A Case Study: Incorporating Emerging Technologies Into the Search for Talent

One Company's Perspective

While waiting, please download "Poll Everywhere" form the app store and select "Constant Aviation"

Kent Stauffer, Chief Safety Officer, Constant Aviation

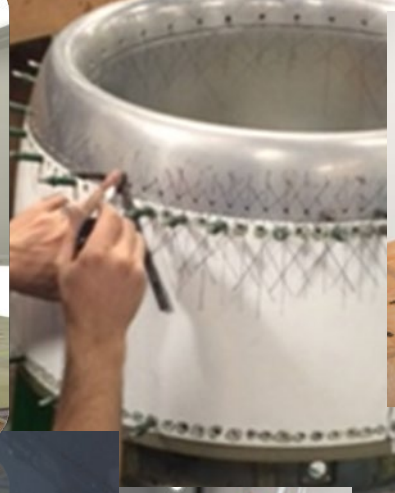
How are you feeling about aviation today?

What is the single most important skill needed to perform maintenance on a drone?

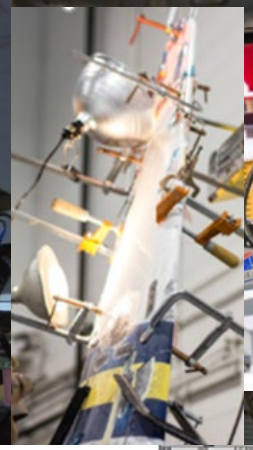
Top

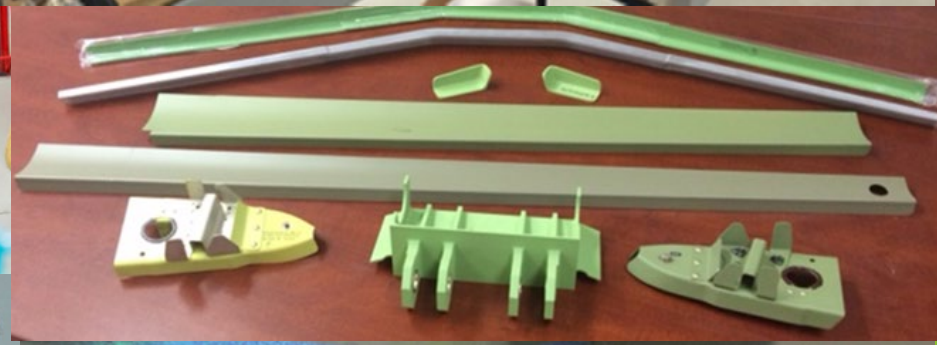
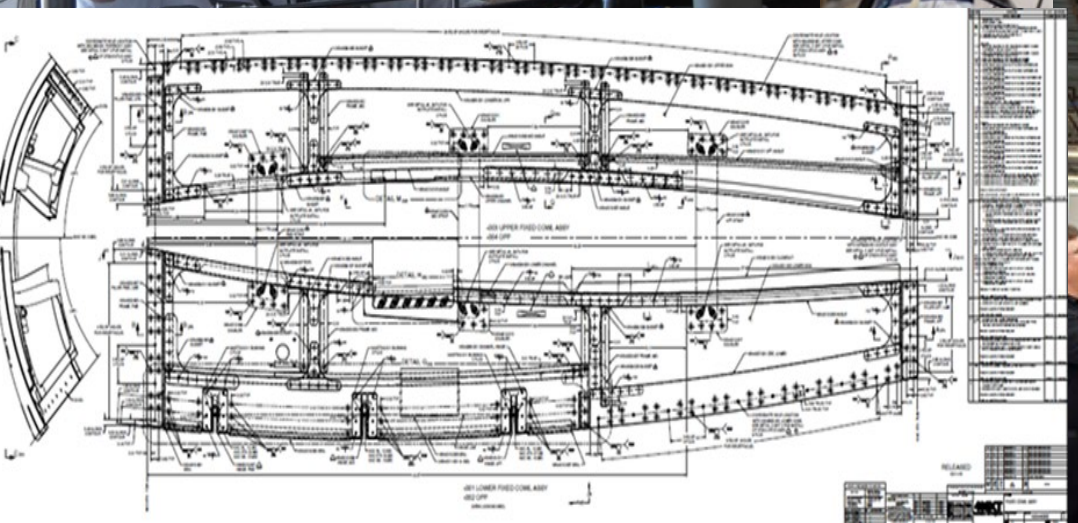
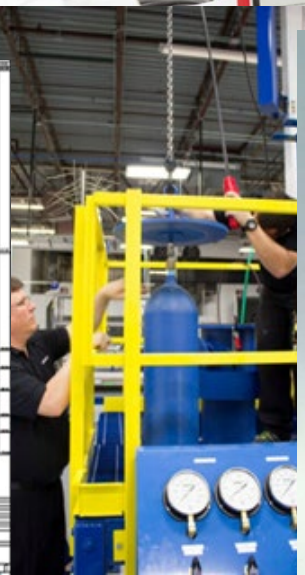
What is the single most important skill needed to perform maintenance on an eVTOL?

