BLOCKCHAIN IN GOVERNMENT BRIEFING:

Q3 2017

DATE: 5th July 2017

FROM: Natalie Smolenski, Business Development

SUBJECT: To clarify the utility of blockchain technologies for governments, with examples of country-level implementations of blockchain (or blockchain-like) technologies as of the beginning of Q3 2017.

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OVERVIEW

Much can happen in one quarter. Since the release of our last report on blockchain in government, countless new initiatives have materialized, and many of those previously described have matured. This Q3 report reflects a sampling of the most prominent blockchain-related government initiatives in the world today. Due to their sheer number, however, it does not attempt to be comprehensive. Its government focus means that the report leaves out most industry-led and private initiatives, many of which are highly influential in shaping the trajectory of blockchain adoption (for example, the financial industry). It makes some exceptions, however, for those with strong ties to local or national governments. In short, this report is an overview of how states at various scales are employing blockchain technology in their efforts to both govern and remain economically competitive.

The main takeaway from this report is that it is not too soon for any government to begin trialling blockchain technologies. Adoption is increasing at extraordinary pace, and those who hope to be pioneers will find that window soon closing. However, indiscriminate adoption is never the goal; as the government of Japan has noted, shared criteria are only just emerging by which to evaluate different types of blockchain solutions. The importance of transparency, good faith, and technical prowess in a solution provider are growing in relief--and as customers become more educated about their options, maintaining freedom to maneuver and avoiding vendor lock-in take on added significance.

The first section of this report includes a sampling of some of the most influential reports, several of them government-issued, on the impacts of blockchain technology that have been published in the past quarter. It follows with regional blockchain initiatives, then moves to country-level implementations. It concludes with a few prominent blockchain projects sponsored by international organizations. Each section of the report includes quotations from the sources cited and links to the source material.

At this point, there is no doubt that the blockchain is the future of social infrastructure for the world. Yet each organization and individual will join that future in its own way. The variety of implementations presented here showcase some of the many possibilities presented by the blockchain for governments at every scale.

REPORTS

¾ of US State CIO's Have Blockchain on Their Agendas

National Association of State Chief Information Officers (NASCIO):
*Blockchains: Moving Digital Government Forward in the State*s, May 16, 2017.

The encrypted digital recording of a transaction or event via a shared "incorruptible" ledger is not currently in common usage among public agencies. But in Blockchains: Moving Digital Government Forward in the States, NASCIO authors forecast change, citing a survey of 19 state CIOs and singling out the state of Illinois, which is analyzing and in various stages of implementing five blockchain pilots, an official confirmed.

Eric Sweden, a NASCIO official and an author of the brief, told Government Technology that blockchain "was not on anyone's priority" list during the organization's annual conference in 2016 — but is now "on a very steep acceleration."

http://www.govtech.com/security/Blockchain-a-Next-Big-Transformational-Technology-in-Government.html

To determine how blockchain can fit into government transactions, NASCIO recommends states follow six steps:

1. Begin research of blockchain technology and economics now to grow knowledge.
2. Explore potential use cases to get a better understanding of how blockchains may disrupt or enable the organization.
3. Consider developing a preliminary strategy on how to adopt blockchain technology for future use.
4. Create a state stakeholder group with individuals from both the business and technology sectors to inform the preliminary strategy.

5. Identify relevant use cases that harvest the benefits of blockchain technology.
6. Develop or join a collaborative with other organizations to explore blockchain opportunities and share knowledge and experience regarding cost reduction and innovation.

https://gcn.com/articles/2017/05/18/nascio-blockchain.aspx

http://statescoop.com/blockchain-for-states-first-brief-in-series-arms-leaders-with-advice

Report: https://www.nascio.org/Portals/0/Publications/Documents/2017/NASCIO%20Blockchains%20in%20State%20Government.pdf

Deloitte/MIT "Business of Blockchain" Survey

At a time when cybersecurity has become a central concern, digital technologies like blockchains, or distributed ledgers, are increasingly viewed as a solution for organizations looking to do business across borders and around the world in a fast, secure manner. At the Business of Blockchain conference, produced by MIT Technology Review in collaboration with the MIT Media Lab Digital Currency Initiative, leaders from this emerging technology and from a wide array of industries, from finance and healthcare to music and renewable energy, shared learnings on how distributed ledgers can help organizations operate more securely and efficiently. Deloitte conducted a brief survey of conference attendees for a snapshot on what is on the minds of many as they think about the growing impact of blockchains.

"The survey results show that consensus is emerging for viable blockchain use cases, but solutions to adoption issues, such as managing private keys and resolving disputes, are still uncertain. This is consistent with our view that blockchain technology adopters should consider shifting focus from proofs-of-concept and focus on barriers to achieving scale."

Report: https://www.technologyreview.com/s/604253/all-eyes-on-blockchain-a-new-way-to-do-business/

Australia: Blockchain Has Benefits for Developed and Developing Economies

Data61: *Risks and Opportunities for Systems using Blockchain and Smart contracts*, May 2017.

According to the Risks and Opportunities report, in economies where trusted third-parties are not always trustworthy, a significant benefit of blockchain is seen as a way of thwarting immutability and non-repudiation. One such example was the shipment of 88 bales of cotton from Texas, United States to Qingdao, China, that the Commonwealth Bank of Australia, in partnership with Wells Fargo and Brighann Cotton, performed via blockchain in October.

In developed societies, however, trusted third-party organisations are usually trustworthy, so Data61 said the benefits of using blockchain technologies in an economy like Australia would likely arise from enabling faster business model innovation, reducing the cost of establishing business relationships, and perhaps reducing the cost or risk of transactions.

"For government, blockchain can be used as a common reference point to bring the other different levels of government in new registries of open data," Turner added.

[. . .]

Contributing to the Risks and Opportunities report were representatives from the Reserve Bank of Australia, the University of Sydney, ANZ Bank, the Australian Tax Office, as well as the Sydney Stock Exchange, which announced a project recently that would see it instantly settle trades using blockchain technology with the help of Sydney-based Bit Trade Labs.

