



Summary Report Draft National TVET Reform Strategic Plan



**Ministry of Labour and Human Resources
Royal Government of Bhutan**

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PART I: NATIONAL TVET REFORM STRATEGIC PLAN- ASPIRATION AND PROSPECTS

1.1 CONTEXTUAL DRIVERS OF TVET REFORM

Royal Vision

- Paradigm shift in the TVET Governance and Management—to redesign, modernize and revolutionize TVET commensurate with the changing technological and economic contexts.
- Build TVET system that is responsive to the local need and capable of fulfilling the aspirations of the youth.
- Transform TVET into a robust, resilient and dynamic system with its institutions providing world class facilities and programs at par with the international standards.
- Education system reform must aim for the standards and goals which are of the highest possible order.
- TVET system must prepare in the provision of high-quality skills training to the Gyalsung graduates.

“ What we lack in numbers, we have to make up in talent. We will never go wrong by investing in making our people stronger, better and more prepared,”

Transitioning to a Dynamic Economy

- Vulnerable Economy – economic vulnerability index of 25.7, below the threshold of 32.
- Import and Hydropower Driven.
- Weak Private Sector.
- Low level of Economic Diversification.
- Growing Un-employment - 5% (2020).
- Low Labour Productivity.

Harnessing Demographic Potential

- Demographic Dividend – 46% of the population below 25 years.
- Rising Youth Unemployment – 22.6% (2020).
- Unmet Youth Potential and Aspiration – Gen Z & Gen Alpha.
- Labour Force Participation Rate – 67.8%.
- Labour Poor and Unskilled Country (Diagnostic Trade Study, 2020).

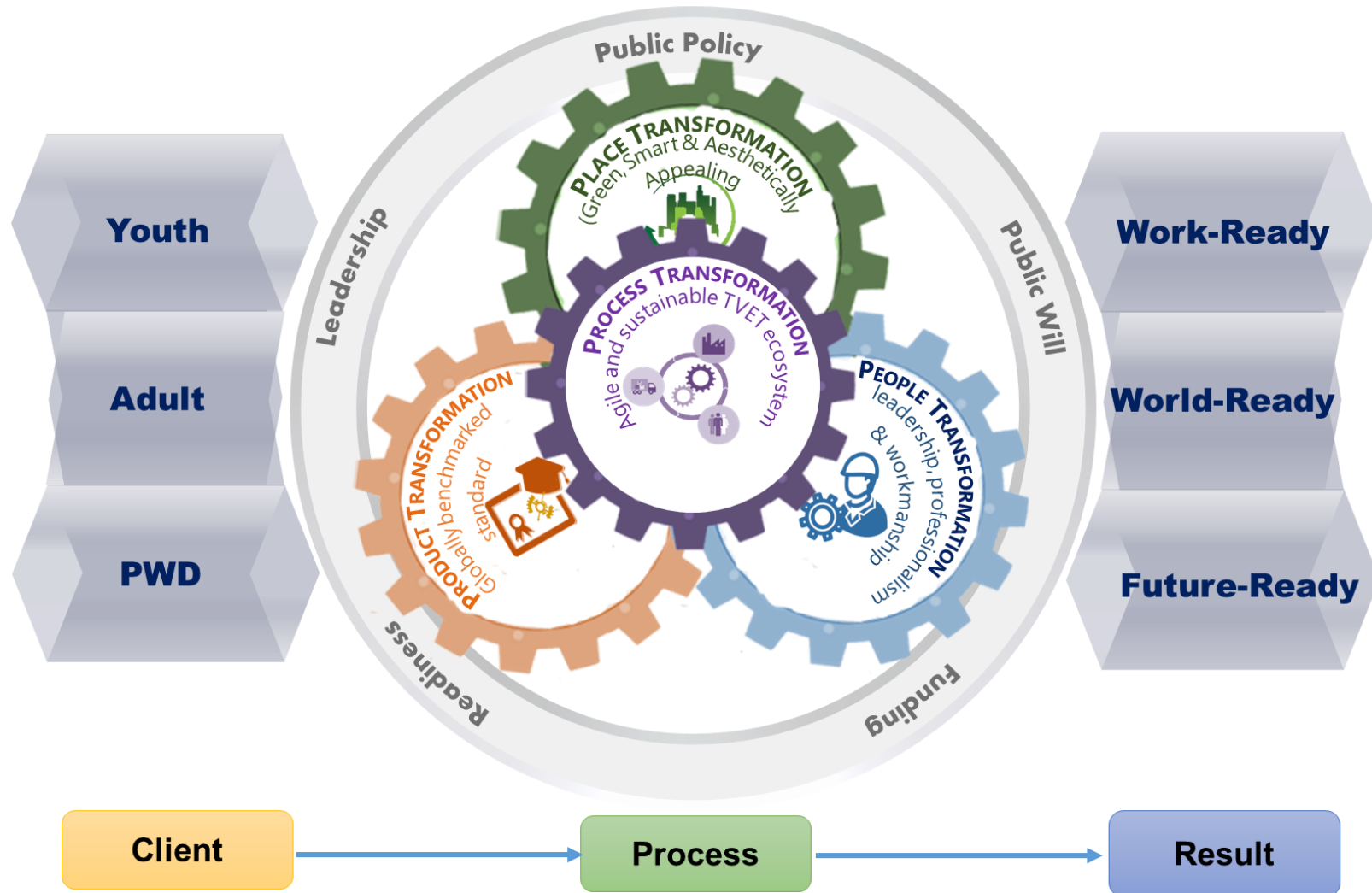
Prospects and Challenges of Digital Era

- Technological breakthroughs accelerating workforce transformation.
- Machine learning and automation likely to displace jobs as well as create new.
- Digital era will change the job profiles and demand new skills.
- Rapid Technological advancement likely to accelerate human machine interaction and frontier.

