The background of the slide features a silhouette of a car's front end, including the hood and windshield, set against a sunset sky with a gradient from orange to blue. The car is positioned in the lower half of the frame, with the horizon line passing through its base.

CarFab AutoLab 2.0

Distributed Vehicle Development and Fabrication

Robyn Allen - June 29th, 2006
Co-Director, MIT Vehicle Design Summit



MIT Vehicle Design Summit

- June 13th-August 13th
 - 21 Teams, 13 Countries
 - 5 vehicles done by August
- ingredients for **INNOVATION**

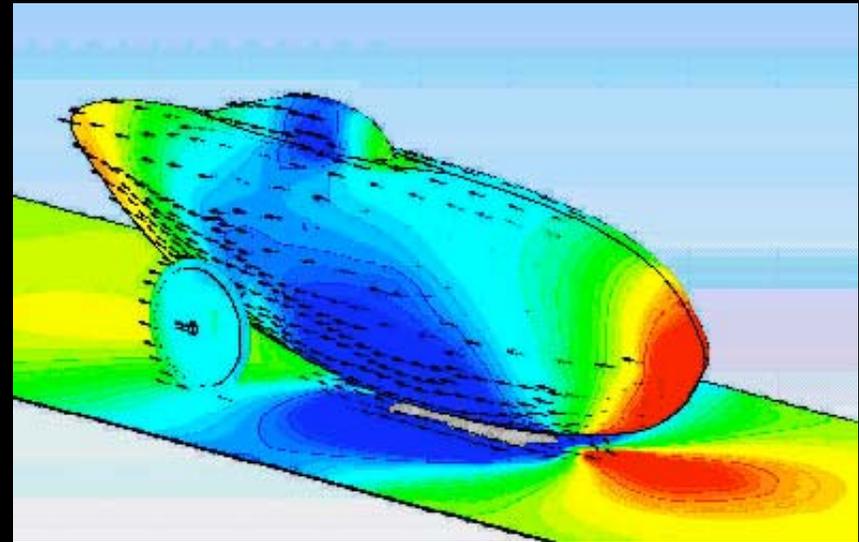
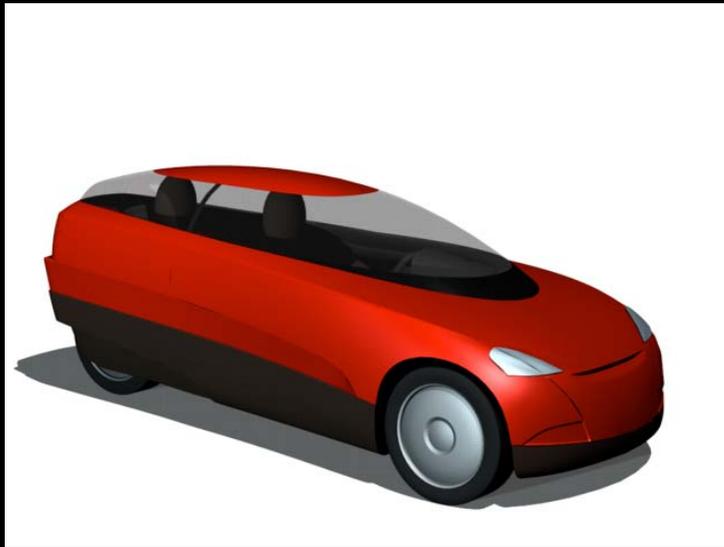
Vehicle Design Specification

- 300+ mpg energy equivalence
- 2 passengers
- 150 mile driving range
- Storage for two bags
- Biofuel, Human-Power, Solar, Fuel-Cell

→ new transportation **PARADIGM**

CAD Design

Easily exchanged open source design
between FabLabs



Space Frame / Monocoque

- Braze or weld steel components



- Structural Composite Shell (like an egg)



Aerodynamic Shell

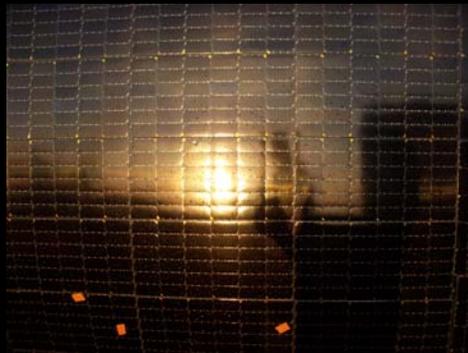
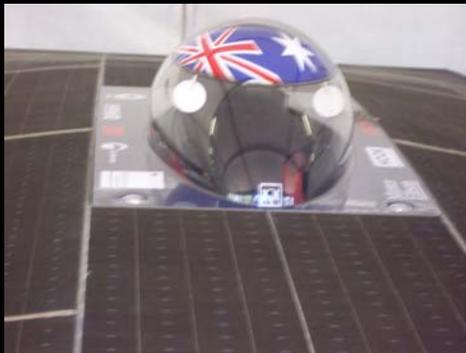


- Cut cross sections (router)
- Layer with foam
- Sand → positive plug
- Form shell
(fiber weave, epoxy)



Propulsion : Modular Design

- Human Powered Base
- Solar for Vehicle Based Grid



- Batteries to extend driving range
- Biofuels to support polyculture

Polyculture

- Revive Ecology, Community
- Plant like prairie, jungle
- Polyculture agriculture
 - Food
 - Biological Waste Treatment
 - Energy as biodiesel
 - Natural resources for building



→ Rural Symbiosis / Self-Sufficiency

A sleek, dark, aerodynamic vehicle model is positioned on a test rig inside a wind tunnel. The model has a rounded, bullet-like shape with a pointed nose and a flat, wide base. It is supported by three vertical struts. The background shows the interior of the wind tunnel with its structural panels and a dark opening at the end. The lighting is focused on the model, highlighting its smooth surfaces and sharp edges.

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