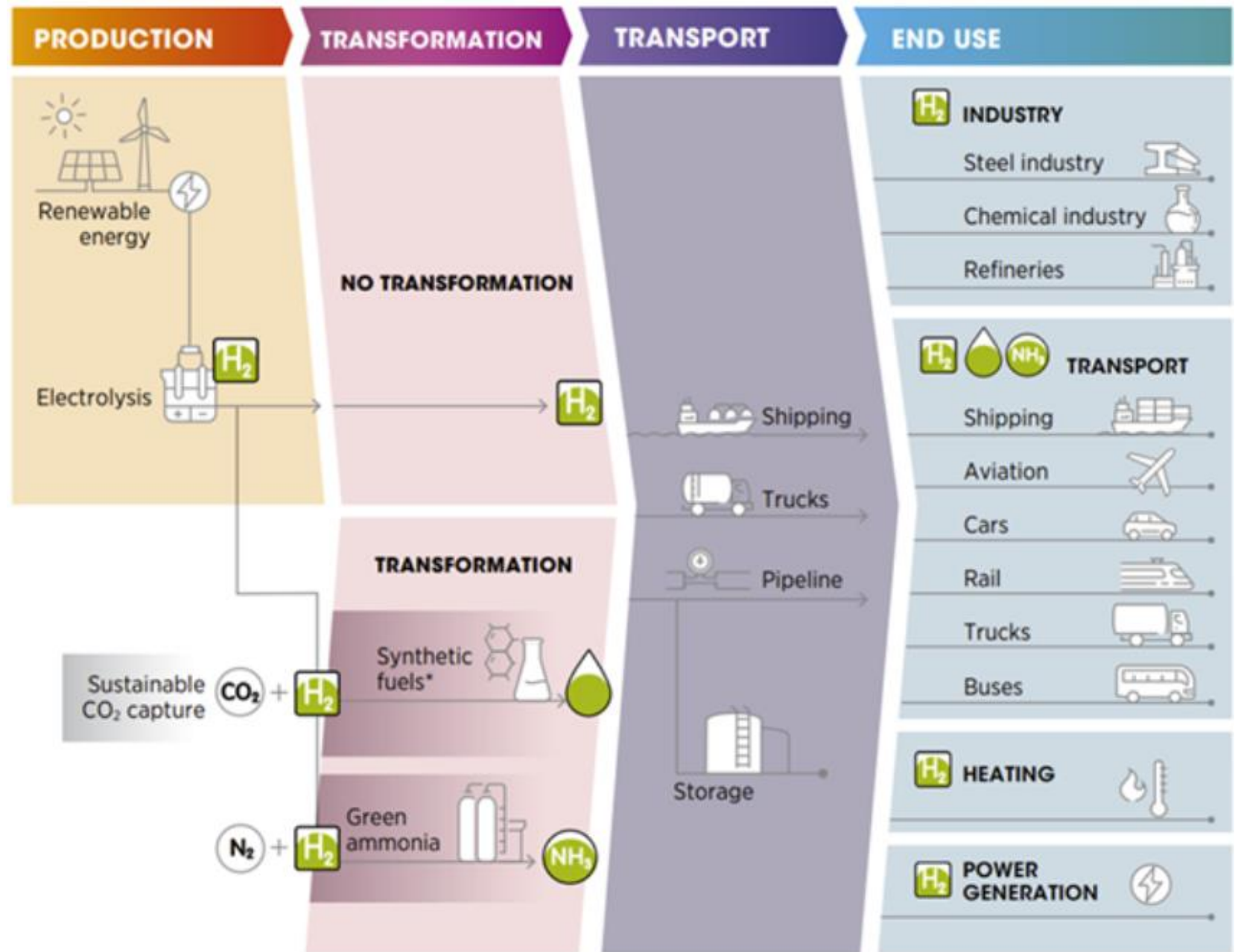




Green Hydrogen Skills

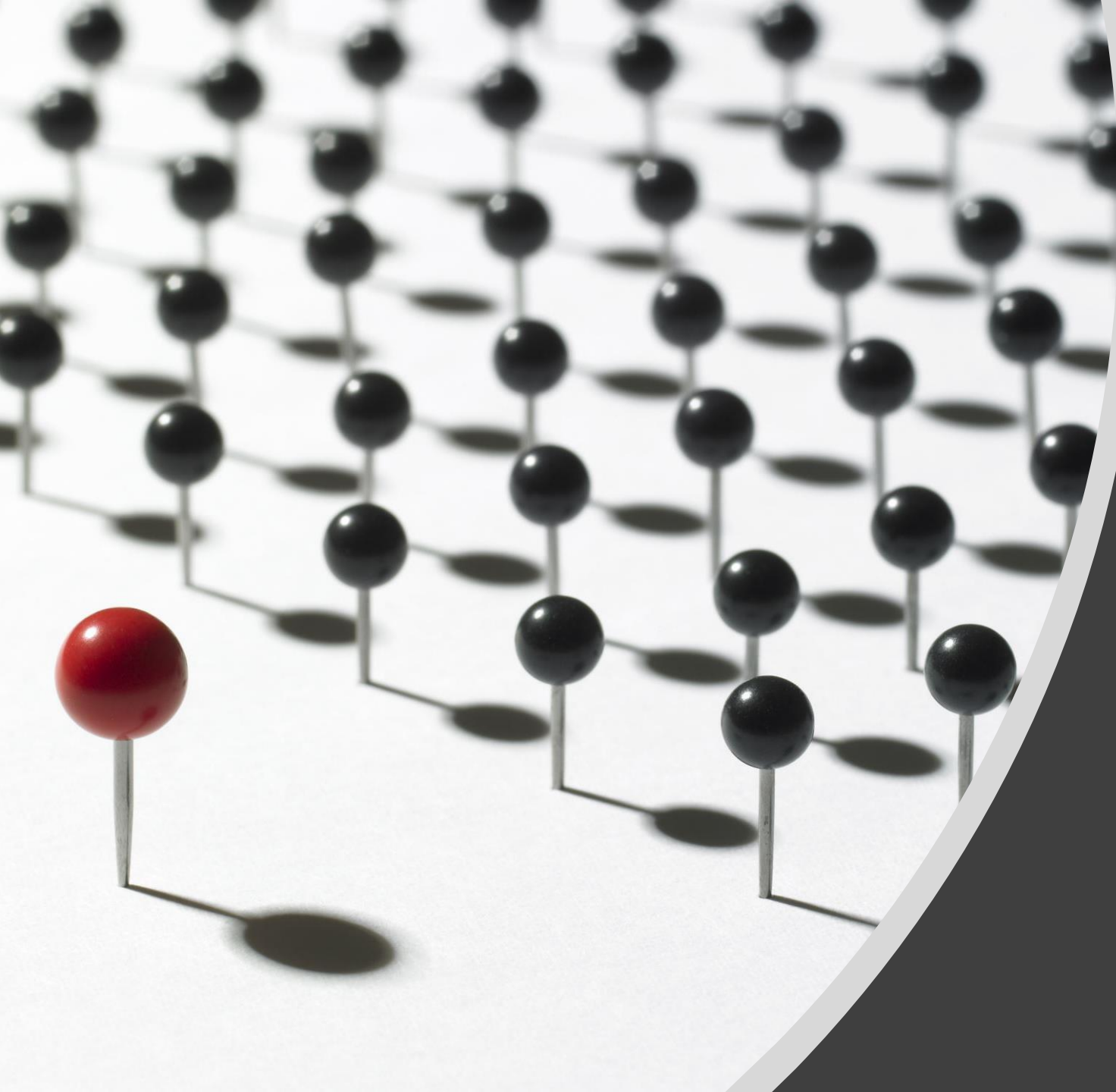
Wendy Poulton

