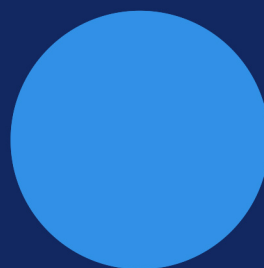


Crypto Bank Market Research 2023: Overview, Trends, Predictions



Our key takeaways:

- Traditional banks are growing crypto-friendlier, and new crypto-native banks dominate the startup landscape in digital banking.
- Superapps are the next-level digital transformation for all banking entities.
- Despite skepticism, the distributed ledger technology (DLT) use expands in the banking sector.
- IoT, AI, and ML advance the digital banking sphere.
- Regulatory pressures are expected to rise, pressing crypto banks to tighten collaborations with traditional banks.
- Security, confidentiality, and safety remain the pressing concerns of crypto banking projects and their users.
- As crypto awareness is increasing, the number of crypto banking users and investors is bound to grow exponentially in the coming years.
- DeFi regulation is the key step to broader institutional adoption of this technology.
- The world witnesses a steadily rising demand for stablecoins and CBDCs.

Besides discussing the trends and dynamics in the crypto banking market, we also provide a detailed digital bank development blueprint for anyone considering this business idea and looking for tried and tested solutions in this niche.

What is a bank?


Banks have been in existence since the dawn of humanity, as people had to transact somehow, exchanging the fruits of their labor for fungible assets of various kinds. Though they functioned differently from what we know as a bank, the present-day concept of a banking entity hasn't changed too much. In the broadest sense of this word, a bank handles:



Money deposits and withdrawals from individuals and commercial entities




Payments for utility services and commercial goods




Money transfers from one user to another




Borrowing and lending activities for various client categories



Payments for banking services

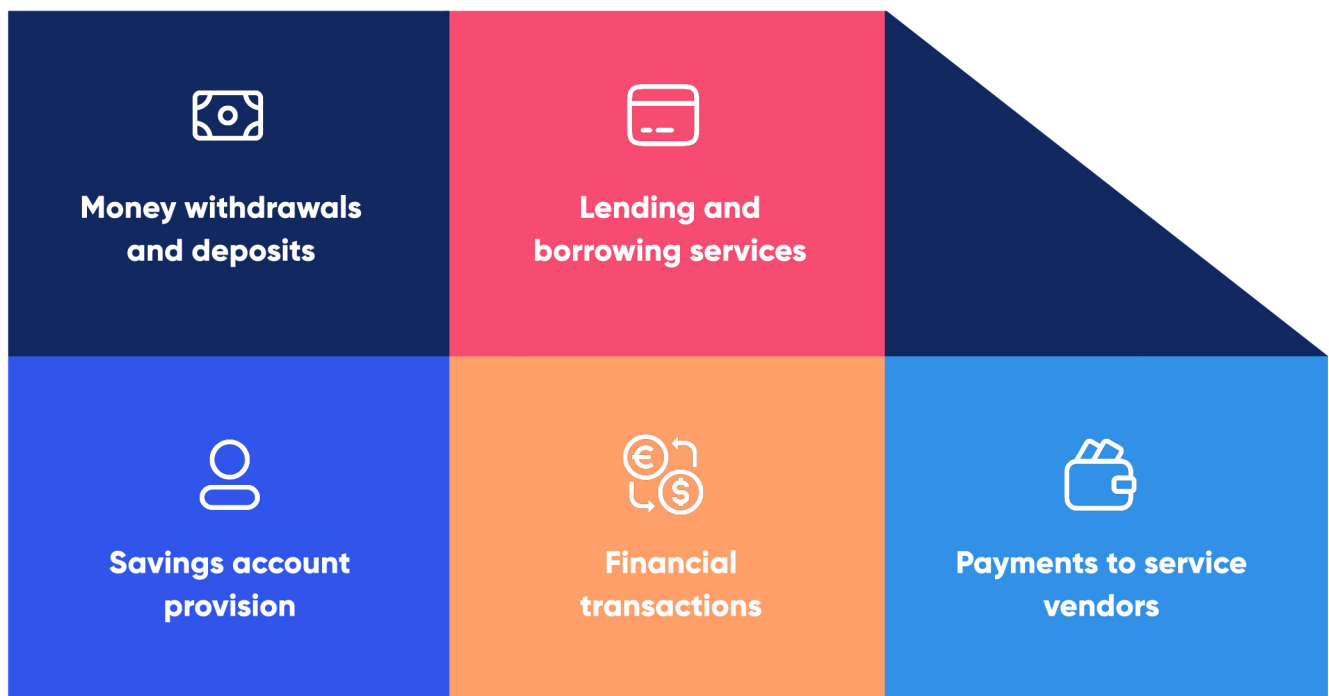


Borrowing and lending activities for various client categories



Crypto Banks

Let's start from the basics – by defining a crypto bank as a distinct type of financial institution. Crypto banks are banking organizations that conduct regular financial activities like:



The only difference between a crypto bank and a regular bank is that all these activities are performed with cryptocurrencies instead of fiat money.

Users can replenish their accounts with crypto assets stored on external wallets or exchange fiat funds for cryptocurrency at the moment of opening an account. This way, a crypto bank can also be characterized as a financial entity mixing a digital bank's functionality with crypto features.

The modern global banking system has gone a long way from traditional financial institutions to crypto banks, with the major stages of that evolution involving:

Traditional banks

One of the major pillars of modern financial systems, traditional banks have been at the grassroots of capital management for centuries. They still have many local branches and offices to which people can come to open and close accounts, deposit and withdraw money, and send transfers. Due to offline presence, the possibility of getting face-to-face consultations, and a wide network of ATMs, such banks are still seen as the golden standard of banking and are favored by older generations due to their low level of technology adoption and high conservatism.

01



Digital banks

At the heart of digital banking was a desire to transform the delivery of financial services to make them more consumer-friendly and compliant with the latest technological changes. Digital banks emerged as fully online financial entities, giving users access to a wide variety of financial services from the comfort of their laptops and smartphones, thus offering a more personalized customer experience and greater control over spending and finances. These banking institutions quickly expanded via API integrations with third-party service providers to allow for more versatile digital bank use without security compromises.

02



Crypto banks

FinTech and DeFi emerged as a continuation of the digital banking trend; these new trends combined finance and technology, as the name suggests, to give users the best of the two worlds. This is how crypto banks formed to allow access to decentralized finance and ensure non-custodial, private operations for users worldwide. These financial institutions operate using cryptocurrencies, so they don't need central banks' oversight for legal operations.

Thus, as you can see, crypto banks represent a fundamentally new concept within the FinTech sector, offering a unique set of features and benefits to users, such as privacy, user-friendliness, and accessibility, coupled with state-of-the-art security. With these parameters seen as the new normal in the financial sphere, traditional banks will inevitably need to adapt and transform digitally.

03



You may often come across these two terms online, induced to think that a crypto and a crypto-friendly bank do the same things. However, these concepts are not identical, with these two types of banks approaching crypto transactions differently. Here's the core distinction:

Crypto-friendly banks

are fine working with crypto businesses and projects. Yet, they don't conduct crypto transactions directly and only provide supportive services, such as accounts for cryptocurrency exchanges, crypto payment processing, and crypto-backed loans in fiat money. This way, users can buy and sell cryptocurrencies using their usual banking cards, complete money exchanges with crypto platforms, and cash out their earnings after selling crypto assets.

Crypto banks

are an innovative type of financial entity that works directly with cryptocurrencies and don't require fiat currency for transactions. They can provide savings accounts for cryptocurrencies, crypto loans, trading services, and other related services for online transactions with this type of asset.

This way, you may see that crypto-friendly banks are a sort of bridge between traditional finance and crypto, while crypto banks are built from scratch with exclusive specialization on crypto transactions. Therefore, crypto banks are technologically more advanced and handle a broader range of financial operations in the digital space.

Blockchain technologies don't stand still; they develop at lightning speed today, moving the crypto industry forward. Thus, the novel crypto banking sector continues evolving and diversifying quickly in response to technological changes and innovations. Based on the in-depth analysis of the present-day digital banking sector, the 4IRE team has identified the following crypto bank categories – see Figure X.

Traditional banks with a crypto license

These banks allow users to sell and buy cryptocurrency from their banking accounts. They offer protection of clients' funds and employ proficient security measures.



Crypto native banks

Full-service banking institutions that cover all cryptocurrency transactions, offer savings accounts, give and accept crypto loans, and process crypto transactions.



Digital banks with crypto license

Digital banking entities that don't have physical offices and operate exclusively online. They have adapted to the digital transformation pressures by adding crypto transaction services to their financial service range.



FinTech/ Crypto/Digital asset platforms

FinTech platforms are a new step in the digital finance evolution. They use innovative technologies for cross-platform financial operations and transact freely with various digital assets, from fiat to crypto.



FinTech superapps with crypto functionality

Most forward-looking digital banks have already transformed into FinTech superapps or are in the process of transition. Superapps are the key trend of the modern digital finance market, enabling lifestyle banking – a user-friendly, integrated financial ecosystem covering many extra services.



With this evolutionary trend in digital banking, it won't be a surprise for anyone that cryptocurrencies are perceived as the future of finance. The privacy, technical superiority, transparency, and impressive security of transactions make crypto a promising tool in the global financial system. Besides, only crypto assets tune so harmoniously into the new lifestyle banking trend and offer cost-effective transactions and lucrative investment terms. Therefore, crypto integrations are so common in traditional and digital banks.

