

# The Indian BLOCKCHAIN INDUSTRY

MISSP is a facilitative platform led by Embassy of India, Berne, to connect Swiss SMEs, making up more than 99% of Swiss companies, with the vibrant New India. For further information, please write to [missp2@missp.ch](mailto:missp2@missp.ch)

## About Momentum In India: Swiss SMEs Programme (MISSP)

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India has made a jump of 79 positions to 63 in 2019 from 142 in 2014 in World Bank's Doing Business rankings. The World Bank has hailed India as one of the top 10 improvers for the third consecutive year. The Government of India is targeting US\$ 1.4 trillion infrastructure investment over 2020-25 to enable economic growth. Switzerland is an ideal partner for India as it is amongst the leaders in the world in innovation, international competitiveness and environmental performance.

India provides a great opportunity for the Swiss SMEs sector to invest and grow.

The Embassy of India, Berne, has been promoting India as an active economic partner and investment destination for Swiss SMEs, which make up 99% of the Swiss companies. In line with this, the Embassy of India, Berne, launched the **'Momentum in India: Swiss SMEs Programme' (MISSP)** to facilitate Swiss SMEs explore, enter, and expand in the Indian market.

The MISSP programme responds to the need for an organized platform dedicated to assist Swiss SMEs establish successful business models across the value chain in India. The Business support services provided by the MISSP programme to Swiss SMEs India entry/expansion strategy include the following:

- Strategy consulting
- M&A
- Operational market entry support
- Tax & legal support
- Financial services
- Project financing
- Location services
- Technology collaboration
- Partner Search and Due diligence

As you would have noticed, the MISSP is a true one-stop source for Swiss SMEs requiring support services, with the additional benefits of:

- Participation in Specialized Common Workshops by subject matter experts
- Regular tax & legal updates
- Access to the MISSP Network and Exchange Platforms to facilitate member companies to share their experiences, best practices, success stories and network among themselves

The program is implemented with the support of Central and State Governments in India and other key Indian and Swiss industry partners, who assist the Swiss SMEs have a smooth experience in various aspects of doing business in India.

The MISSP programme is implemented and monitored by the Embassy of India, Berne, with T&A Consulting as Knowledge Partner responsible for the day-to-day management of the program and Rödl & Partner as the Legal & Tax Partner.

The MISSP team wishes you a great read of this teaser and looks forward to having you join us as the next MISSP member company.

We also invite you to visit our website [www.missp.ch](http://www.missp.ch) and follow us on Twitter at @misspeoi



## OVERVIEW

### Industry Snapshot



The adoption of Blockchain technology in India is experiencing rapid growth. Globally, Investments in Blockchain-based projects have touched over **USD 20 billion** across various industries



#### Patents and Trends

India stands sixth on the list of patents and trends in the Blockchain space



#### Blockchain Adoption

As per a survey by PriceWaterhouseCoopers, 56% of businesses are moving towards Blockchain technology, making the technology a part of their core business



#### Acquisitions

The use of cryptocurrency for trading purposes was recently authorized in India, post which several acquisitions and investments in the blockchain space were seen.

### Start-up Ecosystem

There are currently over 220 blockchain startups operating in India. Majority of them are operating in the fintech sector.

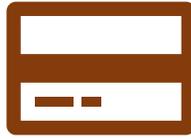
### Skilled Workforce

India stands at the second position in terms of the workforce skilled to undertake Blockchain-based projects. This number rounds up to about 19,700 developers, second only to the 45,000 Blockchain developers of the U.S

## Growth Drivers – Blockchain in India

### Digital Adoption

India has the second highest number of smartphones in the world and with data costs as low as USD 0.03 per GB and highest per capita usage of data (9.8 GB per month), substantial amount of data has been generated in the recent years. Total mobile data traffic per month is expected to grow at a CAGR of 23% from 4.6 exabytes in 2018 to 16 exabytes in 2024. Such amount of data requires the use of faster processing which has given rise to blockchain based applications



### Fintech Boom

India is currently tied with China for the highest FinTech adoption rate globally at 87%, which is significantly higher than the global average of 64%. India had over USD 66 billion worth of transactions in 2019. There are currently over 2,000 fintech startups in India, several of them focusing on the underbanked section of the society. The financial services sector (majorly fintech companies) have been seen to make significant use of blockchain for smart contracts, peer to peer trading and lending, communication between various platforms and process improvement.

