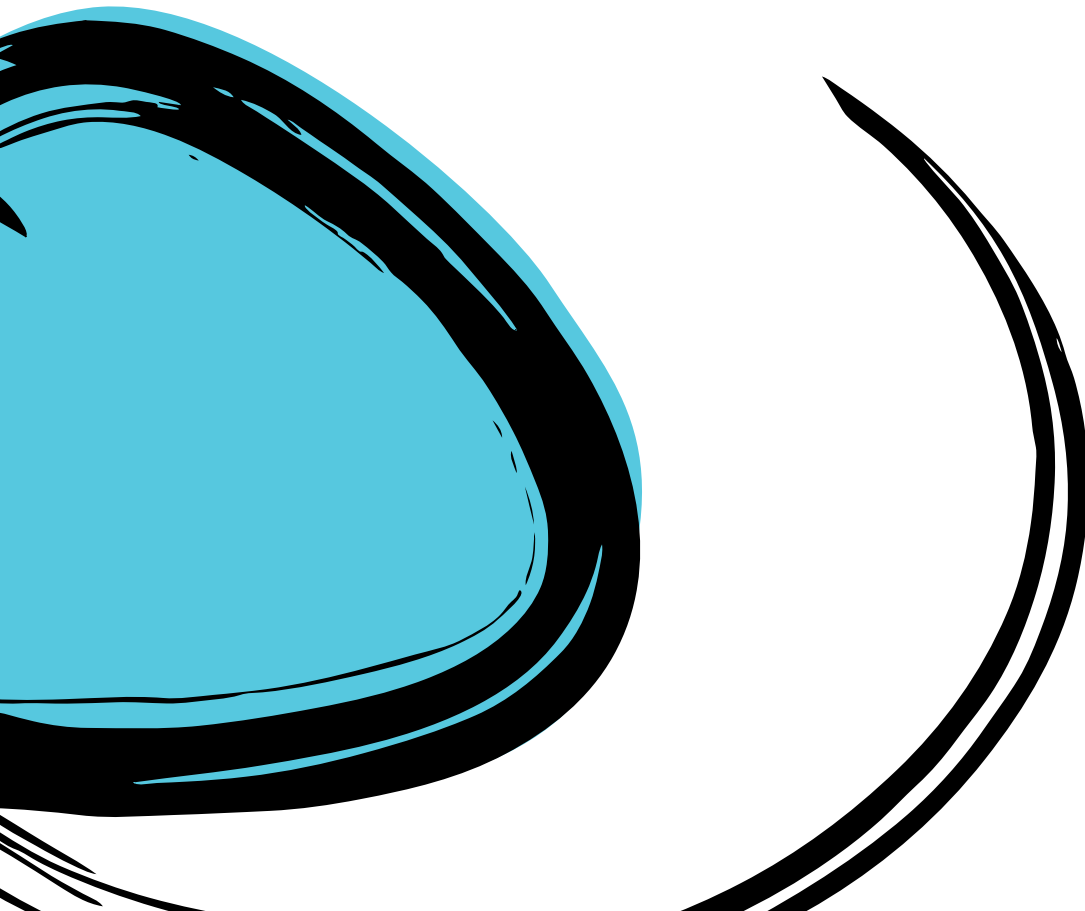




BE PART OF  
SOMETHING  
EXTRAORDINARY

CENTRE FOR ENTERPRISE AND  
ENTREPRENEURSHIP STUDIES

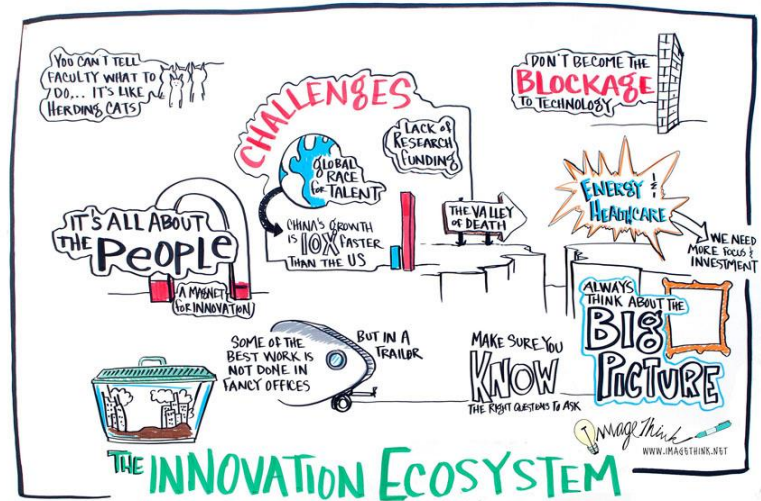


**LUBS2045 Week 8 Lecture**

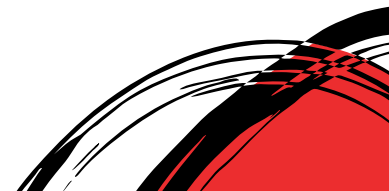
# **Innovation**

# Overview

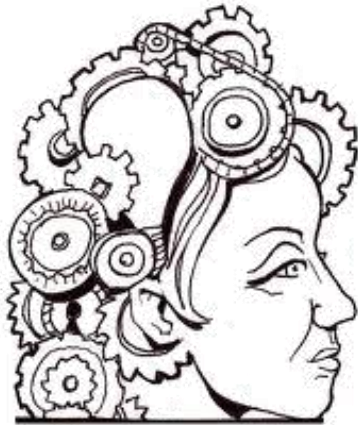
- Understanding innovation
- Innovation and growth
- Innovation and firms
- Innovation and policy



# **What is Innovation?**



# Invention and Innovation



“MOTHER OF INVENTION”

- Schumpeter (1936) states that “Invention implies bringing something new into being; innovation implies bringing something new into use”
- Porter (1990) identifies invention and innovation as key to national growth
- Innovation is a vital aspect of entrepreneurship (Drucker, 1985)
- Entrepreneurship brings innovations to the market





# Schumpeter's Definition

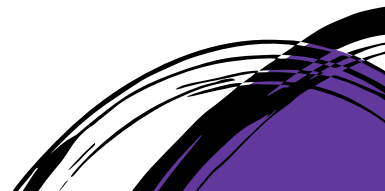
- “To reform or revolutionise the pattern of production by exploiting an invention or, more generally, an untried technological possibility for producing a new commodity or producing an old one in a new way, by opening up a new source of supply of materials or a new outlet for products, by reorganising an industry.”  
(Schumpeter, 1942, p. 132)
- Gales of ‘creative destruction’



amazon  
music

# Innovation and growth

- Innovation is considered to be a key driver of economic growth, wealth creation, and jobs
- Research has documented a link between the entrepreneur, innovation, and multiple sources of wealth creation
  - an entrepreneur infuses the economy with innovation that improves productivity
  - Product innovation results in prolonged growth, superior returns, and strong investor interest
  - Process-oriented innovation successes increase sales and real wages, and decrease prices
  - Economy benefits when firms adopt the innovation
  - Entrepreneurship also stimulates infrastructure upgrades and facilitates industrial growth
  - Innovation-based start-up firms are major engines of economic growth, wealth creation, and jobs (Michael and Pearce, 2009).



