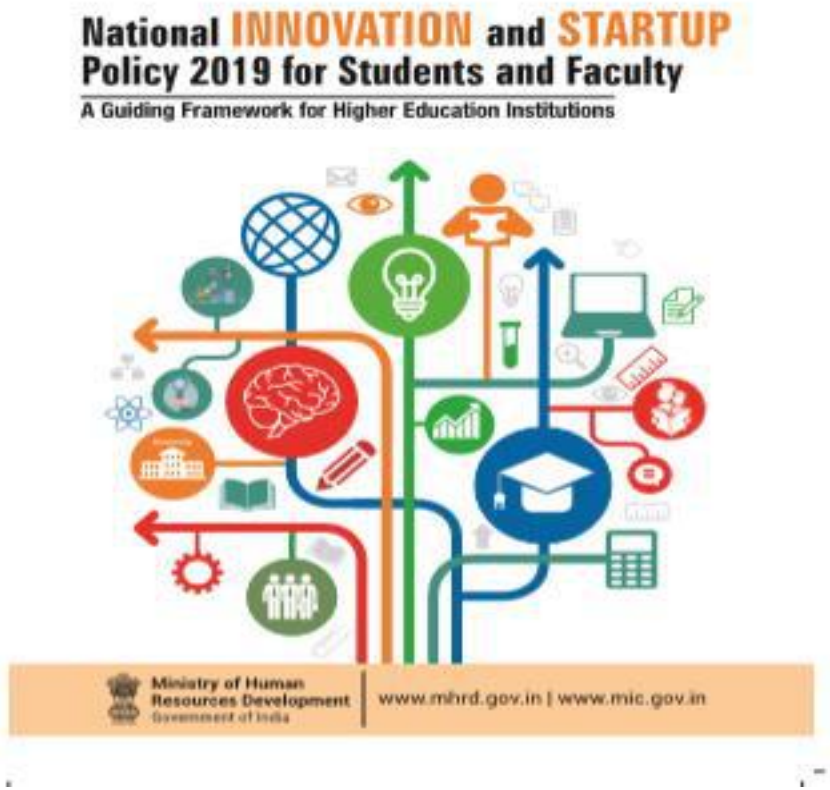
Orientation cum Training Session

Session 1: Orientation and Adoption of NISP at HEI Level



Date: 7th August 2020; Time: 03.00 PM – 5:00 PM

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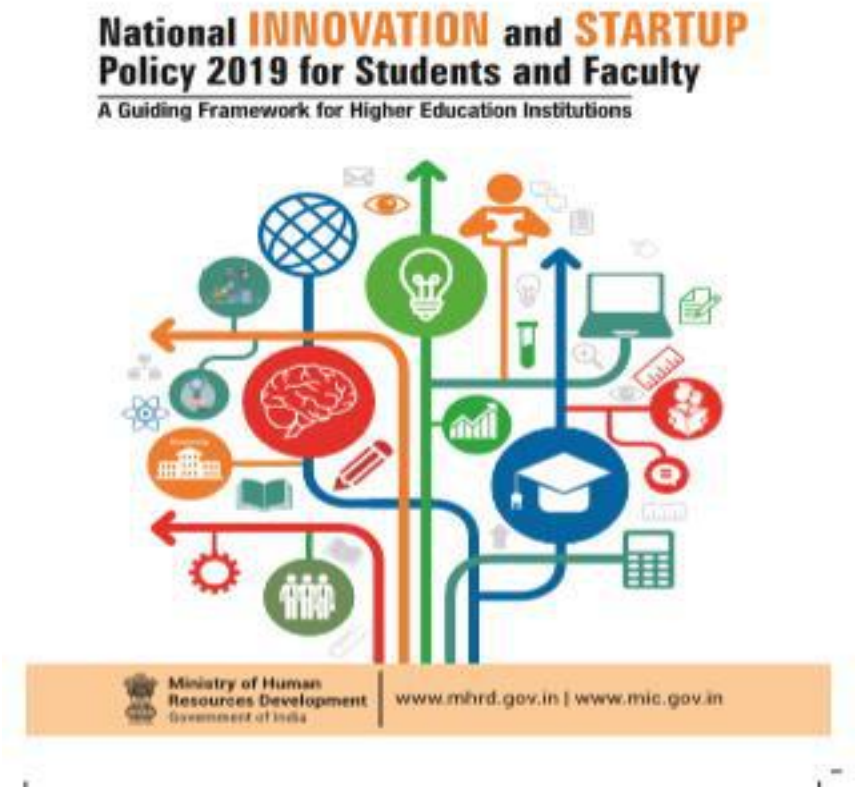


Date: 7th August 2020; Time: 03.00 PM – 5:00 PM

Session Resource Persons:

Dr. Abhay Jere
Chief Innovation Officer MHRD's Innovation Cell, AICTE, New Delhi

Dipan Sahu
Asst. Innovation Director
National Coordinator – ARIIA, IIC & NISP
MHRD's Innovation Cell, AICTE, New Delhi

Learning Objectives

- To Get Sensitized and Oriented on Importance of Entrepreneurship, Entrepreneurial Thinking & Approaches

- To Broaden our Understand on Policy Design, Logic and Performance Indicators

- To Build Our Vision on Design & Development of a Result Oriented I&E Policy/Action Plan at HEI Level

Session Plan
(03.00 PM – 05:00 PM)

- Understanding The Policy Framework– Entrepreneurship, Innovation & Economic Development

  (03.15 PM to 03.30 PM)

- Innovation & Entrepreneurship: Global & India Context & Measuring Frameworks

  (03.30 PM to 03.45 PM)

- Understanding Market Failure & Govt. Intervention – Problem Tree & Policy Logics

  (03.45 PM to 04.00 PM)

- National Innovation and Startup Policy – Dimensions & Thrust Areas for HEIs to Implement

  (04.15 PM to 04.30 PM)

- Expected Outcomes & likely impacts - Setting up Key Performance Indicator

  (04.30 PM to 04.45 PM)

- Question and Answers Session

  (04:45 PM to 05:00 PM)

Initiatives of MHRD's Innovation Cell

- Smart India Hackathon
- Institutions' Innovation Council
- Atal Ranking of Institutions on Innovation Achievements
- National Innovation and Start-up Policy 2019 for Students & Faculty
- International Hackathons

NISP

Hackathon

MHRD'S INNOVATION CELL (GOVERNMENT OF INDIA)

1. Understanding Policy Framework– Entrepreneurship, Innovation & Economic Development

- Innovation Types
- Entrepreneurship Traits
- Entrepreneurship & Economic Growth
- Unleashing Entrepreneurship
- Startup Development Phases and Requirements

Entrepreneurship – Theories & Concepts

- The word entrepreneur itself derives from the French verb **entreprendre**, meaning "**to undertake**".

- In **1723**, Irish–French economist Richard Contillon coined the term Entrepreneur (**self-employment and Risk takers**)

- in **1890**, Alfred Marshall & Frank Knight have added **Leadership** and recognized the need of entrepreneurship through organization, as a **fourth factor of production**.

Goods & Services = *f* (Land, labour, Capital, Entrepreneur)

Mainstreaming Entrepreneurship

- **In 1934**, Joseph Schumpeter's modern definition of an entrepreneur; added **Innovation**; less on Risk Takers

"Entrepreneurs as **innovators** who implement **entrepreneurial change** within markets by **identifying market opportunities** and using **innovative approaches** to exploit them"

- **5 manifestations** of Entrepreneurial Changes
  - Introduction of a *new (or improved) Good & Services*
  - Introduction of a *new method of production*
  - Opening of a *new market*
  - Exploitation of a *new source of supply*
  - *Re-engineering*/organization of business *management processes*.

Mainstreaming Entrepreneurship

- In **1985**, **Peter Drucker** refined the definition of entrepreneurship

  "Not merely the creation of a new organization, also include any individual who starts a new business venture is an entrepreneur; **even those that fail to make a profit**"

- Entrepreneurs Vs Businessmen

Key Entrepreneurial Characteristics

- **Motivation: The enterprising person is highly motivated, energetic, and has a** capacity for hard work.

- **Creative tendency: The enterprising person is restless with ideas, has an** imaginative approach to solving problems, and tends to see life in a different way to others.

- **Calculated risk-taking: The enterprising person is opportunistic and seeks** information and expertise to evaluate if it is worth pursuing the opportunity which will usually involve some risk.

- **Locus of control: The enterprising person has an internal rather than external** locus of control which means that they believe they have control over their own destiny and make their own 'luck'.

Sally Caird and Mr Cliff Johnson, 1987

Productive Vs Unproductive Entrepreneurship

- **Productive entrepreneurship** refers to Schumpeter's five types of innovation – introducing new products, new processes, new markets, new supplies and new organizations (William Baumol).

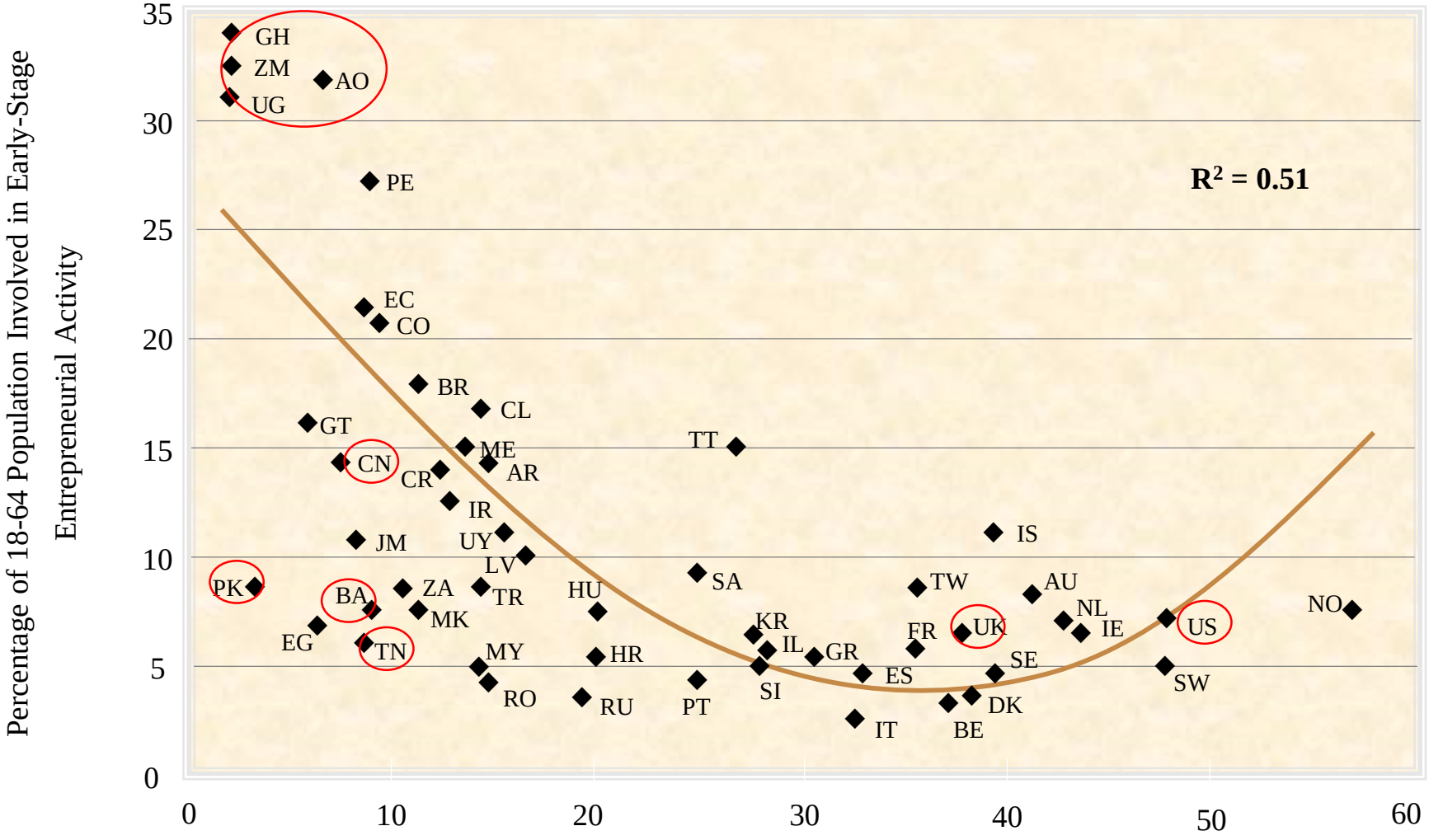
- **Unproductive entrepreneurship** refers to rent seeking activity such as lobbying government for favors, taking legal actions to harm competitors or conducting military activity

- Countries with cultures and institutions that reward unproductive entrepreneurship will channel more of their entrepreneurial efforts to rent-seeking activities, and consequently the economies will perform poorly

- How the entrepreneur acts at a given time and place depends heavily on the rules of the game or the ***reward structure in the economy***

- Thus, the allocation of entrepreneurship between productive and unproductive activities can have a ***profound effect on the innovativeness and subsequent performance of the economy***

