

# CANEUS-Shared Small Satellites

Collective Security, Safety, and Prosperity (CSSP)

Limited Objective Demonstration (LOD)

Inviting Participation of Africa Region

**Milind Pimprikar**  
**Founder & Chairman**  
**CANEUS International**

EUCOM & AFRICOM S&T Conference, Stuttgart, Germany



The CANEUS CSSP Workshop held in Italy on October 20-22, 2010, established a Limited Objective Demonstration (LOD) to demonstrate the CANEUS Shared Small Satellite CSSP Concept on a limited scale. Using the expertise and resources from a number of participating private and public sector entities, the LOD will test this concept.



# Objectives of the CANEUS CSSP LOD

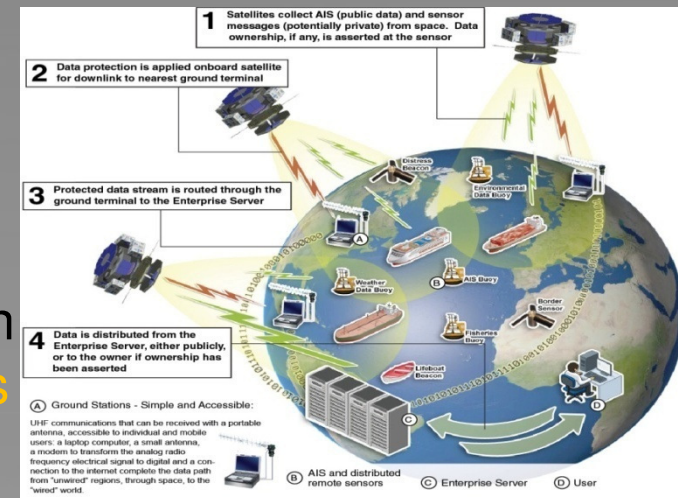
The CANEUS CSSP LOD objective is to demonstrate the **benefits of sharing assets** ( Space, ground segment infrastructure, data fusion, data products, etc,) in **a multi-country and multisystem environment** to support the activities of any given country in Africa to exploit and use the data to support the activities of partners within the International Community .



# The CANEUS CSSP LOD Framework

Through the sharing of a small satellite based **Open Architecture and backed by an Open Source data processing and distribution platform**, the CANEUS CSSP system would be a low-cost, internationally shared space-based data collection and distribution backbone aimed at **creating a seamless data acquisition and exchange environment**.

Its construction would be undertaken through **a series of Limited Objective Demonstrations (LOD)** in order to demonstrate the feasibility of such system and determine the barriers to its implementation and the issues regarding the creation of a potential global system.



# The CANEUS CSSP LOD Overall Strategy

In order to demonstrate the Shared Small Satellites concept and plan the LOD framework, CANEUS is proposing LOD's in different Regions (Asia, Africa, MENA, Oceania, Europe, Arctic, and the Americas) to leverage on the CANEUS CSSP LOD efforts currently ongoing in Chile, Mexico, Argentina in order to:

1. Gather consensus and define details for a globally accepted system
2. Formulate LOD, that can be supported through public-private partnerships from several countries in the short term; and
3. Promote the creation of a global system that would bridge the gap between the have and the-have not's in the longer term.



# Proposed CANEUS CSSP LOD Implementation Plan

1. To **integrate the assets of the participants** from the **LOD participating Country / region** into a seamless data handling system amongst a number of countries to increase their effectiveness to address the challenges the International Community may face.
2. **Demonstrate in a scale down environment, the capability of using existing assets** (satellites, data acquisition, data fusion and data products, etc.) in a multi-country and in a shared assets environment to support operational needs of individual countries.
3. Provide a collaborative environment that can be used to **identify issues related to such operational environment** and **identify solutions** to resolve these problems.
4. Providing the **foundation to the development of a global shared system.**



