

To conduct cleaning of sump pits at Vehicular Underpasses (VUP) without having workers to enter confined space

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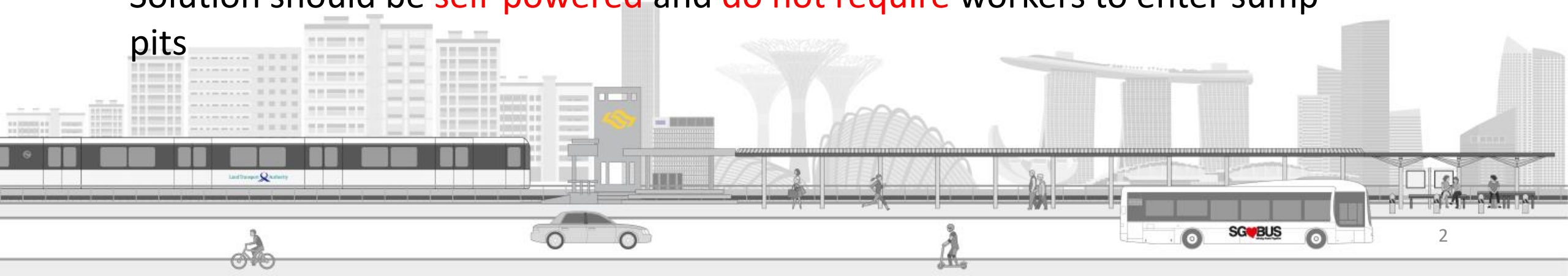


To conduct cleaning of sump pits at VUP without having workers to enter confined space

Background: Cleaning of sump pit currently performed by workers trained in working in confined spaces and at height. It is labour-intensive, time-consuming and carries certain risks. Typically, 3 men may take up to 3 hours to clean a typical sump pit.

Requirements:

- Reduce manpower required to at most **2 workers**
- Reduce time required for removing debris to **about 1 hour**
- Solution should be **self-powered** and **do not require** workers to enter sump pits



Steps to remove Debris



1. Prepare the sump pit for confined space works, including installing exhaust fans etc.

2. Pump out excess water from Sump Pit.

3. Issue permit to work in confined space, including toolbox talks etc.



4. Descend into the sump pit

5. Place debris into bags and hoist up to ground level

*If sudden downpour, water will gush in and workers life will be at risk.



Additional Information

Working prototype – Q3 2020

Ability to remove debris from sump pit without workers' presence in the pit.

Pilot deployment – Q1 2021

Ability to clean sump pit within 1 hour

Ability to take before/after photos of the cleaning



Evaluation Criterion

Weightage (%)

1. Technical feasibility of solution

30

2. Innovation

20

3. Economic Feasibility and Commercialization Potential (Include development cost and final product cost)

30

4. Capacity and Expertise to Execute Project

20

Total Score

100



Additional Photos



Thank You

