

# ADAPTIVE BUILD ENVELOP ASSEMBLY FOR POWDER-BED 3D PRINTING SYSTEMS

## Technology Overview

As 3D printing systems undergo technological advancements, their appeal to mainstream manufacturing industries results in production of large build volume 3D printers by their manufacturers. This reflects upon the initial volume of the powder materials required to carry out a print job and thus affecting the total cost incurred to the user, especially for new material development for 3D printing processes for novel – industry relevant, metals and alloys. This technology focuses on design and utilization of an adaptive build envelop assembly for powder-bed 3D printing systems in order to reduce powder consumption for a particular build height, which proves beneficial when the actual usage does not require coverage of the entire build volume for preliminary sample deposition.

## Potential applications

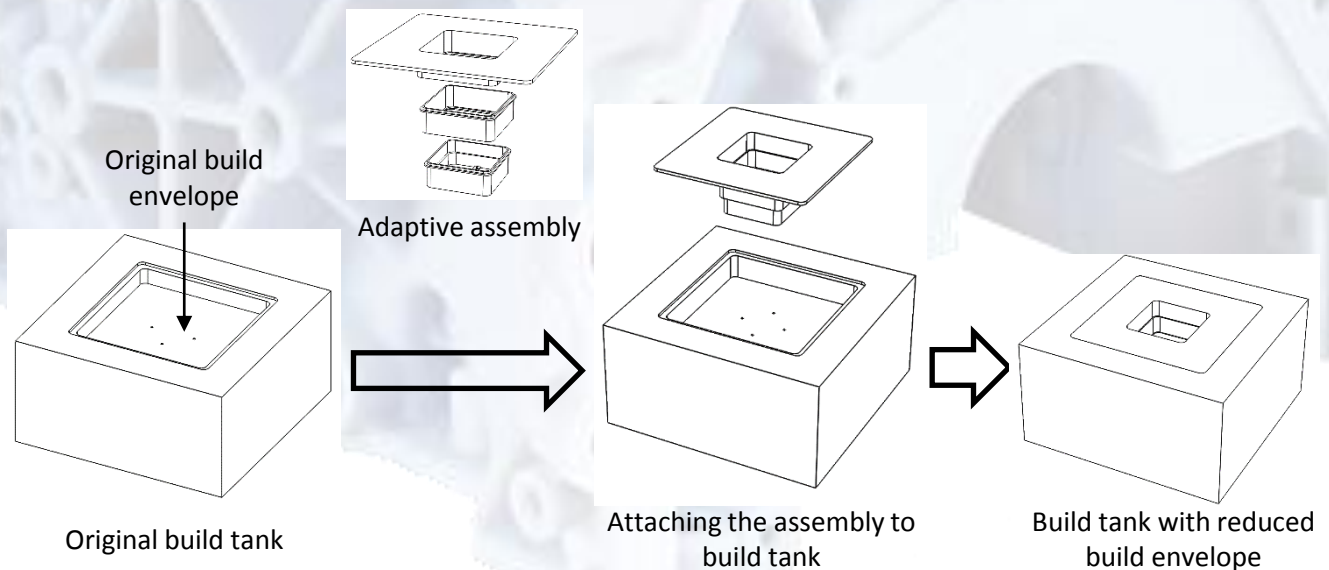
This assembly has been designed to fit in powder-bed 3D printing system without causing any permanent damage to the original build envelop. Simple variations in the design can be carried out to cater the needs of researchers having access to any powder-bed systems.

## Customer Benefits

- Significant reduction in powder quantity required for print
- No damage to the original build envelop
- Cost-effective and customizable
- Universal concept to any powder-bed 3D printing systems

## Features and specifications

It is an adaptive, non-destructive attachment to powder-bed 3D printing systems - the original build volume can be fully recovered when needed and the telescopic design enables a flexible extension of build height capacity by adding more levels of boundary walls.



If you are interested in this technology, please contact the BD Manager: [edmund.lim@ntu.edu.sg](mailto:edmund.lim@ntu.edu.sg)