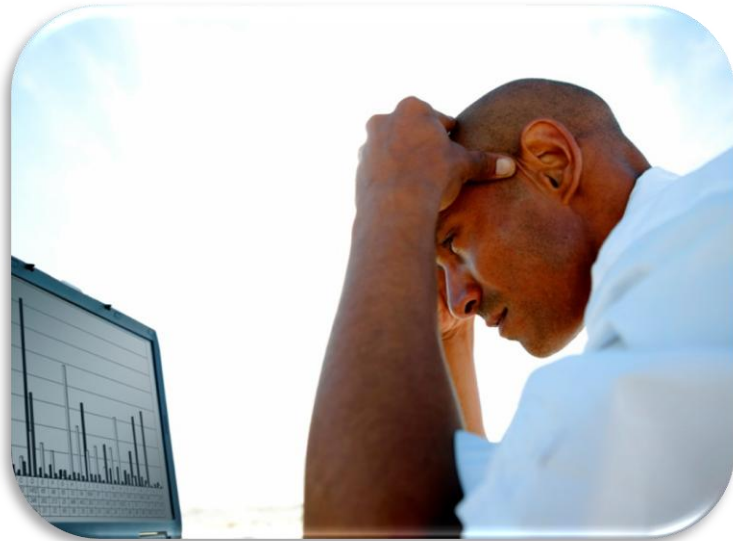


Big data, small library

ALIA National 2016 Conference, 29 August – 2 September 2016,
Adelaide Convention Centre

Vanessa Johnson
Technical Librarian

Overview



Background

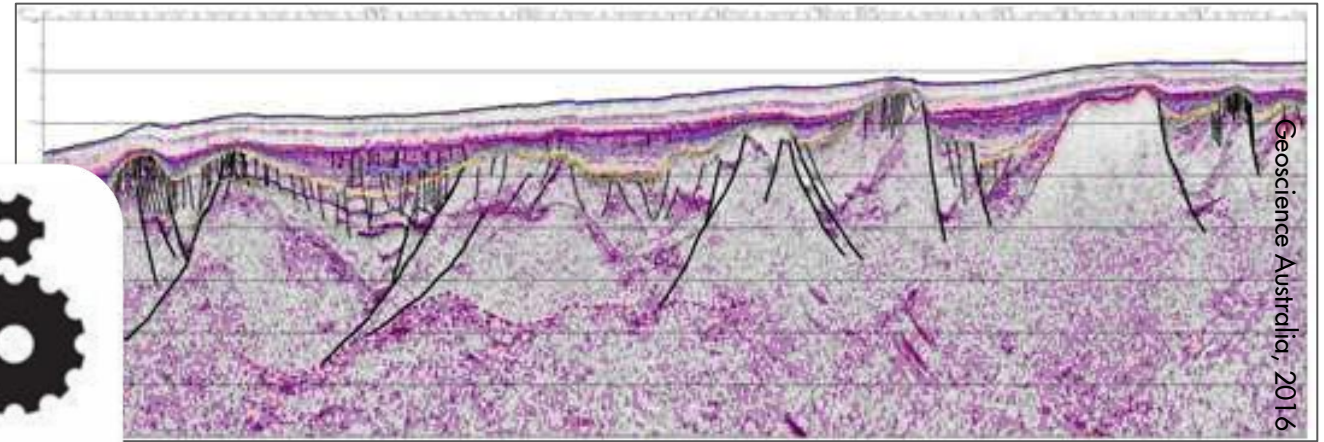
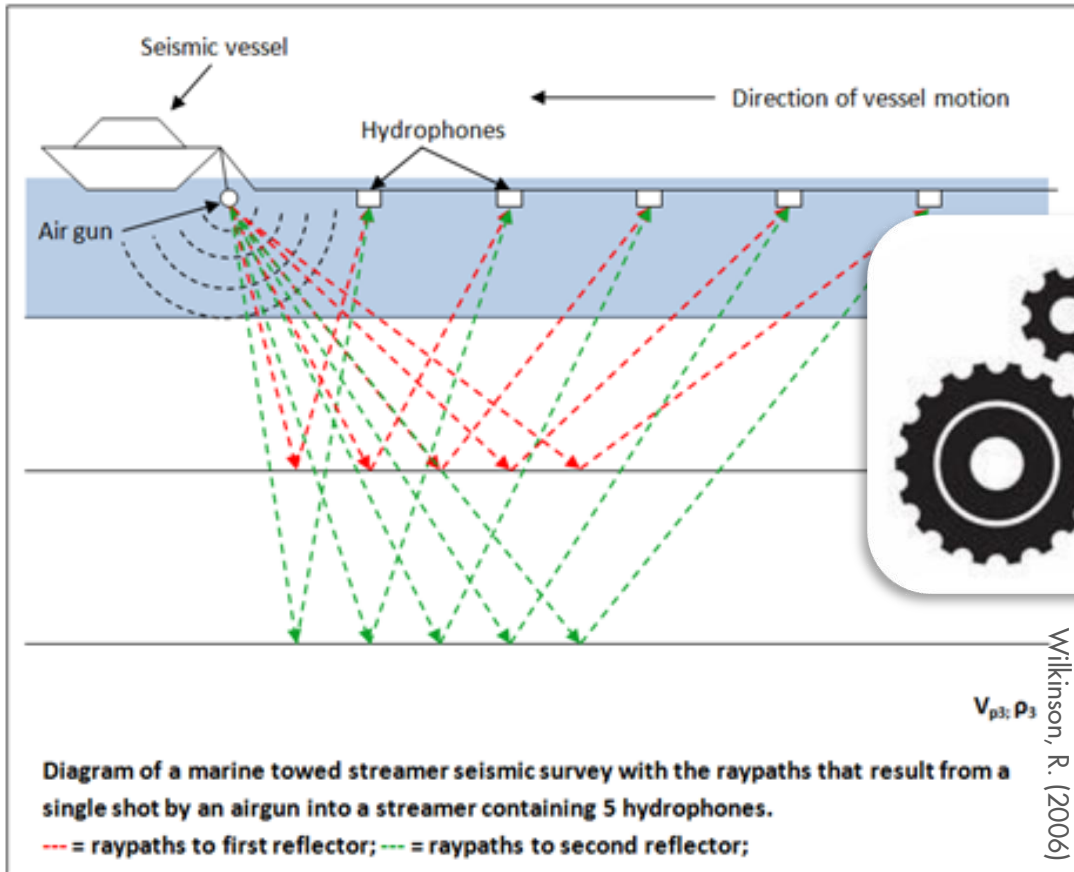
Shell Australia Technical Library

