

Work Package 8a Engagement Day



Dr. Steve Loades

BEIS Programme Manager Hy4Heat

Agenda

Welcome and introduction	Steve Loades
Energy innovation: Hydrogen	Mark Taylor
Hy4Heat programme	Heidi Genoni
WP8a engagement approach	Sarah Boundy
WP8a overview	Nicola Benjamin
WP8a procurement	Steve Loades
Panel session Q&A	Mark Crowther, Heidi, Nicola
Discussion networking stalls	Working with H2 / Appliance developers / Market research / Procurement
One-to-one sessions	With BEIS and programme team

Purpose of today

- Provide an overview of Hy4Heat and programme
- Outline our requirements for demonstration facilities
- Provide an understanding of opportunities in WP8a
- Set out our procurement timeline
- A chance for you to give feedback directly to us
- Opportunity to network and engage with each other

Dr. Mark Taylor

BEIS Deputy Director Energy Innovation
Science and Innovation for Climate and Energy (SICE)



Hy4Heat

Heidi Genoni

Hy4Heat Programme Manager

Hy4Heat mission

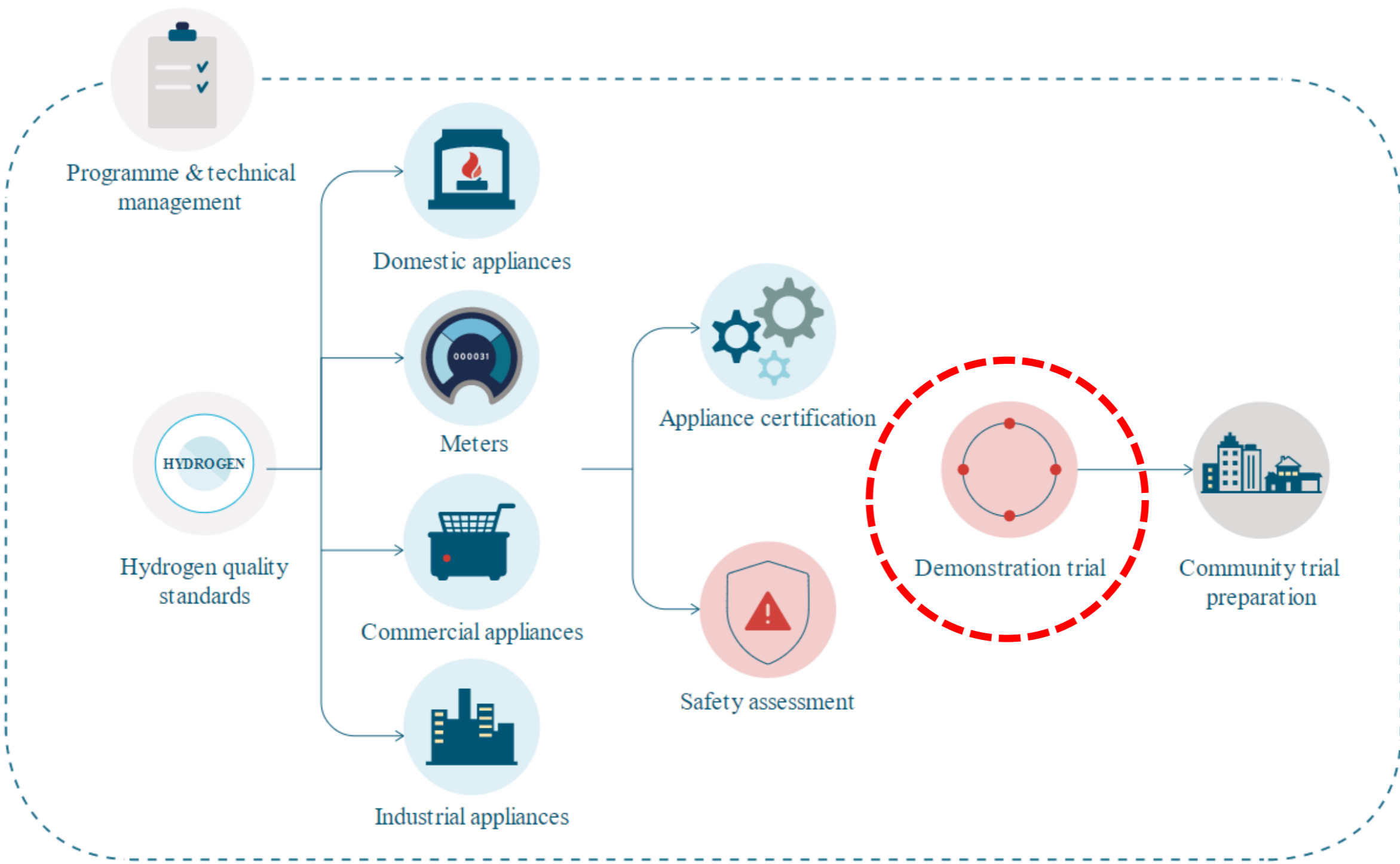
To establish if it is technically possible, safe and convenient to replace natural gas (methane) with hydrogen in residential and commercial buildings and gas appliances

This will enable the government to determine whether to proceed to a community trial



