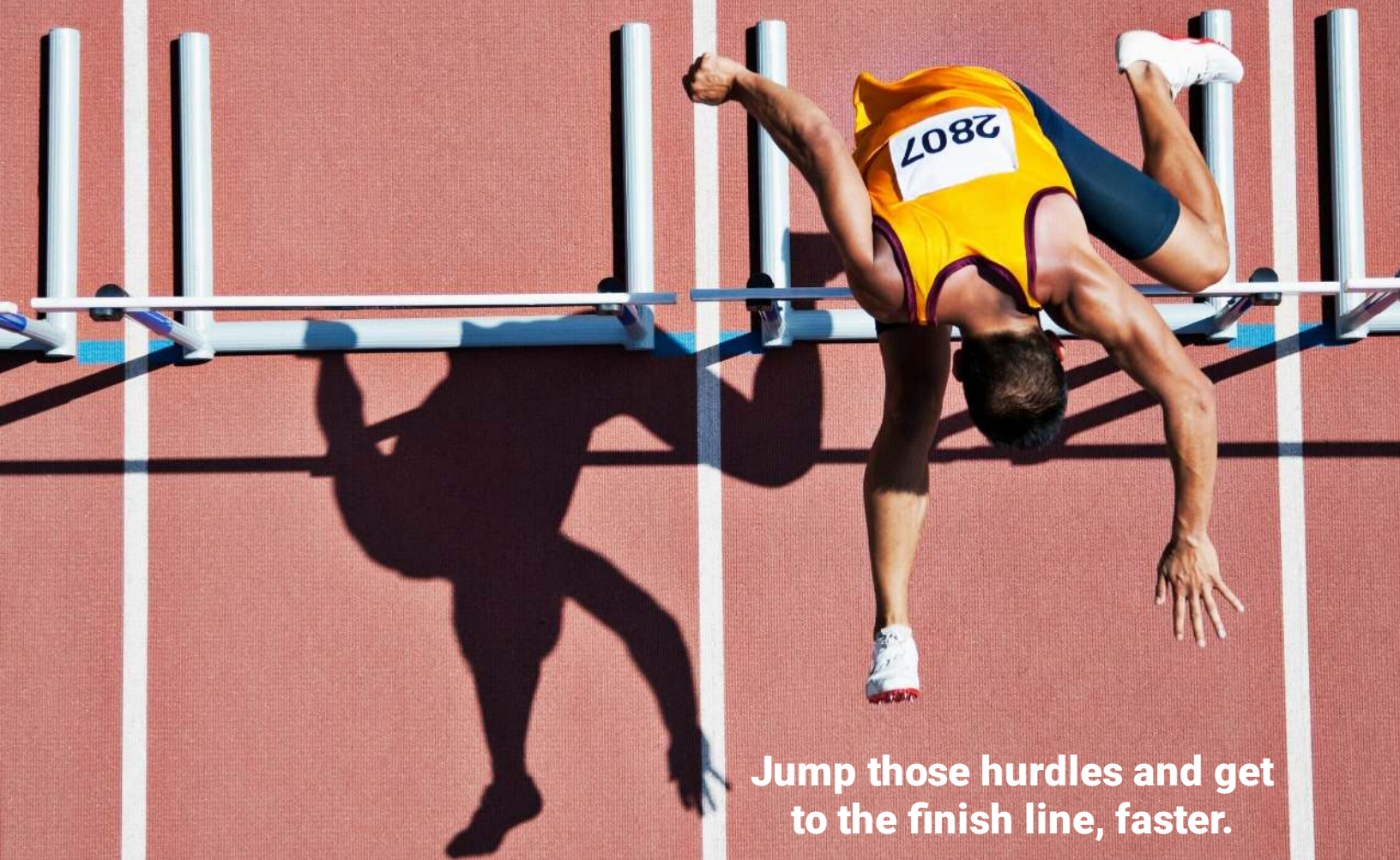




# Transforming Material Challenges into Competitive Advantages

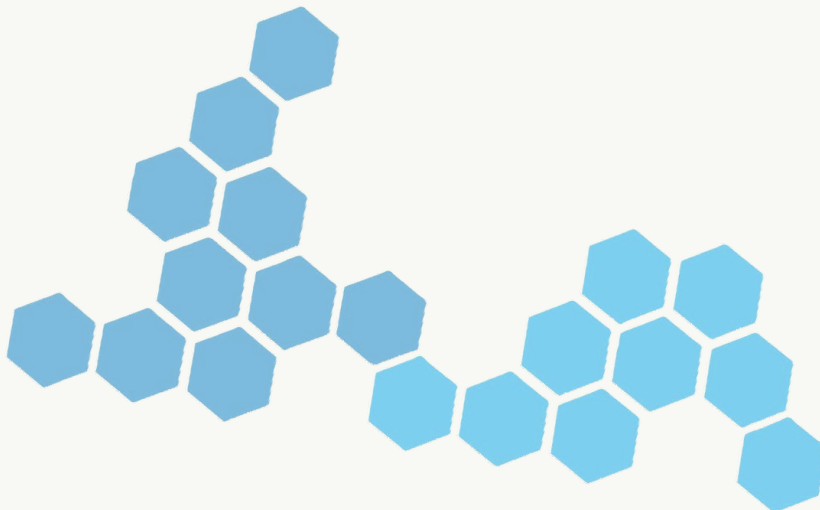


**Jump those hurdles and get  
to the finish line, faster.**



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# Introduction

**In the vast expanse of the manufacturing world, one question often looms large among polymer processors and purchasers: "How can we better manage our plastic resin procurement?"**

It's a critical question that bridges the gap between managing costs and maintaining operational efficiency and quality. The responsibility for answering it often falls on the shoulders of purchasing managers and executives overseeing polymer-intensive manufacturing.

Finding an effective strategy is rarely straightforward given the complex challenges involved at multiple points across the value chain - from materials procurement to production to final packaging and delivery.

Leaders in this space must maintain a keen understanding of market and regulatory trends shaping their material pricing and supply availability. They also need full transparency into their own internal challenges and roadblocks that, if removed, can yield significant competitive advantages.

Yet with unpredictable demand, variable and seemingly always increasing costs, and supply uncertainties, gaining this end-to-end visibility presents difficulties for even the most sophisticated organizations.



As margins tighten and competition mounts in the global economy, however, polymer processors can scarcely afford to lose their footing due to material-related blind spots that threaten productivity or organizational budgets.

The purpose of this eBook is to arm decision-makers across the polymer processing sphere with clarity and strategic guidance. By surfacing common yet overlooked challenges they face, as well as tangible solutions to overcome them, leaders can transform obstacles into opportunities - driving enhanced profitability, sustainability, and future-readiness.

