Whitepaper

Building a Resilient FIBC Supply Chain: How NNZ and Technopac Reduce TCO and Risk for Your Business

Groningen, 21 February 2026

Total Cost of Ownership (TCO) optimized FIBC procurement requires more than negotiating unit prices — it demands a structured sourcing strategy, supplier diversification, and continuous performance management. Our role is to design and manage this strategy together with you, leveraging a global network of manufacturing partners across India, Turkye, Europe, and beyond. Because we are fully independent, we can benchmark multiple producers for each specification and allocate volumes based on performance, risk, and logistics fit — not factory capacity constraints. Over time, this builds a supplier portfolio that is both cost-efficient and genuinely resilient.

Our Supplier Selection Beyond Price

We evaluate and monitor FIBC manufacturers using a multi-dimensional framework, aligned with your requirements at every step.

Our criteria go far beyond the price per unit — we assess the full operational picture to ensure your supply chain never becomes a liability.

- Financial stability and investment capacity
- Production flexibility: product range, MOQ, lead times, surge capacity
- Quality systems and certifications (ISO, food/feed, pharma)
- Supply chain resilience: raw material sourcing, geographic spread, contingency plans
- Technical capability: engineering support, Q-bags, ventilated FIBCs
- Sustainability practices: material efficiency, recycling readiness, social compliance, Carbon Footprint information

For global customers, we use a supplier matrix where each critical FIBC specification is covered by at least two qualified manufacturers in different regions, with clear volume allocations and documented backup arrangements.

Our Multi-Source Strategy and Regional Balancing

We adopt a multi-source structure that carefully balances TCO and supply risk across geographies. This is not a theoretical framework — it is a practical allocation model, continuously managed and reviewed.

- **Primary supplier** — closest to main consumption region for scale and efficiency
- **Secondary supplier** — in another region for competition, innovation, and backup
- **Pre-qualified backups** — ready to activate rapidly in case of disruption

By distributing production across India, Turkye, and other regions, we reduce exposure to local shocks — raw material constraints, logistics bottlenecks, regulatory changes — while using diverse freight routes and transit times to strengthen your planning and forecasting.

Contracting with TCO in Mind

We encourage contract models that go beyond transactional agreements. Volume and term structures give suppliers visibility while giving customers price and capacity security. Transparent raw material indexation avoids emergency renegotiations, and KPI-linked performance reviews cover quality, delivery, responsiveness, and continuous improvement — not price alone. We lead these setups with manufacturing partners so customers benefit from a single point of contact while retaining the full advantages of a competitive, multi-supplier network.

2+
Qualified Suppliers
Per critical specification, in separate regions

4
Key Regions
India, Turkye, Europe, and beyond

6
Evaluation Dimensions
From financials to sustainability

1
Point of Contact
Single interface, full network benefit

Optimization Strategies with NNZ and Technopac: Reducing TCO While Improving Performance

True cost optimization in FIBC procurement goes well beyond unit price negotiations. Our approach begins where most procurement conversations end — at the operational level, where the real cost drivers are visible. By combining deep product expertise, process observation, and supply chain analytics, we identify and quantify savings opportunities that typical transactional sourcing simply cannot access.

Specification Optimization as a Joint Exercise

The starting point for most of our projects is a thorough specification review. Rather than simply replacing the existing bag, we visit sites — physically or virtually — to observe filling, handling, storage, and discharge. Together with your local teams, we verify real product weights, bulk densities, and required safety factors; check compatibility with filling lines, warehouse layouts, and transport units; and map current issues such as spillage, dust, instability, slow filling, and operator complaints. The impact on TCO — not just unit price — is always quantified before implementation.

Single-Trip vs. Multi-Trip: Finding the Break-Even

We do not promote multi-trip or reconditioning as a one-size-fits-all solution. Instead, we analyse whether your supply chain is genuinely suitable: Are the products non-contaminating and appropriate for reuse? Is there a closed or semi-closed loop, making reverse logistics realistic? Are volumes high enough to justify program setup and management? Where these conditions are met, we design a bag capable of multiple cycles. Where they are not met, we focus on optimizing single-trip TCO through specification right-sizing, logistics density, and end-of-life recycling options.

Process and Handling Improvements

We requently identify process-related cost drivers that are not visible from the purchase invoice. Filling speeds limited by poor spout dimensions, damage from unsuitable lifting methods, and storage losses caused by poor stackability are common examples. By adjusting bag design — loop length and positioning, bottom construction, liners, Q-baffles — and recommending compatible handling equipment or layout changes, we help reduce labor time, waste, and quality complaints. These improvements typically generate savings that far exceed minor changes in bag purchase price.

Logistics and Global Supply Planning

With customers moving product across regions, we also contributes meaningfully to the logistics dimension of FIBC procurement. This includes dimensioning FIBCs for optimal truck or container loading — matching internal container heights and door sizes — defining regional stock locations and buffer levels per SKU, and selecting appropriate shipping modes and routes while aligning lead times and safety stocks with supplier capabilities. Because we operate in multiple countries, we can coordinate FIBC supply close to both production and consumption locations where appropriate, reducing transport distance, lead time risk, and carbon footprint simultaneously.