[. . .]

Data61's Research into blockchain technology is funded under the federal government's AU$1.1 billion National Innovation and Science Agenda, announced in December 2015.

http://www.zdnet.com/article/data61-has-its-sights-on-a-blockchain-based-future/

When assessing business risk, regulatory acceptance, and assurance arguments for a blockchain-based system, we need to consider not just the blockchain, but also all of the other components that are integrated in the design of the whole system. Other components will provide user interfaces, cryptographic key management, and on-chain databases, communications, and processing. Judicious use of these other components may mitigate blockchain's risks while still leveraging blockchain's opportunities.

Report: https://www.data61.csiro.au/~/media/052789573E9342068C5735BF604E7824.ashx

Canada: Blockchain Ushers in "Internet of Value"

Don Tapscott and Alex Tapscott: *THE BLOCKCHAIN CORRIDOR: Building an Innovation Economy in the 2nd Era of the Internet*, Feb. 7, 2017.

Like many countries, Canada continues to pursue economic interests with the intent of reducing financial risk, boosting productivity and creating a more diversified job sector. According to Don Tapscott, noted Canadian blockchain thought leader and the bestselling author of the book "Blockchain Revolution," Canada's economic evolution is bolstered by the intersection between the internet and blockchain technology. This assertion is addressed in a recent report he co-produced with his son Alex, The Blockchain Corridor: Building an Innovation Economy in the 2nd Era of the Internet.

According to the Tapscotts, the first internet era was predicated on the availability of information and content anywhere in the world and at any time. Now the second era, fueled by blockchain technology, is ushering in what is known as the Internet of Value, featuring a revolutionary distributed platform poised to reshape and advance the global business environment and world order.

This report goes on to suggest that Canada is rapidly emerging as the second era's global hub or, at the very least, one of a select group of such hubs. Bolstered by Canada's booming tech corridor

located between Toronto and Kitchener-Waterloo in southern Ontario, as well as its world leadership in quantum physics and artificial intelligence, this North American nation is well positioned for the new blockchain economy.

https://bitcoinmagazine.com/articles/tapscott-report-blockchain-tech-heart-canadas-economic-evolution/

Report: http://dontapscott.com/BlockchainCorridorReport.pdf

European Parliament Outlines Impacts of Blockchain Across Sectors

European Parliamentary Research Service: *How Blockchain Technology Could Change Our Lives*, Feb. 2017.

Areas of blockchain impact covered:

- Currencies
- Digital content
- Patents
- E-voting
- Smart contracts
- Supply chains
- Blockchain states
- Decentralised autonomous organisations

Report: http://www.europarl.europa.eu/RegData/etudes/IDAN/2017/581948/EPRS_IDA%282017%29581948_EN.pdf

Japan: Criteria for Evaluating Blockchain Platforms

Information Economy Division Commerce and Information Policy Bureau: *Evaluation Forms for Blockchain-Based System ver. 1.0*, April 12, 2017.

Blockchain technologies are new types of technology used for trading virtual currencies, e.g., Bitcoins. The important features of blockchain technology are that it is extremely difficult to falsify compared to conventional systems, and that inexpensive systems that cause no downtime in effect could be built. Therefore, the technologies are expected to be applied in a wide variety of fields.

However, no evaluation indices or criteria had been established to adequately assess the features of the technologies and to compare them with existing systems. This causes the public anxiety, misunderstanding, and unreasonable hopes to blockchain technologies, and leading to a potential unwillingness to introduce the technology.

Report: http://www.meti.go.jp/english/press/2017/pdf/0329_004a.pdf

Regions

Africa

Transform Africa Summit in Rwanda: "Smart Cities" Theme

Laurent Lamothe, former Prime Minister of Haiti, chairman of the Board of Directors of Global Voice Group, distinguished entrepreneur and champion of socio-economic development in emerging economies through Innovative Financing for Development (IFD), spoke at the Summit in a session: "Internet of Value: Blockhain and the Internet of Things (IOT)"

Against the background of the Summit and its underlying theme, this session was particularly pertinent as Lamothe believes the combination of Blockchain and the Internet of Things has the power to ignite socio-economic development in African countries. In his address he went even further—to say: "If your government, county, municipality, town, city or jurisdiction is not thinking about the Blockchain, they should be."

https://www.newsghana.com.gh/transform-africa-summit-empowers-cities-around-the-world/

Europe

European Commission Launches #Blockchain4EU: Blockchain for Industrial Transformations

The European Commission (EC) is launching a new blockchain research project focused on non-financial applications of the technology.

Called "#Blockchain4EU: Blockchain for Industrial Transformations", the effort will run from now until February 2018 under the direction of two EC bodies: the Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs and the Joint Research Centre.

The goal, according to a recent blog post announcing the project, is to "identify, discuss and communicate" areas in which the existing and emerging applications of blockchain and DLT can transform EU industrial businesses, effectively acting like a kind of study group.

http://www.coindesk.com/europes-executive-arm-launches-new-blockchain-study-group/

European Commission launches €5m DECODE blockchain project

A three-year €5m (£4.29m) project to develop and test blockchain-based tools to increase people's ownership and control over their online data, funded by the European Commission, has been launched.

The project, named Decode - for Decentralised Citizen Owned Data Ecosystem - aims to create tools that will encourage people to take more interest in their data, and to change the way people feel about sharing that information.

Innovation agency Nesta, one of the 14 partners in the research project, said that the aim was to give people better control of their personal data, which has "enormous power and value" but is "locked away in silos".

In addition, it said, many of the ways in which data is generated online is "monopolised by a handful of big businesses that do not always serve individuals and communities fairly", which prevents it being used by other organisations that might use it to create services for public benefit.

[. . .]

The research team plans to use blockchain technologies to create "smart contracts" that allow people to set rules about whether their personal data is kept private or shared.

The Decode project team said there "huge promise" in the concept of a data commons, but that it was "an embryonic area which needs more focus for us to realise these benefits" - and that the project would also work on how the value provided by open data can be understood.

