



Transit X presents a preliminary proposal for a sustainable micro-rail network a fleet of automated electric vehicles (pods) for passengers and freight on a local and regional podway providing equitable public transportation for

# George Town, Penang, Malaysia

This proposal is downloadable at transitx.com/proposals/Transit X for George Town,Penang,Malaysia.pdf

# High capacity · High speed · Nonstop · 24/7 Solar powered · Zero Wait · Door-to-door · Resilient

A companion Transit X Handbook is available at <a href="https://transitx.com/transitxhandbook.pdf">transitx.com/transitxhandbook.pdf</a>

# 118 km network with 10,209 pods

90% of population within a 10 min. walk

Nonstop 72 km/h service to 240 stops



### Transit X proposes to finance, build and operate a sustainable microrail podway to carry passengers and freight for George Town that makes the Transit X service convenient to 90% of the population.

Transit X efficiently services both suburbs and cities and provides for a higher quality of life. See transitx.com for more details. This 3-minute video (transitx.com/ video) describes our innovative solution.

### **Major benefits**

- · Reduce congestion
- · Provide parking relief
- Reduce pollution
- · Improve safety

The Transit X Handbook (<u>transitx.com/</u> <u>transitxhandbook.pdf</u>) answers many questions about our service, the company, our technology, and the way we address: congestion, parking, road safety, pedestrian safety, ADA compliance, sustainability, fares,



solar+storage, construction, aesthetics, operations, economic development, quality of service, security, station footprint, equitability, carbon footprint, transit integration, resiliency, reliability, rights-of-way, and open space.

### Congestion, parking, pollution, and safety

Most regions suffer from traffic congestion, limited parking, air pollution, and unsafe roads. Potential solutions are costly, but Transit X can solve these challenges without public funding. Transit X can integrate into the built environment, providing both short term relief and a long term solution.

### **High Capacity & High Speed**

A single track carries 12,000 pods per hour (20,000 to 50,000 passengers per hour). Two boarding areas fit in a single car space and provide 2,000 boardings per hour. For urban commutes, pods trips are 3 times faster than car trips and the high-speed podway provides faster door-to-door trips than air travel for distances of 1,000 miles or less.

### Zero Footprint and Minimal Disruption

Transit X features stops that don't interfere with pedestrians or other forms of transportation. We use easements alongside highway and roads and integrate utility lines and poles Non-stop interchanges fit above existing intersections. Factory-built tracks and posts enable fast installation with minimal disruption. There are options for long crossings using bridges or underground tunnels. Posts are typically spaced at 23 m (25 yds).

### Low-cost Infrastructure & equitable fares

Transit X does not require government funding because our revenue from fares, freight, and advertising is greater than our costs. We have reduced or eliminated many costs of transportation including the cost of materials, land, construction, fuel, debt service, and labor. Our projects are typically financed by investment banks, private equity firms, banks, and governments.

### **Proven technology**

Our team and partners have built fully automated systems that are now in operation around the world. Transit X may look unique, but the underlying design is very similar to systems that have been operating for 40 years with an exemplary safety record. The rollout and maiden flight occurred on Oct 29, 2018 in Leominster, Massachusetts. The first Transit X system will be demonstrated by the end of 2019.

### **Service Quality**

Transit X provides on-demand, last-mile service that is superior to cars or buses. An operating agreement will guarantee high levels of availability and reliability. Our use of small vehicles (pods) makes this possible. By reducing car use, Transit X creates walkable and bike-friendly neighborhoods.

### Less pollution: Air, Sound, Light, Visual, Water

Transit X offers a much higher quality of life by eliminating many forms of pollution. Pods are quiet, efficient and have zero emissions. Pods offer less visual impact than the existing roads and vehicles, and utility lines can be hidden within the track. At night, there is no light pollution from headlights or taillights. Water pollution from road runoff is significantly reduced. Parking lots and roadways can be converted into green space and community paths as they become unnecessary.

### Sustainable and Efficient

Pods weigh only 55 kg (121 lbs) and achieve over 20 times the efficiency of electric cars. Solar, wind, and storage installed on our tracks and posts can provide 100% of the clean energy needed to power the system.

### More Transit & Fewer Cars

Transit X provides the convenience and privacy that people value in cars, yet without the negative impacts of personal cars. Transit X combines the best of mass transit and personal transportation modes which will lead to greater use of public transit and fewer cars.

### **De-risking Projects**

Transit X partners with large, established firms to provide fixed-price contracts for the engineering, certification, construction, and operations of a Transit X system. Theses partnerships enable Transit X to de-risk all of the major elements of the project, and provide performance guarantees. We work with local construction firms.

### Jobs and Workforce Development

Many regional jobs will be created to build a new transportation infrastructure, as well many new types of jobs will be created from economic growth. The majority of

the construction jobs will be locally sourced and preferential hiring is given to those displaced by the transition.

### **Revenue Generator for Government**

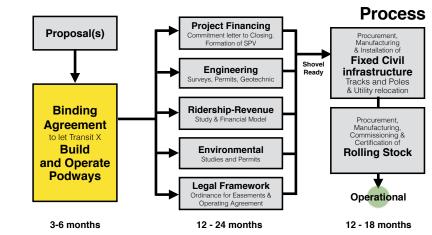
Not only does Transit X not require public financing, but the government and private easement owners receive 4-5% of gross revenue, which would be US\$17 million per year average over the first 10 years.

### Short and Long Term Solution

A project could be operational within 24 months from the start of a project. Transit X offers a rapidly-deployable solution that provides long term benefits. We would form a local company to build, operate, and maintain the network. At least 75% of the profits would be invested back into the region.

### **Moving Forward**

The diagram shows our process for a project. We submit a project proposal, then ask for a commitment for Transit X to build and operate a podway along rights-of-way easements. Example documents and a sample project schedule can be viewed at: transitx.com/process



### Evaluation

#### Please review our

preliminary proposal, and then ask us any questions. We would be happy to provide further information, address specific concerns, or meet with specific people or groups. Any routes or coverage areas shown on the map are only preliminary suggestions and actual routes would be determined based on needs, rights-of-ways, utility corridors, location of trees, and many other factors.

We expect this proposal to be reviewed by one or more committees or working groups. Familiar transportation options, such as buses, light rail, subways, and ridesharing services (including autonomous vehicles) may have already been considered. Very few options offer the convenience of cars with at least the capacity of buses, and most, if not all, require public funding and subsidies.

