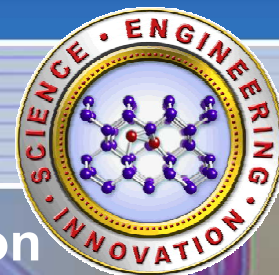


# Industrial Partnerships at Sandia National Laboratories

SAND2009-5486C



Presented to New Mexico Legislative Committee on  
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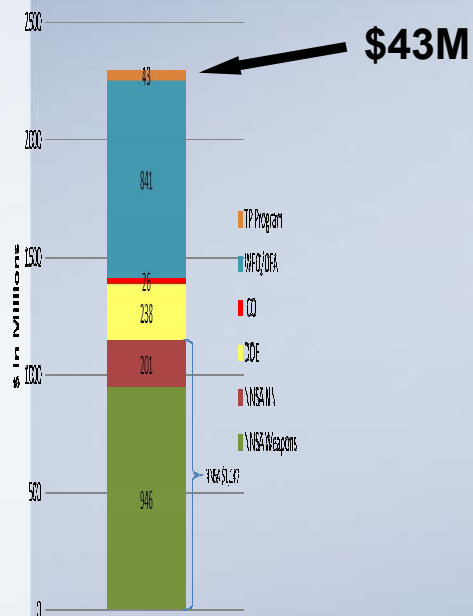


Sandia National Laboratories

# Technology Transfer is a DOE & Sandia Mission

## Mandated by Law

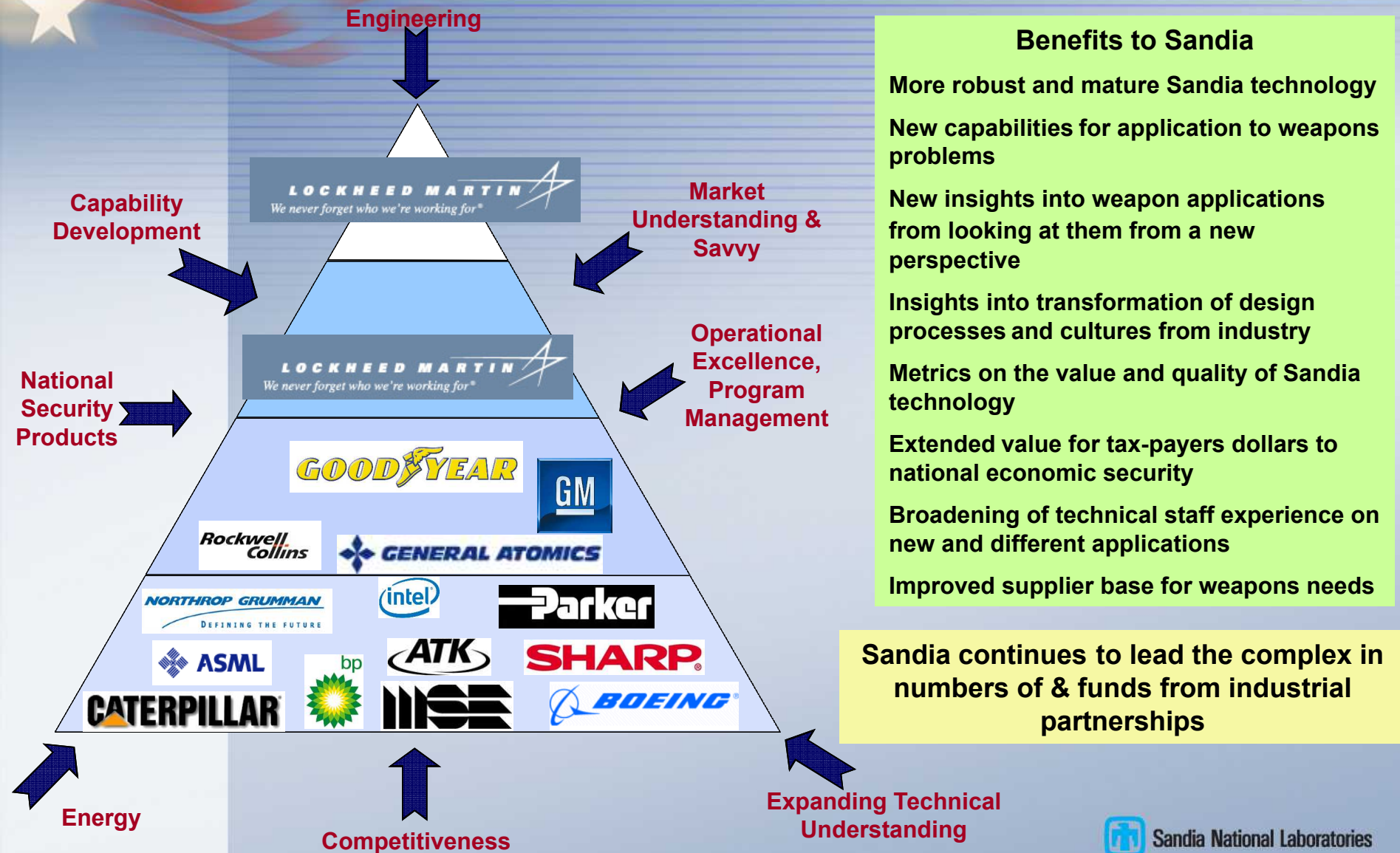
- National Competitiveness Technology Transfer Act of 1989
- DEARS Clause in Sandia's Contract
- Establishment of Office of Research & Technology Applications (ORTA)



