Opening a Window into Government

Around the world, the transformative word within government circles is “transparency”—opening a window into government so that the public it serves can see where its tax money is being spent.

While many governments merely pay lip service to transparency, leave it to a government agency in the very center of the United States to come up with a plan to make it a reality—and use SAP to do so.

The government in Sedgwick County, Kansas implemented SAP ERP 4.6C in 2001. When Renfeng Ma became the county’s ERP director, one of the first questions management asked was, “Where are all those good reports that those SAP sales reps demoed?”

“There was a business expectation when I started to show people the analytical side of SAP,” Ma says. The approach, however, took a decided new tack from the traditional use of SAP within an enterprise. “The business driver became the answer to the question, ‘How well are we doing with taxpayers’ money?’”

The answer, Ma believed, could be found within SAP, specifically SAP’s reporting capabilities. Within those capabilities evolved a new, revolutionary approach to government using SAP NetWeaver Portal, SAP Business Information Warehouse (SAP BW), and SAP Corporate Performance Management (SAP CPM).
Sedgwick County, Kansas

County seat: Wichita
Annual budget: $386,459,272
Employees: 2,900

SAP landscape (customer since 2001):
- SAP R/3 4.6C (soon to upgrade to SAP ECC 7.0)
- SAP BW 3.5 (soon to upgrade to SAP NetWeaver BI 7.0)
- SAP CRM
- SAP SEM 4.0, including SAP Corporate Performance Management (CPM)
821 KPIs
Sedgwick County is putting its government out for — what eventually will be — all to see. Over the course of a 30-month project, Sedgwick County identified 821 key performance indicators (KPIs) that defined the effectiveness of county government. Using SAP CPM, it built those 821 KPIs into a series of dashboards and simplified reporting into a traffic-light system: Green means exceeding standards, yellow means acceptable performance but at risk, and red means not meeting standards and requiring management actions. The county publishes these analytics using SAP NetWeaver Portal.

“Right now all the department managers have this up and running,” says Bjarne Berg, director of business intelligence with MyITgroup, LLC, a VIP Company of Houston, Texas. Berg, an expert in SAP NetWeaver Business Intelligence (SAP NetWeaver BI), was the principal consultant on the Sedgwick County project. “The next phase will be for all the county employees, about 2,900 people, and all the elected officials to get access to this. Then this will be gradually released between spring and summer of next year to the general public, and there you are looking at more than 400,000 people.

“I’ve never seen anyone taking it to this level when it comes to true transparency into government, where you basically have KPIs, cockpits, and benchmarks, which is really the hard part,” Berg continues. “What is good; what is bad; what is yellow, green, and red all used to basically hold government accountable against the benchmarks. This is what makes the project really, really unique.”

The Project
Although the trend of IT projects today is for shorter and shorter project timelines, the Sedgwick County project took 30 months. Ma’s team spent the bulk of their time on the project — which spanned almost two years — discovering and gathering all of the business requirements.

One of the biggest hurdles was overcoming initial resistance to the entire approach. According to Ma, a typical reaction to the project was, “What do you mean you are going to measure me? I’m already doing a good job. Don’t people know that?” Creating the metrics required multiple iterations. “It was quite a lengthy process,” he explains. “It took quite a while for people to agree on meaningful measures.”

The majority of time was spent exploring what benchmarks should be measured and what the thresholds should be, as in what constitutes red, yellow, and green. For example, one of the very last organizations to determine benchmarks was the fire department, Ma says. In order to increase the county’s value to taxpayers, fire departments in Kansas, and elsewhere, broaden their missions to also respond to emergency medical calls. Consequently, the Sedgwick County Fire Department measures their value to taxpayers with four indicators:

- The percentage of time that structural fires were contained in their room of origin
- Urban medical response time
- Suburban medical response time
- Rural medical response time

Although the benchmark was clearly defined and fire industry standards were also used to determine what constituted green versus red status for each fire indicator, it was uncertain how to combine multiple indicators into one index, which would reflect the dual mission of the fire department. To solve this challenge, Sedgwick County adopted the business protocol of its EMS (emergency medical service) department. In the EMS world, there are six indicators: urban response time, suburban response time, rural response time, non-emergency transfers, cardiac survival rate, and quality of care. When any one of the indicators is red, overall EMS performance is yellow, and when two or more indicators are red, then the system-wide indicator turns red. This business logic is applied county-wide in order to calculate index values. “That’s a pretty tough requirement. Thresholds must be set by management with the long-term goal in mind,” Ma explains.
Walk Softly but Carry a Big Stick

According to Berg, a project of this type would not have been successful if it wasn’t for Ma. “Ma used to be the county budget director, not a regular IT person,” Berg says. “He’s the person who used to put together the budget for the whole county. I told Ma that he could pull this off. He came from the business, he’s been there for almost 20 years, he knows everybody, he knows the decision-making process, and he understands the politics and how to move things forward.

