



# Innovation Ecosystems

A powerhouse for answering  
the big questions

Michael Zeitlyn, Managing Director  
Oakland Innovation

# Oakland is a Science Group company

## science group

Defined by science  
Inspired by technology  
Delivering innovation



### oakland innovation

Science &  
technology  
consultancy for the  
consumer &  
industrial sectors



### leatherhead food research

Regulatory,  
sensory, food safety  
& innovation  
services for the food  
& drinks market



### otm

Technology  
advisory services to  
the oil & gas  
industry



### sagentia

Science, technology  
& product  
development

# Challenging time for CPG companies

**CPG face a difficult and competitive environment** and a difficult market environment

>70 percent of CEOs believe growth will remain static at best over the next 12 months  
(PwC CEO survey)

IMF reduced expectations of global growth forecasting 3.4% and 3.6% for 2016 and 2017 respectively

Pessimism about emerging markets, Brazil, Russia, India, China – China official five-year annual GDP growth target lowered to 6.5%

Economic uncertainty

# Challenging time for CPG companies

## Opportunities still remain

- Populations growing, disposable incomes rising, urbanization continuing
- China's consumer economy projected to expand by ~\$6.5 trillion by 2020
- India's GDP is growing at a rate of 7.5% – estimates that consumer market annual growth could reach 6.7% between 2015 and 2020, and 7.1% 2021-2025 – consumer market worth ~US \$500 billion

**An array of new challenges** - Digital, e-commerce, personalisation, affordability of product in emerging markets, sustainability etc

**All types of innovation needed**– product, pack, manufacturing and business model

- Environment – shift in focus towards the bottom line
- Technology – Emerging at pace in an array of organisations – innovation often enabled by science and technology outside of the core capabilities

# What are the benefits of external research and innovation?

## Money

- Managing cost – optimising the use of a streamlined R&D headcount
- Risk reduction (let someone else pay for through the initial failures)
- Sharing investment and risk (and benefit)
- Access to 3<sup>rd</sup> party funding



## Quality

- Fresh perspective
- Managing diversity of technical knowledge required – dynamic requirement
- Access to specific knowledge, skills capabilities and assets
- Exposure to new knowledge and corporate learning
- Distance from corporate perspective and paradigms – keep it on course



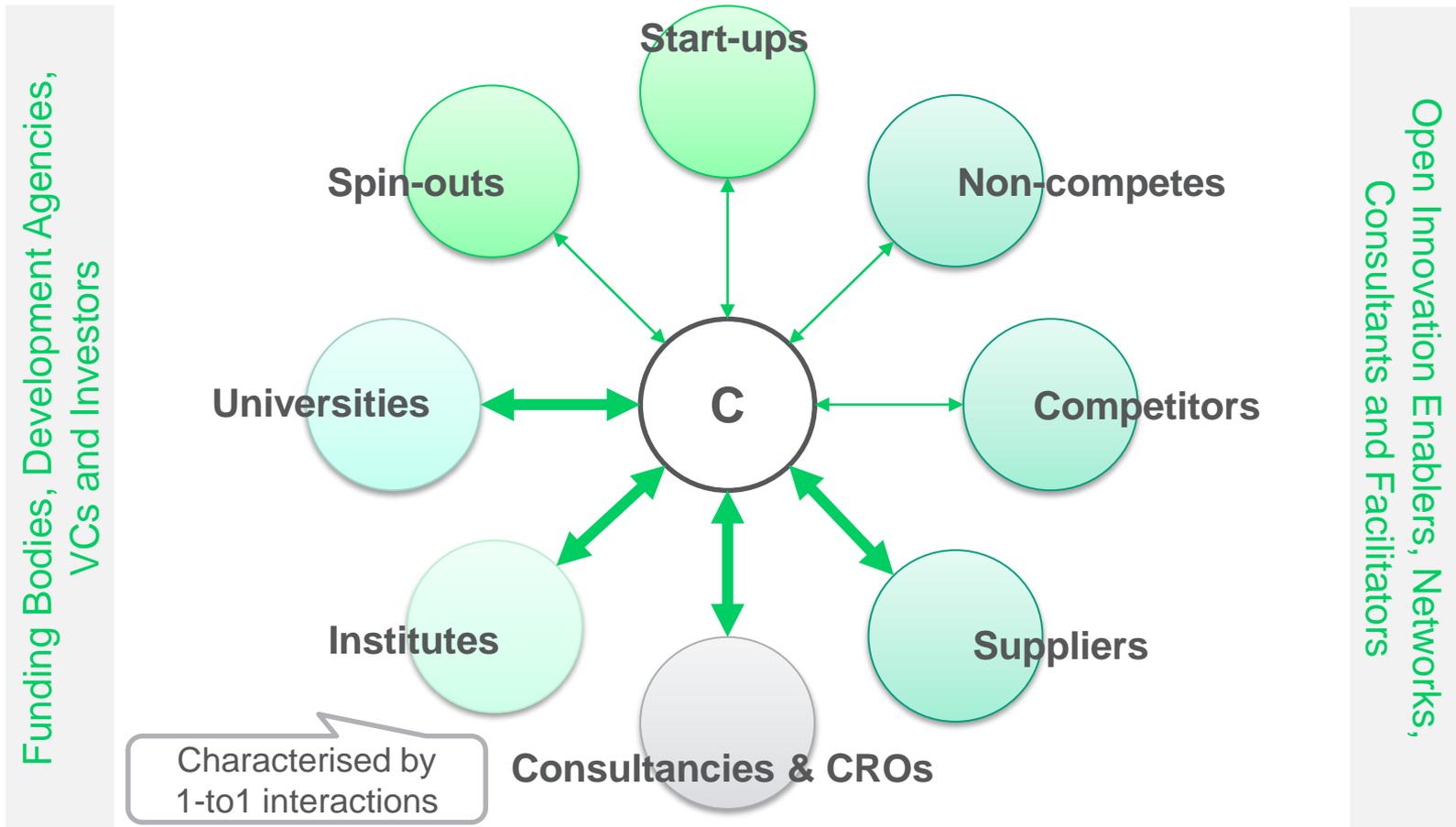
## Time

- Accelerating speed of innovation – dedicated and focused resources
- Short-cutting development time (use existing technology)

