

# Not Just For Boys

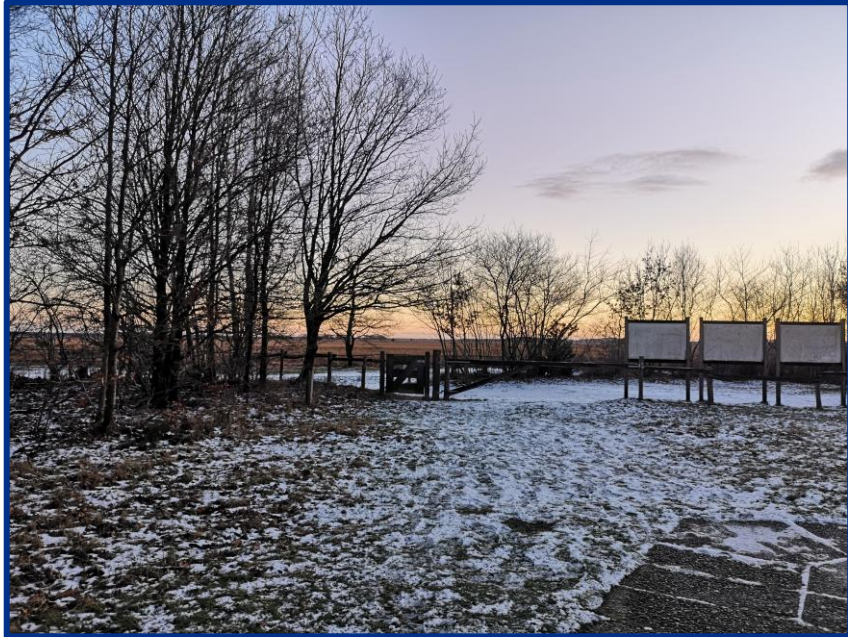
*Fostering girls' interest in technical activities in pre-vocational education*

