NATO OTAN ALLIED COMMAND TRANSFORMATION

CAPDEV/CAP

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INFORMATION ENVIRONMENT ASSESSMENT CAPABILITY (IEAC) RFI – ACT – SACT – 21 – 129 Q&A

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Information Environment Assessment Capability

RFI – ACT – SACT – 21 – 129 – Q&A

AGENDA

- Administration / GoToMeeting set up
- ACT and IEA team presentation
- Capability Overview
- Forwarded Questions
- Discussion – in session Q&A

Information Environment Assessment Capability
RFI – ACT – SACT – 21 – 129 – Q&A

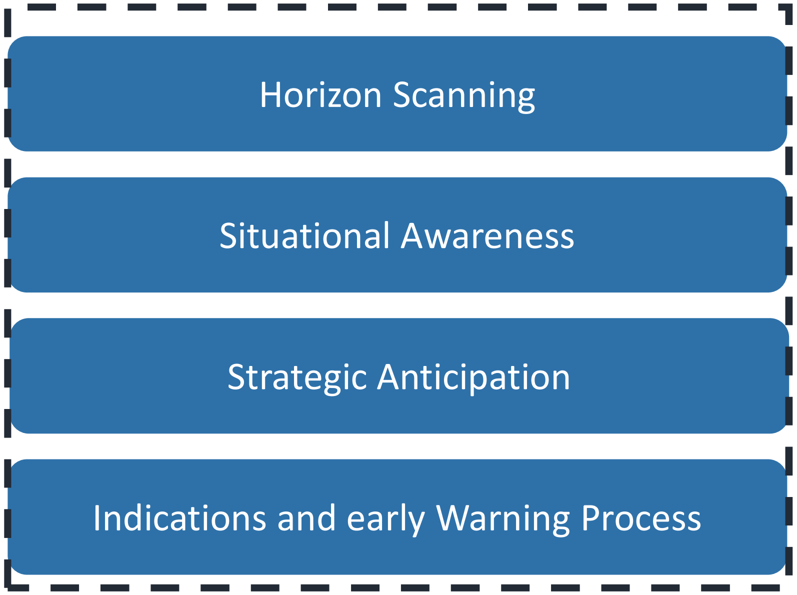
Administration / GoToMeeting set up

- Camera and Microphone turned off for non NATO attendees
- First name only to identify your participation
- Further identification will be done on the Chat
- The session is recorded and will be available on ACT website
- Questions received prior to this session will be addressed first
- Any other questions from the Chat will be addressed next

IEAC – RFI – Background

IEAC – Overview

- Addressing the need to develop IEAC for NATO
- Supporting decision-making on all levels



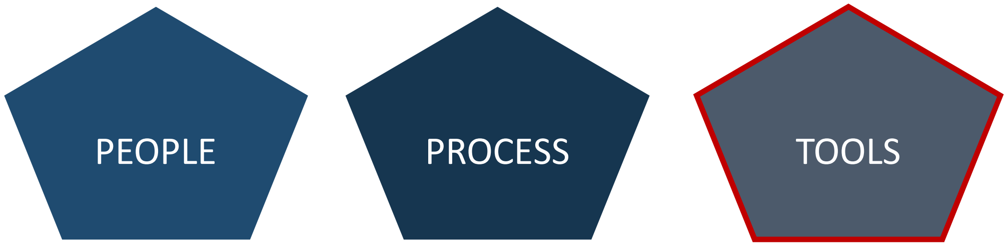
Horizon Scanning

Situational Awareness

Strategic Anticipation

Indications and early Warning Process

IEA Elements:



PEOPLE

PROCESS

TOOLS

IEAC – RFI – Background

The intention is to reach an **improved ability to access and understand the information environment** and to inform decision-making in a context of today's hyper-connected global society.

