

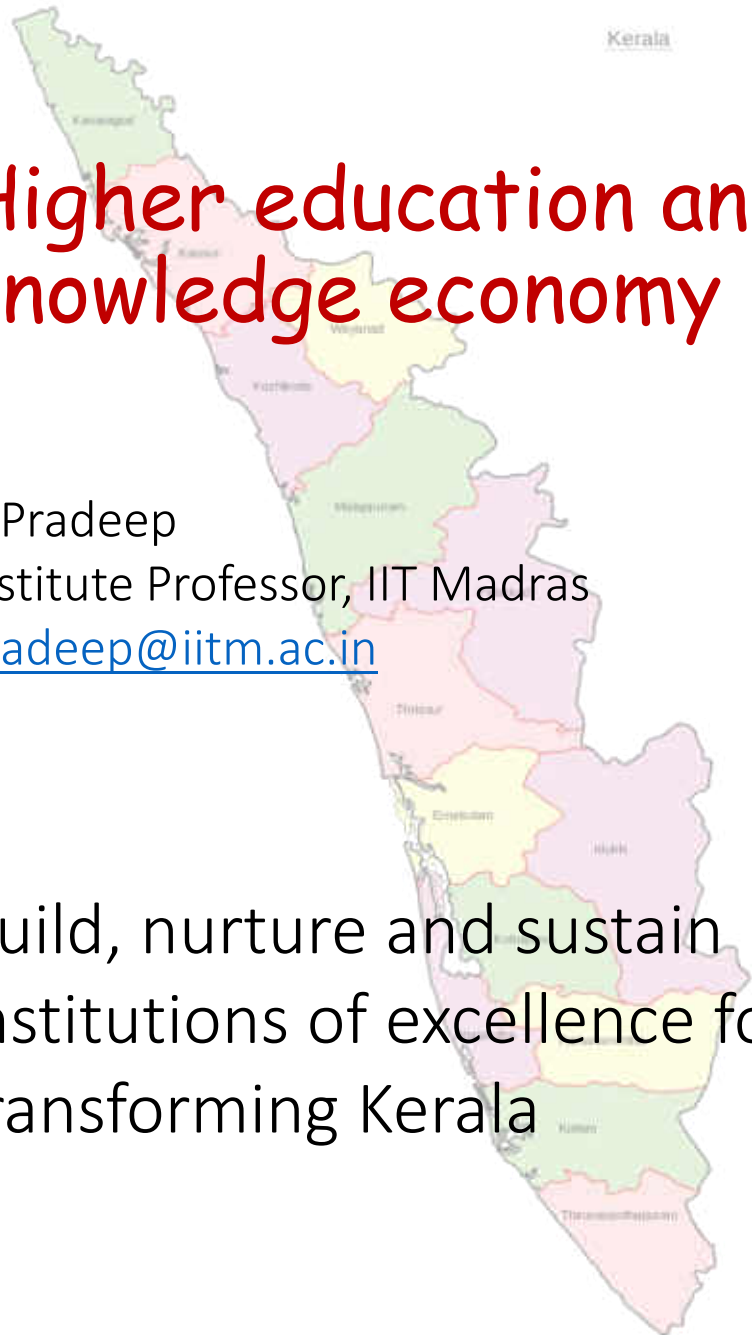
# Higher education and knowledge economy

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Build, nurture and sustain institutions of excellence for transforming Kerala



Dedicated to the children of Kerala



# Can we get there? A comparison of data

Country/state	Kerala	Israel	Taiwan	S. Korea	New Zealand	Vietnam
Land area km <sup>2</sup>	38,863		36,197			331,699
Population	34,630,192		23,568,378			96,208,984
GDP, US\$	\$120b		\$1403b			\$1047.3b
GDP per capita, US\$	\$3,200		\$56,959			\$10,755
HDI	0.645 (India) 0.794 (Kerala)		0.93 (2023)			0.704
Literacy (%)	96.2		98.5			95
M:F ratio	0.9225		0.997			0.9971

