X Infotech Banking
Software Solutions for Financial Sector
WHO WE ARE
X Infotech is a global provider of software solutions for smart cards and digital identity documents.

WHAT WE DO
We help financial organizations, banks, governments and local document producers to implement financial/social cards and eID programs, providing the complete IT infrastructure and empowering them to take autonomous control of their projects.

OUR MARKETS

OUR CUSTOMERS
Banks and Financial institutions, Governments (ministries and federal units).
Quick Facts

- 15 years of deep market expertise
- Customers in 45+ countries
- ≈100 experts in the team
- Electronic passports and cards: 25+ successful projects
- Payment cards: 200+ successful projects
- Social cards: 5 major successful projects
Projects completed

HEADQUARTERED IN EUROPE
100% SUCCESSFUL PROJECTS IN 45+ COUNTRIES
Solutions for financial sector

Turnkey solutions for
- Customer Identity
- Card Personalization
- Process Management
- Mobile

Services:
- Consulting
- Project management
- System integration
- Maintenance and support
<table>
<thead>
<tr>
<th>Solutions for banking sector</th>
<th>Customer Identity</th>
<th>Card Personalization</th>
<th>Process Management</th>
<th>Mobile Solutions</th>
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<tbody>
<tr>
<td></td>
<td>Enrolment</td>
<td>EMV Data Preparation</td>
<td>Integration Services</td>
<td>Payment Gateway</td>
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<td></td>
<td>Identity Management</td>
<td>Key Management System</td>
<td>Card Lifecycle Management</td>
<td>Mobile Gateway</td>
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<td></td>
<td>AFIS/ABIS</td>
<td>Chip Encoding</td>
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<td>SMS-Centre</td>
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<td>Biometric Verification</td>
<td>Secure PIN Manager</td>
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<td>EMV Certificate Authority</td>
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<td></td>
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<td>Production Management</td>
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<td>Instant Issuing</td>
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<td>Stock Management</td>
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## Why choose X Infotech

<table>
<thead>
<tr>
<th>X Infotech</th>
<th>OTHER SOLUTION PROVIDERS</th>
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<tbody>
<tr>
<td><strong>Comprehensive product portfolio</strong>&lt;br&gt;The most complete product portfolio covering the software part of e-passport/e-ID/payment smart card production. Industry-proven quality and guaranteed delivery.</td>
<td><strong>Incomplete product portfolio</strong>&lt;br&gt;The product portfolio does not cover the full lifecycle of e-passport/e-ID/payment smart card production – solutions are bought from other vendors.</td>
</tr>
<tr>
<td><strong>Seamless flexibility</strong>&lt;br&gt;Our turnkey solutions can be embedded quickly as a complete product or as stand-alone components.</td>
<td><strong>Lack of flexibility</strong>&lt;br&gt;Long and expensive delivery for new, optimized solutions. Nearly half of the real cases are ceased or put on hold for technical development difficulties.</td>
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<td><strong>Hardware independent</strong>&lt;br&gt;Our solutions are compatible with any type of chip, equipment and software solutions in order to be easily modified and meet the customer-specific requirements.</td>
<td><strong>Hardware limitations</strong>&lt;br&gt;Software is compatible only with concrete chip or hardware and is difficult to modify.</td>
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<td><strong>Future-proof functionality</strong>&lt;br&gt;Our software solutions combine supreme quality with unlimited expansion possibilities to address evolving customer needs as well as technology advances in the areas of government eID and banking.</td>
<td><strong>Delivery delays</strong>&lt;br&gt;The leading solution providers spend much more time on internal business optimization processes, causing delivery delays and poor support.</td>
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</table>
X Infotech components for financial sector
Customer Identity

**Enrollment** - functionality for capturing of various personal data

**Identity Management** - manages biometric register

**AFIS/ABIS** automatically matching fingerprints against a database

**Biometric Verification** - validates the identity of a client based on biometrics such as fingerprints, face recognition and dynamic signatures.
Card Personalization

- **EMV Data Preparation** - prepares data for further personalization
- **Chip Encoding** – prepares card chip personalization
- **Key Management System** - easy and secure cryptographic key management
- **Secure PIN Manager** - provides PIN generation and printing
Card Personalization

**Instant Issuing** - solutions for instant card issuing

**EMV Certificate Authority** – a root CA for the issuing of EMV cards in local payment projects

**Stock Management** – provides complete tracking of blank, printed and damaged cards

**Production Management** – manages the complete production process
**Process Management**

**Integration Services** - centralized solution for the data and application management

**Card Lifecycle Management** - manages the entire life cycle of smart cards, tokens, and their applications
Mobile Solutions

Payment Gateway - automated processing system for electronic payments and money transfers, etc.

