BRAZIL TAKES OFF

Investor meeting Rio de Janeiro
November 2012 (Handelsbanken)
Benchmarking Brazilian economy against other large economies

Brazil is uniquely positioned amongst world’s top economies:
Indeed, the size of its territory, population and GDP put Brazil in a prominent position among the largest economies in the world.

Key indicators:
Area: 8.5m km²
Coastline: 7,491km
Population: 198.7m
GDP: US$2.29 trillion (2011)
Source: CIA
Where is Wärtsilä in Brazil

Wärtsilä Brasil Ltda founded in 1990
Total 600+ employees today.

Existing workshop and offices (RJ)

More than 25 power plants with installed power in excess of 2,5 GW

New workshop to support the PP installations and local shipping market

New Office and Workshops to support the Offshore (O&G) business

Existing location to support the local PP installations and facilitate training of personnel in Wärtsilä own Sea & Land Academy

Significant Offshore installed base

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### Wärtsilä Brasil snapshot

#### Recent key developments

<table>
<thead>
<tr>
<th>Locations</th>
<th>Current capabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Rio de Janeiro</td>
<td>• PP and SP new project sales, PP project execution</td>
</tr>
<tr>
<td>• Workshop type B</td>
<td>• Broad scope of services</td>
</tr>
<tr>
<td>• SP, PP &amp; Services mgmt; Fin. &amp; Adm. HR and IT</td>
<td>• O&amp;M + maintenance agreements</td>
</tr>
<tr>
<td>• Manaus</td>
<td>• Engines, propulsion, automation and reconditioning services</td>
</tr>
<tr>
<td></td>
<td>• Training services</td>
</tr>
<tr>
<td></td>
<td>• Ship design (sales and local contact) – no full design capabilities</td>
</tr>
</tbody>
</table>

#### Current strengths

- Recognized brand name
- Large installed base (over 3 GW)
- Local presence / proven track record in Brasil
- Largest after Sales organization and footprint
- Only company with a 2-stroke license in Brazil
- Recognized EPC and project management capabilities
- Good reputation as an employer

### Employees

- 547 employees (1.2 M man-hours worked in 2011 serving our customers)

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At present, Wärtsilä has a broader footprint and a larger after sales force than any competitor. Yet, to meet our ambitious targets and to fulfill our customers’ needs, our footprint needs to expand further. In practice, this requires moving to new facilities in Rio, establishing a service outlet in the NE and products to become increasingly localized.
Boom in the economy

- 2011: World Economic Forum
- 2012: Rio + 20
- 2013: Confederations Cup
- 2014: FIFA World Cup Brazil
- 2015: 450th Anniversary
- 2016: Rio 2016

- The Economist: Brazil takes off
- Wallpaper*: Design Awards 2011
- Heathrow Traveller: The Rio Thing
- Brasil Energy: Bold Goal
- Guardian.co.uk: Reviving a reputation
- RIO DE JANEIRO: A MONOCLE CITY SURVEY
- FDI: Manufacturing makes a comeback
The global financial crisis affects the Brazilian Banking System mainly by lack of USD-Liquidity, but not in terms of weak assets in the portfolio, credit losses, trading losses etc. This was prevented to a large extend by the restrictive legal framework which doesn’t allow Brazilian banks to trade CDS. Actually the stable and very profitable banking system will be a strong pillar for the Brazilian economy development.

After a soft landing during the world financial crisis in 2008, Brazilian economy is now stagnant growth, however showing mixed signals. Having flirted with recession the last year, it seems the economy is finally reacting and posting a timid growth. The government is actively stimulating consumption by tax reductions, injecting capital into the economy for investments and by continuously reducing interest rates. GDP rose second Q2-2012 by 0.4% slightly above first quarter at 0.1% mainly due to strong agricultural expansion. Annual GDP growth has been reduce again to 1.57%.

Anyway, Brazil has important players in the commodity segments with a strong domestic and international demand on the long-term and therefore might get back to higher growth rates. Besides, high international reserves give much more fiscal headroom to the current administration to take fiscal initiatives and stimulate/subsidize investments and employment programs.

Unemployment remains at record low level around 5.3%. Labor market is considered to be “hot” and work forces at all levels; both blue and whiter collar, are in high demand. There is currently a lack of skilled labor at all levels.

