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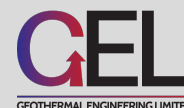
Talking of geology...

communicating with diverse publics about geological resources

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Who am I?



From geologist to science communication researcher

- Geologist (geotechnical engineering geologist and geohazards)
- Science communicator for 5 years
- Interdisciplinary researcher in Geoscience Communication



Geology has gone public...



© Spiegel



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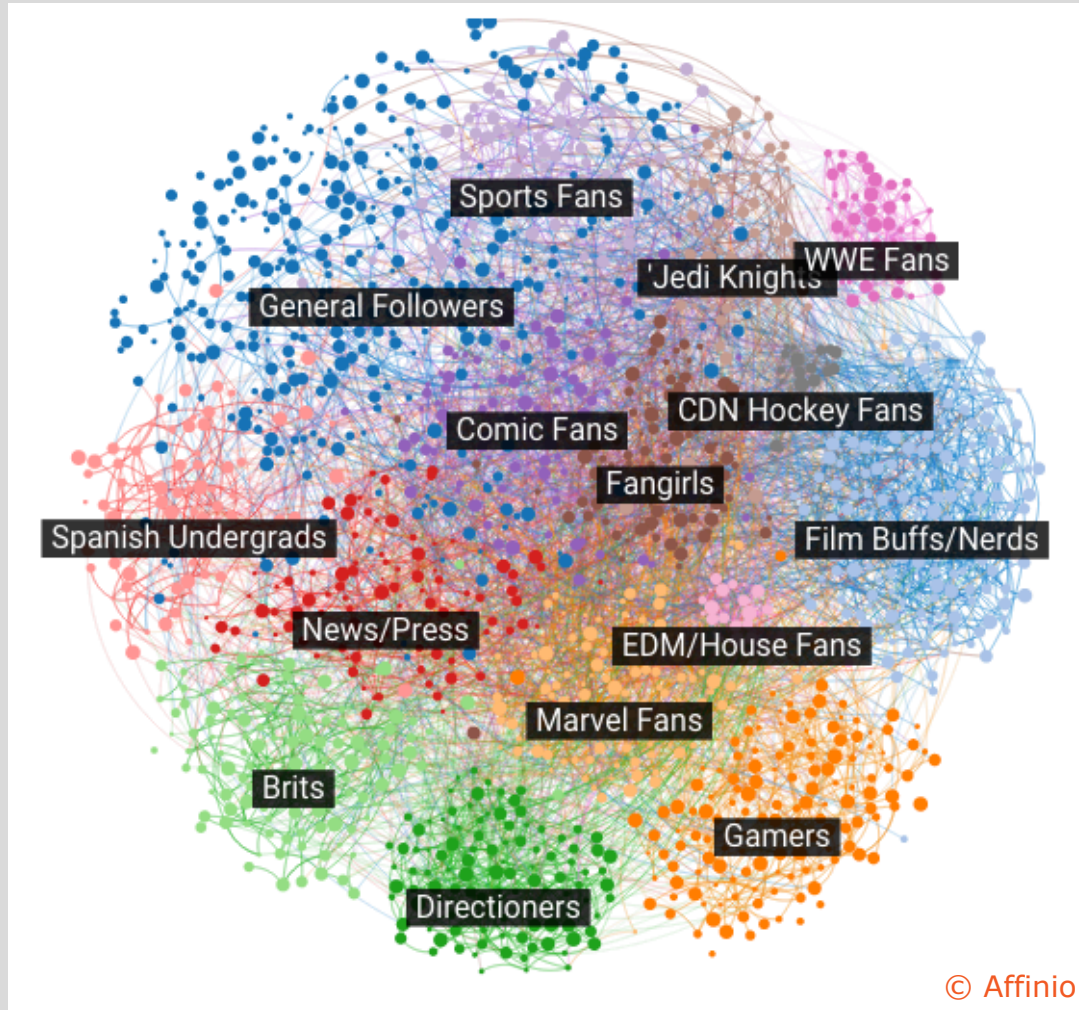
© Search for Common Ground



There is no one 'public'



'The public' is actually divided up many ways...



