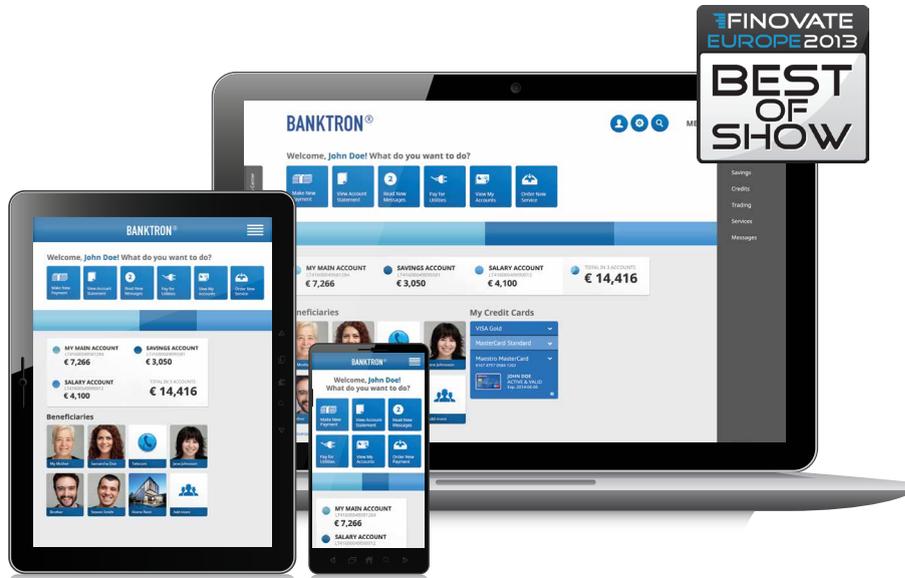


BANKTRON® 8

BANKING PRODUCTS & SERVICES DELIVERY CHANNELS MANAGER



Redefined e-Banking Experience.

What stops banks opting for modern changes and proposed banking services reflecting customer requirements?

The burden of different back-office systems, legacy architecture and technologies.

We want to assure you that it is possible to retain your legacy systems and provide unified UX through different channels on different devices. Do you want to introduce a new, sophisticated banking product onto the market? BANKTRON® lets you deliver it in the most convenient way for your customers and without investing in another integration for your core banking system.

Our single-platform solution called BANKTRON®:

- Centralizes the management of banking services delivery channels and provides unified customer product and payment profile in real-time.
- Enables banks to design a new banking service while paying consideration to customer 'touch-points' across different channels and devices.
- Provides seamless integration and exposure of legacy systems into a flexible IT environment.



MORE ABOUT
BANKTRON®
banktron.etrionika.com

SERVICE DESIGN APPROACH

While engineering the BANKTRON® platform, we have adopted a Service Design approach. The main goal was to present banks with the possibility of creating more useful, more effective and more efficient financial products and services across all bank's customers accessible channels and devices.

A key aspect of the Service Design, and one which we feel is our strongest point, is the ability to manage the User Experience across all channels and devices. Our engineers had to understand bank customer behavior to see interactions as a series of 'touch-points' and to develop a broad understanding of the ways in which being connected to financial services governs everyday life.

BANKTRON® technology enables you to think about a particular financial service as not just being a service available through one device interface at any one point in time. For example, think of the different ways you are able to access your bank balance. You can probably call your bank and inquire, call an automated computer generated system, send an SMS, contact directly from your smart-phone or computer, read your last bank statement, simply visit your bank or use an ATM machine. Each of these is a 'touch-point' between you the bank and your customers. There is significant potential for implementing innovation through careful consideration of 'touch-points'.

BANKTRON® centralizes the management of financial services delivery channels and it is all about choosing the most relevant 'touch-points' for service delivery, designing a consistent customer experience across many channels in relation to brand message, and coordinating completion of customer journey through a service in an optimized way.

BANKTRON® makes all service delivery channels work as one!

UX Philosophy that Redefines E-Banking.

While developing BANKTRON® applications and solutions we follow four principal values that dictate our software engineering and design decision:

Simple

People hate to spend time learning how to use technology. All systems should be easy to use. It is the main key for a successful product.

Powerful

Simplicity does not mean you have to remove everything other than the primary functions. There is always a way to implement powerful functions with a sense of simplicity during the use of them.

