CRDS-FY2018-WR-05

ワークショップ報告書

JST/CRDS・中国科学技術信息研究所共催

主要国のスタートアップ支援制度

平成29年10月23日～24日開催

JST/CRDS　海外動向ユニット

国立研究開発法人 科学技術振興機構 研究開発戦略センター
Center for Research and Development Strategy, Japan Science and Technology Agency

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※「発表･質疑応答」の章で掲載したリンクについて、2019 年 1 月時点ではアクセス可能なことを確認済み。

1 概要

1.1 時間･開催場所

時間： 2017 年 10 月 23 日（月） 9：00～17：00
2017 年 10 月 24 日（火） 9：00～14：00

場所： 東京 国立研究開発法人科学技術振興機構 東京別館 4 階 H 会議室

1.2 内容

今回の共催ワークショップでは、主要国として EU、米国、英国、ドイツ、フランス、イスラエル、中国、韓国、日本を選定した。各国のスタートアップ支援に関する政策の取り組みについて、日中双方のメンバーがそれぞれの調査結果を発表・議論を行った。特に米国と英国については、日中双方がそれぞれ異なる見方による議論となった。

1.3 参加者

今回のワークショップの主な参加者は以下の通りである。通訳（日本語⇔中国語）は秦フェロー、周フェローが担当し、会議の速記は日本側の担当者が行った。

○日本側

･JST/CRDS（8 名）

研究開発戦略センター センター長代理（兼 海外動向ユニット 上席フェロー）		倉持隆雄
海外動向ユニット	上席フェロー	林 幸秀
海外動向ユニット	フェロー	峯畑昌道
海外動向ユニット	フェロー	冨田英美
海外動向ユニット	フェロー	澤田朋子
海外動向ユニット	フェロー	津田憂子
海外動向ユニット	フェロー	八木岡しおり
海外動向ユニット	フェロー	周 少丹

･JST 中国総合研究交流センター（1 名）

	フェロー	秦 舟

○中国側

･中国科学技術信息研究所（ISTIC）側（5 名）

戦略研究センター	主 任	程 如煙
戦略研究センター	研究員	趙 俊傑
戦略研究センター	研究員	烏雲其其格
戦略研究センター	副研究員	王 玲
戦略研究センター	副研究員	高 芳

1.4　発表の議題

10 月 23 日（月）

9：30- 9：50	開会挨拶	程主任・倉持センター長代理	通訳：秦･周
セッション 1（米国･イスラエルのスタートアップ支援制度について）			司会：林上席
9：50-10：50	趙俊傑 （ISTIC）	米国のスタートアップ支援制度 （発表 40 分）	討議 20 分
10：50-11：50	冨田英美 （CRDS）	米国のスタートアップ支援制度 （発表 40 分）	討議 20 分
11：50-12：50	峯畑昌道 （CRDS）	イスラエルのスタートアップ支援制度 （発表 40 分）	討議 20 分
休憩			
セッション 2（英国のスタートアップ支援制度について）			司会：林上席
13：10-14：10	津田憂子 （CRDS）	英国のスタートアップ支援制度 （発表 40 分）	討議 20 分
14：10-15：10	高　芳 （ISTIC）	英国のスタートアップ支援制度 （発表 40 分）	討議 20 分
休憩			
セッション 3（フランス、EU のスタートアップ支援制度について）			司会：程主任
15：30-16：30	八木岡しおり （CRDS）	フランスのスタートアップ支援制度 （発表 40 分）	討議 20 分
16：30-17：30	烏雲其其格 （ISTIC）	EU のスタートアップ支援制度 （発表 40 分）	討議 20 分
休憩			
17：30-17：50	全体に関する討議		

10 月 24 日（火）

セッション 4（ドイツ、韓国のスタートアップ支援制度について）			司会：林上席
10：00-11：00	澤田朋子 （CRDS）	ドイツのスタートアップ支援制度 （発表 40 分）	討議 20 分
11：00-12：00	王　玲 （ISTIC）	韓国のスタートアップ支援制度 （発表 40 分）	討議 20 分
休憩			
セッション 5（中国、日本のスタートアップ支援制度について）			司会：程主任）
12：20-13：20	程如煙 （ISTIC）	中国のスタートアップ支援制度 （発表 40 分）	討議 20 分
13：20-14：20	周少丹 （CRDS）	日本のスタートアップ支援制度 （発表 40 分）	討議 20 分
14：20-14：40	全体の討議･閉会の挨拶　程主任・林上席・倉持センター長代理		

2 発表･質疑応答

2.1 開会挨拶

2.1.1 倉持センター長代理

ISTIC の皆様、東京へようこそおいで頂きました。CRDS と ISTIC の交流においては、毎年着実に実績を積み上げてきていると存じます。私は幸いに先月 ISTIC を訪問し、趙書記とお目にかかり、両機関の交流の大切さを再確認いたしました。今回で 7 回目になります共催ワークショップのテーマは「主要国のスタートアップ支援制度」と、とてもタイムリーなものとなっていると思います。 世界の科学技術イノベーションを巡る環境は非常に大きく変化しています。私は先週開催された国連の会議でニューヨークに行ってきました。そこで世界のビジネス環境、研究開発環境の急速な変化を実感しました。スタートアップをめぐる環境や状況は国によって大きく異なるので、その実体を捉えることはとても難しいと同時に、大変重要であると思います。本日、ISTIC と CRDS 両機関それぞれの視点で調査された結果をもとに、率直な意見交換をすることは、とても価値のあることだと思います。二日間のワークショップとなりますが、実りある意見交換ができること、そして夕刻には交流会で楽しく交流ができることを期待して、私の挨拶とさせていただきます。

2.1.2 程主任

この度は、本共催ワークショップにお招き頂き、ありがとうございます。まず、CRDS の皆様にはワークショップの開催にあたり、用意周到な準備をしていただき、心から感謝致します。CRDS-ISTIC 共催ワークショップは 2011 年にスタートし、今年で 7 回目を迎えました。これまで、主要国のイノベーション政策、ファンディングシステム、次世代先進製造技術、研究成果の橋渡し、研究環境などについて議論を展開しました。こうした議論を通じて、主要国の科学技術動向について、より深い理解が進みました。今回のテーマである「主要国のスタートアップ支援制度」は、今の時代においてとても重要な意味を持つと思っています。近年、世界経済が伸び悩む中、スタートアップは各国の経済成長を促進し、質の高い雇用を創出する手段の一つとなっています。関連研究によれば、スタートアップの活性度と国の生産性向上との間には正の相関関係が見られています。多くのスタートアップの寿命は 5 年未満ですが、5 年以上経営し続けるスタートアップの雇用貢献度は産業界の平均水準を上回っているようです。経済の成長と成果橋渡し期間の短縮はスタートアップの急成長と関連しています。テスラ（2003 年創設）、Facebook（2004 年創設）及び中国の Mobike 社（2016 年創設）のようなイノベーティブな企業は、いずれも若い企業です。将来に向けた経済発展には、スタートアップは不可欠な存在です。一方、周知の通り、スタートアップ業界における人材不足、技術不足、担保制度の不備などの課題も多く、各国政府は様々な対策を取っているようです。本ワークショップを通して、主要国のスタートアップ支援制度について、両機関の間でより深い議論が出来たらと思います。

2.2　セッション１　　米国･イスラエルのスタートアップ支援制度について

2.2.1　趙　俊傑（ZHAO Junjie）　ISTIC

発表内容：米国のスタートアップ支援制度について

以下の資料に基づいて、説明がなされた

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Outline of Presentation

I Creating Environment

II Organizational Guarantee

III Providing Services

IV Cultivating Culture

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GEM: Situation of Entrepreneurship in the US **15/16VS16/17**

美国

人口：31900 万（2014 年）
国内生产总值：174189 亿美元（2014 年）
人均国内生产总值：53,597 美元（2014 年）
中小企业在国内生产总值中的占比：54%（2014 年）
世界银行全球营商环境指数评分：82 分/总共 100 分；名次：第 7 名/共 189 名
世界银行全球创业指数评分：91 分/总共 100 分；名次：第 49 名/共 189 名
世界经济论坛全球竞争力指数评分：5.6 分/总共 7 分；名次：第 3 名/共 140 名
经济发展阶段：创新驱动型

创业自我感知指标	数值	名次/共 60 名
机会感知	46.6	25
能力感知	55.7	21
失败恐惧感	29.4	15
创业意愿	12.4	41

活动量指标	数值	名次/共 60 名
早期阶段创业者总数占比		
2015 年早期阶段创业者总数占比	11.9	27
2014 年早期阶段创业者总数占比	13.8	n/a
2013 年早期阶段创业者总数占比	12.7	n/a
成熟企业主占比	7.3	28T
雇员创业者占比	7.0	4

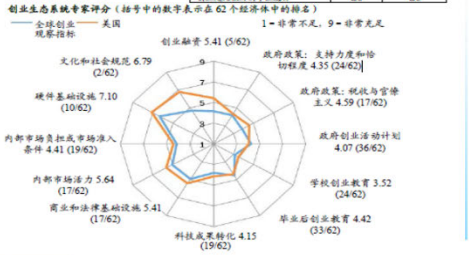
动因指标	数值	名次/共 60 名
改善驱动型机会创业者对应需型创业者的比率	4.8	7

性别平等指标	数值	名次/共 60 名
女性对男性创业者比率	0.6	31T
女性对男性机会型创业者比率	0.9	24T

创业影响力指标	数值	名次/共 60 名
就业岗位创造指标（5 个岗位以上）	31.7	9T
创新程度	4.3	12
行业占比（在企业服务部门中的创业者占比，%）	31.2	9

社会创业价值观指标	数值	名次/共 60 名
创业者地位高	n/a	n/a
创业是比较好的事业选择	n/a	n/a

创业生态系统专家评分（括号中的数字表示在 62 个经济体中的排名）
1 = 非常不足，9 = 非常充足



UNITED STATES OF AMERICA

Population: 321.6 million (2015)
GDP: $17,947.0 billion (2015)
GDP per capita: $55,805.2 (2015)
SME contribution to GDP: 54% (2015)
World Bank Doing Business *Rating* (2015): 82/100; ***Rank:*** 8/190
World Bank Starting a Business *Rating* (2015): N/A; ***Rank:*** 51/190
World Economic Forum Global Competitiveness *Rating* (2015): 5.7/7; ***Rank:*** 3/138
Economic Development Phase: Innovation-Driven

Self-Perceptions About Entrepreneurship	Value %	Rank/64
Perceived opportunities	57.3	9
Perceived capabilities	55.0	20
Undeterred by fear of failure	33.3	41
Entrepreneurial intentions	11.7	47

Activity	Value %	Rank/64
Total Early-stage Entrepreneurial Activity (TEA)		
TEA 2016	12.8	24
TEA 2015	11.9	28
TEA 2014	13.8	N/A
Established business ownership rate	9.2	16
Entrepreneurial Employee Activity – EEA	7.0	7T

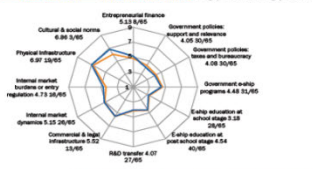
Motivational Index	Value	Rank/64
Improvement-Driven Opportunity/Necessity Motive	6.4	3

Gender Equality	Value	Rank/64
Female/Male TEA Ratio	0.71	27T
Female/Male Opportunity Ratio	0.99	25T

Entrepreneurship Impact	Value %	Rank/64
Job expectations (6+)	34.2	9T
Innovation	37.1	9
Industry (% in Business Services Sector)	31.7	7

Societal Value About Entrepreneurship	Value %	Rank/61
High status to entrepreneurs	74.4	21
Entrepreneurship a good career choice	83.7	29

Expert Ratings of the Entrepreneurial Eco-system (ranked out of 65)



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- The US has good performances in the following indexes that represent innovative entrepreneurship: Entrepreneurial Employees Activity (7), Improvement-Driven Opportunity/Necessity Motive (3), Innovation (9), and Industry(% in Business Services Sector)(7).
- Entrepreneurship ecosystem: performing the best in two aspects: Cultural & social norms (3) and Entrepreneurship finance(8); performing not bad in Commercial & legal infrastructures(13), Internal market burdens or entry regulation (16) and Physical Infrastructure(19); Government e-ship programs were improved both in value and rank.

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I Creating a macro policy environment that's conducive to innovation and entrepreneurship

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1.Strategy, program and plan

■Strategy for American Innovation, 2009 , 2011 , 2015

■Startup America Initiative

The government:

- Expanding channels of capital
- Strengthening guidance for entrepreneurship
- Cutting barriers to entrepreneurship
- Accelerating innovations
- Releasing market opportunities

Private organizations: Startup America Partnership(SAP)

- Developing long-term entrepreneurship ecosystem
- Cultivating and encouraging entrepreneurs of the next generation
- Enhancing the liaison between entrepreneurs and
- Enhancing the liaison between entrepreneurs and enterprises

■Special programs to promote technological innovation and development of small enterprises like SBIR, STTR

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2.Pertinent laws and regulations (before 2010)

- Small Business Act,1953
- Small Business Innovation Act
- Small Business Economic Policy Act
- Small Business Innovation Development Act
- Small Business Technology Transfer Act
- Small Business Research Development Enhancement Act
- Small Business Investment Incentive Act
- Small Business Export Expansion Act
- Small Business Lending Enhancement Act
- Small Business Project Improvement
- Small Business Investment Center Technology Improvement Act
- Equal Opportunity Act
- Federal Acquisition Regulation
- Bayh-Dole Act & Stevenson-Whdler Act
- …

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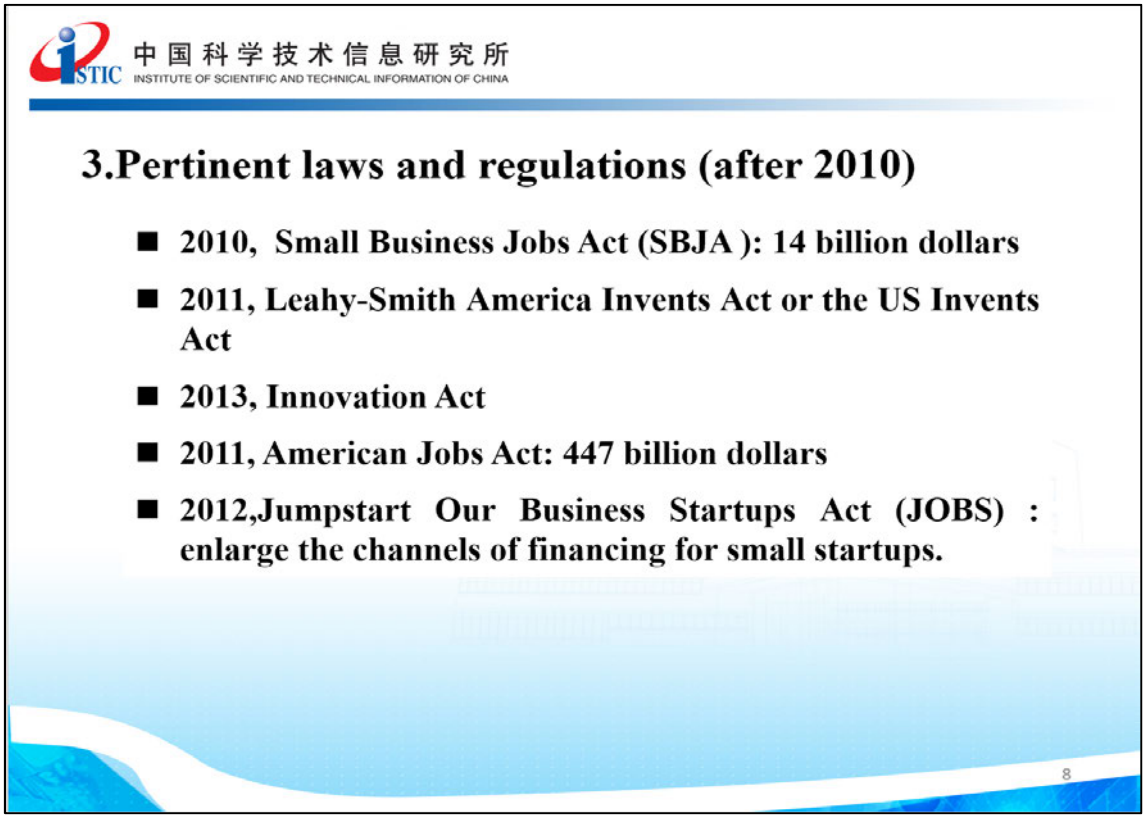
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3.Pertinent laws and regulations (after 2010)
2010, Small Business Jobs Act (SBJA): 14 billion dollars
2011, Leahy-Smith America Invents Act or the US Invents Act
2013, Innovation Act
2011, American Jobs Act: 447 billion dollars
2012,Jumpstart Our Business Startups Act (JOBS) : enlarge the channels of financing for small startups.
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II Complete System of Management and Services
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1.Relevant organizations in the federal government

- White House Small Business Conference
- Small Business Committee in House and Senate
- Small Business Administration(SBA)
  https://www.sba.gov/about-sba
- Office of Innovation and Entrepreneurship (OIE)
  - the National Advisory Committee on Innovation and Entrepreneurship (NACIE)
  - The Regional Innovation Strategies(RIS) Program

  https://www.eda.gov/oie/

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2.Government plus Society (networked service organization)

- **Small Business Development Centers, SBDCs**: are made up of a unique collaboration of SBA federal funds, state and local governments, and private sector resources. 63 Host networks branching out with more than 900 service delivery points throughout the U.S

https://www.sba.gov/offices/headquarters/osbdc/resources/11409

- **The Service Corps of Retired Executives, SCORE:** the nation's largest network of volunteer, expert business mentors, with more than 10,000 volunteers in 300 chapters. As a resource partner of SBA, SCORE has helped more than 10 million entrepreneurs since 1964.

https://www.score.org/

- **Women Business Center, WBC:** partially funded by the SBA, touch over 1,000 individuals seeking to start or grow businesses in any given year.

http://kansaswbc.com/

- ……

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III Considerate Full Services

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1.Financial services

Providing financial services for small businesses on the basis of laws and regulations including Small Business Act, Small Business Investment Act, Small and Medium Business Innovation Development Act, Small Business Research Development Enhancement Act, Small Business Jobs Act, American Jobs Act, Jumpstart Our Business Startups Act.

- **Fund support**
- **Tax reduction and exemption and preferential policies**
- **Loan program: SBA General Small Business Loans, Real Estate % Equipment loans, SBJA Small Business Lending Fund**
- **Loan guarantee**
- **Debenture guarantee**
- **Venture Capital: Small Business Investment Company (SBIC) Program**

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2.Technological support

- Small Business Innovation Research（SBIR）was established and implemented in accordance with Small Business Innovation Development Act. All the federal departments that have an annual R&D fund over 100 million dollars must allot a certain proportion of their funds to support technological innovation and development activities of small businesses.
- Small Business Technology Transfer（STTR）was authorized for establishment in accordance with Small Business Technology Transfer Act in 1992 and was implemented in 1994. All the federal departments that have an R&D fund over 1 billion dollars must allot a certain proportion to support technology transfer activities of small businesses.

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3.Product sale and market expansion service

- Government procurement: SBA government procurement office. According to the US law, 23% of the purchase contracts of the federal government must be offered to small businesses, and large enterprises are required to subcontract 20% of the purchase contracts they obtain from the government to small businesses.
- Product export service for small businesses: In 1980, Small Business Export Enhancement Act was passed and “Small Business Export Promotion Plan” was formulated accordingly.

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4.Personnel training service

- Small business institute: SBA cooperated with local governments and universities to set up small business institutes in many universities to provide applied training and quality education for small business operators. Most local governments would allot a certain amount of funds to offer employees of small businesses free training. All small business service organizations have the function of education and training.
- Online training: SBA and its service organizations utilized modern technologies to launch courses online and offer online trainings.

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5.Comprehensive platform of entrepreneurship service

- SBA small business website: https://www.sba.gov/
- Entrepreneurship accelerator and Maker's Space :"Improvement Challenge Program" of the Department of Education
- Business Incubator（BI）
- Simplifying procedures for business starting: "Start Up In a Day" Program in 2015

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IV Enhancing Entrepreneurship Education and Fostering Entrepreneurship Culture

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1.Enhancing entrepreneurship

- Multi-channel financial support for entrepreneurship education
- Diversified organizations of entrepreneurship education
- Complete system of entrepreneurship education
- Rich and all-round courses of entrepreneurship education
- Professional faculties of entrepreneurship education

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2.Fostering Spirit of entrepreneurship

- The US highly valued the cultivation and establishment of entrepreneurship. One of the core objectives of Startup America Initiative is to establish entrepreneurship and make it the core value of the US and the source of competitive strength
- The Department of Education launched Young Entrepreneur Training and Education Program to strengthen training of university students for entrepreneurship.
- NSF put down National Project Entrepreneurship Education Program to invest $10 million in five years, subsidizing 350 colleges of engineering to train entrepreneurs.
- SBA and USDOL: Self-Employment Assistance Program (SEA)

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3.Creating atmosphere for entrepreneurship

- Encouraging entrepreneurship contest: "Clean Energy Entrepreneurship Competition" (2 million dollars every year), and University Students' Entrepreneurship, American Small Business Championship, FedEx Think Bigger, Tap the Future, Mission Main Street Grants, Love Our Local Business, …
- Supporting inclusive entrepreneurship
- Offering incentives to model entrepreneurs: SBA Small Business Activity Week; White House Awarding Ceremony; SBIR Hall of Fame
- …

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Characteristics of the US Measures to Promote Entrepreneurship
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➢ base on laws and regulations
→ long-term effective
➢ focus on services
→ takes the enterprises as the main part
➢ mobilize social resources
→ Public-Private Partnership
➢ give priority to education
→ culture and spirit of entrepreneurship
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Case: Small Business Investment Company(SBIC) Program

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Program Overview

Small Business Investment Act
The SBIC Program, administered by SBA, is a multi-billion investment program created in 1958 to bridge the gap between entrepreneurs' need for capital and traditional sources of financing. The SBIC is one of the largest fund-of-funds in the United States and can invest up to $4 billion annually. The SBIC program issues debt to venture capitalists, private equity funds and other vehicles that invest in America's small businesses. Over the past seven years(From FY2010 through FY2016), the program has channeled $25 billion of capital to more than 6,990 U.S. small businesses representing a variety of industries across the country. These results were achieved through a proven public-private partnership that leverages the full faith and credit of the U.S. government to increase the pool of investment capital available to small businesses.
www.sba.gov/SBIC

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Launched in 1958 the SBIC Program has(2015):

- Deployed more than $67 billion of capital
- Made more than 166,000 investments in small businesses
- Licensed more than 2,100 funds

From FY2010 through FY2016:

- Over $25 billion in financing was invested in small businesses
- Over 6,990 businesses received investments

As of Sept. 30, 2016

- $4 billion authorization per year
- $28 billion of assets under management
- 313 active SBICs

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Source：*The SBIC Program in Brief*

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Source：*The SBIC Program in Brief*

Source：*The SBIC Program in Brief*

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Investment Criteria

Fund managers are solely responsible for making investment decisions, without any interference from SBA. However, SBIC fund managers must adhere to a basic set of investment criteria:

- ✓ SBICs ***must*** invest in "small" businesses, which are defined as those with less than $19.5 million in tangible net worth AND average net income for the preceding two years of less than $6.5 million; OR, businesses qualifying as "small" under SBA's N.A.I.C.S. Industry Code standards (generally based on annual sales or number of employees)

- ✓ SBICs ***may*** invest in businesses located anywhere in the U.S. or its territories
- ✓ SBICs ***may*** control small businesses for up to seven years, or longer with SBA approval
- ✓ SBICs ***may*** invest using debt, equity or debt with equity features
- ✗ SBICs ***may not*** invest in businesses with over 49% of their employees located outside the U.S. or its territories
- ✗ SBICs ***may not*** invest in project finance, real estate, financial intermediaries or passive businesses
- ✗ SBICs ***may not*** invest more than 10% of the total fund in a single business

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Terms, Pricing & Structure of SBA Capital

SBA makes capital available to licensed SBICs through two financing instruments: a standard debenture and a discounted debenture. A just-in-time financing process allows fund managers to draw SBA capital as frequently as twice a month.

Standard Debenture

- 10-year term with no pre-payment penalty
- Semi-annual interest with bullet payment at maturity
- Fixed rate set at a small premium over the 10-year Treasury
- Available for all financings that meet the basic SBIC Program investment criteria
- 1% Commitment Fee, 2% Draw Fee, Annual Charge

Discounted Debenture

- 10- or 5- year term; no-penalty prepayment option after 1 year
- Issued at a discount to face value
- No interest due on first 5 years of debenture
- Only for use in Low-to-Moderate Income, Energy-Savings or Early Stage financings
- 1% Commitment Fee, 2% Draw Fee, Annual Charge

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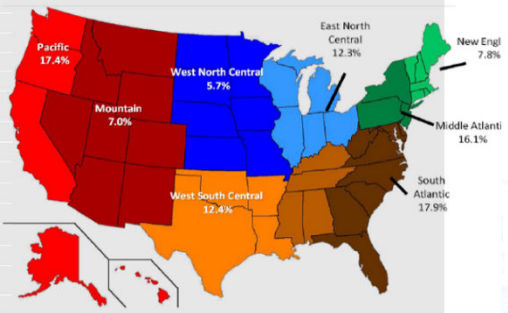
The SBIC Program Portfolio

($ in billions)	**As of Sept. 30, 2016**
Number of Funds in Portfolio:	313
SBA Capital:	$13.7
Private Capital:	$14.1
Total Assets Under Management:	$27.8
	Oct. 1, 2015 to Sept. 30, 2016
Number of Financings Reported:	2,962
Amount of Financings Reported:	$5.99 billion
% Debt	63%
% Equity	17%
% Debt with Equity Features	19%
Average Size of Investments:	$2.02 million
% Located in LMI Areas:	23.6%
	Rate on Standard Debenture
Rate fixed on September 16, 2015	2.83%

* SBA's Participating Securities Program, which ended in 2004, currently represents just 7.9% of assets under management



** Percentages may not sum to 100% due to rounding

Source：*The SBIC Program in Brief*

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Thank You!

