The User Experience – At the Speed of Thought: Kaleida Health

The two dominant vectors of Tableau Version 6 are speed and scope. The in-memory data engine delivers results at lightning speed, far faster than any previous version of Tableau and far faster than most users have ever experienced, except on small amounts of data. This exceptional speed carries through even to the analysis of very large data sets that Tableau was previously unable to process.

We talked to a Tableau user to get a picture of the difference this makes.

Kaleida Health

Kaleida Health is the largest health care provider in Western New York. With 10,000 employees, five hospitals, a number or clinics and nursing homes, and a visiting nurse association – not to mention millions of patient records. Kaleida needed a BI tool that could handle large data sets quickly and painlessly.

Kaleida found traditional reporting tools inadequate to handle its requirements. Driven by the need for a deeper analytic capability, Kaleida created a corporate analysis department around Tableau. Instead of simply pushing out mass reports, Kaleida's BI department wanted a team that could give users what they wanted: reports they could understand.

Jennifer Keubler, Corporate Analyst with Kaleida, said although their data warehouse is robust, Oracle Reporting proved to be clunky and unfriendly. "We had nurses and non-financial people, and people that didn't really understand reporting and visualization, trying to interpret these reports." The result, she said, left much to be desired. Users often didn't notice the data that should have stood out.

"We created the corporate analysis department to work closely with the managers and senior executives on different projects they were doing, to not only pull the data for them, but also look at it, present it, and dig deep into the details, and find things that they should be looking at, and then highlight them in PDF files or PowerPoint presentations using Tableau," said Kuebler.

Kuebler said she spends 95 percent of her day – and runs all of her calculations – in Tableau, primarily pulling data from Oracle databases into Excel first. For monthly analytics, she extracts data directly into Tableau from the data warehouse and is able to save and re-run queries, which is a huge time-saver when dealing with millions of records, with 40+ fields per record.

Speaking of the previous version of Tableau she noted, "I was always able to use, to pull in, as many records as I wanted, but it just ran so incredibly slow that I'd do things in pieces rather than all at once," she said.

The new version eliminated that problem. "Instead of having to re-run everything, it's just a couple clicks. A lot of other people will just run high level reports or summaries and they can't really dig into the details, whereas I start at the detail level then create the summaries. So if somebody wants somethings different, I already have a file with all the details. It's just a matter of moving things around."

Besides speed, another feature of Tableau 6.0 is the ability to link different tables. Kuebler said she uses this function to merge files to an Excel table or link them to different extracts. One example is

if she has an extract by zip code, but wants to look at data by county. "If I don't have county in my file, I have an Excel file that links all the ZIP codes to a county, so I can just link it to that, and the run information by county."

Kuebler's team was asked to look at the emergency room and the patients who visit it more than ten times a year. The data revealed that there was a problem among the Medicaid population: they were frequently using ER and ambulance services inappropriately for stomachaches, headaches, fever.

"It kind of spiraled and spiraled, and the next thing you know, it was a local news story, using the data that we pulled from Tableau," said Kuebler. "And when they did the news story, they made it sound like there was this great research project and the team digging for months. And it was really just a one-day project."

Kuebler also uses Tableau to manage resource utilizations: who's using what supplies and how much those supplies cost. This ultimately leads to efficiency and standardization across the system, something she said could previously not be done internally.

"It's fairly easy to do using Tableau and working with managers and doctors, and this is something that prior to us instituting our BI department, we'd have to contract out with health care consultants, to take a look at this stuff and pull our data."

Just like any competitive enterprise, a health care system also needs to gauge the marketplace. Kaleida uses Tableau to compare itself to other hospitals across the country, looking at the length of patient stay, hospital practices, market share and partnerships with doctors. "It's endless, the types of things we can look at," said Kuebler. "I could go on forever about this product. It's made my life a whole lot easier."

The Difference that Makes a Difference

These user experiences of Tableau Version 6 illustrate the movement of Tableau from being a BI tool in the traditional sense, to becoming a BI platform that can take responsibility for a large amount of the BI needs of any organization. Technically, the difference is in the architecture. Direct-connect leverages existing highly performant data sources. And the in-memory data engine drives the possibilities. The efficient caching and processing capabilities mean that data sets do not need even need to be fully loaded into memory before analysis commences.

But the user is unlikely to know or even care about that. It's speed and scope that they notice. Analysis can be performed at the speed of thought, leveraging more data on less hardware. This is true ad hoc analysis where the user does not have to determine in advance which measures to aggregate or query. The user can explore the data in every one of its dimensions, digging down into detail or summarizing into categories. Almost every form of data visualization is there, available at speed of thought and capable of processing very large data sets.

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