Kerala is unique and no single country can be a model

Most of the figures are for 2021

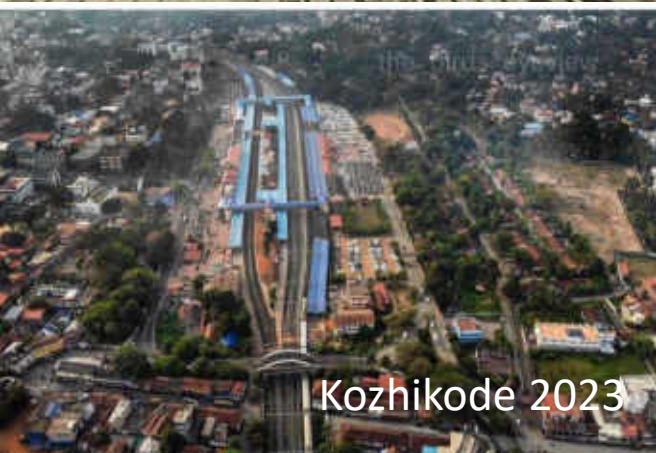




Kozhikode 1901



Chicago 1901

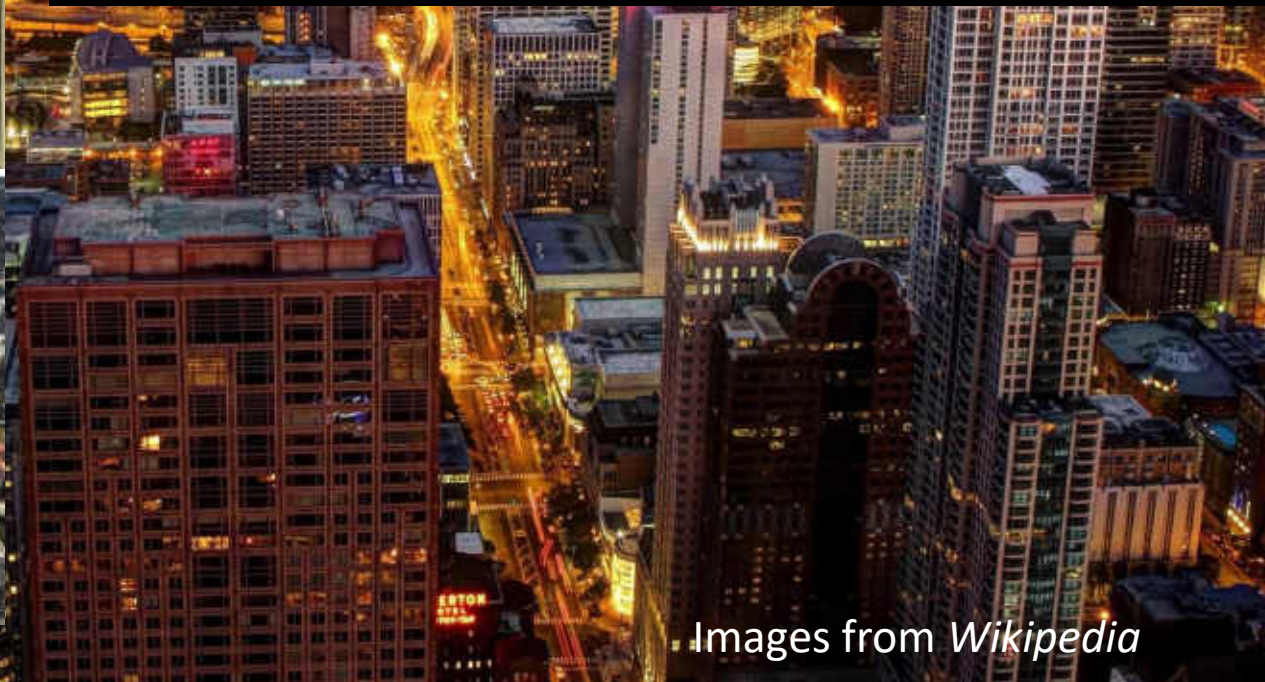


Kozhikode 2023



This world we see is just a century old

Technology transforms the world, quickly



Images from *Wikipedia*

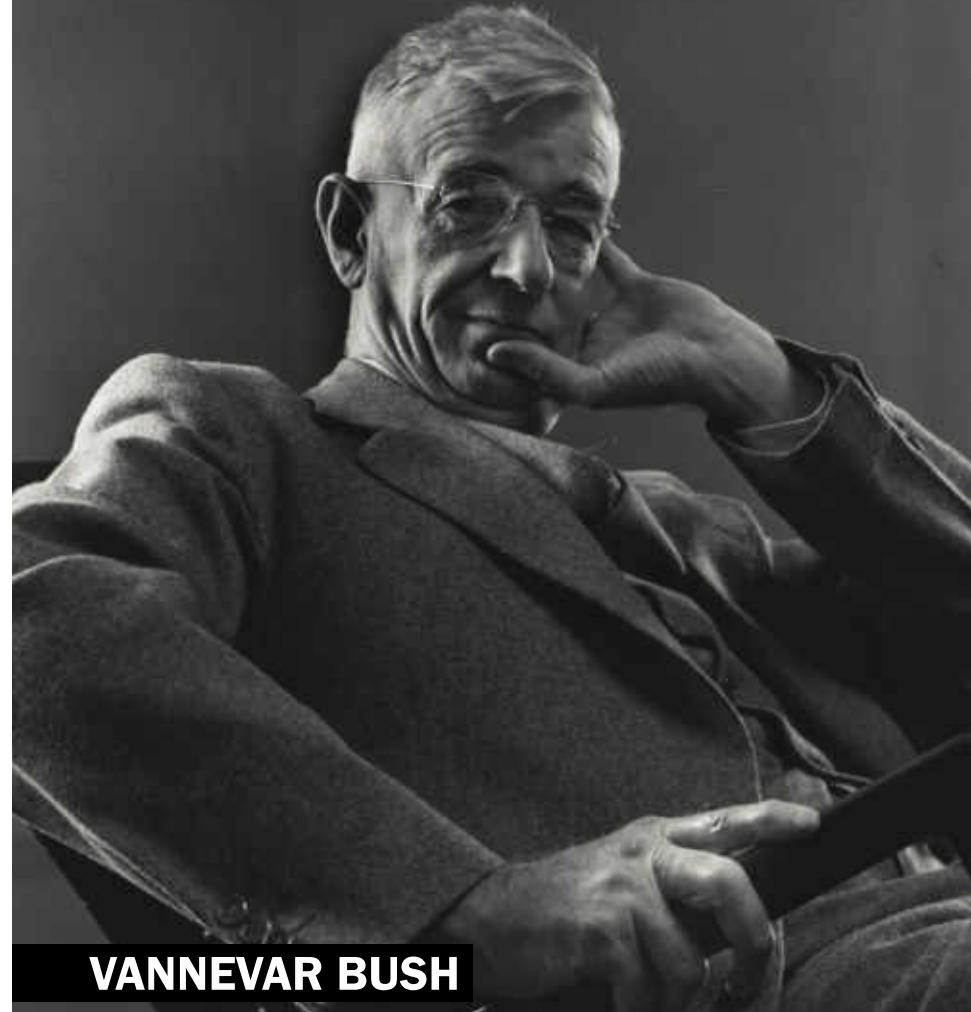
This became possible  
through science  
nurtured by inclusive  
universities

