

# Structural Fire Engineering...

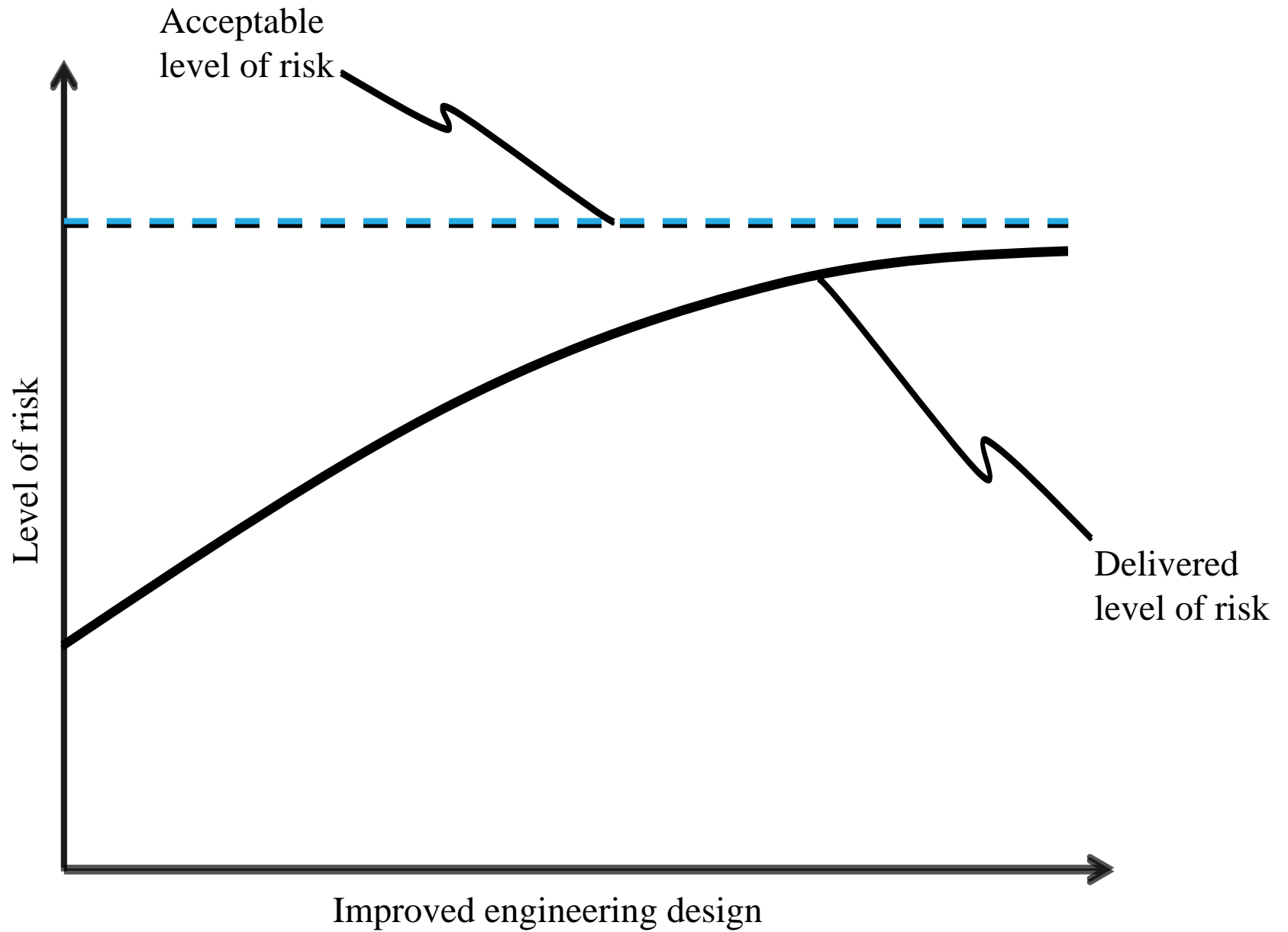
## ... Travelling Fires and Moving Risks