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【質疑応答】

- 冨田 F[1]：p.11 にある SBA の Score プログラムについてご教示いただきたい。SBDC については、ローン（融資）やビジネスについての助言にかかわる機関であるという理解である。また、Score についても同様のプログラムも存在する。これらの違いについて伺いたい。
  - ✧ 趙研究員:まず、機関としてそれぞれ独立している。SBDC は大学内に設置されるのが通例である。主に、融資についての取り組みが主流となる。Score については、コンサルティング的な取り組みを進めている。SBDC とは直接的な関係性はない。Score はより企業と密接に関係し、OB（スタートアップ経験者？）や有識者を利用して（アドバイスを受けるなど？）取り組みを進めている。
- 林上席：米国のスタートアップについて、法律・制度的について丁寧に調査されており有益な調査報告である。これらの調査方法についてご教示頂きたい。コメントについて、何が制度の中で効果的であったのか、何が今後の調査が必要であるのか、検討をすることが望ましいと考える。
  - ✧ 趙研究員：重点化については、ご指摘のとおりである。今後の調査の検討要件にしたい。
  - ✧ 趙研究員：主に 3 点ある。CRDS のように現地調査はできないが、中国人研究者による先行研究がある。そして、（各機関の）ウェブサイトからの情報収集、また、科学技術部大使館（現地大使館）からの情報提供による。
- 林上席：発表資料の冒頭のデータ（p.4）であるが、数字は何を意味し、出典はどこか？
  - ✧ 趙研究員：まず、本スライドの数字については世界 60 カ国程度のランキングをさす。
- 林上席：中国や日本の順位が記載されているとより比較として有益であると考える。
  - ✧ 趙研究員：出典は米国、英国が中心である。
- 周 F：創業コンテストについてお伺いしたい。
  - ✧ 趙研究員：MIT は創業コンテストをしているが、米国の有名企業はこれらのコンテストから発生している。

[1] F はフェローの略、以下同。

2.2.2 冨田英美（TOMITA Amy） JST/CRDS

発表内容：

以下の資料に基づいて、説明がなされた。

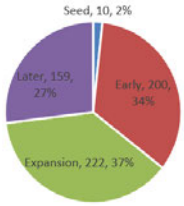
Agenda

1. Current situation
2. Startup related Policies
3. Government funded startup programs
4. Boston's ecosystem and an example of a successful startup
5. Austin's ecosystem and an example of a successful startup
6. Characteristics of the US startups

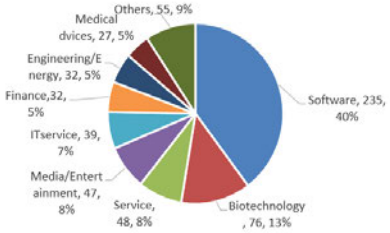
Current Situation

- USA is the most active startup country
  Number of startups grown into global companies
  - Apple, Google, Microsoft, Amazon, Facebook
  - Airbnb, Uber, etc. are growing as Unicorn companies
- Total VC investments (2015) 59B$

Investments by Stage (hundred M$)



Investments by Field (hundred M$)



Curret Situation

Startup Clusters and its Characteristics

- **Silicon Valley**
  Largest startup cluster in the US
  Numbers of IT startups grown into global companies
- **New York**
  Rapidly growing startups in new business fields called "hyphen tech" combine IT with existing industries such as Finance, Real Estate, Fashion, and Media
- **Boston**
  University spin offs in Life Sciences are dominant.
  Universities, Industry and VC collaborate to create Startups
- **Los Angeles, Seattle, Austin**

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Startup Related Policies

- Bayh-Dole Act (1980)
  – Gov. funded research can be patented and licensed
  ⇨ incentive for University's technology transfers
- Stevenson-Wydler Act (1980)
  ⇨ promotes technology transfer from National Labs
- Startup America Initiatives (2011)
  1. Unlocking access to capital
  2. Connecting mentors
  3. Reducing barriers
  4. Accelerating Innovation from "lab to market"
  5. Unleashing market opportunities

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SBIR Program

Small Business Innovation Research (1982)

- Government provides early stage research funds for small businesses
- 11 Federal agencies provided 2.5B$ (FY2015)
- The largest seed fund
- Three-Phase program

- Successful companies: Qualcomm, Symantec, iRobot

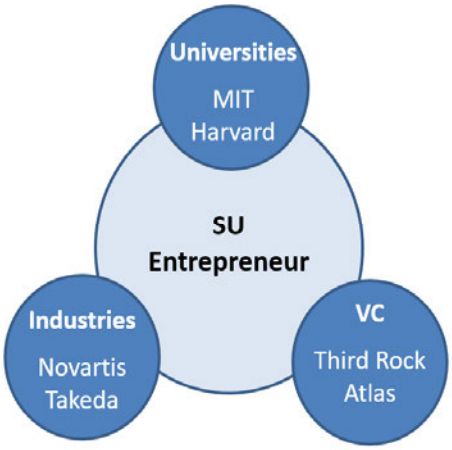
NSF I-Corps Program

I-Corps (NSF)

Entrepreneurship education program for University researchers

Boston's Ecosystem

- World top class research at MIT and Harvard
- Private funds support startups
- Early stage research supported by VC



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Boston's Success Story - Emulate

- Founded in 2014
- Harvard University, Wyss Institute spin off
- Biotechnology
  - Developed Organ-on Chip
  - Enables acceleration of drug development process

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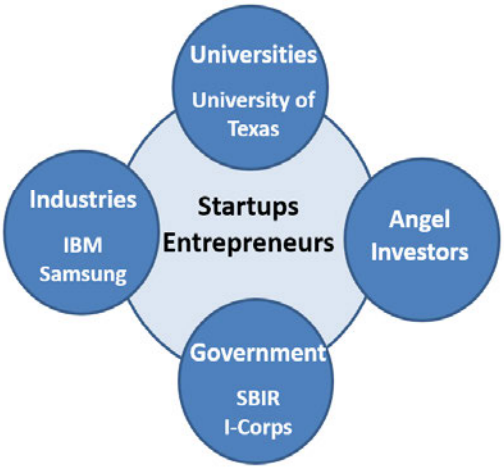
Austin's Ecosystem

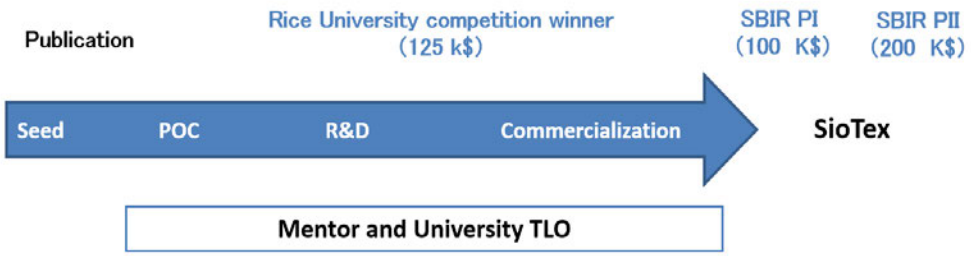
- Local community based ecosystem with State University and local Investors
- Government funds and programs play an important role
- Startups are supported by Angel investors



Japan Science and Technology Agency 10

Austin's Success Story - SioTex

- Founded in 2014
- Texas State University spin off
- Green technology
  - developed environmentally friendly silica from bio-waste
  - Silica to be used as soil improvement agent



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【質疑応答】

- 程主任：まず、第一印象として、冨田Ｆと趙研究員による米国の報告は、冨田Ｆの報告はエコシステム、趙研究員の報告はマクロ政策の説明により包括的に理解が進んだと考える。これらから理解できる点は、メンターや豊富なVC資金と経験豊富な人材が米国において特徴的（良いスタートアップ環境）であると考える。米国で大学発のスピンオフについてどこが最も成功しているか？
  - ✧ 冨田Ｆ：MITである。
- 王副研究員：I-Corpsの応募用件についてはどうか？つまり、大学は教育と研究を中心に行う任務があると考えるが、大学から研究者が流出すると問題ではないか？
  - ✧ 冨田Ｆ：大学においてNSFからの基礎研究の支援を受けている・受けていた研究者が支援対象となる。特にポスドクレベルの研究者が中心となり、アカデミア・ビジネス界からのメンターをそれぞれ備えてプロジェクトチームを組む必要がある。流出について、基本的にはポスドクが中心のとりくみであるため、いずれ大学を出るという前提で進めるため、大学における問題は大きくないと考える。大学において取り決めは異なり、ある大学では、サバティカル期間にこのような起業活動に参加することも可能である。
- 趙研究員：エコシステムにおいて人材に注目した分析はあるか？
  - ✧ 冨田F:スタートアップについては、シリアルアントレプレナー（連続起業家）の存在が大きいと考える。これらの人材が大学へ戻ったり、メンターとなったり、人と資金の還流が米国においては重要（強み）であると考える。
- 趙研究員：エコシステムのソフトの部分とハード（資金・インフラ）の部分があると考えられるが、産業界の存在も重要ではないか。
  - ✧ 冨田Ｆ：ご指摘のとおりであり、どの要素が欠けてもエコシステムが成り立たないと考える。各要素が重層的に関連していると考える。
- 林上席：最後のスライド、まとめであるが、要素が足りない印象を受ける。制度、セイーフティネットなどの結論のみで米国の強みを説明することでは足りないと考える。趙研究員の指摘のように人材に着目する必要があるのではないか？起業のリスクについてはどうか、キャリアのリスクは他国と比べてどうか？
  - ✧ 冨田Ｆ：今後の調査の参考にする。人材の流動性について重点調査したい。要所要所に起業経験者がいるため、これらの人材の流動性について、特に注目したい。
- 高副研究員：スタートアップのエコシステムについては、国レベル・地域レベルのエコシステムは粒度が異なり、また、相互関連性もあると考える。用語の定義も必要ではないか？ボストン・テキサスそれぞれの地域のエコシステムの特徴を示す

情報を図解できるとよりよいのではないか？

- ✧ 冨田Ｆ：特にテキサスについては、情報が少ないため、シリコンバレー・ボストンなどと同程度の情報提供ができるように重点調査を進めたい。

- 王副研究員：中国も同様に研究者による起業も事例があるが、その反面、研究者が産業界へ流出することで、学術研究における人材確保が難しくなるのではないか？
  - ✧ 冨田 F:米国の場合は、学術関連の職がそもそも限られているので、むしろ人材を有効活用して、大学へ還元することに主眼が置かれている印象を受ける。

2.2.3 峯畑昌道（MINEHATA　Masamichi）　JST/CRDS

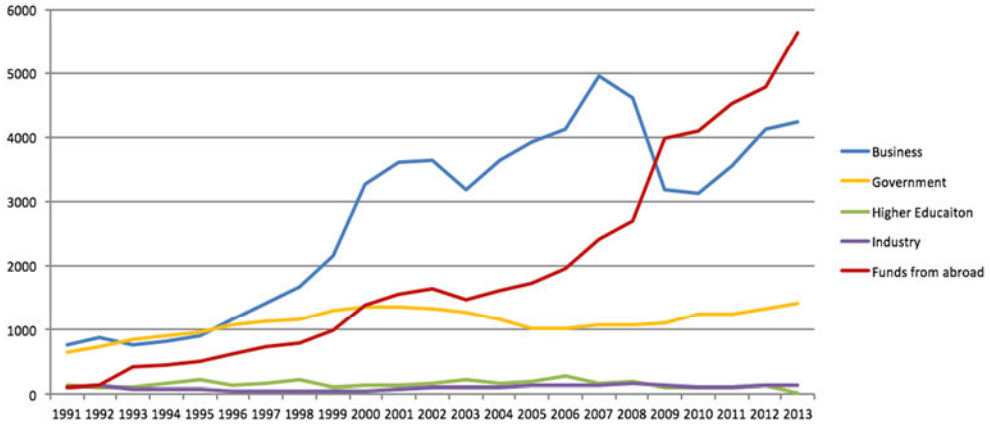
発表内容：

以下の資料に基づいて、説明がなされた。

1 Gross Domestic Expenditure on R&D in Israel

GDP on R&D by Sector of Funds (1991–2013: OECD)

R&D expenditure against GDP is 4.235% (No.1 amongst OECD members : OECD 2015)



- 49% of Israel's total R&D expenditure is funds from abroad
- Sharpe increase of overseas funds in the early 1990s

Japan Science and Technology Agency OECD (2017) Gross Domestic Spending on R&D https://data.oecd.org/rd/gross-domestic-spending-on-r-d.htm 科学技術振興機構 2

2 Governmental Laws and Policies

Title	Time	Aim
Law for the Encouragement of Industrial Research & Development	1985 2005 Rev.	Job creation and surplus yield for the economy by R&D, manufacturing and export
Law for the Encouragement of Capital Investments	1959 2016 Rev.	Tax reduction in the rate of corporate tax derived from technology income, particularly in priority area (Galilee, Jerusalem, Negev)
Angels Law (Section 20 of the 2011-2012 Economic Policy Law)	2011 2016 Rev.	Deducting the amount of its investment from its overall taxable income from all sources
Innovation Visa	2015	Residential visa for foreign entrepreneurs up to 5 years

Revision of laws and regulations noted in the table are not limited to once

Japan Science and Technology Agency The Encouragement of Industrial Research and Development Law, 5744-1984; Ministry of Finance (2012) Opportunity Israel: Enhanced Legislation, R&D Incentives, Grants and Support Programs 科学技術振興機構 3

3-1 Governmental Program-1

Name	Yozma Program
Ministry	Ministry of Economy and Industry
Program Size	Investment（$100mil）
Start Date	1993（Privatized in 1998）
Program Outline	1. Establishment of 10VC funds in Israel（$80mil） 2. Investment in startups（$20mil）
Aim	Developing VC market in Israel by securing funds, management skills of foreing VCs
System to attract foreign investment	1. 5 year option to buyout governmental share by partner investors (foreign VCs) 2. Tax incentive for foreign VCs（Delaware law）

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Erlich, Y. The Yozma Program: Policy & Success Factors; Lerner, J (2010) 'The Future of Public Efforts to Boost Entrepreneurship and Venture Capital', Small Business Economics, 35. pp. 255-264, p. 260

国立研究開発法人 科学技術振興機構 Japan Science and Technology Agency

4

3-2 Governmental Program-2

Name	Incubators Incentive Program
Ministry	Ministry of Economy and Industry
Program Size	Matching funds (85% government, 15% incubator) for entrepreneurs up to $1mil for 2 years ($2.3mil for 3 years in the life sciences)
Start Date	1991
Program Outline	Physical space and infrastructure, administrative services, technological and business guidance, legal advice and access to partners, additional investors and potential customers
Aim	To help private entreprenuers go startup and new Israeli startup companies commercialize
System to achieve its aim	1. Utilizing highly skilled immigrants from the former Soviet states 2. Developing labor market for engineers laid off by Israel defense industry

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Israel Innovation Authority, Incubators, http://www.matimop.org.il/Incubators.html

国立研究開発法人 科学技術振興機構 Japan Science and Technology Agency

5

4-1 Startup from Academia: Mobileye

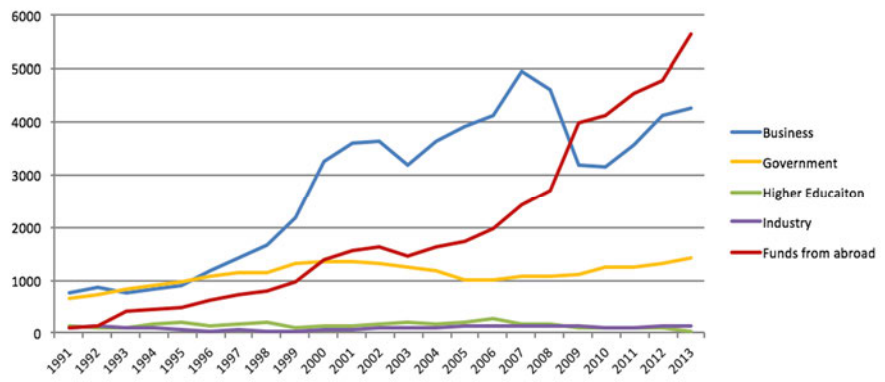
Name	Mobileye
Founded	1991
Headquarters	Jerusalem
Founder	Amnon Shashua，Ziv Aviram
Product	• Advanced Driver Assist Systems（ADAS） • Computer chips
Market Value	$14,078.15mil （September, 2017）
Financial Instrument Exchange	New York Stock Exchange（NYSE）

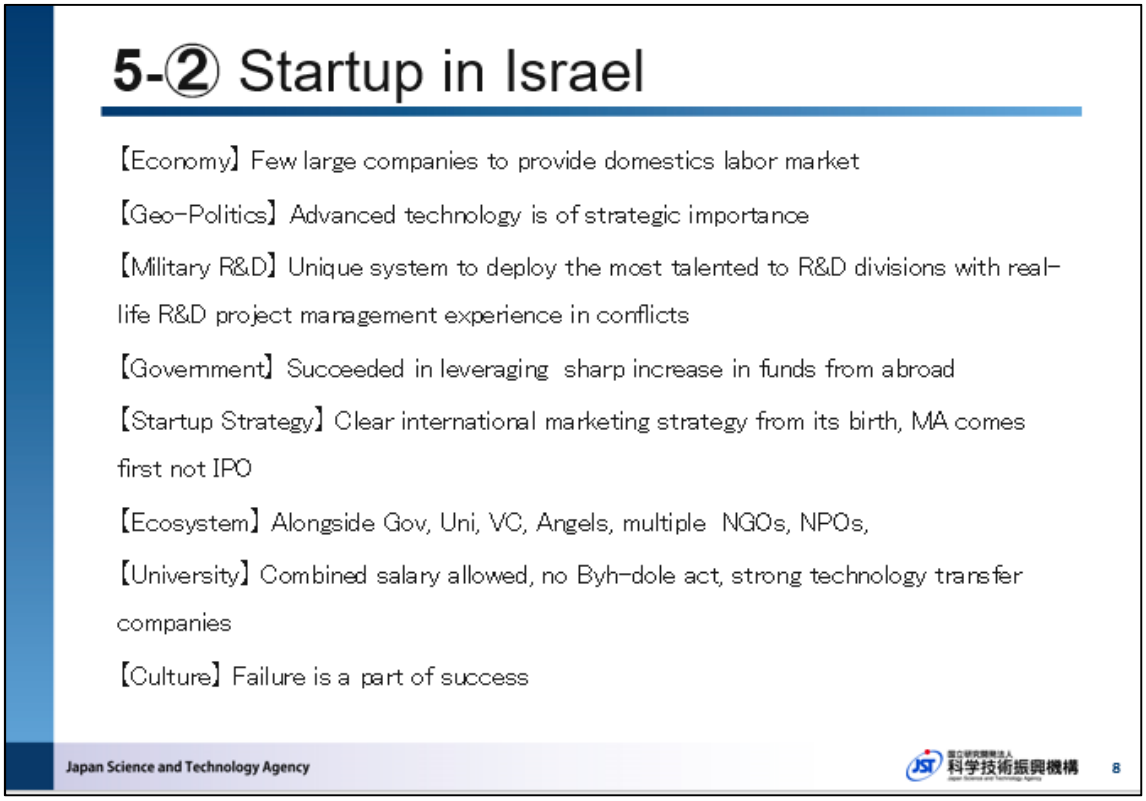
- Biggest Israeli startup in US IPO (2004: 800mil) and MA (2017: 15bil)
- Good case study of intellectual property right and financial return to university

NASDAQ (2017) Mobileye N.V. Quote & Summary Data, Accessed 12 September http://www.nasdaq.com/symbol/mbly ; Amit, H. and Zerachovitz, O (2017) 'How Israel's Hebrew University Lost a Mobileye Windfall', Haaretz, 23 March, http://www.haaretz.com/israel-news/business/1.779258

5-① Startup in Israel

"Startup Nation" is not the nation where startup is simply active but indispensable to sustain its economy.





【質疑応答】

- 鳥雲研究員：スライド 4 ページを見ると、政府 4 割、海外は 6 割となっている。こんなに戦争がよく起こる国でどうしてこういった多くの投資が海外から来るのか。国から何か特別な保障があるのか。
  - ✧ 峯畑 F：海外から投資がある理由はまさに戦争が関係している。戦争に必要なサイバーセキュリティ、IT といった分野の研究開発および人材育成が積極的に推進されている。こういった人材を獲得すべく、海外から多くの投資が来ているという理由がある。
  - ✧ 峯畑 F：有事に際する政府からの保障については今のところ確認できていない。文献で確認するかぎり、インテル社はイスラエル北部（よくミサイルが飛んでくるところだが、IT 起業の集積地）に工場を置いており、戦争中でも業務を遂行したという点が本国から高く評価されたという点が指摘されている。半導体は拠点競争が激しい分野であり、その意味でイスラエルの拠点は維持されたといえるだろう。
- 趙研究員：イスラエルはスタートアップの国。買収が多いため、イスラエルの自国の産業が育たないという問題があるのではないか。
  - ✧ 峯畑：スタートアップの 9 割以上が買収される形でエグジットを迎える。イスラエルはベンチャー市場が盛り上がっているなか、イスラエルの中でどうや

って雇用を創出していくのかが次の課題という声もある。

- ✧ 趙研究員：スタートアップというのはイスラエル人にとっては M&A は当たり前で、国の規制がまったくないため、結局企業は買収されてどんどんと外に出ていってしまうということか。
- ✧ 峯畑：今後変化するかもしれない事例として、Mobileye が挙げられている。同社は依然として研究開発の拠点をイスラエルに残している。ただ、この事例は一般的ではない（大方の企業は出て行ってしまう）。

- 高研究員：この Mobileye について、科技部の副大臣が現地に赴き視察していたという背景がある。チップとシステムにおいて高い評価がなされていると聞いている。自動運転に関しては、一般的にはセンサーの技術を考えているが、Mobileye は画像処理という点でユニークであり、インテルに買収された理由もそうであろう。問題としては、大学に利益還元は少ないけれどもあると思うが、どの程度のものか。
  - ✧ 峯畑:Mobileye で言えば、上場する前の段階で、会社のシェア（株式）の一部を大学に譲渡することとなった。Mobileye が上場した際に、大学側は所持の株式を売却したため、その後の大きな利益を得ていない。あまり厳しく設定してしまうと、研究者が逃げてしまうという懸念が大学側にあった。
- 林上席 F:日本だと産業化して、国民の雇用、経済発展につなげるという考え方が、一般的だがそういう考えは、イスラエルでは望めないということであろう。スタートアップそのものが産業であり、この株式を次のリターンとしてみなしている。スタートアップ育成の制度の面では中国や日本にとって示唆があるかもしれないが、その後の段階ではあまり参考にならないかもしれない。2 ページ目の外国からの研究開発配分だが、中国の割合はどうか。
  - ✧ 峯畑:近年の急速な伸びの原因は中国にある。2016 年のイスラエル発のスタートアップ買収で最も存在感の大きかったのは中国であった。確実に言えることは、伸び率が一番大きいのは中国である。実際の買収額が米国と中国どちらが多いかについては確認する必要がある。
  - ✧ 趙研究員：中国は常州市（江蘇省）に特別センターを設け、イスラエルへの投資を行い、逆に優秀な研究員を中国に招聘するといった政策をとっている。
- 王研究員：Mobileye は個別の事例か、或いは、ほかにもいろいろな例があるのか。
  - ✧ 峯畑:イスラエルではバイ・ドール法がないため、特許法で大学と会社の間の知財に関して契約を結んでいる。特許法の扱いは大学ごとにかなり異なる。ヘブライ大学のワイツマン研究所は非常に厳格に研究者の知財について取り決めていると聞く。よって Mobileye は個別の事例といえるだろう。

2.3　セッション２　　英国のスタートアップ支援制度について

2.3.1　津田憂子（TSUDA　Yuko）　JST/CRDS

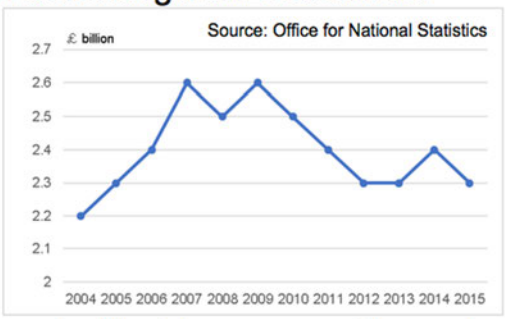
発表内容：

以下の資料に基づいて、説明がなされた。

UK Context

- Private venture capital (VC) investments have been increasing about 5 % per year. Main exit strategy for start-ups is M&A. Annual number of IPOs – only 5-10.
- Expenditure by HEFCE has been decreasing from 2009 onward.