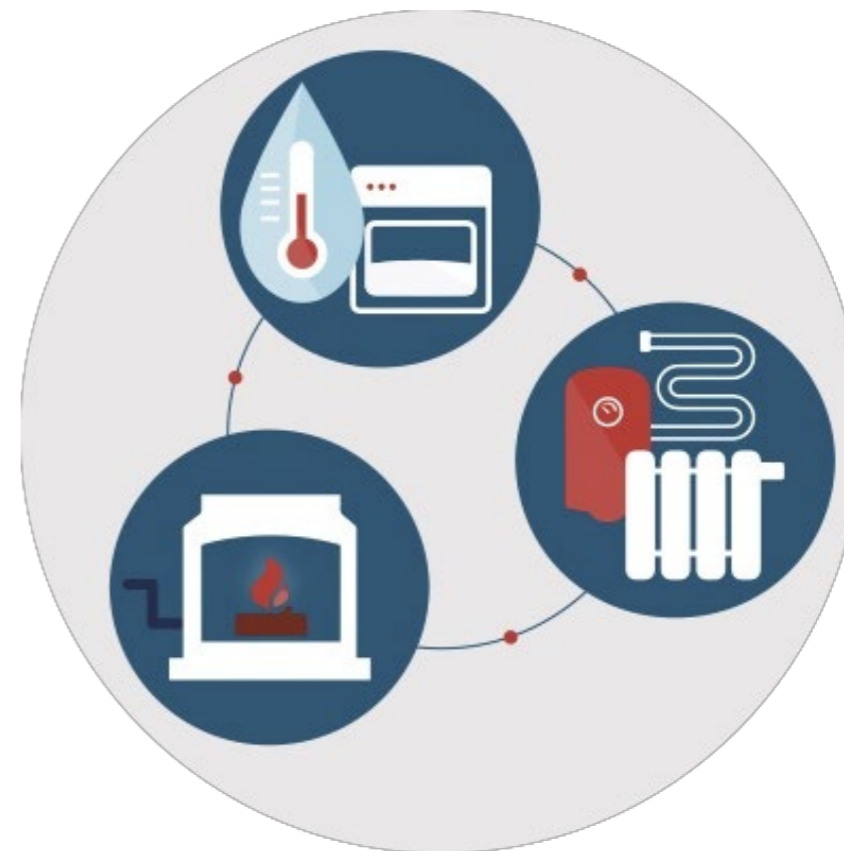
The Hy4Heat Programme





Hydrogen appliances & meters

- Development of certified appliances:
 - gas boilers
 - gas cookers
 - gas fires
 - innovative hydrogen appliance
 - smart meters



Work package 8a objectives

- Develop moveable facilities to demonstrate and display hydrogen gas appliances developed in Hy4Heat that have been safety certified
- The goal is to engage and inform industry stakeholders about the Hy4Heat programme and gather feedback regarding the acceptability of the appliances and the use of hydrogen in place of methane for cooking and heating





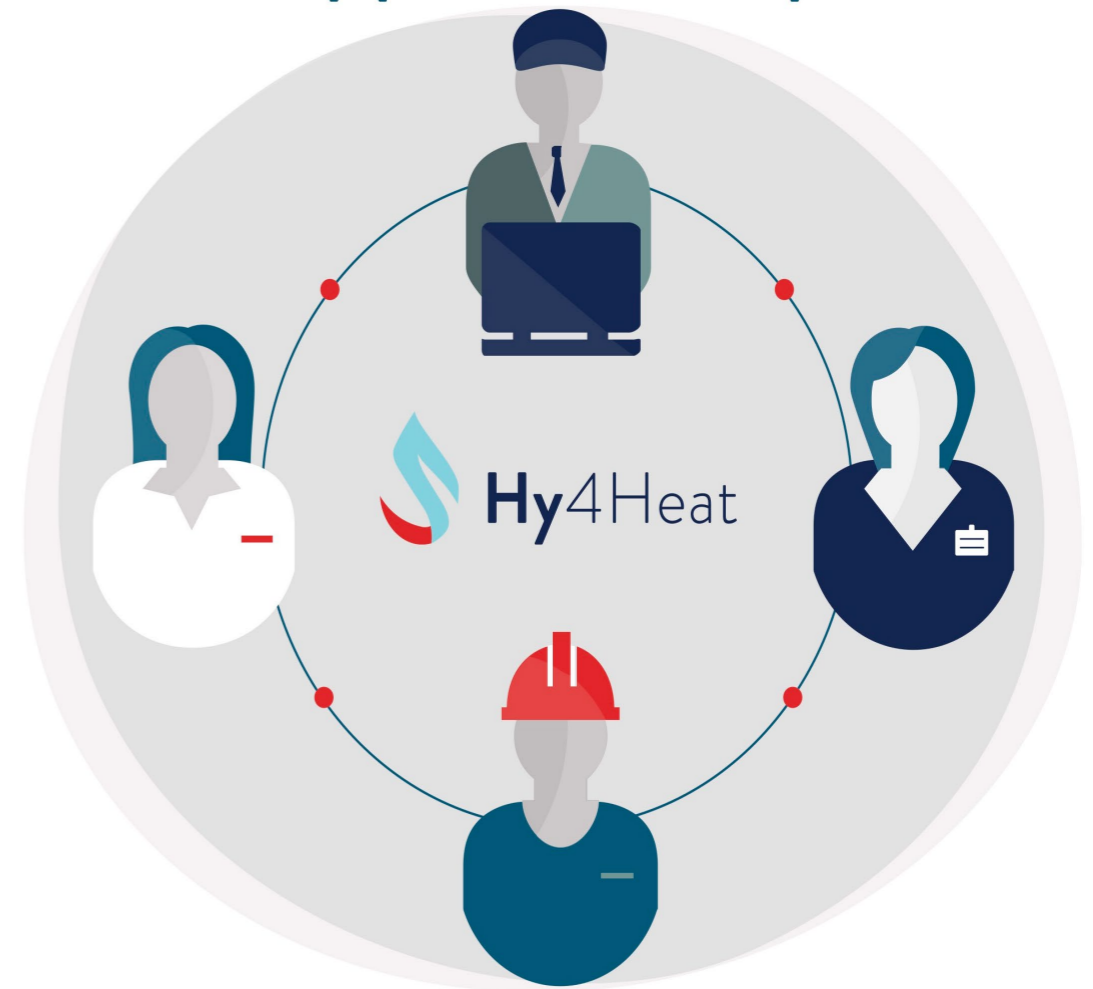
Hy4Heat

Sarah Boundy

Stakeholder Engagement &
Communications Manager

Purpose of moveable demonstration facilities

- We want to display the appliances in showroom settings
- Continued engagement with industry and other stakeholders
- Follow-up to earlier presentations given at industry events and conferences
- Demonstrating tangible output of BEIS innovation programme
- Capture feedback from visitors



