

# TRASH FOR CASH?

## SMART INITIATIVE AIMS TO REVOLUTIONIZE RECYCLING IN KUWAIT

By Athoob Al-Shuaibi

**R**ecycling and waste management are a global problem. The biggest evidence of this is the content of the garbage we throw every night in the bins outdoors, which contains valuable recyclable materials mixed with food waste.

In Kuwait, the garbage bags end up in dumpsters managed by the municipality, where cleaners hand-sort and sell the recyclable items to recycling companies. With the closure of most landfills in Kuwait and the prevention of expansion of existing ones, this calls for the country to invest in the waste recycling industry in a serious manner, which will result in economic and environmental benefits.

With this in mind, a Kuwaiti woman saw an opportunity to invest in this field, taking advantage of her experience of more than 10 years in the field of computer engineering. She invented a smart bin that is connected to the Internet.

Asmaa Al-Ateeq's smart bin is an electronic device that accepts three types of recyclable materials - plastic, glass and metal - that is automatically sorted inside the container. "Based on the weight value of the total waste, we compensate the user by bank transfer or cash. The user must first download an application on his mobile phone and connect via Bluetooth with

the smart bin. After registering their personal data and civil ID number, the type and value of the waste, their data and activity will be saved in their personal history. The bin on the other hand will be connected to an online data network that will send information and notify us if it is time to empty it," she told Kuwait Times.

### How does it work?

The answer is smart sensors. With the help of a company, Ateeq developed electronic sensors that can identify materials to be recycled - plastic, glass and metal. In this way, the machine will instantly sort the items and store each material separately.

"One of the features of the smart bin is that it is locked - it can only be opened electronically by an authorized individual to prevent tampering," she explained. "When I first submitted the idea, some people told me that it's going to be difficult to create this type of sensor and make it work as intended. But it turned out that we can achieve this, and we are going forward to develop the prototype in order to reach the desired efficiency and the final commercial design of the bin."

In 2014, the smart bin was just an idea. It crystallized the following year, and it took 16 months to build the first prototype. It was first tested at the Internet Conference of



Asmaa Al-Ateeq

