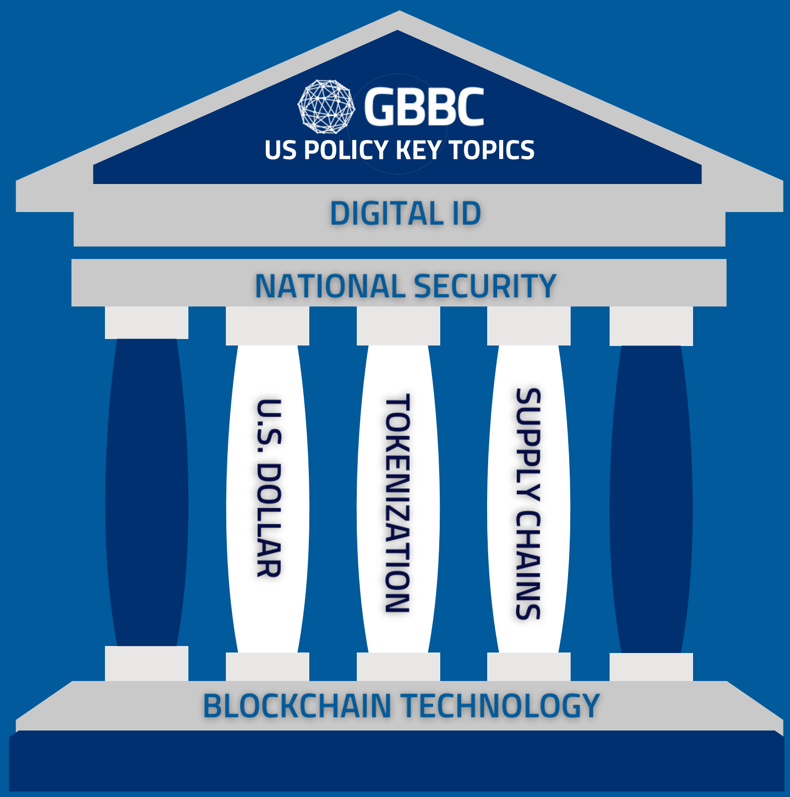
GBBC
Global Blockchain
Business Council

BRINGING BLOCKCHAIN HOME

REAL-WORLD USE CASES



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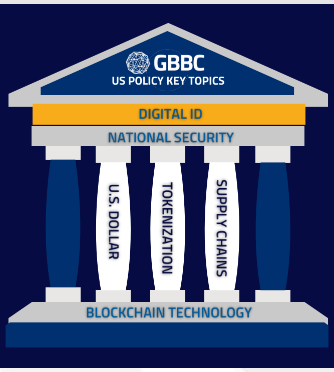
DIGITAL IDENTITY



WHY DO WE NEED IT?

PROBLEM

- **Over 1 billion people** lack proper identification globally [1]
- **Digital and decentralized networks** need adequate identity controls
- **2.8 million identity fraud** reports in 2021 [2]

SOLUTION [1]

DECENTRALIZED, DIGITAL IDENTITY

For institutions:

- Enhance **security and KYC/AML compliance** to ensure secure digital systems
- Enable **Decentralized Public Key Infrastructure (DPKI) to safeguard privacy** while making data available as necessary

For individuals:

- **Self-sovereign identity,** an identity system architecture based on the core principle that identify owners have the right to permanently control one or more identifiers together [3]

EXAMPLES

USE CASES FOR GOVERNMENT

Governments have started researching and developing decentralized identity initiatives

Online identities could unlock **6%** of GDP in emerging countries [3]

- Province of Ontario's Digital ID Plan
- Pan Canadian Trust Framework
- EU General Data Protection Regulation (GDPR)
- Proposal for New E.U. ID
- UK Framework Solution
- India's Digital ID (Adhaar)
- Digital IDs to Land
- Family Digital ID
- Estonia Global ID Solution

WHAT ABOUT THE U.S.?

California DMV is developing a set of smart contracts on a public blockchain to solve trusted vehicle transfers, reduce economic costs, and avoid repeated verification steps for customers and public service entities.

FINANCIAL SERVICES

- **Access to a global financial network** for efficient, direct, and low-cost value exchange
- **Enhanced compliance** with online services that require proof of identification
- **Increased privacy** where users can protect anonymity of holdings

INTERNATIONAL BODIES EXPLORING SOLUTIONS

- Bank for International Settlements (BIS)
- Organization for Economic Co-operation and Development (OECD)
- International Organization of Securities Commissions (IOSCO)
- Financial Action Taskforce (FATF)

HEALTHCARE & TRADE

- **Know Your Object (KYO)** to track an item or cargo from origin to destination as another form of identity
- **Electronic healthcare records** accessible to users regardless of location or insurance provider

