



Decarbonisation stakeholder engagement

Key learnings, interactions
and recommendations

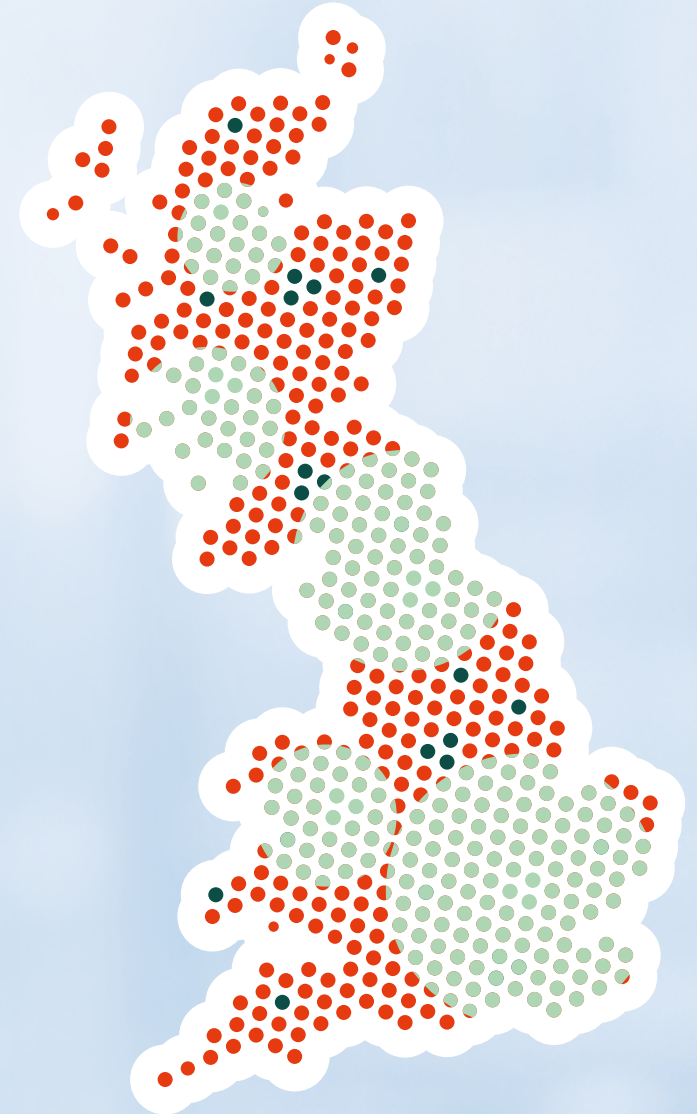
March 2022



If the UK is to hit its net zero targets, decarbonisation of the gas sector is crucial. With funding available and trials underway it's an exciting time for the industry. However, because firms are winning innovation funding to pursue individual projects, there is no one consistent approach and projects are frequently developed in isolation.

If we are to deliver a sizeable carbon reduction as an industry in as efficient a way as possible, it's vital that stakeholders from across industry have an understanding of the wider impacts of their decision making, that we understand key issues and constraints from the outset and that we engender early stage inter-party communication to avoid unforeseen "showstopper" moments later on.

It's important to remember that these trials and projects are taking place against a backdrop of rising prices. It's vital that the industry works as efficiently as possible to minimise the cost impact to consumers.



A series of workshops has taken place following a common structure to enable us to identify common issues, common desires and any necessary differences in engagement approach between stakeholder groups.

Discussion structure as follows:

- **Why?** Setting the scene for decarbonisation of gas
- **What to expect:** The decarb project roadmap
- **The life of a molecule:** How a gas molecule goes through the infrastructure and the interactions of different parties within that journey
- **Lessons learned:** Using HyDeploy as an example, how should parties be engaged differently in the future?
- **Major concerns / opportunities**
- **Successful engagement:** What does it look like?





- Non-DSC (as well as DSC) members will play a critical role in decarbonisation and early engagement is essential.
- The roles we need to engage with are likely to be different from the usual Xoserve contract management contacts, so we need to broaden our comms approach to get to the right people
- Our stakeholders are diverse. There is no 'one size fits all' when it comes to systems, processes and structure, even within common stakeholder groups.
- It is therefore risky to take the voice of a few engaged companies as a representative sample - we need to become inventive in our comms approach.
- Our stakeholder groups are often siloed in their knowledge, leading to a lack of understanding of the impact of their actions. Xoserve has a vital role to play in pulling the industry together and gaining common understanding end to end.

