New opportunities for Armenia's venture ecosystem

CONTENT





05	KEYTAKEAWAYS
06	ARMENIA'S KEY STATS
07	HIGH TECHNOLOGIES AS A NATIONAL PRIORITY
80	ARMENIA'S VENTURE ECOSYSTEM: KEY PLAYERS
09	IN 2021-1H 2022 ARMENIAN START-UPS RAISED >\$1BN IN INVESTMENT
10	TOP-5 LIST OF DEALS WITH ARMENIAN START UPS IN 2021-1H 2022
11	ARMENIAN START-UPS SEEK TO GO GLOBAL
12	WHAT ARMENIA'S VENTURE ECOSYSTEM IS ALL ABOUT
13	SUCCESSFUL ARMENIAN START-UPS

14 IT CERTIFICATE AS KEY GOVERNMENT **INCENTIVE TOOL** 15 VARIOUS EDUCATIONAL PROGRAMS FOR **ENTREPRENEURS** 16 STEM EDUCATION IN VOGUE 17 INTERNATIONAL CORPORATIONS 18 **RELOCATION TO ARMENIA** 19 WHO HELPS BUSINESSES RELOCATE TO **ARMENIA** 20 RESEARCH METHODOLOGY 21 **REFERENCES** 22 ANNEX: ARMENIA'S VENTURE ECOSYSTEM **PLAYERS**

INTRODUCTION

Armenia is a small independent state in the Caucasus region which has ancient history, rich culture, and a dynamic economy. A sizable technology hub with quality human capital in the Soviet times, in the 2000s Armenia resolved to zero in on high technology and entrepreneurship development.

With a strong legacy of industrial leadership in semiconductors, defense electronics and nuclear energy, coupled with advanced curricula at the country's top universities and its cutting-edge expertise in AI and quantum computing, Armenia is trying to make the most of its collaboration with global multinationals that are present in the market, and to support its competitive workforce manifestly capable of developing dozens of projects that make a splash internationally.

Armenia's venture market kicked off in the early 2010s and has been particularly effervescent in the past four years. In a country of just 3 million people there are eight VC funds and three angel investor clubs. All of these back start-ups in their infancy; there's no ecosystem yet for raising big advanced-stage investments.





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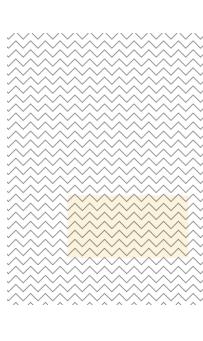
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KEY TAKEAWAYS

IT skyrockets

Armenia's IT sector has shown an unparalleled growth pace at a CAGR of 23% over the last 10 years. High technologies got an invigorating shot in the arm after 2018.

Government stands up for innovation

The Armenian government grants IT companies tax benefits and offers support programs (grants, training, reimbursement for start-ups' participation in events).

Lack of IT specialists

Lack of workforce weighs much on Armenia's IT. It's a lack of promising rookies that currently takes precedence over a deficit of skilled developers. Experts cite mass outsourcing of students by big companies as the key undermining factor here, as there's no incentive to nurture senior specialists.

Venture market takes shape

Armenia's venture ecosystem is only just beginning to take root in spite of having VC funds and angel clubs. Local funds support start-ups at the very early stages. Any sizable investment Armenian start-ups raise comes from funds abroad.

Start-ups go global

Given the petiteness of the domestic market, from their day one local start-ups eye international ones. They may use Armenia as a testbench to fine-tune their products, but few view locals as their end users.

In dire need of smart money

It's investors with the expertise to help their investees streamline operational management and make inroads into new markets that Armenian start-ups need the most.



ARMENIA'S KEY STATS



2.97 million population 2021

\$14,630 GDP per capita (PPP) (89th place out of 189)*

63.4% urbanization level 2021

68.2% Internet penetration 2021

90% of the country covered by 3G communications; 4G and 4G+ available in big cities

Impact of the 2022 geopolitical developments

+515%

more people arrived in the country in 1H 2022

Armenian GDP growth forecast improves



Sources: WorldBank, Fitch Ratings, Central Bank of Armenia

^{*}Below \$19,976 upper middle income estimates by WorldBank



HIGH TECHNOLOGIES AS A NATIONAL PRIORITY

Armenia's start-up ecosystem drives regional innovation, ranking 60th in the 2022 Global Start-up Ecosystem Index by StartupBlink Research Center, and moving 5 lines up from 2021. Armenia also ranks **16th in Eastern Europe.**



Armenia <u>ranks</u> 11th in the Fraser Institute's 2022 Economic Freedom of the World index.