Geophysical data

Big data – velocity, volume, variety, complexity

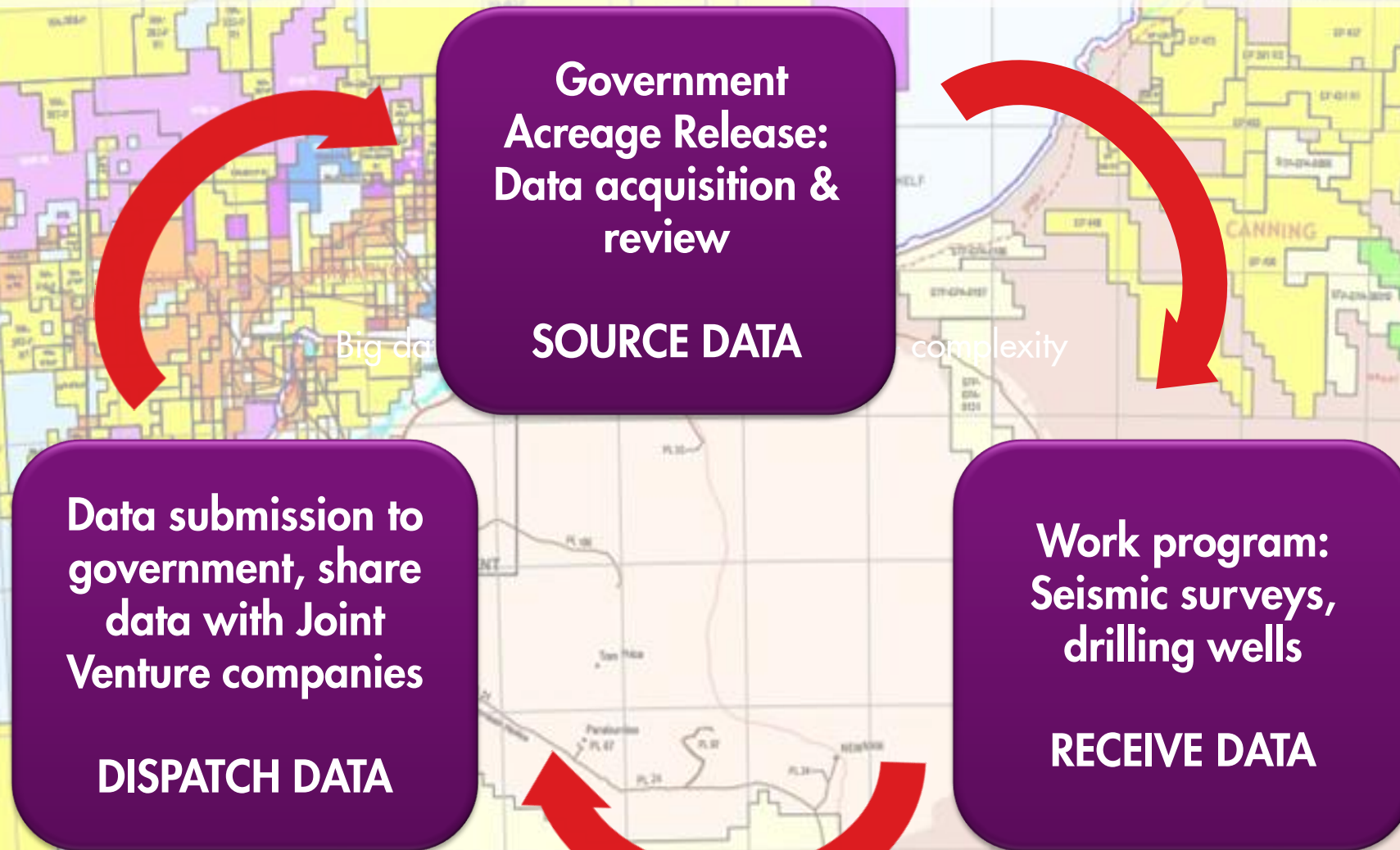


Geophysical data – seismic surveys

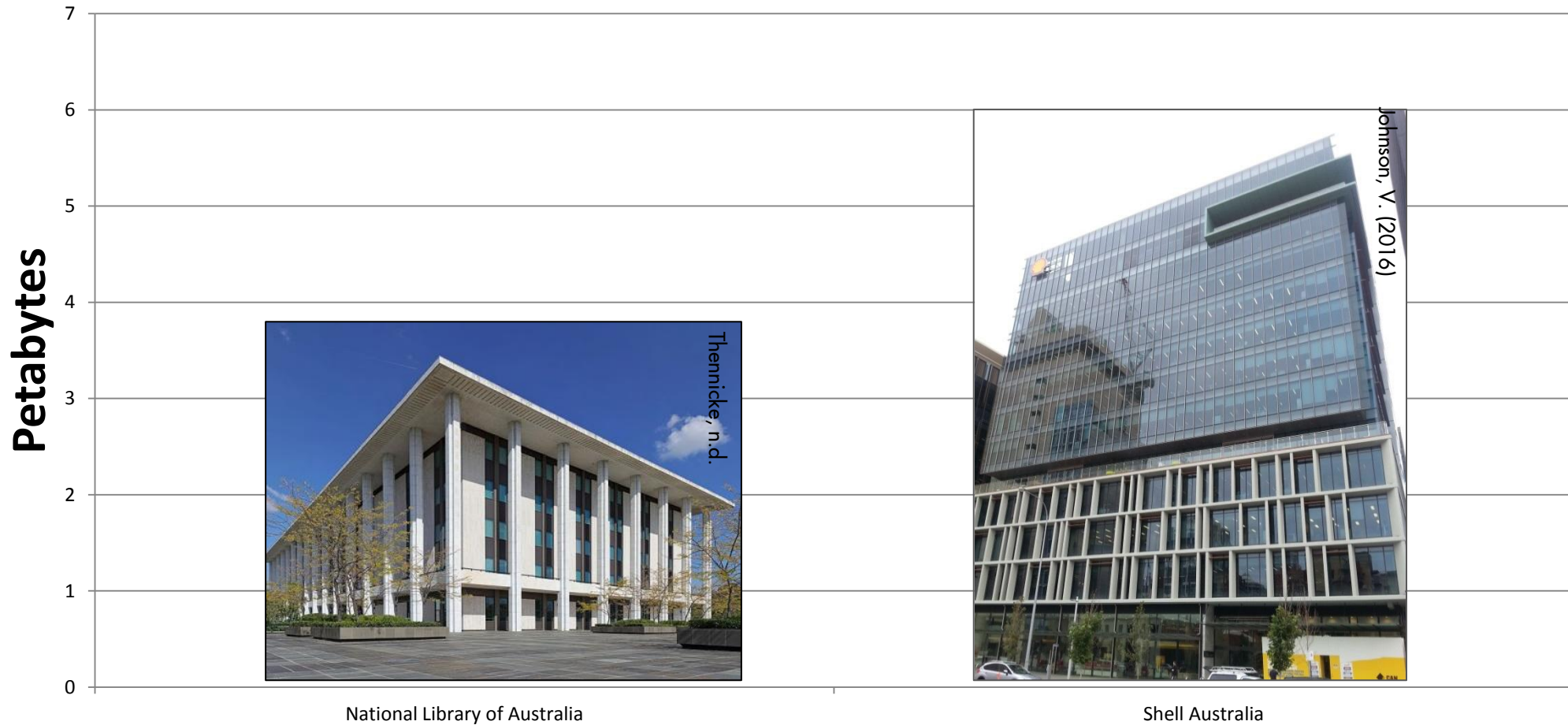


Interpreted Seismic Section

Big data: **velocity** + volume + variety + complexity



Big data: velocity + **volume** + variety + complexity



Big data: velocity + volume + **variety** + complexity



Johnson, V. (2016)