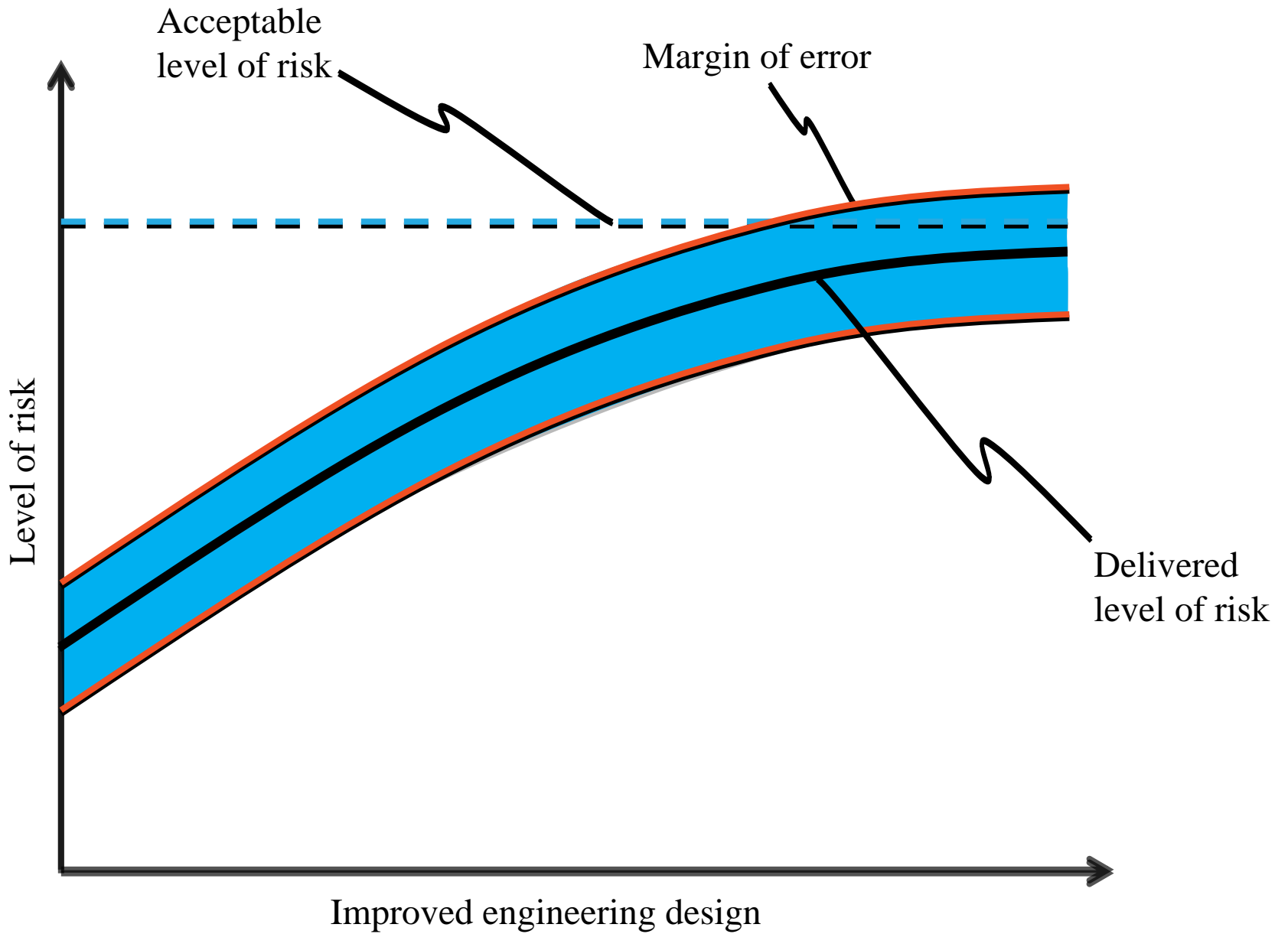
by Angus Law PhD, MEng, AMIFireE

