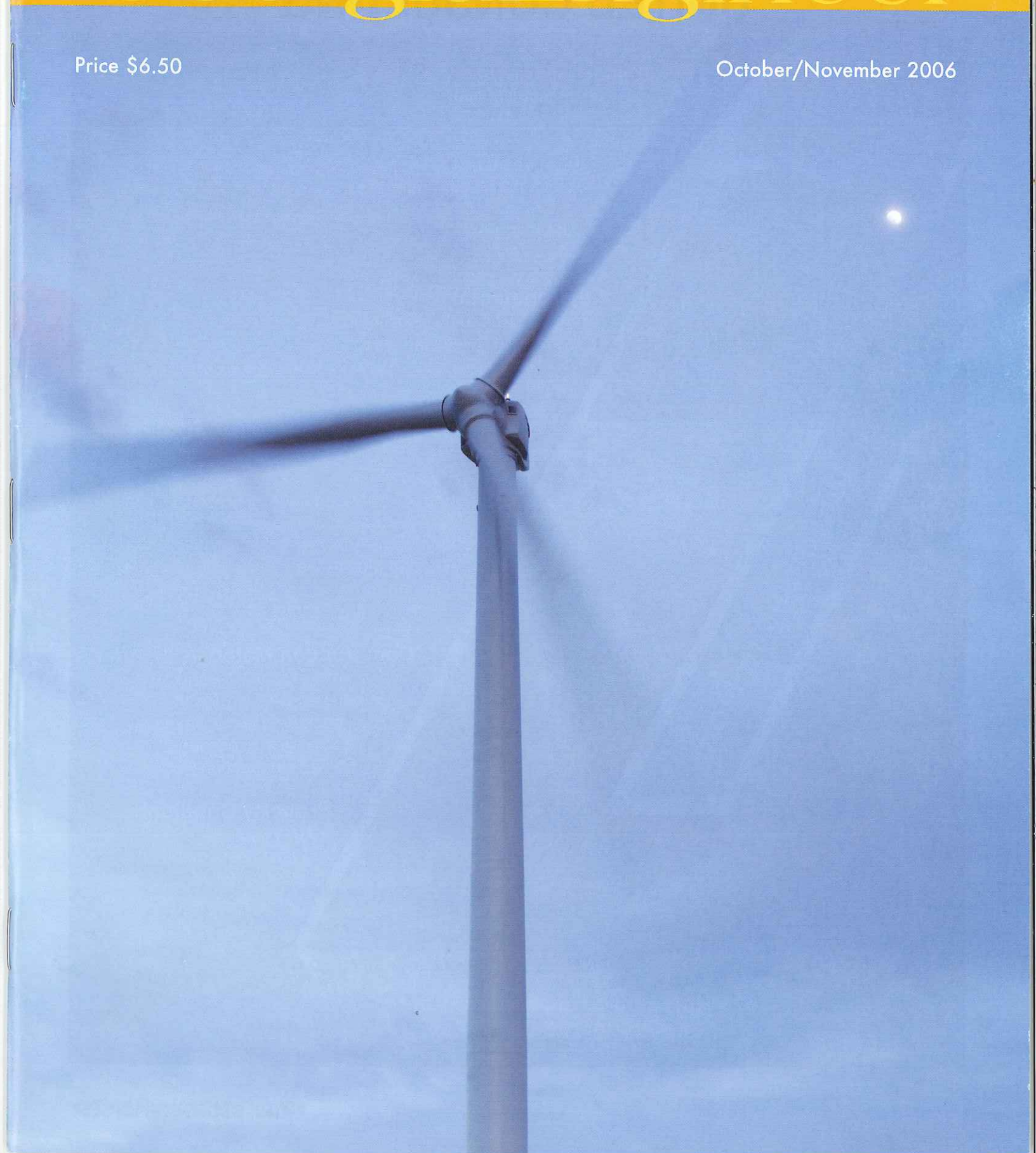


BUSINESS OF ENGINEERING AND EDUCATION

the
GeorgiaEngineer

Price \$6.50

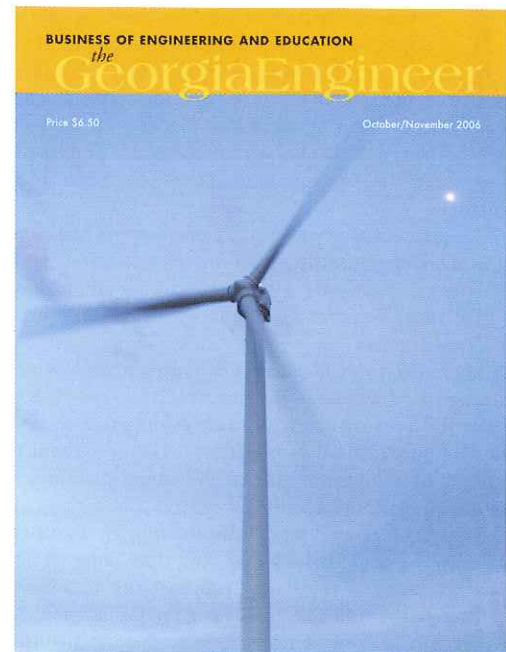
October/November 2006



THE GEORGIA ENGINEER

October/November 2006

- 8** ICB Chapter 17 Special Inspections
- 12** Bridging The Gap
- 13** Buying A Building for your Company
- 15** Contract Hygiene for Engineers
- 19** QBSGeorgia.org
- 22** What's in the News
- 25** Georgia Engineering Foundation
- 26** Georgia Board of Registration for PE/LS
- 27** Exploring Engineer Academy at Georgia Tech
- 30** Ready for Change? How to Get it Together
- 33** The Business of Running a City ~ Sandy Springs, Georgia
- 36** TPL Announces Sale of Belt Line Property
- 37** Changes in Engineering Lead to Growth and Change in SPSU
- 44** Investing in Tax-free Bonds
- 45** The Hidden Liability ~ Sponsoring Pension Plans
- 46** How Big Do You Need to be to use Sophisticated Software?
- 47** Successful Sabbatical Strategies for Business Owners
- 48** Helping Improve Atlanta's Infrastructure
- 49** FAA Contracting Then & Now
- 52** New Wind Turbine Drive-Train Design
- 57** Encouraging Students to Pursue Transportation Education



On the Cover ~

New Wind Turbine Drive-Train Design

Over the past decade, land-based wind turbines have grown in size from about 700 kW to well over two MW. This up-scaling in size, however, has subjected gearboxes and other components to ever-increasing loads and stresses. Traditional gearing and bearing manufacturers, in particular, are struggling to scale existing technology to power these megamachines while maintaining tolerances.

Story on Page 52.



ACEC
58



ASCE
42



ASHE
62



GMCEA
40



GSPE
50



ITE
60



SEAOG
18



WTS
56

Ready for Change? How to Get it Together

By Ruth Middleton House

Wh o knew? Nothing in your technical education prepared you for the amount of time you spend dealing with “people problems” and organizational issues. Yet here they are.

Some people have described project management as “getting results across the knotted line.” Even when it is “business as usual,” the project manager’s job is a tough one. There is huge pressure from the client to meet tight deadlines, control costs, maintain quality standards and ensure a good overall client experience. As you move into implementation, differences in expectations that seemed unimportant earlier become more critical. Deliverables that everyone agreed to in broader terms earlier now come under scrutiny detail by detail. Detail by detail much of that earlier agreement has dissolved.

