PRODUCT

DESIGN

&

DEVELOPMENT

ANALYSIS
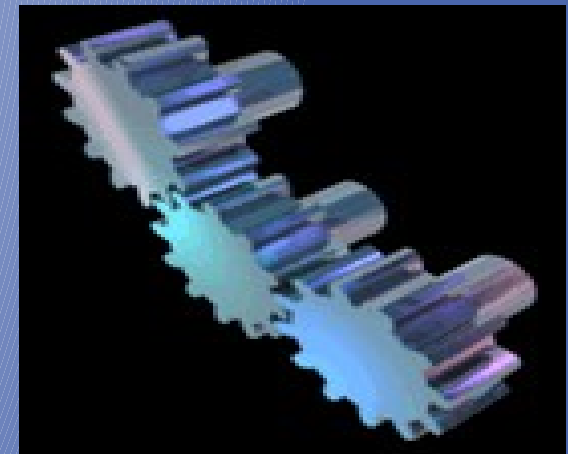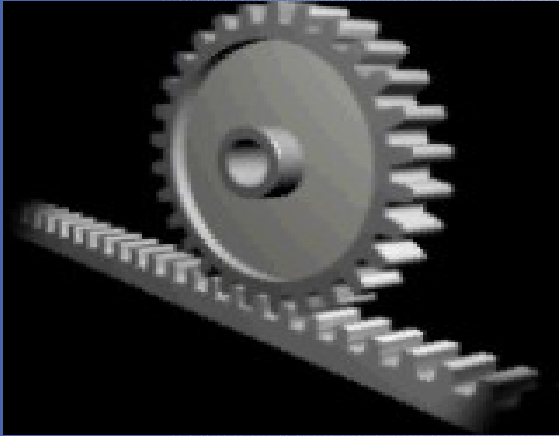
GROUP MEMBERS

| NAME	ROLL.NO
NIKHIL KARNIK	29
SHRUTI KADU	25
NIKHIL KAKAD	26
JEWELY JOY	24
NARENDRA KAPADNE	28
SHARDA JHANWAR	23
KUNAL JAISWAL	21
AKSHAYJANAWALEKAR	22
SAURABH KALIKAR	27
ASHISH KAWAJI	30
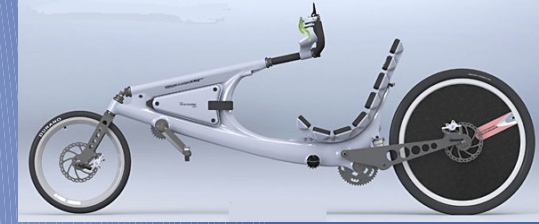
WHAT IS "PRODUCT DESIGN"?

PRODUCT DESIGN:

ProductDesign refers to those activities involved in creating the styling, look and feel of the product, deciding on the product's mechanical architecture, selecting materials and processes, and engineering the various components necessary to make the product work.
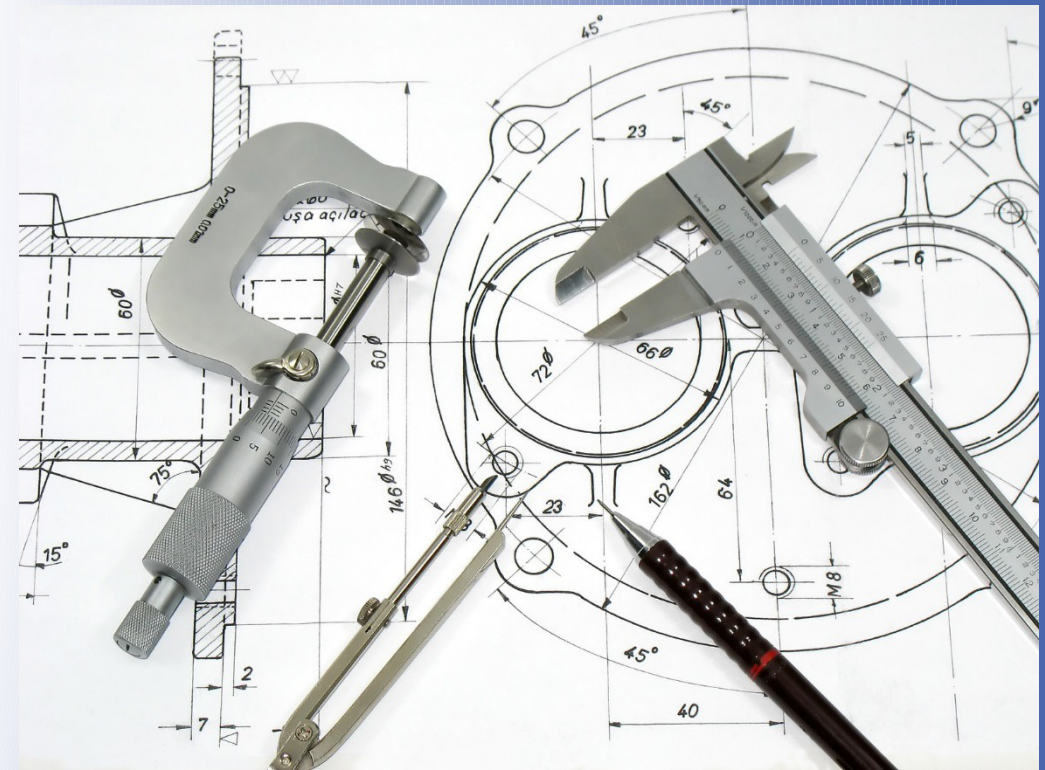
WHAT IS

