DEMONSTRATION 1
Information sharing through CISE

Including lng term data preservation and creation of European Common Language of data

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Long term data preservation and creation of a European common language of data

DNGCD - Patrice LESUEUR

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Authorities at Member State level carry out many different maritime surveillance tasks.

Activities in sectors like **maritime safety and security, fisheries control, marine environment, customs, border control, law enforcement and defence** all require up to real time information from different sources.

The common information sharing environment – CISE is a leap forward in sharing maritime surveillance data between different governmental communities with a responsibility at sea.

EFCA

FRONTEX
EUROPEAN BORDER AND COAST GUARD AGENCY

EMSA
European Maritime Safety Agency

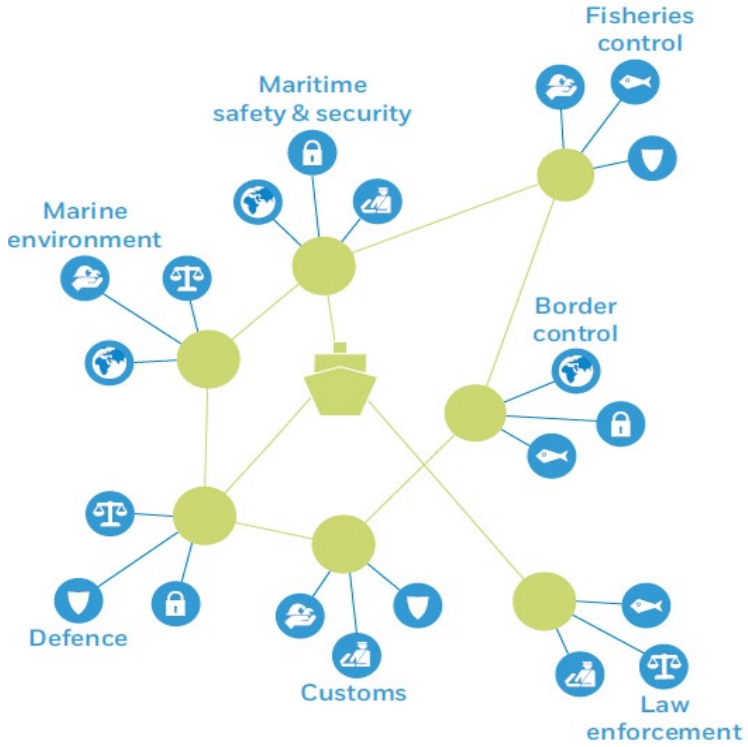
What is CISE?

CISE works via a **network of nodes** in member States and EU Agencies, which takes information from the various existing maritime surveillance systems.

It allows the exchange of **relevant information** across geographical boundaries and beyond usually closed sectors of activity such as safety, maritime security, fisheries control, border control, the fight against fraud, defence or the environment.

Joining CISE also implies signing **a cooperation agreement,** which defines the conditions of the safe use of the data shared.

In addition, Stakeholders should endorse **the responsibility to share** principle, which means they can use data that comes from CISE, but they have to provide data too.



Why CISE?

Member State authorities collect data and information through their sectoral platform and dedicated IT systems to obtain an improved picture.

But

Sharing information can be complex, useless and expensive: shared knowledge is only of interest to a limited extent.

