

Welcome!

2025 Industrial Process Emissions Reduction (IPER) Workshop

29 JANUARY 2025
SAN ANTONIO, TEXAS

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VICE PRESIDENT, MECHANICAL ENGINEERING



ADVANCED SCIENCE. APPLIED TECHNOLOGY

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Southwest Research Institute

One of the largest (by revenue), broadest (by technologies), and deepest (by expertise) independent nonprofit applied research & development organizations in the United States

*Deep Sea to
Deep Space®...*



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...And (Practically) Everywhere Between



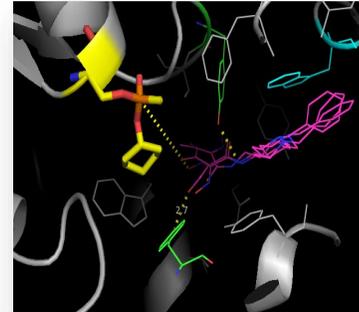
Alvin Pressure



Water & Geological
Engineering



Fire Tech



In Silico Drug Screening



Micro- and Nano-
Encapsulation



Pharmaceuticals
for Clinical Trials



O&G Engineering



Engine Design &
Hybridization



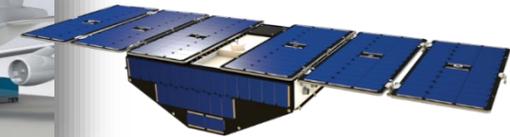
Artificial Intelligence &
Machine Learning



Fuels & Lubricants



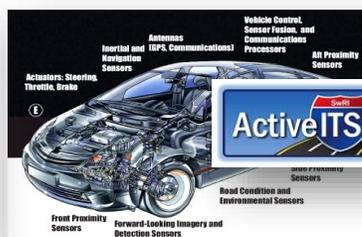
Robotics



Spacecraft & Satellites



Clean Energy Research



Infrastructure
Communications



Autonomous
Vehicles



Space Science & Instrumentation



Solar System Science &
Exploration



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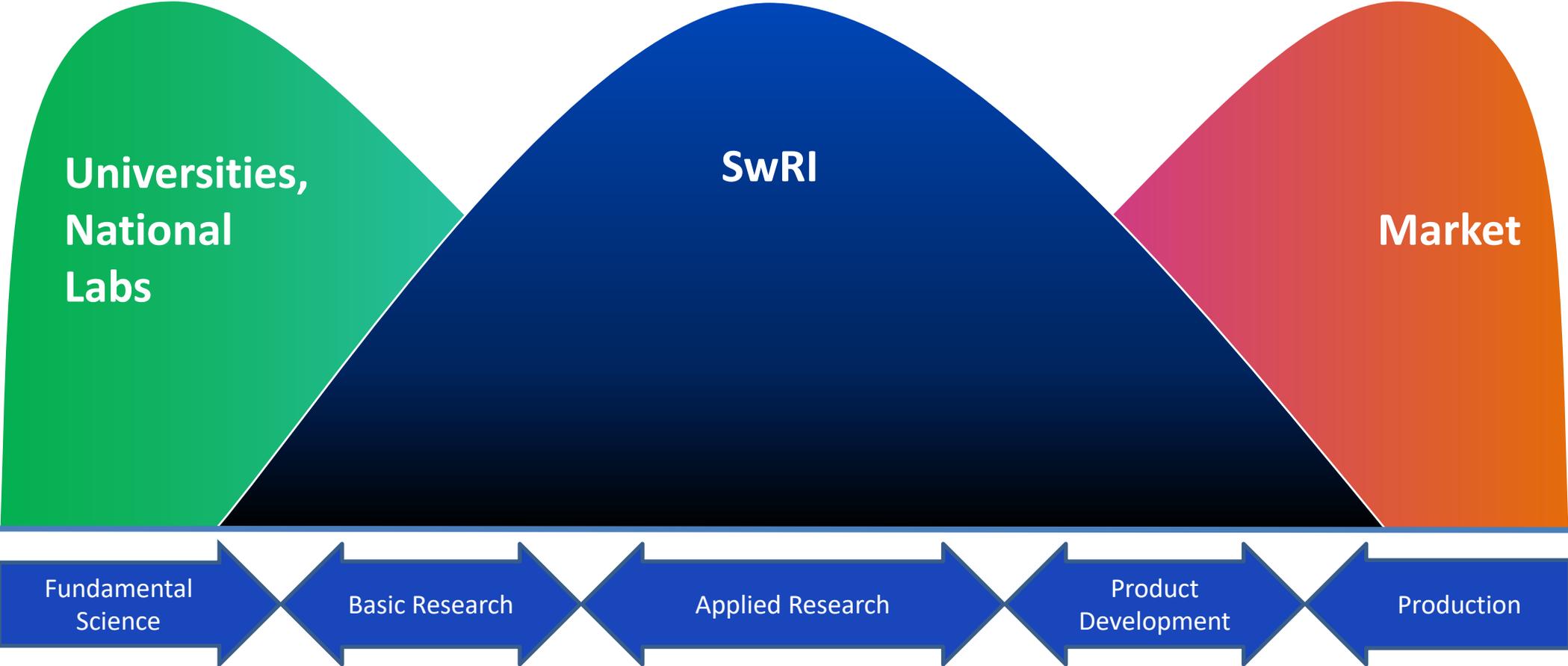
Business Model

