

# Hello Tomorrow!



Smart ticketing and the future  
Gary Watts  
Managing Director  
Applied Card Technologies Limited

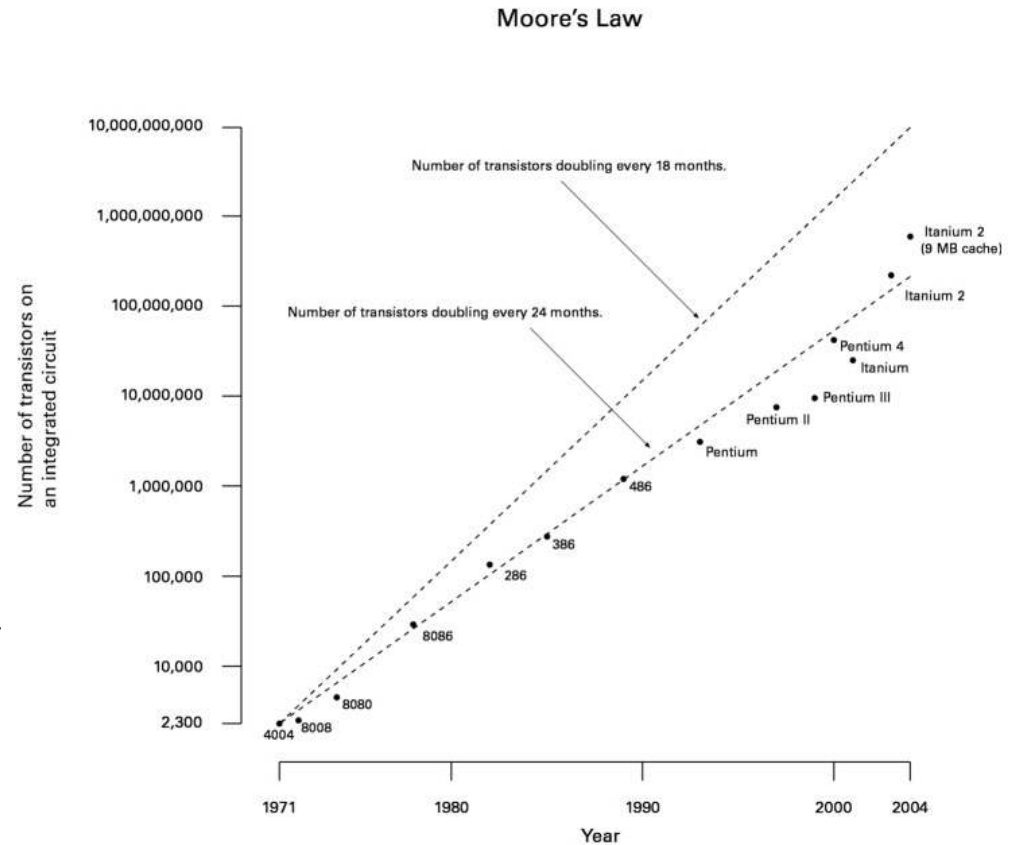
# Delivering smart ticketing

- Impact of computing on smart ticketing
- What are the motives for consumer adoption?
- What are the motives for industry adoption?
- What does the ITSO specification really give us?
- What does the ITSO marketplace look like?
- Where to next?
- What is the next big thing?
- Conclusion



# Computing history

- Moore's law (1975)
  - “the capacity of computing hardware doubles every 2 years”
- Prime example is “smart media”
  - The new Sun Java Card 3.0 specification can provide over 1gb of storage and can even act as a web server
- We have a challenge though, namely “Wirth's law (1995)”
  - “Software gets slower, faster than hardware get faster”



# Unlocking ticketing

- Digital networks creating a mobilised market
- Two specifications creating a significant step change in the way we 'ticket' in the UK
  - ITSO
  - Payment
- Contactless media delivers
  - Convenience
  - Speed
  - Multi-function
  - Freedom



# Motives for consumer adoption

- The features of the technology that largely determine its consumer acceptance.
  - S - Simplicity
    - vs. complexity of the innovation
  - T – Trialability.
    - Is there a chance to test the technology with the ability to reverse the adoption?
  - O – Observability.
    - Is there a chance to see how the innovation works for others and observe the consequences?
  - R - Relative advantage.
    - Is this innovation truly better than what it is replacing. **Cheaper, faster, better**
  - C - Compatibility.
    - Does this innovation fit with my values, beliefs and current needs?
  - S - Support.
    - is there enough support in time, energy and money to ensure success?

