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- Why DNOs need flexible Power
- What is Demand Response

2. Is Flexible Power suitable for you?

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- Potential revenues
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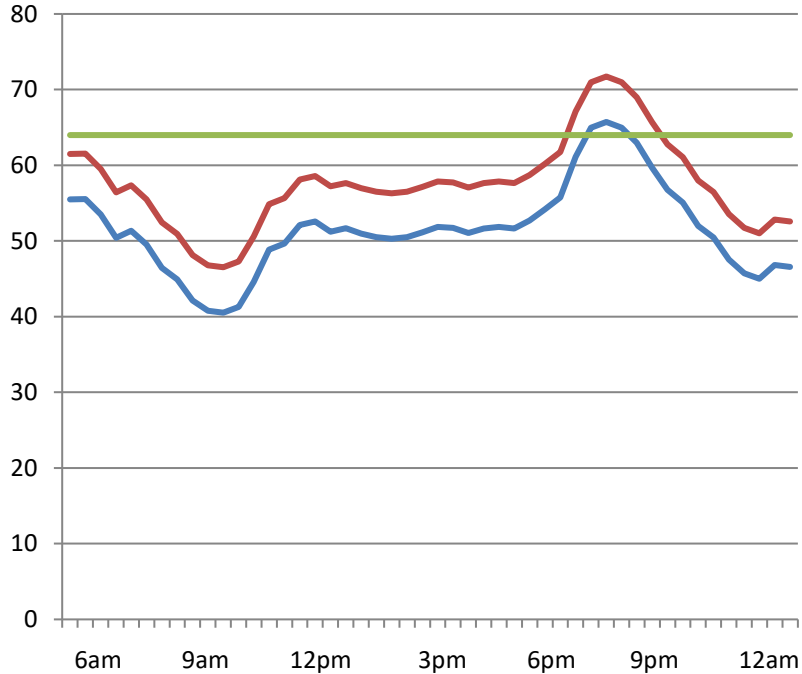
1. What is Flexible Power?

Flexible Power has been created by Western Power Distribution (WPD) to deliver the procurement of **demand response services**.



- Participants who can be flexible with their energy usage or generation assets.
- Access to new revenue stream.
- Location specific; seeks to resolve local constraints on the Distribution Network.

Why DNOs need Flexibility Services



- Traditionally we would build bigger networks to accommodate.
- Shift towards EVs, electric heating, etc. increasing electrical demand.
- We are looking for customers that can increase generation or decrease demand at these peak times.
- Flexibility means we can avoid or defer reinforcement works.
- Reduce socialised cost to customers.

What is Demand Response?

Many electricity consumers have the potential to reduce demand for electricity during peak periods by shifting energy use to other times or have the ability to increase energy supply by using existing on-site generation.

For example at times of peak network demand...

- **a supermarket could turn down/off air-conditioning or refrigeration systems.**
- **a factory with back up diesel generators could switch them on.**

Other generation types are just as suitable, such as Battery Storage, CHP, Natural Gas etc.

All technology types will be accepted, provided they meet the minimum technical requirements.

Where we have known constraints on our network, we're building partnerships that utilise this demand and generation flexibility in return for a financial payment.

2. Is Flexible Power Suitable for you?

Key benefits of Flexible Power:

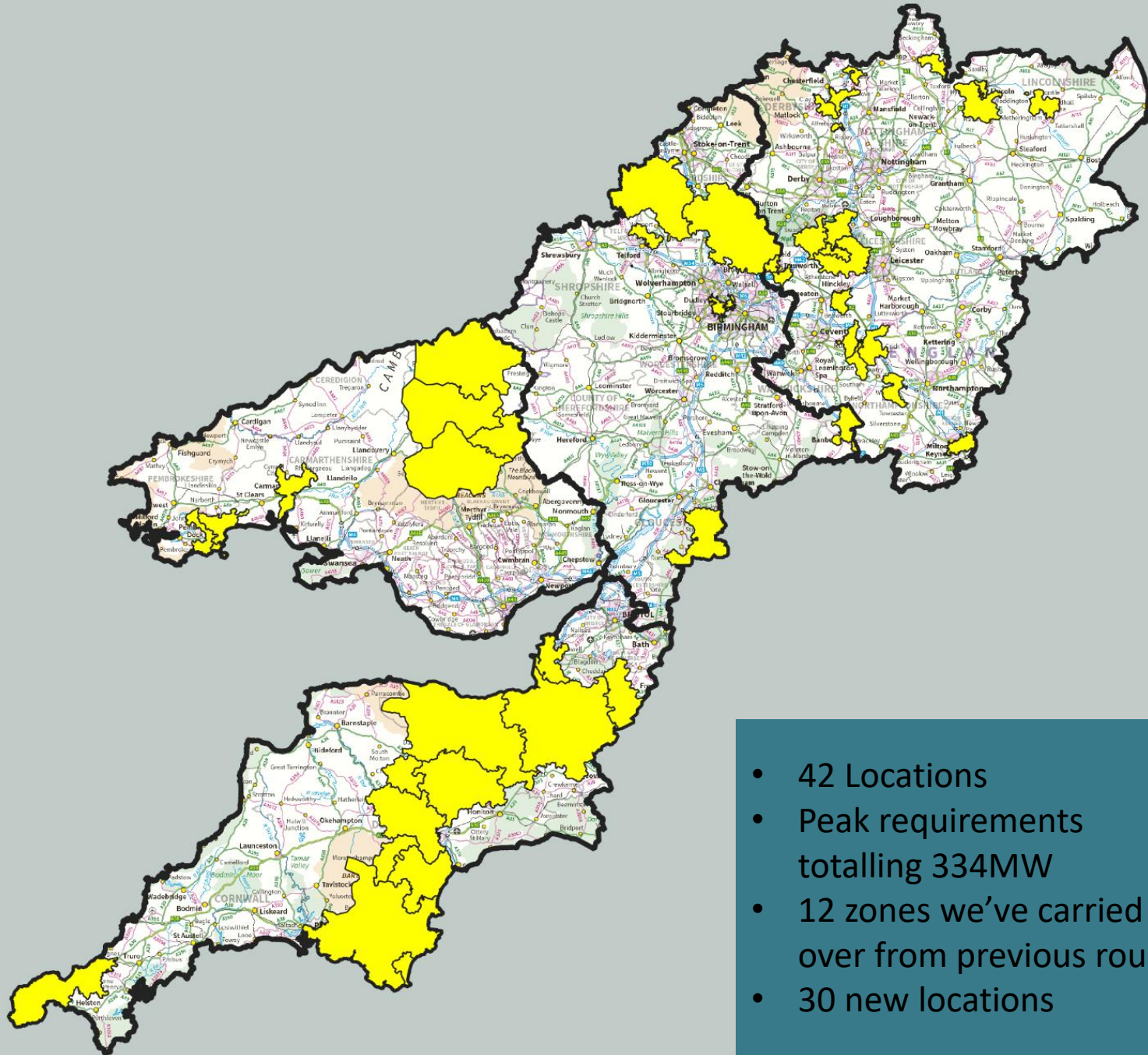
- ✓ All Energy Resources connected to the Distribution Network
- ✓ No Minimum capacity for participation
- ✓ Stackable with other revenue streams
- ✓ Routes for direct entry or through aggregation
- ✓ Electronic availability and dispatch platform
- ✓ Automated performance reporting to enable monthly settlement

Dedicated Flexible Power website provides information and documentation for all aspects and stages of interest: www.flexiblepower.co.uk

Where is Flexible Power available?

Constraints on our network are confined to specific geographical locations. CMZs we're currently procuring for are;

