



# Baseline survey of the Mongolian start-up ecosystem



Ulaanbaatar, Mongolia  
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# Global startup ecosystem

In the first half of 2021 venture funding worldwide reached **\$288 billion** (*Global Startup Ecosystem Report 2021- Startup Genome*).

The goal of a startup ecosystem is to launch and to grow companies. Globally, founders and investors seek to find the best ecosystem that maximizes their success in becoming a unicorn while policy makers compete in creating favorable policy and regulatory environments to increase the economic impact of startups.

## Mongolian Startup Ecosystem

The total value of the Mongolian startup ecosystem is estimated to be at least **MNT 452 billion** based on the average valuation of the startups surveyed. Total funds raised is estimated at MNT 96 billion. Startups in the survey generate **total revenue of MNT 60 billion and 1318 jobs** in the economy. Total 80 startups, 10 incubators, accelerators, innovation hubs and meetup groups, 9 universities, technology colleges, and research institutions, key policy makers and international development organizations have been interviewed in this assessment.

## Top Five Challenges

### Startups

- Recruiting (63%)
- Sales and customer acquisition (55%)
- Raising capital (49%)
- Team development (38%)
- Internationalization (35%)

### Ecosystem

- Educated workforce (68%)
- Stable economic environment (59%)
- Level of innovation (41%)
- Purchasing power of the population (34%)
- Availability of the team members (29%)

## Suggestions for the startup ecosystem growth

01

Create enabling policy and regulations to support startups economic growth

02

Create incentives for startups and investors

03

Promote startup ecosystem connectedness and synergies

04

Educational reform in STEM to support innovation and workforce



# Methodology

“Startups are rooted in innovation, addressing the deficiencies of existing products or creating entirely new categories of goods and services, thereby disrupting entrenched ways of thinking and doing business for entire industries” (The Forbes).

In this assessment the “startup definition” was narrowed to technology-based companies that seek to disrupt ways of doing business within their sectors. The survey attempted to follow the Startup Genome’s Global Startup Ecosystem Report (GSER) approach in measuring **emerging ecosystems** to enable comparison with other ecosystems:

- Performance;
- Funding;
- Market Reach;
- Experience, Talent and Knowledge;
- Connectedness (additional).

The startup sector classifications also followed the GSER classification with few additions.

The major weakness in assessing Mongolian Startup ecosystem is, however, **the lack of reliable third-party data sources** that are used globally to measure startup ecosystems. For example, in the GSER, Startup Genome uses Crunchbase, Dealroom and others as third-party data sources. At the same time, the GSER utilizes global founders survey as well as on the ground research by local consultants.

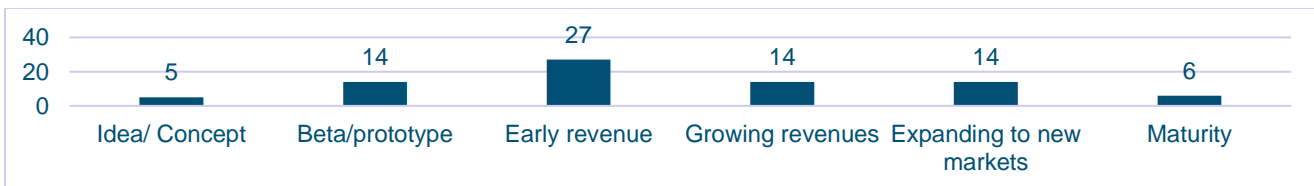
Since relevant databases are not available for Mongolian startups, our approach is based on qualitative assessment of the startup ecosystem by interviewing key stakeholders of the startup ecosystem. A total of 80 startups, 10 accelerators / incubators and innovation hubs, 9 universities and technology colleges (KOSEN), international development organizations and government organizations have been interviewed in this assessment.

## Overview of Startups

In general, it can be said that the Mongolian startup ecosystem is relatively young with almost 63% of startups becoming operational in the last 3 years. Specifically, 32% of surveyed startups have become operational in 2021. According to accelerators / incubators, the awareness and understanding of startups is rising thanks to TV shows such as Shark Tank and startup industry events.

