

Department of Homeland Security

Science & Technology Directorate Overview

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**Homeland
Security**

Science and Technology



Briefing Summary

S&T's Mission and Goals

- Mission
- Goals
- Value Added Proposition

S&T's Organization

- Structure
- Roles and Responsibilities

Some Selected Accomplishments

- New Capabilities
- New Understanding
- People, Processes, Technologies, & Knowledge

S&T'S MISSION AND GOALS

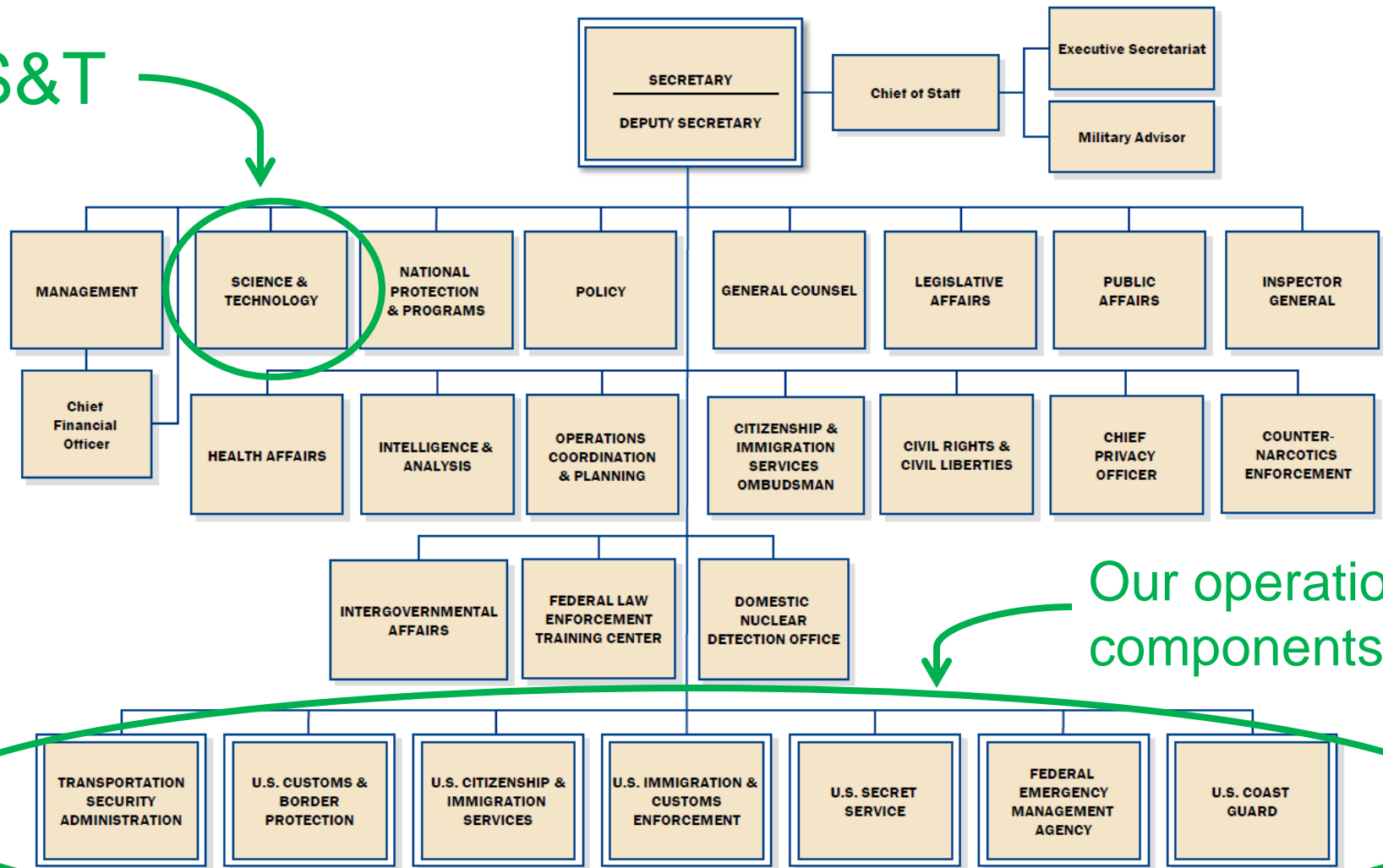
DHS S&T Mission

Strengthen America's security and resiliency by providing knowledge products and innovative technology solutions for the Homeland Security Enterprise



Where does S&T fit within DHS?

