

# USSP Software Sustainability: History & Workshop Objectives

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*a passion for discovery*



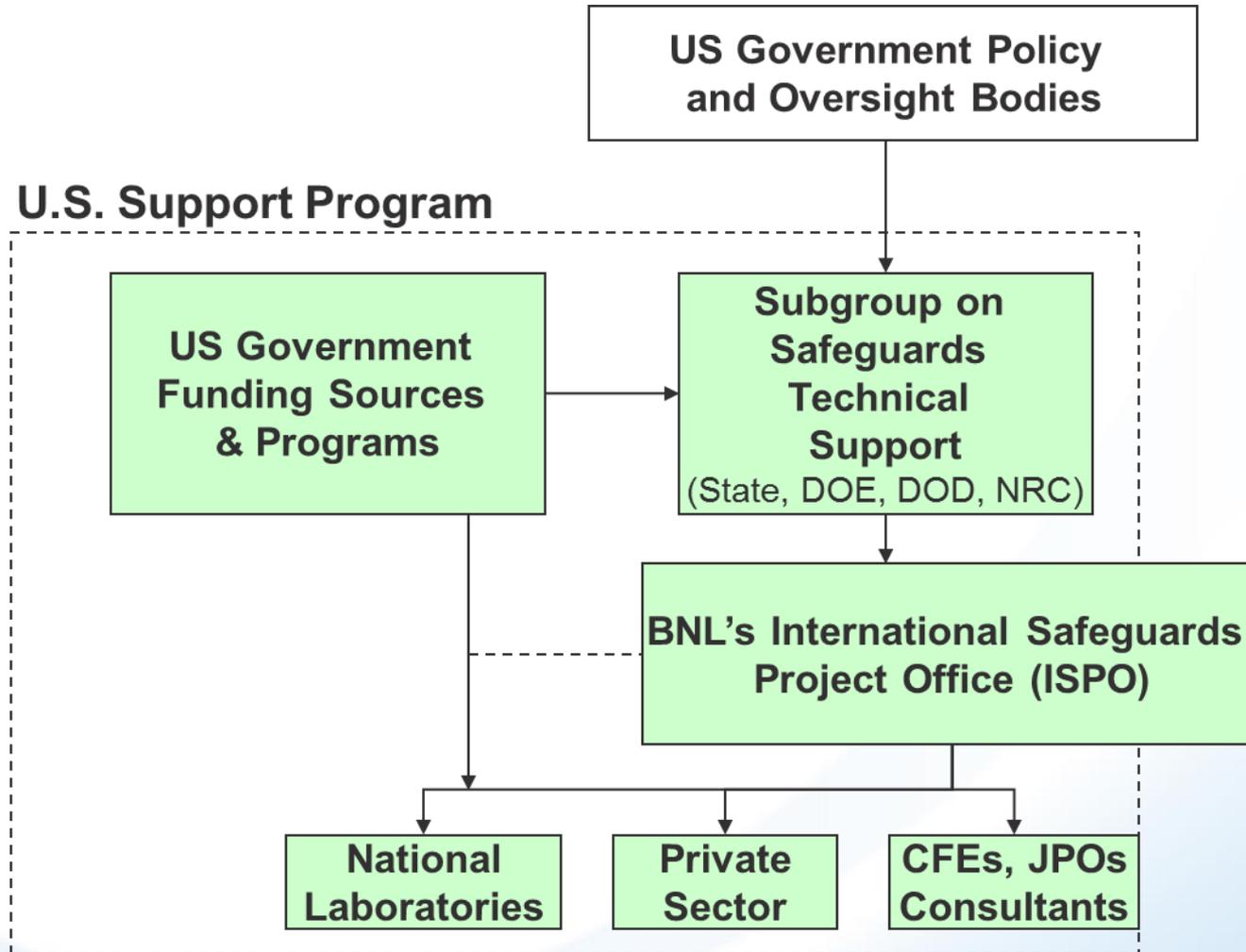
# Overview

- US Support Program to IAEA Safeguards (USSP)
- USSP contributions
- USSP software costs
- Software sustainability issues
- Workshop objectives & strategy

