburg	Russian Federation	100%	100%
Boskalis Westminster Middle East Limited	Nicosia	Cyprus	100%	100%
BW Marine (Cyprus) Limited	Nicosia	Cyprus	100%	100%
Boskalis do Brasil Dragagem e Serviços Marítimos Ltda	Rio de Janeiro	Brazil	100%	100%
Stuyvesant Projects Realization, Inc.	Wilmington	United States of America	100%	100%
Boskalis Westminster LLC.	Wilmington	United States of America	-	100%
Stuyvesant Environmental Contracting, LLC	Wilmington	United States of America	100%	100%
Boskalis Canada Dredging & Marine Service Ltd	Vancouver	Canada	100%	100%
Dragamex S.A. de CV	Coatzacoalcas	Mexico	100%	100%
Boskalis Panama S.A.	Ancon	Panama	100%	100%
Boskalis Guyana Inc.	Georgetown	Guyana	100%	100%
Boskalis International Uruguay S.A.	Montevideo	Uruguay	100%	100%
Dravensa C.A.	Caracas	Venezuela	100%	100%
Nigerian Westminster Dredging and Marine Limited	Lagos	Nigeria	60%	60%
BKI Gabon S.A.	Libreville	Gabon	100%	100%
Boskalis International Maldives Private Limited	Male	Maldives	100%	100%
Boskalis Mozambique Lda	Maputo	Mozambique	100%	100%
Boskalis Westminster Oman LLC *	Muscat	Oman	49%	49%
Boskalis Westminster Al Rushaid Co Ltd. *	Al Khobar	Saoudi Arabia	49%	49%
Boskalis Australia Pty Ltd	Perth	Australia	100%	100%
Boskalis Perth Pty Ltd	Perth	Australia	100%	100%
Boskalis International (S) Pte Ltd	Singapore	Singapore	100%	100%
Zinkcon Marine Singapore Pte. Ltd.	Singapore	Singapore	100%	100%
Koon Zinkcon Pte Ltd *	Singapore	Singapore	50%	50%
P.T. Boskalis International Indonesia	Jakarta	Indonesia	100%	100%
Boskalis Smit India LLP	Mumbai	India	100%	100%
Beijing Boskalis Dredging Technology Co Ltd.	Beijing	China	100%	100%
Boskalis Taiwan Limited	Taipei	Taiwan	100%	100%

OFFSHORE ENERGY

Boskalis Holding I (dollar) B.V.	Papendrecht	The Netherlands	100%	100%
Boskalis Holding II (dollar) B.V.	Papendrecht	The Netherlands	100%	100%
Boskalis Offshore Subsea Contracting B.V.	Papendrecht	The Netherlands	100%	100%
Boskalis Offshore Subsea Services (Europe) B.V.	Papendrecht	The Netherlands	100%	100%
Boskalis Offshore Marine Services B.V.	Rotterdam	The Netherlands	100%	100%
Boskalis Offshore Marine Contracting B.V.	Rotterdam	The Netherlands	100%	100%
Boskalis Offshore Contracting B.V.	Papendrecht	The Netherlands	100%	-
Boskalis Offshore Holding B.V.	Papendrecht	The Netherlands	100%	-
Dockwise B.V.	Breda	The Netherlands	100%	100%
Dockwise Transport N.V.	Curacao	Netherlands Antilles	100%	100%

