

# Uncovering the Impact of Data Governance

Steve Hawtin

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# Why measure business impact?

- Value based management
  - Provides the business case for investing in "Data Services", "Data Quality", "Data Architecture" or "Data Governance"
  
- How to measure the value that data, data management and data governance delivers to an oil company?

# Learning from others

## ■ The Business Case

- *“The business value case for data management” CDA (2011)*
- *“The Main Sequence: Matching Data Management Change to the Organization” Jess Kozman - PNEC12 (2008)*
- *“Quantitative value of data & data management” Paul Haines & Mark Weisman - PNEC15 (2011)*

## ■ Implementation Examples

- *The DAMA, ITIL, PMI & PRINCE2 standards*
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# 2011 CDA Study

- Attitudes of budget holders to data management
- What do they believe?
  - What value does data management deliver?
    - What value does data deliver?
    - Where is value lost and not realised?
  - What would improve the presentation of data management?
  - Where are the key opportunities to improve?

# CDA Study

Published Feb 2011

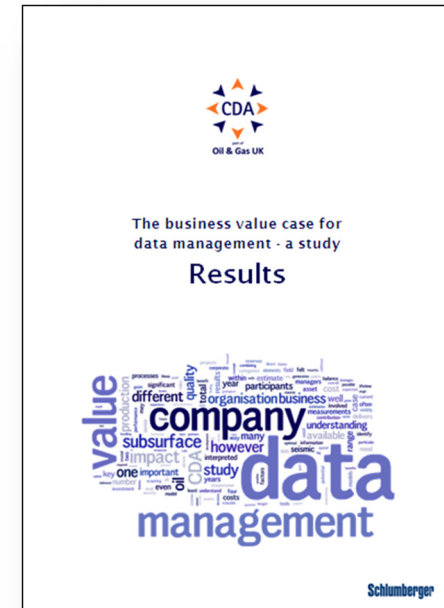


<http://www.oilandgasuk.co.uk/datamanagementvaluestudy/>

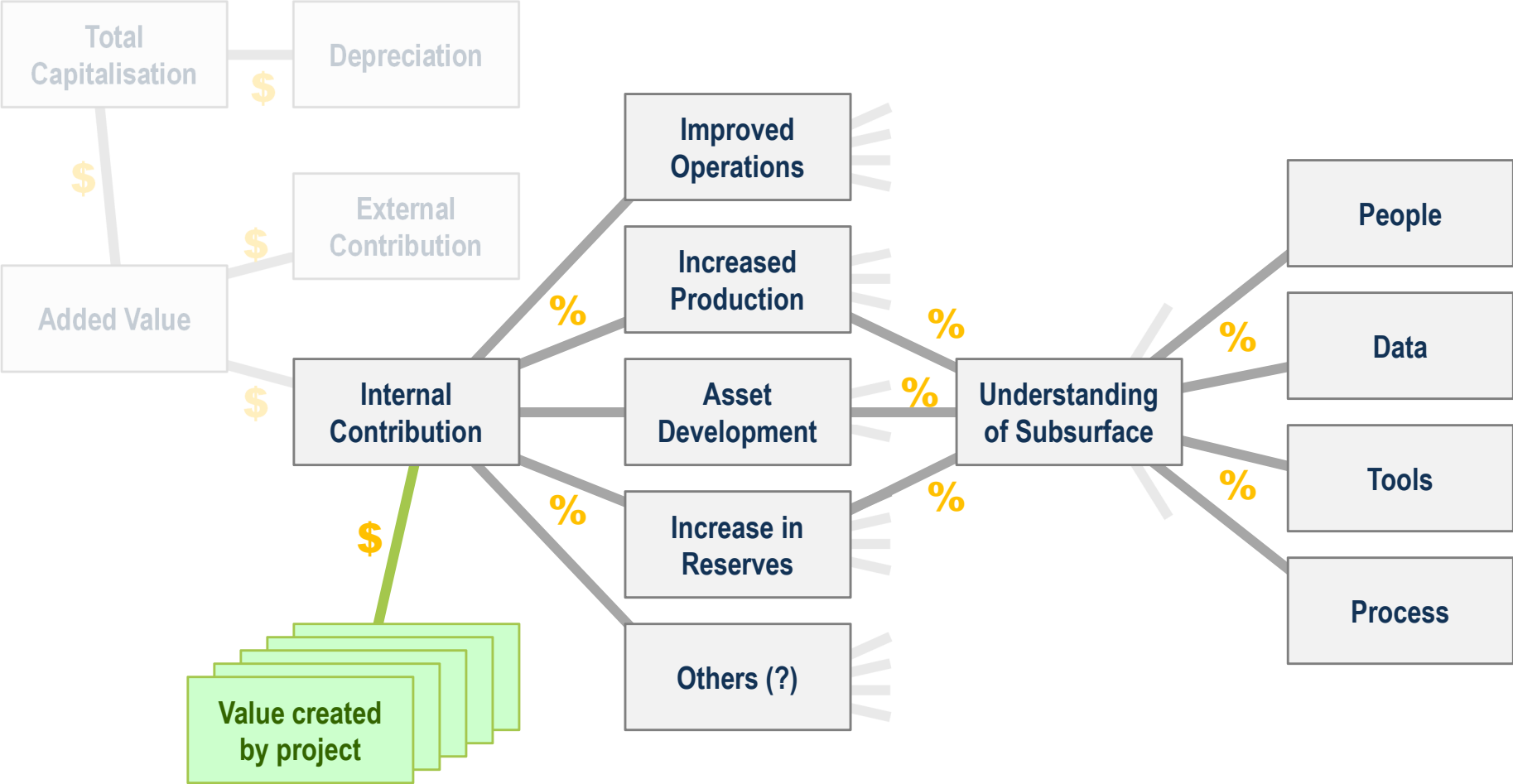
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# Report

- The value of data
  - Cost v Value
  - The beliefs of senior staff
- Value of data management:
  - How long data delivers value
  - Company size
  - The role of 'Data Management'
  - Common opportunities to improve



