



Corporate Ventures in Sweden

How to improve the connection between Swedish start-ups and corporations?

April 2016

THE BOSTON CONSULTING GROUP

Executive summary (I/II)

- 1 Sweden is consistently ranked among the most innovative countries in the world and has since 2012 been in the Top 3 globally**
 - Stockholm internationally considered one of the top tech hubs in the world and is the 2nd fastest growing VC tech market globally, with >\$1B raised in 2015
- 1 However, Sweden has a challenge in growing start-ups to larger sized enterprises**
 - Only 9% alumni companies (2007-2013) from Swedish incubators had turnover >5MSEK 2014
- 2 On the other hand corporations are in pursuit for new ways for innovation & value creation¹, where they have traditionally relied on R&D and/or M&A**
 - R&D and M&A with limited correlation to value creation, and often focused on core business
- 2 Corporate venturing becoming an increasingly important complement to traditional innovation sources**
 - Especially in R&D intense industries such as pharmaceuticals and technology
 - Three main corporate venture vehicles used by corporations:
 - Corporate venture capital with *minority equity* investment in start-ups
 - Accelerators and incubators focused on *fast scan* of new business ideas
 - Innovation labs through *internal* innovation team outside of traditional R&D

1. Value creation measured as Total Shareholder Return

Executive summary (II/II)

- 3 So far, Swedish corporations have not been very aggressive in investing in local start-ups and the majority of acquisitions of Swedish start-ups are made by foreign companies**
 - Only ~20% of the largest companies in Sweden have their own corporate venture set-up today, compared to ~33% in 2012 and ~40% today among the worlds largest companies, with considerably higher penetration in the tech industry (~70%), pharmaceuticals (~65%) and telecom (~55%)

- 4 While there are already good examples of Swedish Corporate venture set-ups there is an opportunity for Sweden better match innovative start-ups with corporations**
 - Comparing Sweden with other successful CV and start-up clusters such Silicon Valley, Israel, and Unternehmertum in Munich there are three key areas to further strengthen:
 - Foster and promote a more entrepreneurial culture, building on Silicon Valley success
 - Focus policy making to match private funding and pro-actively attract foreign investments & talent, building on Israel success
 - Effective incubator organizations with role to integrate private sector and academia and where the government's role is to enable the collaboration, building on Munich success

Sweden ranked third most innovative country in the world

Relatively small share of population as entrepreneurs (6.7%) but high company survivability (84.4%)

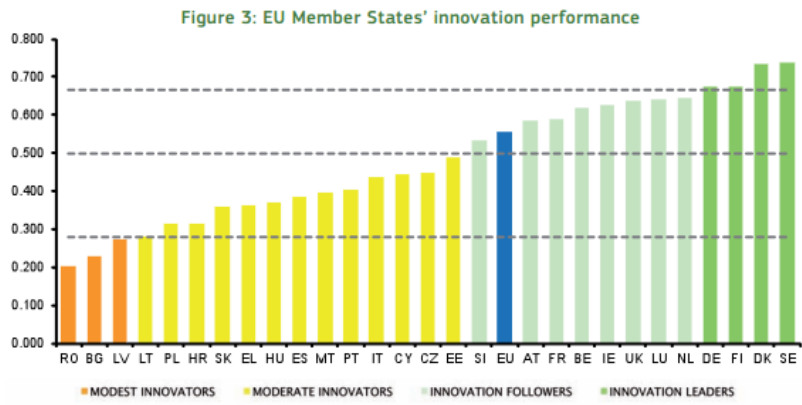
Sweden consistently ranked as top innovator...

3rd in Global Innovation Index 2015

- Top 3 placement since 2012
- Sweden with both high input and high output in innovation process

1st in Innovation European Scoreboard 2015

- Leads index since 2007
- However, sharp relative decline since 2012



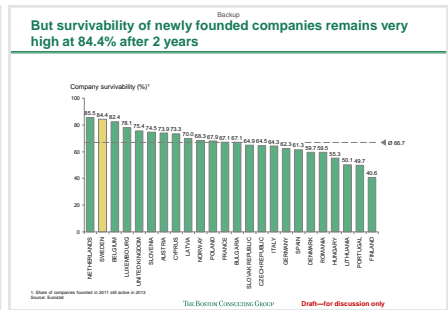
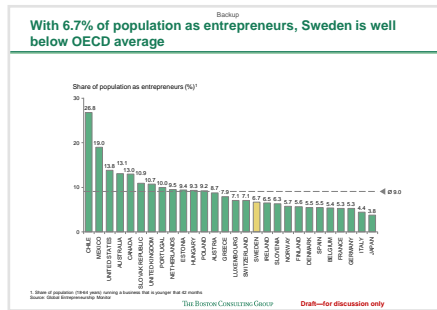
... but has modest company creation, although with very high survivability

Only ~7% of Swedes engaged in entrepreneurship

- Well below OECD average

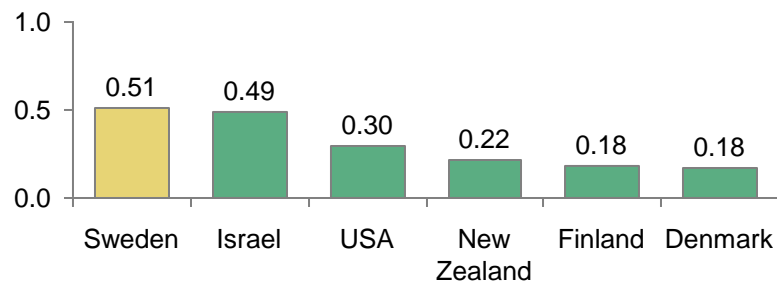
~85% of new companies still active after 2 years

- 2nd best in EU after the Netherlands

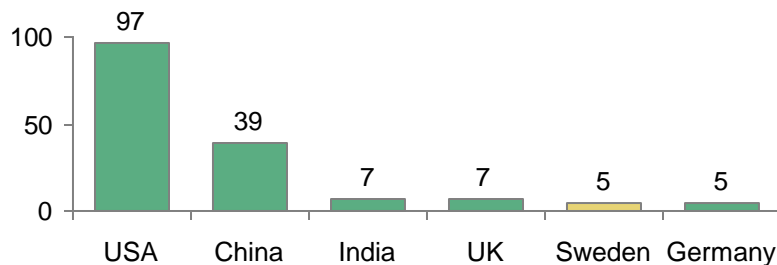


In creation of billion dollar tech companies, Sweden is ranked #1 per capita and #5 in absolute terms 2003-2015

Large tech companies per capita created¹



Amount of large tech companies created²



Stockholms stad

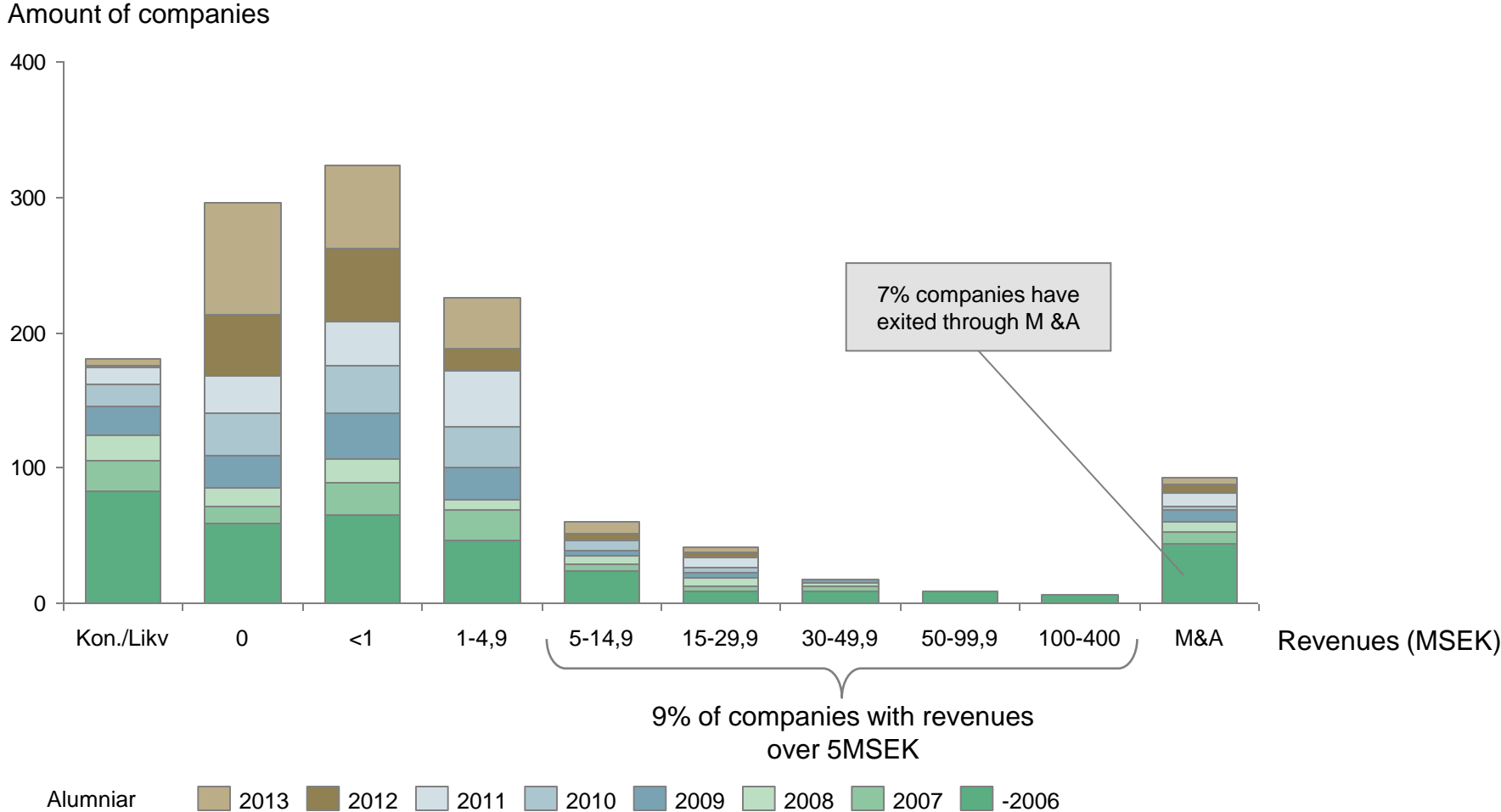
- Stockholm as Sweden's dominating tech hub
- 2nd fastest growing VC tech market globally, with >\$1B raised 2015
- Since 2003, Stockholm has supported creation of 6.3 large tech companies per million inhabitants, and is 2nd only to Silicon Valley (8.1)

