



# **Escola de Engenharia de São Carlos**

## Dep<sup>to.</sup> de Eng. Materiais, Aeronáutica e Automobilística

### Alguns conceitos (veículos urbanos)

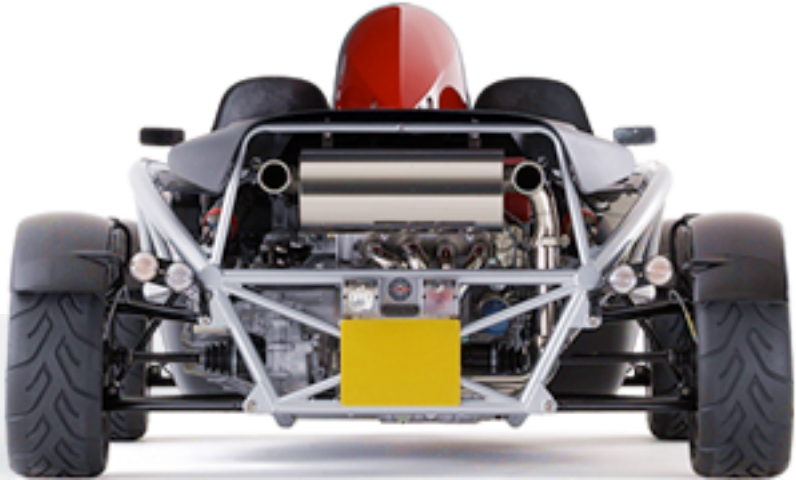
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Propostas para no máximo 2 passageiros.



*Carver*

# Ariel Atom





# KTM X-Bow (pronúncia "crossbow") - Kiska Design

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# Aptera









# GM Globetrotter



# PART BREAK-UP/MATERIAL INNOVATIONS

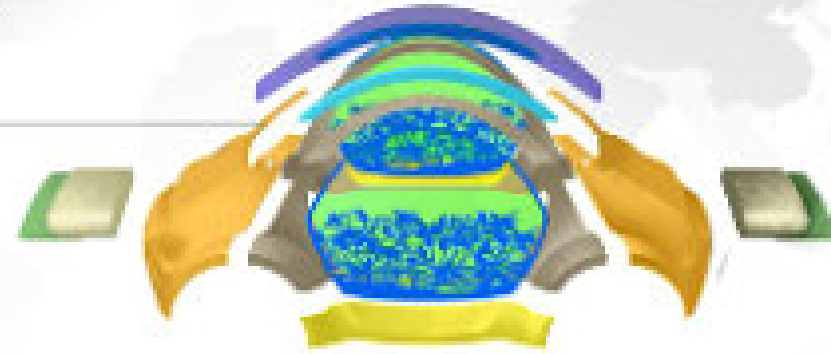
## COMBINING

LOW-WEIGHT TUBULAR STEEL FRAME WITH DMC PLASTIC BOWLS



## SYMMETRICAL LAYOUT!

PART OPTIMIZATIONS  
MANUFACTURING COST REDUCTIONS  
INCREASED CARBON OFFSETS  
ENHANCED CONSUMER FEEL.



ROOF CEILING POLYCARBONATE SHEETS WITH SOLAR-ENERGY HARVESTING NANOTECHNOLOGY COATING OR...

ROOF SIDEGLASS (TWO) HIGH-EFFICIENCY ELECTROCHROMIC GLASS FOR HOT CLIMATES LIKE AFRICA AND INDIA.



BODY CARBON-NEUTRAL BIOPLASTIC WITH 15% PETROLEUM-BASED + 85% CORN-BASED PLASTIC BEANS 80% LESS ENERGY CONSUMED PRODUCTION. PLANT SITUATION PROGRESS BEING INCREASED LOCAL PRODUCTION.

FRONTEND BARS (BUILT INCLUDING COMPLIANCE) ACTS AS LIGHTWEIGHT UNDERSTRUCTURE FOR BIOPLASTIC FRONT, ROOF AND REAR CURB.



