

Billettique
et Transports
2015
Smart Ticketing
& Transport



Jedna karta, wiele funkcji

The ŚKUP Card project Śląska Karta Usług Publicznych





We are working
for a great company

Established in

1991

Focused on
proprietary

software

and services

The

**largest
IT company**

in CEE

Traded on Warsaw
Stock Exchange,
included in
WIG300 Blue
Chip Index

6th

largest software
vendor in Europe

18 500

highly committed
employees

1 500

mEUR sales
revenue in 2014

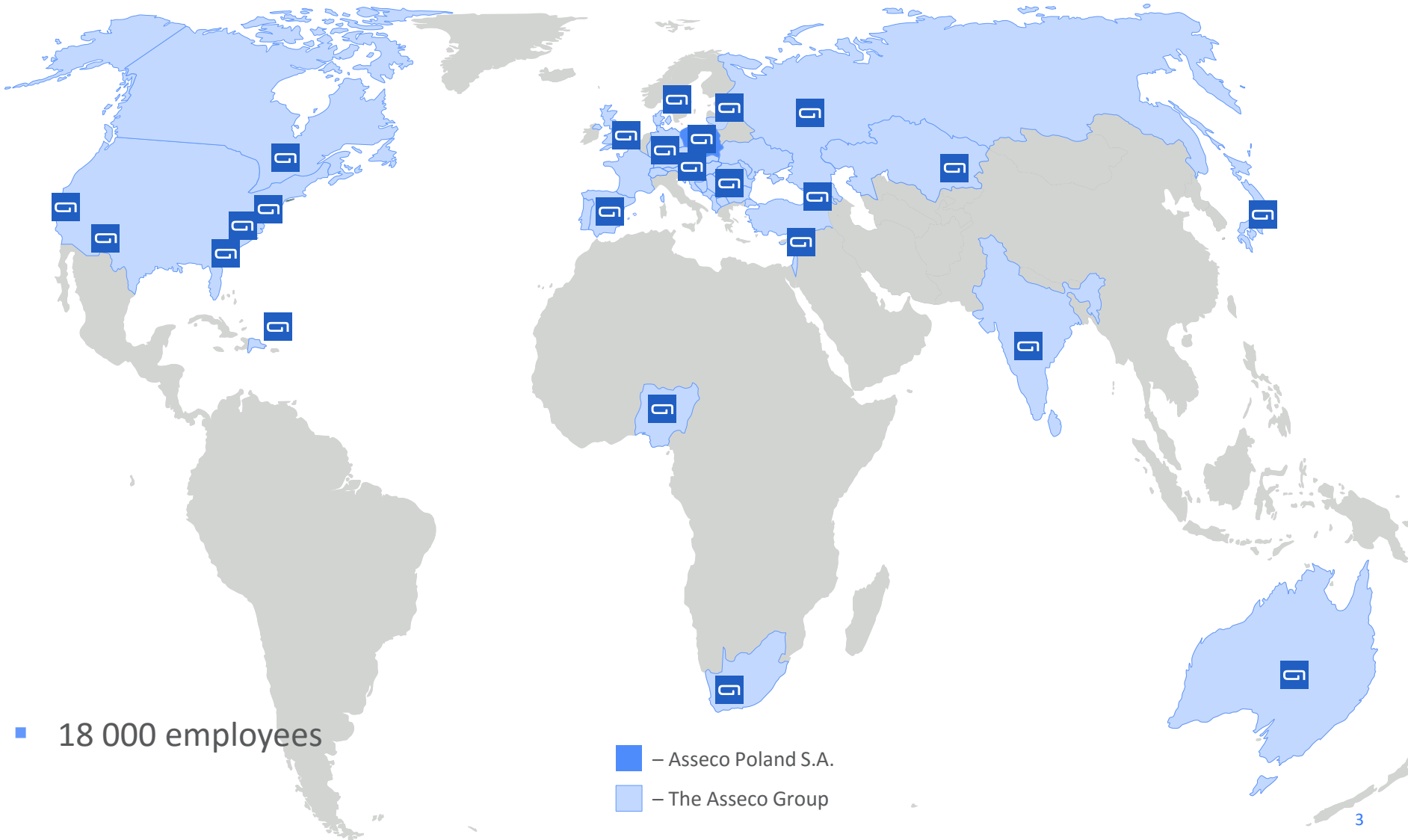
153

mEUR operating
profit in 2014

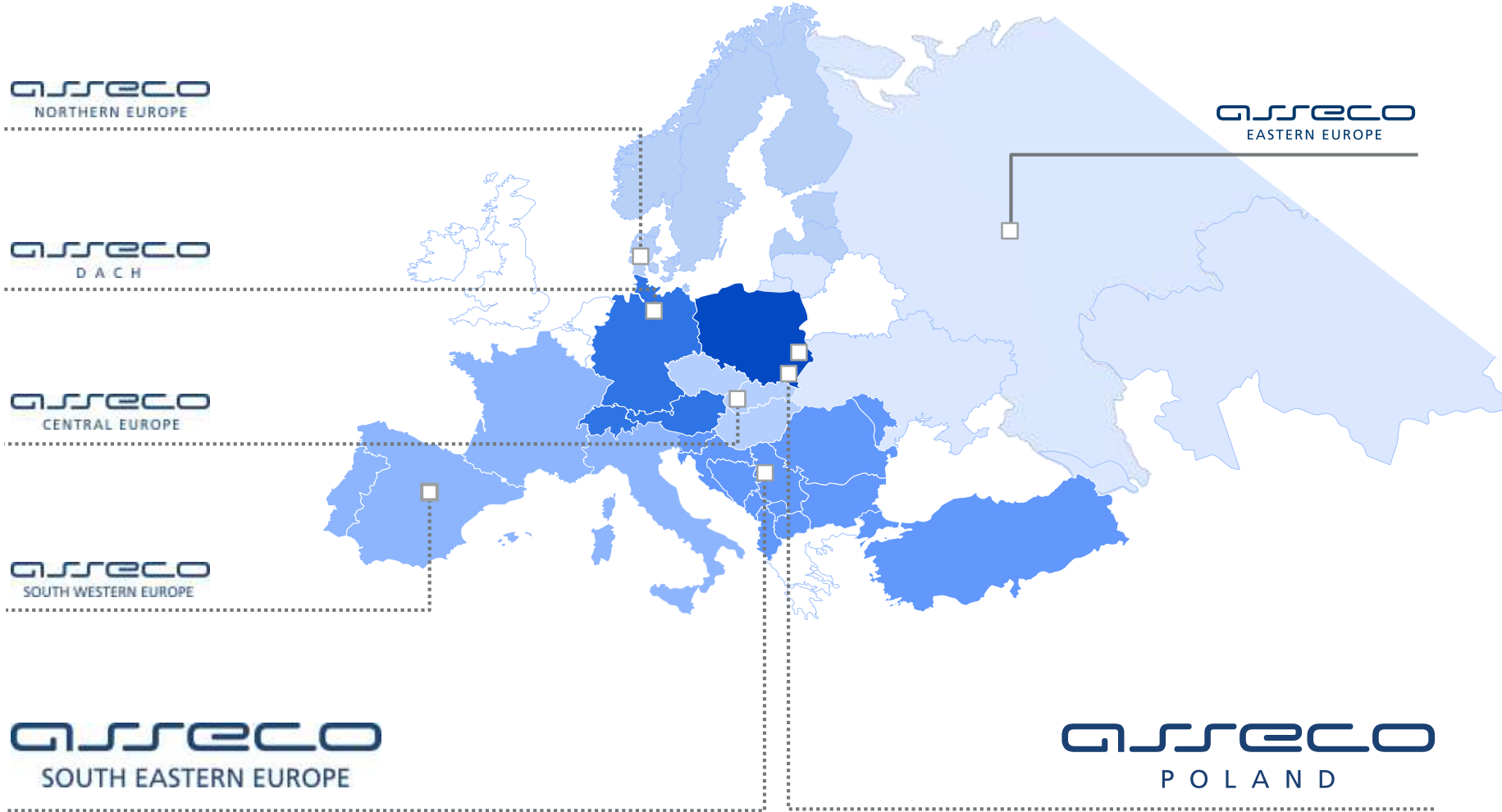
1 200

mEUR market
capitalization

Our offices worldwide



Asseco in Europe



Leading European Software House

Top 100 European Software Vendors

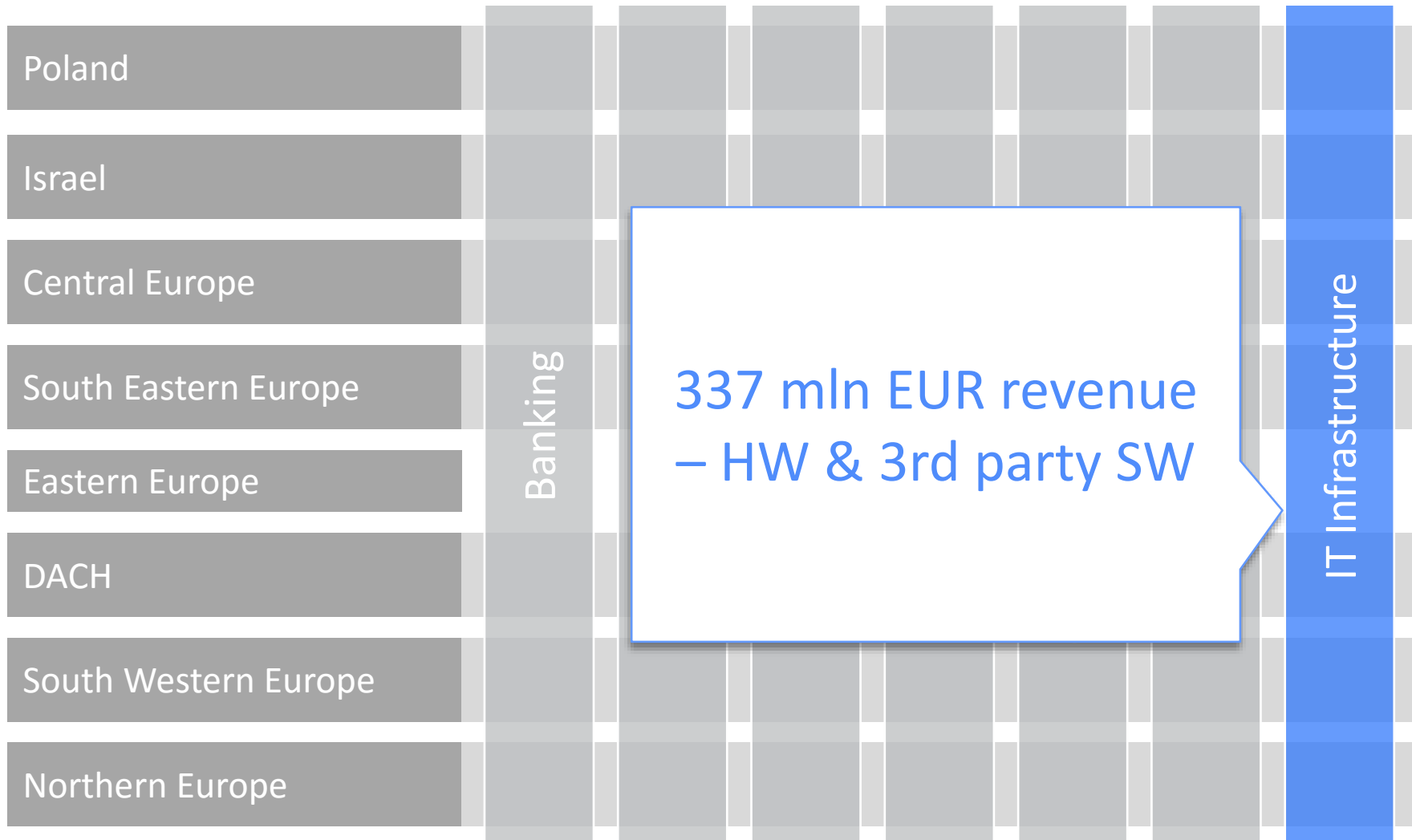


Rank	Company	Sales revenues 2013 (software + services) [EUR millions]	Sales revenues 2012 (software + services) [EUR millions]	Change
1	SAP	16 512.3	15 930.0	+3.6%
2	DASSAULT SYSTEMES	1 887.5	1 853.4	+1.8%
3	SAGE	1 522.6	1 591.4	-4.4%
4	HEXAGON	1 309.6	1 282.8	+2.1%
5	WINCOR NIXDORF	1 257.3	1 257.3	0.0%
6	ASSECO GROUP	1 063.0	1 002.1	+6.0%
7	SOFTWARE AG	856.5	922.2	-7.1%
8	DATEV	752.8	736.7	+2.2%
9	WOLTERS KLUWER	720.9	733.4	-1.7%
10	SWIFT	580.2	594.9	-2.5%