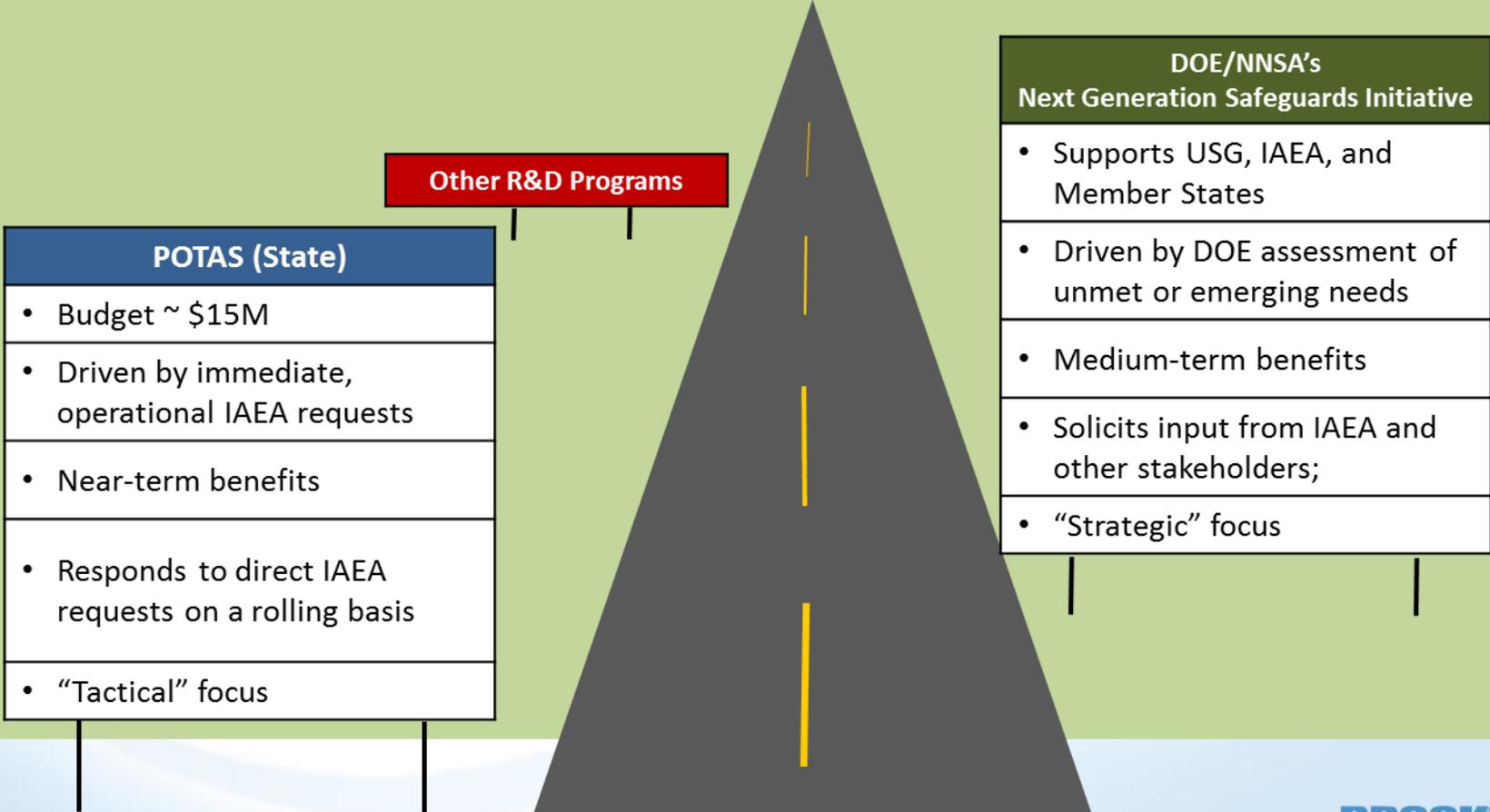
# The U.S. Support Program to IAEA Safeguards (USSP) - Background

- Since 1977
- Completed ~1200 tasks
- \$300+ million in funding and in-kind assistance
  - U.S. Dept. of State Program of Technical Support to IAEA Safeguards (POTAS), other funds from Foreign Assistance Act
  - U.S. Dept. of Energy/Next Generation Safeguards Initiative