Organised research  
happened through the  
creation of National  
Science Foundation and  
other such mechanisms  
of scientific growth

# SCIENCE

## the endless frontier

*75<sup>th</sup> Anniversary Edition*

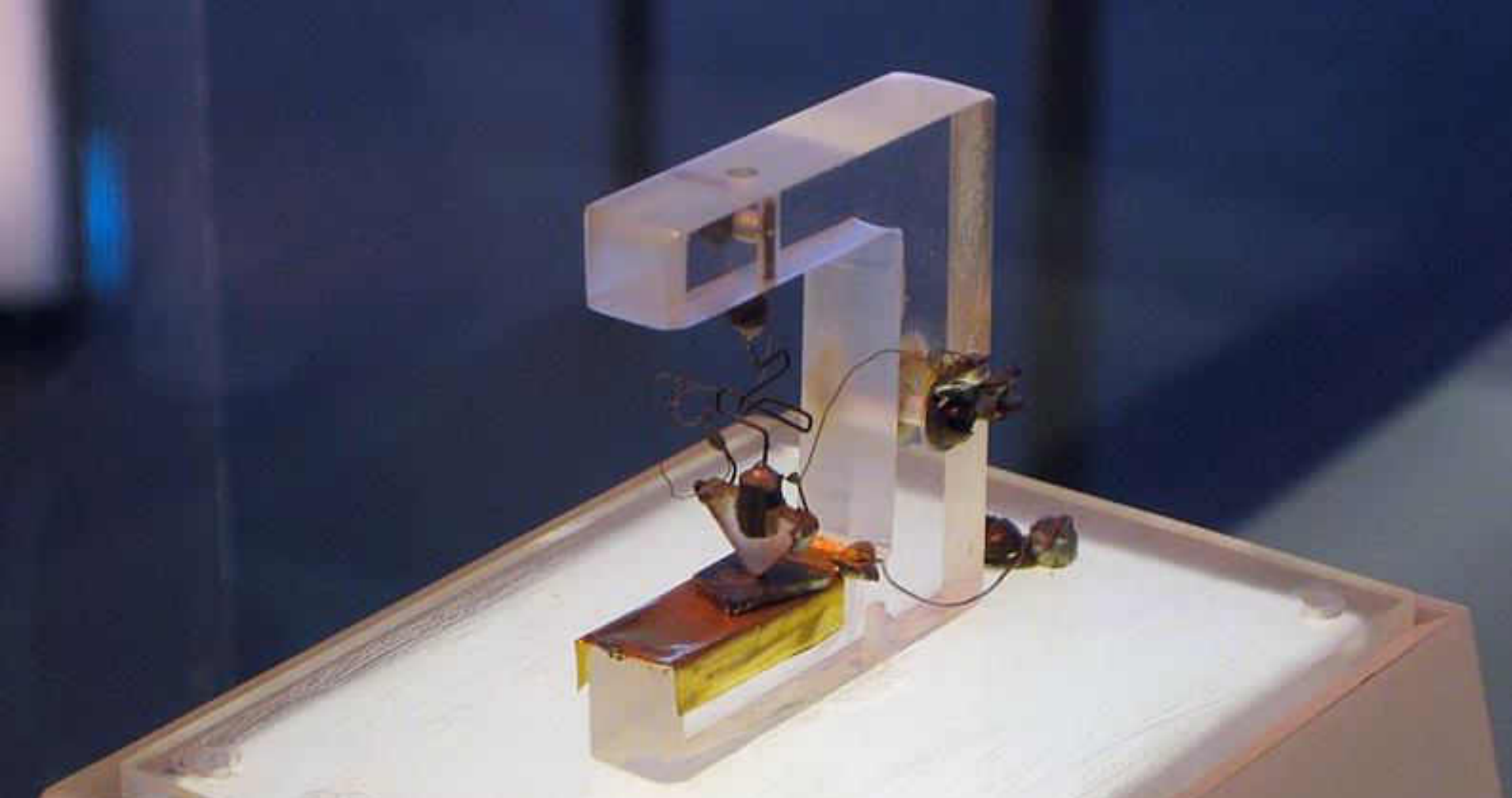


**VANNEVAR BUSH**

Reprinted in celebration of the National Science Foundation's 70th anniversary

*1950-2020*

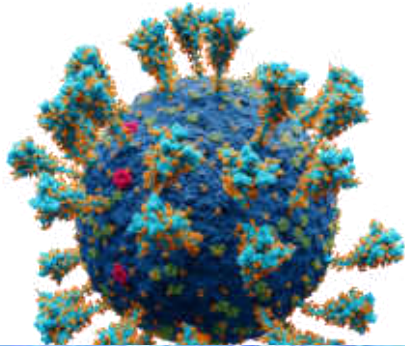




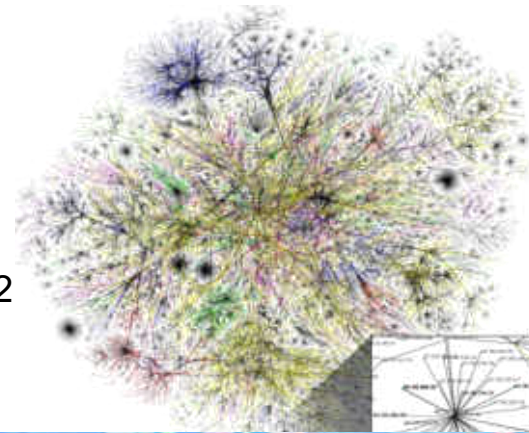
A single discovery can be valued more than the GDP of a nation.

