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DIGITAL DISCRIMINATION IN PARTIALLY AUTOMATED RECRUITMENT PROCESSES

THE ROLE OF DESIGN | DR. FRANCISCA GROMMÉ, DR. NOORTJE WIEZER, DRS. SOPHIE EMMERT
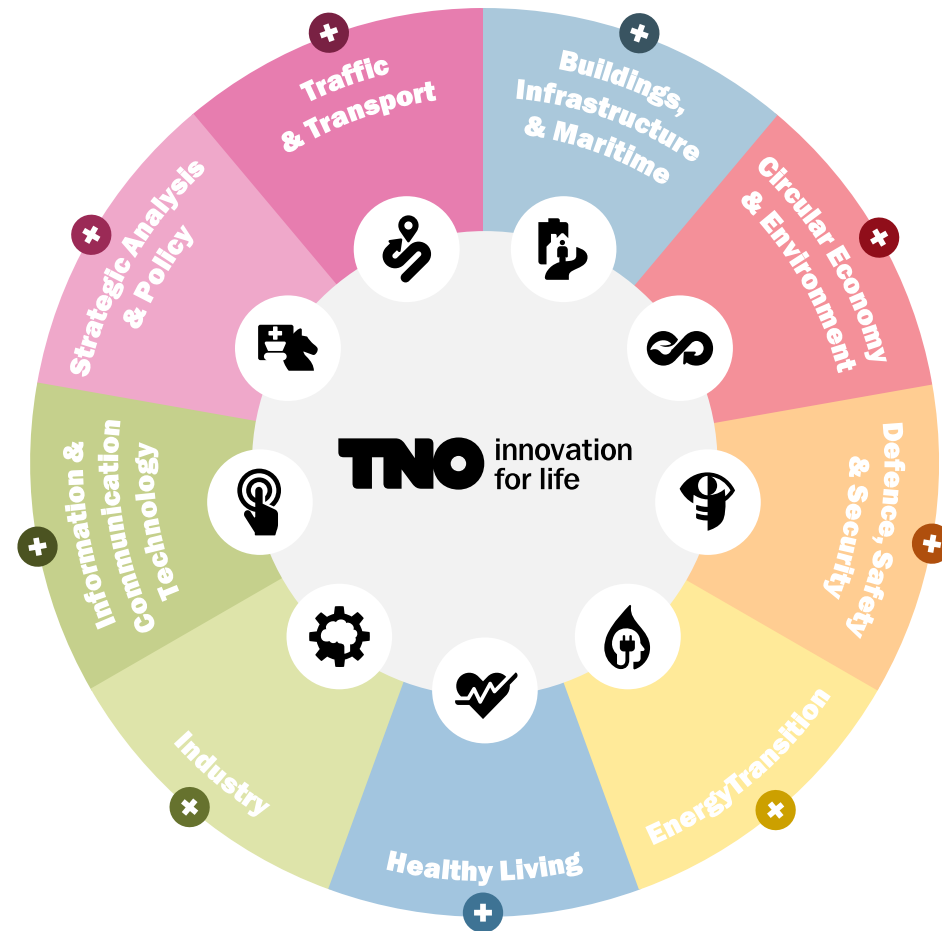
PRESENTATION TODAY

Klant Peggy heeft niet gezien dat er op het moment een kortingsactie is, waarbij de vierde handdoek gratis is. Er staat echter al een behoorlijke rij. Hoe reageer je?

○ Je weet van de kortingsactie, maar je wil de andere klanten niet onnodig laten wachten en rekent de drie handdoeken vriendelijk af.

⦿ Je vertelt Peggy over de kortingsactie en stelt voor dat je een collega roept om de vierde handdoek voor haar te halen.

TERUG

TNO: RESEARCH COMPANY ESTABLISHED BY LAW

ROLES OF TNO

KNOWLEDGE TRANSFER

Knowledge exploitation by spin-offs, licences, in partnership with other companies

DEVELOP FUNDAMENTAL KNOWLEDGE

Together with universities

CLIENTS & PARTNERS

KNOWLEDGE APPLICATION

Contract research for and with clients

KNOWLEDGE DEVELOPMENT

In public-private partnership with partners

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BACKGROUND

It started with undercover research by Radar (tv show) that led to parliamentary questions and promises made by the minister of Social affairs and Employment

Picture: still from Radar:

"We would rather exclude Turkish people because we've had bad experiences in the past. Could you take that into account?"

