

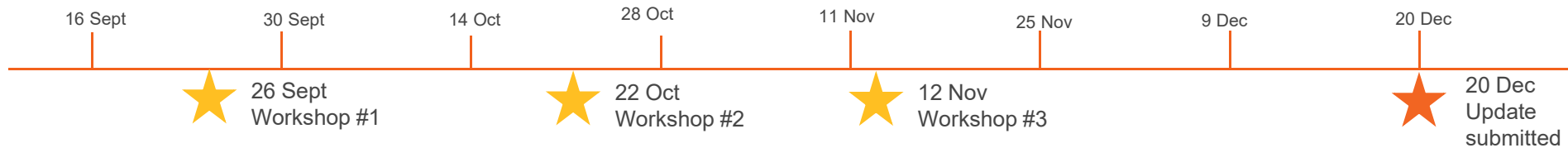
# Early Competition Models

Workshop 3 – 12 November 2019

# Today's agenda

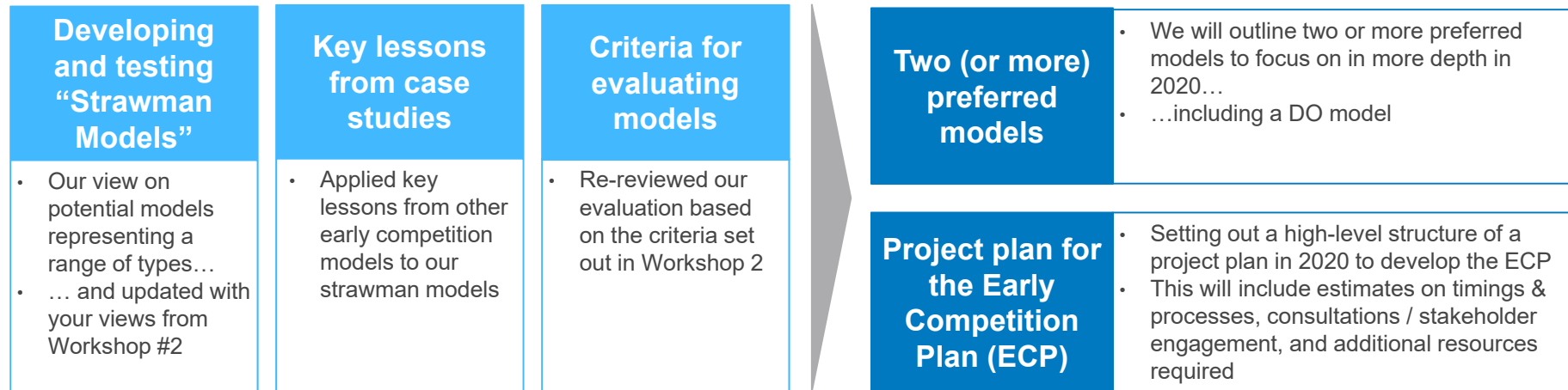
1	Welcome and introductions	Hannah Kirk-Wilson / Sally Thatcher	9:30 – 9:45
2	Recap from previous Workshop and objectives for today	FTI Consulting	9.45 – 10:00
3	Views on updated Strawman Models – DBO	FTI Consulting	10:00 – 11:15
Break			11:15 – 11:30
4	Views on updated Strawman Models – ECM and DO	FTI Consulting	11:30 – 13:00
Lunch			13:00 – 13:30
5	Preparing for the plan in 2020	FTI Consulting	13:30 – 14:45
6	Next steps	Hannah Kirk-Wilson / Sally Thatcher	14:45 – 15:00

# In December 2019 we will submit a project update to Ofgem



Following Workshop #2, we have worked on three key inputs...

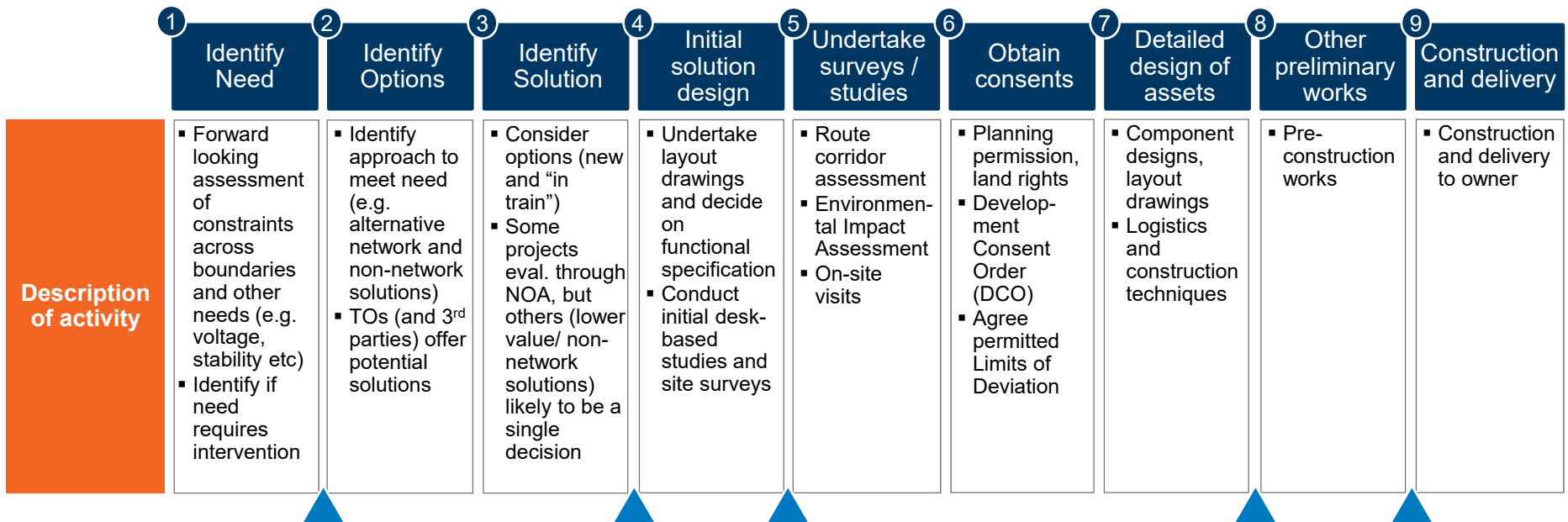
...as we progress towards our Dec update



# 1. Recap on electricity transmission competition models



# The typical investment lifecycle of a transmission project has nine key steps...

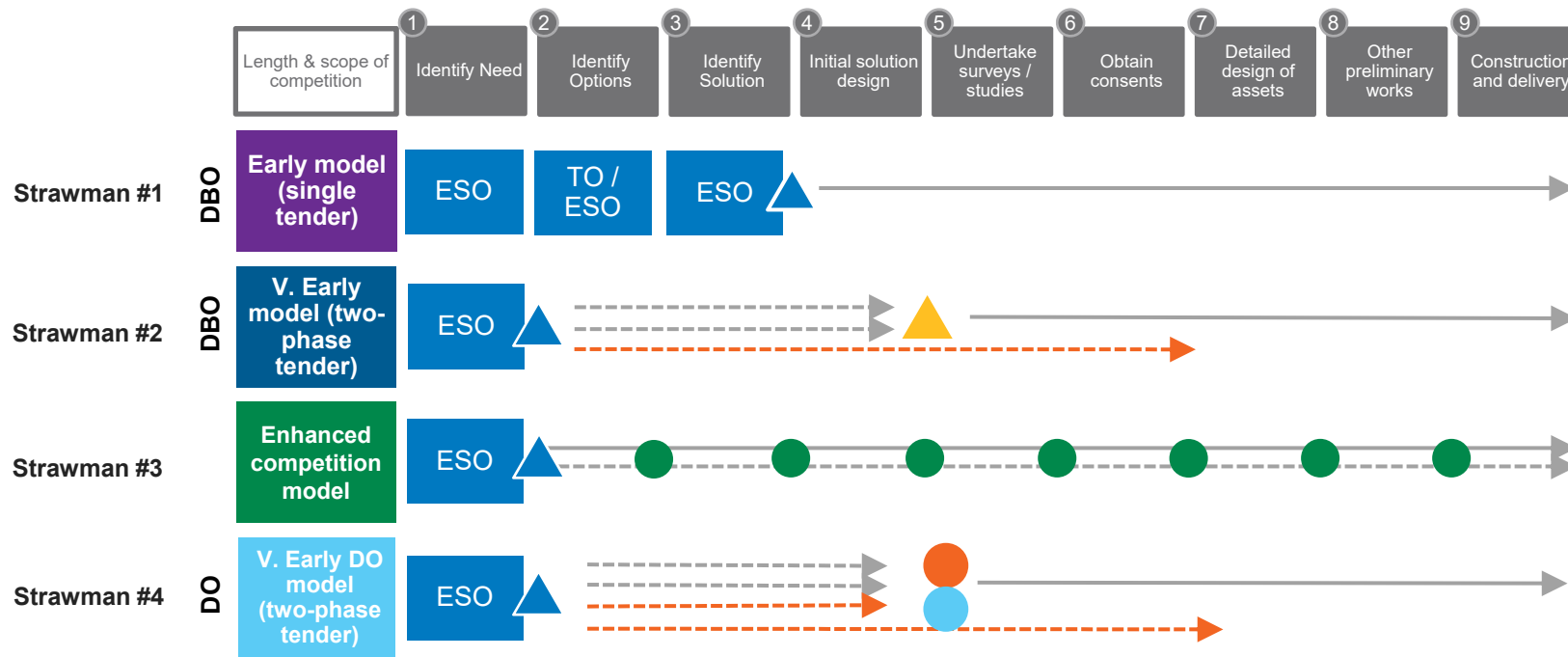


...and competition can be introduced at various points of the investment cycle

<sup>1</sup> Some of the processes may be different in England & Wales and in Scotland (e.g. consenting)

