



Skills for the energy transition from the hydrogen perspective

(and **sun** and wind and systemintegration and infrastructure and nuclear and heat and)

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<http://>



Current Dutch Energy Transition labourmarket



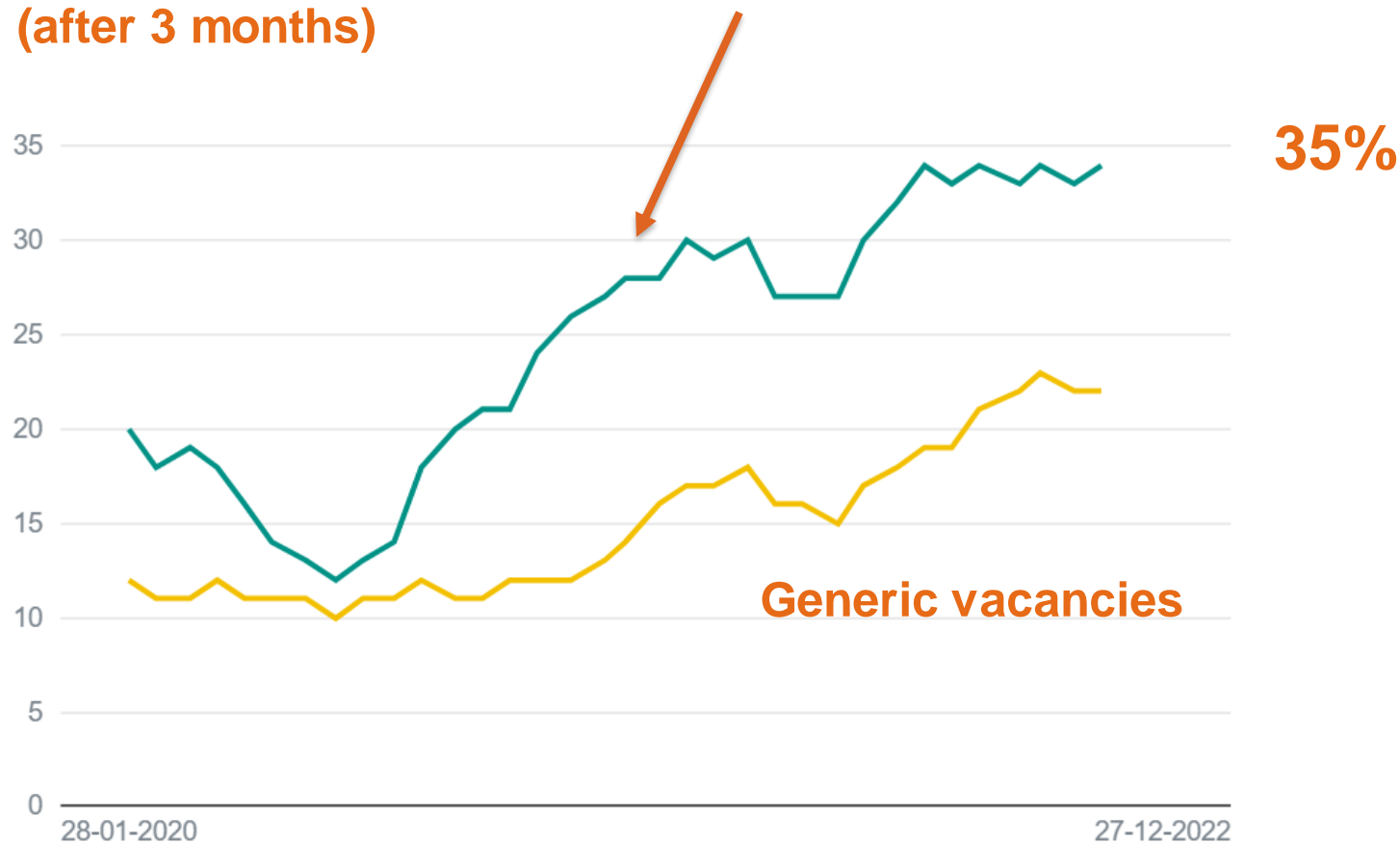
“Instead of millions of people looking for jobs, millions of jobs are looking for people”

