

# An overview of PwC Financial Services - **Digital Assets** Offering in Europe

July 2023



# Agenda

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Key aspects to  
consider



# Key aspects: Legal and Regulatory

Helping clients navigate the EU's crypto-assets regulatory framework and secure benefits



## Current Financial Services Regulation

EU financial markets are chiefly governed by MiFID II (and IFR/IFD). Classification of crypto-assets as “financial instruments” under MiFID II, depends on Member States' definition ahead of any further EU-level harmonization.

Hybrid features of tokens may result in classification of investment tokens as a transferable security or other forms of financial instruments such as a derivative.



## Markets in Crypto-Assets Regulation (MiCAR)

Key objectives include ensuring legal clarity, consumer and investor protection, market integrity and financial stability, while promoting innovation and addressing the challenges caused by fragmented national frameworks.

MiCAR captures crypto-assets not regulated by the current framework, such as:

- “**asset referenced token**” (**ART**)
- “**e-money token**” (**EMT**)
- other crypto-assets including “**utility token**”

MiCAR **in-scope firms**: those conducting any business activity related to crypto-assets in the EU are likely to fall under MiCAR (including non-EU firms). MiCAR exempts services provided by non-EU domiciled firms on the basis of reverse solicitation.



## EU Digital Finance Package (DFP)

The EU is creating a **Digital Single Market**:

- a regulatory framework facilitating digital innovation
- promotion of data-driven finance
- addressing challenges & risks with digital transformation

The Commission has published and moved to implement further EU legislation, along with “technical standards” and supervisory guidance, relevant to crypto-assets:

- Directive with targeted amendments to the existing body of EU financial services regulatory requirements (complemented by changes to prudential regulatory treatment of certain financial services firms to crypto-assets)
- Since March 2023, the DLT Pilot Regime or PDMIR creates the world's largest sandbox regime for industry and regulators alike to gain experience and develop infrastructure for trading and settlement of crypto-assets
- EU regulation on digital operational resilience for the financial sector (**DORA**), published in the Official Journal of the EU in December 2022

# Key aspects: Legal and Regulatory

Issuers and service providers can begin to benefit from a single EU-wide rulebook



## DLT Pilot Regime - an EU-wide regulatory “Sandbox”

Since March 2023, industry and regulators have been able to gain further understanding in the context of the DLT Pilot Regime on the application of distributed ledger technology (DLT) in market infrastructures.

Operators of **DLT- MTF**, **DLT-SS** and **DLT-TSS** infrastructures can receive licenses under MiFID II/ CSDR under simplified conditions under the pilot regime provided that specific organizational requirements are complied with to mitigate DLT-associated risks.

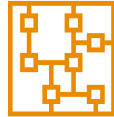


## Crypto-asset Service Providers (CASPs) and crypto-asset issuers (CAIs) - key obligations at a glance

Crypto-asset services in the EU within the framework of MiCAR can only be provided with a license. Once authorized, **CASPs** will benefit from the EU-wide passport and can provide crypto-asset services across the EU. Issuers of stablecoins will not be subject to authorization by NCAs for offerings below EUR 5 million.

**CAIs** will have to meet a set of obligations before making an offer of crypto-assets (other than ARTs or EMTs) to the general public in the EU or in order to request admission of such crypto-assets to trade on a trading platform.

Many firms will want to start considering how and where to apply for their CASP permissions under MiCAR and any other licenses for any MiFID II / IFR/IFD activity.



## Markets in Crypto-Assets Regulation (MiCAR) - a single rulebook

Under MiCAR, 'financial instruments' will be subject to the existing financial services rules (in particular, MiFIR / MiFID II), while certain (but not all) other forms of 'crypto-assets' will be subject to the single rulebook established by MiCAR.

MiCAR introduces rules on crypto-asset services, including authorization and ongoing supervision requirements for crypto-asset issuers (**CAIs**) and crypto-asset service providers (**CASPs**).

MiCAR introduces exemptions for certain authorization requirements (plus “top-up” for certain firms with existing licenses) as well as for publishing whitepapers.

### Obligation to publish a 'whitepaper' does not apply where:

- crypto-assets offered for free/ created through mining/ unique and not fungible with other crypto-assets
- offering is made to < than 150 natural or legal persons per Member State
- total consideration < EUR 1 million or if offering is addressed exclusively to qualified investors

# Key aspects: Tax

Depending on the qualification of the proceeds of the token issuance, different tax consequences can result. Issuers can seek tax clearance from the relevant tax authorities on a country by country basis across EU Member States



## Tax Rulings

- There is the possibility to obtain a tax ruling from the relevant tax authorities in order to confirm the income tax treatment / withholding tax and stamp duty questions of the token issuance and subsequent operations.
- Tax rulings and treatment (rather regrettably) currently differ from EU Member State to Member State.



## Income Tax, Withholding Tax, Stamp Duty Tax, VAT

- Since token issuance can have various forms it can either qualify as equity, debt or any other type of financial arrangement (e.g. sharing of profits or EBIT). Whilst proceeds from equity- or debt-like instruments may not constitute taxable income, other type of arrangements typically could. Hence, it is crucial to analyse the income tax consequences and the possibility of offset (part of) the income with corresponding provisions for future development.
- Payments to token holders for tokens qualifying as debt or equity may generally be subject withholding taxes. For other types of token issuances it should be analysed whether the payments are treated as deemed dividends and therefore subject to withholding tax as well. Even buy-back-and-burn arrangements might be subject to withholding tax and therefore a careful analysis and tax ruling is essential.
- Since many security tokens may qualify as taxable for stamp duty purpose, the activities of the trading with such tokens need to be analysed to avoid stamp duty liability, where such tax applies.
- Whilst security tokens are typically exempt from VAT, relevant operational models need to be carefully analysed to avoid VAT leakage on services imported. Such services might be subject to reverse charge VAT which might not be recoverable depending on the overall activities of the entity.

# Key aspects: Cross-border considerations

Cross-border marketing and distribution of security tokens can trigger the application of foreign financial market laws; cross-border sales of security tokens can have an impact on taxation.



## Cross-border considerations

- With an token issuance, the issuer regularly intends to attract investors from many different countries.
- If the token is also classified as a security in the countries in which the targeted investors are domiciled, the issuer must comply not only with the financial market laws of its home country (e.g. an EU Member State) but also with the financial market laws of the countries in which the investors are domiciled.
- Amongst others, the following topics have to be considered on a country-by-country basis:
  - ✓ How will the issuer reach its target market and what are the statutory concerns regarding marketing of security tokens?
  - ✓ Can the security token be qualified as financial product/investment product in the jurisdiction where the targeted investors are domiciled?
  - ✓ Can the security token be distributed into every country of the target market?
- Therefore, in case the issuer intends to market and distribute its security tokens on a cross-border basis, it is highly recommended to perform a country-by-country legal and regulatory assessment.



## Cross-Border Tax

- When issuing and selling tokens cross-border, it should be ensured that such issuance does not constitute a taxable services for local VAT purposes which could lead to a local VAT liability and registration / filing obligations. This would have to be checked and confirmed from the local perspective (e.g. in the biggest markets).

# Why PwC Financial Services - Digital Assets Solutions?





We are the leading professional services network in the world, helping organizations and individuals create the value they are looking for.



Countries

152

Locations  
More than

742

One Network  
One PwC

#1

Professional Services  
Network in the World

Employees  
More than

328,000

Providing Assurance,  
Tax & Legal as well as  
Advisory Services

84% of Global Fortune  
500 Customers

More than 100,000  
Entrepreneurial &  
Private Businesses

billion \$ turnover

50.3

2022 Revenue

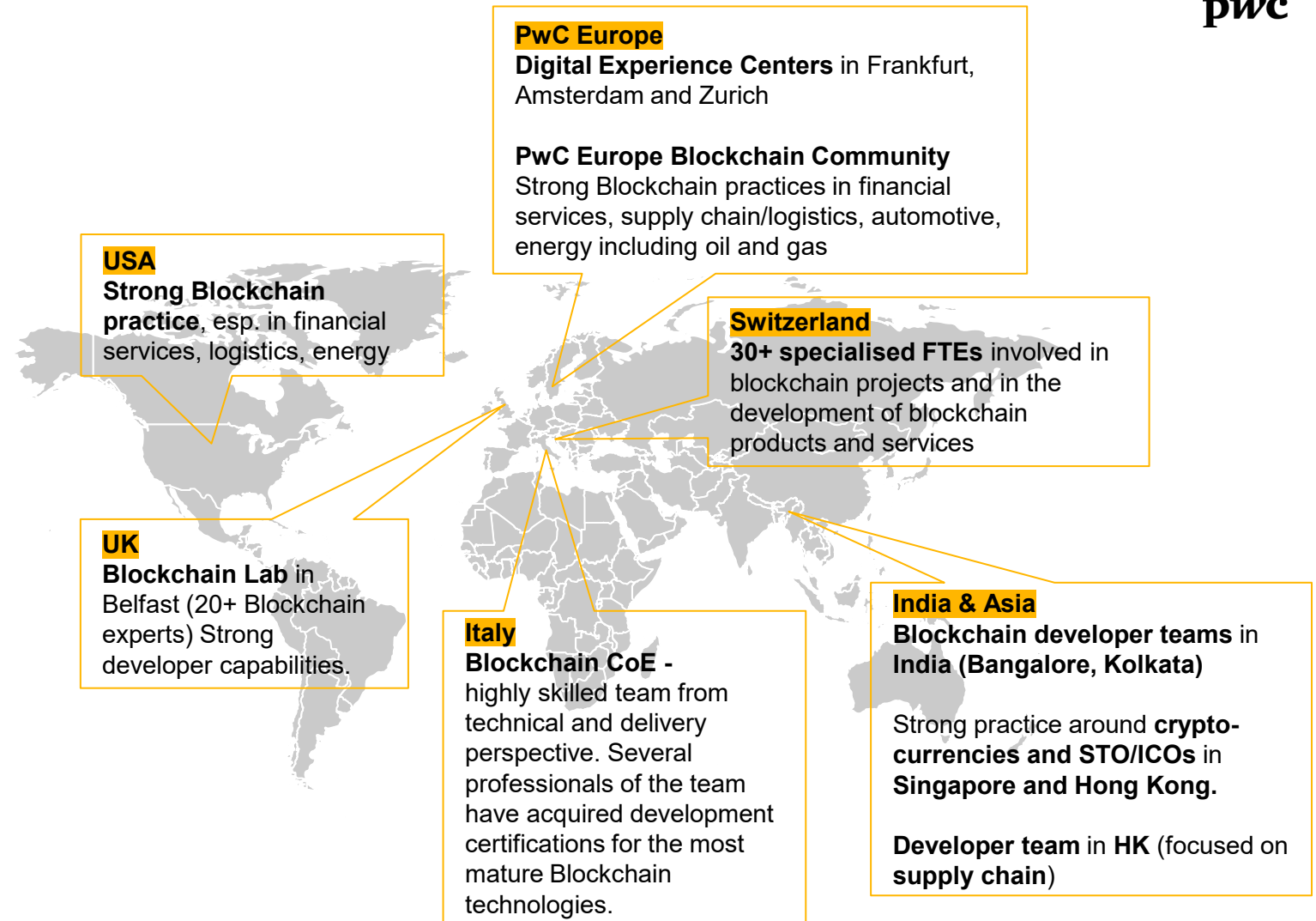
# PwC has **Blockchain teams** and activities across the globe

PwC combines its unique experience of delivering Blockchain solutions with its **depth of industry and regulatory knowledge** to help you define a robust and effective approach to Blockchain implementation.