"PRODUCT DEVELOPMENT"?
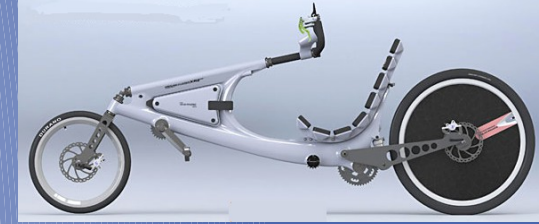
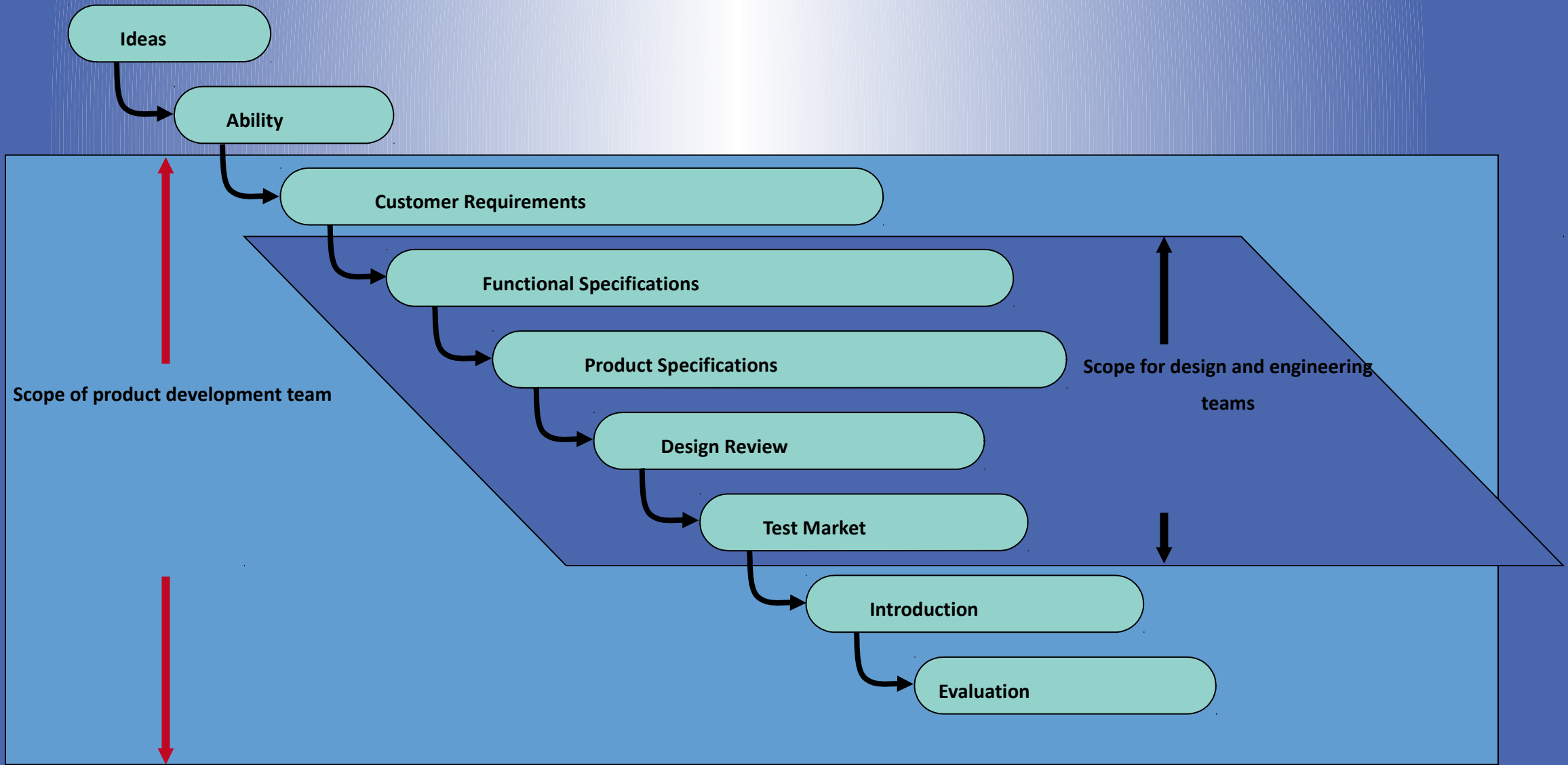**PRODUCT DEVELOPMENT:**

