



Hospital Communication

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## 1. INTRODUCTION

Hospital Communication profile describes how hospitals can communicate with each other and with other members of the emergency management team about the status, services and resources of hospital. These include bed capacity and availability, emergency department status, available service coverage, and the status of hospital's facility and operations.

## 2. OBJECTIVES

The objectives of implementing this profile are:

1. Enabling hospitals and emergency response groups to communicate and share data seamlessly.
2. Responding to emergencies and disaster situations with greater efficiency and speed in regard to hospitals' status.
3. Making sound logistics decisions – where to route victims, which hospitals have the ability to provide the needed service.
4. Facilitating emergency information sharing and data exchange across different organizations of different professions that provide emergency response and management services.
5. Expediting the creation of common operational picture.

## 3. SCOPE

This profile supports a process of exchanging information about hospital's status. The intended scope for this profile includes:

- During and after emergency situations
- Among medical and healthcare organizations (hospitals, nursing homes), emergency dispatchers and managers, and other emergency management agencies

The transactions, specified in this profile are intended to be exchanged between organizations taking part in emergency operations and healthcare organizations. It is expected that requester organization and hospital have had necessary infrastructure, which is specified in the profile, to enable them to send and receive messages in a secured way, using an agreed syntax.

## 4. PROFILE DETAILED DESCRIPTION

### 4.2. Roles Involved

Actor	Description
Requester	The Requester is an emergency management organization who wants to receive information about hospital's status.
Hospital	The Hospital is the healthcare organization to respond to the request.

### 4.3. Actor Diagram



Figure above shows the actors directly involved in the Hospital Communication Profile and the possible messages to be exchanged between them.

### 4.4. Transaction Information

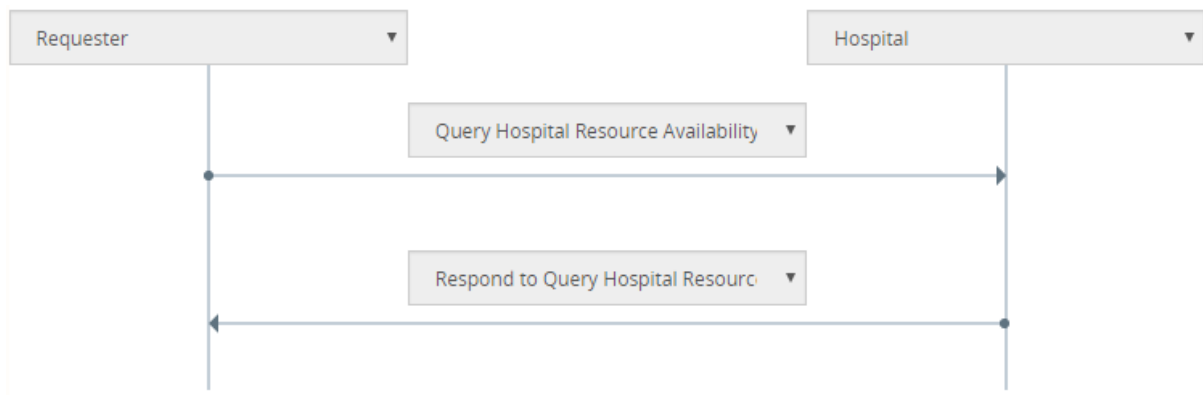
#### 4.4.1. Query Resource Availability

##### 4.4.1.1. Description

Categories	Description and Values
Identifier	c71dac94-5d81-45ee-9b18-046ee44051d4
Description	The Requester sends a request to the Hospital regarding the availability of hospital's resources such as hospital bed capacity, available number of beds and bed types, available morgue capacity,

	status of facility (normal, compromised, evacuating, closed), availability of staffs, status of supplies necessary for clinical operations and so on.
Actors	Requester, Hospital
Pre-conditions	The Requester and the Hospital have already identified each other.
Post-conditions	The Requester has received the information about hospital's facility and resources.

#### 4.4.1.2. Interaction Diagram



#### 4.4.1.3. Query Hospital Resource Availability Message

##### 4.4.1.3.1. Message Semantics

```

<?xml version="1.0" encoding="UTF-8"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns:edxl-
ct="urn:oasis:names:tc:emergency:edxl:ct:1.0" xmlns:edxl-
gsf="urn:oasis:names:tc:emergency:edxl:gsf:1.0"
xmlns:have="urn:oasis:names:tc:emergency:edxl:have:2.0"
xmlns:xpil="urn:oasis:names:tc:emergency:edxl:ciq:1.0:xpil"
xmlns:xal="urn:oasis:names:tc:emergency:edxl:ciq:1.0:xal"
xmlns:ext="urn:oasis:names:tc:emergency:edxl:extension:1.0"
xmlns:gml="http://www.opengis.net/gml/3.2" xmlns="urn:oasis:names:tc:emergency:edxl:have:2.0"
targetNamespace="urn:oasis:names:tc:emergency:edxl:have:2.0" elementFormDefault="qualified"
attributeFormDefault="qualified">

```

```
<xs:import namespace="urn:oasis:names:tc:emergency:edxl:gsf:1.0" schemaLocation="../RIM/edxl-gsf-v1.0-csd02/edxl-gsf-v1.0.xsd"/>
<xs:import namespace="urn:oasis:names:tc:emergency:edxl:extension:1.0"
schemaLocation="../RIM/edxl-ext-v1.0/edxl-ext-v1.0.xsd"/>
<xs:import namespace="urn:oasis:names:tc:emergency:edxl:ciq:1.0:xpil"
schemaLocation="../RIM/edxl-ciq-v1.0-csd04/edxl-xPIL.xsd"/>
<xs:import namespace="urn:oasis:names:tc:emergency:edxl:ciq:1.0:xal"
schemaLocation="../RIM/edxl-ciq-v1.0-csd04/edxl-xAL.xsd"/>
<xs:import namespace="urn:oasis:names:tc:emergency:edxl:ct:1.0" schemaLocation="../RIM/edxl-ct-v1.0-csd06/edxl-ct-v1.0.xsd"/>
<xs:element name="HAVE">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="organizationInformation" type="OrganizationInformationType"/>
      <xs:element name="reportingPeriod" type="edxl-ct:TimePeriodType" minOccurs="0"/>
      <xs:element name="facility" type="FacilityType" maxOccurs="unbounded"/>
      <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
    </xs:sequence>
    <xs:attribute name="defaultLanguage" type="xs:string" use="required"/>
  </xs:complexType>
</xs:element>
<xs:complexType name="FacilityType">
  <xs:sequence>
    <xs:element name="name" type="FreeTextType"/>
    <xs:element name="kind" type="FacilityKindType"/>
    <xs:element name="reportingPeriod" type="edxl-ct:TimePeriodType" minOccurs="0"/>
    <xs:element name="organizationInformation" type="xpil:OrganisationDetailsType"/>
    <xs:element name="geoLocation" type="GeoLocationType"/>
    <xs:element name="status" type="StatusType"/>
    <xs:element name="services" type="ServicesType"/>
    <xs:element name="activityInPeriod" type="ActivityInPeriodType" minOccurs="0"
maxOccurs="unbounded"/>
    <xs:element name="operations" type="OperationsType" minOccurs="0"/>
    <xs:element name="resourceInformation" type="ResourceInformationType" minOccurs="0"/>
    <xs:element name="staffing" type="ResourceInformationType" minOccurs="0"/>
    <xs:element name="emergencyDepartment" type="EmergencyDepartmentType" minOccurs="0"/>
    <xs:element name="traumaCenter" type="TraumaCenterType" minOccurs="0"/>
    <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
  </xs:sequence>
  <xs:attribute name="ID" type="xs:ID" use="required"/>
  <xs:attribute name="parentID" type="xs:IDREF"/>
</xs:complexType>
<xs:complexType name="BedCapacityType">
  <xs:sequence>
    <xs:element name="availableCount">
      <xs:simpleType>
        <xs:restriction base="xs:integer"/>
      </xs:simpleType>
    </xs:element>
    <xs:element name="baselineCount" minOccurs="0">
      <xs:simpleType>
```

```

        <xs:restriction base="xs:integer">
            <xs:minInclusive value="0"/>
        </xs:restriction>
    </xs:simpleType>
</xs:element>
    <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
</xs:sequence>
</xs:complexType>
<xs:simpleType name="StabilityType">
    <xs:restriction base="xs:string">
        <xs:enumeration value="stable"/>
        <xs:enumeration value="improving"/>
        <xs:enumeration value="deteriorating"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="OffloadKind">
    <xs:restriction base="xs:token">
        <xs:enumeration value="land"/>
        <xs:enumeration value="air"/>
        <xs:enumeration value="other"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="OffloadStateKind">
    <xs:restriction base="xs:token">
        <xs:enumeration value="normal"/>
        <xs:enumeration value="delayed"/>
    </xs:restriction>
</xs:simpleType>
<xs:complexType name="OffloadType">
    <xs:sequence>
        <xs:element name="kind" type="OffloadKind" default="land"/>
        <xs:element name="offloadMinutes" type="xs:integer"/>
        <xs:element name="offloadState" type="OffloadStateKind" default="normal" minOccurs="0"/>
        <xs:element name="offloadColourCode" type="ColourStatusType" minOccurs="0"/>
        <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="OrganizationInformationType">
    <xs:complexContent>
        <xs:extension base="xpil:OrganisationDetailsType"/>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="StatusType">
    <xs:sequence>
        <xs:element name="isOK" type="xs:boolean"/>
        <xs:element name="colourStatus" type="ColourStatusType" minOccurs="0"/>
        <xs:element name="stability" type="StabilityType" minOccurs="0"/>
        <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
    </xs:sequence>
</xs:complexType>

```



```

<xs:complexType name="ServiceType">
  <xs:sequence>
    <xs:element name="name" type="FreeTextType"/>
    <xs:element name="code">
      <xs:simpleType>
        <xs:restriction base="ServiceCodeDefaultType"/>
      </xs:simpleType>
    </xs:element>
    <xs:element name="status" type="StatusType"/>
    <xs:element name="externalCode" type="edxl-ct:ValueKeyType" minOccurs="0"/>
    <xs:element name="bedCapacity" type="BedCapacityType" minOccurs="0"/>
    <xs:element name="capacity" type="CapacityType" minOccurs="0"/>
    <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="ResourceInformationType">
  <xs:sequence>
    <xs:element name="status" type="StatusType"/>
    <xs:element name="needs" minOccurs="0">
      <xs:complexType>
        <xs:sequence>
          <xs:element name="resourceNeed" type="ResourceQuantityType"
maxOccurs="unbounded"/>
        </xs:sequence>
      </xs:complexType>
    </xs:element>
    <xs:element name="offers" minOccurs="0">
      <xs:complexType>
        <xs:sequence>
          <xs:element name="resourceOffer" type="ResourceQuantityType"
maxOccurs="unbounded"/>
        </xs:sequence>
      </xs:complexType>
    </xs:element>
    <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="ResourceQuantityType">
  <xs:sequence>
    <xs:element name="resourceKind" type="edxl-ct:ValueKeyType"/>
    <xs:element name="quantity">
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        <xs:restriction base="xs:double">
          <xs:minInclusive value="0"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element name="resourceSize" type="ext:ParameterNameType"/>
    <xs:element name="comments" type="FreeTextType" minOccurs="0"/>
  </xs:sequence>

```

```
</xs:sequence>
</xs:complexType>
<xs:complexType name="ColourStatusType">
  <xs:sequence>
    <xs:element name="colourCode" type="ColourCodeDefaultType"/>
    <xs:element name="statusDescription" type="FreeTextType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
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  <xs:restriction base="edxl-ct:ValueType">
    <xs:enumeration value="airborneInfectionIsolation"/>
    <xs:enumeration value="burnUnit"/>
    <xs:enumeration value="cardiology"/>
    <xs:enumeration value="cardiology.invasive"/>
    <xs:enumeration value="cardiology.noninvasive"/>
    <xs:enumeration value="cardiologymi.STEMI"/>
    <xs:enumeration value="cardiologymi.nonSTEMI"/>
    <xs:enumeration value="cardiology.telemetry"/>
    <xs:enumeration value="dialysis"/>
    <xs:enumeration value="emergencyDepartment"/>
    <xs:enumeration value="hyperBaricChamber"/>
    <xs:enumeration value="infectiousDisease"/>
    <xs:enumeration value="intensiveCare.adult"/>
    <xs:enumeration value="intensiveCare.neonatal"/>
    <xs:enumeration value="intensiveCare.pediatric"/>
    <xs:enumeration value="intermediateCare"/>
    <xs:enumeration value="neonatology"/>
    <xs:enumeration value="neurology"/>
    <xs:enumeration value="neurology.invasive"/>
    <xs:enumeration value="neurology.noninvasive"/>
    <xs:enumeration value="obgyn"/>
    <xs:enumeration value="obgyn.withLaborDelivery"/>
    <xs:enumeration value="obgyn.withoutLaborDelivery"/>
    <xs:enumeration value="operatingRooms"/>
    <xs:enumeration value="ophthalmology"/>
    <xs:enumeration value="orthopedic"/>
    <xs:enumeration value="pediatrics"/>
    <xs:enumeration value="psychiatric"/>
    <xs:enumeration value="surgery"/>
    <xs:enumeration value="surgery.adultGeneral"/>
    <xs:enumeration value="surgery.pediatrics"/>
    <xs:enumeration value="surgery.orthopedics"/>
    <xs:enumeration value="surgery.neurosurgery"/>
    <xs:enumeration value="surgery.facial"/>
    <xs:enumeration value="surgery.cardiothoracic"/>
    <xs:enumeration value="surgery.hand"/>
    <xs:enumeration value="surgery.reimplantation"/>
    <xs:enumeration value="surgery.spinal"/>
    <xs:enumeration value="surgery.vascular"/>
    <xs:enumeration value="surgery.anesthesia"/>
  </xs:restriction>
</xs:simpleType>
```

```

        <xs:enumeration value="traumaCenter"/>
    </xs:restriction>
</xs:simpleType>
<xs:complexType name="CapacityType">
    <xs:sequence>
        <xs:element name="capacity" type="ext:ParameterValueType"/>
        <xs:element name="capacityURI" type="edxl-ct:ValueListURIType" minOccurs="0"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="TriageCountType">
    <xs:sequence minOccurs="0">
        <xs:element name="code" type="TriageColourCodeType"/>
        <xs:element name="count">
            <xs:simpleType>
                <xs:restriction base="xs:int">
                    <xs:minInclusive value="0"/>
                </xs:restriction>
            </xs:simpleType>
        </xs:element>
        <xs:element name="alternateCodeValue" type="edxl-ct:ValueKeyType" minOccurs="0"/>
        <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="ActivityInPeriodType">
    <xs:sequence>
        <xs:element name="reportingPeriod" type="edxl-ct:TimePeriodType" minOccurs="0"/>
        <xs:element name="admissions" type="xs:int" default="0"/>
        <xs:element name="discharges" type="xs:int" default="0"/>
        <xs:element name="deaths" type="xs:int" default="0"/>
        <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
    </xs:sequence>
</xs:complexType>
<xs:simpleType name="TriageColourCodeType">
    <xs:restriction base="edxl-ct:EDXLStringType">
        <xs:enumeration value="red"/>
        <xs:enumeration value="yellow"/>
        <xs:enumeration value="green"/>
        <xs:enumeration value="black"/>
    </xs:restriction>
</xs:simpleType>
<xs:complexType name="FreeTextType">
    <xs:sequence>
        <xs:element name="defaultText" type="LimitedString"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="AlternateTextType">
    <xs:simpleContent>
        <xs:extension base="LimitedString">
            <xs:attribute name="language" type="xs:string" use="required"/>
        </xs:extension>
    </xs:simpleContent>

