Market Review | Morocco

April, 2020

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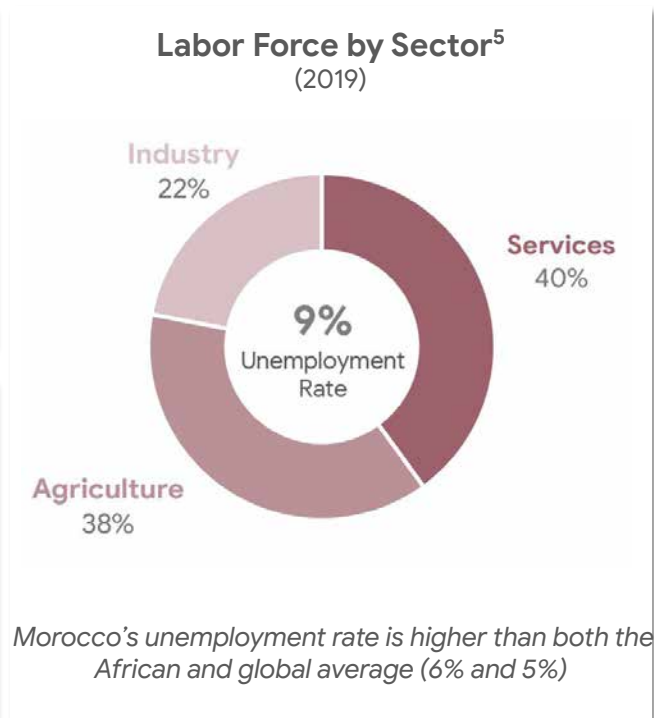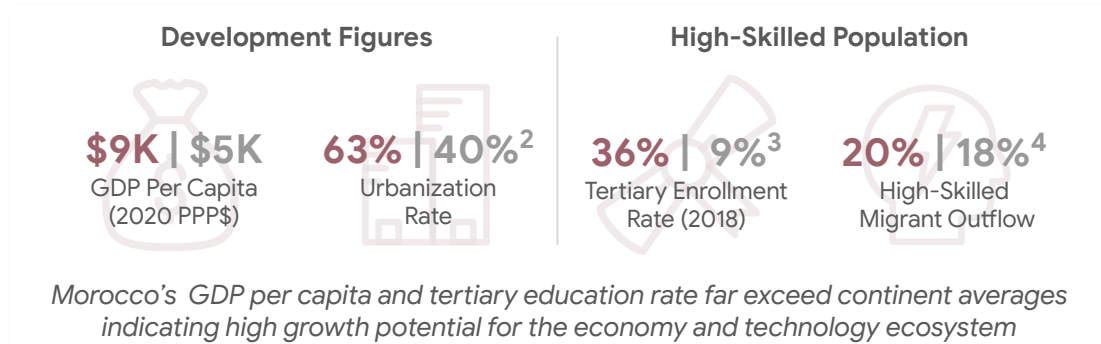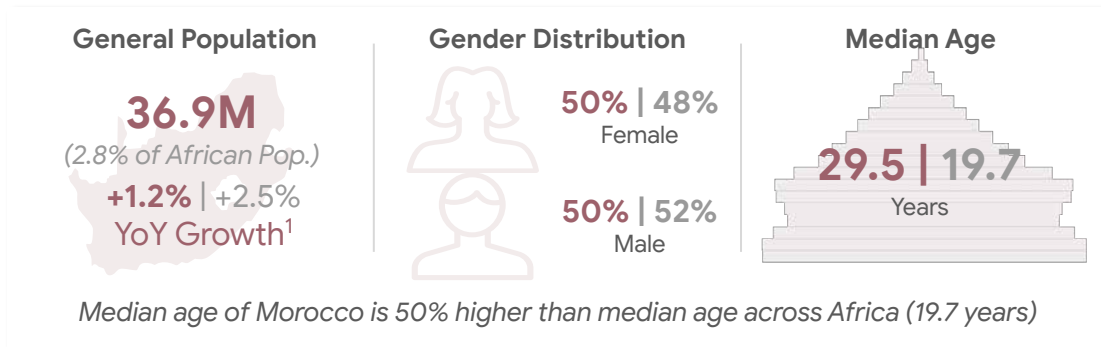# **Country Overview**

- Population & Economy
- Technology Infrastructure
- Government Involvement

Morocco maintains a strong tech ecosystem due to high levels of economic development and education

General Population

36.9M
(2.8% of African Pop.)