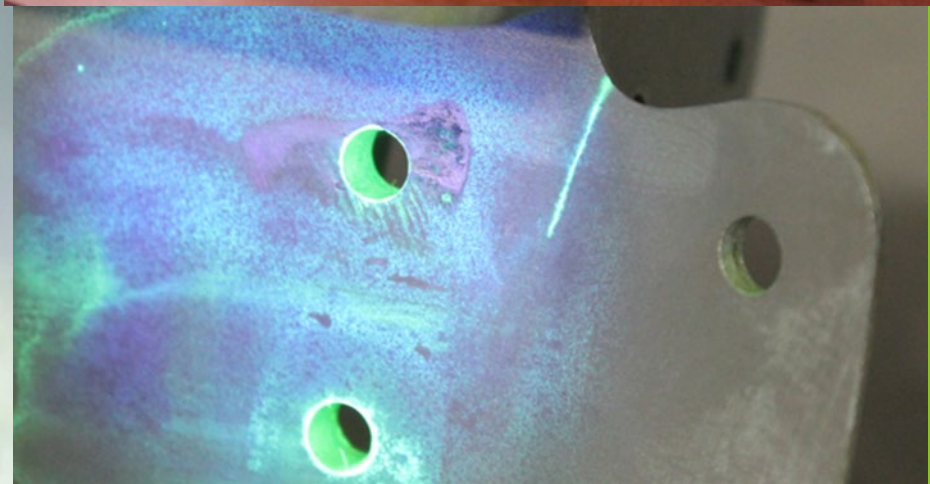
Top



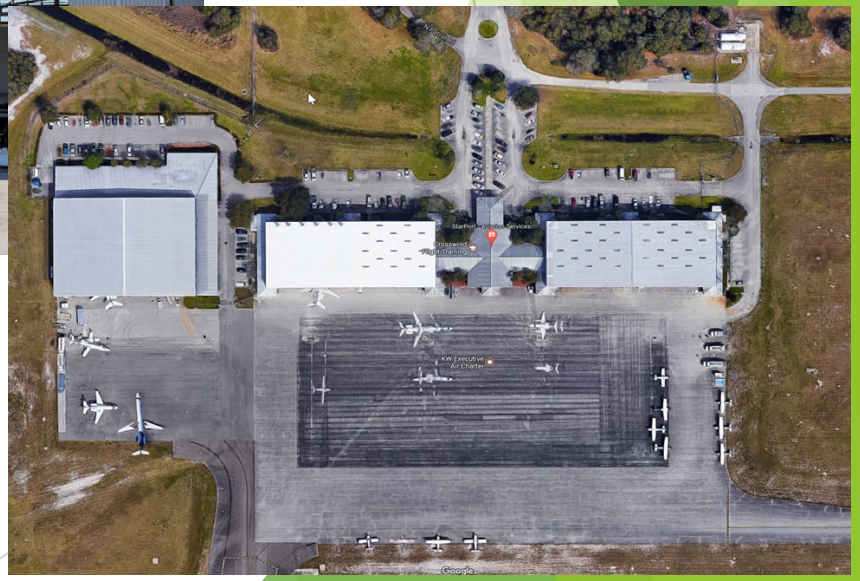




A Case Study - Constant Aviation / Nextant Aerospace

- What do we do and why are we concerned?
  - Maintenance, Avionics, Structures
  - Interiors, Composites, Accessories
  - Engineering
  - Accident recovery / repair
  - Non-Destructive Testing (NDT)
  - FAA PART 21 PMA
  - Paint
  - Commercial (121) Aviation Support
  - 24/7/365 AOG Support
- Next Gen
  - MRO for Robotic Skies - UAS
  - Support for eVTOL
  - Support for Supersonic