```

```

    </xs:simpleContent>
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  <xs:restriction base="xs:token">
    <xs:enumeration value="plant"/>
  </xs:enumeration>
  <xs:enumeration value="security"/>
  <xs:enumeration value="staffing"/>
  <xs:enumeration value="emergency"/>
</xs:restriction>
</xs:simpleType>
<xs:complexType name="OperationType">
  <xs:sequence>
    <xs:element name="kind" type="FacilityOperationKind"/>
    <xs:element name="name" type="FreeTextType"/>
    <xs:element name="status" type="StatusType"/>
    <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
<xs:simpleType name="ColourCodeDefaultType">
  <xs:restriction base="edxl-ct:EDXLStringType">
    <xs:enumeration value="red"/>
    <xs:enumeration value="yellow"/>
    <xs:enumeration value="green"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="FacilityKindType">
  <xs:restriction base="edxl-ct:EDXLStringType">
    <xs:enumeration value="hospital"/>
    <xs:enumeration value="longTermCare"/>
    <xs:enumeration value="urgentCareClinic"/>
    <xs:enumeration value="temporaryFacility"/>
    <xs:enumeration value="other"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="TraumaCenterLevelKind">
  <xs:restriction base="xs:token">
    <xs:enumeration value="level1"/>
    <xs:enumeration value="level2"/>
    <xs:enumeration value="level3"/>
    <xs:enumeration value="no-trauma"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="LimitedString">
  <xs:restriction base="xs:string">
    <xs:whiteSpace value="preserve"/>
    <xs:maxLength value="1024"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="GeoLocationType">

```

```

<xs:sequence>
  <xs:element name="wgs84Location">
    <xs:complexType>
      <xs:complexContent>
        <xs:extension base="edxl-gsf:EDXLGeoLocationType">
          <xs:attribute name="srsName" use="required"
fixed="http://www.opengis.net/def/crs/EPSSG/0/4326"/>
        </xs:extension>
      </xs:complexContent>
    </xs:complexType>
  </xs:element>
</xs:sequence>
</xs:complexType>
<xs:simpleType name="TrafficStatusKind">
  <xs:restriction base="xs:token">
    <xs:enumeration value="normal"/>
    <xs:enumeration value="advisory"/>
    <xs:enumeration value="closed"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="OffloadInfoType">
  <xs:sequence>
    <xs:element name="offload" type="OffloadType" maxOccurs="unbounded"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="EmergencyDepartmentType">
  <xs:sequence>
    <xs:element name="status" type="StatusType"/>
    <xs:element name="offloadInfo" type="OffloadInfoType" minOccurs="0"/>
    <xs:element name="traffic" type="TrafficType" minOccurs="0"/>
    <xs:element name="triageCapacity" type="TriageCapacityType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="TriageCapacityType">
  <xs:sequence>
    <xs:element name="triageCount" type="TriageCountType" maxOccurs="unbounded"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="TrafficType">
  <xs:sequence>
    <xs:element name="status" type="TrafficStatusKind"/>
    <xs:element name="colourStatus" type="ColourStatusType"/>
    <xs:element name="reason" type="FreeTextType" minOccurs="0"/>
    <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="TraumaCenterLevelType">
  <xs:sequence>
    <xs:element name="serviceLevel" type="TraumaCenterLevelKind"/>
    <xs:element name="status" type="StatusType"/>
  </xs:sequence>
</xs:complexType>

```

```

        <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="ServicesType">
    <xs:sequence>
        <xs:element name="service" type="ServiceType" maxOccurs="unbounded"/>
        <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="OperationsType">
    <xs:sequence>
        <xs:element name="operation" type="OperationType" maxOccurs="unbounded"/>
        <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="TraumaCenterType">
    <xs:choice>
        <xs:sequence>
            <xs:element name="adult" type="TraumaCenterLevelType"/>
            <xs:element name="pediatric" type="TraumaCenterLevelType" minOccurs="0"/>
        </xs:sequence>
        <xs:element name="pediatric" type="TraumaCenterLevelType"/>
    </xs:choice>
</xs:complexType>
</xs:schema>

```

#### 4.4.1.3.2. Protocol Requirements

```

<?xml version="1.0" encoding="UTF-8"?>
<definitions xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"
xmlns:edxld="urn:oasis:names:tc:emergency:EDXL:DE:1.0" xmlns="http://schemas.xmlsoap.org/wsdl/"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:tns="urn:eu:c2sense:emergency:distribution:1.0"
xmlns:soap12="http://schemas.xmlsoap.org/wsdl/soap12/" name="EmergencyDistribution"
targetNamespace="urn:eu:c2sense:emergency:distribution:1.0">
    <documentation>C2SENSE Distribution Web Service</documentation>
    <types>
        <xsd:schema>
            <xsd:import namespace="urn:oasis:names:tc:emergency:EDXL:DE:1.0"
schemaLocation="../../DE/EDXL-DE.xsd"/>
        </xsd:schema>
    </types>
    <message name="SendMessage_Message">
        <documentation>Send Message</documentation>
        <part name="body" element="edxld:EDXLDistribution"/>
    </message>
    <message name="ReceiveResponseMessage_Message">
        <documentation>Receive Response Message</documentation>
    </message>

```

```

    <part name="body" element="edxlde:EDXLDistribution"/>
</message>
<portType name="Distribution_PortType">
  <operation name="SendMessage">
    <input message="tns:SendMessage_Message"/>
    <output message="tns:ReceiveResponseMessage_Message"/>
  </operation>
</portType>
<binding name="Distribution_Binding_Soap12" type="tns:Distribution_PortType">
  <soap12:binding style="document" transport="http://schemas.xmlsoap.org/soap/http"/>
  <operation name="SendMessage">
    <soap12:operation soapAction="urn:oasis:names:tc:emergency:EDXL:DE:1.0:SendMessage"/>
    <input>
      <soap12:body use="literal"/>
    </input>
    <output>
      <soap12:body use="literal"/>
    </output>
  </operation>
</binding>
<service name="Distribution">
  <port name="Distribution_PortType" binding="tns:Distribution_Binding_Soap12">
    <soap12:address location="https://localhost:8080/Distribution"/>
  </port>
</service>
</definitions>

```

#### 4.4.1.4. Respond to Query Hospital Resource Availability Message

##### 4.4.1.4.1. Message Semantics

```

<?xml version="1.0" encoding="UTF-8"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns:edxl-
ct="urn:oasis:names:tc:emergency:edxl:ct:1.0" xmlns:edxl-
gsf="urn:oasis:names:tc:emergency:edxl:gsf:1.0"
xmlns:have="urn:oasis:names:tc:emergency:edxl:have:2.0"
xmlns:xpil="urn:oasis:names:tc:emergency:edxl:ciq:1.0:xpil"
xmlns:xal="urn:oasis:names:tc:emergency:edxl:ciq:1.0:xal"
xmlns:ext="urn:oasis:names:tc:emergency:edxl:extension:1.0"
xmlns:gml="http://www.opengis.net/gml/3.2" xmlns="urn:oasis:names:tc:emergency:edxl:have:2.0"
targetNamespace="urn:oasis:names:tc:emergency:edxl:have:2.0" elementFormDefault="qualified"
attributeFormDefault="qualified">
  <xs:import namespace="urn:oasis:names:tc:emergency:edxl:gsf:1.0" schemaLocation="../RIM/edxl-
gsf-v1.0-csd02/edxl-gsf-v1.0.xsd"/>

```

```
<xs:import namespace="urn:oasis:names:tc:emergency:edxl:extension:1.0"
schemaLocation="../../../RIM/edxl-ext-v1.0/edxl-ext-v1.0.xsd"/>
<xs:import namespace="urn:oasis:names:tc:emergency:edxl:ciq:1.0:xpil"
schemaLocation="../../../RIM/edxl-ciq-v1.0-csd04/edxl-xPIL.xsd"/>
<xs:import namespace="urn:oasis:names:tc:emergency:edxl:ciq:1.0:xal"
schemaLocation="../../../RIM/edxl-ciq-v1.0-csd04/edxl-xAL.xsd"/>
<xs:import namespace="urn:oasis:names:tc:emergency:edxl:ct:1.0" schemaLocation="../../../RIM/edxl-
ct-v1.0-csd06/edxl-ct-v1.0.xsd"/>
<xs:element name="HAVE">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="organizationInformation" type="OrganizationInformationType"/>
      <xs:element name="reportingPeriod" type="edxl-ct:TimePeriodType" minOccurs="0"/>
      <xs:element name="facility" type="FacilityType" maxOccurs="unbounded"/>
      <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
    </xs:sequence>
    <xs:attribute name="defaultLanguage" type="xs:string" use="required"/>
  </xs:complexType>
</xs:element>
<xs:complexType name="FacilityType">
  <xs:sequence>
    <xs:element name="name" type="FreeTextType"/>
    <xs:element name="kind" type="FacilityKindType"/>
    <xs:element name="reportingPeriod" type="edxl-ct:TimePeriodType" minOccurs="0"/>
    <xs:element name="organizationInformation" type="xpil:OrganisationDetailsType"/>
    <xs:element name="geoLocation" type="GeoLocationType"/>
    <xs:element name="status" type="StatusType"/>
    <xs:element name="services" type="ServicesType"/>
    <xs:element name="activityInPeriod" type="ActivityInPeriodType" minOccurs="0"
maxOccurs="unbounded"/>
    <xs:element name="operations" type="OperationsType" minOccurs="0"/>
    <xs:element name="resourceInformation" type="ResourceInformationType" minOccurs="0"/>
    <xs:element name="staffing" type="ResourceInformationType" minOccurs="0"/>
    <xs:element name="emergencyDepartment" type="EmergencyDepartmentType" minOccurs="0"/>
    <xs:element name="traumaCenter" type="TraumaCenterType" minOccurs="0"/>
    <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
  </xs:sequence>
  <xs:attribute name="ID" type="xs:ID" use="required"/>
  <xs:attribute name="parentID" type="xs:IDREF"/>
</xs:complexType>
<xs:complexType name="BedCapacityType">
  <xs:sequence>
    <xs:element name="availableCount">
      <xs:simpleType>
        <xs:restriction base="xs:integer"/>
      </xs:simpleType>
    </xs:element>
    <xs:element name="baselineCount" minOccurs="0">
      <xs:simpleType>
        <xs:restriction base="xs:integer">
          <xs:minInclusive value="0"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
  </xs:sequence>
</xs:complexType>
```



```

        </xs:restriction>
    </xs:simpleType>
</xs:element>
    <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
</xs:sequence>
</xs:complexType>
<xs:simpleType name="StabilityType">
    <xs:restriction base="xs:string">
        <xs:enumeration value="stable"/>
        <xs:enumeration value="improving"/>
        <xs:enumeration value="deteriorating"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="OffloadKind">
    <xs:restriction base="xs:token">
        <xs:enumeration value="land"/>
        <xs:enumeration value="air"/>
        <xs:enumeration value="other"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="OffloadStateKind">
    <xs:restriction base="xs:token">
        <xs:enumeration value="normal"/>
        <xs:enumeration value="delayed"/>
    </xs:restriction>
</xs:simpleType>
<xs:complexType name="OffloadType">
    <xs:sequence>
        <xs:element name="kind" type="OffloadKind" default="land"/>
        <xs:element name="offloadMinutes" type="xs:integer"/>
        <xs:element name="offloadState" type="OffloadStateKind" default="normal" minOccurs="0"/>
        <xs:element name="offloadColourCode" type="ColourStatusType" minOccurs="0"/>
        <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="OrganizationInformationType">
    <xs:complexContent>
        <xs:extension base="xpil:OrganisationDetailsType"/>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="StatusType">
    <xs:sequence>
        <xs:element name="isOK" type="xs:boolean"/>
        <xs:element name="colourStatus" type="ColourStatusType" minOccurs="0"/>
        <xs:element name="stability" type="StabilityType" minOccurs="0"/>
        <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="ServiceType">
    <xs:sequence>

```

```

<xs:element name="name" type="FreeTextType"/>
<xs:element name="code">
  <xs:simpleType>
    <xs:restriction base="ServiceCodeDefaultType"/>
  </xs:simpleType>
</xs:element>
<xs:element name="status" type="StatusType"/>
<xs:element name="externalCode" type="edxl-ct:ValueKeyType" minOccurs="0"/>
<xs:element name="bedCapacity" type="BedCapacityType" minOccurs="0"/>
<xs:element name="capacity" type="CapacityType" minOccurs="0"/>
<xs:element name="comment" type="FreeTextType" minOccurs="0"/>
</xs:sequence>
</xs:complexType>
<xs:complexType name="ResourceInformationType">
  <xs:sequence>
    <xs:element name="status" type="StatusType"/>
    <xs:element name="needs" minOccurs="0">
      <xs:complexType>
        <xs:sequence>
          <xs:element name="resourceNeed" type="ResourceQuantityType"
maxOccurs="unbounded"/>
        </xs:sequence>
      </xs:complexType>
    </xs:element>
    <xs:element name="offers" minOccurs="0">
      <xs:complexType>
        <xs:sequence>
          <xs:element name="resourceOffer" type="ResourceQuantityType"
maxOccurs="unbounded"/>
        </xs:sequence>
      </xs:complexType>
    </xs:element>
    <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="ResourceQuantityType">
  <xs:sequence>
    <xs:element name="resourceKind" type="edxl-ct:ValueKeyType"/>
    <xs:element name="quantity">
      <xs:simpleType>
        <xs:restriction base="xs:double">
          <xs:minInclusive value="0"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element name="resourceSize" type="ext:ParameterNameType"/>
    <xs:element name="comments" type="FreeTextType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>

