

LEAP

BLOCKCHAIN INITIATIVES
IN EMERGING MARKETS



powered by

emerge

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About Emerge

We work with entrepreneurs, investors, startups, and governments in emerging markets to embrace new technologies, like **blockchain**, to create impactful solutions to local problems. We **build** blockchain proof of concepts, **consult** governments on innovation policy, **research** groundbreaking projects, **organize** hackathons and educational events, and support emerging market entrepreneurs with access to **funding** and **mentorship**.

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LEAP PROJECT

"Blockchain has the potential to help developing nations **leapfrog** more developed economies."

Vinay Gupta, Rob Knight (Harvard Business Review)

Leap is the first publication dedicated to exploring blockchain initiatives in emerging markets.

We started this project out of **curiosity** to see how entrepreneurs in emerging markets are recreating the leapfrog effect to bypass poor infrastructure with disruptive blockchain applications. However, there is no central source to view information about blockchain applications in emerging markets. So, we got to work. We researched initiatives around the world with the goal of contributing those results to the community. What we found **inspired** us.

The most **disruptive** applications of blockchain technology will come from emerging markets. Poor infrastructure and trustless relationships between centralised authorities in emerging markets are no longer just a disadvantage, but an **opportunity** for radical redefinitions of trust, access, and transparency. Blockchain technologies accelerate a transformation to disrupt centralized authorities and build public processes, distribute energy, unlock land capital, forge fair judiciary systems, and create accessible financial services.

Blockchain propels the **tenacity** of emerging market citizens and is empowering them to vote on government peace treaties with rebel forces, clean the Niger Delta, create the world's first digital decentralized court, and distribute solar-powered rental income. We are witnessing the birth of a technology stack that will enable **billions** of people to create their own space, reclaim their dignity, and transform their futures. This narrative **drove** us to create Leap.

Our team searched blockchain initiatives throughout **every** country in Africa, Asia, the Caribbean, Eastern Europe, Latin America and the Middle East and categorised them by sectors and industries in order to present our results in this report.

We hope that Leap will contribute **meaningful** data to the community, highlight incredible innovations and start a conversation about what blockchain already looks like in emerging markets.

Only then can we truly explore what it **will** be.

KEY FINDINGS

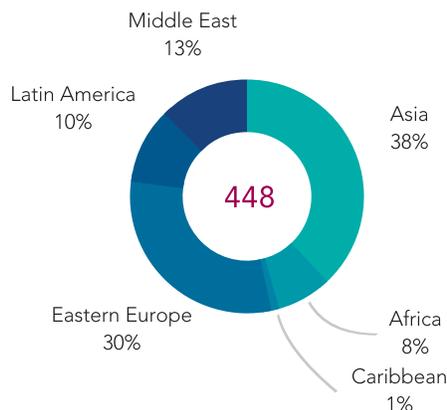
Overview

Our team searched 85 countries in six (6) regions: Africa, Asia, the Caribbean, Eastern Europe, Latin America and the Middle East. We identified a grand total of 448 blockchain initiatives in 29 sectors and industry groups. Asia and Eastern Europe emerged as global leaders in the blockchain space, collectively accounting for 306 blockchain initiatives.

Totals		Initiatives by Region	
		# of Initiatives	
Regions	6	Africa	34
Countries	85	Asia	170
Industries	29	Caribbean	5
Initiatives	448	Eastern Europe	136
		Latin America	48
		Middle East	56

Regional Breakdown

Asia and Eastern Europe collectively account for 68% of total blockchain initiatives in emerging markets. Following closely behind is the Middle East, Latin America and Africa, which represent 31% of total blockchain initiatives. The growing blockchain space in the Caribbean represents 1% of global initiatives.



KEY FINDINGS

Leading Countries

Asian and Eastern European countries top the charts by number of blockchain initiatives, with Russia, China and Singapore emerging as leading countries. Regional leaders broken down by region are as follows: South Africa (Africa), China (Asia), Barbados (Caribbean), Russia (Eastern Europe), Argentina (Latin America) and Israel (Middle East).