# Working out the “Value of Your Data”



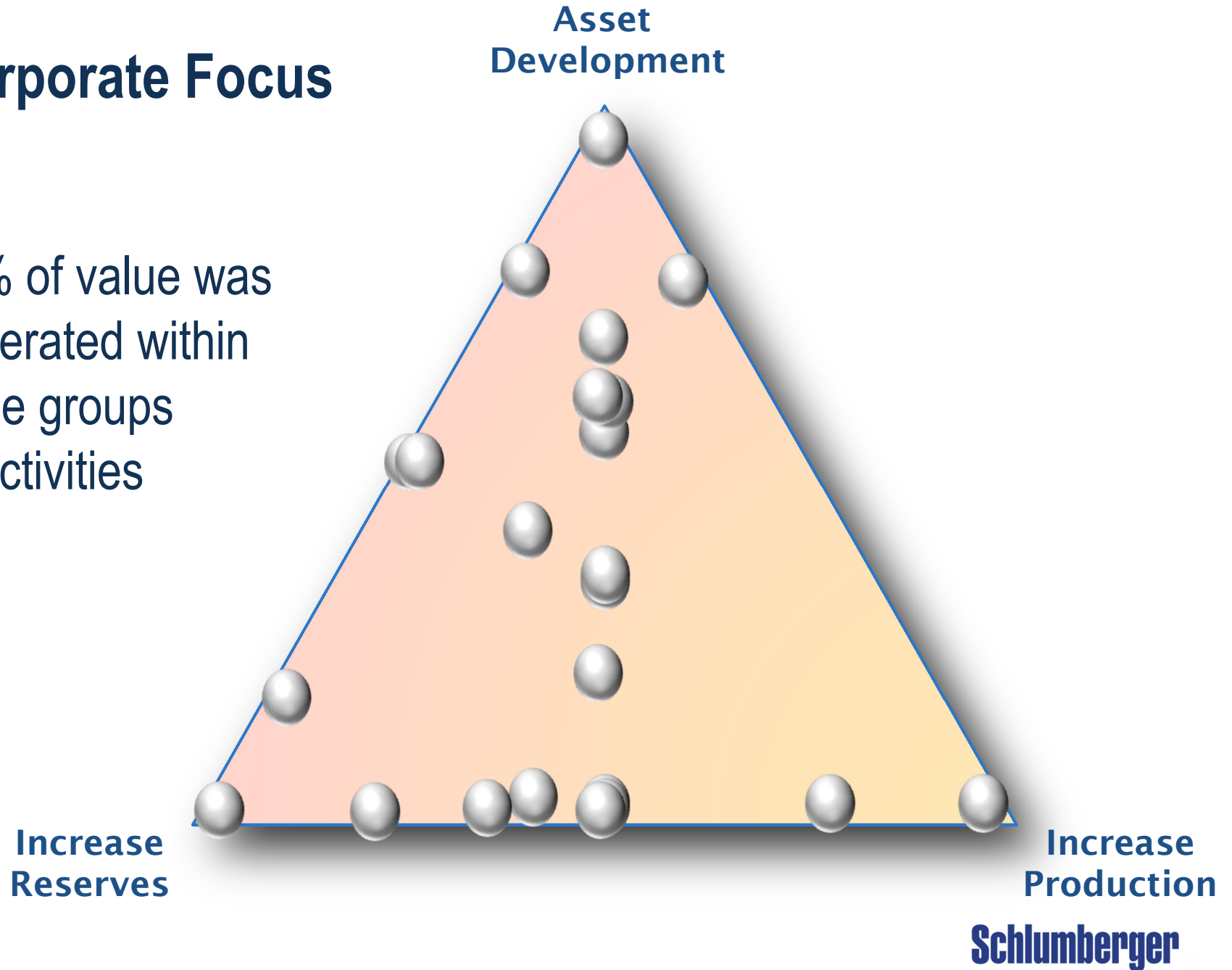


# Value of projects – Two Simplified Examples

- 50% interest cost £5M
- Spent £20M over 2 years
- Turned down offer of £100M for our stake
- Value created:  $(100-5-10)/2$   
=> £42½M per year
- 20 year drilling program to 2030
- 400M barrels from 20 additional wells (20M each)
- £20M to drill each well (\$34M)
- FPSO - £2B (\$170M / well)
- 20M barrels @ \$40 => \$800M
- Value created: \$696M per year

# Corporate Focus

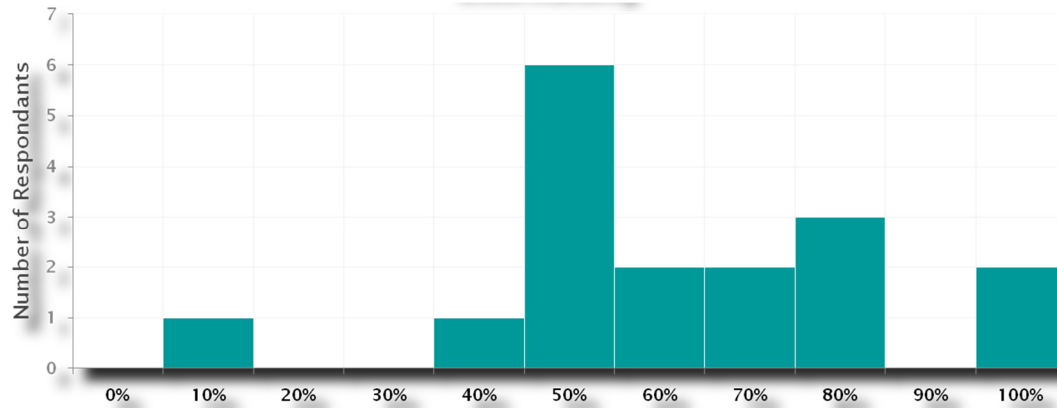
95% of value was generated within three groups of activities



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# How much does the subsurface contribute?

