Young Researchers Seminar 2013

Lyon, France , June 5-7 2013

Laboratoire d'Economie des Transports
Unité Mixte de Recherche du CNRS n° 5593
Université Lumière Lyon 2 - ENTPE

Tracking the challenges of e-ticketing

AN ANALYSIS OF THE IMPLEMENTATION IN THE OSLO REGION

Julie Runde Krogstad

Insitute of Transport Economics
Norwegian Centre for Transport Research

ECTRI
European Conference of Transport Research Institutes

FERSI
Road Safety Research

A negelected, but highly relevant field of research

- Electronic ticketing has been introduced in most European cities
- Technology and public sector projects have been negelected in project managing and implementation research
- This study can contribute to the literature by
  - Identifying success factors in technology projects
  - Evaluating the role of policy and organizational challenges in technology projects

2

The e-ticketing project ”Flexus”

- The project was initiated in 2000
- It was a joint project involving three companies owned by seperate public authorities
  - OS – municipality of Oslo
  - SL- county of Akershus
  - NSB – state government

  } merged into the company ”Ruter” (in 2008)

3

The e-ticketing project ”Flexus”

- The project has been criticised in media and customers are generally not satisfied
- The previous City chief Comissioner got a no-confidence motion in 2008 after a public inquiry

4

Some headlines (2008-2013)

Flexus en skandale

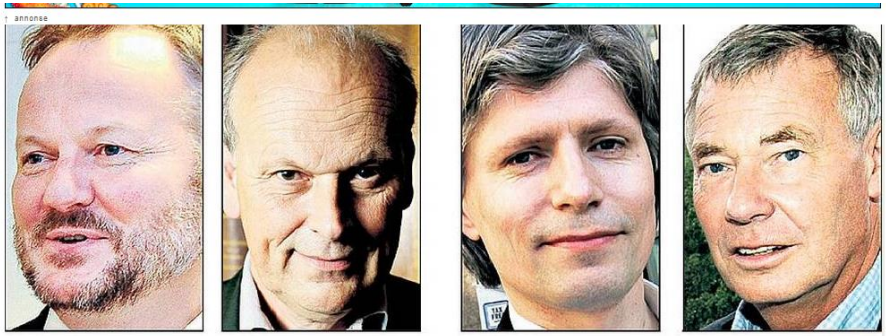
Leder

Publisert: 26.jan. 2009 15:54 Oppdatert: 26.jan. 2009 15:54



Det nye, felle
"Flexus" i Os
som skulle va
siden, er en f
(Sporveiene),
(Kollektivtran
og NSB krang
for skandaler
kostet 600 mi

FOTO: JAN TO



Så hatten passer: Peter N. Myhre (Frp).

Kritiseres også: Michael Tetzschner (H).

Kritisk: Ola Elestuen (V).

Kritisk: Rune Gerhardsen (Ap).

Krass Flexus-refs

Samferdselskomiteen i Oslo er kritiske til måten billettsystemet Flexus er håndtert. Peter N. Myhre får stryk. Også Sporveiens styre har gjort for lite.

Sverre Stenseng
Publisert: 11.mar. 2009 23:35 Oppdatert: 15.okt. 2011 22:13

Anbefal Bli den første av dine venner til å anbefale dette.

Flexus-skandalen

Billettsystem i Oslo og Akershus har vært planlagt siden tidlig

Godkjent i test, ubrukelig i praksis

Høsten 2005 godkjente Sporveiene en test av Flexus som om det var klar til bruk. To måneder senere skjønte de at billettsystemet var ubrukelig.

Anbefal Bli den første av dine venner til å anbefale dette.

Sverre Stenseng , Einar Haakaas
Publisert: 14.okt. 2008 23:59 Oppdatert: 15.okt. 2011 21:41

Flexus-skandalen

DaværendeOslo Sporveier (nå KTP), Stor-Oslo Lokaltrafikk



Noen ble stående nokså lenge ved den nye automaten før de skjønte det var feil automat.

FOTO: JAN TOMAS ESPEDAL

Den fullkomne skandale

Ubrukte kort. Nær en halv million ubrukte Flexus-kort er allerede utdaterte. Å knekke koden vil koste én million.

Anbefal B

Mest les

Meninger

Lars Hellberg
Publisert: 28.okt. 2009 19:00 Oppdatert: 28.okt. 2009 14:34

Kanskje kommer billettene

Nær 25 år og 550 millioner kroner er brukt på å få i gang et nytt elektronisk billettsystem i Oslo og omegn. Nå skal systemet teknisk sett være brukbart til sommeren, men full lanseringsdato er helt i det blå.

Anbefal Bli den første av dine venner til å anbefale dette.