Private cars have a dominant mode share because people like the privacy and convenience of a car — despite the significant risks and negative impact associated with them. People won't give up their cars unless the alternative is both better and cheaper. That is what Transit X can provide.

We hope you agree that this proposal offers a way to address your challenges in both the short and long term, providing an option that is better and lower risk than any alternative — including continuing with the status quo.

We hope you will conclude that moving forward with Transit X is an excellent opportunity to meet your current and future challenges.

Once we agree to move forward, we look to receive a commitment for Transit X to build and operate a podway along rights-of-way easements.

A podway network is rolled out in phases that each take less than 24 months.

### **Other Resources**

The links below provide general information about Transit X:

- · One minute video overview (transitx.com/video)
- <u>Transit X Handbook</u> (transitx.com/transitxhandbook.pdf)
- · Letters of Project Financing, Due Diligence, Contracts (transitx.com/letters.pdf)
- Memorandum of Understanding template (transitx.com/process/mou.html)
- Example Right-of-Way agreement (<u>transitx.com/process/resolution.html</u>)
- · Operating Agreement (transitx.com/process/operating\_agreement.html)
- · General Q & A (transitx.com/QandA.html)
- Other proposals (transitx.com/proposals)

### Addendum

The remaining pages of this proposal provide project-specific details:

- Project Overview and Impact pages 6 and 7
- Taxes and Fees pages 8 and 9
- Fares page 10 and 11
- Financial Project Summary with Pro Forma pages 12 and 13

We look forward to working with you to improve the quality of life for George Town through better transportation.

Sincerely,



Email: rodneydixon@transitx.com or hello@transitx.com Telephone: +1 818-855-4106 (WhatsApp connected) Zoom e-room: https://zoom.us/j/8229009123 Website: transitx.com

