

PROJECT 3

*Refresh of Scooty pep+*

SPONSORED PROJECT by **TVS**

Presented by Vinatha

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Prof. V P Bapat (IDC)



# DESIGN PROCESS

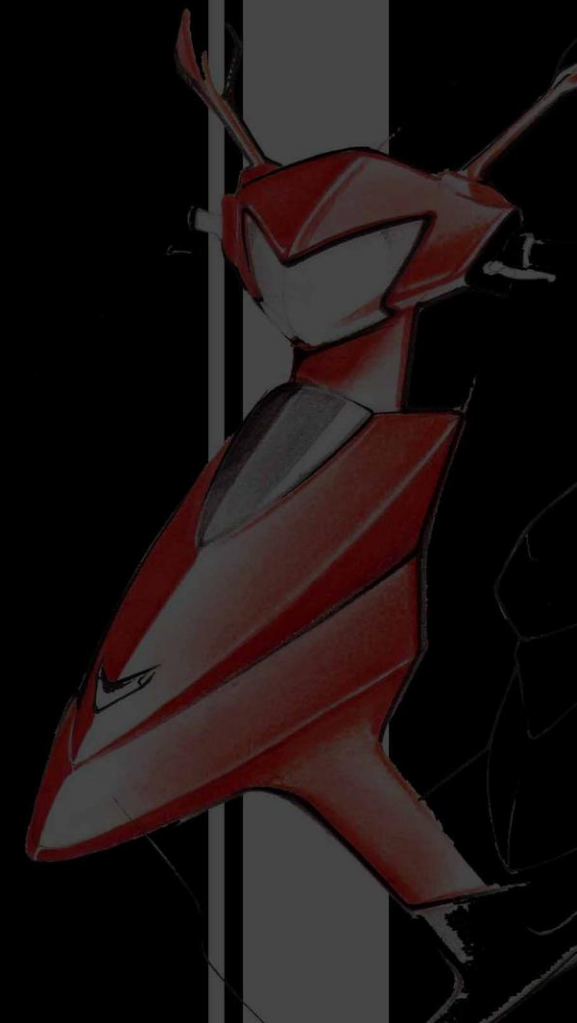
Understanding target  
User Group to  
develop styling brief

User appreciation of  
expressions in form  
to abstract emotions

Critical appraisal of  
Scooty to develop a  
refresh strategy

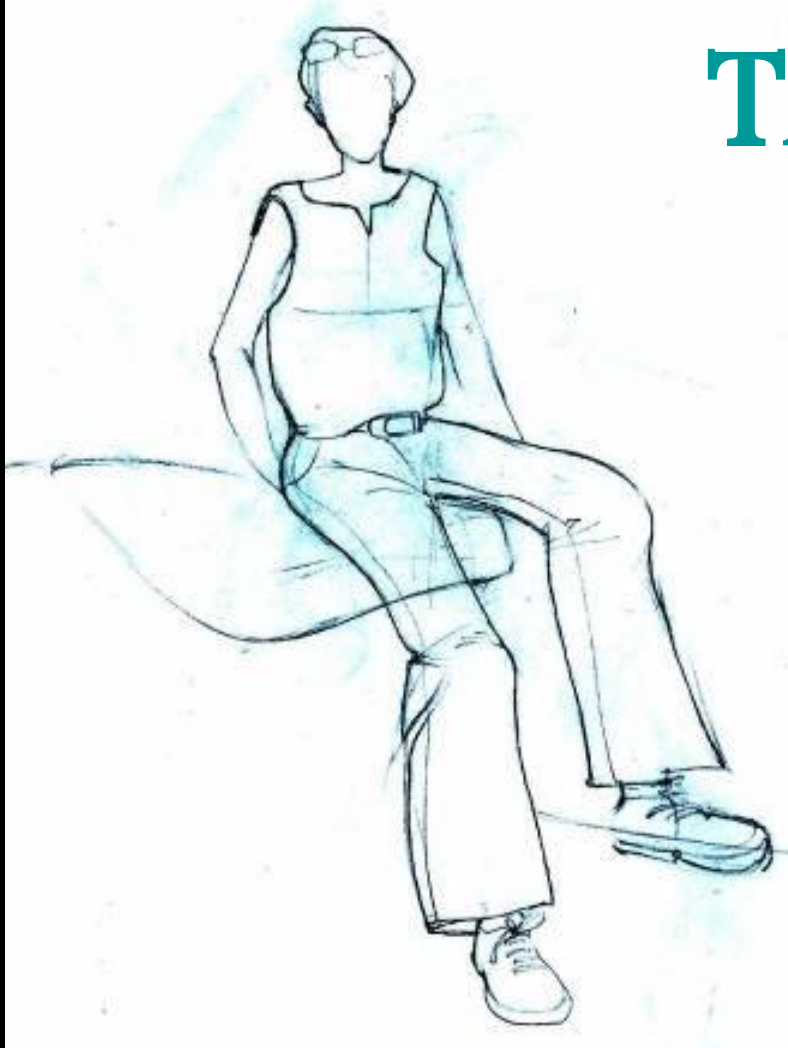
**INFERENCE**

Design Development



# TARGET USER GROUP

Fair Sex of age group 18 – 25 years  
College students / Young professionals  
Single



## Lifestyle

Fast and trendy  
Youthful  
Energetic

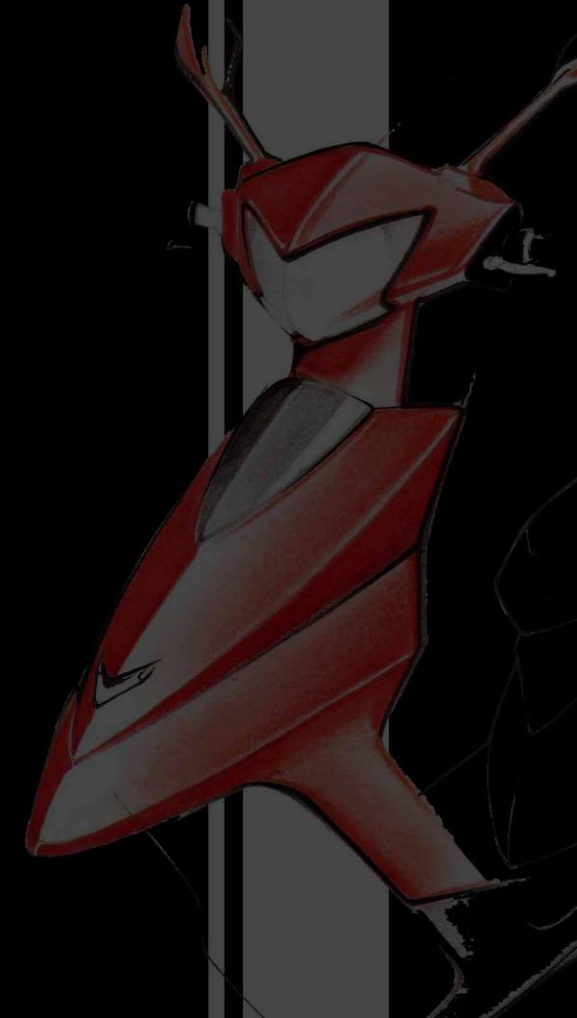
## Accessories

Tech-savvy  
Minimal styling  
Brand conscious  
Jewellery -Modern

## Apparel

Executives prefer formal wear  
College girls preference:  
Sporty comfortable  
Ethnic Indian wear  
(salwar)

TARGET USER GROUP





## Emotional Needs

Vehicle that reflects their personality

Image of oneself riding the vehicle is dear to them

Trust for a brand and its identity in market or fellow users

Need for customisation of vehicle



## Functional Needs

Safety on the road

Easy maintenance

Best mileage

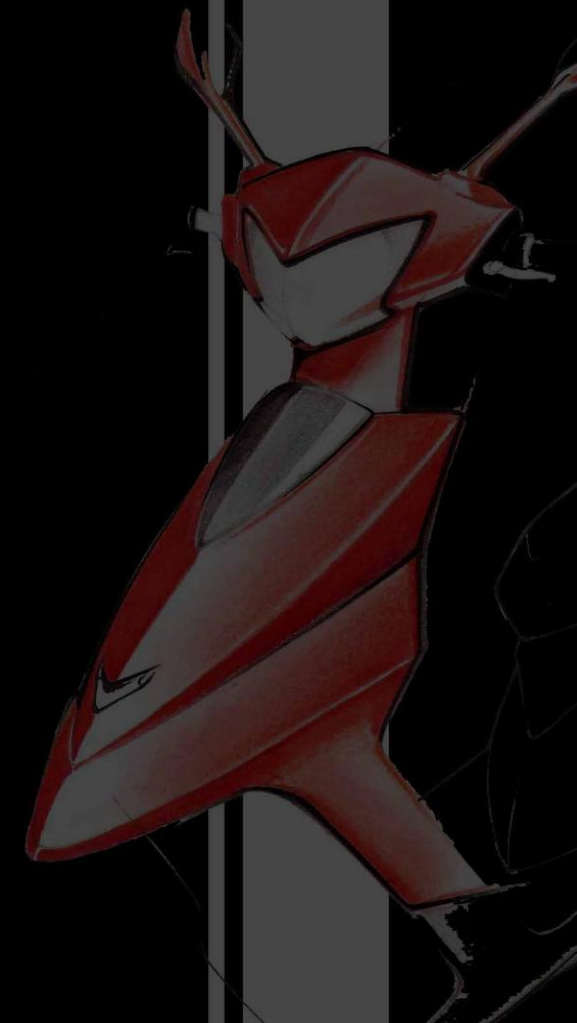
Better user amenities

Weight of vehicle

Easiness to ride

Size or compactness

TARGET USER GROUP





## Development of a styling brief

What a vehicle means to the user?

It is a **statement of her character**

It is an emphasis on what she envisions herself to be



What does Scooty PEP + convey?

I am **girlish** and I am **cute**

I like **fancy looking** products

I am **independent**

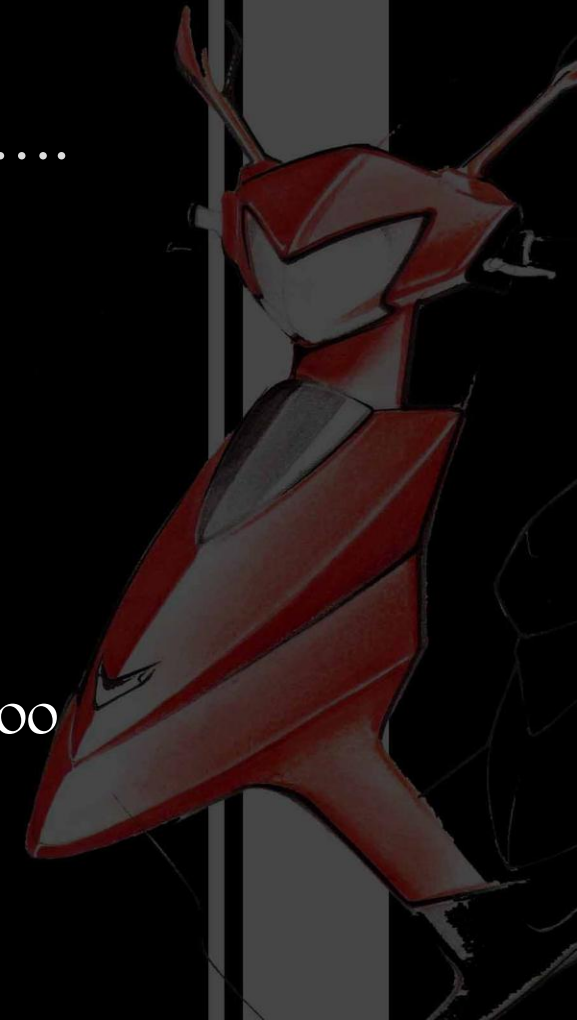
I am **young, vibrant and fun-loving**

I care for my looks

Attempted to analyze and come up with an inference as to what features in the Scooty made people describe the vehicle as such ....

- Use of very **vibrant and young colors**
- **Cheerful** head lamp with **jewel** treatment
- **“Assertive in the face”** Stance
- **Soft** body form
- **Too many surface transitions** emphasized by change in colors too
- Very **feminine** waist line
- **Silver lower panel** has a strong fancy character

TARGET USER GROUP

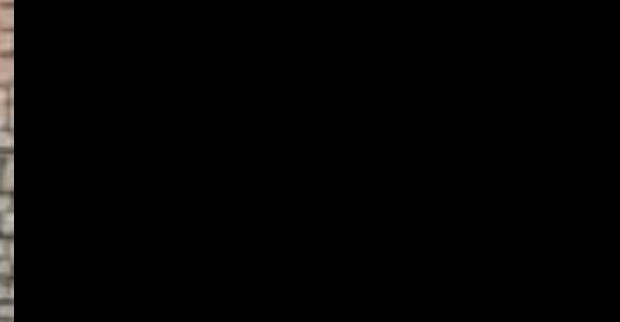




“It’s a typical **Barbie doll** vehicle – looks very fancy”



“It looks **ridiculous**”



“I am daring person...The vehicle **doesn't** have the **crispness** of a **DIO**”



“I think the Scooty **looks cute** on the road”



“Scooty **doesn't** look **elegant** but rather very **flirtatious**”

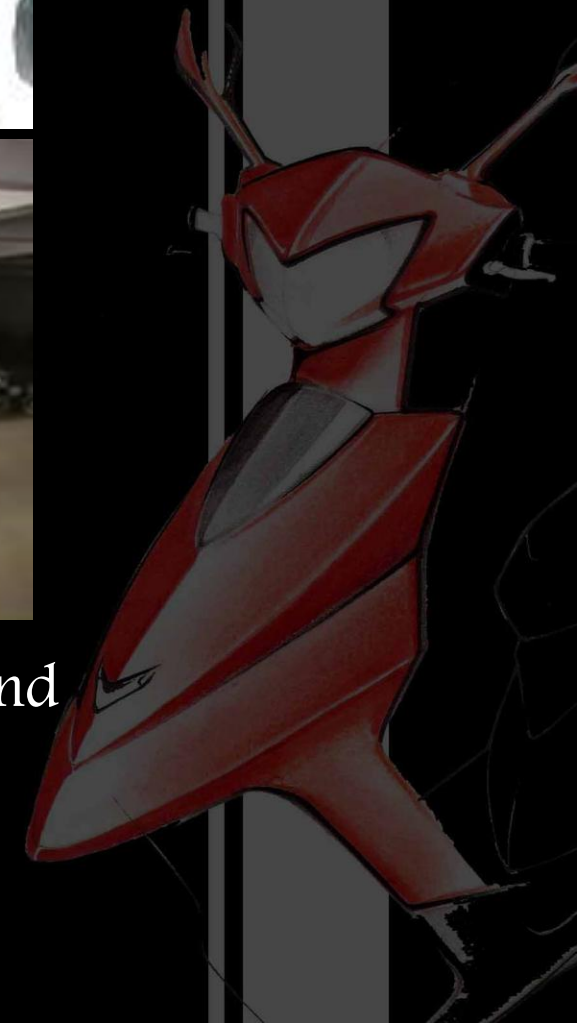


“being hefty, think that Scooty **doesn't** suit my built. But it does look good on the road.”



“I own a Scooty ES and I think it is the best scooterette on the road”

TARGET USER GROUP



## INFERENCE

Need for a fresh look ....

Change towards .... Crisp, Dynamic

Elegant

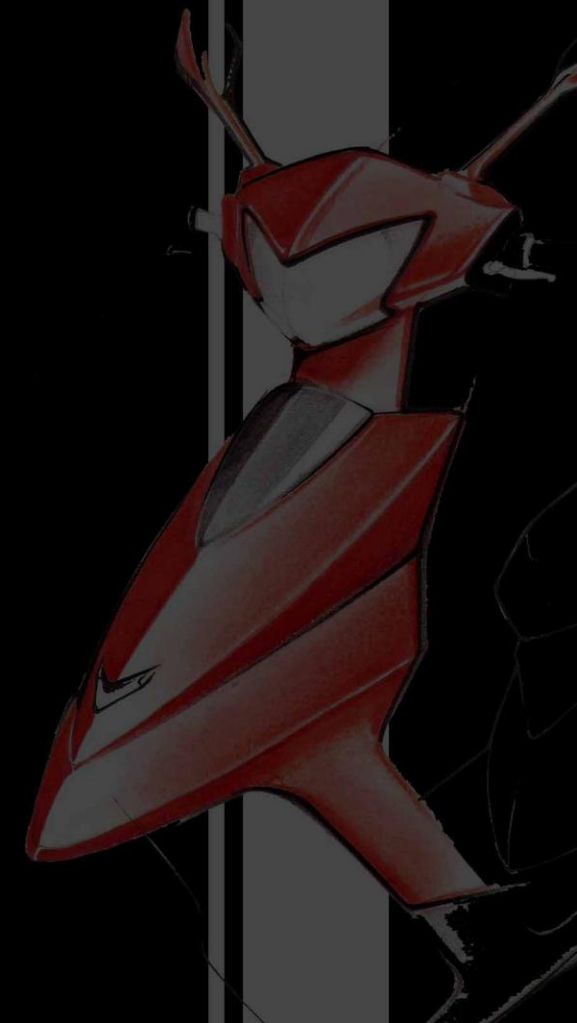
Less fancy

Modern

Young and vibrant

## Styling brief

To design Scooty pep in strict lines of refresh with a conscious effort to maintain the youthful energy that is intrinsic to Scooty styling. This would be done in two definite directions, one being more **‘sporty and dynamic’** and the other **‘Elegant and modern’**.





# USER APPRECIATION OF **EXPRESSION** IN FORM

## WHY?

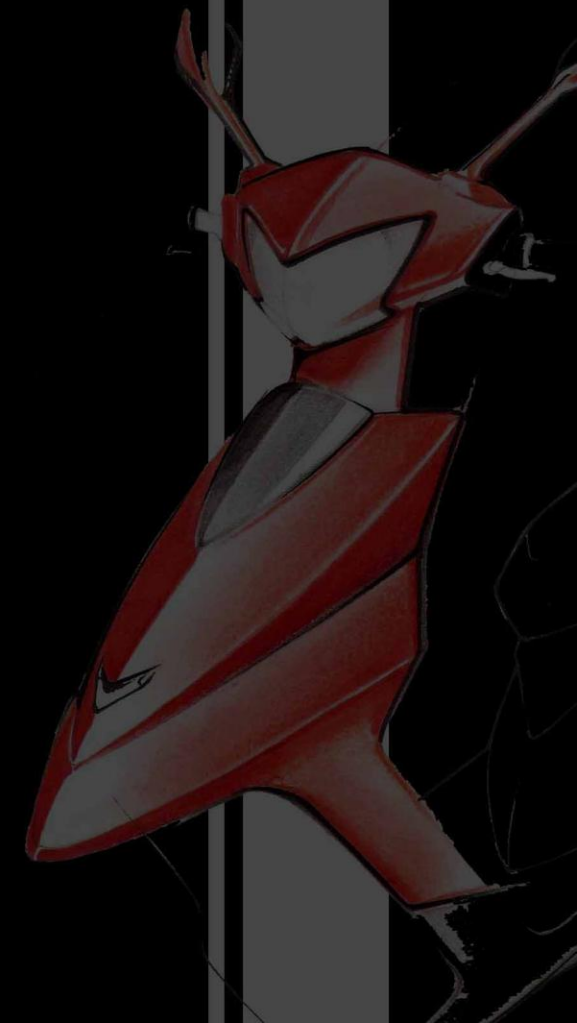
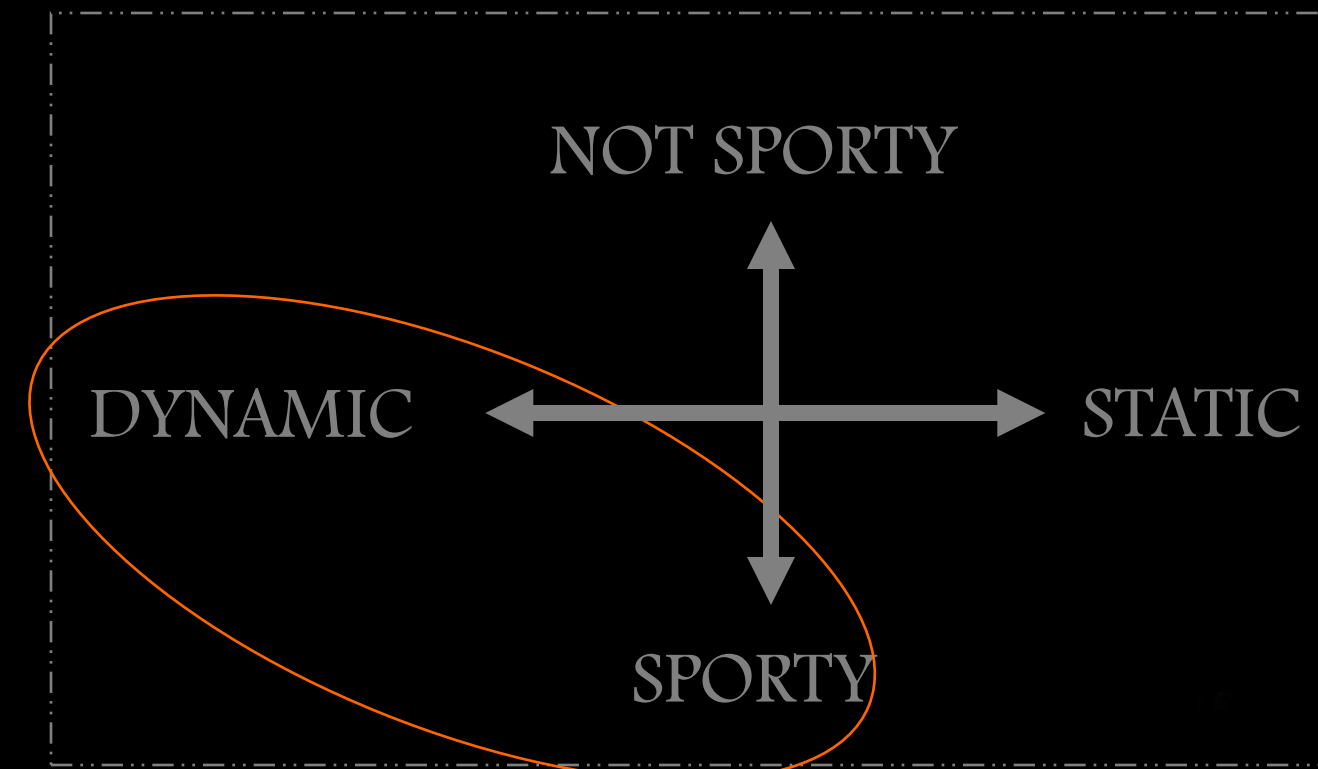
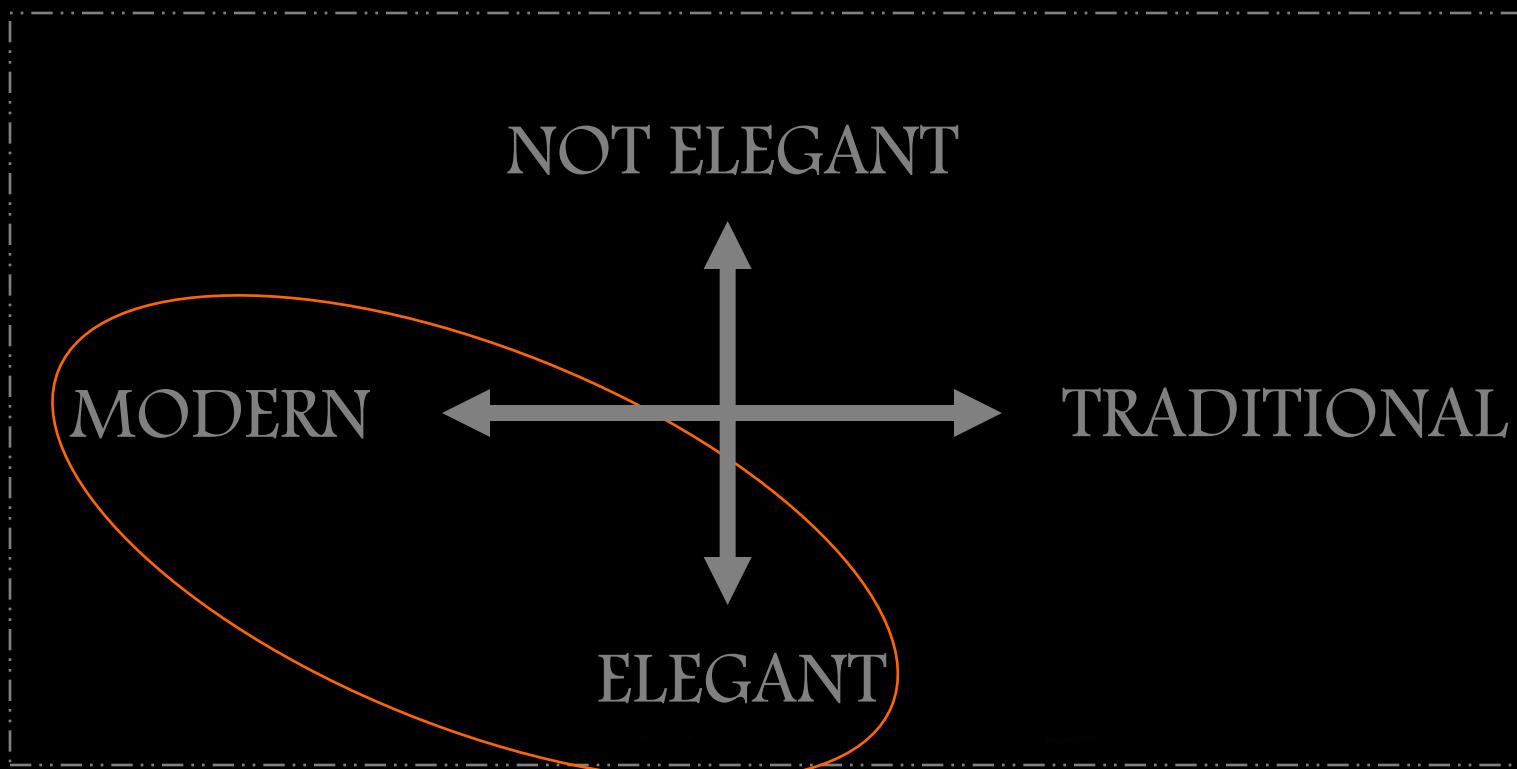
To understand what users meant by expressions like Sportiness and Elegance

To abstract the characteristic visual cues of the qualities users were looking for in a vehicle.

## HOW?

Two sets of image cards (size 10 X 7.5 cm) of products that stood for two expressions namely Sportiness and elegance were made.

User survey was conducted to get feedback on how they rated products in terms of emotions they conveyed



not sporty



## INFERENCE

- Streamlined body with flowy lines
- Sense of movement
- Dynamic stance
- Surface is treated with colors to have high contrast, bright vibrant colors with either white or black
- Matte texture of surface

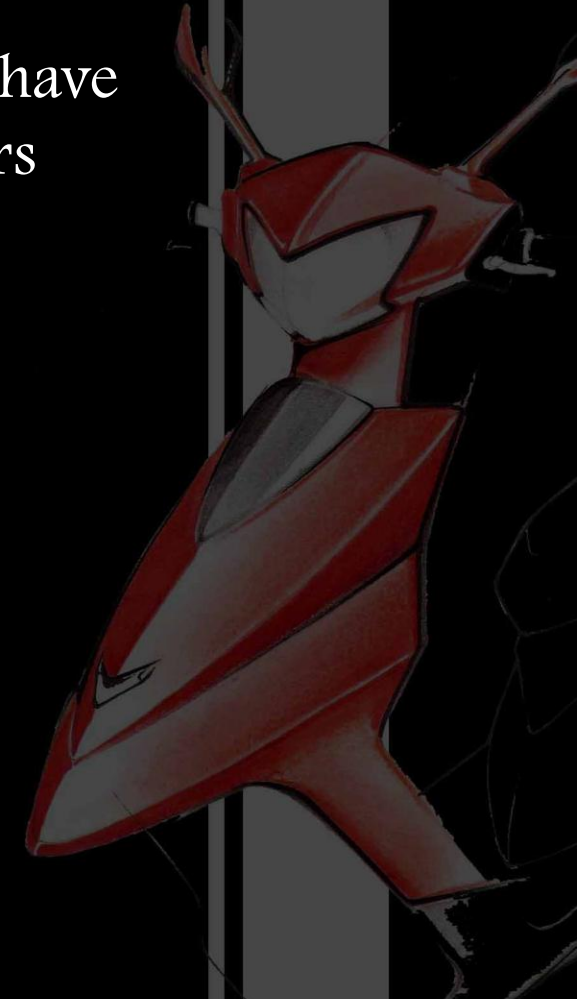
FORM APPRECIATION



Low

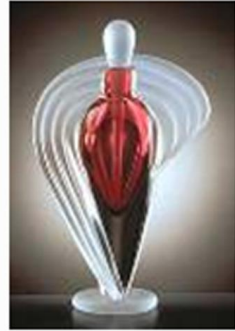
Dynamic Sportiness

High





not elegant



Low

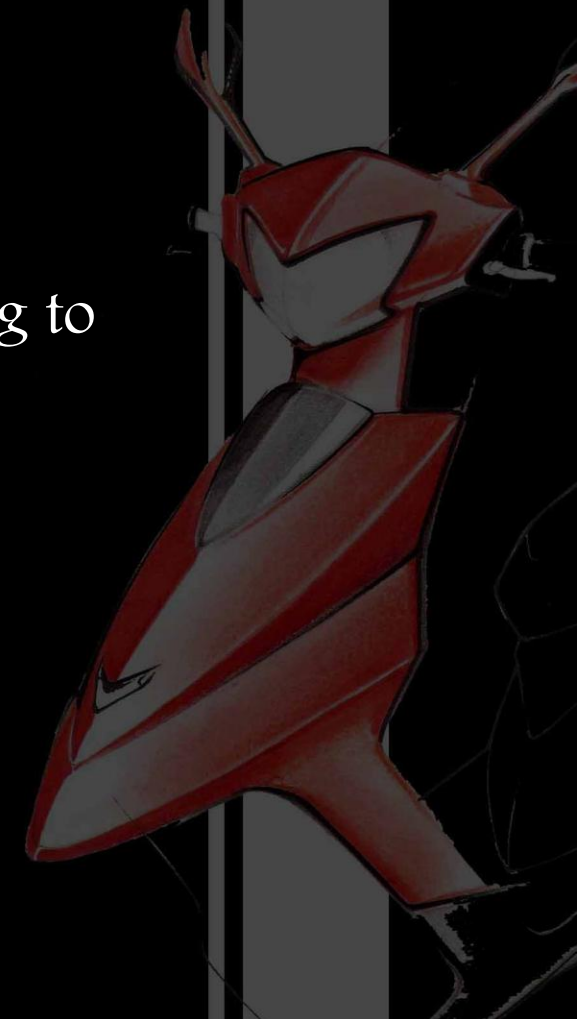
Modern elegance

High

## INFERENCE

- Flushed surface joints and minimalist details
- Pure shapes / forms
- Very little surface break up
- Smooth surface transition
- Colors that are light and soothing to the eye

FORM APPRECIATION





# CRITICAL APPRAISAL OF SCOOTY



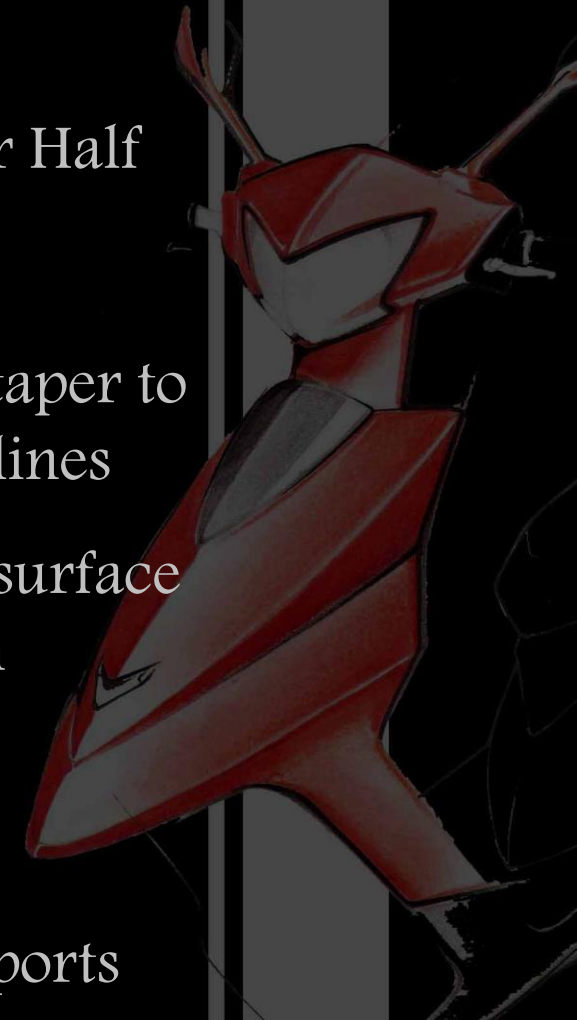
Qualities maintained

## Intrinsic Qualities

## Qualities refreshed

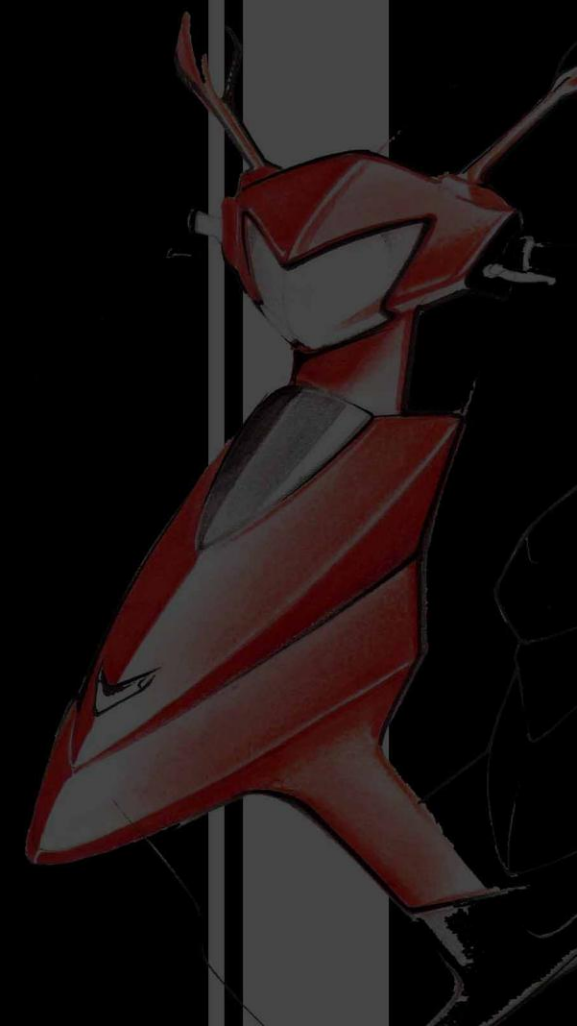
- ← Trendy colour scheme
- ← Light – overall width
- Soft and Bulbous → Crisp and sharp
- ← Feminine
- ← Recessed shoulder ~ sleek
- ← Assertive in the face stance
- ← Prominent neck curvature
- Heavy rear half → Light Rear Half
- ← Prominent highlight in front
- Tapered nose instead of → Reduced taper to suit flow lines
- Too many surface transitions → Reduced surface transition
- ← Tail lamp derivative of flow lines
- Thick supports for mirror → Thin supports

REFRESH SCHEME



Mass  
Movement  
Balance  
Stance  
Proportion  
Features

Refresh DESIGN











## *Design Strategies*



To give the vehicle a fresh look in strict lines of a refresh

A sporty dynamic stance which is the new age attitude

Except for the supporting grey front panel, all the other body parts of Scooty has been altered to have cutting edge style.





