

COLLEGIATE DESIGN SERIES COLLEGIATE ROADSHOW

TEAM ORGANIZATION

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Collegiate Roadshow Team Organization

■ Agenda

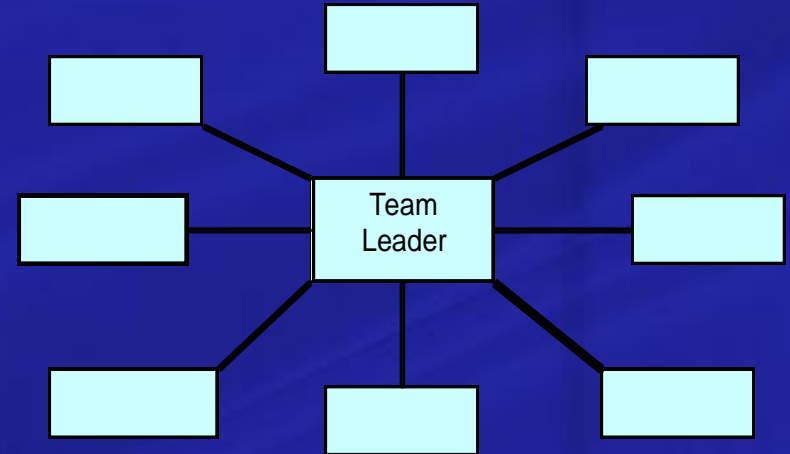
- Leaders & Leadership
- Types of Team Organization
- Tasks define the Organization
- Organization
- Recruiting & Retention
- “Royce Rules”

Leaders & Leadership

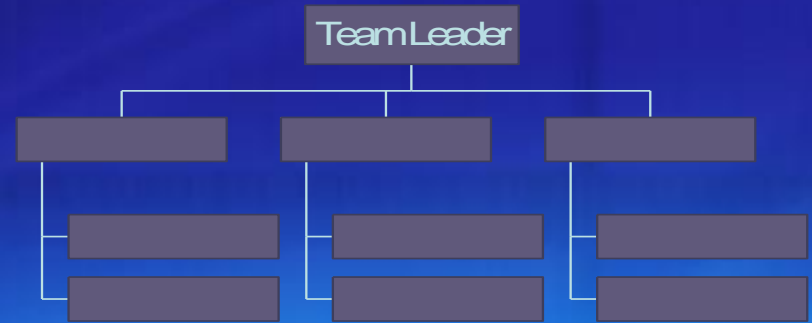
- The team
 - New team or well established?
 - Multi-year?
- Leaders & Leadership
 - Leadership is the team leader AND the leadership core or group
 - How is/was this leadership selected?
 - Leadership style
 - What leadership positions are there?