The project team involves organisations in Spain, the Netherlands, Italy, Sweden, France and the UK, and is led by the chief technology and innovation officer for Barcelona, Francesca Bria. It is due to complete its work in December 2019.

https://www.publictechnology.net/articles/news/%E2%82%AC5m-project-trial-blockchain-tools-aimed-giving-people-greater-control-their-data

DECODE is part of Horizon 2020 – the biggest EU Research and Innovation programme ever with nearly €80 billion of funding available over 7 years (2014 to 2020).

In total, €5m will be paid to the 14 consortium members undertaking the work – including, the Institut Municipal d'Informatica de Barcelona, Eurecat and the University of Catalonia from Spain, Amsterdam City Council, Dyne and the Waag Society in the Netherlands, Politecnico di Torino/ Nexa from Italy, CNRS from France, Arduino from Sweden, and innovation foundation Nesta, Thingful, ThoughtWorks and UCL from the UK. Francesca Bria, Barcelona Chief Technology and Innovation Officer, is the project coordinator.

http://www.econotimes.com/EU-project-DECODE-to-develop-blockchain-tools-to-transform-online-information-sharing-723736

https://www.computing.co.uk/ctg/news/3010250/european-commission-launches-eur5m-decode-blockchain-project

European Parliament & European Commission Host "Spotlight on Blockchain"

"When and how should governments intervene?"

With that question, MEP Jakob von Weizsäcker kicked off a session of discussion yesterday held at the European Parliament (EP) and centered on the future of blockchain regulation in the 28-nation economic bloc.

The "Spotlight on Blockchain" workshop, hosted jointly by the European Parliament and the European Commission, gathered representatives from across the blockchain sector to discuss use cases and platform security.

Part of the program of the Blockchain Observatory, a formal fact-finding initiative launched in April and funded with €500,000, the aim was to cautiously approach the who, what and why of blockchain legislation.

[. . .]

An important question, he emphasized, is what governments could do to help the development of digital technology. Von Weizsäcker ventured that this could be achieved by governments using that technology themselves. He then suggested that an example could be an application that did two things: 1) put identities of companies or people on the blockchain, and 2) put money on the blockchain, speculating that private applications could be built on such an infrastructure.

http://www.coindesk.com/regulating-ethereum-eu-parliament-weighs-blockchains-big-issues/

The member of EU Parliament's committee on Economic and Monetary Affairs, told the attendees that Parliament was wondering whether the government should be involved and whether it has a role to play. Specifically, he said, they were considering whether there was any need for the government or legislators to set up blockchain infrastructure that can assist private enterprise.

Eva Kaili, a Greek member of the European Parliament, stated that they need to "give control back to the people," because this way maybe "we can re-gain some trust," she said, speaking in the context of the banking collapse in 2008.

Vinay Gupta, who helped launch ethereum in the early days, told the attendees that he had worked with the Dubai government to integrate blockchain technology. Europe needs to catch up, he said.

https://www.cryptocoinsnews.com/bitcoin-ethereum-breakthrough-european-union-bids-enter-blockchain-race/

http://www.europarl.europa.eu/news/en/press-room/20170504IPR73448/science-and-technology-options-assessment-meeting-11-05-2017-am

7 European Banks Partner with IBM to Deliver Trade Finance Platform

Seven of Europe's largest banks have formed a consortium to build and operate a new trade finance platform based on IBM blockchain powered by Hyperledger Fabric. Their aim is to improve domestic and cross-border service trade payments for small and medium enterprises (SMEs) in Europe. IBM logo (Photo by David Ramos/Getty Images) The seven banks, Deutsche Bank, HSBC, KBC, Natixis, Rabobank, Societe Generale and Unicredit, have formed the Digital Trade Chain Consortium which chose IBM through a global competitive bidding process. The Chain solution will run in the IBM Cloud and is designed to connect the parties involved in a trade transaction, both online and on mobile devices. It is designed to simplify trade finance processes by addressing the challenge of managing, tracking and securing domestic and international trade transactions.

https://www.forbes.com/sites/tomgroenfeldt/2017/06/28/7-european-banks-form-blockchain-consortium-for-smes/#45e61a213818
https://oneworldidentity.com/2017/06/28/european-banks-select-ibm-build-blockchain-based-international-trade-platform/

LuxTrust and Cambridge Blockchain Partner to Deliver Digital Identity for European Customers

The platform Cambridge Blockchain and LuxTrust are co-creating seems to have an eye on the European General Data Protection Regulation. This new European legislation, due to take effect in mid-2018, aims to strengthen data protection for individuals and simplify and unify data laws across the European Union.

The European General Data Protection Regulation emphasizes 'privacy by design'. Article 23 "calls for controllers to hold and process only the data absolutely necessary for the completion of its duties (data minimisation), as well as limiting the access to personal data to those needing to act out the processing". The new platform will comply with these directives by default.

The new platform will initially cater to banks, allowing them to verify and manage their customers' identities, and will later expand the same technology to secure personal data (such as health records) and Internet of Things devices.

https://cryptoinsider.com/cambridge-blockchain-teams-luxtrust-manage-identity-data/

Europe's Largest Utilities Pilot Blockchain Energy Trading Platform

Some of Europe's biggest utilities joined a project to test blockchain-based trades in wholesale power and natural gas markets. Utilities from Enel SpA to RWE AG will start live trading based on blockchain in the fourth quarter, after tests that start in August, said Michael Merz, managing director at Ponton GmbH, the developer of the project. The software, called Enerchain, allows anonymous peer-to-peer trading without using a third party.

https://www.bloomberg.com/news/articles/2017-05-29/europe-s-biggest-utilities-join-blockchain-energy-trading-trial
http://www.coindesk.com/swedish-government-utility-trials-blockchain-energy-transfers/

COUNTRY-LEVEL INITIATIVES

The following list is a global "map" of major blockchain initiatives current as of Q3 2017. It does not claim to be comprehensive; there are others that are unaccounted for here. It also does not include again every initiative that was mentioned in the Q2 Report. However, it should suffice to get a high-level idea of the types of blockchain initiatives being pursued in different parts of the world.