BUMPERS (REPLACEMENT) BOTH FRONT AND REAR FOR IMPACT PROTECTION WITH EXTERNAL AIRBAG FOR PEDESTRIAN SAFETY



HINGE+DOOR PULL HANDLE ALTERNATE IN FRONT AND REAR OF DOOR

WINDOW SHUTLINE FOLLOWS CUSTOMER'S DOOR PATTERN WITH BUILT DOOR HINGE

DOORS RAPID-PROTOTYPED WITH INTEGRATED HINGE + DOOR HANDLE + SLIP-RESISTANT

20" PAULI HALOGENS FOR WINDOWS IN KEVLAR OPTION (BUILT UNDER)



CUSTOMER'S STORAGE PACKS FOR DIFFERENT MODES: BATTERY PACK FOR MORE RANGE PORTABLE WATER TANK, FURNACE



DOORFLAP!

**INTERIOR SEATING LAYOUT / FUNCTIONALITY**

**WATERPROOF** BOPHINI WEAVE ARM STAYPROOF WITH SOFT EMBLISHED PICO SPEAKERS, BUTTONS AND DISPLAY



**DETACHABLE** EMBLISHED BOPHINI WEAVE ARM STAYPROOF WITH SOFT EMBLISHED PICO SPEAKERS, BUTTONS AND DISPLAY

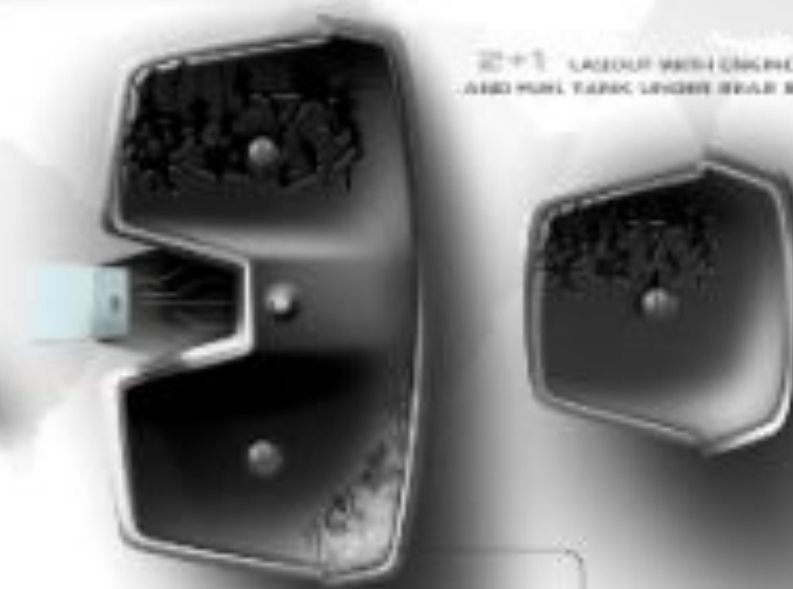