## Tech Transfer Mechanisms

- Cooperative Research & Development Agreements (CRADAs)
- Work for Others (WFO)
- Licensing of Sandia IP
- SBIRs
- New Mexico Small Business Assistance Program
- Entrepreneurial Separation to Transfer Technology
- Sandia Science & Technology Park
- Memoranda of Understanding
- Funding
  - Full Cost Recovery
  - Paid by a Specific DOE Program or by industry

# Our industrial partnerships benefit both industry & Sandia







# Sandia/Goodyear Technology Partnership

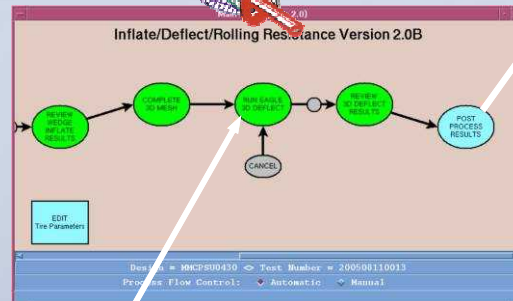
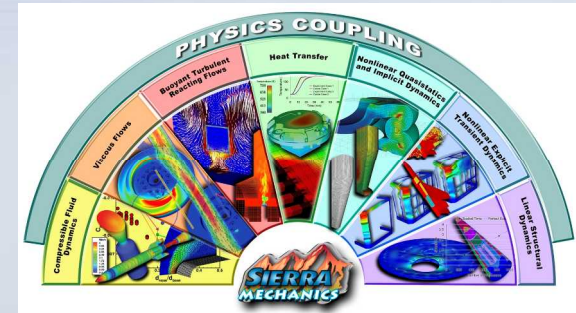
Technology Breakthrough 1994-1996	Technology Maturation 1997-2003	Innovative New Products 2004 - Future
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## Technology Maturation 1997-2003

**Today 100% of the tire designs at Goodyear are modeled before molds are ordered.**

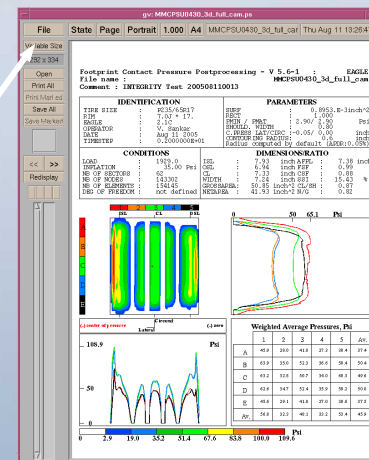
## Traditional Build/Test Product Development – 2-3 Years