123Di	PPT
123NDI	PPTX
ASCII	prj
ASCII ESSO	PSD
ASCII Western	SAF
AVF	SEGB
BIN	SEGD
BRICK	SEGY
BRICK-TAR	sipmap
CGM	SPC
CPIO Backup	SPIDEC
CSV	SSF
DAT	TAR
DBF	TAR - 123Di
DOC	TAR - LINUX
DTS	TAR - P190
FAL	TAR (-b1)
FH	TAR (-b20)
FIELD	TAR 9-b20
GOCAD	TAR -b1
HTML	TAR -b20
hzh.glb	TAR Backup
HZN	TAR COMPRESS
Landmark	TAR SEGY
Landmark BRICK	TIF
Landmark 2v2	TIFF
Landmark 3D	TSAVE
Landmark Ascii	TXT
Landmark BACKUP	UDIX
Landmark DTS	UKOOA
Landmark EMERALD CITY	UKOOA P190
Landmark time	UNKNOWN
LAS	URAX
LF	USDIX
LIS	USTAR
LIST	Various
LST	VT
MCF	WAV
MLTEXP BINARY FORMAT	WAVSAM
NETVAULT Backup	Western
NETVAULT	Western P190
Openworks Backup - TAR	XLS
Openworks	VDIX
P190	VELF
P190 Navigation	VELF CARD
P194	VINT
P2	VRMS
P294	VSH
P698	XLSX
P701 (Geoquest)	XTF
PDF	xytv.gz
PDS	XYZ
Petrel	ZGY
PICS	ZIP