Consumer of BaaS	Financial institutions, fintech companies, or any other organization can use BaaS to offer banking services to clients via API connectivity.
Plug and play banking	Ready-made banking software is provided on a subscription or one-time payment basis to provide a comprehensive business service package.
Traditional bank	Many regular banks transition to the digital space by adopting digital technology and expanding the service coverage for their clients.
Pure marketplace	Marketplace banking is an ecosystem of financial products and services with related characteristics that customers can select in one place.
Banking as a platform	BaaP presupposes the disclosure of traditional banks' infrastructure and functionality via an API connection to allow third-party businesses to build financial solutions on their base.
Banking as a service	Licensed businesses can become providers of BaaS solutions to other companies, monetizing their banking software and allowing access to it via API integrations.
Licensed digital bank	A non-bank commercial entity licensed to provide financial services via its digital channels.
Digital unit of an existing licensed bank	A department of a traditional licensed bank specifically tasked with digital transactions.
Partnership with a licensed bank	By partnering with a bank, FinTechs and crypto banks can be exempt from state usury, money transmission regulations, and other licensing requirements, assuming responsibility for the technical side of digital transactions.
FinTech license model	<p>FinTech licenses are easier to obtain than those of traditional banks and have lower capital requirements. They are tailored to a specific range of services, such as P2P lending and transfers, payment processing, crowdfunding, and digital wallet creation.</p> <p>Here is a detailed overview of licensing and regulatory requirements by country, with a concise summary of legislative acts, documentation, and regulatory authorities for crypto banking businesses.</p>

Region	Country	Regulator	Name for Crypto	Banking / Payments Regulations	Crypto Regulations
Europe	France	MiCA (law for 27 EU members)	Crypto Assets	French Banking Law (Code Monétaire et Financier)	Digital Asset Service Providers (DASPs) License
	Germany		Virtual Currencies / Virtual Assets	German Banking Act (Kreditwesengesetz - KWG)	BaFin regulation for crypto custody services
	Estonia		Virtual Currency	Estonian Financial Supervision Authority (Finantsinspeksioon)	Virtual Currency Service Provider (VCSP) license
	Liechtenstein		Virtual Currencies / Virtual Tokens	Financial Market Authority Liechtenstein (FMA)	Token and Trustee Service Provider (TTSP) Act
	Malta		Virtual Financial Assets (VFAs)	Malta Financial Services Authority (MFSA)	Virtual Financial Assets Act (VFAA)
	Switzerland	Swiss Financial Market Supervisory Authority (FINMA)	Crypto Assets	Swiss Banking Act (Bankengesetz)	FINMA license for crypto businesses
	UK	Financial Conduct Authority (FCA) regulations	Crypto Assets	Financial Services and Markets Act (FSMA)	Temporary Registration Regime (TRR) for crypto businesses
	U.K.'s Financial Services and Markets Bill (FSMB)				

Region	Country	Regulator	Name for Crypto	Banking / Payments Regulations	Crypto Regulations
Asia	Japan	Financial Services Agency (FSA)	Virtual Currencies	"Japan's Payment Services Act"	Virtual Currency Exchange license
	Singapore	Monetary Authority of Singapore (MAS)	Digital Payment Tokens (DPTs)	Payment Services Act	Payment Services license for digital payment token services
	China	People's Bank of China (PBOC)	Virtual Commodities	China Banking and Insurance Regulatory Commission (CBIRC)	No specific nationwide crypto regulation, various local regulations apply
	Hong Kong	Securities and Futures Commission (SFC)	Virtual Assets	Banking Ordinance	"Securities and Futures Ordinance" (SFO)
	South Korea	Financial Services Commission (FSC)	Virtual Assets	Banking Act	"Crypto Asset Act"
North America	US	Securities and Exchange Commission (SEC)	Virtual Assets / Digital Assets	Federal Deposit Insurance Act (FDIA)	No specific nationwide crypto regulation, various state-level regulations apply
		Commodity Futures Trading Commission (CFTC)		Office of the Comptroller of the Currency (OCC)	
	Canada	Canadian Securities Administrators	Virtual Currencies / Cryptocurrencies	Bank Act	Regulation varies by province but generally falls under securities laws or money services business regulations
		Financial Transactions and Reports Analysis Centre of Canada (FINTRAC)		Office of the Superintendent of Financial Institutions (OSFI)	

Region	Country	Regulator	Name for Crypto	Banking / Payments Regulations	Crypto Regulations
North America	Mexico	Banco de México (Bank of Mexico)	Virtual Assets	National Banking and Securities Commission (CNBV) regulations	—
		Ley para Regular las Instituciones de Tecnología Financiera (Ley Fintech)		General Law of Credit Institutions (Ley de Instituciones de Crédito)	
Central & South America	Brazil	Securities and Exchange Commission of Brazil	Crypto Assets	Brazilian Banking Law (Lei 4595/1964)	—
	The Bahamas	The Central Bank of The Bahamas	Digital Assets	Banks and Trust Companies Regulation Act	—
	Bermuda	Bermuda Monetary Authority (BMA)	Digital Assets	Banks and Deposit Companies Act	—
	El Salvador	(Superintendence of the Financial System)	Virtual Assets	Banking Law	The Bitcoin Law (Ley Bitcoin)
Australia		Australian Securities and Investments Commission (ASIC)	Digital Currencies	Banking Act 1959	Anti-Money Laundering and Counter-Terrorism Financing Act 2006 (AML/CTF Act)
Middle East	UAE	UAE Securities and Commodities Authority (SCA)	Virtual Assets / Virtual Currencies	Central Bank of the UAE	Regulations on initial coin offerings (ICOs) and virtual assets

Region	Country	Regulator	Name for Crypto	Banking / Payments Regulations	Crypto Regulations
Middle East	Turkey	Banking Regulation and Supervision Agency (BRSA)	Crypto-currencies	Banking Regulation and Supervision Agency (BRSA)	—
		Capital Markets Board of Turkey (CMBT)			
	Israel	Israel Securities Authority (ISA)	Virtual Assets / Digital Currencies	Banking (Licensing) Law	—

Crypto Banking Landscape

The 4IRE team has conducted exhaustive research on the market landscape for crypto banking and has identified key players in the respective niches of this sector. Obviously, the number of crypto banks is much larger, but we've focused on the most notable representatives, their business models, and methods of work.

The table below presents our findings on the FinTech, crypto, and digital asset platforms with banking services, licensed crypto-friendly banks with an international presence, and crypto-native digital banks offering broad service coverage and support for crypto-related transactions. You can also find a list of traditional banks with over a century of history, which have followed the lead of digital transformation and have integrated crypto-friendly functionality.

Banks

SuperApps

Cypto Native Bank



Digital Banks with Crypto License



Banks

SuperApps

FinTech, Crypto / Digital Asset Platforms with Banking Services



Traditional Banks with Crypto License



As you can see from this table, dozens of crypto banks have established a solid reputation in the digital space, and many more are entering the sector every day to offer flexible and lucrative investment, wealth management, and transaction services to users. Such projects enjoy stably high attention on the part of investors and successfully attract funding, signaling the large-scale change in the global financial landscape toward crypto-friendliness.

Crypto Banking Trends and Predictions

Since the crypto banking trend is only starting to take shape, many users and potential investors are interested in its prospects for the near future. What does the future have in store for crypto banks? Overall, the prospects of this banking sector are closely tied to the rise and integration of cryptocurrencies in all spheres of financial transactions. As more individuals and businesses start using cryptocurrencies in their daily operations, demand for crypto banking is doomed to rise.

However, a vital aspect that may affect the dynamics of crypto banking development is regulation. As the regulatory framework for cryptocurrencies evolves, crypto-friendly and crypto-only banks can encounter pressure on the part of regulatory bodies, needing to adjust their operations to new laws to ensure compliance and legal functioning.

Besides, competition in the crypto industry is expected to rise as traditional banks also start offering crypto-related services. This trend can lead to industry consolidation, with small crypto banks being acquired by, and merging into, larger financial institutions with a more stable position in the market.

Despite the mentioned potential issues, crypto banks have positive long-term perspectives for development and expansion. As cryptocurrencies are growing more popular and appealing to users, demand for specialized banking services compliant with the unique crypto market needs will also grow exponentially. An additional source of possibilities for crypto banks is the fast technological progress in the blockchain sector, the development of new cryptocurrencies, and the DeFi industry expansion. These dynamics can allow crypto banks to deliver unique business value, stand out from the crowd of competitors, and offer innovative services to clients.

Overall, the future of crypto banking largely depends on the rise and development of the broader cryptocurrency industry and will be mostly determined by technological advancements, regulatory changes, and fast-moving market dynamics.

Here is a detailed breakdown of trends and predictions for the crypto banking sector from various perspectives.

Cryptocurrencies and blockchain are digital technology first of all. Thus, the development of tech advancements and innovation in this sphere will determine the pace and direction of crypto banking in the coming years. We've identified the following trends in the technological domain.

1.1 Blockchain and distributed ledger

The distributed ledger technology (DLT) and blockchain were initially received skeptically in the banking industry, with JP Morgan Chase's CEO Jamie Dimon saying that assets moving 20%+ overnight can't be regarded as a currency. However, things have changed since 2017, and though crypto assets still move 20%+ overnight, they are increasingly accepted as an alternative currency by millions of users. Therefore, DLT is doomed to revolutionize the banking sector, as it offers ultimate privacy, access to capital for unbanked populations, and decentralization.

1.2 Smart contracts

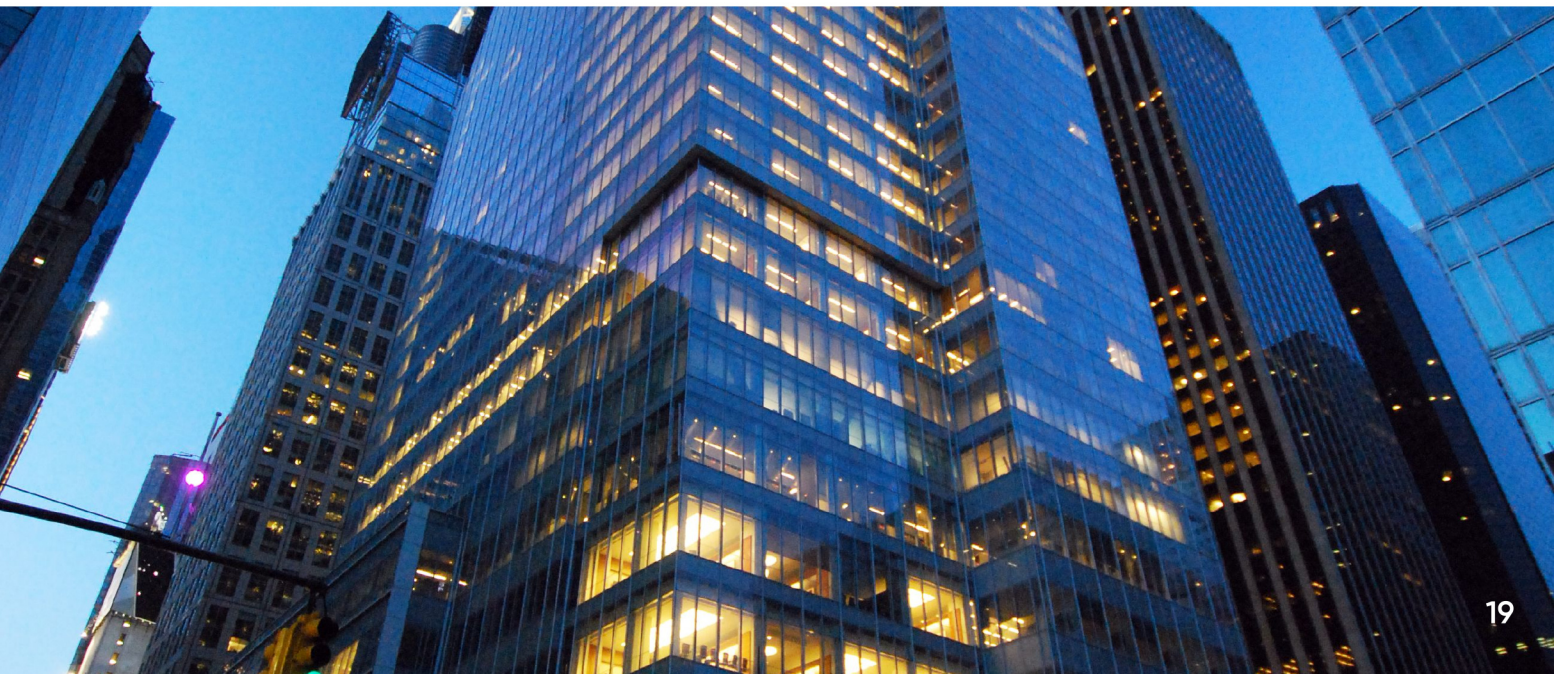
The automated, self-executing contracts are the fuel of blockchain and crypto banking. They are the basis of the decentralization principle in the DLT, allowing users to have their transactions executed after the counterparty's fulfillment of contractual obligations. This way, the function that used to be performed by an intermediary (a bank or credit organization), which charged a considerable fee for the go-between service, can be skipped altogether.