Needs for creating a mechanism of universities earning by themselves with no expectation of getting additional financial support from the Government



- Private-sector-driven investment with risky prospect is made in universities

▶ IP Group provides big financial capital through the long-term partnership with UK universities

UK Context – funds and tax insentives

- The UK Government had funded start-up/entrepreneur through direct investment but shifted to create funds and leave investment management to fund managers who can work on a commercial basis.
- British Business Bank launched in 2013 provides start-ups at different stages by different type of supports.
- Tax reliefs through Enterprise Investment Scheme（EIS）or Venture Capital Trust（VCT）
- Seed Enterprise Investment Scheme（SEIS）in order to encourage investors to finance startups by providing tax breaks for backing projects they may otherwise view as too risky

Governmental Laws and Policies

Title	Year	Contents / recommendations
The Patents Act	1977 Last rev. in2017	- There is no law equivalent to the Bayh-Dole Act of the US - An invention publicly funded is taken to belong to an organization which an employer is working for
Our plan for growth: science and innovation	2014.12	- Support for start-ups - Enhances Venture capital schemes
Witty Review **"Encouraging a British invention revolution: Sir Andrew Witty's review of universities and growth"**	2013.10	- Emphasizes the need for universities and industries to collaborate - Long-term support through Higher Education Innovation Fund (HEIF), budget of which should be £ 250 million per year. - Activates cooperation between higher education institutes and local SMEs
Sainsbury Review **"The Race to the Top: A Review of Government's Science and Innovation Policies"**	2007.10	- Promotes technology transfer between SMEs and universities that have business mind, through HEIF. - Positive support by Regional Development Agencies (RDAs) to provide incubator facilities, high-tech clusters and services in response to business
UK Government White Paper "Realising our Potential: A Strategy for Science, Engineering and Technology"	1993	- Reflects a growing policy interest in innovation from the science base and promote universities' commercialization activities as well as their traditional functions of scholarship, research and teaching
The Mott Report	1969	- Gives an incentive to encourage universities to build science-based industries through academia-industry collaboration

Publicly funded programmes for start-ups

Small Business Research Initiative: SBRI

- Programme equivalent to SBIR in the US, launched in 2001 and operated by Innovate UK.
- Enables the public sector to tap into new ideas and technologies and seeds up their adoption and helps government departments connect with innovative businesses to solve the tough challenges facing the public sector.
- More than 2,200 SBRI contracts valued at over £270 million have been awarded since April 2009. They have generated new business opportunities for many companies and benefited more than 70 government organisations (as of June 2015).

Global Entrepreneur Programme

- Launched in 2003 and operated by Department for International Trade
- Helps overseas entrepreneurs and early stage technology businesses or start-ups that want to relocate their business to the UK.
- The programme has so far helped to 1) relocate 340 businesses to the UK, 2) create over 1000 jobs in the UK economy and 3) raise over £1 billion of private investment for companies

Japan Science and Technology Agency 科学技術振興機構 5

Knowledge exchange & research impact

Higher Education Innovation Fund: HEIF

- HEIF is operated by HEFCE since 2001. It supports and develops a broad range of knowledge-based interactions between universities and colleges and the wider world, which result in economic and social benefit to the UK.
- Allocations for HEIF are performance-based, and institutions are eligible to receive an allocation if they exceed a £250,000 allocation threshold related to their external income earnings and performance of the sector overall.

Round	Period	Allocation funding (million)	Allocated institutions
1	2001 - 2004	£77	89
2	2004 - 2005	£186	124
3	2006 - 2008	£238	133
4	2008 - 2010	£396	130
5	2011 – 2015	£601	99
6	2015 – 2016	£160	100
7	2016 – 2017	£160	97
8	2017 - 2018	£160	98

Research Excellence Framework: REF

- REF is the new system for assessing the quality of research in UK higher education institutions. The results of the 2014 REF were published on Dec 2014.
- A weighting of 20% for impact gives due recognition to the economic and social benefits of excellent research, that would provide researchers with incentives to encourage their activities to be delivered into the society.

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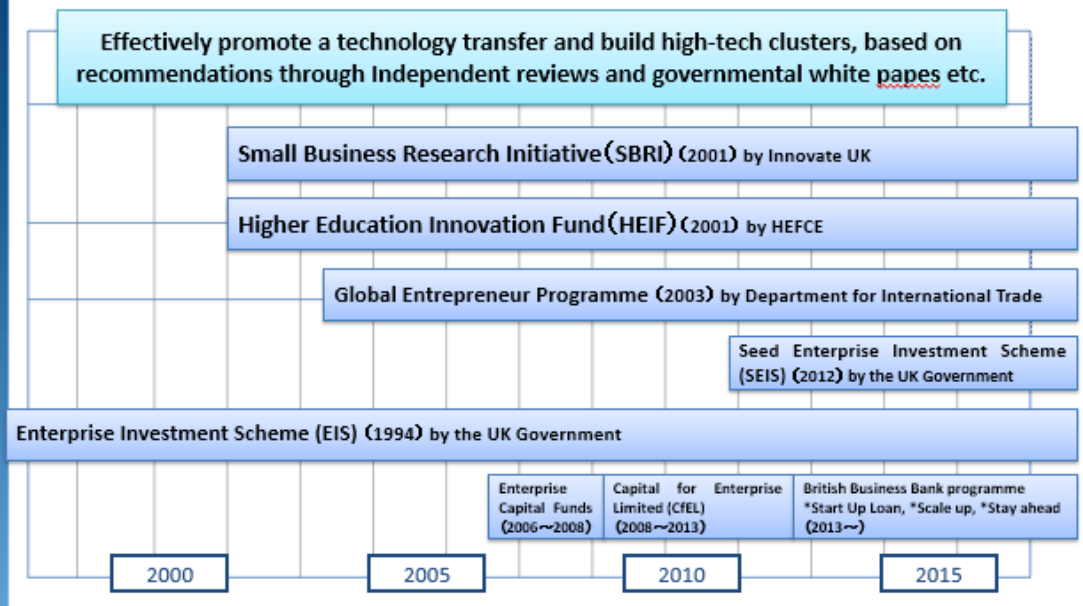
Policy overview map



Japan Science and Technology Agency 科学技術振興機構 7

SSTL

Name	Surrey Satellite Technology Ltd
Founded	1985
Headquarters	Guildford, Surrey
Key Founder	Professor Sir Martin Sweeting
Overview	Spin-off company of the University of Surrey, now majority-owned by Airbus Defense and Space, that builds and operates small satellites
Products	Satellites and related services: GMP-T (Low cost transfer variant geostationary) satellite platform
Record of Success	SSTL's space systems and payloads are at the heart of many successful missions, such as GIOVE-A, Galileo Full Operational Constellation, the Disaster Monitoring Constellation, RapidEye, DMC/Triplesat and FORMOSAT-7 Constellations and TechDemoSat-1
Achievements	• 40% share of global small satellite export market • 30 launches from 8 launch sites • 50 satellite missions launched

ARM

Name	ARM (Advanced RISC Machines) Holdings plc
Founded	1990
Headquarters	Cambridge, Silicon Valley, Shanghai
Key Founder	Jamie Urquhart, Mike Muller (Chief Technology Officer) et al.
Overview	• Joint venture between Acorn Computers, Apple Computer (now Apple Inc.) and VLSI Technology, now majority-owned by SoftBank Group • Arm only creates and licenses its technology as IP, rather than manufacturing and selling its own physical CPUs etc.
Products	• Microprocessor designs and graphics processing unit (GPU) designs - Design (RISC architectures) of Arm processors - Programming tool of RealView and Keil brands
Comprehensive income (2015)	• Revenue - £ 968.3 million • Net income - £ 339.7 million
Financial Instrument Exchange	• London Stock Exchange (1998) • NASDAQ (1998)

Circassia

Name	Circassia
Founded	2006
Headquarters	Oxford, Morrisville and Uppsala
Key Founder	Steve Harris (Chief Executive Officer)
Overview	Specialty pharmaceutical company focused on respiratory disease
Products	• Respiratory-related products: - NIOX® for use in asthma management - Tudorza® for the treatment of chronic obstructive pulmonary disease under collaboration with AstraZeneca
Comprehensive income (2016)	• Revenue - £ 23.1 million • Cost of sales - £ 8.0 million • Gross profit - £ 15.1 million
Financial Instrument Exchange	London Stock Exchange (2014)

Insights into UK start-ups in universities

Various schemes to support start-ups activities by university

- Each UK university has its own scheme for training and support programmes for entrepreneurs. Universities has a technology commercialisation office/company that is working in more professional and sophisticated manner to help staff and students commercialise their expertise and ideas.

Private-sector-driven investment with risky prospect / public support as a momentum

- Mutually beneficial partnership with industry sector.
- The important role of the Government is a catalyst for positive change for start-ups: Allocation of funding and setting-up of a supportive environment.

Different types of investments/funding/programmes for different purposes

- A number of funds to do investments at different stages.
- Relatively small size of funding schemes to support universities in developing their capacity to commercialize knowledge at a earlier stage.
- Various programmes to activate a start-up scene and promote positive atmosphere for entrepreneurship.

Japan Science and Technology Agency 科学技術振興機構 11

【質疑応答】

- 高副研究員:REF(研究者の評価)の社会的貢献 20%というのはどのような評価指標になっているか?
  - 津田:REF は 7 年に 1 回の評価プログラム。ピアレビューで量的な審査が行われる。研究者が自身の活動を報告し、それを REF 審査委員会(36 の部会)が審査するので、7 年に 1 回程度しかできない大規模なもの。
  - 林上席:REF は直接スタートアップの支援に関係がある評価システムではない。英国は研究への助成が運営費交付金と競争的資金がある。この運営費交付金も研究やイノベーションの成果を評価して反映しようという試みが REF。思いのほか、研究パフォーマンスの評価に差がついたので、社会貢献の評価=研究成果の社会応用が研究者のモチベーションとなっているのではないか、という津田 F の仮説だと認識。
- 趙研究員:米国では Small Business への支援があるが、英国でも中小企業を支援している省庁はあるのか。
  - 津田:ビジネスエネルギー産業戦略省がある。ここの下のエージェンシーがあるかもしれないが、現在知見がないので、調べることにする。ちなみに InnovateUK は同省のファンディングを担っている。
- 程主任:ARM は政府からの支援を受けていたのか?
  - 津田:ARM 誕生の土壌(環境整備)は政府が作ったものの、実質出資をしたのは民間企業であるので、これは民間型のスタートアップと認識している。
- 周:大学に技術移転部門があるというが、移転先は?
  - 津田:英国にこだわらず、世界中の企業が対象。
  - 林上席:競争力があるかどうかは別にして産業はあるので、英国内でも技術移転は起こっている。Made in UK という政策で製造業の回帰を図っているので、国内での技術移転を促進している。

2.3.2 高　　芳（GAO　Fang）　ISTIC

発表内容：

以下の資料に基づいて、説明がなされた。

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Reviewing the history of the world economic development, there're generally three waves of innovation and entrepreneurship.

✓The first industrial revolution

✓the revived commercial economy after World Ward II pushed the springing up of entrepreneurship and innovation activities

✓1980s, economic globalization and rapid growth of information technology

In 2008, the international financial crisis made it more necessary for the world economy to shake off it by innovation. Major countries are adjusting their strategic directions, issuing innovation strategies or action plans, with a high frequency and intensity unprecedented. It can thus be seen as the fourth global wave of innovation and entrepreneurship.

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- Speed and volume--up to **80** companies founded every hour on average in 2016; up to 70 companies founded every hour on average in 2015. Newly registered companies amounted to 342,927 during the first half of 2016, and the newly founded companies during the whole year of 2015 amounted to 608,110.
- Global Entrepreneurship—**No.8**, US No.1, Switzerland No.2, Canada No.3, Sweden No.4, Denmark No.5, Iceland No.6 and Australia No.7.
- Proportion of innovative enterprises(2015-2016)—**36%**, Canada 36.10%, in, US 36%, Germany 34.20% and China 25.80%.

	Sweden	Finland	The US	France	The UK	Germany	South Korea	Chinese mainland	Russia	India
motivational index	11.8	9.7	6.4	6.3	3.8	2.7	2.7	1.5	1.3	1.2
Ranking	1	2	3	4	16	26	26	42	47	51

3

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Main Contents

- Background and vision of promoting innovative entrepreneurship
- Policy and measures
- Case and characteristic analysis

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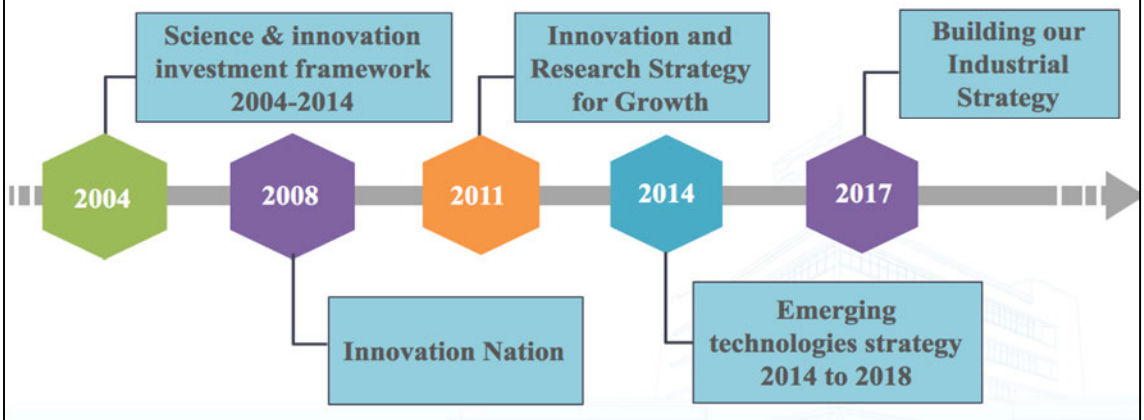

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Main Contents
Background and vision of promoting innovative entrepreneurship
Policy and measures
Case and characteristic analysis
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Special Plan for Innovative Entrepreneurship and small and medium enterprises
SBRI
Promoting the innovation of small and medium enterprises by increasing R&D funding which from the government procurement
Giving him a fish
Growth Accelerator
Providing customized business guidance and development strategies for small and medium enterprises, with special instructors appointed to help enterprises achieve the goal of rapid growth
Teaching him to fish
Innovation Vouchers Scheme
A type of "innovation currency" which is designed and issued to tackle the problems that small and medium enterprises have insufficient economic strength and innovation resources and universities and research institutions have no motivation to serve small and medium enterprises.
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Financial and taxation support

- Providing financial support or R&D subsidies
- Tax credit

The amount of first-round financing in London exceeded the average level of the Europe by 17%, and Round A financing achieved 26% higher.

Plan	Purpose
Enterprise Investment Scheme, EIS	Encouraging investors to purchase stocks
Seed Enterprise Investment Scheme, SEIS	The supplement of EIS, which is mainly to help startups and small enterprises to meet the financing gap. And it's oriented to enterprises much smaller and more primary than EIS, thus with relatively higher risks. Therefore, the proportion tax credit tend to be higher.
Venture Capital Trust Scheme, VCT	Encouraging social capital invested in high-risk unlisted small enterprises (startups), and promoting the development of fund management companies and individual investors to enter the venture capital market.

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Financial and taxation support

Type	Plan	Purpose
Preferential loan	Start-up Loans	Providing loan for young entrepreneurs between 18 and 30
	Business Finance Partnership—For Small Enterprises	Non-bank financial specially targeted at small enterprises
	Enterprise Finance Guarantee, EFG	The government serves as guarantee for small and medium enterprises to loan from 44 authorized institutions including banks and community development financial institutions.
	The National Loan Guarantee Scheme, NLGS	The government provides guarantee for small enterprises for bank loans.
Investment Funds	Business Angel Co-Investment Fund, Cofund	The government and the business circle jointly invest to support business angels to invest in early-stage small and medium enterprises of high risks and potentials
	Enterprise Capital Fund Programme, ECF	The government and individuals jointly support financing of innovative enterprises at their startup stage.
	UK Innovation Investment Fund, UKIIF	Investing in sci-tech enterprises of major strategic fields like digital technology, life science, clean technologies and advanced manufacturing.

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Various platforms to provide supports in creativity and infrastructures

- Science Park, meeting the needs of scholars having the intention of entrepreneurship, boosting the establishment and development of research-intensive enterprises, and enhancing the possibility and profitability of commercial development of university research findings.
  - ✓ The geographical location is close to universities and research institutions, as well as large research infrastructures
  - ✓ The function of incubator to create a favorable entrepreneurship environment and provide services for startups
  - ✓ The sources of funds are diverse, including the government, public sectors, universities, scientific research institutions and private sectors
  - ✓ Openness and internationality, to offer all entrepreneurs and enterprises in the park equal policies, attracting a lot of foreign enterprises.

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Various platforms to provide supports in creativity and infrastructures

- Catapults, promoting technological innovation and commercialization, enhancing the competitiveness of technologies and industries in major fields, and foster future strategic industries.
  - ✓ Research infrastructures, as startups cannot afford the cost of investment
  - ✓ Enhancing the participation of startups and small and medium enterprises, promoting the scale-up, speeding up and range-up of fundamental researches and commercialization of applied researches
  - ✓ Establishing partnerships with universities and enterprises

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Various platforms to provide supports in creativity and infrastructures

- Catapults, tackling the complex common problems faced by enterprises, fulfill opening and sharing of research infrastructures, and pave the way of product development and application for startups.

A freckle removing apparatus developed by the startup Polyphotonix conducted three stages of clinic experiments with the help of CPI, a sub-center of High Value Manufacturing Catapult. Without CPI, it's impossible for Polyphotonix to invest infrastructures in commercialization of its findings solely by itself.

The Connect Digital Economy Catapults unified and integrated the data. For instance, the center cooperated with government and public sector of Manchester in implementing the project Open Data Synchronization to help with unifying data format and facilitate developers' use of data. So far at least two startups have utilized the project data to develop commercialized products.

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Various platforms to provide supports in creativity and infrastructures

- Catapults, taking part in joint development and demonstrative validation of major projects to ensure rapid and steady growth of enterprises

The Future Cities Catapults implemented the project Cities Unlock to integrate Microsoft, Guide Dog for the Bland, Network Rail and Transport for London, as well as the two startups MiBeacon and Mubaloo to jointly demonstrate the technology of navigating for the blind and for those of weak sight.

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Maker Space provide professional services for startups

- There're about 100 Makers' communities of a certain scale around the nation, and UK Maker Space Foundation, as a nonprofit organization, was founded in Jan. 2009 to boost the building of new Maker Spaces in the UK and the development of existing Maker Spaces.
  - ✓They're run by companies, communities or charity organizations.
  - ✓Strict member management system and flexible and open operational environment
  - ✓The government offers a large amount of subsidies for projects that integrate digital technologies with traditional industries.

The Makespace is located in Cambridge, opened to the public in Mar. 2013 and has attracted more than 200 official members so far. Makespace gathered innovators, consultants, enterprises and educational organizations to ensure their mutual benefits.

The Access Space is situated in Sheffield of South Yorkshire, founded in 2000. It's a free multi-media lab running for the longest in the UK. Those interested in art, design, computer, music and electronics may gather there to share their skills and develop unique and innovative commercial and technological projects.

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Simplifying procedures to reduce the entrepreneurial cost

- **No.3,** the lowest entrepreneurial costs among countries ; **No.8,** the most convenient country for running enterprises.
  - ✓Simplifying procedures of registration, reducing the time for examination and approval, cutting the cost of registration, and building up online registration platforms; to register a company on a platform needs to cost around 15 minutes and 20 pounds only, without the need of actually paying register fund.
  - ✓One-stop online service platform to integrate more than 700 fund plans available to small and medium enterprises. By browsing the websites, enterprises can set conditions in accordance with their own situations to find out matching fund plans for further information and application for subsidies.

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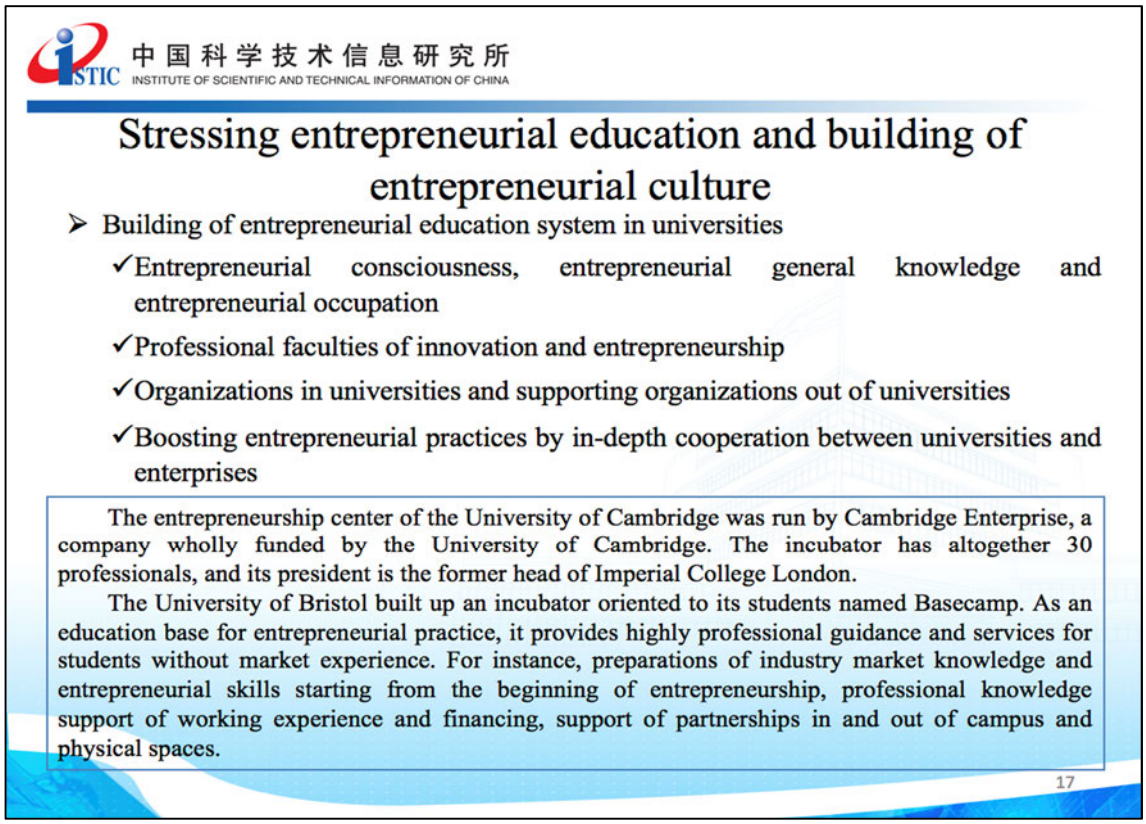
Attracting overseas Makers for innovation and entrepreneurship in the UK
➢ Encouraging overseas Makers for entrepreneurship in the UK
✓Global Entrepreneur Programme to make overseas entrepreneurs familiar with the entrepreneurial environment in the UK.
✓The incubators and accelerators supported by the government provide similar services for international Makers, such as echStars, Xoygen, Seedcamp, Wayra and Collider.
✓Visa for graduate entrepreneurs
16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Stressing entrepreneurial education and building of entrepreneurial culture
➢ Building of entrepreneurial education system in universities
✓Entrepreneurial consciousness, entrepreneurial general knowledge and entrepreneurial occupation
✓Professional faculties of innovation and entrepreneurship
✓Organizations in universities and supporting organizations out of universities
✓Boosting entrepreneurial practices by in-depth cooperation between universities and enterprises
The entrepreneurship center of the University of Cambridge was run by Cambridge Enterprise, a company wholly funded by the University of Cambridge. The incubator has altogether 30 professionals, and its president is the former head of Imperial College London.
The University of Bristol built up an incubator oriented to its students named Basecamp. As an education base for entrepreneurial practice, it provides highly professional guidance and services for students without market experience. For instance, preparations of industry market knowledge and entrepreneurial skills starting from the beginning of entrepreneurship, professional knowledge support of working experience and financing, support of partnerships in and out of campus and physical spaces.
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Stressing entrepreneurial education and building of entrepreneurial culture

- Cultivating creativity of teenagers
  - ✓Setting up support projects specially oriented to teenagers
- Creating an environment of innovation and entrepreneurship in the whole society
  - ✓Dragons Den: holding entrepreneurial competition in the form of entertainment program, so that teams joining in the program will fast build ups markets and client base to enlarge its impact.