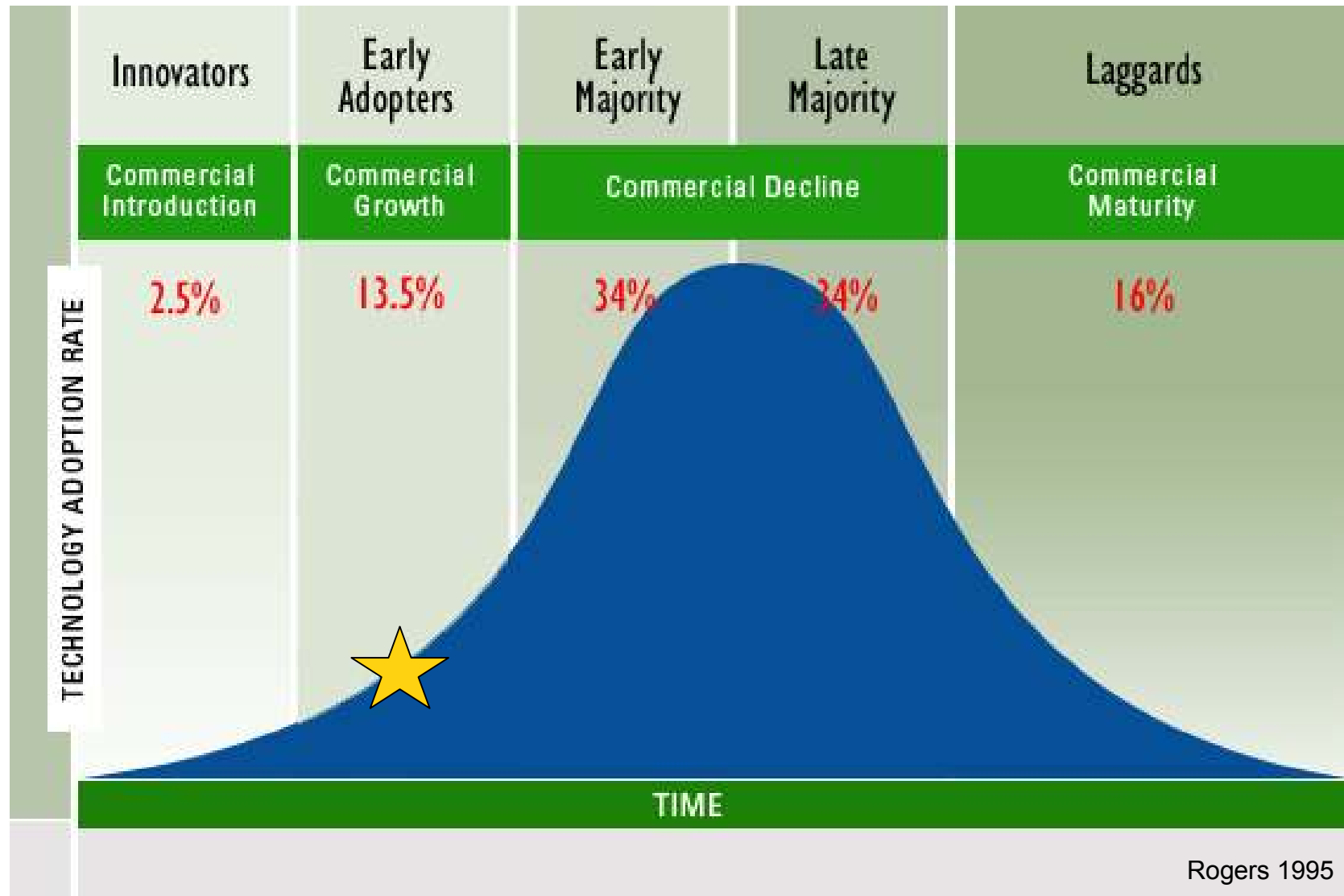


# Motives for industry adoption

- The features of ticketing systems and services that largely determine is industry adoption
  - Adequate supplier choice
  - System interoperability with open interfaces
  - Secure and flexible ticketing framework
  - Accessible and open commercial models
  - Cost reductions on ticket management
  - Removal of cash from the network (bus or rail)
  - Support for existing ticketing arrangements
  - Compliance with data protection and FSA rules
  - Delivering increase management information to effect business change
  - Available in a timely manner



