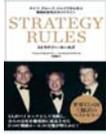


STRATEGY RULES: Lessons from Bill Gates, Andy Grove & Steve Jobs

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Focus of Today's Talk

- How do great entrepreneurs *think about the future*?
- How do they *decide what to do – vision to venture*?
- Lessons for Japan – *innovation to entrepreneurship*?

- We studied three great CEO-entrepreneurs and companies that we know well AND who shaped our modern world of high-tech strategy (especially platforms vs. products):
 - **Bill Gates** (Microsoft CEO 1975-2000, Chairman to 2014))
 - **Andy Grove** (Intel CEO 1987-1998, Chairman to 2004)
 - **Steve Jobs** (Apple CEO/Chairman 1976-1984, 1997-2011)

– Each firm at its peak was the most valuable in the world!

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On the Research

- **Audience: Mainly Practitioners**
 - Entrepreneurs
 - Technology CEOs and other senior managers
 - Students and others interested in strategy & execution
- **Methodology**
 - Qualitative research & interpretation
 - Evidence
 - ~100 interviews over 25 years, including Gates & Grove (Cusumano & Yoffie), plus executives in Apple, Microsoft and Intel; a few personal meetings with Steve Jobs (Yoffie)
 - 9 years of observing & working with Andy Grove (Yoffie)
 - 11 years of internal strategy documents-Intel; DOJ-Microsoft
 - Several of our books & 40 cases on Apple, Microsoft, Intel



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Strategy Rules - Context

Three Very Different People, Great Influence on Each Other, Never (as a Trio) Compared Before



Gates – Privileged, geek, drop-out



Grove – Holocaust survivor, Ph.D.



Jobs – Orphan, flower child, drop-out

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March 1998 Time Magazine 75th Anniversary



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Five Strategy Rules

Not a "random sample" of CEOs but a **common approach**.
Our argument -- important lessons for all strategists & entrepreneurs!

- 1. Look Forward, Reason Back**
未来のVisionを描き、逆算して今何をすべきかを導き出す
- 2. Make Big bets, Without Betting the Company**
会社を危険にさらすことなく、大きなかけをする
- 3. Build Platforms & Ecosystems, Not Just Products**
製品だけではなく、PlatformsとEcosystemsを構築する
- 4. Exploit Leverage & Power – Play Judo & Sumo!**
Leverage 力点とPower勢力を両方活用する
- 5. Shape the Organization around a Personal Anchor**
個人的な強みを核にして組織(と Strategic Focus 焦点)を作る

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Our Argument

- Gates, Grove & Jobs: Entrepreneur-CEOs – establish the foundations of high-tech strategy:
 - Software Products to Platforms = MICROSOFT
 - Products to Platform & Ecosystem Leader = INTEL
 - Portfolio of Products, Platforms & Services = APPLE
- Success not random or only due to "luck." Also reflected personal & organizational "anchors," deep capabilities, and ability to learn & evolve. Vision and willingness to experiment led to "big bets" that changed the industry.

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"Platform" General Definition

- A **"mechanism"** (physical or virtual) that brings different groups of people together for a common purpose or to share a common resource. 共通の目的のために一緒に異なる人々を合わせることで、それとも共通の資源を共有することを可能化する"メカニズム"(機構?)(物理的または仮想的)
- The mechanism also enables transactions, interactions, or innovations that would not otherwise occur or occur so easily. また、このメカニズムは、そう簡単に起こらないだろう取り引き、相互作用、あるいは革新を可能化する

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Levels & Types of Platforms

- Company Level 企業レベル**
 - **Product Platforms:** Common **building blocks and architecture** that enable different groups **within a firm** to more easily create new products or services 新しい製品やサービスをより簡単に作るために**会社内**の異なるグループの一般的なビルディング・ブロックとアーキテクチャ
- Ecosystem Level エコシステムレベル**
 - 1. Innovation Platforms:** Common **building blocks and architecture** that enable different groups **within & outside a firm** to create new products & services.
 - 2. Transaction Platforms:** Common **building blocks and architecture** to more easily interact or conduct transactions **within a market**.

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	Apple		
	Revenues (\$billion)	Operating Profits (%)	Market Value (\$billion)
2015	\$234	30	\$710
2014	183	29	460
2013	171	34	480
2012	157	35	413
2011	108	31	425
2010	65	28	312
2009	37	21	180
2008	32	19	118
2007	24	18	74
2006	19	13	46
2005	14	12	29
2004	8	4	8
2003	6	(loss)	4
2002	6	--	5
2001	5	(loss)	8

What changed at Apple in 2003-2004?

