

SCHEIDT&BACHMANN

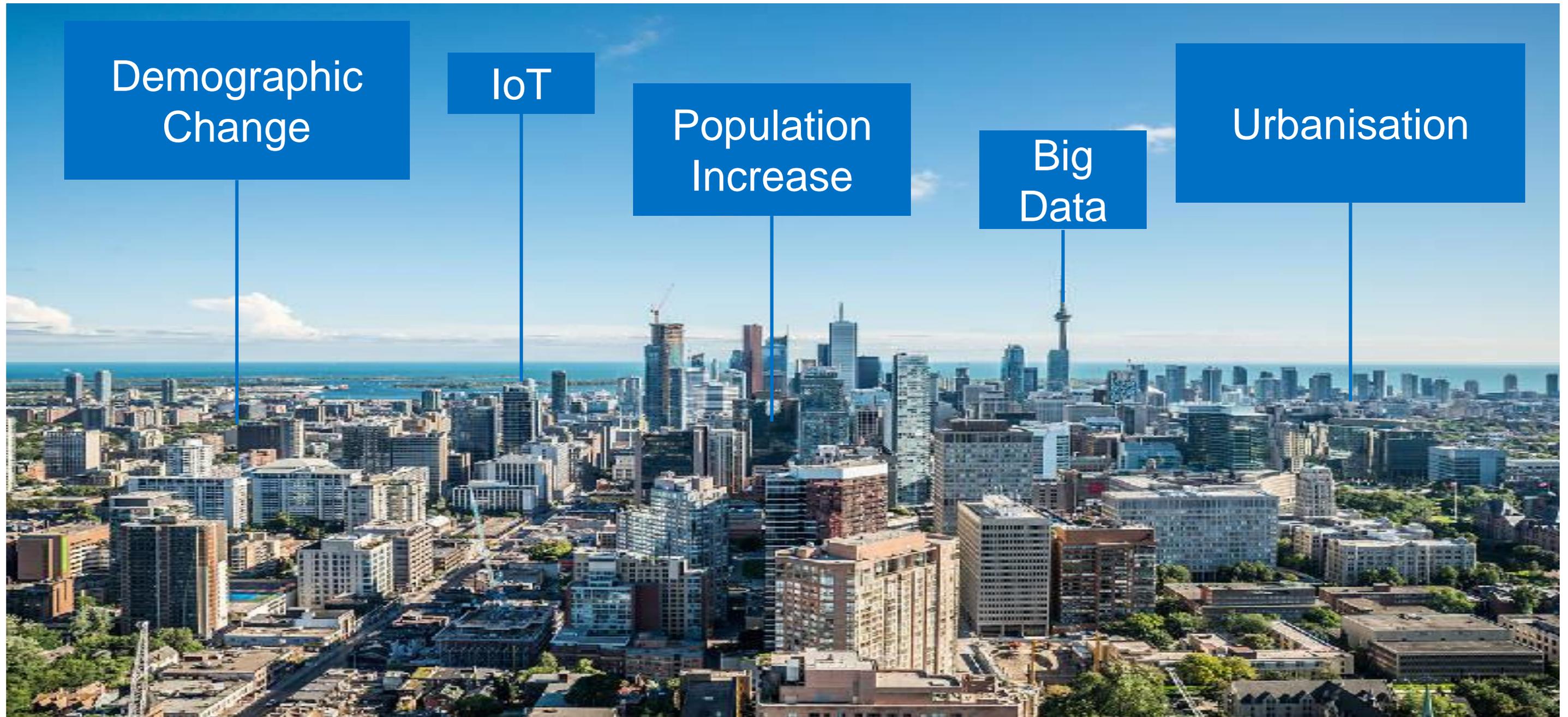


Innovations Learning Center

Strategies for Successful Fare Collection

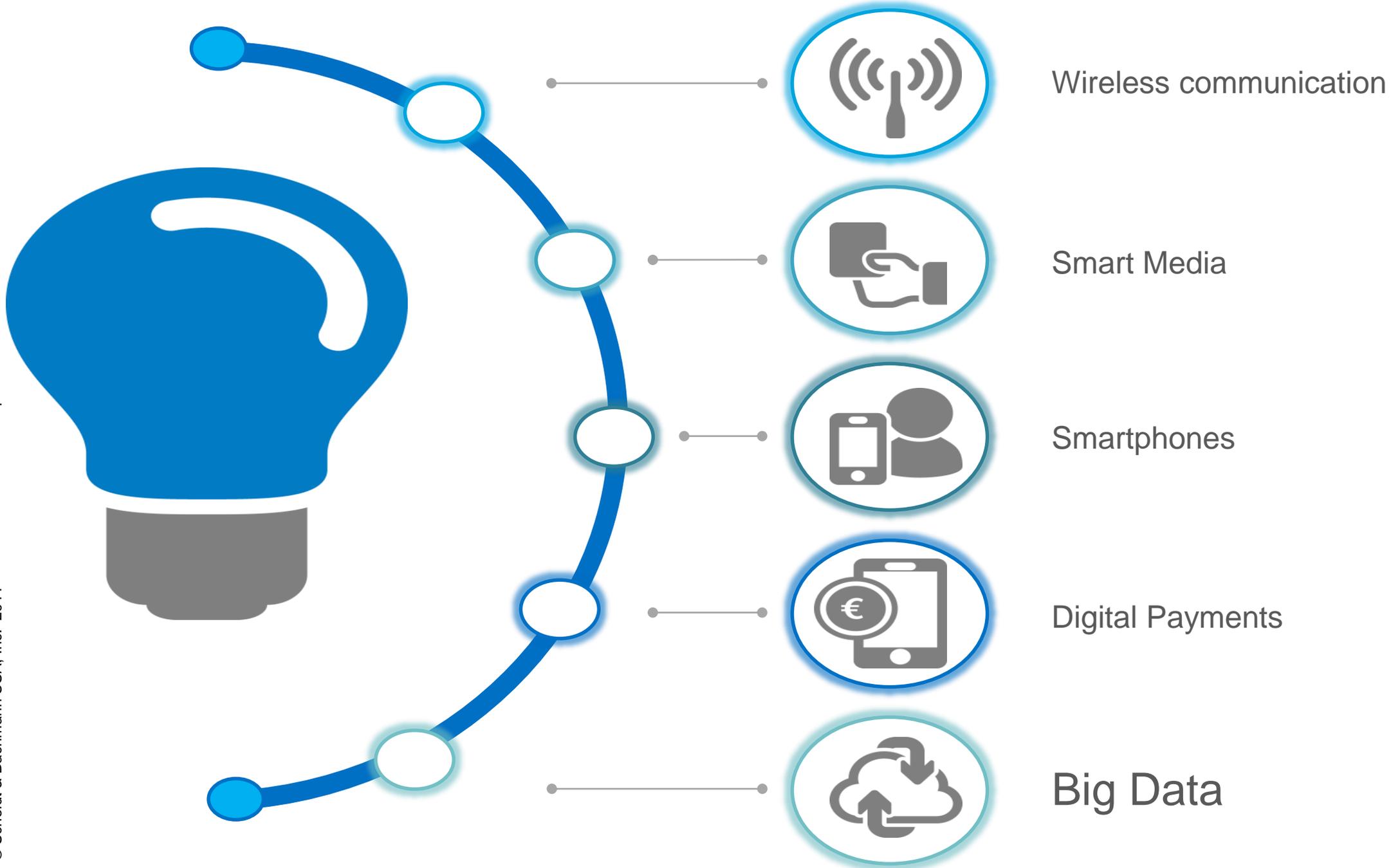
10 October 2017

Smart Cities – New Challenges



© Scheidt & Bachmann USA, Inc. 2011 Presentation S&B / Version Apr 2011

Key Influencing Trends



© Scheidt & Bachmann USA, Inc. 2011 Presentation S&B / Version Apr 2011

Beautiful Design vs. Customer Experience



© Scheidt & Bachmann USA, Inc. 2011 Presentation S&B / Version Apr 2011

Creating a seamless customer experience across all touch points



Potential Paul ...