+1.2% | +2.5%
YoY Growth[1]

Gender Distribution

50% | 48%
Female

50% | 52%
Male

Median Age

29.5 | 19.7
Years

Median age of Morocco is 50% higher than median age across Africa (19.7 years)

Labor Force by Sector[5]
(2019)

Industry
22%

Services
40%

9%
Unemployment
Rate

Agriculture
38%

Development Figures

$9K | $5K
GDP Per Capita
(2020 PPP$)

63% | 40%[2]
Urbanization
Rate

High-Skilled Population

36% | 9%[3]
Tertiary Enrollment
Rate (2018)

20% | 18%[4]
High-Skilled
Migrant Outflow

Morocco's GDP per capita and tertiary education rate far exceed continent averages indicating high growth potential for the economy and technology ecosystem

Morocco's unemployment rate is higher than both the African and global average (6% and 5%)

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Legend | Local Statistic | Africa Average

Accessible and affordable connectivity fuels tech ecosystem growth

Infrastructure Indicators

Above / **Below** **Global Average** | Global Average

70% | 59%
Internet Penetration (FY20E)

124 | 69
Mobile Phone Subscriptions per 100 People

29.7 | 30.5
Mobile Internet Download Speed (Mbps)

$1.66 | $8.53
Cost of 1GB Mobile Internet (PPP$)

18.5 | 74.3
Fixed Internet Download Speed (Mbps)

$24 | $50
Monthly Cost of 5GB Fixed Internet (PPP$)

296 | 1,620
Servers shipped (FY20E)

100% | 89%
Population with Access to Official Electric Grid

Access to consistent electricity and mobile internet connections enable digital growth in Morocco

Population Covered by at Least 3G (2018)
(90% global average)

4% CAGR

Year	Coverage
2009	69%
2010	69%
2011	75%
2012	75%
2013	75%
2014	80%
2015	80%
2016	95%
2017	96%
2018	98%
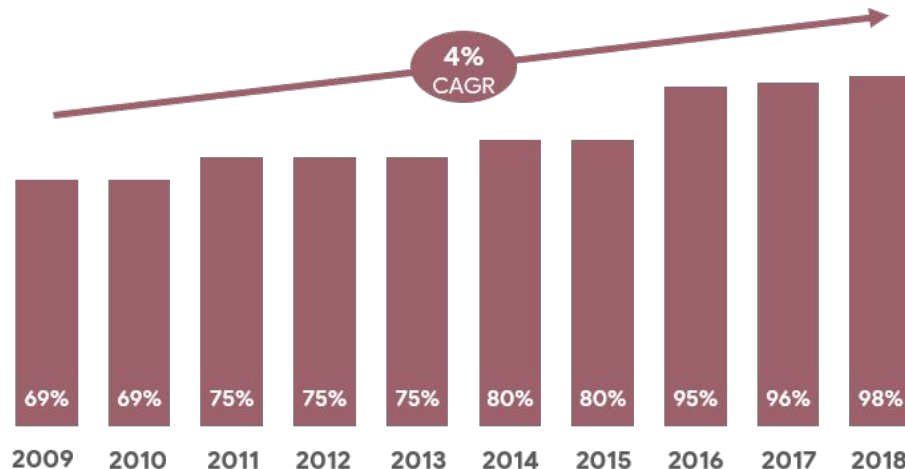
Morocco's 3G coverage exceeds the global average, providing mobile service to virtually every user

Morocco's government is actively developing initiatives to promote ecosystem growth and inclusivity

Notable Government Policies

- The Digital Development Agency has begun **standardizing regulations and policies across the government** to facilitate growth

- The Access to Information Law (2018) **increases the ability to collect and share data** across tech companies and startups
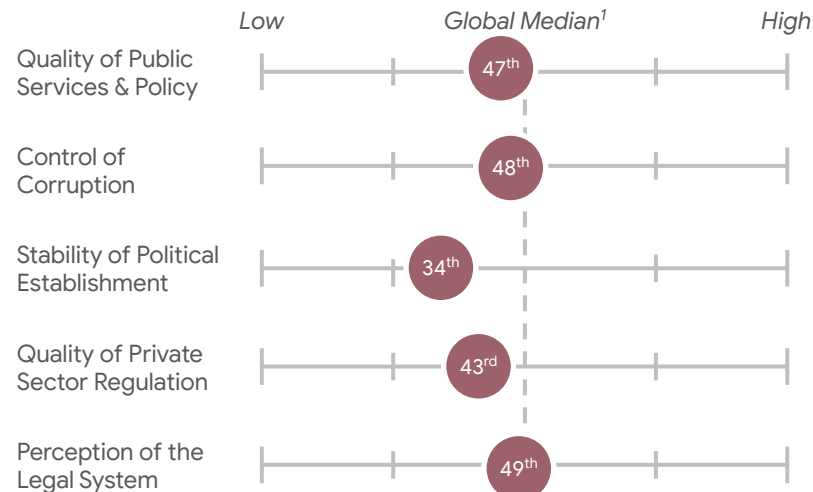
- The Digital Economy Development Financing Policy **increases competition in the tech ecosystem by increasing inclusivity**

