The University Hospitals Leuven considers information technology a strategic factor. IT is not only used to optimize operations within each department, but also to improve interdepartmental cooperation, to optimize workflow over the complete institution, and to provide continuity of care with external partners.

The emphasis in our IT solutions is on integration within the overall infrastructure and within the global electronic medical record. Many subsystems are developed in-house, possibly integrating externally provided technological components.

This hospital-wide integrated information system can facilitate applied research and evaluation of new concepts, systems or technology, and ease transition of promising developments to clinical routine.

**Keywords**
- Hospital Information System
- Electronic Medical Record
- Applied multimedia & telematics

**Collaboration & Users**

This department interacts with all clinical and supporting departments of the hospital. There is close informal cooperation with the IT departments of the hospitals within a hospital network. There is active cooperation with our government e.g. in projects related to BeHealth.
Supporting medical cooperation over the internet in the LISA project.

External health care actors such as general practitioners can access the hospital's electronic medical record over the Internet. In contrast with traditional approaches, focus in this setup is not on exchanging a limited set of standardized data but on active cooperation and planning around the current episode of care. About 700 external physicians use this system to access thousands exams each month.

Integrating software components into global organization and workflow.

Radically opposing traditional integration approaches in medical informatics, the Leuven EMR centers around a master management and workflow layer into which technological slave components are integrated. The example shows such integration of a commercial diagnostic viewing component (left). This integration not only results in an ergonomic overview of all kinds of information, but also provides fine-grained access control and enables new applications to benefit from existing organizational principles. An example of the latter is work list based access to images at outpatient consultations or case discussions (right). Similarly, digital dictation or speech recognition is radically hooked into hospital-wide workflows.

Telematics cooperation for early breast cancer detection.

The breast cancer screening center of the University Hospitals Leuven accepts digital mammography images and diagnostic results over the Internet to confirm preliminary diagnosis. Although this requires quite some technology (already because of the size of the data sets) the real challenges are organizing cooperation with a heterogeneous group of radiological centers.