

Amid Global Challenges, Avenues of Opportunity

State of the North American Moldmaking
Industry Independent Survey 2007



Every step of the way

Parameters and Methodology

Participants - Qualitative

- Thought leaders from a range of industry associations and media: eight in-person/phone interviews
- Molders, Moldmakers and Molder/Moldmakers: 33 interviews, representing a cross-section of roles, markets and company sizes

Participants - Quantitative

- Online survey participants: 429 respondents, comprised of Molders, Moldmakers and Molder/Moldmakers

Data Analysis

Using key findings on challenges, trends and issues from the interviews with thought leaders and industry representatives, D-M-E commissioned an independent market research firm to develop and implement a quantitative survey to validate qualitative results.

Results were classified as “Key Findings” based on recurrent themes/responses in qualitative research (interviews), when those themes were supported by the quantitative online survey data.

D-M-E Company is an essential mold technologies resource to customers worldwide. In addition to the plastics industry’s broadest range of market-leading products, we provide unsurpassed knowledge, a global logistics infrastructure and exceptional service every step of the way.

To discover how D-M-E is responding to what we’ve learned in our research, contact Craig Messerknecht, Vice President – Marketing and Global Product Management at **248-544-5750**. Visit **www.dme.net** for more information.

For the North American moldmaking industry, there's no question that the last decade has been a struggle. But where are we headed now?

In 2007, D-M-E set out to get a clearer picture of the outlook for molders and moldmakers across the country. What we found is a general sense that, despite a variety of ongoing challenges, the worst may be over.

Our survey respondents—including more than 400 online participants and more than 40 personal interviewees—agreed that companies that adapt to the industry's evolution will survive and grow in this new era of global competition.

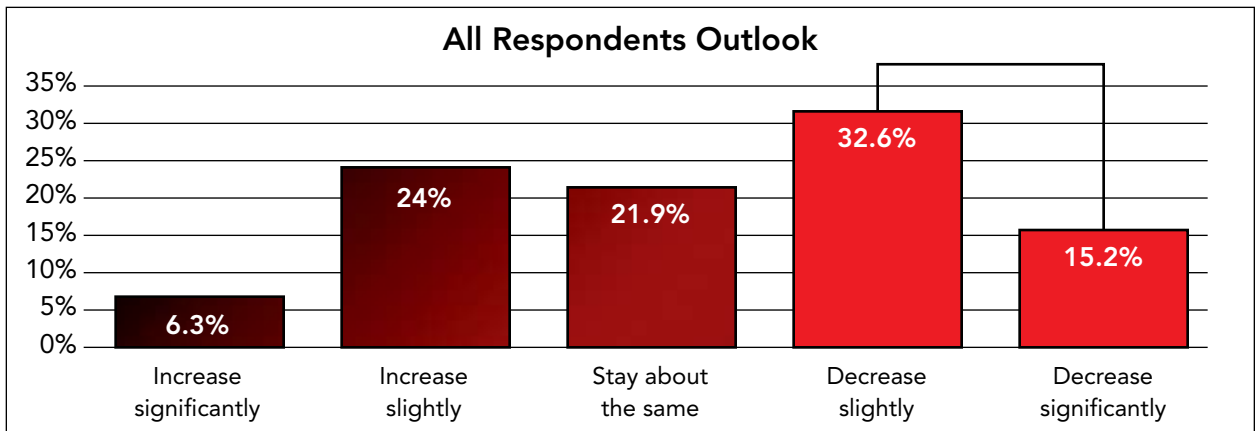
Our Key Findings

Molders, moldmakers and industry experts alike foresee several common trends and challenges in the industry:

- The exodus of moldmaking to **overseas sources will remain the single greatest challenge** to the domestic market.
- Demand for faster, better, cheaper new products will continue to **pressure the supply chain to speed turnarounds, improve quality and reduce costs.**
- Many companies will **struggle to find the investment capital** necessary to meet these intensifying demands with new technology, talent and systems.
- Like many other industries, **moldmakers will face a labor shortage**, as first- and second-generation experts retire.
- **Moldmakers will continue to become increasingly sophisticated** in practices, processes, technology, specialization and more.
- To improve efficiency and quality, and reduce shipping time and costs, molders will look for **molds to be made in closer proximity.**
- Suppliers will pursue strategies involving **increased customer intimacy**; i.e. a deeper involvement in customers' operations.

