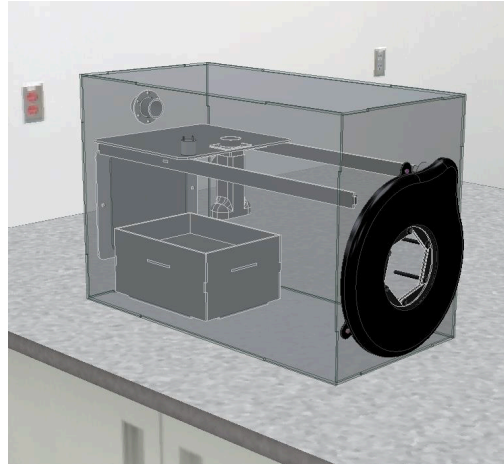


# Vacuum Glove Dispenser



## Project Overview:

The Vacuum Glove Dispenser was developed as the final project for our course in Innovation and Product Design. The challenge was to identify and solve a real-world problem related to the donning or doffing of nitrile gloves, especially in environments requiring high hygiene standards.

## Problem Identification:

Through user research and problem analysis using tools like HTA (Hierarchical Task Analysis), Design Thinking, Human-Centered Design, and feedback grids, we identified two primary issues:

1. **Difficulty donning gloves with wet hands** – The glove material tends to stick to moist skin, making it hard to put on.
2. **Risk of contamination** – Gloves can become contaminated when manually removed from a box or dispenser.

## Solution Concept:

We designed an automated glove-donning system that uses vacuum pressure to expand the glove, making it easy for users to insert their hand, even when wet, without touching the outer surface.

## Design Process Highlights:

- **Tools Used:** Point-of-view statements, Now-How-Wow matrix, Six Thinking Hats, and iterative prototyping.
- **Testing:** The front iris mechanism was prototyped using 3D printing and validated with real glove materials and a functioning vacuum system.

**Outcome:**

The final prototype demonstrated the feasibility of a vacuum-powered, hygienic glove dispenser. It addressed both major user pain points and opened possibilities for implementation in medical, laboratory, and industrial settings. For more information contact me or see our 2 minute video on this link:

[https://drive.google.com/file/d/1zlyz60Kkle9D5z4cGv5Jo\\_apSx29qXi0/view?fbclid=IwY2xjawJ-GTNleHRuA2FibQIxMABicmlkETBrWThtQ1BYc2djWm9BYmdaAR5MpGE9XnXRPN7EVpuXdUfMeS4bKFtGLqkREjFGiZVxA31U\\_wNFkilcb527yQ\\_aem\\_4RhgtlsGt9UDROsBIPD0pg](https://drive.google.com/file/d/1zlyz60Kkle9D5z4cGv5Jo_apSx29qXi0/view?fbclid=IwY2xjawJ-GTNleHRuA2FibQIxMABicmlkETBrWThtQ1BYc2djWm9BYmdaAR5MpGE9XnXRPN7EVpuXdUfMeS4bKFtGLqkREjFGiZVxA31U_wNFkilcb527yQ_aem_4RhgtlsGt9UDROsBIPD0pg)

