



Technology & Innovation

25 Mar 2016

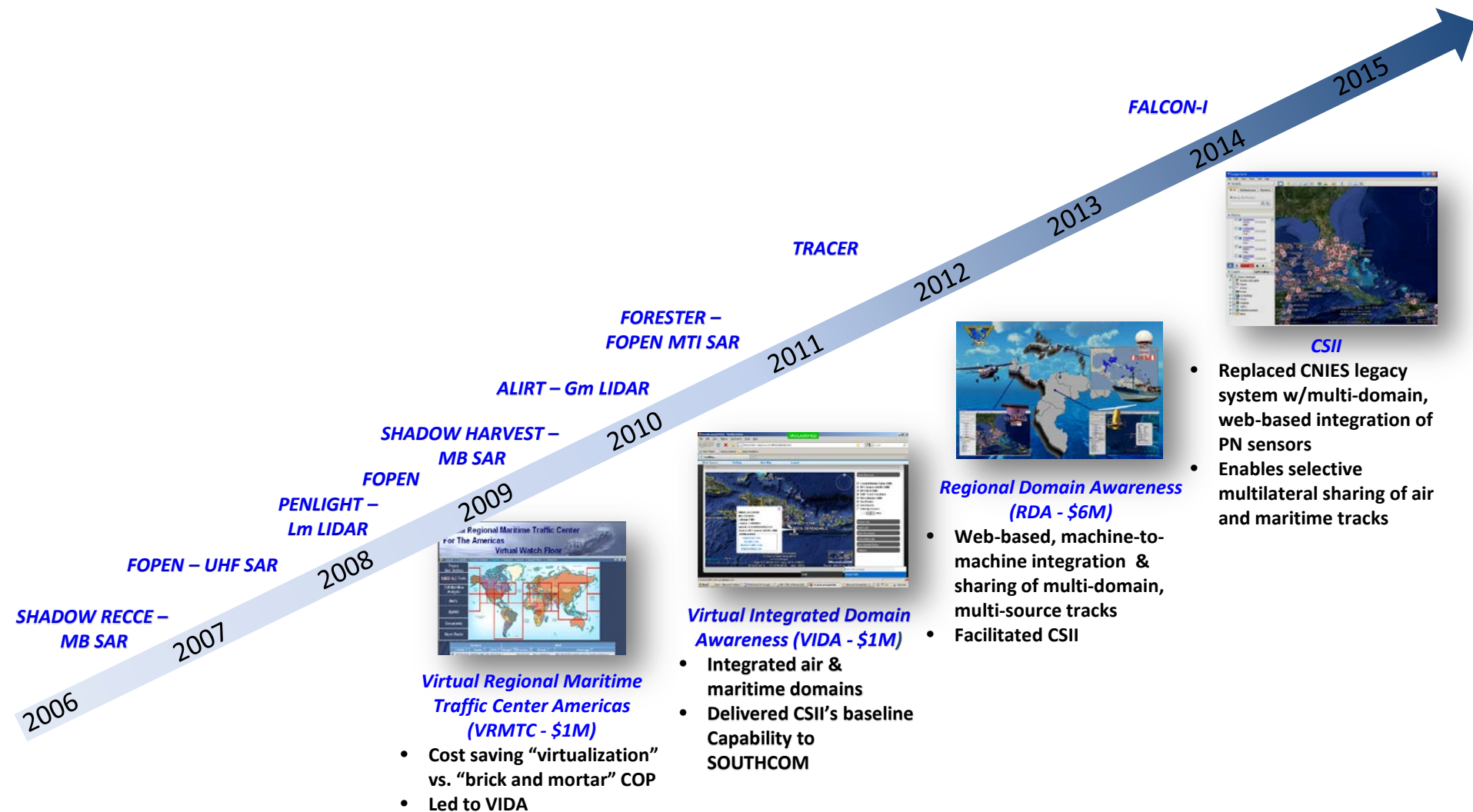
Juan A. Hurtado

UNITED STATES SOUTHERN COMMAND
PARTNERSHIP FOR THE AMERICAS



Where We've Been

Examples of capabilities *delivered*



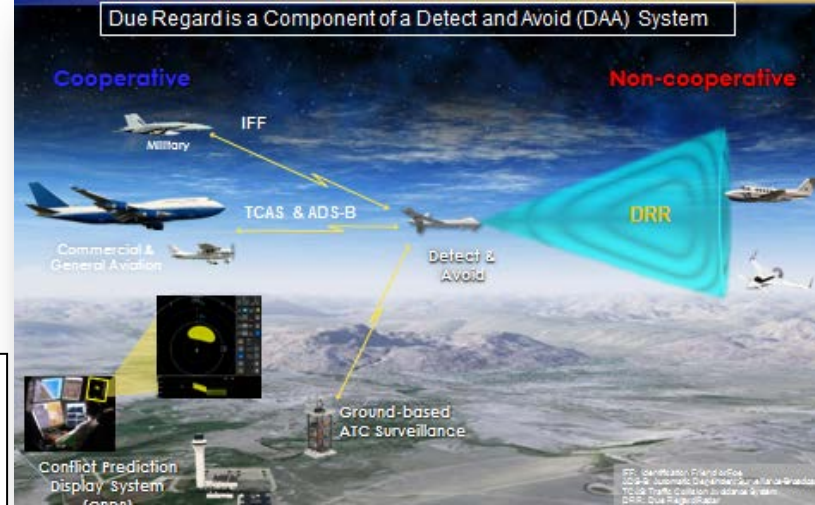
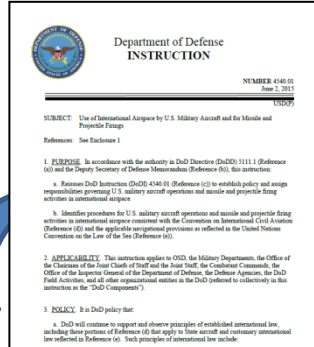


Increasing freedom of movement Untethering Remotely Piloted Aircraft (RPA)

Problem

Solutions

Impact

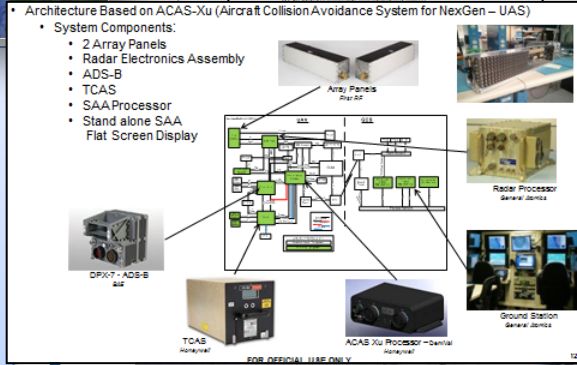


* Current Remotely Piloted Aircraft (RPA) (MQ-9) depend on Ground/Air Based Radar Tether to meet Due Regard (Sense & Avoid) DOD policy

* DODI allows for policy compliance via a 'military certified' self-contained system

* Self-contained system available to execute 'Due Regard' to enhance freedom of movement BUT,

* There are NO DOD standards & processes to certify YET .



PROGRAMMATIC Impact:

- * Develop DOD's joint certification standards & processes using available Due Regard technology for test case – end result, certify existing technology ISO SOUTHCOM/EUCOM/AFRICOM and other CCMDs
- * Inform ongoing USAF Sense and Avoid AoA and help advance USN's TRITON program

OPERATIONAL IMPACT: BREAKS the RPA ground/air based radar tether in order to maximize the RPA's sensor collection and exploit its long endurance and range



Providing Counter IED capability for theater Joint Improvised-threat Defeat Agency (JIDA)

Problem

IEDs, a global problem

- > 30,000 incidents per year
- > 66,000 casualties per year

- COL avg. > 2,200 IED incidents per year, **4th in the world**
- IEDs prevalent throughout SOUTHCOM



Colombia's IEDs:

- Low or no metal
- Victim operated
- Chemical initiated
- HME main charge



Solutions

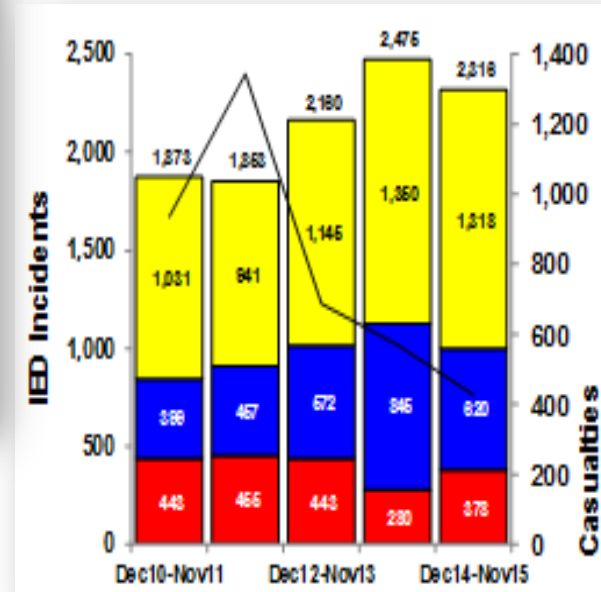
Getting Left of Boom



- Full-time C-IED presence in Bogota (OSC), SC HQs and SOCSO
- C-IED Strategy
- 3-Year US-COL Work Plan
- Key Leader Engagements
- Data Analysis/Sharing
- SMEEs

Impact

- IED incidents down 8%
- Casualties down 29%

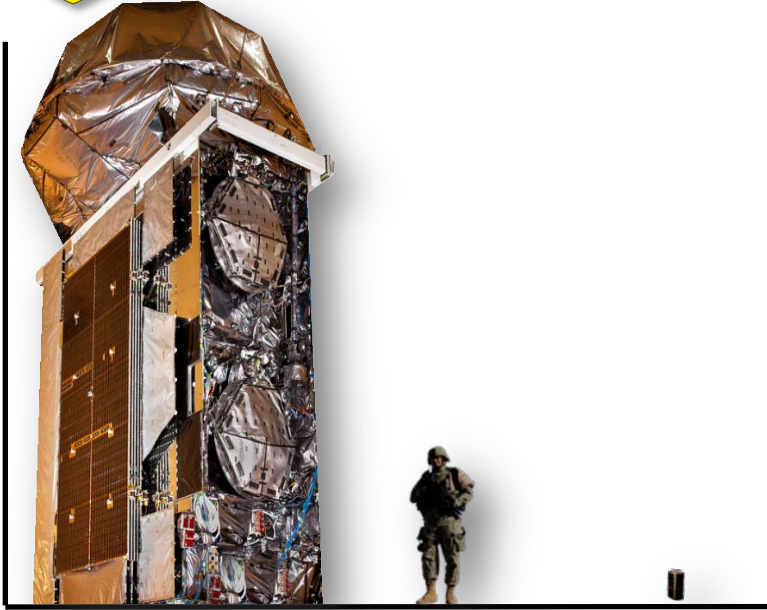


Find Cache Detonation Casualties

Going Forward:

- Continued Support to C-IED
- Close Coordination with Demining
- DDR

Advancing space resilience



Legacy Satellite
~ \$600M

Disadvantaged User

Nano Satellites
~ \$150K

Problem:

- Expensive
- Overtasked
- Limited COCOM Access

Solution:

- Space resiliency
- Low cost
 - ✓ Spacecraft
 - ✓ Launch Vehicle
- Ground Force Tactical Control

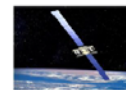
3 nanosatellites in Low Earth Orbit (LEO)



Solutions:



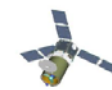
MUOS
\$600M
Comm Relay
6,800 pounds
26 ft x 14 ft



