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Thinking Out Loud: Webcor Builders CEO Andrew Ball

Ever since experimenting with his first computer as a young engineer in the early 1980s, Webcor Builders' CEO Andrew Ball has sought to make construction—one of the most information-intensive industries—more efficient with technology. Silicon Valley writer Margaret L. Young asks Ball about his controversial move to bring e-collaboration to the business.

CIO INSIGHT: What's so great about e-collaboration?

Ball: We think we can do more with fewer people and produce better results. We all get squeezed on the cost side of things, so there's always the desire to achieve productivity gains. IT can help you boost productivity considerably.

Consider the Empire State Building, which was finished in 1931. That building actually took 14 months to build. There was an incredible number of people killed. You had very few building regulations back then. There was no testing, there were no inspections, there was no overview. They just went out there and built it. Today there are, at every step of the way, a variety of agencies—federal, public, private—reviewing every little document, every little piece of a project. There's also a great deal of liability; insurance companies are involved at every level.

Our industry, in general—and the world, in general—has made an attempt to create an equitable solution to the problem of safety and liability. We've created such a complex environment that we now have to deal with that environment in different ways. But the reality is that you couldn't build the Empire State today as fast as they did before. Today, it might take an average construction company 10 years to build the Empire State. Information technologies, plus procedures we've developed, can save a lot of money and help to ease some of those time delays.

How does Webcor use networking technology?

For one, the trailer now is our virtual office. It has access to all of our databases, our records, our communications, everything. The person in the trailer also has a laptop and a Palm handheld. And what we're driving now is the development of wireless features that will allow us to take everything out in the field. It's all about project management, really—a better way to do it.

The construction business is averse to technology. What happens when you can't convince developers, or hardhats, to use it?

When we hire subcontractors, we require them to participate in e-collaboration, to buy computers, put in networks and so forth, and increasingly we'll do business only with those who can do that.

Construction is very resistant to change. People still use pencils and tons of paper. Blueprints are still sent around, loaded up on trucks. Getting one change in a building requires thousands of new pages of blueprints to be redone and distributed. It's extremely time-consuming and expensive.

Collaboration means changes in process and changes in the way you manage. Instead of managing construction, you also now have to manage how people responsible for all the different jobs are managing information flow about what they're doing.

Participation must be required, through incentives or in some cases, having someone at the job site making sure people are using their information devices to transmit information. When it's done right, e-collaboration gets rid of lag times. It takes wasted time out of processes. With e-collaboration, you no longer think in terms of days and weeks, but more in terms of hours. The

feeling that I can procrastinate, that I won't be held immediately accountable for something on my watch is being eliminated. Now, everything is there for all to see.

We're not at the point yet where we can guarantee a client that we'll meet a building deadline and come in at cost, but we're getting close. Once we can do that, our competitive edge will just become that much stronger. And the implications for everyone up and down the food chain—faster buildings, cheaper projects, different designs—are enormous.

What next?

Handheld wireless is absolutely the most important thing in the future. The biggest obstacle to that right now is that we need faster, more reliable download speeds. You really have to have broadband. Blueprints contain lots of dense information, and they can take a lot of time to download.

I also envision the day when we'll have roll-up plastic screens that can receive digital images, a kind of electronic blueprint. The technology is there. We zap around blueprints now, but someone's still got to print them out locally. The next step is roll-up plastic screens, so you never have to make a paper printout. That day is getting closer all the time.

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