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Esri International User Conference
San Diego, California

Technical Workshops | July 26, 2012

Military Planning and Operations

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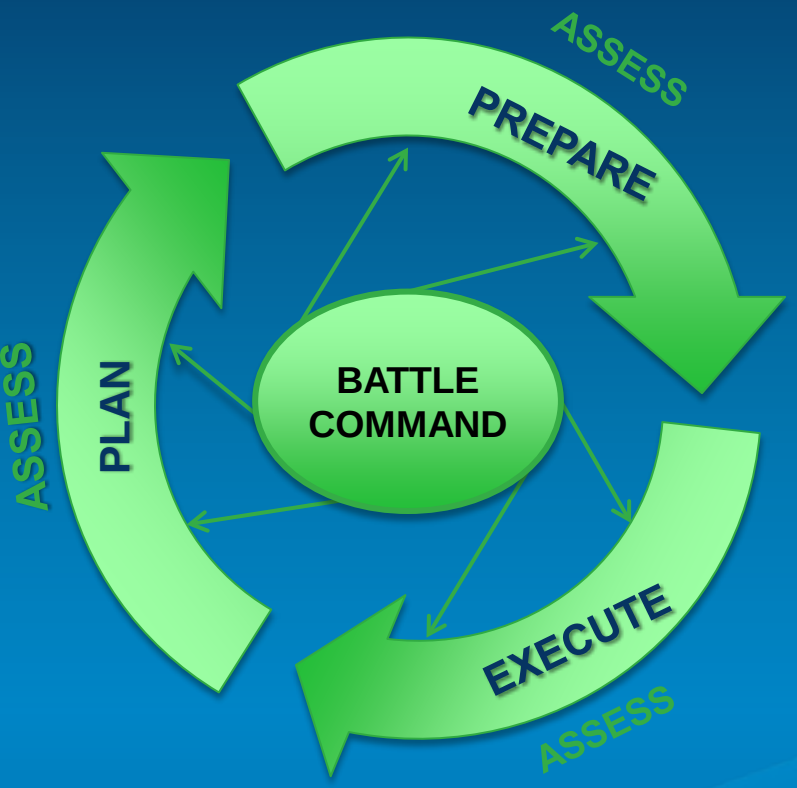
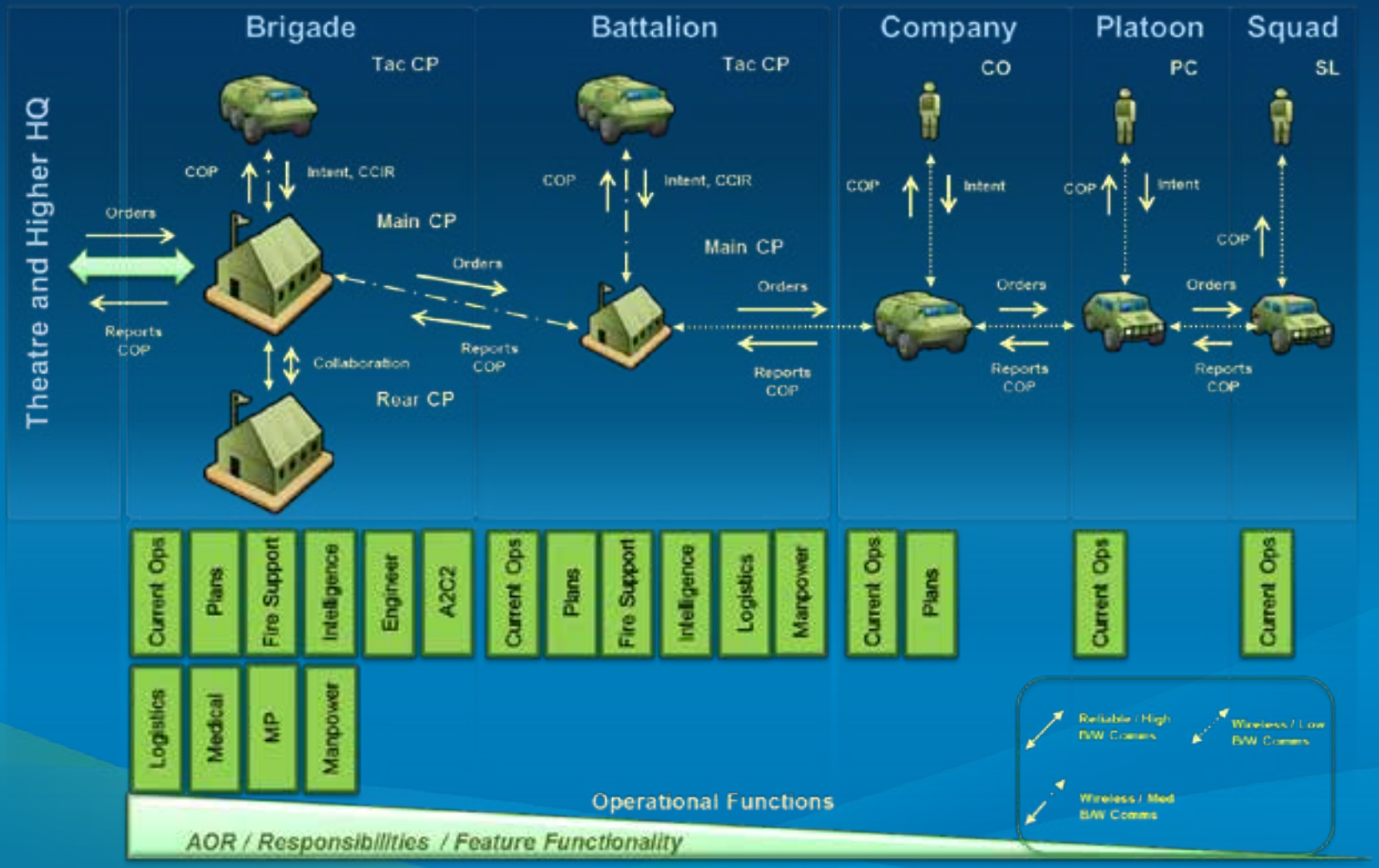
Derek Foll

