



Bootstrapping Revisited

Opening the Black Box of Organizational Implementation



Literature on (enterprise) implementations

- Balancing the local and the global
- Learning and learning failure
- Big-bang, case-based or regional: “Irrespective of the quality of the technical implementation, information systems will likely encounter severe problems, or even fail, if the organisational implementation is not handled properly” (Hertzum 2002).



Understanding the problem

- Challenges emerge when entering unknown territory
 - Unfamiliar technological issues
 - Unfamiliar organizational issues
- Learning is crucial, both about the application and its 'fit' with the organization, where organizational pluralism and user heterogeneity are core factors.



Bootstrapping

- Introduced by Aanestad & Hanseth in 2001
- Addresses start-up challenges
- User enrollment, initial usefulness and critical mass
- Simplicity and cultivation: “A process, which utilizes network effects and spillovers within a growing user base by using simple solutions as a sort of ‘stunts,’ which offer ‘detours’ on the road toward infrastructures” (Hanseth & Lyytinen 2010)



The Electronic Medical Charts Project: Background

- Replace the paper based medical charts.
- Strategic project, hospital wide implementation.
- The right information in the right place at the right time.
- Support “continuum of care”.
- Timeline:
 - 2004: Initiated
 - 2006: Contract signed
 - 2006-2007: Pilot in thorax surgical department
 - 2008: Anesthesia
 - 2009: Children’s ICU



The Electronic Medical Charts Project: Data collection

- Project followed since 2007
 - Project meetings etc.
- Observations
- Interviews (2009)
 - Project manager
 - Doctors (3)
 - Nurses (7)
 - Others (3)