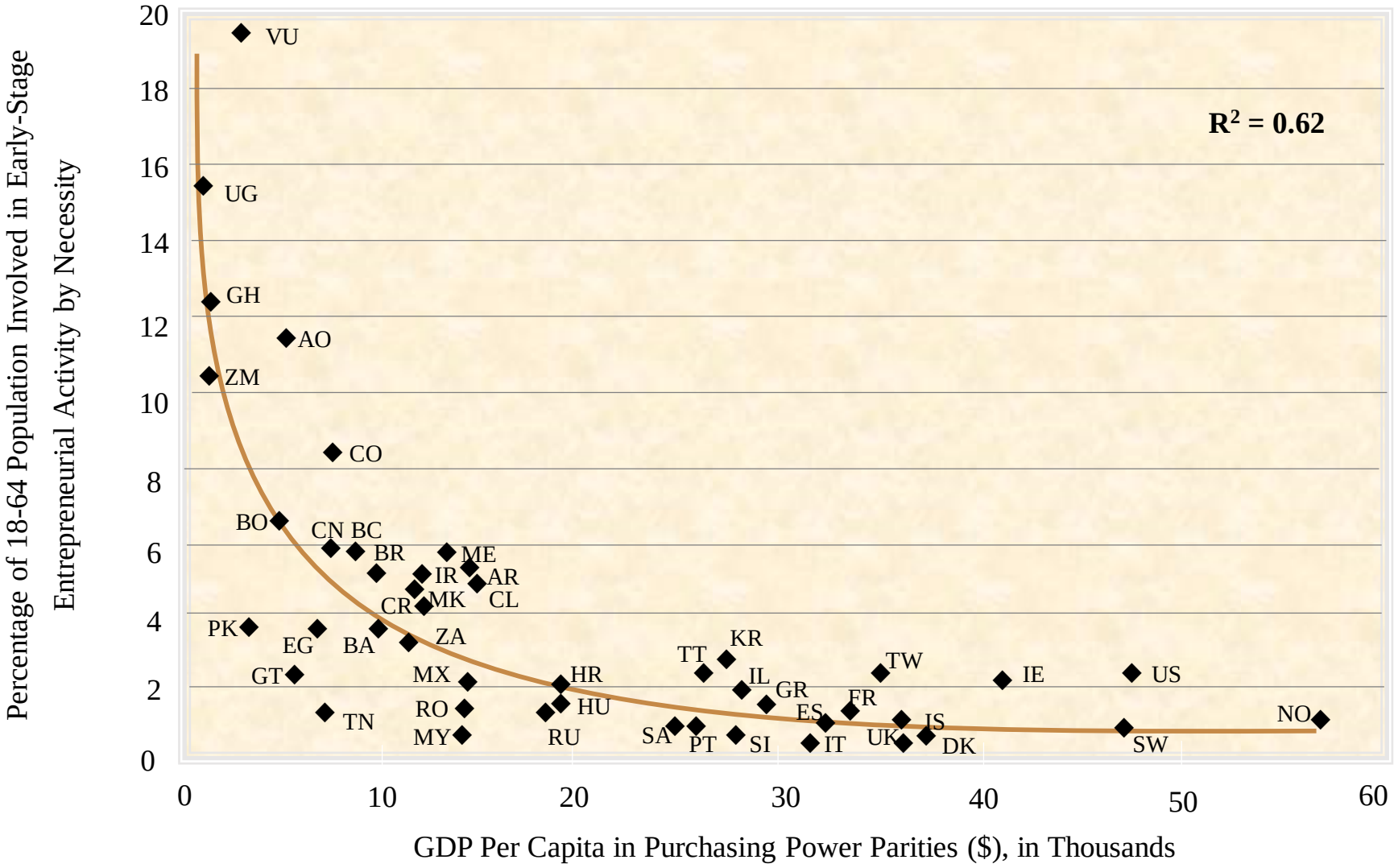
Relationship Between Entrepreneurship and Economic Development



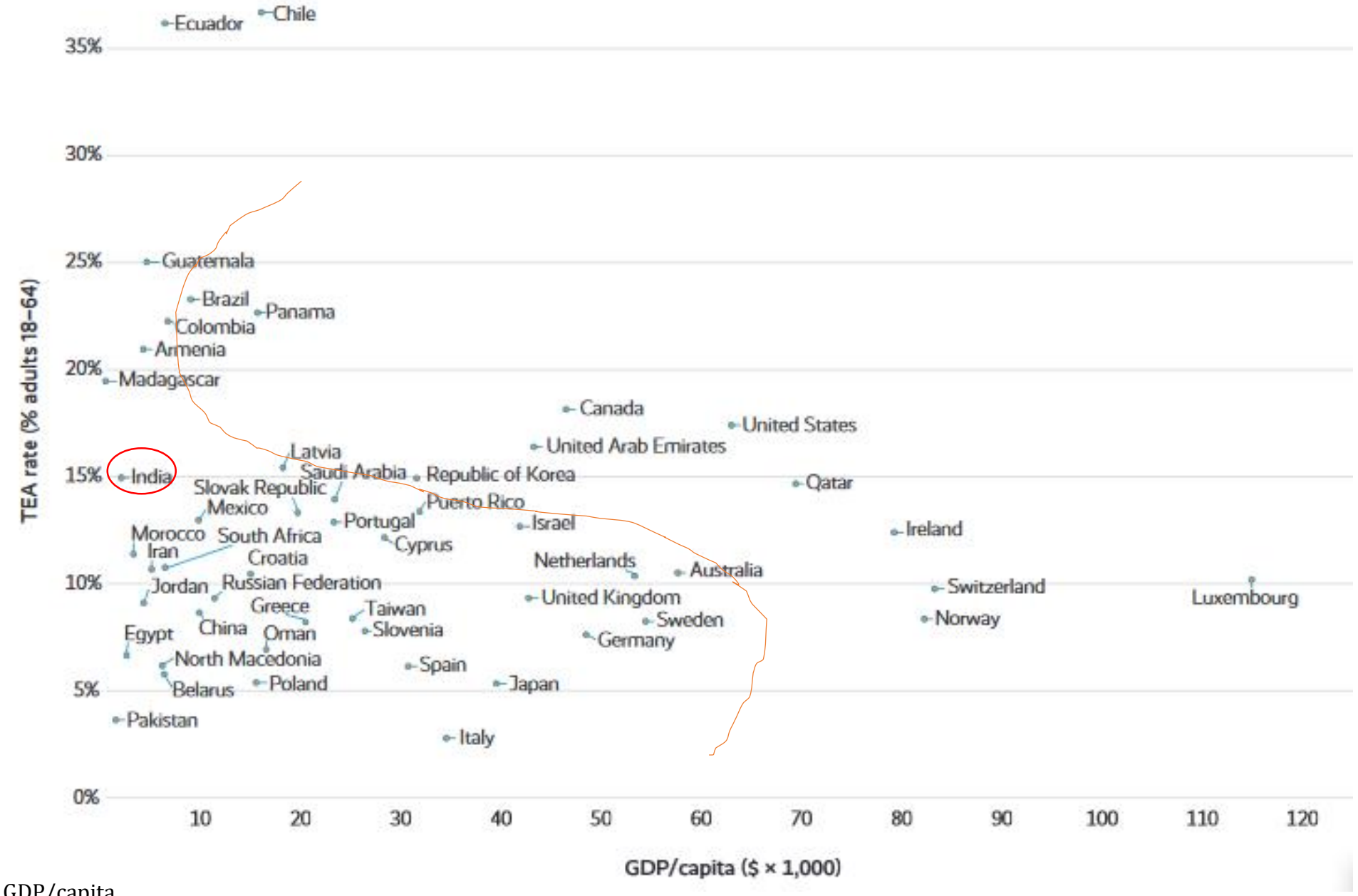
India 9,026.867 PPP Intl $ in Mar 2020

Source: GEM Total Early-Stage Entrepreneurial Activity Rates and Per Capita GDP 2010

Necessity-Based Early-Stage Entrepreneurial Activity and Per Capita GDP 2010



Source: GEM



TEA rates and GDP/capita
Source: GEM Adult Population Survey, 2019 and World Economic Forum www.weforum.org/gcr

Entrepreneurship and Economic Growth

- Not all types of entrepreneurship are good for economic development
- Small and micro firms are not necessarily synonymous with entrepreneurship: many of them do not focus innovation and contribute significantly to economic growth and development
- Low quality and informal entrepreneurship may have negative externalities
- The presence of growth-oriented entrepreneurs seems to be more important than general entrepreneurship
- Unleashing Productive Entrepreneurship: Private Sector Development is Necessary

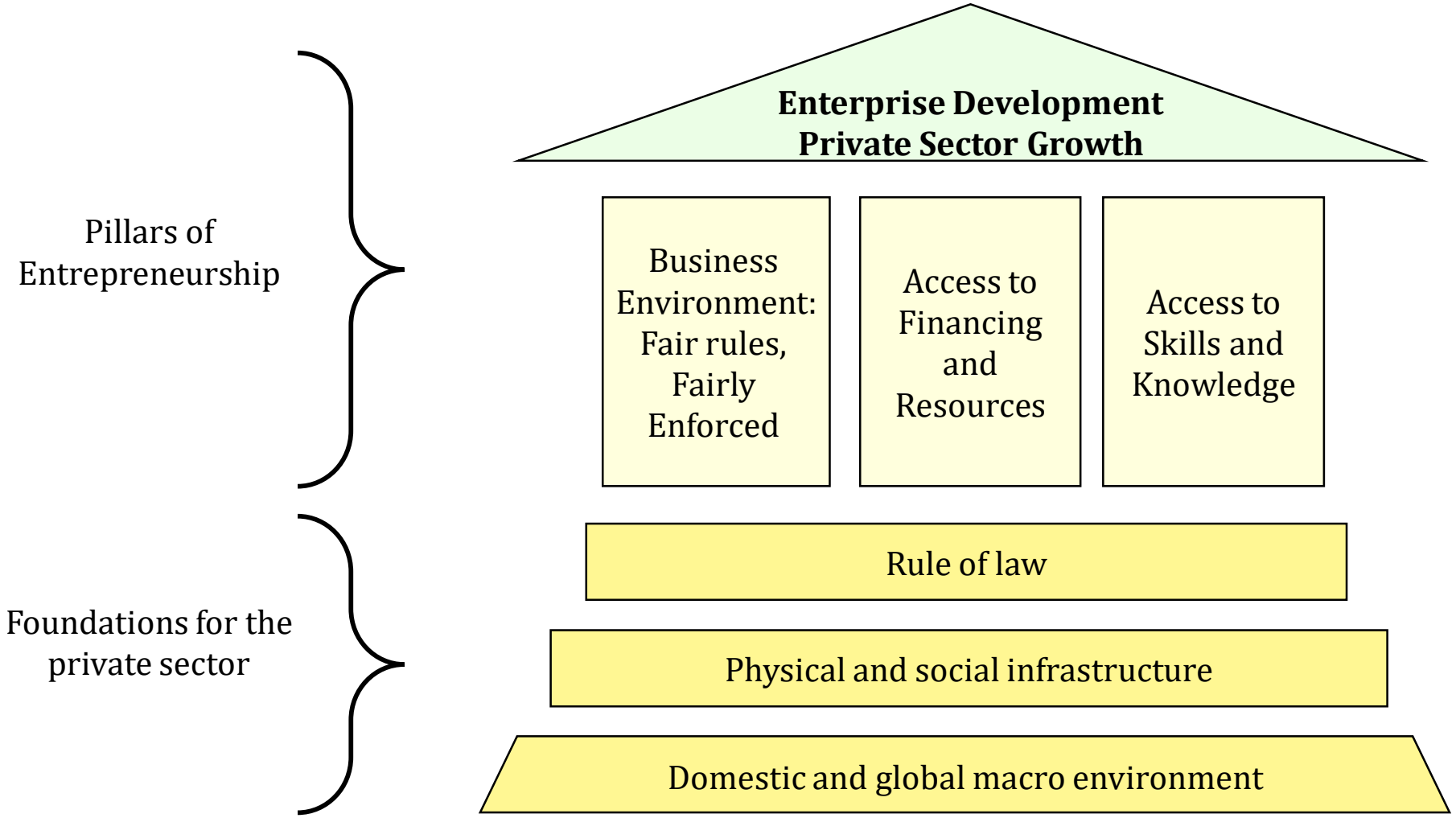
Role of Entrepreneur & Entrepreneurship in Economic Development

- Promotes Capital Formation:
- Creates Large-Scale Employment Opportunities:
- Promotes Balanced Regional Development:
- Reduces Concentration of Economic Power:
- Wealth Creation and Distribution:
- Increasing Gross National Product and Per Capita Income:
- Improvement in the Standard of Living:
- Promotes Country's Export Trade:
- Induces Backward and Forward Linkages:
- Facilitates Overall Development:

Unleashing Entrepreneurship: Private Sector Development

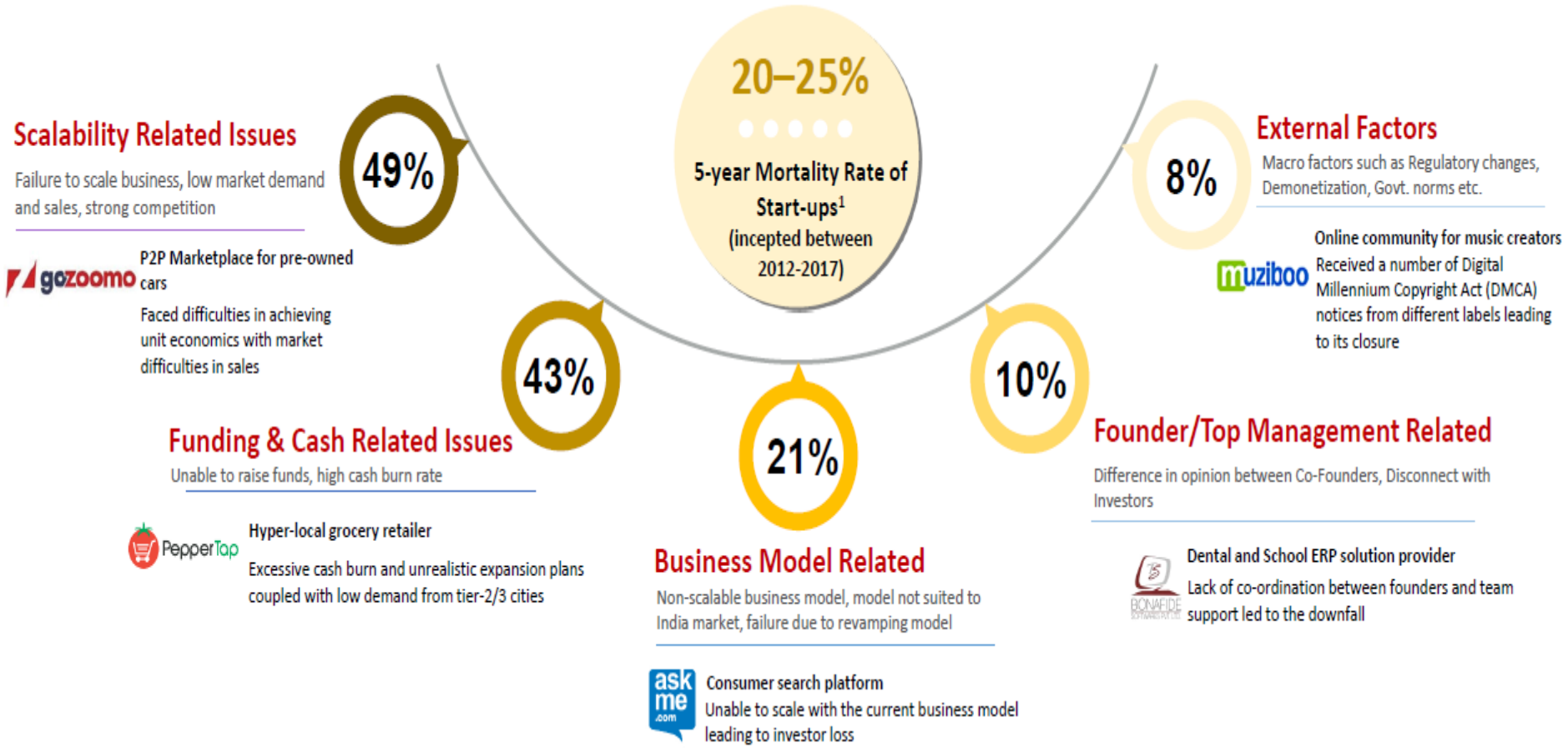
- Development of Entrepreneurship is not always spontaneous.
- The entrepreneurship is motivated and affected by the following factors
  - Economic environment
  - Social environment
  - **Type of Skill and technical knowledge**
  - Family background
  - Religious and cultural affiliation
  - Financial condition
  - **Availability of supporting facilities**
  - Psychological
  - **Government policy and Political environment**
- Type of education prevailing in the country is also an important factor for entrepreneurship development.
- In most of the developed countries, the educational system is designed in such a way that it creates more jobs creators.

