

European Suppliers in Vaca Muerta

How industrial companies enter Argentina's unconventional energy market



Research report · 13 August 2026
Econosur

Marcus A. Volz

Contents

Executive summary

1. Introduction

2. Research design and methodology

3. Supplier Field 1 — Pumps, valves and fluid technology

4. Supplier Field 2 — Automation, measurement and safety technology

5. Supplier Field 3 — Pipeline, storage and export infrastructure

6. Supplier Field 4 — Water, environmental and process technology

7. Cross-case findings — what the 24 cases show

8. Implications for European industrial suppliers

9. Conclusions

About the author

10. Sources and limitations

Annex A — Company reference table

Executive summary

Vaca Muerta is not one procurement market. For a European industrial supplier, the decisive question is not simply whether Argentina needs its technology, but whether the company can reach the decision point at which that technology is specified, purchased, installed and supported.

This study examines 24 European supplier cases across pumps and valves, automation and measurement, pipeline and export infrastructure, and water and process technology. The cases show that technical fit alone does not create market access. Access depends on the product's operational logic, the project stage and the contracting structure. In practice, the relevant gatekeeper may be an operator, an EPC contractor, an integrator, a distributor, a local service organisation or a project-specific specialist partner.

Six findings matter most for companies evaluating their own position:

1. Local presence is most valuable when equipment requires commissioning, maintenance, testing, calibration, chemical handling or fast replacement.
2. A named Vaca Muerta contract is often the result of an earlier sequence of market development, qualification and relationship building rather than the first sign of access.
3. The visible operator is frequently not the decisive buyer: engineering firms, EPC contractors, integrators and distributors can control specification and procurement.
4. The strongest positions often combine European technology with Argentine execution, but local production or a local office does not guarantee an award.
5. The clearest currently documented European openings are concentrated in export infrastructure, where VMOS creates identifiable project packages and contractor interfaces.
6. Financing, rental and pay-per-use can reduce the commercial barrier to adoption where buyers or local partners face investment constraints, although the public record does not show that these mechanisms caused any of the selected Vaca Muerta awards.

The practical implication is simple. A European supplier should not begin with the question "Is there demand for our product in Vaca Muerta?" It should begin with four others: Who controls access to that demand? What local capability does the product require after the sale? At which project stage must the company become visible or qualified? And can commercial terms make the offer executable for the buyer or partner?

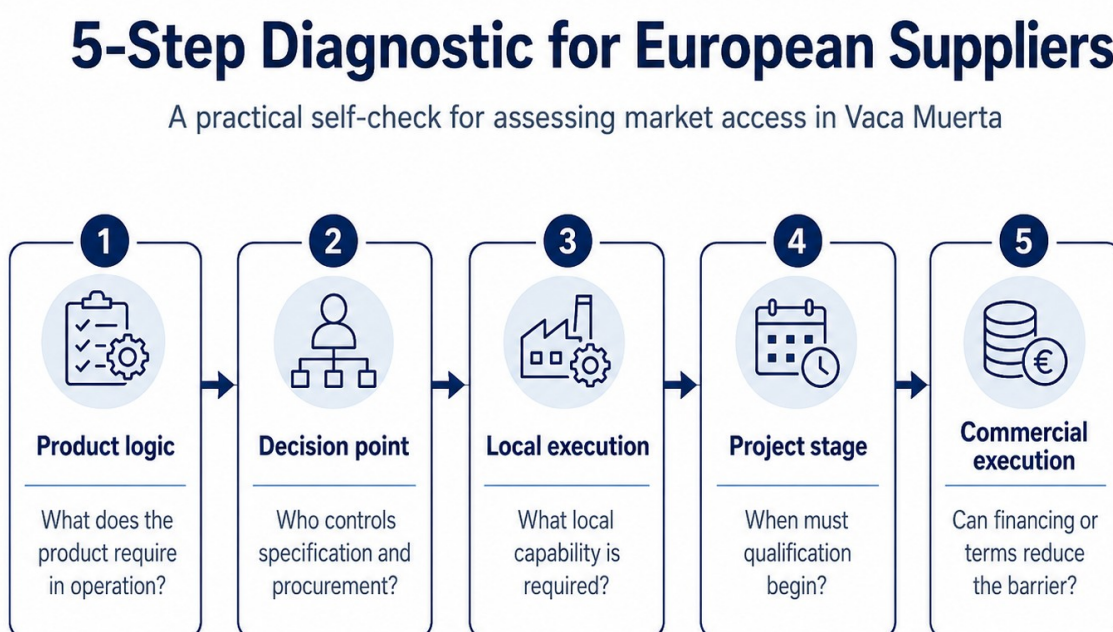
The 24 cases in this report are therefore evidence, not an end in themselves. Their purpose is to show recurring market-entry mechanisms that other European industrial companies can use to diagnose their own route into Vaca Muerta.

How to use this report

Use the cases as analogues, not as benchmarks. The relevant question is not “Which company looks like us?” but “Which access problem looks like ours?” A service-intensive equipment supplier should pay particular attention to cases such as Sulzer and Endress+Hauser; a supplier whose success depends on local stock or a distributor can compare the LESER and Rotork routes; a component supplier entering a large infrastructure project should follow the contractor chain around Técnicas Reunidas, DOF, Tenaris/SIAT and Fugro; and water-technology companies can compare the different positions of Veolia, SNF, Flottweg, AERZEN and Grundfos.

For an individual company, the report can be read as a five-step diagnostic: identify the operational logic of the product; map who controls specification and procurement; determine which local execution capability is genuinely required; establish the project stage at which qualification must begin; and test whether payment, rental or financing options can reduce the buyer’s implementation barrier. The cases that follow show what each of these choices looks like in practice.

Figure 1: 5-Step Diagnostic for European Suppliers



Source: econosur.org · Marcus A. Volz

1. Introduction

Vaca Muerta is often presented through production growth, investment announcements and export potential. For industrial suppliers, however, headline growth does not automatically translate into accessible demand. Equipment and services are purchased through specific operators, EPC contractors, infrastructure projects, local subsidiaries, distributors and technical qualification processes. The decisive question is therefore not simply whether demand exists, but which companies can reach it, through which route and with what degree of local presence.

European suppliers participate across the full industrial chain: pumps and valves, measurement and automation, pipeline and export infrastructure, water treatment, environmental services, process chemicals and field support. Their market positions are not uniform. Some operate through established Argentine subsidiaries with engineering and service teams. Others rely on local distributors. Some enter through a named infrastructure contract, an EPC package or a specialist project partner. Others are visible in Neuquén through trade fairs and technical market development but have no publicly documented Vaca Muerta project.

This study examines these different access models. It does not treat technical suitability as proof of market participation. A company is included only when public evidence shows at least a credible combination of relevant technology, oil-and-gas experience, Argentina or Latin America presence, regional service capacity, documented project activity, participation in Neuquén's industrial ecosystem or a direct Vaca Muerta reference.

The aim is to identify what makes European industrial suppliers commercially present in Vaca Muerta and where the evidence remains incomplete. The result is intended as a practical market-access study rather than a catalogue of equipment manufacturers.

2. Research design and methodology

2.1 Research objective and scope

The central research question is:

How do European industrial suppliers gain access to Vaca Muerta, and which market-entry models are most visible across different parts of the industrial value chain?

The study covers four supplier fields:

1. Pumps, valves and fluid technology
2. Automation, measurement and safety technology
3. Pipeline, storage and export infrastructure
4. Water, environmental and process technology

The final case set contains 24 companies: 16 core cases and eight comparison cases. Core cases provide the strongest combination of technical relevance and documented market access. Comparison cases broaden the analysis by showing alternative access routes, weaker evidence structures or adjacent positions in the same supplier field.

Operators, Argentine-only suppliers and non-European primary contractors are outside the formal case set, although they may appear as clients, project sponsors, contracting parties or parts of the access chain.

2.2 Case selection

Companies were screened against six criteria:

- European headquarters
- relevant technology for the selected supplier field
- presence in Argentina or Latin America
- oil-and-gas references
- evidence of activity in Vaca Muerta, Neuquén, an operator, an EPC project or a relevant industry event
- identifiable local service, production, logistics, engineering or partner structure

Technical relevance alone was not sufficient for selection as a core case.

2.3 Evidence grading

The evidence base is divided into three practical levels:

High evidence: direct company, operator, project or institutional confirmation of an Argentine or Vaca Muerta activity.

Medium evidence: credible project, trade-media, partner, event or regional-company evidence that shows active market access but lacks complete primary confirmation.

Low evidence: technical fit or regional presence without a sufficiently documented route into Vaca Muerta. Where a case falls between two levels, a combined grade is used.

Marketing statements are treated as claims to be verified, not as independently established facts. Quantitative statements are attributed to their source and are not generalised beyond the documented context.

2.4 External factual validation

External outreach is treated as an optional supplementary check, not as a publication prerequisite. The study rests on the verifiable public record. Where no project-specific primary source exists, a Medium grade requires either a credible named company or executive statement or triangulation across independent project, partner, institutional or trade sources. Local offices, trade fairs, recruitment activity and technical fit can establish access capacity or market development, but do not by themselves prove a completed Vaca Muerta project. Non-response is neutral and is not treated as evidence for or against a claim. Unresolved details remain attributed to their source or are explicitly recorded as limitations.

2.5 Analytical unit

Each case is assessed through the same five questions:

1. What does the company supply?
2. What public evidence connects it to Argentina or Vaca Muerta?
3. Through which market-access route does it operate?
4. Which activities are performed locally?
5. Which parts of the case remain unverified or dependent on company claims?

2.6 Market-access framework

The cases fall into several recurring access models:

Direct project access

A supplier enters through a named infrastructure, operator or EPC package.

Local subsidiary and service platform

The company maintains its own Argentine organisation, engineering, field service, logistics, laboratory, production or repair capacity.

Distributor or specialist partner

A local commercial and technical partner provides customer access, after-sales service and operational continuity.

Specification and contractor access

The supplier reaches the market through engineering specifications, integrators, EPC contractors or procurement packages rather than direct operator sales.

Cluster and event-based market development

The company builds visibility and relationships through Neuquén-based exhibitions, industry associations and technical market development before a public project reference is available.