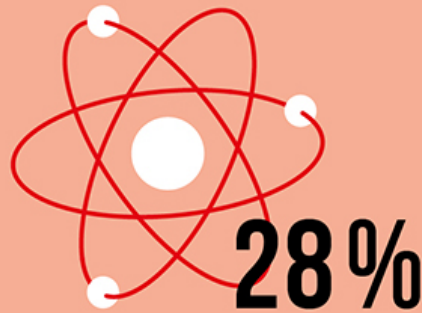
Not just 'Star Wars fans on Twitter'...

There is no one 'public'



SCIENCEPHILES

distinct interest in science, high trust, diverse media use



28%

CRITICALLY INTERESTED

distinct interest in science, clear concerns, diverse media use



17%

PASSIVE SUPPORTERS

moderate interest in science, supportive, informed via newspapers



42%

DISENGAGED

low interest in science, clear concerns, passively informed via TV



13%

Source: Schäfer, Füchslin, Metag, Kristiansen, Rauchfleisch (2018): The different audiences of science communication: A segmentation analysis of the Swiss population's perceptions of science and their information and media use patterns. Public Understanding of Science. bit.ly/FourAudiences



There is no such thing as 'the public'.

So, who is your audience?

A question of expertise



Expertise is a measure of experience and knowledge. It includes three components:

- Specialist content (facts)
- Specialist method (e.g. how science is done)
- Specialist context (e.g. interpreting science in real life)

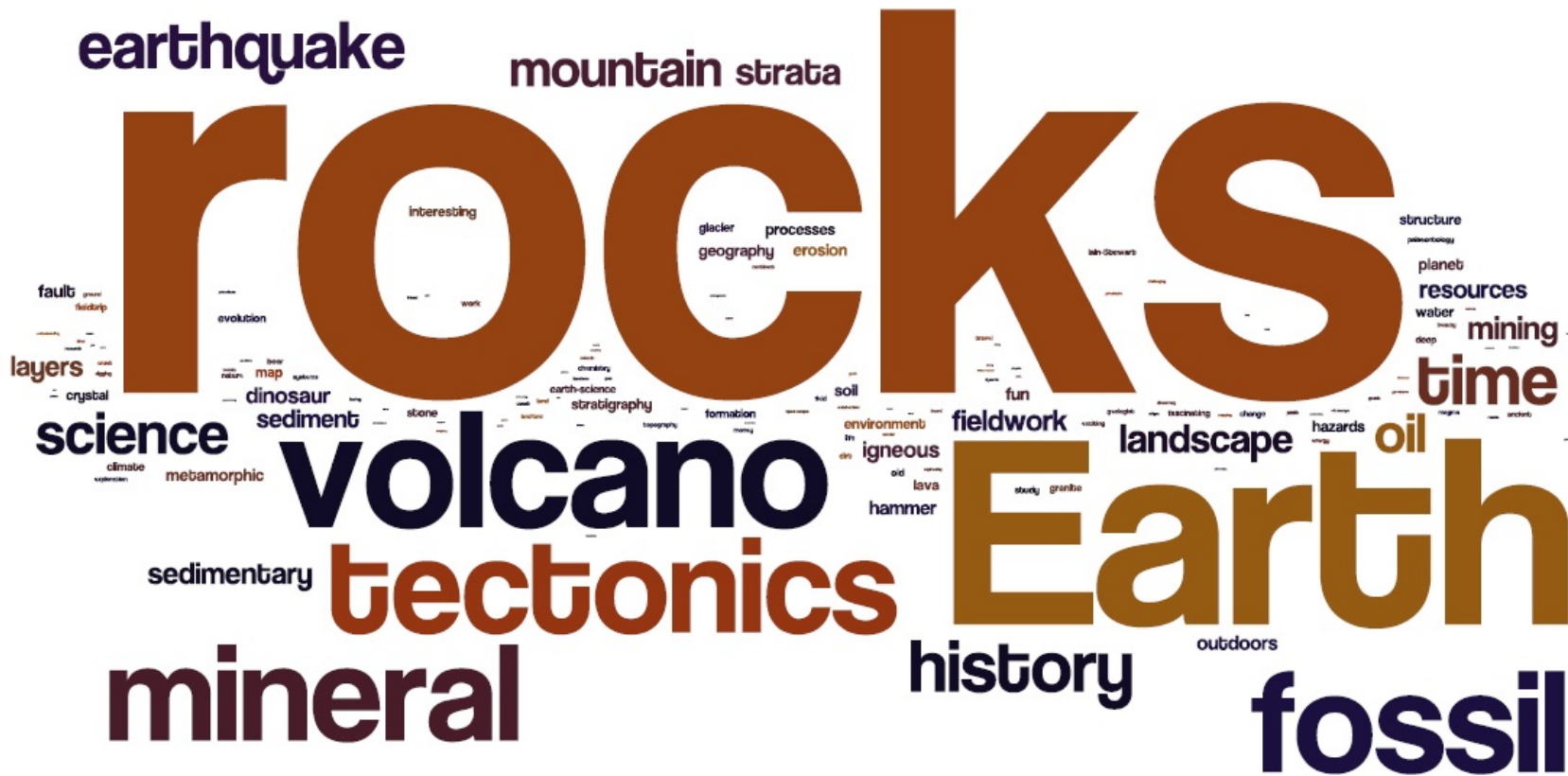
(after Wilkinson, 2010)