Types of Organizations

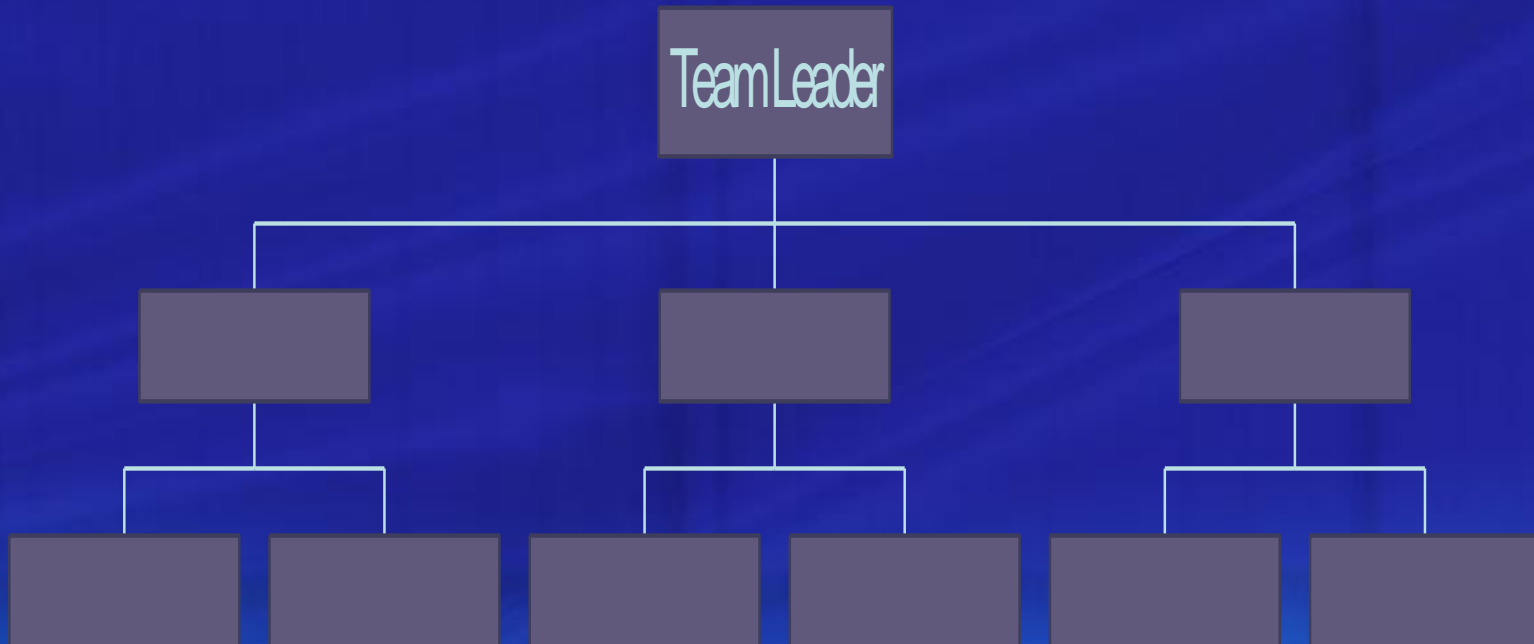
- Star Organization



- Pyramid or Stacked Organization



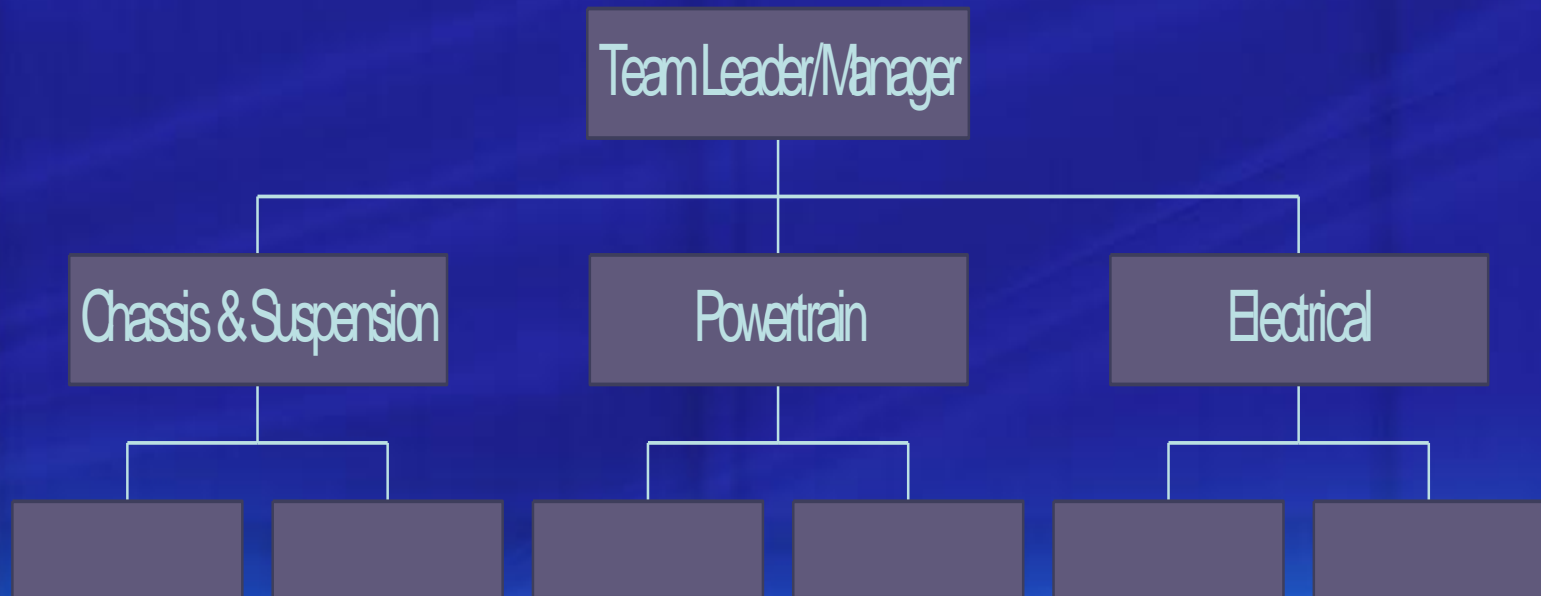
Typical CDS Team Org Chart



Systems = Tasks

- The systems tend to define the tasks and hence the positions on the team
 - Chassis & Suspension
 - Powertrain
 - Electrical

CDS Team Org Chart



Systems have Sub-Systems

▣ Chassis & Suspension

- ▣ Frame
- ▣ Suspension
- ▣ Brakes
- ▣ Wheels & Tires

▣ Powertrain

- ▣ Engine
- ▣ Engine Calibration
- ▣ Intake System
- ▣ Exhaust System
- ▣ Cooling System
- ▣ Other Driveline

▣ Electrical

- ▣ Electronics
- ▣ Wiring
- ▣ Instruments

CDS Team Org Chart 2



Missing Components

- Controls (throttle, brake pedals, clutch, gearshift)
- Body
- Wings/aero

Missing Components - 2

- ❑ Controls (throttle, brake pedals, clutch, gearshift)
- ❑ Body
- ❑ Wings/aero

- ❑ Data Acquisition
- ❑ Driver safety equipment (seat belts, head restraint, etc)

Missing Components - 3

- ❑ Controls (throttle, brake pedals, clutch, gearshift)
- ❑ Body
- ❑ Wings/aero

- ❑ Data Acquisition
- ❑ Driver safety equipment (seat belts, head restraint, etc)

