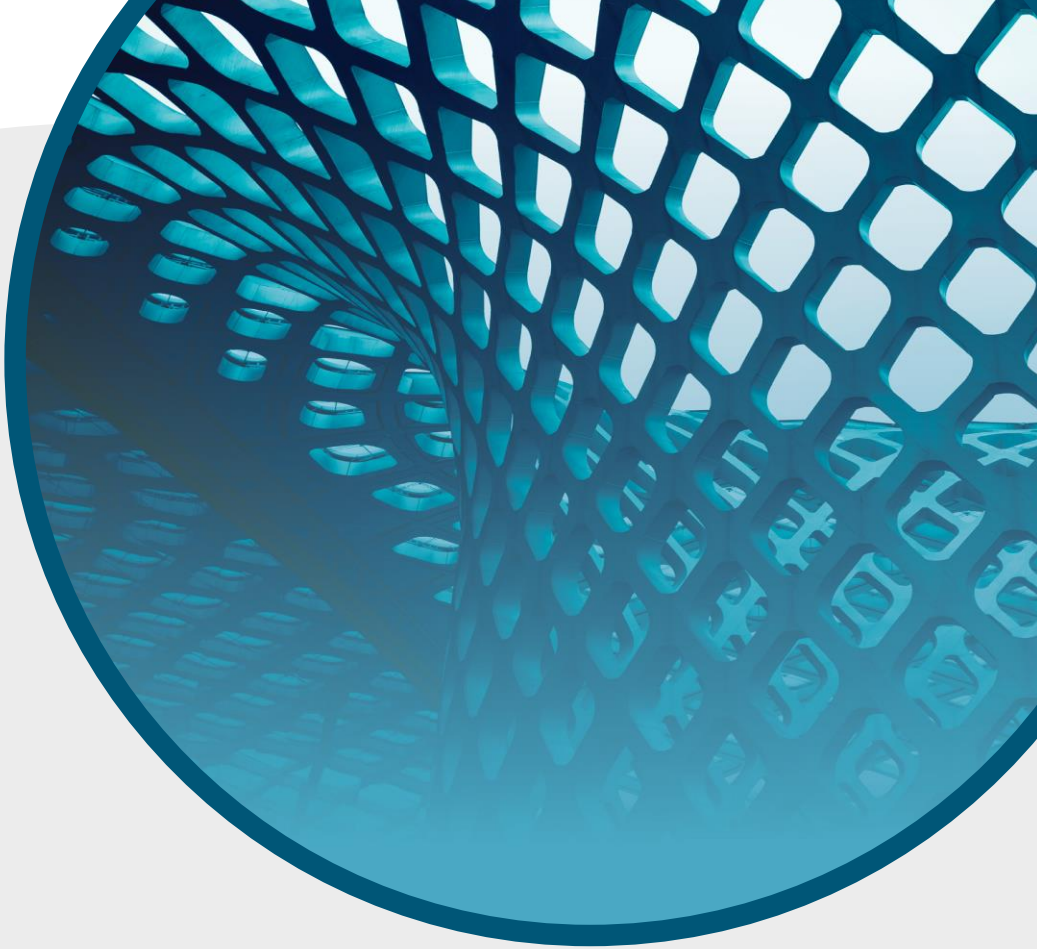
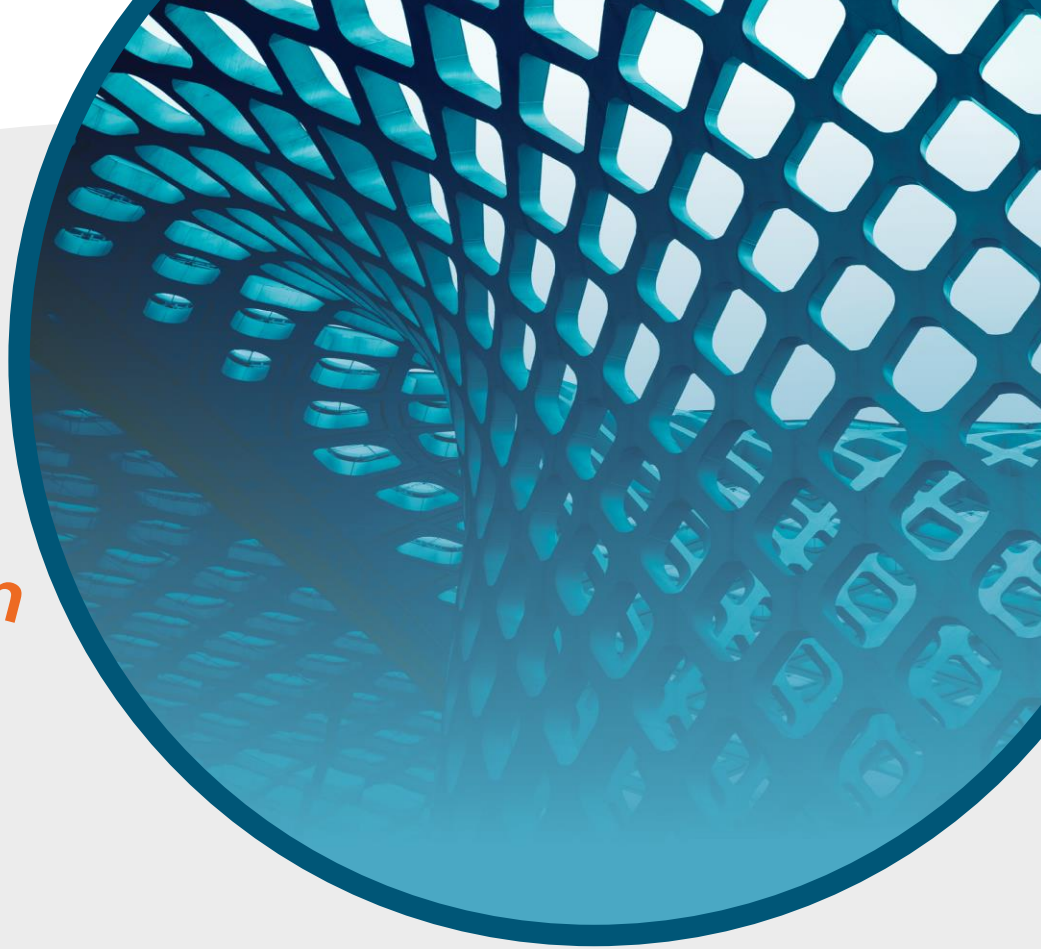


