

INDUSTRY & MANUFACTURING



- **Manufacturing generates 22% of GRP.**
- **The Rostov region is a leader in manufacturing agricultural machines. Rostselmash has an 80% of the Russian market and 17% of the global market for combines and other machines.**
- **The region produces 100% of Russia's electric locomotives and steam boilers and 94% of its sewing machines.**
- **Helicopters manufactured by Rostvertol are exported to more than 30 countries.**
- **Rostov's \$280m port project will quadruple cargo capacity by 2010.**
- **TagAZ is set to produce 120,000 Hyundai cars and SUV's.**



Alexandra **Starikova**, Analyst, MARCHMONT Capital Partners

Large cap machine builders continue record exports but second tier firms need reinvestment to catch up

Although the region enjoys its status as the sole producer of a dozen different types of heavy equipment, parts of the sector are under pressure from foreign suppliers that offer the same quality for less cost. The lack of local raw materials for the sector is a minus. Second tier and state-run enterprises lack the capital and management infrastructure to keep pace, train and promote talented workers.

The regional heavy machine building sector is dominated by some of Russia's most well-known industrial firms: Taganrog Automotive Works (TagAZ), which makes minibuses and Hyundai vehicles; Novocherkask's electric locomotive factory and Rostselmash, Russia's leading manufacturer of agricultural machinery. Rostselmash's strong domestic and export business is why the region ranks first in agricultural equipment manufacturing. Their success overshadows smaller state run and second tier firms who lack the capital and multi-national expertise to keep pace.

The Rostov region ranks first among other regions of the South Federal District in industrial output. At the end of 2006 production of automotive vehicles increased by 28.8% and production of equipment rose by 17.4%. As a result, the overall Gross Regional Product, which largely depends on industrial per-

General Information

Based on the results achieved in 2006 combine harvester manufacturer Rostselmash was ranked first in the TOP-50 rating of leading agricultural machinery manufacturers of Russia.*

The TOP-50 rating also included other five companies from the Rostov region, which is why this region was ranked first among other Russian regions. The following Rostov companies became Russia's sector leaders: Krasny Aksay, ranked 22nd with the amount of shipped goods reaching 208.6 million rubles; Kormmash, ranked 23rd with the amount of shipped goods valuing to 191.2 million rubles; Millerovoselmash, ranked 24th with the amount of shipped goods reaching 182.9 million rubles and Salskselmash, ranked 37th with the amount of shipped goods coming in the region of 106.3 million rubles.

** This rating was compiled by non-profit organization Soyuzagromash*



formance, increased by almost 20%. The development strategy for the machine-building sector includes upgrading high-precision materials processing, improving the quality of finished surfaces and automation of assembly processing.

Rostov's machine-building sector is distinctive because it has a number of large production plants that manufacture products nowhere else but here. These include electric locomotives and steam boilers as well as sewing machines.

The Novocherkask electric locomotives producing factory is the only factory in Russia to manufacture both freight and passenger electric locomotives. During its half century of operation, the factory has developed 30 types of both freight and passenger electric locomotives as well as 14 types of industrial locomo-

tives that have received world recognition. The Rostov region is home to another well-known factory, Krasny Kotelschik. This firm produces high-capacity power-generating and heating boilers as well as other equipment for power plants. Products manufactured by Krasny Kotelschik are in high demand overseas: the factory exports its products to 22 countries worldwide, including EU countries, India and China.

Exports soar by 33%

Another distinct product is the unique mining equipment produced at the Kamensk machine building factory in the town of Kamensk-Shakhtinsky. This equipment is manufactured on a custom order basis to meet the specific mining and geological requirements of buyers.

Industrial production and machine-building in particular dominate in the foreign trade of the Rostov region. In 2006 the total volume of exported goods increased by 9% whereas the amount of exported products manufactured by the region's machine building sector increased by 33%.

Rostselmash, a global player with 65% of the Russian market, is ranked one of the top five producers of combine harvesters in the world.

Most developed sub sector is agricultural machinery

Rostov businesses produce over 60% of all combine harvesters manufactured in Russia. The region is also a leader in the production of tractor-mounted cultivators and the only manufacturer of beet hoes. To maximize their efficiency, machine builders are focusing on innovative developments to automate their production flow.

