

CREATIVE GLOBAL YOUTH IN STEM EDUCATION

*Empowering NextGen Innovators and Entrepreneurs
with IP Knowledge*

Atal Innovation Mission (AIM), NITI Aayog, India,
and
IP4Youth and Teachers Program, WIPO Academy



Intellectual Property Landscape India

India...[e]xperienced a sixth straight year of growth, 2022’s 25.2% increase being the sharpest since 2005. A substantial increase in resident filings was the main driver of growth overall in 2022. Posted highest growth of 31.6% in patent filing globally’

World Intellectual Property Indicators, 2023 report

IPR	FILING		DISPOSALS	
	Apr 20-Mar 22	Apr 22-March 24 (% Growth)	Apr 20-Mar 21	Apr 22-March 24 (% Growth)
Patents	1,05,145	1,74,977 (166%)	79,077	1,70,103 (215%)
Trade Marks	7,71,260	9,43,744 (122%)	5,46,769	8,67,249 (158%)
Designs	30,387	53,058 (174%)	19,694	56,837 (288%)
Copyrights	43,332	66,216 (152%)	35,339	66,907 (189%)
GI	122	300 (246%)	52	215 (413%)

Atal Innovation Mission

Origin, Accountability, Operational Sustainability

Origins

Liberalization (1991)

700 Million below 30

Innovation must be in all walks of life

Accountability

Right to Information - any citizen

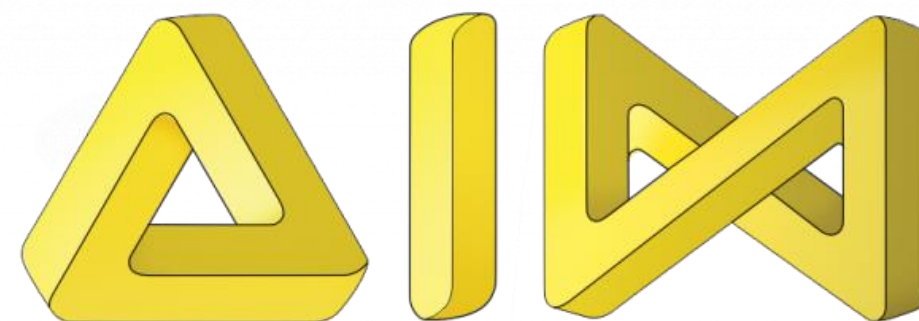
Parliamentary questions

Annual audits

Vision

A sustaining I & E Ecosystem

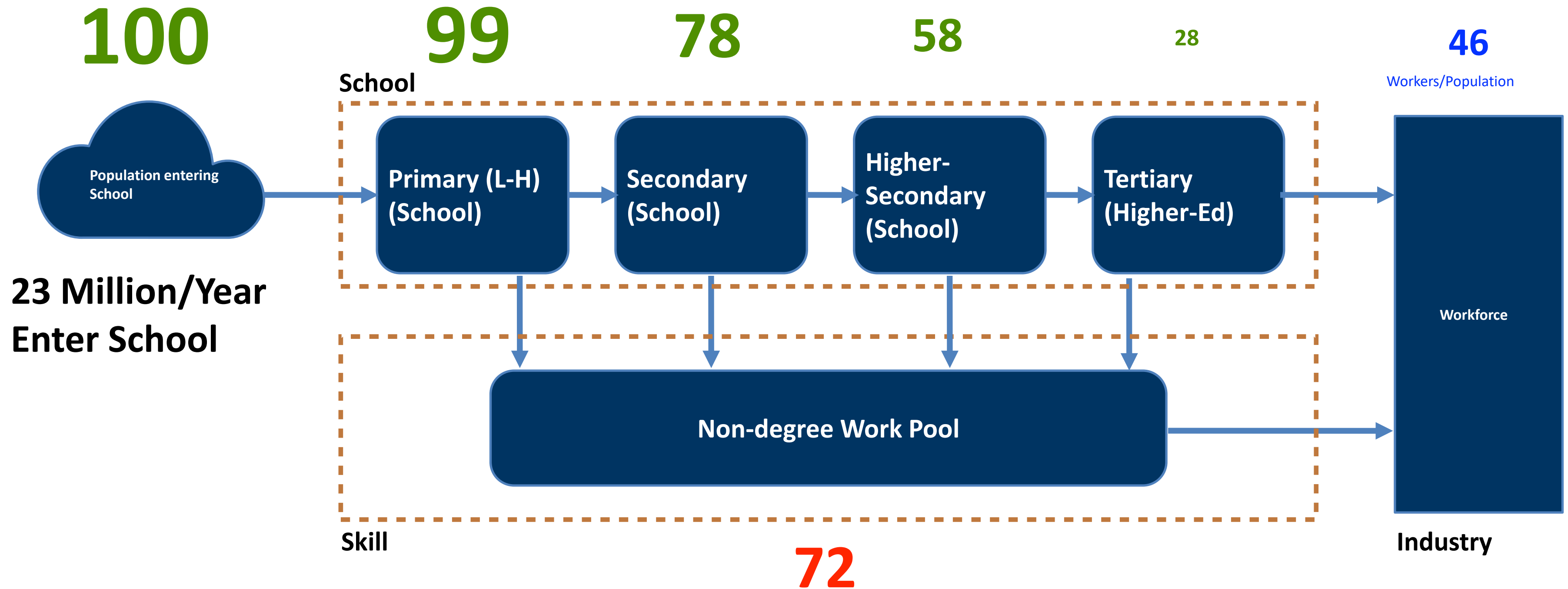
Integration of innovation in all sectors



ATAL INNOVATION MISSION

India Innovation, Entrepreneurship & Human Capital

Innovation must revolutionize School, Skill, and Industry - All Three!



