

SAE SUPRA design elements

SAE India

USP

Layout Package

Proto Build

Presentation

1

Where do you begin Development?

Purpose / Target / Parameters

What is the USP ?

U S P

What will make your car
stand apart ?

'out - of - the - box - thinking'

Innovation & Ideation

Evolution



Early 1920's



Mid 1930's



Late 1950's

Innovation



Mid '60s Lotus -

Pioneering monocoque body construction

Innovation



Late '60s Lotus F1 –
Beginning of the “winged era”

Innovation



Mid '70s Lotus F1 – Many firsts

Beginning of “Ground Effect” , Composite Construction, Big Sponsorship funding

Innovation



Late '70s Brabham-Alfa "Fan Car" –
the reverse Hovercraft principle

Innovation



Late '70's –
The 6 wheelers March and Tyrrell

Innovation

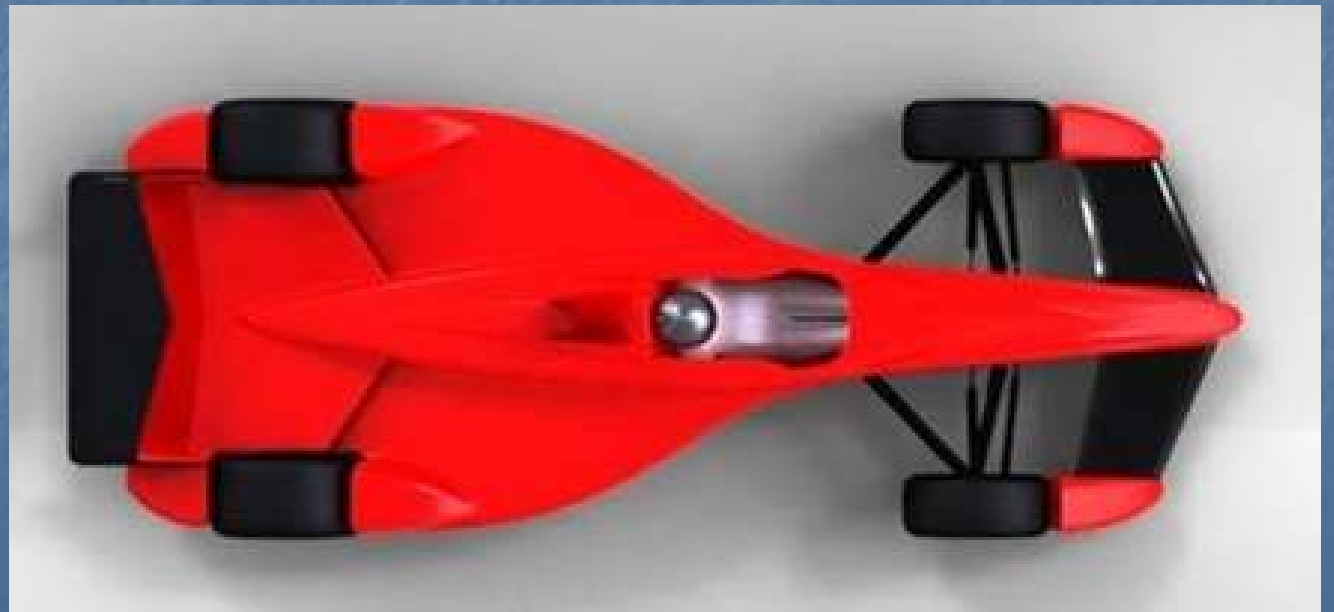


Futuristic Innovation –
Hubless wheels

Innovation



Dallara -
Indycar aero
concept



Innovation



Futuristic aero interpretations

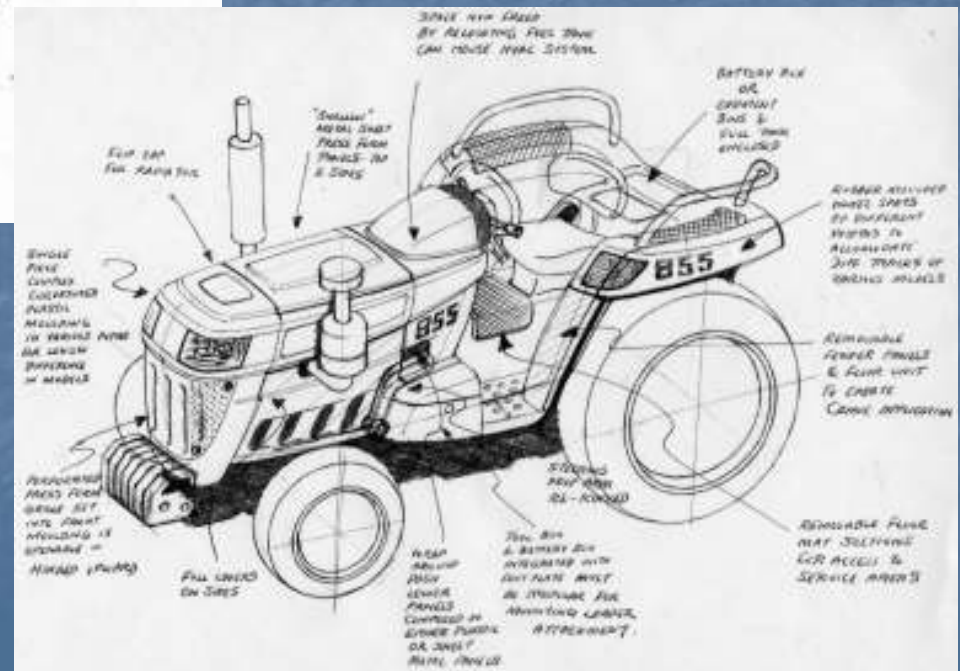
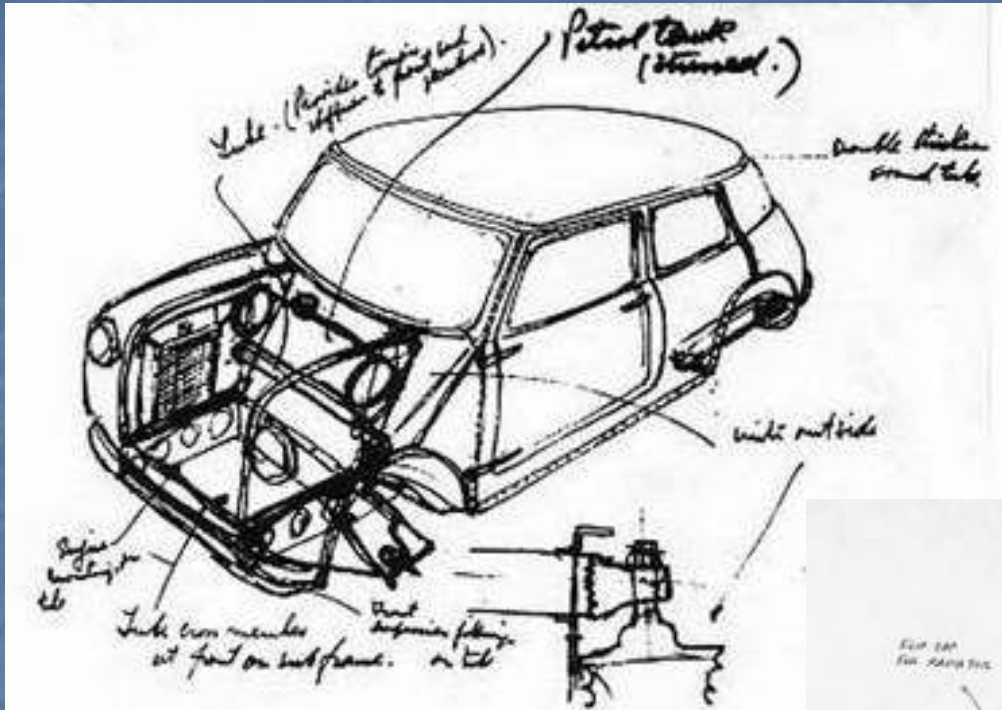
Concept – Design Ideation



Concept – Design Ideation



Concept – Design Ideation



2

How do you start designing?

