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**Next Generation Damage and Post-Crisis Needs Assessment Tool for  
Reconstruction and Recovery Planning  
Capability Project**

**RECONASS Enterprise Service Bus and SOS Implementations**

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## ABBREVIATIONS AND ACRONYMS

ABBREVIATION	DESCRIPTION
PCCDN	Post Crisis Needs Assessment Tool in regards to Construction Damage and related Needs
SOA	Service Oriented Architecture
ESB	Enterprise Service Bus
SOS	Sensor Observation Service
JBI	Java Business Integration
JAX-WS,	Java API for XML Web Services
JAX-RS	Java API for RESTful Web Services
OSGi	Open Services Gateway initiative
BPM	Business Process Model
JPA	Java Persistence API
XA	eXtended Architecture
JTA	Java Transaction API
NMR	Normalized Message Router
DM	Dependency management
OGC	Open Geospatial Consortium
WSDL	Web Services Description Language
SOAP	Simple Object Access protocol
WSN	Wireless Sensor Networks
ORM	Object Relational Mapping
JDBC	Java Database Connectivity

## EXECUTIVE SUMMARY

This document is an accompanying report of the Deliverable 5.1, RECONASS Enterprise Service Bus and Sensor Observation Services Implementations of Work Package 5 (Post Crisis Needs Assessment Tool in regards to Construction Damage and related Needs (PCCDN)).

In chapter 1, the objectives of the PCCDN tool are presented and the Service Oriented Architecture (SOA) that has been adapted in order to achieve these objectives is described.

The next chapter is about the Enterprise Service Bus (ESB) implementation. The ESB is the integration container in the SOA environment that allows communication via a common communication bus.

Finally, in chapter 3, the Sensor Observation Services (SOS) that are provided by the prototype are described. SOS comply with the Open Geospatial Consortium (OGC) standards in an effort to help other people better understand how to use our service and make integration of sensors quicker and more cost efficient. The prototype is hosted in a dedicated root server, with IP 5.9.4.130 and the Sensor Observation Service is available at <https://pccdn.risa.eu/service>. For security reasons, access to the server is restricted to predefined users based on IP, configured by the system administrator.