- The FII Financing program has a goal of **funding 300 tech startups by 2022**, a mandate by the government

Governance Indicator Percentiles

	Low	Global Median[1]	High
Quality of Public Services & Policy		47th	
Control of Corruption		48th	
Stability of Political Establishment	34th		
Quality of Private Sector Regulation	43rd		
Perception of the Legal System		49th	

Morocco's governance is on par with the global median, but presents challenges for new businesses due to regulatory and political instability

Developer Population
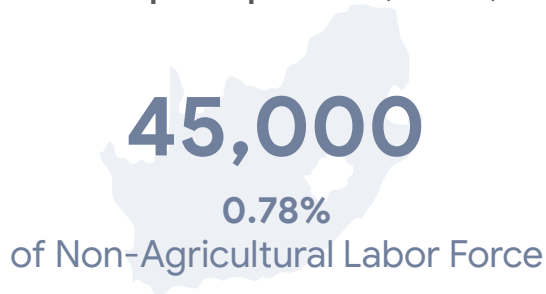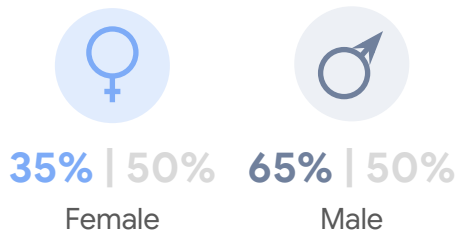
- Demographics
- Education
- Employment
- Experience

Morocco has one of the most inclusive developer populations; female coders represent nearly half of the 18-24 year old demographic
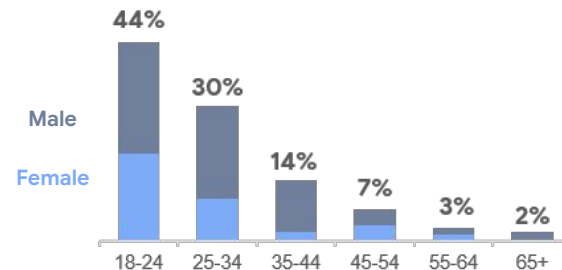
Developer Population (FY20E)

45,000

0.78%
of Non-Agricultural Labor Force

Gender Breakdown[1,2]

Developer Pop | Morocco General Pop

35% | 50%   **65%** | 50%
Female   Male

Age Distribution[1,2]

Male
Female

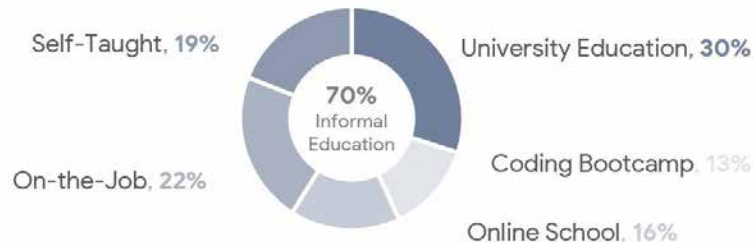| Age	%
18-24	44%
25-34	30%
35-44	14%
45-54	7%
55-64	3%
65+	2%

Top Regions for Developers

1 **Casablanca-Settate** (Casablanca)

2 **Marrakesh-Safi** (Marrakesh)

3 **Fes-Meknes** (Fes)

Activities[1]

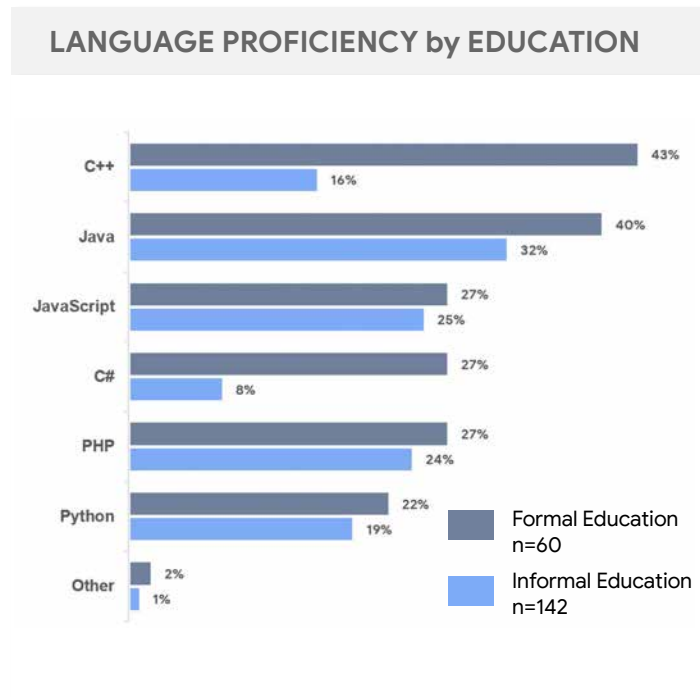**29%**
Of all coders code as a hobby in their free time

