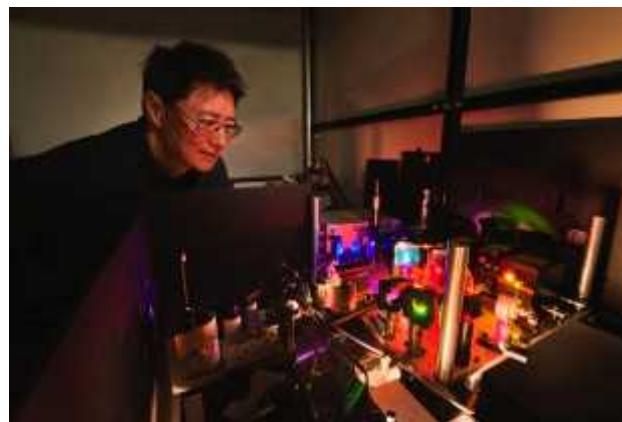
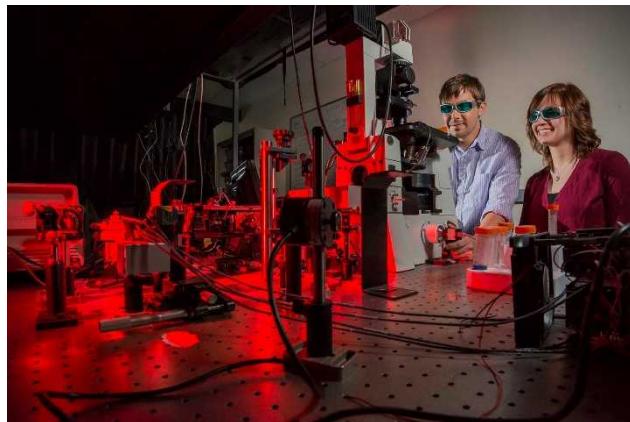