It's not sales and marketing

- Demonstration facilities are part of the Hy4Heat feasibility study
- It's not sales & marketing promotion, but is about getting feedback from viewers
- The audience is primarily energy industry stakeholders
- Hydrogen is a possible pathway – amongst others



Events and exhibitions

- IGEM Utility Week, Birmingham May 2020
- All Energy, Glasgow May 2020
- Hearth & Home, Harrogate June 2020
- Low Carbon Networks & Innovation Conference Glasgow Oct 2020
- **COP26, Glasgow November 2020**
- Hydrogen and Fuel Cells Conference Birmingham March 2021

Nicola Benjamin

Work Package 8a Manager

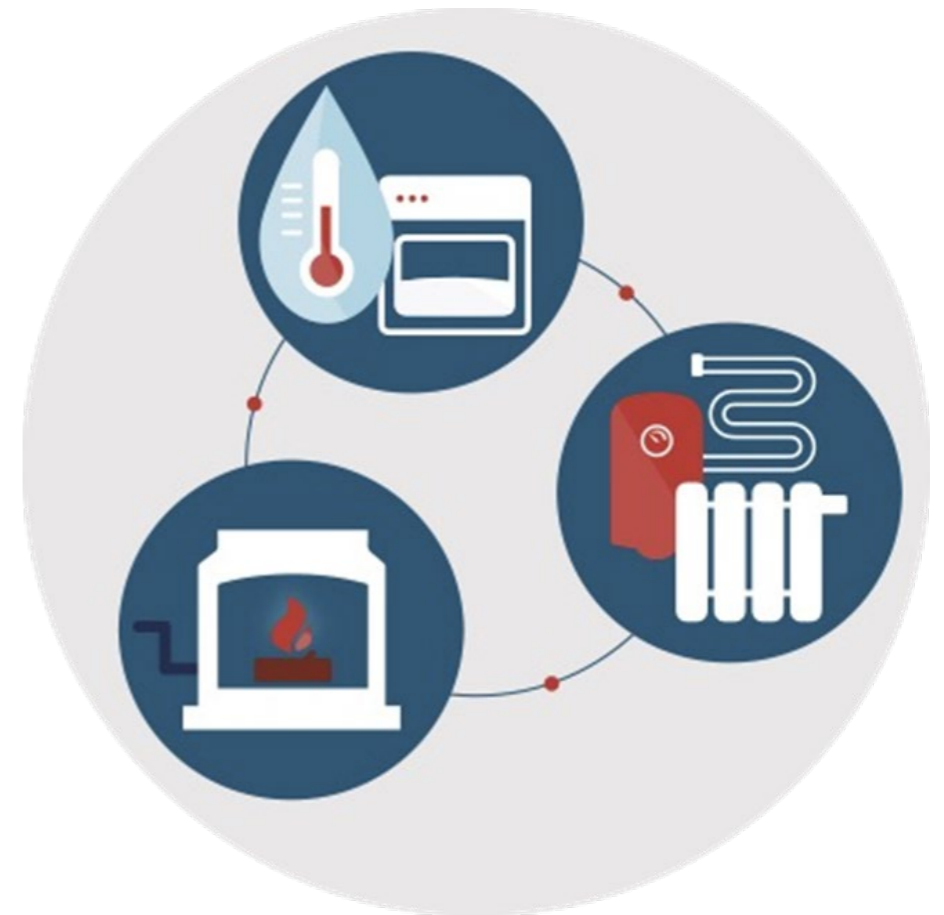
WP8a aims and objectives

The purpose of the work package is to:

- Demonstrate hydrogen gas appliances developed in Hy4Heat programme
- Seek and gather feedback regarding:
 - the acceptability of developed appliances
 - the acceptability of hydrogen for heating and cooking
- Highlight UK-funded innovation programme

Three demonstration facilities

- **Outdoors moveable demonstration showroom** with operational appliances using hydrogen
- **Exhibition showroom stands** (*for display purposes only*) indoors at exhibitions and industry events
- **Portable cooking demonstration** (chef demo) unit to enable cooking demonstrations at various locations using a hydrogen fuelled hob



Displaying appliances & meters

Heating, hot water and cooking appliances and meters displayed in a household settings:

