AMS/OFCM FORUM:
OBSERVING THE ENVIRONMENT FROM THE GROUND UP
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Helios®–
BIG DATA IN THE NETWORK OF NETWORKS

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HARRIS TECHNOLOGY TO CONNECT, INFORM AND PROTECT

Paradigm Shift in the Wx Enterprise

Passive Consumption Closed Systems

Content is Created for Designated Distribution

Radar
Forecasts
Internet
Media
Video Feeds
Internet
Television
Cable
Web TV

Information is commoditized, productized, branded, controlled

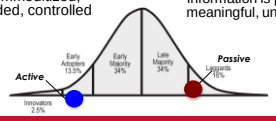
Rate** of change is **data-driven

Active/Inclusive Consumption Open Systems

Content is generated and consumed in real-time for sharing and creating knowledge

Internet of Things
Smart infrastructure
Smart-grid analytics
Autonomous vehicles
Augmented reality
Hyper-local/Personal
Big Data
Social media/networking

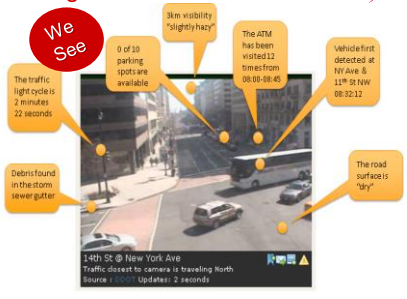
Information is personal, relevant and meaningful, unbranded, uncontrolled



Traffic Camera or Underutilized Asset?

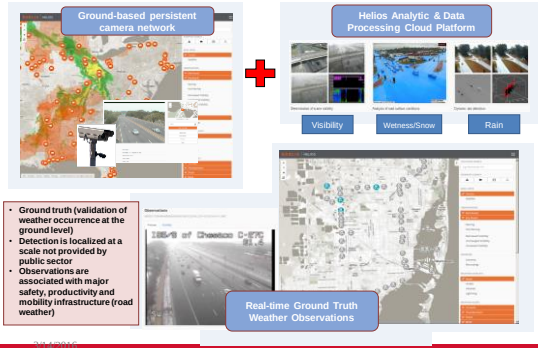
- Traffic Flow
- Environmental Conditions
- Pattern Detection
- Object Tracking
- Surveillance & Monitoring

Overarching Premis



Harris data management and detection analytics transforms under- utilized imaging and observation assets to create a more *"intelligent"* world.

Weather Analytics



- **Ground truth (validation of weather occurrence at the ground level)**
- **Detection is localized at a scale not provided by public sector**
- **Observations are associated with major safety, productivity and mobility infrastructure (road weather)**

Helios® Environmental Intelligence

Real-Time Ground Weather Intelligence:

- Improves the accuracy of short term weather forecasting using visual imagery as validation of real time ground conditions
- Immediate access to weather condition analytics and visual data from aggregated network of more than 35,000 video surveillance cameras
- Visually monitor, search, record, and confirm weather conditions using real time camera views
- Analytics refreshed every 5 minutes to provide up-to-date information with greater than 90% accuracy

Analytics:

- Helios® Visibility Analytic
  - Real-time visibility condition changes caused by fog, heavy rain, heavy snow or even smoke
- Helios® Road Wetness Analytic
  - Confirmation of precipitation affecting road surface
- Helios® Road Snow Analytic
  - Confirmation of snow impacting road conditions, indicating slower traffic and potentially dangerous areas along transportation routes