Exceptional service in the national interest

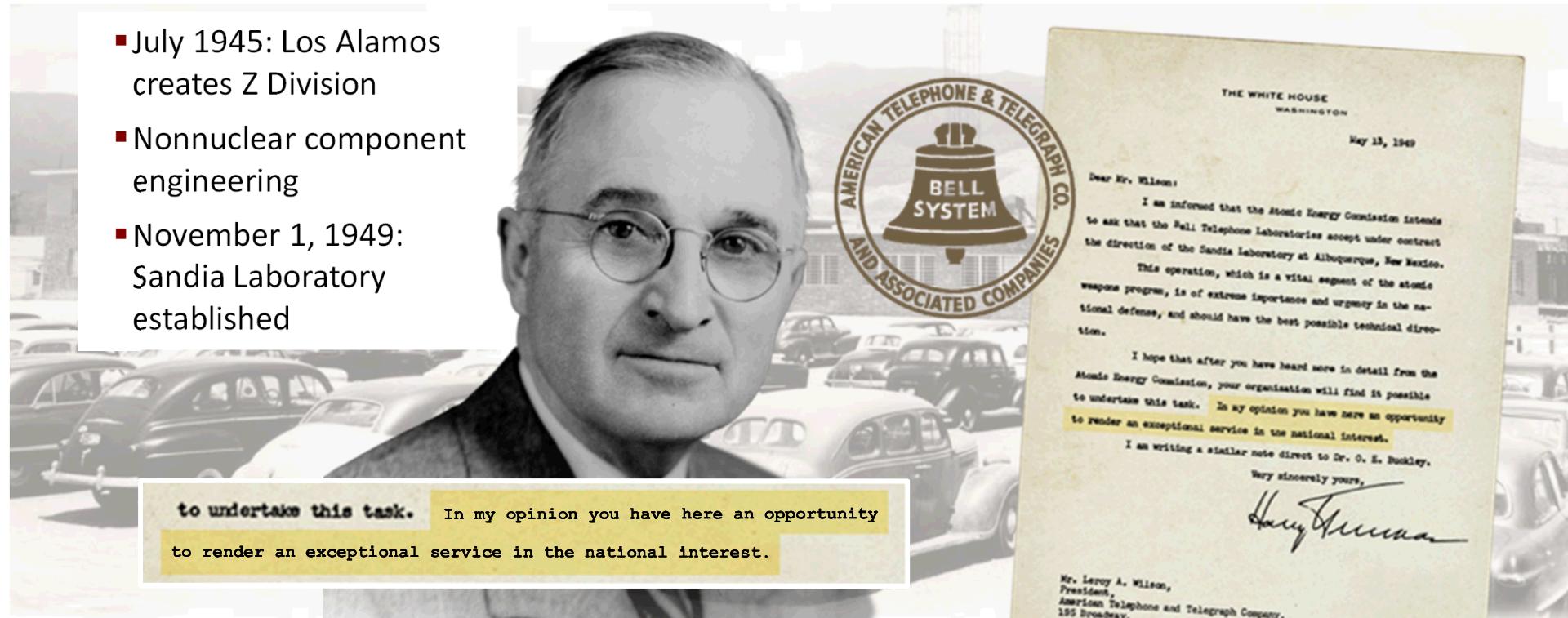


Sandia National Laboratories
David R. White, PhD
Director, Computing and Networking Services

Sandia's History

Exceptional service in the national interest

- July 1945: Los Alamos creates Z Division
- Nonnuclear component engineering
- November 1, 1949: Sandia Laboratory established