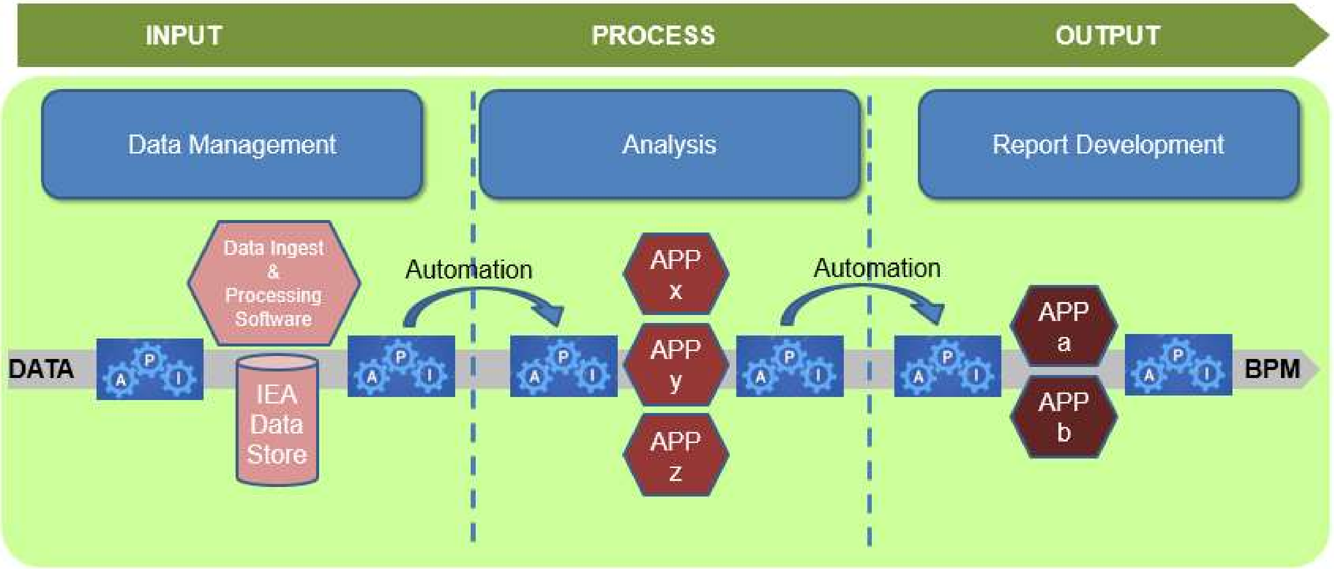
NATO requires an Information Environment Assessment (IEA) Capability that combines analysts' experience with integrated **data management**, **predictive analytics**, **visual representation**, and a comprehensive understanding of the IE concerning **own, earned, and hostile communications** in one platform.

The capability requires a blend of three elements: **people**, **process**, and **tools** – properly trained and organized analysts following defined processes in a coherent and informed manner, and using **powerful and adaptive tools**, including a common digital platform enabled by a range of data sources.

IEAC – RFI – Background

CPP Technical Architecture

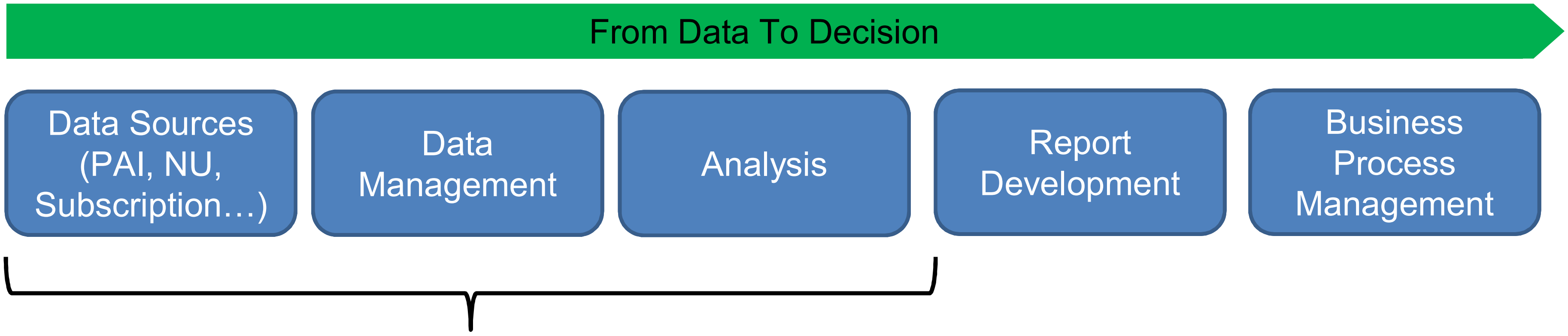
- **Target or Future** state
- Provides **maximum flexibility**, **scalability** & **modularity**
- Comprised of three functional groupings of **interoperable components**
  - Data Management
  - Analysis
  - Report Development
- **Data & BPM fully supported**; however outside scope