Replica of the first transistor, 1947  
Bell Labs

# Innovations sustained the world



*Orthocoronavirinae*  
Group member SARS-CoV-2  
Wikipedia



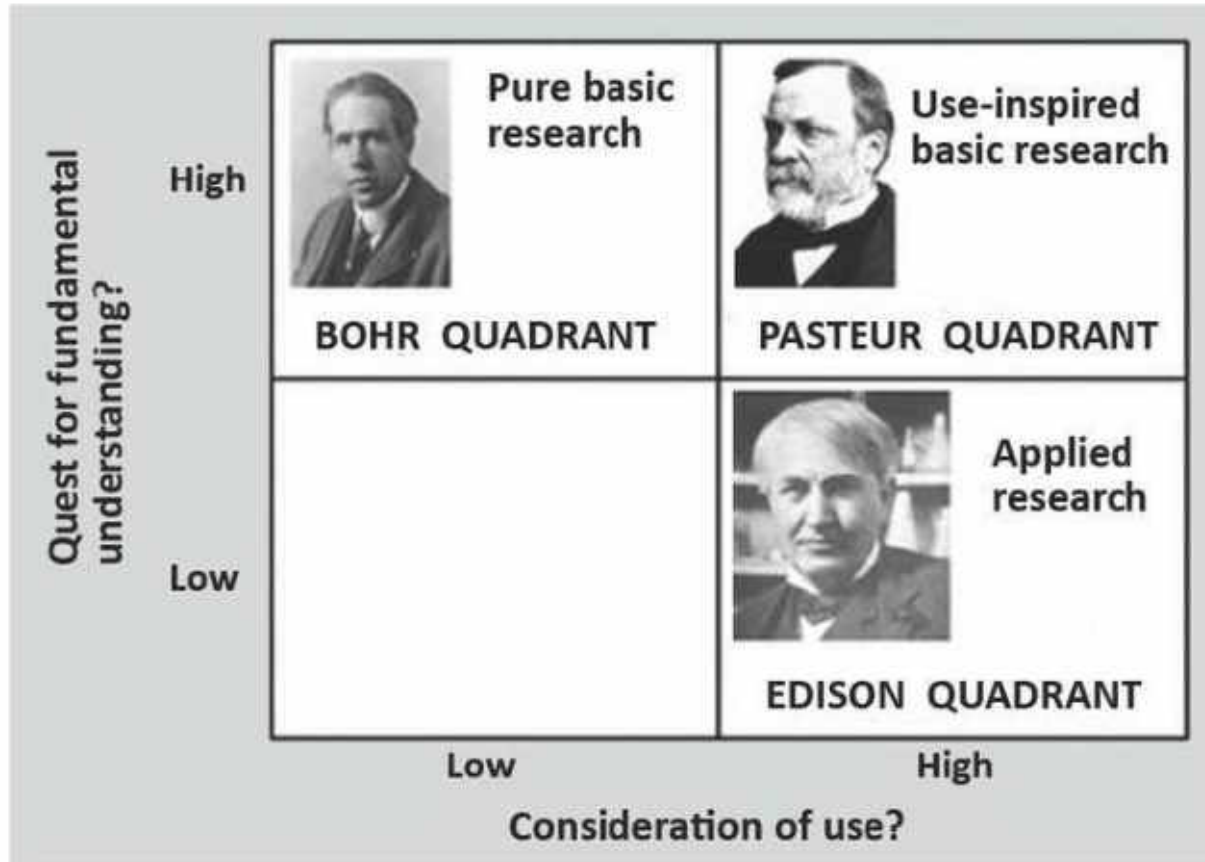
Internet



# This happened principally through universities



Uni



# Key ideas

Academic institutions are not regular government offices

Autotomy, autonomy, autonomy

Quality, quality, quality

Inclusive

Autonomy in every respect – administrative, academic and financial

Nurturing excellence

Ease of doing education

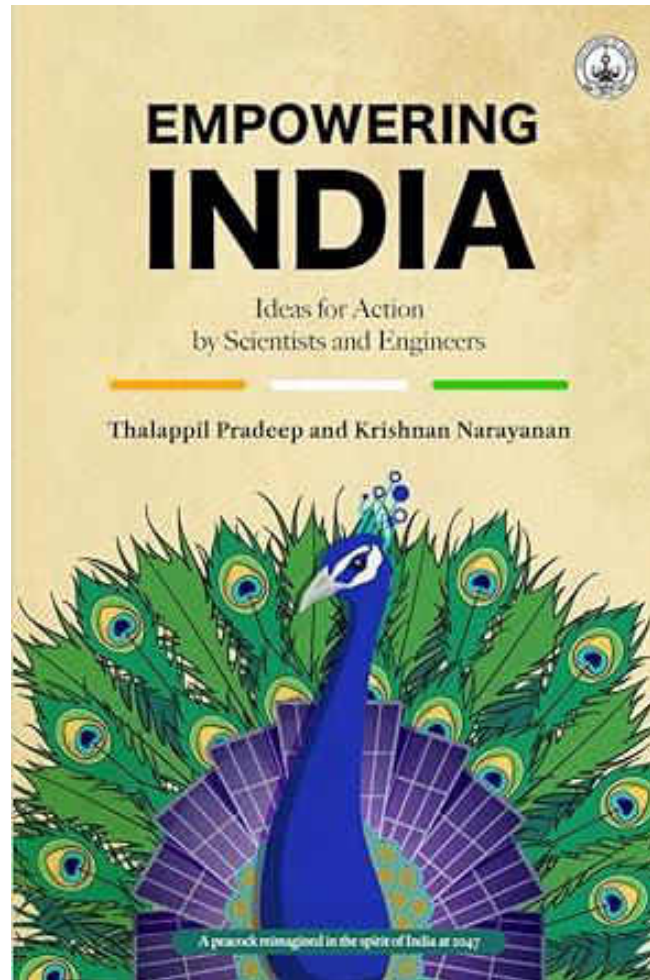