Emerging Market Leaders

of Initiatives

Russia	41
China	34
Singapore	33
Israel	28
Estonia	25
Hong Kong	18

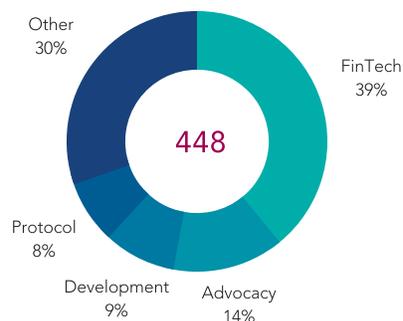
Regional Leaders

of Initiatives

South Africa	10
China	34
Barbados	2
Russia	41
Argentina	12
Israel	28

Leading Industries

Exchange platforms, wallets and financial technologies represent 39% of all initiatives in emerging markets. Blockchain education and advocacy groups are in second and represent 14% of global initiatives with development/venture production studios and protocol technologies together representing 17%.



AFRICA

Overview

"The [African] continent appears set for the advantage of **leapfrogging** lost years of non-development by taking advantage of prevailing global blockchain disruption."

Cointelegraph (Iyke Aru), Nigeria

The 2007 launch of M-Pesa enabled the peer to peer deposit and transfer of mobile money throughout the continent and established Africa as a world leader in financial technology. Mobile money created financial access for millions of Africans. It is, therefore, no surprise that financial technologies are popular in the African blockchain space, with innovators using mobile money application program interfaces to ease interoperability between mobile money and cryptocurrency transfers. There are a total of 34 initiatives in 14 African countries, led by entrepreneurs in Ghana, Kenya and South Africa.

Totals

of Initiatives

Countries	14
Industries	10
Initiatives	34

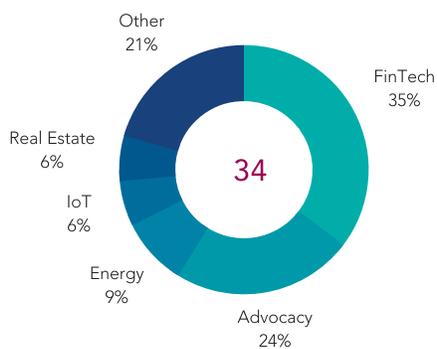
Countries

of Initiatives

South Africa	10
Kenya	6
Ghana	4

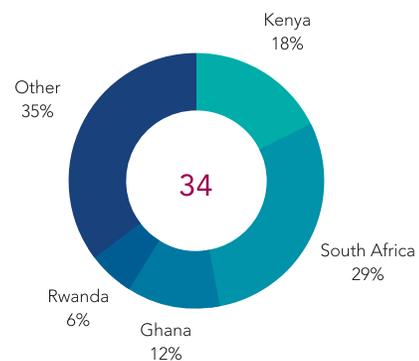
Leading Industries

% of Total Initiatives



Regional Breakdown

% of Total Initiatives



AFRICA

Spotlight

GHANA

Led by local startups like [BenBen](#) and [Bitland](#), Ghana is at the forefront of blockchain-powered digital land registration. BenBen and Bitland aim to disrupt the real estate industry and unlock land capital with electronic information queries, property record management, and secure land transactions.

NIGERIA

The Niger Delta is home to 20 million people and 40 ethnic groups but suffers from destructive oil spills. [Sustainability International](#) aims to change that and is using blockchain to clean oil spills. The nonprofit is building a smart contract platform to reduce corruption and securely transfer funds to projects that aim to clean the polluted Niger Delta region.

RWANDA

Rwanda is building the [Blockchain/Internet of Things Center of Excellence](#), one of the first of its kind, with the goal of incubating projects, hosting research and building prototypes.

SENEGAL

Following in the footsteps of Tunisia, one of the first countries to pilot digital currencies, Senegal and the [West African Monetary Union](#) are trialing a digital eCFA (West African Franc) in Senegal. If successful, the project will be rolled out into other Francophone West African countries.