S&T



Our operational components

What is the “Homeland Security Enterprise?”

“Federal, State, local, tribal, territorial, nongovernmental, and private-sector entities, as well as individuals, families, and communities who share a common national interest in the safety and security of America and the American population.”

Quadrennial Homeland Security Review Report: A Strategic Framework for a Secure Homeland, February 2010.

S&T is Focused on Adding Value to the Homeland Security Enterprise

- S&T provides the Homeland Security Enterprise (HSE) with strategic and focused technology options and operational process enhancements
- S&T seeks innovative, systems-based solutions to complex homeland security problems
- S&T has the technical depth and reach to discover, adapt and leverage technology solutions developed by federal agencies and laboratories, state, local and tribal governments, universities, and the private sector - across the United States and internationally

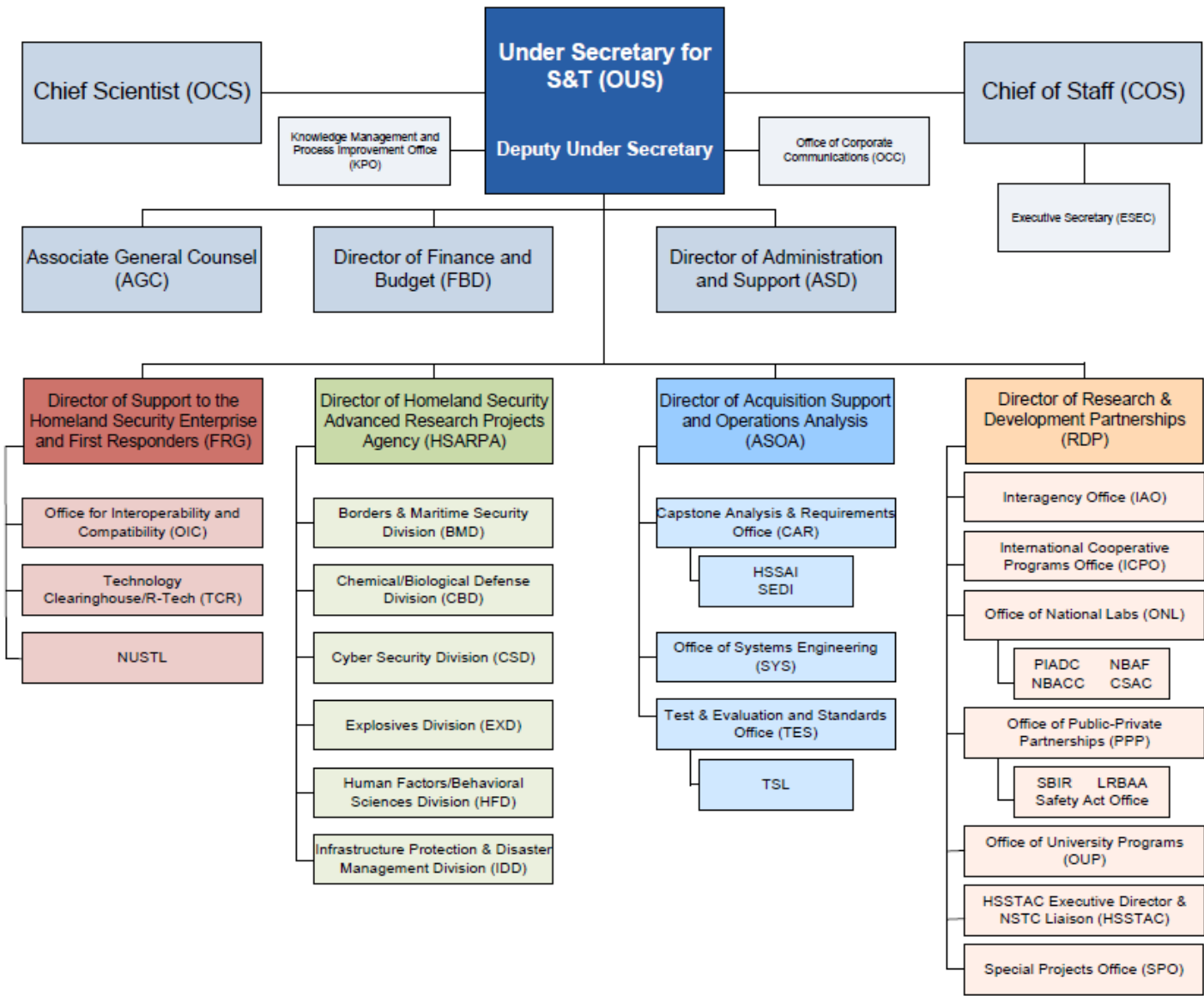


S&T Directorate Goals

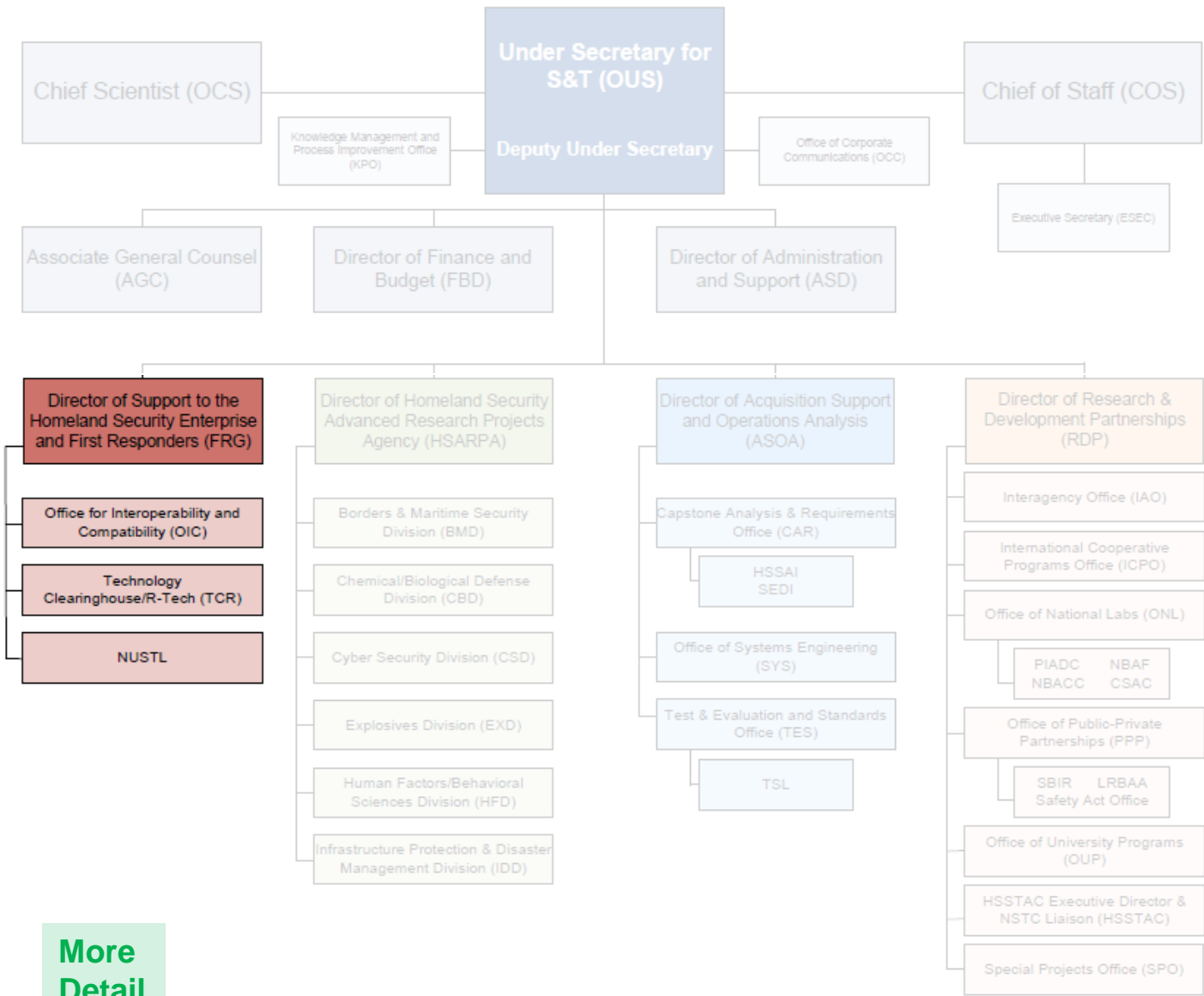
- 1. Rapidly develop and deliver knowledge, analysis, and innovative solutions that advance the mission of the department**
- 2. Leverage technical expertise to assist DHS components' efforts to establish operational requirements, and select and acquire needed technologies**
- 3. Strengthen the Homeland Security Enterprise and First Responders' capabilities to protect the homeland and respond to disasters**
- 4. Conduct, catalyze, and survey scientific discoveries and inventions relevant to existing and emerging homeland security challenges**
- 5. Foster a culture of innovation and learning, in S&T and across DHS, that addresses challenges with scientific, analytic, and technical rigor**

