



# Canadian Crypto Nation



Building a 21st  
century digital  
country on the  
Blockchain

# Canadian Crypto Nation - Building a 21st Century Digital Country on the Blockchain

The Blockchain has provided a platform for key innovations like cryptocurrencies, but this is just one of its many use case applications.

Indeed the thesis of this ebook is that it offers a platform for an entire digital nation.

From [Walmart's supply chain](#) to [renewable energy management](#) to a [Covid screening tool](#), there is a myriad of scenarios that leverage the capability of the technology to enable transparent integrity of digital transactions.

And this is still just the early adopter phase. From 'Programmable Money' to a wholesale reinvention of democracy, the Blockchain will entirely transform society as we know it, and Canada is presented the opportunity to be a global leader of this transformation, creating a truly 21st century Digital Canada.

There are two main component parts to this strategy: Regulatory legislation and the innovation / technology ecosystem.

## Regulations

A keystone foundation is regulation and legislation, the right approach could either inhibit innovation or unlock an unparalleled scale of economic growth. As [Coindesk reports](#) a new German law could theoretically bring as much as €350 billion (~\$425 billion) of institutional investment into their cryptocurrency market.

[Writing for the Globe and Mail](#) Neil Gross paints a somewhat bleak picture of Canada's recent actions in this area, but also one with a silver lining.

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Commenting on the [recent move](#) by the financial authorities to regulate crypto exchanges, Neil says those operating outside of Canada simply won't bother with compliance or will cease trading in Canada, so the requirement will only impact local Canadian players, who will bear the brunt forcing them to pass on the costs to Canada buyers.

However he also points to the opportunity this presents for Canada, that well crafted regulations will play to the 'brand strength' of Canadian providers – The ideal of safety through robust governance and practices.

*“we can stick a stake in the ground on rules and professional standards to make Canada the safest, most reliable place to buy or sell crypto assets in the world.”*

He compares the positioning to that of Swiss bankers or German car makers, highlighting that there is a compelling market need. The crypto industry is still perceived as something of a cowboy landscape, especially to newbies, with great perceived risk due to faulty procedures, negligent systems design and therefore the risk of theft and fraud, such as the loss of \$250m by [Quadriga](#).

So he intelligently suggests that if Canada is to enforce tough legislation the smart move is to leverage this such that it plays to and reinforces the ideal of Canada as a global 'safe haven' for crypto trading. The right procedural requirements could enforce the diligence needed to protect consumers from this type of risk, and would fit with and enhance the international reputation Canada already enjoys as a highly trustworthy nation to do business in.

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When this goes hand in hand with policies that also enable innovation, such as [approving crypto assets for trading](#), it would cement Canada's brand as the best place in the world for crypto.

## Innovation Ecosystem

In the [follow on article](#) we explore the second component of this strategy, the technology / innovation ecosystem.

This explores the dynamics of how new services and thus startup businesses might be encouraged and enabled, to provide the mix of products that consumers most want and would adopt, factoring in related industry developments such as Open Banking.

These different sectors don't exist in isolation indeed it is their synergy that unlocks the most potential, and this presents huge opportunity for Canada. There are core technologies common to both, and growing expertise and capability there will create an accelerating effect for all of them. This includes cutting edge innovations that present massive growth potential in their own right, such as [Self Sovereign Identity](#), where Canada is already a world leader in its adoption for use cases like Government.

Further investing in this capability and applying it across multiple industries would see Canada propel itself head and shoulders over every other country on earth as a truly digital nation and tech sector giant, enjoying an associated scale of economic boom.

# The Cryptocurrency Ecosystem and What it Means for the Payments Industry

In the [previous introduction](#) we describe the innovation ecosystem as the second main component part of a crypto strategy for Canada.

The basic concept is eloquently explained by Anthony Pompliano.

In [this discussion](#), from 9m:50s, he describes a tiered financial system that builds upon gold as the foundation asset at level one, the issuing of cash money based on its value at level two, and then an increasing sophistication of electronic use of money at levels three and above.

He states that the cryptocurrency world is in the process of creating an equivalent system, where Bitcoin functions as the level one asset, aka “digital gold”, and we’ll see a comparable services ecosystem build upon it through layers two and above.