Machine-assisted qualitative analysis in evaluation

AES Conference, Sydney 2019

CONSULTANTS

Make Analysis Quick Again



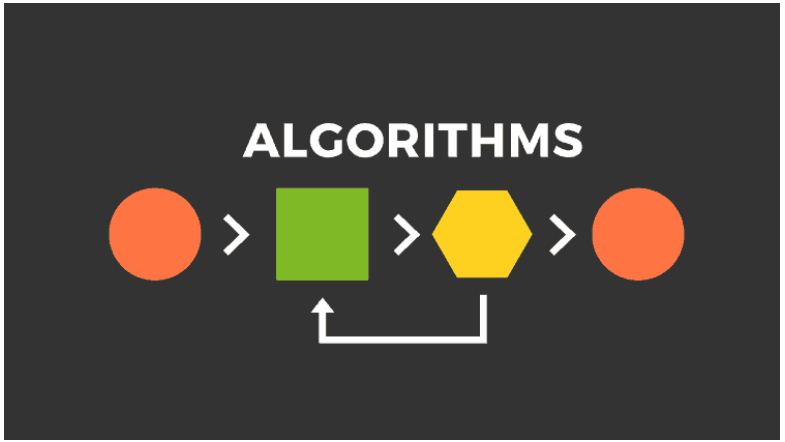
Machine-assisted qualitative analysis in evaluation

AES Conference, Sydney 2019

Agenda

- What machine-assisted qualitative analysis is
- Comparison with traditional qualitative analysis
- Learnings through implementation
- Looking forward
- Q&A