1.3 Artificial intelligence and machine learning

AI and ML use has become commonplace in banking because this technology helps banking institutions process big data and employ smart predictive models for credit risk assessment. This way, advanced AI/ML algorithms help users and businesses evaluate the dynamic changes in market sentiment, suggest favorable investment opportunities, and inform decision-making with real-time analytical insights.

1.4 IoT

Modern users are tech-savvy, using a variety of interconnected devices to simplify their daily routines and transactions. The 21st century has become the era of contactless wearables – devices that form a part of the IoT system and allow users to make payments, track their performance, and stay connected. These wearables come in the form of watches, bracelets, and rings, making a transaction just a matter of one move. FinTech companies can also embrace this trend by offering crypto payment integrations to IoT devices' software.



Regulation is at the heart of any banking institution's operations. No bank, be it a crypto-only institution or a traditional financial entity, can operate legally in any jurisdiction without ensuring regulatory compliance. The reason for such tight control is that such businesses operate with user data and money, which requires sufficient protection and intactness guarantees on the part of the government. Therefore, crypto banks and other DeFi entities are currently facing much regulatory pressure because of the lack of clarity on their business status and the legal status of crypto assets. Here are the main trends that will affect the course of crypto banking development in the coming years.

2.1 ICO and cryptocurrency regulation

Initial Coin Offerings (ICOs) have become a disruptive phenomenon of the crypto industry, with anyone receiving an opportunity to launch their own currency for circulation. It was a time of grand successes and scams, and the rising number of fraudulent ICOs launched to raise fast cash urged the governments to adopt a tighter legal framework for ICO regulation. In the USA, ICOs fall under the jurisdiction of the SEC, which subjects any ICO application to the Howey Test. ICOs in Singapore are regulated under the Monetary Authority of Singapore (MAS), which has issued a detailed Guide to Token Offerings. Every country develops its own ICO regulations depending on how it classifies crypto tokens – as securities or commodities – and assigns a responsible regulatory body to control the sphere. Yet, no comprehensive international framework is yet in existence for global ICO regulation or control.

2.2 KYC and AML

The anti-money laundering (AML) and counter-terrorist financing (CTF) regulations are currently in place in most jurisdictions where cryptocurrencies are generally legal for circulation. Since crypto assets are moved in the digital space without centralized oversight, they can become powerful tools for the financing of terrorist and criminal activities, which requires tighter control over user identity verification with KYC standards and the development of an international AML framework for digital assets.

2.3 Digital asset and blockchain laws

Though many states have already progressed in digital asset regulation, there is no uniform regulatory framework anywhere in the world. Some countries have found ways to tax crypto-derived revenue, and each state has a unique set of regulations and restrictions on crypto payments, investments, and derivatives. Many of them follow the prudential standards of the Basel Committee on Banking Supervision (BCBS) for crypto assets published in December 2022. It's also possible to derive valuable regulatory advice from the Financial Action Task Force's (FATF) 2021 guidance for a risk-based approach to virtual assets and virtual asset providers and the Crypto Asset Roadmap for 2022-2023 developed by IOSCO's Fintech Task Force. Despite the regulatory ambiguity surrounding crypto assets today, they are increasingly seen and used as financial instruments. Stablecoins with pegging to USD, like USDT, are more often used for financial transactions because of their low volatility and higher predictability. However, other cryptocurrencies are also paving their way to financial systems, like infrastructural tokens of large exchanges (e.g., BNB) or algorithmic stablecoins. Thus, the financial trends for crypto banking are expected to be as follows.

3.1 A growing number of digital assets and cryptocurrencies

Since the crypto industry is a decentralized space with loose regulation, actually anyone can create and launch their digital token or cryptocurrency. That's why the variety of crypto assets available for investment, trading, and use is growing every day, with every self-respecting blockchain project having a native token for internal use. This trend will continue as every Web3 app, platform, or game seeks to monetize its ideas and attract a loyal audience to infrastructural token use and investment. The users' major challenge is to assess the offered assets and acquire only those with a solid project standing and healthy market potential.



3.2 Crypto service integration in the traditional financial instruments

As cryptocurrencies are getting more popular and enjoying massive adoption worldwide, their use expands as well. Users need more service providers loyal to crypto payments, which determines the rise of crypto-supportive service integration in regular finance. Users of digital wallets and banking accounts receive innovative opportunities for paying in crypto; you can pay for movie tickets at AMC or cover your online bills at AT&T with cryptocurrencies today. Even Microsoft already accepts crypto money for the company's digital products, and PayPal is about to launch its own stablecoin. Thus, the pace of crypto service integration is moving fast, helping traditional businesses win new audiences and retain the old ones with cryptocurrency integrations.

3.3 Stablecoins' rising popularity

Stablecoins are the island of stability in the turbulent crypto market. They are usually pegged to an international fiat currency (e.g., Tether – a USD-pegged stablecoin) or have a mathematically stable formula (e.g., DeFi Dollar – DUSD). They are less volatile than other crypto assets, so investing in them and holding them for a while in one's wallet is a good idea with low risks. Therefore, the market of stablecoins is bound to rise as the demand for cryptocurrency transactions follows an upward trend. Since blockchain and crypto banking are online-only industries with little to no regulatory oversight, crypto projects' viability depends largely on their ability to ensure end-to-end security for users and their funds. These concerns relate to user data, integrity and confidentiality of transactions, and intactness of crypto assets processed at the banking institutions. Here are a couple of trends you should consider.

4.1 Crypto-related privacy and anonymity

As we live in the times of surveillance economy, people are increasingly giving value to online service platforms that don't collect or aggregate user data and can effectively preserve user privacy. However, the privacy and anonymity of cryptocurrencies based on the principle of pseudonymity in wallet creation has a reverse side in case of massive crypto payment adoption. As blockchain records all transactions openly in the public ledger, and all wallet information is publicly available, all your transactions and assets will be disclosed to any party to which you disclose your wallet ID. For instance, paying for a cup of coffee at a local coffee shop will show all your transactions and assets to the barista, and using crypto wallets for salary payouts lets any colleague learn where you spent your money yesterday. Thus, crypto wallets are yet to achieve the balance between traceability and transparency on the one hand and privacy and confidentiality on the other hand to give users a healthy combination of anonymity and compliance.

4.2 Safe crypto asset storage

Cryptocurrencies are still rocket science for many users, and the technical nuances of the crypto asset movement often become a loophole for hackers and scams. People accidentally reveal their private keys or transfer money to phishing websites; their money is stolen from compromised wallets and exploited Web3 platforms. Therefore, the issue of safe cryptocurrency storage is still pressing. The safest method is to use a cold storage wallet, which is a piece of hardware disconnected from the Web, keeping the money offline. However, the enterprise-level security issue that crypto banks face can't be resolved with a cold wallet. These entities need to figure out advanced security solutions in compliance with the latest Cryptocurrency Security Standards (CCSS) for managing and storing their clients' crypto assets safely and withstand crypto hacker attacks and exploits.

4.3 Cybersecurity and protection from hacks

There are a wide variety of crypto scams online today, preying on user money and data and causing large-scale breaches and thefts. Users may become victims of fake exchanges, ICO scams, fake wallets, pumps and dumps, website clones, and many forms of hacker attacks. One way blockchain responds to emerging cyber risks is the advent of permissioned blockchains, advanced encryption technologies, and comprehensive transaction tracking via the public ledger. The times when cryptocurrencies were a fancy term only a few tech geeks could embrace are long gone. Bitcoin, Ethereum, and dozens of other world-famous cryptocurrencies have become mainstream for investors, traders, and laypeople a couple of years ago, and their adoption and user awareness are expected to grow further. What does this trend have in store for crypto banks? The times when cryptocurrencies were a fancy term only a few tech geeks could embrace are long gone. Bitcoin, Ethereum, and dozens of other world-famous cryptocurrencies have become mainstream for investors, traders, and laypeople a couple of years ago, and their adoption and user awareness are expected to grow further. What does this trend have in store for crypto banks?

5.1 Rising cryptocurrency and blockchain awareness

As the DeFi sector grows and goes mainstream, more and more laypersons not connected with digital technology get a firm grasp of cryptocurrencies. Cryptocurrencies represent an attractive tool for transactions and investments, but awareness of their mechanics, trust in blockchain technology, and its adoption are still at the germinal stage in most countries. The crypto banking sector is expected to expand in the coming years mainly due to the rising consumer awareness and trust for crypto assets, which will move this industry further and attract a loyal following.

5.2 An increasing number of crypto banking users and investors

As cryptocurrencies are becoming more widely used and popular, they attract the attention of institutional investors and entities. For instance, by the middle of 2021, 55% of the top 100 banks invested in blockchain-based startups, with Morgan Stanley giving \$1.1 billion to crypto companies, Goldman Sachs allocating \$698 million to such projects, and BNY Mellon assigning \$690 million to this investment category. Users of crypto banking services and cryptocurrency owners are also rising in number, with over 4.2% of the global population owning crypto assets worldwide as of 2023; the figure is over 420 million this year, compared to only 106 million at the beginning of 2021. The times when cryptocurrencies were a fancy term only a few tech geeks could embrace are long gone. Bitcoin, Ethereum, and dozens of other world-famous cryptocurrencies have become mainstream for investors, traders, and laypeople a couple of years ago, and their adoption and user awareness are expected to grow further. What does this trend have in store for crypto banks?

5.3 Broader access to crypto services

According to the 2022 report of the World Bank, 1.4 billion adults across the world remain unbanked, which is around one-fourth of the global population. These people have no bank accounts and are invisible to the financial system, being deprived of the opportunity to take loans, pay for tuition, or get a mortgage for real estate property. Cryptocurrencies are changing this situation by simplifying access to finance for unbanked and underbanked people, with the fastest adoption dynamics observed in African countries, Latin America, and the Asia Pacific. This way, people who have limited opportunities for traditional banking service coverage get access to crypto services and crypto finance for cross-border transactions, loans, and investments.



The institutional adoption of DeFi is a massive reconstruction of the global financial system on the principles of added security, transparency, and interoperability. With the dramatic gap between US 10-year treasury yields of under 1% and stablecoins' annual gains between 2% and 12%, one shouldn't be surprised to see that 80% of financial institutions across the USA and Europe have interest in digital assets and crypto investments.

There are a number of institutional pioneers who have already reaped the gains from crypto investments:

Morgan Stanley

has recently expanded its service coverage to digital asset acquisition.



BNY MELLON

confirmed the support and custody of digital assets and the launch of several tokenization projects.

JPMORGAN CHASE & CO.

got directly engaged in the digital token and blockchain-powered platform design to allow instant payments for their clients.



