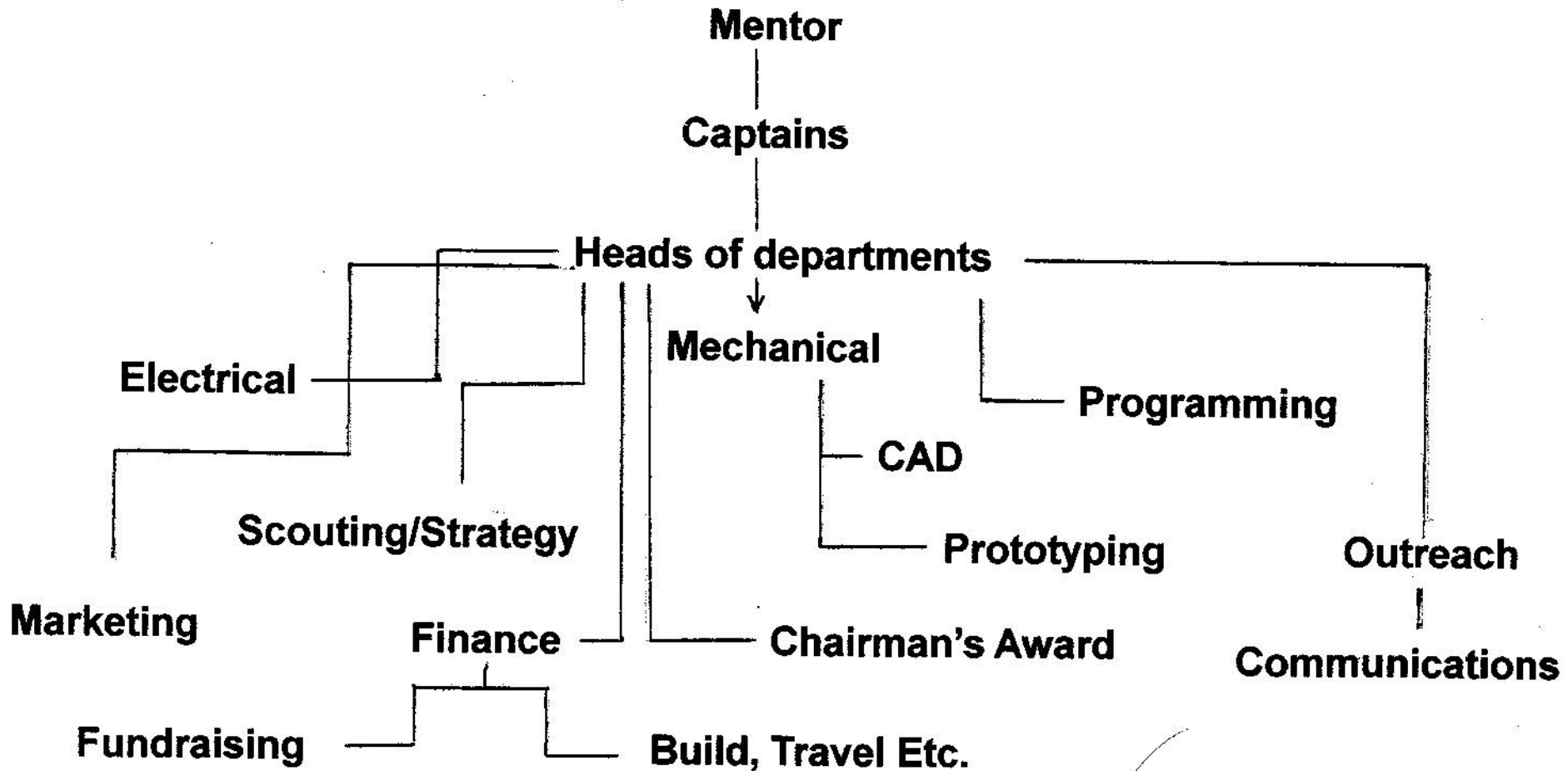


TEAM ORGANIZATION



KISSing Basics

- Have everyone participate in the design
- Build your chassis frame and drive train
- Add structure on to frame
- Place electrical board on structure
- Add mechanisms to structure
- Clean up wiring

The Super Structure

- You do not have to weld
- One inch L shaped structural aluminum works
- Reinforce corners with cross bracing
- Use ¼" or #10 bolts and nuts only
- Use plexiglass to shield electronics and sensitive areas
 - Can be shaped with heat gun and vise
- Don't forget your sponsors and team name and number

The Electrical Board

- Select placement on structure
- Layout entire board on wood or plexi
- Arrange for efficiency of space on structure
- Label all wire at both ends
- Keep color code consistent
 - Red positive Black negative
- Number all PWM's at both ends
- Tie into multiple harnesses and attach to frame

The Chassis Frame

- Use standard frame in KOP
- Build bumpers at the same time
 - Bumpers not included in weight if conforming
- Reinforce bumpers if necessary
- Layout superstructure to fit standard frame

Mechanisms

- Follow the rules
- There are limits on most motors – look them up
- Plan for over capacity
- Seven times limit is industry standard
- Prototype, Prototype, Prototype
 - Correct problems before you install on robot
- Look at past competitions for solutions
 - "thebluealliance.net"

The Drive Train

- Two wheel front wheel drive works
- Rear wheel drag on carpet works
 - Delron pads on wood work
- Number 25 chain is plenty strong
- You must use a chain tensioner for longer chain runs
 - Idler pulleys work
 - Delron blocks work
- Use Andy Mark tough box transmissions
 - May be in KOP
 - Be wary of Bainbots tranny's

Time Line Basics

- Before Kick Off
 - Build your cart and shipping crate
- Week 1
 - Design robot. build chassis, add drive train and prototype
- Week 2
 - Order all foreseeable parts and build superstructure + electrical board
- Week 3
 - Fabricate and assemble mechanisms, begin programming on drive train
- Week 4
 - Install mechanisms, program for function and test for problems
- Week 5
 - Fix problems, order additional parts and continue programming
- Week 6
 - Finalize build – program and practice driving

We are KINGTeC

**Kids Integrating Newly
Grasped Technological
and Engineering
Concepts**

Team 2169