Word association



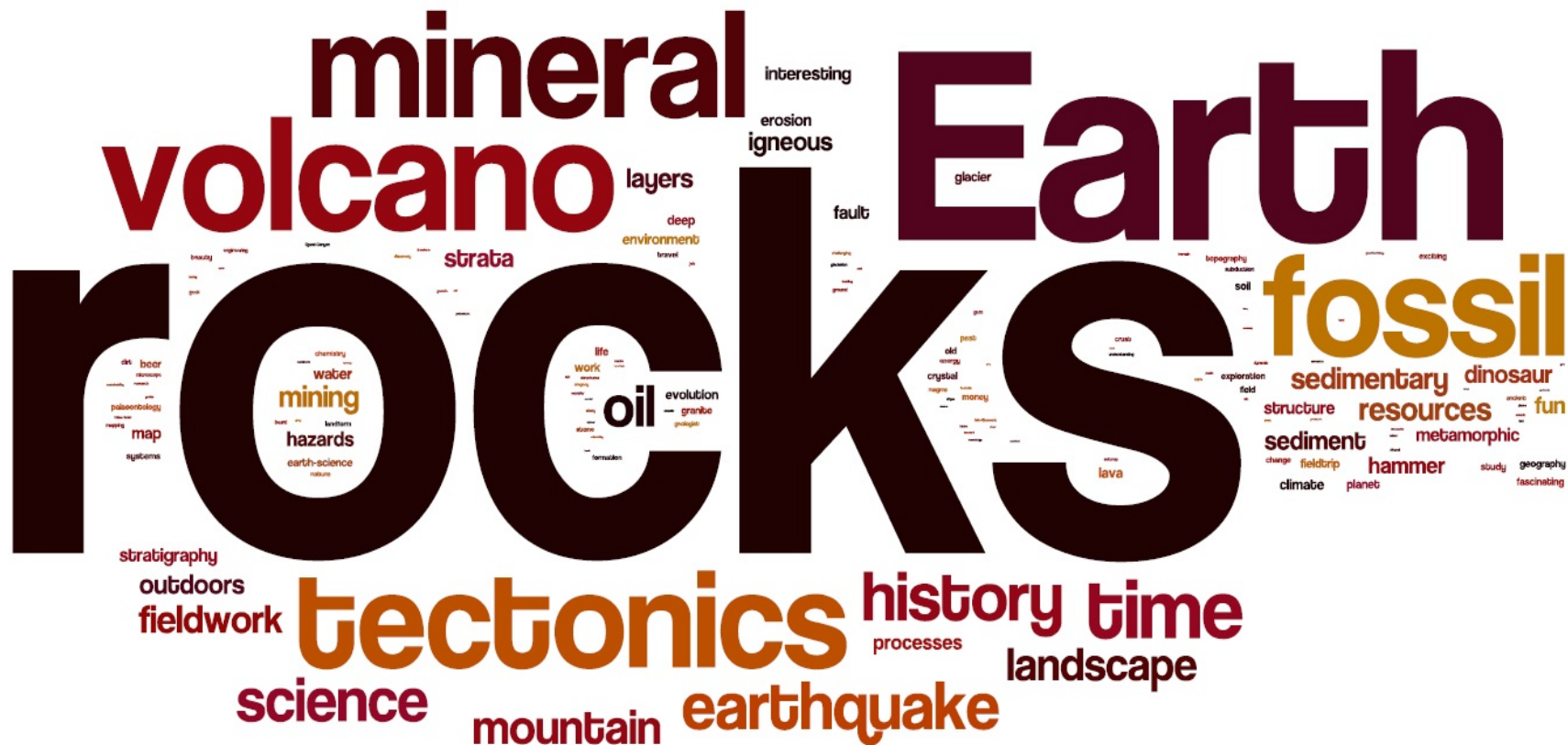
What words do you associate with the word
'geology'?