S&T'S ORGANIZATION

S&T Organization Aligned with Mission

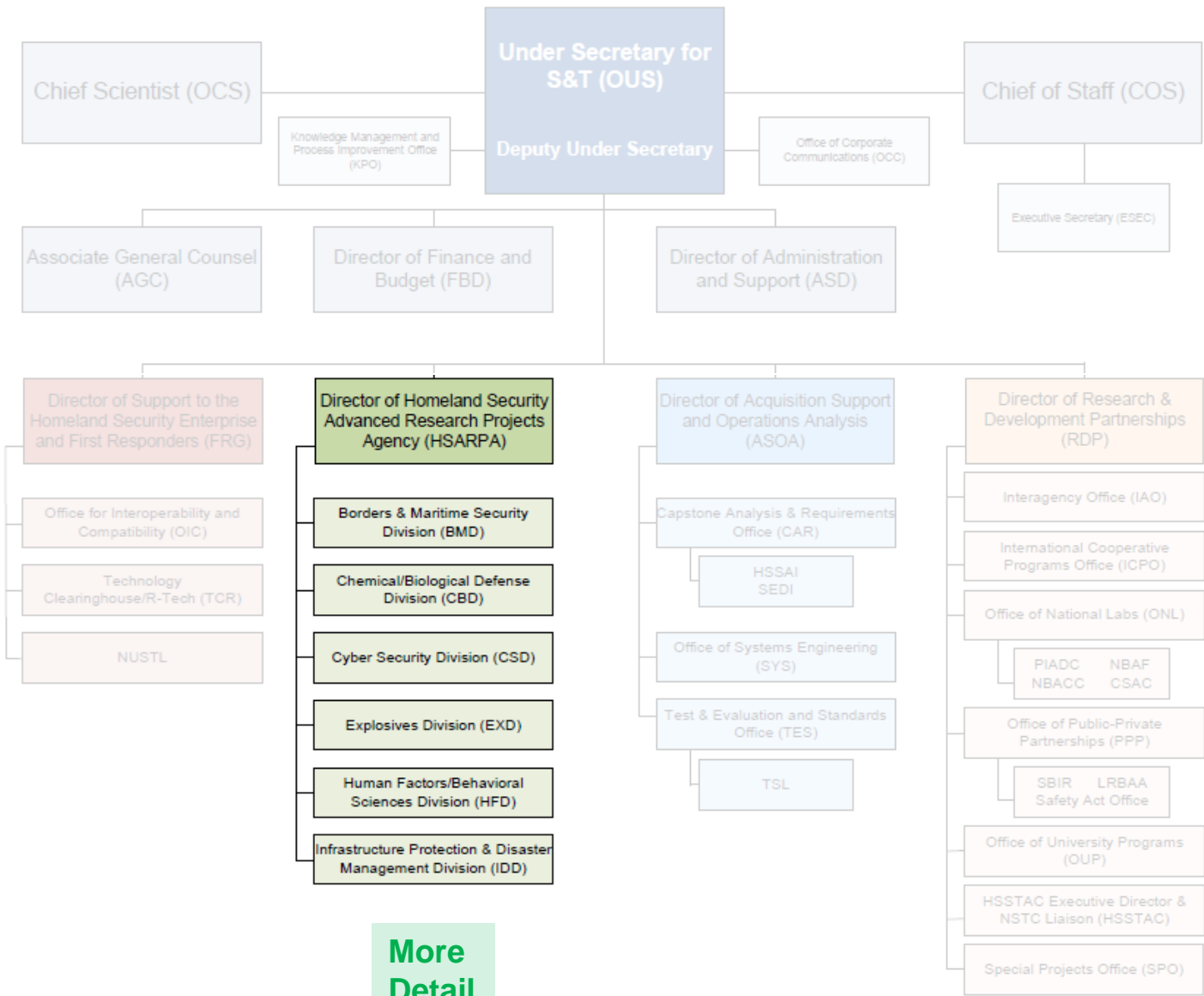


S&T Organization Aligned