## *Stance and movement*

The vehicle has a dynamic stance which radiates youthful energy. The head lamp carries happy assertive attitude  
The vehicle is sleek and slender and bears an overall lightness







## *Mass & Balance*

Tight surfaces and bold edges which sort of lifts the vehicle visually conveys lightness of the form and gives it a slender outline







## *Proportion*

The rear half of Scooty look very massive for its slender front-half. This visual disparity has been corrected





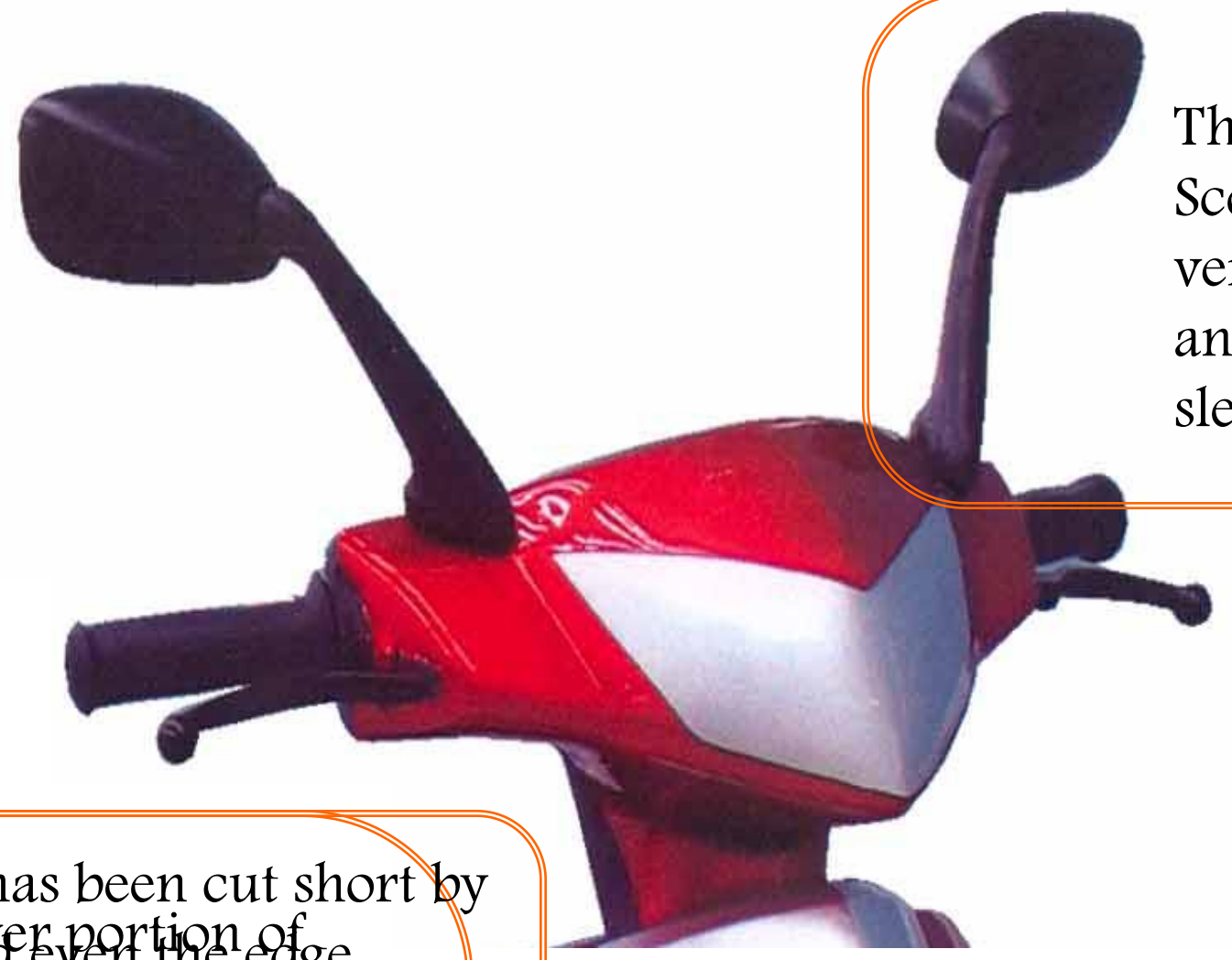


# Features



The nose has been cut short by 40mm and even the edge of the wheel well has been pulled back to make it look shorter over all dynamism.

The surface transition at the lower end has been resolved by a edge feature which is also coherent with the other feature lines



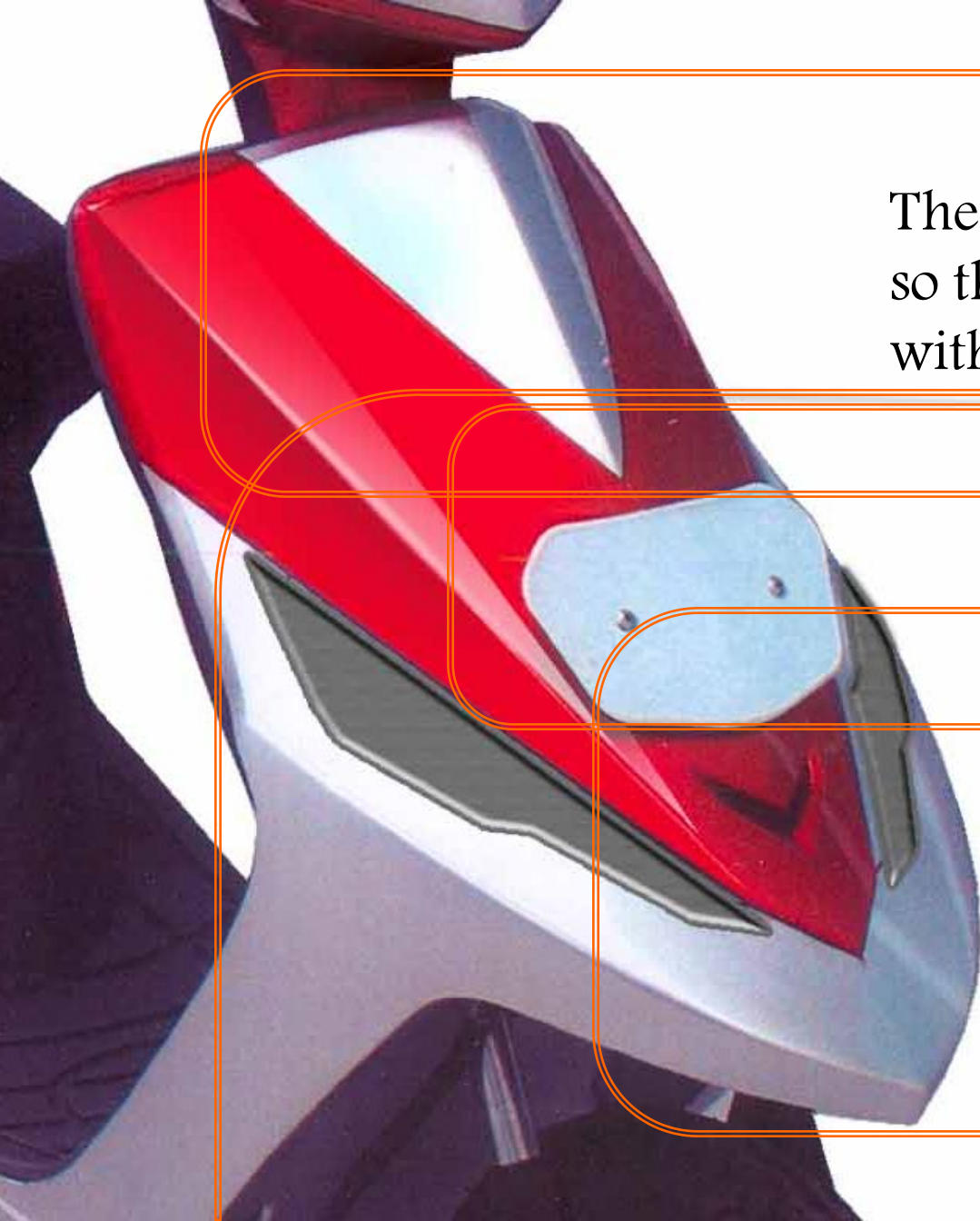
The mirror unlike Scooty's which is very soft, is sharper and the holder is sleek

The head lamp has maintained the same edge lines but appears smaller and cute for the treatment of surfaces.

The characteristic Scooty head stance can be traced to its neck curvature and this has been maintained true to its original







The size and depth of the chest has been decided so that the surface has a natural intersection with the red panel.

The indicators have been decided on the silver panel for two main reasons:  
While designing the front panel and this has been taken that the nameplate can be well positioned  
• It gives a clear unhindered highlight on the red panel cut out has been provided on the red panel and the same kind of cut out feature is also there in the back coloured panel which is a design strategy of Scooty

• It reduces the amount of silver area

• It also gets a clearance of 240mm lamp to lamp.

• Visually it carries a mean attitude

The seat has been made crisp and sharp to suit overall body language. The front half has been reduced by 10mm and

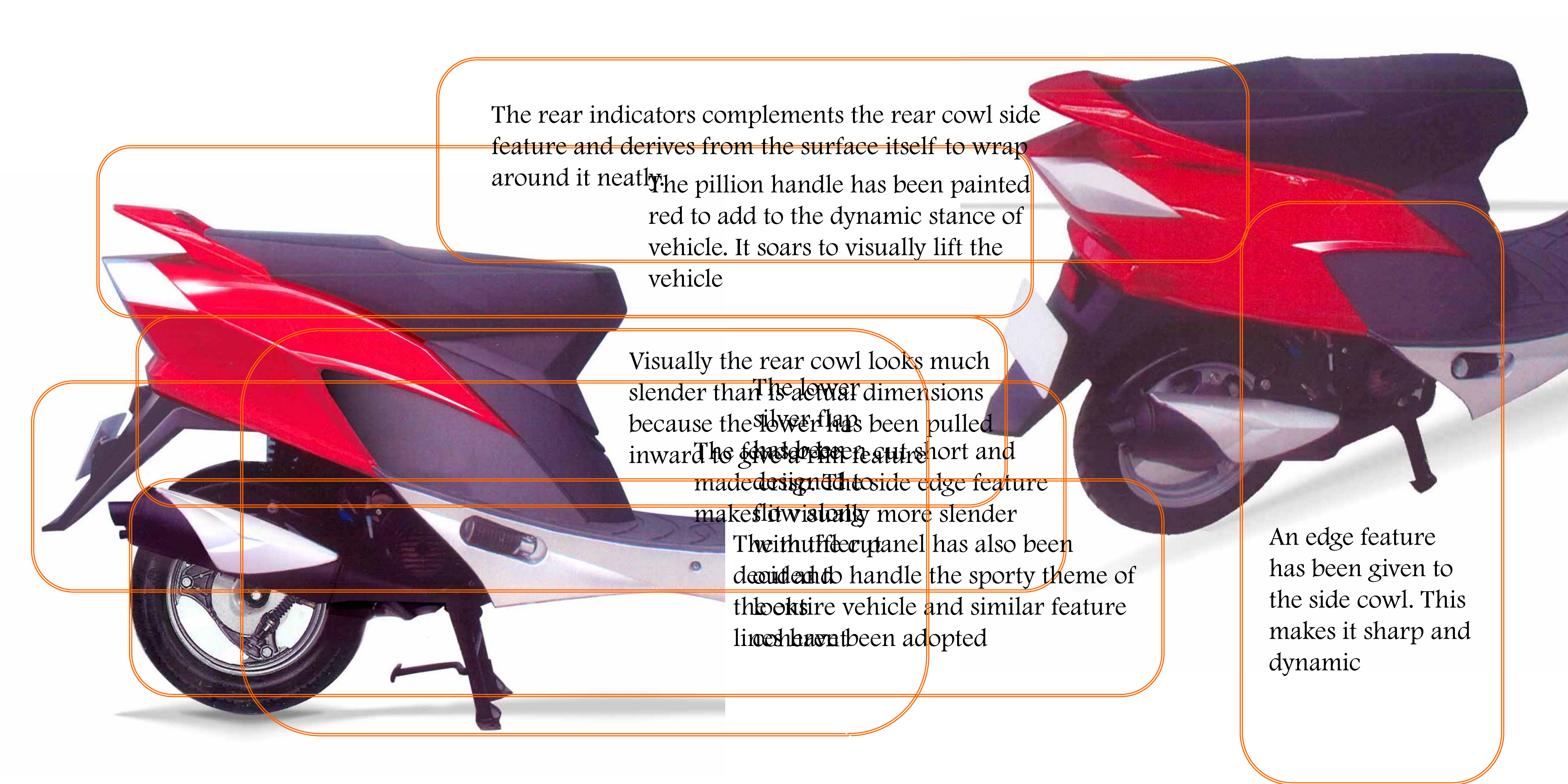
the rear half has been raised  
seat a dynamic dip. Unlike Scooty the seat does not wrap

around the red panel but

the red panel and the same kind of cut out feature is also there in the back rear half of the vehicle







The rear indicators complements the rear cowl side feature and derives from the surface itself to wrap around it neatly.

The pillion handle has been painted red to add to the dynamic stance of vehicle. It soars to visually lift the vehicle

Visually the rear cowl looks much slender than its actual dimensions because the silver flap has been pulled inward to give a thin feature

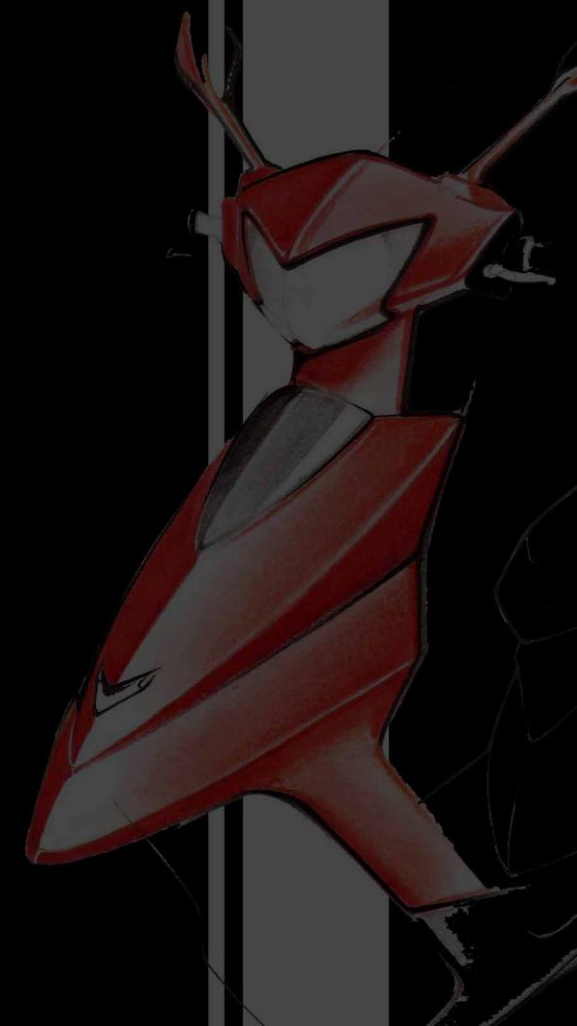
The front lower cut short and made design. The side edge feature makes it visually more slender

The fuel tank panel has also been decided to handle the sporty theme of the entire vehicle and similar feature lines have been adopted

An edge feature has been given to the side cowl. This makes it sharp and dynamic

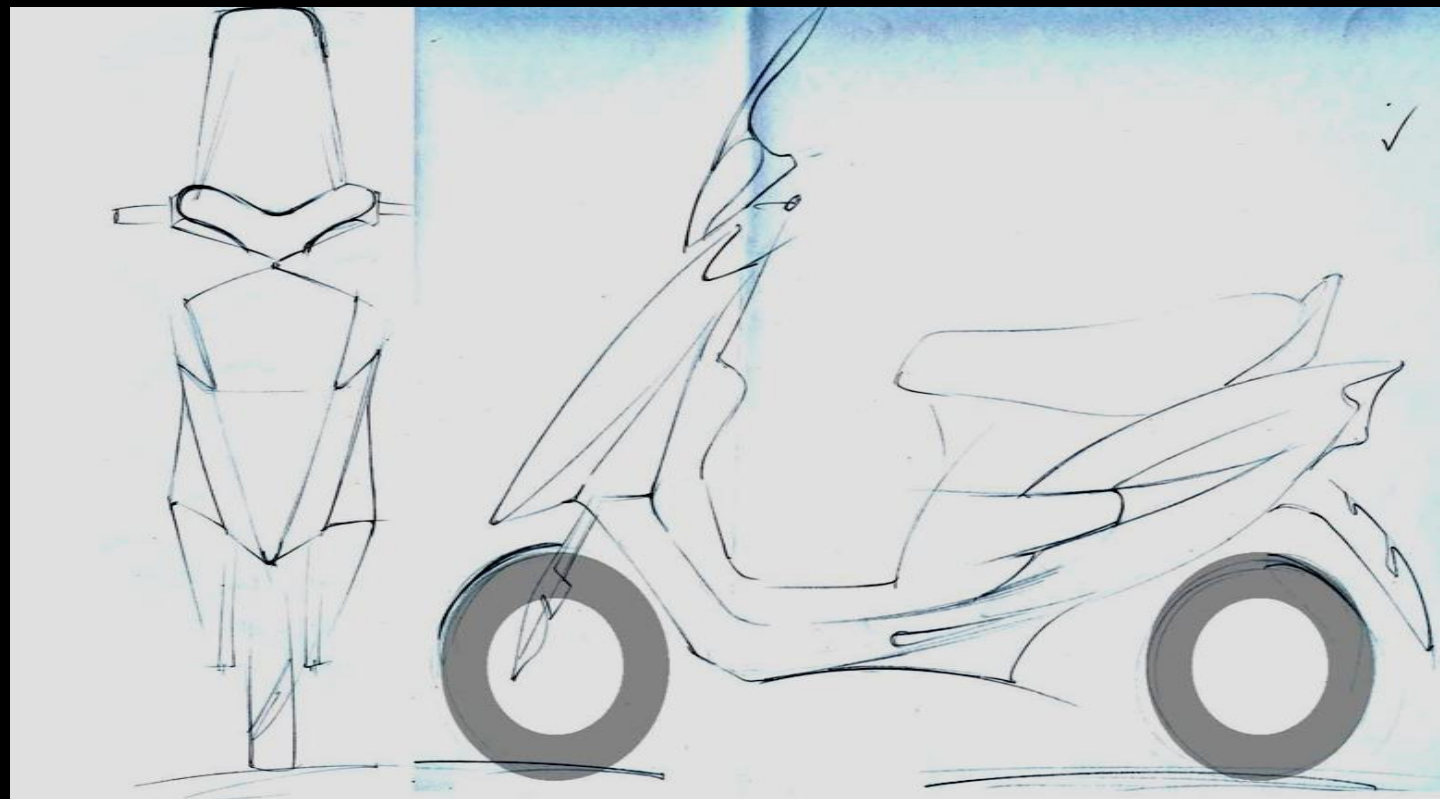
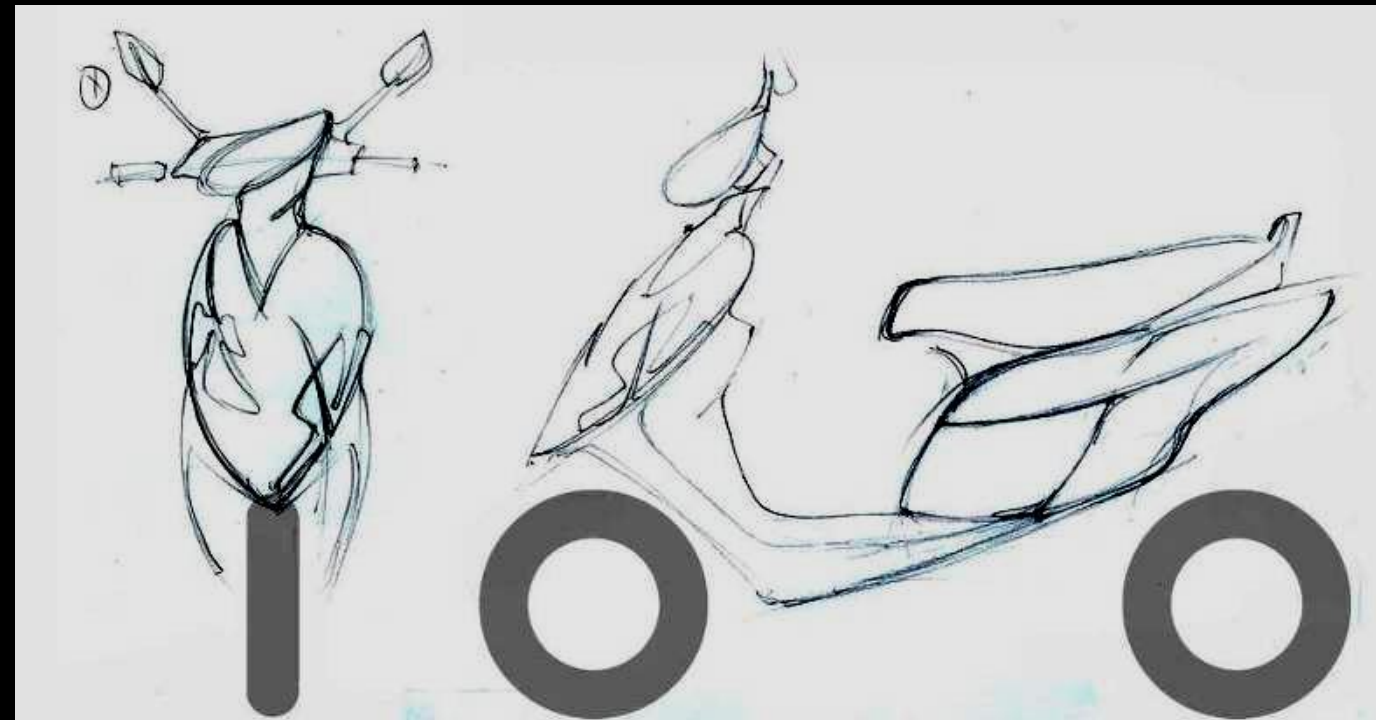
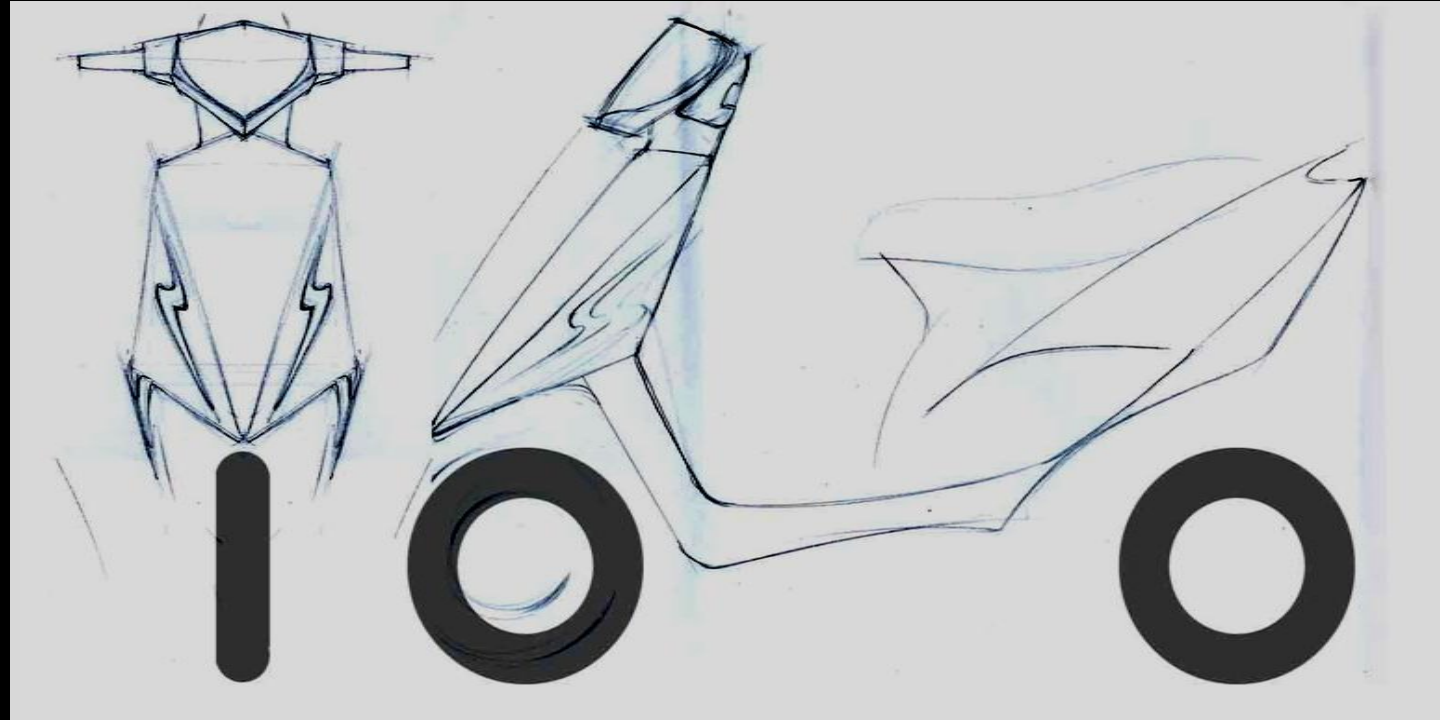


Design development

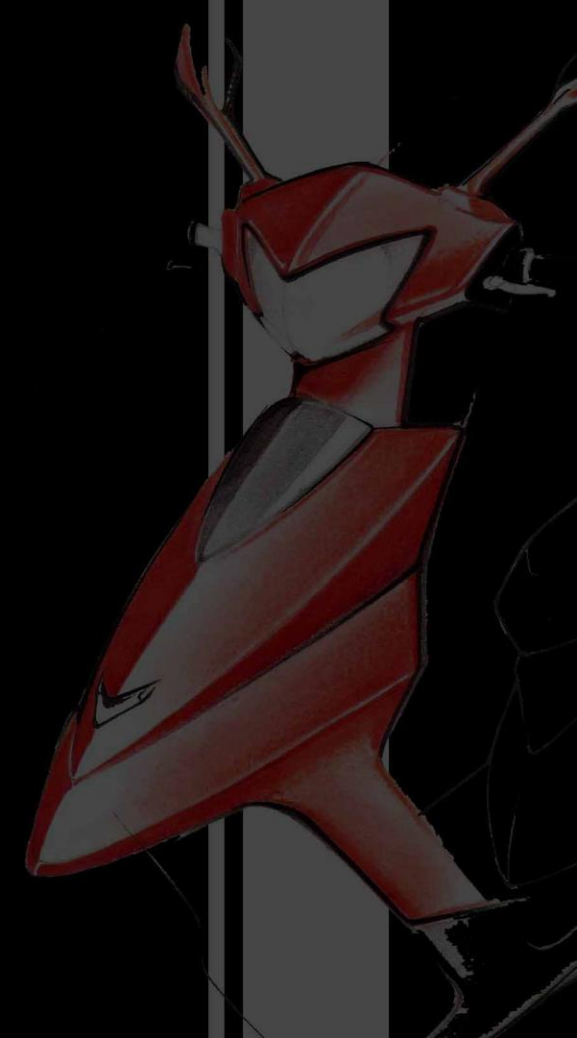


# FORM EXPLORATION

Initial explorations were unbiased; not in any particular direction  
Few of them selected to develop in definite directions



