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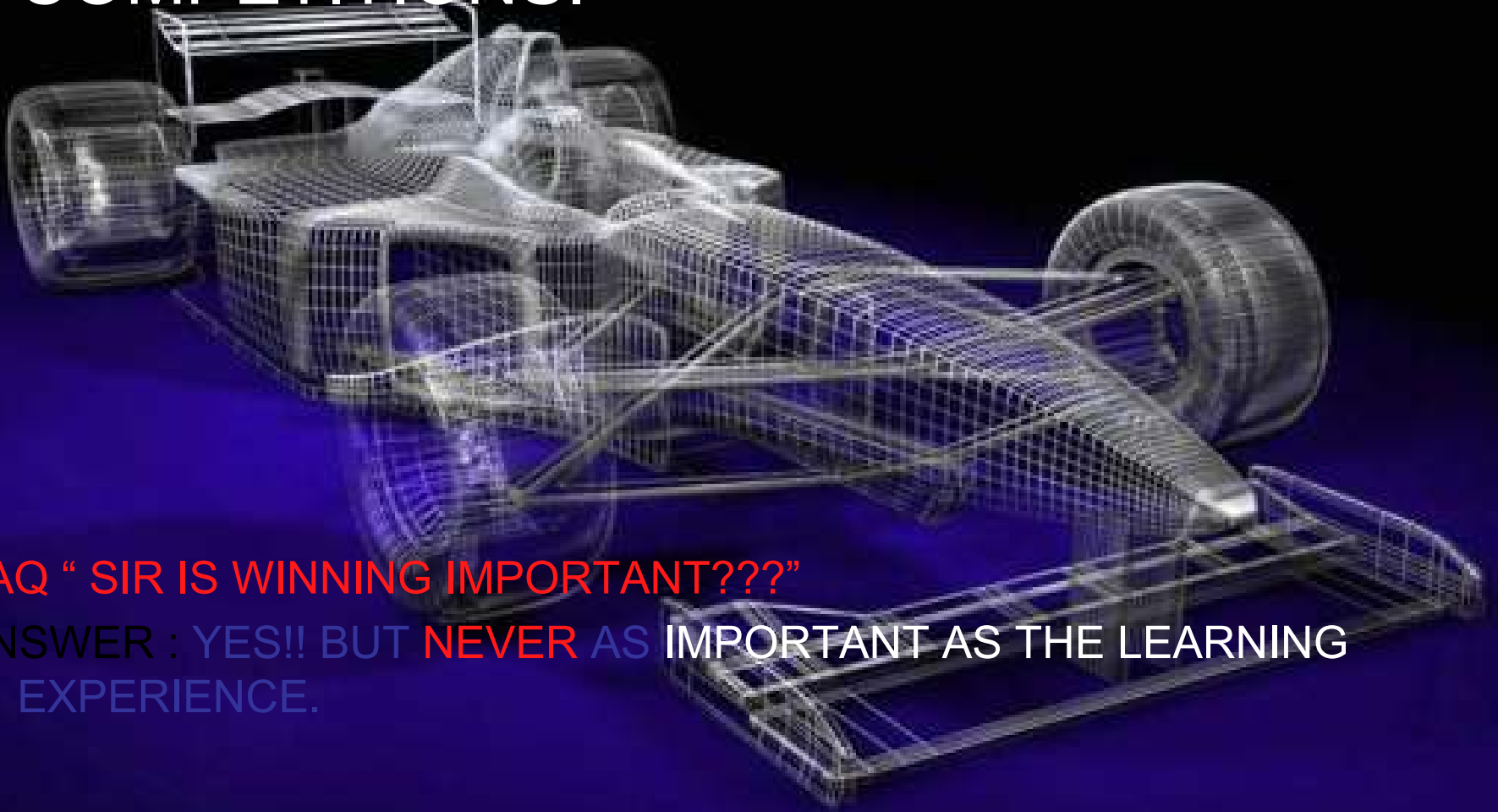


WELL BEGUN IS HALF DONE!

- THE IDEA IS TO PARTICIPATE IN THE UPCOMING SUPRA SAEINDIA COMPETITIONS.