HSBC

shared its plans to invest \$20 billion in the development of a blockchain-powered custody platform.

CARLCAHN.COM

a widely known hedge fund manager, announced a \$1 billion investment in crypto.

Along with these transitional steps among financial entities, one can witness a large-scale move toward cryptocurrency adoption at the governmental level. Today, 24 state governments, including the UK, Canada, and the USA, are actively working on the launch of CBDCs, and 13 more governments are initiating such projects today.

However, DeFi integration in financial institutions is impossible without regulation. Therefore, the key safeguards responsible for the financial system's stability and safety should be introduced in the DeFi ecosystem as well to ensure its adoption at the institutional level.

The key aspects of regulatory control and protection include:

- AML/KYC procedures for risk control
- Data privacy safeguards
- Cybersecurity measures
- Comprehensive governance and conduct standards for crypto banks
- Proper recourse tools
- Legal framework for smart contract-based business operations

Digital transformation of the banking industry is in full swing, and the transition to cashless economies is unavoidable. One of the signs of irreversible digitalization is that more than half of the world's central banks are developing digital currencies – CBDCs. These are the digital versions of national currencies regulated by central banks, aimed at promoting financial inclusion for unbanked and underbanked populations.

Over 100 CBDCs were in development as of July 2022, with financial experts arguing for their adoption due to the many benefits they are expected to bring to the national banking system:

- Greater resilience for domestic payment systems
- More competition among finance providers
- Better access to money among all population categories
- Greater payment efficiency
- Lower transaction fees
- Transparent, digitally traceable money flows

Technically, a CBDC is a form of stablecoin pegged to a specific national currency's exchange rate. Thus, CBDC transfers, trading, and investment will be analogous to operations with cryptocurrencies, with the only exception being the government's guarantee of exchange rate stability and security.

Active interest in CBDC is a reflection of modern financial system users' interest in digital finance and cryptocurrencies. Thus, CBDCs offer governments a tangible opportunity to partake in the global shift towards digital finance by offering digital analogs of national currencies.

Yet, launching a CBDC also comes with technical risks and challenges, such as the Markets in Crypto Assets (MiCA) requirements' coming into force in June 2024 and e-money issuers' mandatory compliance with the draft MiCA regulations expected by the end of 2023. MiCA standards were developed by the European Banking Authority (EBA) to ensure fair governance and set minimal reserve requirements for stablecoin issuers. Therefore, national banks should have resilient and properly secured infrastructures to protect CBDCs against hacker attacks, fraud, and exploits. There should be comprehensive mechanisms for data privacy protection and financial integrity; otherwise, CBDC ownership and transactions may become vulnerable to the same threats regular cryptocurrencies experience in the digital space.

As cryptocurrencies and crypto banking progress, the world's governments are trying to keep pace with those developments to ensure proper rule enforcement and regulation. A recent fall of FTX and massive losses of user money due to that collapse caused even greater scrutiny of crypto exchanges on the part of the governments. Lessons learned from FTX's downfall include:

- Need for better retail investor protection.
- Regulations for cryptocurrency advertisements.
- Better legal delineation of centralized and decentralized exchanges' principles of operations.
- Jurisdictional guarantees to investors.

Many governments are making regulatory moves in response to the emerging risks in the crypto sector. For instance, the EU has recently developed the Pilot DLT Market Infrastructure Regulation (PDMIR), put into force in March 2023, which oversees private sector businesses engaged in trading and settlement of crypto assets. All crypto exchanges are also bound to comply with the pan-EU AML Authority's regulations for KYC and AML procedures of user authorization. The USA has also introduced a broad regulatory network involving the Financial Crimes Enforcement Network (FinCEN), the Financial Stability Oversight Council (FSOC), the Commodity Futures Trading Commission (CFTC), and other related agencies overseeing financial and commodity transactions across the USA. Many other states followed the lead and have developed, or are currently developing, some form of regulatory framework for digital asset circulation.

However, with all regulatory moves taken across the world, there is still much to be done for proper financial security protection, money movement regulation, and oversight of digital currencies at the local and international levels. The forthcoming legislative changes are interagency guidance on liquidity risk management, interagency regulations on finder activities, stablecoin legislation, regulations covering crypto asset promotion, systemic stablecoins, and systemic wallets. There is also pending legislation on crypto asset secondary service provider (CASSP) status and tax treatment for digital assets. Thus, the crypto banking industry should expect many more regulatory requirements to surface in the coming years as the world gradually moves to digital finance.

The greatest loophole of present-day crypto legislation and regulation is the fragmented nature of state efforts on the way to gaining better control and oversight over cryptocurrencies. According to the fact sheet of the US Department of Treasury published in July 2022, global cooperation of digital assets is vital in the industry; yet, there has been little progress toward a genuinely global framework for cryptocurrency oversight and management

Roree Sarel et al. from the Oxford Business Law group suggest the following solution for this situation:

- Appointment of a centralized global regulator responsible for all aspects of the global crypto market.
- Supplementing the centralized regulator's oversight with decentralized regulation involving many different countries.
- Setting international standards similar to the Basel Accords standardizing bank-risk regulation for all countries to harmonize the countries' approaches to crypto industry regulation.

The IMF experts also support these suggestions and point out that the global regulatory framework for crypto assets should include authorized and licensed crypto service providers delivering critical functions, and each sphere of crypto asset use should follow a set of standards similar to those regulating the traditional banking sector. The IMF has also developed a strategy for crypto industry regulation at the international level to ensure a consistent and proactive global response to the changes in the financial ecosystem.

Top 10 Predictions for the Crypto Banking Market

Based on the trends observed in the crypto market today, the 4IRE team has come up with the top 10 predictions any crypto banking business should take seriously.



01 Rising Number and Competition of Crypto Banks

Experts project that the cryptocurrency banking market will grow at a CAGR of 6.8% and will reach over \$2.5 billion by 2029 – a \$1 billion rise compared to the 2021 market size of \$1.49 billion. North America dominates the market, with the highest number of new crypto wallets used by the population, and the Asian market is also predicted to witness a crypto banking boom due to the fast technological progress and intense investments in advanced banking technologies at all levels. The present-day leaders in the crypto banking market include US-based giants like Bitex International C.V. and Coinbase, the Jana-based CookBitX, and UK-based Solidi Ltd. and Digital Asset Services Ltd. However, as the market continues expanding at a fast pace, the global crypto-banking industry is bound to see new market players and tougher competition for the target audience.

02 Tighter Regulation and Control of Crypto Banking

As we've reviewed above, the regulatory environment is getting tougher for numerous crypto-related businesses, and crypto banks will hardly escape this tightening regulation as well. Many countries have developed their unique approaches to crypto regulation, from control identical to fiat currencies to their treatment as commodities. Yet, a comprehensive global framework for crypto regulation is underway to guarantee that cryptocurrencies are not used for money laundering and financing of crime and terrorism. Therefore, the crypto banks of the future will likely face consistent regulations covering their licensure, promotion of specific crypto assets, customer data protection, user identification, and cross-border transaction tracking.

03 Integration of Crypto Banking Services in Traditional Banking

The fast development of crypto banking doesn't mean that it offers an exclusive alternative to traditional financial services. In reality, cryptocurrencies can work well in tandem with traditional finance and augment the variety of services banks and banking institutions can deliver to their clients. Therefore, many traditional banks have expressed an active interest in blockchain technology integration in their financial operations, and we can expect the following trends in the near future:

- FinTech-bank collaborations in a variety of spheres.
- Refinement of compliance requirements for crypto-friendly banks.
- Blockchain applications in banking for better transparency and security.
- User privacy guarantees with blockchain solutions.
- Fee reduction with blockchain use for cross-border transactions in banking entities.
- Digital wallets with traditional and crypto functionality.

04 Comprehensive Security Standards for Crypto Assets

Since security is key in crypto payments, crypto banks will be pressured further to adopt rigorous security standards and guarantees for users. In this aspect, borrowing the experience of digital transactions with fiat currencies makes sense. For instance, security-related progress in online payments was achieved largely due to the implementation of PCI DSS (Payment Card Industry Data Security Standard). Thus, any organization non-compliant with the PCI DSS principles is banned by the centralized banks and not allowed to deal with money processing.

The same standard is currently in use in the crypto industry – it is referred to as CCSS, introduced in 2014 to guide companies on the secure management of crypto transactions. It complements the existing ISO 27001, PCI, and other standards and augments the standard information security practices currently used in digital payments. However, it is not identical to PCI DSS, as it only covers the secure management of crypto wallets and doesn't focus on the entire transaction flow.

Thus, the future of crypto banks is tight regulation of security under the CCSS standard, certification of crypto banking agencies by the Cryptocurrency Certification Consortium responsible for security oversight, and rigorous CCSS audits of existing projects to guarantee end-to-end user assets' protection.



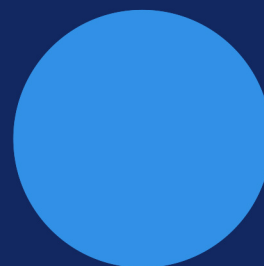
05 Rising Demand for Stablecoins

Stablecoins have witnessed a quick growth in number and diversity at the peak of the cryptocurrency boom in 2021. There was over \$130 billion of stablecoins circulating in September 2021 – a 500% increase compared to 2020. The trend has melted down a bit with the onset of crypto winter; yet, stablecoins are at the top of popularity when it comes to crypto banking. They are less volatile than other coins, so they have the healthiest potential for use in modern banking.

As they are pegged to stable fiat currencies, stablecoins offer many robust use cases for the banking industry. Here are some of them:

- Payments. Stablecoins offer an advanced, convenient method for sending p2p transfers and moving money across the globe without limitations. They can also form the basis for next-level payment technology, such as programmable money.
- Decentralized finance. Stablecoins will support the development of a more inclusive DeFi system because they are its vital building block. With the present-day problems DeFi faces, such as frequent project hacking, market manipulations, and an extensive user learning curve, stablecoins can play a critical role in the advancement of this ecosystem on the principles of higher stability and security.

Liquidity management. Stablecoin use within large financial institutions can guarantee proper liquidity risk management and compliance with regulatory requirements. Low commissions and instant transactions are the best options for internal cash movement without complexities.