Mobile Gateway - automated system for the remote provision of services via electronic channels

SMS Centre - solution for reception and delivery of messages through various channels
Geography of Customers
## Our customers – banking sector

<table>
<thead>
<tr>
<th>Country</th>
<th>Bank/centre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Armenia</td>
<td>Ararat bank</td>
</tr>
<tr>
<td>Azerbaijan</td>
<td>Bank Standard</td>
</tr>
<tr>
<td></td>
<td>PASHA Bank</td>
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<tr>
<td></td>
<td>Millikart processing centre</td>
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<tr>
<td>Bangladesh</td>
<td>EBL Bank</td>
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<tr>
<td></td>
<td>Standard Chartered bank</td>
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<tr>
<td>Bulgaria</td>
<td>First Investment Bank</td>
</tr>
<tr>
<td>Egypt</td>
<td>MASRIA Card Personalization Centre</td>
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<tr>
<td>Estonia</td>
<td>SEB Bank</td>
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<tr>
<td></td>
<td>Tallinn Business Bank</td>
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<tr>
<td>Ethiopia</td>
<td>Wegagen Bank</td>
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<tr>
<td>Germany</td>
<td>GNC TCS personalization centre</td>
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<tr>
<td></td>
<td>Quipu processing centre</td>
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<tr>
<td>Honduras</td>
<td>Banco Ficohsa</td>
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## Our customers – banking sector

<table>
<thead>
<tr>
<th>Country</th>
<th>Companies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guatemala</td>
<td>Banco Ficohsa, Banco Inmobiliario, Banco Trabajadores</td>
</tr>
<tr>
<td>Italy</td>
<td>Publicenter</td>
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<tr>
<td>Jordan</td>
<td>MEPS personalization centre, EMP personalization centre</td>
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<tr>
<td>Kazakhstan</td>
<td>Kaspi bank</td>
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<tr>
<td>Lithuania</td>
<td>Danske Bank, First Data Lietuva</td>
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Our customers – banking sector

<table>
<thead>
<tr>
<th>Region</th>
<th>Customers</th>
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</thead>
<tbody>
<tr>
<td>Latvia</td>
<td>ABLV Bank, Citadele Banka, DNB banka, Rietumu Banka, SEB Banka, Tag Systems, others</td>
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<tr>
<td>Macedonia</td>
<td>Komercialna Banka</td>
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<tr>
<td>Malta</td>
<td>Insignia</td>
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<tr>
<td>Netherlands</td>
<td>Exceet card Nederland BV (ex.PPC Card Systems B.V.)</td>
</tr>
<tr>
<td>Norway</td>
<td>EVRY Card Services</td>
</tr>
<tr>
<td>Panama</td>
<td>Banco Ficohsa</td>
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Our customers – banking sector

<table>
<thead>
<tr>
<th>Country</th>
<th>Bank Name</th>
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<tbody>
<tr>
<td>Poland</td>
<td>PWPW Polska Wytwornia Papierow Wartosciowych</td>
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<tr>
<td>Russia</td>
<td>Hlynov bank</td>
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<tr>
<td>Salvador</td>
<td>FedeCredit bank</td>
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<td>Comedica bank</td>
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<td>Sweden</td>
<td>Resurs Bank</td>
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<td>MegaCard Nordic</td>
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<tr>
<td>Ukraine</td>
<td>Privatbank Ukraina</td>
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<td>Delta Bank</td>
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<td>Polygraph Combine “Ukraine”</td>
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<td>Uzbekistan</td>
<td>United International Processing Center (EMPC)</td>
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Selected References
**EMV Card Personalization**

**Solution**

**Challenge:** X Infotech provided Bank Standard with the EMV card solution, ensuring its interaction with the existing bank system. The solution is perfectly suited to meet the bank needs and widely expand the portfolio of its services and products while gaining a competitive advantage in the marketplace. X Infotech provided a complete EMV Card Personalization solution including integration services, maintenance and consulting services for MasterCard/VISA certification.

