

# LLX

## (AÇU SUPERPORT PROJECT)

### A GATEWAY TO THE FUTURE





# A GATEWAY TO THE FUTURE

*A subsidiary company of EBX Group, LLX is the driving force behind the development of the Açú Superport, one of Latin America's most important investment projects in recent history*

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With a population of just over 30,000 people and a total area of some 459 square kilometres, São João da Barra may not be as recognisable as some of Brazil's other municipalities, however it is the location of one of the country's most exciting developments, the Açu Superport, the largest port infrastructure investment project in all of Latin America.

With two terminals, one offshore and one onshore, the Açu Superport is a private, mixed-use port complex that will eventually boast 17 kilometres of piers and up to 47 mooring berths. It is being built on the northern Rio de Janeiro coastline, near the area responsible for 85 percent of Brazil's oil and gas production.

Being an innovative project boasting modern engineering, construction and operating practices, the Açu Superport will be comparable with the most modern and efficient ports in the world. It is being prepared to receive large vessels such as Capesize and Very Large Crude Carriers (VLCCs), which carry up to 320,000 tonnes of cargo, and Chinamax vessels carrying up to 400,000 tonnes.

The principle company behind this extensive development is LLX, a logistics company of EBX Group that was founded in March 2007 with a mission to provide Brazil with integrated infrastructure and logistics

facilities, mainly in the port sector. LLX's ventures are strategically located and are designed to handle the largest vessels, using the latest port technology, thus resulting in efficient and low-cost operations.

A total of R\$4 billion will be invested in Açu Superport, of which R\$1 billion is being provided by LLX Minas-Rio (responsible for implementing the iron ore port terminal) and R\$3 billion by LLX Açu (responsible for handling other cargo such as steel products, petroleum, coal, granite, slag, pig iron and liquid and solid bulk).

**R\$4  
BILLION**

.....  
**Total investment being  
made into the  
Açu Superport**

Building of the Açu Superport began back in October 2007. Occupying a total area of 90 square kilometres, the complex will have an initial depth of 21 metres, which will be expanded to 26 metres, and the capacity to receive large vessels. At present only seven percent of Brazil's ports have the capacity to

receive capesize ships.

Upon completion the Açu Superport will have two terminal complexes. The first, TX1 is an offshore terminal with a depth of 21 meters, a three kilometre access bridge, a tugboat pier, nine oil and iron-ore piers, approach channel and turning basin. Of these, two iron ore piers, the tugboat pier, approach channel and turning basin are completed. Once operational TX1 will be able to handle up to 100 million metric tonnes of iron ore a year and 1.2 million barrels of oil a day.



# MEETING YOUR EVERY CHALLENGE

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#### **Talking about challenges...**

Boskalis' track record in South America is already strong. Not only in the 'business as usual' projects but especially when it comes to challenging projects like a submerged tunnel and a LNG terminal in Mexico, a total mining solution in Surinam, the construction of the first man-made island in front of Panama City and the installation of a gas pipeline and a communication cable in Tierra del Fuego.

With its major role in the prestigious project at LLX Acu, Boskalis has once again emphatically demonstrated that it is able to successfully manage whatever challenges arise: Challenges related to environmental restrictions, to sudden changes in planning, to working in exposed off shore conditions or related to interfaces with other contractors. We swiftly adapt ourselves, whatever the circumstances.

#### **Let's talk about your challenges**

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## LLX ACU SUPER PORT PROJECT: MEETING EVERY CHALLENGE

For Boskalis, being part of the LLX/OSX project in Brazil has been challenging and inspiring. The entrepreneurial and innovative spirit of the client Eike Batista matches Boskalis' mentality and work ethic.

LLX Acu Super Port Project is an incredibly dynamic project. Its conception took place quickly and continues to develop rapidly as new customers sign on. To meet the challenge, Boskalis and the Client work closely, with constant communications and transparency – making improvements, meeting deadlines and maintaining high quality while achieving excellent safety performance.