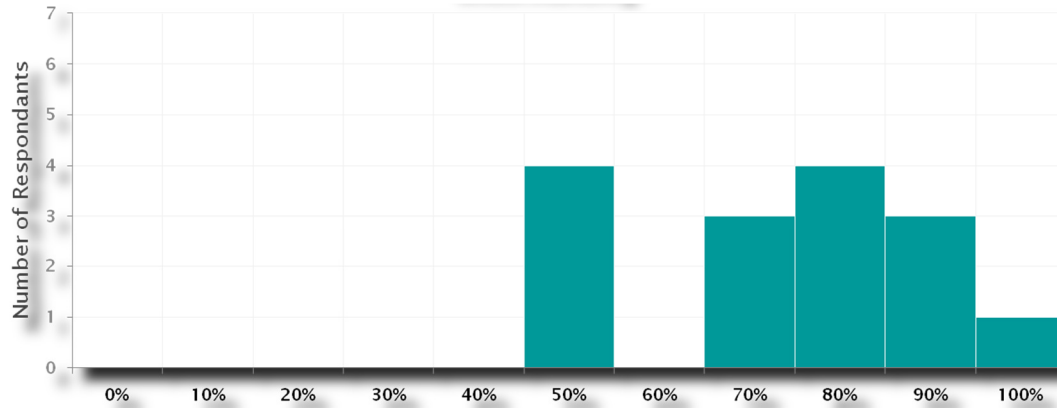
Production



Average  
**62%**

Median  
**60%**

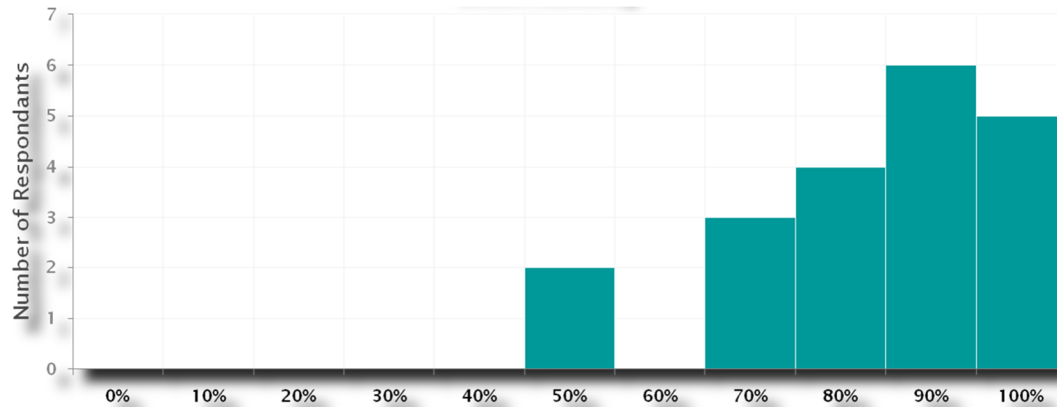
Development



Average  
**73%**

Median  
**80%**

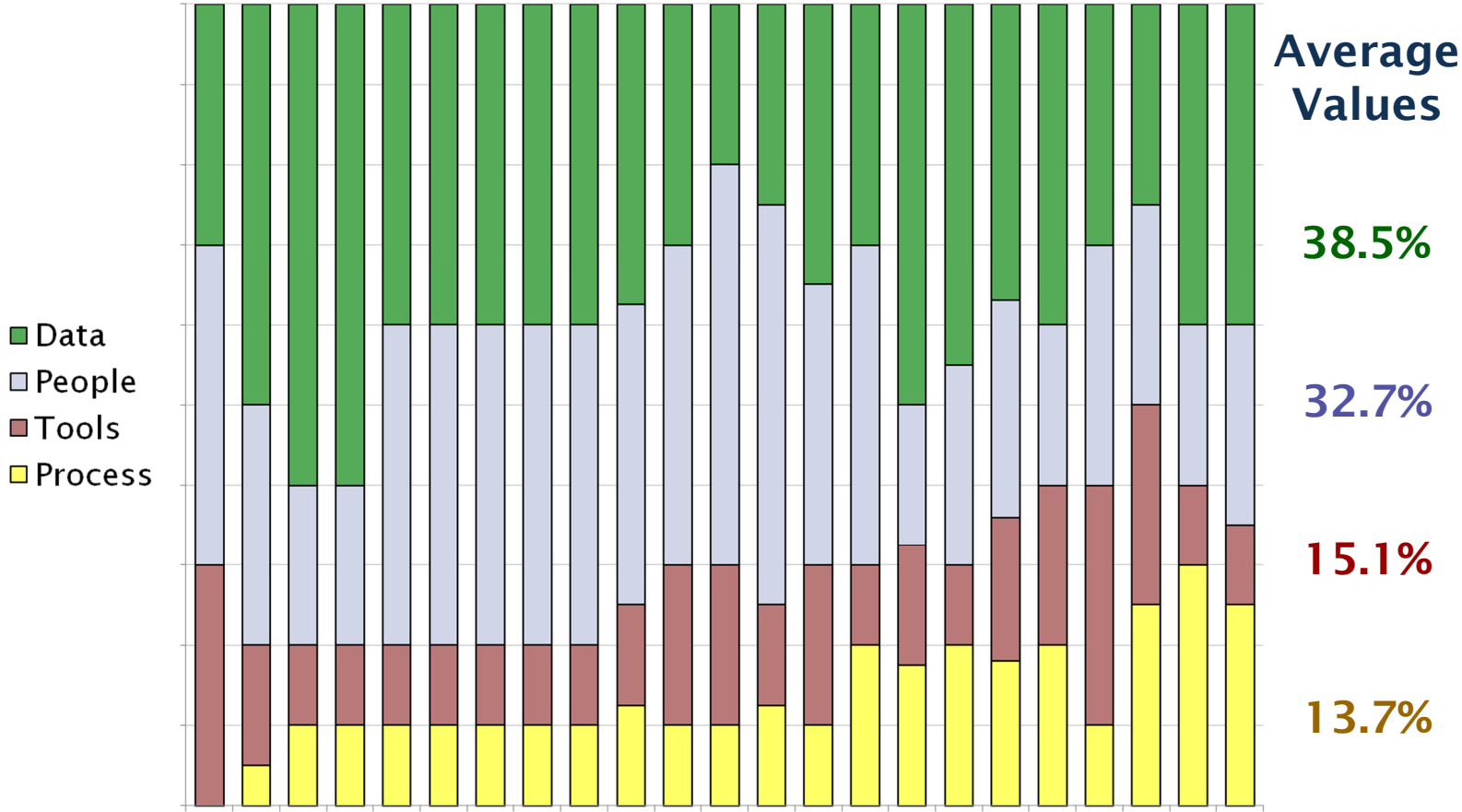
Reserves



Average  
**83%**

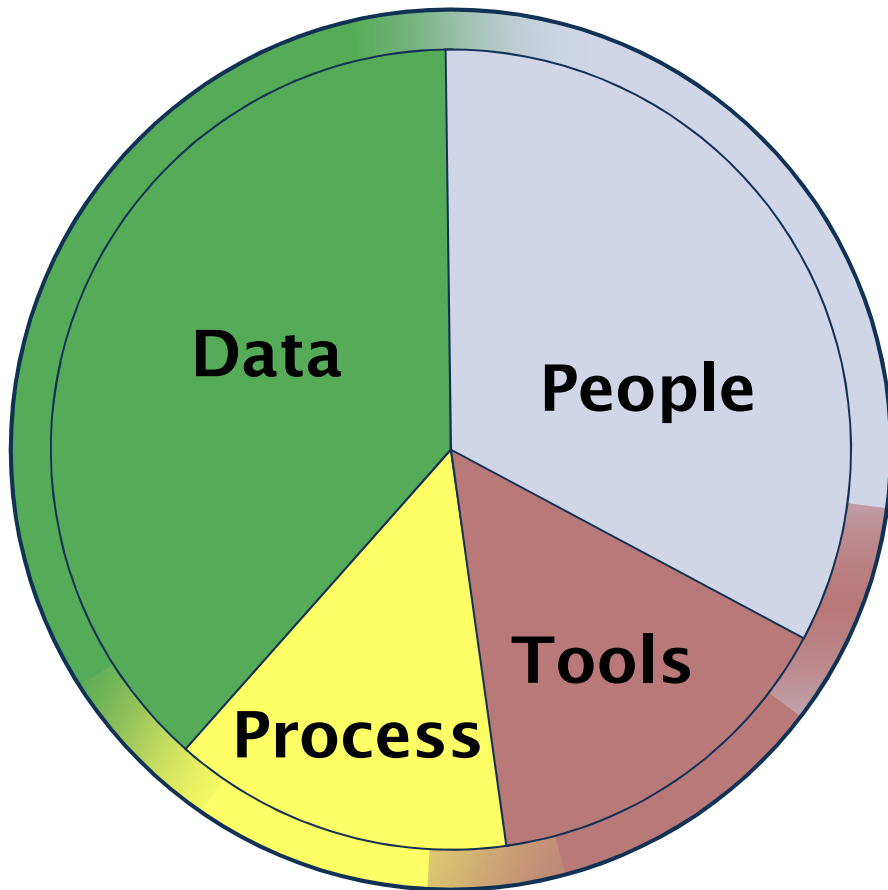
Median  
**90%**

# What contributes to sub-surface understanding?



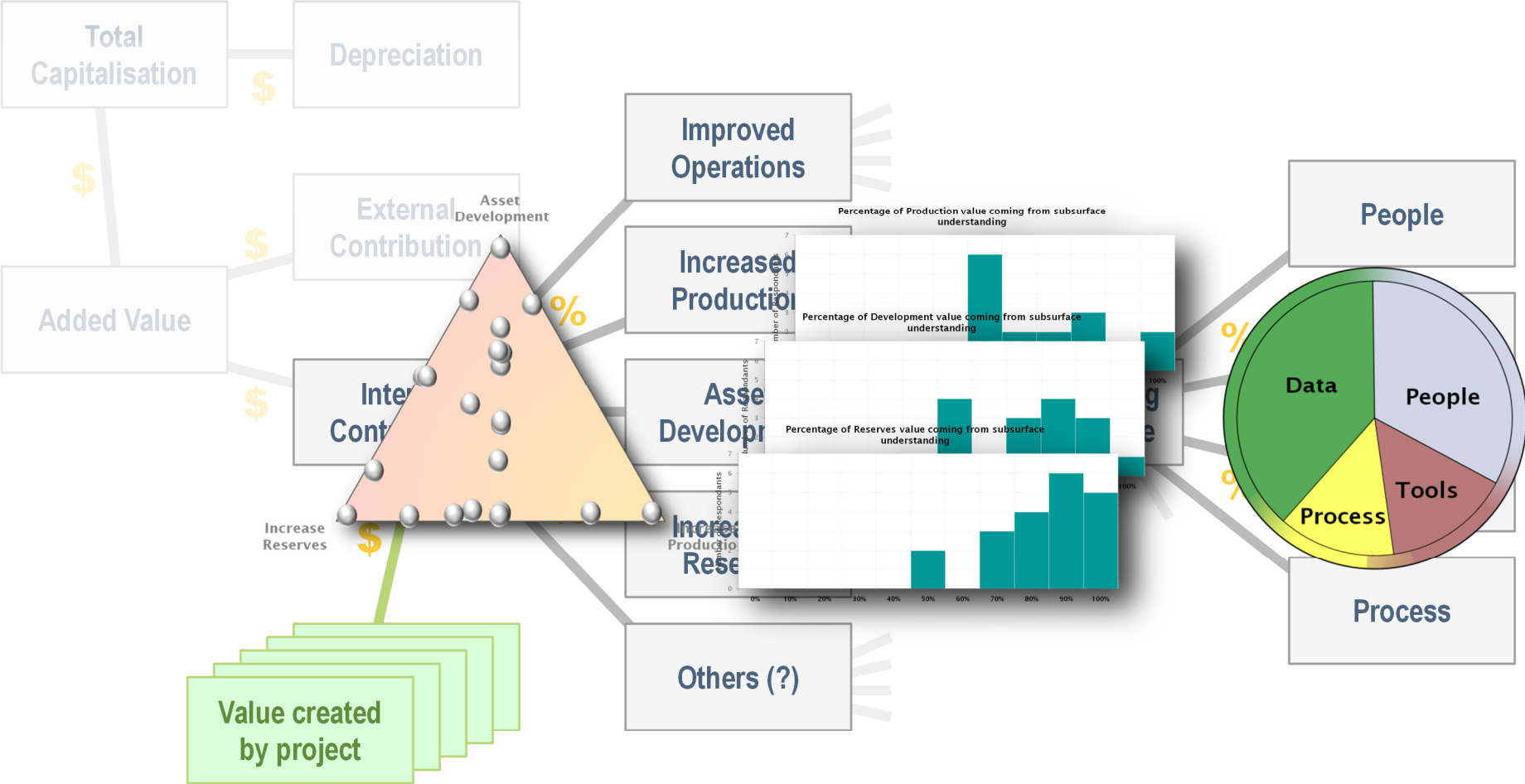
Individual responses

# What contributes to sub-surface understanding?

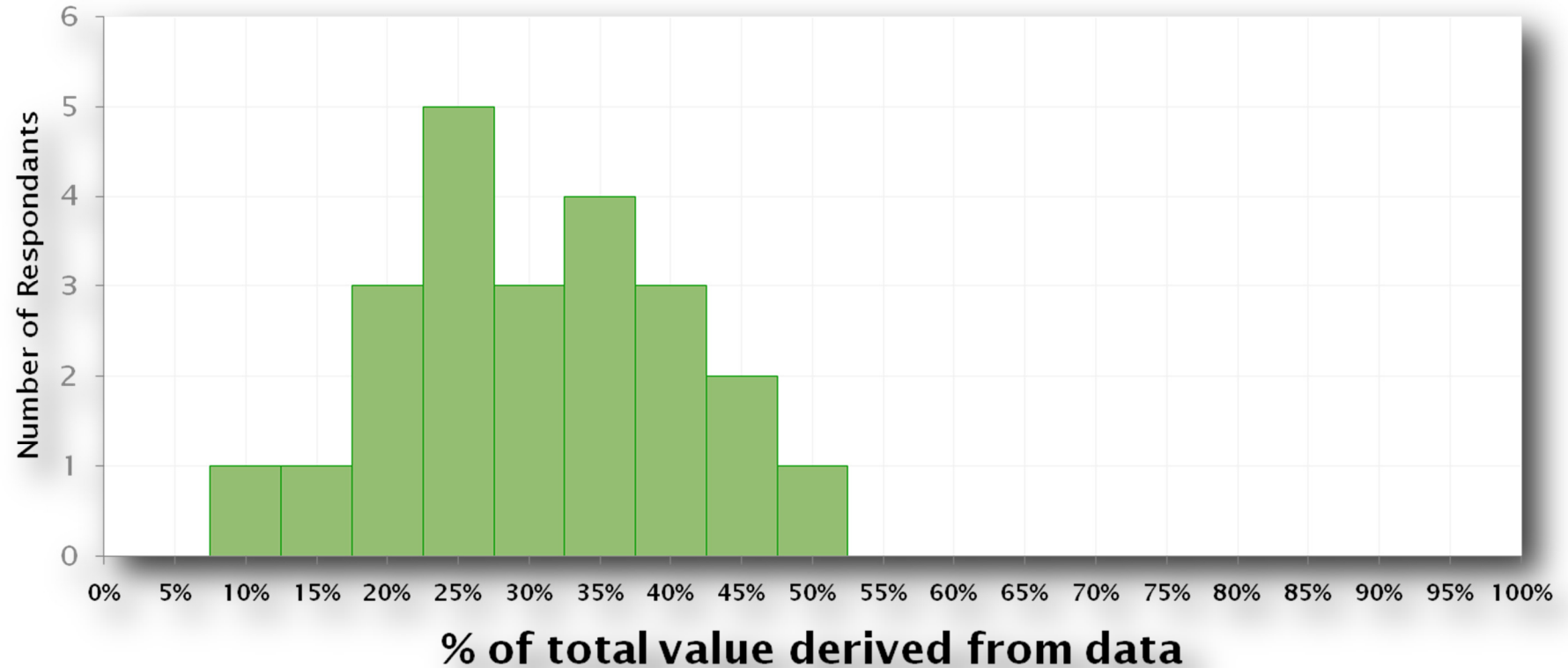


The elements that contribute towards understanding the sub-surface