The complexity of making blockchain technology user-friendly and interoperable has led all governments in this list to partner with blockchain startups or established vendors to roll out their initiatives rather than custom building their own.

The following sections include excerpts from sources describing each country-level initiative, along with links to the original articles.

AUSTRALIA

RegHack DownUnder: Government Promotes Blockchain-Friendly Business Climate

On the weekend of May 12–14, government representatives in the energy sector and banking executives in the financial services industry came together to judge RegHack DownUnder. The brightest developers, UI/UX designers and entrepreneurs across Australia were encouraged to spend the weekend in Melbourne to develop blockchain technology solutions to solve some of the problems it faces in these two heavily regulated sectors.

> https://bitcoinmagazine.com/articles/university-student-involvement-supports-australias-booming-blockchain-community/

State of Victoria Explores Commercial Blockchain Applications

The government of the Australian state of Victoria has become a member of the Australian Digital Currency and Commerce Association (ADCCA) in its foray to explore commercial blockchain applications.

Specifically, the government is now a part of Australia's leading digital currency association through the Department of Economic Development, Jobs, Transport and Resources. With its membership, the Victorian government is looking to partner with the organization and its members to research the potential of blockchain technology in a number of sectors, according to a report by ComputerWorld today.

https://www.cryptocoinsnews.com/victorian-govt-joins-australias-digital-currency-association/

State of New South Wales Explores Land Title Transfers & Consumer Protection Applications

NSW for example is considering how blockchain could be used to manage land title transfers, or to boost consumer protection.

Speaking on a blockchain panel at CeBIT's eGovernment conference, Rhys Bollen, executive director of regulatory policy for the NSW Department of Finance, Services and Innovation noted that although the "jury was still out" on blockchain it was a technology of interest to the public sector.

He acknowledged that blockchain was a challenging technology to understand, but added; "I'm not sure my mother knows how her Visa card works. I think blockchain will be invisible to most

consumers – if it's better than the status quo a commercial enterprise will make a success of it. And my mother won't know how it works."

City of Melbourne Partners with Civic Ledger to Allow Residents to Trade Parking Entitlements

Victor Jiang, founding partner of Sapien Ventures and chairman of Civic Ledger, which develops blockchain based solutions for public sector applications, said that the company had been working on a pilot with the City of Melbourne that would use blockchain to allow people to trade parking entitlements.

"The CIO had a great idea to work with partners to develop an exchange for people with parking permits to trade them.

"It is really that Airbnb concept applied to government-controlled entitlements," he said. The technical challenge however of ensure secure transfer and ensuring that vehicle number plates associated with that entitlement at a specific time of day were up to date required a sophisticated solution.

Mr Jiang said that a blockchain-based register was currently in pilot. "It's using a distributed ledger to report who has what entitlements, for what geographies.

"It can be geo-fenced and people can trade hourly or weekly so that the parking inspector goes around with mobile app to scan the licence plate to see if it has validity.

"Apply that to other Government controlled entitlements and the use cases are almost limitless," said Mr Jiang.

BELGIUM

Port of Antwerp Partners with T-Mining to Streamline Container Logistics

According to the terminal authority, moving containers from point to point often involves more than 30 different parties, including carriers, terminals, forwarders, haulers, drivers, shippers and more. This process results in hundreds of interactions between those parties, conducted through a mix of e-mail, phone and fax.

http://www.coindesk.com/europes-second-largest-port-launches-blockchain-logistics-pilot/

CHINA

Government Pushes Banks to Use Blockchain to Combat Fraud

Lenders have struggled for years with outdated and disparate technology. While four Chinese banks rank among the world's five largest by capital, many still use paper, faxes and traditional chop stamps to verify documents.

Now, spurred by regulators, they are looking to use blockchain to leapfrog a generation of technology and clean up the system, bankers and blockchain experts say.

Demand from Chinese banks for experience in blockchain more than doubled last year and will grow further this year, headhunters and blockchain professionals say, as lenders scramble to catch up with Western counterparts that have already invested $1.5 billion in the technology.

http://www.reuters.com/article/us-china-fintech-blockchain-idUSKBN15A368

Royal Chinese Mint Experimenting with Ethereum-Based Yuan Token

China might be the first country to turn their static money into dynamic digital code as they are experimenting with ethereum to create a Yuan token according to Andrew Keys from ConsenSys, an ethereum development powerhouse.

https://www.cryptocoinsnews.com/chinese-royal-mint-experimenting-ethereum-create-digital-yuan-token/

Chan Cheng District in Foshan City Pilots Intelligent Multifunctional Identity (IMI)

According to reports on the Chinese government's official web portal, gov.cn, the Chan Cheng District in Foshan City is ground-zero for a blockchain trial designed to test the technology's usefulness for streamlining public services. The District, located in Guangdong province, will be testing an innovative platform that the Chinese are calling Intelligent Multifunctional Identity (IMI). The system will reportedly provide a more efficient way for residents to authenticate their identities and official information without filling out forms each time they need a new government service.

The district is home to some one million of the city's 7.19 million citizens, and the streamlined authentication process is seen as a way to dramatically improve the current administrative workflow. Residents in Chan Cheng District currently access government services like healthcare, utilities, and pensions at a central hub in Foshan. That hub requires each person's physical presence, which creates massive administrative congestion.

https://dcebrief.com/chinese-city-launches-blockchain-based-public-services-program/

Hangzou: Global Blockchain Summit, Blockchain Industrial Park

With the successful conclusion of a Global Blockchain Summit on April 28, the city of Hangzhou in China has established itself as a rising center of blockchain technology. The conference opened

with remarks from Canada's Don Tapscott, known in China as the godfather of digital economy, who beamed into the conference via video. Vitalik Buterin, the founder of Ethereum, also gave his insights on why blockchain technology is disrupting the world.

