

# Extended functionality of ATM - Currency Exchange

# Group of Companies Penki kontinentai



**1992** – **Penki kontinentai** group was founded in Vilnius



**1998** - **ASHBURN International** affiliated company was founded



**1998** – **Penkių kontinentų komunikacijų centras** affiliated company was founded



**2001** – **Penkių kontinentų bankinės technologijos (BS/2)** affiliated company was founded



**2004** – **Skaitmeninio sertifikavimo centras (SSC)** affiliated company was founded

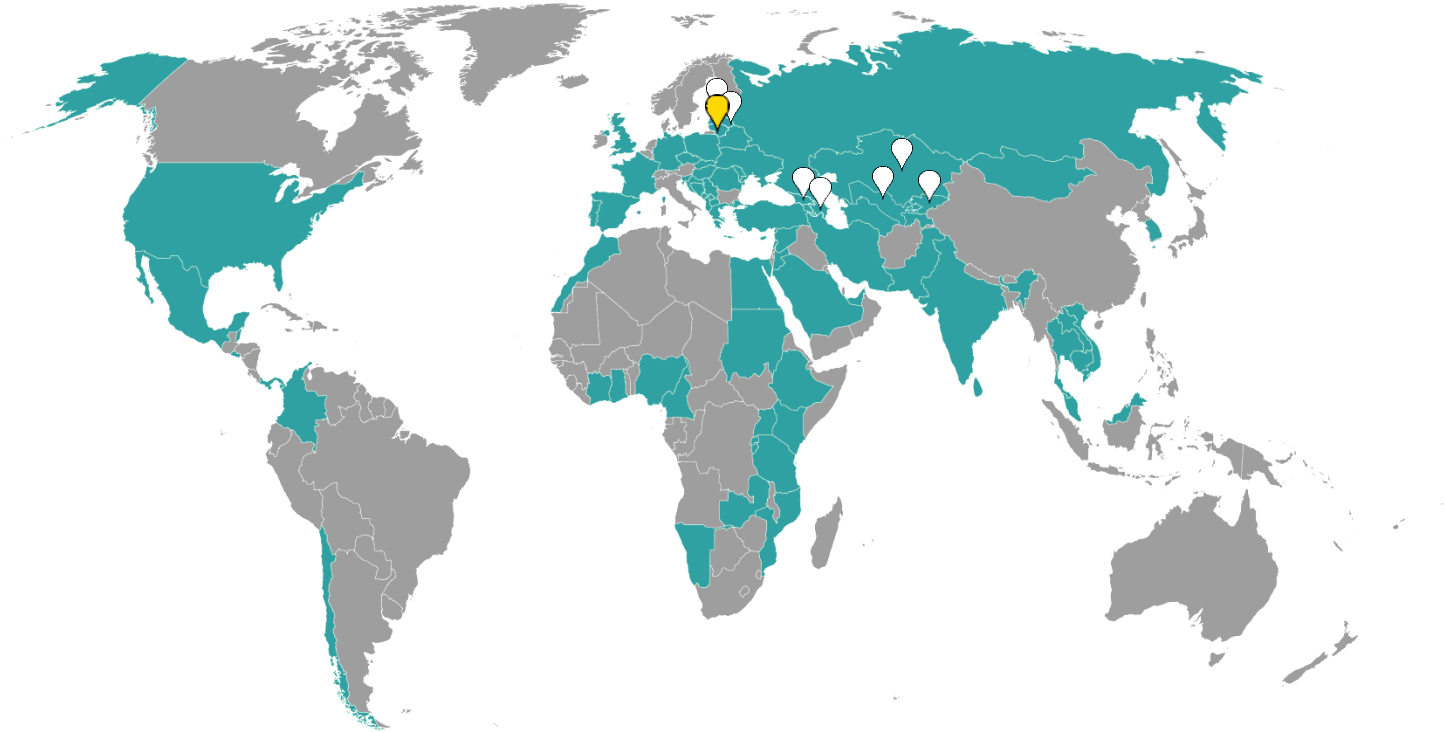


**2005** – **Penkių kontinentų Investicijos** affiliated company was founded

# Business dimensions of Penki kontinentai

Solutions for banks and retail	IT solutions	E-signature (PKI)	Telecommunication	Media	Investments
Software solutions	IT services	Issuing of E-signature certificate	Infrastructural implementation	PENKI TV channel	Real estate investment
Banking equipment	Cloud Solutions	Implementation of public key architecture	Internet	Specialized web-portal	Smart House (projects, realization, monitoring)
Technical maintenance (service)	System Administration	Software implementation For E-signature	IP telephony	Video studio	
Training and certification	Infrastructural implementation	Issuing of SSL certificate	IPTV	Live video broadcasting	
Loyalty programs	Monitoring		Software development		
			Monitoring		

# Global reach:



Head office in [Lithuania](#).