Personal

Don't need, don't care. Arrogant argument. But a correct one – The user should only have the functions that he or she really needs and don't be frustrated by the ones never used.

Friendly

Being less corporate is usually a good decision. Users like it. They need friendly advice; they want help and want to get it. If there's any problem that has taken place the system will definitely help.

UNIFIED UX THROUGH A NUMBER OF CHANNELS

CUSTOMER SERVICE CHANNELS & DEVICES

BANKTRON® consists of multi-purpose modules which allow the creation of solutions for different electronic customer service channels and devices:



Internet Banking

BANKTRON® online applications are developed based on the most advanced technologies and meet the highest level of security. They are applicable to both private customers as well as small and medium-sized enterprises. As BANKTRON® embraces integration with both internal systems and third-party applications, online banking users are provided with the most up to date consolidated information in real time.



Enterprise Services

Financial institutions can offer services for B2B partners and corporate customers and integrate them into BANKTRON® applications. Interfaces with external applications are constructed considering specific situations or using previously prepared templates.



Mobile Banking

You can reach your customers with our BANKTRON® mobile solutions for iPhones, Androids, Windows Phones through native or simple web-based applications that can be used properly on every mobile device.



Terminals

Let's take another look at this: the bank branch is transformed into a comfortable lounge. We can come to this type of place, have a great time and perform transfers using a self-service terminal or talk to a bank consultant. BANKTRON® may embrace this channel as well.



Tablets

The iPad created a new niche market between a mobile phone and a laptop. BANKTRON® is tablet-ready and guarantees a great experience for iPads, Windows-based devices or Android tablets.



Web Portal

BANKTRON® applications can be integrated with web portals so a bank can manage its website far more effectively. This permits the transformation of a bank's web portal into a real sales channel not just 'brochure' of services' descriptions and price lists.



SMS Banking

SMS channels permit financial institutions to interact with their customers in a cost-effective and timely manner. Banks can alert their customers in real time regarding information that they care about such as loan approvals. Additionally, SMS channels can be adopted for other purposes like mobile marketing and loyalty management, fraud management, pre-paid services and mobile payments.



Natural User Interface

ETRONIKA was the first in the world with an online banking application using Natural User Interface (NUI). Developing this application we have used technology based on Microsoft Kinect and proposed an innovative and amazing way of interacting with e-bank services through a smart TV. Being a part of BANKTRON®, solutions with NUI may contribute to new bank services and product development.



Call Center

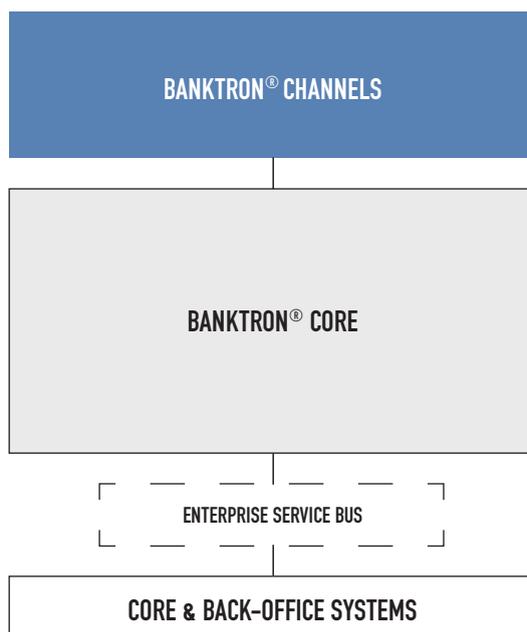
Customers can be identified over the phone and receive services and carry out financial transactions.