Foundations for the Private Sector and Pillars of Entrepreneurship



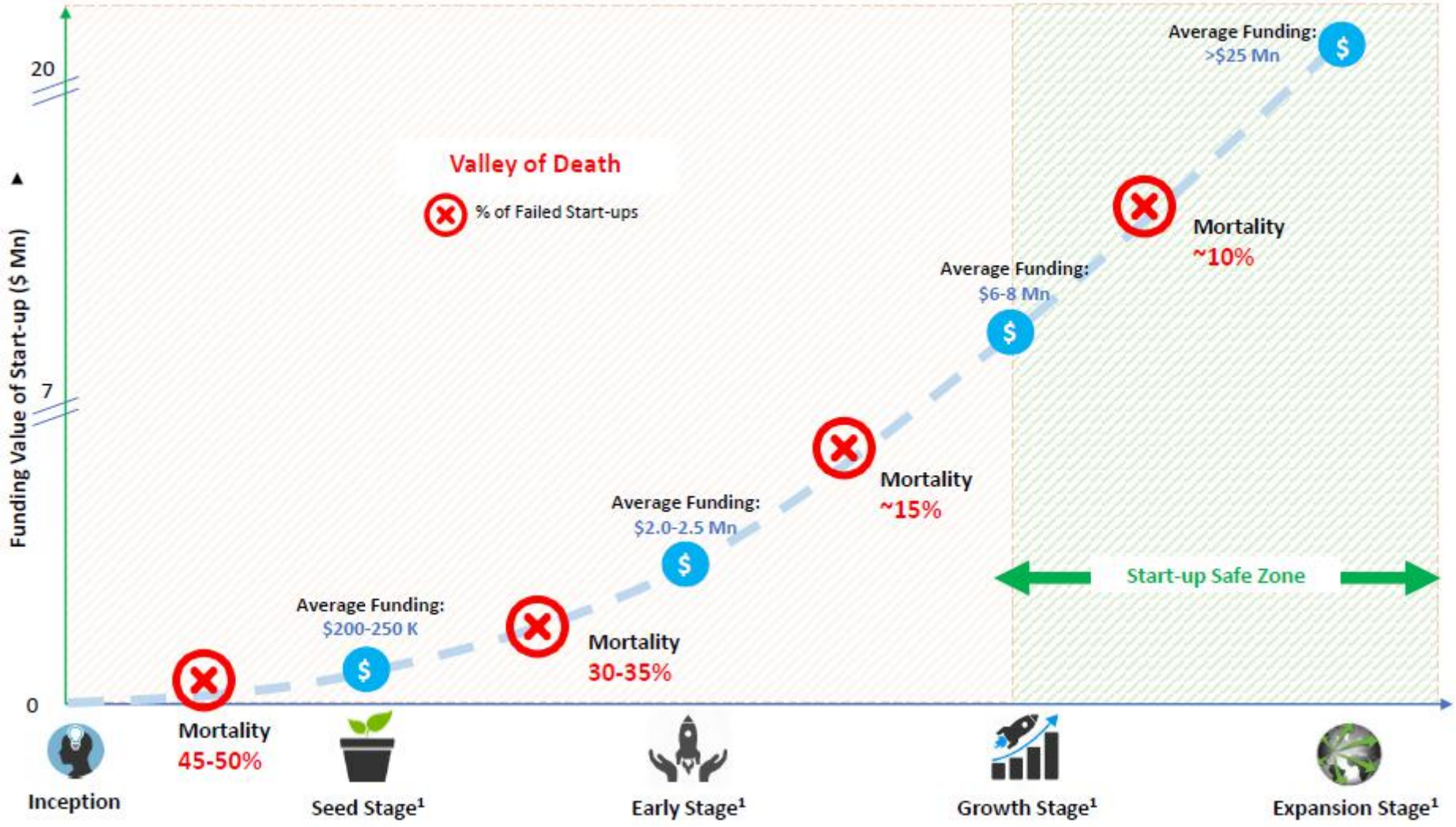
Source: UNDP (2004)

Start-up Mortality



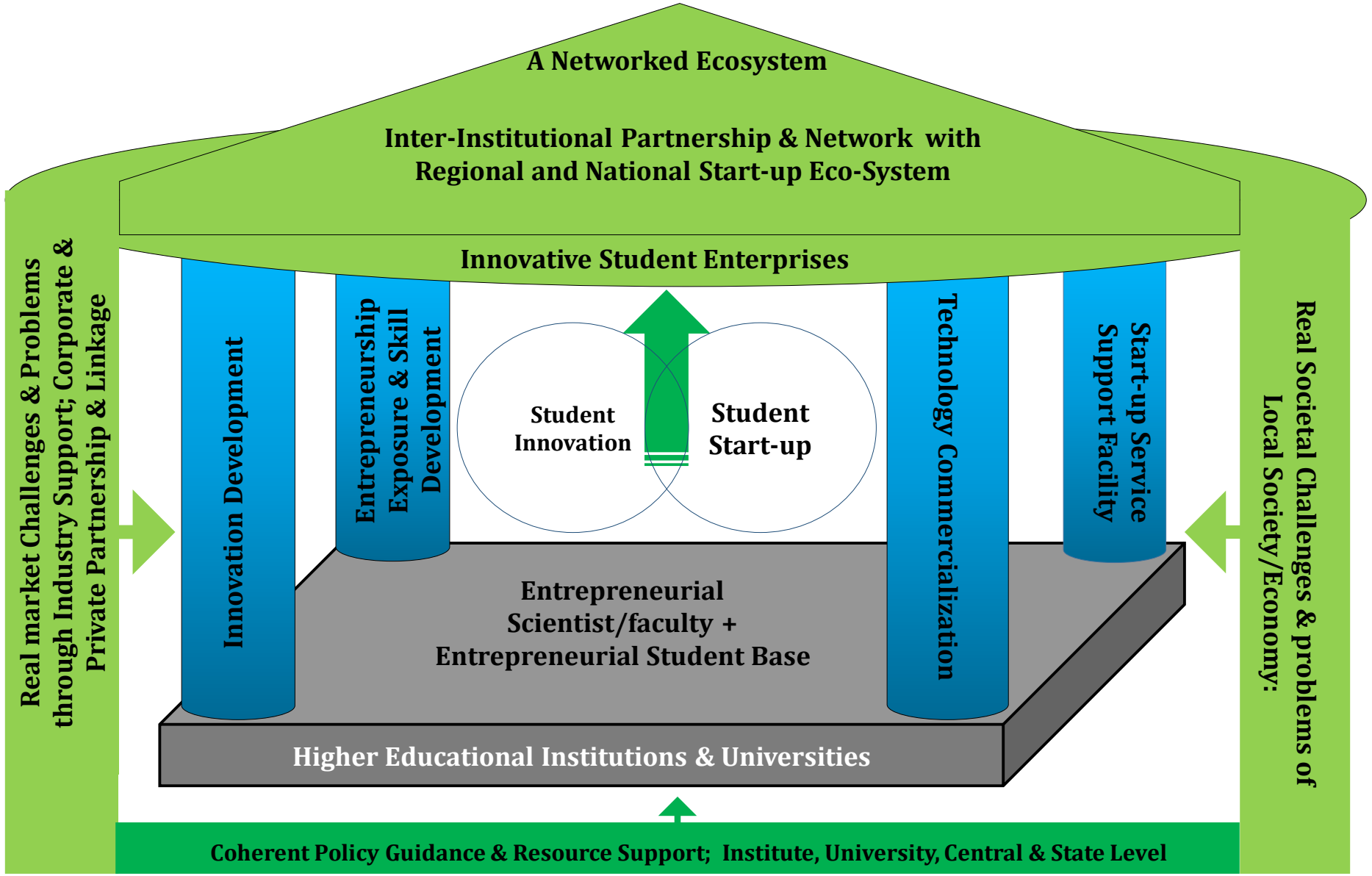
- Majority of Start-ups dying within 1.6-1.9 years of Inceptions
- 55% of failed start-ups have received funding
- 20% failed start-ups graduated from Incubators/Accelerators

Start-up Mortality



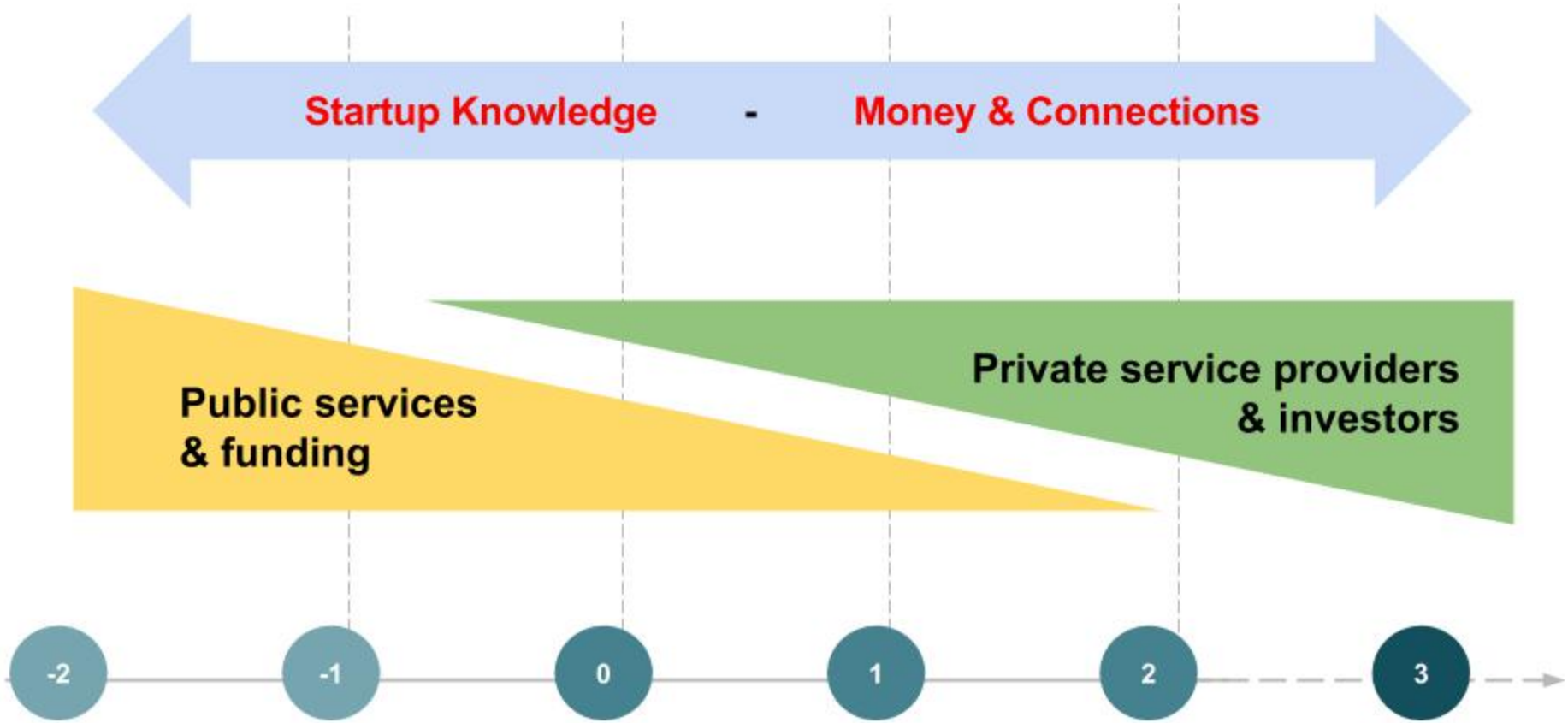
- Funding Amount - Seed Stage < Rs. 5 crore; Early Stage = Rs. 5 to 25 Crore; Growth Stage = Rs. 25 to 100 crore; Expansion Stage > 100 crore

