**General**

*Descriptions clear, succinct and well supported by images; image quality sufficient to convey feature/function; good consistency between image and descriptions;*

**Project Management (Andrea)**

* Team Expectations
  + <https://docs.google.com/document/d/1eTHvpENbUa293RR2QkjQjVI5xrc14k7szrHsOlTvZUc/edit>
* Gantt Charts
  + <https://drive.google.com/drive/u/2/folders/14skjH-JAzOMjinko60bG9bKaw-QCQxaS>
* Risk Register
  + <https://docs.google.com/spreadsheets/d/1emWxgjm_o1NqQ9b5ZZh4-s8WhZi4qw6x/edit#gid=583844381>
* Project Deliverables
  + Weekly Reports: <https://drive.google.com/drive/u/2/folders/1rV6U29cZWiZxvxXQ8pH-Th26r_8j--oE>

*All major deadlines and risks considered. Impact of midterms and assignments in other courses considered. Total hours count provided fits with available. Team capability considered. Tasks allocated equitably to individuals.*

**Identify Needs (Friend)**

* Investigation
  + <https://docs.google.com/document/d/1LzXrNPtIdqZGvDkgfATcmw228lbTlWqq4NbpiuNxRLI/edit>
  + BCMOS Background, Q&A with BCMOS rep
  + General links research
  + Test ride current TrailRider
  + Literature search: Search wheelchair propulsion patents, Looked at alternatives already in market
* BCMOS
  + <https://docs.google.com/document/d/1ptlGp8loCWfxtWEoKNz-0eJIk7KKzEYwva3zqlEdJDg/edit>
  + Mission statement: “provide opportunities for people with physical disabilities to access outdoor recreation”
  + Use TrailRider
  + Pacific Spirit, Stanley Park Prospect Point, Jericho Beach are popular places
  + Finding alternatives that fulfil currently unmet needs: more rider engagement, comfortable, easy for sherpa to use, etc.
  + 55% didn’t return
* Research Links
  + <https://docs.google.com/document/d/1uv-8oa735D6weaiKVkpjditYIT9UYrhdnpzfsfMx0Pc/edit>
  + Initial research into general topics
    - Adapting bikes; power output of hands vs legs; hand rim vs hand pedal propulsion; rider guilt
    - Keri: “...Sometimes I feel bad for the sherpas, I mean you have to drag, pull and get their shoes all wet...”
* Literature Research
  + Take inspiration, no time to reinvent the wheel, our full concepts reflect this
  + <https://docs.google.com/document/d/1FAKBAMXRPgTs1Grm-Hb1x25aHrWCECDSZa95FtdFZA8/edit>
  + Mostly about other riders
  + GRIT: lever, 3 wheels, cheap
  + ORC: GRIT but customizable
  + Jolette: similar design to TrailRider but cheaper and more foldable
  + <https://docs.google.com/document/d/1bvZUHIP8hO1rkZ-tJ28eIV6PrdnjGRGzfcZeeTQOxao/edit>
  + Many past patents on wheelchair propulsion, hard to not overlap at all
  + Pick not-enforced one for detail design stage
* Needs and Stakeholders
  + <https://docs.google.com/spreadsheets/d/1S85w2FNshVAq0QqYDgJho6w1M_TH1IotK00yrTodL70/edit?usp=sharing>
  + Found needs from different stakeholders
  + All needs considered, but not all can affect decision making
  + Focus on BCMOS and rider as main needs, since most intimate
  + Some focus on sherpa

*extensive identification of stakeholders; a clear indication of stakeholder level of influence; needs arising from all stakeholders considered; out of scope needs identified;*

**Set Specifications**

* Value Proposition, Target Market and Project Scope <https://drive.google.com/open?id=11SgKoxPXPbVAuInceopaWD2ZaWJhRfjrTMrKJb-9VzQ>
* Requirements

<https://drive.google.com/open?id=1tdHE6eLvaoeOhfHbJ-_0GaLTnMsCK7JOOtczWSA6OLM>

* Target Specifications

<https://drive.google.com/open?id=13P3Wv-WrjglfZFOEEdBRBPccdWhgqd4b>

*all of Ullman's categories (Table 14-2 p194 "The Engineering Design Process" Ostafichuk, P. et al) considered; priorities of needs determined; selection and determination of the relative importance (weighting) of evaluation criteria clearly justified;*

**Generate Concepts Pt 1 (Stephen)**

* Function Decomposition

<https://docs.google.com/document/d/1XHUiq0IXthqMVEoYG0xiXNlT7XCQnOLrqlt7NcqGo74/edit>

*strong use of ideation tools; exploration of a wide range of solution paths; inclusion of creative, unusual solutions, possibly with significant risk but with potentially high reward;*

* Concept Fragments

*; good use of images to show modes of operation*

**Generate Concepts Pt 2 (Julia)**

* Combining and Winnowing full concepts

<https://docs.google.com/spreadsheets/d/1p1glQhjdo7oms9c0VswuDnphStOo6zkvPMfjmQ-MpSE/edit#gid=1593153411>

* Function Ranking and synergies

<https://docs.google.com/spreadsheets/d/1p1glQhjdo7oms9c0VswuDnphStOo6zkvPMfjmQ-MpSE/edit#gid=397828779>

* Four final chosen concepts for evaluation

<https://docs.google.com/document/d/194VvA9151PORlnxYYmSQygzJc9iXeJDXXI9kFocbANE/edit>

**Evaluate Concepts (Carson)**

* Pre-evaluation Research
* WDM
* Evaluation Criteria Development and Weighting

*net value of concept (score on evaluation criteria) clearly supported; selection and determination of the relative importance (weighting) of evaluation criteria clearly justified;*