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Some Thoughts on Future Workforce Needs

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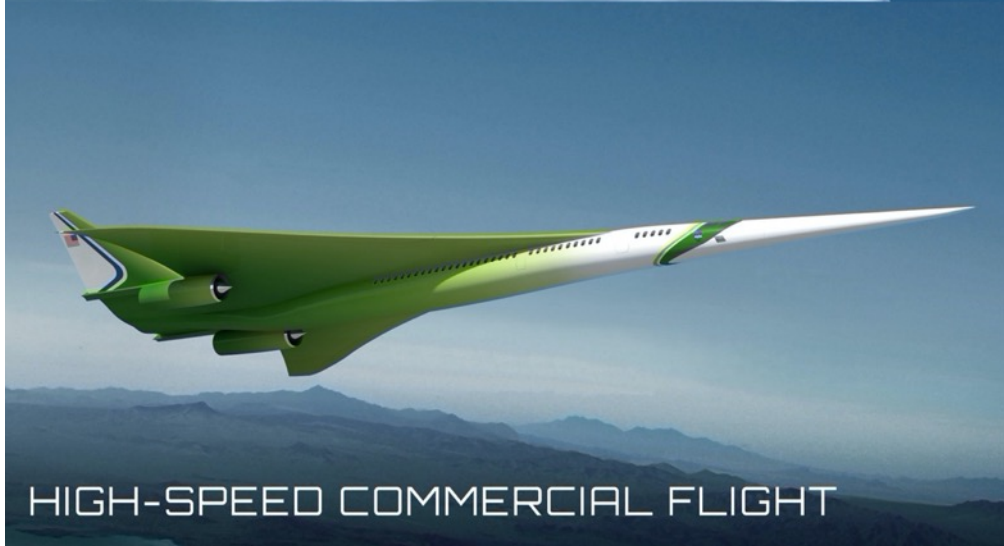
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June 10, 2021

From one configuration...



To many...



Four Transformations for Sustainability, Greater Mobility, and Economic Growth

From a mechanical or aerospace engineering point of view...

Strong technical competence – traditional core disciplines

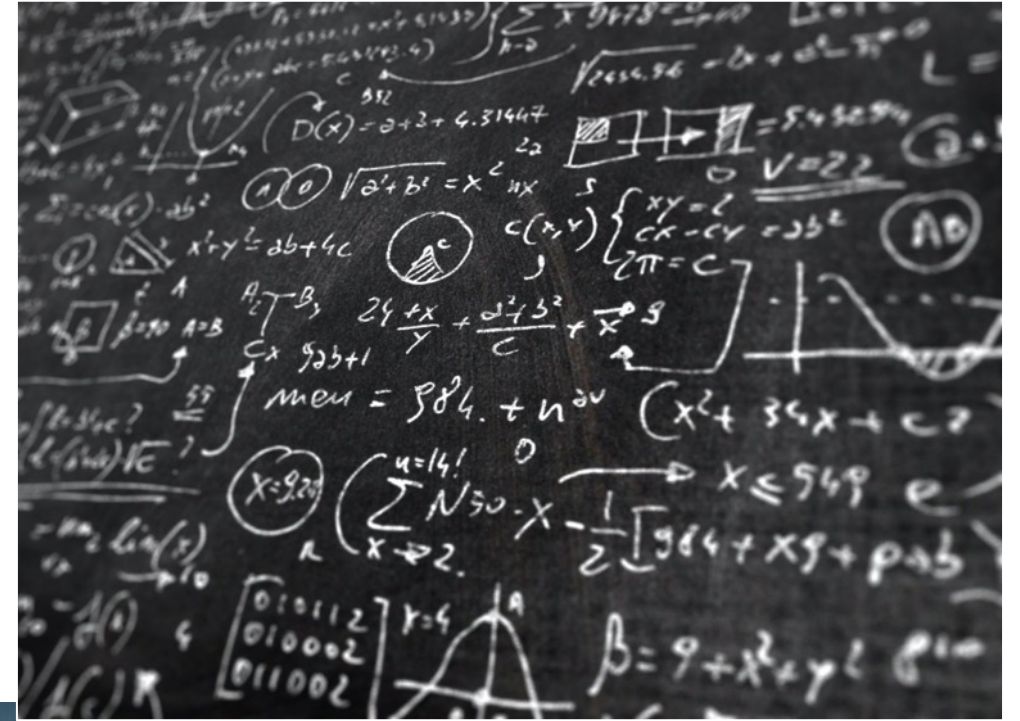
Aerospace, Mechanical Engineering:

- Design
- Solid mechanics
- Fluid mechanics
- Heat transfer
- Thermodynamics
- Controls
- Numerical methods...

But – also need solid familiarity – in “other” traditional disciplines and how they relate to the core ones (big picture)

- Electrical engineering/physics
- Material sciences
- Computer science & artificial intelligence
- And many others...

And, oh by the way – you need the ability to understand and value those other technical disciplines since these future air vehicle systems are becoming even more integrated.



But...

You also need to have the ability to learn and appreciate the non-engineering – as these are often the elements of the context that you need to be able to recognize and accurately interpret

- Economics
- Business & finance
- Marketing
- Political science
- Others...