Start-up Ecosystem Framework - A Micro Ecosystem at Institution Level

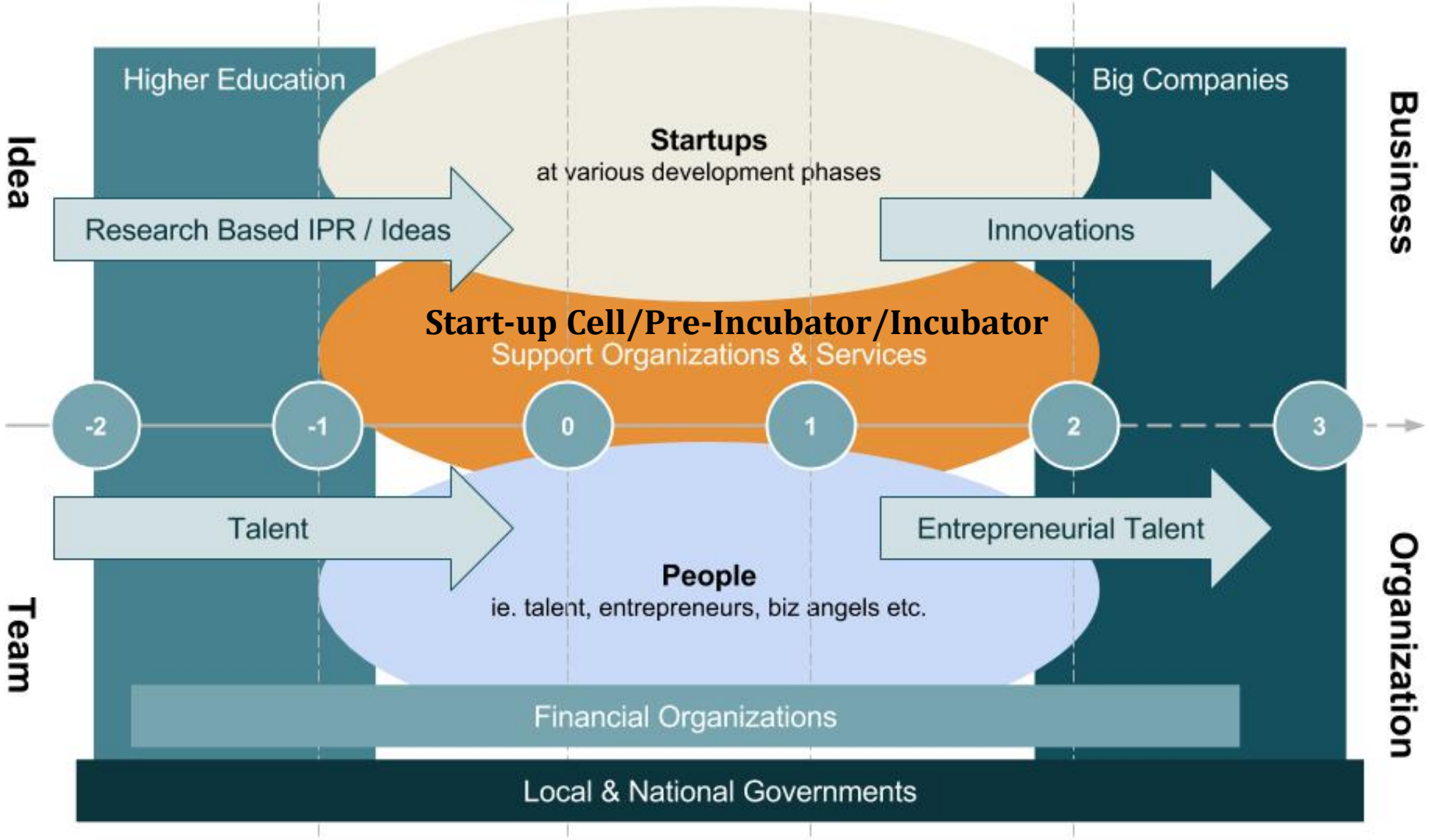


Dipan Sahu (2018)

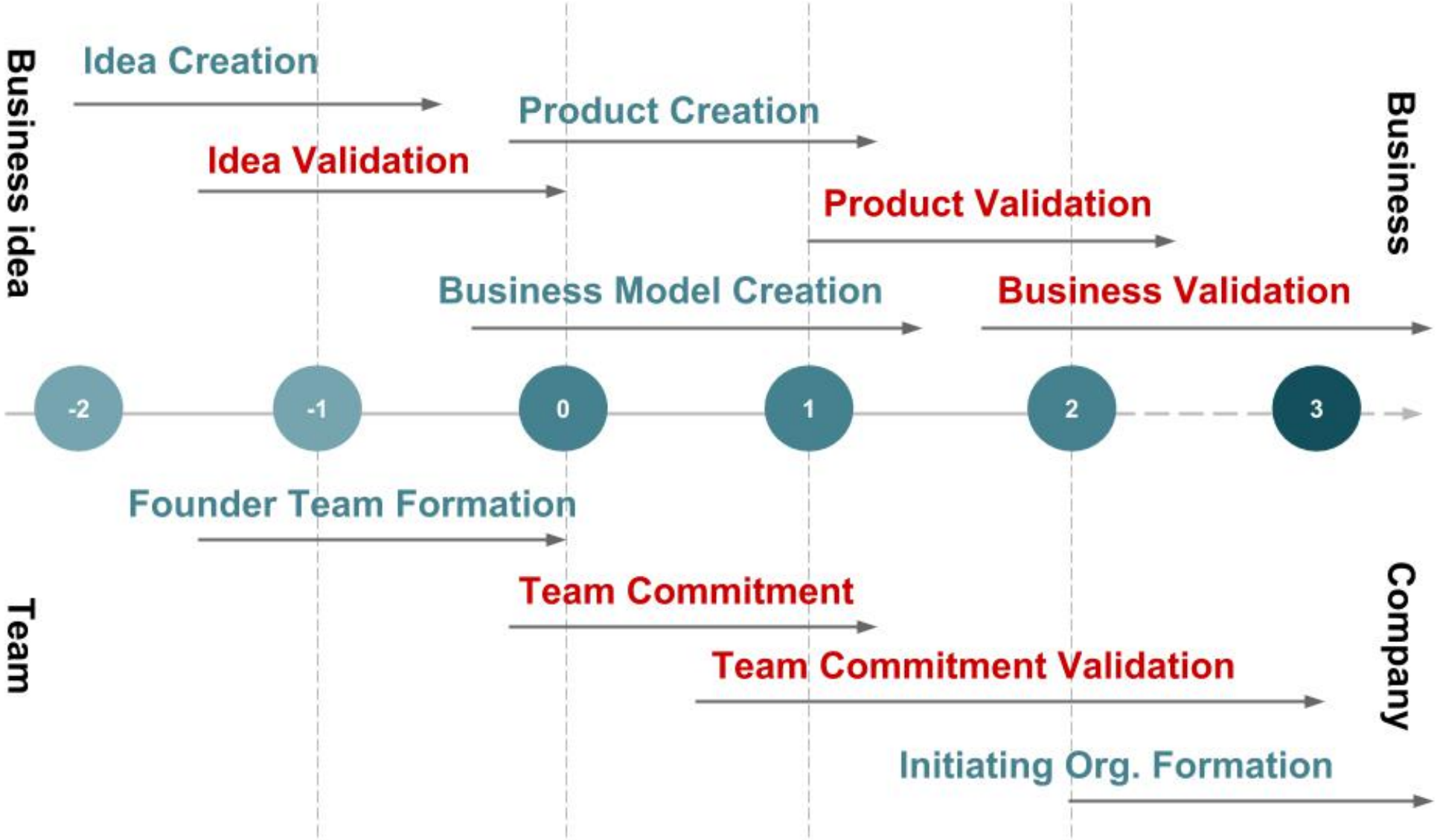
Start-up Development Phases: Key Requirement



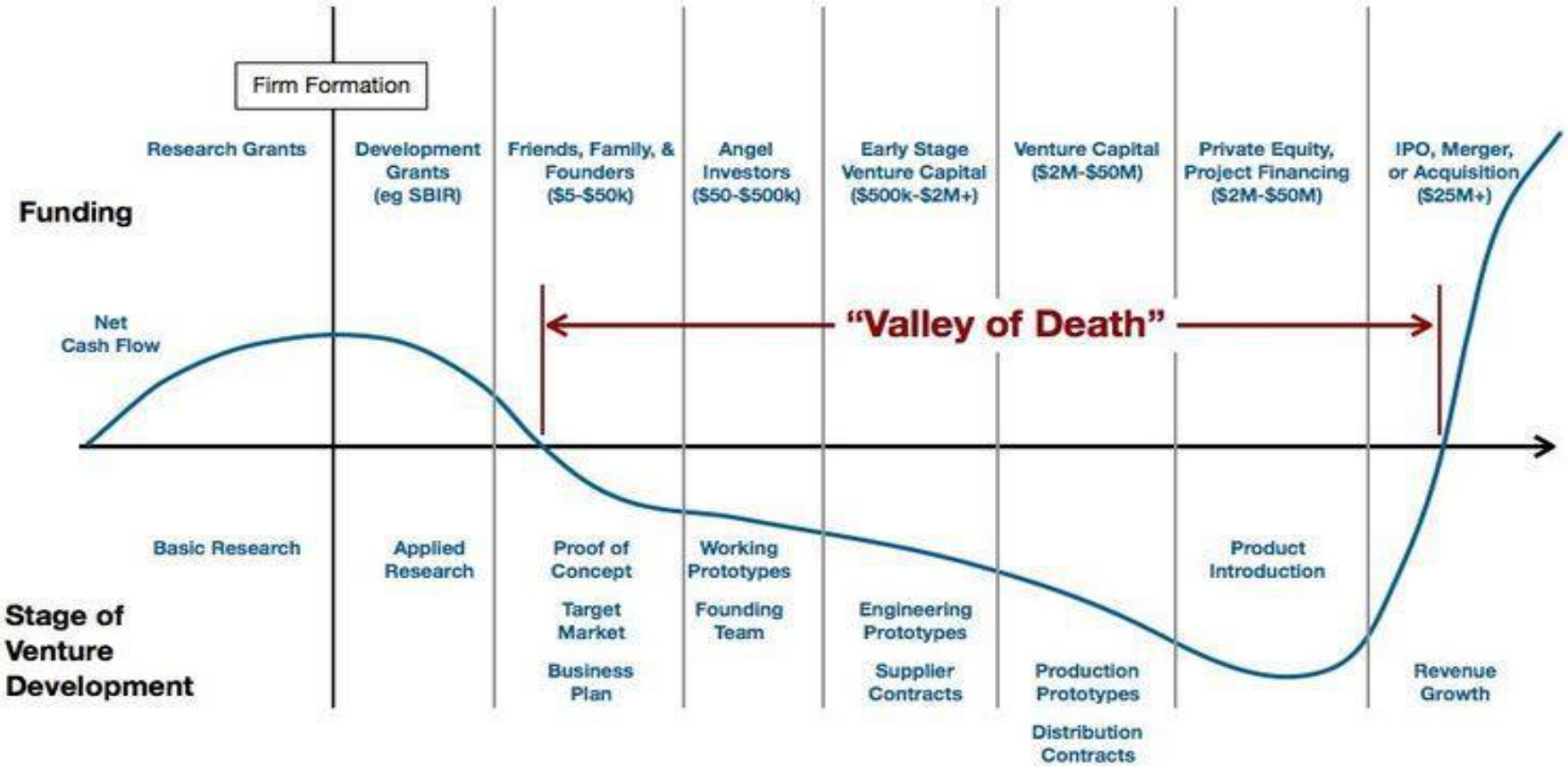
Start-up Development Phases: Key Stakeholders



Start-up Development Phases: Key Services



Lifecycle of a venture



UCDAVIS CENTER FOR ENTREPRENEURSHIP

Graduate School of Management UCDAVIS

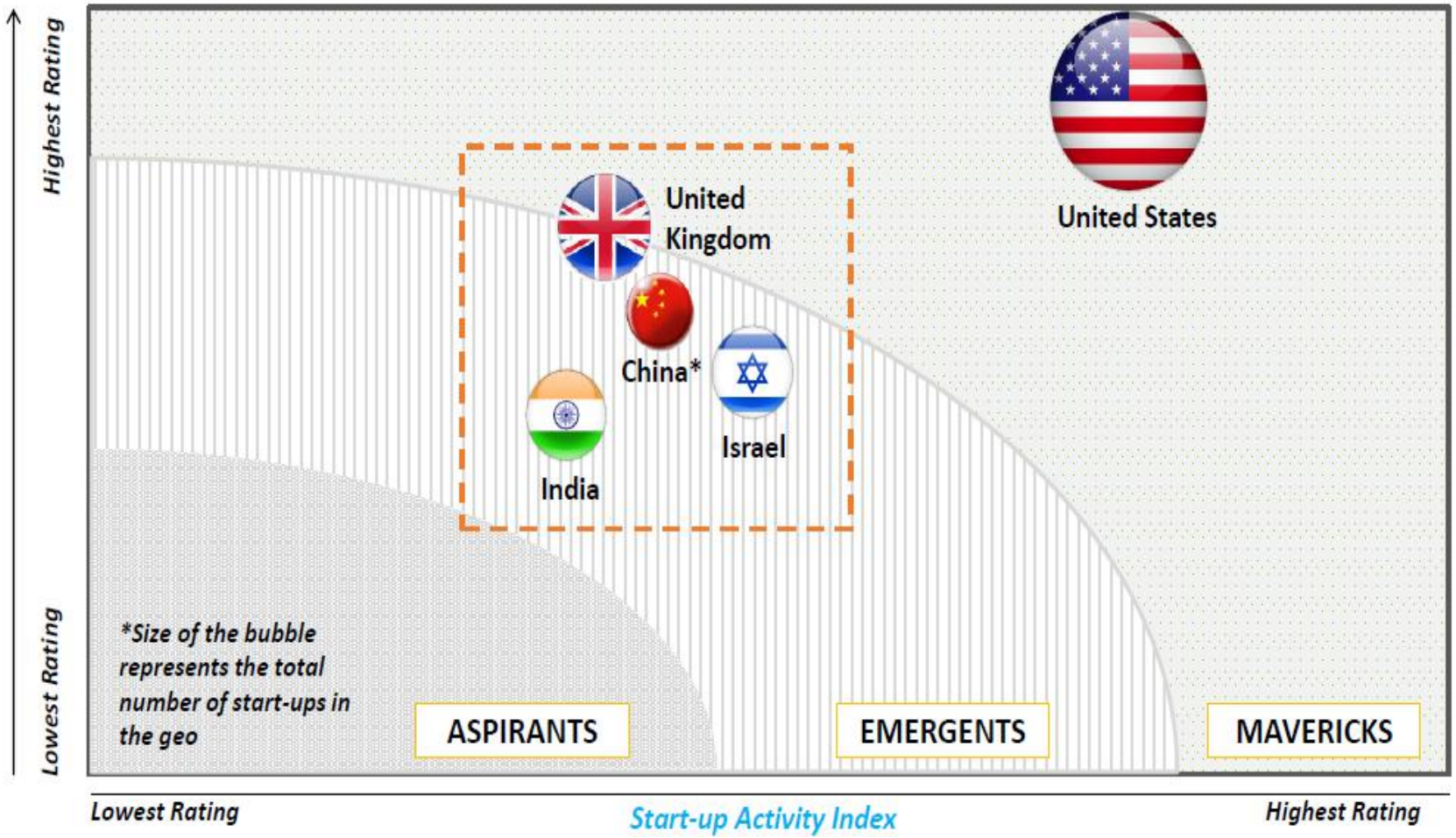
2. Innovation & Entrepreneurship Measuring Frameworks - GII, GEM, GEI, ARIIA

- Global Innovation Index
- Global Entrepreneurship Monitoring
- Global Entrepreneurship Index
- Atal Ranking of Institutions on Innovation Achievement

Global Start-up Landscape

- India positioned 3rd and competing with Israel

Govt. Focus & Country Specific Indices = *f[Government Initiatives (Govt. Polices, Govt. Funding), Country Specific Indices (Global Innovation Index, Ease of Doing Business)]*



Start-up Activity Index = *f[Landscape (Total Start-ups, Start-ups Per Capita, Acquisitions), Unicorns Analysis, Investors Ecosystem & Funding, Advanced Tech Focus]*

I&E Ecosystem: Innovation & Start-up Among Indians

Age Distribution

<=25 yrs	20%
26-30 yrs	31%
31-45 yrs	44%
> 45 yrs	5%

Median age of founders:
2017 – 32 years | 2016 – 31 years

Educational Qualification

Engineering Graduate/PG	50%
MBA	25%
Others	25%

Others incl. CA/Financial Diploma, MBBS, BCA/MCA, BA/MA, etc.

