From Risk to Reward: Transforming Operations for a Sustainable Future

Australian Pipelines and Gas Association

March 2023

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Summary

1. Sustainability is **strengthening the business value chain** and **minimising it's environmental impact**

2. Sustainability impacts all parts of a business and requires a **systematic approach** to **risk and opportunity**

3. **Understand your baselines**:
   - Environmental impacts across your value chain and future trajectories
   - Cultural alignment across the workforce
   - Integration with rest of business

4. Prioritise technical and enabling activities and aim for **traction rather than perfection**

Sustainability

- create and maintain a **viable business** and **biosphere**

- a **value creation opportunity** for both **financial and non-financial** rewards

- a scientifically-informed response to the pressures and emerging opportunities faced by the pipeline industry from the global energy transition

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Common Sustainability Pitfalls and Challenges

- Limited level of understanding Sustainability across business
- Sustainability as an isolated function or team
- Public long-term pledges and targets without supporting detail
- Sustainability targets separated from BAU plans
- Reporting for the sake of reporting
- Limited visibility of skills required (current and future)
- Evolving stakeholder lists and demands
- Fixation on single technological solution

Landmark Santos greenwashing case to centre on meaning of 'clean'

Shell's board of directors sued over 'flawed' climate strategy in first-of-its-kind lawsuit

BP scales back climate targets as profits hit record

Any other pitfalls or challenges?

https://www.lawyerly.com.au/landmark-santos-greenwashing-case-to-centre-on-meaning-of-clean/

https://www.euronews.com/green/2023/02/09/shells-board-of-directors-sued-over-flawed-climate-strategy-in-first-of-its-kind-lawsuit

https://www.bbc.com/news/business-64544110

Sustainability impacts all parts of a business and requires a systematic approach

Principles
The set of fundamental statements that define how work will be executed

Elements
A logical, mutually exclusive breakdown of each principle into actionable tasks

Requirements
A defined set of behaviours or processes to achieve element

Key Tools *(non-exhaustive)*
Specific methods employed to achieve the requirements (Decarbonisation-related tools provided as an example)

Create Alignment and Momentum	Understand Risk and Value	Integrate Activities	Deliver Results
• Clarity of purpose • Stakeholder engagement • Visible leadership	• Understanding risks • Defining the current and future value chain • Understanding potential performance	• Prioritisation of activities • Quantifiable goal- and target-setting • Linkages with broader business • Forging external partnerships • Target ownership and incentivisation	• Performance tracking and verification • Process standardisation and improvement • Performance reviews • Resourcing and capability • Organisational learning
Common, Business-wide Capabilities and Requirements			
• Vision and target setting • Cultural assessment • Decarbonisation Roadmap • External stakeholder and market engagement • Industry commitments selection • Communication campaigns • Leadership upskilling	• Materiality assessment (physical and transition risks) • Value chain transformation • Energy Transition driver tree (baseline and projected) • Asset operating philosophy	• New energy project evaluation methodology • External industrial collaborations pipeline • Recruitment and training planning • Carbon-budgeting • Cascaded emissions targets linked to STIs/LTIs	• Energy management systems and audits • Sensing, quantification and reporting • LDAR campaigns • Emissions reduction improvement ideas pipeline • Technology upgrades • Operating disciplines

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Embedding Sustainability requires building the capabilities and mindset, not just a toolkit

An initial maturity assessment can be used to identify focus areas for Sustainability-related activities

INITIAL MATURITY ASSESSMENT

Create Alignment and Momentum	Understand Risk and Value	Integrate Activities	Deliver Results
Clarity of purpose Stakeholder engagement Visible leadership	Understanding risks Defining the current and future value chain Understanding potential performance	Prioritisation of activities Quantifiable goal- and target-setting Linkages with broader business Forging external partnerships Target ownership and incentivisation	Performance tracking and verification Process standardisation and improvement Performance reviews Resourcing and capability Organisational learning

Common, Business-wide Capabilities and Requirements

Vision and target setting Decarbonisation Roadmap External stakeholder and market engagement Industry commitments selection Communication campaigns Leadership upskilling	Materiality assessment (physical and transition risks) Value chain transformation Energy Transition driver tree (baseline and projected) Asset operating philosophy	New energy project evaluation methodology External industrial collaborations pipeline Recruitment and training planning Carbon-budgeting Cascaded emissions targets linked to STIs/LTIs	Energy management systems and audits Sensing, quantification and reporting LDAR campaigns Emissions reduction improvement ideas pipeline Technology upgrades Operating disciplines

Maturity Rating				
Absent	Exists	In-use	Effective	Effective and Improving
Completely ad hoc	Documents but little more	Achieves result but inefficiently	Fit for purpose	High-performing