**100+ technical team** members focusing on Blockchain technology

Around **500+ staff** working on Blockchain globally

We have global Blockchain expertise with teams in the UK, US, China/HK, Australia, Italy, India, Germany, Austria, Switzerland and the Netherlands



# We offer our clients a broad range of services, leveraging our local and global crypto expertise



## Technology & DLT Development

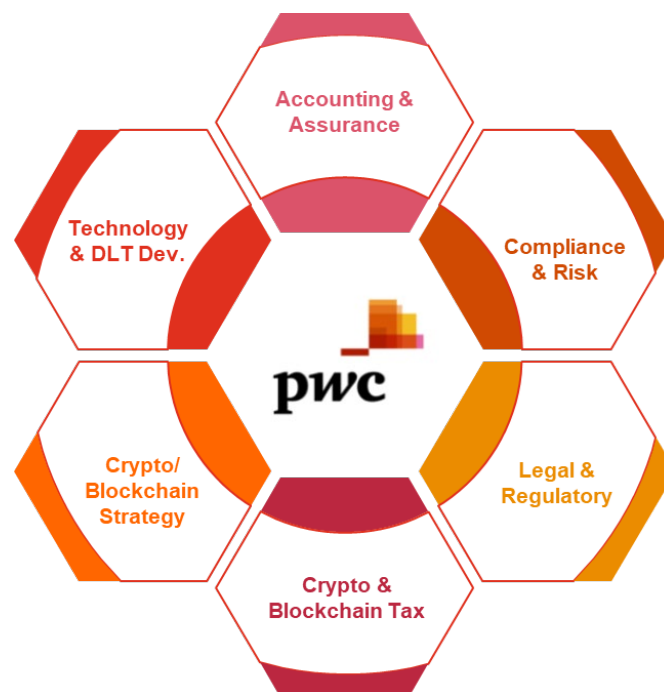
We design & implement cryptographic protocols, review existing implementations and build DLT solutions with domain specific expertise and required infrastructure. Our SMEs validate the security of the infrastructure and apply formal verification to smart contracts to fulfill the regulatory requirements. We have a self developed real time AML monitoring and scoring platform in place covering the regulatory requirements in crypto space. We also enable our customers to use tokenization, NFTs and Web3as new opportunities by providing the technology expertise

## Crypto & Blockchain Strategy

We help firms with the strategic formulation of business models and target operating models for crypto businesses incl. organization, governance, culture. We detail crypto-specific product & service offerings and global & regional go-to-market strategies as a part of comprehensive corporate growth or transformation strategies

## Crypto & Blockchain Tax

We help structure crypto and blockchain related businesses in a tax efficient manner and obtain written confirmation from tax authorities by setting up legal structures, analyzing tax implications and establishing client reporting and monitoring



## Accounting Advisory and Financial & Regulatory Assurance

We leverage our strong expertise and technology enabled audit solutions to conduct financial and regulatory audits for blockchain-enabled businesses incl. smart contracts, stable tokens, asset tokens and other security tokens

## Blockchain Compliance & Risk

We design & implement target operating models for financial crime units, AML and compliance departments and investigation units in the blockchain and cryptocurrency space. We help clients to understand the impact on processes and procedures, to identify operational risks and to elaborate a remediation plan

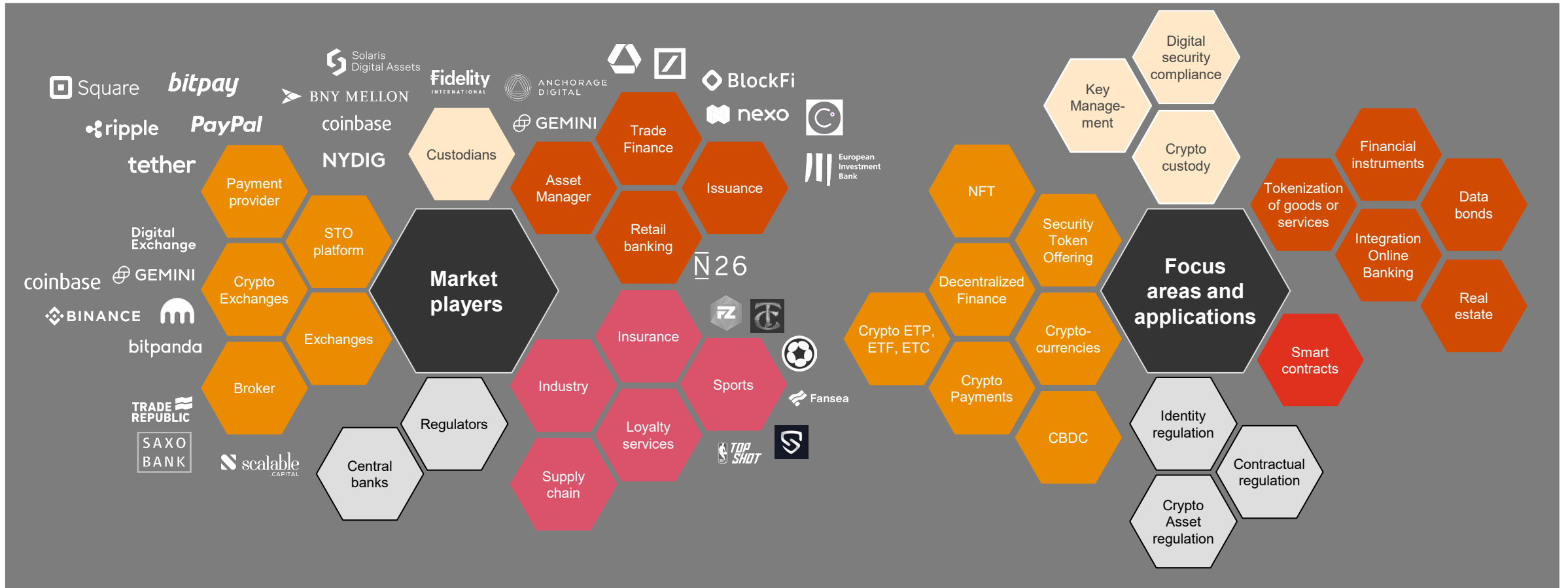
## Legal Financial Services, FinTech & Blockchain

Our multijurisdictional-qualified lawyers are available to assist you in understanding and complying with laws and regulations for crypto-assets, tokenization of assets and stablecoins. We help clients communicate with regulators and obtain the appropriate licenses and create fit-for-purpose legal frameworks. We also help client asset service-providers with their client-facing and transactional documentation (notably for M&A, derivatives and lending transactions)

A focus on our  
Digital Assets  
Solutions



# In Financial Services, we work with the European and Global digital asset ecosystem to develop safe and sustainable innovations for the financial markets of the future



# We share your vision for providing best in class digital asset servicing. We'll apply the learnings from our history of successful digital asset projects to this essential journey, from strategy through execution.



Your PwC team brings an unrivaled experience of the financial service industry and **deep knowledge** of the **global Digital Assets/ Crypto ecosystem**. Our vision for best in class digital asset servicing will drive your journey accordingly.

Applying our long track record across our lines of services, we provide **advisory, audit and tax services**. With a team of crypto experts we have a history of successful transformation management **delivering excellence from day one through your entire journey**.

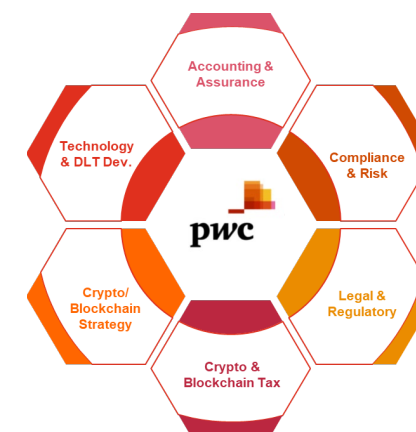
✔ **We know the international digital asset space**  
We understand your environment, current issues, and challenges better than any vendor. Our previous and ongoing support for clients covers smart contract technical reviews, crypto trading platform and custody assessment as well as licensing including BAIT, MaRisk, BSI, ISO, ITIL requirements and best practices.

✔ **As your "Go-to" regulatory advisor, we bring the specific knowledge and experience you need**  
You will be fully prepared for heightened scrutiny, benefiting from our understanding of regulatory requirements and our experience engaging with regulators in the licensing processes.

✔ **You will gain the benefits of our deep experience and lessons learned investigating state-of-the-art market infrastructure**  
We work on the brink of regulatory innovations in collaboration with supervisory agencies, e.g. transaction reporting infrastructure within the DLT Pilot regime. This inside knowledge will leverage your project success.

✔ **We have extensive experience in scoping and preparing license applications**  
We are in regular interaction with the relevant regulatory authorities and are actively involved in shaping international regulatory regimes. We provide the one-stop solution with experts encompassing business strategy, financial modelling, risk & compliance as well as IT experts.

✔ **According to your needs and individual requirements, our involvement can be lighter or higher depending on the scope of your digital asset strategy**



# License application - We support the preparation of all required documents, policies, and processes to apply for the appropriate license(s), advise and support you on interacting with the authorities



## Assessment & Preparation

### Business Model Analysis incl. recommendation & enhancements

**Goal:** Assessing whether the FinTech meets the requirements for obtaining license(s).

- Detailed analysis of the market, potential risks, and compliance with regulatory requirements
- Identifying the necessary documentation and information
- Developing a timeline for the license application process
- Optional: Technical assessment of technical solutions incl. security reviews and gap analysis
- Optional: Regulatory authority readiness High-Level legal assessment

**Deliverable:** Clear understanding of applicable license(s)



## License Application & Filing

### Design target operating model (TOM)/ Drafting & gathering documentation

**Goal:** Identifying the necessary documentation and information to develop a regulatory compliant business model.

- Besides the regulatory business plan, this includes financial statements, compliance documentation, templates and further application documentation
- The applicant has to develop risk management policies & procedures, implementing internal controls, and ensuring ongoing compliance with regulations

**Deliverable:** Definition of TOM incl. business plan, policy framework & further documentation



## Regulatory authority review procedure

### Regulatory authority review & response support

**Goal:** During the license application phase, the applicant must establish a dialogue with the regulator.

- Discuss your plans, seek clarification on regulatory requirements, and address any concerns that the regulator may have
- Communicate proactively with the authorities, present a realistic timeline for the license application process

