

GlobalSat under UN Framework Public-Private Partnership (PPP)



UN World Conference on
Disaster Risk Reduction
2015 Sendai Japan



GlobalSat for Disaster Risk Reduction (DRR)

A New Global Platform
To Fulfill
Sustainable Development Commitments
In the Post-2015 Framework

A Consolidating Role
In the Implementation of Sendai Framework for DRR:
2015-2030
14-16 September 2015
Beijing, China⁵

Milind Pimprikar, Chairman, CANEUS , mp@canexus.org

Risk Reduction Activities Thrive Through Analysis of data

Disaster Monitoring & Reduction Activities

**Require Data from a Suite of Sensors
With Different Capabilities and
With Ability to Provide Global Coverage.**

No Single Satellite

Can Carry Such Complete Set of Sensors

No Single Country

**Can Afford to Develop
Such Complete Set of Sensors &
Satellite Systems**

The Time Has Come

To Create a **Low Barrier** of Entry,
Common **Shared** Platform,
That Allows **Sharing** of
Space & Data Segments

System, Data, Solutions

To be Placed at the Service of

The United Nations

To Better Fulfill their Commitments in the
Post-2015 Framework
For Disaster Risk Reduction

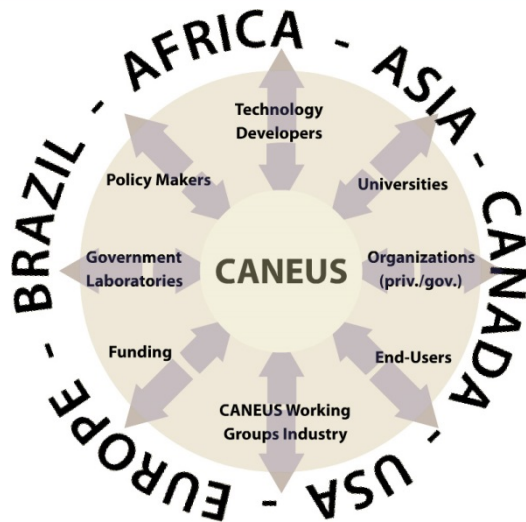
The CANEUS (CANada-EUrope-Americas-Asia-Africa) Network, founded in 1999

*Serves to develop a common platform for space
technology solutions*

**Over 15+ years, CANEUS has created PPP Consortia
with Stakeholders worldwide**

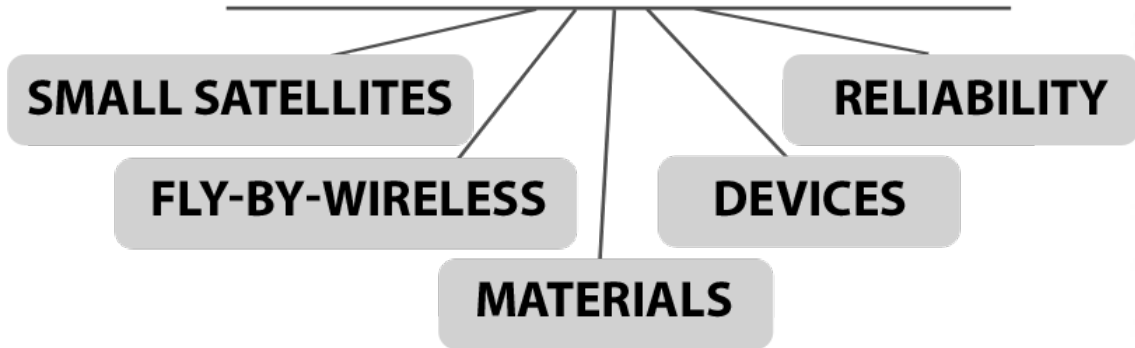
For Developing, Integrating and Testing
Affordable Space Technology Solutions
Through Sharing of Cost and Risk

CANEUS' Consortia Success Examples



- **CSSP**: Collective Safety, Security & Prosperity using Shared Small Satellites in Africa, Middle-East, Americas, Arctic, etc.
- **SSTDM**: Small Satellites and Sensors for Disaster Management in India, etc.
- **Data** Demonstrations and Management in Africa, Asia, Oceania regions

SECTOR CONSORTIA



- **FBW**: Fly-by-Wireless for Sustainment and New Aerospace Systems
- **MNT**: Micro-Nanotechnology for Aerospace and Energy Applications
- **CoE**: Centre for Excellence in Nanotechnology, Energy
- **NAVIN**: Nano Materials and Sensors for Aerospace Vehicles



Third UN World Conference on Disaster Risk Reduction,
Place: Tohoku University Kawauchi-kita Campus. Room: B200
Sendai-Japan

March 17th, 2015, 9:00 – 12:00




CANEUS Workshop

New Global Framework for Sharing of Space Technology and Data Standards To Serve Nation's Disaster Management Needs.

