

## Crux Limited Business Profile

16/04/2018

| Business Overview  |   |            |            |
|--|---|------------|------------|
| Legal business name & trading name   | Crux Limited  | GST Number |            |
| Contact Name   | Daniel Kermode  |            |            |
| Role   | Co-Director   |            |            |
| Email  | danielkermode@hotmail.co.nz   | Mobile     | 0210387384 |
| Business Physical Address  | 11H Ghuznee St, Te Aro, Wellington 6011   |            |            |
| Website  | <a href="https://www.cruxfibre.nz">https://www.cruxfibre.nz</a>   |            |            |
| PRODUCT  |   |            |            |
| Provide a short, plain-English description of what you are planning to build and what it does from the customer's perspective.                                     | Open source Internet Service Provider providing one product, which is a fibre connection. As far as we are aware, we would be the first in the world and this means that the code is freely available for anyone to use for their own innovation. The code will be available for viewing on a website.  |            |            |
| What is the market pain or the problem that the product would be solving? How will the product be different to other solutions in this space? (Value Proposition)? | <p>1) ISP which does not monitor individual internet traffic.</p> <p>2) Lower price points for similar service.</p> <p>3) Producing publicly available resources which could be used by government bodies (e.g. Com Com) or individuals to help them understand networking layer of internet.</p> <p>4) Transparency and honesty in operation (open source coding). Bandwidth aims to be shown more accurately than existing ISPs through analyzing network topography. Aims to be integrated more efficiently with Chorus' systems.</p>  |            |            |
| What are the costs of the project?   | <p>1) Code base need for integration with Chorus' API (Application Programming Interface)</p> <ul style="list-style-type: none"> <li>- Open source and will be publicly available.</li> <li>- Developer (90 hours)</li> </ul> <p>2) Diagram around the networking layer including fundamental of ISP operation.</p> <ul style="list-style-type: none"> <li>- Router, ONT, Stations, Southern Cross line, Servers</li> <li>- Designer (80 hours)</li> </ul> <p>3) Research topic: Multi-plexing</p> <p>Show real time data visualisation of bandwidth usage across the network</p> |            |            |

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|   | <p>as a public resource. Could be a first for an ISP.</p> <ul style="list-style-type: none"> <li>- Show capacity across example connection, bandwidth topography</li> <li>- Developer (110 hours) needed to develop browser web application to show network topography.</li> </ul> <p>~\$30 per hour x 280 hours = \$8,400</p> |
| <b>How long is it going to take?</b>  | 250-300 hours  |
| <b>When are you planning to start?</b>  | ASAP (Early May 2018)  |
| <b>How much do you expect that next immediate bit of work to cost?<br/>And how long is it going to take?</b>            | <p>Code base need for integration with Chorus' API (Application Programming Interface)</p> <ul style="list-style-type: none"> <li>- Open source and will be publicly available.</li> <li>- Developer (90 hours)</li> </ul>   |
| <b>What is difficult about building this product?</b>   | Technical expertise and communication with Chorus  |
| <b>What would a grant be spent on?</b>  | Wages and hardware costs   |
| <b>Please describe any current partnerships</b>   | N/A  |
| <b>How much time and money have you invested in this project so far?</b>  | \$1,350 + ~ 60 hours   |
| <b>What stage are you at with the product development?</b>  | Initial stage of development   |
| <b>Have you sought any advice regarding protecting your Intellectual Property?</b>                                      | No   |
| <b>MARKET</b>   |  |
| <b>Describe your ideal customer. What type of businesses or consumers would be interested?</b>                          | <p>Tech-savvy, 20s-40s</p> <p>Anyone who have cheaper fibre internet access and better understanding of the networking layer of the internet.</p>  |
| <b>Do you have any customers lined up to trial the product/prototype?</b>   | No   |
| <b>How big is this opportunity? what slice of the market will you realistically target based on validated feedback?</b> | Realistically targeting 5% of market share. ~20,000 fibre connections based on 2017 numbers  |
| <b>What do you know about the total market that you are selling into?</b>   | Total of 400,000 fibre connections as of 2017. Most likely to increase as connectivity improves  |
| <b>How will you get your first customers? What sales channels will you use?</b>   | Hubspot (CRM tool), Facebook Ads, word of mouth. Given our target client base, will rely on internet   |
| <b>Who have you spoken to about</b>   | Chorus, Commerce Commission  |