Student Start-ups

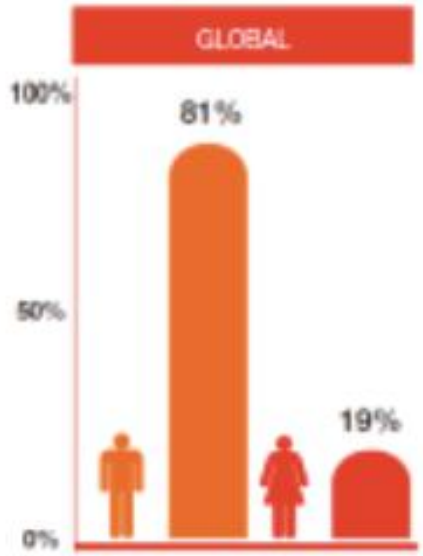
2016	2017
350	450+

Total # of student start-ups in 2017

30% YoY Growth Rate

Female Entrepreneurs

	Male	Female
2017	89%	11%
2016	90%	10%
2015	91%	9%



NASSCOM, 2016

Measuring Entrepreneurship

- In 1999, the ***Global Entrepreneurship Monitor (GEM),*** a global study started by a consortium of universities to analyze the level of entrepreneurship occurring in a wide basket of countries.

- In 2002, the *Doing Business* (DB) report of the World Bank Group first published as "The Regulation of Entry" and later developed into the ***Ease of Doing Business index.***

- In September 2006, the OECD launched a new ***Entrepreneurship Indicators Programme (EIP)***

- In 2007, The ***Global Innovation Index (GII)*** ranks the innovation performance of 143 countries and economies around the world, based on 81 indicators. The GII is co-published by WIPO, Cornell University and INSEAD.

- In 2016, The **Global Entrepreneurship Index** (GEI) is an economic activity index compiled by US-based The Global Entrepreneurship and Development Institute, which looks at how individual countries across the world allocate resources to promoting entrepreneurship. It uses 14 'pillars' to measure the health of the regional ecosystem in each of 137 countries.

- In 2019, ***Atal Ranking of Institutions on Innovation Achievements (ARIIA)*** Framework started by MHRD to measure innovation and start-up ecosystem exit in all HEIs.
- In 2019, ***Ranking of Indian States*** was started by Start-up India, DPIIT, Ministry of Commerce, GoI

Global Innovation Index 2019

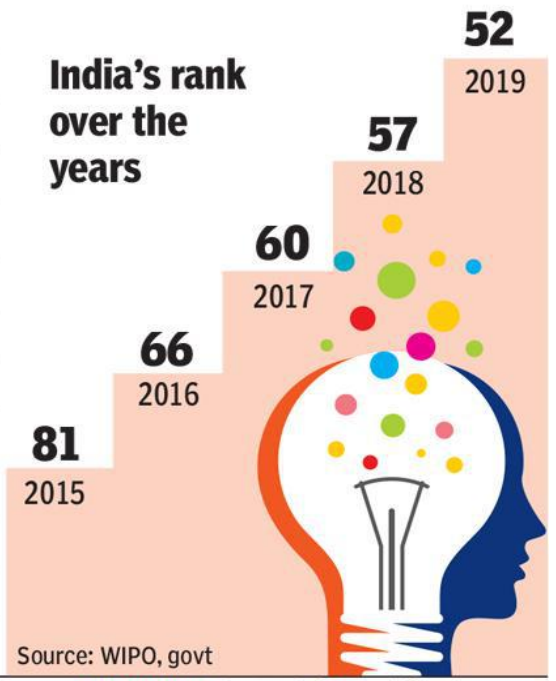
The Global Innovation Index is computed as an average of the scores across input pillars (describing the enabling environment for innovation) and output pillars (measuring actual achievements in innovation)

1	Switzerland	67.24
2	Sweden	63.65
3	USA	61.73
4	Netherlands	61.44
5	UK	61.30
6	Finland	59.83
7	Denmark	58.44
8	Singapore	58.37
9	Germany	58.19
10	Israel	57.43
15	Japan	54.68
17	Canada	53.88
22	Australia	50.34
52	India	36.58
89	Sri Lanka	28.45
105	Pakistan	25.36
116	B'desh	23.31

PTI GRAPHICS

INDIA UP 5 SLOTS IN GLOBAL INNOVATION INDEX

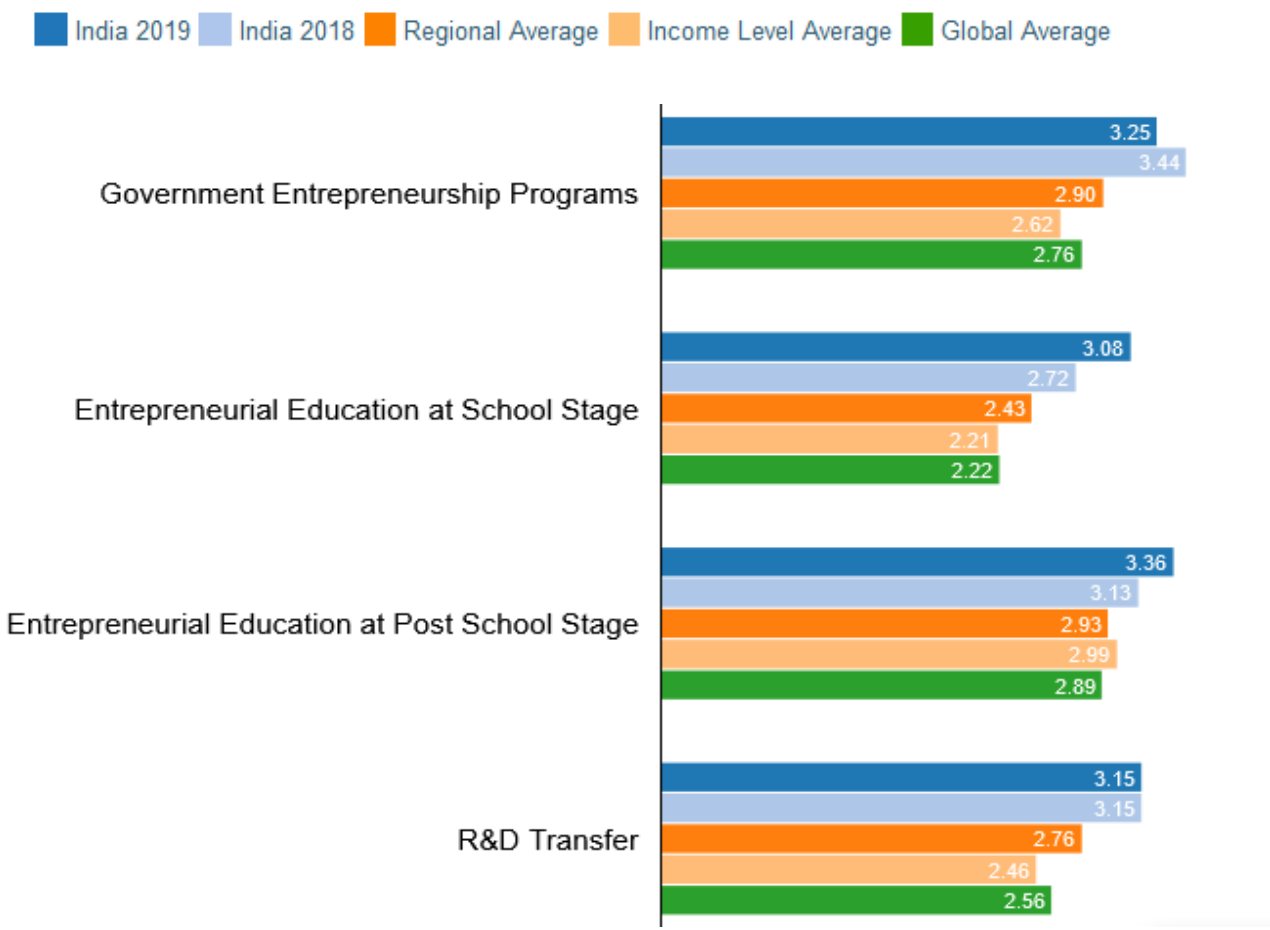
1	Switzerland
2	Sweden
3	US
4	Netherlands
5	UK
8	Singapore
10	Israel
11	S Korea
14	China
15	Japan
35	Malaysia
46	Russia
52	India

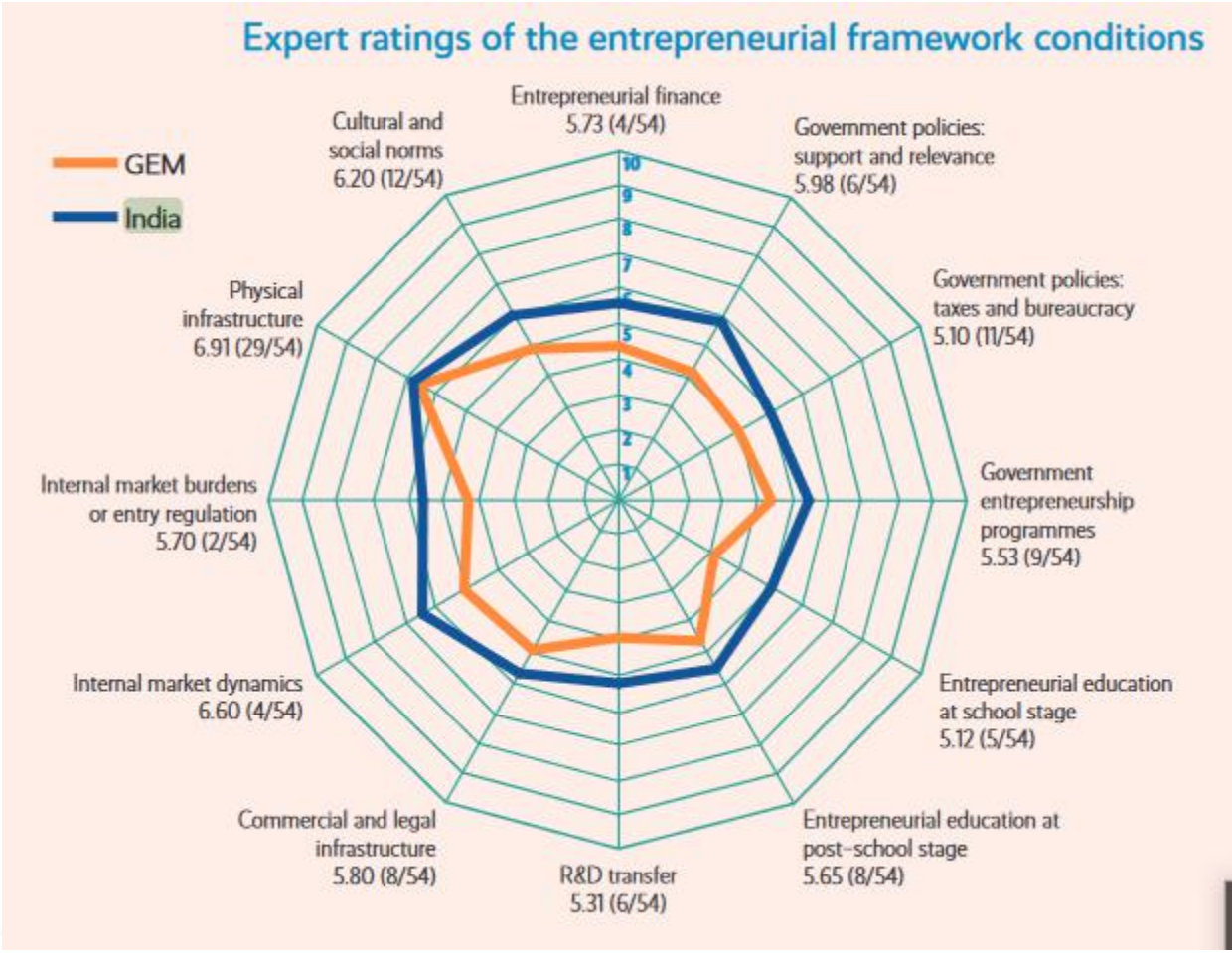


Pillars in GII	2018	2019	Change
Knowledge & technology outputs	43	32	11 ▲
Market sophistication	36	33	3 ▲
Human capita and research	56	53	3 ▲
Business sophistication	64	65	-1 ▼
Institutions	80	77	3 ▲
Creative outputs	75	78	-3 ▼
Infrastructure	77	79	-2 ▼

Source : Global Innovation Index 2019

Global Entrepreneurship Monitor





0 = very inadequate insufficient status, 10 = very adequate sufficient status. Rank out of 54 recorded in brackets

Global rank	Country	Score
1	United States	86.8
2	Switzerland	82.2
3	Canada	80.4
25	United Arab Emirates	54.2
26	Japan	53.3
27	Singapore	52.4
28	Qatar	51.6
29	Poland	49.5
30	Puerto Rico	48.7
31	Spain	46.9
32	Portugal	46.3

Global rank	Country	Score
48	Brunei Darussalam	36.5
49	Croatia	36.1
50	Greece	35.4
72	Belize	26.2
73	Vietnam	26.0
74	Argentina	26.0
75	Indonesia	26.0
76	Panama	25.5
77	Ukraine	25.2
78	India	25.1
79	Jamaica	24.8
80	Russia	24.8

