<http://www.bcmos.org/trailrider.html>

* mission statement: “provide opportunities for people with physical disabilities to access outdoor recreation”
* client-driven, with participants telling us where they want to visit
* TrailRider must be transportable in hatchback, SUV, or minivan
* Accommodates people of all sizes
* Lightweight

Specs:

* Single wheel
* Aluminum frame
* Folds for storage/transportation
* adjustable seating, footrest and armrests
* Disc braking system
* Large profile pneumatic tire
* Cargo compartment
* Optional seat back insert for kids
* Powder coated finish

Sept.11 BCMOS Client Visit

* Eric - disability foundation
* Vision: to empower and inspire people with physical disabilities to re-imagine what is possible
* Scheduled hikes over summer
* BCMOS schedules volunteers (so the sherpas are trained up to a point by BCMOS)
* Hikes 5 days a week all summer
* Trailrider is narrow enough to fit on a suspension bridge, therefore see downwards
* No bounce, don’t overinflate tires
* Some riders can’t use hands (spinal cord injury)
* Taller sherpa usually at the back -> make back handle shorter so short people can volunteer too?
* He expects us to do harder than class 1 hikes
* Current device looks pretty long. Some people don’t have enough clearance to turn.
* Need many different access points for multiple people to carry person up steep hills
* 8 people were needed to carry person up Quarry Rock
* People struggle going downhill… very hard on the knees. Need a good braking system
* Human element is huge factor, volunteers encouraged
* Look into power assist, so that rider feels like they are doing exercise.
* Make it smaller when it folds down. Currently they can only take 4 trailriders in a van
* Emission free and no noise is key. It would be pretty bad for riders to smell their own motor smoke.
* Seems like money < comfort and interactivity.
* Automatic body shifter? For people who can’t move/feel themselves. Correct positions for blood flow
* Volunteers appreciate the workout, they say its an “amazing experience”.
* BCMOS has done on average 100-150 hikes this year.
* Big issue is that volunteers are less available during non-summer months.

Our Questions:

* Are you willing to compromise cost for a better product?
* Is the trailrider versatile for spinal chord injuries too?
* Do they have a warranty?
* Why not classify it as a medical device so that insurance covers it?

Class Q/A Answers:

* How many trailriders in your fleet?
  + A: 10 trailriders at a time. They have 4 separate ones in the program (they can get dirty). Don’t touch the other 10 so they can sell them.
* Can you give detailed specs?
  + There is a manual, if it’s not detailed enough they might be able to get copy of detailed drawings
* How long is a hike?
  + Typically 4 hours. Usually averages out to be 2 hours. They take lots of breaks. Sometimes could be in the chair for 12 hours (garibaldi lake).
  + This website says the same hike takes 5 hours for able bodied people <https://www.vancouvertrails.com/trails/garibaldi-lake/>. That means average hike is about (5/12)\*4 = 1.5 hrs trail
* Accidents on the trail?
  + One guy did tip over when lifting over a rock, he was 300lb. This was years ago. Their priority is safety first, not racing. Anytime they climb up, they do it as a group. BCMOS wants least amount of equipment maintenance.
    - Seems like an outlier case and I think we’re good as long as it’s as safe as the current version.
* Provide us with a cost breakdown?
  + They sell the new ones for $8500. As they get used, they depreciate.
* If there is one thing you would change about the trailrider what would it be?
  + Really want the rider to have a workout and independence.
  + Want only one sherpa to operate.
  + How often do trailriders need maintenance?
    - Front forks held in by locking pins, sometimes locking pins get bent,
    - Brake maintenance (squeaking)
    - Flat tire >>>>> (Good to have extra pump on board?)
* Is there a limit on steepness of hill?
  + Anything is possible with enough people. ITs been on Grand Canyon, Mt. Everest base camp.
  + 8 people for Quarry Rock, 4 hours. 1.5 hr up and 1.5 hr down (rest is breaks).
* If you could personally assist, how would you envision that?
  + Arm exercise
  + Arm pedaling a fan to fan the sherpa? (total speed is limited by the fastest person, not accumulative I think)
  + Pedal (bike pedal?) maybe connect to high gear ratio to wheels to assist with power
  + Do you value having one sherpa for very steep hikes?
    - No, its not gonna last long.
    - Some people outside the organization rent the trailriders (eg families) so would be nice with less/easy sherpa
  + Feedback from Sherpas?
    - Back handle serves as balance. Harder for short people.
    - Sherpas wear gloves.
    - Has anyone experienced discomfort in the chair?
      * Need to time hike carefully so there’s restroom breaks
  + Arm rests are hard plastic, so they have padding. The trail rider can lean backwards or forwards. They want to pad up armrests more.
  + Need more lateral support.
* Have you experienced difficulties with people getting in and out of trailrider?
  + They have a portable lift/hoist with a sling around rider to lower them in. Sometimes take front forks off and put them on a kick stand if its easier to load.
* How many units have you sold since version 4.0?
  + Number one seller is Australia, they sell 10-12 per year. Ontario, alberta or australia are top sellers.
* How do you envision Search and Rescue?
  + Want to have it as an option. (brainstormed)
  + They (who?) consider it as a medical device in the States. They don’t want it classified as a wheelchair.
  + Trailrider was used in west coast trail for spinal chord injury, part of Standing Spirit project, Search and Rescue knew about it. BCMOS would be cool to have it serve in that purpose.
* Are there any regulations ?
  + Physiotherapists weighted in on the design.
  + Risk waiver is important. They give a manual with it.
* What is max height and weight that a person can be ?
  + Heaviest: 350 lbs. In the manual, the weight limit is 250 lbs.
  + Tallest: 6’4”
  + Footplate slides out. They have optional inserts to “shrink it down”.
* Trickiest part is locking pins and where they go.Sometimes they stick. You can imagine a family goes on a hike and they cant assemble it properly.
* What is maximum cost limit?
  + Budget depends year to year. Design it knowing it is within their 5 year plan.
* How long does the trailrider last?
  + Frame hasn’t broken yet. Cushions replaced 3-4 years. Locking pins replacements.
* In the BCMOS program, do you have to pay for sherpas to get there?
  + They don’t provide rides, but pay for parking if necessary.
  + Highly dependent on volunteer having a car/van.
* Would BCMOS be interested in something that sacrifices hard terrain for a device that is more focused on 1 sherpa and rider independence?
  + Pacific spirit, stanley park prospect point, jericho beach are popular places.
  + They would be happy to have a couple models of 5.0 where people choose what kind of trails they want.
* What are common carried medical device or equipment on the hikes?
  + First aid kits, water
* Would you be interested in multiple configurations?
  + They’ve used the black diamond since 2005. They are curious about new improvements/technology.
* Is there a warranty?
  + He will have to get back to us on that.
  + Why not classify as a medical device for insurance purposes?
    - Too much regulations to pass.
  + Is this device eligible for tax break?
  + They do sell them at different price points. You might be able to get cheaper prices depending on how much it was used. They have seen them sold for as little as $8500
* if the current favourite trails are simple trails like Stanley Park, what are the biggest factors in regular wheelchair stopping people with regular wheelchair from using it?
  + They want to give people a chance to go off the paved path.
  + The most return-for-investment elements to combat are common park elements like dirt or grass
* Is there currently a {???} program?
  + Tetra engineers tried to put a snowboard on the bottom
  + He has seen videos of people going at it during the snow.
* What is the bottleneck for how many sherpas?
  + The bottleneck is max 4. Trailriders in a van.
* What is the size of this van?
  + Clearance of 6 ft. 2 seater van, opens in the back. There is a cage so trail riders don’t crash around.
* What sort of components do you want to become stronger?
  + The arm rests are currently detachable. Locking pins have problems.
  + Kickstand got bent once.
* What is your intention behind water/dirt exposure?
  + Very popular to go along the beach, such as pushing during low tide. Salt water/dirt/ sand sometimes doesn’t get rinsed off.
  + ie. Easy to clean?
* Is cost very important?
  + Usability is most important, they can always fundraise for more money. When you are in trail rider, you are giving up a level of independence to try something new.
* How many people come back after using it?
  + 45% come back and try it again. Responses for not coming back: feel bad for sherpas, not enough independence. Responses for doing this: getting out of the wheelchair and trying something new. Finally looking down at something and not up.
  + Propulsion must be manual for authentic camping experience?
    - BCMOS wants that human element. Maybe have a turn on//off option for emergency times when sherpas are too fatigued.
  + Are you aware of other devices that are superior to trail rider?
    - In north shore there is a chair called {???}
    - There’s one called the “jouliette”
  + Is focus on versatility ?
    - Yes. Some parapalegics feel like they are there only for the ride, and want to weel their own chair. Oh well…
    - 1 sherpa and no sherpa mode

Seems like the important things are:

* Interactive and independent for rider
* Easy to use and transport for sherpa

Not so important:

* Usable on difficult trail
* Cost