

## 3D PRINTER MADE IN TOGO USING DISCARDED AND RECYCLED E-WASTE

In the [WoeLab Laboratory](#) of Lomé (Togo) the expert in electronic Kodjo Afate Gnikou has designed and built in 2013 the first 3D printer prototype, using parts from discarded e-waste.

In particular the W.AFATE 3D printer is made up with parts of old computers, 2D printers and old scanners collected from the growing e-waste dumps around Lomé. The author defined his invention as *the first ecological and democratic 3D African Printer*.

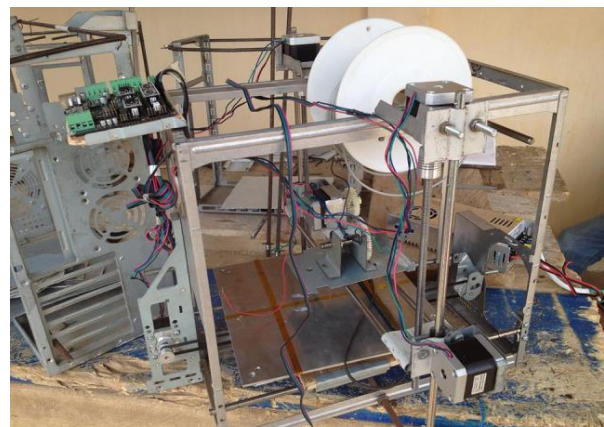
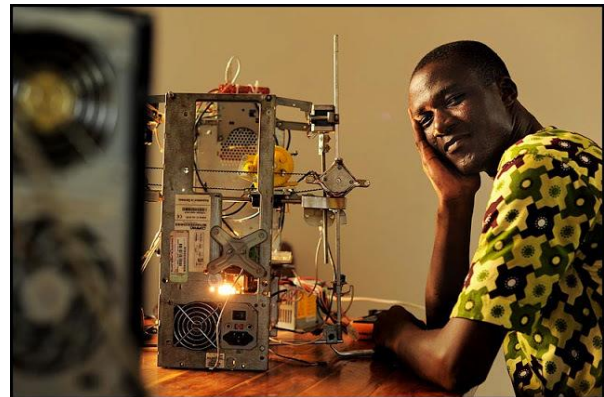
In addition to being a sophisticated tool produced and sold at low cost, the 3D printer can help in resolving an important environmental problem. The WoeLab estimates that every year 515 tonnes of e-waste (including 600.000 computers) from the industrialized countries are trashed in the dumps of African territories. E-waste are then often burned in open air causing huge health and environmental problems.

Created in 2012 by the architect of Togo Sénamé Agboginou within the framework of the [Hub Cités Africaines](#) initiative, the WoeLab Laboratory is focused on locally sourcing and creating sustainable technology to make it available to local actors and to help promote urban renewal within the country.

In particular, the WoeLab Laboratory collects electronic wasted components from dumps and provides assistance to a variety of Lomé stakeholders interested in building different prototypes of equipment for agriculture, such as automatic irrigation systems, and for other production sectors or services. The WoeLab, which defines itself as a *Street Laboratory*, is an incubator of innovative products that take advantage of local resources in a circular economy approach.

The WoeLab Laboratory works with the following objectives:

- valorize electronic waste in a perspective of circular economy, helping to clean the e-waste deposits of the territory;
- make technology available to local actors, particularly to young people, so that they can be actors of a more virtuous industrial development;





- enhance the reuse of discarded electronic equipment, preventing it from ending up in garbage dumps and generating an economic value for final users such as schools, Internet cafes and other social services.

In 2013 the W.AFATE 3D Printer won the prestigious NASA Award for space applications in Paris (France) and other international recognitions. The success of this innovation and its great potential is demonstrated by the wide dissemination of information by the international press.

Currently ten models of 3D printers are being used in schools and Internet cafe in Lomé.

Meanwhile WoeLab has launched a [crowd funding campaign](#) and continues to actively seek the resources needed to launch a large-scale production. The perspective is put in commerce the W.AFATE 3D Printer at an affordable cost of \$ 100, favoring its social use.

**To know more**

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