# Combining the results



# Contribution of subsurface data to total value generated each year

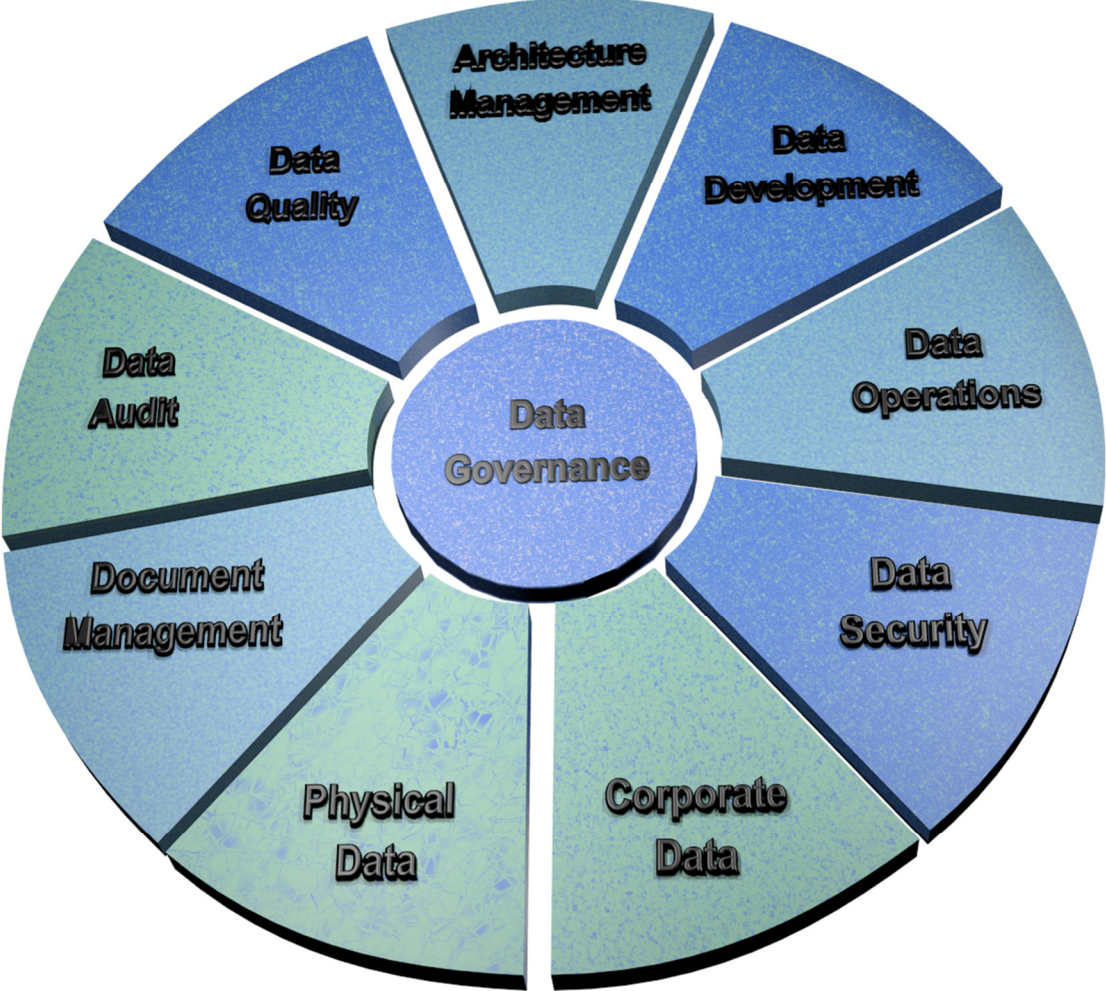


# DAMA Data Management Body of Knowledge

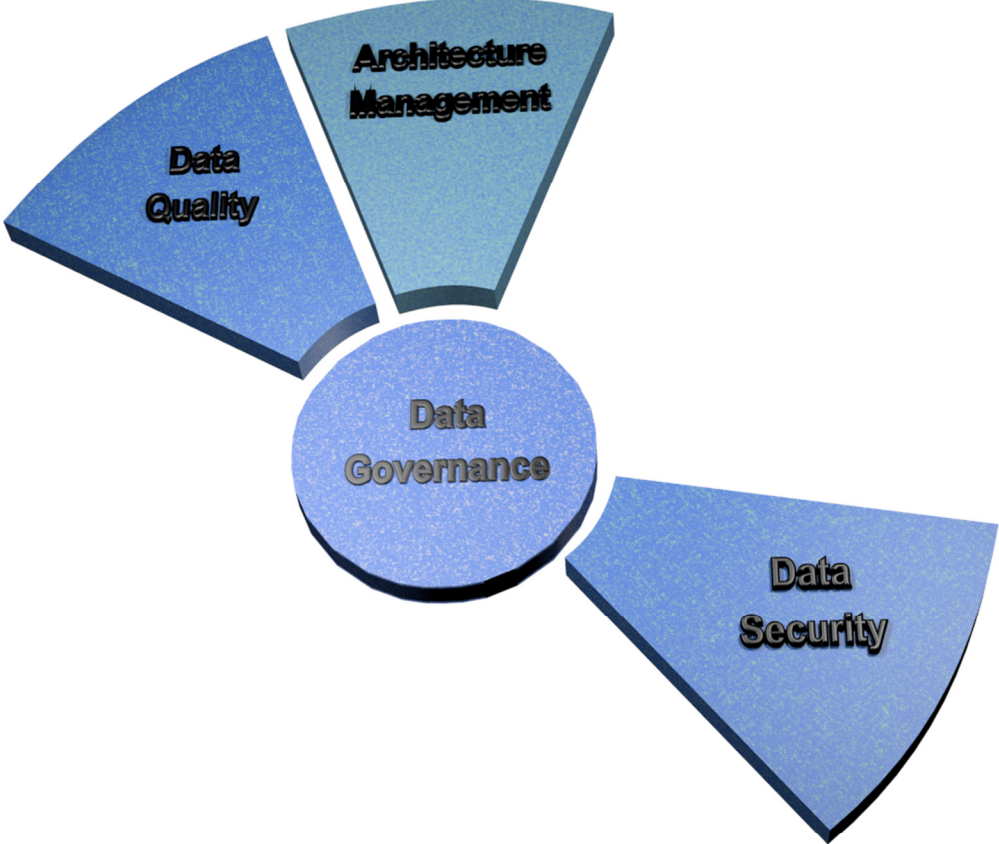




# E&P Variet



# Key Opportunities for Improvement



# CDA Report Conclusion

- Reinforces things we already know:
  - Focus on increasing business value
  - The limitations of “Value Based Management”
  - Be proactive (of course)
  - Point out the value of data (again)
- Data Governance is the single most important missing element

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# Paul Haines & Mark Wiseman - 2011