European Commission President
Ursula von der Leyen
State of the Union Speech

13 September 2023

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Unfulfilled vacancies energytransition (%) (after 3 months)



Future Hydrogen related jobs NL

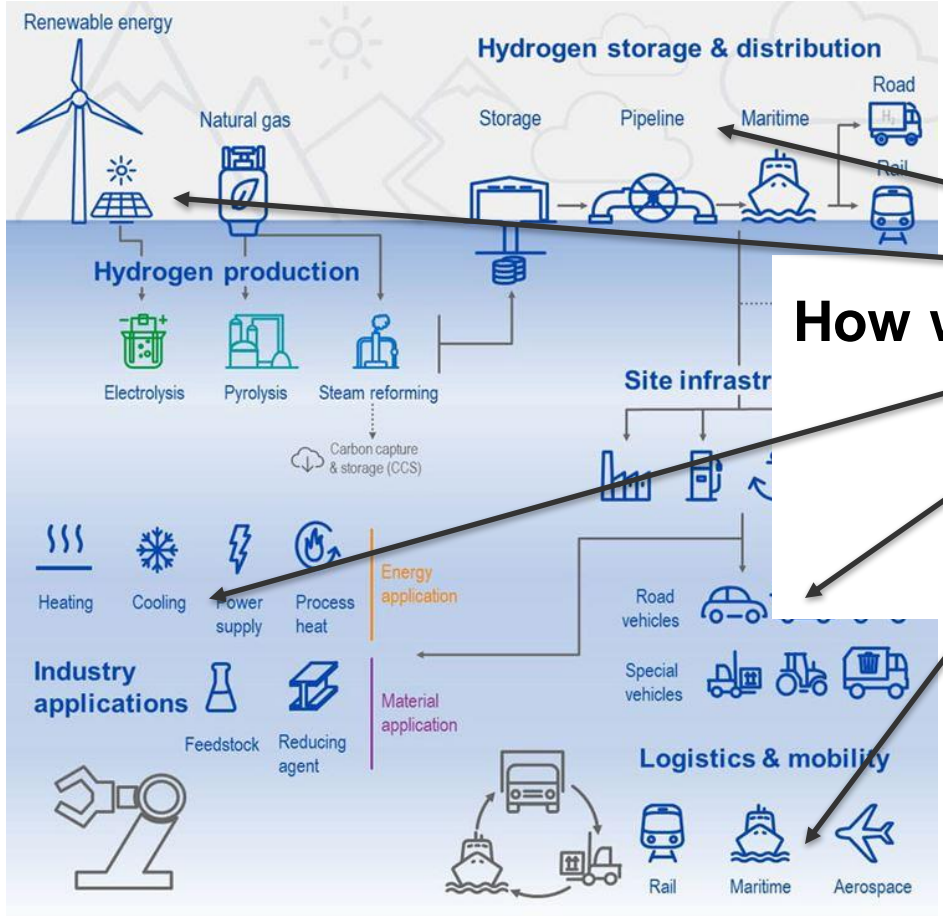
Year CE Delft study 2021	Demand for green hydrogen PJ	Total one-time employment (average FTE/year)	Recurring employment (average FTE/year)
2030	10 - 40	1.800 - 4.700	4.200 - 12.500
2040	132 - 317	2.000 - 13.000	9.200 - 43.000
2050	254 - 593	2.200 - 20.000	14.200 - 72.600

Education level	Education level EQF	Number	%
VMBO	EQF 1-2	15	5,4%
MBO / VET	EQF 3-4	89	33,4%
Associate Degree	EQF 5	30	11,1%
BSc	EQF 6	59	22,0%
Master	EQF 7	61	22,6%
PhD/PD	EQF 8	15	5,4%
Total	EQF 1-8	268	100,0%