API = Application Programming Interface
APP = Application
BPM = Business Process Management Process (i.e., Tasker Tracker)

IEAC – RFI – Background

- **Non-monolithic modular** componentized solution
- Full scope of the capability involves Data to Decision
- RFI is limited from **Data Sources, Data Management** to **Analysis**
- The APIs provide the method of integration between the components and between the elements that make up the components to support scalability and flexibility.



From Data To Decision

Data Sources (PAI, NU, Subscription…)

Data Management

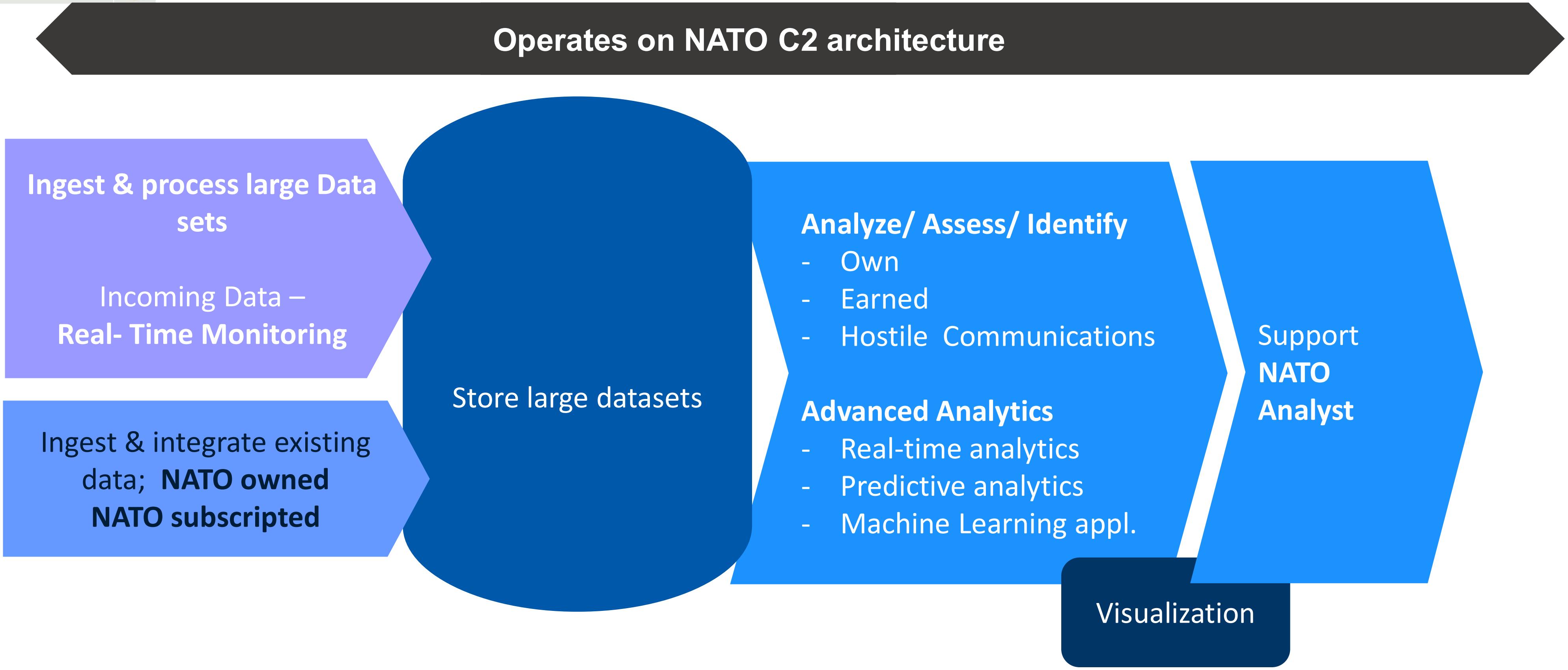
Analysis

Report Development

Business Process Management

RFI Scope

IEAC – RFI – Background



Operates on NATO C2 architecture

Ingest & process large Data sets

Incoming Data –
Real- Time Monitoring

Ingest & integrate existing data; **NATO owned NATO subscripted**

Store large datasets

Analyze/ Assess/ Identify
- Own
- Earned
- Hostile Communications

Advanced Analytics
- Real-time analytics
- Predictive analytics
- Machine Learning appl.

Support
NATO Analyst

Visualization

Flexibility – Adaptable for changes

IEAC – RFI – Background

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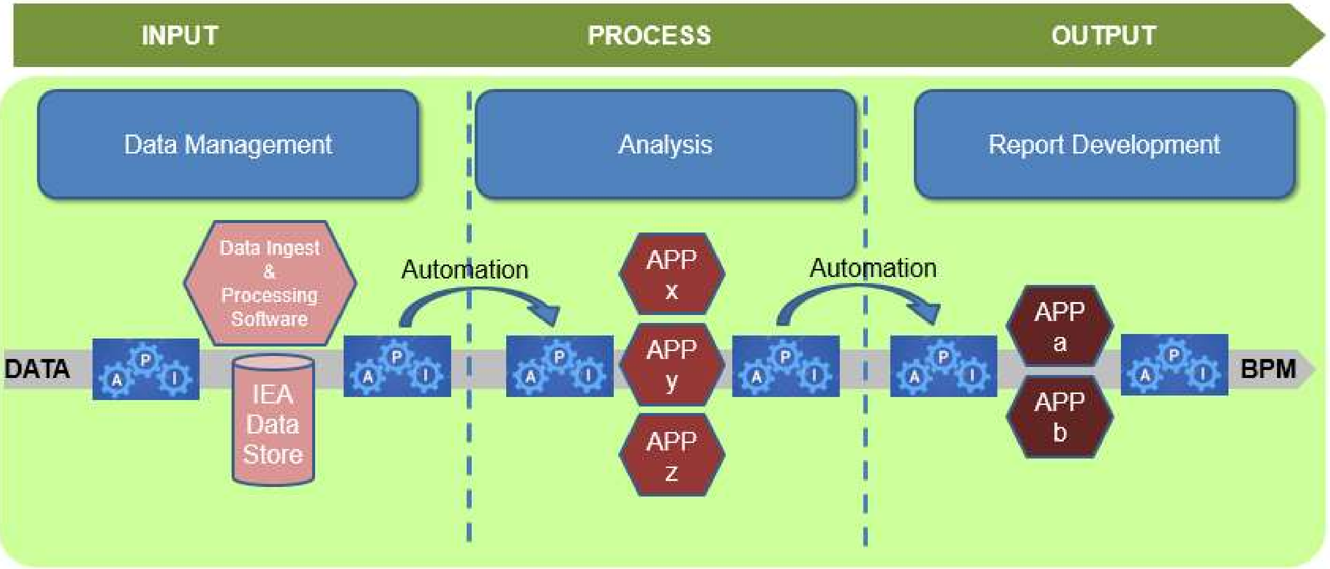

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Forwarded Questions

1. Could you please provide further information on the technical specifications/ requirements for the integration of the tool into the NATO enterprise information systems environment? Could you please provide further information on the technical specifications/ requirements for the integration of the tool into the NATO enterprise information systems environment?

The technical requirements and specifications have not been selected yet, and will be informed by responses to this RFI as well as solution component selection.

This is something that would need to sit within a NATO firewall, so there are things we can't go into in terms of those technical aspects. So you'd just have to be compliant with any of our NATO restrictions in terms of putting it behind our firewall.

2. Could you please further define the components of the IE that need to be covered by the tool? Is Social Media part of the targeted data sources?

Yes in as much as it falls into PAI.

3. Are there sources that are explicitly excluded?

Data restricted above NATO Unclassified, and any PAI data secured behind firewalls and other protection (i.e., username, password).

