

# Electric Bike Business Plan for Hayden Island

**Overview:** This paper reviews the economics of operating a shared, electric bike program on Hayden Island. A bike has several advantages over a scooter; (1) you can pedal it if the battery runs low (2) it has a seat (3) a fresh battery can be swapped quickly (4) folding bikes can be carried aboard a train, bus or car. One \$600 electric bike would be purchased which would have a \$75 GPS tracker, a \$15 combination lock, a \$280 spare battery. An investment totaling \$1,000 is estimated to make \$6,500 in 12 months.

The \$600 electric bike rents for \$10/hr (\$5/hr if hotel guest). The typical ride is expected to last about 90 minutes, with 45 minutes of active biking. The batteries last about 3 hours of continuous use. A fresh battery can be inserted for the next rider.



**Anticipated Revenue:** An average of 3 rentals per day (generating \$10/each) totals \$30/day. Revenue is estimated at \$900/mo (summer) and \$450/mo (winter), with a one year average around \$600/mo or about \$6,500 annually.

**Expenses:** We estimate life expectancy of the \$600 bike to be 4-6 months, although GPS tracking is expected to minimize loss. Monthly expenses are estimated at \$150/mo, including bike replacement, cell tracking, and management overhead. Expenses are estimated at \$150/mo, with maintenance by [a mobile VeloFix van](#).

**Projected Profit:** With revenue projected to average \$600/mo and expenses averaging \$150/mo, we expect profitability within the first 3 months. First year profit on a \$1000 investment is projected to be roughly \$450/mo times 12 months, or \$5,400/year.

**Operational Overview:** This bike sharing plan is NOT associated with ANY shared bike or scooter business in Portland. Instead, we would buy our own bikes from Amazon and make them available to hotel guests. Hotel guests (or boaters) on Hayden Island could register at the front desk, using their driver’s license and credit card. The desk clerk provides the guest with the keys. Full payment is made on return of the scooter. A GPS tracker is inserted into the handlebar for location tracking.

**Scooter and Bike Sharing in Portland:** Hayden Island and Kenton do NOT currently have any bike sharing services (like Nike’s Biketown) or any scooter sharing services (like [Bird](#), [Lime](#), [Skip](#) or [Goat](#)).

	HQ	TOTAL RAISED	CURRENT VALUATION	SELECT INVESTORS	
	Beijing	\$1.6B	\$3B*	Didi Chuxing, Ant Financial	<a href="#">View profile</a>
	Santa Monica, CA	\$418M	\$2B	Sequoia, Index Ventures	<a href="#">View profile</a>
	San Mateo, CA	\$467M	\$1.1B	Uber, GV, Alphabet	<a href="#">View profile</a>
	San Francisco	\$31.1M	\$75M	Accel, Menlo Ventures	
	San Francisco	\$8M	\$43.2M	Grishin Robotics	<a href="#">View profile</a>
	San Francisco	\$4.3M	\$12.3M	Scout Ventures, Vision Ridge Capital	<a href="#">View profile</a>

\*valuation unconfirmed

The low density and remoteness of Hayden Island from downtown Portland make it less attractive to scooter or bike businesses. However, Hayden Island has four major hotels. Those guests may want to travel to the Max train, Delta Park, Expo Center or PIR, not to mention the Jantzen Beach Mall, Lotus Isle Park, Walmart or bike along Marine Drive or Waterfront Vancouver.

**Option 1: Folding bike:**

A 20” folding bike like the [Vilano 20” folding electric bike](#) (\$600) or [SwagCycle EB-5](#) (\$500) can be carried in an automobile, light rail or bus, which is both good and bad. A GPS tracker in the handlebar keeps track of its location. A folding bike is more practical than electric

scooters which have no seat or pedals. They're only for short trips. If the battery dies you have to walk (no pedals). An electric bike enables you to travel further, more comfortably. Scooters take 4-6 hours to charge.

### Option 2: A Full-size Step Through Bike



A [26 inch “step-through” bike](#) could be purchased for about the same price (\$640). They may be preferable than a folding bike or scooter for most people. Importantly, they have more battery options. Insert a fully charged battery and it's ready to go.