Sandia Sites

Albuquerque, New Mexico



Livermore, California



Kauai, Hawaii



*Waste Isolation Pilot Plant,
Carlsbad, New Mexico*

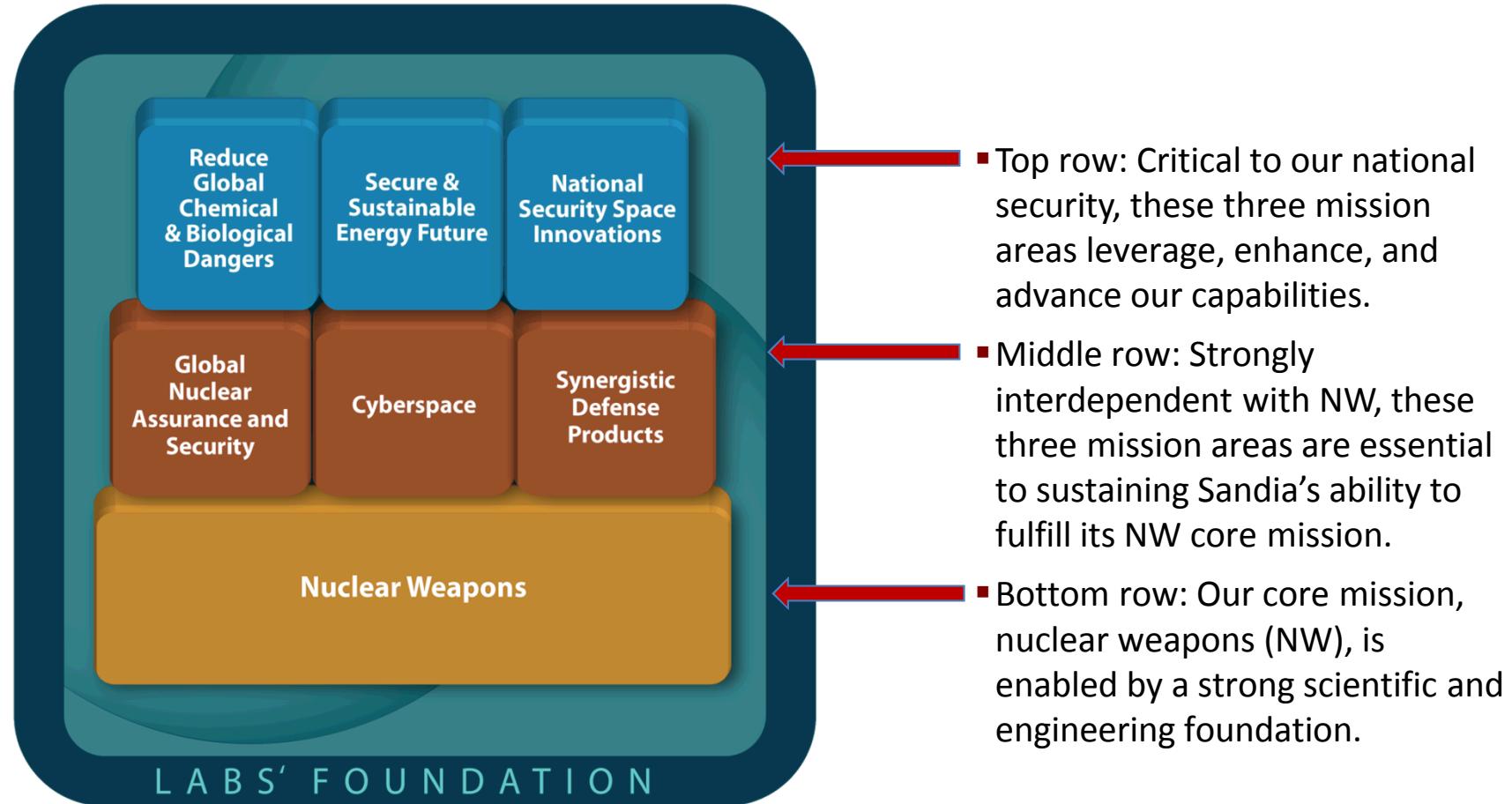
*Pantex Plant,