Word association



All respondents: Rocks: 726/896 participants (words: n=733/4460)

Expert word association



Only 'expert' respondents: Rocks: 457/578 (words n=522/4460)

To be a geologist...



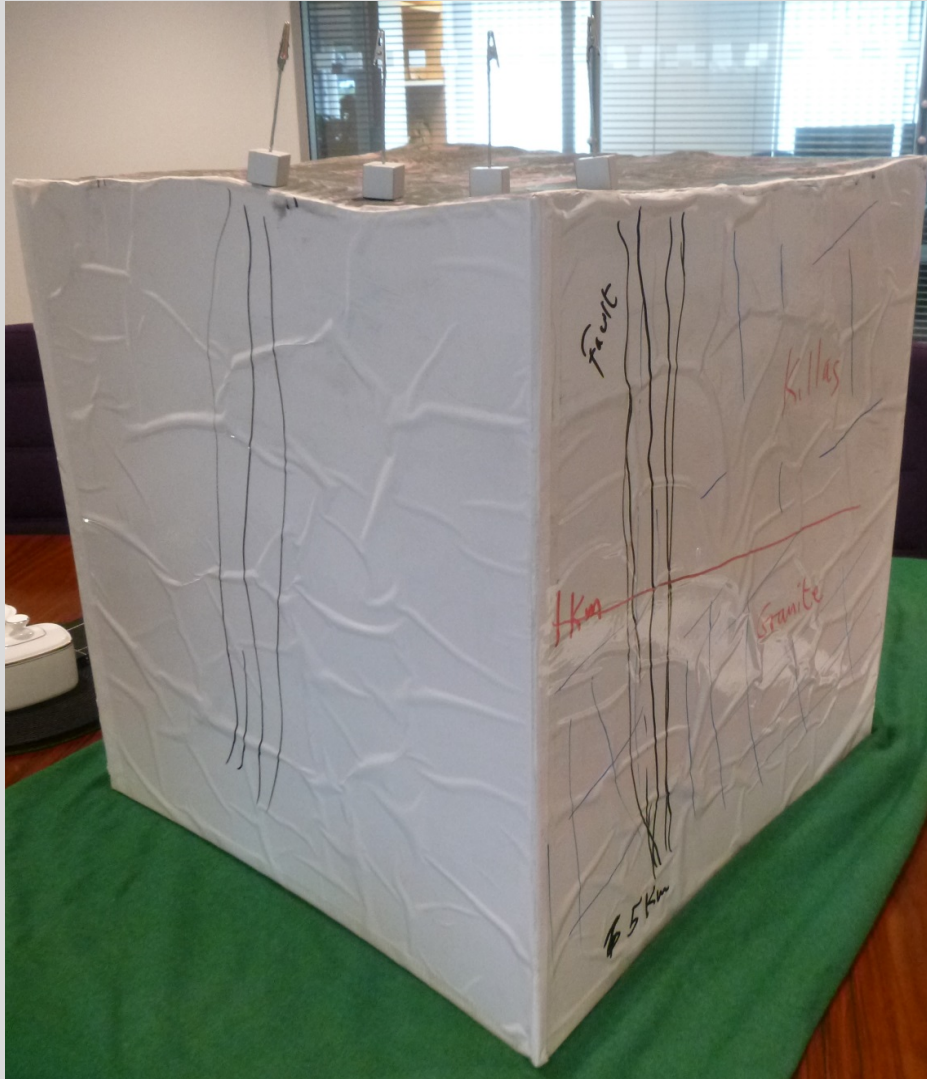
(n=4460)