### 1. Startups by development stages

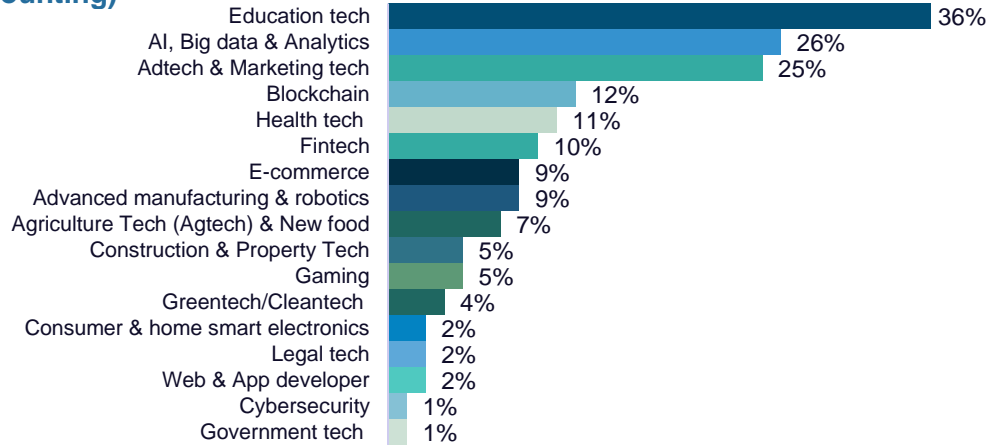
The startups in idea / beta prototype stages of development represent 24%, between early revenue to expanding to new market represent 69% of startups and 7% of startups considered as mature.



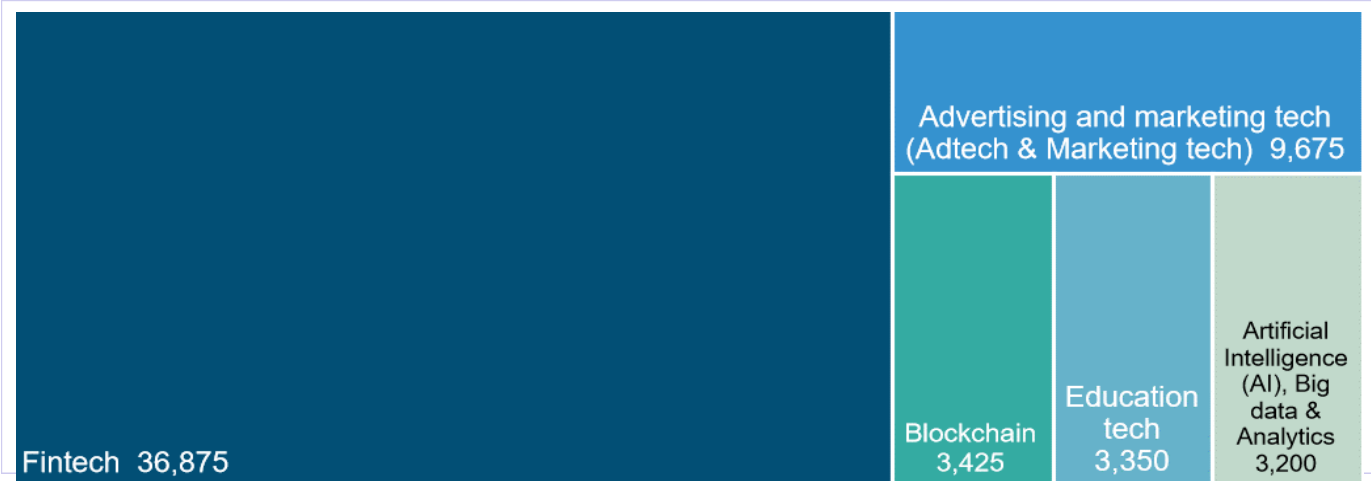
Education tech (by count) is leading the startup sectors while fintech and blockchain sectors lead in revenue.

## 2. Startups by sectors (double counting)

The surveyed startups are predominantly in education tech (36%), followed by AI, Big Data and Analytics (26%), Ad / Marketing Tech (25%).



## 3. Top 5 startup sectors by revenue (MNT million)



## Performance

The **startup ecosystem value (based on surveyed startups) is approximated to MNT 452 billion** (GSER Methodology: Ecosystem Value = log of sum of all exits and estimated startups valuations without double-counting). The ecosystem value is based on the responses provided by startups during the interview process and, hence, cannot be verified. Therefore, the estimated value is purely derived to represent the potential of the sector rather than the true value of the sector. In addition, the mean value of responses was used to reduce upside / downside bias.