The Hangzhou government recently announced that Hangzhou will build China's first Blockchain Industrial Park with preferential policy support for the companies operating within - an innovative move deserving of the world's attention.

http://www.nasdaq.com/article/keep-an-eye-on-hangzhou-a-growing-hub-for-blockchain-development-cm782383

Jiangsu Huaxin Blockchain Research Institute

The government of the Chinese province of Jiangsu is backing a new research effort aimed at offering unbiased information to businesses coming up to speed on blockchain.

Launched in September 2016, the Jiangsu Huaxin Blockchain Research Institute (JBI) is now going public via CoinDesk as the first state-owned enterprise to focus solely on blockchain tech. Already, the group, backed by parent firm Beijing Huaxin Electronics Enterprise Group, claims to have roughly 100 employees at its office in Nanjing working to develop its product.

http://www.coindesk.com/chinas-government-backing-massive-blockchain-research-effort/

FRANCE

Government Launches Blockchain Working Group

France Stratégie, also called the Commissariat-General for Strategy and Foresight, has announced the launch of a working group that will explore various aspects of blockchain technology.

According to the details provided by the commission, the working group will, in particular, delve into the characteristics, potential, and benefits of the technology; explore existing variants and potential improvements; as well as examine how the government can support its development.

The participants working group come from different backgrounds as the initiative draws members from both public and private sector, CoinDesk reported. This includes representatives from France's Prudential Supervisory and Resolution Authority, DINSIC, Blockchain France, AXA, CNRS, and many others, bringing the total to over 35 participants.

> http://www.econotimes.com/French-government-launches-blockchain-working-group-695257

GEORGIA

Bitfury Records 100,000 Land Titles on Bitcoin Blockchain

In April 2016, the Georgian government and the Bitcoin company BitFury initiated a project to record land titles on the Blockchain.

Following the project initiation, on Feb. 7th, 2017, in Tbilisi, the government of Georgia signed an agreement to use the Bitcoin Blockchain to verify property transactions.

And on 19th of April 2017, Valery Vavilov, CEO of BitFury during his speech at the Russian Internet Forum in Moscow, said, that since the launch in February 2017, when his company along with the

government of the Republic of Georgia <u>implemented</u> the property registration on Blockchain had registered more than 100,000 documents

<u>https://cointelegraph.com/news/georgia-records-100000-land-titles-on-bitcoin-blockchain-bitfury</u>

GERMANY

'Blockchain Bundesverband' – the German Federal Blockchain Association Founded in Parliament

<u>https://www.cryptocoinsnews.com/new-pro-bitcoin-ethereum-association-launches-german-parliament/</u>

Innology Adds Blockchain Payment Capabilities to Electric Charging Stations

Innogy, a subsidiary of Germany's energy giant RWE created last year by splitting the renewable, network and retail businesses into a separate entity, has added blockchain capabilities to hundreds of charging stations for electric vehicles (EV).

Carsten Stöcker, Senior Manager at Innogy Innovation Hub, publicly stated "100s of EV Charging Assets all over Germany Blockchainified. E2E Product using asset-backed Crypto-EURO for payments." He further added that "EV Charging assets will be on public ethereum blockchain and further assets across EU connected soon."

<u>https://www.cryptocoinsnews.com/hundreds-charging-stations-electric-cars-blockchenized-ethereum-germany/</u>

INDIA

Telangana and Andhra Pradesh to Deepen Blockchain Pilots

http://techwireasia.com/2017/06/two-indian-states-plan-move-government-related-data-blockchain/#DUvkCgfpljjuQCAm.97

http://economictimes.indiatimes.com/small-biz/security-tech/technology/blockchain-tech-is-joining-e-gov-dots-in-ap-telangana/articleshow/59330625.cms

JAPAN

Blockchain for Processing Government Tenders

The Ministry of Internal Affairs and Communications will test a blockchain-based system for processing government tenders in the fiscal year through March 2018. Next fiscal year, it plans to lay out a roadmap for incorporating distributed-ledger technology in e-government systems and begin moving in that direction.

http://asia.nikkei.com/Politics-Economy/Policy-Politics/Japan-looks-to-blockchains-for-more-secure-e-government-systems

Entire Property Registry to Go on Blockchain

The Japanese government is reportedly planning to unify all property and land registries across urban, farmland and forested areas in a single ledger powered by blockchain technology/

According to a report in prominent financial publication Nikkei, Japan is looking to consolidate data from all government real estate databases into one viewable data record.

[. . .]

The new blockchain-powered register will be tested in select cities come summer 2018. If it proves successful, the Japanese government is looking at a nationwide rollout over the next five years.

https://www.cryptocoinsnews.com/japan-place-entire-property-registry-blockchain/

Government Unveils Process for Evaluating Blockchain Platforms

The Japanese ministry's evaluation methodology includes 32 distinct pointers 'which are especially closely related to the characteristics of blockchain technology', the document reads. Evaluation items include scalability, portability, reliability, throughput, the number of nodes, performance efficiency and interoperability, among others. Blockchain platforms will also be classified by their public (open) or private (permissioned) nature and consortium-based blockchain platforms like Ripple and the Hyperledger Fabric will also be classified separately.

https://www.cryptocoinsnews.com/japan-evaluation-blockchain-platforms/

KENYA

World Bank Supports Blockchain Bonds Trial

The World Bank has revealed plans to explore how blockchain technology could help boost Kenya's financial prospects.

According to a new report, the World Bank is seeking to provide follow-up research to support a mobile phone-based bond issuance dubbed 'M-Akiba' through which the African country's government has so far raised $1.1m.

Kenya's government plans to sell roughly $47m in similar products, and is reportedly considering how blockchain could improve the issuance process.

http://www.coindesk.com/world-bank-to-support-blockchain-bonds-trial-in-kenya/

LUXEMBOURG

Government-Owned LuxTrust Partners with Cambridge Blockchain to Secure Customer IDs

A major digital identity firm backed by the government of Luxembourg is building a new platform alongside US startup Cambridge Blockchain.

The initiative, unveiled today, sees the Cambridge, Massachusetts-based startup partnering with LuxTrust – a company formed in 2005 as part of a big push toward digital identity solutions within Luxembourg that began in the early 2000s.