2,322 IT companies listed on Armenia's Information Technology Registry, of which **1,656 are certified.**

In 2021 Armenia's IT companies posted an aggregate revenue of **\$1+bn**.

16,000 specialists employed in the IT sector (as of 2021).

Forbes <u>highlighted</u> Armenia as "the world's next tech hub".

+23% CAGR for Armenia's IT sector in 2011-2021

Start-up ecosystem growth and development of youth communities

Ministry of High-Tech Industry established (2019)

Preferential tax regime for IT companies introduced

Training and expertise exchange programs

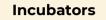
Armenia's active involvement in global digital agenda

Armenia's digital transformation strategy through 2030



ARMENIA'S VENTURE ECOSYSTEM: KEY PLAYERS







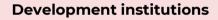






Angel investor clubs



















AiSprouts[™]VC





Correlation





CATALY / T (a) Acequia Capital









IN 2021-1H 2022 ARMENIAN START-UPS RAISED >\$1BN IN INVESTMENT

Armenia's venture market in 2021-1H 2022

\$1.05bn in 26 deals

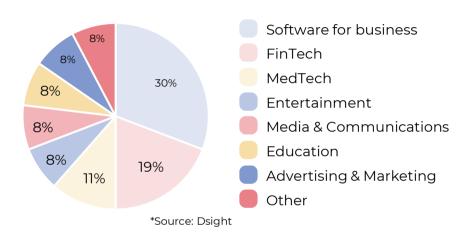
65+% of deals at early-stage* series

BigStory VC outshone others in the number of deals (7)

Two deals worth a total of \$700m, cobrokered by the ServiceTitan service management program, accounted for almost 70% of all investment



Distribution of VC deals by segments 2021-1H 2022



To learn more of investments in Eurasian tech companies click here:

app.dsight.org

40,000+ start-ups

9,700+ 6,200+

deals VC investors

TOP-5 LIST OF DEALS WITH ARMENIAN START-UPS IN 2021-1H 2022

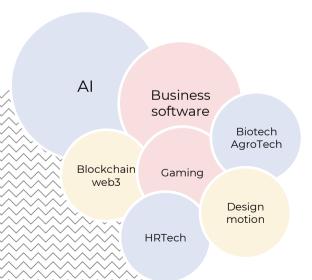
Start-up	Deal's value	Investors	Industry	Description
ServiceTitan	\$700m*	Sequoia Capital Global Equities, Tiger Global Management	Business software	Cloud-based service management platform for PropTech companies
Picsart	\$130m	SoftBank Vision Fund, Sequoia Capital	Business software	Web-based app to edit video and photos
• DISQO	\$85m	Sageview Capital, March Capita	Advertising and marketing	CX platform that helps a brand owner monitor user experience
CODESIGNAL	\$50m	Index Ventures, Menlo Ventures	Business software	Cloud-based software* to check the level of technical skills
S sololearn	\$24m	Drive Capital, Learn Capital	EdTech	Training platform for programmers

^{*} Totally in 2 deals - April 2020, March 2021

ARMENIAN START-UPS SEEK TO GO GLOBAL

The experts we approached believe there are about 500 start-ups in Armenia, an estimate that appears a world away from official stats. They also expect a slowdown in new start-up launches over the next two years as the already operational teams busy themselves improving their current products.

Artificial intelligence as a priority for start-up development



The experts approached highlighted the following problems Armenian start-ups have to face:

Lack of skilled staff

Lack of resources to do business

Too narrow a market locally

Smart money
as start-ups' primary need

Access to overseas markets

Faster start-up promotion

Mentorship



WHAT ARMENIA'S VENTURE ECOSYSTEM IS ALL ABOUT

Market players' readiness to help each other

Well-developed professional networking, streamlined due diligence process

Startup-friendly government

Putting together comfy conditions for IT business development

Youth interested in IT careers

People incentivized to develop their own digital projects

Too narrow a market locally

Start-ups crave for global market presence from their day one

Central Bank's conservative policy

Poor FinTech and banking sector development

SUCCESSFUL ARMENIAN START-UPS

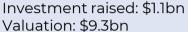






Investment raised: \$1.1bn

Cloud-based platform for PropTech companies

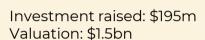




Investment raised: \$30.9m

Free mobile platform for programming training at 13 levels from basic to professional





Web-based service to process photos and videos



Investment raised: \$24.9m

AgroTech solution that helps agribusinesses boost efficiency



Investment raised: \$115m

Cloud-based platform that improves access to personalized medicines for genetic diseases



Investment raised: \$101.5m

Service that helps analyze consumer behavior using a platform and a mobile app



Investment raised: \$20.1m

Platform for accessing design tools to make websites, mockups, videos, logos, etc.