Make Man adapt to machine ?

Or

build machine around Man?

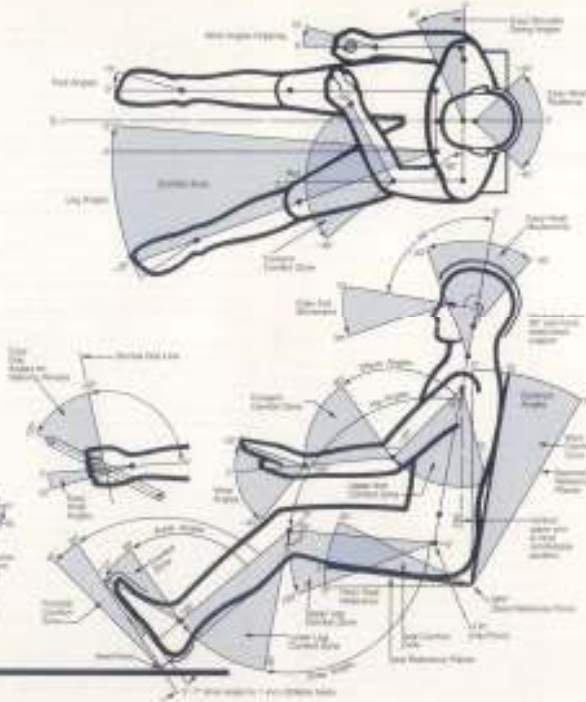
The SeatPack

Comfort
Safety

Human Factors

Angles of Comfort for Vehicular Seating

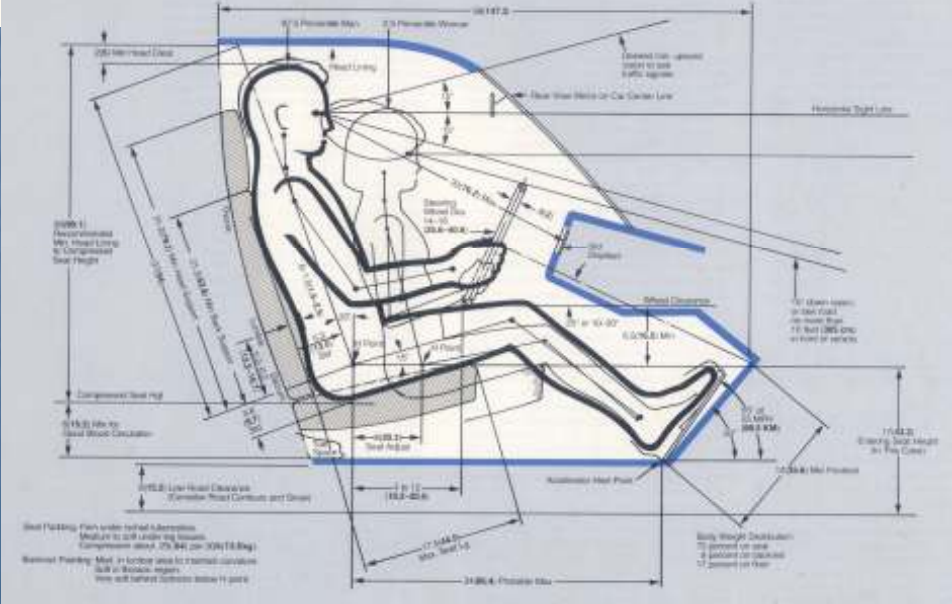
For the most comfortable and healthy seating conditions, the angles of the body and limbs should be maintained within the following limits. Excessive deviation from these limits will lead to discomfort and fatigue. The limits are given as ranges to allow for individual differences in body structure and flexibility. The limits are given as ranges to allow for individual differences in body structure and flexibility. The limits are given as ranges to allow for individual differences in body structure and flexibility.