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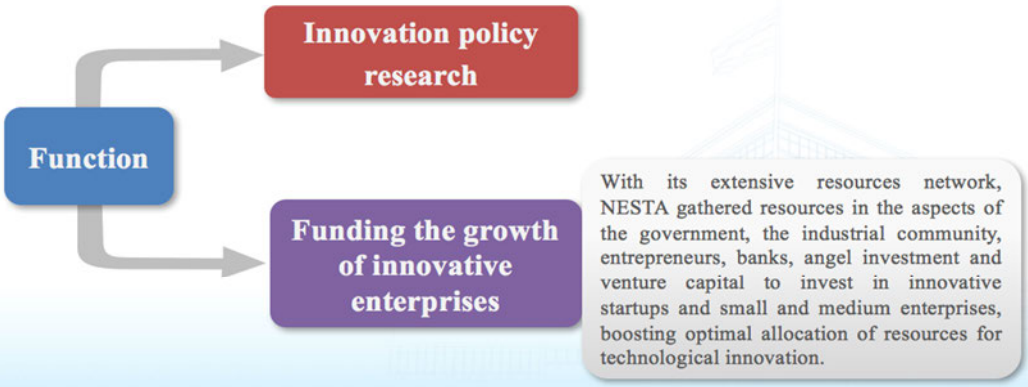
Encouraging and supporting non-government institutions to provide services for innovative entrepreneurship

National Endowment for Science, Technology and the Arts, NESTA



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Main Contents

- Background and vision of promoting innovative entrepreneurship
- Policy and measures
- Case and characteristic analysis

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East London Tech City

- Entrepreneur Visa
- Startup Loan Scheme
- Patent Box Scheme
- Open Database Resources
- Modified IPO Rules

- Future Fifty (aimed to support the projects of 50 fastest growing technology innovation enterprises listed among UK B Round or above in the respects of policy, platform and fund)
- Digital Business Academy (cooperating with tertiary institutions to provide free online projects of entrepreneurship training courses)
- Tech Nation (UK Sci-tech Industry Research Project)
- R&D Tax Credit
- Opening purchasing budget to small and medium companies

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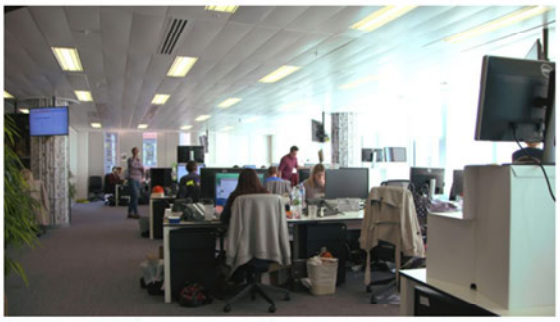
East London Tech City

Busuu founder Bernhard Niesner



Busuu office in London

Busuu, a language learning software manufacturer moved from Madrid to East London Tech City

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A large number of AI start-ups emerged

- Compared with the period between 2011 and 2013, from 2014 to 2016, the number of AI companies built up in the UK doubled.
- Over 60% UK-based AI companies were founded during the last 36 months.
- Almost every week there would be a new AI company established in the UK.

Deepmind	⇨	Google
Autonomy	⇨	HP
True Knowledge	⇨	Amazon
Vocal IQ	⇨	Apple
SwiftKey	⇨	Microsoft
MagicPony	⇨	Twitter
Graphcore	⇨	Samsung

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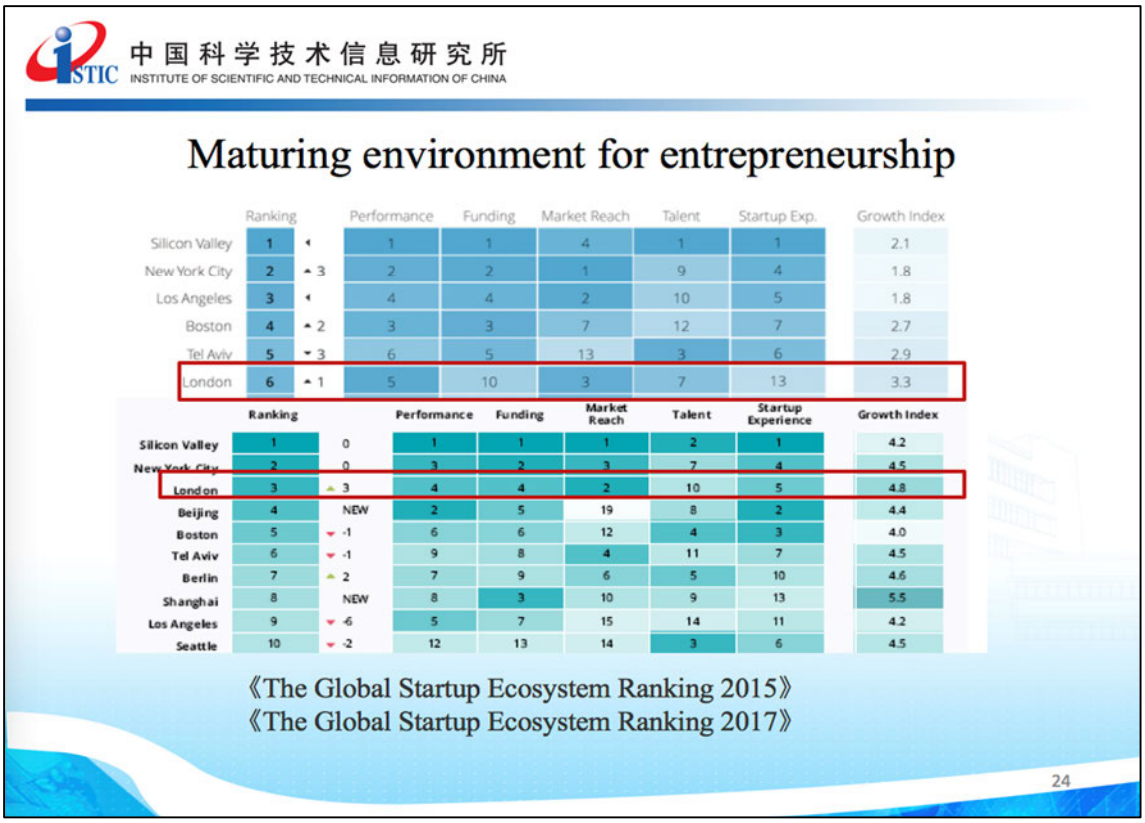
中国科学技术信息研究所
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Maturing environment for entrepreneurship
Ranking Performance Funding Market Reach Talent Startup Exp. Growth Index
Silicon Valley 1 1 1 4 1 1 2.1
New York City 2 ▲3 2 2 1 9 4 1.8
Los Angeles 3 4 4 2 10 5 1.8
Boston 4 ▲2 3 3 7 12 7 2.7
Tel Aviv 5 ▼3 6 5 13 3 6 2.9
London 6 ▲1 5 10 3 7 13 3.3
Ranking Performance Funding Market Reach Talent Startup Experience Growth Index
Silicon Valley 1 0 1 1 1 2 1 4.2
New York City 2 0 3 2 3 7 4 4.5
London 3 ▲3 4 4 2 10 5 4.8
Beijing 4 NEW 2 5 19 8 2 4.4
Boston 5 ▼-1 6 6 12 4 3 4.0
Tel Aviv 6 ▼-1 9 8 4 11 7 4.5
Berlin 7 ▲2 7 9 6 5 10 4.6
Shanghai 8 NEW 8 3 10 9 13 5.5
Los Angeles 9 ▼-6 5 7 15 14 11 4.2
Seattle 10 ▼-2 12 13 14 3 6 4.5
《The Global Startup Ecosystem Ranking 2015》
《The Global Startup Ecosystem Ranking 2017》
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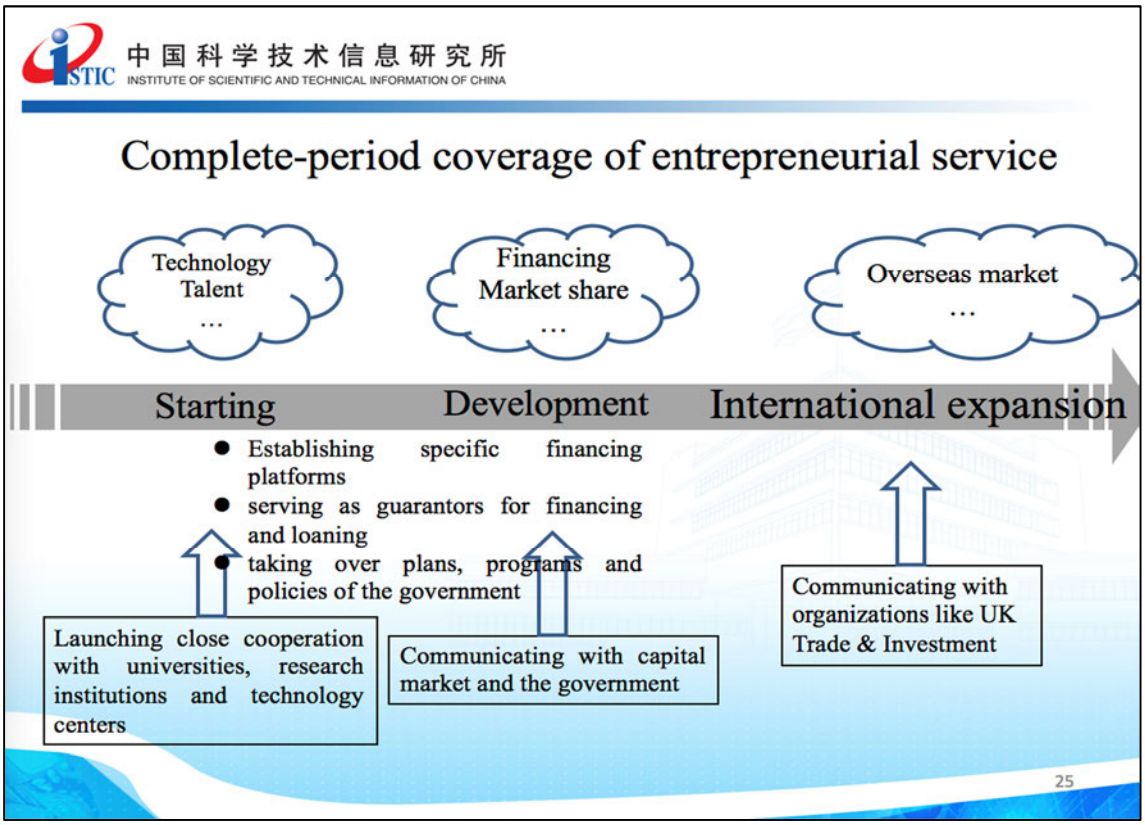
中国科学技术信息研究所
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Complete-period coverage of entrepreneurial service
Technology
Talent
…
Financing
Market share
…
Overseas market
…
Starting
Development
International expansion
Establishing specific financing platforms
serving as guarantors for financing and loaning
taking over plans, programs and policies of the government
Launching close cooperation with universities, research institutions and technology centers
Communicating with capital market and the government
Communicating with organizations like UK Trade & Investment
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More and more outstanding traits of innovation found in enterprises

- The proportion of innovative enterprises rose from 45% between 2010 and 2012 to 53% between 2012 and 2014
- 61% large enterprises (with employees outnumbering 250) and 53% small and medium enterprises (with employees counting between 10 to 250) are innovative enterprises;
- The proportion of "sci-tech innovation" enterprises rose from 22% to 24%;
  - ✓The number of enterprises launching "product innovation" rose from 18% to 19%.
  - ✓The number of enterprises launching "process innovation" rose from 10% to 13%.

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Coexistence of risks and opportunities

- Despite limited support of financial funds, the policy of tax reduction and exemption makes it easier for companies to obtain initial capitals of 100,000 to 200,000 pounds, but there'll be still difficulties in raising follow-up funds after its establishment.
- More developed overseas competitors with greater easiness in financing may raise the competitive pressure on innovative entrepreneurship in the UKs.
- The proportion of technology and product innovations is yet to be raised.
- The impact of Brexit is not yet clear, but it's sensitive to economic risks.

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【質疑応答】

- 津田： AI の研究開発において英国にユニークな動向があるというのがスタートアップ調査のきっかけだったとの説明。高副研究員の分析を聞かせて欲しい。
  - ✧ 高副研究員：世界 AI 研究トップ 10 で、英国の大学から4校がランクインしている。英国の大学の研究者の多くが研究室から起業して世界に影響を与えている。特に DeepMind（オックスフォード大）のインパクトは大きい。
  - ✧ 高副研究員：すでにアルファ碁の第 2 世代が出現しているが、これを支えているのが数学の基礎研究。AI では、処理能力というハードの要素とアルゴリズムの構築というソフト要素が発展を支えているが、イギリスでは、数学の研究レベルが高くアルゴリズムを構築できる人材が多い。
- ➢ 津田：大学の知財がなかなか産業化されない、という問題を英国も抱えている。政府によるアーリーステージの支援制度が充実しているという説明だったが、産業化が上手くいかないことの分析は？
  - ✧ 高副研究員：英国は一人当たりの特許数は米日独についで 4 位だが、産業への橋渡しが盛んではない。700 を超えるスタートアップ支援制度がありながら、まだまだ試行錯誤中で上手くいっていないという理解。
- ➢ 津田：カタパルトプログラムでは高付加価値製造業から出ているスタートアップを成功例としてあげている。デジタルや未来都市など起業と親和性の高い分野ではスタートアップが出ているが、カタパルトプログラム全体として成功しているとするのは少し乱暴ではないか。カタパルトプログラムの第一目標は中小企業の参加であるので、スタートアップはあくまで副産物では？
  - ✧ 高副研究員：コメントの通り、スタートアップに向いたところと向かないカタパルト拠点がある。
- ➢ 林上席：調査手法を聞かせて欲しい。
  - ✧ 高副研究員：先行研究、文献調査、以前駐在した人物への聞き取り調査。

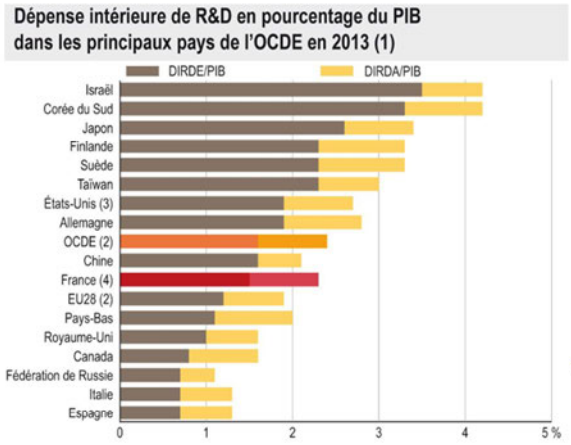
2.4 セッション３　EU、フランスのスタートアップ支援制度について

2.4.1 八木岡しおり（YAGIOKA　Shiori）　JST/CRDS

発表内容：

以下の資料に基づいて、説明がなされた。

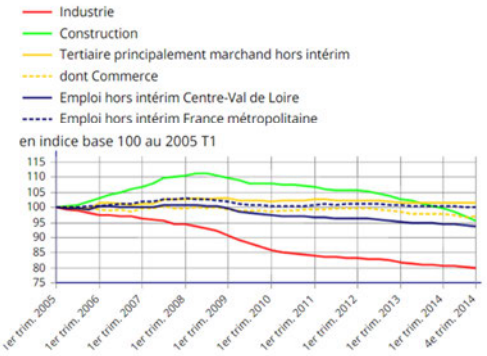
1 Status of France



Expense of RD/GDP: Sources : MENESR/OECD

DIRDE : Private company R&D expense/GDP

DIRDA : Public institutes R&D/GDP



Trend of employee of companies in the region
Centre Val de Loire 2005-2014 Sources : INSEE

Japan Science and Technology Agency 2

2 Related Policy

Name of Law	When	Outline
Allegre Law	1999	French version of the Bayh-Dole Act. This law permitted to the public institutes to transfer their results of research of technology to private industries, aiming the economic growth and improvement of the employment. Also this law allowed to the researcher of the public institutes to start up their company, keeping their initial status as public servants.
＜Programm of Investment for Future（PIA： Programme d'investissements d'avenir)	2009	Future investment plan initiated by the president SARKOZY. Principal covered area are : Higher education and research, Industries and SMI, sustainable development, digital, bio, life with mid-long term. Started in 2010 for PIA1 and PIA2 in 2014 for SATT and IDEX. Today they are working with PIA3。Total amount will be around 47B Euro.

Japan Science and Technology Agency 3

3-1 Implementation of SATT

Name of Organization	Societe d'Acceleration du Transfert de Technologies
Ministry in charge	Private organization（Participation in capital from the nation, region, local cities and public institutes.)
Mode of support from the nation	Subvemtion 856MEuro from ＜PIA 2＞ will be introduced by threes shots in 10 years.
Starting Year	2014
Program contents	1.Selecton & elevation of seeds（maturation) 2.Support of Legal register of company and building benefitable business model（Incubation)
Purpose	Speeding up of elevation of seeds from public reserach institutes.
Caracteristic	14 companies in nationwide, in all regions, w/o Normandy. Focus on selecting/finding seeds from public research institutes by speeding up. Licensing and Seed founding. Challenge : To reach break-even in break even point in 10 years.

Source: SATTWeb Page
https://www.satt.fr/en/what-are-satt/

Japar 機構 4

3-2 Education program

Name of program	PEPITE
Ministry in charge	Ministry of Higher education and research and innovation（MESRI）
Mode of support	Subvention（2.9M Euro 2014-2016) – ＜PIA2＞
Starting Year	2014
Program contents	1. 29 places in the nationwide. Implementation of the students clusters for the innovation & transfer technology and entrepreneur 2. PEPITE concours
Characteristic	1. Offer work space, mentors. Support by SNEE program in terms of social security etc. (Inspired by the support for high level athlete.) 2. PEPITE awards. Total amount 410K Euro. Held together with I LAB national concours (since 1999) organized by MESRI (418M Euro)

Japan Science and Technology Agency 国立研究開発法人 科学技術振興機構 5

3-3 Ministry of Economy

Name of program	French Tech
Ministry in charge	Business France Ministry of Economy, Ministry of Foreign Affaires, Ministry of the territory
Mode of support	200Meuro・15Meuro
Starting Year	2015
Program contents	1. Seed founding, Investment on accelerators 2. One brand mark – French Tech 3. French tech tickets, label, passport 3. Building entrepreneurs network
Purpose	Offer the optimized frame for the growth of the start uppers.
Characteristic	Investment weighting on the lower part of the river. Reduction time and simplification for administration procedures. PIA2

3-4 Fiscal advantage

JEI＜New innovative company＞(started in 2004年)

Fiscal advantage applied for the companies aged less than 8 years. (Employees less than 250 pers.)

Company spending 15% of expense on R&D

- ✓ Reduction of tax (No corporation tax for first benefitable year 50% reduction for 2nd year.)
  No local tax (7 years) (ceiling 200Keuro)
- ✓ Exemption for social security for the employees

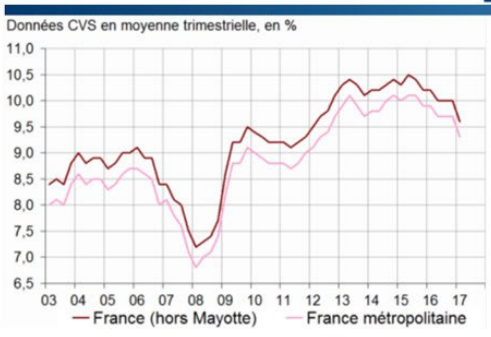
CIR＜研究費税額控除＞

- ✓ Exemption up to 33% of expense for the R&D
- ✓ All companies. Incase of not favorable balance, the company will receive the corresponding refund.

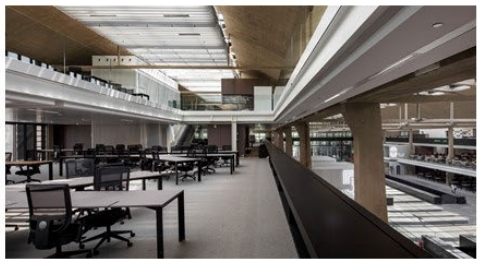
4 Example 「HProbe」

Name of company	HProbe
Foundation	2016
HQ	Grenoble
President	Laurent LEBRUN
Technical advisor	JP NOZIERES
Outline	Manufacture & sales of 3D magnetic field Test Prober Invented a speedy test equipment ideal for MRAM production improving its throughput. MRAM is one of key solutions for low power consumption when the mobiles tools will be integrated in the IoT.
Mother organization	Spintec which is a spin-out company of CNRS.
Characteristics	Seeds inventor is Mr. NOZIERS who leads Spintec and he joins Hprobe as technical advisor (Allegre Law 25-2) Mr. LEBRUN who experienced as CEO runs the company

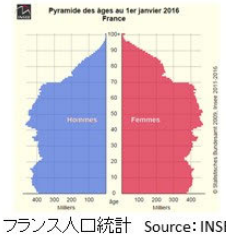
5 French Start-up today



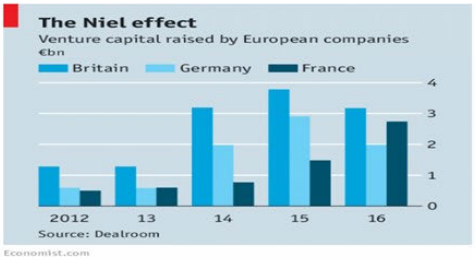
フランス失業率の推移 Source: INSEE



	En % de la population active	
	2016T4	2017T1 (p)
Personnes au chômage	9,7	9,3
15-24 ans	23,3	21,8
25-49 ans	9,1	8,7
50 ans ou plus	6,6	6,6



フランス人口統計 Source: INSEE



Source: dealroom

【質疑応答】

- 趙研究員:INSEE の組織概要、失業率に含まれる年齢層について
  - ✧ 八木岡 F:INSEE は Institut national de la statistique et des études économiques の略称。フランスの大学は 4 年生と決まっているわけではない。起業する年齢に関しては在学中の起業もある。
  - ✧ 林上席:在学中の学生はこの失業の中には含まれないのではないか。
- 趙研究員:フランスでは、コンテストを主催する組織や、創業支援局といったものがあると聞いたがどうか。
  - ✧ 八木岡 F:とくに公的な機関のシーズにおいてのサポートは SATT に一元化されている。移転する機関は逆に数多く存在する。支援機関も多いため、起業するスタートアップが迷う状況にあるといわれている。
- 高研究員:質問は二つ。一つは、最後のスライドにあるコワーキングスペースについてだが、この規模のスペースのものは他にもあるのか。もう一つは、社会保障制度を充実させることにより、学生のただ乗りのような状況(名目上起業しつつ優遇政策を悪用)は発生しないのか。
  - ✧ 八木岡 F:一つ目の質問に対して。この規模では初めての大きさで、大々的に宣伝された。ただ、小規模のものはフランス中にインキュベーション施設としてすでに存在する。
  - ✧ 八木岡 F:二つ目の質問に対して。きちんと口頭試問(面接)を行い、選抜で落とすことがなされているため、ただ乗り防止となっている。
- 林上席:スライドの 2 ページ目。右のグラフは衝撃的な内容と思われる。赤線(industry)が 10 年でかなり下がり、建設が現状維持という状況が本当であれば、大失業率が起こっているはず。この状況と最後のスライドの失業率が全く合っていない。赤線がなぜこれほど下がっているのか。
  - ✧ 八木岡 F:研究開発費が製造業とリンクする部分が大きい。そのトレンドを顕著に示すものとして右のグラフを上げた。赤線の下がりの受け皿として、第三次産業が保たれているのではないかと思料する。
  - ✧ 林上席:グラフについては注意して引用したほうがよい。

2.4.2 烏雲其其格（WUYUNQIQIGE） ISTIC

発表内容：

以下の資料に基づいて、説明がなされた。

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Contents

I. Main problems existing in business startup
II. EU's entrepreneurship policy and improvement direction
III. Erasmus young entrepreneur programme

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I. Main Problems existing in Business Startup

Policy documents related to EU's entrepreneurship

June 2000, A Charter to Support Europe's Small Firm
Sep. 2013, Entrepreneurship 2020 Action Plan
Mar. 2013, Startup Europe initiative
Oct. 2015, Single Market Strategy
May 2015, Digital Single Market Strategy
Sep. 2015, Capital Market Union
Nov.2016, Europe's Next Leaders: The Start-up and Scale-up Initiative

financing channels

FP7: Competitiveness and Innovation Framework Programme (CIP)
H2020: Competitiveness of Middle and Small-Sized Enterprises (COSME)
European Structural and Investments Funds (ESIF)
European Fund for Strategic Investments (EFSI)

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I. Main Problems existing in Business Startup

In Mar. 2016, the EU organized public consultation against the business plan for the purpose of improving the entrepreneurship environment in EU, and found and summarized the three main barriers that the European enterprises would be confronted with during their start-up and growth.

- **Firstly**, too many supervision and administration requirements waste too much energy of start-ups that seek growth during their operation
- **Secondly**, they have few opportunities to build relationship with appropriate business partners, markets and technical personnel due to the inadequate ecology to start up business.
- **Thirdly**, the financing problem is still one of the main difficulties of enterprises during their growth.

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II. EU's entrepreneurship policy and improvement direction

To eliminate regulatory and administrative barriers

(1)To solve the problem of heavy regulatory burden

- In 2007, the EU proposed that 25% of the unnecessary and over-elaborate formalities against SMEs development should have been eased by 2012.
- In 2011, the EU has stipulated that each member state shall limit the procedures to obtain permissions and other necessary authorizations for starting up SMEs within a month.
- The EC plans to implement the initiatives for a **Single Digital Gateway**" in 2017.

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(2) To simplify the tax policy

In the investigation of 2016, **still 58% of interviewees mentioned that the cost of tax compliance was too high; while the interviewees from SMEs said that their expense on tax compliance accounted for about 30% of taxes.** Therefore, the European Commission will carry out a series of work for tax simplification.