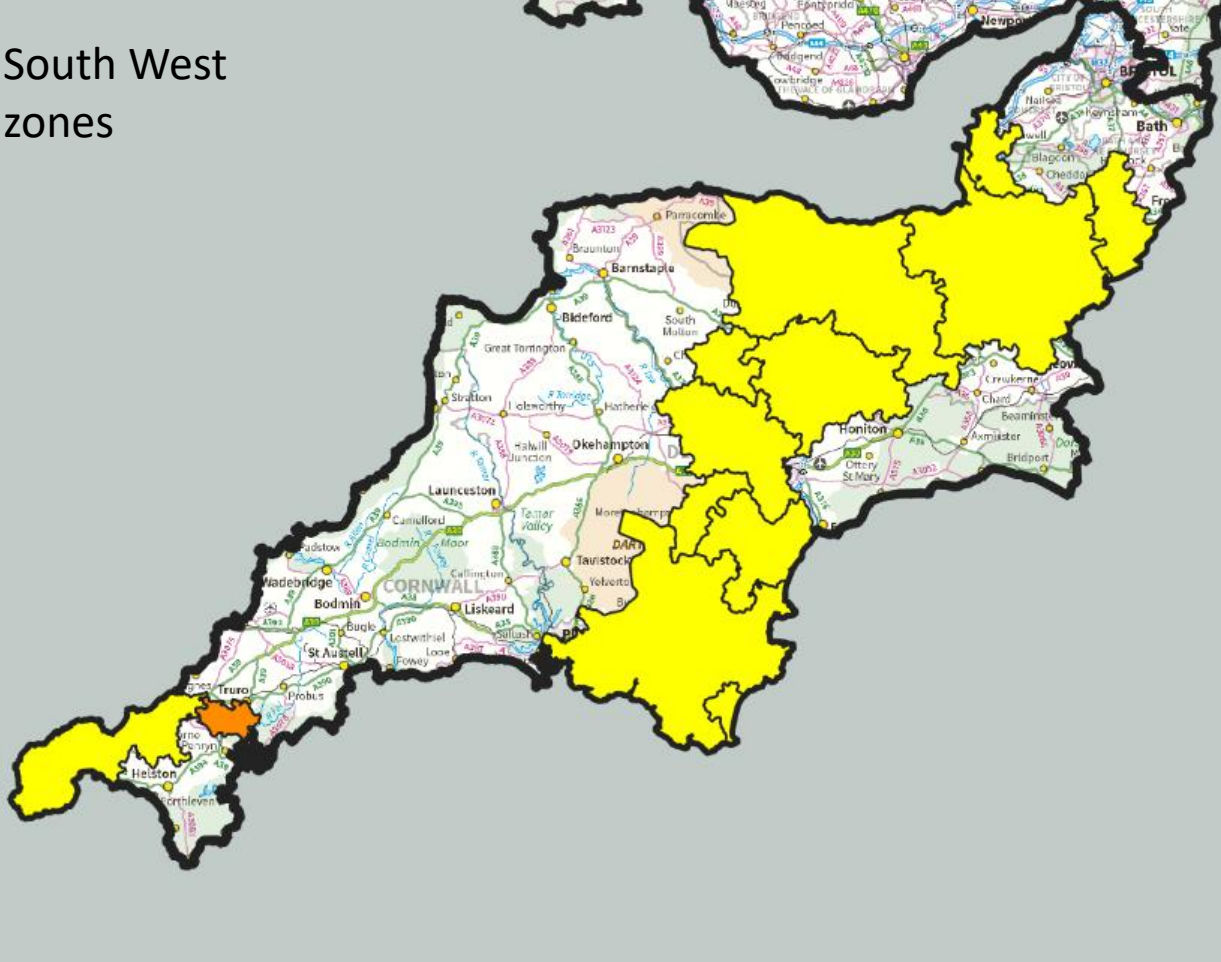
Midlands		South West & Wales	
Alfreton	Derbyshire	Bridgwater/Street	Somerset
Ashby/Willesley	Leicestershire	Exeter City	Exeter
Chesterfield Main	Chesterfield	Hayle – Camborne	Cornwall
Clowne	Mansfield	Isles of Scilly	Isles of Scilly
Coalville	Leicestershire	Moretonhampstead	Newton Abbot North
Grassmoor	Chesterfield	Newton Abbot	Devon
Hinckley	Leicestershire	Plymouth/South Hams	Devon
Lincoln - Beevor Street	Lincolnshire	Radstock	Somerset
Lincoln - North Hykeham	Lincolnshire	Stokenham	South Hams
Mantle Lane	Leicestershire	Taunton GSP	Somerset
Nailstone	Nuneaton	Tiverton	Devon
Weedon	Northampton	Witheridge	Devon
Woodbeck	Retford	Weston Super Mare	Somerset
Woodhall Spa	Lincolnshire	Brimcombe	Stroud
Apollo - Tamworth	Staffordshire	Abergavenny - Builth Wells	South Wales
Donnington	Telford	Abergavenny – Brecon	South Wales
Meaford	Staffordshire	Abergavenny – Glasbury	South Wales
Oldbury	Birmingham	Llandrindod – Rhayader	South Wales
Tamworth Main	Staffordshire	Pembroke – BroadField	South Wales
Union Street - Rugby	Warwickshire	Pembroke - St Florence	South Wales
		Pembroke – Tenby	South Wales
		Trevaughan	South Wales



- 42 Locations
- Peak requirements totalling 334MW
- 12 zones we've carried over from previous round
- 30 new locations



South West zones



- Bridgwater/Street** – Somerset
- Exeter City** - Exeter
- Hayle/Camborne** - Cornwall
- Isles of Scilly**
- Moretonhampstead** - Newton
- Abbot North**
- Newton Abbot** - Devon
- Plymouth/South Hams** – Devon
- Radstock** – Somerset
- Stokenham** - South Hams
- Taunton GSP** - Somerset
- Tiverton** - Devon
- Witheridge** – Devon
- Weston Super Mare** – Somerset
- Brimcombe** - Stroud

Yellow areas – need identified to start using flexibility in 2020. Currently out for procurement.