Rostselmash is Russia's leading manufacturer of agricultural machinery. It's the only business in Russia that supplies its combine harvesters to the global market. The firm is one of the world's five leading agricultural machine builders. The factory occupies a 17% niche of the world market and a 65% niche of the Russian and CIS national markets. For the first six months of the 2006–2007 farming year, Rostselmash remained an absolute leader in the harvesting machinery segment with an 80% share of the Russian market. The factory also accounts for more than 50% of the market in the Ukraine and Kazakhstan, 80% of the Moldavian market and a 25% share in Latvia and Bulgaria.

One of the oldest regional agricultural machine building enterprises is Krasniy Aksay which specializes in development and manufacture of tillage machinery.

The end of 2006 saw a significant increase in the production of the following equipment by regional enterprises: all-purpose lifting machines for agricultural applications produced by Salskselmash; harvesters produced by Aksaykardandetal; sunflower harvesting machines produced by Morozovskselmash; planting machines produced by Azovsky opto-mechanical factory as well as grass mowing machines, tractors and other products. During the first five months of 2007 the regional output of all-purpose lifting machines almost doubled.

It's also worth mentioning that many regional businesses also specialize in after-sale technical maintenance of their products, which adds to their bottom line and creates strong partnerships with buyers who need on-going support.

TagAZ scales up to build 120,000 cars a year

Automotive manufacturing as a sub sector of machine building is less than 10 years old, when Taganrog Automotive Works (TagAZ) was built using the half-finished premises of a combine building factory that never got off the ground.

The total amount of investment in the construction of TagAZ today exceeds \$320m. The plant currently produces Doninvest Orion-M minibuses on the basis of Citroen Berlingo and from French autocomponents as well as Hyundai Accent, Hyundai Sonata and Hyundai Porter passenger cars. In April 2007 TagAZ started the production of the SUV Hyundai Santa Fe Classic. For the first six months of 2007 production of passenger vehicles has risen by 27.1% and truck production has increased by 36.9%. The plant has also produced 559 buses, a new product for the regional car building sector. Taganrog Automotive Works is on track to reach its full capacity of 120,000 vehicles per year.



In 2006 the Novocherkask electric locomotive producing factory outperformed its annual goods and services sales plan by 12% having manufactured:

- 106 passenger alternating current locomotives (EP1)
- 11 dual system electric passenger locomotives (EP10)
- 84 freight alternating current locomotives (29C5K Ermak)
- 3 industrial locomotives (NPM2)

Largest agricultural machine building enterprises

Name	Website	Key products
Azov opto-mechanical plant	—	Planting devices
Aksaykardandetal	www.kardandetal.ru	Propshafts, pivot joint couplings for agricultural applications and harvesters
Krasniy Aksay	www.krasniy-aksay.ru	Tillage machinery
Morozovselmash	—	Sunflower harvesting machines
Rostselmash	www.rostselmash.com	Harvesting machinery
Salskselmash	www.salskselmash.ru	Lifting machines, heystackers and spare parts for agricultural machinery
Shakhtmetal	—	Agricultural equipment

Largest machine building enterprises

Name	Website	Key products
Desyatiy Podshipnikovy Zavod		Antifriction bearings
Azov Press Forging Equipment Plant		Press forging equipment and automated lines
Atom mash		Power-generating equipment
Geomech-Don	www.geomech.ru	Drilling equipment and tools
Donetsky Excavator	www.stroydormash.ru	Excavators, front loaders, steel casting, construction materials
Donpressmash	www.donpressmash.com	Automated lines for steel cutting, plate-bending presses, equipment for cutting rolled steel sections and machinery for the agricultural sector
Small-sized machines building plant		Metal cutting machines
Gavrilov Metallurgic Equipment Plant		Industrial wrenches, electric maneuvering gear, equipment for boiler houses, rack jacks and metal structures
ZIOSAB-DON		Boilers for central heating systems
Inter-Don	www.inter-don.ru	Excavators
Interex	www.interex.ru	Excavators, loaders, garbage collecting trucks and tractors
Krasny Hydropress		Hydraulic equipment
Krasny Kotelschik	www.tkz.su	Steam boilers, parts for power generating equipment, auxiliary equipment for boiler units
Kamensk machine building factory		Mining equipment
Nikolsky Novochoerkassky Mashzavod		Mining equipment
Novochoerkassk electric locomotives building factory		Industrial and mine electric locomotives
Novoshakhtinsk mechanical factory		Metal containers for chemical industry
Promet		Metal profiles for mounting suspended ceilings, sidings and panels
Pessmash		Presses
Rostovgasoapparat	www.rndgaz.ru	Gas heating equipment
Rostkhim mash	www.ggg13.narod.ru	Unique polymeric materials processing equipment
Construction and experimental machine building factory		Concrete mixers, dipper shovels and metal structures
Taganrog car building factory	www.tagaz.ru	Hyundai Accent, Hyundai Sonata and Hyundai Porter passenger cars
Gidroprivod	www.gidroprivod.ru	Hydraulic pumps and motors
EMK- Atom mash	www.atom mash.ru	Equipment for nuclear power stations
Energomash-Atom mash	www.energomash.ru	Equipment for gas turbine thermal power stations, petrochemistry and metallurgy