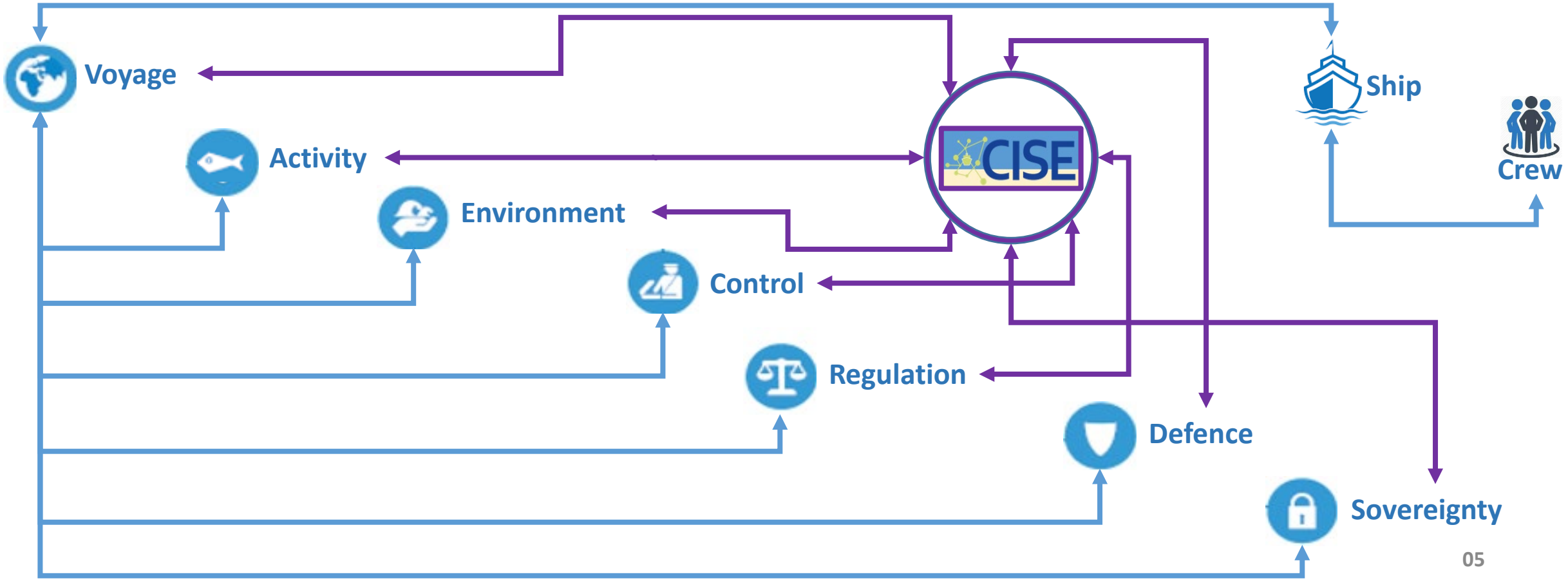
In some cases, information are not even shared:

1. The authorities are not aware that useful information are available elsewhere or that they have information that is of interest to others.
2. There is no legal framework for sharing this type of information between authorities and agencies across Europe.

This can lead to data duplication or, on the contrary, a lack of data leading to unnecessary operational costs in one-off and laborious exchanges.

Purpose of CISE

Each agency of each MS stores maritime data, the interest of which varies according to the professions practiced. CISE facilitates and accelerates the process of information sharing by interconnecting EU maritime networks and Member States' surveillance systems.



Added value of CISE

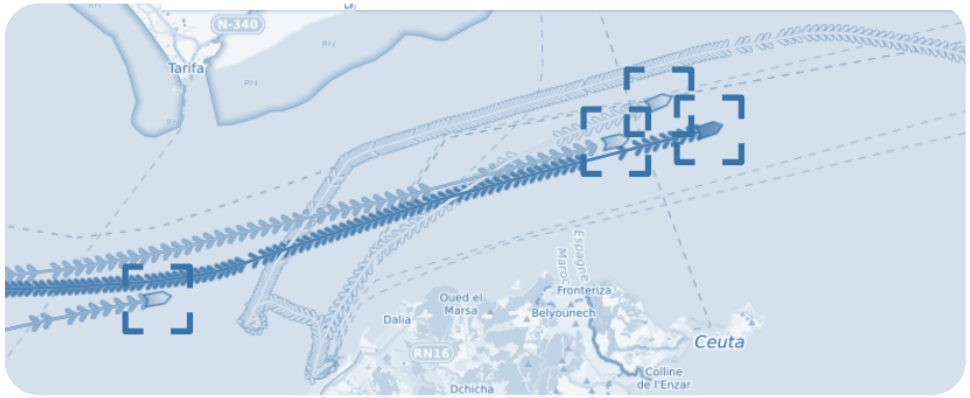
- **Low level Information stored by one maritime authority is potentially of high value and useful for another**
- **No additional system**
- **Full control over information**
- **Simpler operations management**