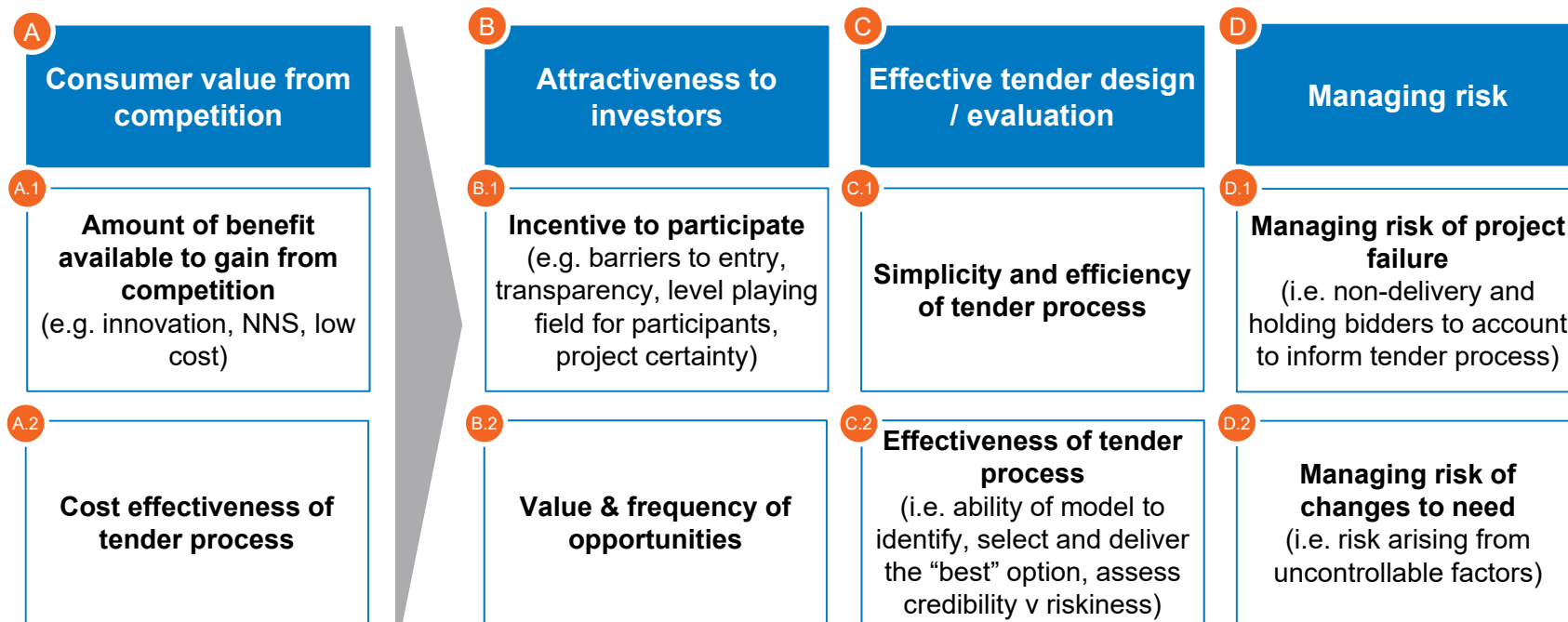
<sup>2</sup> Some lifecycle steps may not occur in the order described (e.g. some environmental impact assessment may occur at an earlier stage to help inform solution)

# In the last Workshop we looked at four Strawman models...



▲ Tender   
 ▲ Subsequent tender decision   
 ● Iterative NOA process (temporal, instead of by stage as shown)   
 ● Handover to incumbent TO   
 ● Handover to winner of subsequent tender   
  Bidders continue to compete   
  Winner of bid   
 - - -> TO reference case / backup option

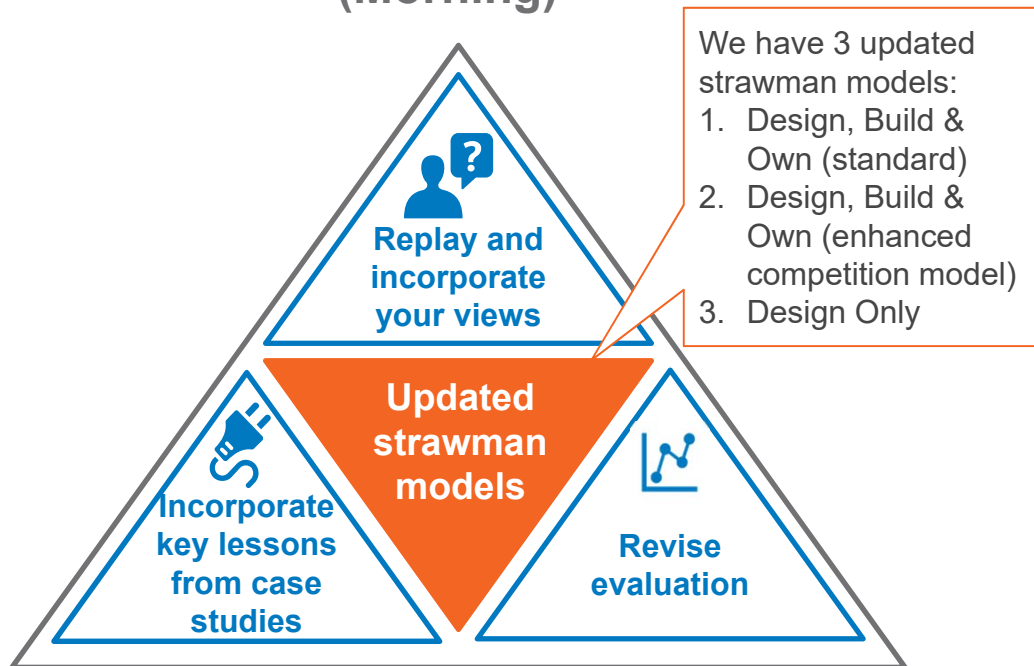
# ...and asked you to take an initial assessment of these models based on our evaluation criteria



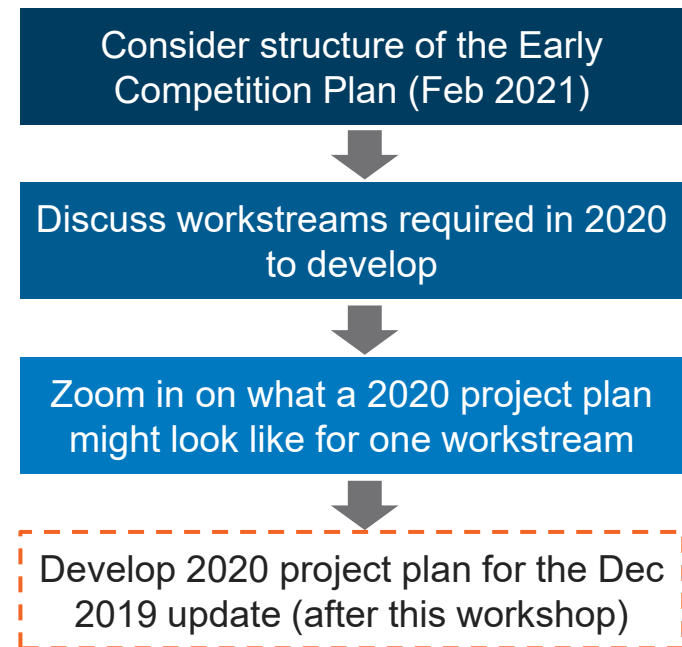
NNS = non-network solutions

# In this Workshop we will present and invite your views on two areas

## Updated strawman models (Morning)

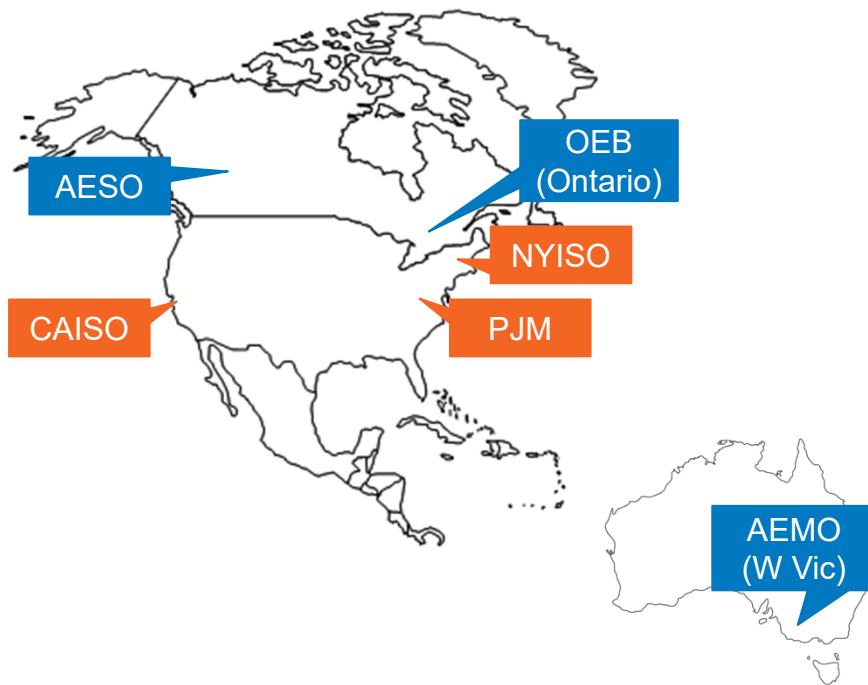


## Project plan (Afternoon)





# To inform the evolution of our strawman models, we have drawn on competitive processes in other jurisdictions



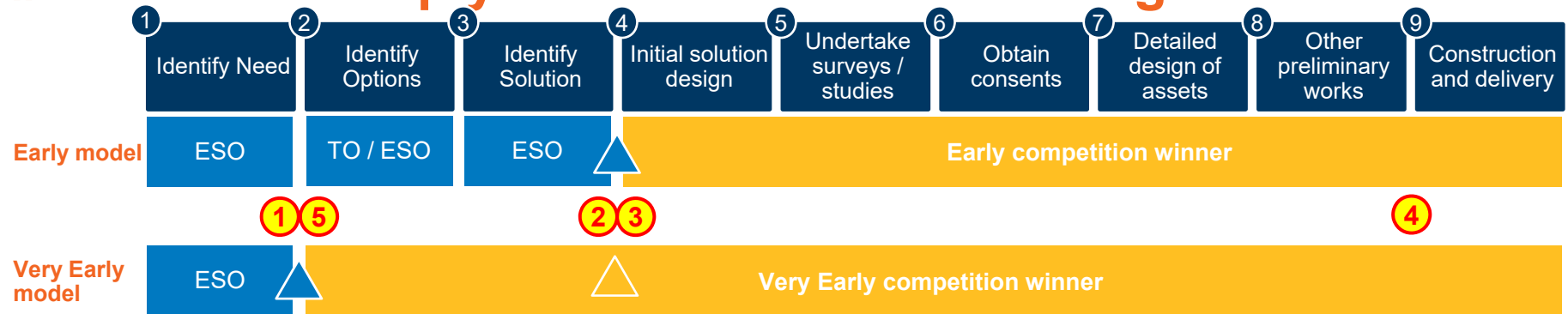
- 1 Established onshore transmission competition**
  - Practical implementation differs by ISO: both Early and Very Early models
  - Relatively few projects (approx. 25) competitively awarded as many fall under 'exceptions'...
  - ...and we have not identified any operational projects
  - Project value has ranged from \$14mn to \$750mn
- 2 New onshore transmission competition**
  - First-of-a-kind tender run to date...
  - ...but plans to run more tenders
  - Only one project tendered in each jurisdiction
  - High value projects have been tendered (\$0.8bn, \$1.6bn)
- 3 Design competition**
  - No design-only tenders in transmission identified
  - In other industries, winners involved during construction