Plans his trip on his laptop



Reads signs to find out where to park and how to navigate the station



Buys a ticket at the TVM



Navigates the station while exiting the train



Uses his mobile phone to plan his trip home while on the train



Interacts with bus driver to find out how to pay and what stop to get off

Significant role of the back-office

In Account-based Ticketing, the back office is doing “all of the work”

- Stored value / tickets maintained in the back office
- Media identify back office account
- Field devices just read ID for validation and transmit identification data
- Back Office manages all aspects of the accounts
- Back office handles fare calculation, purse values & payment
- Tariff changes purely maintained in the back office

Importance of communication

Communication infrastructure is essential for success

- Regular communication between the back office and all the devices - “close-to-real-time” is the key
- Real-time validation against the back office may be helpful, but is not necessary
- Communicate with the back office in order to update accounts
- De-risk fraudulent ID’s based on:
 - very fast acceptance-list and deny-list distribution
 - velocity checking
 - further risk engine rules

Open Payments: Account Based is the platform

The ID-based architecture opens the door to “Open Loop Payments”

- The ID of a contactless credit/debit card can act as an account ID for Account Based ticketing
- The card ID is sent to the back office for identification and payment
- Use customer owned medium without registration!
- Close-to-Real-time payment authorisation

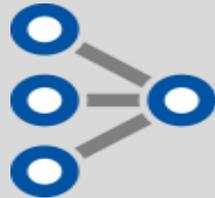
- *But: Contactless credit cards are currently the most expensive and risk carrying media*

Card Replacement Strategy Transition



Media

Media can be migrated in the field, i.e. by validators. A tag will be written to the card to mark it as „Account Based“. After that, the back office holds the actual card status.



Device Fleet

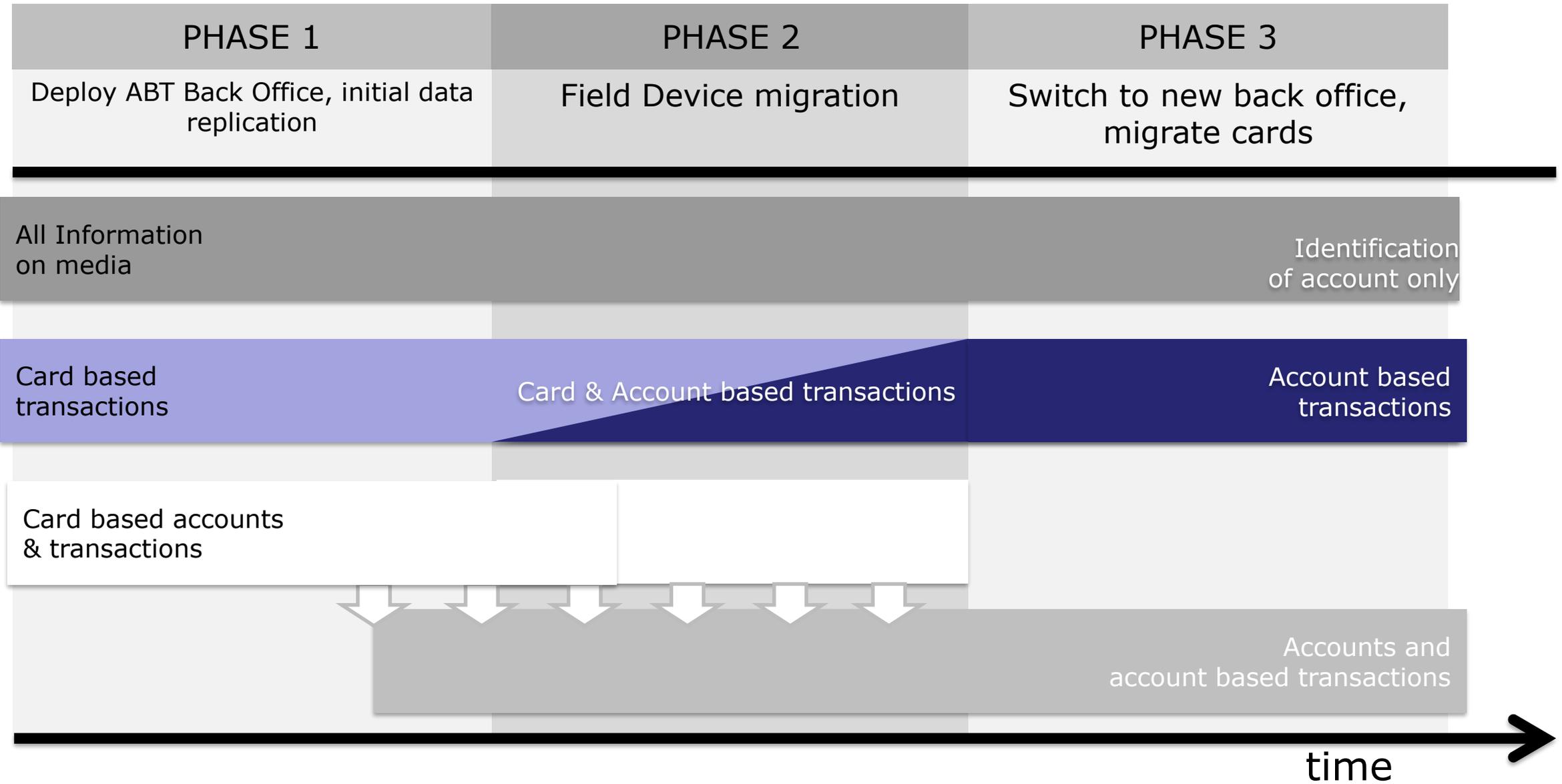
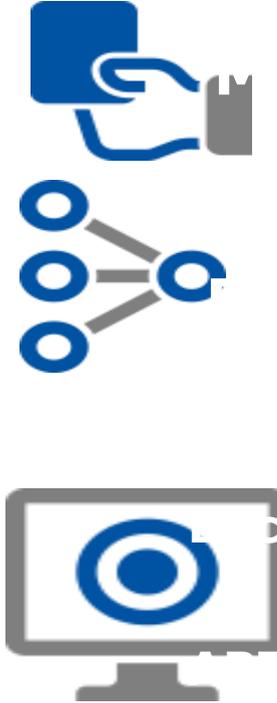
Devices can be upgraded one by one, either by retrofitting or replacement. During the migration period, they need to be able to work in Card Based and Account Based mode.