# USSP Structure



# USSSP Strategy



# USSP Contributions to International Safeguards



Attended and Unattended Monitoring Systems



Human Resources – Regular staff, CFEs, JPOs, and Consultants

Training



Concepts and Approaches



Quality Management Improvement



Materials Control and Accountability

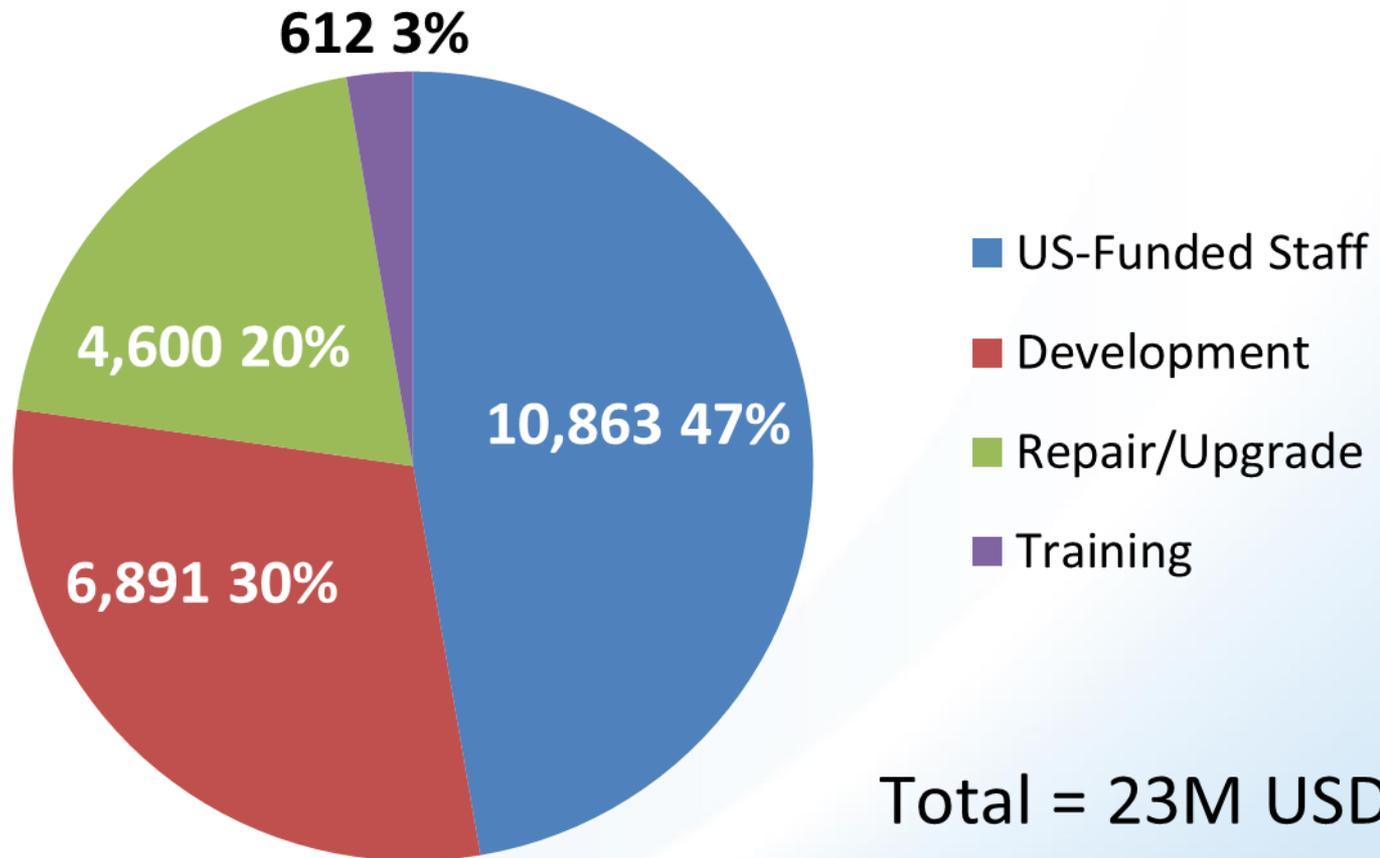


Information Management

