Executive Summary

The requirement that eHealth solutions can interoperate seamlessly between products from different vendors and across organisations is today very common and almost assumed. Unfortunately, many solutions are not able to share data as expected. As a result, end users get reduced quality of service while additional costs are created since many failures occur when systems are already in use. This is in general not acceptable but for eHealth the situation is further aggravated by the fact that patient's treatment may be adversely affected.

This deliverable deals with testing tools required to continuously improve eHealth solutions' interoperability. It specifically addresses testing tools that would be sufficient for testing the selection of recognised profiles used to implement eHealth Interoperability Framework and further elaborated in Antilope Work Package 1 deliverable D1.1.

The realisations scenarios for selected Use Cases specify the associated profiles. For these Use Cases and their associated profiles the information on available testing tools was collected and analysed. The source of information was HITCH testing tool analysis, publicly available information from all identified testing tools, information on IHE web pages, information received from Continua Alliance and other public sources.

For each of the existing testing tools that have been identified and analysed the most important information is provided. The basic tool information such as relevant profile, tool name, tool developed by, tool location and tool info pages is supplemented with information on the tool use (web or local), access to source code and last but surely not least a tool category.

Testing tool categories considered relevant for this work are defined in the methodology clause as test management tools, conformance tester, interoperability validators, simulators/stubs, software libraries, test data generators, reference implementations, and support tools. The information on tool category has a particular importance in the gap analysis.

The information on existing tools is split across several tables dealing with IHE profiles, Continua Alliance profile, and generic HL7 tools not profile specific. In the end, an additional small set of testing tools is identified and analysed but recommended not to be used.

The results of the gap analysis indicate that for all relevant profiles numerous testing tools are available. The finding collected in this deliverable should be used to promote their wider use.

Further analysis on the summary of available tool categories for each profile focused on the areas of possible future improvement of testing tools. The proposed improvements are profile specific but are independent of the Use Case where the profile is used. Clearly conformance testers and interoperability validators provide a more powerful testing solution. If they are not currently available, the proposal is to develop them. Otherwise, other less powerful but rather specific and useful improvements were proposed.

These improvements would positively affect testing of all Use Cases where a profile is used.

The ongoing analysis is examining specific testing requirements coming from Use Case groups or individual Use Cases that would go beyond just profile testing.

To conclude, a short summary of findings in this deliverable is listed here:

- Gap analysis shows that testing tools do exist for eEIF Use Cases

- The use of existing tools will improve interoperability of systems implementing eEIF Use Cases

- In addition to immediate use of existing tools, improved testing tools should be developed to increase the testing precision and productivity

- Improvements that could be targeted at this point in time are identified and the call to develop new or improved testing tools will be issued

- As the eEIF evolves, there should be a continuous process of review, development and deployment of improved testing tools

This deliverable forms the basis for the next deliverable that will ask for the development of new or improved testing tools that would further improve the interoperability of eHealth solutions across Europe.