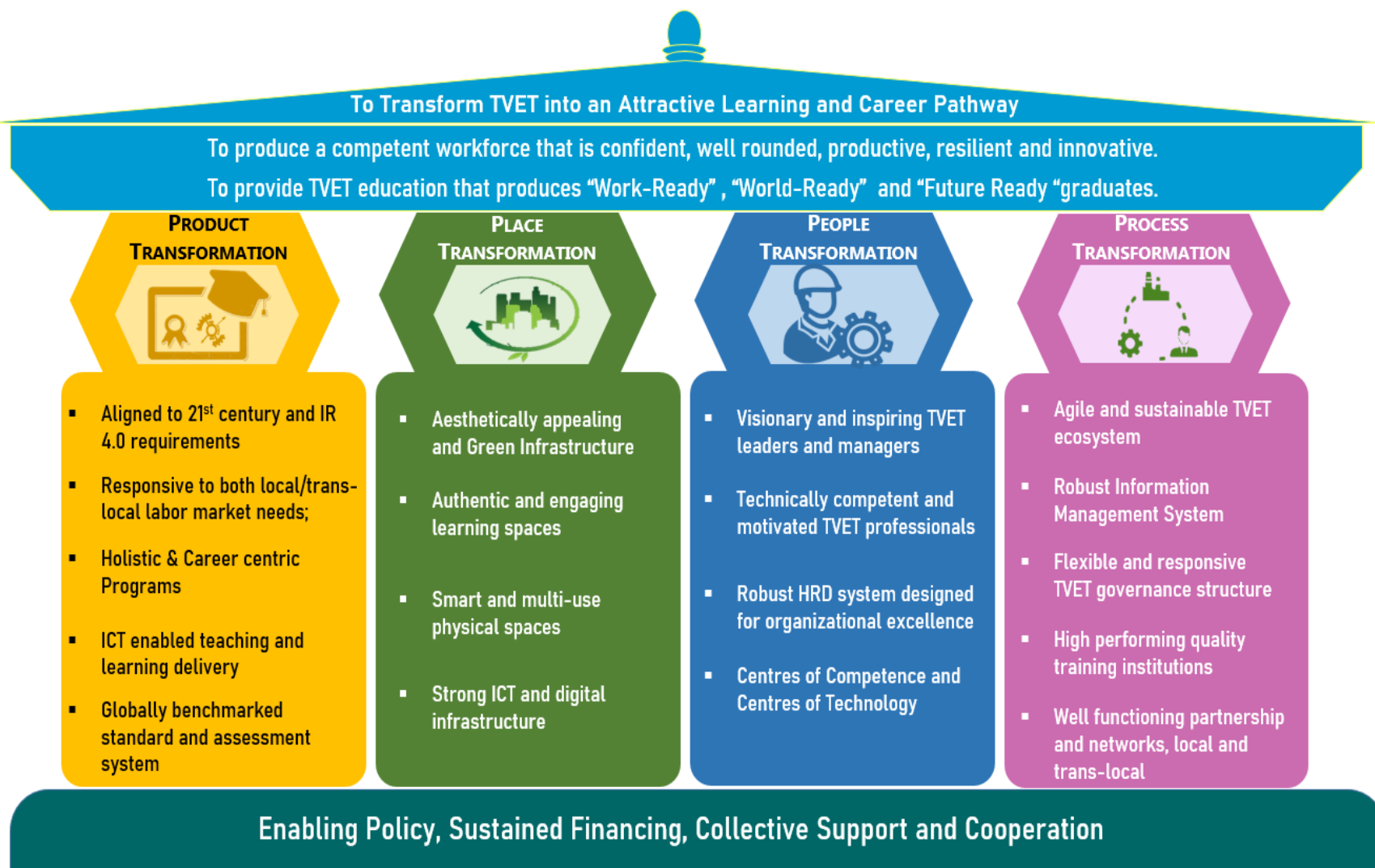
In Support of Agenda 2030 (SDG)

- Inclusive and quality education and skill training.
- Productive employment and decent work.
- Resilient infrastructure and sustainable industrialization.
- Transition to green and low carbon economy.
- For green skills and green jobs.