Twitter: http://twitter.com/TransitXCorp

Mail: 1127 Commonwealth Ave #30, Boston, MA 02134 USA



## **Project Overview**



	ansit X.			
1	Transit X network length	118	km	
2	People (resident-equivalent) in region	708,127	resident-equivalent p	opulation
3	Route density ratio (route length to service area)	0.55		
4	Number of stops	240		
5	Triple-speed route length	0	km	
6	Water crossing route length	0	km	
7	Cost of fixed infrastructure	\$426,690,643		
8	per person	\$603		
9	Mode share of travel on Transit X (23% after first year)	71%	after 10 years	
10	Distance traveled by passengers on Transit X, per year	4,009,293,276	km	
11	per day	10,984,365	km	
12	Daily potential energy generation with standard panels on tracks	903.5	MWh	
13	Sustainable energy use per day	43.6	MWh	5.0% of max capacity
14	Energy storage capital cost for 1 day(s) of supply at \$250 per kWh	\$10,889,409		
15	Size (rated power) of solar installation	10,126	KW	
16	Cost to generate sustainable energy (at \$1,000 per kW)	\$10,126,457		
17	Cost of buying sustainable energy at \$0.15 per kWh	\$6,534	per day	9% of OPEX
18	Daily passengers riding Transit X	501,162	customers	71% of the pop.
19	Distance per passenger per day	22	km	
20	Average distance per trip (assuming 3 trips per day)	7	km	
21	Single passenger fare for shared 7 km trip	\$0.33	1.40	MYB
22	Passenger distance traveled during peak hour	2,196,873		
23	Breakeven			6% of expected and 28% to Transit X)
24	Boarding capacity	86,400	passengers per hour	(17% of customers)
25	Number of node for neak demand			
	Number of pods for peak demand	10,209	pods at 71% mo	ode share
26	Number of pous for peak demand Number of customers per pod		pods at 71% mo	
	Number of customers per pod		and 69 people per	
26		49.1	and 69 people per km	
26 27 28	Number of customers per pod Distance per pod per year	49.1 168,189 11,230	and 69 people per km m <sup>2</sup>	pod
26 27 28 29	Number of customers per pod Distance per pod per year Two-layer pod garage area (10% of route with side-parking)	49.1 168,189 11,230 \$66,358,500	and 69 people per km m <sup>2</sup> is \$72 per person	pod
26 27 28 29 30	Number of customers per pod Distance per pod per year Two-layer pod garage area (10% of route with side–parking) Cost of pods Capital cost of energy generation and storage	49.1 168,189 11,230 \$66,358,500	and 69 people per km m <sup>2</sup>	pod
26 27 28 29 30 31 <b>Pr</b>	Number of customers per pod Distance per pod per year Two-layer pod garage area (10% of route with side–parking) Cost of pods Capital cost of energy generation and storage	49.1 168,189 11,230 \$66,358,500 \$27,320,627	and 69 people per km m <sup>2</sup> is \$72 per person is \$39 per person	pod 0.1% of car parking
26 27 28 29 30 31 <b>Pr</b> 32	Number of customers per pod Distance per pod per year Two-layer pod garage area (10% of route with side–parking) Cost of pods Capital cost of energy generation and storage <b>Oject Finances</b> Total Project Cost	49.1 168,189 11,230 \$66,358,500 \$27,320,627 \$520,369,770	and 69 people per km m <sup>2</sup> is \$72 per person is \$39 per person 2,175,145,637	pod 0.1% of car parking
26 27 28 29 30 31 <b>Pr</b> 32 33	Number of customers per pod Distance per pod per year Two-layer pod garage area (10% of route with side–parking) Cost of pods Capital cost of energy generation and storage <b>Oject Finances</b> Total Project Cost Project cost per km	49.1 168,189 11,230 \$66,358,500 \$27,320,627 \$520,369,770 \$4,423,301	and 69 people per km m <sup>2</sup> is \$72 per person is \$39 per person 2,175,145,637 per km	pod 0.1% of car parking MYR
26 27 28 29 30 31 <b>Pr</b> 33 33 34	Number of customers per pod Distance per pod per year Two-layer pod garage area (10% of route with side–parking) Cost of pods Capital cost of energy generation and storage <b>Toject Finances</b> Total Project Cost Project cost per km Equity financing	49.1 168,189 11,230 \$66,358,500 \$27,320,627 \$520,369,770 \$4,423,301 \$156,110,931	and 69 people per km m <sup>2</sup> is \$72 per person is \$39 per person 2,175,145,637 per km 652,543,691	pod 0.1% of car parking MYR MYR
26 27 28 29 30 31 <b>Pr</b> 32 33 34 35	Number of customers per pod Distance per pod per year Two-layer pod garage area (10% of route with side–parking) Cost of pods Capital cost of energy generation and storage <b>Oject Finances</b> Total Project Cost Project cost per km	49.1 168,189 11,230 \$66,358,500 \$27,320,627 \$520,369,770 \$4,423,301	and 69 people per km m <sup>2</sup> is \$72 per person is \$39 per person 2,175,145,637 per km 652,543,691	pod 0.1% of car parking MYR MYR
26 27 28 29 30 31 <b>Pr</b> 32 33 34 35 36	Number of customers per pod Distance per pod per year Two-layer pod garage area (10% of route with side–parking) Cost of pods Capital cost of energy generation and storage <b>Toject Finances</b> Total Project Cost Project cost per km Equity financing	49.1 168,189 11,230 \$66,358,500 \$27,320,627 \$520,369,770 \$4,423,301 \$156,110,931	and 69 people per km m <sup>2</sup> is \$72 per person is \$39 per person 2,175,145,637 per km 652,543,691	pod 0.1% of car parking MYR MYR
26 27 28 29 30 31 <b>Pr</b> 32 33 34 35 36 37	Number of customers per pod Distance per pod per year Two-layer pod garage area (10% of route with side–parking) Cost of pods Capital cost of energy generation and storage <b>Oject Finances</b> Total Project Cost Project cost per km Equity financing Debt financing	49.1 168,189 11,230 \$66,358,500 \$27,320,627 \$520,369,770 \$4,423,301 \$156,110,931 \$364,258,839	and 69 people per km m <sup>2</sup> is \$72 per person is \$39 per person 2,175,145,637 per km 652,543,691	pod 0.1% of car parking MYR MYR
26 27 28 29 30 31 <b>Pr</b> 33 34 35 36 37 38 39	Number of customers per pod Distance per pod per year Two-layer pod garage area (10% of route with side–parking) Cost of pods Capital cost of energy generation and storage <b>Oject Finances</b> Total Project Cost Project cost per km Equity financing Debt financing	49.1 168,189 11,230 \$66,358,500 \$27,320,627 \$520,369,770 \$4,423,301 \$156,110,931 \$364,258,839 \$61,924,003	and 69 people per km m <sup>2</sup> is \$72 per person is \$39 per person 2,175,145,637 per km 652,543,691 1,522,601,946 258,842,331	pod 0.1% of car parking MYR MYR MYR MYR
26 27 28 29 30 31 <b>Pr</b> 33 34 33 33 34 35 36 37 38 39 39 40	Number of customers per pod Distance per pod per year Two-layer pod garage area (10% of route with side–parking) Cost of pods Capital cost of energy generation and storage <b>Oject Finances</b> Total Project Cost Project cost per km Equity financing Debt financing	49.1 168,189 11,230 \$66,358,500 \$27,320,627 \$520,369,770 \$4,423,301 \$156,110,931 \$364,258,839	and 69 people per km m <sup>2</sup> is \$72 per person is \$39 per person 2,175,145,637 per km 652,543,691 1,522,601,946	pod 0.1% of car parking MYR MYR MYR MYR
26 27 28 29 30 31 <b>Pr</b> 33 34 35 36 37 38 39 40 41	Number of customers per pod Distance per pod per year Two-layer pod garage area (10% of route with side–parking) Cost of pods Capital cost of energy generation and storage <b>Oject Finances</b> Total Project Cost Project cost per km Equity financing Debt financing	49.1 168,189 11,230 \$66,358,500 \$27,320,627 \$520,369,770 \$4,423,301 \$156,110,931 \$364,258,839 \$61,924,003	and 69 people per km m <sup>2</sup> is \$72 per person is \$39 per person 2,175,145,637 per km 652,543,691 1,522,601,946 258,842,331	pod 0.1% of car parking MYR MYR MYR MYR