**Deliverable:** Q&A support during regulatory authority review and start of implementation roadmap.

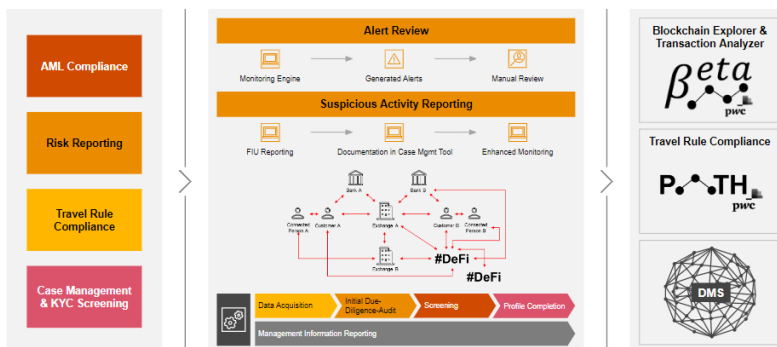


**Regulator grants license(s)**

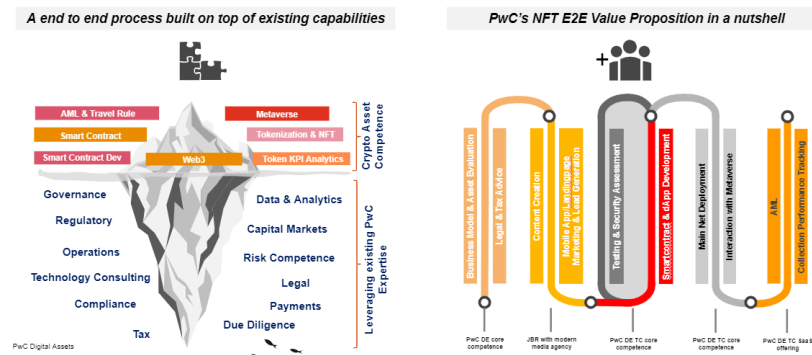
-  
Successful license application

# No matter what your Digital Assets Business Strategy may look like - we have the right tools to support and help you achieve your goals effectively

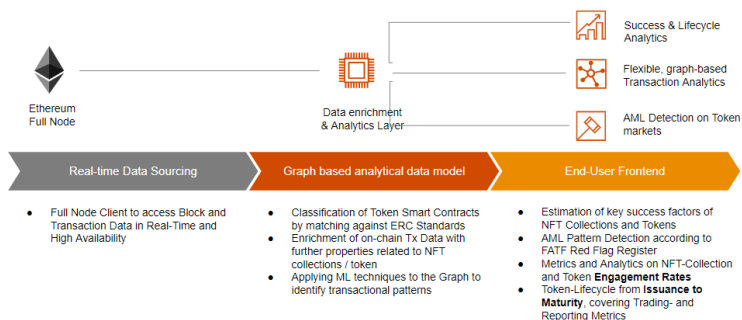
## PwC Blockchain Explorer & Transaction Analyzer



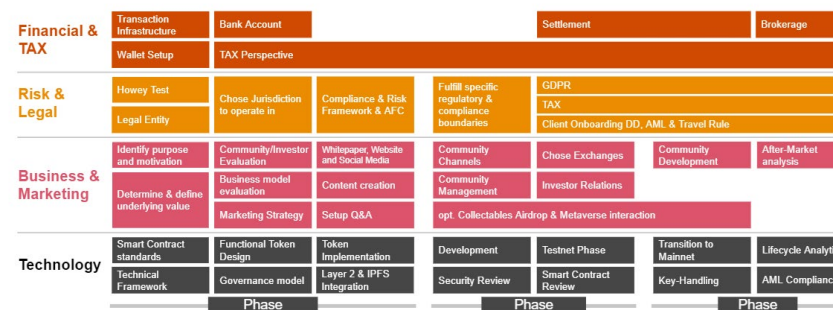
## PwC's NFT E2E Value Proposition



## PwC Real Time Asset Evaluation



## PwC End-to-End Tokenization Framework





# The Strategy& annual “European Crypto Survey” provides deep insights into the investment behavior and needs of European investors

## Selected results from our 2022 report

Cryptocurrencies and other digital assets (e.g. non-fungible tokens, NFTs) have **established themselves as an alternative asset class** not just since yesterday. Already today, 10% of all Germans own cryptocurrencies (compared to 17% for shares), which means that cryptocurrencies are **far from being a niche**.

Nevertheless, only a few German financial institutions have so far decided to **actively engage** themselves and offer a retail-focused product. Especially in light of the increasing uncertainty on the financial markets, caused among other things by the war in Ukraine and the high inflation in Germany, large parts of the EU and the USA, the question arises as to the investment behavior of crypto investors - and what consequences the traditional banking world should draw from this.

Strategy&, the strategy consultancy of PwC, investigated the investment behavior of a total of 2,000 private crypto investors in Germany, Switzerland and Turkey between 24 March and 5 April 2022. Further analysis available in the 2022 [report](#) directly.

## Origin of participants

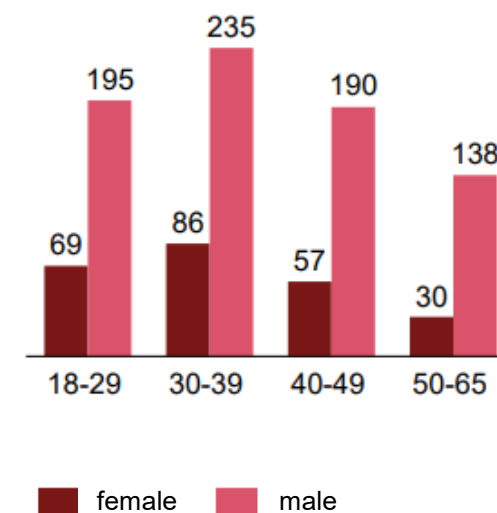


## Number of participants



**2,000** of which  
**50%** surveyed  
in Germany

## Structure of participants (Age and Gender)



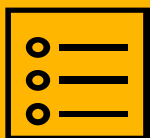
## Avg. age of participants



**37.5 years old**

Strategy& European Crypto Survey 2022

# Through our Governance, Risk & Compliance Maturity Assessment we benchmark implemented frameworks and controls and jointly agree on priorities to address



**Governance, Risk, and Compliance** refers to a strategy for managing an organization's **overall governance, enterprise risk management and compliance framework** in a **harmonized way**. A profound GRC target picture provides a **structured approach** to aligning **business objectives** with an adequate **risk and compliance management**.

## Focus Areas

## Benefits

PwC has a dedicated team of experienced GRC professionals who have extensive expertise in designing, implementing, assessing, and improving holistic Governance, Risk & Compliance frameworks, helping clients to achieve their objectives while creating and protecting value

### Governance



- The role of the Management Board (roles & responsibilities; tone from the top; oversight, reporting, and control)
- Governance Framework ("Know-Your-Structure")
- Three Lines of Defense (**3LoD**) and Key Function Holders (Business, Operations, Risk, Compliance, Cyber Security, Internal Audit)
- Customer and Stakeholder Engagement

- Understanding of your current governance framework as compared against established benchmarks
- Potential improvement levers to achieve operational effectiveness
- Action plan for way forward

### Risk



- Internal Control System
- Enterprise Risk Management Framework (**ERMF**)
- Outsourcing

- Tailored target picture for your ERMF
- Finalised maturity assessment of current Risk measures against target picture
- Policy framework for a group-wide enterprise risk management framework

### Compliance



- Anti-Financial Crime Compliance (AML, Financial Crime, Sanctions and Fraud prevention) (**AFC**)
- Overall AFC Compliance Governance Framework benchmarked against accepted international standards issued by EU, FATF, US DOJ, etc.
- Focus on selected processes: Transaction Monitoring, KYB / KYC, etc.
- Target State: the compliance function acts as enabler of the international growth strategy

- Holistic understanding of your AFC Compliance Governance framework - globally and locally
- Identification of improvement levers, action plan for way forward
- Understanding of maturity of critical processes such as transaction monitoring, KYB / KYC and their integration into the larger framework

# Strong and resilient Governance enables you to achieve your strategic objectives and contributes to creating sustainable value



A strong governance structures is the foundation for a sustainable business model

## Strong Internal Governance

*Accountability, Actions & Assurance*

## Target state

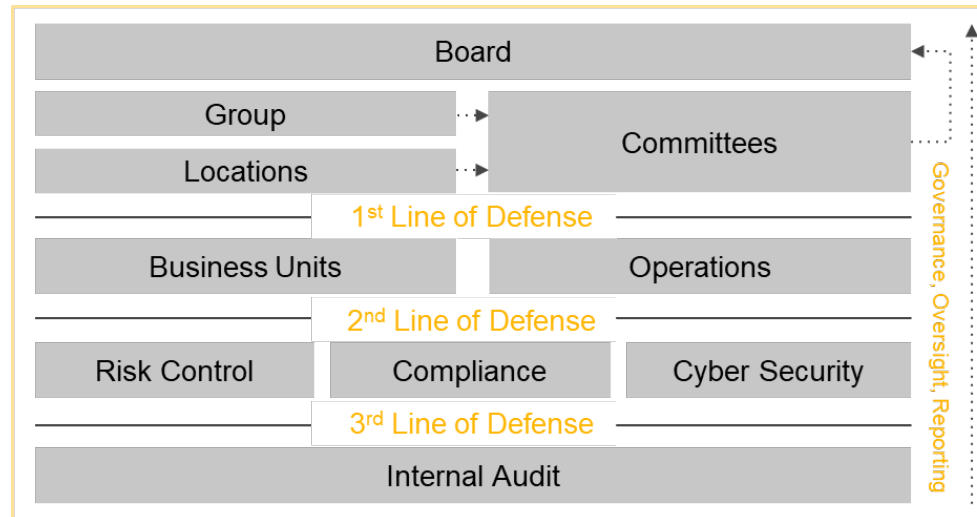
*Govern from top and manage your business, risks, and controls effectively.*

### Guiding Principles:

- Governance, Risk & Compliance contribute to achieving objectives, creating and protecting value
- Clear understanding of roles & responsibilities
- Ensure activities and objectives are aligned

### Selected Benchmarks:

- The Institute of Internal Auditors' Three Lines of Defense Model
- EBA's Guidelines on Internal Governance
- Guidance by the EU Sustainable Corporate Governance Initiative



