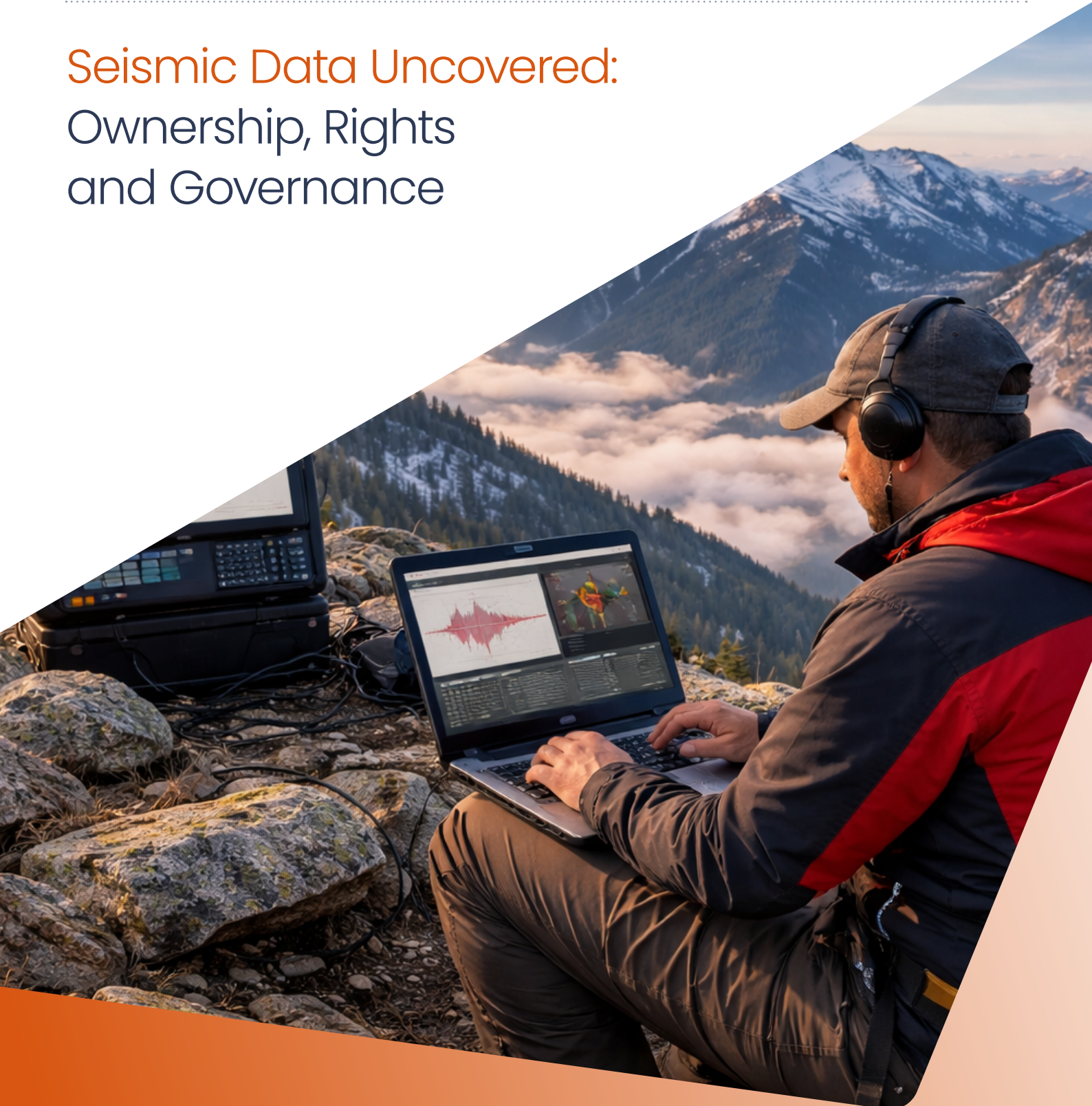


# Seismic Data Uncovered: Ownership, Rights and Governance



# Introduction

Underpinning exploration strategies, informing investment decisions and supporting broader national objectives, seismic data is central to evidence-based decision-making in the hydrocarbon sector.