Local production or value creation

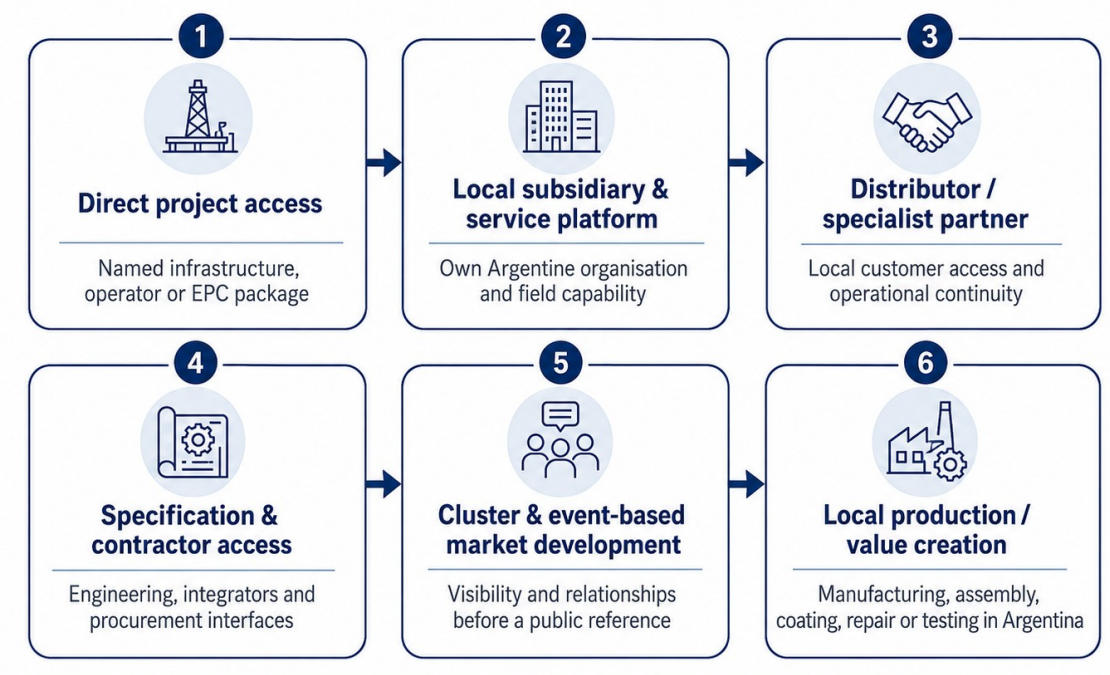
The supplier manufactures, assembles, coats, repairs, tests or otherwise adds value in Argentina rather than relying only on imported equipment.

These models are not mutually exclusive. The strongest cases often combine several of them.

Figure 2: Market-Access Framework

Market-Access Framework

Recurring access models identified across 24 European supplier cases in Vaca Muerta



Source: econosur.org • Marcus A. Volz

2.7 Case set and navigation

The 24 cases are distributed evenly across the four supplier fields, with core cases and comparison cases used to test different access patterns. Company-level reference data — headquarters, employee scale, relevant offer and evidence grade — is consolidated in Annex A. The main chapters therefore move directly to what each case teaches about market access.

3. Supplier Field 1 — Pumps, valves and fluid technology

Fluid technology is the most populated but also the most evidentially uneven of the four supplier fields. Pumps, safety valves, sealing systems and rotating equipment are indispensable across drilling, production, gathering and transport, and most European manufacturers in this category maintain some Argentine footprint. Yet a footprint is not the same as a documented Vaca Muerta position. This field therefore illustrates the study's central distinction with unusual clarity: local presence is common, but a verifiable route into Vaca Muerta is not. The four core cases each demonstrate a different access model — a direct service project, active market development, cluster-based exploration and a partner-led local supply model — while the two comparison cases show how a technically strong supplier can remain evidentially thin.

3.1 Core cases

Sulzer — local service can be more valuable than the initial equipment sale

Why this case matters. In service-intensive fluid technology, market access becomes durable when the supplier can maintain critical equipment locally. Sulzer's case is less about exporting pumps than about being able to overhaul and support them inside Argentina over the asset life.

Evidence and access route. Sulzer operates its own Argentine service organisation across three locations, giving it the "local subsidiary and service platform" model in its clearest form. This is reinforced by a documented direct project: Sulzer's own case study describes the reactivation of the 425-km Oleoducto Trasadino running from the Neuquén basin region toward Chile, with field work carried out from 2021 and fifteen pumps overhauled, twelve of them refurbished at the Ezeiza service centre. Sulzer additionally presented pumps, separation technology and local maintenance services at the Argentina Oil & Gas Expo 2022.

Evidence grade: High. This is a company-owned project record combined with confirmed active industry presence — the strongest evidence structure available short of operator confirmation.

Evidence limits. The Trasadino connection to Vaca Muerta is indirect: the pipeline evacuates crude from the wider Neuquén basin rather than serving a named Vaca Muerta operator, and its reactivation is an infrastructure-continuity project rather than new unconventional development. The case belongs in the field on the strength of Sulzer's documented local service capacity, not on a claim of direct Vaca Muerta operator work.

What this means for a European supplier. Sulzer is the field's clearest example of service-led access: the value lies less in selling equipment than in maintaining it locally over time. That is precisely the profile the framework predicts to be most defensible in operationally critical categories.

NETZSCH — market commitment can precede a public customer reference

Why this case matters. A supplier can be commercially engaged before a named contract becomes public. NETZSCH shows the pre-reference stage: local organisation, explicit Vaca Muerta priority and product development aimed at oil and energy customers, but no disclosed order.

Evidence and access route. NETZSCH operates through an established Argentine organisation and demonstrates the "cluster and market-development" model shading into direct positioning. The president of NETZSCH Bombas & Sistemas Argentina, Fernando Fernández, publicly identifies Vaca Muerta as a growth driver without a foreseeable limit, naming oil and energy customers, new technology development, and a cooperation with WEG on permanent-magnet motors aimed at reducing energy consumption. A single named contract remains publicly undocumented.

Evidence grade: Medium. This is strong evidence of active market development and product-level engagement around Vaca Muerta, but not yet a published customer order.

Evidence limits. Public sources do not yet confirm the specific products, customer types, Neuquén service capacity, the WEG cooperation and installed references.

What this means for a European supplier. NETZSCH shows how a supplier can be visibly and strategically committed to the market — through local leadership, stated priorities and product development — before a public project reference exists. The framework treats this as genuine market access, distinct from mere technical suitability.

KLINGER — cluster participation is an entry step, not proof of a won position

Why this case matters. Trade missions and cluster activity can create access before procurement starts, but they should not be confused with a secured position. KLINGER is useful because the market-development signal is concrete while the customer outcome remains open.

Evidence and access route. KLINGER holds its own Argentine company and demonstrates the "cluster and event-based" model most explicitly of the four. KLINGER Argentina took part in a 2026 GAPP trade mission to Neuquén, in which two dozen suppliers examined the current state of the producing region and upcoming Vaca Muerta opportunities. The CEO of KLINGER Argentina names Vaca Muerta expressly as a near-term growth field.

Evidence grade: Medium. Concrete market exploration in Neuquén is documented, but no published customer order yet exists.

Evidence limits. Public sources do not establish the outcomes of the mission, customer demand and local supply routes.

What this means for a European supplier. KLINGER is the cleanest illustration of pre-contract market development: a documented, verifiable act of market exploration that precedes — and may lead to — a named reference. It anchors the framework's proposition that trade missions and cluster participation are legitimate early access signals.

LESER — local stock and assembly can substitute for a full subsidiary

Why this case matters. When availability and delivery time are part of the product value, a capable local partner can substitute for a wholly owned subsidiary. LESER shows how stock and assembly turn distribution into execution capacity.

Evidence and access route. LESER operates the "distributor and specialist partner" model in its most developed form. On its own website LESER names Vaca Muerta as a concrete target market with an estimated potential of around USD 7 million. Its distribution partner Turbigas is expanding assembly and warehousing capacity in Buenos Aires to deliver within roughly one week, and reports more than 10,000 installed LESER safety valves in Argentina.

Evidence grade: High. This is the field's strongest positioning case: a company-owned market assessment, a long-documented installed base, and a concrete build-out of local availability.

Evidence limits. Public sources do not identify the first Vaca Muerta deliveries, the customer sectors, the exact scope of local assembly or Turbigas's role in service.

What this means for a European supplier. LESER demonstrates that a partner-led model, when backed by local stock, assembly and a large installed base, can produce a market position as defensible as a subsidiary — precisely because the product competes on availability rather than on the sale alone.

3.2 Comparison cases

KSB — access to a tender is not the same as winning demand

Why this case matters. A supplier can reach the formal procurement process and still fail to convert access into an award. KSB is retained because this distinction matters for companies that otherwise overestimate the value of tender participation.

Access evidence. KSB submitted a 2022 bid for the valve supply of the Gasoducto Presidente Néstor Kirchner between Tratayén and Salliqueló. No award or subsequent delivery was established in the public record.

Evidence grade: Medium. The case shows concrete access to a Vaca Muerta-related infrastructure tender, but not a confirmed project.

What this means for a European supplier. KSB illustrates the difference between participating in a procurement process and winning one — a common and analytically important state in this field. It is retained as a comparison case precisely because a documented bid without a confirmed award is a distinct evidence structure from active market development.

Rotork — a representative creates access capacity, not project proof

Why this case matters. A representative and sector visibility can establish a credible route to customers, but they do not show that a project has been won. Rotork marks the lower boundary between market-access capacity and documented Vaca Muerta participation.

Access evidence. Metalart is listed in official AOG catalogues as Rotork's long-standing exclusive representative in Argentina with specialised technical service, and participated in the Argentina Oil & Gas Expo. No Vaca Muerta contract is publicly documented.

Evidence grade: Low to medium. A clear oil-and-gas market access exists, but no hard project evidence for Vaca Muerta.

What this means for a European supplier. Rotork shows the representative-plus-trade-fair route at its most typical: durable commercial access to the sector without, yet, a named Vaca Muerta reference. It marks the lower evidentiary boundary of the field's selected cases.

3.3 Field observation

Supplier Field 1 supports the study's first finding directly: local presence matters most where the product requires commissioning, maintenance, field adjustment, testing or rapid technical support. Sulzer's service centres and LESER's local stock-and-assembly model are the two most defensible positions in the field, and both rest on local execution rather than on the export of equipment alone. NETZSCH and KLINGER show that active market development — local leadership, stated priorities, documented market exploration — constitutes real access before a named contract appears. The comparison cases mark the boundary: a bid without an award (KSB) and a representative without a documented project (Rotork) are genuine market-access positions, but weaker evidence structures than the core cases. Across all six, the field confirms that the absence of a published Vaca Muerta contract must not be read as the absence of market activity — and equally, that stated intent must be verified rather than assumed.