Porter's five forces analysis

Supplier Power

Supplier power is medium in the region. In most cases regional businesses purchase raw materials from their old partners. A significant amount of raw materials are imported from other regions.

Buyer Power

Buyer power has started to decrease-- buyers and sellers have reached the balance point. Production has become profitable and manufactured goods now satisfy buyers' demand both in terms of price and quality.

Threat of New Entrants

Threat of new entrants is rather low as starting new production in this segment requires enormous investment.

Substitutes

Some businesses in the Rostov region are Russia's sole producers in several goods categories.

Rivalry

Rivalry among regional market players is not high as the majority of them specialize.

General Information

The amount of goods shipped has risen by 42.6% compared to last year. The product share of this sector in the total output of manufacturing businesses has increased by 1.3 percentage points reaching 17.1% against the last year figure of 15.8%.

Being a global leader means constantly focusing on performance



Valery **Maltsev**,
General Director
Rostselmash

Rostselmash is Russia's chief manufacturer of combine harvesters. For many years it has been ranked among the world leaders in agricultural machine building. Staying competitive with the likes of Case New Holland and Deere requires constant attention to quality, says Valery Maltsev, Rostselmash's general director.

Rostselmash has its own production facilities to manufacture harvesters, plant spreaders and axles, but for years it has been working with the world's leading quality component manufacturers to supply it with parts. The firm uses Cummins engines, for example, CIT distribution valves and driving wheel axles, Walterscheid double-cantilevers and Optibelt pulley gears. By focusing on advanced technology, quality and performance, Valery Maltsev believes his firm will continue to be a global leader in the field.

What's the future of Russia's national and regional markets for agriculture machine building?

"The Russian market of agriculture machine-building is rapidly growing at the moment. Experts believe that the national demand for grain harvesters will reach 10,000 combines per year before 2010. The RF's national project, 'Development of the Agricultural Sector' has helped grow investments in this sector by billions of dollars.

This is why it's not surprising that even many Western companies see Russian agricultural market as one of the most promising markets in the world. We anticipated the current intensifying rivalry with foreign manufacturers three years ago and since then we have been getting ready for the changes. We have managed to preserve our share in the national market and over the last agricultural year our sales volumes have increased by almost 15%".

A combine is a big ticket item. Besides low cost, what are buyers looking for?

"When our potential buyers start discussing the advantages of Russian machines their first comments are of course, about our significantly lower price. But then they focus on what's really important: the running costs, availability of spare parts and maintenance costs, i.e. the true economic productivity of a certain model of an agricultural machine. And then there are very specific technical characteristics that every

buyer needs to be aware of. What is the effect of a machine on the product being harvested--the losses, degree of grain shattering, impurity content and other such information? Technically, Russian combines can compete with foreign equivalents and even beat them in some parameters. This is because our machines are more adapted for use in the specific agricultural and climactic environments of Russia's regions (high humidity, a lot of weeds on the fields, etc.).

One area where we and other manufacturers fell behind was in operator comfort and safety. We've made enormous progress in this arena as well. Earlier this year, the Czech state-run organization SZZPLS carried out comprehensive safety tests on our VECTOR and ACROS combines. Both received EU certification certificates for conformity to EU safety standards."

What steps do you take in production, management and marketing to retain your leading position in the Russian market?

"First of all we are constantly improving the quality of our machines so we can introduce new products that incorporate the latest design and innovation features. Recently we launched such unique systems as Smart Launch, JamControl, Adviser and a number of other devices which increase the effectiveness and productivity of our machines. Over the last four years we have launched the production of three new machines, namely grain harvesters VECTOR and ACROS and an upgraded version of a fodder harvester, the DON 680M. These models are now all in high demand.

