

How Can Socio-Technical Design Approaches Ensure Autonomy in Hiring Practices?

1. Background

- **AI** (Artificial Intelligence) tools are being used to select the **“best” job applicant**.
- **CV Screening software:** AI tool used to review and rank CVs according to certain criteria.
- These AI tools raise **socio-ethical issues** that hurt the applicant’s **autonomy over self representation**.

2. Methodology

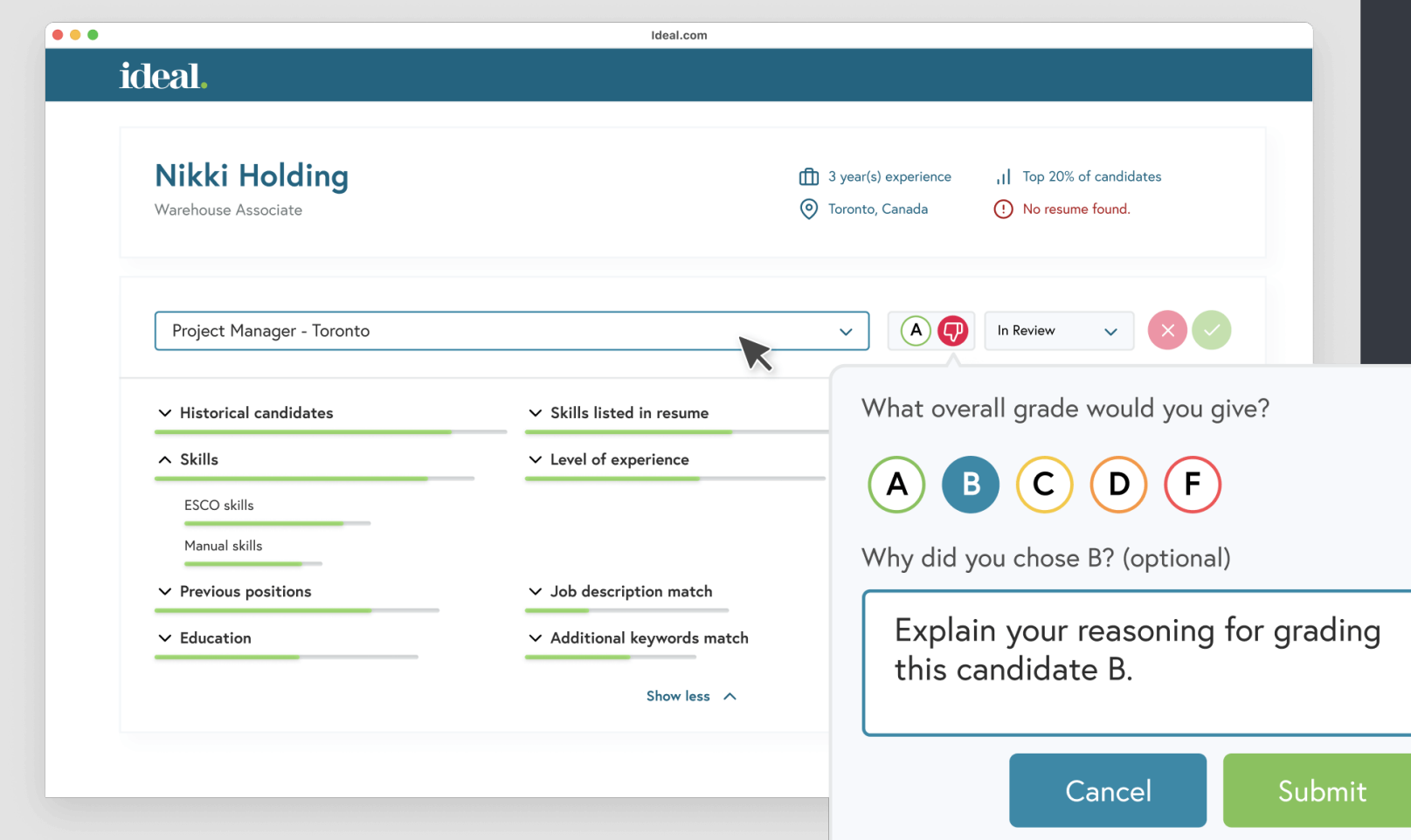
- **Literature study** spanning **multiple domains** such as artificial intelligence, philosophy, design, etc.
- **Goal:** find suitable socio-technical design approaches to address human autonomy in hiring practices.

3. Problem - Data Determinism

- **Data determinism:** The applicant is judged based on **who the algorithm says they are**, rather than **who the applicant is**.
 - **Algorithm** may have an **inaccurate conception** of the applicant
- **Result:** applicant loses their **autonomy over self representation**.

4. Cause of Data Determinism

- I. CV screener assigns **numerical values** to **target variables**.
 - But these target variables are highly **fluid, contextual** and **contestable**
 - **Broad** and **complex variables lose meaning** when forced into narrow numerical categories
- II. CV screener combines a large amount of data and learns from patterns in the data.
 - A person’s score is **dependent** on **the data used** & the **correlation** between the person’s data and previous data.



