Net Zero Sense of Place Framework
Summary

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Find out more at idric.org

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1.

Introduction

Why a Sense of Place Framework?

- Place is central to the development of industry since all industrial activities involve the deployment of technologies and infrastructures somewhere in particular. Industrial activities shape the past and future of industrial towns and regions.
- **Context matters**. A place-sensitive approach presumes that ‘once size fits all’ policies will fail to deploy industrial decarbonisation in ways that are effectively tailored to local needs and circumstances.
- Since 2018, the UK government has aimed to create several low- and zero-carbon industrial clusters. These are also expected to ‘level up’ industrial regions through the deployment of novel technologies such as carbon capture, utilisation, and storage (CCUS) and hydrogen. What is often overlooked is that **how** these changes are seen and experienced by ‘host’ communities will determine the outcomes of technology deployment.
- Industrial decarbonisation needs to shift from a technology-centred perspective to one that recognises host communities’ **sense of place**, if deployment is to be effective, fair and acceptable, and to avoid risk of delay. This Framework aims to guide a **place-sensitive approach** to industrial decarbonisation.

> Saying that they’re spearheading the fourth industrial revolution, great. But what’s spearheading the fourth industrial revolution got to do with reenergising the local economy and improving air quality? The two don’t seem to go together
>
> — Ellesmere Port resident

What Do We Mean by ‘Sense of Place’?

Sense of place refers to the connections and meanings that people have with particular places in the world.

Sense of Place has several dimensions:

Place satisfaction
The perceived quality of a place & how this has changed over time for better or for worse;

Place attachment
The feelings people have about a place - usually positive but can be negative or ambivalent;

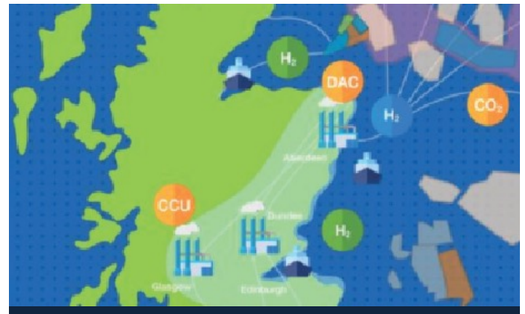
Place identity
How localities shape people’s sense of who they are;

Place experience
The everyday experience of living in a place over time;

Place meaning
The meanings people associated with a locality based on their experiences in this place;

Local knowledge
The expertise residents develop about a place from living there over time.

Grangemouth



Case 1: The Scottish Cluster

Milford Haven

Case 2: The South Wales Cluster

Ellesmere Port

Case 3: The North West Cluster

An Evidence-based Framework

This framework is based on findings from the Net Zero Sense of Place (NZSoP) research project of the Industrial Decarbonisation Research and Innovation Centre (IDRIC) led by the University of Exeter.

