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Accessing Space Capabilities
Key To
Achieving the
Sustainable Development Goals

Donna Bethea Murphy
SVP Global Regulatory
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21 operators
Global & Regional
CEO driven

Satellite Communications - Connecting the World

Inclusion • Security • Mobility • Safety • Cyber-resilience

Broadband for All 1	**Early Warning Systems / Food Security** 2

Satellite is Relevant to all SDGs

Telemedicine / Remote Diagnostics 3	**eLearning For Teachers & Students** 4	**Digital Inclusion for Women/Girls** 5	**Water Management** 6	**Power Management / Smart Grids** 7
Digital Opportunities to Prevent Rural Depopulation 8	**Resilient, Robust, Instant Connectivity Systems** 9	**Bridging Digital/ Education/ Health/ Social divides** 10	**Smart Cities (Traffic management, Air Quality, etc.)** 11	**Precision Farming / Smart Agriculture** 12
Monitoring Sea Levels & Temperatures, Pollution, Heat Loss, etc. 13	**Reporting Fishing Quotas, Preventing Illegal Practices** 14	**Monitoring Deforestation; Tracking Wildlife** 15	**Peacekeeping Operations; eGovernment** 16	**Partnerships: NGOs, Terrestrial Operators, International Organisations** 17

Working Group on Technologies in Space and the Upper-Atmosphere

Identifying the potential of new communications technologies for sustainable development

September 2017

BROADBAND COMMISSION
FOR SUSTAINABLE DEVELOPMENT

UN Broadband Commission
WG Report of September 2017

- ◆ Extraordinary technological innovation in satellites
- ◆ Ubiquity, reliability, mobility enable smart society applications in cities and rural areas
- ◆ Work hand-in-hand with terrestrial systems to achieve the SDGs as a key component of 5G

- ◆ Ensure continued access to relevant spectrum
- ◆ Ensure regulatory conditions allow technology exploitation
- ◆ Stakeholders should cooperate to promote innovation and technology development

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SATMED on 'Friendship Floating Hospitals' in Bangladesh
Making e-Health Accessible

SATMED serves NGOs, hospitals, medical universities & healthcare providers in resource-poor areas
◆ **Ships are equipped with maritime satellite terminals**
◆ **Visiting medics communicate from remote areas with national/international doctors**
◆ **They provide medical counseling to marginalized communities through telemedicine & exchange medical knowledge with local doctors**

SATMED has deployed 10 times : Philippines, Bangladesh, Benin, Sierra Leone, Niger

Use Cases: e-Health: Africa

SOS Children's Village brings healthcare to children & their families in remote parts of Benin using portable satellite terminals

◆ Patient medical data sent in real time via satellite to urban hospitals

◆ Monitoring, diagnosis & treatment of adults & children

◆ Diabetes, hypoglycemia, hypertension & other serious conditions identified

◆ Conditions that may never have otherwise been discovered referred for treatment

◆ Successful pilot in 2014 - project still in operation today

Secure Transmission of Personal Data • Immediate Diagnosis & Treatment

Project iMlango, Kenya
Project iKnowledge, Tanzania

- ◆ 500 schools connected with small satellite terminals & community WiFi hotspots backhauled via satellite
- ◆ Education for marginalized communities & training for teachers
- ◆ Focus on 68,000 marginalized girls in Kenya & encouraging 'science for girls' in Tanzania
- ◆ Cooperation between Tanzanian schools & University of Dublin to promote Young Scientists Tanzania competition
- ◆ Students use Skype to do joint experiments with students in Dublin

International cooperation • 'Train the Trainer' • 'Science for Girls'

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Call for tender from Ministry of Education in Panama to connect 450 isolated schools

◆ Schools connected via satellite to the Internet

◆ Local technicians receive training on installation, working & maintenance of satellite links & equipment

◆ Benefits for local adults & children

◆ Education & skills transferred to rural communities

Education for All • Local Capacity Building • Sustainable Solutions

Professional Training – How to Run a Business

Connecting schools on Greek Islands:
Valtesiniko, Kastellorizo, Gavdos

◆ Development issues are not just reserved for emerging economies! Relevant also in the EU!

◆ Island areas can typically be home to tiny populations of a few hundred persons

◆ One Greek island now connected by satellite has only 50 residents + 1 school!