Asseco Group

The fastest
growing
producer of
software in
the Top 10

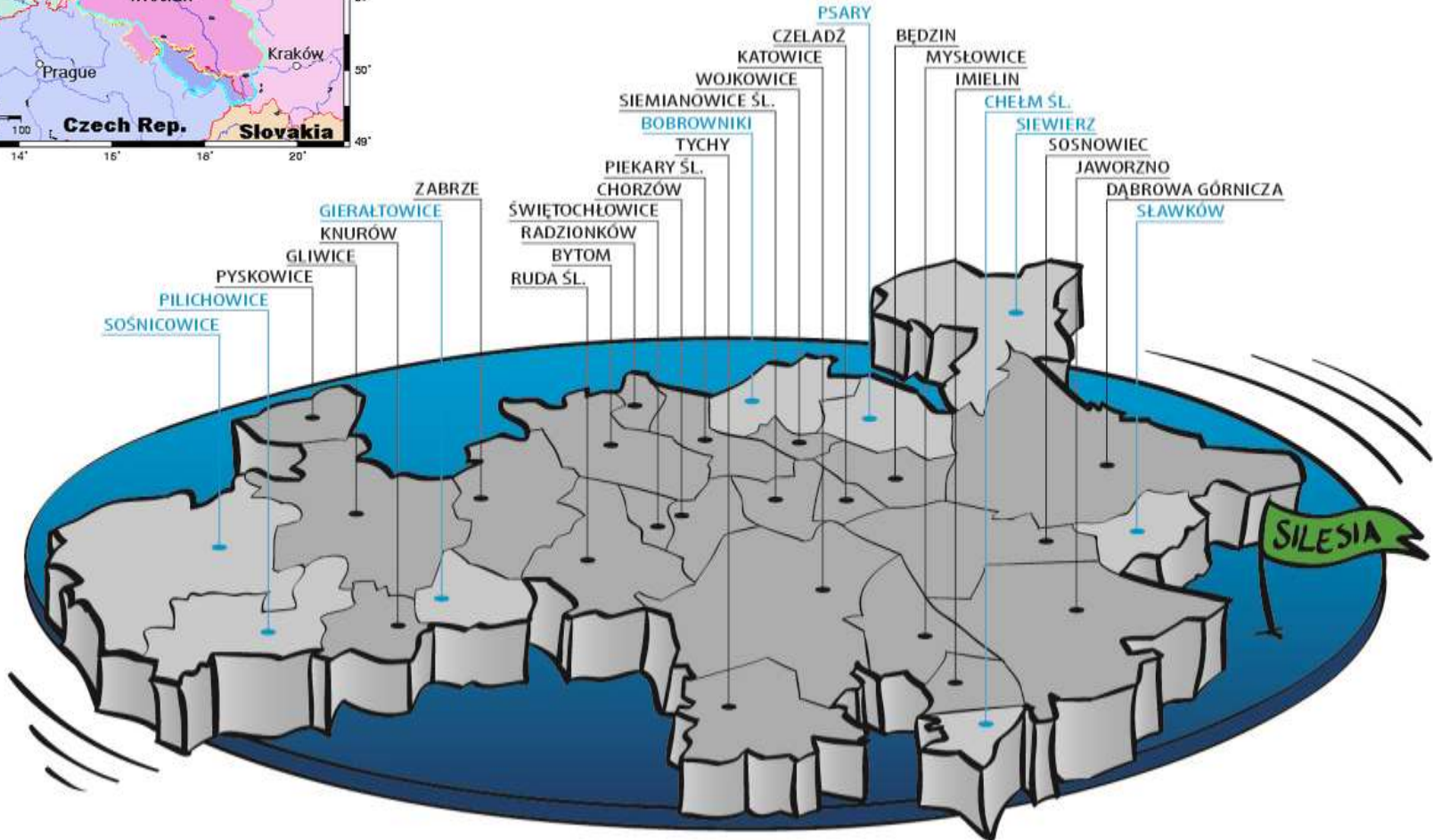
Asseco Group Business Units





How Silesian Card in ŚKUP project works?

ŚKUP operation range



What ŚKUP is?



One card - payment for different services (communication, culture, library, sports & recreation, parking).

- ŚKUP will make public transportation easier:
1. will optimize public transportation costs,
 2. will provide precise financial settlements for KZK GOP member cities.

ŚKUP Card – types

System includes two types of cards:

- **personalized card** (by name)
- **not-personalized card**

700.000 cards
are to be issued till 2018.



Fundamental System elements:

- 01 ŚKUP CARD
- 02 Customer Portal
- 03 Customer Service Points
- 04 Passenger Service Points
- 05 Data Processing Centre
- 06 Data Collection Points
- 07 Fee collection and cards recharge devices