"Officially we are not allowed to select on the basis of ethnic background. But if this is really your preference, we can take it into account"

(47% of the respondents complied)

Source: NPO radar, January 28, 2018
(https://www.youtube.com/watch?v=OMbXffAeQEk)

Maar als dat echt jullie wens is,
zullen wij daar rekening mee houden.

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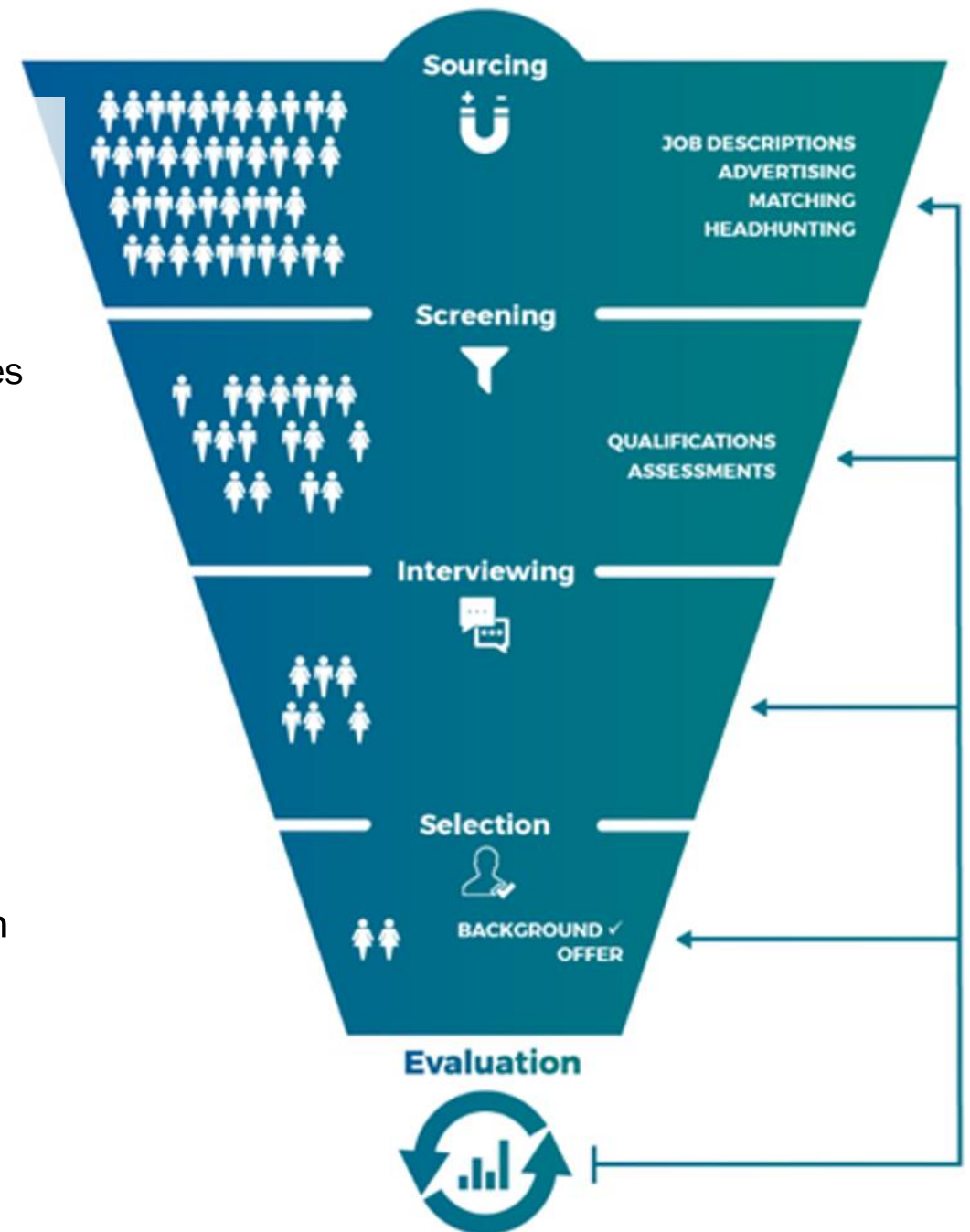
QUESTIONS?