1. Amount of tech companies per capita created since 2003 valued at more than 1 billion USD 2. Amount of tech companies created since 2003 valued at more than 1 billion USD
Source: Atomico, Swedish Startup Space

However, few Swedish start-ups make the enterprise journey

Only 9% alumni companies (2007–13) from Swedish incubators had turnover >5MSEK 2014

Incubator alumni companies (2007–13) by 2014 turnover



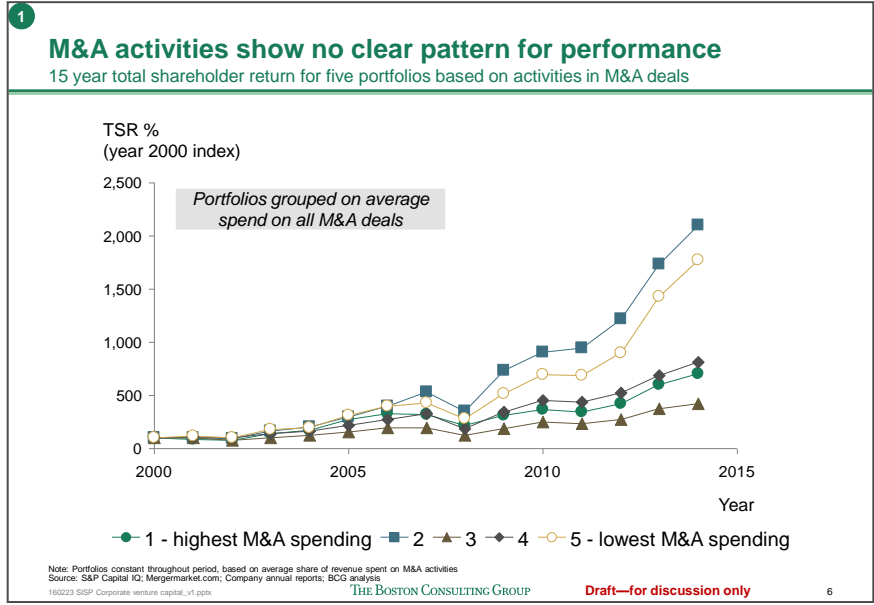
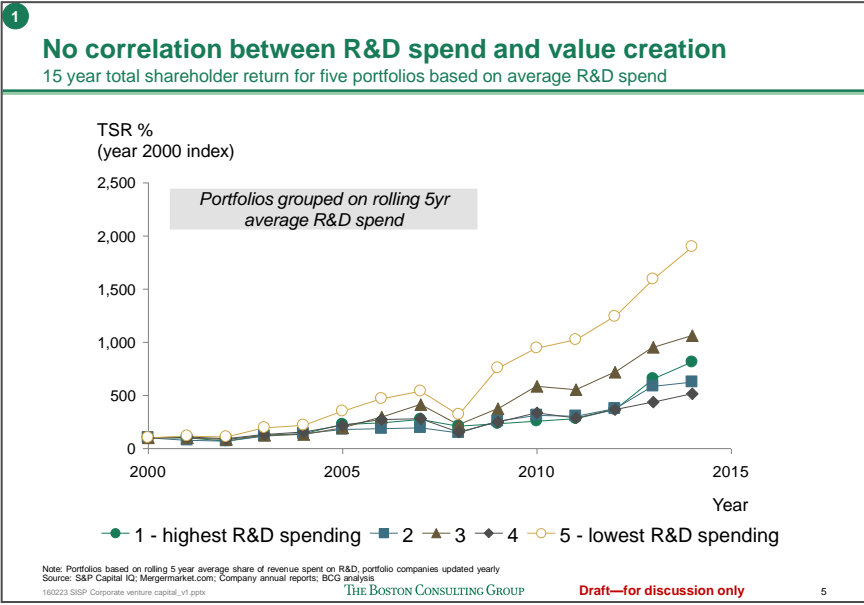
Source: ALMI, BCG analysis
160401 BCG Corporate ventures in Sweden_vSend.pptx

R&D and M&A both with low value creation correlation

Traditional sources for innovation (R&D and M&A) also primarily focused on core business

No clear correlation between R&D spend and value creation over time...

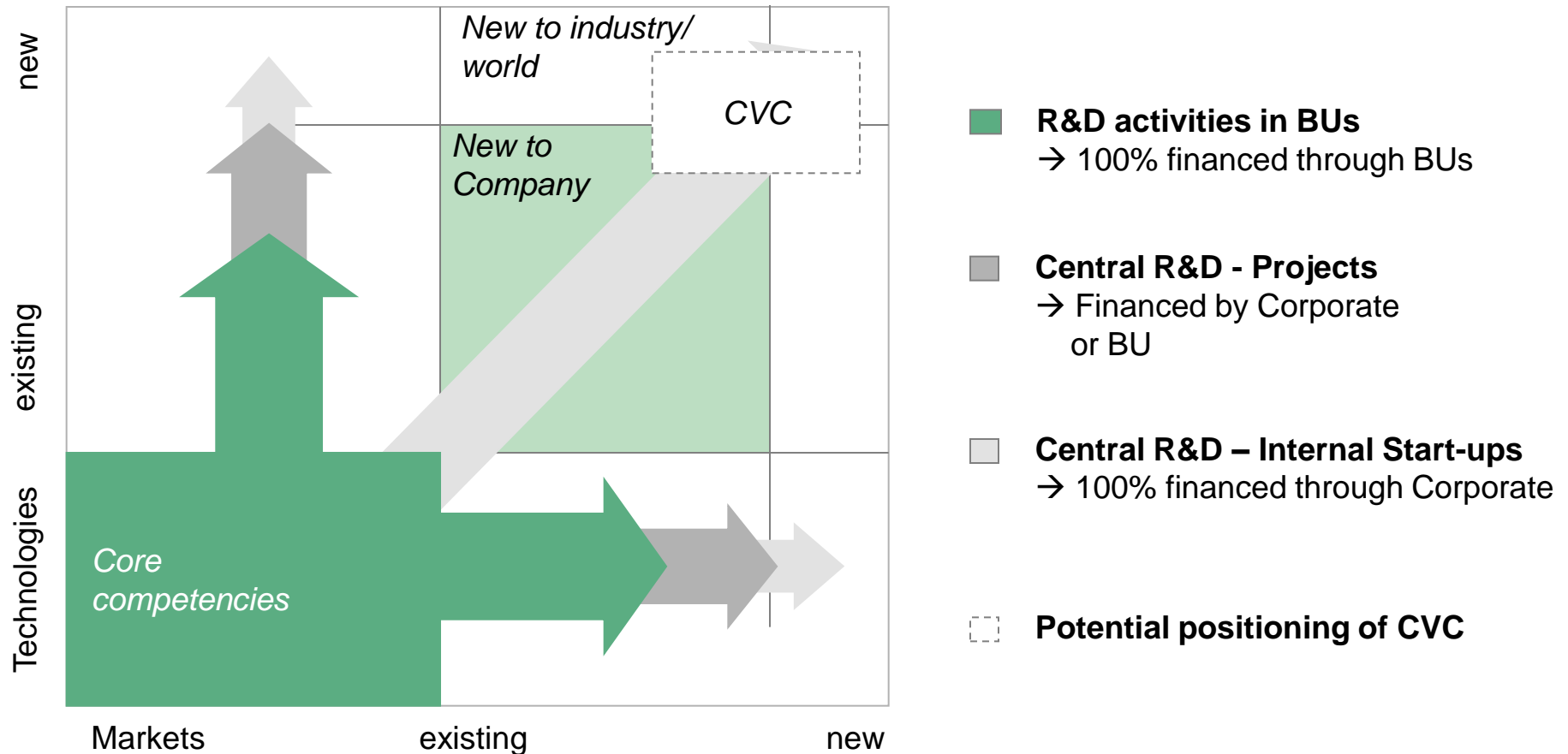
... with very similar pattern for M&A spend compared to value creation



