



# REWE PICK & GO

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01

# The Task



# THE TASK



Design a process which enables only legally allowed customers to buy age restricted products that:

- Enable low friction for customers
- Prevent fraud
- Are feasible for the retailer in process cost as well as needed resources
- Provide a positive UX
- Is usable without additional manpower (no employees in store)

02

To Consider

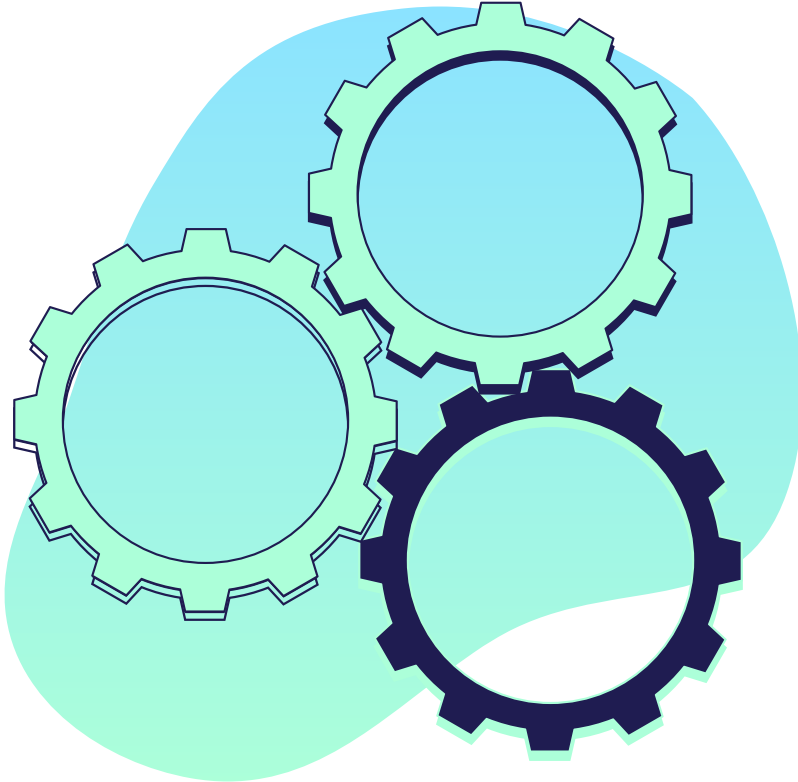


# APPLIED SOLUTIONS

## Non-optimal solutions currently used:

- Sensors & Signals for employees
  - By a start-up company that provides sensors that send a signal to an employee as soon as someone grabs sth. from a shelf
- Bouncers / Doorman
  - next to the alcohol shelves or the entrance door checking ID either every customer or only Pick & Go customers

## FURTHER BARRIERS



- **Technological issues**
  - Adding payment method was difficult
- **Theft**
  - The AI cannot stop people from stealing, only employees potentially could
- **Artificial Intelligence**
  - Not real time
- **§9/10 Youth Protection Act**
  - Mon Cherie, Alcohol, Cigaretts, Baumkuchen, ... at 18 yrs.
  - Beer & prosecco, Wine at 16 yrs.
- **Data protection**
  - The data must be deleted after it has outrun its purpose
  - The data from the camera and the information about the shopper must not be combined.

