

# Early Competition Models

## Workshop 1

26 September 2019

# Today's agenda

1	Welcome and introductions	Hannah Kirk-Wilson	9:30 – 9:45
2	Scene set from Ofgem	James Norman	9:45 – 10:00
3	Project scope, timelines and required inputs	Hannah Kirk-Wilson	10:00 – 10:15
4	Key model dimensions to consider	Alaric Marsden/ Greg Yap	10:15 – 11:00
5	Possible early competition models	Alaric Marsden/ Greg Yap	11:00 – 12:00
Lunch			12:00 – 12:30
6	Principles and potential evaluation criteria	Alaric Marsden/ Greg Yap	12:30 – 13:15
7	Summary of today's workshop and next steps	Hannah Kirk-Wilson	13:15 – 13:45

# 1. Welcome and introductions



## 2. Introduction from Ofgem



### 3. The Early Competition Plan



# The ESO has been asked to produce a plan that sets out how two models of early competition could be implemented

The plan is intended to help inform Ofgem's thinking on how to take competition forward. We anticipate this will be submitted in February 2021.

The plan is likely to explore....

Early & very early competition models

Competition for non-network solutions

Design-only competitions

The role ESO could play in distribution level competition

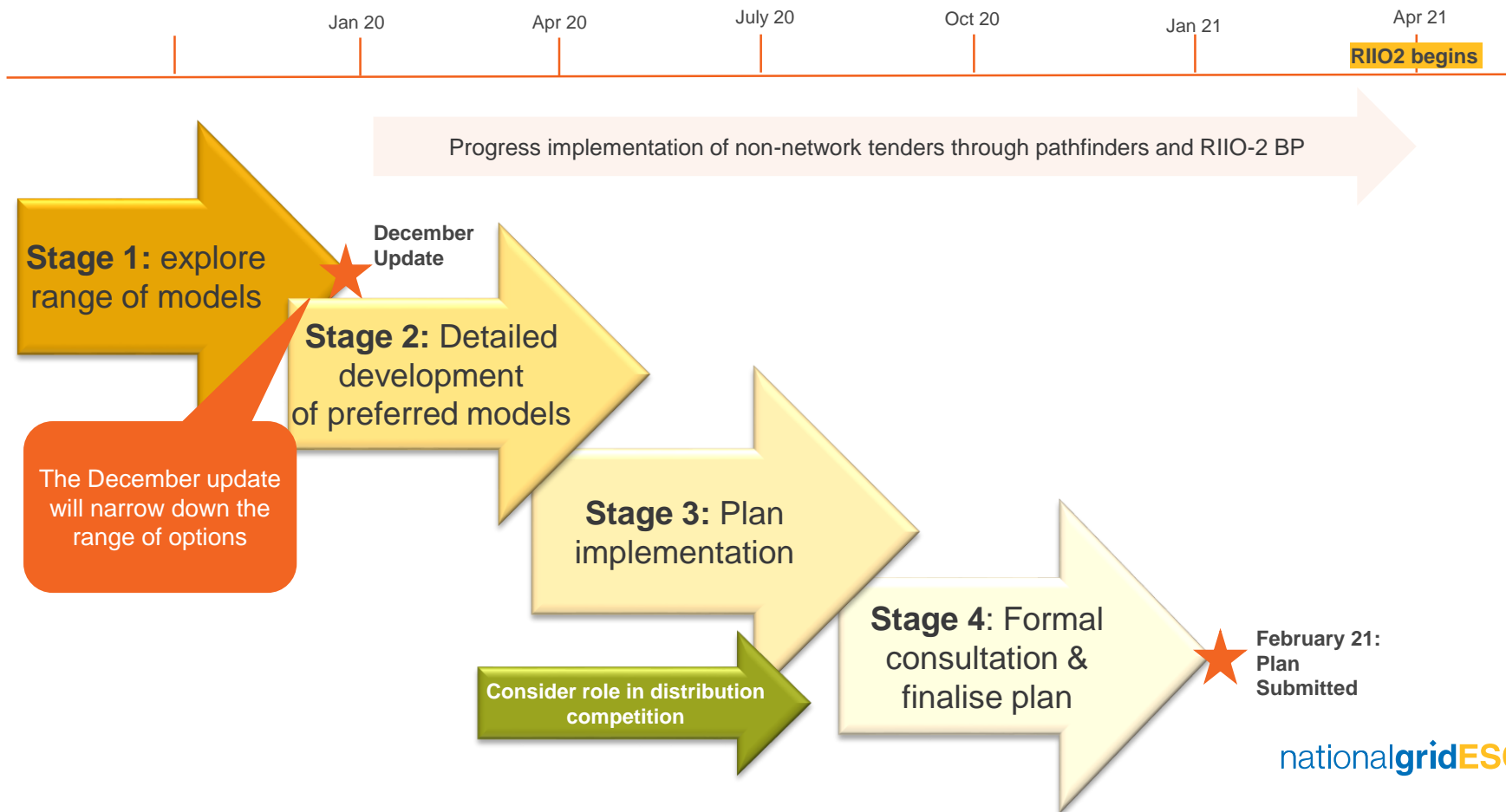
The plan should set out.....