AND – most critically – need HUMAN SKILLS

The ability work effectively within a team, across disciplines, across teams, and across organizations.

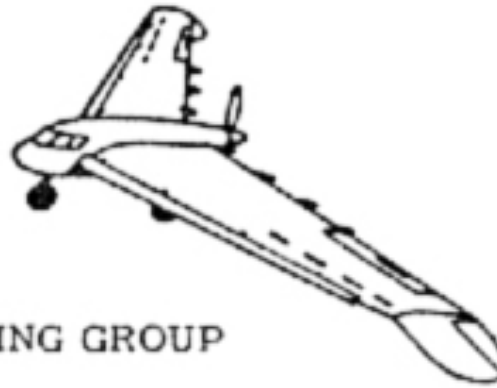
- Emotional intelligence
- Self-awareness
- Empathy
- Communication skills – spoken & written
- Listening for understanding
- Sense of humor



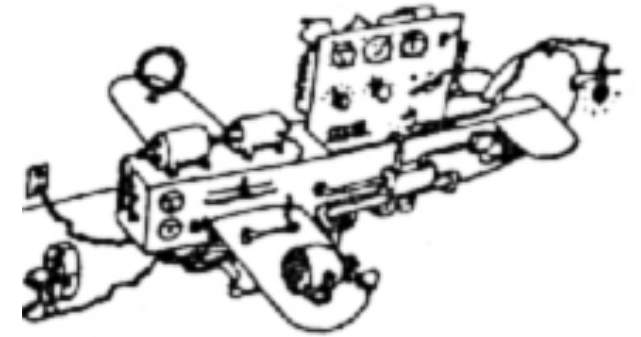
The point is...

Aircraft systems might have been more disciple-centric...but not anymore.

These systems are getting more and more integrated and complex – you must be able to effectively deal with the multi-disciplinary complexity!



WING GROUP



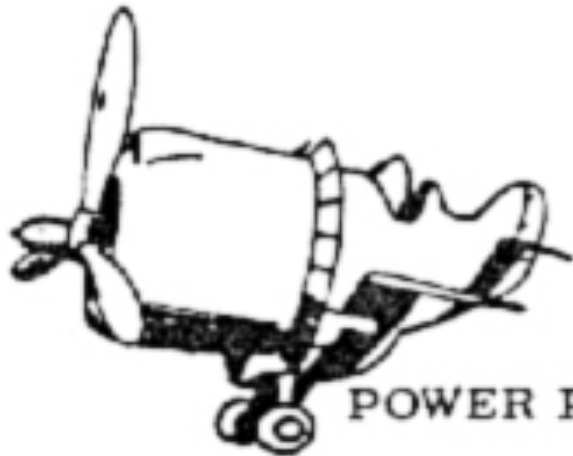
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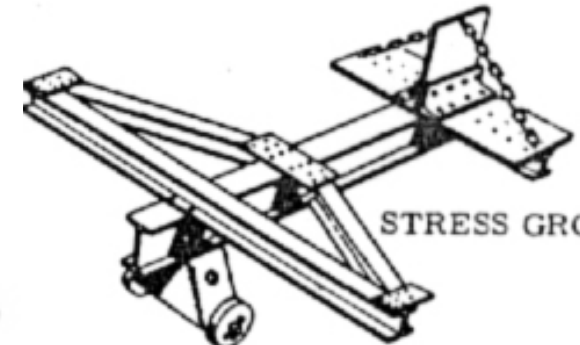
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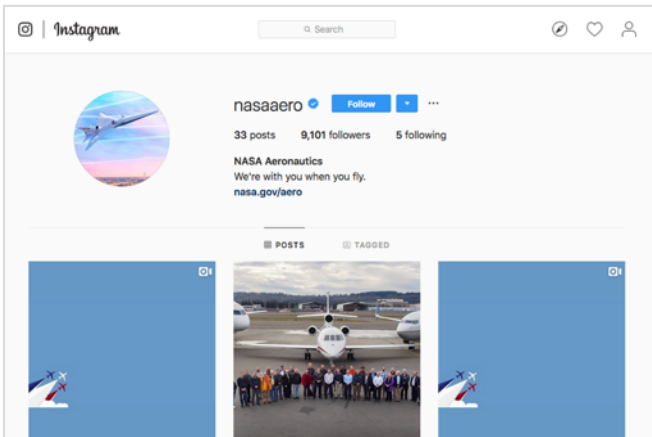
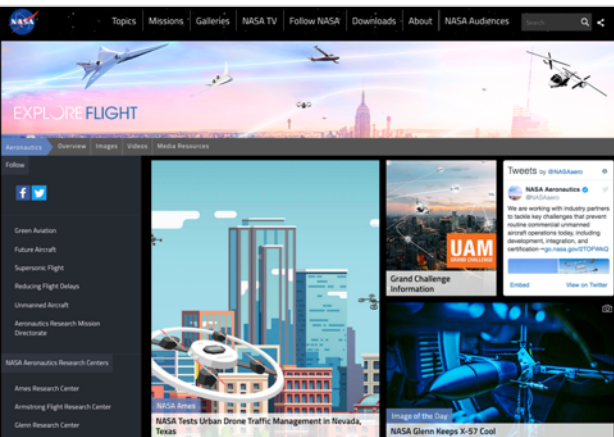
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