```

```

<xs:complexType name="ColourStatusType">
  <xs:sequence>
    <xs:element name="colourCode" type="ColourCodeDefaultType"/>
    <xs:element name="statusDescription" type="FreeTextType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
<xs:simpleType name="ServiceCodeDefaultType">
  <xs:restriction base="edxl-ct:ValueType">
    <xs:enumeration value="airborneInfectionIsolation"/>
    <xs:enumeration value="burnUnit"/>
    <xs:enumeration value="cardiology"/>
    <xs:enumeration value="cardiology.invasive"/>
    <xs:enumeration value="cardiology.noninvasive"/>
    <xs:enumeration value="cardiologymi.STEMI"/>
    <xs:enumeration value="cardiologymi.nonSTEMI"/>
    <xs:enumeration value="cardiology.telemetry"/>
    <xs:enumeration value="dialysis"/>
    <xs:enumeration value="emergencyDepartment"/>
    <xs:enumeration value="hyperBaricChamber"/>
    <xs:enumeration value="infectiousDisease"/>
    <xs:enumeration value="intensiveCare.adult"/>
    <xs:enumeration value="intensiveCare.neonatal"/>
    <xs:enumeration value="intensiveCare.pediatric"/>
    <xs:enumeration value="intermediateCare"/>
    <xs:enumeration value="neonatology"/>
    <xs:enumeration value="neurology"/>
    <xs:enumeration value="neurology.invasive"/>
    <xs:enumeration value="neurology.noninvasive"/>
    <xs:enumeration value="obgyn"/>
    <xs:enumeration value="obgyn.withLaborDelivery"/>
    <xs:enumeration value="obgyn.withoutLaborDelivery"/>
    <xs:enumeration value="operatingRooms"/>
    <xs:enumeration value="ophthalmology"/>
    <xs:enumeration value="orthopedic"/>
    <xs:enumeration value="pediatrics"/>
    <xs:enumeration value="psychiatric"/>
    <xs:enumeration value="surgery"/>
    <xs:enumeration value="surgery.adultGeneral"/>
    <xs:enumeration value="surgery.pediatrics"/>
    <xs:enumeration value="surgery.orthopedics"/>
    <xs:enumeration value="surgery.neurosurgery"/>
    <xs:enumeration value="surgery.facial"/>
    <xs:enumeration value="surgery.cardiothoracic"/>
    <xs:enumeration value="surgery.hand"/>
    <xs:enumeration value="surgery.reimplantation"/>
    <xs:enumeration value="surgery.spinal"/>
    <xs:enumeration value="surgery.vascular"/>
    <xs:enumeration value="surgery.anesthesia"/>
    <xs:enumeration value="traumaCenter"/>
  </xs:restriction>

```

```

</xs:simpleType>
<xs:complexType name="CapacityType">
  <xs:sequence>
    <xs:element name="capacity" type="ext:ParameterValueType"/>
    <xs:element name="capacityURI" type="edxl-ct:ValueListURIType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="TriageCountType">
  <xs:sequence minOccurs="0">
    <xs:element name="code" type="TriageColourCodeType"/>
    <xs:element name="count">
      <xs:simpleType>
        <xs:restriction base="xs:int">
          <xs:minInclusive value="0"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element name="alternateCodeValue" type="edxl-ct:ValueKeyType" minOccurs="0"/>
    <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="ActivityInPeriodType">
  <xs:sequence>
    <xs:element name="reportingPeriod" type="edxl-ct:TimePeriodType" minOccurs="0"/>
    <xs:element name="admissions" type="xs:int" default="0"/>
    <xs:element name="discharges" type="xs:int" default="0"/>
    <xs:element name="deaths" type="xs:int" default="0"/>
    <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
<xs:simpleType name="TriageColourCodeType">
  <xs:restriction base="edxl-ct:EDXLStringType">
    <xs:enumeration value="red"/>
    <xs:enumeration value="yellow"/>
    <xs:enumeration value="green"/>
    <xs:enumeration value="black"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="FreeTextType">
  <xs:sequence>
    <xs:element name="defaultText" type="LimitedString"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="AlternateTextType">
  <xs:simpleContent>
    <xs:extension base="LimitedString">
      <xs:attribute name="language" type="xs:string" use="required"/>
    </xs:extension>
  </xs:simpleContent>
</xs:complexType>

```

```

<xs:simpleType name="FacilityOperationKind">
  <xs:restriction base="xs:token">
    <xs:enumeration value="plant"/>
  </xs:enumeration>
  <xs:enumeration value="security"/>
  <xs:enumeration value="staffing"/>
  <xs:enumeration value="emergency"/>
</xs:restriction>
</xs:simpleType>
<xs:complexType name="OperationType">
  <xs:sequence>
    <xs:element name="kind" type="FacilityOperationKind"/>
    <xs:element name="name" type="FreeTextType"/>
    <xs:element name="status" type="StatusType"/>
    <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
<xs:simpleType name="ColourCodeDefaultType">
  <xs:restriction base="edxl-ct:EDXLStringType">
    <xs:enumeration value="red"/>
    <xs:enumeration value="yellow"/>
    <xs:enumeration value="green"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="FacilityKindType">
  <xs:restriction base="edxl-ct:EDXLStringType">
    <xs:enumeration value="hospital"/>
    <xs:enumeration value="longTermCare"/>
    <xs:enumeration value="urgentCareClinic"/>
    <xs:enumeration value="temporaryFacility"/>
    <xs:enumeration value="other"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="TraumaCenterLevelKind">
  <xs:restriction base="xs:token">
    <xs:enumeration value="level1"/>
    <xs:enumeration value="level2"/>
    <xs:enumeration value="level3"/>
    <xs:enumeration value="no-trauma"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="LimitedString">
  <xs:restriction base="xs:string">
    <xs:whiteSpace value="preserve"/>
    <xs:maxLength value="1024"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="GeoLocationType">
  <xs:sequence>
    <xs:element name="wgs84Location">

```

```

        <xs:complexType>
            <xs:complexContent>
                <xs:extension base="edxl-gsf:EDXLGeoLocationType">
                    <xs:attribute name="srsName" use="required"
fixed="http://www.opengis.net/def/crs/EPSG/0/4326"/>
                </xs:extension>
            </xs:complexContent>
        </xs:complexType>
    </xs:element>
</xs:sequence>
</xs:complexType>
<xs:simpleType name="TrafficStatusKind">
    <xs:restriction base="xs:token">
        <xs:enumeration value="normal"/>
        <xs:enumeration value="advisory"/>
        <xs:enumeration value="closed"/>
    </xs:restriction>
</xs:simpleType>
<xs:complexType name="OffloadInfoType">
    <xs:sequence>
        <xs:element name="offload" type="OffloadType" maxOccurs="unbounded"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="EmergencyDepartmentType">
    <xs:sequence>
        <xs:element name="status" type="StatusType"/>
        <xs:element name="offloadInfo" type="OffloadInfoType" minOccurs="0"/>
        <xs:element name="traffic" type="TrafficType" minOccurs="0"/>
        <xs:element name="triageCapacity" type="TriageCapacityType" minOccurs="0"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="TriageCapacityType">
    <xs:sequence>
        <xs:element name="triageCount" type="TriageCountType" maxOccurs="unbounded"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="TrafficType">
    <xs:sequence>
        <xs:element name="status" type="TrafficStatusKind"/>
        <xs:element name="colourStatus" type="ColourStatusType"/>
        <xs:element name="reason" type="FreeTextType" minOccurs="0"/>
        <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="TraumaCenterLevelType">
    <xs:sequence>
        <xs:element name="serviceLevel" type="TraumaCenterLevelKind"/>
        <xs:element name="status" type="StatusType"/>
        <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
    </xs:sequence>

```

```

</xs:complexType>
<xs:complexType name="ServicesType">
  <xs:sequence>
    <xs:element name="service" type="ServiceType" maxOccurs="unbounded"/>
    <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="OperationsType">
  <xs:sequence>
    <xs:element name="operation" type="OperationType" maxOccurs="unbounded"/>
    <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="TraumaCenterType">
  <xs:choice>
    <xs:sequence>
      <xs:element name="adult" type="TraumaCenterLevelType"/>
      <xs:element name="pediatric" type="TraumaCenterLevelType" minOccurs="0"/>
    </xs:sequence>
    <xs:element name="pediatric" type="TraumaCenterLevelType"/>
  </xs:choice>
</xs:complexType>
</xs:schema>

```

#### 4.4.1.4.2. Protocol Requirements

```

<?xml version="1.0" encoding="UTF-8"?>
<definitions xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"
xmlns:edxld="urn:oasis:names:tc:emergency:EDXL:DE:1.0" xmlns="http://schemas.xmlsoap.org/wsdl/"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:tns="urn:eu:c2sense:emergency:distribution:1.0"
xmlns:soap12="http://schemas.xmlsoap.org/wsdl/soap12/" name="EmergencyDistribution"
targetNamespace="urn:eu:c2sense:emergency:distribution:1.0">
  <documentation>C2SENSE Distribution Web Service</documentation>
  <types>
    <xsd:schema>
      <xsd:import namespace="urn:oasis:names:tc:emergency:EDXL:DE:1.0"
schemaLocation="../../DE/EDXL-DE.xsd"/>
    </xsd:schema>
  </types>
  <message name="SendMessage_Message">
    <documentation>Send Message</documentation>
    <part name="body" element="edxld:EDXLDistribution"/>
  </message>
  <message name="ReceiveResponseMessage_Message">
    <documentation>Receive Response Message</documentation>

```

```

    <part name="body" element="edxIde:EDXLDistribution"/>
</message>
<portType name="Distribution_PortType">
  <operation name="SendMessage">
    <input message="tns:SendMessage_Message"/>
    <output message="tns:ReceiveResponseMessage_Message"/>
  </operation>
</portType>
<binding name="Distribution_Binding_Soap12" type="tns:Distribution_PortType">
  <soap12:binding style="document" transport="http://schemas.xmlsoap.org/soap/http"/>
  <operation name="SendMessage">
    <soap12:operation soapAction="urn:oasis:names:tc:emergency:EDXL:DE:1.0:SendMessage"/>
    <input>
      <soap12:body use="literal"/>
    </input>
    <output>
      <soap12:body use="literal"/>
    </output>
  </operation>
</binding>
<service name="Distribution">
  <port name="Distribution_PortType" binding="tns:Distribution_Binding_Soap12">
    <soap12:address location="https://localhost:8080/Distribution"/>
  </port>
</service>
</definitions>

```

## 4.4.2. Query Service Availability

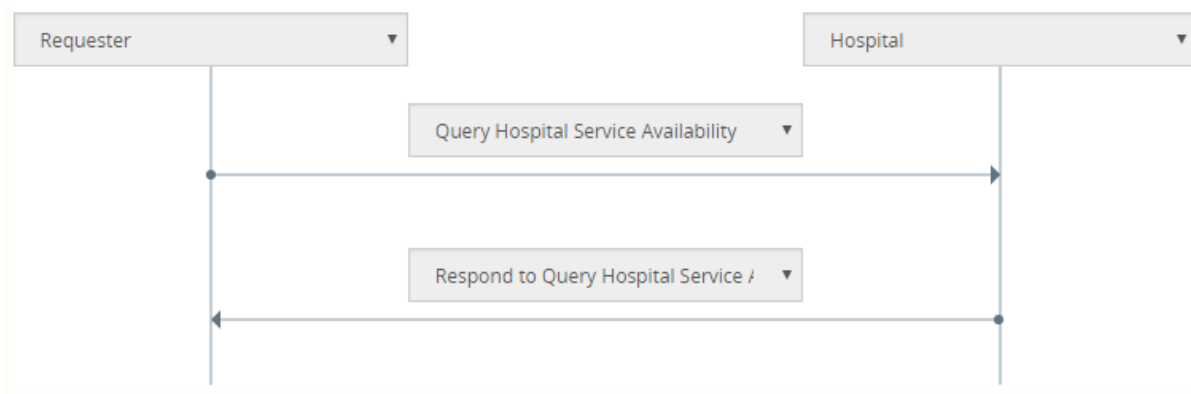
### 4.4.2.1. Description

Categories	Description and Values
Identifier	dda16f3b-c225-4669-b51c-3ea258fa7217
Description	The Requester sends a request to the Hospital regarding the availability of hospital's services such as cardiology services, dialysis services, surgery services and so on.
Actors	Requester, Hospital



Pre-conditions	The Requester and the Hospital have already identified each other.
Post-conditions	The Requester has received the information about hospital's services.