Sverre Stenseng Jan Tomas Espedal (Foto)
Publisert: 06.feb. 2008 14:50 Oppdatert: 12.jan. 2012 15:44

Forsinket billettprosjekt

Oslo Sporveier har kjøpt sitt system fra det franske selskapet Thales Transportation Systems.Stor-Oslo Lokaltrafikk har valgt australsk-belgiske ERGsom leverandør.NSB har bestilt sitt

ECTRI FERSI Road Safety Research Laboratoire d'Economie des Transports

5

– Sperrene skulle aldri ha vært montert

I fem år har folk passert åpne sperringer på T-banen i Oslo sentrum. Investeringen til flere titalls millioner kroner er overflødig.

Sveinung Berg Bentzrød
Publisert: 11.sep. 2010 23:21 Oppdatert: 12.okt. 2011 19:31



Ruter fakturerte hundrevis av kunder dobbelt

- Feilen skal nå være rettet opp, og kundene får kompensasjon, sier Gøren Eriksen, kommersiell sjef i Ruter

Karl A. Jahr
Publisert: 19.aug. 2011 17:10 Oppdatert: 18.okt. 2011 16:12

Solhjell gikk i Flexus-fella

Selv ikke en topp-politiker slipper snikegebyr når billettautomaten på toget ikke virker. Det fikk Bård Vegar Solhjell (SV) erfare da han tok toget uten billett onsdag.

Publisert: 14.sep. 2011 14:41 Oppdatert: 18.okt. 2011 16:41



http://www.osloby.no/nyheter/Han-trykker-som-en-gal_-men-automaten-ser-bare-ut-til-a-gjore-narr-av-ham-6283852.html

Klarer ikke å kontrollere Flexus-kort





MILLIONSLUK: Det elektroniske reisekortet Flexus har en budsjettsprekk på 100 millioner kroner. I bakgrunnen de berømmelige sperringene.

SIGURDSØN, BJØRN

KOLLEKTIVTRAFIKK:

Ny Flexus-smell

Sperringene på T-banen i Oslo sentrum har stått klar i fem år. Å sette dem i drift vil koste 20 millioner kroner årlig.

NYHETER E24
Publisert: 12.09.2010 10:04, Oppdatert: 12.09.2010 11:44

l gi bot til billettkjøpere

r seg ikke. De vil tvinge passasjerer med gyldig billett til å registrere eltreiser. Reisende som ikke gjør det, skal straffes med gebyr.

g Berg Bentzrød
sep. 2010 23:47 Oppdatert: 12.okt. 2011 19:34



Hvor smart er digital reisebillett?

Digitale billetter provoserer oslofolk

Det minst smarte Ruter har gjort er å innføre "smart" billett, mener Aftens lesere. Er du fornøyd med det digitale reisekortet?

sturle scholz
nærø
Publisert: 12.jan. 2012 19:03 Oppdatert: 16.jan. 2012 09:47

- Vil Ruter at vi skal snik

T-banens nye billettautomater vil bare selge én billett om gangen.

Jon Robin Halle
Publisert: 17.sep. 2011 10:10 Oppdatert: 18.okt. 2011 16:44

Major implementation problems

- The implementation of electronic ticketing in Oslo resulted in the following problems:
  - **budget over-runs**
    - *In 2008 the project had cost the OS exclusively 35 mill. euro*
  - **Long delay**
    - *6 years of delay in the Oslo metropolitan area*
  - **A low quality system**
    - *Dissatisfied customers*
    - *Dissatisfied employees*
    - *Access gates are in place, but never used*

7

The access gates



8

Theoretical approaches

- Policy networks can be defined as stable patterns of social relations between interdependent actors

- **Top-down approach**: Linkages in the implementation chain, veto points (Pressman & Wildavsky 1973)

- **Bottom-up approach**: Communication channels and organizational learning (Elmore 1980; Hjern & Porter 1981)

- **Technology approach**: Is the technology affecting the whole organization? Is it mature? (Baldersheim et.al. 2008; Bouwman 2005)

9

Data & method

- Document analysis
  - Public documents provide detailed descriptions of the course of events
  - Transcription from a public inquiry in 2008, arranged by the municipality of Oslo

- Four in-depth interviews with key players:
  - Director of OS
  - OS project leader
  - Comissioner for transport in the municipality of Oslo
  - Employee representative from an operating company

10

Top-down approach: Identifying the veto points

Table 1 Veto points

Veto point	Time	Decision	Problem
I	2003	Contract of cooperation between OS, SL & NSB	Various goals and plans of progress made it difficult to coordinate the procurement of the three ticketing systems
II	2004	OS, SL & NSB tried to decide on a fare reform	Different goals and organizational differences made it difficult to attain change. Political leadership was absent in the process
III	2004	The NPRA (Norwegian Public Roads Administration), counties and public transport companies in the eastern region of Norway completed a standard handbook for electronic ticketing	Implementation of the new standard required changes to be made in the upcoming systems and additional resources
IV	2005	OS approved the installation test when the system did not work. This led to renegotiation with Thales and a new project organization in OS	The OS' lacked the required time, resources and expertise. The vendor Thales did not acknowledge the existing challenges
V	2005-07	Technical workshop involving OS, SL, NSB and the three vendors. About 200 issues were clarified.	Different goals between the vendors
VI	2007 (juli)	OS demands a switch in Thales project organization	Thales did not give sufficient priority to the project, underestimated the resources needed and lacked understanding of the Oslo situation

