Oyster: The Path Ahead

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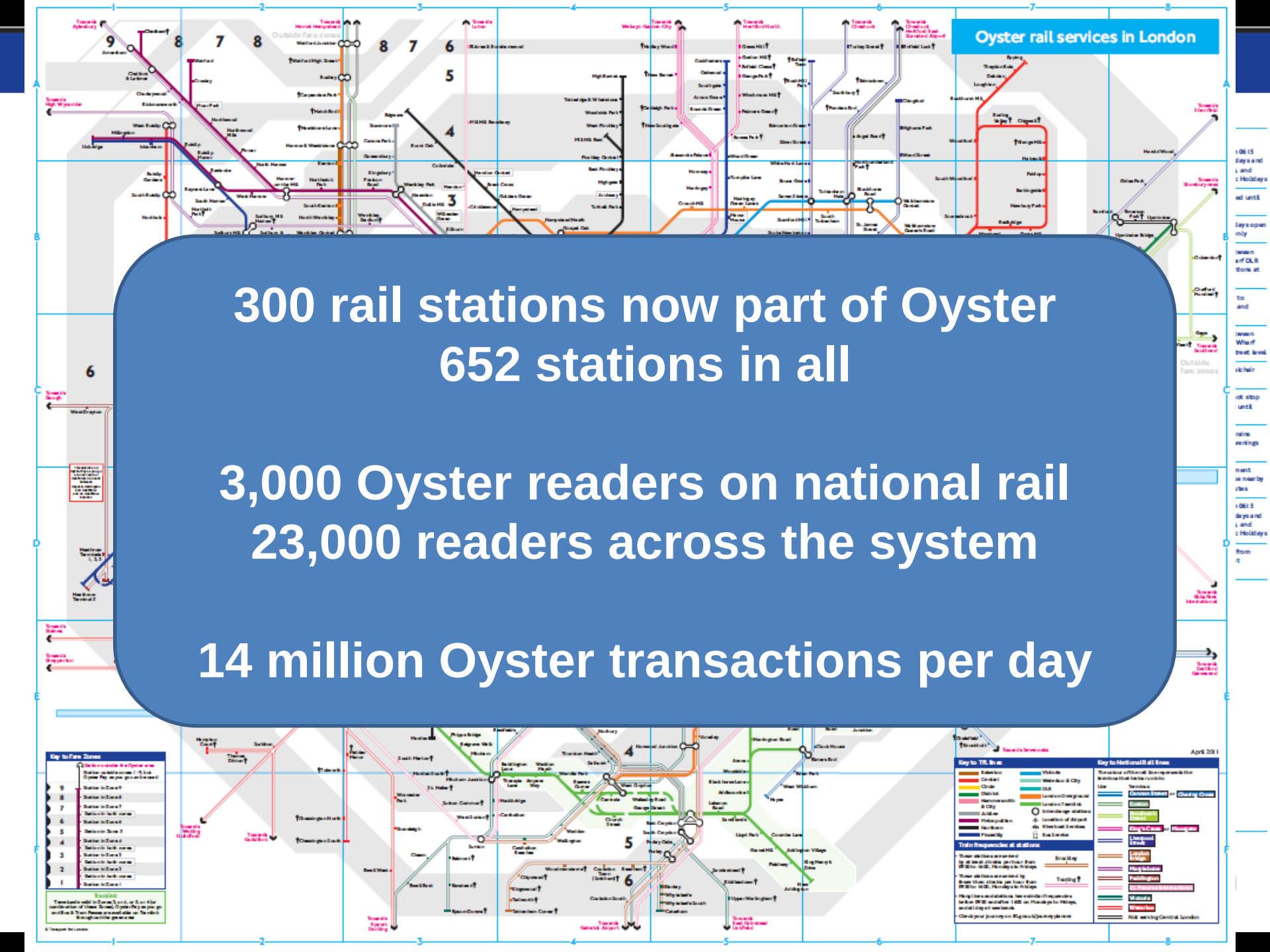
Where are we today?

