



# Envision the Future of the Lift Truck

Autodesk Design Challenge 2022

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Toyota / Autodesk design

# Environment In The Warehouse

The aisle size for a small warehouse is about **8–10 feet**. The forklift is **hard to turn** and may accidentally **injure** people. Also, the **weight** a forklift can hold and the **height** it can lift is limited.



**Concept**

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# AGILITY

In order to let the forklift works better in a narrow space, I redesign the **shape** of the truck and the **behavior** of forks.

Screens — safety

Platform — greater loading

Wheels — make a turn

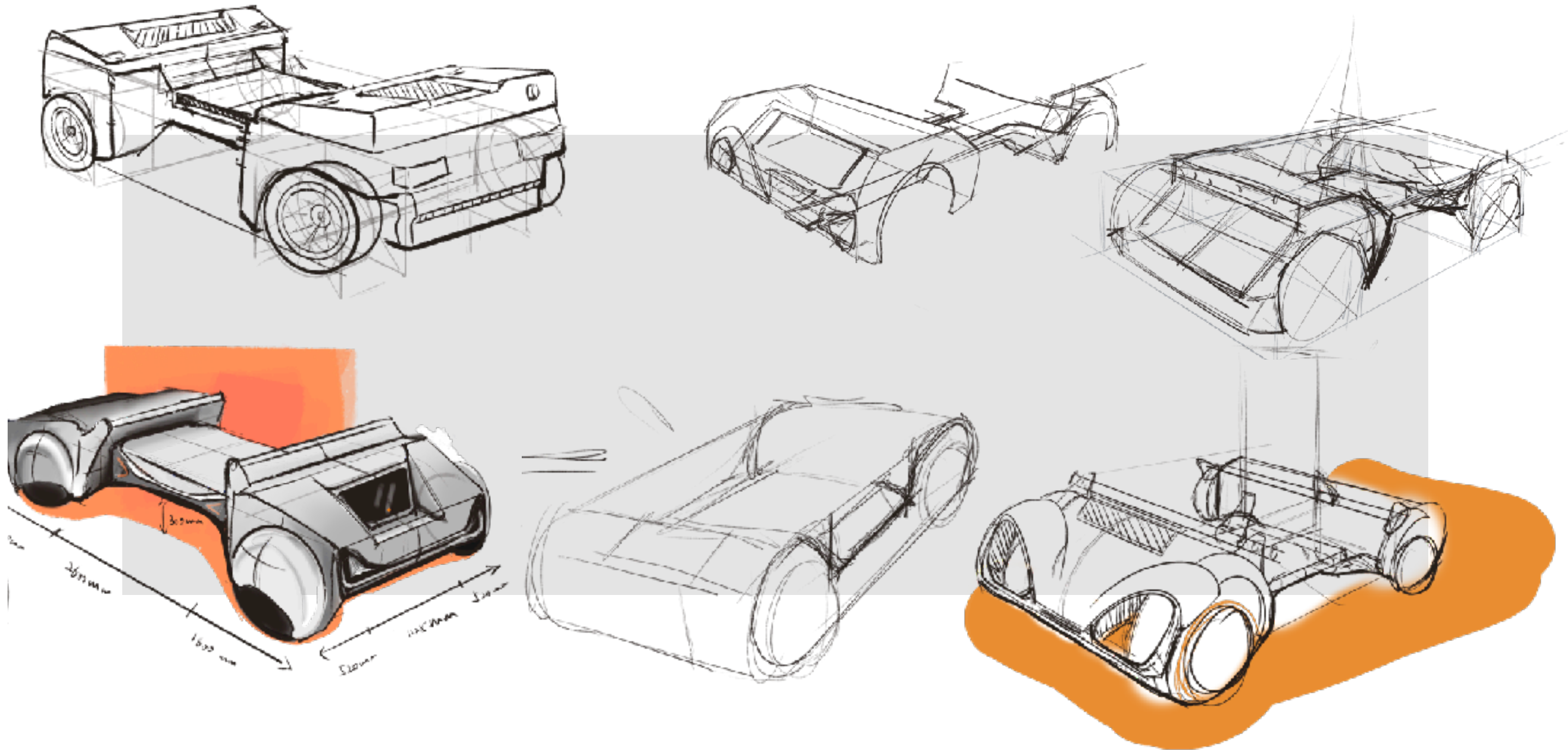
Forks — working efficiency



Concept

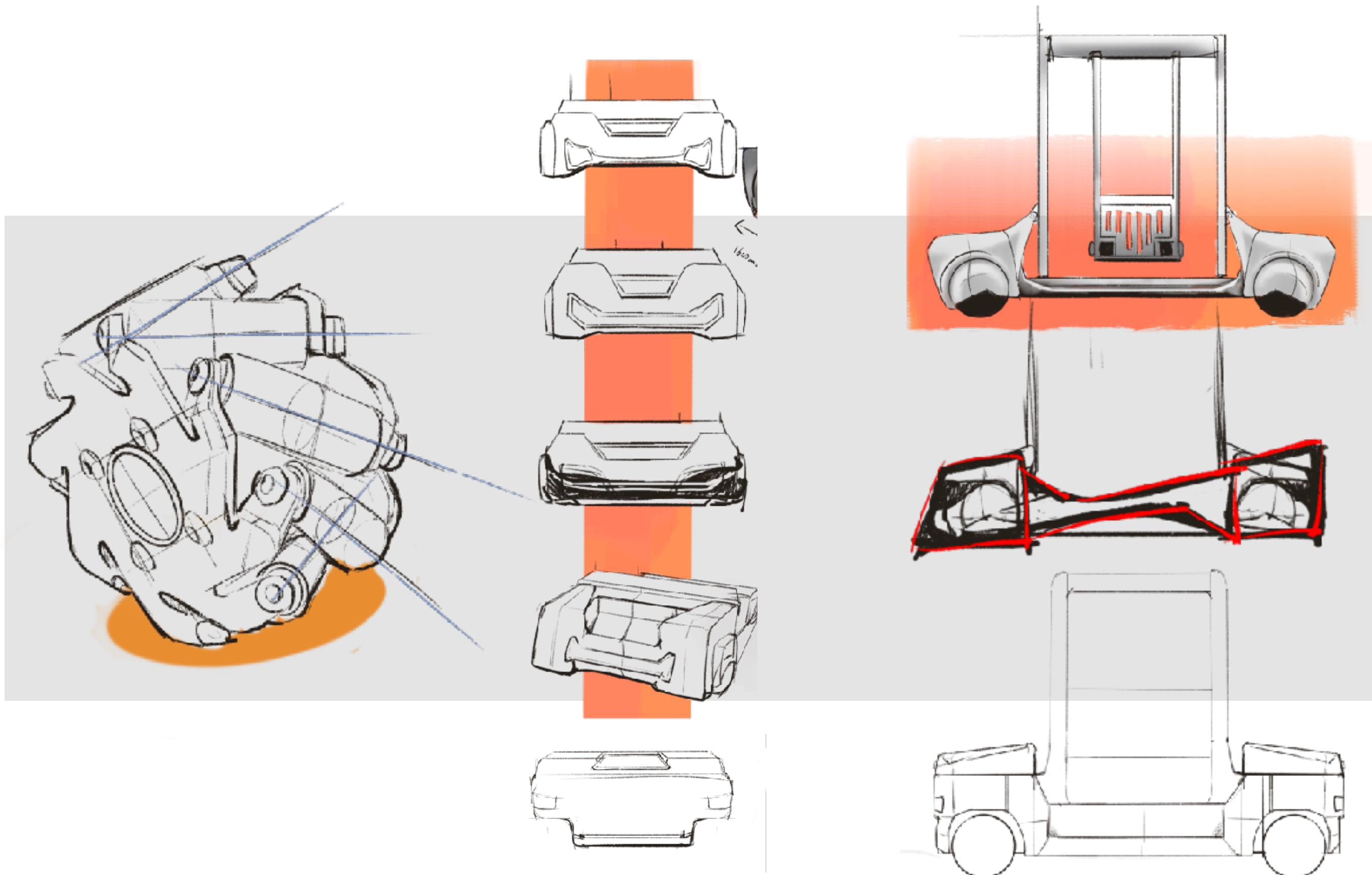
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**Ideation Sketch-form exploration**

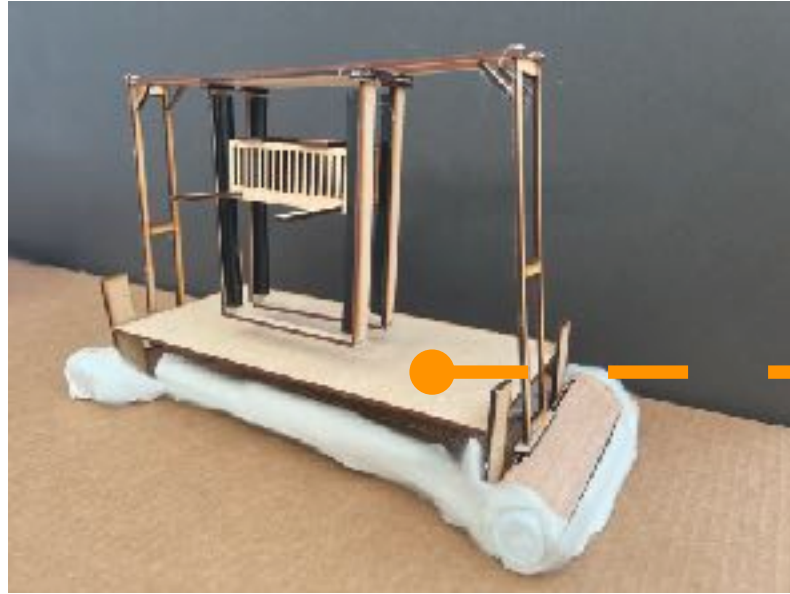
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**Ideation Sketch-form exploration**  
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**Ideation Sketch-final view**  
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## Development

