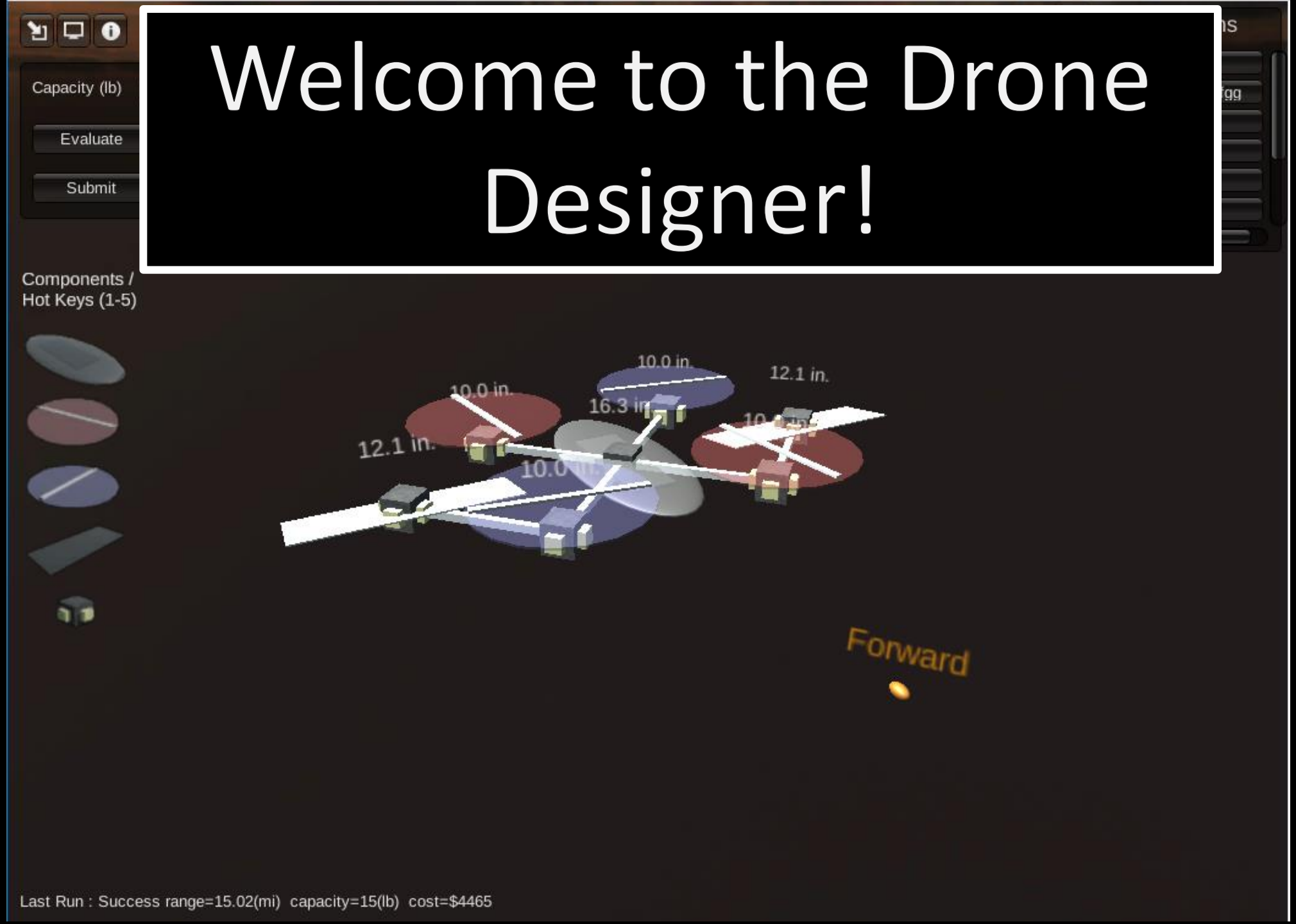