Investment raised: \$17.5m

Technology that uses AI to eliminate background noise during video and audio communication sessions

5%

IT CERTIFICATE AS KEY GOVERNMENT INCENTIVE TOOL

In 2014 Armenia enacted a preferential legal regime for IT businesses.

At the core of it is an IT certificate that grants **the right to tax benefits.**

The procedures only apply to companies registered in Armenia. What countries the founders are from does not matter.

About the IT certificate

Entrepreneurship funding programs

Export development grants

From Ministry of Economics of Armenia as part of World Bank financed program; \$1.8m total

"Entrepreneur + state"

Project backed by ANIF investment fund to support Armenian SMEs; \$0.5-4m grants

Reduced tax rates:

0% profit tax

(18% standard)

VAT (20% standard) 10%

income tax dividend tax (21% standard) (21% standard)

Armenia Startup Academy

Early-state accelerator with up to €10K grants + up to €50K grant program for more mature start-ups

"Green" investing support

\$8m from EBRD, EU and Green Climate Fund for "green" investing development in Armenia's private sector



VARIOUS EDUCATIONAL PROGRAMS FOR ENTREPRENEURS



Early-stage accelerator helping start-ups get ready for pre-seed and entry to the global market



Al Incubator

Al project scale-up program



Impact Yerevan Hub

Programs for entrepreneurs and start-ups of all stripes to be able to raise funds and network



PicsArt Academy

Training program for software developers using multiple programming languages



NCIE

Consulting for companies that want to relocate to Armenia from abroad



Foundation for Armenian Science and Technology

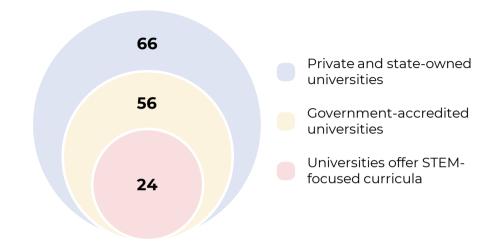
Support of projects in science and technology. Offers acceleration and mentorship programs, and grants too

STEM* EDUCATION IN VOGUE

1,800-2,000

technology specialists graduate on a yearly basis

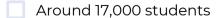






armath Educational program for children in technology and entrepreneurship





12% of graduates have founded their own start-ups

Children's Educational Center, technology and design. Around 15,000 students



Program for 13-17 year old minors. Training in the basics of responsible and creative entrepreneurship



Source: armeniaeducation.info

*STEM - science, technology, engineering, mathematics

INTERNATIONAL CORPORATIONS

Corporations that have launched their acceleration and/or incubation programs





































































ORACLE COGNI CISCO IN G D-Link ORACLE COGNI



align DataArt amazon synopsys Mentor align DataArt









WHO HELPS BUSINESSES RELOCATE TO ARMENIA

Legal entity registration

Accounting

Assistance in green card and other immigration issues

Coworking and office space













ArmGate Advisers



YellowRockets

















private.law

















RESEARCH METHODOLOGY



Insightful interviews

with Armenian investors, development institutions, service providers, and start-ups



Analysis of open sources

Data from research companies, mass media, Armenia's government statistics agencies

Key definitions

Venture investment is an investment in a high-risk and potentially high-yielding technology-based project. The term "investment" refers to the acquisition of a share in a privately-held investee's shareholder/charter capital and/or the lending of funds with convertible shares/equity (on suspensive conditions included).

The overall venture markets stats do not include M&As, PE deals, exits, loans, and investment in the market infrastructure.

Armenian start-ups are companies registered in the territory of Armenia, or companies founded by Armenian nationals and registered in another country/city but operating in Armenia (e.g., having R&D centers).

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ANNEX: ARMENIA'S VENTURE ECOSYSTEM PLAYERS

Name

HIVE Ventures

SmartGate VC

Granatus Ventures

BiaStory VC

Formula VC

Hve Ventures

Triple S (3S) Ventures

Himk Capital

LOCAL VENTURE FUNDS

Description

International fund investing in Armenian-

Silicon Valley based fund with an Armenian

One of Armenia's pioneering VC funds which

Set up by Krisp and Podcastle Al co-founders,

the fund invests in Armenian founding teams

Aimed at backing early-stage start-ups in

Invests in Armenian start-ups and seeks to

Focused on start-ups founded in Armenia or

Invests in Armenian-founded start-ups and

Armenia and the surrounding regions

build Armenia's tech ecosystem

elsewhere by Armenian diasporas

those operating in Armenia

helps develop a product and market it

founded start-ups

rep office

internationally

Focal stages

Early Stage

Pre-Seed

Early Stage

Early Stage

Pre-Seed

Pre-Seed.

