

## FOOTWEAR TECHNOLOGY: ADIDAS PARLEY

With the release of a running shoe that features recycled plastic from the ocean and is being made at one of its Speedfactory advanced manufacturing facilities, adidas has brought together two of its most interesting concepts from recent years.

# The best of both worlds

**P**rotecting the world's oceans from plastic waste is a cause that adidas believes is important to it. That said, as with any business, its primary goal is to generate revenue and so it is only natural that the majority of its resources are spent trying to achieve this. Fortunately, the sportswear giant seems to have found a way of accomplishing both goals.

When the company first presented the idea for its Speedfactory in July 2014, it suggested this project would offer a glimpse into how products would be manufactured in the future. Now, four years into what was initially a three-year project, the company operates two Speedfactories,

advanced production facilities where footwear products are assembled by automated robotic technology. They are located in Ansbach, Germany and in Atlanta, US.

Although the output of these facilities has so far been limited to selected shoe models, the company believes their introduction may herald a move away from the current practice of making products at large manufacturing hubs in Asia before shipping them to all corners of the globe. Instead, it could be the start of an era when smaller facilities are responsible for manufacturing purely for their local markets.

The name of the first shoe off the production line at the Ansbach Speedfactory, the Futurecraft

*The Made For Los Angeles (AM4LA) shoe, featuring yarns derived from recovered plastic from the oceans, will be made at its Speedfactory in Atlanta, US.*

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MFG (Made for Germany), was a nod towards this vision of the future. Featuring several established innovations, such as a Boost midsole and a Primeknit upper, this sneaker, released in 2016, was sold exclusively in the German market. At the time, adidas described it as “a defining moment for the industry”.

### Straight to the street

The company continued this theme with the launch in October last year of the adidas Made For (AM4) footwear series, a project which has involved manufacturing running shoes specifically for the needs of runners in six key cities around the world. Each one has been developed after close consultation with a group of consumers in the city, allowing the brand to gain insight into the demands of runners in each location.

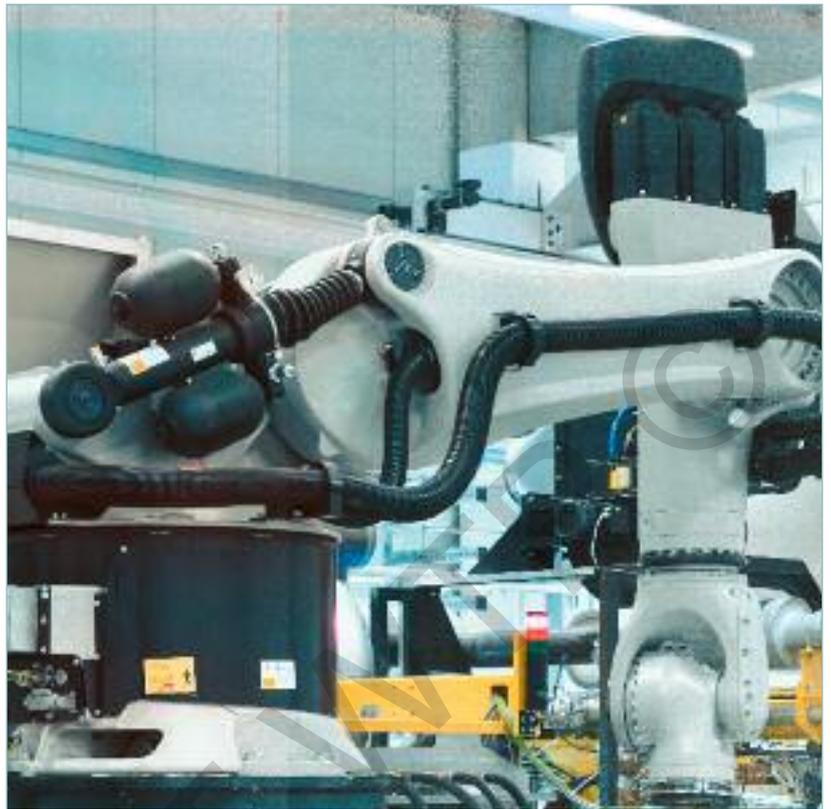
The first of these was the Made for London (AM4LDN) shoe, developed to cater for the city’s commuter runners. It features Boost energy return technology, a floating torsion bar for increased stability and enhanced grip outsoles. This is designed to help the shoes cope with city streets and variable weather conditions. Hot on the heels of that model came the adidas Made for Paris (AM4PAR), targeted at female runners. It incorporates part reflective laces to aid visibility, a feature added in response to feedback from runners that they prefer running at dusk. Both models are made at the Ansbach Speedfactory.

But it is not just the German facility that is involved in this project. The company’s Atlanta Speedfactory was responsible for manufacturing the AM4NYC, designed for runners in New York City. In fact, it was the first shoe to be produced there. Adidas employed motion capture technology to study the running style of runners from the city, who also offered details of some of the quirks of running in the ‘Big Apple’. Among the features this led to were reflective elements to make it safer to run at night. They were designed with agility and stability in mind, helping the wearer efficiently navigate around corners and change direction at speed.

### Plastic partnership

With the Made for Tokyo (AMTKY) and the Made for Shanghai (AM4SH) still to come in the series, it is the shoe made for Los Angeles which has sparked the most interest. The AM4LA, also made in Atlanta, incorporates yarns derived from recovered ocean plastic.

Adidas has been developing products using recycled ocean waste since 2015 as part of a relationship with conservation organisation Parley for the Oceans. This group was founded in 2012 to raise awareness about the dangers posed both to animals and humans by plastic



waste in the oceans. Parley’s mission is to do more than simply make people aware of this problem; it also wants to present solutions, an objective that led to its work with adidas.

