



#### About the presenter

- Experience
  - Corporate
    - Large and Small projects
    - Including International
  - University Senior Design
  - Basketball coaching
  - Consulting
    - Leader and team member
- Education
  - BSME (University of Minnesota)

What this presentation will cover

- What is culture
- Setting the tone
- Roles to balance in Design Culture
- Prioritization Tools where groups are vital



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### What is Culture

- Set of behaviors
- Group reinforces
- Takes time to create
- A culture can exist within a culture
  
- Definition
  - Customs, arts, social institutions and achievements of a particular nation, people or other social group
  - Cumulative deposit (collection) of knowledge, experience, beliefs, values, attitudes and means



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### Desired Culture

- Respectful
- Fun
- Listen on both sides
- Accepting of mistakes while learning
- Timely
- Put project before me
- Plan and act



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### Execution Behavior Risks

- Discipline lacking, open loop
  - Need follow-through and verification
- Gold plating - Implementation/ phased development
  - Cannot do everything for everyone
- Grandfathering in “old” and “bad” design features/ maintain old processing restrictions
  - Reuse is good but ensure it is not a hinderance



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### Setting the tone – As Leader

- Share vision with the team
- Meet individually to learn of motivations and concerns
- Team needs to fit the desired culture
- Start meetings on time – to set schedule sensitivity
- Fight for the team and the project, get resources
- Confidence in team
- Manage egos and pride – the risk of being exposed. Allow to save face
- Decision process
- No excuses – find alternatives (contingency plans)
- Establish trust



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### Setting the tone – As team member

- Question without undermining
- Curious attitude
- Be accountable
- Hold others accountable
- Do role well, but do not limit to your role
- Do whatever it takes



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**Desired Behaviors – deeper actions**

- Help each other
- Understand trade offs and balance
- Consistency



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### Roles to Balance in Design

- Function – engineering
- Cost, Product
- Reliability
- Weight
- Power
- Safety
- Human Factors/ UX
- Manufacturing
- Quality
- Regulatory
- Aesthetics/ Appearance
- Project cost and schedule
- Marketing/ sales
- Testing



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### Considerations Beyond Roles

- Different personalities
- Styles
- Backgrounds
- Skills (beyond functional role)
- Strengths
- Interests



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### Prioritization Tools

- Quality Function Deployment/ Value Engineering
  - Pugh Concept Selection is one tool
  - State of the Art is considered
- Risk management
- Task management
- Trade studies
- Design of Experiments (DOE)



### Systems View/ Perspective

- Design Intent/ Concept of Operations
- Marketing perspective/ Business case
- Systematic literature review
- Visit customers



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### Key takeaways

- Take one item and use it tomorrow
- Take one item and share it with someone else
- Priority behaviors



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**Thank you for attending!!!**



**For more information feel free to  
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