Customers

*Engagement Model*



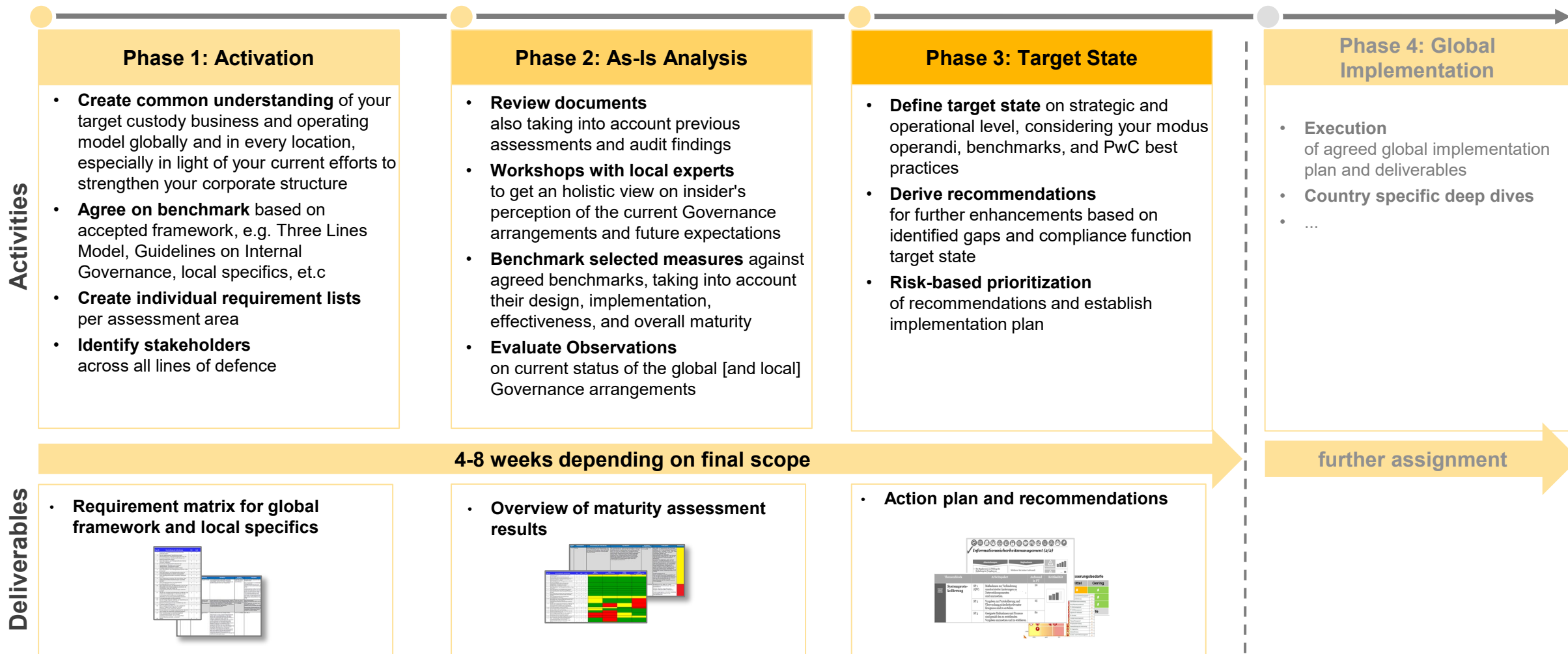
Stakeholders

*(e.g. regulators, market participants)*

### Key Points to consider:

- **Know-Your-Structure:** align business, risk, and compliance strategies to guide your structure.
- **Consolidation:** focus on separating control from business functions.
- **Verticalization:** effective governance and reporting lines across all relevant entities that allow for a risk-based reporting and status tracking.
- **Committees & Accountability:** well designed committees and accountability structures support for decision making, steering and coordination of GRC
- **Corporate Values** and Code of Conduct: the management is responsible for setting the Tone from the Top
- **Robust Internal Controls Framework & Functions** for steering under conditions of uncertainty and manage complexity
- **Engagement model** with external parties to build trust in your business and operations

# A maturity assessment focuses on the most important elements of a harmonized Governance framework across entities and all lines of defense



# We help you to build an international, harmonized, proven and sustainable Enterprise Risk Management Framework across your value chain

## Current State

A major custodian entity is located in **Europe**, and the **Custody technology service** in **Asia**.

Illustrative example

## Target State

Applicant aims to **set-up regulated entities as hubs** in different **core jurisdictions**. This includes e.g. Hong Kong, Abu Dhabi and Germany.

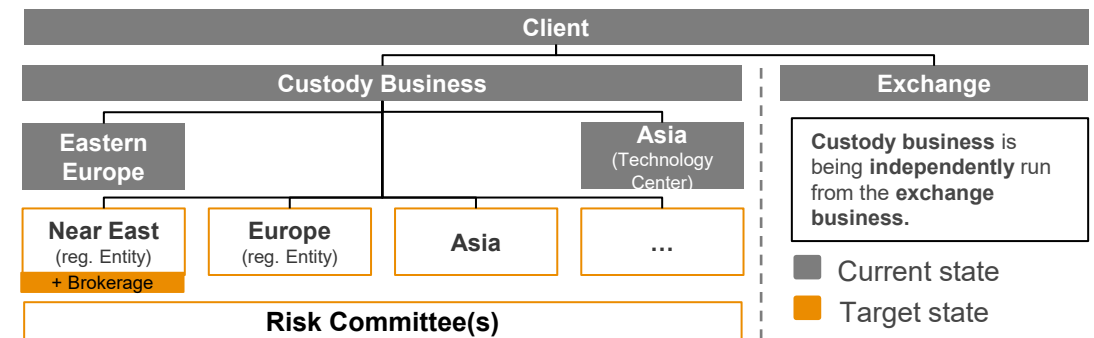
### ERMF - Target Picture

A sustainable Enterprise Risk Management Framework (**ERMF**) should define and establish **best practice standards independent from regulatory requirements** across the entire custody business.

- The standards provide a **baseline** for local units and allow for easy **adaptability** and an **effective integration** into the group structure.
- Regulators** currently **focus on group-wide ERMF**, specifically pointing to unified **standards**, harmonization & strong outsourcing frameworks.
- Entity specific **additional** (regulatory) **requirements** have to be **considered**, e.g., such applicable **to the combined brokerage and custody business** for example in Germany (within one legal entity).

### Harmonized Risk Governance Structure

A harmonized **risk governance structure** provides the **foundation** for a functional risk and compliance management.



Illustrative example

- Alignment of senior management and key committee responsibilities fosters establishment of a **strong risk awareness**.
- Centralization of risk functions drives **know-how pooling and cost reduction**.
- A harmonized enterprise risk management framework allows for **clear responsibilities** between the **your Custody entities**.

# Harmonized minimum standards for Risk Management are key to standardization and automation and ensure scalability

## Three focus areas in regard to a sound and proven Risk Management

### 1 Internal Control System

**Adequate Controls** need to be implemented and tested regularly for **safekeeping** of **private keys** and their backups

### 2 Enterprise Policy Framework





Documentation of **clear and consistent structures and standards** across the entire group

### 3 Outsourcing

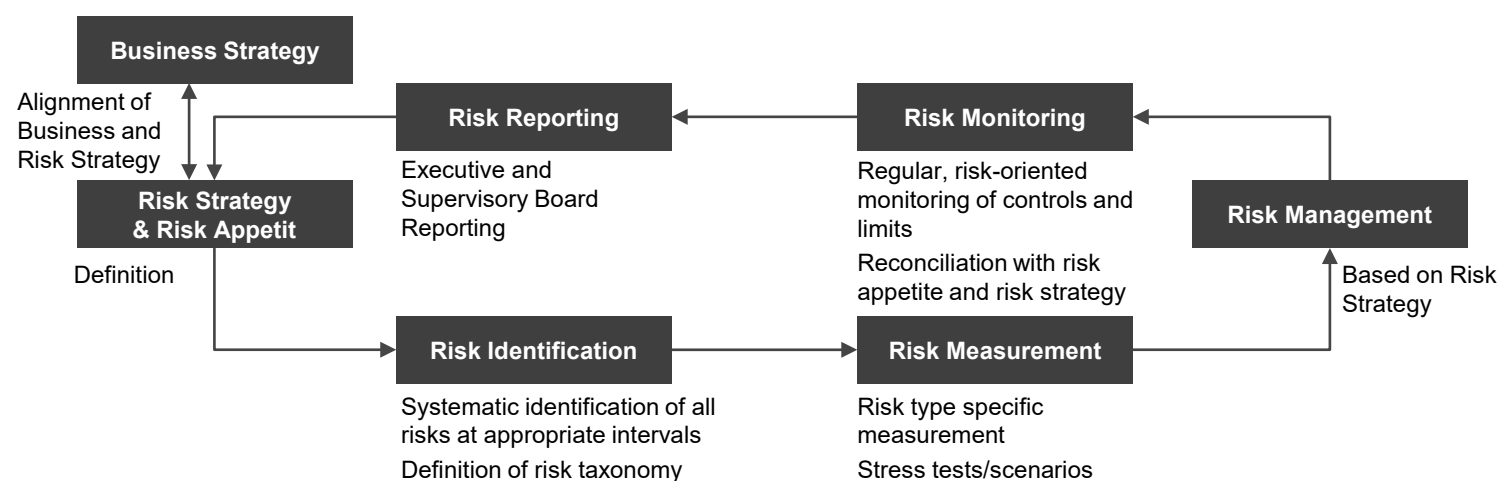
Regulators require an **appropriate third party management** – i.e. for external technology custody hub

## Risk Profile

The **custody business** has a strong **focus** on **Operational Risks**, especially around the private key storage – this includes:

-  Technology risk
-  Fraud, theft and cyber-attack risk
-  Legal, tax and regulatory risks
-  Third party risk

## Core Elements of the Internal Control System



## Benefit

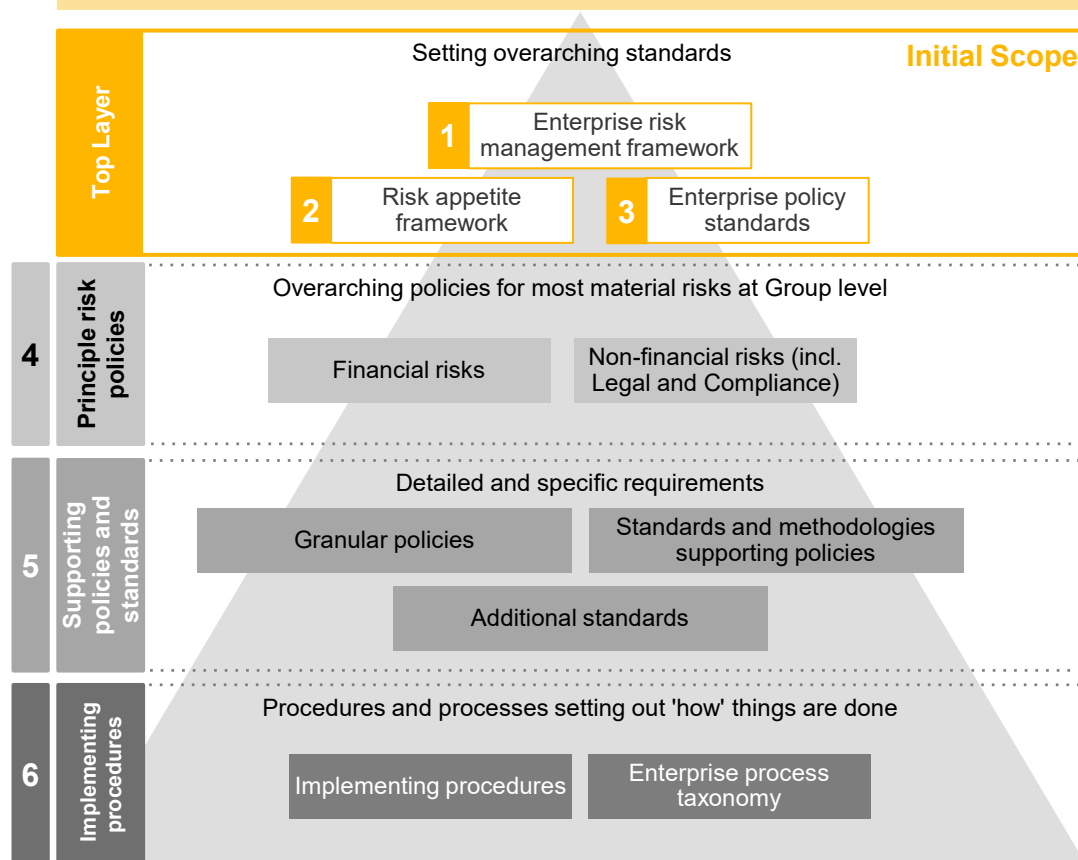
An **internal control system** ensures that these key risks are **adequately addressed across the risk management lifecycle**.