**EMV Card Personalization Solution**

**Challenge:** X Infotech provided Ararat bank, one of the leading banks in Armenia, with the EMV Data Preparation, Personalization and Secure PIN Manager solutions, allowing the bank to migrate to EMV technologies in a very short time period. Together with the software solution, X Infotech delivered professional services - project management, support and integration of all components into the bank system. The solution allows the bank to issue 100,000 cards per year.

**EMV Card Personalization Solution**

**Challenge:** X Infotech provided Bank Standard with the EMV card solution, ensuring its interaction with the existing bank system. The solution is perfectly suited to meet the bank needs and widely expand the portfolio of its services and products while gaining a competitive advantage in the marketplace. X Infotech provided a complete EMV Card Personalization solution including integration services, maintenance and consulting services for MasterCard/VISA certification.
EMV personalization projects

**Introduction of EMV Cards**

**Challenge:** Eastern Bank Limited replaced magnetic stripe cards with EMV cards, turning authentication exceptionally secure. X Infotech delivered several software solutions, including EMV Data Preparation, Card Personalization, Instant Issuing, as well as integration services and staff training. X Infotech solution provides complete support for the personalization of Diners Club, MasterCard and VISA cards. The bank uses different vendor embossers together with X Infotech software.

**EMV Card Personalization Solution**

**Challenge:** X Infotech provided Masria Card with a complete personalization solution, including laser engraving printing, chip encoding, color printing and dedicated personalization software, personalization scripts as well as cryptographic infrastructure development.
Upgrade of EMV Card Personalization Platform

**Challenge:** X Infotech successfully upgraded the EMV Card Personalization solution for one of Bulgaria’s biggest banks. The upgrade of the existing card platform has increased competitiveness and allowed the bank to manage a far greater number of cards to match its product range.

Payment Card with Loyalty Application

**Challenge:** X Infotech software has allowed First Investment Bank to deliver new products and adapt to the changing market needs. The newly implemented solution allows bank clients to combine payment and loyalty cards in one payment instrument thus benefiting from a variety of bank partner offers and promotions.
EMV Card Personalization Solution

**Challenge:** X Infotech provided a centralized personalization solution, as well as a solution scheme for Wegagen Bank, located in Addis Ababa, Ethiopia. Desktop embossers are used for this project.

EMV Card Personalization Solution

**Challenge:** X Infotech implemented the EMV Card Personalization solution as well as different services - integration, training, maintenance and consultancy for MasterCard/VISA certification. X Infotech solutions has allowed the personalization centre to issue a variety of payment cards as well as accommodate new chip card technologies, such as contactless cards and electronic identity documents.
EMV personalization projects

**EMV Card Personalization Solution**

**Challenge:** X Infotech provided a software solution for EMV card personalization. The delivered solution includes: EMV Data Preparation, Key management System, Chip Encoding along with professional services such as project management, systems integration and support. This solution allowed the bank to migrate from magnetic stripe cards to smart cards as well as issue secure MasterCard/Visa cards.

**PIN Generation Solution**

**Challenge:** X Infotech provided Banco Inmobiliario with a turnkey solution for the issuance of MasterCard/VISA contact cards, PIN generation and printing of PIN envelopes. The delivered solution includes - EMV Data Preparation, Chip Encoding, Key Management, Secure PIN manager.

Guatemala (Banco Trabajadores)

Guatemala (Banco Inmobiliario)
**EMV personalization projects**

**EMV Card Personalization Solution**

**Challenge:** X Infotech provided Kaspi Bank, one of the biggest banks in Kazakhstan, with a comprehensive solution for the issuance of smart cards. X Infotech delivered a software solution for EMV Data Preparation, Chip Encoding, Key Management System as well as implementation services and professional support. The solution allowed the bank to migrate to EMV technology and issue 500,000 VISA/MasterCard cards per year.

