

Geophysical surveys are conducted on either a multi-client or proprietary basis. Proprietary or exclusive surveys are acquired by a geophysical company for an individual client who owns the data, and they usually cover limited acreage.

In contrast, multi-client surveys are acquired by the geophysical company for its own use and are generally collected over large acreage. The geophysical company owns the data which it then markets and licenses to as many clients as possible, making the survey less expensive on a per-unit-area basis than proprietary data and driving interest in the potential leasing acreage.

Multi-Client vs. Proprietary Acquisition

MULTI-CLIENT ACQUISITION	PROPRIETARY OR EXCLUSIVE ACQUISITION
<ul style="list-style-type: none"> Develops a product with geophysical data available for licensing 	<ul style="list-style-type: none"> Provides a service with geophysical data only available to the E&P company
<ul style="list-style-type: none"> Geophysical company designs survey based on market (E&P companies) interests – developing prospects, delineating reservoirs and for use in preparing for future licensing rounds (lease sales) 	<ul style="list-style-type: none"> Geophysical Company and E&P company enter into agreement for acquisition of geophysical data over a pre-determined area (e.g. acreage under lease)
<ul style="list-style-type: none"> Geophysical company bears all risk, pays cost of project (financial risk can be mitigated by pre-financing from customers) 	<ul style="list-style-type: none"> Geophysical Company provides the vessel(s) and crews to acquire data
<ul style="list-style-type: none"> <i>Geophysical company owns the geophysical data</i> 	<ul style="list-style-type: none"> <i>E&P company owns the geophysical data</i>
<ul style="list-style-type: none"> Lower cost of the data to users (E&P companies), allowing more investment in other E&P activities 	<ul style="list-style-type: none"> E&P company pays full cost of project (no risk to geophysical company)
<ul style="list-style-type: none"> Geophysical company promotes (markets) the data which in turn drives interest in licensing (leasing) acreage 	<ul style="list-style-type: none"> Cost of geophysical data is on a per acre basis, which is much higher than if only licensed. Cost of acquisition is dependent on supply/demand of vessel and crew.

Today, the multi-client data business model plays a preeminent role in the geophysical industry. IAGC’s members acquire the majority of marine 3D data around the world and a large proportion of the land and transition zone (*e.g. shallow waters or nearshore areas*) 3D data in North America on a multi-client basis. The industry continues to acquire large multi-client 2D surveys in frontier basins and these surveys play a very important role in exploration.

The multi-client data licensing business model has significant economic advantages for E&P companies, host governments and geophysical companies. The multi-client business model spreads the costs of data acquisition and processing over time and among multiple customers. Under the model, the geophysical company initiates and conducts projects of general industry interest at its own financial risk. Restricted non-transferrable data-user licenses are then sold to individual E&P companies for a fraction of the cost of acquiring and processing the data themselves allowing multiple E&P companies the opportunity to evaluate resource potential in particular area along geological trends that will facilitate higher exploration and development success rates.

STAKEHOLDER	BENEFITS OF MULTI-CLIENT BUSINESS MODEL
E&P Company	<ul style="list-style-type: none"> • Access to high quality data for a fraction of the cost of exclusive proprietary ownership • Allows company to prospect on trend or regional basis – facilitating higher exploration and development success rates • Ability to “ramp up” knowledge base very quickly using available “off the shelf” data • Lowers the economic hurdles to exploring and producing oil and gas, therefore allowing smaller E&P companies access and entry to riskier and often more expensive plays • Improves the efficiency of E&P investments, resulting in more investments • Reduced risk associated with survey permissions, acquisition and data processing
Host Government	<ul style="list-style-type: none"> • Lower barriers to entry for E&P companies thus promoting more active and competitive licensing rounds • Rapid and efficient development of reserves • Provides data to make decisions about operational matters • Provides opportunity to create subsurface maps that can help in the stewardship of the natural resources
Geophysical Contractor	<ul style="list-style-type: none"> • Opportunity to showcase new technology to a broader client base as well as to governments (new acquisition and processing technology) • Greater control in deployment of assets

Where the Multi-Client Business Model is Successful

The multi-client business model continues to be the most beneficial and successful on the U.S. Gulf of Mexico continental shelf, the Norwegian continental shelf, Australia, Indonesia and onshore North America, where there exists a robust multi-client investment market and corresponding successful exploration efforts.