- smart meters
- boilers
- fires
- cookers and hobs
- innovative boiler

Visitor feedback

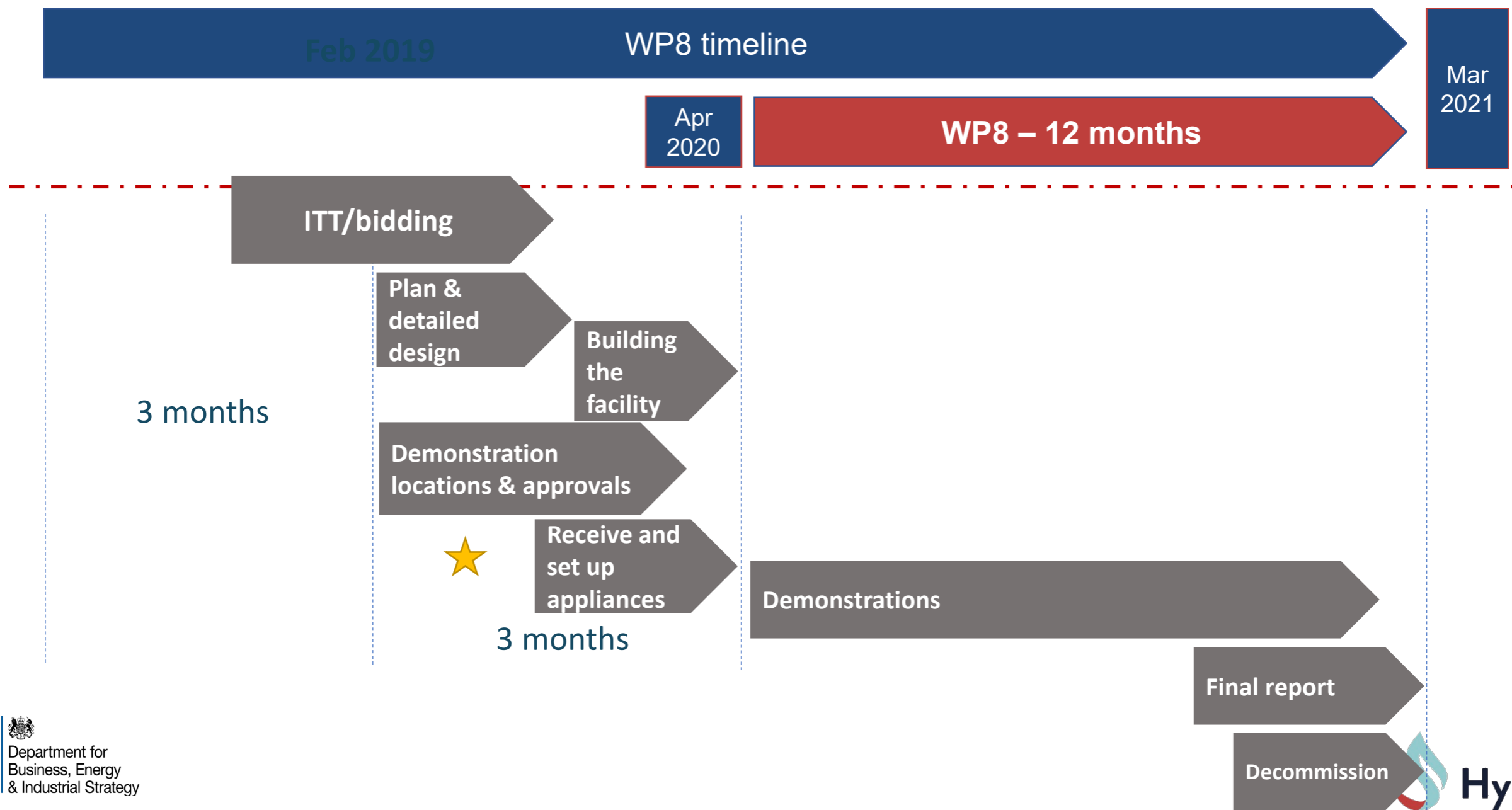
The demonstration phase provides an opportunity to gauge visitor feedback on hydrogen appliances and the innovation programme

This should capture, but is not limited to:

- ✓ Perceptions (positive / negative / neutral)
- ✓ Comments on aesthetics and acceptability of appliances
- ✓ Acceptability or otherwise of the potential of hydrogen replacing methane for heating and cooking in homes and buildings



WP8a timeline tbc



The experience we need

We need you to:

- Demonstrate experience of designing, creating and delivering a range of exhibitions at a variety of locations
- Demonstrate experience of capturing, measuring and analysing feedback from visitors to exhibition showrooms

What we are looking for

- Facility design, build and management
- Equipment installation and dismantlement
- Public Safety Management (compliance with relevant health and safety and other applicable legislation)
- Stakeholder feedback and analysis
- Logistics and overall project management co-ordination

A consortium is acceptable if required to fulfil all aspects of the delivery requirements

Working safely

You must be able to demonstrate

- good health & safety record
- Site-appropriate method statements and safe working practices
- Staff training and adherence to safe working practices
- Specialist hydrogen expertise should be sought and guidance incorporated where needed

Additional safety considerations

- Storage of hydrogen cylinders
- Connection of hydrogen gas supply (cylinders) and appliance equipment
- Safe transport of hydrogen gas
- Gas detection in the event of a leak
- Evacuation procedures

Three demonstration facilities

'Display purposes only'