COMPONENTS & FUNCTIONALITY

The main roles of BANKTRON® from the perspective of the entire bank IT infrastructure are:

- > Delivering basic financial products to the customer service channels and devices
- > Providing business logic for new financial products and services design
- > Polishing inconsistencies of core banking and back-office systems
- > Containing User Experience (UX) elements
- > Providing smart information routing among IT system parts

BANKTRON® MAIN COMPONENTS

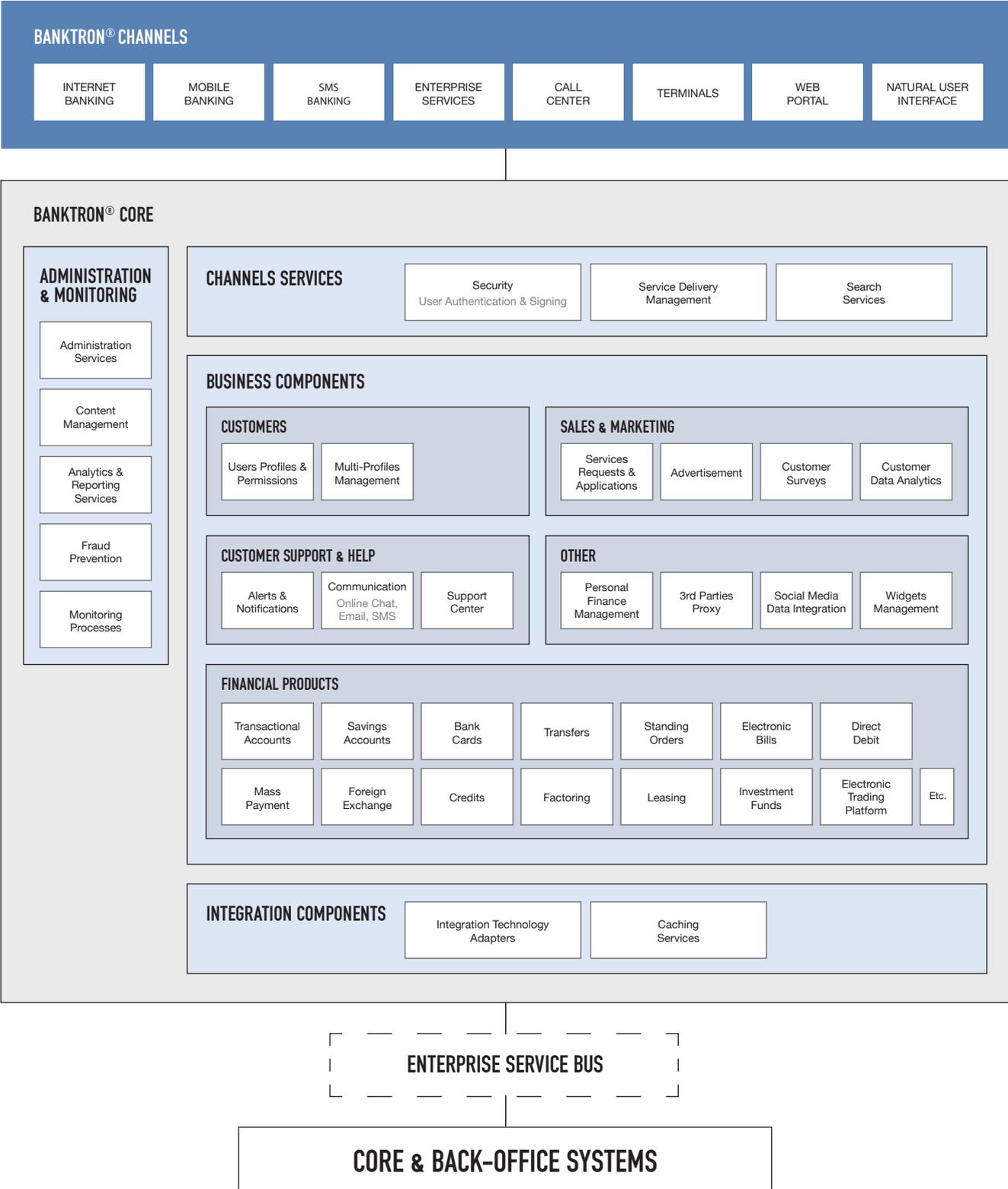


Cool features.
Hundreds of them.

- > Synergy of private and corporate customers and their trustees via flexible work spaces
- > Personal service packages, bank fees, operation limits and personalized visible and advertising content for different customer groups or single customer
- > Fraud prevention engine and tools (logs, monitoring, alert systems)
- > Efficient user administration, assignment of rights and roles
- > Social Media data integration
- > Different login and operation signing methods
- > Smart Content: BI engine helps to profile customer and make decisions based on historical data and actions
- > Personal Finance Management (PFM) features
- > Charts, graphs and rich visual user experience
- > Smart Search: efficient search tool for people who are used to finding things just by using a search function
- > User friendly widgets and shortcuts for daily operations
- > Electronic Trading Platform

And many more!

