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“A survey of incremental development in Norwegian IT industry”

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Context and background

- INCO - Incremental and Component-based Development
- Our focus: INCO goal 1: Advancing the state-of-the-art of software engineering, focusing on technologies for incremental and component-based software development.
- Jarle Liknes, 2000: Master Thesis on Incremental Development
Prestudy

- All five companies used incremental development
- Normal project length: 3-12 months
- Normal increment length: 2-8 weeks
- Large variations in project group size

Prestudy quotations

- The only way of doing software development is by using incremental development.
- Having educated customers is equally important to having competent developers when using incremental development.
- Incremental development's most valuable property is risk reduction.
- The biggest challenge when introducing incremental development is convincing customers of its added value.
- Incremental development demands high levels of cross-disciplinary competence.
- A great advantage of incremental development is that the customer can see the product evolve according to the specification.
- We have no intentions of introducing RUP as the process demands far too much involvement.
Main study

- Hypotheses:
  - $H1$: There are advantages to using incremental development.
  - $H2$: Incremental development requires more/other customer/developer competence than non-incremental development.
- Questionnaire

Conclusion

- Results give reason to accept $H1$, but not $H2$.
- Incremental development is in widespread use in Norwegian IT industry today, and the companies generally have positive experiences with this type of development.
Further work

- $H1$: carry out a larger, statistically valid survey
- $H2$: the questions need to be rephrased