Close major gaps and play to your strengths

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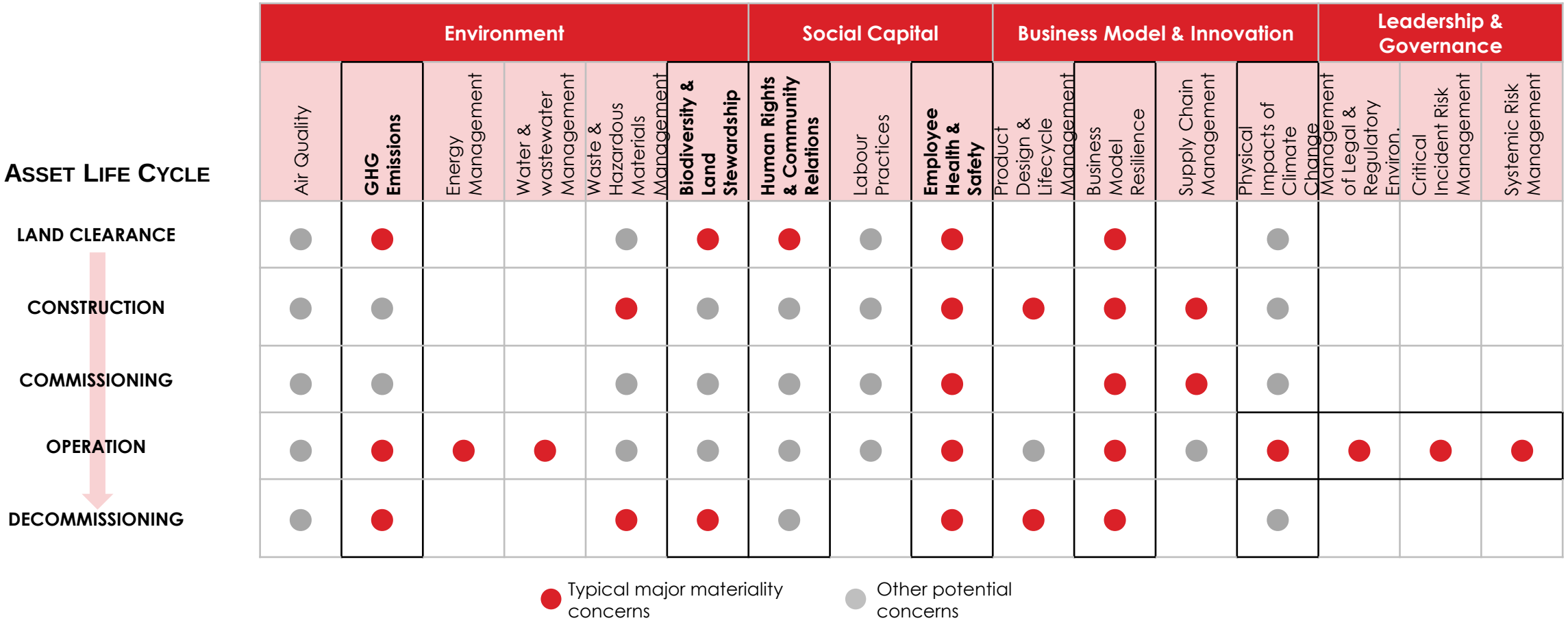
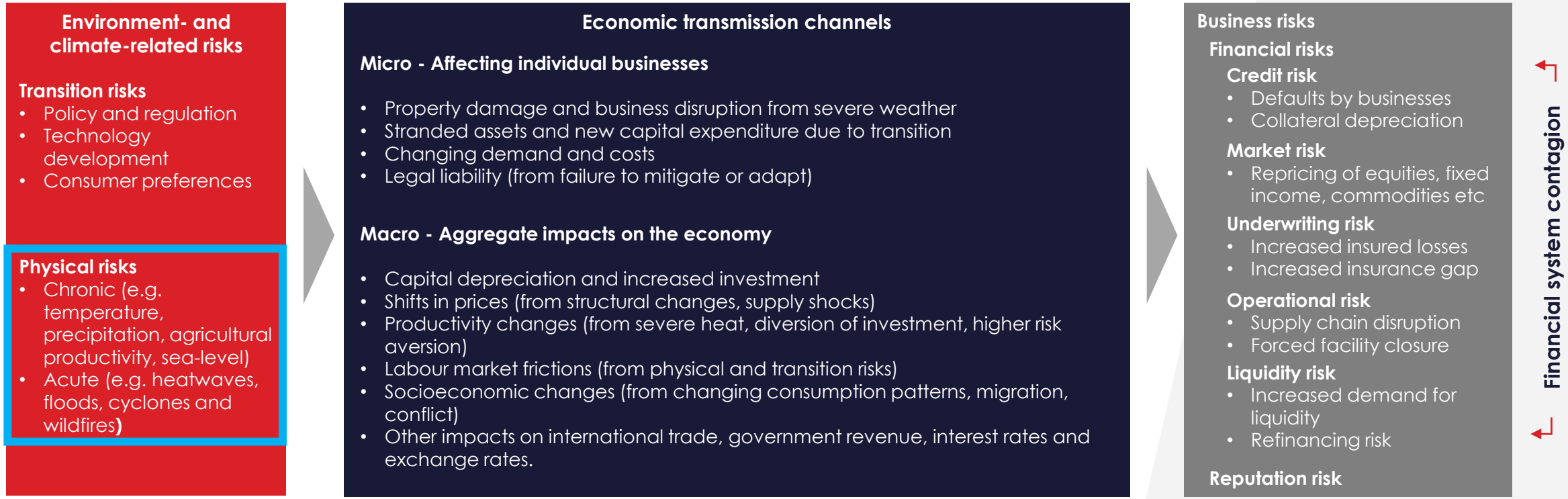
An asset lifecycle materiality assessment allows the key risks and impacts of a pipeline to be considered across its lifetime

Simplified Materiality Assessment



Many companies do not yet fully comprehend the risks and opportunities posed by climate change to their value chains and have not designed appropriate responses