The job gets even tougher when it must be completed in the midst of growing pressure from within. Joint ventures, mergers and acquisitions disrupt the way business is done inside the organization.

- Processes, methods and procedures that once worked smoothly may be overridden by new ones that are untested.
- Relationships may become strained and even break under the pressure. A breakdown puts more than an individual relationship at risk, it can weaken the entire project infrastructure as well.



- Changes in staff, policy, or philosophy turn up the pressure even more.
- Business models of the companies merging or in joint venture may not be a good fit; they may even be in direct conflict with each other.

Your financial people assessed the financial risks; everyone is clear what the financial benefits of a successful joint venture, merger, or acquisition would be. But did anyone ask the follow-on question: what are the organizational risks? Can your organization handle a major organizational change and keep delivering on-time, within budget, quality projects at the same time?

You have the technical capacity to deliver project excellence; you have the financial capacity to make the change; now it is time to focus on organizational capacity. And you can do that by asking and answering these four questions.

Where are the gaps in your organization? Scan your organization—undergo a kind of MRI of organizational alignment. Get input from the people doing the work. Where are the communication gaps between levels, groups, or people in the organi-

zation? Where is the conflict? What processes are broken or missing? What part of your business model is working/not working?

This broad assessment not only points to problems, it also points to solutions. Since it is based on people’s perceptions, it won’t give you “The Answer”; it will tell you where to look for answers. It can lead to activities that heal relationships in the short term so that people are willing to work together. It can also lead to a revised, ongoing approach to getting alignment and keeping it over the long term. It may even bring to light the need for a revised business model among the cooperating or merging companies.

How ready are your people for change? Stress can drain the energy needed to deliver the work and to implement the change. How well do your team members handle it? Unfortunately, frustrated team members under stress may take out their frustrations on each other. Sarcasm, blaming others, and contrived conflict will only make matters worse.