Higher education is going well.  
All it needs is only a desire to transform.



Please conduct open discussion on the report in every institution.



# India@2047 – Ideas for action



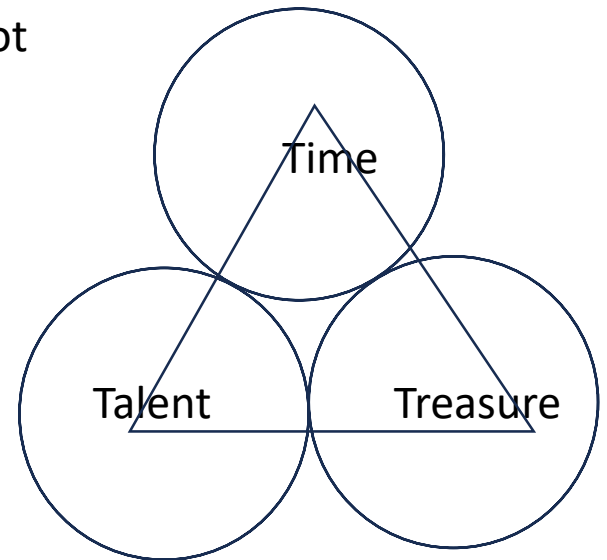
Available on Amazon

# Our lessons

- Alumni engagement – we have never gave the alumni a forum to participate in the growth of institutions
- Retired faculty and staff – Capacity underutilized
- Knowledge pool of Kerala – The Global Malayalee – not used adequately
- Visionary leadership in every institution
- Development office with freedom