## TARGET GROUP: Quick Shoppers\*



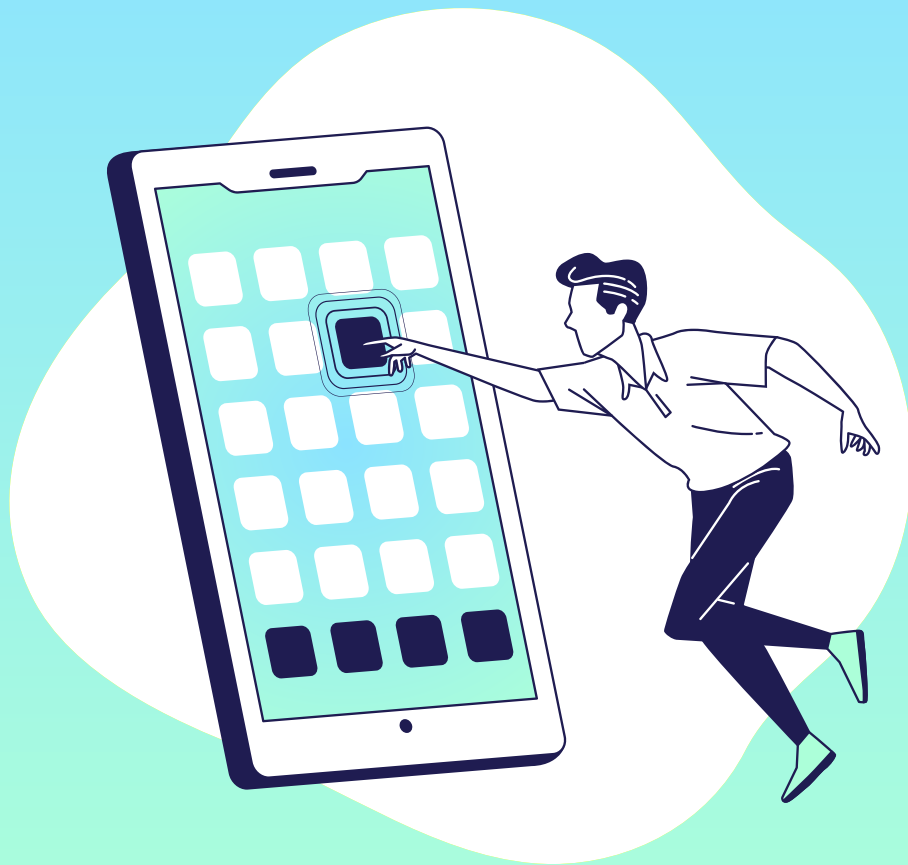
16 yrs.



18 yrs.



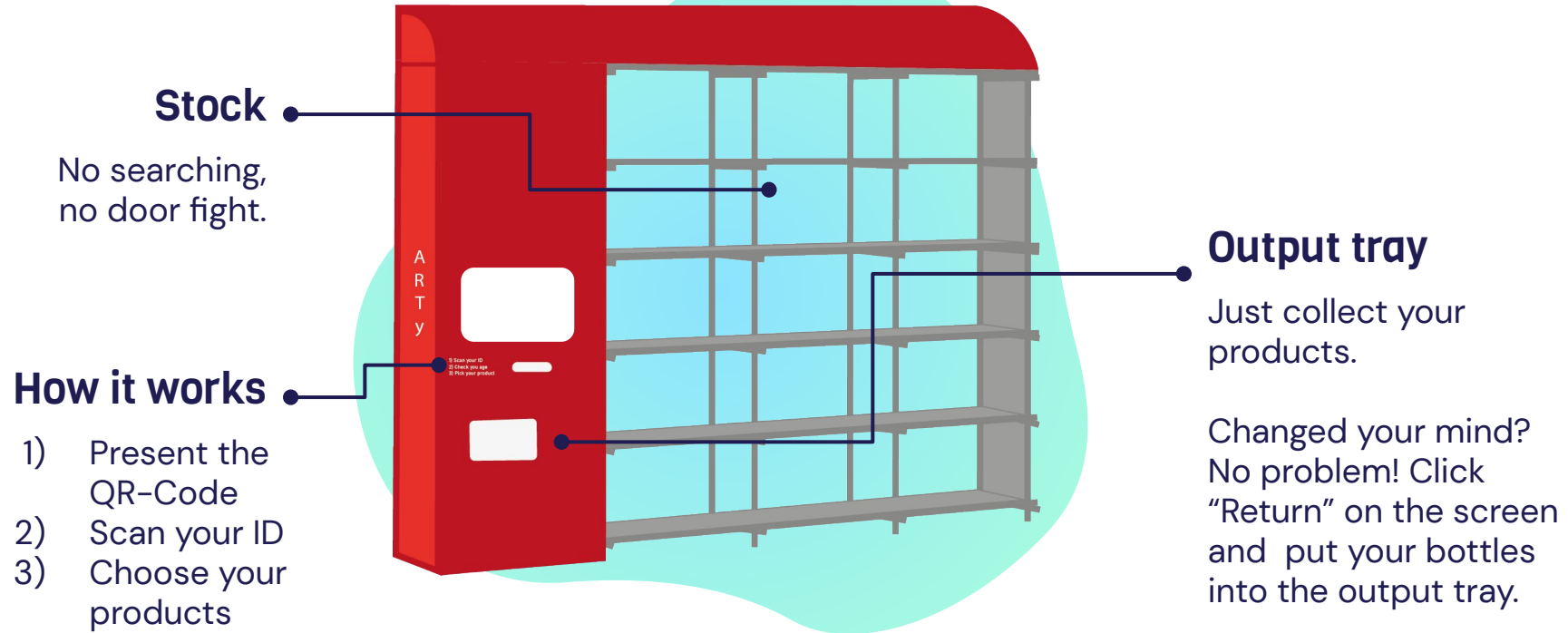
\*This target group only applies to the REWE Pick&Go and not the bigger supermarkets where people do a big shop for groceries.