Machine-assisted qualitative analysis



Our analysis ecosystem

Natural Language Processing

Topic Modelling

Sentiment

http://www.bnosac.be/images/bnosac/blog/NLP-R-ecosystem.png

Tokenisation

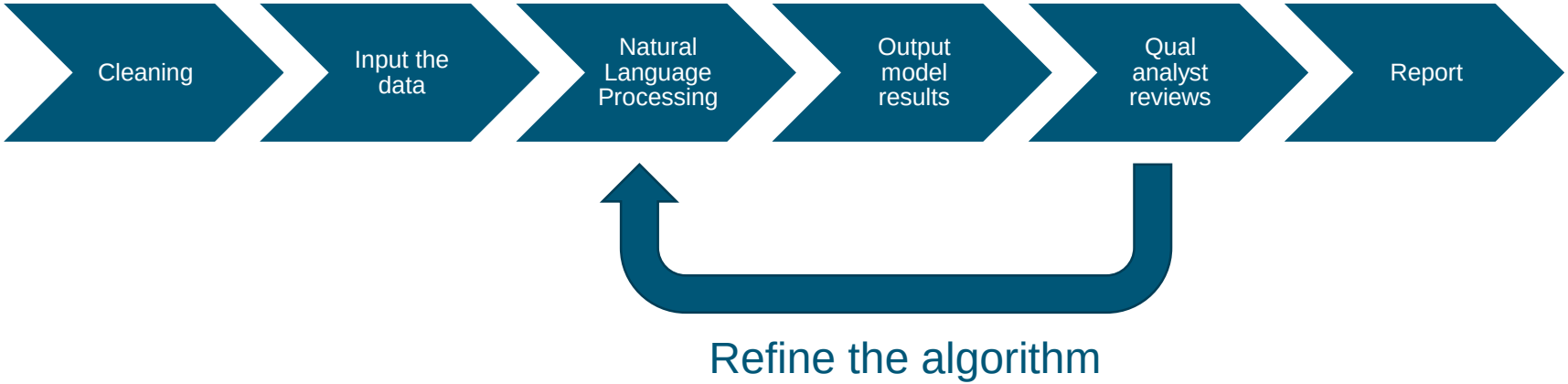
Topic modelling

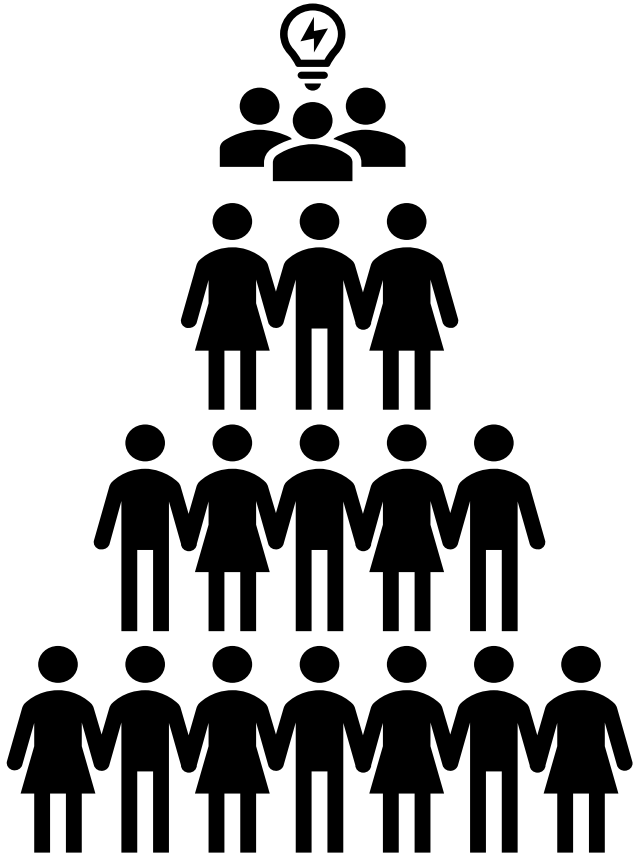
Topic = ‘Cats”

Associated words:

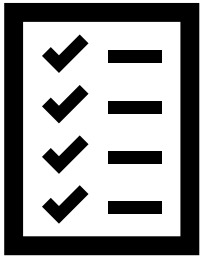
- Meow
- Whiskers
- Kneading
- Burmese

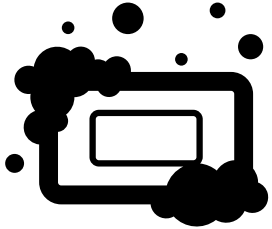
The process

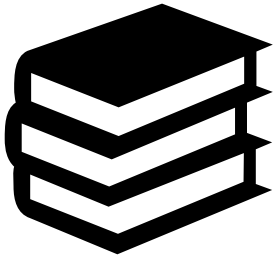

Cleaning
Input the data
Natural Language Processing
Output model results
Qual analyst reviews
Report
Refine the algorithm

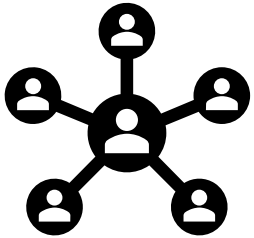


When will it help?

