Our Mission

To serve as a catalyst for the reduction of global dependence on crude oil by establishing Israel as a center of knowledge and industry in the field of fuel alternatives for transportation.
Our Goals

1. **Replace** the share of oil in Israel's transportation sector by 60% by 2025, while supporting *green growth*.

2. Turn Israel into a center of knowledge and industrial best practices in the field of fuel alternatives.

3. Raising the world’s awareness of alternative fuels. 

   *Building global partnerships to speed up innovation.*
The Way to change

Linear approach

Non-Linear approach

We cannot solve our problems with the same thinking we used when we created them. (Albert Einstein)
Start-up Nation: History of innovation

- **1950**: Agricultural, Water
- **1960**: Defense
- **1980**: Space, ICT
- **2000**: Life Science, Internet

- During the first 50 years → Innovation out of necessity
- Last 20 years = specialization → ICT / Life Science / Internet / etc

**The Challenge** –

how to develop new industries?
Principals for non linear Innovation

- **Focus:**
  - Define the needs and create a challenge
  - Tools to support along the value chain

- **Leverage**
  - Use Israel’s small degree of separation
  - Bring people and know-how from other fields

- **Fresh thinking**
  - Create tool for interdisciplinary
  - Joint projects

“The best way to predict the future is to create it,” (Abraham Lincoln)
Innovation Process

Sake and Stir

Innovation

Tools

Academia

Industry

Entrepreneurs

New academic discipline

New Industries

Int’ collaboration

FREEDOM TO CHOOSE THE WAY WE MOVE
Smart Transportation Institute

- National center together with Tel Aviv University.
- Multi disciplinary.
- Research agreements with international institutes.
- Partnership with Industry.
- Accelerator for pre seed ideas.
Local Entrepreneurship
Putting the entrepreneurs in the center

✓ Build supportive ecosystem
✓ Community
So how we are doing so far?

- 2012:
  - 40 Research groups
  - 50 entrepreneurs
  - 50 companies

- 2014:
  - 130 Research groups
  - 1500 entrepreneurs
  - 200 companies

- 2020:
  - 200 Research groups
  - 2500 entrepreneurs
  - 500 companies
Thank you

www.fuelChoicesInitiative.com
Reality of Fuels Alternatives

- There are many solutions
- No gold standard
- Some solutions are already economically viable
- Some solutions are locally based
- Implementation can start now
Basic assumptions

- Solutions must have economic viability
- We will not pick a winner
- We will provide equal opportunity for everyone
- Infrastructure will need government support
How to replace Fuel? - Barriers for change

- Total Cost of ownership (Cost of the Vehicles + maintenance + fuel)
- Vehicles Availability
- Infrastructure Cost
- Standards and Regulation
- Market Acceptance (Fear factor/ Safety / Environment / Chic / Trends)

Acceptability Index: How easy is the change

( T.O.C + Infrastructure cost + regulation, market acceptance / how fast can it happened )
## Market acceptance matrix

<table>
<thead>
<tr>
<th></th>
<th>Light</th>
<th>Private</th>
<th>taxi</th>
<th>Light Duty trucks</th>
<th>Heavy Duty trucks</th>
<th>Buses</th>
<th>Jets</th>
</tr>
</thead>
<tbody>
<tr>
<td>CNG</td>
<td>low</td>
<td>medium</td>
<td>high</td>
<td>Very high</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Methanol</td>
<td></td>
<td></td>
<td>High</td>
<td>Unknown</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EV</td>
<td>high</td>
<td>low</td>
<td>medium</td>
<td>Very low</td>
<td>high</td>
<td></td>
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</tr>
<tr>
<td>Bio</td>
<td></td>
<td></td>
<td>low</td>
<td></td>
<td></td>
<td></td>
<td>high</td>
</tr>
</tbody>
</table>
## Israel market analysis

<table>
<thead>
<tr>
<th></th>
<th>Gasoline</th>
<th>Diesel</th>
<th>Jet Fuel</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mainly Private Vehicles</td>
<td>Light Duty Trucks</td>
<td>Medium &amp; Heavy Duty Trucks</td>
</tr>
<tr>
<td># of Vehicles</td>
<td>2200K</td>
<td>217K</td>
<td><strong>75K</strong></td>
</tr>
<tr>
<td>Current Usage (fuel)</td>
<td>43%</td>
<td>14.5%</td>
<td><strong>18%</strong></td>
</tr>
<tr>
<td>2025 Objectives (fuel)</td>
<td><strong>40%</strong></td>
<td>4.5%</td>
<td>5.5%</td>
</tr>
</tbody>
</table>

Mainly Private Vehicles: Light Duty Trucks
Medium & Heavy Duty Trucks
Buses
Private Vehicles & Taxis
Train
Jet Planes

100K

FREEDOM TO CHOOSE THE WAY WE MOVE
Reduce the usage of oil by 60% by 2025

Expected Penetration Rate for Alternative Fuels in Israel
The Green growth effect – contribution to the GDP

- Carbon emission
- Price Stability
- Industry
- Consumers Saving
- Tax from NG

2020: 0.10% + 0.07% + 0.33% = 0.49%
2025: 0.16% + 0.14% + 0.62% = 1.00%