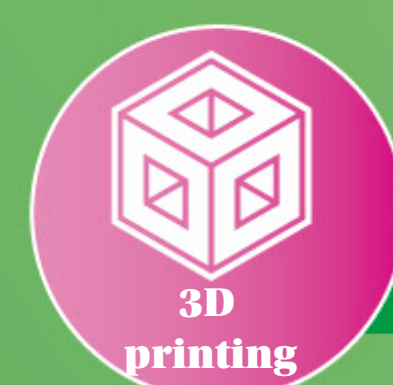




# Next-Generation Manufacturing: 3D Fabrication Empowered by CNF

We are developing innovative technology to fabricate CNF reinforced plastics using 3D printers. Because this technology does not require molds, it enables fine-tuning of part design, the production of complex geometries, and small-lot manufacturing. Furthermore, by imparting CNF's excellent properties—lightweight, high strength, and recyclability, it redefines conventional manufacturing practices.

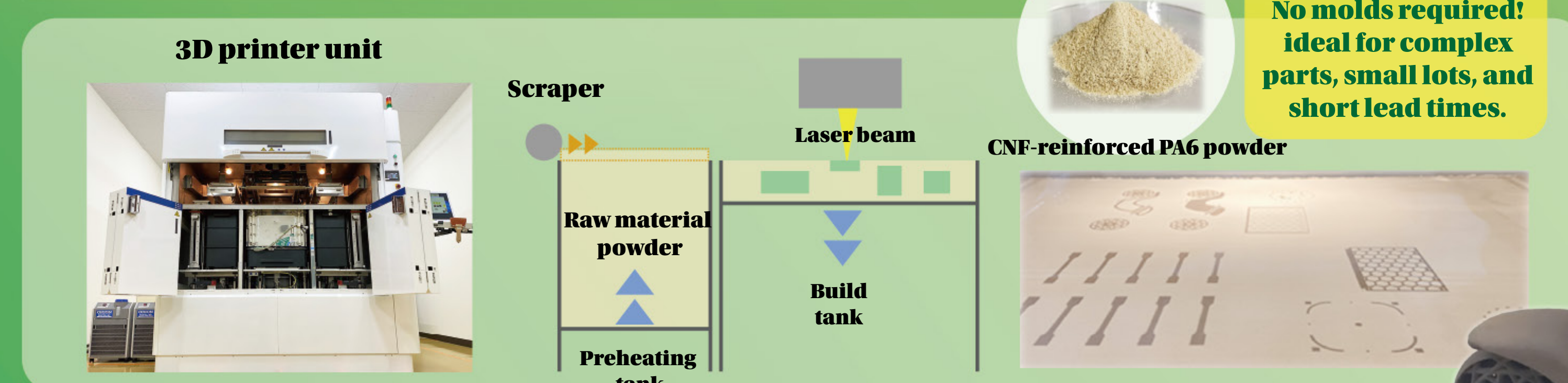


## CNF transforms the manufacturing process

**3D printing** + **CNF** = **Mold-free, rapid production of complex and high-strength components**

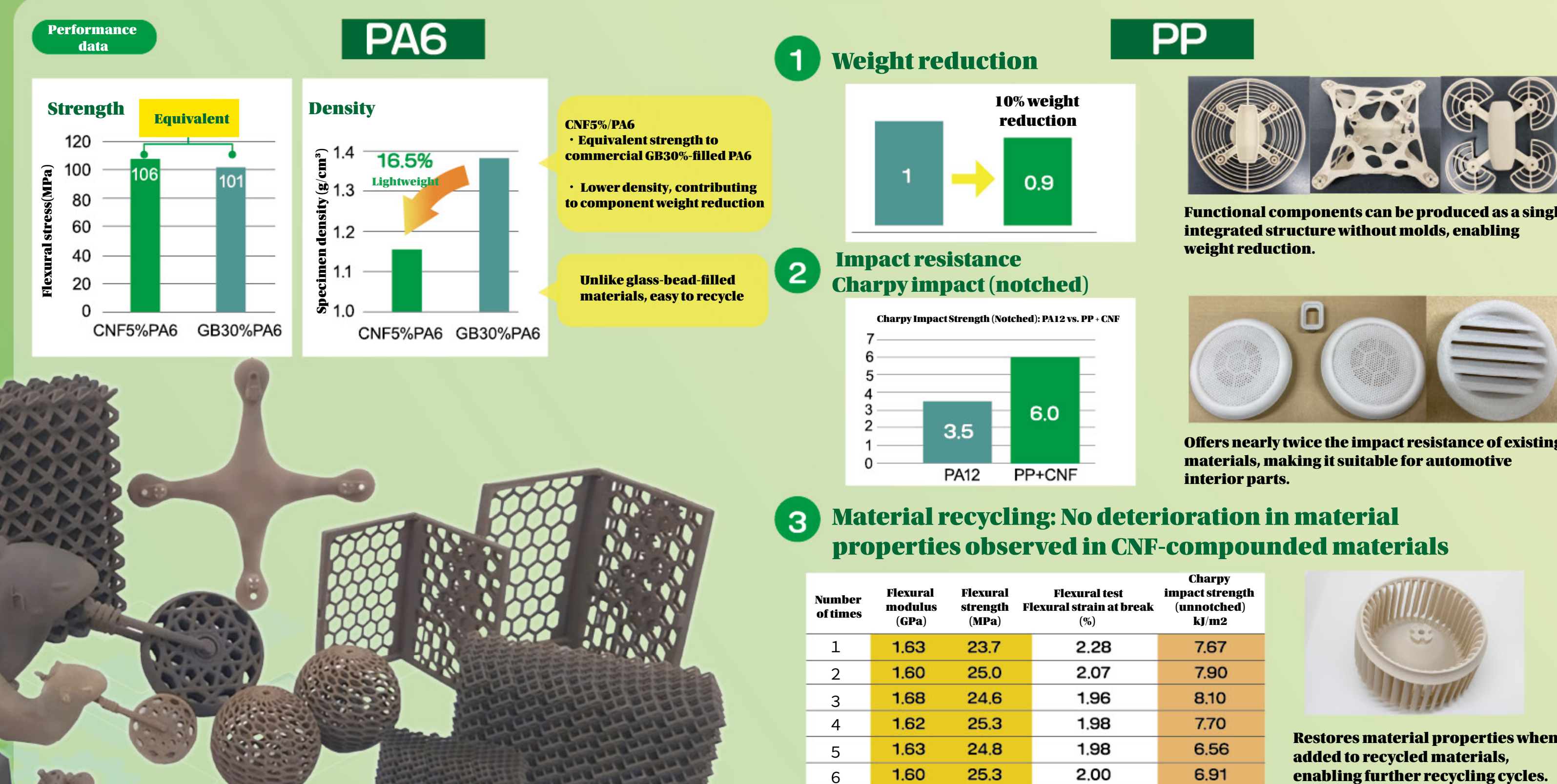
This innovative technology maximizes the advantages of mold-free 3D printing. It enables the direct fabrication of parts with complex geometries and internal structures from digital design data. This capability facilitates design refinement, high-mix/low-volume production, and shorter lead times. By integrating CNF with 3D printing, we introduce a new approach to manufacturing that frees designers and engineers from conventional production constraints.

## PBF: Powder Bed Fusion



## Achieves both high performance and recyclability

CNF reinforced 3D printing materials not only eliminate the need for molds but also offer excellent physical properties. Adding CNF reduces material density, enabling a 10% reduction in part weight. Moreover, while achieving strength comparable to commercially available glass-bead-filled materials, they offer a significant advantage in recyclability. CNF is a next-generation material that delivers both high performance and sustainability.



If you are interested in CNF, please feel free to contact us.