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PAERI'24

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# Introduction

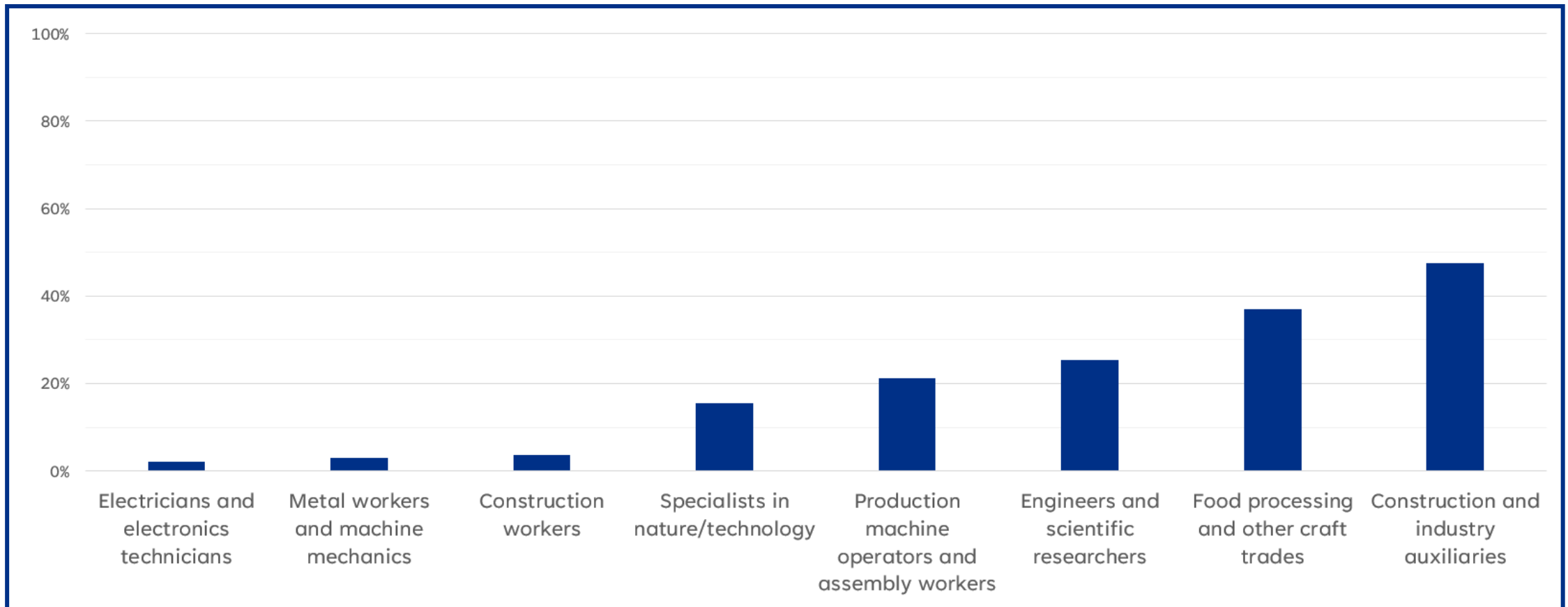


five-month internship at ASTRON  
(Netherlands Institute for Radio Astronomy)  
during MSc Science Education and  
Communication



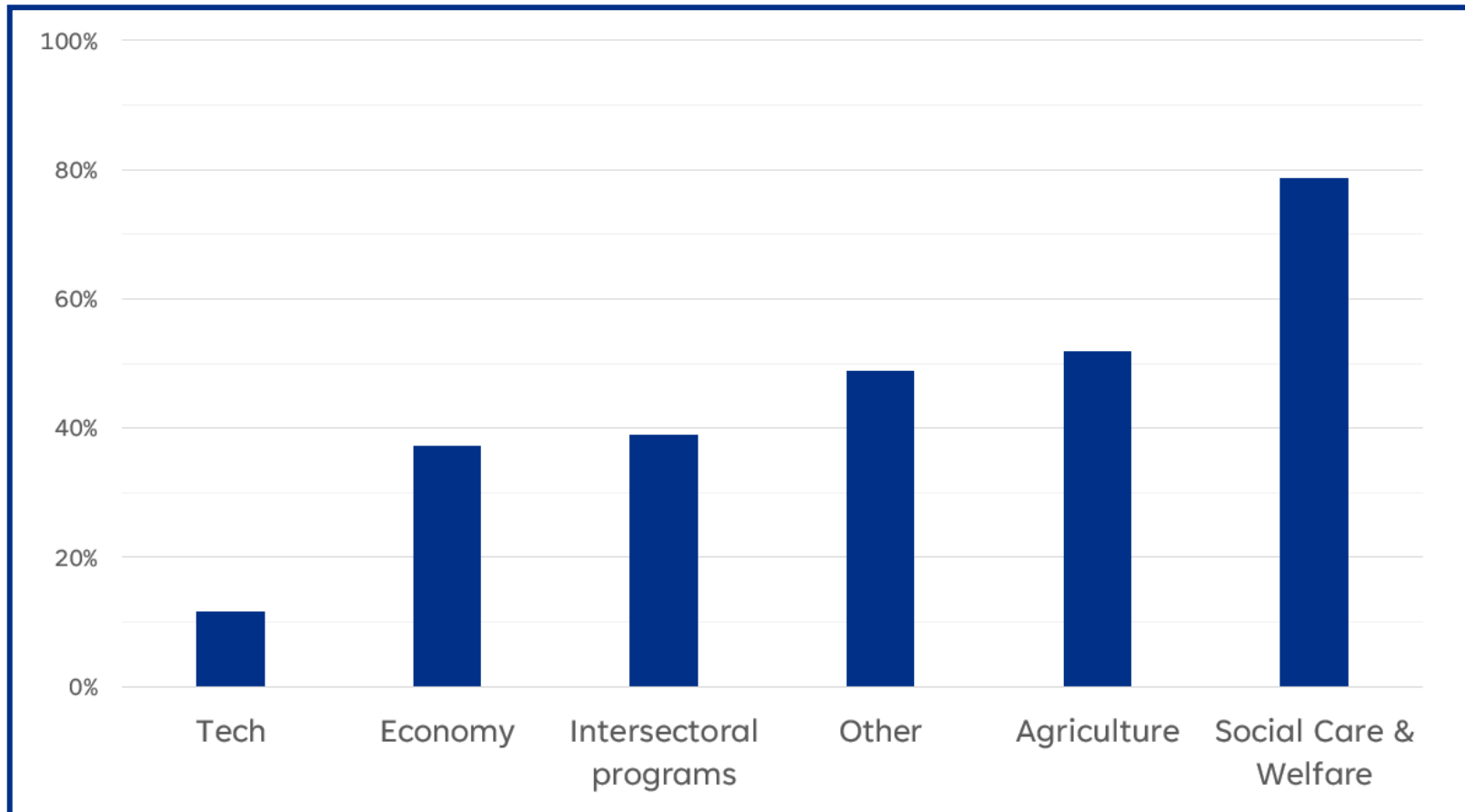
# Problem

Percentage of female workers in different technical professions in 2023 (CBS, 2024)



