



Polyfoam Achieves 25-30% Cost Savings and 50% Acceleration in Mold Production with ZW3D

polyfoam
absorb your life

INDUSTRY
Mold & Die

PRODUCT
Diverse and international-standard EPS foam productsization

WEBSITE
<https://polyfoam.co.th>

❓ CHALLENGES

- Prolonged mold creation process, delaying customer approvals and production timelines
- Time-consuming cost estimation, creating workflow bottlenecks and delaying project kickoffs
- Inefficiencies in CAD to CAM transition with manual parameter inputs

🔗 SOLUTION

ZW3D

✅ RESULTS

- Reduced production time and achieved 25–30% cost savings by integrating ZW3D, cutting mold creation time to 20–30 days
- Enhanced accuracy and speed in cost estimation in just few hours with ZW3D
- Streamlined mold design and CAM processes with ZW3D's ability to automatically select the workpiece with parameters

Polyfoam is a leading manufacturer of diverse, international-standard EPS foam products in Thailand. With nearly 60 years of expertise, Polyfoam has consistently pioneered innovations to serve a wide range of markets, including construction, medical, consumer goods, agriculture, and industrial applications. The company's product portfolio spans from cool blocks and floor-leveling foam in architecture to foam packaging for goods protection and foam vegetable plots.



Aerial View of Polyfoam Factory

As Polyfoam's business and demand expanded, they faced several challenges: time-consuming cost estimations, prolonged mold creation processes that delayed production timelines, and inefficiencies in CAD to CAM transitions due to manual parameter inputs. They needed a solution that could address

these issues while being financially feasible. After thorough analysis, Polyfoam discovered that ZW3D met their expectations, offering essential features needed across different departments and enhancing their production processes.

Quicker Cost Estimation to Enhance Customer Decision Efficiency

The ability of ZW3D to quickly create 3D mockups for customers has transformed Polyfoam's efficiency in initial customer consultations. Wattana Thongwhao, General Manager, explains, "When customers send us 2D or 3D models, we can quickly create a 3D mockup in ZW3D for them to see the product appearance in advance, which helps customers make quicker decisions."

Meanwhile, accurate and timely cost estimations are crucial for Polyfoam's sales team. Before, the Polyfoam sales team received 2D drawing parts and estimating from specifications and their experience, which was time-consuming. However, Chayapon Lertlaksameekarn, Sales Department Lead, highlights that this challenge has been solved by using ZW3D, "ZW3D allows us to receive 3D files from customers and quickly provide accurate cost estimates. This greatly aids the sales team in working more efficiently and conveniently." The Polyfoam sales team can now

promptly and precisely evaluate customer model files and provide cost estimates in just a few hours.

In-house Mold Production Now Achievable

Creating molds is a crucial part of Polyfoam's production process, but it used to be a bottleneck, slowing down production and extending timelines. Previously, the Engineering Department created 2D mold drawings from 2D parts and manually programmed CNC for simple parts, while complex parts were outsourced to third-party suppliers for mold creation. To maintain their competitive edge and meet increasing customer demands, Polyfoam chose ZW3D as their optimal solution.



In-house EPS Foam Processing and Production

“
Molds are essential for producing high-quality EPS foam, ensuring exceptional support for our customers. With ZW3D, we can now produce molds in-house, significantly speeding up production timelines.
”

—Wattana Thongwhao, General Manager of Polyfoam

Streamlined CAD to CAM Integration for Enhanced Efficiency

To further improve efficiency, the engineering department also needed a solution with great performance in the integration of CAD and CAM. The previous process was fraught with inefficiencies due to manual parameter inputs. ZW3D has effectively resolved these issues. Prasit Potikarn from the Engineering Department describes, “With ZW3D, once the design is completed, we can immediately perform CAM, selecting the workpiece and proceeding without needing to manually input parameters. ZW3D helps us save time in design, CAM, and overall operations.”

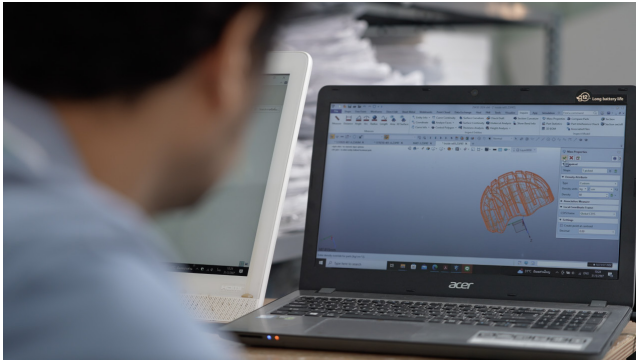
As a result, the engineering team can seamlessly receive CAD files from the sales team to design molds, extract core cavities, and separate parts. “ZW3D simplifies part separation and allows us to generate CAM operations efficiently. The ability to automatically select tools makes the process faster,” Prasit Potikarn explains. ZW3D has streamlined these processes, enabling the engineering team to work more efficiently and improving overall operational efficiency.

Higher Precision for Quality Control to Increase Checking Efficiency

Quality control at Polyfoam has seen significant enhancements with the adoption of ZW3D. Previously, the process of manually checking mold trial dimensions against 2D drawings was not only time-consuming but also prone to inaccuracies. Ensuring high-quality assurance is a top priority at Polyfoam. Since integrating ZW3D, substantial improvements have been realized.

Wattana Ninwanit from the Quality Assurance Department explains, “Once the sample production is completed, we check the dimensions and appearance to ensure they match the customer's 3D specifications. Now, with ZW3D, we can calculate values that closely match these specifications,

significantly reducing time and increasing accuracy.”



Quality Control Department Efficiently Inspecting Samples with ZW3D

Greater Efficiency and Significant Cost Savings Gained with ZW3D

By adopting ZW3D, Polyfoam has achieved significant improvements in production efficiency, cost savings, and overall operational performance. As a result, Polyfoam has reduced the time to create molds from 45–60 days to 20–30 days, achieving up to a 25–30% cost saving .

The integration of ZW3D has enabled Polyfoam to streamline its workflow, reduce mold creation time, and enhance collaboration across departments. With the continued use of ZW3D, Polyfoam is well-positioned to meet the evolving demands of its customers and maintain its leadership in the EPS foam industry.

ZWSOFT

ZWSOFT has been delivering reliable all-in-one CAx solutions since 1998. With over 20 years of experience, our products have been chosen and trusted by over 1.4 million customers in more than 90 countries worldwide.

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