

Data Visualization within Management at Euramax

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ABSTRACT

Are you interested in starting to use SAS VA, and seeking for actual information regarding its implementation? Looking for the do's and don'ts implementing SAS VA? Finding out new ways of presenting data to your management? Interested in the mobile reporting power of SAS VA?

This paper is for all the people that are involved in the process of choosing and/or implementing SAS VA and want to get inside information regarding the experiences of Euramax Coated Products while using SAS VA for 1 year.

INTRODUCTION

SAS VA is one of the new released products of SAS that offers its users a complete new range of easy to use analysis- and reporting functions combined with the option to use big data. Euramax was one of the first companies in Europe that started using SAS VA. Euramax is a global manufacturer of pre-coated metals who relies on analytics and data visualization for its decision making. Euramax has deployed significant innovations in recent years. SAS Visual Analytics fits in the innovative culture of Euramax and its need for information-based decision making.

Euramax has two strategic company philosophies:

- Innovation: "We want to be the most innovative premium coil coater of the world".
- "I make it happen": Internal guideline for employee's behavior.

Referring to the company's strategic philosophy, SAS VA fits perfectly in this description. SAS VA is a high innovative software tool regarding ease of use in data preparation as well as creating reports and/or analyze data. SAS VA also covers the need to empower our employees with data exploration and reporting capabilities for their daily work. The power and flexibility of SAS Visual Analytics enables Euramax to streamline analytics processes to meet our business objectives. With SAS, Euramax has offered employee's visual analytics on mobile devices, to enable instant access to centralized reports from any location, including customer sites.

CONSIDERATIONS

While introducing a software tool like SAS VA, you have to consider the following aspects.

User acceptance: SAS VA is a powerful tool in analyzing and reporting but in a new and different way than most employees are used to with products like Excel. Users often try to put as much as possible data in one graphic using methods that only can be used in products like Excel. Often the complexity in the report is that big, that a change can hardly be made without high manual intervention. Still a lot of employees created their reports for many years in Excel and really need time to adjust to this kind of reporting. Strong management commitment is essential in this.

Management commitment: Without a clear senior management vision and commitment it's a difficult way convincing the management to start investing in strategic reporting. Management feels comfortable in end of week/month reporting looking back and asking questions why it might have gone wrong. (Mainly getting the same answers all the time). Creating prediction models using trial and error will often lead to unexpected results and methods of process control.

Data preparation: SAS VA is a report and analysis tool and not by definition a data warehouse tool. Although there are real options for business rules definitions, it can be strongly advised not to do so in the reporting environment. Considering creation of business rules in a data warehouse is strongly advised. You can read more on this aspect at the don'ts later in this report.

DO'S

Introducing SAS VA to Euramax, several aspects showed to be very relevant in this process.

Management commitment: Considering the fact that reporting traditionally is done backwards, the senior management must be convinced that new ways of analysis and reporting will lead to more in-depth knowledge regarding the processes. Often products like Excel are used for individual reporting and users find its limits in amount of data and/or complexity. Management often has to accept these limits and has created a low expectation in resolving these limitations. Keep in mind that there is a big difference between wanting to improve and really opening up to improve.

Be pro-active in creating new reports: Do not get trapped between the user asking for old reports to be reproduced while not knowing what to expect, and the designer knowing the possibilities but not understanding the information needs. Invest in quality time with your manager to understand his information needs and do not be afraid to be asking why over and over again. Do not accept answers like "that's what we had for years" without understanding the real functional reason for this information. Start making reports using the options in SAS VA without making it look like the existing reports. This way the discussion and understanding of the possibilities of SAS VA and the acceptance of the new way of in-depth reporting can grow.

Accept that in the beginning there will be a critical approach and some rejection, but once the advantages get clearer and clearer the acceptance will take over and switch to new expectations. Especially the fact that customizations in reports can be done in no time, new creativity from the managers in reporting expectation will be rewarded at once.

Change Management: Introducing high advanced reporting and analysis tools often lead to unrealistic expectations. Buying the software tool is not the solution but the start of a new way of working. Often the biggest part of the reporting introduction of BI is the quality and in-depth of the data itself. Preparing, cleansing and enriching the data often needs a lot of time. Managers need to understand that business rules need to be clear and leave no room for discussion. If needed, even ask for written confirmation to insure the progress of the process. Always be aware of the fact that mistakes in the data will lead to incorrect reports that will lead to non-acceptance and/or rejection of the report tool. This will be killing for the implementation. Knowledge of change management will surely help out in this matter.

Split up reports into individual related graphics: As mentioned before, reports often consist of too much information in one graphic making it to complex. SAS VA and its flexible interactions between the objects, creates the options to a more open method of reporting. Figure 1 shows a snapshot of a split-up report concerning sales growth related to sales projects. The report has been split up into 4 objects covering a different part of the subject. The bar graph covers the sold weight and the corresponding sales value. While drilling down on the financial year you get the information on period/week level. Multiple selections are possible while pressing the shift key and clicking on more items. The pie chart, directly related to the bar graph selection, covers the sales by Sales Rep. Both the cross table as the geo chart represent the individual projects in a different way both graphical as numeric. The number of selectable items and combination of items covers a wide range of information needs. Fixed selections can be added to the top of the report for additional easy filtering on all of the data.

