

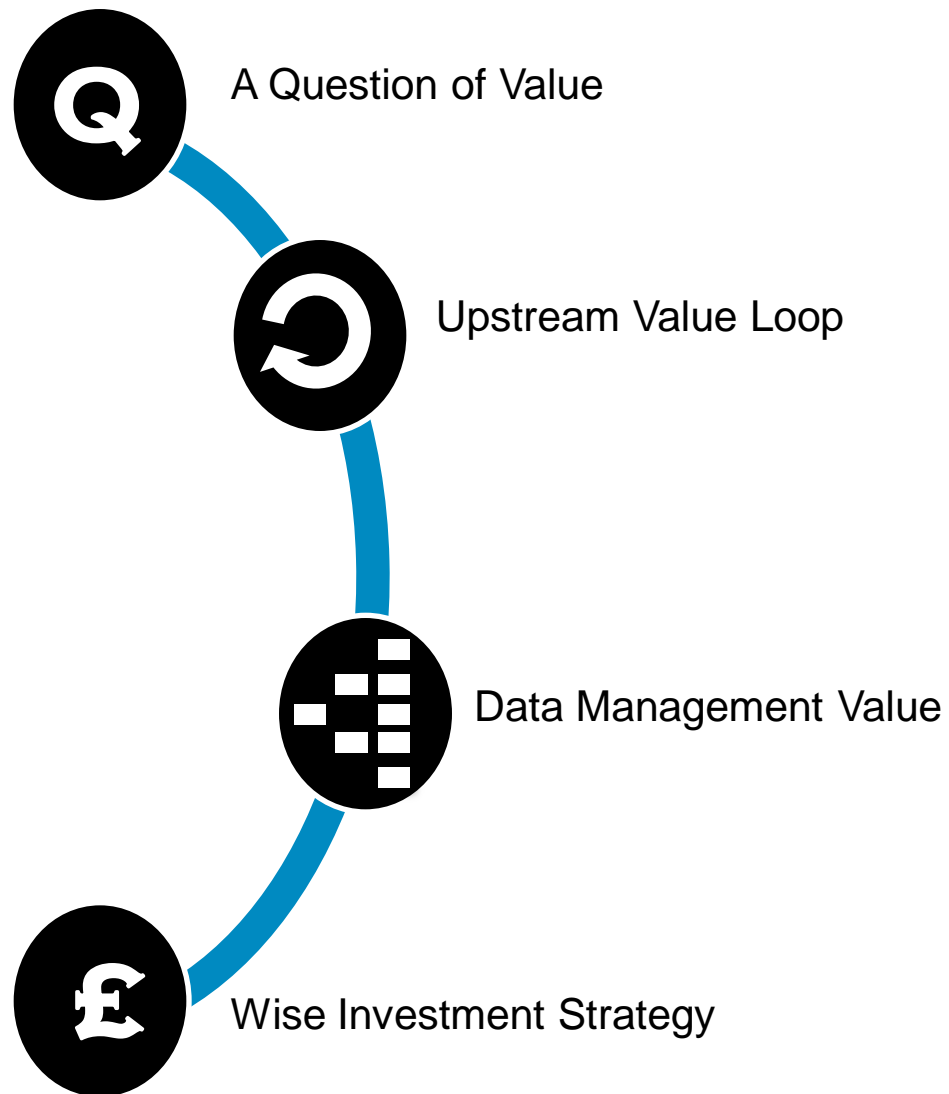
Delivering Success in Data Management Projects