REGIONAL MANUFACTURE



**SLIDING CONSOLE** A FIBER'S SPACE SAVER!



**LIGHTWEIGHT** EXTRUDED MAGNESIUM STRUCTURES WITH TOP (LAMBDA) PAD SCREWED ON



**2+1 LAYOUT** WITH EMBLISHED HORN TARPIC LEATHER SEAT MAT



**OLED DISPLAYS** FOR REAR-VISION PRODUCTIONS AND FOR SEE-THROUGH A-PIECE

**REAR VISION** CAMERA CAPTURE IMAGE FROM REAR PILLAR & SEND TO FRONT PILLAR DISPLAY



**STARTER** BUTTON PORT PAD (ALUMINUM) SIGNAL

**CROSSCAR BEAM** USED TO MOUNT STEERING COLUMN ONTO

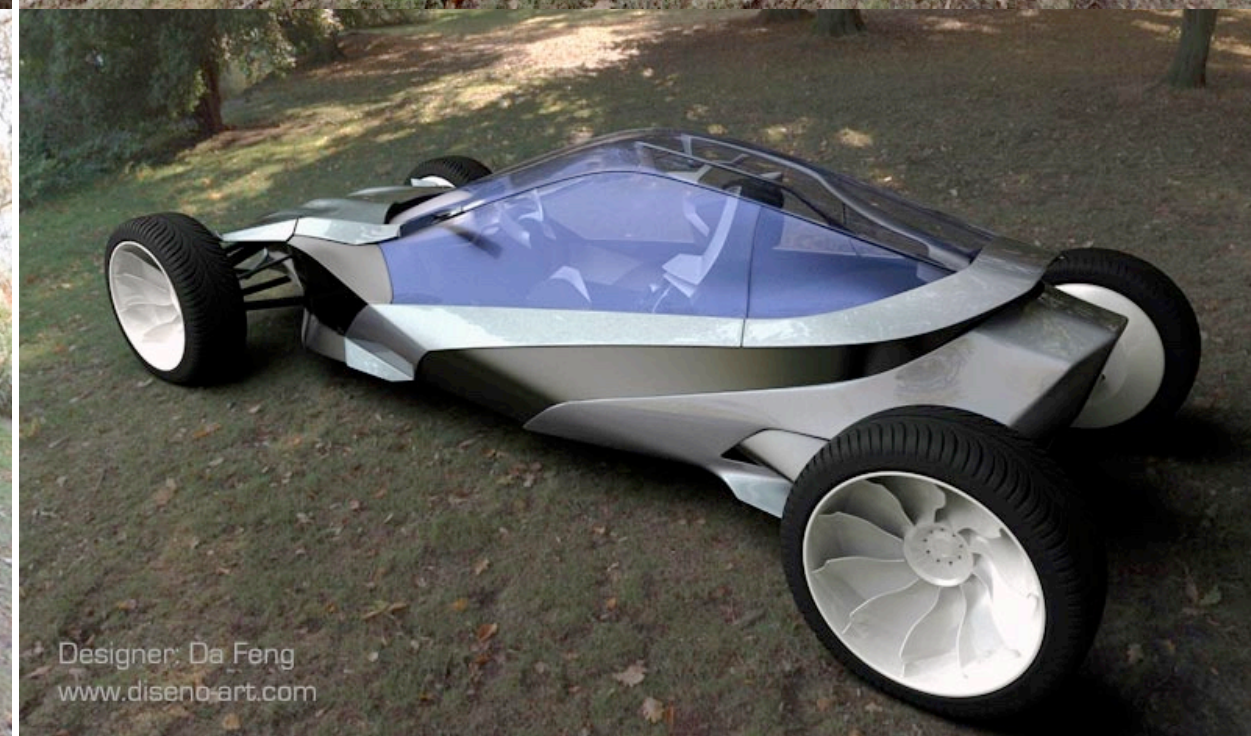
**SLIDE** -CONTROL LEVER



EM



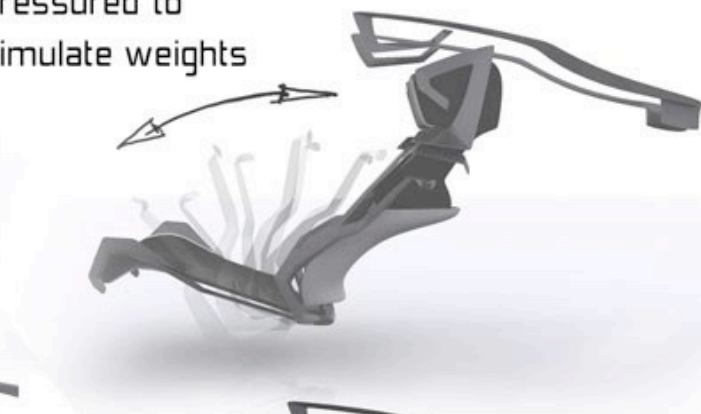
# GYM - *Human Electric Hybrid Concept*



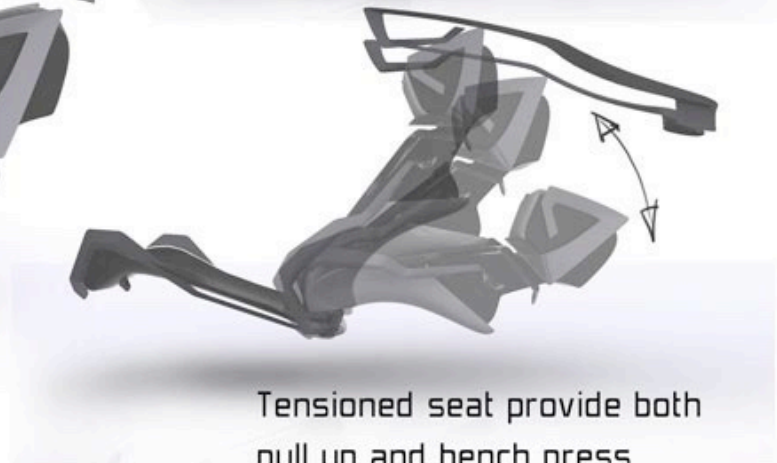
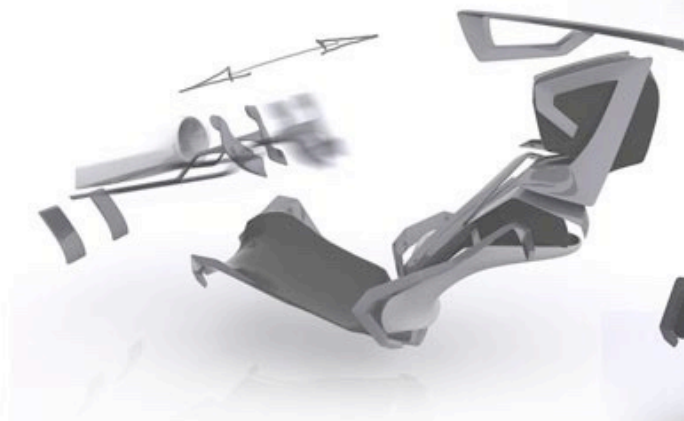




