

# The Doorway™

A Publication of The Gill Corporation

High-Performance Composite Products Since 1945 • [www.thegillcorp.com](http://www.thegillcorp.com)

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COMMITTED TO  
EXCELLENCE



# COMMITTED TO EXCELLENCE

The Gill Corporation's international headquarters are located in El Monte, California, with additional facilities in Maryland, France and Northern Ireland. The corporation is a vertically integrated company and one of the world's largest manufacturers of honeycomb, high-performance floor panels, cargo compartment liners, precision-machined and fabricated parts and original equipment for passenger and freighter aircraft. The Gill Corporation also excels in many other types of advanced composites including honeycomb core, interior sandwich panels for creating structures such as aircraft galleys and bulkheads, and related products.





In the composites industry, The Gill Corporation is known as a pioneer. We maintain that reputation by continuously developing new technologies, improved manufacturing efficiencies and product improvements as a part of our standard routine. We are a company that stays one step ahead by proactively developing next-generation cargo liners, sandwich panels and weight-saving honeycomb products for the aviation industry including regional jets, cargo aircraft, single aisle, wide body passenger and military aircraft. The Gill Corporation's ability to support programs by identifying, developing and producing innovative products, before a new aircraft program has even been launched, sets us apart.

Since 1952, the company has expanded to larger facilities eleven times. Out of humble beginnings in a rented garage to its multi-division global operations, The Gill Corporation can trace the beginnings of its explosive growth to the 1960s when the corporation purchased manufacturing space and began a series of expansions aimed at meeting the demands of the

growing aerospace industry. During the period of 1967 to 2001, the corporation expanded its manufacturing capabilities outside the main campus through a series of global acquisitions (The Gill Corporation Europe, Ltd – Northern Ireland, The Gill Corporation – France and The Gill Corporation – Maryland). In 2005, Chairman and CEO Stephen Gill and the shareholders initiated the first of many major capital investment projects to include state-of-the-art equipment, increased personnel, IT/digital enhancements and upgrades to the existing facilities (see *The Doorway* Fall 2008). Then the global economy seemed to implode.



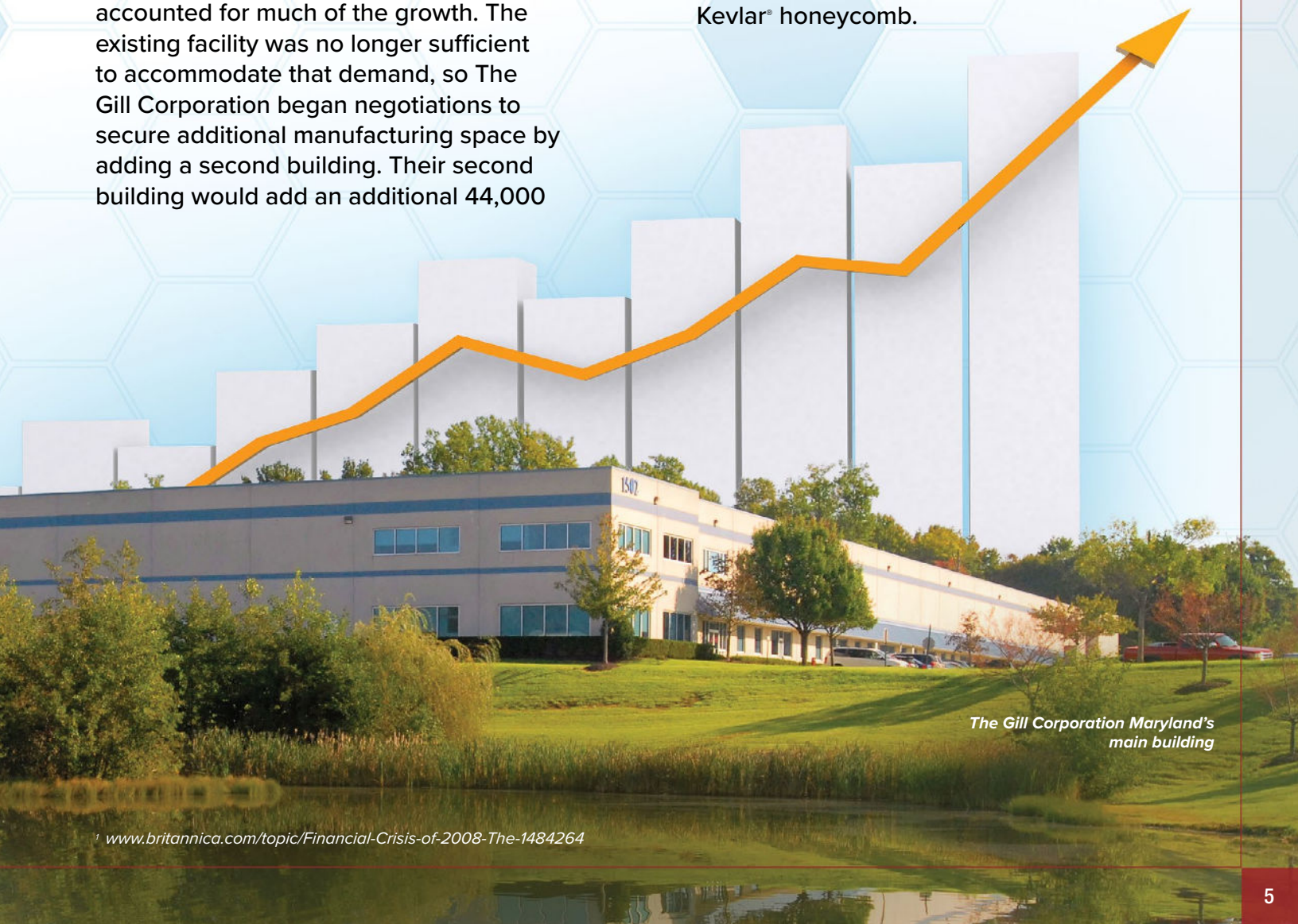
In 2008, the world economy faced its most dangerous crisis since the Great Depression of the 1930s.<sup>1</sup>