1 GBBC GSMI 2.0 Report (November 2021)
2 U.S. Federal Trade Commission (February 2022)
3 "Self-sovereign identity: the future of personal data ownership?" World Economic Forum (August 2021)
* View Taxonomy from GSMI

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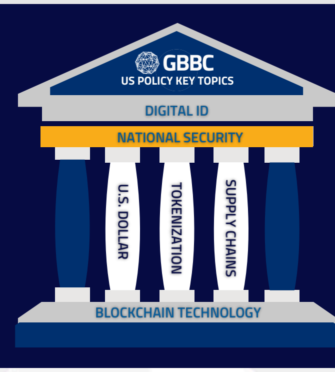
NATIONAL SECURITY



DANGERS IN A DIGITAL DATA WORLD

PROBLEM

The world is digitizing everything, and secure data is the key

$457 MILLION [1]
extorted from victims via **ransomware** in 2022

83% [2]
organizations globally had **more than one** data breach

$4.3 MILLION [2]
average total cost of a **data breach** in 2022

Governments are not immune to this problem [2]

$2.1 MILLION
average total cost of a **data breach** in the **public sector** in 2022

The United States was ranked highest in cost of data breaches for the **12th year in a row**

CYBERSECURITY

SOLUTIONS

BLOCKCHAIN-BASED TOOLS

Digital ID enhances AML/KYC compliance and can establish streamlined access to services

Tokenization enables the ability to digitize an asset

Supply chains strengthened by transparency and ability to detect counterfeit goods

FOLLOW THE MONEY [3]

Blockchains' immutable ledgers provide traceable transactions that can be analyzed to determine illicit activities

- Real-time updates with transactions
- Collect and monitor potential evidence
- Real-time updates
- Tracing funds to off-ramps
- Supporting seizures
- Identifying criminals

1 "Crypto Crime Report 2023" Chainalysis

2 "Cost of a Data Breach" IBM (2022)

3 "Key considerations for law enforcement handling blockchain & cryptocurrency data" TRM Labs (February 2023)

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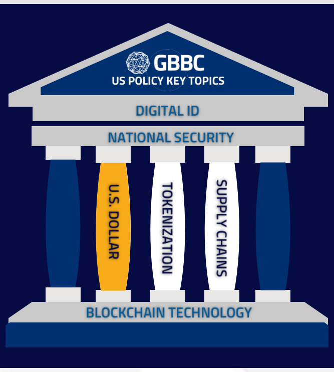
U.S. DOLLAR



FOREIGN EXCHANGE MARKETS [1]

DAILY TURNOVER

Average Daily Turnover in April 2022

$7.5T

USD = 88.5% GBP = 12.9%
EUR = 30.5% CNY = 7.0%
JPY = 16.7%

DAILY SPOT

$3.3T

DAILY FX SWAPS

$2.2T

USD LEG REPRESENTS 87% OF CROSS-BORDER TRANSACTIONS

WHAT IS THE ROLE OF US$ IN A DIGITAL MONEY WORLD?

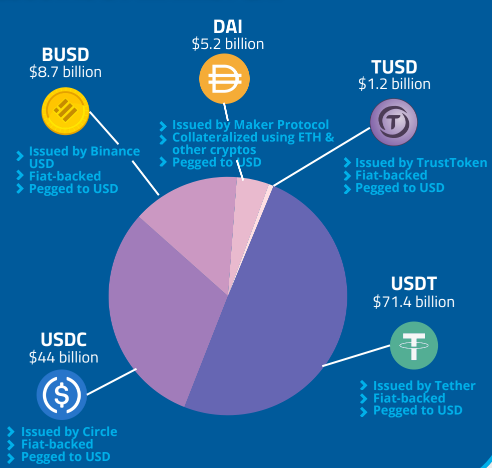
STABLECOINS [2]

A crypto asset that aims to maintain a stable value relative to a specified asset, or a pool or basket of assets

TOP STABLECOINS BY MARKET CAP

USDC [3] SPOTLIGHT

- **1.6M** Number of holders
- **$4B** 24HR trading volume
- **9.6T** Total on-chain transactions
- **190+** Number of countries supporting



CBDCs

A digital payment instrument and store of value issued by and is a liability of a jurisdiction's central bank or other monetary authority

- **Complement current forms of money** and methods for providing financial services
- **Enhancing demand for U.S. dollar** through greater efficiency of fund flows at lower costs
- **Protect U.S. status** as the world's reserve currency

RESEARCH

- Atlantic Council CBDC Tracker
- The Digital Dollar Project
- WEF Digital Currency Governance Report

ALTERNATIVES: CRYPTOCURRENCIES

A crypto asset that is a digital representation of value with no redeeming rights against a central party

TOP COUNTRIES FOR GLOBAL ADOPTION [4]