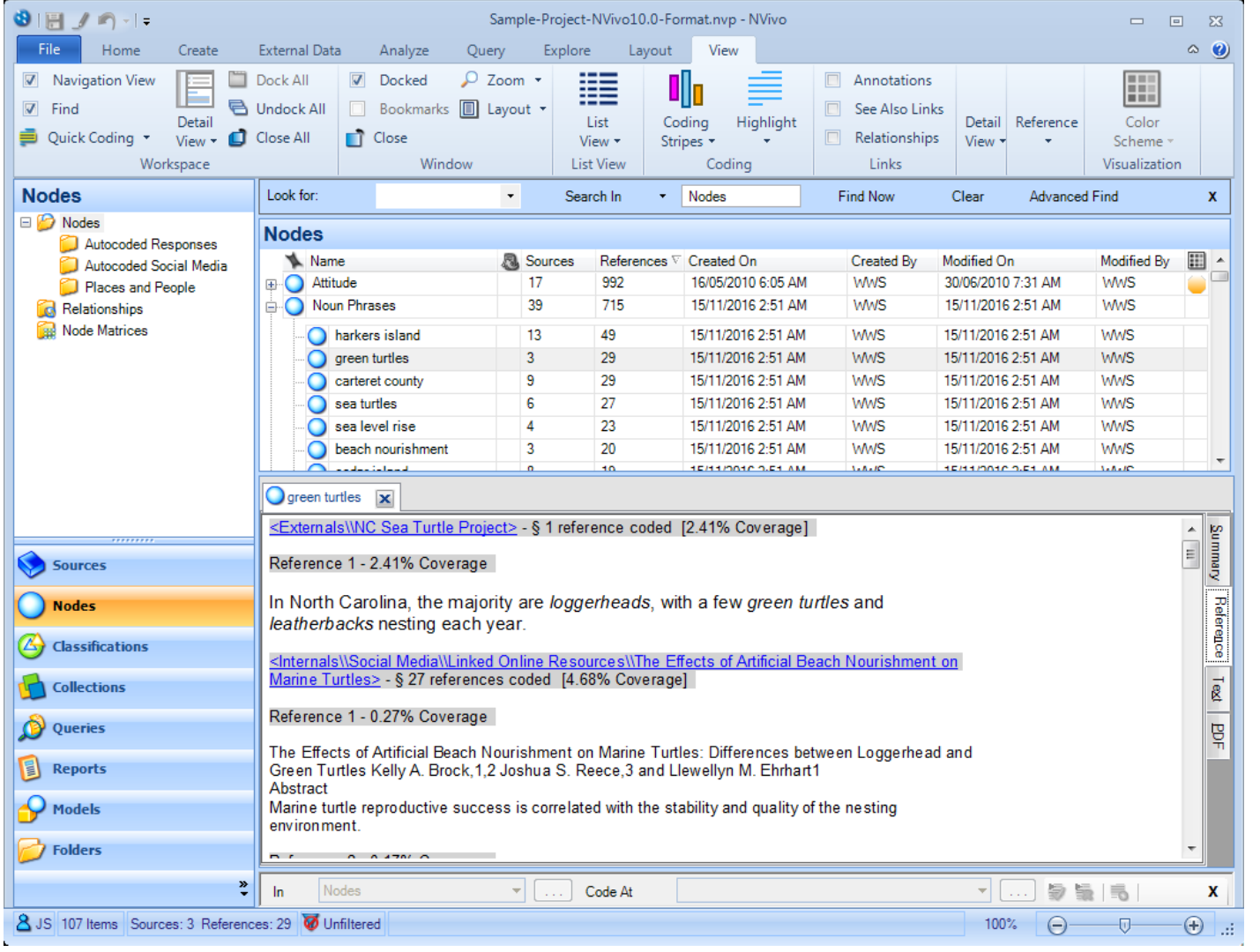


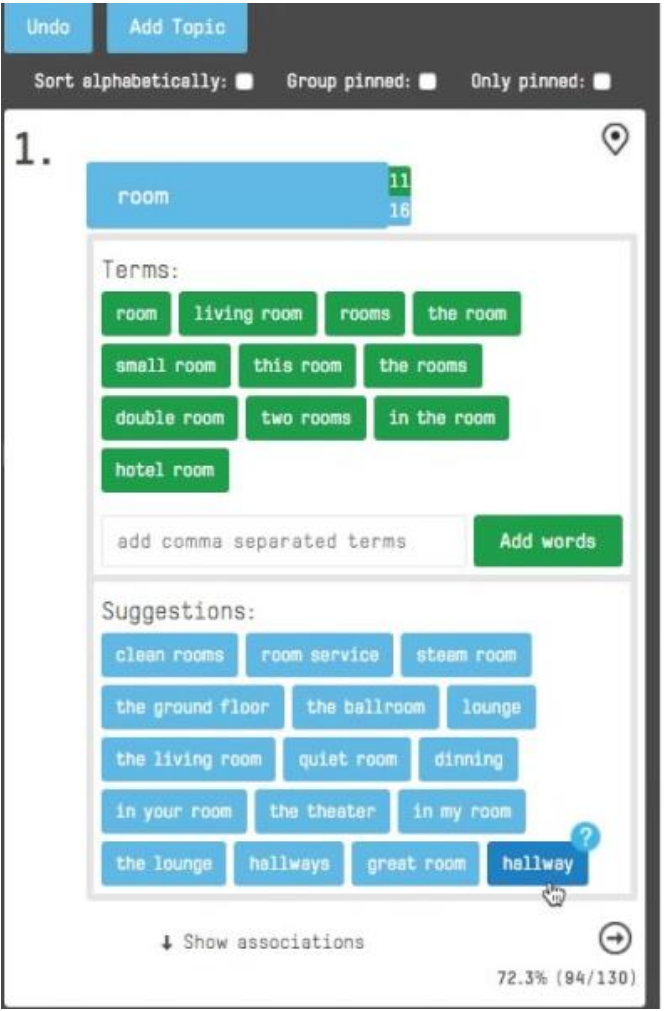






How does this compare?

