

Differentiating the relevance of CBT to occupations in the aviation industry: Lessons for VET?

Dr Steven Hodge (Griffith University, Brisbane)

Dr Tim Mavin (Griffith University, Brisbane)

Dr Suzanne Kearns (University of Waterloo, Canada)

Competency- Based Education in Aviation



ASHGATE

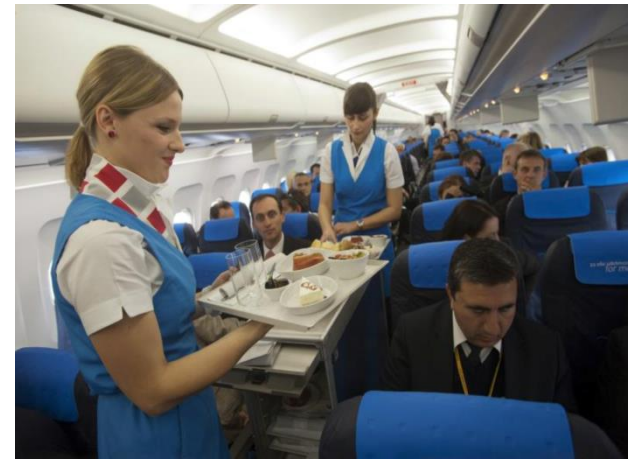
Exploring Alternate Training Pathways



SUZANNE K. KEARNS,
TIMOTHY J. MAVIN
AND STEVEN HODGE



Engineer



Cabin Crew

Aviation
Professional

Pilot



Air Traffic Control



International Civil Aviation Organisation (ICAO)

- Increasing move towards competencies
- One size fits all approach
- Employed a DACUM style methodology
 - “Developing a Curriculum”

Our concerns

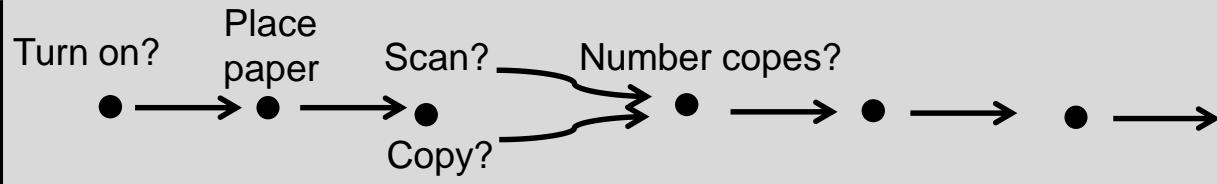
- A fundamental (evangelistic) acceptance in aviation of CBE across all professions.
- No common framework.
- No research into its effectiveness e.g. commercial pilot training in Australia.
- Professional concerned about move to CBE.

Our research

- Interviewed aviation professionals:
 - Airline pilots
 - Aircraft Engineers
 - Air traffic controllers (ATC)
 - Cabin crew
- Geography
 - Asia pacific
 - North America
 - Middles East
 - Europe