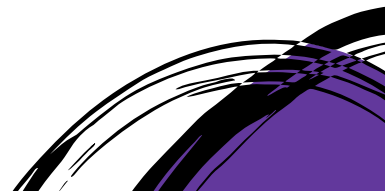
# NESTA's Innovation Report

- The ability to turn ideas into useful new products, services and ways of doing things is the wellspring of prosperity for any developed country
- Companies that invest most in innovation tend to grow faster than ones that don't
- Countries that invest most in innovation grow faster as well
- Many of the nation's doing best today in innovation have articulated a clear vision of where they think their future wealth and jobs will come from

**We are Nesta**

**The UK's innovation  
agency for social  
good.**

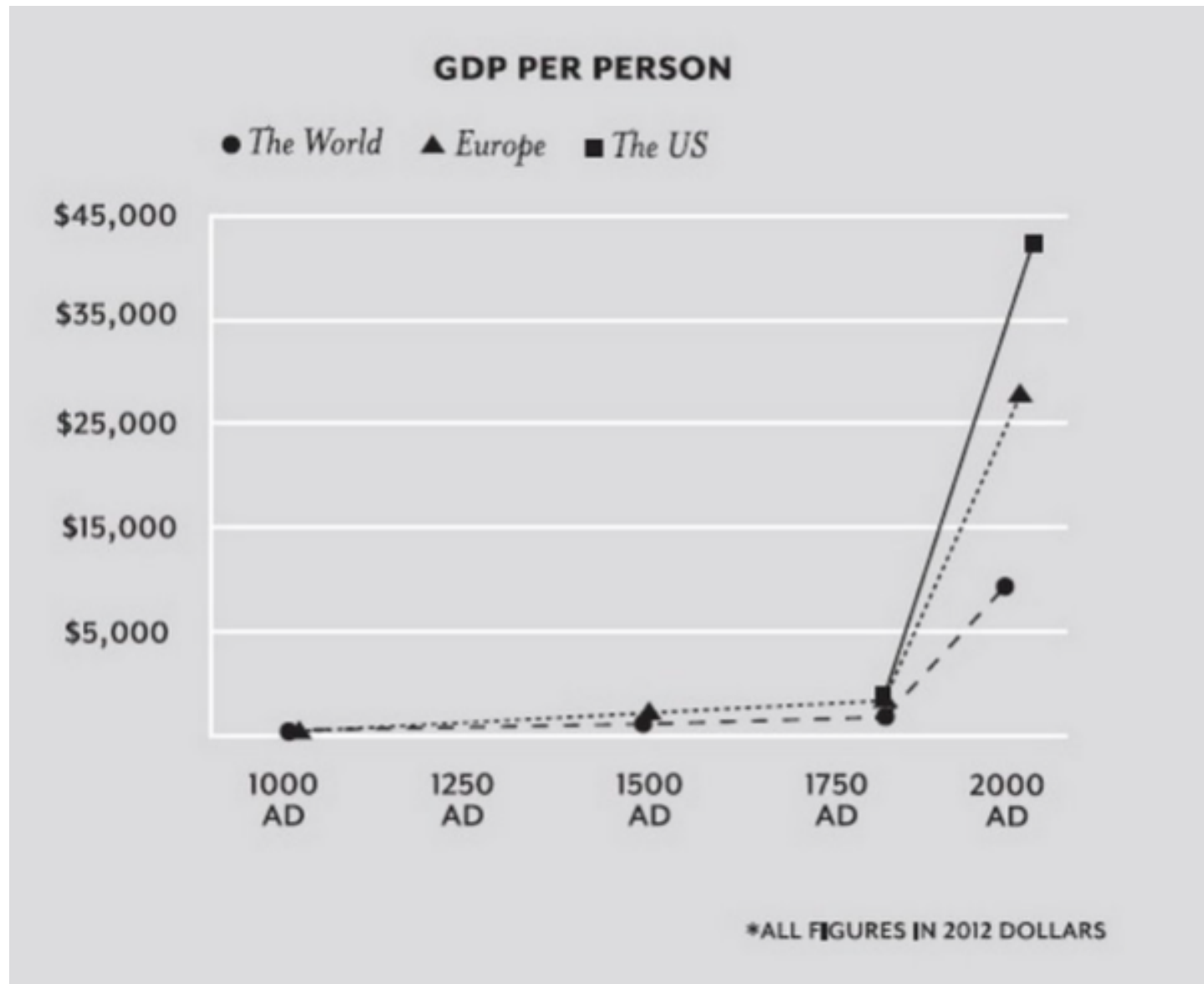
**NESTA** Making  
Innovation  
Flourish