“The steering committee on the project is not at the director level. The steering committee is the top guys in the county: CFO, HR director, and assistant county manager, all reporting directly to the CEO,” Berg continues. “This project could never be pulled off by IT. You typically see this project at the IT level, and if Ma had been [at the IT level], users would just circumvent him and go straight over his head.”

When describing the process of setting KPIs, Ma attributes the success to the unique organizational culture Sedgwick County has developed over the years. About 15 years ago, Bill Buchanan, the county manager, came to Sedgwick County and initiated a series of organizational changes, including:

Renfeng Ma, ERP Director, Sedgwick County
Drilling Your Way to Effective Government

Below is a typical dashboard, currently only available to department heads within Sedgwick County’s government. Each pane represents a facet of the organization, and each department gets its own traffic-light indicator: red for not meeting standards and requiring management action, yellow for acceptable but at risk performance, and green for exceeding standards.

A department head can select one of the indicators and from there, drill down to the data that supports the indicator – in this example, Public Safety to examine Emergency Medical Services (EMS).

Below is a summary of six KPIs that measure performance against the benchmarks for the month.
Managers can access another view to review the data that supports a particular metric.

Again using EMS as an example, a manager can view an overview KPI and the operational KPIs for management (secondary) and local EMS managers (tertiary).

If you click on the EMS KPI, you will get a dashboard with the breakdown of the 911 calls by the month, week, ambulance stations, and hour of the day. **WWW**
The Technology Behind the Benchmarks

To build the Sedgwick County dashboards and cockpits, the project team, with the assistance of Berg and his team, relied upon SAP Business Information Warehouse (SAP BW) 3.5 combined with SAP NetWeaver Portal, according to Berg. The Sedgwick County project can now use SAP Corporate Performance Management (SAP CPM) cockpits. The queries are fed into SAP BW, SAP BW feeds them to SAP CPM, and then SAP CPM presents the results of the queries in a series of cockpits and dashboards in the portal.

The data originates in a series of systems, some from SAP R/3 4.6C and some from several legacy systems that include everything from Microsoft Excel spreadsheets to UNIX client/server technology, which requires construction of a separate system using an SQL database and active server pages for updates.

Before rolling out the dashboards and cockpits to all 2,900 employees, Sedgwick County plans to upgrade to SAP ECC 7.0 “We’re probably going to split the ABAP stack from the Java stack and then put in another application server because if you are going to roll it out to 2,900 users, we’re going to be constrained on the application side,” Berg says.

Rolling out the KPI dashboards to the 400,000 residents of the county poses a different set of challenges. Even with the upgrade’s new infrastructure, “400,000 users will probably crash that,” Berg says. “Remember, every one of these visits to the system sometimes requires six or seven queries running behind the scenes to show them.”

The project team has yet to determine exactly how it will do that. “We’ll probably have to pre-run some of the queries and, using the [SAP] BEx (SAP Business Explorer) Broadcaster, publish it to a static Web page in an SAP portal.”

6 Lessons Learned

- **Leave plenty of time for go-live.** Ma says he learned this lesson from Berg at the 2004 Managing SAP Projects conference. “Make sure you have at least two to three weeks before go-live to look at your final product and to capture all the unforeseen mistakes that may emerge. That was so true and, in this project, if we didn’t follow Berg’s advice about leaving several weeks ahead of the time before go-live, we would have lost quite a few project members and the project sponsors.”

  Ma did not elaborate other than to say that mistakes do happen. “The best way to make a project perfect is to go live and then leave enough time to kick back and do nothing but look at it from the user perspective.”

- **Allow time at the beginning for “sink-in.”** Berg, on the other hand, says that it is important to schedule time at the beginning of the project to build momentum. In the Sedgwick County project, the emphasis was on “over-communicating.” “Ma went around explaining what are we doing and why are we doing this, where are we going with this, and what’s the purpose.”

