



LETTER FROM CHRISTIAN BURGER

Each time I sit down to pen this letter, I begin by worrying that there is not enough new going on to make it worth your time ... then, after stopping to reflect on the previous four or five months, I am amazed at the events that continue to shape our industry. BIM, *SharePoint*, ECM, and field data-capture technology are just a few of the larger trends evolving quickly in our space.

In addition, business intelligence and cloud computing are also developing and being adopted at an increasing rate.

Burger Consulting has not been idle during this year either. In addition to helping many clients with selections and implementations, we have been attending a number of conferences, presented by both associations and user groups, as well as keeping up on technology from outside our industry and working on specific development initiatives with the vendor community. The result of all this effort is expressed within the newsletter.

In terms of specific developments that we are watching closely:

1. One recent client has deployed **NoteVault** (<http://www.notevault.com>) to positive effect. This is a well-known solution by now that allows a superintendent in the field to call a predetermined number and verbally provide his “daily report,” which is then transcribed. The information is also reviewed by someone with an engineering background looking for “problems” or risks that may be inherent in the report but not obvious to a layperson doing the transcription. This application provides the report in a PDF format, which then creates a document storage consideration, especially when the company has 20 jobs or 200, and they are getting one or two reports per day from each. This is another good use of ECM technology that could also be integrated with the PM solution.
2. In spite of the economy and near-depressed conditions in construction, contractors are continuing in large numbers to address their ERP solution situations. They are either holding fast with the solutions they have – upgrading and/or integrating them with other solutions – or replacing them. This focus has meant nearly record years for companies like **Viewpoint**, **Penta**, and **CMiC**. Keeping up with the implementations seems to be the most difficult challenge they face now. As the saying goes, a good problem to have.
3. For lack of a better word, the “turmoil” in preconstruction solutions also bears watching. BIM is the first and perhaps largest technology disrupting that space, causing many software developers to reconsider their strategy and product path. Also, as the estimating products expand away from their core functions (i.e., estimating and bidding), they are colliding with other products that they have not competed with before (e.g., plan room, subcontractor prequalification, conceptual estimating). This situation is causing competition inside the construction organization and new decisions having to be made around where certain precon data will be stored and which solution(s) should be used. This promises to be one of the more dynamic areas in construction IT over the next several years.
4. And I would be remiss if I did not mention the progression of mobile technology out in the field. More companies are deploying data solutions to the field, which is creating a need for better connectivity, both in terms of reliability and speed. And solutions are being deployed for capturing units of production, labor hours, safety inspections, meeting minutes, and equipment usage. The same technology in many cases can be used to deliver information to the superintendents or site engineers in the field. This obviously places considerable pressure on the generation of software developers that built solutions for a specific device or OS. Many now need to redeploy their dedicated solutions to be more platform-independent.

As you can see, there is no shortage of issues to monitor. You are welcome to reach out to Angus or me with any specific inquires you may have.

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New Yorker Cartoon

LEGEND

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Software Vendor Name

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Software/Product Name

AGC IT FORUM RECAP

AGC's IT Forum Conference was held in Chicago this year and had an outstanding turnout and excellent results. The event concentrated on *SharePoint*, ECM, mobile field technology, "cheap IT," IT trends, and budgeting and reporting on IT costs. IT metrics were also a focus, which BCG supported with a presentation from the new IT Metrics Survey we produced. Many BCG clients, representatives from the vendor community/exhibitors, and some new friends were at the conference. The networking opportunities were plentiful, and the CIOs and IT managers in attendance shared both strategic ideas and practical advice. If you did not make it to the IT Forum this year, consider attending next year. It will be in Chicago again, and the line-up will be even better.

NORTHWESTERN UNIVERSITY'S BIM SYMPOSIUM

Northwestern University's McCormick School of Engineering recently hosted its first BIM symposium at its campus in Evanston, Illinois. Attending were about 130 participants representing owners, architects, engineers, and contractors. Under the heading of "Technology for Design and Construction," the event allowed presenters to discuss and share actual experiences and provide the attendees with actionable advice and real-world examples.