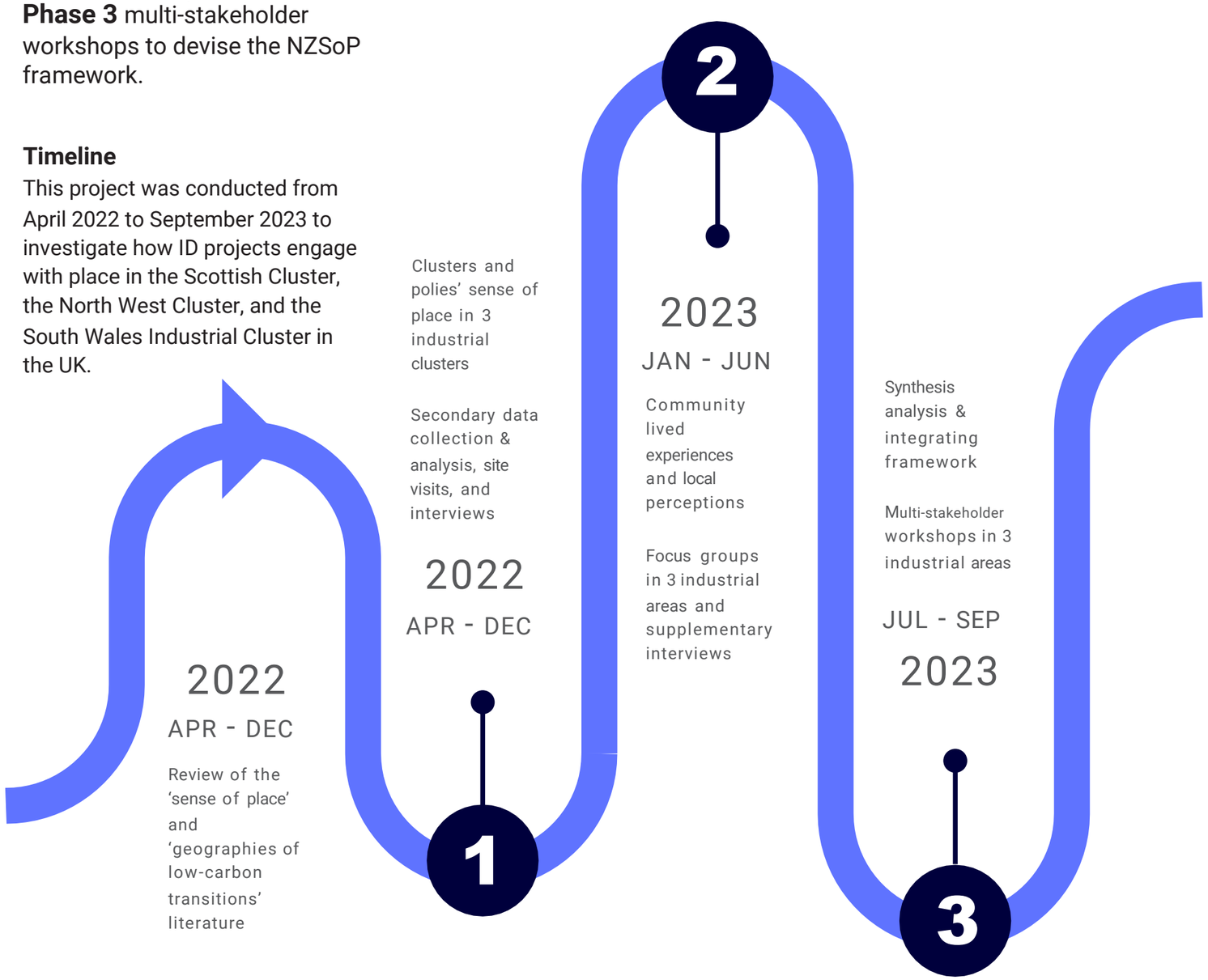
Phase 1: Used interviews to capture policy and industry stakeholder perspectives on cluster decarbonisation. We found that policy and industry stakeholders tended to think about place only in terms of cluster branding, and regard host communities as passive recipients of information and place changes. This finding shows a general need for a more place-sensitive understanding of technology deployment and for systematic, proactive community engagement in policy and cluster development.

Phase 2: Used focus group discussions to capture host community perspectives in three industrial places (Grangemouth in Scotland, Ellesmere Port in Northwest England, and Milford Haven in South Wales). While expressing pride in place and support for industrial decarbonisation, we found that residents expressed scepticism about the credibility of new technologies and the promised benefits for local development. This was grounded in past experiences - a lack of balance between host communities and dominant local industries, and a lack of representation in government and regulatory bodies.

In conclusion, a mutual learning process is necessary for policy and industry stakeholders to understand place and site-specific needs, and for community stakeholders to understand technology choices and justifications. Key findings from Phases 1-2 were refined with responses from **Phase 3** multi-stakeholder workshops to devise the NZSoP framework.

Timeline

This project was conducted from April 2022 to September 2023 to investigate how ID projects engage with place in the Scottish Cluster, the North West Cluster, and the South Wales Industrial Cluster in the UK.



2.