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2003	6	(loss)	4
2002	6	--	5
2001	5	(loss)	8

iPad (iPod Touch stretched, with some new apps)
 iPhone (iPod Touch + cell)
 iPod & iTunes for Windows
 iPod & iTunes

Apple			Microsoft			
	Revenues (\$billion)	Operating Profits (%)	Market Value (\$billion)	Revenues (\$billion)	Operating Profits (%)	Market Value (\$billion)
2015	\$234	30	\$710	\$94	19	\$365
2014	183	29	460	87	32	340
2013	171	34	480	78	34	300
2012	157	35	413	74	30	235
2011	108	31	425	70	39	247
2010	65	28	312	62	38	245
2009	37	21	180	58	35	247
2008	32	19	118	60	37	150
2007	24	18	74	51	36	288
2006	19	13	46	44	37	251
2005	14	12	29	40	37	234
2004	8	4	8	37	25	256
2003	6	(loss)	4	32	30	252
2002	6	--	5	28	29	216
2001	5	(loss)	8	25	46	258

“Platform” Over “Product” Strategy

When did “the light” go on ?

- **Bill Gates: 1980 MS-DOS contract with IBM**
 - Gates gave DOS to IBM for no-royalty but kept rights to license to other firms & create “PC clone” market ライセンスする権利を保持
- **Andy Grove: 1990 CISC vs. RISC decision**
 - Grove decided to stay with older x86 microprocessor design & evolve incrementally to preserve compatibility 互換性を維持する優先
- **Steve Jobs: 2003 iPod/iTunes to Windows**
 - Jobs agreed to make Apple products & services available to all PC users すべてのPCユーザーに利用できるようにする決定

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Apple: Pre-2003 = Product-First Thinking

Post 2003 = Product + Platform + Services!



- **Reinvented/extended capabilities:** Linked PCs to consumer electronics, smart phones, digital media & software
- **Changed strategy & business model:** Product portfolio (Mac, iPod, iTunes) to platform & complements (iOS – iPod, iPhone, iPad – with App Store, iTunes, then iCloud, etc.)

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Personal to Organizational “Anchors” ... Impact on Strategy

Bill Gates – a deep understanding of software, insight in 1975 to write once, sell a million times (“*Software as Product...Platform*”)

Andy Grove – *pursuit of “discipline”* 規律の追求, insight from 1968 to make Moore’s Law into a reality (“*Fab & Marketing*”)

Steve Jobs – an unmatched sense of design, insight in 1976 to bring new technology to average people (“*User Experience*”)

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How Look Forward, Reason Back?

- Create a vision of the future, such as by
 - **Extrapolation** 推定 (from “data” you & others know today)
 - **Interpretation** 解釈 (what do these data really mean?)
 - **Point of view** 立場 (what should the future look like for your firm & market, after 1-3, maybe 5-10 years?)
 - Describe in a **Vision Statement** that is **simple, clear, actionable**
簡単、明確、実用的
- Then reason back 逆算する:
 - What are the specific actions to take TODAY?
 - 6 months from now? Next 6 months? Etc.

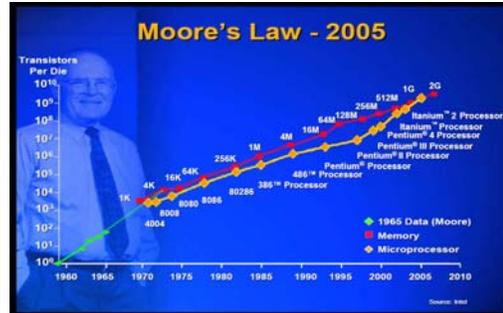
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Counter-intuitive, or Not?

- Yes. Most of us want to **learn from history**, so we tend to **“look back, and then reason forward.”**
- Our three CEOs did some of this!
 - **Gates** – IBM’s history with the mainframe & PC “clones”
 - **Grove** – Fairchild’s chaotic history & early Intel goals
 - **Jobs** – Hewlett-Packard et al. & Silicon Valley culture
- But mostly, they **“looked forward, and reasoned back”** – very carefully.
 - We believe that all great strategists & entrepreneurs need to do this themselves or with a trusted team.