Data Sources fall into three categories:

Publicly Available Information (PAI)
NATO subscripted data sources
NATO available information (NATO unclassified)

Dark Web is excluded. But we can do Deep Web in terms of paid subscriptions. We have to follow the social media policies for each site. They all have specific policies they adhere to.

Password protected is not the right term. Password protected sites are allowed. Except for policy and doctrine and legal issues there is no data set excluded per se.

Information Environment Assessment Capability

RFI – ACT – SACT – 21 – 129 – Q&A

4. Could you please provide further information regarding Earned Communication and Hostile communication? Should the tool be able to define communication as “hostile” and “earned”?

Own Communications

Communications developed and published by NATO and relevant Allied officials, using official channels.

Hostile Communications.

Hostile communications, including by adversaries or potential adversaries, is the term used by IEA analysts to describe actors and activities in the IE that are assessed to be deliberately and purposefully hostile to NATO and Allies.

Earned Communications.

Earned communications is anything that is being said by third parties about a topic/organization (e.g. NATO), during an observed time period, which has not been generated by NATO and over which NATO does not have any control. It could be positive, neutral or negative. Technically, hostile communications directed towards NATO is a sub-set of earned communications. Earned Communications can be considered a measurement of effect. The analysis of the content and sentiment of earned communications contributes to an assessment of the nature and attribution of any changes in attitudes, perceptions or behaviours

It’s not content agnostic, it’s sender/org agnostic. Eg if President Macron says something bad about NATO that is not hostile comm, it is Own Comm. If Russia says something good about NATO, this is still Hostile Comm.

5. What is the current state of the IEAC capability?

IEA is to a certain part declared Initial Operating Capabillity (IOC). IEA is already producing products, so methodology and procedures are in place and get refined as we move along. Future technological solutions will for sure impact the further development

NATO currently employs a version of Brandwatch to collect data and manually assesses.

Information Environment Assessment Capability
RFI – ACT – SACT – 21 – 129 – Q&A

6. Are parts of it in operation and/or various state(s) of development?

For the sake of the IEA capability development, NATO has contracted GMU & SNL to provide a Data Analytics Engine Prototype. This tool will be available soon for the NATO IEA practitioner to use and test it.

7. Is it NATO's intent to augment what has been developed to-date or already available?

The Analysis of Alternative considers several options. One of them considers to build on the Data Analytics Engine Prototype designed to inform the capability development process, but all options whether it could be adopted from a NATO Nation, bought from Industry or create are still being considered.

8. In case prior deliverables and/or artefacts have been developed, can the output from previous phases be shared with RFI responders?

Certain things from Brandwatch and Sandia Laboratories for the Prototype are proprietary. We are developing our own queries and tasks,and analysis. So we will have our own data that we can export it directly to a NATO system and run our own analysis.

9. From the RFI we notice that the data sources are considered part of the scope being addressed. In our perspective, however, data sources may vary significantly both in type, ownership, terms of use, availability and in time. We therefore would expect that individual agreements would be required with (selected) data source owners on the public internet as well as for ingesting other data sources (NATO members and partners as well as within NATO). Whereas the capability to ingest all types of source data as appropriate is a clear (high-level) requirement, can the inclusion of data sources in the scope be elaborated upon by ACT, and what would be expected from the supplier?

Twofold.

(1) Ingest, process and store the data for analysis. NATO will identify the data source and negotiate access, terms of use, service level agreements, etc.

(2) In the case the RFI respondent has data sources useful to NATO’s purpose they may also be considered but are not a primary requirement under the RFI.

Information Environment Assessment Capability
RFI – ACT – SACT – 21 – 129 – Q&A

10. How will new data sources be identified and added to the list of available sources?
Tool needs to be adaptive and scalable. Data sources will change over time, also pending technical developments and focus area (RUS, CHN eg. Datasources)

11. What level of non-attribution is required?
Level 2: Managed attribution. We are considering MA solutions that facilitate access to the Internet while providing protection of the user and the user's organisation to include solutions that protect user identities and conceal user and organisation activities that could reveal NATO's interests and vulnerabilities.