Green hydrogen and PtX value chain





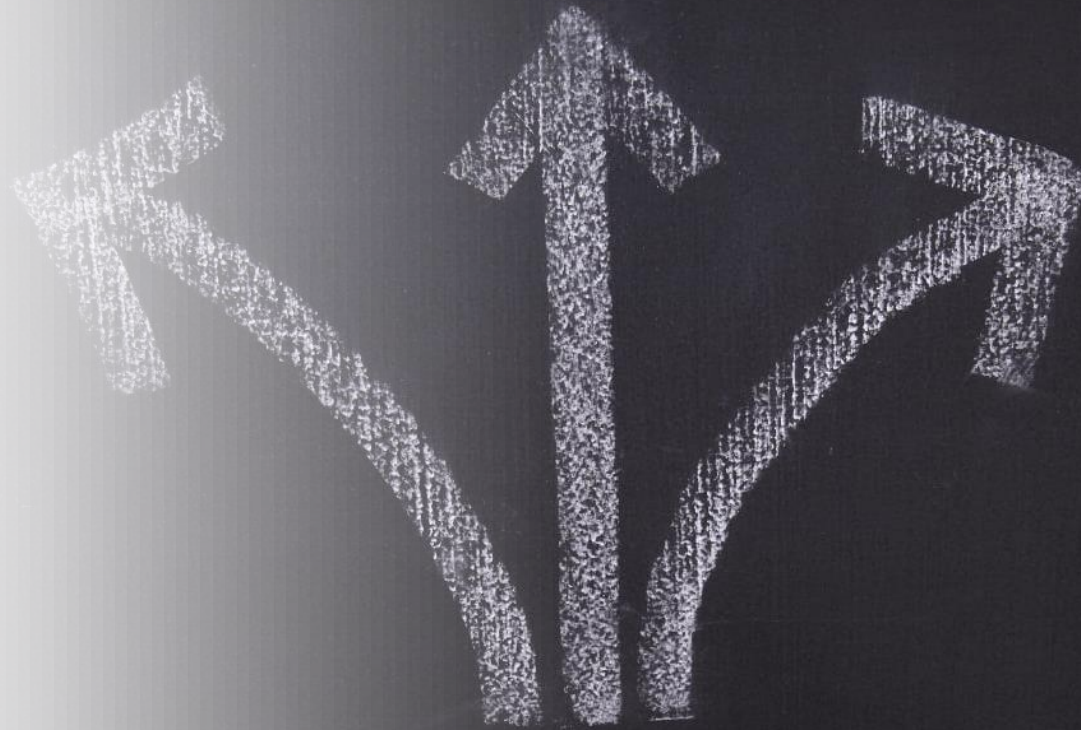
What are the green hydrogen skills requirements in South Africa??