# Setting up an enterprise policy framework is crucial for consistent and efficient risk management processes

## Benefit

The purpose of the **Enterprise policy framework** is to **translate strategic principles** governing business, risk taking and risk management articulated by the Executive Management into a set of overarching requirements **setting out accountabilities, boundaries** and practices. An efficient Enterprise Policy framework **ensures consistency** across the entire group.

## Structure of an enterprise policy framework



## Content of policy document

<b>1</b>	<b>Enterprise Risk Management Framework</b>	Principles governing risk taking and management, definition of the 3 lines of defense model, accountabilities for business and functional leadership
<b>2</b>	<b>Risk appetite framework</b>	Principles for an acceptable enterprise risk profile, limits and tolerances, cascading across the organization
<b>3</b>	<b>Enterprise policy standard</b>	Guidelines around policy hierarchy, ownership, management and content
<b>4</b>	<b>Principle risk policies</b>	High-level adaption of principles articulated in ERMF and RAF specific to each individual risk type
<b>5</b>	<b>Supporting policies and standards</b>	Granular policies setting out detailed requirements, rules and controls providing consistent definitions and practices
<b>6</b>	<b>Implementing procedures</b>	Business/function-specific implementation of policy requirements, repository for all processes

# A centralized Outsourcing Management allows for an integrated and efficient oversight and decision-making

## Benefit

A structured outsourcing lifecycle ensures **adherence** of third parties **to standards** set out in the enterprise risk management framework. This is also relevant for **core processes**, e.g. IT services, which are outsourced intra-group and not covered within the internal ERMF. Furthermore, regulators have increased scrutiny on outsourcing management within license application processes.

### Checklist to determine your ERMF Target Operating Model



#### Governance structure

Embedding of independent and centralized outsourcing governance structure in the overall organization with **integration of relevant hierarchies and executives**



#### Identification and classification of outsourcings

**Decision tree and classification of services as:**  
Outsourcing | Other services | IT-services



#### Risk assessment methodology

**Risk evaluation and materiality assessment including**  
Inherent risks | External risks | Service provider risks



#### Contracts & inventory

Define **compliant master and service agreements** and maintain a comprehensive **inventory for outsourcing and sub-outsourcings**



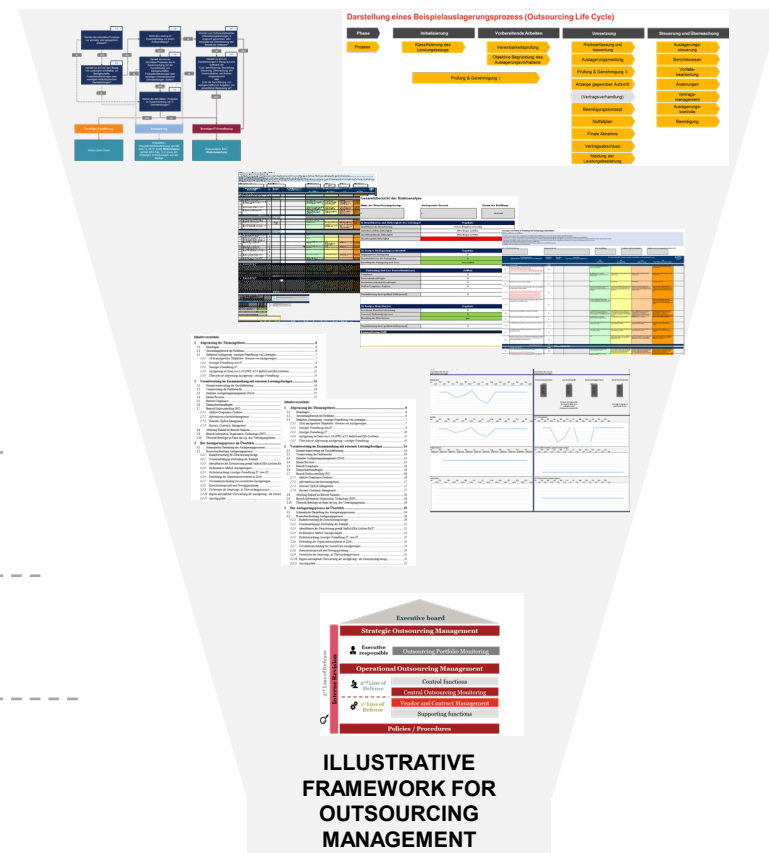
#### Termination & continuity management

Definition of **exit strategies and emergency concepts** for material and critical services



#### Monitoring / control

Establish **KPI and risk related provider reporting** with proper aggregation on **management level**





# With PwC's ERMF Assessment Matrix a Target Picture can be derived that is suited to drive your expansion plans

## Benefit

PwC developed a template to **identify key requirements** on the **basis of best practices**, paving the way to **model a harmonized ERMF tailored to your needs and demands**. PwC's template serves not only for the **systematic recording of the specific country requirements** but also for their comparability to develop a **best practice target picture for the GRC framework**.

### Checklist to determine your ERMF Target Picture

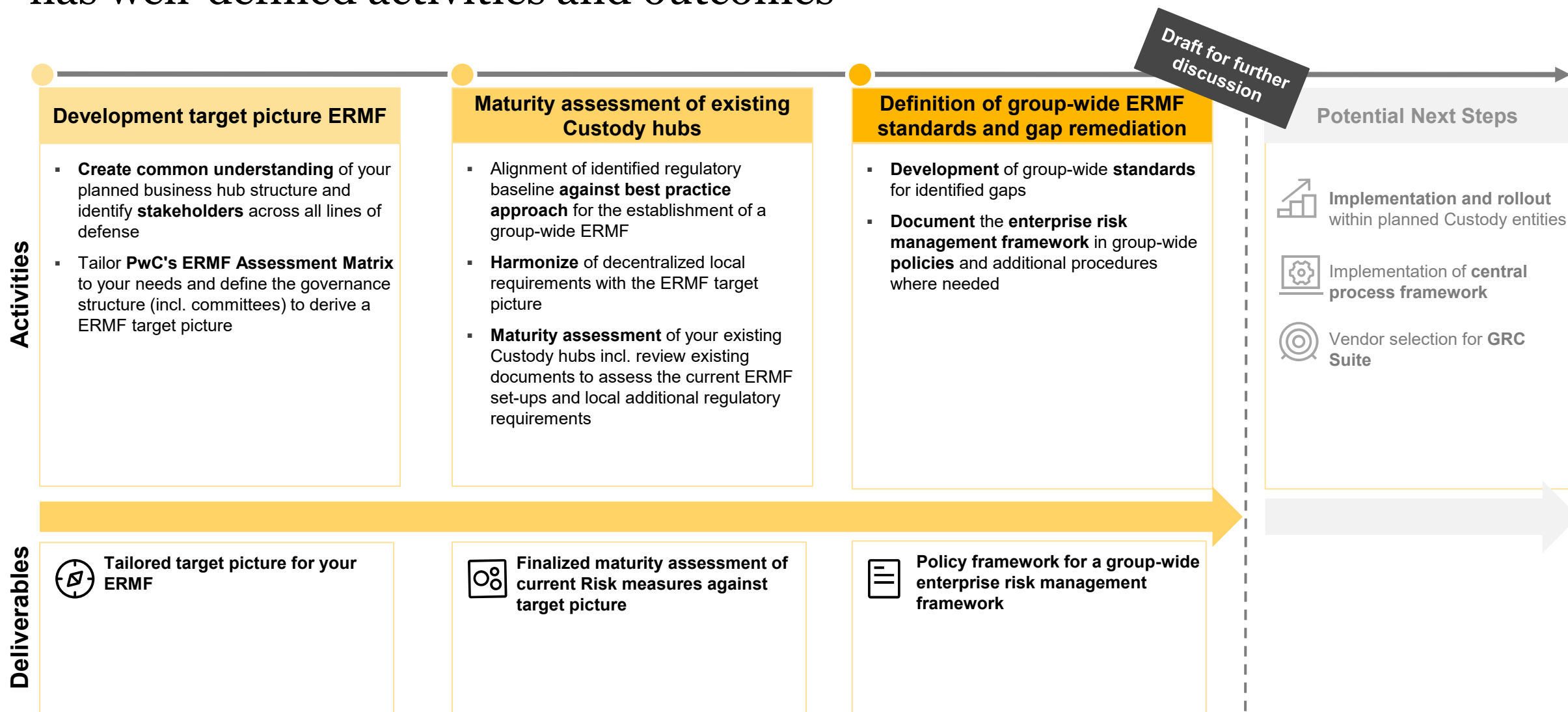
- 1  **Identification of local regulatory requirements and their impact**  
*(working assumption is that this has already been done by you as business is either running or license applications in progress)*
- 1  **Tailoring of PwC's ERMF Assessment Matrix to your specific needs**
- 1  **Alignment of key requirements with your internal risk framework**
- 2  **Maturity assessment of existing hubs**
- 3  **Development of group-wide standards for identified gaps**
- 3  **Documentation of new developed group-wide standards within policy framework**

### PwC's ERMF Assessment Matrix

Illustrative example

Label	Category	Requirement	Country 1	Country 2	Country 3
			Product 1	Product 2	Product 3
Governance	Special Functions	Risk control function			
		Compliance function			
		Internal audit function			
	Outsourcing	Outsourcing capability	-		
		Central outsourcing management	-		
...	...				
Risk	Risk Identification	Risk Inventory	x [description]	x [description]	
	Risk Management	Risk-bearing capacity	x [description]		x [description]
		Risk appetite		x [description]	
...	...				

# The proven PwC implementation approach consists of three central steps and has well-defined activities and outcomes



# We perform a holistic benchmark of your Anti-Financial Crime Compliance Framework against accepted international standards & PwC best practices



The digital asset ecosystem operates under an increasingly regulated environment

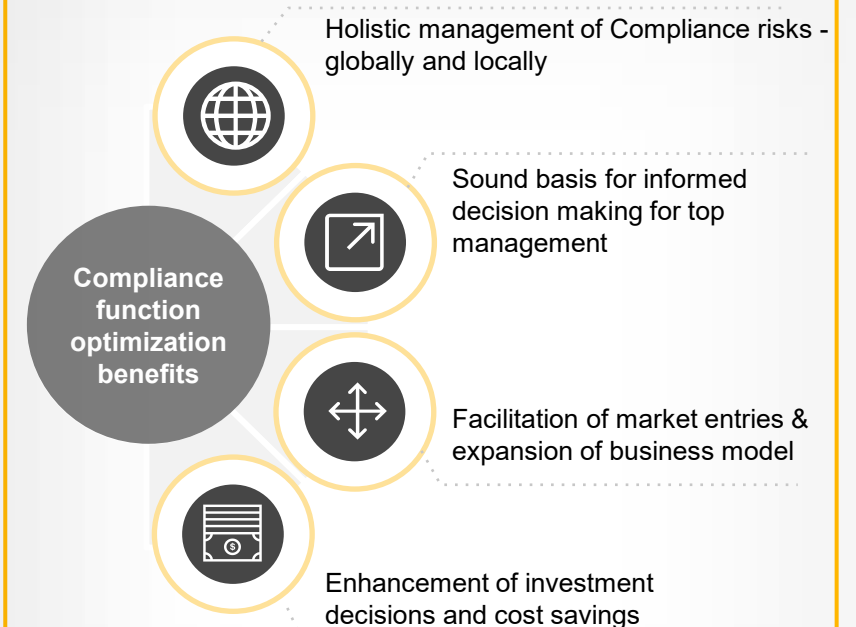
We combine expert knowledge in AFC & Compliance from traditional financial services with Crypto-specific rules regarding AML, Sanctions, Fraud in a **structured approach**.