Challenges at LLX Acu Super Port Project included:

- A very tight deadline at the start of the project to meet the turtle season. Boskalis solved this through an extremely short mobilization time of the equipment and moving past the beach under unfavorable weather and sea conditions.
- The enormous transportation distance for the dredged material. This challenge was met with almost 20 kilometers of pipeline on location.
- Meeting tight deadlines caused by changes in planning and sequence of activities as the project advances. Boskalis quickly

adapts by negotiating with the Client and subcontractors, providing alternative solutions and equipment and streamlining execution.

In total five vessels were mobilized: two jumbo cutter suction dredgers, two large trailing suction hopper dredgers, a clamshell dredger plus supporting marine equipment and dry excavation equipment. Although the numbers vary, between 350 and 450 people are at work at any given moment on dredging the access and inner channels, turning basin and harbor basin as well as land reclamation work. At a later date Boskalis will also construct the revetments at the harbor's entrance. The total dredged volume will be in excess of 43 million cubic meters, part of which will be used to reclaim land for the construction of the port facilities.

Boskalis' track record in South America is already strong. Not only in the "business as usual" projects, but especially when it comes to challenging projects such as:

- the installation of a submerged tunnel in the entrance channel in Coatzacoalcos, Mexico, the largest oil exporting terminal in Central America;
- the reconstruction of an LNG terminal

in Cuyutlàn, Mexico, in severe offshore conditions;

- a total mining solution in Surinam, where the overburden in the jungle (partly swamp) was removed and bauxite was lifted, including road transport to the refinery. The required dredge (1800T) was transported by road to the site.
- the construction of the first artificial island

in front of Panama City (see picture);

- the installation of a gas pipeline and a communication cable in the remote location of Tierra de Fuego

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we are ready for it!

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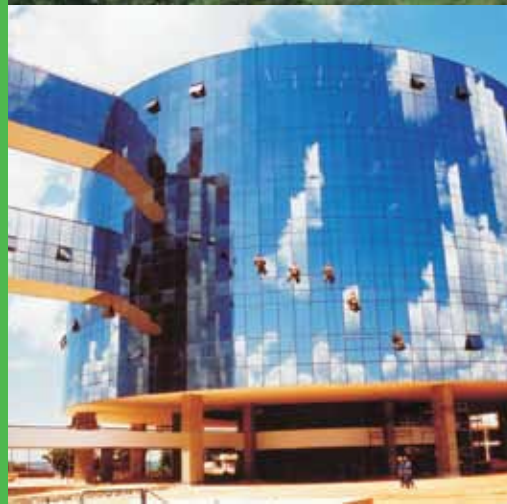
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## LLX (AÇU SUPERPORT PROJECT)

The other terminal, TX2, is an onshore terminal being built around a 6.5 kilometre long, 300-metre-wide approach channel. TX2 will boast a wharf line of over 13 kilometres, where liquid and solid bulk, coal, pig iron, slag and granite will be handled, in addition to steel products.

In total the Açú Superport has been designed to handle 350 million tonnes a year of exports and imports, especially oil, which ranks it amongst the three largest port complexes in the world. The Açú Superport is forecast to come into operation in the second half of 2013.



One of the things about the Superport that is and will be so crucial to its future success is the fact that it has been designed to meet the logistical and supply requirements of the oil

## SISTEMA PRI® engineering

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to build the LLX Açú Superport's office. The success of this partnership was a result of our understanding of the client's needs, coupled with quality and time commitment to the welfare of the professionals involved in the building process of one of the largest enterprises in Brazil.

[www.solucaomadeiras.com.br](http://www.solucaomadeiras.com.br)



**Commitment and quality in line with the environment**



**Products:**

The company provides a wide range of wood products with a focus on construction: a wide variety of woods, engineered wood products (plywood, OSB board), treated wood.

**Certification:** The majority of our wood products are certified by the FSC® (Forest Stewardship Council®) and come from managed forests.

**Services:**

- Prefabricated wood buildings. We design spaces that ensure comfort, safety and speed of assembly. Applied to places: office, restaurants, kitchens, warehouses, dressing room and sanitary, accommodation.
- Prefabricated roof: roof system for industrial wood.



and gas production and exploration activities that exist within the Campos Basin. It is here that approximately 85 percent of Brazil's total oil and gas production originates.