SOUTH AFRICA

South African startups are leading blockchain energy projects. The [Sun Exchange](#) is a local startup that built a unique crowdsale platform for users to lease solar cells and generate passive income from distributed solar incentives from anywhere in the world. Another interesting startup is the [ixo Foundation](#), which is creating Proof of Impact to validate social impact objectives using oracles and smart contracts.

ASIA

Overview

"Blockchain technology will help Southeast Asia to leapfrog the West."

NEM Foundation, Singapore

Blockchain initiatives are booming in Asia with world-class protocols, startups, mining pools, developers and venture production studios. China, Singapore, and Hong Kong are leading regional innovation, with countries like Indonesia, Malaysia, the Philippines and Thailand leading the charge in Southeast Asia. There are a total of 170 initiatives in 28 countries throughout Asia.

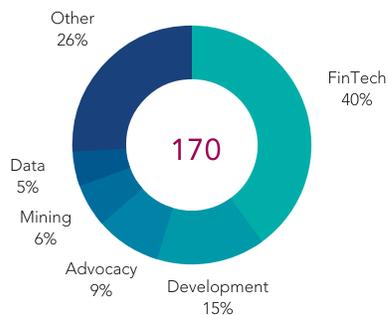
Totals # of Initiatives

Countries	28
Industries	18
Initiatives	170

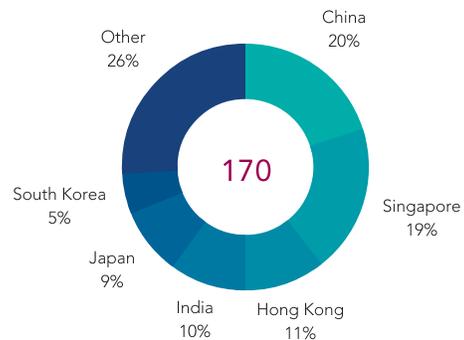
Countries # of Initiatives

China	34
Singapore	33
Hong Kong	18

Leading Industries % of Total Initiatives



Regional Breakdown % of Total Initiatives



ASIA

Spotlight

CHINA

China leads by the number of blockchain initiatives in Asia. [NEO](#), formerly AntShares, is one of the more well-known Chinese blockchain startups. NEO also aims to add digital identity and simpler programming languages to its smart contract protocol.

HONG KONG

Hong Kong startups are making plastic cryptocurrencies. Local startups [Monaco](#) and [Xapo](#) are using cryptocurrency debit cards to increase mainstream adoption in a country that already innovated its financial system to use pre-paid card payment services like the Octopus card. Local venture studio [Intrepid Ventures](#) and accelerator [SuperCharger FinTech Accelerator](#) are working with groups in the region to accelerate blockchain startups and contribute to the growth of this space in Asia.

INDONESIA

Chances are that the tuna you eat comes from Indonesia. [Provenance](#) and local entrepreneurs saw this opportunity and are piloting a blockchain supply platform for tuna fish to increase transparency in seafood supply chains.

SINGAPORE

Singapore is a hotbed for blockchain innovation, with some of the most advanced blockchain startups and regulations in the world. One of the few agriculture-blockchain initiatives is based in Singapore. [AgriLedger](#) aims to create a blockchain platform to both reduce food waste and empower local farmer cooperatives in emerging markets.

SOUTH KOREA

A local startup is creating [ICON](#); a powerful, decentralized information and payment network for hospitals, insurance providers, regulators, governments, universities, and banks.

CARIBBEAN

Overview

"Quite frankly, the [Caribbean] region is going to **leapfrog** the developed nations now."

Bitt, Barbados

Caribbean countries have long led innovations in agriculture, art, energy, and finance. The region is ripe to lead blockchain adoption with diaspora and local Caribbean innovators, regulators, and startups pushing the boundaries of new blockchain initiatives. There are a total of five blockchain initiatives in four countries in the region.

