



Spot Infoterra

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Proposal for participation in the GEOSS Architecture Implementation Pilot – Phase 3 (AIP-3)

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Spot Infoterra Response to the GEOSS AIP-3 CFP

1 Overview

Spot Infoterra as coordinator and major contributor of Architecture Work Package of the SAFER project makes the proposal to study the matching of SAFER Emergency Reference Scenario into the GEOSS Disaster Management Scenario. This proposal falls into the “Reduction and Prevention of Disasters” SBA.

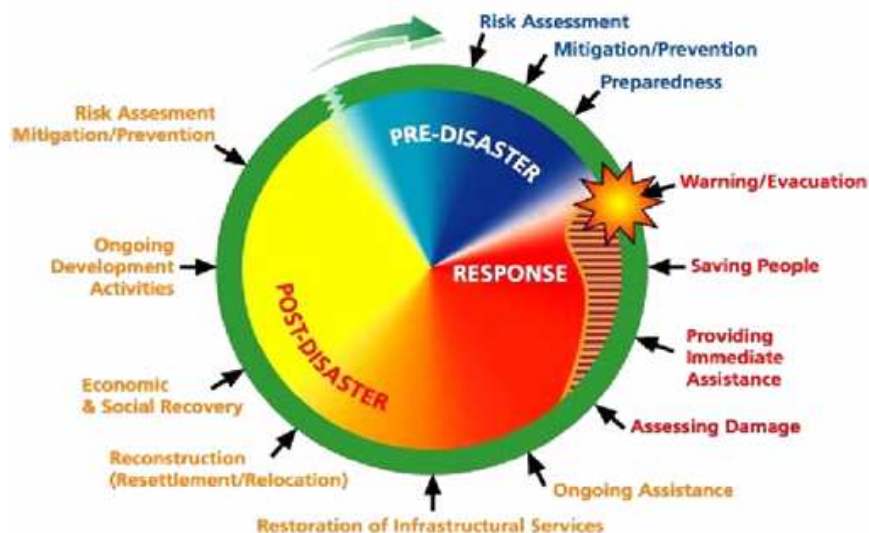
2 Proposed Contributions

The EC/FP7 SAFER project objective is to implement and to validate a pre-operational version of the GMES Emergency Response Service, reinforcing the European capacity to respond to emergency situations.

As a first priority, SAFER will validate an information service focusing on rapid mapping during the response phase and then enrich this service with a wider set of thematic products. In the long term, the GMES Emergency Response Service will provide an operational capacity in Europe and worldwide, with benefits in terms of better quality of life, better health, and increased safety.

Consequently, SAFER has defined, as a result of an RM-ODP analysis, a components based SOA platform to provide Disaster Management services in the field of the Emergency Rapid Mapping.

Proposed contribution is to study how match SAFER reference scenario and related canonical use cases and operational components in the GEOSS Disaster Management Scenario.