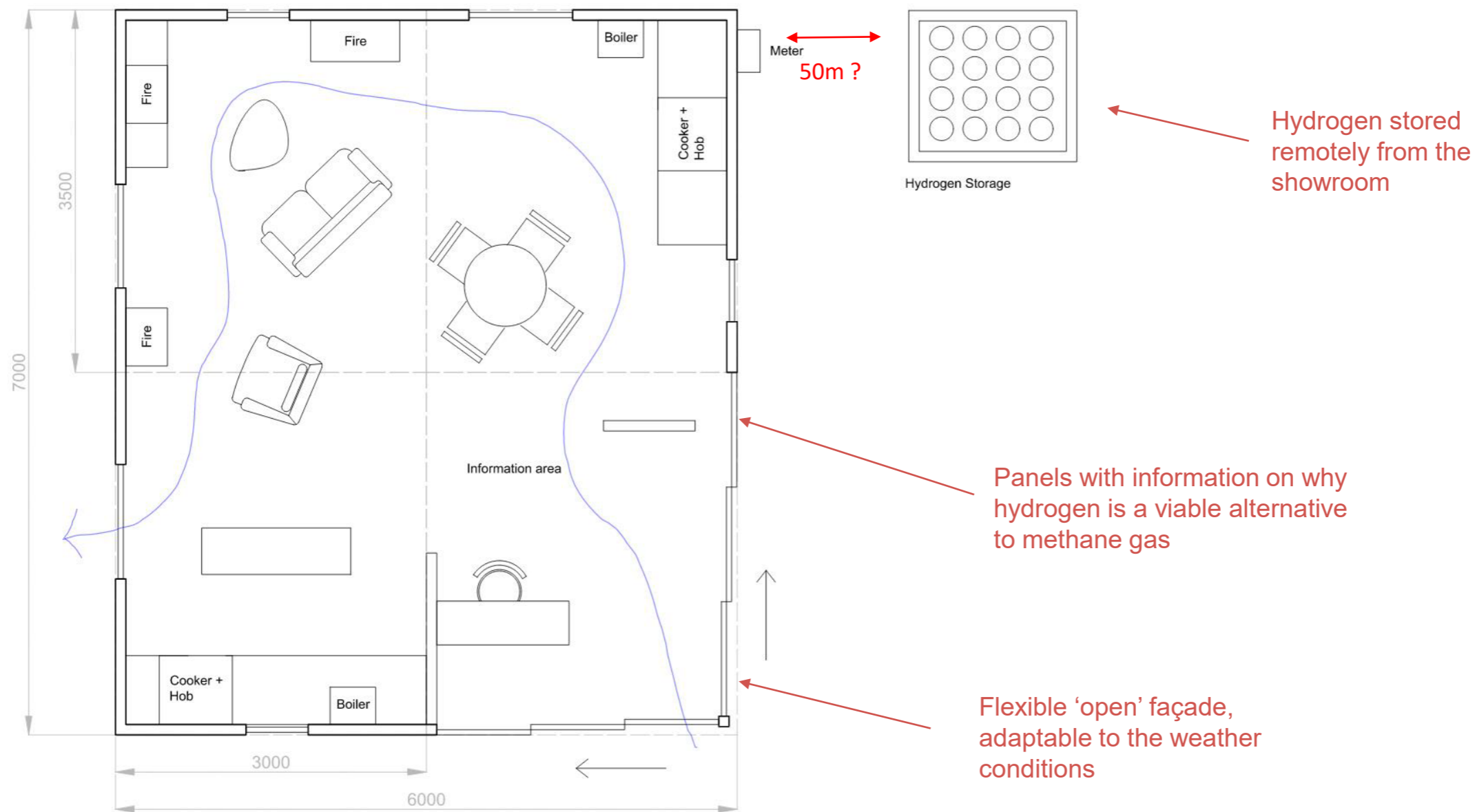
- Modular, scalable, exhibition stands for use in a variety of industry conferences and exhibitions
- From 12m squared to 30m squared
- Using digital and other display tools to create a well-presented modern interior 'show home standard'
- Construction and installation compliant with technical and safety requirements and manufacturers' specifications

Mobile demonstration showroom requirements

Mobile demonstration showroom with operational hydrogen appliances

- Moveable, easily transported by Road
- Suggested floor plan circa 40sqm
- Suitable for stand-alone presentations
- Additional storage space required for hydrogen cylinders (at least one MCP required)
- Well presented modern interior 'show home standard'
- Construction and installation compliant with technical and safety requirements and manufacturers' specifications

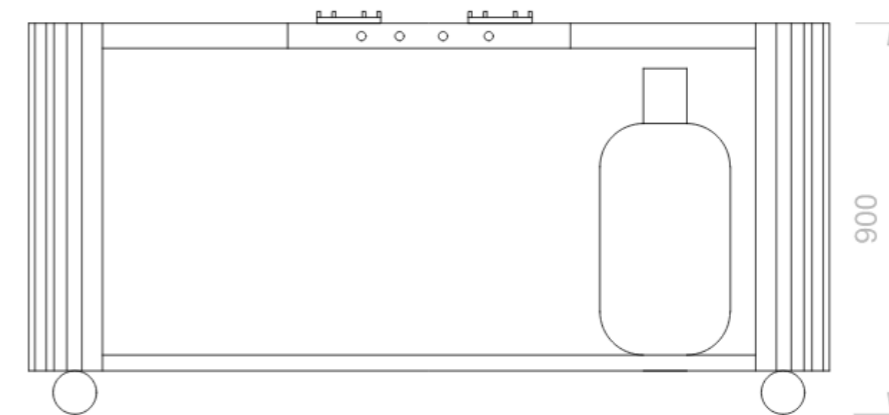
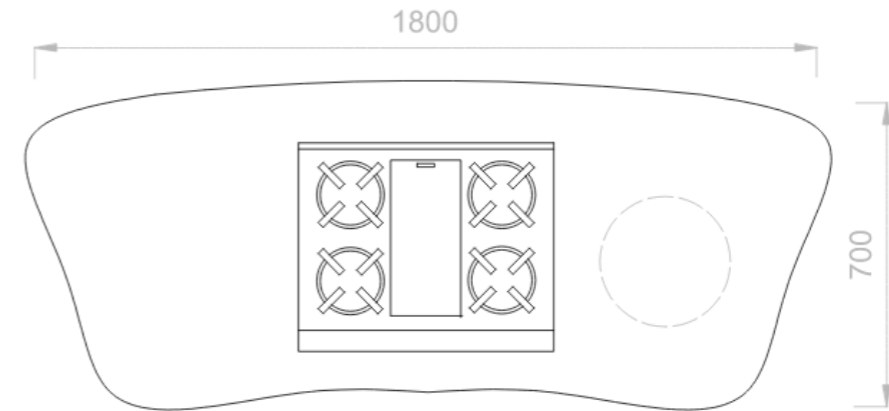
Indicative design - mobile showroom layout