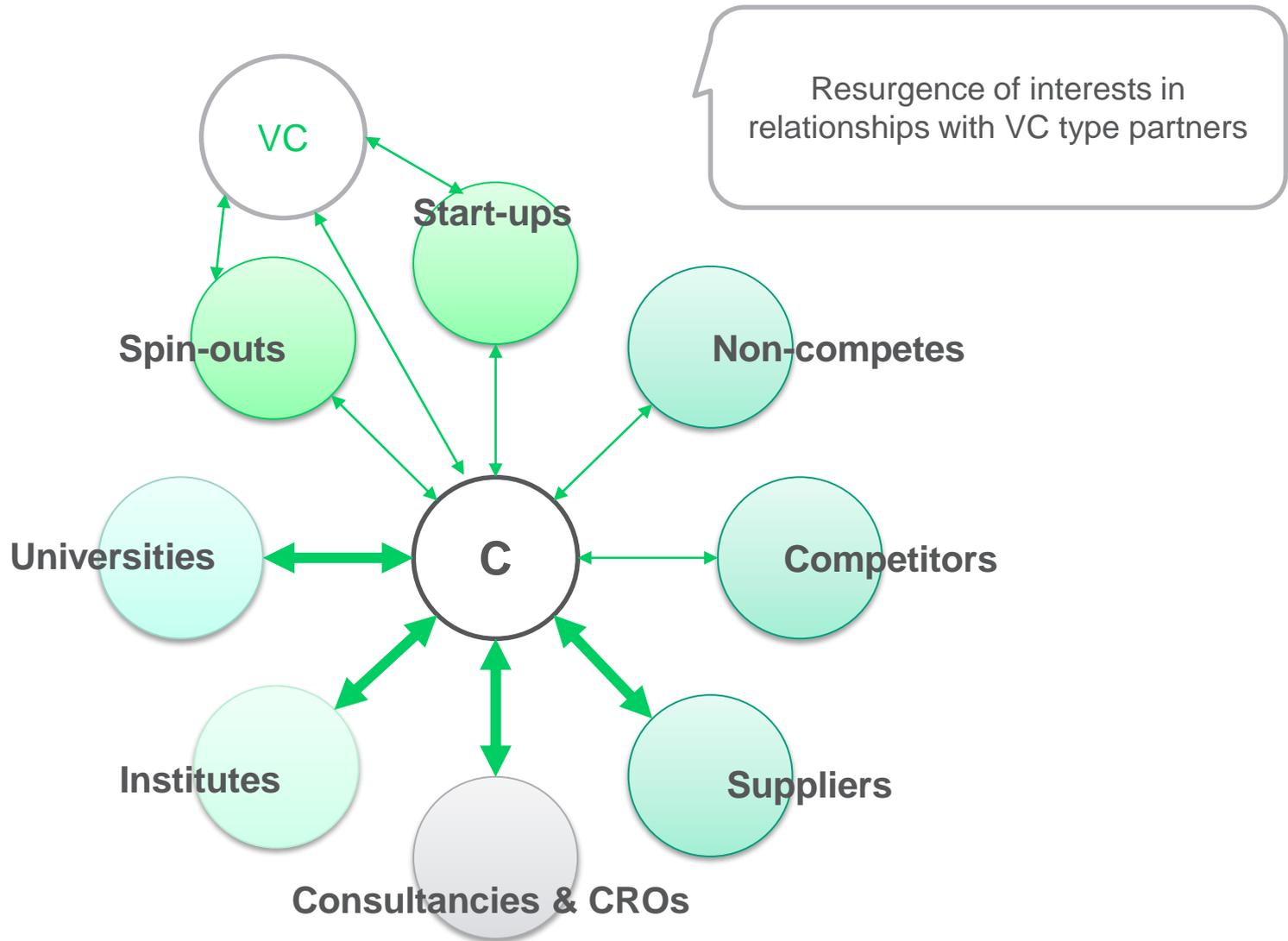


# External partners for innovation and patterns of behaviour

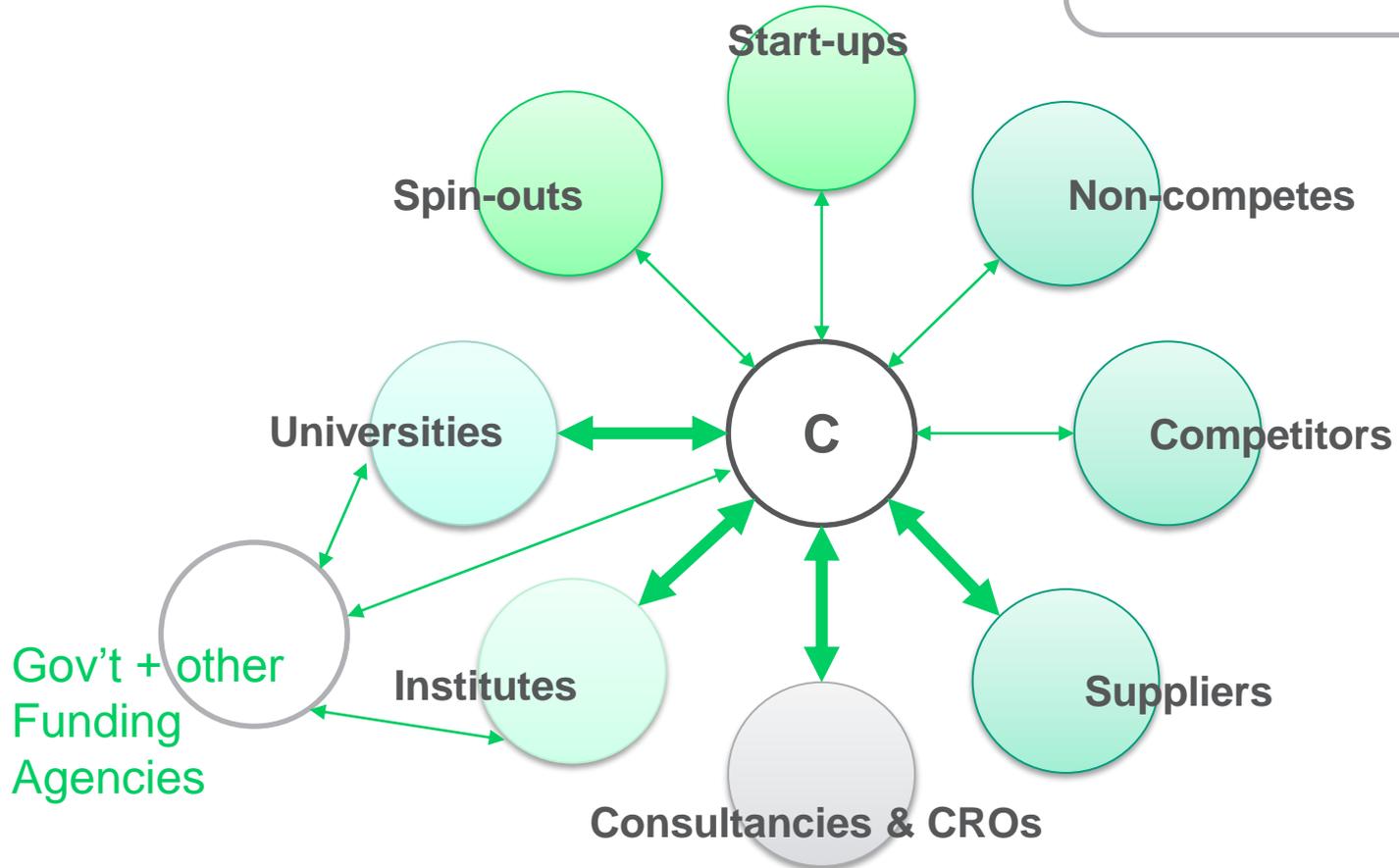
Licence Agreements, Co-investment & Joint Development