Practiced by  
everyone

All these need no investment –  
only vision and freedom



Alumni engagement model

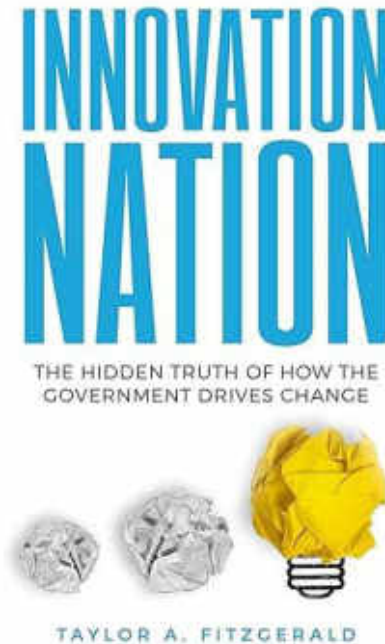
>60 lakh individuals

# How to build new Kerala

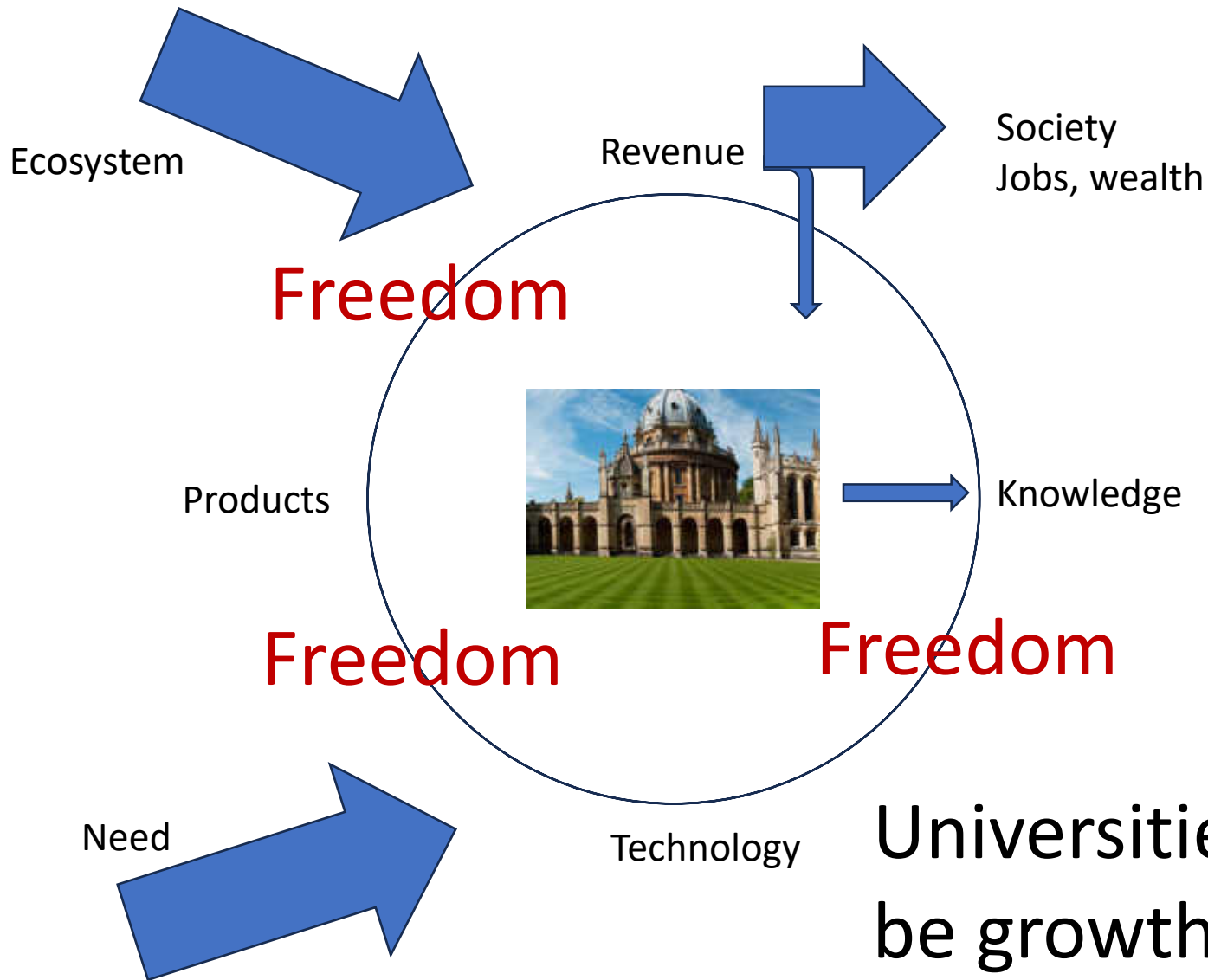
Nothing goes faster than thought  
Nothing is more purposeful than knowledge  
Nothing is more rewarding than a startup

Startup is a vision  
Startup is an ambition  
Startup is a community  
A collection of startups is a growth engine

All it needs is an environment  
Most important is quality people  
The next is FREEDOM  
Investment is a minor component