Big data: velocity + volume + variety + **complexity**

- Components – raw, processed, interpreted – many files, many media

- Versions

- Licensing & permissions

- Mergers & iterations

**SURVEY MULTICLIENT
2014**

confidential
15 years

**REPRO
2016**

**SURVEY JV
2012**

confidential 3/6 years

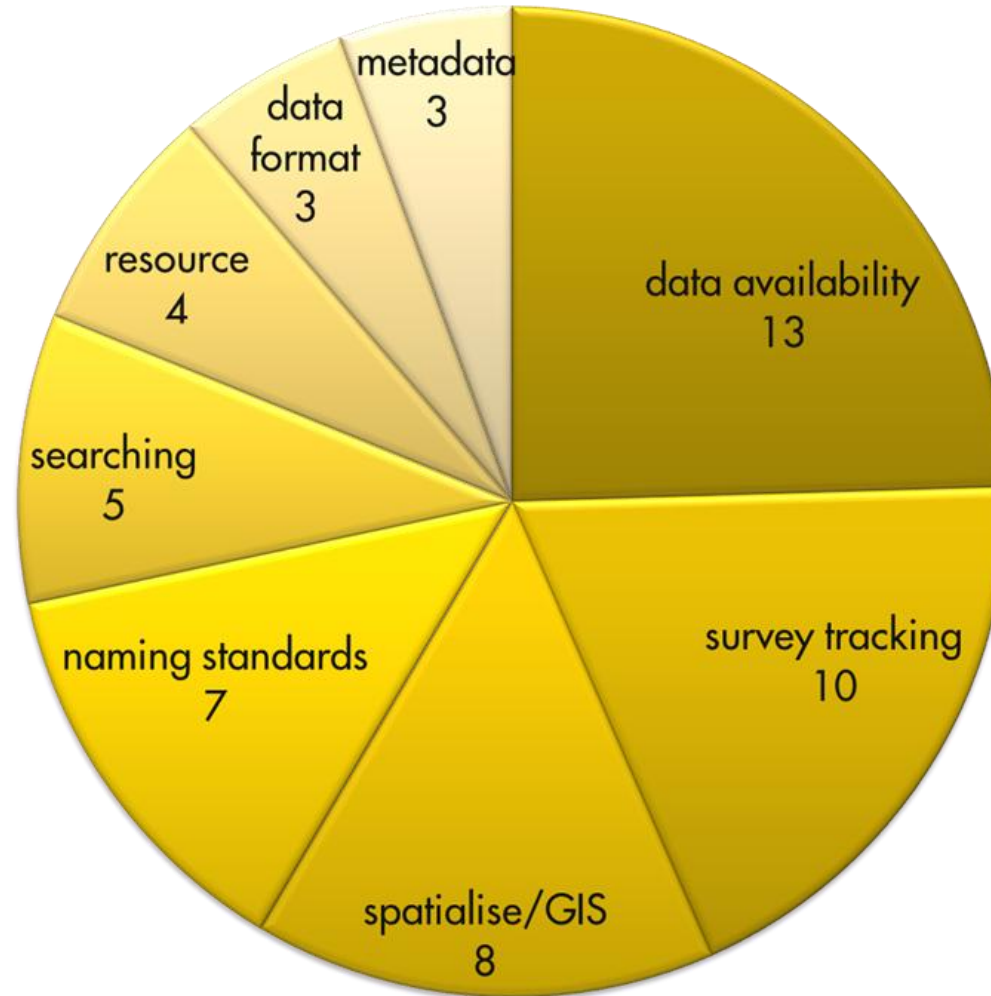


The Process

An opportunity for improvement
Five steps

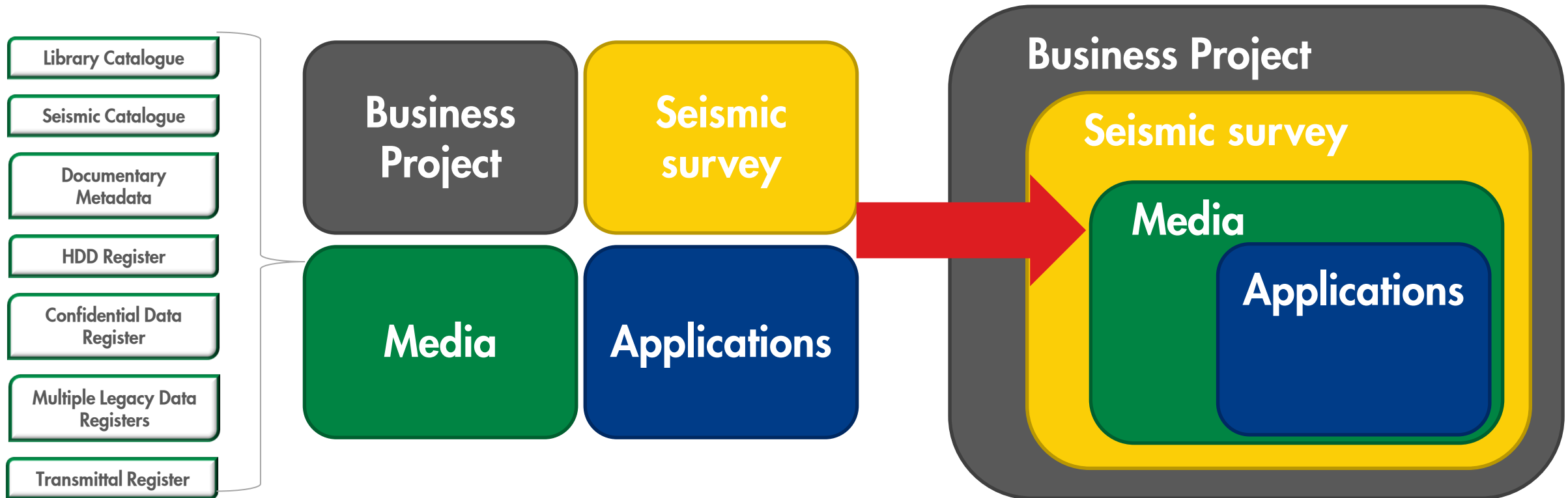


No pain, no gain



- Data management pain points:
- Tracking data through the E&P lifecycle
 - Naming standards
 - Searching