12. Must all collection be completely non-attributable, or does there need to be a level of low or managed attribution?
Utilize Managed Attribution (MA) whenever possible. Overt* activity should, and Discreet* activity must, utilize MA in accordance with policy. When licensing requirements prohibits obfuscation of the identity under MA, that is understandable however, this should not discourage the use of MA to access licensed content on the Internet.
* "Overt" is deemed to be at an acceptable Operational Security (OPSEC) or personal security risk in that there is licensed access and permission to use. "Discreet" access is deemed to be generally passive, masked to the source owner or non-attributable identity.

13. Has it been considered that being non-attributable could immediately bring the data being collected to the attention of adversaries by the fact it is being accessed with no attribution?
It has been considered and we will continue to consider the implications of managed attribution. We do allow for exceptions through our NATO legal processes to consider on a case by case basis. However, the collection of publicly available information needs to be non-attributable to NATO wherever possible.

Information Environment Assessment Capability
RFI – ACT – SACT – 21 – 129 – Q&A

14. How accurate does the translation have to be?
At least as accurate as current Google Translate or similar capabilities.
Accurate translation is needed in order to ensure a proper understanding of (potential) effectiveness of communications within the IE and (specific) audiences
Pending the content and question asked - the translation should be able to pick up nuances - in diplomacy language is key

15. How many languages to translate from and to (e.g. all languages in the world(!) to all languages used by NATO)?
Translation needed form pre-specified languages –TBD addressing specified regional areas and audiences
Translation to: English and French

16. Where do you expect the technological components of the capability to be deployed?
Technology itself must not be designed for deployment - nevertheless deployed personnel must be able to access the data required. Cloud based is an option
WE don’t expect this capability to be hardened or deployed into a war zone. It is an HQ capability that should work from a laptop or any access tool.

17. Are the requirements for deployment of the technological components of the capability available?
We interpret this to refer to the hardware, network, bandwidth, etc. No. TBD. Will be informed by responses to this RFI, supporting prototypes, solution selection, etc.

Information Environment Assessment Capability

RFI – ACT – SACT – 21 – 129 – Q&A

18. Can the solution be Cloud based; possibly offered as a service, or must it be on-premises, or hybrid of both?

Requirements for hosting are not prescribed and are flexible to include all options or combinations of options (i.e., hybrid) that provide the most flexibility, scalability, and agility as a reasonable cost.

Right now, we have products and Data that sits in the NATO cloud. Depending on what proposed solution is for data storage, cloud based is not out of the question, it just has to meet NATO Office of Security (NOS) standards. And you will find out the NOS standards if you need the NOS standards. All of the options including on-premises will get into the question of NOS standards.

19. What networks will users access the system from?

NATO Unclassified.

20. Is it envisaged to store all ingested data from sources persistently, for all types?

No. A data management plan will be developed and implemented during the development process.

It’s still early , there is a good idea of where we want to with it, how we want to have the data tables, but this will get defined as we get there.

21. Also, have requirements been identified in terms of "timeliness" of source data (i.e. allowing dynamical classifications and re-classifications based on timeliness criteria whereby data captured in time may become obsolete or even inaccurate).

No - data needs to be accessible and allow a historical view but not all raw data needs to be stored locally - processed data needs to be stored

22. Considering the scope as depicted in the RFI, is it envisioned that all data (ingested but also generated/created within the Data Management and Analysis steps) will be/remain Unclassified or are further classifications (and related processes) to be considered?

For IEA all data should remain unclassified, nevertheless some data might be shared with other CoIs which have further classifications requirements.

For our interests, we strive for a completely UNCLASS environment. As data amasses, just the sheer amount of data gives the requirement sometimes to give a restriction to this data, especially exchanging with other COIs like OSINT or Cyber, then there is a requirement that this data can be exported to these classified areas, and sometimes also need to collect the raw data to analyze properly.

Information Environment Assessment Capability
RFI – ACT – SACT – 21 – 129 – Q&A

23. Are estimates on the types and volumes of "to-be-ingested" data available?
No.
Some of this data we might need for Years. So basically, as much data as we can. Hard to estimate.