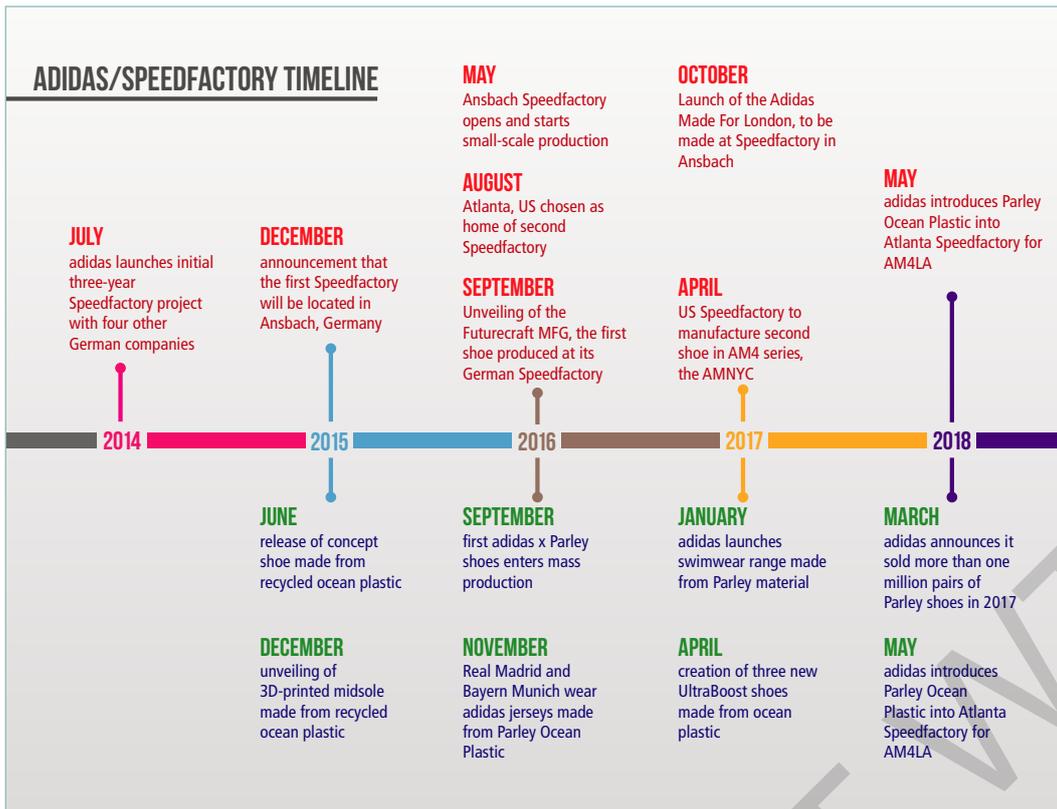
The organisation collects marine debris through a global network of clean-up operations. The rubbish it recovers, which includes discarded fishing nets, is then processed into a usable material. Over the past three years, adidas has used this material in a range of products. The first, a concept shoe with a Parley Ocean Plastic upper, was released in June 2015. It unveiled a 3D-printed midsole made from recycled ocean plastic a few months later. Although the company admitted at the time that it was not suitable for use due to a lack of cushioning, it insisted it was an indication of things to come.

It was not until the end of 2016 that the first adidas x Parley shoe entered mass production. Its range of products featuring recovered ocean plastic has since been extended to football jerseys, swimwear and various other items of apparel. In terms of footwear, it is now used in several versions of the UltraBoost range, including the UltraBoost X, a product designed specifically for women. The brand has also developed a version of its Primeknit upper made from 85% recycled ocean plastic.

The AM4LA has a 100% recycled upper, including yarns derived from plastic waste found in the ocean. Each pair of AM4LA prevents the equivalent of 11 plastic bottles from entering the ocean, according to the company. Its other features include Boost midsole cushioning,

*The company’s two Speedfactories are equipped with advanced robotic technology capable of assembling shoes with minimal human input*

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engineered ventilation zones and a digitally-bonded sole and upper. At the Speedfactory in Atlanta, tension patches are digitally mapped onto the upper to deliver a more precise fit. This allows for comfort and stability while using less material.

Ben Herath, vice president of design for adidas running, says: "By leveraging Speedfactory's digital production capabilities, integrating Parley Ocean Plastic, and pushing our designers' creative boundaries, we have successfully created a high performance running shoe while simultaneously reducing waste and unnecessary by-products."

#### Ambitious plans

In March, adidas chief executive Kasper Rorsted told US media the company had sold one million pairs of shoes made from recovered ocean plastic in 2017, surpassing the target it had set itself the previous year. The brand has also said it wants to create one million shoes a year from each Speedfactory by 2020. It is aiming to increase the share of products made under what it calls "speed programmes" to at least 50%. In 2016, the last year for which the company offered specific details, the figure had reached 15%.

By bringing recycled ocean plastic into its Speedfactory, adidas has opened up a new avenue for both projects. "The AM4LA shoe demonstrates the potential and flexibility of the adidas Speedfactory to evolve and integrate new materials and technology that deliver progress towards solutions to current and new

challenges," Mr Herath says.

The Speedfactory project will certainly play an important role in the way the company manufactures products going forward. What it must now determine is how this fits in with its desire to help keep plastic out of the oceans. By bringing together its work with Parley and its new advanced production facilities, it has given itself the opportunity to help protect the health of the planet as well as that of its business.



Features of the AM4LA include Boost midsole cushioning and engineered ventilation zones.