NZSoP framework

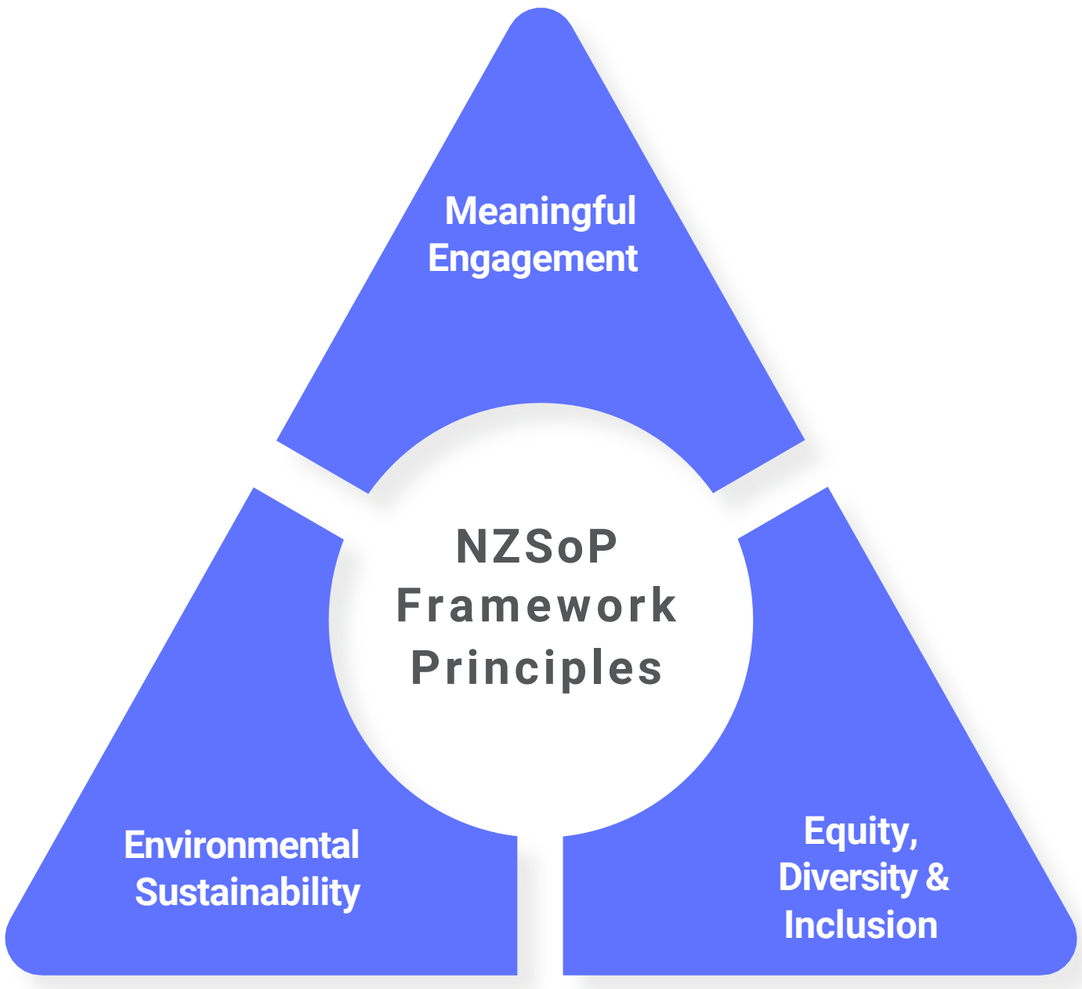
What Is the NZSoP Framework?

The Net Zero Sense of Place Framework

Delivering the NZSoP Framework

- The Net Zero Sense of Place framework can inform the deployment of decarbonisation technologies from a place-sensitive perspective. It will help industrial decarbonisation (ID) initiated at national or regional levels to become locally relevant, with the recognition that the development of net zero industrial clusters and decarbonisation policies involve actions and consequences for individual localities.
- The NZSoP framework is not a public engagement plan for an industrial cluster, nor a tool to obtain social license. Instead, it provides a guide to rethink ID as a **place-making** process, and how this process can unfold in ways that benefit people who are directly impacted, to create more inclusive, fair and thriving futures for industrial places
- The NZSoP framework has 3 stages of delivery:
  - Stage 1:
    Adopting a place-sensitive mindset
  - Stage 2:
    Delivering the six place themes
  - Stage 3:
    Realising positive outcomes
- The stages are guided by 3 overarching principles:
  - Meaningful engagement between host communities, policy, and industry stakeholders
  - Equity, diversity, and inclusion
  - Environmental sustainability

Overarching Principles



The stages are guided by 3 overarching principles

Meaningful Engagement

Moving from a "top down" hierarchical approach to community engagement (e.g. PR messaging) towards a more egalitarian approach that is empowering to host communities, who are seen as key stakeholders in ID

Equity, Diversity, and Inclusion

Recognising different circumstances that each person may face (Equity), ensuring sufficient representation of different backgrounds (Diversity), and creating a welcoming environment for everyone (Inclusion)

Environmental Sustainability

Recognising that engagement about NZSoP through events and activities can produce negative environmental impacts. Ensuring that delivery of the NZSoP framework minimises emissions and impacts, and maximises environmental benefits in decision-making and technology deployment

3 Stages of Delivery

Tech-centred

Transition in the process of the ID deployment

STAGE 01

Adopting a place-sensitive mindset

A ‘techno-centric’ mindset is not enough to ensure inclusive, fair, and acceptable technology deployment. A change in mindset is needed.