4. Supplier Field 2 — Automation, measurement and safety technology

Where fluid technology is defined by hardware that must be maintained, automation and measurement is defined by systems that must be specified, integrated and trusted. Access in this field runs less through equipment sales than through engineering qualification, integrator relationships and long-term service and calibration. That shifts the evidence pattern: the strongest cases here are anchored either in a documented installed system or in a named local service structure, while the weaker ones rest on stated activity without a verifiable operator reference. The field also contains the study's most explicit corporate-attribution problem — the Siemens AG versus Siemens Energy question — which the analysis addresses directly rather than smoothing over.

4.1 Core cases

Siemens — a named reference is only useful if the responsible entity is clear

Why this case matters. A strong historical reference can become commercially ambiguous when corporate structures change. Siemens shows why suppliers and buyers must identify the current legal entity and business unit behind a market position.

Evidence and access route. This is the field's clearest case of "direct project access" combined with location strategy. Siemens S.A. stated publicly in 2018 that it had supplied monitoring, control and data-acquisition systems for the intelligent surveillance of shale-gas production at a Vaca Muerta field. In 2019 a dedicated Neuquén office was announced for the shale market, and AOG Patagonia 2026 shows continued market development.

Evidence grade: High. The historical project statement is strong and specific, and it is reinforced by a documented local-office strategy and continued cluster presence.

Evidence limits. Corporate attribution remains unresolved after the separation of Siemens Energy: the present-day organisational responsibility for the Neuquén business, local office and historical SCADA customer is not conclusively verified. The Neuquén office opened at Irigoyen 579 in 2022 belongs to Siemens Energy, not Siemens AG's Digital Industries business, and cannot automatically be treated as a continuation of the historical SCADA position.

What this means for a European supplier. Siemens is analytically valuable precisely because it combines the strongest historical project evidence in the field with the field's least resolved attribution question. The access model is clear; the entity behind it is what remains to be pinned down.

Schneider Electric — a senior-management claim is not project-level evidence

Why this case matters. Senior-management confirmation can be a meaningful signal without being sufficient project evidence. Schneider shows the difference between credible market activity and an auditable operator-product reference.

Evidence and access route. Schneider combines a "local subsidiary and service platform" with the field's most senior — but least detailed — activity claim. Following an Argentina visit, Schneider Electric SVP Chris Dartnell stated publicly that Schneider was already succeeding in several Vaca Muerta projects. The statement names no operators or products but is a clear company-level indication of existing activity, resting on a substantial local structure.

Evidence grade: Medium. The claim comes from global senior management without operator or product detail; the case is carried by the combination of that claim with a real local organisation, not by a documented project.

Evidence limits. The public record supports a senior-management statement that Schneider is active in several Vaca Muerta projects, combined with its established Argentine operating structure. Operators, project scopes and specific systems are not disclosed and are not inferred.

What this means for a European supplier. Schneider illustrates a distinct evidence structure: a credible statement of existing activity from the company itself, but at a level of generality that the study treats as a claim to be verified rather than an established project record. Its core-case status rests on local structure plus management statement, not on disclosed detail.

Endress+Hauser — local service capacity can itself be a market position

Why this case matters. For measurement technology, proximity and service can itself be the competitive position. Endress+Hauser shows how a regional office, calibration and field service create access even without a public project name.

Evidence and access route. Endress+Hauser demonstrates the "local subsidiary and service platform" model in its most current and concrete form. The company officially names a Regional Office South in the Polo Tecnológico Neuquén, with Andrea Marino as the named contact. The Argentine company provides technical service, calibration, maintenance contracts, inventory audits, training and project development, reinforced by AOG Patagonia 2026 presence. No single operator or project is named.

Evidence grade: Medium. This is the strongest current local-presence and service evidence in the field, even without a published contract.

Evidence limits. Public sources do not yet confirm operator references, installed base, and the Neuquén office's function in projects, calibration and field service.

What this means for a European supplier. Endress+Hauser shows that a physically present, named, fully developed regional structure inside the cluster is itself a strong access position — the measurement-field equivalent of Sulzer's service-led model in Field 1. It is market access built on proximity and service rather than on a single reference.

KROHNE — the decisive route can run through an integrator rather than the operator

Why this case matters. A manufacturer does not always need to sell directly to the operator. KROHNE shows how a specialist integrator can become the route into specification, skid design and commissioning.

Evidence and access route. KROHNE provides the field's most complete project-level evidence through the "distributor and specialist partner" model. Its Argentine representative Meditecna developed a fiscal natural-gas metering skid for Wintershall at the Aguada Federal field in Vaca Muerta, built around a KROHNE ALTOSONIC V12 ultrasonic flowmeter and commissioned for custody transfer. This is a historical customer reference rather than a statement about the current operator.

Evidence grade: High. This is a concrete historical reference at customer, field and product level, with a clear partner-based access route — the most completely documented case in the field.

Evidence limits. The documented skid was developed for Wintershall, but the operator context later changed: Vista states in its 2026 securities filings that it acquired Wintershall's remaining 50% interest in Aguada Federal on 17 January 2022 and became operator and sole concessionaire of the block. The case therefore identifies Wintershall as the historical customer for the documented skid, not as the present operator.

What this means for a European supplier. KROHNE is the field's benchmark for what a fully evidenced historical project reference looks like: a named customer, a named field, a named product and a documented partner. It anchors the upper end of the evidence scale and shows that partner-led access can produce the clearest project record of all.

4.2 Comparison cases

WIKA — local service plus cluster outreach still needs project conversion

Why this case matters. Local service and active cluster outreach create a credible base, but the commercial test is conversion into named projects. WIKA illustrates the gap between access infrastructure and project evidence.

Access evidence. WIKA officially promotes AOG 2026 in Neuquén with a direct Vaca Muerta reference and holds its own calibration and on-site service capacity in Argentina. No specific order or operator is public.

Evidence grade: Medium. A strong local measurement-and-service case, but without a direct project reference.

What this means for a European supplier. WIKA parallels Endress+Hauser's service-and-presence model at a comparison-case evidence level: real local capacity and explicit cluster outreach, but one step short of a named reference. It shows the same access route with a thinner evidence base.

Dräger — hiring into the cluster is an access signal, not a reference

Why this case matters. Hiring into Neuquén is evidence of deliberate market building, not proof of installed systems. Dräger shows how recruitment can signal where a company expects future demand to emerge.

Access evidence. Dräger Argentina repeatedly sought a Neuquén-based Key Account Manager for oil and gas, mining and industry to develop strategic customers in Patagonia. This documents active regional market development, but no project or installed base.

Evidence grade: Medium. Clear evidence of deliberate regional market-building, without a public project reference.

What this means for a European supplier. Dräger is the safety-technology counterpart to KLINGER's market-development model in Field 1: a documented, verifiable act of building local capacity that precedes a named contract. It marks how a safety specialist establishes cluster access before a reference exists.

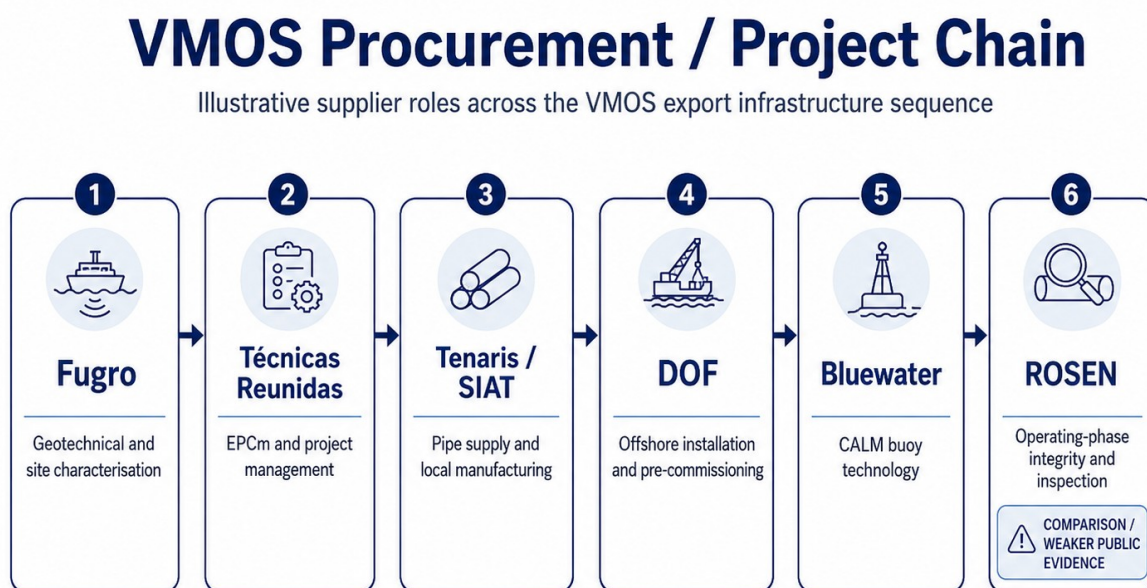
4.3 Field observation

Field 2 sharpens the study's third and fifth findings. The relevant buyer is frequently not the operator: KROHNE reaches the market through a metering-skid integrator (Meditecna), Siemens through project and location strategy, and Schneider through EPC-scale industrial relationships. Public evidence is also especially uneven: KROHNE provides a historical reference naming customer, field and product, while Schneider, despite a senior-management activity claim, discloses no operator or product. The field also isolates two strong positions that do not depend on a single contract: a documented installed system (KROHNE) and a named local service structure (Endress+Hauser). Both are defensible access positions, evidenced differently — one by a project record, the other by service proximity. Finally, Field 2 carries the study's clearest attribution caution: the Siemens AG versus Siemens Energy division matters because an unexamined corporate label can misstate which European entity actually holds the position.

5. Supplier Field 3 — Pipeline, storage and export infrastructure

This is the field in which European suppliers have their strongest evidence. Three of the four core cases rest on named, documented contracts — an EPCm award, an offshore-installation contract and a government-documented pipe supply — because the VMOS export terminal at Punta Colorada is a single, large, contract-driven project that generates public procurement records. A further Medium-evidence comparison case, Fugro, adds a specifically documented geotechnical site-investigation role in the Gulf of San Matías, supported by independent Argentine project reporting. The field therefore inverts the pattern of Fields 1 and 2: instead of local presence in search of a reference, here the reference is often explicit and the analytical work lies in mapping the contractor structure around it. The fourth core case, Bluewater, is supported by triangulated 2026 project reporting and the independently documented DOF installation scope, but still lacks a project-specific supplier or project-company announcement. The field's integrity therefore depends on keeping Bluewater at Medium rather than treating the reported award as primary-confirmed.