STAKEHOLDERS ENGAGED

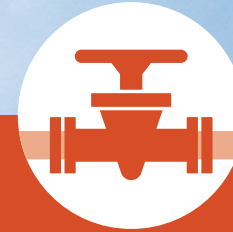
Xserve



IGTS



**MAMS /
MEMS & MAPS**



DNS



SHIPPERS



SUPPLIERS



**XOSERVE
ADVOCATES**

EMERGING THEMES

A number of common themes emerged, which will be addressed in more detail within this pack.

They are:



Impact of blend



Technical impacts



Communications



Asset availability & ownership

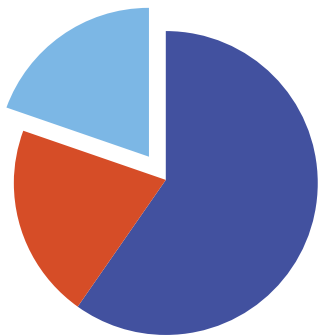


Early involvement in trials



Skills & training

One of the big concerns around blend was an understanding and ability to predict how 'much' blend there would be in any part of the system at a given time. This variability was a cause for concern for a number of stakeholders.



Metering companies had queries over whether meter testing regimes would need to change given that there would be a change to the chemical composition of gas going through them. It wasn't clear whether that had been considered.

There were queries around the point at which hydrogen is injected into the system, the points at which CV/ FWA are measured and how that would be managed at scale from a billing perspective. I&C was also raised in terms of the gas received, the point of injection and the billing implications.

HyDeploy was a significant subject for shippers & suppliers who had experienced a number of frustrations during the first trial and felt there was a lack of understanding that all supplier billing systems and processes are different. The operational impact hadn't been taken into account.

IGTs wanted to better understand the points at which FWA was measured through the gas system as this has an impact upon their processes and ability to bill. IGTs at the workshop stated they were unlikely to do their own blending, this is expected to happen at distribution network level.

Is it 20% fixed - or it isn't? 20% one day 7% the next - if that is likely we need to take that away and that is a complete change on what we believed to be happening.

What if a customer opts out?
How do we manage a reversal?

I'm concerned that FWA / calorific value measurement in blended gas at the point it moves into the LDZ is missing in the journey map - these are critical to the injection strategy at the LDZ point.

What is entering my CSEP I need to understand what blend it is, what make up it is so I need to know what is entering my network. If we are saying it is a stable 20% blend I want to be able to validate that that is what actually entered my network. How do we measure what is entering via the CSEP?

We'd like to be involved from now to ensure we're ready if a decision on blend is made next year

The main theme across all groups was that the earlier all parties were consulted, the better. In fact, the supplier group went so far as to say that there shouldn't be any trial project meetings underway that doesn't include representation from the supplier community as project impacts are so wide-reaching.



Common points of note:

- Cross-industry meetings at the start of a decarb project would be welcomed to ensure wider impacts are understood and all parties have the opportunity to shape activity to a mutually advantageous position at the outset.
- Change can take time - where changes to billing or metering functionality are required, it's important that the industry takes a unified approach to decision-making.
- Consumer communications must be considered together. Projects are likely to involve process and system changes, as well as training of operational teams.
- There are some useful industry meetings in place that Xoserve could usefully feed into to disseminate decarbonisation updates, i.e. ICOS, IGEM, but these are in pockets and don't cover the full market.
- There's a significant appetite across all groups for regular (monthly) sessions with Xoserve to receive decarbonisation project updates.
- While Xoserve's primary relationships are typically with contract managers and policy specialists, these will need to expand to get the right messages to the right people within stakeholders organisations, enabling the industry to better prepare for change.

Talking through the projects like this is a useful format

There can never be enough communication!

These sessions are super useful and we want to be involved

AMO (Assn Meter Operators), UKMF (co-chair) - 2 good forums with technical consultants that are worth including within this forum as they understand the governance around metering. Gemserv are secretariat for both.

Please involve shippers and suppliers from the outset on project working groups - doesn't need to be everyone, just a representative

HyDeploy has provided useful learnings on the positives and pitfalls of managing a trial, providing insight that can be used in future.



Key learnings:

- A joined up approach to customer comms is imperative across the industry to avoid confusion.
- Cross-party engagement in the beginning will support a more efficient and cohesive project and avoid any surprises in implementation.
- New processes will need to be established covering multiple interactions across the industry. Aside from the more obvious supplier billing processes and frontline training, there are also significant

metering considerations, such as meter spec, training, the age of affected meters and the commercial risk of stranded assets, as well as a decision on how CVs and FWA will be measured across networks and IGTs.

- There is a hunger for accessible information in “bite size chunks”. This could include a combination of industry training packs, engagement forums, knowledge hubs, etc.