COMPANY	CITY OF INCORPORATION	COUNTRY OF INCORPORATION	2015	2014
Dockwise Shipping B.V.	Breda	The Netherlands	100%	100%
Dockwise Transporter B.V.	Breda	The Netherlands	100%	100%
Dockwise Vanguard B.V.	Breda	The Netherlands	100%	100%
Fairstar Heavy Transport N.V.	Rotterdam	The Netherlands	100%	100%
Fairstar Finesse B.V.	Rotterdam	The Netherlands	100%	100%
Fairstar Fjell B.V.	Rotterdam	The Netherlands	100%	100%
Fairstar Fjord B.V.	Rotterdam	The Netherlands	100%	100%
Fairstar Forte B.V.	Rotterdam	The Netherlands	100%	100%
Target B.V.	Breda	The Netherlands	100%	100%
Talisman B.V.	Breda	The Netherlands	100%	100%
Treasure B.V.	Breda	The Netherlands	100%	100%
Triumph B.V.	Breda	The Netherlands	100%	100%
Trustee B.V.	Breda	The Netherlands	100%	100%
White Marlin B.V.	Papendrecht	The Netherlands	100%	-
Boskalis Offshore Fleet Management B.V.	Papendrecht	The Netherlands	100%	100%
Fairmount Marine B.V.	Rotterdam	The Netherlands	100%	100%
Fairmount Ocean Towage Company B.V.	Rotterdam	The Netherlands	100%	100%
Fairmount Glacier B.V.	Rotterdam	The Netherlands	100%	100%
Fairmount Expedition B.V.	Rotterdam	The Netherlands	100%	100%
Fairmount Alpine B.V.	Rotterdam	The Netherlands	100%	100%
Fairmount Sherpa B.V.	Rotterdam	The Netherlands	100%	100%
Fairmount Summit B.V.	Rotterdam	The Netherlands	100%	100%
Boskalis Offshore Transport Services N.V.	Antwerp	Belgium	100%	100%
Unie van Redding- en Sleepdienst België N.V.	Antwerp	Belgium	100%	100%
Unie van Redding- en Sleepdienst N.V.	Antwerp	Belgium	100%	100%
Boskalis Offshore Marine Services N.V.	Antwerp	Belgium	100%	100%
Dredging & Contracting Belgium N.V.	Overijse	Belgium	100%	100%
Boskalis Germany Offshore GmbH	Hamburg	Germany	100%	-
Boskalis Offshore AS	Randaberg	Norway	100%	100%
Boskalis Offshore Subsea Contracting Azerbaijan LLC	Baku	Azerbaijan	100%	100%
Smit Amandla Marine (Pty) Ltd.	Capetown	South Africa	70%	70%
Smit Marine South Africa (Pty) Ltd.	Capetown	South Africa	100%	100%
Boskalis Offshore Subsea Services (Middle East) L.L.C.*	Dubai	United Arab Emirates	49%	49%
Boskalis Offshore Subsea Services (Australia) Pty Ltd	Chatswood	Australia	100%	100%
Smit Shipping Singapore Pte. Ltd.	Singapore	Singapore	100%	100%
Smit Singapore Pte. Ltd.	Singapore	Singapore	100%	100%
Smit Holding Singapore Pte. Ltd.	Singapore	Singapore	100%	100%
Smit Tak Heavy Lift (S) Pte. Ltd.	Singapore	Singapore	100%	100%

TOWAGE & SALVAGE

SMIT Harbour Towage Rotterdam B.V.	Rotterdam	The Netherlands	100%	100%
Rotterdam Tug B.V.	Rotterdam	The Netherlands	100%	100%
SMIT Salvage B.V.	Papendrecht	The Netherlands	100%	100%
Smit Towage Brasil B.V.	Papendrecht	The Netherlands	100%	100%
Smit Towage Mexico B.V.	Papendrecht	The Netherlands	100%	100%
Smit Towage Europe B.V.	Papendrecht	The Netherlands	100%	-
Smit Towage Holding B.V.	Papendrecht	The Netherlands	100%	100%
SMIT Harbour Towage Belgium NV	Antwerp	Belgium	100%	-
Smit Harbour Towage (UK) Limited	Fareham	United Kingdom	100%	100%

HOLDING & ELIMINATIONS

Boskalis Holding B.V.	Papendrecht	The Netherlands	100%	100%
Boskalis Finance B.V.	Papendrecht	The Netherlands	100%	100%
Baggermaatschappij Boskalis B.V.	Papendrecht	The Netherlands	100%	100%
Boskalis Marine Infrastructure Investments B.V.	Papendrecht	The Netherlands	100%	100%
Boskalis Westminster Dredging B.V.	Papendrecht	The Netherlands	100%	100%
Smit Internationale Beheer B.V.	Rotterdam	The Netherlands	100%	100%
Smit Internationale N.V.	Papendrecht	The Netherlands	100%	100%
Smit Nederland B.V.	Rotterdam	The Netherlands	100%	100%
Smit Internationale Overseas B.V.	Rotterdam	The Netherlands	100%	100%
Smit Vessel Management Services B.V.	Rotterdam	The Netherlands	100%	100%
Boskalis Germany Holding GmbH	Hamburg	Germany	100%	-

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COMPANY	CITY OF INCORPORATION	COUNTRY OF INCORPORATION	2015	2014
UAB "Boskalis Baltic"	Klaipeda	Lithuania	100%	100%
Boskalis Westminster Dredging Limited	Nicosia	Cyprus	100%	100%
B.K.W. Dredging & Contracting Limited	Nicosia	Cyprus	100%	100%