The diagram illustrates the internal structure of a thick-walled tire. It features a central **stiff, inextensible steel belts** (represented by a grid of squares) and a **thin, flexible sidewall** (represented by a grid of triangles). The tire is shown with a **stiff, inextensible bead** (represented by a grid of circles) and **incompressible rubber** (represented by a grid of diamonds). A large blue arrow points to the right, indicating the direction of motion or force.



## After

## Automated Simulation Process



# Technology-Based Economic Development Programs



**SANDIA SCIENCE &  
TECHNOLOGY PARK**



**NMSBA**

Los Alamos National Laboratory  
Sandia National Laboratories

**ESTT**

*Entrepreneurial Separation  
to Transfer Technology*

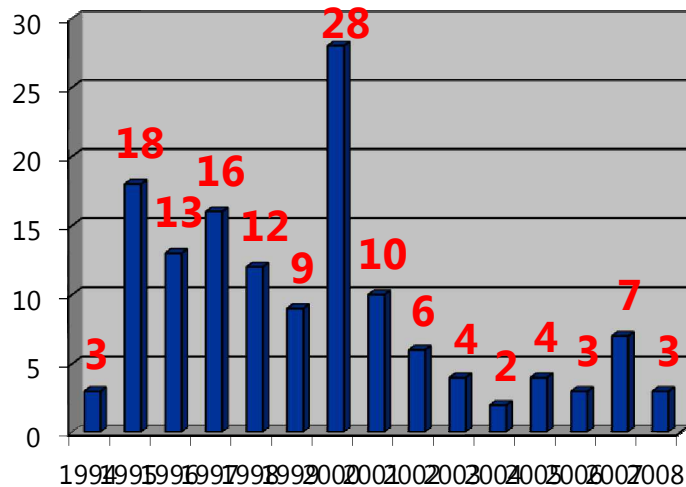


Sandia National Laboratories

# Entrepreneurial Separation to Transfer Technology (ESTT)



- **Entrepreneurs terminate Sandia employment**
  - Term of separation is two years with the option to request a third year
  - Entrepreneurs are guaranteed reinstatement by Sandia if they return before ESTT expiration
- **Participants may start up or help expand technology-based small businesses**