Atal Tinkering Labs

10,000 Labs in Schools (6-12th cl)

11 Million Students exposed to Design Thinking, Entrepreneurship

160,000 Innovative Projects

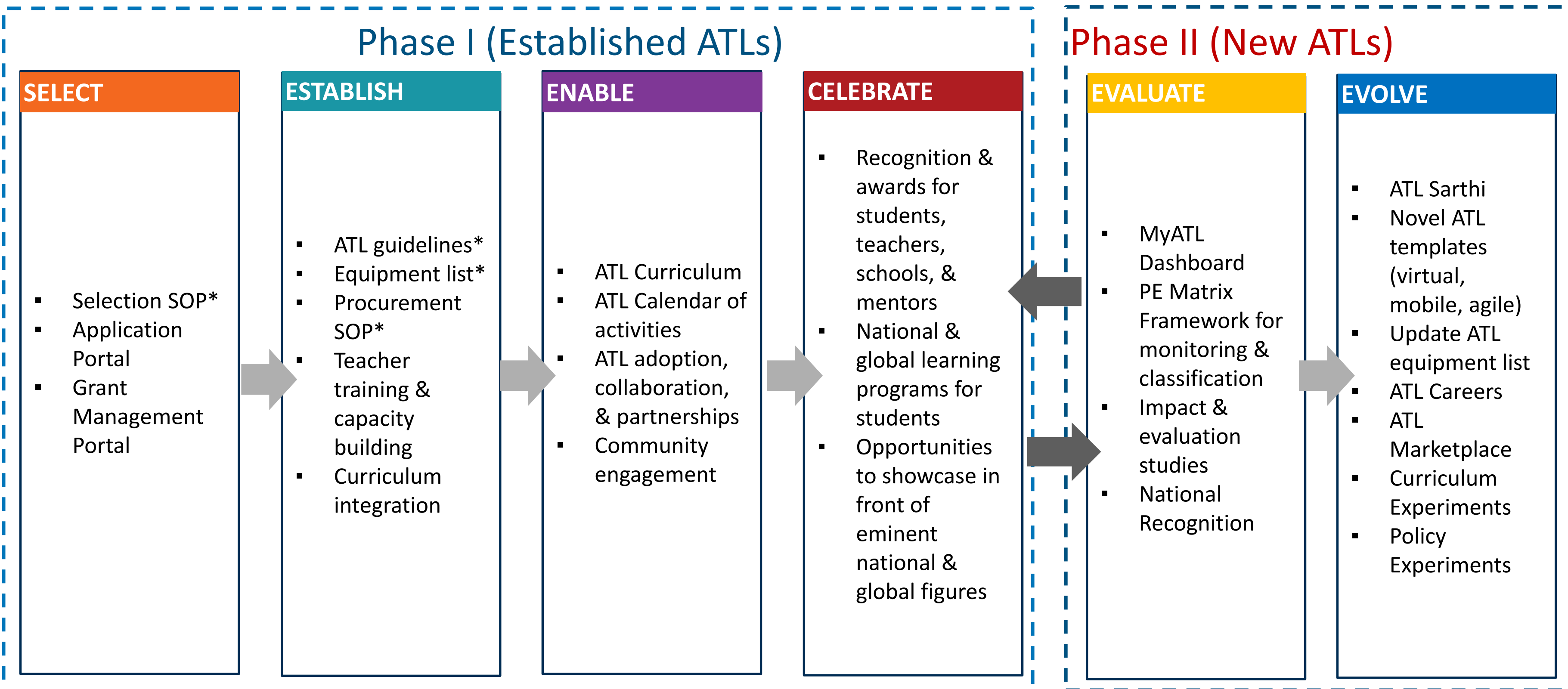
60% in Rural Schools

60% in Government Schools

96% in Girls/Co-Ed Schools



The ATL Template





Paljor Namgyal Girls School, Sikkim



Kendriya Vidyalaya, Ladakh



Govt Multipurpose School, Chhattisgarh