Seed, Series A.

Series B

Pre-Seed, Seed

Seed, pre-

Series A

Industry focus

Business Software, MedTech, DeepTech,

Consumer, Enterprise, Fintech, Frontier

B2B SaaS. E-Commerce. AI/ML. Field

Services, Agriculture, Food, Energy,

Renewables, Blockchain, Crypto,

Tech. Healthcare. PropTech

Al, Blockchain, SaaS, Fintech

IT, Big Data & Analytics

Technologies

EdTech

SAAS, IoT, AI

Cvbersecurity

Al, IoT, Blockchain, DeepTech

Social, Mobile, Analytics, Cloud

Number of portfolio

companies

21

18

14

7

5

N/A

N/A

N/A

Founding

vear

2014

2017

2013

2021

2012

2021

2022

2021

Name

Sierra Ventures

Al Fund

Crosspring

RTP Global

s16vc

Starta VC

Possible Ventures

Acequia Capital

Founding

vear

1982

2017

2006

2000

2020

2011

2010

stage

lifecycle

INTERNATIONAL VENTURE FUNDS

Description

Invests in new early stage technologies globally

Al-focused fund investing in the earliest start-up

Supports small start-ups through their entire

A venture firm that invests in early-stage tech

An angel investor fund that invests in early-stage

A fund that has an accelerator and helps start-ups

build a product in the U.S. and scale up globally

across Europe, Asia, and North America

start-ups in Europe and the U.S.

Advanced tech focused fund

Early-stage focused fund

NDS

Industry focus

AI/ML, Big Data, FinTech, Healthcare,

Fintech, AR, Security, SAAS solutions,

Synthetic Biology, AI, Robotics, Web 3.0,

Quantum Computing, 3D printing,

IoT, E-Commerce, SaaS, Emerging

Technologies

ΑI

Edtech

Technology

Technology

Space exploration

Number of global investments

386

22

15

174

32

158

80

427

Focal

stages

Seed.

Series A

Early Stage

Seed

Early Stage

Early Stage

Early Stage

Early Stage

Seed.

Series A

ANGEL INVESTOR CLUBS





Name	Founding year	Description	Industry focus	Membership	Number of portfolio companies
BANA (Business Angel Network of Armenia)	2017	Ecosystem for entrepreneurs and investors, Armenia's first angel investor club. They invest in start-ups that have traction and/or MVP	-	45	20
		The club brings together professionals	Biotech, Digital Healthcare, IT, Blockchain, Artificial Intelligence,		

from across Armenia, from Russia, Biometrics, Construction, Real AICA (Angel Investor 2018 Germany, the U.S., Austria, and Denmark. Estate Development, Renewable 45 11 Club of Armenia) Helps start-ups find angel investors who Energy, Banking, FinTech, Food & offer both investment and experience Beverage, Consumer Products, Logistics, Retail FAST Foundation founded club. Brings STAN (Science and

together science and technology savvy 2018 Technology Angel Al solutions investors who support teams from an Network) idea through the seed stage

36

Name

SAP Startup Factory

ACCELERATION PROGRAMS

Founding year

2021



Industry focus

ΙT



Participants

<u>Founder Institute</u> <u>Yerevan</u>	2009	The world's biggest Pre-Seed accelerator launched its Virtual 2022 program in Armenia earlier this year	-	-
Microsoft Innovation Center Armenia	2011	A program that backs local start-ups and is aimed at developing new IT products	ΙΤ	57
Armenia Startup Academy	2017	Set up to support innovative technology teams at their early stages	DeepTech	121
<u>Impact Aim</u>	2017	An independent platform to back early-stage start-ups with a specific focus on sustainable development tech	AgriTech, GovTech, GreenTech	-
Orion Worldwide Innovations	2017	Set up in 2017 in the U.S. and Armenia, this acceleration hub seeks to guide and support innovation in Eastern Europe, Asia, and in the Americas	-	60+

An acceleration program that is designed to help globally focused B2B start-ups. Operates in partnership with BANA, EU4Business, and

