



Avoiding Common Data Management Traps

New Digital Business, www.ndbteam.com

... Or 'The Elephant in the Room'

As a cliché as in life 'The Elephant in the room' is difficult to avoid.



For the avoidance of doubt ...

It is the big and obvious issue that is ignored or not addressed ...

- ... possibly because it would be very difficult
- ... or pointing it out may cause embarrassment
- ... or we have ignored it successfully so far and perhaps it will just go away
- ... or it is something 'we don't talk about'



Structure

- Introduction
- Data Management challenges are well known
 - Transformative
 - Impact on day to day work
 - Elements of a Data Management framework
 - Success stories in each dimension
- Governance and Failure
- The Elephant in the room
- Steps towards successful change

Brief Introduction

What is said about NDB?

“Getting NDB engaged was like putting the project on steroids.”

“It was a piece of seminal work in the development of this company ... but don’t tell him that!”

“You’ve just done what we could’ve done ... except we don’t have the people or the knowledge.”

“My expectations are exceeded; very helpful thank you!”

Clients:

BP Corporate, BP Azerbaijan, BP Norway, ConocoPhillips NSB, Nexen, Hess, Afren, North Energy, ConocoPhillips Corporate, Apache, Shell E&P, BG Group, EnVision, Schlumberger, SAIC, Woodside, ADCO, Total E&P, Tullow Oil, Tullow Uganda, Cairn Energy, Melrose Resources, Nexen Petroleum, PetroCanada, Helix RDS, IHSenergy, Landmark Resources (LMKR), Halliburton/Landmark, Accenture, Perigon Solutions, Wrightway, 8over8

Typical Data Challenges - Impact on the business

Houston

- Can be hard to find the data you need
- Has no idea what data Stavanger have available
- Users generally don't document their horizons/work

System can't answer Q like "how many wells drilled in block X penetrated the Devonian" or "how many wells in block X have a gamma, sonic and density log"

Short term association of **contractors** means less inclined to perform good data mgmt practice

Stavanger

Main concern is that it helps his people work better, work faster, and drill better wells.
It is "damned hard to find data in Stavanger"

No central database –
leads to **confusion** over what is the definitive version of data

Missing well issue – found out after having spent a lot of time building a velocity model for a depth conversion that there was a key well in part of the area that she hadn't been aware of (was missing from many of the earlier maps she'd seen).
Saw mention of the well in a report, asked partner about it, got them to send the data, rebuilt the model.

New users – very difficult to find data as not a single data source. Need to know what something is called in order to find it.

Not a complete log suite for a wells, even though they were probably logged at time of drilling ('82 – '86)

London

Field data was bought from Shell but it is believed that as we did not have DM skills in house they did not ask the correct questions about the data and **did therefore not receive everything that they wanted** – didn't manage the process well

Can't answer Q "what surveys do we have in Libya?"

Drilling

Does the information exist? Where is it? What format is it in?