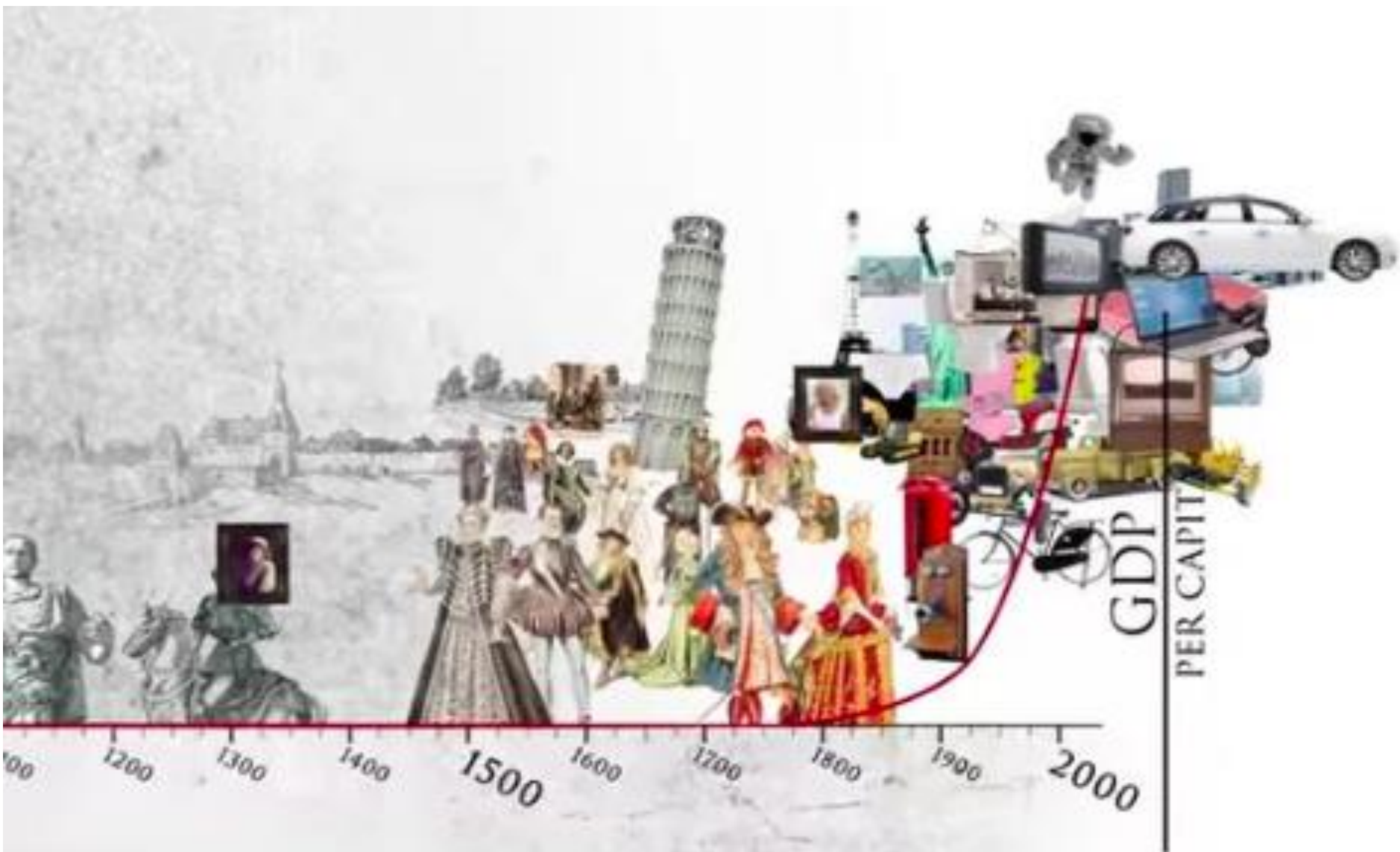






# 'The hockey stick of human prosperity'







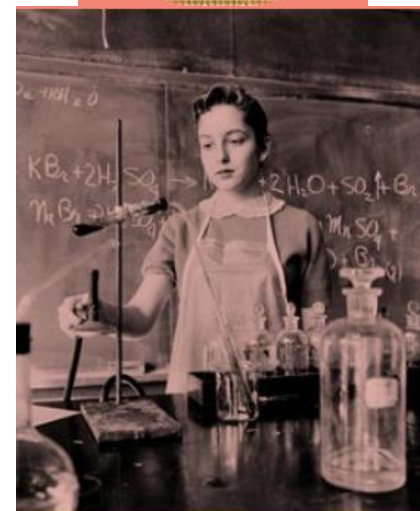


# FIFTY THINGS THAT MADE THE MODERN ECONOMY

'Every Tim Harford book is cause for  
celebration' MALCOLM GLADWELL

## Tim Harford

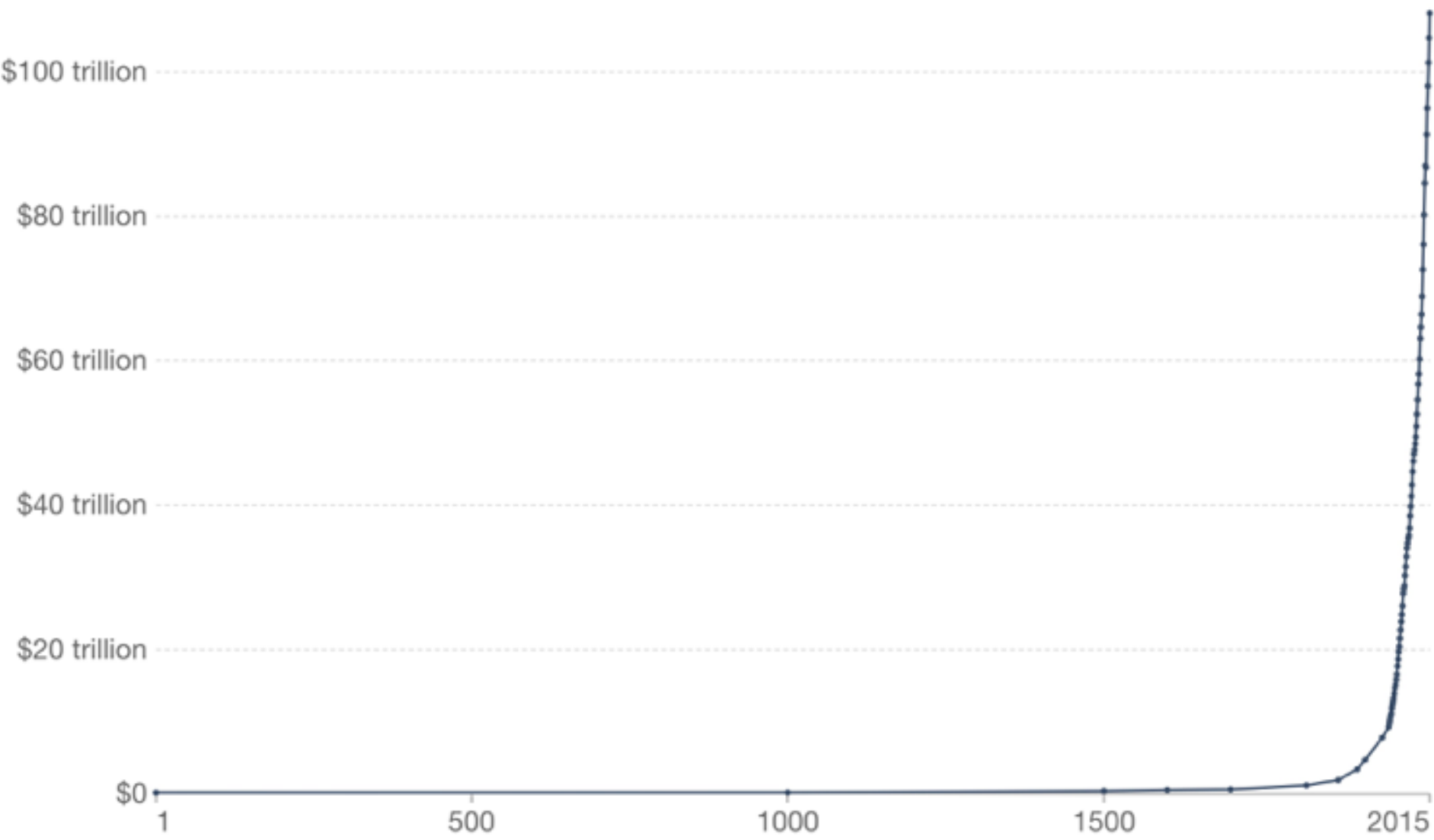
AUTHOR OF THE UNDERCOVER ECONOMIST



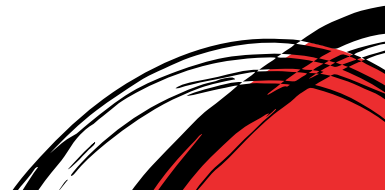
# World GDP over the last two millennia



Total output of the world economy; adjusted for inflation and expressed in international-\$ in 2011 prices.



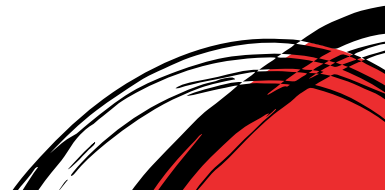
# **Innovation and Entrepreneurs**





# Steve Jobs

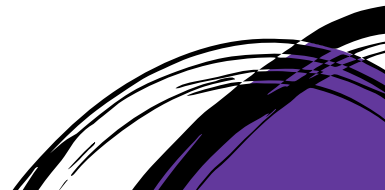
“Innovation comes from people meeting up in the hallways or calling each other at 10.30 at night with a new idea ... It’s ad hoc meetings of six people called by someone who thinks he has figured out the coolest new thing ever and who wants to know what other people think of his idea. And it comes from saying no to 1,000 things to make sure we don’t get on the wrong track or try to do too much. We’re always thinking about new markets we could enter, but it’s only by saying no that you can concentrate on the things that are really important.”



# Sergey Brin



“It’s important not to overstate the benefits of ideas. Quite frankly, I know it’s kind of a romantic notion that you’re just going to have this one brilliant idea and then everything is going to be great. But the fact is that coming up with an idea is the least important part of creating something great. It has to be the right idea and have good taste, but the execution and delivery are what’s key.”

