

## **Dashboards and the Human Condition**

### The end game for business intelligence systems

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Do you remember the Web when frames, flash, and blinking text were new? If you've blanked those memories from your mind, use the [Wayback Machine](#) to look at how your favourite sites evolved over time. I'll bet you a nearly-new beta max machine that your favourite site is easier to navigate today than it was a few years ago. The biggest reason for this is a slow recognition that your audience is more important than the technology you use to reach them. An important contributor to this improvement in Web usability is the fact that providing the best user experience – rarely the same as the coolest look and feel – may also make you rich. By way of example, Amazon is known to invest in usability testing for economic rather than humanitarian reasons.

#### **What does this have to do with dashboards?**

Dashboards will unlock the added value in decades of IT investment in the form of competitive advantage through better decisions. But the humans make the decisions. None of these ERP deployments, business intelligence rollouts, analysis upgrades, or reporting launches are worth a dime without a human who monitors and acts on the information they provide. The only things all these systems and investments have in common are display screens and humans. Dashboards are the final link that connects your systems to your people. They really are interfaces between your systems and your business decisions. Therefore a dashboard that accommodates the behavior of the human user in addition to exposing business data is bound to add more value.

A recent real-world anecdote illustrates the point. In conversation with a marketing director in Dallas, I learned that he has no fewer than six dashboards to help him manage his performance. There's the CRM dashboard, the financial dashboard, the PR dashboard, the advertising dashboard and so on. Each comes with its own username and password, and to access some of them he needs to launch a separate application. None of them get his undivided attention and some of them are rarely used at all. But he's the first to acknowledge that they all contain important information. In the end, the constraints under which the human is operating define the return on your systems investment.

This means that your dashboard software is your last opportunity to match the strengths of your systems with the strengths of your people – or to compensate for their limitations. Despite our individuality, there are some behaviors that most of the human race shares in common. This is also true when you look at how humans interact with a computer. That's why there's a whole discipline devoted to human computer interaction. To get the most out of your IT investments, we need to design dashboards that complement these behaviors.

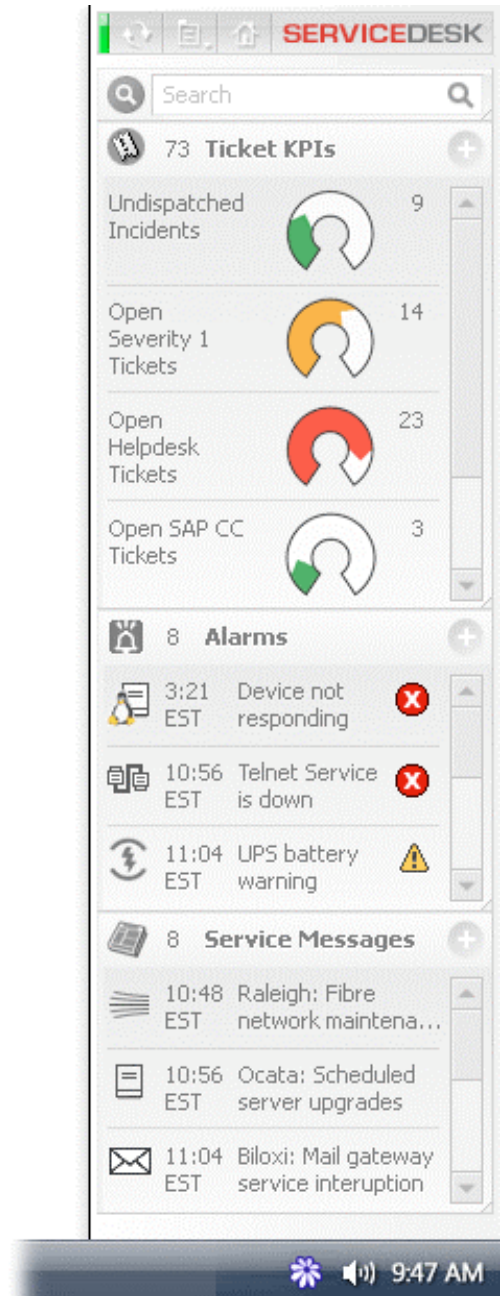
### **The rule of placement**

The first characteristic most of us share on a computer is laziness. One economist has suggested that the only two traits common to all of us are laziness and greed. But that's a bit dark for a dashboard article. Let's call it busyness instead – as in, we're busy doing other things. It's safe to assume that the higher up you climb on the corporate ladder, the busier you become. The marketing director mentioned earlier simply does not have the time to launch and login to six different dashboards. This brings us to the first requirement of an ideal dashboard. It must appear where it cannot be missed or ignored. If you need to look for it, you won't. This is the rule of placement.

To get the most out of your systems and your people, your dashboard has to appear on their desktop. Stand alone applications and Web-based reporting are good but as the

marketing director illustrates, once you have too many to manage they're no good at all. The desktop is better. With the information that matters appearing on your desktop, you can maintain peripheral awareness of the important metrics without interrupting your workflow.

I can hear howls of disagreement from people who say that the first and last time they see their desktop is when they power up their system for the day. I'm one of them. On a regular work day the desktop is quickly buried under umpteen windows of email, spreadsheets, documents and Web pages. But the rule of placement works here too. Today's flat panels and laptops can easily accommodate a desktop dashboard as a top bar, bottom bar, or side bar while leaving plenty of real estate for your daily applications. Look at a flat panel running a mini-dashboard alongside other applications and you'll think panels were purpose-built for this arrangement. But the fact that your desktop dashboard must be small to be useful brings us to the second rule for making dashboards really work: the rule of design.