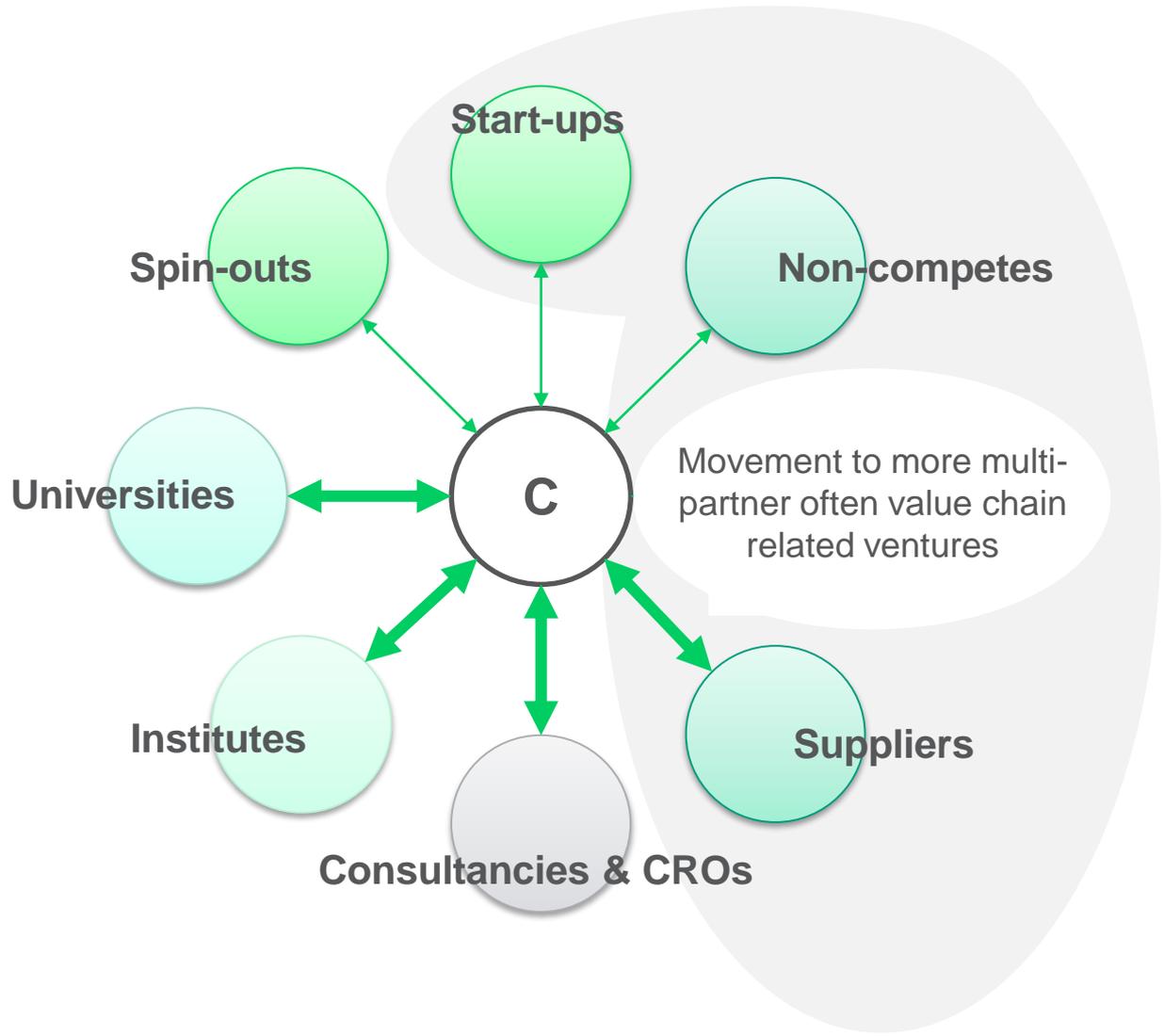


Collaboration, Consultancy & Contract Research

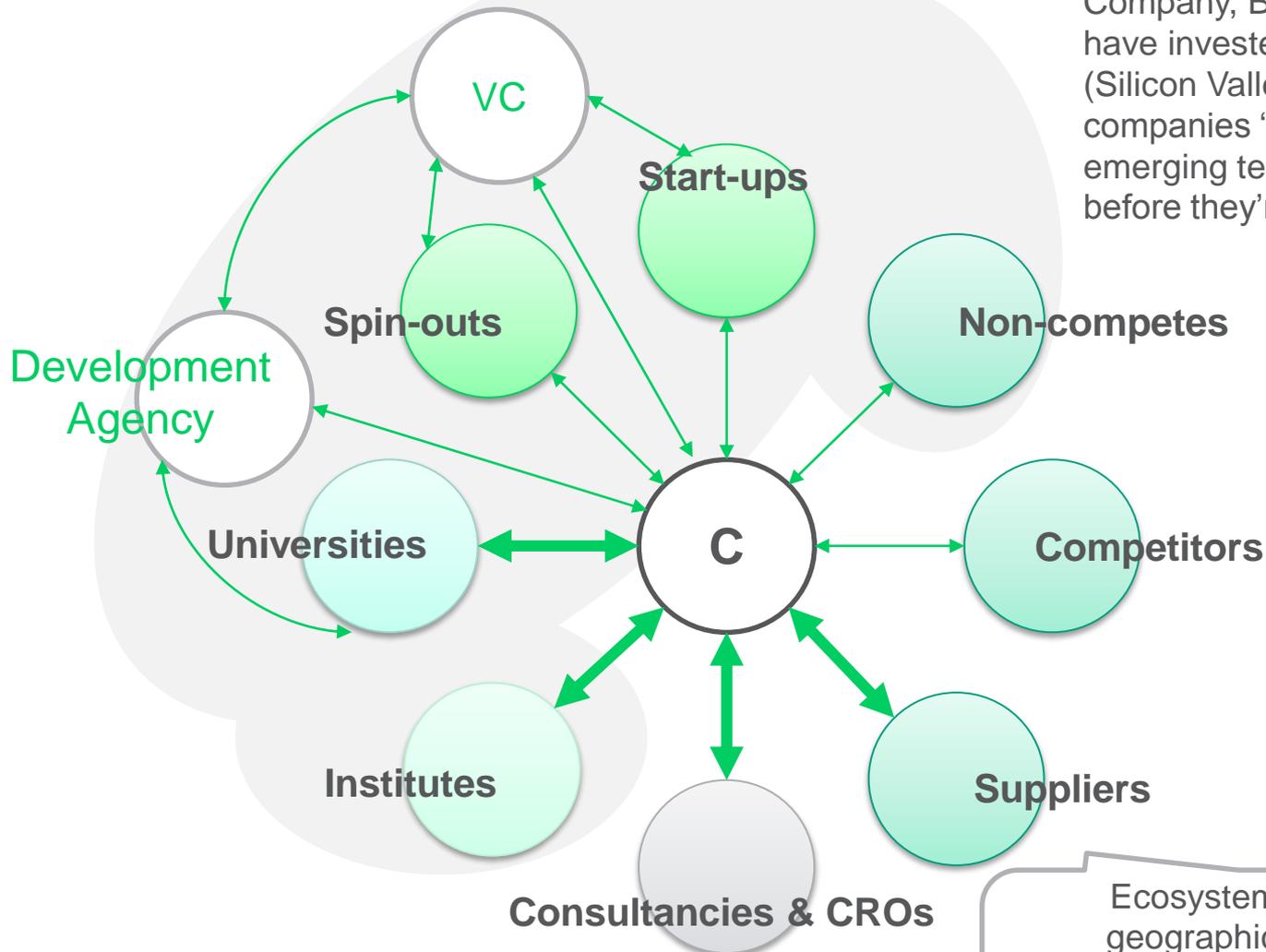


Resurgence of interests in use of public funding bodies to augment R&D investment





Coca-Cola The Hershey Company, Bayer and Lowe's have invested in SU Labs (Silicon Valley) - said to help companies "experiment with emerging technologies . . . before they're ubiquitous."