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# DOUBLE



## Mast supporter

C: silver  
M: stainless steel  
F: smooth

## Red Light Sign

C: red  
M: LED  
F: bright

## Trail

C: orange  
M: non-spray plastic&stainless steel  
F: smooth

## Forks

C: black  
M: aluminum alloy  
F: smooth

## HMI Screen

C: black  
M:SLCD  
F: smooth

## Platform

C: black  
M: antislip  
F: texture

## Sponge

C: black&white  
M: sponge  
F: soft

**DOUBLE**





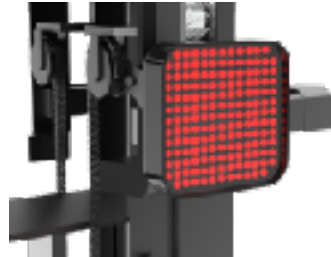
Antislip Platform



Rail for Forks



Mecanum Wheel



Working Sign



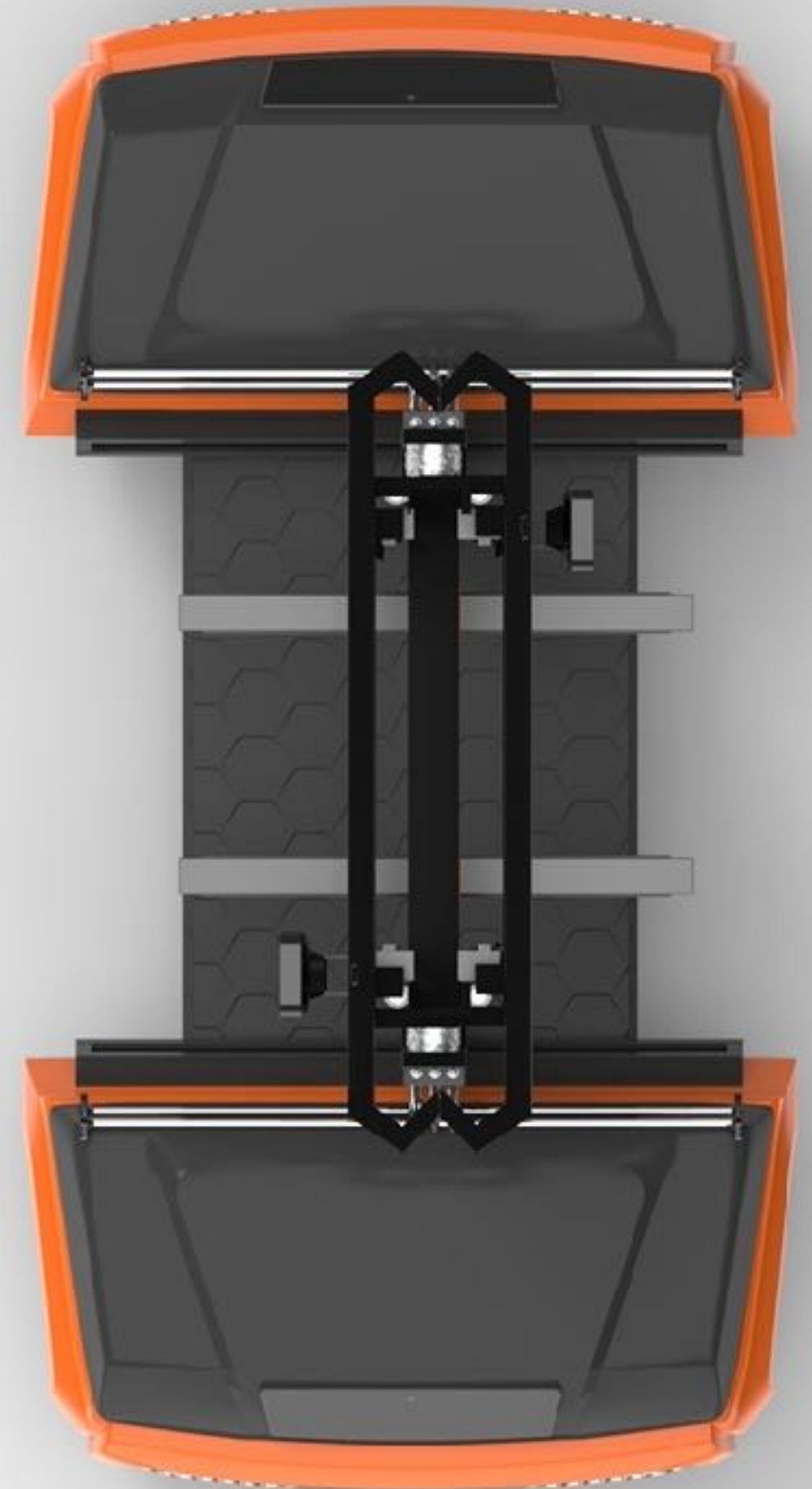
Body Curves

**HMI Screen**  
Self-management

**Sponge**  
Prevent people from hit by the truck



**Final Renderings-details**  
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**Top View**  
Leaving the space on each side to let forks goes down and pick up/put down the cargo.





**Scenario**  
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# Thank You