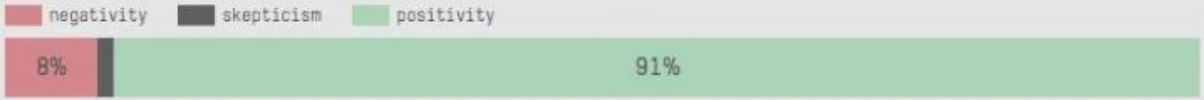

Sample-Project-NVivo10.0-Format.nvp - NVivo
File
Home
Create
External Data
Analyze
Query
Explore
Layout
View
Navigation View
Find
Quick Coding
Detail View
Dock All
Undock All
Close All
Workspace
Docked
Bookmarks
Close
Zoom
Layout
Window
List View
Coding Stripes
Highlight
Coding
Annotations
See Also Links
Relationships
Links
Color Scheme
Visualization
Nodes
Nodes
Autocoded Responses
Autocoded Social Media
Places and People
Relationships
Node Matrices
Look for:
Search In
Nodes
Find Now
Clear
Advanced Find
Nodes
Name
Sources
References
Created On
Created By
Modified On
Modified By
Attitude 17 992 16/05/2010 6:05 AM WWS 30/06/2010 7:31 AM WWS
Noun Phrases 39 715 15/11/2016 2:51 AM WWS 15/11/2016 2:51 AM WWS
harkers island 13 49 15/11/2016 2:51 AM WWS 15/11/2016 2:51 AM WWS
green turtles 3 29 15/11/2016 2:51 AM WWS 15/11/2016 2:51 AM WWS
carteret county 9 29 15/11/2016 2:51 AM WWS 15/11/2016 2:51 AM WWS
sea turtles 6 27 15/11/2016 2:51 AM WWS 15/11/2016 2:51 AM WWS
sea level rise 4 23 15/11/2016 2:51 AM WWS 15/11/2016 2:51 AM WWS
beach nourishment 3 20 15/11/2016 2:51 AM WWS 15/11/2016 2:51 AM WWS
green turtles
<Externals\\NC Sea Turtle Project> - § 1 reference coded [2.41% Coverage]
Reference 1 - 2.41% Coverage
In North Carolina, the majority are loggerheads, with a few green turtles and leatherbacks nesting each year.
<Internals\\Social Media\\Linked Online Resources\\The Effects of Artificial Beach Nourishment on Marine Turtles> - § 27 references coded [4.68% Coverage]
Reference 1 - 0.27% Coverage
The Effects of Artificial Beach Nourishment on Marine Turtles: Differences between Loggerhead and Green Turtles Kelly A. Brock,1,2 Joshua S. Reece,3 and Llewellyn M. Ehrhart1
Abstract
Marine turtle reproductive success is correlated with the stability and quality of the nesting environment.
Summary
Reference
Text
PDF
Sources
Nodes
Classifications
Collections
Queries
Reports
Models
Folders
In
Nodes
Code At
JS
107 Items
Sources: 3 References: 29
Unfiltered
100%



Includes 72.3% (94/130) of the texts.

SENTIMENT

Sentiment detected in **82** texts. The values will be updated as you apply filters below.



TERMS

Click on a term to filter the example sentences in the text section below.

room | living room | rooms | the room | small room | this room | the rooms | double room | two rooms | in the room | hotel room

ASSOCIATIONS

Click on one or more associations to filter the example sentences in the text section below.

clean | comfortable | nice | quiet | small | great | spacious | ready | good | stay

