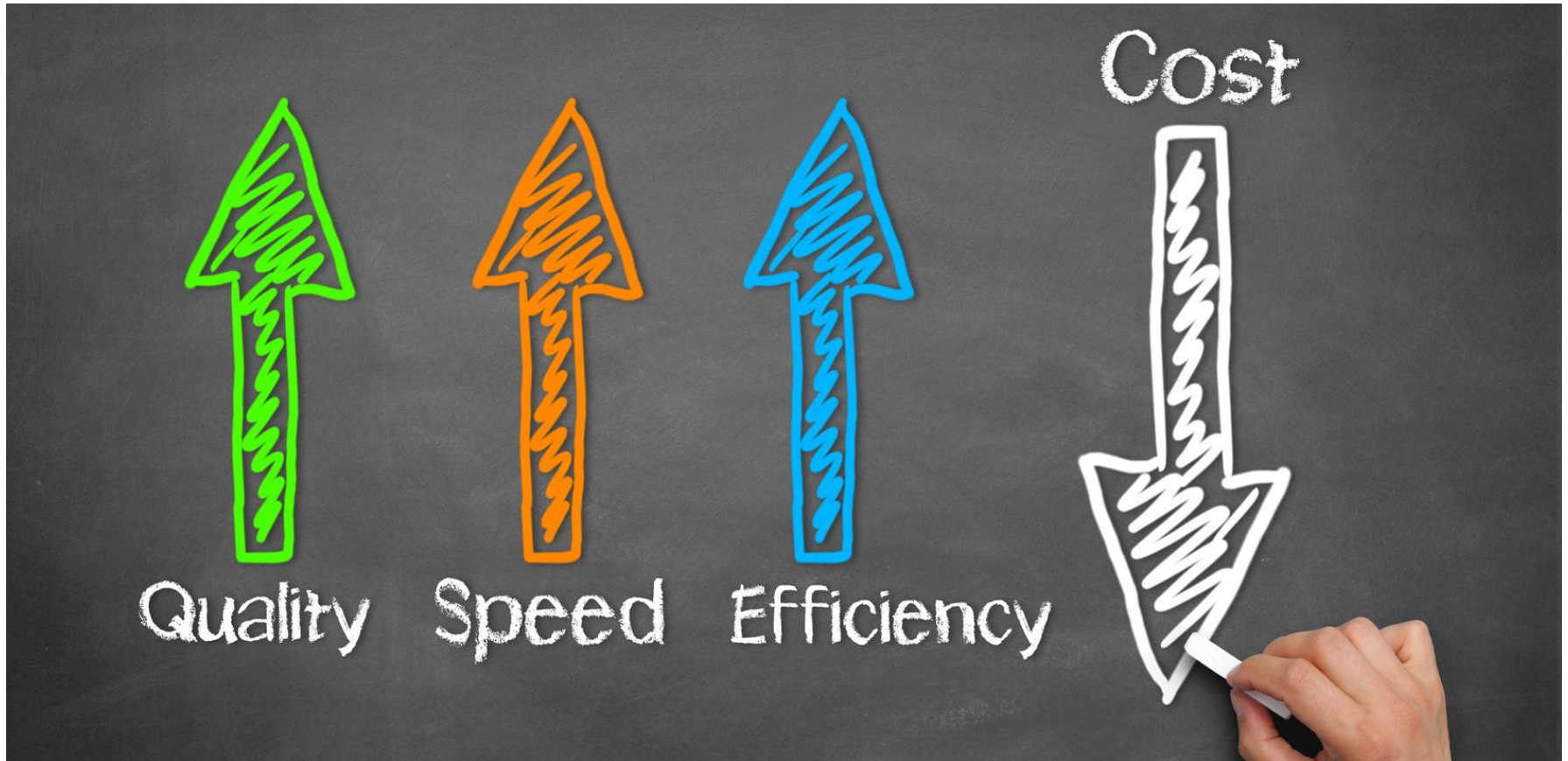


How to increase revenue in public transport



A new age of ticketing

Drivers of modern ticketing solutions

- Lowering of cost of sales
- Reduction of fraud
- Increase of revenue



How to achieve: Cost reduction

- Most sales transactions done via web portals or mobile devices
- Less tickets distributed in the system
- Automatic sales machines and external retail network
→ no real need for manned points of sales
- Increase of reusability with electronic tickets
- Less or less complex sales devices required
- Closing of the system limits the need for on board sale or inspection



How to achieve: Fraud reduction

- Closing of the systems with In/Out systems provides 100 % control of the tickets
- Modern electronic data carriers are more difficult to copy
- Data availability in the cloud allows better safety measures in the system (fraudulent use checks, velocity checks etc.)



How to achieve: Increase of revenue

- **Electronic tariffs allow**
 - quick tariff changes,
 - price diversity and
 - optimization of the revenues
- **Interoperability allows additional revenue channels:**
 - In transit:
 - Offer regional tickets or
 - tickets for other transport providers
 - None Transit:
 - Micro-payments (parking, entry tickets, coffee etc.)
 - Sales of uploads for cellular phones
 - Sales of vouchers like: iTunes etc.



Modern solutions

Development in ticket media

Expansion in usage of smart media

- Introduction of contactless Credit Cards
- Drivers licences, passports, student ID and many other ID-Cards are issued based on Smart Cards

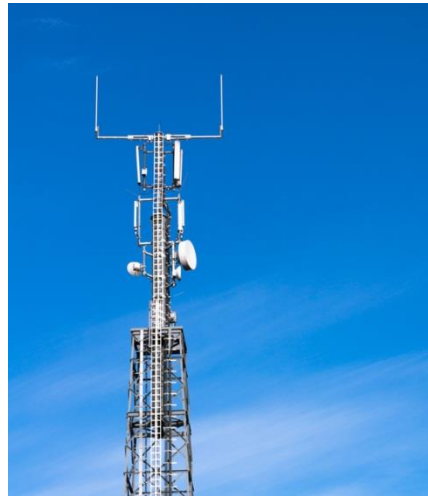
Explosion of smart phones

- Very large and growing usage of smart phones
- Huge expansion on development of applications for mobile platform
- Slow but steady increase of availability of NFC enabled mobile phones



Communication technology

- Expansion of availability of standardized wireless communication networks
- Continuous increase in performance of wireless networks (3G / 4G / LTE)
- Significant cost reduction for use of wireless networks



Developments in media and communication enable new concepts in Ticketing:

“Open Payment”



Paradigm shift in ticketing

**The ticket
information is
stored in the media**



**The Ticket
information is
stored in the back
office:**

A true “E-Ticket”

**The system is limited to
ticket media distributed
and managed by
Operators/Authorities**



**Passengers may
choose to use
their own fare
media**

Cloud Ticketing – Open Payment



Open System Design

Closed systems: Check-in/Check-out

- Passenger needs to register his ticket media when entering/exiting the system

Open systems: Be-in/Be-out

- Ticket media registers automatically

Hybrid systems:

- Be-in/Be-out for registered customers, Check-in/Check-out for single use customers

Hybrid use of operator issued electronic ticket and acceptance of other credentials (credit cards, mobile phones, ID's ...)

Conclusion

The “Open Payment” and recent development in Ticketing Technology offer for the operators an excellent platform to significantly improve the financial performance.

**Relatively small investments
have a fast and very large return potential !!!**



A New Age of Ticketing

Open Discussion

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Thank you for your attention!