- It is intend to approve a Common Consolidated Corporate Tax Base to support the small enterprises opening up cross-border business and the innovative enterprises.
- To simplify the EU VAT system, a VAT action plan was proposed in April 2016 to set up the single VAT zone.
- Publish the best practice guide for tax system of venture capital investment for EU member states.

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(3) To revise the company law and insolvency law

- In 2010, the EU requested each member state to review and revise the *Insolvency Law*.
- At present, the EC has passed a legislative document in terms of the company and insolvency law: to make sure that all member states have established the early warning mechanism and reforming frameworks; to set up the mechanism of providing a "Second chance" for those of faith but failing to start up business; and to enhance the efficiency of corporation reorganization, bankruptcy and liquidation.
- In 2017, the EU also proposes to revise the *Company Law* to promote the application of digital technique in general commercial affairs management. The EU's e-Government Action Plan will promote a large-scale pilot program that implements the principle of "once only " of same documents for enterprises in the EU.

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II. EU's entrepreneurship policy and improvement direction
To create opportunities
(1) To enhance cooperation and build ecosystem
➢The Startup Europe Initiative aims to build the relationship among various ecosystems, to connect local ecosystem with international market and to provide information to start-ups by means of one-stop services. The facilitators: SE Accelerators Assembly SE Universities network .
➢The European Institute of Innovation and Technology （EIT） is helping on a number of fronts: entrepreneurship skills, mentoring, and start-up accelerators .
➢Further actions: In 2017will reinforce Startup Europe to take a wider scope beyond the ICT and web start-up sector. Extend the Erasmus for Young Entrepreneurs programme to incubators and entrepreneurs in international markets.
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(2) To enlarge government procurement opportunities
➢In the first FP7 innovation procurement actions SMEs won73% of the contracts. In 2014, the EU adopted a new public procurement framework providing opportunities for start-ups to access public procurement.
➢In 2017, the European Commission will take further actions including setting up innovation brokers so that to establish the relationship between buyers and innovative enterprises; and utilizing the European Innovation Partnership (EIP) action plan to guide the public procurement of innovative products.
(3) To upgrade skills
➢Based on the 'New Skills Agenda for Europe' , the Commission is working to improve skills quality and their relevance to the job market. The Commission has also set up European Entrepreneurship Framework and Digital Competence Framework to improve the teaching skills.
➢In 2016, the European Commission proposed to reform the EU Blue Card system so as to attract high-quality talents to start up business in Europe.
➢Further Actions: extending the activities of the EIT to promote the training of entrepreneurship skills, management skills and innovative skills.
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II. EU's entrepreneurship policy and improvement direction

To improve financing channels

- The existing financing tools such as the ESIF, EFSI, COSME have played a certain role.
- Since 2010, the European Employment and Social Innovation (EaSI) has granted 1 billion Euros of small loans to support 100,000 micro-enterprises.
- The Capital Market Union launched in 2015 also comes into play.
- The EC has proposed to increase the budget for European Fund for Strategic Investments (EFSI) and Middle and Small-Sized Enterprises (COSME) to transfer more funds for SMEs at the start-up and growth stages.

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The EU is putting forward the comprehensive package of measures for venture capital financing of starting up business:

- The pan-European Venture Capital Fund of Funds is established to solve the problems of small-scale and fragmented European venture capital funds, to attract more private capital to flow into the field of venture capital investment.
- Revise the control regulations of the European Venture Capital Fund (EuVECA) and of the European Social Entrepreneurship Funds (EuSEF) to provide cross-border supports to SMEs.
- Build the pan-European platform to share the best practice of member states in crowd funding.

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III. Erasmus Young Entrepreneur (EYE) programme

The EYE programme initiated in 2009 is mainly to provide opportunities to new or aspiring entrepreneurs (NEs) , to help them to get practical guidance from experienced entrepreneurs (HEs) and to establish and operate SMEs in Europe, and to facilitate the experience exchange between NEs and those from other participating countries of the EU.

During 2009-2016, the EYE programme had provided 6,274 European NEs with the opportunity to receive HEs guidance overseas and facilitated 4,107 exchanges. Within 8 years of its operation, the number of entrepreneurs participated has grown steadily, which produced a positive influence on European economy.

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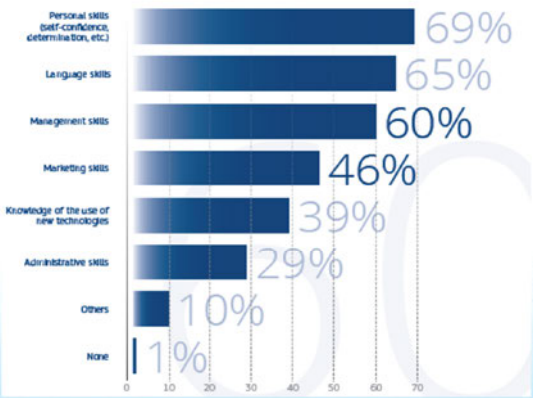
Strengthening the entrepreneurship attitude and improving the entrepreneurship skills

skills acquired by new entrepreneurs



- After participation in the EYE programme, 78% of the entrepreneurs claim that EYE contributes to their ambitions to start up business, and more than 1/3 of entrepreneurs who are setting up their business think that EYE provides them with direct assistance.
- 60% of the new entrepreneurs adjust their management skills;
- 46% of the new entrepreneurs obtain the marketing skills.

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Bringing the economic benefit

- Data proves that, the new enterprises established by EYE beneficiary have a higher survival rate than the average survival rate of EU SMEs; 87% of new entrepreneurs are still in business after their exchange, the average three year survival rate of companies in Europe stand at 57% . Meanwhile, 60% of the experienced entrepreneurs claim that they have obtained fresh ideas or techniques and some of which materialized in new products or services.

- 61% of the new entrepreneurs and 54% of the experienced entrepreneurs survived increased their turnover after participation in the EYE programme. In addition, 30% of the former and 56% of the latter said that they have recruited new employees.
- 36% of the EYE programme participants who aspire to start up business have established their own business.

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Expanding the market

- 90% of the new entrepreneurs obtain new market knowledge in exchange, 80% of them have established a wide international relationship and expanded their commercial network, and some even extended their business network to other countries.
- By means of building a cooperative relationship with foreign partners, about 65% of experienced entrepreneurs expand their business to other countries through exchange activity (higher than the average of EU), and 1/4 of them extend their business to the country where their exchange partners are located.

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【質疑応答】

- 津田 F：EU の政策と参加国の政策は連動しているか？
  - ✧ 烏雲研究員：EU としてはいろいろな政策があり、各国と連動するのは難しい。
- 津田 F：参加国のスタートアップの取り組みのレベルにばらつきがあるが、どうしているのか？
  - ✧ 烏雲研究員：大きな差があるので、統一することは困難。一番の課題は、問題は国として取り組みたくないという国があるということ。
- 林上席：EU の場合は 3 カ国が一緒にならないと資金がもらえないなどの決まりがあるが、そのあたりはどうなっているのか？
  - ✧ 烏雲研究員：研究費の場合は多国籍でないと資金が出ないが、スタートアップの資金に関してはどうしているかわからない。
- 林上席：ヨーロピアン・ストラクチャー・ファンドは、遅れている国を助けるものではないか。
  - ✧ 烏雲研究員：ハンガリーでは、EU から受給した資金を SU に分散する。
- 澤田 F：ドイツの例を挙げると、EIT ハブでは、ヨーロッパ各地の人が来て起業しているが、ここで起業した人に対しては資金が支払われる。
  - ✧ 烏雲研究員：ただ、これらの資金は研究資金なのか創業資金なのかは不明である。
- 林上席：エラスムスのプログラムも同様ではないか。EU 各国が SU に出資する割合は、研究費の割合と同様か。
  - ✧ 烏雲研究員：そのあたりは、もう少し調べてみたい。
  - ✧ 津田 F：EU の基金をポーランドが一番もらっている。そのお金を国内の SU 支援のために使用する。

セッション４　　ドイツ、韓国のスタートアップ支援制度について

2.4.3 澤田朋子（SAWADA　Tomoko）　JST/CRDS

発表内容：

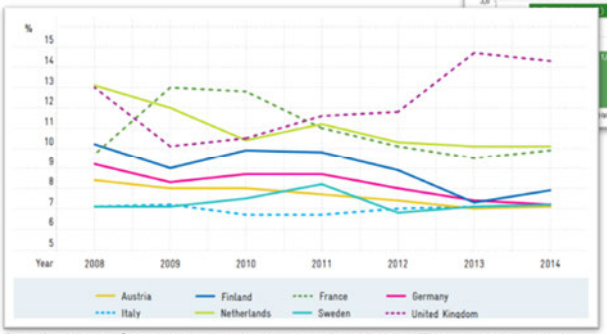
以下の資料に基づいて、説明がなされた。

1 Unemployment rate & start-up rates in Germany

- Good economic conditions
- Weak Entrepreneurship generally

Development of unemployment & percentage unemployment rates

Source: www.bpb.de

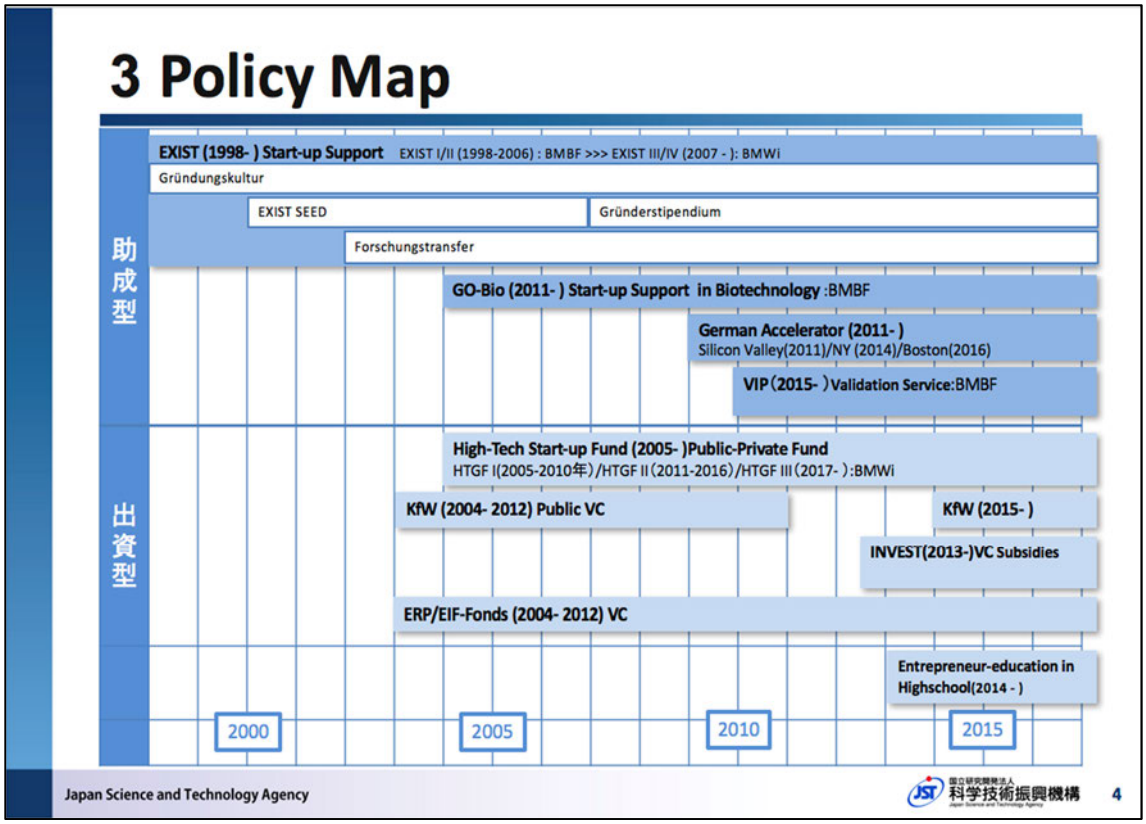


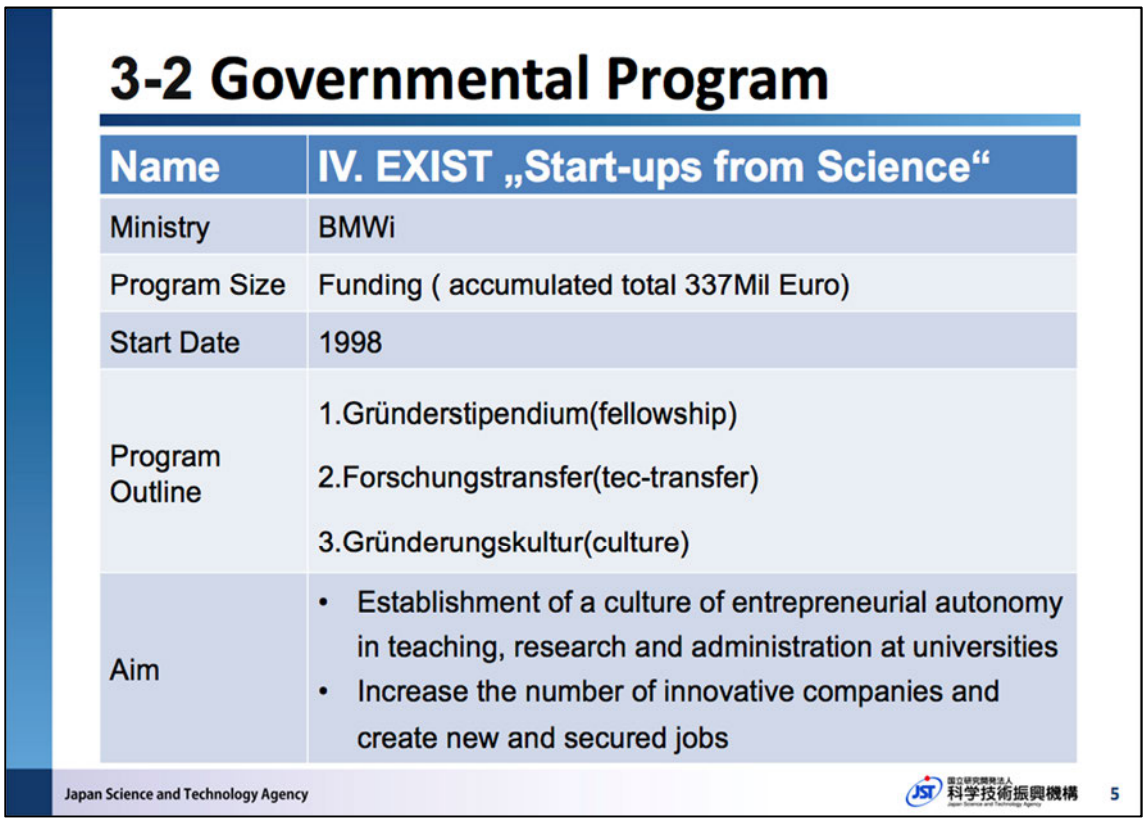
Development of percentage start-up rates in selected European countries

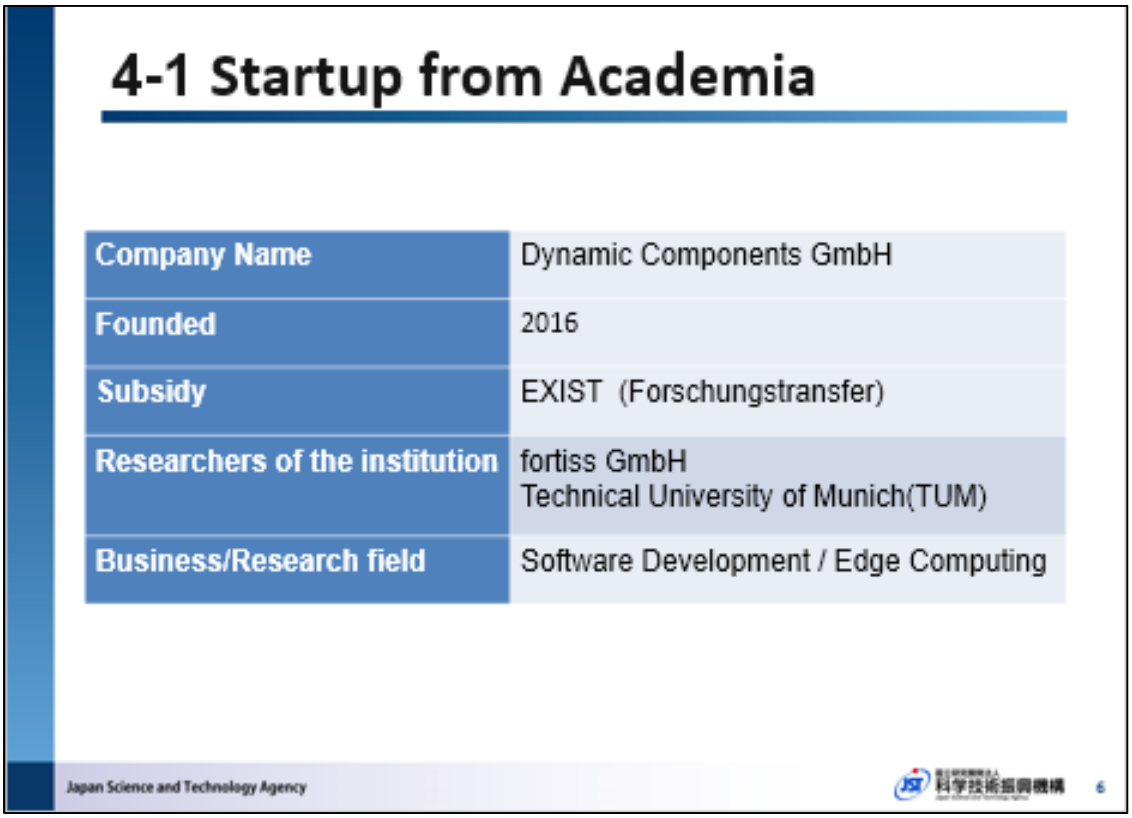
Source: www. .e-fi.de

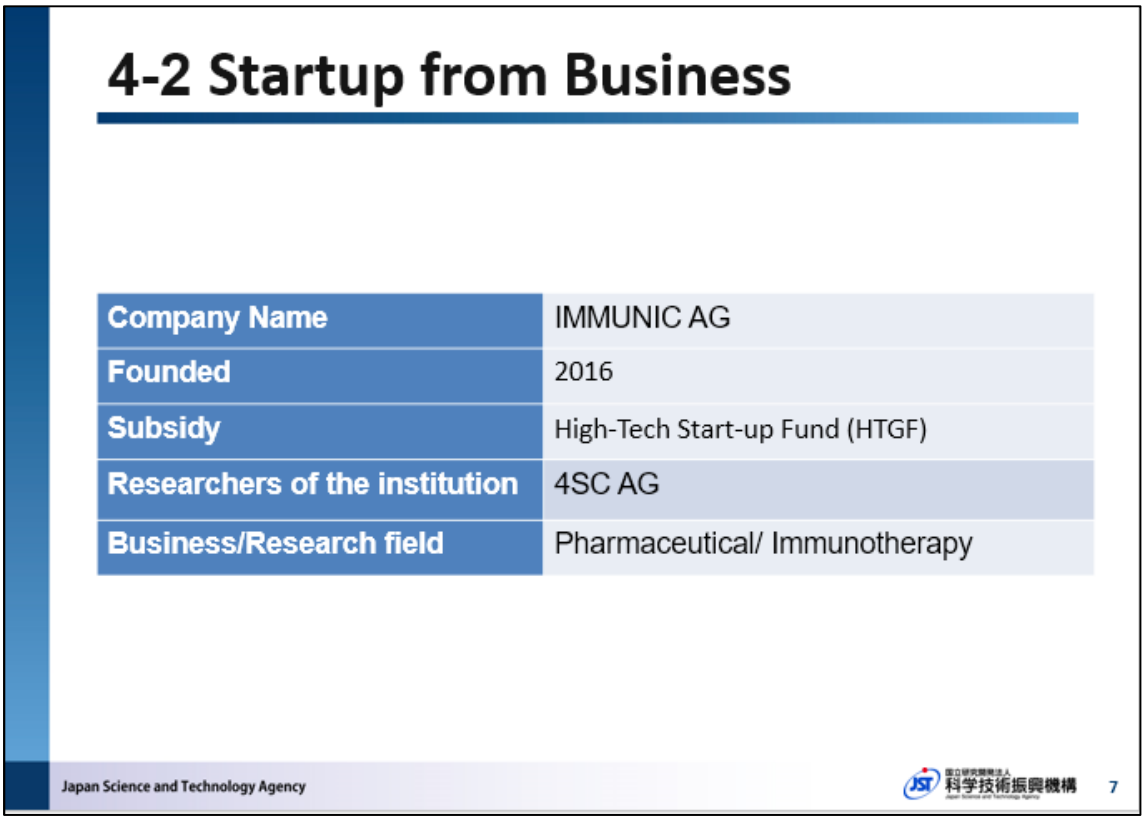
2 Governmental Laws and Policies

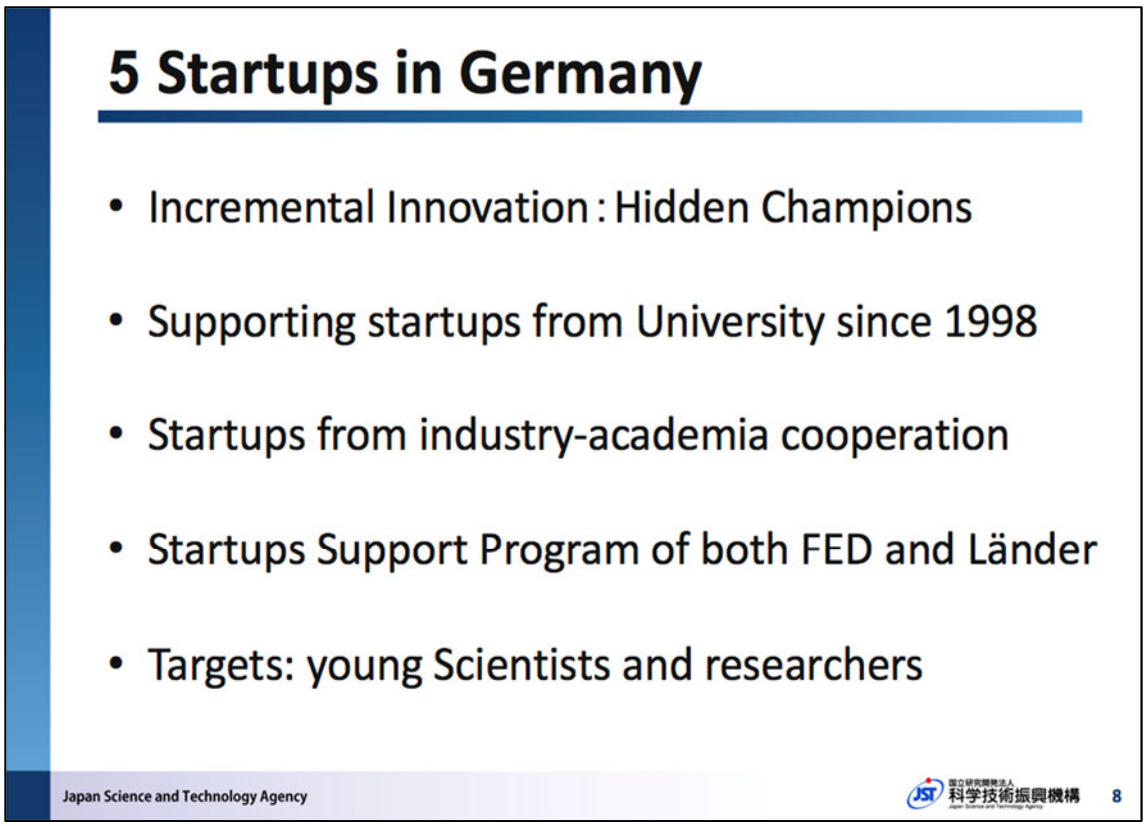
Title	Time	Aim
High-Tech Strategy (HTS)	2006	Germany's first science and technology innovation basic strategy. It aims to industrialize research results as quickly as possible.
Higher Education Act § 2 (7) (HRG)	1998 rev.	Addition of technology transfer as well as education and research as a role the university should play.
Employee Invention Act § 42 (ArbnErfG)	2002 rev.	With regard to inventions made at the university, amendments were made to abolish "professor privilege“ granting the university a commercial use right.