**50-60%
vocational
jobs**

Sources : Hazenberg, Competencies needed for hydrogen in the industry and network Leguijt, Cor; Van den Toorn, Emiel; Bachaus, Amanda; Jongsmma, Chris. *Werk door groene waterstof investeringen; Update en uitbreiding*. CE Delft, Delft: CE Delft, 2021,

- R&D
- Design
- Construction
- Production
- Installation
- Operation
- Maintenance
- Decommissioning



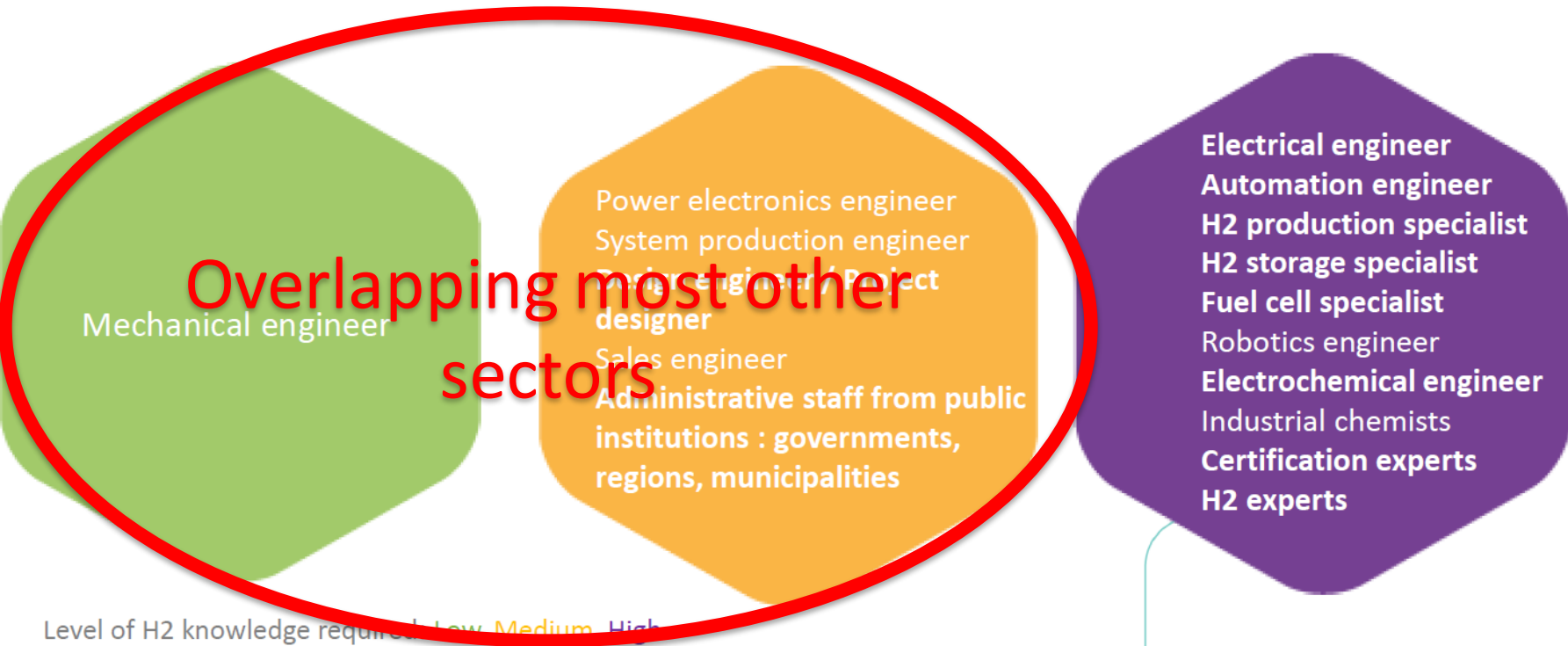
How will jobs look like?

- 2023
- 2025
- 2030
-

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Source <https://www.tuvsud.com>

Jobs in demand in hydrogen



Level of H2 knowledge required: Low Medium High

Bold = urgent need

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