Presenters included Pepper Construction, Bovis Lend/Lease, Limbach Facility Services, Walsh Construction, and Crate and Barrel, as well as a few developers such as **Trimble/Meridian**, **Horizontal Glue**, and **EcoDomus**. Interestingly, some of the presenters were the same ones featured at another BIM event earlier in the year. However, the presentations were more focused and seemed to be better received at the symposium.

There was consensus among the presenters that a single BIM model does not fulfill the needs of all parties from design through facilities management. A design intent model, a construction model, and a facilities maintenance model exist in different forms. These models will share some elements, but will vary because each serves a particular function. The presenters also agreed that identifying and involving partners in the process as early as possible significantly improves efficiency and reduces risk. However, to use BIM most effectively, contractors need to develop a BIM execution plan that is very specific regarding factors like the tools that will be used, the level of detail, and the hierarchy for systems coordination. Communicating with disciplines during the preparation of the execution plan about their requirements from a model and their level of understanding is also vital.

The symposium also touched on technology solutions that facilitate the 3D design and construction process. **Horizontal Glue** provides a cloud-based solution for BIM collaboration that allows the streaming of models to remote users and connects the model to other systems (e.g., scheduling, estimating, and facilities management) via web services. **Horizontal Glue** works with a wide variety of CAD products, including those from **Bentley**, **Autodesk**, **ArchiCAD**, **Google**, and **Tekla**. **Trimble**, with its **Meridian** and **Tekla** acquisition, also offers an integrated solution, linking project documentation to the model and providing the tools to enable BIM in the field. Both vendors presented well and supply good solutions for the future of BIM in the construction industry.

BCG LAUNCHES THE ECM SCORECARD

Burger Consulting has developed and released one of our most innovative products in the last couple of years. It is an ECM Scorecard developed currently for the **Construction Imaging** customer base, though it could easily be adapted for other ECM products. The process combines a brief survey followed by a structured one-day on-site interview. The resulting report includes a benchmark rating for the quality of the ECM implementation (in this case, **Construction Imaging** products) compared to targets, averages, and best-in-class values where available. The process is enabling CIOs, CFOs, and IT managers to gain better insight into their ECM implementation and determine where, if at all, there is risk and/or inefficiency relating to the use of ECM technology. Senior analysts from BCG and **Construction Imaging** review the report and recommendations directly with the client.

Based on findings in BCG's recent IT Metrics Survey that ECM is currently one of the most underutilized and under-implemented solutions in the market today, BCG and **Construction Imaging** both believe the timing of this initiative is ideal. This is not the customer satisfaction survey most of us imagine. Instead it looks more critically at the assumptions of ECM and how the technology is deployed within an organization. For example, the survey portion addresses applications being used, how they are being deployed in the field, and what functions are being processed with ECM tools. The interview then focuses on record counts, risk, inefficiency, and indexing methods by primary user group. This approach produces a deep and rich view into how the organization is getting value from ECM technology (or not) and compares it to other companies using similar technology. It also provides an excellent perspective on, in this case, a customer base and allows **Construction Imaging** to see what needs exist for more training or consulting with their customers.

Reactions to the insight gained by clients seem to confirm our assumption. A more detailed publication of summary findings is soon to follow.

WHAT TRIMBLE'S PURCHASE OF TEKLA MEANS FOR THE INDUSTRY

Many of you are aware of **Trimble's** intention to acquire Finland-based **Tekla Corporation**. On June 30, **Trimble** announced the final result of the public tender offer that represents 99.46 percent of all the shares and votes in **Tekla** at a cost to **Trimble** of approximately \$489 million. **Trimble** has been on an acquisition path over the past few years. The purchase of **Tekla** is a continuation of a connected construction site acquisition strategy, according to **Trimble**, that included the procurement of **Meridian** back in 2006-2007.