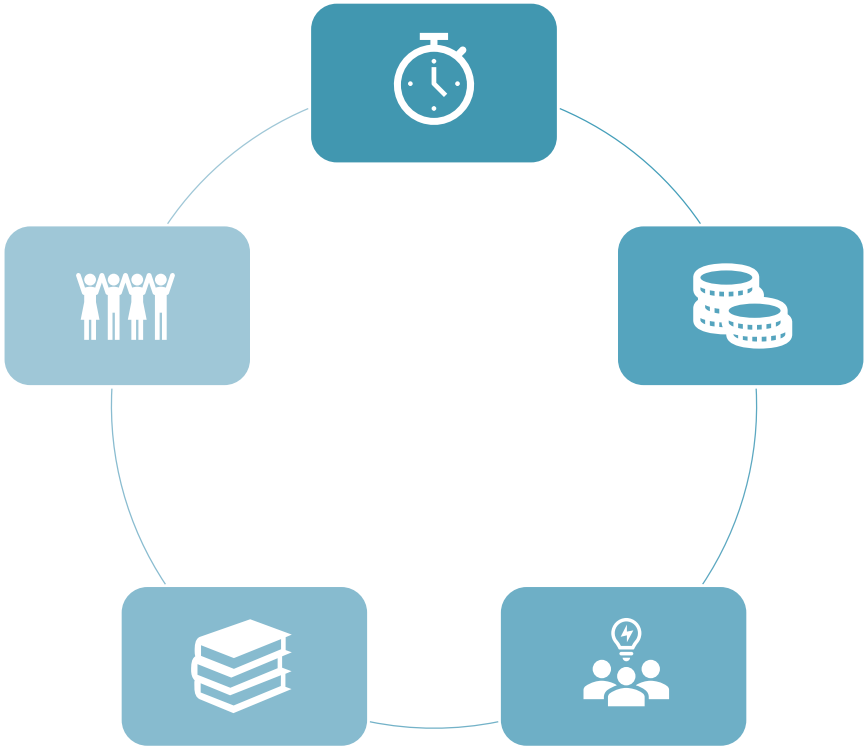
TEXTS

Below you will see examples of what is included in this topic.