Global rank	Country	Score
94	Moldova	20.2
95	Rwanda	20.0
96	Kenya	19.8
117	Guyana	16.3
118	Brazil	16.1
119	Nicaragua	16.1
120	El Salvador	15.7
121	Cameroon	15.6
122	Guinea	15.5
123	Mali	15.3
124	Angola	15.1
125	Uganda	14.8

Entrepreneurial Attitudes

Countries	ATT	Opportunity Perception	Startup Skills	Risk Acceptance	Networking	Cultural Support
United States	83.53	1.000	1.000	0.931	0.610	0.841
India	22.71	0.325	0.229	0.383	0.135	0.177

Entrepreneurial Abilities

Countries	ABT	Opportunity Startup	Technology Absorption	Human Capital	Competition
India	23.62	0.260	0.046	0.249	0.531

Entrepreneurial Aspirations

Countries	ASP	Product Innovation	Process Innovation	High Growth	Internationalization	Risk Capital
India	28.88	0.662	0.460	0.259	0.176	0.152

ARIIA
ATAL RANKING OF INSTITUTIONS ON INNOVATION ACHIEVEMENTS

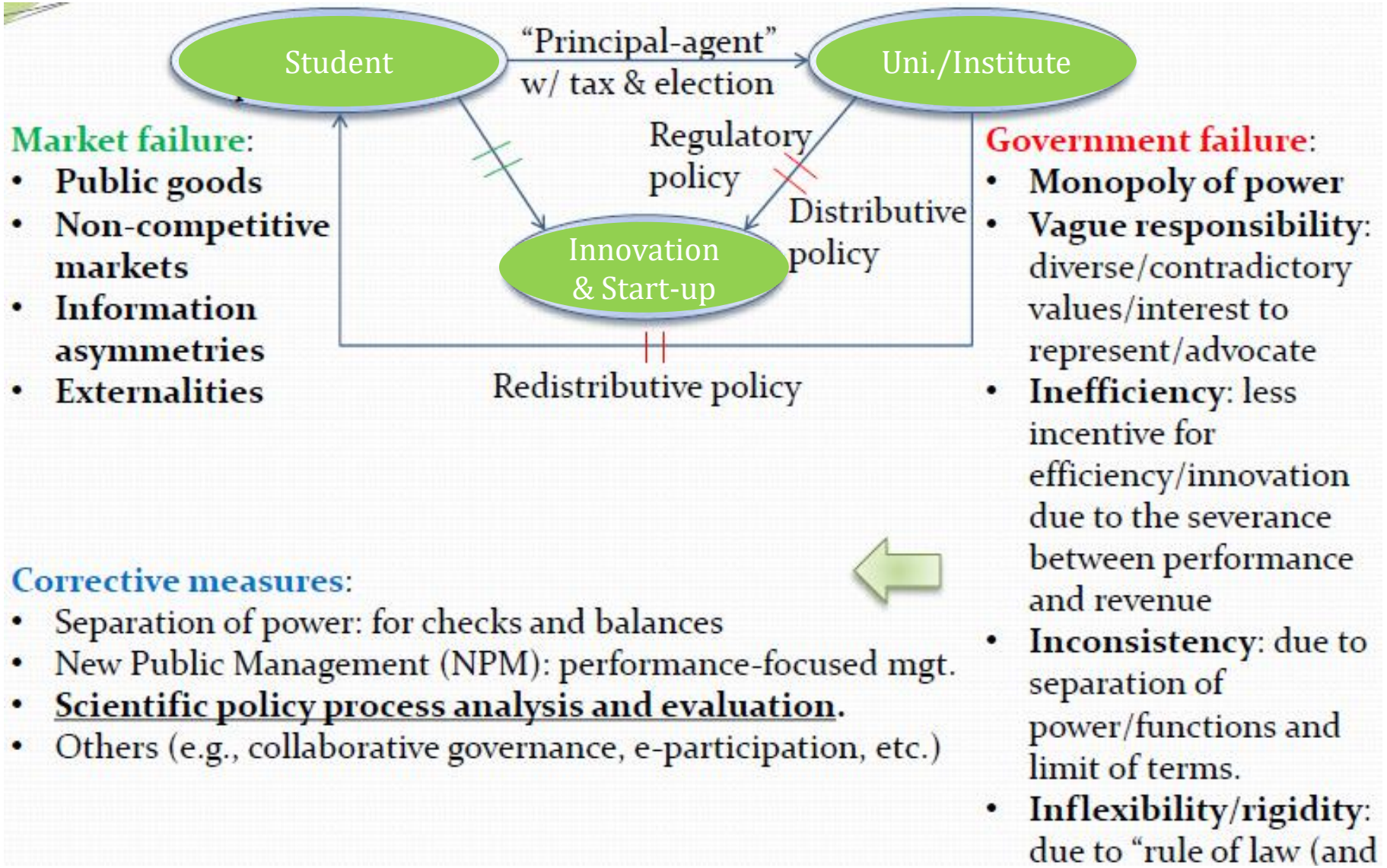
Designed taking the Indian innovation and start-up ecosystem in HEIs into account, various parameters comprise of input, process, output, and outcome parameters are included in the framework. Below are the major parameters considered in ARIIA for ranking:

- Annual budget; expenses & revenues to support innovation & start-up in the campus
- Innovation, pre-incubation and incubation infrastructures & facilities on campus
- Academic courses offered by the institute on innovation, IPR and start-up
- Patent Granted and Published and Patents hold by Incubate Start-ups
- Innovation & Technology transfer and commercialization made
- Successful innovation and start-ups emerged from campus.
- Innovation in Institute Governance

3. Understanding Market Failure & Govt. Intervention – Problem Tree & Policy Logics

- What is Market Failure
- What is Govt. Intervention
- What is Policy Problem
- Problem Tree
- Objective Tree/Policy Logic

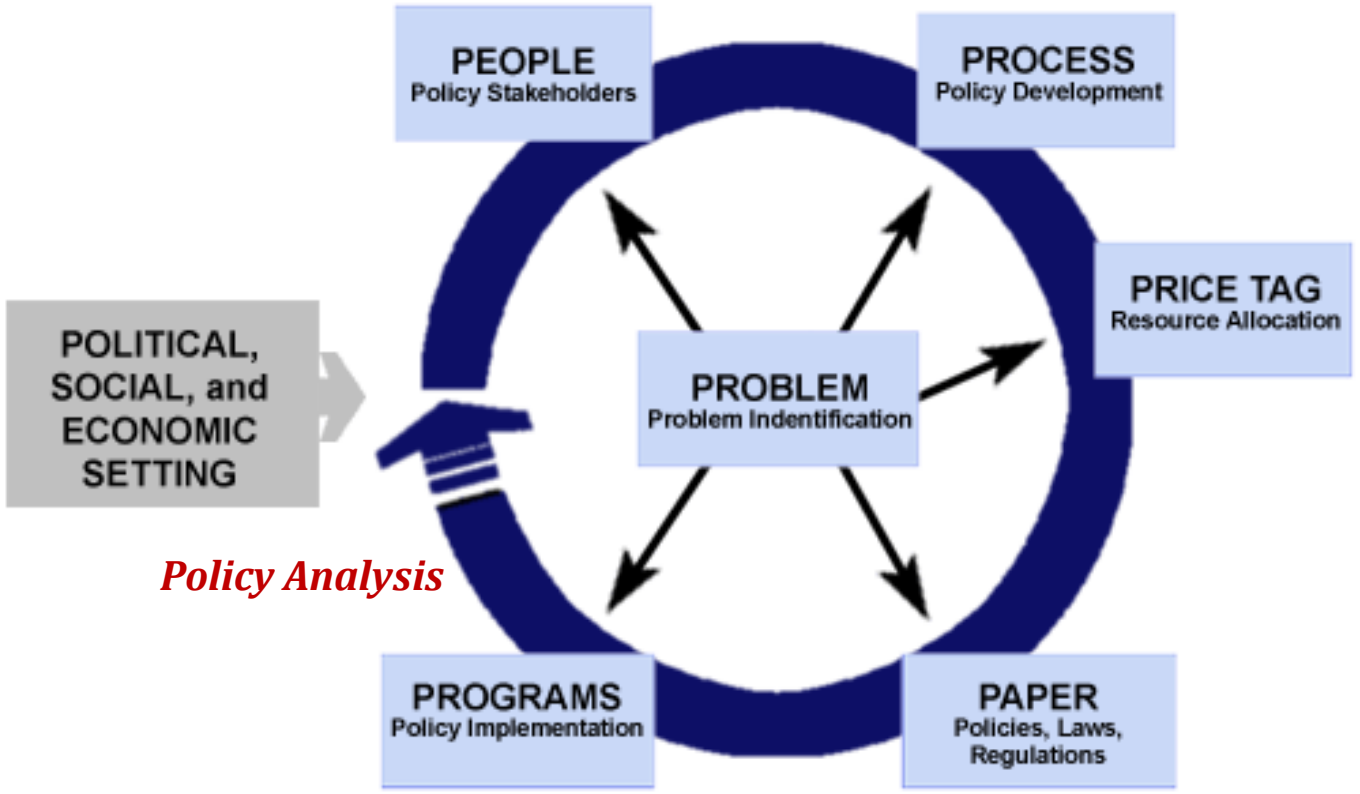
Market Failure, Govt. Intervention & Public Policy



Components of the 6 P's of Policy

Depict the complex and nonlinear nature of policy

- Challenges can be found in each of the six "Ps."
- If a policy problem was not well articulated through adequate policy analysis.
- The problem is at the center of policymaking. Problems requiring policy attention abound and can be identified from many sources.
- The **Process** of policymaking. The process of policymaking includes:
  - Framing the "problem" (issue framing)
  - Getting the issue on the policy agenda (agenda setting)
  - Formulating the policy (policy formulation)



"in order to complete at least one cycle of formulation, implementation, and reformulation and to obtain a reasonably accurate portrait of program success and failure," (Sabatier and Jenkins-Smith, 1993)

https://www.policynl.ca/

Policy Analysis:
Monitoring & Evaluation
Impact Evaluation

Policy (process) analysis can be defined as the systematic investigation of alternative policy options and the assembly and integration of the evidence for and against each option.

It involves a problem-solving approach, the collection and interpretation of information, and some attempt to predict the consequences of alternative courses of action." (Ukeles, 1977)

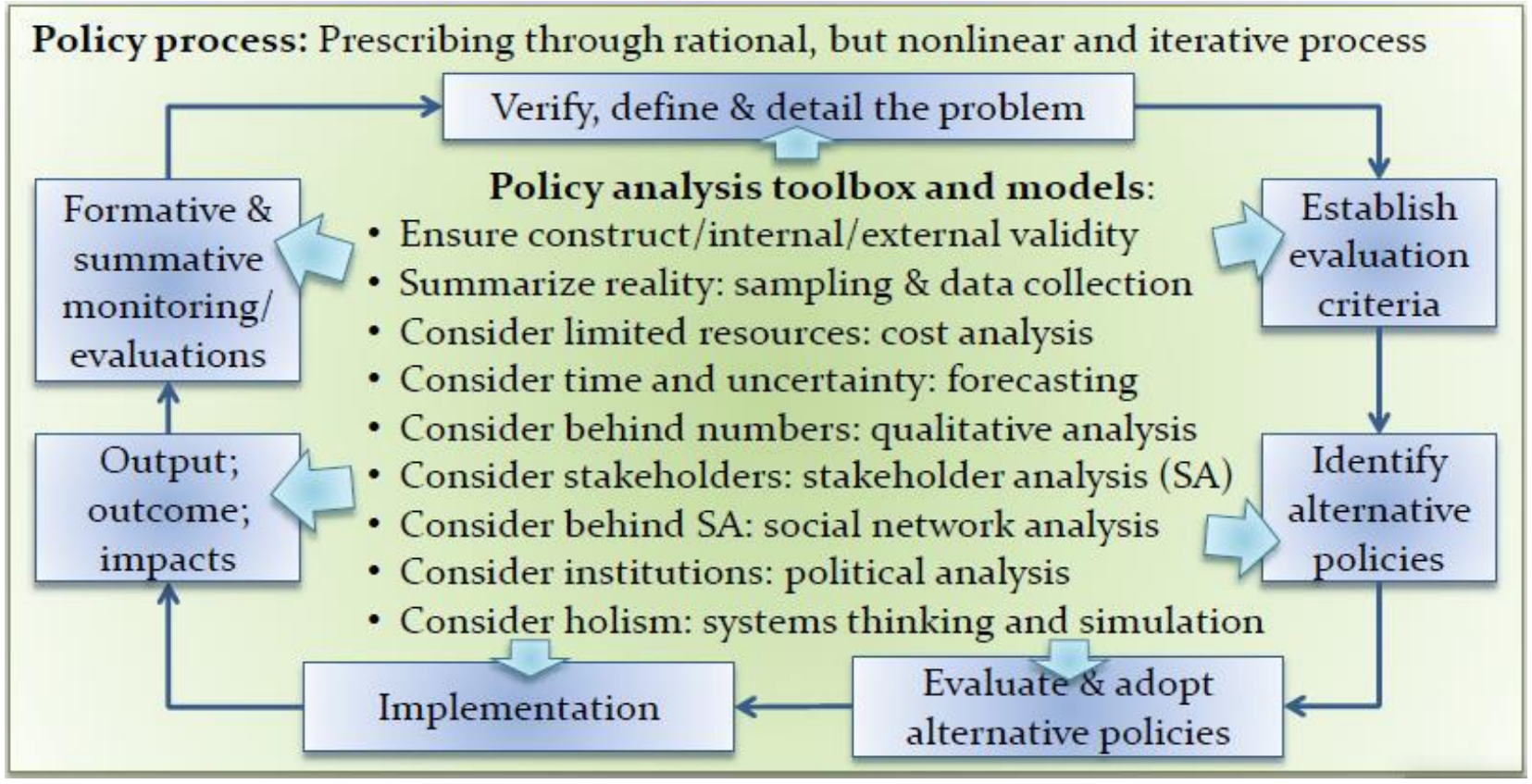
Balanced Problem Solving Approach – Policy Process Analysis

1

Worldview and philosophy:
Mission statement as a guiding hand

Logical thinking tools: Describing system of variables/parameters/structures/boundaries—logic tree of MECE; multi-dimensional matrix; flowchart