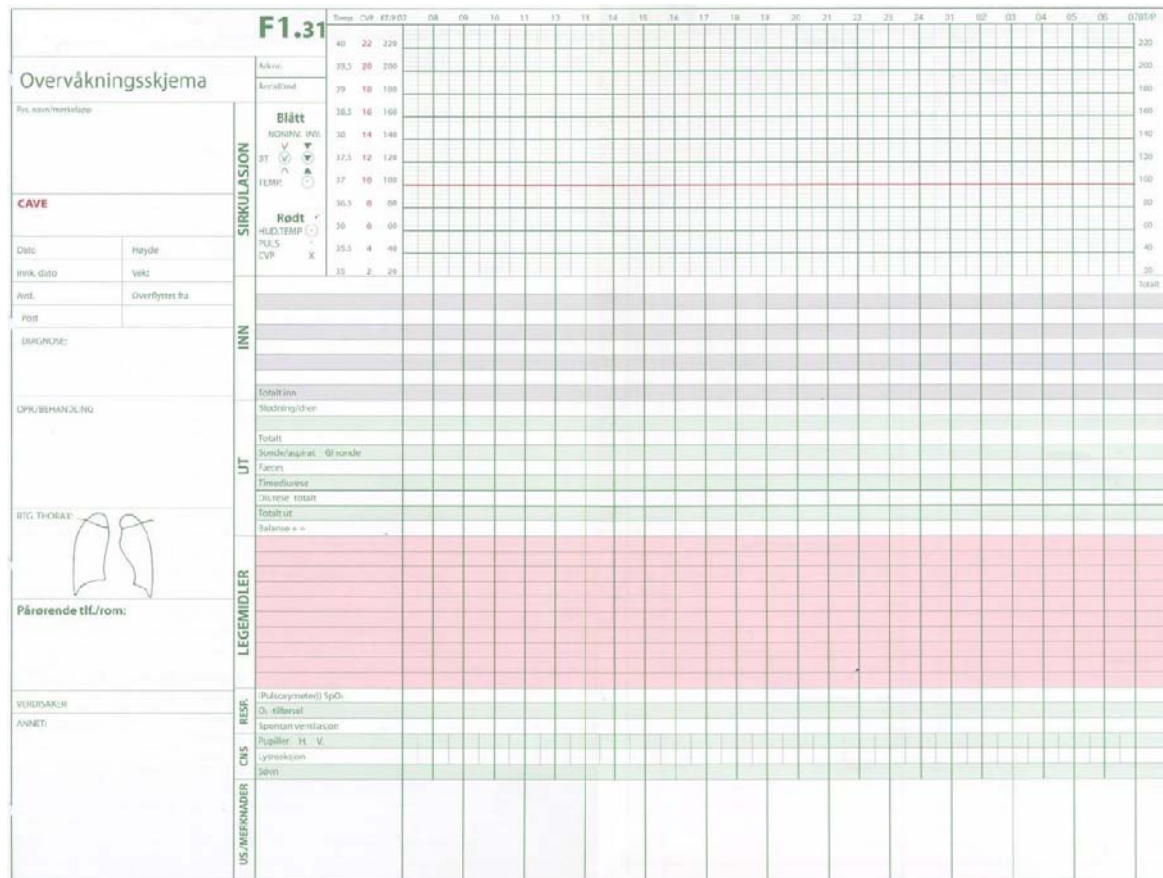


Clinical practices

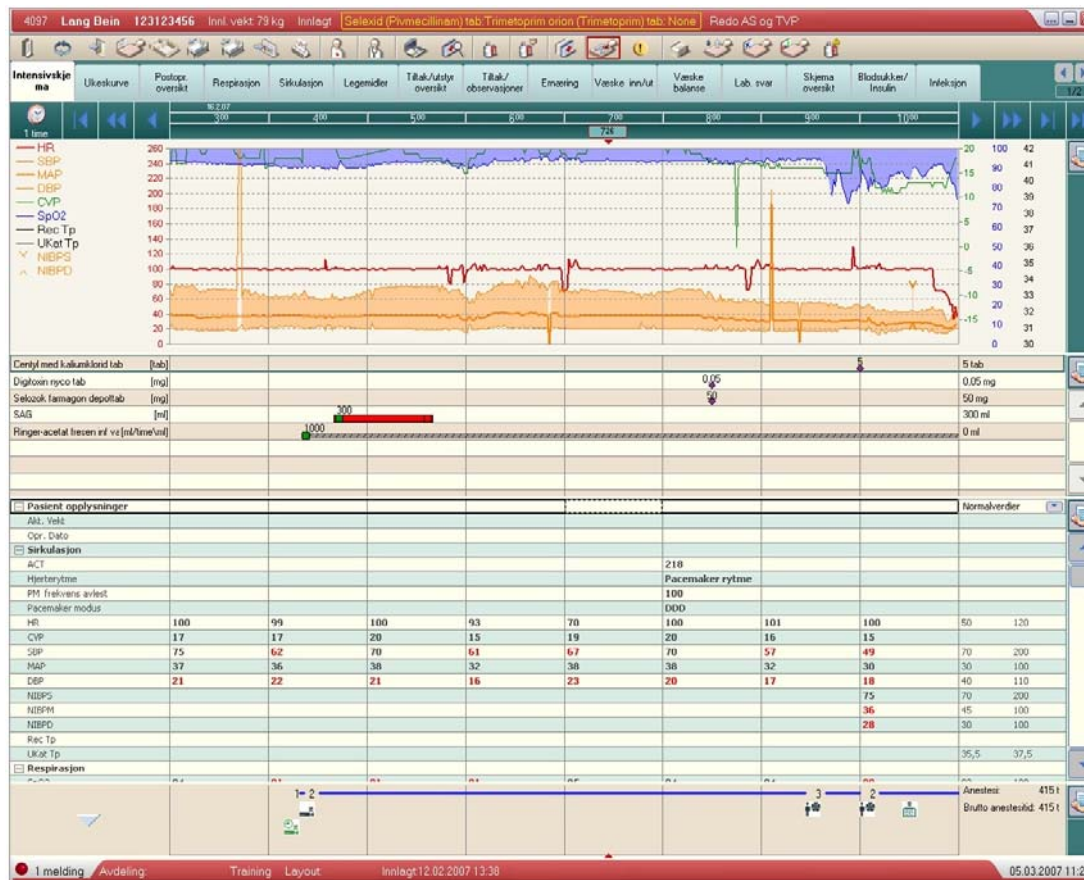
Tight entanglement: “We can’t manage for five minutes without the medical charts. Then the patient would be dead – many would die if we didn’t have this information. So this is essential – that it works”.

-ICU nurse

The paper charts



MetaVision





The pilot (2006-07)

- Thorax surgical department
 - All patients in all units from day one
- Problematic issues
 - Unreadiness
 - Bugs
 - Logical flaws
 - Disruption of practices
- Premature termination



Internal evaluation (2007)

- Organizational challenges
 - Tight entanglement with practices
 - Difficult to maintain operations
 - Previous experience had limited relevance
- In general: Underestimated complexity



Next phase (2008)

- Anesthesia section
- Simpler application
- “Business” driven pace
- “We have an unsurpassed documentation of the ORs today that we didn’t have previously” (head of section).



Different approaches

	Pilot	Thorax	Anesthesia
Strategic approach	Big-bang	Client-based	Region-based
Focus on	The IT-system	Risk	Complexity
Short term goal	Change	Learning	Learning
Diversity	Horizontal and vertical	Vertical	Horizontal
Pace/progress	Project driven	"Business" driven	"Business" driven
Usability for	Everyone	All clinicians	All patients
Issues covered	Everything and nothing (unfocused)	Bugs, logical flaws and use of terminology. Support for multiple practices in multiple contexts, reuse of information and integration	Bugs, logical flaws and (to some extent) use of terminology. Support for single practice in single context
Issues not covered		Latitudinal diversity and volume; suitability for multiple patient groups. Dependability; one tool for all patients	Longitudinal diversity; support for multiple practices in multiple contexts. Reuse of in-formation and integration



Organizational bootstrapping

- Encourages awareness and differentiation
- Regards implementation strategies as tradeoffs
 - Different implementation strategies trigger different complexities
 - Different learning potentials and outcomes
 - Different costs and risks
- Acknowledges and stimulates learning as a core aspect of organizational implementation