Technical Education

Self-Taught, 19%

University Education, **30%**

70% Informal Education

On-the-Job, 22%

Coding Bootcamp, 13%

Online School, 16%

Informal education channels, like bootcamps, focus coding languages like Java, PHP, and Python

FORMAL EDUCATION
University[3]

30%[1]

Gender[2]

67% 33%

Top Industries	1	Comms., Media, Technology	2	Financial Services	3	Cons. Products & Services

Median Age	Avg. Monthly Salary	Full-Time
25-34	**$1,500**	**32%**

INFORMAL EDUCATION
Bootcamp, online courses, on-the-job, self-taught

70%[1]

Gender[2]

65% 35%

Top Industries	1	Comms., Media, Technology	2	Cons. Products & Services	3	Health & Public Services

Median Age	Avg. Monthly Salary	Full-Time
25-34	**$1,600**	**23%**

LANGUAGE PROFICIENCY by EDUCATION

Language	Formal Education	Informal Education
C++	43%	16%
Java	40%	32%
JavaScript	27%	25%
C#	27%	8%
PHP	27%	24%
Python	22%	19%
Other	2%	1%

Formal Education n=60
Informal Education n=142

Question: How did you primarily learn to program or code?

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Female coders are more heavily represented in full-time roles than in part-time or freelance work

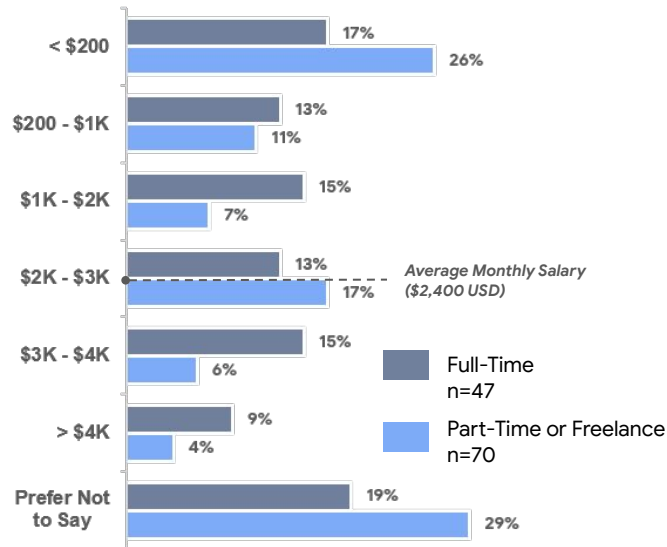## FULL-TIME ROLE   *38%*[1]

Gender[2]

65%   35%

Hours Coding per Week			
46%	9%	18%	28%
5-10 Hours	11-20 Hours	21-30 Hours	> 30 Hours

Avg. Years of Experience	Top Industries	Avg. Monthly Salary
7.6	Comms/Media/Tech, Financial Services	$1,400

PART-TIME or FREELANCE ROLE   *57%*[1]

Gender[2]

83%   17%

Hours Coding per Week			
53%	10%	9%	29%
5-10 Hours	11-20 Hours	21-30 Hours	> 30 Hours

Avg. Years of Experience	Top Industries	Avg. Monthly Salary
6.8	Comms/Media/Tech, Health & Public Srvc.	$1,400

MONTHLY BASE SALARY FROM CODING

Salary	Full-Time	Part-Time or Freelance
< $200	17%	26%
$200 - $1K	13%	11%
$1K - $2K	15%	7%
$2K - $3K	13%	17%
$3K - $4K	15%	6%
> $4K	9%	4%
Prefer Not to Say	19%	29%

Average Monthly Salary ($2,400 USD)

Full-Time n=47

Part-Time or Freelance n=70

Question: How do you spend your time coding or programming?