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Moore’s Law Drove the Vision of Gates, Grove & Jobs – But Differently



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Bill Gates’ Vision (1975)

“a computer on every desk and in every home,” running Microsoft software. (*Company filing, 1975*)

Note: Microsoft co-founder Paul Allen wanted to sell hardware & software, which most computer companies did at the time (IBM, DEC, and Apple, founded 1976)

(J p. 63) **Gates:** “I thought we should do only software. When you have the microprocessor doubling in power every two years, in a sense you can think of computer power as almost free. So you ask, why be in the business of making something that’s almost free? What is the scarce resource? What is it that limits being able to get value of out that infinite computing power? Software.”

1994 magazine interview, quoted in *Microsoft Secrets* (1995)



マイクロプロセッサの能力が2年ごとに倍増するのなら、ある意味で、コンピュータの計算能力はほとんどタダになると言える。だから私はこう考えた。タダで手に入れるものを提供するビジネスを続ける意味はあるのか？ もっと価値の高い、希少なリソースは何か？ 無限のコンピュータインテリジェンス、パワーから価値を引き出すうえでの制約になっているものは何か？ その答えは、ソフトウェアだった。

—ビル・ゲイツ(1994年)

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Steve Jobs’ Vision (1976, 2001)

1976: A computer as easy to use as a typewriter or a toaster, right out of the box! Apple II (1978) then the Macintosh (1984)



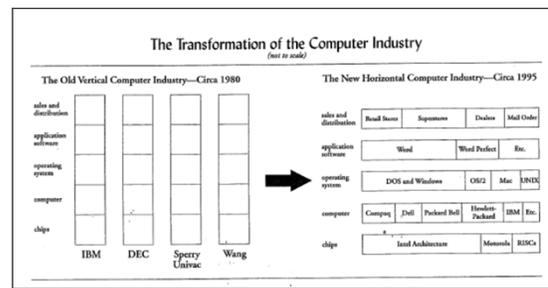
2001: “We think [the PC] is evolving... The future of computing lay in finding a way to allow users to create, share, and add value to the explosion of digital devices... The Mac can become the ‘digital hub’ of our emerging digital lifestyle.”



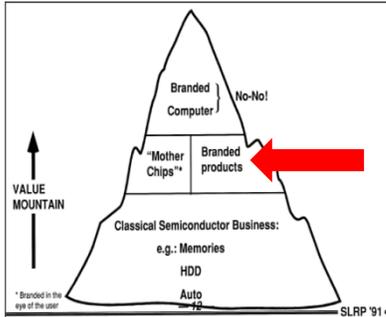
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Grove’s Vision (late 1980s)

Moore’s Law would break the vertical computer industry. Intel must try to dominate only the microprocessor layer.



1991 Grove Board Presentation



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Les Vadasz (Intel SVP) on Andy Grove:

(J p. 85) Grove ...understood a basic truth: **"You can only look so far, and so you better just keep looking frequently. That's the most important element of strategy: You understand the direction you're going, but you also know what you're going to do in the next six months.** Most companies will do a pretty good job many times about the direction, but then they never break it down to shorter metrics. Intel did a super job on that."

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「将来は必ず一定の距離までしか見通せないため、頻りに目を向けなければなら
ない。そして、戦略でもっとも重要なものは、将来だけでなく、次の半年で何をす
るかを理解することだ。たいていの企業は方向性を入念に検討するが、それを
短期間の具体的な目標に置き換えない。この点でまわっていたことが、インテル
が成功した大きな理由だ」

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Intel and "Moore's Law"

- Not really a "law." **An investment strategy (and big bet!)** by Intel to double price-performance every 18-24 months
 - Required billions of dollars in steady investments over many years
 - x86 microprocessor became key to PC platform and this allowed Intel to maintain high prices, build entry barriers, "control" supply
 - Required partnership with Microsoft and Intel efforts to grow the entire PC ecosystem – OS, applications, & hardware
- From 1965-2015, price-performance of PC computing devices increased about 2,000,000,000 times!
 - New apps & services utilizing higher levels of processing power, data storage, and bandwidth
 - Enabled most everything we see today in technology, including the next-generation "Internet of Things"

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On Making Bets

Andy Grove: "There is at least one point in the history of any company when you have to change dramatically to rise to the next level of performance. **Miss that moment and you start to decline.**"