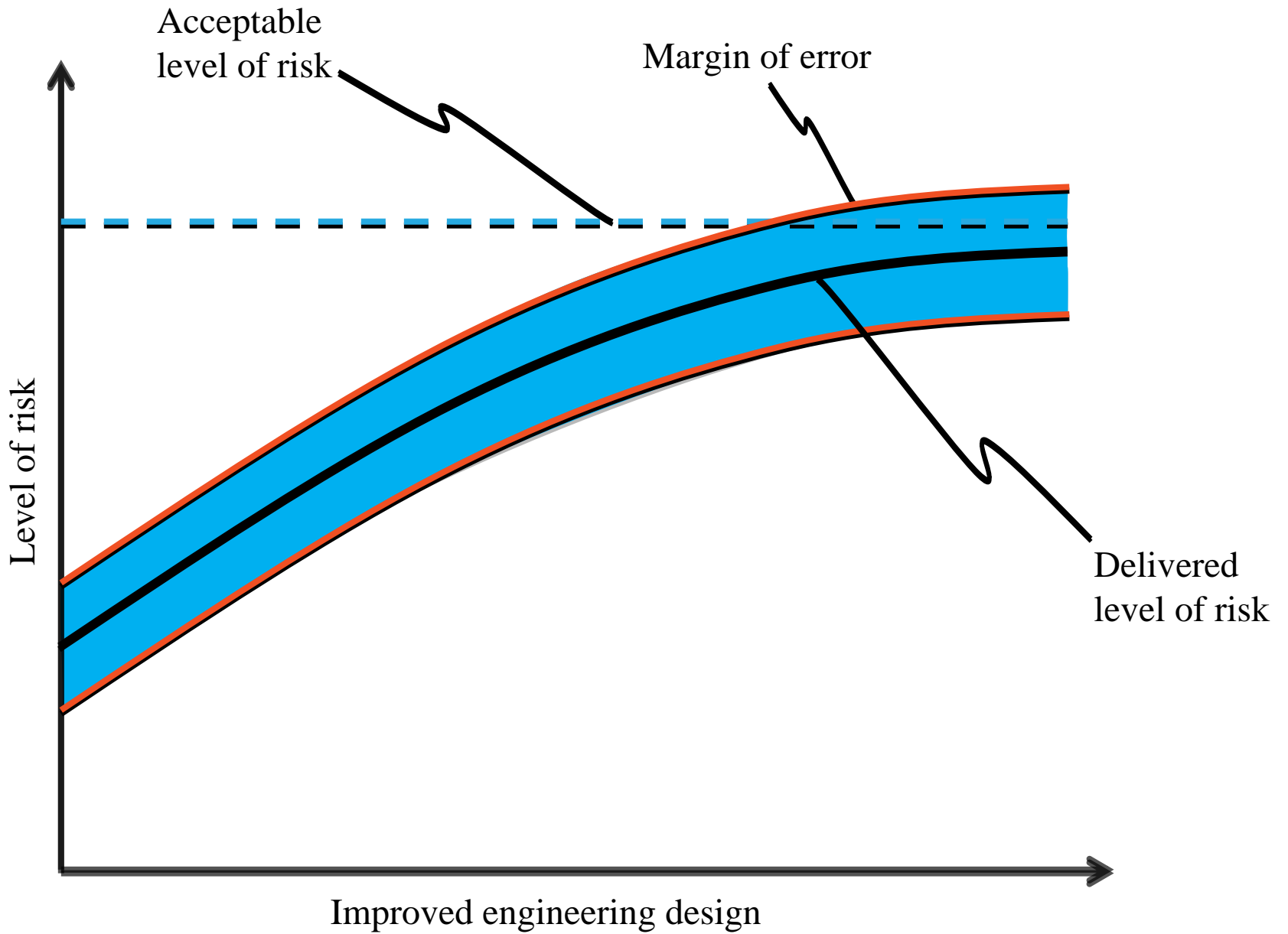


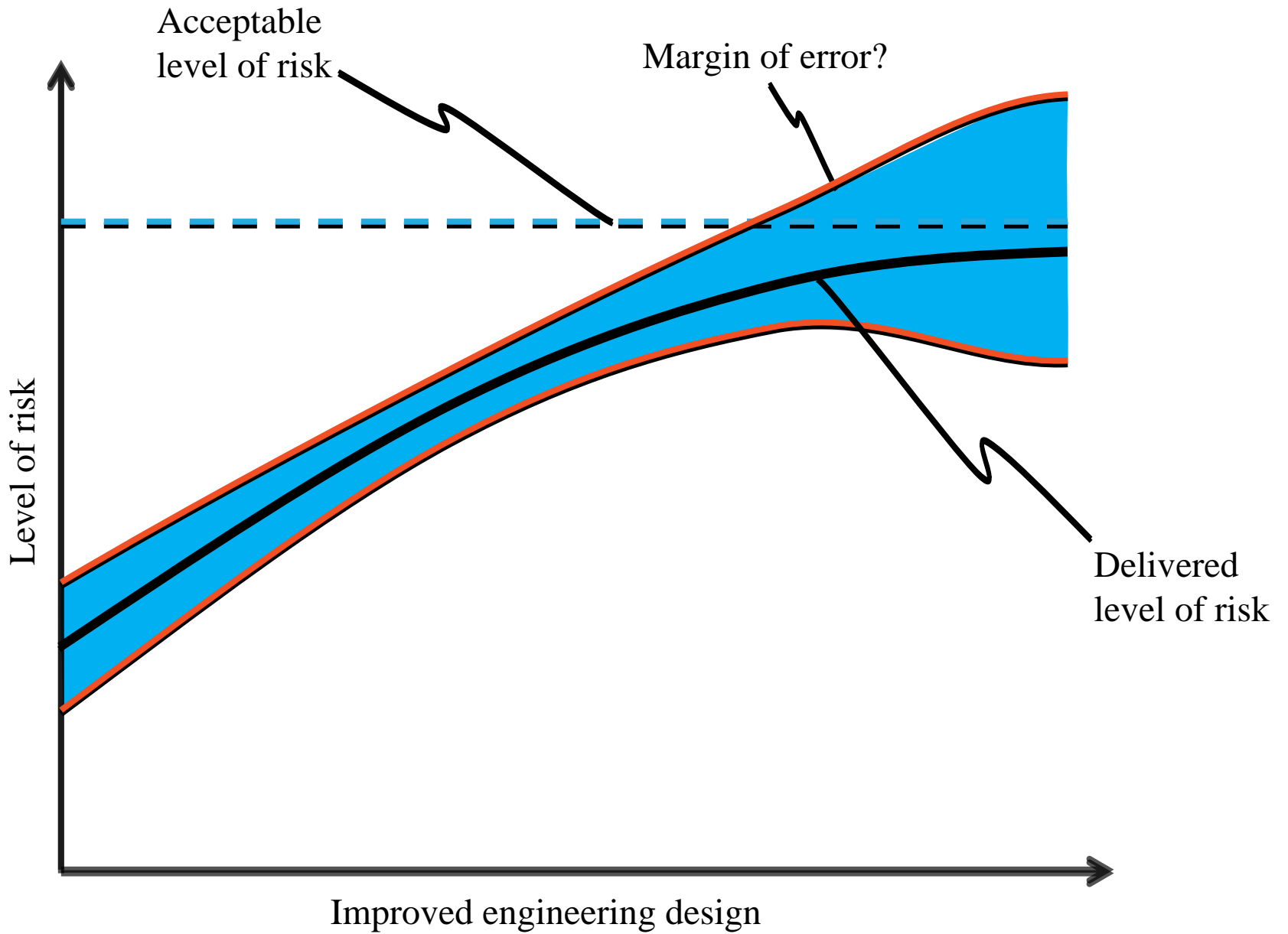
ARUP

We have a duty to use the world's limited resources as efficiently as possible...