26 27 28 29 30 31 <b>Pr</b> 33 34 35 36 37 38 39 40 41 42	Number of customers per pod Distance per pod per year Two-layer pod garage area (10% of route with side–parking) Cost of pods Capital cost of energy generation and storage <b>Oject Finances</b> Total Project Cost Project cost per km Equity financing Debt financing	49.1 168,189 11,230 \$66,358,500 \$27,320,627 \$520,369,770 \$4,423,301 \$156,110,931 \$364,258,839 \$61,924,003	and 69 people per km m <sup>2</sup> is \$72 per person is \$39 per person 2,175,145,637 per km 652,543,691 1,522,601,946 258,842,331	pod 0.1% of car parking MYR MYR MYR MYR
26 27 28 29 30 31 <b>Pr</b> 32 33 34 35 36 37 38 39 40 41 42 43	Number of customers per pod Distance per pod per year Two-layer pod garage area (10% of route with side–parking) Cost of pods Capital cost of energy generation and storage <b>Coject Finances</b> Total Project Cost Project cost per km Equity financing Debt financing Debt financing	49.1 168,189 11,230 \$66,358,500 \$27,320,627 \$520,369,770 \$4,423,301 \$156,110,931 \$364,258,839 \$61,924,003 <b>\$21,532,095</b>	and 69 people per km m <sup>2</sup> is \$72 per person is \$39 per person 2,175,145,637 per km 652,543,691 1,522,601,946 258,842,331 90,004,156	pod 0.1% of car parking MYR MYR MYR MYR MYR MYR MYR
<ul> <li>26</li> <li>27</li> <li>28</li> <li>29</li> <li>30</li> <li>31</li> <li>Pr</li> <li>32</li> <li>33</li> <li>34</li> <li>35</li> <li>36</li> <li>37</li> <li>38</li> <li>39</li> <li>40</li> <li>41</li> <li>42</li> <li>43</li> <li>44</li> </ul>	Number of customers per pod Distance per pod per year Two-layer pod garage area (10% of route with side–parking) Cost of pods Capital cost of energy generation and storage <b>Coject Finances</b> Total Project Cost Project cost per km Equity financing Debt financing Debt financing	49.1 168,189 11,230 \$66,358,500 \$27,320,627 \$520,369,770 \$4,423,301 \$156,110,931 \$364,258,839 \$61,924,003 \$21,532,095 \$109,474,586 \$109,474,586	and 69 people per m <sup>2</sup> is \$72 per person is \$39 per person 2,175,145,637 per km 652,543,691 1,522,601,946 258,842,331 90,004,156 457,603,763 3,072	pod 0.1% of car parking MYR MYR MYR MYR MYR MYR MYR
26 27 28 29 30 31 <b>Pr</b> 32 33 34 35 36 37 38 39 40 41 42 43 44 43	Number of customers per pod Distance per pod per year Two-layer pod garage area (10% of route with side–parking) Cost of pods Capital cost of energy generation and storage <b>Coject Finances</b> Total Project Cost Project cost per km Equity financing Debt financing Debt financing	49.1 168,189 11,230 \$66,358,500 \$27,320,627 \$520,369,770 \$4,423,301 \$156,110,931 \$364,258,839 \$364,258,839 \$364,258,839 \$364,258,839 \$364,258,839 \$364,258,839	and 69 people per m <sup>2</sup> is \$72 per person is \$39 per person 2,175,145,637 per km 652,543,691 1,522,601,946 258,842,331 90,004,156 4,175 3,072 motor vehicles	pod 0.1% of car parking MYR MYR MYR MYR MYR MYR MYR MYR
26 27 28 29 30 31 <b>Pr</b> 32 33 34 35 36 37 38 39 40 41 42 43 44 43	Number of customers per pod Distance per pod per year Two-layer pod garage area (10% of route with side–parking) Cost of pods Capital cost of energy generation and storage <b>Coject Finances</b> Total Project Cost Project cost per km Equity financing Debt financing Debt financing Net financing Debt service (per year) COPEX + Debt Service + Tex + Dece Project costs – per person Number of motor vehicles displaced	49.1 168,189 11,230 \$66,358,500 \$27,320,627 \$520,369,770 \$4,423,301 \$156,110,931 \$364,258,839 \$364,258,839 \$364,258,839 \$364,258,839 \$364,258,839 \$364,258,839 \$364,258,839 \$364,258,839 \$364,258,839 \$364,258,839 \$364,258,839 \$364,258,839 \$364,258,839 \$364,258,839 \$364,258,509 \$364,258,509 \$5,096	and 69 people per m <sup>2</sup> is \$72 per person is \$39 per person 2,175,145,637 per km 652,543,691 1,522,601,946 258,842,331 90,004,156 4,175 3,072 motor vehicles	pod 0.1% of car parking MYR MYR MYR MYR MYR MYR MYR MYR
<ul> <li>26</li> <li>27</li> <li>28</li> <li>29</li> <li>30</li> <li>31</li> <li>Pr</li> <li>32</li> <li>33</li> <li>34</li> <li>35</li> <li>36</li> <li>37</li> <li>38</li> <li>39</li> <li>40</li> <li>41</li> <li>42</li> <li>43</li> <li>44</li> <li>45</li> <li>46</li> </ul>	Number of customers per pod Distance per pod per year Two-layer pod garage area (10% of route with side–parking) Cost of pods Capital cost of energy generation and storage <b>Oject Finances</b> Total Project Cost Project cost per km Equity financing Debt financing Debt financing	49.1 168,189 11,230 \$66,358,500 \$27,320,627 \$520,369,770 \$4,423,301 \$156,110,931 \$364,258,839 \$61,924,003 \$21,532,095 \$109,474,586 \$735 400,929 \$5,096 \$0,01	and 69 people per m <sup>2</sup> is \$72 per person is \$39 per person 2,175,145,637 per km 652,543,691 1,522,601,946 258,842,331 90,004,156 4,175 3,072 motor vehicles	pod 0.1% of car parking MYR MYR MYR MYR MYR MYR MYR MYR
<ul> <li>26</li> <li>27</li> <li>28</li> <li>29</li> <li>30</li> <li>31</li> <li>Pr</li> <li>32</li> <li>33</li> <li>34</li> <li>35</li> <li>36</li> <li>37</li> <li>38</li> <li>39</li> <li>40</li> <li>41</li> <li>42</li> <li>43</li> <li>44</li> <li>45</li> <li>46</li> <li>47</li> </ul>	Number of customers per pod Distance per pod per year Two-layer pod garage area (10% of route with side–parking) Cost of pods Capital cost of energy generation and storage <b>Oject Finances</b> Total Project Cost Project cost per km Equity financing Debt financing Debt financing Vearly fees and taxes (US\$30 per capita) Vearly fees and taxes (US\$30 per capita) DODEX a Debt forwice a force Project costs — per person Number of motor vehicles displaced Yearly cost of cars displaced — per person Operating costs per passenger-km	49.1 168,189 11,230 \$66,358,500 \$27,320,627 \$520,369,770 \$4,423,301 \$156,110,931 \$364,258,839 \$364,258,839 \$364,258,839 \$364,258,839 \$364,258,839 \$364,258,839 \$364,258,839 \$364,258,839 \$364,258,839 \$364,258,839 \$364,258,839 \$364,258,839 \$364,258,839 \$364,258,839 \$364,258,839 \$364,258,506 \$364,258,506 \$5,096 \$5,096 \$5,096 \$0,01 \$0,03	and 69 people per km m <sup>2</sup> is \$72 per person is \$39 per person 2,175,145,637 per km 652,543,691 1,522,601,946 258,842,331 90,004,156 3,072 motor vehicles 21,300	pod 0.1% of car parking MYR MYR MYR MYR MYR MYR MYR MYR
<ul> <li>26</li> <li>27</li> <li>28</li> <li>29</li> <li>30</li> <li>31</li> <li>Pr</li> <li>32</li> <li>33</li> <li>34</li> <li>35</li> <li>36</li> <li>37</li> <li>38</li> <li>39</li> <li>40</li> <li>41</li> <li>42</li> <li>43</li> <li>44</li> <li>45</li> <li>46</li> </ul>	Number of customers per pod Distance per pod per year Two-layer pod garage area (10% of route with side–parking) Cost of pods Capital cost of energy generation and storage <b>Oject Finances</b> Total Project Cost Project cost per km Equity financing Debt financing Debt financing	49.1 168,189 11,230 \$66,358,500 \$27,320,627 \$520,369,770 \$4,423,301 \$156,110,931 \$364,258,839 \$61,924,003 \$21,532,095 \$109,474,586 \$735 400,929 \$5,096 \$0,01	and 69 people per km m <sup>2</sup> is \$72 per person is \$39 per person 2,175,145,637 per km 652,543,691 1,522,601,946 258,842,331 90,004,156 3,072 motor vehicles 21,300	pod 0.1% of car parking MYR MYR MYR MYR MYR MYR MYR MYR

