



CDAO

Joint All-Domain Command and Control (JADC2)

Experimentation, Data Integration Layer, Mission Applications

CLEARED
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NO SCRIPT PROVIDED

Our JADC2 Focus Areas



There are 3 key areas we are aligned to support:

Global Information Dominance Experiments (GIDE)

Overview:

- Rapid experimentation with JADC2 across Joint Force focused on CY23 fielding
- Metrics-based analysis and evaluation

Next Steps:

- GIDE 6: 1 Jun - 30 Jul 2023

Enterprise Data Mesh Services (Data Integration Layer)

Overview:

- Purpose-built data mesh services (e.g., API registry, pub/sub interface, transforms, etc.)
- Prioritized curated data services for warfighters, data producers & consumers, and developers from UNCLASS to fully informed

Next Steps:

- Deliver Initial DIL in FY23

Mission Applications

Overview:

- Consolidate existing software licenses across CCMDs to share functionality and reduce enterprise costs.
- Provide acquisition on-ramp for new commercial software developers

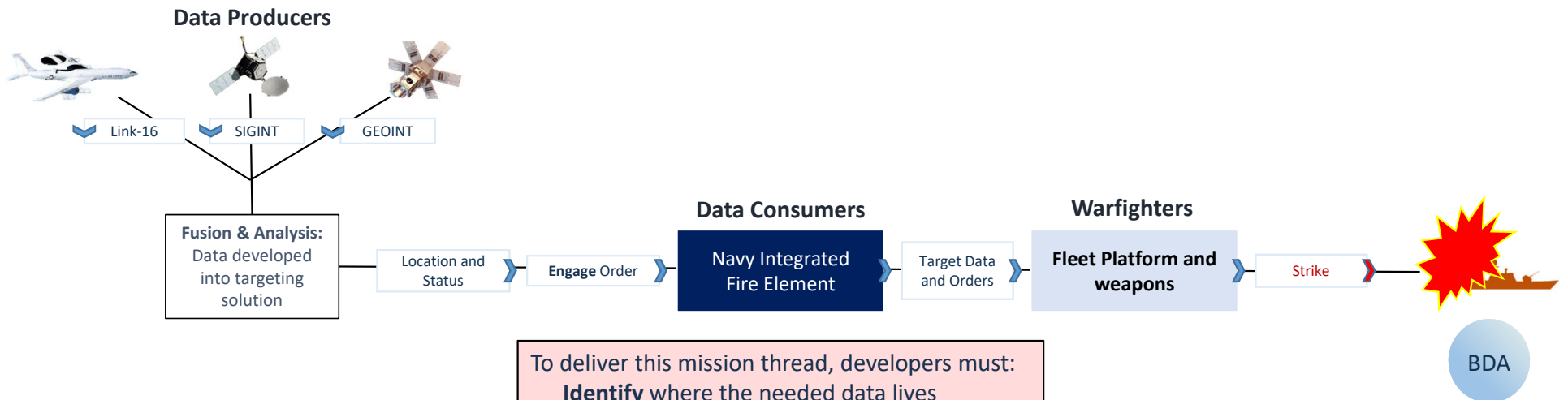
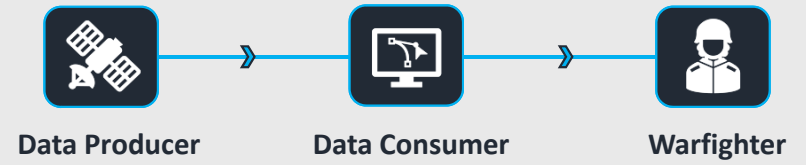
Next Steps:

- Work with CCMDs to identify software for purchase

TODAY: Long Range Precision Fires



Challenge: Data integration workflows are executed manually as point-to-point connections, with a single pipeline developed per data source, per application, per mission thread. This results in an exponential explosion of work and does not meet the pace, scale and complexity of the modern fires mission.



To deliver this mission thread, developers must:

- Identify** where the needed data lives
- Request** and receive access to the data
- Ingest** multiple data feeds
- Consume** the data into their application
- Process** and transform the data as needed
- Publish** application outputs to other apps

The DIL Uses Data Mesh Principles



	Domain-Oriented Ownership	Data-as-a-Product	Self-serve Data Platform	Federated Computational Governance
WHAT	<p><i>Example Domains:</i></p> <ul style="list-style-type: none"> • Source Aligned (e.g. NTM Service Platforms, etc.) • Aggregate (e.g., CIP, COP, etc.) • Consumer Aligned (e.g., ops, intel, logistics, etc.) 	<p><i>Example Data Products:</i></p> <ul style="list-style-type: none"> • Target Quality Tracks • Blue Force Tracks • Weapons Salvos • Munition Availability 	<p><i>Example Services:</i></p> <ul style="list-style-type: none"> • API Registry • Query/Search • Pub/Sub • Data Transforms • Data Provenance • CDS/MLS 	<p><i>Example Governance:</i></p> <ul style="list-style-type: none"> • Standards as code • Policies as code • Monitoring
HOW	<ul style="list-style-type: none"> • Conduct Mission Engineering Analysis to map Priority Mission Threads/Kill Chains to Data Domains • Identify/establish relevant Domain Owners 	<ul style="list-style-type: none"> • Identify product owners • Make data accessible through APIs by: <ul style="list-style-type: none"> • Provide funding to Domain Owners • Provide resourcing/engineering support • Go through PBR/Budget process to resource Domain related programs 	<ul style="list-style-type: none"> • Develop prototype capability • Incrementally deploy and validate 	<ul style="list-style-type: none"> • Establish initial governance model and prototype "as code" capabilities as part of experimentation



Application of the 4 data mesh principles will connect relevant data producers to data consumers and the Joint Warfighter



Industry Asks



- What emerging capabilities can be used today in experimentation?
- What additional data services do we need within the DIL?
- What would allow for more rapid commercial software development? How can we improve software onboarding?
- How might this impact the software industry business model?