Despite its importance, the governance of seismic data – particularly in relation to ownership and usage rights – is complex. For many governments, historical agreements, fragmented datasets and evolving commercial models have created uncertainty around how this critical national asset can be effectively managed and monetised.

This challenge is becoming increasingly significant. As countries work to attract investment and optimise resource development, the ability to control and utilise seismic data is gaining strategic importance. In response, governments are placing greater emphasis on strengthening their role as custodians of this data and taking steps to regain control.



## Why seismic data ownership is so complex

Historically, seismic data has been acquired through two primary models:

**Proprietary acquisition** – where it's commissioned by oil companies to de-risk specific exploration blocks

**Multi-client acquisition** – where seismic companies produce data at their own cost and risk and later license it to multiple investors

In both cases, the underlying principle remains the same: seismic data generated within a country belongs to the state. Most hydrocarbon legislation reinforces this, while allowing oil companies or seismic providers temporary rights, either to use or commercialise the data under defined conditions.

However, the on-the-ground reality is more complicated. A combination of long-term commercial agreements, evolving business models and the involvement of multiple stakeholders (including governments, oil companies and seismic providers) has created layers of complexity around how data rights are managed.

In addition, legacy data formats and inconsistent documentation practices have made it more difficult for governments to maintain a clear, unified view of their national datasets. As a result, while ownership is clearly defined in principle, its application is often less straightforward.

## The government's role as data custodian

Governments play a central role in safeguarding and enabling the value of seismic data. This responsibility extends beyond ownership to stewardship, and spans three key areas:

**Preservation** – Seismic data is a non-renewable asset. Once lost, it cannot be recreated. Governments have a responsibility to ensure that both physical and digital data are stored securely and maintained over time. This often requires specialist handling and environmental controls.

**Internal use** – Access to seismic data enables government technical teams to develop their own understanding of the subsurface. This capability is essential for informed decision-making, licensing strategies and resource evaluation.

**Access for investors** – Making data available to potential investors (typically oil/mining companies) is critical to attracting exploration activity. Governments need to balance accessibility with appropriate controls, ensuring that data can be reviewed without compromising its integrity or confidentiality while allowing potential investors enough freedom to fully evaluate it.

In practice, these roles position governments as regulators and enablers of investment as well as data custodians. And it is here that challenges often arise.



## Key challenges governments face

Despite growing awareness of the importance of seismic data governance, many governments continue to face significant challenges in managing seismic data rights effectively. These include:

**Historical contracts** – One of the most common issues revolves around the structure of historical agreements. Contracts with seismic providers can include terms that extend commercial rights over unduly long periods, limiting the state's ability to regain control of its data.

**Legacy licensing agreements** – Poorly drafted or structured licensing agreements can restrict governments' ability to reuse, reprocess or redistribute data, leaving datasets underutilised or off limits until contractual rights expire. This delays value realisation and can reduce the attractiveness of a country's resource offering.

**Fragmented data ownership** – National datasets often contain a mix of proprietary and multi-client data. When licences expire or blocks are relinquished, determining which rights revert to the state – and when – can be complex.

**Unclear documentation** – Inadequate record-keeping or inconsistent documentation often creates uncertainty around ownership and usage rights, increasing legal and operational risk.



## Risks of getting it wrong

When seismic data rights are unclear or poorly managed, the consequences can be significant. In many cases, governments face reduced control over their national assets, limiting their ability to shape licensing strategies or influence how data is used. What's more, there is often a knock-on impact on investment, as uncertainty around data access or ownership creates barriers for potential investors.

There is also an increased risk of contractual disputes, particularly where rights are ambiguous or inconsistently applied. At the same time, valuable datasets may remain underutilised – which can delay or diminish their contribution to national economic development.

In many cases, the issue is not a lack of data, but an inability to use it effectively. Without clear ownership frameworks and governance structures, the full value of seismic data cannot be realised.

Poorly drafted contracts can, in effect, grant long-term exclusive positions to seismic companies, even where datasets are out of date or less aligned with market expectations. This can limit a state's options and have material implications on its ability to compete for investment.

## What good governance looks like in practice

Effective governance of seismic data rights requires a structured, proactive approach supported by clear policies.