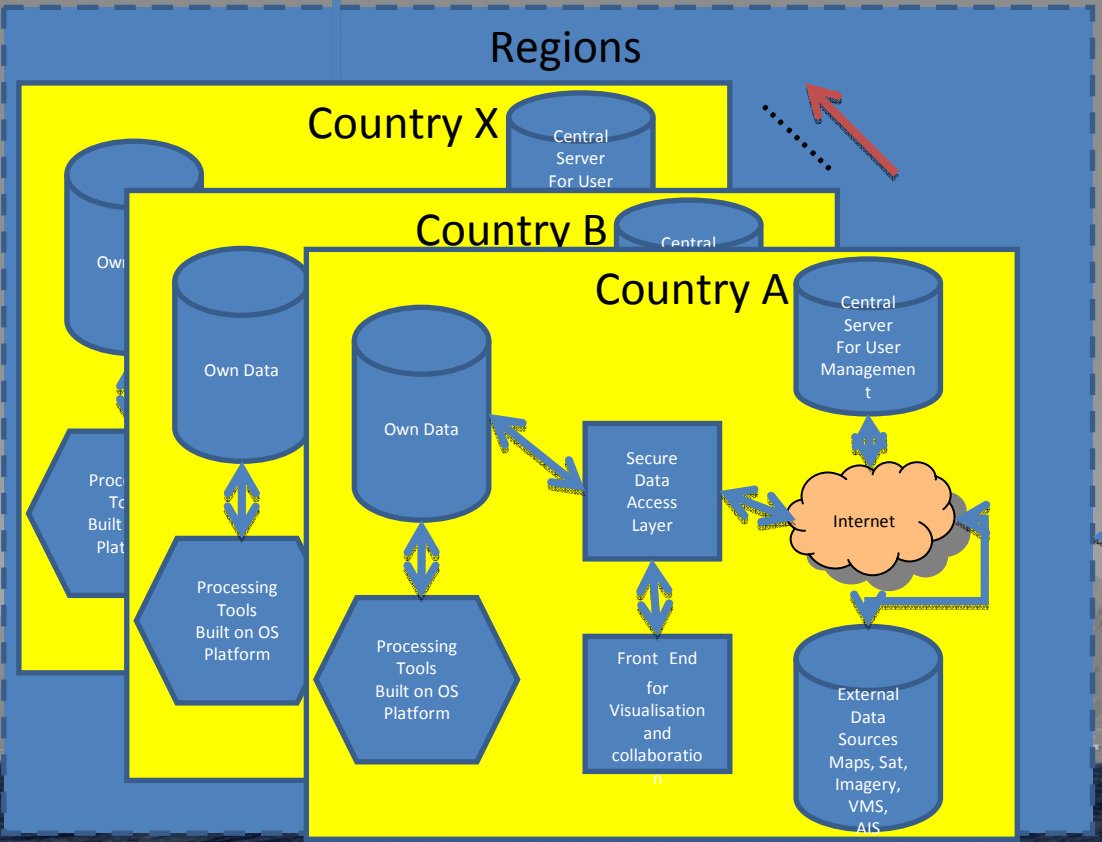
# CANEUS CSSP LOD Program

Global Configuration with Application to a Country / Africa Region

- Outcomes**
- Needs analysis
  - Technical issues
  - Financials
  - ConOps
  - Barriers

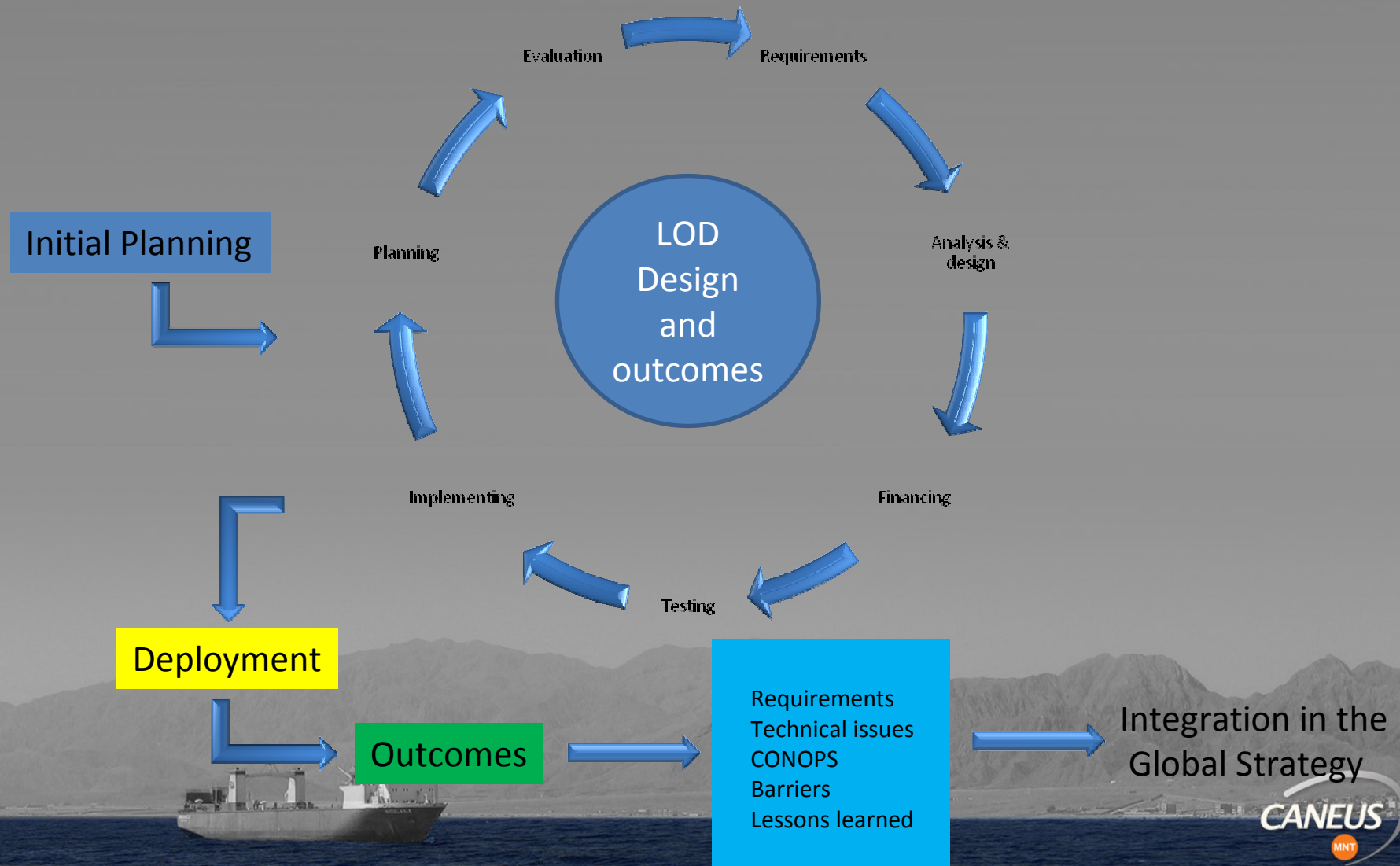
- Level 1: Cross Issues, AIS Data acquisition and sharing**  
**Level 2: Requirements Region Level Country Level**  
**Level 3: Identification of Barriers**