The state of Luxembourg owns two-thirds of LuxTrust, with the remainder held by a consortium of banks and financial institutions that utilize its services.

That firm is now moving to integrate blockchain, setting the stage for at least some of its 500,000-strong subscriber base to utilize the tech in some capacity.

http://www.coindesk.com/luxembourg-government-backed-firm-to-launch-blockchain-id-platform/

MALAYSIA

Launch of EcoBit, a Conservation Coin, Compliant with UN Standards

In terms of environmental welfare, traditional schemes face a constant battle with legislation, bureaucracy, corruption and even sabotage from deployment countries.

Now, EcoBit, a Blockchain initiative and coin with support from the Malaysian government and United Nations (UN), hopes to take a decisive step forward.

The startup, which has comprehensive plans for conservation on an international scale, has so far raised over $4.5 mln via its token sale.

"In phase one, we secured one mln acres of tropical rainforest with Kelantan state government in Malaysia. It is the largest ever carbon credit project in Malaysia," CEO Mr. Tang told Cointelegraph.

In total, EcoBit has a three-phase roadmap to create fully-fledged eco-friendly communities for human habitation. In the first instance, however, this will take the form of a conservation-based guardianship of rainforest in a contract which will run for 30 years.

Climate Protector Sdn Bhd is spearheading the project using EcoBit technology, with lawmakers in Malaysia's Kelantan province signing the deal this week in a ceremony featured on national television.

https://cointelegraph.com/news/crypto-conservation-ecobits-30-year-plan-shows-blockchain-means-business

MALTA

Cabinet Approves National Blockchain Strategy

Malta Today reports that Prime Minister Joseph Muscat, during a speech this week, said that Malta's Cabinet had approved the first draft of a "national strategy to promote blockchain", though what the particulars of that policy may be remains to be seen. Muscat, the paper said, is planning to release the strategy for public comment in the near future.

He did, however, suggest that Malta might look to apply the tech to its land registry process – a concept other governments have begun embracing. Muscat also indicated that Malta's health industry may also utilize blockchain.

http://www.coindesk.com/malta-government-blockchain-strategy/

NETHERLANDS

Port of Rotterdam Consortium Sharing Logistical Info

Announced earlier this month, the Netherlands-based effort includes support from a number of local and regional institutions, including the Port of Rotterdam, ABN Amro, Delft University and the Netherlands Organisation for Applied Scientific Research. Also taking part in the initiative are Royal FloraHolland, a major floral auction house, and the Windesheim University of Applied Sciences, among others.

Over the next two years, consortium members will test applications for sharing logistical and contractual information between parties. According to Delft University, the project will move forward in conjunction with a separate blockchain initiative pursued by the Dutch Ministry of

Economic Affairs. Delft said that it would create an open-source infrastructure to serve as the basis for testing among the other companies and institutions involved.

http://www.coindesk.com/europe-biggest-port-blockchain-logistics/

National Grid Introduces Blockchain to Manage Supply & Demand

https://www.cryptocoinsnews.com/bitcoin-ethereum-breakthrough-european-union-bids-enter-blockchain-race/

NORWAY

April 17, 2017: Blockchain Day (Oslo)

https://www.cryptocoinsnews.com/iota-spearheads-dlt-research-in-norway/

Distributed Ledgers in eHealth Event

https://www.cryptocoinsnews.com/iota-spearheads-dlt-research-in-norway/

Distributed Ledger Technology Research Network

Since 2016, the IOTA Foundation has been leading a concentrated effort to apply its Tangle distributed ledger network to the public sector, with a strong focus on eHealth. Now, in partnership with leading Norwegian healthcare providers such as Olso Medtech, the Norwegian Centre for E-Health Research, and Oslo Cancer Cluster, the IOTA Foundation and Alpha Venturi are working together to form a new Distributed Ledger Technology research network.

[. . .]

Distributed ledger networks like IOTA's Tangle are seen as an opportunity to overcome the interoperability challenges professionals in eHealth are currently facing. Along with the founding partners of the DLT research network, IOTA is well positioned to tackle complex issues ranging from insurance and payments processing to sharing digital healthcare data in a reliable, secure manner. This research network could very well be the first step in achieving a distributed ledged-based eHealth infrastructure with the potential to, "promote the development of precision medicine, advance medical research, and invite patients to be more accountable for their health," according to research from HealthIT.gov.

https://www.cryptocoinsnews.com/iota-spearheads-dlt-research-in-norway/

Initiated together with Oslo Medtech, Oslo Cancer Cluster, NTNU CCIS, The Norwegian Centre for E-Health Research and Alpha Venturi (network manager), the network has the ambition to grow as an international cross-industry network of research and academia experts involved with DLT research and innovation.

David Sønstebø, the Founder of IOTA, who is originally from Norway and Wilfried Pimenta are both directly involved with key Norwegian and Nordic stakeholders, from both public and private sectors. The new network will grow as a key contributor to the region's transition to the digital economy.

https://blog.iota.org/iota-launches-dlt-research-innovation-network-from-norway-9be083dfaf54

PAPUA NEW GUINEA

Papua New Guinea Partners with Australia to Develop Blockchain e-Government Projects

The Central Bank of PNG is leapfrogging traditional financial infrastructures to look at the future of financial technologies, with blockchain. Earlier this month, the central bank launched a new program to research and study blockchain technology toward applications in identity and financial inclusion for its citizens.

The next step, was to partner the Australian Government to collaborate on developing use cases for blockchain technology for the tropical country. A number of use cases are earmarked for exploration including areas such as identity and land registration, remittances, security, regulations and digital government.

https://www.cryptocoinsnews.com/papua-new-guineas-central-bank-goes-big-blockchain-australia/

RUSSIA

Consortium of Banks Launches Ethereum Payment Processing Trial

Like other central banks, the Russian one is testing blockchain technology: Last year, a consortium of large Russian banks it formed for the purpose processed the first transactions through the Etherium platform. With Putin's support, which means everything in today's Russia, the central bank, run by Putin favorite Elvira Nabiullina, can more aggressively move the country's financial sector to the blockchain.

https://www.bloomberg.com/view/articles/2017-06-06/ethereum-could-change-russian-banking-and-government

SOUTH KOREA

Government Selects Insurance Company for Blockchain Pilot

Kyobo Life, one of the largest insurance providers in the country, was selected by the South Korean government as the major operator of its Blockchain project. Kyobo is expected to facilitate tests and pilot experiments with the South Korean government's Blockchain platform.