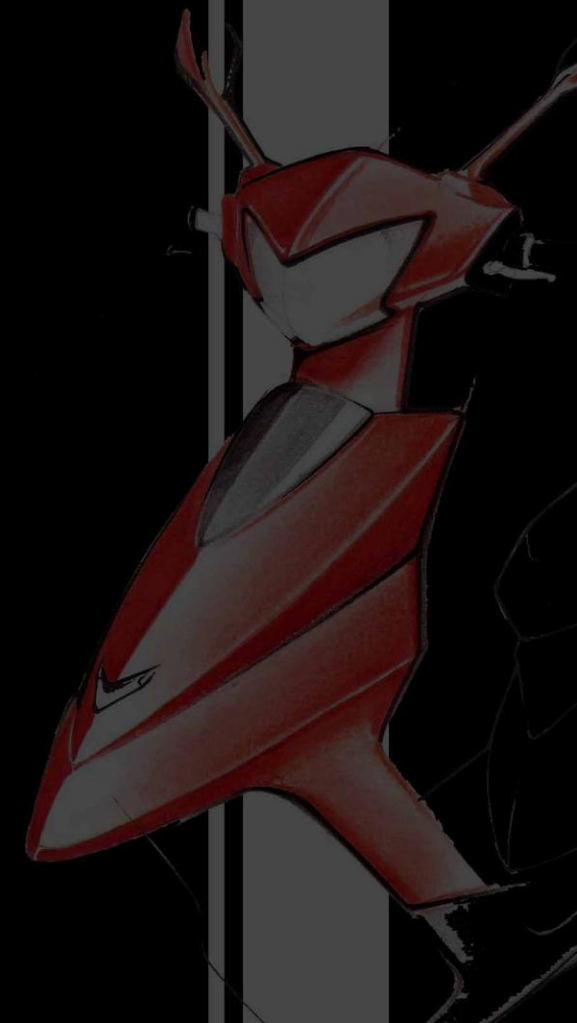
FROM EXPLORATION



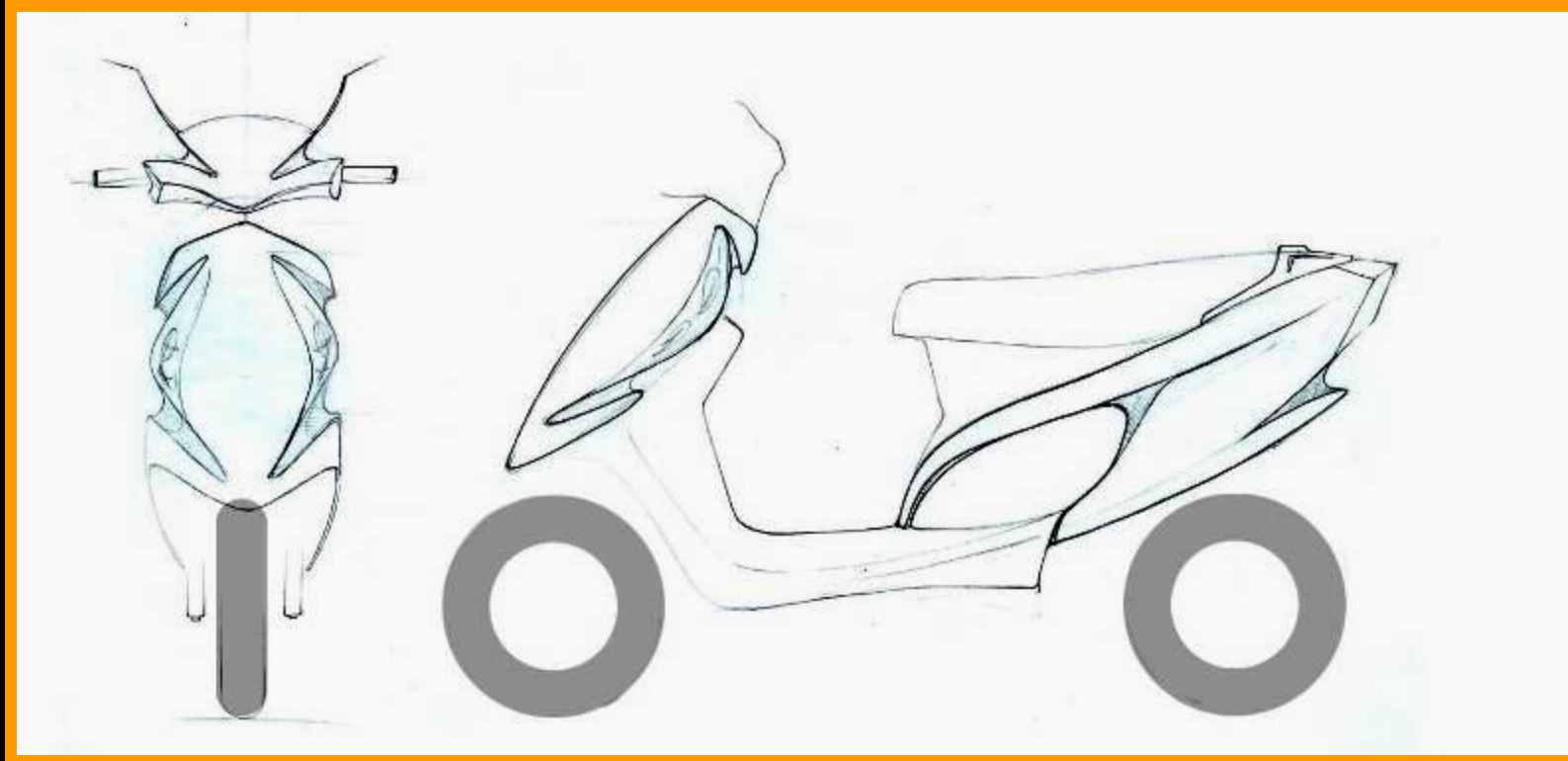


## IDEATION IN SPECIFIC DIRECTION ~ **SPORTY**

Out of over 50 sketches made during ideation phase selected few are used to explain the process



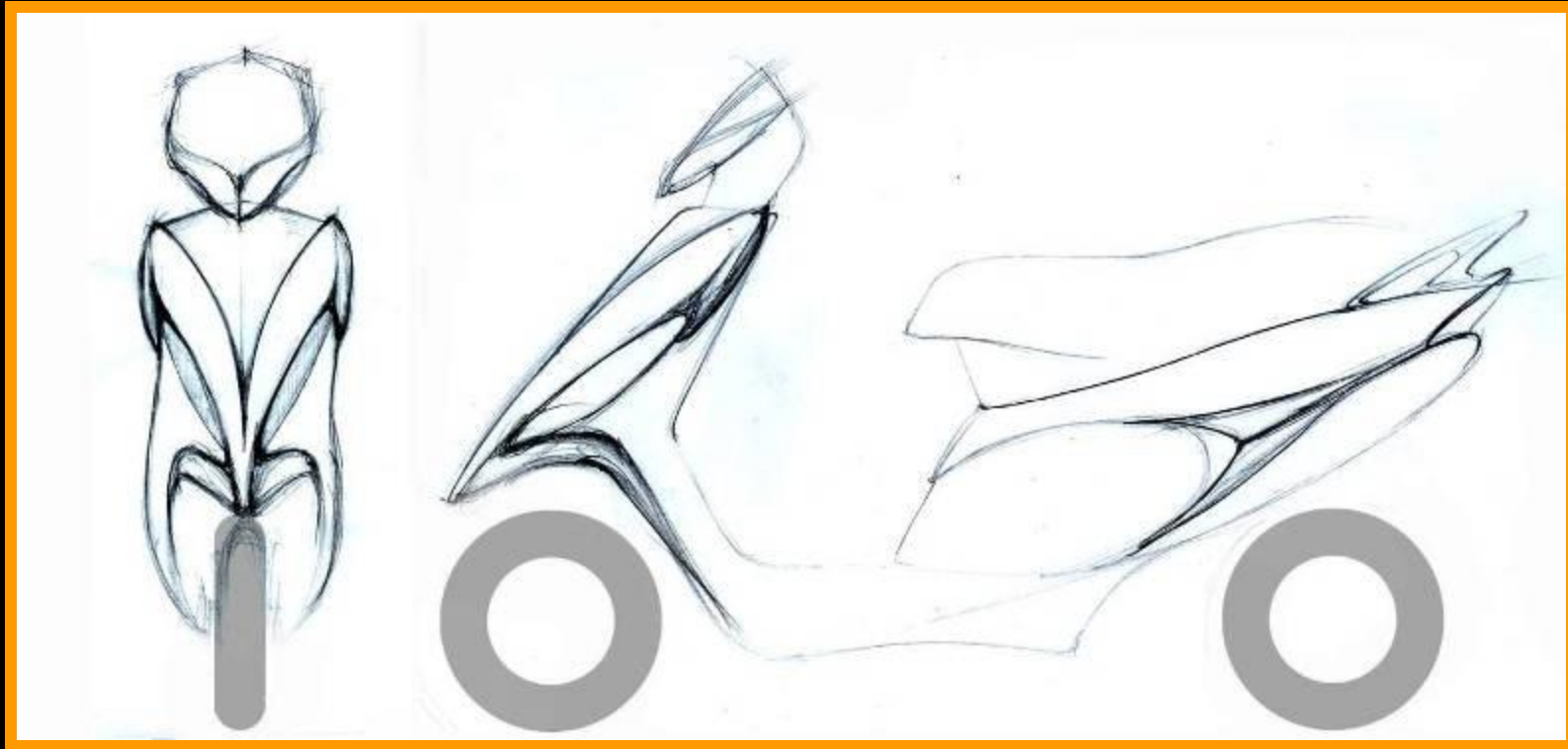
# IDEATION IN SPECIFIC DIRECTION ~ SPORTY



Frontal expression of an Urban insect with a dynamic identity

Soft edges

flow lines and sharp cut outs gives it an aggressive look

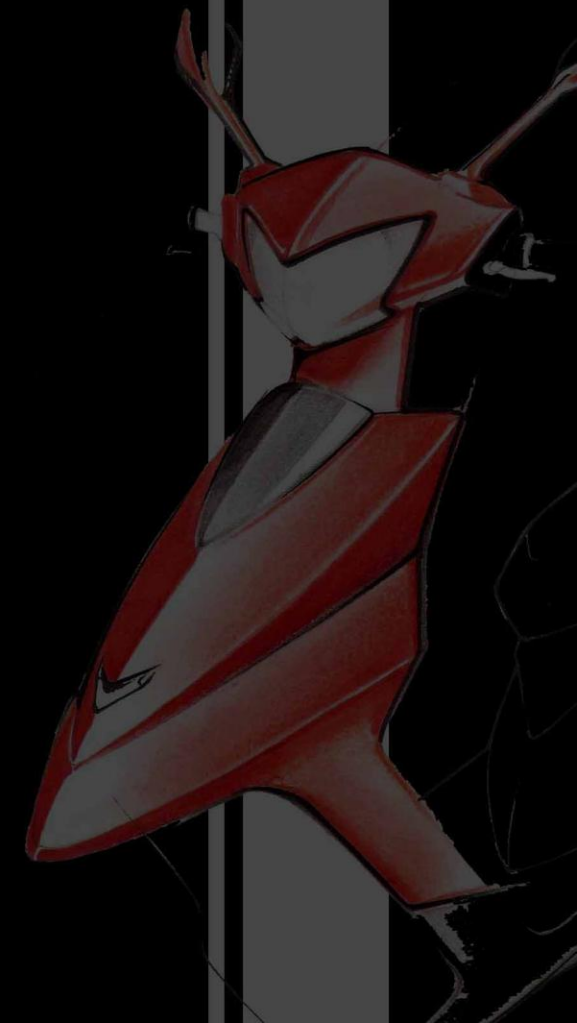


Aggressive and muscular ready to pounce

Angle of head gives it aggressive stance

Swiftness rendered due to lightness of rear

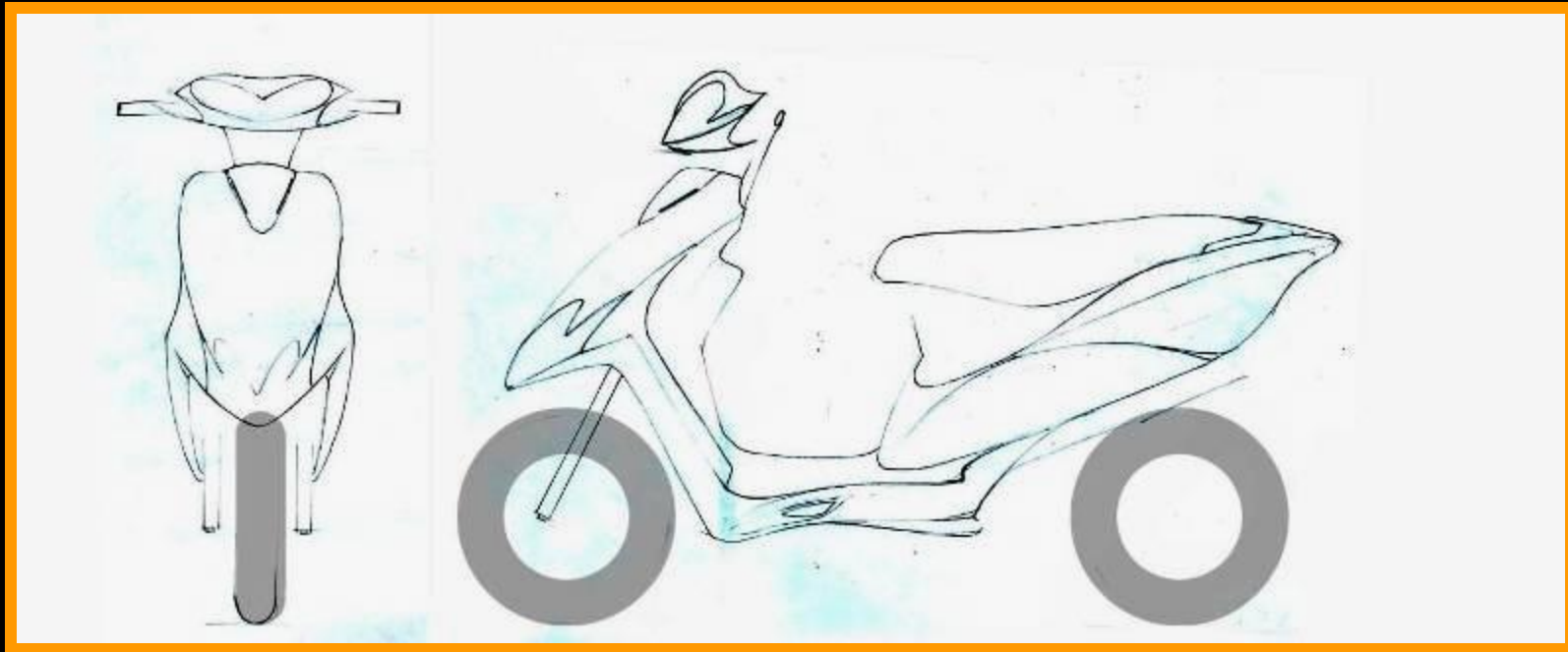
Sense of movement achieved due to streamlining of rear





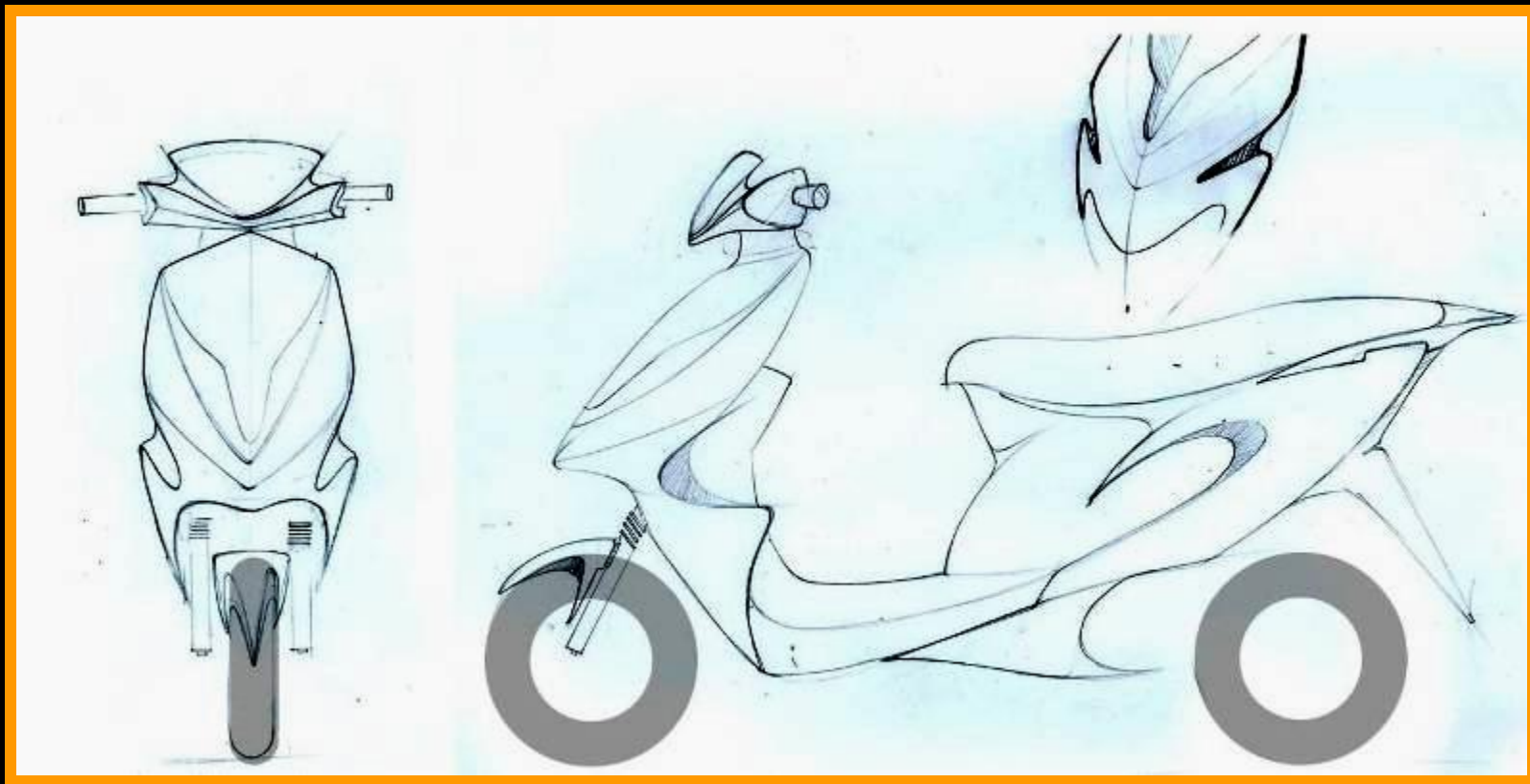
# IDEATION IN SPECIFIC DIRECTION ~ SPORTY

IDEATION



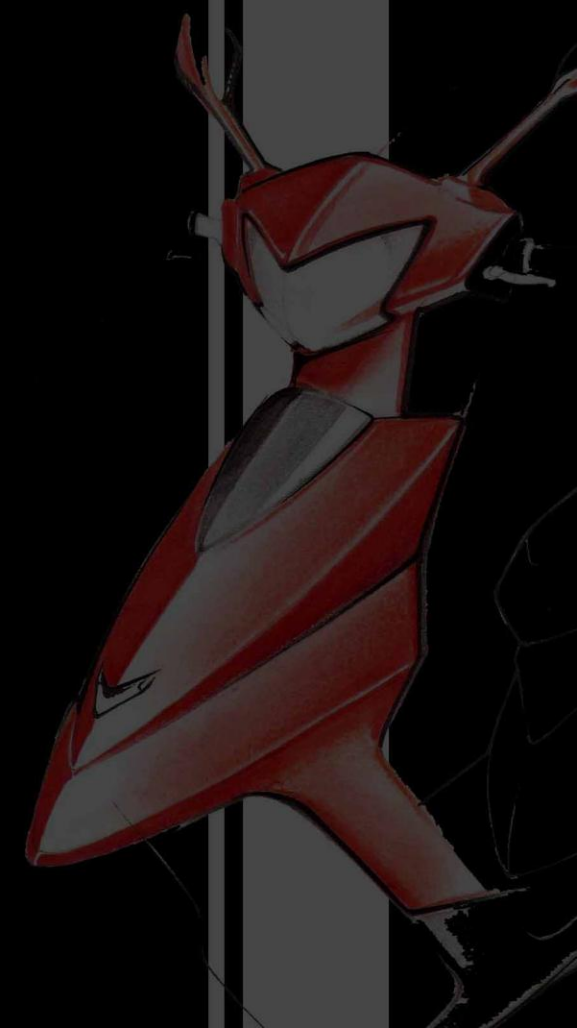
Soft feminine body panel gets a dynamic flair to it due to head lamp treatment

Frontal expression



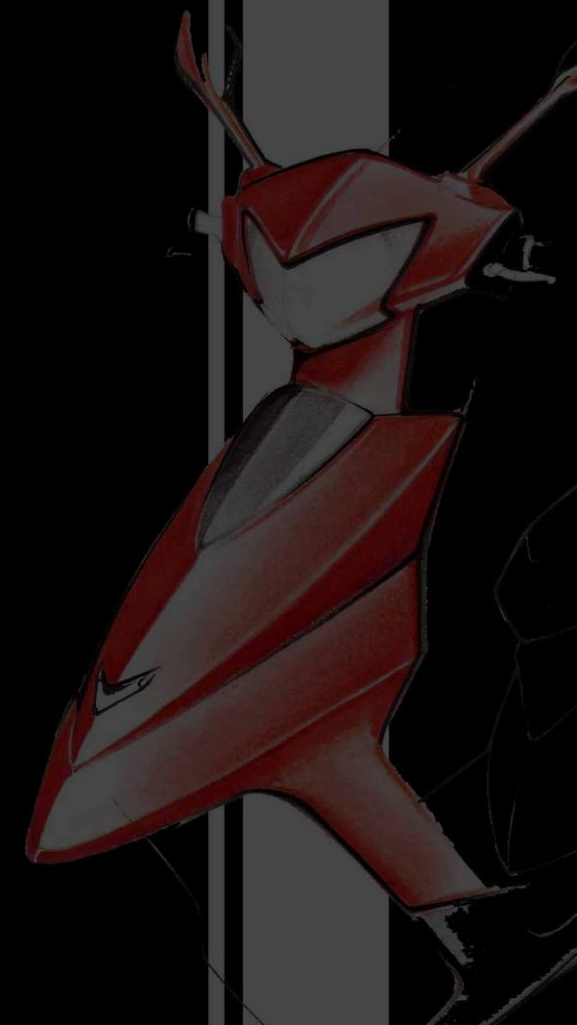
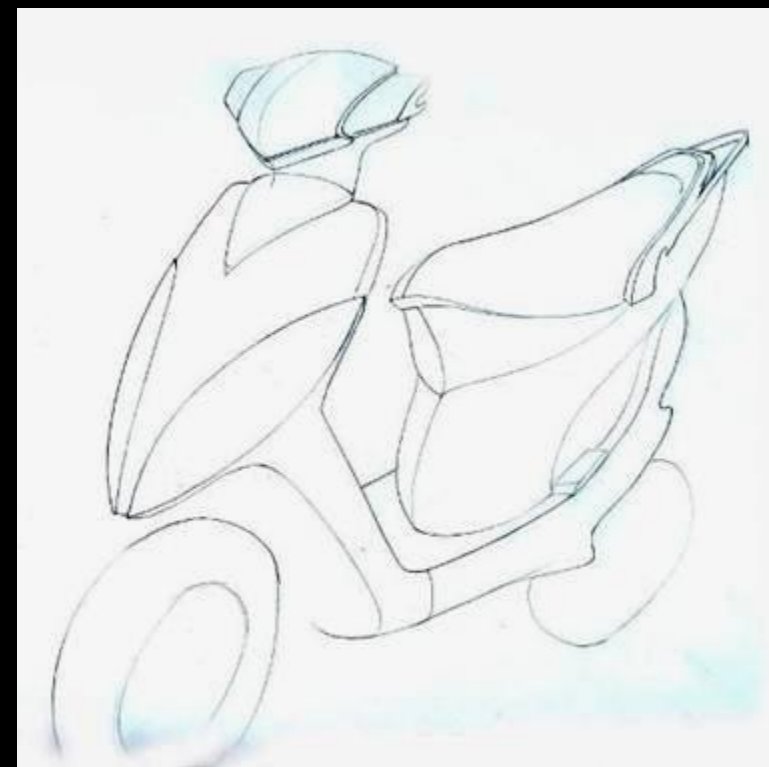
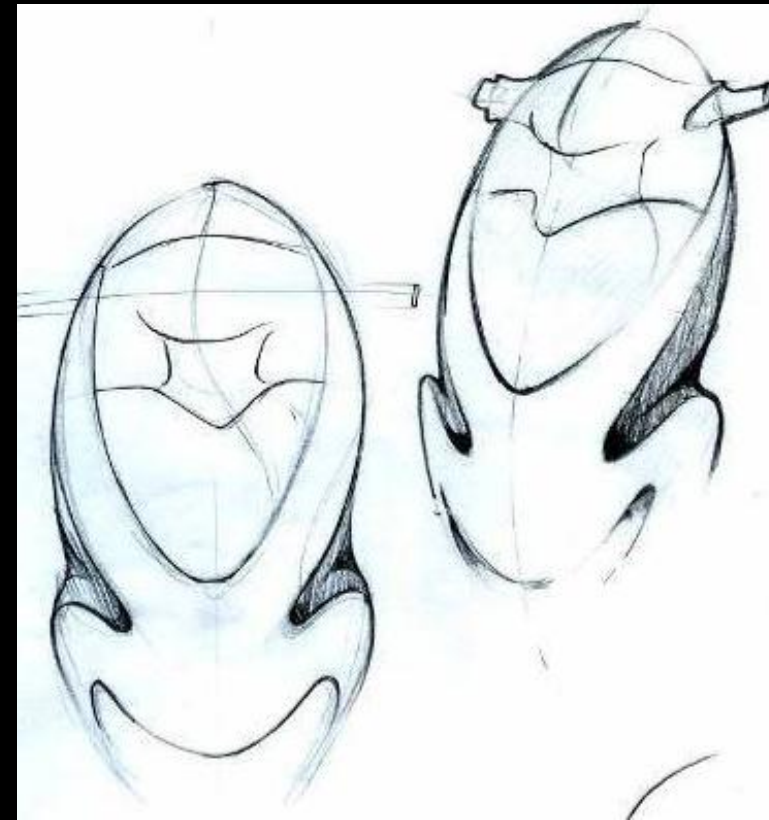
Masculine nature attained by increased shoulder width, Smooth surface transitions make it sporty and full of life

Surface behaviour treatment



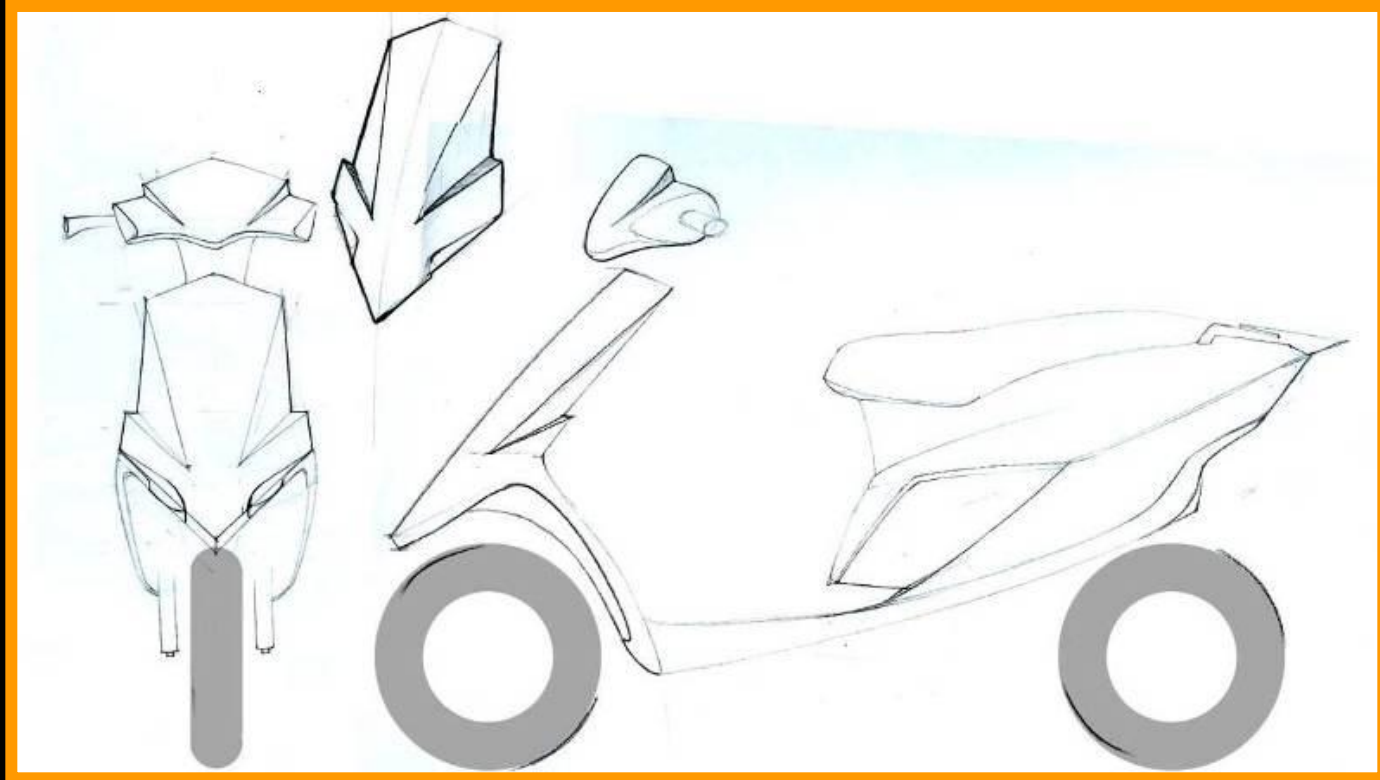
## IDEATION IN SPECIFIC DIRECTION ~ ELEGANT

Out of over 50 sketches made during ideation phase selected few are used to explain the process