29.3 JOINT OPERATIONS

The Group has activities in the operational segments Dredging & Inland Infra and Offshore Energy through joint operations, which are no related parties by definition of IFRS. Legally these joint operations comprise project driven construction consortiums. Revenue of the Group is realized for an amount of EUR 727 million (2014: EUR 309 million) via joint operations. The balance sheet of the Group holds for EUR 550 million (2014: EUR 432 million) current assets, including cash and cash equivalents (refer to note 21) and an amount of EUR 492 million (2014: EUR 382 million) current liabilities that have been included on a pro rata basis in accordance with share of the Group in these joint operations. (Temporary) surpluses respectively shortages in the financing of the joint operation are withdrawn by respectively financed by the partners in the joint operation. At year-end 2015, Group companies owe joint operations an amount of EUR 189.8 million (2014: EUR 280.1 million) and hold EUR 23.6 million (2014: EUR 45.5 million) receivable from joint operations. Similar as for contracts of Group companies, guarantees are provided also for contracts of joint operations by the Group or one of its Group companies. The guarantee commitments regarding joint operations are disclosed in note 28 as part of the guarantee commitments regarding contracts and joint ventures. Group companies are jointly and severally liable for the non-consolidated part of the liabilities of their joint operations which are disclosed in note 28. Most often counter to these provided guarantees are comparable receivables from the clients of the joint operations, reducing the exposure for the Group.

The major joint operations (project driven construction consortiums) in which the Group is involved are shown below:

ENTITY	COUNTRY OF INCORPORATION	2015	2014
DREDGING & INLAND INFRA			
SAAone EPCM bouwcombinatie V.O.F.	The Netherlands	30%	30%
SAAone GWW V.O.F.	The Netherlands	50%	50%
Projectorganisatie Uitbreiding Maasvlakte (PUMA)	The Netherlands	50%	50%
Combinatie BadhoeverBogen V.O.F.	The Netherlands	20%	20%
A4ALL V.O.F.	The Netherlands	10%	10%
MSB Grind & Zand V.O.F.	The Netherlands	33%	33%
BPL Wegen	The Netherlands	50%	50%
BPL Beton	The Netherlands	50%	50%
ZSNH Combinatie Van Oord/Boskalis V.O.F.	The Netherlands	50%	50%
Combinatie Regenboog V.O.F.	The Netherlands	38%	38%
C.V. Projectbureau Grensmaas	The Netherlands	17%	17%
Unie van Marken V.O.F.	The Netherlands	70%	-
Combinatie IJsselweide	The Netherlands	50%	50%
Combinatie Isala Delta	The Netherlands	50%	50%
Kribverlaging Waal fase 3	The Netherlands	50%	50%
Combinatie Wilhelminakanaal	The Netherlands	33%	33%
Combinatie BaggerIJ	The Netherlands	50%	-
Boskalis Van Oord Pluit City JV V.O.F.	The Netherlands	50%	-
NMDC-Boskalis-Van Oord-Jan de Nul Consortium for Suez Canal Project	Egypt	25%	25%

ENTITY	COUNTRY OF INCORPORATION	2015	2014
Ras Laffan Port Extension	Qatar	50%	50%
Penta-Ocean Koon DI Boskalis Ham JV (Jurong 4)	Singapore	17%	17%
Boskalis Jan de Nul - Dragagens E Afins LDA	Angola	50%	50%
Boscampo	Cameroon	50%	50%
Bahia Blanca	Argentina	50%	50%
Quequen	Argentina	50%	50%
OFFSHORE ENERGY			
Boskalis Offshore AS - Tideway v.o.f.	The Netherlands	50%	50%
Tideway-Boskalis JV	The Netherlands	50%	50%
Offshore Windforce V.O.F.	The Netherlands	50%	50%
Offshore Windforce WIK	The Netherlands	50%	-
Offshore Windforce VM	The Netherlands	50%	-
Thames JV	The Netherlands	50%	-
Vulcan & Viking JV	The Netherlands	50%	-