# 03 Our SOLUTIONS

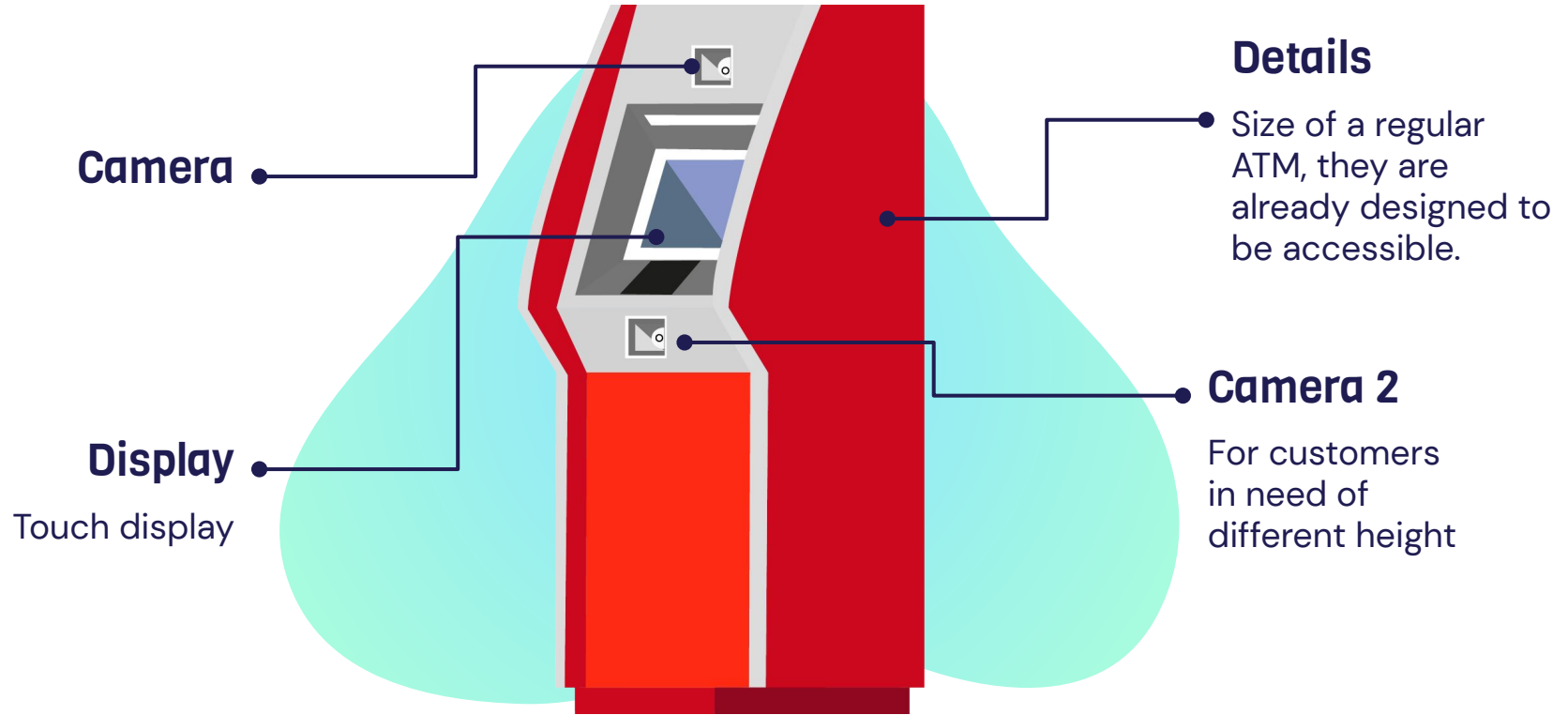


# ARTy (Automated Age Recognition Technology)

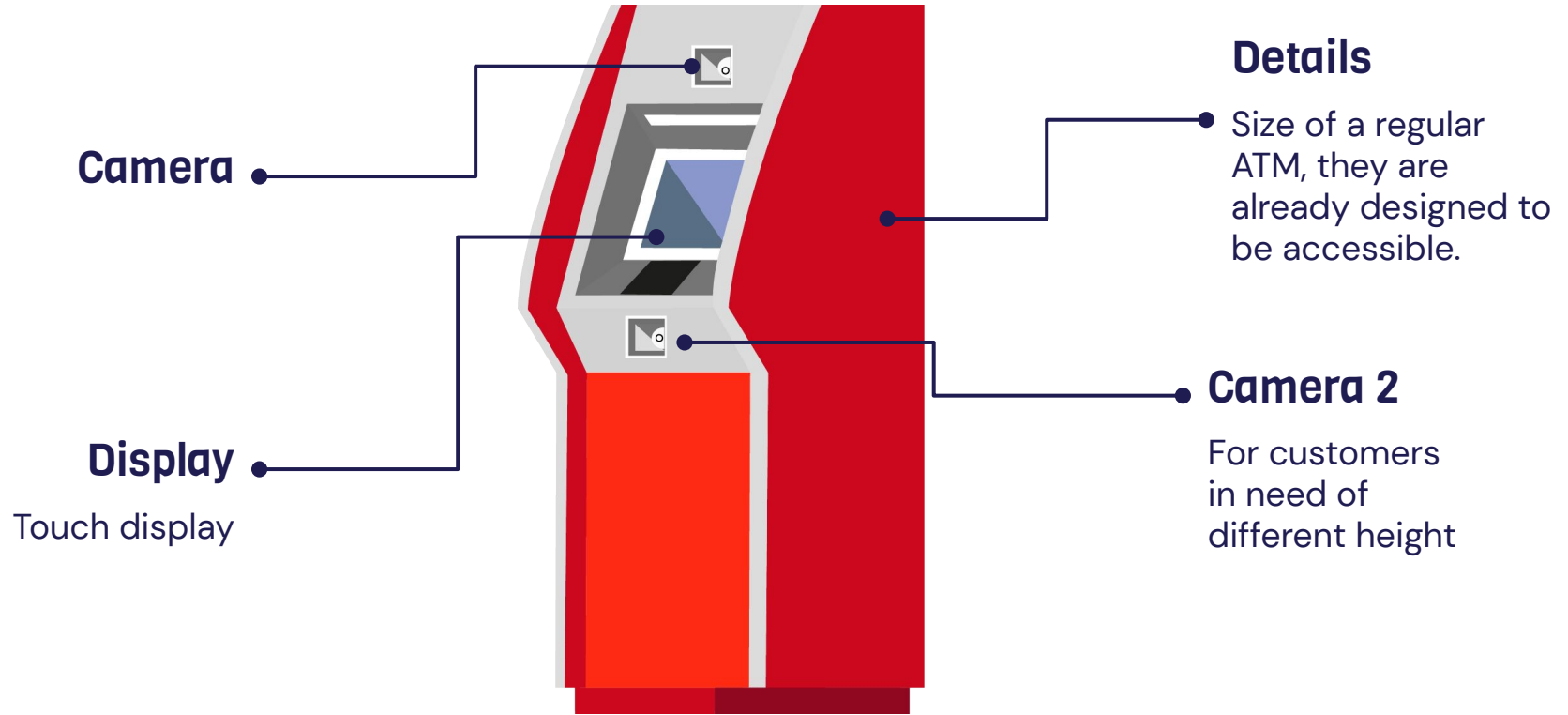