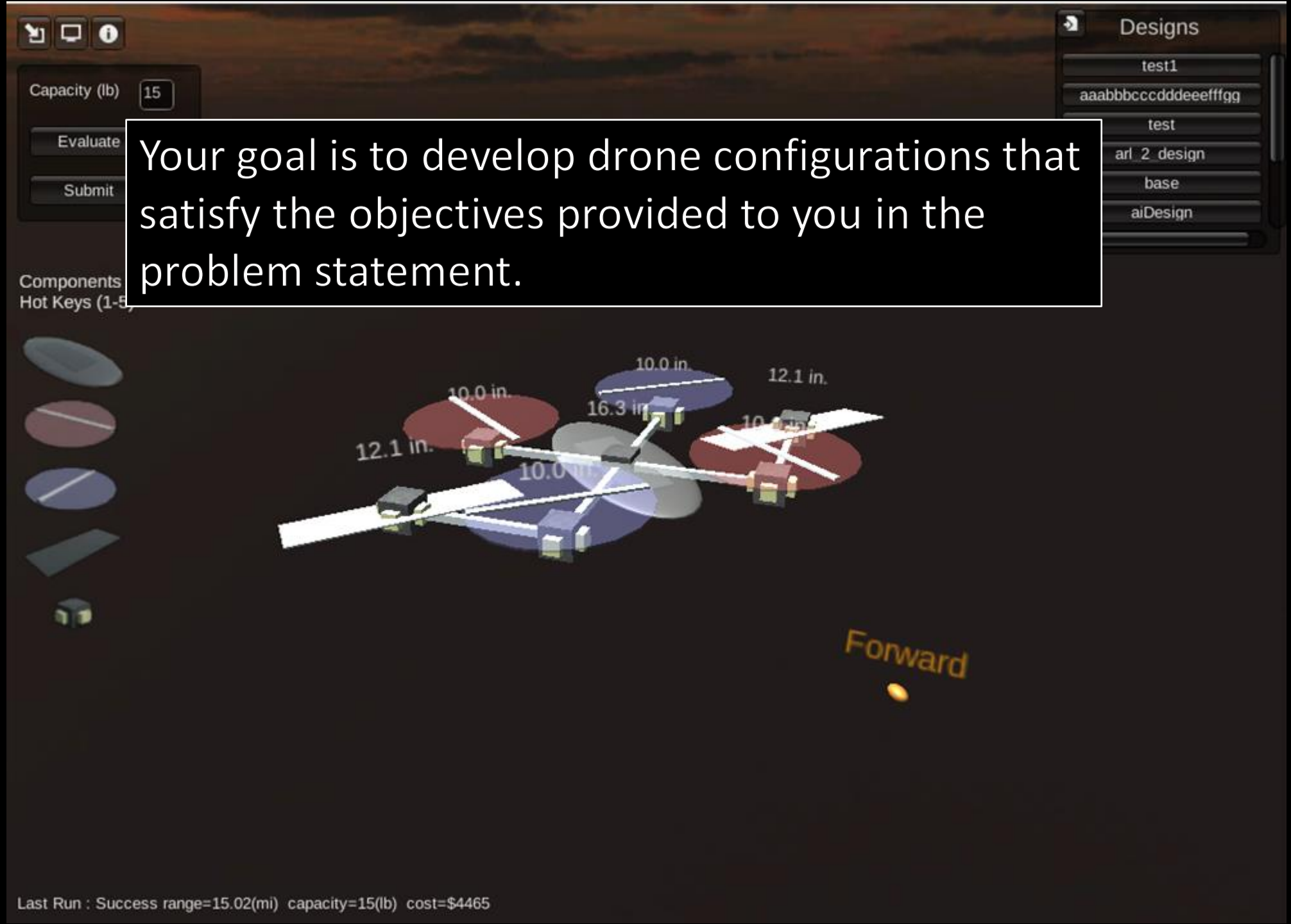
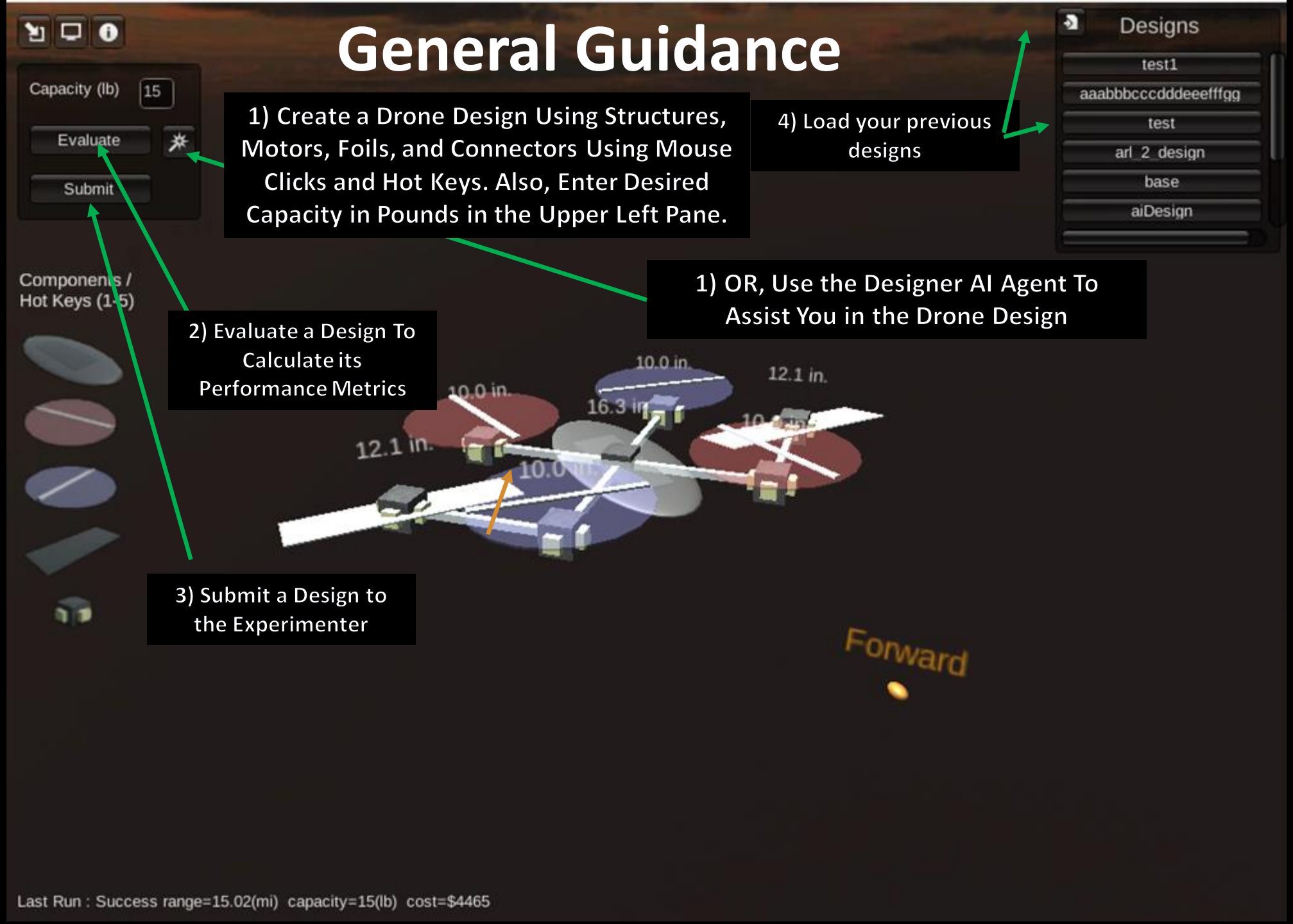
Welcome to the Drone Designer!




Designs
test1
aaabbbcccdddeeefffgg
test
arl_2_design
base
aiDesign
Capacity (lb)
15
Evaluate
Submit
Components
Hot Keys (1-5)
Your goal is to develop drone configurations that satisfy the objectives provided to you in the problem statement.
10.0 in.
12.1 in.
16.3 in.
Forward
Last Run : Success range=15.02(mi) capacity=15(lb) cost=$4465

General Guidance



Components

Hotkeys

1

2

3

4

5

Battery – provides energy proportional to its size

Motor – provides upward and forward thrust proportional to size

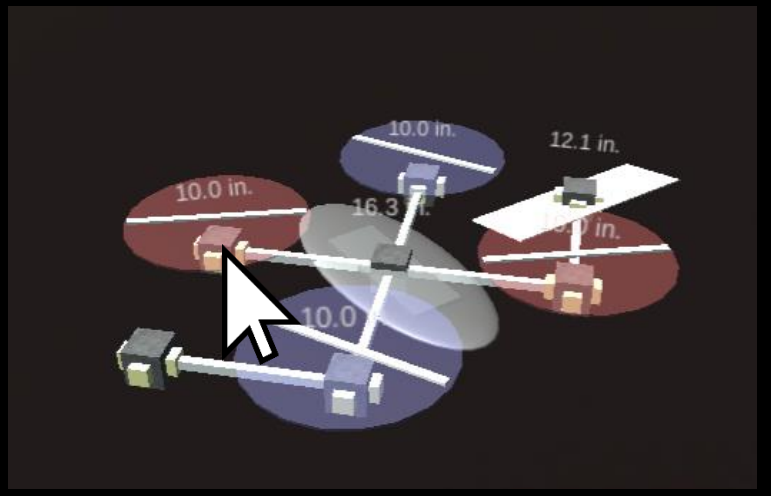
- Red motors spin clockwise
- Blue motors spin counter clockwise

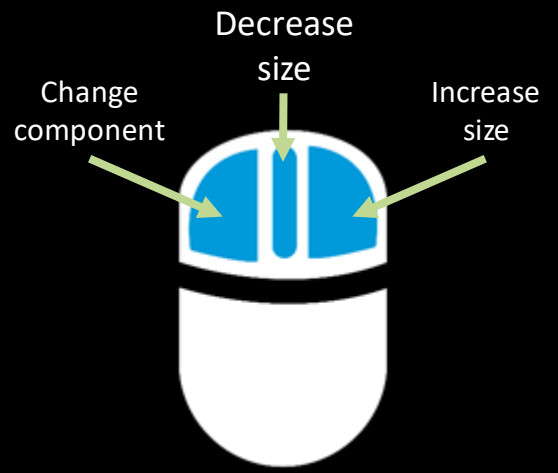
Airfoil – provides lift proportional to size and forward velocity^2

Node – provides mounting location for components, has zero mass

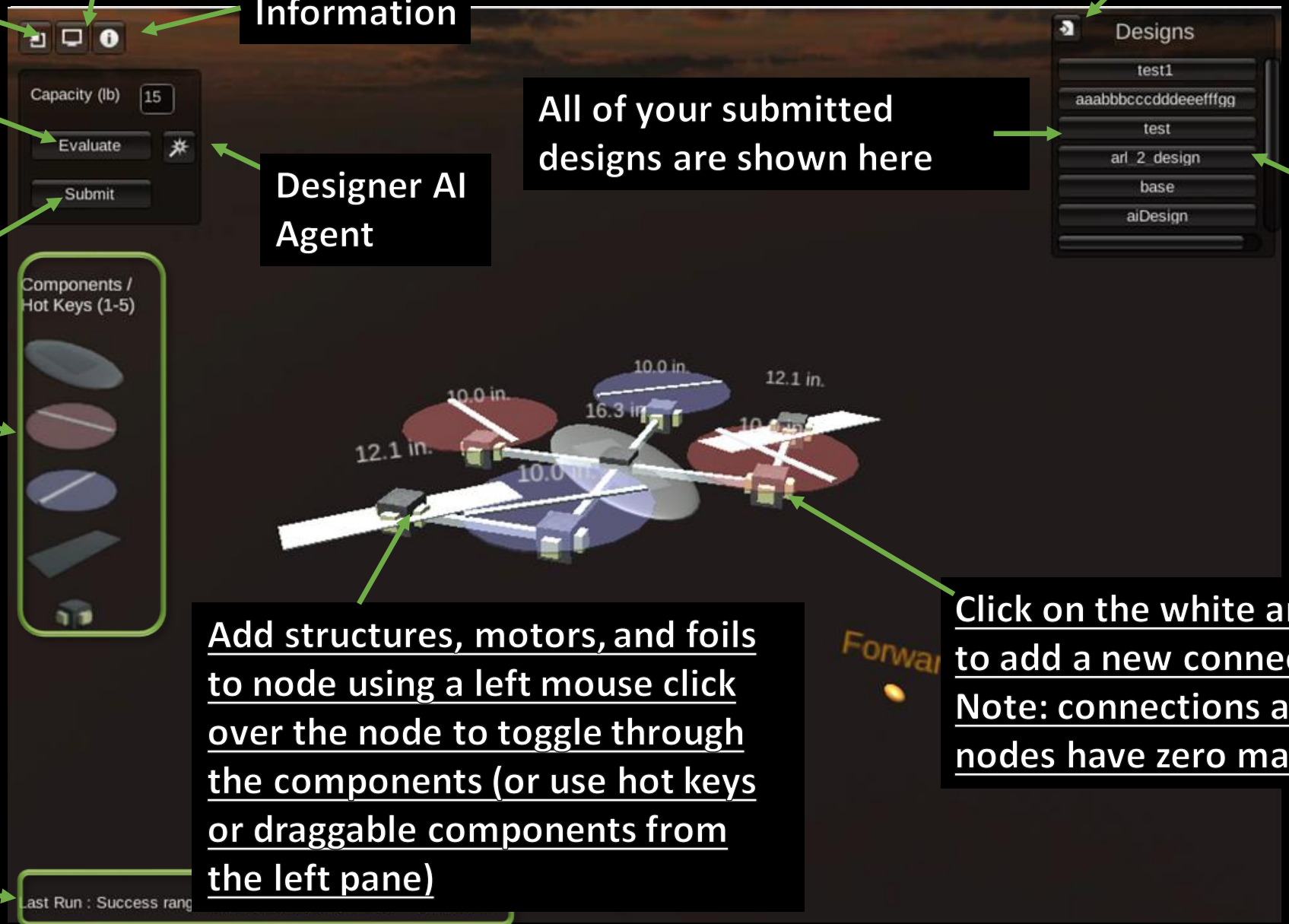
Note: Component hotkeys are active when the cursor hovers over a node

