Imagine a different vehicle for change

By Yvonne LeFave
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Go Green Trikes, LLC
In Lansing, Michigan
Despite the hype, when sustainability is factored in, bigger is seldom better!
“But we’ve always done it this way!”
Efficient last-mile delivery in city centers & on campuses
sustainable & green delivery solution
NO carbon emissions = no smog or pollution
A delivery solution that doesn’t block traffic and promotes a company’s green image
Cost-effective

Tipagornwong and Figliozzi: An Analysis of the Competitiveness of Freight Tricycle Delivery Services in Urban Areas
Presented at the 93rd Annual Meeting of the Transportation Research Board January 12-16, 2014

TABLE 5 Elasticity Analysis of Per-Mile Transportation Costs of Tricycles and Diesel vans

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Light urban delivery</th>
<th>Morning courier service</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tricycle</td>
<td>Diesel van</td>
</tr>
<tr>
<td></td>
<td>Tricycle</td>
<td>Diesel van</td>
</tr>
<tr>
<td><strong>Logistics elements</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service time (minutes)</td>
<td>0.473</td>
<td>0.739</td>
</tr>
<tr>
<td>Distance between a depot and a service</td>
<td>-0.290</td>
<td>-0.297</td>
</tr>
<tr>
<td>area (miles)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service area (sq. mile.)</td>
<td>-0.118</td>
<td>-0.211</td>
</tr>
<tr>
<td>Unit demand weight (lbs.)&lt;sup&gt;a&lt;/sup&gt;</td>
<td>-0.173</td>
<td>0.000</td>
</tr>
<tr>
<td>Time window (hours)&lt;sup&gt;a&lt;/sup&gt;</td>
<td>0.084</td>
<td>0.124</td>
</tr>
<tr>
<td><strong>Cost elements</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purchase price (dollars)</td>
<td>0.090</td>
<td>0.255</td>
</tr>
<tr>
<td>Driver wage (dollar/hour)</td>
<td>0.908</td>
<td>0.873</td>
</tr>
<tr>
<td>Electricity price / diesel price</td>
<td>0.000</td>
<td>0.035</td>
</tr>
<tr>
<td>CO2 emission cost (dollar/ton)</td>
<td>n/a</td>
<td>0.002</td>
</tr>
<tr>
<td><strong>Transportation element</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average speed (mph)</td>
<td>-0.394</td>
<td>-0.091</td>
</tr>
</tbody>
</table>

<sup>a</sup> Large changes of these parameters change the per-mile costs because they increase vehicles.

**Policy Discussion**

Many urban areas are trying to increase the livability of downtown areas. In many cases road diets, marked pedestrian crossings and areas, and additional bicycle lanes or parking are introduced to increase the appeal of pedestrian and bicycle modes. These efforts can affect the competitiveness of tricycle delivery because they may slow down motorized traffic while increasing the speed or accessibility of tricycles.

Transportation infrastructure planning and regulation can promote tricycle delivery by reducing on-street speed limits, narrowing traffic lanes, limiting motor vehicle parking, and extending bicycle facilities. The same factors that improve pedestrian and bicycle mobility in urban areas...
If it’s such a great idea, why aren’t the big delivery companies doing it?
Introducing the Truck Trike:

9 FEET LONG!
Introducing the ELF

ELF =
• Electric
• Light-weight
• FUN!

- For smaller loads (350lbs including rider)
- Electric-assist 20mph for up to 20 miles
- High visibility in traffic
- Lights, turn signals, brake lights
- Solar panel recharges electric
- Trailer increases its cargo capabilities
Challenges?

- “bleeding edge”
- Technology
- Customization
- Infrastructure
- Insurance/banks
  - no no-fault option
  - “out of the box” for insurance auditors
  - It takes an innovative banker to recognize the potential

Opportunities?

- First choice of sustainably-minded business owners
- Multiple streams of income
  - Deliveries
  - Moving/Shopping services
  - Advertising
  - Event support
- Community Building
  - Food deserts
  - Giving back
Go Green Trikes, LLC now serving Greater Lansing!