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**Quantitative Value of Data  
and  
Data Management**

Paul Haines, Noah Consulting  
Mark Wiseman, Hess Corporation

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**PNEC 15<sup>th</sup> International Conference on Petroleum Data Integration,  
Data and Information Management**

May 17-19, 2011 - Houston, Texas, USA

# Questions

- How can we measure data value?
- Can we measure true data costs?
- How does the management of data affect value?
  - Does data quality detract from business decisions?
  
- Determine factors and build a model...



## Cost of Data - Components

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- Cost to acquire data
- Cost to use and leverage
- Cost to replace
- Cost to maintain
- Cost of decisions based on the data usage

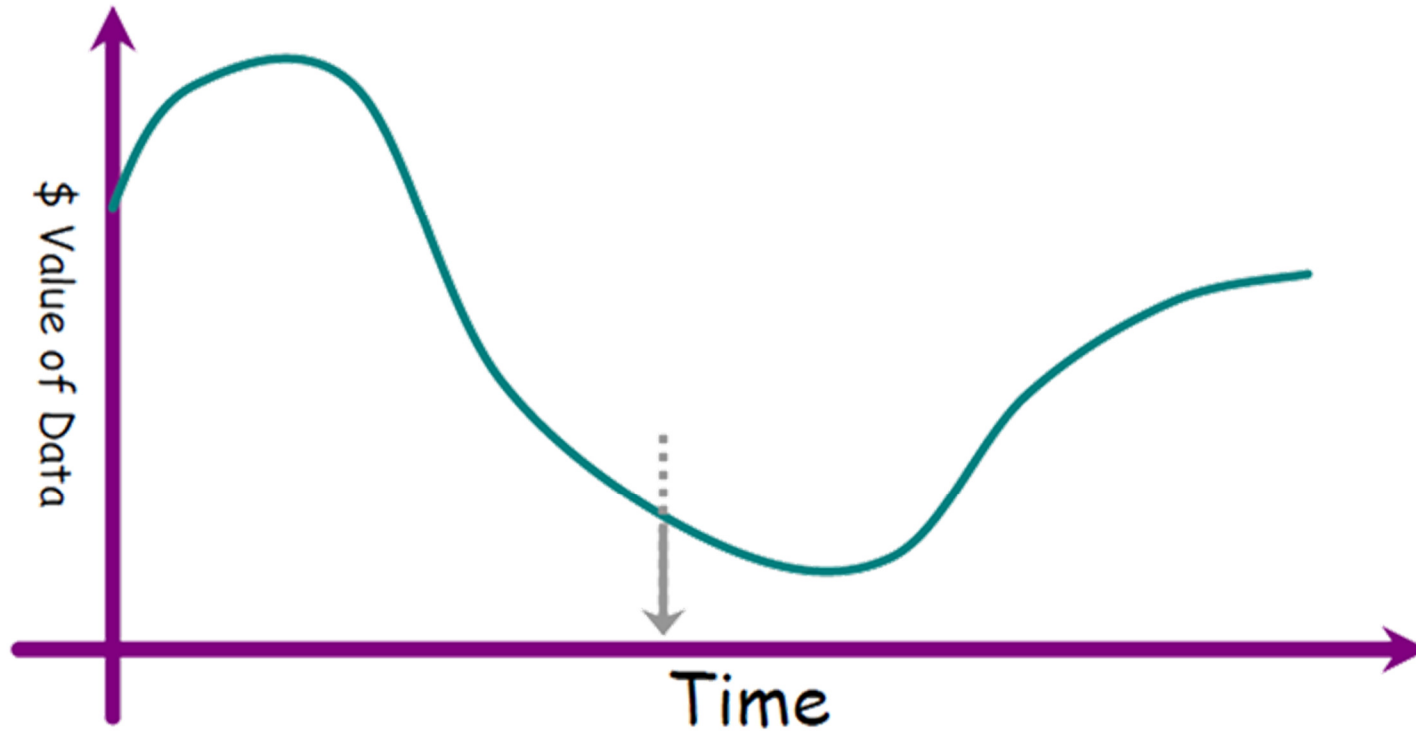


## Value of Data - Components

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- Time value of data
- Performance value of data that comes from increasing people productivity
- Integration of data to further its relevance and applicability
- Value of decisions based on the data usage