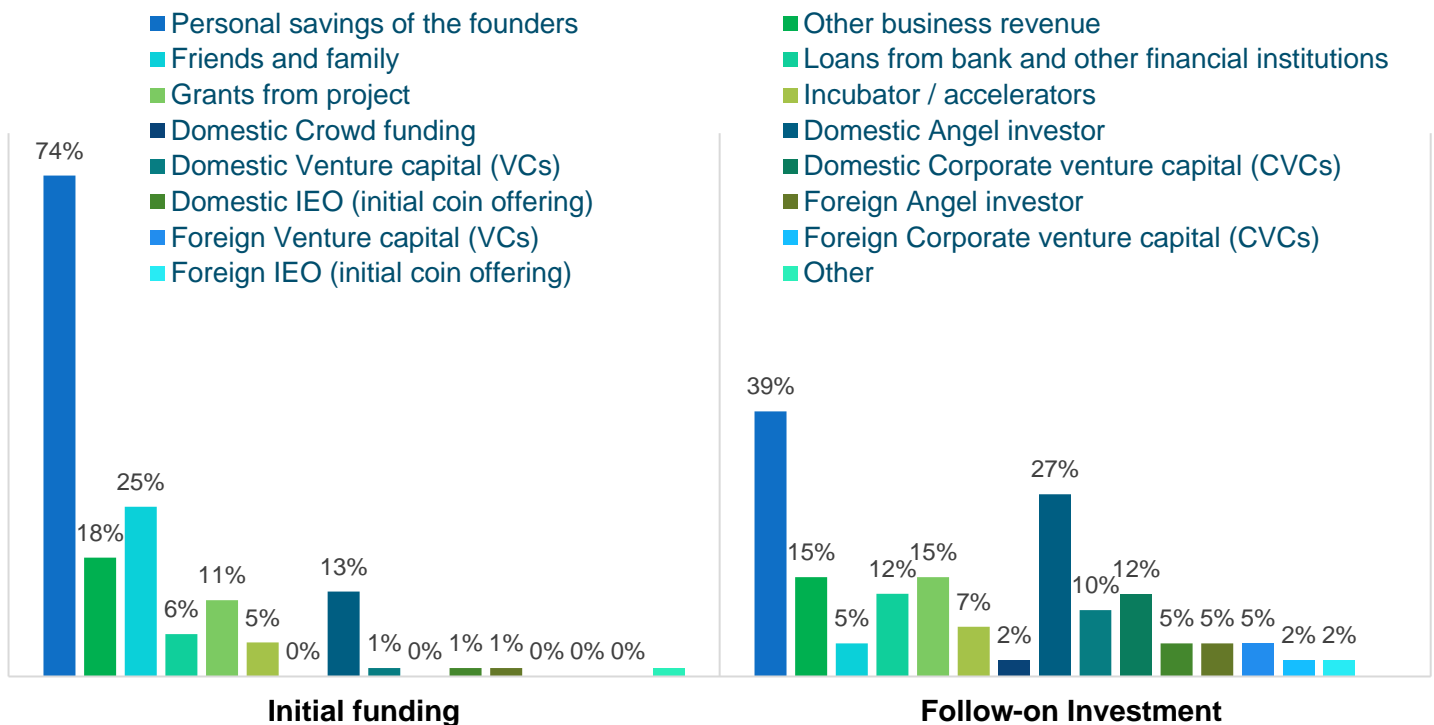
46% of startups in the survey have performed the valuation of their companies internally, 10% had a third-party valuation (mostly companies in growing revenue stage that have raised or about to raise funding from investors / accelerators) and 44% have not valued their companies.

Total numbers of startups which have completed partial exit was 20 or 25% of surveyed startups. The total amount raised through partial exit was MNT 28 billion, of which 5% through IPO and 95% through private offerings to large corporations. **The average valuation at the exit was 12 times of initial investment by founders.**

# Funding

Startups on average raised MNT 183 million in initial investment and total initial investment of MNT13.4bn. Access to funding remains the biggest challenge (counting multiple choices of funding), particularly in early stages of development as founders primarily rely on personal savings (74%), friends and family (25%) followed by other business revenue (18%) and domestic angel investors (13%). Grants provide 11% of initial funding while incubators / accelerators provide 5% and another 6% is funded by loans. Domestic and international angel investors and venture funds are scarce, each representing only 1.3% of funding.

