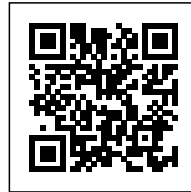




PRINT YOUR CITY: PRINTING THE PUBLIC SPACE WITH WASTE

Posted on November 28, 2017 by editorship



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[Print Your City!](#) is an initiative by The New Raw that explores the concept of applying 3D printing to plastic waste, as a way to re-design urban space. As the name suggests, Print your City! is a call for action, rallying citizens to recycle household plastic waste in order to transform it into raw material for public furniture via a 3D printing process.



The first outcome of the project, which creates a circular stream within the city, generating more engaged citizens and less CO₂ emissions, is the XXX bench, a furniture piece designed for the Municipality of Amsterdam.

ISSN : 2575-5374

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The throwaway lifestyle of contemporary cities has exponentially increased the production of plastic waste. In Amsterdam alone, residents generate an average of 23 kg of plastic waste per person annually (as recorded in 2015 by the Municipality of Amsterdam's report *Afvalketen in Beeld - Grondstoffen uit Amsterdam*). That's enough waste to 3D print one bench for every two Amsterdammers, per year.



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Print Your City! processes recycled plastic pellets from municipal plastic waste or flakes from ground up recycled products and 3D prints street furniture and equipment. Weighing 50 kg and measuring 150 cm long by 80 cm wide, the XXX bench is made from recycled plastic and is 100% recyclable. The piece was produced in collaboration with Aectual on a large-scale pellet extrusion 3D printer located close to the city centre. This resulted in a very short material circle, which could constantly be fed with additional material from the urban plastic waste streams, thereby achieving long-term adaptation to the city's evolving needs.

The XXX bench seats two to four people and takes the form of a double-sided rocking chair, designed to act as a statement on working together to close the cycle for plastic. Users have to find equilibrium together or use their energy to rock each other. XXX bench can be easily customized in terms of shape or function, and it can integrate messages or logos. In this way, it invites citizens not only to participate in the material collection but also to contribute to the design and customization process to better meet the needs of a neighbourhood.

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Cities provide fertile ground for large and long-lasting applications of recycled plastic: following on from XXX, the project is focusing on the development of a broader range of urban furniture and public space applications such as bus stops, recycling bins, playgrounds and anything else that city residents may need.

Print Your City! is an ongoing research project initiated by The New Raw. It was kick-started in 2016 in collaboration with Aectual as part of the Circular City Program developed by the AMS Institute, and it is supported by TU Delft and AEB Amsterdam.

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