The scope and form of each model, and associated processes

Pathways and timeframes for introduction, including legislative and framework changes

Roles and responsibilities of different parties

# Indicative stages and timeline to submission of final plan in Feb 2021



# We are currently in Stage 1 and working towards an update to Ofgem in December 2019

## This update will set out:

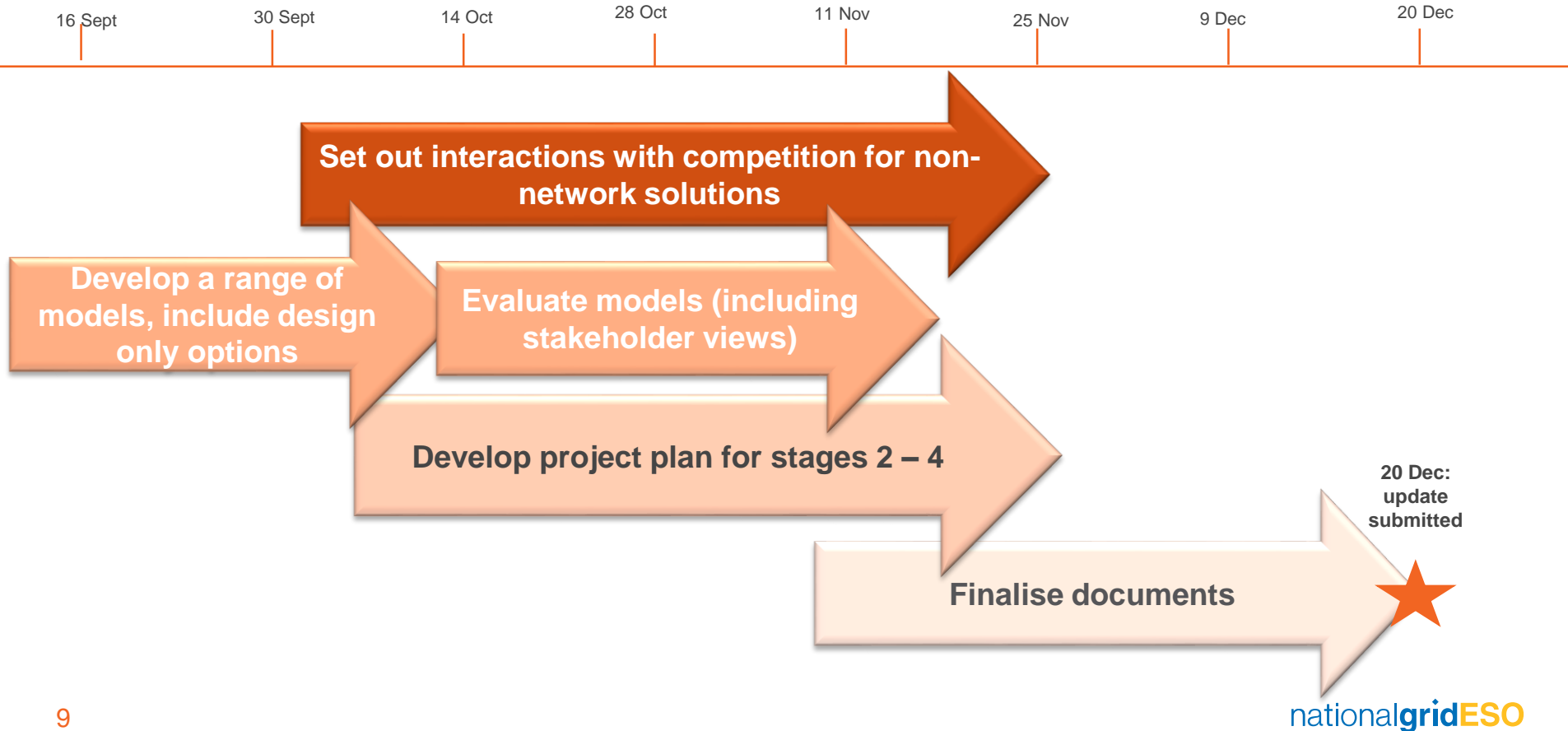
- 1) the interaction with existing development of ongoing work to tender for non-network solutions
- 2) two (or more) models that ESO will pursue further and our justification for this
- 3) the project plan for Stages 2 to 4



**This workshop is focussing on the development of models**

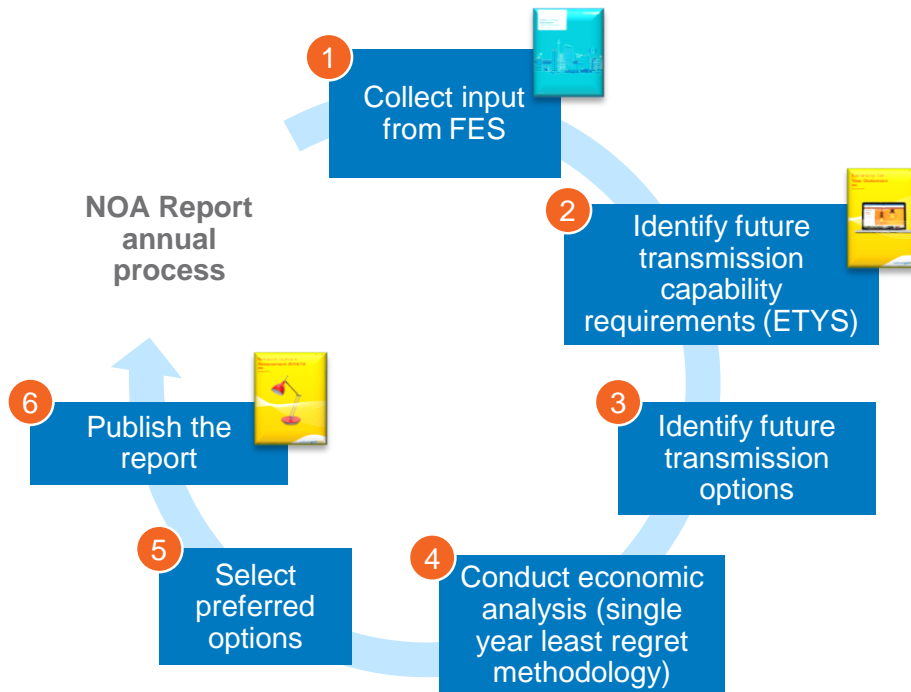


# Timeline and plan for Stage 1



# The NOA process will interact with any potential early model









The NOA annually re-assesses the need for transmission reinforcements and recommends a preferred option for identified system needs