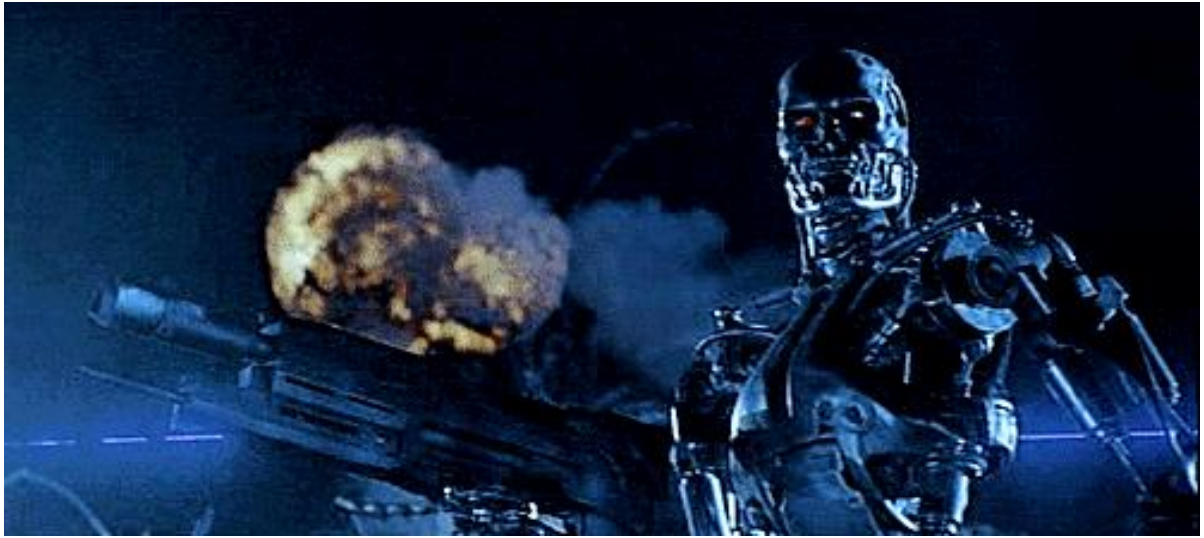
Show examples

Help & Support

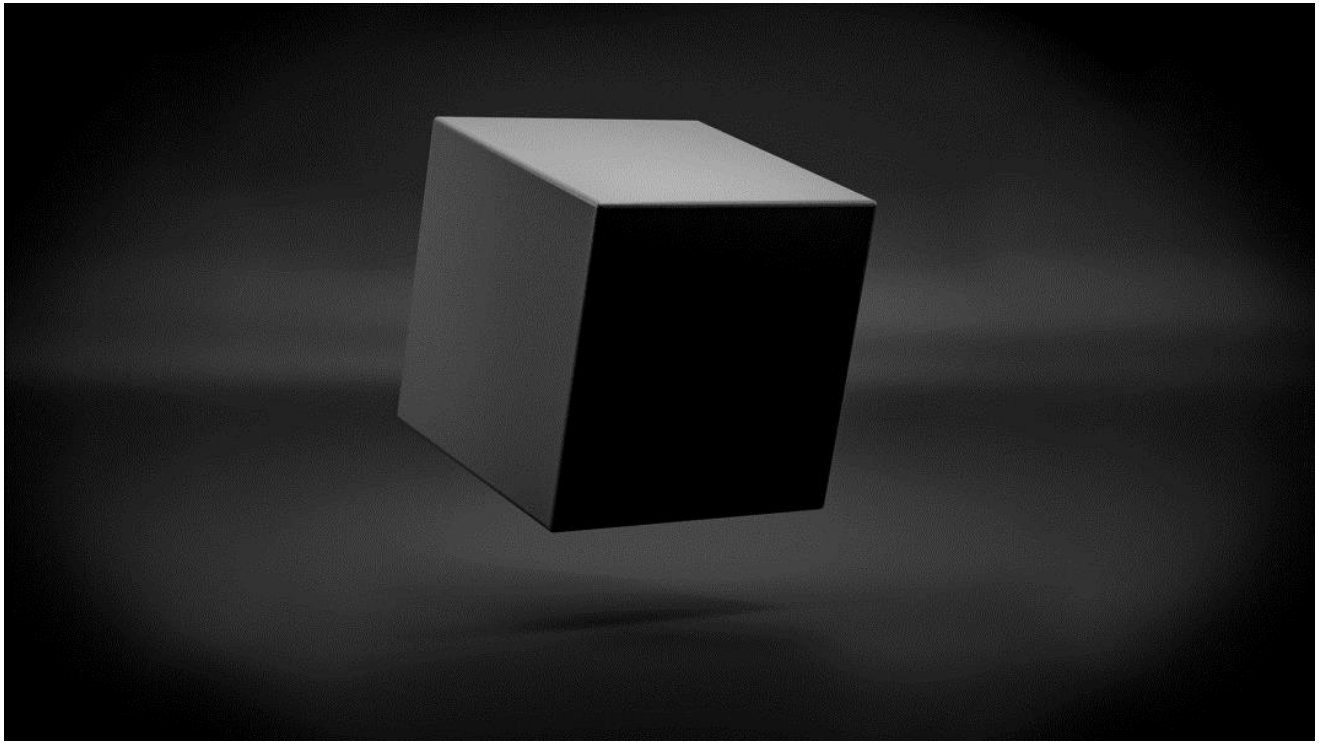
The benefits



What could go wrong?



Unboxing algorithms



Ethical implementation

There is no such thing as trustworthy AI, only people

Thomas Metzinger

Have a hypothesis—what will my data say?

Know your data—can this output be correct?

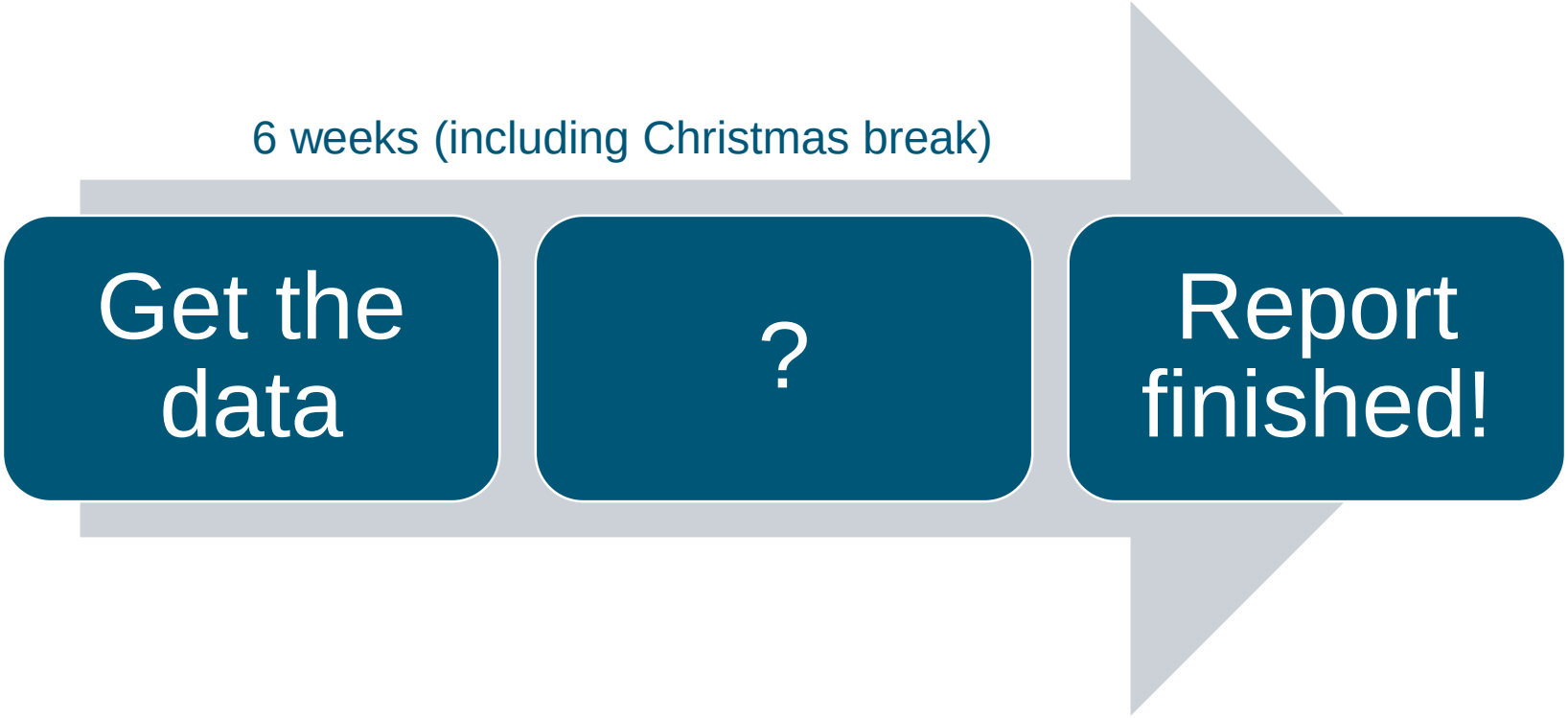
Know your model—how does my model analyse?