BANKTRON® MAIN COMPONENTS – DETAILED LOOK



ARCHITECTURE & INTEGRATION

SCALABILITY & FLEXIBILITY

BANKTRON® has a big advantage when it comes to integrating it with core and back-office systems.

Service Oriented Architecture

BANKTRON® is based on SOA software engineering principles and concept. SOA stands for Service Oriented Architecture. SOA facilitates the creation of flexible, reusable assets for enabling end-to-end business solutions.

Independent Modules

You can choose to have exactly what your business needs at the moment without taking risks tomorrow. When there is demand for additional model, it can be easily and quickly implemented.

Flexible Buying Options

BANKTRON® is made up of lots of independent modules so that you don't have to buy the full-suited platform.

CLOUD READINESS

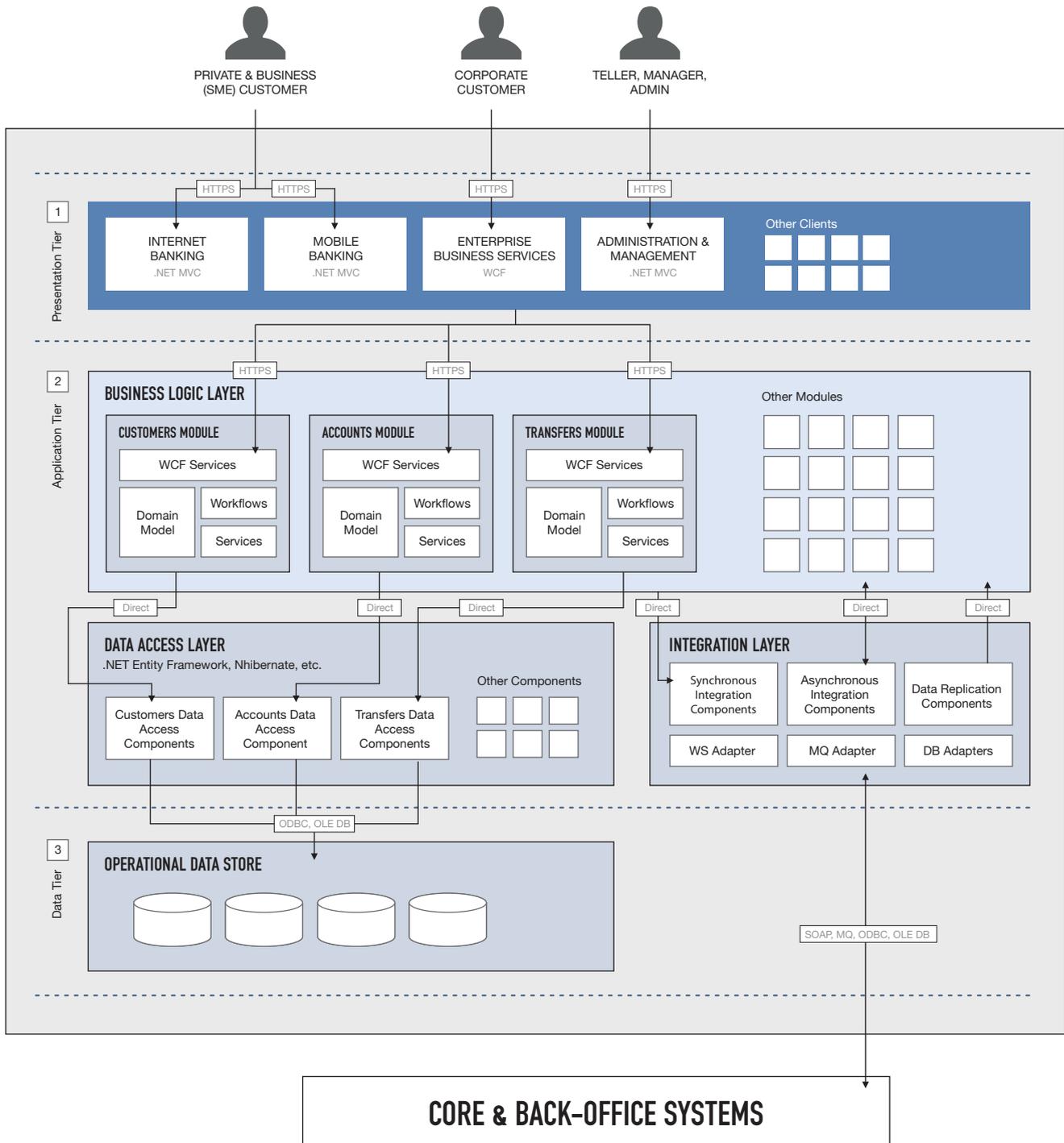
If you are planning to move into cloud then don't worry – BANKTRON® is ready for transforming into cloud-based solutions. This is exciting because cloud-optimized networks will be able to simplify infrastructure, increase efficiency and provide scalability so you can deliver an e-banking experience securely and without any interruptions.