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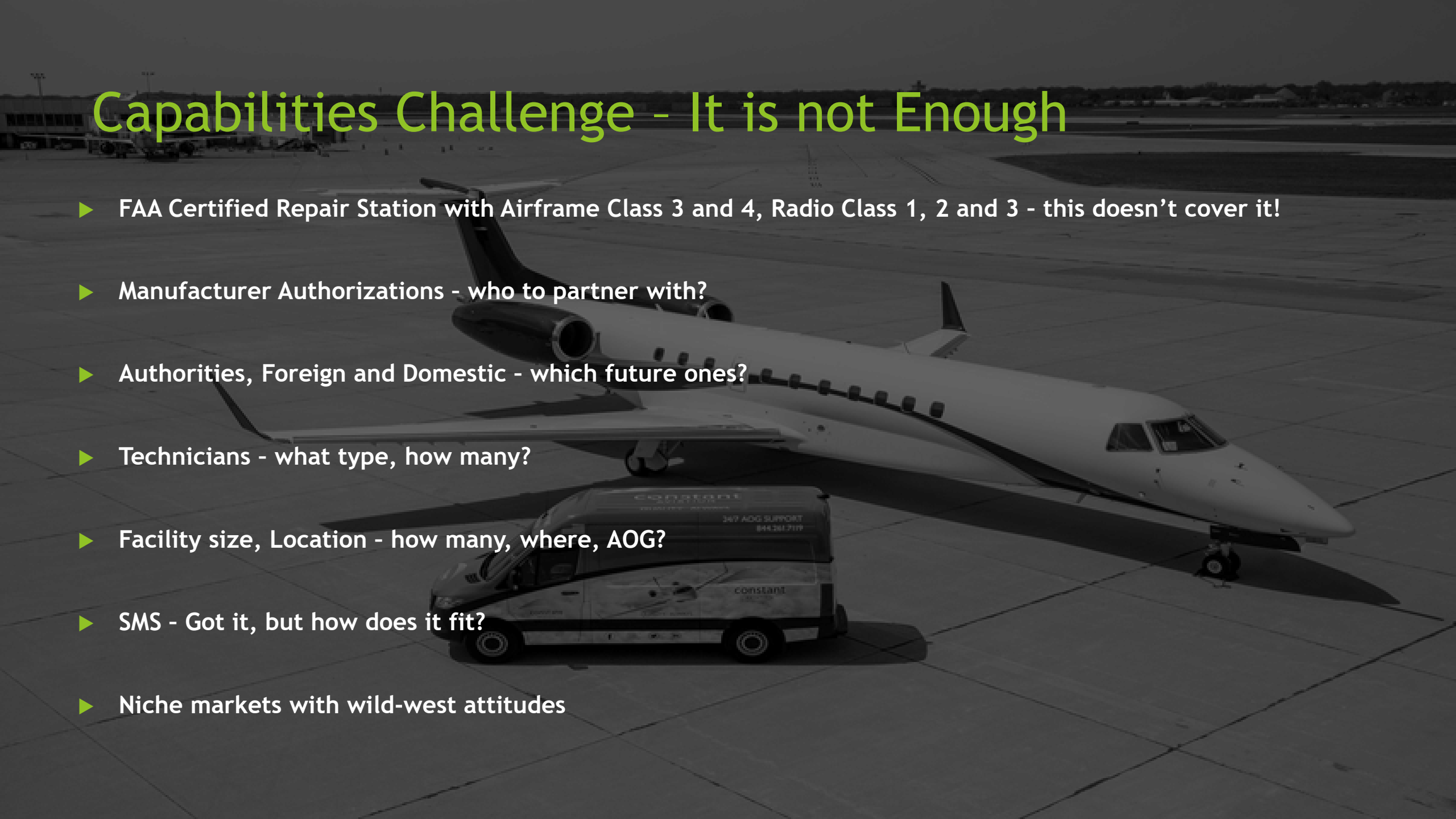
NORTHROP GRUMMAN
DRYDEN FLIGHT RESEARCH CENTER