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RESEARCH FOCUS

› Knowledge gap: how recruitment technologies are used and developed by (self-proclaimed) 'forerunners'

› Understand their application as part of the *recruitment process within an organisation*

› Identify the combination of digital tools employers and intermediaries may used, incl. social media, cv databases

› Aim: identify risk factors for inspection

Algoritmes en grondrechten

M.J. Vetzo, J.H. Gerards en R. Nehmelman

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RESEARCH QUESTIONS

› Which recruitment technologies are used in recruitment processes and how do these technologies work?

› **How are they used by the actors involved in the recruitment process?**

› What is the legal framework for the application of recruitment technologies?

› **How can usage of recruitment technologies lead to discrimination in the recruitment process?**

Source: Bogen, Miranda, and Aaron Rieke. 2018. "Help Wanted: An Examination of Hiring Algorithms, Equity, and Bias." Upturn. https://www.upturn.org/reports/2018/hiring-algorithms.

A 'NEW GENERATION' OF RECRUITMENT TECHNOLOGIES

› 50-60% of employers expected increased investments for 2019

› Some employer/intermediary motivations:

  › Efficiëncy and objectivity

  › Competition for 'talent' on a tight labour market

  › Improve job seeker experience and commitment

  › Improve 'fit' with employer (skills, culture)

  › Outreach to specific groups (local/international)

Source: hema.nl; https://www.recruitmenttech.nl/landscape/
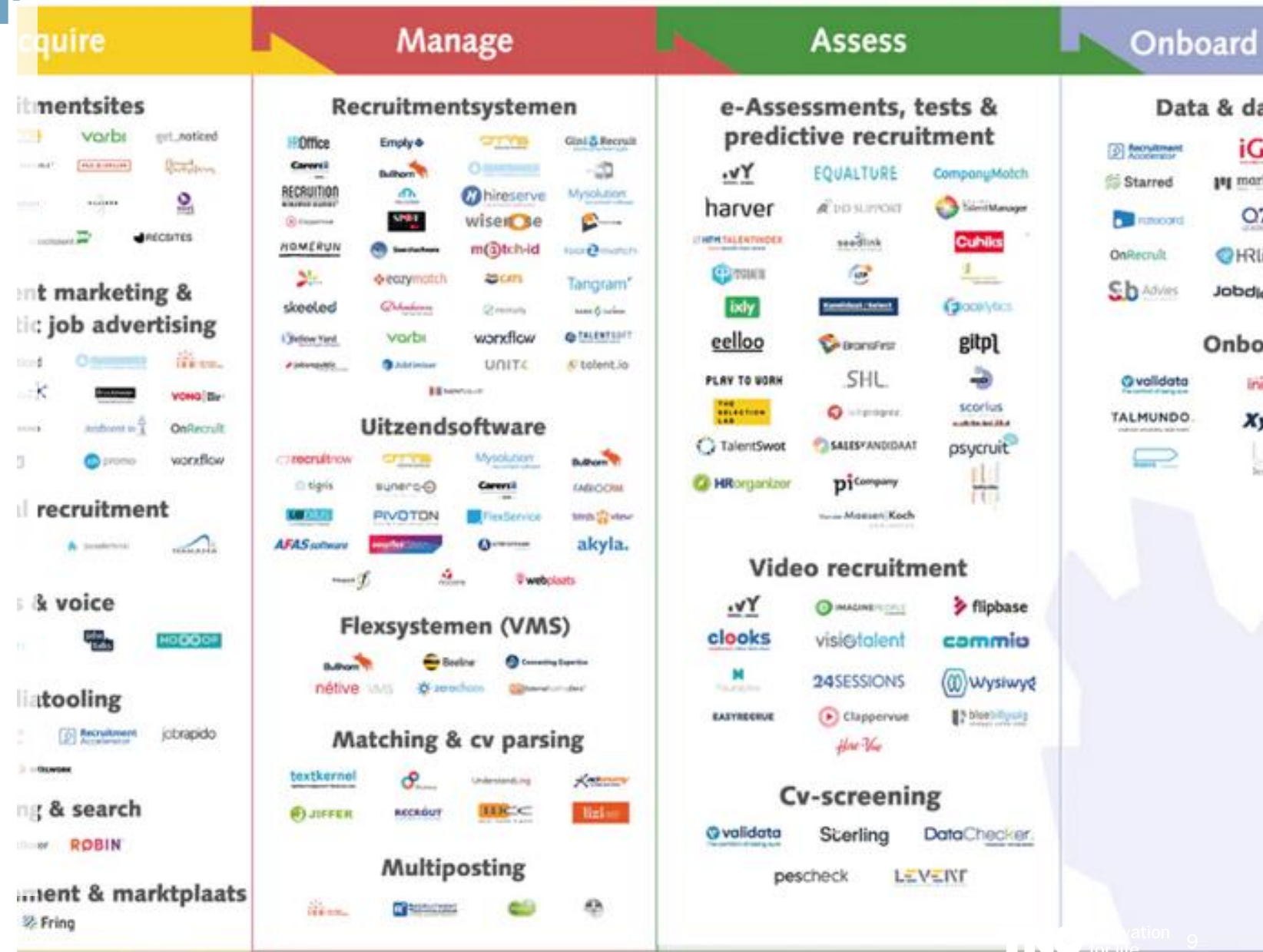
1. ACTIVE RECRUITING