Inputs	<ul style="list-style-type: none"><li>■ Four <b>Future Energy Scenarios</b> (FES): Two Degrees, Community Renewables, Consumer Evolution and Steady Progression</li><li>■ System needs are assessed in the Electricity Ten Year Statement (ETYS)</li><li>■ Options proposed – by the TOs for boundary needs; tenders for solutions for voltage, stability, thermal and constraint solutions (market participants, TOs, DNOs)</li></ul>
Methodology	<ul style="list-style-type: none"><li>■ Single year <b>Least Regret</b> methodology (which considers optimum delivery year, economic regret and implied probability of scenarios)</li><li>■ Based on expected capital investment and constraints under each FES.</li></ul>
Outputs	<ul style="list-style-type: none"><li>■ <b>Decision</b> for each option: proceed; delay; hold; stop; or do not start</li><li>■ Recommended <b>delivery dates</b> for options considered critical</li><li>■ Eligibility of options for <b>competition</b></li></ul>

# Project identification by network companies

Network companies should consider different criteria when deciding whether to flag potential projects as applicable for early or late competition in their Business Plans

Criteria	Very early/early model	Late model
'Threshold' value	 £50mn	 £100mn
Contestability	 If meet threshold value, network companies must 'provisionally unflag' project by explaining why there is no reasonable probability of an alternative solution.	 Not applicable.
Separable	 Not applicable.	 Ownership of asset under consideration and other existing assets can be clearly separated
New	 Not applicable.	 New asset or complete replacement of existing asset.

Ofgem will then examine flagged and provisionally unflagged projects, consider which are potentially eligible for early competition and consult on their draft determinations

# The ESO is already introducing competition in comparing asset investment with non-network solutions

- Currently, we are exploring in our **Pathfinder Projects** how this can be applied to voltage, stability and constraint management challenges.
- The **Early Competition Plan** will explore how we can build on this to consider non-network alternatives to large transmission investment projects.

**‘Non-network solutions’** refers to any solutions not provided by an incumbent network owner or CATO

These could be commercial services using existing assets, or new build assets connected to the networks

## 4. Key model dimensions to consider



# Our mission

- 1) To explore the **different model dimensions** that constitute the potential Design, Build & Own (DBO) and Design Only (DO) early competition models, applicable for both network and non-network / commercial solutions.
- 2) To identify and discuss **all possible early DBO and DO models** and provide an initial view on the workability of these models.
- 3) To have an initial discussion on the underlying principles and **evaluation criteria** that will help us select our preferred models

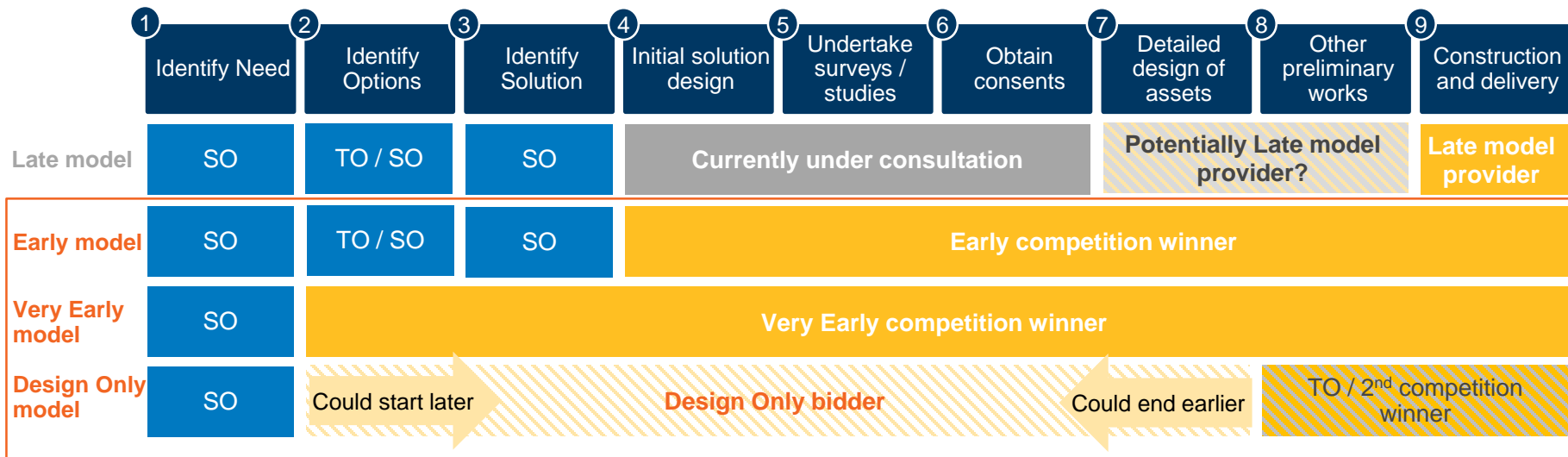
# Recap of the project lifecycle

	1	2	3	4	5	6	7	8	9
	Identify Need	Identify Options	Identify Solution	Initial solution design	Undertake surveys / studies	Obtain consents	Detailed design of assets	Other preliminary works	Construction and delivery
Description of activity	<ul style="list-style-type: none"> <li>Forward looking assessment of constraints across boundaries and need for intervention to resolve</li> </ul>	<ul style="list-style-type: none"> <li>Identify approach to meet need (e.g. network vs. non-network solution)</li> <li>Consider potential for competition</li> <li>TOs (and 3<sup>rd</sup> parties) offer potential solutions</li> </ul>	<ul style="list-style-type: none"> <li>Consider each new option and those “in train”</li> <li>For each:                             <ul style="list-style-type: none"> <li>Proceed</li> <li>Delay</li> <li>Hold</li> <li>Stop</li> <li>Do not start</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Undertake layout drawings and decide on functional specification</li> <li>Conduct initial desk-based studies and site surveys</li> </ul>	<ul style="list-style-type: none"> <li>Route corridor assessment</li> <li>Environmental Impact Assessment</li> <li>On-site visits</li> </ul>	<ul style="list-style-type: none"> <li>Planning permission, land rights</li> <li>Development Consent Order (DCO)</li> <li>Agree permitted Limits of Deviation</li> </ul>	<ul style="list-style-type: none"> <li>Component designs, layout drawings</li> <li>Logistics and construction techniques</li> </ul>	<ul style="list-style-type: none"> <li>Pre-construction works</li> </ul>	<ul style="list-style-type: none"> <li>Construction and delivery to owner</li> </ul>