Kendriya Vidyalaya, Kargil

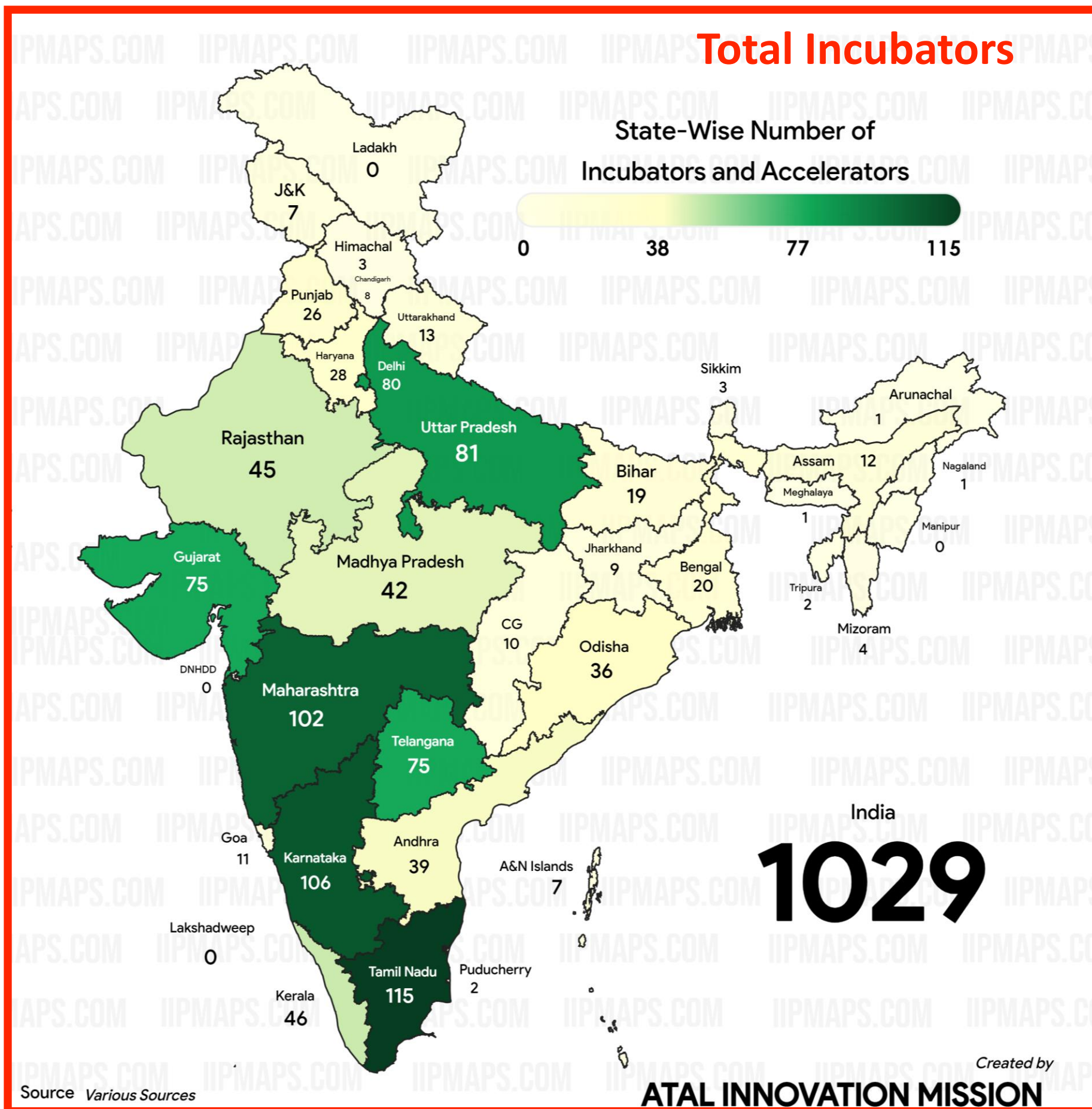


Ummat School, Andaman & Nicobar



Sarvodaya Central Vidyalaya, Kerala

Incubators



Business Incubators

(e.g., 101 Atal Incubation Center)

Sector-focused Incubators

(e.g., Textile, Defense, Handicraft, SDG, Climate, Agriculture, Women)

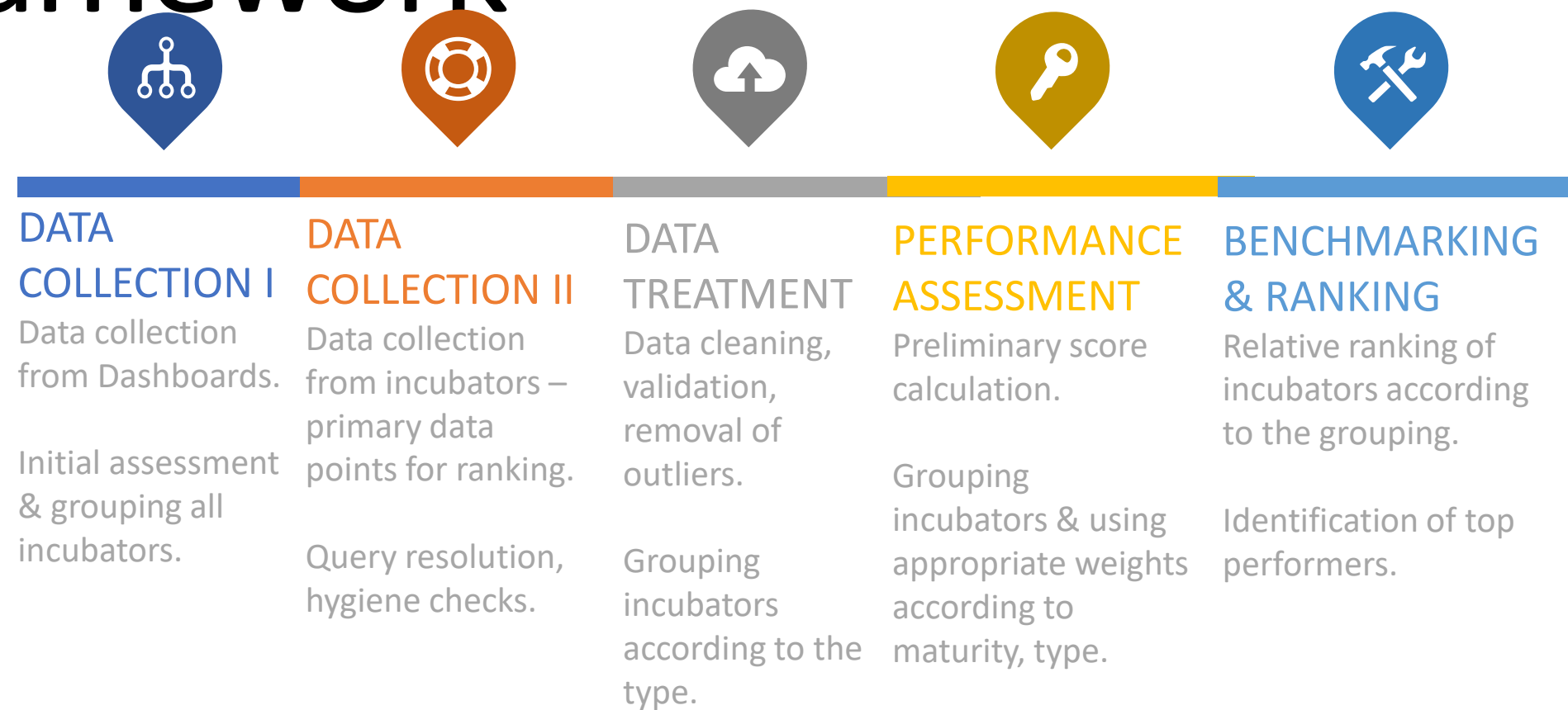
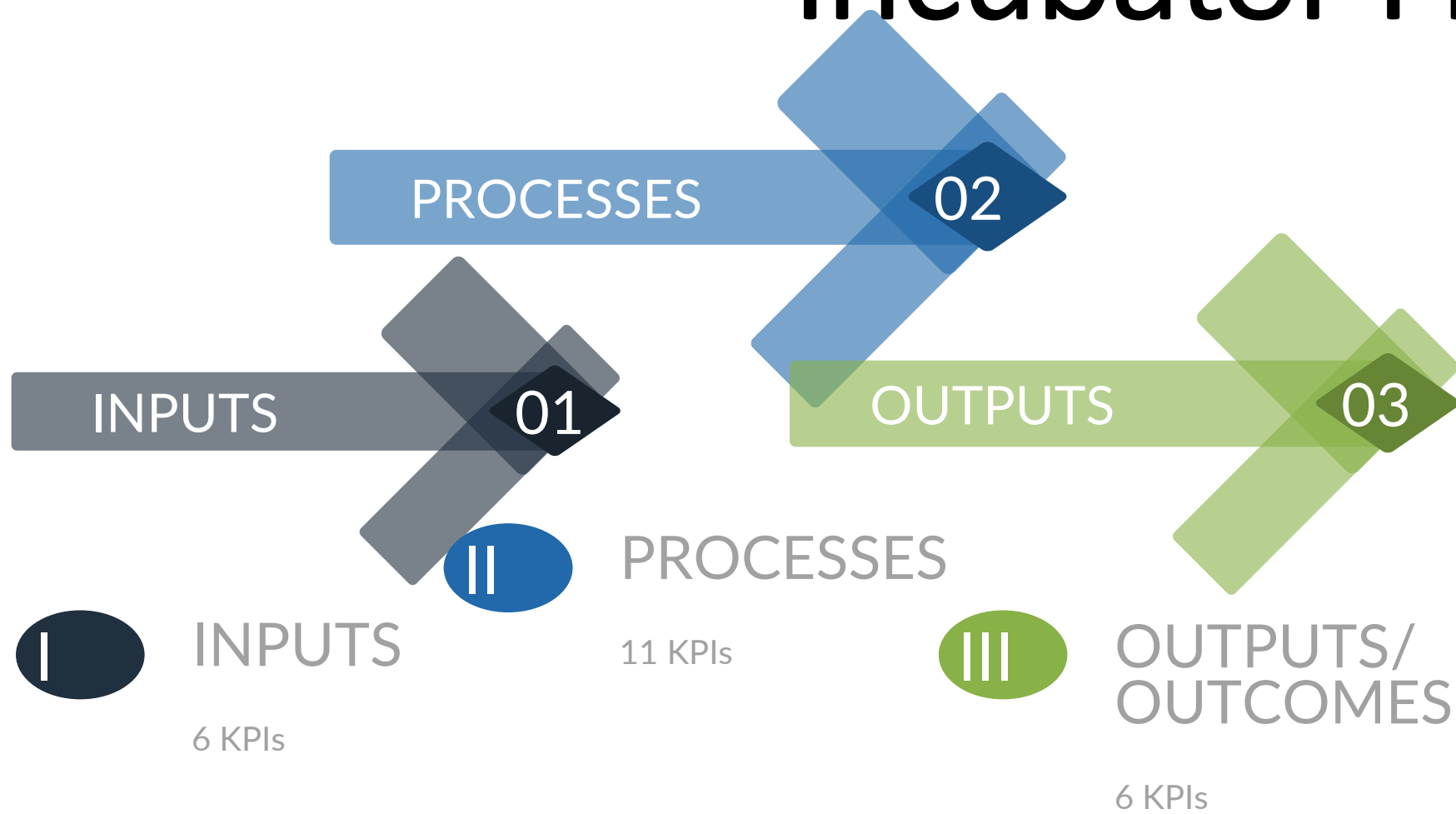
Community Innovation Centers