When you are changing over / doing a street all in one go - how do you manage this when the metering is the liability of the supplier and these may all be different (n.b. this was the same issue for MAPs in the smart metering roll out & they couldn't do it street by street)

We need to be able to provide our front line staff with useful information so that they are knowledgeable when an affected customer contacts us (even if they're not contacting us about the trial, it's important that the customer service representative can identify that they're on the trial as it's important context)

We need a voice in trials early, so we can support project teams in developing processes that work for everyone (including the customer)

To date, trials have been quite insular, Now broadening out so need to assess impact, take learnings, get a larger group together in the development phase. Better engagement.

Trial outputs / learnings need to easily available

In addition to customer-facing packs, it's worth having supplier-focused packs for trials, so we have clear and consistent information that can be shared across supplier businesses



Metering stakeholders in particular have major technical concerns that they feel aren't currently being picked up early enough within the decarbonisation debate. There are several issues on this topic alone, from safety testing and standards to the potential reduction in asset life and the associated implications for current commercial models.

For shippers and suppliers the technical concerns are more system and process-related, not least of all because no two systems are the same so suppliers need time to develop individualised responses to blending as there will be no option for a standardised solution.

IGTs were also interested in the metering impact and the practicalities of potentially blending and deblending, particularly for I&C premises or multi-occupancy buildings where there's a chance that not all tenants will agree to a trial.

By nature, technical impacts often take time and collaboration to resolve, so this is one of the big reasons that stakeholders want to be consulted early on to ensure they have a voice at the start and can input to solution design.

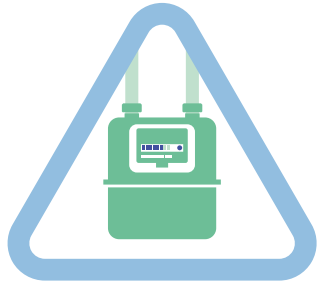
Too many unanswered questions. 2023 is immediate! We are treating blend with a lot more interest than we do for 100% hydrogen which is further in the future. The whole area of accredited testing and approvals is required. Stranded assets and whether new meters going on the wall will be ok, it all needs reassurance that this will work - we need that assurance for the investors...

It's OK to use the change management meetings initially to engage shippers and suppliers, but as projects develop we'll need specific sessions so that we're picking up technical impacts of trials/change with enough time to input and implement

Multi occupational building (MOB) : depending on the route of the network do we have to consider deblending in a 16 storey steel riser?? Or should these be electric not gas and go that route instead?

We'll have to test up front, might we also need to test more regularly if it's new tech? Firmware updates? We don't really understand the difference between ultrasonic and diaphragm meter performance yet.

ASSET AVAILABILITY & OWNERSHIP



Metering stakeholders were concerned that metering-related issues had largely been absent from decarbonisation conversations to date, but needed to be brought in as early as possible. Wide-ranging concerns were raised regarding the physical availability of appropriate meters, manufacturing capability and then safety testing of new meters.

Metering costs are a factor that often seems to be overlooked, whether it's shortened meter lifecycles or stranded asset costs, they're rarely considered at the outset of infrastructure projects.

The ownership discussion also extended to customer ownership, with suppliers clear that they are responsible for that consumer relationship and therefore need to understand and input to project design, as well as having a clear map of customer interaction points, e.g. letters from DNs, metering appointments, etc.

ASSET AVAILABILITY & OWNERSHIP

These programmes must consider how the meters work - the suppliers are engrossed in the smart programme and so have not been focussed on blend. The meter manufacturers are finally looking at blend - but are behind. These programmes are led by the network but we can learn from the smart program, where we had 3 / 4 years of concerns that we don't want to see again - there is no point purely having a network focus we must consider the metering asset side. The existing meter set will work on a blend, if we go blend then full hydrogen it can be supported, so we need to be able to sweat the asset for its full life.

We own the customer relationship, so need to be consulted up front rather than have another group assume impacts that we then have to manage

Stranded asset costs **NEED** to be added in, there is form for ignoring it (e.g. smart).

Meter manufacturers are in the process of removing internal filters, Brittleness is also a concern for 100% Hydrogen as it affects metal structure more than natural gas. Work needs to be done with the regulator. Pressure loss is governed by regulation - we need to get together with the networks and work this through. They're focusing on getting pipes ready, we're working on appliances.

The main area of focus when it comes to skills and training was from metering companies, who need to be able to train engineers on installation / disconnection of new meter types, as well as how to read meters that may be managing differing or fluctuating CVs.

From a supplier perspective, all frontline staff must be trained on managing customer queries and complaints, as well as learning how to recognise a meter that forms part of a trial. This training will also need to extend to back office operational roles as well, to ensure that billing processes are accurate and understood.



Longer term, we'll need to know how hydrogen tariffs/ demand forecasting / purchasing will work.