Ecosystems centred on geographic clusters and application focussed communities is becoming progressively more important to many CPG companies

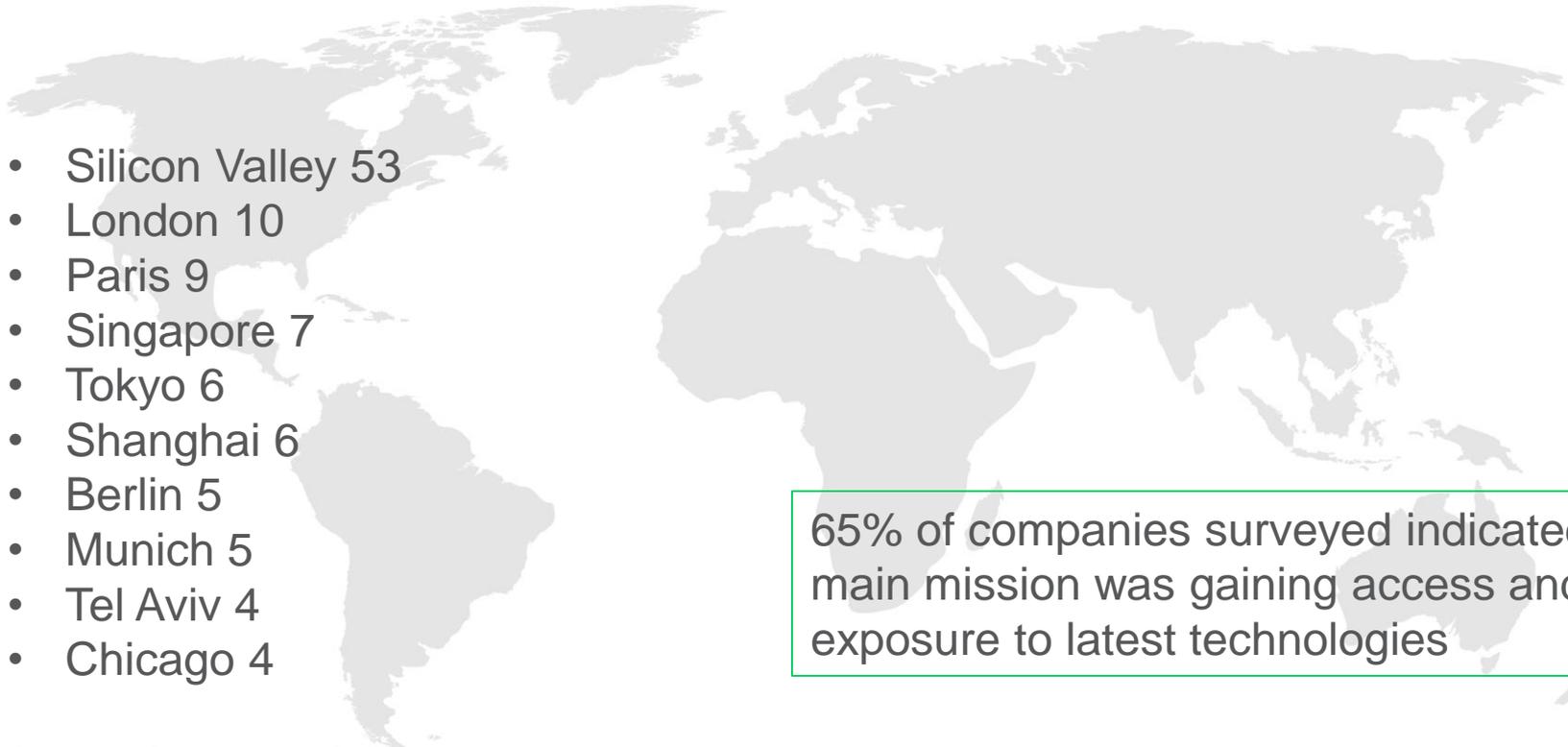
# Ecosystems are an important powerhouse for innovation

## More visible part of corporate strategy in a number of CPGs

- Can be centred on physical infrastructure or connected network
- Large companies taking different roles
  - Host ('campus' model)
  - Catalyst (instigator/enabler)
  - Resident/Actor
  - Observer (outpost or observatory)
- Motivations
  - Address big issues/challenges
  - Spotting new opportunity
  - Provide a fresh source of ideas
  - Tracking or engaging with merging technology
  - Augmenting capacity and capability