A help desk dashboard displayed as a sidebar on the desktop.

## The rule of design

Visual communication experts like Stephen Few have made careers out of showing us how to properly design reports, charts, and graphs for quick and accurate consumption. Ideas as simple as avoiding pie charts and 3D graphs take on greater importance when you're communicating critical information to a group of people. The same is true when we use scale, color, and arrows as metaphors for enterprise performance. These design concepts are significant for full size reports. They assume magnified importance when you shrink the visual elements to fit on a desktop dashboard. Because the rule of placement tells us that if it isn't on the desktop, we won't look at it.

As a result, we need to design desktop dashboards with profound simplicity. This is the organization's last opportunity to transform investments into added value. It's the last opportunity to transform information into knowledge. Not much can fit on a desktop dashboard if you want everything to be legible at a glance. Even properly designed charts will fail to communicate if you stuff 20 of them into a small space and hope that a busy human will struggle to see and interpret them.

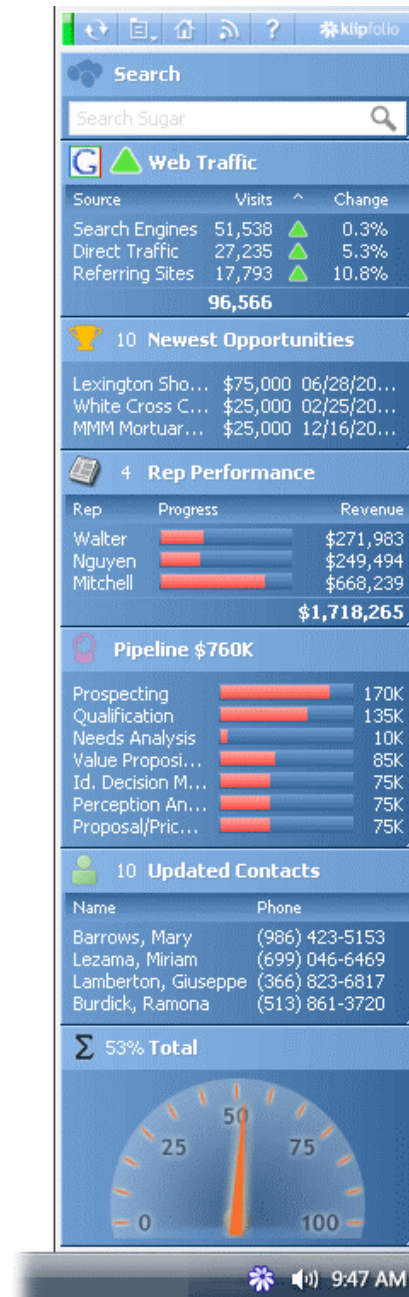
Along with designing these elements properly we have to be judicious in choosing which metrics appear on the desktop dashboard. Taking this thought one step further, we have to understand which changes or thresholds are sufficiently important that dashboard alerts should be triggered. This could take the form of higher priority items bumping lower priority ones off of your desktop. Truly urgent alerts may have to appear as pop-ups or be sent to your mobile device. Achieve all this and you're ready for dashboards to recommend resolutions to the human decision-maker as well.

## The rule of accuracy

The rules of placement and design point to a third rule that looks like a technology issue rather than one based on the human condition. The rule of accuracy suggests that for humans to look at and act on the information shown on their dashboards, it must be correct.

Humans quickly learn to pay attention to things that matter and to ignore things that don't. Even if your dashboard appears right where it should be for persistent awareness, and even if the information it displays is properly designed, we will pay attention to it only as long as the information is correct. The first time you make a decision based on a dashboard and it's later proven to be incorrect, you begin to lose faith in your dashboard. If this situation occurs regularly you will eventually ignore your dashboard or turn it off altogether. That's the human side of the rule of accuracy but it has serious implications for enterprise information systems. It means your desktop dashboard must consistently present complete and accurate information.

There are two ways of doing this. Your dashboard can either reconcile all your different information systems itself, or draw on a business intelligence system that already does this for you. One way or another, your desktop dashboard has to be data agnostic or it will fail. Interestingly, this rule may be the easiest to follow because business intelligence vendors have been working on meshing heterogeneous data sources for years.



**A desktop sales dashboard displaying web traffic, opportunities, forecast pipeline and more.**

## **Dashboards are the end game**

Blinking text and gratuitous Flash disappeared from good Web sites over time. Web designers moved beyond what technology could do towards what humans could use. The advent of dime-a-dozen dashboards means the same change has begun in enterprise information systems. The case of the marketing director with six dashboards proves the point. Once this process begins it's likely to build momentum quickly. When the humans at the top of every business information food chain are recognized, it's inevitable that systems will converge until a single dashboard accommodates all their needs. The recent acceleration in acquisitions in this market bears witness to the trend. Cognos bought Celequest and Applix. Oracle bought Hyperion. Business Objects bought Inxight and SAP bought Business Objects.

Dashboards are the end game for business intelligence systems because they accommodate the human decision-maker. Recognizing the human constraints that lead to the rules of placement, design, and accuracy won't be long in coming.

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