*Uncertainty reflects demand, generation and load uncertainty as well as the cost of asset uncertainty*

# At the outset, there are four broad categories of competition models – but dozens of variants exist



- Today's workshop will cover the three broad early competition models – we will not discuss the Late model
- There are a multitude of variants of the above models. To identify a comprehensive (but not exclusive) set of model variants we will consider the key model dimensions
- Although the focus of today will be on transmission assets, it may be applicable to the distribution sector (where it will have an additional set of benefits / challenges)



# There are five model dimensions to consider when designing an early competition model variant

## A. Tender point & competition scope

The project stage at which the tender is initiated and completed, and the scope of the competitive process

## B. Tender design

Process to identify which needs are suitable for tender, preparation for the tender and the tender design

## C. Delivery rights & obligations

The bid evaluation process and the delivery rights (including the treatment of IP)

## D. Risk & return

The allocation of risk and return, and the approach to managing uncertainty

## E. Roles

The specification of roles of the participants (Ofgem, ESO, TOs, bidders and other third parties)

**By varying these dimensions, we can identify and outline most early competition models**

# A. Tender point & competition scope

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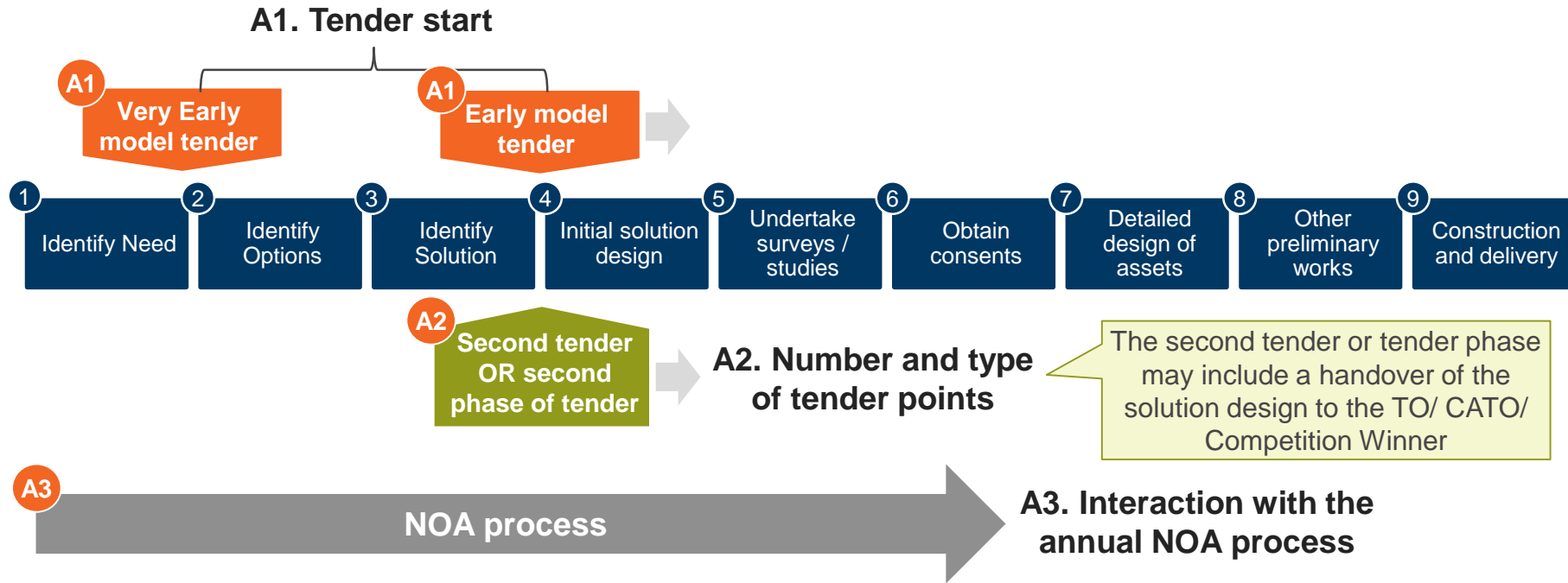
B. Tender design

C. Delivery rights & obligations

D. Risk & return

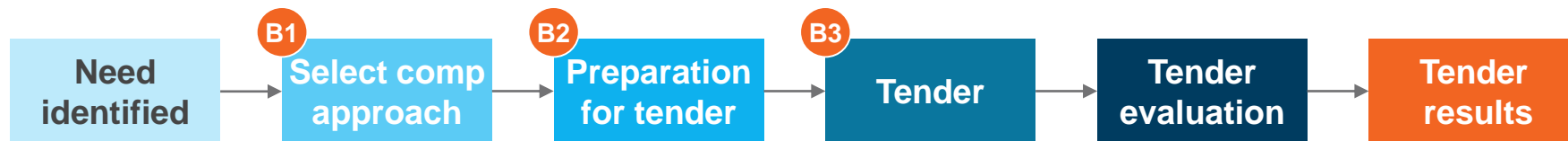
E. Roles

The project stage at which the tender is initiated and completed, and the scope of the competitive process



# B. Tender design

Process to identify which needs are suitable for tender, preparation for the tender and the tender design



## B1. Identify which options are suitable for tender

- Decision process to identify which options are suitable for early competition (and which type)
- Legal viability of desired bidders / outcomes to meet needs