## 2a. Identifying the different early competition models & issues

*Design, Build and Own (DBO) model*



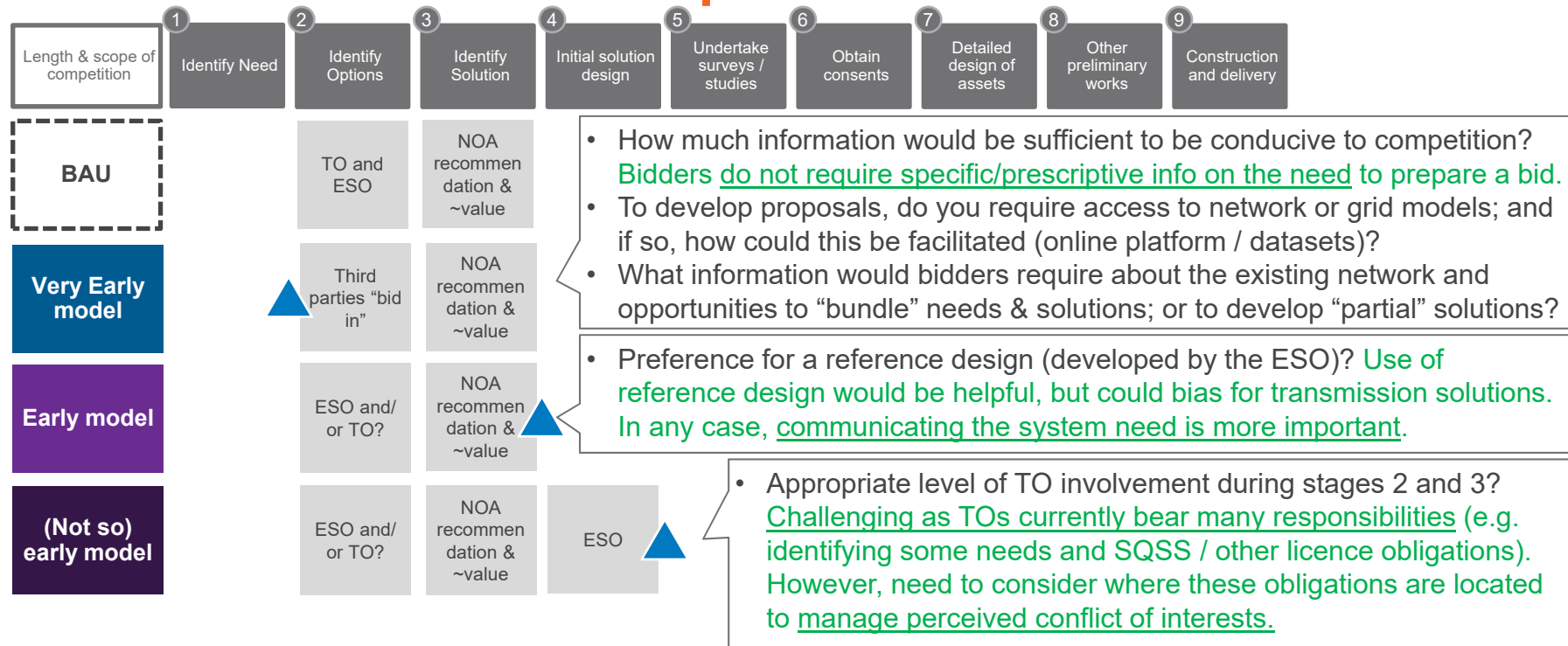
# We discussed the following key dimensions in Workshop #2 and will recap your views in the following slides



- |  |  |  |   |  |
|--|--|--|---|--|
| <p><b>1 Tender point</b></p> <ul style="list-style-type: none"> <li>Where to introduce tender (trade-off between innovation &amp; uncertainty / difficulty in assessing bids)</li> <li>ITT and reference design developed by ESO (so TO can actively participate)</li> </ul> | <p><b>2 Scope of competition</b></p> <ul style="list-style-type: none"> <li>Single tender point or shortlisting bidders – may be decided through NOA which already allows alternate opportunities to progress in parallel</li> <li>Recovery of sunk cost / devex?</li> </ul> | <p><b>3 Tender design and evaluation</b></p> <ul style="list-style-type: none"> <li>What evaluation criteria (cost, uncertainty, qualitative factors)?</li> <li>Extent to which NOA can be adapted to facilitate and evaluate bids?</li> </ul> | <p><b>4 Ex-post accountability</b></p> <ul style="list-style-type: none"> <li>Post-tender change mechanisms</li> <li>Trade-off between harsher penalties vs incentive to participate</li> </ul> | <p><b>5 Backstop solution</b></p> <ul style="list-style-type: none"> <li>Potentially developed in parallel and acts as default solution in absence of competition or if deliverability of solution uncertain</li> <li>Trade-off between extra cost and insurance policy</li> </ul> |
|--|--|--|---|--|

▲ Tender / Design Only tender      ▲ Subsequent tender decision

# Dimension 1: The starting tender point impacts the degree of information that can be provided to bidders



**Tentative conclusion**

Very early model can work. Starting tender point could differ on a case-by-case basis (depends on amount, timings and uncertainty of information provided)

## Dimension 2: Multiple bidders could be shortlisted in an initial stage of the tender before a final selection is made



Single tender variants (both V. Early and Early)

Two-phase tender variants (both V. Early and Early)



Views on shortlisting? Shortlisting can be useful to manage project uncertainty, although consenting should not be undertaken by multiple parties

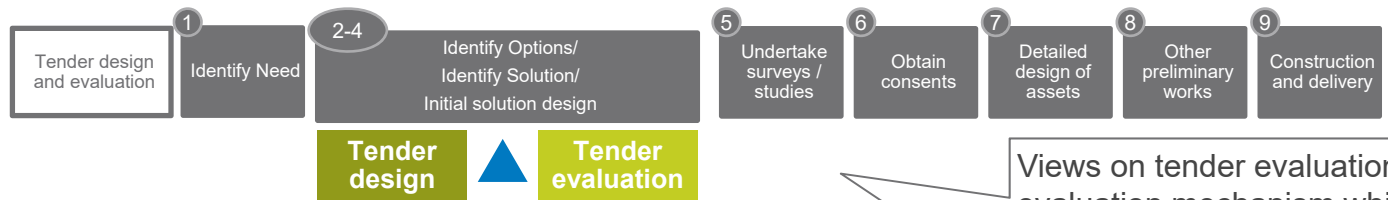
**Case studies:** Nearly all other early comp models have multi-phase tenders. Shortlisted bidders can modify bids in some models, cannot in others. Not the norm to provide funding (in fact, CAISO requires bidders pay for its evaluation costs) TO required to provide all necessary info to 3rd party bidders (e.g. NYISO)

**Tentative conclusion**

- Decision to shortlist could be made on a case-by-case basis (depends on time-criticality, uncertainty, duplicated cost etc)
- Bidders should be prepared to operate on a no funding basis

▲ Tender    ▲ Subsequent tender decision    - - - -> Bidders continue to compete    -> Winner of bid

# Dimension 3: Cost is likely to be only one of multiple factors to consider when selecting the winning bid...



What information / metrics should bidders provide (quantitative vs qualitative)? Questions should direct bidders to provide as simple and objective answers as possible (both quant and qual). Difficult to evaluate long-essay style questions as might be biased to larger firms, but also need a way of eliminating non-credible bids. Criteria should be outlined ex-ante to provide transparency to those forming bids.

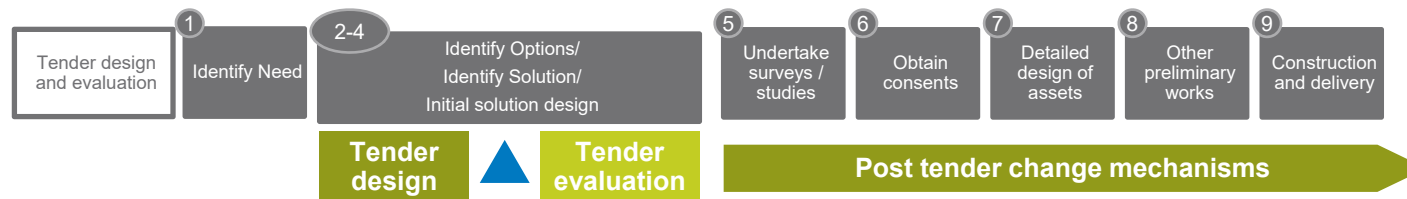
Views on tender evaluation (needs to have evaluation mechanism which can assess very different bids, as well as assess partial bids and NNS / other innovative options that cut across multiple “needs”)  
 Very complex and will be developed over time.  
 Tender could be “open” where bidders bid their own uncertainty mechanisms and penalties to be exposed to based on their own confidence in their solutions.

- Case studies:**
- PJM – cost cap included (offered by bidder)
  - IESO (Alberta) – Fixed price bid with change mechanisms set ex-ante
  - NYISO – all types of bids assessed at the same time (vs CAISO where NNS assessed outside tender)
  - Ontario – TO required to submit a plan if no 3<sup>rd</sup> party participation (i.e. “developer of last resort”)

**Tentative conclusion**

- Quantitative and qualitative tender evaluation metrics will be adopted, noting stakeholder comments above,...
- ...plus arrangements for “developer of last resort” in case no bidder participates or no bidder meets the criteria
- Details will be developed in the next stage

# Dimension 4: ... with post tender change mechanisms as a necessary feature to manage risk



What post-tender change mechanisms are needed?

- a) Risk of project changing
- b) Risk of system need disappearing or changing

Issues are linked to tender design and evaluation. Some areas might be confirmed in contract negotiations as no one-size fits all. Sometimes a project may be paused – how long would bidders be willing to wait?

Trade-off between harsher penalties vs incentive to participate

May be part of bid submission – opportunity to “flex” solution up or down

Some incumbent TO interactions to be considered (e.g.):

1. Role of incumbent TO if works are needed to connect solution
2. Effect on incumbent TO if affected by failure / delay

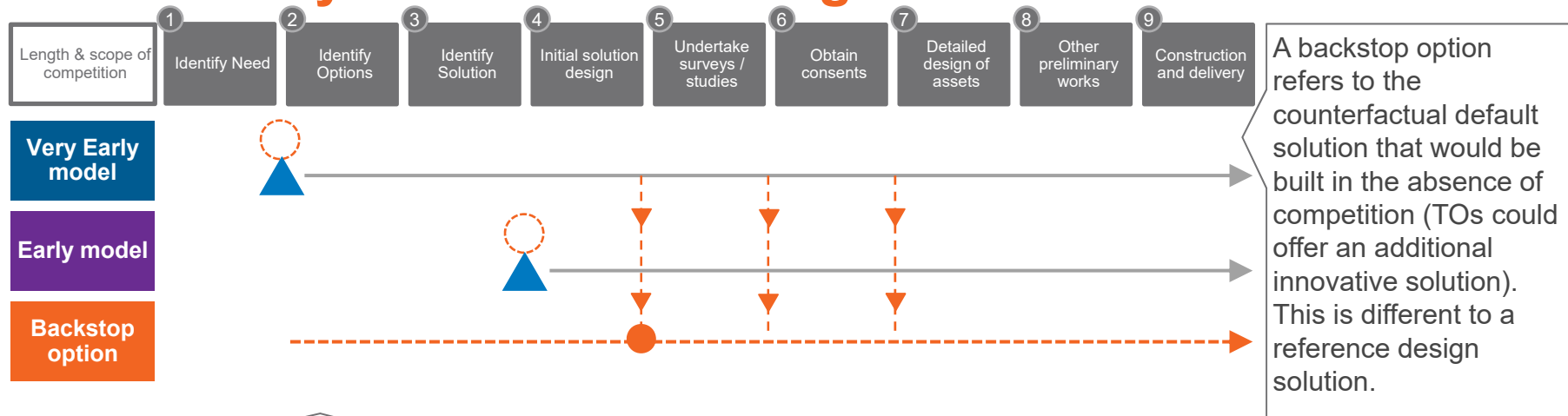
More detail on bid evaluation criteria (Appendix A.1)

**Case studies:**

- Unexpected events mostly dealt with through bilateral negotiations; re-evaluation of need / project on a case-by-case basis seen in practice (e.g. PJM / Ontario / CAISO)

**Tentative conclusion** Designing post tender change mechanisms are key model challenges but they are manageable and there is a full year to develop the details

# Dimension 5: Running a backstop option to mitigate the deliverability risk of the winning solution



**Backstop option** could be developed

- What key benefits or disadvantages?
- How far should the backstop option go on for?