#### Selected Benchmarks:

- US Department of Justice Evaluation of Corporate Compliance Programs
- 5th EU Money Laundering Directive
- FATF Guidance for a Risk-Based Approach to VASPs 2021 & 2022
- FATF's Travel Rule
- EU Markets in Crypto-Assets Regulation (MiCAR)



## Target State: The compliance function acts as enabler of the international growth strategy



# Our proposed approach creates tangible results for strengthening your AFC Compliance going forward

Activities

## Phase 1: Activation

- **Create common understanding** of your target custody business and operating model globally and in every location
- **Define regulatory baseline** for relevant risks and regulatory regimes, i.e. AML/CTF, Sanctions, Fraud
- **Agree on benchmark** based on international legal framework, e.g. FATF Guidance, 5th EU Money Laundering Directive, US DOJ Evaluation
- **Create individual requirement lists** per assessment area
- **Identify stakeholders** across all lines of defence

## Phase 2: As-Is Analysis

- **Review documents** also taking into account previous assessments and audit findings
- **Workshops with local experts** to get an holistic view on insider's perception of the current status and expectations
- **Assess selected measures** for effectiveness (e.g. sample checks)
- **Evaluate Observations** on current status of the global [and local] AFC Compliance function and with a focus on selected risks or processes (e.g. AML, KYB, Transaction Monitoring)

## Phase 3: Target State

- **Define target state** on strategic and operational level, considering your modus operandi, benchmarks, and PwC best practices
- **Derive recommendations** for further enhancements based on identified gaps and compliance function target state
- **Risk-based prioritization** of recommendations and establish implementation plan

## Phase 4: Global Implementation

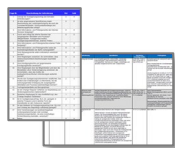
- **Execution** of agreed global implementation plan and deliverables
- **Country specific deep dives**
- ...

4-8 weeks depending on final scope

further assignment

Deliverables

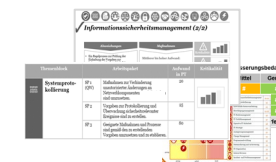
- **Requirement matrix for global framework and local specifics**



- **Overview of maturity assessment results**



- **Action plan and recommendations**



# Key Facts: PwC's Crypto Compliance Suite

## Modularity

- Crypto Transaction Monitoring und Case Management can run separately
- 3rd Party Crypto AML Integration
- Blueprint implementation for Travel Rule Compliance

## Structure and Reporting

- Robust Workflow-Tool
- Full Audit-Trails
- Integrated real time metrics
- Fully configurable reporting

## State of the art

- Based on experience from 150+ projects in 30+ countries
- FATF aligned
- Travel Rule ready

## Flexibility

- Seamless integration over configurable APIs
- Built on state of the art frameworks
- Modern architecture (microservice)
- We think crypto!

## Agility

- Extension with Low/No-Code
- Differing operating models
- Fast deployment



## User Experience

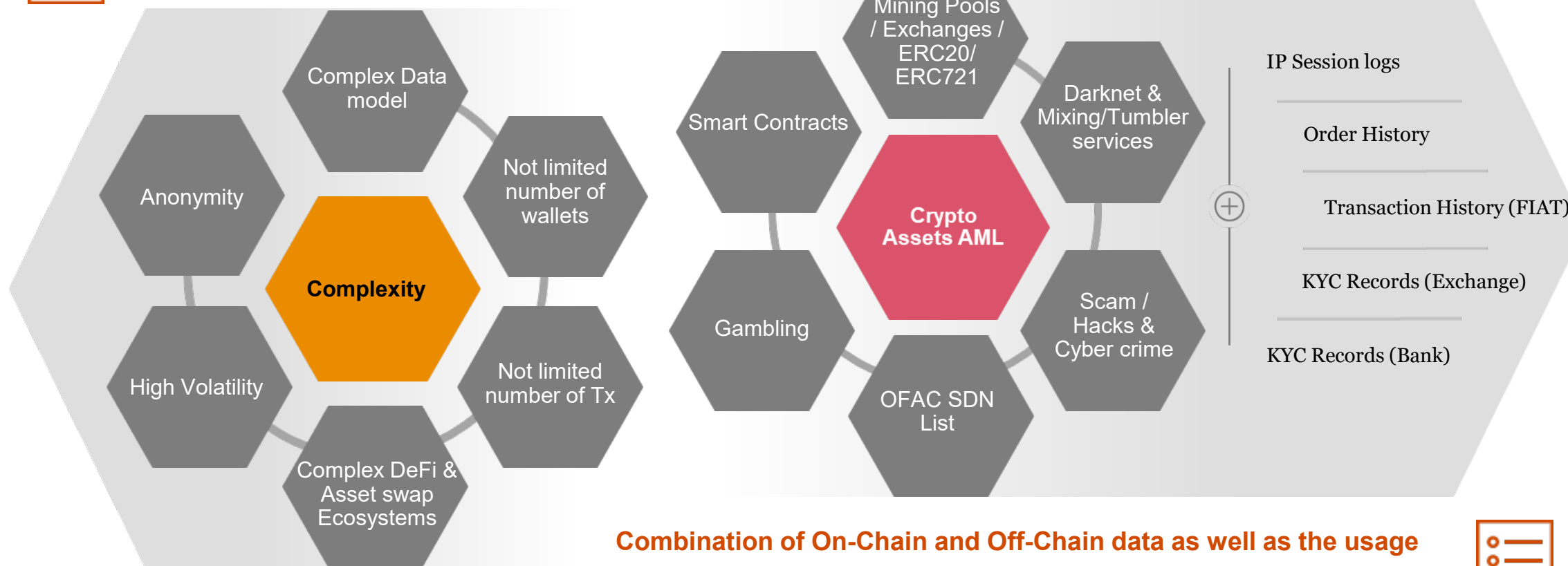
- Intuitive design for non-technical users
- Traceable workflow solutions
- Access to multidisciplinary PwC and multijurisdictional PwC Legal Business Solution teams

# Key Facts: PwC's Crypto Compliance Suite

## Legacy processes meet new asset complexity



### High complexity of the new asset class



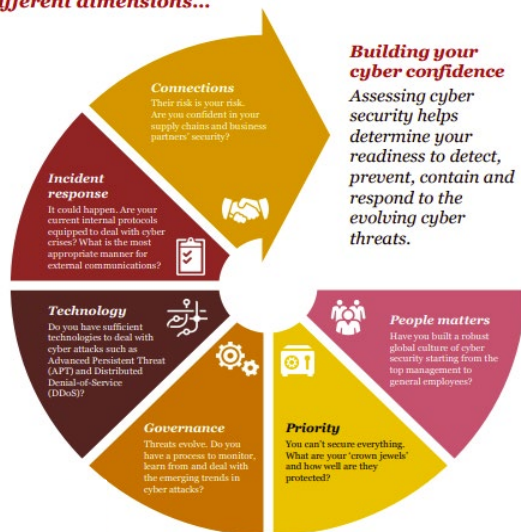
Combination of On-Chain and Off-Chain data as well as the usage of AI helps to cope with the complexity of AML-Requirements



# PwC's Cyber Readiness Health Check will measure how 'cyber-ready' and secure you are and what you need to tell your customers and regulators

PwC's **Cyber Readiness Health Check** will provide you with a clear **snapshot of the effectiveness** of your **current cyber security measures** and your **preparedness in managing cyber risks**.

*We view your security from different dimensions...*



**Building your cyber confidence**  
Assessing cyber security helps determine your readiness to detect, prevent, contain and respond to the evolving cyber threats.



**In our journey with you, we develop a path to enhance your cyber security**

**Initial Assessment 1**  
Assess current state of readiness through interviews and questionnaires.

**Deep-dive Testing 2**  
Focused domain reviews and testing based on diagnostic.

**Risk Analysis 3**  
Identify gaps and improvement areas with regard to regulatory requirements and industry best practices

**Report & Benchmarking 4**  
Present final report incl. Findings, recommendations, target state of readiness and implementation roadmap.

# With our Cyber Security expertise, we help you conduct regular Penetration Tests to identify vulnerabilities, measure process effectiveness and improve technical security

- Identify the specific scope of the penetration test, including the target systems, networks, and applications that will be tested.
- Agree on rules of engagement (Test Methods, Invasiveness, No-Gos) and issue a permission to attack
- Prepare technical prerequisites such as whitelisting of IPs, C2 infrastructure or commissioning of accounts.

- First step is automatic / semi-automatic vulnerability assessment of selected targets and a parallel technical OSINT (Open Source Intelligence)
- Based on the first results, vulnerabilities and possible attack paths are tested manually by a experienced penetration tester
- Depending on the environment and RoEs target systems are exploited to verify a vulnerability or a PoC is developed in a representative environment
- All findings and actions are documented

- Test Results are Summarized in a preliminary finding list
- Found Vulnerabilities and Weaknesses are evaluated and ranked by using CVSS 3.1 or CWE 4.9
- Provide recommendations for addressing the vulnerabilities, including specific steps that the exchange can take to improve their security.
- Final report is issued
- Presentation of final results and recommendations to stakeholders

- Customer Equipment such as client hardware or token is returned
- Passwords, Accounts or C2-Servers are deleted or decommissioned
- With acceptance of the final report, all raw data acquired during the test is deleted on PwC systems
- Formal acceptance of project deliverables and obtaining feedback from customer
- Agreement on next steps, follow-up activities or implementation support

## Preparation

## Penetration Test Execution

## Reporting & Communication

## Closure

### Key Deliverables

- Agreement on Scope
- Rules of Engagement (RoE)/ Permission to Attack
- Technical preparation (e.g. whitelisting)

- Initial Scanning & OSINT Analysis
- Manual testing for Vulnerabilities
- Developing PoCs
- Documentation of Findings

- Summary of Test Results
- Evaluation/ assessment of vulnerabilities
- Evaluation of mitigation measures
- Preparation of the results report
- Presentation of Results

- Handover Equipment
- Decommission of Clients & Accounts
- Delete raw data
- Feedback & Lessons Learned
- Formal Acceptance

## Benefit

The goal is to provide the custodian with valuable information about the security of their systems and applications, and to help them take steps to improve their security and protect against real-world cyber attacks.