Figure 3: VMOS Procurement / Project Chain



① Evidence strength varies by case; the chain is illustrative rather than exhaustive.

Source: econosur.org · Marcus A. Volz

5.1 Core cases

Técnicas Reunidas — EPC managers can become gatekeepers for other suppliers

Why this case matters. For many equipment suppliers, the decisive buyer may sit inside the EPC chain. Técnicas Reunidas matters because its procurement and project-management role can determine which other suppliers reach VMOS packages.

Evidence and access route. Técnicas Reunidas holds the field's clearest "direct project access" position. VMOS S.A. awarded it the engineering, project management, procurement and construction management for the Punta Colorada hydrocarbon storage and export terminal, at a published contract value of around USD 440 million. Subsequent 2026 project reporting also places Técnicas Reunidas alongside AESA and Oilfield Production Service in the execution structure for the intermediate pumping stations at Allen and Chelforó. This additional role broadens the visible project footprint beyond the terminal EPCm scope, although the detailed division of work at the pumping stations is not publicly specified.

Evidence grade: High. A direct, publicly announced European prime contract at the centre of the VMOS export complex.

Evidence limits. Public sources do not fully map the contractual interfaces between Técnicas Reunidas, the tank farm, loading systems, monobuoys and further supply packages.

What this means for a European supplier. Técnicas Reunidas is not only a case in its own right but a node in the access chain for others: as EPCm manager it helps define which equipment suppliers — including European ones — are qualified into the project. The additional reported participation in the intermediate pumping-station structure extends that position from the export terminal into the onshore transport chain. It remains the field's clearest example of the contractor-access model operating at prime-contract scale.

DOF — specialised project capability can create direct access without broad local presence

Why this case matters. A highly specialised contractor can win a direct project package without first building a broad commercial footprint in Argentina. DOF shows the value of entering through a capability that a project specifically requires.

Evidence and access route. DOF holds a documented "direct project access" position at the marine-installation stage. It officially reported an Argentine contract in the USD 25–50 million range covering mooring pre-lay, PLEM installation, tie-in spools, hook-up and pre-commissioning of two CALM buoys plus diving services. Industry and project sources place the contract at the VMOS terminal at Punta Colorada.

Evidence grade: High. An officially announced European contract for the marine installation and pre-commissioning stage, confirmed through the company's own regulated disclosure.

Evidence limits. DOF's regulated disclosure identifies an Argentine contract and the technical scope but does not name VMOS. The VMOS/Punta Colorada attribution therefore rests on independent project reporting. The precise interface between DOF's installation scope and the CALM-buoy supplier's delivery scope is not publicly disclosed.

What this means for a European supplier. DOF anchors the offshore-execution layer of the export terminal. Its case is also the mirror image of Bluewater's: DOF installs the two CALM buoys that

Bluewater is reported to supply, so the two cases together define the same critical interface — one side officially documented, the other not yet.

Tenaris/SIAT — local manufacturing strengthens access but does not guarantee future awards

Why this case matters. Local production can strengthen competitiveness, logistics and political durability, but it does not remove price and procurement competition. Tenaris/SIAT is the clearest hybrid of European corporate domicile and Argentine industrial execution.

Evidence and access route. Tenaris/SIAT combines "direct project access" with "local production or value creation" — the field's only case where the European position is realised through Argentine manufacturing. The Río Negro provincial government documents 721 38-inch pipes manufactured by SIAT/Tenaris for the offshore section between Punta Colorada and the monobuoys, of which 658 received concrete weight coating by Socotherm. Independent specialist port reporting additionally records the shipment of more than 10,100 tonnes of SIAT/Tenaris steel pipe through Dock Sud for the Punta Colorada submarine infrastructure. This second source corroborates the logistics and scale of the offshore package but remains a secondary source rather than a primary project record.

Evidence grade: High. A government-documented supply of critical material, manufactured locally within a European-domiciled group.

Evidence limits. The case deliberately combines European corporate domicile with Argentine manufacture: it qualifies as European through Luxembourg incorporation, while the industrial value is created in Argentina. The supply scope for the 437-km onshore duct and any further Tenaris/SIAT packages should be examined separately, and the offshore VMOS package must not be conflated with the separate LNG feedgas pipeline tender.

What this means for a European supplier. Tenaris/SIAT is the field's — and the study's — clearest illustration that "European supplier" can mean a European-domiciled group creating value through Argentine industry. It is precisely this hybrid that makes the case analytically central rather than a labelling technicality.

Bluewater — commercial relevance can be high even when public evidence is incomplete

Why this case matters. Commercial centrality and public evidence are different dimensions. Bluewater shows why even a strategically important supplier role should be graded by the strength of its public confirmation.

Evidence and access route. Bluewater is reported to occupy a "direct project access" position at the heart of the export terminal. EconoJournal identifies Bluewater as the manufacturer and supplier of the two CALM monobuoys for VMOS, with the units built in shipyards in the United Arab Emirates. Multiple June 2026 reports repeat the Bluewater attribution and trace the project information to statements by VMOS general manager Gustavo Chaab. Bluewater itself has not published a project-specific announcement.

Evidence grade: Medium. This is a direct and central technology reference supported by triangulated project reporting, but without a project-specific announcement from Bluewater or VMOS.

Evidence limits. Bluewater has not published a project-specific award announcement. However, 2026 project reporting identifies Bluewater as the builder of the two VMOS CALM buoys in the United Arab Emirates and attributes the information to VMOS general manager Gustavo Chaab. The surrounding offshore scope is independently supported by DOF's official contract for installation and pre-commissioning of two CALM buoys and by Río Negro government reporting on the offshore mooring works. The case is therefore retained at Medium evidence strength; exact contractual scope and commercial terms remain undisclosed.

What this means for a European supplier. Bluewater remains the study's clearest test of evidence discipline. The supplier attribution is now corroborated across several project reports and is consistent with the independently documented DOF installation scope, but it still lacks a project-specific Bluewater or VMOS announcement. The case therefore remains a Medium core case: stronger than a single-source report, but deliberately below primary-confirmed contract evidence.

5.2 Comparison cases

ROSEN — operating-phase demand can exist before a project reference is visible

Why this case matters. Some demand appears only after infrastructure is commissioned. ROSEN shows how an integrity specialist can be commercially relevant to the operating phase even before a named VMOS reference is public.

Access evidence. ROSEN maintains a Buenos Aires office and cites more than 300,000 km of inspected pipeline in South America. A specific Vaca Muerta or VMOS contract is absent.

Evidence grade: Low. Strong regional integrity-service capacity is documented, but no named Vaca Muerta or VMOS project reference is public.

What this means for a European supplier. ROSEN represents the operating-phase integrity layer that the export system will require over its life — the strongest regional candidate for pipeline and subsea-loading-line integrity, included to show an access route based on installed-base service that is distinct from the construction-phase contracts of the core cases.

Fugro — commercially relevant access can begin before equipment procurement

Why this case matters. This case shows that access can begin before equipment procurement, when specialist site work shapes later engineering and installation decisions.

Access evidence. Argentine project reporting identifies the geotechnical vessel Fugro Resilience as having carried out the seabed characterisation used for the two CALM-buoy locations, with the campaign taking place in 2025.

Evidence grade: Medium. The project role is specifically described in independent Argentine reporting, but no project-specific Fugro announcement or other primary confirmation was identified.

What this means for a European supplier. Fugro adds a different access model to Field 3: a specialist European service company can enter before construction through geotechnical site characterisation that de-risks later offshore engineering and installation. Unlike the construction-phase core cases, Fugro's role sits upstream in the project-development sequence, showing that commercially relevant access begins before equipment procurement and physical installation.

5.3 Field observation

Field 3 is where the study's evidence is strongest and its central caution sharpest, and the two facts are connected. Because VMOS is a single large contract-driven project, it produces named public records — Técnicas Reunidas' EPCm award, DOF's disclosed installation contract, the government-documented SIAT pipe supply — that create three High-evidence core positions. Independent project reporting documents Fugro's geotechnical campaign at Medium evidence. Fugro extends the procurement map upstream into site characterisation, before construction and installation begin. The same project concentration also exposes the Bluewater evidence boundary: the supplier attribution is corroborated across project reporting and by the surrounding DOF scope, but no project-specific Bluewater or VMOS announcement has been found. The field therefore yields a layered project chain running from geotechnical investigation through engineering and procurement, pipe manufacture, offshore installation and loading technology. Finally, Tenaris/SIAT crystallizes the European-domicile-versus-local-manufacture theme that runs through the whole study: the most "local" case in industrial terms is, on paper, a European supplier — and that hybrid is the point, not a contradiction to be resolved away.

6. Supplier Field 4 — Water, environmental and process technology

Water is where Vaca Muerta's growth meets one of its most concrete constraints. Unconventional development consumes and produces large volumes of water. In June 2026, Neuquén revised the water-use canon for unconventional drilling and declared reuse, recirculation and efficient water use a provincial policy priority, with the new regime applying to consumption from 1 July 2026. That regulatory shift turns water technology from an environmental footnote into a direct cost and procurement question for operators. Demand is structurally rising, yet public supplier transparency remains low. The field therefore contains two directly documented core cases — a treatment-plant operating record and a flowback-reuse application — and two market-development cases whose listing for AOG Patagonia 2026 documents preparation for Neuquén-based access rather than an already completed market presence.

6.1 Core cases

Veolia — operating the solution can be a stronger position than supplying equipment

Why this case matters. This case shows how operating an installed local solution can create a durable market position that goes beyond equipment supply.

Evidence and access route. Veolia documented the GAPSA facility near Añelo as operating from 2022 and treating hydrocarbon-laden drill cuttings from Vaca Muerta wells through indirect thermal desorption. Hydrocarbons are recovered for reuse, water is separated, and the treated solids contain, according to Veolia, less than 1% hydrocarbons. Veolia describes the plant as the first of its kind in Latin America. Current operating status and throughput are not publicly confirmed.

Evidence grade: High. A company-documented operating site with a direct cluster connection and a clearly described environmental and circular-economy process.

Evidence limits. Public sources do not confirm the current operating status, operator relationships, plant capacity, treated volumes, precise water and waste streams, or the current operating relationship between GAPSA and Veolia Argentina. The "less than 1% hydrocarbons" figure is a company statement and is not independently verified.

What this means for a European supplier. Veolia is the field's benchmark: the only selected case with a company-documented treatment-plant operation inside the Vaca Muerta cluster. Its access model is an installed environmental process rather than presence in search of a reference, making it the water field's equivalent of the documented-project core cases in Field 3.