(e.g., 50 Atal Community Innovation Centers)

Vernacular Innovation Centers

(e.g., 30 Centers planned)

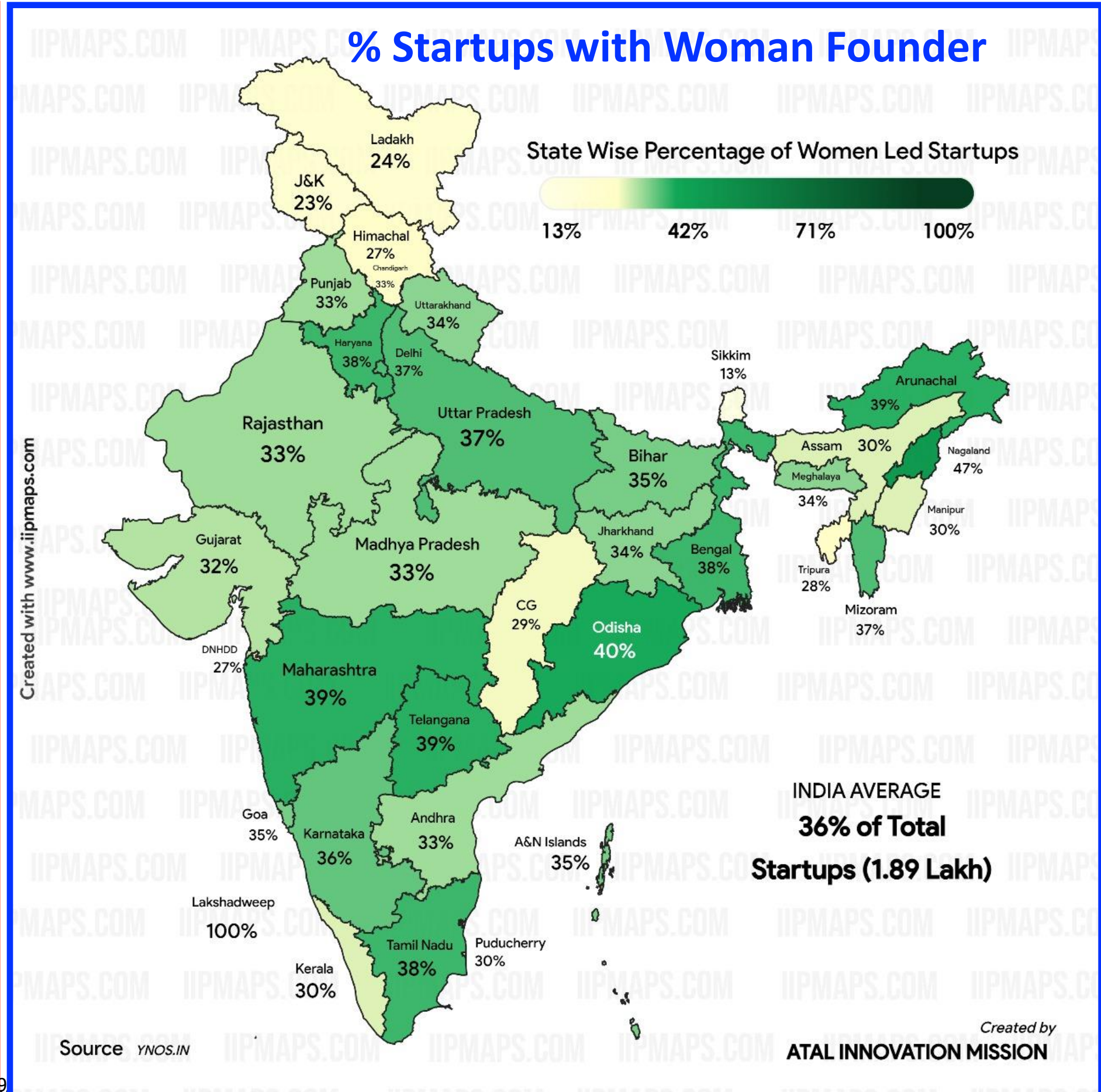
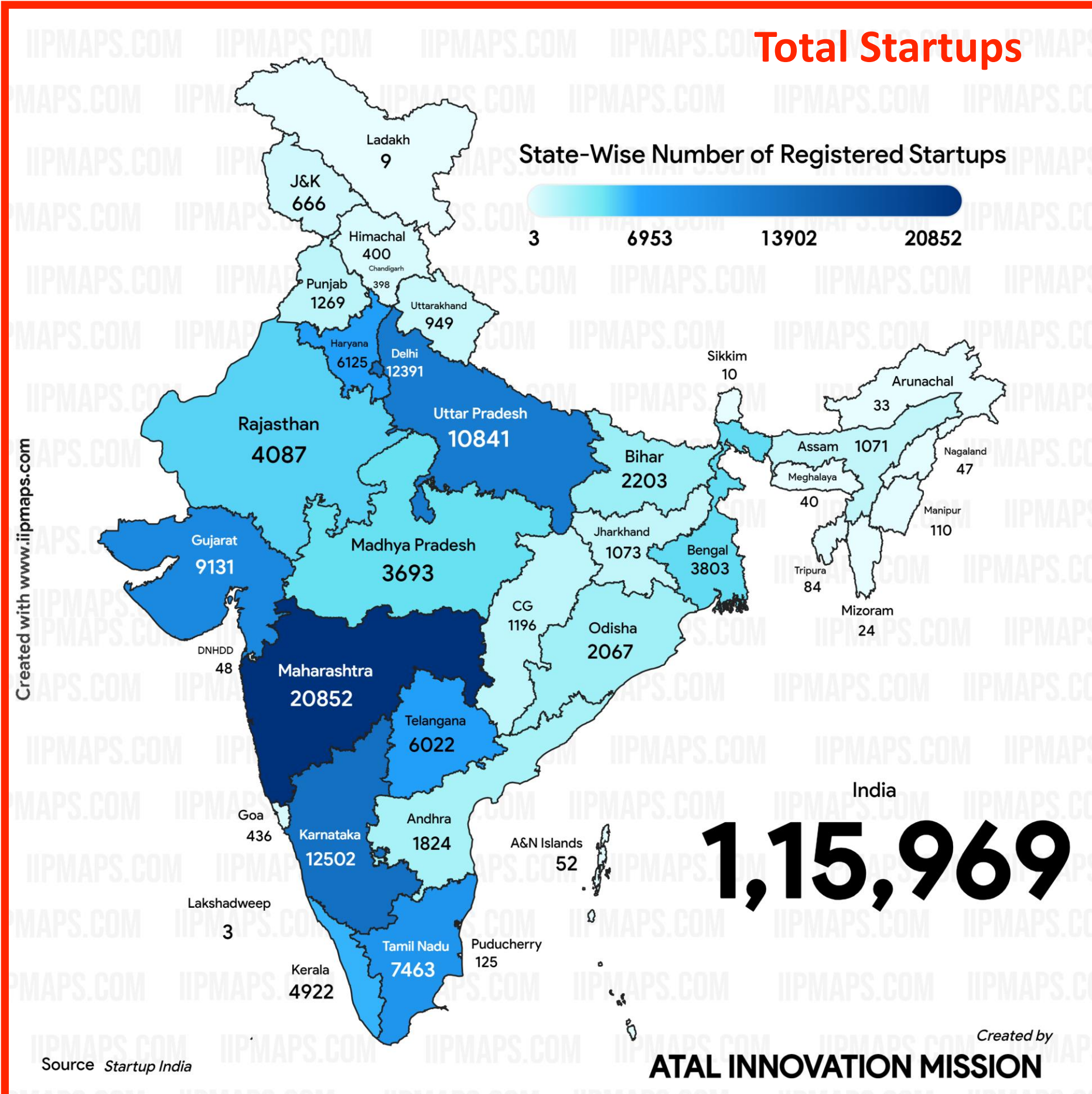
Incubator Framework



CATEGORY	23 KPIs	UNIT	WEIGHT
A. Input Indicators (30%)	A1: Staff to Startup ratio	%	4%
	A2: Total Startups/year avg	%	6%
	A3: Fraction of incubatee slots utilized	%	5%
	A4: Acceptance/Applications received ratio	%	8%
	A5: No. of incubatees able to use support services offered vs total incubatees	%	4%
	A6: No. of public+private agencies that fund the incubator	#	5%
B. Process Indicators (40%)	B1: CEO's credentials – Avg. of Education, Business & Influence	#	8%
	B2: AIC Responsiveness – Avg. of UC/PFMS completion, DB & Subjective assessment	#	6%
	B3: Active Network Partners – Avg. of academic, business & quality	#	8%
	B4: Avg. number & quality of events & workshops held for startup engagement	#	4%
	B5: Suite of Services provided (subjective)	#	2%
	B6: Existence of vision and 5-year strategic plan for incubator	0/1	2%
	B7: Well-defined processes for incubatee selection	0/1	2%
	B8: Reviewed /audited regularly for compliance with vision statement	0/1	2%
	B9: Formally outlined monitoring & evaluation processes	0/1	2%