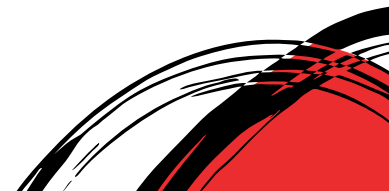


A photograph of Ginni Rometty, a woman with blonde hair, wearing a black blazer over a black top. She is gesturing with her hands while speaking. The background is a solid dark blue.

“The only way you  
survive is you  
continuously transform  
into something else. It’s  
this idea of continuous  
transformation that  
makes you an  
innovation company.”

**GINNI ROMETTY**

Chairman, President  
and CEO, IBM



# Jeff Bezos

“If you think of [opportunity] in terms of the Gold Rush, then you’d be pretty depressed right now because the last nugget of gold would be gone. But the good thing is, with innovation, there isn’t a last nugget. Every new thing creates two new questions and two new opportunities.”



# Amanda Blanc

“Innovation is not just about brand-new ideas ... I’ve always said execution is better than strategy. If you find that somebody has a great idea or way of doing things then quite often you can copy that, and replicate that, and build on that. There are ways of doing that ... You don’t always have to have the brand-new idea yourself, innovation can actually be a better way of doing something that already exists.”



# Creativity/Innovation

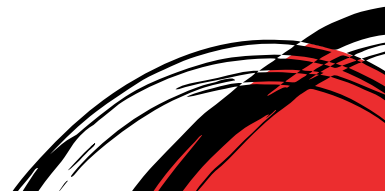
- Creativity and innovation drive entrepreneurship and vice versa

## Creativity

A process of reassembling known ideas that are wrongly assumed to be unrelated to each other

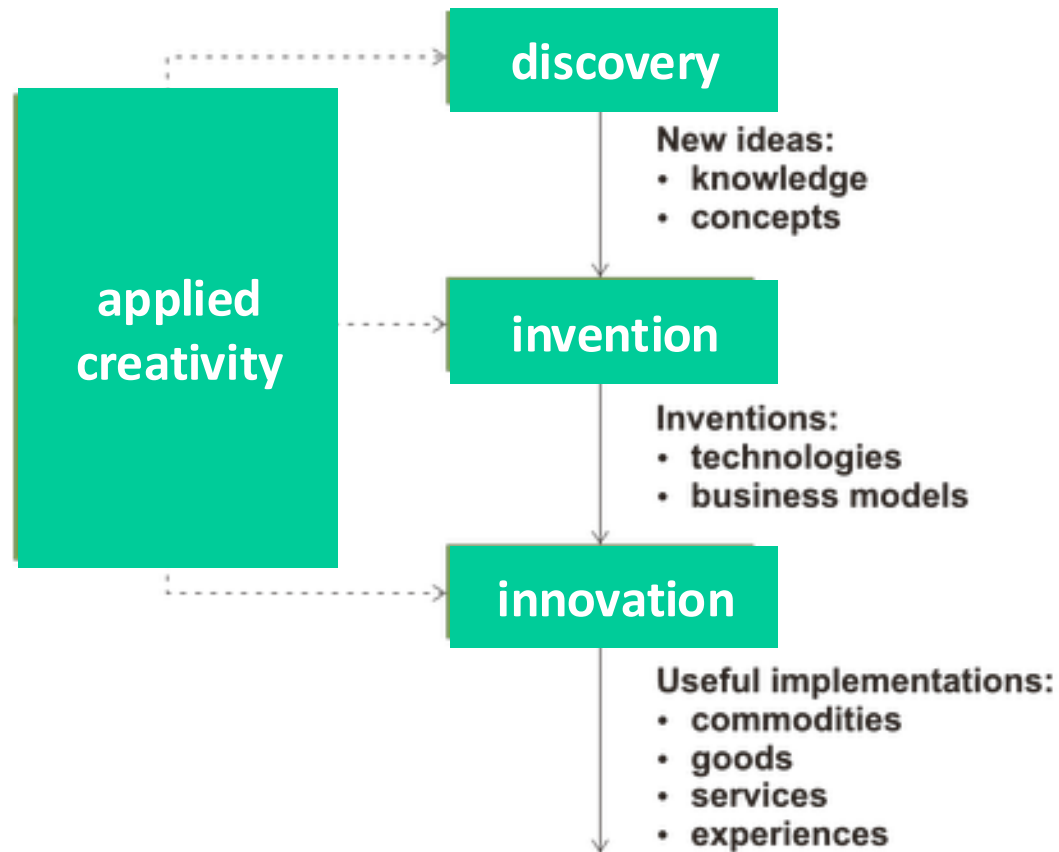
## Innovation

A process of intentional change made to create value by meeting opportunity and seeking advantage