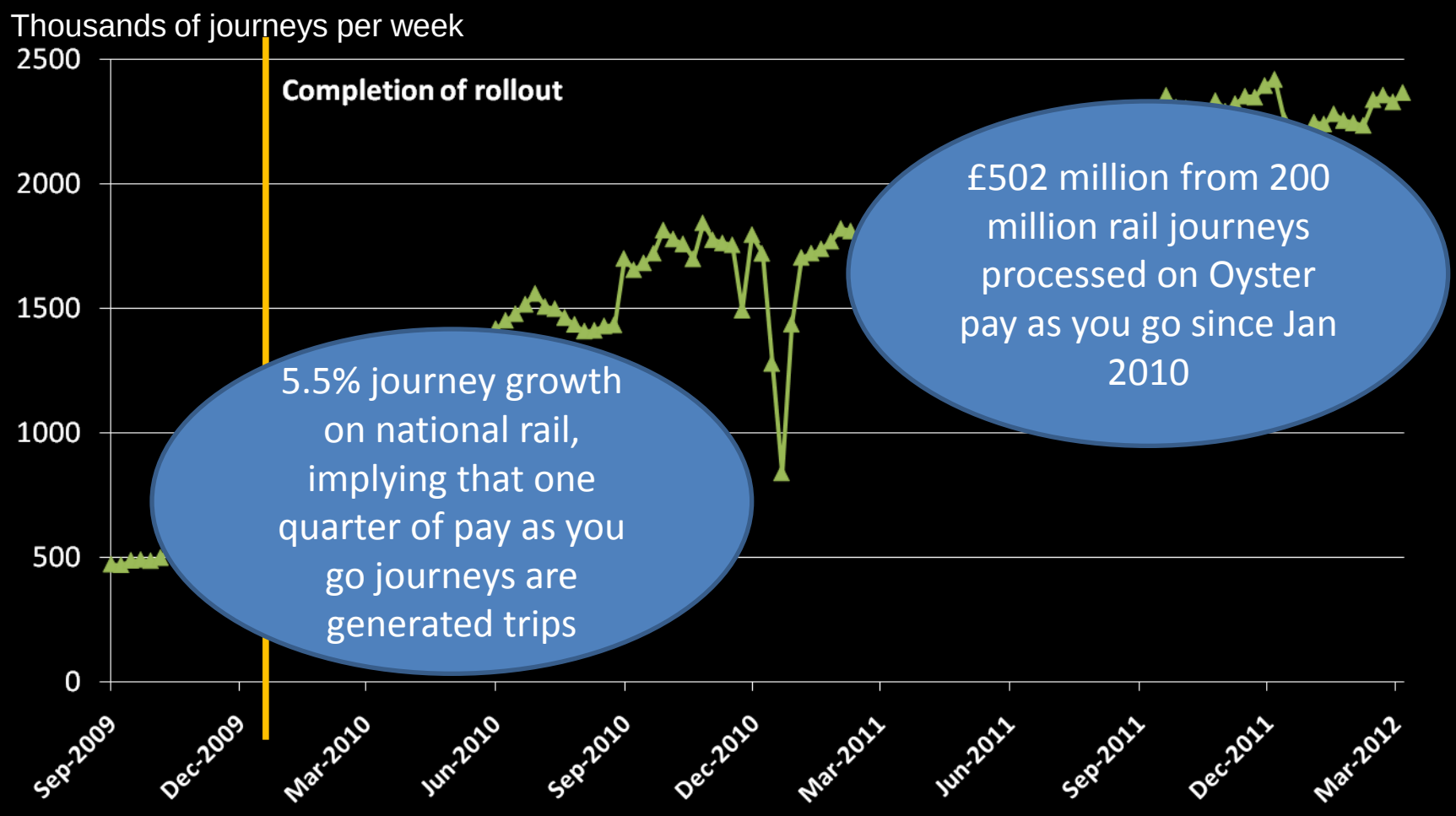
Oyster delivered and hugely successful

- Launched in 2003
- ~96% of ticketed travel on buses
- ~81% of ticketed travel on Tube; paper tickets issued by national rail account for most of the rest

Transport integration across London with launch of Oyster on national rail services completed in Jan 2010


Oyster rail services in London
300 rail stations now part of Oyster
652 stations in all
3,000 Oyster readers on national rail
23,000 readers across the system
14 million Oyster transactions per day