ŚKUP Card functionalities:



City transportation – electronic ticket enabling use of flexible tariff models (check-in check-out, time & distance tariffs, temporary tickets).



Parking – use of Electronic Money Instrument as card's payment function, Park & Ride.



Electronic administration – identification in offices, CC SEKAP electronic signature.



Non-cash payments – payments in offices, centres of culture and sports as well as for project partners.

ŚKUP in numbers



Municipal services fee collection module - 410 pcs.



Fee collection/cards recharge for sellers module - 800 pcs.



Authorization control devices (controllers) – 320 pcs.



Parking Machines + transmission module - 223 pcs.



Recharge Machines (stationary detached) – 109 pcs.



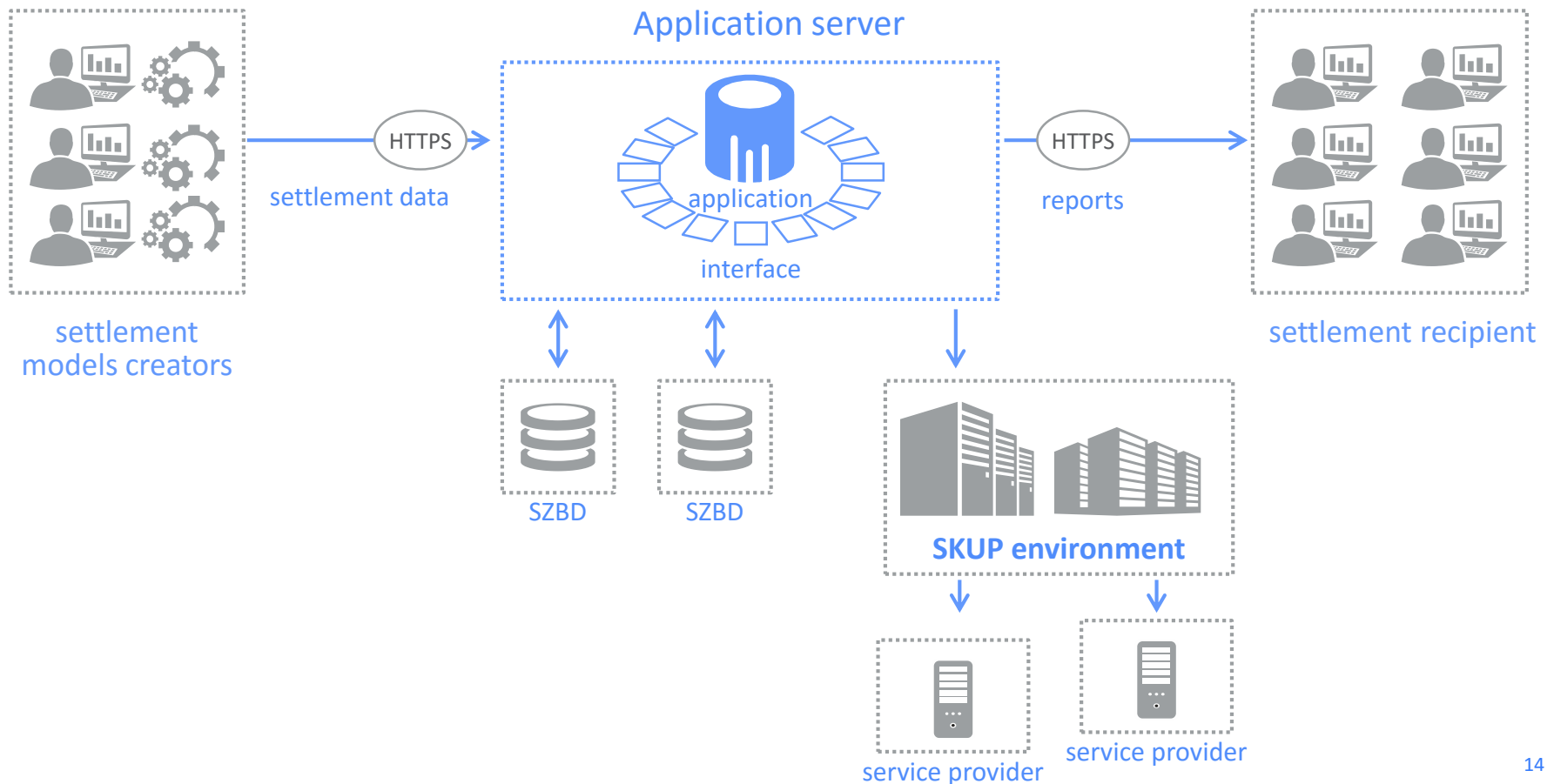
Reader of SEKAP electronic signature entered on card - 52 pcs.