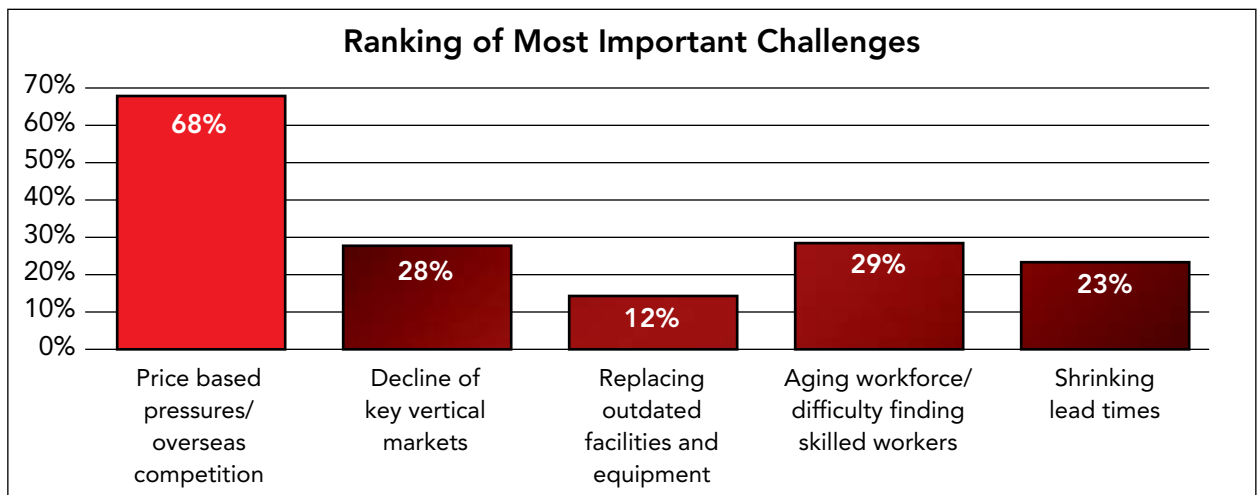
Still Struggles Ahead?

In our online survey, we asked participants to analyze the prospects for the domestic moldmaking market. Across all three categories—Molders, Moldmakers and Molder/Moldmakers—the greatest percentage (though not a majority) said they expect the industry to decrease in the next five years.



Nearly 48 percent of respondents said the industry will decline significantly or slightly.

Why the general, if not prevailing, pessimism? **Participants routinely cited the exodus of moldmaking overseas as the single greatest challenge.** The majority of those who believe the domestic market will decrease pointed to foreign, low-labor-cost competition (particularly from China).



Sixty-eight percent of all respondents named "price-based pressures" (including overseas competition) as the most significant challenge, on a scale of 1 – 5.