Delivering the six place themes

Six inter-related place themes serve as guiding principles for designing constructive multi-stakeholder dialogues between stakeholders and host communities.

STAGE 02

STAGE 03

Realising positive outcomes

Delivery of the NZSoP framework can realise a range of positive outcomes for host communities, government at national and local levels, and industry.

Place-based

Apporach to ensure inclusive, fair, and acceptable ID process

Stage 1: Adopting A Place-sensitive Mindset

- Our findings show that policy and industry stakeholders view ID through a particular lens that puts technologies, and their costs, at the centre of ideas of change. There is strong emphasis upon CCUS and Hydrogen, upon facilities and infrastructures, and upon their costs and benefits.
- What this overlooks is a crucial aspect of technology deployment – it will happen in places with pre-existing communities, histories of growth and decline, culture and identities. It will directly impact and shape these places and communities.

Stage 2: Delivering the Six Place Themes

6 Place Themes

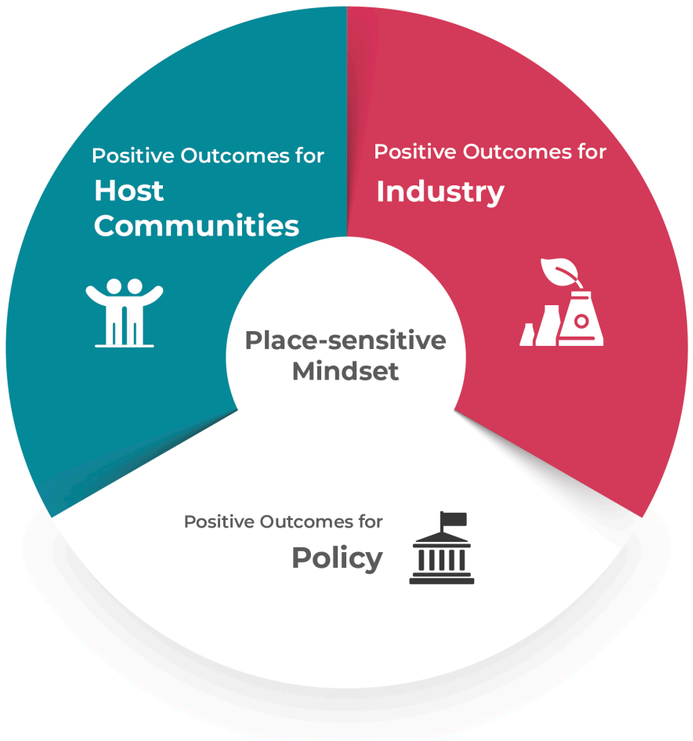
The framework comprises six inter-related themes:

- **Encouraging pride in place**
- **Recognising place changes**
- **Grounding benefits**
- **Unlocking local knowledge**
- **Engaging place visions**
- **Building trust and reciprocity**

These themes can serve as Guiding Principles for designing constructive multi-stakeholder dialogue between industry, public sector, community organisations, residents, and other organisations who are involved in or will be impacted by ID.

Delivery of the framework requires expert, trusted practitioners of stakeholder dialogue who have knowledge of facilitation and engagement, as well as site specific conditions.

Stage 3: Realising Positive Outcomes



Positive Outcomes for

Host communities

- Increased pride in place
- More jobs, prosperity and quality of life
- Rebalanced relationship with the industry
- Recognition of lay knowledge, lived experience, and place attachment
- Increase knowledge of ID cluster plans
- Opportunities to shape ID technology deployment
- Empowered communities through active citizenship

Positive Outcomes for

Industry and cluster developers

- Reduced risk of delayed or abandoned projects
- Delivery of local social, economic, and environmental co-benefits
- Reduced mistrust and stronger relationships with host communities
- Increased social consent for decarbonisation projects and clusters
- Clearer place-sensitive dimensions of ID (e.g. naming of clusters)
- Reduced public concerns about the transition away from fossil fuels
- Increased familiarity with cluster plans and specific technologies
- Improved industry/cluster branding strategies

Positive Outcomes for

Policymakers at national and local levels

- Effective co-delivery of benefits (e.g. levelling up)
- Grounding societal benefits of net zero in local needs
- Increased public consent for net zero ID
- Recognition of diverse voices in more inclusive and effective ways
- Learning from public concerns and mistrust
- Improvement to place/cluster branding strategies

> **I want industry to be seen as a blessing rather than a curse.**

— Grangemouth resident

3.