	B10: External governance in Board & various selection committees	0/1	2%
	B11: Repository of data on current incubatees and graduates	0/1	2%
C. Outcome Indicators (30%)	C1: Dropouts/incubated ratio	%	3%
	C2: Avg. number of employees per incubate firm	%	3%
	C3: Outside funds raised by the incubator per incubatee firm	%	8%
	C4: Avg. annual Revenue generated by the incubated startups	%	5%
	C5: Fraction of incubatees with commercialized products/apps launched	%	5%
	C6: Fraction of incubatees with patents filed/granted	%	6%

Band	Score (/10)	# of Incubators	Band Name
Band A	7.5+	12	Top Performers
Band B	6.5-7.5	22	Front Runners
Band C	5.5-6.5	24	Emerging Incubators
Band D	<5.5	9	Aspirants

Startups



AIM Cost-Benefits (2016-2021)

5x Return (Conservative), 17x (Less Conservative)

Ref: Supporting Inclusive Entrepreneurship in India, Tarun Khanna, India Policy Forum 2022

- **Cost = 1511 cr (USD 182M)**
- **Benefits (Conservative) = 8167 cr (USD 984M)**
 - Market value of 2729 startups = 6835 cr (USD 823M)
 - Jobs created (14,556), Salaries = 524 cr/yr (USD 63M)
 - Matching capital for Infrastructure = 58 cr (USD 7M)
 - Value from Tinkering Labs exposure = 750 cr (USD 90M)
- **Benefits (Less Conservative) = 25,093 cr (USD 3023M)**

Journey so far ...