# ITSO technology adoption rate

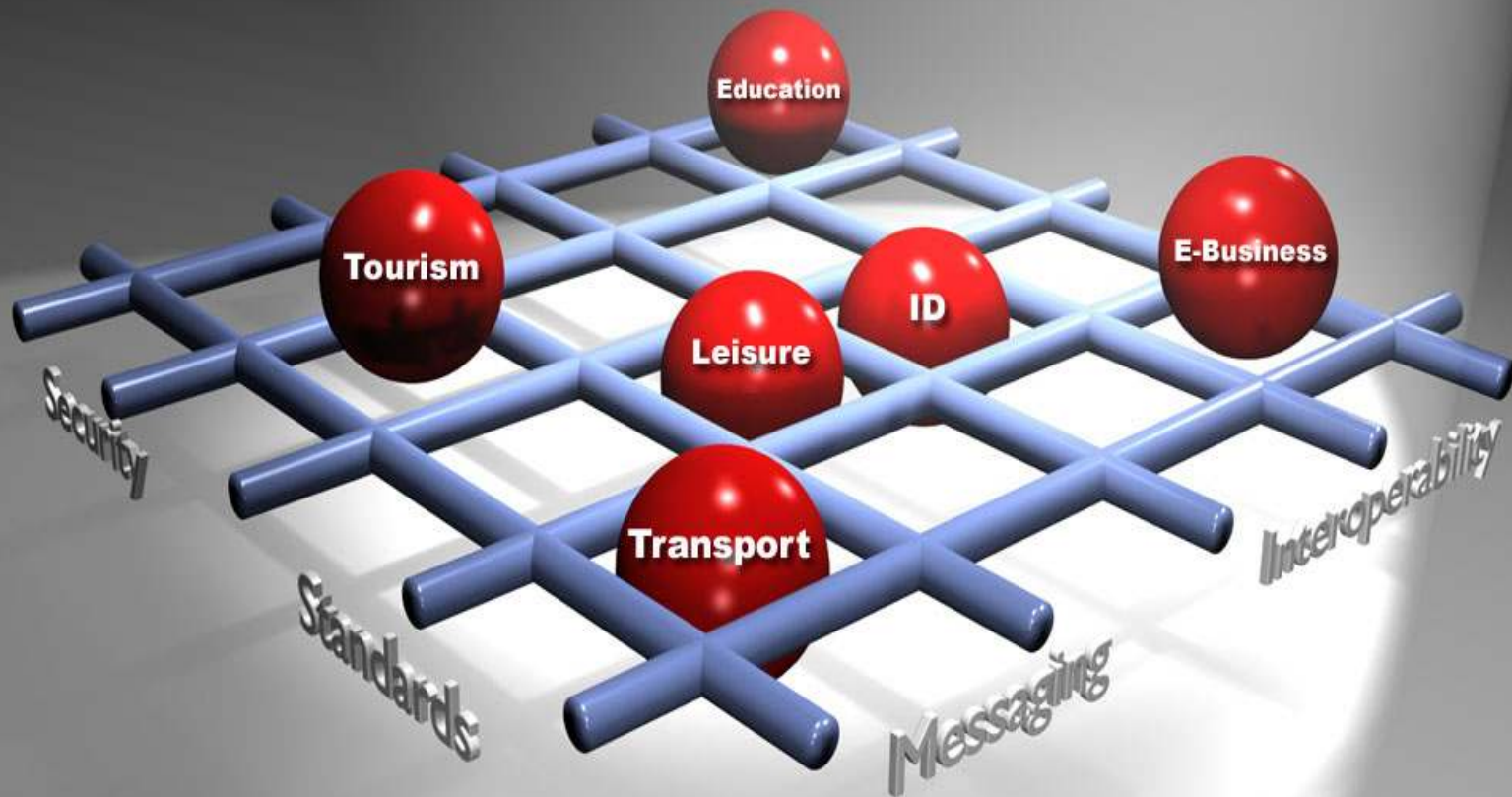


# ITSO

- Delivering an open specification for smart media ticketing within transport (to start with)
- Encouraging open market forces
- Easing the complexity of supply chain interaction
- Creating the operational framework for transport providers to engage each other