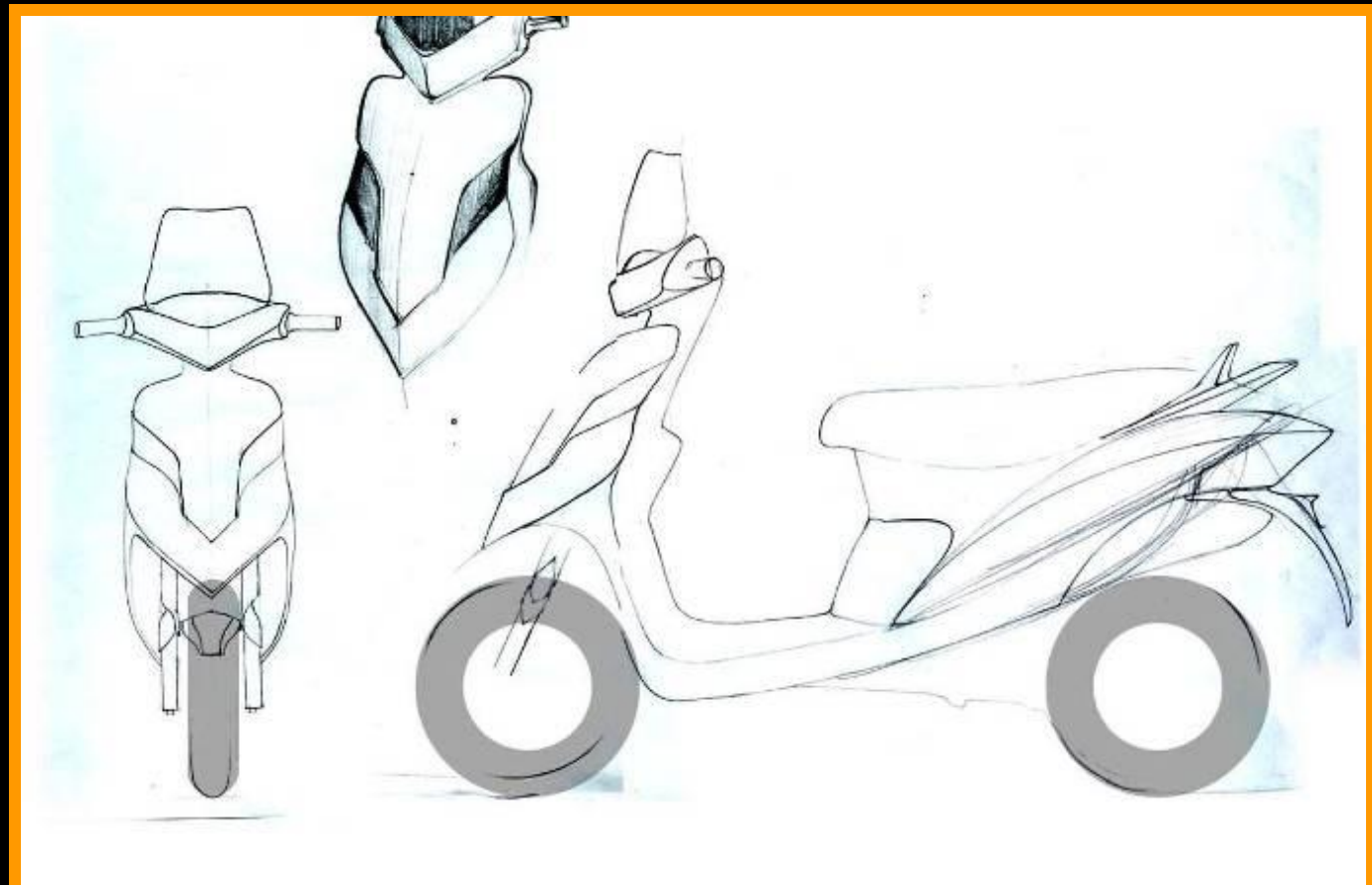




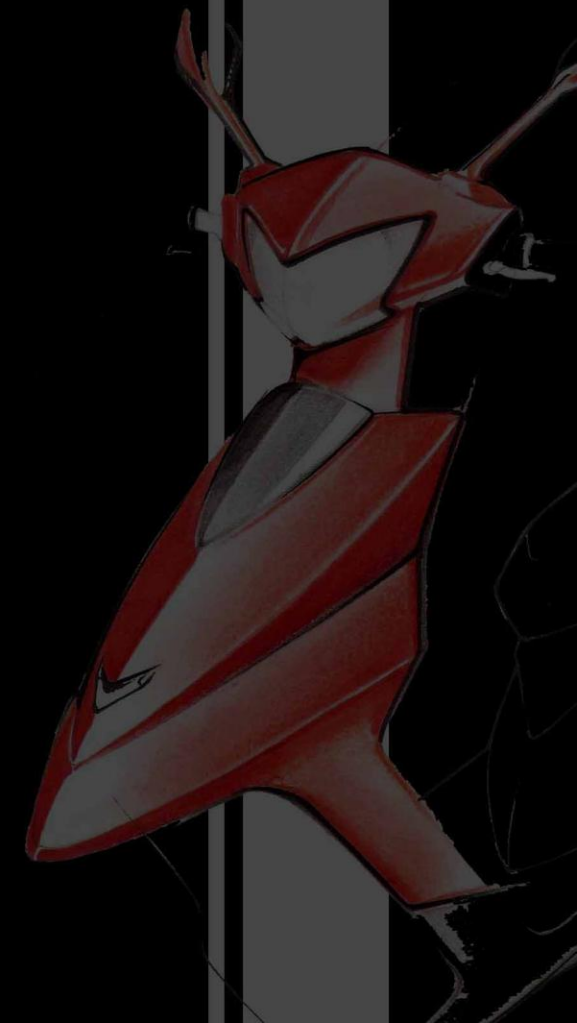
# IDEATION IN SPECIFIC DIRECTION ~ ELEGANT



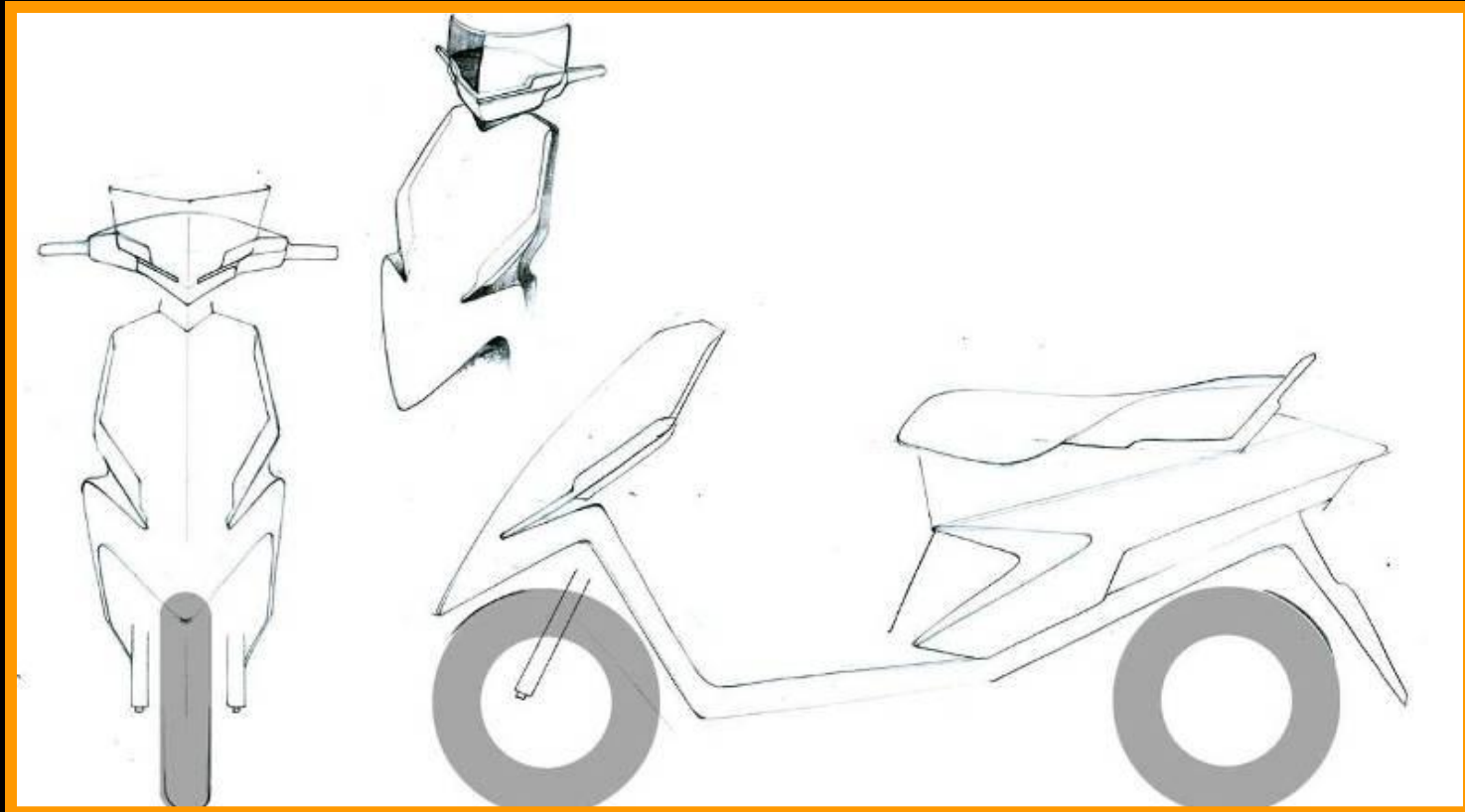
Edge styling is used to attain a sharp and light form. The simplicity of surface gives it an elegance. But the rear is heavy



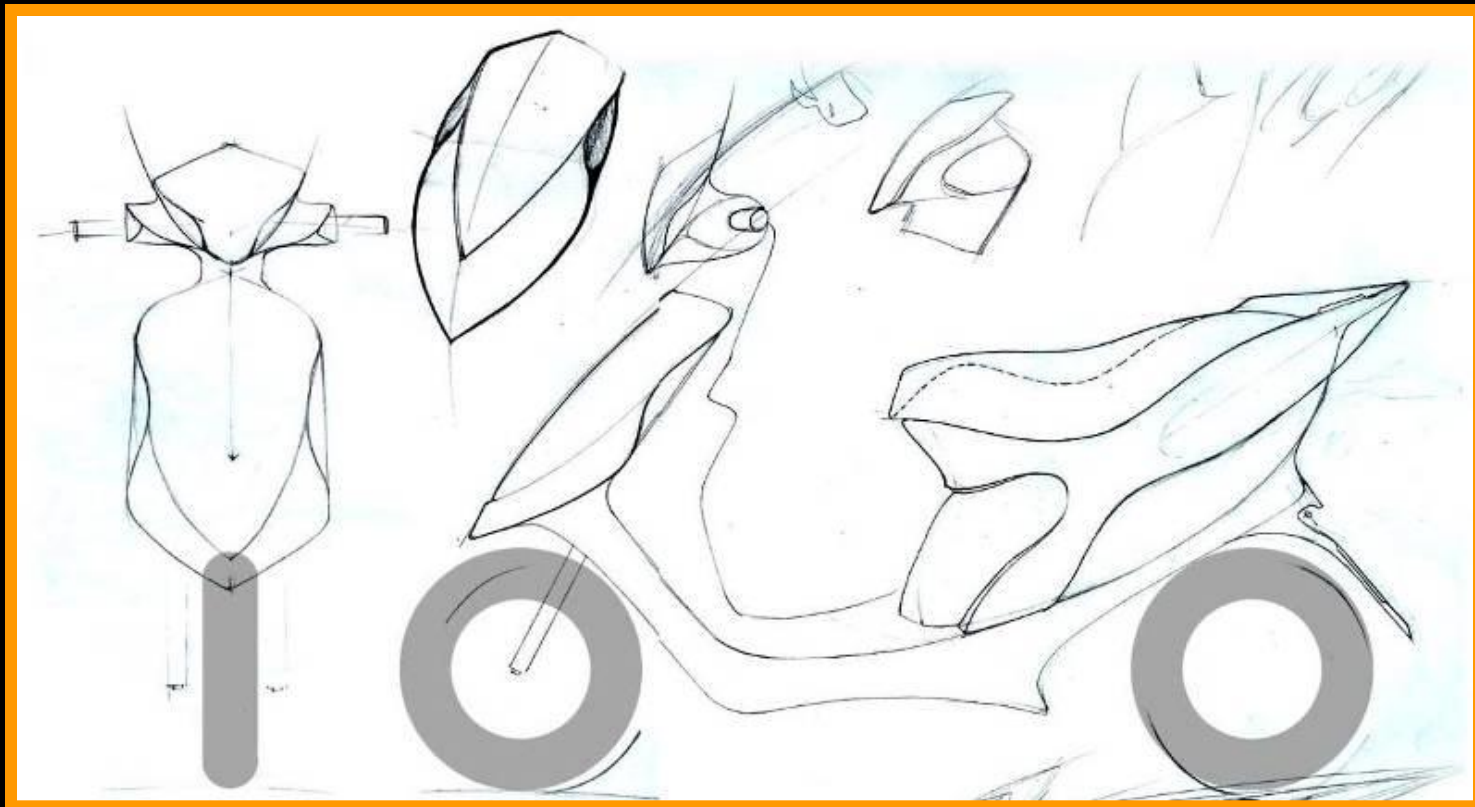
Surface transition kept to the minimum by variation in depth instead of side cut out. The rear half is very heavy and needs correction. Name plate can be incorporated.



# IDEATION IN SPECIFIC DIRECTION ~ ELEGANT



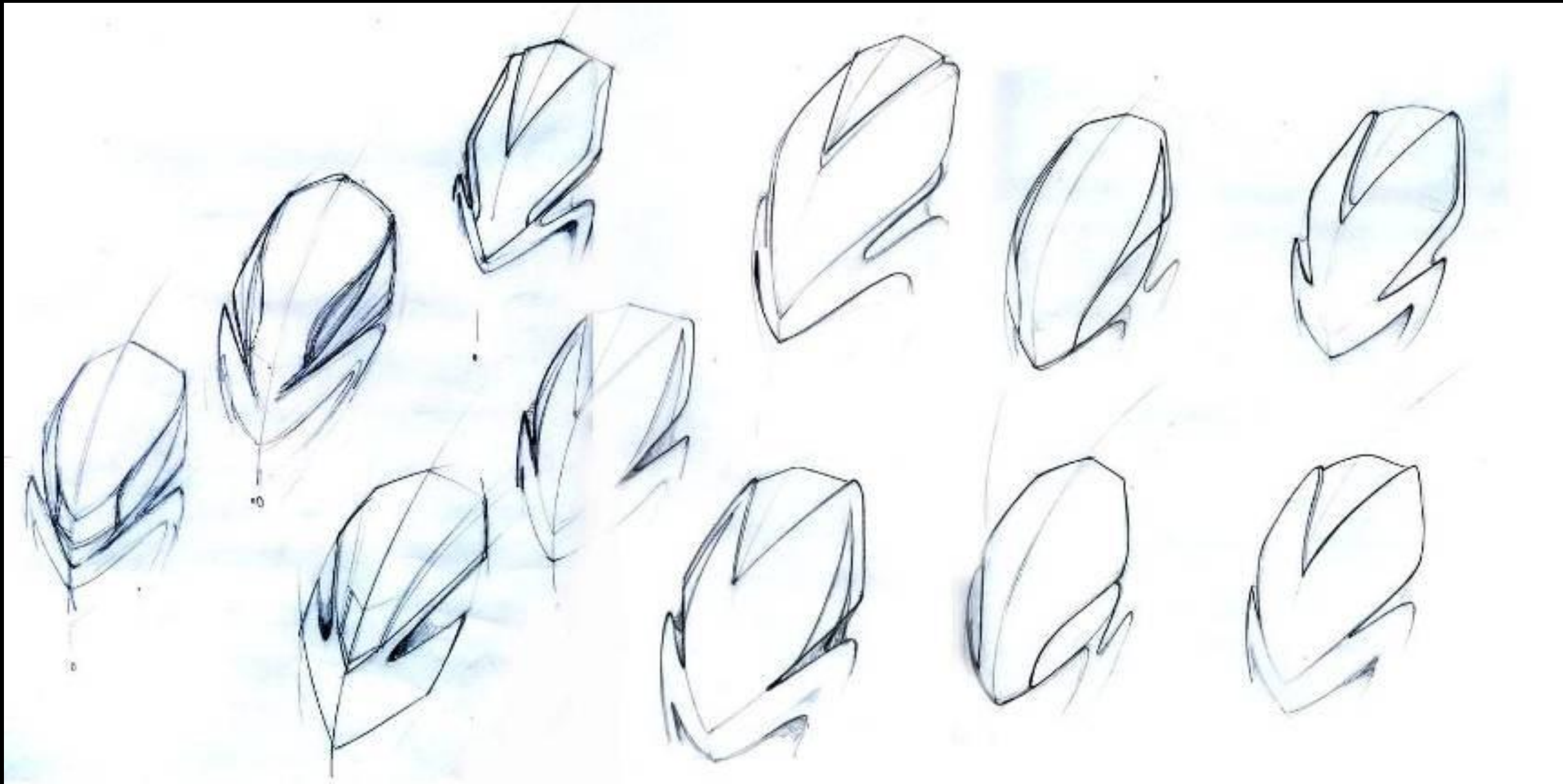
Sleek, tech-savvy and elegant. The surface is maintained as one through out with sleek indicators at the sides. Clean lines well tight over a slim mass makes it a expression of youthful elegance



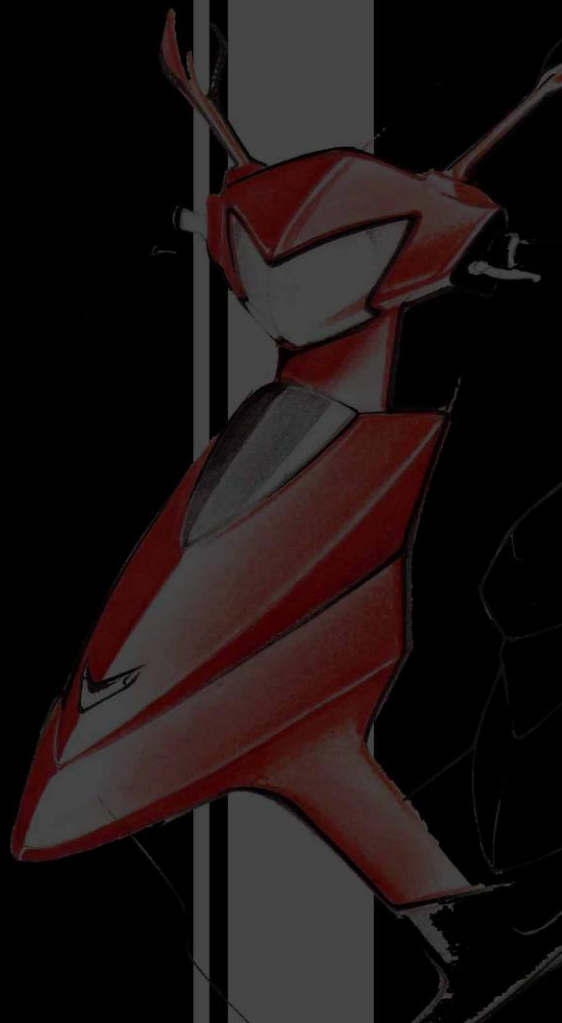
Minimum surface transition used to capture the essence of Scooty pep. The inclination of head varied to do away with the reserved nature of the former sketch. The rear panel partition lines are exaggerated.





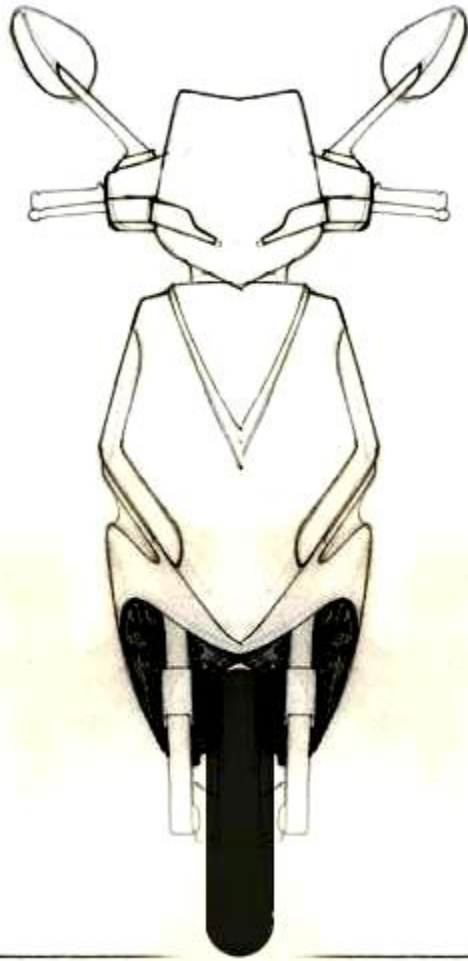


CONCEPTUALISATION





Prominent wavy surface transition to break front panel

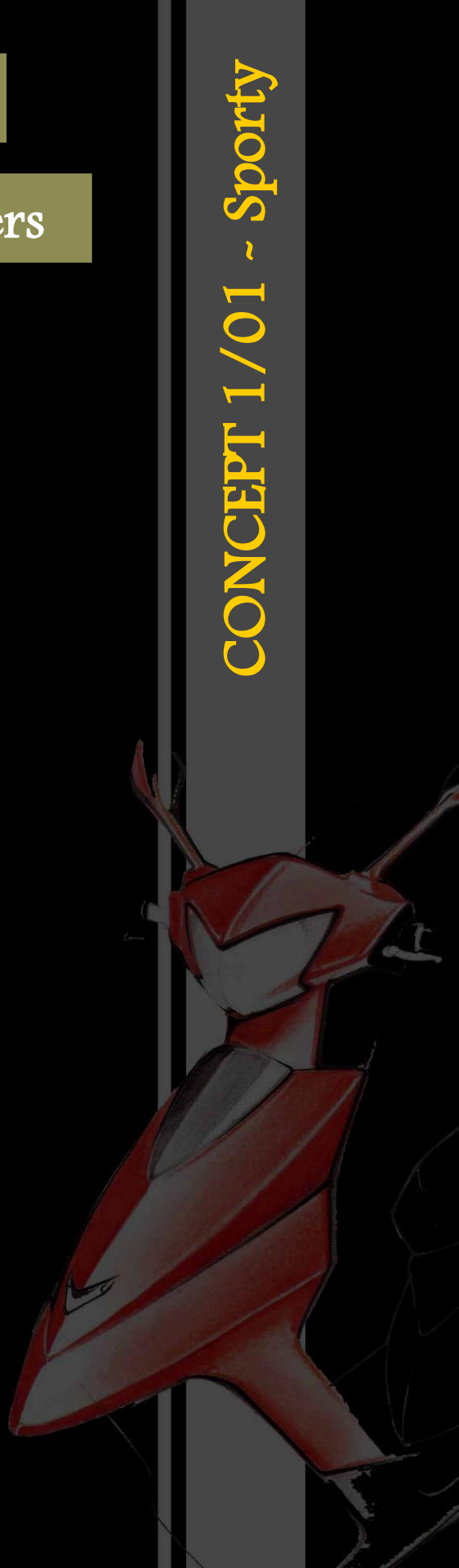


Long indicators to adorn side lengths



A trend setter in its style

Seamless fairing with silver eye holders



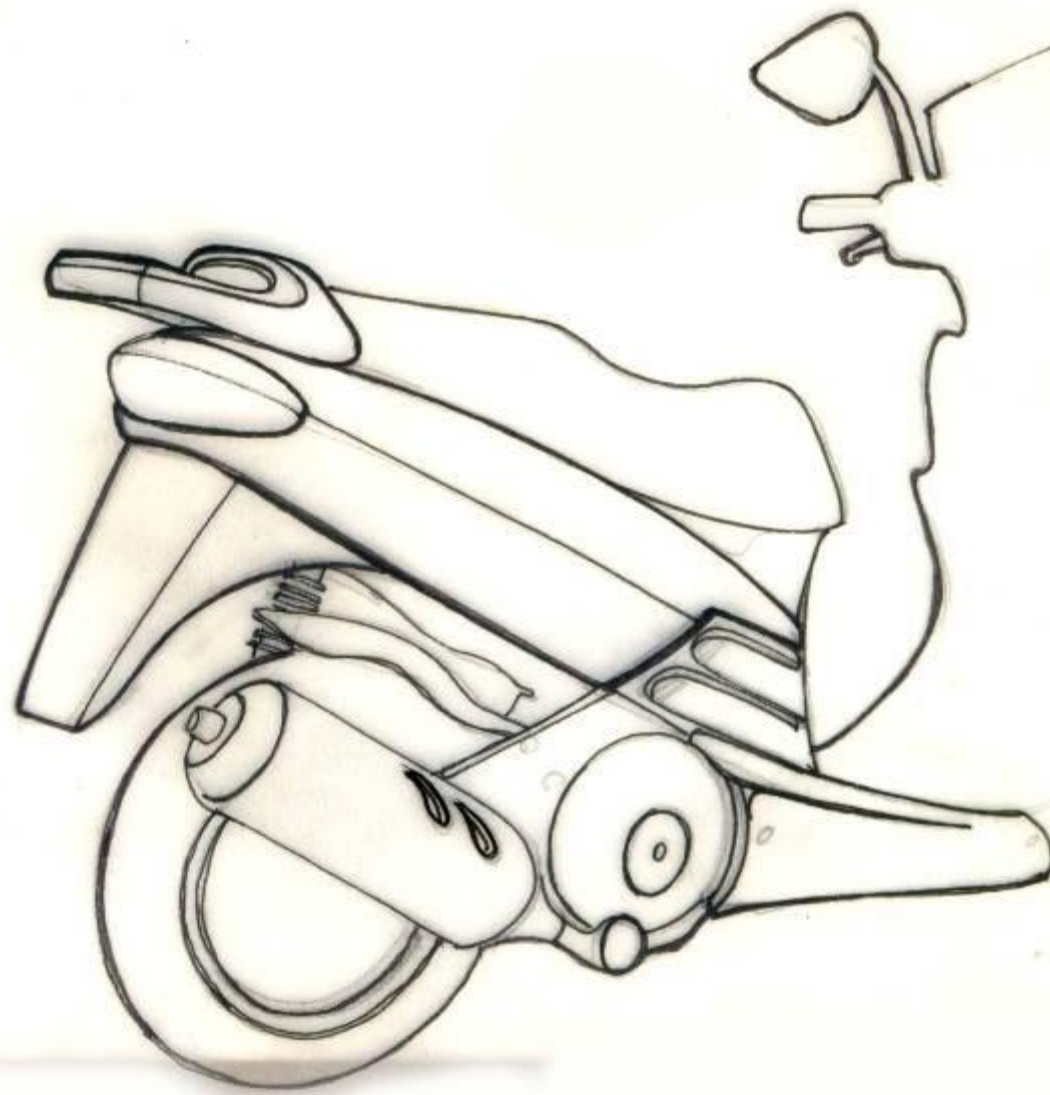
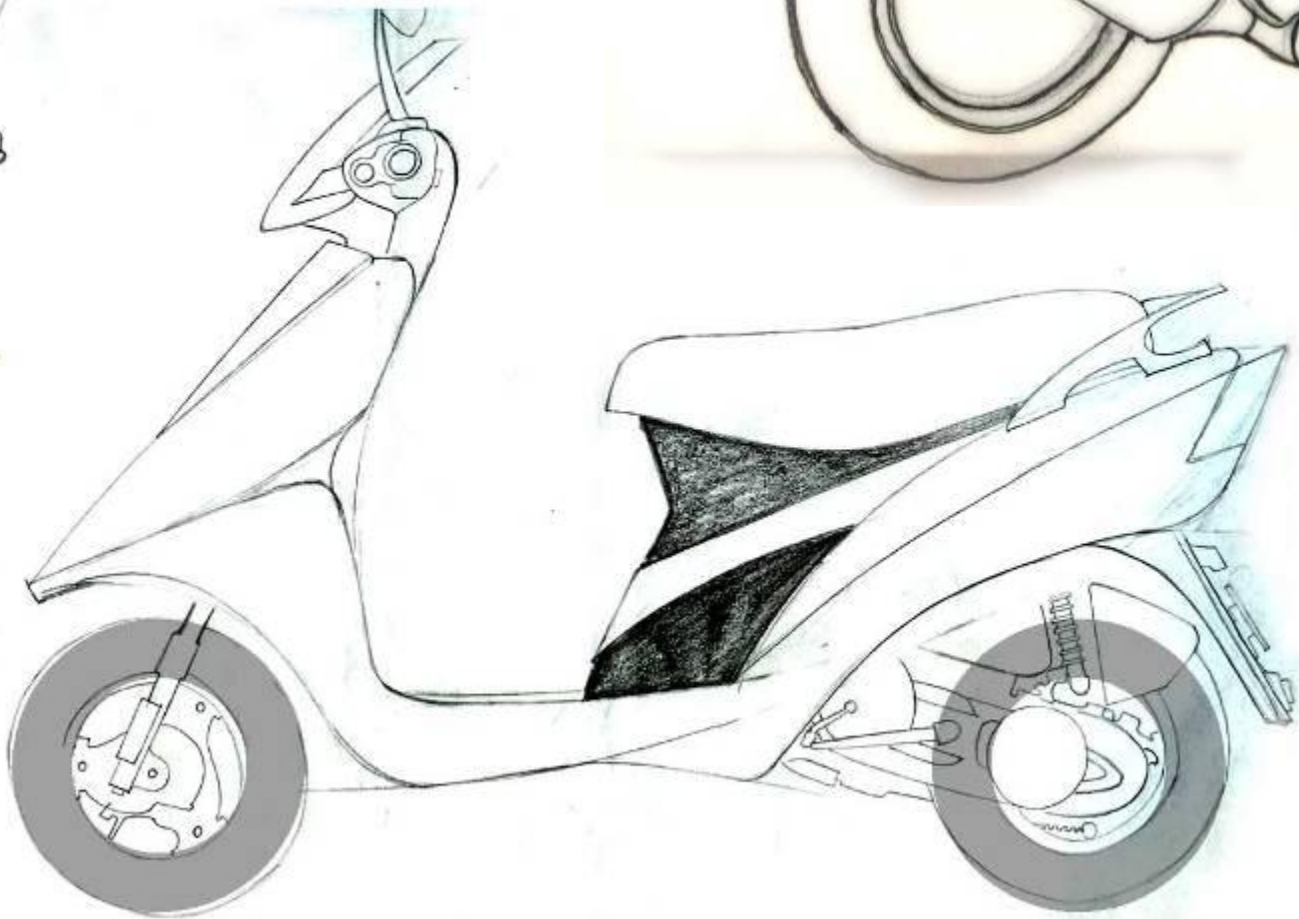
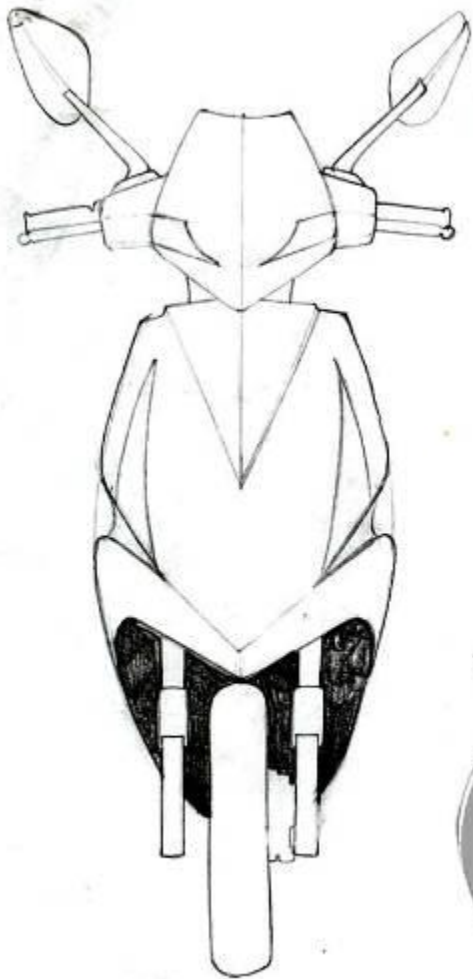
CONCEPT 1/01 ~ Sporty



