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Strategic Options for Enterprise Transformation

In a paper presented at a CPBIS-sponsored session of the recent TAPPI Engineering, Pulping and Environmental Conference, S. Pätäri, K. Kyläheiko, and J. Sandström of the Lappeenranta (Finland) University of Technology School of Business examined methodology by which pulp and paper industry companies challenged by the realities of today's operating environment can identify potential paths forward. The paper, "Opening Up New Strategic Options in the Forest Industry: Case Biorefineries" draws on modern management theory to take a structured look at how companies can identify and evaluate alternative new business models. As the title indicates, the authors illustrate the approach with reference to the biorefinery as a strategic option.

The approach is based on the resource-based view (RBV) of the firm, which sees the firm as a collection of resources that are a potential basis for competitive advantage, and more particularly on the "dynamic capability" extension of the RBV model. The dynamic capability approach examines the processes by which firms build competitive advantage in a rapidly changing environment. An outgrowth of these models is strategic options theory, which sees an organization's resources as a bundle of options for future strategic choice, while addressing both the uncertainty and rapid change inherent in the operating environment.

Applying this thinking to the biorefinery case suggests the following steps:

1. Sensing signals from the operating environment: the Kyoto Protocol; environmental awareness among consumers; increasing global interest in forest-based raw material and biomass-for-energy business.
2. Building strategic options to capture the upside potential: forming strategic partnerships with entities such as research institutes and energy industry companies to complement the resource base and to gain new knowledge; feasibility studies relating to the raw material, technology and markets; investing in pilot plants; understanding the global economy (energy regulation, subsidy policies, political risks, etc.).
3. Hedging the downside risks: if necessary, scaling down, deferring or abandoning the investment; managing strategic partnerships, e.g., with appropriate contracts; exercising learning and waiting options if first-mover advantages are not strong; protecting knowledge assets (e.g., by patents or secrecy); committing and rewarding human resources.
4. Exercising the strategic options: investing in technology, physical assets and knowledge
5. Reconfiguring the existing knowledge base and capabilities to sustain the newly acquired competitive advantage.

Further details are available from the corresponding author, S. Pätäri (satu.patari@lut.fi).

PEERS: An Opportunity to Interact with Industry

Authors are invited to participate in CPBIS-sponsored sessions in the business and industry studies track at this year's TAPPI PEERS (Pulping, Engineering, Environmental, Recycling) Conference, October 17-20, 2010 in Norfolk, VA. Examples of topics that would be of interest to this large audience of industry delegates include market studies, human resources issues, competitive strategy, industry structure, innovation, business practices, mill management, supply chain management, and similar topics. This is an opportunity to showcase your work to potential industry sponsors of, or participants in, your future work. Complimentary one-day speaker registration is available. Authors interested in presenting a paper should submit an abstract to tom.mcdonough@cpbis.gatech.edu. Requests for further information can also be sent to this address.

The deadline for abstract submission is March 9, 2010. Authors will be notified by April 15 regarding acceptance. Preprint manuscripts will be due on June 30, 2010.

Recent Forestweb Headlines

Every week, Forestweb publishes "Newsbeat," a news report tracking recent developments in and around the paper and forest products industries. Newsbeat is available by subscription from Forestweb. See http://www.forestweb.com/Corporate/index.cfm

Below is a small sampling of headlines from recent issues, together with brief synopses.

February 15

Year-over-year U.S. printing and writing shipments up again in January, marking third straight month: AF&PA

January's results marked the third straight month in which the figures were positive, after declining the prior 21 months in a row.

February 8

Severe supply constraints likely to keep global pulp market firm well beyond first quarter; no consensus on price peak

The main concern of customers is to get the tonnage.

Domtar contracts Metso with rebuild of fine paper machine at its Plymouth, North Carolina, mill for fluff pulp production

Fine paper machine will be rebuilt and converted to fluff pulp production.

AF&PA: December U.S. paper and paperboard production up 9.5% year-over-year as printing and writing, containerboard post healthy gains; total 2009 output down 10.2% from 2008

Recently released AF&PA statistics for December show a 5.1% year-over-year gain for printing and writing papers. In addition, containerboard output surged by 22.6% compared to last December and total paperboard production increased 14.8%.

Canada promises C$292.5M to help forest products sector develop biomass energy

The pledge came the same day as an industry group called for dramatic change to keep the forestry business viable. The Forest Products Association of Canada released a study saying integration of traditional lumber operations with biofuel and biochemical production could revive the sector.

February 1

PPPC: Deceleration in North American newsprint industry decline continues in December, especially in U.S., with year-over-year single-digit drops and one percentage point operating rate gain

Newsprint shipments from the U.S. in December fell a relatively modest 5.2% from a year ago

Renewable energy prospects tour IP paper mill in Franklin, Virginia, slated for spring closure

Renewable energy companies are potentially interested in the site's infrastructure. In October, IP announced plans to close the 600,000 t/y uncoated freesheet and coated paperboard mill.

January 25

German renewable power company RWE Innogy, Sweden's BMC to open US$150M bioenergy plant in Waycross, Georgia; facility to produce 750,000 tons of wood pellets annually for export to Europe

New plant will create approximately 75 direct jobs.

Pulp producers expect further price hikes in February as customers scramble for tonnes amid very tight supply around world

Further hikes would follow what has turned out to be quick implementation of January increases.

China looks to possible improvement in demand from exports and domestic consumption to mitigate effect of rising Chinese paper capacity in 2010

New capacity may trigger periodic imbalances in supply/demand and send prices of raw material higher.

U.S. containerboard production jumps 23.4% in December from year earlier; mill inventories at lowest level in 15 months

The increase included a 65.0% increase in containerboard produced for export.

Flambeau River Biofuels moves ahead on US$250M green diesel project in Park Falls, Wisconsin; biorefinery will burn sawdust, bark, wood not required for adjacent pulp and paper mill

The project will proceed if pilot plant trials are successful and if the U.S. Department of Energy approves loan guarantees.

Statistics Corner: Estimated Industry GHG Emissions

Table 1 (next page) contains estimates of emissions constituting the greenhouse gas profile of the global forest products industry. The data are taken from an article by R. Miner and J. Perez-Garcia [Forest Products Journal, **57**(10): 80-90 (2007)]. These are best available estimates, but there is considerable uncertainty surrounding each. See the original article for details. Emissions are largely offset by sequestration in forests, products and landfills

Table 1. Greenhouse Gas Profile of the Global Forest Products Industry

		Million tonnes CO_2 equivalents
Direct Emissions	Fuel consumption at pulp and papermills	205
	Fuel consumption at wood products facilities	25
	Management of mill wastes	20
	Secondary manufacturing operations (i.e., converting primary products into final products)	12
	Total direct emissions	**262**
Indirect Emissions	Electricity purchases by pulp and paper mills	140
	Electricity purchases by wood products facilities	40
	Electricity purchases by secondary manufacturing operations (i.e., converting primary products into final products)	13
	Harvest and transport emissions from the pulp and paper value chain	40
	Harvest and transport emissions from the wood products value chain	30
	Methane emissions from forest products decomposition in 250 anaerobic municipal solid waste landfills	250
	Total indirect emissions	**513**
Sequestration	Sequestration in sustainably managed forests	-60
	Sequestration in products in use	-200
	Sequestration in products in landfills	-340
	Total Sequestration	**-600**

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