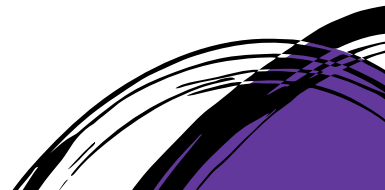




# The Creative Process



# Scale of Innovation



# Schumpeter's Types of Innovation

- Schumpeter's (1996) pentology of innovation:
  1. Introduction of new/improved goods and services
  2. Introduction of a new process
  3. Opening up a new market
  4. Identification of new sources/raw materials
  5. Creation of new types of industrial organisation
- Innovation is best understood as a continuum/spectrum



# Scale of Innovation

## Incremental Innovations

- *Small scale modifications, often unnoticeable, accumulate*

## Radical (or Disruptive) Innovations

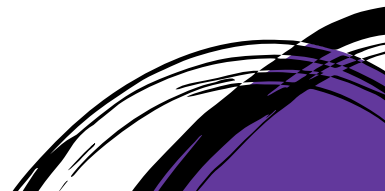
- *Dramatic; destroys or supplants existing business model*

## Changes of technology system

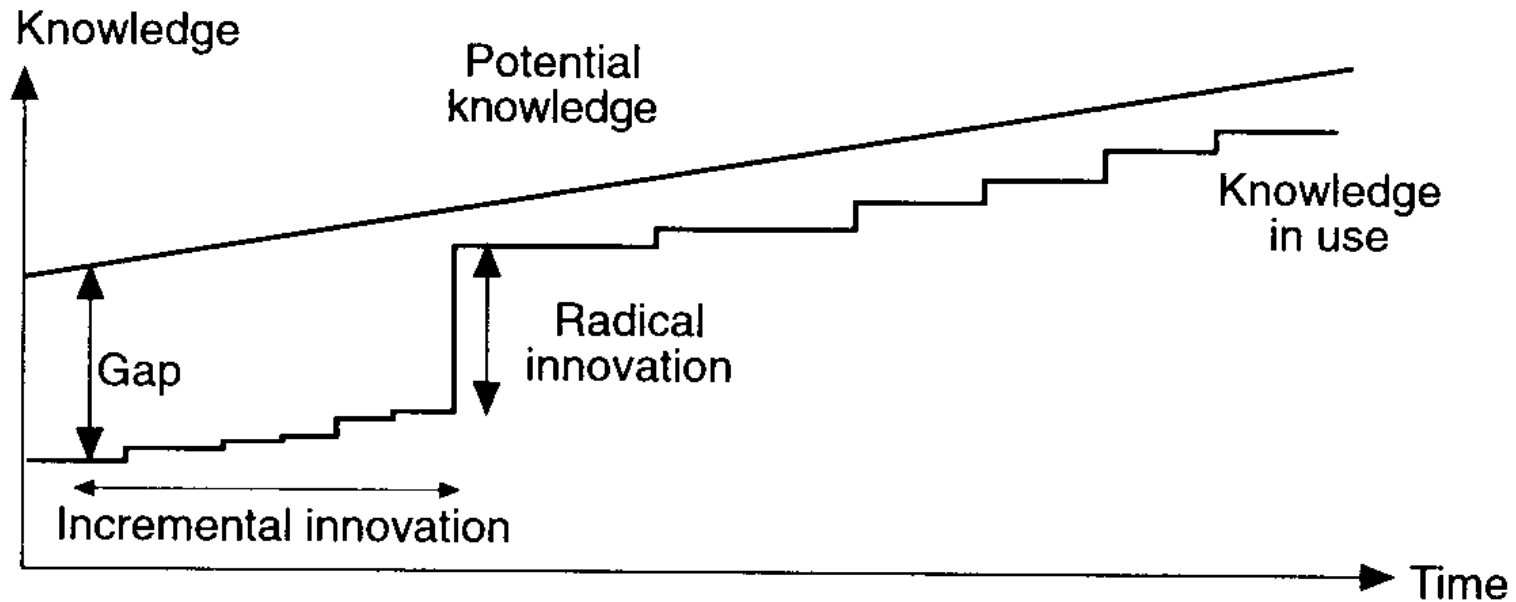
- *Extensive economic change & creation, emergent generic technologies*