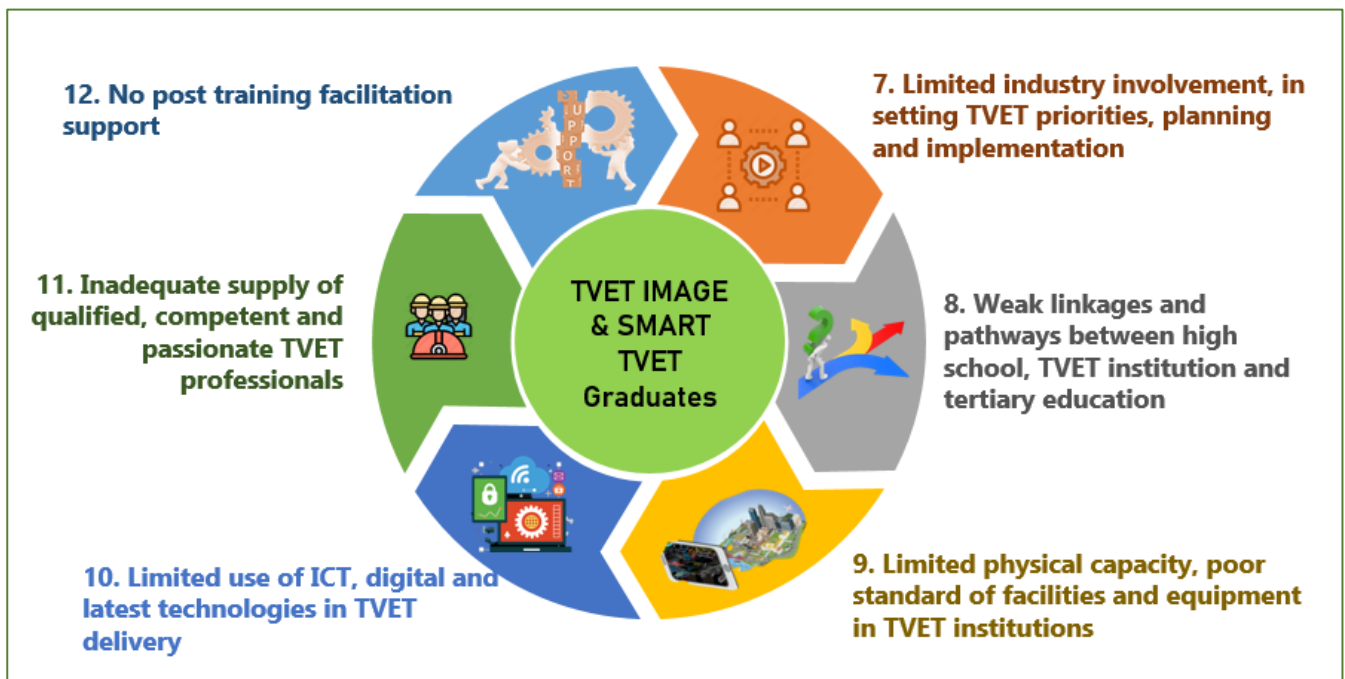
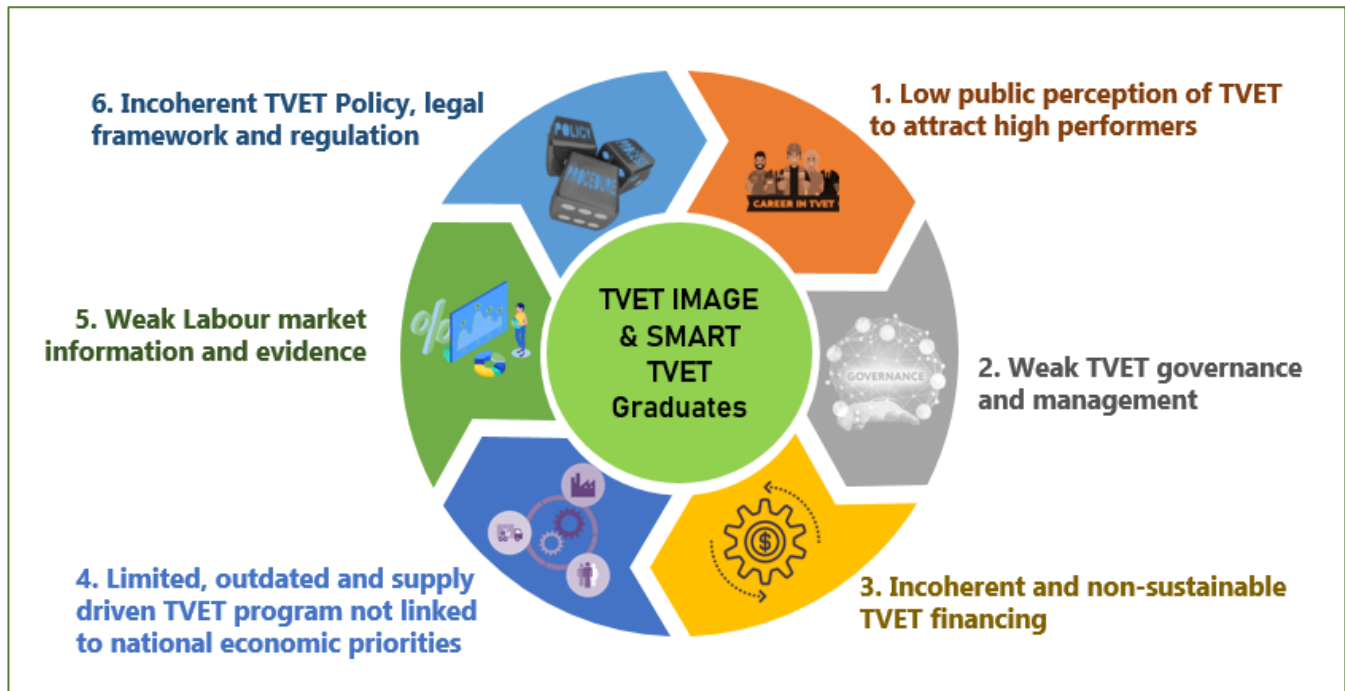
1.2 TVET REFORM MODEL



1.3 STRATEGIC FRAMEWORK



1.4 ISSUES AND CHALLENGES



ASPIRATION:

Deliver TVET programs that are designed to adequately equip Bhutanese youth with 21st century skills and IR 4.0

1

Diversify TVET programs in response to the needs of local and trans-local 21st century economy

1

Develop a responsive Framework and Standard Operating Procedures (SOP) to facilitate the introduction of demand driven TVET courses

2

Conduct Labour Market Skill Need Assessment to guide the selection and prioritization of courses

3

Review and revise NCS in line with 21st century skills, gearing towards IR 4.0

4

Develop and introduce demand driven course attuned to the current and emerging needs of the economy

5

Equip institutes with state-of-art training tools and equipment

2

Revamp TVET program design and development system

1

Review and embrace best practices in standard and curriculum development, benchmarked at globally recognized standards

2

Strengthen TVET course structure to integrate 21st century skills, soft skills, entrepreneurial skills, green skills and transversal skills

3

Provide flexible learning opportunities to capture informal and non-formal modes of training

4

Introduce female and PWD friendly TVET courses

5

Integrate assessment of soft and transversal skills in National Assessment

6

Pilot flexible curriculum structure in TTIs in construction, Automobile and ICT sectors

3

Foster work readiness through work-based curricula approach and effective OJT and work-based learning system

1

Review and sharpen On-Job-Training and Work-based learning system

2

Diversify work-based learning through different training modality such as DTP, ATP, internship etc.

3

Explore PPP and win-win model for effective work-based learning

4

Develop work-based learning management, monitoring and evaluation system

4

Overhaul national assessment and certification system to global standard

1

Study efficacy, reliability and validity of the current national assessment system

2

Adopt credible and agile national assessment and certification system in line with global standards

3

Develop a dynamic database and e-portfolio system for assessment and certification system

4

Strengthen the quality and security features of certification system

5

Develop framework for assessment and certification of formal, non-formal and informal learning including credit transfer mechanism

6

Explore joint certification with renowned international bodies and institutes

I.5 TVET TRANSFORMATION PILLAR-I: PRODUCT TRANSFORMATION

ASPIRATION:

Built TVET institutions that provides appealing, authentic, holistic and ICT enabled learning environment

1

Develop aesthetically appealing infrastructure and physical environment with sustainable and green feature

1

Incorporate all aesthetical essence including the traditional Bhutanese facade and green features in the design of all new infrastructure

2

Incorporate inclusive and gender sensitive features in all TVET infrastructure and facilities

3

Develop overall topographical and structural master plan for all institutes

4

Put in place Common Minimum Facilities in all TVET institutes as per the Common Minimum Facility Standard (CMFS) guidelines

5

Incorporate safety and protection features at par with international standards in all infrastructure and facilities

2

Build functionally authentic, engaging and multi-use teaching and learning facilities

1

Design and build workshops mirroring industry situation for authentic teaching-learning

2

Build smart and integrated learning spaces and facilities for flexibility and space optimization

3

Provide adequate tools and equipment in line with industry standards

4

Provide adequate amenities for holistic development

1

Build first class sports and recreational facilities to foster wellness, teamwork, leadership and self- confidence

2

Build adequate student support amenities to offer a wide range of support services

3

Create smart learning spaces through integration of ICT and digital infrastructure

1

Develop ICT and Digital Master Plan of TVET institutes

2

Equip TVET institutes with adequate ICT and digital infrastructure facilities to provide flexible, accessible and smart learning space

3

Develop a dynamic and interactive website and a social media page to provide online services and to disseminate timely and relevant information

4

Establish Learning Management System and e-portfolio

I. 6. TVET TRANSFORMATION PILLAR-II: PLACE TRANSFORMATION

ASPIRATION:

Develop and nurture a pool of committed, motivated, inspiring and qualified TVET leaders and professionals willing to trail blaze Bhutan's TVET System to global standards.