SNF — regulatory pressure can create demand for performance-based applications

Why this case matters. This case shows how a supplier can build access around a measurable operating problem and local field support rather than around a stand-alone product sale.

Evidence and access route. SNF combines a documented application with a "local subsidiary and service platform." SNF officially documents a Vaca Muerta basin application in which operators reused

highly saline flowback water. According to SNF, the polymer systems maintained their performance under high salt loads and reduced freshwater demand by up to 40%. SNF Argentina additionally provides bulk logistics, field hydration systems, laboratory and on-site support and engineering, and is listed as an exhibitor for AOG Patagonia 2026.

Evidence grade: High. SNF's Argentine structure is combined with a directly documented flowback-reuse application in Vaca Muerta.

Evidence limits. Public sources do not identify the operators, field or project, treated water volumes or precise chemistry and equipment interfaces. The "up to 40%" freshwater-reduction figure is an SNF statement and is not independently verified.

What this means for a European supplier. SNF shows how a chemistry supplier gains access through a documented performance application plus a full local service structure. It is the field's clearest link to the reuse agenda reinforced by Neuquén's 2026 water policy: a supplier positioned where regulatory pressure is creating procurement demand.

Flottweg — a future cluster appearance is an option-building step, not market proof

Why this case matters. A forthcoming cluster appearance can build market options, but it is not evidence of a completed market position. Flottweg illustrates the distinction between preparing access and converting it.

Evidence and access route. Flottweg demonstrates the "cluster and event-based market development" model at a pre-event stage. It is listed as an exhibitor for AOG Patagonia 2026, scheduled for October in Neuquén, with a separation portfolio directly applicable to Vaca Muerta waste streams. No named operator or installed Vaca Muerta plant is publicly documented.

Evidence grade: Medium. Specialised oil-water-solids separation and documented preparation for Neuquén-based market development, but no project reference yet.

Evidence limits. Public sources do not yet confirm the Argentine representation, mobile units, service deployments and references at operators or waste-treatment companies.

What this means for a European supplier. Flottweg is the separation-technology counterpart to the market-development cases in earlier fields: a technically central capability with a documented forthcoming cluster appearance, positioned ahead of a public reference.

Lutz-Jesco — technical fit plus event presence still leaves the customer route unresolved

Why this case matters. Technical fit and event presence still need a defined local customer, integration and service route before they become durable market access.

Evidence and access route. Lutz-Jesco also demonstrates the "cluster and event-based market development" model at a pre-event stage. It is listed as an exhibitor for AOG Patagonia 2026, scheduled

for October in Neuquén, with a dosing and water-quality portfolio applicable to treatment and reuse. No named Vaca Muerta contract or local integrator is publicly documented.

Evidence grade: Medium. An independent dosing, disinfection and water-quality case with documented preparation for Neuquén market access, but without a published project reference.

Evidence limits. Public sources do not yet confirm the Argentine partner, service responsibility, customers and specific dosing skids or water-treatment applications.

What this means for a European supplier. Lutz-Jesco rounds out the field's technology coverage on the treatment-and-reuse side: where Veolia treats waste and SNF conditions water chemistry, Lutz-Jesco supplies the dosing and control layer that reuse programmes require. Its evidence is a forthcoming market-development route rather than a named reference.

6.2 Comparison cases

AERZEN — a strong local service base does not automatically create sector access

Why this case matters. A strong national service base is not the same as sector-specific access. AERZEN shows why local capacity must still be connected to a concrete Vaca Muerta customer route.

Access evidence. Aerzen Argentina maintains sales, its own after-sales service, an office in Mendoza and a regional installed base of more than 1,200 machines. Its turbo blowers are designed for industrial wastewater aeration. No Vaca Muerta project is publicly documented.

Evidence grade: Low. A substantial Argentine service structure and regional installed base are documented, but no Vaca Muerta or Neuquén wastewater project reference is public.

What this means for a European supplier. AERZEN represents the biological wastewater-aeration stage — a different point in the water chain from the separation, chemistry and thermal-treatment core cases. It broadens the field's technological coverage, and its own regional service base makes it a substantive rather than nominal comparison.

Grundfos — local manufacture and a Neuquén partner create access infrastructure, not a named project

Why this case matters. Local manufacturing and a Neuquén service partner create real access infrastructure, but that infrastructure only becomes sector position when it converts into a customer or project reference.

Access evidence. Grundfos Argentina operates a 3,200 m² facility in Garín with manufacturing, warehousing and service. In its own 2023 Argentina newsletter, Grundfos identifies HydroSolution as its direct distributor in Neuquén. A specialist pump-industry interview with HydroSolution describes the company as an authorised Grundfos technical-service agent for Neuquén and Río Negro, located in the heart of Vaca Muerta and positioned in the regional oil-and-gas pumping market. This establishes a

partner and service route into Neuquén, but no named Grundfos-branded Vaca Muerta operator project is publicly documented.

Evidence grade: Low to medium. Argentine manufacturing and service, a direct Neuquén distributor and an authorised regional service route are documented; oil-and-gas positioning is visible at partner level, but no named Grundfos-branded Vaca Muerta project is public.

What this means for a European supplier. Grundfos represents the water-transport and dosing segment with genuine local production plus a documented Neuquén distributor/service route. It therefore moves beyond a purely national-presence case, while remaining below project-level evidence. The case illustrates the difference between regional access infrastructure and a named Vaca Muerta reference.

6.3 Field observation

Field 4 is defined by a gap between structural demand and public evidence. Neuquén's 2026 water policy — a revised water-use canon and an explicit reuse, recirculation and efficiency priority — makes water technology a concrete procurement question, yet supplier transparency is the lowest of the four fields. Against that backdrop, the field yields two directly documented core cases of different types: Veolia's treatment-plant operating record near Añelo and SNF's flowback-reuse application. Both sit where regulatory pressure is creating demand — waste treatment and water reuse — distinguishing them from the two pre-contract market-development cases, Flottweg and Lutz-Jesco, whose forthcoming AOG Patagonia 2026 participation is documented but whose project references are not. The comparison cases sharpen the recurring point about local value creation: AERZEN holds a substantial local service structure without a named Vaca Muerta reference, while Grundfos now also has a documented Neuquén distributor/service route but no named project. Two quantitative claims — Veolia's "less than 1% hydrocarbons" and SNF's "up to 40%" freshwater reduction — remain explicitly attributed company statements rather than independently verified results, in keeping with the study's treatment of marketing figures as claims rather than independently established facts.

7. Cross-case findings — what the 24 cases show

Across the 24 cases, six conclusions recur consistently:

First, local presence matters most when the product requires commissioning, maintenance, field adjustment, chemical handling, testing or rapid technical support.

Second, a direct Vaca Muerta reference is not always the first visible sign of market entry. Trade fairs, Argentine subsidiaries, regional service teams and EPC relationships can precede a named operator contract.

Third, the relevant buyer is often not obvious. Operators may define the need, but engineering firms, EPC contractors, distributors, project companies and service partners can control specification, qualification or procurement.

Fourth, the strongest European positions combine imported technology with local execution. Pure export models appear less defensible in service-intensive or operationally critical categories.

Fifth, public evidence is uneven. Some companies describe projects in detail, while others reveal almost nothing about customers, volumes or contracting structures. The absence of public detail must therefore be separated from the absence of market activity.

Sixth, financing emerges as a potential market-access accelerator rather than a universal prerequisite. A separate public-source check of the 24 selected companies identified ten group-level examples of either structured financing or CAPEX-light rental and pay-per-use models. These mechanisms are not shown to have been used in the selected Vaca Muerta projects, and Argentina-specific availability is often not public. The finding therefore concerns commercial capability rather than proven project causality.

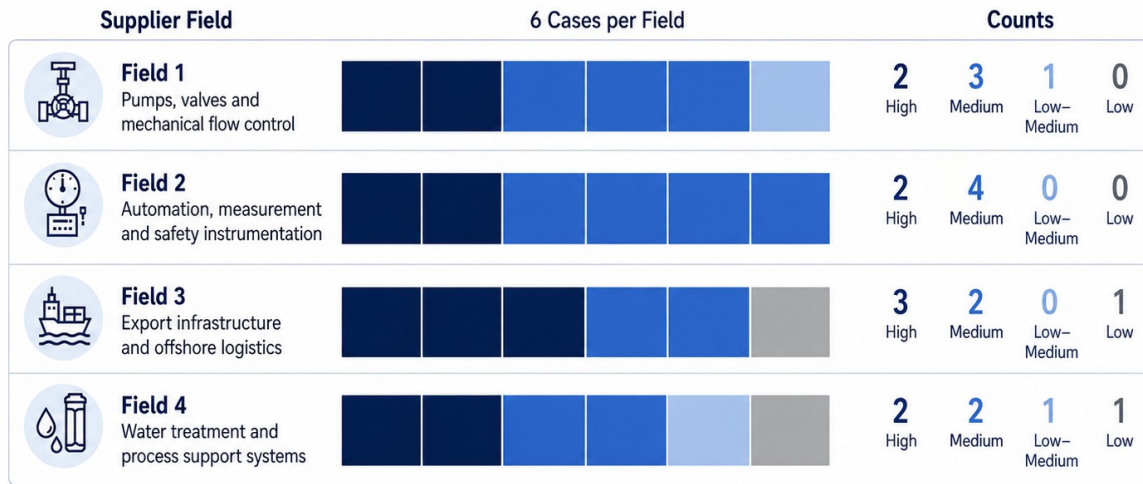
Figure 4: Public Evidence Strength by Supplier Field

Public Evidence Strength by Supplier Field

How strongly the 24 selected cases can be documented in public sources.

Each supplier field contains 6 cases.

■ High ■ Medium ■ Low-Medium ■ Low



 This chart shows public evidence strength only. It does not show the six market-access models.

Total:	High	9	Medium	11	Low-Medium	2	Low	2
---------------	-------------	----------	---------------	-----------	-------------------	----------	------------	----------

Source: econosur.org · Marcus A. Volz

8. Implications for European industrial suppliers

The cross-case findings describe how European suppliers are positioned in Vaca Muerta today. This section draws the practical consequences for a supplier trying to build, defend or interpret a market position in the cluster. The implications follow from the documented cases and the market-access framework and should be read as strategic inferences from the public evidence, not as prescriptions.