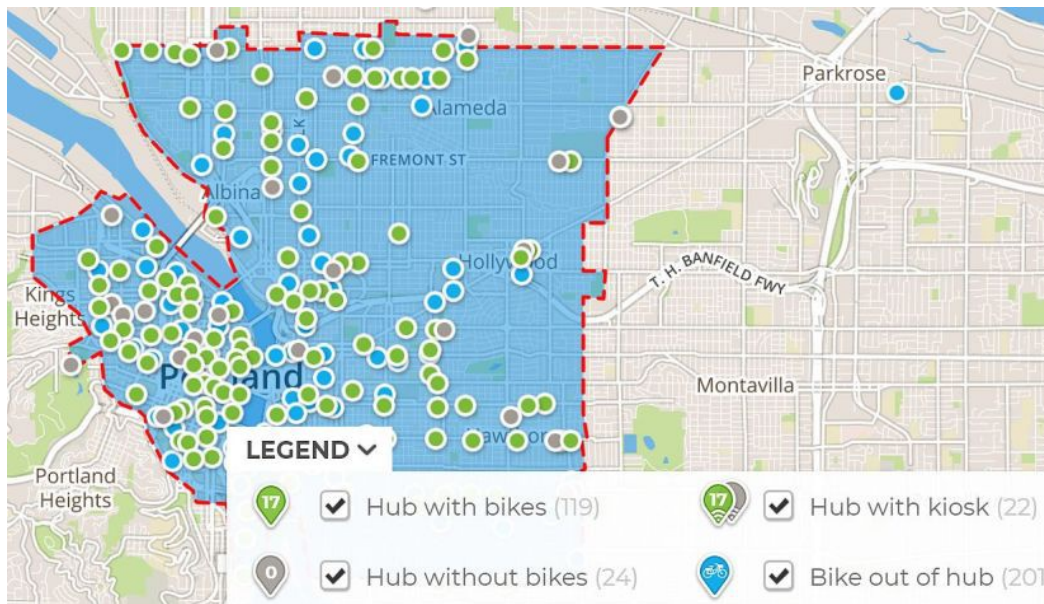
Optionally, a [RadCity Step-Thru Electric Bike](#) (\$1700) with a 750W hub motor and 48V 14Ah (672Wh) battery may perform better with a lower MTBF. <https://youtu.be/vSZE0he-zEA>

**Would we need a city permit?** Many bike shops rent bikes. This plan is no different. Unlike ALL scooter sharing businesses in Portland, our bikes are NOT *dockless*. They are brought back to a hub on Hayden Island and charged. Our bikes are NOT left abandoned on public sidewalks all over the city.

**Advantages of private bike sharing:** Bike sharing companies utilize an app to find a nearby (unused) bike. They don't have to pay monthly fees to park a bike at night. But they DO have to pay people \$8-\$20 per bike to pick up bikes, charge them overnight, and re-distribute them throughout the city by 7am the following morning.

- OUR private bike business REDUCES bike clutter.
- They're stored at a central hub on the island and charged at night.
- No clutter. No extra costs.
- More profitability.

**Nike's Bike Share System:** Nike's Biketown bikes DO use a bike hub, but Nike's bike sharing system service area is NOT available north of Killingsworth. There is NO bike hub anywhere near Hayden Island.



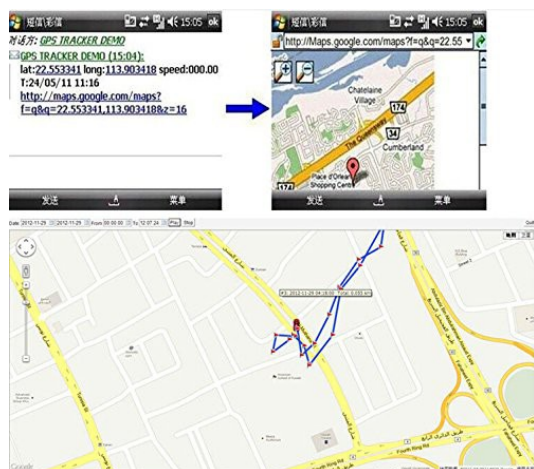
Biketown's service area only extends east from the dense downtown area. Park a Biketown bike OUTSIDE their service area, in Kenton, Delta Park, Expo, St Johns or Hayden Island, and it will cost you an extra \$10.

Bottom line: there is no bike sharing system anywhere near Hayden Island.

**Nike Fees:** If Nike comes to Hayden Island (and they could), their fees would not likely be competitive. Nike charges a \$5 sign-up fee and a Pay-As-You-Go fee of 8 cents per minute. So  $\$5 + 60\text{min} \times 8\text{cents}$  (\$4.80) equals \$9.80 for the first hour. Our \$5/hr fee (for hotel guests) would be very competitive...and ELECTRIC! Nike's rates are below.