Climate physical, transition and financial risk model



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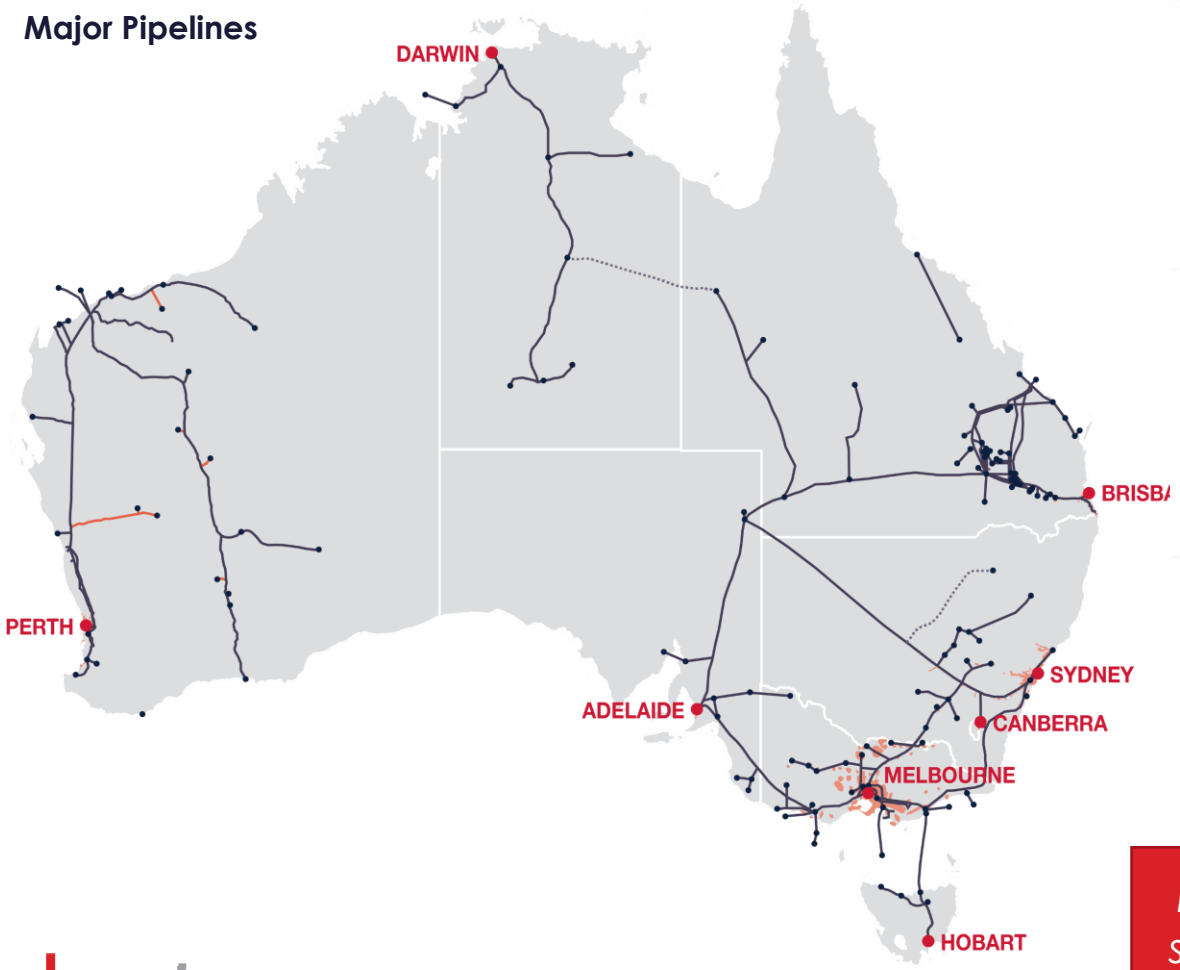
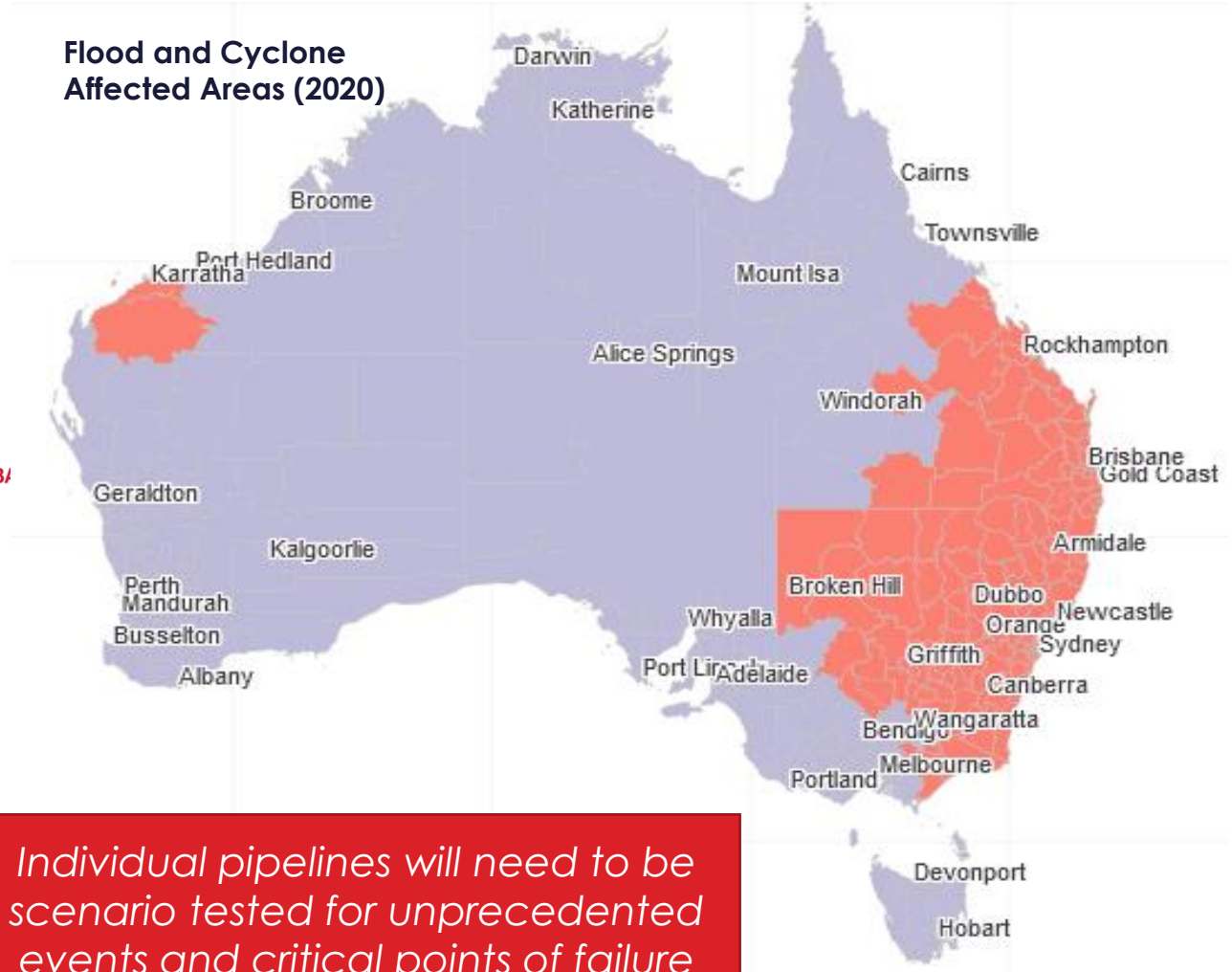
https://www.bis.org/bcbs/; Source What is Climate Risk? A Field Guide for Investors, Lenders, and Regulators, Imperial College, Centre for Climate Finance & Investment, Bob Buhr, Honorary Research Fellow