› Social media advertising and 'referral recruitment': e.g Facebook, Twitter (70-80% of employers for advertising vacancies)

› Recruitment sites (e.g. LinkedIn 'banners')

› Social media analysis and campaigning; employer branding (e.g. Ignite, MagnetMe)

› In-house matching systems (e.g. cv databases used by employment systems)

› *'Integrated' applications: internal applicant tracking systems (ATS), combined with HR data, contract management, etc.*

Location:
• Netherlands

18 - 65+

All genders

Include people who match ⓘ

Add demographics, interests or behaviors | Sugg

▼ **Demographics**

 ▶ **Education**

 ▶ **Financial**

 ▶ **Life Events**

 ▶ **Parents**

 ▶ **Relationship**

 ▶ **Work**

▶ **Interests**

1. ACTIVE RECRUITING

› Combined with use of informal referral networks and use of general online cv databases

› Responsibility for online presence with applicant

› Use of 'diversity expertise'

Respondent A:

› Different platforms for different professional groups and online profiles

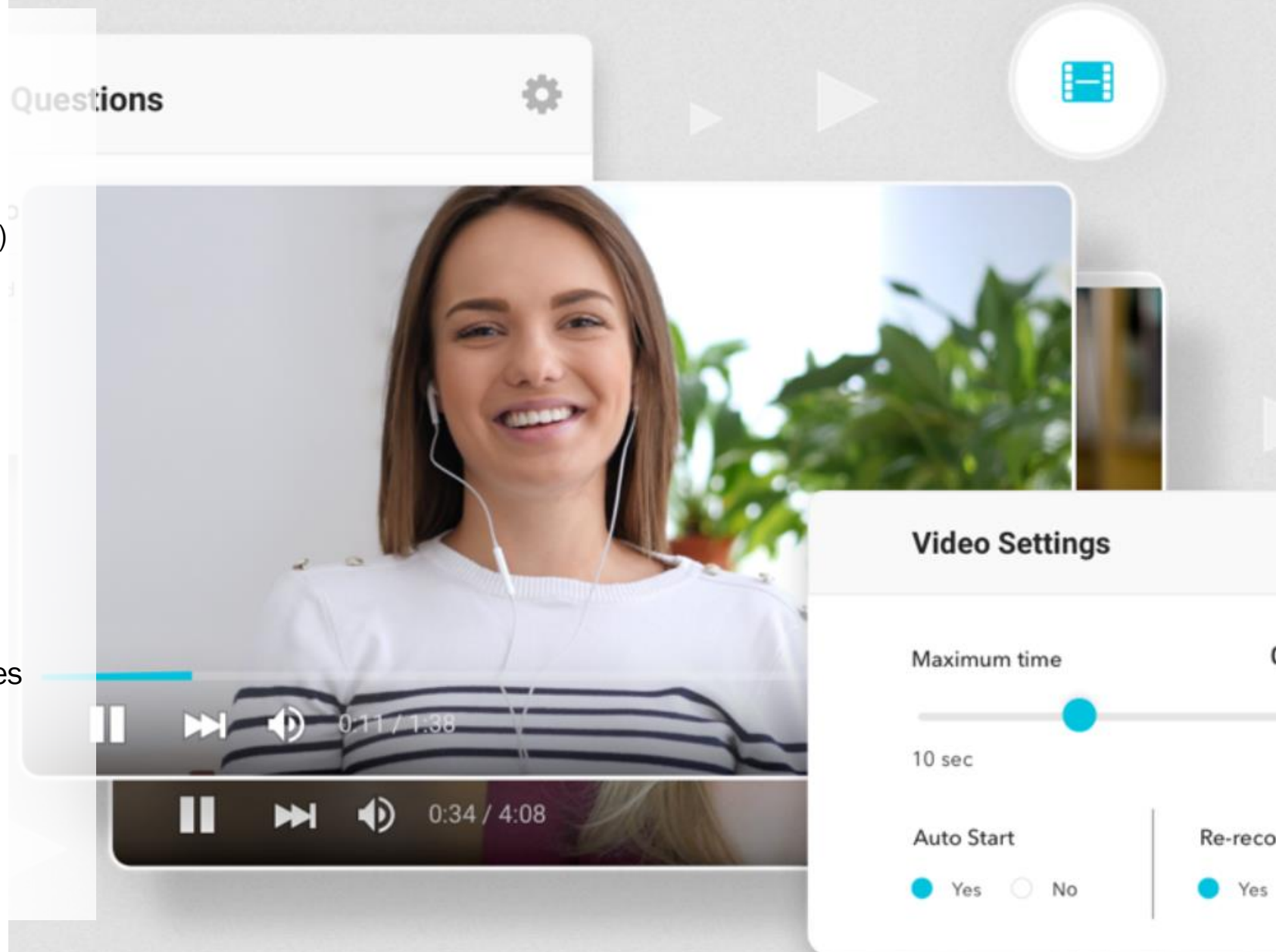› Outsourcing to marketing companies and recruiters

