

Generative Artificial Intelligence

**Exploring the impact of generative and
conversational AI models on Deltares**

DigiShape | online session ChatGPT in the water sector

Ruben Dahm
May 24, 2023

Generative AI | disruptive



Menu Weekly edition Search

Business | Battle of the boffins

The race of the AI labs heats up

ChatGPT is not the only game in town



Diversity Latest Magazine Ascend Topics Podcasts Video Store

AI And Machine Learning

ChatGPT and How AI Disrupts Industries

by Ajay Agrawal, Joshua Gans, and Avi Goldfarb

December 12, 2022

nature > news > article

NEWS | 12 January 2023

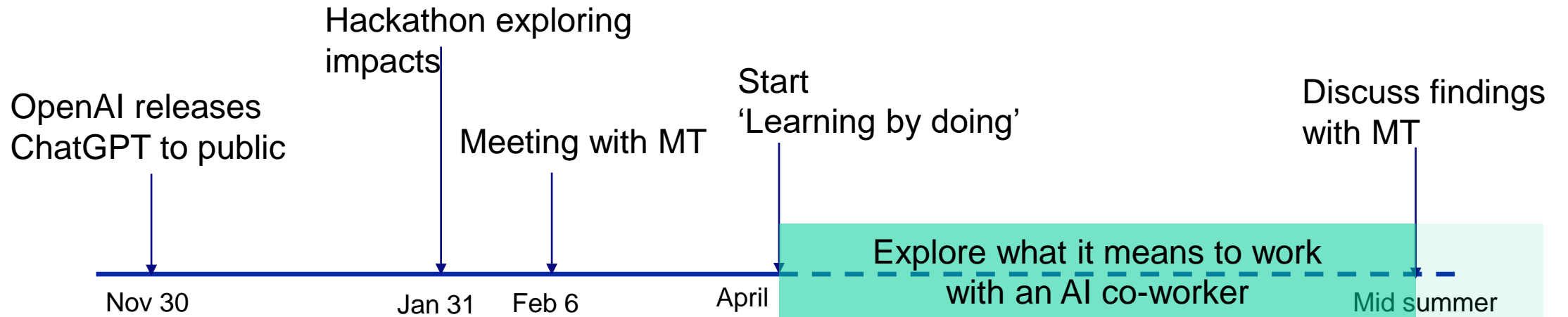
Abstracts written by ChatGPT fool scientists

Researchers cannot always differentiate between AI-generated and original abstracts.

Holly Else



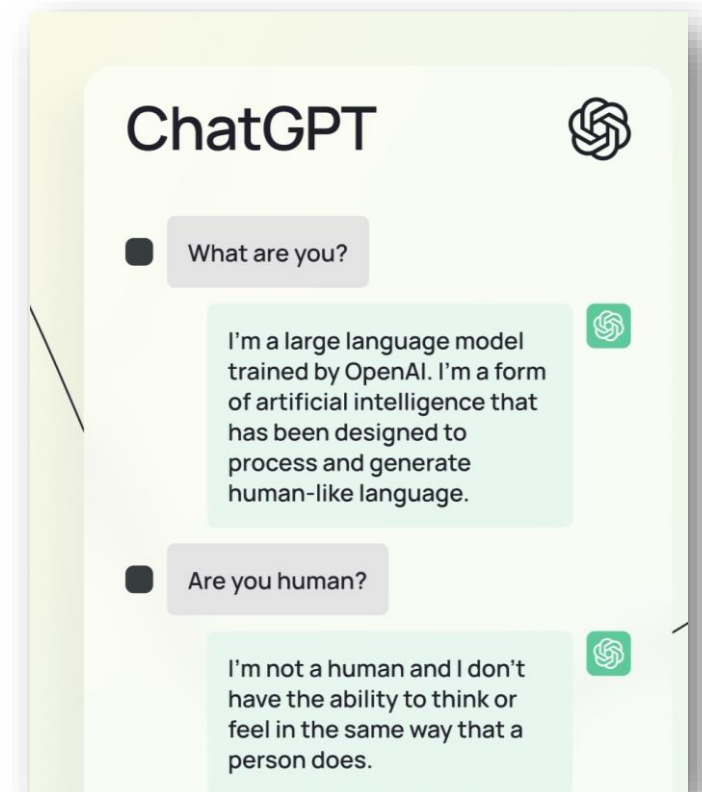
Generative AI | disruptive



Generative AI | Open AI

- Multimodal (text + video + imagery)
- Applications layer build on top of the massive language models > **new businesses** – think along the line of GitHub CoPilot
- (economic) Impact will be disruptive
- Co-working (automation?) with **creative** and already **highly digitalized** jobs

Deltares

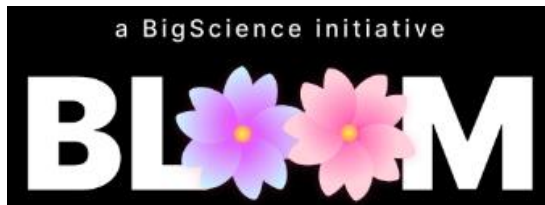


The technology (generative transformers **tools today**)

