SRC Energy Inc.
Information Systems

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May 2017

NYSE MKT: SRCI

Agenda

- Background
- Integration and selection
- Cloud vs. on-prem
- Data management
- Reporting development and system audits
- IT Project management
- Business continuity
- Ongoing challenges
- End state performance and maintenance

About SRC Energy

- SRC Energy Inc (SRCI:NYSE MKT) is a domestic oil and natural gas exploration and production company. SRC Energy's core area of operations is in the Denver-Julesburg Basin. SRC Energy's corporate offices are located in Denver, Colorado

- Our IT department consists of 2 Network and Helpdesk support staff; 3 systems specialists, according to the system type; and 1 GIS/database analyst

When we started, most of our systems development was 'green field'

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- To start, we established a very simple integration strategy to build a core reporting engine
  - Data governance rules were established in the integrated system and data quality was assessed
  - Connected an analytics tool to the integrated system
  - Developed custom reports within the analytics layer
- By automating the data quality rules within the integrated environment, data gaps are identified and corrected
- The integrated engine was developed over a period of about 8 months and is in continued development, as we add more systems
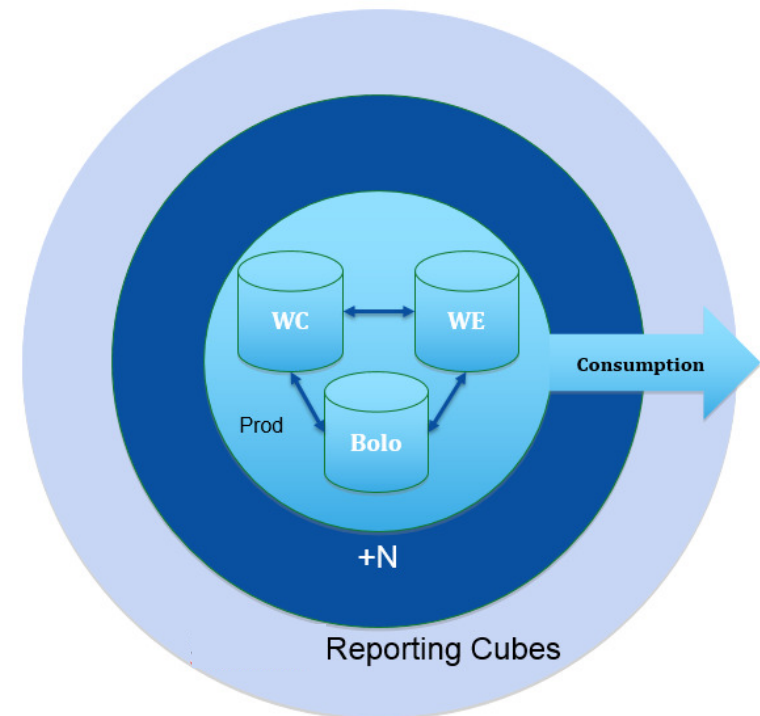
The Systems assessment and selection process helps drive consensus and requirements

- Where to begin with selection
  - Determine the vendors and products in the functional space (i.e.: industry products like Enertia or Bolo for oil and gas accounting)
  - Establish a list of requirements to measure the performance of the products by conducting user interviews
  - Create a Request for Proposal (RFP) for potential vendors

- Choosing the vendor or product
  - Score the vendors according to functionality and demonstration, this is a quantitative exercise and should not reflect a given vendor's canned script, but rather be more interactive
  - Evaluate the long-term costs
  - Conduct reference checks
  - Select the product for implementation and hire a vendor familiar with the implementation of the product

The advantages and disadvantages of cloud computing are not straight forward

- We run a hybrid shop, combining both cloud and on-premise computing systems
- Some fundamental challenges with the cloud
  - In the cloud environment, hosted solutions can hold your data hostage
  - Each vendor has a different approach, or policies regarding access to the data within the solution
  - Creating a tunnel or port to extract data from a hosted solution can be complex and time consuming
  - On-premise solutions can have long-term cost benefit, as some hosted solutions can increase in cost, with company growth (i.e.: charging on a per well basis)

- Conversion of data into like format, so data relationships can be established is an extensive process

Data Conversion **(ETL)**	Perform data extraction from legacy systems, data mapping from old to new systems, and data loading with systematic and controlled processes
Data Cleanse	Data cleanse activities are business-led – starting with defining the approach and ending with documented results for data adds, changes, and exclusions
Data Control	Apply rigorous version controls and document all business decisions and rationales for audit and compliance tracking
Reporting and Dashboards	Architect and implement business integration, data warehouse, and reporting solutions to manage and improve data integrity moving forward

- The number of systems tied together creates the enterprise level data for multi-functional use and reporting

- The flow of data is determined, according to creation (publisher) and subscriber systems

- Write-backs occur within the integrated environment, creating efficiencies for data entry and complex reporting