Anticipating location-specific physical risks and updating current business continuity management systems

Major Pipelines



Flood and Cyclone Affected Areas (2020)



Individual pipelines will need to be scenario tested for unprecedented events and critical points of failure

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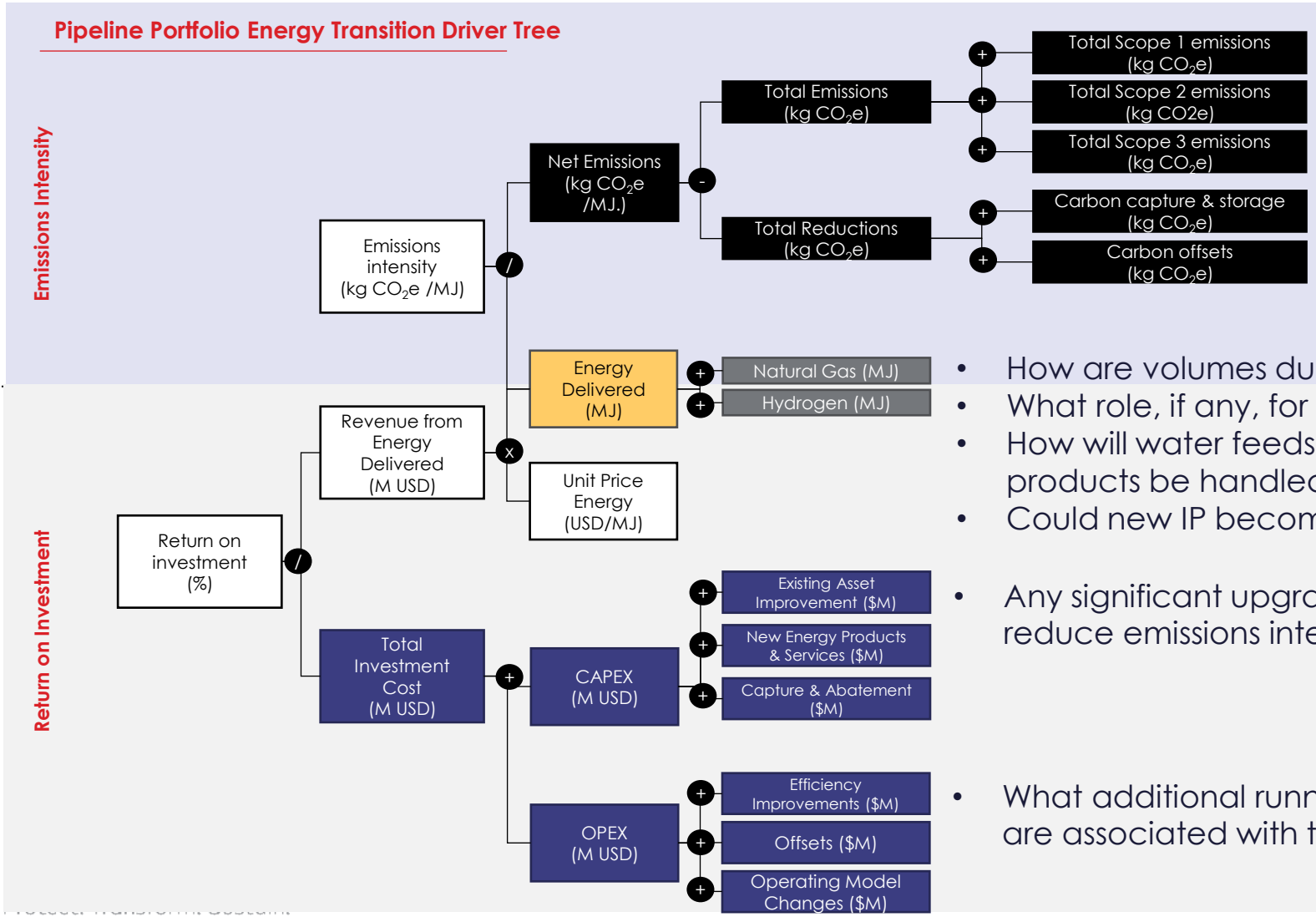
Source: https://www.apga.org.au/pipeline-facts-and-figures
Source: https://www.minister.industry.gov.au/ministers/taylor/media-releases/2021-australian-energy-statistic

Energy Transition Driver Tree models can be used to understand the interplay of revenue and environmental impact, and to identify unique value levers



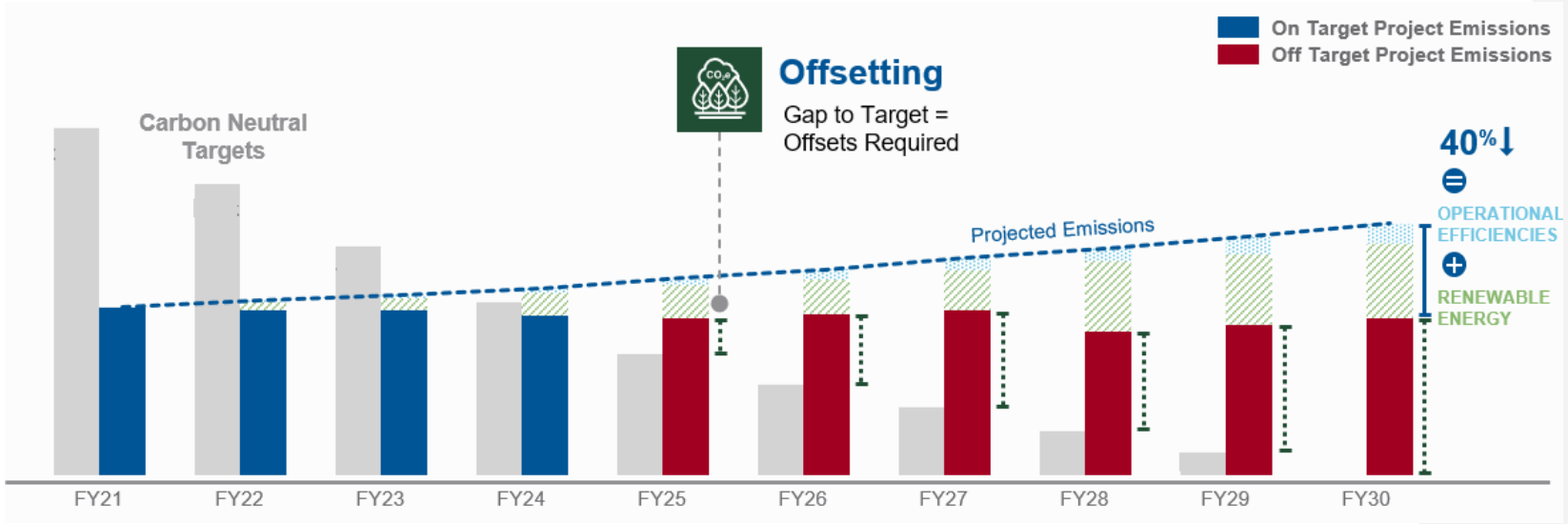
- How well quantified are CO_2 and CH_4 emissions over project life-cycle?
- What is the electrification potential?
- What role do CCUS or offsets play?