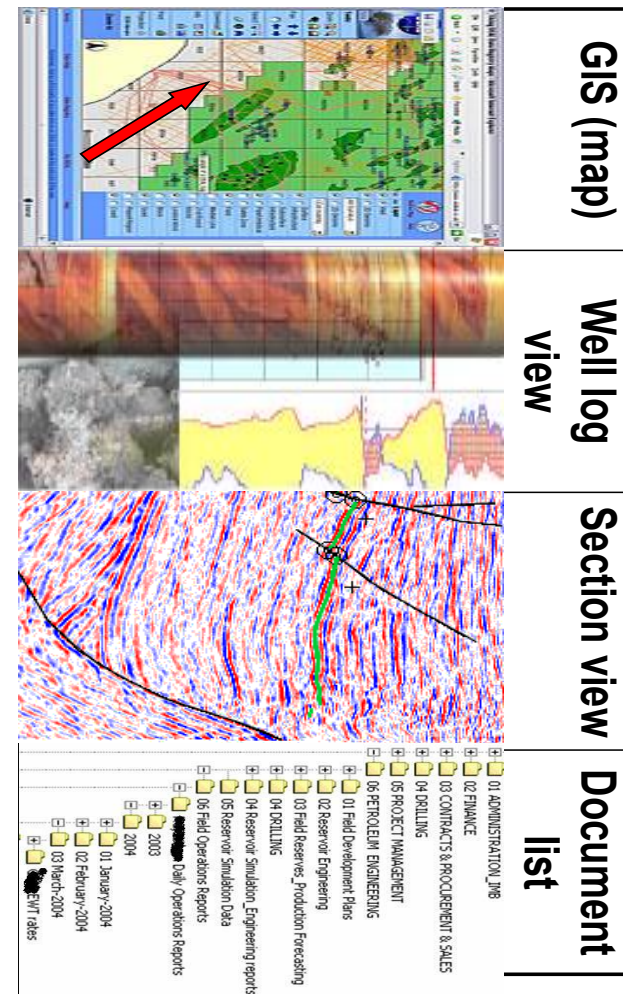
CEO Consequences

- Increased time taken to make a decision? – Commercial Failure
- Sub-optimal recovery? – Leaving money in the ground
- Under engineering for Safety? – Risking people's lives
- Costs not Optimised? – Poor investment decisions
- Increased / Decreased CoS (Chance of Success)? – Commercial Failure
- Unreliable Production Reporting? – Criminal Negligence?
- Loss of Credibility with Governments and JV Partners

Functionality 'must haves' - characteristics of an IM architecture

- Provide a definitive data source for key data types
- Show the user what information is available for an area
- 'Drill down' into the data to get more detail and to make selections
- Move the selected data into the analysis environment or order the information or product from physical storage
- Support the publishing process for preserving the results from analysis

(Bruce Rodney, Exprodat)



- Three button clicks to any data in a paper, a digital, interpreted and archive. Searchable, viewable and selectable online.

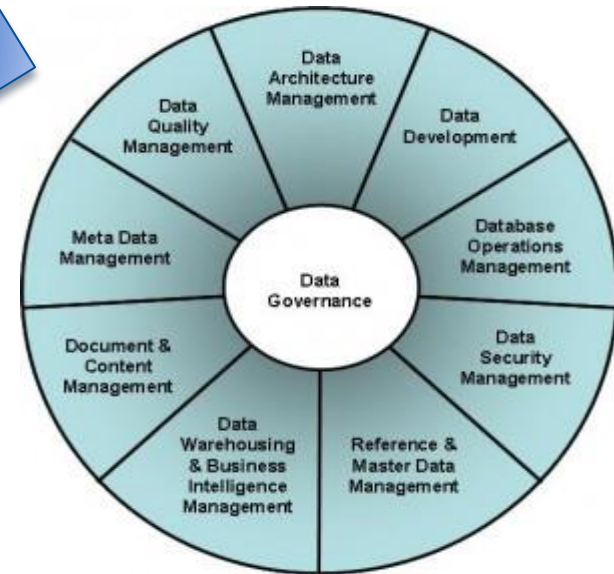
Elements of a data management framework

- Governance and Policy
- Process
- Data Standards
- Architecture
- Roles and Responsibilities

