Georgia Tech The Center for Paper Business and Industry Studies

CPBIS

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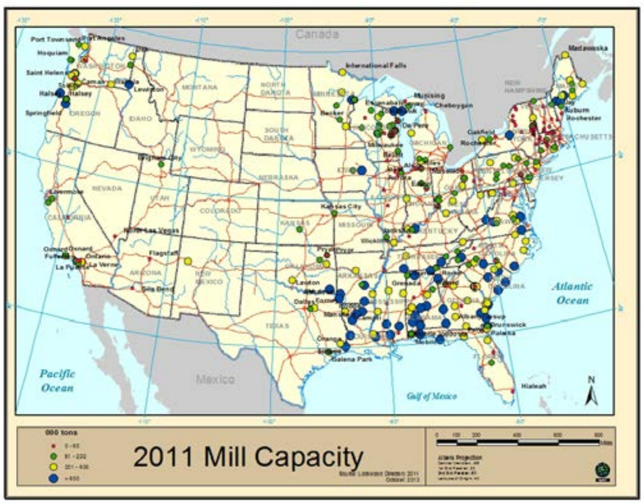
US Capacity: Comprehensive New Report Now Available from CPBIS



Based on the Center for Paper Business and Industry Studies at Ga Tech MillsOnLine database, this report, by Dr. Patrick McCarthy, CPBIS Director and Georgia Tech Professor of Economics, details 2011 U.S. pulp and paper capacity. The report provides information on total operating capacity at 345 mills in the U.S. Further, the report looks in more detail at geographic distributions of capacity, by Census regions and states. Among the findings, Alabama, Georgia, Louisiana, Wisconsin, and South Carolina have the largest operating capacities and the amount of capacity withdrawn exceeds existing capacity. Focusing upon the top five companies, the report highlights their product diversity and geographic distribution, reflecting strategic decisions in terms of what to produce, where to produce, how much to produce, and the number of production facilities. . The Final Report is available for purchase on the CPBIS website (http://www.cpbis.gatech.edu/support/products).

Xativa: Where European Paper Began

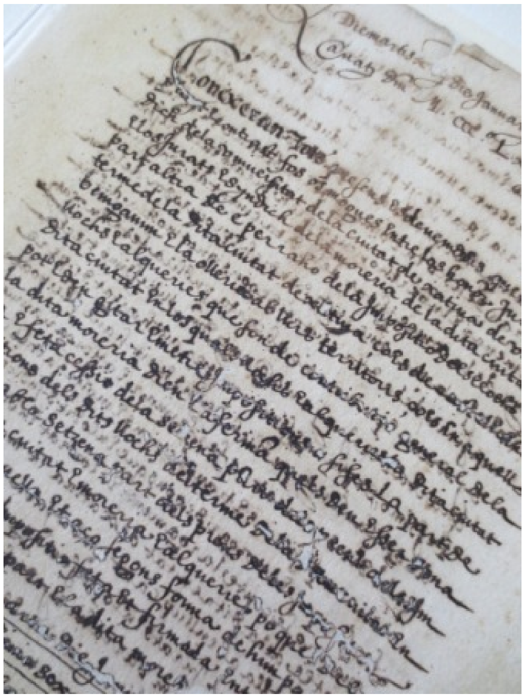
by Heidy van Beurden

How do you turn a precious, but invisible, paper legacy into tangible opportunities? That's the challenge I investigate with great support from local entrepreneurs, historians and citizens in the city of Xativa (province of Valencia, Spain). This is a beautiful, authentic Spanish city with narrow streets and hidden patios, as well as the bustle of modern life. Most visitors stop over for the fabulous castle on top of the hills, but they do not learn about the technology revolution that took place in this city in ancient times, from which we still benefit. Xativa introduced Europe to the art of papermaking, following China and the Arabic world.

Historic relevance: improved communication
Surviving documentation strongly suggests that Xativa is the city where European paper history started. In 1154, geografó Al Idrisi wrote: *"(in Xativa)….. they produce paper of a quality like nowhere else found in the world."* It is said that the city's well-known linen fabrics in Roman times eased the way for Xativa to flourish in paper manufacturing. Surrounding areas in the province of Valencia were part of this paper history too, including the nearby paper mills of Alcoy.

The municipal archives of Xativa are the proud owner of valuable papers from medieval times, including examples from the years 1380 (see photo) explaining the rights and obligations of the citizens at that time. The pieces clearly show how the structure of paper evolved over time and how this led to improved readability and thus improved communication.

Local memories
What fascinated me as a first-time visitor and one with a background in communications, was the lack of



Medieval paper document in the Xativa archives

reference to this precious past. Paper does not play a role in Xativa's tourism strategy. And the paper theme is not a significant part of current social or economical initiatives (except for one existing paper mill, Hinojosa, with facilities covering 100,000 m^2 producing packaging for the agriculture and tile industries).