APPENDIX B.3

Ten Year overview of key financial data, 2005-2014

Table #20: Ten-year overview of key financial data, 2005-2014

in EUR million, unless stated otherwise	2014 ⁽¹²⁾	2013 ⁽¹²⁾	2012 ⁽¹¹⁾	2011	2010	2009	2008	2007	2006	2005
Revenue	3,167	3,144	3,081	2,801	2,674	2,175	2,094	1,869	1,354	1,156
Order book	3,286	3,323	4,106	3,489	3,248	2,875	3,354	3,562	2,543	2,427
Operating result (EBIT) (2)	652.3	463.4	335.8	354.1	401.9	249.3	339.1	245.5	150.3	82.3
EBITDA (3)	945.9	757.2	567.1	590.5	621.5	444.9	454.6	348.1	236.8	162.5
Net result	490.3	365.7	249.0	254.3	310.5	227.9	249.1	204.4	116.6	62.7
Net group profit	492.2	365.3	252.0	261.0	312.9	229.2	250.1	207.1	117.0	63.3
Depreciation, amortization and impairment losses	293.5	293.8	231.3	236.4	219.6	195.7	115.4	102.5	86.6	80.2
Cash flow	785.7	659.1	484.4	497.4	532.5	424.8	365.6	309.6	203.6	143.5

APPENDIX B.4

Press Releases, 2016

Press Releases

<https://www.oilandgaspeople.com/news/8015/boskalis-dockwise-to-transport-johan-sverdrup-hardware-from-s-korea-to-norway/>

<http://www.euroinvestor.com/news/2016/07/22/boskalis-secures-contract-award-for-in-excess-of-eur-100-million-for-aberdeen-offshore-wind-farm-project/13418693>

<http://www.euroinvestor.com/news/2016/06/29/boskalis-appointed-preferred-offshore-balance-of-plant-contractor-for-aberdeen-offshore-wind-farm-project/13401845>

<http://splash247.com/sal-heavy-lift-secures-contract-from-offshore-windforce/>

“Boskalis wins EUR 80 Million Contract for Artificial Islands in Indonesia,” Press Release, 24 March 2016

Papendrecht, 24 March 2016

Royal Boskalis Westminster N.V. (Boskalis) has been awarded a contract by KSO Ciputra Yasmin to construct the land for the *Centre Point of Indonesia Project* located off the coast of Makassar. The contract value is approximately EUR 80 million. Work is scheduled to commence in the coming months and will last two years. Boskalis will deploy a mega trailing suction hopper dredger for the reclamation activities.

The project involves the construction of five artificial islands off the coast of Makassar. Approximately 75 hectares of land will be reclaimed using 9 million cubic meters of sand sourced from offshore borrow areas. The islands will be protected by rock revetments.

The construction of the five islands marks the first phase of a prestigious development by KSO Ciputra to provide high-quality waterfront land for both residential and commercial use.

Boskalis' strategy is aimed at benefitting from key macro-economic factors which drive worldwide demand in our markets: expansion of the global economy, increasing energy consumption, global population growth and the challenges presented by climate change. This land reclamation project is driven by the necessity to create land to accommodate population growth in a densely populated region.

Visit vimeo.com/boskalis/makassar for an animation about the project activities.

“Boskalis awarded gas pipeline trenching and backfilling contract in Abu Dhabi,” PR 8 March 2016

Papendrecht, 8 March 2016

Royal Boskalis Westminster N.V. (Boskalis) has been awarded a contract from the National Petroleum Construction Company of Abu Dhabi, UAE for dredging work related to the installation of an offshore gas pipeline of the Abu Dhabi National Oil Company as well as to an existing offshore gas pipeline. The activities are due to commence in the first quarter of 2016 and will be executed in phases with completion expected in the second half of 2017.

Boskalis will dredge a trench for the installation of the new offshore gas pipeline over a total distance of more than 50 kilometers between Das Island and Ras Al Qila onshore Abu Dhabi. For this project a medium-sized trailing suction hopper dredger and a large cutter suction dredger will be deployed as well as backhoe dredgers for dredging in shallow waters. Following its installation, the pipeline will be backfilled. In addition, Boskalis will be backfilling an existing offshore pipeline with sand over a total distance of 34 kilometers with a trailing suction hopper dredger. This pipeline is located in the vicinity of the new pipeline.

Boskalis' strategy is aimed at benefitting from key macro-economic factors which drive worldwide demand in our markets: expansion of the global economy, increase in energy consumption, global population growth and the challenges that go hand in hand with climate change. This project closely relates to the increasing energy consumption.