Although the U.S. and Norwegian governments have different approaches to confidentiality of data and leasing or licensing of acreage for oil and gas exploration, typically multi-client geophysical data is available for licensing for two or more lease sales or licensing rounds in both markets. The lease sales or licensing rounds and acreage “turnover” are predictable, which is important to encouraging a geophysical company’s investment to conduct a multi-client survey. Lease sales or licensing rounds are scheduled in advance with a clear indication of the acreage that will be included, allowing geophysical companies to plan and execute seismic projects based on acreage that will be made available for leasing or licensing.

In addition, the confidentiality period for multi-client data in these regions is comparably longer than in other countries, allowing the seismic contractor the opportunity to achieve a reasonable return on their investment. These regions are also competitive with major international and

independent E&P companies actively and successfully acquiring open acreage.

The competitive markets provide more buyers of multi-client geophysical data. In turn, the multi-client data promote competitive lease sales or licensing rounds and ensure that host governments receive market value for the hydrocarbon resource.

The multi-client business model can benefit stakeholders in regions that include some key characteristics:

- Licensing rounds or lease sales are held regularly, on schedule, with pre-determined areas available for licensing or leasing announced well in advance of each licensing round or lease sale;
- Smaller parcels (acreage) are offered for licensing or leasing, thus promoting greater competition for acreage;
- The confidentiality period (sometimes called exclusivity period) for the multi-client geophysical data is a minimum of 15 years, allowing the data owner multiple licensing rounds or lease sales to market the multi-client geophysical data; and
- At the expiry of the confidentiality period, only the processed data is available for release to the public.

Data Licensing Agreement: Integral Element of the Multi-Client Business Model

When a geophysical company sells the right to use its multi-client data, it enters into a data licensing agreement with its client. The licensing agreement governs the client's use of the geophysical data (as well as products derived directly from the data), protecting and preserving the geophysical company's valuable intellectual property in the data.

The licensing agreement establishes that the data is the property of the geophysical company and the client licensee is granted the right to use the data to conduct internal business, but is prohibited from disclosing, transferring or copying the data to any other parties, including by means of asset sales or corporate mergers.

Multi-Client Business Model: The Exploration Approach of Choice

The multi-client business model delivers preferred data products to the marketplace, making it the exploration model of choice by E&P companies. The revenue generated by the business model helps pay for research and development in new acquisition and processing technologies that improve subsurface imaging and assure vital efficiency gains needed for the future of exploration. The future of the geophysical industry and its continued capital investment in new data and technology that will fuel future successful exploration efforts will depend on the continued viability and success of the multi-client business model.

The multi-client survey acquisition business model has been a proven successful for decades. However, there are threats that jeopardize the viability of this model. These include but are not limited to changes in the terms of confidentiality periods, issuing tenders for multi-client geophysical data for projects that are actually proprietary, thus negating the cost-benefit of economies of scale as well as the intended use of data licensing agreements.

Large regional multi-client surveys are beneficial to host countries offering areas for leasing and an economical option for companies exploring for oil and gas and will continue to help expedite development of oil and gas reserves around the world.

Environmental Stewardship

The geophysical industry takes a great deal of care and consideration of potential impacts to the marine environment. In its efforts to operate in an environmentally responsible manner, the industry implements measures to ensure that marine mammals are further protected from direct or indirect harm from its operations. For more than 40 years, the industry has demonstrated its ability to operate seismic exploration activities in a manner that protects marine life. Various research studies indicate that the risk of direct physical injury to marine mammals is extremely low, and currently there is no scientific evidence demonstrating biologically significant negative impacts on marine mammal populations.