

Beach Wheelchair:

Access to Cornish beaches through inclusive design

A joint product development exercise between Sustainable Design (AIR) and Cornwall Mobility Centre



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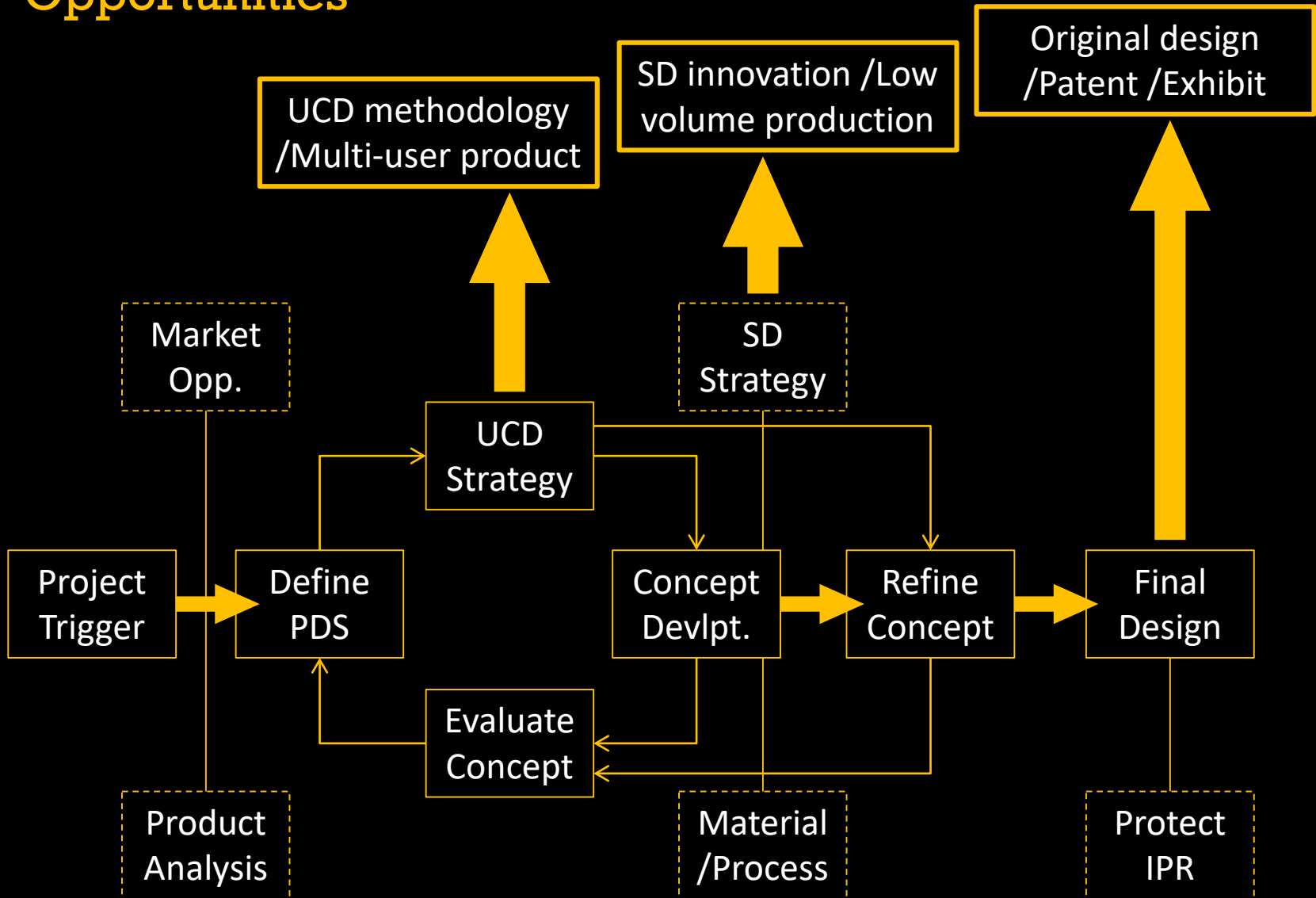
Project Summary

- A practiced based research project exploring issues of access to beaches for people with physical disabilities and mobility difficulties.
- The research will be used to support the development of beach wheelchairs to help a wider proportion of the population to access the beach more easily.
- Working in partnership with Cornwall Mobility Centre to develop beach wheelchair product(s) for the commercial market.
- The Cornwall Mobility Centre can support important primary research activities in this product realm due to its advisory role to a large client base.