Year-end projections:
  - Annual GDP growth has been reduce again to 1.57%.
  - Inflation year-end forecast at 5.42%
  - Trade surplus in the external accounts at USD 18 billion;
  - Foreign direct investment at USD 58.8 billion and current account deficit of USD 56.1 billion.
  - The SELIC interest rate is expected to end 2012 at 7.50% p.a. and the foreign exchange rate BRL 2.00 per USD
  - The net public sector debt is expected to end 2012 at 35.25% of GDP.
  - For 2013 the main estimates are; GDP growth at 4.0% and IPCA inflation at 5.44%, current account deficit at USD 68.16 billion, foreign direct investments at USD 60 billion and trade surplus at USD 14.57 billion.
Economic growth is expected to pick up from 2013 onwards.

The Brazilian government is actively stimulating consumption by tax reductions, injecting capital through investments and by continuously reducing interest rates. Inflation at 5.3% is somewhat over the Central Bank’s target of 4.5%. There is lack of skilled labour at all levels while unemployment remains record low at around 5.3% (being even lower in the offshore hub of Rio de Janeiro).
At this point the economy rests on quite strong fundamentals...

**Inflation has been at historically low levels...**
12-month IPCA inflation and inflation targets (%)

**... enabling the central bank to lower the steering rate** *

Central bank steering rate

%  

0  5  10  15  20  25  30  


Selic interest rate (%)

* Additionally, the central bank has injected R$99.8 billion of liquidity into the banking system by cutting reserve requirements.

Source: Credit Suisse research and forecasts Dec-2009; the shown forecasts are in line with other investment banks

**Unemployment continues to decline...**
Unemployment rate (%)

**... while industrial confidence is approaching pre-crisis levels**

Industrial confidence index

© Wärtsilä
... however, some risks will always prevail

1. A reversal in global economic recovery

A new recession cycle in central economies would likely be accompanied by higher risk aversion to risk and lower investor appetite for emerging market investments.

2. The expansionary monetary and fiscal policies

For the past decade, government spending has exceeded GDP growth*. In the long-term, government spending should converge to GDP growth or Brazil could become too indebted to foreign investors.

Credit from public banks, namely National Development Bank BNDES, has grown faster than private lending. Also private sector banks must carry their fare share.

Large monetary stimulus from the Central Bank was necessary to avert a financial crunch in 4Q2008. Now that the economy is showing signs of a solid base, the CB has started to withdraw surplus liquidity from the market through repurchase operations.

3. Further strengthening of the Real (BRL)**

An "excessively" strong Brazilian Real (BRL) would favor imports over exports and thus reduce future GDP growth.

Challenges facing Brazilian businesses are, amongst several; strong Real, high taxes, poor infrastructure, tight labour market, bureaucracy, expensive credit and escalating costs amongst others.

Current USDBRL rate: 1.74 (31-Dec-2009)

On a real effective trade weighted basis, the BRL has strengthened by 26% in 2009 and is expected to appreciate even further.

**USDBRL forecasts

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>GS</td>
<td>1.60</td>
<td>1.60</td>
</tr>
<tr>
<td>CS</td>
<td>1.60</td>
<td>1.80</td>
</tr>
</tbody>
</table>

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Pre-salt reserves are likely to turn Brazil into a true oil major...

**World Proven Oil Reserves by Country**

<table>
<thead>
<tr>
<th>Country</th>
<th>Proven Reserves (bn boe)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saudi Arab</td>
<td>264</td>
</tr>
<tr>
<td>Iran</td>
<td>138</td>
</tr>
<tr>
<td>Iraq</td>
<td>115</td>
</tr>
<tr>
<td>Kuwait</td>
<td>102</td>
</tr>
<tr>
<td>Brazil - Bullish</td>
<td>83-113</td>
</tr>
<tr>
<td>UAE</td>
<td>98</td>
</tr>
<tr>
<td>Venezuela</td>
<td>87</td>
</tr>
<tr>
<td>Russia</td>
<td>79</td>
</tr>
<tr>
<td>Brazil - Conservative</td>
<td>53</td>
</tr>
<tr>
<td>Libya</td>
<td>41</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>40</td>
</tr>
<tr>
<td>Nigeria</td>
<td>36</td>
</tr>
<tr>
<td>USA</td>
<td>29</td>
</tr>
<tr>
<td>Canada</td>
<td>28</td>
</tr>
<tr>
<td>Qatar</td>
<td>27</td>
</tr>
<tr>
<td>China</td>
<td>15</td>
</tr>
<tr>
<td>Brazil - Proven</td>
<td>13</td>
</tr>
<tr>
<td>Algeria</td>
<td>12</td>
</tr>
<tr>
<td>Mexico</td>
<td>12</td>
</tr>
<tr>
<td>Angola</td>
<td>9</td>
</tr>
<tr>
<td>Norway</td>
<td>8</td>
</tr>
</tbody>
</table>

Inclusion of pre-salt discoveries - to date - should move Brazil well into the top-10 in world-wide proven reserves.