## Project Overview p. 2



### Impact of proposed network

1	Reduction in GHG emissions (metric tons CO2-eq)
2	Estimated cost to maintain public roadways
3	Reduced waste products
4	Travel time saved (non-stop travel and congestion)
5	Cost savings from reduced car ownership
6	Increase in household income (from time savings and car costs)
7	Reported injuries avoided
8	Lives saved (from safety)
9	Land freed from parking (2,279 acres)
12	Temperature reduction (from heat island effect & GHG reductions)
11	Health care savings (from pollution, injuries)

### **Model Inputs**

		-
15	Ratio of road length to track length	
16	Walking speed	
17	Width of convenient swath along track	
18	Fixed cost per km (track & posts)	\$2
19	Water crossing: additional cost per km	\$8
20	Triple-speed: additional cost per km	\$
21	Rate factor for water crossings or high-speed links.	
22	Average distance traveled per person per year	
22	(for trips under 1600 km)	
23	Average distance per day per person	
24	Mode share % of people convenient to Transit X	
25	Percentage of daily demand during peak hour	
26	Maximum capacity per track	
27	Average dwell time during peak hour	
28	% of pods traveling on route with highest demand	
29	Average speed of pod	
30	Average # of trips for a daily customer	
31	Average passengers per pod during peak hours	
32	Average passengers per pod	
	Average discount per passenger	
33	Maximum passengers per pod	
34	Empty pods: Percentage non-revenue	
35	Ex-Factory cost per pod	
36	Worldwide Median Income per Household (US\$)	
37	Average number of residents per household	
38	Base fare per km	
39	(per mile)	
40	O&M as % of project cost	
41	Percentage debt financed	
42	Length of loan/debt	
43	Interest rate for debt	
44	kg CO2 emissions per liter of gasoline	
45	Monetary value of 1 hour personal time (USD)	
46	Eat. roadway maintenance per year per km	
47	Area of one parking lot space	
48	Commercial income of land (annual)	
49	Distance from roadway that is convenient	
50	Stops per km	
51	Boarding capacity per stop Solar panel area per meter of track	
52	Cost of sustainable energy and storage	
53	Global Horizontal Irradiance (GHI)	
54	Cost to generate sustainable energy	
55 56	Storage per column	
	Typical span	
57 58	Energy storage cost	
	Energy storage capacity	
59 60	Area of parked pod	
	Distance discount at max distance	
61 62	Max distance discount	
63	Max usage discount at 10.000 km per capita	
64	Shared Pod Discount	
65	Shared Pod Compartment Discount	
66	Mode share starting discount	
00		

4		
	km/h	
1.63	km	
\$2,790,000	11,662,200	MYR
\$8,370,000		
\$5,580,000		
2.2		
10,000	km	
,		
27	km	
	at 5 min walk.	
20%		
40,349		
10	seconds	
18%		
72	km/h	45 mph
3	per day	
3.7	passengers	
2.3	passengers	
26%		
5	passengers	
25%		
\$5,000	20,900	MYR
10,000	41,800	MYR
2.3		MYR
\$0.08	0.3	MYR
\$0.12		MYR
5%		
70%		
	years	
7%	,	
2.37		
\$2.00	8	MYR
\$51,000	213,180	MYR
. ,	m <sup>2</sup>	
\$0.16	per m <sup>2</sup>	MYR
0.49		
2.0	KIII	
360	nnh	
2.0		
	per kWh	
	kWh/m²/day	
\$1,000		
40	kWh	
	m cols/km:	44
\$250	per kWh	
	days	
	m <sup>2</sup>	
40%		
40 % 500	km	
50%	1511	
20%		
20% 40%		
40% 67%		
01%		

395,918	MTCO2-eq annually
\$21,999,214	annually
64,249	metric tons annually
389	hrs/person annually
\$4,350	per person annually
64%	
2,486	annually
25	annually
9,221,375	m²
0.5 to 2	°C
High	

### Model Inputs (continued)

68	Name of region or project	George Town, Penan
69	Currency name	MYR
70	Equal to US\$1	4.18
71	Sustainable energy/electricity generation & storage as	CAPEX
72	Land area of region (sq. km)	305
73	Number of residents in region	708,127
74	% travel within region	80%
75	% of land area served by roads	70%
76	Coverage: % of pop. convenient (10 min walk) to Transit X	90%
77	Annual median household income (US\$)	\$8,000
78	Convenient walk time to stop (min)	10
79	Triple-speed route length (km)	0
80	Water crossing route length (km)	0.0
81	Visitors per year	0
82	Average length of visit (days)	2
83	Solar production ratio	1.57
84	Regional Fare Factor	1.0
85	EPC costs & contingency	30%
86	Triple-speed (km/h)	242
87	Daily Passengers Adjustment	100%
88	Number of Stops Adjustment	100%
89	Mode Share Adjustment	100%

### Pod & Car

		Pod	Car
87	Service life (years)	20	12
88	Full cost of vehicle per year	\$200	\$9,000
89	Public cost to maintain infrastructure (per km)	\$0	\$100,000
90	Energy consumption (MPGe)	3564	24
91	Energy consumption (liters/100km)	0.07	9.8
92	Energy consumption (Watt-hours/km)	9	1375
93	mass of CO2 per vehicle per km (kg)	0	0.09875
94	Vehicle mass (kg)	45	1950
95	Average speed of urban travel (km/h)	72	16
96	Typical travel time (in minutes) for 7 km trip	6	27
97	Fare/cost per km	\$0.08	\$0.62
98	Number of deaths per 100M passenger-km	0.00001	1
99	Number of injuries per 100M passenger-km	0.0006	62
100	Volume to park (cubic meters)	5.7	70.9
	1 ( )		



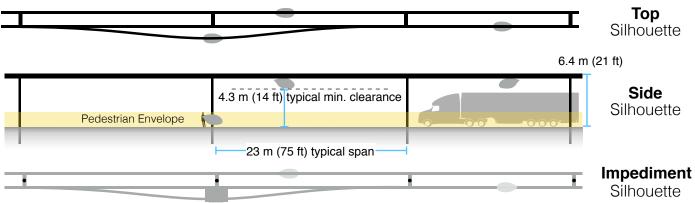
## **Taxes and Fees**

### 5% of gross revenue is paid for air rights and local taxes.

A minimum payment is based on the Footprint and the Transit X Commercial Rate (TXCR).