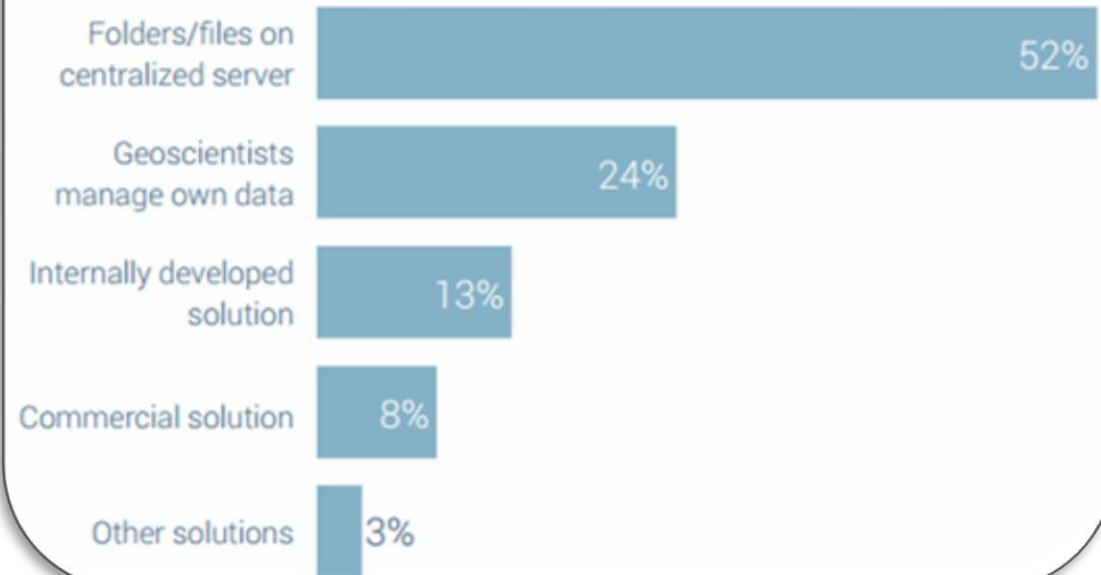
Metadata, metadata everywhere



Step 1: Initial assessment

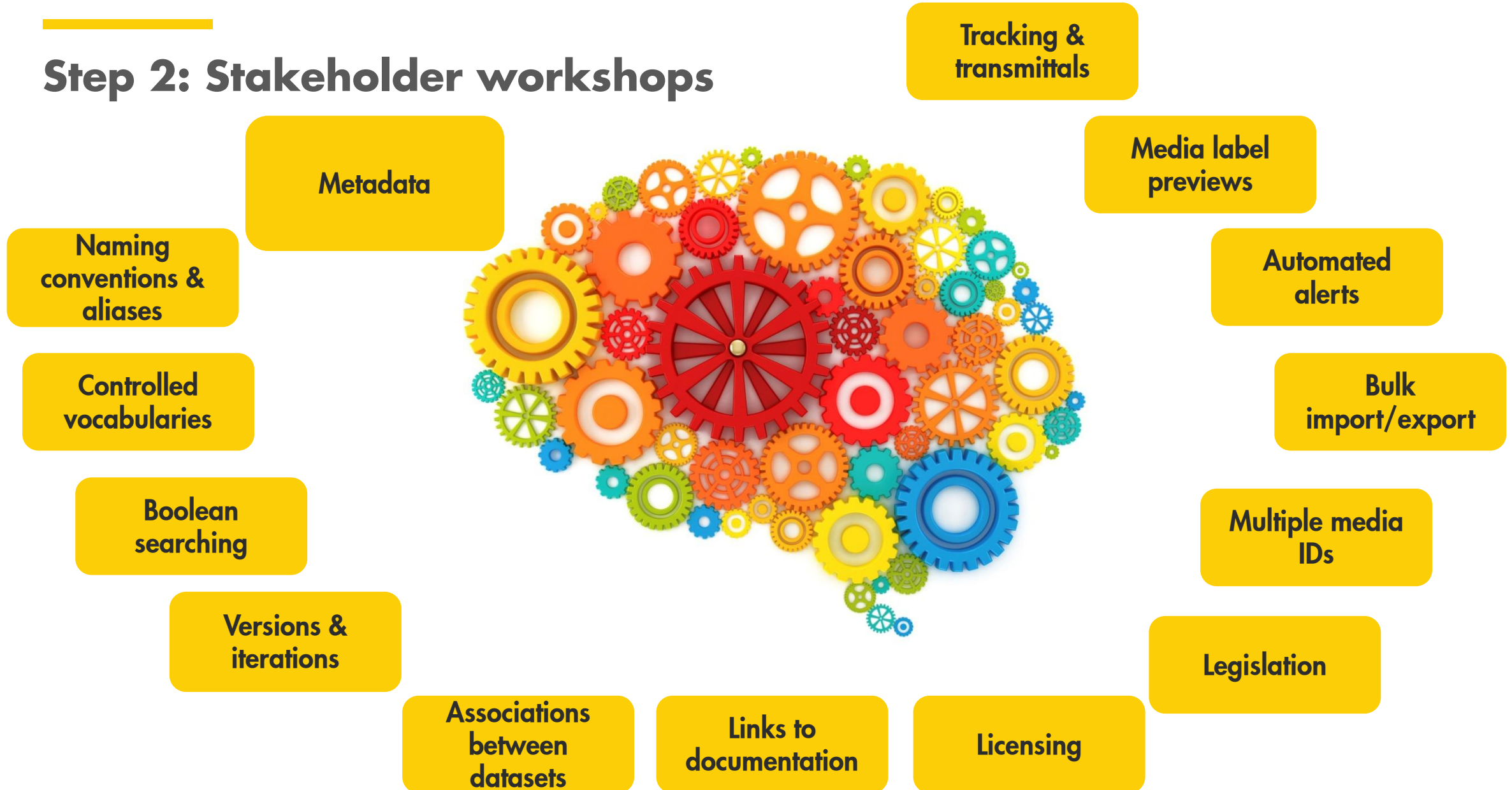
- Cost
- Confidentiality
- Control
- Customization