Indicative design - portable cooking display (chef demo)

Portable cooking display (chef demo)

- Moveable, easily transported by road
- Example is of a display of a cooking station (catering trolley)
- Hydrogen cylinder dimensions: 305mm diameter x 660mm height, 22kg weight
- Off-floor storage required



Stakeholder feedback

- The demonstration showrooms should engage stakeholders to give them an understanding of:
 - The Hy4Heat programme
 - BEIS and industry innovation

Feedback should be captured to understand

- Acceptability of appliances for potential use in people's homes
- Sentiment towards the idea of hydrogen for heating and cooking

Deliverables

- Design, build install demonstration facilities
- Transportation and storage
- Project management, liaison with exhibitors, local authorities, etc
- Installation and staffing of facilities
- Ancillary equipment purchases
- Hydrogen supply / installation / storage / risk assessment
- Safety compliance assessment ongoing, reporting and monitoring
- 12 months activities schedule
- Decommissioning
- Market research / feedback reports (regular and final)



Hy4Heat

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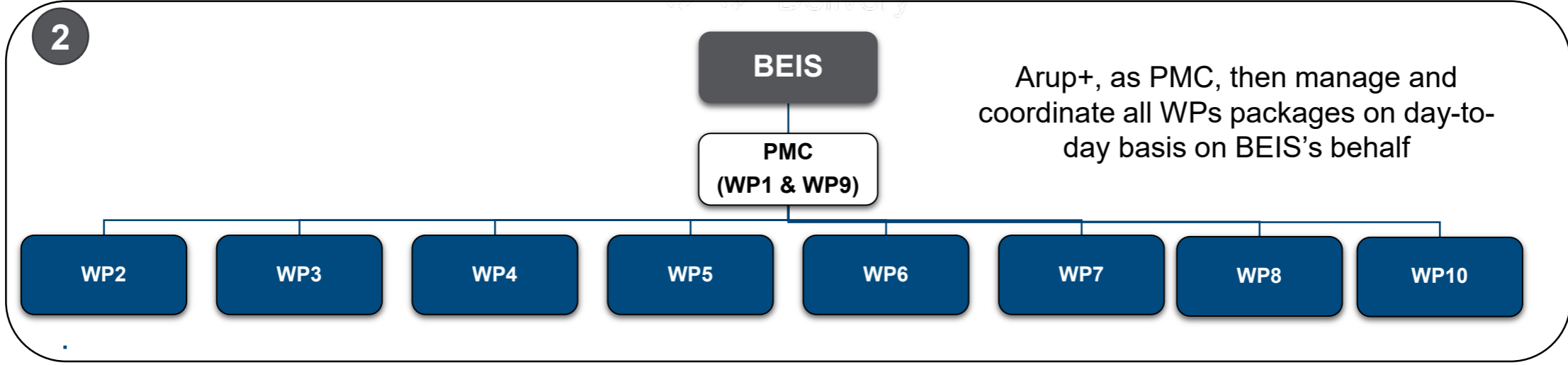
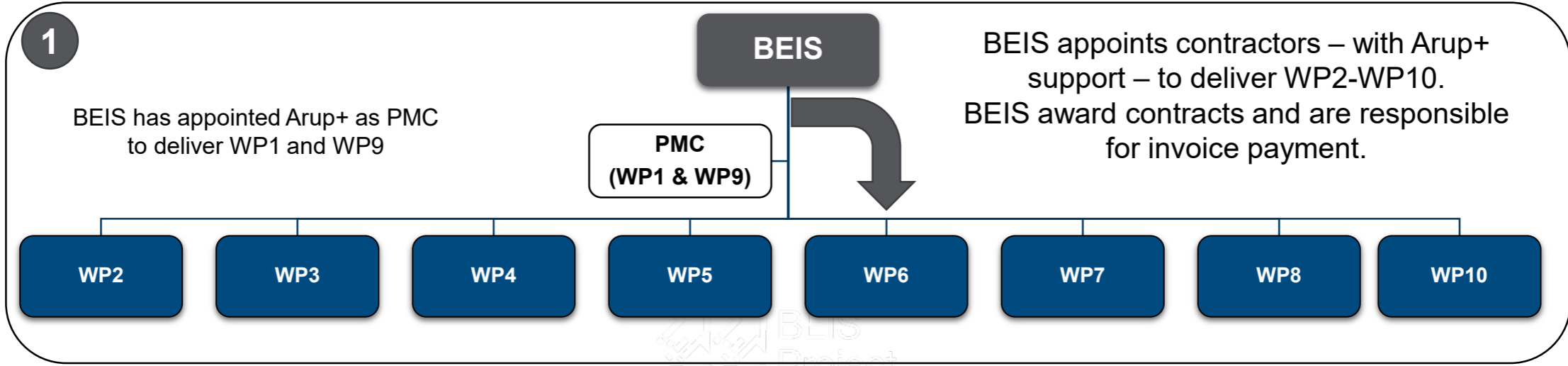
BEIS Programme Manager Hy4Heat

WP8a procurement

Dr. Steve Loades



BEIS ... working with Arup+ ... on procurement ...



Arup+ ... procurement exclusion ...