# Problem

Average percentage of female students in different vmbo-sectors (DUO, 2022)



# Theoretical Background

## Stereotype Threat

Reduced performance after exposure to negative stereotypes about one's demographic  
([Steele & Aronson, 1995](#))

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*Self-Determination Theory:*  
relatedness, competence,  
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([Deci & Ryan, 2000](#))

*Mindset Theory:*  
beliefs about abilities as  
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## Role Models

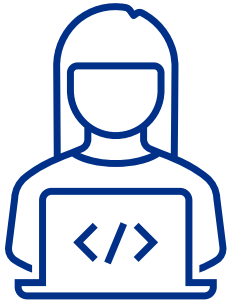
... should be:

- from underrepresented groups
- meaningfully similar to the students
- portrayed as competent and successful, but attainably so

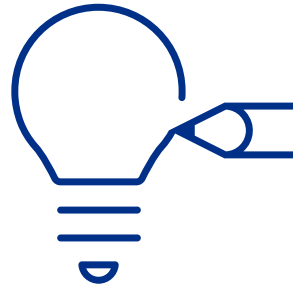
([Gladstone & Cimpian, 2021](#))

# Goals

*The target audience should...*



perform technical activities



actively participate



gain knowledge & empowerment



# Resulting Criteria

*The product should...*

show ASTRON as an approachable and valuable part of the local community and economy.

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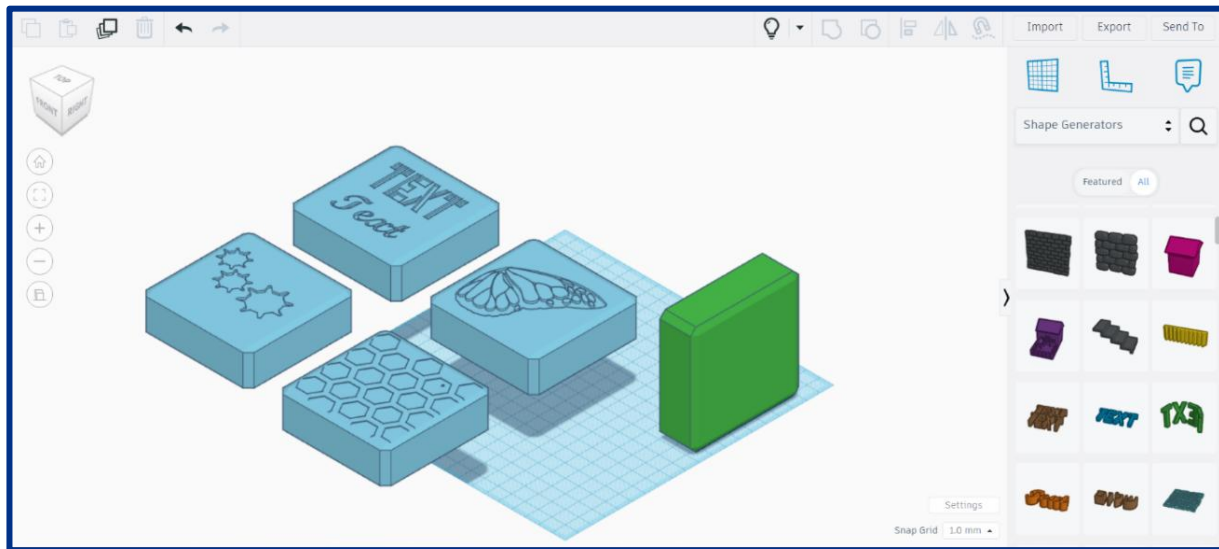
not take more than around 2.5h (including breaks) on each of the two days.

demonstrate the technical work being done at the organisation.