WGS
\$500M
Comm Relay
7,600 pounds



Iridium Next
\$36M
Comm Relay
1,500 pounds



ORS-1
\$198M
Imagery
1,000 pounds



TacSat-3
\$68M
Imagery
1,000 pounds

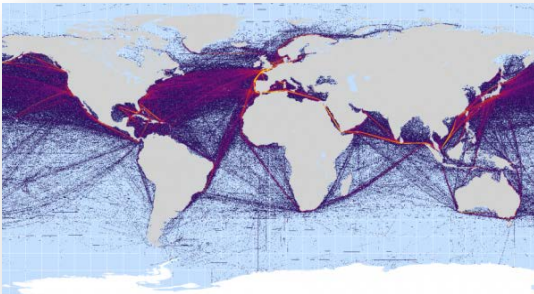


SNaP
\$550K
Comm Relay
12 pounds
10 x 10 x 30 cm

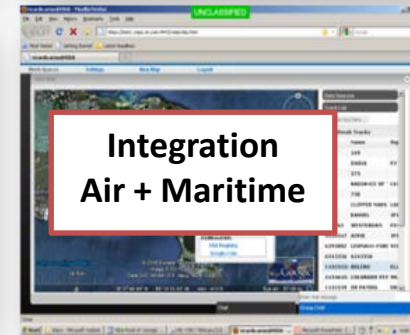


Developing domain awareness

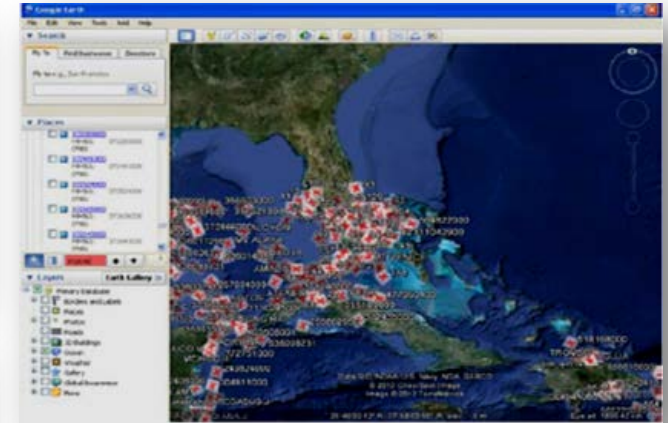
Problem



Solutions



Impact



Efforts supported the Collaborative Sensor Information Integration (CSII). Replaced CNIES legacy system with a multi-domain, web-based integration of PN sensors, enabling selective multilateral sharing of air and maritime tracks

Next - the Caribbean Collaborative Environment (CCE) initiative, a \$9M congressional plus-up to address security concerns in the Caribbean



Leading the way DoD Technology in Global Peacekeeping

Problem

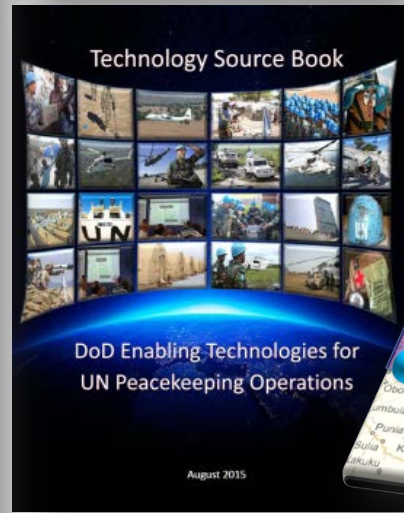
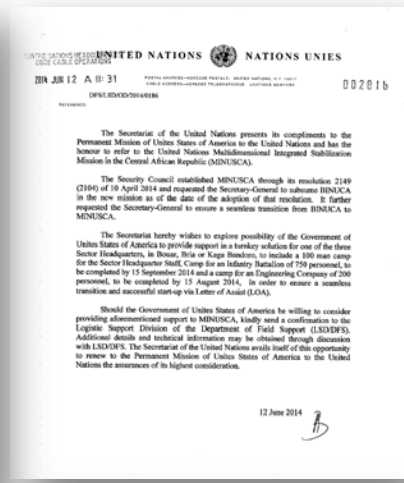


*"Peace operations...remain one of the world's most important tools to address armed conflict."*¹

*"The United States intends to continue to do its part. And today, I'm issuing new presidential guidance...to expand our support for U.N. peace operations... to become a leading technology contributing country to UN peace operations."*²