FAQ “ SIR IS WINNING IMPORTANT???”

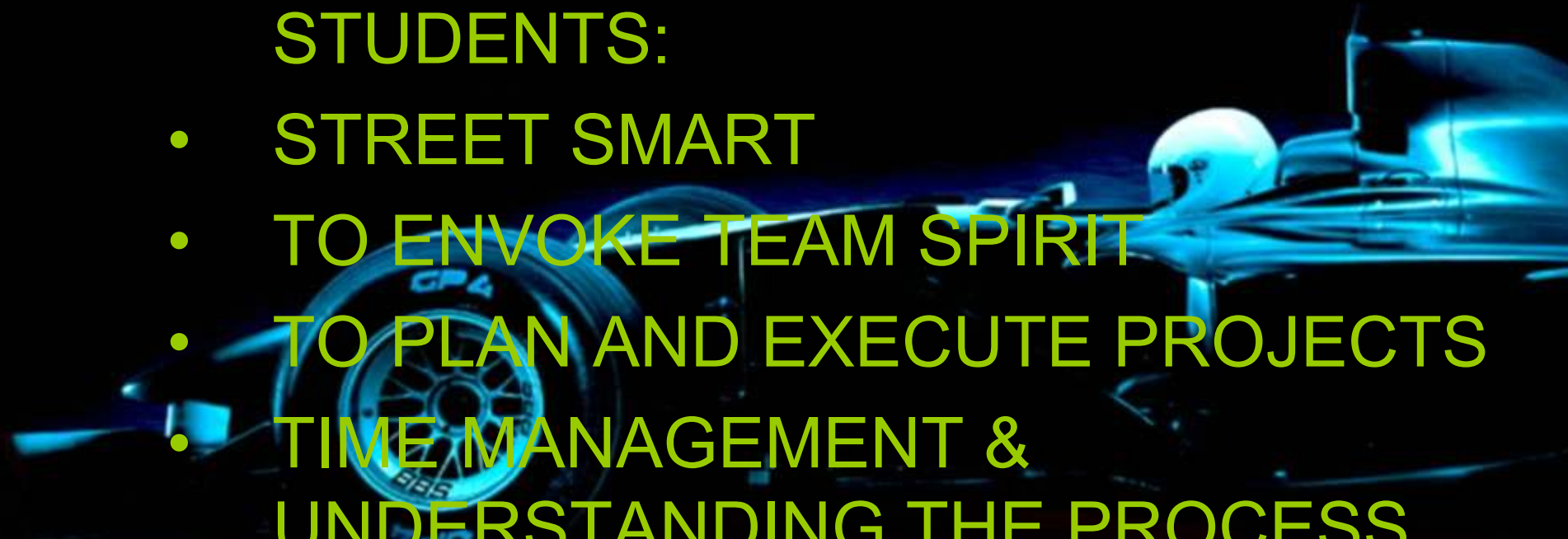
ANSWER : YES!! BUT NEVER AS IMPORTANT AS THE LEARNING EXPERIENCE.



IDEA

THE SOLE PURPOSE OF SUCH A
COMPETITION IS TO MAKE
STUDENTS:

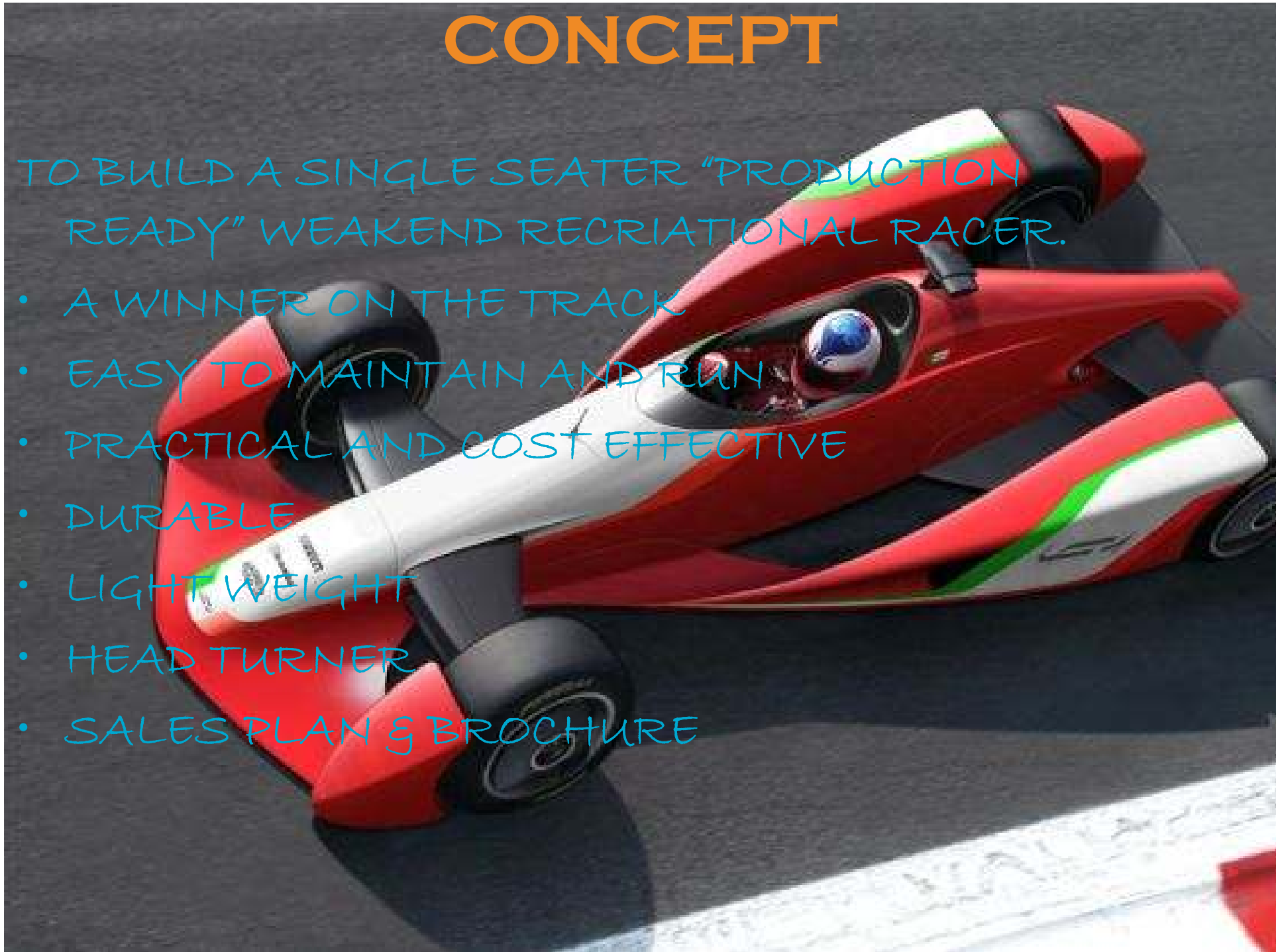
- STREET SMART
- TO ENVOKE TEAM SPIRIT
- TO PLAN AND EXECUTE PROJECTS
- TIME MANAGEMENT &
UNDERSTANDING THE PROCESS



CONCEPT

TO BUILD A SINGLE SEATER "PRODUCTION READY" WEEKEND RECREATIONAL RACER.

- A WINNER ON THE TRACK
- EASY TO MAINTAIN AND RUN
- PRACTICAL AND COST EFFECTIVE
- DURABLE
- LIGHT WEIGHT
- HEAD TURNER
- SALES PLAN & BROCHURE



***A CRAFTSMAN IS AS GOOD
AS HIS TOOLS!***

DESIGN CRITERIA

- FOLLOWING SPECIFICATIONS OF THE RULE BOOK.
- PREPARATION OF A CHECK LIST \ TO-DO LIST
- PROCESS \ WORKFLOW \ AUTOMATION PLANNING
- MANPOWER MANAGEMENT
- USE OF ENGINUITY
- THINK OUTSIDE THE BOX
- NOT TO RE-INVENT THE WHEEL
- AVOID OVER ENGINEERING
- EASE OF ASSEMBLY / DIS-ASSEMBLY
- STICK TO MANUFACTURERS SPECS
- SIMPLICITY...WHY COMPLICATE!
- MAKE IT SHORT SWEET AND SIMPLE.
- ERGONOMICS & CREATURE COMFORTS
- WORKSHOP AND SERVICE MANUAL
- ECONOMICS

