

STC 2004: Tutorial
**Evaluation and assessment of health
information systems**

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Pirkko Nykanen, Finland
Jan Talmon, Netherlands

- EFMI WG Eval, IMIA WG TA -

Organisers of Tutorial

- **EFMI-WG on Assessment of Health Information Systems**
 - <http://www.umit.at/efmi>
- **IMIA-WG on Technology Assessment and Quality Development in Health Informatics**
 - <http://www.imia.org>

IT in health care: possible benefits

- Reduction of medication error by CPOE
- Better diagnostics by decision-support systems
- Increase quality of documentation
- Reduce costs by telemedical applications
- ...



IT in health care: possible risks

- University hospital suspends use of **Order Entry System** after user boycott. Estimated losses: up to 34 Mio \$.

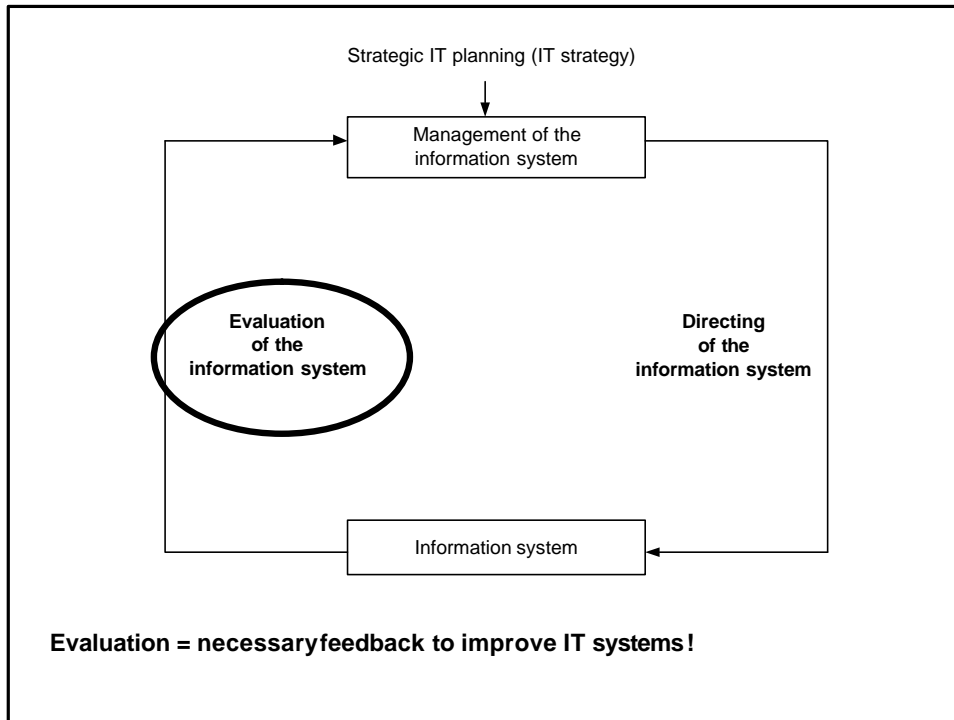
Ornstein C (2003). California; Hospital Heeds Doctors, Suspends Use of Software. The Los Angeles Times. Los Angeles, Jan 22nd, 2003

- **London Ambulance Dispatch System** collapsed after inadequate testing. Thousands of emergency calls were answered not or too late.

<http://www.cs.ucl.ac.uk/staff/A.Finkelstein/las.html>

- The malfunction of **Therac-25**, a medical linear accelerator caused the death of three patients in the late 1980th.

http://courses.cs.vt.edu/~cs3604/lib/Therac_25/Therac_1.html



Aim of Tutorial

- To introduce to systematic evaluation of information technology in health care
- To provide support to plan and conduct evaluation studies.
- To inform on ongoing European initiatives

Some literature

- Friedman, Wyatt. **Evaluation Methods in Medical Informatics**. New York: Springer, 1997.
- Anderson J G, Aydin C E, Jay S J, editors. **Evaluating Health Care Information Systems - Methods and Applications**. London, New Delhi: Sage Publications; 1994.
- Van Gennip EMSJ, Talmon J, editors. **Assessment and Evaluation of Information Technologies in Medicine**. Studies in Health Technology and Informatics, volume 17. Amsterdam: IOS Press; 1995.
- *Comprehensive list at: <http://www.uit.at/efmi> -> bibliography*

Schedule for Tutorial

Part One (1,5 h):

Introduction to IT evaluation
(Brender, Talmon)

Part Two (1 h):

Recent European initiatives (EFMI WG Eval)
(Ammenwerth, Nykänen, Talmon)

Final discussion