Proposed UN Global-Sat,
For commitment to the post-2015 framework for disaster risk reduction

To create proposed UN Global-Sat, that allows sharing of space and data segments with its ability to serve as a strong tool for nation's disaster management and development needs

News & Highlights

Ms. Simonetta Di Pippo
Director, United Nations Office for Outer Space Affairs



Dr Alanna Simpson
World Bank's Global Facility for Disaster Reduction & Recovery



Mr. Sanny Jegillos
Senior Advisor, UNDP-DRR



Dr. Joachim Post
United Nations Office for Outer Space Affairs

Welcome to CANEUS World Workshop 2015

The workshop attempts to define technical, policy, financial issues, and a frame public/private partnership implementation plan for the CANEUS led UN Global-Sat constellation contributing to the post-2015 framework for disaster risk reduction.

The UN Global-Sat is an opportunity for constructive engagement in space technology with nations worldwide that will increase partner's capacity tailored to specific disaster management requirements.

Read more

Gallery



In Focus



- End-User Updates
- Satellite Applications
- Programmatic Issues
- Collaboration Models

Blogs



- Partners
- Stakeholders
- UN

Caneus-Brochure-2.pdf - Adobe Reader

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New Global Framework
for Sharing of Space Technology
and Data Standards To serve Nation's
Disaster Management Needs

CANEUS
UN Global Sat

CANEUS WORKSHOP
**THIRD UN WORLD CONFERENCE ON DISASTER
RISK REDUCTION**
Sendai-Japan
March 17h, 2015, 9:00 – 12:00

CANEUS
UN Global Sat

Concept of UN Global-Sat For
commitment to the
post-2015 framework for disaster
risk reduction



GlobalSat for DRR:

- Opportunity and Implementation Path Forward

- **Opportunity:**

- *No global partnership to coordinate and organize all the disparate efforts for disaster and environmental monitoring through satellites*
- Unique Opportunity Under UN Framework to address:
 - Data availability
 - End-to-end data flow: System of Systems
 - Near real-time Disaster alerts

- **Implementation Path:**

- Formulate Global Collaborative Partnership
 - Seeking Guidance and Feedback to Realize the UN Vision

GlobalSat PPP Concept

- Common nano-satellite platform allows:
 - Data gathering system with the same telemetry and commanding
 - Production in numbers that decreases overall cost and increases predictability of performance
 - Common ground segment
 - Common launch interface and deployment system
 - Design tailored to specific requirements for reliability and mission duration
 - Availability of spares across all participants
 - Inter-satellite communication system
- Payloads built all over the world and dedicated to gather data:
 - Infrared
 - Visible
 - Panchromatic
 - Ground sensors data collection
 - Synthetic Aperture Radar
 - Etc...
- Platform / Payload Integration can be done in states that build the payloads
 - Secondary benefits for local economy
- All data collected and available (distributed both raw and processed) to the participating countries
 - Leverage on each other

AFFORDABLE

ADAPTABLE

SUSTAINABLE

SCALABLE

GlobalSat Platform Under UN Framework

- Complements and different from existing efforts
- **GlobalSat:** A constellation of diverse instruments (hyperspectral, IR, SAR, etc..) and ability to do data exfiltration from sensors on the ground
- **GlobalSat solution** is part technical product and part educational and empowerment
 - ***Focus is on capacity building***
- GlobalSat shall assimilate information of other space assets to enhance data processing and interpretation
 - e.g. Leverage on recent agreement between UNOOSA and DigitalGlobe
 - GlobalSat puts the local entities in the driving seat and empower them into a self-sustainable system for them to manage.
 - Current solutions usually put private companies on the driving seat.