Goals of the workshop

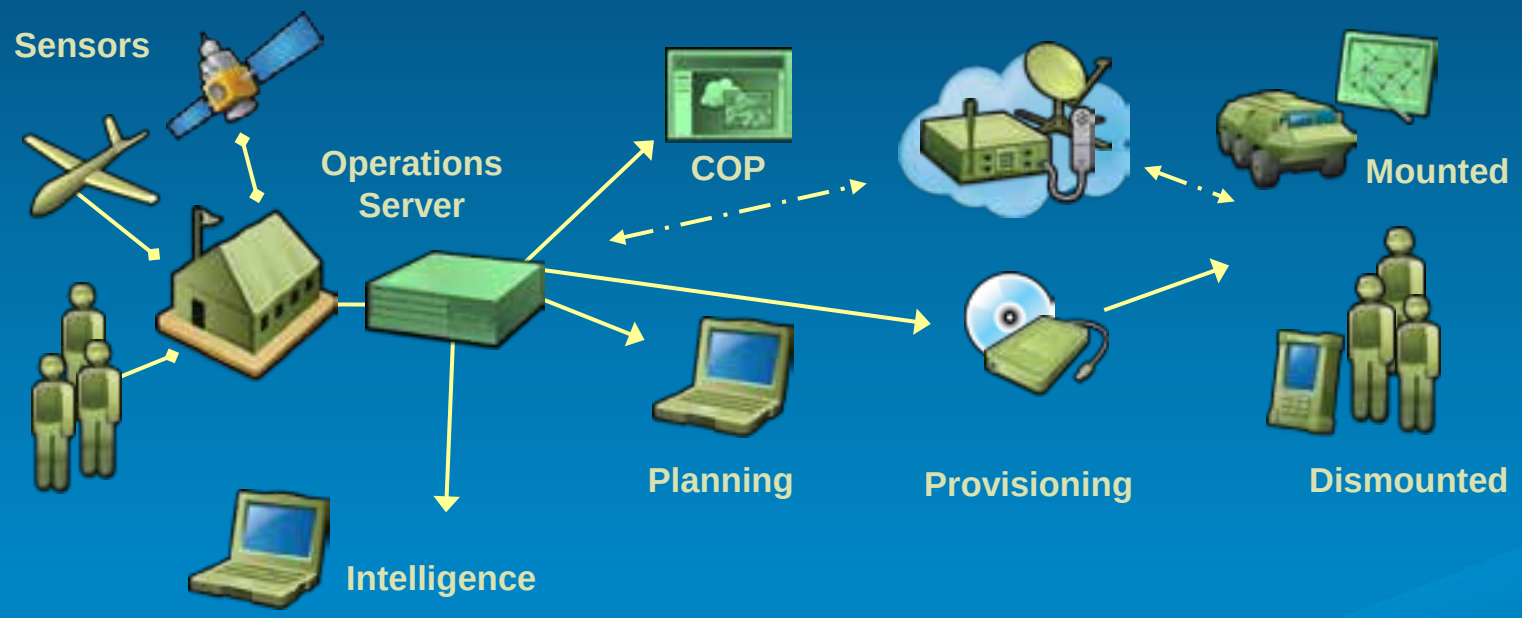
- Briefly review ArcGIS for the Military Land Ops concept
- Explain how ArcGIS is configured to support
  - Sharing & collaboration
  - Connected vs mobile environments
  - Planning & Analysis
  - Current Operations
- Highlight ArcGIS.com resources
- Recommendations and best practices

