

# Digital Reactor Design – Thermal Hydraulics

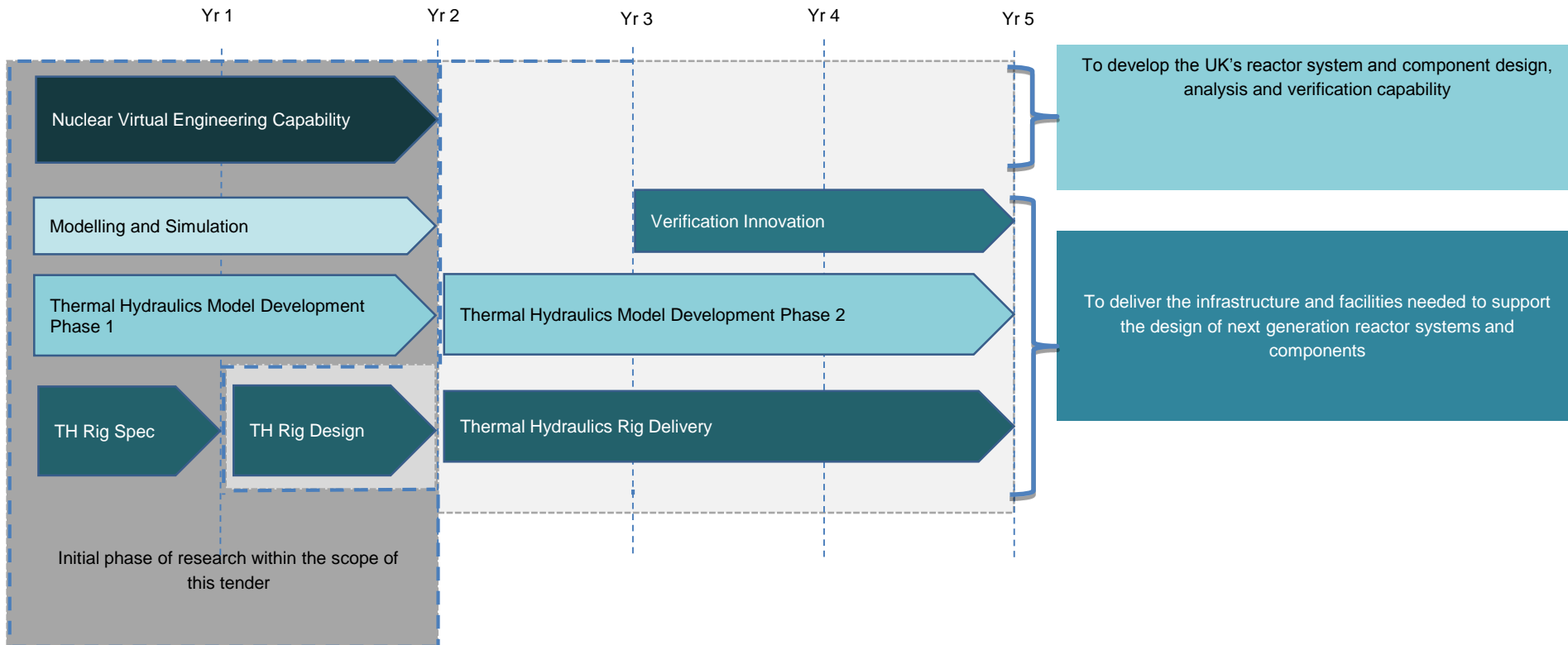
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# Plan as Presented in the ITT

## ► 5 year Integrated Programme of R&D for Digital Reactor Design





## Thermal Hydraulics – The Team

- ▶ Lead by Frazer-Nash, the team comprises 6 core members:



The  
University  
Of  
Sheffield.



Science & Technology  
Facilities Council



## Thermal Hydraulics - First Phase Objectives

- ▶ Thermal Hydraulic Modelling – 2 years
  - ▶ A Critical Review of the State-of-the-Art in thermal hydraulic prediction capability.
  - ▶ A Specification for an innovative thermal hydraulics modelling capability.
  - ▶ Initial Innovative Models.
- ▶ Thermal Hydraulic Test Facility – 1 year
  - ▶ A Critical Review of the State-of-the-Art in thermal hydraulic test facilities worldwide.
  - ▶ A Specification for a UK thermal hydraulics test facility.
  - ▶ Identification of opportunities to use the facility to benefit other ‘NIRAB’ programmes.