11

Top-down approach: Conflicting goals among the interacting actors

- Implementation barriers caused by conflicting goals among actors:
  - Organizational barriers
  - Inadequate cooperation structures
  - Lack of fare reform

- Fare reform was the key challenge for an operative system:
  - Organizational barriers
  - Absent political leadership

12

Bottom-up approach: Communication channels

- The line organization in the OS was not involved
  - *Poor user-friendliness*
  - *Income security was prioritized*

- Lack of communication led to
  - *Extra adjustment costs*
  - *Delays*
  - *Dissatisfaction among employees – the new system is slower than the old*

13

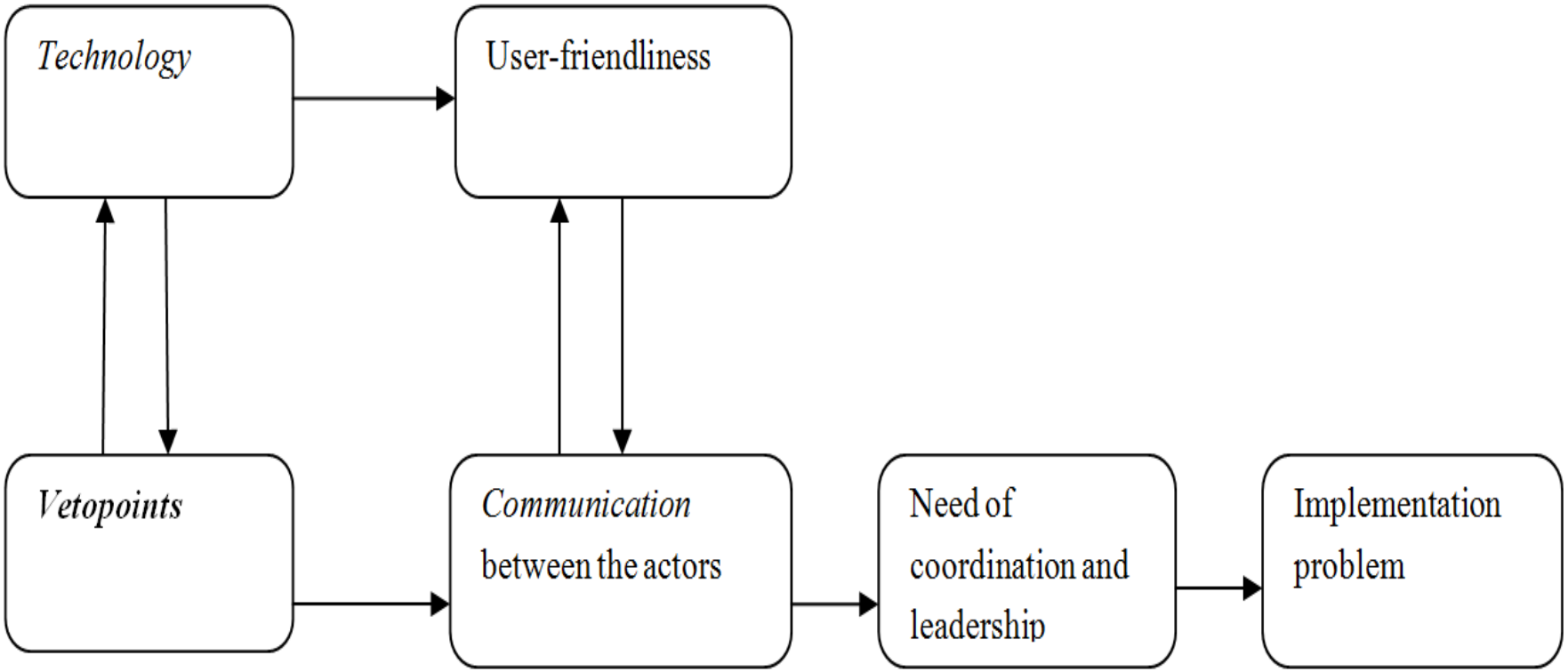
Technology approach: If you automate a mess, you get an automated mess

- No existing software could readily be transferred to match the three fare systems in Oslo and make it interoperable

- Implementation of technology demands an ‘accommodating’ organization to overcome barriers created by organizational boundaries

14

Relation between the variables



15

Conclusions & recommendations

- The Flexus e-ticketing system was implemented without adequate attention to the organizational complexity (technology-led view)
  - Fare systems turned out hard to change due to conflicting interests between autonomous organizational entities

- Fare reform needs to be anchored at political level

16

Conclusions & recommendations

- Critical factors for success:
  - Fare reform anchored at the political level
  - Co-ordination between actors
  - Better monitoring of the project's performance
  - Regular reporting

17

Opening questions

- How can the structure and form be improved as a scientific paper?

- What factors are major contributors when introducing new technology into public sector organizations?

18