The Operations Process

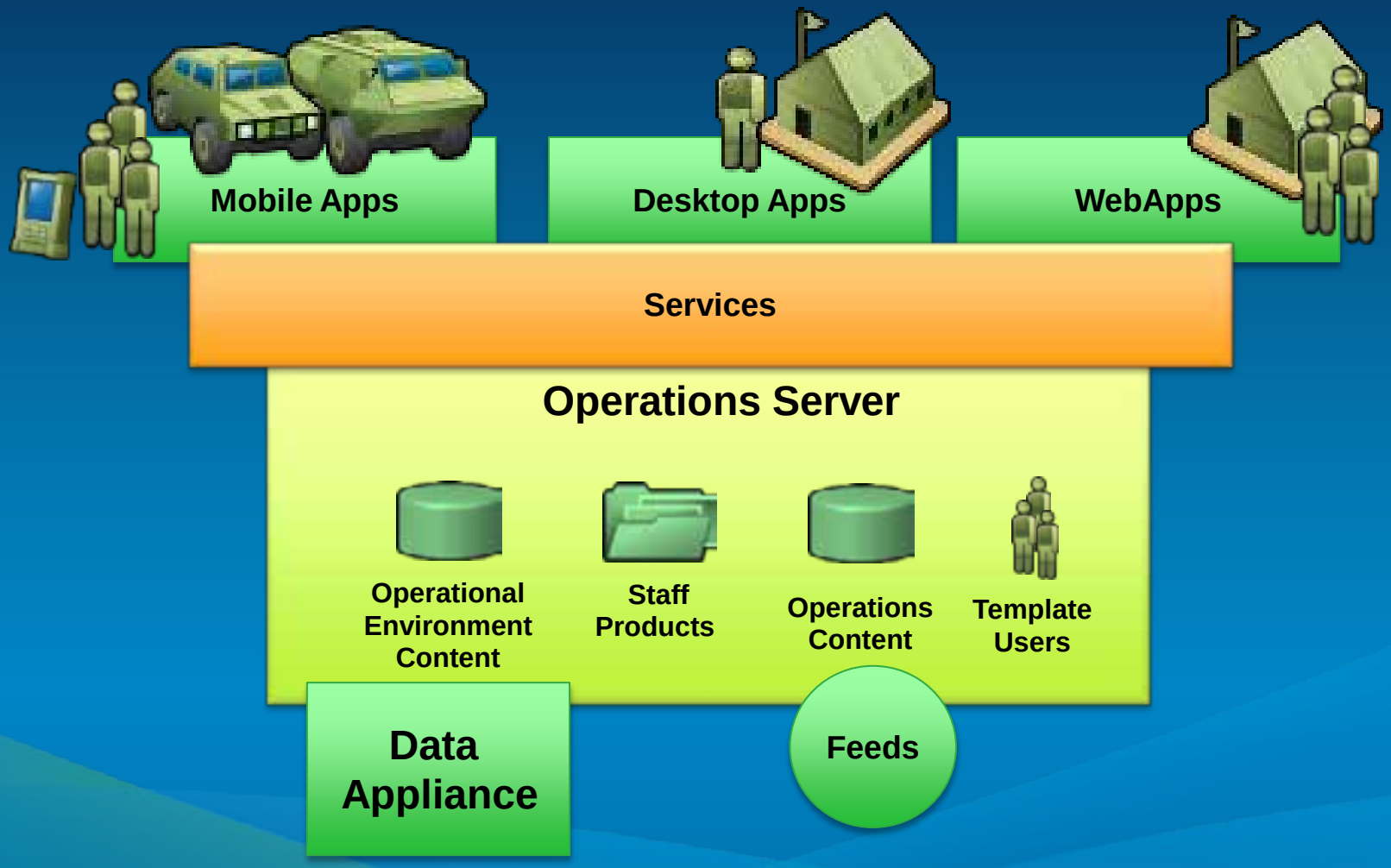



Theatre and Higher HQ
Brigade
Battalion
Company
Platoon
Squad
Tac CP
Tac CP
CO
PC
SL
COP
Intent, CCIR
COP
Intent, CCIR
COP
Intent
COP
Intent
COP
Orders
Main CP
Main CP
Orders
Orders
Orders
Orders
Reports
COP
Reports
COP
Reports
COP
Reports
COP
Reports
COP
Collaboration
Rear CP
Current Ops
Plans
Fire Support
Intelligence
Engineer
A2C2
Current Ops
Plans
Fire Support
Intelligence
Logistics
Manpower
Current Ops
Plans
Current Ops
Current Ops
Logistics
Medical
MP
Manpower
Operational Functions
AOR / Responsibilities / Feature Functionality

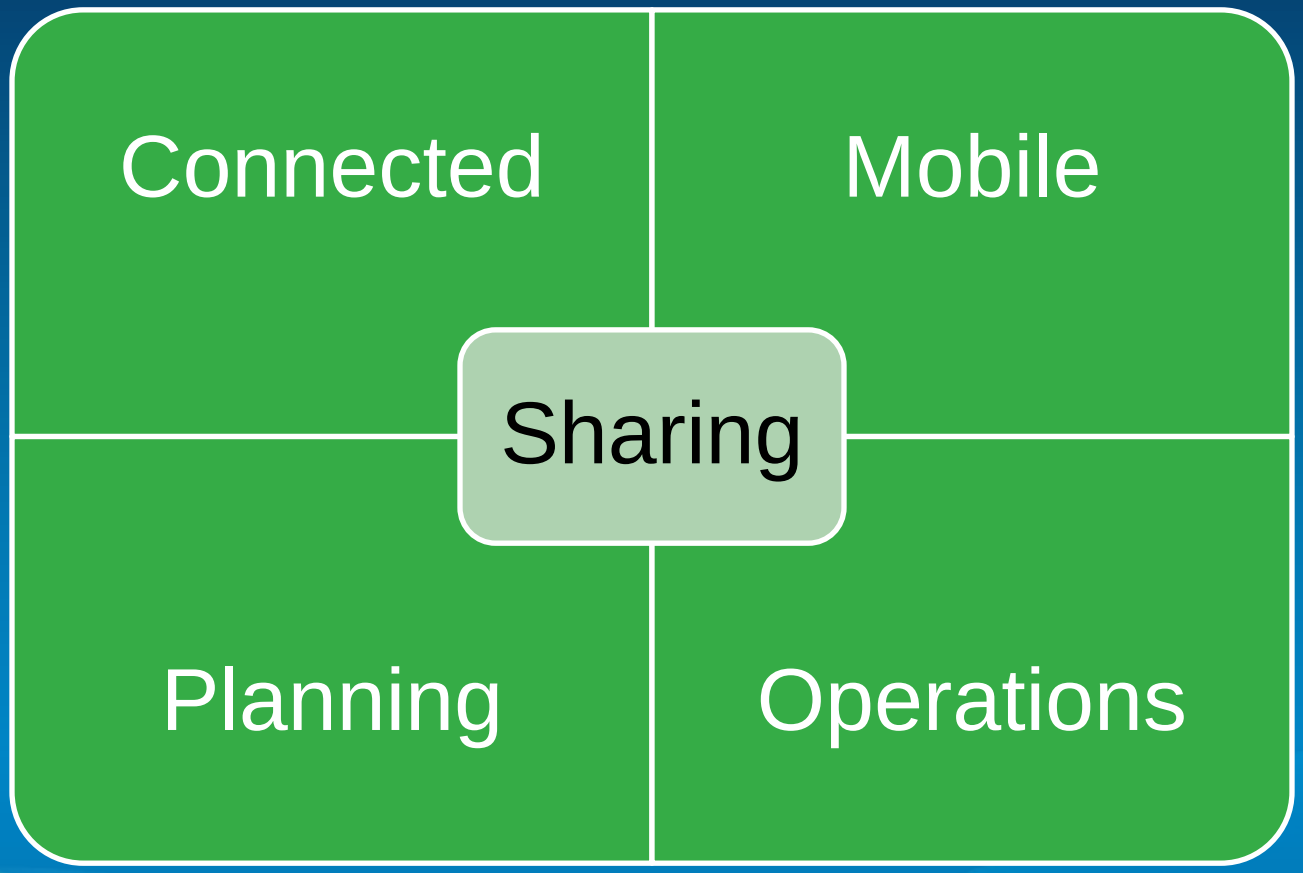
ArcGIS for the Military – Land Operations