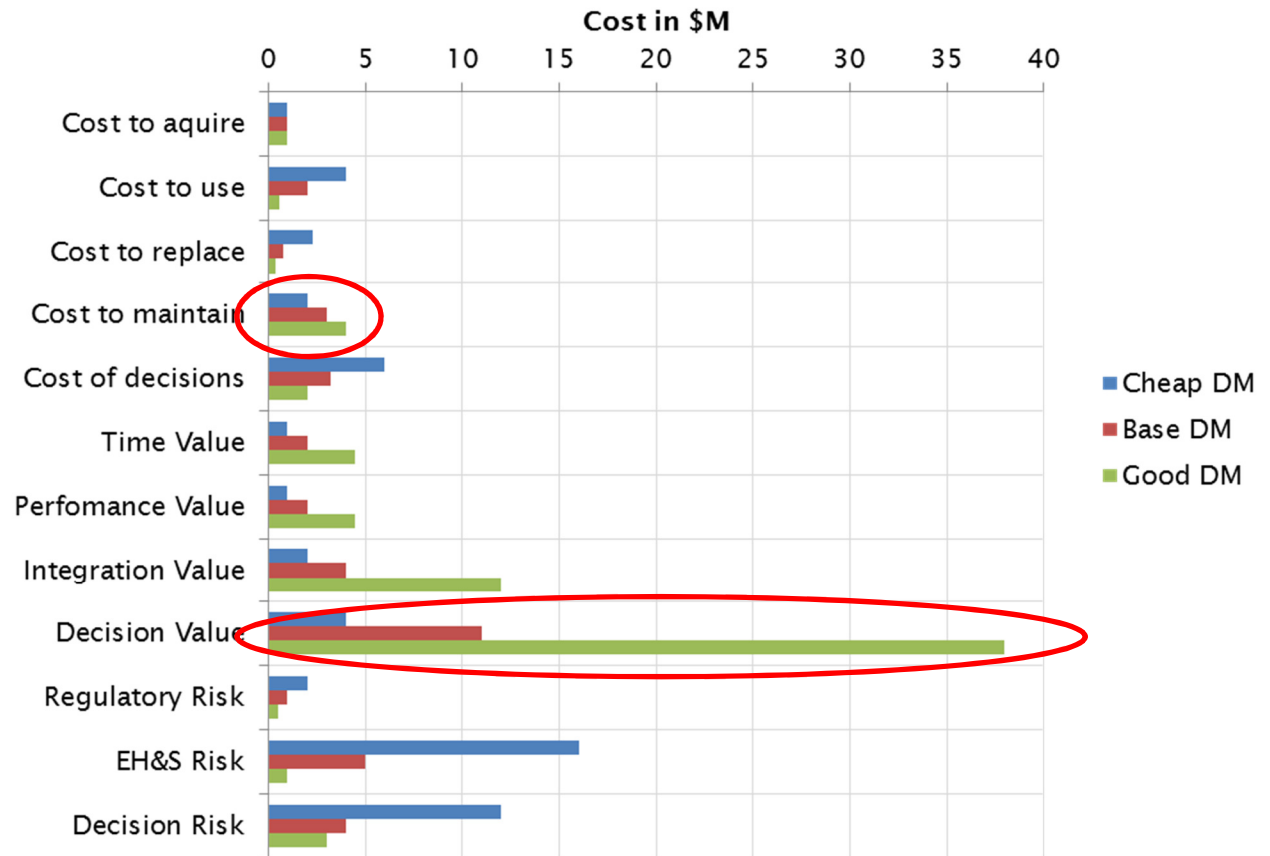
# Variation in the value of data over time





# Hess - Noah Study - 2011

- Created model of the whole E&P process
- Extra \$1M in DM triples value from decisions



# Conclusions

- Value of the data far outweighs the costs
- In this situation good data management is a very attractive investment
  - \$1M investment delivers >\$30M additional value generated

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# Dan Shearer & Debbie Garcia - 2006