Vendor technologies like [Hiro](#) demonstrate a great example of this effect, providing the tools to build upon this layer with new applications, with major market innovations like [Mastercard planning](#) to build upon CBDCs, like launching like a [crypto rewards card](#), a great example of a level three service.

In China they are already active and the competitive repercussions are becoming evident. As the [Cointelegraph reports](#) the banks are promoting the CBDC, the ‘digital yuan’, over the incumbent payment providers like Alipay and WeChat Pay. JD.com has started [paying staff](#) in the digital yuan.

# The Cryptocurrency Ecosystem and What it Means for the Payments Industry

## Open Banking

As we consider the dynamics of building a Canadian ecosystem a key industry trend to factor in is Open Banking.

This intersects considerably with the crypto sector, particularly in areas like payments as highlighted above, and for Canada it is a domain [needing urgent attention](#) and impetus or they risk being left behind. Again the parallel development required includes regulatory legislation, so it presents an opportunity to kill two birds with one stone.

Matthew Enubuje [provides a helpful overview](#) of where the two sectors overlap, and the potential for their synergy.

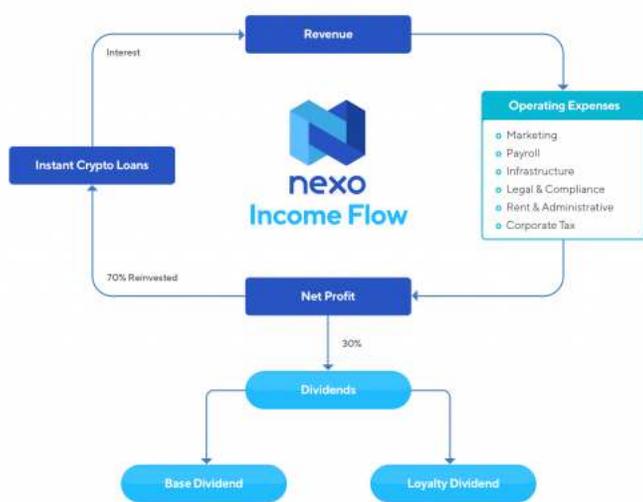
He makes the key point that reflects the insights described by Anthony Pompliano, that where the Blockchain industry has excelled at the level one core digital asset infrastructure, they haven't been as progressive in terms of developing the higher layer of interconnecting, value adding apps. Open Banking has.

The advantages of crypto over Open Banking are mainly those to do with circumventing the banking system and the technological features of the Blockchain - The decentralized control of assets by users themselves not banks, and the transparent integrity of the transactions.

He describes the opportunity for the crypto industry being to basically expand to the higher levels of the ecosystem introduced in this article, citing examples such as [Nexo](#), a crypto lending platform with no credit checks and instant credit lines, and where their revenue comes from their 5.9% interest on loans.

# The Cryptocurrency Ecosystem and What it Means for the Payments Industry

This adds equity to their crypto as it can be used to get a loan and by users holding it for long periods, they receive 30% dividends and this offsets the demand to supply ratio.



Matthew suggests a few other examples of this ecosystem, such as [Helium](#), a crypto company distributing hotspot devices and people earn their crypto when they use it, and the mobile app [Emma](#) — it lets you connect to your bank accounts and crypto exchanges.

The killer innovation central to both trends is interoperability. Open Banking is achieved through API-based data flow between banks and apps, and for crypto cross-chain integration is the holy grail of its next major phase of evolution. The CoinTelegraph explores this in detail [here](#), with major innovations setting out to address the challenge including [Cosmos](#).

## The Future of Money – Programmable Money

A concept that brings all this together and paints a vision of the future of where it is headed is “Programmable Money”. This is not just about the straight digitization of money as we understand it, but an entire transformation of how money ‘works’.

# The Cryptocurrency Ecosystem and What it Means for the Payments Industry

As the term suggests it refers to creating an intrinsic intelligence for money. [Reporting on an IBM](#) being awarded a patent for a “bespoke programmable crypto token,” Cointelegraph explores how specific functionality can be programmed into the behaviour of digital monies.