Another priority focus for our company is developing our service maintenance network. Presently Rostselmash has around 160 service stations throughout Russia and abroad. All these stations use the unified Rostselmash service standard. Each harvester we sell is guaranteed to receive a full portfolio of maintenance services for the first two years.

We also carry out various marketing programs targeted both at our business partners and end users. One of our most popular programs allows buyers to get loans using the machines they've decided to purchase as collateral. We cooperate with several banks on this program."

Rostselmash is now Russia's chief exporter of agricultural machines. What do you do to increase your share in the international market?

"Our company has been implementing an aggressive export policy since 2004 when the first really modern models came off the production line. Since that time we have exported over 3,000 combine harvesters which means that every third combine is exported. 10% of all our exports went to European customers. The chief importers of Russia combines remain the Ukraine and Kazakhstan.

Last year Rostselmash expanded its sales geography from 13 to 17 countries, including Bulgaria, Poland, Serbia and Montenegro, Mongolia and the Baltic states, Romania, Armenia, Azerbaijan and Kyrgyzstan. Rostselmash has also strengthened its positions in North-America. For example there are seven VECTOR harvester being operated in Canada now.

Bulgaria occupies a special place in our export policy. Over the last three years we have sold more than 100 combine harvesters to Bulgarian farmers. At present we are considering the possibility of creating a large stock of warranty spare parts for our machines in Bulgaria. We hope this spare parts stock will satisfy the demand for our machines on the part of European consumers.

In the future, of course, we hope to expand to other countries where we see the potential, and farmers in these countries see the value, of buying high quality, reliable equipment from a Russian company.

Alexandra **Starikova**, Analyst, MARCHMONT Capital Partners

Aircraft industry continues to diversify and re-tool for the future

Rostov aircraft manufacturers produce unique amphibious aircraft and heavy lift MI-26T helicopters for the military and specialized commercial aircraft for rescue, ambulance and firefighting that are made to order. The commercial planes have a high export potential and are currently sold to more than 30 countries. The industry is challenged by RF limits on foreign participation in strategic economic sectors and by aging plant and equipment.

There are eight aircraft manufacturing plants in the Rostov region. The region ranks first in Russia in the manufacture of heavy-lift helicopters. During the first six months of 2007 production output of the Russian sector as a whole grew by 30%, fueled by increased state defense spending.

World-class helicopter production doubles sales at Rosvertol

The Rostvertol company is one of the major producers of combat and heavy-lift transport helicopters within the Russian military-industrial complex. In 2006 the share of orders placed by Federal Service for Defense Contracts with Rostvertol increased by three times compared to 2005 to 27.9% of overall production output. The company manufactures different modifications of helicopters including the MI-26T crane-type copter, MI-24-PS rescue and patrol helicopter, MI-26T firefighting helicopter and MI-24TS helicopter used by customs. Designed to replace the famous MI-24 Flying Tank and multipurpose attack helicopters such as the MI-35 that are in service with the Russian Air Force, around the clock production of new MI-28N helicopter named Night Hunter is now under way. The price of the MI-28N varies between \$ 12m and \$ 16m depending on specification.

Recently named as Best Russian Exporter-2006 in the aircraft building category, collaboration with Rosoboronexport state corporation allowed Rostvertol to double its sales volume in 2006 compared to 2005. Rostvertol helicopters are

Irkut Corporation

Irkut Corporation comprises several aircraft design and manufacturing companies. Its major holdings are Beriev Aircraft Company, A.S. Yakovlev Design Bureau, BETA AIR, and the Russian Avionics design bureau. Today the corporation's major programs are those dedicated to the Su-300MK multipurpose combat airplane and the Be-200 multifunctional amphibian airplane.



fitted with high tech equipment such as satellite navigation systems, azimuth radar and night vision systems and are sold to more than 30 countries in Europe, Asia, Africa, the Middle East and Latin America. The MI-25 helicopter has a high export potential and the MI-26T helicopter, with a cargo capacity of up to 20 tons is the heaviest and most powerful helicopter in the world. The company's expertise in helicopter manufacture has enabled it to begin membership negotiations with the European Helicopter Association.

Taganrog's aircraft hub

Taganrog, is the second largest city in the Rostov region and is home to several aircraft builders.