Management of Geophysical and Other Geoscientific Data

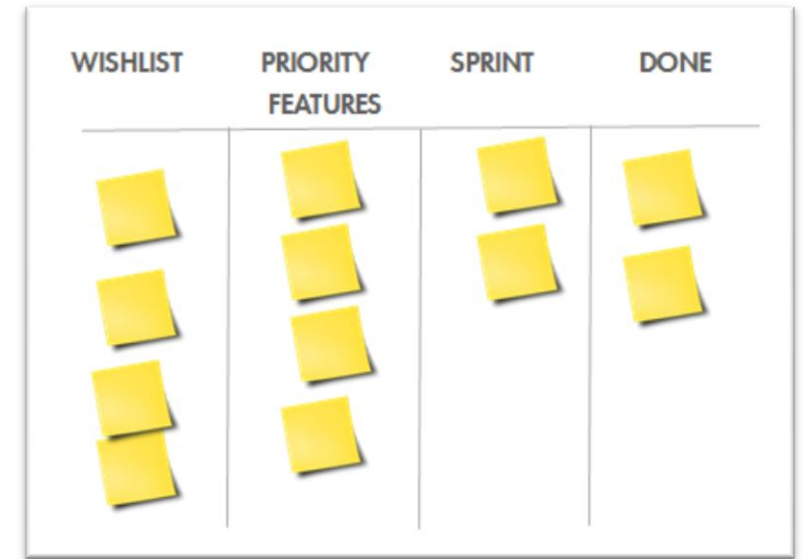
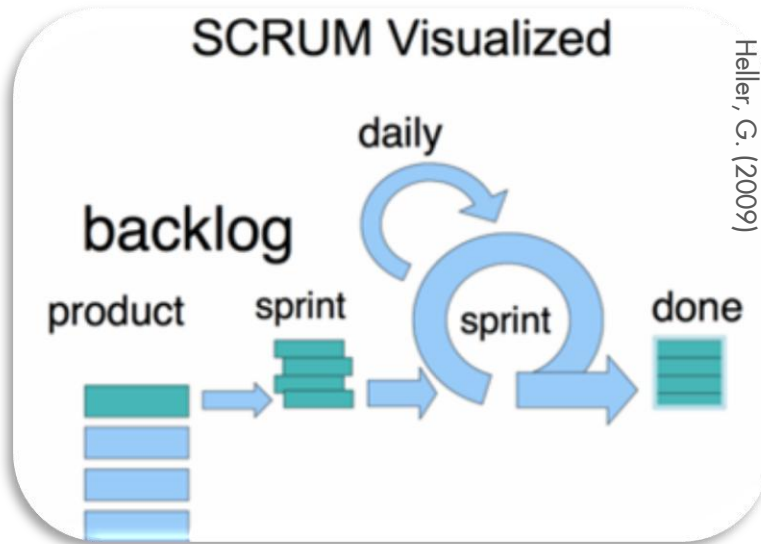
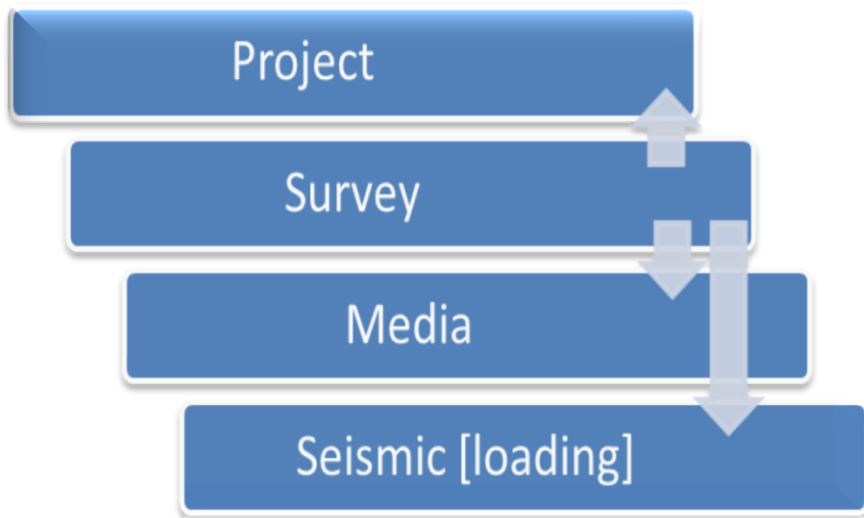