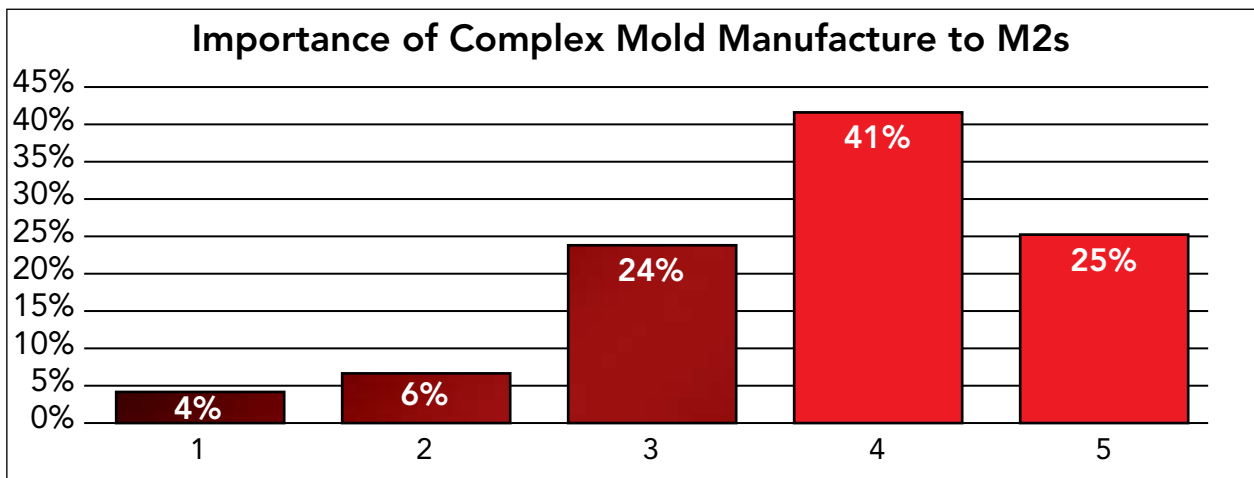
Low-Cost Competition May Level Off

With international competition expected to continue, our personal interview subjects predicted an ongoing shakeout of North American moldmakers: some small to mid-size shops will struggle; others who have already adapted to the new economic climate will perform well.

On the other hand, a substantial minority expressed optimism for the domestic market based on several predictions:

- **Foreign competitors will have to increase their prices** as their workers demand higher standards of living (by far, the most prevalent factor cited by respondents).
- **Domestic manufacturing costs will decrease due to productivity gains**, making North American tool shops more price competitive.
- Toolmakers in China and other **low-cost foreign markets lag behind U.S. companies in lead times and overall quality.**

However, many interviewees agreed that, especially in commodity tooling and molding (relatively simple jobs with high volumes), the quality from China is the same or even better—and at lower costs. So where do North American moldmakers still seem to have the advantage? In **complex tooling** that requires advanced engineering, niche capabilities or vertical market expertise.



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“Our experience with China has been good on single-cavity prototype molds. It has not been good on higher cavitation, interchangeable tooling,” said a representative from a leading global provider of medical devices.

Consensus also emerged that **lead time is a competitive advantage for North American moldmakers**. In many markets, throughout the supply chain, rapid turnarounds are often becoming a higher priority than lower costs.

“China often can’t meet deadlines. There are a lot of hidden costs in missed lead times,” said a representative from a custom injection molder.

The Sophisticated Moldmaker

Another way moldmakers are combating low-cost overseas competition is by running increasingly sophisticated operations, deploying **more efficient processes, practices and technologies** (including automated equipment and Lean techniques).

Some examples of this new technological sophistication:

- 2-shot molding
- Multi-parting lines and stack molds
- Cut heat-treated steel
- MIT/Kavaform process
- Cast cavities
- EDM
- Electric machines
- Thin-wall sleeves
- High-speed CNC
- High-speed, high-definition hard milling
- Process controls
- Conformal cooling

Moldmakers are also becoming more sophisticated in their business strategies. They’re developing specializations and **niche capabilities by product and market**. Others are **diversifying customers, products and services**. Either way, the most successful moldmakers are focusing on their core competencies and **outsourcing other functions**.

Proximity, Intimacy and Collaboration

How else are forward-thinking molders and moldmakers adapting to the global economy? **By building closer relationships**.

Repeatedly, interviewees and survey respondents cited a trend toward molds being made in close proximity to the molder, which can ease and accelerate shipping, improve communications and facilitate testing and debugging.

Proximity is just one component of a new push toward **customer intimacy**, wherein suppliers work to gain a deeper understanding of customers’ businesses and become **involved in projects at the earliest phases of design**. That way, they can help avoid problems and add value from the beginning.

