# Early Wildfire Detection using IoT

**01**

**02** Method
Litterature study, Proof of Concept, field-tests

**03** Results
Capable sensors were found through research and tested with promising results in the field, a communication with central servers through LTE-M was established. A LWM2M-object was also created and sent to the central servers containing dummy data.

**04**

**05** Future Work
Considering the results from the field test, further testing of the SPS30-sensor should be carried out to test the sensor to its limits and see at what ranges it can pick up a change in the particle mass concentration suspended in air.

**06**

## Problems
• What sensors are suitable for detection of fire?
• In the case of a fire, is it possible to pinpoint the geographical location?
• What is the most suitable way to harvest energy in a forest environment?
• How do you communicate with central servers from an IoT-device in a forest environment?

## Solution
An IoT device based upon brand new technology. Combined with a flagship sensor from Sensirion

## Discussion
Even though it is not possible to test every kind of sensor and since there is specific requirements for our applications, a very good candidate was found, the SPS-30 particle sensor from Sensirion. This sensor proved to be able to detect a fire swiftly after the fire being started. Therefor it is possible to say that particle detection using the SPS-30 is a reliable way to detect a fire.

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