According to local publications including Business Korea, Kyobo Life was contracted by the country's National Information Society Agency under the Ministry of Science, ICT and Future Planning. The insurance company emphasized that its developers and researchers will particularly focus on the development and testing of Blockchain-based Internet of Things (IoT) systems.

Along with Kyobo Life, other emerging South Korean Blockchain and fintech startups including D. Lemon, The Loop and One were contracted by the Ministry of Science to collaborate with the research and development team of Kyobo. Although the investment was not disclosed, Business Korea confirmed with Kyobo that all of the companies involved will be funded by the Ministry of Science until the project is completed.

https://cointelegraph.com/news/south-korea-is-ready-to-test-blockchain-selects-insurance-company-for-pilot-experiments

SWITZERLAND

Procivis Introduces Beta of Electronic Identity & Service Platform

The beta version of Procivis' integrated electronic identity and services solution, called "eID+", is available as of now. The platform allows the issuance, management and integration of electronic identity services. At the heart of the solution is a mobile app that allows citizens to create and manage their electronic identity, and access related services. These include secure and convenient

login to websites using two-factor authentication, and the electronic signing and safe storage of documents.

Verification providers, such as state authorities or their delegates, can access the platform on a web backend to attest the correctness of personal data stored as part of a citizen's electronic identity. An application programming interface (API) allows third parties to validate the verification status of such information, adding security and speed to their processes. A second backend allows website operators to set up seamless onboarding and login for their applications using eID+ as well as the upload of documents for electronic signing by eID+ users.

http://www.the-blockchain.com/2017/05/23/swiss-e-government-startup-procivis-releases-integrated-e-identity-platform/

UKRAINE

Blockchain Land Registry Trial to Begin in October

The government of Ukraine has revealed plans to trial a land registry system underpinned by blockchain.

In a government meeting on Wednesday, Maksym Martyniuk, First Deputy Minister of Agricultural Policy and Food, unveiled the pilot project, planned to start in October. According to local media reports, the scheme will introduce blockchain to the Eastern European country's State Land Cadastre and digitize auctions for leases of state land.

The news follows Prime Minister Volodymyr Groysman's recent commitment to hold auctions for all state land leases going forward – a move aimed to increase competition, boost the local economy and reduce illicit activities. Warning of potential "criminal punishment" for non-compliance with the policy, the Prime Minister said at the time.

http://www.coindesk.com/ukrainian-government-to-start-blockchain-land-registry-trial-in-october/

UNITED STATES

July 18, 2017: Federal Blockchain Forum

Organized by the General Services Administration and the State Department.

http://www.coindesk.com/us-government-organizes-federal-blockchain-forum-july/

https://www.digitalgov.gov/event/in-person-u-s-federal-blockchain-forum/

Department of Homeland Security Awards Small Business Blockchain Grants

The Department of Homeland Security (DHS) Science and Technology Directorate (S&T) has awarded $9.7 million to 12 small businesses for 13 Phase II contracts through the Small Business Innovation Research (SBIR) program.

Each Phase II award contract received approximately $750,000 to develop a prototype based on the feasibility of the technologies demonstrated in the Phase I effort, which were completed in November 2016.

https://www.dhs.gov/science-and-technology/news/2017/05/02/press-release-dhs-st-awards-97m-13-phase-ii-sbir-projects

http://www.coindesk.com/us-government-awards-2-25-million-blockchain-research-projects/

General Services Administration: RFQ for Government Contract Awards

The GSA has issued the first RFQ for blockchain technology from the US government. They want to use permission chains to streamline the contract award process.

https://www.fbo.gov/index?s=opportunity&mode=form&tab=core&id=178e6faba980ab956fa595d968f0088a

Navy to Use Blockchain in Manufacturing

https://cointelegraph.com/news/us-navy-interested-in-integrating-blockchain-technology-for-more-secure-manufacturing-systems

State Department: Blockchain@State Working Group

Currently they've only hired an intern to produce a biweekly report on blockchain in government. But they're tracking blockchain as an international diplomacy tool.

http://www.coindesk.com/us-state-department-forms-new-blockchain-working-group/
https://vsfs.state.gov/projects/view/776

State of Arizona Passes Bill Declaring Smart Contracts Legally Enforceable

Arizona Governor Doug Ducey recently signed into law HB 2417, which governs the enforceability of blockchain technology-powered smart contracts in commerce.

The statute broadly defines both blockchain technology and smart contracts, with the latter defined as "an event-driven program, with state, that runs on a distributed, decentralized, shared and replicated ledger and that can take custody over and instruct transfer of assets on that ledger."

The statute provides that a transaction cannot be declared invalid or unenforceable solely because it contains a smart contract term. The statute also provides additional clarification with respect to the ownership of information stored in a blockchain network.

The Arizona law is one of the first of its kind in the United States and may provide a roadmap for other states looking to regulate the use of smart contracts. Legal certainty with respect to the enforceability of smart contracts is relevant in the energy space, as many of the energy-specific blockchain technologies in development, such as electric vehicle charging and microgrid transactions, will likely rely heavily on smart contract functionality.

State of Illinois: 5 Blockchain Pilots Underway

Illinois is looking at five focused pilots for blockchain, according to Jennifer O'Rourke, business liaison for the Illinois Blockchain Initiative (IBI) which was formally created in November [2016] by six state and municipal agencies.

Member agencies are the Illinois Pollution Control Board; state departments of Commerce and Economic Opportunity, Innovation and Technology, Finance and Professional Regulation, and Insurance; and the Cook County Recorder of Deeds.