Respondent B:

› At times low awareness of operation of algorithms

Respondent A: "We hire Ignite for our digital advertising. So you specify which target group you're looking for, and then they'll do a targeted search on online platforms, and make sure that [our company] is present. For instance, they will use an Instagram of Facebook post for drivers – who don't use LinkedIn as much."

Respondent B: "The recruitment technologies do not affect the diversity of our applicant pool because the vacancies are advertised according to *region* and interest (...). So they'll click on 'logistics' and Facebook will decide where the advert ends up

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2. SELECTION AND ASSESSMENT

› Matching functions (e.g. LinkedIn obs)

› Video interviews (e.g. Cammio)

› Text analysis

› Online assessments and games

  › Intelligence; 'cultural fit'; 'learning agility'; skills

› Chatbots (e.g. Joboti)

› Social media for informal 'screening'

› Social-media based personality profiles (e.g Crystal Knows)

› Little known usage of 'emotion recognition' in the Netherlands

› (and combinations of the above)

Questions

Video Settings

Maximum time

10 sec

Auto Start   Re-reco

● Yes   ○ No   ● Yes

Source: Harver.com

2. ASSESSMENT AND SELECTION

› Online assessments and video interview mainly for 'bulk' hiring (e.g. callcentres); also traineeships

› Facilitates selection earlier in the process

› Selection criteria not always made available to candidates

› Job seekers responsible for availability online information

› Use of expertise for 'diverse hiring' (e.g. attention to language in assessments)

Respondent C:

› Usually not fully automated: e,g. online assessment scores are part of the selection procedure

Respondent D:

› Currently employers are still learning how to use data analytics. They are also still training and testing in-house assessment data

Respondent C: "The cultural fit test is not a means for selection, but an input for our second interview"

Respondent D: "It's complicated because you need to take a test, interpret it, and understand the data. You need to understand that a low learning agility score does not need to be negative (..) These tasks also rely on the intelligence level of the recruiters"

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RISK FACTORS

1. Low awareness of inequalities that may influence or arise from technology usage

2. Lack of employer oversight and accountability caused by outsourcing part of the recruitment process

Respondents D and E:

3. Technologies are used despite of lack of independent validation

Respondent D: "We tested interviews and automated interviews simultaneously a few times for twenty candidates and compared their success rates; the difference was only 5%."

(...)

Respondent E: "We have been doing personality tests for a long time, these are certified and validated. Now we have also hired data scientists."

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RISK FACTORS

4. Lack of job seeker access to knowledge about the data used in selection processes and criteria used in assessments

5. The 'psychology of choice'

Respondent F:

6. The design and application of algorithms (Barocas & Selbst, 2016):

- Definitions of success

- Training data

- Choice of variables

- Use of proxies

- Making

Respondent F: "We are continuously fine-tuning our definition of 'the best' with the assessment bureau (…) We now know that discipline and systematic working are important predictors of succes. So they need to be integrated better in the tests."