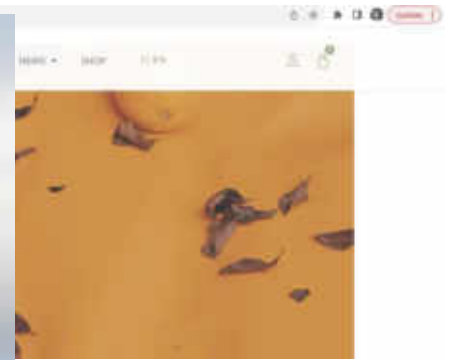




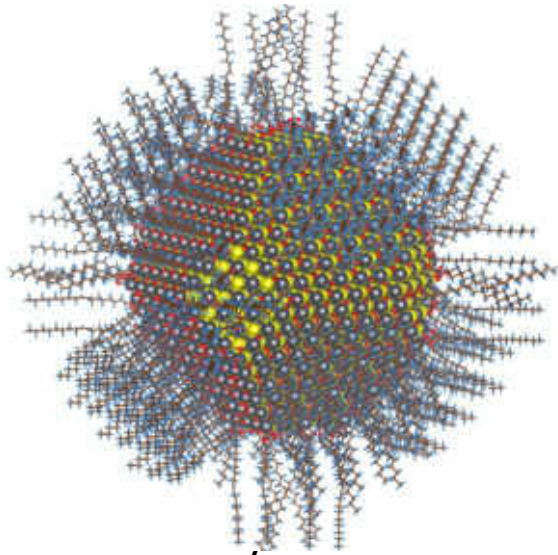
Universities must  
be growth engines

What are the  
opportunities

## 1. Sustainable



Most eco-sensitive region of the planet



ch



All are startups

## 2. Responsible tourism

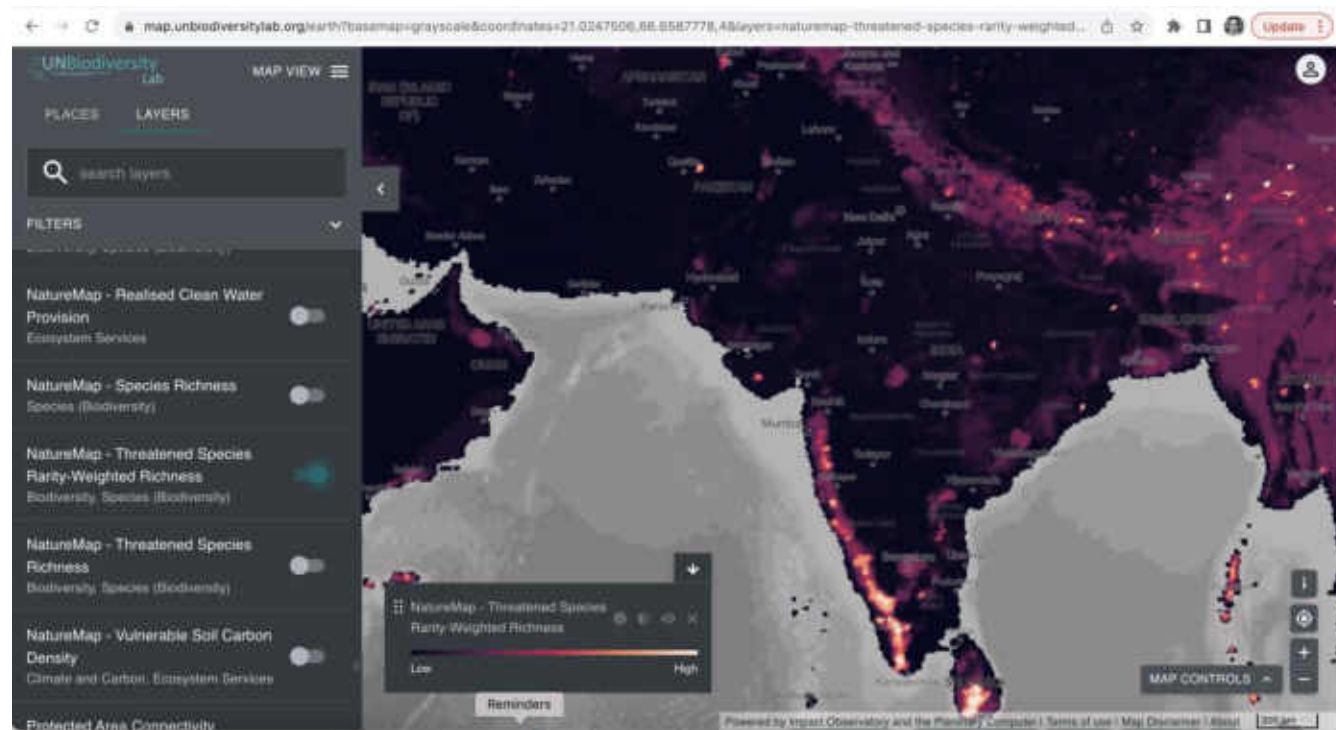
Biodiversity

Sustainable food

Zero society

Healthcare devices

## 3. Affordable healthcare for the world





## 4. Educating the globe

Education (\$13.7T)  
Health (\$12 T)  
Mobile food service (\$3T)



Personalized learning experience and artificial intelligence

# Medical technology – examples of success in Kerala



Dentacare , Muvattupuzha (<https://www.dentcaredental.com/>)



Agappe (<https://www.agappe.com/in/about-us>)