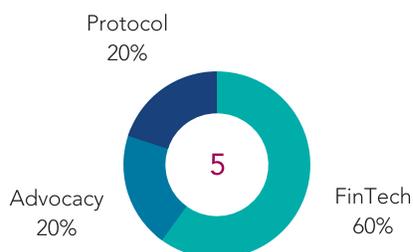
Totals # of Initiatives

Countries	4
Industries	3
Initiatives	5

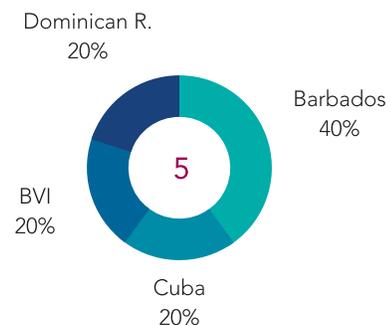
Countries # of Initiatives

Barbados	2
Cuba	1
BVI \ DR	1 \ 1

Leading Industries % of Total Initiatives



Regional Breakdown % of Total Initiatives



CARIBBEAN

Spotlight

THE BAHAMAS

The [Bahamas Financial Services Board](#) is contributing to the local blockchain community. The professional services group recently founded the country's first FinTech group together with [Emerge](#) and local leaders to explore applications of blockchain technology in the country's reputable offshore financial center.

BARBADOS

Barbados is home to [Bitt](#), an innovative fintech Caribbean startup. Since its founding in 2013, Bitt has created the region's first Bitcoin ATM, is trialing a digital fiat, has conducted the first merchant transaction and is creating a cross-Caribbean blockchain settlement network.

CUBA

Cuba's first bitcoin transaction was brokered by [Bitcoin Cuba](#), an initiative that aims to educate Cubans about cryptocurrencies and to explore use cases.

DOMINICAN REPUBLIC

[Pocket Network](#) is a local startup building a software platform to make mobile decentralized application building and cryptocurrencies more mainstream. Their network allows developers to integrate cryptocurrency transactions with just a few lines of code, without fees or traditional merchant accounts.

HAITI

Haiti's former prime minister, [Laurent Lamothe](#), is a passionate blockchain advocate and frequently speaks about how the technology could have helped Haiti recover from the 2010 earthquake and leapfrog lacking infrastructure.

EASTERN EUROPE

Overview

"Countries like Ukraine and Georgia are positioning themselves to **leapfrog** other advanced nations."

Bitfury, Global

Together with Asia, Eastern European countries are leading global blockchain initiatives in emerging markets. Russia, Estonia, and Ukraine lead blockchain innovation. Estonia, in particular, is emerging as a global thought leader in the sector with plans for its own initial coin offering, an e-residency program, and blockchain-healthcare initiatives. There are 136 total blockchain initiatives in Eastern Europe throughout 18 countries.