They first came together informally during the spring and summer of 2016, making it official by year's end with three goals for blockchain: ensuring thoughtful and light-touch governance as it applies to the technology; supporting building out the ecosystem from an economic development perspective; and promoting government integration of the technology itself.

Among its outreach, Illinois has joined a pilot exploring the use of blockchain to transfer property titles that was begun last year by the Cook County Recorder's office, O'Rourke said.

John Mirkovic, the county's deputy recorder of deeds, said the agency likes "the idea of making it harder to steal your neighbor's house" and believes it's completely legal "to trade property using a blockchain."

"It makes property records a natural fit for a distributed ledger or a blockchain. It's a chronological timestamp ledger of a chain of events. That's why it also makes sense for land records because that's also how land records are kept," Mirkovic told Government Technology. The state of Illinois also intends to:

- work with a community college to reflect some of its course credentials through a blockchain;

- work with health provider registries to reconcile data planes — which currently costs insurers about $2 billion annually — ensuring the accuracy of multiple input points and enabling customers, O'Rourke said, to do something "as simple" as check their doctor's licenses and insurance through an app;

- start an energy credit marketplace to track Renewable Energy Credits, tradeable features generated by creating 1 Megawatt-hour of electricity through wind turbines or solar panels. These are traded on secondary and tertiary markets and it may not always be clear when they're retired; and

- hold a vital records pilot with a hospital, starting a blockchain to record a birth. The fact that this is "the most appropriate starting place for digital identity is not lost" on agencies, O'Rourke said.

http://www.govtech.com/security/Blockchain-a-Next-Big-Transformational-Technology-in-Government.html

http://www.ibtimes.com/chicago-looks-become-fintech-mecca-lawmakers-show-they-actually-understand-blockchain-2556681

Illinois Blockchain Initiative Blog: https://medium.com/the-illinois-blockchain-initiative

State of Nevada Passes Bill Preventing Taxation and Regulation of Blockchain Use

This bill prohibit[s] a local government from: (1) imposing a tax or fee on the use of a blockchain; (2) requiring a certificate, license or permit to use a blockchain; and (3) imposing any other requirement relating to the use of a blockchain.

https://www.cryptocoinsnews.com/nevada-senate-vote-recognize-blockchain-tax-ban-bill/

https://news.bitcoin.com/nevada-senate-opts-to-prohibit-tax-and-regulations-on-blockchain-technology/

UNITED ARAB EMIRATES

Dubai Pilots Blockchain for Cheques, Shipping, Payments, Passports

Dubai's pioneering government-backed initiative to implement blockchain technology across the city is now into its third month, and the pilot schemes continue to roll out. The move adds to the city's reputation as a leading center for business in the Middle East, while also drafting the roadmap for cities across the globe to follow.

https://cryptoinsider.com/dubai-drawing-roadmap-blockchain-city/

http://www.coindesk.com/dubai-plans-gate-less-airport-security-using-blockchain-tech/

http://www.econotimes.com/ObjectTech-partners-with-Dubai-Governments-GDRFA-to-develop-blockchain-based-digital-passports-749566

INTERNATIONAL ORGANIZATIONS

UNITED NATIONS WORLD FOOD PROGRAMME

Distributing Ethereum-based Vouchers to Refugees

Pakistan: "Building Blocks"
In January 2017, WFP took the ambitious step of piloting an early stage blockchain project, named 'Building Blocks', at field level. Deep in the heart of Sindh province, Pakistan, WFP tested core assumptions and the ability of blockchains to authenticate, record, and reconcile cash and food assistance transactions.

As beneficiaries received in-kind food assistance, and a WFP-cash transfer in addition, coded transactions were inputted into the system by the vendor and authenticated and recorded on a public blockchain through a smartphone interface while they waited. Transaction reports generated from the system were used to reconcile the disbursements and ensure trust between the parties.

Adopting key learnings, and having confirmed the technical feasibility and usability of a basic blockchain system, WFP's 'Building Blocks' project is building a robust blockchains engine to support multiple facets of CBT, with transaction reconciliation as a first step. The expanded pilot using this system is expected in the spring of 2017.

http://innovation.wfp.org/blog/blockchain-crypto-assistance-wfp

Syria/Jordan:

https://cointelegraph.com/news/ethereum-blockchain-used-by-united-nations-for-sending-aid-to-syria

United Nations High Commissioner for Refugees

Partnering with Microsoft and Accenture to Issue Refugee ID's on the Blockchain

Microsoft and Accenture have partnered to develop a digital identification network that employs blockchain technology. This is part of project supported by the United Nations with a view to offering legal identity to more than one billion people in the world who lack official documents.

A prototype of the digital identification network was unveiled at the headquarters of the United Nations on Monday. This was during the ID2020 second summit which seeks to promote the Sustainable Development Goal of offering legal identity to all human beings in all parts of the world.

https://www.thelincolnianonline.com/blockchain-based-id-system-unveiled-for-refugees-by-accenture-and-microsoft/

Oxfam

Building Ox-Chain, an Oxfam Blockchain

Ox-Chain is a collaborative research project between the Universities of Edinburgh, Northumbria and Lancaster, and research partners Oxfam, Zero Waste Scotland, Volunteer Scotland and WHALE Arts. By bringing together experts in digital design, cryptography, business and international development we will design a Blockchain for Oxfam to better support the circulation and re-circulation of valuable items within its business model – hence 'Ox-Chain'. More broadly, drawing on the expertise and practices of our research partners, we will explore the reconfiguration of economic, social and cultural life which may be made possible by digital, peer-to-peer value exchange.

http://oxchain.uk/

WORLD BANK

Kenya: Blockchain Bonds Trial

The World Bank has revealed plans to explore how blockchain technology could help boost Kenya's financial prospects.

According to a new report, the World Bank is seeking to provide follow-up research to support a mobile phone-based bond issuance dubbed 'M-Akiba' through which the African country's government has so far raised $1.1m.

Kenya's government plans to sell roughly $47m in similar products, and is reportedly considering how blockchain could improve the issuance process.

http://www.coindesk.com/world-bank-to-support-blockchain-bonds-trial-in-kenya/