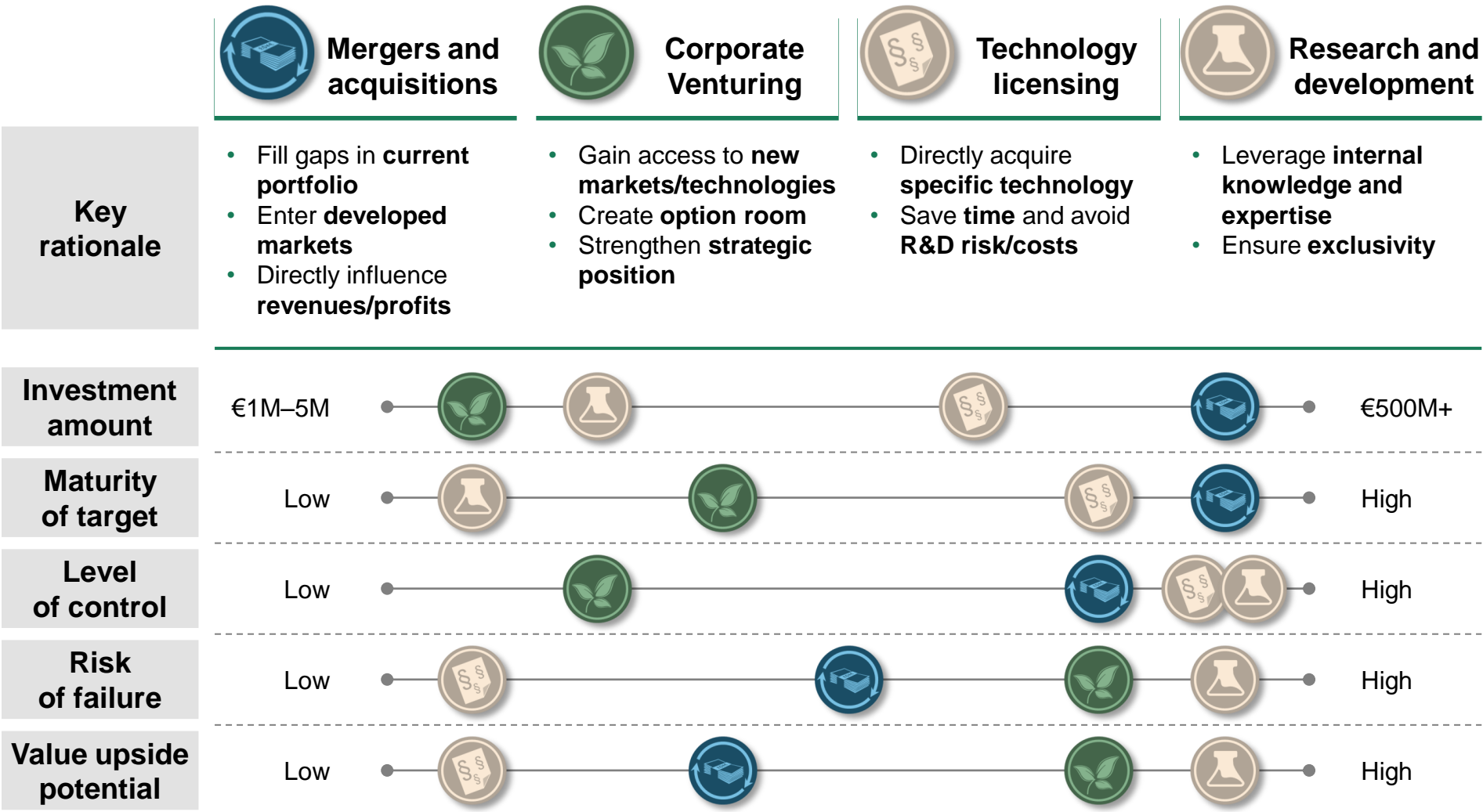
Corporations looking for alternative innovation and value creation sources

Note: Portfolios based on rolling 5 year average share of revenue spent on R&D, portfolio companies updated yearly
 Note 2: Portfolios constant throughout period, based on average share of revenue spent on M&A activities
 Source: S&P Capital IQ; Mergermarket.com; Company annual reports; BCG analysis

Corporate Venturing supports & expands existing innovation management approaches



Corporate Venturing and M&A with clearly differentiated characteristics



Source: BCG analysis
160401 BCG Corporate ventures in Sweden_vSend.pptx

Corporations applying especially three types of venturing tools mostly dependent on industry dynamics

Automotive Chemicals Consumer goods Financial services Media Tech Telecom

Corporate Venture Capital



- Minority *equity investment* in start-ups
- Gain *early* understanding of market/technologies
- Create *mid-term* option room

Accelerators and Incubators

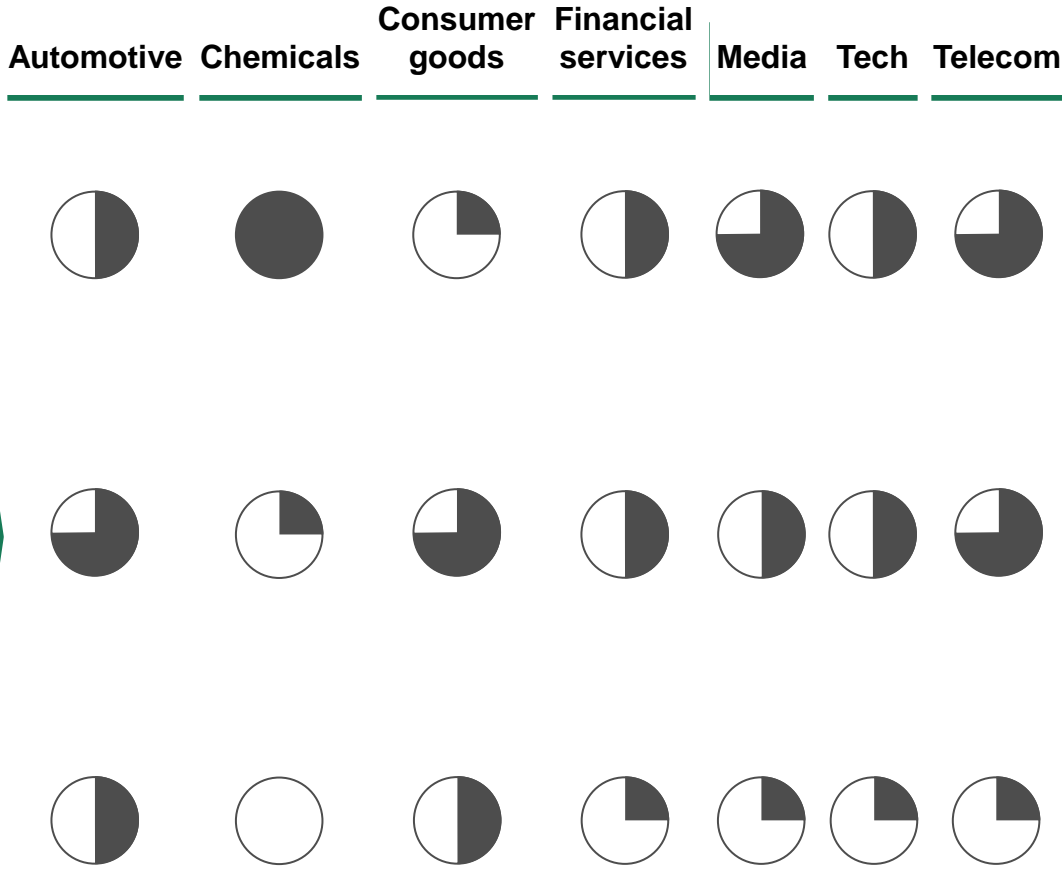


- *Fast scan* of new business ideas
- Look into *broad* array of searchfields
- *Structured* program with start ups