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Senior developers lead in coding for blockchain, hardware and mobile, while junior coders focus more heavily on desktop and big data platforms

JUNIOR DEVELOPER
Less than 6 years of coding experience   *51%*[1]

Gender[2]

61%   39%

Open Repository Contributions

- 6% Once a year
- 14% Once every 6 months
- 15% Once a month
- 41% Once a week
- 24% Have never contributed

Top Languages

1. Java
2. JavaScript
3. PHP

Top Industry	Avg. Monthly Salary	Full Time
Comms/Media/Tech	$900	25%

SENIOR DEVELOPER
Over 6 years of coding experience   *49%*[1]

Gender[2]

70%   30%

Open Repository Contributions

- 24% Once a year
- 17% Once every 6 months
- 10% Once a month
- 15% Once a week
- 33% Have never contributed

Top Languages

1. Java
2. Python
3. C++

Top Industry	Avg. Monthly Salary	Full Time
Comms/Media/Tech	$2,300	27%

DEVELOPER PLATFORMS OF CHOICE

Platform	Junior Developer	Senior Developer
Desktop	43%	27%
Big Data	24%	19%
Mobile	22%	25%
Cloud	19%	20%
Hardware	12%	18%
Blockchain	9%	19%
Other	2%	0%

Junior Developer n=103
Senior Developer n=99
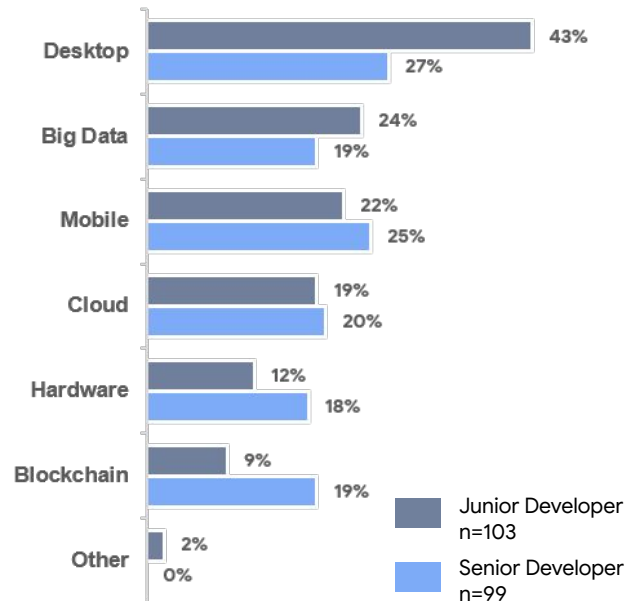
Question: How many years of professional coding or programming experience do you have?

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Technology Ecosystem

- Innovators *(focus areas)*
- Innovators *(fundraising)*
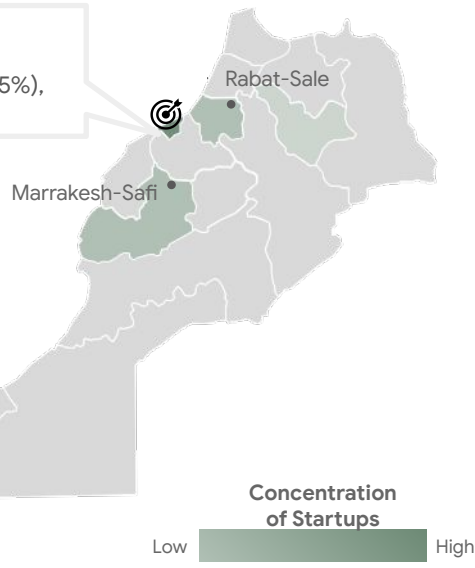- Investors
- Educators
- Enablers

The e-commerce vertical is a critical part of the Moroccan tech ecosystem with a key hub in Casablanca

Casablanca-Settat Region
Major City(s): Casablanca
Top Verticals: E-Commerce (35%), FinTech (10%), HRTech(10%)

Rabat-Sale

Marrakesh-Safi

Concentration of Startups
Low ▬▬▬▬ High

"The high taxes and slow & costly processes to operate a business in Morocco make it really difficult for startups to launch and scale"
- Investor, Casablanca

Breakdown by Top Verticals

28% E-Commerce	**12%** HRTech	**12%** AdTech / MediaTech	**9%** SaaS
6% AI/ML, Big Data, Cloud	**6%** CleanTech	**6%** EdTech	**21%** Other

Headcount & Founder Demographics (2020)

251+ **7%**
51-100 **10%**
11-50 **23%**
1-10 **60%**
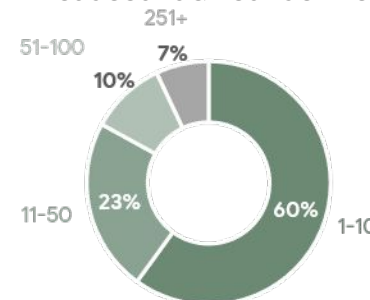
16%