Can we learn from the roll out of smart metering training - so we don't do it again with this roll out? The rush to get people through caused problems. Paid for training but it wasn't the right level. Need training plan in place asap so we're ready to go. Still picking up problems from smart rollout.

There is a massive shortage of engineers in the I&C space - there are so few people left with this competency.

We need the right information to be able to train up our front line staff in managing customer queries / complaints relating to trials

Decarbonisation programme comms

- **Monthly catch ups** will provide immediate bridging support in the short-term.
- **A shared knowledge hub** containing up-to-date information should act as a central repository, ensuring regular visitors and providing access to a wider group of stakeholders within customer organisations.
- **Regular proactive updates** (like the ESO newsletters) could help subscribers to remain up-to-date
- **Map relevant groups/ forums** that would prove useful engagement channels

Project comms

- Use **regular catch ups** to identify representatives for project working groups
- Shared online **knowledge hubs**
- Development of industry **training packs & comms** by project, inc. FAQs, explainer videos, training materials that can be used within stakeholder organisations

Enablers to improvement / next steps

- **Persona creation** - to inform comms evolution; improve cross-industry understanding of stakeholder networks & support targeted audience growth
- Development of **new maps**:
 - » Consumer perspective / interactions map;
 - » Data flow map - what goes into a bill?
- Use these to map current comms and identify **CX improvements**

SECTION 1:

Policy milestone update

Donec id elit non mi porta gravida at eget metus. Donec ullamcorper nulla non metus auctor fringilla.

- Apr 14** Donec ullamcorper nulla non metus auctor fringilla.
- Apr 26** Aenean lacinia bibendum nulla sed consectetur.
- Jun 04** Nulla vitae elit libero, a pharetra augue.
- Aug 18** Sed posuere consectetur est at lobortis.

SECTION 2:

Projects of note & timescales

Donec ullamcorper nulla non metus auctor fringilla. Maecenas sed diam eget risus varius blandit sit amet non magna.

- May 02** Cras justo odio, dapibus ac facilisis in, egestas eget quam.
- Jun 04** Nullam quis risus eget urna mollis ornare vel eu leo.
- Sep 01** Nulla vitae elit libero, a pharetra augue.

SECTION 3:

Spotlight on: Future Billing Methodology consultation

Nullam quis risus eget urna mollis ornare vel eu leo. Vestibulum id ligula porta felis euismod semper.

Vestibulum id ligula porta felis euismod semper. Duis mollis, est non commodo luctus, nisi erat porttitor ligula, eget lacinia odio sem nec elit.

Maecenas faucibus mollis interdum. Nullam id dolor id nibh ultricies vehicula ut id elit. Duis mollis, est non commodo luctus, nisi erat porttitor ligula.

www.xoserve.com/services/future-billing-methodology/

SECTION 4:

Dates for the diary

Sed posuere consectetur est at lobortis. Donec id elit non mi porta gravida at eget metus.

Apr 14 Donec ullamcorper nulla non.	Apr 24 Aenean lacinia bibendum nulla sed.
May 01 Lorem Ipsum Ullamcorper Consectetur.	Jul 22 Duis mollis, est non commodo luctus, nisi erat.
Aug 01 Integer posuere erat a ante venenatis.	Sep 13 Maecenas sed diam eget risus varius.

EXAMPLE: PERSONA



PERSONA

SMALL METERING BUSINESS

FAMILY

MAM/MAP



PROFILE

Brief description. Curabitur blandit tempus porttitor. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Curabitur blandit tempus porttitor. Duis mollis, est non commodo luctus, nisi erat porttitor ligula, eget lacinia odio sem nec elit.



ABOUT MY BUSINESS

- Business size: (rough turnover banding/ employee #)
- Footprint: UK/ regional/ international?
- Activities undertaken/business interests: Lorem ipsum dolor sit amet, consectetur adipiscing elit.
- Proportion of business associated with gas: 80%
- Customers: Lorem ipsum dolor
- Stakeholders: Lorem ipsum dolor

JOBS/AREAS AFFECTED BY DECARB DECISIONS

- Item A
- Item B
- Item C



PERSONA

LARGE GAS TRANSPORTER

FAMILY

IGT



PROFILE

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ABOUT MY BUSINESS

- Business size: (rough turnover banding/ employee #)
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- Proportion of business associated with gas: 80%
- Customers: Lorem ipsum dolor
- Stakeholders: Lorem ipsum dolor

JOBS/AREAS AFFECTED BY DECARB DECISIONS

- Item A
- Item B
- Item C



ABOUT DECARBONISATION

- Extent to which decarb features on our corporate agenda
- In what way? (projects, services, products)
- Key market messages
- Dedicated decarb/ sustainability team?