ProductDevelopment refers collectively to the entire process of identifying a market opportunity, creating a product to appeal to the identified market, and finally, testing, modifying and refining the product until it is ready for production.

It is the process of creating a new product to be sold by a business or enterprise to its customers.
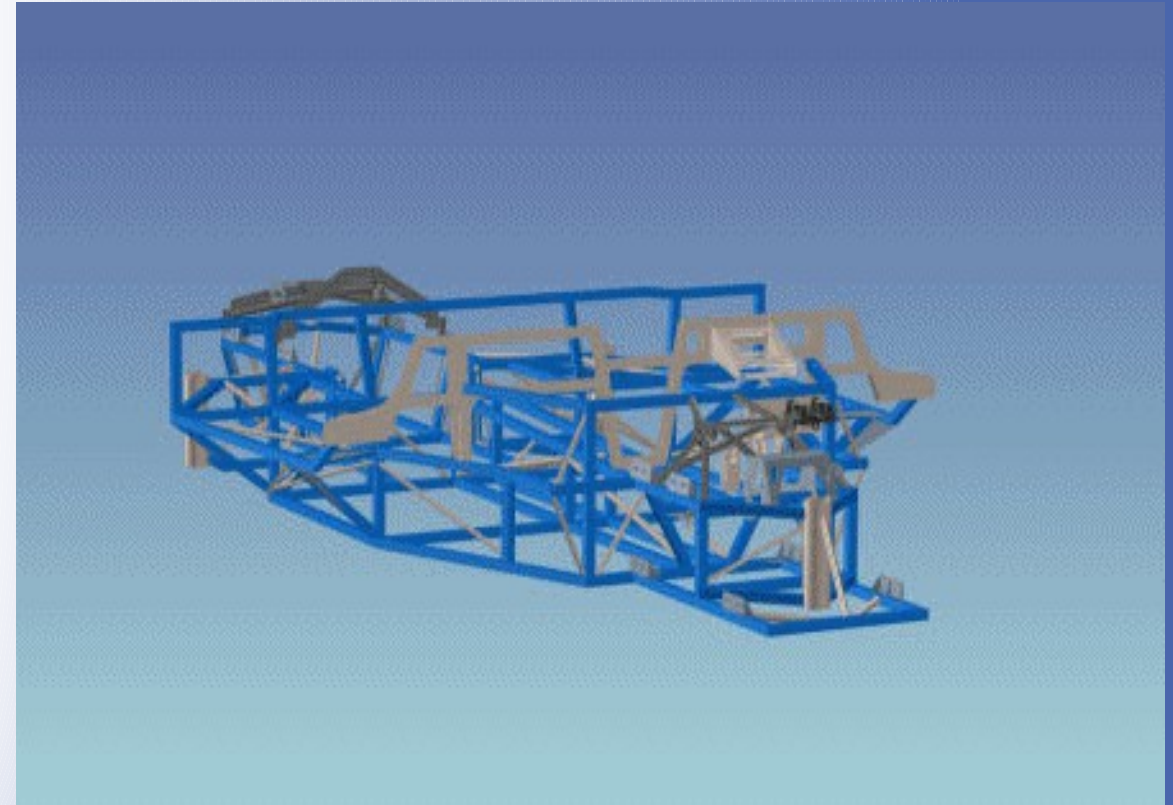
PRODUCT DEVELOPMENT SYSTEM
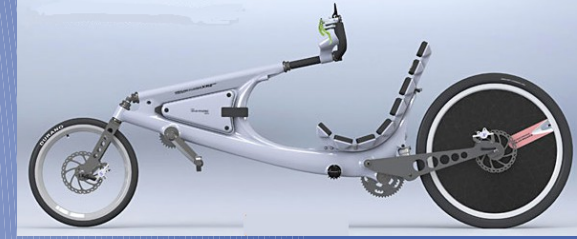
CREATION