The LSE explores the idea, asking ‘[Do we need programmable money?](#)’, where they define it in terms of both Open Banking and crypto:

*“In non-crypto fintech, ‘programmable money’ seems to refer to leveraging open banking APIs to build new, automated use-cases over legacy bank payment infrastructure but in our crypto world, the ‘programmable money’ refers to digital cash hosted on a blockchain, where cash can be placed under the control of a smart contract.”*

Hence a key standard that could make it possible is ‘DAML’, a programming language for creating Blockchain smart contracts that run across multiple infrastructure options. DigitalAsset is the world’s expert on this and explore the trend in more detail in [this series of blogs](#).

Not only does this provide the technology to digitally enable currencies as they behave now, but to make possible a future of Programmable Money, where a variety of behaviours and actions can be coded into the flow of money not possible with physical currency.

A Canadian visionary in this field is Alex Tapscott. Indeed he defines it as the wholesale reinvention of capital, a journey he foresees in his 2016 presentation ‘[Blockchain is Eating Wall Street](#)’.

# The Cryptocurrency Ecosystem and What it Means for the Payments Industry

*“Digital assets are smart and programmable. Let’s say you’re sending money to your kid studying in college. You can now program the money to only work at certain retailers like Walmart and Whole Foods, rather than the Ontario Cannabis Store or LCBO.*

*By rethinking capital, we can reimagine markets, money and finance. Entire swaths of the financial services industry currently worth trillions of dollars — banking, payments and even money itself — will be questioned, challenged and upended in the years to come.”*

## How Canada Could Transform the Payments Industry

In conclusion the potential for Canada is aptly [presented by](#) Alex’s father Don Tapscott, Canada’s uber digital guru.

Speaking at Payments Canada in 2017 Don envisions how the Blockchain Revolution could enable Canada to pioneer the reinvention of the payments industry. Blockchain is a technology that represents nothing less than the second era of the Internet and it can be at the heart of a new financial system.

# The Canadian Digital Dollar – Could Canada Pioneer a Blockchain-based Central Currency?

The Internet has been steadily digitizing our monetary systems – The first online e-commerce payments were followed by the ability to email money to others, through to a modern day world of Bitcoin.

The transformation is not yet complete, cash is still widely used but some argue it's inevitable that eventually we will evolve fully to a [world entirely without it](#).

How will these advances ripple through the system? For example the [Bank of England warns](#) that the emergence of a cryptocurrency economy may weaken or eliminate bank credit issuance.

## The Canadian Digital Dollar

The full blown digitization of national currencies, “CBDCs” – [Central Bank Digital Currencies](#), is the grand prize and Canada is well positioned to lead the trend globally.

It's a behemoth of a worldwide opportunity now taking shape – In the USA former CFTC chair Chris Giancarlo has [set up a not-for-profit](#) called the Digital Dollar Foundation, to pioneer the creation of a US central bank digital currency (CBDC). In his presidency campaign Michael Bloomberg [proposed creating a regulatory framework](#) for cryptocurrencies in a new financial regulation plan.

# The Canadian Digital Dollar – Could Canada Pioneer a Blockchain-based Central Currency?

The World Economic Forum says it's time to [take them seriously](#), CNBC explores [what they would look like](#), the US Federal Reserve published a [literature review](#), the IMF a [set of considerations](#) for their use and Brookings a [set of design options](#). The Bank of England offers [this discussion paper](#) to explore the topic in detail and HSBC comments on them [here](#).

Early pioneers include [Switzerland](#), [Ghana](#) and the [Marshall Islands](#) seeking to blaze the trail, and China has [ambitions to lead the world](#) in this field.

There are concerns and critics of course. Coin Telegraph writes that they have the [potential to upend global finance](#), and also that they are [dead in the water](#), and the Economist asks if [they will break the banking system](#).

## Leading Canada's Blockchain Revolution

A Canadian visionary in this field is Alex Tapscott. He [articulates the scale of the transformation](#) he believes is coming through explaining that while the Bitcoin revolution has been massive, it will still only be a bit player in comparison.