**EMV Card Personalization Solution**

**Challenge:** X Infotech provided Banco Ficohsa with a comprehensive solution for the issuance of smart cards. X Infotech delivered software solutions for EMV Data Preparation, Chip Encoding, Key Management System as well as professional services such as implementation, support and consultancy for VISA/MasterCard certification. The solution allowed the bank to introduce EMV cards and issue VISA/MasterCard cards.
**Instant EMV Card Issuing Solution**

**Challenge:** X Infotech deployed the Instant Issuing software solution as well as delivered desktop card printers and PIN pads for on-site card issuance at 49 branches and the user-selected PIN option. X Infotech Instant Issuing allows KCB system to directly personalize dual interface EMV cards at the branch. The new platform boosts branch traffic and continuously improves customer relationship, offering simple and convenient access to banking services.

**Instant EMV Card Issuing Solution**

**Challenge:** X Infotech implemented a smart card software solution for Cooperative bank, one of the largest banks in Kenya. X Infotech deployed the Instant Issuing software solution as well as supplied personalization printers for on-site card issuance at 140 sites across Kenya.

*Kenya (Kenya Commercial Bank)*

*Kenya (Cooperative Bank)*
Instant EMV Card Issuing and Biometric Enrolment Solutions

Challenge: X Infotech delivered the Instant Issuing and Biometric Enrolment solutions for payment cards that store biometric information on the chip. With these technologies, the bank is able to prevent identity fraud and theft as well as increase access security via biometric verification.

Instant EMV Card Issuing Solution

Challenge: X Infotech implemented the Instant Issuing solution for Consolidated Bank. It allows the bank system to instantly issue cards at the branch. For this project, X Infotech delivered software solutions and personalization printers for the instant issuance of payment cards.
EMV personalization projects

Mobile Money Solution

**Challenge:** X Infotech implemented a mobile solution for Equitel – the mobile banking service for Equity Bank. The Mobile Gateway solution provides access to remote services, while the Payment Gateway solution is used for processing of financial transactions. The mobile banking platform allows bank clients to carry out free deposits and money transfers.

Data Encryption Solution

**Challenge:** Based on the framework of this project, X Infotech implemented a software solution for complete encryption of sensitive information. The comprehensive solution meets the requirements of international organizations.
**EMV personalization projects**

**EMV Card Personalization Solution**

**Challenge:** One of the largest banks in the Baltics successfully introduced a new EMV card personalization platform, powered with X Infotech solutions. X Infotech solutions offer superior quality for card personalization and position the bank as the ultimate provider of secure payment cards in Latvia.

**PIN Management Solution**

**Challenge:** X Infotech provided Tag System with a software solution that ensures a high level of security for end-users, flexibility and local support. In addition to standard printing of PIN envelopes, the solution offers printing of PIN Tabs, thereby giving clients numerous opportunities for business growth.
**PIN Generation Solution**

**Challenge:** X Infotech provided Danske Bank Lithuania Branch, one of the leading banks in the Nordic region, with a solution for PIN printing. X Infotech Secure PIN Manager enables the bank to print PIN envelopes on-site, in compliance with security regulations in the payment card industry.

**In-house EMV Card Personalization Platform**

**Challenge:** X Infotech delivered the EMV card personalization solution for optimized Insignia Cards’ operations and improved card issuance performance. The new card issuance system has also enabled Insignia Cards to expand their product portfolio. The project entailed EMV Data Preparation, contact VISA Card Personalization and Secure PIN Manager.
EMV personalization projects

**EMV Card Personalization and PIN Generation Solutions**

**Challenge:** X Infotech has provided a software solution for the issuance of contact and contactless MasterCard cards at the facilities of Hlynov Bank - the leading bank in the Kirov region. X Infotech deployed the EMV Data Preparation, Card Personalization and Secure PIN Manager solutions for PIN generation and printing of PIN envelopes. The new issuance platform has enabled the bank to relocate card personalization from a dedicated centre to in-house personalization facilities as well as increase production volumes.

**EMV Card Personalization Solution**

**Challenge:** X Infotech delivered the EMV Data Preparation, Chip Encoding and Trusted Service Manager as well as complete system migration to new personalization machines. X Infotech Trusted Service Manager allows the client to complete the personalization process Over The Air (OTA) and Over The Internet (OTI) as well as update, amend or delete mobile phone applications.
EMV personalization projects

**Instant EMV Card Issuing Solution**

**Challenge:** X Infotech deployed the Instant Issuing solution for KCB Group – the largest banking network in Kenya and Uganda. X Infotech delivered software solutions as well as desktop card printers and PIN pads for on-site card issuance and the user-selected PIN option.