Affiliated companies:

[Azerbaijan](#) | [Georgia](#) | [Kazakhstan](#)  
[Kyrgyzstan](#) | [Latvia](#) | [Uzbekistan](#) | [Estonia](#)



Our solutions and services  
are widely known in 78 countries  
all around the world

# Certificates



Successful usage of IT process management system in accordance with ITIL v3 recommendations



Annually approved ISO 20000 and ISO 27001 standard compliance



Solutions developed by **BS/2** have got audit certificates of conformance for the PCI PA-DSS (Payment Application Data Security Standard) requirements



# Awards and prizes



## **Diebold Nixdorf / Wincor Nixdorf:**

- Special Achievement Banking 2007, 2013, 2014, 2017
- Best Banking Solution 2012, 2013, 2016
- Best Banking Service 2002, 2003, 2012, 2013, 2014
- Most Innovative Software Solution 2004, 2005
- Most Innovative Concept 2002, 2003, 2004, 2005

## **ATM Industry Association:**

- Best ATM Security Technology 2002

## **Lithuanian Confederation of Industrialists:**

- Innovation prize 2016
- Product of the year 2001, 2005, 2006, 2007, 2008, 2012



# Technological partners

DIEBOLD  
NIXDORF



**Microsoft**  
GOLD CERTIFIED  
Partner

**gemalto**  
security to be free

**ingenico**  
GROUP

**UNISYS**



**ARRIS**

**GD**  
Giesecke & Devrient

  
**StrongPoint**

**BIZERBA**

# Penkių Kontinentų Bankinės Technologijos

- All-round IT service outsourcing
- Software development, sales, installation, integration and maintenance
- Technical maintenance and repair of banking, telecommunication, acquiring and retail equipment
- Monitoring of IT infrastructure
- Staff training and consulting
- Spare part service