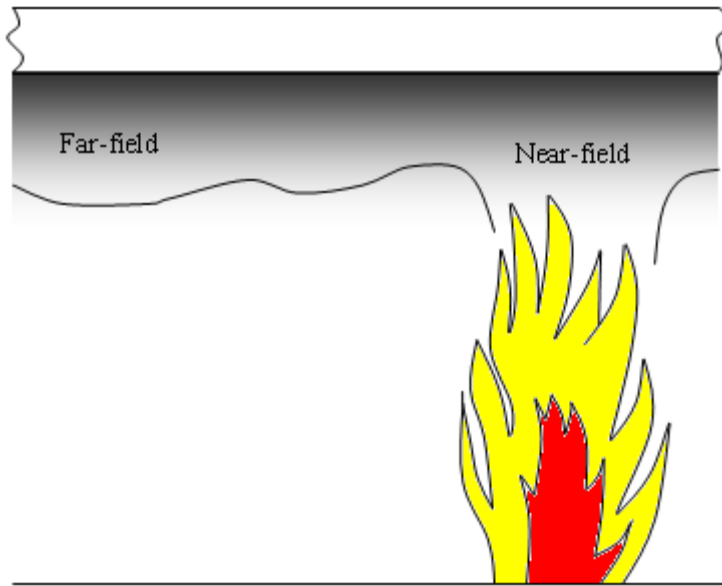






Current design approaches may not adequately quantify the fire risk in a building ...

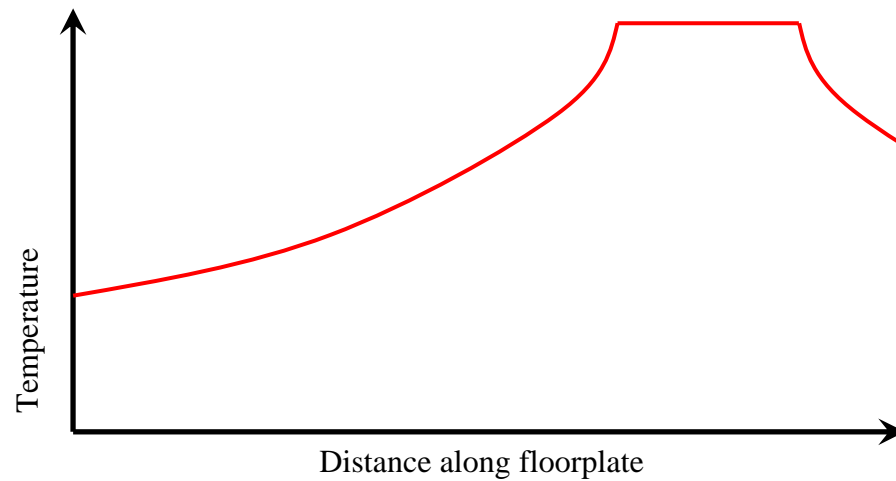
Real fires travel around a building  
gradually consuming all of the fuel...