Arup+ proposal committed to abide by this exclusion ...
therefore part of the contract with BEIS

Invitation to Tender for Programme Management Contractor (PMC) for UK hydrogen for heat demonstration

Tender Reference Number: 1318/06/2017



C: Conflict of interest

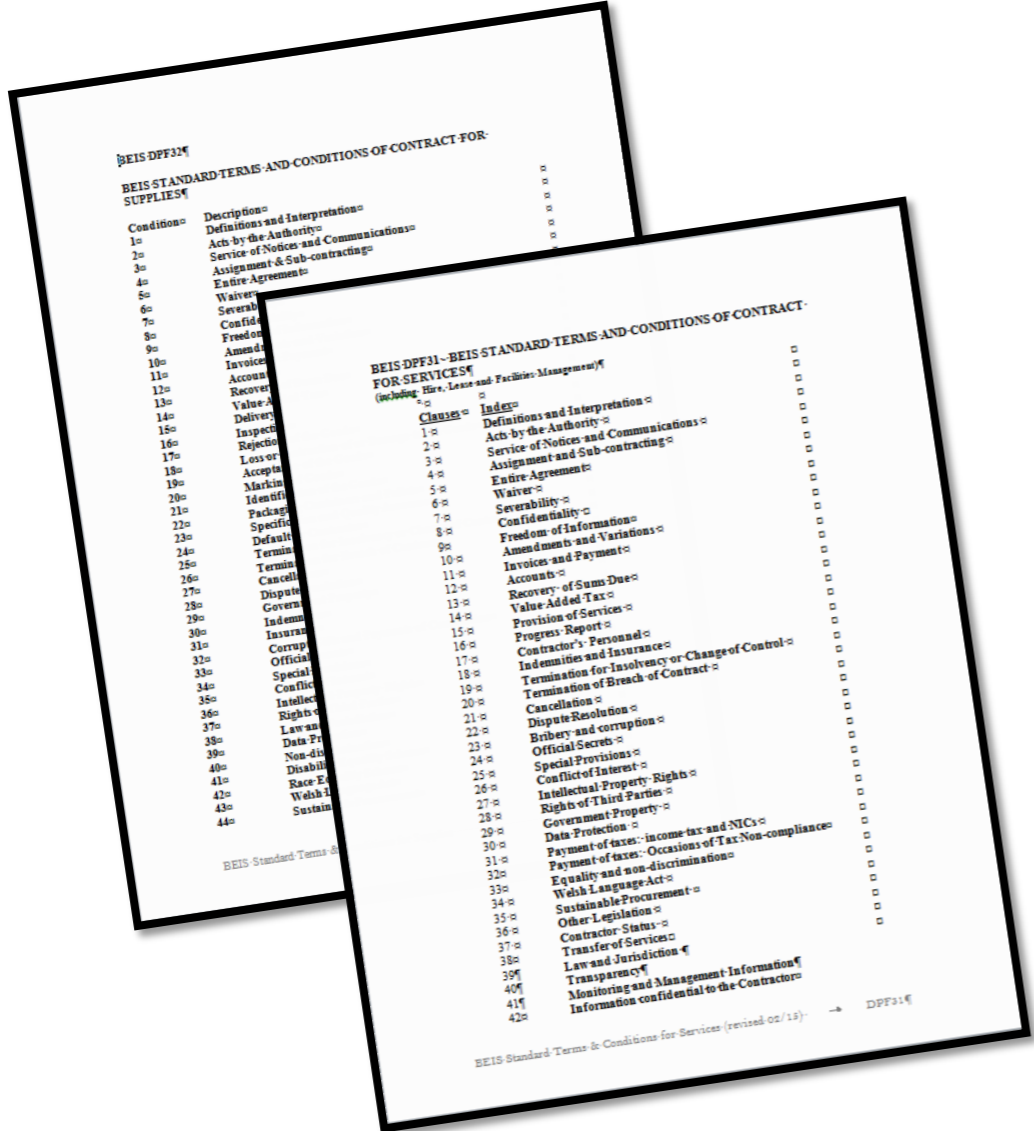
The appointed programme management contractor for this ITT will undertake a central role in developing the detailed technical design and specification of subsequent work packages (WP2-WP8) and assisting with procurement and award procedures.

BEIS therefore considers that there is no means by which it can ensure compliance with the duty to treat economic operators equally in accordance with regulation 18(1) of the Public Contracts Regulations 2015 other than by excluding the company or consortium appointed to deliver the PMC role for this ITT from the procurement processes for subsequent work packages.

In their tender response, tenderers are required to give a commitment to abide by this exclusion unless they can prove that their involvement in preparing the procurement procedure for subsequent work packages is not capable of distorting competition.



BEIS terms and conditions (Ts & Cs)



- BEIS standard Ts & Cs are expected to form the basis of any contract
- BEIS will publish the final version of the Ts & Cs at the time of any ITT
- These will be final and any bids submitted on condition that Ts & Cs are amended will be effectively submitting a non-compliant bid
- BEIS are happy to share these documents

Group or consortium bids

BEIS welcome bids from consortia / groups... as well as large(r) single entities

Some pointers:

- Single proposal
 - make clear the proposed role for each partner, the lead contact, the organisation and governance
 - set out how any sub-contractors will be managed and the % of the tendered activity (in terms of £) that will be sub-contracted
- Set out proposed arrangements, if a consortium is not proposing to form a corporate entity
 - BEIS reserves the right to require a successful consortium to form a single legal entity
- BEIS recognises that arrangements in relation to consortia may (within limits) be subject to future change
 - therefore respond in the light of the arrangements as currently envisaged
 - Notify BEIS of any future proposed change, so that a further assessment by applying the selection criteria to the new information provided can be made

Criteria – getting the balance right



Proposals are scored and ranked:

- using a range of weighted criteria
- cost / price is always a criterion



Full / final details are included in ITTs

BEIS reserves the right to award contract on written bid only

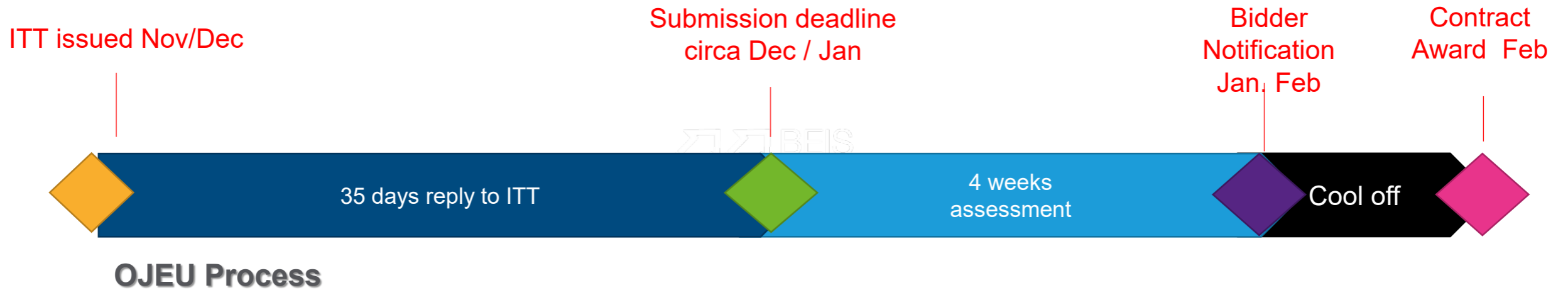
Nb. Bidders are strongly advised to structure their proposals to cover each of the criteria

Transparency

- In the interests of fairness, today's information will be made available to for all potential bidders
 - Linked with the PIN notice
 - Including Q&A from panel session in an anonymised form



ITT key dates (indicative)



ITT key dates (indicative)



TO BE CONFIRMED!



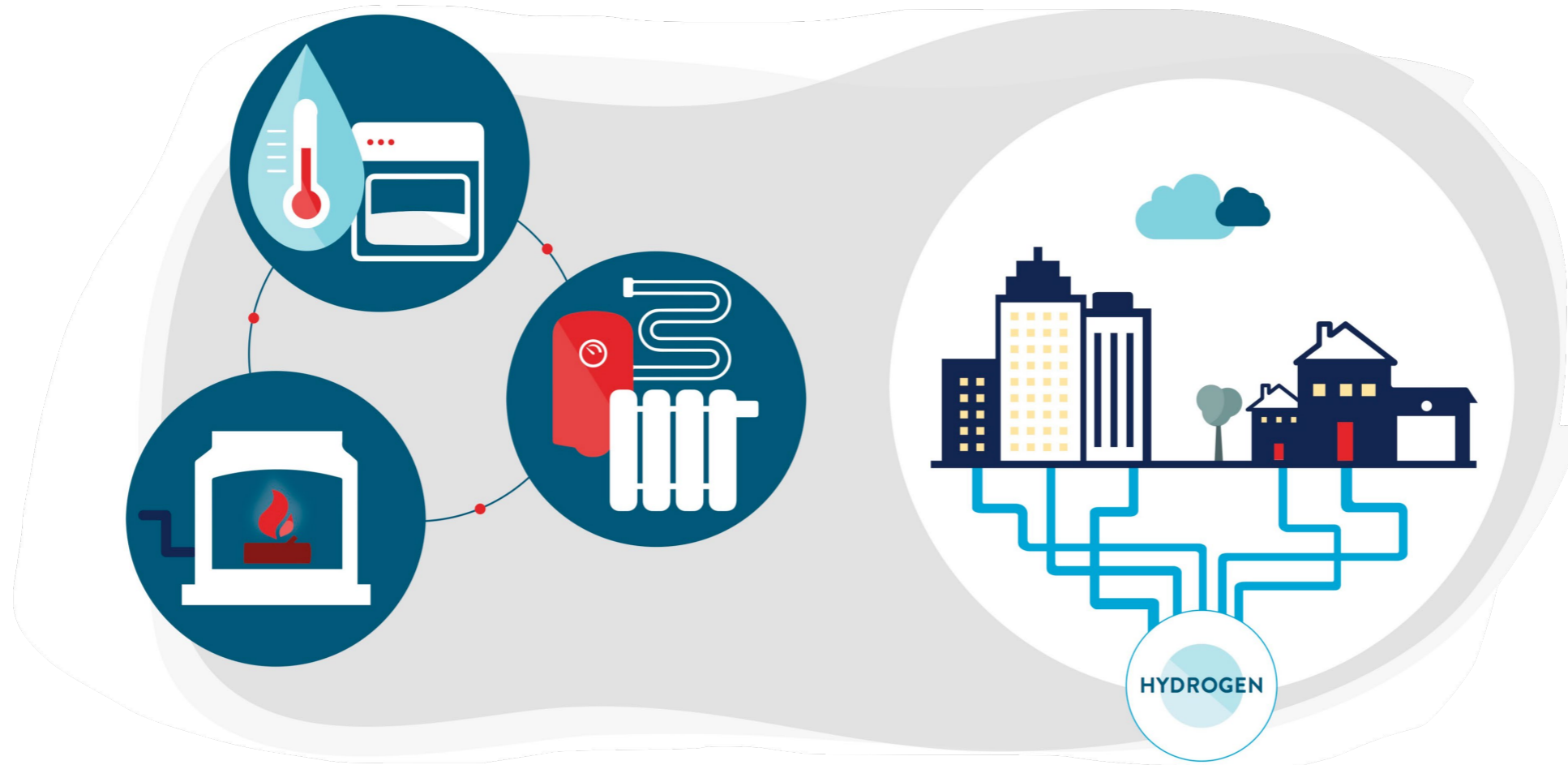
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Panel Q&A and discussion



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Roundtable discussions



One to one sessions



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