#### 4.4.2.2. Interaction Diagram



#### 4.4.2.3. Query Hospital Service Availability Message

##### 4.4.2.3.1. Message Semantics

```

<?xml version="1.0" encoding="UTF-8"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns:edxl-
ct="urn:oasis:names:tc:emergency:edxl:ct:1.0" xmlns:edxl-
gsf="urn:oasis:names:tc:emergency:edxl:gsf:1.0"
xmlns:have="urn:oasis:names:tc:emergency:edxl:have:2.0"
xmlns:xpil="urn:oasis:names:tc:emergency:edxl:ciq:1.0:xpil"
xmlns:xal="urn:oasis:names:tc:emergency:edxl:ciq:1.0:xal"
xmlns:ext="urn:oasis:names:tc:emergency:edxl:extension:1.0"
xmlns:gml="http://www.opengis.net/gml/3.2" xmlns="urn:oasis:names:tc:emergency:edxl:have:2.0"
targetNamespace="urn:oasis:names:tc:emergency:edxl:have:2.0" elementFormDefault="qualified"
attributeFormDefault="qualified">
  <xs:import namespace="urn:oasis:names:tc:emergency:edxl:gsf:1.0" schemaLocation="../RIM/edxl-
gsf-v1.0-csd02/edxl-gsf-v1.0.xsd"/>
  <xs:import namespace="urn:oasis:names:tc:emergency:edxl:extension:1.0"
schemaLocation="../RIM/edxl-ext-v1.0/edxl-ext-v1.0.xsd"/>
  <xs:import namespace="urn:oasis:names:tc:emergency:edxl:ciq:1.0:xpil"
schemaLocation="../RIM/edxl-ciq-v1.0-csd04/edxl-xPIL.xsd"/>
  <xs:import namespace="urn:oasis:names:tc:emergency:edxl:ciq:1.0:xal"
schemaLocation="../RIM/edxl-ciq-v1.0-csd04/edxl-xAL.xsd"/>

```

```
<xs:import namespace="urn:oasis:names:tc:emergency:edxl:ct:1.0" schemaLocation="../../RIM/edxl-ct-v1.0-csd06/edxl-ct-v1.0.xsd"/>
<xs:element name="HAVE">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="organizationInformation" type="OrganizationInformationType"/>
      <xs:element name="reportingPeriod" type="edxl-ct:TimePeriodType" minOccurs="0"/>
      <xs:element name="facility" type="FacilityType" maxOccurs="unbounded"/>
      <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
    </xs:sequence>
    <xs:attribute name="defaultLanguage" type="xs:string" use="required"/>
  </xs:complexType>
</xs:element>
<xs:complexType name="FacilityType">
  <xs:sequence>
    <xs:element name="name" type="FreeTextType"/>
    <xs:element name="kind" type="FacilityKindType"/>
    <xs:element name="reportingPeriod" type="edxl-ct:TimePeriodType" minOccurs="0"/>
    <xs:element name="organizationInformation" type="xpil:OrganisationDetailsType"/>
    <xs:element name="geoLocation" type="GeoLocationType"/>
    <xs:element name="status" type="StatusType"/>
    <xs:element name="services" type="ServicesType"/>
    <xs:element name="activityInPeriod" type="ActivityInPeriodType" minOccurs="0"
maxOccurs="unbounded"/>
    <xs:element name="operations" type="OperationsType" minOccurs="0"/>
    <xs:element name="resourceInformation" type="ResourceInformationType" minOccurs="0"/>
    <xs:element name="staffing" type="ResourceInformationType" minOccurs="0"/>
    <xs:element name="emergencyDepartment" type="EmergencyDepartmentType" minOccurs="0"/>
    <xs:element name="traumaCenter" type="TraumaCenterType" minOccurs="0"/>
    <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
  </xs:sequence>
  <xs:attribute name="ID" type="xs:ID" use="required"/>
  <xs:attribute name="parentID" type="xs:IDREF"/>
</xs:complexType>
<xs:complexType name="BedCapacityType">
  <xs:sequence>
    <xs:element name="availableCount">
      <xs:simpleType>
        <xs:restriction base="xs:integer"/>
      </xs:simpleType>
    </xs:element>
    <xs:element name="baselineCount" minOccurs="0">
      <xs:simpleType>
        <xs:restriction base="xs:integer">
          <xs:minInclusive value="0"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
  </xs:sequence>
```

```

</xs:complexType>
<xs:simpleType name="StabilityType">
  <xs:restriction base="xs:string">
    <xs:enumeration value="stable"/>
    <xs:enumeration value="improving"/>
    <xs:enumeration value="deteriorating"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="OffloadKind">
  <xs:restriction base="xs:token">
    <xs:enumeration value="land"/>
    <xs:enumeration value="air"/>
    <xs:enumeration value="other"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="OffloadStateKind">
  <xs:restriction base="xs:token">
    <xs:enumeration value="normal"/>
    <xs:enumeration value="delayed"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="OffloadType">
  <xs:sequence>
    <xs:element name="kind" type="OffloadKind" default="land"/>
    <xs:element name="offloadMinutes" type="xs:integer"/>
    <xs:element name="offloadState" type="OffloadStateKind" default="normal" minOccurs="0"/>
    <xs:element name="offloadColourCode" type="ColourStatusType" minOccurs="0"/>
    <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="OrganizationInformationType">
  <xs:complexContent>
    <xs:extension base="xpil:OrganisationDetailsType"/>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="StatusType">
  <xs:sequence>
    <xs:element name="isOK" type="xs:boolean"/>
    <xs:element name="colourStatus" type="ColourStatusType" minOccurs="0"/>
    <xs:element name="stability" type="StabilityType" minOccurs="0"/>
    <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="ServiceType">
  <xs:sequence>
    <xs:element name="name" type="FreeTextType"/>
    <xs:element name="code">
      <xs:simpleType>
        <xs:restriction base="ServiceCodeDefaultType"/>
      </xs:simpleType>
    </xs:element>
  </xs:sequence>
</xs:complexType>

```

```

    </xs:element>
    <xs:element name="status" type="StatusType"/>
    <xs:element name="externalCode" type="edxl-ct:ValueKeyType" minOccurs="0"/>
    <xs:element name="bedCapacity" type="BedCapacityType" minOccurs="0"/>
    <xs:element name="capacity" type="CapacityType" minOccurs="0"/>
    <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="ResourceInformationType">
  <xs:sequence>
    <xs:element name="status" type="StatusType"/>
    <xs:element name="needs" minOccurs="0">
      <xs:complexType>
        <xs:sequence>
          <xs:element name="resourceNeed" type="ResourceQuantityType"
maxOccurs="unbounded"/>
        </xs:sequence>
      </xs:complexType>
    </xs:element>
    <xs:element name="offers" minOccurs="0">
      <xs:complexType>
        <xs:sequence>
          <xs:element name="resourceOffer" type="ResourceQuantityType"
maxOccurs="unbounded"/>
        </xs:sequence>
      </xs:complexType>
    </xs:element>
    <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="ResourceQuantityType">
  <xs:sequence>
    <xs:element name="resourceKind" type="edxl-ct:ValueKeyType"/>
    <xs:element name="quantity">
      <xs:simpleType>
        <xs:restriction base="xs:double">
          <xs:minInclusive value="0"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element name="resourceSize" type="ext:ParameterNameType"/>
    <xs:element name="comments" type="FreeTextType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="ColourStatusType">
  <xs:sequence>
    <xs:element name="colourCode" type="ColourCodeDefaultType"/>
    <xs:element name="statusDescription" type="FreeTextType" minOccurs="0"/>
  </xs:sequence>

```

```

</xs:complexType>
<xs:simpleType name="ServiceCodeDefaultType">
  <xs:restriction base="edxl-ct:ValueType">
    <xs:enumeration value="airborneInfectionIsolation"/>
    <xs:enumeration value="burnUnit"/>
    <xs:enumeration value="cardiology"/>
    <xs:enumeration value="cardiology.invasive"/>
    <xs:enumeration value="cardiology.noninvasive"/>
    <xs:enumeration value="cardiologymi.STEMI"/>
    <xs:enumeration value="cardiologymi.nonSTEMI"/>
    <xs:enumeration value="cardiology.telemetry"/>
    <xs:enumeration value="dialysis"/>
    <xs:enumeration value="emergencyDepartment"/>
    <xs:enumeration value="hyperBaricChamber"/>
    <xs:enumeration value="infectiousDisease"/>
    <xs:enumeration value="intensiveCare.adult"/>
    <xs:enumeration value="intensiveCare.neonatal"/>
    <xs:enumeration value="intensiveCare.pediatric"/>
    <xs:enumeration value="intermediateCare"/>
    <xs:enumeration value="neonatology"/>
    <xs:enumeration value="neurology"/>
    <xs:enumeration value="neurology.invasive"/>
    <xs:enumeration value="neurology.noninvasive"/>
    <xs:enumeration value="obgyn"/>
    <xs:enumeration value="obgyn.withLaborDelivery"/>
    <xs:enumeration value="obgyn.withoutLaborDelivery"/>
    <xs:enumeration value="operatingRooms"/>
    <xs:enumeration value="ophthalmology"/>
    <xs:enumeration value="orthopedic"/>
    <xs:enumeration value="pediatrics"/>
    <xs:enumeration value="psychiatric"/>
    <xs:enumeration value="surgery"/>
    <xs:enumeration value="surgery.adultGeneral"/>
    <xs:enumeration value="surgery.pediatrics"/>
    <xs:enumeration value="surgery.orthopedics"/>
    <xs:enumeration value="surgery.neurosurgery"/>
    <xs:enumeration value="surgery.facial"/>
    <xs:enumeration value="surgery.cardiothoracic"/>
    <xs:enumeration value="surgery.hand"/>
    <xs:enumeration value="surgery.reimplantation"/>
    <xs:enumeration value="surgery.spinal"/>
    <xs:enumeration value="surgery.vascular"/>
    <xs:enumeration value="surgery.anesthesia"/>
    <xs:enumeration value="traumaCenter"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="CapacityType">
  <xs:sequence>
    <xs:element name="capacity" type="ext:ParameterValueType"/>
    <xs:element name="capacityURI" type="edxl-ct:ValueListURIType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>

```

```

    </xs:sequence>
</xs:complexType>
<xs:complexType name="TriageCountType">
  <xs:sequence minOccurs="0">
    <xs:element name="code" type="TriageColourCodeType"/>
    <xs:element name="count">
      <xs:simpleType>
        <xs:restriction base="xs:int">
          <xs:minInclusive value="0"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element name="alternateCodeValue" type="edxl-ct:ValueKeyType" minOccurs="0"/>
    <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="ActivityInPeriodType">
  <xs:sequence>
    <xs:element name="reportingPeriod" type="edxl-ct:TimePeriodType" minOccurs="0"/>
    <xs:element name="admissions" type="xs:int" default="0"/>
    <xs:element name="discharges" type="xs:int" default="0"/>
    <xs:element name="deaths" type="xs:int" default="0"/>
    <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
<xs:simpleType name="TriageColourCodeType">
  <xs:restriction base="edxl-ct:EDXLStringType">
    <xs:enumeration value="red"/>
    <xs:enumeration value="yellow"/>
    <xs:enumeration value="green"/>
    <xs:enumeration value="black"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="FreeTextType">
  <xs:sequence>
    <xs:element name="defaultText" type="LimitedString"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="AlternateTextType">
  <xs:simpleContent>
    <xs:extension base="LimitedString">
      <xs:attribute name="language" type="xs:string" use="required"/>
    </xs:extension>
  </xs:simpleContent>
</xs:complexType>
<xs:simpleType name="FacilityOperationKind">
  <xs:restriction base="xs:token">
    <xs:enumeration value="plant"/>
    </xs:enumeration>
    <xs:enumeration value="security"/>
  </xs:restriction>
</xs:simpleType>

```

```

        <xs:enumeration value="staffing"/>
        <xs:enumeration value="emergency"/>
    </xs:restriction>
</xs:simpleType>
<xs:complexType name="OperationType">
    <xs:sequence>
        <xs:element name="kind" type="FacilityOperationKind"/>
        <xs:element name="name" type="FreeTextType"/>
        <xs:element name="status" type="StatusType"/>
        <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
    </xs:sequence>
</xs:complexType>
<xs:simpleType name="ColourCodeDefaultType">
    <xs:restriction base="edxl-ct:EDXLStringType">
        <xs:enumeration value="red"/>
        <xs:enumeration value="yellow"/>
        <xs:enumeration value="green"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="FacilityKindType">
    <xs:restriction base="edxl-ct:EDXLStringType">
        <xs:enumeration value="hospital"/>
        <xs:enumeration value="longTermCare"/>
        <xs:enumeration value="urgentCareClinic"/>
        <xs:enumeration value="temporaryFacility"/>
        <xs:enumeration value="other"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="TraumaCenterLevelKind">
    <xs:restriction base="xs:token">
        <xs:enumeration value="level1"/>
        <xs:enumeration value="level2"/>
        <xs:enumeration value="level3"/>
        <xs:enumeration value="no-trauma"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="LimitedString">
    <xs:restriction base="xs:string">
        <xs:whiteSpace value="preserve"/>
        <xs:maxLength value="1024"/>
    </xs:restriction>
</xs:simpleType>
<xs:complexType name="GeoLocationType">
    <xs:sequence>
        <xs:element name="wgs84Location">
            <xs:complexType>
                <xs:complexContent>
                    <xs:extension base="edxl-gsf:EDXLGeoLocationType">
                        <xs:attribute name="srsName" use="required"
fixed="http://www.opengis.net/def/crs/EPSSG/0/4326"/>

```

```

        </xs:extension>
      </xs:complexContent>
    </xs:complexType>
  </xs:element>
</xs:sequence>
</xs:complexType>
<xs:simpleType name="TrafficStatusKind">
  <xs:restriction base="xs:token">
    <xs:enumeration value="normal"/>
    <xs:enumeration value="advisory"/>
    <xs:enumeration value="closed"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="OffloadInfoType">
  <xs:sequence>
    <xs:element name="offload" type="OffloadType" maxOccurs="unbounded"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="EmergencyDepartmentType">
  <xs:sequence>
    <xs:element name="status" type="StatusType"/>
    <xs:element name="offloadInfo" type="OffloadInfoType" minOccurs="0"/>
    <xs:element name="traffic" type="TrafficType" minOccurs="0"/>
    <xs:element name="triageCapacity" type="TriageCapacityType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="TriageCapacityType">
  <xs:sequence>
    <xs:element name="triageCount" type="TriageCountType" maxOccurs="unbounded"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="TrafficType">
  <xs:sequence>
    <xs:element name="status" type="TrafficStatusKind"/>
    <xs:element name="colourStatus" type="ColourStatusType"/>
    <xs:element name="reason" type="FreeTextType" minOccurs="0"/>
    <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="TraumaCenterLevelType">
  <xs:sequence>
    <xs:element name="serviceLevel" type="TraumaCenterLevelKind"/>
    <xs:element name="status" type="StatusType"/>
    <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="ServicesType">
  <xs:sequence>
    <xs:element name="service" type="ServiceType" maxOccurs="unbounded"/>
    <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>

```



```

        </xs:sequence>
    </xs:complexType>
    <xs:complexType name="OperationsType">
        <xs:sequence>
            <xs:element name="operation" type="OperationType" maxOccurs="unbounded"/>
            <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
        </xs:sequence>
    </xs:complexType>
    <xs:complexType name="TraumaCenterType">
        <xs:choice>
            <xs:sequence>
                <xs:element name="adult" type="TraumaCenterLevelType"/>
                <xs:element name="pediatric" type="TraumaCenterLevelType" minOccurs="0"/>
            </xs:sequence>
            <xs:element name="pediatric" type="TraumaCenterLevelType"/>
        </xs:choice>
    </xs:complexType>
</xs:schema>