Totals

of Initiatives

Countries	18
Industries	20
Initiatives	136

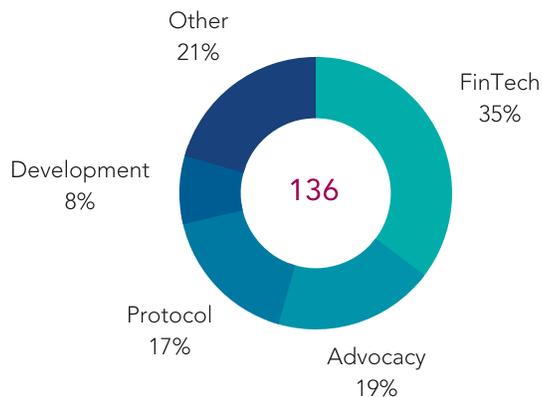
Countries

of Initiatives

Russia	41
Estonia	25
Ukraine	12

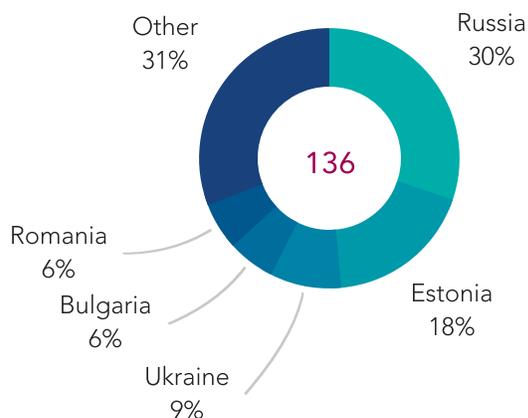
Leading Industries

% of Total Initiatives



Regional Breakdown

% of Total Initiatives



EASTERN EUROPE

Spotlight

CZECH REPUBLIC

[Trezor](#) is possibly the most popular, hardware wallet and was created by Czech startup, [SatoshiLabs](#), which also founded [Coinmap](#). Coinmap is a user-friendly map that shows where merchants accept cryptocurrency payments.

ESTONIA

The [Estonian government](#) is well-known for its efforts to innovate its public services with blockchain technology. The government is building its own initial coin offering, laying the groundwork for regional exchange platforms with its e-residency program and is securing patient records in a digital healthcare registry. In addition to boasting an innovative government, Estonia is home to startups like [Funderbeam](#) that are creating fascinating technologies, like the first tokenized stock exchange for privately-owned technology startups.

GEORGIA

In partnership with [BitFury](#), Georgia became the first government to successfully secure land titles on a blockchain platform. The government recently reported that it secured 100,000 land titles on the bitcoin blockchain.

RUSSIA

Russia's blockchain scene is growing impressively fast. Startups in the country seem to launch almost daily, with each product more innovative than the last. [Waves](#), a disruptive blockchain protocol for digital asset management, is pursuing several initiatives in the country, including a WhopperCoin loyalty cryptocurrency with Burger King.

LATIN AMERICA

Overview

"Latin America is a region weakened by centralized institutions, but kept afloat by a huge pool of talent. We are using blockchain to **leapfrog** into the digital economy and transform our communities."

Crowdjury / Kleros, Argentina

The Latin American blockchain space is emerging as a global leader in good governance technologies, with exciting initiatives that create access to justice and legal representation. For example, one of the first successful pilots of a voting software enabled Colombian diaspora communities to vote on a local peace treaty. There are 48 blockchain initiatives in 18 countries, with Argentina, Brazil, and Mexico leading initiatives in the region.

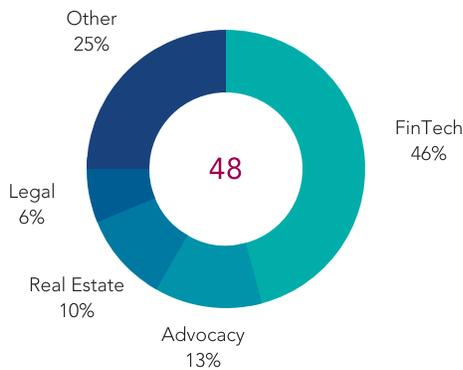
Totals # of Initiatives

Countries	18
Industries	12
Initiatives	48

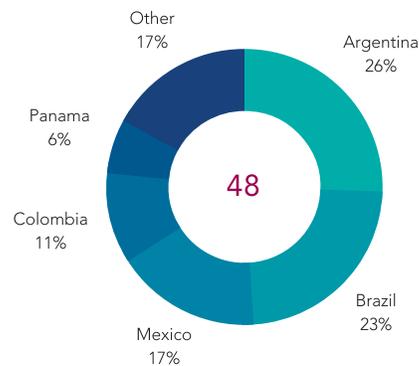
Countries # of Initiatives

Argentina	12
Brazil	11
Mexico	8

Leading Industries % of Total Initiatives



Regional Breakdown % of Total Initiatives



LATIN AMERICA

Spotlight

ARGENTINA

[Crowdjury](#), an Argentinian startup, is taking on the justice system by creating a decentralized court system. Their team is building [Kleros](#), a blockchain-powered platform that uses game theory incentives to crowdsource anonymous jurors for judicial proceedings, to lower the cost of access to justice and deliver fast, accessible, and transparent verdicts.