Devices in vehicles – 1300+ vehicles.

Inter-operators financial settlement System (1)

Key system element supporting financial management of public transportation.



Inter-operators financial settlement System (2)

Usage, in settlements among organizers, operators & carriers, of real data received from System:

- number of kilometres per vehicle on a certain line,
- number of passengers per selected time frame,
- number of passengers per kilometres on a certain line,
- profits obtained divided on lines and distances between bus stops.

Rate modelling and settlements as element supporting transport planning & organization:

- ride duration on a certain line,
- number of passengers,
- traffic frequency on a certain line,
- operating speed,
- vehicle number in the system,
- percentage in which a vehicle is occupied by passengers,
- transport profitability.



AEP

Ticketing solutions

is proud to be the most important Asseco partner
in the ŚKUP Card project

AEP is the leading Italian manufacturer of equipment and
complete solutions for public transport **ticketing**

AEP systems and equipment are in many countries of the world such as

France, Israel, Kazakhstan, Italy etc.

The ŚKUP Card

The SKUP card is a MIFARE DESFIRE smart card containing:

- **Personal data and photograph**
- Up to 10 different **fare products** usable in the whole public transportation of Silesian region, handled with complex priority logic to make its use extremely simple
- The **electronic money purse** (“e-purse”) that can be used for limited-amount payments in the whole SKUP ecosystem
- The **electronic money point purse** (“e-purse”) to be used only for SKUP public transport



The ŚKUP Fare Plan

SKUP fare plan has the following main tickets' types:

- Time/Zone tickets (15 minutes or 1 zone - 30 minutes or 2 zones etc....) - bought on ground or on board (also on the validator)
- Check-In Check-Out (CICO) tickets based on travelled distance (KM) – bought with the e-purse, multiple check-in allowed also with different fares. CICO based on travelled distance/time has been developed and abandoned as too complicated for a network of 10.000+ stops and confusing for the users.
- Zone crossing seasonal tickets with/without max number of runs in the period
- Flat seasonal tickets for the whole network
- Different limitations/fares for different lines/vehicles (express lines, bus, trams)

Users can buy their tickets on ground (TVM, reloading POS, ticket offices) or buy on board through the validators with a CICO logic; maximum fare (distance) is debited at CI, settlement according to the travelled distance at CO according to the user profile. If at CI the e-purse content is not enough to reach the last stop the validator shows the stop the user can reach. Forced CO is available, i.e. to get in/off at the same stop.