- Most considered that a backstop is unnecessary – duplication of cost, unnecessary complications with TO, signals distrust in winning solutions.
- To consider if there are specific scenarios where a backstop might be needed.

**Case studies:**

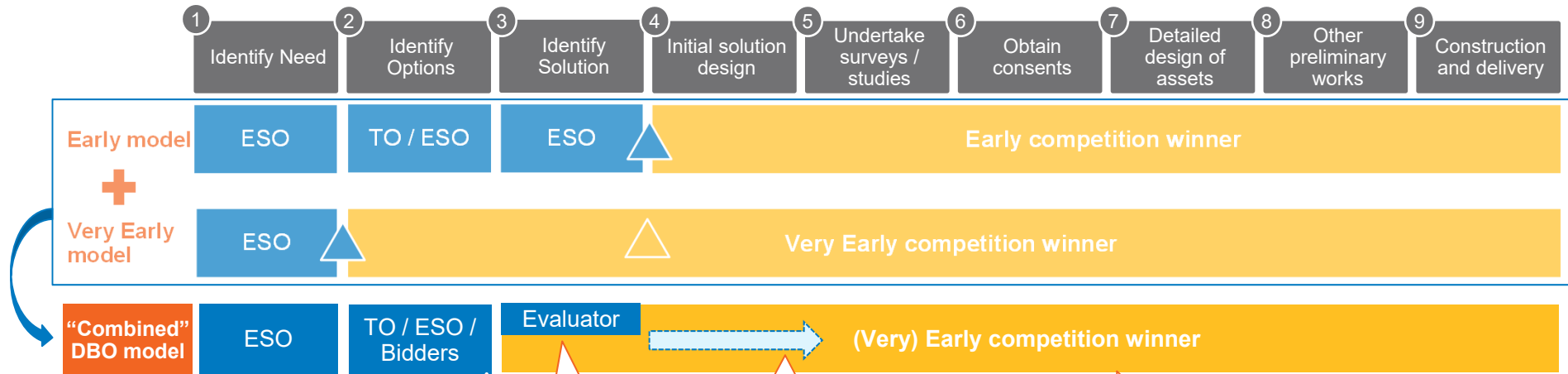
- NYISO outlines use of a backstop for reliability / economic needs, but it has never been used in practice.

**Tentative conclusion**

- Backstop solution not to be implemented.



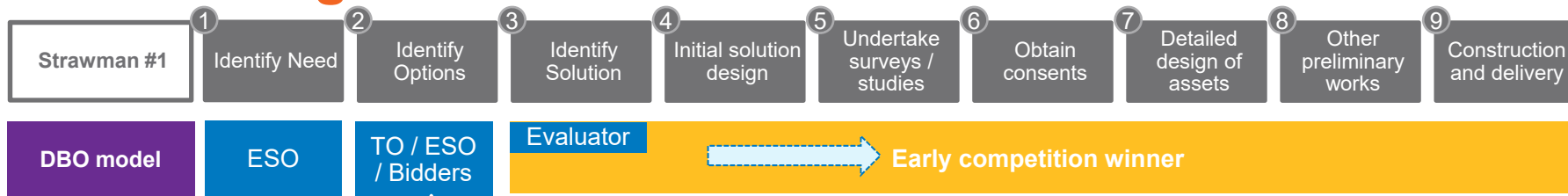
# DBO Strawman: Initial conclusions based on workshop #2



- 1 Tentative conclusion:**
  - V. Early model can work & may elicit broadest range of solutions
  - Starting tender point could differ on a case-by-case basis (depends on amount, timings and uncertainty of info provided)
- 3 Tentative conclusion:**
  - Quantitative and qualitative tender evaluation metrics will be adopted...
  - ...the details to be developed in the next stage
- 2 Tentative conclusion:**
  - Decision to shortlist could be made on a case-by-case basis (depends on time-criticality, uncertainty, duplicated cost etc)
  - Bidders should be prepared to operate on a no funding basis
- 4 Tentative conclusion:**
  - Designing post tender change mechanisms are key model challenges...
  - ...but they are manageable and there is a full year to develop the details
- 5 Tentative conclusion:**
  - No need for backstop solution

▲ Tender / Design Only tender    ▲ Subsequent tender decision    ① to ⑤ match to model dimensions

# DBO Strawman: Taking into account your feedback, we have redesigned a new strawman model



- ESO identifies and classifies the need:
  - Can the need be met by a competed solution?
  - Degree of uncertainty (and hence bid information)
  - Size of expected solution
  - Time criticality

- Decision on whether to issue a tender as part of the optioneering process.
- Different projects can be at different points in the project “lifecycle”
- Evaluation criteria outlined ex-ante to provide sufficient transparency for bidders to form proposal

If there is competition:

- Evaluate the tender
- Decide whether to select a winner or shortlist a few

If multiple projects shortlisted:

- Shortlist bidders undertake FEED studies + initial solution design;
- Select single winner at suitable time prior to consenting

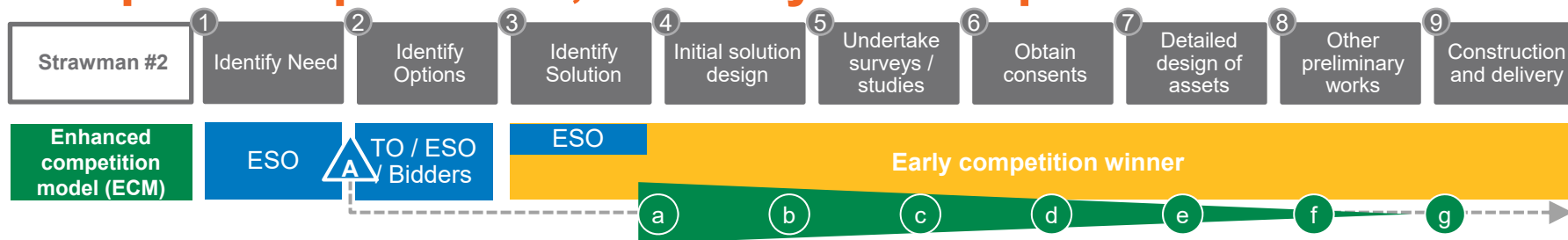
- Oversee activities; may need to oversee ongoing interface between winning bidder and TOs (to be considered further – TOs will be compensated)
- Provide revenue stream (backed by Ofgem)
- Relevant entity to hold winner accountable – opportunities for post-tender changes depending on:
  - Amount of “flex” in bids
  - Changes to need
  - Uncertainty mechanisms
  - Accountability agreements

## 2b. Identifying the different early competition models & issues

*Enhanced competition model*



# Enhanced Competition Model exerts maximum competitive pressure, but may not be practicable



Likelihood of incumbent displacement decreases closer to EISD

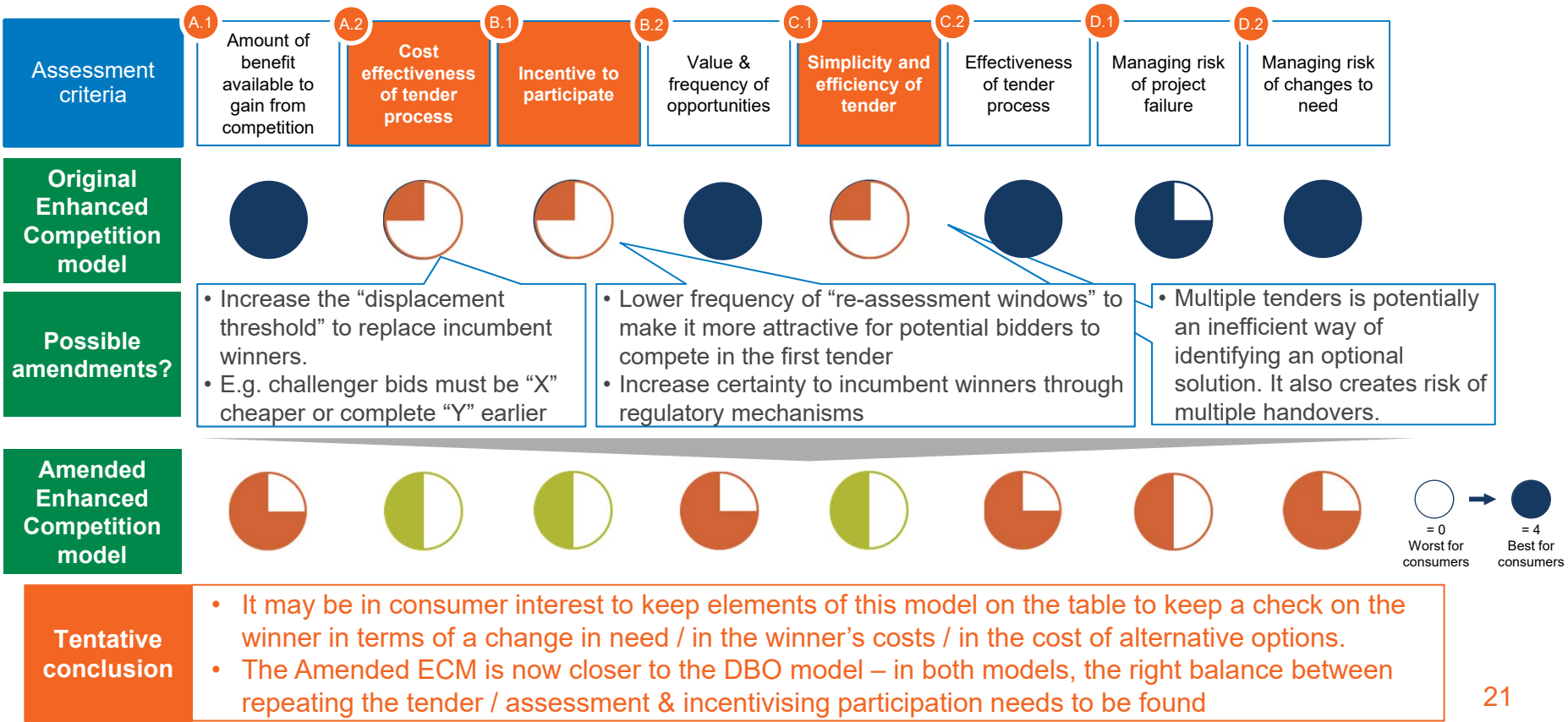
(the corollary being that the challenger solution would need to be increasingly beneficial to consumers to displace incumbent)