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RECOMMENDATIONS

› General conclusion: current ways of using recruitment technologies can support discriminatory practices or increase the risk of discrimination

  › Technologies can reproduce or entrench existing forms of discrimination, but may also introduce new forms of exclusion

Recommendations to the Inspection of the ministry of Social Affairs and Employment :

1. Increase awareness employers

2. Work towards more support for validation, control and transparency

3. Legal framework: GDPR compliance does not automatically fulfill equal the employer's responsibility to verify whether a technology may have discriminatory effects

4. Directions for future research: applicant experience; input-output analysis; legal analysis

5. This is not only a legal issue. Recruitment technologies participate in changing labour relations

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QUESTIONS?

DEVELOPMENT OF A REFERENCESYSTEM LABOUR MARKET DISCRIMINATION

COLLABORATION ISZW, CBS EN TNO

> Aim of this project:

  > to develop a methodology to detect risks of discrimination in recruitment

> By:

  > development of a prototype reference system, which can make a link between vacancy requirements and candidates as bias-free as possible, and thus provide a reference for other recruitment technologies in order to clarify the differences or similarities in the links made.

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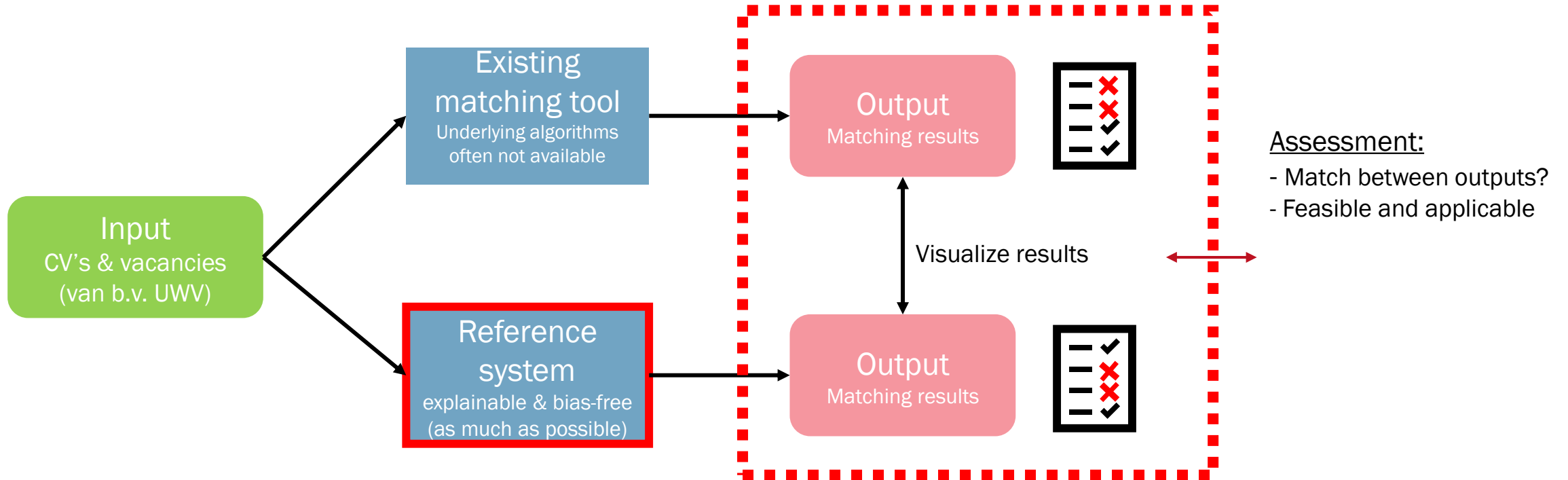
IDEAS AT THE EUR: POLITICS OF DIGITAL LABOUR RELATIONS

> Respondent G: digitalisation as part of a supporting relationship between workers, employers, and society

> In contrast to: digitalisation as part of an increasingly flexible labour market in which recruitment technologies support and shape job seekers as individual entrepreneurs

> Questions:

> A) How do recruitment technologies take part in rearranging labour relations? (incl. how they direct the debate towards 'fairness')

> B) What can we learn from existing alternative approaches? (incl. in terms of design process)

Respondent G: "Everything is connected, you cannot separate that from digitalisation. You need to analyze a changing market and society, and what you [an employer] need in that situation (…) Employers are very strange, they are looking for unicorns for the price of a donkey. But someone with a disability might be able to do the job too. (…) Diversity is not a piece of technology or digitalisation but a core attitude. A video can be used to demonstrate a skillset to do the job; you need to build this into the technology."