Innovation Labs



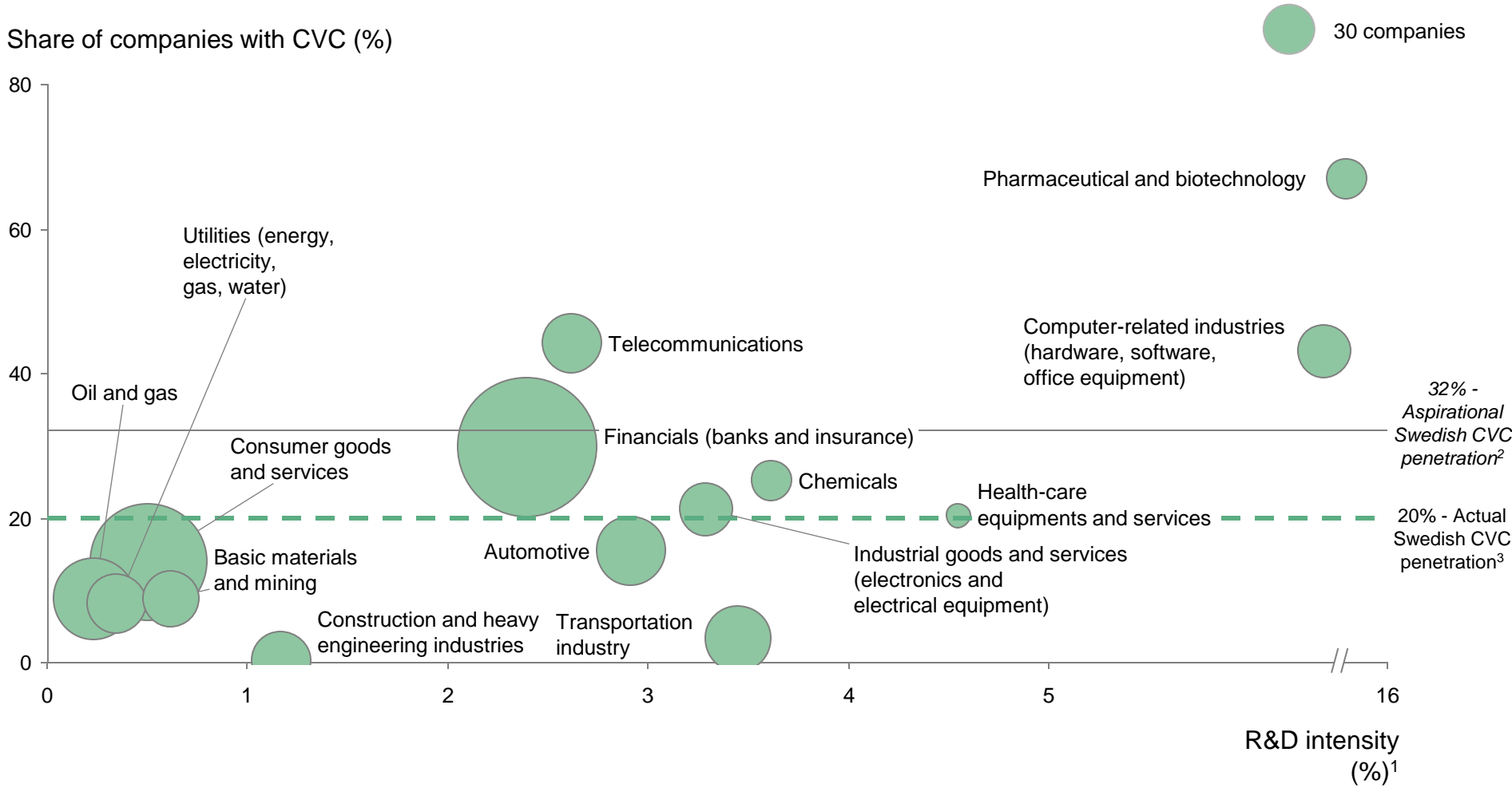
- *Internal* innovation team outside of traditional R&D
- *Rapid delivery* of prototypes
- Fast testing of *MVP*¹ in market



1. MVP = Minimum viable product
Source: BCG analysis

The higher the R&D intensity the higher CVC penetration

Pharmaceuticals and tech with highest relative share of corporate venturing among industries



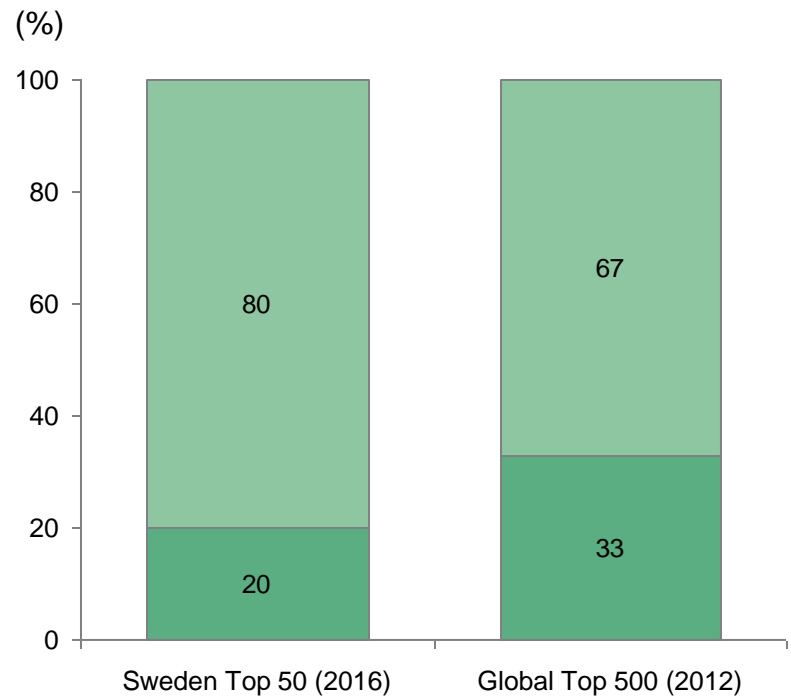
1. R&D investments divided by total sales 2. Compared to global average for various industries, industry composition of leading Swedish companies implies that there should be a 32% CVC penetration 3. The actual CVC penetration of leading Swedish companies is just 20%, indicating an underperformance

Source: Lovain University; BCG analysis

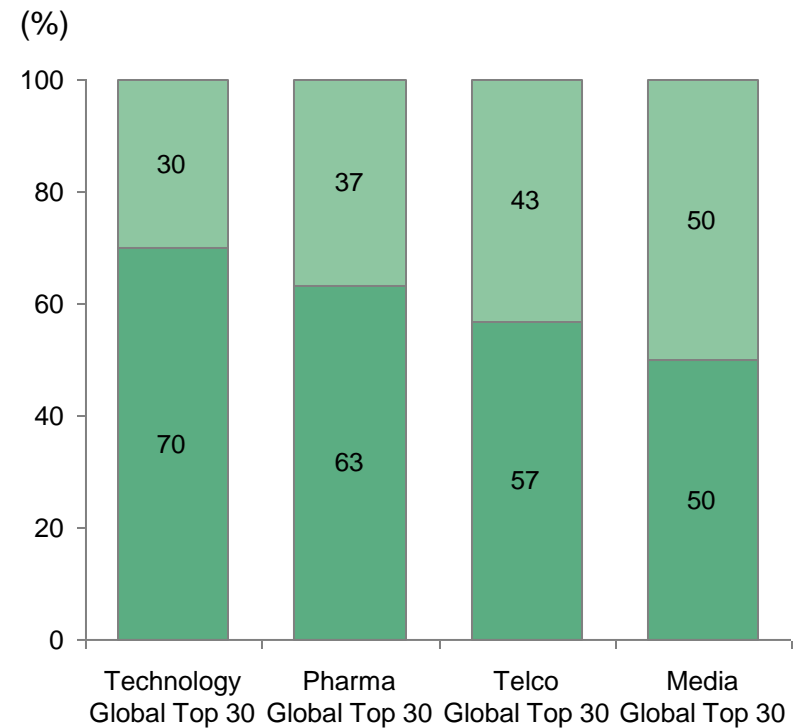
Only ~20% of Sweden's top 50 companies have a CV¹ set-up

Compared to average of ~33% of largest global companies

Swedish Corporate Venture less common than global average...