```

#### 4.4.2.3.2. Protocol Requirements

```

<?xml version="1.0" encoding="UTF-8"?>
<definitions xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"
xmlns:edxldr="urn:oasis:names:tc:emergency:EDXL:DE:1.0" xmlns="http://schemas.xmlsoap.org/wsdl/"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:tns="urn:eu:c2sense:emergency:distribution:1.0"
xmlns:soap12="http://schemas.xmlsoap.org/wsdl/soap12/" name="EmergencyDistribution"
targetNamespace="urn:eu:c2sense:emergency:distribution:1.0">
    <documentation>C2SENSE Distribution Web Service</documentation>
    <types>
        <xsd:schema>
            <xsd:import namespace="urn:oasis:names:tc:emergency:EDXL:DE:1.0"
schemaLocation="../../DE/EDXL-DE.xsd"/>
        </xsd:schema>
    </types>
    <message name="SendMessage_Message">
        <documentation>Send Message</documentation>
        <part name="body" element="edxldr:EDXLDistribution"/>
    </message>
    <message name="ReceiveResponseMessage_Message">
        <documentation>Receive Response Message</documentation>
        <part name="body" element="edxldr:EDXLDistribution"/>
    </message>
    <portType name="Distribution_PortType">
        <operation name="SendMessage">
            <input message="tns:SendMessage_Message"/>

```

```

        <output message="tns:ReceiveResponseMessage_Message"/>
    </operation>
</portType>
<binding name="Distribution_Binding_Soap12" type="tns:Distribution_PortType">
    <soap12:binding style="document" transport="http://schemas.xmlsoap.org/soap/http"/>
    <operation name="SendMessage">
        <soap12:operation soapAction="urn:oasis:names:tc:emergency:EDXL:DE:1.0:SendMessage"/>
        <input>
            <soap12:body use="literal"/>
        </input>
        <output>
            <soap12:body use="literal"/>
        </output>
    </operation>
</binding>
<service name="Distribution">
    <port name="Distribution_PortType" binding="tns:Distribution_Binding_Soap12">
        <soap12:address location="https://localhost:8080/Distribution"/>
    </port>
</service>
</definitions>

```

#### 4.4.2.4. Respond to Query Hospital Service Availability Message

##### 4.4.2.4.1. Message Semantics

```

<?xml version="1.0" encoding="UTF-8"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns:edxl-
ct="urn:oasis:names:tc:emergency:edxl:ct:1.0" xmlns:edxl-
gsf="urn:oasis:names:tc:emergency:edxl:gsf:1.0"
xmlns:have="urn:oasis:names:tc:emergency:edxl:have:2.0"
xmlns:xpil="urn:oasis:names:tc:emergency:edxl:ciq:1.0:xpil"
xmlns:xal="urn:oasis:names:tc:emergency:edxl:ciq:1.0:xal"
xmlns:ext="urn:oasis:names:tc:emergency:edxl:extension:1.0"
xmlns:gml="http://www.opengis.net/gml/3.2" xmlns="urn:oasis:names:tc:emergency:edxl:have:2.0"
targetNamespace="urn:oasis:names:tc:emergency:edxl:have:2.0" elementFormDefault="qualified"
attributeFormDefault="qualified">
    <xs:import namespace="urn:oasis:names:tc:emergency:edxl:gsf:1.0" schemaLocation="../RIM/edxl-
gsf-v1.0-csd02/edxl-gsf-v1.0.xsd"/>
    <xs:import namespace="urn:oasis:names:tc:emergency:edxl:extension:1.0"
schemaLocation="../RIM/edxl-ext-v1.0/edxl-ext-v1.0.xsd"/>
    <xs:import namespace="urn:oasis:names:tc:emergency:edxl:ciq:1.0:xpil"
schemaLocation="../RIM/edxl-ciq-v1.0-csd04/edxl-xPIL.xsd"/>
    <xs:import namespace="urn:oasis:names:tc:emergency:edxl:ciq:1.0:xal"
schemaLocation="../RIM/edxl-ciq-v1.0-csd04/edxl-xAL.xsd"/>

```

```

<xs:import namespace="urn:oasis:names:tc:emergency:edxl:ct:1.0" schemaLocation="../../RIM/edxl-
ct-v1.0-csd06/edxl-ct-v1.0.xsd"/>
<xs:element name="HAVE">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="organizationInformation" type="OrganizationInformationType"/>
      <xs:element name="reportingPeriod" type="edxl-ct:TimePeriodType" minOccurs="0"/>
      <xs:element name="facility" type="FacilityType" maxOccurs="unbounded"/>
      <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
    </xs:sequence>
    <xs:attribute name="defaultLanguage" type="xs:string" use="required"/>
  </xs:complexType>
</xs:element>
<xs:complexType name="FacilityType">
  <xs:sequence>
    <xs:element name="name" type="FreeTextType"/>
    <xs:element name="kind" type="FacilityKindType"/>
    <xs:element name="reportingPeriod" type="edxl-ct:TimePeriodType" minOccurs="0"/>
    <xs:element name="organizationInformation" type="xpil:OrganisationDetailsType"/>
    <xs:element name="geoLocation" type="GeoLocationType"/>
    <xs:element name="status" type="StatusType"/>
    <xs:element name="services" type="ServicesType"/>
    <xs:element name="activityInPeriod" type="ActivityInPeriodType" minOccurs="0"
maxOccurs="unbounded"/>
    <xs:element name="operations" type="OperationsType" minOccurs="0"/>
    <xs:element name="resourceInformation" type="ResourceInformationType" minOccurs="0"/>
    <xs:element name="staffing" type="ResourceInformationType" minOccurs="0"/>
    <xs:element name="emergencyDepartment" type="EmergencyDepartmentType" minOccurs="0"/>
    <xs:element name="traumaCenter" type="TraumaCenterType" minOccurs="0"/>
    <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
  </xs:sequence>
  <xs:attribute name="ID" type="xs:ID" use="required"/>
  <xs:attribute name="parentID" type="xs:IDREF"/>
</xs:complexType>
<xs:complexType name="BedCapacityType">
  <xs:sequence>
    <xs:element name="availableCount">
      <xs:simpleType>
        <xs:restriction base="xs:integer"/>
      </xs:simpleType>
    </xs:element>
    <xs:element name="baselineCount" minOccurs="0">
      <xs:simpleType>
        <xs:restriction base="xs:integer">
          <xs:minInclusive value="0"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
  </xs:sequence>

```

```

</xs:complexType>
<xs:simpleType name="StabilityType">
  <xs:restriction base="xs:string">
    <xs:enumeration value="stable"/>
    <xs:enumeration value="improving"/>
    <xs:enumeration value="deteriorating"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="OffloadKind">
  <xs:restriction base="xs:token">
    <xs:enumeration value="land"/>
    <xs:enumeration value="air"/>
    <xs:enumeration value="other"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="OffloadStateKind">
  <xs:restriction base="xs:token">
    <xs:enumeration value="normal"/>
    <xs:enumeration value="delayed"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="OffloadType">
  <xs:sequence>
    <xs:element name="kind" type="OffloadKind" default="land"/>
    <xs:element name="offloadMinutes" type="xs:integer"/>
    <xs:element name="offloadState" type="OffloadStateKind" default="normal" minOccurs="0"/>
    <xs:element name="offloadColourCode" type="ColourStatusType" minOccurs="0"/>
    <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="OrganizationInformationType">
  <xs:complexContent>
    <xs:extension base="xpil:OrganisationDetailsType"/>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="StatusType">
  <xs:sequence>
    <xs:element name="isOK" type="xs:boolean"/>
    <xs:element name="colourStatus" type="ColourStatusType" minOccurs="0"/>
    <xs:element name="stability" type="StabilityType" minOccurs="0"/>
    <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="ServiceType">
  <xs:sequence>
    <xs:element name="name" type="FreeTextType"/>
    <xs:element name="code">
      <xs:simpleType>
        <xs:restriction base="ServiceCodeDefaultType"/>
      </xs:simpleType>
    </xs:element>
  </xs:sequence>
</xs:complexType>

```

```

        </xs:element>
        <xs:element name="status" type="StatusType"/>
        <xs:element name="externalCode" type="edxl-ct:ValueKeyType" minOccurs="0"/>
        <xs:element name="bedCapacity" type="BedCapacityType" minOccurs="0"/>
        <xs:element name="capacity" type="CapacityType" minOccurs="0"/>
        <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="ResourceInformationType">
    <xs:sequence>
        <xs:element name="status" type="StatusType"/>
        <xs:element name="needs" minOccurs="0">
            <xs:complexType>
                <xs:sequence>
                    <xs:element name="resourceNeed" type="ResourceQuantityType"
maxOccurs="unbounded"/>
                </xs:sequence>
            </xs:complexType>
        </xs:element>
        <xs:element name="offers" minOccurs="0">
            <xs:complexType>
                <xs:sequence>
                    <xs:element name="resourceOffer" type="ResourceQuantityType"
maxOccurs="unbounded"/>
                </xs:sequence>
            </xs:complexType>
        </xs:element>
        <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="ResourceQuantityType">
    <xs:sequence>
        <xs:element name="resourceKind" type="edxl-ct:ValueKeyType"/>
        <xs:element name="quantity">
            <xs:simpleType>
                <xs:restriction base="xs:double">
                    <xs:minInclusive value="0"/>
                </xs:restriction>
            </xs:simpleType>
        </xs:element>
        <xs:element name="resourceSize" type="ext:ParameterNameType"/>
        <xs:element name="comments" type="FreeTextType" minOccurs="0"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="ColourStatusType">
    <xs:sequence>
        <xs:element name="colourCode" type="ColourCodeDefaultType"/>
        <xs:element name="statusDescription" type="FreeTextType" minOccurs="0"/>
    </xs:sequence>

```

```

</xs:complexType>
<xs:simpleType name="ServiceCodeDefaultType">
  <xs:restriction base="edxl-ct:ValueType">
    <xs:enumeration value="airborneInfectionIsolation"/>
    <xs:enumeration value="burnUnit"/>
    <xs:enumeration value="cardiology"/>
    <xs:enumeration value="cardiology.invasive"/>
    <xs:enumeration value="cardiology.noninvasive"/>
    <xs:enumeration value="cardiologymi.STEMI"/>
    <xs:enumeration value="cardiologymi.nonSTEMI"/>
    <xs:enumeration value="cardiology.telemetry"/>
    <xs:enumeration value="dialysis"/>
    <xs:enumeration value="emergencyDepartment"/>
    <xs:enumeration value="hyperBaricChamber"/>
    <xs:enumeration value="infectiousDisease"/>
    <xs:enumeration value="intensiveCare.adult"/>
    <xs:enumeration value="intensiveCare.neonatal"/>
    <xs:enumeration value="intensiveCare.pediatric"/>
    <xs:enumeration value="intermediateCare"/>
    <xs:enumeration value="neonatology"/>
    <xs:enumeration value="neurology"/>
    <xs:enumeration value="neurology.invasive"/>
    <xs:enumeration value="neurology.noninvasive"/>
    <xs:enumeration value="obgyn"/>
    <xs:enumeration value="obgyn.withLaborDelivery"/>
    <xs:enumeration value="obgyn.withoutLaborDelivery"/>
    <xs:enumeration value="operatingRooms"/>
    <xs:enumeration value="ophthalmology"/>
    <xs:enumeration value="orthopedic"/>
    <xs:enumeration value="pediatrics"/>
    <xs:enumeration value="psychiatric"/>
    <xs:enumeration value="surgery"/>
    <xs:enumeration value="surgery.adultGeneral"/>
    <xs:enumeration value="surgery.pediatrics"/>
    <xs:enumeration value="surgery.orthopedics"/>
    <xs:enumeration value="surgery.neurosurgery"/>
    <xs:enumeration value="surgery.facial"/>
    <xs:enumeration value="surgery.cardiothoracic"/>
    <xs:enumeration value="surgery.hand"/>
    <xs:enumeration value="surgery.reimplantation"/>
    <xs:enumeration value="surgery.spinal"/>
    <xs:enumeration value="surgery.vascular"/>
    <xs:enumeration value="surgery.anesthesia"/>
    <xs:enumeration value="traumaCenter"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="CapacityType">
  <xs:sequence>
    <xs:element name="capacity" type="ext:ParameterValueType"/>
    <xs:element name="capacityURI" type="edxl-ct:ValueListURIType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>

```

```

    </xs:sequence>
</xs:complexType>
<xs:complexType name="TriageCountType">
  <xs:sequence minOccurs="0">
    <xs:element name="code" type="TriageColourCodeType"/>
    <xs:element name="count">
      <xs:simpleType>
        <xs:restriction base="xs:int">
          <xs:minInclusive value="0"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element name="alternateCodeValue" type="edxl-ct:ValueKeyType" minOccurs="0"/>
    <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="ActivityInPeriodType">
  <xs:sequence>
    <xs:element name="reportingPeriod" type="edxl-ct:TimePeriodType" minOccurs="0"/>
    <xs:element name="admissions" type="xs:int" default="0"/>
    <xs:element name="discharges" type="xs:int" default="0"/>
    <xs:element name="deaths" type="xs:int" default="0"/>
    <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
<xs:simpleType name="TriageColourCodeType">
  <xs:restriction base="edxl-ct:EDXLStringType">
    <xs:enumeration value="red"/>
    <xs:enumeration value="yellow"/>
    <xs:enumeration value="green"/>
    <xs:enumeration value="black"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="FreeTextType">
  <xs:sequence>
    <xs:element name="defaultText" type="LimitedString"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="AlternateTextType">
  <xs:simpleContent>
    <xs:extension base="LimitedString">
      <xs:attribute name="language" type="xs:string" use="required"/>
    </xs:extension>
  </xs:simpleContent>
</xs:complexType>
<xs:simpleType name="FacilityOperationKind">
  <xs:restriction base="xs:token">
    <xs:enumeration value="plant"/>
    </xs:enumeration>
    <xs:enumeration value="security"/>
  </xs:restriction>
</xs:simpleType>