Geosoft 2015 Exploration Information Management Report

Step 2: Stakeholder workshops



Step 3: Database construction & testing



Step 4: Guideline development & education



Step 5: Populating the database

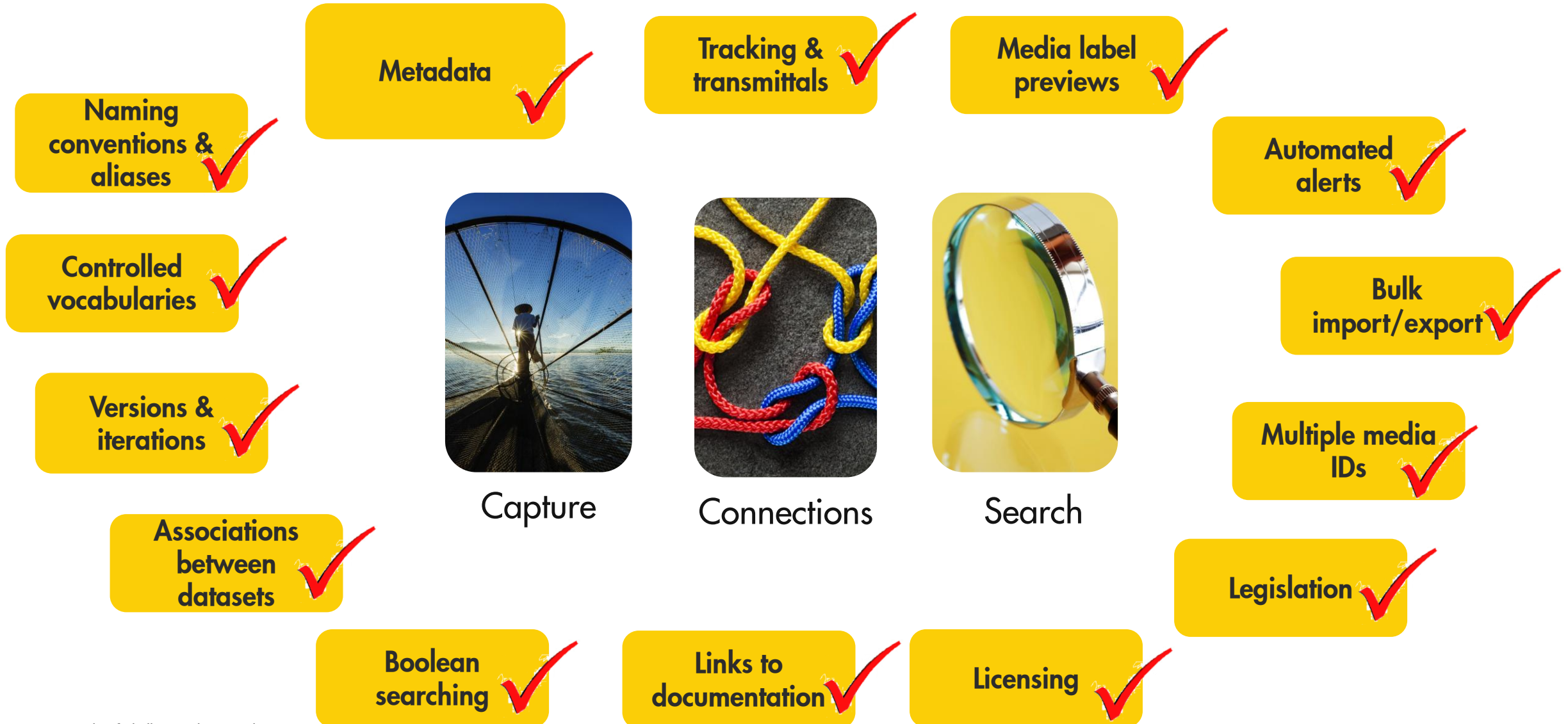


The result

It works!
Plans for the future

3

The end result



View to the future



Questions and Answers

Q&A

References

- Slide 1: Johnson, V. (2016). 3592 tapes.
- Slide 4: Johnson, V. (2014). DataFormats [Wordle]. <http://www.wordle.net/show/wrdl/6651340/DataFormats>
- Slide 5: Wilkinson, R. (2006). *Speaking Oil & Gas*. BHP Billiton Petroleum Pty Ltd.
- Slide 5: Geoscience Australia. (2016). Seismic. Retrieved from <http://www.ga.gov.au/scientific-topics/disciplines/geophysics/seismic>
- Slide 6: Government of Western Australia Department of Mines & Petroleum (2016). Petroleum Titles Map. <http://www.dmp.wa.gov.au/Documents/Petroleum/PD-SBD-GEO-102D.pdf>
National Offshore Petroleum Administrator. (n.d.-b). Legislation, determinations, guidelines & fact sheets. Retrieved from <http://nopta.gov.au/legislation/index.html>
- Slide 7: National Library of Australia. (n.d.). Facts and figures. Retrieved from <https://www.nla.gov.au/facts-and-figures>
Thennicke (Own work) [CC BY-SA 4.0 (<http://creativecommons.org/licenses/by-sa/4.0>)], via Wikimedia Commons
https://upload.wikimedia.org/wikipedia/commons/9/9c/National_Library_of_Australia%2C_ACT_-_perspective_controlled.jpg
- Johnson, V. (2016). Shell Australia Perth.
- Slide 8: Johnson, V. (2016). Media.
- Slide 9: Google Maps.
- Slide 13: Geosoft (2015) Exploration Information Management Report. Retrieved from <http://www.geosoft.com/>
- Slide 14: Government of Western Australia Department of Mines & Petroleum (2016). <https://wapims.dmp.wa.gov.au/wapims>
- Slide 15: CSIRO. (n.d.). CSIRO Data Access Portal. Retrieved from <https://data.csiro.au/dap/landingpage?execution=e3s2&eventId=viewDescription>
Scrum Alliance. (2016). Learn about Scrum. Retrieved from <https://www.scrumalliance.org/why-scrum>

Author/Shell Australia Pty Ltd retains copyright as provided under Creative Commons Attribution Licence by-nc-nd/4.0 as specified by the ALIA National 2016 Conference.