with Mission



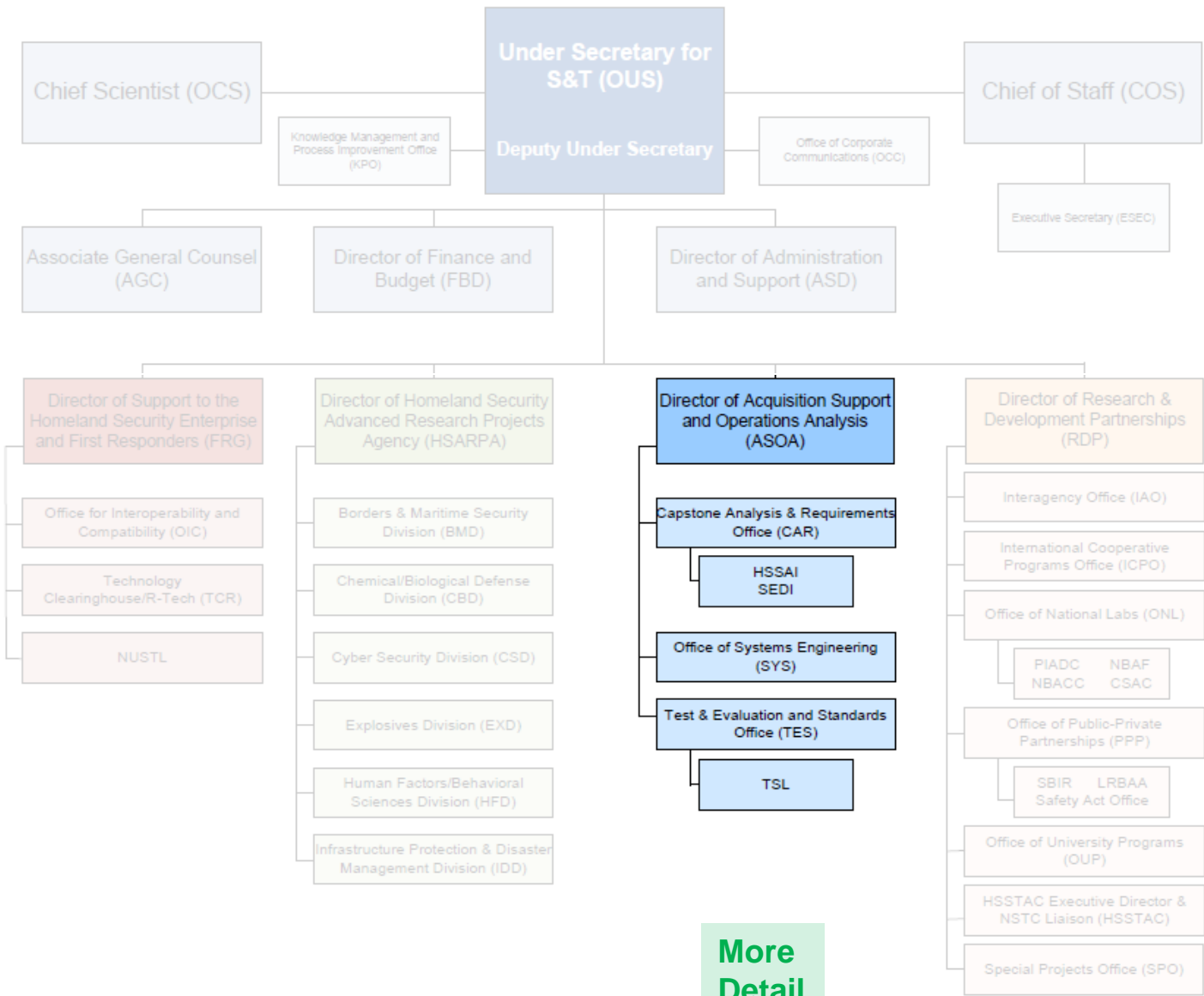
More Detail

S&T Organization Aligned with Mission