Dynamic stance

More aggressive than sporty

Mean looking head lamp



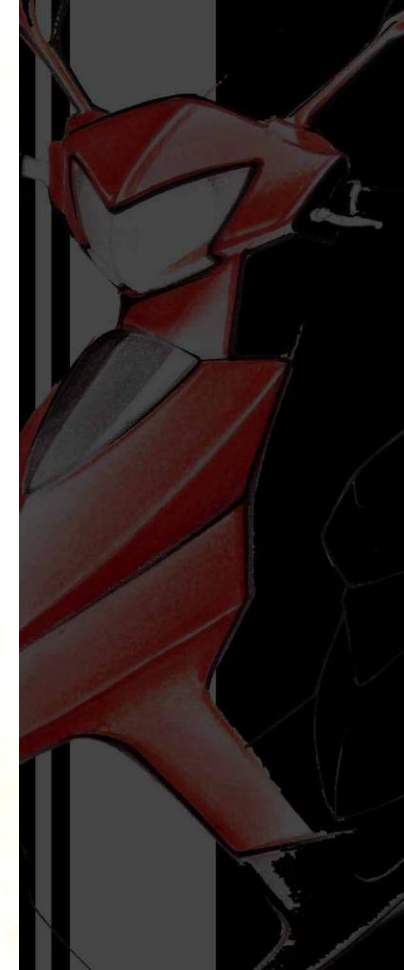
Rear – too many surface transitions

Front panel too curvaceous ~ heavy

Long indicators placed away from side

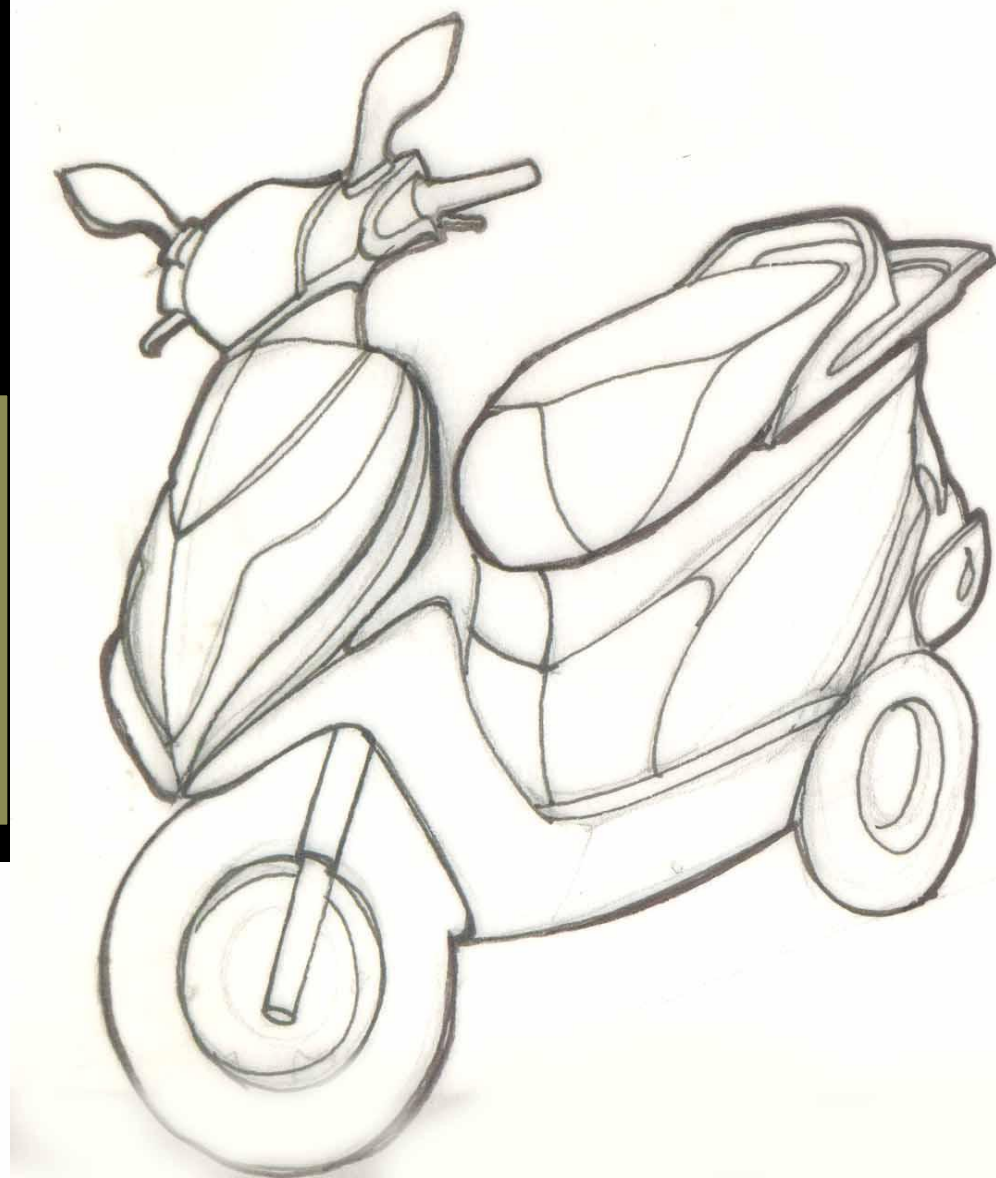


CONCEPT 1/02 ~ Sporty

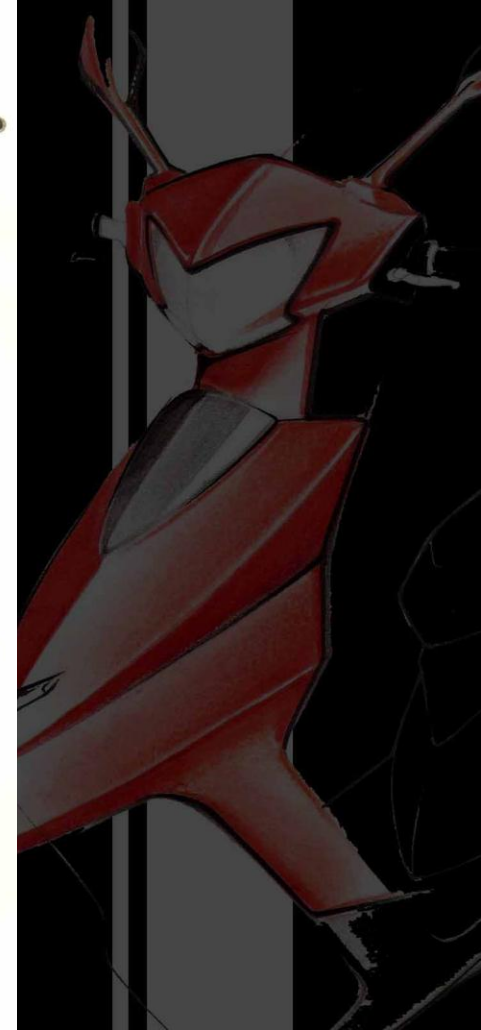
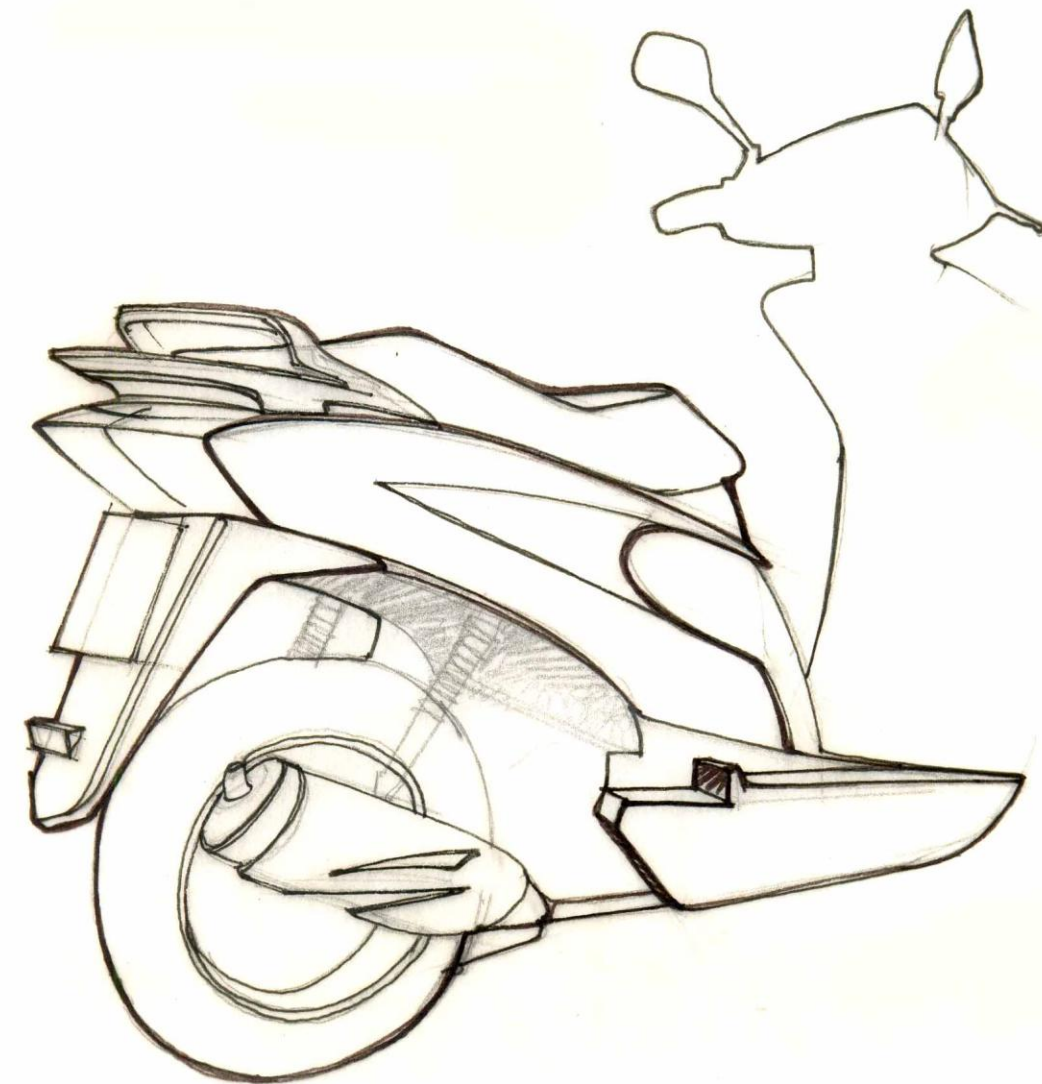
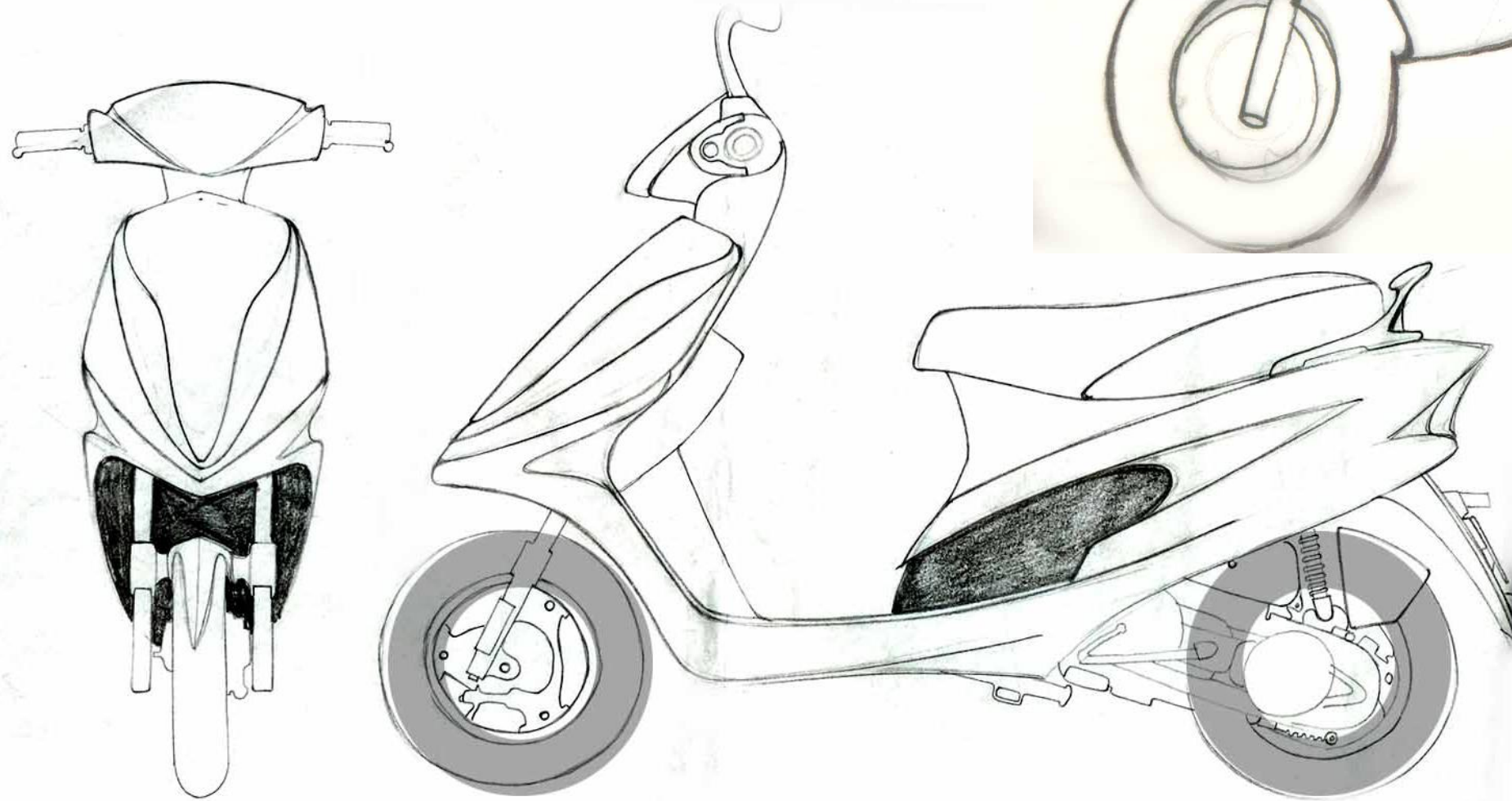




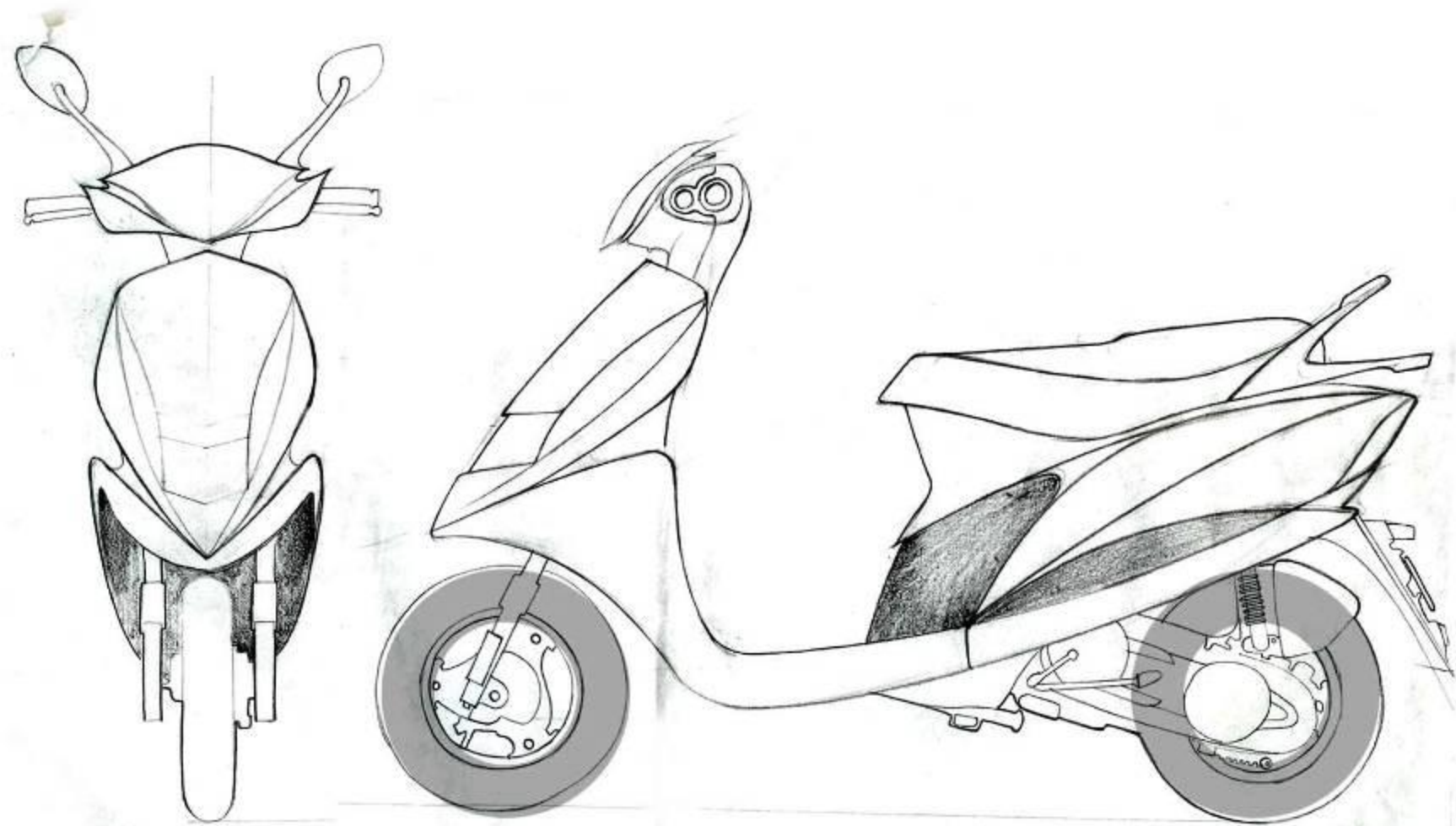
front panels have surface transitions that dictates a sporty overtone to satiate the needs of the younger generation



rear mass is balanced and the muscular pinch at the rear gives a dynamic attitude







Dynamic creature

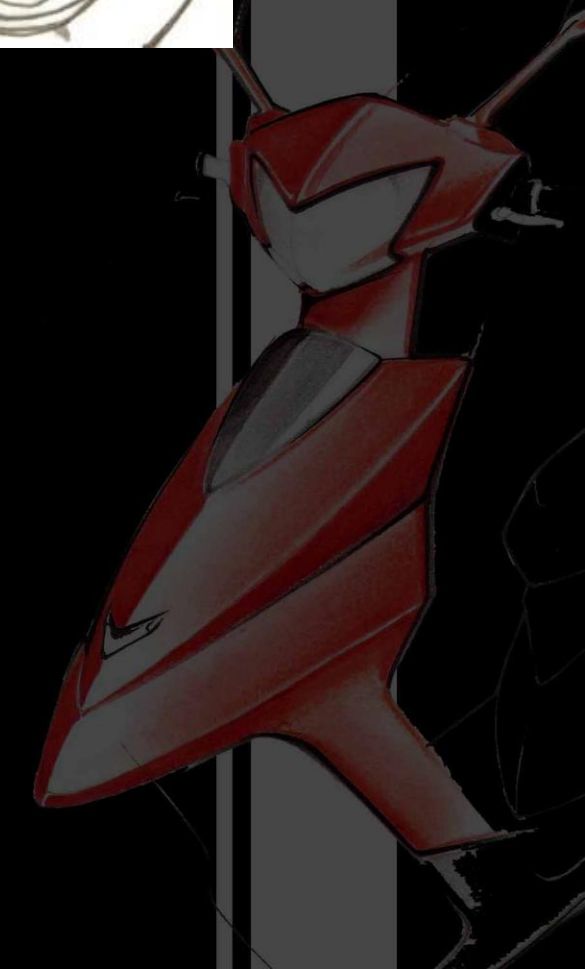


Razor sharp edge styling

Thin indicator lamps

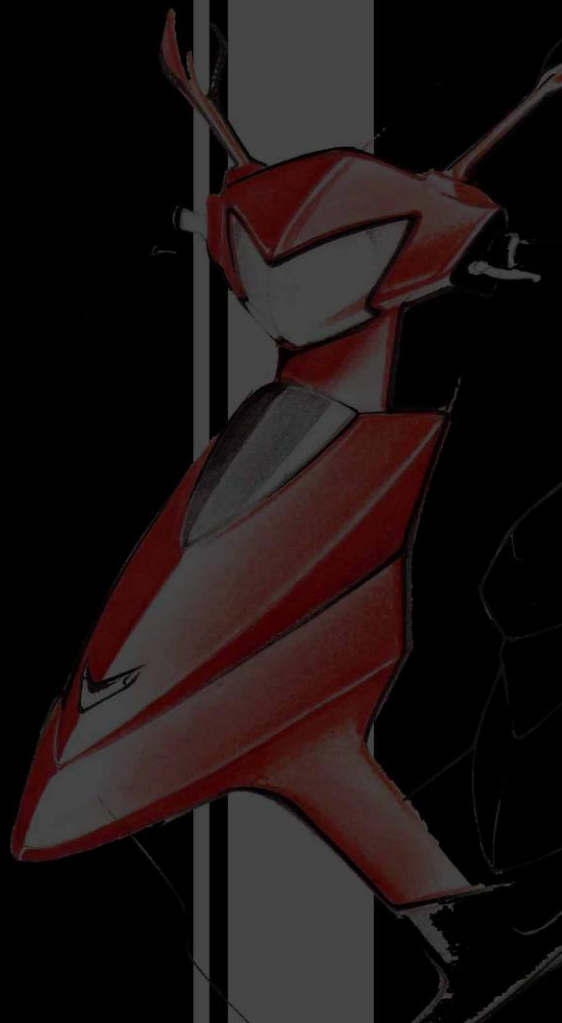
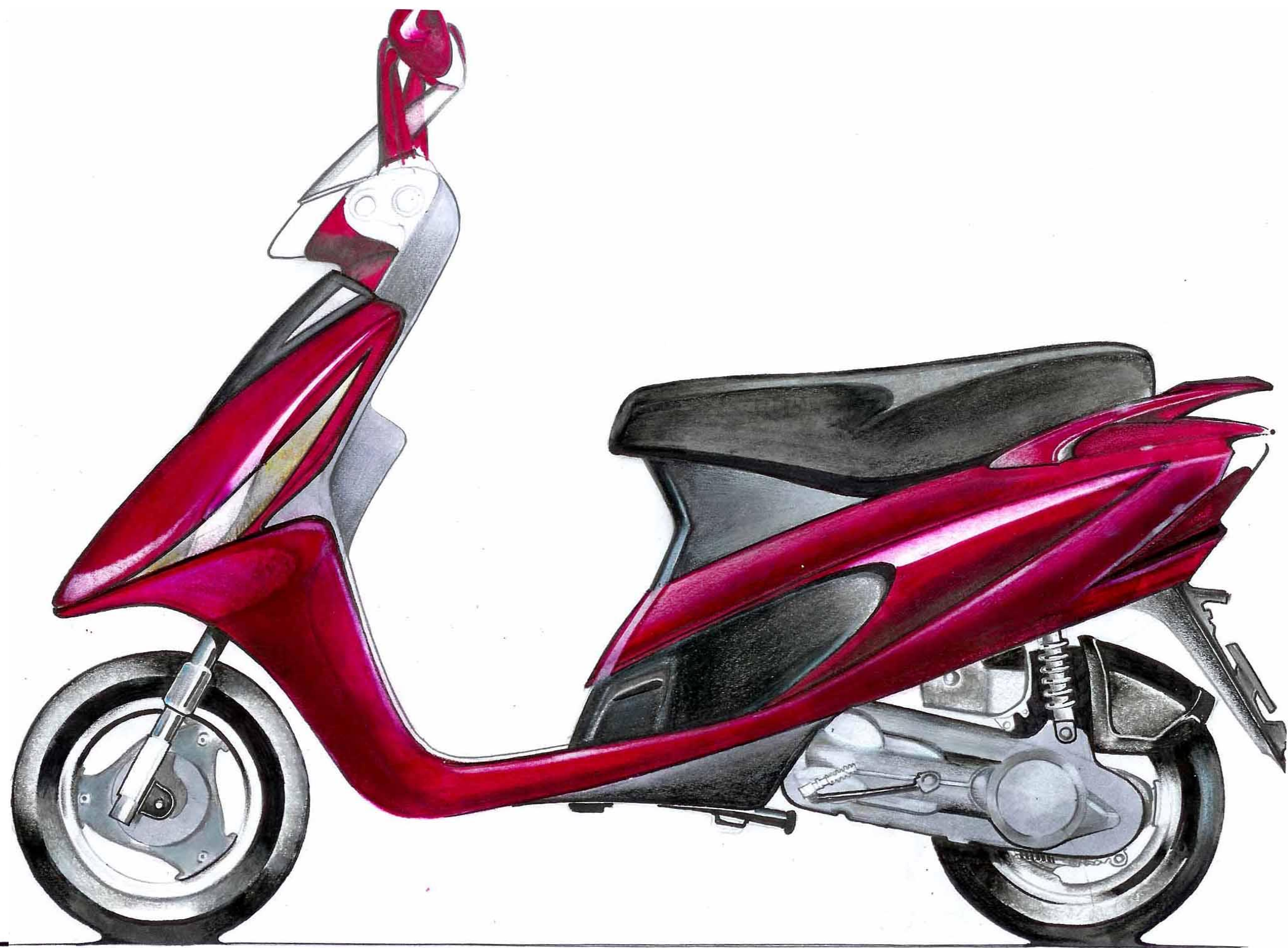
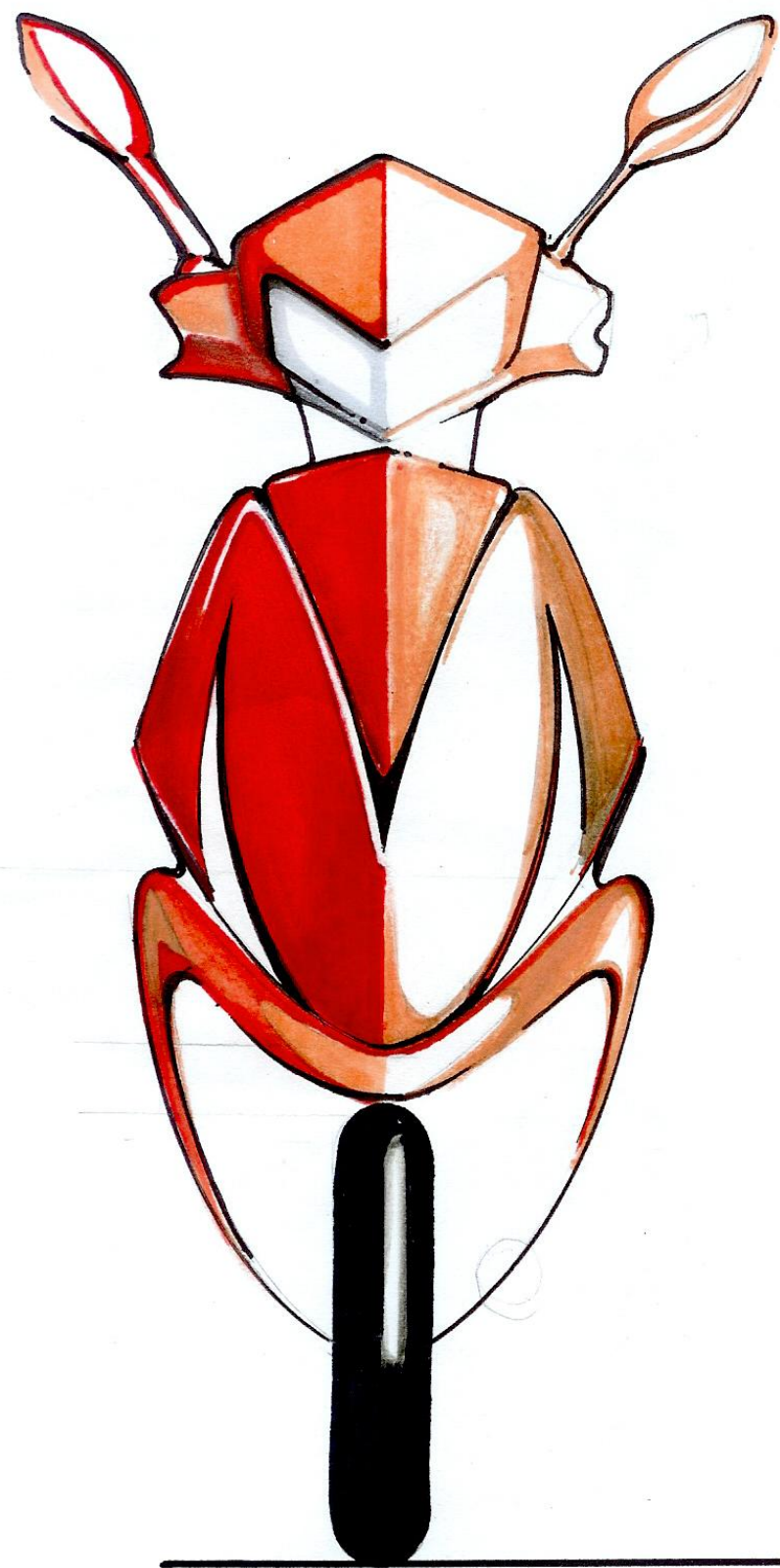
Thou rear flow lines are good  
it looks bulky