CV Screening Software 2

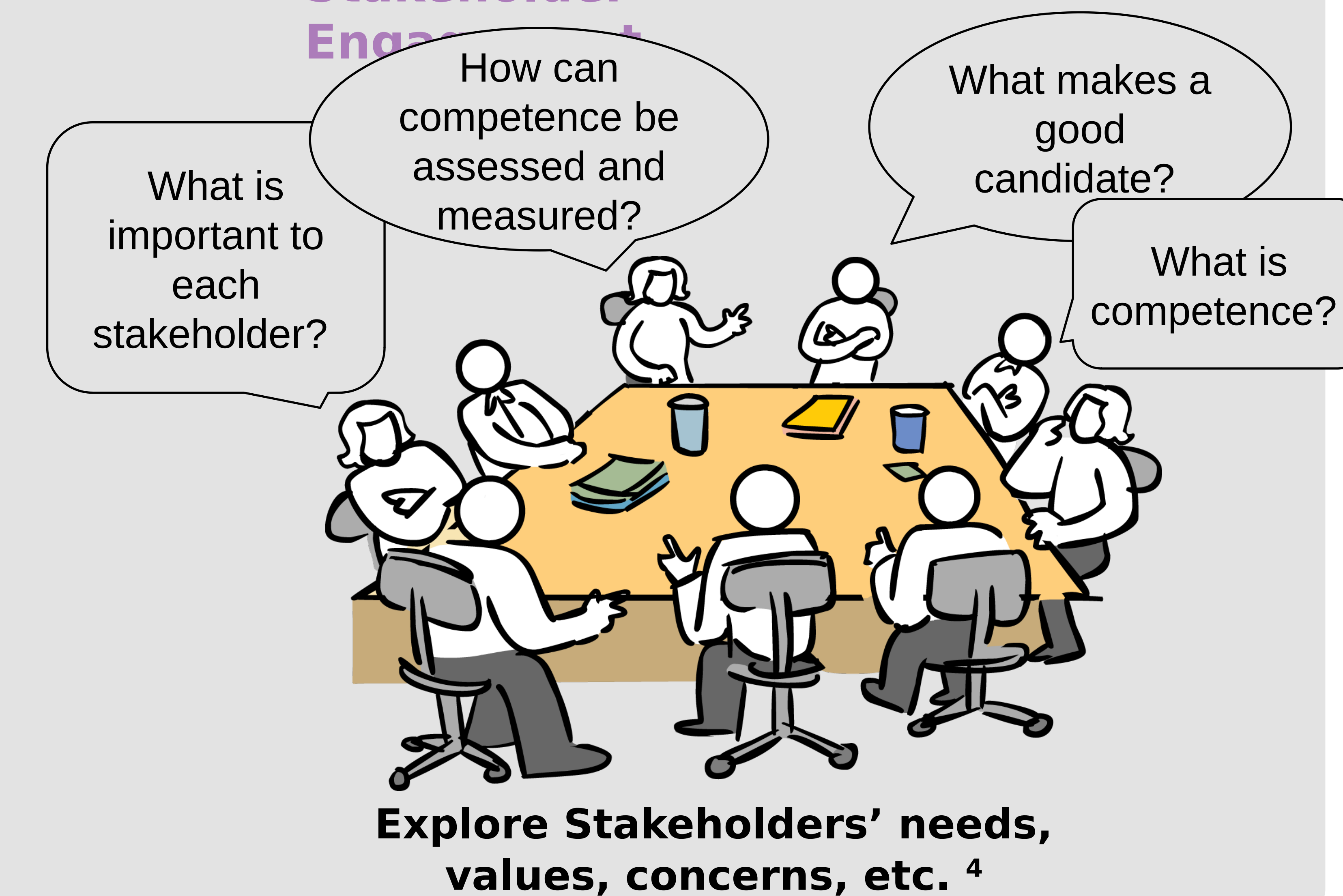
5. Proposed Solution

- **Expand design approach:** techno-centric socio-technical
 - Consider **human, social, organizational** and **technical factors**
- **Designers** should get a **nuanced understanding** of the **social context**, its **politics**, and **stakeholders**, before developing a solution
- Involve **key stakeholders** in design process (**Participatory Design**) and centralize their values (**Value Sensitive Design**)
- Design approach: **Iterative, experimental** & **evolutionary**

Stakeholder Analysis



Stakeholder Engagement



6. Conclusion

- This **context-dependent, stakeholder-centric** approach results in an **inclusive** and **socially aware** process
 - Necessary to understand the complex **social context** and the **stakeholders' implicated values**
- **Social scientists, design specialists** & **computer scientists** should collaborate.
 - **Not one sole expert** has all the answers

Liam Kedem | L.Kedem@tudelft.nl
 Supervisor: Evgeni Aizenberg
 Responsible Professor: Inald Lagendijk



References
 [1] <https://ideal.com/product/screening/>
 [2] *ibid.*
 [3] <https://www.kissclipart.com/stakeholder-png-clipart-stakeholder-theory-scrum-1e4vsu/>
 [4] <https://www.kissclipart.com/stakeholder-meeting-clip-art-clipart-stakeholder-e-n4pxce/>