The minimum comfort limit for the 1st Percentile male (SM) is 30 degrees. This is the angle of the torso relative to the vertical. The 50th Percentile male (SM) is 45 degrees. This is the angle of the torso relative to the vertical. The 95th Percentile male (SM) is 60 degrees. This is the angle of the torso relative to the vertical. The 1st Percentile male (SM) is 30 degrees. This is the angle of the torso relative to the vertical.

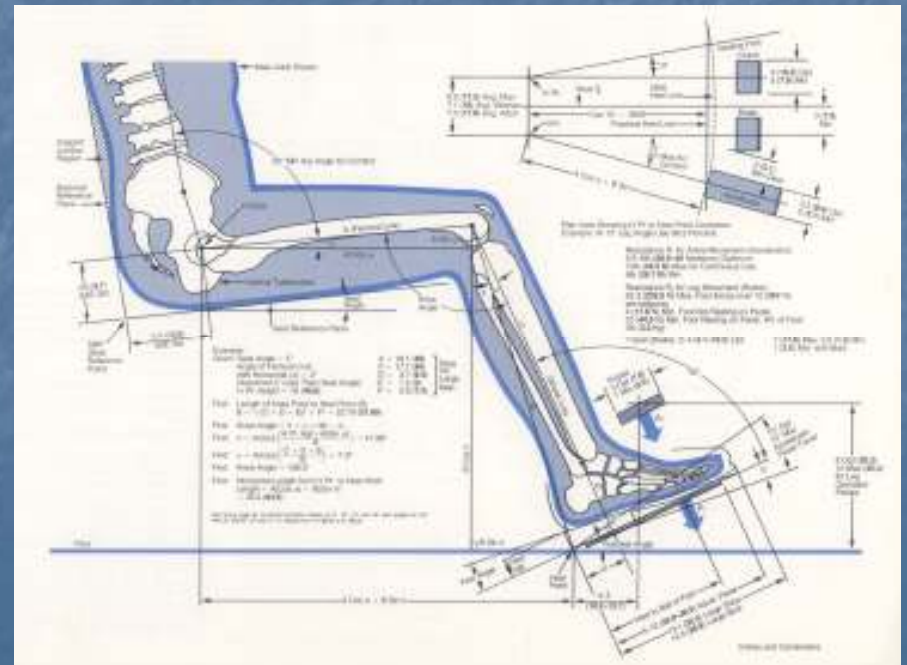
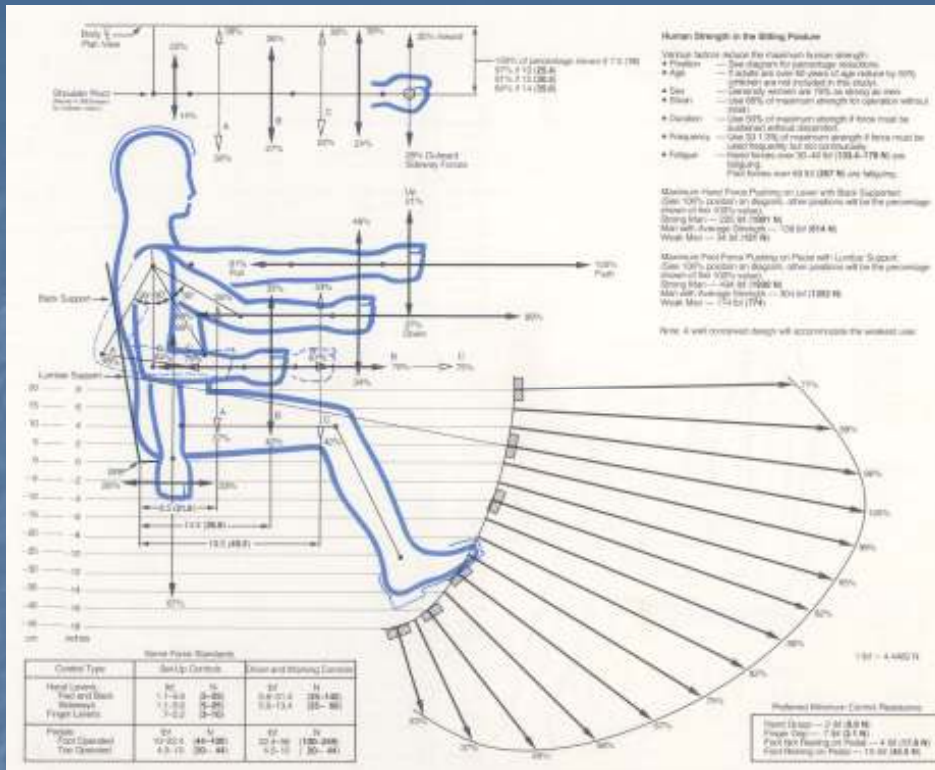
When the seat is reclined, the backrest and the SM should be supported by the backrest, and the SM should be supported by the backrest. When the seat is reclined, the backrest and the SM should be supported by the backrest, and the SM should be supported by the backrest.

