GXP® Solutions for Airborne ISR
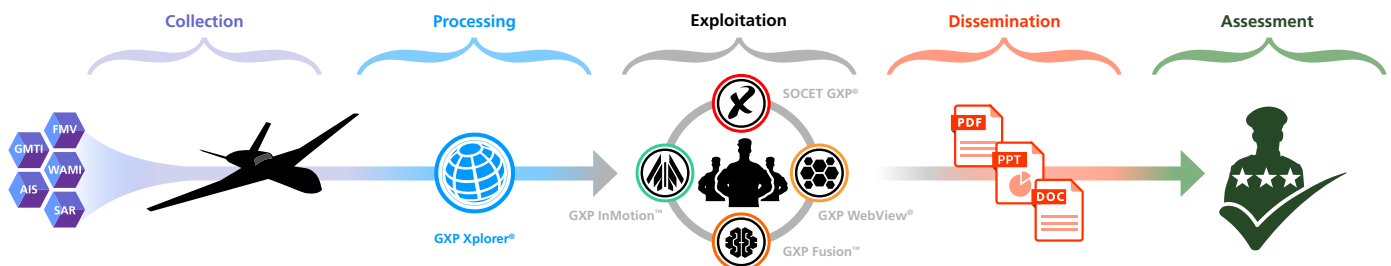
Processing, Exploitation, & Dissemination (PED)

Real-time intelligence generated by Multi-INT Airborne Intelligence, Surveillance and Reconnaissance (ISR) can help vector critical aid to the right location during Humanitarian Assistance/Disaster Relief (HA/DR) operations, or shape the outcome of a battle by locating and tracking an adversary. In both of these cases, analysts require the right tools to discern patterns of life and identify key insights from Mulit-INT ISR collection so that their customers will be armed with the best and most current information.

GXP® software solutions help analysts understand key tasks and targets, while enabling the delivery of timely and accurate intelligence across a variety of mission sets to leadership and partner agencies:

» **Counterterrorism:** Develop pattern based, actionable intelligence that drives operations to counter the threat.

» **Border Security:** Stay ahead of incursions, illicit activity, and other trans-national issues with watchboxes and automatic alerts for cross-border activity.

» **Maritime Domain Awareness:** Understand the maritime picture before checking on station. Normalcy modeling defines the maritime pattern of life and hotspot locations.

» **HA/DR:** Quickly identify and triage affected areas, and find viable routes and landing zones for first responders.

GXP software optimizes ISR efforts by allowing users to:

» **Eliminate data silos** created by ISR Platform and sensor-specific software

» **Gain total situational awareness** of the collection environment, targets of interest, and desired outcomes

» **Automate workflows** with human-machine teaming to screen imagery, video, documents, and products for a decisive information advantage

» **Accelerate intel sharing** with a coherent picture of all collection activities

» **Identify collection gaps** through visualization of data footprints by location over time

» **Simplify data management** with rules for retention and accessibility

GXP Geospatial solutions to ensure **a safer world.**

BAE SYSTEMS

GXP addresses a wide range of challenges across the Tasking, Collection, Processing, Exploitation, Dissemination, and Assessment phases of the ISR Cycle:

Challenge: Using multiple tools to analyze disparate data types from different ISR Platforms creates data silos and inefficient collaboration

Solution: GXP software is sensor and platform agnostic supporting a wide range of data types and formats to facilitate cross-cue. In addition, GXP applications are tightly integrated and aided by Workflow and Mission tools, effectively driving analyst teaming and Quality Assessment/Quality Control (QA/QC).

Challenge: Identifying changes in activity is extremely difficult

Solution: GXP automatically extracts and exposes rich metadata on ingest to tag time, location, and attributes for search and discovery. This allows users to easily find and incorporate data, reports, and observations from prior missions for added context and comparison.

Challenge: Intel data and products are too large for email, and in other cases the data can't be reformatted for wider dissemination

Solution: GXP can simultaneously publish to multiple formats and disseminate intel products to other platforms, higher headquarters, and partners. Users can stream imagery and live video across disadvantaged networks using the GXP Pixel Streaming capability and HTTP Live Streaming (HLS) to send data anywhere.

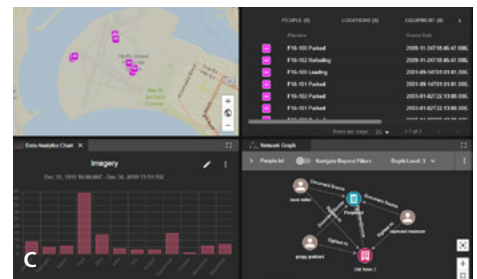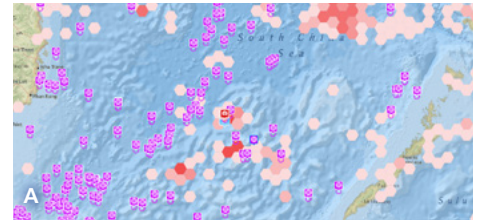## Challenge: Geographically separated analysts cannot be connected

Solution: GXP can federate data across multiple organizations to enable wide data access, prevent unnecessary data duplication, and support real-time collaboration around live data.

Challenge: Not enough time or manpower to exploit all available data

Solution: GXP has a variety of combat-proven machine learning capabilities that allow analysts to analyze more data, detect things that might have otherwise been overlooked, and complete tasks faster. Automated workflows incorporate critical feedback loops without breaking existing analyst workflows.

Challenge: Management of Big Data is increasingly difficult

Solution: GXP data management software allows you to retain all of your mission products (videos, images, PPT, PDF, KML) and make them searchable for the entire PED team.

A) Clusters of dark maritime activity in the South China Sea detected using Radio Frequency Geolocation (Data Courtesy of Hawkeye360)

B) Full Motion Video (FMV) with Augmented Reality (AR) overlays in GXP InMotion; Gridded Reference Graphic illustrating moving objects detected and tracked by the Tracking Analytics Software Suite (TASS) (Full Motion Video from MX-15, L3 Harris)

C) Analysis of activity trends and entity relationships with GXP Fusion software

Supported data types include:

» Panchromatic Imagery (PAN), Multispectral Imagery (MSI), Hyperspectral Imagery (HSI), Synthetic-Aperture Rader (SAR)

» FMV

» Wide Area Motion Imagery (WAMI)

» Moving Target Indicator (MTI)

» Electronic Signals

» Feature Data

» 3-D & Point Cloud

» Third-Party Databases

» Reports (Microsoft®, Adobe® PDF)

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