The Beriev Aircraft Company comprises a design bureau, flight-test range,

experimental factory, and hydro aviation air training center in Gelendzhik as well as a branch and flight-test facility in Moscow. The company is part of the Irkut Corporation* and designs and manufactures aircraft such as seaplanes, amphibious airplanes, unpiloted aircraft and rocket-space equipment. The company also developed the submarine-launched cruise missile and components for the Buran shuttle.

Today Beriev specializes in the manufacture of a new generation of aircraft such as Be-200 light amphibian airplanes as well as its famous A-40 amphibian airplane, A-50 airborne warning and control airplane and Be-32K and Be-132MK airplanes for local airlines. In 2009 – 2010, production of the Be-200 model is expected to be moved from Irkutsk to Taganrog. This will contribute

Aircraft companies in the Rostov region

Company	Website	Products
Aviaremvzvod	–	Repair of Yak-18T and similar airplanes
BETA AIR	www.beta-air.com	Testing equipment, aviation electronics, power control systems, air conditioning control systems, vibration and acceleration transducers
Krasnye Krylya (Red Wings)	www.redwings.ru	Design and continuous production of ultralight aircraft and accessories for them
Rostvertol	www.rostvertolplc.ru	MI Helicopters
Rostov-Mil	www.helicopter.ic.ru	Repair and modernization of MI helicopters
	–	
The Beriev Aircraft Company	www.beriev.com	Seaplanes, amphibian airplanes, unpiloted aircraft, rocket-space equipment
Rostov Civil Aviation Factory #412	www.rfca412.aaanet.ru	Repair of airplanes, airplane engines
Taganrog Aviation	–	Repair and modernization of Tu-142M anti-submarine airplanes, production of equipment for cargo and machinery landing, production of accessories for Tu-334 short-haul airplane

significantly to the company's development, employment and increase in overall production output.

BETA AIR, also a part of the Irkut Corporation produces ARINC – 608A compliant ATE-200 automated test equipment. These stations enable tests of airborne electronics of both Western and Russian built aircraft. The ATE-200 is the only automated test equipment system available on the market that can be used for maintenance of aircraft produced in Russia.

The Krasnye Krylya (Red Wings) is another Taganrog firm. It designs and produces different types of microlight aircraft.



Porter's five forces analysis

Supplier Power

Suppliers to this industry have a medium power. Most aircraft manufacturers have long-term stable relationships with their suppliers. Foreign suppliers play an important role in this business as products purchased from them are not produced by Russian manufacturers.

Buyer Power

Buyer power in this sector of the economy is high, with government orders and increasing commercial business providing strong demand.

Threat of New Entrants

Aircraft building is highly capital intensive and the military nature of most of the production limits new players.

Substitutes

Some of the military and commercial aircraft produced in the Rostov region have no counterparts anywhere in the world, the MI-26T helicopter is one of them. Others have substitutes both in the Russian and global markets.

Rivalry

Rivalry in the Russian market, still dependent on state orders, is fairly low. The market for commercial and military aircraft in the global market is quite intense, despite the small number of major players.

Six new 'greenfields' will change Rostov's industrial landscape

Russia is entering a so called 'era of greenfields' when new production facilities are built from scratch. In the Rostov region there are six projects currently underway that will create these new industrial zones. All these projects are private-state partnerships. The state contribution varies from 15% to 60% of the total investment. When completed these projects will add thousands of jobs and pump hundreds of millions into the regional economy.



Like many other regions of Russia, Rostov faces the following common problems:

- many existing production facilities were built forty or fifty years ago and are worn out
 - while old factories can be re-built, most are too unsuitable for modern production equipment and technology
- Regional planners have developed a new master plan to re-invigorate more than 2000 hectares of industrial land. The result will be to:
- eliminate unproductive factories creating the space to develop new, efficient industrial clusters
 - the cost-benefit of building new industrial space rather than re-investing in old structures is compelling.

To further address these issues, regional authorities have approved a regional law to create new economic development zones in the region. The regional budget will finance the cost of engineering communications for these future industrial zones. Maximum financial support is planned to target those territories which are experiencing acute employment issues. Among such territories is the Krasnosulinskaya industri-



al zone where in the 1990s 50 mines were closed as part of a coal mining sector restructuring plan.