When the seat is reclined, the backrest and the SM should be supported by the backrest, and the SM should be supported by the backrest. When the seat is reclined, the backrest and the SM should be supported by the backrest, and the SM should be supported by the backrest.



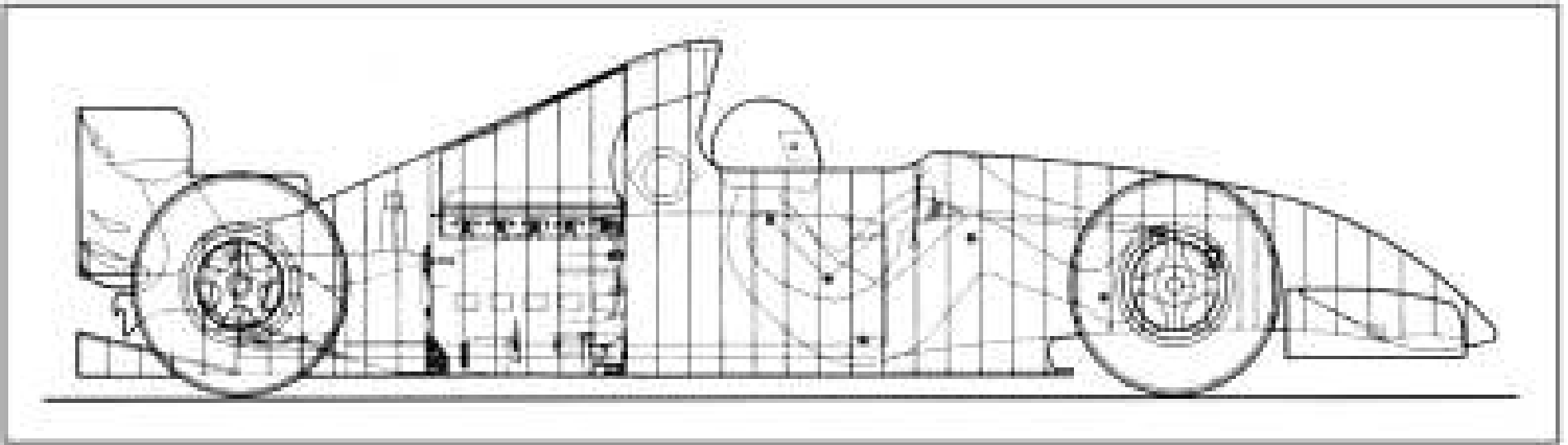
Seat Position: When seated, the backrest and the SM should be supported by the backrest, and the SM should be supported by the backrest. When the seat is reclined, the backrest and the SM should be supported by the backrest, and the SM should be supported by the backrest.