Back Office

The ABT Back Office is built in parallel to the existing back office. Data is continuously replicated to ensure consistency. After migration of all field devices and cards, CBT Back Office is switched off.

Card Replacement Strategy Transition



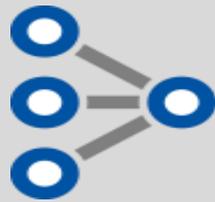
© Scheidt & Bachmann USA, Inc. 2011 Presentation S&B / Version Apr 2011

Device-focused Transition



Media

Media can be migrated in the field, i.e. by validators. A tag will be written to the card to mark it as „Account Based“. After that, the back office holds the actual card status for such a card.



Device Fleet

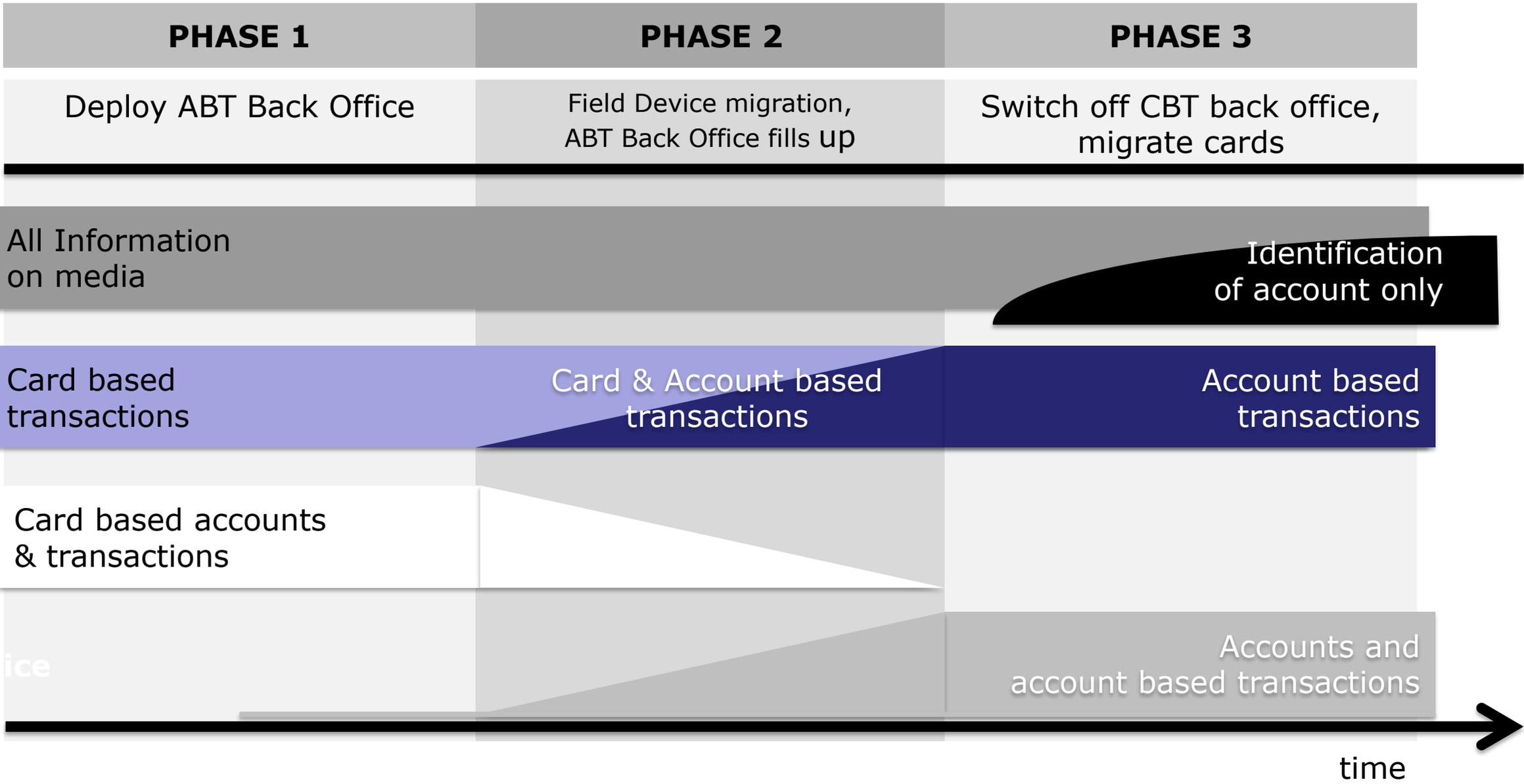
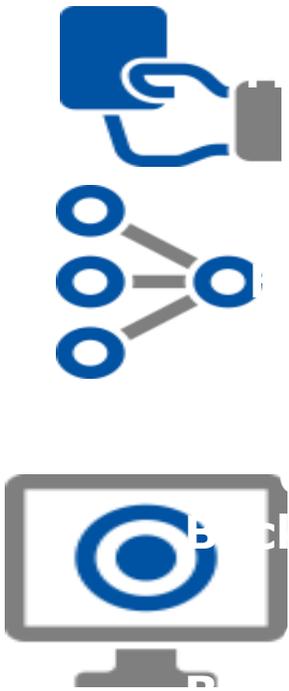
Devices can be upgraded one by one, either by retrofitting or replacement. During the migration period, they need to be able to work in Card Based and Account Based mode and send transactions to the both back office system.



Back Office

The ABT Back Office is built in parallel to the existing back office. It will receive transactions from all migrated field devices as a „copy“ to start to learn the current card status. When all field devices are migrated, Then CBT Back Office can be switched off.

Device-focused Transition

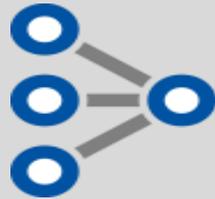


Delayed Card Replacement Strategy Transition



Media

Media will be identified by their UID on ABT-related devices during the device upgrade period. Once all field devices are upgraded to accept new cards, cards may be replaced by new and more secure ID media.