Side supports swivel,  
 pressured to  
 simulate weights



Moveable seat, peddles and  
 steering wheel makes stepping  
 and rowing machine



Tensioned seat provide both  
 pull up and bench press

Designer: Da Feng  
[www.diseno-art.com](http://www.diseno-art.com)



# Designova Minuteman (M<sup>2</sup>) Concept

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# MIT *Stackable City Car*

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Photo: Franck Vairani





# Peugeot 888 Concept Car



One electric engine in each wheel, powered by lithium-ion batteries located in the trunk.

Chassis: Janssen | Suspensão: 16x 1653 Odo NORWAY | eixo: 16x 1653 Odo NORWAY | motor: 4x 1653 Odo NORWAY



PEUGEOT 888



Chassis: Janssen | Suspensão: 16x 1653 Odo NORWAY | eixo: 16x 1653 Odo NORWAY | motor: 4x 1653 Odo NORWAY



PEUGEOT 888



Oskar Johansen | Selskapsvege 1b, 0553 Oslo, NORWAY | oskar@peugeot.com | mobil: +47 97033831

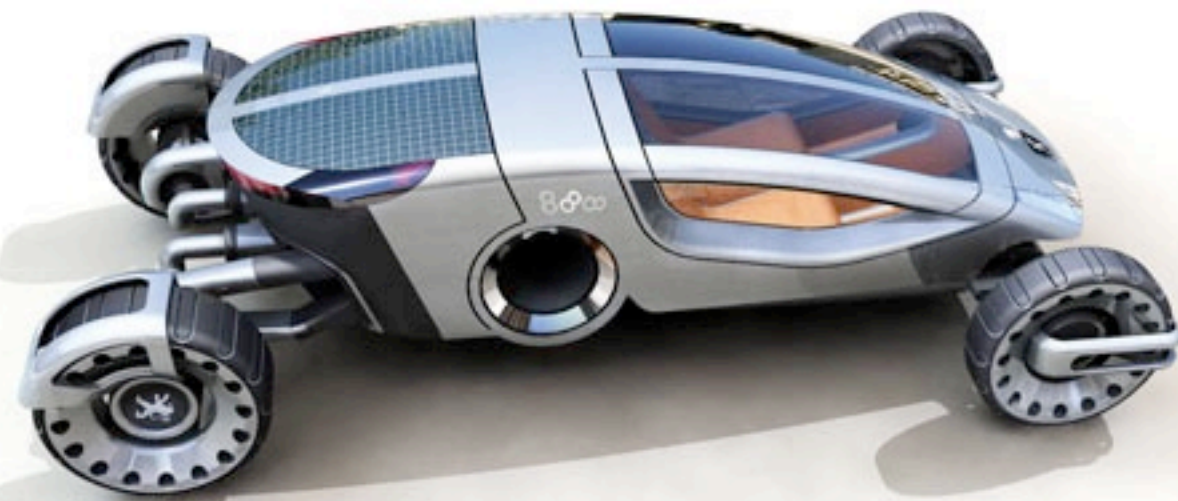


CITY-mode



HIGHWAY-mode

PEUGEOT 8800



PEUGEOT 8800



PEUGEOT 8800

Oskar Johansen | Selskapsvege 1b, 0553 Oslo, NORWAY | oskar@peugeot.com | mobil: +47 97033831



# Kawaii

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# Yellow Egg (Luigi Colani)