While many organizations floundered and failed, shareholders at The Gill Corporation held their ground and did something bold and unexpected. They analyzed market forecasts from each division against historical data, concluded the aerospace industry was poised for explosive growth and they doubled down by reinvesting in the corporation; a gamble that has paid off in spades.

From 2003 – 2007, the division in Maryland had seen demand for both metallic and non-metallic machined honeycomb rise more than 30%. An increase in aircraft manufacturer's build-rates, new aircraft and emerging military programs accounted for much of the growth. The existing facility was no longer sufficient to accommodate that demand, so The Gill Corporation began negotiations to secure additional manufacturing space by adding a second building. Their second building would add an additional 44,000

square feet of manufacturing and office space to accommodate manufacturing of non-metallic honeycomb materials used in various aerospace parts, including aircraft engine nacelles and primary and secondary aircraft structures. In 2008 – in the midst of the Great Recession – the corporation began operations in the second building of the Maryland complex. The expanded and improved facility offered:

- Six 5-axis machines for honeycomb
- Advanced inspection methods using CMM technology
- Vertical carousels for tools and parts
- State-of-the-art dust collection system
- Temperature and humidity control for working with Nomex® and Kevlar® honeycomb.



*The Gill Corporation Maryland's main building*

<sup>1</sup> [www.britannica.com/topic/Financial-Crisis-of-2008-The-1484264](http://www.britannica.com/topic/Financial-Crisis-of-2008-The-1484264)



The original building (MD1) would remain a Center of Excellence (CoE) dedicated to all metallic products while the new building (MD2) was equipped as a machining center of excellence (CoE) for non-metallic honeycomb core.

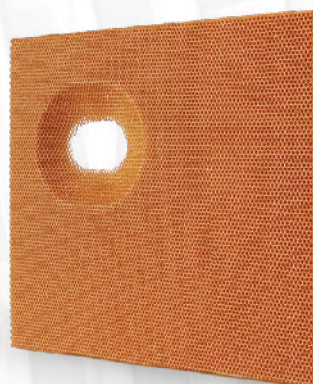
A Center of Excellence (CoE) is a team, a shared facility or an entity that provides leadership, best practices, research, support and/or training for a focus area. Due to its broad usage and vague legal precedent, a “center of excellence” in one context may have completely different characteristics from another. The focus area might be a technology, a business concept, a skill or a broad area of study.<sup>2</sup>

## The non-metallic products machined in MD2 included:



**Gillcore HD**, a Nomex® aramid fiber-reinforced honeycomb which is coated with heat-resistant phenolic resin. Gillcore HD provides a wide range of honeycomb types, including different cell sizes, cell geometries, paper thicknesses and densities for commercial and aerospace defense applications.

