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## SATOP Success Stories

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### **Challenge: Provide better insulation for a glass artist's furnace**

Ed Kozlowski, a glass artist who sells his work at Disney World, called the Space Alliance Technology Outreach Program (SATOP) to help him keep heat inside his furnace at Buddha Belly Glass Studio – an expensive problem.

Engineers at The Thurston Company, a SATOP Alliance Partner, used the design and materials behind the space shuttle's heat tiles to develop a solution plan for Kozlowski. The result – over \$2,500 in reduced electric bills for this small business owner.

### **Challenge: Prove the energy efficiency of an entrepreneur's windows**

Ed VerVane knew his internal storm windows worked, he just needed the research to prove this to customers. Sales increased dramatically after SATOP provided that proof for free.

NASA engineers got involved in the project, and a collaboration with several other groups produced tests proving that the Winsulator system reduced window-related electricity consumption for heating and cooling by 29 percent.

Kennedy Space Center officials were so happy with the results of a demonstration in their conference room that VerVane's company was nominated for Small Business Subcontractor of the Year.

### **Challenge: Protect radio broadcast equipment from lightning**

Radio station WOSN-FM needed help to protect the station's tower site and broadcast equipment from lightning strikes – a problem that could cause them to go off the air, threaten public safety, suffer damage, and lose advertising revenue.

The Boeing Company designed a plan for the radio station similar to the plan used to protect the space shuttle while it sits on the launch pad, allowing them to protect their station.

### **Challenge: Solve corrosion problem in a pressurized steam vessel**

Dayco Products, Inc., a global supplier of industrial hoses and other products, called upon the SATOP for help after discovering corrosive moisture residue at the bottom of a pressurized vessel used in the manufacture of their hoses.

Tim Thurston, the owner of The Thurston Company, knew first-hand how NASA avoided corrosion with pressure vessels and other equipment that regularly sat on the launch pad. Thurston recommended Dayco follow NASA's suit and use an epoxy coating to provide a barrier from the corrosive elements, resulting in a very cost-effective, long-term solution.

### **Challenge: Strengthen a mechanical fruit-picking device**

When Mongoose Inc. was in the process of finalizing their mechanical fruit-picking device, they never dreamed they would receive free help from experts in the U.S. space program.

"After going through several prototypes, we still found that the vibrating motion of the device was causing some structural problems," said Greg Gaskin, VP of Operations for Mongoose Inc.

A Boeing engineering team with expertise in structures and mechanical systems reviewed the prototype, and provided modifications that would strengthen the device and dampen the vibration. After mass-producing the revamped device, Mongoose Inc. successfully sold 30 units for the 2000-2001 picking season, generating over \$1 million in sales.

"For a small company that lacks on-staff engineering, the SATOP is a great way to access highly skilled individuals who are experts in their fields," Gaskin said.

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#### **Space Alliance Technology Outreach Program**

For information on SATOP, call ITAC at 212-442-2990

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