22nd April 2013

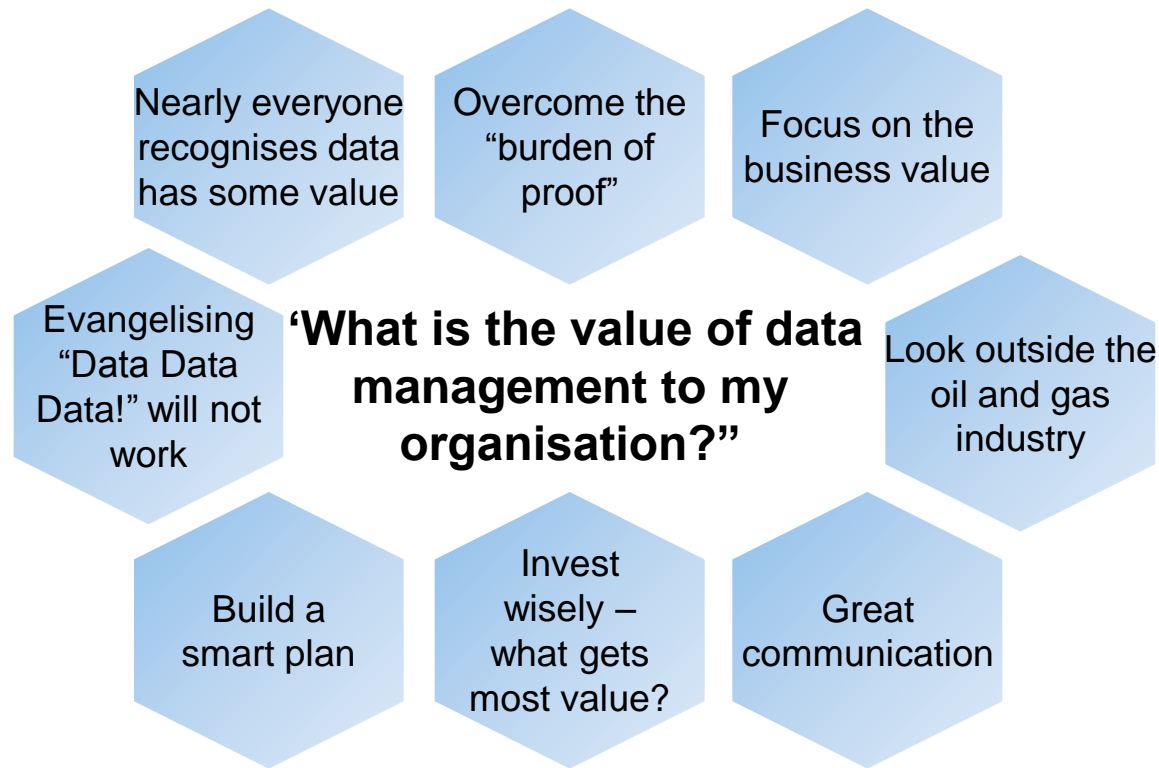
Stephen Lord, IBM Chemicals and
Petroleum CoC



Agenda



Are organisations missing the real value of data management or are we failing to describe the value of data?



What is the value of Data?

Clearly “decision value” has the highest potential followed by Integration Value

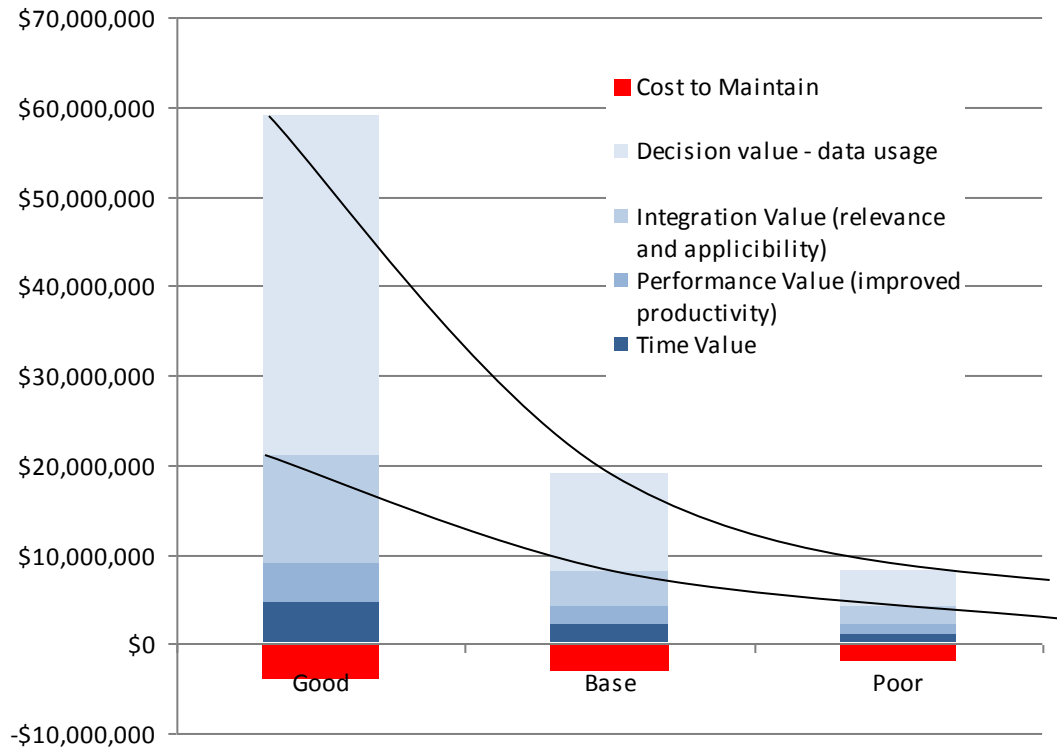
However: These can be ‘harder’ to quantify. Acquisition cost or “saving time searching for data” are easier to measure.