3 Policy Map
助成型
出資型
EXIST (1998-) Start-up Support
EXIST I/II (1998-2006) : BMBF >>> EXIST III/IV (2007 -): BMWi
Gründungskultur
EXIST SEED
Gründerstipendium
Forschungstransfer
GO-Bio (2011-) Start-up Support in Biotechnology :BMBF
German Accelerator (2011-)
Silicon Valley(2011)/NY (2014)/Boston(2016)
VIP (2015-) Validation Service:BMBF
High-Tech Start-up Fund (2005-)Public-Private Fund
HTGF I(2005-2010年)/HTGF II(2011-2016)/HTGF III(2017-):BMWi
KfW (2004- 2012) Public VC
KfW (2015-)
INVEST(2013-)VC Subsidies
ERP/EIF-Fonds (2004- 2012) VC
Entrepreneur-education in Highschool(2014 -)
2000
2005
2010
2015
Japan Science and Technology Agency
4


3-2 Governmental Program
Name
IV. EXIST „Start-ups from Science“
Ministry
BMWi
Program Size
Funding (accumulated total 337Mil Euro)
Start Date
1998
Program Outline
1.Gründerstipendium(fellowship)
2.Forschungstransfer(tec-transfer)
3.Gründerungskultur(culture)
Aim
• Establishment of a culture of entrepreneurial autonomy in teaching, research and administration at universities
• Increase the number of innovative companies and create new and secured jobs
Japan Science and Technology Agency
5


4-1 Startup from Academia
Company Name
Dynamic Components GmbH
Founded
2016
Subsidy
EXIST (Forschungstransfer)
Researchers of the institution
fortiss GmbH
Technical University of Munich(TUM)
Business/Research field
Software Development / Edge Computing
Japan Science and Technology Agency
6


4-2 Startup from Business
Company Name
IMMUNIC AG
Founded
2016
Subsidy
High-Tech Start-up Fund (HTGF)
Researchers of the institution
4SC AG
Business/Research field
Pharmaceutical/ Immunotherapy
Japan Science and Technology Agency
7



【質疑応答】

- 趙研究員：ドイツではイノベーションは大企業の中で起きているか。中小気企業の割合は？
  - ✧ 澤田 F：イノベーションは大企業か？ドイツ人の回答で中小企業から、とのコメントだが、実際は BMW などの大企業からだと思われる。ドイツの中小企業の割合は 98%。
  - ✧ 趙研究員：中国でもいろいろ議論ある。中小企業は活力あるが、大企業からイノベーションは起きていると思う。
- 趙研究員：写真はすべて男性ですね。
  - ✧ 澤田 F：工学部女性２割をきり。大学初女性起業化は１割程度。
- 津田 F：起業のインセンティブは何か？という議論が当初あったが。ドイツの例を見ると経済的理由がインセンティブとなりそうだが？（失業率、経済不況？）
  - ✧ 澤田 F：ドイツには今そのインセンティブはない。文学部でもシーメンス（Siemens）に就職できるくらい、売り手市場である。ミュンヘン工科大学での取り組み。大学の中で成績・能力の高い学生に起業させるような啓蒙活動をやっている。E・マスクのスペース X でのリニアモーターカーでのコンペをやった。（ハイパーループ）。MIT の学生が参加して優勝した。ドイツのレベルの高い学生を示すよい例となった。こういった試みを推奨している。トップの人

たちをどのようにスタートアップにかかわらせることができるかがキーとのこと。

- 高副研究員：ドイツ国内でのコンペは？
  - ✧ 澤田 F: ドイツ国内でのコンペを行うメリットは国内でお金をもらえることだが、支援はすでに十分にあるのであまり必要がなく、コンペも少ない。
- 程主任：IMMUNIC AG の事例。州政府からの支援の具体的内容は？
  - ✧ 澤田 F:州政府は、IT とバイオとには直接出資している。それも強いインセンティブになっていると思われる。ほかの州でも同様な直接・間接的サポートはある。
- 王副研究員：チーム結成の信頼関係はどうやって？
  - ✧ 澤田 F:テックトランスファーの準備期間１８ヶ月の間に信頼関係を構築した。
  - ✧ 澤田 F：もうひとつ別の事例：４人で始めたが、途中（起業時）で人数が減ることもある。

2.4.4 王　　玲（WANG　Ling）　ISTIC

発表内容：

以下の資料に基づいて、説明がなされた。

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Main Contents

I. Overview of entrepreneurial environment

II. Develop a national strategy for entrepreneurship

III. Create an ecosystem for entrepreneurship

IV. Case study of innovative entrepreneurship

V. Summary and thinking

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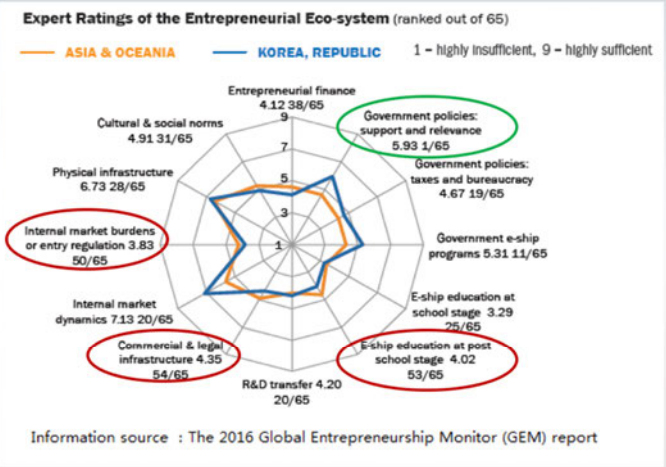
I. Overview of Entrepreneurial Environment

- Population: 50.6 million (2015)
- GDP: $1,376.9 billion (2015)
- GDP per capita: $27,195 (2015)
- SME contribution to GDP: 50% (2014)
- World Bank Doing Business Rating (2015): 84/100; Rank: 5/190
- World Bank Starting a Business Rating (2015): N/A; Rank: 11/190
- World Economic Forum Global Competitiveness Rating (2015): 5.0/7; Rank: 26/138
- Economic Development Phase: Innovation-Driven



Information source : The 2016 Global Entrepreneurship Monitor (GEM) report

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I. Overview of Entrepreneurial Environment

Findings of GEM's survey: In 2015, there were less than 40% working-age adults thinking entrepreneurship a good career choice in South Korea; only about a quarter of adults thought they were capable of entrepreneurship; The entrepreneurial participation rate of the 45-54 age group was higher, accounting for about a quarter. Young entrepreneurs (18-24 years old) were few.

Main reasons

- "Iron rice bowl" jobs such as civil servant, prosecutor, lawyers, doctor and posts in large corporation remains the professional pursuit of most young people.
- South Korea implements compulsory military service system
- "The risk of entrepreneurial failure" is the greatest concern of young Koreans. "starting a business is a dangerous thing."
- Since 2009, youth unemployment problem has been emerging in South Korean society. Entrepreneurship is only considered when "there is no other choice" (according to data from South Korean National Statistical Office, in June 2016, South Korea youth unemployment rate soared to 10.3%, hitting a 17-year high).

Status quo: youth entrepreneurial activities are generally not active

- The sector where South Korean youth is engaged in entrepreneurship are mostly low-level but competitive fields: according to the statistical data from South Korea National Statistics Office, South Korean twenty-something entrepreneurs that gather in service industries such as restaurant and convenience stores account for 74%; 51% of the small businesses founded by young people were closed within a year and 83% of them were closed within five years.
- The South Korean government frequently launches youth entrepreneurship support programs in recent years, but the effect is limited: according to the statistical data from South Korea National Statistics Office, only 47.3% of South Korean youth (15 to 29 years old) participated in economic activities in May,2016, which meant that more than half of South Korean young people were having no source of income.

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II. Develop a national strategy for entrepreneurship

(I) Develop "creative economy" and build a society that respects and shows creativity.

(II)Establish "Ministry of Science, ICT, and Future Planning(MSIP)" to implement the Creative Economic Strategy.

(III)In June 2013, MSIP's Plan of Creative Economy suggest combining creativity and imagination with science, technology and ICT, to create new industries and new markets, create an ecosystem friendly to entrepreneurship, foster creative economy and culture, and thus achieve a high level of employment.

(IV) Economic development paradigm: "catch-up strategy driven growth" ➡"creativity-based growth leading economy"

(V) Venture enterprises and start-ups are key to creating new markets and new jobs.

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III. Create an ecosystem for entrepreneurship

The development level of economy, unique culture and political pattern affect the structure of entrepreneurial ecosystem.

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III. Create an ecosystem for entrepreneurship

(I) Encourage establishment of start-ups

- Model of government's support for start-up companies ---industry-school cooperation flagship project provides management advice to small businesses and start-ups through coupon scheme.
- Introduce "start-up friendly index" to assess government-funded research institutions.
- Promote angel investment with tax incentives: capital gains tax can be deferred. If existing venture company reinvests its stock sales income in another venture company, the capital gains tax (10%) will be deferred until the new equity is sold. To promote angel investment, the concessionary rate of income tax on investment under ₩ 50 million is increased from 30% to 50%.
- Set up an "Innovation Center for Creative Economy" and build a nationwide innovation and entrepreneurship network. From September 2014 to July 2015, the central government of South Korea coordinated large enterprises and local governments to jointly establish 17 innovation centers in different regions, playing both roles of incubators and innovation accelerators.
- Set up an "online innovation city", and invite more than 3,000 retired experts voluntarily providing guidance on how to gain investment from government or enterprise for entrepreneurs; organize creativity competition, reward best performers and attract more people to start a business.
- Hold creative economy expos, promote successful cases, create a mentoring and planning space for the public, and facilitate the public's use of the online portal of creative economy, Creative Korea.

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III. Create an ecosystem for entrepreneurship
(II) Strengthen entrepreneurship education: cultivate the spirit of entrepreneurship and innovation
To encourage more young people to start businesses, in May 2013, Ministry of Education of South Korea issued a plan to strengthen entrepreneurship education for college students by allocating ₩ 262 billion to improve courses and create an advanced education model.
The South Korean government stipulates that university must use 30% of all the funding it receives to establish links between start-ups, jobs, industry and academia. These resources can also be used to strengthen entrepreneurship education and disseminate entrepreneurial spirit.
South Korea's Small and Medium Enterprise Administration Bureau is building a network of incubators. By 2013, 275 incubators had joined in the network, of which 209 ones were run by universities.
South Korean Small and Medium-sized Enterprise Administration Bureau supports incubator construction in three forms: provide business premises; provide technical and business management consulting services; provide education and guidance services.
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III. Create an ecosystem for entrepreneurship
(III) Implement schooling-suspension system for college students' entrepreneurship
• Initiated in 2013, the system sets that South Korean college students can apply for schooling suspension for continuously 2 years if they are engaged in entrepreneurship in their major field, (not including general personal services such as real estate agency, restaurant and hotel). During the period of schooling suspension, the gained entrepreneurial achievement can be taken as 6-18 credits and counted towards school grades.
• South Korea's Ministry of Education has actively promoted the mutual credit certification system for entrepreneurship courses between universities, and students can obtain the same credits by attending entrepreneurship courses in other schools.
• Establish entrepreneurship clubs in universities, and the achievement from active preparation for entrepreneurship in the entrepreneurship club can be taken as 3 credits per semester.
• The schooling suspension system for entrepreneurship has aroused positive responses. In 2014, the number of universities in South Korea that have implemented the schooling suspension system for entrepreneurship was increased from 21 in 2013 to 80, and that of university entrepreneurship clubs increased from 1,883 to 2,949 in South Korea.
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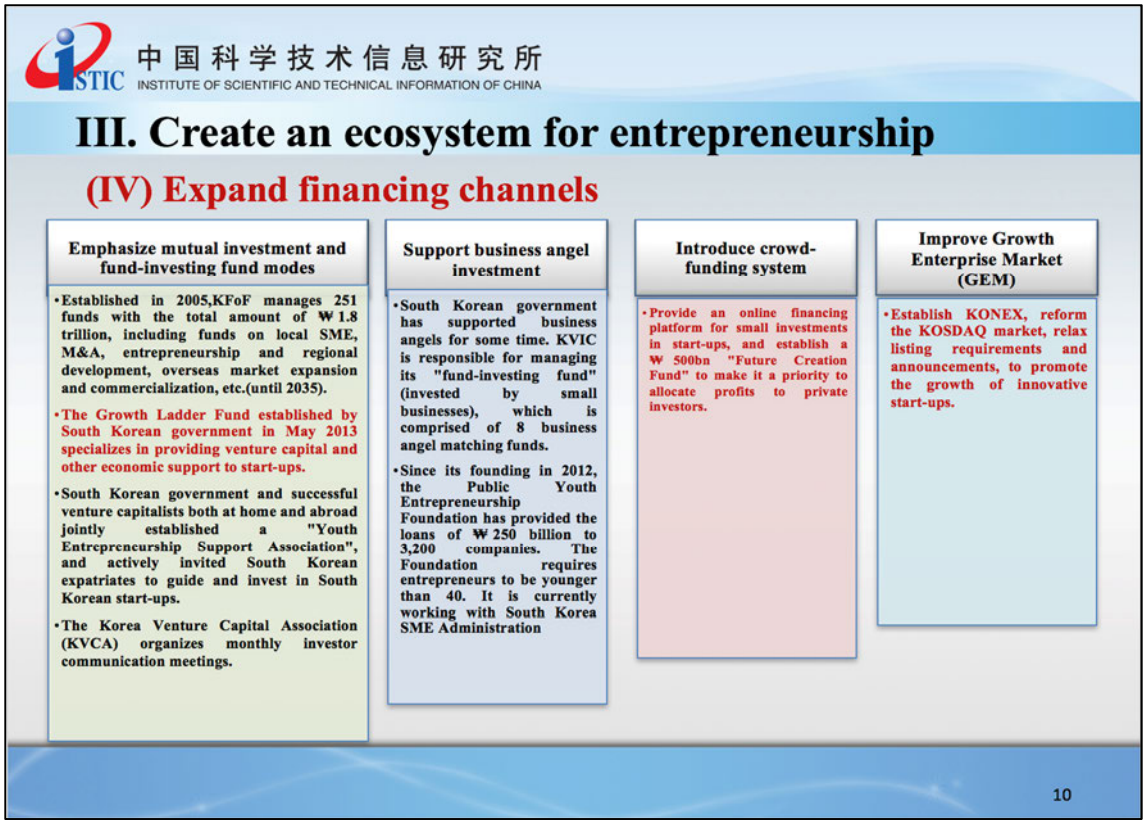
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III. Create an ecosystem for entrepreneurship
(IV) Expand financing channels
Emphasize mutual investment and fund-investing fund modes
•Established in 2005,KFoF manages 251 funds with the total amount of ₩1.8 trillion, including funds on local SME, M&A, entrepreneurship and regional development, overseas market expansion and commercialization, etc.(until 2035).
•The Growth Ladder Fund established by South Korean government in May 2013 specializes in providing venture capital and other economic support to start-ups.
•South Korean government and successful venture capitalists both at home and abroad jointly established a "Youth Entrepreneurship Support Association", and actively invited South Korean expatriates to guide and invest in South Korean start-ups.
•The Korea Venture Capital Association (KVCA) organizes monthly investor communication meetings.
Support business angel investment
•South Korean government has supported business angels for some time. KVIC is responsible for managing its "fund-investing fund" (invested by small businesses), which is comprised of 8 business angel matching funds.
•Since its founding in 2012, the Public Youth Entrepreneurship Foundation has provided the loans of ₩250 billion to 3,200 companies. The Foundation requires entrepreneurs to be younger than 40. It is currently working with South Korea SME Administration
Introduce crowd-funding system
•Provide an online financing platform for small investments in start-ups, and establish a ₩500bn "Future Creation Fund" to make it a priority to allocate profits to private investors.
Improve Growth Enterprise Market (GEM)
•Establish KONEX, reform the KOSDAQ market, relax listing requirements and announcements, to promote the growth of innovative start-ups.
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III. Create an ecosystem for entrepreneurship
(V) Get public procurement innovation-oriented
• Since 1996, South Korean Government has implemented the “New Technology Procurement Assurance Plan for Innovation-oriented Small and Medium-sized Enterprises". As long as any small and medium-sized enterprise’s technical products have been certified as “procurement assurance goods", South Korea SME Administration can ask all public institutions (including the central and local governments, state-owned enterprises) to make it a priority to purchase these innovative products.
• SMEs can take the certification as a marketing tool. South Korean government's target is that 50% of the procurement (goods and services, etc.) come from small and medium-sized enterprises, and 10% of the goods come from the list of new technical products.
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III. Create an ecosystem for entrepreneurship

(VI) Reform enterprise bankruptcy procedures

- According to the World Bank's 2013 "*Doing Business*" Report, South Korea is ranked the 14th out of 185 economies in the world for ease of bankruptcy processing, above the OECD average.
- According to the "joint liability system" in South Korea's bankruptcy law (be liability system)", when enterprise (major borrower) asks financial institutions for loan, it shall obtain the written consent of co-guarantor who shall bear subordinated debt in case of any default of the enterprise. Even if the enterprise declares bankruptcy and enjoys debt relief, the co-guarantor's debt cannot be waived. Therefore, the chain of defaults formed by the joint liability system makes it difficult for enterprise to recover from failure and start again, so it receives a lot of criticism.
- In 2012, to encourage entrepreneurship, South Korean government reformed the system and completely abolished the joint liability of start-ups. For banks and non-banking companies, only their executives and business partners will be bound by a joint guarantee contract.

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IV. Case study of innovative entrepreneurship

(I) Junior Noncommissioned-Officer Academy for Entrepreneurship

Target

Cultivate innovative young entrepreneurial talents

It's founded jointly by South Korean SME Revitalization Service and South Korea Ministry of SME in March 2011 (5 ones to date).

admission qualification

Under the age of39

"Persons preparing for entrepreneurship" who try to launch entrepreneurial activities in technical fields and the "legal representative of small and medium-sized enterprises" who have not been in business for three years

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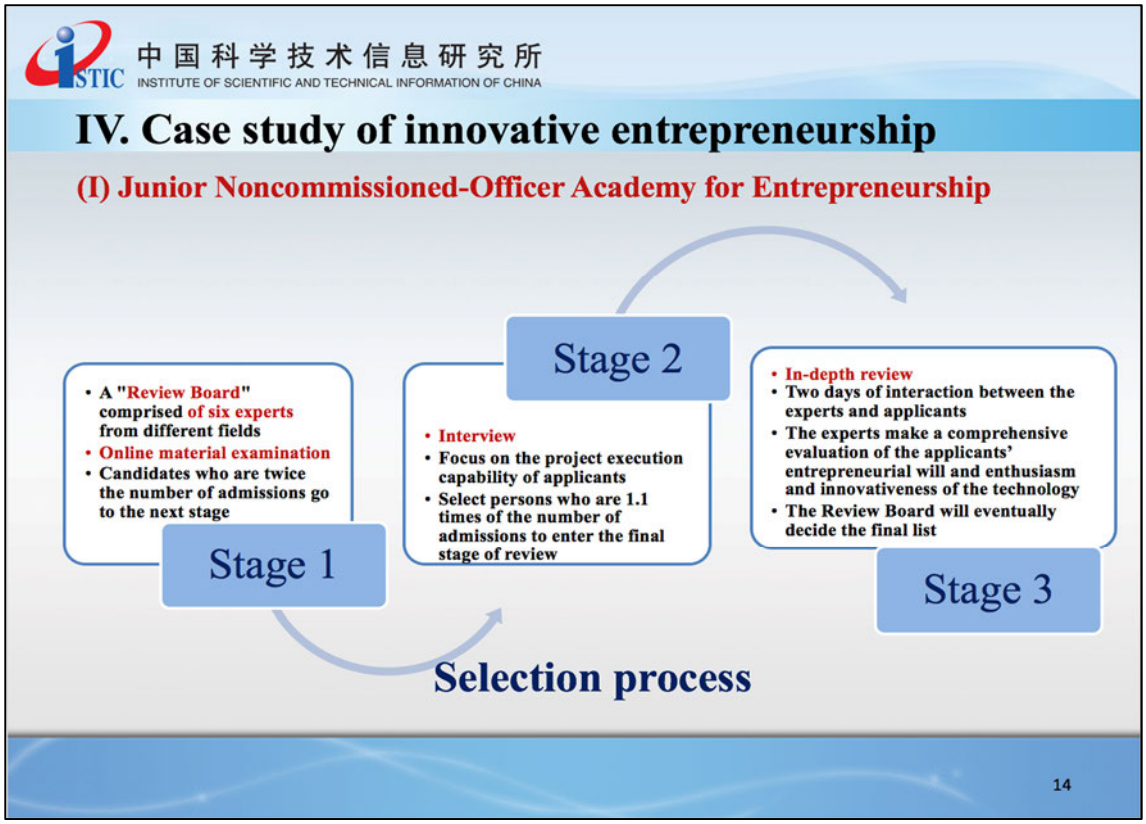
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IV. Case study of innovative entrepreneurship
(I) Junior Noncommissioned-Officer Academy for Entrepreneurship
• A "Review Board" comprised of six experts from different fields
• Online material examination
• Candidates who are twice the number of admissions go to the next stage
Stage 1
Stage 2
• Interview
• Focus on the project execution capability of applicants
• Select persons who are 1.1 times of the number of admissions to enter the final stage of review
• In-depth review
• Two days of interaction between the experts and applicants
• The experts make a comprehensive evaluation of the applicants' entrepreneurial will and enthusiasm and innovativeness of the technology
• The Review Board will eventually decide the final list
Stage 3
Selection process
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IV. Case study of innovative entrepreneurship
(I) Junior Noncommissioned-Officer Academy for Entrepreneurship
Supports Offered by the Academy
Within one year, the students will receive one-stop support services including entrepreneurial space, entrepreneurial education, market development, R&D funding, and expert guidance, etc.
It's funded by South Korean government. The budget was 18 billion won in 2011, and was increased to 26 billion won in 2014.
Students may apply for funding according to actual demands, but the amount cannot exceed 70% of the total project funds.
Each student can receive a maximum of 100 million won of start-up fund during the school year.
After graduation from the school, students can apply for other follow-up government funds through the school, such as youth special venture fund and start-up support fund.
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IV. Case study of innovative entrepreneurship

(I) Junior Noncommissioned-Officer Academy for Entrepreneurship

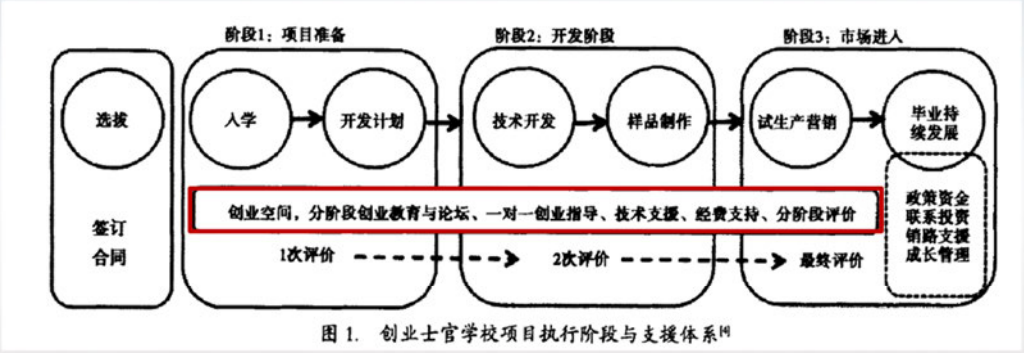

图 1. 创业士官学校项目执行阶段与支援体系[4]

Source: Park ZH. Analysis of South Korean Entrepreneurial Talent Education- a case study of " Junior Noncommissioned-Officer Academy for Entrepreneurship". Comparative education research. 2016(7)No.318

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IV. Case study of innovative entrepreneurship

(I) Junior Noncommissioned-Officer Academy for Entrepreneurship

表 1. 2011~2015 年间创业士官学校招生及毕业情况统计一览(单位:人)

时间	申请人数	入学人数	退学	毕业数
第 1 期(2011 年)	1,292	241	29	212
第 2 期(2012 年)	1,301	229	16	213
第 3 期(2013 年)	1,867	301	47	254
第 4 期(2014 年)	1,570	307	23	284
第 5 期(2015 年)	1,121	278	26	252

资料来源: 청년창업사관학교.사관학교 소개[EB/OL].http://start.sbc.or.kr/fa/introduce.do?m=intoCtr.2016-05-18.

表 2. 青年创业士官学校运营成果

区分	1 期	2 期	3 期	4 期	合计
销售额(亿韩元)	1,140	793	366	292	2,591
就业岗位创设(人)	1,072	1,176	1,147	603	3,998
知识产权(项)	315	450	387	276	1,428
融资额(亿韩元)	123	101	110	45	379
投资额(亿韩元)	179	152	39	47	417

资料来源: 안재형.지금은 창업시대 (1) 중기청·중진공 청년창업사관학교…계획부터 사업화까지 창업 지원의 A to Z 가 이곳에[N].매일경제 Luxmen, 2015년 06월(제57호)

Source: Park ZH. Analysis of South Korean Entrepreneurial Talent Education- a case study of " Junior Noncommissioned-Officer Academy for Entrepreneurship". Comparative education research. 2016(7)No.318

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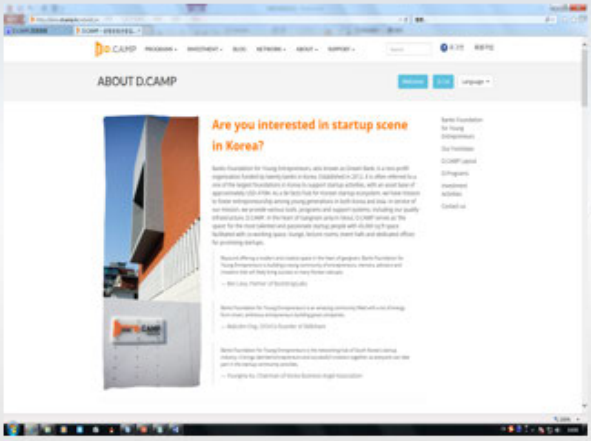
IV. Case study of innovative entrepreneurship

(II) South Korea's First Maker Space -- D.CAMP



Source: D.CAMP Official Web Page (https://dcamp.kr/)

It was set up in 2013 by Youth Entrepreneurship Consortium for Banking Industry. D stands for "dream". It aims to creating youth employment by activating entrepreneurship ecosystem through an organic combination of investment, network and space.