Human Factors



Layout Package

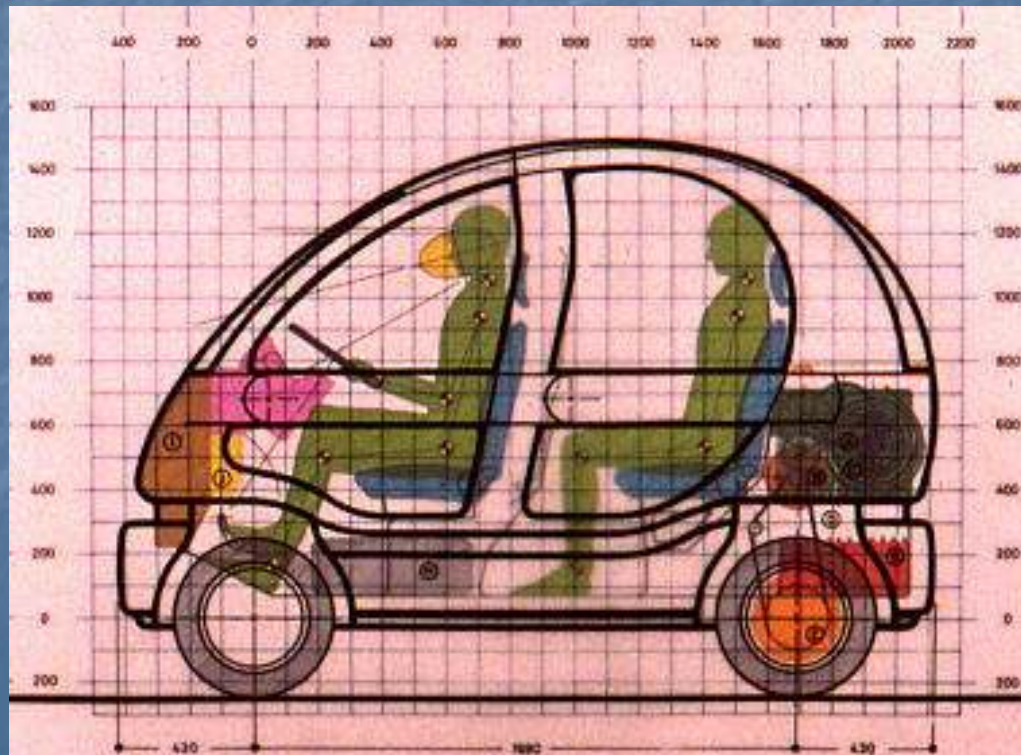
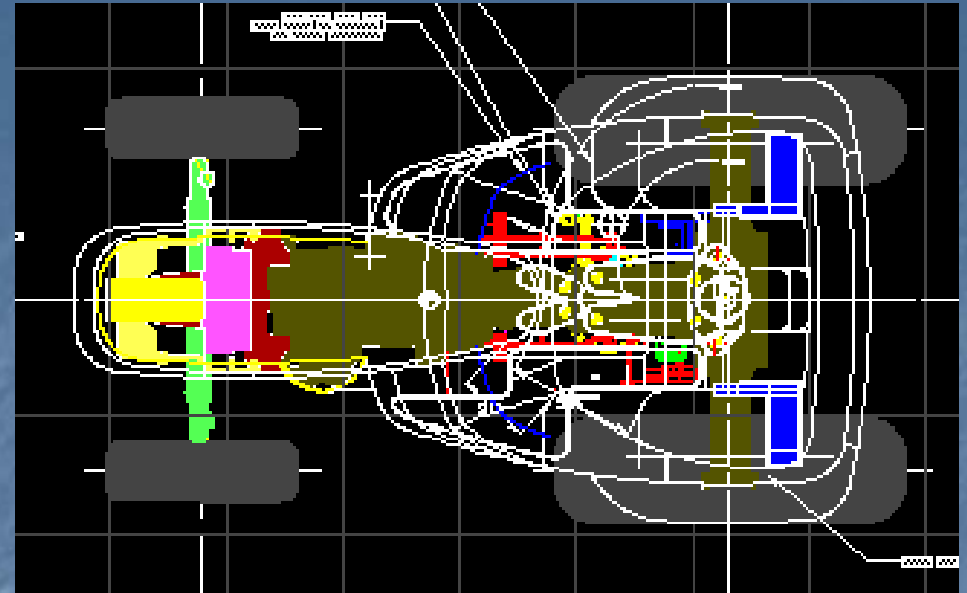
Central to the design process