However:

What if interpreters will always spend around 40% of their time looking for data because this is what they feel is ‘about right’?

What if by concentrating on the lower value metrics we actually perpetuate a self fulfilling prophecy?

From: Value of Data Management: PNEC
Paul Haines, Senior Principal - Noah Consulting
Mark Wiseman, Senior Manager - Hess Corporation





What if interpreters will always spend around 40% of their time looking for data because this is what they feel is 'about right'

In the CDA Value of Data Management Study E&P Executives clearly chose data as the most important aspect of 'understanding the subsurface'.

Data on the subsurface is always by it's nature incomplete.

We don't actually measure how much hydrocarbon is in a trap we measure secondary properties such seismic impedance or formation resistivity.

As such we never have a complete picture, just an increased certainty in the risk. There isn't too much data but the right data at the right time top define an opportunity and understand the risk.

What if by concentrating on the lower value metrics we actually perpetuate a self fulfilling prophecy?

Interpreters will always spend an appreciable amount of time looking for data.

This is not a useful metric nor a bad thing.

The important metric is the quality of the business decision.

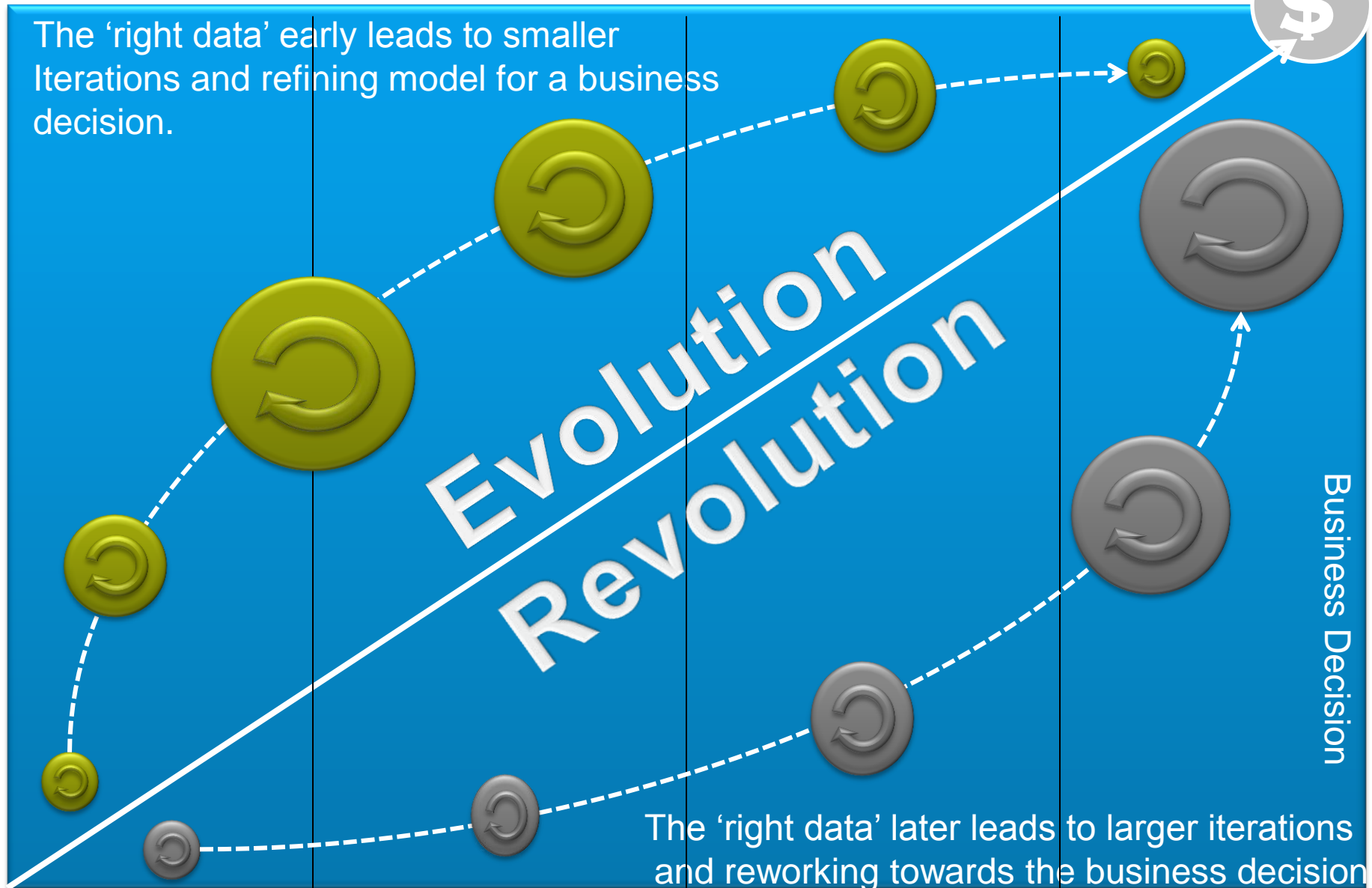
But we measure the "time spent looking for data" we do the project We go from 43% to 42%....

