Yellow Team Project Mockups
Living and Working in Constrained Space
Yellow A

Movable Walls
Concept

- Modular room dividers
- Can split apartments, create temporary guest rooms, add extra closet space
- Do-it-yourself
Market

• Target customer: studio apartments in large cities like NYC, where sharing is common.

• Top six NYC companies control 95% of the market. No competition in other cities.

Source: B&D Marketing
Benchmarking

• Pressurized Temporary Walls
  Built on-site out of sheet rock and metal 2x4's.

• Main advantages
  • Look and feel very much like "real" walls
  • Very little damage to walls other than screw holes

• Main disadvantages
  • Expensive—$1000
  • Require professional installation
  • Take 5 hours to install
Customer

- Market survey: 8 apartment dwellers in Boston and New York City
- Average of **3.75** people living in apartments designed for **2.25** people
- Need for privacy was mentioned often
Customer

More Important | Less Important

Sturdy
Inexpensive
Do-It-Yourself
Reconfigurable
Soundproof
Looks Real
Structural

0%
# Preliminary Contract

<table>
<thead>
<tr>
<th>Customer Need</th>
<th>Privacy</th>
<th>Stability/Safety</th>
<th>Ease of Use</th>
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<tbody>
<tr>
<td></td>
<td>Physical Partition</td>
<td>Strength</td>
<td>Modularity, Weight, Intuitive Setup</td>
</tr>
<tr>
<td>Engineering Specs</td>
<td>- Fits range of ceilings 8’ to 10’</td>
<td>- Support a person’s leaning weight, 80 lbs of horizontal force</td>
<td>- Parts must fit through door (32” x 82”)</td>
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<td>- All pieces under 20 lbs</td>
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### Risks Resolved

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- Modular design enables wall to fit a wide range of sizes
- Vertical fit
- Horizontal fit
Risks Resolved

Privacy

Physical Partition

- Fits range of ceilings 8’ to 10’
- Panels combine to fit any length room

Yellow A
Risks Resolved

Privacy

Physical Partition

- Fits range of ceilings 8’ to 10’
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Yellow A
Risks Resolved

- **Stability/Safety**
  - Support a person’s leaning weight, 80 lbs of horizontal force

- **Strength**
  - Posts are pressure fit between ceiling and floor
  - Post must hold load but not damage ceiling
  - From analysis, our target range to support load is 4-8 psi
Risks Resolved

Ease of Use

- Modular design enables team of two people to set up 10 ft of wall in 2 hours
- Floor guides and plumb line to ensure straightness

Modularity, Weight, Intuitive Setup

- Parts must fit through door (32” x 82”)
- All pieces under 20 lbs
- As few parts as possible
Future Steps

- Careful selection of materials for aesthetic, weight, stability, and cost