- Space planning and composition
- Definition of body envelope and panel configuration
- Human comfort and safety
- Homologation and regulation compliance
- Service and accessibility
- Manufacture and assembly
- Feasibility and costing

Layout Package

other examples



3

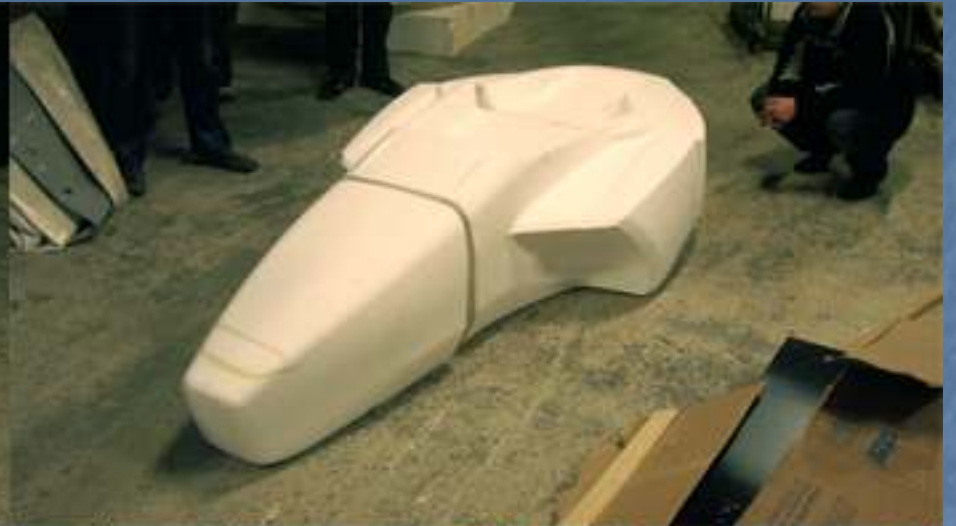
Proto Build

Process

Quality – fit and finish

Engineering Art

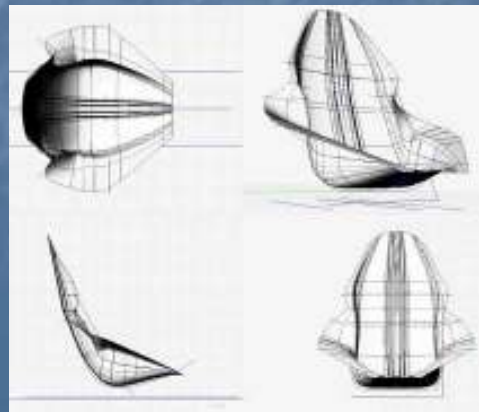
Process Body volumes



Process Body volumes



Process Parts



Quality fit, finish & detail



Engineering Art



4

Presentation

Building Brand Identity
Cult & Presentation
Marketing & Re-Source

Graphics & Livery - Cult



Brand Marketing – Sponsorship Visibility



Promoting Indian Identity and its contemporary culture

(Virtually) Selling Liquor and Beer

Selling an Airline

Formula Racing

A Multi Discipline Activity

Management
Human Resources – Team Organizing
Design
Engineering
Visual Communication
Promotion Marketing