How to use the NZSoP framework

Getting Started

Who leads on engaging about the NZSoP framework?

- What organisation leads the delivery of the framework needs to be perceived as trustworthy by host communities, have a degree of agency and be at arm's length from industry. If not, engagement is unlikely to be successful and the NZSoP framework will not be delivered. We suggest local authorities or related public sector agencies and local development organisations, which have a responsibility to all residents living in host communities, now and in the future.
- Where councils lack staff capacity and resource budgets, we encourage collaborations with academic institutions or with industry to form joint bids for fundings from national and central governments. If partnerships involve industry, the involvement of a neutral organisation in leading the dialogue can be important to avoid the impression of only serving industry interests.
- We suggest that cluster plans and deployment projects allocate (more) budget to resource meaningful community engagement.

Preparation phase

- Work in this phase involves networking amongst stakeholders as well as data collection, using multiple methods, about place history, characteristics and circumstances, and plans for technology and infrastructure deployment.

Delivery phase

- There is no fixed format and length for the dialogue, which can be tailored to local circumstance. It could be in the form of citizen assemblies, a workshop with small group discussions, or a series of workshops, depending on time and resources available. Follow-ups are important to produce outputs and maintain momentum to generate impact.

Disclaimer

There are several broader issues out of the scope of this framework, but which will impact its delivery, including:

- Uncertainty over cluster development and, more broadly, net zero policy, which could make it difficult to conduct systematic and pro-active stakeholder and community engagement at the cluster level.
- Competition between nations and companies in global markets, which may constrain the local commitment of multi-national companies and affect the potential to fulfil the visions proposed for a specific place (national, regional, and local).

It is important that the delivery of the NZSoP framework is open to calls for alternatives to the policy goals and decarbonisation technologies pre-set by government and cluster developers. A narrow framing to instrumentally achieve existing policy goals could fail to address mistrust and prevent the identification of novel solutions through dialogue.

In all three case studies of the NZSoP project, host communities expressed doubts about proposed technological solutions, due to insufficient information disclosure, existing concerns, and lack of public involvement in cluster decision-making. While the focus of place-sensitive multi-stakeholder dialogue is not on the discussions of technological feasibility and selection, it is important to recognise these disagreements when exploring the six sense of place themes, making space for disagreements to be aired openly and respectfully, addressing existing concerns.

Introducing 6 Place Themes

These 6 place themes address different dimensions of meaningful, place-sensitive community engagement in the process of ID. They can be integrated, reordered, or individually stressed in accordance with the contexts and needs of each case

Encouraging Pride in Place

Exploring similarities and differences in sense of place among stakeholders with a focus on whether ID can be perceived as positive to the place

Recognising Place Changes

Exploring whether ID can be designed and deployed to bring about desired changes that can enhance people's satisfaction with their lives in the place

Grounding Benefits

Exploring whether ID can respond to the concerns and needs of diverse residents, and help level up declining and deprived areas in the place

Unlocking Local Knowledge

Exploring whether local people's knowledge about the place and their experiences with industrial activities can inform decision-making

Engaging Place Visions

Exploring common ground between diverse visions of a net zero industrial place, and identifying conflicts among stakeholders and across levels

Building Trust & Reciprocity

Exploring challenges and opportunities for (re)building trust between industry and host communities, and ways to create a more reciprocal relationship

Theme 1: Encouraging Pride in Place

- For many people, it is important to feel proud of the place where they live. Furthermore, the meanings and feelings they have for that place help define what they see as ‘out of place’
- **Could pride in this place be increased by deploying a particular decarbonisation technology here?**
- Dimensions to explore in engagement between stakeholders can include:
  a. lived experiences of the place, feelings, and satisfaction with its current state
  b. perceptions of local nature and nearby landscapes, as well as already existing industrial/energy infrastructures
- It may be difficult for community participants to discuss this question in detail, due to a relative lack of community engagement by clusters to date. Thus, it is important to prepare information for discussion that is accessible for all participants. Materials (e.g. factsheets) could be provided to participants before and during engagement events.
- The point is not to debate the value of a certain technology in principle, but to unpack **under what conditions could pride in place be improved by technology deployment? Could local decarbonisation projects enhance local people’s sense of place?**