If a card holds multiple tickets (i.e. e-purse, 2 zones, 3 zones, zone seasonal ticket) the priority logic is seasonal ticket, ticket, e-purse but the User can override it manually. The system is in pilot, Customer experience is not yet stabilized; more than 6 million validations have been done with success.

The ŚKUP Inspectors

- Notwithstanding the fare plan complexity the inspectors application can verify the tickets in less than 1,5 seconds (worst case with 8 tickets on the card) in an easy way.
- Inspectors have a green/led light feedback as the device contains the fare plan, the service parameters and the run data including the stop which are loaded with a shuttle card
- In case of red light the inspector will receive further information to issue a fine.



ŚKUP Card is secure!

The security of ŚKUP Card is ensured by SAM modules:

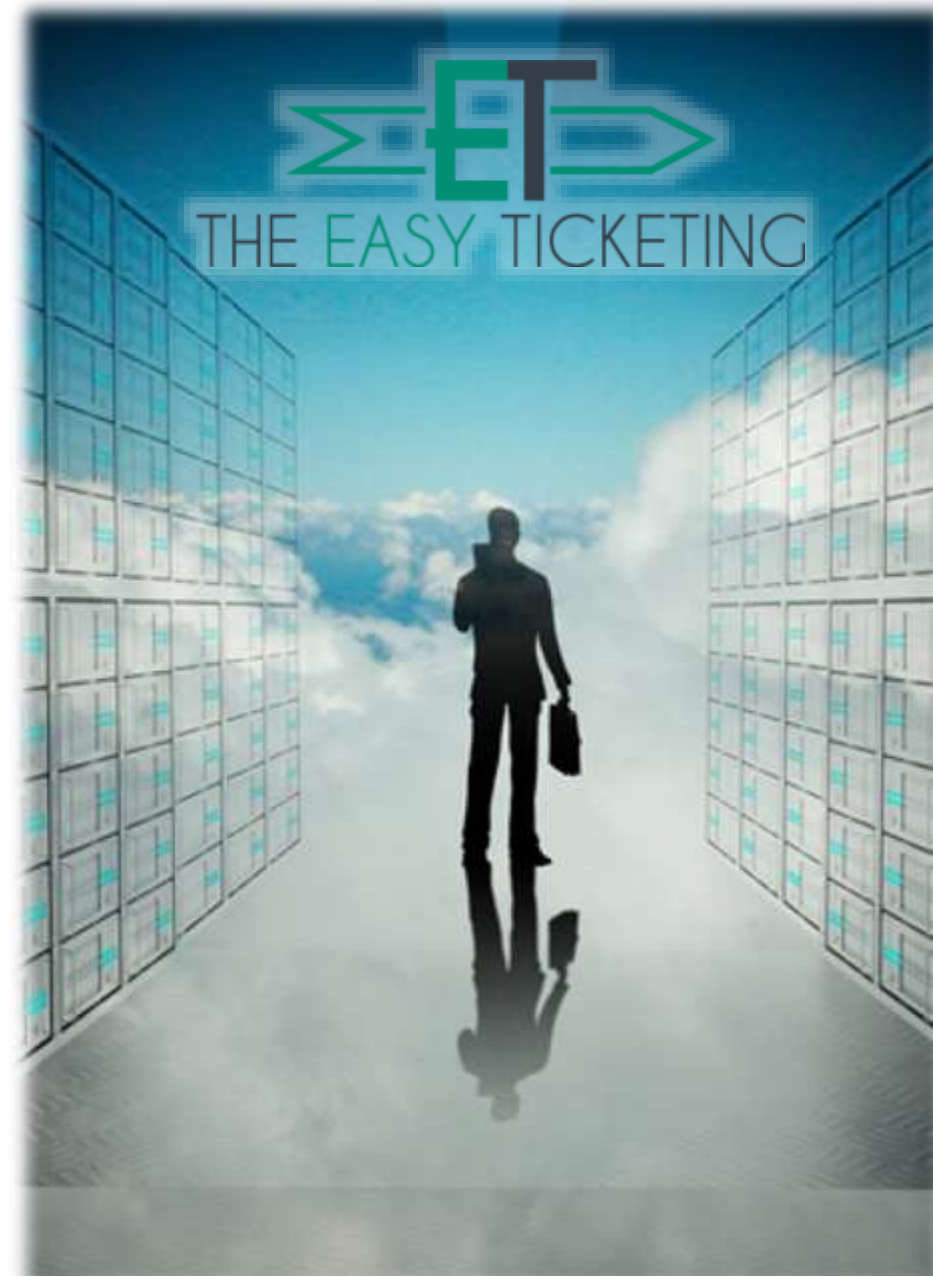
- Advanced security architecture based on several different types of SAMs
- AEP Remote SAM Management System
- SAM unlock at power on
- Limited plafond with remote automatic reloading
- Secure remote e-purse top-up; users can recharge their cards via web site
- AES data encryption
- AES communication encryption