Before you undertake major change you may need to improve morale and operations in the short term. This could be the time for stress management/conflict management

training; general alignment across departments at the leadership level; a high-level “As-Is” process review; and other short-term activities.

Getting your people ready for change sets the stage for improved, ongoing communications and alignment from top to bottom—and from bottom to top.

How quickly and accurately does information get from the decision makers at the top of the organization to the people doing the work? How quickly and accurately does information get from the people doing the work back up to the people making the decisions?

Project by project, things happen fast. Your project teams are used to that and they communicate within the team accordingly. However, that real-time communication hasn’t carried over to organizational change. The executive team in a large corporation was shocked by this finding: two years after they announced a change in direction, the people doing the work still didn’t know how the change affected their jobs. For all that time, the people at the top were headed West while the people doing the work were still going East.

One department changed that pattern and changed their



“Quality in Transportation and Site Design”

1950 Greensbrooke Close
Stone Mountain, GA 30088-4434

www.lcwengineeringinc.com
lwashington@lcwengineeringinc.com

Phone: 678-860-3018 • Fax: 770-593-9594
Cell: 678-557-8020

business results. That department established full operating alignment (up and down the organization, across groups and between people) through 90-120-day cycles of management planning, feedback from employees, action and review.

Within those cycles, management used e-mails, newsletters, and a website to get the news out to all employees all at one time. Volunteer employee teams met weekly or bi-weekly and gave management up to date information about what was really going on at ground level. They even proposed high-quality, actionable solutions.

After six months of working together in a new way, the department was ready to roll out a new strategic initiative. This time, it didn't take two years to get alignment: it took two days.

How well does your business model fit with the current market environment? With the business models of your partners in joint venture or in the merging organization?

With concurrent, ongoing alignment from top to bottom and bottom to top, any problems with your existing business model are more likely to surface. Doing the wrong thing well won't get you where you need to go.

Shifts in the economy, shifts in the law and shifts in political power can bring about abrupt changes in your client market: priorities, project funding, and sources of funding all change. The business model that delivered for you ten years ago may not work now.

Entering a joint venture or merging companies can complicate matters further. Mis-fitting or conflicting business models may even obscure who is doing what—and why.

Aligning operationally within the company may not be enough: you may need to realign across companies in order to face (and serve) the market in the same way. To succeed in a changing client market and with a new company configuration, you may need to start over with the basics: create a new business fact base; develop an integrated business framework of strategies, programs, and measurements; design a joint implementation plan.

The Results

Your goal is to get results in the short-term that will last over time.

In the short term, getting people ready for change reduces stress levels to allow for optimum performance. At the same time, it

allows the organization to maintain a sense of urgency without the negative side effects of fear.

Ongoing, concurrent alignment and an updated, consistent business model produce long-lasting results that can be measured in three ways:

- Measurable improvement in employee morale in 120 days.
- Measurable improvement in the client experience in six months.
- Measurable improvement in key financial/business metrics in one year. ❖

Baker
ChallengeUs.

Program and project management for civil and transportation infrastructure, planning, and engineering design.


Michael Baker Jr., Inc.
2835 Brandywine Road, Suite 200
Atlanta, Georgia 30341
Phone 678.459.1010 • Fax 678.459.1030
www.mbakercorp.com


LONG
ENGINEERING, INC.

A Female-Owned Business
LEED™
Accredited Professionals

Land Development
Water/Wastewater
NPDES Compliance
Planning/Permitting
Transportation/Traffic
Land Surveying
Construction Management
Stormwater Management

2550 Heritage Court Suite 100 Atlanta, Georgia 30339 Ph 770.951.2495 Fax 770.951.2496 Certified DBE/FBE	1780 Corporate Drive Suite 400 Norcross, Georgia 30093 Ph 770.931.8005 Fax 770.931.8555 www.longeng.com	Long Jackson & Associates, LLC 550 Franklin Road Suite 202 Nashville, TN 37220 Ph 615.221.1131 Fax 615.221.1132
--	--	--

 **Prestressed Concrete Tanks**



6.0 MG REUSE WATER STORAGE TANK
FORSYTH COUNTY DEPARTMENT OF WATER AND SEWER
CONSULTING ENGINEERS:
METCALF & EDDY, INC.

High Quality • Long Life
Virtually Maintenance Free

THE CROM CORPORATION
Builders of Water and Wastewater Tanks
250 S.W. 36TH TERRACE • GAINESVILLE, FL 32607
PHONE: (352) 372-3436 • FAX: (352) 372-6209 • www.cromcorp.com