DRAWING

- BASED ON THE DESIGN CRITERIA
- BASED ON THE SPECIFICATIONS
- HAS 2 AND 3 DIMENSIONAL RENDERINGS OF COMPONENTS AND PARTS
- TRIANGULATION AND STRENGTHENING OF STRESS\LOAD POINTS WITH GUSSETS.
- SUSPENSION GEOMETRY.
- ELECTRICAL , HYDRAULIC , WATER, FUEL CONTROL CABLES & SWITCH GEAR
- SAFETY EQUIPMENTS.
- DIMENSIONAL ACCURACY , FIT AND TOLLERENCE, FINISH, PROCESS NOTES, MATERIAL SPECS, PART NUMBERING.
- ARTIST RENDERING AS PIN-UP.
- SCALED CLAY MODELING (PREFER SCALE OF 1:6).
- DETAILED SUBASSEMBLY DRAWINGS.

LIST OF MATERIALS

- AS PER DESIGN RULES
- AS PER DESIGN CRITERIA
- AS PER DRAWINGS

INCLUDES

HAND OPERATED AND POWER TOOLS,
WELDING AND FINISHING EQUIPMENT.

FABRICATION

- SAFETY PRECAUTIONS AND SAFETY EQUIPMENT
- LEARNING SHOPFLOOR PRACTICES
- EQUIPMENT LISTS
- PREPARATION OF SHOP FLOOR
- SHOPFLOOR LAYOUT
- SHOP FLOOR CLEANLYNESS
- WELL LIT AND VENTILATED SPACE



METHODS OF FABRICATION

COMMON MANUFACTURING PRACTICES IN SUPRA AND FSAE

FOR CHASSIS

- CUTTING
- BENDING
- NOTCHING
- GRINDING
- PIPE BENDING
- WELDING

FOR OTHER COMPONENTS

- FOUNDRY/CASTING
- TURNING
- THREADING
- MILLING
- SHAPING
- CNC
- WATER JET
- LASER CUT
- GAS CUTTING
- PLASMA CUTTING
- HYDRO FORMING

SHEET METAL WORK

- SHEET CUTTING
- SHAPING
- BENDING
- REVITTING
- SEAMING
- SPOT WELDING
- BONDING
- WELDING

JIGS , FIXTURES AND CLAMPS

FIRST RULE OF FABRICATION...

“SECURE, CLAMP YOUR JOB!”