Operations Server



Solution Patterns



Connected

- High speed network
- Range of devices

- ArcGIS 10.1
  - Server and Portal
  - GeoEvent Server
  - Web applications
  - Desktop
  - Runtime
  - Viewer

Mobile

- Connected over tactical radio
- Small form factor devices

- ArcGIS Runtime clients

- Peer to Peer Messaging
- File based provisioning & update

- Services if available

Sharing Maps

- Users share information with each other as packages
  - Packages encapsulate all aspects of a GIS
    - Symbology
    - Tools
    - Data

- Users share GIS with <u>everyone</u> through services
  - Shared across the web and mobile devices through web maps and apps
  - Web maps define the layers/popups for the services
  - Apps bring the map to life in browsers and devices

Planning

HQs Product Groups

Published Products

Tools & Templates Groups

Map Templates
Tools

Functional Product Group

Published Options

EVENTEMP Development

OPS/INTEL

OPERATIONAL ENVIRONMENT

ENEMY COA

MCOO

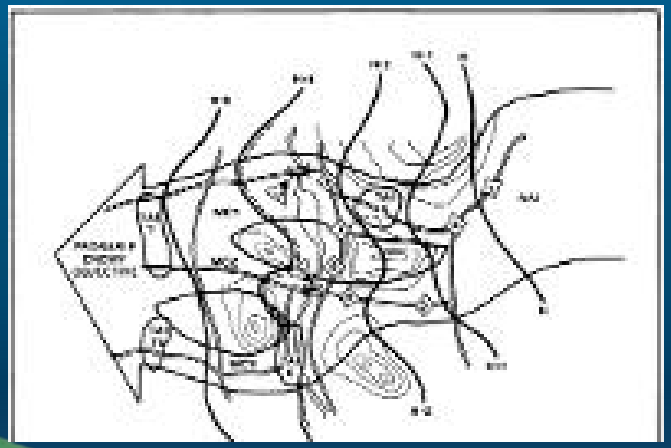
ISR PLANNING

NAI Template

ISR OPS

NAI Options

EVENTEMP Decision Support Template



Package Workflow

- Open Map Template (Map Package)
  - Contains user task layers & tools
  - Can reference useful services
  - Can contain default data – ORBAT, standard plan features
- Add data to support decision
  - Layer packages or services from portal
- Create own product
  - Update task layers
  - Standard procedures for updating other users layers
- Deliver product as layer pack
- Share tradecraft, save working environment as map package

Lightweight Planning – Observation Post Layout

OPERATION Group

COP Plans

Connected or disconnected

Tactical planning, reconnaissance, survey

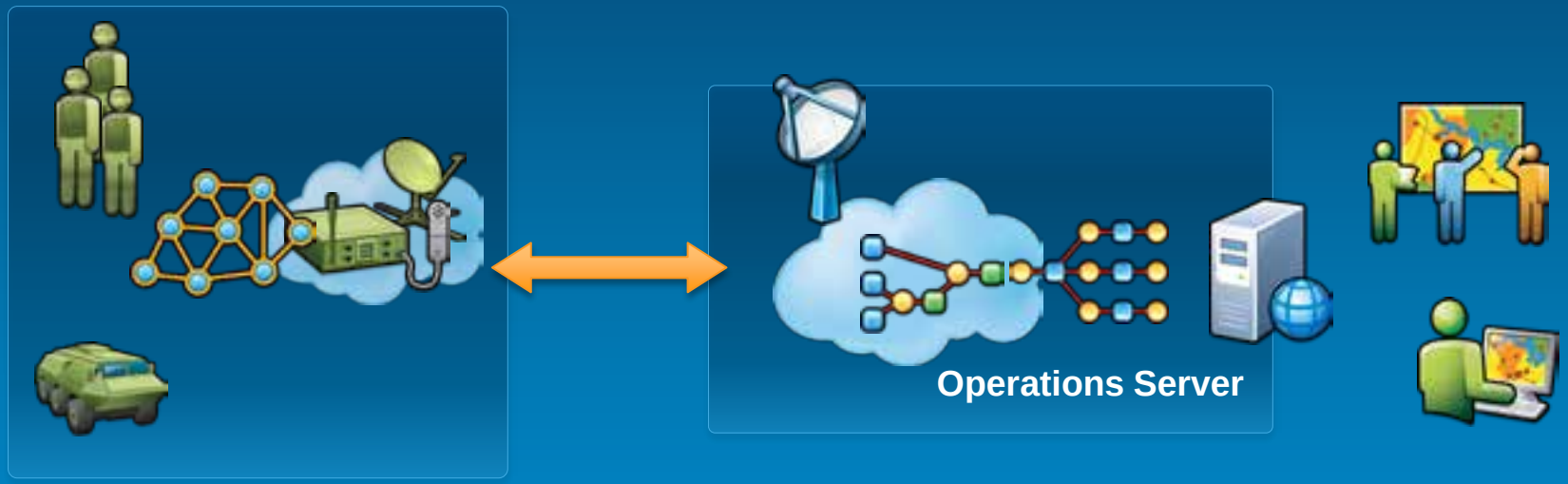
Lightweight Planning

Planning Key Points

- Ad-hoc process, multiple options & versions
- Support different theaters and mission types
- Mobile and HQ environments

