

## CHALLENGE

- Replace Excel to better manage their complex Bill of Materials (BOMs)
- Find a reliable tool for maintaining and sharing their BOMS across their organization from engineering to procurement

## SOLUTION

- Chose OpenBOM solution to integrate their BOM management process - required minimal maintenance without dedicated IT team
- Contacted Razorleaf for initial data loading of SOLIDWORKS and Excel BOM data to create accurate BOMs for a product record master in OpenBOM

## BUSINESS BENEFITS

- Increased productivity by 10 – 15% by moving from a manual process to automating the BOM process, thus reducing the time and effort
- Better managed different revisions and change management resulting in an increase in quality by reducing manual errors

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## Nexa3D Improves Productivity with OpenBOM

### About Nexa3D

Nexa3D is passionate about digitizing supply chain sustainably. The company makes ultrafast polymer 3D printers that deliver 20X productivity advantage, affordable for professionals and businesses of all sizes. Partnerships with world-class material suppliers unlock the full potential of additively manufactured polymers for volume production. Automated software tools optimize the entire production cycle using process interplay algorithms that ensure part performance and production consistency, while reducing waste, energy, and carbon footprints.

### The Challenge

Nexa3D was experiencing problems with managing their product Bills of Materials (BOMs) in Excel. Nexa3D used SOLIDWORKS and PDM Professional from SOLIDWORKS to manage engineering data for their product definition. However, because their product BOMs contain more than Nexa3D components in CAD, they needed a separate tool for maintaining and sharing their BOMs. As needs expanded, Excel proved not a great tool for managing this dynamic information. Their product BOM is quite complex, and multiple departments (engineering, production, purchasing, and finance teams) edited this information. It was critical to collaborate on the BOM data across the organization.



We needed to add certain functionality to Excel for regulatory compliance, purchasing information, vendor data, and costs. Unfortunately, it became unmanageable and restrictive in terms of permissions and who can edit and track the changes. Over time, it became more problematic than helpful, and we outgrew Excel for a variety of business reasons.



Kenyon Whetsell,  
Mechanical Engineering  
Director

SOLIDWORKS with PDM Pro would have been a logical place for the mechanical engineering team to manage this BOM data, but it was not straightforward for other teams, such as electrical engineers, to access or manage BOM data from that tool. At Nexa3D, not every component is modeled or defined in SOLIDWORKS as fit, form, and function for components, such as consumables, adhesives, and certain cables, which can be validated more effectively in physical builds.

## The Solution

In their search for a replacement for Excel, the Nexa3D team decided to move forward with OpenBOM, a cloud-based real-time collaboration and data management technology that allows managing parts, catalogs, bill of materials, inventories, and purchase orders across networks of engineers, supply chain managers, and contract manufacturers. Also, they converged on OpenBOM because of the affordable recurring costs. It was critical to have a reliable tool for their bills of materials.

“We required a system that checked all the boxes, and OpenBOM did just that. We needed a system that works from purchasing to the engineering team, with completely different requirements. In addition, we recognized that OpenBOM needed minimal maintenance and did not require a dedicated IT team,” said Whetsell.

Since OpenBOM was a new product for Nexa3D, they needed to find an OpenBOM certified service provider that could assist them in initial data loading and onboarding.

“After talking with Jonathan Scott, Chief Architect at Razorleaf, we knew Razorleaf offered the most compelling choice – outlining the key deliverables to move our data into OpenBOM. With this being a new product, we really leveraged Jonathan’s knowledge for our initial data loading and onboarding. He took a messy Excel spreadsheet, did a lot of data cleanup, and trained us on the OpenBOM tool,” said Whetsell.

Razorleaf created Catalogs (item masters) and BOMs in OpenBOM to track the important information to Nexa3D and then set up SOLIDWORKS to feed its BOM information into OpenBOM. With some training, Razorleaf quickly turned over the process to engineers, who subsequently loaded all the SOLIDWORKS and Excel BOM data to create comprehensive, accurate BOMs for Nexa3D’s products. Validating what they already suspected, Nexa3D identified and repaired multiple BOM errors while creating their new product record master in OpenBOM.

“

Razorleaf communicated very effectively in terms of timeline and budget. They set very reasonable expectations and suggested alternate paths or workarounds to bring a successful outcome. We hit the ground running in just a week and could take advantage of everything OpenBOM had to offer.

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said Whetsell.

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### The Benefit

OpenBOM solution allowed Nexa3D to increase productivity by moving from a manual process to automating the BOM process, thus reducing the time and effort. Now, the various teams can communicate on the latest and greatest revision to ensure that the product builds as specified, purchasing orders the right part at the right cost, and engineering has a reliable product definition.

“We can now better manage different revisions and change management resulting in an increase in quality by reducing manual errors. We can implement more process improvements to avoid and remove errors. Although difficult to measure quantitatively, we increased our productivity by approximately 10-15%. Plus, we have saved tens of thousands of dollars by implementing this solution,” said Whetsell.

OpenBOM also has allowed Nexa3D to be more agile in its approach. When they get feedback from the customer, they can apply it and be more proactive. This solution helps Nexa3D bring new products to market and new features while keeping them agile and organized.

Nexa3D was impressed with the value Razorleaf brought to the table. Since they work with a lot of diverse types of customers and scenarios, Razorleaf has a broad perspective of what works and can provide new approaches and strategies to streamline and automate processes.

### About Razorleaf

Founded in 2000, Razorleaf is a global consulting & systems integrator with specialized expertise in PLM. We are focused on helping manufacturing organizations connect products and processes across the digital enterprise to drive more value from the innovation process. Led by a highly skilled and seasoned team of experts across North America, Europe, and India, Razorleaf transforms businesses by offering comprehensive consulting and implementation services focused on managing the digital thread across the product life cycle and supply chain.



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