# Managing Material Cost Pressures

## Challenge

Cost management complexities arising from raw material prices, capital expenditures, waste generation, and skilled labor retention challenges place immense pressures across manufacturing organizations in resin-reliant industries. Simultaneously, balancing cost reduction with quality and regulatory adherence represents a monumental challenge with implications across the entire value chain.



## Solutions

- **Strategic Sourcing and Supplier Diversification** - Implementing disciplined purchasing strategies based on pricing intelligence, building supplier relationships both locally and globally, and qualifying alternate materials can provide significant financial benefits without compromising on quality or consistency.
- **Design and Process Optimization** - Re-engineering parts and workflows to reduce material usage, streamline changeovers, and eliminate non-value-add steps are proven methods to boost sustainability and lower expenses related to natural resource consumption.
- **Circular Business Models** - Investing in material recovery reuse models can minimize waste generation and its associated costs. Closed-loop practices also align with consumer and regulatory pressures for sustainability.
- **Data-Driven Production Tracking** - Leveraging IIoT (Industrial Internet of Things) and advanced analytics to pinpoint production and material usage inefficiencies allows organizations to optimize manufacturing productivity, quality, and labor utilization - resulting in major cost savings and carbon reduction over time.

# Fluctuating Demand and Supply Chain Disruptions

## Challenge

Dealing with fluctuating customer demand forecasts, severe supply chain disruptions, and general market uncertainty has grown increasingly perilous for procurement leaders in polymer processing industries - requiring enhanced visibility and agility.