## 4. Initial and Follow-On investments by funding sources



51% of startups have follow-on funding. On average startups have 2 follow-on funding (10 maximum) bringing total follow-on funds raised by startups to MNT 88.9bn. The average fundraising amount in follow-on funding rounds was MNT 2.3 billion. Startups stated that negotiating the valuation (31%) of the company and terms of agreement (16%) and establishing working relations (15%) were the biggest challenges in getting the funding.

Some of more successful startups have raised a total MNT 40 billion from large international corporations and domestic venture funds. On the positive note, more domestic corporate venture investors are entering the market. Most notable investors include MCS Investment, Shunkhlai, TESO and others. New types of investors such as corporate venture funds and foreign VCs, crowdfunding platforms become more available to startups.

## Market Reach

Startups (double counting) primarily target consumers as business to consumers (B2C 75%), followed by business-to-business (B2B 65%) and business-to-government (B2G 18%). On an aggregate basis, the total domestic market is estimated by startups to be MNT 11 trillion. However, the average domestic market

size is estimated by startups in the survey to be MNT 191bn.

On average startups are quite optimistic about their domestic market reach as they believe they hold 15% (max 80%) of market share in their respective sectors. 21% of start-ups entered or have intentions to enter into international markets covering countries such as the

USA, Japan, Korea, Central Asia, Philippines, etc. Of these startups, % have performed market research.

Total revenue of surveyed startups was MNT 60 billion. The average revenue of startups in this survey was MNT 1.0 billion. 64% have started to earn revenue in the first year, 15% in the second year and 21% in three or above years. It took them on average 1.8 years to start earning revenue and 3.3 years to become profitable.

## Talent & Knowledge

The founders are highly educated with 48% having an advanced degree and 44.6% with a degree in STEM.

**On average founders have founded 2.4 startups.** They have on average 6.4 years of professional experience in the sectors where they operate and 6.9 years in other sectors. 77% of founders believe that sector experience, networking (57%), leadership skills (56%) and knowledge of foreign language (38%) helped them in founding and operating their startups.

78% of startups have IT professionals on their teams and average salary is MNT 2.2 million. On average, startups have five IT professionals (max 30) in their teams of which two (max 12) have language proficiency. 64% of startups find their IT staff through networks, 25% from universities, 6% through HR companies, 3% from coding courses, 1% from Github, and the remaining 19% through announcements etc.

**43% startups registered 137 intellectual properties domestically and 10 internationally, all in commercial use.** On average startups have registered 15 intellectual properties (maximum 40). Startups assessed the effectiveness of certifying and securing new ideas as intellectual property at 4.7 on a scale of 1 (not at all complicated) to 10 (very complicated). However, major complaints relate to lack of protection, inability to register computer programs / original coding, too slow (it took 9 months just to register a trademark), unnecessary forms and information are required.

The research institutions and universities have created innovation and startup development systems such as Innovation hubs and supporting collaboration between professors and students in creating startups, allocating funding and creating partnerships with incubator /accelerator companies. Successful startups from

universities repay back the funding received. However, the rate of innovation transfer to companies remains low. The success rate of startups from universities is around 50% or lower. The laboratories and research centers need to be upgraded to support innovation. In addition, the regulations and bureaucracy need to be significantly reduced to enable the establishment of innovation and startup hubs at the universities. In addition, participants have commented that the entrance into STEM professions is reducing every year.

On the positive side, technology colleges (KOSEN) are entering into education sector. Their focus on engineering and tech professions helps them to compete successfully with universities and research institutions in creating enabling startup ecosystem and relevant mindset among their students and professors.

## Connectedness

Startups have the highest engagement with accelerators / incubators (66%). Accelerators / Incubators rank high in terms of different types of cooperation and engagements such as networking, sharing experience and knowledge, product development and services, financial support and others. 55% of startups presented their ideas to them. On average, accelerators / incubators spend MNT 113mn on a startup annually and 55% of their participants are getting outside external funding.