Because we failed to understand the true value we now have a bigger challenge to get funding for the next project and slip down the investment in data and it's management slide.

Good Data Management provides the right data early in the cycle and supplements this later.

IBM

The 'right data' early leads to smaller iterations and refining model for a business decision.



The 'right data' later leads to larger iterations and reworking towards the business decision

Is it really that simple?

- Quick Answer: No of course not!
- But lets simplify a scenario

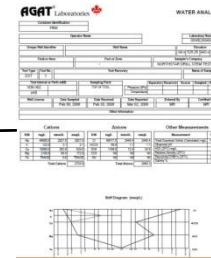
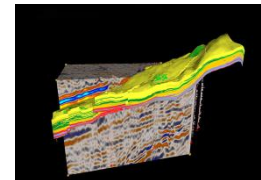
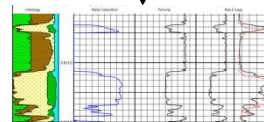
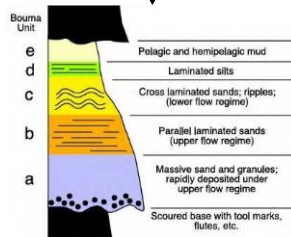
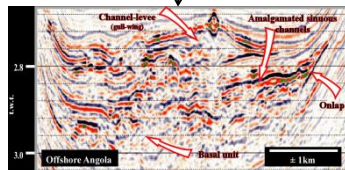
Water analysis indicates 'fresh' water

Revolution

Reassess seismic?

Is it fluvial?

Repeat Sw?