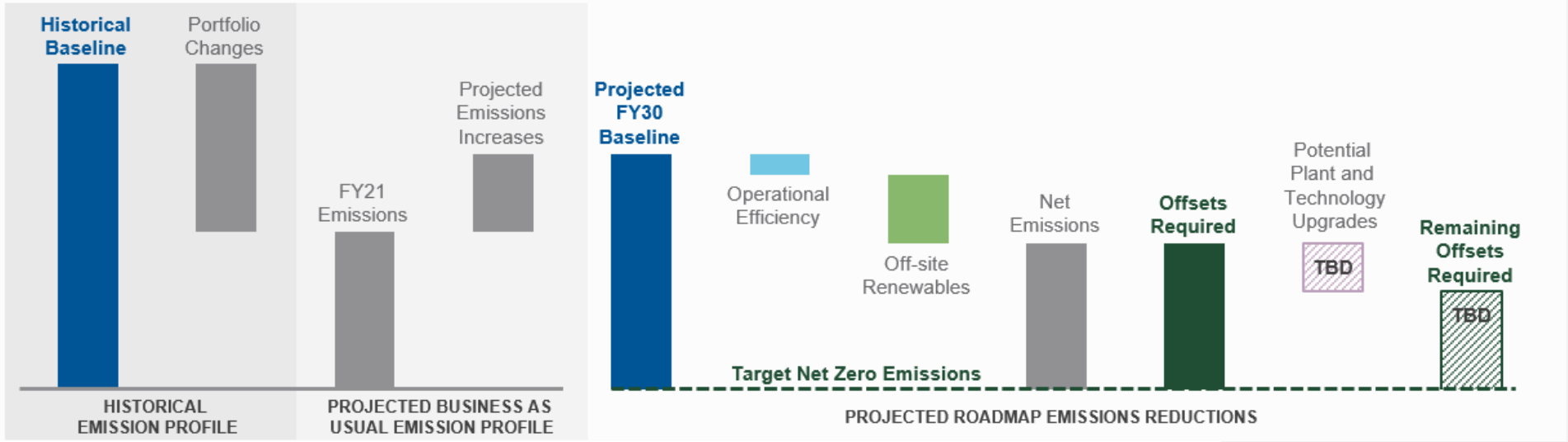
- How are volumes due to change?
- What role, if any, for H_2 or Bio-gas?
- How will water feedstocks and anaerobic digestion products be handled?
- Could new IP become an alternate source of revenue?

- Any significant upgrades or new projects to reduce emissions intensity?

- What additional running and staffing costs are associated with these changes?

Driver Tree modelling can compare planned trajectory versus target over various time horizons and highlight potential gaps





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Understanding the degree of cultural alignment

	Maturity Gap	Opportunity
1.1 Clarity of purpose Client X has a well defined purpose which is clearly linked to its sustainability goals.	▪ Role of Sustainability in Client X's overall purpose is unclear	▪ Create communications materials that clearly describe the connection between Client X's overall purpose and Sustainability
1.2 Stakeholder engagement Client X's long term roadmap developed by engagement with all relevant stakeholders.	**Internal:** ▪ Frontline staff need to be engaged and informed of how their knowledge can assist Sustainability-with clear prioritisation of activities ▪ Majority of workforce do not see clear linkages between Sustainability and Safety, Quality and Productivity **External:** ▪ Key customers, such as XYZ, are indicating they will give preference to carbon neutral suppliers	**Internal:** ▪ Engage internal stakeholders through design and execution of tailored communications campaigns that describe: - The importance and value of Sustainability to Client X (e.g. positive outcomes such as assisting commercial competitiveness and job security, employee retention in addition to reduced emissions) - The role of each site/team in achieving Client X's Sustainability goals
1.3 Visible leadership Leadership are actively involved in ensuring Sustainability is treated as a priority of the business.	▪ Leadership have delivered the high-level message but yet to provide details of how individuals make a difference	▪ Leadership Engagement and behaviours improvement program