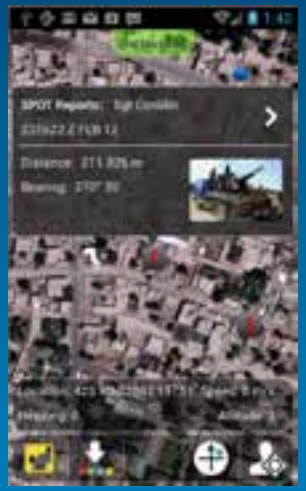
- Document style workflow, portal groups & packages
- Limited structure

Operations

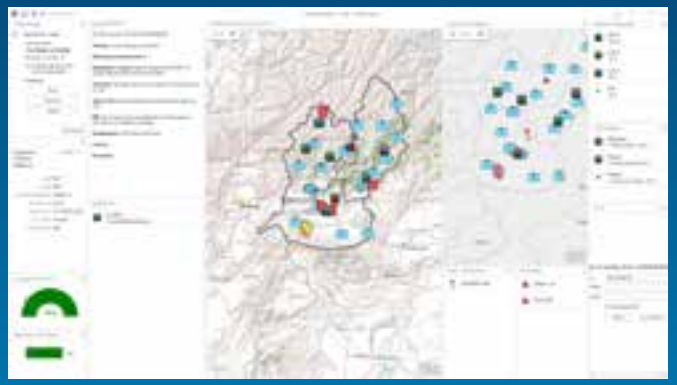


Operations Server Components

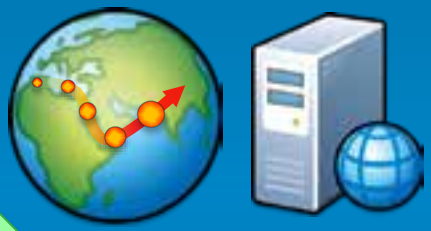
Squad Leader



ArcGIS Viewer Dashboards



GeoEvent Server



ArcGIS Server

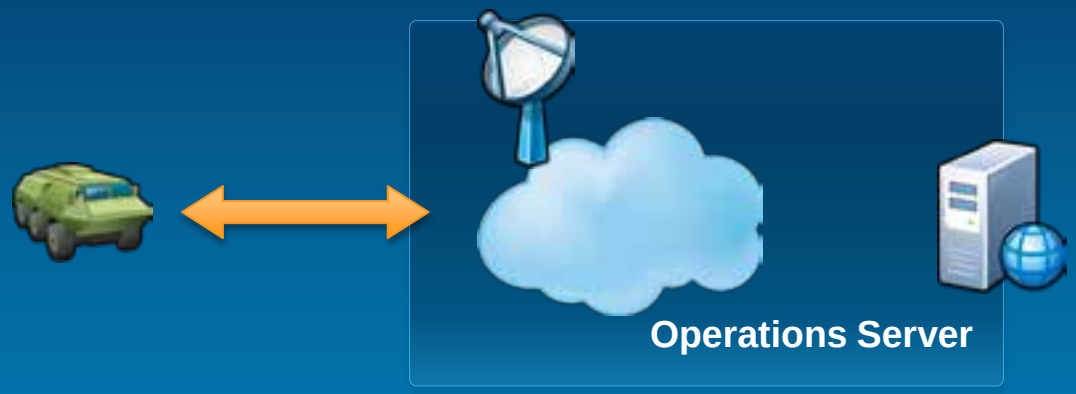
Vehicle Commander

GeoMessage

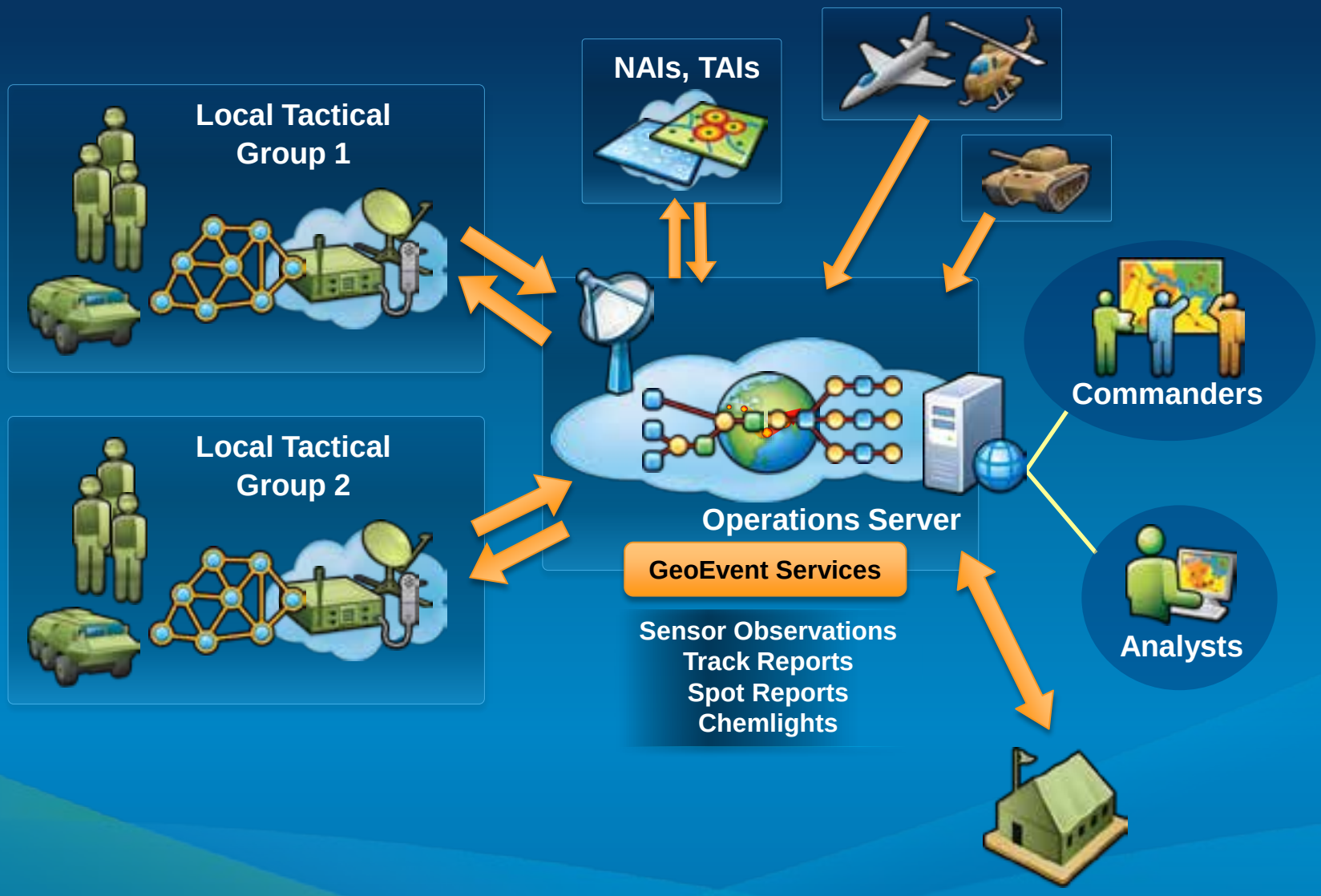
ArcGIS for the Military
GeoEvent Server Template