Findings

Photo copy



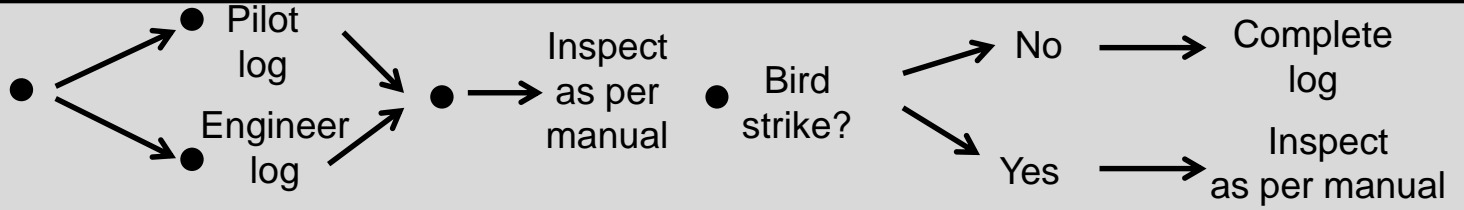
BIRD STRIKE



Photo copy



Aircraft
Bird
strike



PASSENGER EVACUATION



PASSENGER EVACUATION



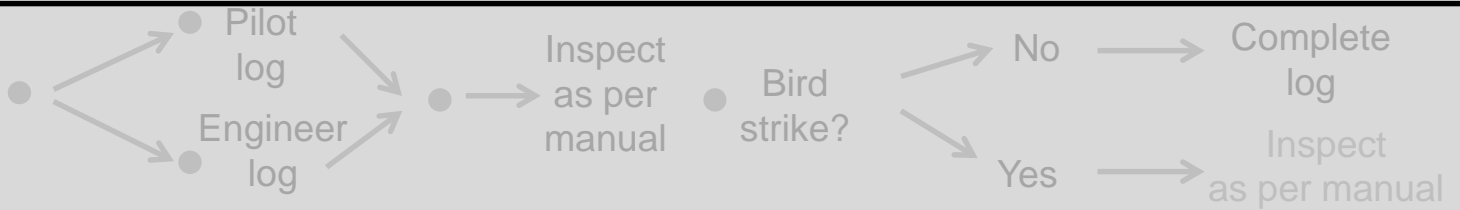