Amarillo, Texas*



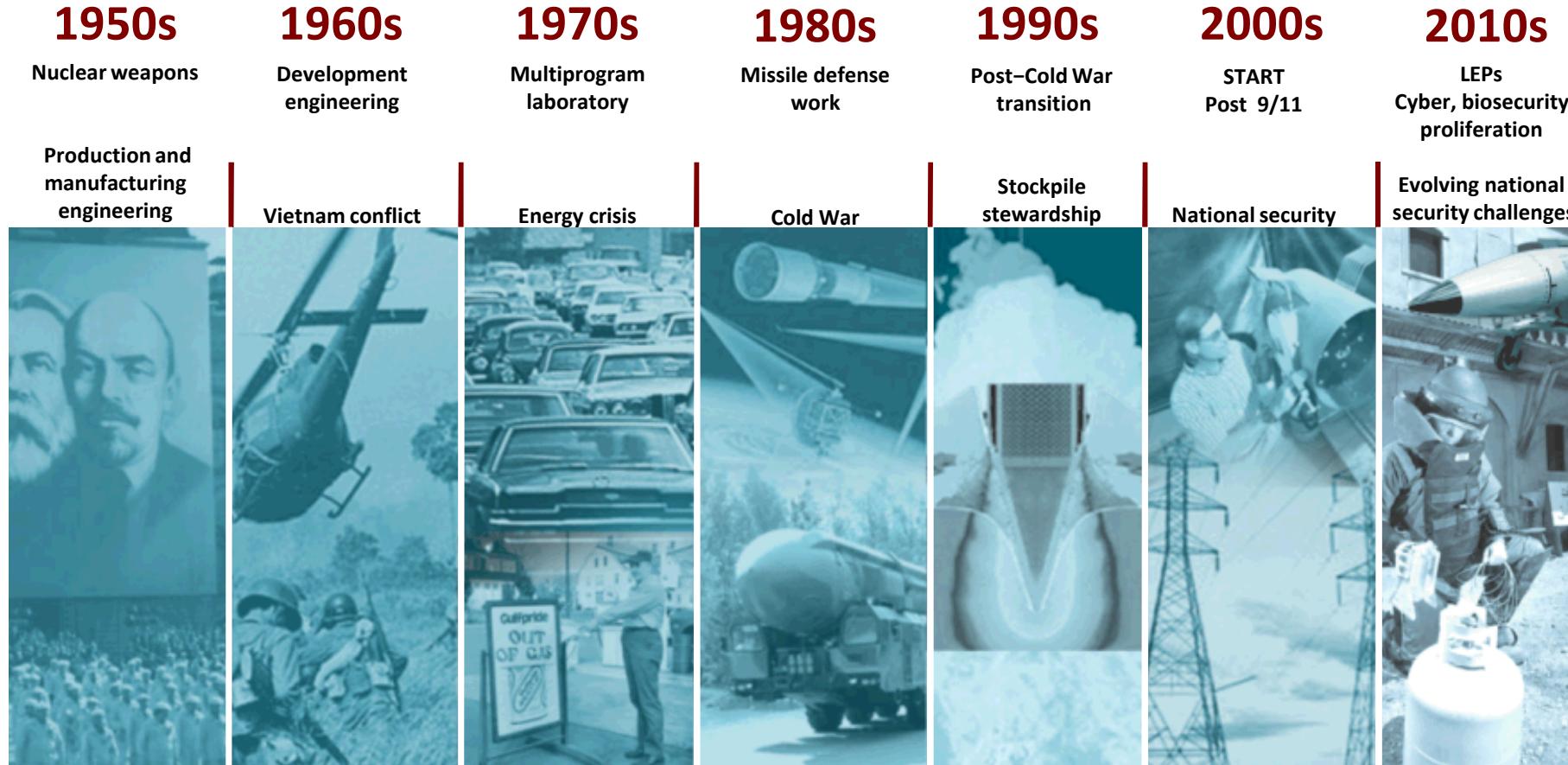
*Tonopah,
Nevada*



National Security Mission Areas



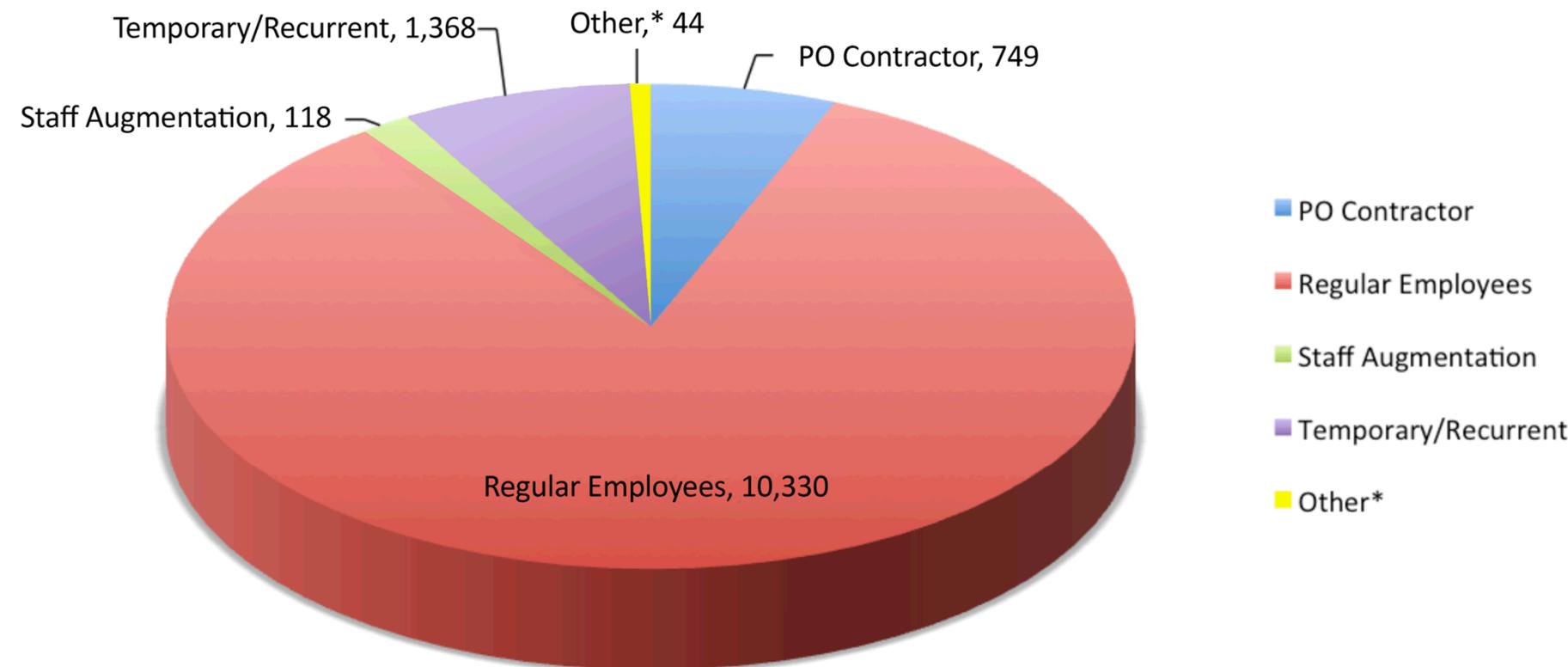
Sandia Addresses National Security Challenges