どのような企業にも、少なくとも一度は、業績を飛躍させるための激的な変化が求められるときがある。その瞬間を逃せば、衰退が始まる。

Steve Jobs: "Dylan and Picasso were always risking failure. This Apple thing is that way for me. I don't want to fail, of course... **If I try my best and fail, well, I've tried my best.**"

Dylan と Picasso はリスクを取った。Apple で私がしていることもそれと同じだ。もちろん失敗はしたくない。だけど、自分のベストをやってみて失敗したのなら、それは自分のベストを試してみた。

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Thinking About the Future

- **Thought Exercise:** What innovations are occurring now in science, technology, and business that will greatly influence the future? These are what Andy Grove called "inflection points" "変曲点" – at least "10x" changes?
 - The next "Moore's Law," for different industries?
 - Current "facts" for extrapolation & interpretation?
 - What "resources" might become "almost free"?
 - What "resources" might become "more scarce"?
 - What "big bets" should companies make **NOW**?

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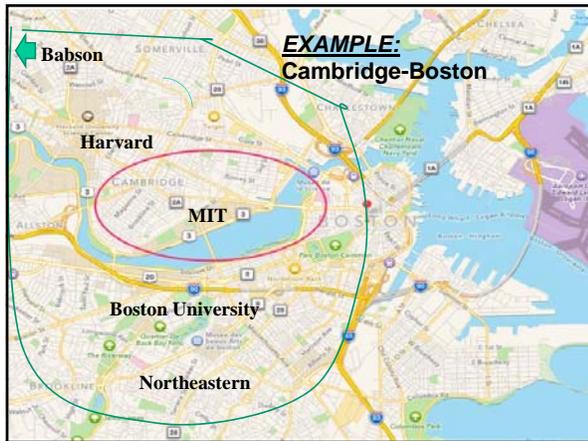
Lessons for Japan?

- Japan has become a world leader in “**Innovation Capacity**” **イノベーション能力** : creating patents (universities & companies), and product & technology development in big firms
 - **Many great entrepreneurs in Japanese history!**
- Japan today behind USA, Europe & China in “**Entrepreneurship Capacity**” **起業能力** : commercializing innovations & creating new firms
 - **How encourage and nurture the next generation?**

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How Succeed in Today’s World?

- **基礎科学と応用研究 一と商品化一の間のギャップが小さくなっている。**
- **ワールドクラスの大学は THREE 強い柱 PLUS より広範な ECOSYSTEM を必要とする。**



THE CAMBRIDGE AREA INNOVATION ECOSYSTEM
A sample of the rich resources available in the MIT Community and beyond.

Educational Institutions Harvard University Boston University Northeastern University Tufts University Babson College University of Massachusetts Worcester Polytechnic Institute Corporate R&D Labs Microsoft Google Intel Novartis Pfizer Schlumberger Nokia State & Local Gov. Initiatives Life Sciences Cluster/Robotic Cluster Clean Energy Cluster IT Cluster Regional Trade Associations Mass Technology Leadership Council Mass Software Council Mass Innovation and Technology Exchange Mass IT Collaborative Entrepreneurs Committee	Investors Venture Capitalists Angel Investors Private Equity Corporate Investor Groups	Entrepreneurship support IIE Boston 128 Innovation Capital Group Boston Entrepreneurs' Network HR Regional Publications Mass High Tech Boston Business Journal Xconomy Innovation Economy Column in the Boston Globe Entrepreneurs / Start-up Companies Life Sciences / Biotech Energy Robotics Internet / Web 2.0 / Web 3.0 Information & Communication Technologies	Service Providers Law Firms Marketing and Public Services Accountants and Part Time CFOs HR Outsourced IT Traditional Office Space Incubators Consultants MIT Organizations Deshpande Center Venture Mentoring Service MIT Entrepreneurship Center MIT Enterprise Forum Modular Adds-As-You-Grow Offices Services Cambridge Innovation Center One Kendall Square Pegs
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MIT ILP
INDUSTRIAL LIAISON PROGRAM