Vietnam Philippines Ukraine

$1 TRILLION market capitalization

300 [2] million users

1 "BIS Triennial Central Bank Survey" (2022)
2 https://coinmarketcap.com/charts/ (March 2023)
3 "USD Coin (USDC) | Circle" (March 2023)
4 2022 Global Cryptocurrency Adoption Index - Chainalysis
* View Taxonomy from GSMI

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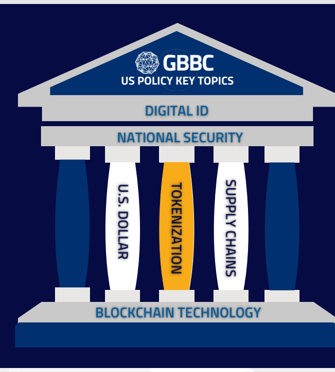
TOKENIZATION



WHY TOKENIZATION?

BENEFITS [1]

Tokenization is the digital representation of rights and obligations

- **Transparency and automation** leading to reduced costs
- **Reduction of risks** due to programmable compliance
- **Improved accountability** through measurement, reporting, and verification frameworks
- **Potential to fractionalize assets** such as verified CO2 tons (carbon credits)

EXAMPLES

DIGITAL BONDS [2]

Functions similar to traditional bonds, can have automated lifecycles, reduce settlement times, transaction fees, and increase transparency

CARBON CREDITS [1]

Blockchain-based carbon credits enable price transparency, reduce double-spending, allow for accurate accounting of carbon emissions and offsets, and improve effectiveness of voluntary carbon markets

TOKENIZATION STANDARDS

InterWork Alliance

A Global Blockchain Business Council Initiative

Empowers organizations to adopt and use token-powered services in their day-to-day operations across use cases and networks, bringing inclusivity to globally distributed applications

TOKEN TAXONOMY FRAMEWORK

The basic structure that enables multiple parties to define a standard with a common language, behaviors, and properties for the exchange of value using **tokenization**

LEARN MORE ABOUT TTF HERE

USE CASES

- Digital Measurement, Reporting, and Verification (MRV) Framework
- Hedera's Token Service

20+ implementations of TTF

APPLYING TOKENIZATION

INTEROPERABILITY [3]

- Platform neutral
- Formula used to generate business functionality
- Behaves in a strictly deterministic way

VOLUNTARY ECOLOGICAL MARKETS [1]

- Blueprints to help companies build ecosystems that support tokenized environmental assets and interoperability
- Guidance and special considerations for workflows
- Overview of the buy-side and sell-side of environmental markets and how tokenization fits into existing markets

READ THE REPORT HERE

1 "Voluntary Ecological Markets (VEM) Version 2"
2 "Digitzing Bonds on the Blockchain"
3 "The First Digital Bond Issued In A Regulated Market By The Swiss Exchange Points To A Need For Standards"
* View Taxonomy from GSMI

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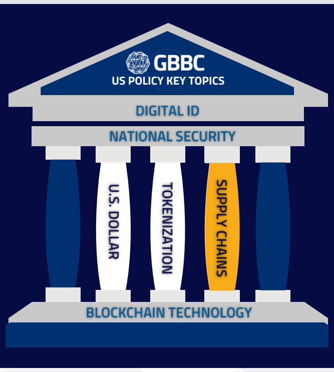
SUPPLY CHAINS



BLOCKCHAIN IN SUPPLY CHAINS

DISTRIBUTED LEDGERS [1]

By using a distributed ledger for supply chain processes

- Every party can access the data and authorize who can alter it
- Transaction details are immutably stored
- Secure supply chains can be established through hashing properties

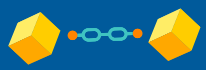
SMART CONTRACTS [1]

A self-executing program that defines and enforces a set of conditions amongst parties, without the need for an intermediary

Smart contracts **remove the need** for intermediaries and **streamline processes**

APPLICATIONS

LONG TERM BENEFITS [2]



	Reduce Waste and Delays	Faster Processing of Transactions	Detect Counterfeit Goods
Reduce Costs, Fewer Intermediaries	Increase Trust	Reduce Compliance Violations	Track and Trace Products

USE CASES [2]

EXAMPLES OF TRACEABLE PRODUCTS

- Pharmaceuticals
- Food
- Medical supplies
- Electronics
- Original Equipment Manufacturing (OEM) parts

Circulor

Use of lithium battery traceability from producer to retailer

HYPERLEDGER FOUNDATION

GSBN's global trade operating platform

Critical Minerals Association

CRITICAL MINERALS ASSOCIATION

Use of transparent process for the security of supply and extraction for acquiring mineral rights

fnbo

Researching how to implement blockchain in 'CattleID' app

1 "Could Blockchain Revolutionize Parcel Shipping?"

2 "A Systematic Literature Review of Blockchain-Enabled Supply Chain Traceability Implementations"

* View Taxonomy from GSMI

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