Publish Plans

Provisioning & Update



Mounted & Dismounted Apps


Local Tactical Group 1
Local Tactical Group 2
NAIs, TAIs
Operations Server
GeoEvent Services
Sensor Observations
Track Reports
Spot Reports
Chemlights
Commanders
Analysts

Operations Server Configuration

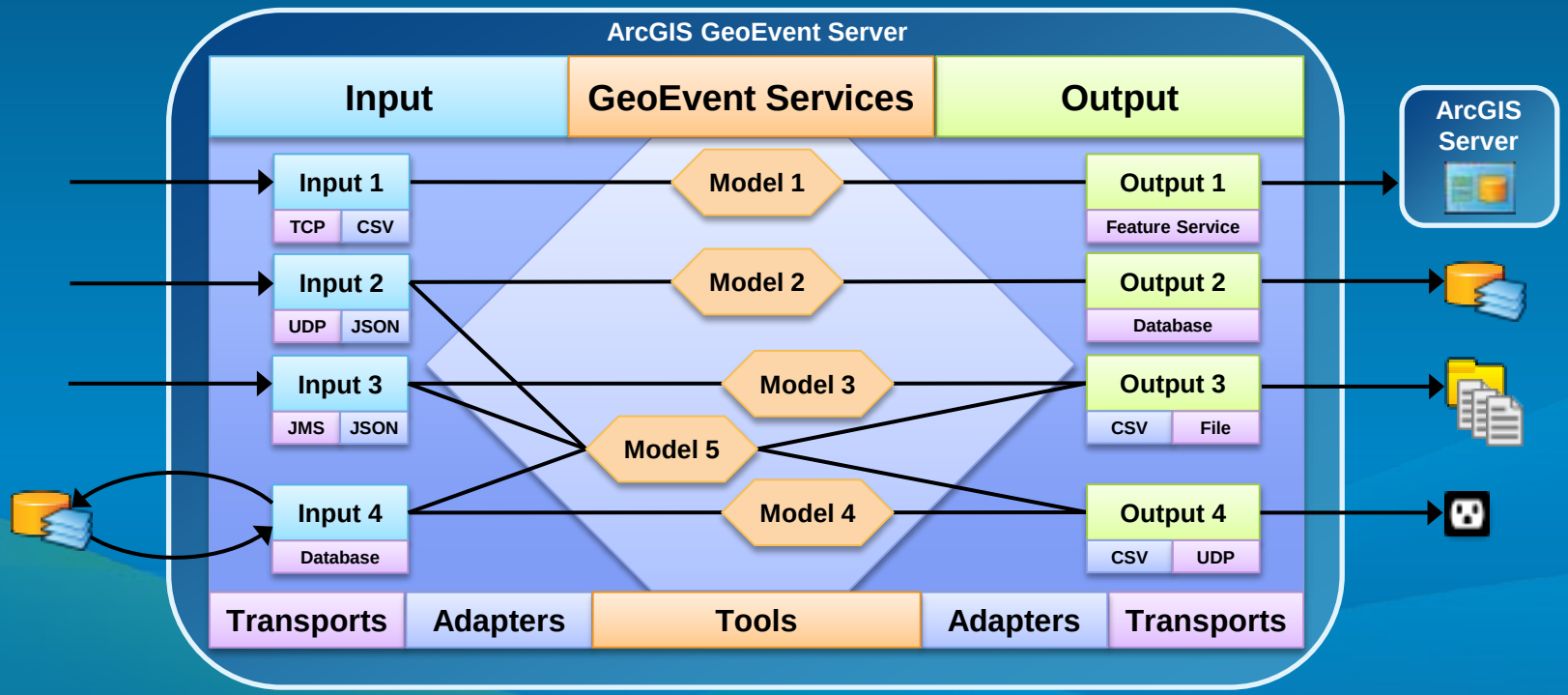
Services

- Control Measures
- ISR Plan
- Ops Locations
- Ops Reporting
- Tactical Locations
- Tactical Reporting