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DISCUSSION QUESTIONS

› What can we learn from design practices?

  › What can design methods contribute to decreasing risks of discrimination?

› Which other questions should we ask?

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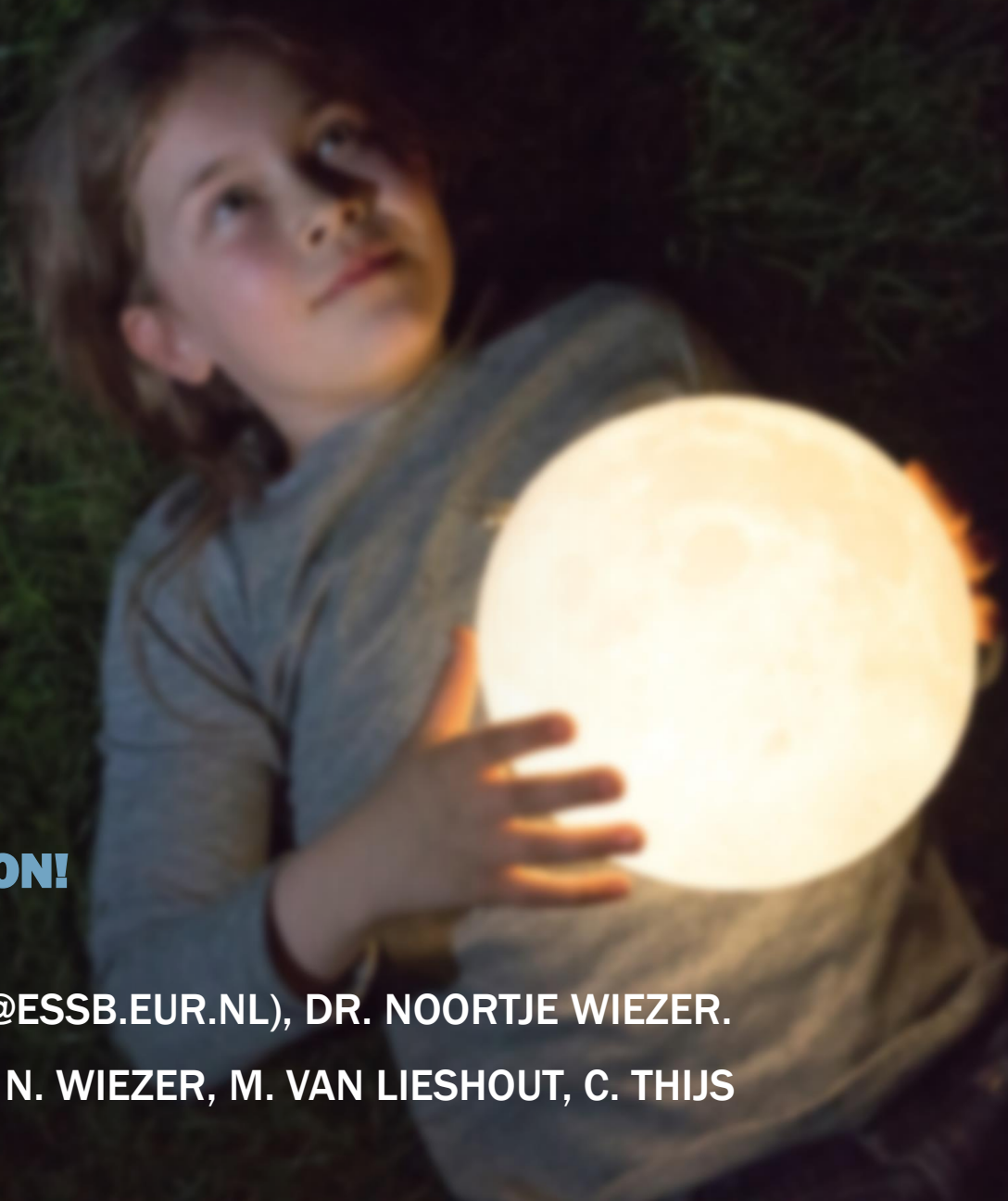
› **THANK YOU FOR YOUR ATTENTION!**

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