GlobalSat Implementation Issues

Technical

- Suite of sensors and satellite system
- Common data and access
- Affordable
- Sustainable
- Adaptable
- Scalable
 - Expansion to sustain growing need and achieve global coverage (space and time)

Programmatic

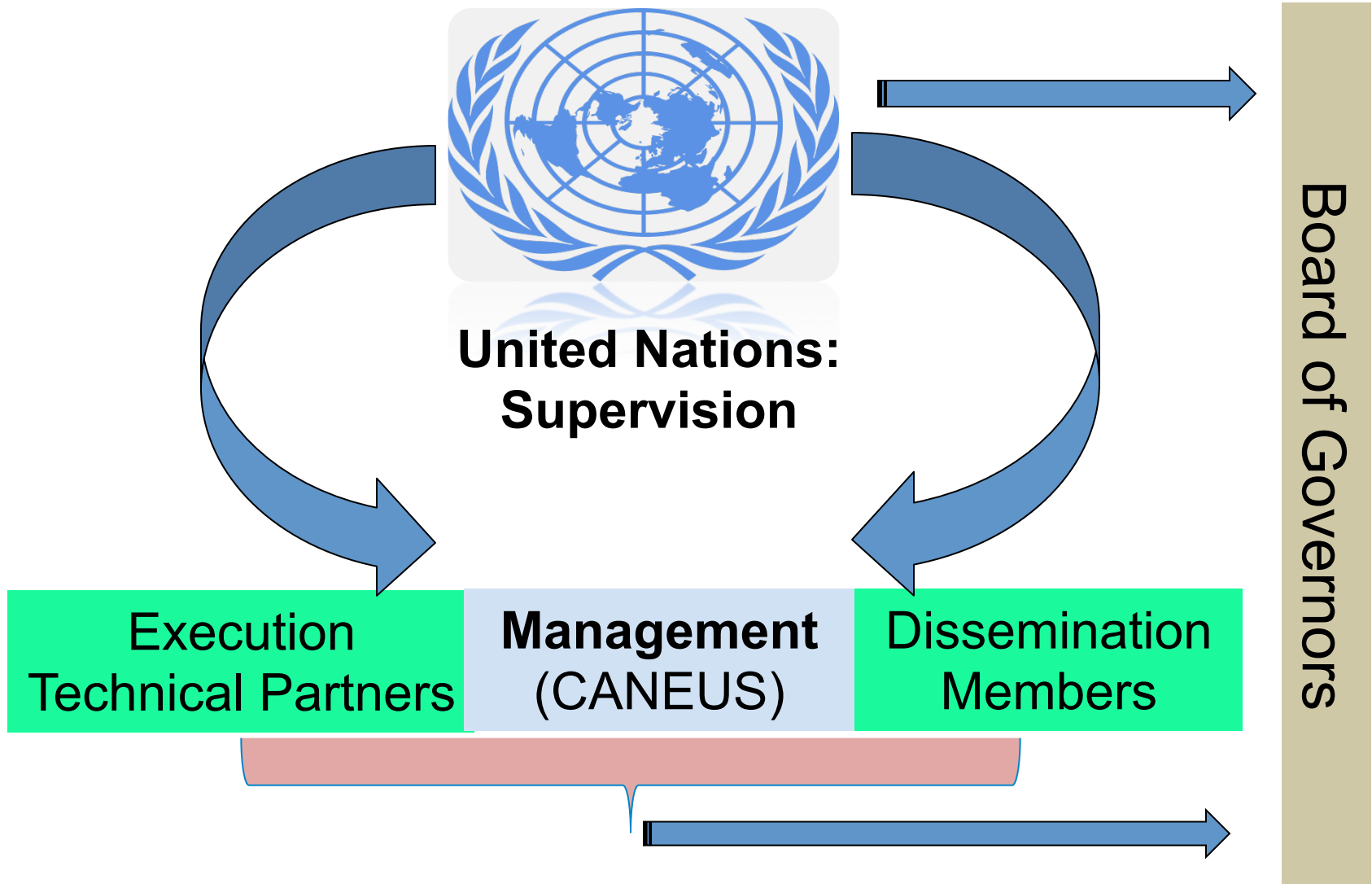
- **Accessibility:**
 - low barrier of entry
- **Accountability:** to Serve Global Communities
- **Program Management:** Lean Effective Leadership
- **Resources:** Accomplish GlobalSat Vision
- **Job Creation:** In Global Communities
- **Educational Imperative**

GlobalSat Implementation Steps:

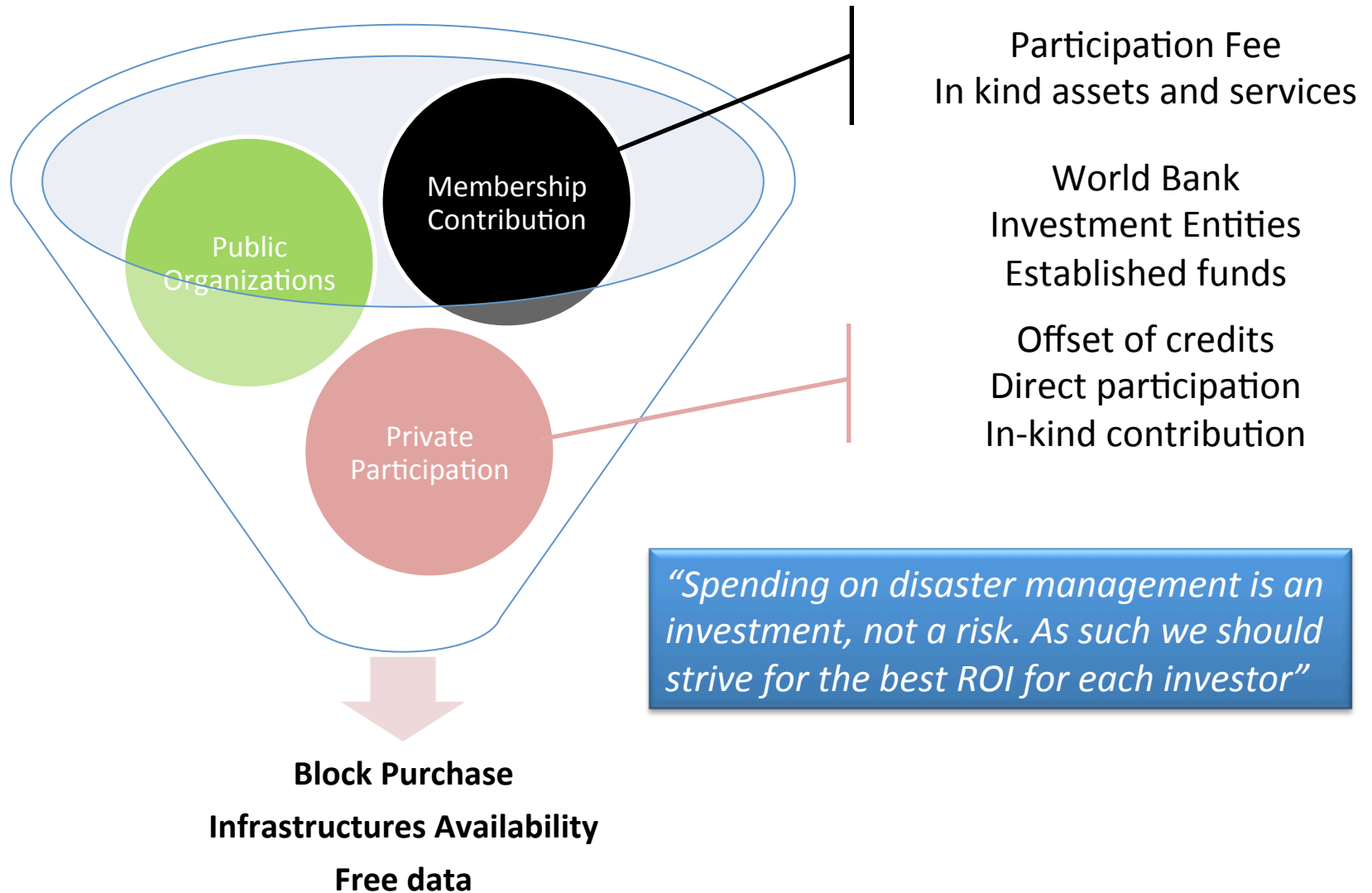
- **Primary Objective: Seek Stakeholder's Perspectives**
- **Potential Models for Resources:**
 - **Participating Countries Pool-in resources** to address Application-Specific goals
 - Key Challenge: Potential Bureaucratic delays
 - **Public-Private Partnership (PPP) Model:**
 - Proven and Successful in Similar Endeavors
 - Large pool of pro-active foundations, & Individual
- **Balancing the needs and challenges**
 - Identify the Scope, limitations and complimentary features
 - Clearly Articulate the broad programmatic issues

Primary Goal: Address end-users Needs and requirements

GlobalSat PPP Roles and Responsibilities



Potential PPP Financial Framework



PPP Session expectations

Seeking input from participants:

- What changes are needed to this PPP concept to address the global framework needs?
- Which are the first countries / regions for PPP?
- Who are the main PPP stakeholders to include in the formulation phase?
- Which are the best financial mechanisms to consider?



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Thank You