Hover cursor over a node





GUI Layout



Restore base drone

Reset View

Information

Refresh Design list

Evaluate current design

Submit current design

Designer AI Agent

All of your submitted designs are shown here

Click on a design to load it

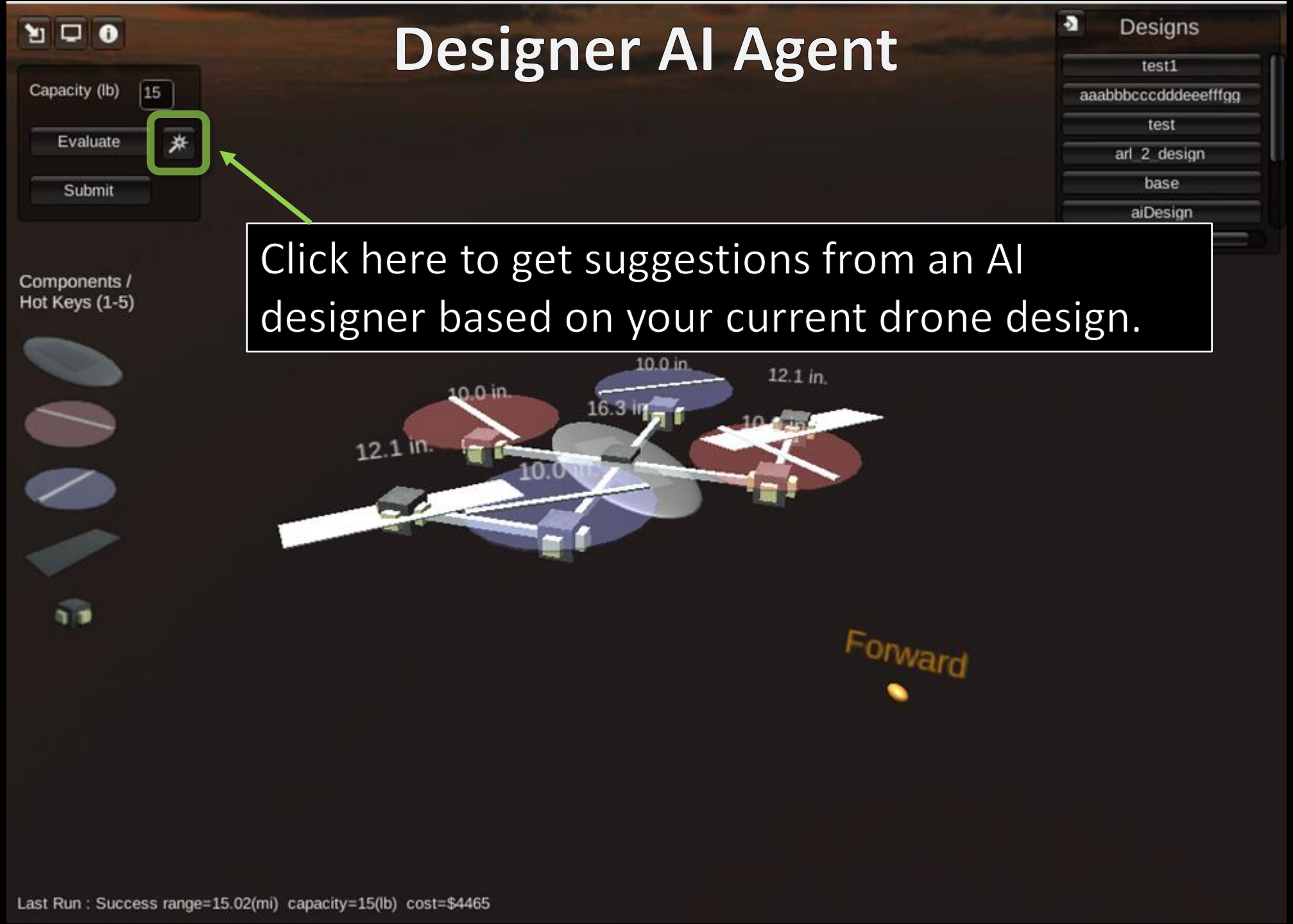
Available components

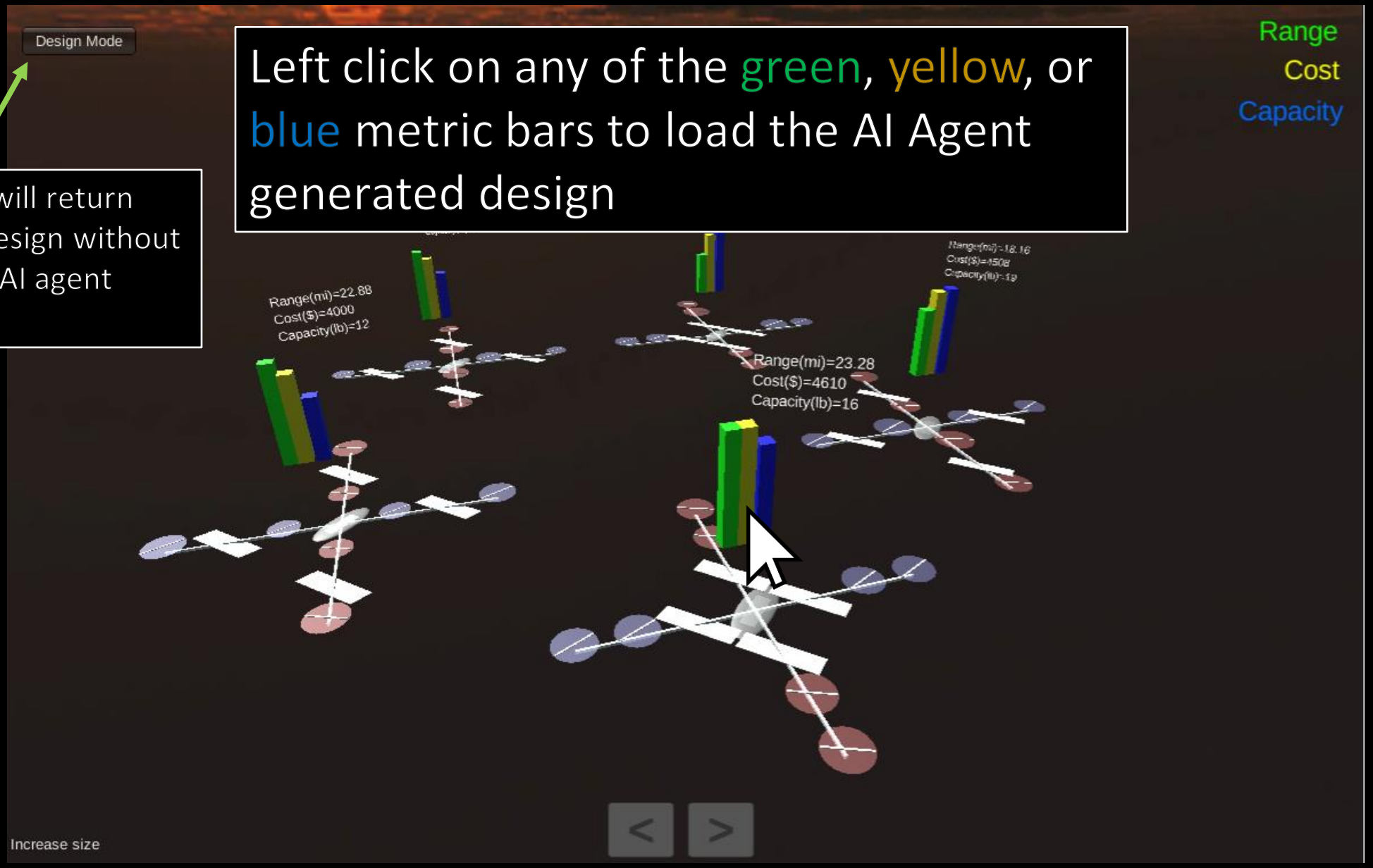
Add structures, motors, and foils to node using a left mouse click over the node to toggle through the components (or use hot keys or draggable components from the left pane)

Click on the white area of a node to add a new connection.
Note: connections and empty nodes have zero mass.

Last action log

Designer AI Agent

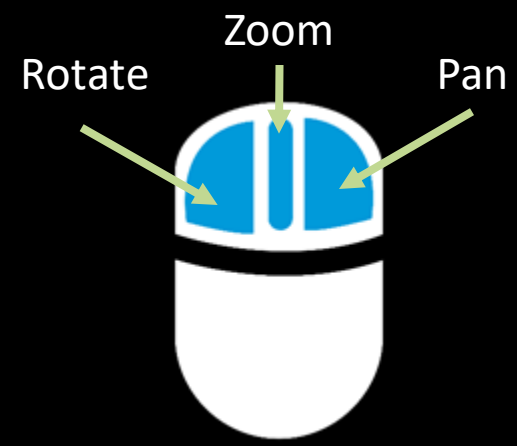



Design Mode
Left click on any of the green, yellow, or blue metric bars to load the AI Agent generated design
Range
Cost
Capacity
This button will return you to the design without selecting an AI agent design
Range(mi)=22.88
Cost($)=4000
Capacity(lb)=12
Range(mi)=23.28
Cost($)=4610
Capacity(lb)=16
Increase size