### Broken Supply Chains

India has one of the most comprehensive supply chain coverages. During the transportation of goods, several checks are undertaken which increases the lead time, which in turn increases the goods which are lost due to spoilage apart from pilferage. It is estimated that around 30-40 % of total production goes waste at various levels of the supply chain amounting to a loss of USD 30 billion per annum. Logistics Industry, having realised the benefits of blockchain, has been utilizing it in its track and trace process along with hub based routine checks. This has led to a decrease in the lead time, increase in efficiency and improvement in processes, helping them improve their top line.

### Data Security

India was ranked among the top five countries to be affected by cyber crime, according to a report by online security firm "Symantec Corp". India is also number 23 of the UN Global Cyber security Index. With the recent growth in the amount of data being produced and stored, it has become vastly important to store data safely. Due to this, blockchain adoption has seen a sharp growth in the recent years, with the financial services industry at the top of the helm.



## Key Target Sectors (Private) for Blockchain in India

**Financial Services**



**Healthcare**



**Logistics**



**Cyber Security**





Over 40 Blockchain initiatives are being executed by the public sector in India, with about 92% in pilot/proof of concept phase and about 8% projects in the production phase.



Regulators are collaborating with the Indian Institute of Technology to develop a Blockchain system that would allow citizens to vote remotely. This would allow 450 million migrants to vote.



Leveraging the distributed ledger technology, a consortium of India's eleven largest banks have launched the first ever Blockchain-linked loan system in the country which ensures transparency and communication among the different banks.



Tech Mahindra launched a Blockchain accelerator with the Government of Telangana with the aim to make the state the Blockchain capital of the world. The accelerator is aimed at blockchain startups with strong real-world use case and to boost industry growth.

## Government and Blockchain

The government has been actively pushing to make use of blockchain in its processes. About 50% of the states in India are involved in blockchain related initiatives, which are driving the public sector blockchain adoption in the country.

### Major states implementing Blockchain



#### Andhra Pradesh

- Governance
- Health Care
- Vehicle Insurance



#### Kerala

- Farm Insurance
- Agricultural Supply Chain



#### Maharashtra

- Digital Certification
- Ration Distribution
- Organ Transplant

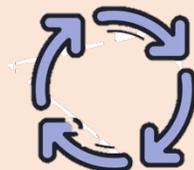


### Main reasons why government is pushing for implementation of Blockchain

Improve Profitability



Improve Processes



Increase Transparency



Ease of Business



### Major areas where government is making use of Blockchain

Insurance



EV Battery Swap



Organic Farming

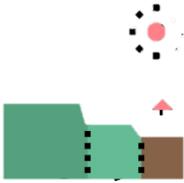


Energy Trading



## Key Government Use Cases

### Land Records



Land ownership is primarily established through a registered sale deed. This document is not a government guaranteed title to the property, but only a record of the transfer of property – and hence subject to challenge. Records are stored manually in paper format and require manual labor, checking and are subject to adverse affect of calamities. A blockchain system was created to bring existing stakeholders onboard and given them read/write access , citizens to manage their land transfer (including uploading of necessary documents, payments) through a single user friendly portal, and ability to view current status of their transaction through events immutably stored on the blockchain.

### Educational Certificates



Existing solutions of educational certificates verification face challenges of centralization, manual verification, lead time and ease of breach and tamper. NITI Aayog addressed the challenges in educational certificates through a blockchain based solution. The approach, SuperCert, has a permissioned blockchain architecture that involved decentralization, intelligent identity encryption and identity interlinking for issuance of educational certificates. The solutions have features for both online and offline verification. The immutability feature of blockchain ensures that tampering of certificate is not feasible – both the content of the certificate and the identity of the certificate holder.

### Pharmaceutical Supply Chains



Risk of entry of fake drugs arises when the products are handed off between the various stages and layers of the complex supply chain. Therefore greater visibility and traceability was required in the supply chain. With new systems in place and implementation of blockchain based mechanisms, each transaction was pushed by internal systems in an automated manner and registered as well as time-stamped using the ledger to ensure security and safety of the product. Manufacturing inputs, like active pharmaceutical ingredients tracked and linked to the final products. Additionally, details like location and temperature from attached IoT devices were made visible to all stakeholders, thereby limiting the possibility of record tampering.