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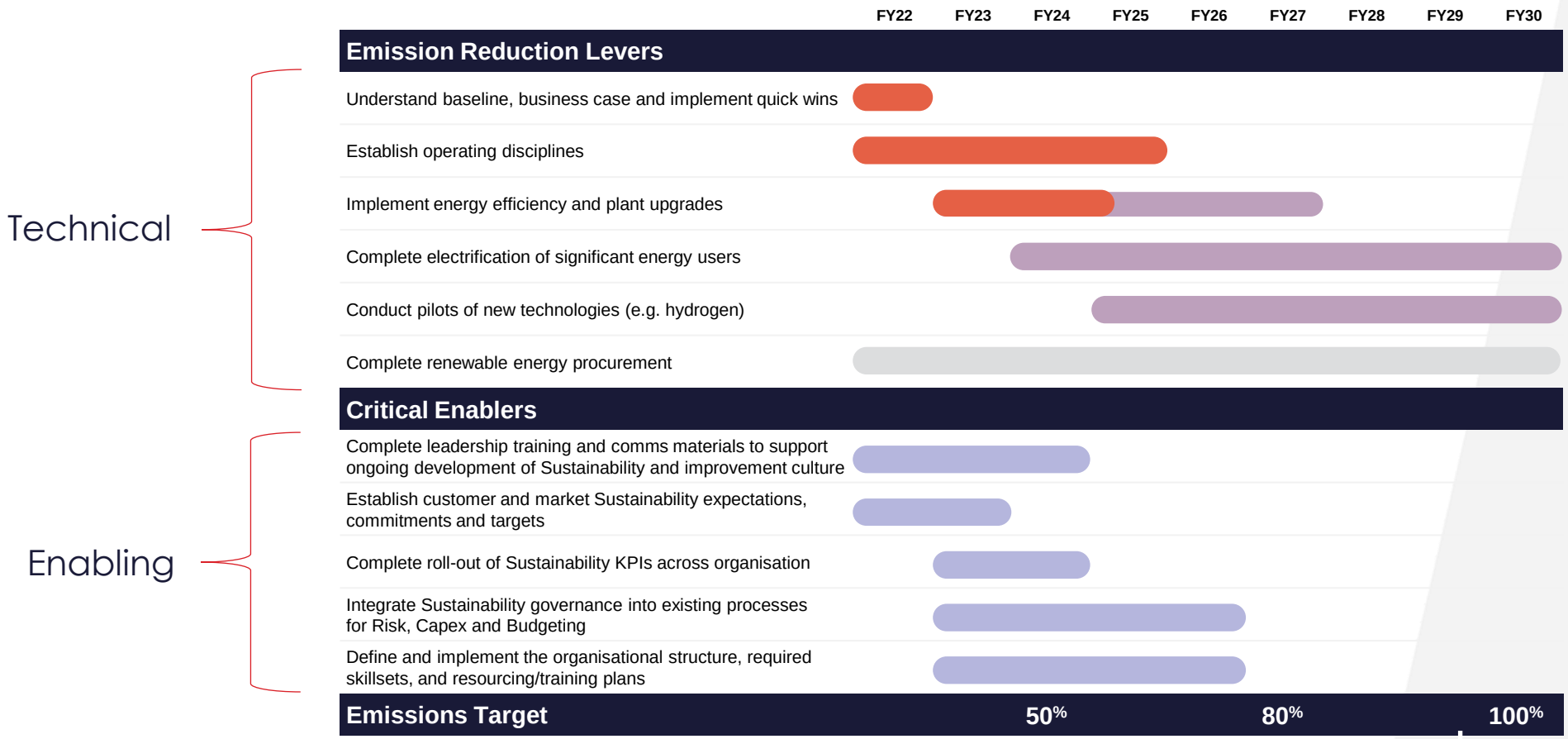
Sustainability has implications for all business units and functions that support the primary value stream

Business Area	Implications (non-exhaustive)
Maintenance and Reliability	• Procedure design to minimise venting and flaring • Inspection and leak detection protocols
Supply Chain	• Responsible sourcing • Supplier emissions
Major Projects	• New energy sources • Pilot to asset scale-up/commercialisation
HR	• Skills and capability • Attraction and retention
Safety	• Worker safety during extreme events
Risk and Compliance	• Scenario modelling • Business Continuity • Insurance • Audit
Digital & IT	• Remote sensing • Data collection
Marketing	• Emissions intensity of product • Customer base
Legal	• Regulatory landscape monitoring
Continuous Improvement	• Target-setting • Improvement verification • Innovation partnership

Broader business integration needs to be considered as part of planning and execution processes

Prioritise technical and enabling activities to demonstrate results, build momentum and complete necessary groundwork

Example High level Roadmap



Aim for traction, rather than perfection

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Thank you

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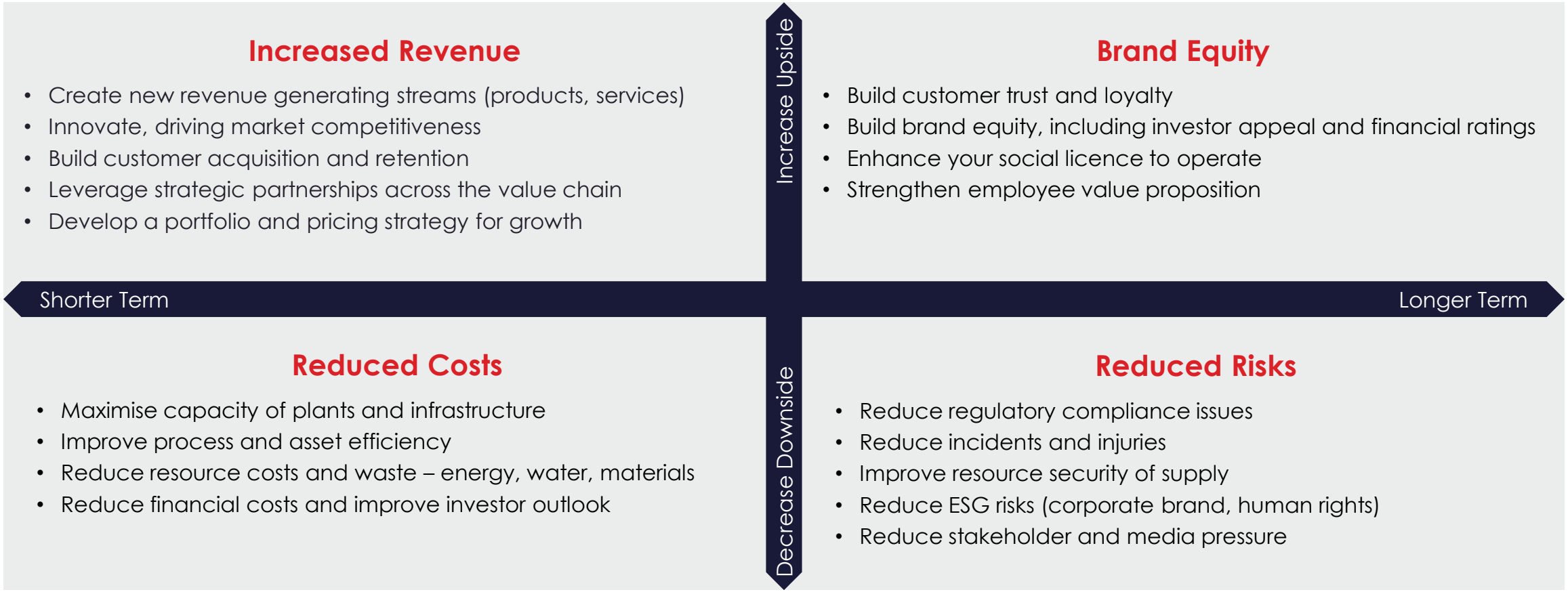
Sustainability is a clear business opportunity, driving innovation and market competitiveness whilst being resilient in the long term