## Solution

- **Supply Chain Digitization** - Implementing solutions to gain end-to-end visibility while optimizing logistics, inventory, and transportation allows for greater flexibility and forecasting accuracy in uncertain conditions.
- **Supplier Collaboration** - Strategic relationships and contractual language and escalator/de-escalator mechanisms with vendors can ensure continuity-of-supply and mutually beneficial demand planning to minimize risks from external shocks. Enhanced data sharing also plays a key role.
- **Alternative Material Sourcing** - Qualifying substitute material types or expanding supply bases geographically better equips processors to adapt accordingly when facing specific market constraints. Multi-sourcing is a pivotal buffer when dealing with variability.
- **Portfolio Diversification** - Serving a broader diversity of end-markets and customer verticals allows revenue streams to remain relatively stable even if segments experience significant demand fluctuations.

# Material Management Complexity

## Challenge

Managing an increasingly vast array of polymer grades, additives, fillers across global supply bases can be chaotic at times - especially when attempting to balance costs, compliance, sustainability, and performance needs simultaneously.



## Solutions

- **Supplier Base Rationalization** – Consolidating to a strategic set of providers capable of supplying a wider material portfolio simplifies procurement operations. It also unlocks aggregated volume benefits.
- **Process Excellence Methodology** – A laser focus on maximizing efficiency across sourcing, quality control and production planning activities helps organize workflows despite growing material complexity. Cross-functional teams and buyer education also aid this mission.
- **Automated Tracking Systems** – IIoT platforms with robust ERP integration enable detailed material genealogy and logistics visibility - providing procurement leaders insights to optimize in real-time amid complexity.
- **Specialization** – Rather than managing a vast array of polymer types internally, processors can choose to channel materials expertise via strategic verticals while relying on compounders and resin distribution for product diversity. This focused factory model has proven effective.

# Difficulty in Production Scheduling

## Challenge

Struggles with inaccurate demand forecasting, inefficient scheduling capabilities, and material/additive availability constraints cause delays - disrupting optimizations efforts.



## Solutions

- **Predictive Analytics Adoption** – AI-enabled demand sensing and production planning tools can significantly minimize variability against real-time constraints. This enhanced visibility empowers leaders to make data-driven decisions.
- **Digital Twin Modeling** – Virtual manufacturing simulations allow for dynamic “what-if” scenario modeling to predict bottlenecks within complex production networks - enabling proactive optimization.
- **Modularized Equipment** – Adaptable machines with quick-change tooling, mobile rigging/conveying equipment enables faster material and job changeovers to align with schedule variability and market demands.
- **Aftermarket Partnerships** – Leveraging equipment OEMs or specialized service providers to manage maintenance, upgrades and reach global spare part inventories enables greater uptime and reduces delays from machine failures.



# Global Sustainability Trends

## Challenge

Adapting to rapidly evolving global regulations and consumer sustainability preferences can pose a business risk if supply chains fail to transform accordingly. Uncertainty around material compliance and circularity persists.



## Solutions

- **Supplier Audits** – Thorough evaluations of provider practices, carbon accounting, and waste diversion rates is invaluable for de-risking the complex polymer supply web. It also informs group-wide ESG goal setting.
- **Blockchain Enablement** – Distributed material passports allow transparent tracking of resin flows, ensuring responsible sourcing. This caters to stakeholder demands for traceability across product lifecycles.
- **Investments in Innovation** - Allocating resources to R&D focused on next-gen recyclable materials, greener plastic alternatives, energy-efficient equipment is key for corporations to maintain relevance in the face of evolving trends.
- **Benchmarking** – By continuing to assess sustainability KPIs against industry peers, processors can calibrate circular initiatives and investments to satisfy both commercial and environmental objectives.

# Meeting Individualized Customer Demands

## Challenge

Increased demand for custom polymer formulations that satisfy niche application needs is creating added complexity around managing materials without tradeoffs.



## Solutions

- **Modularized Production** – Adaptable equipment building blocks coupled with quick-change tooling allows for more flexible reconfiguration in generating specialized material batches or products.
- **Advanced Plastics Recycling** – Will be in more demand for ability to combat year over year changes in formulations. Allows for closed loop solutions to be implemented.
- **CEO Engagement** - Continued advocacy and market education a must to drive demand for recycled content and facilitate investments in domestic recycling.
- **Supplier Innovation Partnerships** – Collaborative materials development with chemistry providers to jointly tailor resin formulations, evaluate alternate plastic types, and diversify end-application portfolio for individual customer needs while optimizing production.

# Supply Chain Optimization

## Challenge

Managing an efficient supply chain is vital for polymer processors, especially in the face of varied and complex procurement needs. This includes challenges in inventory management, supplier relations, transportation, and the need for continuous improvement in supply chain operations.