BRAZIL

The [Brazilian government](#) is making great strides in blockchain innovation to pilot land transfer projects with Ubiquity and identity management for Brazilians with [ConsenSys'](#) spoke, uPort.

CHILE

The [Santiago Stock Exchange](#) is partnering with IBM to create a private blockchain to exchange information between banks and regulators to eventually incorporate blockchain securities lending solutions.

COLOMBIA

A blockchain voting platform enabled Colombian diaspora members to vote on a peace treaty between their government and local rebel forces. [Democracy Earth Foundation](#) is creating the future of a 'liquid democracy' that empowers citizens to securely vote on issues and questions from anywhere in the world, with more than simple yes or no answers.

MEXICO

[Trato](#) is a Mexican startup creating an online software as a legal service. It uses blockchain, artificial intelligence, and big data tools to automate affordable legal services and help small companies create edit and time-stamp their legal documents.

MIDDLE EAST

Overview

"Blockchain ... could allow the region to leapfrog over entrenched and antiquated processes."

Arab World Blog, Middle East

Middle Eastern entrepreneurs are currently working on digital wallets for homeless people, food distribution on the Ethereum blockchain, and purchasing real estate with bitcoin. Middle Eastern governments and entrepreneurs are leading the charge for blockchain innovations in social impact, finance, real estate, and cybersecurity in emerging markets. Dubai is emerging as a global leader in this space and even announced its Blockchain Strategy, with which it intends to create an open platform to share blockchain resources with other cities and countries.

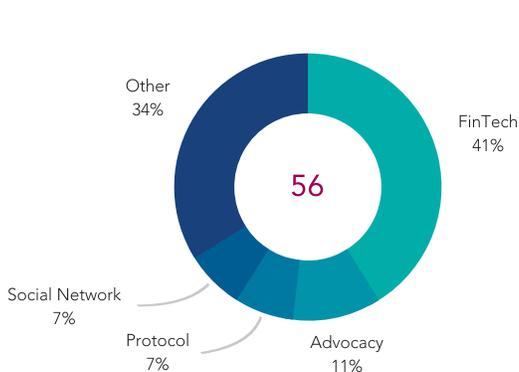
Totals # of Initiatives

Countries	13
Industries	17
Initiatives	56

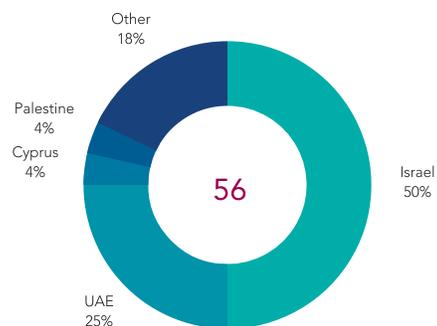
Countries # of Initiatives

Israel	28
UAE	14
Turkey \ Palestine	2 \ 2

Leading Industries % of Total Initiatives



Regional Breakdown % of Total Initiatives



MIDDLE EAST

Spotlight

AFGHANISTAN

The [Digital Citizen Fund](#) is a nonprofit organization that works to increase digital and financial literacy for women and girls in Afghanistan. The organization is well known for its efforts to use Bitcoin enabled payments to empower women in Afghanistan to achieve financial independence through writing blogs and advertising.

ISRAEL

Israel is fast becoming a global leader in the blockchain space, responsible for a majority of the blockchain projects in the Middle East region. Significant protocols are making blockchain technologies more mainstream and accessible. [Bancor](#) is a local startup that allows any community to create tokens, [Backfeed](#) allows users to create their own decentralized autonomous organizations and [Crypto Next](#) enables anyone to create their own digital exchange.

JORDAN

The [United Nations World Food Program](#) partnered with blockchain innovators to trial cryptocurrency based vouchers for Syrian refugees in local refugee camps in an effort to revolutionize resource and food distribution programs.

PALESTINE

There is no Palestinian currency. However, the [Palestinian Monetary Authority](#) intends to change that and recently announced plans to pilot a digital currency on a blockchain.