48% of startups collaborate with other startups and 44% with large corporations in regards to finding customers and markets, product and service development, financial support, and networking. The connectedness with academia and research institutions is around 28% of interviewed startups. 30% of startups had some sort of collaboration with public institutions and 26% with international development organizations. The connectedness with international development institutions is primarily limited on small projects to support digitization of public services or support of entrepreneurship and success rate of those projects is also mixed, primarily due to commitments from startups and entrepreneurs. The MonJa program by JICA is the only program that is focused on tech startups and it seems to succeed given its specific focus. On the positive note, the connectedness with the international startup ecosystem is improving with startup founders attending international startup accelerator programs

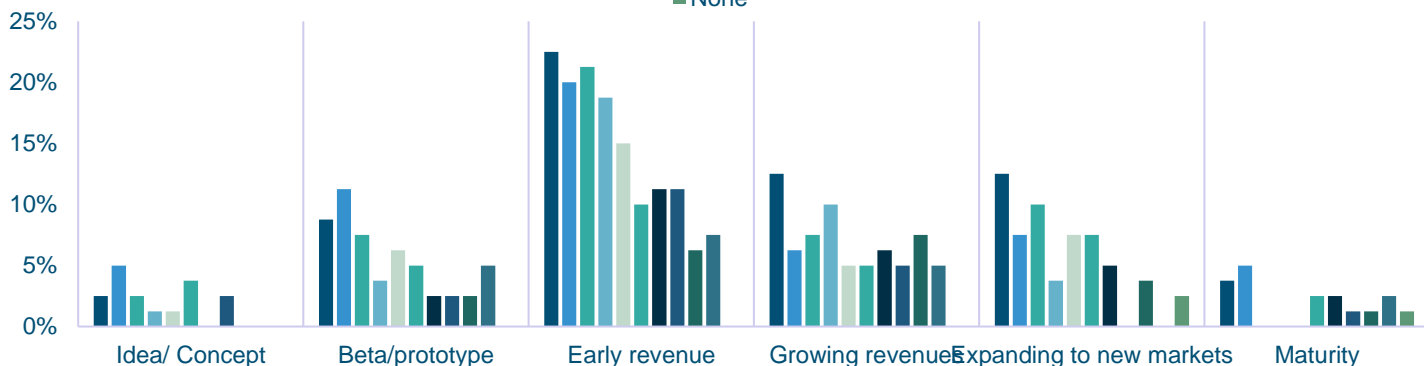
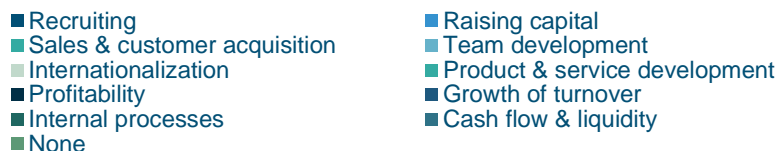
from leading international networks and startup accelerators such as Global Accelerator Network, Founders Institute, Aspire, Design Thinking, Lean

Startup. They participate in international startup competitions such as Seedstars, Startup Weekend, She Loves Tech and others.

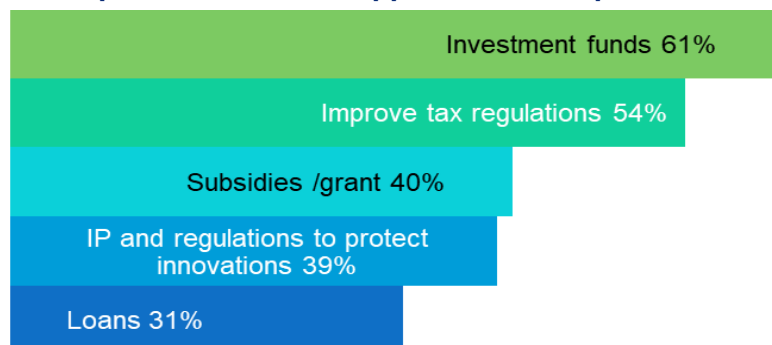
## Challenges & Needs

At startup level, recruiting is the major challenge faced with an average of 63%, followed by raising capital (55%), sales and customer acquisition (49%), and team development (37%).