...where several industries vastly over perform



Since 2012 corporate ventures among global top 500 (Fortune) companies has increased from ~33% to ~40%

Swedish CVC landscape adds major players at steady pace

H&M latest to move into the investing in start-ups, even if CV set-up not fully developed yet

Swedish trend in line with global trend

Over the past decade, more and more Swedish blue chip corporations have been entering the CVC sphere at a moderate pace

Despite tech-companies being first-movers, the trend spans industries

- Everything from tech (Google Ventures) to Apparel Retail (H&M) and Media (MTGx)

"Sweden's largest public company H&M to search for more tech investments...H&M has established a Venture Capital business aimed at investing in young tech companies in sectors adjacent to apparel, like marketing and logistics"

Breakit.se (3/9 2015)

"The newly launched MTGx is to become "the X factor" in accelerating the organization's innovation and success within digital entertainment, by creating a portfolio of new entertainment platforms and centralize digital know-how for all the group's companies."

Dagens Industri (2013)

Several successful Swedish CV set-ups now exist



Company snapshot

- **Entertainment broadcasting company**
 - Free-TV, pay-TV, digital entertainment, radio and content production
 - Revenue (2014) 1.7B€

- **Automotive manufacturer**
 - Trucks, buses, construction equipment, marine and industrial engines
 - Revenue (2014): 31.0B€

- **Pharmaceutical and biologics company (British-Swedish)**
 - Discovery, development and commercialization of prescription medicines
 - Revenue (2014) 19.8B€

CVC activities

- **MTGx Ventures** est. 2012 to engage in new digital fields
 - Small-scale investments to large-scale acquisitions
 - Sub-departments: **MTGx MediaFactory** (incubator), **MTGx media-for-equity**, (media start-ups investor)

- **Volvo Group Venture Capital** est.1997
 - Induce business growth and increase profitability through investments in technology-based companies

- **Medimmune Ventures**, acquired by Astra Zeneca 2007
 - Invests in early-to late-stage biotech companies
- **BioVenture Hub**, est. 2014
 - Alternative eco system and life science-incubator for academics and start-ups

Strategy

- Leveraging MTG's global reach and marketing power combined with financial support to grow startups

- Startups with talented mgmt teams, active in disruptive/transformative technologies that can be combined with core Volvo capabilities

- Broad scope: all growth stages of startups, and very wide spectra of product categories adjacent to mother company core

Several global CV success factors that Sweden can build on

Three very different, but successful, start-up hubs compared

Key characteristics

Silicon Valley ecosystem

World's premier innovative eco system with several inimitable strengths



- Private capital supporting all stages of startup cycle
- Proximity to global tech leaders
- Heavy exposure to state funded research

Israeli government policy making

Active long-time state support of entrepreneurship and tech startups



- Network of incubators (30 yrs)
- Matching of private capital (20 yrs)
- Actively recruiting FDI¹ for investments and R&D to Israel (10 yrs)

Munich incubator Unternehmertum

Europe's largest university-based incubator



- Supporting >50 startups/year
- 90% long-term private financing
- Close cooperation with private sector
- Utilizes university's research
- Pan-regional hub for Bavaria

Key characteristics

Culture of entrepreneurship

- Increase status of entrepreneurship
- Focus on market need and individual innovators, not government

Active government policy

- Make innovation central to labor policy
- Match private investments
- Use government agencies to promote Swedish startups abroad

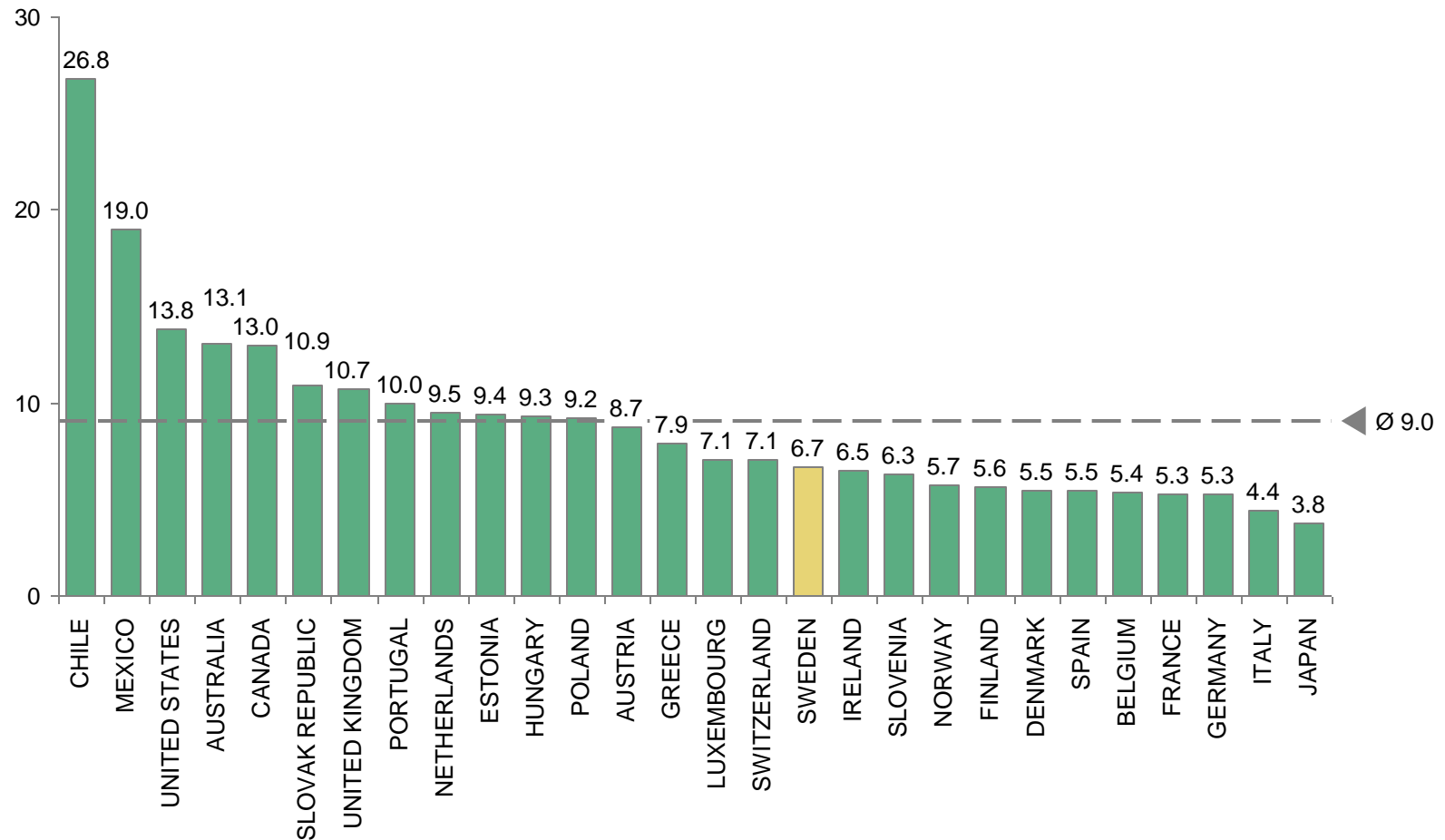
Effective incubator organization

- Integrate private sector and academia; government role only to enable
- Regional cooperation to scale incubator effectiveness

Appendix

With 6.7% of working population as entrepreneurs, Sweden is well below OECD average