## Changes in the techno-economic paradigm

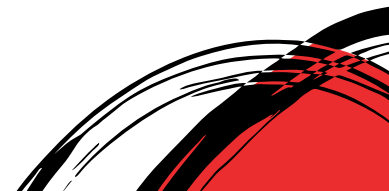
- *Revolutionary economic changes*



# Step Changes in Innovation

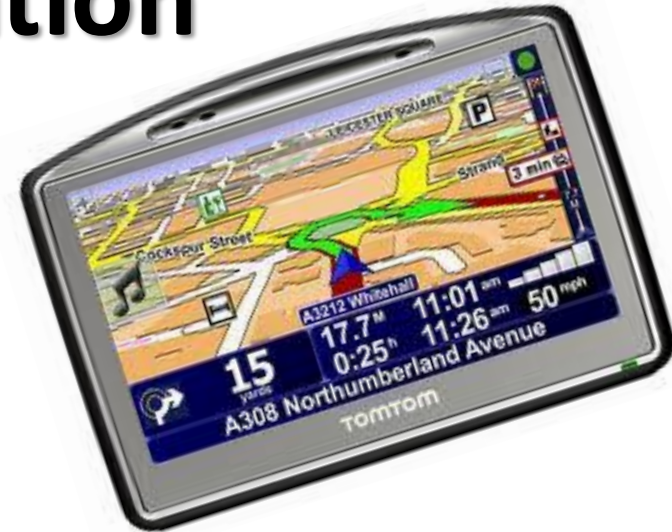
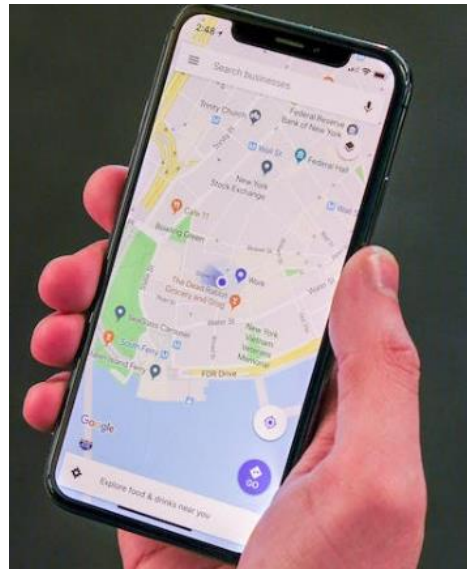
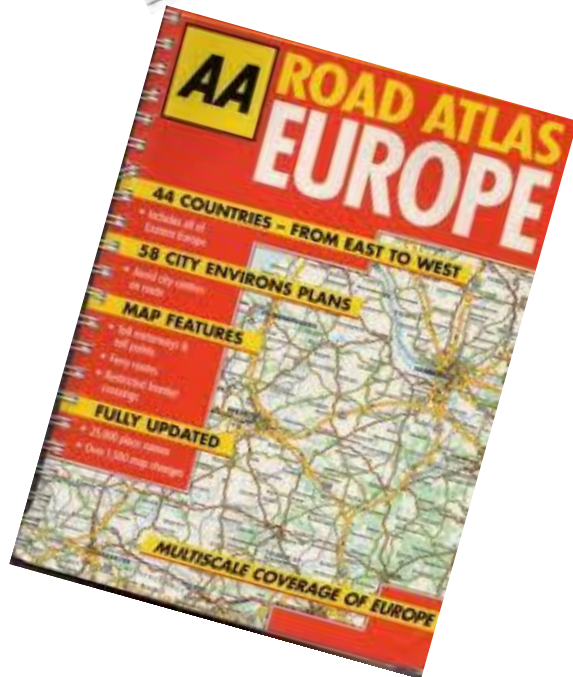
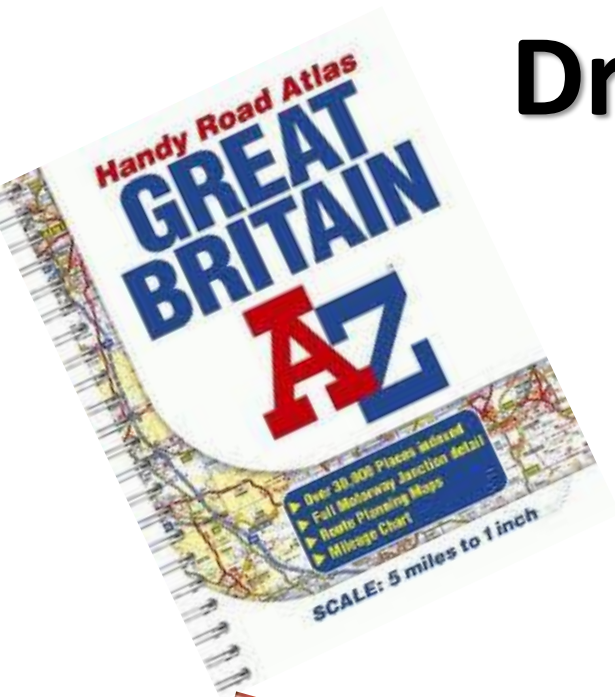


# Calculating Innovation

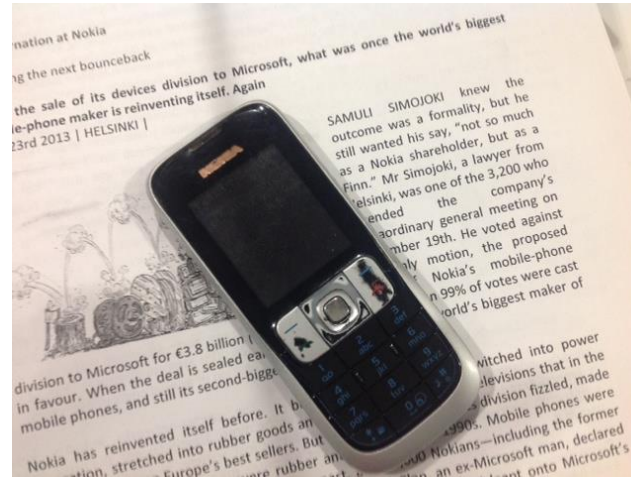




# Driving Innovation

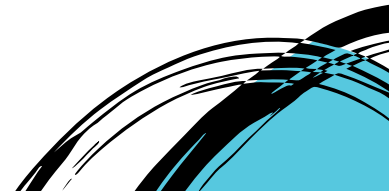
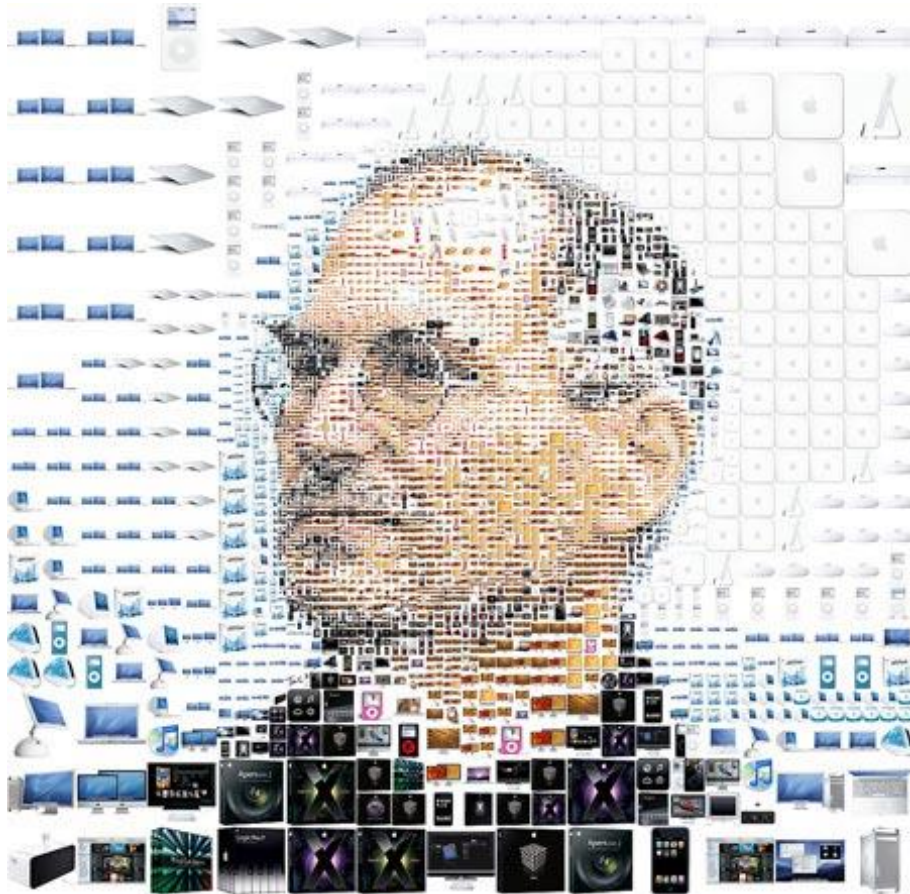