1

Build inspiring and visionary TVET leaders & managers

1

Develop policy to provide TVET leaders, managers and professionals with competitive financial incentives, facilities, privileges and preferences

2

Select and recruit a pool of high-performing TVET leaders and managers

3

Build capacity of TVET leaders and manager for achieving organizational excellence

4

Institute grooming and mentoring system of TVET leaders and managers in-collaboration national and international bodies

2

Build world-class TVET professionals

1

Conduct competency profiling & training needs assessment of TVET professionals

2

Develop TVET professionals HRD Policy and Master Plan

3

Recruit National & International TVET faculties to deliver quality TVET courses

4

Establish dedicated TVET professional development, innovation and entrepreneurship center

5

Conduct capacity building as per the HR Master Plan and training needs assessment

6

Build capacity of TVET Trainers to deliver PWD friendly courses

3

Augment authentic learning through active engagement of industry experts

1

Strengthen industrial attachment mechanism for TVET Trainer

2

Develop system for involvement of industry expert in training delivery

3

Train and certify skilled supervisors of the industry

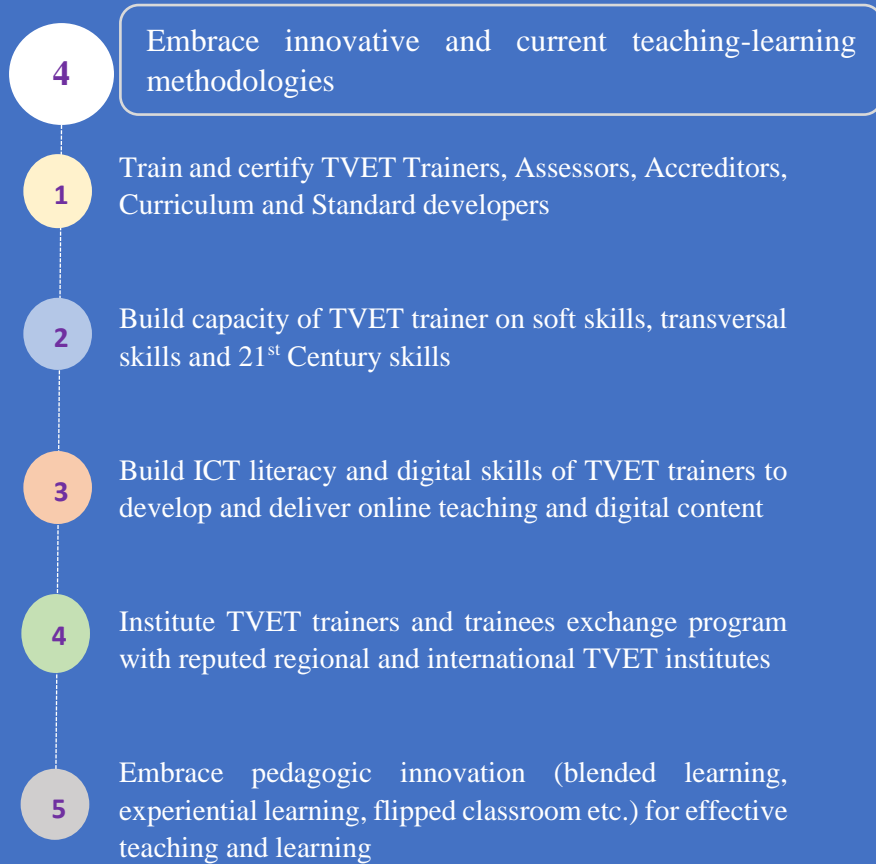
4

Collaborate with industry in sharing resources to provide authentic work-based learning