- ✓ **Annual NOA process has to be run anyway** – could be adapted to introduce competitive tenders frequently
- ✓ **Credible bids** that are unable to participate in Very Early stages due to lack of information or technology still in nascent stages **can participate in the future**
- ✓ **Competition is encouraged at all points** and across the entire project lifecycle, not just at the beginning
- ✓ **Innovation is encouraged throughout entire process**, not just at the beginning
- ✓ **Continuous competitive “threat”** ensures incumbent solution is delivered optimally throughout project; and incumbent kept ‘honest’ – this potential issue of post-tender accountability in the DBO model is a strength of the ECM
- ✓ **Uncertainty to consumers managed** in the best possible way – changes to project need or project delivery would be continuously assessed

- ✗ Multiple tenders will **add cost to consumers**
- ✗ Threat to incumbent solution of being displaced later on – this might **deter bidders from participating** in the first place or introduce a “first mover disadvantage”...  
... although this threat decreases over time as tender decision considers EISD and sunk cost of incumbent
- ✗ Bidders thought excessive risks **transferred from consumers to bidders**

▲ Tender ● Iterative NOA process (temporal, instead of by stage as shown) ---▶ Potential challenger

# How can we balance the perspective of consumers and bidders in order to maximise consumer benefit?



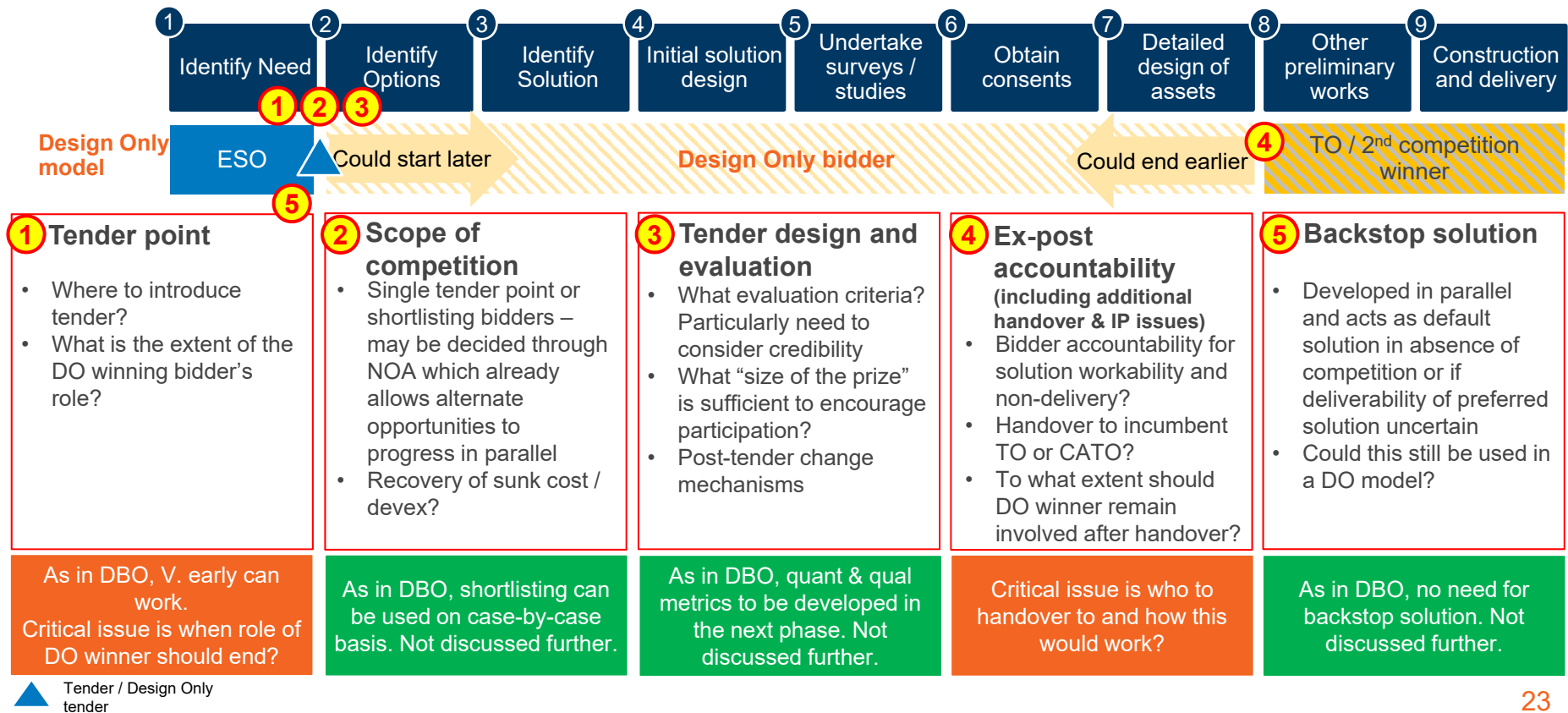
## 2c. Identifying the different early competition models & issues

*Design Only (DO) model*

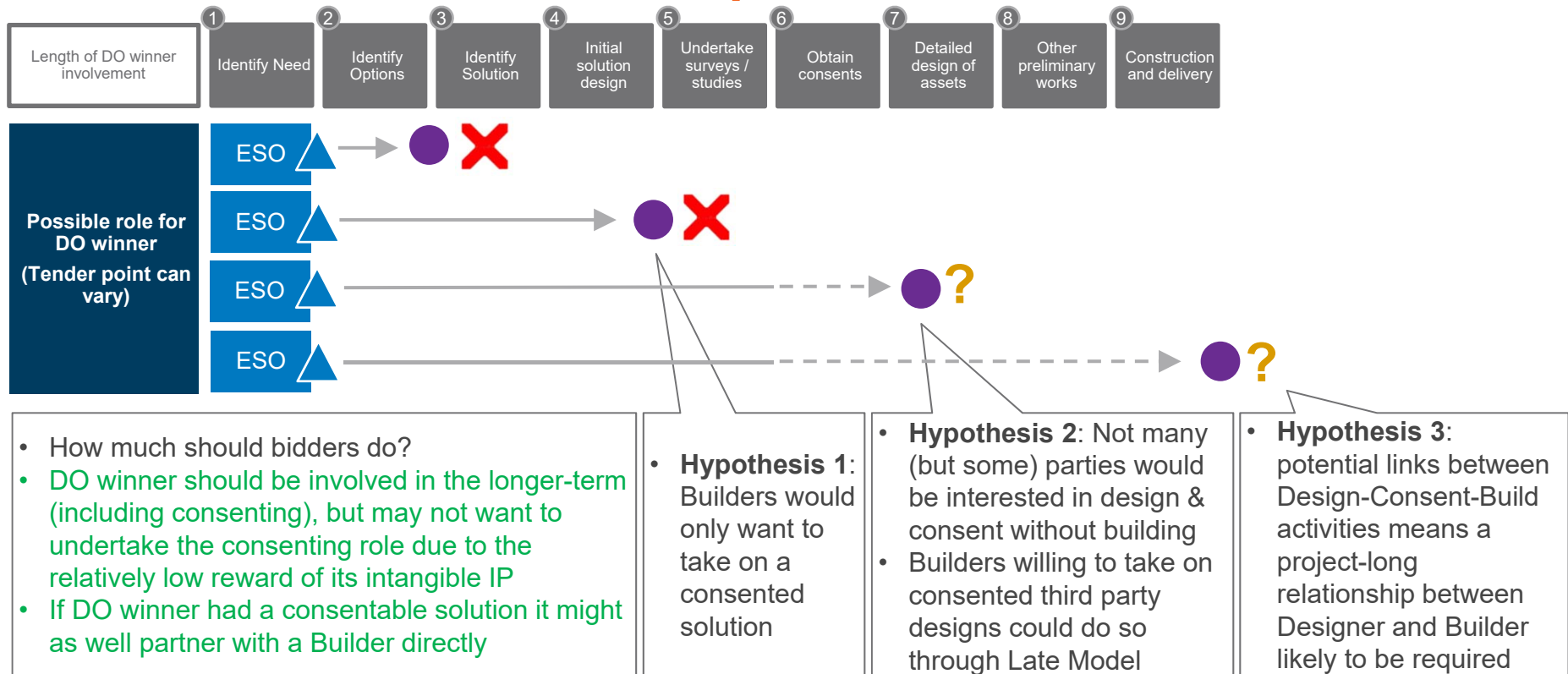




# Our discussion in Workshop #2 on the DO model reflected specific challenges on tender scope / ex-post accountability



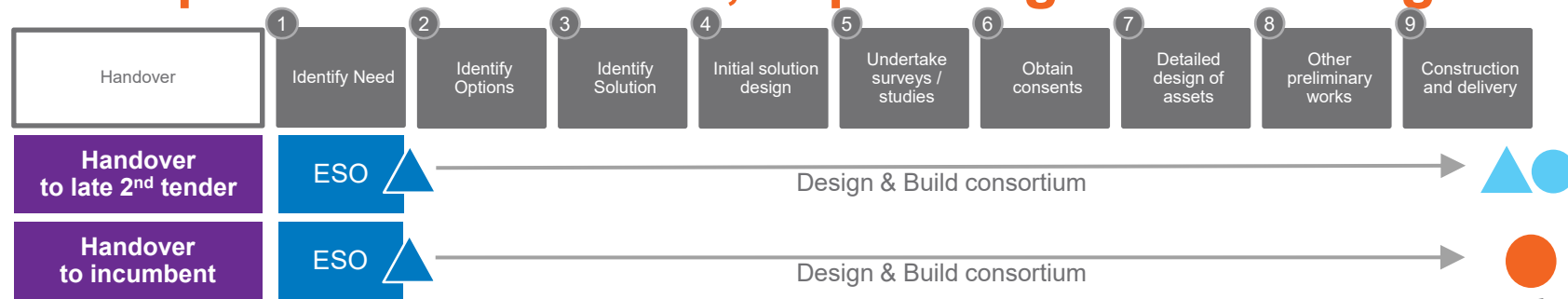
# Dimension 1: DO winner needs to be involved post-design to be incentivised to develop a credible solution




▲ Design Only Tender → Winner of bid - -> Winner involved but not leading ● Handover to incumbent TO or subsequent tender winner (CATO)