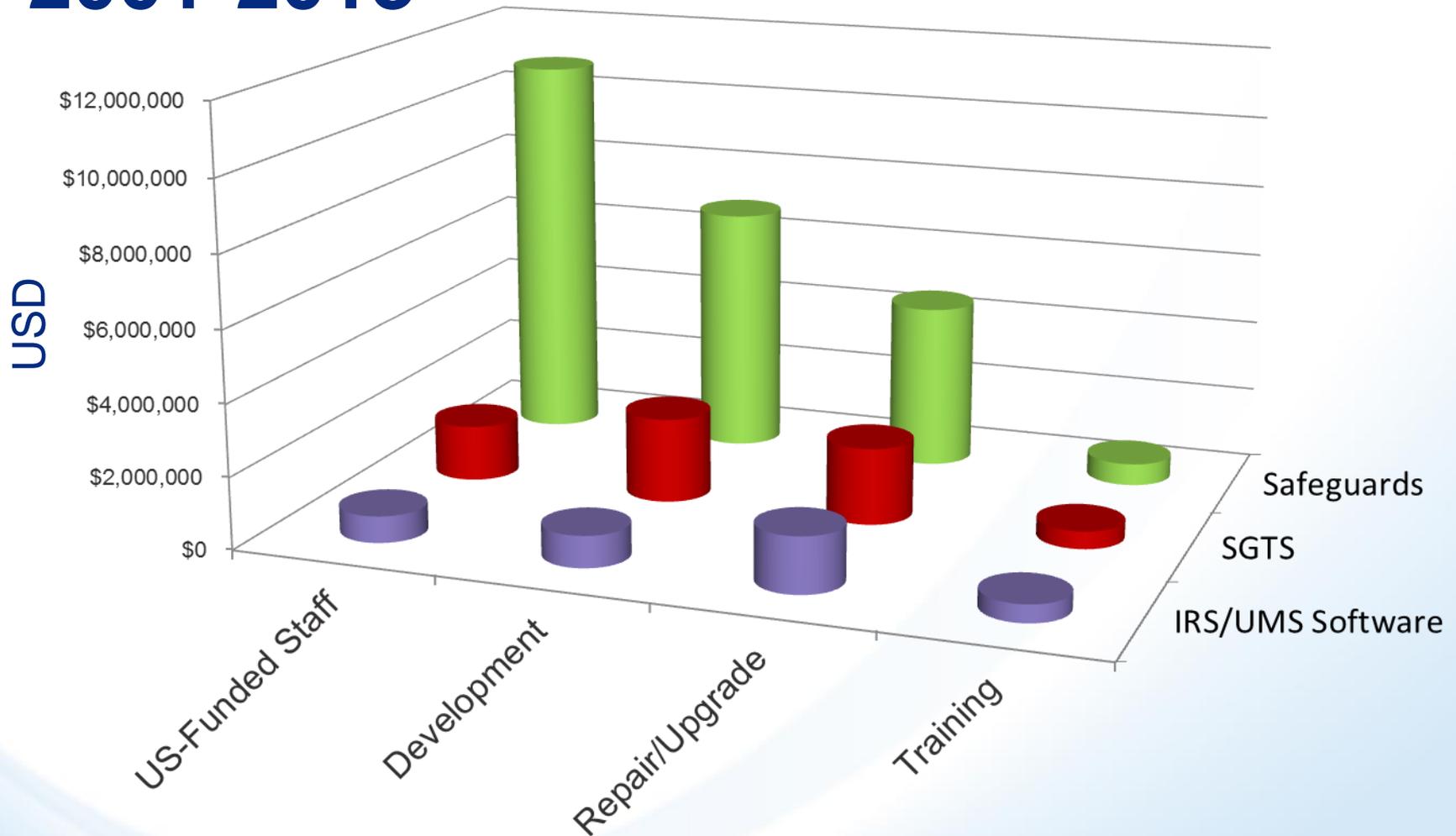
# USSP Software Support Examples

- Processing and analysis of radiation and surveillance data
- User interfaces (safeguards equipment, Member State reporting, information analysis)
- Mainframe migration, modernization of applications
- Immersive environments for training
- IT security (forensics, penetration testing)
- Training (quality, IT security)