PLAN DETAILS	
Pay-As-You-Go one-time sign-up fee	\$5.00
Pay-As-You-Go per minute cost	8 cents / minute
Riding time	Unlimited
Number of bikes allowed on one account	4
Max reservation time	10 minutes*
Max hold time	30 minutes*
Fee to lock bike at public rack inside system area	\$2
Fee to lock bike at a public rack outside system area	\$10
Reward for bringing bike from a rack back to a station	+ \$1 account credit
Lost bike fee	\$1500

**The GPS Tracker:** We use [a GPS tracker inserted into the handle bar](#). It's invisible and costs about \$75 with a \$10/month cellular fee. Location would be pinged every few minutes. Location can be seen by the system operator's computer or phone. [Here's a video of the GPS system](#) (below), which costs about \$60.



**Costs:**

**A. Inexpensive e-bike through Amazon**

- (1) [NAKTO 26" Step-through Electric Bike](#) with 36V 10Ah battery ..... \$640
- (1) [Spare lithium battery with charger](#) ..... \$279
- (1) [Keypad Bike Lock with Sharable eKeys](#) ..... \$ 20
- (1) [GPS Bike Tracker](#) ..... \$ 60
- **TOTAL** ..... **\$999**

**B. RadCity Step-through bike:**

- (1) [RadCity e-bike with a 750W hub motor and 48V 14Ah](#) (672Wh) ... \$1,700
- (1) [Spare 672W/hr battery with charger](#) ..... \$ 590
- (1) [Keypad Bike Lock with Sharable eKeys](#) ..... \$ 20
- (1) [GPS Bike Tracker](#) ..... \$ 60
- **TOTAL** ..... **\$3,370**

**Benefits:**

- **Profitable**
- **Useful**
- **Fun**

**Bike Rack:**

A variety of different bike hubs could be used, but we'll go with an existing bike rack or structure to park the bike at night. If security is a concern, a \$40 U-bolt could be used.

**Risk:** This venture could easily lose money. Bikes may be vandalized or stolen, expenses may be higher, and revenues lower.

Let's say CAPEX expenses are higher. The more expensive RadCity electric bike with extra battery would total \$3,500. Let's say revenues are half what we expected, renting out an average of only once per day at \$10/hr, for an average of 90 minutes (\$15 per day), so monthly rental revenue would total \$450 or \$5,400/yr.

If maintenance expenses are \$150/mo (\$1,800/yr), plus \$3,500 (bike and accessories), that totals \$5,300. With total annual revenue of \$5,400, less \$5,300 (expenses), that leaves an estimated net profit at the end of year one of only \$100. Actual figures are hard to predict.

## **Business Options:**

This proposal was geared for businesses such as hotels, but it could make sense for friends or neighborhoods. Sponsorship may also make sense.

**A. Neighborhood associations could be operators.** A 501(c)3 could generate revenue for neighborhood investments or for post-earthquake resiliency. One possible way of structuring the deal might be to enable private investors keep all the profit in year one. In subsequent years, profit would be shared 50/50 with the 501(c)3. The non-profit provides space and a tax deduction. The 501(c)3 could generate \$2,000-\$3,000/year.

**B. Promotional Income.** Both the bike and the hub could be platforms for sponsors. Just as Nike sponsors Biketown bikes, restaurants, small shops or the Jantzen Beach Mall could have naming rights system-wide, on individual bikes or on the bike hub.

System-wide exclusive sponsorship might be incorporated into the Hub and each bike at a price to be determined. Sponsorship at the hub might involve a poster. Sponsorship on the bike could include ads with QR-codes. Scanning the ad enables a 20% off coupon and displays a map to the restaurant. At \$50/mo per ad, four ads per bike may generate \$200. Advertising *could* enable practically “free” bike sharing. “Free” (non-electric) bikes would cost roughly \$500 each with \$1500/yr maintenance (\$2000/yr). But if advertising alone can generate \$200/mo per bike, that's \$2400/year revenue. It pays for itself.

Another source of income may be bike parking. EVERYONE is enabled to rent or share their own bike, parked in the centralized bike hub. The bike owner determines price. Bike hub parking costs \$30-\$50/month. With four bikes, that's \$120-\$200/mo revenue for the operator.

## **Summary:**

This paper outlines a business plan to offer private bike sharing on Hayden Island. It could be offered through hotels, the Mall, moorages or other communities on the island. It uses privately purchased bikes and utilizes GPS trackers. I speculate that a \$1,000 investment could generate \$6,500 in year one.

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