Name board integrated with  
front panel



CONCEPT 1/04 ~ Sporty

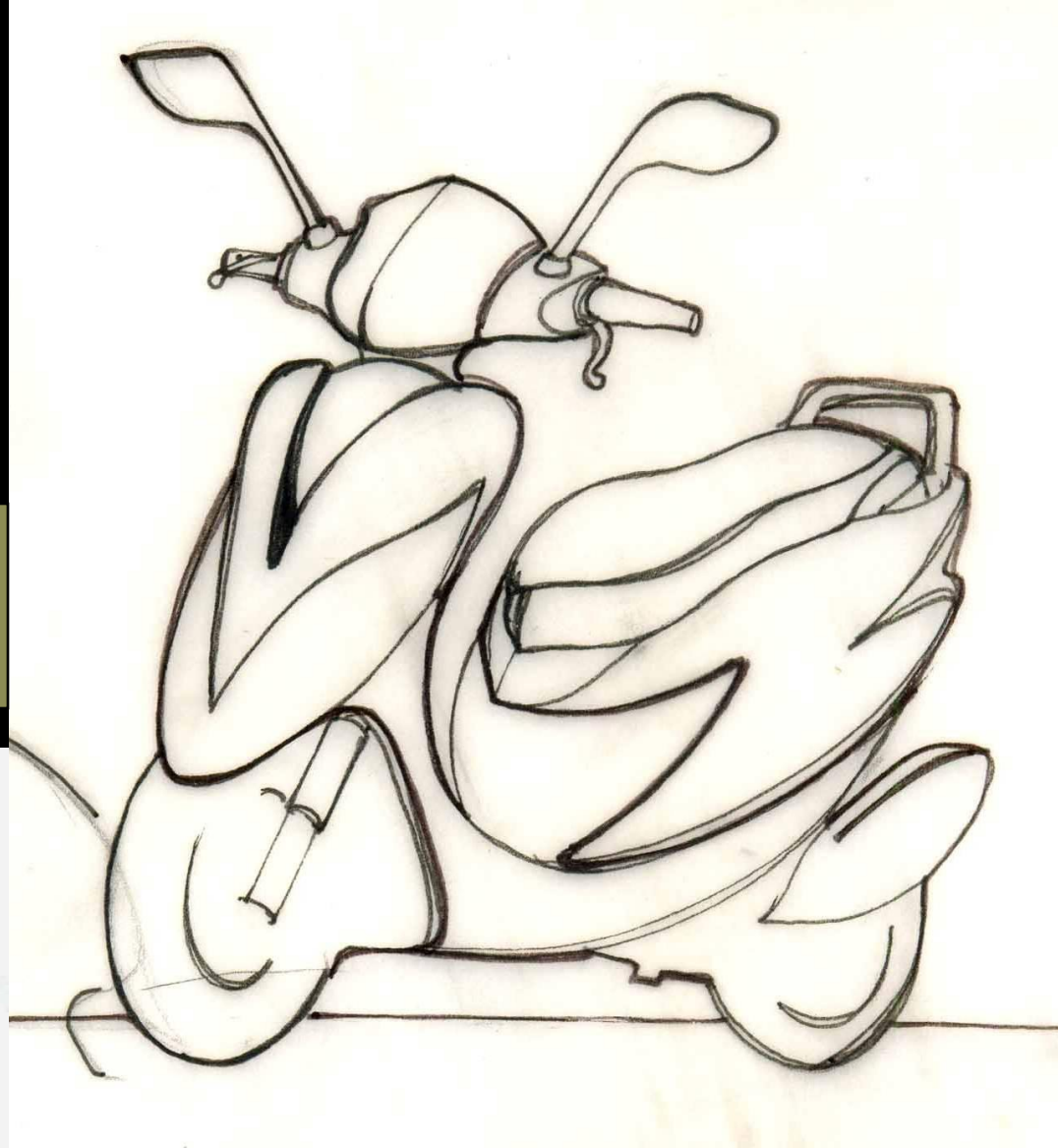




FINAL CONCEPT ~ Sporty

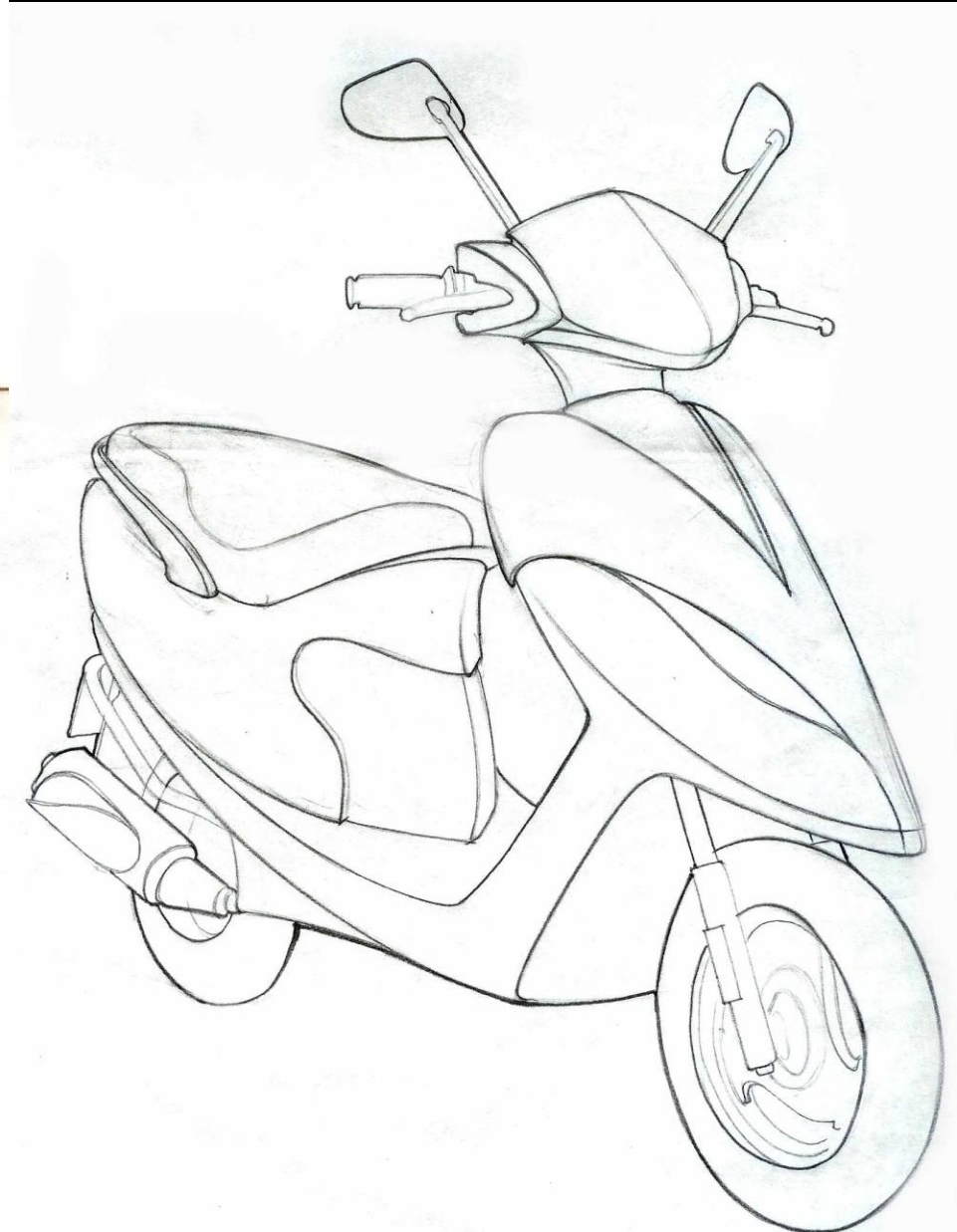


An option with more sharper lines to make it look modern

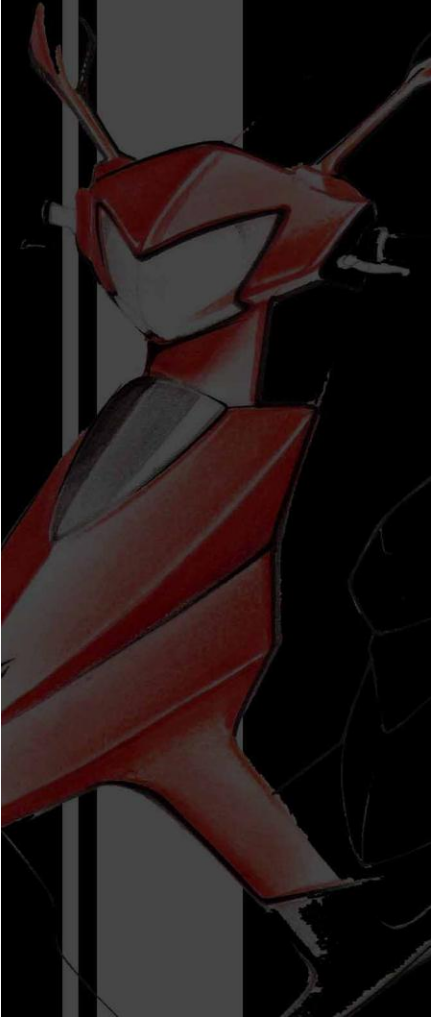


Very close to existing Scooty

Graphics used to reduce mass of the rear



CONCEPT 2/01 ~ Elegant

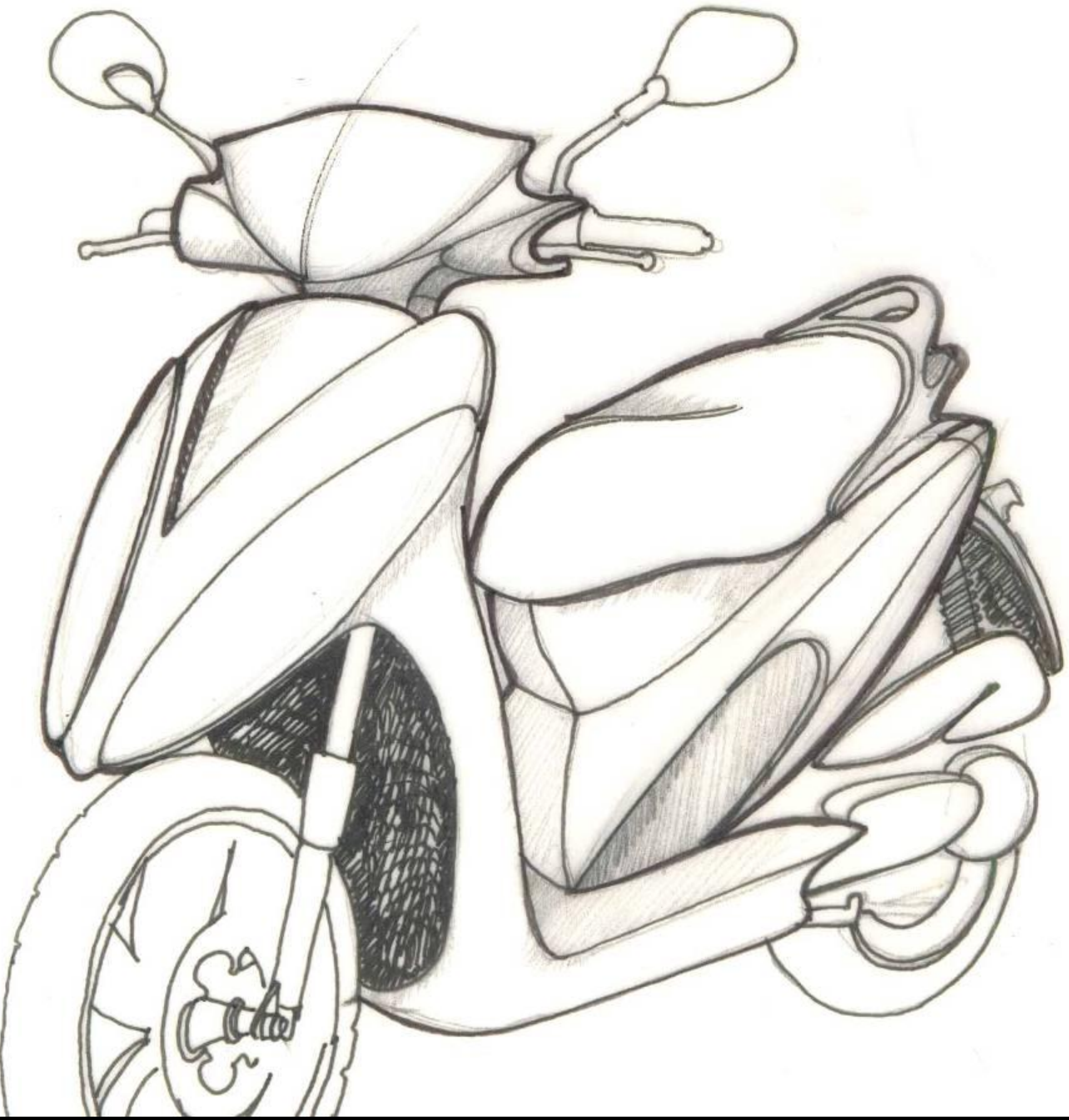
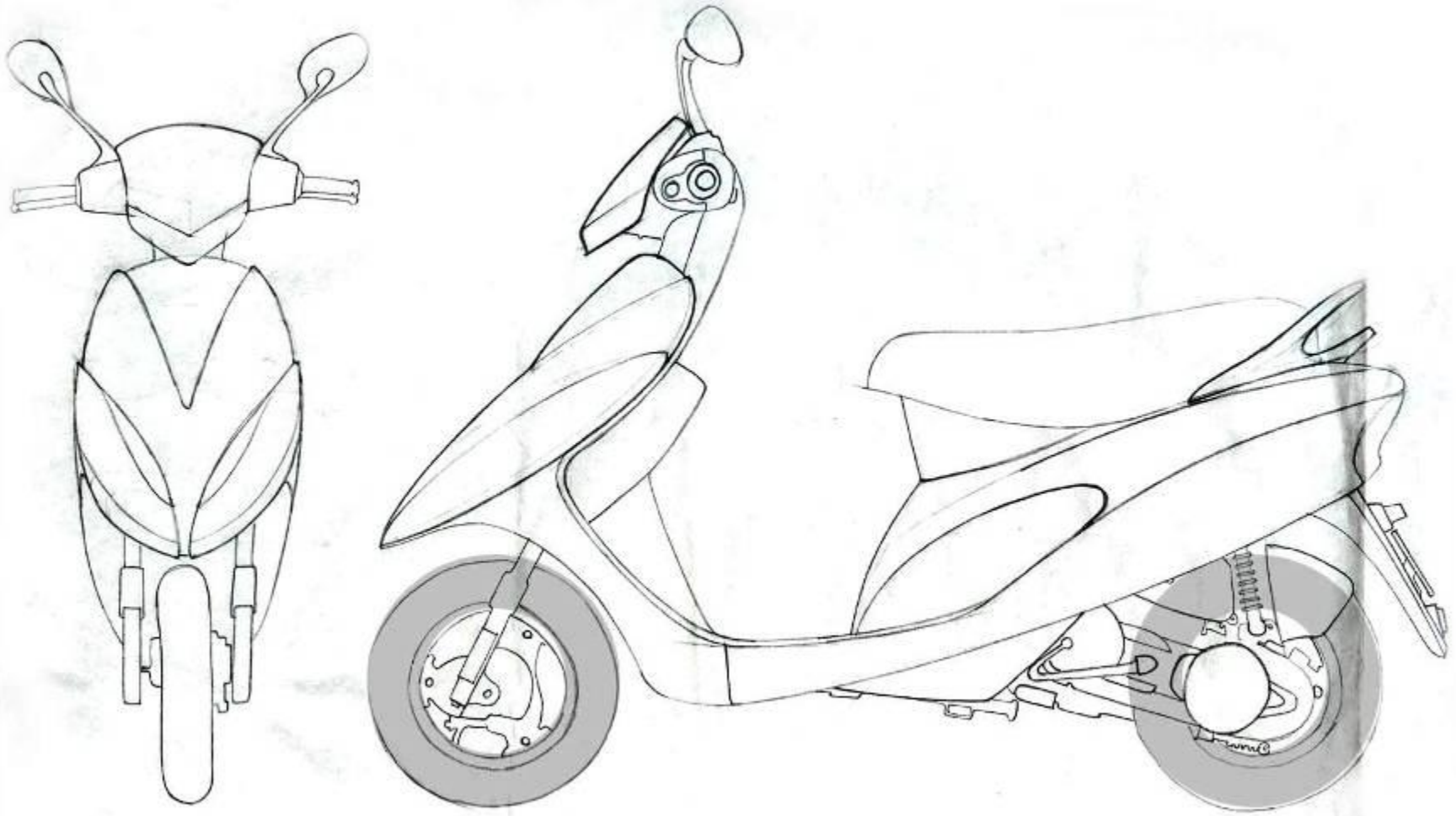




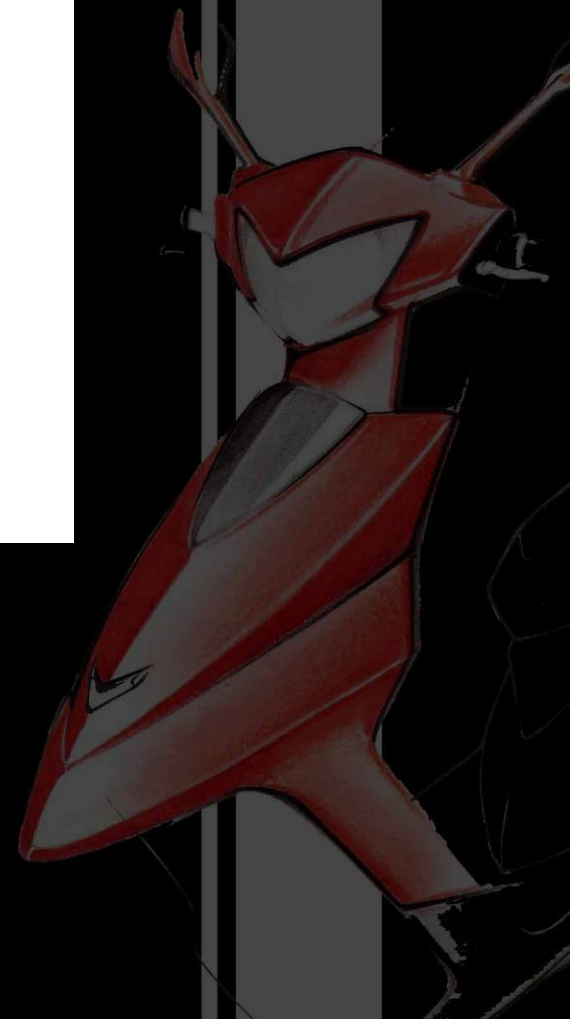
Simple curves to get streamlined surface

Indicators thin and standing out of front panel

Front panel resolved to look more feminine and elegant



Rear mass ideally reduced



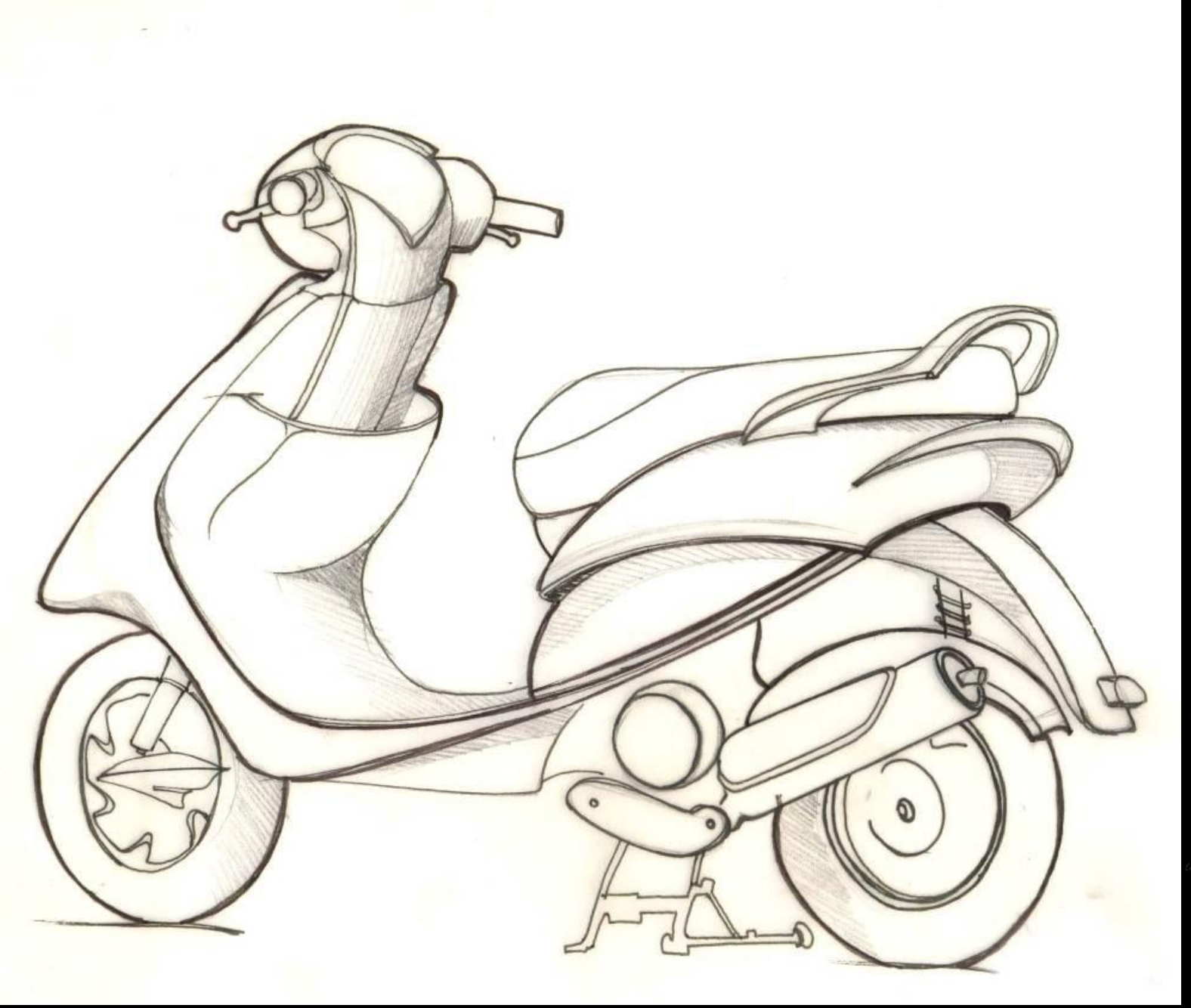
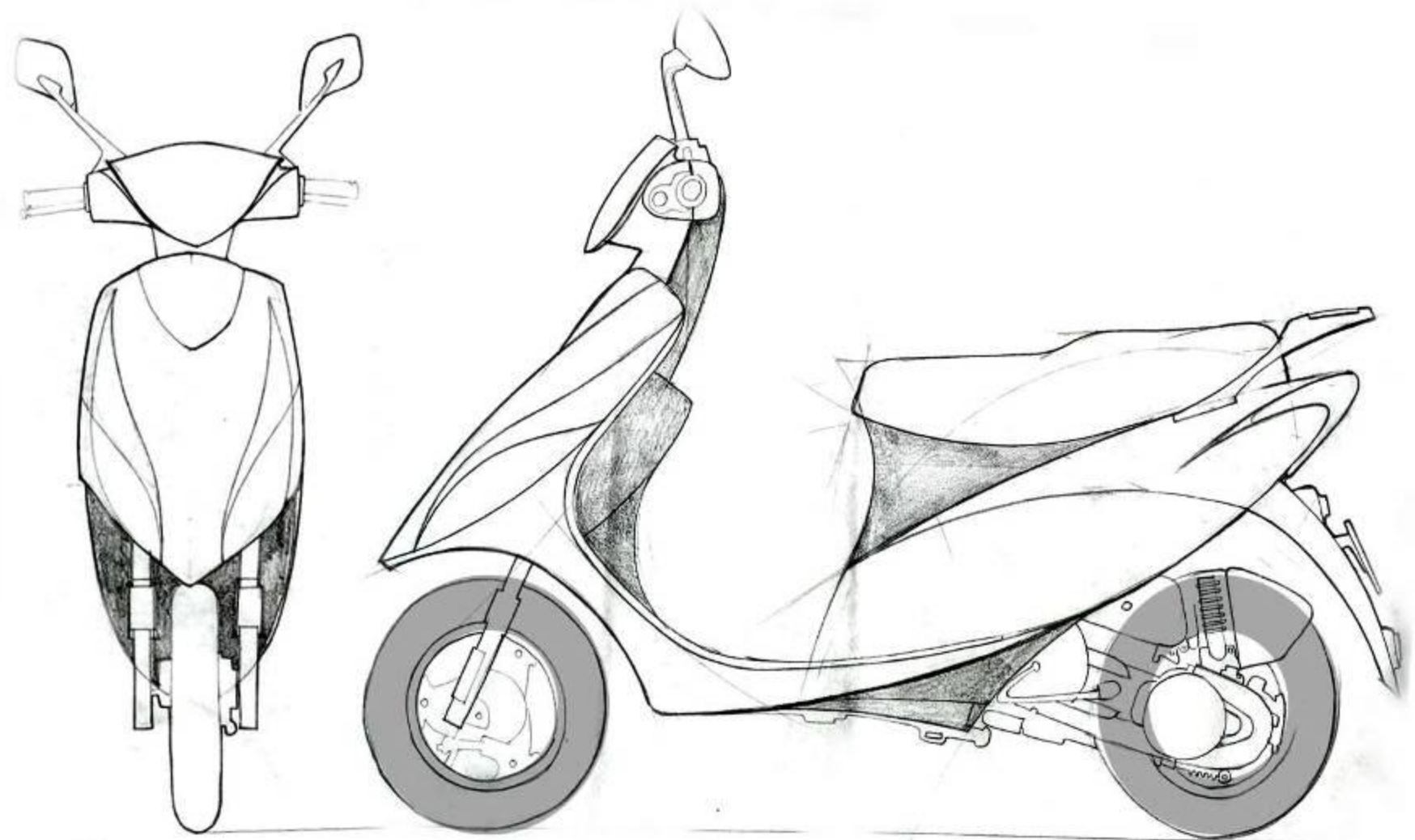
CONCEPT 2/02 ~ Elegant



Simple curves to get streamlined surface

Feminine curves of indicator made long to look modern

Front panel too wide



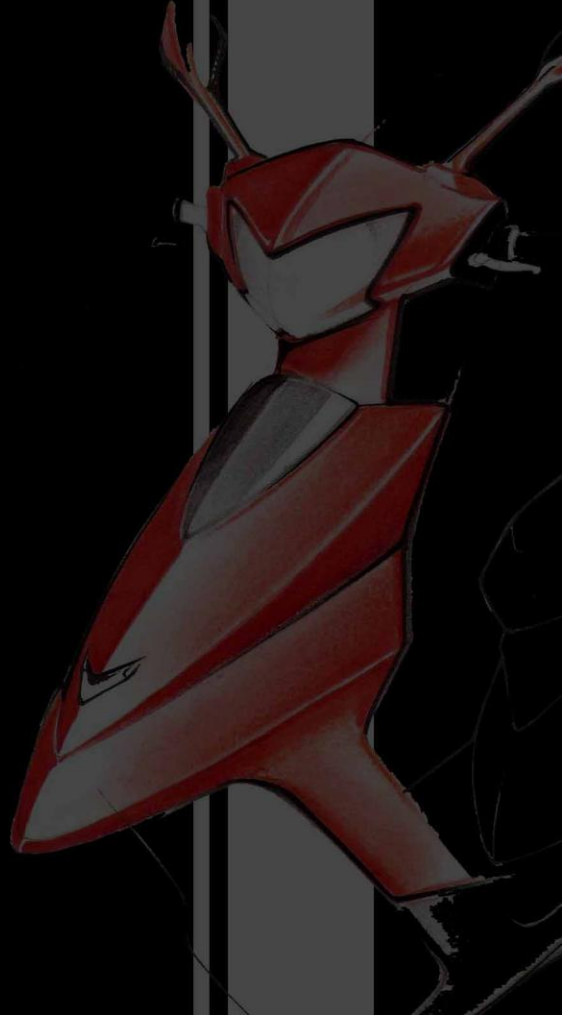
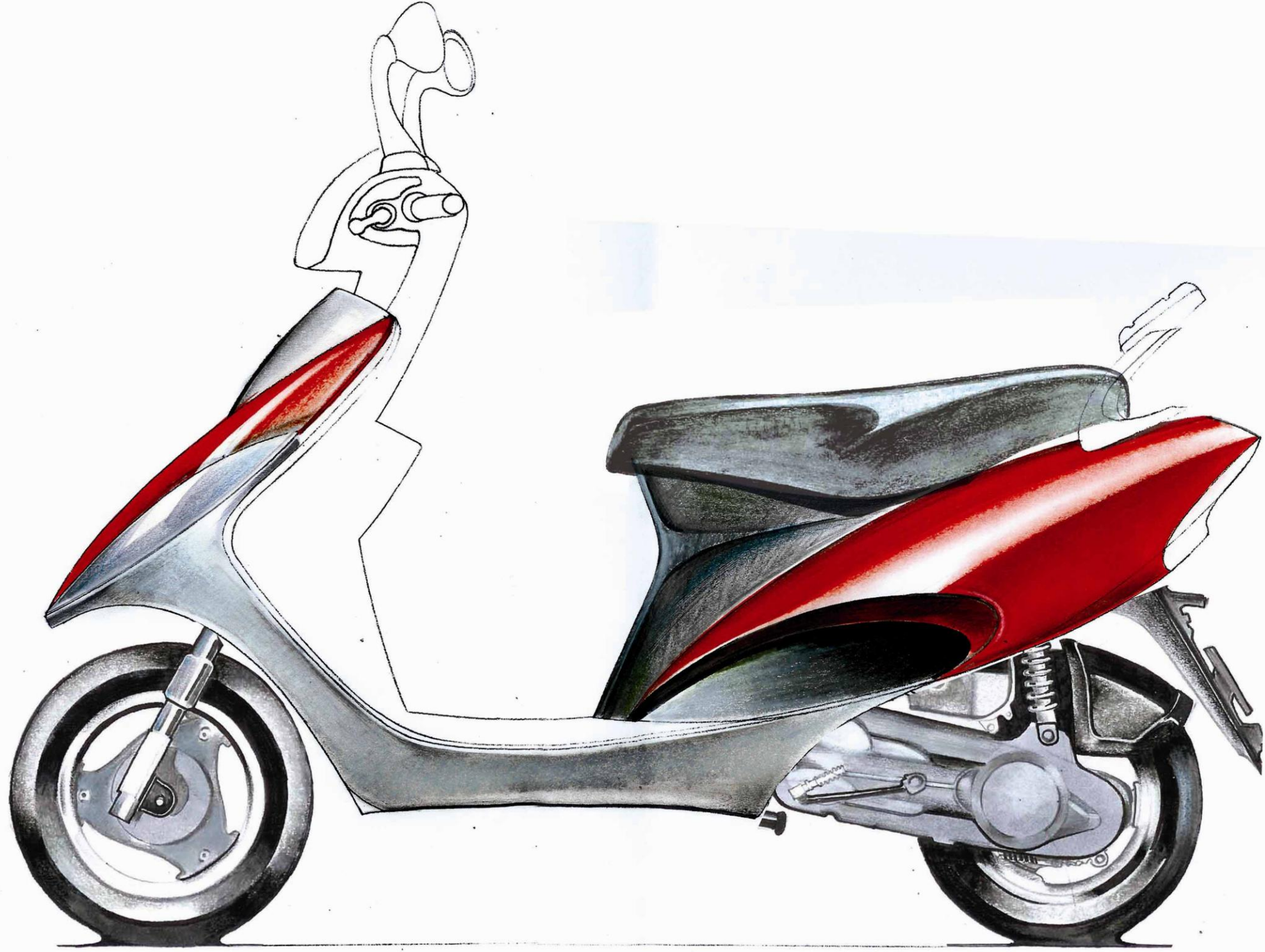
Rear half cut by midway curve continued to fender

Allows for pillion rider leg space



CONCEPT 2/03 ~ Elegant

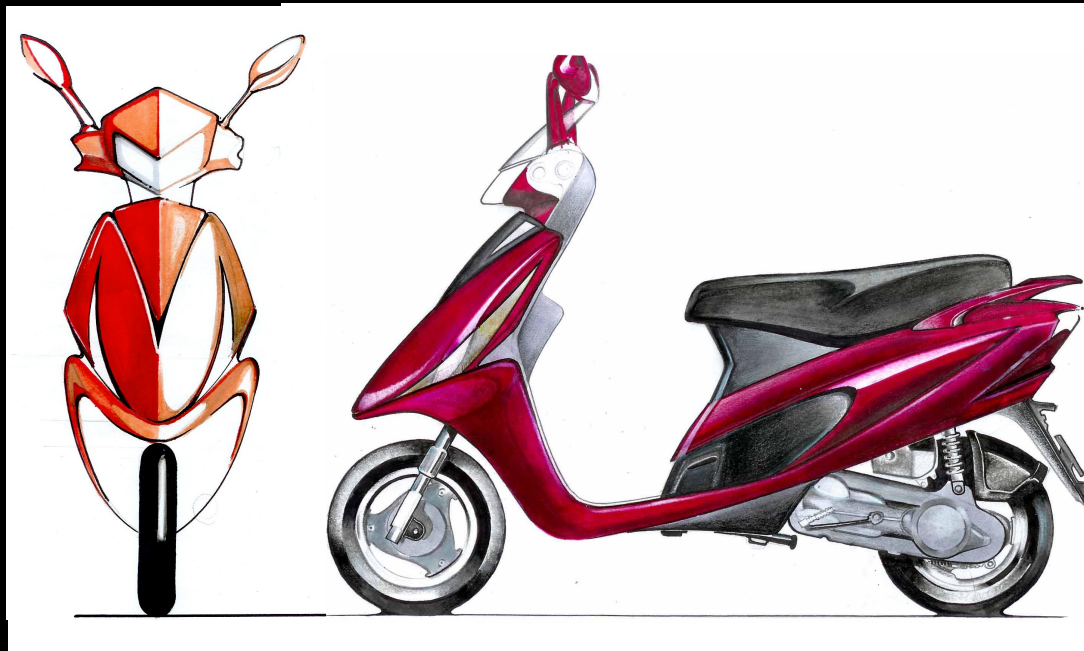




FINAL CONCEPT ~ Elegant



## FINAL CONCEPT - SPORTY



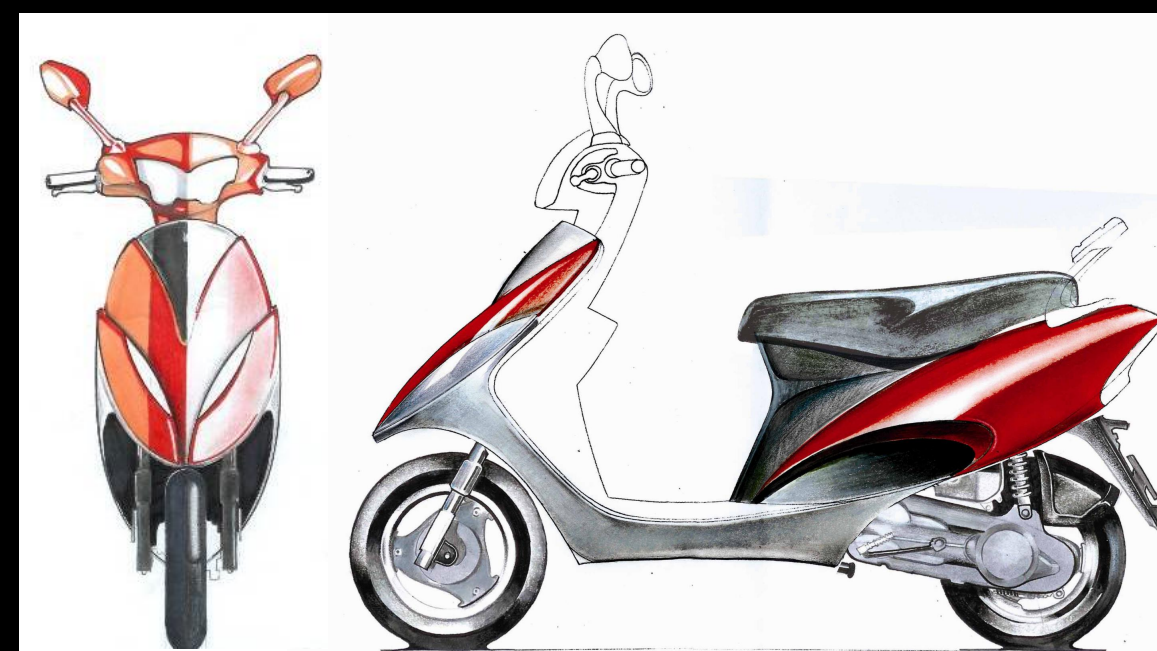
The dynamic features give a sleek and sharp quality

Maintains the intrinsic qualities with a crisper look.