Economics



Model Built



No measurement of R_w , assume a marine sand

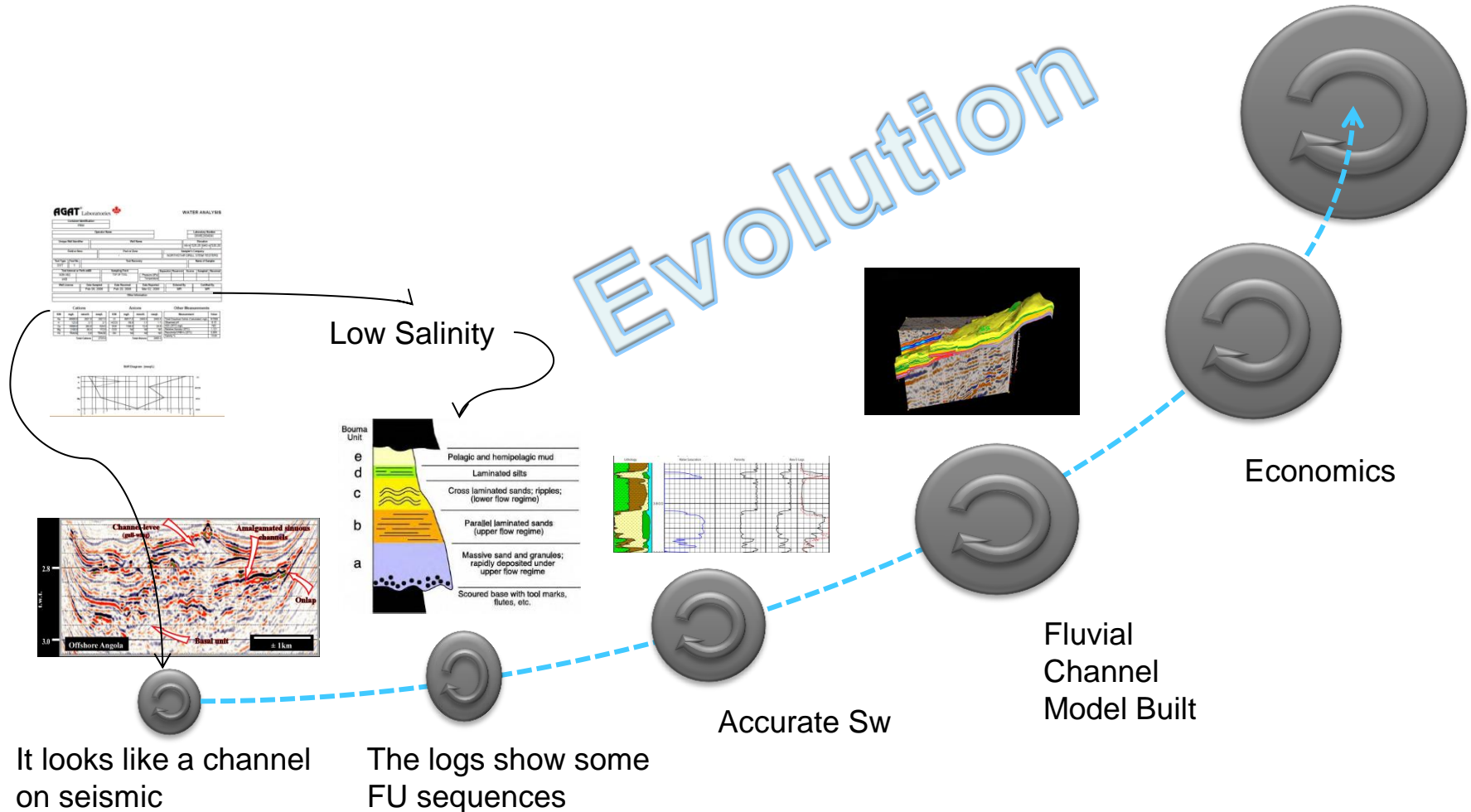
The logs show some typical Bouma sequences

It looks like a turbidite on seismic

Is it really that simple?

