Problem

GE9X blade designed exclusively for Boeing’s next generation wide-body jet, the 777X
132in Fan Diameter Cost $41M Per Engine Orders ship early 2020

Problem: Automating the mating of two materials used on the GE9X blade:
- 3M Structural Adhesive Film AF 191M.030 – MATL365
- 3M Polyurethane Protective Tape 8730NA MATL366

Customer Requirements
• Fully automated
• Capable of collecting the mated material
• Must incorporate various safety functions
• Quick and easy to set-up
• Reliable with routine maintenance
• Minimal footprint

6-3-5 Design Requirements
• Industrial Grade
• Operated in Shifts
• Capable of continuous bonding.
• Even thermal distribution across epoxy.
• Uniform thickness after bonding.
• No creases or wrinkles.
• Liners collected on take-up rolls.

Manual process
2. Line up materials and remove any pockets of air.
3. Mate in pressurized heating bed for mating.
4. Cut on vacuum table with ply-cutter

Project Challenges
Trade Secrets - Material Handling - Safety Requirements - Response Time