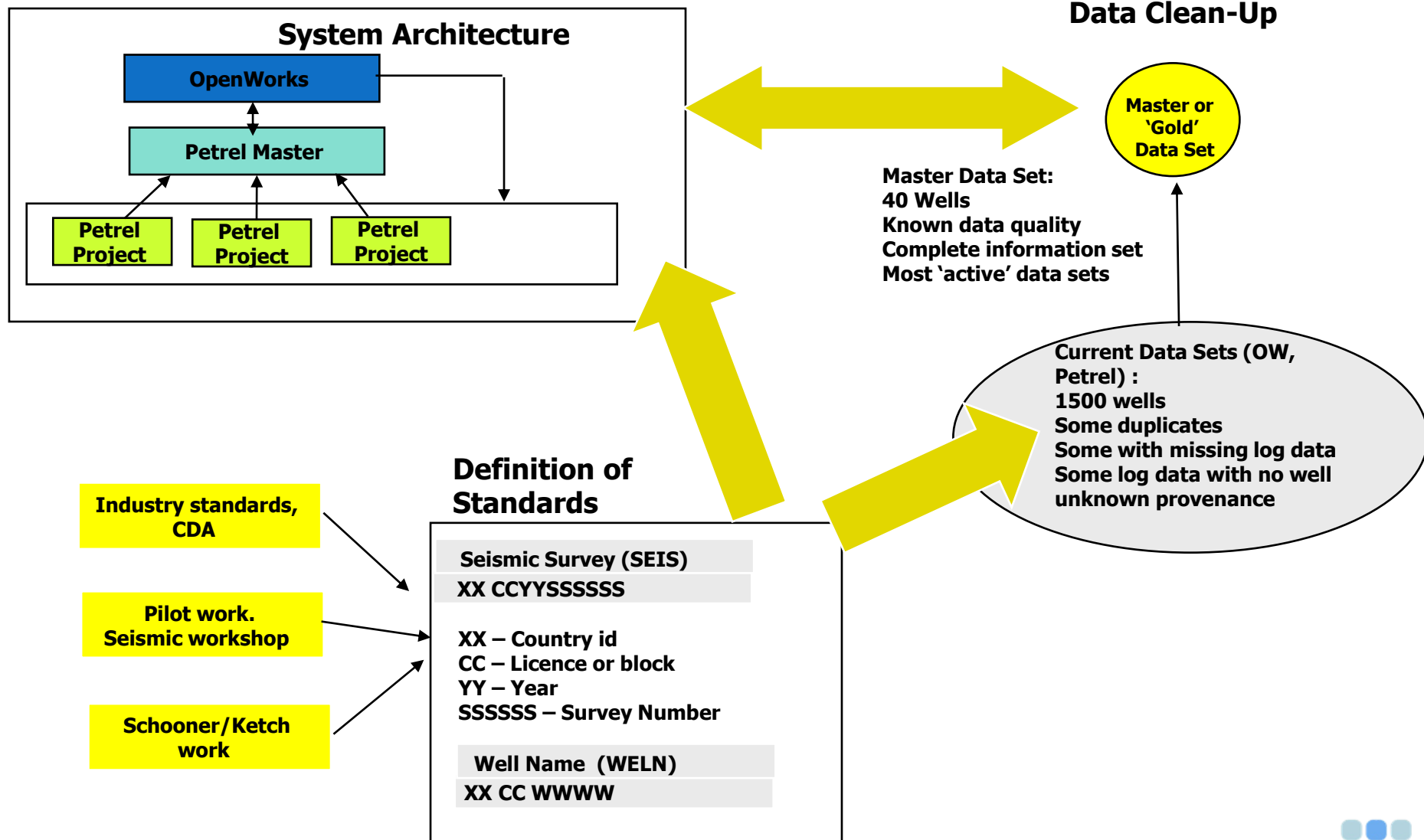
DAMA



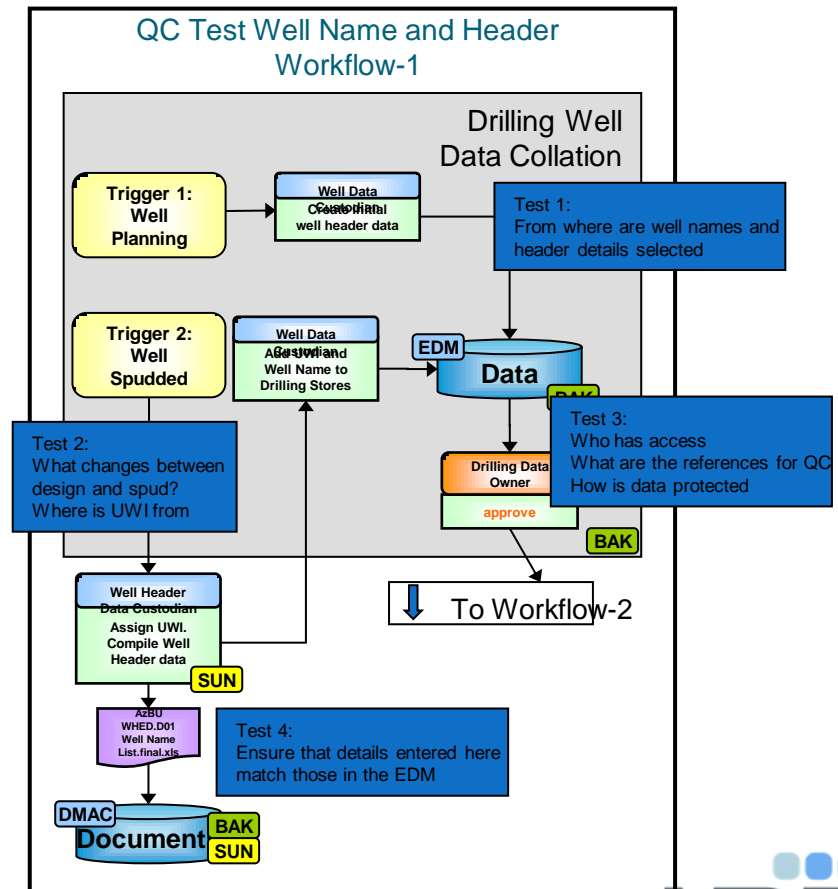
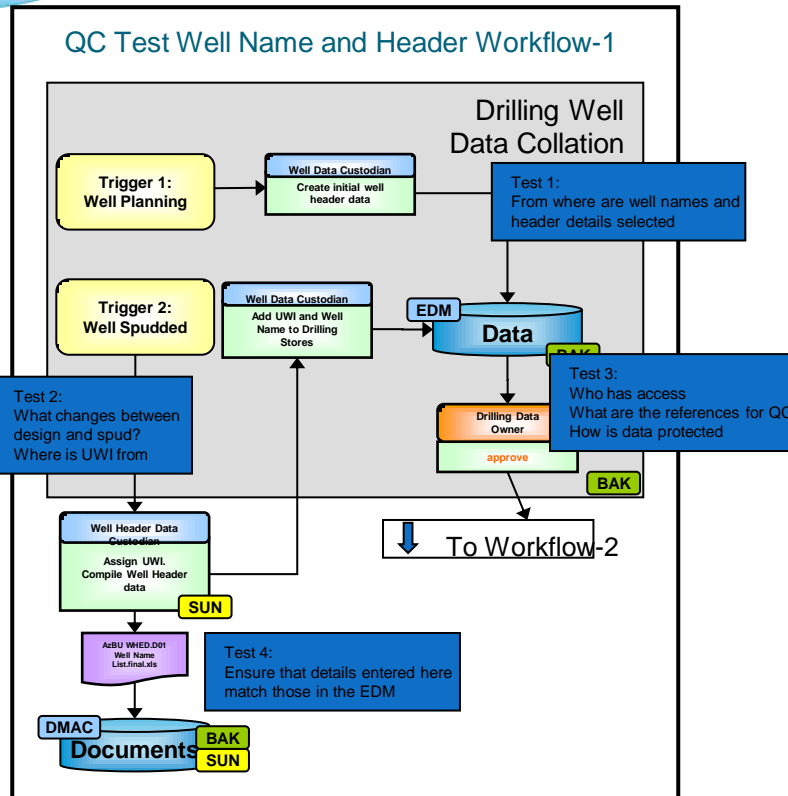
Typical Approach



Data Standards and Technology



Architecture and Process per Data Type



Process considerations:

- Using defined roles
- Apply standards
- Fit to architecture
- Service levels
 - how soon is my data available?