Share of population as entrepreneurs (%)¹

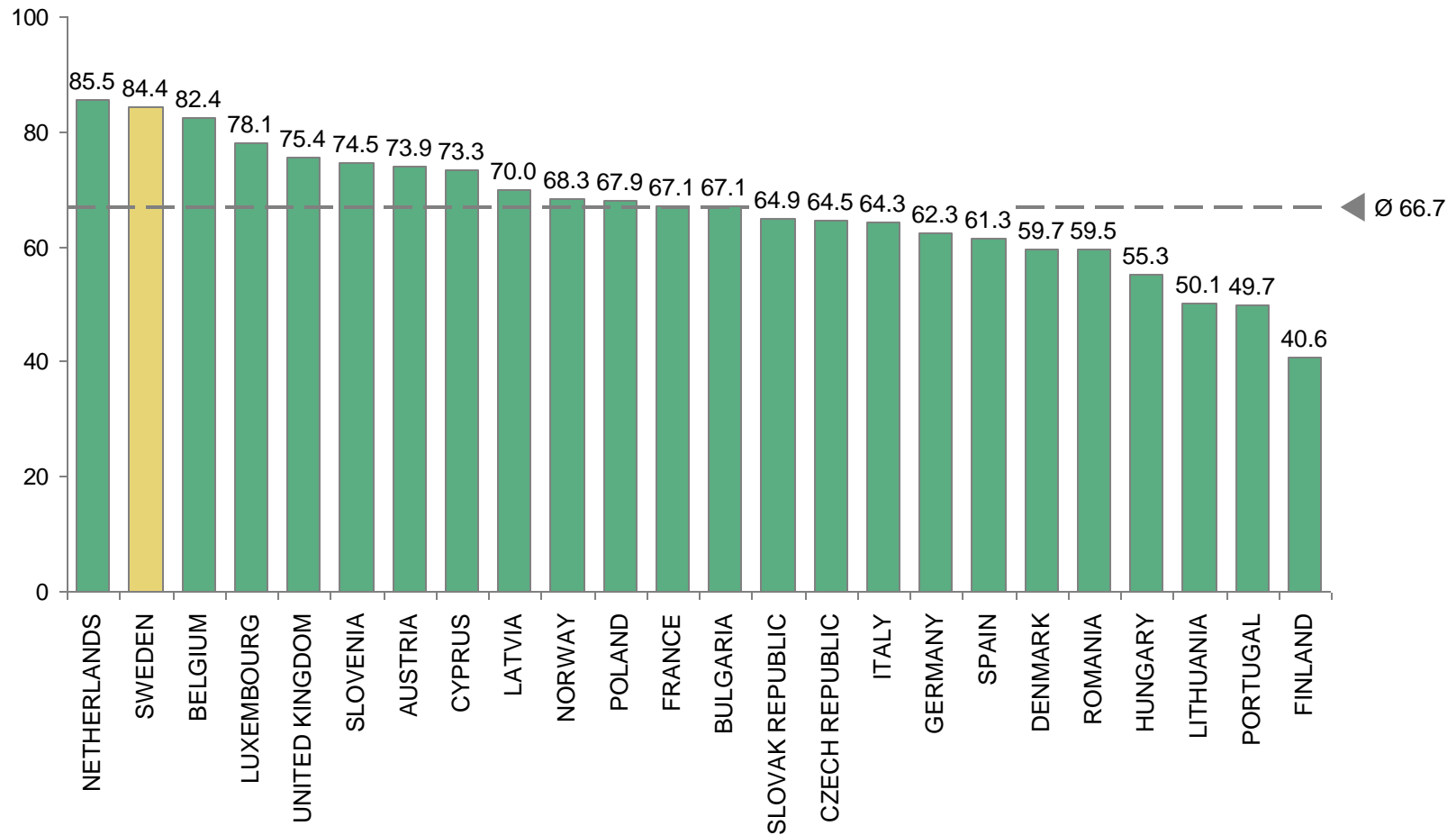


1. Share of population (18-64 years) running a business that is younger than 42 months

Source: Global Entrepreneurship Monitor

But 2-year survivability of newly founded companies remains very high at 84.4% compared to other EU countries