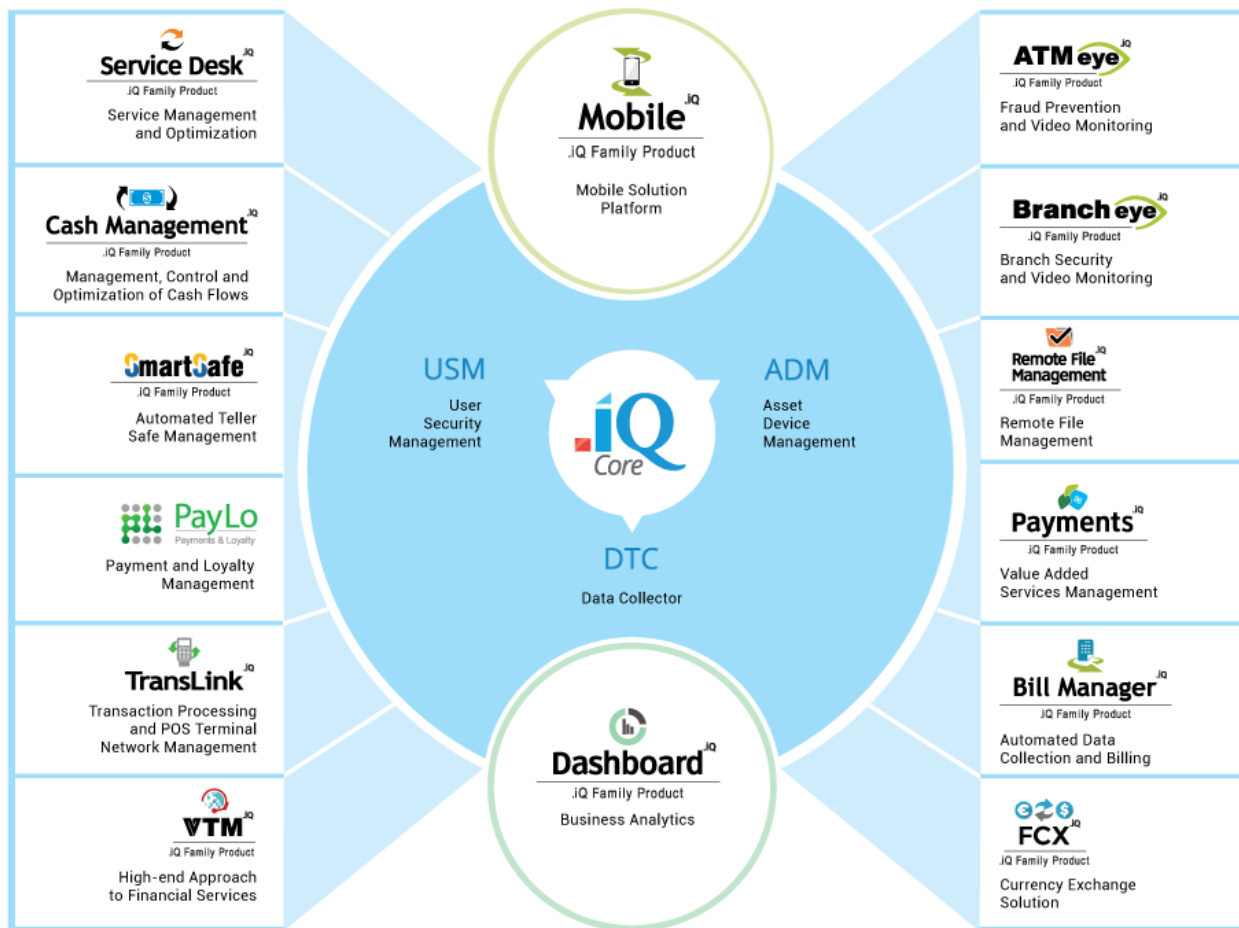




## 25 years on the market:

- More than 300 talented professionals
- More than 20 years of partnership with Diebold Nixdorf
- 7 affiliated companies in Azerbaijan, Uzbekistan, Georgia, Kazakhstan, Kyrgyzstan, Latvia and Estonia
- 78 countries of operation
- About 700 international customers
- More than 90 partners all around the worlds

# The .iQ software family products



# Extended functionality of ATM

- ✓ **Installation of the Diebold Nixdorf multivendor application platform at the ATMs of different vendors**
- ✓ **Development of ATM's UI**
  - Standard work scenarios for card transactions
  - Extended scenarios for cardless transactions
  - Different multimedia effects
  - Interactive communication with clients (Advertising, Direct Marketing, etc.)
- ✓ **Preparation of the ATM for Contactless Transactions**
  - Work with Visa payWave/MasterCard PayPass
  - Work with RFID enabled ID cards
- ✓ **Adaptation of the ATM for Blind and Visually Impaired people**
  - Talking ATM with voice over menu capabilities
  - Special work scenario
  - High Contrast Screens
- ✓ **Payment transactions**
  - Cash (recycler/cash-in) or credit/debit card
  - Bank account replenishment
  - Loan payments
  - Utilities bills
  - Telecom/Internet providers bills
- ✓ **Added Foreign Currency Exchange Functionality**
  - Recycler/Cash-In ATM
  - Conversion to and from local currencies