Learnings through implementation

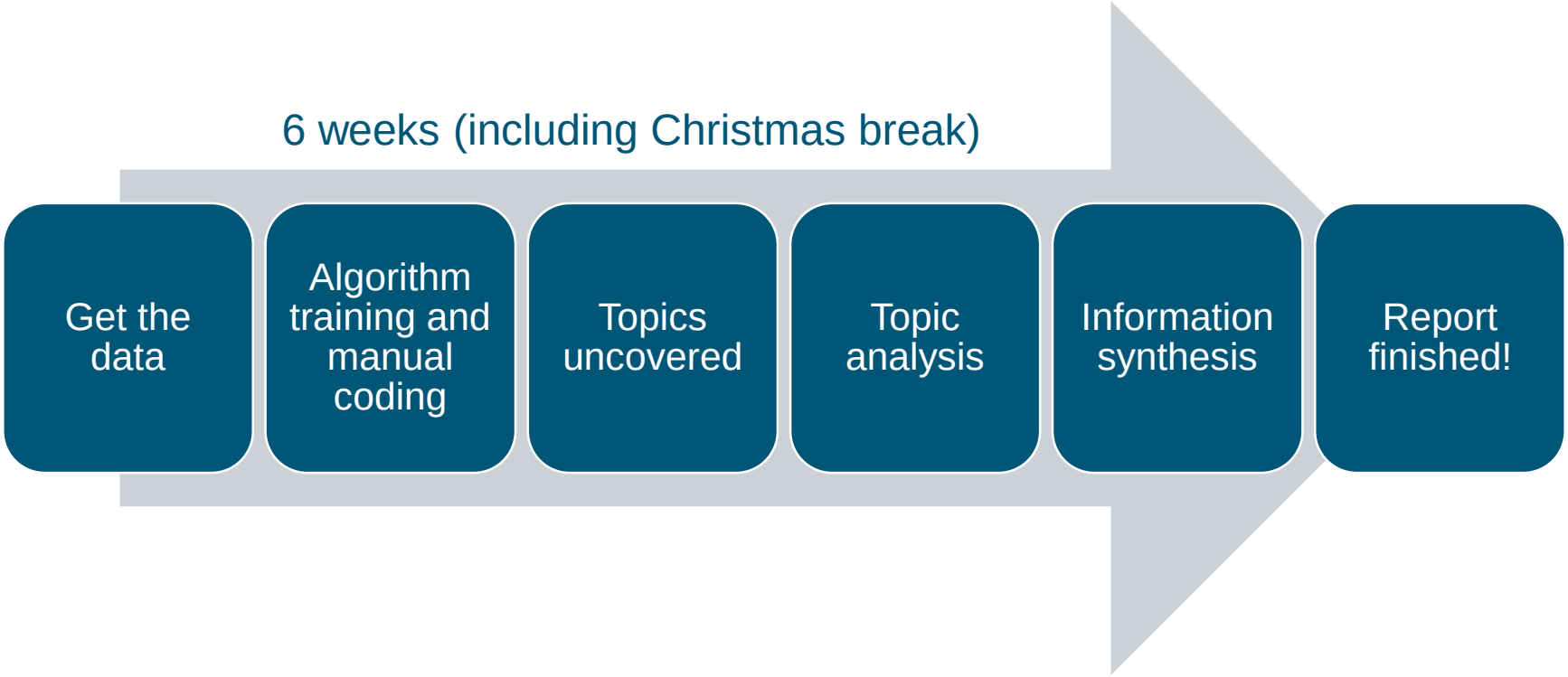
Large consultation

Large consultation

6 weeks (including Christmas break)



Large consultation



Large consultation

Benefits of using machine-assisted qualitative analysis:

- Able to analyse written submissions
- Topics were representative
- Saved time for us and the client

Large consultation

Learnings from this project:

- Combined analysis
- Cleaning data
- Testing the algorithm

Looking
forward

POLAROID
LM PROGRAM
630

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Consultant

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