PhUSE 2015

Paper XXnn

Metadata Driven –Yet Another Cliche in Our Industry

Chris Decker, d-Wise, Morrisville, NC

ABSTRACT

Over the last five years the concept of metadata driven has been thrown about more often than a hot potato. In our experience the reality is that this people either really can't back up the phrase with any substance or have very different concepts of what it means and or how to implement the approach. Vendors and industry experts tout how a robust metadata driven approach will dramatically change the industry but don't seem to actual build innovative solutions which support this idea.

This paper will first provide our concept of what metadata driven means and what 'data about the data' needs to be implemented to support this approach. Then the paper will discuss the different ways it has been interpreted across the data flow lifecycle, and what the current state of industry solutions looks like as it relates to a truly metadata driven process. Then we'll attempt to describe how emerging metadata concepts and solutions from other industries might be used to realize a future state metadata driven approach.

INTRODUCTION

Over the last five years the concept of metadata driven has been thrown about more often than a hot potato. In our experience the reality is that this people either really can't back up the phrase with any substance or have very different concepts of what it means and or how to implement the approach. Vendors and industry experts tout how a robust metadata driven approach will dramatically change the industry but don't seem to actual build innovative solutions which support this idea.

This paper will first provide our concept of what metadata driven means and what 'data about the data' needs to be implemented to support this approach. Then the paper will discuss the different ways it has been interpreted across the data flow lifecycle, and what the current state of industry solutions looks like as it relates to a truly metadata driven process. Then we'll attempt to describe how emerging metadata concepts and solutions from other industries might be used to realize a future state metadata driven approach.

Because metadata driven has become a cliché in the industry, we're going to avoid using it for the rest of this paper and just call it Bob.

METADATA DEFINTION

Defining metadata as the "data about the data" seems easy. However, really defining what metadata you need to collect and how you want to use it to dynamically drive processes can be very challenging due to the complexity of the current state and ever changing medical and statistical science.

First, you must step away from the two dimensional world of rows and columns structures

and determine what metadata needs to be captured to drive processes. Metadata about the clinical data, such as the CDISC standards, is limiting and really doesn't address the process. Process driven operational metadata is a key component to achieving the overall goal of a BOB automation.
This section will summarize what metadata is and is not collected in today's process and why that creates gaps and the inability to realize a BOB approach.

BOB WITHOUT WHEELS

Currently, technologies, vendors, CROs, and pharmaceutical companies have claimed that they have built, implemented, or designed BOB approaches and tools. However, while they have used metadata and carried it through the process, in most cases they haven't used metadata to drive the actual downstream steps.

Adding CDISC standards to an Excel spreadsheet and reading that with a tool is not driving. It's putting metadata in a basket and carrying it down the street. A BOB approach needs to be designed so the information you add actually provide directions for the next step in the process.

This section will describe some example of where BOB could add wheels and actually get behind the steering well.

FUTURE STATE AUTOMATION

This section will outline what a future state metadata driven approach might look like exploring the use of different processes and technologies used across other industries. This includes the use of semantic modeling for clinical data providing a powerful and flexible model that maps to the actual clinical data flow versus a two dimensional A4 piece of paper as well as the ability to implement workflow engines using the metadata as input and driving the tasks users experience every day.

This section will provide a more in-depth summary of how these areas could be implemented to significantly change the way we approach the current processes.

CONCLUSION

The conclusion summarizes your paper and ties together any loose ends. You can use the conclusion to make any final points such as recommendations predictions, or judgments.

REFERENCES (HEADER 1)

References go at the end of your paper. This section is not required.

ACKNOWLEDGMENTS (HEADER 1)

Acknowledgments go after your references. This section is not required.

RECOMMENDED READING (HEADER 1)

Recommended reading lists go after your acknowledgments. This section is not required.

CONTACT INFORMATION (HEADER 1)

(In case a reader wants to get in touch with you, please put your contact information at the end of the paper.) Your comments and questions are valued and encouraged. Contact the author at:

Author

Name
Company
Address
City /
Postcode
Work Phone:
Fax:
Email:
Web: