Walk-n-Roll

Sketch Model Review
Pink B
Walk-n-Roll

• Adaptable assisted walking
• For legs/ankle injuries
• Combines crutches and a knee scooter
Problem

- Crutches
  - Short distance and varying surfaces
- Scooters
  - Long distances and flat surfaces
- Walk-n-Roll = Both
Feedback and Concerns

• Ergonomics
  • Height/Weight
  • Wheel Positioning

• Ease of Transformation
  • Risk of Losing Balance
Demo!

Transformation
Research

• Market
  • 575,000 Users and $100 Million Market in the USA
  • No hybrid products available

• Benchmarking
  • Generic crutches are cheap and easily accessible
  • Competitor hands-free crutches are expensive for short-term use
Research

• Technical
  • Considered critically stressed points and materials
    • Have to be mindful of joints and hinges
  • We believe it will be feasible with Aluminum
    • Lightweight, Strong
    • Will conduct testing to verify
Other Considerations

• Wheels on both crutches --> Better Weight Distribution

• Telescoping Handle --> Reduces Crutch Width

• Steering Mechanisms
  • Tilt Steering
  • Turnable Handlebars