# Top locations for locating Innovation Centres

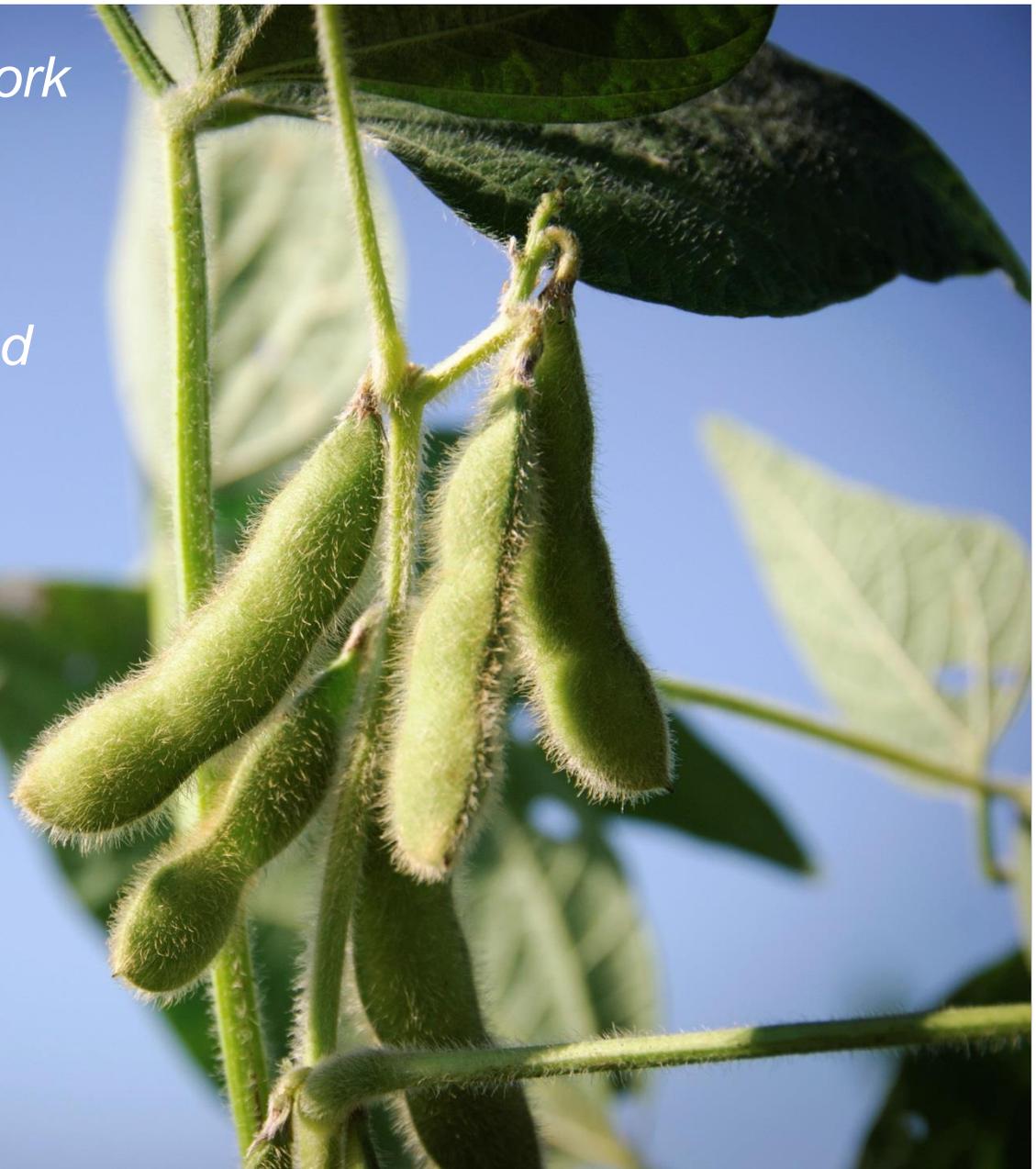
- 
- Silicon Valley 53
  - London 10
  - Paris 9
  - Singapore 7
  - Tokyo 6
  - Shanghai 6
  - Berlin 5
  - Munich 5
  - Tel Aviv 4
  - Chicago 4

65% of companies surveyed indicated main mission was gaining access and exposure to latest technologies

Source: Capgemini Consulting and Altimeter Analysis 2015

Survey of largest 200 companies by revenue based on the Bloomberg-based research list – total of 309 Innovation centres identified.

*“Bringing together a network of scientists to ultimately improve the quality of research into sustainable food systems was deemed to be **important and worthwhile**”*



# Approach

The project aims to create an ecosystem that will lead to an improved understanding of the sustainability of food supply and specifically the role dairy can have in addressing this in the context of feeding 9.5B people by 2050

## *Scoping the idea and defining the space*

## *Building the network*



Oakland has now identified and engaged with GDP's preferred candidates for the ecosystem, and have confirmed their commitment to the initiative

*The meeting will bring together 17 eminent scientists and experts from the field of sustainable food systems – this will be the start of a journey working towards addressing the key gaps in research*



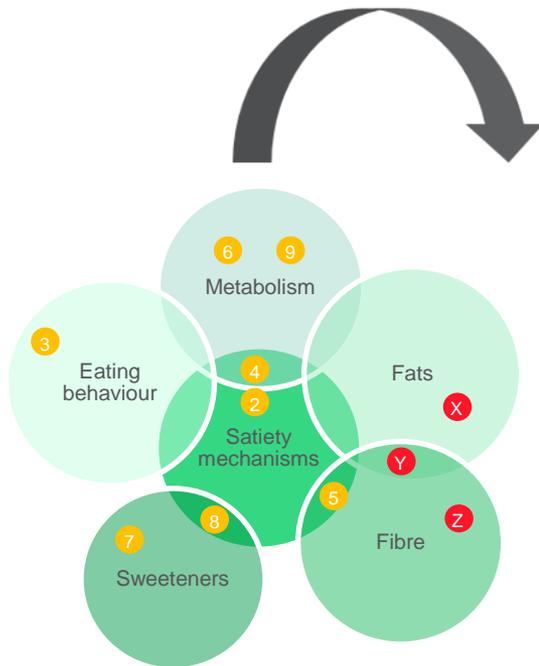
## Experts noted

*“GDP are bringing together an excellent network of people, we are really excited and honored to be involved in this initiative”*