WIPO Director General, Mr. Daren Tang's India visit in Oct 2023 comprised of visiting one of India's ATL meeting a group of young innovators. The program stimulates a problem-solving, innovative mindset in children as young as 11 years.



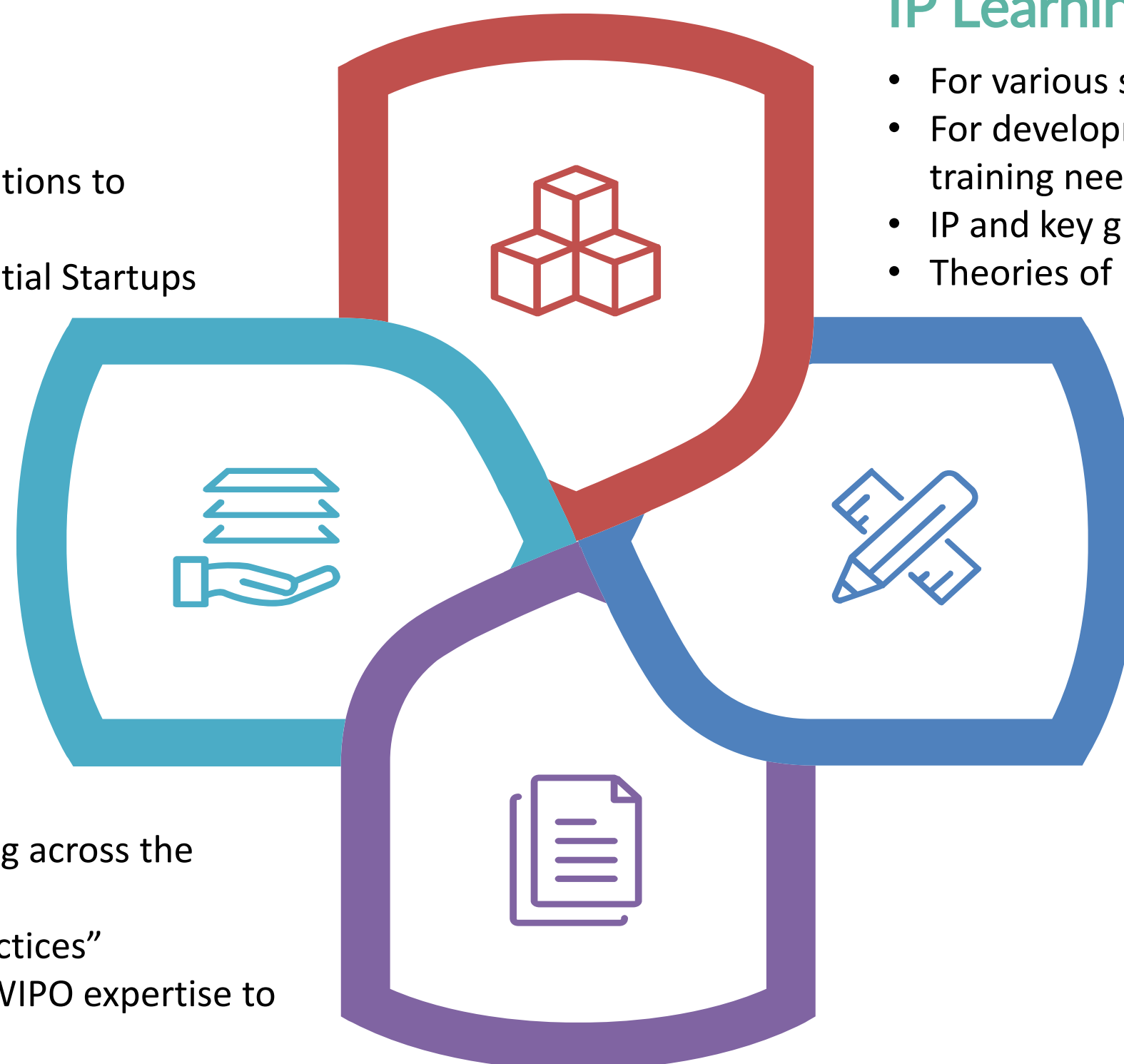
- *Follow up Mission by Mr. Sherif Saadallah, Executive Director of the WIPO Academy to learn about ATL*
- *Need for strengthening the innovation model with WIPO's support in the area of IP learning, training, and youth education – supporting teachers and students*
- *Additionally, there is a need to share the Indian model in schools for the benefit of youth and WIPO member states*

Journey ahead ...

WIPO Academy & AIM intend to collaborate to build Innovation Learning Programs

Expert Network

- Experts to help build sustainable solutions to challenges facing the world
- Mentors to guide Innovators & potential Startups
- Trainers to help set up Incubators



IP Learning & Awareness

- For various stakeholders, particularly youth and teachers
- For development and economic growth given the educational and training needs of youth and teachers
- IP and key global issues
- Theories of innovation and creativity

Youth Entrepreneurship

- Co-develop training & curriculum on Entrepreneurship & Innovation
- Work to ignite passion for Innovation amongst school kids
- Focus on Grassroot Innovation

Delivery

- Deliver effective programs & training across the Innovation ecosystem
- Develop “Global replicable best practices”
- Build on the current AIM model & WIPO expertise to support youth & teachers