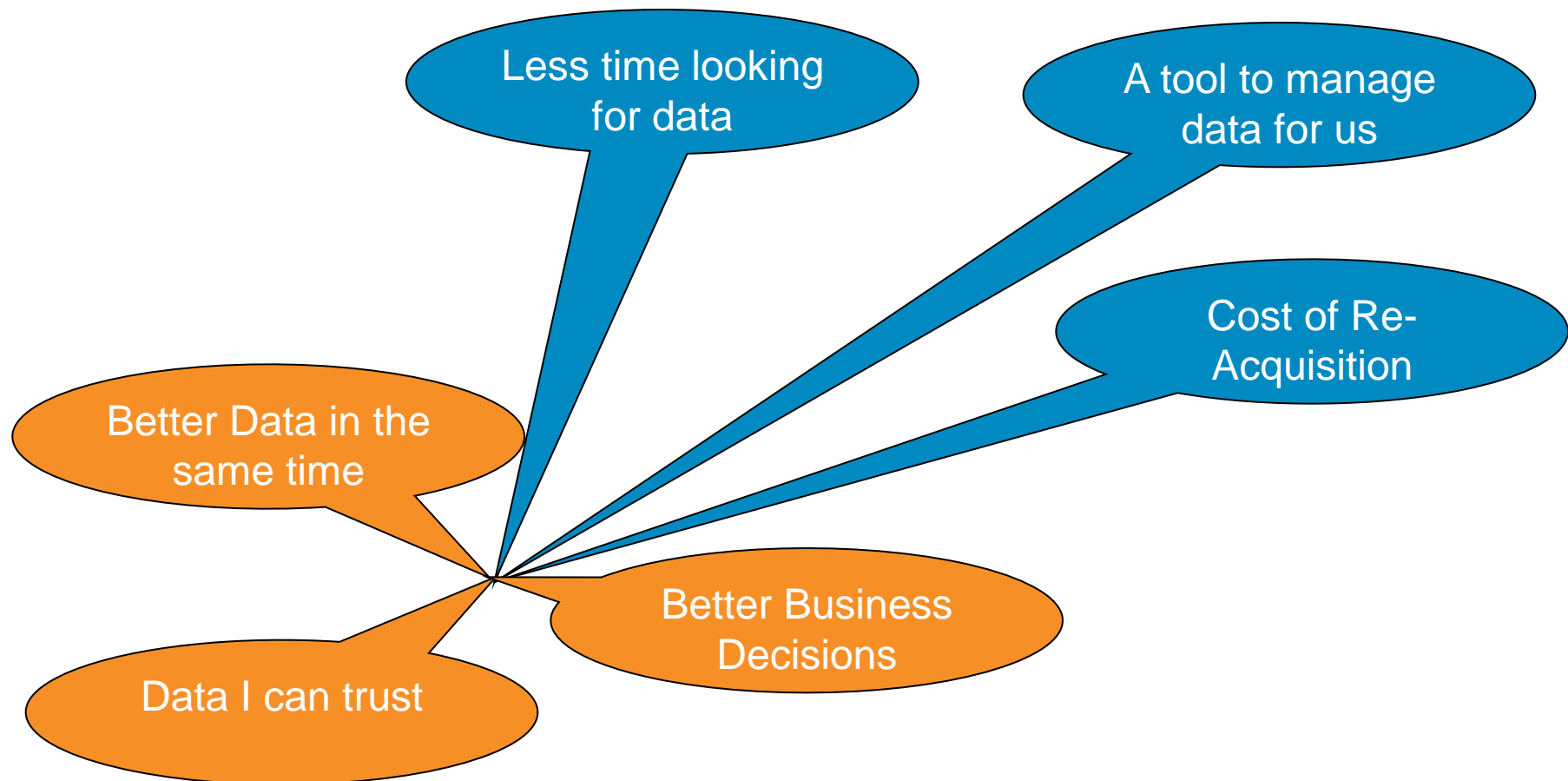
- Water Analysis from DST #1 available from the beginning

Evolution



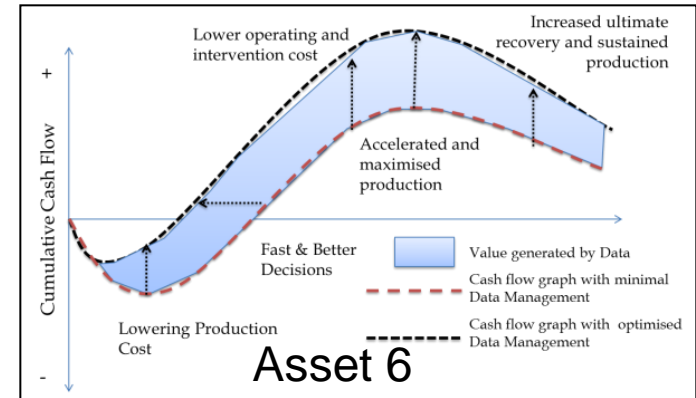
Better Business Decisions through Data Quality and Availability

- The somewhat simplified scenario assumes that over the time for the evaluation the same data is made available and interpreted.
- We could also assume that the end-users spent the same amount of time looking for data.

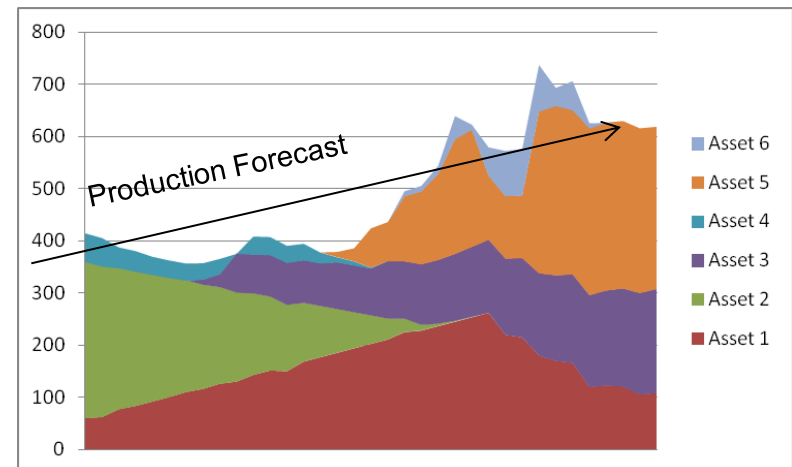


Value derived from E&P Data varies over time and each combination of data brings about additional value. All this helps us understand the risk and manage uncertainty

