At the village level, there is still a lot of organic waste, namely in the form of cow dung, food waste and garden waste, as well as land for managing waste is also still wide. Morover, kitchen waste and organic waste can be changed into biogas which can be converted into electricity or for kitchen needs. Regulation of Minister of Energy and Mineral Resources Number 27 in 2014 supports biogas development and will purchase electricity from biogas conversion. The potential of biogas from organic waste per 1000 people is 7619.8 litres of biogas, meaning that the energy contained is very abundant and its production can still be increased if it is processed with a modern digester system. Currently, there are many types of buried biogas design in the community, namely biogas that is buried in the ground. This design makes it difficult to maintain and check for leaks in the digester system.

This research produces a tool in the form of a portable digester or another name is GenBIoT 2.0 (IoT-based Biogas Generator) which can be used by the public to produce biogas that can be used by home industries or factories in general. By using a research method that is almost similar to the System Development Life Cycle (SDLC), this tool is built with several stages starting from planning analysis, design, testing and implementation. This tool can be used as an alternative as a cheap and easy source of energy.

The use of a water ratio of only 10% makes the fermentation time too long. Although the biogas content is high in this ratio, it is not effective in terms of energy utilization time. Organic waste will pile up later if you keep using such a comparison. This year we will use the ratio 3:2:5 and 4:1:5. By mixing organic waste, cow dung and water, GenBIoT can produce VGM (Methane Gas Volume up to 120 Biogas (L) with a composition of 16 Kg Cow dung, 4 Kg Organic Waste and 20 litres of water means that 120 L is enough to meet the needs community by utilizing existing waste in addition to waste pollution will decrease