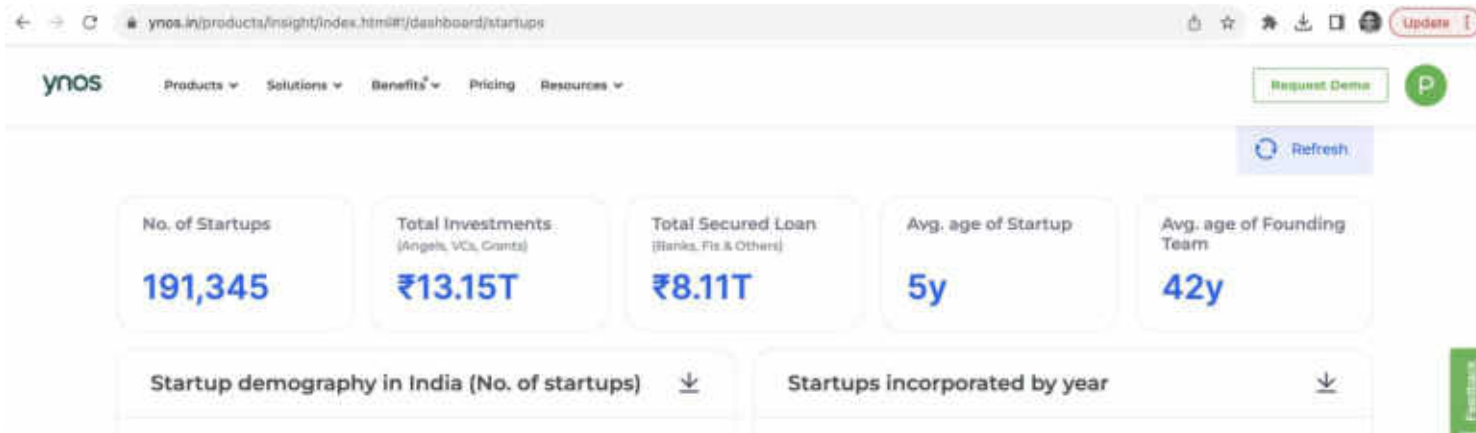
TTK Healthcare Ltd (<https://ttkhealthcare.com/>)



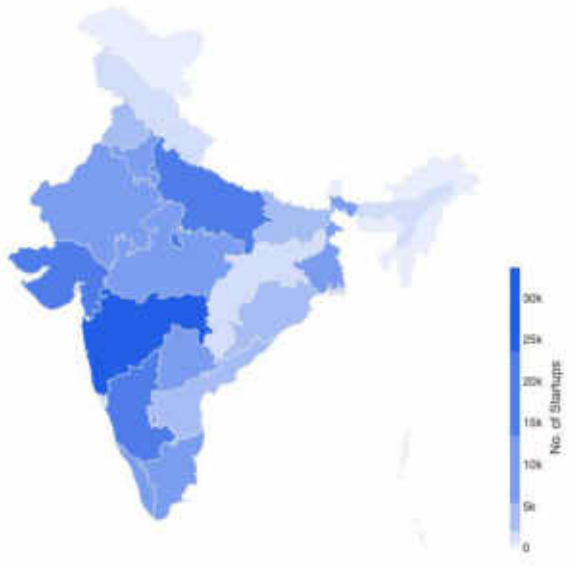
HLL Peroorkada Factory for contraceptives

Global medical devices market >\$500b

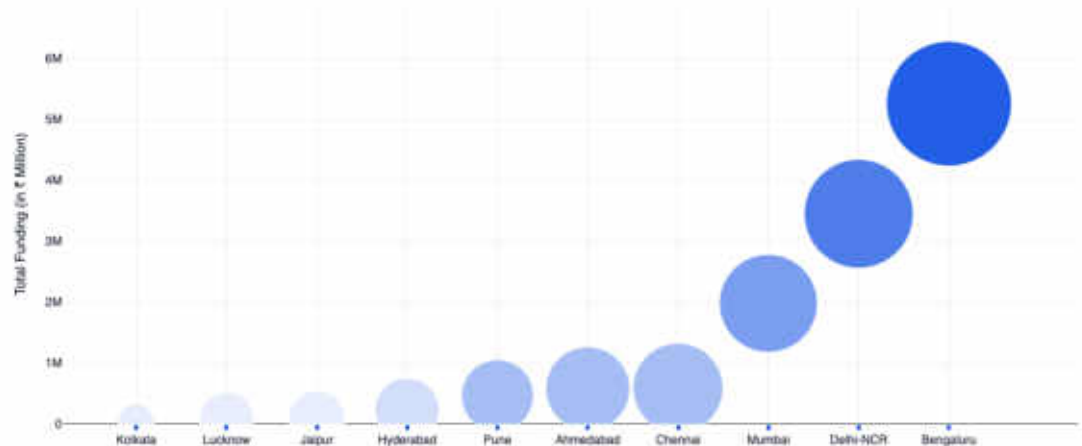
# Startup analytics



Startup demography in India (No. of startups)



Cities with highest angel and VC funding



October 31, 2023



# We need an interdisciplinary institution of excellence

## Kerala Institute of Science, Technology and Innovation (KISTI)



### Why KISTI?

When there are many institutions already...? IIT, IISER, NIIST

Kerala made great contributions to education since 1957

Peoples' science movements thrived

Renaissance movement of late 19<sup>th</sup> and early 20<sup>th</sup> century  
brought equality and camaraderie between people

Yet, we did not make an impact in research and innovation

No research institution of global value

We cannot afford to miss the bus in the age of innovation

The 1st

# Zero-carbon state

Make every home run on renewables

Make every transport on green fuels

Make every public building run on renewables

Attract zero-carbon manufacturing to Kerala





നീറുപ്പുപ്പാക്കൊരാണെടാർന്ന!