Company survivability (%)¹

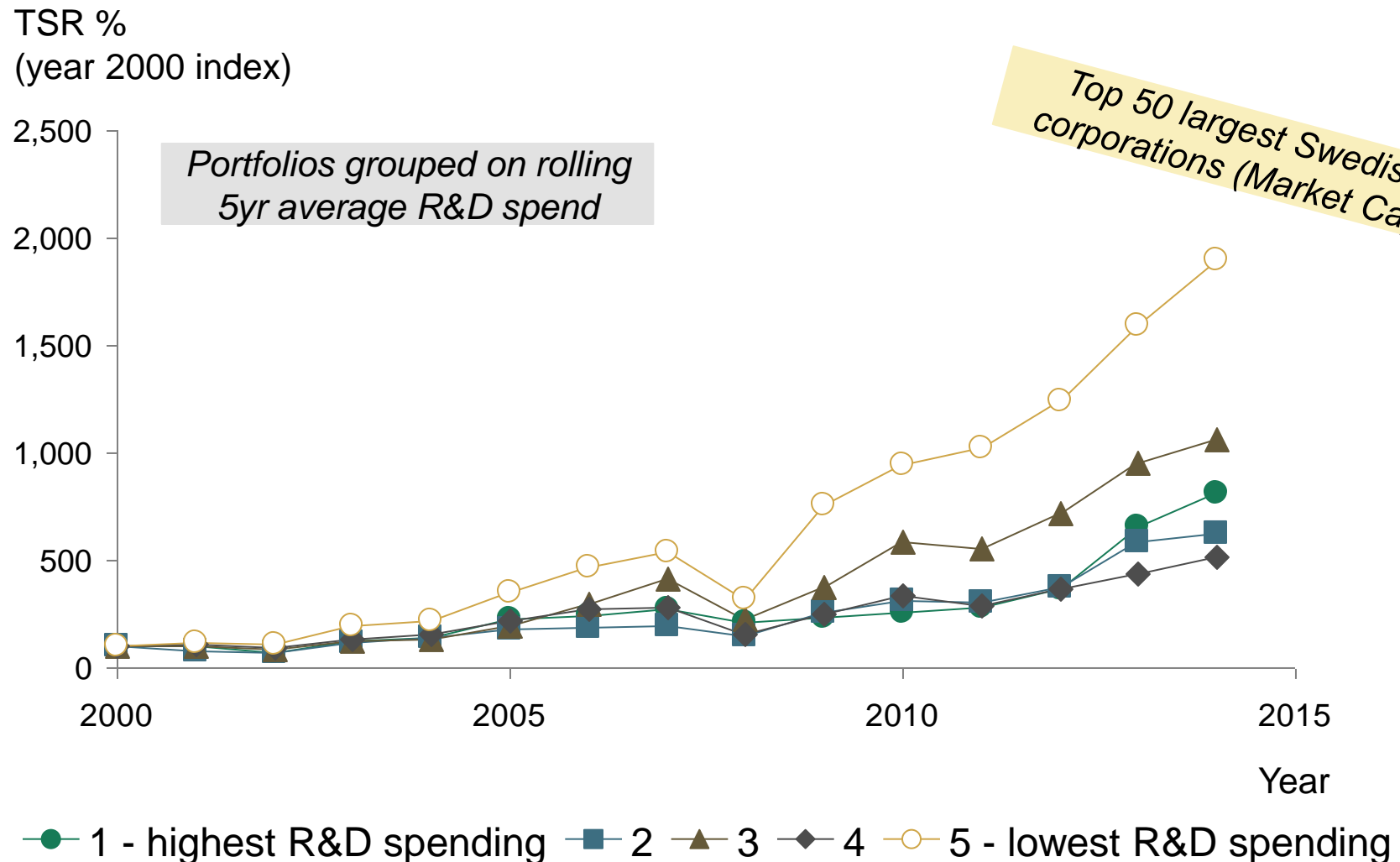


1. Share of companies founded in 2011 still active in 2013

Source: Eurostat

No correlation between R&D spend and value creation

15 year total shareholder return for five portfolios based on average R&D spend

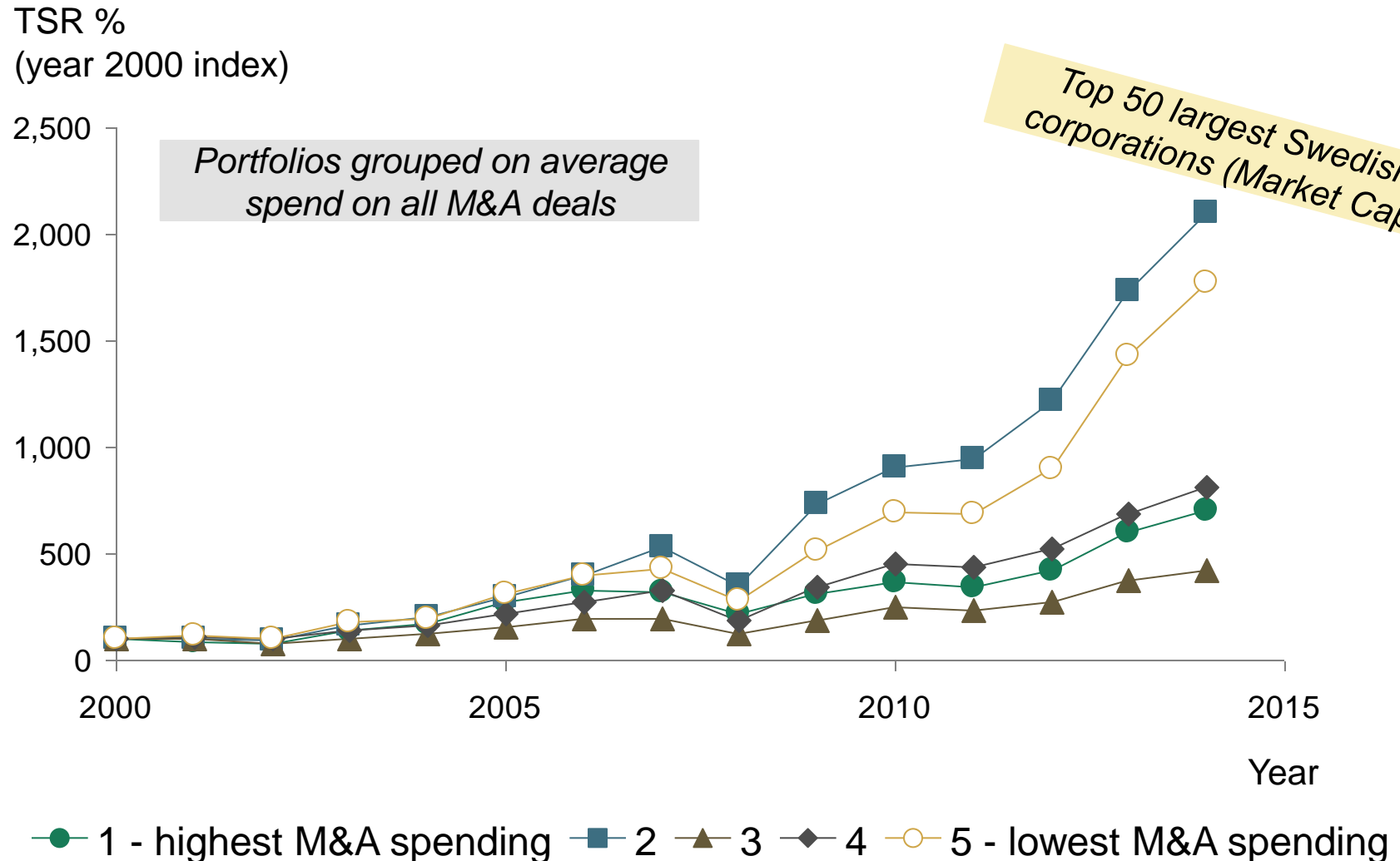


Note: Portfolios based on rolling 5 year average share of revenue spent on R&D, portfolio companies updated yearly

Source: S&P Capital IQ; Mergermarket.com; Company annual reports; BCG analysis

M&A activities show no clear pattern for performance

15 year total shareholder return for five portfolios based on activities in M&A deals



Note: Portfolios constant throughout period, based on average share of revenue spent on M&A activities

Source: S&P Capital IQ; Mergermarket.com; Company annual reports; BCG analysis

160401 BCG Corporate ventures in Sweden_vSend.pptx

MTGx focuses on expanding into adjacent digital solutions

MTGx with multiple venturing divisions

MTGx Ventures

- **Larger investments in digital companies**
- Portfolio currently mainly consists of **e-sports¹ broadcasting companies** and **YouTube MCNs²**

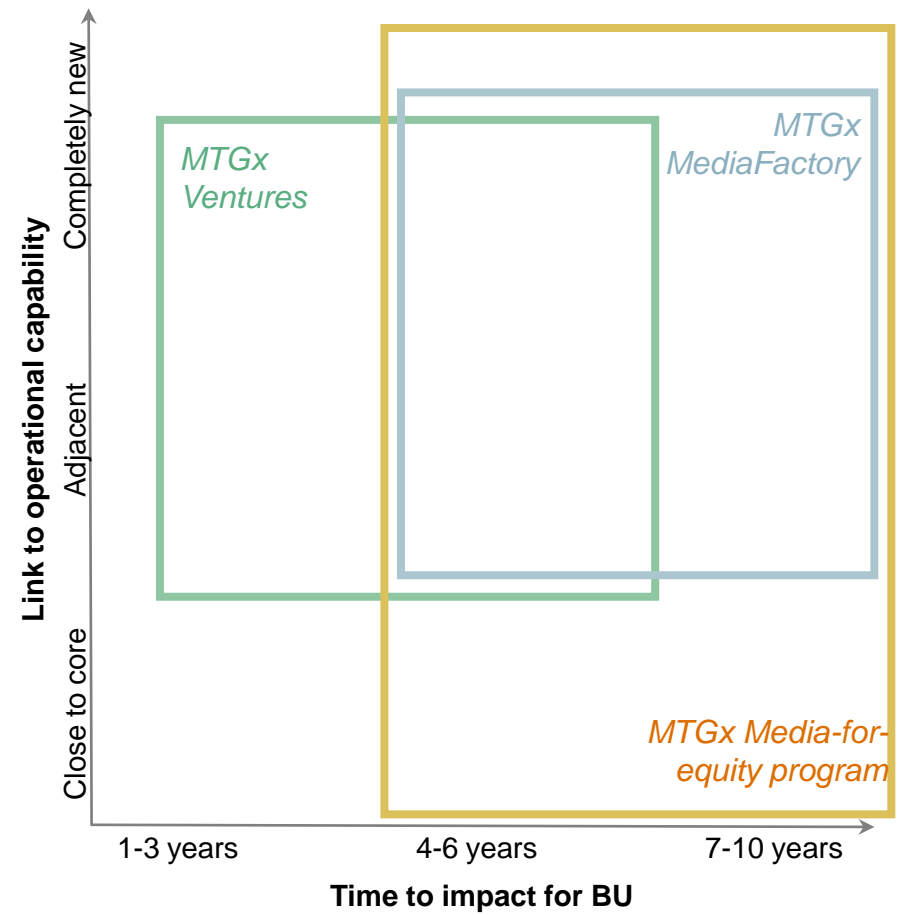
MTGx Media-Factory

- **Corporate accelerator** for start up media companies
- **Early-stage partnerships** and minority stake investments
- Support with mentors, media reach and content rights

Media-for-equity program

- **European media alliance** for investing in new digital businesses wanting to expand geographically
- **Invest media space** rather than money

MTGx division with varied business focus



1. Competitions in video and computer gaming 2. Multi-Channel Network
Source: MTGx; BCG analysis

MTGx press clippings

" Our ambition is to find and develop **digital entertainment products** that complement our existing ones, as well as to discover **brand new concepts**."

MTGx.se

" We see a **clear interest** among start-up companies for developing their products and ideas **along MTGx** and our **digital eco system**."

Anil Hansjee, Chief Investment Officer MTGx

" As an investor, we can provide resources from all parts of our business [...] with **marketing power** across multiple countries [...] as well as pure **development support**. Finally, we have the ability to offer **financial support** for your company."

MTGx.se

"Along the development of MTGx there has arisen **some dissatisfaction** among other parts of MTG. Allegedly, colleagues have reacted on the **high costs of MTGx**, their locales and their privileges.

Dagens Media

"We think a lot about **which areas we should be active in**, where we are not active today due to our cultural heritage"

SvD Näringsliv

"**MTG enters European Media Alliance** to grow digital business [...] The alliance creates a strong pan-European footprint that enables its members to **invest in consumer-focused digital start-ups**, [...] that are looking to **expand their geographical footprint**."

MTG press release, Oct 15 2014

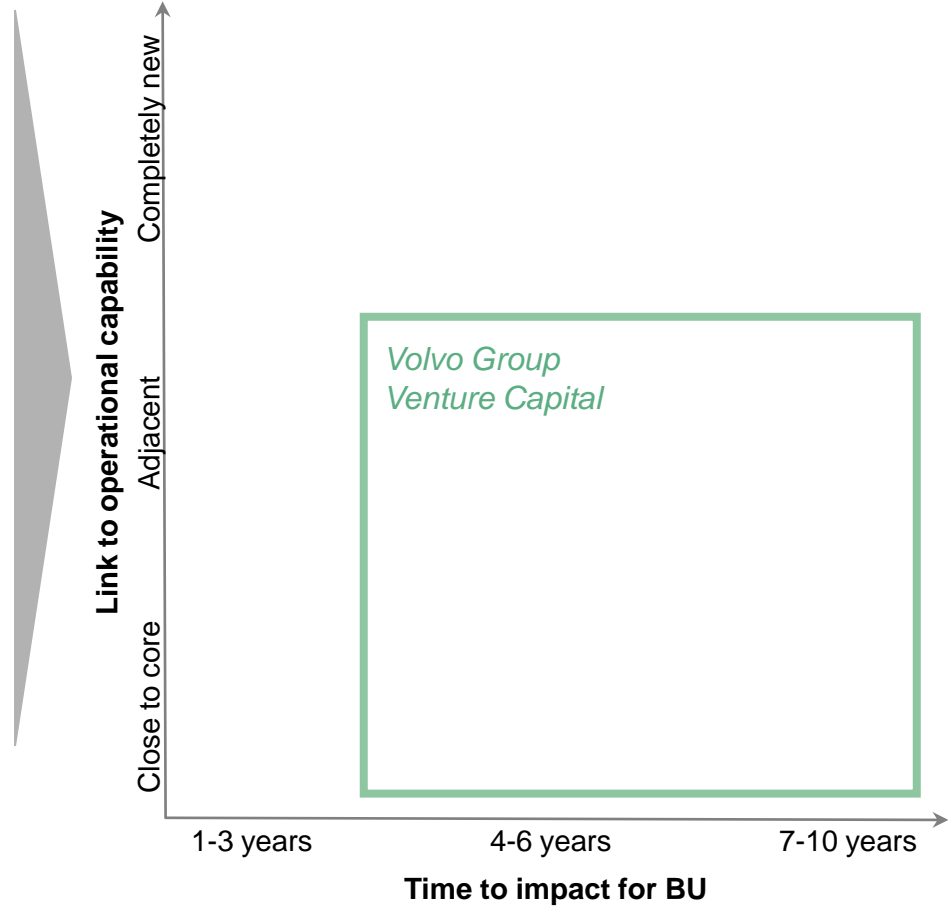
Volvo focuses on new technologies close to current core