UAE

The government of Dubai is one of the most innovative hubs in the global blockchain community. The government is pursuing several initiatives and launched the [Dubai Blockchain Strategy](#) and [Smart Dubai](#), with intentions to create a paperless government entirely run on blockchain technology by 2020. The government has also organized hackathons and works regularly with groups like ConsenSys and local startups to foster new blockchain use cases.

METHODOLOGY

How do we define an emerging market?

The phrase 'emerging markets' throughout this report refers to all countries in Africa, Asia, the Caribbean, Eastern Europe, Latin America and the Middle East. There is no international agreement on which countries constitute emerging markets. However, many of the countries covered in this report are traditionally classified as developing countries, which we believe is a term that implies inferiority to developed countries. The term 'developing country' cannot capture the latent human potential to bootstrap innovation. We believe the phrase 'emerging market' does. For this reason, we endorse efforts by groups like the World Bank to eliminate the term 'developing countries' from its datasets (World Bank 2016) and to adopt more inclusive and aspirational definitions of world populations.

What did we include? What didn't we include?

We aimed to provide a quantitative and qualitative view of blockchain initiatives in emerging markets and therefore collected data about any active projects, startups, advocacy groups, partnerships, government trials, enterprise pilots or meetups. Regulations are outside the scope of this goal and we do not summarize regulations around blockchain or cryptocurrencies in emerging markets. We believe that fantastic resources like Bitlegal and Coindesk provide well-researched guidance on regulatory developments around the world. We focused our resources on data specifically related to blockchain initiatives, which is a much less available resource.

When did we collect this information?

We searched blockchain initiatives between July and September 30, 2017.

METHODOLOGY

How did we collect this information?

Our team worked tirelessly to manually collect data from news sources, social media, forums, press statements, contact pages, websites, blockchain conferences, videos, blockchain reports, token sale announcements, and white papers. We dedicated resources to individually researching each emerging market country throughout the regions covered in this report. Our team members endeavored to collect as much data as we could. However, it is likely that many projects are not available online or still not searchable. As such, we make no guarantees as to the accuracy of the data collected, nor should this be relied on as investment advice.

How did we present the data in this report?

Accessibility is key. We wanted this data to be engaging, accessible and most of all, digestible. We chose to present each region separately, and provide both quantitative and qualitative data. The opinions expressed about each regional profile spotlight are our own. Our team came across incredible projects, and it was difficult to choose ones to spotlight. We chose them based on their traction, ingenuity, and popularity. We are exploring ways to highlight numerous initiatives in the future to create accessibility and visibility for as many emerging market blockchain initiatives as we can. They all deserve the visibility.

What's next?

Leap captures initiatives up until September 30, 2017. We are exploring ways to create an open source initiative to highlight fantastic technological innovations and their leaders. This project was entirely community driven, so please drop us a line at hello@emergedev.co to share your thoughts, comments and suggestions.

In the meantime, we are hosting an event called [e:disrupt](#), which will focus on blockchain initiatives by emerging market entrepreneurs and by diaspora community members. [e:disrupt](#) is at 6 pm on [May 31st, 2018](#) in downtown Toronto, Canada. We will announce details on our website soon.

METHODOLOGY

What metrics, industries and sectors did we use?

Industry

Agriculture
Cybersecurity
Entertainment
Environment / Energy
Financial Technology
Healthcare
Identity
Insurance
Legal Technology
Mining
Real Estate
Social Impact / Social Network
Transportation
Telecommunications
Venture / Investment

Sectors

Accelerators / Incubators
Blockchain Advocacy
Cybersecurity
Development / Venture Studio
Software as a Service (SaaS)
Supply Chain
Voting / Democratic Process

Technology

Assets / Smart Property
Data
Educational Technology
Internet of Things (IoT)
Protocol / Infrastructure
Storage / Cloud Computing

CREDITS

People around the world contributed their time and energy to make Leap happen. From research to data to methodology and everything in between, we want to thank everyone that worked with us to create Leap.

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