## B2. If yes...preparation for the tender

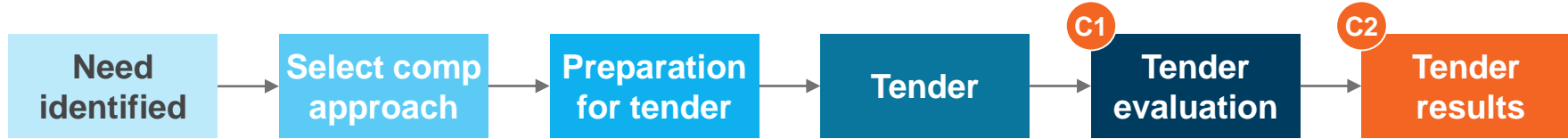
- Non-network solutions and interaction with the NOA (e.g. with ESO's Pathfinder process)
- Info provided to bidders to ensure level playing field and a fair and transparent process
- Use of "reference design"
- Prequalification process

## B3. Tender design and parameters

- Parameters for bidders to compete on:
  - Technical specifications
  - Bid metric (and financial assumptions)
  - Firmness of the bid
  - Info (and other tender details) required for comparability
  - To what extent is the need (or needs) met
  - Other financial assumptions (WACC etc)
- Decide on design, build, operate vs design only
- Tender mechanism (auction process, bidding, competitive dialogue)

# C. Delivery rights & obligations

The bid evaluation process and the delivery rights (including the treatment of IP)



## C1. Bid evaluation

- Methodology to evaluate:
  - Bids, depending on info provided / tender design (assess criteria for financial and technical evaluations)
  - Single or multiple tenders
  - Different types of solutions and durations
  - Unproven solutions / high tech & delivery risks

## C2. Delivery rights and obligations

- Rights to develop the project (or rights to develop solutions if there are multiple phases)
- Duration of contract rights
- Treatment of IP rights
  - Interface with TO / delivery provider if 'handing over' project designs
- Obligations to deliver, contingency planning and penalties for non-delivery

# D. Risk & return



The allocation of risk and return, and the approach to managing uncertainty

## D1. Return method

- Cost and cost recovery
- Rate of return on investment (incl. for IP)
- Ex-post efficiency assessments
- Allowance for re-openers
- Performance incentives (early or outperformance on delivery)
- Penalties for non-delivery

## D2. Risk allocation

- Risk allocation for foreseen and unforeseen risks
- Ownership and allocation of liabilities
- Non-delivery risk (tech failure, consenting issues)
- Risk of handover to TO / delivery provider and other stakeholder issues
- Project cancellation or required changes if need disappears (via NOA)
- Extent of ex-post accountability and potential actions (e.g. to deal with cost overruns)

### Options for treating IP

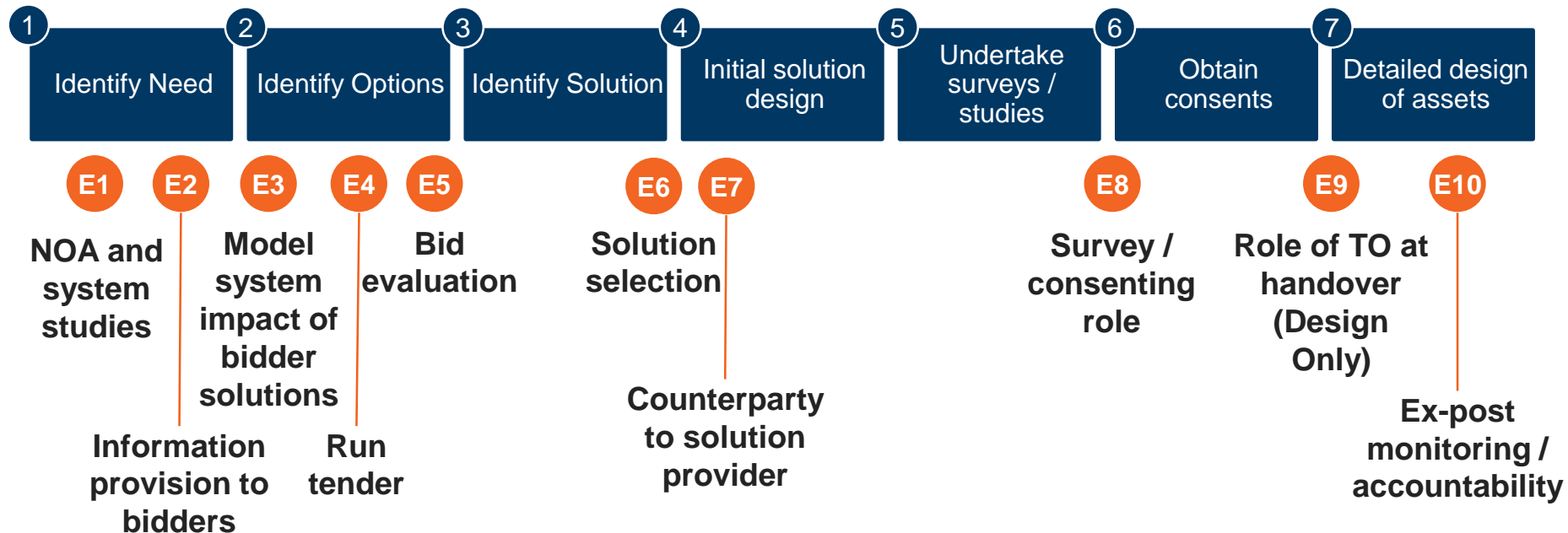
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|---|---|
| 1. A success fee, rewarded ex-post  | 4. TO/CATO/Competition winner buys or licenses IP (opportunity to also buy losing IP?)            |
| 2. A penalty (or a commitment fund by the competition winner that can be reduced) | 5. Successful bidder required to form a consortium or partnership with the TO / delivery provider |
| 3. Successful bidder retains a share of cost savings                              |   |

# E. Roles



The specification of roles of the participants (Ofgem, ESO, TOs, bidders and other third parties)

Who is best placed to undertake the following activities (if any), and to what depth?



# Key questions

What other model dimensions should be considered in developing early competition model variants?