- 501(c)(3) Scientific Not-for-Profit
 - All earnings reinvested
 - Objective and unbiased
- Revenue from Projects
 - No “endowment” fund
- Internal Research and Development (IR&D) program
- Collaborative
 - Created more consortia than any other organization in the United States



Natural Beauty on the SwRI Campus

SwRI in the Technology Spectrum



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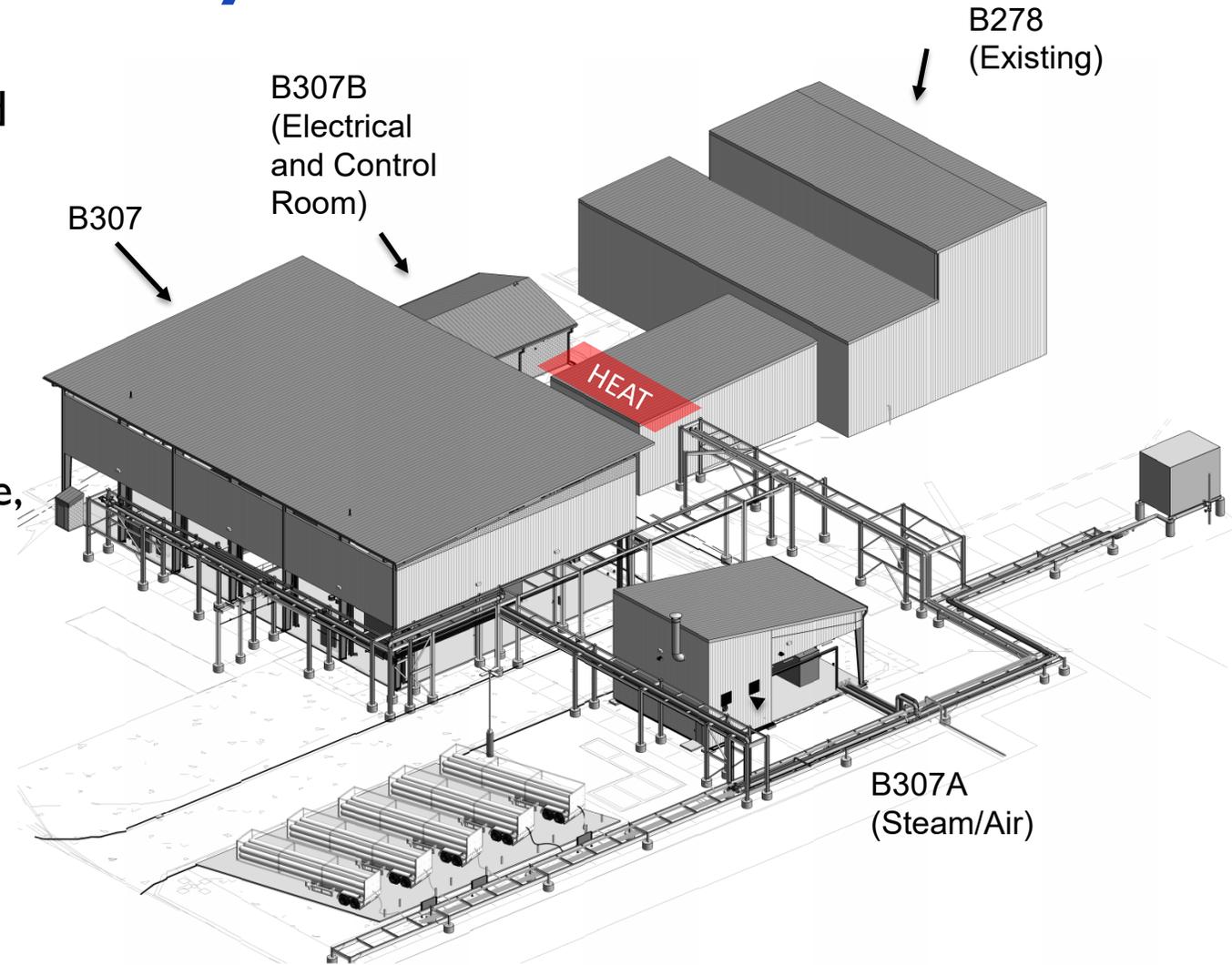
SwRI Main Campus Today



ADVANCED SCIENCE. APPLIED TECHNOLOGY

New Flammable Gas Test Facility Overview

- B278 turbomachinery research facility and HEAT combustion facility are pre-existing
- New B307 Flammable Gas Test Facility:
 - B307A is an auxiliary bldg. for air/steam
 - B307B is a control/electrical building
 - B307 is an open-air machinery test area with capability up to 5 MWe, bridge crane, 4 machinery pads
- Pipe rack, fuel yard, flare pads
- Design with passive and active mitigations
- Enables testing for hydrocarbon compression, hydrogen compression, heat pumps w/flammable refrigerants, gas turbine testing, turbopumps, organic Rankine cycles, etc...





Thank you!

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