Indeed he defines it as the wholesale reinvention of capital, a journey he foresees in his 2016 presentation '[Blockchain is Eating Wall Street](#)'.

Alex tells of how in August 2019, central bankers around the world assembled for their annual Jackson Hole symposium, where Mark Carney endorsed what could be the largest change in the global financial system since the 1944 Bretton Woods agreement.

# The Canadian Digital Dollar – Could Canada Pioneer a Blockchain-based Central Currency?

At the symposium, [Carney argued for replacing the U.S. dollar](#) as the reserve currency with a new global currency, entirely digital, and backed by a basket of digital currencies from a number of central banks.

With Canada's optimum size, scale of banking sector and mix of industry expertise across fields like payments and the Blockchain, the country is uniquely positioned to move quickly on this opportunity and in a meaningfully substantial manner.

Already early innovators like the [City of Calgary](#) are pioneering the path and the [Bank of Canada has laid the groundwork](#). In Dec 2020 Timothy Lane, deputy governor of the bank and head of research at the fintech and crypto department, [claimed](#) that Canada's CBDC might see the light of the day "sooner than expected."

According to Lane, the predicted decline in COVID-19-fueled cash transactions has been happening more rapidly than the bank had previously expected. This could trigger the bank to issue a CBDC sooner than it originally planned.

# Don and Alex Tapscott – Leading Canada’s Blockchain Revolution

Don Tapscott is the original Digital Economy guru, literally writing [the book](#).

Fast forward twenty five years and Don is still charting the future, a path that could lead Canada to becoming the world’s leading digital nation.

In 2016 Don published the [Blockchain Revolution](#), describing how this technology innovation represents nothing less than the second generation of the internet and holds the potential to transform money, business, government and society.

Being a visionary obviously runs in the family, as son Alex is equally capable in proffering a powerful roadmap for how Canada should be at the forefront of this revolution, such as [issuing their own digital currency](#).

*“Becoming the first G20 country to launch a truly native digital currency would also mean setting the standard for others to follow, giving Canada a competitive edge in the emerging fintech sector.”*

## Self-Sovereign Digital Identity

In his latest article, [published to Quartz](#), Don defines the next major evolutionary leap for the Internet, and how it could entirely transform business models and society.

Describing the current Internet model, where the big platforms own and control our data, as ‘digital feudalism’, Don suggests this inequity will act as the catalyst for a wholesale evolution and revolution of the Internet.

# Don and Alex Tapscott – Leading Canada’s Blockchain Revolution

*“What we need is a wholesale shift in how we define and assign ownership of data assets and how we establish, manage, and protect our identities in a digital world. Change those rules, and we end up changing everything. It is a revolution to be sure. We’ve called it the blockchain revolution.”*

Don proposes that the technology trend of ‘[Self-Sovereign Identity](#)’ is central to this revolution. When we shift from being dependent on governments to issue our unique digital identifiers, to being able to self-provision and own them directly ourselves, the foundations for the revolution will have been established. From this we’ll take control of our personal data and how it is used and monetized.

He highlights the ventures pioneering this trend, such as [Blockstack](#), [Civic](#), [Veres One](#), [uPort](#) and [Sovrin](#), and with Canada already a [world leader in this field](#), such as [how the public sector can utilize them](#) for next generation Digital Government practices, the potential for Canada to emerge as the global leader in the field is visibly within reach.

## As a Platform for Digital Democracy

The impact of this transformation will reach far further than simply technological change; it offers the potential to entirely modernize the very foundations of our societies – How our democracies work.

Writing [on Forbes](#) Alex describes “Blockchain Democracy”, how the technology will not only better secure digital voting but provide the foundations for new, 21st century models for truly participative democracy.

# Don and Alex Tapscott – Leading Canada’s Blockchain Revolution

Using the Internet, citizens became more involved, learned from one another. With the blockchain, the system can cost-effectively engage all citizens and provide equal access to public services (e.g., health care, transportation, education) and social security.

Technology is a powerful tool but it alone cannot achieve the change we need. In the spirit of the saying “The future is not something to be predicted, it’s something to be achieved,” let’s reinvent government for a new era of legitimacy and trust. It’s time to stop the tinkering.