3



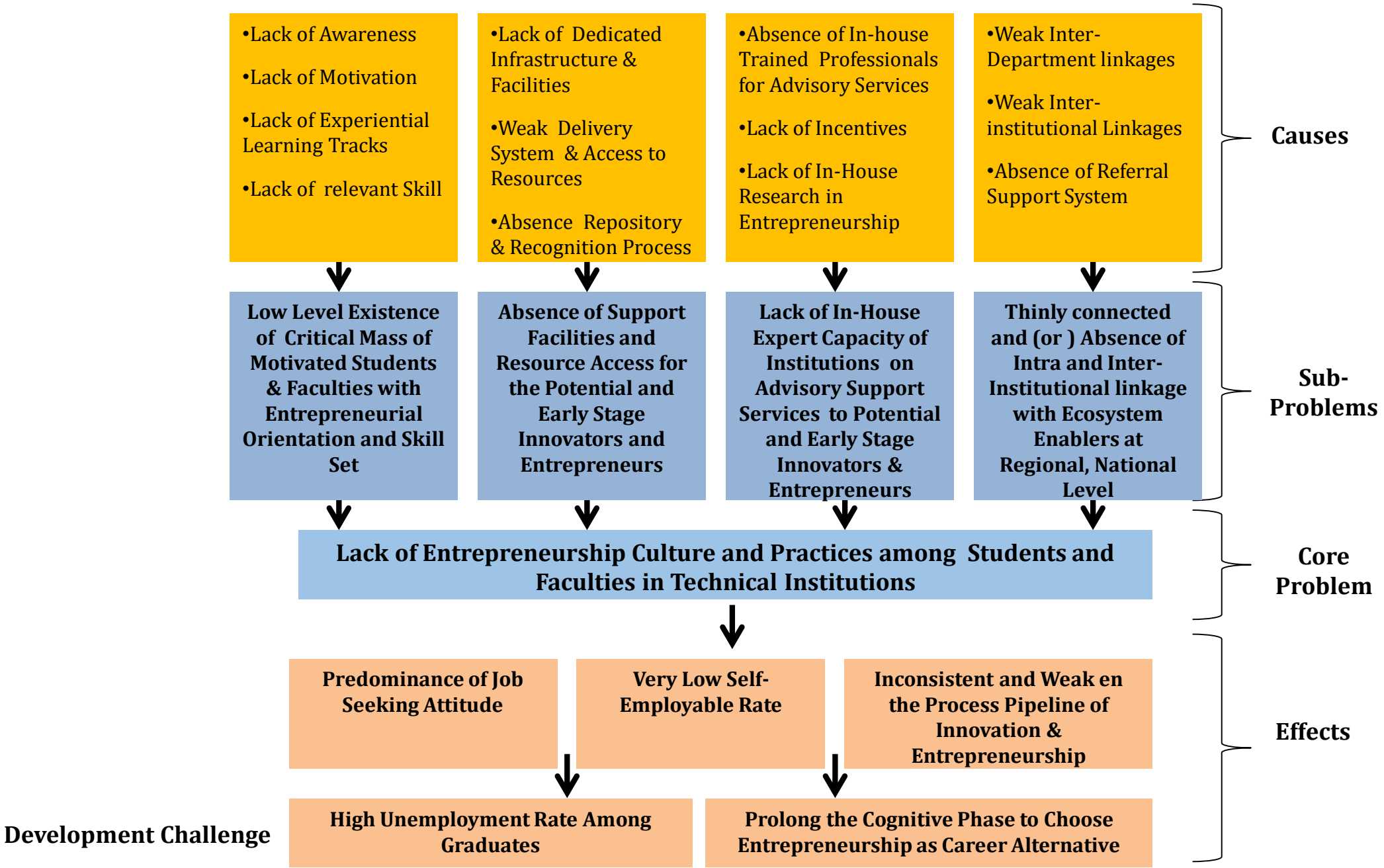
2

Environments (inside/outside system):
Actors/stakeholders (individual or collective); beliefs/values/interests; intellectual capacity (perceive, measure, interpret); resources (time, money, info., etc.); culture; institutions; technology

Limitations:
Deficiency/excess/instability/ uncertainty/competition in every process, tool, model,

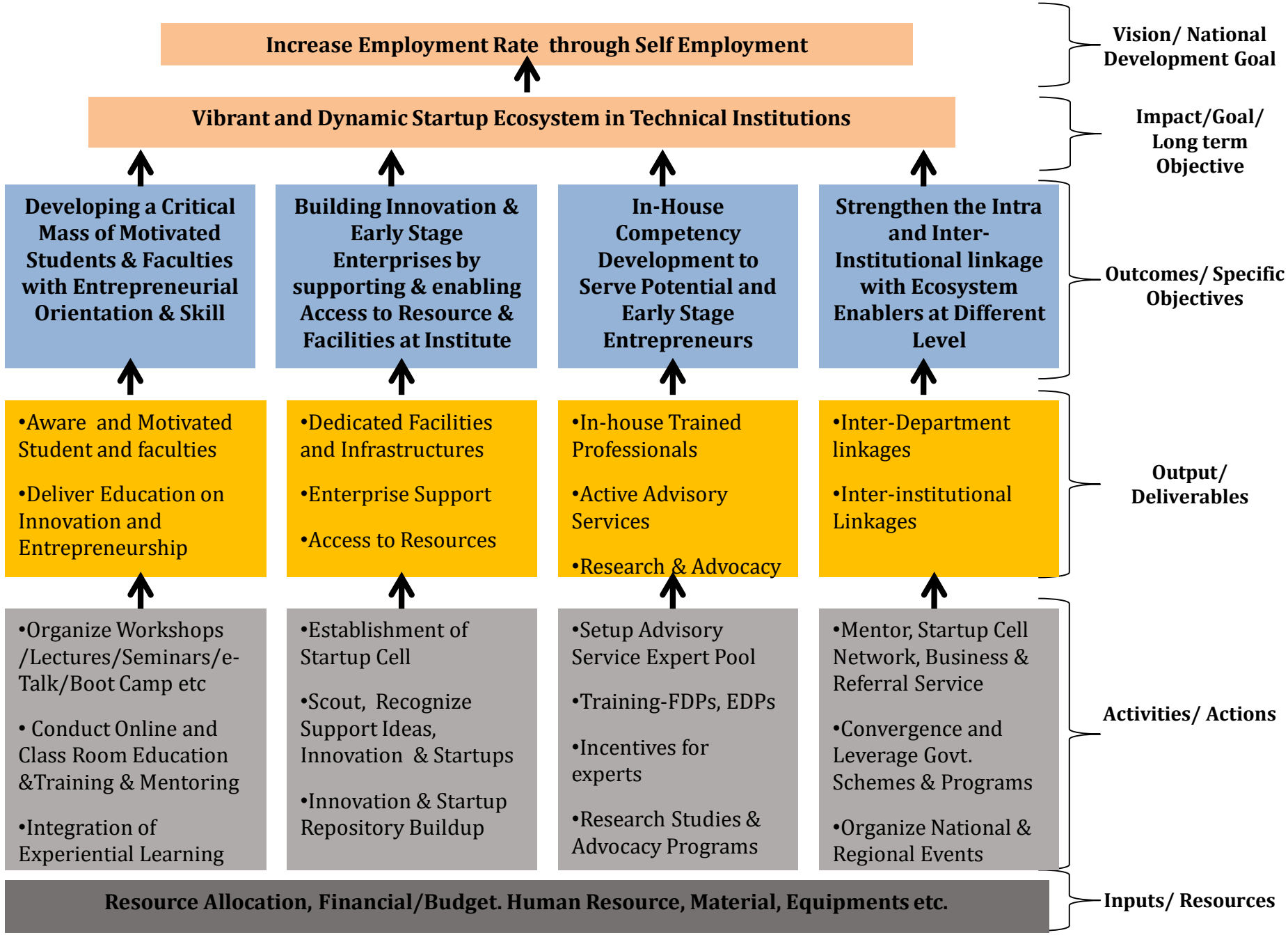
4

Problem Tree – Start-up Ecosystem Development at Institution Level



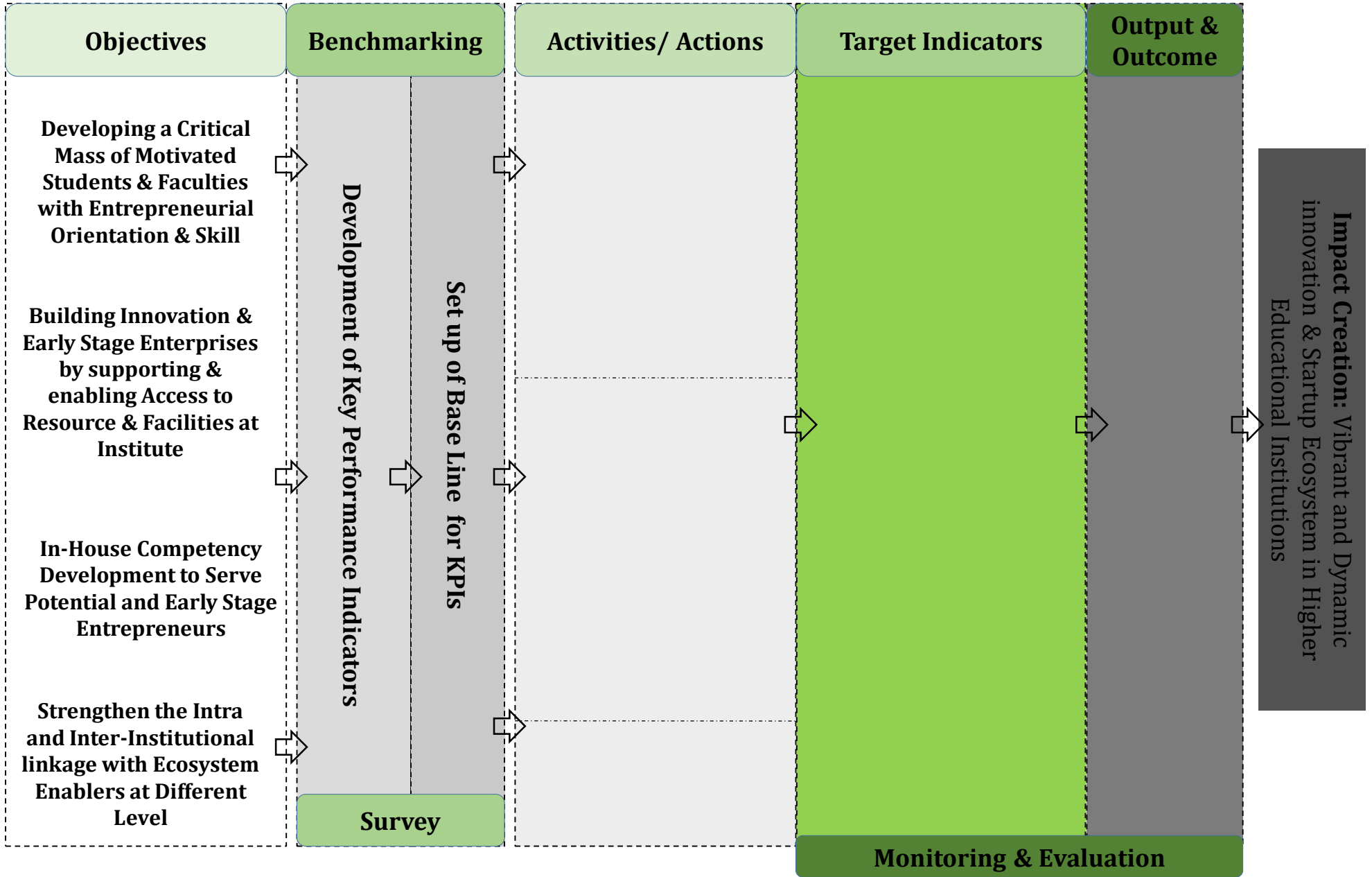
Dipan Sahu (2019)

Objective Tree/Policy Logic – Start-up Ecosystem Development at Institution Level



Dipan Sahu (2019)

Sample Micro Action Plan Framework



Dipan Sahu (2019)

KPIs – Innovation & Start-up Ecosystem Development at Institution Level

Hierarchy of Objectives	Key Performance Indicators (KPIs)	Means and Verification
Vision	•% Increase in Self-Employment Rate •No of Established Start-ups	•DPIIT & NASSCOM •ARIIA
Goal/Impact	•Enabling Environment Established with multiple level of support for innovation & Entrepreneurship in Institute •No/% of Graduate students choose Entrepreneurship as career & # Increment/year •No/% of Student and Graduates Practicing Entrepreneurship & # Increment/year	•Biannual Survey •ARIIA, NIRF Rankings
Outcomes	•Nos/% of student & faculty mass with entrepreneurship Orientation, # Increment/year •Nos/% of Student & faculty motivated to start any entrepreneurial activity & #Increment •No of IPR/Innovations developed for commercialization & # Increment/year •No of Student/Early Stage Start-ups formed & # Increment/year •No/% of In-house Expert Capacity available for Advisory Services & # Increment/year •% of Satisfaction over Advisory services offered to Innovators & Early Stage Entrepreneurs •Network Established with connecting multiple stakeholders & Ecosystem Enablers	•Biannual Survey •Quarterly News Letter
Outputs	•No/% of Student & faculty mass exposed to awareness/orientation building programs & # •No/% of Students covered through entrepreneurship Education; MOOC, Class Room, Experiential Learning programs etc. & # Increment/year •No of beneficiaries are accessing the infrastructure & facilities per day, month & # Increment •No of innovators identified; No of awarded,/recognised; No of Supported, & # Increment •No of Entrepreneurs identified; No of awarded,/recognised; No of Supported, & # Increment •No of Student projects turns to (commercialize) Innovations •No of IPR based product/services generated and registration filed •No/% of in-house trained professional developed for advisory services & # Increment •No of Research Studies on Entrepreneurship published •No of Regional, National and International linkages established for the start-up & innovation •No/% Representatives of experts & entrepreneurial students across Dept & Disciplines. •No of Beneficiaries Referred to Incubators/investors for further support through Start-up Cell •No of Beneficiaries generated under various schemes and programs leveraged and converged at Start-up Cell	•Biannual Survey •Monthly progress report
Activities	• No and types of Education/Skill certification program on Entrepreneurship, IIPR, Innovation etc. • No of workshops, awareness, market out reach events, orientation, advocacy meetings etc. • No of networking event (Intra and Inter-institutional, enablers, stakeholders) organized • No of skill and competency development training programs/FDPs/EDPs organised • No of research studies related to Entrepreneurship conducted • No of convergence and leverage with schemes/programs offered by major enablers • No of national and regional award and campus Hackathon like events organised • Incentivising Entrepreneurship and Innovation; services and facilities; Start-up Manual, policies, tool kits etc. • Amount of total budget/year spend against total institution revenue for start-up • Budget allocation and Spend ratio for the start-up mandate in institute	•Biannual Survey •Quarterly News Letter •Monthly progress report •Review Meetings

