Executive Summary

Ethiopia has nearly 100 million people, but nearly 90% of Ethiopians have to walk for water instead of having it piped to them. Of these, 37 million are rural people who live within just two kilometers of a clean water source. Globally, this number skyrockets to 1.7 billion people.

The problem is that, currently, household piped water is too expensive for most people living at the bottom of the economic pyramid. On top of that, rural communities lack access to skilled pipe network operators and decent infrastructure like roads and electricity.

To address this, 3BL Enterprises is developing Flowius which pipes water to rural houses and farms for residential use and irrigation at a price they can afford. These piped water systems are

- **Radically affordable** and less than half the cost of typical piping
- **Reliable** since they’re simple to operate, minimizing system downtime
- **Safer** than typical water collection methods like carrying in jerrycans
- **Income generating** for homes with more time and for farms with irrigation

Flowius builds water systems that are so radically affordable that homes and farms living on $1.50/day can have water piped to them.

How does Flowius work?

Flowius will use a network of rurally-based franchises to

1. **Map out communities using Flowius Collect**, which gathers geospatial and design data and uploads it to our engineers,
2. **Build two systems in parallel**: one for residential use (owned by a local client) and one for irrigation (owned by us), since most rural homes are also farms,
3. **Operate and maintain systems using Flowius Manage**, which provides push notifications for O&M activities, instructional videos for those activities, customer management tools, and data analytics for the water systems.

Flowius Collect

Flowius Manage

Micro-Utility Piping
Water for Residential Use
(Owned by Local Client, e.g. Water Ministry)

Pipe Network to Farm Plots for Irrigation
(Owned by 3BL)
How do we make water radically affordable?

- Limit the daily supply of water to each home, which minimizes pipe, pump, and treatment system sizes.
- Utilize economies of scale to reduce material unit costs, which nobody in Ethiopia is doing right now.
- Constantly collect and analyze water system data to consistently improve our designs and maintenance methods.

How does 3BL make money?

For both residential and irrigation systems, 3BL designs the pipe networks and purchases the materials while our franchises are in charge of marketing for, constructing, and maintaining the systems. We split our 20% gross margin with our franchises.

### Residential
- Homes pay client $50 to connect and $1/month
- Client covers remainder of system cost and pays 3BL
- Payback: 31 months

### Irrigation
- Farms pay 3BL $60 to connect (approx. 80% of overall cost).
- Farms pay for usage to access pre-paid water meters at tap
- Payback: 12 months

Where do we find franchises and partner communities?

To find our franchises (our key partners), we recruit upcoming and recent graduates in engineering, business, and construction management from local universities who are interested in returning to their hometowns. We test them for relevant skills and, if selected, we train them. Each franchise will be located in a rural town (typically at least 30,000 people with a local water ministry office) and will serve their surrounding villages.

Once the franchise has been trained and established, they partner with the local water ministry office to identify appropriate communities, contact village leaders, market to households, and help set up financing.

What progress have we made so far?

We have partnered with iceaddis, a local technology space, to develop our applications and our business model. We’ve also partnered with the Wita Kebele Farmer’s Association, which is the collection of homes in Wita, where we will have our pilot project. All 700 homes in Wita have paid $50 to connect to the initial residential system, and the local water ministry office in Butajira (the nearby town) has given us another $7700 to build the system. We will commence construction in early April 2017.

Who is our competition?

<table>
<thead>
<tr>
<th>Product Feature</th>
<th>flowius</th>
<th>Typical Piping</th>
<th>NGOs</th>
<th>Consumer Products</th>
<th>Water Kiosks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water to Homes</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>?</td>
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<tr>
<td>Clean Water in Home</td>
<td>✔️</td>
<td>?</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
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<tr>
<td>Plentiful Water in Home</td>
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<td>✔️</td>
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<tr>
<td>Affordable to End-Users</td>
<td>✔️</td>
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<tr>
<td>Scalable/Sustainable</td>
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<td>✔️</td>
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</table>

700 Homes have paid $50 to connect to the system from local water ministry office in Butajira.
How much will we expand?

<table>
<thead>
<tr>
<th>YEAR</th>
<th># FRANCHISES</th>
<th># RESIDENTIAL SYSTEMS</th>
<th># IRRIGATION SYSTEMS</th>
<th>TOTAL REVENUE</th>
</tr>
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<tbody>
<tr>
<td>1</td>
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<td>1</td>
<td>$ 58,500</td>
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<tr>
<td>2</td>
<td>3</td>
<td>7</td>
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<tr>
<td>3</td>
<td>9</td>
<td>22</td>
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<td>4</td>
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<td>30</td>
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<tr>
<td>5</td>
<td>54</td>
<td>120</td>
<td>60</td>
<td>$ 4,800,000</td>
</tr>
</tbody>
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Who are our partners?

Wita Kebele Farmers’ Association and EiABC

Graduates from the EiABC have been partnering with the Wita Kebele Farmers’ Association to design and construct new housing in the community. The housing is meant to utilize local architectural styles while improving the quality of construction and living conditions.

iceaddis

iceaddis is a community driven technology innovation co-creation space with a strong social and environmental commitment. The institution’s mission is to provide a collaborative workspace where young minds can meet and create opportunities for themselves and others. Founded in 2011 as the first innovation hub in Ethiopia, iceaddis supports 14 startups and continues to engage over 5000 individuals.