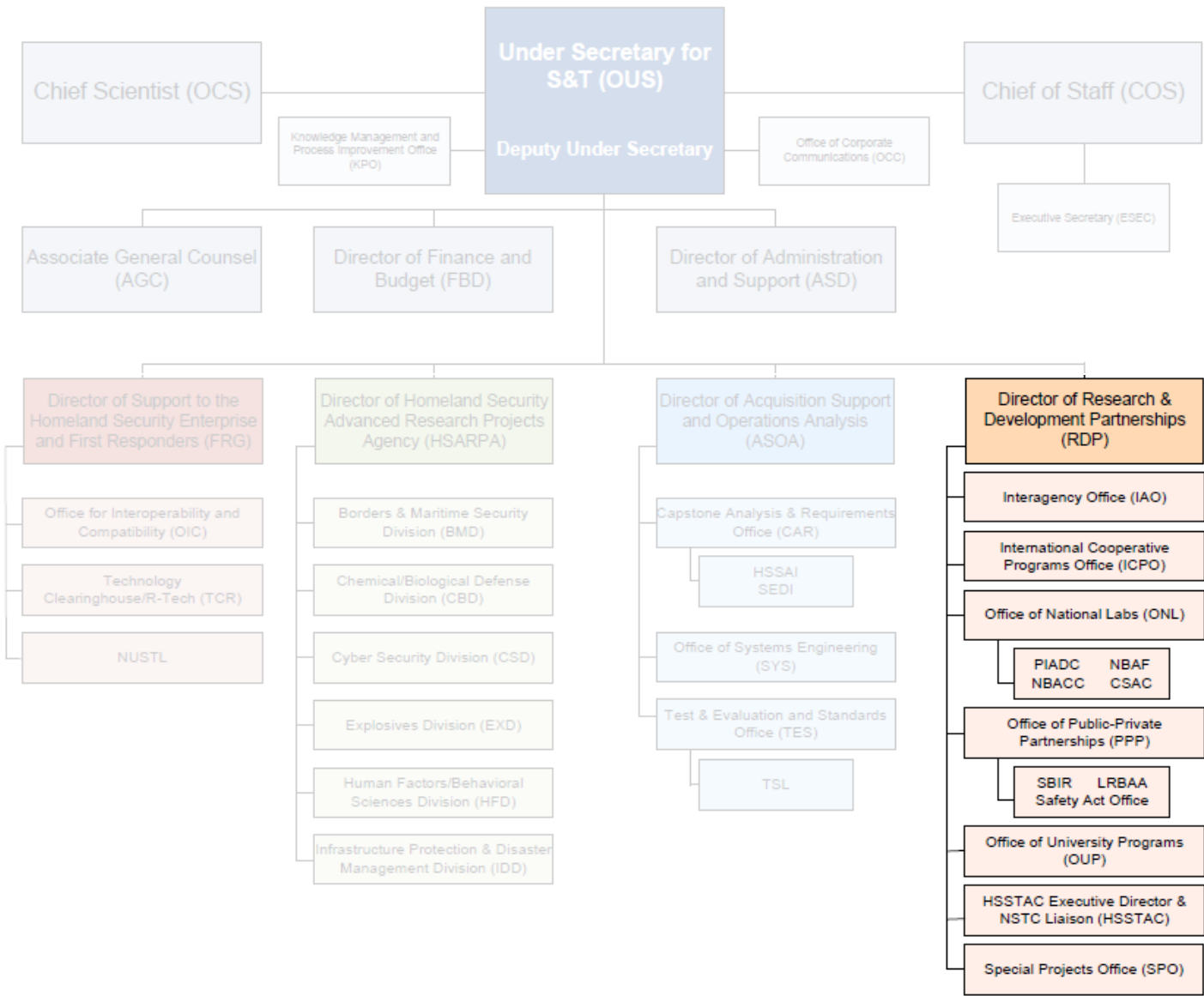
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S&T Organization Aligned with Mission