# Phone Technology

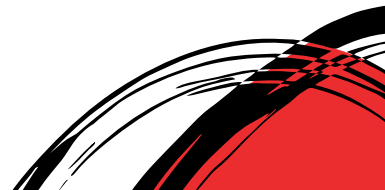




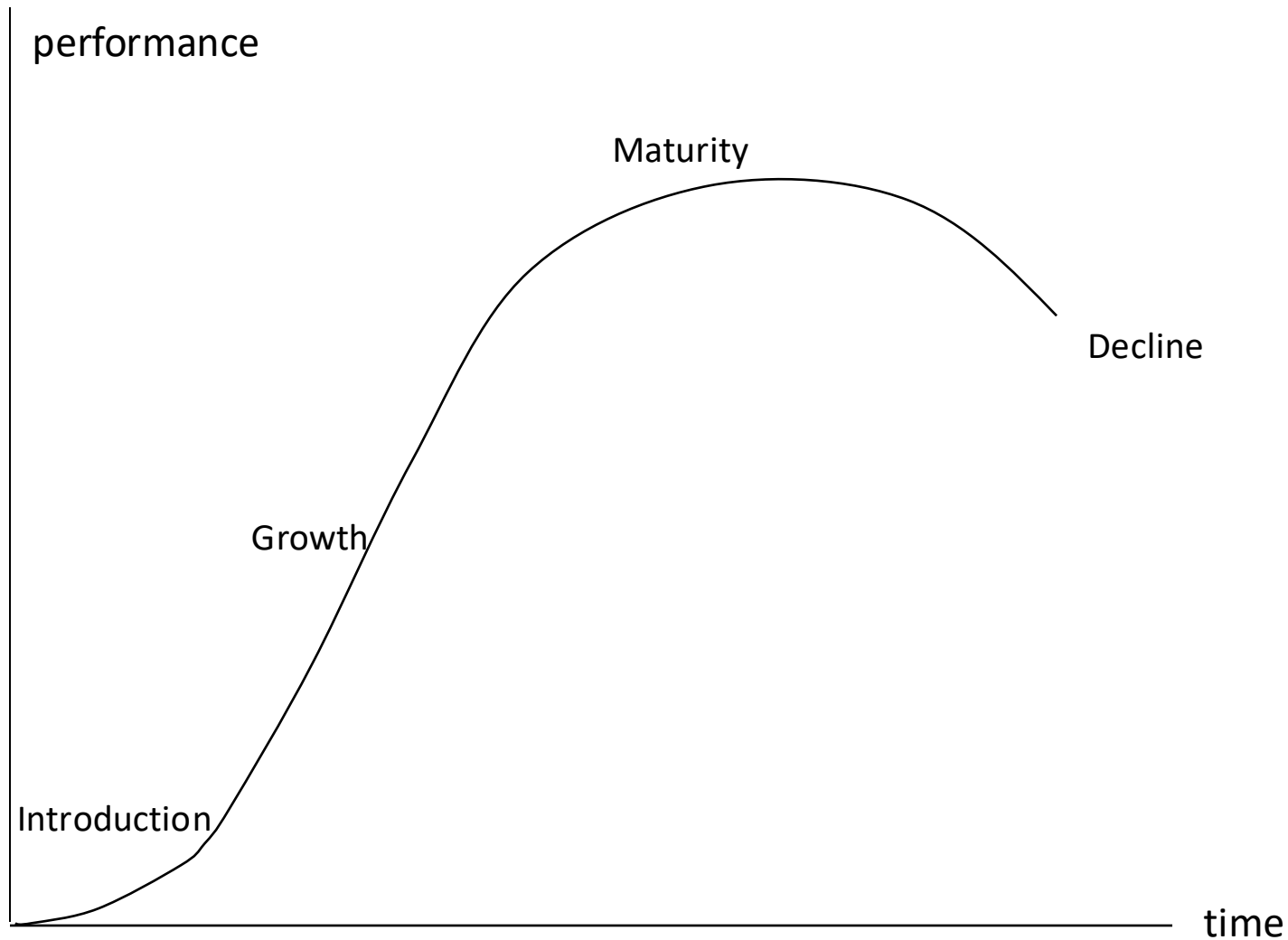
# Radical Innovation and Apple



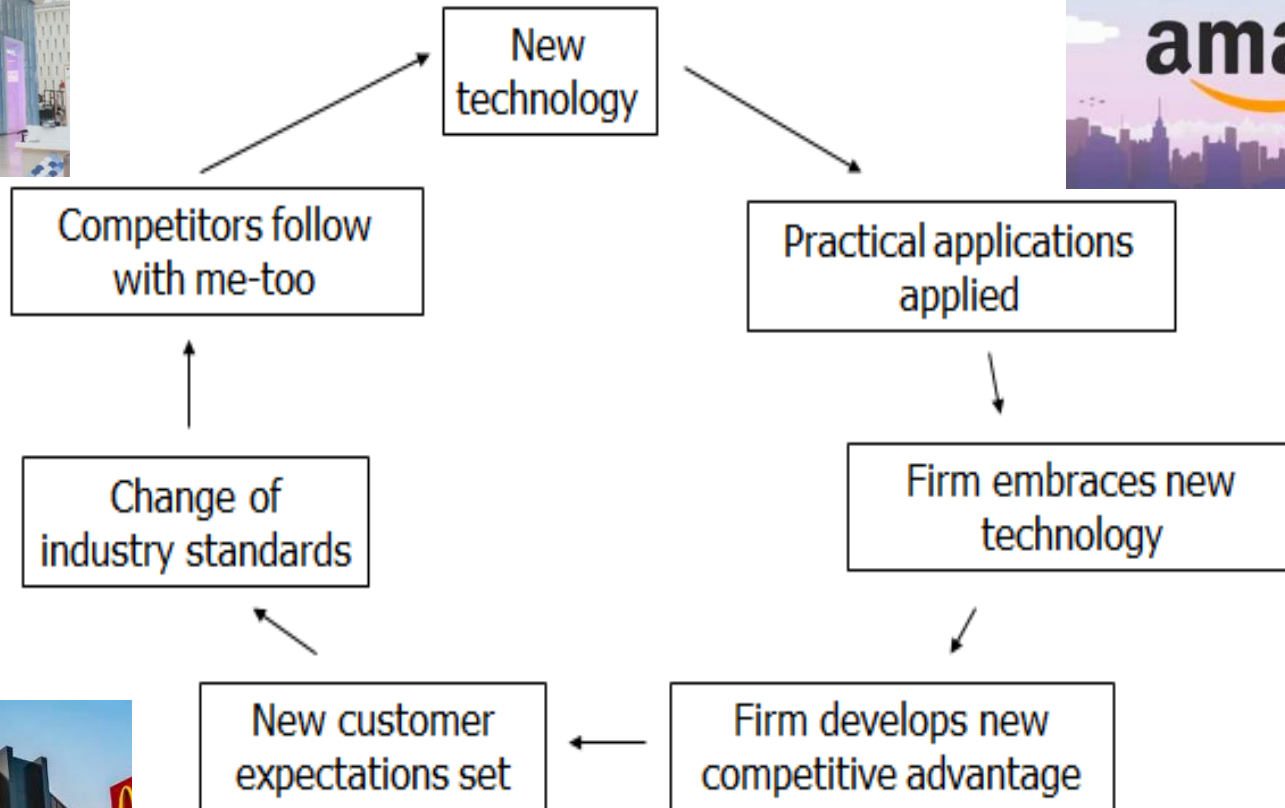
# **Innovation and the lifecycle**



# Lifecycle of products and technology



# Competitive Advantage





# Netflix



## Cross-industry inspiration



### Business model

Started as a DVD rental company, Netflix is always looking for better and more profitable business models. Latest: buying movie theaters.

*Experiment with and test new business models.*



### Change the customer experience

Netflix knows and shows your movie preferences. See complete series in one night #bingewatching

*Make a personal offering. Build a community.*



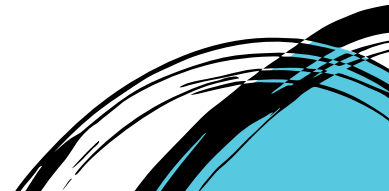
### Learn from illegal sites

Netflix learns from illegal download sites for checking the popularity of series / movies.

*Look everywhere for customers insights.*

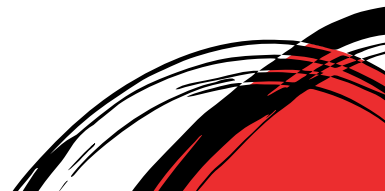
# Challenges of managing innovation

- Avoiding technologies that fail
- Developing appropriate organisations
- Developing stimulating climates
- How much to spend and when to terminate projects
- Meeting timescales
- Handling the marketing/R&D interface
- Coping with uncertain technologies
- Transferring technologies to other innovations
- When to employ external expertise
- What to communicate internally and externally
- Giving individuals responsibility

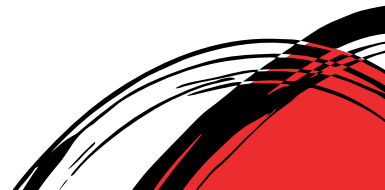


# Big v. Small

- “What we have got to accept is that the large-scale enterprise has come to be the most powerful engine of progress.” (Schumpeter, 1942, p. 43)