# The ITSO Framework

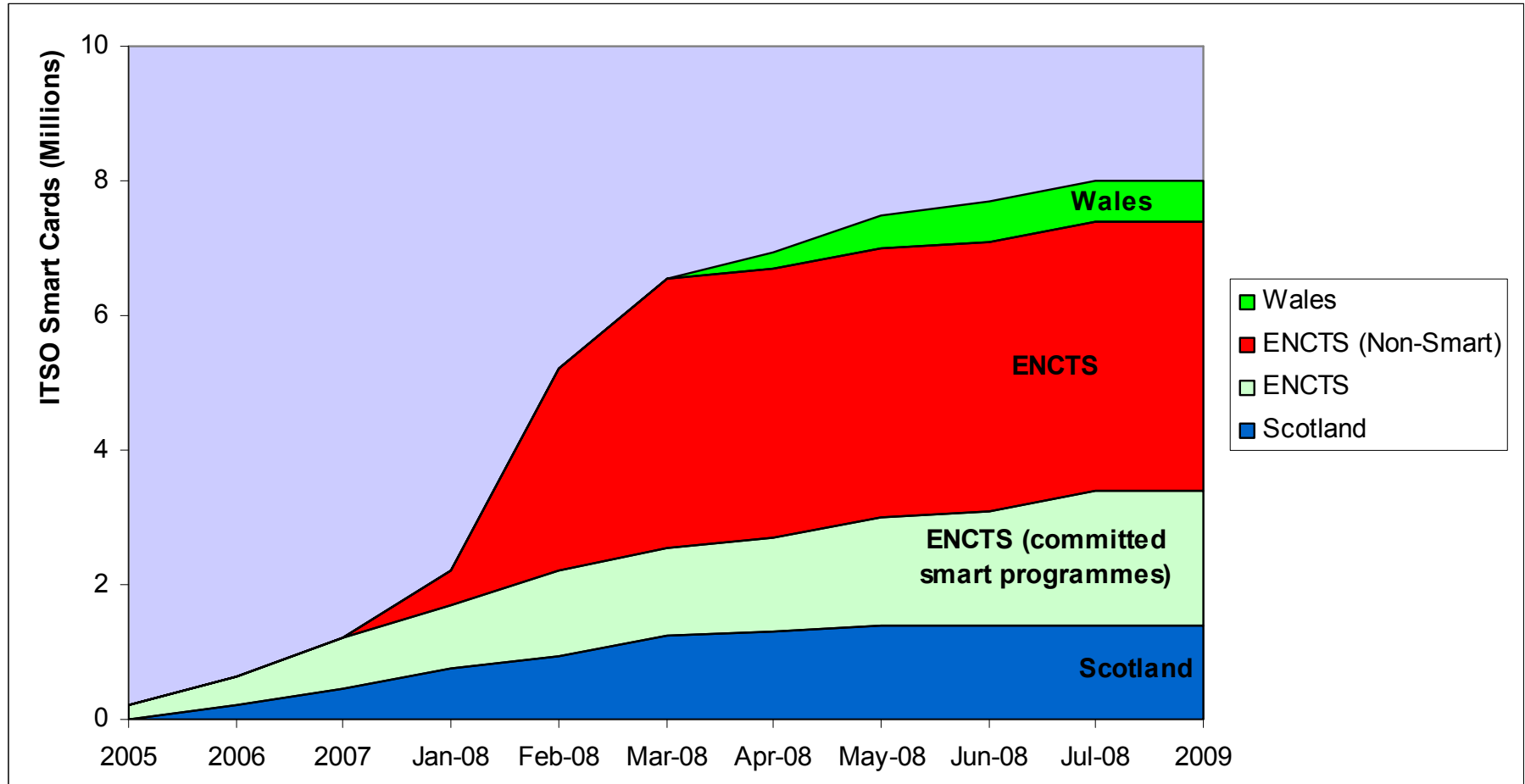


# ITSO marketplace

- 16+ committed ITSO schemes
  - Bus travel (13)
  - Rail travel (3)
- Over 8 million ITSO smart cards issues to date
- ITSO has moved from market creation through to market deployment
- Transport groups increasingly becoming multi model (includes payment across modes)



# ITSO smart card estate



# On reflection.....

- ITSO plug and play is a myth
  - more integration testing among suppliers
- Steady state specifications required
  - Giving supplier community chance to perfect
- More ITSO policing is required
  - Ensuring suppliers stick to the rules
- Need for adequate documentation regarding key elements
  - ISMS operation
  - ISAM behaviour



# Where to next?

- Short answer is rail.....
  - In the UK on a typical day about 3.3 million passenger rail journeys are made
  - Over £5billion was spent on rail travel in 2007 and this is growing at a rate of 5% a year
  - Train Operating Companies (TOCs) are budgeting for ITSO schemes in line with franchise commitments
  - Scale is critical to eventual commercialisation
  - TOCs are provisioning for their own retail service to retain control of their customer base



# The next big thing

- Smart mobile phones
  - Nearly everyone has got a mobile
  - Smart card phones could deliver
    - Ticketing
    - Access control (gate entry)
    - Payment
  - e Near Field Communications (eNFC)
    - Act like a contactless card
    - Act like a contactless reader/writer
  - For smart phones to gain ground in ticketing space there needs to be a complete consumer value package



Image – copyright NFC forum



# The next big thing

- E-money