When talking to the locals, I learned that there is only one paper era in the city that brings to the surface the most positive associations with papermaking in the community: Gregorio Molina's Xativa paper mill, which was operational in the 1930s, 40s and 50s. "It was more than work; it was an institution in the city", citizens say. "Working in the paper factory meant complete devotion and fidelity." Many of the former employees still live in the housing blocks built for them at that time. Their children tell of memories of those days, such as the participation by their whole family in the traditional (Catholic) processions in the name of the company. Old chimneys at the border of the city are the only visible remains of this time in the city.

Relevance of paper today

Why is this all relevant? On the one hand there is little awareness of the true historic value of the paper industry in Xativa, and thus of potential business models for new paper initiatives. At the same time, when viewed from a global perspective, the international world of paper is booming, alongside the digital revolution. Paper use in nontraditional applications, as well as in art, design and fashion, represent new opportunities. Xativa could take on a role in education and inspiration regarding the quality and durability of authentic paper materials, and attract specific target groups in creative sectors and the field of sustainability.

What remains of the Gregorio Molina Xativa paper mill.

As a first step toward the goal of turning the paper legacy into tangible opportunities, the three eras will be connected in a permanent exhibition. The aim is to link ancient history, community memories from the twentieth century bringing the theme alive, and future perspective, for which all contributions and suggestions from the global paper industry are still very welcome. The exhibition is expected to open in March 2014.

In communications I notice, despite the pros of tablets and shared online information, a tendency to appreciate authentic writing and straightforward content. In this context, offering writing courses in the city of Xativa is another step to turn the paper legacy into tangible opportunities. It is worth knowing that the inventor of the fountain pen was also born in Xativa, which gave another boost to improving communications from which the world still benefits today.

More information about upcoming activities: www.paperexperiencexativa.com

Editor's note: Ms. Van Beurden is a communications specialist and editor working for governments, the private sector and the non-profit sector, mainly in the area of energy efficiency and smart cities. She lives and works in both Xativa and Amsterdam.

AF&PA Statistics

Since our last reporting of American Forest and Paper Association statistics releases, the Association has issued reports on paperboard, kraft paper and printing and writing papers. Below are the key findings:

Paperboard

Total August boxboard production increased by 2.8 percent compared to August 2012, and increased 3.2 percent from July. Unbleached kraft boxboard production increased over the same month last year, and increased compared to July. Total solid bleached boxboard & liner production increased compared to August 2012, and increased compared to July. The production of recycled boxboard increased compared to August 2012, and increased when compared to July.

Kraft Paper

Total August kraft paper shipments were 135.4 thousand tons, essentially flat compared to July. Bleached kraft paper shipments increased year-over-year 13.2 percent, but the 4.4 percent year-over-year decline in unbleached kraft paper shipments was enough to bring overall kraft paper shipments down 2.1 percent year-over-year. Total month-end inventory also remained essentially flat compared to July 2013.

Printing andWriting

Total printing and writing paper shipments decreased 4 percent in August compared to August 2012. Additional key findings:

August coated free sheet (CFS) papers shipments decreased 5 percent compared to August 2012, with year-to-date shipments through August essentially flat compared to 2012. U.S. imports of CFS papers decreased 6 percent year-over-year in July.

Uncoated free sheet (UFS) paper shipments decreased 3 percent in August. For the year, shipments are down 3 percent in 2013. U.S. exports of UFS papers in July increased year-over-year for the fourth consecutive month.

August uncoated mechanical (UM) paper shipments decreased 7 percent when compared to August 2012, with year-over-year imports through June up 6 percent. UM exports are up 12 percent in 2013 compared to the first seven months of 2012.

Coated mechanical (CM) shipments in August decreased 6 percent compared to August 2012. Shipments of CM are down 11 percent for the year, with imports up 4 percent year-over-year through July.

Trend Indicators from Industry Intelligence Inc.

Industry Intelligence Inc. has provided market intelligence to more than 600 companies worldwide since it began as Forestweb in 1999. Industry Intelligence delivers a daily report featuring news of the paper and forest products industries. For your subscription visit: http://www.industryintel.com

Below is a selection of recent headlines chosen to mirror significant trends in and around the paper and forest products industries.

Morningstar: SCA's resurgent forest products segment turns in best quarter since 2010, and along with tissue segments, drives strong Q3 results, expects to slightly increase fair value estimate of SEK139

Higher Tissue margins were supported by synergies related to last year's Georgia-Pacific European tissue acquisition.

World tissue capacity to continue growing in 2014, with another 2.7 million tonnes/year to start up, reports MarketPulpMonthly; most growth is in China, but US market also affected as competition, pricing might heat up if not already, say analyst

In the U.S., tissue capacity has risen by 325,000 tons/year since the end of 2011, RBC Capital Markets stated.

