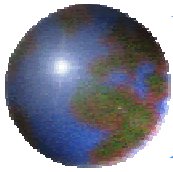


Implementing Public Information Systems in Developing Countries: Learning from a Success Story

Geoff Walsham

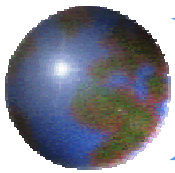
Judge Business School
University of Cambridge

Presentation to LSE Department of Information Systems, 25 May 2006



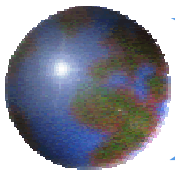
Reference

Krishna, S and Walsham, G. ‘Implementing public information systems in developing countries: Learning from a success story’, *Information Technology for Development*, 11(2), 2005, 123-140.



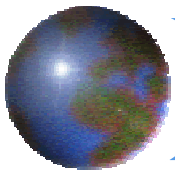
Outline of seminar

- Context of Andhra Pradesh's IT Efforts
- Methodology of our case study
- Two successful systems
- In what way were the systems successful?
- What contributed to 'success'?
- Some later reflections



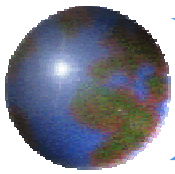
Andhra Pradesh (AP)

- State in Southern India – population 75m+
- State capital – Hyderabad
- Language – mostly Telugu
- Average prosperity for India but large poor rural population
- New Chief Minister (CM) elected in 1995 – Chandrababu Naidu – IT literate and focused



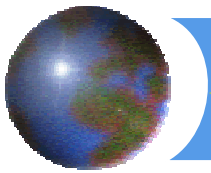
Methodology of our case study

- Longitudinal study 1999-2003
- Focused on two e-government systems
- Interpretive case study (Walsham 1993!)
- Field interviews + site visits + documentation
- Content-context-process approach



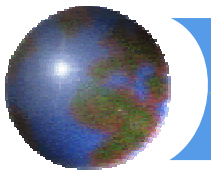
IT Strategy for AP 1997 – Vision 2020

- Bandwidth/network connectivity etc
- Human resources – setting up of IIIT
- SMART government (Simple, Moral, Actionable, Responsive and Transparent)
- Synergise with the private sector
- Regulatory framework for IT



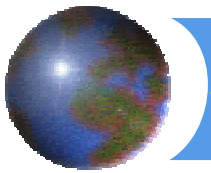
CARD

- Computer-aided Administration of Registration Department
- All sale, mortgage and gift transaction for houses and commercial property must be registered
- Fee charged is high (about 14% of price of property)
- Transactions registered at subregistrars' offices
- Previously manual – corruption and a 'cloud' of 'agents' – duration of weeks



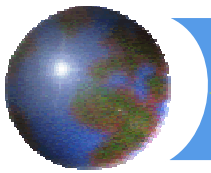
Implementation of CARD

- Started with one office in 1998
- In operation at all the 387 subregistrars' offices with over 4.4 million digital documents by October 2003
- Time for registration – mostly less than half a day
- No 'agents' any more



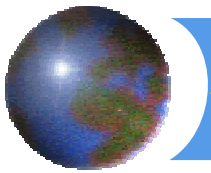
e-Seva

- Multiple agencies for bill-paying and other citizen services
- Electricity, water, property tax, birth and death registration etc.
- Previous system: manual/slow/corrupt
- Could take half a day to pay a bill
- Concept of e-Seva was to provide computerised centres as one-stop shop for payment of bills and access to services



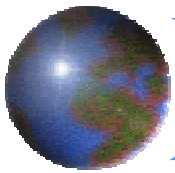
Implementation of e-Seva

- Hardware and software maintained by private companies
- Operation of services by Government employees
- First centre operational in 1999
- 36 centres/400 counters by mid 2003 in Hyderabad
- Also 70 centres covering smaller towns



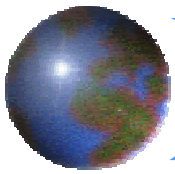
In what way were these successes?

- Sustainability
- Scalability
- Satisfying key stakeholder groups:
 - consumers of the services
 - government staff operating the systems
 - senior government officials



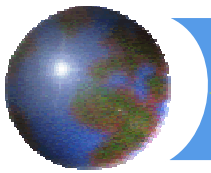
View from an Opposition MP

‘I have to admit bill-paying and other service systems are working well in Hyderabad ... But he (Chandrababu Naidu) should pay more attention to rural areas’.



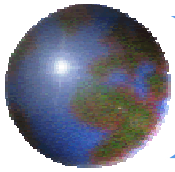
What contributed to 'success'?

- Leadership of the Chief Minister
- Involvement of multiple groups
- Innovative organizational structures
- Citizen-orientation in selection of projects
- Learn and persist



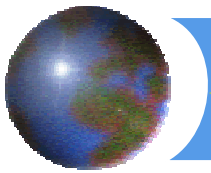
Leadership of the CM

- Knowledgeable and enthusiastic about IT
- Long-term commitment to the change process
- Took a detailed interest in implementation
- Responsive and willing to learn from mistakes
- Politically adept e.g. in ‘enrolling the steel frame’ (the Indian Administrative Service - IAS)



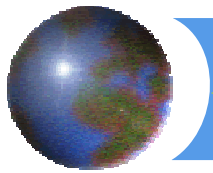
Multiple groups and innovative organizational structures

- IAS/other government officials
- Government staff
- Local private sector for IT implementation
- External consultants for credibility/overall architecture



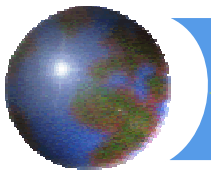
Citizen orientation in project selection

- Initial effort made to ‘streamline’ internal government processes
- Much resistance encountered from government staff
- Shifted to citizen-oriented systems
- Creates political visibility



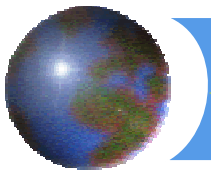
Learn and persist

- Willingness to learn by senior management team as a whole e.g. IT advisor (an LSE graduate!)
- Abandon systems which meet high resistance
- Incremental learning and scaling (CARD and e-Seva)
- Long-term persistence



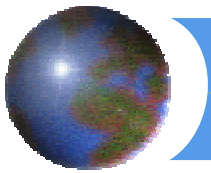
Contribution to 'development' of such systems?

- Focused on urban areas initially
- And on those who pay bills, own property
- Is there an opportunity cost here e.g. diverting resources from more urgent needs?
- India is a highly polarised society in economic terms – do such systems help to perpetuate this?



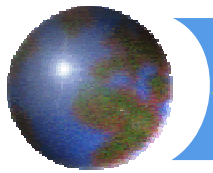
Leadership of Chandrababu Naidu

- Quite impressive in many ways
- But part of India's 'big man' syndrome
- Remove the person and the system falls apart?
- Visible in other sectors such as public health: neo-Victorian charity?



Theoretical reflections

- Need for deeper analysis of how to address institutional resistance – use of institutional theory?
- Need for better conceptualisation of development and the contribution of IS, such as those in AP, to development
- Need for more studies of ‘successful’ systems in my view



Further reference

Walsham, G and Sahay, S 'Research on information systems in developing countries: current landscape and future prospects', *Information Technology for Development*, 12(1), 2006, 7-24.