- Horizontal issues:**  
 Data Access, Data Sharing, Data Ownership, Data Security, Data Distribution  
**Cross requirements [Harvest the results of the LOD's]**  
**Program Management:**  
 LOD Program [ Specific countries, representatives of the global requirements for the sharing of AIS data]  
 Technical Issues  
 Operational Issues (data)  
 CONOPS (Country)



Project Management support

# CANEUS CSSP LOD Design







# CANEUS-Shared Small Satellites

CSSP (Collective Security, Safety, and Prosperity)

## *LIMITED OBJECTIVE DEMONSTRATIONS*

*Related Ongoing and Proposed Activities*



Ongoing CANEUS CSSP LOD  
Chile, Argentina, Mexico  
and  
Proposed Confirmed LOD's  
in  
Vietnam, Saudi Arabia, Others



# Use of a Phased Approach

- Develop a “Comprehensive Strategy” so that these LOD feeds into the Overall CANEUS CSSP LOD Program
- 3-4 Phases
  - Phase I/II: Demonstration of increased awareness with satellite resources, and Integration and fusion of multiple data sources
  - Phase III/IV: Development of more ambitious programs (III being local or regional, IV being global) to use the new types of data products being generated
- Different teams work on phases in parallel
  - Depending on funding, US, EU, African, Asian, MENA teams take on different tasks
- Depending on capacity and funding, more countries/regions can be brought in, in a stepwise manner
  - Fusion tools created in one location can be shared with second location, who will then further advancement of the tools instead of recreating them
  - Countries with unique data sources (such as national satellite resources) can develop relevant data fusion strategies



# Challenges to Chile

- Commercial traffic
- Search and Rescue
- Narcotraffic
- Illegal fishing



# Each LOD to Address:

- What are the objectives of the proposed LOD? [Answer the question: **why?**]
- What is the architecture to be used to execute the LOD? [Answer the question: **how?**]
- What is the plan to be adopted to execute the LOD? - [Answer the question: **what?**]
- What is the high-level schedule to be adopted? [Answer the question: **when?**]
- What is the list of participants (management, customers and potential providers)? [Answer the question: **who ?**]
- What are the **milestones/metrics** to define success of the project?
- What is the **expected cash-flow** based on the milestones above? Where will the \$\$ come from? What fraction of total contributions is available vs. in need to be raised? How will it be raised?



# African Countries are Invited to Leverage and Benefit Fully from the CANEUS Shared Small Satellites Demonstration Efforts

Contact:

Milind Pimprikar

Founder & Chairman

CANEUS International

Tel: 514-499-3959

[mp@caneus.org](mailto:mp@caneus.org)

[www.caneus.org/cssp](http://www.caneus.org/cssp)