# Dimension 4: The winner can handover to either TO or subsequent tender winner, depending on CATO legislation

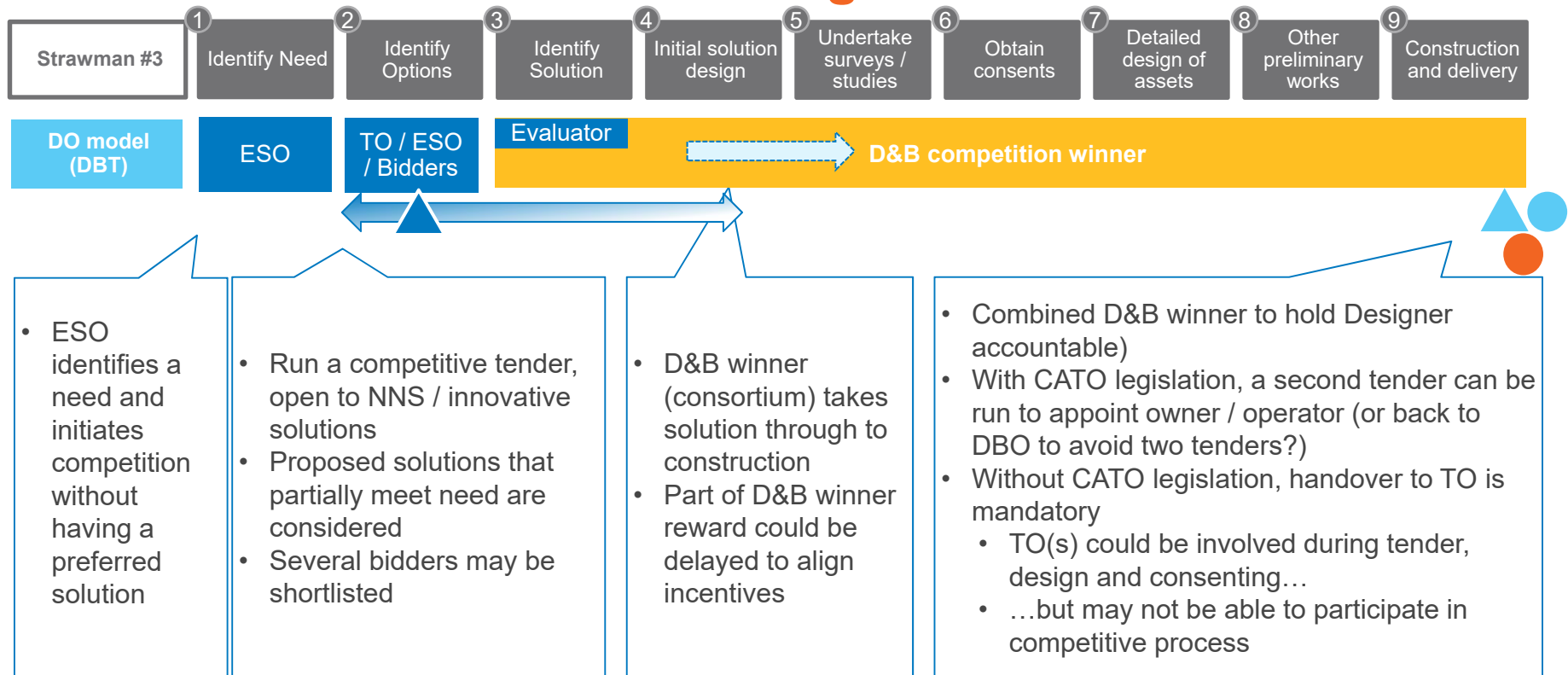


- Handing over after construction may help align the long-term incentives of the winner.
- A D-B winner can handover to:
  - **1. Consortium:** with a party willing to own and operate the asset → DBO model
  - **2. Competition winner:** second tender to select party to own and operate asset → contingent on CATO legislation
  - **3. Incumbent TO:** TO owns and operates → not contingent on CATO legislation, but raises issues with respect to TO's role in competitive process

- Is there investor  appetite to purchase an asset without having been involved in construction / influenced design & operating costs?

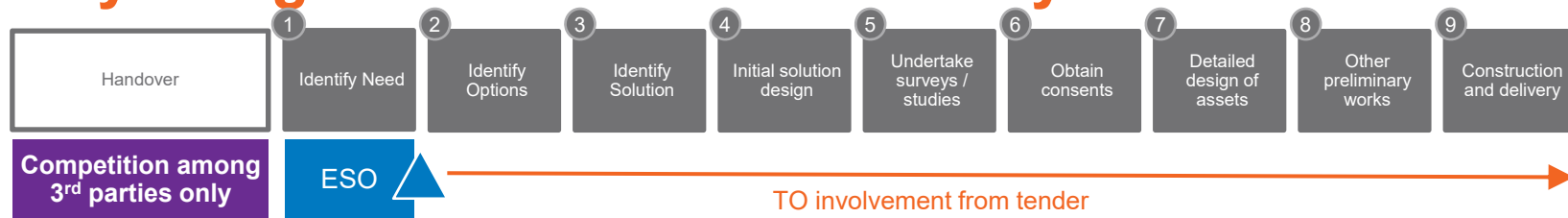
- In absence of CATO legislation, it is only possible to handover to the incumbent TO 
- Because of the handover, TOs might want to be involved in the development process...
- ... but they may have to give up their right to compete
- Would TOs prefer to compete or would they be willing to give up their right to compete and be involved in the development of a third party solution?

# Strawman #3: Potential Design Only model may need to extend to include Build – a Design Build Transfer model



▲ Design & Build tender    ▲ Subsequent tender    ● Handover to winner of subsequent tender    ● Handover to incumbent TO

# Alternative “pure” DO model could formalise existing third party design innovation facilitated by TOs



- Competition among third-party design-only bidders?
- How can existing TO processes be leveraged for involving third parties?
- Who is best placed to run this competition?

- **General scepticism on “what problem is the DO model trying to solve”?**
  - TOs already work collaboratively with some third-parties...
  - ... but some views expressed on whether this process could and should be formalised to encourage greater participation and transparency
- **Hypothesis:** an alternative “pure” DO model could facilitate more innovation for some types of needs (e.g. enhancing existing TO assets)

- No transfer at the end; as TO leads the development throughout

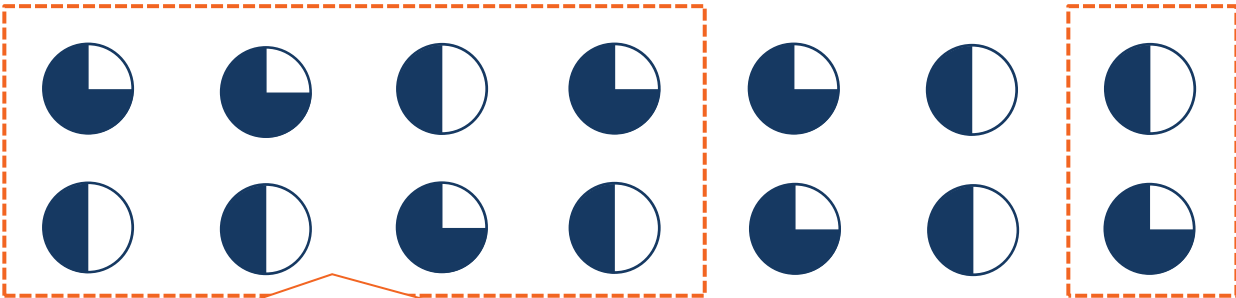
**Taking this forward**

- Are third parties currently excluded or disadvantaged from participating with the TOs?
- Would a formalised, independent competitive process resolve any identified issues?

# Summary: Initial assessment of Strawman models

Assessment criteria	A.1	A.2	B.1	B.2	C.1	C.2	D.1	D.2
	Amount of benefit available to gain from competition	Cost efficiency of tender process	Incentive to participate	Value & frequency of opportunities	Simplicity and efficiency of tender	Effectiveness of tender process	Managing risk of project failure	Managing risk of changes to need

DBO model								
Amended Enhanced competition model								
DO model (DBT)								
DO model (Alternative)								

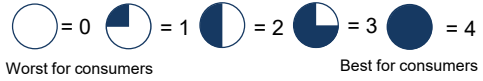


✓ ECM model sharpens post-tender accountability...  
 ✗ ...but bidders may be deterred from participating.

Key trade-offs

Similar to DBO model but with a more costly / complex process due to transfer

? Unclear, depends on size of problem



The above ratings assume that CATO legislation has been put in place.

### 3. Project plan for 2020



# Summary of Ofgem's letter – 24 Sept 2019



A clear description of proposed early comp models	Proposed roles and responsibilities of all parties
<ul style="list-style-type: none"> <li>• (At least) two early competition models:                             <ul style="list-style-type: none"> <li>○ One for <b>design and delivery</b> (and applying the model with and without CATO legislation)</li> <li>○ One for a <b>competition for ideas</b></li> </ul> </li> <li>• The description of these models should include:                             <ul style="list-style-type: none"> <li>○ Processes and functions to deliver models</li> <li>○ The whole lifecycle for each model</li> <li>○ The criteria for choosing which model</li> <li>○ Who would be the most appropriate counterparty for non-network solutions</li> <li>○ The role of data (data management, and the treatment and sharing of data)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Outline the proposed roles and responsibilities of all parties</li> <li>• Consider the role of the ESO:                             <ul style="list-style-type: none"> <li>○ Practical implications, including estimated cost, expertise and risk implications</li> <li>○ Identify areas outside of the ESO's legal remit and how these would be resolved</li> </ul> </li> <li>○ Explore the role of the ESO in supporting competition in the electricity distribution sector</li> <li>○ Determine the interaction between Ofgem's role and the proposed early competition models</li> <li>○ No consideration of the late model, except if there are potential conflicts</li> </ul>



<ul style="list-style-type: none"> <li>• Areas of work already being undertaken</li> <li>• Incremental aspects of the draft proposal which could be delivered for commencement of RIIO-2 (what can be set out and costed by Dec 2019 on competing for non-network solutions) → referring to Pathfinder Projects</li> <li>• Components of the workstream that could potentially be delivered during RIIO-2 (what remains to be scoped and costed beyond Dec 2019) → referring to the Early Competition Plan</li> </ul>
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# High-level outline of the Early Competition Plan 2021...