The newly planned industrial zones will have the following advantages:

- a comprehensive approach to their construction which will considerably lower infrastructure-related costs;
- significant allocation of budget sums by regional authorities to build necessary engineering communications;
- low land costs;
- the new industrial zones will be sited close to large regional cities enabling workers to travel to these sites easily;
- 'fast track' approval process by all cooperating authorities to assure rapid granting of all necessary approvals.

Novoaleksandrovskaya zone



This will be the smallest regional industrial zone (70 hectares). It is situated in the Azov district.

- Distance from Rostov-on-Don is 21 kilometers.
- 90% of the zone is already occupied. Among the resident businesses are such names as Coca-Cola, which is currently building new production facilities here; Russian Glass Company Adamant and dairy products manufacturer Unimilk. whose new factories are planned for 2008 and 2009.

Azovskaya zone



- It is situated in the southern suburban part of Azov city.
- Distance from Rostov-on-Don is 40 kilometers.
- The first phase of construction projects the development of a 170 hectare lot.

- 60% of the zone is currently occupied. Among the residents are such names as PepsiCo and Ruslegpromavto.

Yuzhno-Batayskaya zone



- The total surface of the land lot for this development is 567 hectares.
- The zone is situated near such cities and towns as Rostov-on-Don, Bataysk and Aksay, whose combined population exceeds 1.3 million.
- The zone borders with a federal motorway Don (M4) and the South Hub, which is currently under construction.
- The zone is also supposed to be the new location of what planners say will be the largest airport in southern Russia.
- Within a ten-kilometer distance from the zone there are numerous ports capable of handling river-sea vessels as well as a large railway junction.
- 10% of the zone is currently occupied with businesses.

Zarechnaya port zone



Situated on the left bank of the Don River, which is opposite the central part of Rostov-on-Don, this \$280m. project will develop an industrial and port zone that will radically re-shape Rostov's transportation infrastructure:

- Construction of a multi-purpose port that will quadruple cargo capacity when completed (2009-10).
- Construction of two new bridges and a motor road.
- Construction of a new railway junction capable of servicing the needs of the zone's new port terminals and production facilities.

- The zone will impact motor, rail and waterways of international significance.
- The zone currently houses large manufacturing facilities of such national and international market players as Yug Rusi (South Russia), Donskoy Tabak (Don Tobacco), Aston, Moryak (Seaman), Cargill and Buncje to name but a few.

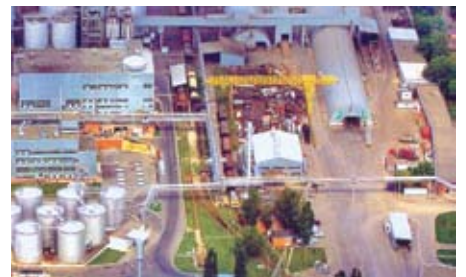
Krasnosulinskaya zone



This zone is situated inside the 'golden triangle' of the Eastern Donbass between cities of Shakhty, Novoshakhtinsk and Krasny Sulin.

- Distance from Rostov-on-Don is 75 kilometers.
- The surface of the land lot for development is 600 hectares.
- Additional tax incentives will be provided by regional authorities.

Oktyabrskaya zone



- It is situated in the central part of Oktyabrsky district in the southern suburban area of the town of Shakhty.
- Distance from Rostov-on-Don is 70 kilometers.
- Distance from the federal motorway Don (M4) is 10 kilometers.
- The surface of the industrial zone is around 1,000 hectares.
- The zone has links with Kamenolomnya station by rail.
- Additional tax incentives will be provided by regional authorities.
- 25% of the zone is currently populated by businesses.

Source: Rostov Regional Agency for Investment Development

Alexandra **Starikova**, Analyst, MARCHMONT Capital Partners

Regional shipbuilders count on new port to spur investment

The Azov-Don waterway is a major transport highway, but it needs significant new port facilities as well as a new fleet (the existing vessels are 40-years old). Local area shipbuilders are capable of producing up to 50 boats year, but their yards need major upgrading as well. The region's competitive advantage is price and low transportation expenses, but new contracts are still going to foreign firms who can deliver larger vessels more rapidly. An ambitious \$ 280 million major port upgrade is planned to be completed in 2009 that will quadruple cargo capacity and re-invigorate the industry.