13 zones with peaks totalling 171.64MW

1MW in each zone would equate to Annual revenue ~£63k

Orange areas – signposting for need identified in next 5 years.

What's the earning potential?

We have calculated a fixed price for flexibility within our **Constraint Management Zones** (CMZs) based on cost efficiency. Our fixed prices are currently operating at...

	Arming	Availability	Utilisation
Secure	£125/MWh	N/A	£175/MWh
Dynamic	N/A	£5/MWh	£300/MWh
Restore	N/A	N/A	£600/MWh

On average, participants can make between **£1,500 - £6,000 per MW** they make available over the course of a year.

These prices will only be applicable to CMZs that do not have multiple flexibility providers with a total capacity that exceeds the CMZs needs.

Where a CMZ does has multiple providers with a total capacity that exceed the CMZs needs then the zone will go to clearing to achieve the best market price. This market price then becomes that CMZs new fixed price and is awarded to all providers.

What's the earning potential?

Some examples of potential earnings...

Asset capacity: 1MW

Zone type: Dynamic – Winter requirement (Nov – Feb)

Total winter earnings through availability: £2,640
(Mon- Fri, 3pm – 9pm at £5 per MWh = 528MWh)

Total winter earnings through utilisation: £4,800
(utilised for a total of 16MWh)

Total winter earnings: £7,440

Average Monthly earnings: £1,860

Average No. of hours utilised per month: 4MWh

Asset Capacity: 1MW

Zone type: Secure – Winter requirement (Nov - Feb)

Total winter earnings through arming: £4,000
(1 day a week, 5-7pm at £125 per MWh = 32MWh)

Total winter earnings through utilisation: £5,600
(utilised for a total of 32MWh)

Total winter earnings: £9,600

Average Monthly earnings: £2,400

Average No. of hours utilised per month: 8MWh

But remember – All our zones have different sized needs, so earnings will vary. We have developed an **Earnings Calculator** which will give you a tailored estimated based on your assets location & size: www.flexiblepower.co.uk/value-calculator

Key operational requirements

- Site/asset location within CMZ boundary.
- Commitment to build Application Programme Interface (API).
- Ability to provide minute by minute metering data over API.
- Asset ability to respond to within 15mins and hold response for minimum of 1 hours.
- Acceptance of CMZ Terms & Conditions.
- Each site must be built or have a connection agreement with the final milestone before the CMZs operating window.
- Provision of the service must not put the participant in breach of other agreements (e.g. connection agreement).

Key Contractual requirements

- No exclusivity clauses.
- No obligation to provide availability.
- No penalties for non-delivery, only loss of revenue through underperformance clawback.
- Shared & Capped Liabilities

3. How to Participate - Signposting

Signposting > **procurement** > **declaration > acceptance > dispatch > settlement > billing**

Our signposting information shows our requirements up to five years out across our network on the WPD website – www.westernpower.co.uk/network-flexibility-map

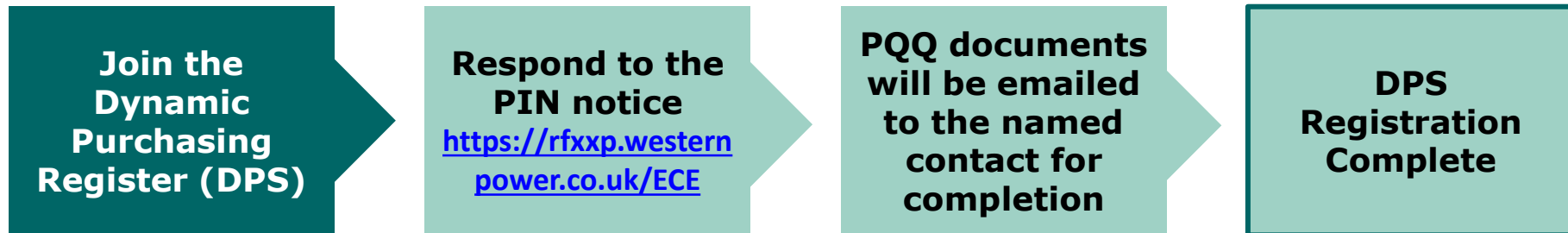
Here potential participants can see where and when flexibility locations will open for procurement. It also provides information on each locations requirements; months service is needed, times of day, volumes & utilisation frequency.