There is scope for reducing bulk of seat

SPORTY CONCEPT WAS SELECTED FOR FURTHER REFINEMENT

## FINAL CONCEPT - ELEGANT

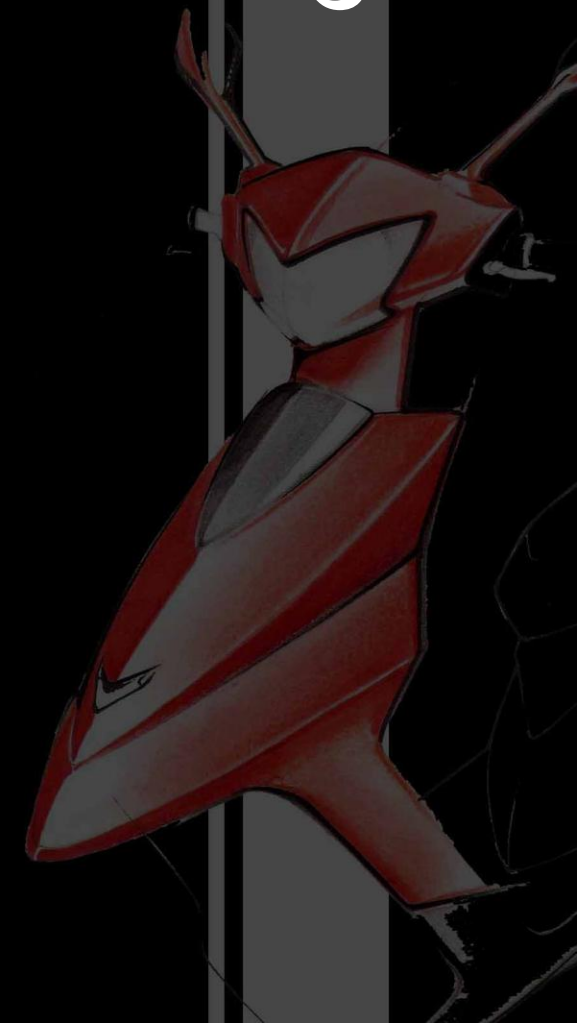


The rear looks bulkier than Scooty

Haven't evolved enough for a refresh since lines follow the same soft nature

Seat bulk if reduced will not look appropriate

In terms of how better a refresh each was





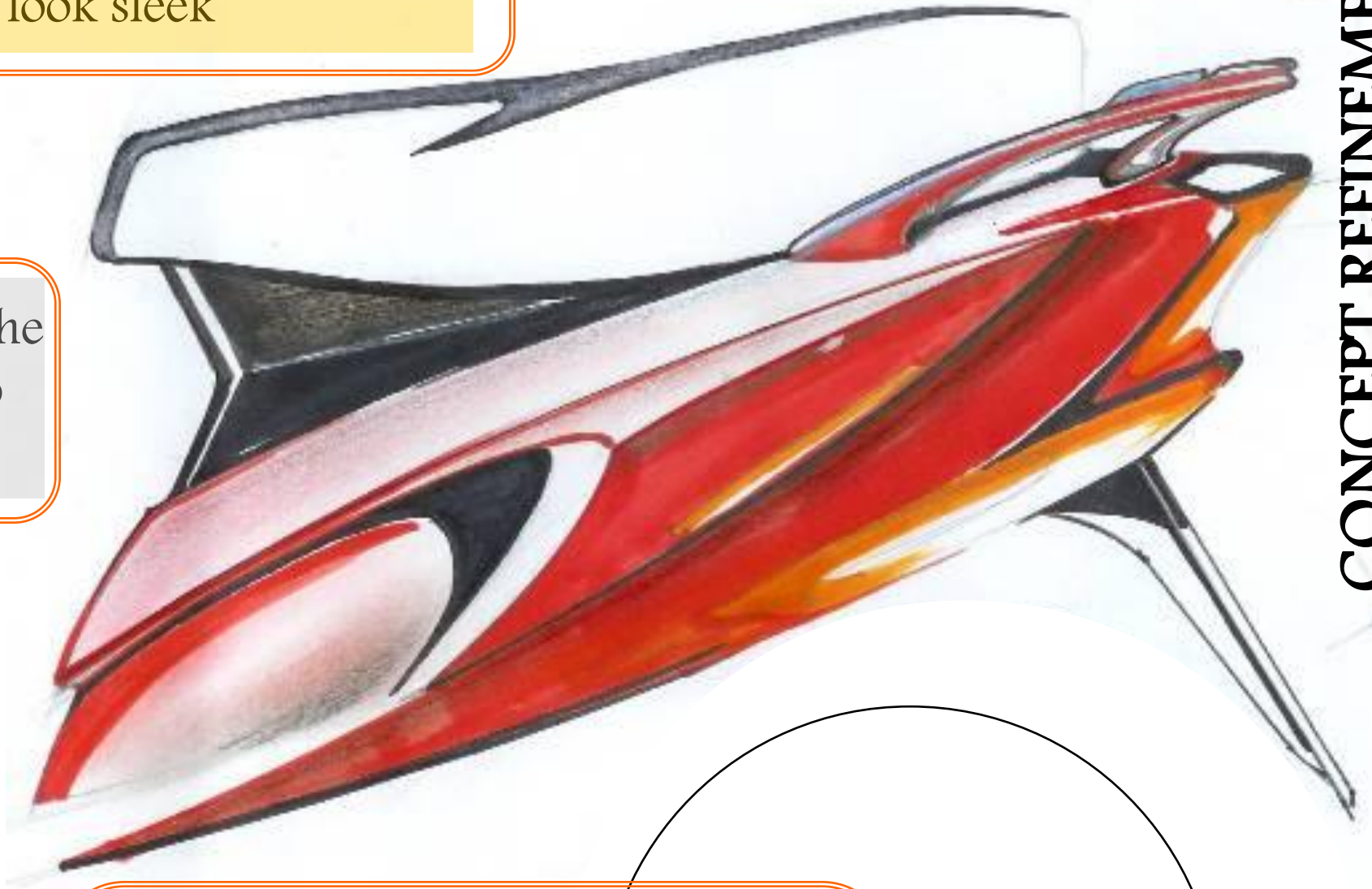


*Concept Refinement*

Seat can also be improvised further to look sleek



The muscle on the sides increases the width of the rear half which has to be reduced for a sleeker look



The rear half can be made sleeker by removing the lower region of the rear panel. This also gives a sporty stance

CONCEPT REFINEMENT  
Sketching





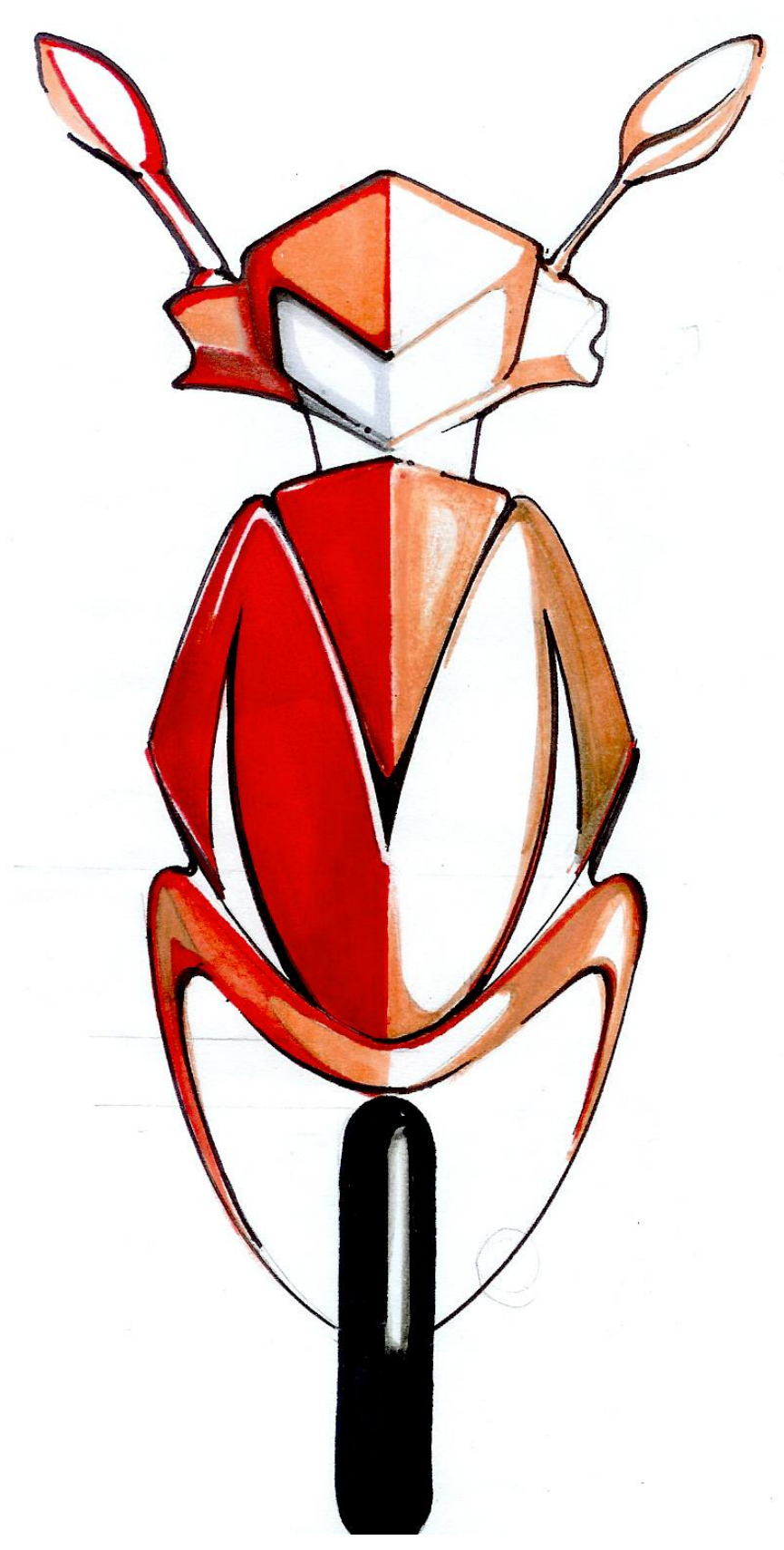
*Concept Refinement*







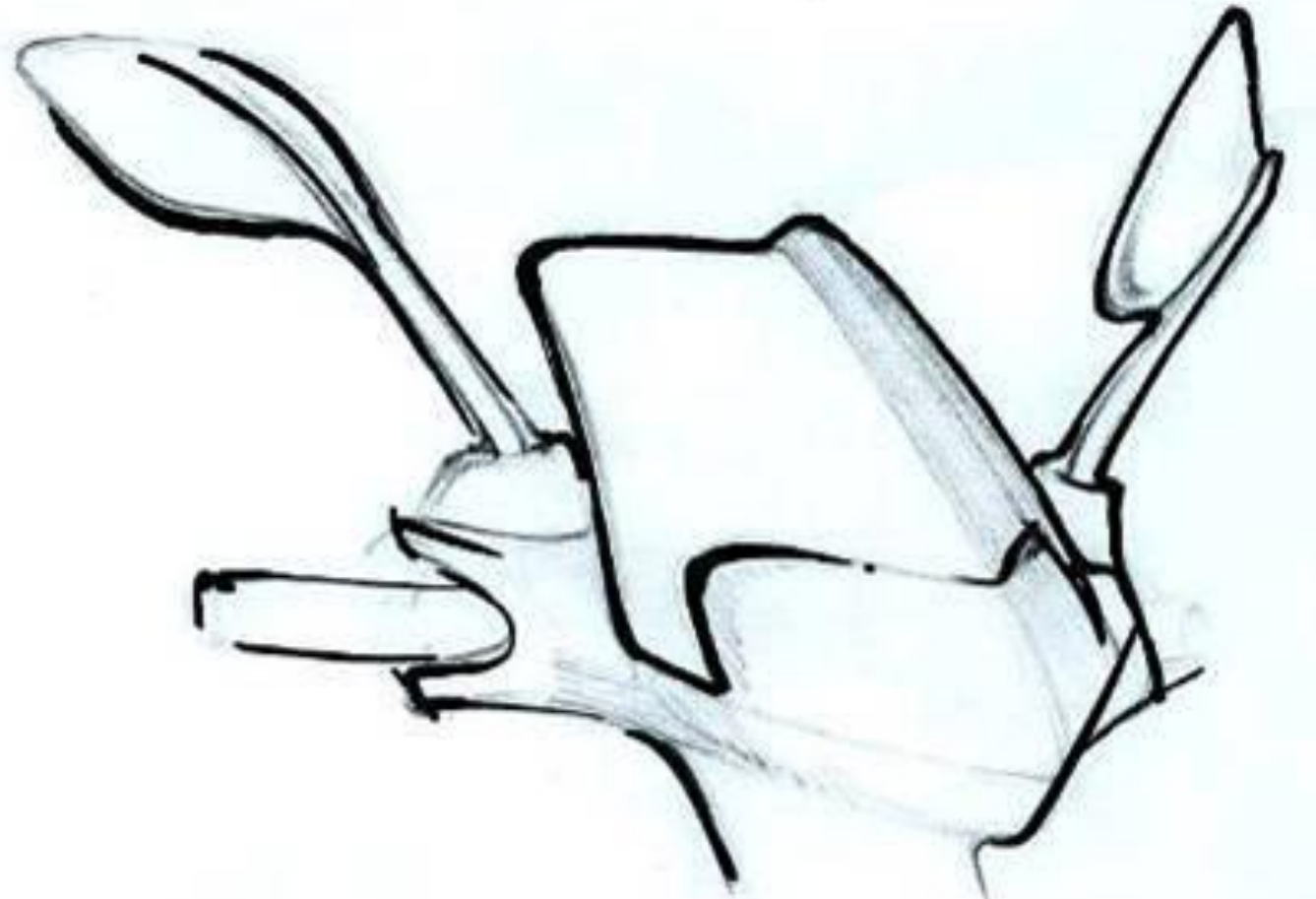
*Concept Refinement*







*Concept Refinement*  
*Head lamp*







## Clay model - 1

Not the natural intersection of both panels



The lens area has been carved to an assertive in the face attitude. The chin delivers a modern look.

Conflict in surface curves in the three different panels  
Bulkiness due to surface curvature

pacified by break up  
Two surface curvatures exploited for a cut out feature.  
Attempt to retain the nose of Scooty by enhancing the two surface curvature





Clay model - 2



Seat with cutting edge style



Cut out repeated in rear for coherence and hence extended over the entire cowl.

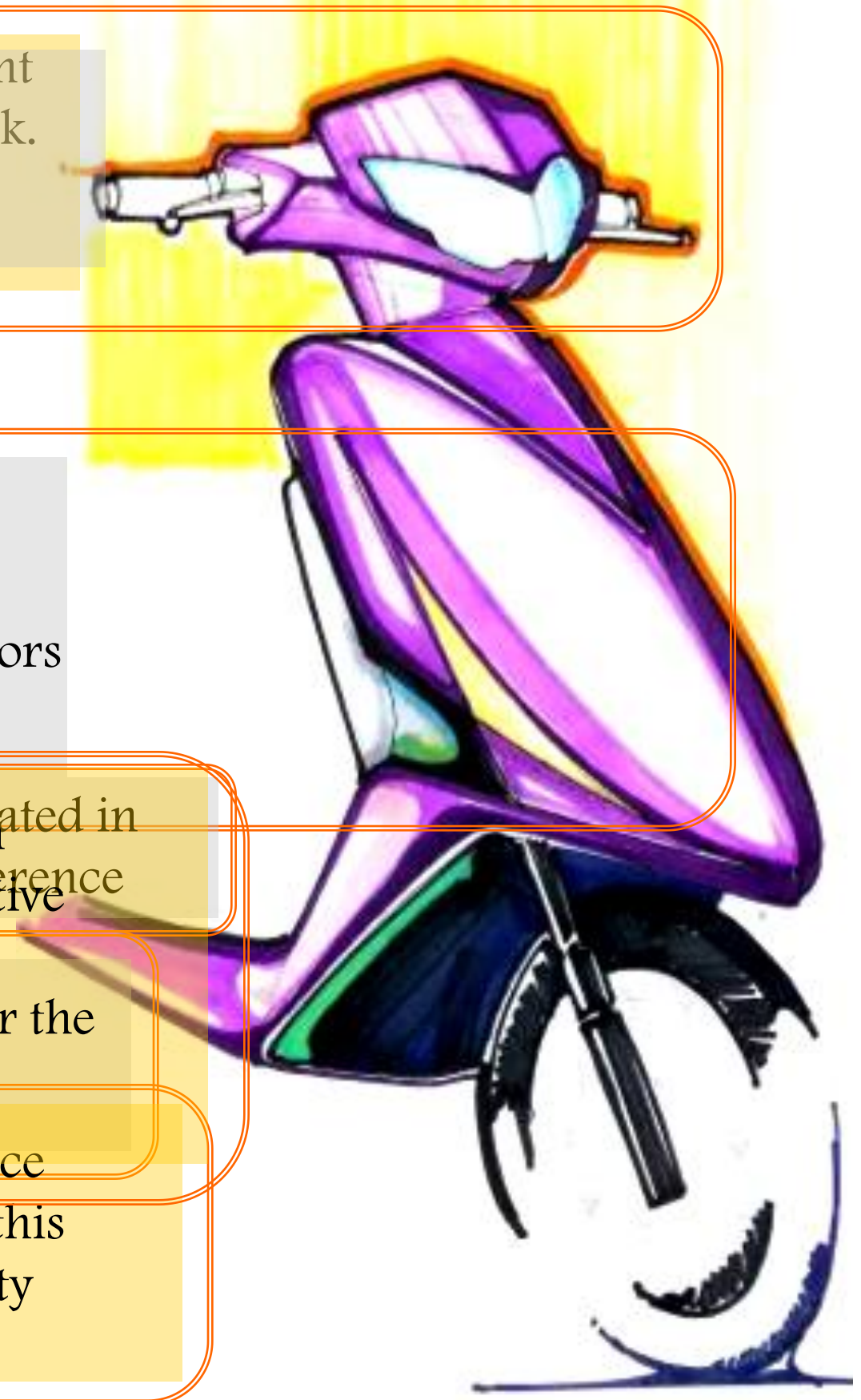
Pillion leg space designed but this exceeded safety dimensions



Head lamp with front fairing for sporty look. Head lamp given a chin for modern outlook (taken as add-on)



Long indicators

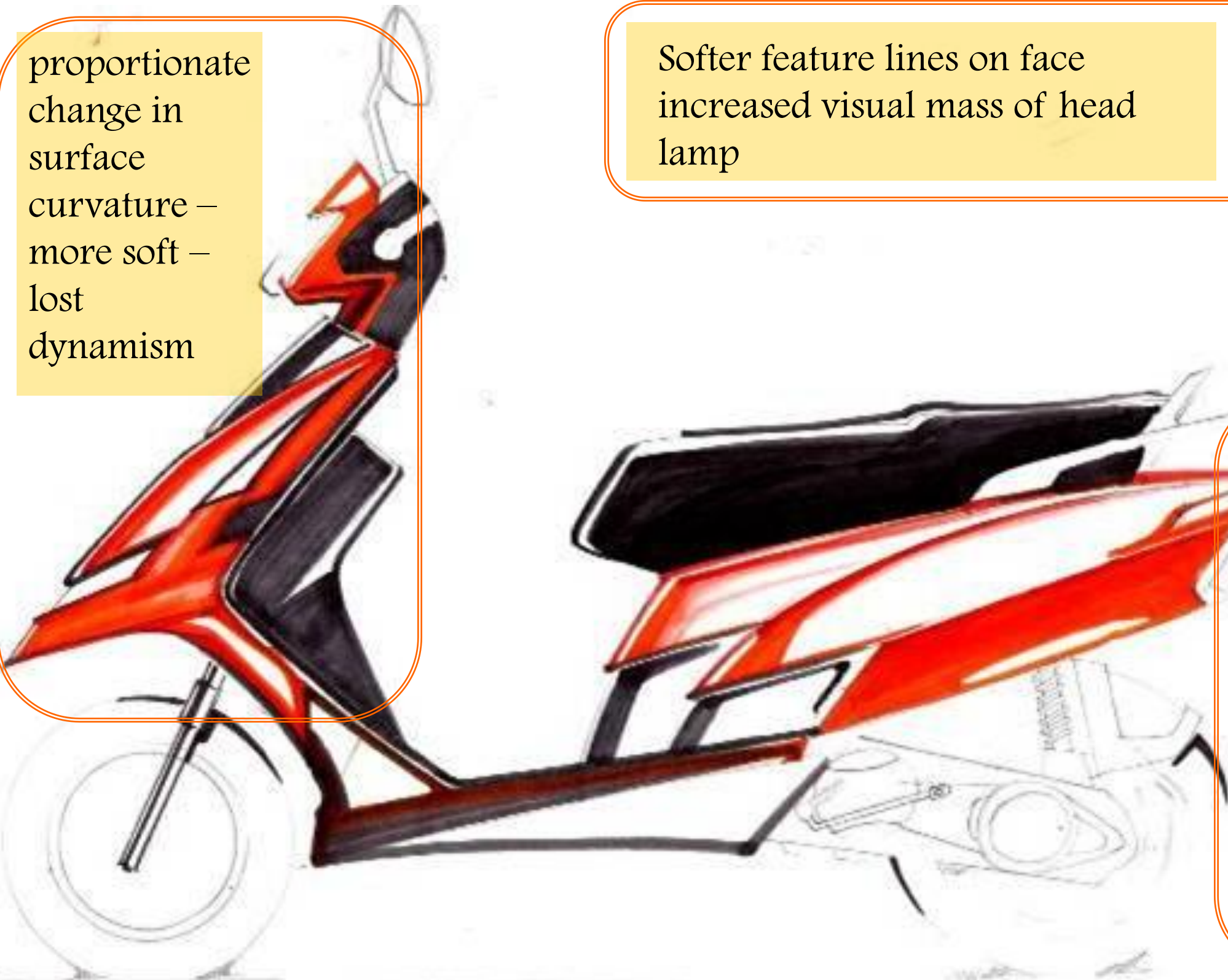




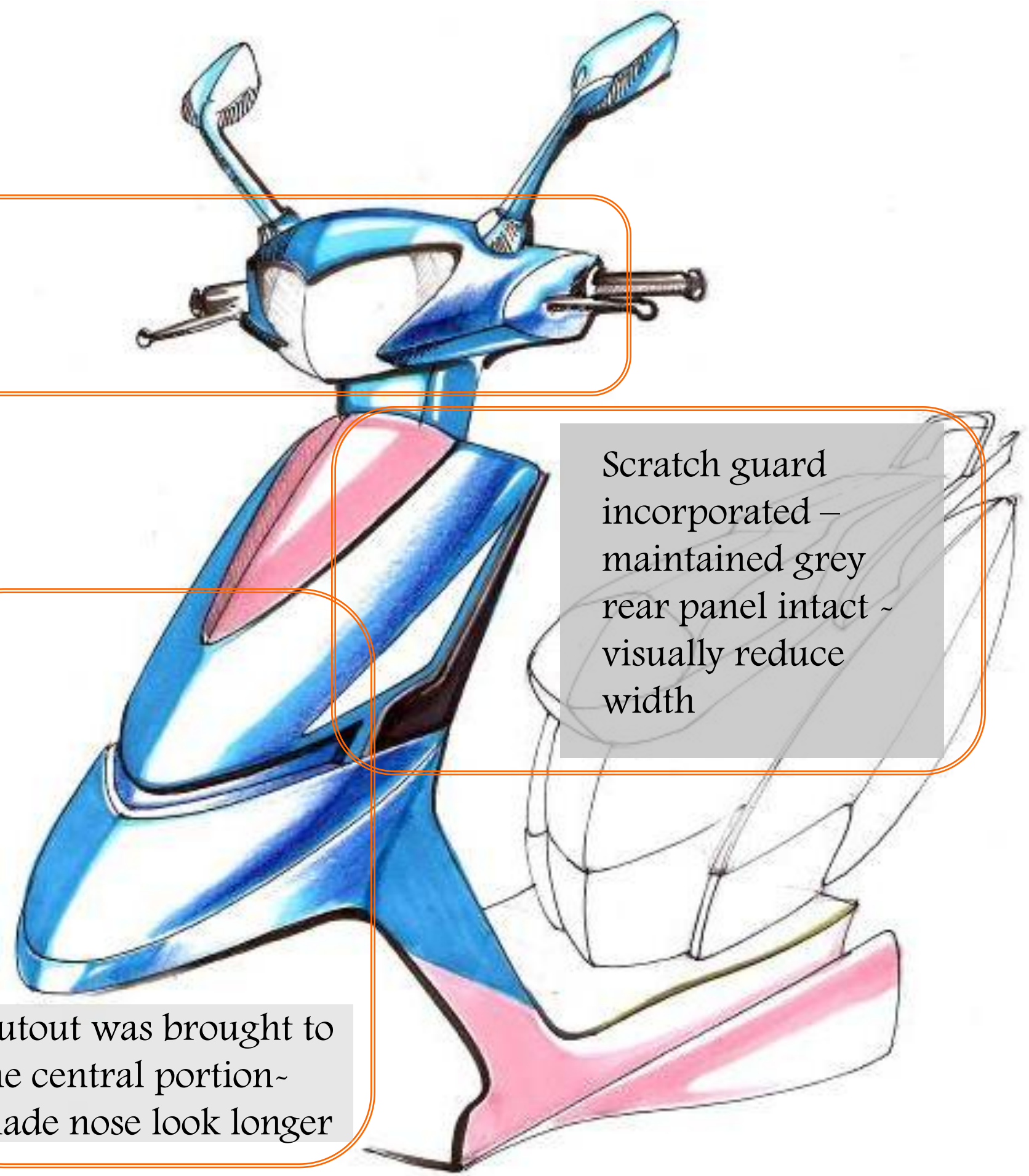


Clay model - 3

proportionate change in surface curvature – more soft – lost dynamism



Softer feature lines on face increased visual mass of head lamp



Scratch guard incorporated – maintained grey rear panel intact – visually reduce width

Cutout was brought to the central portion – made nose look longer





*Clay model - 4*

change in surface curvature – more sharp for dynamism

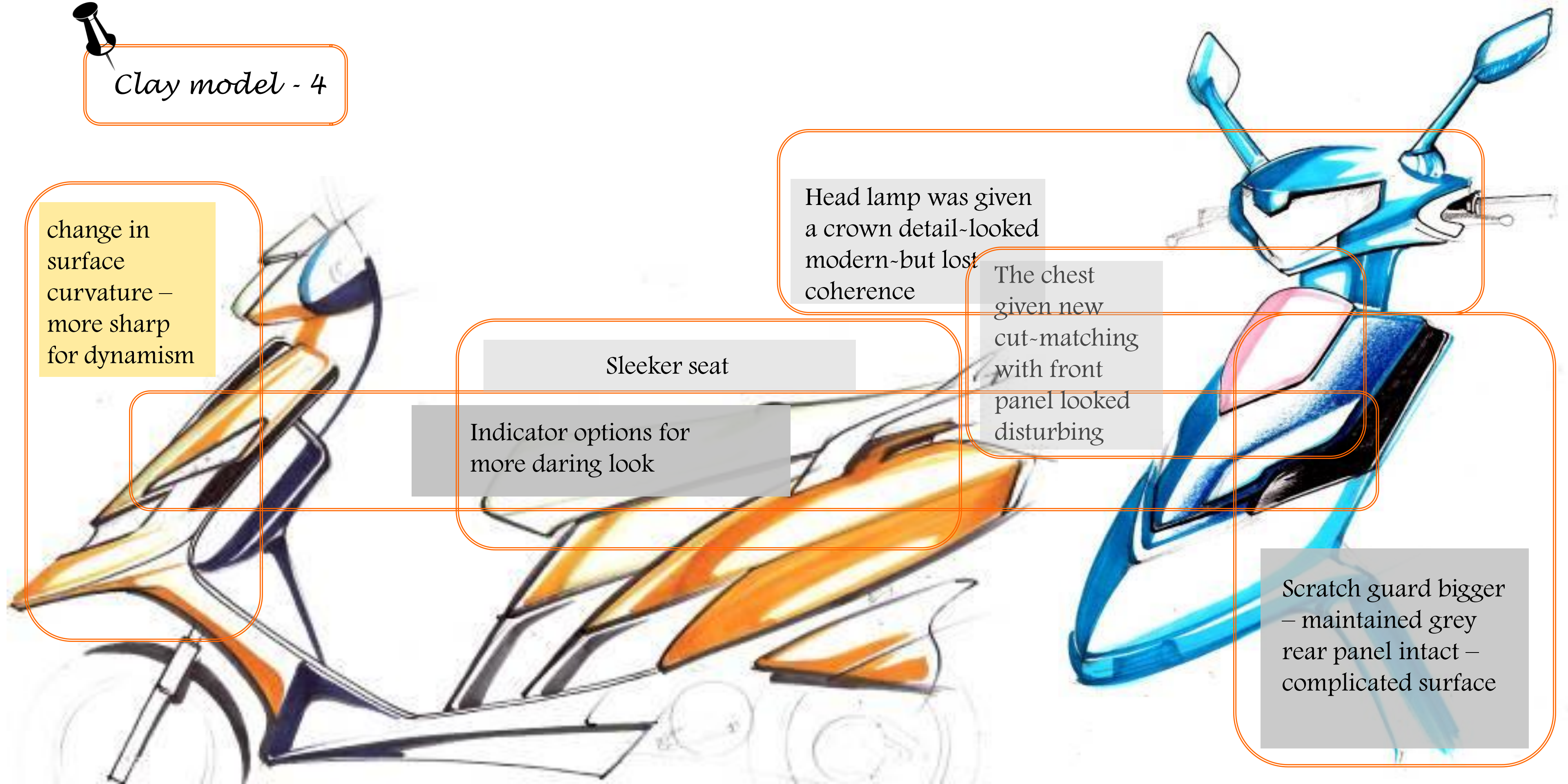
Head lamp was given a crown detail-looked modern-but lost coherence