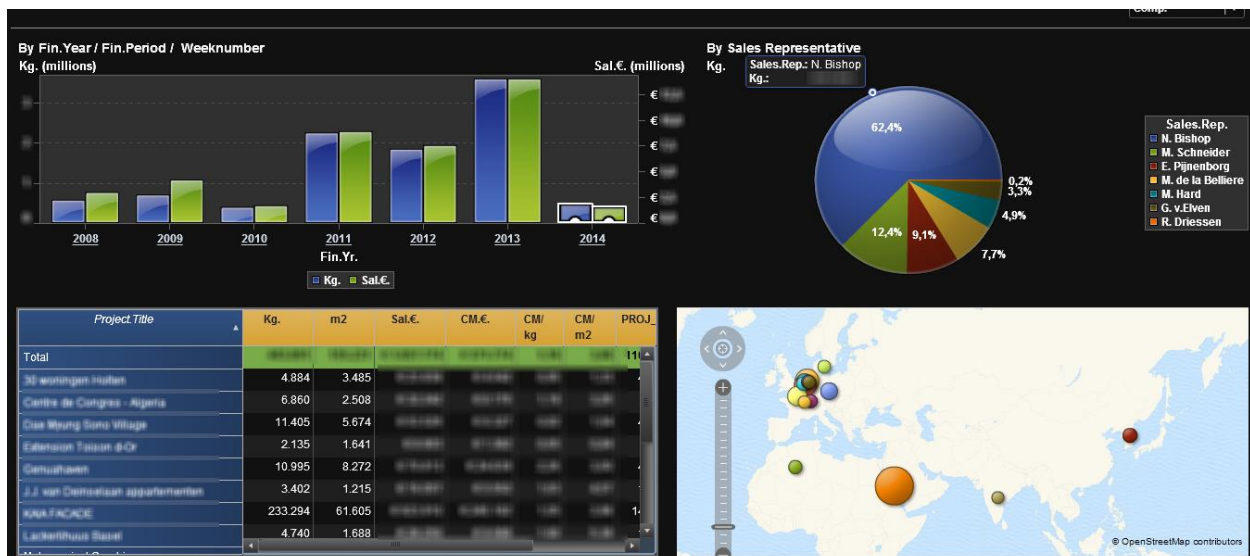


Figure 1: Report overview Sales projects.

Create user groups for folder and data access: While creating all kinds of reports for all kinds of responsible levels, metadata authorizations on folder/report level and on data level are necessary. Strategic data needs to be protected for management use only, and users must not be confronted with reports or data they should not see. Individual assigning of read/write rights can/will lead to a situation that cannot be controlled anymore. Creating user groups with very specific names will clear up this misunderstanding. Giving read/write rights is just a matter of being a member of the user group that is related to the protection of the folder/report or data. Table 1 shows some possible ways of definition.

User Group	Description
Read0001	Read access LASR Prod Sales Projects
Read0002	Read access LASR Prod Sales Orders
Read1001	Read access Folder Sales
Read1002	Read access Folder Finance
Read1102	Edit access Folder Finance
Read2001	Read access LASR Mr. xxxx
Read3001	Read access LASR Dep.Costs. Operations

Table 1: User group set-up samples.

Every table loaded into the LASR server gets its own access user group(s) while the general access via sas-users has been locked out. The user groups Read0001 and Read0002 give you read only access to the total contents of the tables Sales projects and Sales Orders. For external representatives that only should see their own customers, use the Read2001 user group which is related to only one person. The user itself could be used but that will not lead to a single way of working. Using personal user groups allow you to temporarily add another user to someone's reading rights. User groups like Read1001 and Read1002 allow the assigned members to have read access to the mentioned folders. Edit right related groups assign members that are allowed to store reports into the folder. Only reason for not using ACT's is the fact that you cannot use them for data access restrictions and wanting to have a single method.