## Solutions

- **Effective Inventory and Supplier Management Practices** - Implementing practices that streamline inventory management and enhance supplier relations allows for greater flexibility and lower risks.
- **Transportation Optimization and Effective Demand Forecasting** - Utilizing advanced predictive analytics and logistics planning tools to optimize transportation and meet demand efficiently.
- **Collaboration and Communication with Supply Chain Partners** - Strengthening partnerships and communication channels across the supply chain drives better coordination and efficiency.
- **Continuous Improvement in Supply Chain Management** - Regularly assessing and improving supply chain processes through modern digital solutions allows organizations to adapt seamlessly to changing market dynamics.

# The RTi Advantage

For many of the challenges listed in this eBook – especially those related to strategic sourcing, pricing intelligence, supplier management, and benchmarking – RTi serves as an invaluable procurement partner for organizations across the polymer value chain.

With 15 million pounds annually of market pricing visibility (across 1000+ grades from over 70+ resin producers) the ResinSmart platform empowers manufacturers and processors with unmatched insights that drive significant bottom line impact.

Our polymer expertise and analytics translate into eye-opening, P/L-transformational cost savings for customers spanning automotive, electronics, packaging, medical applications while maintaining strict quality and engineering specification adherence.

Below are snapshots of a few recent customer success stories that underscore these benefits:

**Private Equity Firm:** A private equity firm with \$10B+ in annual revenue across 12 plastic manufacturing portfolio companies partnered with RTi. By establishing target baseline pricing and identifying \$25M+ in potential savings, RTi delivered \$12.5M in actualized savings in the first year through improved procurement practices and materials qualification. PE firms are increasingly seeking out RTi's expertise in today's active M&A environment.

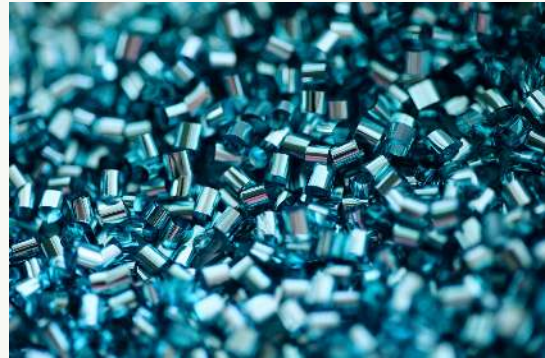


**Packaging Manufacturer:** A food packaging manufacturer faced cost pressures from Asia and potential plant closure. RTi provided pricing intelligence and identified \$8M+ in savings, allowing the company to avoid closure and regain competitiveness with \$5M in Year 1 savings and \$4M beyond. In fact, the savings was more than what would have resulted from closing the plant and helped keep manufacturing jobs in North America.



**Tier 1 Supplier:** A Tier 1 automotive supplier was losing business due to destocking combined with post-COVID cost increases that blindsided them and were unable to pass through. After partnering with RTi, they achieved \$5M in contract savings in just 3 months through pricing intelligence and strategy guidance. This aided profitability and growth investments.

**Injection Molder:** A injection molder exiting Chapter 11 with a change in leadership partnered with RTi to transform procurement practices. This quickly delivered \$750K in savings without switching materials, along with \$4M additional yearly run-rate savings – supporting a significant financial turnaround from new business as they improved their competitive edge.

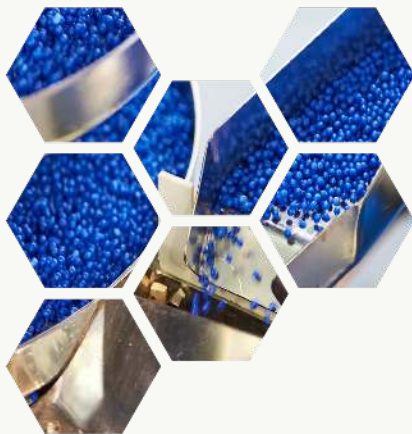


## RTi Value Drivers

Customers save time and money with us because we provide:

- **Ultra-Competitive Material Rates** – The RTi team leverages transactional market visibility and proprietary modeling to provide clients assuredness of achieving truly competitive resin prices for their specific situations by capitalizing on the volatility in the market, maximizing downturns in the market and mitigating price increases. Their target baseline pricing strategy optimizes budgets.
- **Unmatched Domain Expertise** – Veteran market experts equip customers with resources & knowledge to optimize material management, turning plastics procurement from a cost center into a value creator for the organization.
- **Reliable Supply Continuity** – RTi fosters collaboration across producers to ensure customers meet requirements with materials that have long-term availability for their applications, while qualifying alternative grades to mitigate risk.
- **Workflow Efficiency Gains** – By serving as an extension of our client's sourcing team, RTi alleviates procurement leaders from manual burdens - allowing more focus towards strategic supply chain initiatives that impact the bottom line. Their polymer expertise also builds internal capabilities.