## Currency Exchange Machine



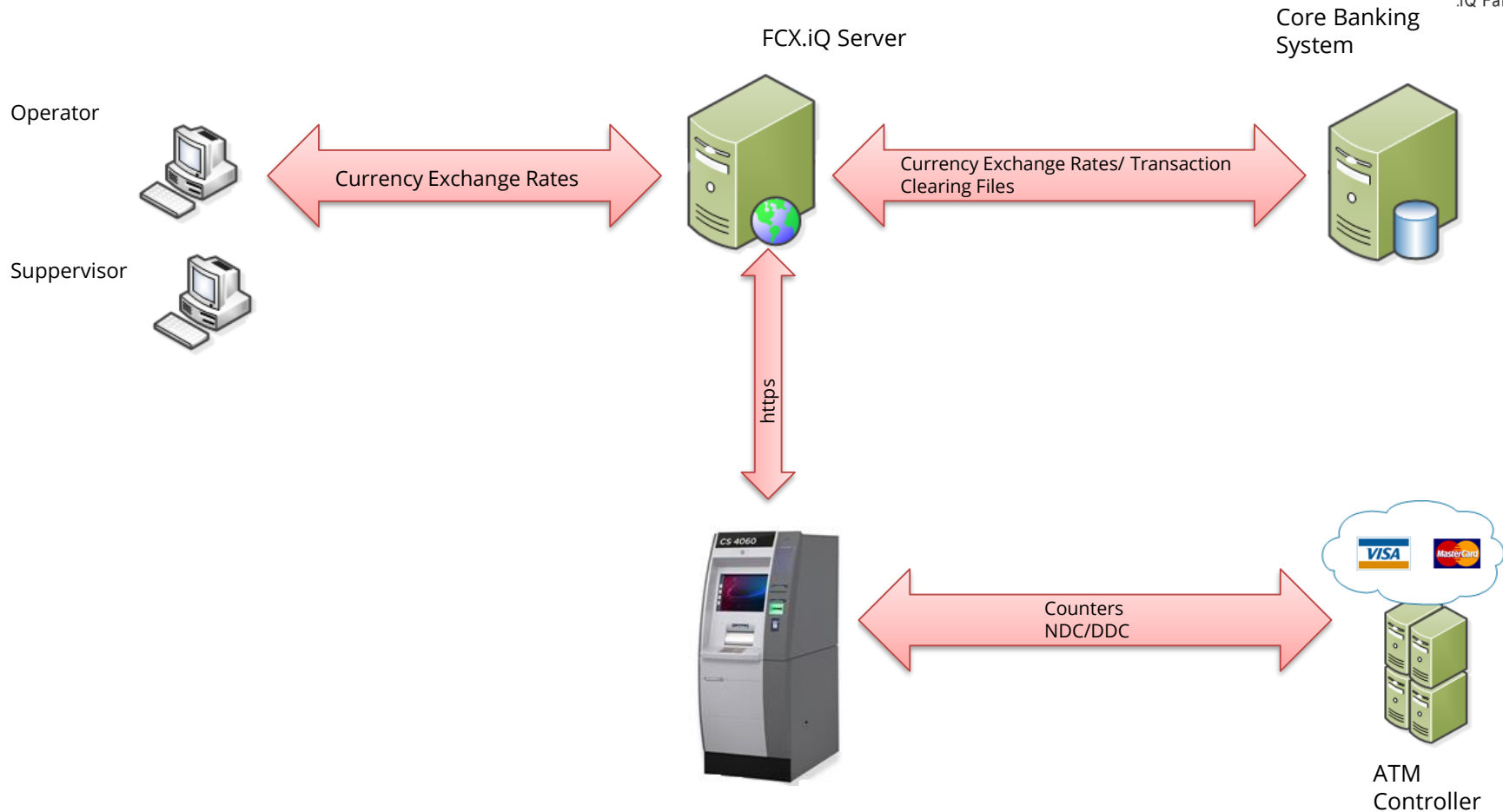
# FCX.iQ - Foreign Currency Exchange Solution

FCX.iQ is an added functionality software solution that enables currency exchange at Diebold Nixdorf ATMs with recycling or cash-in technology:

- ✓ Allows foreign currencies exchange to the local currency and vice versa;
- ✓ Flexible calculation of a bank exchange fee
- ✓ Consists of FCX.iQ Server integrated into ATM network and FCX.iQ Terminal agent installed on ATM;
- ✓ ATM working scenarios can be adopted to the customers needs.

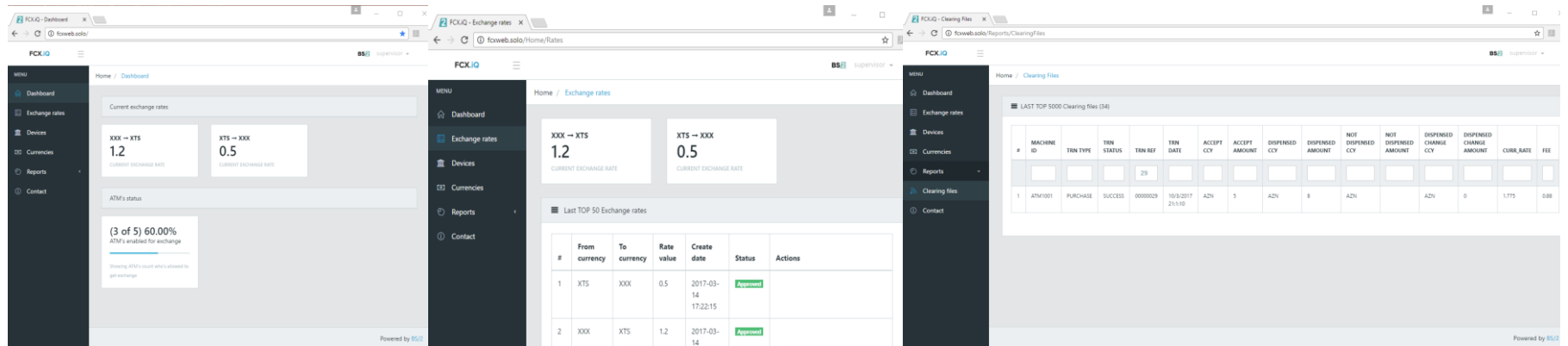


# FCX.iQ – Software Architecture



# FCX.iQ Server – Functionality

- ✓ Device Management
- ✓ Different User's Privileges
- ✓ Currency Rate Management
- ✓ Dashboard
- ✓ Transaction Clearing DB
- ✓ Integration with the Core Banking System (optional)