To gather additional information about a maritime event

To request operational assets, risk analysis, former recording

Added value of CISE

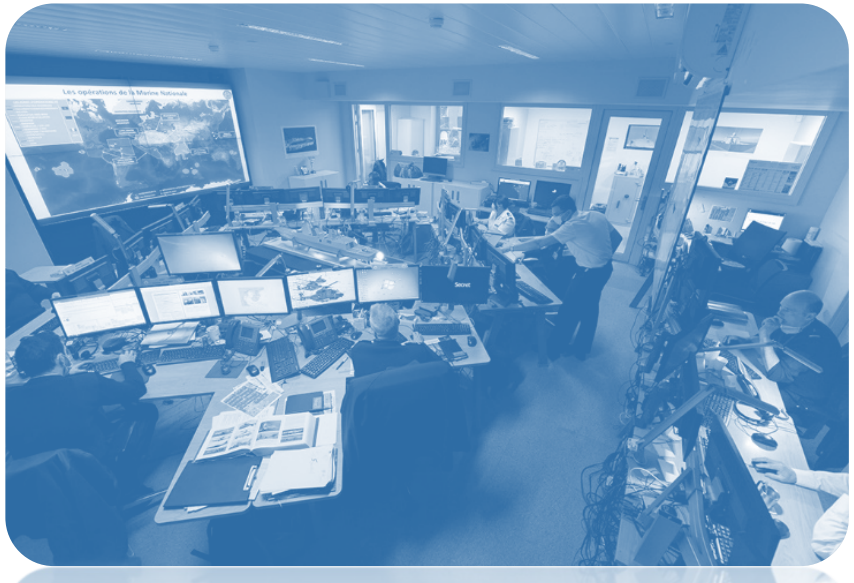
Exchange of alerts on positions, behaviours



Exchange of documents, risk analysis, suspicious situation

The semantic representation of the CISE data model makes everyone agree on the large bag of classes…

Action ActionPriorityType ActionStatusType ActionType Agent AgentAgent AgentEvent AgentLocation AgentObject AgentRisk
AgentRoleInAgentType AgentRoleInEventType AgentRoleInLocationType AgentRoleInObjectType AgentRoleInRiskType Aircraft Anomaly
AnomalyType AssociationClass AttachedDocument Cargo CargoDocument CargoDocumentType CargoType CargoUnit Catch CertaintyType
CertificateDocument CertificateDocumentType CloudCoverType ColourType CommunityStatusType ConditionOfTheCargoAndBallastType
ContainmentUnit CorrelatedWith CorrelationType CrisisIncident CrisisIncidentType DangerousSubstancesType Document DutyType Entity
EnumerationType Event EventAreaType EventDocument EventDocumentType EventEvent EventLocation EventRoleInEventType FileMediaType
FishingGearType FormalOrganization GenderType Geometry HullMaterialType Incident INFClassType InformationReliabilityLevelType
InformationSecurityClassificationType InformationSensitivityDegreeType IrregularMigrationIncident IrregularMigrationIncidentType ISO3166CountryCodeType
ISPSSecurityLevelType LandVehicle LawInfringementIncident LawInfringementIncidentType Location LocationDocument LocationDocumentType
LocationQualitativeAccuracyType LocationRoleInEventType LocationRoleType LocationZoneType MaritimeSafetyIncident MaritimeSafetyIncidentType
Metadata MeteoOceanographicCondition MetocType MissionType Movement MovementType NamedLocation NatureType NavigationalStatusType
Object ObjectEvent ObjectLocation ObjectRoleInEventType OperationalAsset OperationalAssetType OperationalCapabilityType
OperationalPurposeType Organization OrganizationalCollaboration OrganizationalUnit OrganizationClassificationType OrganizationDocument
OrganizationDocumentType OrganizationPurposeType OrganizationRoleType PackageType PackagingMaterialType PackingGroupCodeType Period
Person PersonDocument PersonDocumentType PersonIdentificationType PersonIdentifier PlacementPurposeType PlannedOperationsType
PlannedWorksType PollutionCodeType PollutionIncident PollutionType PortFacilityLocation PortLocation PortOrganization Relationship
ResponseType Risk RiskAgent RiskDocument RiskDocumentType RiskLevelType RiskProbabilityType RiskSeverityType RiskType
SanitaryMeasureType SeaConditionType SensorType SeverityType ShipConfigurationType SourceType SpeciesType Stream StreamType
TidesType UNDGType UniqueIdentifier UnitsOfMeasureType UrgencyType Vehicle Vessel VesselDocument VesselDocumentType VesselType
WeatherConditionType WeightMeansType



… and the huge object properties.