5

Study and integrate minimum industry experience requirements for TVET trainers

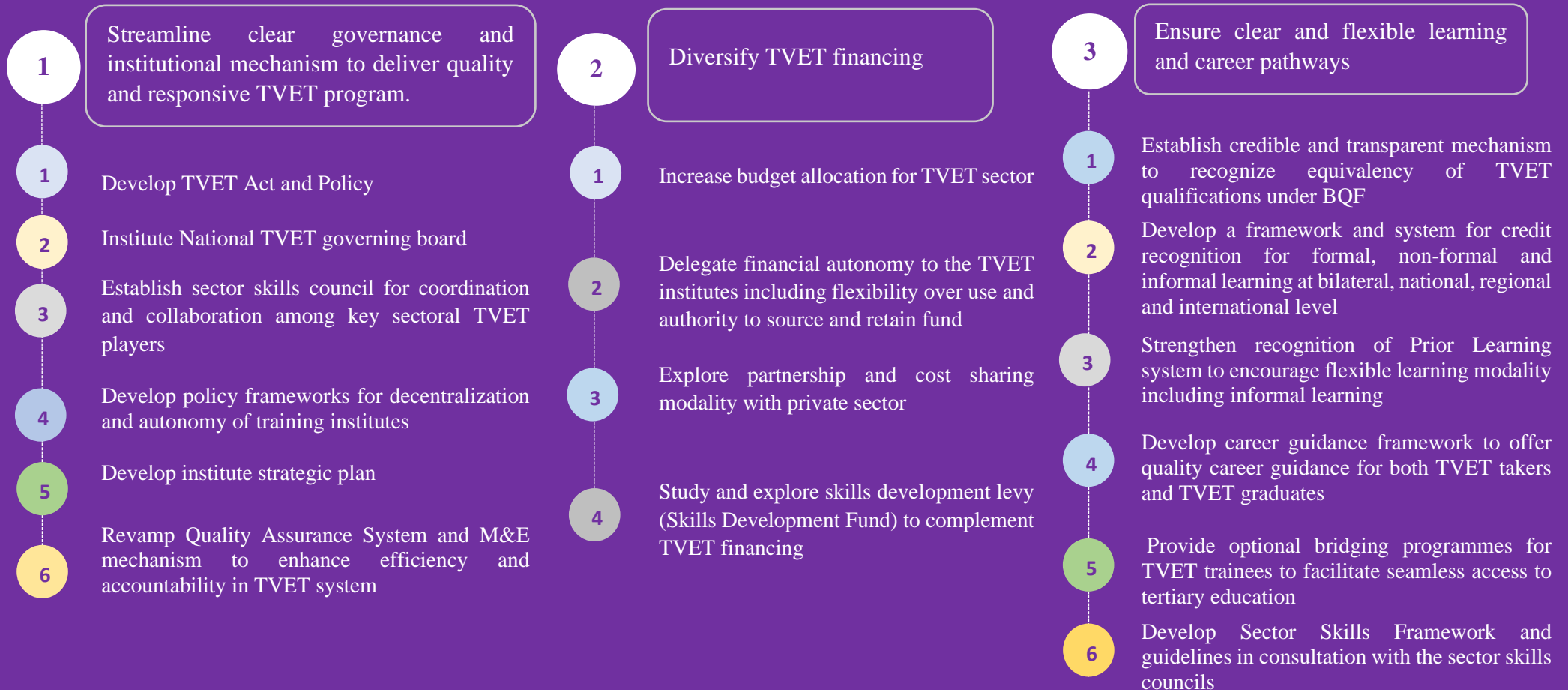
I. 7. TVET TRANSFORMATION PILLAR-III: PEOPLE TRANSFORMATION



1.7 TVET Transformation Pillar-III: People Transformation

ASPIRATION:

Put in place a responsive, robust, agile, sustainable, resilient and a high performing TVET System



1.8 TVET TRANSFORMATION PILLAR-IV: PROCESS TRANSFORMATION

4

Enhance national, regional and international linkages and collaboration among key TVET players.

1

Develop a framework and mechanism for collaboration and linkages with TVET stakeholder at national, regional and international level

2

Participate in networking, collaboration, linkages and partnership activities at regional and international level

3

Establish a dynamic mechanism to strengthen institute-industry linkages at local and global level

4

Explore outsourcing TVET institutes to foreign operators through Government-to-Government collaboration

5

Establish a dynamic and robust TVET and Labor market Information

1

Develop effective Web-based TVET and LMI System to gather and disseminate reliable labour market supply demand data

2

Train staff and relevant stakeholders in collecting, analyzing and disseminating TVET and labour market information

6

Institute and facilitate post training support to TVET graduates

1

Create a dedicated unit in institutes to provide post-training services to the graduates

2

Establish alumni associations at Institute levels through functional Alumni Association

3

Establish effective Innovation and entrepreneurship laboratory in the institutes

1.8 TVET Transformation Pillar-III: People Transformation

7

Promote TVET as mainstream learning and career choice

1

Develop and implement TVET promotion communication strategy using diverse communication channels

2

Promote TVET career guidance and counselling in schools in collaboration with MoE

3

Conduct National Skills Competition

4

Participate in Regional and International Skills Competition

Increase stipend to support decent living at the institute and during OJT

8

Promote research and development and innovation culture in TVET system

1

Institute research endowment fund to foster research, development, and innovation in TVET sector

2

Conduct tracer, evaluation, perception studies and impact assessments for evidence based TVET system

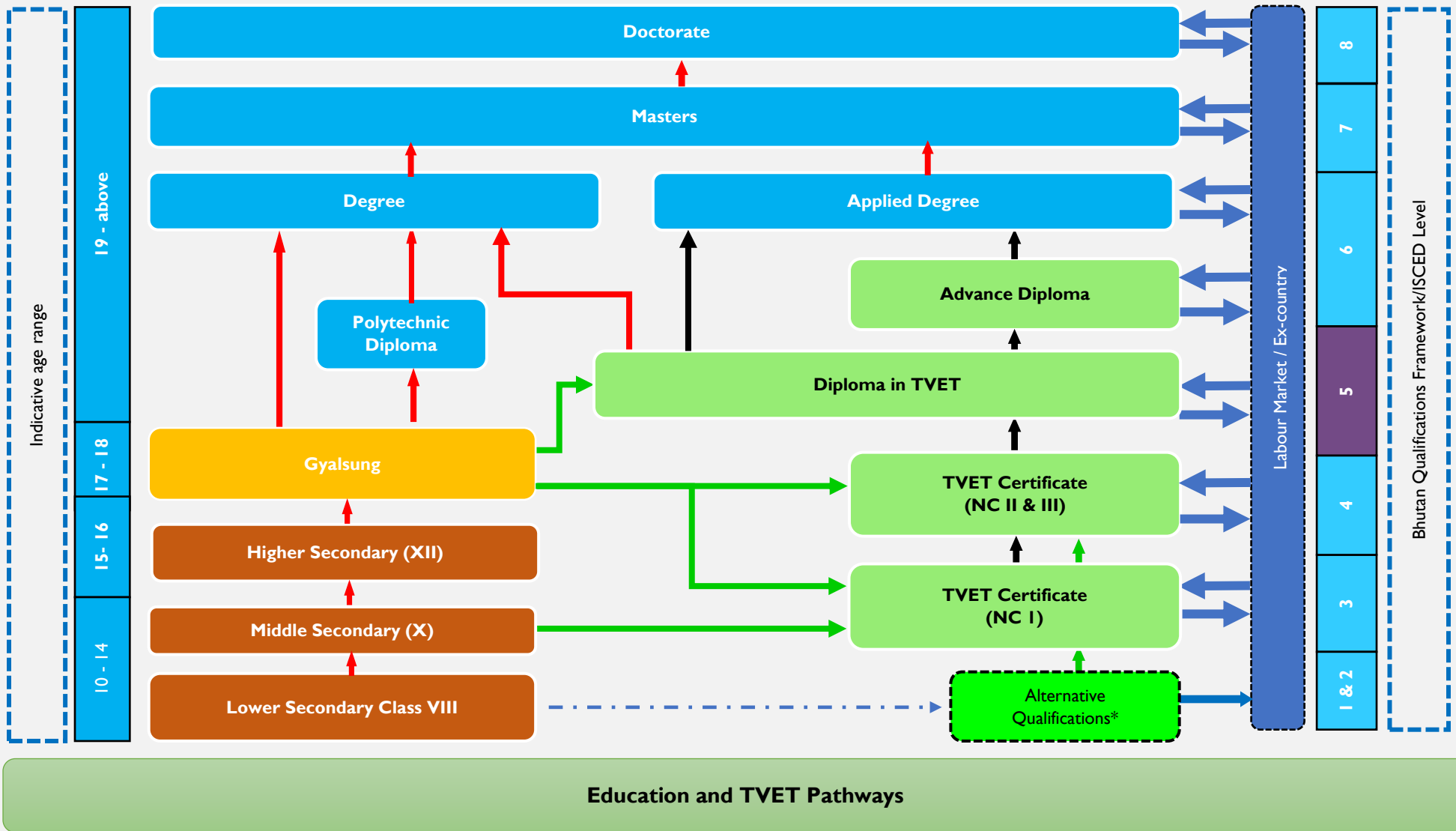
3

Institute TVET journal publication, seminar and conference at national, regional and international