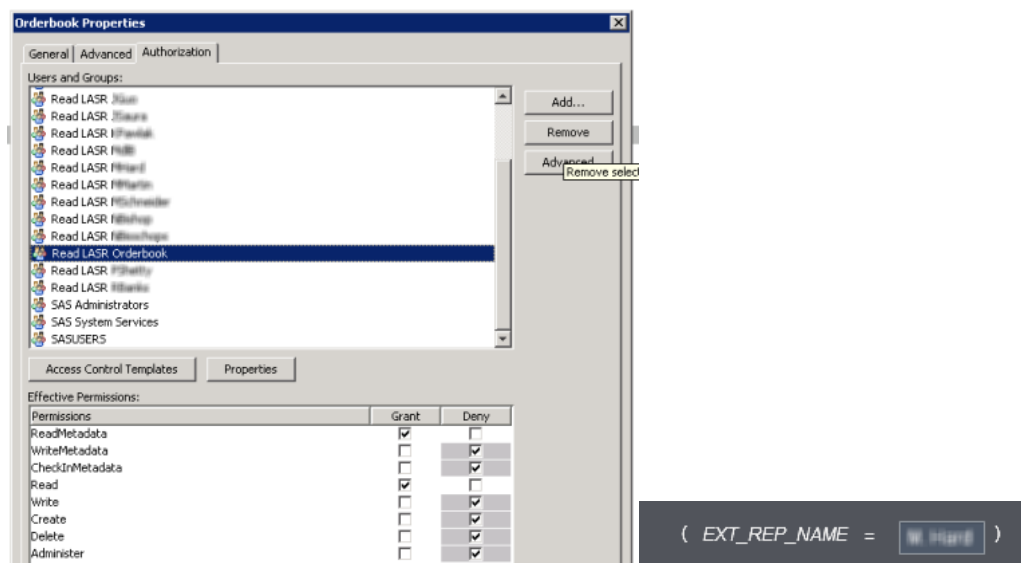


Figure 2: Access assignments to User groups.

Figure 2 shows the assigned access user groups to the LASR table Orderbook with one main access group as highlighted and several individual groups with a data read restriction by name. This restriction has been defined in the management console while using conditional grants on the LASR table.

Split up user set-up for Web/Mobile reporting: Creating reports in SAS AV for both Web as Mobile use is a challenge because of the difference in usable screen size. Some object aspects are more suitable for the Web reports where others suit better for the Mobile reports. Generally most of the Mobile related reports consist of more key bases figures, where the Web related reports often give access to the individual details of the data. While using separate user accounts, you can assign rights to separate folders for both Web as Mobile use. This way the user will only see the assigned folder with the correct report set-up. Mobile user accounts are needed to allow the users to logon the SAS BI app. For security reasons it's advisable to create new users accounts on the local server using complex and secure passwords. While using windows authentication the password is used all the time and can lead to unexpected abuse. The mobile users password needs to be entered only once in the app and can be changed easily on the server. Changing the password or locking the mobile user will automatically lock all of the data functionality on the SAS BI app and make it unusable for others.

Mobile reporting: The mobile app of SAS VA is powerful and easy to use. You can download the app for free searching on SAS Inc. The app allows to use some demo reports that surely cover a lot of the mobile reporting options.

DON'TS

Do not ask what to create, ask for the information needs: As mentioned before, users have no idea what SAS VA can do for them. Presenting the possibilities does not automatically mean that they understand it or are able to think in this way. Asking for the information needs and getting grip on the expectations will lead to new ideas and ways of solving the request in SAS VA. First check if all of the data is available and that the quality and/or definitions are ok. Once the correct data is available, create reports to a more detailed level than expected. This way the manager will see possible deviations in data and be able to check the details where he often could not before. Being able to find more of the details, the recognition and thrust in the report (and the system) will grow and lead to a positive acceptance. (Added value)

Do not try to regenerate Excel based reports: If you ask a manager what the report expectations are, you will often receive a lot of printed excel reports. Creators of these Excel sheets are masters in data manipulation within the model and adding unexpected things like manually added reference lines. Most of the reports have their own "business rules" that can be manipulated at any time. Drag out all of the hidden calculations and rules and try to create individual data fields for them so they can be selected and controlled in a data warehouse. The biggest challenge will be to redesign the report into SAS VA and create the unexpected.

No business rules in reports but in data warehouse: SAS VA offers a lot of possibilities to create new variables of any kind. This possibility has a strong benefit for users that want to rapidly create new fields for analyzing data in different groups or criteria's. For management reports it's not done to create new definitions as being business rules in reports. The black box principle has very dangerous side effects like the traceability and controllability. If the definition is not 100% future proof, strange results effects can occur in the future without anyone understanding why this is happening. Surly the report tool will get the blame and no one will trust the reports anymore. Worse case would be that the business changes due to increasing knowledge, and there is no decent way to find all on the rules in the reports to changes them. Preferable all of the business rules and new field definitions should be in a data warehouse system. Here we have the option to screen the results of the definitions on detailed level knowing that the cumulated results will be OK. Changing the definitions will change all of the records and directly also all of the related reports without checking them one by one. This way everyone understands that the reports just represent the data and that possible failures always will be related to errors in the data and not errors in the report set-up. There is only one truth of the data and that's in the controlled data warehouse environment. It's very important to keep the thrust in your system especially when there are plans for strategic decision reporting.

No quantity but quality: After the buying of the software tool, management expects miracles on short notice. Be realistic in promising new reports, because often the data definitions are not clear enough and it can take a long time before getting it right. Making the report is not the problem but having good quality of data is essential and this often takes time. Ones the data is clean and well defined there is nothing blocking you creating new ways of exploring and/or reporting in a high advanced way. Better one high quality report per week than five none trusted or incomplete reports. Ones the thrust in the reporting system has gone, it will be very difficult to regain it despite of all the fancy new options. There is often only one chance to make a good impression and that's with quality in this case and not quantity.

CONTACT INFORMATION

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