Project Aims

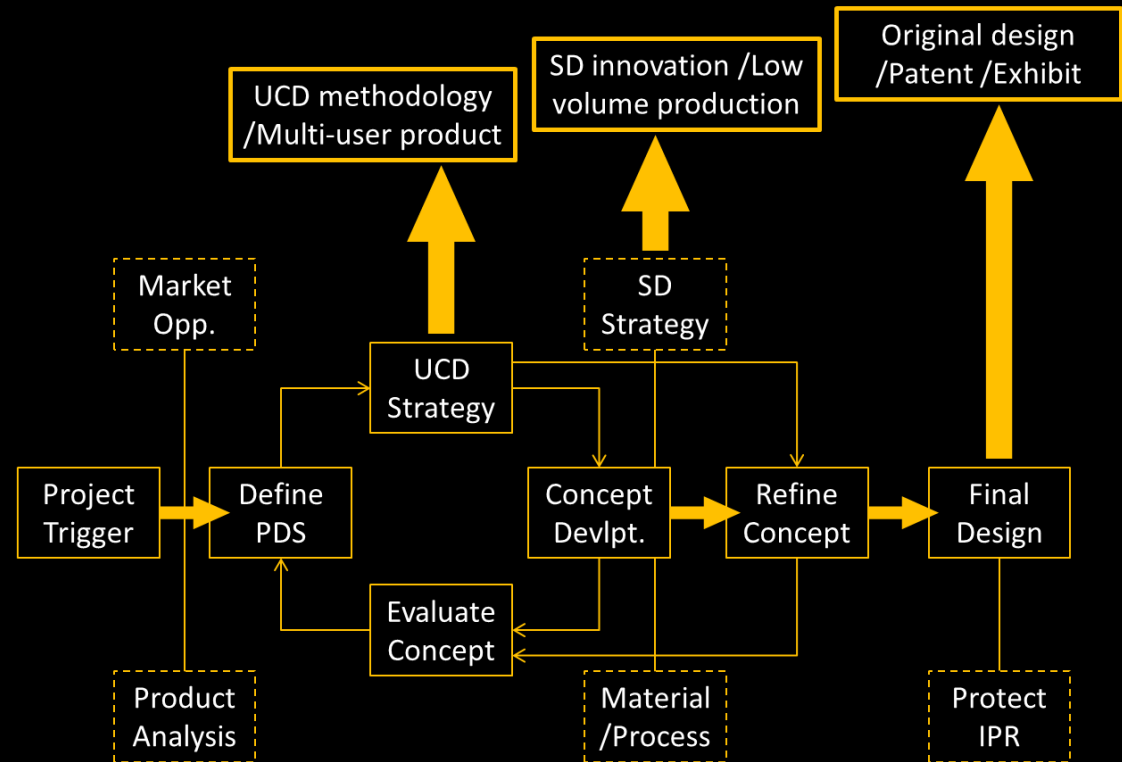
- To complete a pilot project as a joint product development exercise between SD AIR and the Cornwall Mobility Centre (CMC).
- To develop a production-ready design for a beach wheelchair with improved design and lower retail cost compared to existing products available.
- To develop practice based research outputs which demonstrate originality, significance, rigour and impact, that can contribute to the REF.