**What about the  
other 30% of  
Germany?**

# A.C.T. (Accessible Age Control Technology)



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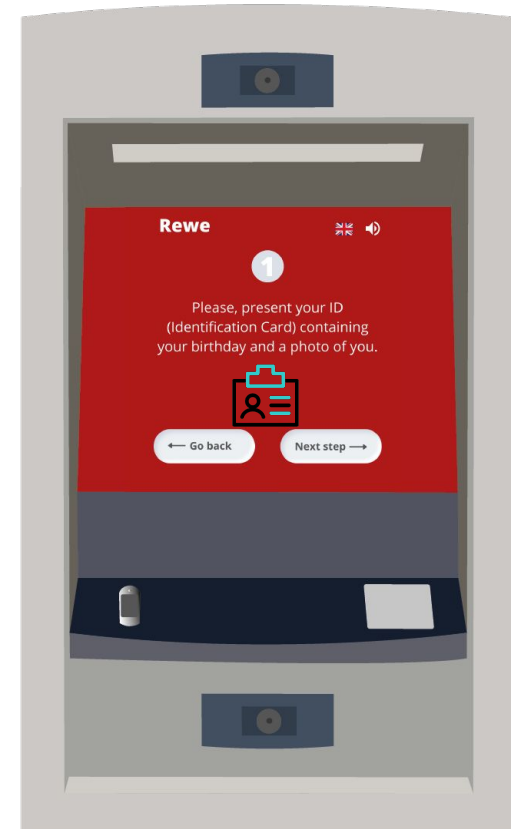