## A. Tender point & competition scope

- A1. Tender start**
- A2. Number and type of tender points**
- A3. Interaction with the NOA process**

## B. Tender design

- B1. Identify which needs are suitable for tender**
- B2. Preparation for the tender**
- B3. Tender design and parameters**

## C. Delivery rights & obligations

- C1. Bid evaluation**
- C2. Delivery rights and obligations**

## D. Risk & return

- D1. Return method**
- D2. Risk allocation**

## E. Roles

- E1. NOA and system studies**
- E2. Information provision**
- E3. Model impact of solutions**
- E4. Run tender**
- E5. Bid evaluation**
- E6. Solution selection**
- E7. Counterparty to solution**
- E8. Survey / consenting role**
- E9. Role of TO at handover (DO)**
- E10. Ex-post monitoring**

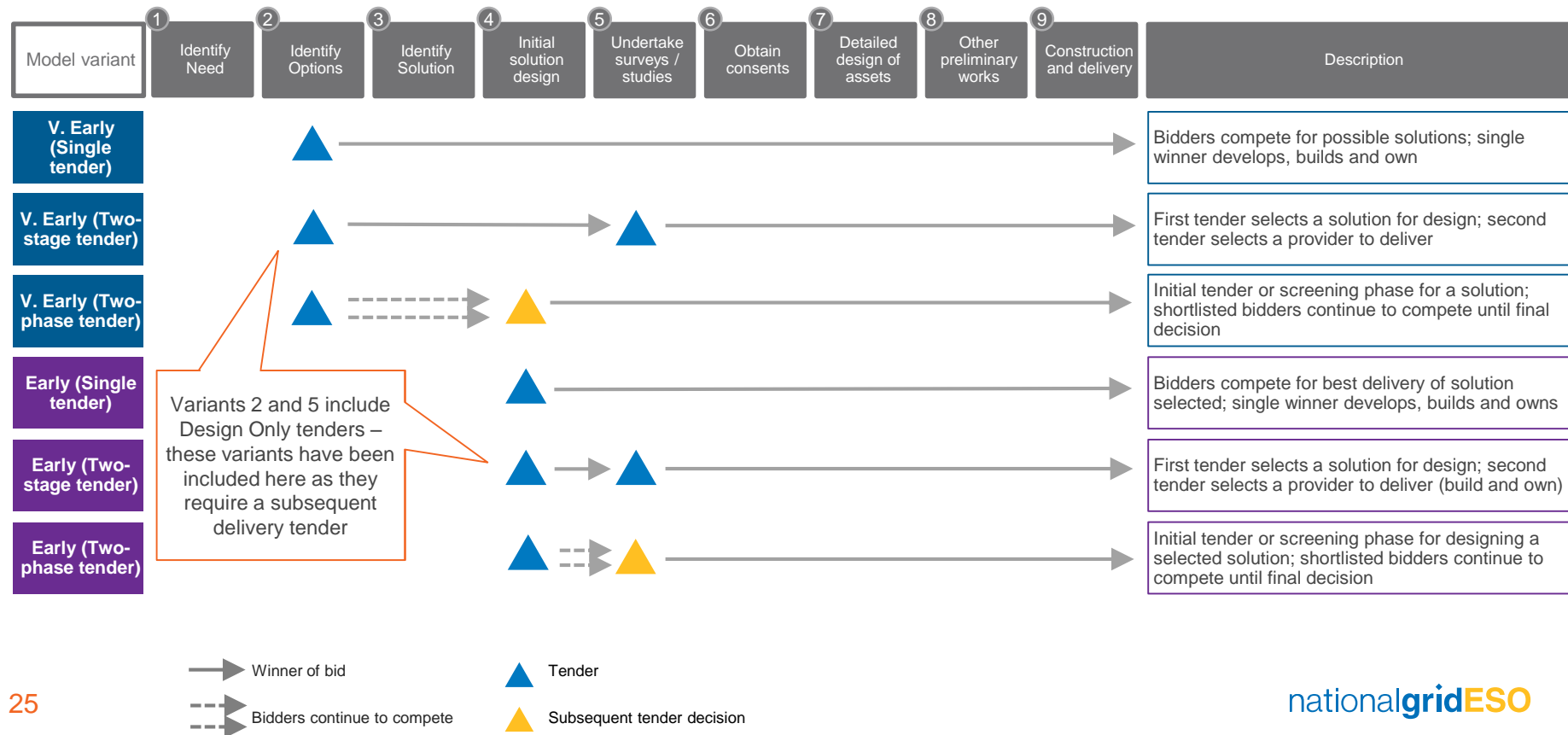
## 5. Possible early competition models





# Design, Build and Own (DBO): Model variants

Design, Build and Own

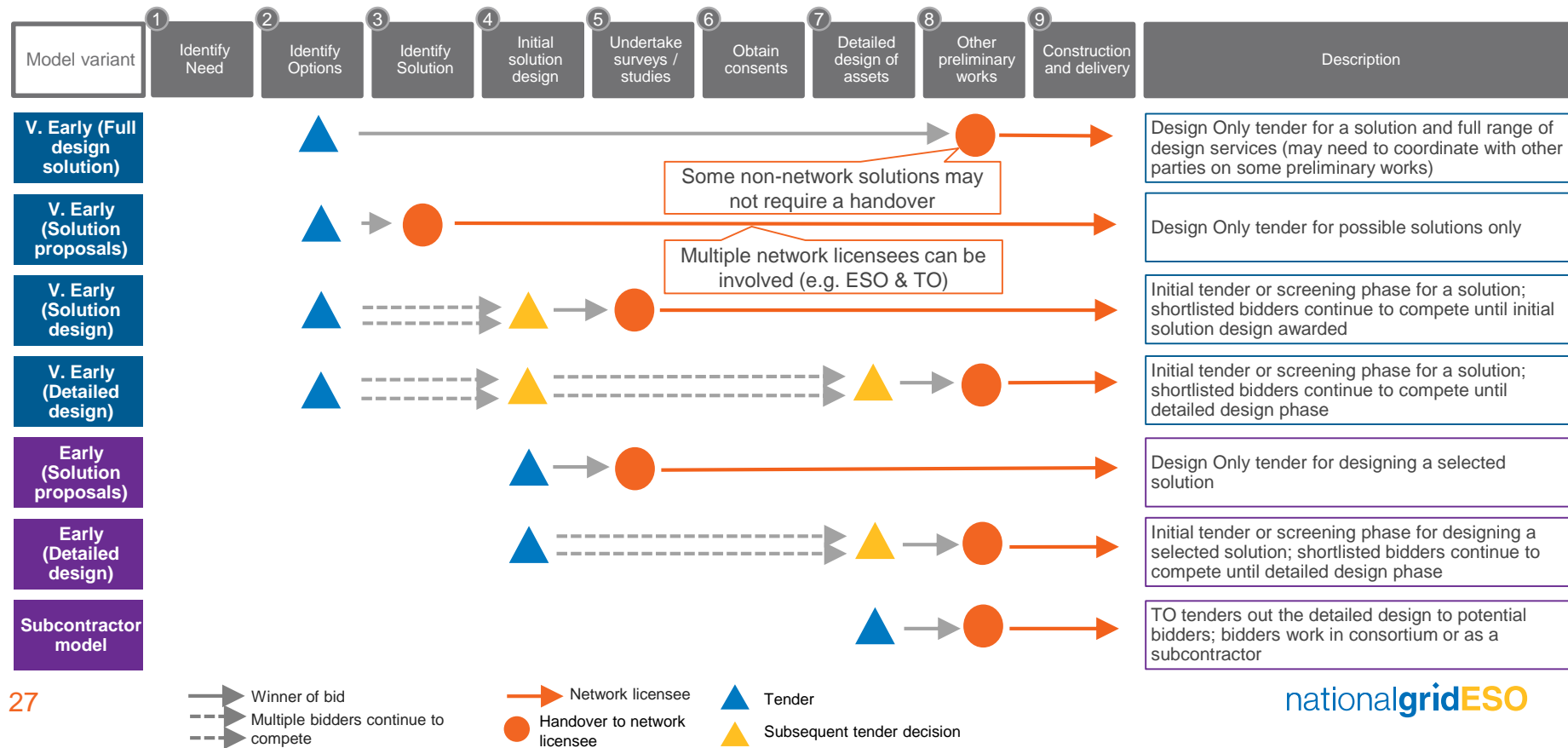


# The model dimensions would need to be worked out for each model variant

## Design, Build and Own

Model variant	A. Tender point & competition scope	B. Tender design	C. Delivery rights & obligations	D. Risk & return	E. Roles
V. Early (Single tender)	<b>First tender:</b> After stage 1 ("Identify Need")	<b>Identify which needs are suitable for tender</b> <ul style="list-style-type: none"> <li>How would it be determined which competition model is best suited to meet the need?</li> <li>Which bidders would be able to participate with or without legislation?</li> </ul> <b>Preparation for the tender:</b> <ul style="list-style-type: none"> <li>What is the scope for non-network solutions?</li> <li>What information needs to be provided to bidders?</li> </ul> <b>Tender design and parameters:</b> <ul style="list-style-type: none"> <li>What should bidders compete on?</li> <li>What is the appropriate tender mechanism?