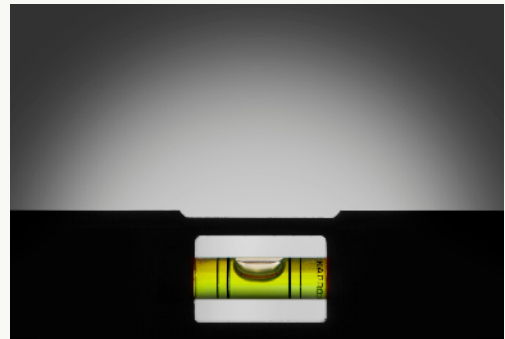
For manufacturing executives and purchasing managers seeking tangible solutions to complex polymer cost and operational challenges, RTi stands ready as a strategic partner with proven value.



# Frequently Asked Questions

## **Q: With the immense focus on sustainability today, how can manufacturers balance this priority alongside cost and supply chain resilience imperatives?**

A: Integrating sustainability into procurement decisions is complex with numerous trade-offs to navigate. RTi consultants take a consultative approach focused on each customer's unique constraints and priorities - whether commercial performance, risk management, circularity, or social impact. Their pricing intelligence and supply market expertise provides vital inputs for manufacturers to make informed trade-off decisions that meet both commercial and environmental objectives to the extent possible.



## **Q: If our business has complex polymer specifications, can your team still source cost savings?**

A: Without question. The RTi team possesses in-depth expertise around specialty resin formulation optimization to meet precise customer requirements while still achieving noteworthy pricing advantages. Even complex, more exotic resins are subject to associated raw material dynamics and prevailing supply demand conditions.



## **Q: What pricing visibility does RTi offer compared to legacy indexes for budgeting and contract negotiations?**

A: RTi moves beyond limited data from lagging legacy indexes that fail to represent true resin market pricing due to lack of transactions considered and infrequency of reporting. With daily granular insights powered by predictive modeling, RTi offers customers unprecedented real-time market visibility to inform their budgeting and sourcing decisions. This cost competitiveness and working capital efficiency empowers manufacturing success. As an example of this, over 70% of their engagements with plastic processors has resulted in no change in supplier or engineering specification. This technical knowledge, alongside supply market visibility and relationships, unlocks savings regardless of polymer application complexity or product criticality. RTi strives to challenge status quo costs through creative yet controlled strategies.

## **Q: I don't purchase millions of pounds of resin annually, am I a candidate for ResinSmart?**

A: It depends. In the complex, opaque world of thermoplastics materials, volume doesn't always dictate price. Information and how it's used is the most powerful tool to deliver maximum cost savings, and this is the type of support ResinSmart provides. RTi's no-risk consultation on resin price history is the perfect way to assess the potential for additional cost savings, as RTi will be able to provide a data-driven benchmark to how your price stacks up in the industry.



## **Q: What if RTi's experts are unable to deliver cost savings after an engagement is initiated?**



A: Once an engagement is signed, current resin prices are benchmarked against an agreed upon index to take out market change dynamics. Although incredibly rare, if ResinSmart is unable to deliver cost savings, you don't pay RTi, and you have peace of mind that your procurement team has been doing an exceptional time.

However, price drift due to market conditions and market opportunities arise at unpredictable times, so it is possible that RTi will be able to empower future savings during the engagement.



RTi empowers your procurement team with the ability to have fact-based negotiations with your suppliers on a technical level. This allows you to achieve and sustain best-in-class pricing without RFPs and leverage plays. In fact, 80% of our clients saved without changing suppliers or specifications.

Request a no-risk consultation today to elevate your material management with RTi – your secret weapon in procurement.

[Click here](http://rtiglobal.com) to contact us at [rtiglobal.com](http://rtiglobal.com).