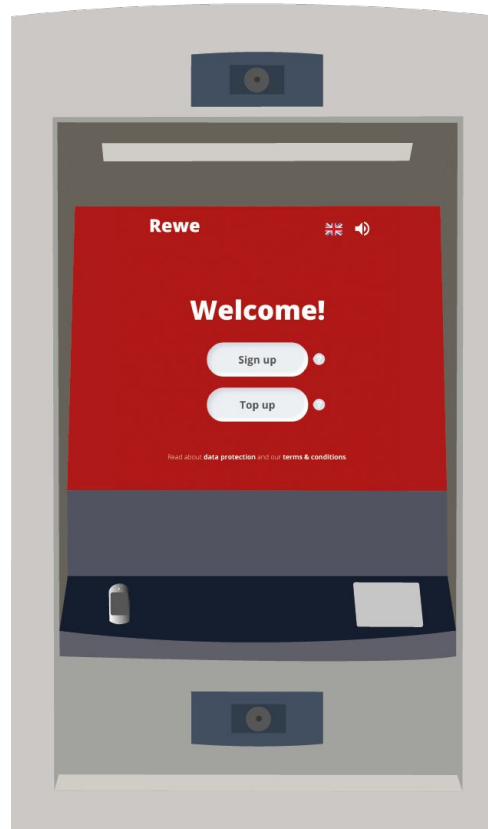


# STEPS TO SUCCESS



-01-

The ID card is presented to the device and read by artificial intelligence.