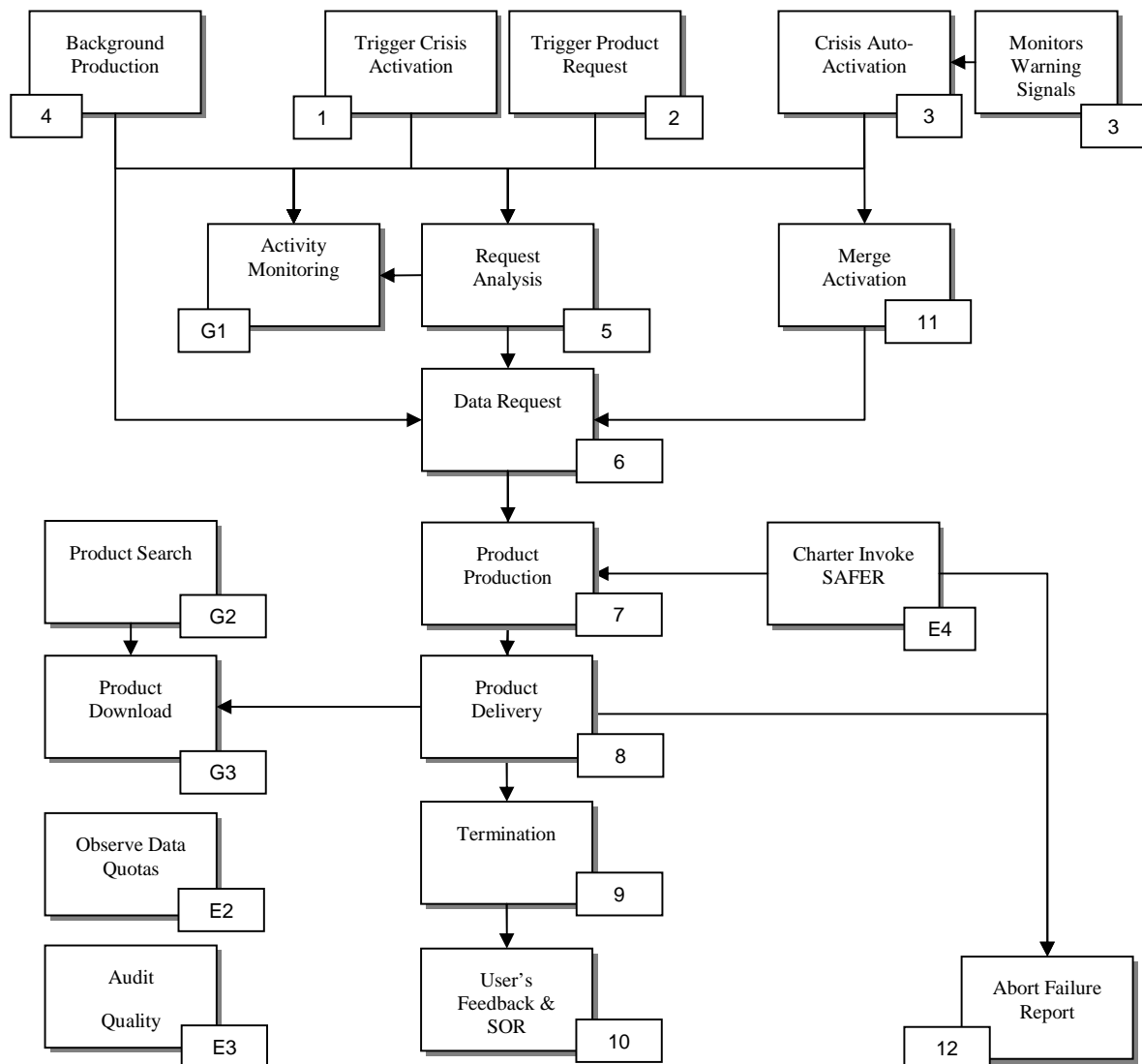
SAFER Disaster Management Cycle

2.1 Societal Benefit Area Alignment and Support

SAFER defines five reference scenarios. The most relevant for GEOSS is the Emergency Case reference scenario (E4RCS-RSC-01). Although SAFER emergency reference scenario, described below, does not depend on the type of scenario, suggestion is made to take as a reference the management of a Flood disaster.

ERCS-RSC-01	In emergency case, when a disaster event occurs, a Civil Protection Organization or Humanitarian Organization (or National or EC Focal Point) makes a request for crisis activation on the disaster area.
	<p>In emergency case, as soon as a disaster is known, a Civil Protection Organization or Humanitarian Organization activates the ERCS in order to request the products related to the area that will contribute to help them to manage the crisis. ERCS Focal Point, with support of Emergency Mapping Coordinator would analyze the request in order to accept or not the activation.</p> <p>If the activation is accepted ERCS Focal Point searches for available data and decides, with support of Emergency Mapping Coordinator and Non Emergency Mapping Coordinator, which input data are needed. ERCS Focal Point requests EO data to EO Data provider that are to be delivered to Service Providers and manages with support of Emergency Mapping Coordinator the production.</p> <p>ERCS Focal Point keeps user informed all along the process. The Reference and Assessment maps products should be delivered to the users within a time of frame specified in the SLS. As soon as the requested products are produced and validated, ERCS Focal Point notifies user about availability of new products and then publish a preliminary version of the Service Operation Report before closing the activation.</p> <p>The ERCS Focal Point will publish the final Service Operation Report as soon as the feedback from user is received.</p>

SAFER reference scenarios are described following decomposition into canonical use cases which are, for some of them, common to the five reference scenarios. Figures bellows provides an overview of the canonical decomposition.