PASSENGER EVACUATION



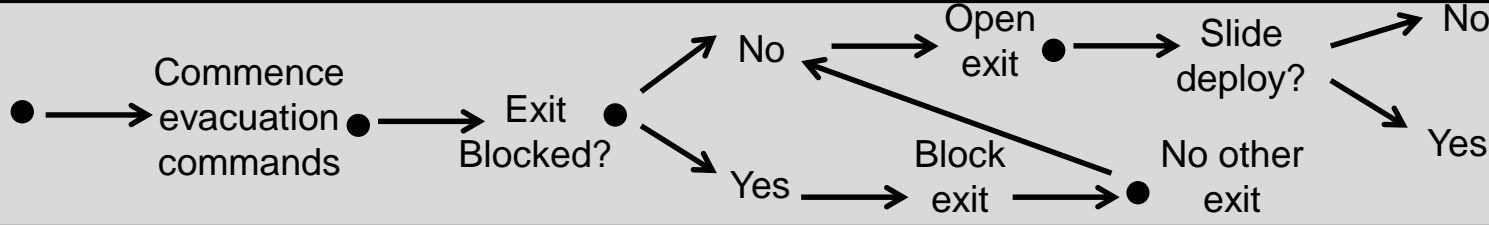
Photo copy

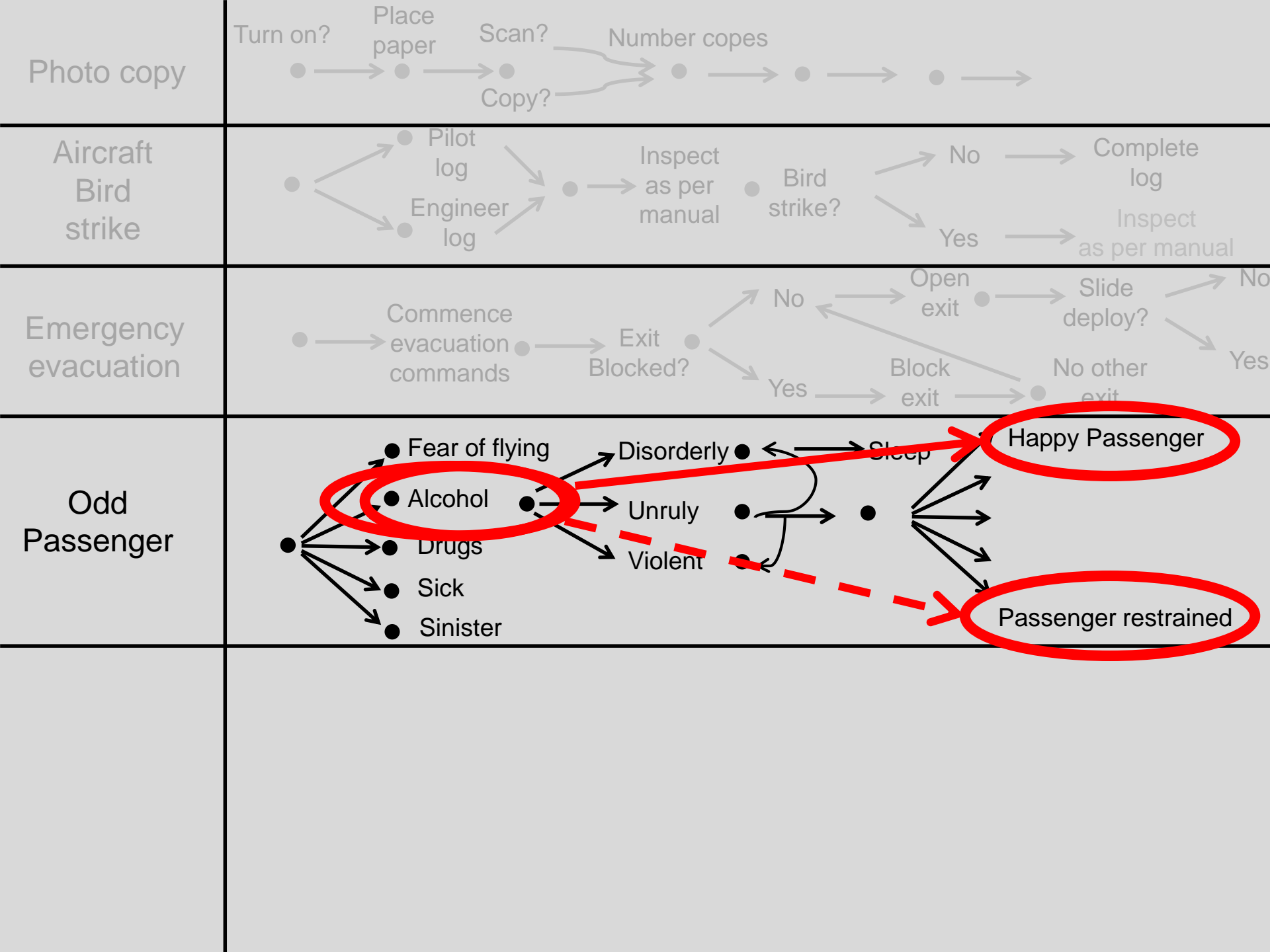


Aircraft
Bird
strike

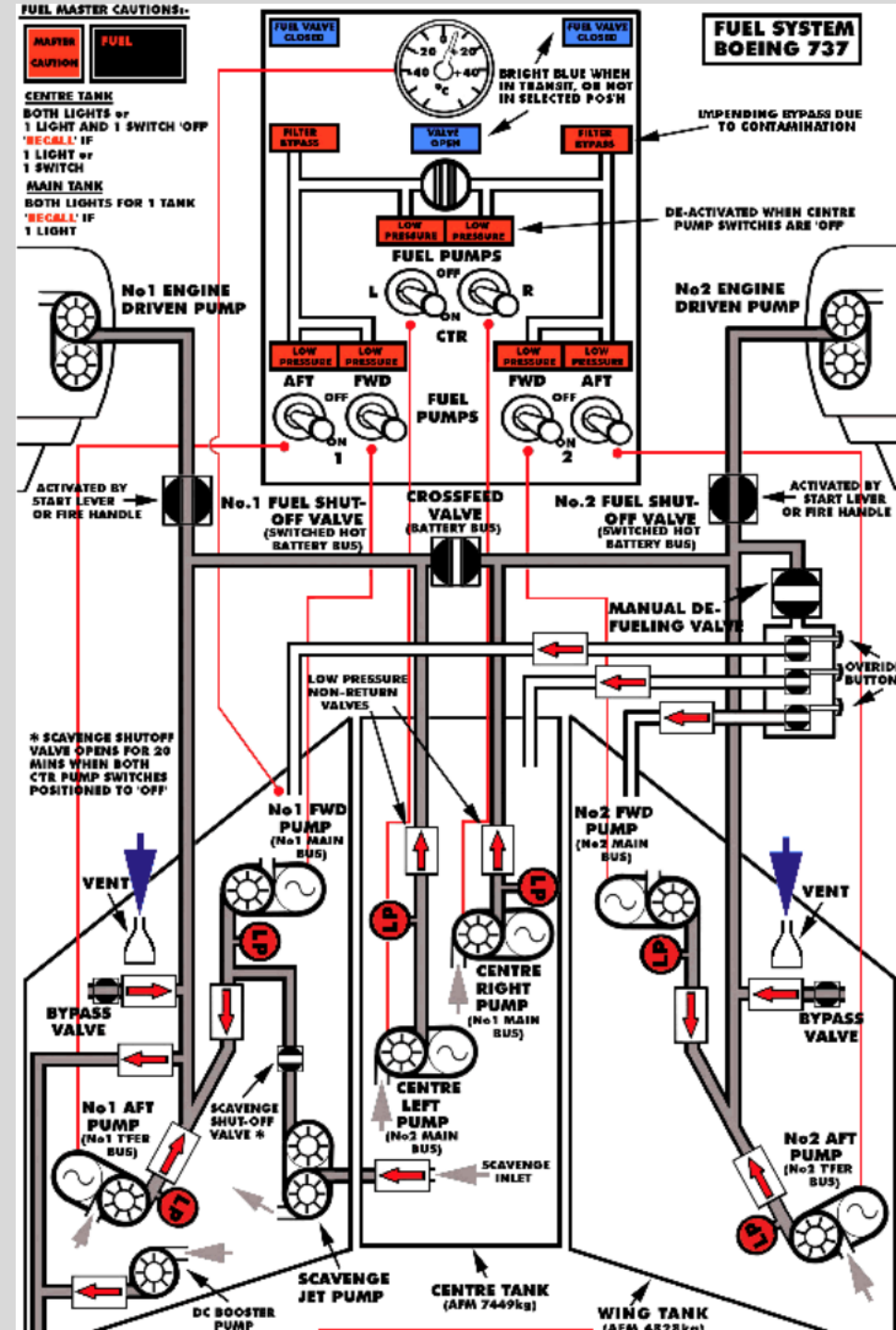


