Piloting the Smart Brooder System for Automation of Temperature Control in Brooding Day Old Chicks:

2SCALE recently rolled out the installation of Smart Brooder at Homerange Poultry Kenya. This move is in line with the 2SCALE goal that aims to ensure the adoption of eco-efficient production practices for target commodities and in this case, the brooding process for Homerange poultry.

Brooding involves supplying chicks with supplemental heat and humidity. During the first weeks of a chick's life, heat is more important than food. Ideally, a chick may seem fully grown at the time of hatching. However, it is important to note that some of its features like the thermoregulatory, gastro-intestinal and immune system still need further development for the chick to be fully mature.

How the Smart Brooder works
The smart brooder is an environmental control device that ensures the conditions in the brooding space are kept within optimal levels. The device is composed of 2-4 temperature sensors and 1 humidity sensor. These sensors take readings throughout the brooding space and relay the data to a chip which is programmed to determine the age of the chicks and regulates the conditions in the brooding space accordingly. This is very vital since as chicks age, their feathers as well as environmental requirements change.

The smart brooder is the brainchild of Arinifu, one of the entrants of the 2SCALE digital innovation challenge. George Chege, the Technical and Design lead who was in charge of the installation, said that the smart brooder innovation services Arinifu's vision to enhance poultry farmer output by providing access to new, affordable and efficient technologies. He further added that at Arinifu they work with the farmers to understand the challenges they face then tap into technology for solutions.

Ian Mutwiri, the Business champion and CEO of Homerange Poultry Kenya reiterated this by saying that the smart brooder is going to address one of the pressing pain points of poultry farmers since most of the flock losses occur in the brooding stage. He further added, "The best part about it is that once the system is running, even at night you are sorted. It is a fantastic system and we look forward to adopting it as a technology."

Digital innovation
Temperature is needed for survival of the chicks since they do not have the mechanism to maintain their internal temperature for their first few weeks. Humidity is important since it determines the rate of growth of bacteria within the coop. The device then uses Global System for Mobile Communications (GSM) to convey data to the farmer. In case of any drastic changes, the farmer is alerted via SMS. This also doubles as an inclusive method since the farmer does not necessarily need a smartphone in order to benefit from the smart brooder technology. The smart brooder installation is on pilot and its success at Homerange Poultry Kenya will see it being adopted among other poultry farmers across Kenya under the 2SCALE program.

For further reading please visit https://www.2scale.org/en/updates/2scale-pilots-smart-brooder-at-homerange-poultry-kenya-en