8.1 Match the access model to the product's operational logic, not to a generic notion of “presence”

The clearest pattern across all four fields is that the defensible access model is dictated by what the product demands over its life, not by a uniform preference for a local subsidiary. Where the product must be commissioned, maintained, adjusted, tested or supported in the field, local execution capacity — Sulzer's service centres, Endress+Hauser's regional office and Veolia's documented treatment-plant operation near Añelo — is the position that holds. Where the product is a code-required, replacement-intensive item competing on availability, a partner-with-stock model can be equally defensible, as LESER's local assembly and inventory through Turbigas shows, because the buyer's real need is delivery time rather than the sale itself. Where the product is a large capital component inside a single project, access runs through contractor qualification and project procurement rather than through standing local presence, as Técnicas Reunidas and DOF demonstrate. The implication is that a supplier should first classify its own product by operational logic and only then choose an access model. A subsidiary added without a service rationale, or an export-only stance in a service-intensive category, both misread what the market rewards.

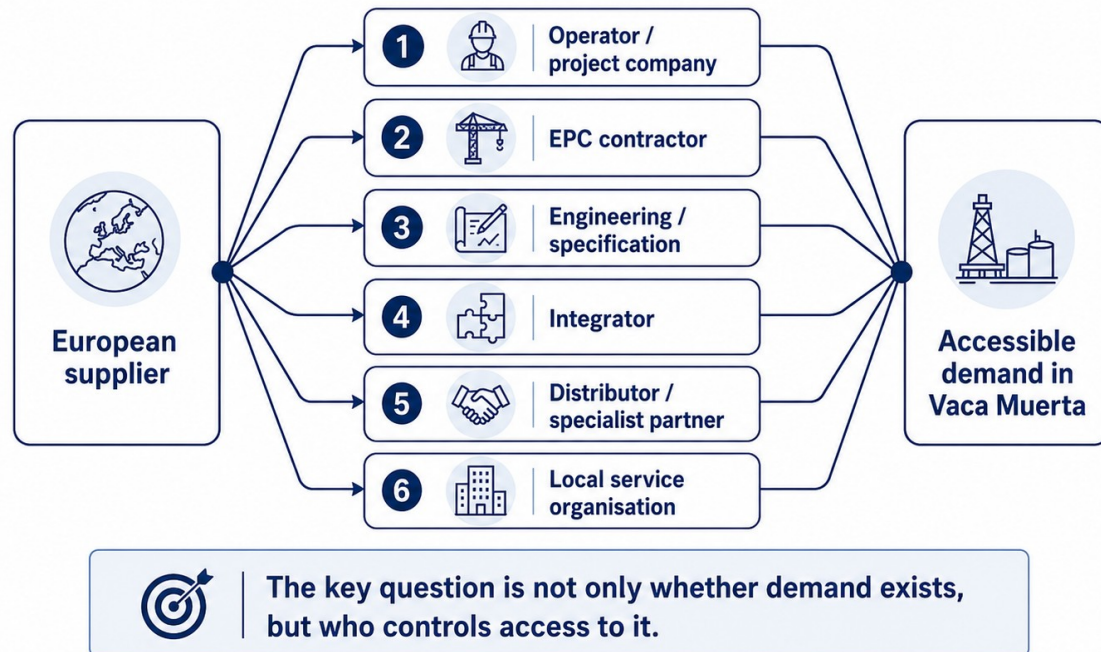
8.2 Map the buyer beyond the operator

The study's recurring finding that the relevant buyer is often not the operator has a direct strategic consequence: qualification and specification frequently happen one or two layers away from the company that ultimately owns the asset. KROHNE reaches the market through a metering-skid integrator, not solely through direct operator sales. For the VMOS terminal, equipment specification and supplier access may be shaped through the EPCm and procurement-management processes led by Técnicas Reunidas, rather than solely through direct sales to VMOS S.A. For a European supplier, the commercially decisive relationship may therefore be with an engineering firm, EPC contractor, integrator or specialist installer. Identifying who controls specification, qualification and package procurement is a prerequisite to access, not a secondary detail. A supplier that targets only the visible operator may be addressing the wrong decision point.

Figure 5: Gatekeepers and Decision Points

Gatekeepers and Decision Points

Why the operator is often not the only route to demand in Vaca Muerta



Source: econosur.org · Marcus A. Volz

8.3 Treat cluster presence as a legitimate sequenced step, not a substitute for a reference

Trade-fair participation, association missions and regional service build-out recur across the cases as genuine early-stage market development — KLINGER's GAPP mission to Neuquén, Dräger's targeted Neuquén hiring, and the AOG Patagonia listings of Flottweg and Lutz-Jesco. The evidence supports treating these as a real and sequenced entry route: they build the relationships and visibility that precede a named contract. But the same cases show the limit. None yet carries a documented operator reference, and cluster presence should be understood as a step toward access rather than proof of a position already won. The practical reading for a supplier is that cluster engagement can be worth the investment precisely because it is where qualification begins, provided that event participation is tied to a defined follow-up route and is not presented internally as completed market entry.

8.4 Local value creation strengthens a position — but does not create one

Tenaris/SIAT shows how manufacturing inside Argentina converts a European-domiciled supplier into a locally embedded industrial participant, with the political, logistical and commercial durability that domestic production can bring to a nationally significant project. A separate Southern Energy LNG feedgas pipeline provides a cautionary comparison. This is not the Tratayén–Salliqueló/Perito Moreno pipeline: Southern Energy is developing a roughly 478-km pipeline from Neuquén to the Gulf of San Matías for its LNG export project. For that separate pipeline, the consortium selected India's Welspun for the line-pipe supply and Tenaris's bid was not selected; the pipe procurement was distinct from the subsequent construction tender. This comparison is contextual and separate from the documented SIAT

supply for VMOS. The comparison cases sharpen the point from the other side: AERZEN has substantial Argentine service capacity without a documented Vaca Muerta reference, while Grundfos combines local manufacturing with a documented Neuquén distributor/service route but still lacks a named project. Local value creation can strengthen and protect an existing project position, but it does not replace the need for a specific procurement, qualification or contracting route into the cluster.

8.5 The clearest documented opening is concentrated in export infrastructure

The distribution of strong evidence across the four fields is itself a strategic signal. Field 3 — pipeline, storage and export infrastructure — is where European suppliers hold their strongest and most clearly documented positions, because the VMOS export build-out is a large, contract-driven project generating identifiable procurement and specialist-service packages. The selected cases now span geotechnical site characterisation (Fugro), EPCm and procurement management (Técnicas Reunidas), pipe manufacture (Tenaris/SIAT), offshore installation (DOF) and CALM-buoy technology (Bluewater, at Medium evidence). Fields 1 and 2 show wide presence but thinner public project evidence, consistent with a more mature and less publicly transparent upstream and production environment. This does not establish that upstream opportunities are absent or that the segment is saturated. It shows that the clearest currently documented openings are concentrated in infrastructure that is still being built. For a European supplier deciding where public evidence of current procurement is strongest, the export and mid/downstream build-out therefore deserves particular attention. Field 4 indicates a possible next opening: Neuquén's 2026 reuse-and-recirculation policy is turning water technology into a procurement question before most selected suppliers hold a named reference. A separate cross-case check also shows that commercial payment and usage models can strengthen access where local buyers or partners face investment constraints.

8.6 Make the offer financially executable where capital is the bottleneck

Financing is not a substitute for market access: a supplier still needs the right customer, specification route and local execution model. But once those conditions exist, commercial structure can determine whether technically suitable demand becomes executable demand. The separate review of the 24 selected companies found ten group-level examples of structured financing, leasing, rental or pay-per-use capabilities. The study does not show that these mechanisms caused any of the selected Vaca Muerta awards, and Argentina-specific availability must be verified case by case.

For a European supplier, the practical question is not simply whether it can offer credit. It is whether the buyer, contractor or local partner is constrained by upfront CAPEX, working capital or the risk of committing to unfamiliar technology. Depending on the product, the response may be payment terms, export-credit-supported financing, leasing, rental, pay-per-use, a pilot unit or an operating-service contract. Where finance is the bottleneck, reducing the buyer's cash commitment or technology risk can strengthen an already viable access route; where specification or qualification is the bottleneck, financing alone will not solve the problem.

8.7 Visibility is a strategic variable, not a neutral fact

The study's fifth finding — that public evidence is uneven — has an implication in both directions. Some suppliers document projects in detail while others disclose almost nothing, and this asymmetry is partly a communications and customer-confidentiality choice. For a supplier, controlled visibility of a genuine reference can itself be an access asset because a documented project helps establish technical

credibility with the next buyer, contractor or integrator in the chain. For an analyst or competitor, the same asymmetry means that absence of public detail cannot be read as absence of activity; a commercially active supplier may remain poorly visible in the public record. Reading the market therefore requires separating what is documented from what may be occurring and treating low visibility as an evidence gap rather than a conclusion about market position.

8.8 The standing of these implications

These implications are drawn from the verifiable public record as of 13 August 2026. Several positions remain deliberately qualified — most consequentially Bluewater, whose central role is corroborated in project reporting but not primary-confirmed by a project-specific company announcement, and Schneider Electric, whose activity claim is not substantiated at project level. Because the implications rest on recurring patterns across twenty-four cases rather than on a single company, they are broader than any individual unresolved detail. They should nevertheless be revisited as procurement advances and new public records appear.

9. Conclusions

The study set out to answer a single question: how do European industrial suppliers gain access to Vaca Muerta, and which market-entry models are most visible across the industrial value chain? The twenty-four cases show that there is no single answer, and that this absence of a uniform route is itself the central finding. Access is not simply a matter of demand meeting supply. It depends on a specific supplier reaching a specific decision point through a route made available by the product's operational requirements, the project stage and the contracting structure.

Across the four supplier fields, those routes take recognisably different forms. In fluid technology, wide local presence coexists with relatively few documented Vaca Muerta references, and the most defensible positions — Sulzer's service organisation and LESER's partner-held local stock — rest on local execution rather than on equipment exports alone. In automation and measurement, access runs through specification, integration and calibration as much as through sales, with KROHNE's integrator-built metering skid providing the most complete project record and the Siemens attribution question showing why the European entity behind a position must be identified rather than assumed. In pipeline and export infrastructure, the evidence is strongest because a single large, contract-driven project generates named records — a Fugro geotechnical investigation, an EPCm award, an offshore-installation contract and a government-documented pipe supply — while the same project concentration exposes a central component whose supplier, Bluewater, is corroborated in project reporting but not primary-confirmed by a project-specific company announcement. In water and environmental technology, structural demand is rising under Neuquén's revised policy framework while public supplier transparency remains lowest, leaving two directly documented cases of different types — a treatment-plant operating record and a flowback-reuse application — alongside two suppliers preparing for Neuquén-based market development.