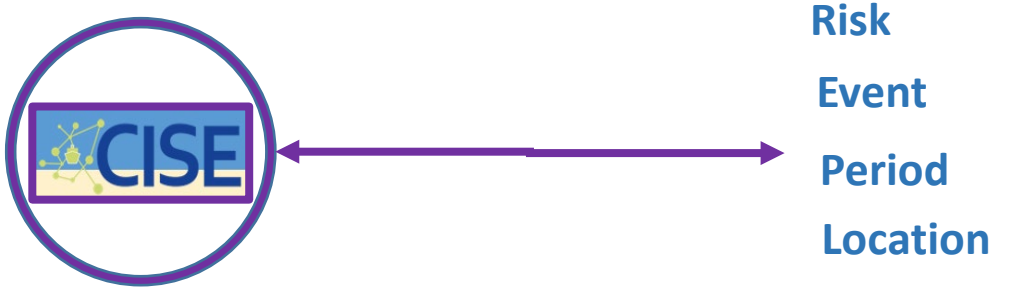
hasActionActionStatus hasActionActionType hasActionMission hasActionPriority hasAgentAgentAgent hasAgentAgentAgentRole hasAgentAgentDuty
hasAgentAgentInvolvementPeriod hasAgentDocument hasAgentEventAgent hasAgentEventAgentRole hasAgentEventEvent
hasAgentEventInvolvementPeriod hasAgentIdentifier hasAgentLocationAgent hasAgentLocationAgentRole hasAgentLocationInvolvementPeriod
hasAgentLocationLocation hasAgentMetadata hasAgentObjectAgent hasAgentObjectAgentRole hasAgentObjectDuty hasAgentObjectInvolvementPeriod
hasAgentObjectObject hasAgentRiskAgent hasAgentRiskAgentRole hasAgentRiskInvolvementPeriod hasAgentRiskRisk hasAnomalyAnomalyType
hasCargoCargoType hasCargoContainedCargoUnit hasCargoDocumentDocumentType hasCatchWeightMeans hasCertificateDocumentDocumentType
hasContainmentUnitCommunityStatusOfGoods hasContainmentUnitDangerousSubstancesCode hasContainmentUnitPackageType
hasContainmentUnitPackagingMaterial hasContainmentUnitPackingGroupCode hasContainmentUnitPollutionCode hasContainmentUnitUnitsOfMeasure
hasCorrelatedWithCorrelatedBy hasCorrelatedWithCorrelationType hasCorrelatedWithUniqueIdentifier hasCrisisIncidentCrisisIncidentType
hasDocumentIdentifier hasDocumentLocation hasDocumentMetadata hasEventDocument hasEventDocumentDocumentType hasEventEventEvent
hasEventEventEventRole hasEventEventInvolvementPeriod hasEventIdentifier hasEventLocationDateTime hasEventLocationEvent
hasEventLocationEventArea hasEventLocationLocation hasEventLocationLocationRole hasEventLocationSourceType hasEventMetadata
hasEventNatureType hasEventOccurrencePeriod hasEventRisk hasIncidentCertainty hasIncidentResponseType hasIncidentResponseUrgency
hasIncidentSeverity hasIrregularMigrationIncidentIrregularMigrationIncidentType hasLawInfringementIncidentLawInfringementIncidentType

Each maritime LS defines at least :
one “Cargo” class
&
one “Location” object

One example : The class Anomaly.

An anomaly is used to characterize an unusual event at sea which deserves to be noted or reported.

With CISE, it can relate to every type of anomaly that a standard legacy system could understand.