Startups with **at least one woman founder**; of which e-commerce & HRtech are leading verticals
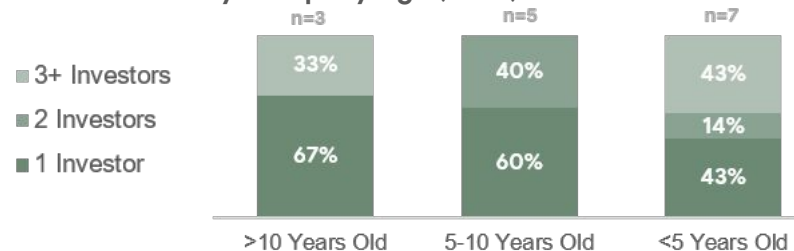
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Venture capital firms play a leading role in funding seed and early stage startups followed closely by accelerators and incubators

Distribution of Startups by Stage (2020)

Startup Stage

Seed/Early Stage	Mergers, Buyouts	Undisclosed
46%	11%	43%

Last Investor Type

Venture Capital	Accelerators/ Incubators	Angel	Corporate	Undisclosed
38%	31%	6%	6%	19%
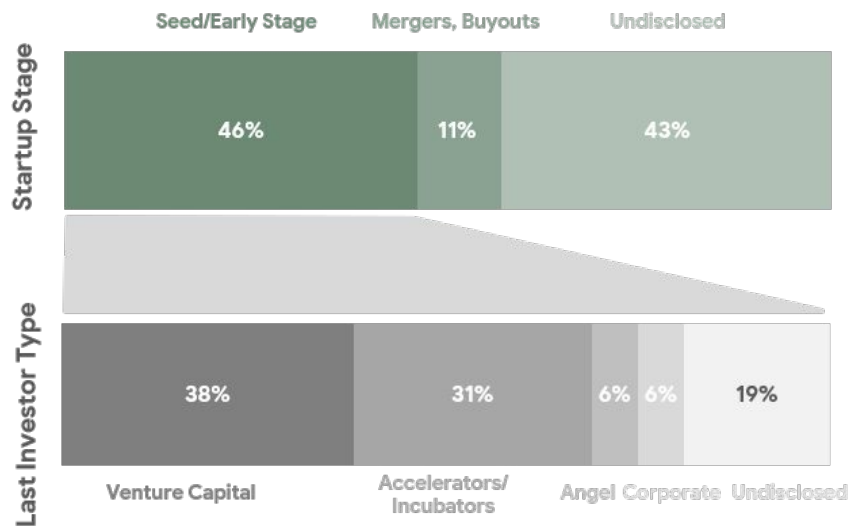
Most of the startups are still in early stages of funding, getting much of their funds from incubators, accelerators and venture capital

Investor Count by Company Age (2020)

- 3+ Investors
- 2 Investors
- 1 Investor

	>10 Years Old (n=3)	5-10 Years Old (n=5)	<5 Years Old (n=7)
3+ Investors	33%	40%	43%
2 Investors			14%
1 Investor	67%	60%	43%

Newer startups are gaining more traction from investors. Nearly 50% of the startups are being funded by a single investor (disclosed)

Innovator Characteristics

49%

of the startups primarily focus on the B2B market

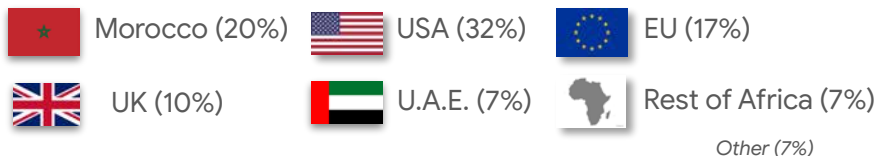*33%[1] of the startups operating in Morocco are headquartered internationally*

18% of the startups are part of the professional services sector

A wide range of global investors fund startups in Morocco

Investors

🇲🇦 Morocco (20%)   🇺🇸 USA (32%)   🇪🇺 EU (17%)

🇬🇧 UK (10%)   🇦🇪 U.A.E. (7%)   Rest of Africa (7%)

Other (7%)

Leading Moroccan Investors

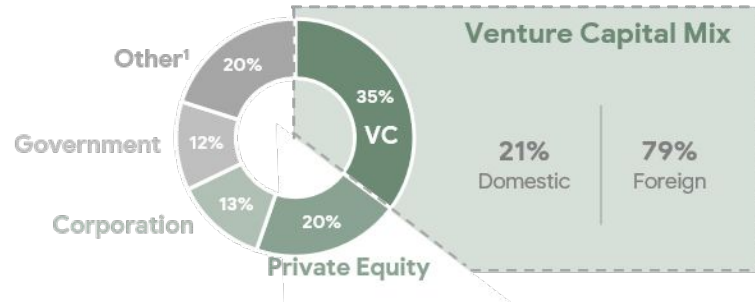**Outlierz Ventures** invests $50K to $500K in seed or pre-series A tech-enabled, mostly B2B, companies across Africa