“Boskalis consortium preferred bidder for Dredging & Reclamation of Fehmarnbelt project,” PR
4 March 2016

Papendrecht, 4 March 2016

Femern A/S, a subsidiary of the Danish state-owned Sund & Bælt Holding A/S, has today announced its intention to award a substantial contract related to the construction of a tunnel connecting Denmark and Germany to the Fehmarn Belt Contractors consortium including Royal Boskalis Westminster N.V. (Boskalis). Besides Boskalis, the consortium includes Hochtief AG, Ed Züblin AG and Van Oord. The total budget for the Fehmarnbelt link construction is DKR 45 billion (approximately EUR 6 billion) and the value of the contract to Boskalis is approximately EUR 300 million.

The Fehmarnbelt Fixed Link will connect Denmark and Germany and will be the world's longest immersed road and rail tunnel. The fixed immersed tunnel link across the Fehmarnbelt will be more than 18 km long and carry a four-lane motorway alongside a twin track-electrified railway.

The Fehmarnbelt Fixed Link tender consisted of four contracts: the tunnel north, the tunnel south, tunnel dredging and reclamation and the tunnel portals and ramps. The Fehmarn Belt Contractors consortium is the preferred bidder for the tunnel dredging & reclamation contract. The contract is conditional to obtaining the outstanding environmental permits that have yet to be issued by the German authorities. To the best of our knowledge, these permits are not expected to be issued before 2017.

The activity scope for Boskalis together with Van Oord includes the dredging of a tunnel trench in the seabed over a distance of 16 kilometers with the use of various types of dredging equipment including trailing suction hopper dredgers, backhoes and grab dredgers. The dredged material will be reused to create a new recreational nature reserve area on the Danish side of the Fehmarnbelt. The consortium will also construct a new working harbor where the tunnel contractors will construct a tunnel fabrication yard where the tunnel sections will be cast before being floated out to sea for installation.

Appendix B.5 Rationalization Plan

In July 2016, *Boskalis* announced that it had completed its “fleet rationalization study” (conducted by Deloitte). Based on the study, *Boskalis* declared that it was going “to take 24 vessels out of service over the next two years [2016-2018].” And that this fleet reduction would result “in the loss of approximately 650 jobs worldwide.” Public details about the plan are as follows:

FLEET REDUCTION -- Dredging division

Ten vessels are to be taken out of service, while three vessels are to be added to the fleet.

Scrap, lay-up or sell (selectively) non-cost competitive (older) assets:

- Large Hoppers: *Seaway* ('16), *Barent* ('17), *Cornelius Zanen* ('18)
- Small TSHD: *Argonaut* ('16), *Coronaut* ('16), *Gemma*, *Flevo* ('18)
- Cutters: *Orion* ('16), *Jokra* ('16)
- Backhoes: *Maricavor* ('16)

Changes in FTE

Dredging division currently has 1,077 FTEs in its crew pools. By 2018, this would be reduced to 862 FTEs, a laying off of 215 FTEs. Dredging also has 246 FTEs in its operational pools. By 2018, this would be reduced to 226 FTEs, laying off 20 employees.

Vessels/Specific Crew reductions (Dredging)

- *Coastway* and *Waterway* ('16): reduce from 2 full crews to 1 full crew
- *Edax* and *Phoenix* ('16): reduce from 2 full crews to 1 full crew

Vessels/ Specific Crew additions (Dredging)

- *Helios* ('17): increase from 1 chief engineer and 1 head skipper to full crew
- *Colbart* ('16): increase from half crew to full crew

1.6(b) FLEET REDUCTION -- Offshore division

Scrap, lay-up or sell non-cost competitive assets:

- Semi-submersible vessels: *Super Servant 3*, *Swan*, *Tern*
- AHT(S): *President Hubert*, *Union Diamond*, *Smit Orca*, *Union Sapphire*, *Eerland*, *Smit Lynx*
- Oceangoing tugs: *Expedition*, *Sherpa*, *Summit*
- Sheerlegs: *Taklift 6 & 7*

Impact on Employment

The Offshore Energy division currently has a crew of 1,373 FTEs (excluding **SMIT Singapore**). The proposed cuts would reduce that number to 965, laying off 408 employees.

Implication - Summary

Total oversupply is 657 FTE of which 143 Dutch FTEs

Supply-Demand Overview (# FTE)

		Supply '16	Δ	Δ NL	Δ Non NL	Demand '18
Dredging	Crew	1.077	215	60	155	862
	Operational pools	246	20	20	-	226
Offshore Energy	Crew	1.373	408	56	352	965
	Operational pools	278	14	7	7	264
Total		2.974	657	143	514	2.317