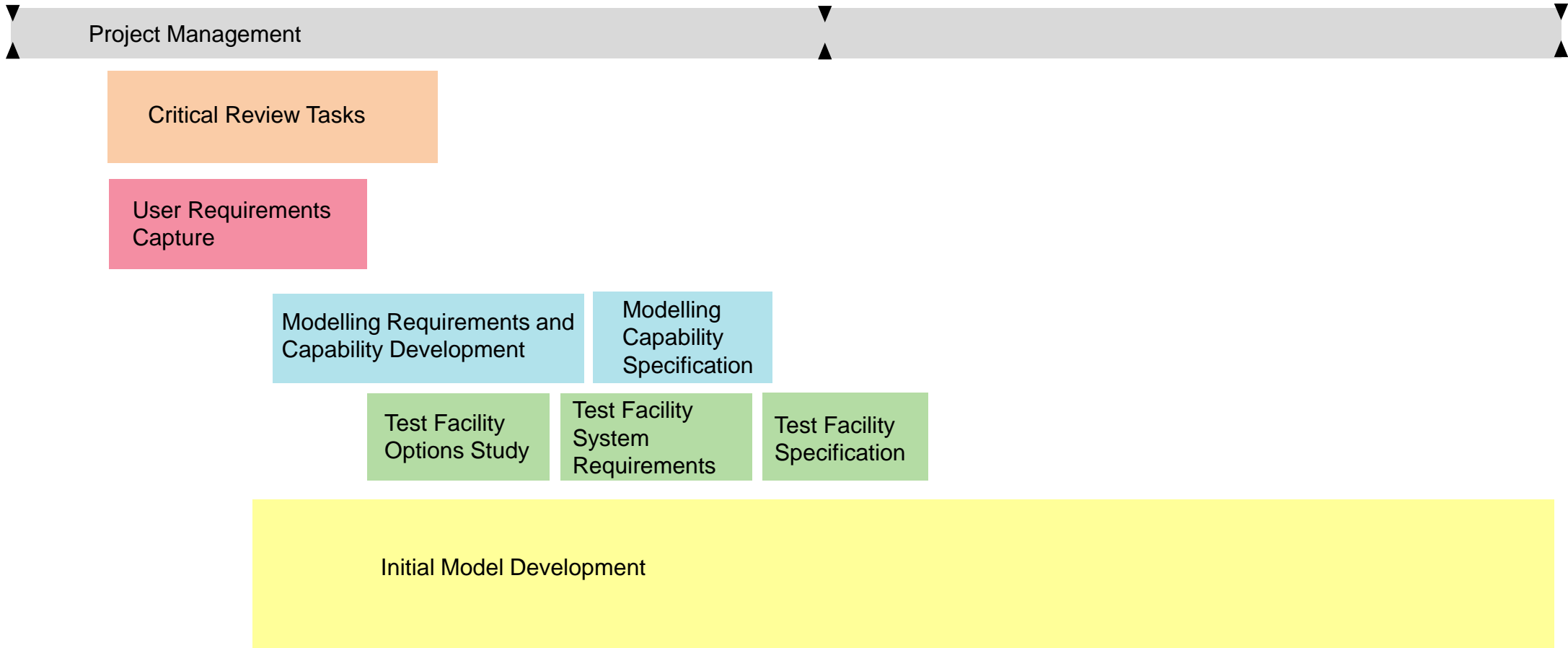


## What Will the Output Look Like?

- ▶ Critical Review tasks:
  - ▶ What is out there?
  - ▶ What does it do, what does it not do?
  - ▶ Who uses it and why?
- ▶ Test Facility Specification:
  - ▶ Specification of requirements for one or more test rigs, suitable for enabling suppliers to tender for the design.
- ▶ Modelling Specification:
  - ▶ Capability Specification (vision), appropriate to enable specification of specific future R&D activities.
  - ▶ Recommendations for how to get there.
- ▶ Initial Models:
  - ▶ In the planning stages.



# The Plan





## The Wider Team

- ▶ This work is being led by the core team, but it is for the benefit of all!
- ▶ Our philosophy is to be as inclusive as possible.
- ▶ We want to give everyone the opportunity to contribute.
  - ▶ Attendance at a workshop;
  - ▶ Contribute in writing.
- ▶ Tell us what you think the UK needs.
- ▶ Tell us what your company/technology needs.



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