ET - The Easy Ticketing

The SKUP card system is managed by ET-CSC, the Central Supervisory of the ET AEP software suite

- One solution all over the world: customizations and special applications have been added without creating dedicated software applications
- Over 25 transport operators with 1,300+ buses and trams, coordinated by KZK-GOP service organizer
- Highly configurable and individually parameterizable
- Over 10,000 stops, hundreds of lines...
- Fleet management
- Complex tariff range with hundreds of different ticket types
- Centralized surveillance/diagnostics



Integration with third-parties systems

The ET system is natively open and integrable. Web Services interfaces are extensively used for integrating third parties systems:

- **Clearing house** subsystem, according to bank security architecture
- **Web portal** subsystem, for passenger information, card requests, fare products / e-purse recharge
- **Data warehouse**, for report generation
- **Map module** for real time fleet management
- **Transport network** data import from KZK-GOP subsystem
- **Diagnostic modules**



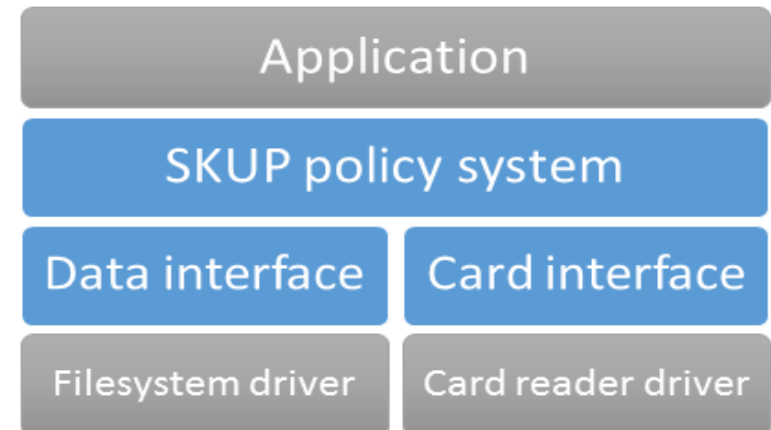
Integration of third-party equipment

AEP ET-Quick library allows third parties to easily integrate their devices in the ET – The Easy Ticketing system:

- Securely connecting to the Central System to get configuration files and send activity files
- Checking for updates to ensure the use of the last system configuration
- Easily management of SKUP cards hiding their innermost complexity
- Used by TVMs and top-up terminals

ET-Quick benefits:

- Drastically reduces the integration time
- Drastically reduces maintenance costs
- Guarantees card data coherence
- Improves system security



On board devices:

- on-board computer & driver console
- contactless validators
- combo validators (paper and contactless)
- Ethernet switch distributing GPS position and managing power ON/OFF procedures



Asseco partner:



More than 7,000 units

- Inspectors' terminals
 - Android based solution
 - Control of paper tickets using bar code
 - Control of electronic tickets
 - Handling of fines

Asseco partner:



Thanks for your attention

ASSECO
P O L A N D

AEP
Ticketing solutions

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