# USSSP Funding for All Safeguards Software, 2001 – 2013 (K USD)



# USSP Software Costs 2001-2013



*SGTS: Division of Safeguards Scientific & Technical Services*

*IRS: Integrated Review Software*

*UMS: Unattended Monitoring Systems*

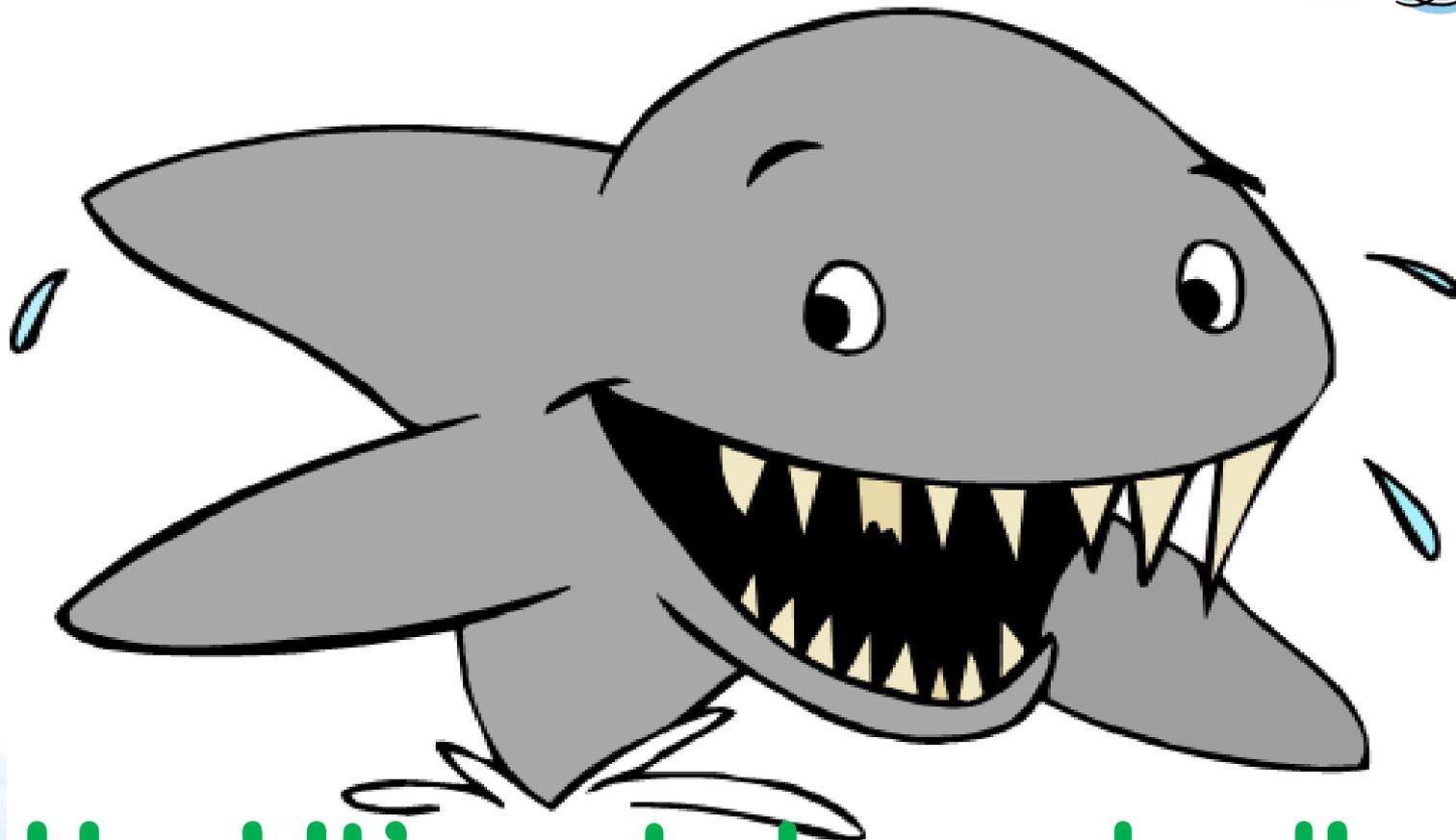
# USSP Software Support Mechanisms

- USSP lets contract (development, maintenance, training, etc.)
  - Private sector
  - National laboratory
- USSP allocates funds for IAEA to let contract
- USSP funds consultant or cost-free expert