We also provided a downloadable document detailing all this information: www.flexiblepower.co.uk/our-schemes

Our **postcode checker** will also tell you is your site is within a CMZ: www.flexiblepower.co.uk/postcode-checker

3. How to Participate - Procurement

Signposting > procurement > declaration > acceptance > dispatch > settlement > billing



- The DPS holds a record of all parties who have completed a pre-qualification process to be eligible to tender for demand response services in any of our current or future zones.
- Eligibility to join the DPS is not assessed on technical ability or on geographical location of assets. Only company/individual address and contact details must be provided.
- Parties who have successfully been added to the DPS will be invited to all future tenders.



3. How to Participate - Operation

Signposting > procurement > **declaration > acceptance > dispatch > settlement > billing**

- We provide all participants with access to our dedicated participant portal.
- Here participants can;
 - Provide their week ahead asset availability - Weds midnight cut-off.
 - Find out what has been accepted - Thurs mid-day cut-off.
 - Receive stop start signals.
 - Submit event metering data.
 - View event performance statement.
 - View event earning statements.
 - View and approve monthly invoices.
- An API link must be built to facilitate the communication between the portal and the participants asset control.
- The cost of building the API link is the responsibility of the participant. This is a basic interface and in most cases a low cost to implement.

4. Timeline & key dates

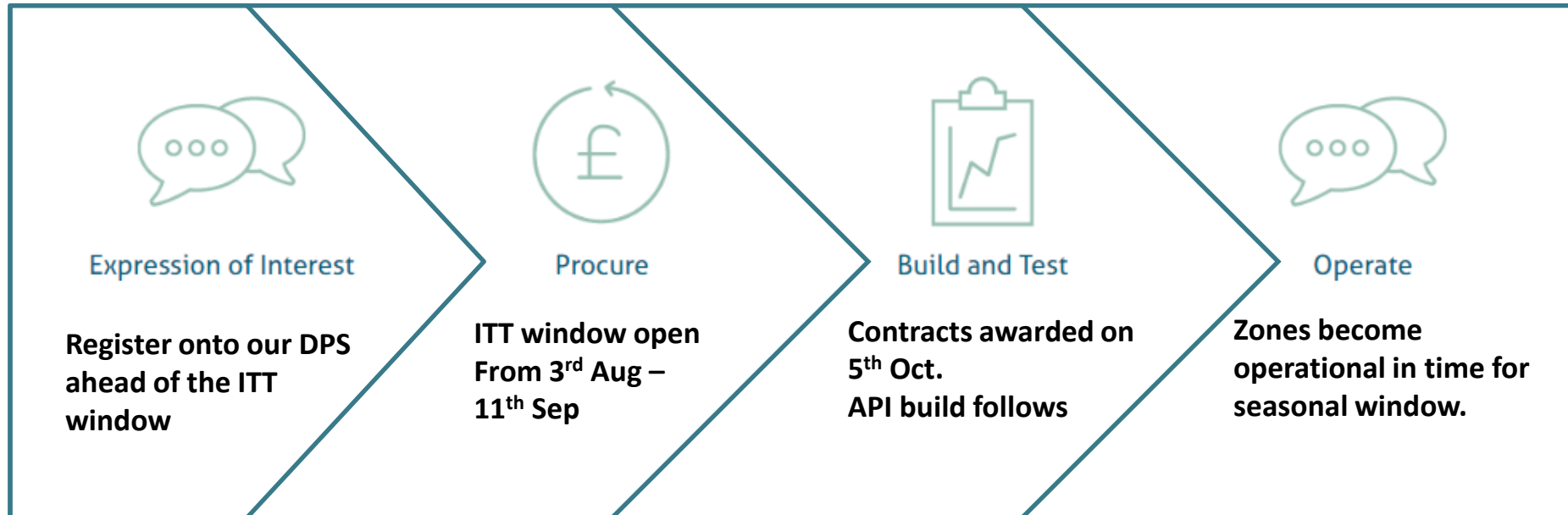
2020 Procurement Cycle 2

29th June 2020 – Proposed CMZs published

3rd August 2020 – ITT issued to all participants accepted onto the DPS

11th September 2020 – ITT Deadline

5th October 2020 – Procurement results



5. Questions?