The market-access framework remained applicable across these differences. The recurring models — direct project access, local subsidiary and service platform, distributor or specialist partner, specification and contractor access, cluster and event-based market development, and local production or value creation — were sufficient to classify every case. The strongest positions frequently combined several models, while major project contracts could also establish a strong position through direct access alone. The framework's central proposition was borne out: technical suitability is not market access, and market access is not one thing. A defensible position depends on matching the access route to what the product requires over its operating life, identifying who controls specification, qualification and procurement, and treating cluster presence and local value creation as factors that can strengthen a position without establishing one by themselves. Commercial payment or usage models can strengthen an existing route where the buyer or partner faces investment constraints, but the public record does not show that they caused any of the selected Vaca Muerta awards. They are therefore treated as an accelerator rather than as a seventh stand-alone access model.

Equally important is what the study does not claim. It measures documented access and public visibility, not market share, contract value or commercial success. Company statements, including quantified performance claims, are treated as claims to be verified rather than as independently established facts, and the absence of public evidence is separated from the absence of activity. A High grade requires sufficiently specific primary evidence that identifies the relevant project, activity, product, location, operator or contracting relationship; the source type alone does not determine the grade. Bluewater is therefore presented as reported but not primary-confirmed, while Schneider Electric is presented as company-claimed but not substantiated at project level. These cases remain visible precisely because the study does not resolve evidentiary gaps in its own favour.

This is therefore a structured public-evidence map rather than a closed account. Individual assessments are based on auditable public sources, with company claims attributed, Medium-evidence cases triangulated where possible and unresolved details stated as limitations. New company disclosures or procurement records may strengthen, qualify or reduce individual assessments over time, but the cross-case conclusions do not depend on any single unresolved point.

About the author

Marcus A. Volz is a market analyst and international B2B consultant based in Argentina. His work focuses on industrial markets, market access and competitive intelligence in South America, with particular emphasis on energy, mining, manufacturing and infrastructure.

He is the founder of Econosur, where he researches how international companies, suppliers and investors access and operate in South American markets.

econosur.org

10. Sources and limitations

This section provides the public-source record underlying the 24 case assessments and the cross-case findings. The source review was completed between 4 and 13 August 2026. For each company, the first source listed is the principal or most probative public record used for classification; additional links provide corroboration, local-presence evidence or attribution context.

10.1 Sources by case

Field 1 — Pumps, valves and fluid technology

1. Sulzer — Sulzer, “Pumping new life into the Trans-Andean pipeline.” Primary source: https://www.sulzer.com/es-es/-/media/files/services/service-centers/case-studies/pumping_new_life_into_the_transandrea_pipeline_a10750_web.pdf. Supporting source: <https://www.sulzer.com/en/shared/events/220320-argentina-oil-and-gas-expo>.
2. NETZSCH — La Mañana de Neuquén / MASE, “NETZSCH proyecta un 2025 optimista con foco en Vaca Muerta y la recuperación del convencional.” Primary source: <https://mase.lmneuquen.com/empresas/netzsch-proyecta-un-2025-optimista-foco-vaca-muerta-y-la-recuperacion-del-convencional-n1172800/amp>.
3. KLINGER — GAPP, “Misión Comercial Neuquén 2026,” documenting the supplier mission; supplemented by an interview with the CEO of KLINGER Argentina. Sources: https://es.linkedin.com/posts/gapp---grupo-argentino-de-proveedores-petroleros_gapp-misi%C3%B3n-comercial-neuqu%C3%A9n-2026-activity-7448462449256783874-sl_R and <https://tageblatt.com.ar/alberto-pinter-economia-argentina-se-desarrolla-olas/>.
4. LESER — LESER, “Vaca Muerta,” documenting the target market and local partner model. Primary source: <https://www.leser.com/en/the-company/neuigkeiten/news/vaca-muerta/>. Supporting partner source: <https://turbigas.com.ar/>.
5. KSB — Río Negro, reporting the 2022 valve bids for the Gasoducto Presidente Néstor Kirchner. Source: <https://www.rionegro.com.ar/energia/gasoducto-nessor-kirchner-enarsa-recibio-siete-ofertas-para-la-provision-de-valvulas-2403649/>.
6. Rotork — Argentina Oil & Gas Expo official catalogue identifying Metalart as Rotork’s Argentine representative and technical-service partner. Source: <https://www.aogexpo.com.ar/2023/Catalogo.pdf>. Historical corroboration: <https://www.aogexpo.com.ar/2017/download/catalogo-AOG2015-digital.pdf>.

Field 2 — Automation, measurement and safety technology

7. Siemens — Mercado, “Innovación en el proceso de gestión de la empresa,” September 2018, containing the historical SCADA supply statement. Primary source: <https://mercado.com.ar/revista/2018-septiembre-no1208/innovacion-en-el-proceso-de-gestion-de-la-empresa/>. Supporting sources: <https://www.lmneuquen.com/siemens-hace-pie-neuquen-una-sede-propia-n653104> and <https://www.siemens.com/ar/es/compania/acerca-de-nosotros/nuestros-negocios/digital-industries.html>.
8. Schneider Electric — Public statement by Schneider Electric SVP Chris Dartnell on Argentine and Vaca Muerta activity. Primary source: https://www.linkedin.com/posts/chris-dartnell-7155772_schneiders-business-in-argentina-continues-activity-7381613504543264768-iSz2. Supporting source: <https://www.se.com/ar/es/about-us/local/company-profile/schneider-electric-argentina/>.
9. Endress+Hauser — Endress+Hauser Argentina records identifying the Regional Office South in the Polo Tecnológico Neuquén and the Argentine service structure. Sources: <https://www.ar.endress.com/es/informacion-contacto> and <https://www.ar.endress.com/es/grupo-endress-hauser/elgrupo-endresshauser/argentina>.

10. KROHNE — Meditecna, “Puente de medición fiscal de gas natural — Yacimiento Aguada Federal, Vaca Muerta,” documenting the historical Wintershall metering skid and KROHNE ALTOSONIC V12. Primary source: <https://www.meditecna.com.ar/blog/puente-de-medici%C3%B3n-fiscal-de-gas-natural>. Current operator context: Vista Energy securities filing, <https://www.sec.gov/Archives/edgar/data/1762506/000119312526032639/d37728d6k.htm>.

11. WIKA — WIKA’s official Neuquén / Argentina Oil & Gas market page and Argentine service presence. Sources: https://www.wika.com/es-mx/argentina_oil%26gas.WIKA and https://www.wika.com/es-ar/wika_argentina.WIKA.

12. Dräger — Dräger Argentina recruitment record for a Neuquén-based Key Account Manager covering oil and gas, mining and industry; official Argentina location record. Sources: <https://ar.linkedin.com/jobs/view/key-account-manager-neuqu%C3%A9n-at-dr%C3%A4ger-4349901011> and https://www.draeger.com/es_csa/Locations/Argentina.

Field 3 — Pipeline, storage and export infrastructure

13. Técnicas Reunidas — Técnicas Reunidas, “Técnicas Reunidas awarded an engineering and management contract for the Vaca Muerta project.” Source: <https://www.tecnicasreunidas.es/tecnicas-reunidas-awarded-an-engineering-and-management-contract-for-the-vaca-muerta-project/>.

14. DOF — DOF Group ASA, “Contract award in Argentina,” supplemented by the regulated Euronext disclosure and project reporting linking the scope to VMOS / Punta Colorada. Sources: <https://www.dof.com/news/dof-group-asa---contract-award-in-argentina>, <https://live.euronext.com/en/products/equities/company-news/2026-02-16-dof-group-asa-contract-award-argentina> and <https://www.shale24.com/oil-gas/vmos-contratarreloj-frentes-contratistas-separan-vaca-muerta-primer-embarque-diciembre-n1030>.

15. Tenaris/SIAT — Government of Río Negro, “Río Negro acopia en SAE caños para el ducto marino del VMOS,” documenting the offshore pipe package. Primary source: <https://prensa.rionegro.gov.ar/articulo/59801/rio-negro-acopia-en-sae-canos-para-el-ducto-marino-del-vmos>. Corporate domicile and SIAT ownership context: <https://www.sec.gov/Archives/edgar/data/1190723/000155485526000490/ts-20251231.htm>.

16. Bluewater — EconoJournal reporting identifying Bluewater as manufacturer and supplier of the two VMOS CALM buoys. Primary project-reporting source: <https://econojournal.com.ar/oilgas/vmos-cual-es-el-plan-b-de-ypf-si-la-guerra-en-medio-oriente-demora-la-llegada-de-equipamiento-clave/>. Bluewater technical background: <https://www.bluewater.com/our-solutions/mooring-and-transfer-systems/calm-buoy-terminals/>. No project-specific Bluewater or VMOS supplier announcement was identified in the source review.

17. ROSEN — ROSEN Group South America location record and subsea-loading-line integrity case material. Sources: <https://www.rosen-group.com/en/company/locations/rosen-south-america> and <https://www.rosen-group.com/en/expertise/experience-center/case-studies/comprehensive-integrity-solution-for-a-subsea-loading-line-inspection>.

18. Fugro — Argentine project reporting identifies the Fugro Resilience carrying out geotechnical work for VMOS off Punta Colorada in 2025. Sources: <https://argenports.com/nota/asi-trabaja-en-punta-colorada-el-buque-que-definira-donde-se-instalaran-las-monoboyas-de-la-terminal-petrolera/> and <https://www.rionegro.com.ar/energia/llego-a-rio-negro-el-buque-que-definira-donde-iran-las-monoboyas-del-puerto-petrolero-vmos-4209362/>.

Field 4 — Water, environmental and process technology

19. Veolia — Veolia Argentina, “Veolia Argentina se consolida como actor clave en el desarrollo sustentable de Vaca Muerta,” and the company record on the Añelo hazardous-waste-treatment plant. Sources: <https://www.latinoamerica.veolia.com/es/noticias/veolia-argentina-consolida-actor-clave-desarrollo-sustentable-vaca-muerta> and <https://www.latinoamerica.veolia.com/es/noticias/planta-tratamiento-residuos-peligrosos-veolia-argentina-anelo-fue-visitada-delegacion>.

20. SNF — SNF Oil & Gas, “Driving Sustainable Stimulation Through Flowback Water Reuse,” an Application Spotlight on Argentina’s Vaca Muerta Basin, plus SNF Argentina’s local service record. Sources: <https://www.snf.com/industry/oil-gas/stimulation/> and <https://www.snf.com/locations/ar/>.