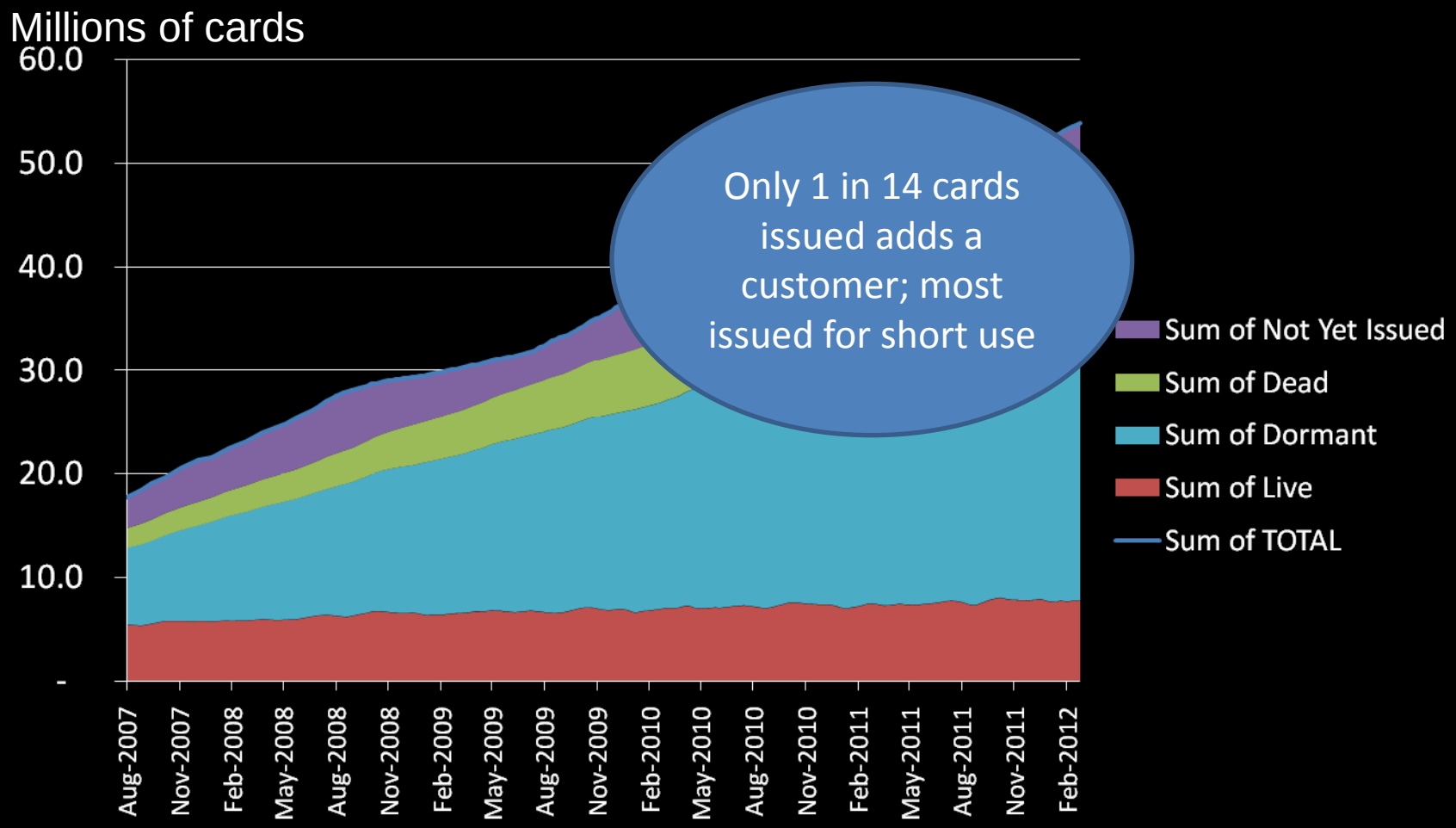
Spread of Oyster on national rail



Remarkable success, but ...

Challenges remain

Oyster card issuance



If we could we should seek to…

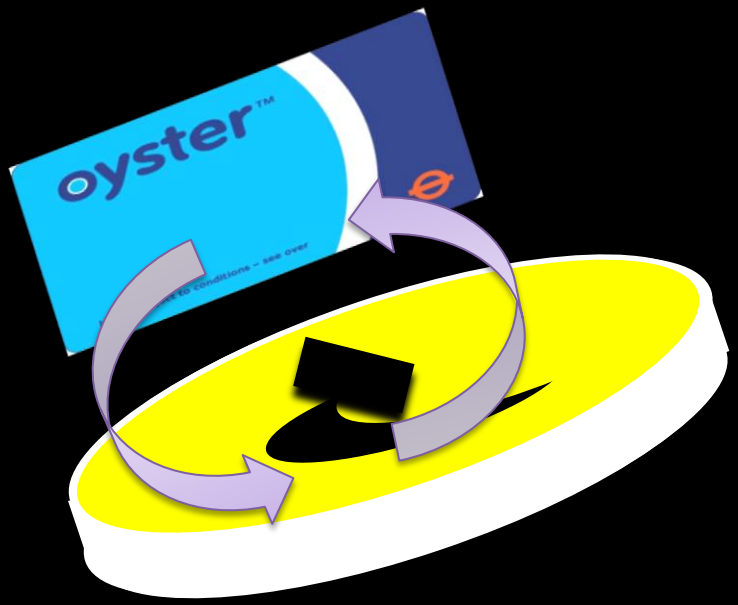
- …speed up our customers' journeys through our system
- …cut out steps in the journey that don't actually involve motion
- …reduce our costs of revenue collection

Current challenges

- **Despite the visible success of Oyster, ticketing still represents a difficult business model**

- **Need to think from first principles about models for revenue collection**

Working with Oyster cards



The billing engine in the reader reads the information on the card

It looks up the appropriate fares data locally and writes changes back to the card