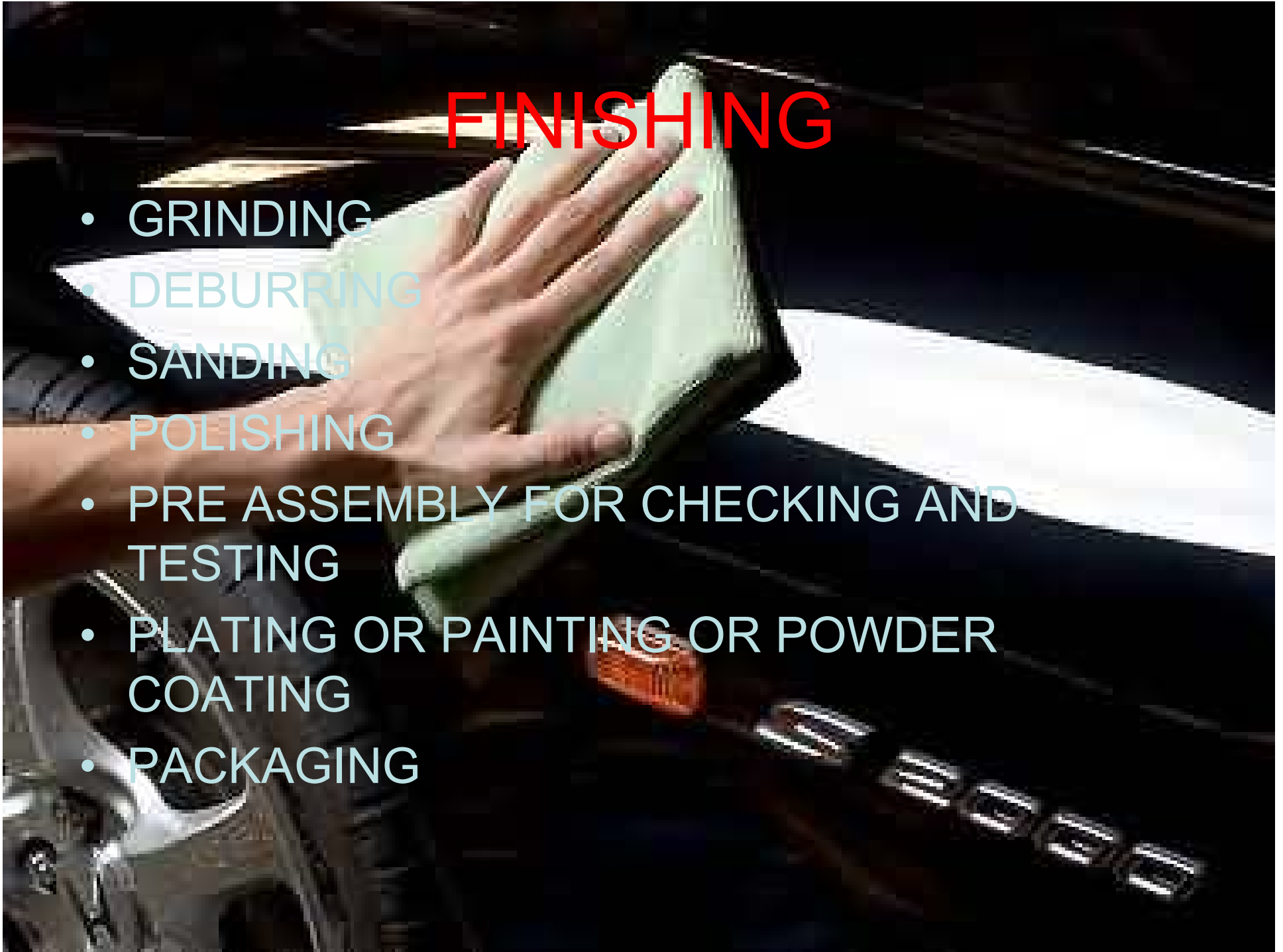
MAKE JIG ACCORDING TO DESIGN
SPECS...

IT SHOULD BE LEVEL, DIMENTIONALLY
ACCURATE, COMFORTABLE TO WORK
ON, PROPERLY EARTHED, RIGID AND
STRONG!



FINISHING

- GRINDING
- DEBURRING
- SANDING
- POLISHING
- PRE ASSEMBLY FOR CHECKING AND TESTING
- PLATING OR PAINTING OR POWDER COATING
- PACKAGING