**EMV Card Personalization Solution**

**Challenge:** X Infotech provided Polygraph Combine ‘Ukraina’ with the EMV Card Personalization solution. X Infotech deployed the EMV Card Personalization and Production Workflow Management solutions, including EMV Data Preparation, Key Management System, Chip Encoding and Secure PIN Manager. The solution supports the issuance of contact and contactless MasterCard and VISA cards.
Challenge: X Infotech implemented the Instant Issuing solution for the Processing center that serves as a centralized platform for 28 banks across Uzbekistan. X Infotech delivered EMV Data Preparation, Card Personalization, local and EMV card product support.
Social card projects

Huduma Programme

**Challenge:** The programme is run by the Government of Kenya that aims to transform public service delivery by providing access for citizens to various public services from 12 ministries, departments and agencies via citizen service centres and integrated technology platforms. X Infotech has delivered software solutions for a unified payment infrastructure in the country as well as the Biometric Enrolment, Card Personalization, Instant Issuing and Secure PIN Management solutions for the issuance of Huduma cards.

Family Card

**Challenge:** X Infotech implemented the Card Personalization solution along with high volume personalization machines for a social benefit system dedicated to low income families. The Family Card program was designed to control the distribution of subsidized goods in Egypt. Based on this project, 17 million smart cards were issued and 45 000 POS/acceptance terminals were connected to the programme.
**Electronic Identity Card (eID) for Orphans and Vulnerable Children**

**Challenge:** X Infotech successfully completed a social project in Kenya, in collaboration with Equity Bank. This project was carried out to introduce a social card and develop a payment infrastructure dedicated to cash transfers and fair distribution of benefits for poor households with orphans and vulnerable children. X Infotech delivered the Biometric Enrolment, Card Personalization solutions and ensured integration with POS systems.

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**Hunger Safety Net Programme**

**Challenge:** In cooperation with Equity Bank and Ministry of Labour, Social Security and Services, X Infotech delivered a software solution for the issuance of social cards in Kenya. This programme ensures secure cash transfers for vulnerable households. X Infotech deployed the Biometric Enrolment and Card Personalization solutions.
Government Projects

Electronic Identity Documents

- eID card for Ghana (ongoing)
- Residence Permit Card in Ireland (2016)
- Passport Card in Ireland (2015)
- Border Control Solution for Tunisia (2015)
- Biometric Enrolment Solution for Lithuanian Police (2015)
- eID Card in Moldova (2014)
- EAC, SAC ePassport in Liechtenstein (2014)
- ePassport in Ireland (2013)
- Payment card with Biometric ID App for South Sudan (2013)
- BAC/EAC ePassport in South East Asia (2013)
- eID Card in South East Asia (2012-2013)
- eID Card in Latvia (2012)
- Scholar Card in Latvia (2012)
Government Projects

PKI solution for Electronic Identity Documents

- PKI solutions for ePassport in Peru (2016)
- PKI solution for eID card & ePassport in Uruguay (2015)

Diplomatic passports

- European Union laissez-passer (2015)

Social Cards

- Social card project in Kenya-Huduma card (ongoing)
- The Hunger Safety Net Programme (2012)
- Orphans and vulnerable children project in Kenya (2012)
- Egypt social card (2009)
Banking Projects

**EMV Personalization**
- EMV personalization for Polygraph Combine “Ukraina”
- EMV personalization solution for Hlynov Bank (Russia)
- EMV personalization solution for Insignia Cards (Malta)
- Personalization solution for Ararat Bank (Azerbaijan)
- Personalization solution for Kaspi Bank (Kazakhstan)
- Personalization solution for Megacard (Sweden)
- Personalization solution for Banco Ficosha (Guatemala, Honduras, Panama)

**Instant Issuing and Mobile Banking**
- Instant Issuing project for Equity Bank (Kenya)
- Instant Issuing project for Co-operative Bank (Kenya)
- Instant Issuing for KCB (Kenya)
- Mobile service solution for Equity Bank (Kenya)
Vadims Teresko
X Infotech Business Development Director,
Banking & Mobile