> … at the moment I’m not massively proud of being from Ellesmere Port, but if it did become a world leading location for Green Growth, then I would be.
>
> — Ellesmere Port resident

> … when it was industry looking after their staff, and investing in the local community, then, yes, completely proud, because they’re part of the community. But as it’s evolved and they’re not, then, I wouldn’t be as proud, because they actually just taking, and not giving anything back.
>
> — Ellesmere Port resident

Theme 2: Recognising Place Changes

- For industrial towns and regions, industry has played a pivotal role in shaping the surroundings, livelihoods, social lives, and identities of host communities. Residents remember how the town used to be and how industry used to enable community activities. ID is likely to bring a new wave of industry-led place-making with further economic, physical, social, and emotional changes to people's lives and the places where they live.
- **What aspects of this place could be improved by industrial decarbonisation and technology deployment?**
- Note that these aspects can go beyond the industrial domain, and that local communities may hold positive, mixed, and negative associations with industry. The point here is to **understand what changes to the place could improve local people's satisfaction with their lives**, including increasing the elements they cherish and addressing the parts they do not like, especially those associated with industry (e.g. noise, smells, hazards).
- This question can help industry and cluster developers recognise the changing relationship between host communities and industry in particular places, and any negative industrial legacies from the past that might exist there. It can also help to explore potential changes that might be welcomed by local people that industry could bring to the place.

> It will be great if Ellesmere Port regains its reputation
> … [now] it's seen as a dirty town.
>
> — Ellesmere Port resident

> Now it appears to be business will nominate a pot of money to support a community project, and in my view, it's seen as just paying someone to put a label on, 'we have community involvement'. It's not the same as it used to be… whereas years ago, they [industry] were the heart, the social clubs of the industry. They brought everyone together, they brought the families together. Now it's lip service.
>
> — Ellesmere Port resident

Theme 3: Grounding Benefits

- ID takes place in an uneven world and can potentially reshape inequalities experienced by declining industrial places and deprived industrial communities. To ‘level up’ these places needs more than economic potential. It requires plans to translate potential benefits of ID into local benefits addressing site-specific concerns and needs.
- **Could existing social, economic, and environmental problems in this place be improved by channelling benefits from decarbonisation projects?**
- This can be discussed in terms of specific local concerns and needs identified in preparation work. This also involves understanding how the costs associated with ID can be minimised (or at least not worsen existing local concerns) and benefits maximised.
- It may be difficult for industry and cluster developers to respond to local concerns that are beyond the industrial domain, but this can be done through indirect mechanisms and by partnership working with other local organisations including councils and community organisations. Working together can leverage co-benefits from different funding sources, initiatives, and programmes in the place.
- The point here is to **think through a fairer and more balanced allocation of ID benefits and costs in relation to the host communities and the specific place**, spreading opportunities (e.g. employment, training) to those most in need.

> It is a nice lot of words, but it also makes me a little bit angry. Because if there is much money in the area, why do we have food banks and child poverty? … billions of pounds worth of investment. Is Milford going to see any of that?
>
> — Milford Haven resident

> It’s going to be great and everything. But what’s it going to bring for the area? How’s it going to reduce the traffic and things like that?
>
> — Grangemouth resident

Theme 4: Unlocking Local Knowledge

- Local people, particularly families that have lived in an area over generations, are experts in their local environment and community. Instead of viewing residents as passive recipients of messages about technologies, industry and cluster developers can find ways to recognise, value, and integrate local knowledge into decarbonisation plans.
- **What local knowledge could substantively improve deployment plans? Could local knowledge be used to minimise negative social, environmental, economic or political consequences?**
- Engagement on this theme differs from unilateral public consultation. It views community stakeholders as expert informants about the places where they live and opens up space for the co-production of deployment plans, instead of their top-down implementation.
- The point here is not to use engagement instrumentally to 'inform' or 'educate' host communities who are viewed as lacking expertise. Instead, the goal **is to enable mutual social learning between stakeholders who draw on different kinds of knowledge (expert, local, lay etc.)**.
- **By recognising the value of diverse sources of knowledge**, creative and place-sensitive problem solving can produce grounded understandings of the social, economic, and environmental consequences of ID.