</li> </ul>	<b>Bid evaluation:</b> <ul style="list-style-type: none"> <li>How should bids (of different types and durations) be evaluated?</li> </ul> <b>Delivery rights and obligation:</b> <ul style="list-style-type: none"> <li>How should single / multiple winners be treated in each model?</li> <li>What are the obligations to deliver?</li> <li>What is the penalty for non-delivery?</li> <li>What is the contingency plan for non-delivery?</li> </ul>	<b>Return:</b> <ul style="list-style-type: none"> <li>How should investments be remunerated? (e.g. one off reward, RAB-based, fixed revenue stream or cap &amp; floor)</li> <li>What performance incentives are required?</li> </ul> <b>Risk allocation:</b> <ul style="list-style-type: none"> <li>How should risk be allocated and mitigated? (e.g. non-delivery risk due to tech failure / default / consenting issues)</li> <li>How should ex-post accountability be handled?</li> <li>How should IP be treated?</li> </ul>	<p>Discussion of roles for each of the following activities (throughout the lifecycle and auction process):</p> <ul style="list-style-type: none"> <li>NOA and system studies</li> <li>Information provision to bidders</li> <li>Model system impact of bidder solutions</li> <li>Run tender</li> <li>Bid evaluation</li> <li>Solution selection</li> <li>Survey / consenting role</li> <li>Role of 2<sup>nd</sup> competition winner at handover</li> <li>Ex-post monitoring / accountability</li> </ul>
V. Early (Two-stage tender)	<b>First tender:</b> After stage 1 <b>Second tender:</b> After stage 4 ("Initial solution design") or 7 ("Detailed design")				
V. Early (Two-phase tender)	<b>First phase:</b> After stage 1 <b>Second phase:</b> Any stage				
Early (Single tender)	<b>First tender:</b> After stage 3 ("Identify solution")				
Early (Two-stage tender)	<b>First tender:</b> After stage 3 <b>Second tender:</b> After stage 4 or 7				
Early (Two-phase tender)	<b>First phase:</b> After stage 3 <b>Second phase:</b> Any stage				

