

TechHome Builder: The Builder's Guide To Technology



Why Wireless Integration?

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Managing a household of four is more complicated than it looks. There are schedule conflicts, disagreements to negotiate, transportation to arrange, items to purchase, bills to pay and money to manage. What if that same household operates with four occupants who each speak different languages? Crazy, right?

Each person would need his own translator, and every translator would have to speak all of the other occupants' languages. Organizing something as simple as a tennis match would be a nightmare of crossed wires and "broken telephones."

Many homebuilders actually suffer a similar communications nightmare. Often, different departments can't share information. In effect, each department needs a translator to speak to any other department.

Sales can't directly "speak" (share data) with accounting. Job supers can't authorize payment for work completed. Scheduling can't talk to anyone. The accountants are basically left screaming in a language nobody understands. Translators -- in the form of people or custom data-migration software -- are required to move data from silo to silo. Builders who don't have this problem are probably very rich or very wise:

Very Rich These guys have paid someone (translators) to write data translation paths between the business software that otherwise wouldn't be able to communicate.

Very Wise These guys were smart enough to purchase a system that "pre-integrated" the various data silos created by a typical building business: sales, jobsite supers, estimating, workflow management/scheduling, work orders, accounts receivable/accounts payable, change-orders/variances, warranty management and general ledger accounting.

Working on the Same Page

Back to the family of four: Let's say there has been some confusion and the family is trying to reconcile something that happened and who was responsible. There are four versions of the truth and these versions are expressed in four different ways. It's a nightmare sorting through versions, as the head of the household translates back and forth between players.

The same is true for builders. If the sales department makes an upgrade to a project, a vendor-specific purchase order (with price, quantity, delivery address, job code number, etc.) has to be created for procurement, and that same data has to get to multiple departments to generate payment and records for calculating the closing price. What if the sales, procurement, accounting and legal are all on different systems, like Excel, QuickBooksPro and paper records? It will take epic amounts of time for a worker to physically move this data around. If this happens just once per start, it puts a substantial drain on the builder's human resources, driving up his costs and lowering his margins.

Allowing each department to work on its own software with independent data causes havoc when it comes time

to sort out what was ordered, who was paid, etc.

One solution is to have every department working from one single, "inviolable" database.

Stepping Up to Integration

One builder, who had a few software systems and paper-based systems, recently converted to an integrated system that he says has had a dramatic return on investment.

Graham Hart Home Builder constructs homes in the booming Dallas-Fort Worth market. Until recently, Graham used QuickBooksPro and Excel to perform all its front- and back-office business functions (sales, management of jobsite supers, estimating, workflow management/scheduling, work orders, accounts receivable/accounts payable, change-orders/variances, warranty management and general ledger accounting).

QuickBooksPro and Excel are both user-friendly programs, according to many builders. However, if the sales department receives a change order, can QuickBooksPro and Excel -- without intervention by translators -- work with the schedule to create a work order and purchase order, with the right pricing, so that the job expense is properly allocated, the supers updated, the subs alerted, the payment authorized, and the proper client billed, with complete reconciliation back to the general ledger?

With the implementation of an integrated accounting system and a process management system, Graham went to what it calls an entirely integrated, entirely paperless, invoice-free, checklist-driven, purchase order system that its superintendents drive wirelessly from the field using Blackberrys.

The company says with this "workflow management" approach, it drove margins up significantly. Before integrated software was installed, Graham Hart Home Builder's superintendents had the power to inspect/approve payment of work and materials.

However, they all had to submit these changes on pieces of paper. "Data had to be re-entered at the office, and we have no schedule tracking, just 'static' Excel cells that were not fully integrated to QuickBooksPro," says Shawn Goff, president, Graham Hart Home Builder. "Every different piece of information was in a silo, disconnected from every other piece, and not integral to our central accounting."

After the installation of integrated software, Graham Hart Home Builder was able to pre-load schedules and checklists on its superintendents' Blackberrys. "Upon work stage or job completion approval, the super signs off and that wireless signal triggers schedule updates, messaging, accounting updates and payment ... all linked to one database. All our systems came pre-integrated; we did not incur the cost of custom code," says Goff.

Graham Hart Home Builder says the new software allowed it to drop its cycle time and it now averages a 110 days per house.

What Does 'Integration' Mean?

If you have ever used a tax program like TurboTax, you've used an integrated system. An integrated system means that data you enter once automatically populates data fields where it may be required later.

It applies to the builder world, too. Once you have a price for a pre-cut SPF stud, why would you want to reenter it on every job start, in every framing estimate? It's easier to enter it once and have the integrated system carry the information to data tables where it may be required.

Sounds simple, right? It gets more complicated when the SKU for the variance charge order has to be dynamically inserted in a sub-contractor-specific work order, a vendor-specific e-purchase order, and an accounts payable system, so the final cost of the house can be calculated and presented in closing documents two days from now.

An integrated system can handle those steps.

Integration Results for Graham Hart Home Builder

Cycle time reduction: Now down to about 110 days per home.

Net margins: 25 percent, including land.

Return on technology investment: On a gross of \$19 million, Graham Hart Home Builder realized a first-phase direct return-on-technology-investment of \$570,000 (software and consulting cost around \$100,000); savings will compound, year-on-year.

Now a totally paperless, automated invoice-purchase order-work order system.



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