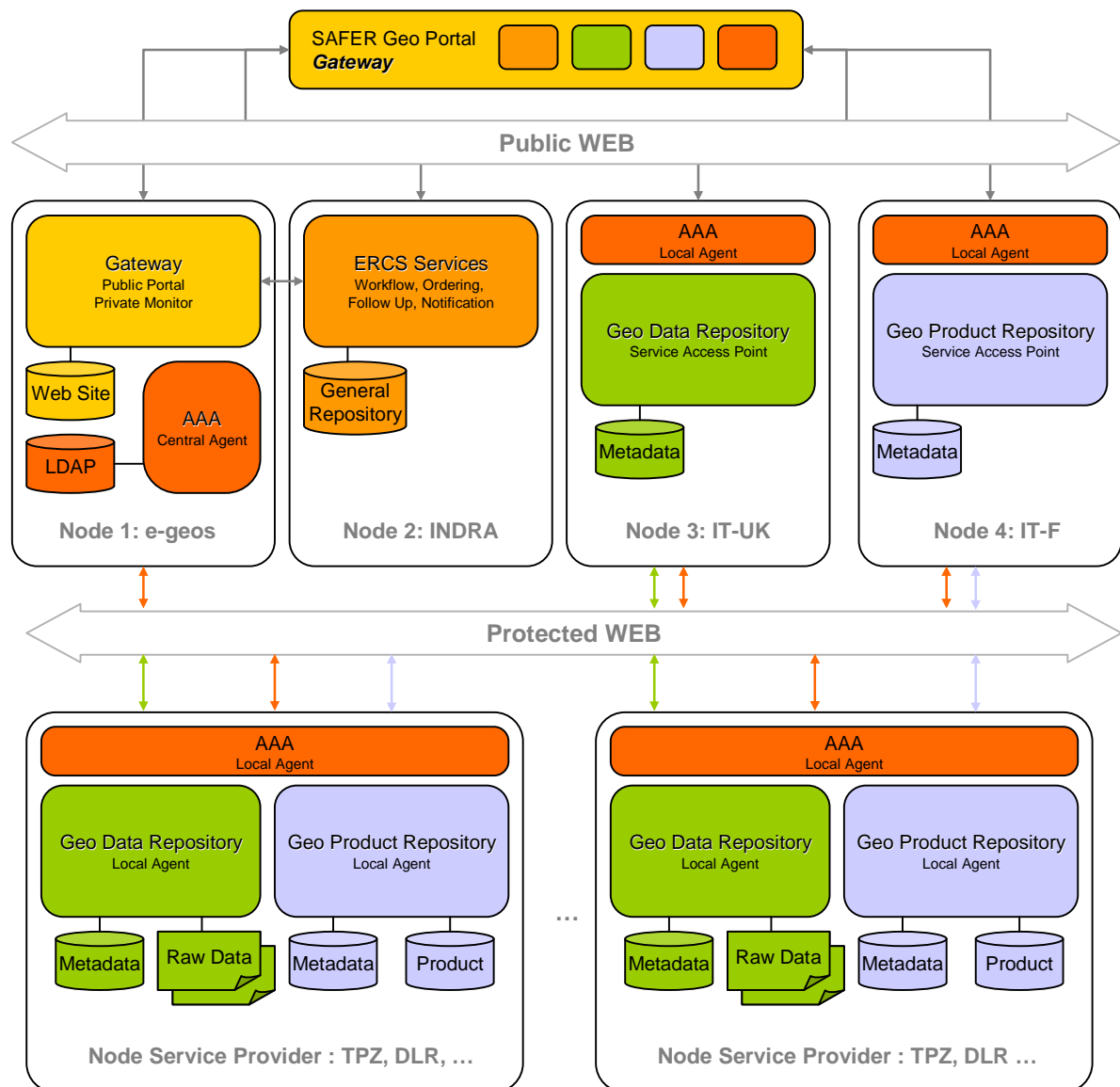
SAFER Canonical Use Cases Overview and Dependencies

Proposal is to study how SAFER canonical use cases could match in the different steps of the GEOSS Disaster Management Scenario.