MIT Entrepreneurship Output

- About 30,000 companies founded by MIT alumni since 1945, with ca. 4 million employees & annual sales ca.\$2.5 trillion
- MIT graduates create hundreds of new companies each year
- Many MIT departments, labs, and centers encourage entrepreneurship among students, faculty & alumni:
 - Classes & workshops (MIT Sloan School, Media Lab, School of Engineering)
 - Trust Center for MIT Entrepreneurship
 - MIT \$100K Entrepreneurship Competition (business plan competition)
 - MIT Venture Mentoring Service
 - MIT Technology Licensing Office
 - Deshpande Center for Technological Innovation (commercialize lab projects)
 - MIT Media Lab Entrepreneurship Program
 - MIT Legatum Center for Development and Entrepreneurship
 - MIT Enterprise Forum (education of alumni + business plan competitions)

MIT Regional Entrepreneurship Acceleration Program (MIT REAP)

- Established ca. 2011 by MIT Sloan School of Management
- Identify & share best practices to encourage entrepreneurship from MIT-Cambridge & other ecosystems
- 2-year program, with 8 country-city teams
- 4 meetings over 2 years, 3 at MIT & 1 at a team site
- **2015-2017: 8 teams from Japan, China, Thailand, Wales, Norway, Israel, Saudi Arabia, Chile**
- **Tokyo University of Science = Host for Japan team, with all teams meeting January 2017 in Tokyo**

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MIT's perspective on innovation-driven entrepreneurial ecosystems



Source: <http://reap.mit.edu>



Innovative Capacity & Entrepreneurial Capacity Are Distinct Regional Assets

イノベーション能力

I-Capacity

Ability to develop new to the world innovations from inception through to the market.

Strong I-Cap:
Universities, Central R&D,
Network of researchers,
Medical Centers



起業能力

E-Capacity

Ability to start and build new to the world businesses from inception to maturity.



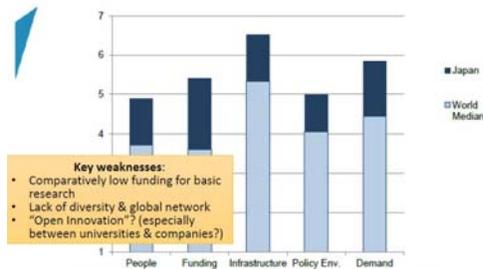
Strong E-Cap:
Entrepreneurs, Mentors,
Founding Teams
Investors at all stages

MIT



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High i-Capacity of Japan



- Key weaknesses:**
- Comparatively low funding for basic research
 - Lack of diversity & global network
 - "Open Innovation"? (especially between universities & companies?)

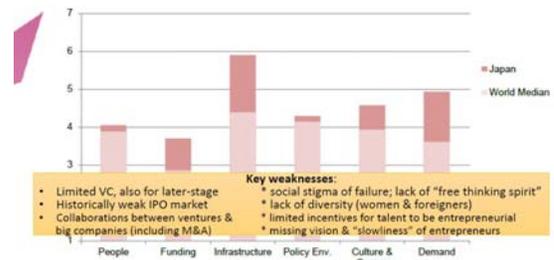
Source: World Economic Forum Global Competitiveness Index – Executive Opinion Survey (2013)

MIT | October 2015



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Low e-Capacity of Japan



- Key weaknesses:**
- Limited VC, also for later-stage
 - Historically weak IPO market
 - Collaborations between ventures & big companies (including M&A)
 - social stigma of failure; lack of "free thinking spirit"
 - lack of diversity (women & foreigners)
 - limited incentives for talent to be entrepreneurial
 - "missing vision" & "slowness" of entrepreneurs

Source: World Economic Forum Global Competitiveness Index – Executive Opinion Survey (2013)

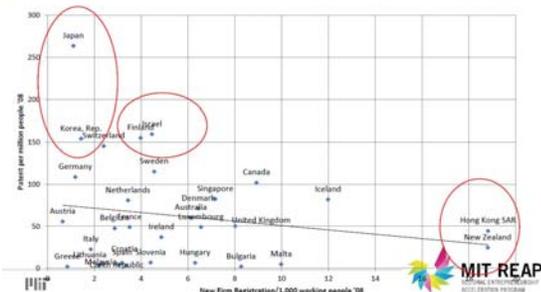
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Innovation and Entrepreneurship are Related but Different

Patent Rate (I-Capacity) vs. Business Formation Rate (E-Capacity)



MIT



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Culture and Community Capacity