06 UI/UX Advancements in Crypto Banking

Simple, intuitive user interfaces ensure a positive user experience, which is at the heart of any new technology's success. The way modern crypto-banking apps are designed can make or break this technology's mass adoption, so designers and programmers are currently working on making crypto banking apps appealing, user-friendly, and UX-optimized. Trends that will determine UI/UX advancements in crypto banking in the near future are as follows:

- Use of AI for better UX
- Implementation of chatbots and virtual assistants
- Personalized financial planning recommendations
- Mobile-friendly solutions
- Biometrics
- Voice processing functionality
- Gamification and interactivity

07 Smart Contract Integration for Banking Workflow Automation

The core feature of smart contracts with potential value for banking is their ability to automate transactions and remove intermediaries from this process. As a result, banking entities can make their operations secure, efficient, and transparent. Smart contracts can be universally applied in payments, lending, trade finance, insurance, and compliance controls. Some of the ways they are expected to be used in banking are:

- Broadening access to financial services for unbanked and underbanked populations. Smart contracts and digital money can be used without visiting a bank office, so people living in remote areas may gain access to services they were previously locked out of.
- Streamlining of cross-border transactions. Smart contract technology makes it easier and cheaper to move money across borders without complex documentation and expensive intermediation. Besides, cryptocurrency payments don't require settlement periods, and the recipient can get the transfer in minutes.
- Innovation and adoption of new business models in banking. DeFi and smart contracts enable innovative banking services, such as decentralized lending, automated market-making, yield farming, staking, etc. Thus, both forward-looking entrepreneurs and users can get access to a much broader variety of potentially profitable activities.
- Improvements in data integrity. Smart contracts get self-executed on the blockchain, thus guaranteeing full transparency and immutability of financial records. Anyone can access those records in the public ledger, which creates no space for disputes or fraud. The availability of open, reliable data that can be easily verified can assist users in decision-making and eliminate the information asymmetry of traditional finance.

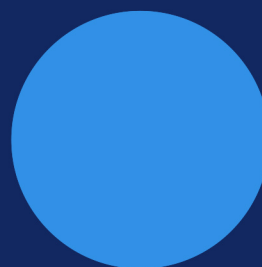
However, due to their self-executing nature, smart contracts used in banking require continuous code logic audits, testing, and precise coding. Besides, a comprehensive regulatory framework for smart contract execution is yet to be developed, so the foreseeable future promises great advancements in smart contract technology integration in the banking sector.

08 Closer Partnerships between Traditional Banks and Crypto Banks

The crypto boom of 2021 gave birth to many partnerships between traditional banks and crypto banking startups. However, the recent downfall of Silvergate Capital Corp, Signature Bank, and Silicon Valley Bank at the beginning of 2023 signaled concerns about the safety and soundness of such collaborations. There are also increased liquidity risks that a bank may experience from crypto-related deposits, suffering systemic vulnerabilities in cases when customers redeem their assets too quickly. The bankruptcy of FTX, one of the top three largest exchanges in the world, added caution to the subject of bank-crypto partnerships.

However, the trend for closer collaboration between traditional banks and crypto entities is irreversible for many reasons. On the one hand, traditional banks try to expand their service range and attract new customers with innovative, demanded asset types. On the other hand, crypto startups seek support from traditional banks because they need such partnerships to raise user and investor trust. Therefore, such collaborations turn out to be mutually beneficial, and more banks are observed to invest in crypto banking, launch additional crypto-friendly services, or join hands with existing startups to deliver comprehensive service coverage. Some examples are a partnership between Wise and N26, Monzo, and ZA Bank, as well as a recent bond between Radobank and a Norwegian FinTech Signicat. Other illustrative cases are:

- Deutsche Bank + Traxpay
- Banking Circle + SIA
- Tradeshift + HSBC
- Subaio + ABN AMRO, and the like.



09 Risk Management and Creditworthiness Solutions in Crypto Banking

Due to the lack of regulatory oversight and the high volatility of crypto assets, they still represent a considerably riskier alternative to traditional finance. The main sources of financial risks with which crypto banks will need to deal in the future are:

- Speculative nature of most crypto assets
- Aggressive marketing campaigns for new tokens and projects
- Promotion of complex products without adequate risk disclosure
- Lacking project accountability
- Availability of risky leverage to retail investors without experience
- Improper risk management at crypto-asset exchanges that pose risks to their solvency

Other challenges for the crypto banking projects' creditworthiness and risk management include pseudonymity of user wallets, complexities in asset holdings' identification, lack of transparency in transactions, and a lack of data reliability needed for adequate consumer protection.

10 Rising Investment in Crypto Banking Startups

Private and institutional investors are getting increasingly attracted to crypto banking startups, which can be seen from the recent successful funding rounds of many promising projects (see Table X). Overall, 55% of the world's top 100 banks have invested in blockchain or digital currencies of any kind, with the most active investors being:

- KB Financial Group
- Goldman Sachs (over \$698 million investments in 5 rounds)
- Commonwealth Bank of Australia (\$400 million, 4 investment rounds)
- Citigroup (\$215 million, 6 investment rounds)
- BNY Mellon (\$690 million, 3 investment rounds)

Notably, most of these investments were made between 2020 and 2022, and 2023 was largely unfavorable for crypto, mainly due to the collapse of FTX and the later demise of three top crypto-friendly banks. However, as the regulatory landscape for cryptocurrencies and crypto banking continues to evolve, the world is likely to see more promising startups and a new wave of investment in this irreversibly rising trend.

Creating a crypto bank project may seem overwhelming without a tried and tested template with functionality and architecture such software should embrace.

The 4IRE team has compiled all features and functions a crypto bank may include, organizing them in a handy, visual format of a blueprint for developers and businesses.

These features may be organized at four main levels, as discussed below.



Strategic level

The strategic level of crypto bank planning involves a corporate strategy and business strategy design, which lay the basis for the business model selection. Based on your strategic considerations, you can choose among plug-and-play banking solutions, banking as a platform, BaaS use from a third-party provider, or becoming a BaaS provider yourself. At this level, you also choose the required licensing depending on your business model and proceed to more concrete organizational planning of core business units.

APIs and Integrations Layer

You can significantly expand your project's functionality and service coverage by integrating third-party services via APIs. For internal APIs, you should consider payment processing, core banking, and webhook API types. When it comes to open APIs, here, the main focus should be made on social and location APIs. Open banking APIs are varied and diverse, including APIs for customer information, payments, administration, data analytics, budgeting and financial planning, remittance, and many more service aspects. It's also vital to include a variety of third-party APIs, such as social networks, user identity verification providers, customer management systems, mWallets, and the like.

Platform Layer

At the platform layer of your crypto banking project, all the core digital banking functionality should be determined to guide your development roadmap. This point is crucial in project success, as it shows what your crypto bank will offer to clients, and how it can add value in the highly competitive digital banking market. The main functionality aspects to consider are as follows:

Payments

These features are multiple and diverse in banking institutions, covering crypto payments, international transfers, invoices and statements, topping up the account, p2p payments, remittance services, bills and utility payments, SWIFT, NFC, and many more. Payment integrations are also worth considering, as people are growing increasingly tech-savvy and want to complete transfers with one click. Thus, you may integrate your app with Google Pay, PayPal, Samsung Pay, Venmo, or any other third-party payment provider to ensure a seamless user experience.

Investing and trading features

Modern banks increasingly offer related services to users, such as an opportunity to participate in IPOs, buy and sell bonds, ETFs, fractional shares, stocks, REITs, and many other securities in the stock market. Users should also be given an opportunity to add stocks to a watchlist, develop investment strategies, and auto-rebalance their portfolios.

Data analytics

Any decision-making thrives on big data, and your crypto bank can offer powerful tools to users, ranging from financial planning to budgeting, AI-powered analytics, retirement planning, and interactive dashboards. These features offer great UX personalization and add value to your product offering.

Authentication and verification features

Digital identity management plays a vital role in compliance with regulations, so you should have 2FA, KYC/AML, biometrics, and e-signature features in place. Multi-factor authentication may also give an additional protective layer to use data and funds.

Enterprise-level features

Crypto banks should be user-friendly and convenient not only to retail users but also to funds and institutional investors. To guarantee business-friendly solutions, you can consider invoice and expense management features, payroll systems, PoS hardware, salary payments, regulatory reporting, paychecks, tax and accounting management functionality, cash flow monitoring, and the like.

Accounts

A digital bank should support various accounts, such as individual, savings, sub-accounts, crypto accounts, IBAN accounts, etc. Business-friendly solutions may include multi-user access to accounts. The more exciting opportunities you offer, the greater flexibility and user satisfaction you can offer.

Lending features

Loans and lending features are vital in the banking sector. You should give your retail and business users an opportunity to get personal loans, SME lending offers, refinancing of existing loans, car loans, overdrafts for cards and accounts, revolving credits, and secured and unsecured loans. Many other options exist in this area to attract a greater user base with a need for access to finance.

Insurance features

Insurance is working in tandem with banking services today, so you can expand the service coverage with travel, health, accident, or motor insurance plans.

Banking cards

It's not mandatory for digital banks to offer physical cards, but some projects have incorporated them into their business offers. Thus, you can attract greater numbers of users with debit and credit cards, virtual card issue possibility, multi-currency card support, prepaid and travel cards, etc.

This is not an exhaustive list of features, as you can also add wealth management, tracking of earnings in real-time, card freezing for non-use periods, and many other exciting functions modern users will definitely appreciate.

As you can see, most of these features are shared by crypto banks and usual digital banks. We at 4IRE have collected the full list of solutions and services that crypto-native, crypto-friendly, and licensed crypto banks can offer to users (the feature set differs from entity to entity).

Crypto payments

This sphere of crypto banking should also cover p2p payments in crypto and fiat currencies, crypto-to-crypto transactions, crypto custody solutions, and cashing out to banks.

Exchanges

Users should be allowed to buy and sell crypto assets with fiat money.

Digital asset management

As cryptocurrencies differ from fiat currencies in many ways, you should incorporate distinct asset management features suitable for this class of assets. These include risk management, reconciliation, spreads and fees management, automated hedging features, and the like.

Cards

In terms of card management, crypto banks should also support crypto debit cards and card tokenization features to give their users freedom of transacting in the crypto world.

Lending/loans

should also be adapted to the crypto peculiarities, with crypto-backed lending, business-level lending services, and uncollateralized loan provisions.

Engagement and promotions

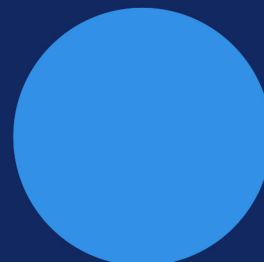
are highly popular in the crypto industry, and a crypto bank can offer exciting cashback deals, special membership conditions, gifts, rewards, and referral programs.

DeFi investing/trading features

are an exciting new world of functionality, which should embrace liquidity farming, staking, token swaps, crypto ETFs, crypto derivatives, and other financial instruments available in the crypto market.

Crypto bank creators can consider an even broader feature range that will cover multi-purpose digital wallets (multi-currency and NFT support), custody wallets, CryptoTV, Web3 dApp browsers, DAOs, etc. It's vital to keep in mind that the crypto banking industry develops at a fast pace, giving users new features, functions, and perks to enhance UX and win customer loyalty. Thus, businesses should keep pace with the fast changes and treat their users with innovative, handy features that ensure ultimate security, user-friendliness, and freedom of transactions.