# At PwC, we have developed an audit methodology and supporting tool specifically to provide assurance services for entities engaging in crypto-asset transactions

The world around us is changing – advances in the digital landscape, including Blockchain, have revolutionized how we exchange value between multiple parties. Today, to exchange value digitally (such as currency, property or commodities), we rely on trusted intermediaries such as banks to establish trust between the transacting parties. Without blockchain, a trusted intermediary is necessary to prevent fraud, because when value is represented digitally, it can be duplicated or manipulated. Blockchain uses a decentralized mechanism to establish trust, without the need for a trusted intermediary. crypto-assets are just one type of digital asset exchanged on the blockchain. Rapid growth in cryptocurrencies has been accompanied by key trust issues and presents challenges in providing audit comfort over ownership and transactions. These challenges have been the subject of ongoing discussions between audit and securities regulators in the search for solutions.

Therefore we have developed an audit methodology to audit crypto-related topics in the annual financial statement audit, internal audit or other kind of audits. These topics include, for example, controls in regards to the key ceremony or key management. In particular the risks relate to the confidentiality, integrity and availability of private keys and their backups. For this purpose, we use crypto-specific control matrices developed in-house as well as a PwC tool to validate the ownership of the cryptocurrency held.

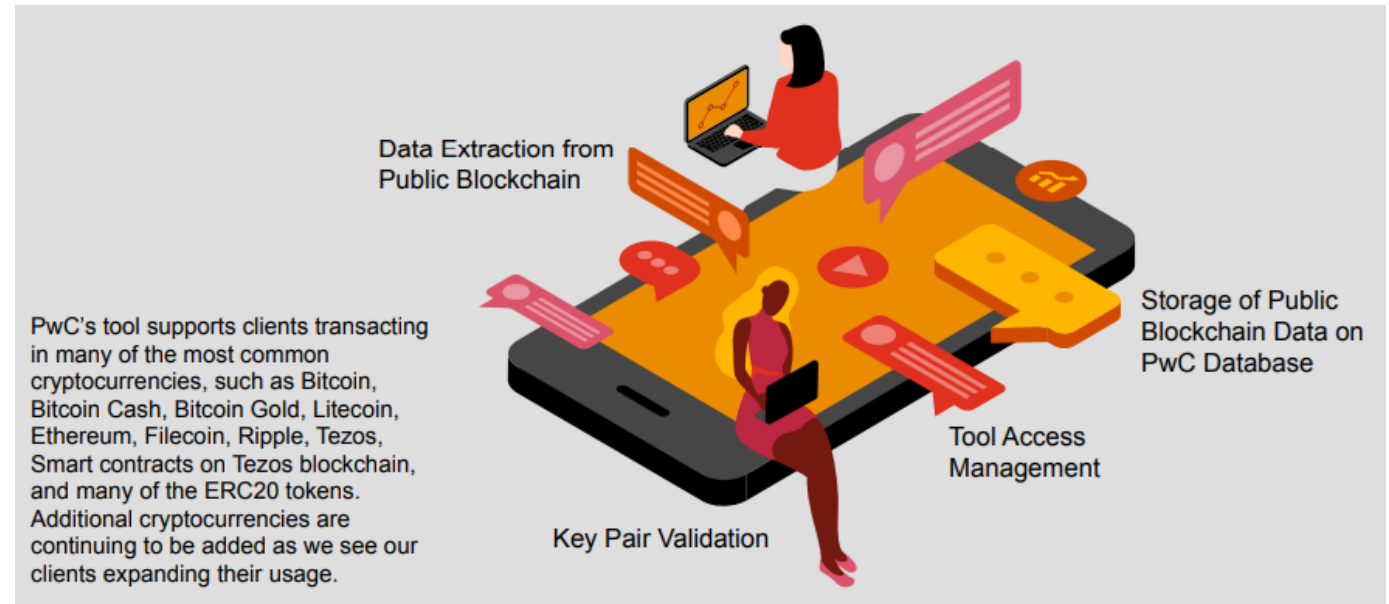
## What does PwC's tool do?

Provides independent, substantive audit evidence of the private key and public address “pairing” which is an important element needed to establish ownership of crypto-assets.

Securely interrogates the blockchain to independently and reliably gather corroborating information about blockchain transactions and balances.

Provides assurance. Using this tool and our methodology surrounding the audit of cryptocurrency, we are unique in our ability to employ a proprietary tool to complement our assurance methodology for entities whose operations are materially impacted by cryptocurrencies.

Keeps your keys safely under your control - they are not shared in any way during this process.



# Ensuring readiness for a control report is a further measure to demonstrate the resilience and effectiveness of existing operational controls

## What is the purpose of the report?

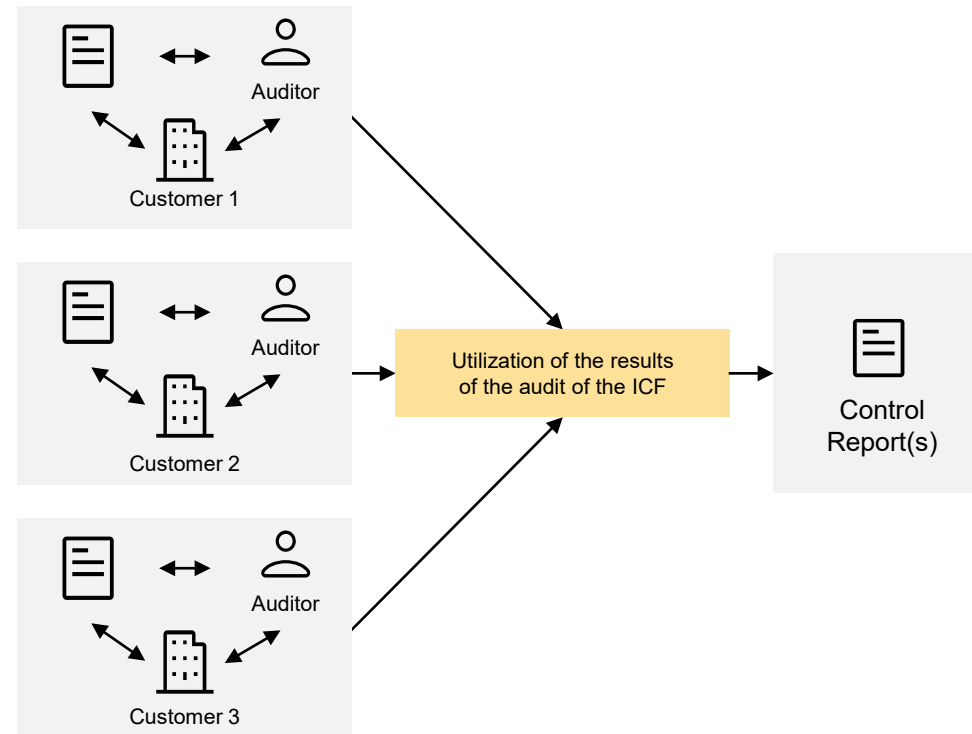
Clients require a **certificate of service provision in accordance with requirements and controls**. This should follow general (internationally) recognized standards to ensure acceptance, especially by the following addressees:

- (IT) management of the client
- Annual auditor of the client
- Internal audit
- Shareholders and investors
- Regulatory authorities

Benefits of the audit of the certified ICS:

- **Transparency and trust**
- **Uniform standard**
- Fulfilment of **accountability**
- Evidence of **regularity of service** (both adequacy and effectiveness)
- Also: **Marketing tool**

## Function of a control report (like SOC, ISAE 3402, PS951)



## SOC 1



ISAE 3402; SSAE 18; PS951

- Report provides detailed information and assurance about a service organization's internal controls relevant to the client's financial statement.
- The scope of the audit includes internal controls relating to business processes and IT processes.
- Recipient of SOC 1 reports often include client's management and external auditors.

## SOC 2



ISAE 3000; SSAE 18

- Report provides detailed information and assurance about a service organization's internal controls relating to the five trust categories (security, availability, processing integrity, confidentiality and/or privacy of customer data).
- The scope of the audit includes any combination of the five trust categories mentioned above.
- Recipient of SOC 2 reports often include client's management, business partners, potential customers, regulators and external auditors.
- We can assist you in assessing and achieving readiness for SOC certifications.

# In order to identify risks at an early stage, we perform health checks for the selected subject areas according to a central PwC approach



## Kick-Off Meeting



## Performing the analysis



## Closing

Potential next steps:  
Support by closing the gaps

### Ziel

After the kick-off meeting, we agreed with you on the topics to be analyzed, the schedule and our list of requirements.

At the end of this phase, we identified and assessed the gaps in each topic area..

At the end of the project, we presented the identified gaps to you and discussed them with you. You will receive a clear and structured documentation of the results.

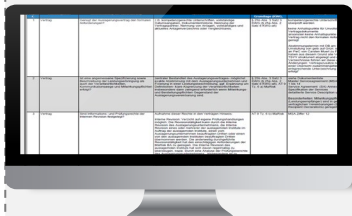
### Aktivitäten

- Performing an initial workshop to build up an understanding of the business area and the client
- Final definition of the topics to be considered and their prioritization in coordination with the responsible contacts of the client
- Creation of requirement lists for the corresponding topic areas
- Coordination of meetings for the deep dive interviews

- Performing deep dive interviews to obtain an understanding of the process and to gain initial insights in the sense of a self-assessment
- Review of the written order and process documentation (incl. ICS) with regard to compliance with regulatory requirements
- Execution of control tests in selected subject areas
- Consultation and description of gaps in clusters (e.g. gaps in documentation, gaps in execution)

- Preparation of a results document with presentation and description of the identified gaps (incl. evaluation and heat map)
- Discussion of the identified gaps in a joint workshop
- Joint identification and discussion of quick wins and longer-term mitigating measures and inclusion of these in the implementation plan

### Ergebnisse



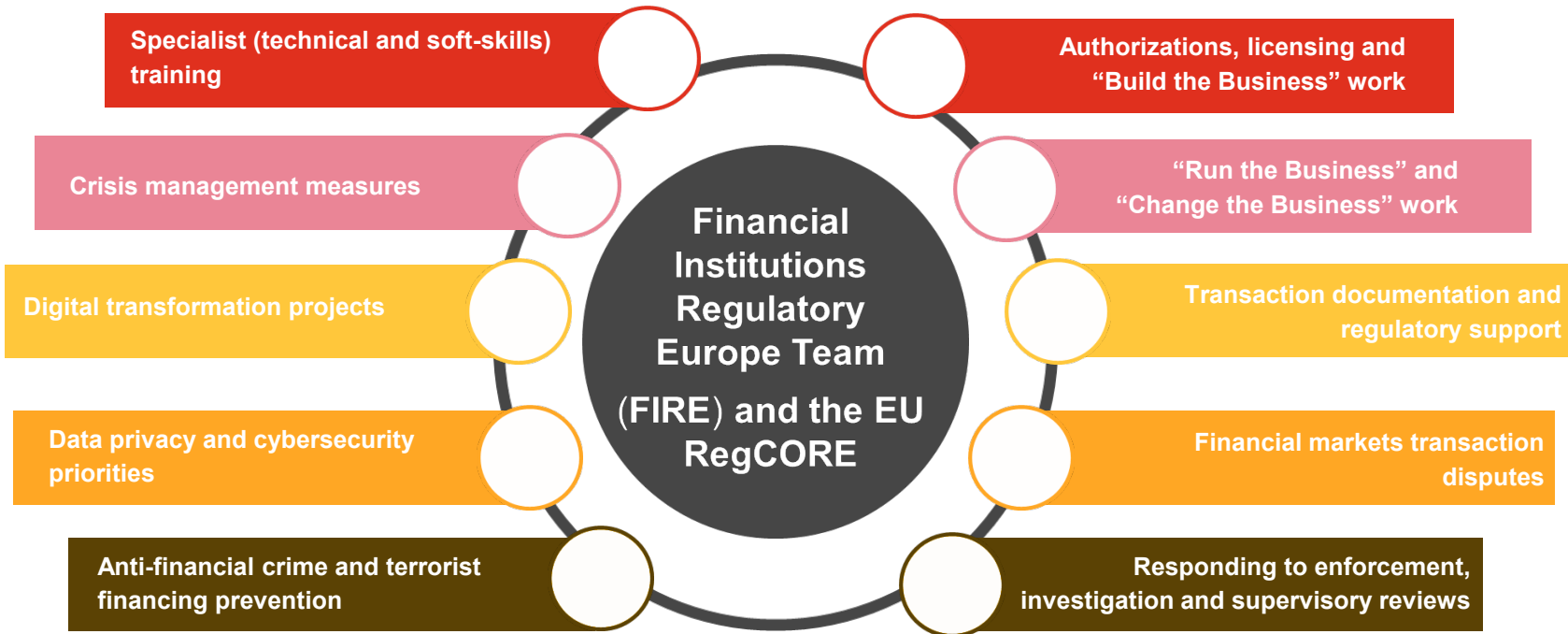
- Detailed **project plan** incl. prioritization of topics
- Detailed **requirements** by subject area