D.CAMP has cafes, dream office, co-working space, start-up settlement space, multi-function hall and other facilities, It support youth entrepreneurship by operating investment funds, holding dream courses, dream contests, dream day and other activities, and providing dream mentor, etc. As members, young people can use the cooperative space and conference rooms, and get the priority of participating in various activities. As of February 2016, 2,649 start-ups have participated or are participating in it.

The characteristics of D.CAMP are: establishing the "D.brand" program; select people from public opinion circle to be responsible for the operation; host international entrepreneurship activities, etc.

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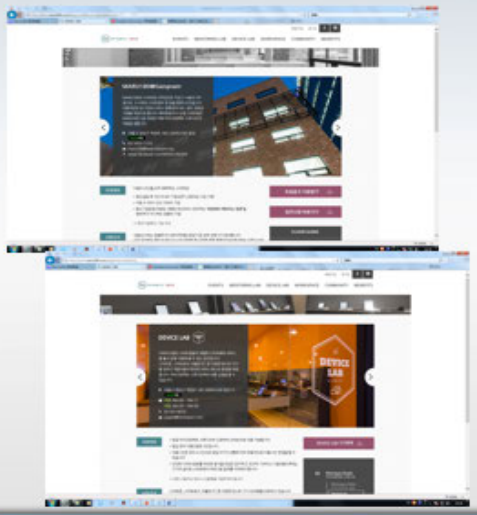
IV. Case study of innovative entrepreneurship

(III) Maker Space in Gangnam District, Seoul - Maru 180

Set up by Asan Sharing Consortium in 2014, Maru 180 is aimed to providing an open platform for young entrepreneurs to offer integrated entrepreneurship solutions. There have been more than 30 startups residing in it, and each person has a monthly residency fee of 100,000 won (about 550 yuan).

Maru 180 has conference hall, cafe, accelerator, transaction space and other facilities. It supports entrepreneurship by holding Chung Ju-yung Entrepreneurship Exhibition and providing the 99-day tutoring, etc.

The characteristics of Maru 180 are: run by private enterprise; both start-ups and investment companies join in it; retain start-up investment; provide networked tutoring.



Source: Maru180 Official Web Page (https://maru180.com/)

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V. Summary and Thinking

(I) South Korean government is known for its policy activism. It promulgates a large number of policies, which are often re-enacted or abolished, lacking continuity. Solution: solidify policies, and at the same time create a policy database, to review different programs' benefits to individual SMEs, and then determine whether there is any obvious repetition between these programs, so as to ensure policy's effectiveness.

(II) As for South Korea's innovative entrepreneurship, the most critical constraints are young people's lack of manpower and capital and limited work and entrepreneurial experiences. Hence, financial support and professional guidance are of critical importance.

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V. Summary and Thinking

(III) The number of medium-sized enterprises in South Korea is limited. If an enterprise is no more small enterprises , the government's support will come to an abrupt end, which will depress the ambitions of small enterprises to develop and grow.

(IV) South Korean college students' entrepreneurial consciousness is still in its infancy, but its entrepreneurial education focus on shifting from course teaching to combining theory with practice, and setting corresponding courses according to regional economic and industrial characteristics to avoid monotonous and convergent entrepreneurial talent cultivating pattern and realize diversified development of talents.

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【質疑応答】

周 F：韓国のスタートアップ教育は中国を意識しているか？

- ✧ 王副研究員：中国に韓国留学生が多い。教育面でも経済でも影響は大きいと思う。

- 峯畑 F：どんな国から M&A があるか？
  - ✧ 王副研究員：統計資料からは研究開発型は多くなく、飲食業が多い傾向にあるので、M&A は盛んではない。
- 冨田 F：どこの国のモデルを真似しようとしているか。またメンターは大勢いるか？
  - ✧ 王副研究員：米国モデルを参考にしていると思う。
  - ✧ 王副研究員：オンラインで 3000 名の企業 OB のリストにアクセスできる（無料）。
- 林上席：よくまとまった発表でした。３年前まで韓国をウォッチしていた。その観点から５番のサマリーはよくまとまっていた。大統領制でしかも５年任期なので後継者が前任者の政策からできるだけ新しいことをしようとするので、指摘・分析は正しいと思う。日本からすればよい面とも見える。日本は行政が強く政権かわっても政策がかわらないので、新しい施策が行われない傾向がある。中小企業が少ないのもそのとおり。従来大企業を支援し強化することが国力を強くすることだっ

た。サムソン・LG などの部品供給会社は日本や中国に求められ、韓国の中企業が育たない面があった。大学卒業生は卒業後できるだけ大企業へ職をもとめ浪人する場合すらある。どうやって調べたか。ISTIC は吉林省に近く吉林省でも韓国を見ていると思うので。新しい政権は大企業を好きでない、むしろ叩いている。これについてどう思うか？

- ✧ 王副研究員：吉林省では韓国をウォッチしている。ISTIC は吉林省と近く吉林省では朝鮮語がわかる方がいるので情報をいただいた。また OECD のデータベース（英語）を使用した。韓国大使館からも情報をいただいた。

セッション５　中国、日本のスタートアップ支援制度ついて

2.4.5 程　如煙（CHENG　Ruyan）　ISTIC

発表内容：

以下の資料に基づいて、説明がなされた。

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Main content

- Background of China's launching innovative entrepreneurship
- China's measures in supporting innovative entrepreneurship
- Features of innovative entrepreneurship in China

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The rapid sci-tech development is lowering the threshold of entrepreneurship

- **The rapid development of information technologies like cloud computing and open-source software have largely reduced the cost of establishing Internet-based enterprises or software enterprises.**
- **In the field of manufacturing, the tools required for design and manufacturing are becoming cheaper and easier to use, such as CAD software, computerized numerical control machine tools, laser cutting machines and 3D printers.**
- **In the field of life science, the Internet-based automation lab makes it possible for anyone to conduct remote experiments solely with a laptop.**

3

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Ranking of motivational index of major countries

	(motivational index)	Ranking
Sweden	11.8	1
Finland	9.7	2
US	6.4	3
France	6.3	4
UK	3.8	16
Germany	2.7	26
South Korea	2.7	26
Chinese mainland	1.5	42
Russia	1.3	47
India	1.2	51

Data source: Global Entrepreneurship Monitor 2017 Report
Note: Motivational index=improvement-driven opportunities/Necessity motive

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Background of China's launching innovative entrepreneurship

●Fostering and generating new driving force for economic and social development. With the constraints on resources and environment heightening in China, traditional growth modes that feature high input, high consumption and extensive development can hardly continue.

●Enlarging employment and striving for people's richness. Having a population of over 1.3 billion and more than 900 million laborers, China also has a large number of university graduates and transferred rural labors every year, thus posing a great pressure on employment.

●Stimulating the innovation potential and passion for entrepreneurship in the whole society. The idea of entrepreneurship and innovations is still not deeply rooted in Chinese people's hearts, so that they tend to lack the competence of creation and entrepreneurship, and a favorable environment that encourages innovations and tolerates failures is not yet formed.

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Mass Entrepreneurship and Innovation (Innovative entrepreneurship) was proposed in China

- In an executive meeting of the State Council held in Oct. 2013, it was stressed to "mobilize social capitals to boost the growth of small and mini enterprises, especially innovative enterprises".
- In Sept. 2014, Premier Li Keqiang gave the call of Mass Entrepreneurship and Innovation at the Summer Davos Forum.
- In the Government Work Report of 2015, Mass Entrepreneurship and Innovation was officially proposed.

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Source:「大衆創業万衆創新」Policy Official Web-Site
(http://www.gov.cn/zhengce/zhuti/shuangchuang/index.htm)

- Since 2013, nearly 50 copies of relevant documents have been issued.
- Other relevant documents were issued by 16 ministries and commissions, including the Ministry of Finance, National Development and Reform Commission, the Ministry of Science and Technology, the Ministry of Industry and Information Technology, the Ministry of Education, the Ministry of Human Resources and Social Security, the State Administration for Industry and Commerce, and People's Bank of China.
- Relevant documents were issued in 32 regions, including Beijing, Shanghai, Guangzhou and Hebei.

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Enhancing overall planning and coordination

- **Building up inter-ministerial joint conference to boost innovation and entrepreneurship, led by National Development and Reform Commission and joined in by 28 departments, having 1-2 meetings held every year.**

✓Making overall planning and coordination to boost jobs related to innovations and entrepreneurship, studying and coordinating major issues encountered during the implementation of policies for innovation and entrepreneurship, and strengthening guidance, monitoring and evaluation of the implementation of innovation and entrepreneurship.

✓Enhancing information exchanges and mutual cooperation between local governments, departments and enterprises in promoting innovation and entrepreneurship.

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Innovating systems and mechanisms

- **Deepening the reform of commercial system**
  - ✓ **"Three Licenses Issued in One" provide convenient service of business registration for entrepreneurship and innovations.**
  - ✓ **Building up negative lists for market access to break unreasonable limits on industry access.**
- **Strengthening protection of intellectual property right for entrepreneurship**
  - ✓ **Boosting trading of intellectual property rights and building up nationwide public service platform for intellectual property rights operation.** http://www.sipop.cn/gate/index.html

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Optimizing finance and taxation policies

- **Enhancing financial support**
  - ✓ **Building up venture capital guide fund for national emerging industries (with a total scale of 40 billion yuan)**
  - ✓ **Setting up national small and medium enterprise development fund (with a total scale of 60 billion yuan and a financial contribution of 15 billion) to focus on the development of growing SMEs at the seed stage and the initial stage.**
- **Tax credit**
  - ✓ **Implementing tax credit policies for technology business incubator and university science park etc.**
  - ✓ **Venture firms shall be entitled to exemption of tax on 70% taxable income.**
- **Improving government procurement policy to facilitate development of small and medium enterprises.**

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Invigorating financial market

- **Optimizing the capital market**
  - ✓ Encouraging startups to raise funds through stock market and bond market
- **Enriching new models of financing**
  - ✓ Supporting the development of Internet-based finance, guiding and encouraging development of crowdfunding platforms.
  - ✓ Improving the system of intellectual property valuation, pledge and circulation.

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Developing services for entrepreneurship

- **Accelerating development of startup incubation**
  - ✓ Strengthening and enlarging the space for mass entrepreneurship and innovation by developing new type of startup incubation.
  - ✓ Boosting and encouraging startup incubators to cooperate with Angel Investment and Venture Capital Investment.
- **Studying and exploring new models of public services like Entrepreneurship Vouchers and Innovation Vouchers.**

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Stimulating the momentum of talents

- **Encouraging entrepreneurship of researchers**
  - ✓ Allowing off-post entrepreneurship of professional researchers in tertiary institutions and research institutions
- **Encouraging entrepreneurship of university students**
  - ✓ Completing the curriculum system for entrepreneurship education
  - ✓ Allowing university students to retain their student status for entrepreneurship during suspension of schooling
- **Introducing overseas talents for entrepreneurship in China**
  - ✓ Lifting restrictions on issuing visas and permanent resident permits for overseas high-end talents launching businesses in China.
  - ✓ Guiding and encouraging local governments to offer start-up initial capitals to high-level talents returning to China for entrepreneurship.

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Holding entrepreneurship contest and mass entrepreneurship and innovation week

- **China Innovation and Entrepreneurship Competition was started in 2012. Using the form of competition instead of evaluation, more outstanding enterprises can benefit; the projects for the competition will join in financing road show to get them closer to capitals.**
- **Mass Entrepreneurship and Innovation Week was started in 2015. The main venue for the event in 2017 was placed in Shanghai to offer characteristic activities like theme exhibitions, conferences and forums, policy publicity, professional services and consultation.**

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Royole Corporation-Case Study

- Royole Corporation is a world leader in the field of flexible display, flexible sensor, VR display and relevant smart devices.
- Royole Corporation was set up in Shenzhen, China, the Silicon Valley and HK in 2012. During the four years since the company was set up, its market value has overtaken 3 billion dollars.

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Core Competitiveness

- The flexible display is only 0.01 millimeter thick and its curling radius can reach 1 millimeter. It can be widely used in products like smart phones, laptops, televisions and wearable electronic equipment.
- The flexible display can impact not only a product but the whole industry. The emergence of such a new display will probably change the upstream and downstream industries of traditional display industry.
- Applying for more than 300 patents around the world.

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Favorable entrepreneurship environment provided by Shenzhen Overseas Chinese Hi-tech Venture Park
深圳留学生创业园

- **Royole is located in the Overseas Chinese Hi-tech Venture Park.**
  - ✓ The hi-tech venture park has incubated hundreds of outstanding enterprises and quality projects.
  - ✓ The rents are very cheap.
  - ✓ assist enterprises in the park to build up connections with financial institutions, investment funds and private capitals;
  - ✓ appoint special staffs to contact investment and financial institutions.

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Governmental capital subsidies

- **In 2013, the new-type flexible display technical team of Royole was selected by the Peacock Plan for Overseas High-level Talents' as Innovation and Entrepreneurship Teams.**
  - ✓ The Peacock Plan is a plan proposed by Shenzhen Government in 2011 to absorb overseas high-level talents (teams) to launch businesses and innovations in Shenzhen. The overseas teams included in the Peacock Plan are entitled to an average subsidy of 20 million yuan, with the maximum set at 100 million yuan.

深圳市海外高层次人才 PEACOCK PLAN 孔雀计划 中国·深圳

- **In 2015, Dr. Liu Zihong, President and CEO of Royole was listed among the distinguished experts for the Recruitment Program of Global Experts.**

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Government helping with company's publicity

- ✓ At the main venue of National Mass Entrepreneurship and Innovation Week in Beijing in 2015, Royole demonstrated its color flexible display screen.
- ✓ At the main venue of National Mass Entrepreneurship and Innovation Week in Shenzhen in 2016, Royole demonstrated its flexible sensor and flexible electronic arc-shaped auto center console.

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Gaining investment of Shenzhen Capital Group and Shenzhen-HongKong Venture Capital Co., Ltd

- ✓ Shenzhen Capital Group was founded with the investment of Shenzhen Government in 1999, with the joining of social capitals (the government contributed 500 million and enterprises offered 200 million). It's now developed into China's strongest and most influential local venture capital group to manage all types of professional investment funds with a scale of nearly 200 billion yuan.
- ✓ Shenzhen-HongKong Venture Capital Co., Ltd. is a professional venture capital company started by PKU-HKUST Shenzhen-HongKong Institution by raising private capitals. The institution is a cooperation project among Shenzhen Municipal Government, Peking University, and HKUST in 1999.

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Favorable external environment in Shenzhen

- The government and investment institutions are of especially high efficiency.
- Shenzhen features complete industrial chain resources.
- As an immigrant city, Shenzhen shows diversification, tolerance, innovation and vigor.
- Shenzhen is close to Hong Kong, and it's convenient for it to access international market.

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Main content

- Background of China's launching innovative entrepreneurship
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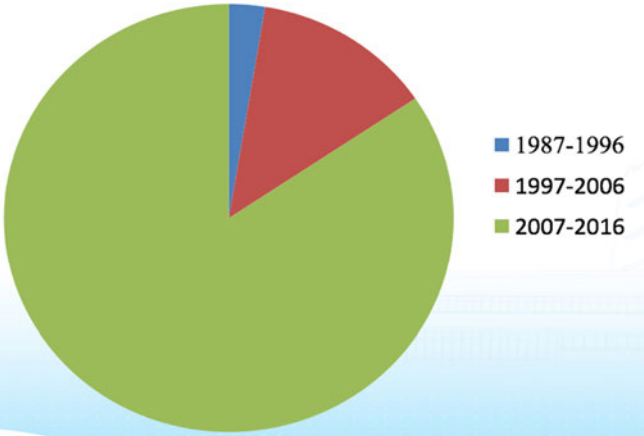
Fast increasing number of incubators

Number of incubators in China in nearly 30 years



During the first decade, the number of incubators was less than 100;

During the second decade, the number of incubators was more than 500;

During the third decade, the number of incubators reached 3,255.

In the last three years, newly built incubators in China amounted to 1,787, taking up a half of the total number of incubators in the last 30 years.

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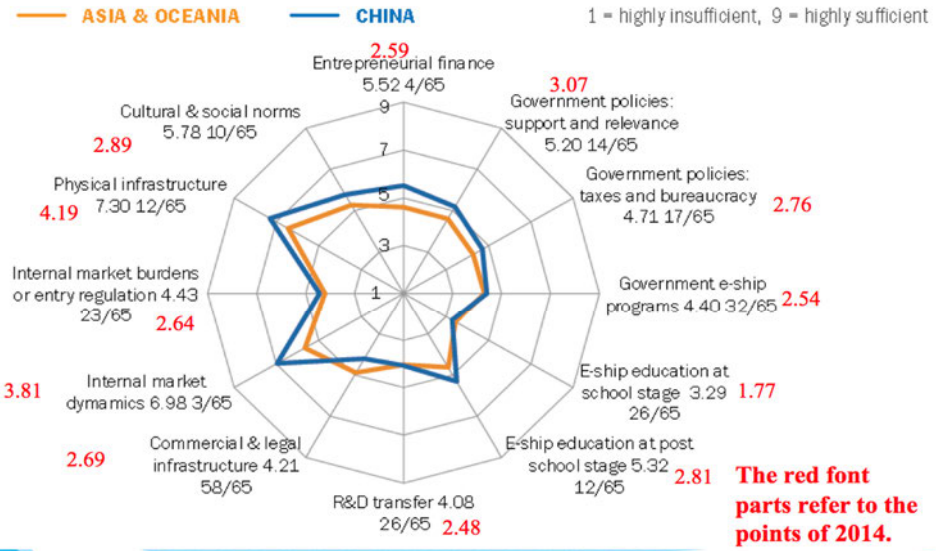
Greatly improved environment for entrepreneurship

Expert Ratings of the Entrepreneurial Eco-system (ranked out of 65)



The red font parts refer to the points of 2014.

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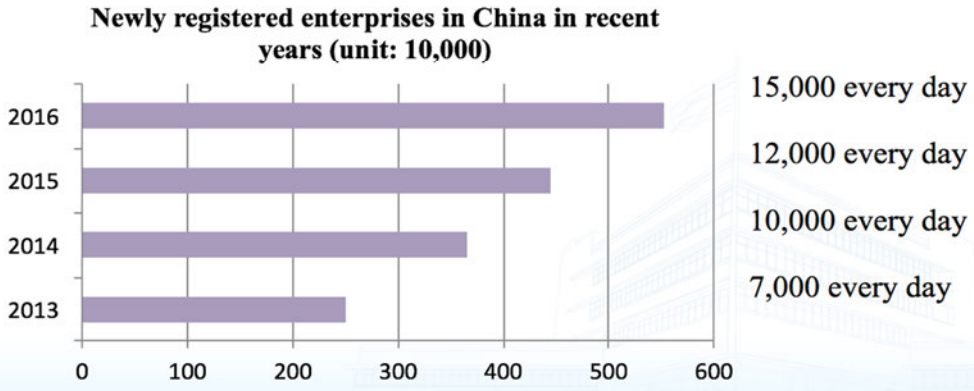
The number of startups is rapidly growing



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Promotion of the quality of entrepreneurship

- Rapid growth of entrepreneurship by overseas returnees. From 2006 to 2014, businesses started by overseas returnees take up a share of 18.7%; the share before 2005 was the least, only 4.9%. The proportion from 2015 till now is the highest, reaching 76.4%.
- Some entrepreneurships feature higher contents of technical innovation, involving emerging technologies or products like smart hardware, smart manufacturing, gene therapy and cell therapy.

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Problems

●Many entrepreneurs are passionate but short of relevant competence, as well as necessary risk awareness, protection of intellectual properties and market-oriented operation capacity.

●Business incubators are of uneven qualities, with most of them staying at the level of providing venues or exempting rents.

●Fraud of startups, which is especially outstanding among Internet-based enterprises.

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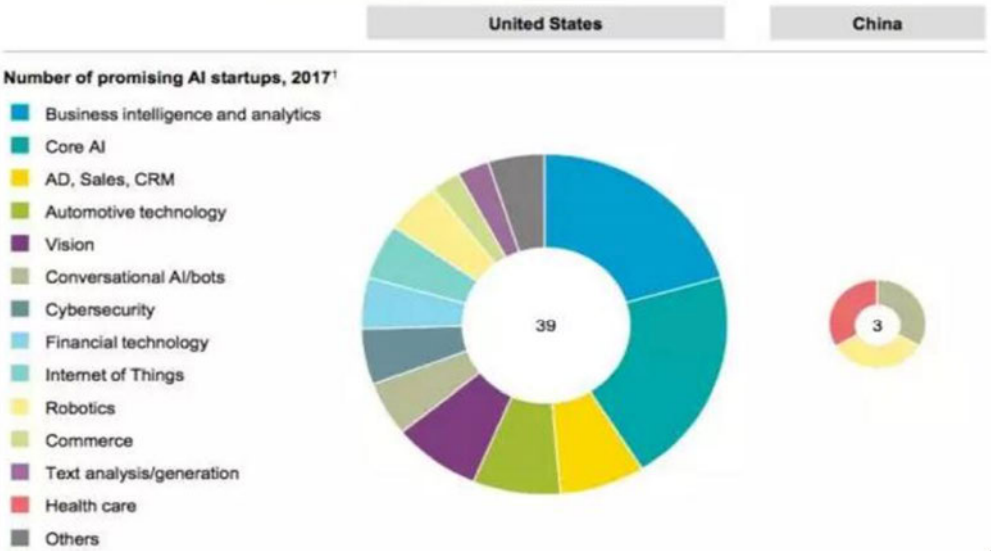
●Most startups don't feature high innovation contents

The United States has a more robust AI startup ecosystem than China



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- Entrepreneurship environment has been largely improved.
- The number of startups is rapidly growing.
- The quality of entrepreneurship is rising.
- There're still many problems .