4

Establish innovation hub and TVET resource centre to facilitate research, development and innovation

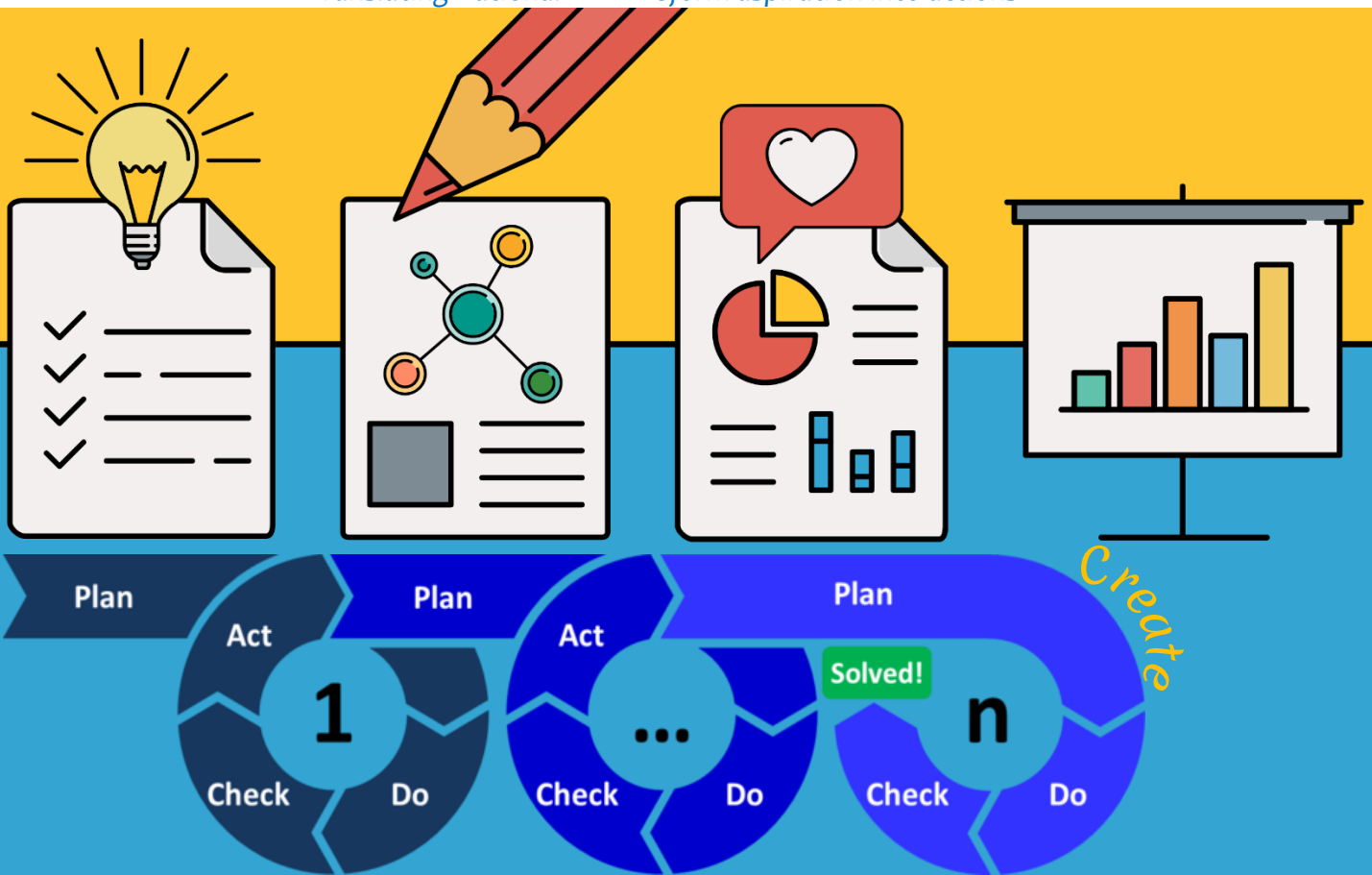
1.9 EDUCATION AND TVET PATHWAYS



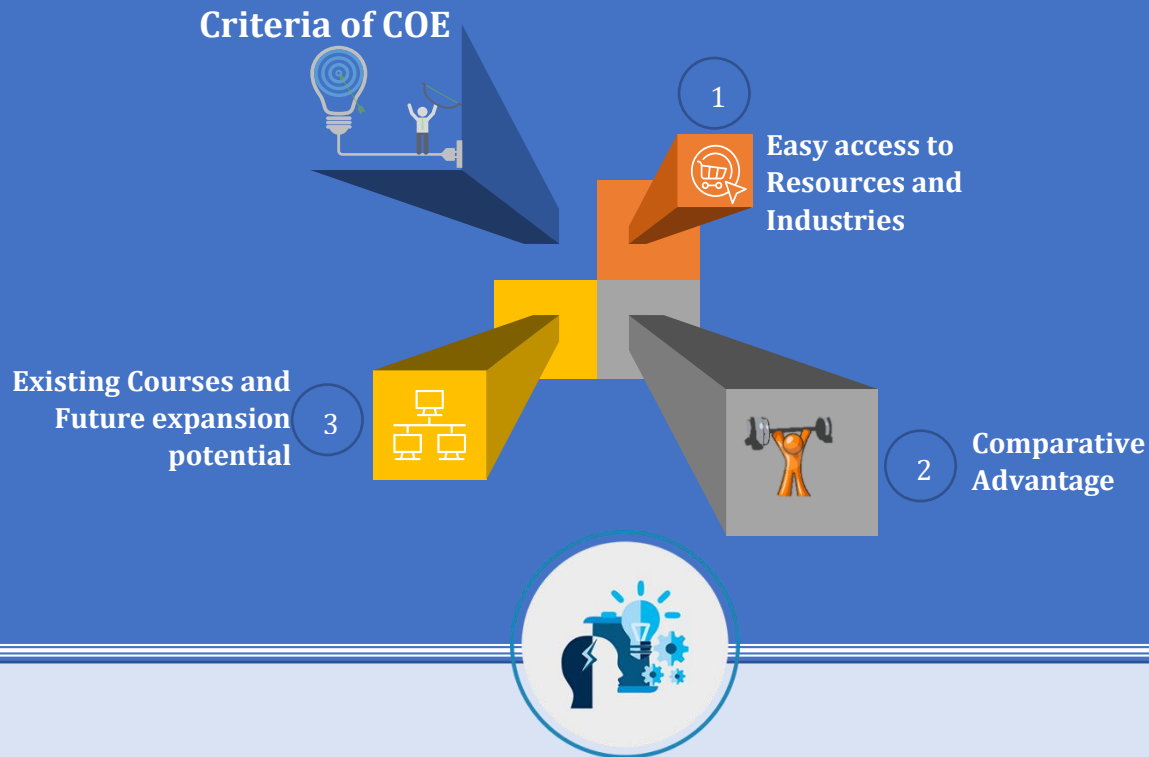
PART-2: OPERATIONALIZATION OF TVET REFORM ASPIRATIONS

OPERATIONAL PLAN

“Translating National TVET Reform aspiration into actions”

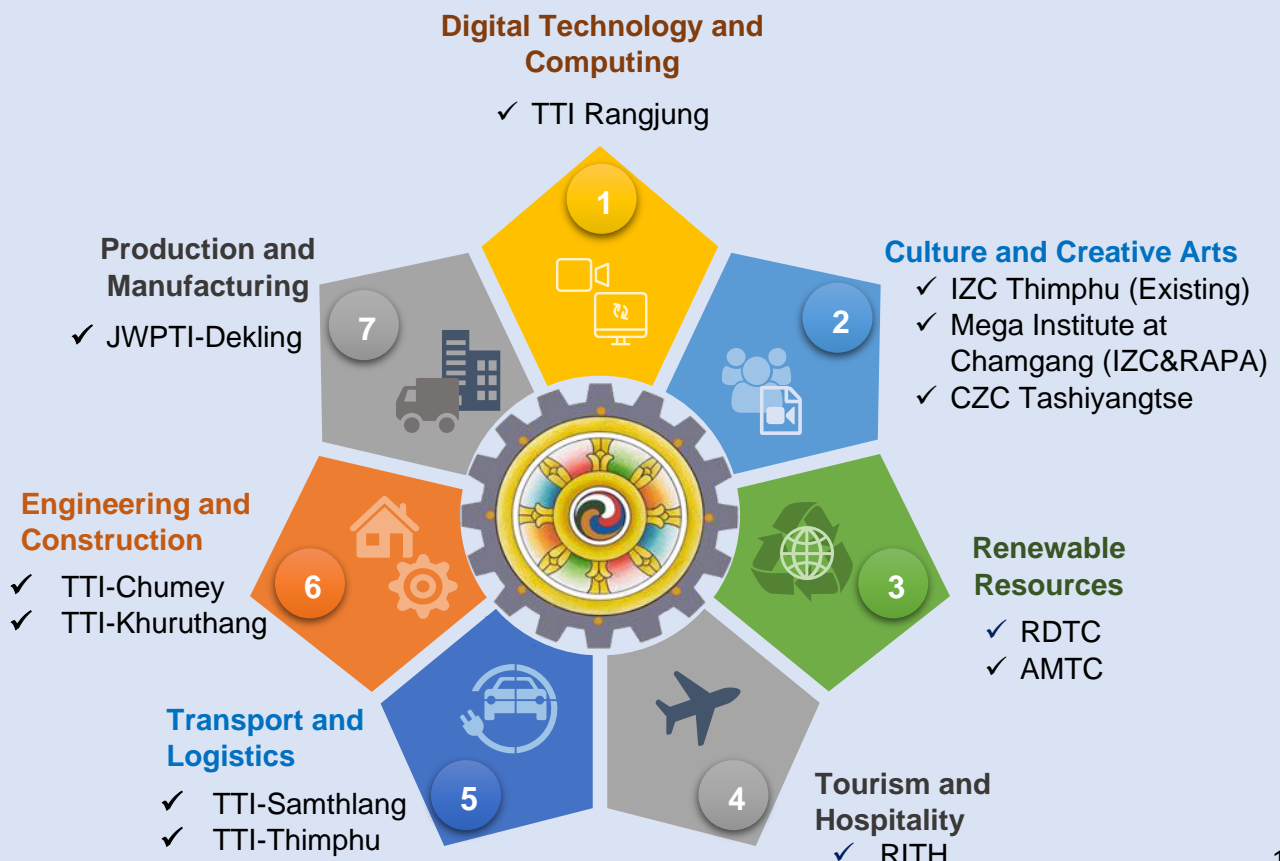


2.1 Centre of Excellence



Centre of Competence/Technology - Unique Selling Point (USP)

Objective: To enhance Operational Efficiency and Promote Research and Innovation



2.2 Operational Plan - Product Transformation

Aspiration:

Deliver TVET Programs that are designed to adequately equip youth with 21st Century Skills and IR 4.0 Competencies



Parameter-course rollout & enrollment projection

- Existing Institute capacity
- Center of Excellence
- Resource pooling and logistic
- Provision for future expansion
- Labour market demand
- Self-employment prospective
- Youth centric courses



Summary of Course Rollout and Enrollment Projection Plan by Center of Excellence

Sl. No.	Center of Excellence	No. of course		Total Capacity	Total Enrollment/Anum
		NC	ND		
1	Culture and Creative Arts	23	13	1000	615
2	Computing and Digital	10	5	500	400
3	Transport and logistic	17	5	1200	896
4	Hospitality and Tourism Services	9	2	300	250
5	Engineering and Construction Technology	7	6	1050	663
6	Renewable Resources	10	0	350	335
7	Production and Manufacturing	10	2	750	522
Total		86	33	5150	3681

