The SAPHIRE project aims to develop an intelligent healthcare monitoring and decision support system on a platform integrating the wireless medical sensor data with hospital information systems. In the SAPHIRE project, the patient monitoring will be achieved by using agent technology where the “Agent behavior” will be supported by intelligent clinical decision support systems which will be through semantically enriched Web services to tackle the interoperability problem. In this way, not only the observations received from wireless medical sensors but also the patient medical history will be used in the reasoning process of the clinical decision support system. Furthermore, through a graphical tool to be developed, while modeling the clinical decision processes, it will be possible to exploit the available computer-interpretable models.

The intelligent healthcare monitoring system will be deployed through two pilot applications, one for homecare monitoring of cardiovascular patients in Germany; the other to monitor cardiovascular patients in a hospital in Romania. To subscribe to critical data delivery, clinicians will simply use a Web-based program indicating desired alerts, thresholds, delivery methods (SMS/e-mail/web/pager) or to build a patient coverage list. Once subscribed, clinicians will immediately receive clinical notifications and reminders.