THINGS THAT ARE MOST IMPORTANT TO ME

Early engagement

Clear, accessible information I can share

Technical changes that impact X, Y, Z



ENGAGEMENT

- Extent to which we're engaged with the gas industry:



Forums/ groups we belong to:

- Aenean eu leo quam.
- Pellentesque ornare sem lacinia quam venenatis vestibulum.
- Fusce dapibus, tellus ac cursus commodo

Parties we interact with within the gas industry:

- Maecenas faucibus mollis interdum.
- Aenean eu leo quam.
- Duis mollis, est non commodo luctus

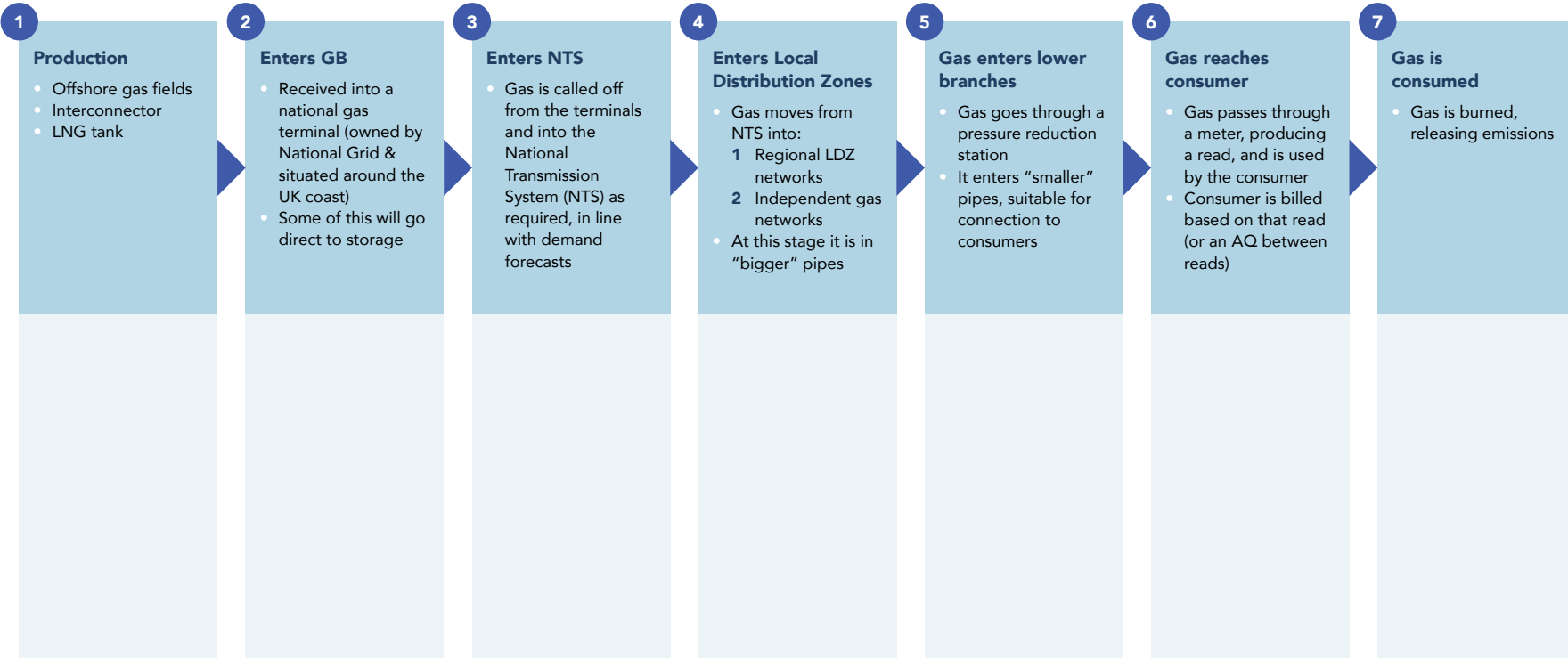
How we want to receive/access information:

- Lorem ipsum dolor sit amet.
- Consectetur adipiscing elit.
- Curabitur blandit tempus porttitor. Morbi leo risus.