The regional industry includes 14 ship building and ship repair enterprises. These include such local firms as Azovskaya Sudoverf (the Azov Wharf), Priboi, Midel, Moryak, RIF, Ust Donetsk Ship Repair Plant and Don-Kassens (Joint Ship Building Plants of Don project) Their shipbuilding potential is about 50 vessels annually and requires up to \$ 60m investment.

\$ 280 million port upgrade will quadruple cargo capacity

A major port facilities upgrade («The Rostov Multipurpose Port») is underway. The \$ 280 million project is a private-state partnership that planners hope will shift a considerable part of the Ukrainian ports' traffic to Russia.

Along with the possible building of the second branch of the Volga-Don channel, the project will improve the navigation between the Caspian and Black seas, encourage greater economic development with countries of the Caspian region and provide cargo handling all year round in the Azov-Don region (Source: the Agency of Investment Development of the Rostov region).

When completed in 2009, it will more than quadruple cargo capacity. The project will include three stages. The first stage has been completed: land has been purchased for the new port facility to be situated in the Zarechnaya industrial zone of Rostov. Together with the land, the parties participating in the project have also bought a port complex with the capacity of 1 million tons of cargo per year. Now the Azovsko-Donskoye Parokhodstvo Steamship Company is developing the second stage, which concerns the construction of a second freight area. This will include a container terminal with a capacity of 200 TEU per year, a terminal for processing general cargo and metal-roll with a capacity of 3 million tons per year, as well as a logistics center with a surface area of 10,000 square meters. It is hoped that the port will be able to process up to



5 million tons of various cargo per year by 2010. Azovsko-Donskoye Parokhodstvo will also spearhead the third stage of construction in 2009. This will include a multimodal port terminal with a capacity of up to 10 million tons per year. When completed, the project is expected to include a complex for transferring timber, bulk cargo and metal-roll; a second container terminal with a capacity of 350 TEU per year; a logistics complex with a surface area of 150 square meters and an industrial techno park.

As a result, by 2012 the capacity of the port is expected to reach 15 million tons of cargo per year, and the total investment is forecasted to reach \$ 280 million.

The largest manufacturer in the region is a joint Russian-German company Don-Kassens, located in Aksay in the Rostov region, founded in 1995 by the Volga-Don Shipping Company and Cassens Werft GmbH (Germany). Since 2002 German company Johannes Tillmann GmbH&Co. KG joined the consortium too. Don-Kassens deals with high quality ship building and repair using advanced German technology, equipment and materials. In April 2007 the dry-cargo vessel Navigator with a load carrying capacity of 3,000 tons was launched. This vessel was designed by the Rostov Central Planning and Design Office Stapel. Don Kassens also launched two other dry-cargo vessels, Aksay and Temernik, with a displacement

of 5,000 tons. This firm also converts dry cargo vessels into tankers.

As for Stapel, it focuses on planning and design of ship building, overall repair and retrofit and deals with designing multi-function surface platforms, manufacturing navigation devices, developing hydrography projects, and supplying water transport companies with normative and technical books. Stapel's services are widely used in many Russian regions as well as abroad.

Taganrog (the Rostov region) is home to Activcentre, a leader in manufacturing sails and designing yachts. Activcentre also designs and manufactures duck fabric products: exhibition halls, standard dismountable premises, tents, awnings, marqueses, etc.

Biggest ship buyer looks to China

Prices for Rostov ship building are considerably lower than for their Western European counterparts. Asian shipbuilders charge less, but the costs to transport vessels to Russia eliminates this price advantage. Moreover, Asian orders are executed much more rapidly by the Rostov wharfs.

The largest buyer of vessels in the Rostov region is Azovsko-Donskoye Parokhod-

stvo (Steamship Company). They are looking to China to build 10 multi-purpose dry cargo ships with deadweights of 9,800 tons. Although Mikhail Shvalev, general manager of Azovsko-Donskoye Parokhodstvo feels that Rostov's shipyards can build these vessels, the contract in question calls for building ships that are much heavier than river vessels.

"As for Don's shipyards," says Mr. Shvalev, "Midel has built 4 ships for us, each with a deadweight of 4,500 tons, using German technology. But Don's shipyards have no experience in building a large-capacity fleet, especially within the time frame we need. Azovsko-Donskoye Parokhodstvo needs 10,000 ton ships. These marine vessels need to be constructed at a deep water shipyard. China is one of our possible partners; but we haven't signed any contract." Azovsko-Donskoye Parokhodstvo has made a contract with the Volgograd shipbuilding factory, however, for the construction of 4 Tanais-type dry cargo ships. Another contract was concluded between Azovsko-Donskoye Parokhodstvo and the Okskaya Shipyard, based in the town of Navashino, Nizhny Novgorod region for a 7,094 ton vessel.