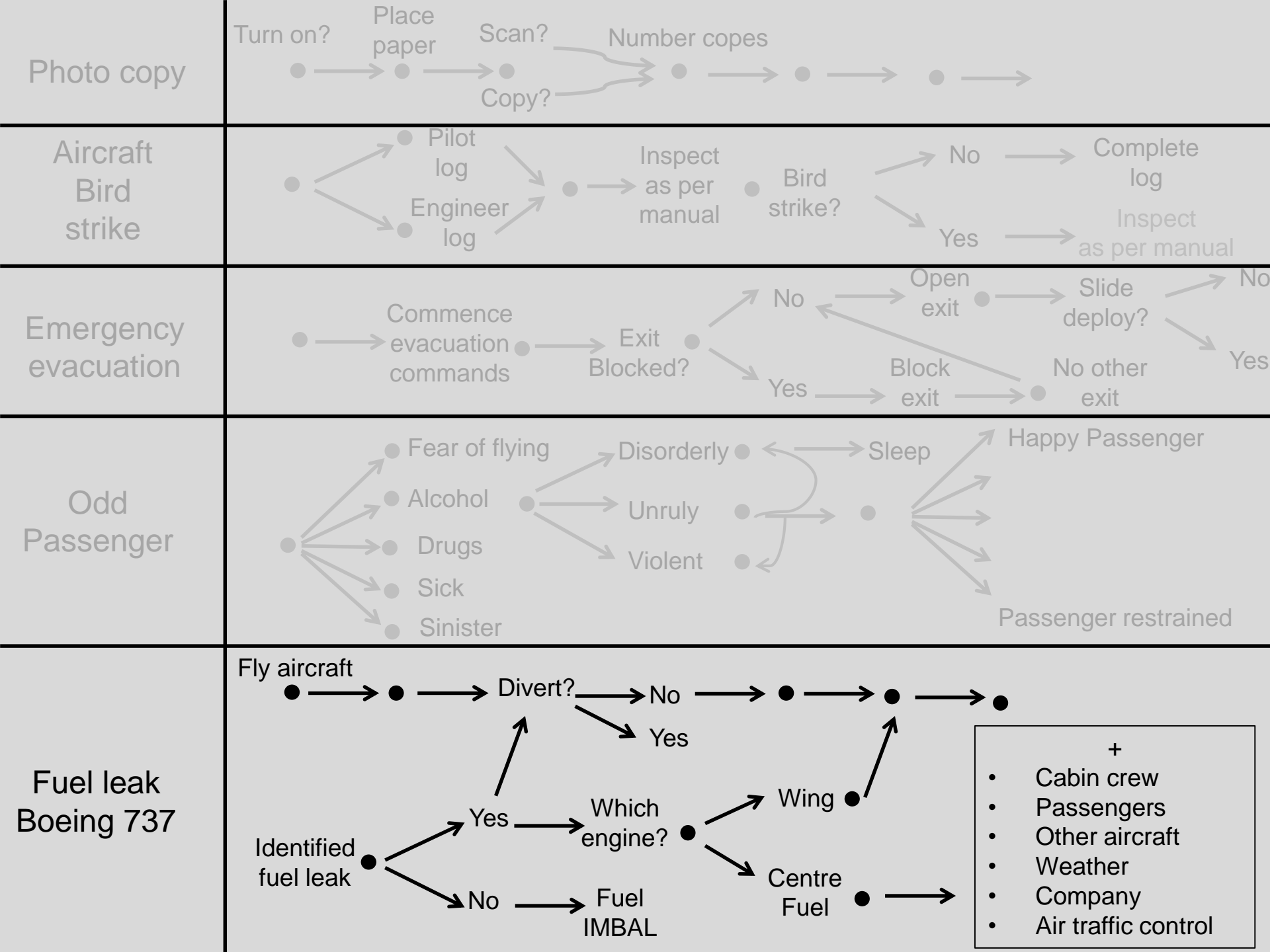
Emergency
evacuation

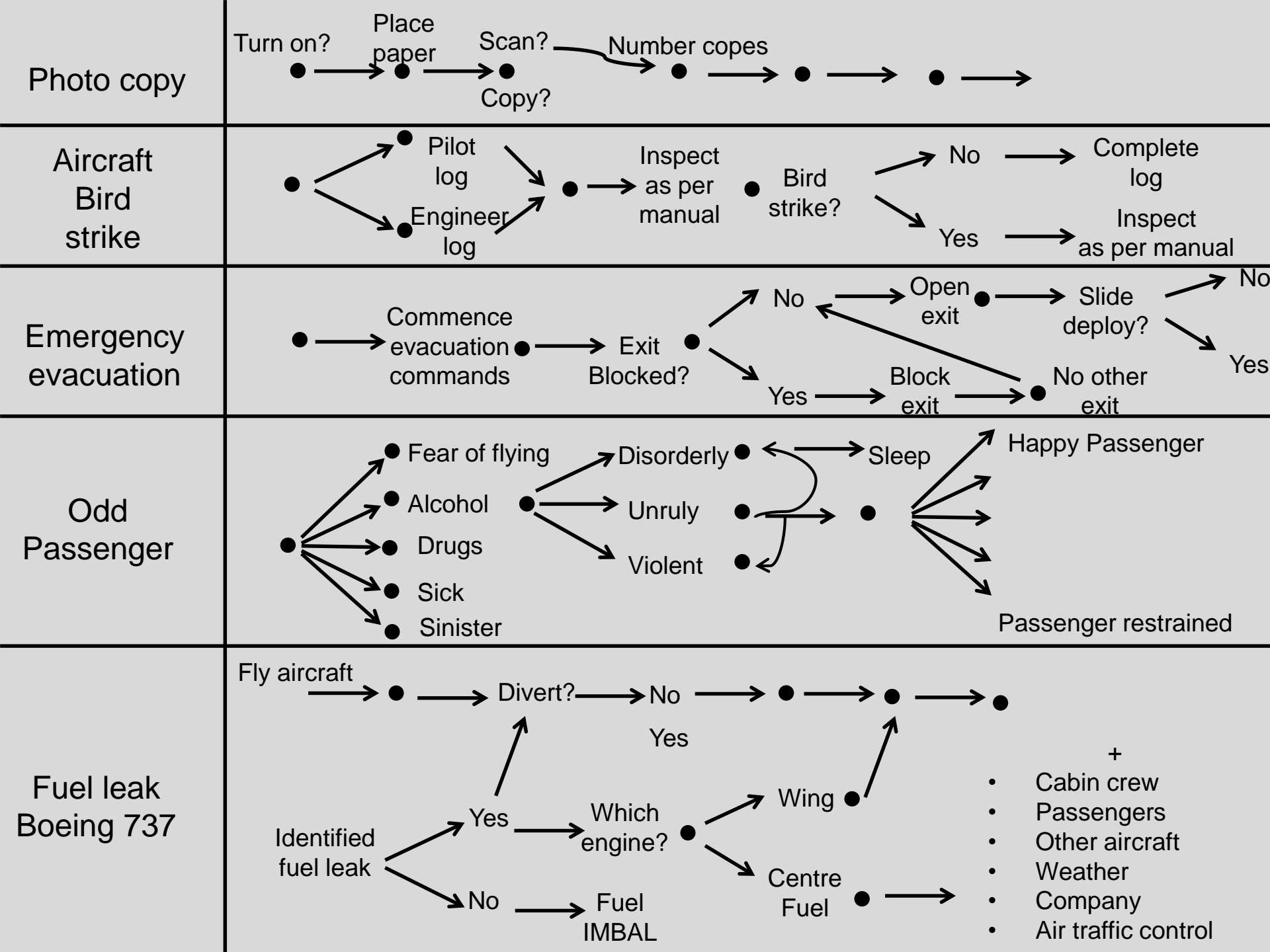


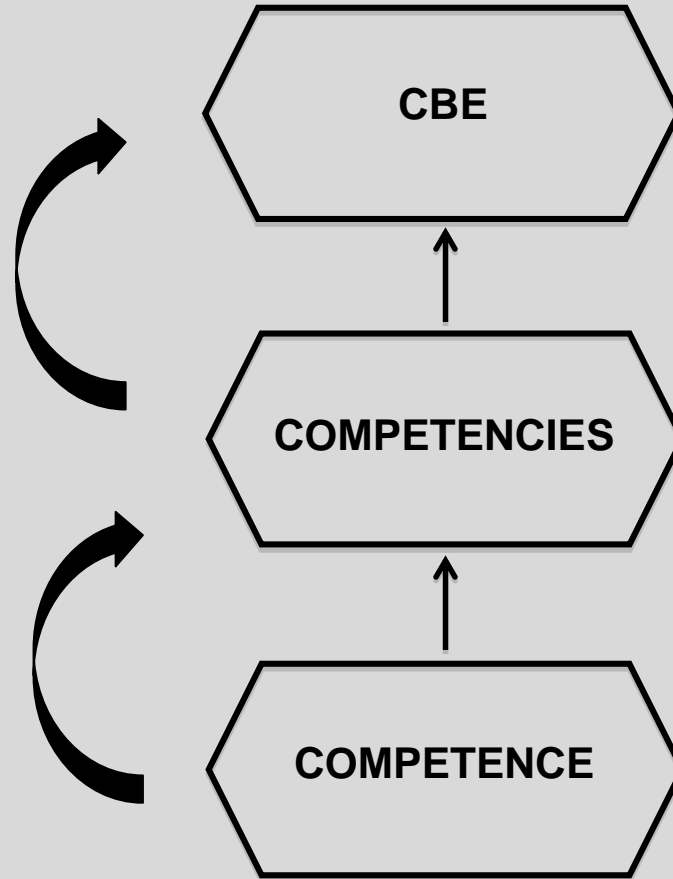


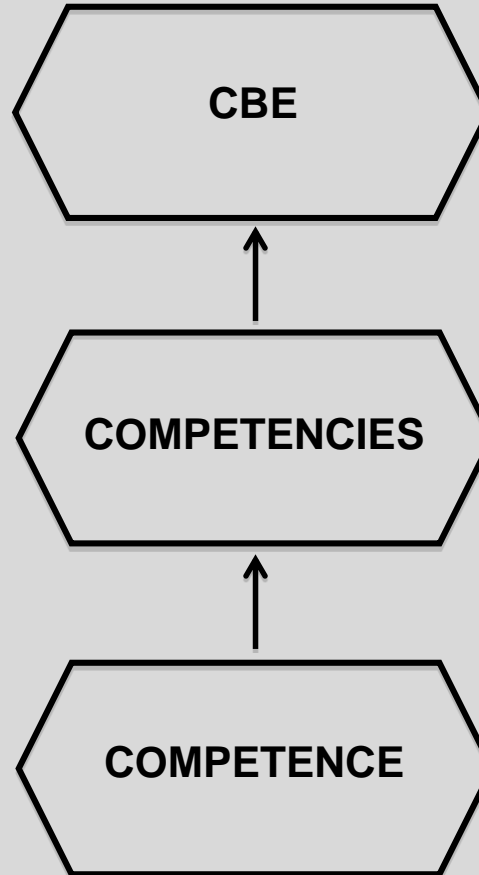