ENHANCEMENT

PRODUCT DEVELOPMENT
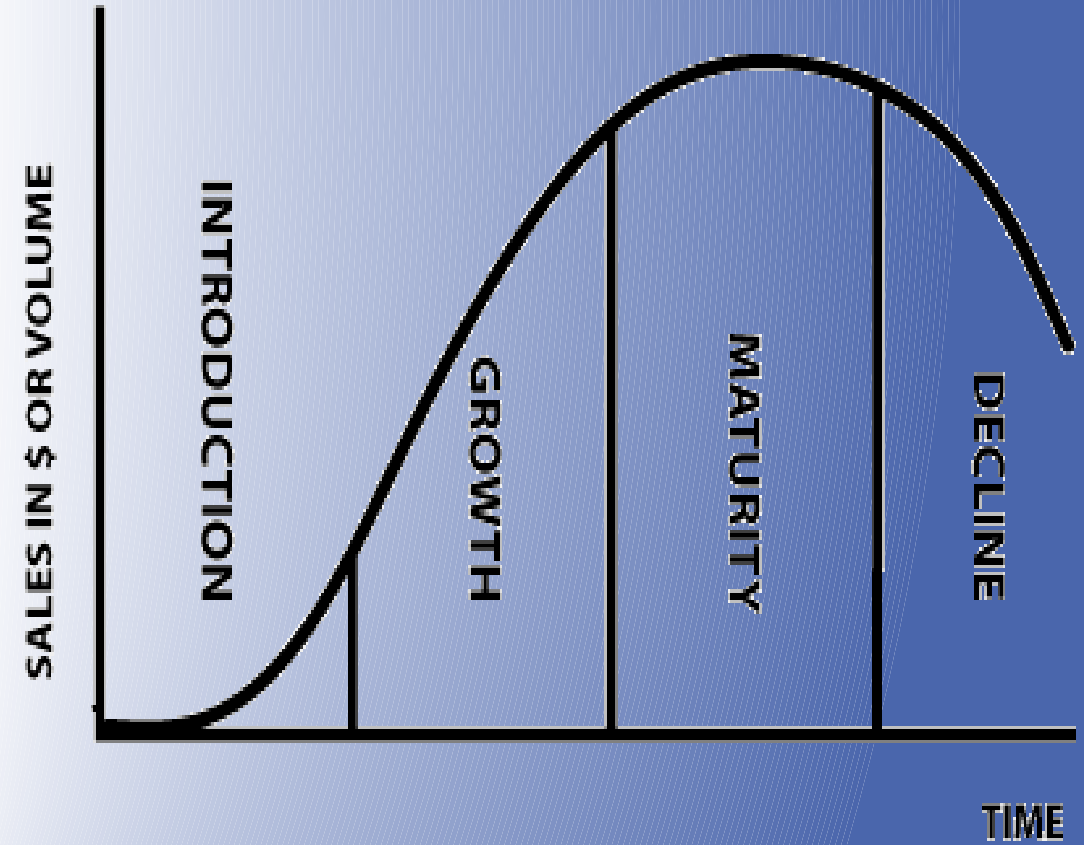
INNOVATION

IMPLEMENTATION
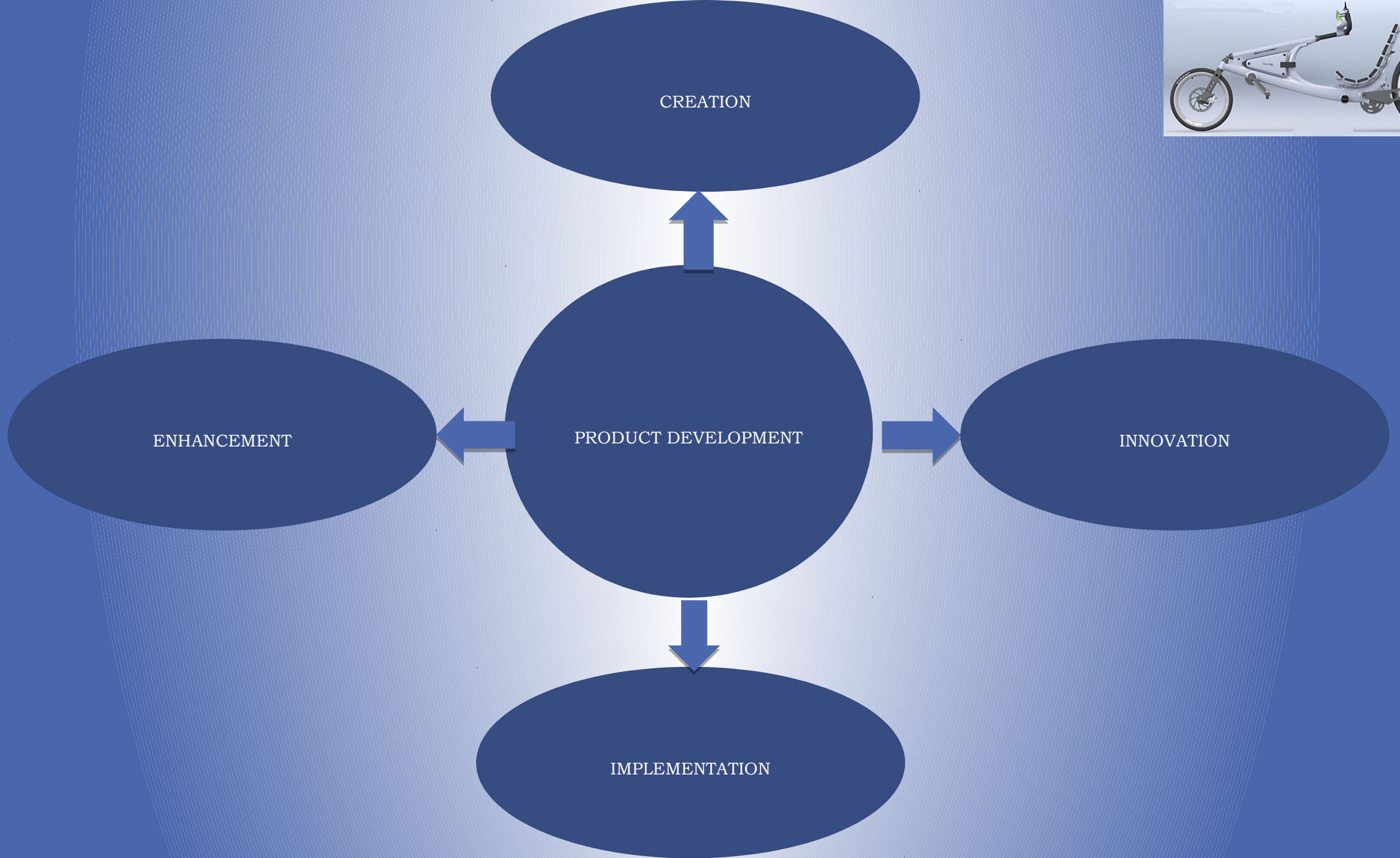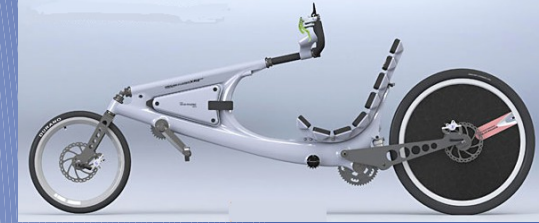
Product Life Cycle

A product's life is divided into four phases:

1. Introduction
2. Growth
3. Maturity
4. Decline

1.Introduction Phase:

Fine tuning may warrant unusual expenses for-

-Research

-Product development

-Process modification and enhancement

-Supplier development

Product Life Cycle (Contd..)

2.Growth Phase

-Product design begins to stabilize

-Effective forecasting of capacitybecomes necessary

-Adding or enhancing capacity may be necessary

3.Maturity Phase

-Competitors now established

-High volume, innovative production may be needed

-Improved cost controlis required

4.Decline Phase

-Unless product makes a special contribution to the organization, must plan to terminate offering

Issues for Product Development

◆ Robust design

◆ Modular design

◆ Computer-aided design (CAD)

◆ Computer-aided manufacturing (CAM)

◆ Virtual reality technology

◆ Value analysis

◆ Environmentally friendly design

BICYCLE

- A bicycle, often calleda bike or cycle, is a human-powered, pedal-driven, single-track vehicle, having two wheels attached toa frame, one behind the other.

