



LOCAL MOTORS 3D PRINTS THEIR SELF DRIVING SHUTTLE WITH MAKERBOT

Local Motors, a disruptive tech and automotive company that designs and builds vehicles, is daring to uproot and redefine an entire industry. By setting up localized micro-factories that design and manufacture cars directly in the region they serve, the company has achieved a small-batch, on-demand business model. In turn, this allows the company to focus on big ideas while keeping their footprint small.

THE OLLI
SELF-DRIVING
BUS, POWERED
BY IBM'S
WATSON, IS JUST
ONE OF THOSE
BIG IDEAS.

olli



Olli isn't just another autonomous vehicle—it's an entirely new way of thinking about transportation. In order to build disruptive products like the Olli, the Local Motors team depends on specific tools to meet their production and prototyping needs at each step of the process; tools like the MakerBot Replicator+, a cloud-enabled desktop 3D printer.

“We really don't have the time to wait for the parts we need,” explains Alex Fiechter, Local Motors' Director of Product Development. “We need to set the making of them in motion and forget about them while we work on other things. The Replicator+ has been the ideal example of this 'set it and forget it' experience for creating 3D printed parts on both the production and the prototyping side.”



50
PERCENT
REDUCED
COSTS

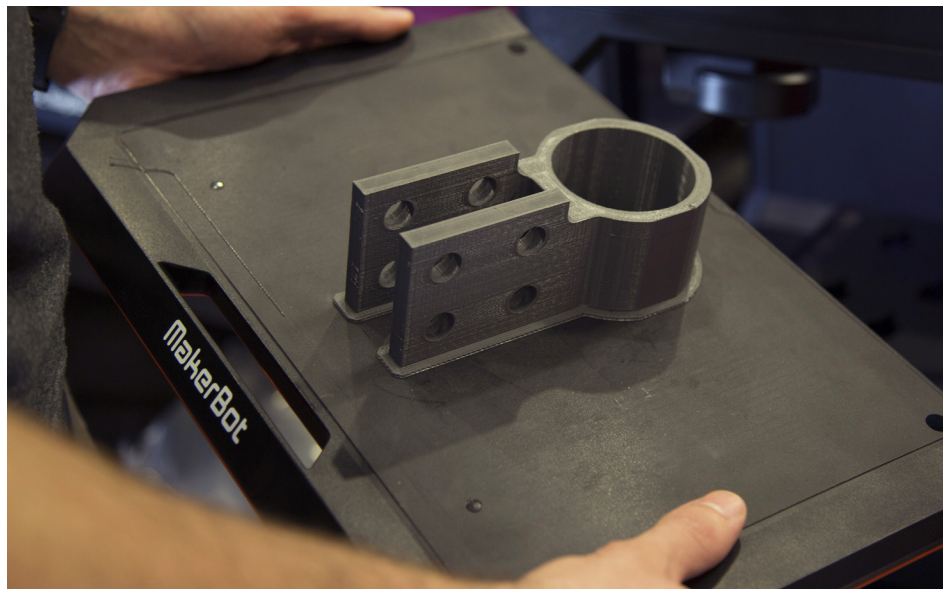
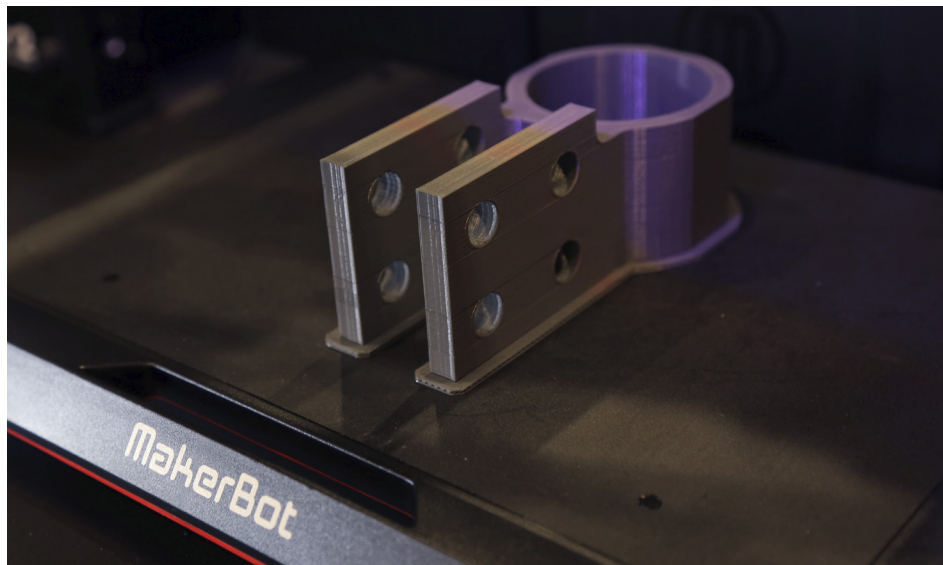
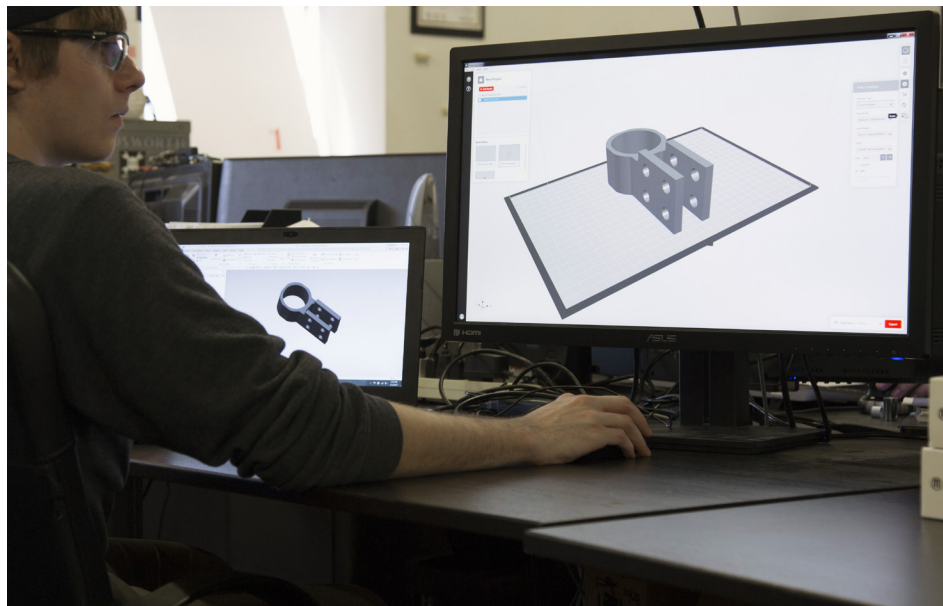
90
PERCENT
TIME
REDUCTION