Universal grammar and spelling

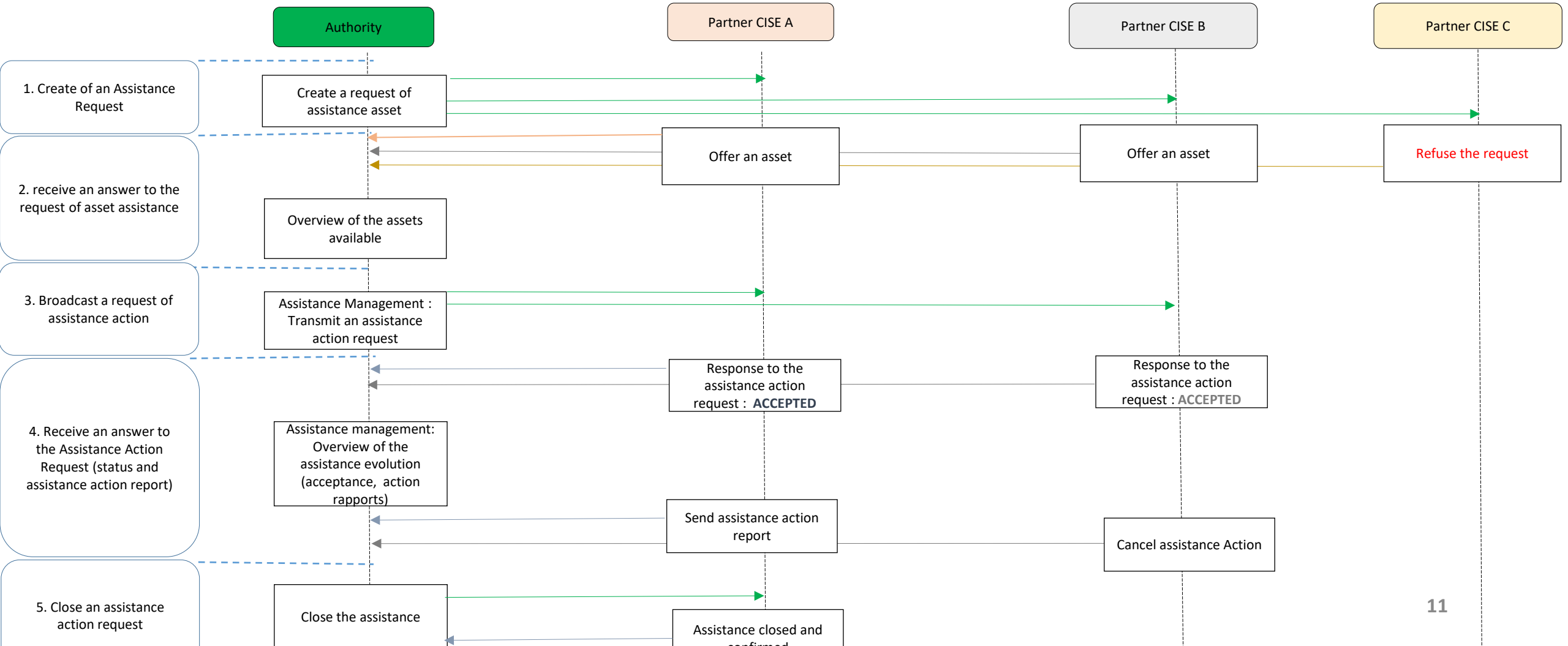
Some “operational” services **End-users oriented**

Some CISE services “strictly speaking” : **Easy to choose and to aggregate**

Involved CISE protocols : **Push/pull/subscribe protocols to manage the flow**

Involved attributes : to specify the information elements

A clear process to request and submit



Categories		
Security	Law enforcement	Regulation
Terrorism support	Prohibited imports – arms	Flag state, ownership, crew composition, previous port of call
Crew members/passengers with association with terrorists/terrorism	Prohibited imports - narcotics, illicit tobacco including precursor chemicals	first time in port of regulatory interest
Engaged in intelligence collection/history of suspicious activity	Migration - illegal immigration/human trafficking	History of regulatory non-compliance
	Serious organized criminal activity	dangerous cargo
	Exploitation of natural resources illegal, unreported, unregulated fishing	people/cargo with dangerous/infectious pathogens - agriculture
	Marine pollution	Invasive species
	Illegal activity of activist groups	unusual transit/operating in or transiting an environmentally sensitive area, exclusive zone, or restricted area
	General maritime security - piracy, violence, stateless vessels	Sanctions/UN security council resolution violations
	Migration - passport discrepancies	

Two networks : EU Restricted and EU Classified

As a reminder:

Built on cooperation and collaboration, CISE is at the heart of a constantly expanding network connecting legacy systems. It brings advanced technology and information sharing together for safer, more secure, more sustainable seas around Europe and beyond.

So, Let's share our maritime data.

Thanks a lot for your attention.

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