Our Workforce

- Total Sandia workforce: 12,609
- Regular employees: 10,330
- Advanced degrees: 5,790 (56%)

Data as of July 20, 2015



* Other badged personnel

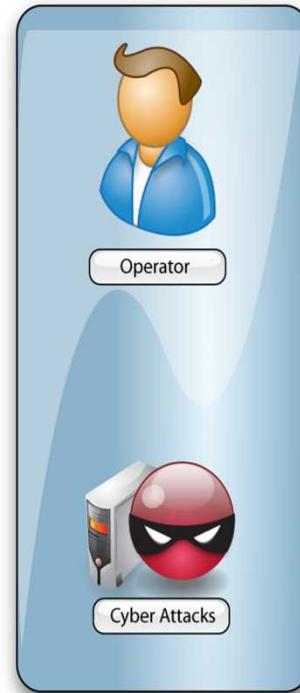
- **Emulytics™**
- Big Data Analytics
 - Behavioral Based Analytics
 - Stream Processing
 - Enterprise Host Based Analytics
- Dynamic Defense (aka Moving Target Defense)
- Automated Red Teaming
- Vulnerability Analysis
- SCRM

The need for cyber engineering

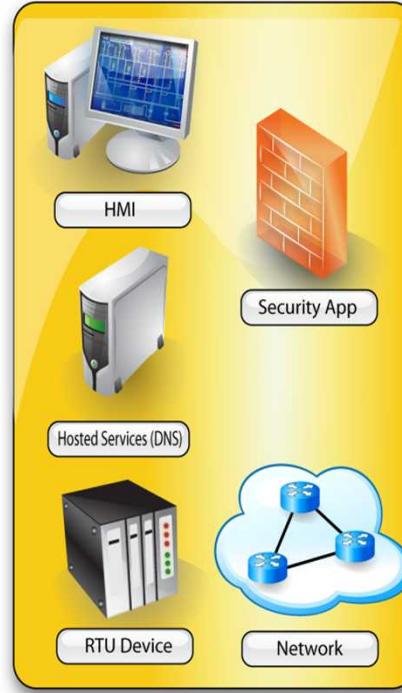


13th Century BC
Bridge

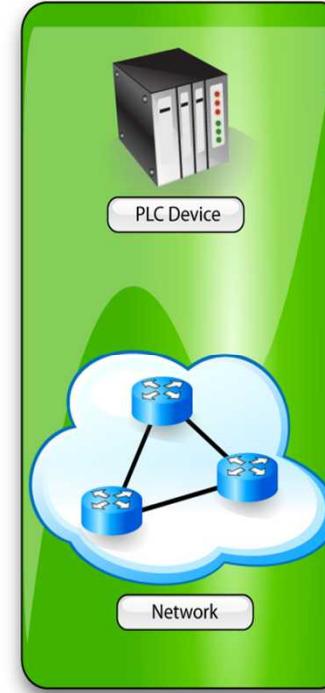
Human



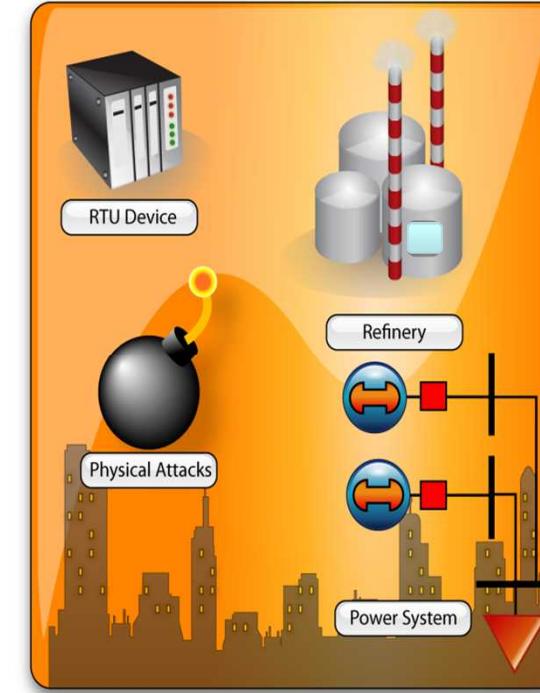