**Gillcore® HK**, a Kevlar aramid fiber-reinforced honeycomb which is coated with heat-resistant phenolic resin. Gillcore HK provides a wide range of honeycomb types, including different cell sizes, cell geometries, paper thicknesses and densities for commercial, military, aerospace and defense applications. Gillcore HK has been developed and commercialized in both hexagonal and over-expanded cell configurations.



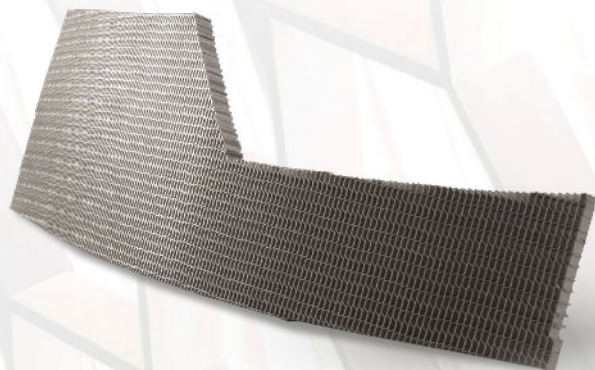
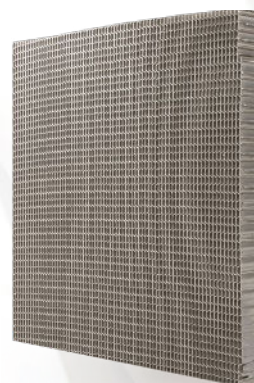
<sup>2</sup> [https://en.m.wikipedia.org/wiki/Center\\_of\\_excellence](https://en.m.wikipedia.org/wiki/Center_of_excellence)

## The metallic products machined in MD1 included:



**PAA-CORE® 5052**, an aluminum honeycomb that is phosphoric acid-anodized and coated with a proprietary primer. PAA-CORE has unsurpassed corrosion resistance, (with minimal weight loss after 31 days in an acidified salt spray chamber). PAA-CORE outperforms non-metallic core materials due to significantly higher strength-to-weight ratio and hot/wet strength.

**DURA-CORE® II 5052**, an aluminum honeycomb that provides the aerospace and commercial markets with a high degree of flexibility in solving lightweight structural design challenges. Prior to bonding, the foil is cleaned and treated using a proprietary chemical conversion coating. The resulting honeycomb exhibits excellent corrosion resistance in hostile environments, especially salt fog.



**HIGRID®**, a high-strength corrugate aluminum honeycomb that offers an ideal solution for fastener inserts and edge reinforcements in honeycomb structures. It also excels as a high-impact energy-absorber. Produced by bonding together corrugated sheets of aluminum foil, much higher densities are possible than with conventional expanded honeycomb.

**TRUSSGRID®**, a three-dimensional honeycomb that is a dimensionally stable, naturally vented, rigid-core material made of cross-laminated aluminum foil corrugations. With considerable strength in all three dimensions, TRUSSGRID offers unique performance in special types of sandwich construction and as a high-impact absorber.



SAP®

8" FACE B  
EXIST. WALL  
FOR 45MIN  
EXTING.

 THE GILL CORPORATION  
INTERNATIONAL HEADQUARTERS

Adding the second building not only increased the overall capacity, it also allowed the corporation to eliminate the issue of contamination between the two different material types.

As expected, the additional manufacturing space in Maryland eased the pressure a bit and the decision to house machining in Maryland worked for a while. The gamble to reinvest proved shrewd but industry growth quickly exceeded the Maryland division's ability to match future demand. Senior management advised Stephen Gill that major changes would be necessary to honor the corporate vision "to provide products that meet or exceed customer requirements."

In 2016, Stephen Gill and the shareholders responded to the news by announcing new challenging sales goals that reflected a large increase in current sales by 2020. This signaled the shareholders acknowledgment that a significantly restructured manufacturing plan was necessary and their commitment to provide the tools necessary to achieve those goals.