EXAMPLES OF WELDING

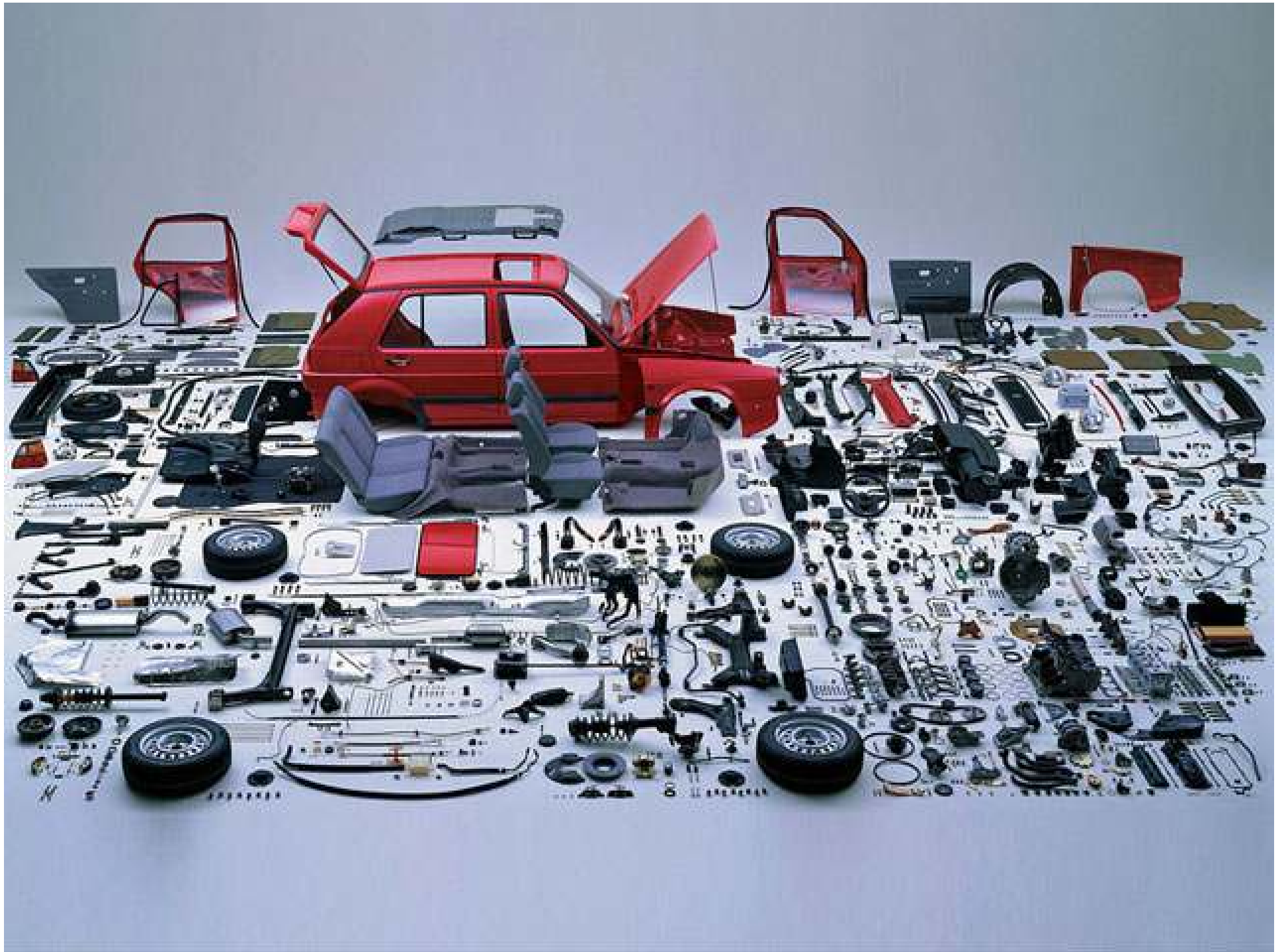






FINAL ASSEMBLY

- **PREPARE A ASSEMBLY CHART**
- **NO HAMMERS! A SLIDING FIT IS THE BEST FIT.**
- **USE RUBBER/ PLASTIC MALLETS.**
- **CLEAN AS U WORK**
- **ARRANGE PARTS IN THE ORDER OF ASSEMBLY**
- **USE CLEAN RAGS\ TOWELS\ GOOD HAND GLOVES.**
- **CHECK FLUIDS, ELECTRICAL CONNECTONS, WATER , HYDRAULIC, FUEL LINES, CONTROL CABLES AND SWITCH GEAR.**
- **START ENGINE**
- **CHECK FOR LEAKS**
- **TAKE HER FOR A SPIN (BE EASY ON HER).**
- **CHECK BRAKES, CLUTCH, THROTTLE AND TRANSMISSION.**
- **WHEELS FOULING \ SCRAPING AGAINST OTHER PARTS.**
- **CHECK ALL GAUGES AND METERS.**
- **CHECK ONBOARD SAFETY EQUIPMENTS**
- **ALL ROUND SPANNER CHECK.**



FIN