```

```

        <xs:enumeration value="staffing"/>
        <xs:enumeration value="emergency"/>
    </xs:restriction>
</xs:simpleType>
<xs:complexType name="OperationType">
    <xs:sequence>
        <xs:element name="kind" type="FacilityOperationKind"/>
        <xs:element name="name" type="FreeTextType"/>
        <xs:element name="status" type="StatusType"/>
        <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
    </xs:sequence>
</xs:complexType>
<xs:simpleType name="ColourCodeDefaultType">
    <xs:restriction base="edxl-ct:EDXLStringType">
        <xs:enumeration value="red"/>
        <xs:enumeration value="yellow"/>
        <xs:enumeration value="green"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="FacilityKindType">
    <xs:restriction base="edxl-ct:EDXLStringType">
        <xs:enumeration value="hospital"/>
        <xs:enumeration value="longTermCare"/>
        <xs:enumeration value="urgentCareClinic"/>
        <xs:enumeration value="temporaryFacility"/>
        <xs:enumeration value="other"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="TraumaCenterLevelKind">
    <xs:restriction base="xs:token">
        <xs:enumeration value="level1"/>
        <xs:enumeration value="level2"/>
        <xs:enumeration value="level3"/>
        <xs:enumeration value="no-trauma"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="LimitedString">
    <xs:restriction base="xs:string">
        <xs:whiteSpace value="preserve"/>
        <xs:maxLength value="1024"/>
    </xs:restriction>
</xs:simpleType>
<xs:complexType name="GeoLocationType">
    <xs:sequence>
        <xs:element name="wgs84Location">
            <xs:complexType>
                <xs:complexContent>
                    <xs:extension base="edxl-gsf:EDXLGeoLocationType">
                        <xs:attribute name="srsName" use="required"
fixed="http://www.opengis.net/def/crs/EPSSG/0/4326"/>

```



```

        </xs:extension>
      </xs:complexContent>
    </xs:complexType>
  </xs:element>
</xs:sequence>
</xs:complexType>
<xs:simpleType name="TrafficStatusKind">
  <xs:restriction base="xs:token">
    <xs:enumeration value="normal"/>
    <xs:enumeration value="advisory"/>
    <xs:enumeration value="closed"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="OffloadInfoType">
  <xs:sequence>
    <xs:element name="offload" type="OffloadType" maxOccurs="unbounded"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="EmergencyDepartmentType">
  <xs:sequence>
    <xs:element name="status" type="StatusType"/>
    <xs:element name="offloadInfo" type="OffloadInfoType" minOccurs="0"/>
    <xs:element name="traffic" type="TrafficType" minOccurs="0"/>
    <xs:element name="triageCapacity" type="TriageCapacityType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="TriageCapacityType">
  <xs:sequence>
    <xs:element name="triageCount" type="TriageCountType" maxOccurs="unbounded"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="TrafficType">
  <xs:sequence>
    <xs:element name="status" type="TrafficStatusKind"/>
    <xs:element name="colourStatus" type="ColourStatusType"/>
    <xs:element name="reason" type="FreeTextType" minOccurs="0"/>
    <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="TraumaCenterLevelType">
  <xs:sequence>
    <xs:element name="serviceLevel" type="TraumaCenterLevelKind"/>
    <xs:element name="status" type="StatusType"/>
    <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="ServicesType">
  <xs:sequence>
    <xs:element name="service" type="ServiceType" maxOccurs="unbounded"/>
    <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>

```

```

    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="OperationsType">
    <xs:sequence>
      <xs:element name="operation" type="OperationType" maxOccurs="unbounded"/>
      <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="TraumaCenterType">
    <xs:choice>
      <xs:sequence>
        <xs:element name="adult" type="TraumaCenterLevelType"/>
        <xs:element name="pediatric" type="TraumaCenterLevelType" minOccurs="0"/>
      </xs:sequence>
      <xs:element name="pediatric" type="TraumaCenterLevelType"/>
    </xs:choice>
  </xs:complexType>
</xs:schema>

```

#### 4.4.2.4.2. Protocol Requirements

```

<?xml version="1.0" encoding="UTF-8"?>
<definitions xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"
  xmlns:edxldr="urn:oasis:names:tc:emergency:EDXL:DE:1.0" xmlns="http://schemas.xmlsoap.org/wsdl/"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  xmlns:tns="urn:eu:c2sense:emergency:distribution:1.0"
  xmlns:soap12="http://schemas.xmlsoap.org/wsdl/soap12/" name="EmergencyDistribution"
  targetNamespace="urn:eu:c2sense:emergency:distribution:1.0">
  <documentation>C2SENSE Distribution Web Service</documentation>
  <types>
    <xsd:schema>
      <xsd:import namespace="urn:oasis:names:tc:emergency:EDXL:DE:1.0"
        schemaLocation="../../DE/EDXL-DE.xsd"/>
    </xsd:schema>
  </types>
  <message name="SendMessage_Message">
    <documentation>Send Message</documentation>
    <part name="body" element="edxldr:EDXLDistribution"/>
  </message>
  <message name="ReceiveResponseMessage_Message">
    <documentation>Receive Response Message</documentation>
    <part name="body" element="edxldr:EDXLDistribution"/>
  </message>
  <portType name="Distribution_PortType">
    <operation name="SendMessage">
      <input message="tns:SendMessage_Message"/>
    </operation>
  </portType>

```

```
<output message="tns:ReceiveResponseMessage_Message"/>
</operation>
</portType>
<binding name="Distribution_Binding_Soap12" type="tns:Distribution_PortType">
  <soap12:binding style="document" transport="http://schemas.xmlsoap.org/soap/http"/>
  <operation name="SendMessage">
    <soap12:operation soapAction="urn:oasis:names:tc:emergency:EDXL:DE:1.0:SendMessage"/>
    <input>
      <soap12:body use="literal"/>
    </input>
    <output>
      <soap12:body use="literal"/>
    </output>
  </operation>
</binding>
<service name="Distribution">
  <port name="Distribution_PortType" binding="tns:Distribution_Binding_Soap12">
    <soap12:address location="https://localhost:8080/Distribution"/>
  </port>
</service>
</definitions>
```

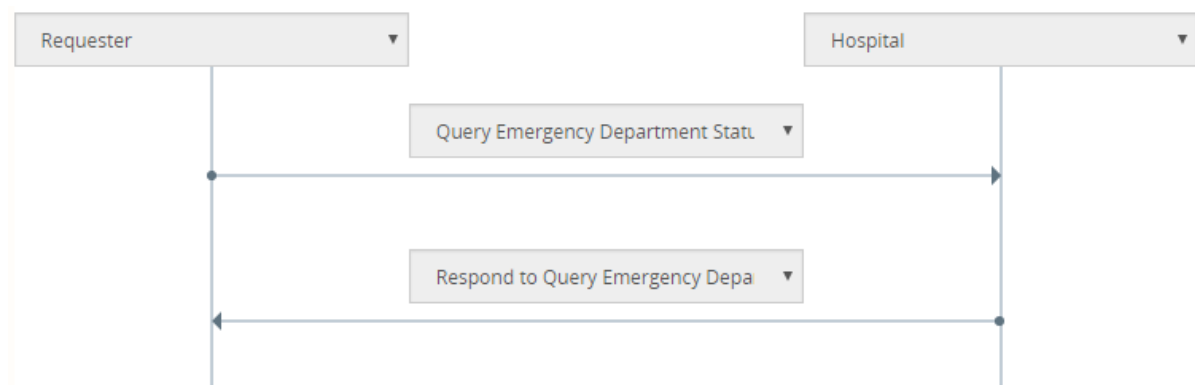
### 4.4.3. Query Emergency Department Status

#### 4.4.3.1. Description

Categories	Description and Values
Identifier	ef2dc2f7-d0ff-4fa6-800b-f3bf2985805e
Description	The Requester sends a request to the Hospital regarding the status of hospital's emergency department such as ability of hospital to receive patients, the number of triage patients that hospital currently has, the number of each triage patient type the hospital can accept, status and offload time for ground ambulance capabilities and so on.
Actors	Requester, Hospital

Pre-conditions	The Requester and the Hospital have already identified each other.
Post-conditions	The Requester has received the information about emergency department status.

#### 4.4.3.2. Interaction Diagram



#### 4.4.3.3. Query Emergency Department Status Message

##### 4.4.3.3.1. Message Semantics

```

<?xml version="1.0" encoding="UTF-8"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns:edxl-
ct="urn:oasis:names:tc:emergency:edxl:ct:1.0" xmlns:edxl-
gsf="urn:oasis:names:tc:emergency:edxl:gsf:1.0"
xmlns:have="urn:oasis:names:tc:emergency:edxl:have:2.0"
xmlns:xpil="urn:oasis:names:tc:emergency:edxl:ciq:1.0:xpil"
xmlns:xal="urn:oasis:names:tc:emergency:edxl:ciq:1.0:xal"
xmlns:ext="urn:oasis:names:tc:emergency:edxl:extension:1.0"
xmlns:gml="http://www.opengis.net/gml/3.2" xmlns="urn:oasis:names:tc:emergency:edxl:have:2.0"
targetNamespace="urn:oasis:names:tc:emergency:edxl:have:2.0" elementFormDefault="qualified"
attributeFormDefault="qualified">
  <xs:import namespace="urn:oasis:names:tc:emergency:edxl:gsf:1.0" schemaLocation="../RIM/edxl-
gsf-v1.0-csd02/edxl-gsf-v1.0.xsd"/>
  <xs:import namespace="urn:oasis:names:tc:emergency:edxl:extension:1.0"
schemaLocation="../RIM/edxl-ext-v1.0/edxl-ext-v1.0.xsd"/>
  <xs:import namespace="urn:oasis:names:tc:emergency:edxl:ciq:1.0:xpil"
schemaLocation="../RIM/edxl-ciq-v1.0-csd04/edxl-xPIL.xsd"/>
  <xs:import namespace="urn:oasis:names:tc:emergency:edxl:ciq:1.0:xal"
schemaLocation="../RIM/edxl-ciq-v1.0-csd04/edxl-xAL.xsd"/>

```

```
<xs:import namespace="urn:oasis:names:tc:emergency:edxl:ct:1.0" schemaLocation="../../RIM/edxl-ct-v1.0-csd06/edxl-ct-v1.0.xsd"/>
<xs:element name="HAVE">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="organizationInformation" type="OrganizationInformationType"/>
      <xs:element name="reportingPeriod" type="edxl-ct:TimePeriodType" minOccurs="0"/>
      <xs:element name="facility" type="FacilityType" maxOccurs="unbounded"/>
      <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
    </xs:sequence>
    <xs:attribute name="defaultLanguage" type="xs:string" use="required"/>
  </xs:complexType>
</xs:element>
<xs:complexType name="FacilityType">
  <xs:sequence>
    <xs:element name="name" type="FreeTextType"/>
    <xs:element name="kind" type="FacilityKindType"/>
    <xs:element name="reportingPeriod" type="edxl-ct:TimePeriodType" minOccurs="0"/>
    <xs:element name="organizationInformation" type="xpil:OrganisationDetailsType"/>
    <xs:element name="geoLocation" type="GeoLocationType"/>
    <xs:element name="status" type="StatusType"/>
    <xs:element name="services" type="ServicesType"/>
    <xs:element name="activityInPeriod" type="ActivityInPeriodType" minOccurs="0"
maxOccurs="unbounded"/>
    <xs:element name="operations" type="OperationsType" minOccurs="0"/>
    <xs:element name="resourceInformation" type="ResourceInformationType" minOccurs="0"/>
    <xs:element name="staffing" type="ResourceInformationType" minOccurs="0"/>
    <xs:element name="emergencyDepartment" type="EmergencyDepartmentType" minOccurs="0"/>
    <xs:element name="traumaCenter" type="TraumaCenterType" minOccurs="0"/>
    <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
  </xs:sequence>
  <xs:attribute name="ID" type="xs:ID" use="required"/>
  <xs:attribute name="parentID" type="xs:IDREF"/>
</xs:complexType>
<xs:complexType name="BedCapacityType">
  <xs:sequence>
    <xs:element name="availableCount">
      <xs:simpleType>
        <xs:restriction base="xs:integer"/>
      </xs:simpleType>
    </xs:element>
    <xs:element name="baselineCount" minOccurs="0">
      <xs:simpleType>
        <xs:restriction base="xs:integer">
          <xs:minInclusive value="0"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
  </xs:sequence>
```

```

</xs:complexType>
<xs:simpleType name="StabilityType">
  <xs:restriction base="xs:string">
    <xs:enumeration value="stable"/>
    <xs:enumeration value="improving"/>
    <xs:enumeration value="deteriorating"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="OffloadKind">
  <xs:restriction base="xs:token">
    <xs:enumeration value="land"/>
    <xs:enumeration value="air"/>
    <xs:enumeration value="other"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="OffloadStateKind">
  <xs:restriction base="xs:token">
    <xs:enumeration value="normal"/>
    <xs:enumeration value="delayed"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="OffloadType">
  <xs:sequence>
    <xs:element name="kind" type="OffloadKind" default="land"/>
    <xs:element name="offloadMinutes" type="xs:integer"/>
    <xs:element name="offloadState" type="OffloadStateKind" default="normal" minOccurs="0"/>
    <xs:element name="offloadColourCode" type="ColourStatusType" minOccurs="0"/>
    <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="OrganizationInformationType">
  <xs:complexContent>
    <xs:extension base="xpil:OrganisationDetailsType"/>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="StatusType">
  <xs:sequence>
    <xs:element name="isOK" type="xs:boolean"/>
    <xs:element name="colourStatus" type="ColourStatusType" minOccurs="0"/>
    <xs:element name="stability" type="StabilityType" minOccurs="0"/>
    <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="ServiceType">
  <xs:sequence>
    <xs:element name="name" type="FreeTextType"/>
    <xs:element name="code">
      <xs:simpleType>
        <xs:restriction base="ServiceCodeDefaultType"/>
      </xs:simpleType>
    </xs:element>
  </xs:sequence>
</xs:complexType>

```

```

        </xs:element>
        <xs:element name="status" type="StatusType"/>
        <xs:element name="externalCode" type="edxl-ct:ValueKeyType" minOccurs="0"/>
        <xs:element name="bedCapacity" type="BedCapacityType" minOccurs="0"/>
        <xs:element name="capacity" type="CapacityType" minOccurs="0"/>
        <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="ResourceInformationType">
    <xs:sequence>
        <xs:element name="status" type="StatusType"/>
        <xs:element name="needs" minOccurs="0">
            <xs:complexType>
                <xs:sequence>
                    <xs:element name="resourceNeed" type="ResourceQuantityType"
maxOccurs="unbounded"/>
                </xs:sequence>
            </xs:complexType>
        </xs:element>
        <xs:element name="offers" minOccurs="0">
            <xs:complexType>
                <xs:sequence>
                    <xs:element name="resourceOffer" type="ResourceQuantityType"
maxOccurs="unbounded"/>
                </xs:sequence>
            </xs:complexType>
        </xs:element>
        <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="ResourceQuantityType">
    <xs:sequence>
        <xs:element name="resourceKind" type="edxl-ct:ValueKeyType"/>
        <xs:element name="quantity">
            <xs:simpleType>
                <xs:restriction base="xs:double">
                    <xs:minInclusive value="0"/>
                </xs:restriction>
            </xs:simpleType>
        </xs:element>
        <xs:element name="resourceSize" type="ext:ParameterNameType"/>
        <xs:element name="comments" type="FreeTextType" minOccurs="0"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="ColourStatusType">
    <xs:sequence>
        <xs:element name="colourCode" type="ColourCodeDefaultType"/>
        <xs:element name="statusDescription" type="FreeTextType" minOccurs="0"/>
    </xs:sequence>