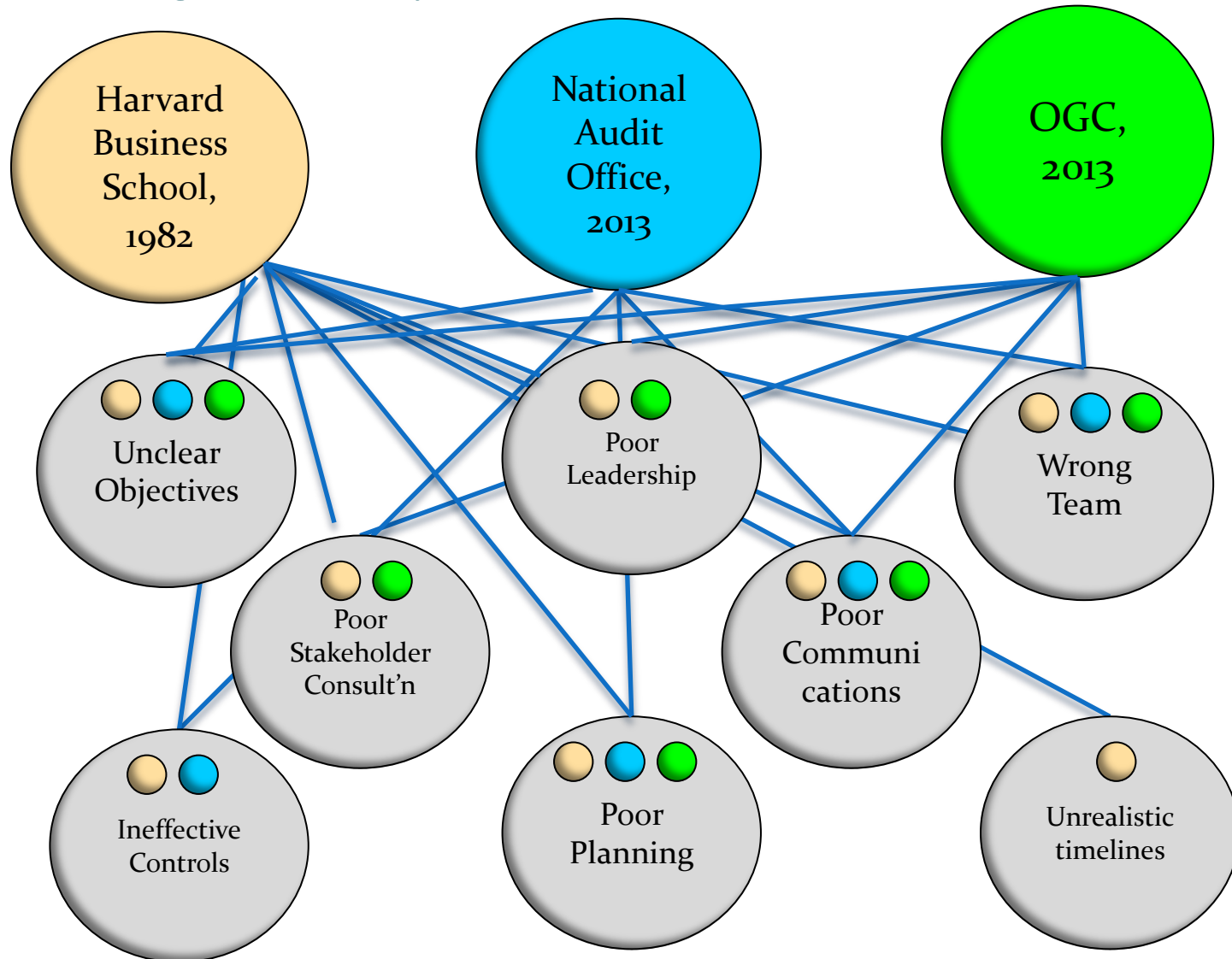
However....