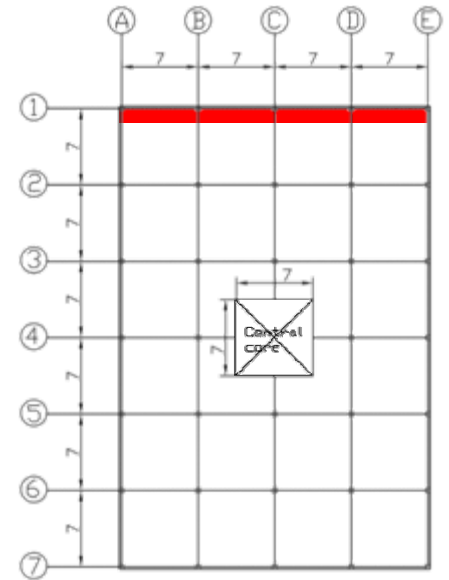
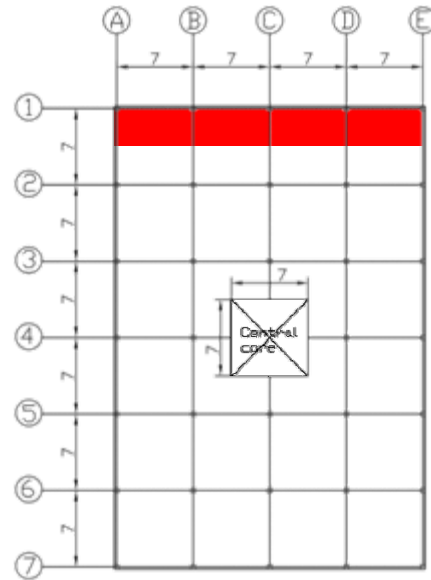
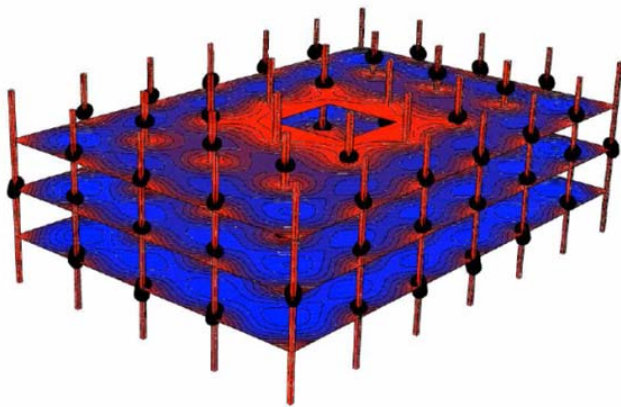
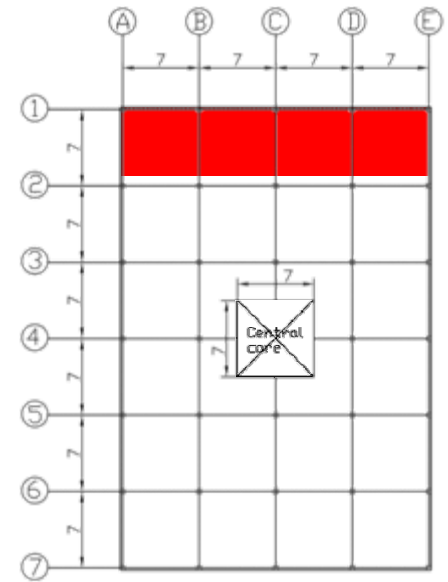
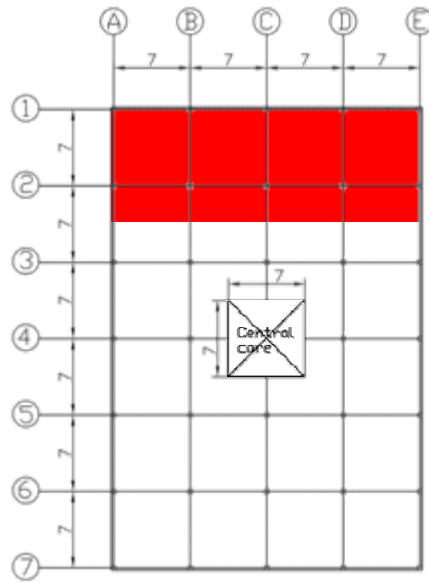
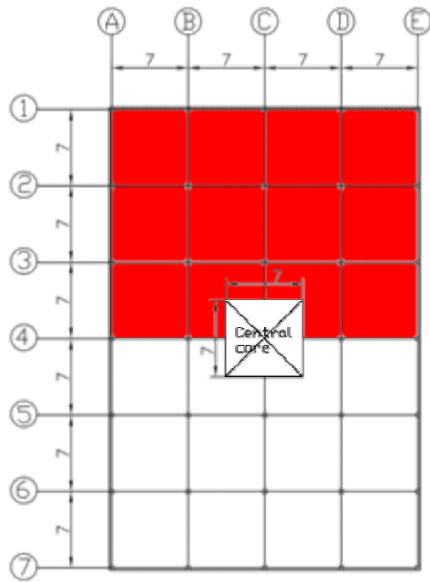
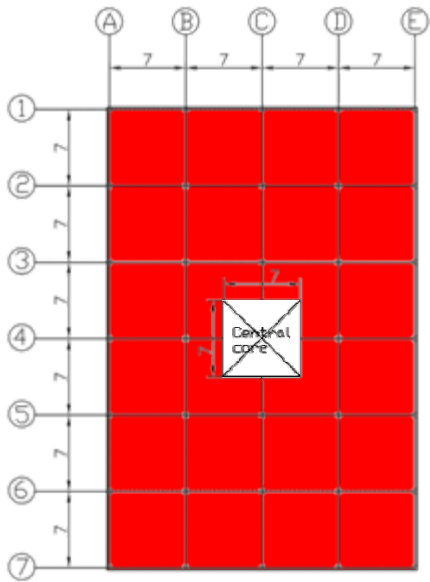


Floor split into two:

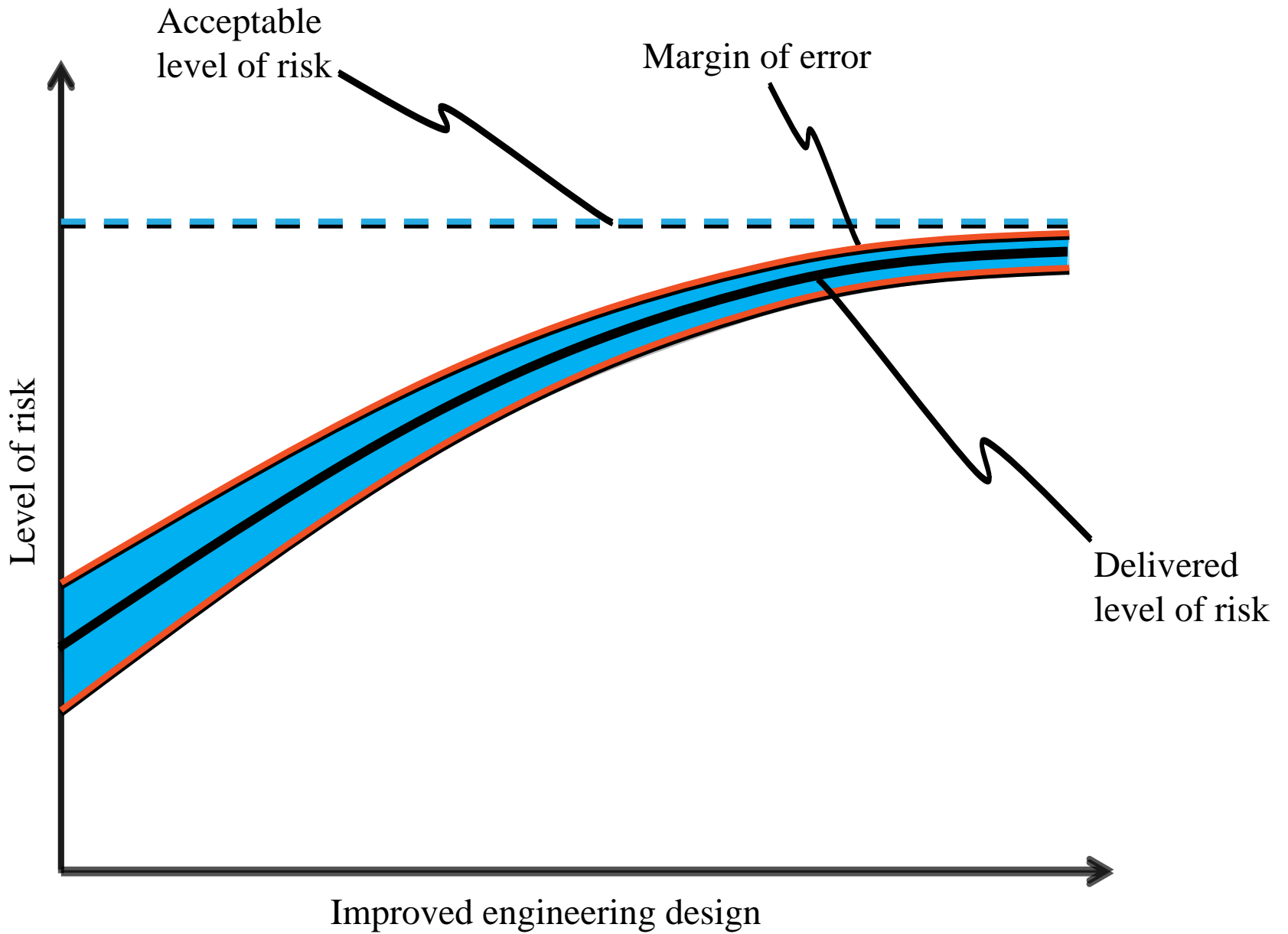
Near-field  $\approx 1200^{\circ}\text{C}$

Far-field  $\approx$  Cooler





This approach is rooted in physics  
rather than precedent...



Travelling fires allow us to better understand the risk to buildings posed by fire...