24. Is a refinement and/or more specifics on the understood/suspected requirements for case management and workflows and to be able to support “Accurate tracking and assessment of objectives and outcomes” available?
No.

25. Current reading would indicate analysis is performed on ingested data only; however is it also envisioned that "refined, targeted and pro-active" searches would also be triggered to collect additional, new and/or renewed data while performing analysis?
Yes, It is envisioned that ‘refined, targeted and pro-active’ searches will be triggered.

26. Considering the people and processes part of the capability, is it envisioned this capability would (mainly) serve within a business environment and/or a military operational environment?
Military strategic and operational environment but not limited to military decision makers
This tool is for military, strategic, and operational level, but also feeds into the political level in NATO HQ. It is not foreseen for any business applications.

Information Environment Assessment Capability RFI – ACT – SACT – 21 – 129 – Q&A

27. This may have an impact on data sources as well as types of data and analysis augmentation and automation capabilities required. It may also distinguish broad use cases such as "operational awareness, including real-time environmental information assessment to include in operations live video feeds" from "strategic analysis & decision support".
Military strategic and operational environment but not limited to military decision makers

28. Should the capability enable/support multi-tenancy within the NATO environment, e.g. segregated user groups or communities mapped on to specified data sources and/or stores (some common, others dedicated for certain groups, having specific Data Management and Analysis Services available to each group or even individual users)?
The level of support needed to map specific user groups to data sources is not necessary. However, individual user groups will need to have segregated work spaces.
In the future, We do want to have the capability for the data sources aspect. As we ingest more data sources, depending on the use, some groups may not be able to use that data just because of what they do in their work function. In order to ensure we're meeting data policy, we have to be cognizant of that. Currently we won't have that, but it is a future consideration. (basically, user groups)

29. Can supporting documentation (vision, concepts and proofs of concepts, white papers, etc.) be provided for your consideration as part of the response referred to in the completed spreadsheet?
Yes.

Information Environment Assessment Capability RFI – ACT – SACT – 21 – 129 – Q&A

30. What is the difference between/ what are the definitions of surface and deep web?

The Surface Web is what users access in their regular day-to-day activity. It is available to the general public using standard search engines and can be accessed using standard web browsers that do not require any special configuration, such as Mozilla Firefox, Microsoft’s Internet Explorer or Edge, and Google Chrome.

The Deep Web is the portion of the web that is not indexed or searchable by ordinary search engines. Users must log in or have the specific URL or IP address to find and access a particular website or service. Some pages are part of the Deep Web because they do not use common top-level domains (TLDs), such as .com, .gov, and .edu, so they are not indexed by search engines, while others explicitly block search engines from identifying them. Many Deep Web sites are data and content stored in databases that support services we use every day, such as social media or banking websites. The information stored in these pages updates frequently and is presented differently based on a user’s permissions.

Source: https://www.cisecurity.org/spotlight/cybersecurity-spotlight-the-surface-web-dark-web-and-deep-web/

The deep web is mainly data subscribed by NATO

31. What does „horizon scanning“ mean?

Horizon Scanning is a technique for detecting early signs of potentially important developments through a systematic examination of potential threats and opportunities, which may be geographic or thematic. The method calls for determining what is constant, what changes, and what constantly changes. It explores novel and unexpected issues as well as persistent problems and trends; including matters at the margin of current thinking that challenges past assumptions.

A solid 'scan of the horizon' can provide the background to develop strategic anticipation for future developments and thereby gain lead time. It can also be a way to assess trends to feed into situational awareness as well as communications assessment.

32. What is the difference between monitoring and tracking?

Monitoring – eg if you’re observing a certain area (monitoring developing situation in Ukraine), Tracking: specific items and topics that could become something that we want to Monitor.

Information Environment Assessment Capability

RFI – ACT – SACT – 21 – 129 – Q&A

33. Does „enabled by services“ mean that the backend of the digital system consists of (several) microservices?
Or does it mean that the digital system is provided by the contractor as a service?

1. Yes, that is the intent that the backend of the digital system consists of microservices..
2. As a service is also an option.