Dipan Sahu (2019)

Progress Monitoring Sheet

Sl. No.	Indicators	State/Uni./Institute Level
1	Received Positive Response or Letter of Interest obtained from Governor Office/State Govt.	☐ Yes ☐ No
2	Identification of State dept or agency as Champion organization to lead and coordinate the Start-up Movement	☐ Yes ☐ No
3	Conduct of State level Policy Consultative Workshop for Leaders from Academic and Ministries	☐ Yes ☐ No
4	Preparation /Adoption of Student Innovation and Start-up Policy Guidelines and Measures at	
	• State Level	☐ Yes ☐ No
	• University Level	☐ Yes ☐ No
	• Institutions Level	☐ Yes ☐ No
5	Allocation and Securing Fund from State Govt. to support Student Innovation and Start-up	☐ Yes ☐ No
6	Time bound implementation of Action Plan by Champion Organisation in the State and universities as per the plan	☐ Yes ☐ No
7	Celebration of Innovation and Start-up by Regularising annual events such as Start-up Yatra or Innovation Festival at State level.	☐ Yes ☐ No
8	Inclusion as an agenda item in Annual Progress review Meeting with VCs by Governor/State Govt.	☐ Yes ☐ No
9	Placing of System of Regular Monitoring Mechanism/ MIS system	☐ Yes ☐ No

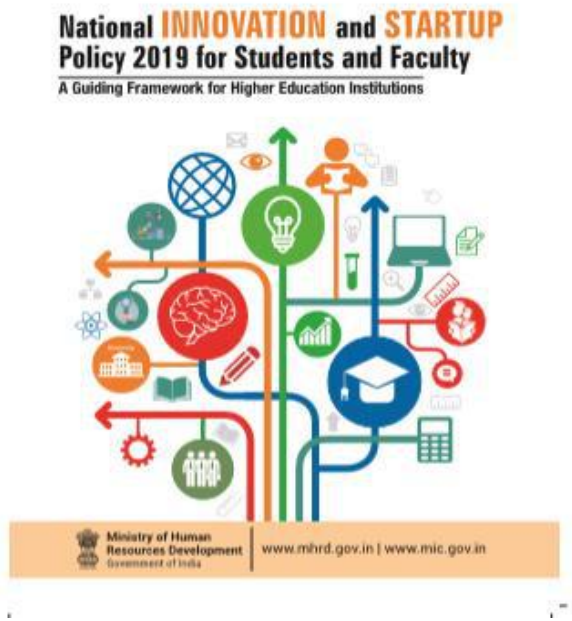
4. National Innovation and Startup Policy – Dimensions & Thrust Areas for HEIs to Implement

- Dimension & Thrust Areas
- Policy Provisions – HEIs to Adopt
- Where to Start

National Innovation and Start-up Policy 2019 for Students & Faculty

MHRD'S INNOVATION CELL (GOVERNMENT OF INDIA)

- NISP 2019 was launched by Hon'ble Minister of Human Resource Development on 11 September 2019.
- The policy intends to guide HEIs to promote students' and faculty driven innovations & startups.
- It will be instrumental in leveraging the potential of student's problem solving & entrepreneurial mind-set and promoting a strong intra and inter-institutional partnerships.



Thrust Areas of NISP 2019

1

A. HEIs Strategies & Governance for Promoting Innovation & Entrepreneurship

A1. Creating Innovation Pipeline and Pathways for Entrepreneurs

A2. Building Organizational Capacity, Human Resources and Incentives

A3. Collaboration Co-creation and Business Relationship and Knowledge Exchange

2

B. Norms for Faculty & Students Driven Innovations and Startups

B1 & B2. Incentivizing Faculty & Students for Entrepreneurship

B3. Norms for Faculty Startup

3

C. Incubation & Pre-Incubation support

4

D. IP Ownership Rights for Technologies Developed at HEI

5

E. Pedagogy & Learning Interventions for Supporting Innovations & Startups

6

F. Entrepreneurial Performance Impact Assessment

Highlighting features of the policy

- Creation of 'Innovation fund' for supporting innovative projects and Start-ups by allocating minimum 1% of institution's total budget

Academic break for a semester/ year to work on their startups

Credits for working on innovative prototype/ business models

- 2% - 9.5% Equity/ stake in startup/ company by Institute's incubator
- Complete Ownership of IPR by the inventors in case of non-usage of institute's facilities/ resources

- Services to be offered by institution in lieu of equity, fee based or zero payment model

Part - I

A. HEIs Strategies & Governance for Promoting Innovation & Entrepreneurship

- A1. Creating Innovation Pipeline and Pathways for Entrepreneurs.
- A2. Building Organizational Capacity, Human Resources and Incentives.
- A3. Collaboration Co-creation and Business Relationship and Knowledge Exchange.

A. Strategies & Governance for promoting Entrepreneurship

- HEIs should formulate University/HEI level Document in accordance with the NISP and State Startup Policies.
- HEIs should Achieve through Mission Statements rather than Stringent Control System
- A Sr. Faculty (at the level of Dean/Director/Equivalent Position) with less hierarchy and autonomy must drive the Entrepreneurial Agenda.
- Intra and Inter institutional Relation to promote E&I agenda & Institute can provide services and facilities to outsider entrepreneurs too.
- Resource Mobilization Plan Should be in Place
  - Own Resource: 1% fund of the total annual budget
  - Raising fund from Diverse Sources (State and Central Agencies)
  - Incubation Fund support under CSR, Section 135 of the Company Act 2013
  - Sponsorship, Donation from Alumni Network
- All HEIs should join the Institution's Innovation Council (IIC) network and participate, participate in Smart India Hackathon (SIH) and participate in Atal Ranking of Institutions Innovation Achievement (ARIIA)

A1. Creating Innovation Pipeline and Pathways for Entrepreneurs

- HEI to ensure maximum student should participate and go through pre-incubation process of Problem identification, Solution development, Proof of Concept validation and prototype development, business model and proposal development.

- HEI should link and collaborate their Incubation unit with external agencies and ecosystem enablers and provide network support to incubate startups.

- Connecting student entrepreneurs with incubate startups for internship, experience sharing and encouraging participation of students in innovation and business plan competitions and organize such competitions/hackathons on campus.

A2. Building Organizational Capacity, Human Resources and Incentives

- Institute should recruit staff that have a strong innovation and entrepreneurial/industrial experience, behavior and attitude, this will held in fostering the I&E agenda and culture in HEI.

- Faculty and departments of the institute have to work in coherence and cross departmental linkage and maximum utilizations internal resources and knowledge.

- Faculty and staff should be encouraged to do courses/trainings/certificates on innovations, entrepreneurship and IPR.

- To retain talent, institute should develop academic and non-academic incentives and reward mechanism for all staff, faculty and stakeholders.

- A performance matrix should be developed and used for evaluation as part of annual performance and contribution of faculty/staff towards achieving I&E agenda should be part of matrix.

A3. Collaboration, Co-creation and Business Relationship and Knowledge Exchange

- Institute should develop a policy or guideline document for forming and managing the relationships with external stakeholders including private industries.

- Knowledge exchange through collaboration and partnership should be made as part of institutional policy.

- Mechanisms should be devised by the institute to ensure maximum exploitation of entrepreneurial opportunities with industrial and commercial collaborations.

- Knowledge development should be done by the institute trough development of innovation knowledge platforms using ICT capabilities. Repository of ideas, PoCs, Innovations and Startups can be managed through the platform.

Part –II

B. Norms for Faculty & Students Driven Innovations and Startups

- B1. Incentivizing Students for Innovation and Entrepreneurship
- B2. Incentivizing Faculties & Staff for Innovation and Entrepreneurship
- B3. Norms for Faculty Startup

B. Norms for Faculty and Student Driven Innovations & Startups

B1. Incentivizing Students for Innovation and Entrepreneurship

HEIs should establish process/clear guideline and mechanism for easy creation and nurturing of startups/enterprises by students (UG, PG and PhD), faculty and staff of HEI by setting up a committee and working committees on following:

- Allow students to setup Startup (Social and tech and non-tech) or working part-time for the startup while studying/working as intern
- Allowing students to earn credit for working on Innovative prototypes/business Models.
- Student Innovators/entrepreneurs may allowed to opt for startup in place mini project /major project, seminar and summer training etc.
- Allow student entrepreneurs to take a semester break/year break to work o their startup
- Allowing student entrepreneurs/innovators to sit for the examination. (institute need to set up minimum attendance and after reviewed by committee on case to case basis).
- Allowing Student entrepreneurs to use the address of Hostel (or) pre-incubation and (or) incubation unit to register their venture while studying at HEI.

B2. Incentivizing Faculty for Innovation and Entrepreneurship

- Allowing faculty to start Startup based on the technology developed in the lab at the institute or previously developed somewhere else but have ownership on IP, if technology based.

- Allow faculty and staff to take off for a semester/year as sabbatical/unpaid leave/casual leave /earned leave for working on startup and come back.

- No restriction on shares that staff and faculty can take as long as they don't spend more than 20% of office time on the startup in advisory or consultants role and don't compromise with their existing academic and administrative work or duties.

- In case faculty/staff is drawing salary form institute, institute's stake/equity on startup should be limited to 20% of total share of faculty/staff or 9.5% of total stake which ever is minimum.

B3. Norms for Faculty Startup

- Role of faculty while teaching may be as owner/founder/co-founder/Director-promoter/adviser/mentor/consultant but cant take role of employee as CEO or other managerial role in his/her startup and cant draw salary from startup and cant accept gifts from his own startup. He/she can take share on profit and dividend only if any from startup as owner/shareholder.

- Faculty must clearly separate and distinguish on-going research at the institute from the work conducted at the startup/company.

- In case selection for acceleration or incubation, he may take sabbatical leave or other leave up to one semester or year or more based on committee recommendation.

- Faculty must not involve research staff or other staff engaged in academic projects of institute in activities at the startup

Part –III

C. Incubation & Pre-Incubation support Facility Creation and Access

D. IP Ownership Rights for Technologies Developed at HEI

E. Pedagogy and Learning Interventions for Entrepreneurship Development

F. Entrepreneurial Performance Impact Assessment

C. Incubation & Pre-Incubation support Facility Creation and Access

- Creation of Pre-Incubation and Incubation (SPV – Section 8 of Company Act or Society Act)
- Pre-incubation and Incubation Support: Attach with nearest Incubation Unit if not exist in campus
- Promotion and intensification of Technology Commercialization efforts. Allow Licensing of IPR from Institute to Startup incubated at Incubation Unit.

- Facility should be accessible to 24x7 to student, staff and faculty of all discipline and department across the institute.

- Provision and streamline relevant services and mentoring support through pre-incubation/incubation units in-return for fees, equity sharing (or) zero payment basis.

- In return of services offered (Space, Infrastructure, mentorship, seed fund, accountant and legal and patent support) and use of facilities at institute/incubation unit may take 2-9.5% equity/stake in the startup/company incubated.

- In case of compulsory equity model, startup may be given a cooling period of 3 months to use the incubation services on rental basis to take final decision

D. IP Ownership Rights for Technologies Developed at HEI

- If fund and (or) resource of HEI used substantially, then IPR should be made jointly by Institute and inventor and license together and revenue sharing among the parties.

- If any one of inventor want to start a startup based on the technology developed as above, then it can be licensed to inventor with royalty would be no more than 4% of sales price, preferably 1-2%, unless it is pure software product.

- If it is in form of shares, then it will again between 1-4%. In case software share divide is based on mutually decided between the institute/incubation unit and incubate company.

- On any dispute on IPR ownership and revenue sharing and licensing, then a five member committee setup at HEI will look into the matter and recommend.

- Interdisciplinary research and publication on startup and entrepreneurship should be promoted by HEIs.

E. Pedagogy and Learning Interventions for Entrepreneurship Development

- Adopt and produce desirable learning outcomes as part of curricular, co- curricular and extra curricular level.
- Create and publish tool kit on innovation and startup and IPR for open access to students and faculties.
- Student clubs/bodies on innovation and IPR and Startup must be established and engaged.

- HEI should start recognizing and giving Innovation and Entrepreneurship awards to best achievers form campus annually. And confer gold medal kind of rewards during convocations ceremony.

- Teaching on tolerating and encouraging failures.

- Creating awareness among students and teaching methods should include case studies of real business stories of failure and success, experiential learnings.

- Pedagogy changes nee to be done to ensure that maximum number of students projects and innovations are based around life challenges. It should be constantly reviewed and updated.

- Start a part time or full time MS/MBA/PGDM in Innovation , Entrepreneurship and Venture Development Course to be offered through Incubation Unit as per the AICTE guideline.

F. Entrepreneurial Performance Impact Assessment

- Performance Analysis of services and facilitates on regular basis
- Development of key performance indicators
- Focus on Input, process, output, outcome and impact level

- Download the Copy of NISP & Share with Students, faculties, and Head of Institute for Adoption. https://mic.gov.in/assets/doc/startup_policy_2019.pdf

- Institutes can join the NISP Campaign launched by MHRD's Innovation Cell: https://mic.gov.in/startup_application.php

- Institutes can Implement NISP by Appointing a Sr. Faculty as In charge and Nominate Details at https://mic.gov.in/nominate_faculty_for_nisp.php

- For detail explanation please watch video on MIC YouTube https://www.youtube.com/watch?v=8vdEyL7uKXs&t=7330s

- Recorded version of Training Session 1 on MIC Facebook: https://www.facebook.com/mhrdInnovation/videos/1557696537724806

ज्ञान-विज्ञान विमुक्तये

MHRD

सत्यमेव जयते

MHRD'S INNOVATION CELL (GOVERNMENT OF INDIA)

AICTE

INSTITUTION'S INNOVATION COUNCIL (Ministry of HRD Initiative)

Thank you

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