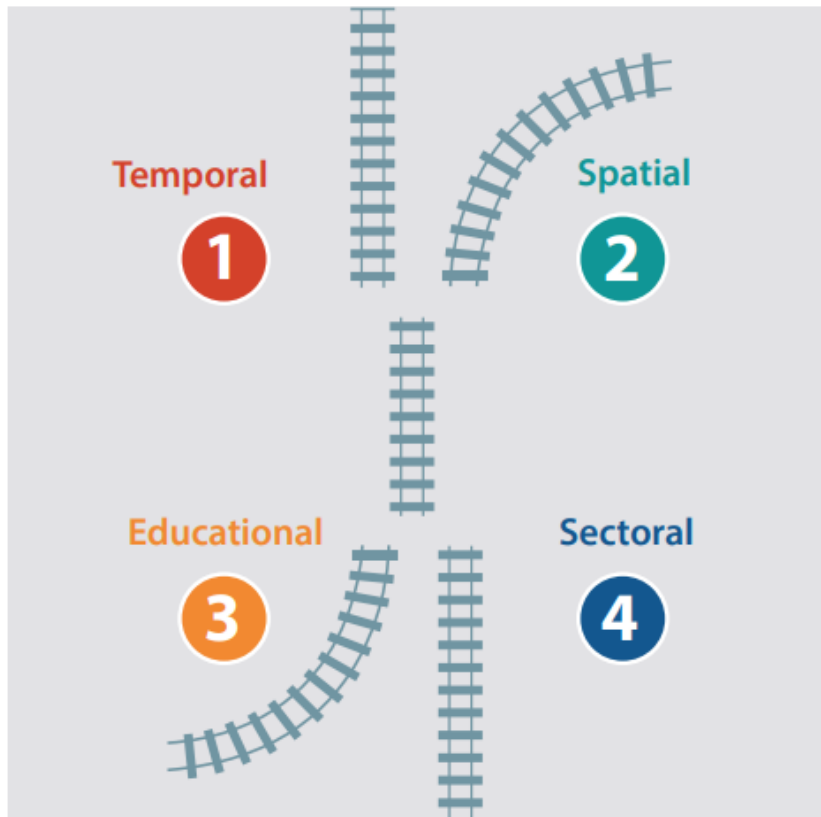
Depends

Depends

- Type of renewables?
- Using H₂ or making PtX?
- If PtX what kind of PtX?
- Timeframe?
- Export or local use?
- Existing infrastructure
- Need for storage?
- Market?
- National competitiveness
- Localisation or not?
- Technology choices
- Mineral resources required
- Volume needed