**BURLINGTON™  
RESOURCES**

**VISION**

**ASSETS**

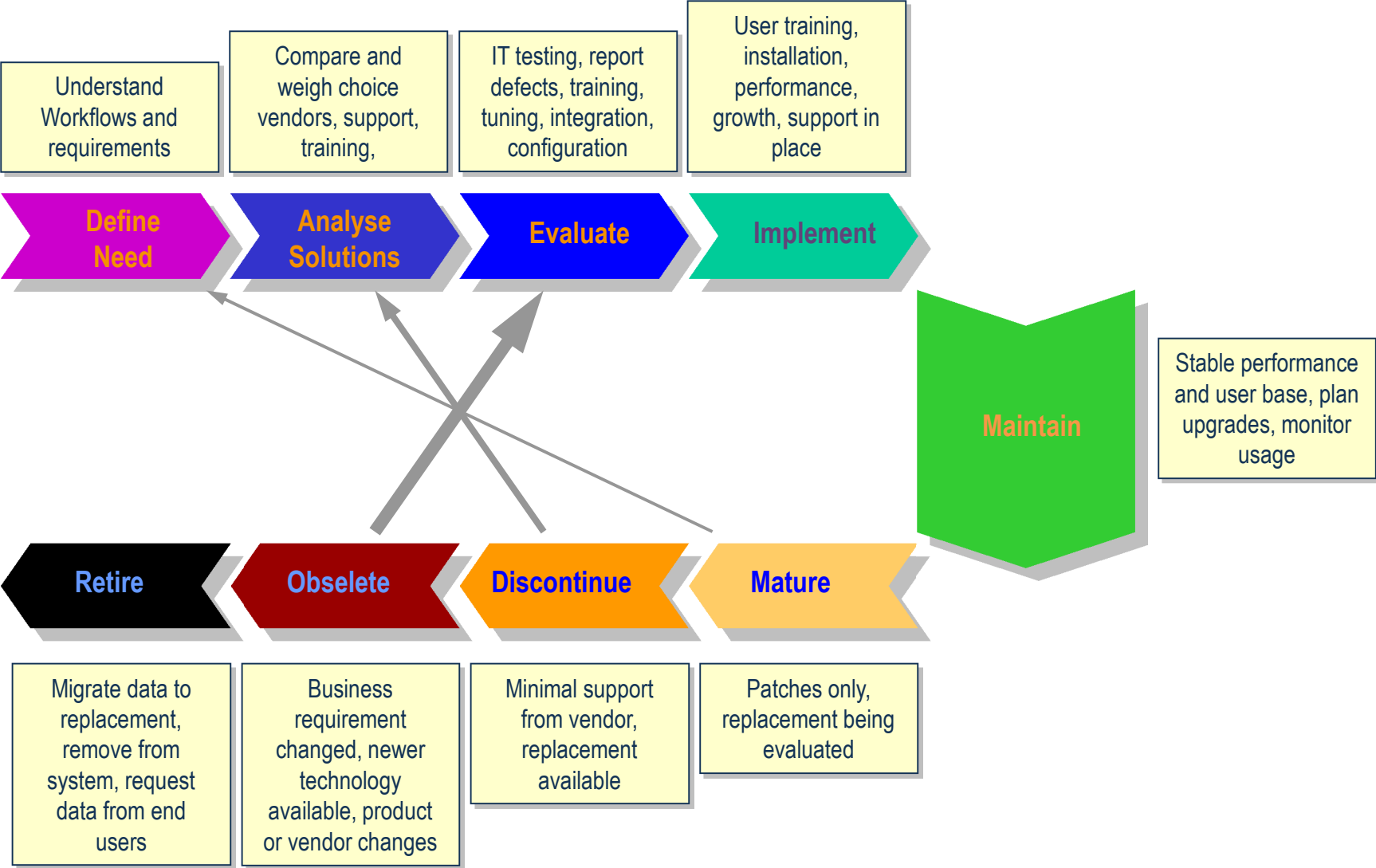
**PEOPLE**

**REPUTATION**

**Improving Technology  
Investment Planning  
with Metering**

Dan Shearer and Debbie Garcia  
PNEC  
April 19, 2006

# Application Deployment Lifecycle



# Approach

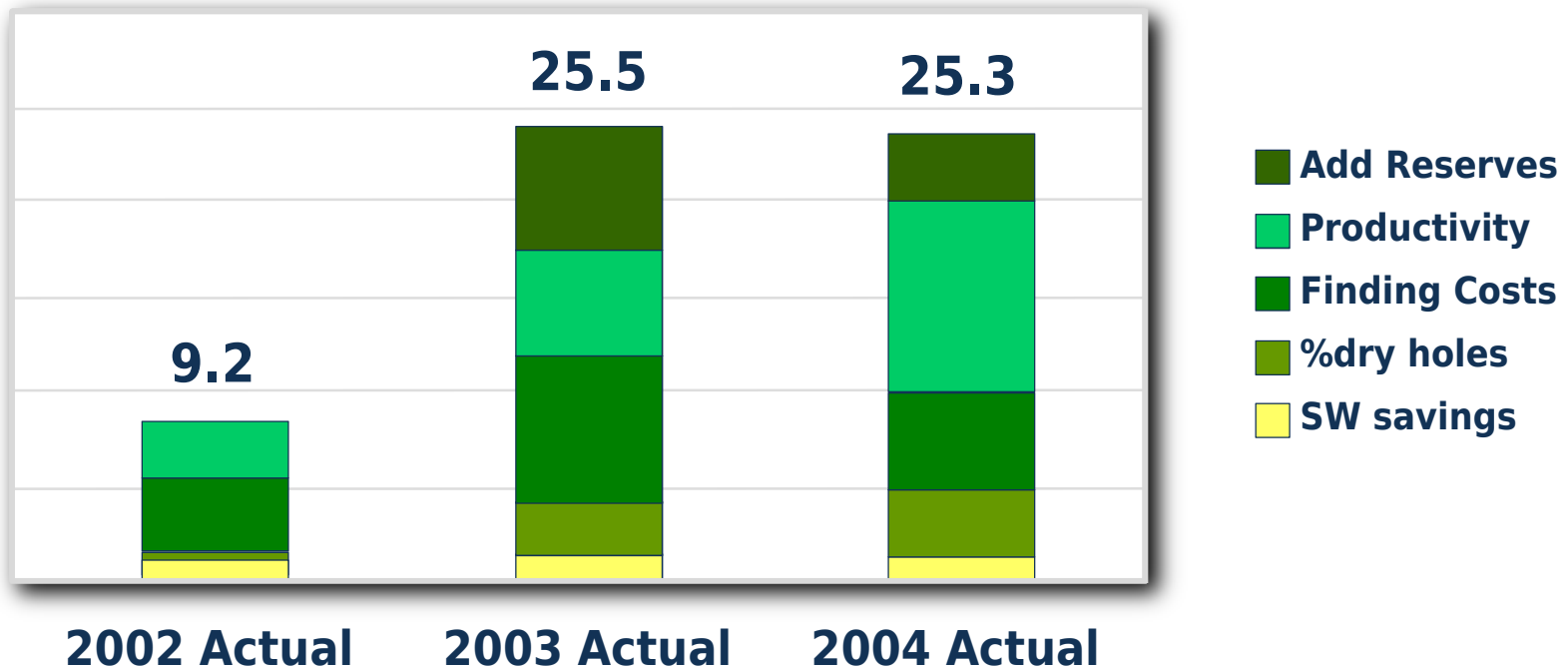
- Identify the applications apparently performing "the same" job
- Validate there really was overlap...

...and retire the "least used"

- Invest in Change Management:
  - Communicate to users
  - Train users in the replacements

# Burlington - Shearer - 2006

- Actual benefit was significantly more than software cost



# Conclusion

- Measured improvement in "the information landscape" responsible for 20 times more "business value" benefits than "IT" benefits



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# Conclusion

- In most oil companies (at the moment) Data Management is an opportunity for investment rather than an overhead to be cut:
  - Data is a significant asset
  - Improving data handling has significant impact
    - Business impact typically >10 times IT

**Personal Observation:** Data Governance is commonly the underlying issue