Senior leadership acknowledged the existing accounting/production/CRM systems were sadly out of date, so resources were allocated to identify a system capable of supporting the corporation beyond the goals set by Stephen Gill and the shareholders.

In July 2018, the El Monte campus implemented Systems, Applications & Products in Data Processing (SAP), a scalable enterprise resource

planning software program capable of supporting the projected growth of The Gill Corporation.

In 2018, we also came to the conclusion that it was no longer feasible to house both metallic and non-metallic machining operations in the Maryland facility. The non-metallic materials are manufactured in El Monte, so it was a no-brainer to bring that machining work to the El Monte campus. Fewer steps mean faster delivery to our customers. Production lines were reconfigured with an eye toward the creation of the new machining center at the El Monte campus.

Plans have been drawn to locate the El Monte non-metallic machining in Building 6 which is located on the west side of the campus. Architectural renderings depict an area to house multiple CNC machines and other fabrication equipment adjacent to staging and inspection areas. Initial projections forecast the need for two shifts of 25-30 personnel. Build-out of the space is slated to begin in July 2019.



*El Monte building 6.*



As we prepare for this exciting new venture, the Gill engineers and production staff are working hard to define clear expectations of results and identify tools to measure success. At the heart of this venture is the knowledge that Centers of Excellence (CoE) are considered “competency centers” or “capability centers” created to improve expertise in a certain area and make the most of its resources. A CoE can improve business practices, help a company achieve consistency, as well as reduce complexity by:

- Using resources in a more efficient way
- Providing quality services and products to customers
- Reducing costs by eliminating inefficient practices, while implementing new technologies and skills. <sup>3</sup>

We’ve taken the first step by initiating process qualifications with OEMs and received the green light from our first customer account as the corporation prepares to transition non-metallic machining to the El Monte campus. Once complete, the new machining center will feature:

- Dust collector
- CNC (5-axis) machines
- HVAC system
- Air drops for vacuum
- Lights and related fixtures
- Robotics

Other projected equipment includes saws, a Gerber machine, stabilization and forming ovens, a vacuum bladder and a bag sealer.



<sup>3</sup> [www.cleverism.com/how-set-up-center-excellence](http://www.cleverism.com/how-set-up-center-excellence)

**After the dust settles,  
we look forward to  
the satisfaction that  
comes from a job  
well done and  
the universal benefits  
for both The Gill  
Corporation and its  
customers with  
the Machining CoE  
in El Monte.**



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*The Gill Corporation – Maryland does not sell  
sandwich panels. Contact The Gill Corporation – El Monte  
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AND SHOULD BE RECYCLED

# Trivia

## Did You Know?

Iceland is the only country in the world without any mosquitoes, snakes or other reptiles. They also have very few species of spider, all of which are not harmful to humans.

Dogs are capable of understanding up to 250 words and gestures. The average dog is as intelligent as a two-year-old child.

Beer reduces the risk of developing kidney stones by 40%.

The first non-human to win an Oscar was Mickey Mouse.

Without your pinky finger, your hand would lose 50% of its strength.

The National Science Foundation estimated that human brains produce as many as 12,000 to 50,000 thoughts per day, depending on how deep a thinker you are.

There are exactly 46,783,665,034,756,288,456,012, 645 move possibilities in a game of chess.

You can survive entirely on a diet of potatoes and butter, which provide all the necessary nutrients the human body needs.

Once a tractor company owner was insulted by the owner of Ferrari. Enzo Ferrari's words were: "You may be able to drive a tractor, but you will never be able to handle the Ferrari properly." Today, that tractor company is known as "Lamborghini."

There is a road in France that can be used only twice a day, for a few hours. Then it disappears under 13 feet of water.

If the human eye were a digital camera, it would have 576 megapixels.

Ants never sleep. Also they don't have lungs. Oxygen enters through tiny holes all over their bodies and carbon dioxide leaves through the same holes.

## THE FUNNY SIDE

### In a Podiatrist's office:

"Time wounds all heels."

### Outside a Muffler Shop:

"No appointment necessary. We hear you coming."

### At a Tire Shop:

"Invite us to your next blowout."

### In a Restaurant Window:

"Don't stand there and be hungry; come on in and get fed up."