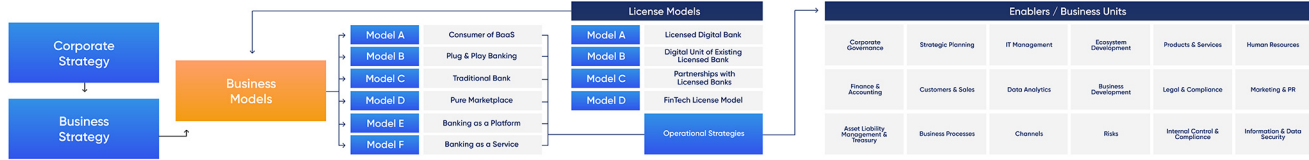
Finally, a crypto project should also determine the non-banking functionality of its software. Though it may seem auxiliary, these special features also contribute to UX/UI and user satisfaction. Thus, you may consider e-commerce functionality, mobility features like deliveries and grocery/food purchases with cryptocurrencies, travel perks, social media connectivity, entertainment elements, and special features for education, gaming, real estate, etc.



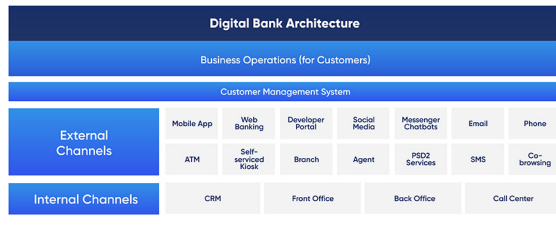
Digital (Crypto) Bank Puzzle



Strategic Level



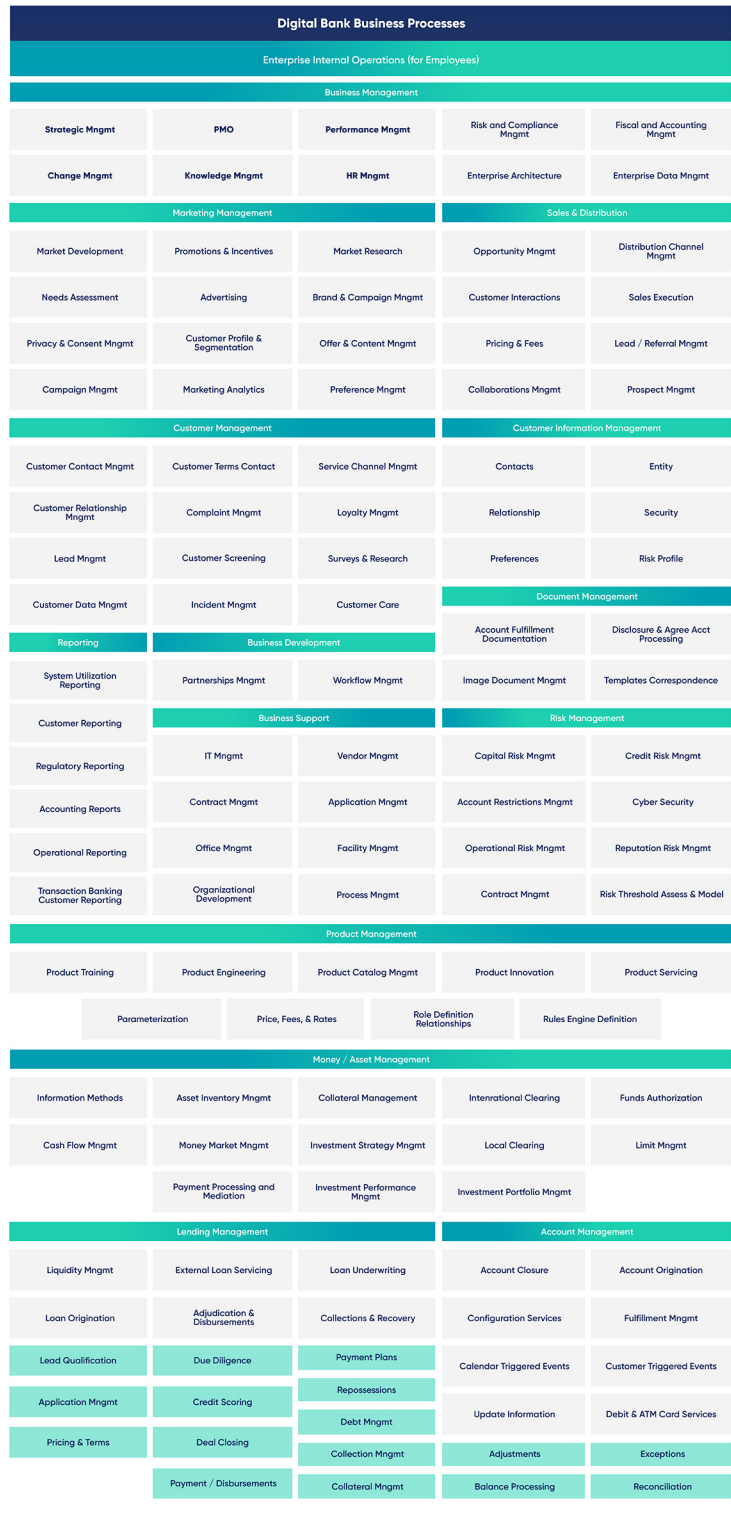
Omnichannel Communications Layer



APIs & Integrations Layer



Platform Layer



Platform Layer

Engagement & Promotions			For BuLending / Loanbusiness		Infrastructure Management			API Management																																
Integrated Chat	Live Support Chat	Cashback	Purchase Lending	Merchant Lending	Database Mngmt	Hardware Mngmt	Platform Mngmt	Messaging Mngmt	Monitoring	User & Rights Management																														
Referral Program	Special Membership	Rewards	Supply Chain Finance	Micro Credit	Quality Assurance Management				SLA Mngmt	Monetization	API Security Mngmt																													
Gamification	Refund	Subscription management	Credit Scoring	Student Loan	Parameters Gathering	QA Notification	QA Inspection	QA Revision	Accounting																															
Notifications	Loyalty Programs	Chargeback	Personal Loans	Refinancing	Policy & Claim Management				Treasury Administration	Settlements & Reconciliation																														
Gift Cards	Discounts	Coupons	SME Lending	Mortgage Mngmt	Contract Lifecycle Mngmt	Claim Settlement	Claim Administration	Contract Administration																																
Analytics					Data & Analytics																																			
Financial Planning Tools	Budgeting	Smart Budgeting	Overdraft	Secured Loans	Data Mngmt		Analytics Products & Tools for Employees																																	
Accounting services integration	AI-powered Analytics	Interactive Dashboards	Unsecured Loans	Revolving Credits	Data Platform	Data Warehouse	Journey Analytics	Predictive Analytics	Dashboards & Key Insights																															
Personalised Reports	Retirement Planning		Gold Loans	NPA management	Reference Data Mngmt	Data Loading & Processing	Customer Profitability	Machine Learning Enabled	3rd-Party Data																															
Authentication & Verification					Cards																																			
Digital Identity Mngmt	Digital Onboarding	KYC / AML	Bank Linking	ATM withdrawals	Debit Cards	Virtual Cards	Data Lake	Ops Data Store	BI / Ad-Hoc Analysis	Prescriptive Analytics	Segmentation																													
Dynamic CVC2	2FA	Biometrics	Credit Cards	Special Cards	Junior/Student Cards	Single-use cards	Analytics Products & Tools for Customers		Embedded Analytics	Performance Indicators	Market Data Mngmt	Reporting	Campaign Mngmt																											
Multi-factor Authentication	E-sign		Multi-currency Cards	Prepaid Cards	Multi-cards	Travel Cards	AI Functionality																																	
Insurance					Appearance																																			
Travel Insurance	Health Insurance	Accident Insurance	Freeze card	Notifications	Trade Platform	Earning Tracking	Online Customer Support	AI Biometrics		Personalized Insights	Advanced Analytics / Forecasts	Automated AML / KYC	Authorization & Identity																											
Motor Insurance	Special Insurances		Others		Wealth Management		AI-powered Decision-Making (Digital Marketing)																																	
Islamic Banking	Portfolio Mngmt	Cash Mngmt & Virtual Access	Islamic Banking		Portfolio Mngmt		Cash Mngmt & Virtual Access		Customer Acquisition		Credit Decision Making		Monitoring & Collections																											
Additional, Non-Banking Functionality (from FinTech SuperApps)					Additional, Non-Banking Functionality (from FinTech SuperApps)																																			
Payments					Exchange					E-Commerce					Travel																									
P2P Payments	Cash Out Directly to Bank	Crypto-to-Crypto	Buy Crypto	Sell Crypto	Seller's Profile					E-Commerce Website Builder					Custom Solutions for Sellers					Transportation Ticketing					Booking															
Invoices & Statements	Donations	Crypto Custody	Engagement & Promotions		Discounts					Online Shopping					Search Filters					Insider Offers					Transportation Rent					Airport Lounge Access										
Digital Assets Management					Special Features					Mobility					Social Media																									
Risk Mngmt	Spreads & Fees Mngmt	Automated Hedging	Referral Program	Rewards/ Gifts	Task/Earn center	Delivery					Groceries & Food					Follow					Messaging																			
Reconciliation	Crypto Investments Consulting	Strategy & Portfolio Management	Web3 DApps Browser	DAO Elements		Special Features					Posts					News Feed																								
Digital Wallet					Investing & Trading (DeFi)					Mini-Programs Creation					Games					Social Media Portfolio					Entertainment															
Cold Storage	Custody Wallet	NFT Storage	CryptoTV	Crypto Taxes & Accounting		Invest Club					Education					Ads call blocker					Cinema					Books					Sport					Theater				
Cards					Lending and Loan Services					Vaccination QR code checker					Pedometer					Physical checks sending					Real Estate															
Crypto Debit Cards	Cards Tokenization	Crypto Credit Cards	Index Funds	Crypto ETFs	Lending Services for Businesses	Crypto Debit Cards					Cards Tokenization					Crypto Credit Cards					Individual Loans					Crypto-Backed Loans					Uncollateralized Loans					Lending Services for Businesses				

Core System Layer

Enterprise Internal Operations (for Employees)																					
Business Management																					
Bank Accounts	Customer MDM	Security	Cards	Origination System	Customer Data	Deposit Mngmt	ATM Network Mngmt	Lending	Enterprise Data Warehouse	Fraud Prevention	Depository Receipts Mngmt	Cash Mngmt	Fund Transfer & Remittance	Currency Exchange Mngmt	Transaction Authorization						
Risk & Compliance						Payments Processing Engine															
RFR	FATCA	Customer Compliance	Watchlist	KYC	Open Banking Policy Engine	IFRS Reporting	Financial Risk Management	Correspondent Bank Fulfillment	Payment Tracking	Disputes & Chargeback	CRS Reporting	Tax	Fraud Monitoring	AML Monitoring	Guideline Compliance	Compliance Reporting	Security Assurance	STAR Tool	Check & Draft Processing	Central Cash Holding	Just-in-Time (JIT) Funding
Risk RADAR																					

Infrastructure Layer

Infrastructure Services											
Computation				Storage				Network			
Data Base											
Cloud (Private)											
IoT	Robotics Services	Artificial Intelligence & Smart bots	Data Reconciliation Services	Security & Fraud Services	Augmented Reality	Experience Services - Omnichannel	NLP	Analytics & Contextual Services	Digital Content Management Systems	Alerts & Notification Engine	Identity & Authorization Services
Backend Integration Service											

Core System Layer

Next goes the core banking system, which usually incorporates the elements of cash management, currency exchange, fund transfer and remittance, ATM management, authorization of money movements, etc. Risk and compliance features also belong to this level of operations, including KYC, RFR, FATCA, taxes, CRS reporting, risk RADAR, AML monitoring, and other tools for compliant, legal, and safe bank functioning. The payments processing engine is responsible for disputes and chargebacks, correspondent bank fulfillment, check and draft processing, central cash holding, etc.