APPENDIX A: LIFE OF A MOLECULE MAPS

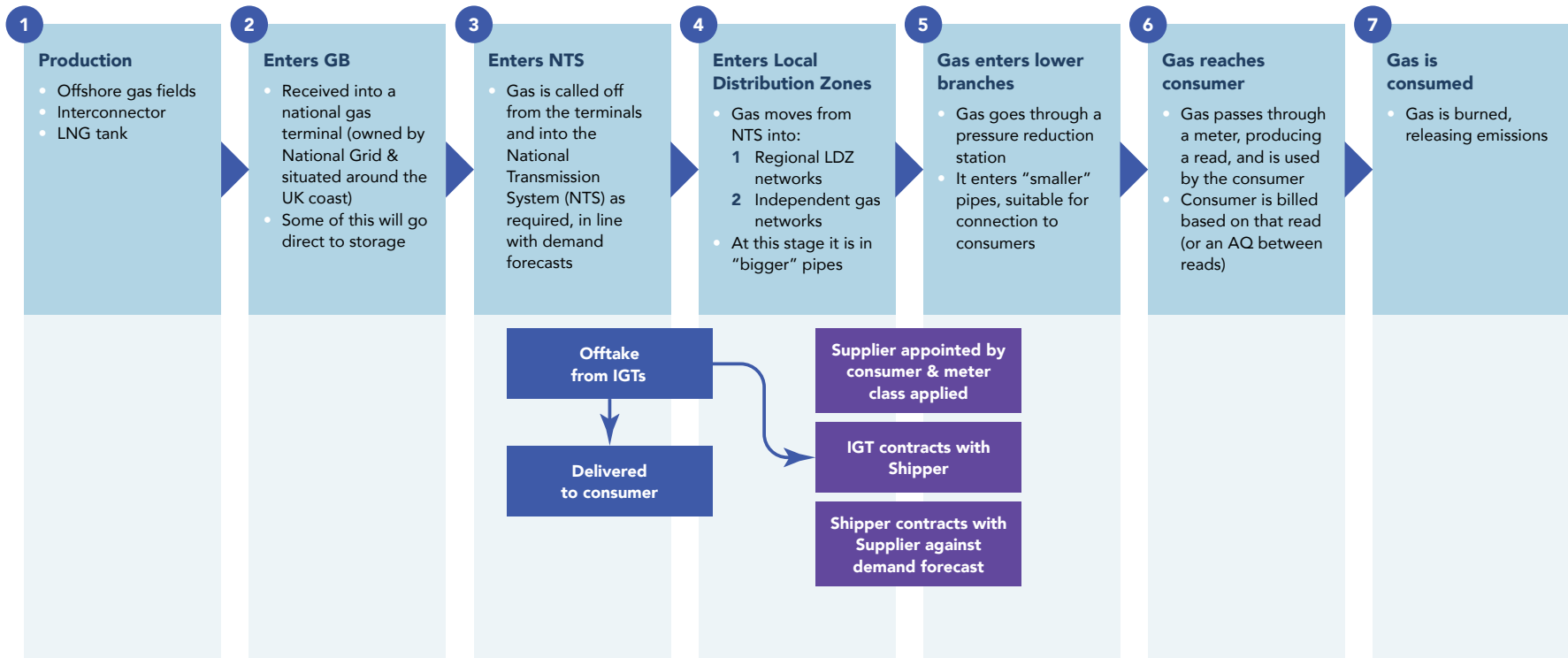
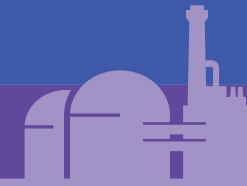
Xserve GAS ROADMAP