# ESTT Success Stories



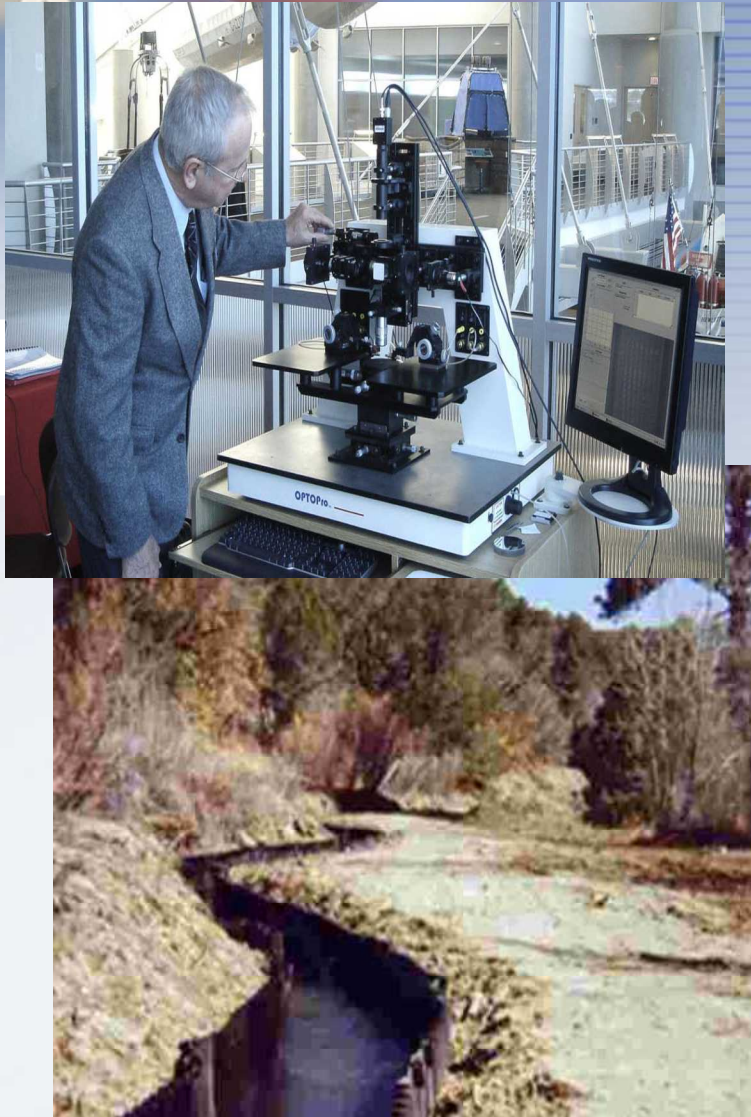
## Wavefront Sciences

- Founded by Sandian who left on ESTT Program
- Licensed optics-based technology from Sandia
- Grew from 3 to 40 employees in NM
- Now part of Abbott Medical Optics, a division of global-based Abbott Laboratories, but still located in NM

## eSolar

- Sandian joined eSolar through ESTT program to help expand a company
- eSolar is partnering with NRG Energy to build a 92 megawatt concentrating solar power plant in southern NM

# New Mexico Small Business Assistance (NMSBA) Program



- **Governed by the Laboratory Partnership with Small Business Tax Credit Act (a New Mexico State Law)**
- **Public/Private Partnership with State of New Mexico, Los Alamos National Laboratory, Sandia National Laboratories, and New Mexico Small Businesses**
- **Allows up to \$2.4M per lab per year in assistances and tax credits**
- **Must be a New Mexico for-profit small business to qualify**
- **Companies in rural counties are eligible for \$20K per business each year; urban counties are eligible for \$10K per business each year**



# NMSBA Success Stories for Sandia



## Giggling Springs

- Hot Springs in Jemez
- Sandia helped them to use heat from hot springs water to provide heat for cabins
- Propane costs were reduced from \$2500 to \$800 per month

## Four Corners

- Oil and gas companies in Farmington/Aztec area
- Sandia helped them create a system to desalinize produced water from coal bed methane mining
- Reduced cost of water treatment and transportation

# Sandia Science & Technology Park

## **“A Master-Planned Technology Community”**



- 200+ Acres
- Affiliated with Sandia National Laboratories
- Pedestrian-Oriented, Campus-Style Park
- State-of-the-Art Fiber Optics Network

***“Celebrating 10 Years of Economic Growth”***

# SS&TP Public/Private Partnership

## ORIGINAL PARTNERS

- Sandia National Laboratories
- Technology Ventures Corporation
- City of Albuquerque

## LAND OWNERS

- Albuquerque Public Schools
- BUILD New Mexico/Union Development Corporation\*
- New Mexico State Land Office

\*Private organizations

## OTHER KEY PARTNERS

- Department of Energy
- Lockheed Martin Corporation\*
- Economic Development Administration
- **State of New Mexico**
- Bernalillo County
- Public Service Company of New Mexico\*
- Mid-Region Council of Governments
- New Mexico Congressional Delegation





# SS&TP Success Story: EMCORE



- EMCORE is a publicly traded company
- First company to move into Park in 1998
- Moved company head-quarters from NJ to NM in 2006
- Licensed from Sandia
  - VCSEL technology
  - Solar cell technology
  - Transponder technology
- \$114.7M investment in Park
- 350+ employees at Park
- Signed Distributed Generation Agreement with PNM