# USSP Software Sustainability Issues

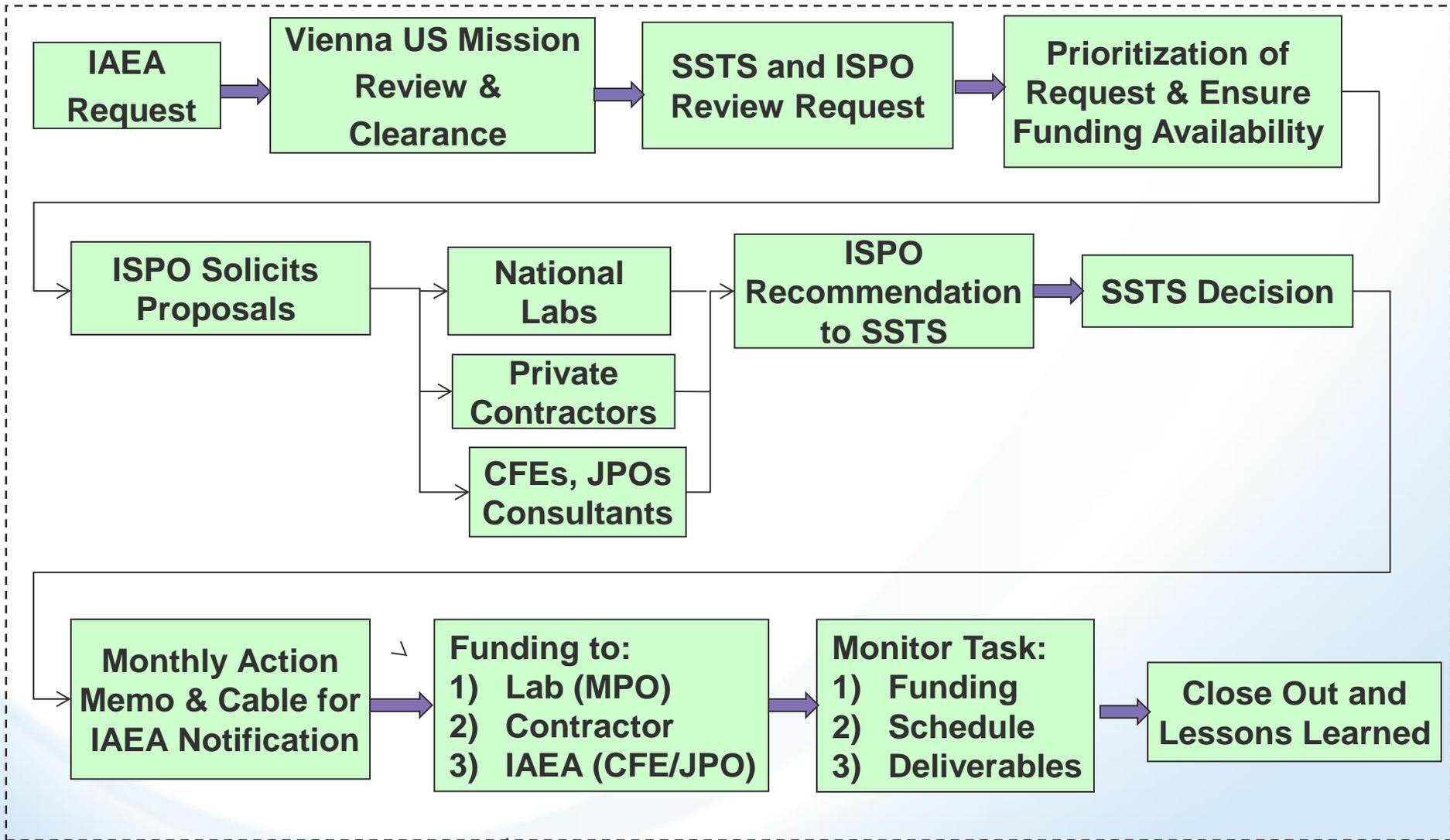


# Factors Influencing Sustainability



**Hey! It's not always bad!**

# USSSP IAEA Request Process



*Can take a few months to one year to initiate a new task*

# Software Sustainability Workshop Objectives

- Improve SGTS' ability to acquire and sustain necessary software products
  - Quality (performance, usability, maintainability)
  - Timeliness & availability
  - Reasonable, manageable costs
- Improve support to and coordination with SGTS
  - IAEA internal stakeholders & support organizations
  - USSP, other MSSPs
  - Vendors