Trimble and **Tekla** already had a partner relationship and have been promoting field-based BIM for a while. And both **Trimble** and **Tekla** have strong international presence. The integration that has been developed between **Meridian** products and **Tekla** products will help **Trimble** open doors for the **Meridian** product suite outside of the U.S., where they already have a solid base.

Also, the lack of interoperability between software applications that support the construction process has been a complaint from companies in the industry for many years. **Trimble's** acquisition strategy offers interesting solutions and removes some of the interoperability issues (if you are using all of their products).

Certainly the ability to take a BIM module to the field and leverage **Trimble's** layout solutions for both initial layout and/or QA/QC of the model provides workflow efficiencies to the industry. Being able to tie an RFI to the model from the field and have the model generate the RFI in a project management system (or vice versa) offers intriguing capabilities as well, in terms of streamlining processes.

For those organizations that have been using **Trimble** solutions and are either entering the field of BIM or already leveraging a BIM methodology, the acquisition of **Tekla** represents a promising solution for the industry and one worth exploring.

BCG INTRODUCES IT METRICS SURVEY

Burger Consulting Group is pleased to announce the availability of our IT Metrics Survey. We developed and released it after many years of listening to the industry and hearing requests for better performance metrics. You can find a link to participate in the survey at www.burgerconsulting.com. It takes about 30 minutes to complete and covers such areas as IT Cost, IT Organization, Disaster Planning, Software Applications, and Remote Connectivity. A white paper based on data from the first 180 respondents and some very interesting results will be finished soon. For a limited time, participants who complete the survey will receive a free copy of this white paper. We also expect

to maintain historical responses, so a company could actually request a "private" report showing comparative values and trends. But that will come with time. Our immediate goal was to identify metrics that were actionable and useful to the CIO or IT manager in a construction office.

Here are a few highlights from our IT Metrics Survey:

1. *Excel* remained the number one estimating solution for contractors. This may not be surprising, especially among smaller companies that do not have the resources to implement a larger, more structured system. What is interesting, however, is that other newer solutions are making their way up the list and gaining in popularity. **On Center's** estimating solution *Quick Bid*, *WinEst*, **MC2's ICE**, and *HCSS* (for Heavy/Highway) all seem to be capturing market share. And this is consistent with what BCG sees in the market. This is likely due to the fact that each of these structured solutions offers additional functions from the preconstruction and bidding process that spreadsheet solutions generally don't. For example, *Quick Bid* has the take-off function, *HCSS* has field reporting capability, and many of the products are adding in the bid solicitation feature.
2. As for ERP (accounting/job cost), **Viewpoint** has an impressive position now, nearly tied with **Timberline**. However, it should be noted that the data for the larger construction market would show **Timberline** far ahead of **Viewpoint**, but that is primarily because of the number of customers **Timberline** has among the smaller contractor base. **CGC**, **Penta**, and **J.D. Edwards** were all represented near the top as well.
3. Of the companies in the \$10M to \$500M annual revenue category, only a third had some form of ECM technology in place. The percentage of firms that had implemented ECM moved up to 50 percent in the next revenue category, \$500M to \$1B, and was 100 percent for the \$1B+ companies. The numbers for *SharePoint* deployment were slightly higher at 40 percent, 80 percent, and 100 percent, respectively. What needs to be determined is how many of those with *SharePoint* consider that to be their primary ECM.
4. Lastly, among the most prevalent IT initiatives being planned for the coming year, IT is most heavily focused on improving disaster recovery, data storage, and security. Related to this observation, for those that have a documented disaster recovery plan, less than half of the mid-sized companies had tested it ... a less than positive situation.