FUEL LEAK



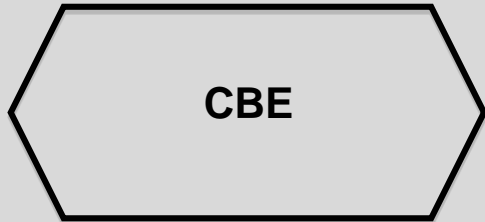








SIMPLE



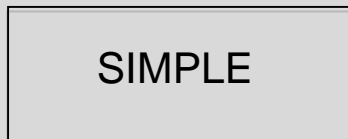
← Competency based education fits neatly into the framework.

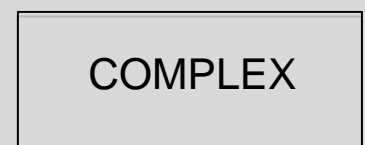
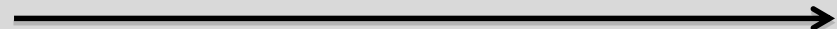
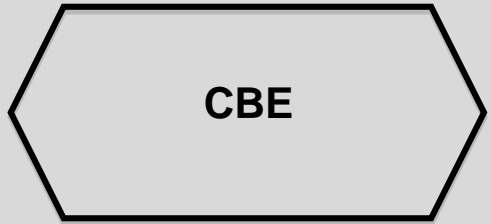


← Competencies in textual form can represent competence.