ArcGIS GeoEvent Server

Analyzing GeoEvent Streams

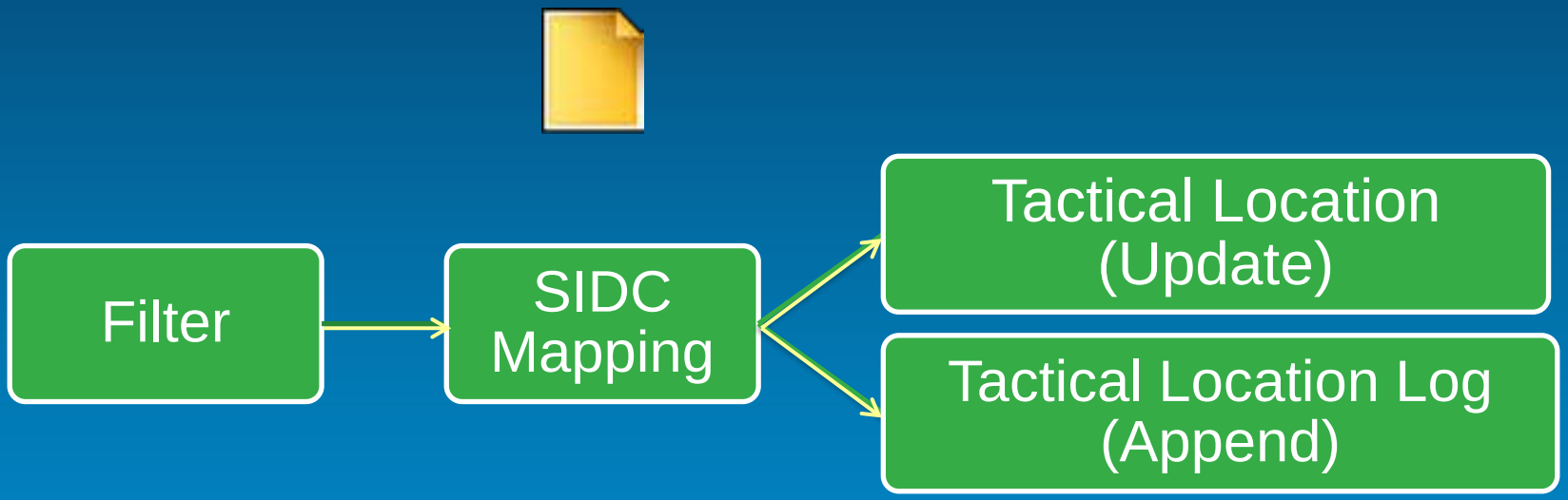
- **GeoEvent Services** are configured to connect Inputs, GeoEvent Models, and resulting output:
  - **GeoEvent Models**: perform continuous Processing and Analysis of GeoEvents received from Inputs.