Skills misalignment factors

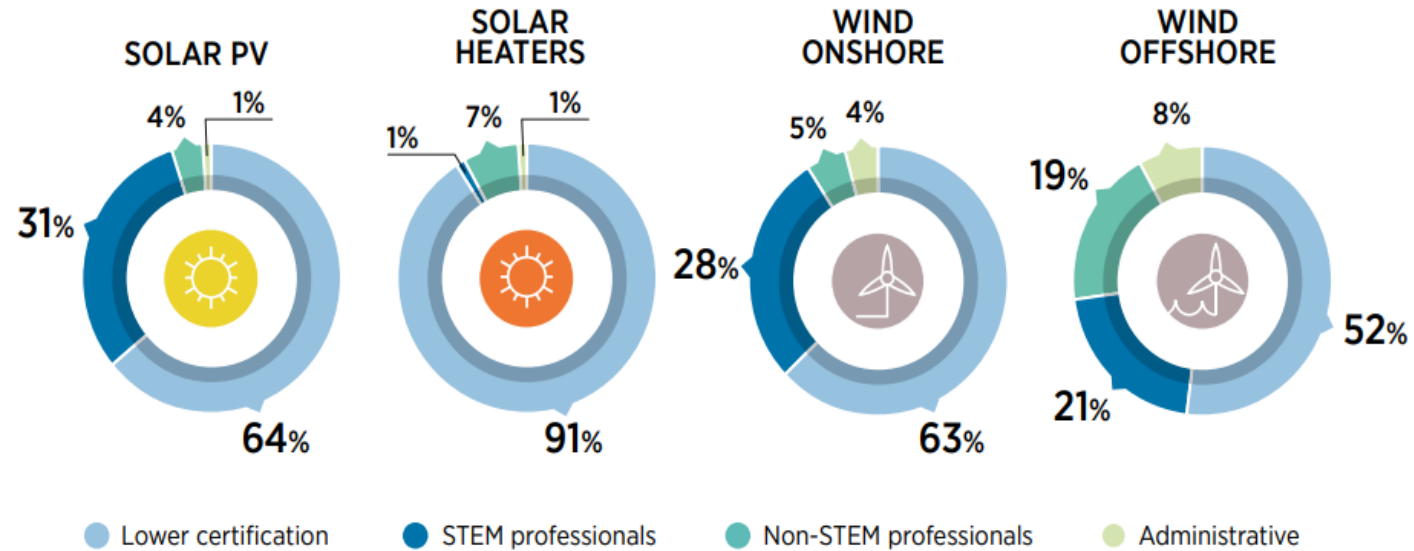


1 TEMPORAL MISALIGNMENTS occur when job losses precede job gains on a large scale. Examples are the closure of mining activities that do not necessarily coincide with new activities in renewable energy or energy efficiency.

2 SPATIAL MISALIGNMENTS occur when new jobs are emerging in other communities or regions and are a challenge for people who lost jobs and might have the right qualifications and skills, but have financial, family or property ties to the region where they live.

3 EDUCATIONAL MISALIGNMENTS occur when the skills levels or the occupation required under the energy transition have not been developed or needed under the previous energy system. Addressing them requires careful planning and foresight of the skills requirements ahead.

Figure 15: Human resource requirements for workers in solar PV, wind energy (onshore and offshore), and solar water heaters

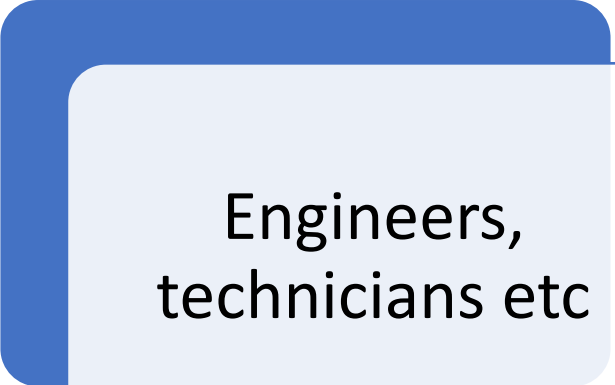


*Note: STEM = science, technology, engineering and mathematics
Source: IRENA, 2017a, 2017b, 2018, 2021d.*

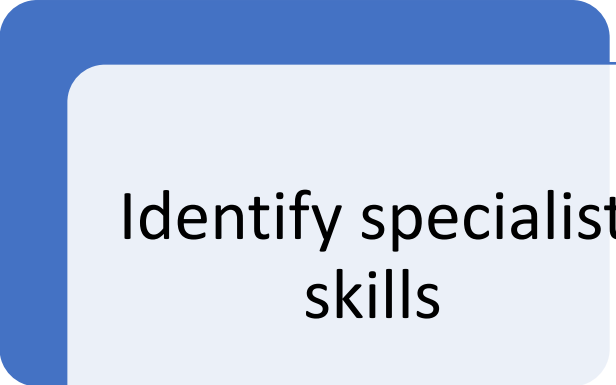
Levels of skills may change



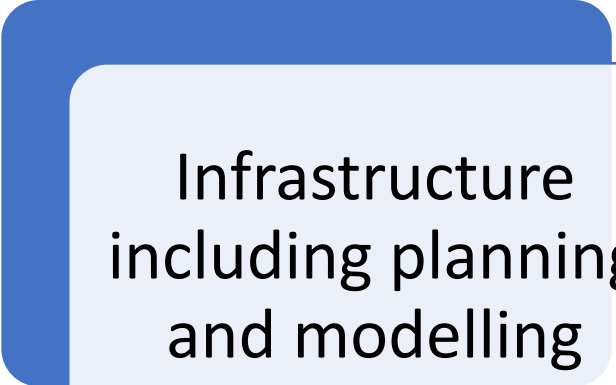
Unpack no regret/low hanging fruit options



Engineers,
technicians etc



Identify specialist
skills



Infrastructure
including planning
and modelling

Look at the wider needs and include capabilities



Finance



Policy and
regulation



Procurement



Negotiation



Problem
solving



Thank you