|  |   |                      |               |                      |               |        |     |       |        |        |       |       |         |        |       |       |         |       |  |  |         |
|--|---|----------------------|---------------|----------------------|---------------|--------|-----|-------|--------|--------|-------|-------|---------|--------|-------|-------|---------|-------|--|--|---------|
| this product? Has this product been triggered by the industry?   |   |                      |               |                      |               |        |     |       |        |        |       |       |         |        |       |       |         |       |  |  |         |
| How much revenue do you expect to generate over the next 1, 2 or 3 years?  | <table><tr><td>Year</td><td>Customer</td><td>Revenue per customer</td><td>Total Revenue</td></tr><tr><td>Year 1</td><td>500</td><td>65.00</td><td>32,500</td></tr><tr><td>Year 2</td><td>2,000</td><td>65.00</td><td>130,000</td></tr><tr><td>Year 3</td><td>5,000</td><td>65.00</td><td>325,000</td></tr><tr><td>TOTAL</td><td></td><td></td><td>487,500</td></tr></table> | Year                 | Customer      | Revenue per customer | Total Revenue | Year 1 | 500 | 65.00 | 32,500 | Year 2 | 2,000 | 65.00 | 130,000 | Year 3 | 5,000 | 65.00 | 325,000 | TOTAL |  |  | 487,500 |
| Year   | Customer  | Revenue per customer | Total Revenue |                      |               |        |     |       |        |        |       |       |         |        |       |       |         |       |  |  |         |
| Year 1   | 500   | 65.00                | 32,500        |                      |               |        |     |       |        |        |       |       |         |        |       |       |         |       |  |  |         |
| Year 2   | 2,000   | 65.00                | 130,000       |                      |               |        |     |       |        |        |       |       |         |        |       |       |         |       |  |  |         |
| Year 3   | 5,000   | 65.00                | 325,000       |                      |               |        |     |       |        |        |       |       |         |        |       |       |         |       |  |  |         |
| TOTAL  |   |                      | 487,500       |                      |               |        |     |       |        |        |       |       |         |        |       |       |         |       |  |  |         |
| Assuming you create the product successfully, what are the potential commercial returns to the business?                                       | Estimating that the open source ISP attracts 1,000 new customers, creating \$65,000<br>\$8,400 investment would yield 773% ROI (does not account for inflation risk)  |                      |               |                      |               |        |     |       |        |        |       |       |         |        |       |       |         |       |  |  |         |
| Assuming the technical aspects of the project are successful, how capable will the business be at commercializing or implementing the results? | Extremely capable as we have economics and financial specialists within the business.   |                      |               |                      |               |        |     |       |        |        |       |       |         |        |       |       |         |       |  |  |         |
| At what price are you going to sell it?  | \$65 for fibre connection (100Mbps)<br>- Bandwidth could depend on ONTs.  |                      |               |                      |               |        |     |       |        |        |       |       |         |        |       |       |         |       |  |  |         |
| TEAM & RESOURCES   |   |                      |               |                      |               |        |     |       |        |        |       |       |         |        |       |       |         |       |  |  |         |
| Please describe the relevant experience and expertise you have on your team and who has it.  | Crux Limited has three directors<br>Legal (John), Financial/Technical (Daniel) , Marketing/Design (Sean)  |                      |               |                      |               |        |     |       |        |        |       |       |         |        |       |       |         |       |  |  |         |
| Please describe what your team needs to go full time on the business, and how close to this you are.   | Business needs to be self-sustaining and producing revenues to provide for living costs.<br>Could be possible with funding within the next three months.  |                      |               |                      |               |        |     |       |        |        |       |       |         |        |       |       |         |       |  |  |         |
| Are you engaging any external technical partners to do any of the technical work? If so, who are they and what are their roles?                | No  |                      |               |                      |               |        |     |       |        |        |       |       |         |        |       |       |         |       |  |  |         |
| What are the available funds to get the venture off the ground?  | Pockets of directors  |                      |               |                      |               |        |     |       |        |        |       |       |         |        |       |       |         |       |  |  |         |
| What help do you seek from WREDA?  | Funding for new employees needed for R&D. Support with Commerce Commission application under s690 of Telecommunication Act 2001 to be registered as a non-retail user.  |                      |               |                      |               |        |     |       |        |        |       |       |         |        |       |       |         |       |  |  |         |