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Top Five Reasons to integrate 3D Printing into Your Product Development Lifecycle

Alaris™30

Desktop 3D Printing System

Why should you consider using 3D printing technology as part of your product development process?

Objet surveyed its' base of users from various markets including consumer goods, consumer electronics, medical device, education, research, entertainment and others, why they made the investment, and based on their responses crafted these Top Five Reasons to Integrate 3D Printing into Your Product Development Lifecycle.



1. Designers can prototype more iterations without blowing the timeline or budget

3D printing – particularly when done in-house – enables design teams to quickly produce a high-quality, realistic prototype with moving parts, at relatively low cost when compared to other methods such as machining or outsourcing. This means teams can use prototyping on projects where it wasn't feasible in the past due to time or cost considerations.



2. Better collaboration resulting in improved design and manufacturability

The ability to quickly produce real working prototypes that teams can see and touch helps bridge the gap between the virtual CAD design and the final product. Design and manufacturing engineers can use these prototypes as a tool to better communicate how a design looks, feels, and operates allowing for the product design to integrate with manufacturing at an earlier stage in the development lifecycle.



3. Field test with prototypes that resemble the final product providing insight into potential design flaws

More prototyping means more opportunity to evaluate whether or not a part will function as intended. Prototypes allow designers to catch potential flaws before incurring the exponentially higher costs of re-tooling and rework, reducing some of the risk of introducing new products.

4. Improve customer satisfaction

3D printing can help improve satisfaction for both internal and external customers. Designers using 3D printing have the ability to quickly produce realistic prototypes for internal decision makers, as well as external clients. Having the ability to touch a real world concept, combined with testing functionality allows all constituents of the design and manufacturing process to make better product decisions. The bottom line, 3D printing helps organizations get better products to market faster than ever before.



5. Seeing is believing

Design is both an art and a science that starts with imagination. 3D printing helps quickly transform something imagined into something that can be seen and touched. Prototypes are often used to help sell new concepts, so the more realistic the prototype, the better.

Additional considerations

Cost and time savings are the primary drivers for incorporating 3D printing into the product development process. But for some organizations, other factors influence the need for in-house technology.



Organizations oftentimes weigh the need for in-house technology against the efficiencies of outsourcing. A typical maturity curve is to start off with outsourcing, and then bring it "in-house" as the volume of projects grows. Many Objet customers have realized that an in-house solution has significant additional benefits like the ability to protect the confidentiality of their designs. Customers have also found that the 3D printing system can be useful for many different applications some of which were originally unexpected. Having this technology at their fingertips gives them the freedom they need to be more creative and efficient with their designs.

A 3D printer for every need

Whatever the driver, this paper demonstrates a myriad of benefits to integrating 3D printing into your product development process. In recent years, 3D printing technology has matured to the point where there are a number of different types of systems on the market, from entry-level to high end. Chances are a system exists that meets your organization's exact requirements.

Alaris30 3D Printing System from Objet Geometries

Objet Geometries is the innovation leader in 3D printing. Objet develops, manufactures and globally markets ultra-thin-layer, high-resolution 3D printing systems for rapid prototyping and rapid manufacturing. Our wide range of solutions includes the Alaris30, the world's first desktop 3D printing systems, based on our patented PolyJet™ technology. This printer enables designers to create the unique combination of high-quality, finely detailed printed prototypes with a compact office-friendly system. Printing smooth surfaces, complex geometries, small moving elements, fine details, and stand-out text will create the true-to-life parts you need when prototyping your designs.



Alaris30

Affordable Desktop
3D Printing System

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