1) According to statements made by Brazilian government officials and Petrobras’ CEO, the potential reserves of the recently discovered pre-salt area in Brazil could be as large as 70-100 bn boe

2) Our internal analysis, when only taking into account high- and medium-probability blocks* from the Santos Basin, arrives at minimum of 40 bn boe in pre-salt reserves.

3) IEA World Energy Outlook 2008 worldwide proven and probable (2P) reserves used as a proxy as the BP estimates did not provide a split into onshore and offshore.

Brazil’s proven oil reserves as per year-end 2007 amounted to 13 bn boe of which roughly 90% is offshore, compared to the world average of 18%.

Life after pre-salt
The new Petrobras President’s initiative of realistic targets

Petrobras’ domestic oil production forecasts (OGX could offer upside)

Petrobras’ oil reserves (Sep-2012)
- Proven Reserves: 15.7 bn boe
- Potential Recoverable Volumes: 15.8 bn boe
- Of which roughly 90% is offshore vs. the world average of 18%
- Growth in the oil & gas market driven by pre-salt development

Petrobras’ 2012-2016 business plan
- Domestic exploration & production spending totals USD 131.6 billion
- Of which USD 25.4 billion (19%) is earmarked for exploration

Petrobras has been known for not reaching its production targets and its projects being delayed. To change this, they introduced a new project management structure which should give more reliability to their targets.

* Business plan
Source: Petrobras investor presentation Sep-2012, 2010 WBR strategy for old production forecast
Main obstacles when doing business in Brazil

- Bureaucracy and complex tax legislation
- Lack of skilled manpower, specially in the shipbuilding & offshore market
- Expensive real estate in the main cities
- Lack and/or expensive financing solutions
- Local content rules potentially affecting competitive landscape
- Lack of some infrastructure might impact the logistics
- Security constrains in some areas
The development of environmental solutions and gas technology will be our priority in meeting the evolving needs of our customers.
Name: Luiz Barcellos  
Age: 54  
Mechanical engineer  
Married, 2 daughters

Wärtsilä:  
Working at WBR since Nov. 1997  
1st contact with Wärtsilä in 1987  
Long experience in shipbuilding and marine businesses

Current position: General Manager Ship Power  
Director Wärtsilä Brasil
OUR STRATEGIC GOAL
To be recognised as the leading solutions provider in the marine industry for:

LEADER IN

- Efficiency
- Gas and dual-fuel solutions
- Environmental solutions

THROUGH OFFERING
- Lifecycle solutions for ship owners and operators
- Enhanced system integration for the ship building industry
- The best product sales and delivery process for the marine industry
Petrobras Today:
Proved Reserves + Potential Recoverable Volumes: 31.5 bi boe

Petrobras’ Proved Reserves : 15.7 bi boe
Potential Growth: + 15.8 bi boe

- 2005-2010: more than 50% of new discoveries around the world were in deep water, with Brazil representing 63% of these discoveries. (PFC Energy)
- From 2005 to 2012 Petrobras declared 63 discoveries in pre-salt area and 189 in other areas to ANP.
- 2030: Brazil should present the highest growth production among the countries that are not members of OPEC. (PFC Energy)

* Added Reserves in 2011 = 1.24 billion boe.
* Pre-Salt Added Reserves: 1 billion boe.
* Reserve/Production Ratio → 19.2 year.
Construction of 137 Units: Drilling, Production and Vessels

Oil Production, Brazil: 2,022 – 4,200 kbd

Construction of:
- 38 Production Unit (PU) up to 2020
- 50 Drilling Rigs up to 2020
- 49 Ships up to 2020

23 PU contracted
15 to be contracted

28 Drilling Rigs
contracted
5 to be contracted

49 Ships
contracted

Petrobras’ CEO presentation 20th September 2012
Oil Production, Brazil: 2,022 – 4,200 kbd

Drilling Rigs Construction

- 25 up to 2016
- 50 up to 2020

Drilling Ships (38)

Semisubmersible (10)

Auto raising (2)

* Under negotiation, to be confirmed in the contracts signature; ** P-53 and P-60 drilling rigs were constructed in Brazil
Oil Production, Brazil: 2,022 – 4,200 kbdp

