DesignNews

3 COMPOSITE TRENDS THAT SUPPORT ENGINEERING INNOVATIONS.

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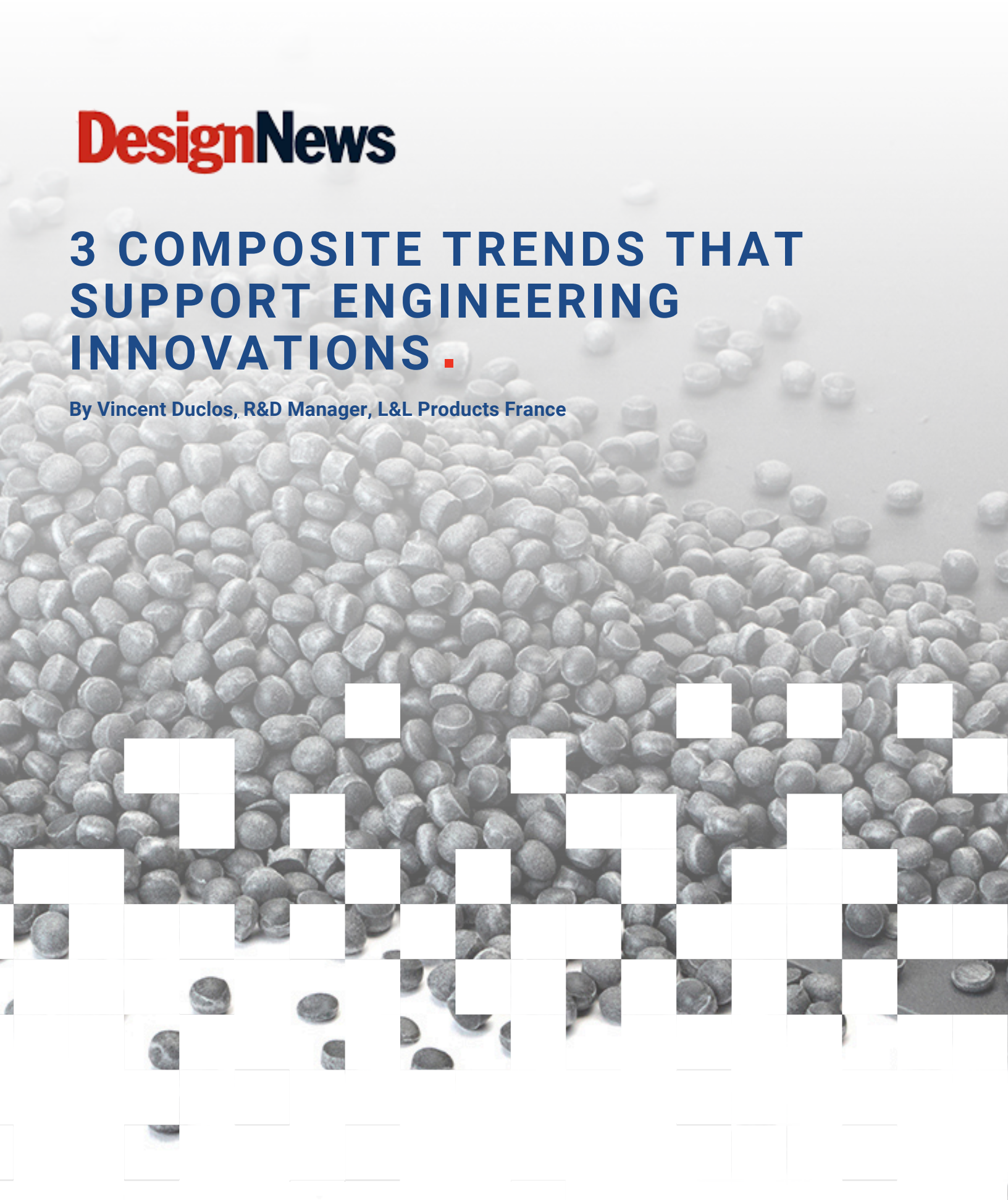

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At a Glance

- **Composites use could help speed up product development cycles.**
- **Multi-functional composites combine several attributes into a single material system.**
- **Composites offer several opportunities for customization.**

In 2026, the demand for composites remains high. According to Grand View Research, the 2025 global composites market was approximately $112 billion, and it is expected to grow to over $210 billion by 2033.

With revolutionary new materials for composites being developed and new applications emerging, a variety of industries are increasingly realizing the value that these materials can deliver. The development of advanced technologies and new materials, like in-mold foaming core materials, will simplify composite part manufacturing and extend the field of use. Industries across the global landscape are pushing toward lighter and stronger products, and these new materials enable process optimization and efficiency.

Let's look at three key composite trends we can expect to see in 2026.

Trend 1: Composites as a process optimizer

Based on the variety and availability of composites, it's likely that we'll see more companies leaning into the materials to accelerate development cycles and manufacturing processes.

OEMs in many markets are increasingly under pressure to reduce time to market without sacrificing quality or performance. Composites are a strategic enabler in this area, allowing faster development cycles, streamlined manufacturing with fewer steps and parts, and more consistent, repeatable processes.

Compared with materials produced through traditional production methods, composites can increase throughput while reducing energy use thanks to in-situ foam core materials. Additionally, net-shape manufacturing can minimize secondary machining and post-processing, which lower both waste and labor costs.

In the automotive and commercial vehicle industries, composites can also enable metal downgauging, where thinner metal sections are reinforced with composite structures to achieve a lighter weight without sacrificing strength.

Trend 2: Multifunctional composites will do more with less

We will likely see a continued shift toward multi-functional composites, which are increasingly valued for their ability to combine multiple functions into a single material system. With multi-functional composites, aspects like strength, durability, acoustic performance, and aesthetics are addressed together in the design of a single part.

We are already seeing multi-functional composite applications that routinely integrate:

- Structural reinforcement
- Energy absorption
- Thermal and acoustic insulation
- NVH control and vibration damping
- Fire resistance
- Lightweighting and part reduction

Complex, multi-part assemblies can be replaced by a single part that delivers improved structural integrity, lightweighting, and even part reduction. For example, engineers can integrate bushings and mounting hardware. These consolidated parts can reduce or eliminate the number of welds, separate mounting hardware, and mechanical fasteners, which are common sources of fatigue and failure and require additional steps in the assembly process. This improves the durability and reliability of the part.

Trend 3: Customization will be a competitive advantage

Traditional materials will always have a place, but composites can unlock additional opportunities for customization. Customers want materials that align with their specific application needs, whether that means adjusting weight, openness, width, or visual appearance.

One of the unique features of composites is they afford the ability to create customized solutions more efficiently than do traditional methods and materials. Designers and engineers see increased flexibility with composites and can do much more to solve multiple problems at once. Application-specific composite engineering puts the right material in the right amount and at the right place.

This customization can also help create brand consistency across a platform, as composite surfaces can be incorporated into a wide variety of layups, including metallic and non-metallic facings.

Adding it all up

The growing composites market reflects that composites are not just material alternatives—they're a competitive advantage. For manufacturers looking to stay competitive in 2026, the question is no longer whether to adopt composites, but how to strategically leverage their unique capabilities. As industries demand faster development cycles, integrated functionality, and tailored solutions, composites deliver on all three fronts.

ABOUT THE AUTHOR

Vincent Duclos is the R&D Manager for L&L Products France. With over 20 years of experience in materials science, chemistry formulation and innovative solution development, Vincent works across many applications and industries including automotive, aerospace and sports equipment.

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