Infrastructure Layer

Infrastructure services are responsible for computations, data storage, and network operations. The bank's database also belongs to this layer, and the private cloud storage handles many critical functions, such as NLP, robotics services, analytics, AI and smart bots, and the like.

How to start a Crypto Bank?

As statistics and steadily rising user interest in crypto solutions show, launching a crypto bank is a good business idea today. You have numerous opportunities to monetize the project and occupy a solid niche in the fast-growing crypto banking industry. But for many businesses, especially those new to the DeFi and Web 3.0 world, the crypto bank project may seem too overwhelming or overly complex at the beginning. Here's a detailed plan for building a good strategy for your business idea and transforming it into a realistic, practical roadmap for crypto bank design and launch.



Crypto Bank Strategizing

Strategy is the basis of any effort you make to build a new project that meets user needs and expectations and reflects your business mission and philosophy. Here are the core steps you need to take to arrive at a sustainable, consistent strategic plan for a winning crypto bank.

Environmental Analysis

STAGE 01

You should look around and assess the industry you're planning to enter, taking a closer look at the existing players, your main competitors, and the target audience. It's vital to understand what drives modern businesses' successes and what leads to their failures, who the main stakeholders are, what market leaders have to offer, and how organizations position themselves.

Strategy Intent

STAGE 02

You should look around and assess the industry you're planning to enter, taking a closer look at the existing players, your main competitors, and the target audience. It's vital to understand what drives modern businesses' successes and what leads to their failures, who the main stakeholders are, what market leaders have to offer, and how organizations position themselves.

Strategy Development

STAGE 01

At this stage, you shape a more concrete and detailed strategy for your business project. It covers corporate strategy, business strategy, and functional strategy elements (data analytics, technology, marketing, sales, legal issues, HR, finance management, and the like). You also get an opportunity to come up with tangible objectives and deliverables that will help you determine whether you've achieved the initially set goals.

Strategy Implementation and Execution

STAGE 02

It's time to get down to action, moving from strategy to its realization. You should create a strategy executive dashboard with the core elements (roadmaps, budgets, and tasks) and a strategic management office that will track the implementation of the programs' portfolio.

STAGE 05

Strategy Implementation and Execution

Once the key points from the strategic plan have been implemented, it's time to see whether the effort was successful. Use the dashboard to assess the performance and KPIs and make adjustments if not all goals have been met. Modify the goals or implementation approaches and get back to a new strategic cycle.



Crypto Bank Roadmap

The crypto bank development roadmap is the full, detailed breakdown of tasks and stages from your project's start to finish. It begins with the pre-discovery stage of project conceptualization and ends with a fully functional product. We at 4IRE have prepared a handy infographic to illustrate the dynamics of project development across all aspects and stages – see Table X. Let's stop on every aspect in a bit more detail.

Research and Analytics

At the start of the development process, research and analytics give essential support for decision-making in the form of data and insights on competitors, the external environment, and customer analysis. The company may also embrace its internal environment, products, and services to proceed with the R&D strategy and match it with business needs. More detailed customer and market segmentation, business requirements collection and analysis, and feature list formation take place at the discovery stage, and as soon as it's time to develop an MVP or modernize the existing service, research and analytics entail analytical support, search for third-party partners, and continuous market monitoring.

As the project moves to its end, researchers and analysts provide ongoing knowledge base formation and management, business analytics support, and market analysis. The process never ends with revenue growth opportunities research, trend analysis, and industry innovation analytics taking place throughout the project's existence.

Strategy Development

Strategy is developed based on the insights from environmental analysis, so it's usually refined at the earliest stages, taking the form of a corporate strategy statement, business strategy statement, and business model definition. These insights are further refined into an agile operating model and organizational governance guidelines.

As your project progresses, these guidelines transform into objectives and key deliverables, initiatives, and the activation plan for launching the software. In the final stages, strategic work is mostly tied to scaling and growth strategizing.

Business Development

The business development aspect starts with PMO establishment at the beginning of work on the project and also involves the ecosystem strategy with relevant business documentation. In the later phases, as continuous project management and road mapping go on, business development usually involves vendor selection and onboarding, API banking integrations, merchant collaborations, third-party service integrations, and co-creative solutions and partnerships. At the end of the development process, the functions of business development mostly cover change management, key business infrastructure operations, and program management.

Legal Strategy

The legal aspect of a crypto bank's roadmap is vitally important. Thus, extensive legal requirements analysis and regulatory framework and jurisdiction analysis are done at the earliest stages of project development. These insights inform a legal strategy and allow company incorporation and office opening in line with the local legislation. Next, corporate governance and user documentation are prepared, with data protection, data privacy, and GDPR compliance procedures developed to manage risk and compliance issues. Licensing is also instrumental for legal crypto bank operations, so work on the licensing issues undergoes throughout the whole project, with the final arrangements made before the bank's deployment.

Product Development

For your digital product to stand out, you should start with product and service benchmarking, product analytics, and feature list detailing. You also need to take an in-depth look at your target customers and their needs. Next goes the product strategy with a detailed product definition and a unique customer value proposition. Later phases, from MVP development to the solution's launch, mostly involve the R&D work, such as feature prioritization, MVP creation and testing, product and service integration, and deployment. All critical digital banking and crypto features are programmed and integrated at these stages.

Omnichannel Strategy

Omnichannel communication should encompass the design of communication channels and the assessment of their performance. The strategy also includes planning for communication aspects and customer support aspects that can enhance customer experience and ensure seamless user experience.

Technical Development

A crypto bank is a technically complex project, so its design and development involve many technical tasks. During the pre-discovery phase, you mostly deal with requirement collection and assessment, functional and non-functional requirements, and the transformation strategy your project is expected to achieve. The following stage involves more concrete steps toward digital IT strategy and architecture development; you should also have a well-formulated IT operating model to proceed to MVP development.

Later stages relate to MVP architecture and infrastructure, covering all essential technical features and core banking system elements. The prototype is tested after the development work is over, and the product's deployment may be scheduled once all technical aspects are checked for operational efficiency and the absence of bugs. The final stage of technical development work usually entails scaling, maintenance, and digital marketing efforts – end-to-end product support.

Marketing & PR

The marketing & PR work starts with marketing research and target market segmentation to understand who the product will be meant for. These insights lay the foundation for a go-to-market strategy, branding, and positioning concepts. The team should also come up with an effective client acquisition strategy and BTL marketing ideas. As the product is ready for launch, the marketers' job is to attract customers and engage people through social media and other marketing channels.

Customers & Sales

The customer is at the heart of any project today, so a business idea starts with the discovery of customer needs and the development of a customer-centric strategy for product promotion. Next, the sales team creates a sales and customers strategy that incorporates the CX design features, customer retention and monitoring, CRM, CX alignment, etc. Once the product gets deployed, the sales & customers experts deal with referral programs and collaborations.

Financial Strategy

Any digital project is a money-intensive undertaking, so you need to conduct precise financial planning to ensure the project is feasible. Start with project assessment, financial analysis, and financial resources estimation. Based on these input data, you can develop a financial model, strategy, and investment plan. To proceed to later stages, you need to secure VC funding and find the money for the MVP. After that, financial management is usually related to accounting and reporting.

ALM & Treasury

ALM is the coordinated management of your entire balance sheet, and it should be optimally organized for the project's transparency and stability. ALM & Treasury management procedures are essential for timely risk mitigation and effective project governance.

HR Strategy

Your crypto bank will be developed by a team of people – experts with diverse expertise and tech stack. Thus, you should estimate the HR requirements at the start of the project, determining how many people you will need for organizational and technical work. Write vacancies to find the lacking staff, formulate a detailed HR strategy, corporate culture, and assign a CEO to lead the project to success. Most of the HR-related work on the project onwards involves talent recruiting and people management.

Risk Management

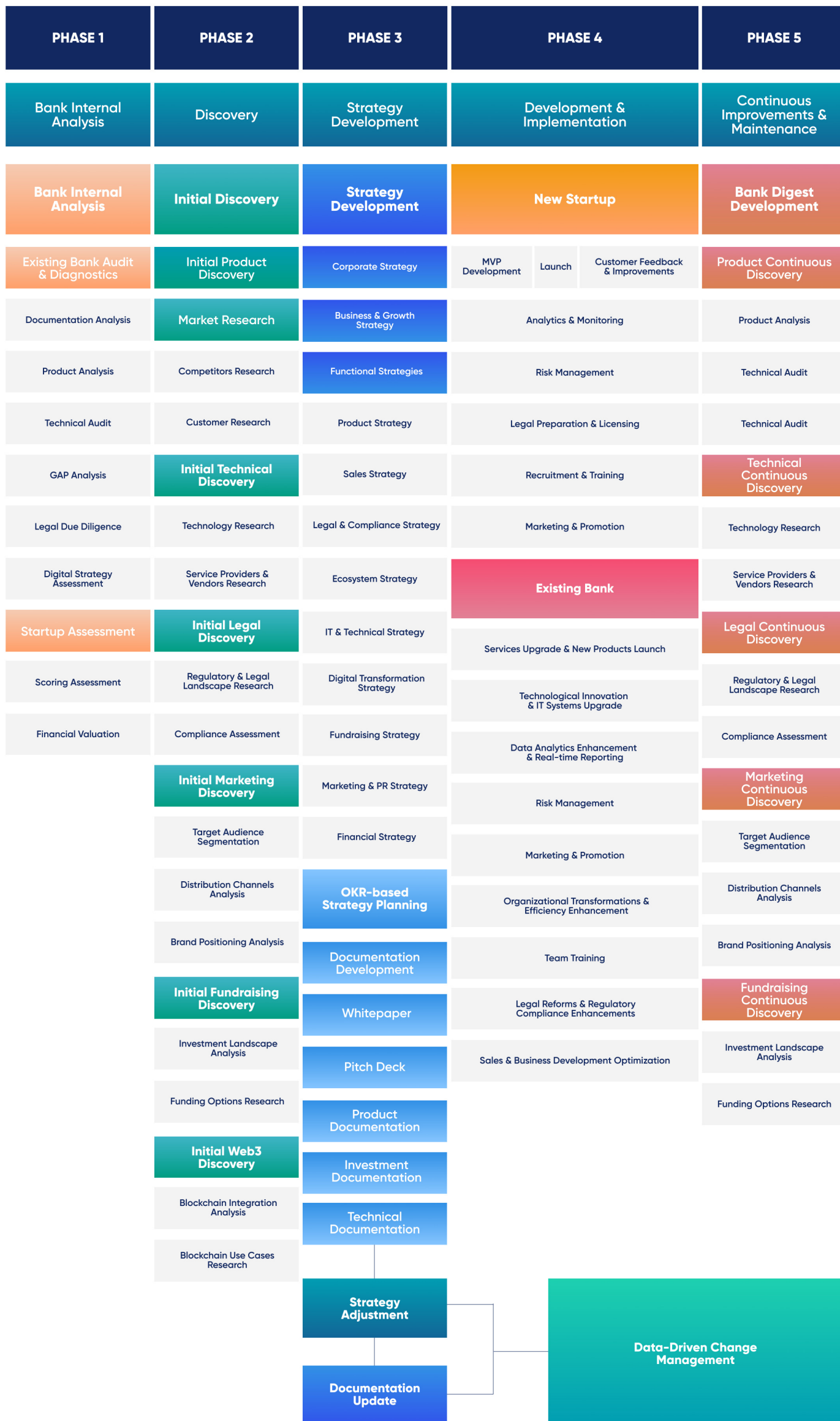
Risks await a crypto banking project at all steps, so it's vital to anticipate them and develop proactive approaches to risk aversion, identification, assessment, and management. These planning activities take place at the start of the project.

