

THE COMPETENT FIRE ENGINEER – THE ESSENCE OF RESEARCH AND EDUCATION

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CONTEXT

- Climate change (wildfires / WUI)
- Strive towards sustainability (built environment, industry)
- European Green Deal

 increased fire safety challenges / complexity

 strong need for competency in FSE.

- Strong need for competence in the field of FSE → central theme.
- Disclaimer: perspective as an academic.
- D. Lange et al., ‘A competency framework for fire safety engineering’, Fire Safety Journal (2021):
 - Plead for stronger accreditation;
 - Expressed the need to articulate a proper definition of competency;
 - Competency comprises knowledge and skills;
 - ‘First-principles’ is mentioned as corner stone.

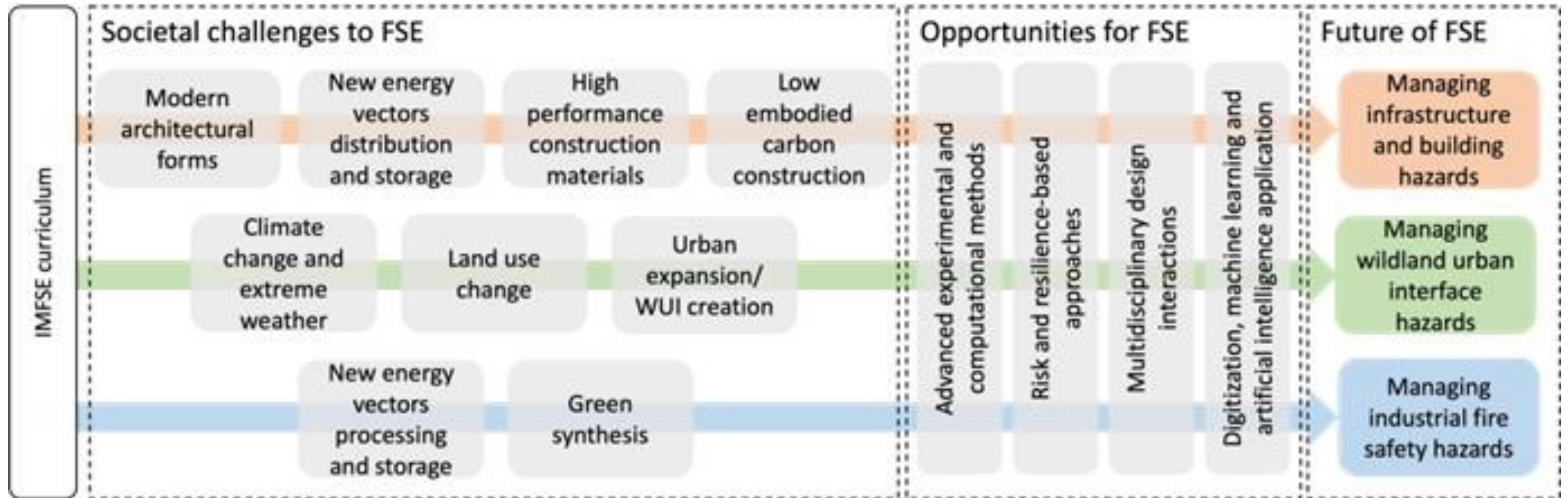


- First stage: ‘basic knowledge and certain other professional and personal attributes’;
 - Can be achieved through the completion of a university program ‘covering not only the systematic body of theory but also the application of that theory, amongst other necessary graduate attributes’;
 - Institution or degree should be accredited.
 - Alternative routes: competence expectations must be equivalent.
 - Concerns the ‘entry’ into professional practice.
- Second stage: professional experience → application of the acquired skills, under supervision of (an) accredited professional(s).

OVERVIEW



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Courtesy dr. Rory Hadden, The University of Edinburgh



OUTLOOK

- Accreditation and recognition of competency is a corner stone for the profession of fire safety engineers and is of existential importance.
- Generalists and specialists are needed, but the focus of university (MS/ME) programs should be on generalists.
- Incorporating and acknowledging the importance of first-principles based designs is key for the sustained future of the fire safety engineering profession.
- Only on this basis current and future challenges can be properly addressed in terms of fire safety.