- ❑ Packaging
- ❑ Ergonomics

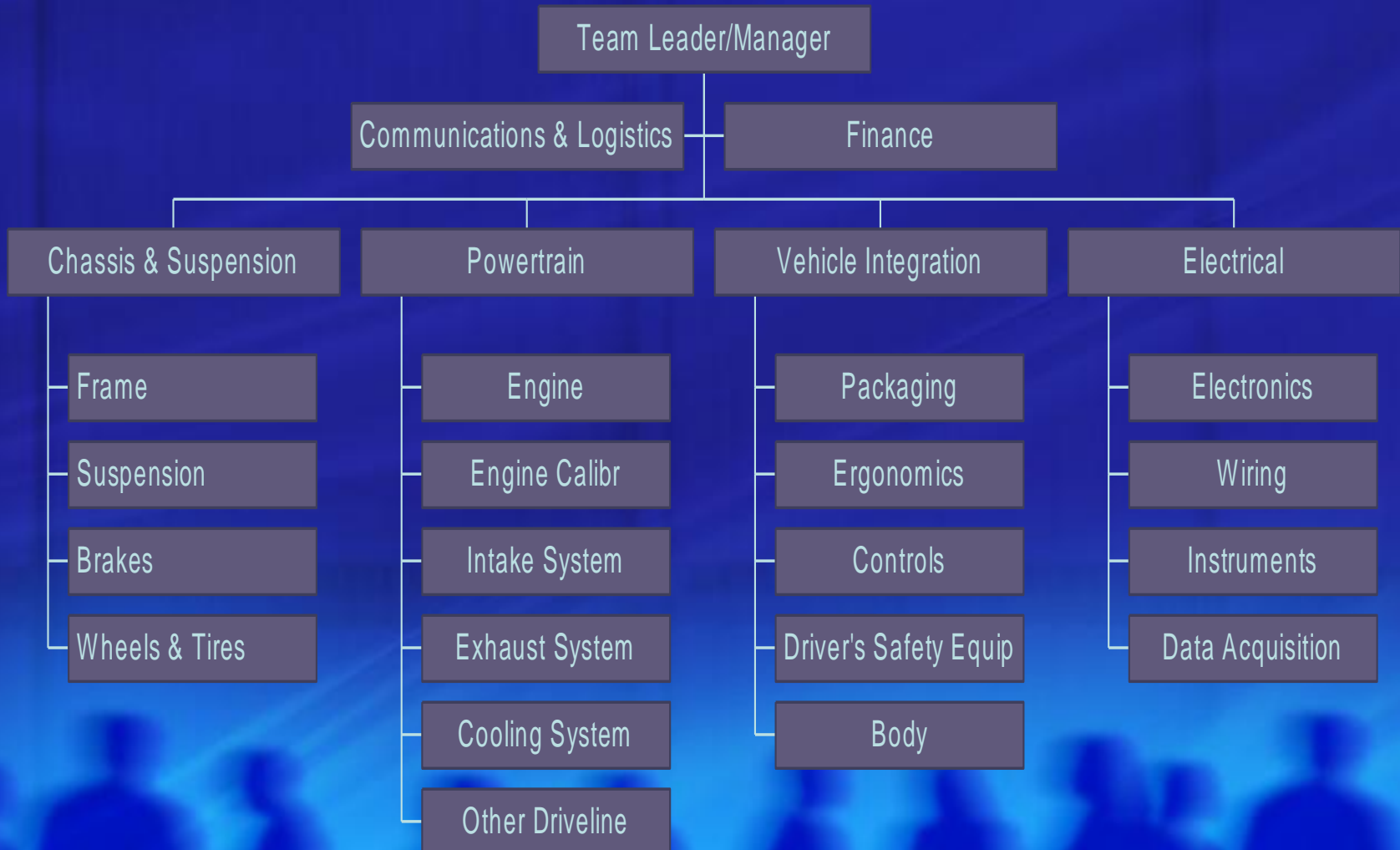
CDS Team Org Chart 3



Who Will be Responsible for?

- Keeping the Timing Chart
- Tracking Program Timing
- The Parts List
- Vehicle Weight
- Communications
 - Keeping meeting notes
 - Sending out meeting notes & other communications
- Logistics
- Fund Raising & Sponsorship
- Money/finances/cheque book
- Purchasing parts
- Cost Report
- Presentation Event
- Design Event Material (story boards, etc.)

CDS Team Org Chart 4



Team Organization - Summary

- Get organized early
- Leadership has to be earned
- Military style won't cut it
- Leadership by example works
- Set the "tone" early
- Cohesiveness
- Discussion but no divisiveness
- Written org charts
- Written job descriptions

Recruiting & Retention

- ❑ Will lose 50% of first recruits
- ❑ Retention is the key
- ❑ How do the newer members of the team fit in?
- ❑ Newer members need to realize their limitations
- ❑ But must be treated with respect by the “senior” members

Recruiting & Retention - cont'd

- Key to retention is:
 - Involvement without being in over-their-head
 - Giving the 'newbies' interesting and worthwhile tasks
- Possible solutions
 - Apprenticeships
 - Machining simple parts
 - Simple fabrication
 - Making detail drawings from layouts or for more complex assemblies
 - Making assembly drawings from details
 - Updating/fixing last year's car as a training vehicle

“Royce Rules”

- Teamwork
- Organization
- Written Org Charts & Job Descriptions
- Written meeting notes (decisions)
- Written goals
- Written plans
- Best for people to set their own goals
- Timely decisions
- Consensus
- Don't fall behind!
- Keep to the dates