Device Fleet

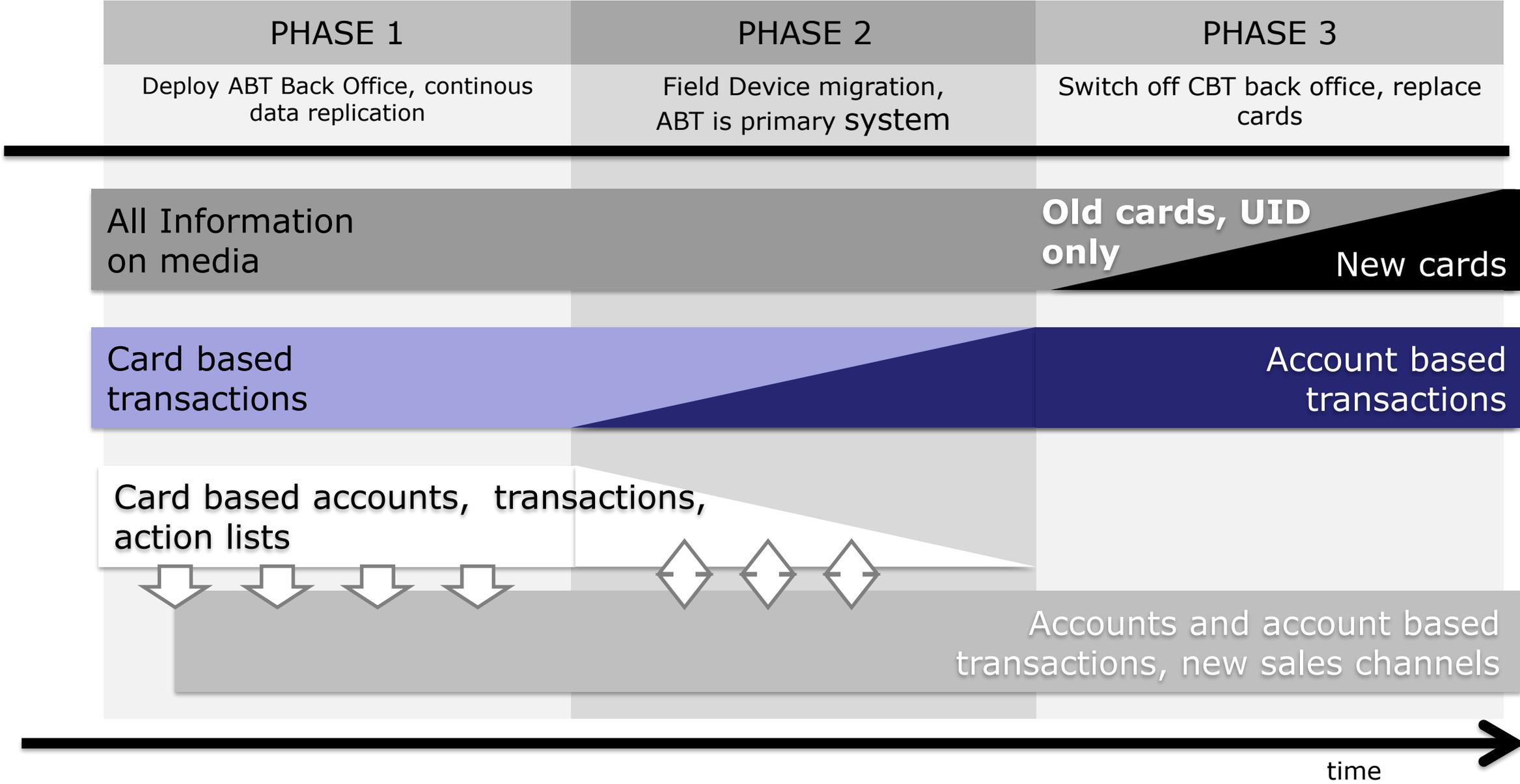
Devices can be upgraded one by one, either by retrofitting or replacement. Upgraded devices will send transactions based on the card's UID to the ABT back office.



Back Office

The ABT Back Office is built in parallel to the existing back office. Data is continuously replicated to ensure consistency. With the appearance of migrated field devices, the ABT Back Office has to provide action list entries back to the CBT Back Office so that ABT transactions are properly reflected on the card itself.

Delayed Card Replacement Strategy Transition



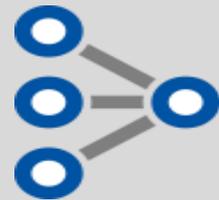
© Scheidt & Bachmann USA, Inc. 2011 Presentation S&B / Version Apr 2011

Dual Media Transition



Media

Media in field are kept unchanged. For new Account Based Ticketing business cases, new media are issued.