Investments open up new opportunities for Volvo

Volvo venturing goals mainly within adjacent and core segments

Volvo Group Venture Capital

- Invest in **technology-based innovation** in **adjacent fields**
- Investments should lead to **increased profitability for customers** and **new business opportunities** for Volvo
- Investment should have a **positive return** while contributing to the **growth and competitive advantage** for Volvo
- Portfolio companies currently within e.g. **autonomous vehicles, artificial intelligence** and **online truck fleet management**



Volvo Group Venture Capital press clippings

"Our focus is on areas in which **technology-based innovation** results in solutions that improves the profitability of our customers and enable **new business opportunities** for the Volvo Group."

volvogroup.com

"We look at the company's potential and how we can combine the assets of the company with the capabilities of Volvo Group. To find these companies, we **cooperate with an extensive global network** of entrepreneurs and other investors"

volvogroup.com

"Decide **where you want to take your bets** as a corporate, and which part of the industry you want to specialise on. **Specialising focus** is the only way to drive deal flow. You will **never succeed as a passive investor**. **The only way to succeed is by doing.**"

Johan Carlsson 2012,
Former president Volvo Group Venture Capital

It became clear to us we are good [at] investing when we can **combine the capabilities** of the group with a company that has a **new product that is ready for market** and ready to be **scaled up**. [...] That is where our venture model works best."

Johan Carlsson 2012,
Former president Volvo Group Venture Capital

AstraZeneca ext. innovation includes venturing & incubation

Focus mainly within pharmaceuticals

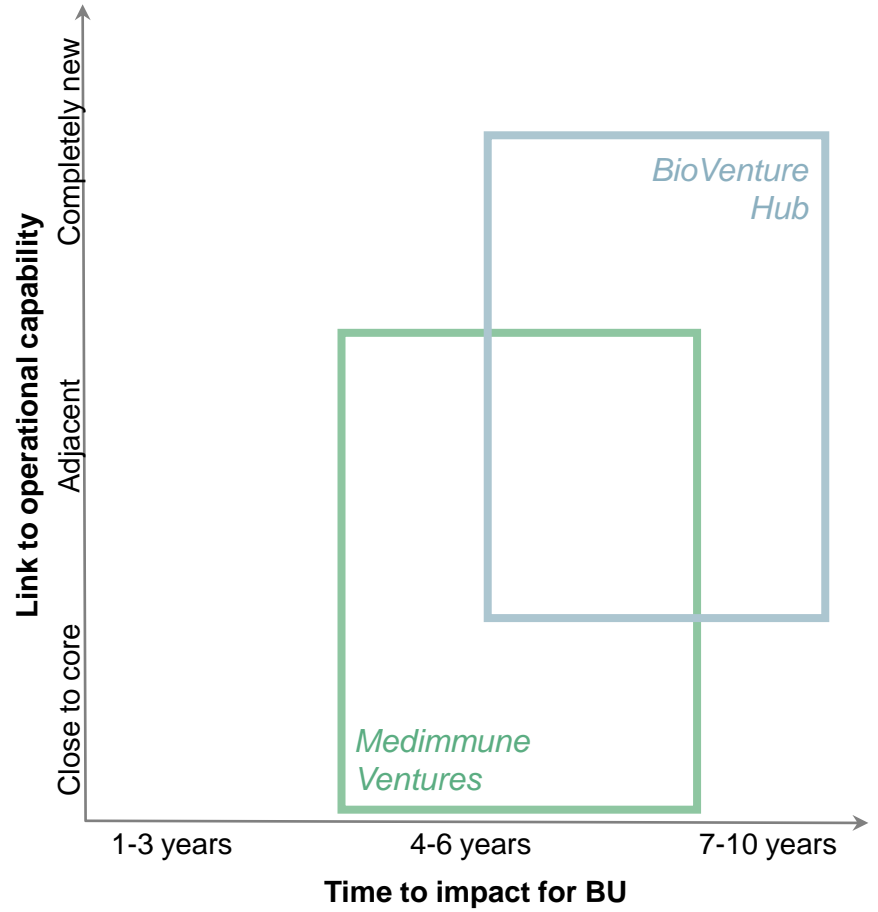
Med-immune Ventures

- Invests in **small and large molecules, vaccines, pharmaceutical technologies and platforms**
- Invests in **early-to late-stage** products and technologies
- **IT companies** pertaining to discovery, development and commercialization of pharmaceutical products are also of interest

BioVenture Hub

- **Incubation hub** for start-ups and academic groups providing **know-how, labs and offices**
- Objective to expose AstraZeneca to innovation with **lower investment risk**
- Target companies are **about to enter clinical phase** and should be a suitable collaboration partner

Mostly long-term focus for AstraZeneca



1. Video game sports 2. Multi-Channel Network
Source: AstraZeneca; Medimmune Ventures; BCG analysis

Medimmune Ventures and BioVentureHub press clippings

Medimmune Ventures

"[We] invest in private companies which develop **small and large molecules, vaccines, pharmaceutical technologies and platforms**. We also seek investments in medical device, diagnostic, imaging and healthcare IT companies which pertain to the **discovery, development and commercialization** of pharmaceutical products."

medimmuneventures.com

"MedImmune Ventures invests in companies with **early to late stage** products and technologies, in early (e.g. seed) to late (e.g. mezzanine) rounds of financing."

medimmuneventures.com

"We believe that in the current financial environment, there is a **growing role for corporate venture** capital funds such as MedImmune Ventures"

Ron Laufer, senior managing director,
MedImmune Ventures

BioVentureHub

"The hub exposes AstraZeneca to **more innovation and science**. It stimulates an even more vibrant place to work and generates **future collaboration opportunities**."

azbioventurehub.com

"This venture can have a **decisive effect** on the development of life science in Sweden"

Birgitta Losman, President
Västra Götaland Development Board

"In our case the **hub worked as planned**. It's given us **new partnerships** and interactions [...]. You can also engage Astra employees as consultants, which is **very valuable**."

Johannes Hulthe, CEO Antaros Medical,
Company at BioVenutreHub in 2015

Disclaimer

The services and materials provided by The Boston Consulting Group (BCG) are subject to BCG's Standard Terms (a copy of which is available upon request) or such other agreement as may have been previously executed by BCG. BCG does not provide legal, accounting, or tax advice. The Client is responsible for obtaining independent advice concerning these matters. This advice may affect the guidance given by BCG. Further, BCG has made no undertaking to update these materials after the date hereof, notwithstanding that such information may become outdated or inaccurate.

The materials contained in this presentation are designed for the sole use by the board of directors or senior management of the Client and solely for the limited purposes described in the presentation. The materials shall not be copied or given to any person or entity other than the Client ("Third Party") without the prior written consent of BCG. These materials serve only as the focus for discussion; they are incomplete without the accompanying oral commentary and may not be relied on as a stand-alone document. Further, Third Parties may not, and it is unreasonable for any Third Party to, rely on these materials for any purpose whatsoever. To the fullest extent permitted by law (and except to the extent otherwise agreed in a signed writing by BCG), BCG shall have no liability whatsoever to any Third Party, and any Third Party hereby waives any rights and claims it may have at any time against BCG with regard to the services, this presentation, or other materials, including the accuracy or completeness thereof. Receipt and review of this document shall be deemed agreement with and consideration for the foregoing.

BCG does not provide fairness opinions or valuations of market transactions, and these materials should not be relied on or construed as such. Further, the financial evaluations, projected market and financial information, and conclusions contained in these materials are based upon standard valuation methodologies, are not definitive forecasts, and are not guaranteed by BCG. BCG has used public and/or confidential data and assumptions provided to BCG by the Client. BCG has not independently verified the data and assumptions used in these analyses. Changes in the underlying data or operating assumptions will clearly impact the analyses and conclusions.



Thank you

bcg.com | bcgperspectives.com