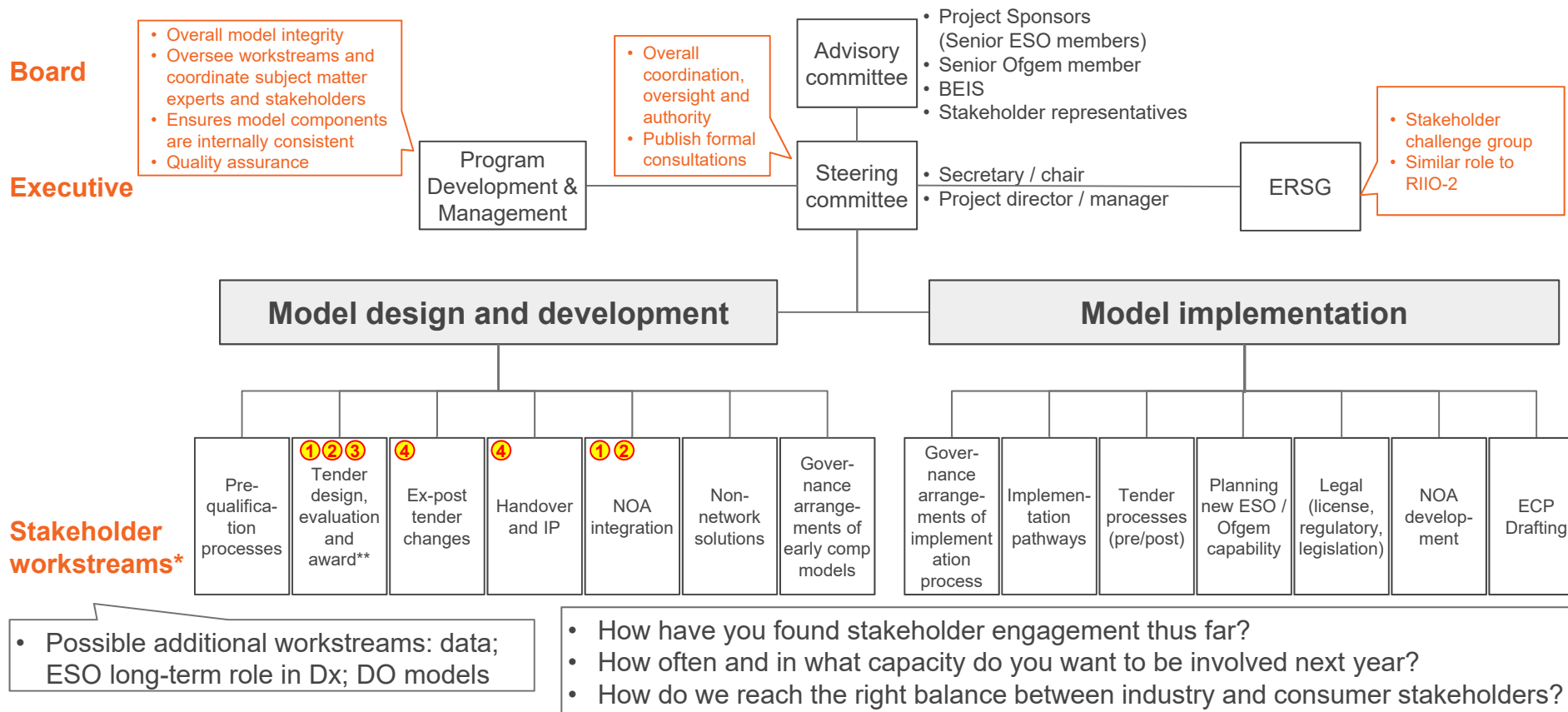
- **Proposed guidelines** on running the early competition models
- A **blueprint** on the pathways to implement
- Estimated cost to implement and run proposed competition models
- Where possible, ESO/Ofgem to begin building on existing competitive processes (e.g. Pathfinders projects)

Proposed guidelines on running early competition
<ul style="list-style-type: none"> <li>• Design of the early competition models which could be applied in scenarios with and without CATO legislation. Selected models will cover both Design, Build &amp; Own and Design Only variants</li> <li>• Non-network solutions will be considered across these models, building on the ongoing Pathfinder Projects</li> <li>• Proposed guidelines on tender processes for selected models:                             <ul style="list-style-type: none"> <li>• Prequalification process</li> <li>• Assessing needs &amp; criteria for competition &amp; criteria for choosing timings (VE or E)</li> <li>• Preparation for the tender and publication of ITT</li> <li>• Running the tender and evaluation (criteria, weights, mechanisms)</li> <li>• Post-tender change management (contracts, counterparties, monitoring, penalties)</li> </ul> </li> <li>• Views on the role of the ESO, Ofgem, BEIS, shortlisted &amp; winning bidders, bidder of last resort and TOs</li> <li>• Views on the type of projects that may be suitable for different models of competition</li> <li>• Consider the role of data in data management and operation, consulting with the Energy Data Taskforce</li> </ul>

Blueprint for implementation post-2021
<ul style="list-style-type: none"> <li>• Role of each party in implementing early competition model guidelines (depending on legislation)</li> <li>• Ofgem and BEIS activities: Decision on early competition and legislative changes</li> <li>• Subject to decision, workplan for implementation (including integration with NOA, if appropriate)</li> <li>• Proposed licence amendments and timings (with or without legislation)</li> <li>• Agree plan, cost and resources to develop new capabilities for all relevant parties</li> <li>• Consider the range and extent of roles ESO could play in distribution network competition models</li> </ul>

... to inform the Dec 2019 update as we work “backwards” from the end-objective

# Strawman plan for ECP development in 2020

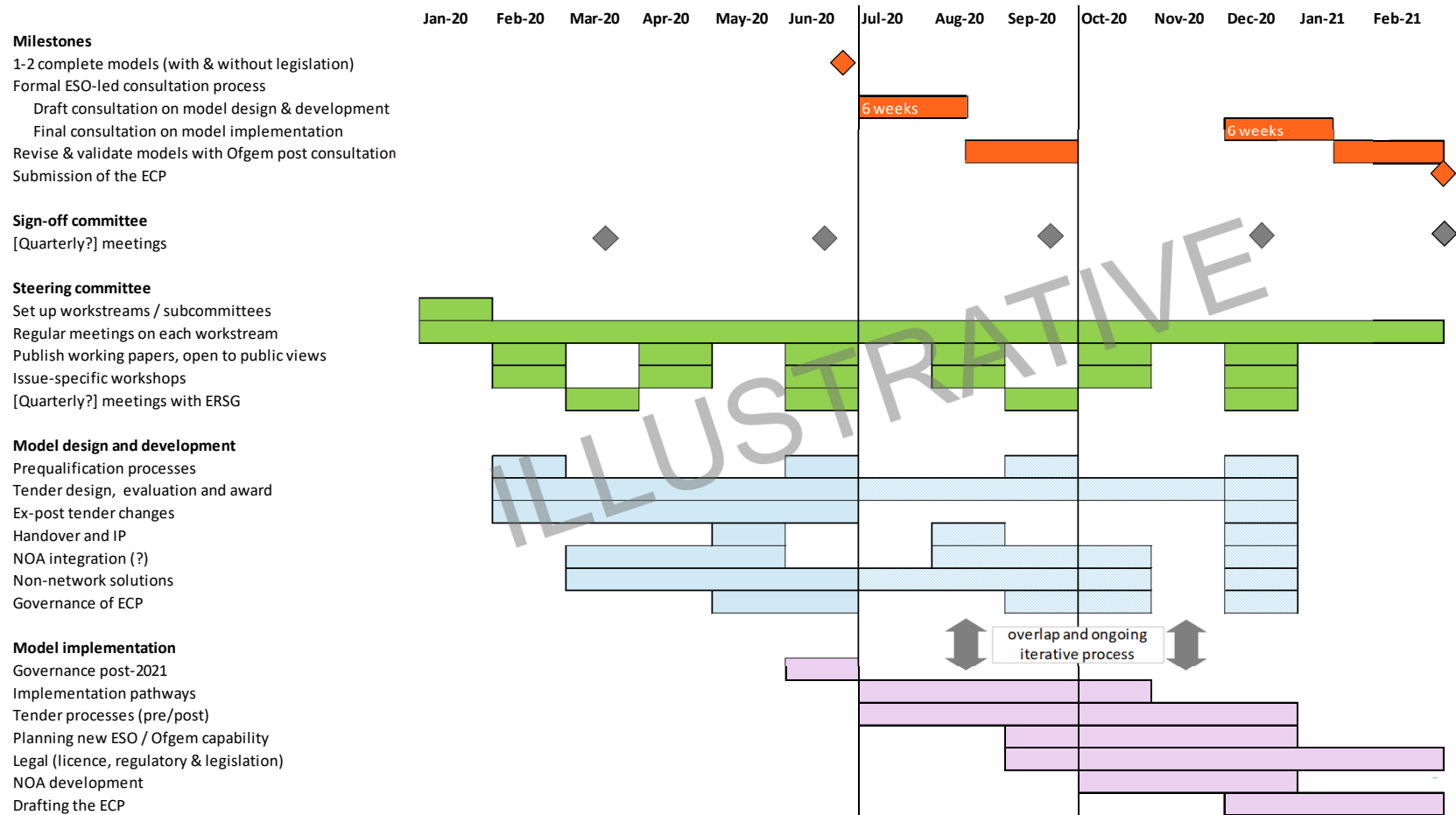


\* each stakeholder workstream will be led by the ESO with a diverse set of expertise where needed (legal, technical, financial, investor)

\*\* expected to be very complex and may be split into further subcommittees  
 ① to ⑤ model dimensions discussed in Workshop #3



# High-level timings for each workstream



# Example: Pre-qualification stakeholder workstream

## Pre-qualification stakeholder workstream

<p>1 Forming of workstream working group (c.1 week)</p>	<ul style="list-style-type: none"> <li>• <i>Core members</i>: 3x ESO members with mix of regulatory and procurement expertise, technical expertise and experience in CM PQQ processes – estimated [80 to 120] person days</li> <li>• <i>Other experts (called in periodically)</i>: legal advice, external financial expert – estimated [50] person days</li> <li>• <i>Ofgem &amp; potential bidders (called in periodically)</i></li> </ul>
<p>2 Identify key questions &amp; issues (c.6 weeks)</p>	<ul style="list-style-type: none"> <li>• Identify and extract key lessons from other prequal processes</li> <li>• Identify key parameters and set criteria to prequalify (financial, technical, legal)</li> <li>• Identify frequency to run PQQ (e.g. once for each party, updated for material changes or every five years)</li> <li>• Identify trade-offs between stringent requirements and ease of participation</li> <li>• Identify disqualification processes</li> <li>• Set out a draft proforma for a pre-qualification questionnaire (PQQ)</li> </ul>
<p>3 Publication of working paper (c.1 week)</p>	<ul style="list-style-type: none"> <li>• Draft working paper issued to Steering Group, published if approved</li> <li>• Views received; no response required</li> </ul>
<p>4 Preparation for ESO-led consultation (c.3 weeks)</p>	<ul style="list-style-type: none"> <li>• Revised views with draft final position</li> <li>• Preparation for full consultation &amp; draft the prequal section</li> <li>• Engage with other WGs (e.g. tender design, governance) to ensure alignment</li> <li>• Set out current positions of the WG</li> </ul>
<p>5 Revised position on prequalification process (c.6 weeks)</p>	<ul style="list-style-type: none"> <li>• Update views based on feedback, with detailed design of pro-forma</li> <li>• High-level cost estimates for running PQQ process</li> <li>• Reengage with other groups if necessary</li> <li>• Outputs to be transferred to ECP drafting stakeholder WG + support in drafting ECP</li> </ul>

