



**UNITED REPUBLIC OF TANZANIA
MINISTRY OF WORKS, TRANSPORT AND
COMMUNICATIONS**



Transformation of Technical Education to Foster Society Needs

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- Some Public Technical Institutions
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Technical Education and Training (TET)

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- According to the definition by UNESCO and the International Labor Organization (ILO), TET
- Refers to “aspects of the educational process involving, in addition to general education, the study of technologies and related sciences
- and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupants in various sectors of economic and social life” (UNESCO and ILO, 2001)
- TET is dispensed in public and private educational establishments aimed at granting all segments of the society access to life-long learning resources

Some Public Technical Institutions

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- Dar es Salaam Institute of Technology (DIT)
- Arusha Technical College (ATC)
- National Institute of Transport (NIT)
- Mbeya Institute of Science and Technology (now Mbeya University of Science and Technology- MUST)

Training Programmes offered in 1980s

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- Full Technician Certificate and Advanced Diploma programmes in:
 1. Civil Engineering
 2. Mechanical Engineering
 3. Electrical Engineering
 4. Electronics and Telecommunication Engineering
 5. Science and Laboratory Technology
- The principal objective of TET is to train youths and adults alike, readying them for the labor market

The Knowledge Society of 21st Century

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- In the knowledge society of the 21st Century, dominated by HI-TECH and information and communication technology, and where labor market demands are constantly changing
- Providing relevant TET programs to both boys and girls is deemed central to the effort to foster sustainable Society development
- In that regard, technical institutions have reformed their education system, with a view to training youths to meet labor market and society needs

Changes in Education System

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- The government developed National Qualification Framework (NQF)
- The Full Technician Certificate (FTC) and Advanced Diploma (ADE) programmes were phased out
- And replaced with National Technical Awards Levels (NTA)
- A new system of Curriculum development and delivery was established
- Which is Competence Based Education and Training System (CBET)

Emerging and New Training Programmes

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1. Civil and Irrigation Engineering
2. Computer Engineering
3. Computer Science and Information Technology
4. Lapidary and Jewelry Technology
5. Auto Electric and Electronics Engineering
6. Mining Engineering
7. Biomedical Equipment Engineering
8. Multimedia and Film Technology
9. Biotechnology
10. Oil and Gas Engineering
11. Mechatronics

Contribution of Air Transport to the Economy of Tanzania

- The Air Transport plays a crucial role in the growth of the Tanzanian economy
- It facilitates domestic and international trade, contributes to national integration, and provides access to jobs, health, education and other essential facilities
- It provides the best and easy accessibility to areas of high potential in agricultural, manufacturing and tourism activities and those areas with high mineral deposits

Current Situation on Training of Pilots and Engineers

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- There is no Public Institution or College that offers such training
- The few existing private ones are doing it not in an organised manner
- As a result there is critical shortage of aviation professionals
- Particularly that of Pilots and Aircraft Maintenance Engineers
- At the same time the Aviation Industry is growing at a fast pace
- Hence high demand of Aviation Professionals

Status of Pilots in Tanzania, June 2017

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Pilots		ATPL	CPL	PPL	Total
Local	Male	97	137	62	296
	Female	7	10	4	21
	(43%)	104	147	66	317
Foreigners	Male	112	242	53	407
	Female	3	14	2	19
	(57%)	115	256	55	426
Total					743

TCAA, 2017

Status of Aircraft Maintenance Engineers in Tanzania

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Age (years)	Locals	Foreigners	Locals
20 - 30	5	9	36%
31 - 40	7	17	29%
41 - 50	16	18	47%
51 - 60	71	29	71%

□ **Source: TCAA**

□ **Total 172 Maintenance Engineers 99 (58%) Locals, 73 (42%) Foreigners**

Distribution of Aircraft Fleet Size in Tanzania

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Equipment	2013	2014	2015	2016	2017
Single Engine (Small)	180	187	195	203	211
Multi Engine (Medium to Heavy)	35	36	38	39	40
Total	215	223	233	242	251

Source: TCAA

Forecasting the Demand of Professionals and Fleet Size

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- Crew requirements are estimated at 2.5 pilots for single engine and 3.25 pilots for multi-engine transport type operations
- Accreditation of aircraft – Size of maintenance engineers to increase by a factor of 3 in the next twenty years
- Equipment quantities to increase as follows:-
 - 4% annually for smaller single engine aircraft
 - 2% annually for medium multi-engine aircraft

The fleet size increased from 215 aircraft in 2013 to 251 aircraft in 2017, registering a growth of 17%

Pilot Requirement

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Year	2013	2014	2015	2016	2017
Single Engine (Small)	450	468	488	508	528
Multi Engine (Medium to Heavy)	228	234	247	254	260
Total	678	702	735	762	788