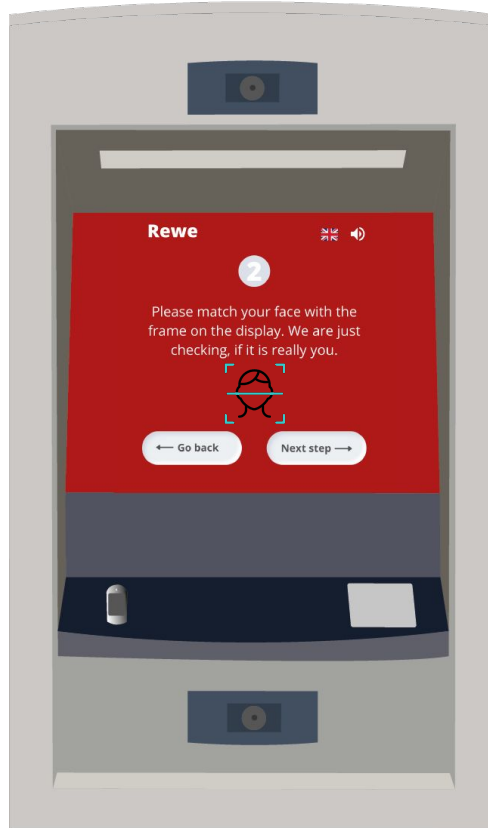


# STEPS TO SUCCESS



**-02-**

The image on the ID card is compared with the user's face by scanning the face.

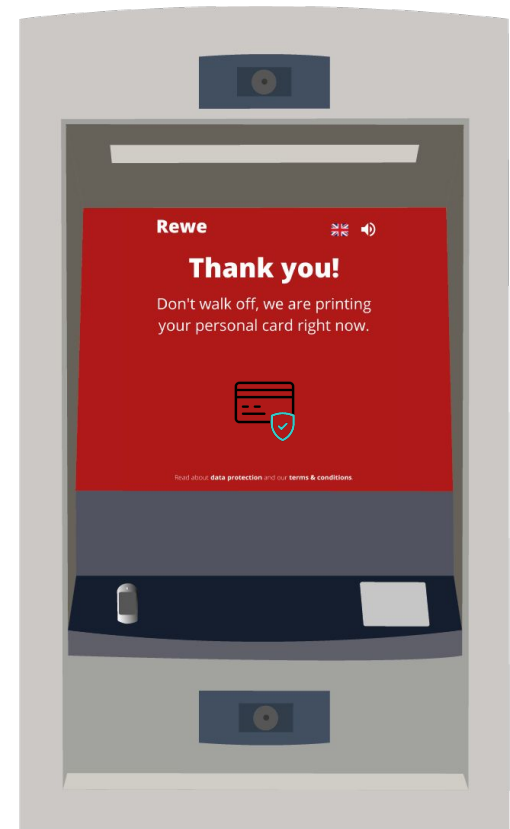


# STEPS TO SUCCESS



**-03-**

To complete the process, the fingerprint is needed and linked to the account.



# 05 SOLUTION EVALUATION





## ROUNDING UP

	Low friction	Fraud prevention	Feasibility	Positive UX	No added manpower	Accuracy	Accessibility
ARTy	X	high	X	X	X	90-100%	75%
A.C.T.	X	high	X	X	X	90-100%	100%

***“Success needs  
diversity”***

**Source: Rewe Group**

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# REFERENCES



# REFERENCES

- Smart-eID
- Digital Identity Card for Europe
- Supermarkets without counters
- ALDI Shop&Go
- Characteristics and Effectiveness of Alcohol Website Age Gates Preventing Underage User Access
- Security and Privacy Preservation Scheme of Face Identification and Resolution Framework Using Fog Computing in IoT
- YOTI APP
- <https://www.sciencedirect.com/science/article/pii/S2214785322016984?via%3Dihub>

## PAPERS

- <https://www.sciencedirect.com/science/article/pii/S2214785322016984?via%3Dihub>
- <https://www.sciencedirect.com/science/article/pii/S2214785322016984?via%3Dihub>