1. President Obama remarks at UN peacekeeping summit
2. White House Memo, 28 Sep 15: pledges U.S. support to UN Peace Operations

Solutions



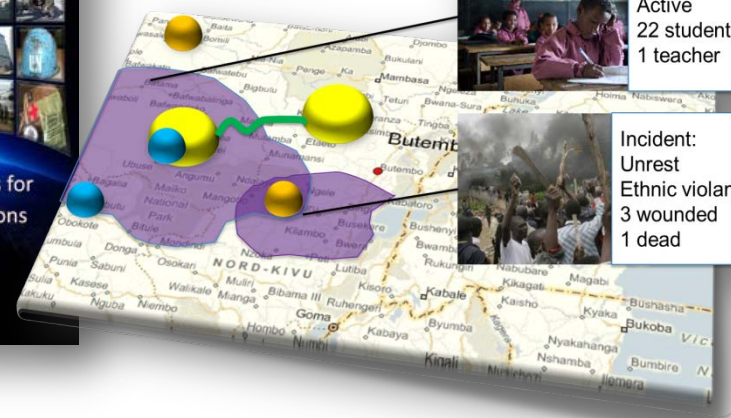
Impact



School:
Active
22 students
1 teacher



Incident:
Unrest
Ethnic violence
3 wounded
1 dead





Facilitating Information Sharing

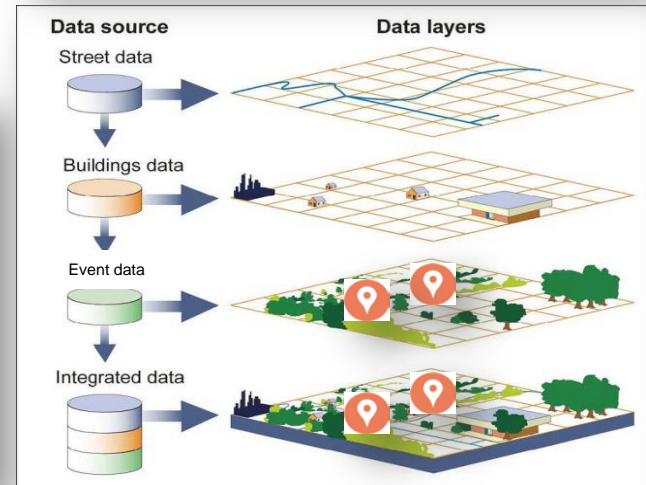
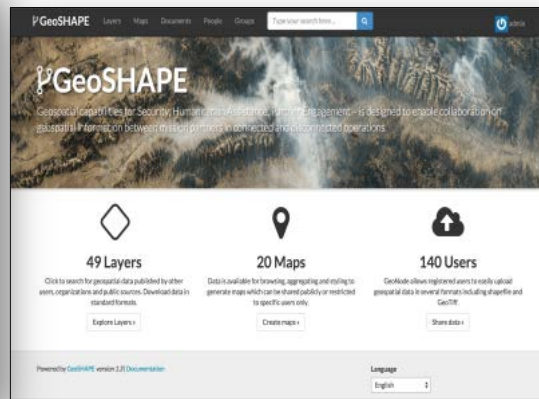
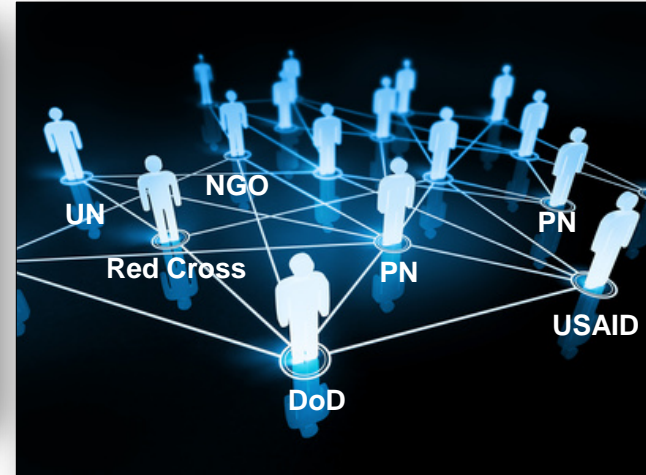
Problem