- **Seek representation from the top and from the middle.** According to Berg, it is not only important to have sponsorship from the top, but also from middle management. “You can’t build it for one or the other; it has to be both,” he says. “There has to be something in it for both, or else there’s no reason for them to cooperate with you.”

- **Show and tell as soon as possible.** “As soon as you get something up and running, and you have something to show, don’t wait until the end of the project and then ‘flip the light switch,’” Berg says. “You have to demo it to them as early as possible, because users don’t really know what they’re agreeing to until they have seen three, four, five iterations.” One wants a base of collectible feedback from users “so you’re working with them; you’re not just asking for a functional spec and flipping the switch three months later.”

- **Projects around measurement require a lot of trust.** Nobody likes to be measured, but if you are implementing a project that does exactly that, it is important to build as much trust as possible between the project team and those being measured, Berg says. With the Sedgwick County project, Ma and his team were people with deep experience and deep roots within county government. “The people he had on that team were people who have been on the project for a long time, who have done reporting for the county in the past, and basically, when they pick up the phone and talk to somebody in the department, they know who they’re talking to and they have the credibility and the trust.”

- **The project is not over at go-live.** “In this particular case, we wanted to increase transparency and improve the decision-making process for after go-live,” Ma says. “But even after we flipped the switch and moved it to management, in my mind, my job wasn’t done.” For one, Ma says he had to meet with top management to make sure the project met their expectations.” The project team had to be ready to make adjustments to the final product if it failed to meet expectations, “but in this particular case, it did, so then I prompted everybody to start using the dashboards and cockpits.” Thanks to these promotional efforts, the dashboards have become part of the county government culture.
The county’s mission and goals
Strategic planning
A management model (a decision-making process)
Performance measures
Enterprise thinking and planning
Customer service
KPIs

“These were initiated with a long-term vision and executed with unsurpassed rigor, enabling me to seek cooperation rather than applying a ‘big stick’ approach,” says Ma. “Team KPI was formed with 12 department heads across all functions to talk about how we manage and how we measure success, and I would show several metrics that could represent their performance,” he explains. “Later on, after we reached agreement, we moved the discussion to their supervisor’s level and then eventually to the top executive level.”

The process represents a long negotiation, according to Ma. “But in the end, everybody understands that the county manager and county commission have authority to make the final decision, and that took longer. It’s a good combination of some position power, some politics, and some understanding of the human behavior that alleviated the fear that nobody is out to get them. This is really for the good of the whole Sedgwick County. You have the obligation to show taxpayers what happened with the taxes they paid and the unique organizational culture cultivated by our county manager over the years made it possible,” says Ma.

Levels of KPIs
Ma’s team developed three levels of KPIs, each level aimed at an increasingly granular audience (see the sidebar on the next page). Primary indicators, such as corrections recidivism rate and fire department performance index, are aimed at top-level managers and elected officials, allowing them to have a quick overview of the delivery of public services. Secondary indicators (e.g., corrections recidivism rate for facilities and the percentage of times that structural fires were contained in their room of origin) are for top-level managers and elected officials who require more detailed information to understand the status of primary KPIs. They are also for middle level managers who need to monitor their program outcomes. Tertiary indicators, such as the corrections recidivism rate for a juvenile detention facility and Station 33’s fire response time, are aimed more at operating managers and line-level employees, helping them to link their team’s work to the overall performance of the department.

The project team also created a fourth type of KPI called the “community profile.” These metrics indicate the relative health of a community but are outside the direct control of county government. They include benchmarks for the crime rate, disease rates, divorce rates, and high school graduation rates.

Together, all the metrics add up to a comprehensive profile of the performance of Sedgwick County’s government. “It’s like the Mississippi principle: The KPIs aren’t very deep but are five miles wide,” Berg says.

All the metrics in the world will do nothing for county government unless they are put to use. According to Ma, they must be accompanied by some form of action. For example, if the KPI for the county’s 911 call volume goes red, it means that it is receiving more calls than it can handle. Therefore, the county should investigate increasing the investment of resources in that area. What’s also encouraging in Sedgwick County is that the dashboards have become part of the management practice: The county manager reviews the dashboards at his senior staff meeting each month and some of the KPIs are included in the performance evaluation of his direct reports.

Berg concurs. By establishing benchmarks and publishing performance against them, “the government can document true needs by presenting objective numbers,” he says. “Maybe politics will become a little less opinionated and more factual. You can still disagree, but at least you will disagree based on the same facts.”

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— Bjarne Berg, director of business intelligence, MyITgroup, LLC