*Outcome of the discussions to be shared shortly after the meeting in June*

# Ecosystems need to consider knowledge, capability and geography

No one blueprint but ecosystems need to be structured in line with need

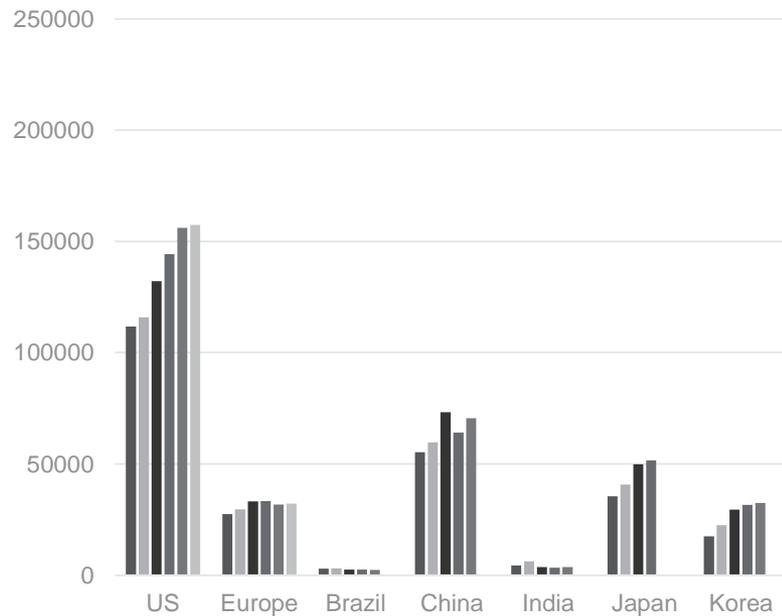


		Regional distribution of actors				
		America	Europe	Asia		
Capabilities	Metabolism				Research	Position in innovation supply chain
	Satiety					
	Fats				Technology development	
	Fibre					
	Sweeteners				Commercialisation	
	Behaviour					

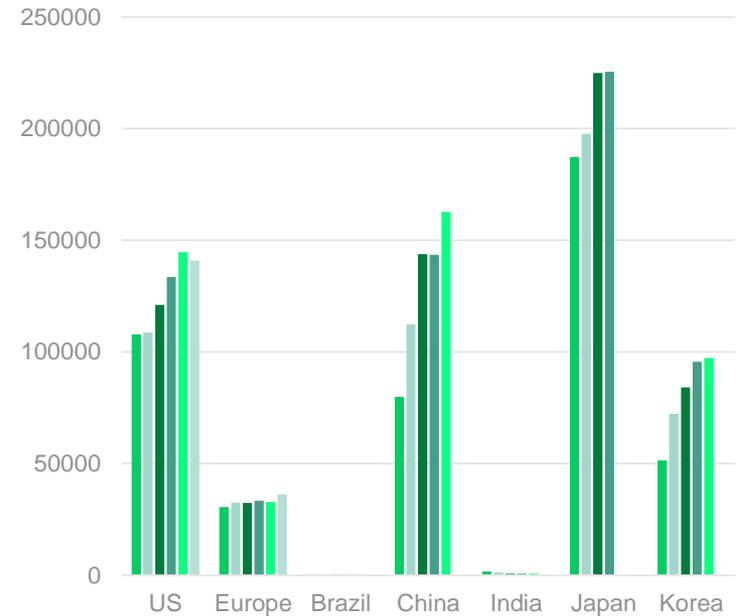
# The growing challenge of geographic reach