1	Air-rights and Local Taxes		(for calculating min	nimums)	
2	Total commercial land (estimated)	21,350,000	m <sup>2</sup>		acres
3	Total commercial gov't revenue (US\$)	\$3,416,000		14,278,880	MYR
4	TXCR (Transit X Commercial Rate)	\$0.16	per m <sup>2</sup> (estimated)	0.7	MYR
5	TXCR is the yearly tax rate per land area. Calculation: total land area of commercial properties in the governmental region, divided by all the governmental income generated by those properties. The TXCR is used to calculate the minimum tax/fee.				
7	Private Easement Fees	For examp	ble		
8	4% of gross revenue	\$36.61	per route-meter		
9	Minimum nor yook	\$0.24	per route-meter		
9	Minimum per year	\$01 <u>2</u> 1	per route meter		
9 10	Transit X payment to Gover				
		nment	estimated		
10 11	Transit X payment to Gover	nment	estimated	88,564,089	MYR
10 11	Transit X payment to Gover % of route on government easements	nment 98%	estimated		MYR MYR
10 11 12	Transit X payment to Gover % of route on government easements Total air-rights and local taxes	nment 98% \$21,187,581	estimated per year		MYR
10 11 12 13	Transit X payment to Gover         % of route on government easements         Total air-rights and local taxes         per resident	nment 98% <b>\$21,187,581</b> \$30	estimated per year	125 116,934	MYR
10 11 12 13 14	Transit X payment to Gover         % of route on government easements         Total air-rights and local taxes         per resident	nment 98% <b>\$21,187,581</b> \$30 \$27,975	estimated per year per year	125 116,934 0	MYR MYR
10 11 12 13 14 15	Transit X payment to Gover         % of route on government easements         Total air-rights and local taxes         per resident         with a minimum of	nment 98% <b>\$21,187,581</b> \$30 \$27,975	estimated per year per year	125 116,934 0	MYR MYR MYR
10 11 12 13 14 15 16	Transit X payment to Gover         % of route on government easements         Total air-rights and local taxes         per resident         with a minimum of	nment 98% <b>\$21,187,581</b> \$30 \$27,975 Government	estimated per year per year	125 116,934 0	MYR MYR MYR MYR
10 11 12 13 14 15 16 17	Transit X payment to Gover         % of route on government easements         Total air-rights and local taxes         per resident         with a minimum of         Other financial benefits to C         Less road maintenance from lower VMT	nment 98% <b>\$21,187,581</b> \$30 \$27,975 <b>Government</b> g and lanes	estimated per year per year	125 116,934 0	MYR MYR MYR MYR MYR

## Footprint calculations for minimum fee



Pod landing area: 1.5m x 2.5m with 3m minimum spacing

1	Footprint Calculations	Metric	Imperial
2	Track width	<u>0.30</u> m	
3	Track height	<u>0.60</u> m	
4	Post diameter	<u>0.3</u> m	
5	Post cross section	<u>0.07</u> m <sup>2</sup>	
6	Stop landing area	<u>3.75</u> m <sup>2</sup>	
7	width	<u>1.5</u> m	
8	length	<u>2.5</u> m	
9	Ramp length	<u>21</u> m	
10	Typical Span	<u>23</u> m	
11	Number of posts per unit length	<u>43.5</u> pole	es per km
12	Post height	<u>6</u> m	
13			
14	Single track	1022.1 m <sup>2</sup>	
15	Area of Side Silhouette	678.3 m <sup>2</sup>	
16	Area of Top Silhouette	313.1 m <sup>2</sup>	
17	Impediment Area (adjusted)	30.7 m <sup>2</sup>	
18			
19	Dual track	1322.1 m <sup>2</sup>	
20	Area of Side Silhouette	678.3 m <sup>2</sup>	
21	Area of Top Silhouette	613.1 m <sup>2</sup>	
22	Impediment Area (adjusted)	30.7 m <sup>2</sup>	
23			
24	Stop	82.1 m <sup>2</sup>	
25	Area of Side Silhouette	25.2 m <sup>2</sup>	
26	Area of Top Silhouette	19.4 m <sup>2</sup>	
07			
27	Impediment Area (adjusted)	37.5 m <sup>2</sup>	
28			
29	Stops with dedicated landing areas	2 stop	os per km
30	% of dual track	100%	
31			
32	Average area per unit length	1,486 m² p	per route-km
33			
34	Contract values		
35	% gross revenue for government on private prop.	1%	
36	% gross revenue for private easement	4%	
37	% gross revenue for government easement	5%	
38	Impediment Factor	10	



The average commute would be 3.5 times faster saving each commuter 295 hours per year.\*

At 0.19 MYR per km, a typical commute on Transit X is 17% less than public transit and 74% less than a Taxi.\*

			_						Trip	b Le	eng	th			
All prices in MYR			2	2 km					10 km				40 km		
Transit X				<b>0.38</b> to 0.64 2 min., 3.6x faster				<b>1.89</b> to 3.16 8 min., 3.6x faster			ster	<b>7.24</b> to 12.34 33 min., 3.4x faster			
Public transit average					2.				3	3.4	10		4.99		
nodes	Taxi Uber/Lyft Public Bus			2	<b>2.</b> to 6 n		S			<b>12.9</b> 30 m		es	<b>50.20</b> 30 to 120 minutes		
Common public modes				<b>2.26</b> 2 to 6 minutes				<b>9.29</b> 8 to 30 minutes		es	<b>35.69</b> 30 to 120 minutes				
d uou				31	<b>1.</b> to 12 r		es		15 to	<b>1.7</b> 60 r		tes	<b>2.64</b> 60 to 240 minutes		
Com	Trai	n		21	<b>2.</b> to 12 r		es		8 to	<b>3.0</b> 60 m		es	<b>4.76</b> 30 to 240 minutes		
Personal car				2 t	<b>2.</b> 3		es		8 to 3	<b>7.C</b> 30 m	-	tes	<b>24.76</b> 30 to 120 minutes		
	Avg. Speed	Low Speed	High speed				Min Dist	Max Dist.	Time cost	Mode 6%	shar 70%	-	* All numbers on mode shares, speeds, and cos		
Travel mode	km/h	km/h	km/h	Base	Includ es km	Over per-km	km	km	per min	2	10	40	are rough estimates		
Taxi	30	20	80	1.72	1	0.86	0.5	100	0.76	5%	4%	1%			
Uber/Lyft Public Bus	30 15	20 10	80 40	1.38 1.72	1 20	0.69 0.05	0.5	100 50	0.38 0	10%	10% 50%				
Train	30	10	40 80	2.58	20	0.05		100	0		36%				
					_				-						

Base fares are set for first 5 years, then adjusted by formula. A 20% discount on a shared pod and a 40% discount on a shared compartment. Trips are discounted proportional to their length reaching a maximum of a 40% discount on a 500 km trip. No congestion–based pricing. Fares are proportional to the median income of the area and inversely proportional to per capita use, so the more use of Transit X, the lower the base fare up a to 50% discount. The amount of market–rate fares must be less than the amount of discounted fares. Transit X Fair Fare Formula and Fair Freight Formula is universal and applies to all regions and all times.