ADVANCES IN BUSINESS INTELLIGENCE

Business intelligence, like most technology sectors, has continued to evolve rapidly, and there are several advances that will ultimately be of specific benefit to the construction industry. Developments in BI solutions have become more and more about leveraging improvements in the underlying hardware platform. The advent of solid state drives with minimal read/write latency allows for faster analysis. Similarly, enhancements in in-memory computing, where all processing is done in cache memory rather than the traditional read/write access of disk drives, have further increased the speed and capabilities for business analytics.

SAP recently announced a new appliance called *SAP HANA* aimed at using these in-memory computing advances for faster data processing. This new platform allows analytical data to be accessed in near-real time without affecting a transactional application, such as the ERP/Accounting and Finance system. Even the most heavily optimized data warehouses traditionally could have several hours lag time between when transactional data was ingested from core business applications and when the data was accessible for analysis. Potentially, a database created in a *SAP HANA* appliance could replace typical databases from vendors such as **Oracle**, **Microsoft**, and **IBM** for core business applications. And the cost of *SAP HANA* appliances is dropping. With increased efficiencies in analytical processing to be gained and reduced TCO for many core business applications, a greater number of companies within the industry are likely to benefit.

POSITIVE CHANGE AT 2011 CFMA CONFERENCE

As in years past, our involvement with CFMA has been constant and varied. This year we did a presentation at CFMA's Annual Conference on change management that was very well received. It seems as though everyone is interested in understanding more about how to bring about positive and significant change within their organization while using system solutions as a catalyst. It focused on how to promote and foster change, especially during a system or process implementation, when an open mind is most important. We have proposed presenting "Top IT Performance Metrics" at next year's conference and are hopeful that will be on the docket. If either topic seems appropriate for your local CFMA chapter meeting, please get in touch with Maura York or Jennifer Stastny to see about timing. These are both technology topics BCG would be happy to present at a chapter meeting.

In addition, our most recent article, "Inherent Risks of IT Systems and Technology Tools," is slated to appear in the September/October issue of *Building Profits*. Keep an eye out for it in print and online.

CURRENT CLIENTS AND PROJECTS

Burger Consulting has recently assisted the following companies with important engagements, including strategic IT plans and assessments, software selections, and implementations. We also have placed CIOs and IT managers and have helped assess a company's overall computing infrastructure and data center.

CCC Group, Inc.	Kenny Construction
EMCOR	Rogers-O'Brien Construction
Fusco Corporation	Traylor Bros., Inc.

BCG greatly appreciates those clients who have furnished us references. We thank you for your confidence in our services.

BURGER CONSULTING IN PRINT AND IN PERSON

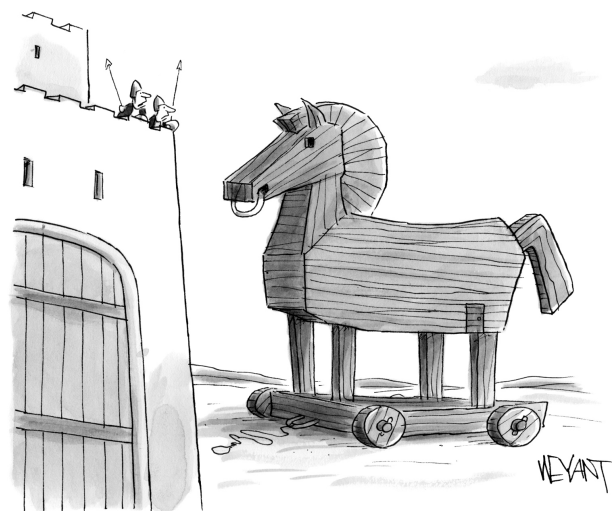
Burger Consulting Group has written or been quoted recently in the following:

- *AGC of America Tech Brief*, "The AGC IT Forum"
- *FMI Quarterly*, "Information Systems: The Next Seven Years"

BCG professionals also were invited to present, moderate, or serve as panelists at the following events:

- AGC IT Forum Conference 2011 in Chicago, IL
- Northwestern University's Symposium on Technology for Design and Construction in Evanston, IL

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