Device Fleet

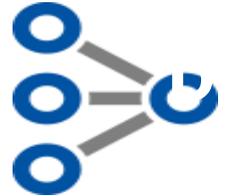
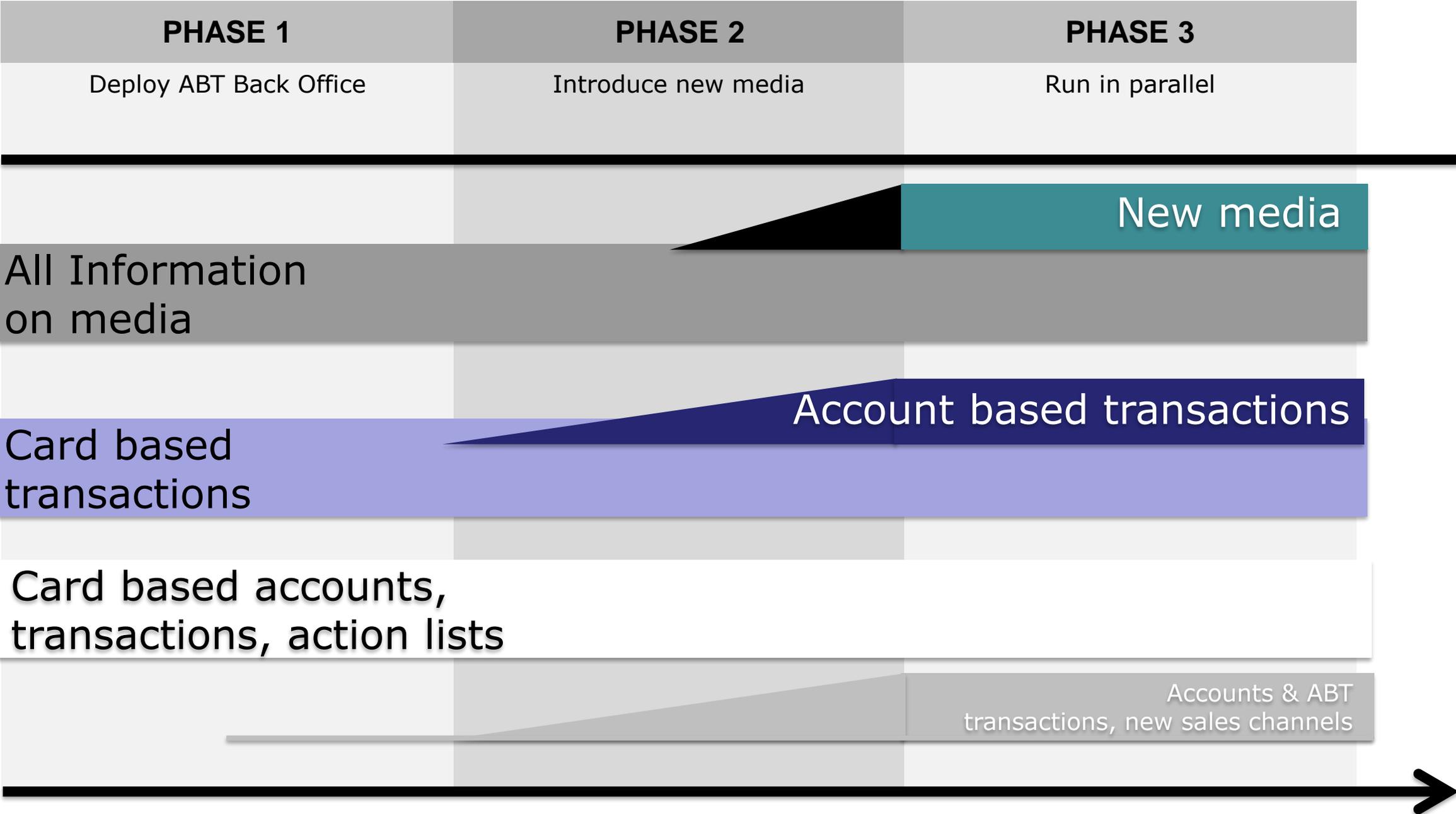
A part of the field device fleet is upgraded to also perform Account Based Transactions. Alternatively, new devices are deployed in parallel to the existing fleet.



Back Office

The ABT Back Office is built to run in parallel to the existing back office. Data is kept separately, eventually consolidated on a higher level. Once deployed, this can also be used to enable new sales channels.

Dual Media Transition



time

Thank you for your attention!



www.scheidt-bachmann.com

06/10
© Scheidt & Bachmann GmbH 2016
000098/1.0-01022016