SGTS: Division of Safeguards Scientific and Technical Services

# Workshop strategy

- Bring stakeholders and experts together
- Identify and understand the issues:
  - Share best practices
  - Analyze relevant scenarios and case studies
- Recommend short- and long-range plans

# READY? 1...2...3...JUMP!



# Backup slides

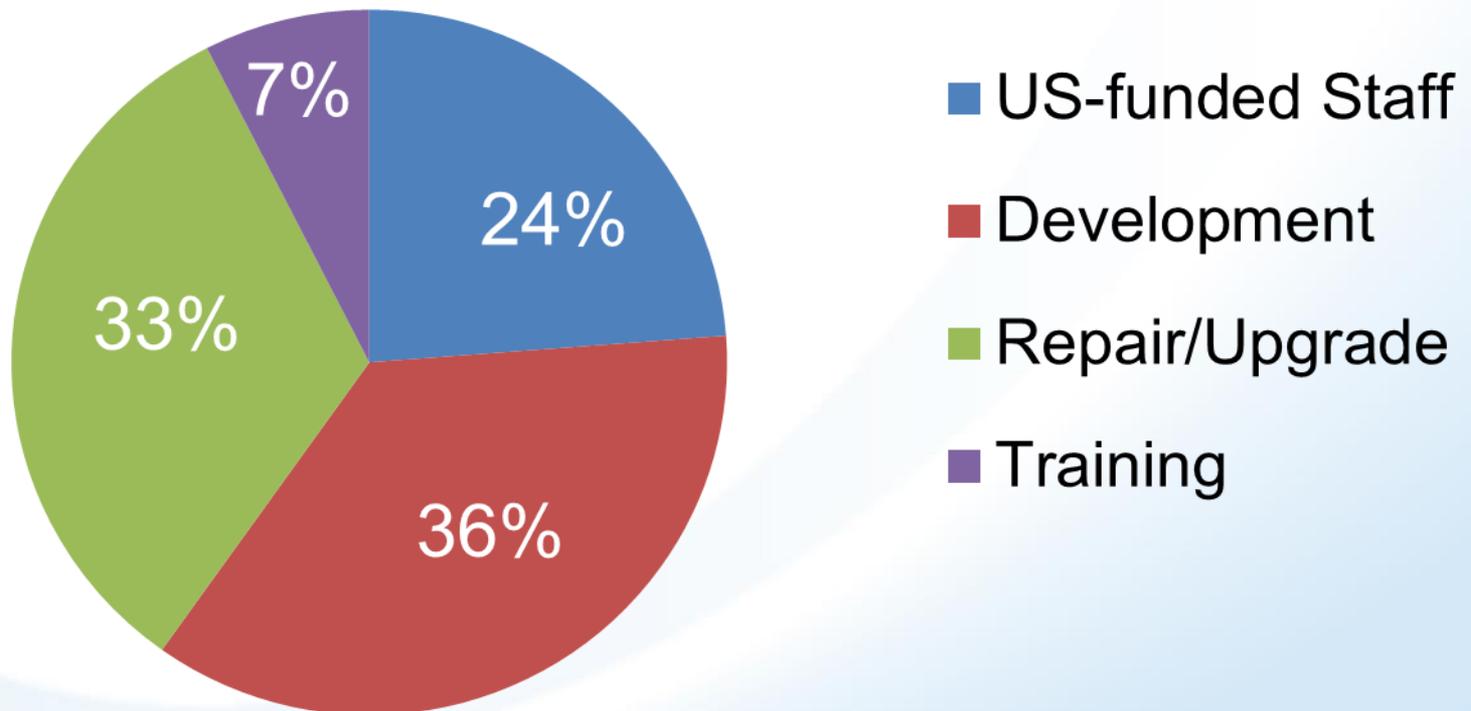
# Factors influencing sustainability

- Funding uncertainties
- USSP request process
- IAEA indirect customer
- Sustaining key nuclear codes
- One person or small company as custodian
- Intellectual property
- Technology “surprise”
- IAEA’s high personnel turnover

# USSP Funding Distribution for SGTS Software Systems

2001 – 2013

6.6M USD



# Life cycle costs of IRS 2001 – 2013 3.7M USD