A guiding fundamental principle is the timely transfer of data. Governments should ensure that all acquired data (both raw and interpreted) is provided as part of contractual obligations. This supports continuity of knowledge and enables long-term use of the data, reinforcing the importance of adherence to legal and regulatory requirements.

Clear, defined timeframes for commercial rights are crucial, too. Limiting exclusivity periods to reasonable durations helps balance the commercial interests of seismic providers with the country's long-term national interests.

Governments should also avoid granting broad or unrestricted exclusivity across large geographic areas. A more targeted approach promotes competition, encourages data acquisition and reduces the risk of market stagnation.

Finally, strong oversight and compliance mechanisms are essential. Governments must maintain visibility over contractual arrangements and ensure that all parties adhere to agreed terms.

Together, these principles create a governance framework that protects national interests while enabling the effective use and development of seismic data.

## Delivering value: Supporting investment and energy development goals

When seismic data is well managed, it becomes a powerful enabler of investment, exploration and long-term strategic planning.

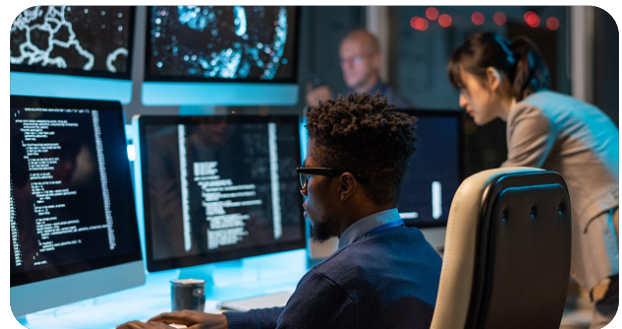
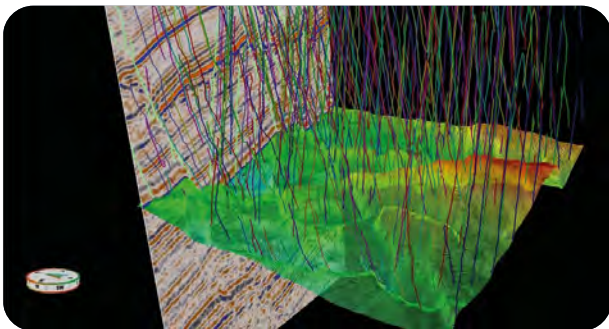
Control over national datasets allows governments to develop a comprehensive understanding of subsurface resources, identify data gaps and prioritise future acquisition or reprocessing efforts. This supports more informed decision-making across both hydrocarbon and mining sectors.

Importantly, it also allows governments to align data access and pricing strategies with broader national objectives. Rather than focusing solely on data monetisation, governments should use seismic data to encourage exploration activity, attract strategic partners and support economic development.

Advances in technology are enhancing this potential. Modern processing techniques can significantly improve the quality of legacy seismic datasets, often at a fraction of the cost of acquiring new data. This creates a strategic opportunity to unlock additional value from existing assets, provided that governments retain the necessary rights and access.

To support this, investment in modern data infrastructure – along with the development of robust, government-controlled data repositories – is essential. By consolidating data into a single, well-managed environment, governments can improve visibility, reduce fragmentation and ensure long-term accessibility. Controlled data rooms also significantly enhance the investor experience while maintaining data security. By improving both accessibility and usability, governments can increase the attractiveness of their resource offering.

Ultimately, when governments take an active role in managing seismic data, they strengthen their ability to attract investment, accelerate exploration and generate national wealth.



## Conclusion

Seismic data is one of the most valuable assets available to governments in resource-rich countries, yet it is still often underutilised. Ownership is clearly defined in principle. However, the practical realities of managing, accessing and monetising this data are complex, with legacy agreements, fragmented datasets and evolving technologies all contributing to this challenge.

However, governments are increasingly recognising the importance of strengthening their role as custodians of seismic data. Supported by governance frameworks, modern infrastructure and clearer ownership structures, they are taking steps to unlock the value of this critical national asset. And by doing so, they can support investment, enable exploration and achieve long-term strategic goals.

As governments continue to strengthen their approach to seismic data ownership and governance, those that successfully translate policy into practice will be best positioned to maximise long-term value. For further discussion of any of the points raised, please feel free to get in touch.