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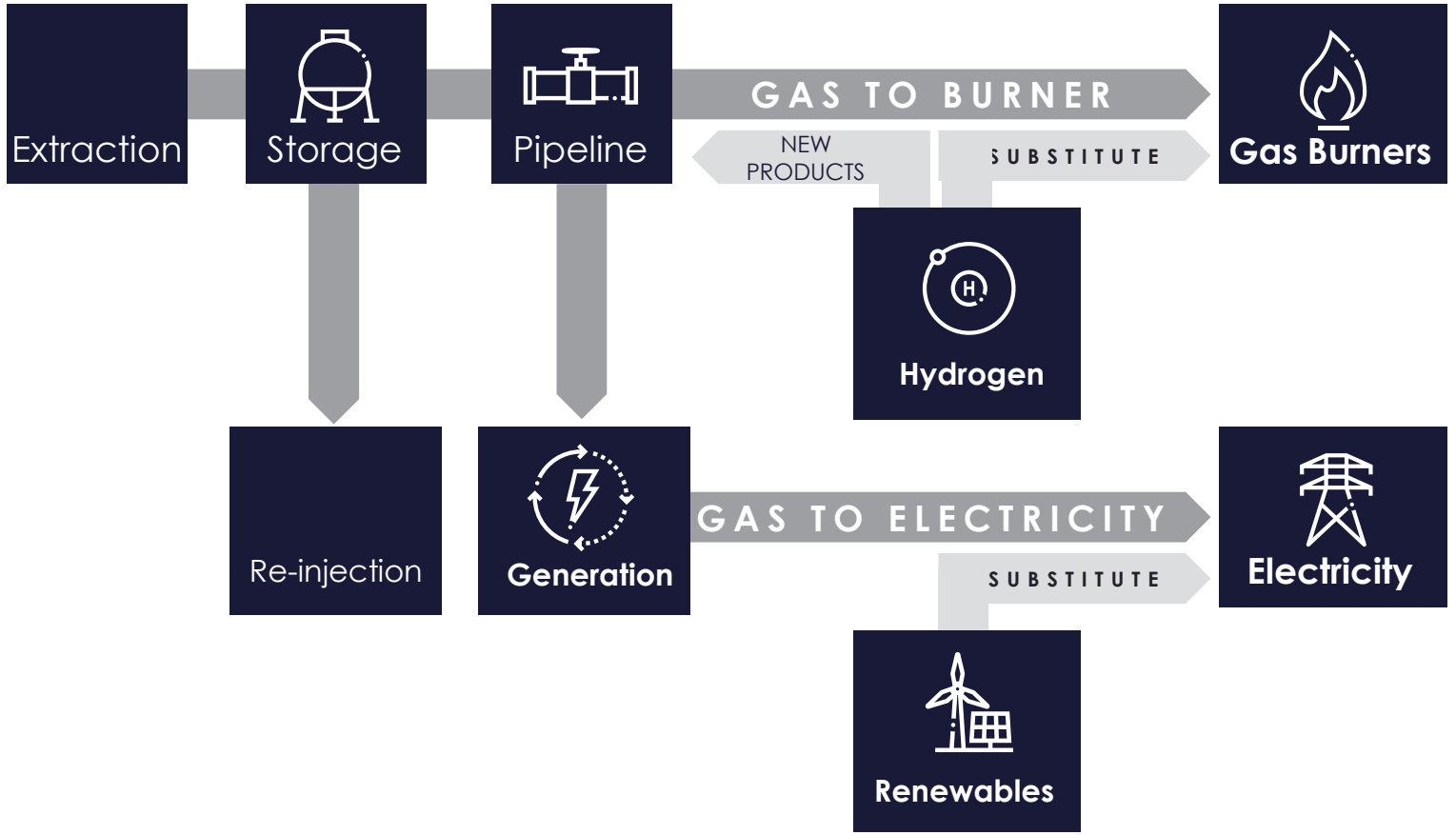
Disruption in energy market produces opportunities for pipeline operators



Potential changes under consideration:

- Add gas terminals
- Increase gas storage
- Increase renewables capacity
- Increase gas power generation capacity
- Green hydrogen capacity
- Enriching the methane chain with hydrogen

This means a need for diversification, vertical integration, new capabilities, partnering and detailed business planning and delivery expertise