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Thanks for your attention

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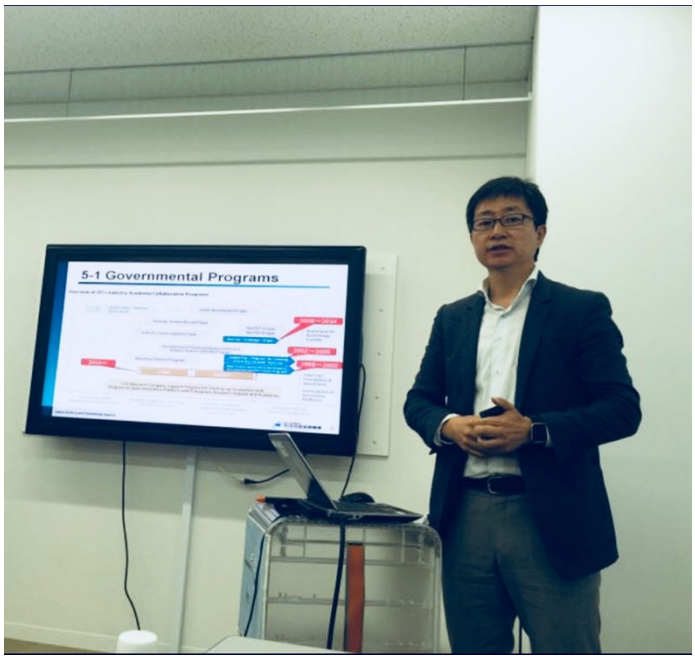
【質疑応答】

- 林上席：大変包括的に情報提供いただいた。特に深センについては大変参考になる。
- 津田Ｆ：スタートアップが活発になりつつあるというご説明であったが、大学の役割はどのような状況であるのか？特に北京大学、清華大学などについてお伺いしたい。
  - ✧ 程主任：これらの大学は起業教育制度や休学期間を利用した制度も設けている。しかし、起業率は必ずしも高いわけではない。
- 八木岡Ｆ：Royole 企業については急成長を遂げているということであるが、シーズ技術から商業化を目指す際に、どのような資金的支援を調達することが可能であったのか？
  - ✧ 程主任：技術については、米国留学組の成果が多い。起業の場所は深センである点も重要であった。当地の場合は、技術実証について、地方政府からの幅広い支援を行うことが可能となる。毎年、平均約 3 億円規模の資金を得られたことは決定的に重要であった。深センのハイテクパークにおいては、企業・VC・政府の支援部門も設置されている。本パークに参加するには申請・評価を得た後、活動が可能となる。深セン市政府の投資もあるが、政府の起業資金は全体の 3%である。規模としては小さいが、政府のお墨付きを与える点でその他の外部資金を調達する基盤となる。分野については、電子装置の取り組みが重要視されている。海外に出た中国人を呼び戻す目的がある。
- 林上席：深センの市政府関係者は、日本からの調査訪問を受け入れることは可能か？
  - ✧ 程主任：可能性はある。
- 冨田 F:外国人の中国における起業数はどのような状況であるのか？スタートアップバウチャーの発行についてはどの機関が行っているのか？また、大学知財の評価についてはどうか？
  - ✧ 程主任：中国人帰国留学生による起業について、2006 年から 2014 年までのデータについては、起業の中で帰国留学生の割合は 4.9%であるが、2015 年以降であれば、76.4%と圧倒的に、海外留学組の起業割合が多い。外国人については、近年始まったばかりの取り組みであるため、必ずしもまだ十分な成果は確認できていない。技術評価については、政府の地財局が行っている。
- 澤田Ｆ：中国のスタートアップは数が増えているという印象があるが、中央・地方政府含め、公的な取り組みの重要性はどの程度あるとお考えか？また、ICT 分野でのスタートアップが盛んな理由は何か？
  - ✧ 程主任：中国政府の役割は大きい。2015 年の基本政策が作成されたことで、スタートアップを支援するキャンペンが国家的に行われた事は、国民の意識変容という点で、政策的にきわめて重要であった。また、民間の取り組みとし

てはユニコーンが発生することで、一般的な関心の高まりにもつながった。学生について、親の世代が裕福になりつつあるため、就職に躍起になるよりは自身が希望する職業を模索する傾向が進んでいると考える。これらもスタートアップの背景としては重要ではないかと考える。教育に独創的な学習を推進する仕掛けが組み込まれてきた点も重要である。

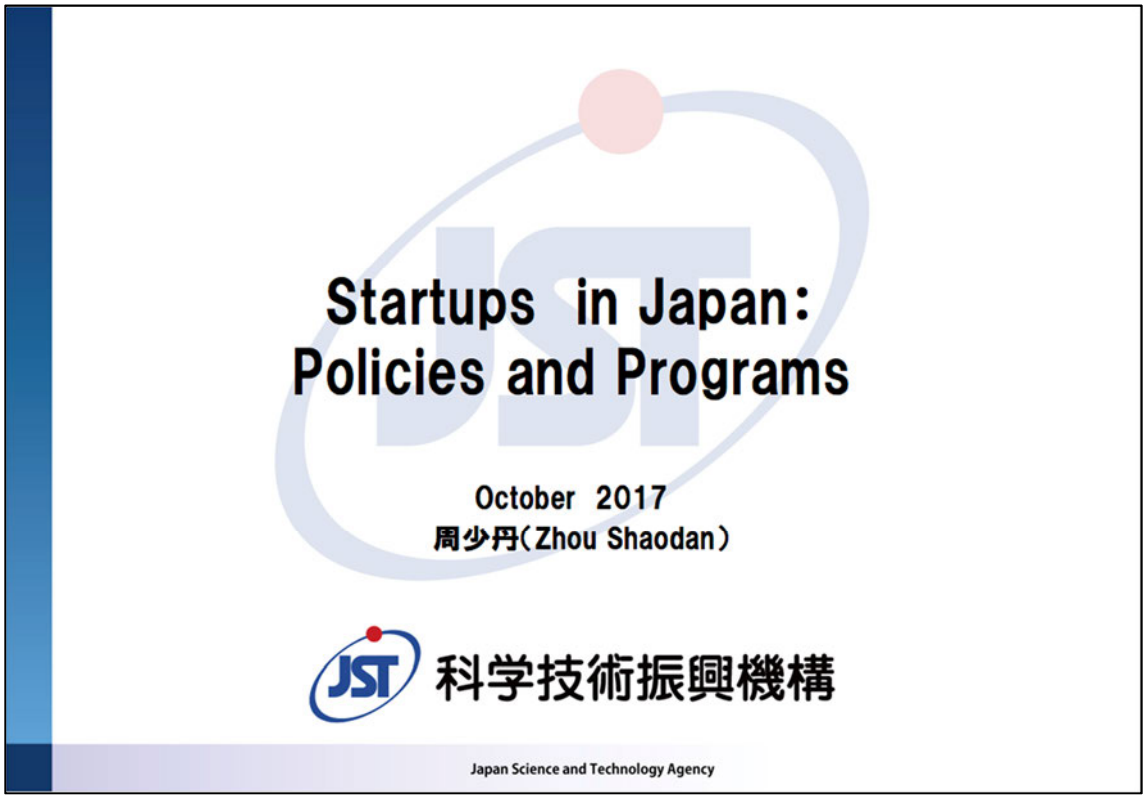
- ✧ 趙研究員：起業家教育や大学内資金援助、教育現場の雰囲気も変わってきている。
- ✧ 高副研究員：中国全体でもともと ICT 分野が強かったわけではない。ただし、近年ソフトウェア、CPU/GPU について急速な発展を遂げてきた。2008 年頃から 10 大プロジェクトが開始され、これに関する政府の評価も高かった、モバイル技術・移動技術分野における重点化、また５G 通信においても世界を牽引する技術がある。IC チップについても同様の傾向がうかがえる。大型公的投資を受ける企業の事例も確認できる。

2.4.6 周　少丹（ZHOU　Shaodan）JST/CRDS



発表内容：

以下の資料に基づいて、説明がなされた。

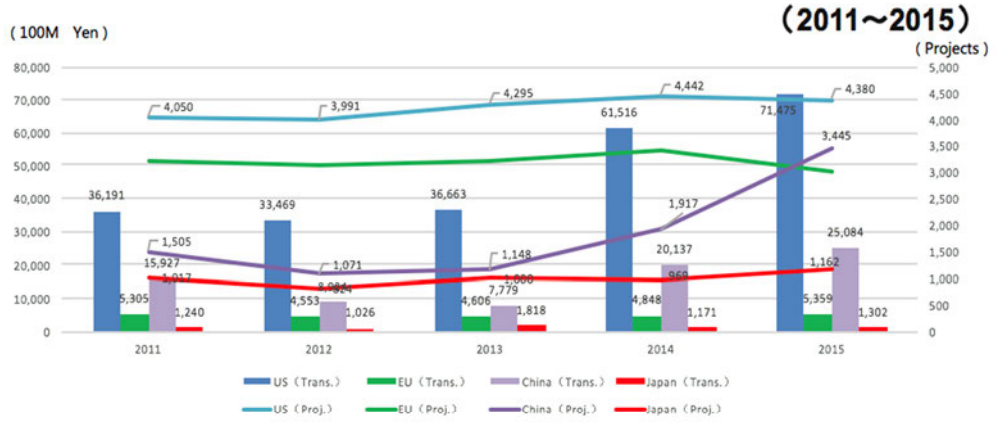


Outline

- Current Situation of Startups in Japan
- Governmental Laws and Policies
- Governmental Programs（START・SUCCESS）
- Startup from Academia funded by JST
- Challenges for Startups in Japan

1 The Amounts of VC Transactions and Projects in Major Countries and Regions

（2011～2015）

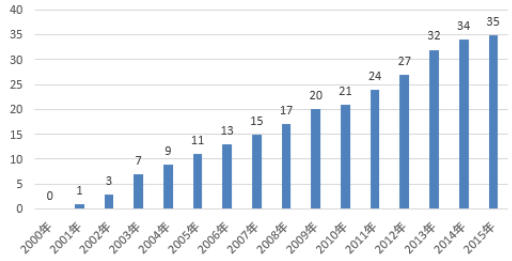


VEC<ベンチャー白書2016>

- The amounts of VC transactions and investment projects in US are far ahead of others.
- The amounts of VC transactions and investment projects in China increased rapidly since 2013, coming close to the lever of US.
- Compared with China， Japan improve slightly.

2 The amount of startups from Academia

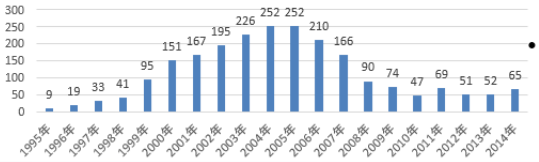
The amount of listed companies from academia(Cumulative value)



The market value of listed tech companies from academia （ Aprile,2016 ）

Company Name	Funded Date	IPO Date	From	The Market Value(100M Yen)
ペプチドリーム 株式会社	2006	2013	UT	3,570
CYBERDYNE 株式会社	2004	2014	Tsukuba U	2,954
株式会社 ユーグレナ	2005	2012	UT	1,284
サンバイオ 株式会社	2001	2015	Keio U	701
株式会社 ヘリオス	2011	2015	RIKEN	673
36 Listed Companies	-	-	-	15,394

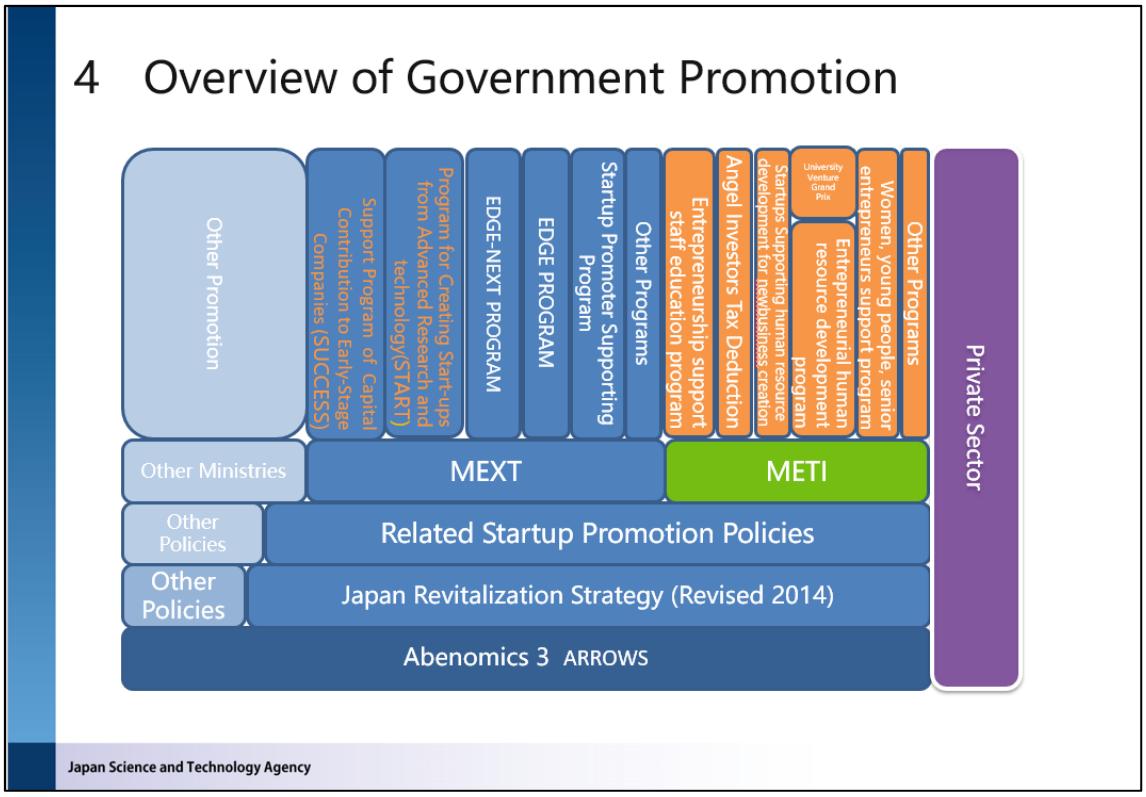
The amount of new startups from academia

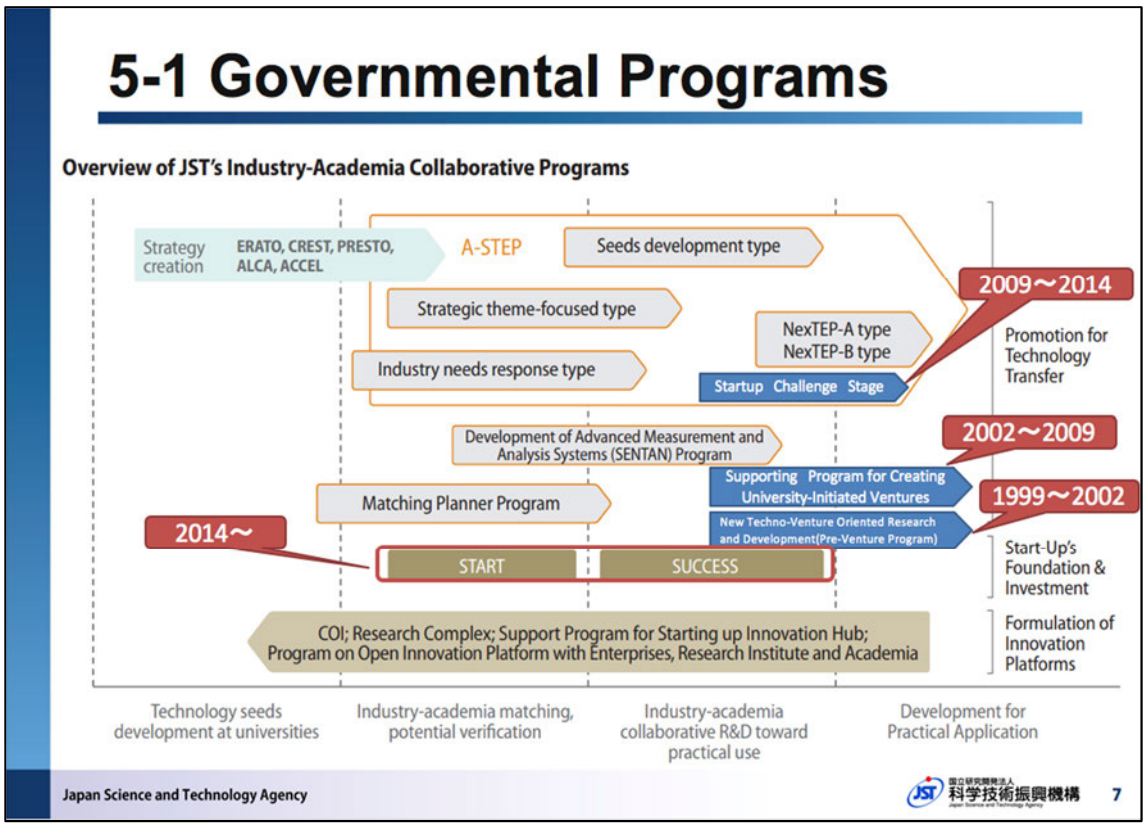


- These listed tech companies from academia contribute greatly to the Japanese economy, and the market value of them up to 150 million Yen.
- The number of new startups from academia has decreased significantly since 2005,.In 2014,there are only 65 new startups established, only a quarter of the peak period.

3 Governmental Laws and Policies

Title	Time	Aim
Act to Facilitate Technology Transfer from Universities to the Private Sector	1998	To develop new fields of business, improve industrial technologies and revitalize research activities at universities through measures to promote the transfer of research results related to technology to private business operators.
Act on Special Measures Concerning Revitalization of Industry and Innovation in Industrial Activities	1999 2011Rev. 2014Ended	To revitalize industries and promote innovation of industrial activities. The law authorizes the Department of Commerce to create standard patent rights clauses to be included in federal funding agreements with nonprofits, including universities, and small businesses.
Plan for the Creation of New Markets and New Jobs (Hiranuma Plan)	2001	15 Policy Proposals to Achieve the Creation of New Markets and New Jobs. I. Building Innovation Systems and Fostering Venture Businesses to Create New Industries ・Creating "1,000 Venture Firms Sprung From Universities I. Reform of Employment Systems and Maintenance of a Safety Net


4 Overview of Government Promotion
Other Promotion
Support Program of Capital Contribution to Early-Stage Companies (SUCCESS)
Program for Creating Start-ups from Advanced Research and technology(START)
EDGE-NEXT PROGRAM
EDGE PROGRAM
Startup Promoter Supporting Program
Other Programs
Entrepreneurship support staff education program
Angel Investors Tax Deduction
Startups Supporting human resource development for newbusiness creation
University Venture Grand Prix
Entrepreneurial human resource development program
Women, young people, senior entrepreneurs support program
Other Programs
Private Sector
Other Ministries
MEXT
METI
Other Policies
Related Startup Promotion Policies
Other Policies
Japan Revitalization Strategy (Revised 2014)
Abenomics 3 ARROWS
Japan Science and Technology Agency

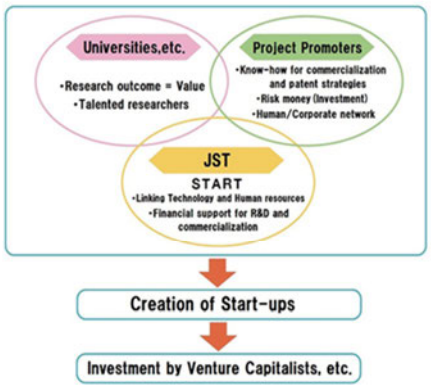

5-1 Governmental Programs
Overview of JST's Industry-Academia Collaborative Programs
Strategy creation
ERATO, CREST, PRESTO, ALCA, ACCEL
A-STEP
Seeds development type
Strategic theme-focused type
Industry needs response type
NexTEP-A type
NexTEP-B type
Startup Challenge Stage
2009～2014
Promotion for Technology Transfer
Development of Advanced Measurement and Analysis Systems (SENTAN) Program
2002～2009
Supporting Program for Creating University-Initiated Ventures
Matching Planner Program
1999～2002
New Techno-Venture Oriented Research and Development(Pre-Venture Program)
2014～
START
SUCCESS
Start-Up's Foundation & Investment
COI; Research Complex; Support Program for Starting up Innovation Hub;
Program on Open Innovation Platform with Enterprises, Research Institute and Academia
Formulation of Innovation Platforms
Technology seeds development at universities
Industry-academia matching, potential verification
Industry-academia collaborative R&D toward practical use
Development for Practical Application
Japan Science and Technology Agency
科学技術振興機構
7

5-2 Governmental Program(1):START

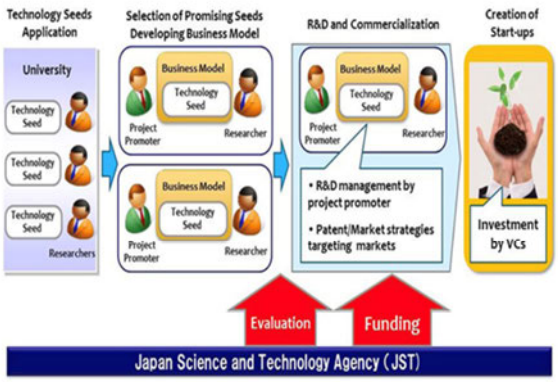
START

Program for Creating STart-ups from Advanced Research and Technology

Framework for START Program



Project implementation image



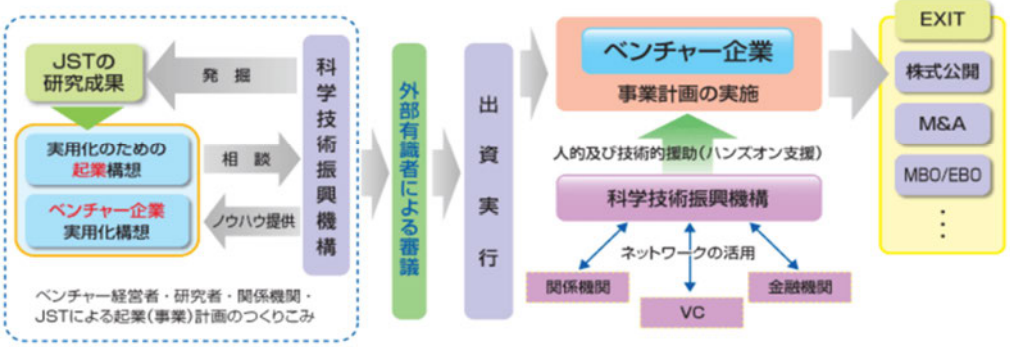
5-3 Governmental Program(2):SUCCESS

出資型新事業創出支援プログラム
SUCCESS

Support Program of Capital Contribution to Early-Stage Companies

Object ： A Startup or Team aiming for practical application of JST`s Research Archive

Maximum capital contribution： 50%(Total voting right) or 0.5 Billion Yen



6 Successful Startups from Academia

- TOKIWA-Bio --START Program
- Kyulux --SUCCESS Program
- Photosynth / SKYDISC -- NEDO's Program
- euglena -- UT
- ……

Japan Science and Technology Agency 国立研究開発法人 科学技術振興機構 10

7 Challenges for Startups in Japan

- Challenges for Startups(Especially R&D Driven Startup from Academia) in Japan

① Lack of financial support at an early stage.
② Lack of cultivation of management personnel.
③ Lack of incentive for establishing startup.

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【質疑応答】

- 高副研究員：日本の環境を伺うと中国とは大きく異なる印象を受ける。日本の場合は、各省が個別に取り組みを進めている印象を受けるが、政府全体の取り組みはどのような状況になっているのか？
  - ✧ 林上席：スタートアップ支援については、各省が積極的に現在公的支援のあり方を検討・実施中である。今後、省庁横断的な調整努力が必要になると考える。
  - ✧ 津田 F:起業支援という事例では、経済産業省が中核的な取り組みを進めていると考える。これまでシーズレベルから、商業化まで広く支援が行われてきた。文部科学省では、人材育成に関する取り組みを中心に公的な支援が進められている。また、JST の事例としては研究開発型スタートアップのプロジェクトが多く実施されている。SUCCES や START プログラムはこれらに該当する。
- 烏雲研究員：日本では、博士研究者の就職難の問題があるが、EDGE プログラムなどでは、博士研究者の起業について、どの程度認識されているのか？
  - ✧ 澤田 F:EDGE や EDGE ネクストは博士研究者も含めて、広く研究開発型のスタートアップ支援を行っている状況である。
- 王副研究員：日本のスタートアップについては、誰が起業をしているのか？
  - ✧ 津田 F:若手、もしくはシニア研究者が中心となるもの、企業の研究開発担当者が独立する事例など多岐にわたる。経営者を務める技術者もいれば、人材マッチングをつうじてとりくみを進める事例もある。
- 趙研究員：大学発スタートアップが 2000 年代初頭から急速に増えた時期があった印象を受ける。ただし近年若干数が減少している印象を受ける。今後の見込みはどうか？
  - ✧ 津田 F：急速な増加は見込めないのではないか？数が増えることと、エコシステム全体が成長することは異なる。
  - ✧ 林上席：終戦直後から高度成長にかけて多くの創造的なものづくり企業が成長してきた。21 世紀に入るまでは多くの成果を挙げてきた。ただし、米国の IT 分野の成長、中国の規模を強みとした経済成長、このような環境変化への対応を迫られている状況である。そうなった場合、社会システム全体を大きく変革していく必要性が発生する。深センなどの事例を確認すると、日本は後塵を拝している印象を受ける。中国から学ぶことも多いと考える。
- 高副研究員：林上席ご指摘のとおりである。日本の新たな成長が必要であると考える。イノベーションという意味では、国連では 4 月 21 日をイノベーションの日に位置づけたようである。日本政府の取り組みはいかがであるか？
  - ✧ 林上席:経済産業省などは国連のとりくみについて積極的に観察していた可能性がある。

2.5 総評･閉会挨拶

- 程主任：今回、スタートアップというテーマ選択は非常に良かったと感じている。発表を通じて主要国のスタートアップの政策と事例を比較することができた。中国側はマクロ的に政策を網羅し、日本側は事例や現地調査を踏まえた発表であった。感想として次の 3 点を述べたい。1 点目はスタートアップの役割の重要性についてである。エコシステムの観点から考えた場合、例えば企業全体を森とみれば大きな木もあれば小さな種も必要である。スタートアップは後者。現在、世界の状況は急激に変化しているが、大企業では政策の舵取りが迅速にできないことが少なくない。そこで機敏性の高いスタートアップを取り込むことで、政策における方向転換を可能にし、変化する世の中に対応できるようになる。2 点目は、このエコシステムの中には様々な要素が入っており、土壌全体を改善することが大事であるという点を指摘したい。これら要素の一つである政府はその役割を明確に果たさなければならない。政府の役割としては、例えば全体の統括、アーリー段階における呼び水的な資金の投入、人材育成といった点が挙げられる。また、政府が資金を出した場合でも、その管理は民間に委ねるべきと考える。3 点目として、スタートアップを促進するために規制緩和も重要であるという点を挙げたい。既存の制度ではスタートアップに向かない場合もあり、起業のやりやすい環境を構築していくことが重要である。メディアを利用し宣伝することで起業意識を高めることも可能である。制度の成果については中国ではまだ評価できない段階だが、将来的には評価の必要も出てくる。最後に改めて、今回のワークショップの発表者全員に対し、感謝の意を表したい。
- 林上席：最初に、今回のテーマの選び方が非常にタイムリーなものであった点を言いたい。日本側および中国側のプレゼンテーションはいずれも素晴らしいものだった。特に程主任の中国の起業の現状に関する発表については非常に興味深く拝聴した。日本はスタートアップや起業への関心が高いものの、なかなか進まない状況にある。その中で、中国は深センを中心にものすごい勢いで進んでいると理解していが、今回それを実際に発表で聞けてよかった。改めて、実際に資料を準備された方々全員の努力に敬意を表したい。質疑応答に関しては、最初のころは硬さが若干あったようだったが、後半に向けて活発な議論が行われたように思う。その意味で、日本、中国以外のさまざまな国のスタートアップについての理解が深まったと思料する。このワークショップは今年 7 回目を迎え毎年のイベントとなっているが、今回改めて重要なワークショップであることを実感した。「継続は力なり」という諺があるが、ぜひ来年以降も続けていくことをお願いしたい。日程、テーマ、場所等については今後双方で相談しながら決めていきたい。

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CRDS-FY2018-WR-05

ワークショップ報告書

JST/CRDS・中国科学技術信息研究所共催

「主要国のスタートアップ支援制度」

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