- P-68 (Lula South)
- P-67 (Lula Central)
- P-66 (Lula High)
- P-62 (Roncador mod. IV)
- P-58 (Norte Pq. Baleias)
- Cid. Paraty (Lula NE Pilot)
- Cid. Ilhabela (Sapinhoá North)
- P-65 (Roncador mod. III)
- Cid. Anchieta (Baleia Azul)
- Cid. Itajaí (Bauna e Piracaba)

Production Units Construction
- 19 up to 2016
- 38 up to 2020

Petrobras’ CEO presentation 20th September 2012

© Wärtsilä
• More than 100MWe
• 6x 18V50DF in 3 modules
• Wärtsilä design and manufacture
• Running on tri-fuel: treated crude, MDO and treated well gas
• Reducing Carbon Footprint with as much as 93,000 tons per year
• Fully operational modules

• Official test concluded in October 2012.
Tankers - 49 Promef’s Ships: 2012 - 2020

Oil Production, Brazil: 2,022 – 4,200 kbpd

Petrobras’ CEO presentation 20th September 2012
Today’s business environment

• 47 Shipyards;
• 11 New yards under construction;
• 59,000 workers directly employed;
• 6.2 Million DWT order book;
• 18 Offshore Oil Platforms under construction;
• 28 Offshore Deepwater Drilling Rigs contracted to be built in Brazil.
• 7 Offshore Deepwater Drilling Rigs being negotiated.

Petrobras demand

Demand assured for the coming years (2012-2020) in the world’s largest E&P investment program:

• 38 Production platforms;
• 50 Drill rigs;
• 500 Offshore supply vessels;
• 80 Tankers.
Brazilian Shipbuilding Scenery

Main Shipyards and Construction Sites

- Erín – Manaus (AM)
- Atlântico Sul Shipyards – Ipojuca (PE)
- Promar – Ipojuca (PE)
- Tomé Engenharia/Ferrostaal (AL)
- São Roque – São Roque do Paraguaçu (BA)
- Enseada do Paraguaçu - Maragogipe (BA)
- Jurong Aracruz - Aracruz (ES)
- OSX Shipyards – São João da Barra (RJ)
- Superpesa – Niterói (RJ)
- Mauá – Niterói (RJ)
- Brasá – Niterói (RJ)
- Inháuma – Rio de Janeiro (RJ)
- UTC Site – Niterói (RJ)
- DM/TKK Engenharia - Itajai (SC)
- IESA – Charqueadas (RS)
- Honório Bicalho - Rio Grande Port (RS)
- Rio Grande 1 – ERG1 (RS)
- Rio Grande 2 – ERG2 (RS)

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## DWT under construction

<table>
<thead>
<tr>
<th>Ranking</th>
<th>Estate</th>
<th>DWT</th>
<th>Orders</th>
<th>DWT Part. %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1º</td>
<td>Pernambuco</td>
<td>3,072,000</td>
<td>30</td>
<td>49.79</td>
</tr>
<tr>
<td>2º</td>
<td>Rio de Janeiro</td>
<td>1,367,900</td>
<td>76</td>
<td>22.17</td>
</tr>
<tr>
<td>3º</td>
<td>Rio Grande do Sul</td>
<td>1,120,000</td>
<td>13</td>
<td>18.15</td>
</tr>
<tr>
<td>4º</td>
<td>São Paulo*</td>
<td>330,500</td>
<td>108</td>
<td>5.36</td>
</tr>
<tr>
<td>5º</td>
<td>Santa Catarina</td>
<td>146,736</td>
<td>48</td>
<td>2.38</td>
</tr>
<tr>
<td></td>
<td>Others</td>
<td>133,000</td>
<td>37</td>
<td>2.16</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>6,170,136</strong></td>
<td><strong>312</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>
The world needs affordable, clean, flexible and reliable power.
Name: Jorge Alcaide
Age: 47
Mechanical engineer – 1988
MBA in Energy Business – 2005

Married, 3 children

Wärtsilä:
Working at WBR since Jan 2008
Long experience in the Power market since 1997

Current position: Regional Director, Power Plants
From where the Brazilian electricity comes?

Total installed capacity: 127 GW (July 2012)
Annual growth: 4% per year

Hydro has limited growth potential (Amazon jungle)
The Interconnected grid – 95,500 km and growing

- Annual increase of 3,000 km;
- 230kV = 41,500 km
- 345kV = 9,800 km
- 440kV = 6,700 km
- 500kV = 33,200 km
- 600kV = 1,600 km [DC]
- 750kV = 2,700 km

Source: ONS
To put it in prospective - From Finland to Portugal

- 4,000 km

- 3,750 km (Isolated Grid)

- 3,900 km

BRAZIL

EUROPE
98% of total consumption is in the interconnected area

National energy by generation type
Total installed capacity: 127 GW (July 2012)

• The majority of potential locations suitable for large hydropower plants are located in the Amazon region, far from the consumer centers. Environmental issues could avoid the full development of the existing hydropower potential in that region.

