

# PVEL

## Portable Virtual Environments Lab



Human Factors &amp;

Integrated Logistics Engineering

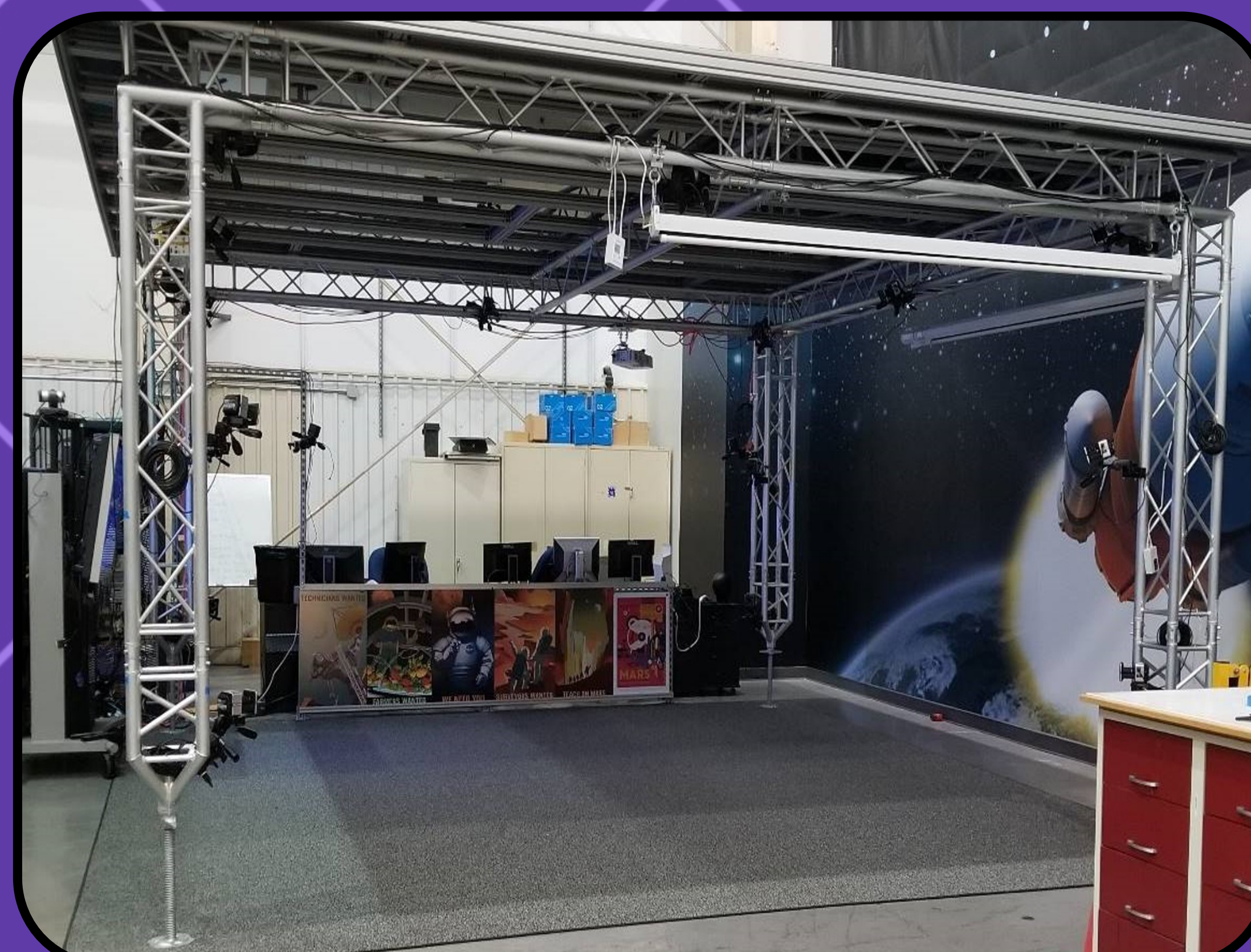
**EV74**

The **Virtual Environments Lab (VEL)** is operated by the EV74 Human Systems Integration & Engineering (HSI&E) team to provide virtual human factors engineering (HFE) assessments for various projects.

Virtual human factors assessments allow users to interact with accurate full-scale virtual models to assess access, work envelope, reach, line of sight etc., for the required female and male percentiles, as well as, assessing tool fit and function. This improves assessment accuracy by allowing analysis of physical movement/limitations with millimeter precision utilizing motion capture.

### Full-size VEL Capabilities:

- Room-scale Virtual Reality (VR)
- Augmented Reality (AR)
- Full-body Motion Capture (MoCap)



The **Portable Virtual Environments Lab (PVEL)** is a deployable version of the VEL that can be setup and used for performing virtual human factors assessments in convenient locations, such as conference rooms or around existing mock-ups and workspaces.

The PVEL remotely connects the EV74 VEL to clients and allows for easy and versatile virtual human factors assessments to meet a project's needs.

### Portable VEL (PVEL) Capabilities:

- Room-scale Virtual Reality (VR)
- Augmented Reality (AR)



## Projects Supported:

- Mars Ascent Vehicle (MAV)
- SLS Exploration Upper Stage (EUS) Mobilization
- Mars Transit Habitat
- Lunar Surface Habitat