Overall, expanded collaboration is predicted across the supply chain, including:

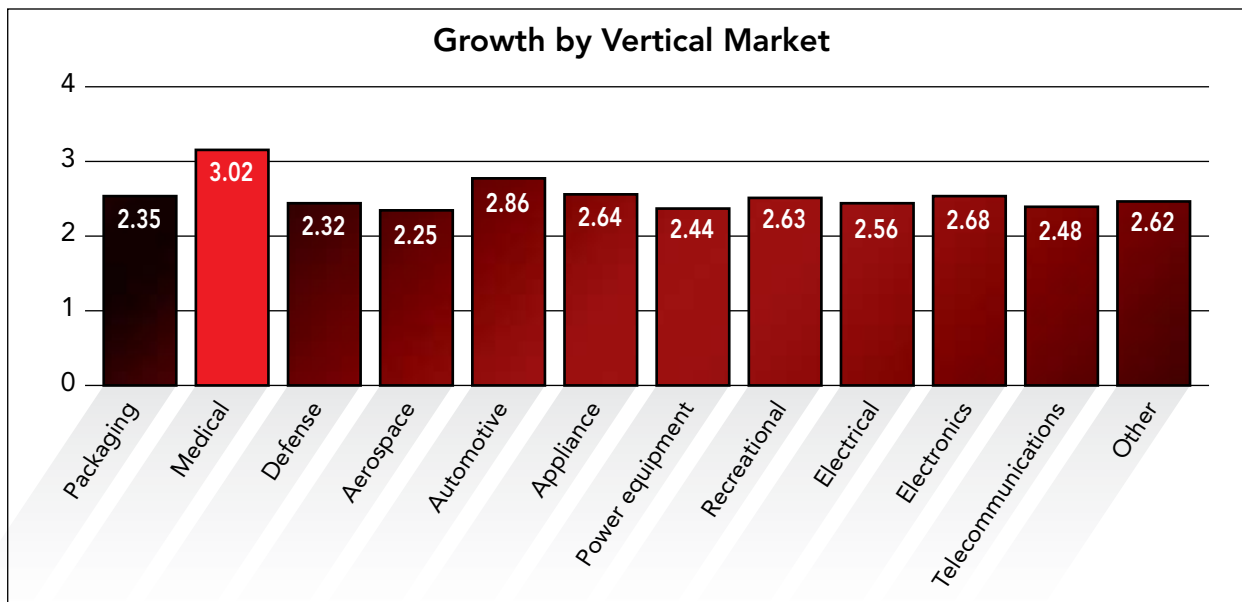
- **Outsourcing non-core competencies** (e.g., mold base builds, specific machining functions, etc.), particularly to shops running Lean.
- Support with **market intelligence, applications assistance, product design expertise**, etc.
- Anything that can **add value for customers**—most notably to reduce lead times.

“The marketplace demands more and more features and functionality be added to parts,” said a representative from a global medical technology provider. “They expect to have all of this with the same lead times or less.”

The Places to Be

In addition to growth by adding value, our research also identified certain high-growth markets and geographic regions where the moldmaking industry is expected to thrive.

The strongest markets? **Medical, “New Domestic” Automotive, Military/Defense and Packaging.** Building and Construction were predicted for slower growth. On the flip side, Traditional Automotive and Commodity Parts (electronics, telecommunications, fasteners, etc.) are forecast to continue their decline.



Survey participants believe the Medical industry represents the greatest potential for profits.

Geographically, the success story also varies. The outlook for the Upper Midwest—including the area within a 300-mile radius of Detroit, the seat of traditional automotive—is generally gloomy. The strongest U.S. markets are the **Southeast, Northeast and West (particularly California).**

Attracting the Next Generation

Even in the most promising markets and regions, one emerging challenge looms for all: the labor shortage left by retiring first- and second-generation moldmakers.

And again, visionary companies that aren't afraid of change are taking the lead. Thriving moldmakers are in action to fill the labor and knowledge gaps through:

- In-house training, apprenticeship programs, partnerships with local schools/tech colleges and reliance on suppliers.
- Implementation of processes and technologies that take labor out of the moldmaking process such as Lean, Kaizen and automation.

Signs of Progress

Despite the general decline predicted on the surface of our data, the underlying signs of progress in the industry are many and varied. Companies that are ready, willing and able to adapt will do so, and they're likely to grow and prosper amid the new economic realities of North American Moldmaking.

Any questions? As the market continues to evolve, D-M-E is evolving with it, and is ready and equipped to help you compete. Contact us with your next challenge. Visit www.dme.net to learn more, and don't hesitate to call us at **800-626-6653** (U.S.) or **800-387-6600** (Canada).