The complex has been strategically positioned to handle and treat oil, provide support to offshore exploration and production operations, and to house a metalworking cluster dedicated to the oil and gas industry. Furthermore, the Açú Superport will have an Oil Treatment Facility (OTF),

which is now licensed for 1.2 million barrels a day. The OTF will lower the water and salt content in the oil by using centrifugation and decantation. The operation enhances the quality and the commercial value of the product.

Because of its privileged location close to the main oil-producing basins of Brazil, the Açú Superport is extremely attractive for companies operating in the oil and gas sector, such as OSX, which operates in the offshore oil

**50,000**

**Total jobs that the port and industrial complex will ultimately generate**





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and natural gas equipment and services industry. The Açú Superport may also be connected to gas pipelines, especially the pipeline of Santos Basin, to supply natural gas to steelworks, the thermal power plant of MPX and other industries located in the Industrial Complex.



LLX has also invested some R\$200 million towards running more than 150 social and environmental programs

in São João da Barra. The initiatives include the professional qualification program, conducted in partnership with SENAI and the municipal government of São João da Barra,

where courses are also provided to residents. In the two stages implemented to date some 600 people received bricklayer, welder, carpentry, mechanics, forklift operator,

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Its aim is to deliver high quality services at competitive prices which guarantees its leading position in the market.

Its mission is to protect and ensure the well being of its customers by providing them with the highest

standard of personal and property security. It works to provide safe and orderly environments and solutions in the area of prevention, acting with strength, reliability and integrity. It provides its personnel specialised training by working in partnership with highly regarded training institutions and regularly evaluates them to ensure the high level of performance is maintained and at the same time treating them fairly and respectfully. As a result, it can offer a unique service to take ensure the safety and peace of mind of its clients.

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A series of initiatives for the fishing community are also being implemented. These include a dentists surgery and IT laboratory in the fishing community, the refurbishment of the fishing offices in Barra do Açu, the refurbishment of schools, the donation of equipment to legalise fishing boats, donation of a head office for the fishermen's village, diagnosis of education levels and delivery of navigation kits, with buoys, lifejackets and flags.

On the environmental front, LLX is developing programs aiming to recover and preserve the environment in the region where its ventures are installed. One such program is the Biodiversity Conservation Program, which helps develop applied research for the handling and protection of coastal ecosystems. The program entails initiatives for environmental recovery, area protection and environmental education, in addition to studies conducted by the company itself and supporting scientific research carried out by a number of institutions. One of the program's flagships is the creation of the Caruara Private Natural Heritage Reserve (RPPN), the largest private reserve in the country, occupying 3,845 hectares.

LLX also invests in initiatives to bolster family-based farming. The

### HOLANDA

Operating for over 25 years with excellence in the area of Quality Control, the experience of the company states in major works such as dams, ports, harbors, canals, tunnels, industrial structures, and now proud to be one of the key contributors of the construction of the Latin Americas Largest Port Facility (Açu Superport Project). Further emphasizing the development and implementation of building methods in the area of civil works as well as the investigation of pathologies including the definition of repair and recovery systems aimed at durability of structures.

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initiatives include the arrangement with the municipal government of São João da Barra and the State Agriculture, Fisheries and Supplies Department of Rio de Janeiro to help small rural producers and associations by building greenhouses in the fifth district of São João da Barra. The program uses sustainable practices for greenhouse cultivation, adding value to products and rural properties and enabling year-round harvests, in addition to boosting producer income.

In partnership with Companhia de Desenvolvimento Industrial do Estado do Rio de Janeiro (CODIN) and the municipal government of São João da Barra, LLX is building Vila da Terra, a rural housing settlement in São João da Barra. It is here that 90 areas in the location are being allocated to families losing their homes due to the creation by CODIN of the Industrial district of São João da Barra in the municipality. Relocation to Vila da Terra is being offered to families who are resident in the area and own less than ten hectares of land.

At present more than 7,000 people are working on the port's construction, 50 percent of whom live in either Campos or São João da Barra. Once operational the port and the industrial complex are expected to generate as many as 50,000 jobs, while at the same time attracting investment of around R\$100 billion to the region. **BE**

For more information about  
LLX (Açu Superport Project) visit:  
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