Capabilities Challenge – It is not Enough



- FAA Certified Repair Station with Airframe Class 3 and 4, Radio Class 1, 2 and 3 - this doesn't cover it!
- Manufacturer Authorizations - who to partner with?
- Authorities, Foreign and Domestic - which future ones?
- Technicians - what type, how many?
- Facility size, Location - how many, where, AOG?
- SMS - Got it, but how does it fit?
- Niche markets with wild-west attitudes

Skill Sets Needed

UAS	eVTOL	Supersonic
• Composite • Avionics • Wiring • Pilot? • Cleared Airspace • AOG • Paint • Programming	• Composite • Avionics • Wiring • Battery Tech • AOG • Paint • Interiors • Programming	• Adv. Composite • Adv. Sheetmetal • Avionics • Wiring • AOG • Paint • Interiors • Facilities?

All Need:

- Advanced Troubleshooting Techniques
- Advanced knowledge of new and ever-changing regulations and oversight
- Advanced skills in IT
- Advanced communication / soft / critical thinking skills
- Intimate SMS concept and practice knowledge
- Diversity and compete for standard AMTs – two pipelines??

Reality Check

- The real question – does a great AMT make a great Emerging technologies technician?
- These certs and related skill sets don't exist in a succinct format today. Now what?
- The industry must adapt but, in the meantime,…we must create our own pathways
  - Developed as add-on to existing certificates
    - AMT / AET / Standards / Certificate programs outside of aviation
    - Military UAS for UAS
    - Helicopter techs for eVTOL?
  - Developed from scratch
    - Apprentice Programs
    - Standards adapted from other (F46.06

Part 147 today cannot deliver these add-on skills today – when it changes, will schools be able to address the needs?

How Do We Begin – Short Term?

- Develop in-house guide for qualifications development
  - It all starts with identifying what you need
- Gap Analysis of tech skills
  - Aircraft
  - UAS – we start with this
  - eVTOL
  - Supersonic
- Begin with existing tech with certs or skills and add on
  - Military UAS?
- Begin with new tech
  - Apprenticeship
  - Tech school / career school

What We've Done

Disclaimer - There is no play book, and we are not the experts

Start with UAS

- Ideal tech is one that has AET qualifications, composite experience and IT troubleshooting skills
- Converting aircraft apprentice program to UAS and developing in house
  - In-house schooling on composites, wiring harness, UAS flight, IT Troubleshooting and programming
- Partner with Tech Schools like Western Tech, El Paso
  - Aerospace and Defense Technology
  - Electronics Engineering Technology
  - Information Systems and Security

- Identifying and grooming potential existing techs
- Heavy Military recruiting efforts
- Must add Minorities and Diversity
- Continue to drive change through partners like ATEC

What Do We Push For In The Future?

Develop new standards for Certification in areas of emerging technologies

- Must be flexible as tech changes
- Consider 147 add-ons, “Type Ratings” or EASA Model of authorizations based on technology

Address the Part 147 school issue – How do we help them adapt?

- Run the risk of education being too broad (broader than it already is) i.e., “license to learn”
- What does the industry need?

Industry must Work with High Schools, Aviation Programs(Choose Aerospace), Military, Tech Schools and Career Schools

Marketing / Awareness

It Is Up To Us

- Must start now
- Must be united as industry AND academia in identifying the need and addressing it
- Don’t forget the logistics
  - Equipment, tooling, Facilities, Infrastructure
- Must be Flexible
- Must have the SMS mindset
  - Reporting culture is critical
- Must drive the regulators and manufacturers before they drive us – no blood priority

Thank you

We’d love your feedback!

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