Copy of written data sent to TfL servers

Card is the source of truth

Working with EMV

For EMV transactions, there is no processing performed at the reader

The reader holds no fares information

No transport specific data written back to card

Perform all card processing centrally in servers

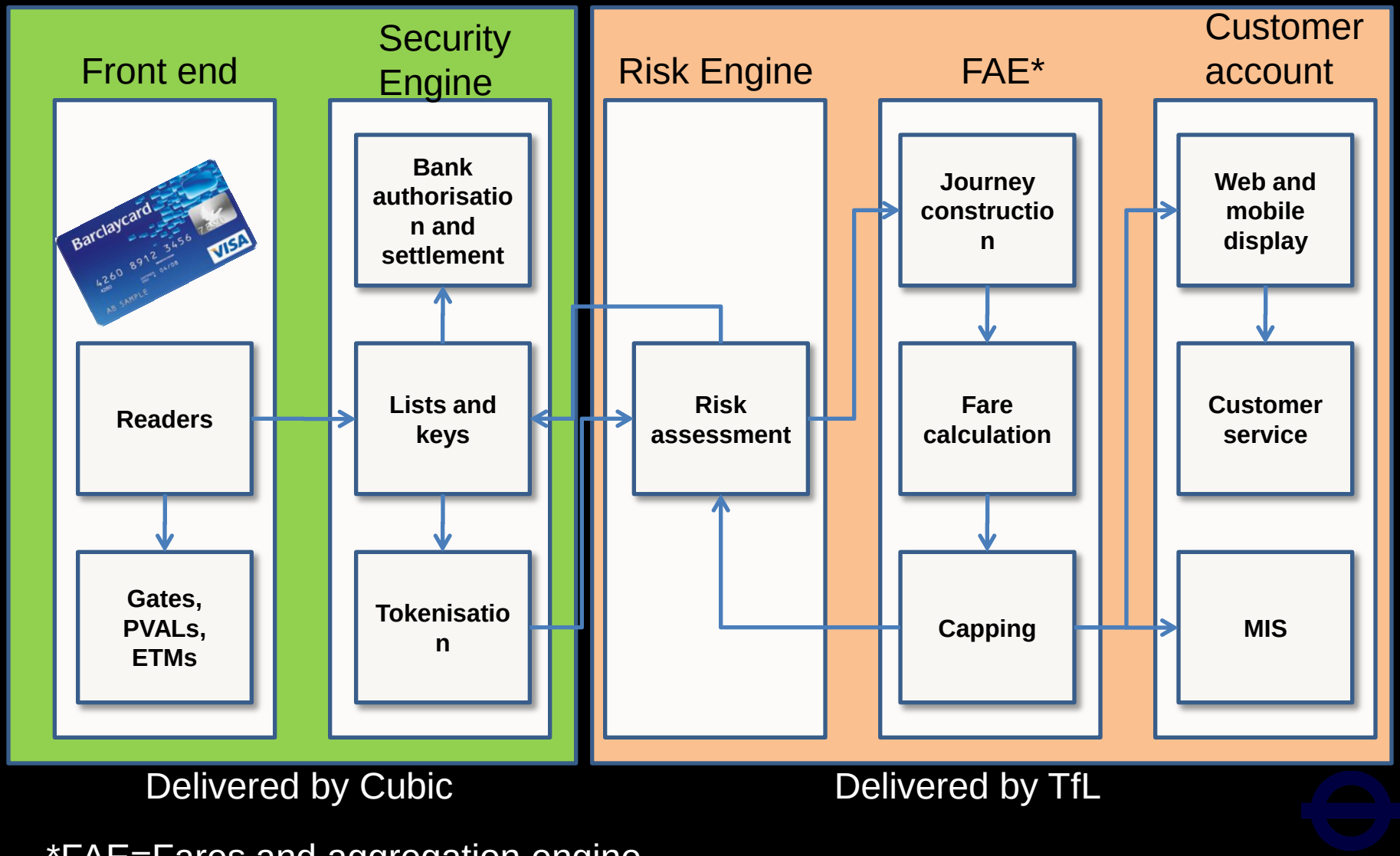
Accounts held in back office source of truth

EMV = Eurocard, Mastercard, Visa card

Why EMV?

- Better proposition for customers
  - Pay for transport like you pay for everything else
  - No need to get a card or top it up
- Cheaper cost of revenue collection
- Easier system to manage
  - Accounts in back office
  - Ability to deal with exceptions
- Flexibility for new fares policy
  - Enhanced capability for peak pricing
  - Loyalty programmes
  - Dealing with groups such as part time workers

Overall architecture



*FAE=Fares and aggregation engine

When does this happen?

2012

2013

Extending EMV based ticketing

- Active discussions with transport operators in the UK
- Working closely with major cities around the world
  - Collaboration on transit rule setting and concept of operations
  - Cooperation on development of a single back office
- Back office based solution will work with other payment technologies, e.g., identity cards, student ID, etc.

Questions?