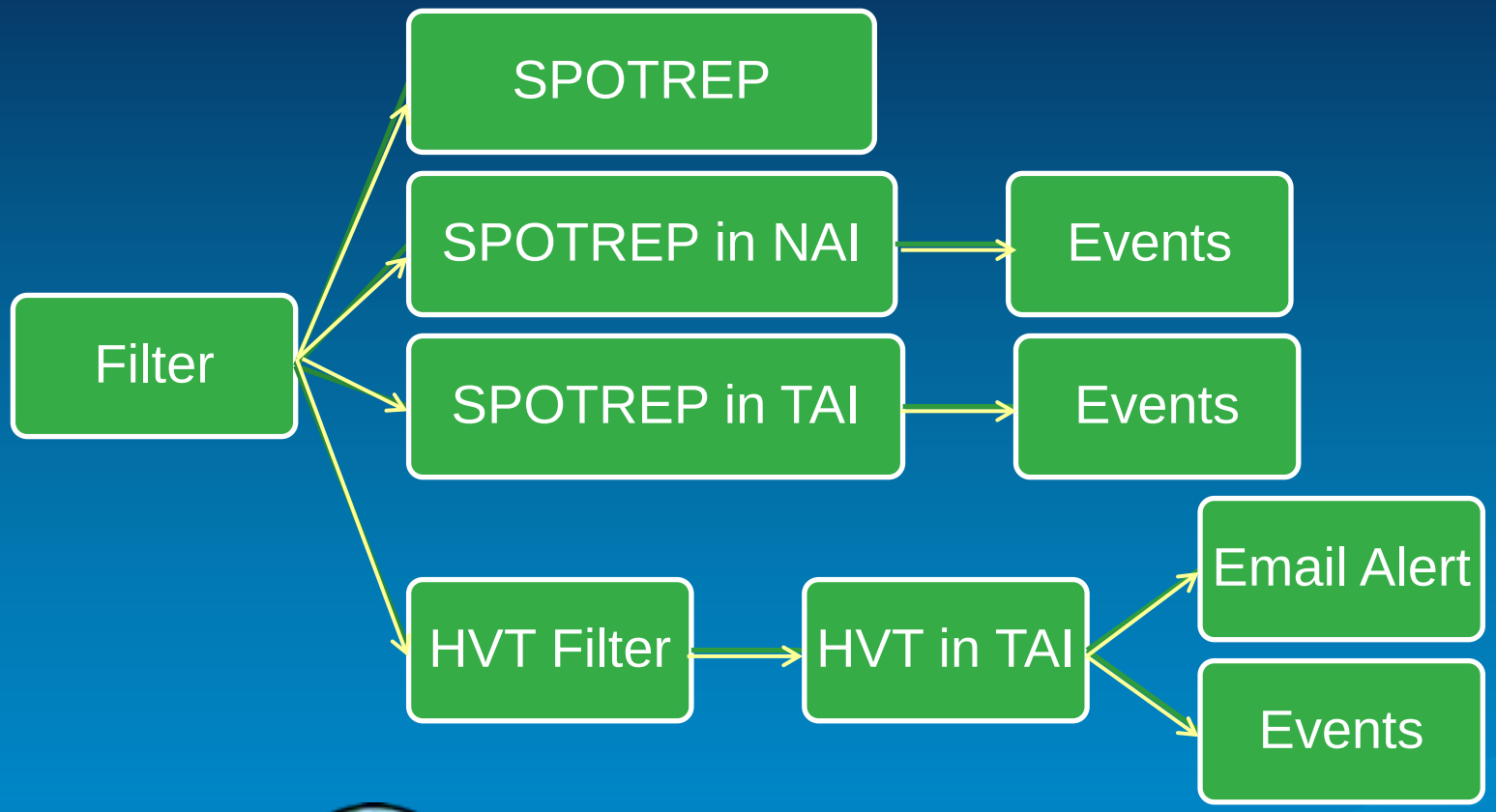
Supported Message Formats

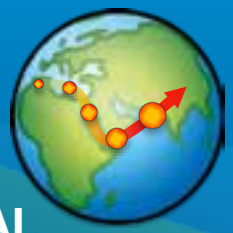
- GeoMessages
  - Trackrep
  - Chemlight
  - Spotrep / SALUTE
  - SLANT report
  - SITREP
  - BEDAVAIL
  - MEDEVAC
  - EOD 9 LINE
- GeoEvent Server
  - VMF
  - CoT

Track Processing



SPOTREP Processing

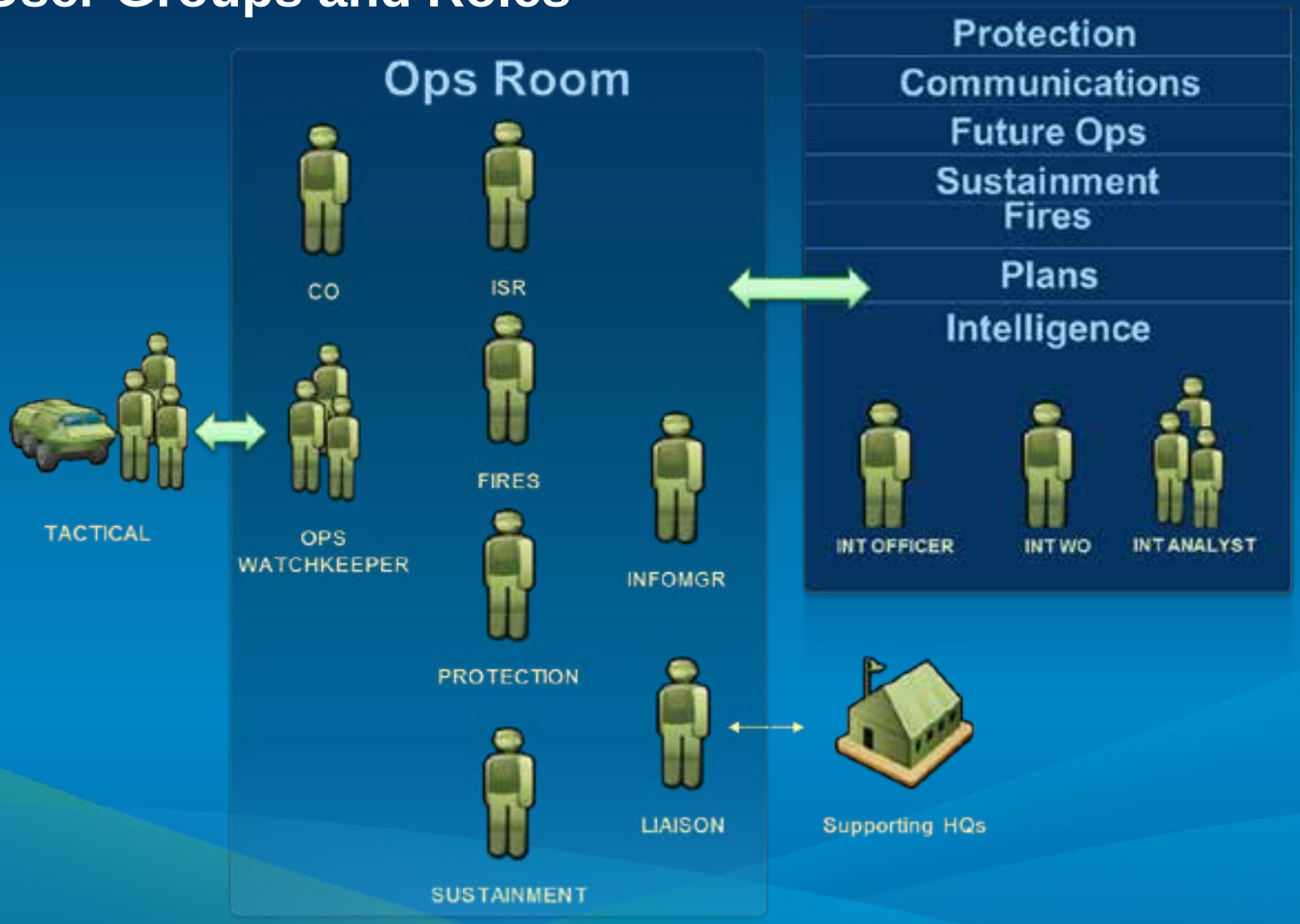




ISR Plan
- NAI & TAI

AGES Defense Template

User Groups and Roles



Current Operations Applications

Summary

- Reviewed ArcGIS for the Military Land Ops concept
- Explained how ArcGIS is configured to support
  - Sharing & collaboration
  - Connected vs mobile environments
  - Planning & Analysis
  - Current Operations
- Highlighted ArcGIS.com resources
  - resources.arcgis.com
- Suggested best practices

Questions

Thank you!

Please fill out evaluations (we need to feel loved!!)

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Coming Up:

- **Using Imagery for Intelligence Analysis @ 3:15 pm**

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