Live



Virtual

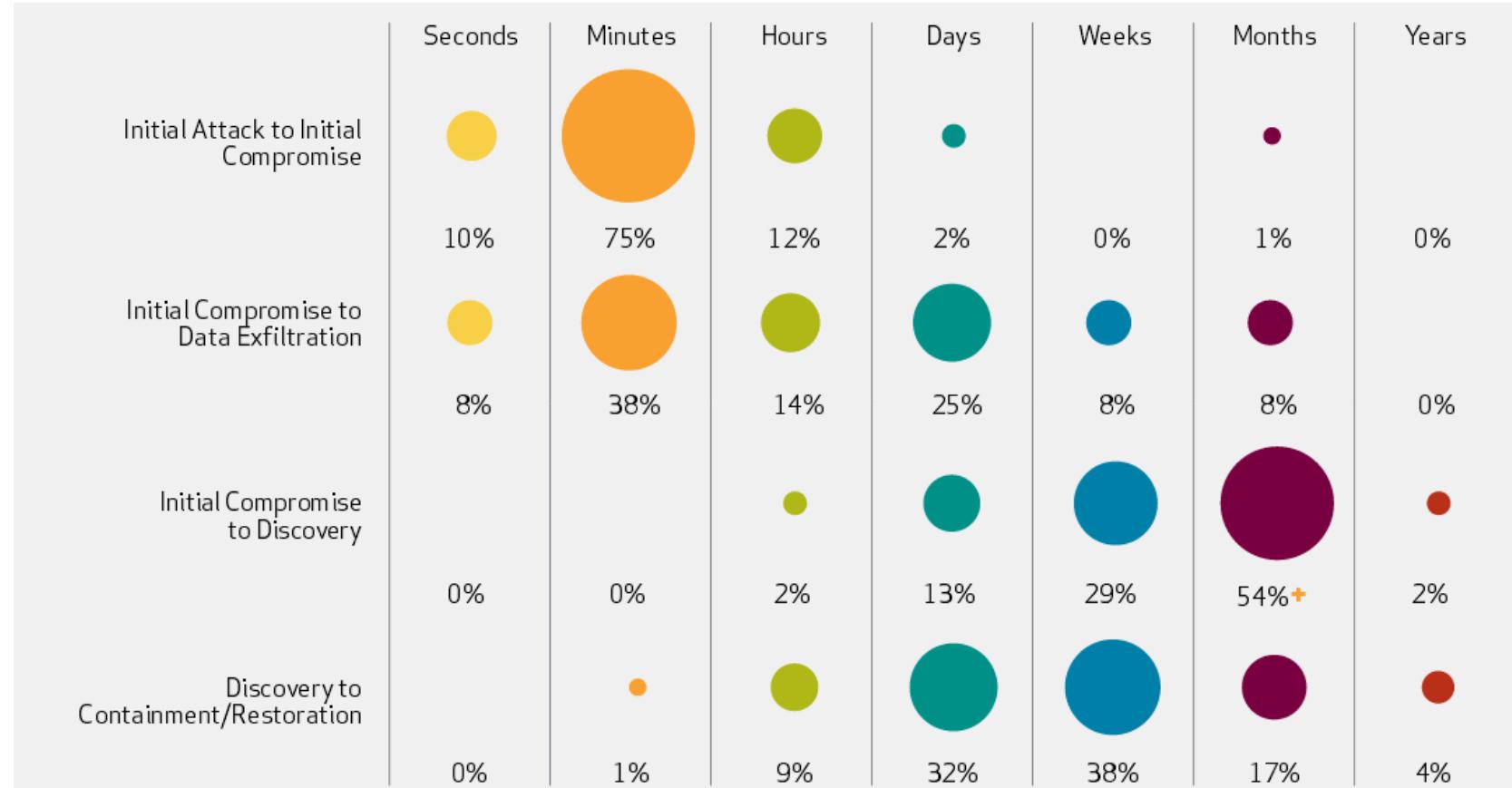


Constructive



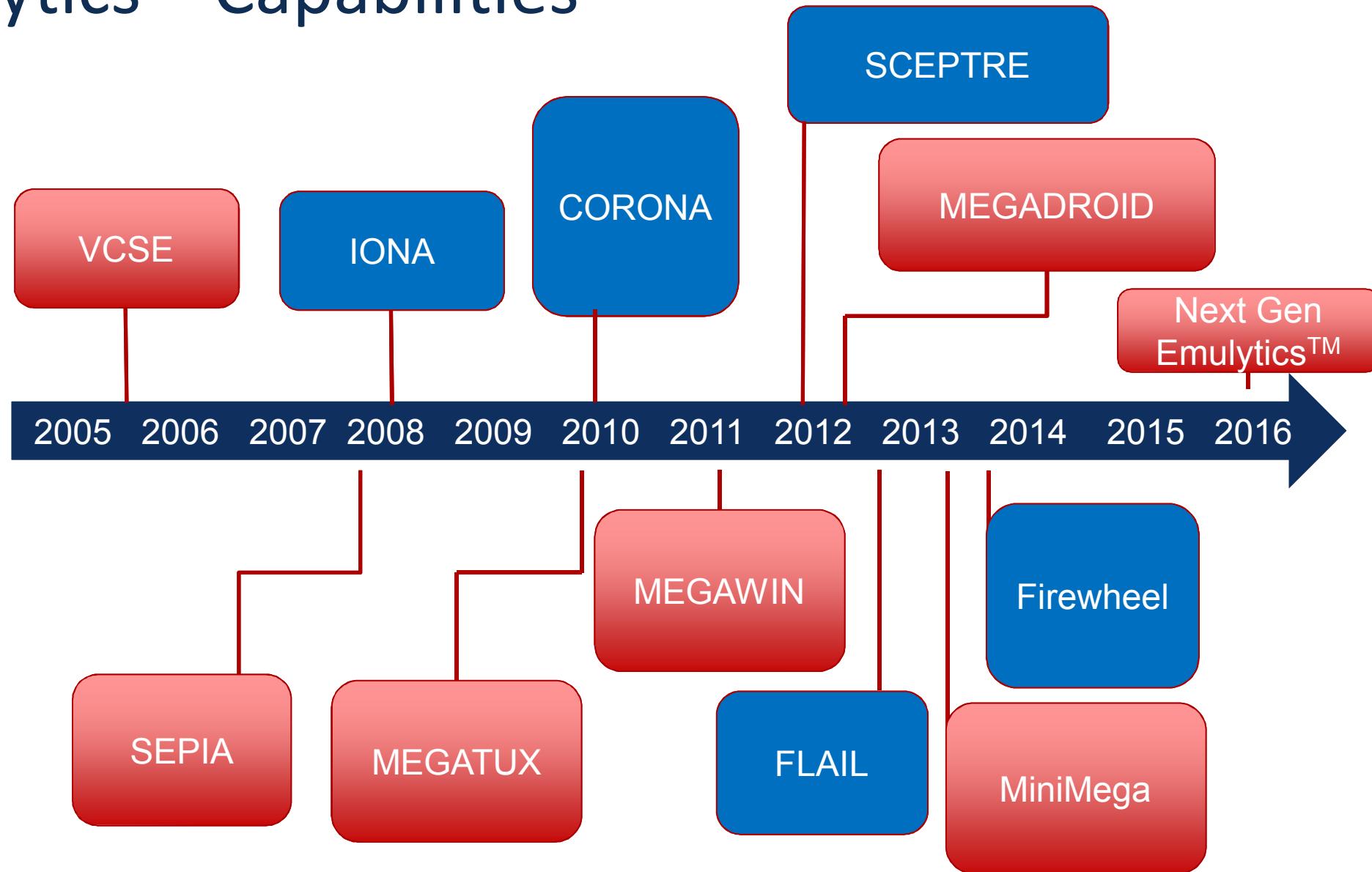
Why Modeling & Simulation?

855 breaches, 174 million compromised records in 2011



Source: Verizon Data Breach Investigation Report 2012

Emulytics™ Capabilities



Impact of Each Mitigation?