> People assume that Pembrokeshire people are stupid … and that they come in with their big ideas, and do all these surveys, take no notice of the locals. They do their own thing, which is usually a disaster.
>
> — Milford Haven resident

> There is a sense of being 'done to' in the communities here.
>
> — Milford Haven resident

> I can smell Ellesmere Port, so that is what my children are breathing in.
>
> — Ellesmere Port resident

Theme 5: Engaging Place Visions

- Successful cluster visions are not merely a branding strategy that appeal to external investors. They need to make sense to local people and engage diverse place visions held by host communities. By creating visions of desired futures for an industrial place, ID can help to anchor unfamiliar decarbonisation technologies in that place, while catalysing new potential for prosperity and quality of life in that place.
- **What kind of place would you like to see this place become in the future? Could industrial decarbonisation enable that to be achieved?**
- What will this place be like in 2050 or 2100? How would participants describe everyday life in this place in the future? If there are multiple future visions of the place held by different participants, what are the similarities and differences between them? What kind of host community-industry and public sector relations is captured by these different visions? What are the challenges to making these visions real, and how best can you address these challenges?
- Engagement should pay attention to tensions and trade-offs, along with the common ground between different participants and visions.
- The point here is **to draw on host communities' envisioned place futures (both ideal and feared) to inform cluster and place visions prompted by ID**, so as to increase their potential connection, as well as to be realistic about the extent to which these expectations can be realised by ID.

> Industry needs to realise that we can see through that [PR spin]. And for this to actually be viable, they need to actually be honest, and they need to be very specific about what it is that they are trying to achieve.
>
> — Ellesmere Port resident

> They don't even ask our opinion about what we want for the Port. They just go ahead and do it. And we have to pay for it.
>
> — Ellesmere Port resident

> There's been plans since when was Milford first established? And they continue to be plans and promises and visions.
>
> — Milford Haven resident

Theme 6: Building Trust and Reciprocity

- Host communities' levels of trust in ID proposals and claimed benefits of ID are influenced by past and existing relationships with industry. Trust can be eroded by an imbalanced community-industry relationship, and improved when residents are seen as key stakeholders.
- **How can meaningful and genuine engagement between host communities and industry help to (re)build trust and create a more balanced and reciprocal relationship with industry?**
- Use engagement discussions to identify what levels of trust and reciprocity exist between different stakeholders – host communities, industry, and public sector organisations - and how ID deployment could be used to (re)build trust.
- In a climate of mutual distrust, the goal **is to explore together what meaningful and empowering community engagement for ID could look like**, not to avoid conflict. Consensus may not be possible.
- Viewing ID as a process requiring long-term, mutually beneficial relationships between host communities and industry can help. Understanding disagreement and the potential inequalities between industry and host communities in decision-making and investment allocation can also help to build (or enhance) trust and more reciprocal relationships.

> Get the balance back… instead of they [industry] taking everything.
>
> — Grangemouth resident

> It has to benefit everyone, because at the end of the day, if the industry are going to get something, then the local community has to get something, then the local economy with the jobs. But you can't just keep taking without giving something back.
>
> — Ellesmere Port resident

4.

Conclusions and next steps

Conclusions and Next Steps

- Sense of place matters to the process of industrial decarbonisation. However, to date a place-sensitive mindset is lacking in policy and industry perspectives on industrial decarbonisation. This absence risks the rapid, effective deployment of net zero technologies and the achievement of climate mitigation policy goals.
- The NZSoP framework offers a foundation for designing meaningful and inclusive engagement between host communities, policymakers at different levels, regulatory bodies, and industry. The six place themes can help deliver a range of positive outcomes, not least to enhance a sense of fairness, legitimacy, and public support for – or understanding of – industrial decarbonisation, as well as increase opportunities to 'level up' declining industrial areas.
- We encourage stakeholders to apply the framework and look forward to receiving their feedback. We also welcome opportunities to further develop the NZSoP framework. This could be through its application in other UK industrial clusters (e.g. Southampton, Humber, Teesside). It could also be developed by incorporating insights from other social science approaches to sustainability transitions, such as socio-ecological systems, just transitions, and social license to operate.

Acknowledgments and Key Information Sources

Reports

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Find out more at https://idric.org

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