- **Overall view** of identified gaps incl. description and **risk assessment** (heatmap)

# Our Legal and Regulatory focused solutions

PwC Legal Business Solutions' Financial Services Regulatory Practice Group:  
Helping clients navigate challenges and seize opportunities in financial regulation



We bring an exceptional track record and creativity to all our engagements. This extends to our delivery of traditional legal and tax advisory services, managed legal solutions as well as through the wider breadth of coverage, including beyond law, that we can offer from working in tandem with **Strategy&**, **PwC** and **PwC Legal Business Solutions** teams and their multidisciplinary expertise across Sector Groups and the wider PwC “Community of Solvers”.

# Helping financial services firms and investors across asset classes

## At home in Europe and across global financial centres

The capabilities of PwC Legal Business Solutions' **Financial Services Sector Group** focus on supporting clients across a wide spectrum of transactional, corporate, regulatory issues as well as complex dispute resolution. We act for traditional financial services providers (active across all asset classes) as well as for FinTech, crypto-asset services providers (**CASPs**) and their respective counterparts and clients.



## PwC Legal Business Solutions – delivering law across borders

- **Financial Institutions Regulatory Europe (FIRE) Team & EU Regulatory Compliance Operations, Risk and Engagement (EU RegCORE) center**

PwC's FIRE Team helps financial institutions navigate the complex regulatory environment with a focus on new technologies such as crypto-assets and digital operating models. Our advice is based on a deep understanding of our clients' business models and regulatory know-how. In response to the "Europeanization" of rulemaking and supervision our EU RegCORE center provides clients with dedicated support for the EU's Single Rulebook and European System of Financial Supervision (ESFS).

- **Banking, Finance and Capital Markets Practice Group**

Our Banking, Finance and Capital Markets Practice Group offers legal expertise and support for sell-side and buy-side clients, with guidance on strategy, regulatory requirements, legal documentation, and quantitative modelling, valuation, and risk management. Our team provides comprehensive advice throughout the transaction lifecycle, from idea inception to post-trade or post-closing mechanics. We contribute to innovation and help create safer, sustainable, and efficient markets by participating in various industry association working groups.

- **Legal Financial Services, FinTech & Blockchain**

Our multijurisdictional-qualified lawyers are available to assist you in understanding and complying with laws and regulations for crypto-assets, tokenization of assets and stablecoins. We help clients communicate with regulators and obtain the appropriate licenses and create fit-for-purpose legal frameworks. We also help client asset service-providers with their client-facing and transactional documentation (notably for M&A, derivatives and lending transactions)

# Five focus areas of Regulatory Monitoring Technology - PwC's Rule Scanner distinctly addresses each of these focus areas

## Regulatory Taxonomy

- Design of Taxonomy for global regulators as reference point for text analytics.
- Mapping of risk and product/service taxonomies of regulators to that of clients.
- This is a major differentiator in terms of PwC Rule Scanner's global capability.

## Regulatory Library

- All regulations broken down into lowest obligation level (sub paragraph level)
- Accessible with high levels of context in modern machine digestible format
- Facilitates high levels of value added automation.

## Regulatory Risk

- Provides a risk-based view of regulation
- Provides a regulatory risk score by regulation type, jurisdiction and business line.
- Provides RCSA (Risk Control Self Assessments) both internally and to prudential regulators.

## Horizon Scanning

- Monitoring of regulatory changes for typically 750+ regulators globally across more than 170 jurisdictions.
- Supports all announcement & document types of global/regional regulators.
- Rule Scanner is fully real-time and AI based. Supports taxonomies from any client using our mapping technology.

## Enterprise GRC Management

- Fully automated Regulatory & GRC Mapping.
- Automates the entire process from storing and tracking regulatory developments.
- Risk ranks all obligations and integrates to policy management and controls systems.
- Integrates with risk and other external systems.

## Clients' current challenges

- Firms struggle to monitor and analyse regulatory notices from the regulators to which they are exposed.
- Firms also tend to focus on only a certain number of regulators/supervisors, i.e. coverage gaps that expose them to regulatory and enforcement risk;
- Firms struggle to understand relevance of the information and to extract relevant risk intelligence

## The approach of PwC's Rule Scanner

- Deliver a **Client-Centric Collaboration Platform space as a hosted client offering**, known as the Financial Institution's Gateway. PwC Rule Scanner is one of many solutions i.e., applications that can sit on the Gateway and be accessible by clients.
- PwC **Rule Scanner tags items published by regulators (Regulation Library) and links to a taxonomy (agreed with client) and then proactively assesses a client's operational and compliance footprint and provides indicators** of areas where the client is at risk of regulatory/legal risk exposure as well as updates in a much more focused fashion than competing technological solutions generally available to the market
- Reduce compliance costs - up to 50% - freeing the team up to work on higher value topics

# Helping financial services firms and investors with their tax obligations across asset classes

Digital assets are a new and rapidly evolving asset class, with several characteristics that make them unique from a taxation perspective. Existing rules have not typically been developed with digital assets in mind.

PwC's approach helps clients understand the tax consequences of their digital asset strategy and activities, including the characterization of asset classes, transfer pricing implications and reporting requirements. Armed with that understanding, our clients are able to refine their tax strategy and make informed structuring decisions that take into account differences between jurisdictions and evolving regulatory guidance.

## Our Service Offering focusing on tax

Analysis of tax implications especially for institutional investors

Support of tax declaration obligations for Blockpit -/ the institutional investors (esp. reporting obligations for institutional investors)

Support for special issues related to income/ VAT issues in the crypto environment

Tax structuring for crypto funds

Corporate and personal tax for cryptocurrencies

General tax consulting

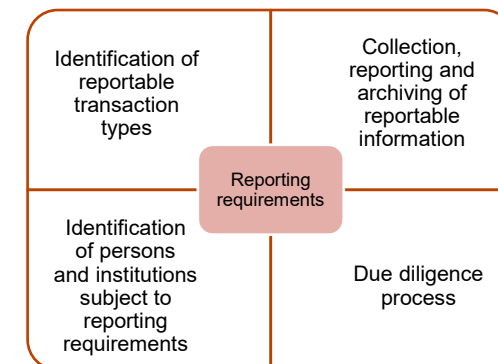
Assistance with DAC8 implementation (classification, reporting)



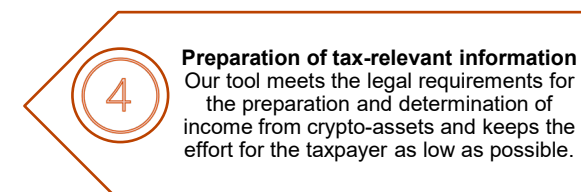
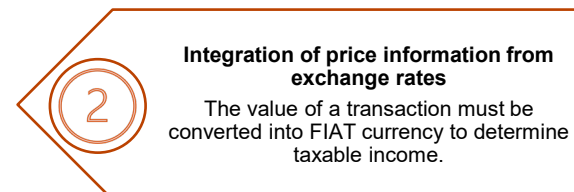
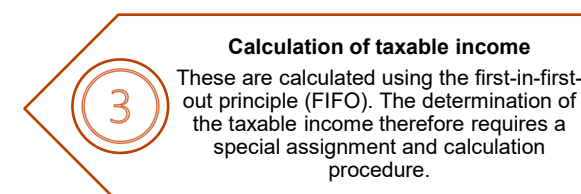
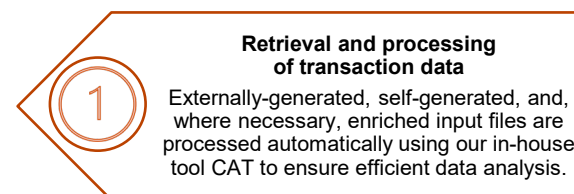
### Your benefit

- Ensuring compliance
- Relieve the burden on your resources and focus on your core competencies
- Cost reduction and risk minimization
- Process reliability through uniform quality standards

### CARF-Tool



### Crypto-asset Tracker (CAT)



PwC Financial  
Services -  
Digital Assets  
Leadership Team





# Key contacts for PwC Digital Assets Financial Services Sector Group in Germany - Overview of our leadership team



**Andreas Traum**

**Dominik Schauerte**

**Philipp Schröder**

**Dimitri Gross**

**Konstantin Dagianis**

**Dr. Michael Huertas,  
LL.M, MBA**

**Partner, FS Digital Assets  
Lead Europe**

**Partner, FS Digital Assets  
Compliance**

**Partner, FS Digital Assets  
Risk & Treasury**

**Director, FS Digital Assets  
Technology**

**Partner, FS Digital Assets  
Assurance**

**Partner, Global & European  
FS Legal Leader**

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**Relevant experience incl.**

- Go-live of first regulated trading venue for digital assets starting with crypto-currencies.
- Development of strategy and implementation plan for crypto-custodians and secondary market for trading of security tokens

**Relevant experience incl.**

- Design and implementation of holistic Compliance Governance Models (incl. e.g. Strategy & Mandate, Organization, Risk Assessments, Processes & Methodology, Monitoring, and Reporting)

**Relevant experience incl.**

- Extensive experience with requirements of EMIR and local regulation on the governance and setup of the risk function inside financial market institutions
- Overall responsibility for the risk stream incl. development, testing and go-live across multiple asset classes for a large clearing house

**Relevant experience incl.**

- System integration, software customizing, transaction monitoring, solving of scalability issues and implementation of AML risk based strategies.
- Travel Rule (TRISA) and real time AML solution for transaction monitoring and risk scoring for BTC & ETH

**Relevant experience incl.**

- Design and development of processes and written regulations for crypto custodians and crypto trading platforms, the support and quality assurance in the selection of crypto trading platforms for new brokers.

**Qualified as**

- Solicitor-Advocate (England & Wales)
- Solicitor (Ireland)
- Solicitor (Northern Ireland)
- Rechtsanwalt (Germany)

We look forward to working with you!



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