```

```

</xs:complexType>
<xs:simpleType name="ServiceCodeDefaultType">
  <xs:restriction base="edxl-ct:ValueType">
    <xs:enumeration value="airborneInfectionIsolation"/>
    <xs:enumeration value="burnUnit"/>
    <xs:enumeration value="cardiology"/>
    <xs:enumeration value="cardiology.invasive"/>
    <xs:enumeration value="cardiology.noninvasive"/>
    <xs:enumeration value="cardiologymi.STEMI"/>
    <xs:enumeration value="cardiologymi.nonSTEMI"/>
    <xs:enumeration value="cardiology.telemetry"/>
    <xs:enumeration value="dialysis"/>
    <xs:enumeration value="emergencyDepartment"/>
    <xs:enumeration value="hyperBaricChamber"/>
    <xs:enumeration value="infectiousDisease"/>
    <xs:enumeration value="intensiveCare.adult"/>
    <xs:enumeration value="intensiveCare.neonatal"/>
    <xs:enumeration value="intensiveCare.pediatric"/>
    <xs:enumeration value="intermediateCare"/>
    <xs:enumeration value="neonatology"/>
    <xs:enumeration value="neurology"/>
    <xs:enumeration value="neurology.invasive"/>
    <xs:enumeration value="neurology.noninvasive"/>
    <xs:enumeration value="obgyn"/>
    <xs:enumeration value="obgyn.withLaborDelivery"/>
    <xs:enumeration value="obgyn.withoutLaborDelivery"/>
    <xs:enumeration value="operatingRooms"/>
    <xs:enumeration value="ophthalmology"/>
    <xs:enumeration value="orthopedic"/>
    <xs:enumeration value="pediatrics"/>
    <xs:enumeration value="psychiatric"/>
    <xs:enumeration value="surgery"/>
    <xs:enumeration value="surgery.adultGeneral"/>
    <xs:enumeration value="surgery.pediatrics"/>
    <xs:enumeration value="surgery.orthopedics"/>
    <xs:enumeration value="surgery.neurosurgery"/>
    <xs:enumeration value="surgery.facial"/>
    <xs:enumeration value="surgery.cardiothoracic"/>
    <xs:enumeration value="surgery.hand"/>
    <xs:enumeration value="surgery.reimplantation"/>
    <xs:enumeration value="surgery.spinal"/>
    <xs:enumeration value="surgery.vascular"/>
    <xs:enumeration value="surgery.anesthesia"/>
    <xs:enumeration value="traumaCenter"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="CapacityType">
  <xs:sequence>
    <xs:element name="capacity" type="ext:ParameterValueType"/>
    <xs:element name="capacityURI" type="edxl-ct:ValueListURIType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>

```



```

    </xs:sequence>
</xs:complexType>
<xs:complexType name="TriageCountType">
  <xs:sequence minOccurs="0">
    <xs:element name="code" type="TriageColourCodeType"/>
    <xs:element name="count">
      <xs:simpleType>
        <xs:restriction base="xs:int">
          <xs:minInclusive value="0"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element name="alternateCodeValue" type="edxl-ct:ValueKeyType" minOccurs="0"/>
    <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="ActivityInPeriodType">
  <xs:sequence>
    <xs:element name="reportingPeriod" type="edxl-ct:TimePeriodType" minOccurs="0"/>
    <xs:element name="admissions" type="xs:int" default="0"/>
    <xs:element name="discharges" type="xs:int" default="0"/>
    <xs:element name="deaths" type="xs:int" default="0"/>
    <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
<xs:simpleType name="TriageColourCodeType">
  <xs:restriction base="edxl-ct:EDXLStringType">
    <xs:enumeration value="red"/>
    <xs:enumeration value="yellow"/>
    <xs:enumeration value="green"/>
    <xs:enumeration value="black"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="FreeTextType">
  <xs:sequence>
    <xs:element name="defaultText" type="LimitedString"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="AlternateTextType">
  <xs:simpleContent>
    <xs:extension base="LimitedString">
      <xs:attribute name="language" type="xs:string" use="required"/>
    </xs:extension>
  </xs:simpleContent>
</xs:complexType>
<xs:simpleType name="FacilityOperationKind">
  <xs:restriction base="xs:token">
    <xs:enumeration value="plant"/>
    </xs:enumeration>
    <xs:enumeration value="security"/>
  </xs:restriction>
</xs:simpleType>

```

```

        <xs:enumeration value="staffing"/>
        <xs:enumeration value="emergency"/>
    </xs:restriction>
</xs:simpleType>
<xs:complexType name="OperationType">
    <xs:sequence>
        <xs:element name="kind" type="FacilityOperationKind"/>
        <xs:element name="name" type="FreeTextType"/>
        <xs:element name="status" type="StatusType"/>
        <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
    </xs:sequence>
</xs:complexType>
<xs:simpleType name="ColourCodeDefaultType">
    <xs:restriction base="edxl-ct:EDXLStringType">
        <xs:enumeration value="red"/>
        <xs:enumeration value="yellow"/>
        <xs:enumeration value="green"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="FacilityKindType">
    <xs:restriction base="edxl-ct:EDXLStringType">
        <xs:enumeration value="hospital"/>
        <xs:enumeration value="longTermCare"/>
        <xs:enumeration value="urgentCareClinic"/>
        <xs:enumeration value="temporaryFacility"/>
        <xs:enumeration value="other"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="TraumaCenterLevelKind">
    <xs:restriction base="xs:token">
        <xs:enumeration value="level1"/>
        <xs:enumeration value="level2"/>
        <xs:enumeration value="level3"/>
        <xs:enumeration value="no-trauma"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="LimitedString">
    <xs:restriction base="xs:string">
        <xs:whiteSpace value="preserve"/>
        <xs:maxLength value="1024"/>
    </xs:restriction>
</xs:simpleType>
<xs:complexType name="GeoLocationType">
    <xs:sequence>
        <xs:element name="wgs84Location">
            <xs:complexType>
                <xs:complexContent>
                    <xs:extension base="edxl-gsf:EDXLGeoLocationType">
                        <xs:attribute name="srsName" use="required"
fixed="http://www.opengis.net/def/crs/EPSSG/0/4326"/>

```

```

        </xs:extension>
      </xs:complexContent>
    </xs:complexType>
  </xs:element>
</xs:sequence>
</xs:complexType>
<xs:simpleType name="TrafficStatusKind">
  <xs:restriction base="xs:token">
    <xs:enumeration value="normal"/>
    <xs:enumeration value="advisory"/>
    <xs:enumeration value="closed"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="OffloadInfoType">
  <xs:sequence>
    <xs:element name="offload" type="OffloadType" maxOccurs="unbounded"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="EmergencyDepartmentType">
  <xs:sequence>
    <xs:element name="status" type="StatusType"/>
    <xs:element name="offloadInfo" type="OffloadInfoType" minOccurs="0"/>
    <xs:element name="traffic" type="TrafficType" minOccurs="0"/>
    <xs:element name="triageCapacity" type="TriageCapacityType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="TriageCapacityType">
  <xs:sequence>
    <xs:element name="triageCount" type="TriageCountType" maxOccurs="unbounded"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="TrafficType">
  <xs:sequence>
    <xs:element name="status" type="TrafficStatusKind"/>
    <xs:element name="colourStatus" type="ColourStatusType"/>
    <xs:element name="reason" type="FreeTextType" minOccurs="0"/>
    <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="TraumaCenterLevelType">
  <xs:sequence>
    <xs:element name="serviceLevel" type="TraumaCenterLevelKind"/>
    <xs:element name="status" type="StatusType"/>
    <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="ServicesType">
  <xs:sequence>
    <xs:element name="service" type="ServiceType" maxOccurs="unbounded"/>
    <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>

```

```

        </xs:sequence>
    </xs:complexType>
    <xs:complexType name="OperationsType">
        <xs:sequence>
            <xs:element name="operation" type="OperationType" maxOccurs="unbounded"/>
            <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
        </xs:sequence>
    </xs:complexType>
    <xs:complexType name="TraumaCenterType">
        <xs:choice>
            <xs:sequence>
                <xs:element name="adult" type="TraumaCenterLevelType"/>
                <xs:element name="pediatric" type="TraumaCenterLevelType" minOccurs="0"/>
            </xs:sequence>
            <xs:element name="pediatric" type="TraumaCenterLevelType"/>
        </xs:choice>
    </xs:complexType>
</xs:schema>

```

#### 4.4.3.3.2. Protocol Requirements

```

<?xml version="1.0" encoding="UTF-8"?>
<definitions xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"
xmlns:edxldr="urn:oasis:names:tc:emergency:EDXL:DE:1.0" xmlns="http://schemas.xmlsoap.org/wsdl/"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:tns="urn:eu:c2sense:emergency:distribution:1.0"
xmlns:soap12="http://schemas.xmlsoap.org/wsdl/soap12/" name="EmergencyDistribution"
targetNamespace="urn:eu:c2sense:emergency:distribution:1.0">
    <documentation>C2SENSE Distribution Web Service</documentation>
    <types>
        <xsd:schema>
            <xsd:import namespace="urn:oasis:names:tc:emergency:EDXL:DE:1.0"
schemaLocation="../../DE/EDXL-DE.xsd"/>
        </xsd:schema>
    </types>
    <message name="SendMessage_Message">
        <documentation>Send Message</documentation>
        <part name="body" element="edxldr:EDXLDistribution"/>
    </message>
    <message name="ReceiveResponseMessage_Message">
        <documentation>Receive Response Message</documentation>
        <part name="body" element="edxldr:EDXLDistribution"/>
    </message>
    <portType name="Distribution_PortType">
        <operation name="SendMessage">
            <input message="tns:SendMessage_Message"/>

```

```

        <output message="tns:ReceiveResponseMessage_Message"/>
    </operation>
</portType>
<binding name="Distribution_Binding_Soap12" type="tns:Distribution_PortType">
    <soap12:binding style="document" transport="http://schemas.xmlsoap.org/soap/http"/>
    <operation name="SendMessage">
        <soap12:operation soapAction="urn:oasis:names:tc:emergency:EDXL:DE:1.0:SendMessage"/>
        <input>
            <soap12:body use="literal"/>
        </input>
        <output>
            <soap12:body use="literal"/>
        </output>
    </operation>
</binding>
<service name="Distribution">
    <port name="Distribution_PortType" binding="tns:Distribution_Binding_Soap12">
        <soap12:address location="https://localhost:8080/Distribution"/>
    </port>
</service>
</definitions>

```

#### 4.4.3.4. Respond to Query Emergency Department Status Message

##### 4.4.3.4.1. Message Semantics

```

<?xml version="1.0" encoding="UTF-8"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns:edxl-
ct="urn:oasis:names:tc:emergency:edxl:ct:1.0" xmlns:edxl-
gsf="urn:oasis:names:tc:emergency:edxl:gsf:1.0"
xmlns:have="urn:oasis:names:tc:emergency:edxl:have:2.0"
xmlns:xpil="urn:oasis:names:tc:emergency:edxl:ciq:1.0:xpil"
xmlns:xal="urn:oasis:names:tc:emergency:edxl:ciq:1.0:xal"
xmlns:ext="urn:oasis:names:tc:emergency:edxl:extension:1.0"
xmlns:gml="http://www.opengis.net/gml/3.2" xmlns="urn:oasis:names:tc:emergency:edxl:have:2.0"
targetNamespace="urn:oasis:names:tc:emergency:edxl:have:2.0" elementFormDefault="qualified"
attributeFormDefault="qualified">
    <xs:import namespace="urn:oasis:names:tc:emergency:edxl:gsf:1.0" schemaLocation="../RIM/edxl-
gsf-v1.0-csd02/edxl-gsf-v1.0.xsd"/>
    <xs:import namespace="urn:oasis:names:tc:emergency:edxl:extension:1.0"
schemaLocation="../RIM/edxl-ext-v1.0/edxl-ext-v1.0.xsd"/>
    <xs:import namespace="urn:oasis:names:tc:emergency:edxl:ciq:1.0:xpil"
schemaLocation="../RIM/edxl-ciq-v1.0-csd04/edxl-xPIL.xsd"/>
    <xs:import namespace="urn:oasis:names:tc:emergency:edxl:ciq:1.0:xal"
schemaLocation="../RIM/edxl-ciq-v1.0-csd04/edxl-xAL.xsd"/>
    <xs:import namespace="urn:oasis:names:tc:emergency:edxl:ct:1.0" schemaLocation="../RIM/edxl-
ct-v1.0-csd06/edxl-ct-v1.0.xsd"/>

```

```

<xs:element name="HAVE">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="organizationInformation" type="OrganizationInformationType"/>
      <xs:element name="reportingPeriod" type="edxl-ct:TimePeriodType" minOccurs="0"/>
      <xs:element name="facility" type="FacilityType" maxOccurs="unbounded"/>
      <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
    </xs:sequence>
    <xs:attribute name="defaultLanguage" type="xs:string" use="required"/>
  </xs:complexType>
</xs:element>
<xs:complexType name="FacilityType">
  <xs:sequence>
    <xs:element name="name" type="FreeTextType"/>
    <xs:element name="kind" type="FacilityKindType"/>
    <xs:element name="reportingPeriod" type="edxl-ct:TimePeriodType" minOccurs="0"/>
    <xs:element name="organizationInformation" type="xpil:OrganisationDetailsType"/>
    <xs:element name="geoLocation" type="GeoLocationType"/>
    <xs:element name="status" type="StatusType"/>
    <xs:element name="services" type="ServicesType"/>
    <xs:element name="activityInPeriod" type="ActivityInPeriodType" minOccurs="0"
maxOccurs="unbounded"/>
    <xs:element name="operations" type="OperationsType" minOccurs="0"/>
    <xs:element name="resourceInformation" type="ResourceInformationType" minOccurs="0"/>
    <xs:element name="staffing" type="ResourceInformationType" minOccurs="0"/>
    <xs:element name="emergencyDepartment" type="EmergencyDepartmentType" minOccurs="0"/>
    <xs:element name="traumaCenter" type="TraumaCenterType" minOccurs="0"/>
    <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
  </xs:sequence>
  <xs:attribute name="ID" type="xs:ID" use="required"/>
  <xs:attribute name="parentID" type="xs:IDREF"/>
</xs:complexType>
<xs:complexType name="BedCapacityType">
  <xs:sequence>
    <xs:element name="availableCount">
      <xs:simpleType>
        <xs:restriction base="xs:integer"/>
      </xs:simpleType>
    </xs:element>
    <xs:element name="baselineCount" minOccurs="0">
      <xs:simpleType>
        <xs:restriction base="xs:integer">
          <xs:minInclusive value="0"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
<xs:simpleType name="StabilityType">