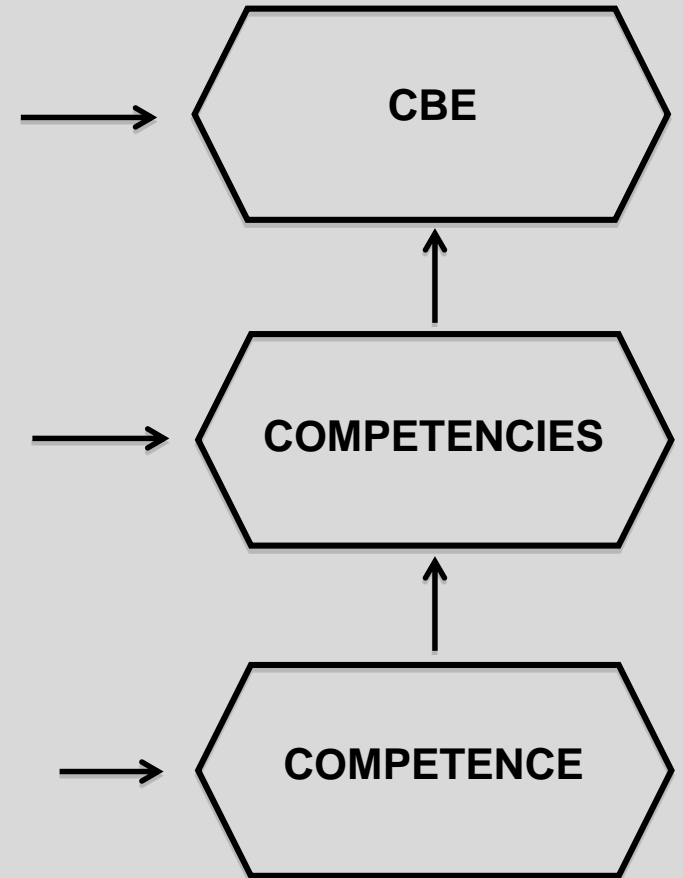


← Nature of competence is simple or is accomplished in a linear pre-described process.





- Competency based education does not fit into the framework.
- Competencies in textual form do not, or cannot represent competence.
- Those that do are simplistic in nature, vague or impractical.
- Nature of competence complex.
- Often requiring multiple team members.
- Problem sometimes not previously considered.
- Numerous options available.
- Time pressure or higher risk.