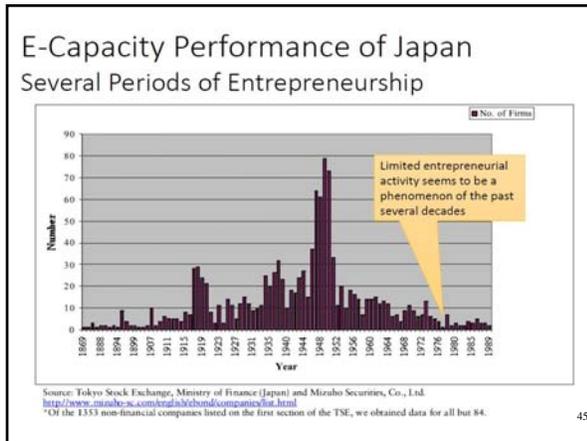
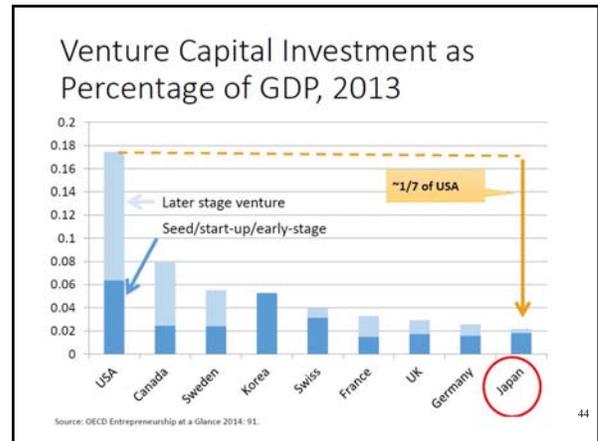
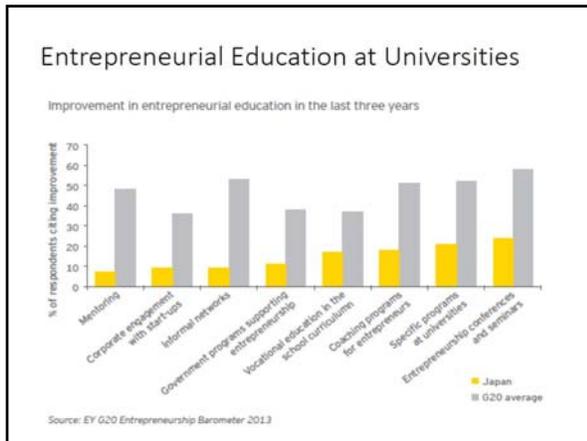
Prime Minister Abe: "Japan needs to become more accepting of initial failure."

	Japan	USA	Germany	UK	China
Early-stage entrepreneurial activity (TEA) (% of adult population)	3,8	13,8	5,3	10,7	15,5
Necessity-driven (% of TEA)	18,8	13,5	23,2	12,9	33,2
Opportunity-driven (% of TEA)	76,2	81,5	75,8	83,6	65,7
High status of entrepreneurs*	55,8	76,8	79,1	74,9	72,9
Good Career Choice*	30,9	64,7	51,7	60,3	65,7
Perceived opportunities*	7,3	50,8	37,6	40,9	31,9
Perceived capabilities*	12,2	53,3	36,4	46,4	32,9
Fear of Failure*	54,5	29,7	39,9	36,8	39,5

* % of population aged 18-64

Notable Program in Tokyo:
Entrepreneur Mentoring Initiative in Japan

Source: Global Entrepreneur Monitor 2014; Generation Entrepreneur 2013.



Conclusions

- Japan creates many innovations (patents) and companies but most startups remain small...
 - Innovations “trapped” in big conservative firms?
 - Not enough growth capital for startups?
 - Not enough “big ideas” or “vision”?
 - How get more young Japanese to take more risks?
 - How get more big firms to take more risks?
 - Entrepreneurs do not have to become Bill Gates, Andy Grove, or Steve Jobs to make important contributions to Japan’s future!

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Now is “the Moment” for Japan!

Andy Grove (former Intel CEO) quoted in *Strategy Rules*:
 “There is at least one point in the history of any company when you have to change dramatically to rise to the next level of performance. **Miss that moment and you start to decline.**”

どのような企業にも、少なくとも一度は、業績を飛躍させるための激的な変化が求められるときがある。
 その瞬間を逃せば、衰退が始まる。

今がその瞬間！
 Thank you

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