More Detail

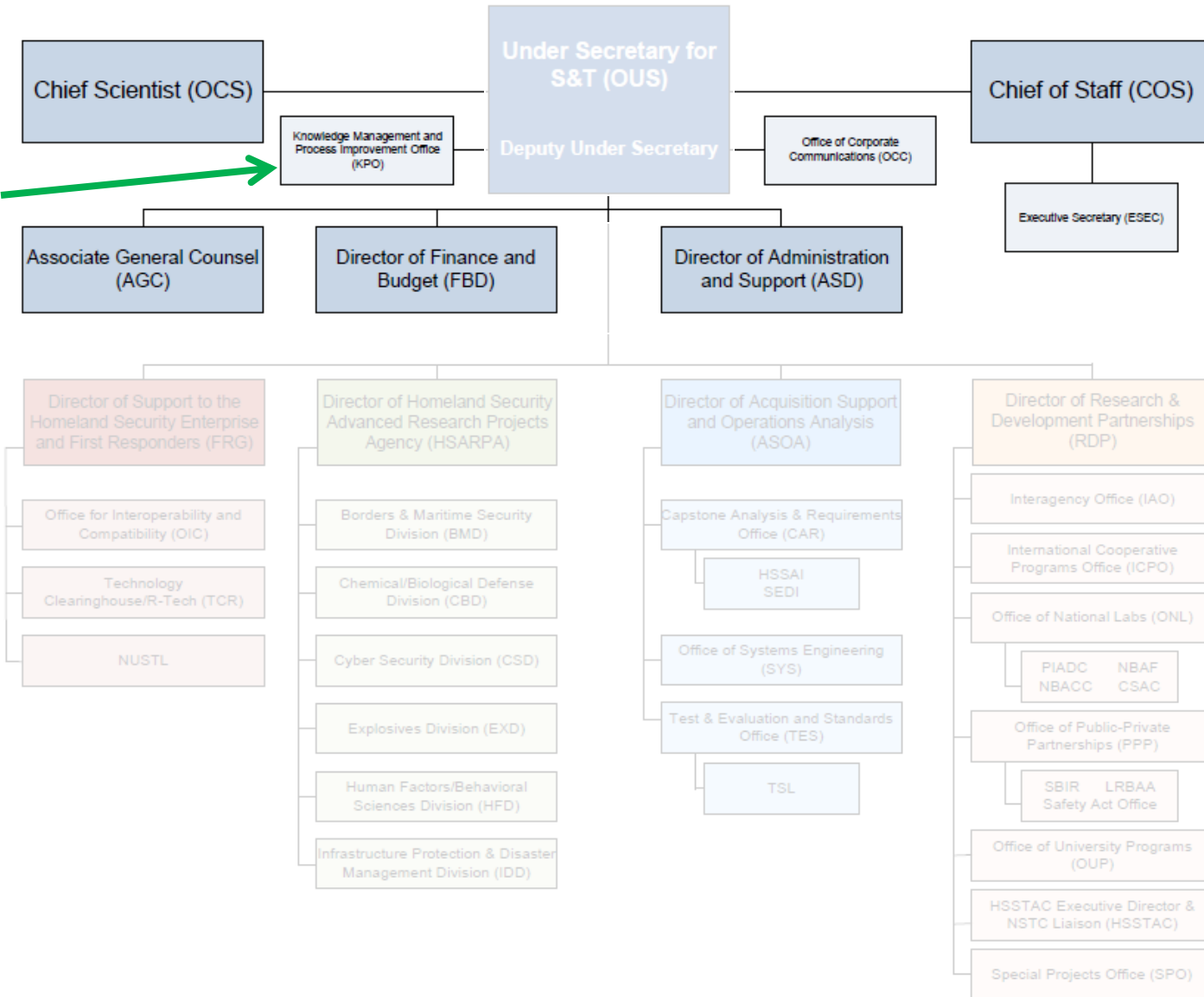
S&T Organization Aligned with Mission



More Detail

...and the offices that provide support...

Yours truly →



**SOME SELECTED
ACCOMPLISHMENTS**

Accomplishments: New Capabilities

- The Next-Generation Self Contained Breathing Apparatus was certified by the Department of Transportation and National Fire Protection Association**
- Developed a new explosives trace detection device by FLIR Systems that is ten times more sensitive and can also detect narcotics**
- Received an award at the Sans Institute's Second Annual National Cybersecurity Innovation Conference for the DNSSEC project**
- The new FMD vaccine is in final safety testing and, pending USDA regulatory approval, will be licensed next year**
- Virtual USA was used during this year's Mississippi River flooding**
- Developed a buried tripwire system that can detect and classify targets crossing the U.S. border**

Accomplishments: New Capabilities and Understanding Risks

New Capabilities for the Homeland Security Enterprise

- S&T- developed CIRT, a concrete breaching tool, has been acquired by FEMA and multiple Urban Search and Rescue teams
- Upgraded the imaging and radar sensors on Border Patrol's Mobile Sensor Surveillance unit
- Demonstrated an integrated CBRNE detection system that brings together reports from the disparate collection systems deployed in cities around the U.S.
- Completed testing on improved cable design through the Resilient Electric Grid program with upcoming plans for a pilot demonstration
- Transitioned the Mobile SPOT program that will help automate information sharing for TSA's behavior detection officers

Understanding Homeland Security Risks and Opportunities

- 12 Signed International Agreements
- NBACC Accreditation for BSL-4 work

Accomplishments: People, Processes, Technologies, Knowledge

❑ **Process Enhancements and Improved Efficiencies**

Process Improvements for S&T

- Robust portfolio reviews
- Technology foraging pilot
- SharePoint: My Sites, Project Sites
- Project Management Excellence
- Toastmasters
- Fed Travel Support pilot
- CO₂ training

Process Improvements for DHS

- Led the Cargo Release Technical Trade Study in support of CBP's Automated Commercial Environment (ACE) program
- Co-Chair of the DHS/DoD Homeland Security Air Surveillance AoA WG

❑ **Acquisition Support and Operational Analysis**

- Leading the Department's COE for Systems Engineering
- Established a joint working group to develop a technology roadmap for the DHS-wide Next Generation Wireless Broadband Tactical communications capability.

Questions?



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