- Automated data quality rules allow the flow of data to be monitored and corrected between multiple systems

Custom reporting development is much easier today with newer technology

- Spotfire and other analytics tools allow for quick report development and most departments are familiar with the technology
  - Reports can be developed "on the fly" if the data sources are complete
  - New technology allows for quick publishing of data through a web viewer, keeping installs to a minimum
  - Combined data can be used to derive reports such as NRI, or LOE
  - Determine the number of critical reports; too many reports become meaningless

- Getting away from complex spreadsheets and "shadow IT"

- Data living outside of the system is not controlled data

- In many cases "shadow IT" occurs when there is no logical home for data, which creates a strong case for a larger, integrated system

- Integrated systems can conduct workflow, notifications and provide a home for data outside of specific, or functional data (i.e.: Accounting in the G/L)

- Auditing data outside the system can be extremely challenging and is not efficient

- Business sponsorship is paramount for the success of a project, especially for larger, more complex projects

- Clear scope of the project helps determine the success of the project from day 1

- Determine the appropriate methodology; we consistently follow the Agile methodology, which allows for daily communication and more definable time periods

- We tend to develop in short sprints, over the course of 6 to 8 weeks, which allows us to discontinue an effort or change the objectives without too much risk

Business continuity minimizes potential downtime and the recovery of mission critical data

- With improvements to data storage technology, space has become more inexpensive and business continuity products are now more affordable

- With business continuity products established, systems can be back up and running (in the event of disaster or disruption) in a matter of minutes

- In the past, it would take days to get systems back up and running

- Minimizing disruption to the business is critical and recovering data can save many hours of work

Our ongoing challenges remain in establishing process and workflow outside the systems
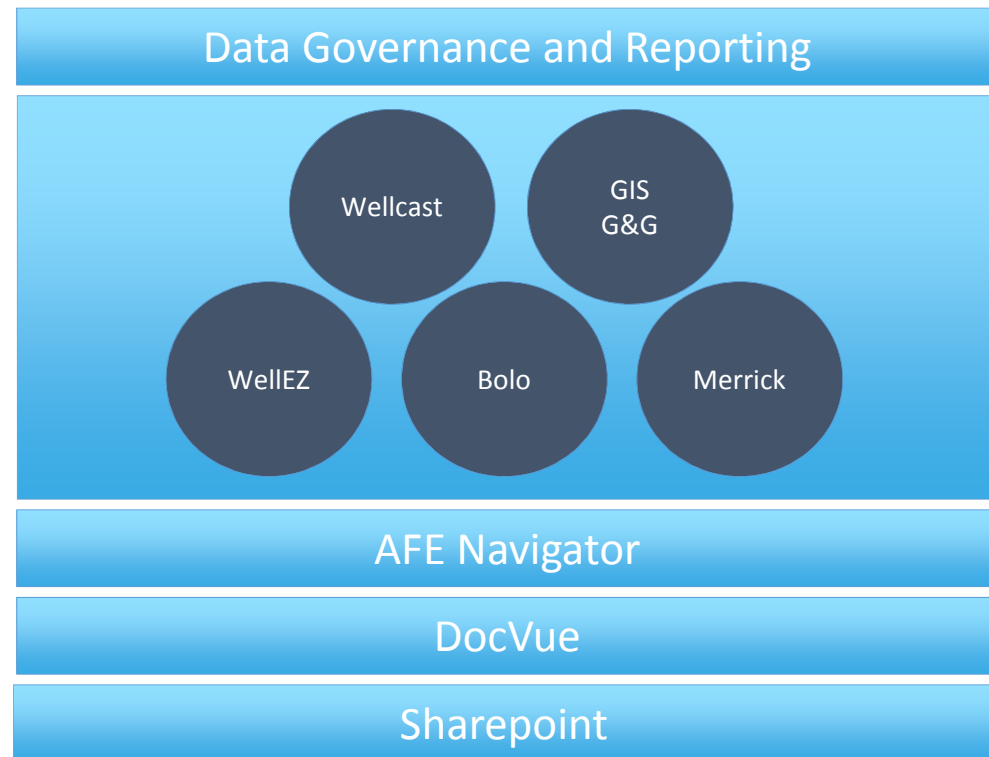
- Understanding the data model requires the flow of data from one system to the next, within the integrated environment

- Defining process between departments (the point at which data is approved and pushed to another team member) can enable a workflow system

- Workflow systems can automate the flow of data through the organization and enhance the quality of data (i.e. the golden record)

- Reliance of data is dependent on the quality (i.e. "garbage in, garbage out")

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- Utilizing a web interface (portal) all the systems can be accessed in an integrated environment

- Centralized systems are more readily supported, by a smaller team

- We don't want to grow the IT function, but rather do more with less

Data Governance and Reporting

Wellcast
GIS G&G
WellEZ
Bolo
Merrick

AFE Navigator

DocVue

Sharepoint

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Questions or comments?

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