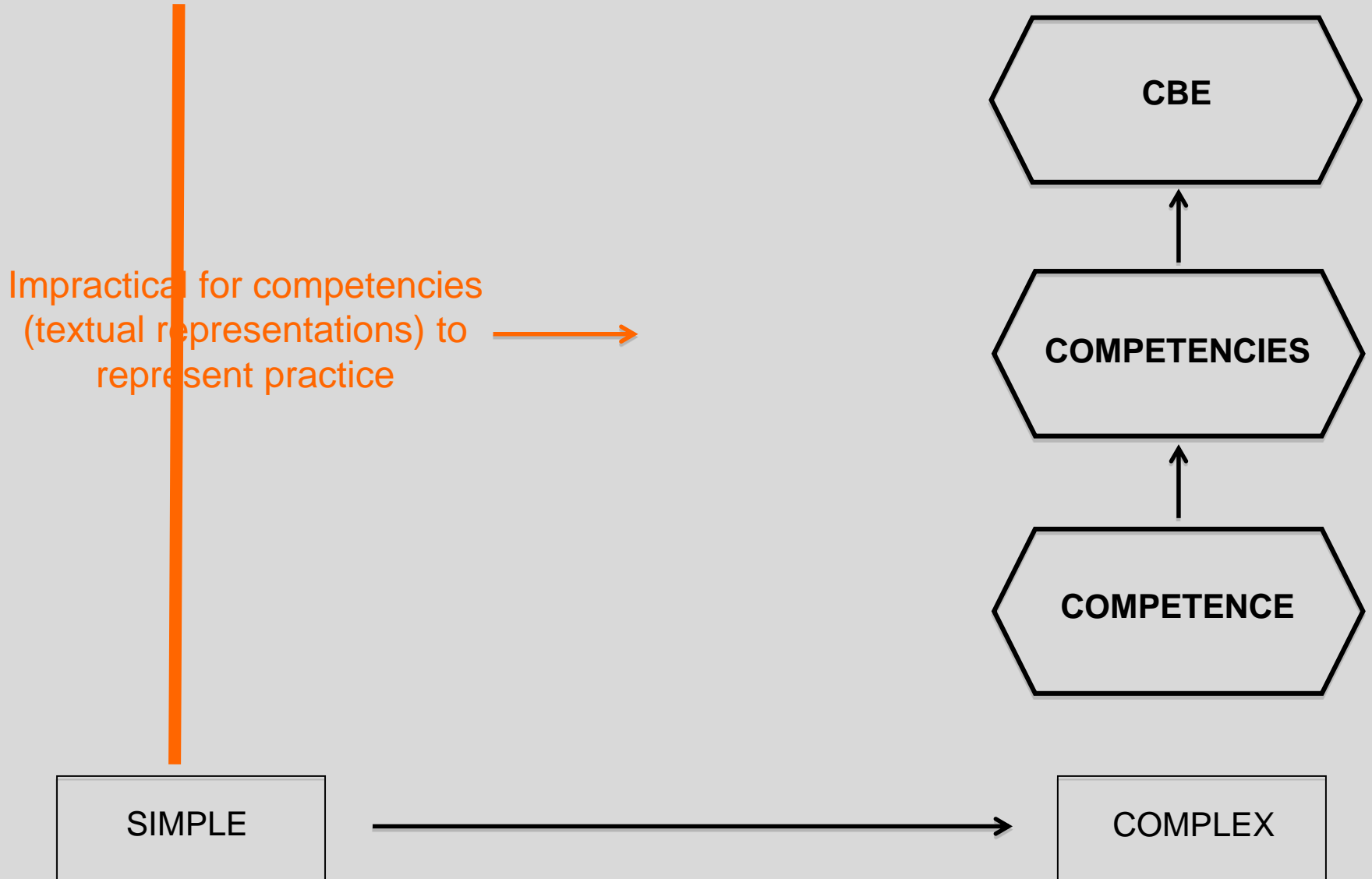


SIMPLE



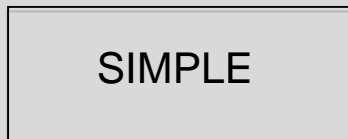
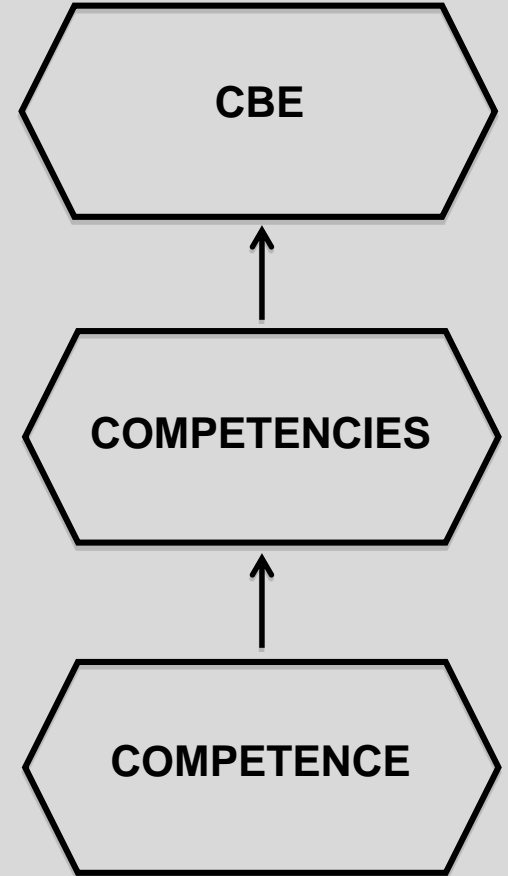
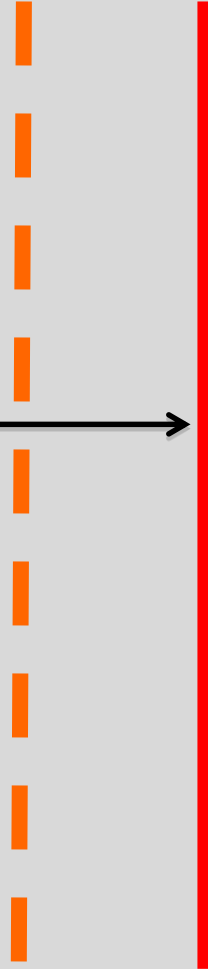
COMPLEX

ISSUES!



ISSUES!

Impossible for competencies
(textual representations) to
represent practice



Implication for VET

- In Australian VET, CBT is a 'one-size-fits-all' model
- It has been estimated that VET/CBT covers 80% of occupations in Australia (OECD, 2008)
- **Competency standards may suit some occupations better than others**
- VET/CBT covers roles and tasks from entry level to advanced/expert levels (Cert I to Advanced Dip)
- **Competency standards may suit some levels better than others**