◆ Simple satellite connections allow such communities & their children to keep up with education & be part of society itself

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Social cohesion • Equal opportunities • Every Child Online

Satellite Operators deploy Immediate Solutions in Difficult Circumstances

... and instant solutions when they are needed most

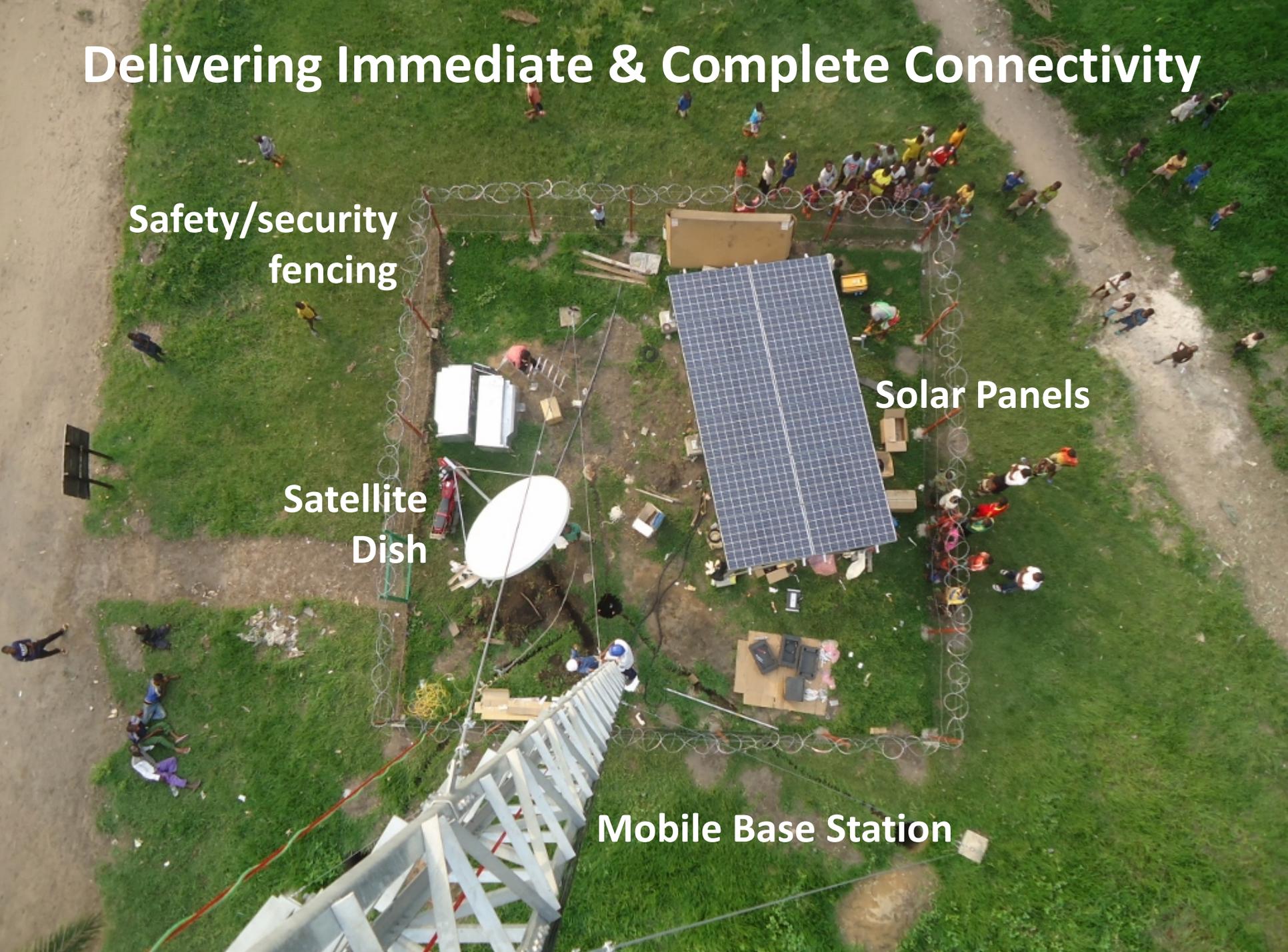Creating Local Jobs & Capacity Building for Sustainability

Delivering Immediate & Complete Connectivity

Safety/security fencing

Solar Panels

Satellite Dish

Mobile Base Station

Conclusions

- ◆ A technology unique to global connectivity

- ◆ Already used for a multitude of applications

- ◆ Despite widespread use, satellites remain an invisible infrastructure

- ◆ UNOOSA can change this

- ◆ Benefitting from satellite services requires:

  - ❖ Technology neutral regulation
  - ❖ Interference free spectrum
  - ❖ Continuing Innovation and Economies of Scale

• **THANK YOU** •