Wise Ventures is a subsidiary of the Small Enterprise Assistance Funds (SEAF) with 35M MAD to invest in early-stage startups, in addition to SMEs

Central Guarantee Fund is a public institution based in Rabat that provides seed capital

"Morocco is expected to see an increase in investment from China, especially as China invests in Tangier Tech City plans."
- Educator, Rabat

Type of Investors (2020)

- Other[1] 20%
- Government 12%
- Corporation 13%
- Private Equity 20%
- VC 35%

Venture Capital Mix

21% Domestic | 79% Foreign

Areas of Focus

🌱 *16% of foreign investors only invest in seed or early stage vs 50% of local investors*
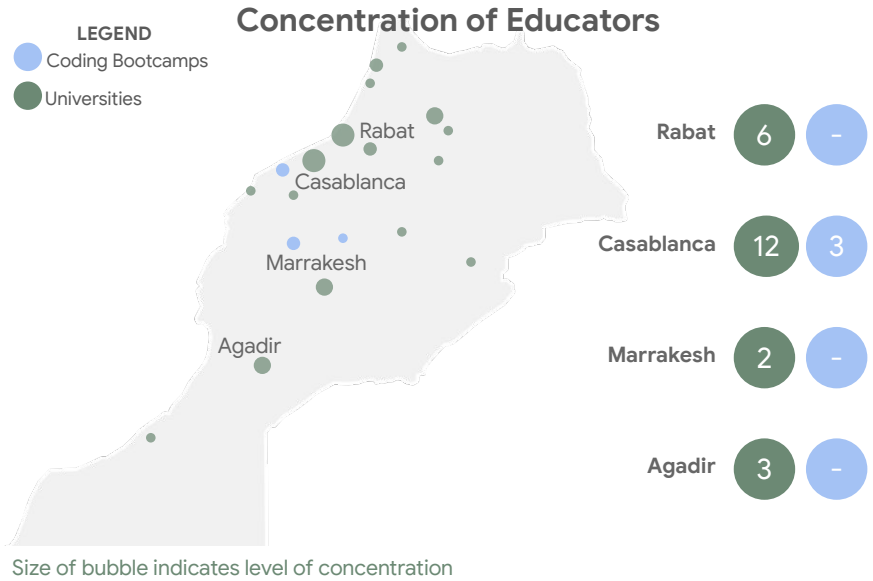
📈 *~18% of investors active in Morocco invest solely in the software sector*

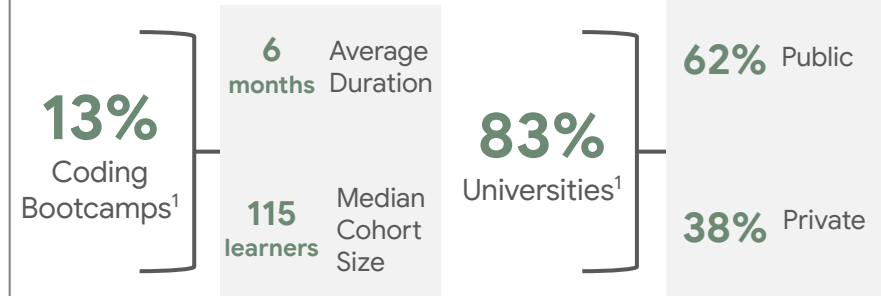🪙 *40% of investors active in Morocco invest in E-Commerce*

University programs and other informal channels are critical to developing new coders due to a lack of coding bootcamps

Concentration of Educators

LEGEND
- Coding Bootcamps
- Universities

	Universities	Coding Bootcamps
Rabat	6	-
Casablanca	12	3
Marrakesh	2	-
Agadir	3	-

Size of bubble indicates level of concentration

"Universities in Morocco are developing, but are still not on par with the universities in Egypt, Rwanda or South Africa."
    - Entrepreneur/Investor, Casablanca

Educator Type Breakdown

13% Coding Bootcamps[1]

6 months Average Duration

115 learners Median Cohort Size

83% Universities[1]