Dimensioning for Transport Efficiency

FIBCs engineered to match container and truck dimensions, maximizing loading density on every shipment

Regional Stock Strategy

Defined buffer levels and stock locations per SKU, matched to supplier lead times and demand variability

Multi-Country Coordination

Our presence in multiple markets enables supply coordination close to both production and consumption points

End-of-Life Options

Recycling and reconditioning options mapped to relevant regional markets, reducing waste and compliance risk

Implementation Roadmap with NNZ and Technopac

A successful FIBC procurement transformation does not happen through a single contract change. It requires a structured, phased approach that aligns your internal stakeholders — procurement, operations, logistics, quality — with our expertise and network. The roadmap below reflects how we and your team work together from initial assessment through to long-term continuous improvement, treating every phase as a joint project with shared accountability and measurable deliverables.

1 Phase 1: Joint Assessment & Baseline

Together with customer we form a joint project team. We support data collection and TCO modelling, site visits and process mapping, and an initial supplier and specification review. **Deliverable:** A shared baseline TCO picture and a prioritized list of improvement levers across specification, sourcing, process, and end-of-life dimensions.

2 Phase 2: Strategy Design

We develop optimized bag concepts and validates them with your operational teams. Multi-source and regional sourcing strategies are proposed with clear volume allocations. Contract and KPI frameworks with a TCO and resilience focus are designed, and reuse or recycling options are evaluated. **Deliverable:** A documented FIBC strategy including target specs, supplier structure, and business case.

3 Phase 3: Pilots

We organize and supervise controlled pilots: trial batches of new designs on defined lines and routes, performance monitoring covering filling time, damage, loading density, and operator feedback, followed by adjustments based on real-world results. **Deliverable:** Validated concepts and data-backed confirmation of TCO improvements.

4 Phase 4: Rollout & Standardisation

We support the phased conversion of plants and SKUs, training for operators and warehouse staff, and alignment of forecasting and ordering patterns with the new sourcing model. **Deliverable:** Stable operations under the new TCO-optimized and risk-mitigated FIBC regime.

5 Phase 5: Continuous Improvement

After rollout, we remain involved as a long-term partner through regular review meetings with performance dashboards, proactive proposals in response to market changes and volume shifts, and the exploration of new materials, designs, and sustainability options. **Deliverable:** Ongoing TCO improvement and supply chain resilience over time.

Why a phased approach matters: Each phase builds on verified results from the previous one. Decisions are data-driven, risks are managed, and internal buy-in is earned through demonstrated performance — not theoretical projections. Our role is to make this process as efficient and low-disruption as possible for your organization.

Illustrative NNZ and Technopac Case

The following example illustrate how our TCO-based approach and multi-source strategy translate into measurable outcomes for real procurement challenges. It demonstrates the value that can be unlocked when procurement moves beyond unit price to a holistic, performance-driven sourcing model.

Case: Global Food Company: Right-Sizing and Multi-Source Supply

A global food company operated with several different FIBC sizes and constructions across its European and Middle Eastern sites, sourced from various local suppliers. Despite low unit prices in some locations, the group faced recurring problems: inconsistent quality, low stacking stability, and fluctuating lead times that disrupted planning across sites.

We mapped the usage across all sites and proposed a standardized set of FIBC designs tailored to product families, with dimensions aligned to pallets and containers. Production was split between qualified manufacturers in India and Turkey, with clear primary and secondary allocations and harmonized quality standards enforced across the network.

The project reduced the number of FIBC SKUs by 35%, improved container loading by 15%, and cut quality complaints related to bags by more than half. Although some sites accepted a slightly higher unit price, the overall TCO per ton decreased by roughly 25%, and supply reliability improved measurably during periods of market volatility — demonstrating the resilience value of a structured multi-source approach.

1	2	3
−35% SKUs	**+15% Loading**	**−25% TCO**
Standardization across sites	Container fill improvement	Total cost per ton

> Moving from a price-per-unit mindset to a TCO-based sourcing model — supported by our multi-source network, specification expertise, and process insight — consistently delivers cost reductions of 25–40%, measurable quality improvements, and significantly greater supply chain resilience. These are not exceptional outcomes; they are the expected result of a disciplined, structured approach to FIBC procurement.

Single Point of Contact

We manage the full supplier relationship, quality oversight, and contract administration — giving your procurement team leverage without complexity.

Global Network, Local Insight

Our multi-region manufacturing coverage combined with on-the-ground operational knowledge ensures both cost competitiveness and supply continuity.

Data-Driven Performance Management

Our regular KPI reviews, transparent TCO dashboards, and proactive market monitoring keep your FIBC strategy continuously optimized and future-ready.