Innovative Tourism and Technology Development for Armenia

Description



Description

One of the region's biggest business and IT incubators set up in 2002 under the auspices

of the World Bank. Seeks to identify viable business ideas and grow them into start-ups

A program for for start-up student teams, university alumni, and other entrepreneurs. 33

An incubation and acceleration program that is aimed at bringing together Armenian

A government program launched in 2018 to back tech start-ups of Armenian diasporas

An incubator under the auspices of the EU which supports Syria-based Artmenians and

business solutions and boost collaboration between universities and industrial companies

Catalyst Foundation's 26-week incubation program to help teams develop scalable

Created as an extension of the SAP Startup Factory for B2B start-ups, the program

An incubation program that provides full support for creative project teams and

abroad. Welcomes Armenians from all over the world who have innovative start-up ideas,

start-ups and international mentors, including from the Armenian diaspora in France

start-ups have received full support there

and helps them relocate and get grant support

readies teams for Startup Factory's accelerator

businesses with high commercial potential

other local entrepreneurs

Helps Armenian start-ups develop digital products and services

Industry focus

IT

EdTech, MedTech, Healthcare, SaaS

FinTech, Business Software, IT, Gaming,

Industrial Security

ΙT

IT

AI (Cryptocurrency, Robotics, Marketing

Automation, Cybersecurity, Information

Technologies, Computational Biology)

Tech, B2B

INCUBATO	DRS
Name	Four

Enterprise Incubator Foundation

(EIF)

American University of Armenia's

Entrepreneurship and Product

Innovation Center (EPIC)

StartDoon

Neruzh Diaspora Startup Program

Beeline Startup Incubator

IRIS BUSINESS INCUBATOR

Al Incubator

BANA Startup Incubator

Artbox

	Founding year
BATC	DRS

2012

2017

2017

2018

2018

2020

2020

2021

2021

Founding year

2016

2009

2000

2018

2016



Description

A fund set up by a group of enthusiasts to help develop a tech-focused and self-reliant innovation

Established as part of Armenia's Ministry of Economics, the center develops all strategic events to

Set up as a business association to advocate the collective corporate interests in the field of IT,

Set up by the SmartGateVC founders to hold programs such as Hero House, Armenia Startup

A branch of a large start-up community in Armenia. Brings together start-ups and entrepreneurs at a

Academy and others which give Armenia's start-up ecosystem a set of useful skills.

start-up ecosystem. Interacts with with more than 400 corporations and 1,000+ start-ups



DEVEL	OPMENT	INICTITI	ITIONS
DEVEL	.OPINIEN I	1112111	U I IUNS

Name

Startup Armenia Foundation

NCIE (National Center for Innovation and

Entrepreneurship)

UATE (Union of Advanced Technology

Enterprises)

Catalyst Foundation

Yerevan Startup Grind

FAST (Foundation for Armenian Science and Technology)	2016	A platform and innovation ecosystem. Puts together and launches incubation and acceleration programs (Revive Deep Tech Accelerator), training programs (MITQ), programs for the Science and Technology Angel Network (STAN) angel investor club, and also such programs as Advanced Solutions Center (ASCENT) and others

telecom and high technology

series of events

promote the country's innovative ambitions

Bridging The Gap Between Web2 & Web3: A

Startup Grind Europe Web3 Summit

EMERGE

Road to Global 2022 EUROPE Virtual Summit

SG Women's Summit

Diaitec

BarCam

Sevan Startup Summit

Startup Boost Weekends

Chainpoint Conference

GLOBAL INNOVATION FORUM

development

the Balkans

technology sector

Armenia Startup Academy

investors

Host

Startup Grind Yerevan

Emerge Global Ventures

Startup Grind Yerevan

Startup Grind Yerevan

UATE

BarCam

Startup Armenia Foundation

Catalyst Foundation

Nooor

FAST

Description

Features a few sessions with top experts in investing and in Web 3.0 focused product

Precedes Global 2022 and features Web 3.0 and NFT gaming

A big tech event for the IT sector plus an IT employment fair

Conferences for blockchain and crypto specialists

Startup Grind's annual event for female entrepreneurs and investors

The region's largest technology show and an annual tech fair for Armenia's high

A weekly business forum for informal networking between start-ups, companies, and

A weekly event sponsored by IT companies or youth organizations in several Armenian

The fourth global forum about new technology that influences human life

cities. Participants get prize money and the opportunity to join EPIC Startup Incubator or

Conferences for start-ups, investors and corporation in Central Asia, Eastern Europe, and

Name