Research Opportunities



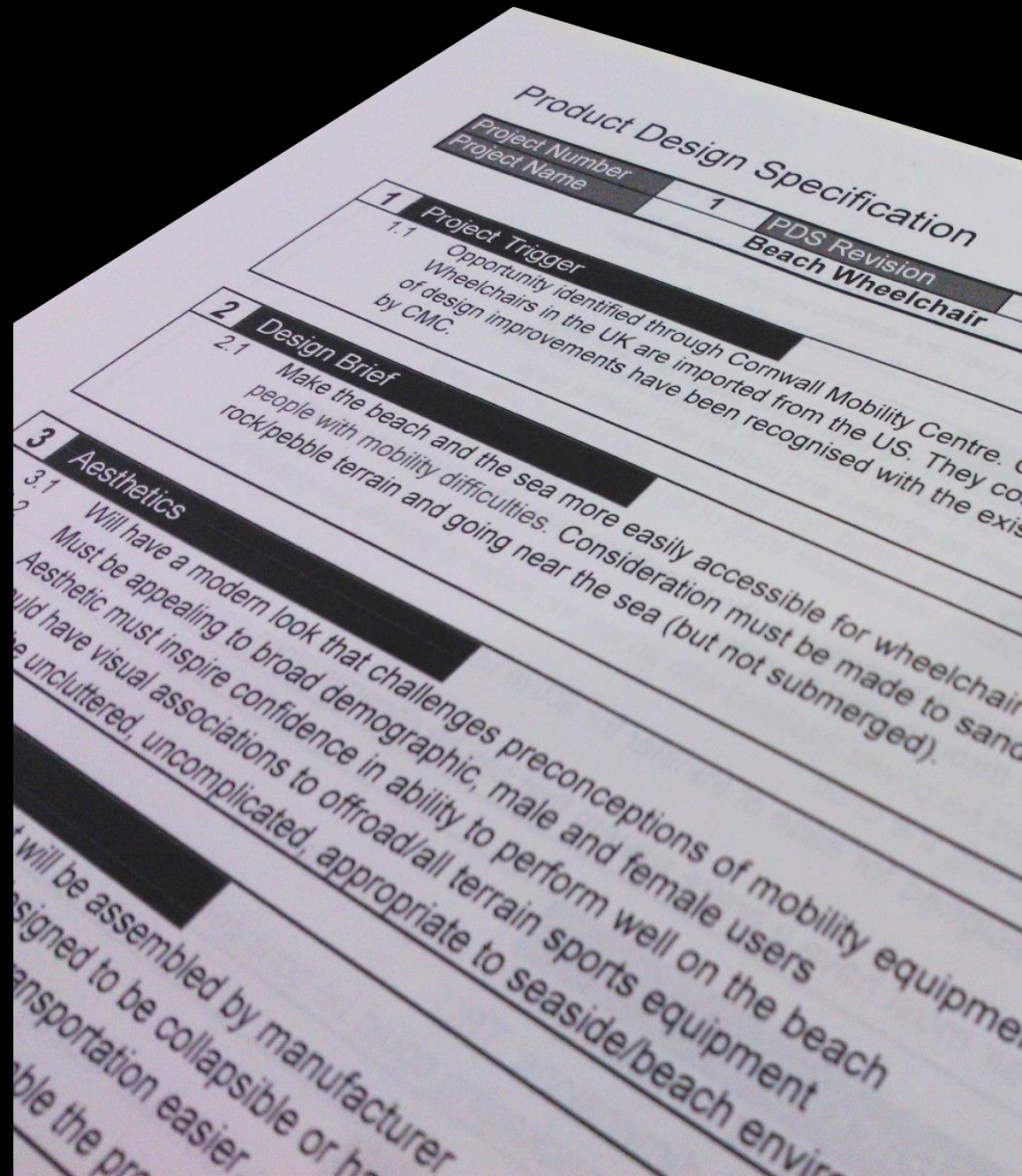
Research Opportunities

- Case study of pilot collaborative product development project
- Toolkit for product designers in education to identify research outcomes through product development?



Product Design Specification

- Used to define project scope
- Prioritises design requirements under specific constraint headings
- Collaborative input between project partners
- Revisable, working document



Product Analysis

- Identify and analyse precedents
- Test performance through UCD strategies
- Evaluate against the PDS



• Beach chair provided by the Perranporth Gardens Charities

User Centred Design

- Testing of existing products and prototypes
- Direct observation, film, photography, interview, questionnaire, etc
- User feedback
- Identify opportunities for innovation
- Evaluation of design concepts against the PDS



Testing of the Landeez product with CMC staff at Perranporth beach, November 2014

Innovation

- Biomimicry?
- Cradle-to-Cradle?
- LCA comparisons?
- Design for disassembly?
- Local production?
- Low volume/ zero tooling?
- Material innovation?
- Etc, etc...



Hairy pads on the feet of desert creatures, like the Fennec Fox, help them move on loose sand by providing a braking mechanism as their feet push backwards. (asknature.org 2014)

Questions..?

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