The image displays three screenshots of the FCX.iQ web application interface, showing different functional areas:

- Dashboard:** Shows current exchange rates for XXX → XTS (1.2) and XTS → XXX (0.5). It also displays ATM status, indicating that 3 of 5 ATMs are enabled for exchange at a 60.00% rate.
- Exchange rates:** Shows the same exchange rates as the dashboard, along with a table of the last 50 exchange rates. The table includes columns for #, From currency, To currency, Rate value, Create date, Status, and Actions.
- Clearing files:** Shows a table of the last 5000 clearing files. The table includes columns for #, MACHINE ID, TRN TYPE, TRN STATUS, TRN REF, TRN DATE, ACCEPT CCY, ACCEPT AMOUNT, DISPENSED CCY, DISPENSED AMOUNT, NOT DISPENSED CCY, NOT DISPENSED AMOUNT, DISPENSED CHANGE CCY, DISPENSED CHANGE AMOUNT, CURR\_RATE, and FEE.

# FCX.iQ Client – Prerequisites and Functionality

## Prerequisites:

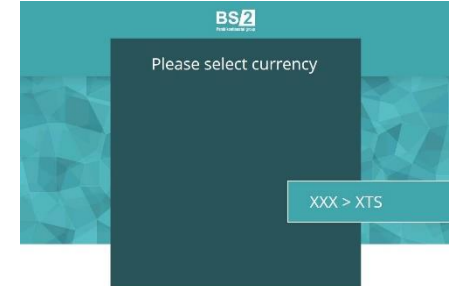
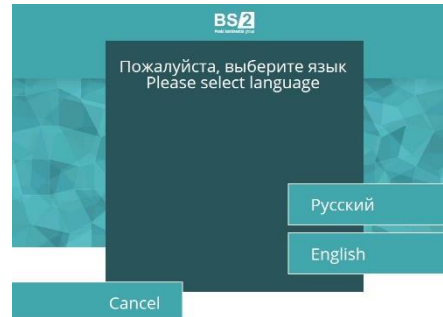
- ✓ Diebold Nixdorf Recycler/Cash-in ATM
- ✓ Windows 7 Operating System
- ✓ ProTopas Application Layer (ProCash/ProCash-in) + ProTopas WebExtension
- ✓ Currency Data Files for all currencies that will be used for exchange

## Functionality:

- ✓ Integration into ATM scenarios in all accessible languages
- ✓ Downloading currency exchange rates for each transaction
- ✓ Adaptation of the short-change calculation to the customer's requirements
- ✓ Currency rate and commission fee pre-calculation
- ✓ Saving of all transaction records to the Electronic Journal
- ✓ Sending of all transaction reports to the FCX.iQ server

# FCX.iQ – Transaction Flow

- ✓ Select Currency Exchange option from the ATM menu and dialogue language
- ✓ Select the foreign currency that have to be changed to the local currency
- ✓ Currency Exchange Rates Calculator at the next stage is showing the Client for an entered amount: exchanged amount, exchange rate, service fee that will be taken for a transaction and total amount that will be paid
- ✓ At this step the Client can continue the transaction or cancel it, if not satisfied with the calculation results
- ✓ If the Client chooses to continue, at the next stage ATM will open the shutter and will wait for the cash to be entered into cash slot. Standard ProCash-in validation operation is performed at this step
- ✓ If the amount that was entered into the calculator at the previous step corresponds to the validated amount the currency exchange transaction is done. In the other case confirmation calculator will be open at the next screen. It provides you an option to add more money or proceed with the transaction or cancel it.
- ✓ The client is receiving the printed receipt in case of a successful transaction or special message with the error code if the transaction has failed.

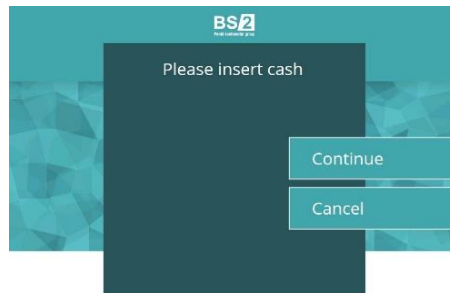




# FCX.iQ – Short-Change Calculation Scenario

Recommended scenario:

- ✓ One of the cash dispenser cassettes is filled with the lowest possible denomination banknotes (base denomination);
- ✓ The amount to be dispensed after a currency exchange operation is rounded to the base denomination value;
- ✓ The balance, which is the difference between the calculated amount and the amount to be dispensed, is charged by the bank as a commission for the operation





# Thank you for your attention

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