INFRASTRUCTURE



APPENDIX A: LIFE OF A MOLECULE MAPS

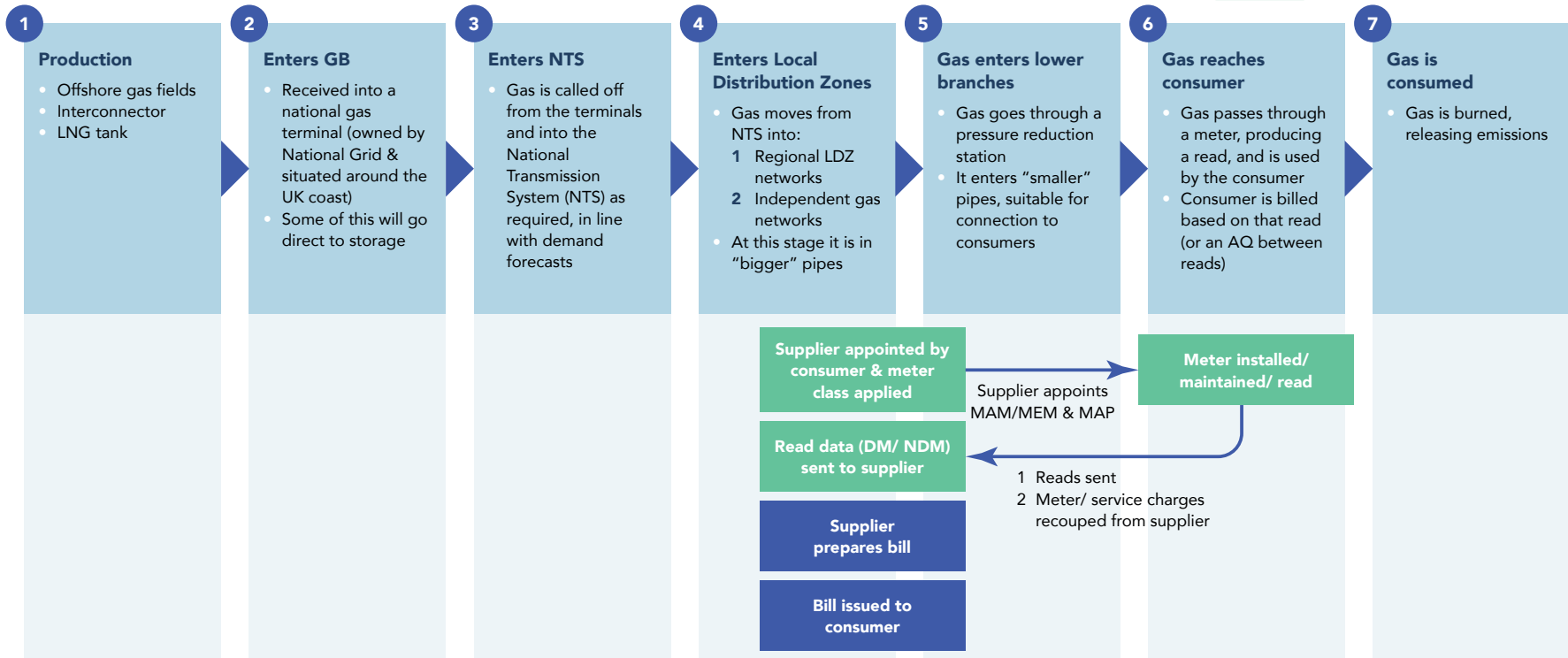
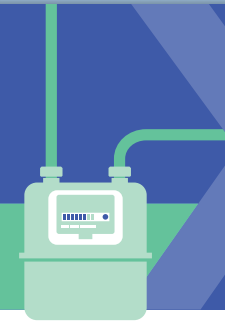
Industry interactions - IGT