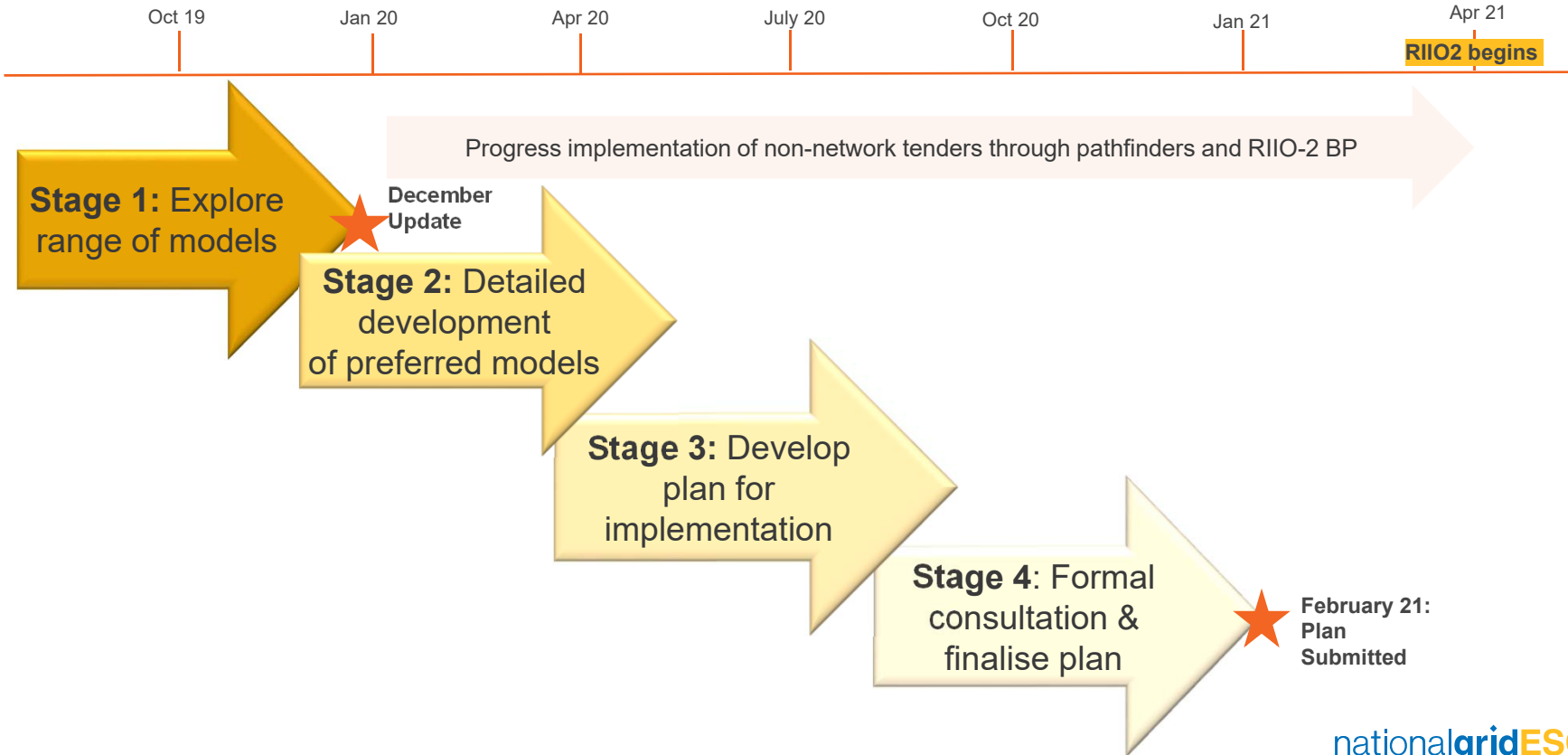
There are **four** forms of stakeholder engagement

- i. Opportunity to be part of the **stakeholder workstream team** (called on ad hoc basis)
- ii. Opportunity to participate in **ad hoc workshops**
- iii. Opportunity to respond to **issue-specific working papers**
- iv. Opportunity to respond to **consultation**

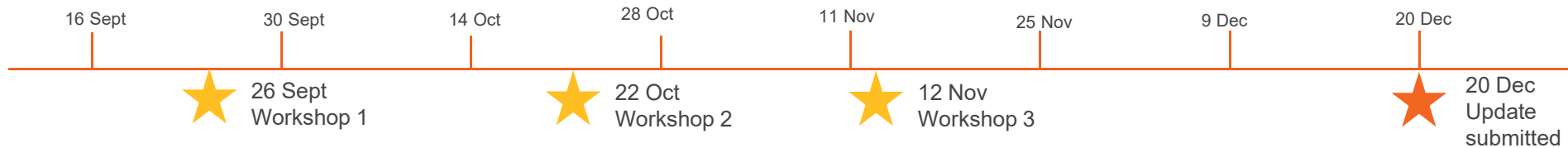
## 4. Next steps



# Stylised stages and indicative timeline to the submission of the final Early Competition Plan in February 2021



# In December 2019 we will submit a project update to Ofgem



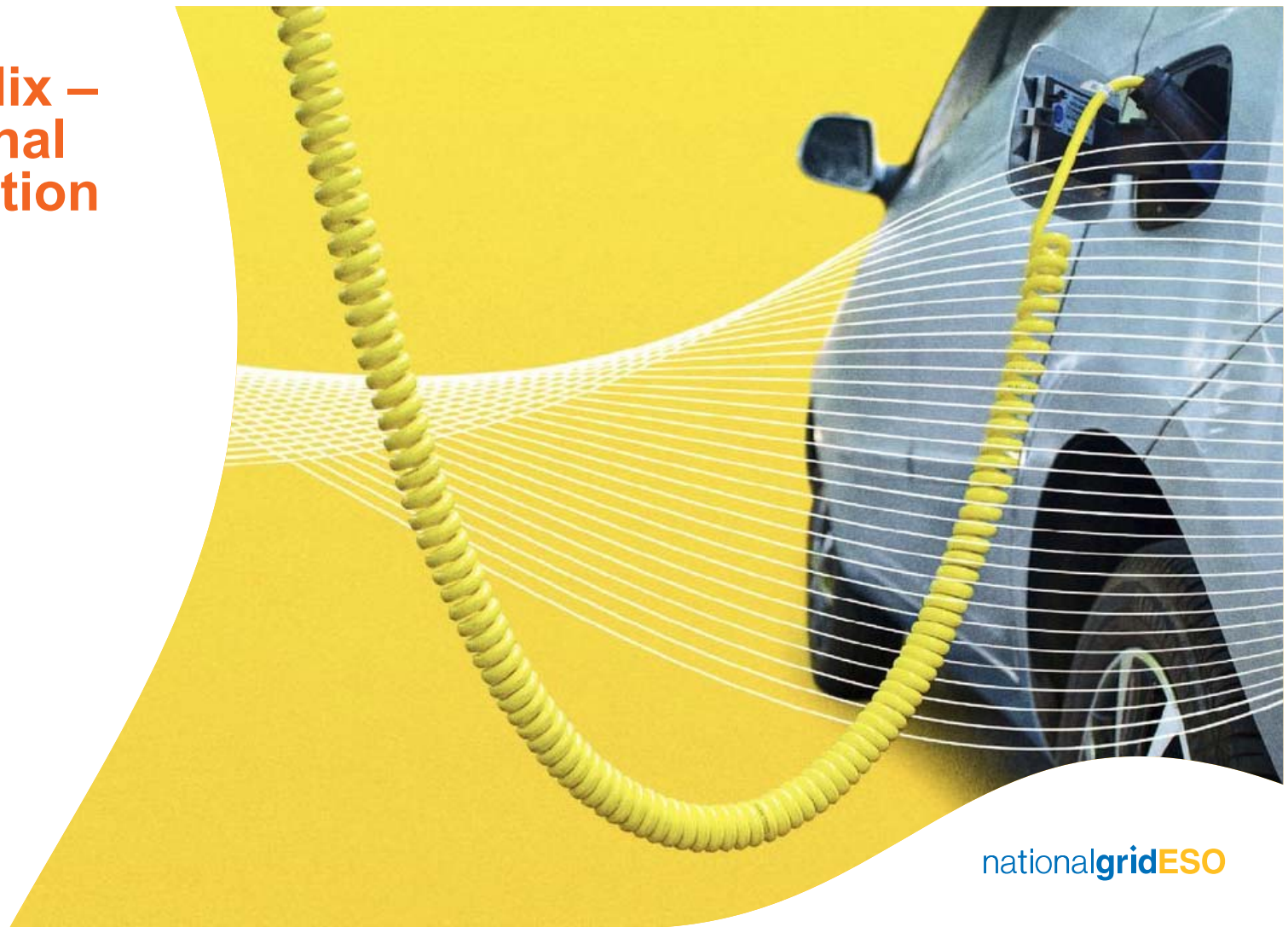
## We are currently working on three key inputs...

<p><b>Developing and testing “Strawman Models”</b></p> <ul style="list-style-type: none"> <li>• Our view on potential models representing a range of types...</li> <li>• ... and updated with your views from Workshop #2</li> </ul>	<p><b>Identify key lessons from case studies</b></p> <ul style="list-style-type: none"> <li>• Apply any key lessons from other early competition models to our strawman models</li> </ul>	<p><b>Criteria for evaluating models</b></p> <ul style="list-style-type: none"> <li>• Re-review and validate our evaluation based on the criteria set out in Workshop 2</li> </ul>
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## ...that will form the basis of our Dec update

<p><b>Two (or more) preferred models</b></p>	<ul style="list-style-type: none"> <li>• We will outline two or more preferred models to focus on in more depth in 2020...</li> <li>• ...including a DO model</li> </ul>
<p><b>Project plan for the Early Competition Plan (ECP)</b></p>	<ul style="list-style-type: none"> <li>• Setting out a high-level structure of a project plan in 2020 to develop the ECP</li> <li>• This will include estimates on timings &amp; processes, consultations / stakeholder engagement, and additional resources required</li> </ul>

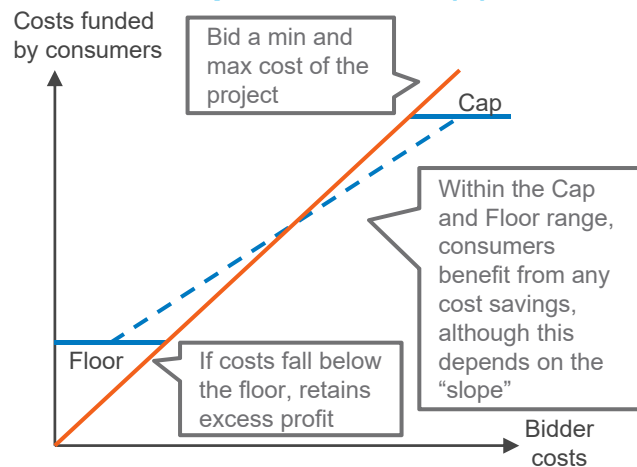
## A1. Appendix – Additional information



# Illustration: bid evaluation considerations

Costs metrics	Financing metrics	Options for bid flexibility	Technical metrics
<ul style="list-style-type: none"> <li>▪ Bid for a fixed preliminary works cost, including bidder's return</li> <li>▪ Bid a 'best indicative cost' for construction and operation, including bidder's return</li> </ul>	<ul style="list-style-type: none"> <li>▪ Fixed cost of equity and gearing</li> <li>▪ Indicative cost of debt and the approach to firm this up later</li> <li>▪ Info and assurance on financing strategy</li> </ul>	<ul style="list-style-type: none"> <li>▪ Cap and floor – (1)</li> <li>▪ Sharing factors – (2)</li> <li>▪ Cost re-openers – (3)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Technical capability</li> <li>▪ Solution design (depending on stage)</li> <li>▪ Plans for preliminary works</li> <li>▪ Earliest-in-service-dates</li> </ul>

## Cap and floor – (1)



## Sharing factors – (2)

Sharing factors allow alignment of incentives between developers and consumers

- Could use different sharing factors for development and construction phases
- Sharing factors could be set by bidders or the Tenderer
- Could be symmetrical or asymmetrical for cost overruns and savings

## Cost re-openers – (3)