A more in-depth study



Expert subsurface geology



- 3D spatial reasoning
- Technical language and symbols
- Surface connects to subsurface

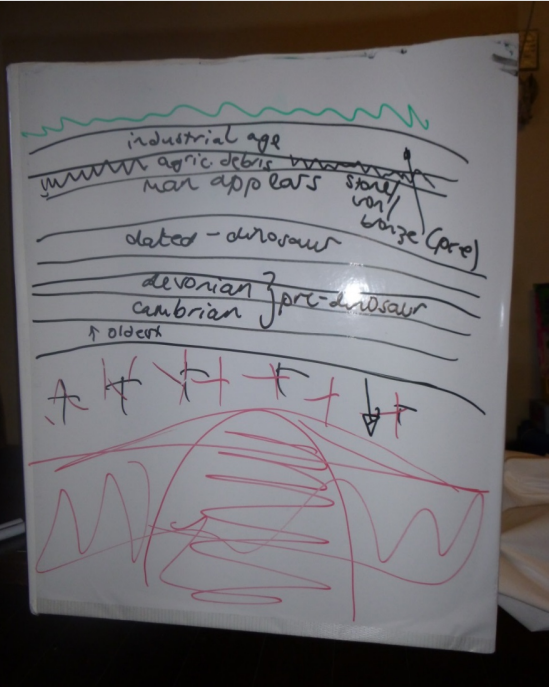
Eric, expert geologist



Non-expert subsurface geology

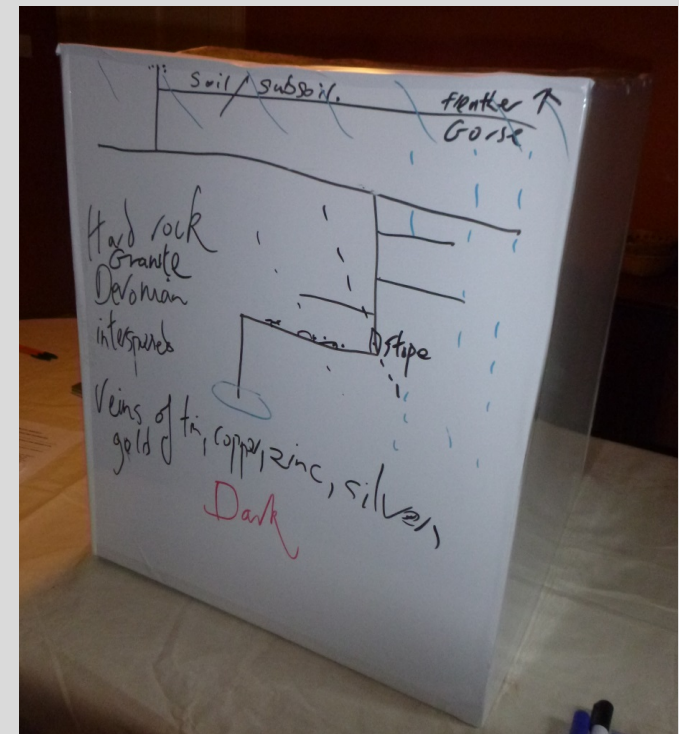


- Only used one side
- Geographical spatial reasoning



Kimberley, resident of Carharrack

- Often relied on stickers or other visual cues
- Surface and subsurface disconnected