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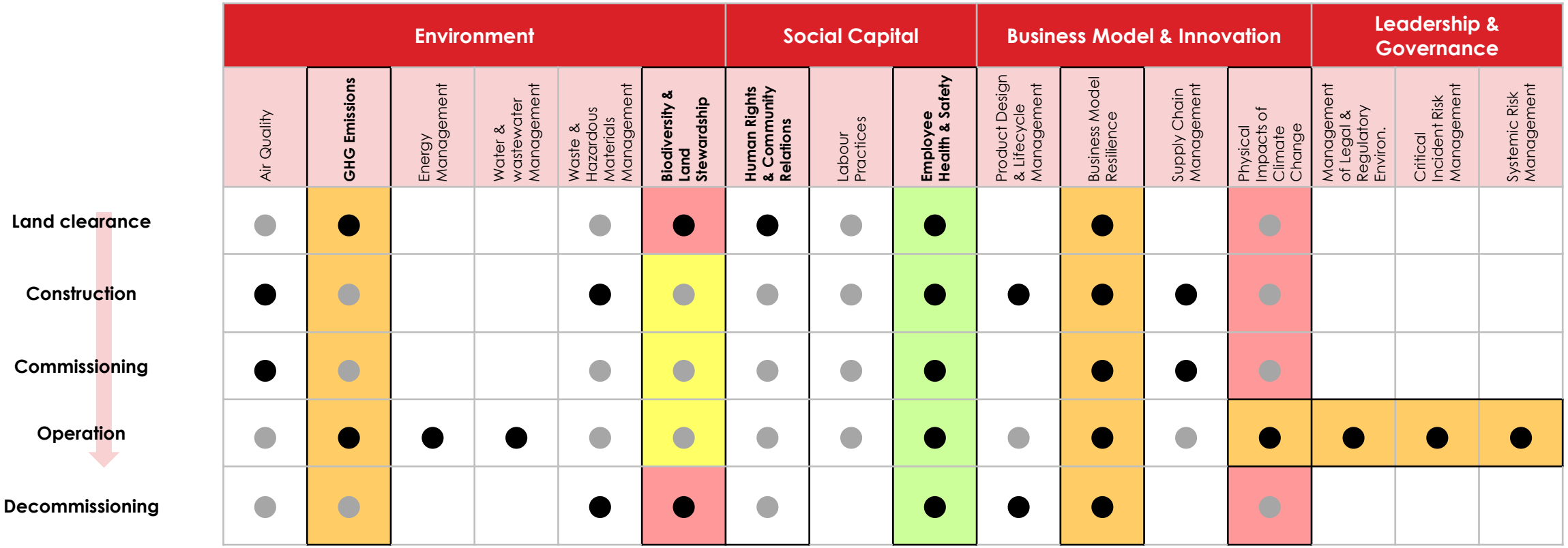
Maturity assessment involves determining how capable existing processes and systems are to handle potential risks (current and future)

PIPELINE- COMBINED MATERIALITY AND MATURITY ASSESSMENT



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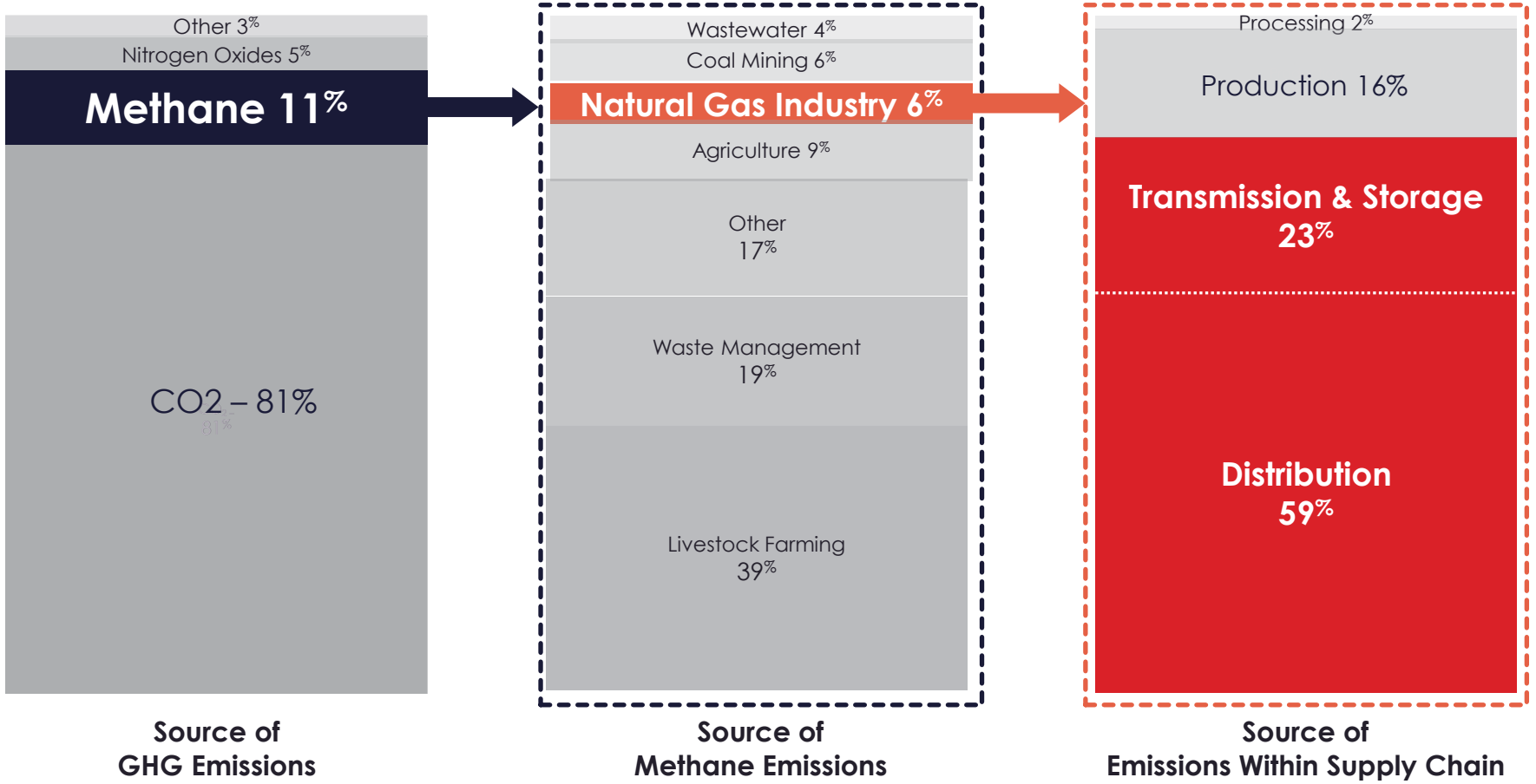
Within the methane supply chain, 82% of fugitive emissions come from transmission, storage and distribution



Data is for Europe, representative of global trends.

Source: https://oge.net/en/sustainable/emission-reduction/methane-emissions