WIPO ACADEMY

Embracing Youth Potential

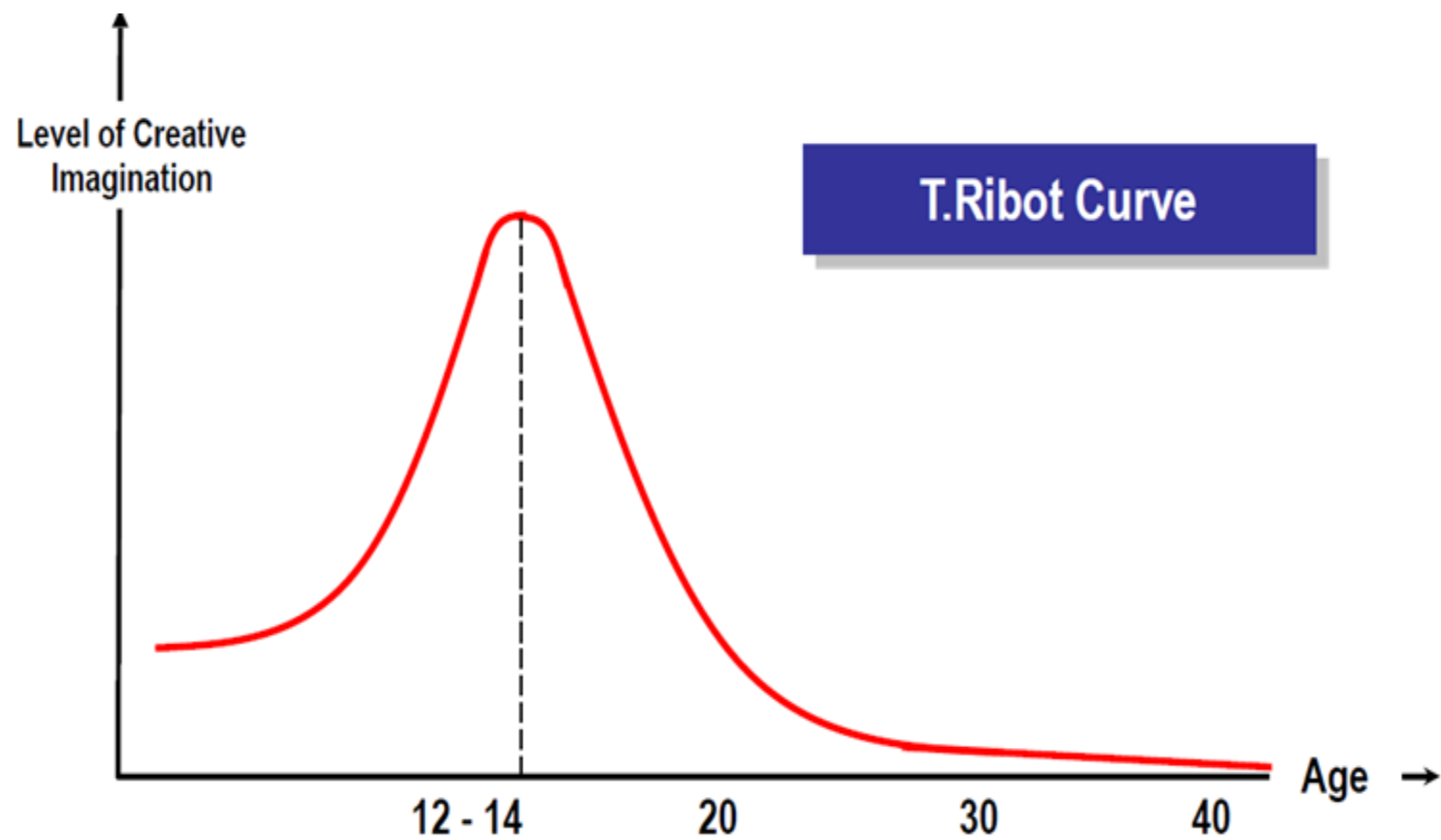
1. WIPO Academy's IP4Y&T Program
2. Different approaches of implementation
3. How youth learn to invent and create?
4. Partnerships
5. India's Atal Tinkering Labs Model for Global Impact

"Too often we prepare our children for employment by others, conditioning them to be dependent on employers, at that very age when they possess the most creative ideas unleashing that innate human potential to improve on what was done before and to become inventors, entrepreneurs, and employers themselves."

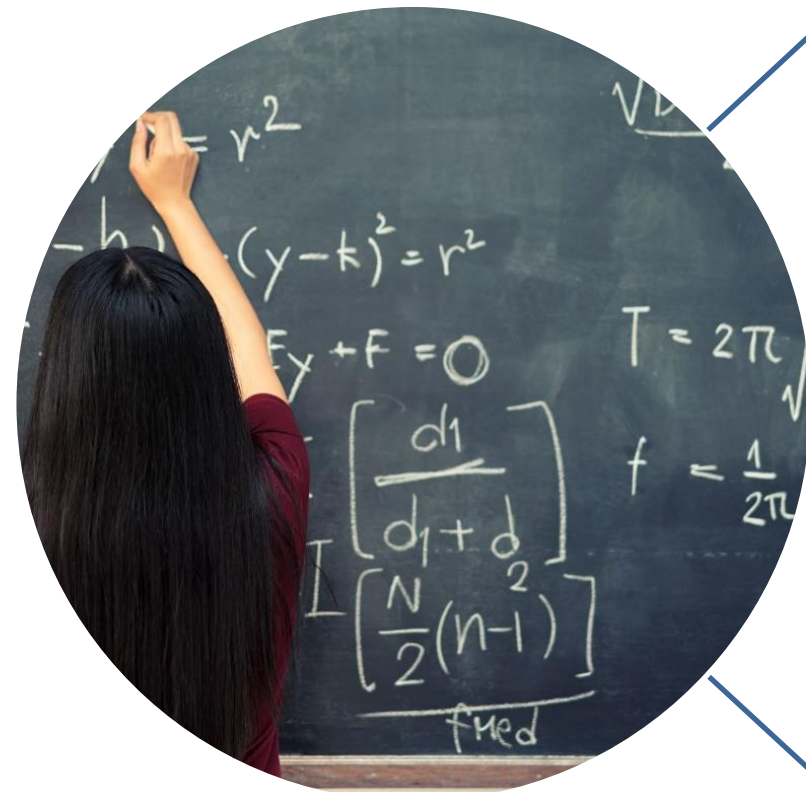
Regan Asgarali- Director of the Trinidad and Tobago IP Office