Licensed Pilots by June 2017 are 743 making a deficit of 45

Maintenance Engineers Requirement

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Year	2013	2014	2015	2016	2017
Engineers	185	202	219	236	253

Licensed Engineers by June 2017 are 172 making a deficit of 81

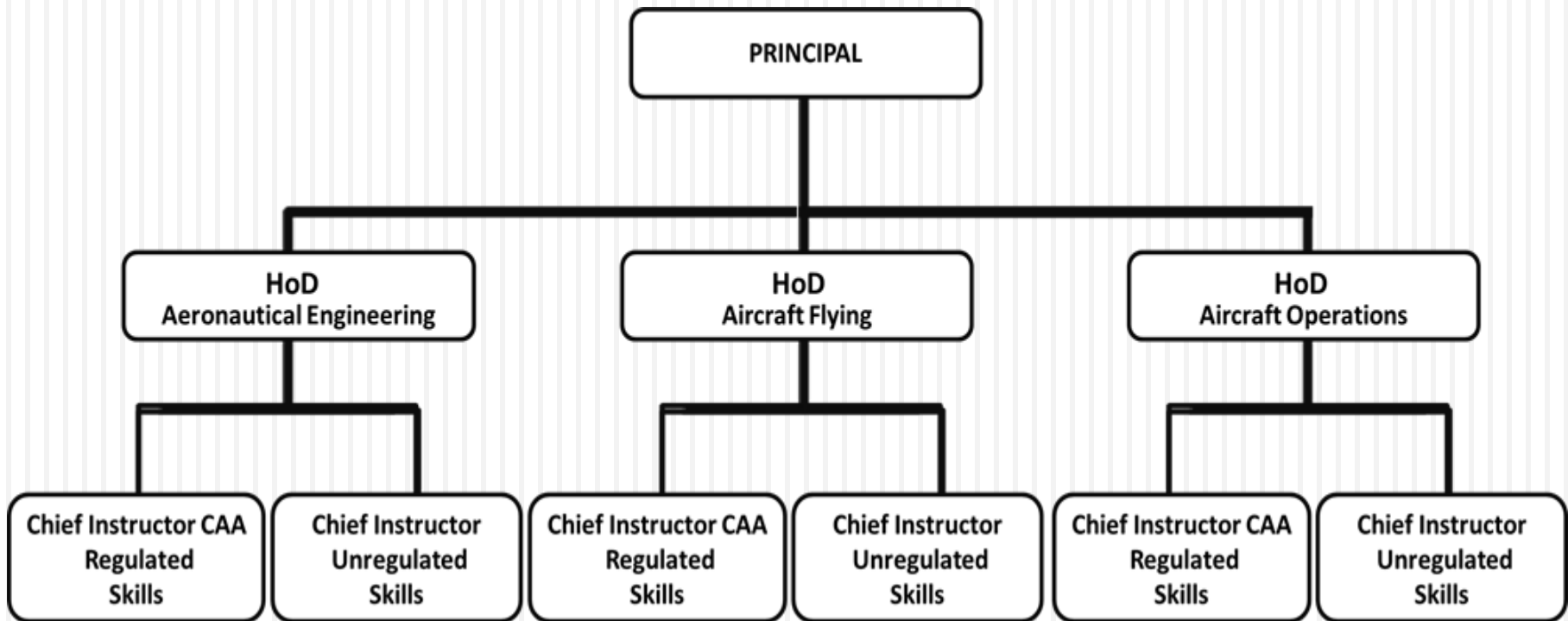
Demand for Aviation Professionals

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- As aviation industry remains an integral part of Tanzanian society, there will be a growing need for qualified personnel for various careers in aviation industry, particularly of pilots and engineers
- This is due to the fact that there is a steady growth in movements and passengers uplifted in the country
- As a result, the demand for flight crew and engineers from the smaller and medium type aircraft will grow
- As a solution to the above mentioned problems the National Institute of Transport (NIT) has established a School of Aviation Technology to train Pilots, Engineers and Cabin Crews

NIT School of Aviation Technology

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Achievements so far

- NIT has NACTE accreditation for the course on Air Craft Maintenance Engineering from NTA Level 4-8
- The number of enrolled students is 101
- The first batch of 20 students for Bachelor degree (NTA-8) is due July 2018
- Accreditation with TCAA for Pilot and Cabin crew training is 99% done
- The institute has 5 Aircrafts: 2 for ground training and 3 for Flying training, state of the art pilot training simulator

Our Motto:

Building the Youth for the Future

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**I thank you very much
for your attention!**

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