```

```

    <xs:restriction base="xs:string">
      <xs:enumeration value="stable"/>
      <xs:enumeration value="improving"/>
      <xs:enumeration value="deteriorating"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="OffloadKind">
    <xs:restriction base="xs:token">
      <xs:enumeration value="land"/>
      <xs:enumeration value="air"/>
      <xs:enumeration value="other"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="OffloadStateKind">
    <xs:restriction base="xs:token">
      <xs:enumeration value="normal"/>
      <xs:enumeration value="delayed"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="OffloadType">
    <xs:sequence>
      <xs:element name="kind" type="OffloadKind" default="land"/>
      <xs:element name="offloadMinutes" type="xs:integer"/>
      <xs:element name="offloadState" type="OffloadStateKind" default="normal" minOccurs="0"/>
      <xs:element name="offloadColourCode" type="ColourStatusType" minOccurs="0"/>
      <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="OrganizationInformationType">
    <xs:complexContent>
      <xs:extension base="xpil:OrganisationDetailsType"/>
    </xs:complexContent>
  </xs:complexType>
  <xs:complexType name="StatusType">
    <xs:sequence>
      <xs:element name="isOK" type="xs:boolean"/>
      <xs:element name="colourStatus" type="ColourStatusType" minOccurs="0"/>
      <xs:element name="stability" type="StabilityType" minOccurs="0"/>
      <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="ServiceType">
    <xs:sequence>
      <xs:element name="name" type="FreeTextType"/>
      <xs:element name="code">
        <xs:simpleType>
          <xs:restriction base="ServiceCodeDefaultType"/>
        </xs:simpleType>
      </xs:element>
      <xs:element name="status" type="StatusType"/>
    </xs:sequence>
  </xs:complexType>

```

```

    <xs:element name="externalCode" type="edxl-ct:ValueKeyType" minOccurs="0"/>
    <xs:element name="bedCapacity" type="BedCapacityType" minOccurs="0"/>
    <xs:element name="capacity" type="CapacityType" minOccurs="0"/>
    <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="ResourceInformationType">
  <xs:sequence>
    <xs:element name="status" type="StatusType"/>
    <xs:element name="needs" minOccurs="0">
      <xs:complexType>
        <xs:sequence>
          <xs:element name="resourceNeed" type="ResourceQuantityType"
maxOccurs="unbounded"/>
        </xs:sequence>
      </xs:complexType>
    </xs:element>
    <xs:element name="offers" minOccurs="0">
      <xs:complexType>
        <xs:sequence>
          <xs:element name="resourceOffer" type="ResourceQuantityType"
maxOccurs="unbounded"/>
        </xs:sequence>
      </xs:complexType>
    </xs:element>
    <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="ResourceQuantityType">
  <xs:sequence>
    <xs:element name="resourceKind" type="edxl-ct:ValueKeyType"/>
    <xs:element name="quantity">
      <xs:simpleType>
        <xs:restriction base="xs:double">
          <xs:minInclusive value="0"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element name="resourceSize" type="ext:ParameterNameType"/>
    <xs:element name="comments" type="FreeTextType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="ColourStatusType">
  <xs:sequence>
    <xs:element name="colourCode" type="ColourCodeDefaultType"/>
    <xs:element name="statusDescription" type="FreeTextType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
<xs:simpleType name="ServiceCodeDefaultType">

```



```

<xs:restriction base="edxl-ct:ValueType">
  <xs:enumeration value="airborneInfectionIsolation"/>
  <xs:enumeration value="burnUnit"/>
  <xs:enumeration value="cardiology"/>
  <xs:enumeration value="cardiology.invasive"/>
  <xs:enumeration value="cardiology.noninvasive"/>
  <xs:enumeration value="cardiologymi.STEMI"/>
  <xs:enumeration value="cardiologymi.nonSTEMI"/>
  <xs:enumeration value="cardiology.telemetry"/>
  <xs:enumeration value="dialysis"/>
  <xs:enumeration value="emergencyDepartment"/>
  <xs:enumeration value="hyperBaricChamber"/>
  <xs:enumeration value="infectiousDisease"/>
  <xs:enumeration value="intensiveCare.adult"/>
  <xs:enumeration value="intensiveCare.neonatal"/>
  <xs:enumeration value="intensiveCare.pediatric"/>
  <xs:enumeration value="intermediateCare"/>
  <xs:enumeration value="neonatology"/>
  <xs:enumeration value="neurology"/>
  <xs:enumeration value="neurology.invasive"/>
  <xs:enumeration value="neurology.noninvasive"/>
  <xs:enumeration value="obgyn"/>
  <xs:enumeration value="obgyn.withLaborDelivery"/>
  <xs:enumeration value="obgyn.withoutLaborDelivery"/>
  <xs:enumeration value="operatingRooms"/>
  <xs:enumeration value="ophthalmology"/>
  <xs:enumeration value="orthopedic"/>
  <xs:enumeration value="pediatrics"/>
  <xs:enumeration value="psychiatric"/>
  <xs:enumeration value="surgery"/>
  <xs:enumeration value="surgery.adultGeneral"/>
  <xs:enumeration value="surgery.pediatrics"/>
  <xs:enumeration value="surgery.orthopedics"/>
  <xs:enumeration value="surgery.neurosurgery"/>
  <xs:enumeration value="surgery.facial"/>
  <xs:enumeration value="surgery.cardiothoracic"/>
  <xs:enumeration value="surgery.hand"/>
  <xs:enumeration value="surgery.reimplantation"/>
  <xs:enumeration value="surgery.spinal"/>
  <xs:enumeration value="surgery.vascular"/>
  <xs:enumeration value="surgery.anesthesia"/>
  <xs:enumeration value="traumaCenter"/>
</xs:restriction>
</xs:simpleType>
<xs:complexType name="CapacityType">
  <xs:sequence>
    <xs:element name="capacity" type="ext:ParameterValueType"/>
    <xs:element name="capacityURI" type="edxl-ct:ValueListURIType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>

```

```

<xs:complexType name="TriageCountType">
  <xs:sequence minOccurs="0">
    <xs:element name="code" type="TriageColourCodeType"/>
    <xs:element name="count">
      <xs:simpleType>
        <xs:restriction base="xs:int">
          <xs:minInclusive value="0"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element name="alternateCodeValue" type="edxl-ct:ValueKeyType" minOccurs="0"/>
    <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="ActivityInPeriodType">
  <xs:sequence>
    <xs:element name="reportingPeriod" type="edxl-ct:TimePeriodType" minOccurs="0"/>
    <xs:element name="admissions" type="xs:int" default="0"/>
    <xs:element name="discharges" type="xs:int" default="0"/>
    <xs:element name="deaths" type="xs:int" default="0"/>
    <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
<xs:simpleType name="TriageColourCodeType">
  <xs:restriction base="edxl-ct:EDXLStringType">
    <xs:enumeration value="red"/>
    <xs:enumeration value="yellow"/>
    <xs:enumeration value="green"/>
    <xs:enumeration value="black"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="FreeTextType">
  <xs:sequence>
    <xs:element name="defaultText" type="LimitedString"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="AlternateTextType">
  <xs:simpleContent>
    <xs:extension base="LimitedString">
      <xs:attribute name="language" type="xs:string" use="required"/>
    </xs:extension>
  </xs:simpleContent>
</xs:complexType>
<xs:simpleType name="FacilityOperationKind">
  <xs:restriction base="xs:token">
    <xs:enumeration value="plant"/>
    </xs:enumeration>
    <xs:enumeration value="security"/>
    <xs:enumeration value="staffing"/>
    <xs:enumeration value="emergency"/>
  </xs:restriction>

```

```

    </xs:restriction>
</xs:simpleType>
<xs:complexType name="OperationType">
  <xs:sequence>
    <xs:element name="kind" type="FacilityOperationKind"/>
    <xs:element name="name" type="FreeTextType"/>
    <xs:element name="status" type="StatusType"/>
    <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
<xs:simpleType name="ColourCodeDefaultType">
  <xs:restriction base="edxl-ct:EDXLStringType">
    <xs:enumeration value="red"/>
    <xs:enumeration value="yellow"/>
    <xs:enumeration value="green"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="FacilityKindType">
  <xs:restriction base="edxl-ct:EDXLStringType">
    <xs:enumeration value="hospital"/>
    <xs:enumeration value="longTermCare"/>
    <xs:enumeration value="urgentCareClinic"/>
    <xs:enumeration value="temporaryFacility"/>
    <xs:enumeration value="other"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="TraumaCenterLevelKind">
  <xs:restriction base="xs:token">
    <xs:enumeration value="level1"/>
    <xs:enumeration value="level2"/>
    <xs:enumeration value="level3"/>
    <xs:enumeration value="no-trauma"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="LimitedString">
  <xs:restriction base="xs:string">
    <xs:whiteSpace value="preserve"/>
    <xs:maxLength value="1024"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="GeoLocationType">
  <xs:sequence>
    <xs:element name="wgs84Location">
      <xs:complexType>
        <xs:complexContent>
          <xs:extension base="edxl-gsf:EDXLGeoLocationType">
            <xs:attribute name="srsName" use="required"
fixed="http://www.opengis.net/def/crs/EPSSG/0/4326"/>
          </xs:extension>
        </xs:complexContent>
      </xs:complexType>
    </xs:element>
  </xs:sequence>

```

```

        </xs:complexType>
    </xs:element>
</xs:sequence>
</xs:complexType>
<xs:simpleType name="TrafficStatusKind">
    <xs:restriction base="xs:token">
        <xs:enumeration value="normal"/>
        <xs:enumeration value="advisory"/>
        <xs:enumeration value="closed"/>
    </xs:restriction>
</xs:simpleType>
<xs:complexType name="OffloadInfoType">
    <xs:sequence>
        <xs:element name="offload" type="OffloadType" maxOccurs="unbounded"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="EmergencyDepartmentType">
    <xs:sequence>
        <xs:element name="status" type="StatusType"/>
        <xs:element name="offloadInfo" type="OffloadInfoType" minOccurs="0"/>
        <xs:element name="traffic" type="TrafficType" minOccurs="0"/>
        <xs:element name="triageCapacity" type="TriageCapacityType" minOccurs="0"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="TriageCapacityType">
    <xs:sequence>
        <xs:element name="triageCount" type="TriageCountType" maxOccurs="unbounded"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="TrafficType">
    <xs:sequence>
        <xs:element name="status" type="TrafficStatusKind"/>
        <xs:element name="colourStatus" type="ColourStatusType"/>
        <xs:element name="reason" type="FreeTextType" minOccurs="0"/>
        <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="TraumaCenterLevelType">
    <xs:sequence>
        <xs:element name="serviceLevel" type="TraumaCenterLevelKind"/>
        <xs:element name="status" type="StatusType"/>
        <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="ServicesType">
    <xs:sequence>
        <xs:element name="service" type="ServiceType" maxOccurs="unbounded"/>
        <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
    </xs:sequence>
</xs:complexType>

```

```

<xs:complexType name="OperationsType">
  <xs:sequence>
    <xs:element name="operation" type="OperationType" maxOccurs="unbounded"/>
    <xs:element name="comment" type="FreeTextType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="TraumaCenterType">
  <xs:choice>
    <xs:sequence>
      <xs:element name="adult" type="TraumaCenterLevelType"/>
      <xs:element name="pediatric" type="TraumaCenterLevelType" minOccurs="0"/>
    </xs:sequence>
    <xs:element name="pediatric" type="TraumaCenterLevelType"/>
  </xs:choice>
</xs:complexType>
</xs:schema>

```

#### 4.4.3.4.2. Protocol Requirements

```

<?xml version="1.0" encoding="UTF-8"?>
<definitions xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"
  xmlns:edxIde="urn:oasis:names:tc:emergency:EDXL:DE:1.0" xmlns="http://schemas.xmlsoap.org/wsdl/"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  xmlns:tns="urn:eu:c2sense:emergency:distribution:1.0"
  xmlns:soap12="http://schemas.xmlsoap.org/wsdl/soap12/" name="EmergencyDistribution"
  targetNamespace="urn:eu:c2sense:emergency:distribution:1.0">
  <documentation>C2SENSE Distribution Web Service</documentation>
  <types>
    <xsd:schema>
      <xsd:import namespace="urn:oasis:names:tc:emergency:EDXL:DE:1.0"
        schemaLocation="../../DE/EDXL-DE.xsd"/>
    </xsd:schema>
  </types>
  <message name="SendMessage_Message">
    <documentation>Send Message</documentation>
    <part name="body" element="edxIde:EDXLDistribution"/>
  </message>
  <message name="ReceiveResponseMessage_Message">
    <documentation>Receive Response Message</documentation>
    <part name="body" element="edxIde:EDXLDistribution"/>
  </message>
  <portType name="Distribution_PortType">
    <operation name="SendMessage">
      <input message="tns:SendMessage_Message"/>
      <output message="tns:ReceiveResponseMessage_Message"/>
    </operation>
  </portType>

```

```
</portType>
<binding name="Distribution_Binding_Soap12" type="tns:Distribution_PortType">
  <soap12:binding style="document" transport="http://schemas.xmlsoap.org/soap/http"/>
  <operation name="SendMessage">
    <soap12:operation soapAction="urn:oasis:names:tc:emergency:EDXL:DE:1.0:SendMessage"/>
    <input>
      <soap12:body use="literal"/>
    </input>
    <output>
      <soap12:body use="literal"/>
    </output>
  </operation>
</binding>
<service name="Distribution">
  <port name="Distribution_PortType" binding="tns:Distribution_Binding_Soap12">
    <soap12:address location="https://localhost:8080/Distribution"/>
  </port>
</service>
</definitions>
```