Natural Language Processing

 OpenAI

ChatGPT



Google

Introducing Bard

 **GitHub Copilot**

Deltares

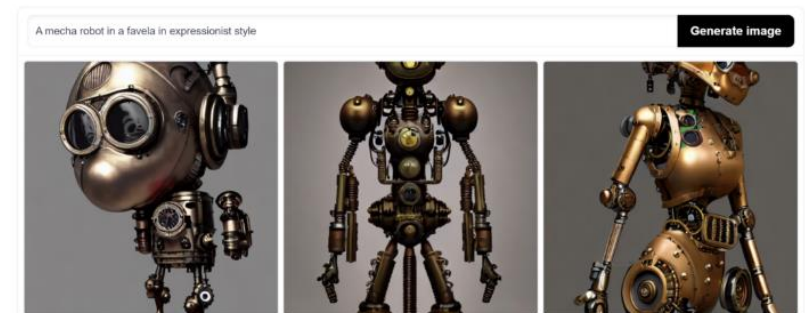
Stable diffusion models



Multimodal large-language models

Stable Diffusion Spaces

Stable Diffusion is a state of the art text-to-image model that generates images from a text description.
For faster generation and forthcoming API access you can try [DreamStudio Beta](#)



The technology (generative transformers **tools next weeks**)

Natural Language
Processing



Stable diffusion
models



Kosmos-1

Multimodal large-language
models



PaLM 540B



Generative AI | Deltares

- Colleagues are experimenting with these tools
- Some organizations decided early on their position (fraud!, embrace!)
- Let's explore the implications and if possible give clarity to our colleagues, partners, clients

Actions taken to anticipate the effect of *generative AI* on Deltares' workflows

Generative AI | the Jan 31st exploration

1- Dedicated exploratory session (hackathon)

2 – Deltares-wide informative session

Open session at Patio to interact with interested colleagues and get to know their expectations / experiences

Outputs:

- Initiate internal discussion to anticipate actions
- Explore key effects for a proactive decision making
- Disseminate information across the institute

learning by doing – actions & roadmap

Generative AI | Actions

- Design an internal experiment on the use of generative AI tools
- Focus on application / integration in daily work
- Action learning: kick-off, bi-weekly feedback loops
- Work in multiple streams
- Dedicated 2-3 months duration. Decision how to move forward

Generative AI | Actions – 4 streams



scripting



writing



legal

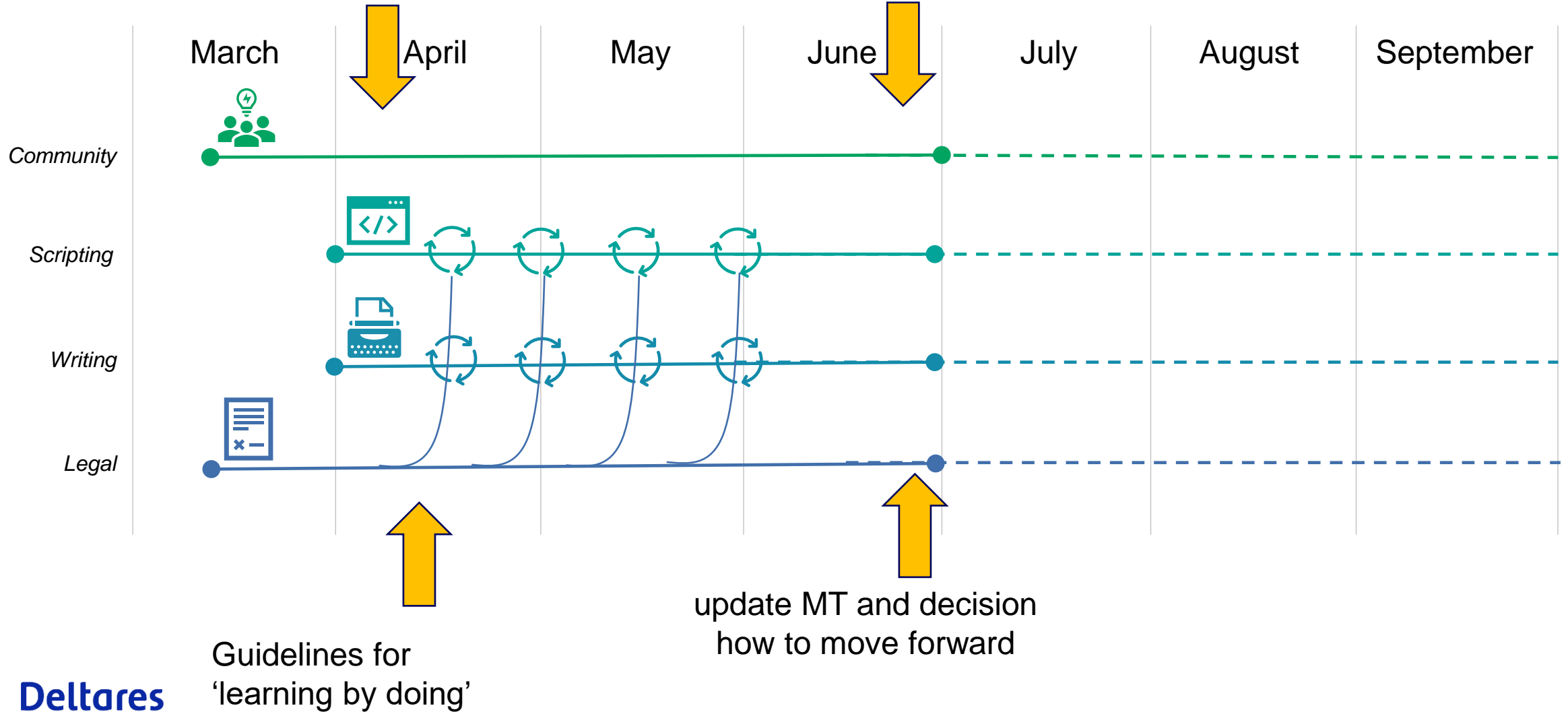


Deltares community

Generative AI | roadmap

Key lessons from 'learning by doing'

Kick-off for scripting and writing teams





Generative AI | conclusions

Ideas, thoughts, worries and suggestions are welcome!

Generative AI



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Deltares