62% Public

38% Private

Case Study: 3W Academy

Overview: Started in France, the Casablanca branch opened in 2018. Their main 4-month fee-based training program focuses on full-stack web dev (primarily male students); women make up 50% of the free coding classes, offered via a separate program
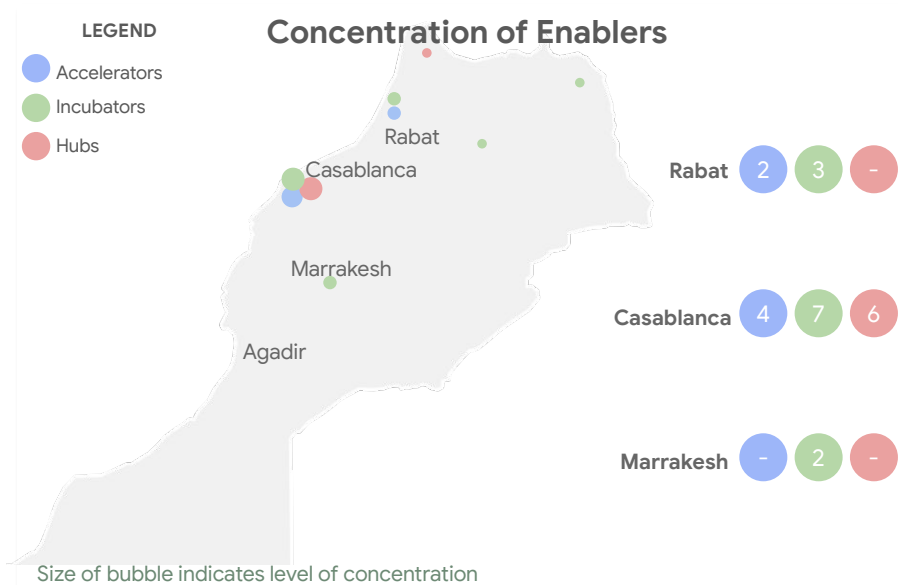
Tech Stack:

Moroccan government & universities are increasingly active in the tech ecosystem, frequently supporting accelerators, incubators, and hubs

- Accelerators
- Incubators
- Hubs

Concentration of Enablers

Rabat

Casablanca

Marrakesh

Agadir

Size of bubble indicates level of concentration

	Accelerators	Incubators	Hubs
Rabat	2	3	-
Casablanca	4	7	6
Marrakesh	-	2	-

"As a hub, we used to have an office in Morocco, but compared to other cities where we had hubs it was a challenging market, so we decided to close the office in Morocco."
- Enabler/Investor, Global

Incubators/Accelerators vs Hubs

68% **14%** **18%**

Incubators/Accelerators *Hubs (Co-working spaces)*

45%
Government or University Backed
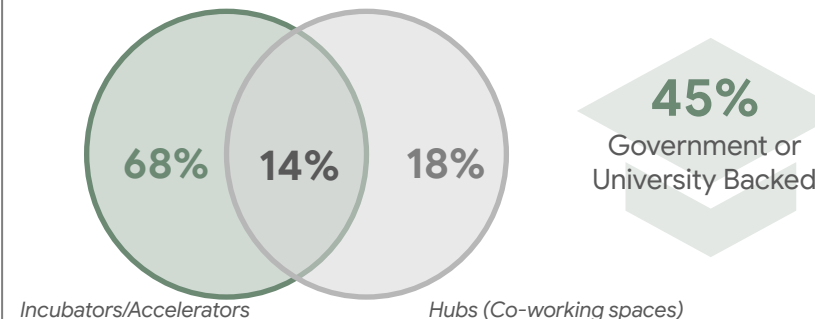
Case Study: Emerging Business Factory

Overview: An incubator/hub in Marrakesh which provides some funding, training, and co-working space in exchange for shares. As one of the first incubators in Marrakech, **they focus on technology and media startups**. They currently house 12 startups.

Partners *(sample):*

AIRFRANCE

Allianz ⑪

MARRAKECH
جامعة القاضي عياض
UNIVERSITÉ CADI AYYAD

Counsel Communal

MADE IN MOROCCO

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Supporting Materials

Glossary

Term	Definition
Countries Analyzed	South Africa, Egypt, Morocco, Nigeria, Kenya, Ghana, Rwanda, Ethiopia, Uganda, Tanzania, Ivory Coast
African Startup	A company that meets the following criteria: ● In growth stage of funding (e.g., seed round, series A - F) ● Technology-focused ● Headquartered in Africa or driving the majority of its revenue in Africa
Tech Ecosystem	The network of people, organizations and institutions that enable innovation
Innovator	African startup (see definition above)
Investor	Provides funding in the tech ecosystem (e.g. venture capital, corporate venture capital, angel investors, government funding, private equity)
Educator	Provides technical training or education (e.g. university, bootcamps, online courses, on-the-job training)
Enabler	Provides support in the form of work space, training, education, mentorship or funding (e.g. accelerators, incubators, work hubs)
Professional Developer	An individual that is employed in a job that involves coding and spends 5 or more hours per week coding
Junior Developer	An individual with less than six years of coding experience
Senior Developer	An individual with six or more than six years of coding experience
Formal Education	Universities or secondary schools that provide information communication technology (ICT) curriculum
Informal Education	Bootcamps, online course, self-taught or on-the-job curriculum to teach coding skills
Female Founded Startup	Startup with at least one female founder

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