IP4YOUTH & TEACHERS PROGRAM

In the last 5 years, the Academy trained **580,000+ youth**



T.Ribot Curve



Under 18 years

- 177,000
- 15-18 Exercising Purchasing Power
- 10-14 Actively Aware
- 7-9 Passively Aware

18-24

• 196,417

25-34

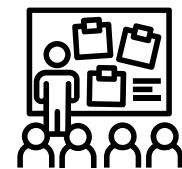
• 208,599

IP4YOUTH & TEACHERS PROGRAM

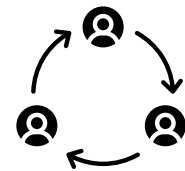
Pillars of the IP4Y&T Program



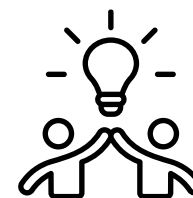
Teachers Training and Certification Program



Summer Camps



Resource Sharing Hub



Youth-run Innovation Clubs



IP Youth Ambassadors



Curricula Development

IP4YOUTH & TEACHERS PROGRAM

Global trends in youth employment and education



- Young people (15-24 years) is likely to reach 336 million in 2050
- 1.7 Billion school children (ages 5-18 years)
- ILO Trends Report: In 2020, NEET had risen to **285 million** worldwide and continues to rise



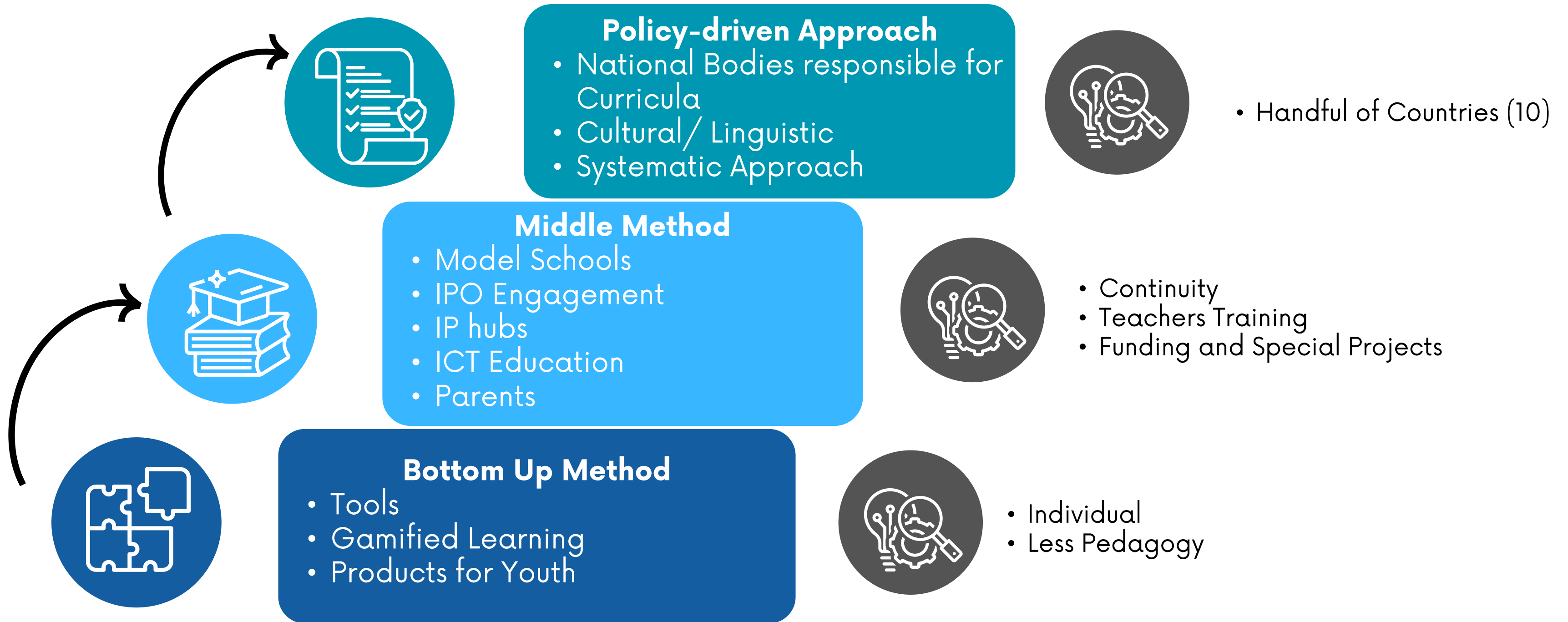
- UNESCO calling Member States action for a new social contract for education



- World IP Day- IP and SDG's

DIFFERENT APPROACHES OF IMPLEMENTATION

Meeting the needs of WIPO Member States



1. WIPO Academy's IP4Y&T Program

2. Milestones

3. Different approaches of implementation

4. How youth learn to invent and create?

5. Collaborating with India for Global Impact

HOW YOUTH LEARN TO INVENT WITH US?

How to be an inventor

How to make money?

How to invent

TRIZ - Ideal Final Result
What is the best solution?

TRIZ - Contradictions
How to resolve?

Out of the box thinking using
bio-mimicry and itselfness

Case Studies

IP Protection

Creativity & Copyright

Creativity & TM

Innovation & Patents

IP in Traditional Knowledge

Entrepreneurship

Business Mindset
Explore value of IP

Bringing IP to market

Success stories of youth
entrepreneurs

Re-branding Game
Targeting the audience



Ms. Somaia, Inventor, Egypt

IP Youth Ambassadors

- Age 6-26-years
- New or aware user of IP System
- Creator or inventor of a nationally recognized product, start-up, small or medium enterprise (SME)
- Recognized and nominated by national Ip authority
- Role model for other young creators, inventors, innovators, and entrepreneurs.



COLLABORATING FOR GLOBAL IMPACT



AIM and WIPO Academy and WIPO Academy will collaborate to strengthen their shared objectives to promote a culture of innovation and entrepreneurship.



Leveraging India's expertise and experience to empower youth with practical skill sets of creativity, innovation, critical thinking, design thinking, ethical leadership, & cross-cultural collaboration.



REQUESTS

- To request assistance contact us at:
IP4youth@wipo.int
- <https://welc.wipo.int/ipedu/assistance>

Thank you
Altaye Tedla
Altaye.tedla@wipo.int