21. Flottweg — AOG Patagonia 2026 exhibitor listing and Flottweg oil-sludge / industrial-separation application material. Sources: <https://www.aogpatagonia.com.ar/listado-de-expositores/> and <https://www.flottweg.com/applications/industrial-waste-mineral-oils/oil-sludge/>.

22. Lutz-Jesco — AOG Patagonia 2026 exhibitor listing and official dosing / measurement portfolio. Sources: <https://www.aogpatagonia.com.ar/listado-de-expositores/>, <https://www.lutz-jesco.com/en/products/dosing-pumps/> and <https://www.lutz-jesco.com/en/products/measurement-and-control-technology/>.

23. AERZEN — AERZEN Argentina company profile documenting local sales, after-sales service and the Mendoza office. Primary source: <https://www.aerzen.com/company/worldwide/company-profile-aerzen-argentina>.

24. Grundfos — Grundfos Argentina 2023 newsletter identifying HydroSolution as its direct distributor in Neuquén; specialist pump-industry records documenting HydroSolution as an authorised Grundfos technical-service agent for Neuquén and Río Negro. Sources: <https://www.grundfos.com/ar/dbs-americas-assets/Newsletter-Argentina-PrimerSemestre-2023> and <https://guiadebombas.com/hydrosolution/>.

10.2 Contextual and financing sources

Neuquén water policy. Government of Neuquén, 10 June 2026, on the revised water-use canon and the policy priority given to reuse, recirculation and efficient water use in Vaca Muerta: <https://www.neuqueninforma.gob.ar/noticias/2026/06/10/258998-la-provincia-impulsa-el-reuso-y-el-cuidado-del-agua-en-vaca-muerta>.

VMOS schedule. Government of Río Negro, 11 February 2026, placing the first shipment in the December 2026–January 2027 window: <https://prensa.rionegro.gov.ar/articulo/57832/rio-negro-motor-de-la-nueva-etapa-energetica-del-pais>. Shale24, 13 July 2026, reporting the current early-January 2027 operating target based on statements by YPF president Horacio Marín: <https://www.shale24.com/oil-gas/vmos-cronograma-fino-cano-troncal-17-julio-allen-31-octubre-una-monoboya-deberia-llegar-pronto-cumplir-primer-embarque-n1456/amp>.

Southern Energy comparison. The line-pipe comparison in Section 8.4 concerns Southern Energy’s separate LNG feedgas pipeline from Neuquén to the Gulf of San Matías and must not be confused with the Tratayén–Salliqueló / Perito Moreno gas pipeline. Sources: Infobae, 27 January 2026, <https://www.infobae.com/economia/2026/01/27/los-detalles-de-la-licitacion-del-gasoducto-que-dejo-en-evidencia-el-rol-de-techint-en-el-mercado/>; La Nación, 28 January 2026, <https://www.lanacion.com.ar/economia/techint-podria-tener-que-construir-un-gasoducto-con-tubos-importados-nid28012026/>; La Nación, 27 April 2026, <https://www.lanacion.com.ar/economia/inminente-definicion-en-la-construccion-de-una-de-las-obras-privadas-mas-importantes-de-la-argentina-nid26042026/>.

Argentina financing context. Banco Central de la República Argentina, “Informe de Inclusión Financiera, segundo semestre de 2025,” published 30 April 2026: <https://www.bcra.gob.ar/publicaciones/informe-de-inclusion-financiera-segundo-semestre-de-2025/>. The report documents both the 2025 expansion of MiPyME financing and its still-limited depth relative to the economy.

German export-credit context. Federal Export Credit Guarantees, Argentina country cover policy: <https://www.exporkreditgarantien.de/en/country-information/argentina.html>. Argentina is classified in country risk category 7; the published cover policy states that there are no formal restrictions for short-term business and no formal restrictions for medium- and long-term transactions with private buyers, while public-buyer transactions are assessed case by case.

Group-level financing, rental and usage-model evidence. The cross-case finding that ten of the 24 selected groups publicly document structured financing or CAPEX-light models is based on group-level public sources. These sources do not establish that the mechanisms were used in the selected Vaca Muerta projects or are currently available in Argentina.

KSB rental: <https://www.ksb.com/de-de/supremeserv/mietpumpen-service>.

Siemens Financial Services: <https://www.siemens.com/es-mx/products/financial-services/asset-finance/financing-siemens-products-solutions/>.

Schneider Electric Energy as a Service: <https://www.se.com/us/en/work/services/energy-as-a-service/>.

KROHNE equipment rental: <https://www.krohne.com/es/servicios/alquiler-de-equipos>.

Dräger industrial equipment rental: https://www.draeger.com/en-us_us/Safety/Industrial-Equipment-Rental-Services.

Técnicas Reunidas, “Raising finance”: <https://www.tecnicasreunidas.es/know-how/our-services/>.

Veolia engineering-project financing capability: <https://www.industries.veolia.com/en/engineering-projects>.

Flottweg rental machines: <https://www.flottweg.com/product-lines/rental-machines/>.

AERZEN pay-per-use: <https://www.aerzen.com/rental-solutions/pay-per-use>.

Grundfos leasing and ECA-supported financing: <https://www.grundfos.com/es/campaign/leasing-service> and <https://www.grundfos.com/us/about-us/media/latest-news/grundfos-and-ekf-sign-unique-financing-partnership-agreement>.

10.3 Source hierarchy and limitations

The evidence base combines primary sources — including company contract announcements, company application records, government releases, securities filings, regulated disclosures and integrator project descriptions — with trade-media reporting, association records, event listings, recruitment records and company market-positioning material.

A High grade is used only where the public record directly identifies the relevant project, activity, product, location, customer or contracting relationship with sufficient specificity. Source type alone does not determine the grade. Supplier attribution without project-specific primary confirmation, as in the Bluewater case, and project activity documented through independent reporting, as in the Fugro case, remain at Medium. Senior-management claims without disclosed project detail, as in the Schneider Electric case, are likewise kept at Medium.

Local offices, distributors, trade fairs, recruitment activity and company market-positioning pages can establish presence, service capacity, intent or a route to customers, but they do not by themselves prove a completed Vaca Muerta project. Conversely, failure to identify a project in a targeted public-source review is not evidence that no commercial activity exists; it is recorded only as an evidence gap.

Supplier-originated quantitative claims are retained only with attribution. This applies in particular to Veolia's statement that treated solids contain less than 1% hydrocarbons and SNF's statement that its Vaca Muerta flowback-reuse application reduced freshwater use by up to 40%. Neither figure is presented as independently verified. Financing, leasing, rental and pay-per-use sources are group-level capability evidence only and do not establish use in the selected Vaca Muerta projects or current availability in Argentina.

Annex A — Company reference table

The table provides a compact reference for the 24 cases. Employee figures are the latest publicly stated group-level figures identified in company sources and are indicative rather than strictly comparable: reporting dates and definitions differ, and some privately held companies do not publish a current group headcount. The main report deliberately keeps these descriptive facts out of the case narratives so that the cases remain focused on market-access lessons.

Company	HQ	Employees*	Relevant offer	Field	Evidence / access route
Sulzer	Switzerland	13,526 (2025)	Pumps and rotating-equipment service	F1	High — own Argentina service platform + Trans-Andean pipeline overhaul
NETZSCH	Germany	4,800+	Progressing-cavity and rotary pumps	F1	Medium — Argentina company; explicit Vaca Muerta market development
KLINGER	Austria	~3,100	Gaskets, sealing systems and industrial valves	F1	Medium — Argentina company; Neuquén mission and market development
LESER	Germany	1,000+	Safety relief valves	F1	High — Turbigas partner; local stock/assembly; explicit Vaca Muerta focus
KSB	Germany	16,838 (2025)	Pumps and valves	F1	Medium — documented bid for Vaca-Muerta-related pipeline package; no award
Rotork	United Kingdom	n/a	Valve actuators and flow control	F1	Low–Medium — Argentine representative + technical service; no named project
Siemens	Germany	~318,000 (2025)	Automation, SCADA and digital industries	F2	High with caveat — historical Vaca Muerta SCADA; current entity attribution unresolved
Schneider Electric	France	~160,000	Industrial automation, process control and safety	F2	Medium — Argentina subsidiary + senior-management Vaca Muerta project claim
Endress+Hauser	Switzerland	18,306 (2025)	Process measurement, calibration and service	F2	Medium — Neuquén regional office/service platform; no named project
KROHNE	Germany	4,128 (2025)	Flow measurement and custody transfer	F2	High — Meditecna integrator; Wintershall Aguada Federal metering skid
WIKA	Germany	11,000+	Pressure/temperature measurement and calibration	F2	Medium — Argentina service + Neuquén outreach; no named project
Dräger	Germany	16,687 (2025)	Gas detection and industrial safety	F2	Medium — targeted Neuquén commercial build-out; no named project
Técnicas Reunidas	Spain	10,000+	EPC/EPCm engineering, procurement and project management	F3	High — direct VMOS EPCm award + reported pumping-station participation
DOF	Norway	n/a	Offshore and subsea installation services	F3	High — disclosed Argentina offshore contract linked to VMOS
Tenaris / SIAT	Luxembourg / Argentina	~25,000 (2025)	Large-diameter line pipe	F3	High — government-documented VMOS offshore pipe supply; local manufacture
Bluewater	Netherlands	n/a	CALM buoys and offshore transfer systems	F3	Medium — triangulated VMOS supplier attribution; no project-specific primary announcement
ROSEN	Switzerland	4,000+	Pipeline integrity and inspection	F3	Low — South America integrity base; no named VMOS/Vaca Muerta project

Company	HQ	Employees*	Relevant offer	Field	Evidence / access route
Fugro	Netherlands	~10,000	Geo-data and geotechnical site characterisation	F3	Medium — Fugro Resilience documented on VMOS geotechnical campaign
Veolia	France	215,000 (2025)	Water, waste treatment and environmental services	F4	High — operating Vaca Muerta treatment facility near Añelo
SNF	France	9,388 (2025)	Water-soluble polymers and flowback chemistry	F4	High — documented Vaca Muerta flowback-reuse application + local structure
Flottweg	Germany	1,260 (2025)	Centrifuges, decanters and tricanterers	F4	Medium — AOG Patagonia 2026 market development; no named project
Lutz-Jesco	Germany	n/a	Dosing pumps, chemical dosing and water quality	F4	Medium — AOG Patagonia 2026 market development; no named project
AERZEN	Germany	~2,600	Blowers, compressors and wastewater aeration	F4	Low — Argentina service base; no Vaca Muerta project
Grundfos	Denmark	~21,000	Pumps, dosing and water transport	F4	Low–Medium — Argentina manufacture + Neuquén distributor/service; no named project