### 6. Challenges faced by startups



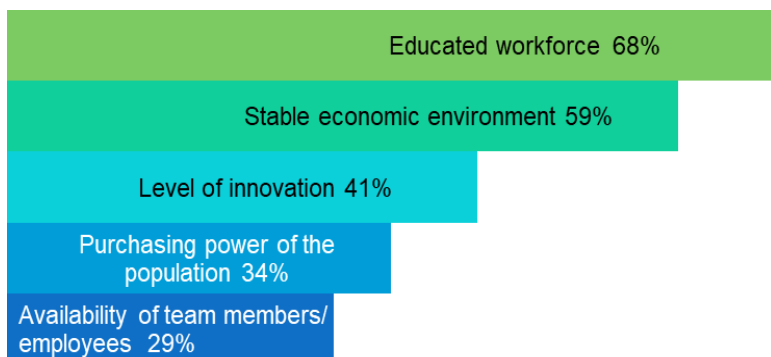
### 7. Top 5 most needed support for start-ups



The top five most needed support identified by startups are: investment funds (61%), improved tax regulations (54%), subsidies/grants (40%), intellectual property and regulations to protect innovations (39%) and loans (31%). In addition to these support startups expect support in accessing incubators / startups (20%), innovation hubs (13%), co-working spaces (11%) and awards (8%).

Startups view Mongolian startup ecosystem as evolving and identified **top 5 factors to support the ecosystem development**: educated workforce (68%), stable economic environment (59%), level of innovation (41%), purchasing power of the population (34%), and availability of team members (29%).

### 8. Top 5 factors to support startup ecosystem in Mongolia



They have also stated people's bilingual ability (25%), level of entrepreneurial mindset (25%), level of motivation to develop startups by the government (21%), stable banking environment (20%), availability of mentoring (14%) and geographic location (8%) all play an important role in developing Mongolian startup ecosystem.

**Mongolian ecosystem is viewed to be fairly developed by private sector.** The main factors that are viewed as weaknesses in the current ecosystem seem to relate to policy and regulations. The comments from stakeholders include unclear legal framework on the definition of startups, ecosystem soft infrastructure (management), reduction of government bureaucracy, and lack of human resources. Stakeholders commented a need long-term well researched policy support through tax exemptions in early stages, improvement in double taxation and investment regulation to support venture capital and angel Investors. **The view of policy regulators and government agencies is less positive** when it comes to the startup ecosystem development. In their view, regulations and process on innovation transfer to real economy need to be improved. From donors' perspective, **the government commitment to the development of the startup ecosystem is the key factor** in accelerating startup growth. They also believe that the government role should be of an enabler by creating favorable and well-researched policies and regulations to support startup ecosystem growth.

## Suggestions for the startup ecosystem growth

The assessment has identified 4 key areas of the potential support to help Mongolian ecosystem to grow.

### 01 Create enabling policy and regulations to support startups economic growth

Commitment to developing the startup ecosystem from the government is vital. Mongolian government can draw on these and other many successful strategies to present its commitment in supporting the startup ecosystem. The stakeholders commented on importance of policy support with specific actions such as updating the Law on Innovation to revisit the definition of a startup, to improve innovation transfer, speedy and agile government policies and to focus on specific forward looking technology trends to spring forward the startup ecosystem in Mongolia. However, private sector participants as well as public organizations warned against overregulation of the sector and heavy reliance on public financial resources. The government role in developing the startup ecosystem needs to be clarified as the newly established Ministry of Economic Development and Ministry of Digital Development and Communication and have overlapping roles, while innovation is being part of the Ministry of Education and Science.

### 02 Create incentives for startups and investors

Investment funds and improvement of tax regulations are the key in supporting startup economic growth in Mongolia. With the facts gathered during this interview the startup sector is promising and can grow into a major driver of economic diversification. By developing a favorable investment regime and tax environment Mongolia can increase direct foreign investments, exports of tech enabled services and products and achieve economic diversification.

### 03 Promote startup ecosystem connectedness and synergies

Proper expansion of the ecosystem requires local and international connectedness. Key areas for local connectedness are: create an association or consortium, database of startups, and research and policy papers to improve startup ecosystem. Belonging to the largest country linking Asia to Europe is an asset to be exploited. Collaborations with different ecosystems, such as Japan, would be a real springboard for the growth of our ecosystem and a way to show the world our potential. We need to learn from similar ecosystems, such as Lithuania and Estonia, which have managed to stand out spectacularly as leading startup ecosystems.

### 04 Educational reform in STEM to support innovation and workforce

Educated and skilled workforce is a key to the development of Mongolian startup ecosystem. Recruiting and building a skilled team has been stated as a key challenge for startups in Mongolia. Reduction in enrolment to STEM profession is another indicator for the government to have a new path in reforming STEM education. The model of Kosen Colleges of Technology, a five-year engineering education from 15 years old, proved to be a driving factor of Japanese industrialization and innovation and Mongolia could take similar path in bringing skilled workforce to support its startup ecosystem.