34. Is there a minimal requirement for the number of users and size of dataset?

We have to be able to grow from the current minimum number of 25 user . This goes back to the modular and scalable aspect where we need to be able to grow it without the system slowing down or crashing.

There is not really a minimum size for a dataset.

35. Is it required to stick to the number of preset rows or is the text allowed to be longer?

The text can be longer

36. How are the data sources that you want to process determined?

NATO governance will identify the data sources.

37. Is there a set of sources made beforehand (e.g. a list of URLs), are there specific parameters to look for (e.g. keywords to be searched), ...?

Yes…but are not available for the RFI.

Dependent on our search. Every query has its own keywords, so it needs to be adjustable, flexible that these can be changed in any direction. And old sources can be deleted and new sources added.

Discussion – in session 1 Q&A

Chat question 1: Just for clarification, you specified earlier that cloud is possible within the scope of "NATO Cloud". Does this include public cloud platforms (with security considerations in place like no public internet access, etc.)?
Along with a second question: you mention real-time monitoring. Exactly what timespan is considered "real-time" for this RFI scope? Are you talking about minutes, hours, days, ...?
It's possible, but something we would have to run against NOS standards. It's not preferred.
If it's cloud based, we need to have instant access. We need to collect it directly from internet, so there are needs to get access to public clouds.
At a minimum, we'd want information in hours.

Chat question 2: Can you confirm that data agreements will be between data providers and NATO, and not responsibility of IEAC supplier
Yes, to a degree. Currently we have some things in the works with the supplier (for social media for example). Most of them will be between NATO and supplier. Some is public Data that we want to use but we need to adhere to their policy, and they are submitting that on our behalf because they will also be able to use the data.

Chat question 3: Does the system need to have the ability to crawl/ scrape text data from specific websites that are not structured like News/ Twitter/ PRs?
Yes, we need to be able to crawl unstructured data

Discussion – in session 1 Q&A

Chat question 4: with the timespan for real-time I meant more something akin to "how quickly after publication do you want something to be ingested and analyzed"?
It Depends on the topic. Right now we track by the day.
Ideally, Dashboards that are already created to have a look at it . We currently have that with Brandwatch where we have dashboards for topics we keep on eye on.. Depending on the situation, we might want it hourly. But that will likely be less common than daily.
It depends on the data source. Some might not change that often and daily is enough. Some might be updated more often and need live updates.

Chat question 5: From the answers on real time, it seems real time live video feeds and image analysis is currently not done?
Yes that is correct, but that would be of interest

Chat question 6: Does Twitter data satisfy your social media monitoring needs or do you need data from other social sources: Facebook, youtube, Instagram etc?
Twitter is not sufficient – we need additional data sources – need also some other information – and other types of social media from other nations. Facebook is on decline. Twitch and TikTok are on rise

Chat question 7: What do next steps look like? Timeframe?
This RFI will feed the Analysis of Alternatives, then we will complete the CPP with the recommended option. It will go to Governance for approval before the Project Proposal phase with the Host Nation (NATO Nation or NATO Agency), before a possible request for proposal within a 1 to 2 years time frame, pending the option recommended at the CPP stage.

Information Environment Assessment Capability

RFI – ACT – SACT – 21 – 129 – Q&A

Discussion – in session 2 Q&A

Chat question 1: will there be a separate exercise to identify a Systems Integration Partner?
No separate exercise planned.

Chat question 2: what is driving the current timeframe?
We follow the new NATO Common Funded Capability Development Governance model, established in 2018. At this stage we're developing the Capability Programme Plan (CPP) as mentioned in the RFI. This CPP will be delivered in June 2022 to Governance. The intent of this CPP is to elaborate about the abilities and the projects we need follow to deliver the capability and to achieve in the end Full Operational Capability (FOC).
After the CPP we will start the Project Proposal with the implementing entity once it will be appointed.
The timeframe is driven by the new governance model, and the intent is to deliver this capability as soon as possible in order to achieve FOC.

Chat question 3: As we have off the shelf capability, can we organize demo on data fusion, ai, nlp and analysis via online? Or live demo at NATO ?
No demo scheduled in this RFI process.
Once the RFI process is done and the answers delivered, such demo could be organized.

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