- Data is often acquired for a specific purpose
- The initial value of the data is usually assigned to the business decision it was acquired for as a justification of its acquisition cost.
- E&P data is intrinsically technical and complex; combined with other complex data leads to a further reuse of the data and therefore further value.
- This further value > value assigned at acquisition, moreover the value of data over the longer term has little correlation to its initial value.
- Data deemed insignificant at one stage can be the key to understanding the risks in a business decision.
- Taking a 'non-traditional' approach to data value can provide a competitive advantage through long term realisation of the value of data assets.
- Value can mean different things to different business stakeholders.



Asset 6 production is more valuable when Asset 5 has an expected production drop.



Sustainability?

- Value

- Long lead times to ROI
- Poor metrics used to measure value

- Inertia

- It's never finished
- What about the legacy data?
- The last project didn't deliver

- Culture:

- It's not my job
- It's not on my appraisal
- We need a technology solution

Data Management Projects?

- Value

- Put in the effort before the project.
- Find the correct metrics for your organisation
- Recognise that different levels of the organisation will see value differently and have different drivers
- Create a smart plan that builds on success

- Engage

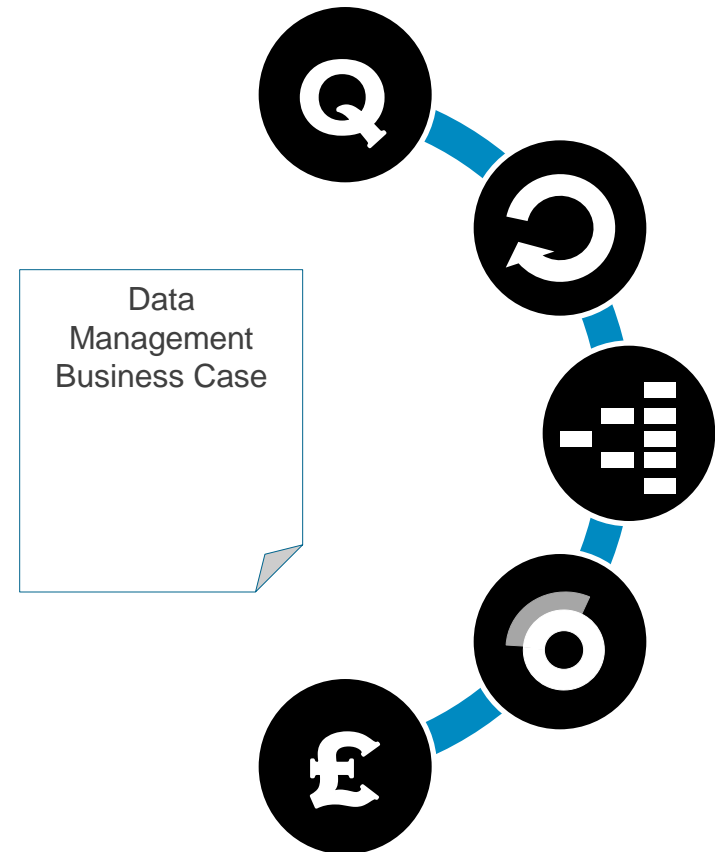
- Make the scope and intended deliverables clear
- Engage top down and bottom up. Ensure the value statements cover all levels

- Culture:

- Change Management is usually critical not optional
- Correct use and management of Data is everyone's job

Key Data Management Principles to remember when building your business case:

- Value derived from data can increase over time but only through use and application.
- Optimal use of data leads to better understanding of uncertainties which leads to better understanding of risk
- Data is an asset and should be treated as such – this is not just it's acquisition cost!
- The decision value of data greatly exceeds the integration value of data which exceeds the acquisition, time and productivity value
- Value realised from data can often only be fully demonstrated retrospectively



Look to the 'Real Value' data provides not just the easiest KPI's to measure