Consequently, in term of Societal Benefit Areas, the current proposal falls into the scope of the “Reduction and Prevention of Disasters” SBA.

2.2 Component and Service Contributions

SAFER components and services as described below. Proposal includes the registry of the SAFE Gateway, especially the Public Portal into the GEOSS registry as a service which falls into the Disaster SBA category and “Exchange and Dissemination System, Portal or Website” resource category.



SAFER SOA Architecture Overview

An overview of different services is given below.

- Gateway

The Gateway contains the client side functionality and graphical user interfaces for the ERCS. the Gateway is divided into two separate parts, the Users Portal and the

Private Monitor. The former contains the web applications that provide the common functionality that shall be available to all registered users of the ERCS service. The latter part contains the web applications intended for use by the ERCS contributors.

- **ERCS Services**

The Emergency Core Response Services are dedicated to support crisis management specific services.

- **Ordering Services**

All components necessary for a user to order emergency and non-emergency products and to request an activation from a portal.

- **Workflow service**

The Workflow service provides the functionality for updating the status information for the current production, including sending notifications to involved actors, and storing activity tracking information.

- **Follow-up Service**

Service to follow an ERCS activity about a given crisis or request from a portal. The service gives a view of the status and information collected by the Workflow service.

- **Notification Services**

Provides functionality for sending notifications to selected users via e-mail, via SMS and as a message in a Portal.

- **General Repository**

Enable to manage all ERCS information system and not necessarily linked to a given crisis. It contains information such as: list and description of contributors, template documents and reference procedure, annual RMU budget and annual EO data quota.

- **Geo Repository Services**

The Geo Repository Services provides the services for storing, discovering, viewing and downloading the ERCS products and production data.

- **Catalogue Service**

Service that provides functionality for uploading new data and products.

- **Discovery Service**

The service used for searching data and products on the basis of the content of the corresponding metadata using the W4 criteria (Who, What, Where, When), and for displaying the content of the metadata.

- **View Services**

Components that provide functionality for viewing the data and products (web portrayal service).

- **Download Services**

The interfaces for download of data and products using FTP or HTTP.

2.3 Architecture and Interoperability Arrangement Development

Considering in the AIP Development Process that “The core of the reusable process are community *Scenarios* and transverse *Use Cases*”, and fact that proposal seeks to study relationship between GEOSS and SAFER scenario via the use cases decomposition, result may lead to support the refinement of the architecture by providing specialized use case at phase 3.

3 Description of Responding Organization

Spot Image is based in Toulouse (France), capital of the European space industry. Spot Image was set up in 1982 to promote, produce and distribute data received around the world from the SPOT series of earth observation satellites. Spot Image was the first private company set up to market earth observation imagery. The Spot Image corporate headquarters houses all system activities: data archiving and pre-processing centre, programming centre, data processing workshop, imagemaps workshop, photographic workshop, and documentation centre. In the last ten years, it has become the world's leading supplier of satellite-based geographic information, value-added products and services for professionals.

Infoterra France has been founded in January 2006, by bringing together ISTAR (created in 1988) and EADS Astrium teams specializing in Earth Observation Services since more than 15 years. Pioneer in photogrammetry and remote-sensing, with a strong R&D team and a leading position in several GMES projects, Infoterra is focused on Advanced services in geo-information. Infoterra France is a 100% subsidiary of [EADS Astrium](#), Europe's leading space systems and services specialist, and part of [Infoterra Group](#), with companies in [Germany](#), [Spain](#), and [United Kingdom](#), as well as sales subsidiaries and distribution networks in Singapore, China, Japan and Korea.

The Spot Infoterra Group activity within the AIP initiative will be supported by Didier Giacobbo and Arnaud Cauchy. Both will contribute to the matching study of GEOSS and SAFER reference scenario.

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