The chest given new cut-matching with front panel looked disturbing

Sleeker seat

Indicator options for more daring look

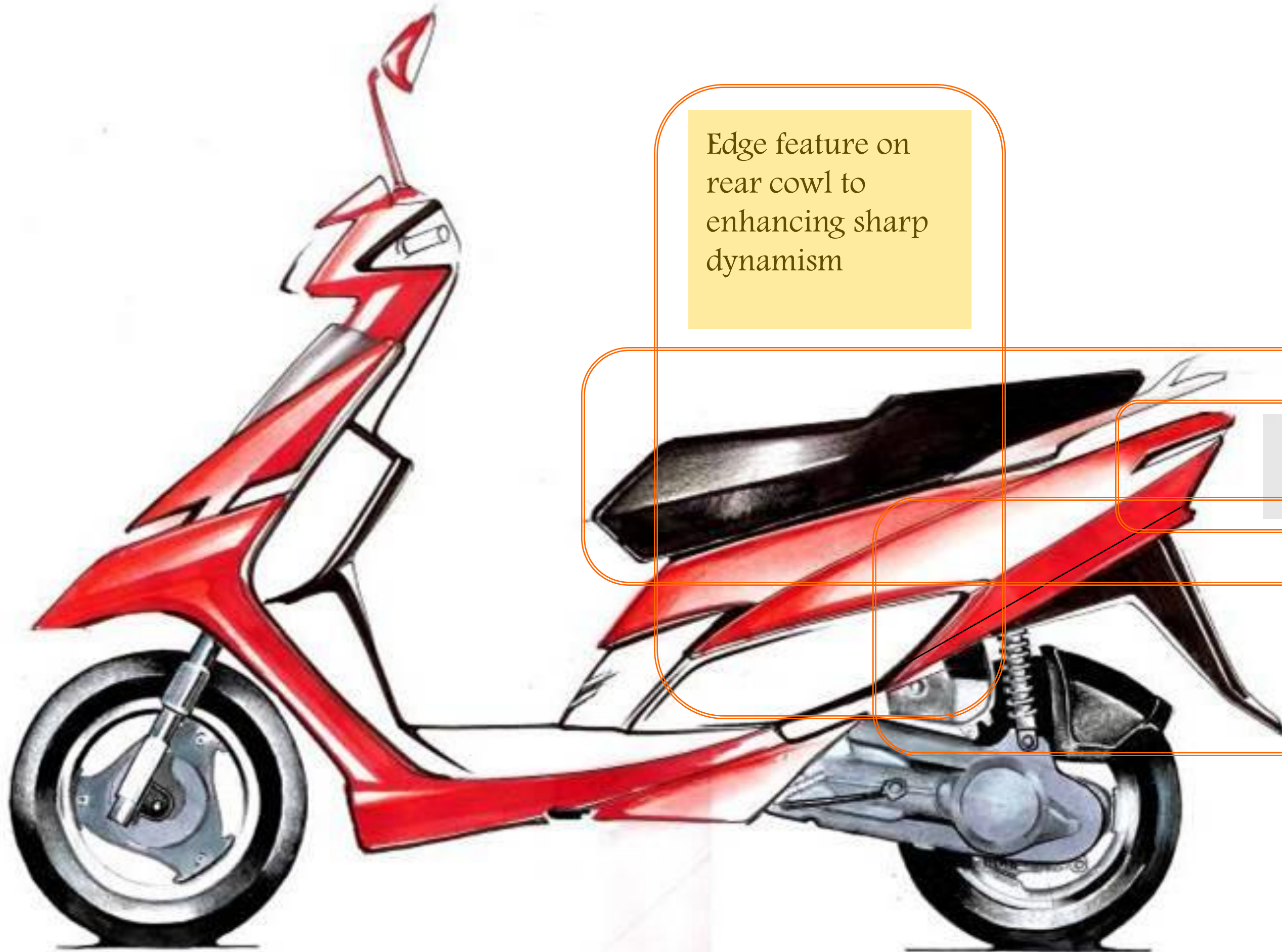
Scratch guard bigger – maintained grey rear panel intact – complicated surface







*Clay model - 4*



Edge feature on rear cowl to enhancing sharp dynamism

Seat was brought much lower to  
Rear cut out to complement front  
cut out looked very ornamental  
existing storage space and seat joinery

Rear cowl made further sleek -raising cowl+ rim feature





*Clay model - 5*

Neck curvature ~ **'ready to head ahead'** attitude.

Long & well pronounced indicator for a **'mean look'**

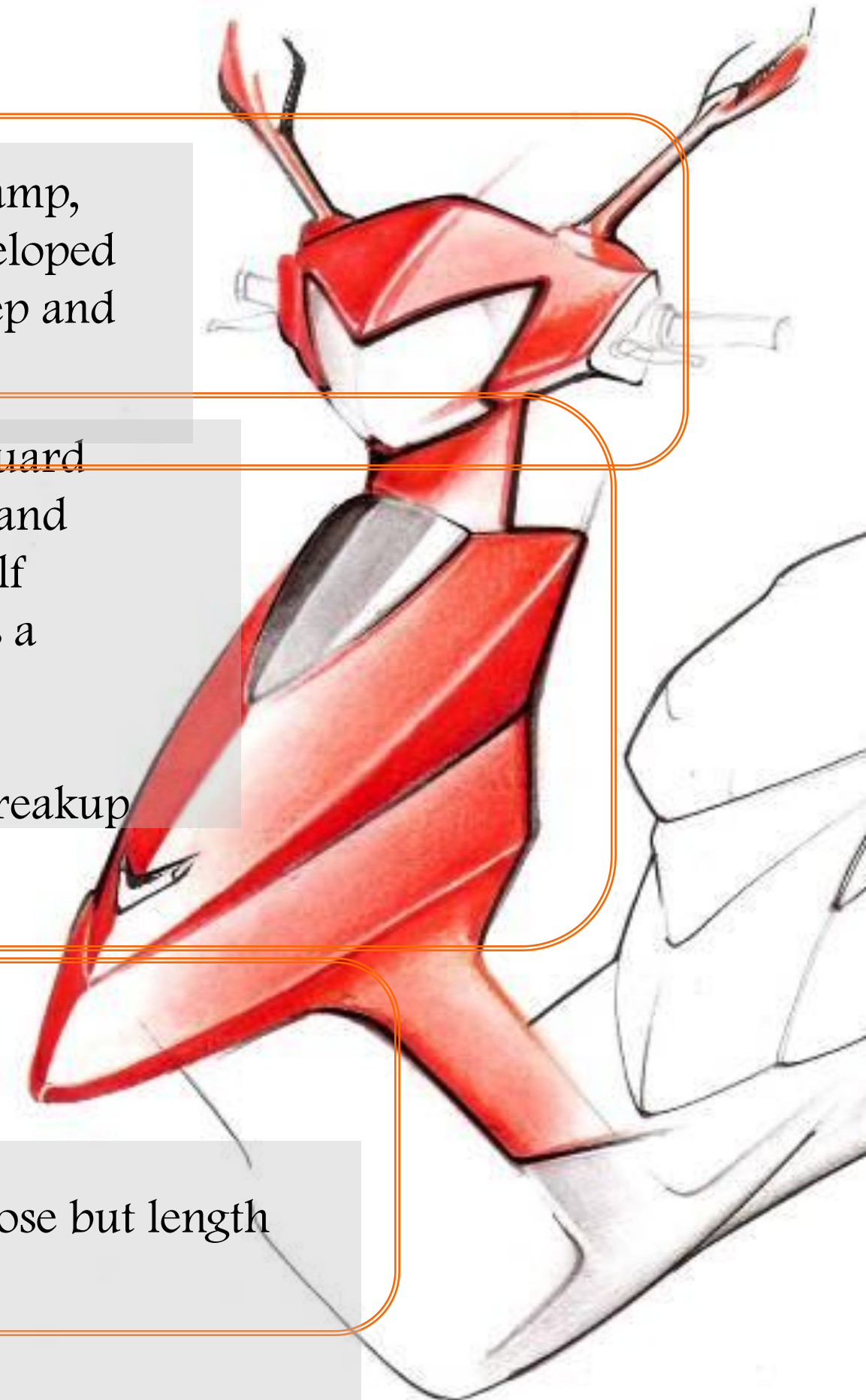
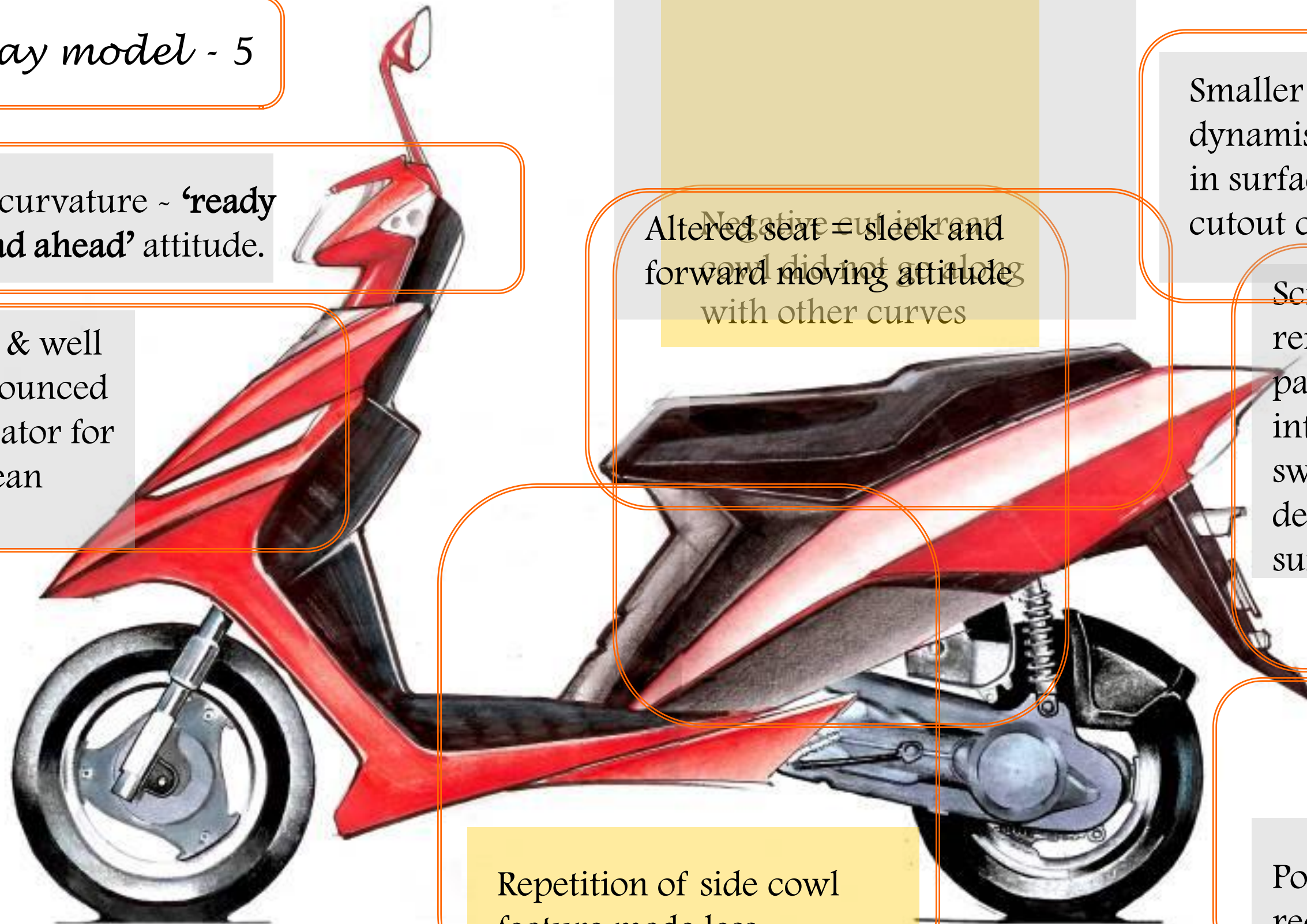
Altered seat = sleek and forward moving attitude  
Negative cut in rear cowl did not go along with other curves

Smaller head lamp, dynamism developed in surface sweep and cutout curves

Scratch guard removed and panel itself integrates a sweep to develop a surface breakup

Repetition of side cowl feature made less prominent – area turned bland

Pointed nose but length reduced







*Clay model - 5*

Surface transition made possible by a feature that adds to overall dynamism

Unobstructed high light

Surface transition is smooth and there are no features

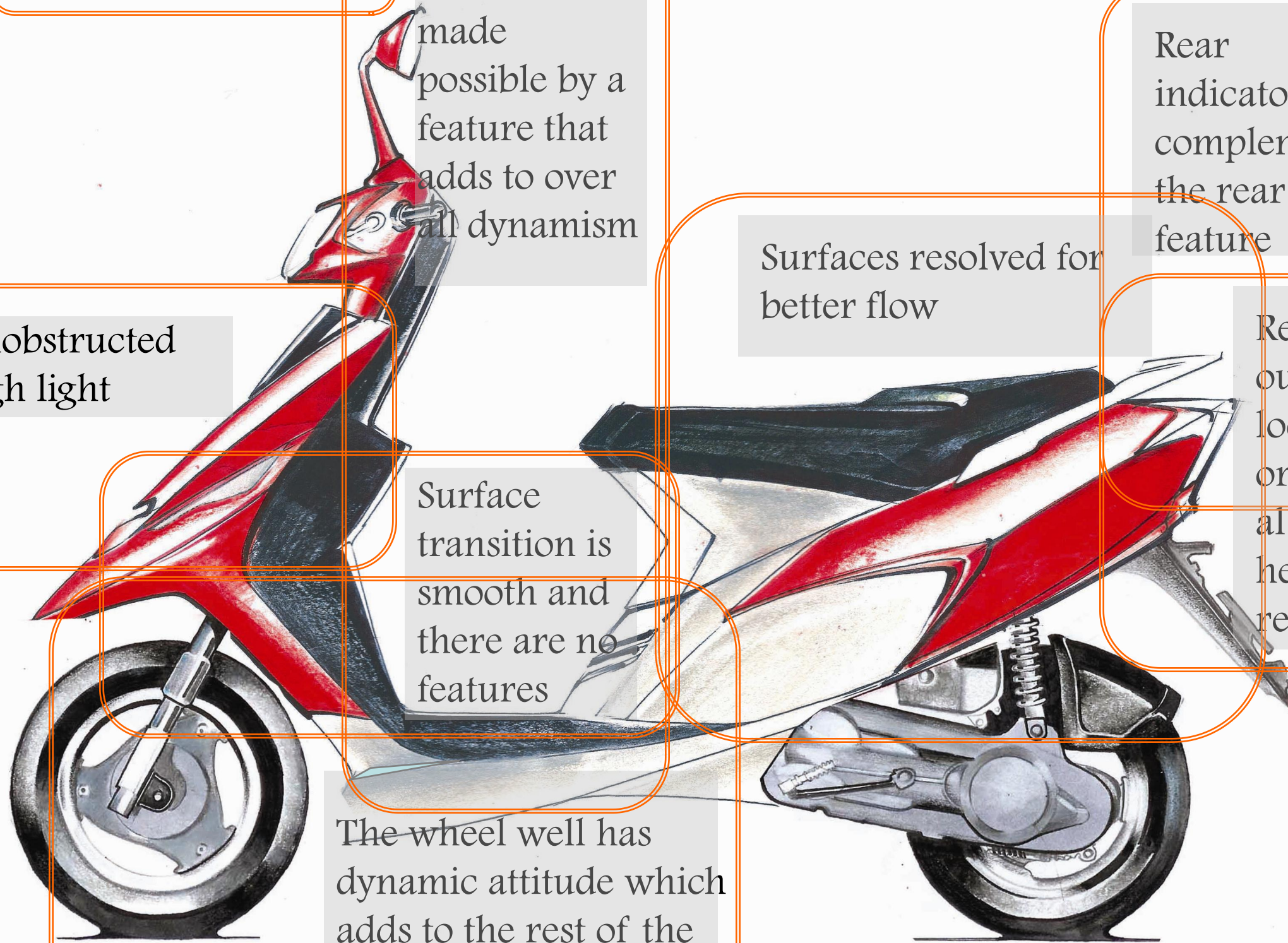
The wheel well has dynamic attitude which adds to the rest of the body language

Surfaces resolved for better flow

Rear indicators complement the rear cowl feature

Rear cut out looked ornamental and hence removed

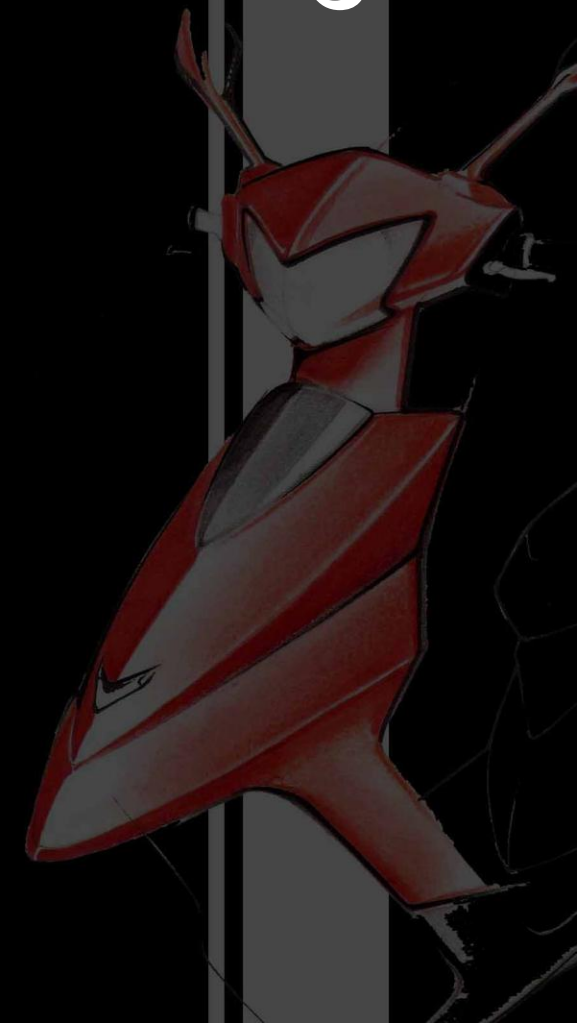
Different options for front indicators





## LEARNINGS FROM CLAY MODEL

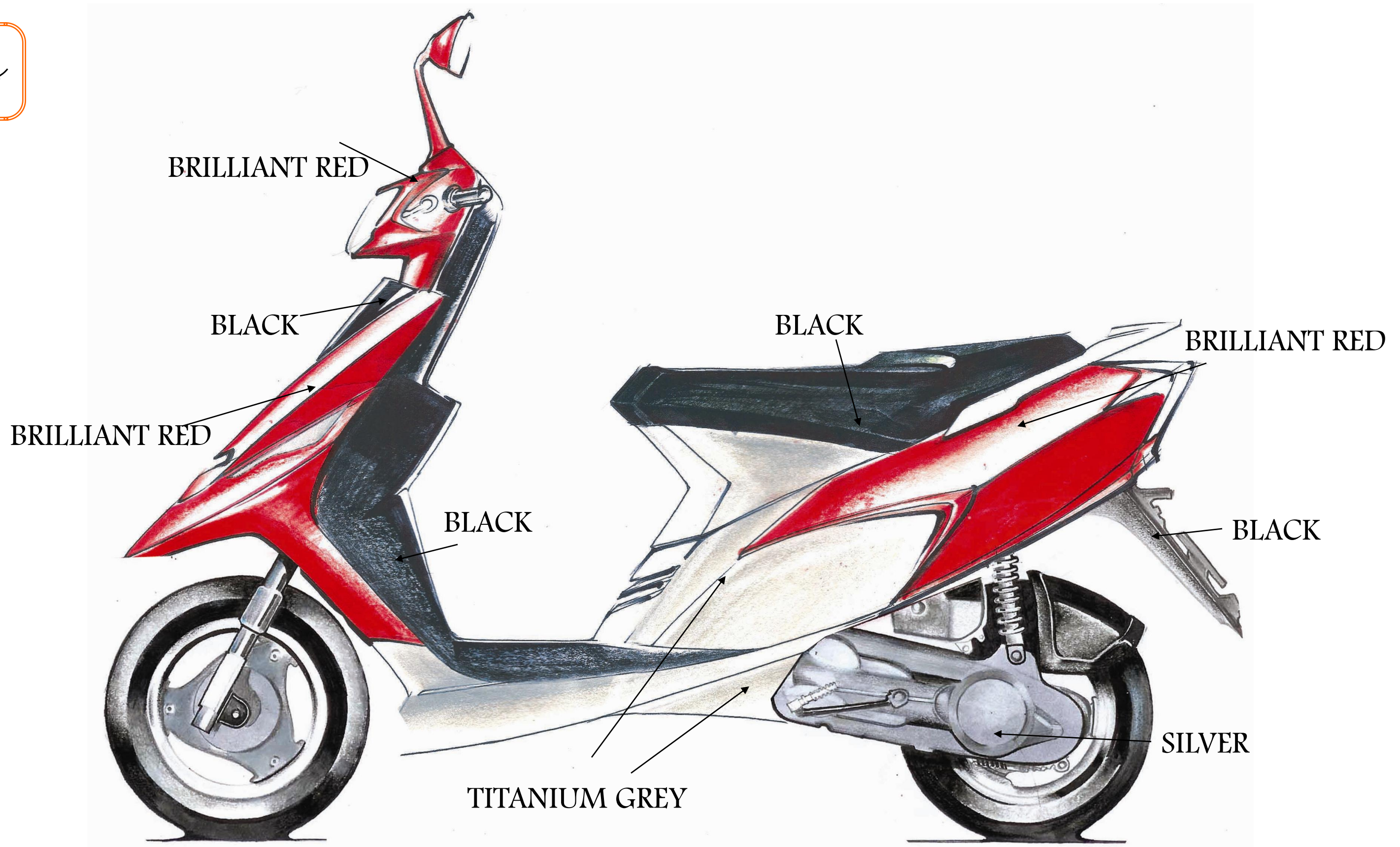
1. Surfaces need to be finished before judging surface quality in terms of its own dimension, line quality and surface nature.
2. The same surface can be made convex, concave and planar without changing the edge of the surface
3. Tape can be used on clay to decide on cut outs and indicator positions. Using a knife to mark on the clay spoils the surface
4. In order to try out various options of surface it is possible to mask the developed surface and then work on it so it is always possible to get back to the initial surface
5. Mirrors can be used to visually assess and perceive the form at a distance
6. The clay model appears smaller when painted. This visual judgement has to be accounted for while making the model.
7. The clay model is placed on a raised platform and level adjusted to work comfortably on various portions. When visually judging the form it is always better to bring down the platform to ground level.







*Colour options*











*Painted model*



Rear cowl rim could have been better detailed

The supporting grey panel in front needs to be changed in its character to suit the vehicle

The front panel could have been pulled further in

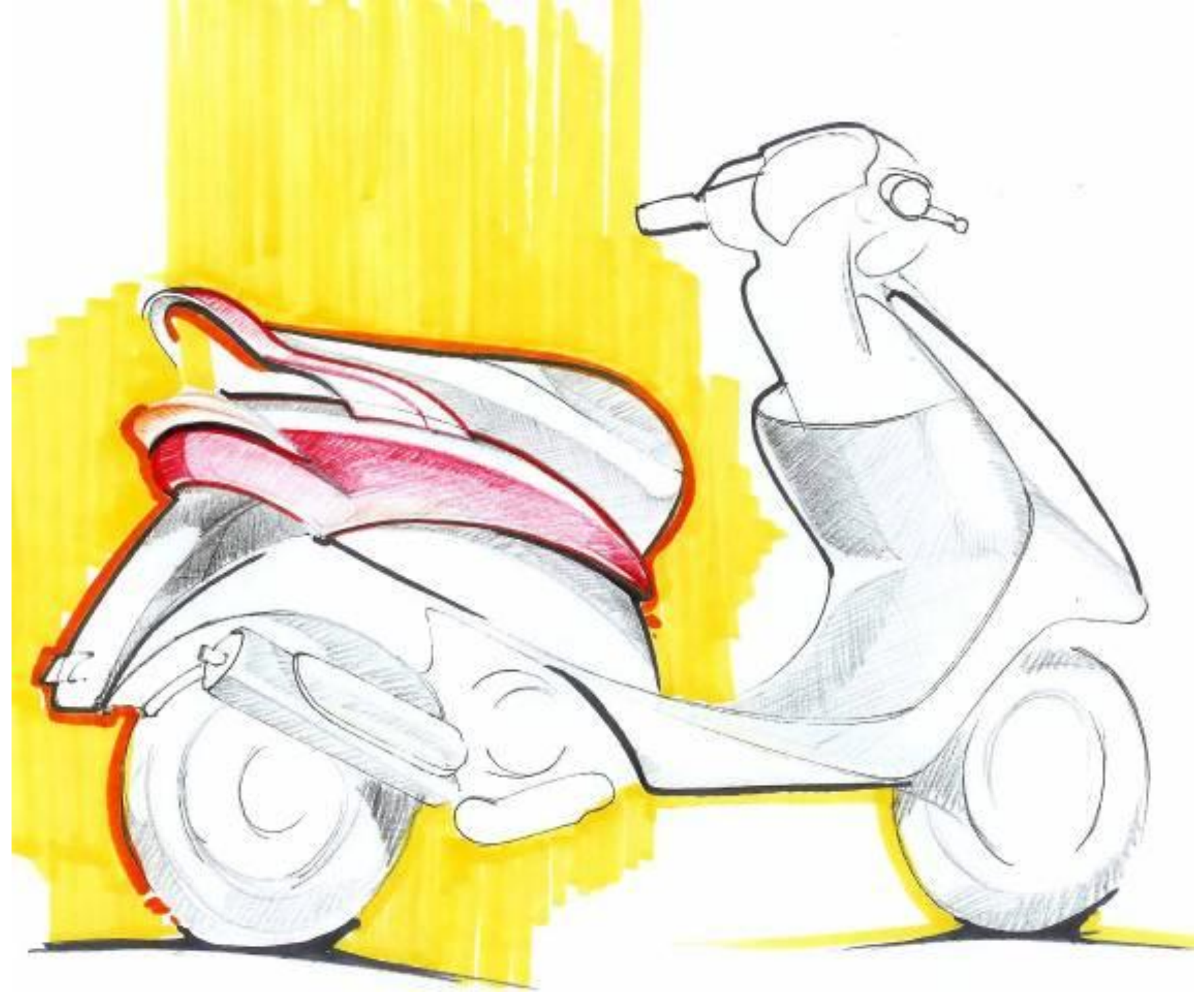
With due respect to ergonomics changes in seat dimensions can make it look far sportier and dynamic.

While masking the head lamp lost its curvature





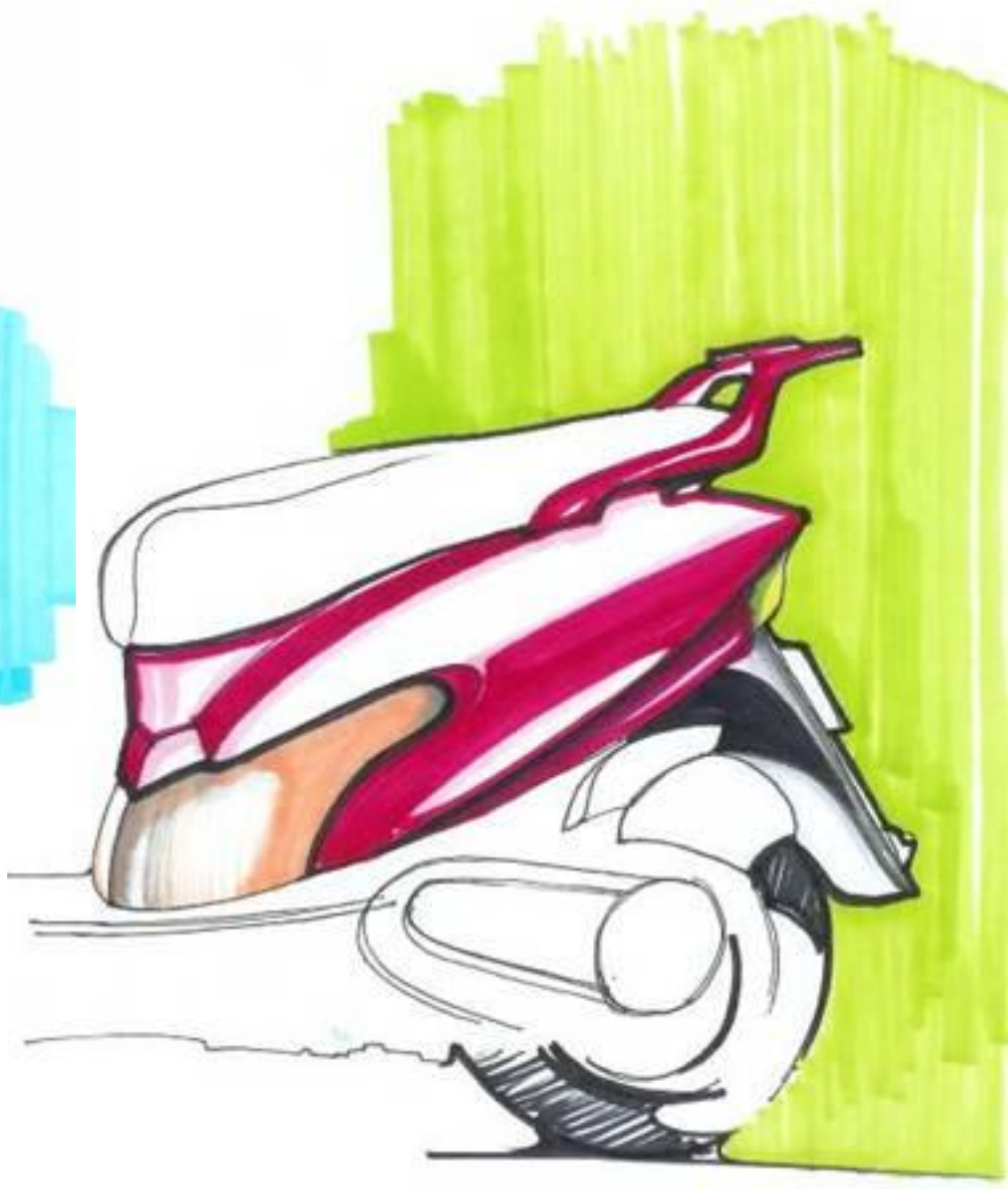
Marker Renderings







*Marker Renderings*





Dedicated to Mr. Prasad, my Clay sculptor

I would like to thank

Mr. Makrand Kulkarni for guiding and helping me through all stages of the project

Sasidhar, Kannan and Ravi for assisting Mr. Prasad

Mr. Elias Abraham, Head of styling dept. for giving me an opportunity to do this project

Prof. Chakravarthy and Prof. Bapat for encouraging me to take this project and giving me all requisite support

Tabitha for being there