Porter's five forces analysis

Supplier Power

The region needs to import basic raw materials for shipbuilding from other regions, but they are readily available and the prices are stable. Electronics and other equipment are imported from abroad.

Buyer Power

All shipyards build vessels to order, so buyer power is high.

Threat of New Entrants

The threat of new entrants is currently low. Although the demand is also limited at present, the region's access to navigable rivers and the seas make it attractive for efficient foreign shipyards to joint-venture with Russian firms.

Substitutes

There are numerous shipbuilders in Russia and throughout Europe. The region's lower cost production is an advantage over European competitors.

Rivalry

Asian firms, particularly Chinese, are fierce competitors and are putting a lot of pressure on the market.

Major ship-building companies of the Rostov region

Name	Website	Products
Azovskaya Sudoverf (the Azov Wharf)		Seine boats, small fishing boats, cargo transshipment
Activcentre	www.activcentre.ttn.ru	Sails, tents, awnings, pavilions, repair of yachts and boats, designing of yachts and motor boats
Breeze		Shipping hydraulics
Granite		Fuel efficient yachts, boats
Krasny Hydropress		Hydraulic equipment
Midel		Barges, repair and service of vessels
Moryak		Motor boats, shipping rescue equipment, boats
Priboi		Navigation, current, average and overall repair of river vessels and river and sea vessels, docking of vessels
RIF		Ship building
Stapel	www.stapel.ru	Ship building, ship repair, updating of vessels, designing multi-function surface platforms, manufacturing navigation devices, hydrography and ecology projects
Shipyard Don Kassens	www.sudoverf.ru	Cargo river and sea vessels, repair
Sudomehservis		Vessels, ships, factory ships, repair shops, barges, towboats, motor boats, long boats, yachts, rescue equipment, boats, docks, repair
Taganrog ship repair plant		Dock repair of vessels with the weight upto 600 tons, fishing vessel repair, border guard vessels, port and technical fleet, all types of navigation repair
Ust Donetsk Ship Repair Plant		Barges, docks, repair, vessel service

Industry and manufacturing

SWOT

Strengths

- The region's strong industrial base shows strong, continued growth—in 2006, regional automotive production increased by 28.8% and general manufacturing production rose by 17.4%.
- The region ranks first among other regions of Russia in agricultural machine building.
- The region is part of an international corridor, with sea, air, rail and highway infrastructure in place to serve both domestic and international markets.
- During the first six months of 2007 aircraft production grew by 30%.
- Rostov aircraft building companies have a proven capacity producing specialty aircraft—seaplanes, amphibians and heavy lift helicopters.
- Rostov's higher education institutions provide excellent training for the aircraft industry labor force.
- The Azov Sea and the Don River are key gateways to national deep-water inland waterways.
- Regional shipbuilders have low overhead operations.

Weaknesses

- Some regional machine building businesses suffer from a deficit of specialists and a general aging of plant and equipment.
- The sector imports most of its raw materials from other regions.
- Aircraft plants still depend on state orders.
- Outdated shipyards and technology limit ability of shipbuilders to design and build a more modern fleet.

- Low demand from regional shipbuilding enterprises discourages re-investment.

Opportunities

- The production potential of Rostov machine builders is vast.
- Well-experienced labor force.
- Russia's increasing military budget will have a positive impact on local aircraft firms.
- Specialty aircraft production is gaining more global momentum.
- Azov-Don shipyards are attractive for potential joint-ventures due to low overhead costs; strategic physical locale and experienced workforce.
- New \$280m. Universal Port project will create jobs, more modern facilities and should accelerate investor interest in the region.

Threats

- Aircraft, shipbuilding and agricultural machine building are highly capital intensive and entail considerable risk.
- Experienced workforce needs re-training to adapt to hi-tech manufacturing.
- Mounting competitive pressure from Chinese and other Asian players could seriously impact market shares in both shipbuilding and agricultural sub sectors.
- Reliance on imported marine and aircraft electronic components and potential increased customs duties on these parts will erode margins.