Summary - Proposed Course Implementation and Enrollment Plan by June 2024

Sl. No.	Institute	No. of courses	COE related Course	No. of course		Total Capacity (2023-24)	Total Enrollment (2023-24)
				NC	ND		
1	TTIC	12	12	5	4	850	545
2	TTIK	4	4	2	2	200	118
3	TTIR	11	11	10	5	500	400
4	TTIS	8	8	8	0	700	540
5	TTIT	10	4	9	5	500	356
6	JWPTI	13	12	10	2	750	522
7	IZC (Exist.)	5	5	0	5	100	50
	IZC (New)	10	10	9	1	300	165
8	CZC	7	7	7	3	250	125
Total (TTIs & IZCs)		80	73	60	27	4150	2821
9	RAPA (New)	11	9	8	4	350	275
10	RITH	11	11	9	2	300	250
11	RDTC	7	7	7	1	200	185
12	AMTC	2	2	2	0	150	150
Total (Other Public Inst)		32	30	26	7	1000	860
Grand Total				28		5150	3681
Total indicative budget forecast for FY 2023-26						Nu. 569 million	

2.3 Operational Plan - Place Transformation

Aspiration:

Built TVET institutions that provides appealing, authentic, holistic and ICT enabled learning environment.



Parameter for place transformation:

- Readiness for enrollment of Gyalsung graduates
- Center of Competence and Technology
- Product roll out and projected enrollment plan
- Common Minimum Facility
- Existing facility and scope for expansion



Proposed Expansion Capacity of TTIs and IZCs

Sl. No.	Institute	Existing Capacity	Capacity after expansion	Increased capacity
1	TTI Chumey	288	850	562
2	TTI Khuruthang	288	200	-88
3	TTI Rangjung	384	500	116
4	TTI Samthang	80	700	620
5	TTI Thimphu	80	500	420
6	JWPTI	384	750	366
7	IZC-Thimphu (Existing Campus)	100	100	0
8	IZC-Thimphu (relocation to Chamgang)	-	300	300
9	CZC-Trashiyangtse	164	250	86
	Total	1768	4150	2382

Proposed Expansion Capacity of Other Public Training Provider's

1	RITH	100	300	200
2	RAPA	40	350	310
3	RDTC	70	200	130
4	AMC	70	150	80
	Total for OPTPs	280	1000	720
	Total (TTIs, IZCs and OPTPs)	2048	5150	3102

Budget Estimate: Expansion of capacity in the public TVET Institutes

SL No.	Particular	Total estimate (Million Nu.)
1	TTIs, IZCs, Resource Center & new campus	3,767.613
2	Other Public Training Providers (OPTP)	1,075.438
	Total indicative budget forecast, FY 21-24 (Nu. Million)	4,843.05

2.4 Operational Plan - People Transformation

Aspiration:

Develop and nurture a pool of motivated, inspiring and competent TVET leaders and professionals willing to trail blaze Bhutan's TVET System to global standards.

Parameter for people transformation:

- Course rollout plan projection
- Standard Trainer-Trainee's ratio
- Re-assignment of relevant existing trainer
- DAHE TVET scholarship
- Recruitment of Master Trainer



TVET Trainer Projection Summary

SI#	Particular	Total Max. capacity (FY 23-24)	TVET Trainer Requirements							
			Total No. Req.	Existing Trainer	Add. Trainer Req.	Year wise requirement				
						22-23	23-24	24-25	25-26	MT ¹
1	Total TTIs & IZC	4150	296	141	155	49	105	22	2	69
2	Total Other Pub.	1000	70	38	32	0	29	4	0	25
Grand Total		5150	366	179	187	49	134	26	2	94

Master Trainer Projection Summary

SI#	Particular	Total capacity (23-24)	Total No. MT Req.	Year wise requirement						
				22-23		23-24		24-25		25-26
				National	Inter.	National	Inter.	National	Inter.	National
1	Total MT in TTIs & IZCs.	4150	69	1	20	11	33	3	1	0
2	Total MT in Other Public Institutes	1000	25	2	4	5	12	0	2	0
Grand Total		5150	94	3	24	16	45	3	3	0

Total indicative budget forecast for FY 2022-26

Nu. 274.650 million

¹ MT: Master Trainer, either National or International Master Trainer

2.5 Operational Plan - Process Transformation



Aspiration:



Put in place a responsive, robust, agile, sustainable, resilient and a high performing TVET System.

Process transformation activities:

1. Develop TVET Act and TVET Policy
2. Institute National TVET Governing Board
3. Develop a framework for decentralization and autonomy of the institute
4. Institute Center of Competence/Technology
5. Establish Sector Skills Councils
6. Review and Revamp Quality Assurance System
7. Develop framework and modality for TVET financing
8. Institute Skills Development Fund
9. Foster Institute-Industry linkages at local and trans-local level
10. Establish institutional linkages and collaboration at regional and international level
11. Study outsourcing of TVET Institutes to foreign operators
12. Institutionalize common and mutually agreed Qualification framework and education pathways
13. Develop and strengthen TVET MIS and Labour Market Intelligence System
14. Establish post training facilitation support centers
15. Develop framework to foster research and innovation culture in TVET system
16. Develop strategies to re-brand TVET as attractive career pathway

Total indicative budget forecast for FY 2021-26:

Nu. 645.310 million



2.6 FINANCING TVET REFORM



SL No.	Financing Source	Indicative Commitment	Remarks
1	Government of India (12th FYP)	308.112	Available for Infra Development
2	Asian Development Bank (STEP-UP)	840.00	Ongoing
3	Helvetas	140.00	Ongoing
4	Government of Singapore	44.1	Agreement signed on June 29, 2021
5	Government of Australia	14.2	Launched on March 2021
6	Asian Development Bank (II Phase)	2100.00	Under Discussion
7	Government of Canada	240.00	Under Discussion
	Total	3,684.41	

Sl No.	Transformation Pillars	Indicative Budget	Remarks
1	Product Transformation	569.00	Includes procurement of equipment
2	Place Transformation	4843.05	Capacity enhancement from 2048 to 5150
3	People Transformation	274.65	Includes fees for Master Trainers and Capacity Building
4	Process Transformation	645.31	Includes cost of management outsourcing and scholarship
	Total	6332.01	

Note:

1. For the calculation of indicative budget estimate, the recurrent budget (stipend, operation and management cost) is not included.
2. For the indicative cost calculations for process transformation, the outsourcing of two institute to reputed foreign operator is calculated at Nu. 50 million/year for each institute for year 2024 to 2026.