Internal Control & Compliance

Internal controls are vital for proper risk prevention, assessment, effective operations, financial consistency, and strategy compliance at all stages of project development. You need to develop standardized, automated controls aligned with workflow management systems at the start of the project, thus ensuring that your organizational goals are met, and operational effectiveness is high. Well-organized controls also guarantee accurate reporting, legal compliance, and policy alignment.

Information & Data Security

Cybersecurity is at the heart of any software development project, especially when it comes to sensitive user data and finance management. Your project planning should start with an in-depth analysis and research of existing cyber threats and the cybersecurity landscape. After that, your team will develop practical guidelines for cybersecurity measure integration and comprehensive protection of the crypto bank's core processes and infrastructure. Cybersecurity should be properly tested before deployment, with continuous maintenance and upgrade of protective measures in the process of the crypto bank's operations.



How Can We Help?

At 4IRE, we always focus on top-quality service, which presupposes the formation of cross-functional teams comprised of experts with a unique tech stack, competencies, and experience. They work as a single, fine-tuned mechanism to deliver stellar tech solutions to clients. We have a large team of professionals with extensive expertise, a strategic vision of the crypto market, project management know-how, and the best international-level practices in the digital banking and crypto industry. This is why we always guarantee end-to-end service coverage and a cross-functional approach to problem-solving.

Our proprietary work algorithm for crypto banking projects includes:

- Onboarding followed by a pre-discovery phase, at which we conduct a comprehensive analysis and audit of your business idea, diagnose its marketability, and assess its market potential.
- Next comes the discovery stage with a more precise estimation and assessment of the workflow.
- Strategizing and development are the culmination of our collaboration, encompassing all development work and alignment of your technical solutions with a broader strategic vision and goals of your business.

At present, 4IRE clients interested in the digital and crypto banking industry can enjoy the following services:

- Digital transformation. We help businesses reach a fundamentally new level of technical excellence by modernizing and automating their workflows, architecture, and underlying technology.
- Technical development. 4IRE experts can create banking solutions, blockchain-based software and platforms, and cybersecurity products using state-of-the-art technologies to enhance your business efficiency, safety, and productivity.
- Research and analytics. We empower existing businesses in development, expansion, and new market entry with data-backed insights and thorough market analysis.
- Consulting. Our professionals in the sphere of business analytics, marketing, sales, and product development can consult you on any aspect of business you want to enhance or transform, suggesting the best way to go with these digital transformations.

An extended team of 4IRE Group, Actana Research, and Aurum Law Firm provides a comprehensive, well-planned service mix tailored to crypto bank creation projects, which covers:

- **Research and analytics**
- **Strategizing support**
- **Fundraising assistance**
- **Technical development**
- **Cybersecurity solutions**
- **Blockchain development**
- **Banking solutions**
- **Legal and compliance aspects**

Thus, by choosing 4IRE as a trusted crypto bank development partner, you get a unique package of benefits:

- **Endless customization.** All technical solutions we offer are highly customizable in compliance with your project vision, strategy, and business goals.
- **Microservice architecture.** Our projects are modular by design, giving you the freedom to develop and deploy services one by one without the need to adjust the entire architecture.
- **Tried and tested frameworks.** Our ready-made solutions can make the development process way faster and cheaper, thus giving you a competitive advantage in the fast-moving banking market.
- **Flexibility of pre-configured solutions.** We offer many pre-built modules with flexible features, thus giving you an opportunity to tweak all elements to your unique business idea and requirements.
- **Holistic approach.** Our team treats every aspect of the project as a vital part of the larger product, so you will never experience fragmentation or mismatch at various development stages.
- **Composable services.** Due to the use of highly flexible pre-built modules, we can create any composable service to your liking without limitations in functionality and design.
- **Omnichannel UX.** We strive to offer a consistent, positive user experience at all levels of user interaction with your banking products across all communication channels.
- **Cloud-native solutions.** All products we build at 4IRE are cloud-native, giving you the freedom and flexibility of cloud capacity without sticking to the local server or hardware limitations.

Modular business solutions and designs. Our modular approach to business architecture development and design allows clients to work with minor aspects of their existing products without the need to build new solutions from scratch.

Analytics Services		Consulting services		Continuous Bank Support
Bank Diagnostic & Assessment	Project Initial Discovery	Strategy Development	Fundraising Consulting	Bank Performance Analytics
Legal & Compliance Review	Initial Product Discovery	Corporate Strategy	Legal & Regulatory Consulting	Analytics Digest Development
Technology Assessment	Initial Technical Discovery	Business Strategy	Marketing Consulting	Project Continuous Discovery
Financial Audit & Assessment	Initial Legal Discovery	Functional Strategies	Documentation Development	Product Continuous Discovery
Customers & Stakeholders Surveys	Initial Marketing Discovery	OKR-based Strategy Planning		Technical Continuous Discovery
Operational Efficiency Analysis	Initial Fundraising Discovery			Legal Continuous Discovery
Data & Analytics Evaluation	Initial Web3 Discovery			Marketing Continuous Discovery
SWOT Analysis				Fundraising Continuous Discovery
				Web3 Continuous Discovery

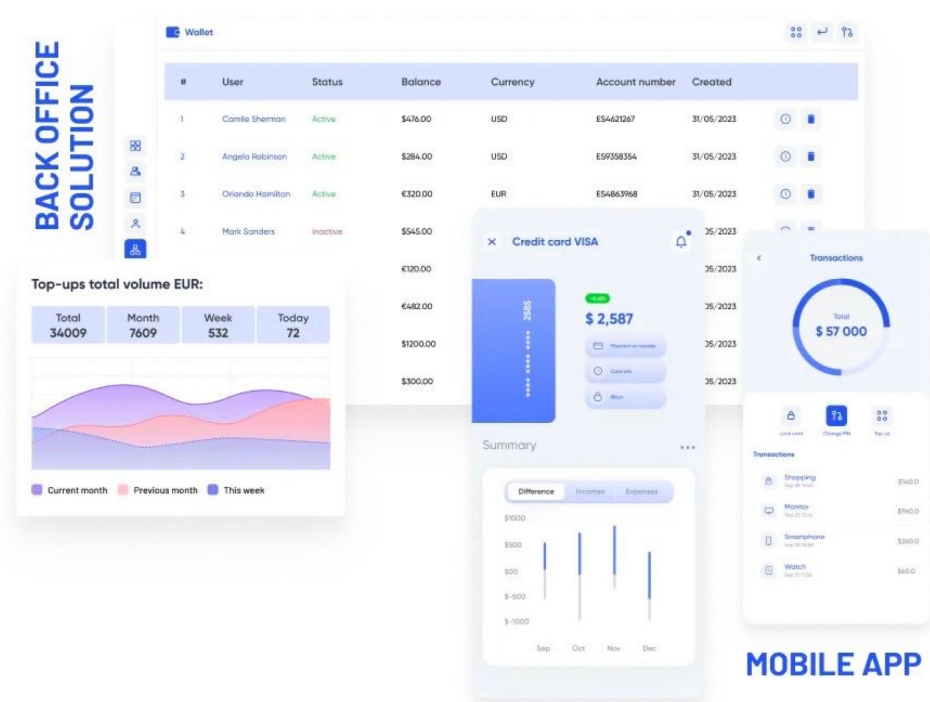
Technical Development Services

Banking Solutions	Blockchain Solutions	Cybersecurity	Technical Support
Digital Banking Services	Crypto Banking Services	Information Security	Software Maintenance & Updates
Core Banking System	Digital Wallets	Data Security	Integrations Support
Custom Integrations & APIs	DeFi Infrastructure	Penetration Testing	Technology Scouting
			Database Management
			Continuous Monitoring & Troubleshooting
			User Training & Support

Final Word

The key takeaway from this research is that banking and crypto businesses are closely interconnected. While crypto emerged as an ultimatum to traditional banking intermediaries and gave a promise of privacy and decentralization, the present-day regulatory pressures urge crypto businesses to form close ties with traditional banks to ensure compliance. No banking institution, whether regular or crypto, can do without the basic set of banking services, like payroll and account settling. Therefore, the future of crypto banking is intimately tied to banking in the classical sense, and proper integration of crypto and digital banking features is a secret formula for such projects' success.

Now that you understand the backstage of crypto bank project development much better, you can see that there can be no better moment to join this industry than now. Contact 4IRE to explore the exciting, promising world of crypto banking opportunities today. We're ready to build a robust, technically superior, and feature-rich product for your success in this vibrant market niche.



4IRE offers state-of-the-art solutions for crypto bank development to help you enter the niche and reap the benefits of quick industry expansion. The 4IRE team tracks the sector and offers innovative software to clients, helping all our partners stay ahead of the competition and embrace the latest FinTech technology. Our products are compliant with rigorous cybersecurity and user authentication standards, compatible with traditional and digital banking solutions, suitable for seamless cross-border transfers, and infinitely scalable to keep pace with your business needs. From white-label crypto bank software to an innovative crypto project built from scratch, we have the creativity and tech expertise to build your new winning crypto banking solution for ultimate success.



"Embarking on the journey to establish a Digital Crypto Bank demands intricate, multifaceted collaboration from professionals spanning several domains, including IT developers, analysts, business strategists, and legal experts. We've crafted this Crypto bank market research to provide our holistic, proprietary perspective on the subject matter, shedding light on the vast array of challenges and queries that arise. Our team stands poised to offer invaluable expertise in the realization of any initiative within the crypto banking realm and fintech solutions."

Helen Petraschuk
Managing Partner at 4IRE



Our Partners



Actana Research: A dynamic and ambitious analytics and consulting company specializing in providing thorough research, actionable insights, and strategic advice to Web3 startups and FinTech projects. Their mission is to empower startups and early-stage ventures with visionary expertise, advanced methodologies, and analytical support throughout all phases of project development.



Aurum: A law firm that specializes in offering legal advice, consulting services, and regulatory and compliance solutions to companies operating in the AI, Web3, and FinTech sectors.



ProcessMIX: A low-code app development platform designed to simplify the coding process and cater to a wide range of workflow design needs for businesses, making it a user-friendly solution for app development.