- Success is patchy
- Initiatives lose urgency
- Looking for technology to solve problems
- Undone by poor practice
- Most commonly we see:
 - Do over again
 - Local bright spots

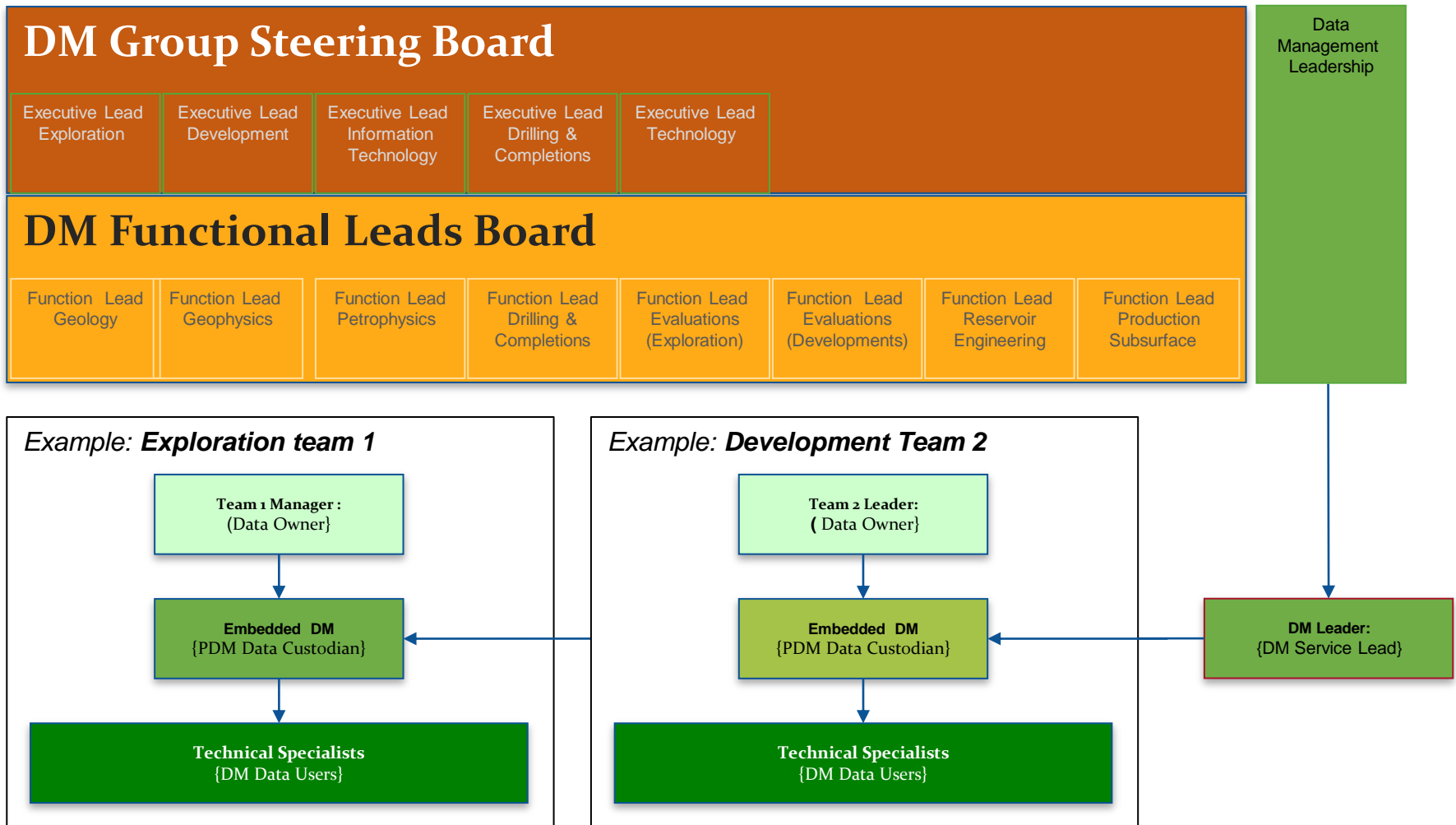


Standard Reasons Projects Fail,

(Project Management Today, march 2014)



Data Management Governance and Delivery Model



Effective Governance is held back by the Elephant... 'Ownership'

- Is the term clearly understood?
- Poor sponsorship
- Lack of engagement
- No changes in user behavior
- Little investment in the service
- Reaction rather than planning
- Thinking through consequences
- Need to get work done



Examples: Changing the Business and Avoidance Tactics

Impacts not discussed ...