### Fertilizer Subsidy



Agriculture is part of the livelihood of roughly half the population of India and fertilizer subsidy is distributed through by the government. The fertilizer subsidy supply chain faced issues related to process inefficiencies, limited visibility of stocks and inventory, inability to track loss / pilferage, multiple data entry points and isolated claims data and generation process. The implemented blockchain systems, created an immutable data bank shared with all stakeholders, linked invoice to production and end-to-end visibility across the supply chain, ensured settlements and reconciliation and enabled real time claims and stock management across supply chain. This led to an increase in productivity, zero paper trail and real time tracking of fertilizer.

# OPPORTUNITIES IN INDIA



## Capital Markets

India has over 5,500 listed companies and a market capitalization of over USD 2.2 trillion which makes for opportunities in trade settlement, data analysis and commercial paper issuance. Roughly 60 million trading accounts exist and USD 400 billion being invested with Asset Management companies. Several companies have started using algorithmic trading by means of blockchain.



## Banking

With over 600 million bank accounts, transaction costs increase. Using blockchain, transparency can be increased along with reduction in costs and can also help in regulatory compliance as well as Trade Finance. Several banks are opting for technologies which decrease manual intervention and human error.



## Insurance Industry

Although majority of the Indian population is uninsured, this has been changing rapidly with several country wide insurance schemes already in place along with the spread of information about the need for insurance increasing. Insurance companies are looking to improve their bottom line by using blockchain for claims processing and underwriting as well as data processing and security.



## Healthcare and Life sciences

The pharmaceuticals (USD 40 Billion) and the Healthcare Industry (2022 Expected) USD 134 billion) form two of the major pillars of the Indian economy. Traditional systems of record management for patient records (Physical paper and reports) are followed in India which makes data mutability an issue. With Blockchain technology, Individual healthcare chains and centers can develop patient record systems. opportunities also exist in inventory management, raw material tracing and supply chain tracking.



## Telecom

Having over a billion telephone connections in India, making it the second highest number of telephone connections in the world. The industry has been dynamic and competitive in the recent years majorly focusing on the price competition. As the need for reducing price arises, so does the need for reducing costs, which has led all the players to improve their processes. This has led companies to look at blockchain for various solutions.



## Oil and Gas

India is the third largest consumer of crude oil with most it being supplied to various parts of the country for processing in consumption. This has required a robust supply chain with several and adequate checks. Thru blockchain technology, companies are able to optimize their supply chains, reduce the need for checks and are able to reduce pilferage and leading to potential savings in cost.

### T&A Analysis:

As India is going to become one of the largest data producers in the coming few years, the need for blockchain based systems is going to increase. Several private organisations are ramping up their systems with blockchain to fulfil future demands. Most of the technology consulting firms in India, namely Tata consulting services and Infosys are working on blockchain based projects, either to create their own products or for their clients. Also with the government actively pushing integration of technology and ease of business, several growth areas have cropped up, within and outside the public sector. There was hesitation on part of the companies to adopt blockchain due to clouded regulations which led to lack of investment by companies and VCs. Recently there was some clarity to the regulations and with proactive approach of the government, It is expected that this sector will take off in the near future. Blockchain technology is in its early stages of growth in India and the time for it to prosper has come as several Proof-of-Concepts (POCs) have already been confirmed.



## About Us

### Business with India starts here

T&A Consulting is a global advisory firm, with extensive experience of working with overseas enterprises towards achieving successful and accelerated entry into India.

We work with various international Investment Attraction agencies where India is a key market and have been delivering a range of programmes to identify outward investment opportunities from India.

Incepted in 2006 in the capital city of New Delhi, T&A currently has 4 offices in India and global operations in Toronto, Canada, and Zurich, Switzerland.

Today, within its different verticals, the company caters to international economic development agencies, overseas enterprises, higher education institutions, and tourism boards.

**+ India Market Entry:**  
Opportunity assessment, feasibility studies, targeted market research reports, competitor analysis, price bench-marking, location identification & Partner identification

**+ Outward Foreign Direct Investment (OFDI):**  
Targeted analysis of outward investment, trends and opportunities to assist international inward investment agencies with lead generation.

**+ Client Engagement and Business Development:**  
Relationship management with foreign Economic Development and Trade Promotion Organizations, organizing trade and reverse trade missions

**+ Tourism Representation:**  
Promoting Indian outbound tourism and providing representation to tourism boards and destination management companies

**+ Education Representation:**  
Student recruitment support and representation to international education institutions and assisting in forging partnerships for research and student and faculty exchange

Looking at India market?

Get in touch

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