3D Scene Movement

Mouse

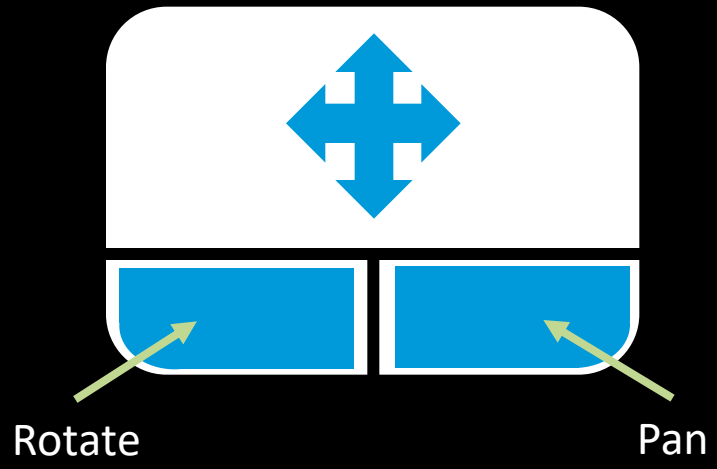
Click + drag



Zoom: Shift + drag

Laptop Touchpad

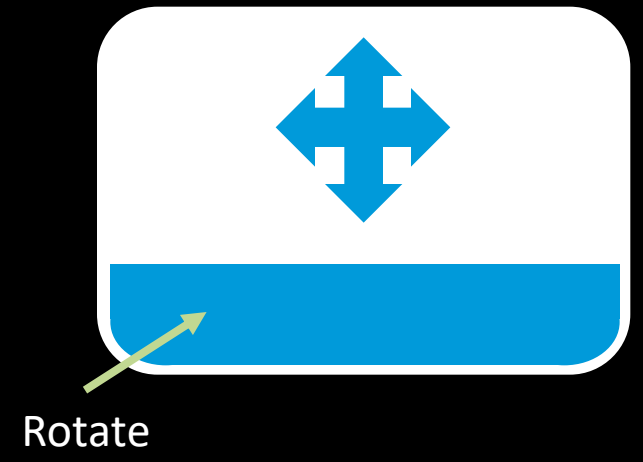
Click + drag



Zoom: Shift + drag

Mac Tracpad

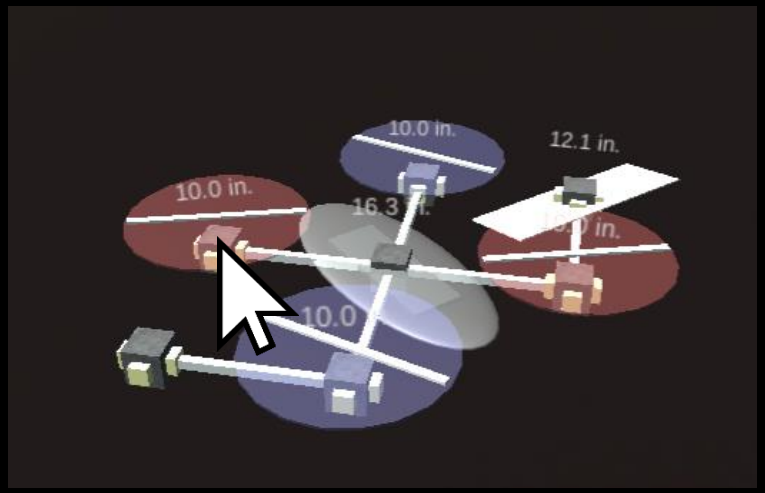
Click + drag



Zoom: Shift + drag

Additional Hotkeys

Hover cursor over a node



D — Delete – remove the component or structure from the design

↑ — Increase Component Size

↓ — Decrease Component Size