SMART DAMAGE/LEAKAGE DETECTION SYSTEM

Oil and gas pipelines are critical but essential structures. A damage/leakage in such pipeline  
may lead to accidents. Let us integrate technology for such issues through this problem.  
PROBLEM DESCRIPTION

• A smart city has communal shelters and common LPG pipeline architectures  
• A damage/leakage, if unnoticed will leads to major accidents  
• Sensing the leakage in advance may help for predictive efforts to avoid major accidents

REQUIREMENTS SPECIFICATION  
• Design a model solution which can monitor the pipeline functionalities for each 0.5km  
length  
• Collect the status of, just below safe threshold and at such level create an alert in mobile  
app  
• Trigger and control the gas flow remotely from the mobile app

SOLUTION AND OUTCOMES  
1. A complete system overview of the above solution with the highlights of  
Components and technologies that can be used  
2. Mobile SMS app for alert and display the issue along with time and location of  
leakage  
3. ‘Shut-off’ button in mobile app to stop gas flow in the pipes  
OR  
2. Web app display for damage/leakage location  
3. Web based trigger to stop the gas flow