## Patents originating from beyond US and Europe over the past 5 years

Patents Granted to Foreign Applicants at 7 Offices

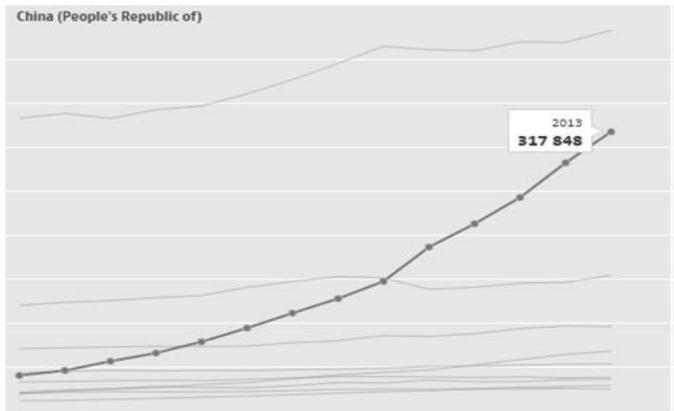


Patents Granted to Domestic Applicants at 7 Offices

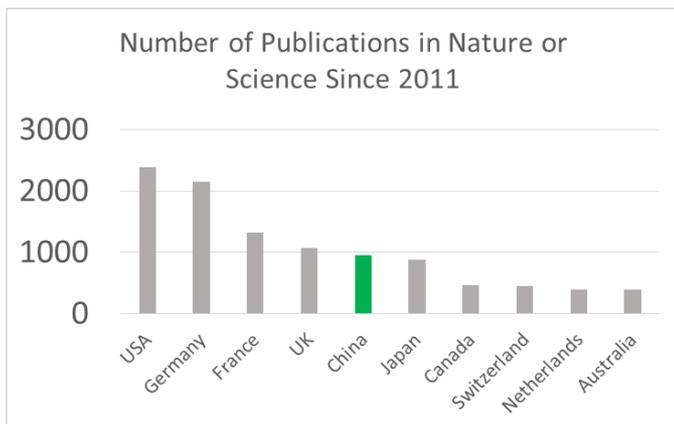


# The growing challenge of geographic reach

For example – the upstream potential to be found in China

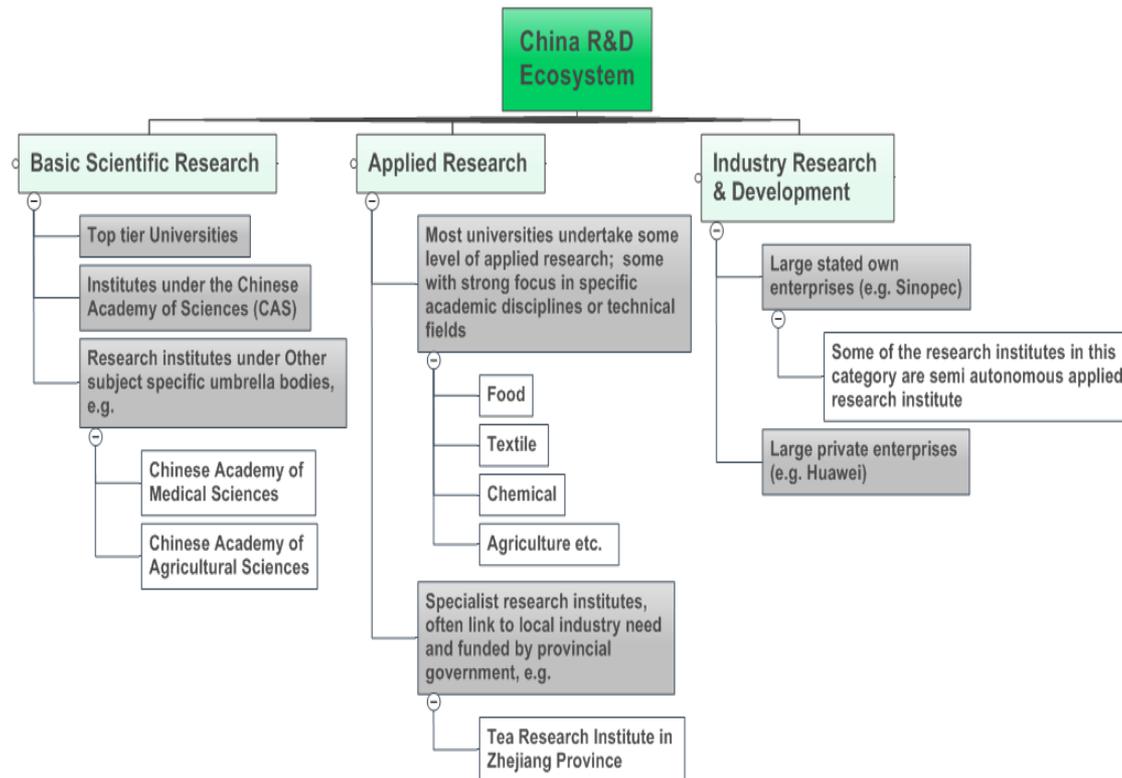


- In 2014, total R&D investment in China equates to 2.1% of GDP
- R&D funding 2<sup>nd</sup> in the world, after USA
- On track to be top R&D spender by 2019,
- In December 2015, Nature Index ranked China second in the world, after the US, for output of high-quality science
- Rapidly growing patenting activity



# The challenge for Western companies in new markets?

Western companies are often bewildered by the complex R&D system in China



- The top 10 cities contribute to over 70% of the research output in China
- New and significant players appearing at pace e.g. Jiangnan University for food technology and Suzhou Institute for Nano-Tec and Nano-Bionics
- Engagement is not straight forward – leading labs well funded and selective

# Potential strategies

Set up  
'Innovation  
Centre'

Leverage  
networks e.g.  
JV partners/  
suppliers/nodes

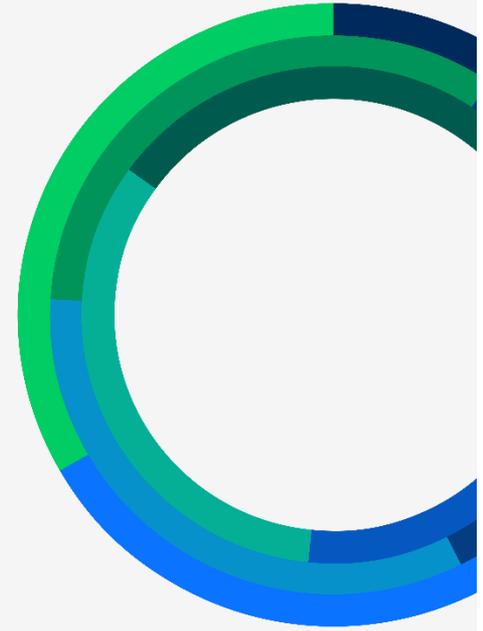
ID hot spots and  
key players,  
track activity  
and engage  
selectively

Key =  
recognise that it is a long game



# Conclusions

- Innovation remains a business imperative in this environment
- External partnerships form an important part of strategy
  - The nature of external research is evolving
  - One-to-one models remain significant
  - Partnerships with universities CROs and suppliers are the default
  - Start-ups spin-outs and other corporates remain a challenge
  - Revived interest in external funding sources (public and private sector)
- A strong trend towards harnessing ecosystems
  - Systematic approach to ecosystem development
  - Capability to harness the potential of new economies is growing requirement
  - Beyond a physical presence partnership strategies can assist this process



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