Solutions



Impact



Investing in the future



Building Partnerships



Developing Partners



Locally



Export to theater



Addressing Environmental Security

water, energy, food, climate change

Problem



Solutions



Impact



- Community of Interest
- Informs “way ahead”
- FY16 efforts:
 - ✓ Water Security Workshops in Brazil and Peru
 - ✓ Technology pilots to reduce global environmental footprint of PKO missions

Defending America with Nanosats

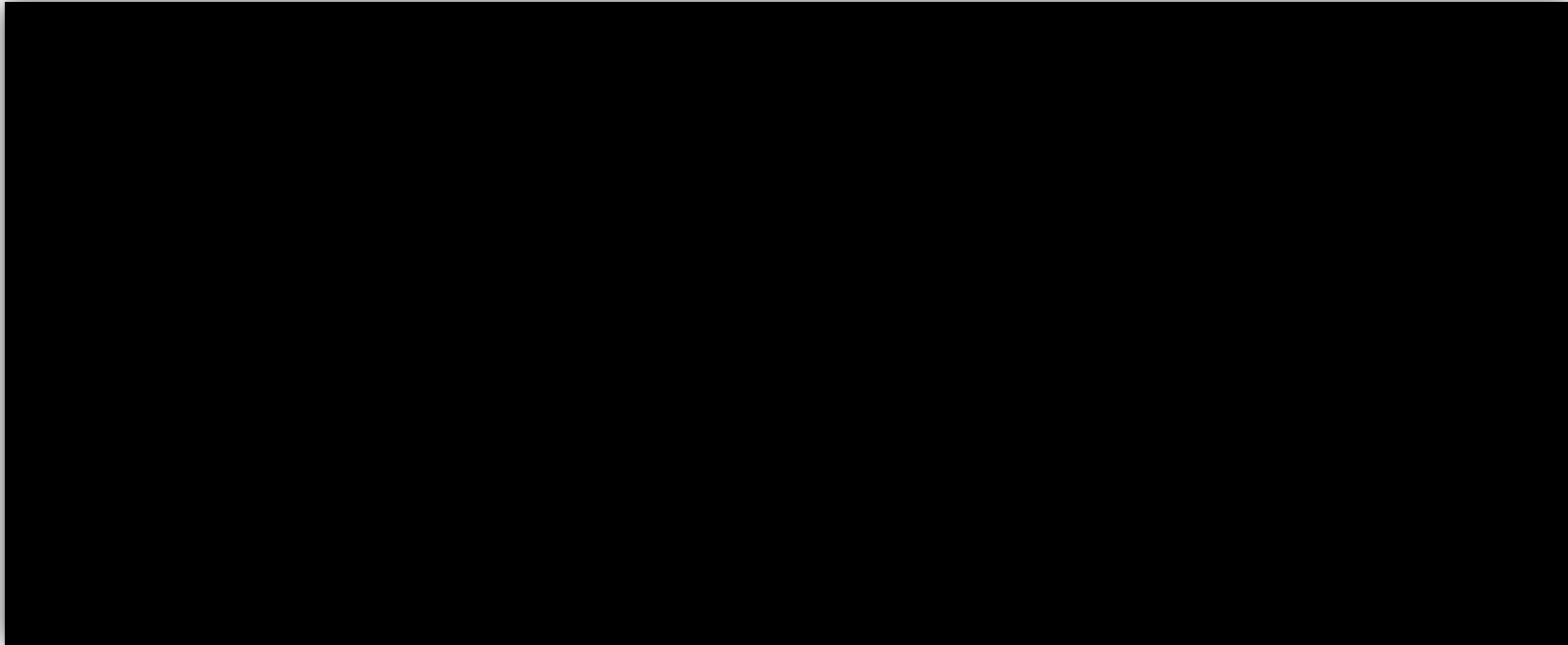
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Questions?