Paper consumption in Middle East hits 20 million tonnes in 2012, up 11% from 2010; region imports 100% of its printing, stationery paper, with China, Indonesia and India as largest exporters

However, the UAE alone has 5 major tissue mills, namely Abu Dhabi National Paper Mill, Crown Paper Mill, Emirates Paper Mill, Queenex Paper Mill and Fine Hygienic Paper, together meeting 60 per cent of local demand, while the rest is met by imports.

Quality of UK electricity drops as share of renewable energy rises, which could potentially cause outages, experts warn; influx of renewable energy makes it more difficult to maintain stable current power grids need to maintain

Experts warn that the rise of decentralized and unreliable renewable capacity makes it more difficult to maintain a stable frequency, reducing the quality of supplies and potentially collapsing the grid.

Pratt Industries celebrates production of 6 million tons of recycled containerboard at its Conyers, Georgia, paper mill; company recently passed 5-

million-ton mark at its Staten Island, New York, recycled containerboard facility

The 196" wide Voith Paper machine, designed in 1995 to produce 720 tons per day, today produces more than 1000 tons per day of recycled linerboard and corrugating medium at speeds up to 3400 feet per minute.

Disney develops paper generators to replace batteries

The paper generator allows users to interact with products by pressing, rubbing or sliding on a piece of electric paper that could, for example, light up an array of LEDs.

Fortress Paper to swing production at mill in Thurso, Quebec, between dissolving pulp and hardwood kraft pulp, providing flexibility and maximizing margins in response to market conditions; company expects no downtime needed to modify to 'swing' operation

Given current market conditions for dissolving pulp, the Company has determined that the FSC Mill can improve margins by redirecting its production capacity to lower-cost NBHK pulp production.

New York coffee roaster and retailer switches to more sustainable, omni-degradable kraft paper bags, which were supplied by TekPak Solutions, a Toronto-based innovator in compostable and biodegradable packaging materials

Gimme! Coffee wanted a more sustainable alternative to its old mylar bags.

Uruguay ready to allow UPM to boost capacity at its Fray Bentos pulp mill if company meets stricter environmental requirements, says country's president; company seeking to boost production to 1.4 million tonnes/year

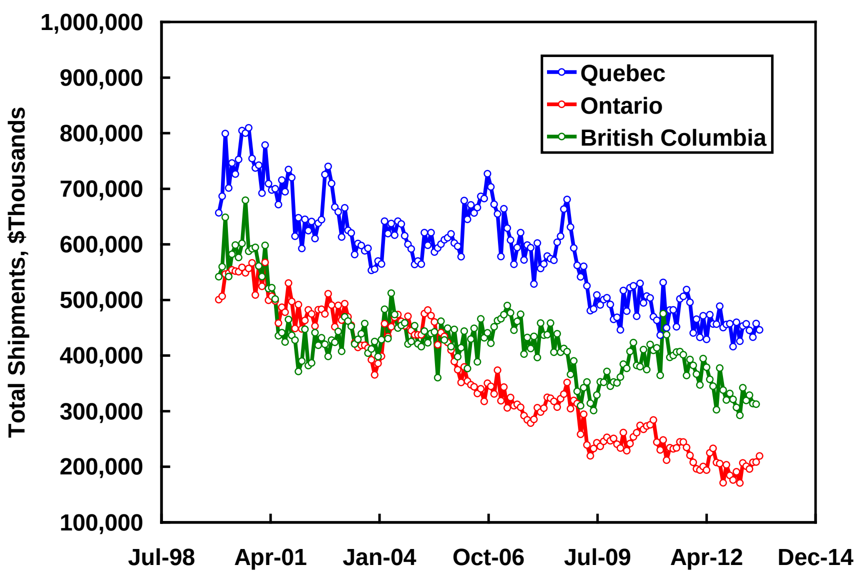
UPM will have to ensure the plant lowers the temperature and amount of phosphorus in the water it returns to the river.

KiOR to build second production plant, doubling capacity at its cellulosic fuels facility in Columbus, Mississippi; US$225M project will further company's progress toward achieving long-term goal of producing 92 gallons of biofuel/bone dry ton of biomass

The company expects to achieve greater yields, production capacity and feedstock flexibility than the original design basis for the existing Columbus facility.

Statistics Corner: Canadian Paper Shipments

As illustrated in the figure below, the decline in shipments of pulp, paper and board by the major paper-producing provinces mirrors that seen elsewhere outside of Asia, although BC has fared somewhat better than eastern Canada.■



Pulp, paper and Board Shipments by Major Paper Producing Canadian Provinces

(Source: Statistics Canada)