0

0.03

0.19 0.1 50

0.57 0.1 400

72

30

72

20

72

80

0

1.15

0

0

Transit X

Personal car



# **Fair Fare Formula**

## Fare rates are updated annually using this formula

	Name	Value	Units	Description of the value or model input	In USD
1	GlobalIncome	41,800	MYR	Global median household income. Updated annually based on most recent standard published data.	10,000
2	AllTravel	23,000	km	Travel distance per household per year on any mode for trips under 1600 km. A global constant	
3	PercentIncomeForTr ansport	20%		% of median household income for all transportation under 1600 km trips. A global constant.	
4	GlobalRate	0.36	MYR/km	Global rate: Globalincome * PercentincomeForTransport / AliTravel	0.09
5	IncomeFirst	\$33,440	MYR	Median household income at first stop (per person per day). External input. Based on reliable public data source updated annually.	\$8,000
6	IncomeDest	\$50,160	MYR	Median household income at destination per trip. External input. Based on reliable public data updated annually.	\$12,000
7	RegionalRate	0.29	MYR/km	Regional rate based on median income: MedianIncomeFirst * PercentIncomeForTransport / AllTravel	0.07
8	UnderIncomeRate	0.07	MYR/km	Under global income adjustment: if (RegionalRate < GlobalRate, GlobalRate - RegionalRate, 0)	0.02
9	NominalRate	0.36	MYR/km	Nominal rate: RegionalRate + UnderIncomeRate	0.09
0	RegionalFactor	1.00		Regional Fare Factor. Negotiated upfront to make network financially viable.	
11	AdjustedRate	0.36	MYR/km	<b>o</b> , <b>o</b>	0.09
3	Population	708,127		Population in region. Updated annually based on trusted public data source.	
12	UsageMaxDiscount	50%		Fare Discount when Transit X travel per household equals AllTravel. Global constant.	
4	PassengerTravel 2	4,009,293,276	i km	Total passenger distance traveled previous calendar year. Based on expected mode share for first 3 years. Based on actual passenger trips. Audited.	
15	ModeShare	25%		Percent of Total Travel Per Capita on Transit X: PassengerTravel / (Population x AllTravel)	
6	BaseRate	0.32	MYR/km	Base rate for single-passenger pod (without discounts) (1 - UsageMaxDiscount x min(1,ModeShare)) x AdjustedRate	0.08
7	SpecialRateFactor	2.20		Rate factor for water crossings or high-speed links. Global constant.	
8	SpecialBaseRate	0.70	MYR/km	Base rate for high-speed travel or water crossings: BaseRate * SpecialRateFactor	0.17
9	DistanceDiscount	40%		Distance discount at max distance. Global constant.	
20	MaxDistanceDiscou nt	500	km	Max distance discount. Global constant.	
21	DistanceDiscountPe rKm	0.000255	MYR/km	Discount amount per km: BaseRate x DistanceDiscount / MaxDistanceDiscount	
22	SeniorDiscount	20%		Senior discount set according to local regulations	
23	StudentDiscount	20%		Student discount set according to local regulations	
	DisabilityDiscount	20%		Disability discount set according to local regulations	
24	DiscountBaseRate	0.25	MYR/km	Discounted base rate: BaseRate x (1 - SeniorDiscount)	0.06
25	SharedPodDiscount	20%		Discount for a shared pod. Set by Transit X per year. 15% minimum and 30% maximum. Maximum yearly change is one percentage point.	
26	SharedPodRate	0.25	MYR/km	Rate for a shared pod: BaseRate x (1 - SharedPodDiscount)	0.06
27	SharedCompartment Discount	40%		Discount for shared compartment. Set by Transit X per year. 25% minimum and 40% maximum. Maximum yearly change is one percentage point.	
28	SharedCompartment Rate	0.19	MYR/km	Rate for shared compartment BaseRate x (1 - SharedCompartmentDiscount)	0.05
29	SingleOccupancyMa xDistance	0.22	MYR/km		
30	Senior + SharedCompartment Rate	0.09	MYR/km	Rate for a Senior taking a 500 km trip in a shared compartment. BaseRate x (1 - SeniorDiscountAmount) x (1 - SharedCompartmentDiscount) x (1 - MaxDistanceDiscount)	0.02
31	50PctIncomeAtDest	25%		% Higher fare rate if Destination has 50% higher median income than First (IncomeDest / IncomeFirst - 1) / 2	
32	DistanceBase 2	2,966,877,024	km	Passenger distance under base fare. Audited value from operational data.	
33	PercentBase	74%		Percent of passenger distance under base fare: DistanceBase / PassengerTravel	
34	BaseRevenue	698,609,228	MYR	Annual revenue from all travel under base rate. Audited value from operational data.	
35	AverageDiscount	26%		Average fare discount from Base Rate: 1 - (BaseRevenue / (DistanceDase x BaseRate))	
36	MarketFactor	1.0		Market rate factor. Negotiated value for setting ratio of AverageDiscount	
	MarketRateCap	26%		Cap on passenger travel distance at market rate:	
37	Marketriateoap			AverageDiscount x MarketFactor	

### **Project Summary**

**Project** A fully-automated, solar-powered, micro-rail **Description** network. A transportation utility.

Project type Sustainable Transportation Infrastructure Design, Build, Finance, Own, Operate, Maintain (DBFOOM)

Project equity US\$156 million (30% of total)

Cost to Gov't \$0

Structure Privately financed equity and debt

Debt term 10 years @ 7%

- Equity terms A waterfall profit distribution per year with:
  - 1. 90% until capital payback,
  - 2. then 50% until Target% is reached
  - 3. then 10%