BANKTRON® can be integrated with almost any financial institution core system. Integration is possible both directly and via a middleware layer.

In order to connect BANKTRON® with bank core and back-office systems in the most efficient way, we use Enterprise Service Bus (ESB). ESB is an architectural pattern and a key enabler in implementing the infrastructure for a Service Oriented Architecture (SOA). An ESB provides support for interactions between heterogeneous services and interfaces that might be mismatched or which might change over time.

BANKTRON® architectural principles are based on Three-Tiers Architecture that allows any one of the three tiers to be upgraded or replaced independently of one another.

BANKTRON® ARCHITECTURAL PRINCIPLES



Presentation Tier

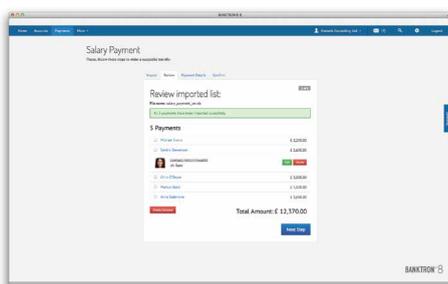
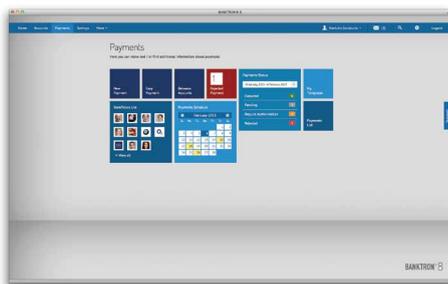
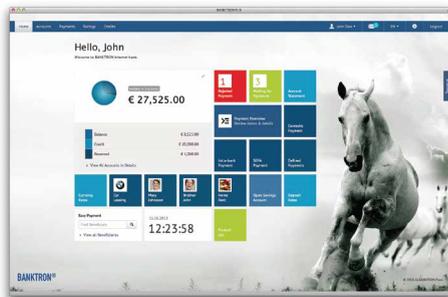
The Presentation tier is a front-end responsible tier (it integrates all channels) for user interaction and for exchanging data with the business logic layer. Users only have access to the presentation layer so they cannot affect other BANKTRON® layers.

Application Tier

Business rules and the entire logic are integrated in a number of modules under the business logic layer. It uses very secure HTTPS protocol to communicate with the presentation tier and has direct connection with the data access and integration layers. The data access layer is responsible for customers, accounts, payments and other data access components which exchange data with databases. The integration layer is the layer which enables the BANKTRON® system to integrate with core and other banking systems via a number of adapters.

Data Tier

This tier houses database servers where information is both stored and retrieved. Data in this tier is kept independent of the application servers or business logic.



ADVANCED USER INTERFACE

User interfaces of BANKTRON® applications are:

- › Modern and simple
- › Customizable
- › Friendly and helpful
- › Integral through different channels
- › Expandable

Responsiveness

BANKTRON® application user interfaces utilize the most recent technologies such as CSS3 and HTML5. While developing them we opted for a responsive web design (RWD) approach. Using this approach online product interface is crafted to provide an optimal viewing experience—easy reading and navigation with a minimum of resizing, panning, and scrolling—across a wide range of devices (from desktop computer monitors to smart mobile phones).