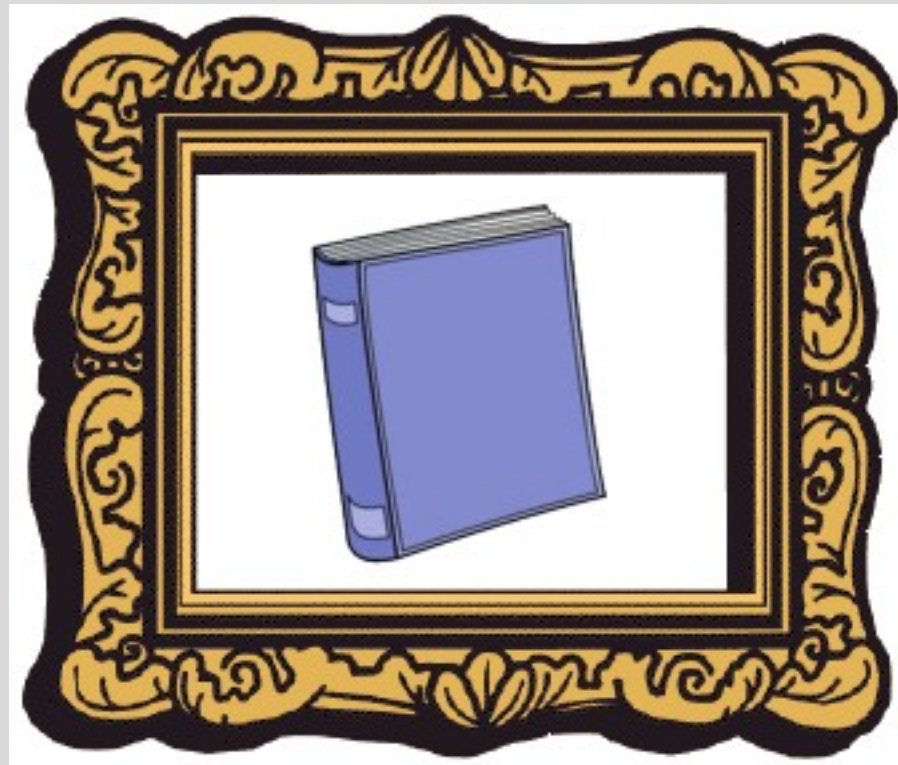


Kara, resident of Carharrack

Frames



Frames can be described as ‘interpretive storylines’ (Nisbet, 2009)



Frames – geological subsurface



Frames – community value



Negative view – loss of community

“I don’t know how many, I've never actually stopped to count because I found it too upsetting, but there's families that have gone now that were vital to... a nice, cohesive, village life. They were born here. They've lived here all their lives. They've brought their children up and they've gone.

So, the fabric of the village has changed totally ... Now, you can open the curtains in the morning and see a strange dog in the garden or people standing at the gates looking up at your windows and you think this isn't what life was like.”

Hannah, resident of Hemerdon



Frames – cultural value



Positive view – links to heritage and identity

See, the trouble is, people look at [the mining tips around the engine houses] and they say, oh, this is ugly waste ground. Actually, it's not. It's our heritage.

Kara, resident of Carharrack

They used to say that if you find a hole in the ground, anywhere in the world, there would be a Cornishman at the bottom digging for something.

Keith, resident of Carharrack



<- engine house





Communication vs engagement.

Which one is best?

What is the purpose?



Communication vs engagement is about what are you trying to achieve.

- Do you need a Social License to Operate (SLO)?
- Do you have a legal requirement?
- Are you trying to raise your profile?
- Do you need to share information about risks?

What is the difference?



- Communication is information transfer
- Engagement is an action that establishes dialogue between experts and publics

(Bauer and Jensen, 2010)

Effective engagement – United Downs geothermal



Conclusions



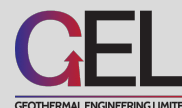
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- Who (or what) is your audience – what is important?
- Expert vs Non-expert thinking can help find gaps
- Framing and sharing values can help improve effective communication
- Communication or engagement, which is best for you?

Thanks!

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British
Geological Survey
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