• Thermal power generation is the only source capable to provide reliability to the interconnected grid.

Note: Most of Wärtsilä power plants located in the interconnected area have been used as stand-by capacity for the renewable plants (hydro/wind/biomass)
The historically strong correlation between real GDP growth and the annual increase in electrical energy consumption suggests that the strong demand for power plants is to continue.

The National Energy Agency EPE anticipates the annual energy demand to more than double during 2010 - 2030, from less than 500 TWh to more than 1000 TWh.

Source: EPE Plano Nacional de Energia 2030; IBGE; MME
Energy consumption Real x Forecast (TWh x year)

Brazil – Real Electrical Energy Consumption 1995 / 2010

Growth 4% + per year
Brazilian Energy Market: future opportunities

- **Demand Growth:**

  - Government forecasts minimum 4% load growth per year until 2020

  - New large hydroelectric projects are no longer available close to the load centers

  - New offshore discoveries will lead to an increase of natural gas availability

  - over 5,000 MW per year for the next years!

  - New hydro plants are designed to be run-of-rivers ➔ need of thermal back-up.

  - Natural Gas thermal plants opportunities!
Auction in brief: New electricity is purchased through auction

Annual energy auction system in brief

• Purchase of new energy to meet consumption growth
• Electricity demand based on distribution companies evaluation
• Three types of auctions for new energy
  • A-3 (thermal and biofuel projects; COD in three years time)
  • A-5 (long lead-time projects such as hydro; COD in five years time)
• Reserve and Emergency (in case energy demand requirements are not met with the above)
  • New energy only: for new power plants or expansion of existing ones
  • Open for all technologies (hydro, thermal, biomass, wind)
  • Thermoelectric power provides supply reliability in dry periods
  • Long-term PPA (15 years for thermal plants)

Note: See the Appendices for full description
Brazil - December 2012

- 25 Power Plants
  + 4 under construction = 29 total

- 2,283 MW installed capacity
  + 356MW under construction = 2,639MW

- 1,836 MW under O&M contract
Services business landscape
Name: Robson Campos
Age: 42
Lawyer – 1995
Corporate Finance – 2004

Married, 2 children

Wärtsilä:
Working at WBR since Jul 1990
Long experience in the Finance, Power and Services market since 1995

Current position: President, Wärtsilä Brazil
Head of Services
Wärtsilä Brazil Services today

- Strong presence in Brazil
- High quality services, especially in propulsion and O&M
- O&M agreement or maintenance agreement for every power plant commissioned since 2002
- Established relationships with Offshore customers
- Underlying market potential in both power plants and services provides strong future market potential
- Opening Ceremony Q1 2013

- Service for: engines, thrusters, Electrical and Automation, etc.

- Training Center for yards, local manufacturing and operators.
• Service locations and workshops
  – Rio de Janeiro: Area 2332 m² (B type)
  – Manaus: Area 3400 m² (C type)

• Power Plants and Offshore O&M and maintenance agreements, 1.2 GW covered by O&M agreements

• Maintenance agreements: 2

• More than 620,000 man-hours worked in 2009 serving our customers

• Brazilian cabotage owners current port calls: 152 per month
• Main ports: Santos and Suape (resp. 26 and 23 monthly calls)
• Petrobras offshore expansion: ~300 new installations by 2020
### Key future target segments

<table>
<thead>
<tr>
<th>Growth area:</th>
<th>Offshore services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategy:</td>
<td>Capture the after-sales to the suppliers to the Brazilian offshore market. Partner-up with them from DAY 1 they are commencing work off the Brazilian coast.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Growth area:</th>
<th>Propulsion services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategy:</td>
<td>Build up our own capabilities to perform the works in-house. Offer services together with the engine and offshore services.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Growth area:</th>
<th>O&amp;M services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategy:</td>
<td>Secure orders with IPP’s in energy auctions and projects in the isolated grids. Industry self generation projects and O&amp;G installations</td>
</tr>
</tbody>
</table>

**Main focus:**
- **Footprint in offshore market**
- **Merchant fleet customers (O&M agreements and propulsion services)**
- **IPP new customers (O&M agreements)**
Developing Local Manufacturing

…to create a business model meeting a volatile volume demand and high local content requirements

Multi Product Factory
THANK YOU!

WÄRTSILÄ