- NAME-
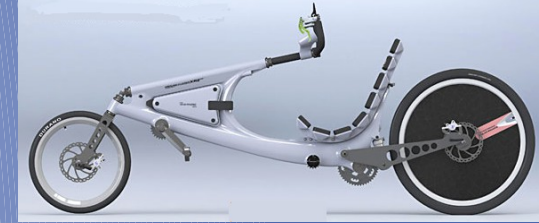
SOLAR ASSIST GROUND HUGGER XR2 HP(CARBON FIBER)

"call it our Ferrari on two wheels "

current price-$75

SOLAR ASSIST

GROUND HUGGER **XR2** ^HP
CARBON FIBER

Build This Advanced CarbonFiberSolar Assist Recumbent

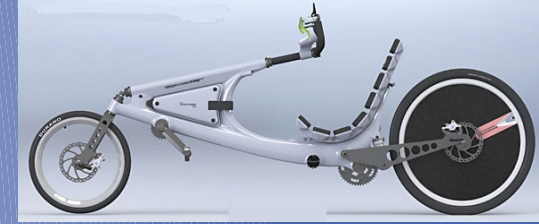*For Clean, Gasoline-Free Commuting and Cycling Pleasure*

MODIFICATIONS

Three Optional Versions

- Electric/Human hybrid power with

on-road or stationary solar charging,

or rapidplug-in recharging.

- Conventional e-bike power (wheel motor)

and with rapid plug-in recharging,

plus optional solar recharging.

- Dedicated human powered version

built on the most advanced technology

available.

DESIGN

SPECIFICATIONS

| PARAMETER	SPECIFICATIONS
LENGTH:	90 inch (2285.7 mm)
HEIGHT:	36 inch (914.4 mm to top of handlebars)
WHEELBASE:	67.9 inch (1725 mm)
WEIGHT:	27 - 45 lbs (depending on frame finish and components)
FRONT WHEEL:	20 x 1.1 (406-28mm rim with 20.1 tire)
REAR WHEEL:	26 - 27 inch (optional cross-section)
GEARING:	Optional(Rderailleuror Sachs 3 x 7internalhub)
BRAKES:	Optional disc
REAR SUSPENSION:	Trailing arm with air/spring shock
SEATADJ:	4-inch (101.6mm) longitudinal seat& 6-inch(152.4mm)handlebaradjustment (Fits 64 - 72 inch/1625.6 - 1828.8mm rider height as shown. Frame may be shortened or lengthened for taller or shorter riders.)

ADVANTAGES

- Unique Steering System

- CarbonFiberConstruction

- Break Free of the Gas Pump

- clean and virtually free mobility

- without the pedal-pumping work of a conventional bicycle.

- cut monthly expenses

- solar power can maintain up to 8 km/hr with little or no drain on the batteries.

Upright Bicycle LWB Recumbent
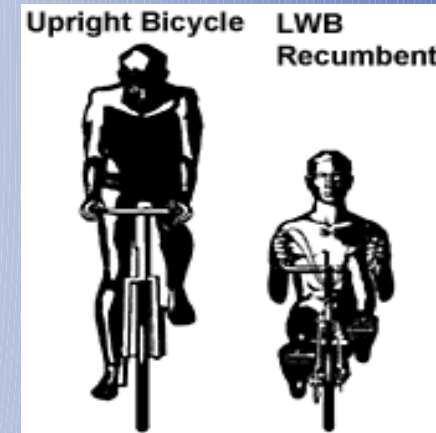
ANALYSIS
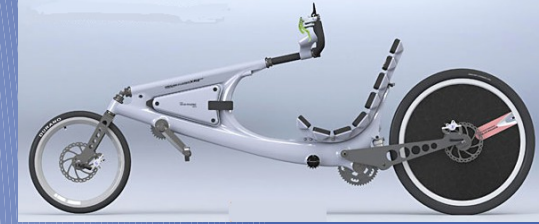
- Robust Design-make a small model of bicycle & then implement it in reality.

- Modular Design-fragment the task & work on individual module in a team

- CAD/CAM-Conventional 2D CAD drawings are also included, but the most enjoyable and enlightening experience will be with the 3D models.

- Virtual Reality Technology-Within an assembly, you can export individual parts into separate documents, make cutaway views by simply dragging a plane across a part or an assembly, and change transparency with the click of a mouse so you can see what's inside.

- Value Analysis-environmentfriendly,lesscost,onetimeinvestment,lessmaintainance,userfriendly,nouse offuel,highperformance and many more.

THANK YOU

ANY QUESTION?