# Design only (DO): Model variants



# The model dimensions would need to be worked out for each variant

Design only

Model variant	A. Tender point & competition scope	B. Tender design	C. Delivery rights & obligations	D. Risk & return	E. Roles
V. Early (Full design solution)	<b>Tender:</b> After stage 1 <b>Handover:</b> After stage 7	<b>Identify which needs are suitable for tender</b> <ul style="list-style-type: none"> <li>How would it be determined which competition model is best suited to meet the need?</li> <li>Which bidders would be able to participate with or without legislation?</li> </ul>	<b>Bid evaluation:</b> <ul style="list-style-type: none"> <li>How should bids (of different types and durations) be evaluated?</li> </ul>	<b>Return:</b> <ul style="list-style-type: none"> <li><b>How should investments be remunerated?</b> (e.g. one off reward, RAB-based, fixed revenue stream or cap &amp; floor)</li> <li>What performance incentives are required?</li> </ul>	Discussion of roles for each of the following activities (throughout the lifecycle and auction process): <ul style="list-style-type: none"> <li>NOA and system studies</li> <li>Information provision to bidders</li> <li>Model system impact of bidder solutions</li> <li>Run tender</li> <li>Bid evaluation</li> <li>Solution selection</li> <li><b>Survey / consenting role</b></li> <li>Role of TO at handover</li> <li><b>Ex-post monitoring / accountability</b></li> </ul>
V. Early (Solution proposals)	<b>Tender:</b> After stage 1 <b>Handover:</b> After stage 2	<b>Preparation for the tender:</b> <ul style="list-style-type: none"> <li><b>What is the scope for non-network solutions?</b></li> <li>What information needs to be provided to bidders?</li> </ul>	<b>Delivery rights and obligation:</b> <ul style="list-style-type: none"> <li><b>How should single / multiple winners be treated in each model?</b></li> <li>What are the obligations to deliver?</li> <li>What is the penalty for non-delivery?</li> <li>What is the contingency plan for non-delivery?</li> </ul>	<b>Risk allocation:</b> <ul style="list-style-type: none"> <li>How should risk be allocated and mitigated? (e.g. non-delivery risk due to tech failure / default / consenting issues)</li> <li><b>How should ex-post accountability be handled?</b></li> <li><b>How should IP be treated?</b></li> </ul>	
V. Early (Solution design)	<b>First phase:</b> After stage 1 <b>Second phase:</b> After stage 3 <b>Handover:</b> After stage 4				
V. Early (Detailed design)	<b>First phase:</b> After stage 1 <b>Second phase:</b> After stage 3 <b>Third phase:</b> After stage 6 <b>Handover:</b> After stage 7				
Early (Solution proposals)	<b>Tender:</b> After stage 3 <b>Handover:</b> After stage 4	<b>Tender design and parameters:</b> <ul style="list-style-type: none"> <li>What should bidders compete on?</li> <li>What is the appropriate tender mechanism?</li> </ul>			
Early (Detailed design)	<b>First phase:</b> After stage 3 <b>Second phase:</b> After stage 6 <b>Handover:</b> After stage 7				
Subcontractor model	<b>Tender:</b> After stage 6 <b>Handover:</b> After stage 7				

Questions that are likely to be more of a focus in Design Only models are **highlighted**

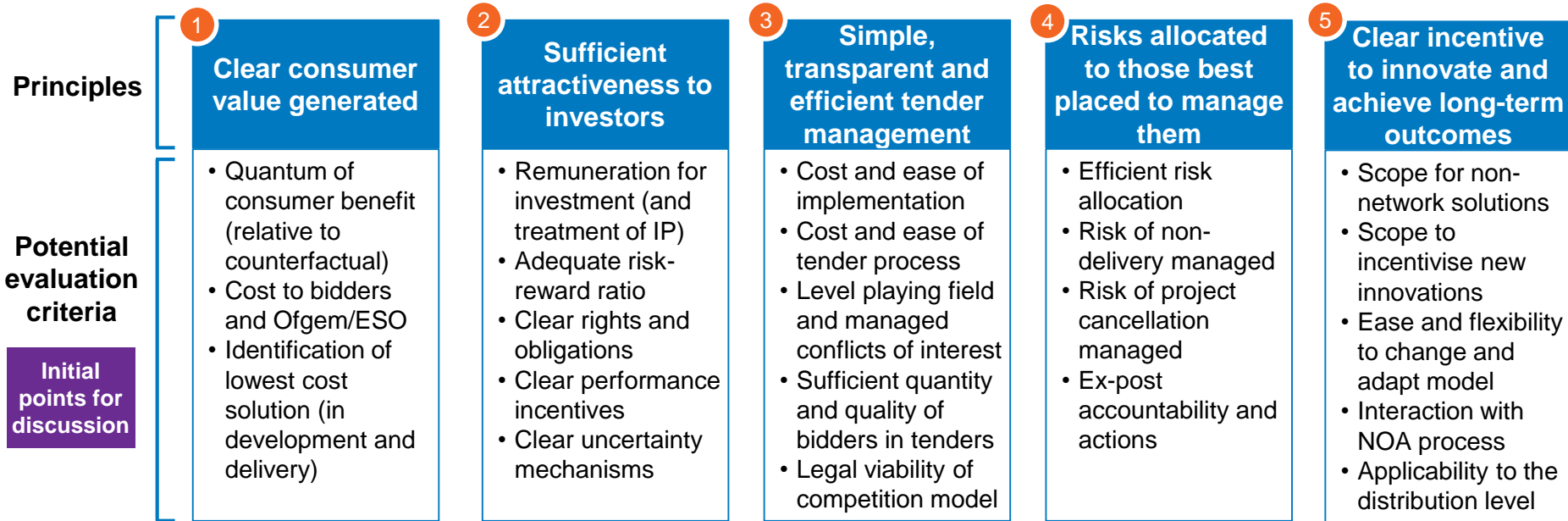
# Key questions on initial views on the different early competition model variants

- 1) What other variants of early competition models should be considered?
- 2) Which models are:
  - a) Potentially workable?
  - b) Workable, but only if certain features are introduced?
  - c) Unworkable?
- 3) Are there fundamental issues that currently prevent some variants from being workable?
- 4) What other questions, issues or challenges have not yet been raised?  
*(e.g. so far, we have not discussed the applicability of these models on the distribution level in too much detail)*

## 6. Evaluation criteria



# We need to agree on a set of assessment principles and criteria to evaluate DBO and DO models



Have we captured an appropriate range of principles to make a model work for all stakeholders?