Taxes & Fees \$21,187,581 per year

Benefits to society and Extremely high environment

Estimated return 22% average IRR at 5 yrs 32% average IRR at 10 yrs

Financials (US\$ in millions)	Year 1	Total Years 1-12
Gross Revenues	142	4,122
Taxes and fees	7	206
Debt service	\$25	\$280

### ESG (Environmental, Social, Governance) Benefits

Clean Energy	yes	Improve Resiliency	yes
Energy security	yes	Sustainable	yes
Zero Emissions	yes	Equitable	yes
Zero GHG	yes	<b>Recyclable Materials</b>	yes
Lowers Pollution	yes	Affordable Housing	yes
Clean Water	yes	Improved Health	yes
Improved Safety	yes	Economic Development	yes
Add Green Space	yes	Access to Food	yes
Accessible	yes	Add Quality Jobs	yes

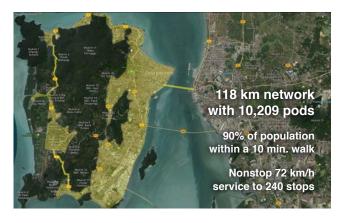




Transit X presents a preliminary proposal for a sustainable micro-rail network – a fleet of automated electric vehicles (pods) for passengers and freight on a local and regional podway providing equitable public transportation for

### George Town, Penang, Malaysia

High capacity • High speed • Nonstop • 24/7 Solar powered • Zero Wait • Door-to-door • Resilient



#### About Transit X

Transit X finances, designs, builds, and operates solar-electric micro-rail public transit podways to supplant buses, trains, cars, and trucks. Transit X offers its service to governments and commercial developers. Maiden Flight was on Oct 29, 2018 and pilot projects started in 2018. First pilots will break ground in 2019 and begin operations in 2020. Transit X is a privately held company founded in 2015, based in Boston, Massachusetts.

### Status

	Now	Prior to close
Project financing	Available	Yes
Outdoor Test Track	Nov 2019	Yes
Rider-Revenue study	Preliminary	Yes
Environmental study	Per region	Yes
Air rights	Per project	Yes
Permitting	Per project	Yes
Safety certification	Per country	Yes
Construction firm	Per project	Yes
Design and major subs	Per project	Yes
<b>Operations &amp; Maint</b>	Partners	Yes
Utility relocation	Per project	Agreements

General information available at <u>transitx.com</u>. Detailed information and references can be provided under appropriate nondisclosure/non-compete/non-circumvent agreements. Contact: Mike Stanley, CEO, Transit X, <u>mike@transitx.com</u>, 508-596-7024

### 12-year Pro Forma



### **Model Inputs and Assumptions**

Route length (km)	118
Starting number of pods	3,369
Projected revenue growth	15%
Project Cost (Privately funded)	\$520,369,770
% Debt financed	70%
Debt	\$364,258,839
Equity	\$156,110,931
Debt payment (per year)	\$25,498,119

#### Travel per year per pod (km) 168,189

- Revenue per vehicle-km (US\$) 0.25
  - OPEX as % of project cost 5%
    - Debt Interest rate 7%
      - Debt term (yrs) 10
- Profit share when below capital return 90%
  - Profit share when below Target IRR 50%
  - Profit share when above Target IRR 10%

### Pro Forma

	Years O	1	2	3	4	5	6	7	8	9	10	11	12
Revenue	0	142,113,090	163,430,054	187,944,562	216,136,246	248,556,683	285,840,185	328,716,213	378,023,645	434,727,192	499,936,270	574,926,711	661,165,717
5% RoW÷tax÷fee	0%	7,105,655	8,171,503	9,397,228	10,806,812	12,427,834	14,292,009	16,435,811	18,901,182	21,736,360	24,996,814	28,746,336	33,058,286
Debt service	0	\$25,498,119	\$25,498,119	\$25,498,119	\$25,498,119	\$25,498,119	\$25,498,119	\$25,498,119	\$25,498,119	\$25,498,119	\$25,498,119	\$25,498,119	\$25,498,119

Investor share	0	67,627,571	80,869,728	37,024,522	31,356,752	33,594,492	36,167,894	39,127,306	42,530,630	46,444,452	50,945,348	56,121,378	62,073,813
Investor share (%)		90%	90%	35%	25%	23%	21%	19%	18%	17%	16%	15%	14%
Share / Orig Capital	0%	43%	52%	24%	20%	22%	23%	25%	27%	30%	33%	36%	40%
IRR to date	loss	(57%)	(3%)	10%	17%	22%	26%	28%	30%	31%	32%	33%	33%

#### **Important Notices**

The information contained in this document is not an offer to sell or a solicitation to buy any security. These materials and documents and information from which they are derived or which are referred to by or accessible from them may contain forward looking statements within the meaning of Section 27A of the Securities Act of 1933, Section 2E of the Securities Exchange Act of 1934 and the Private Securities Litigation Reform Act of 1995. All statements other than statements of historical fact are forward looking statements and are subject to risks and uncertainties. Forward looking statements generally can be identified by the use of forward looking terminology such as "may," "will," "expect," "intend," "estimate," "project," "anticipate," "believe" or "plan" or the negative thereof or variations thereon or similar terminology. Although Transit X believes that the expectations reflected in such forward looking statements are reasonable, it can give no assurance that such expectations will prove to be correct. All forward looking statements or circumstances after the date made. Except as required by law, Transit X undertakes no obligation to update any forward looking statements and information from which they are derived or which are referred to by or accessible from them represent Transit X's best estimate as to the allocation of the funding proceeds based upon its present business plan and financial condition. The costs and expenses to be incurred in pursuing the Company's business plan cannot be predicted with certainty. There can be no assurance that unforeseen events will not occur or that the Company's business plan will be achieved or that it will not be changed, and it is possible that the funding proceeds may be applied in a manner other than that described herein.

# **Jobs Report**

1	Annual median household income (US\$)	\$8,000
2	CAPEX	
3	Average gross CAPEX salary (% of median HH)	125%
4	Average gross CAPEX salary	\$10,000
5	% of CAPEX as salary	15%
6	Years of CAPEX	2
7	# of CAPEX jobs	3,903
8	% of jobs that are manufacturing vs. construction	75%
9	Manufacturing jobs	2,927
10	Construction jobs	976
11	OPEX	
12	Average gross OPEX salary (% of median HH)	115%
13	Average gross OPEX salary	\$9,200
14	% of OPEX as salary	30%
15	<b>Operations and Maintenance jobs</b>	848