- Notion that economic growth was possible without the innovations of individual entrepreneurs had begun to gain support (Galbraith, 1956)
- However, individual entrepreneur and their role in innovation has seen resurgence in policy attention (Michael and Pearce, 2009)
- Small firms seen as more important for innovation, although can be consumed by larger firms



# **Innovation and Public Policy**



# Who to support?

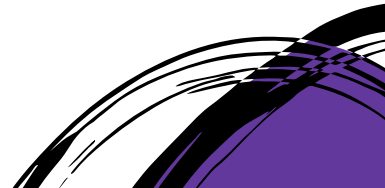
- Not all entrepreneurs are equal in economic potential
  - Entrepreneurs who do not innovate do not create wealth (but may create employment)
  - Problem of ‘picking winners’
- Government should shape the ‘rules of the game’ through regulation, taxation, and legal processes to foster innovation
- Questionable whether direct government action is effective
  - lack of effective control of the agency problem between the implementing policy maker and the taxpaying public

Original Articles

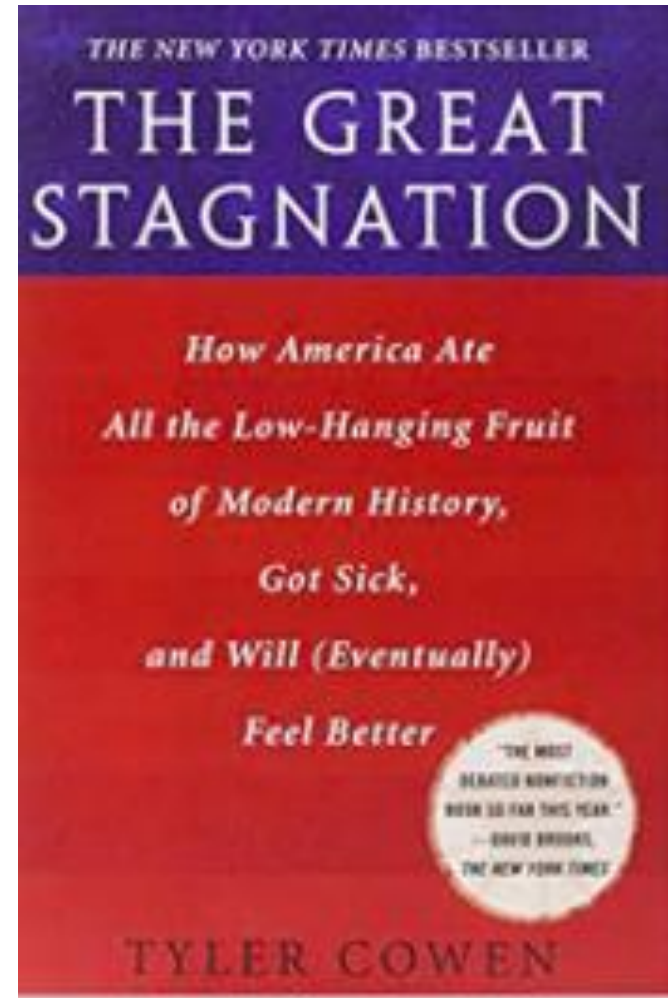
## **The need for innovation as a rationale for government involvement in entrepreneurship**

Steven C. Michael ✉ & John A. Pearce II

Pages 285-302 | Published online: 19 May 2009



# Death of innovation?





# Final Thoughts

- Innovation is an important component of economic growth
- Important for firms to see innovation as a process
- Innovation is not simply the preserve of large firms
- Over-reliance on dominant large firms is problematic
- Policy should play a role in fostering innovation – however how to do it is open to debate