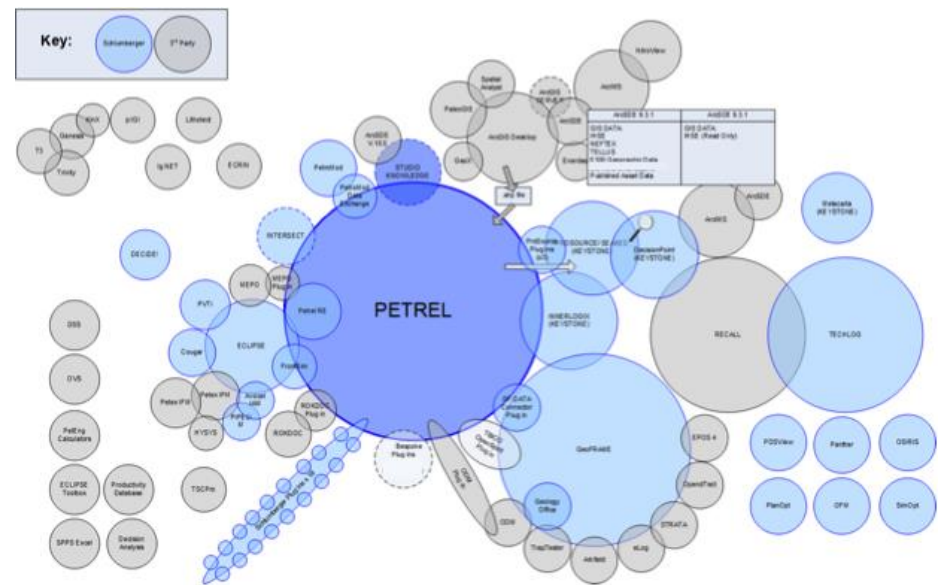
- Global Roll out of Petrel
- Standards for Well Data
- ROI for software purchase
- Assurance policy
- Organisational change
- Performance Goals

Diversions ...

- Buy more technology
- 'Don't impact users'
- More clean ups
- More projects
- Being busy, short term

Difficulties in Ownership– ‘falls between two stools’

- Everyone is very busy
 - Ownership seen as technical
 - You're the expert (its an IT problem)
 - Its complicated
 - Business/ IT relationship
 - Business imperatives
 - IT imperatives
 - Not technology
 - Not a lack of understanding
 - Activities required are clear
- ... to make it work requires fundamental changes



Small Steps to overcoming ownership issues

- Recognition...
- Portfolio approach
- Supporting the science
- Top Down insistence
- Business Impact estimated
- Organisational changes

Seismic Wavelets	Synthetic Seismograms	Calibrated TD Curves	Checkshots/Velocity Log
VSP Data	VSP Program Report	VSP Final Report	Site Survey Reports
Site Survey Tapes	Faults	Horizons	Horizon Attributes
Seismic Interpretation	Field Reports	Bathymetry	Gravity
Magnetics	Acquisition Report	Seismic Navigation(2D,3D,4D)	Seismic Traces (2D,3D,4D)
Processed Tapes	Field Tapes	Processing Report	Processing Sequence
2D SP Locations	3D Sail Lines	3D Seismic Outlines	Seismic Prints
Observers Logs	Seismic Processing Velocities		

Summary

- There are lots of success stories in Data Management
- Data Managers can only facilitate
- Questions about 'impact' often avoided
- IT and Business have different viewpoints
- Effective Governance is essential – effectiveness depends on Ownership