  - Increasing number of providers
    - Barclaycard 'onepulse'
    - Mastercard 'paypass'
    - sQuid
  - Making a play for the ITSO 'national stored travel rights' purse
  - Need to be ITSO aware



- Key features

- sQuidcard is a national product
- sQuidcard is a simple electronic card that replaces small value cash
- Uniquely positioned to be retailer/operator-centric, rather than bank-centric;
- Contactless (of course)
- Low cost - never more than 1.5% to the merchant/retailer
- Free for customers to use
- **Multi-purse** capability – allows sQuid, transit, specialty purses to interface on a single card
- Already compatible with UK ITSO transit smartcard standards



# Conclusion

- Digitised networks enabling next generation ticketing
- Smart media has capacity to deliver step change in the consumer experience
- ITSO has moved from market creation to market deployment
  - Provides a secure interoperable ticketing framework
  - Technology becoming less of a challenge (but integration not to be underestimated)
  - Providing the conditions for industry adoption
- Consumer proposition must deliver value add
- E-money is here and adoption is growing
- eNFC phones must bring additional functions and consumer benefits to compete cost effectively with other ticketing media



**Thank you**

**[Gary.watts@card.co.uk](mailto:Gary.watts@card.co.uk)**

**[www.card.co.uk](http://www.card.co.uk)**



# Introducing ACT

- Global turnkey smart media transaction systems
- Retail reward programmes
- Customer management systems
- Tourism management systems
- ITSO transport ticketing systems
- Managed operational services
- Member of ITSO technical committee