With streamlined 3D printing, Local Motors design engineers are able to reduce tooling costs by 50% and reduce overall production time by a staggering 90%, all while keeping part production in-house. As a result, designers and engineers can focus on what matters most: bringing big ideas to fruition fast and reliably at the lowest cost for maximum ROI.

“There’s a huge difference between using an outside part manufacturer and having that capability in-house,” says Design Engineer Frederik Tjonneland. “The convenience of being able to print a part and have it in your hand in a couple of hours is not only cheaper, but also reduces lead times and allows us to iterate that much more quickly.”

But the seamless journey of going from idea to part-in-hand starts well before a design file is sent to a printer; it begins with the intuitive print preparation software, MakerBot Print.

With a streamlined and powerful interface, MakerBot Print features a long list of professional-friendly capabilities under the hood. Among others include native CAD file importing, automatic build plate arrangement, and the ability to save multiple build plates and assemblies as a single project -- enabling critical collaboration and iteration.





Regardless of which parts the Local Motors team are printing at any given time, the real test comes down to how well those parts function for tough production and prototyping needs. For this, the team turns to MakerBot Tough PLA.

With Tough PLA, engineers are able to create durable, high-impact strength prototypes and fixtures on-demand, for each step of the process. These tough parts feature similar tensile, impact and flexural strength characteristics as ABS plastic and are ideal for functional printing applications.



“We like Tough PLA because we can thread directly into the part and mount other components to it,” explains Mechanical Engineer, Tony Rivera. “In the time it would have taken to order a metal part and have it shipped here, we already finished the entire project.”

Local Motors is set to revolutionize the way we get around with smart, safe, and sustainable mobility solutions like the Olli. But to consistently arrive at these disruptive solutions fast and reliably, the team depends on tools and processes that empower their existing workflows without redefining them.



The key to unlocking that empowerment is the high design flexibility made possible by MakerBot 3D printing.

“Fast and iterative desktop 3D printing is absolutely critical at Local Motors... it’s integral towards what we do” adds Tjonneland. “MakerBot will always have a place with us.”

LOCAL MOTORS
OPERATES FIVE
MANUFACTURING
LOCATIONS
IN PHOENIX,
KNOXVILLE, LAS
VEGAS, NATIONAL
HARBOR, AND
BERLIN.