Customer Profile

One of the key factors of BANKTRON® application success is the focus on user requirements. For this we use Customer Profile function that meets the following goals:

- › Has unique customer profiles
- › Has different visual interfaces
- › Focuses on user needs and requirements
- › Has an eye on business users
- › Enables users to create custom interfaces

METRO STYLE INSPIRED VISUAL DESIGN

We took inspiration from the Metro style introduced by Microsoft for Windows-8 applications.

Metro style is not just about design. It is not about user interface. It is a philosophy on how your product reacts to customer actions and how the content is presented.

BANKTRON® applications use the Windows-8 grid system. The grid system is a design tool that helps achieve visual unity across different apps while providing a structure for variation and maintaining user interest. The grid system is built into the development templates and we designed our controls and collections with this grid system in mind.

The visual design of BANKTRON® applications is a highly professional piece of work. The fonts are new, fresh and beautiful and the navigation or main functions are in all the right places and all the colors make it a really nice composition.

We will make your brand shine!

SECURITY

Security was and is one of the most important factors developing BANKTRON®. To protect system from unauthorized access and fraud multi-layer security approach is used. BANKTRON® security is based on the following:

- > User rights and roles that allow to see only particular data, and make only particular actions
- > Data exchange between server and client is built on industry standard SSL protocol which encrypts and protects data transmission
- > Communication among system components is encrypted
- > Important user information (passwords, IDs, etc.) is stored in database in encrypted format
- > Login control – it is configurable time slot, after which you can try login to the system after unsuccessful attempt
- > IP blacklists
- > Ability to set a max number of unsuccessful attempts
- > User session disconnected automatically if client remains inactive for a certain period of time
- > Transaction and user action logs
- > Stored history of all user actions, ability to see general statistics for user actions
- > Electronic password generators
- > Two-channel authentication. This type of authentication uses different user identification means – physical (password card, password generator, mobile phone, etc.) and memorized information (user name, password)
- > E-signature integration with PKI and wireless PKI, thus ensuring that all messages, orders, transactions and e-documents are sent and digitally signed by an authorized user
- > Prevention against identity theft and detection of suspicious and fraudulent operations

OPERATION MANAGEMENT

Running financial mission-critical applications requires close attention to the health of the entire IT infrastructure that supports it.

Understanding this challenge BANKTRON® is designed to be integrated with advanced monitoring solutions that manage all aspects of IT infrastructure in both physical and virtual environments.

Availability Monitoring

BANKTRON® availability monitoring is the process of collecting data and reporting on the status of critical application software. Availability monitoring software is employed for this purpose and continuously monitors applications and servers and their performance, creating an audit trail against which to test Service Level Agreement (SLA) compliance.

ETRONIKA can ensure availability levels (SLA) of up to 99.95%.

Application Monitoring

BANKTRON® comprehensive application monitoring solution automatically identifies the systems on a network and the applications they are currently running and create concise summaries for the administrator. Application monitoring solutions allow an administrator to effectively manage the BANKTRON® system.

Performance Monitoring

BANKTRON® performance monitoring enables us to track the performance impact of applications and service, and to generate alerts or take action when defined thresholds for optimum performance are exceeded.

TECHNOLOGIES

BANKTRON® provides financial institutions with the ability to expand and develop their e-services and to securely publish currently existing banking products tailored according to market needs. Based on modular principle BANKTRON® empowers rapid deployment and flexibility to enter the market with an innovative product and service offerings portfolio. This goal is achieved using new-generation industry standard technologies including:

- > Microsoft .NET
- > Microsoft SQL Server
- > Microsoft Windows Server
- > Microsoft System Center
- > Internet, E-mail
- > GSM, SMS
- > PKI, wPKI

Technologies used for the development of Advanced User Interface:

- > HTML5
- > CSS2/CSS3
- > Responsive (Adaptive) Web Design
- > Twitter Bootstrap Frontend Framework
- > jQuery UI User Interface
- > jQuery JavaScript Library
- > jQuery Masonry Plugin
- > LESS CSS Techniques
- > FusionCharts Dynamic Chart Drawing

ABOUT ETRONIKA

ETRONIKA is a leading Baltic IT company developing complex and innovative solutions for finance, banking and e-businesses, using the most advanced and secure technologies.

Contacts: V. Gerulaičio g.1, LT-08200 Vilnius, Lithuania, tel.: +370 5 2483 153, info@etronika.com

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