APPENDIX A: LIFE OF A MOLECULE MAPS

Xserve GAS ROADMAP

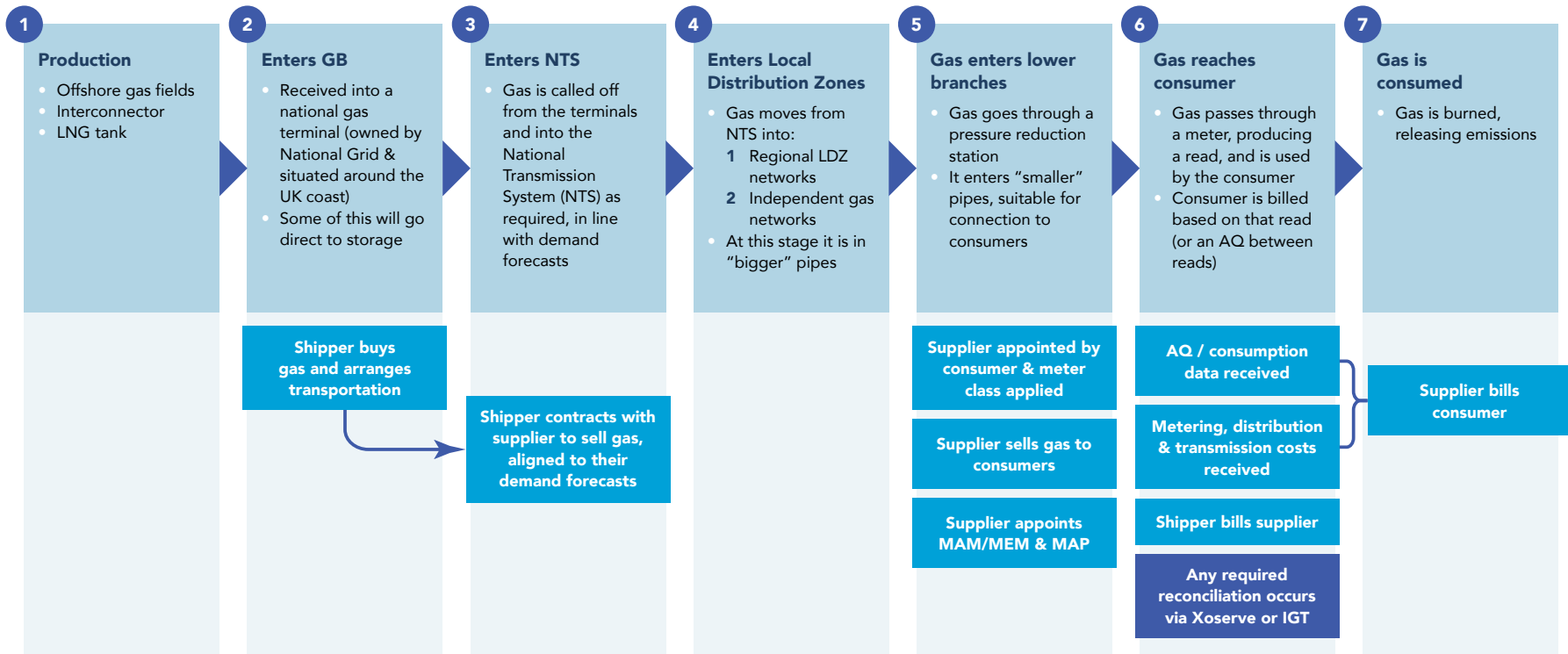
Industry interactions - MAM/MEM & MAP



APPENDIX A: LIFE OF A MOLECULE MAPS

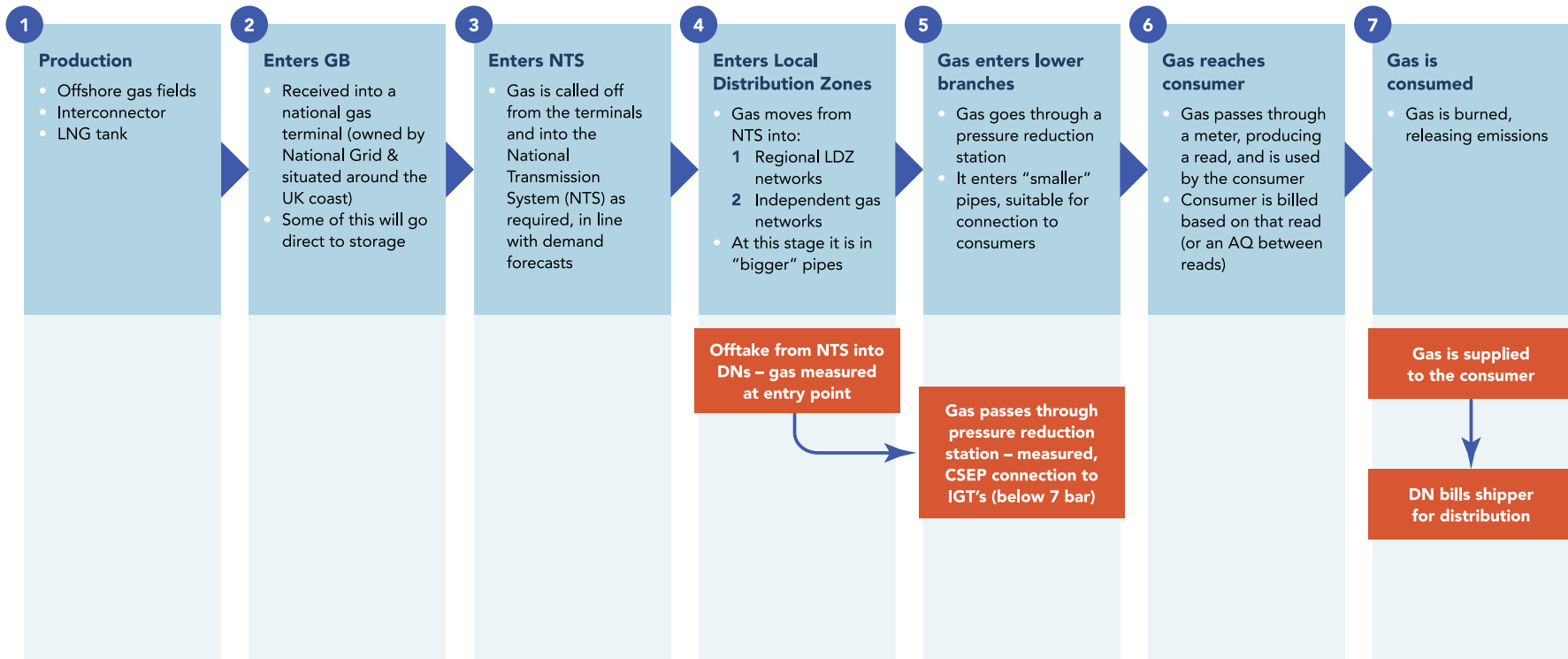
Xserve GAS ROADMAP

Industry interactions - SHIPPER / SUPPLIER



APPENDIX A: LIFE OF A MOLECULE MAPS

Industry interactions - DN



APPENDIX A: LIFE OF A MOLECULE MAPS

Industry interactions - NTS