*... and much more!*

# Activities

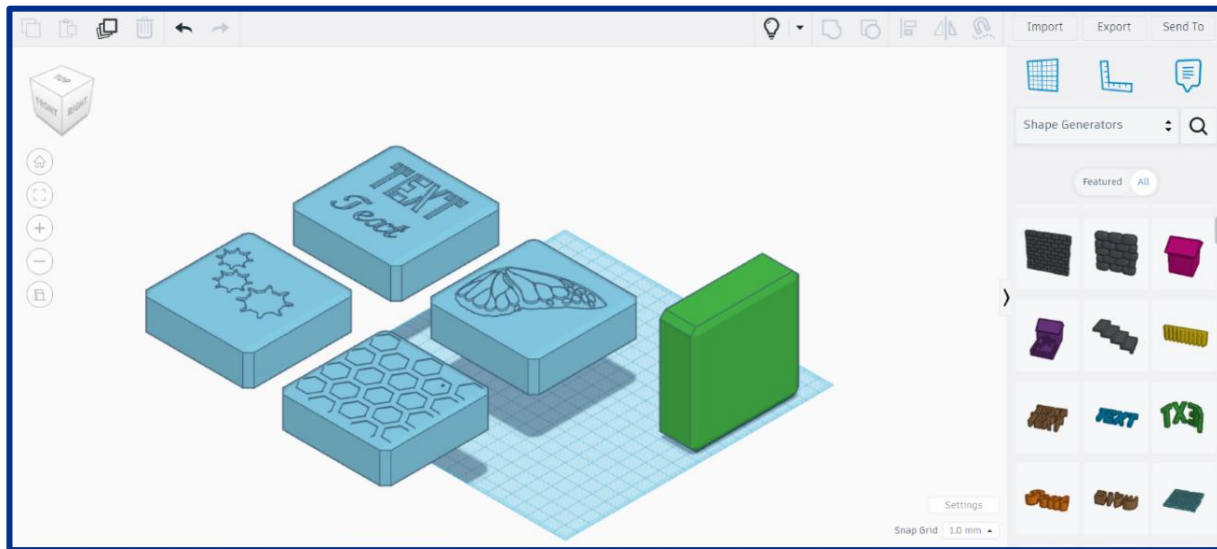
## Computer-Aided Design (CAD) in TinkerCAD



+ 3D-printing

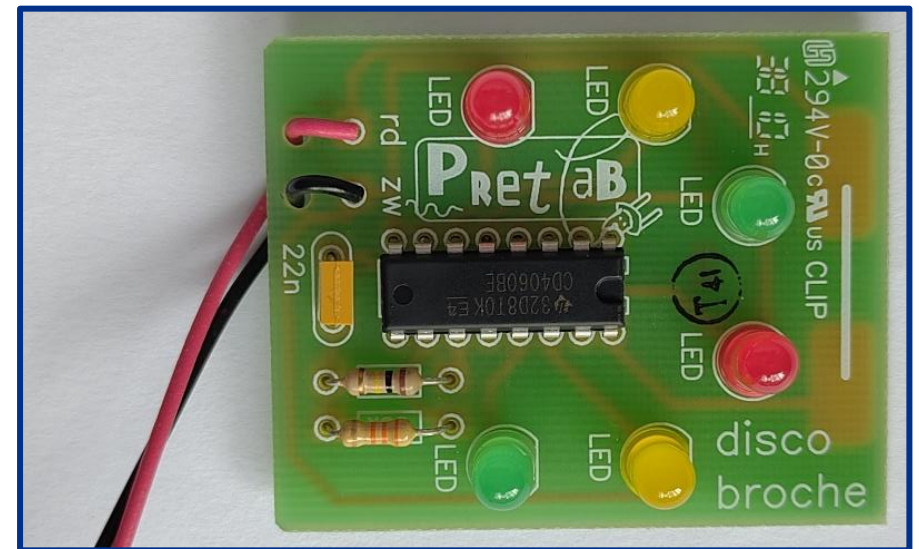
# Activities

## Computer-Aided Design (CAD) in TinkerCAD



+ 3D-printing

## Soldering



# Pilot Run

- Tested with group of 20 students in class, seven (female) student at ASTRON
- Some adaptations necessary
- Overall positive feedback
- Likely longer and potentially earlier intervention(s) necessary



Thank you for listening!

*Questions?*

ASTRON