'DIFFERENTIATING' THE SIZE AND SHAPE OF UNIVERSITIES OF TECHNOLOGY IN SOUTH AFRICA

A PRESENTATION BY:

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ROLE OF SA PUBLIC UNIVERSITIES

3 key functions as outlined in the NDP & HEA…

a) Research: knowledge-production, innovation and tech transfer

b) Teaching: graduate attributes (knowledge, competencies and skills). Active citizenry and employable graduates

c) Community engagement: address social justice imperatives in SA (triple burden of poverty, unemployment, and inequality)

SOME SALIENT FEATURES OF PUBLIC HEIs

Heavy reliance on DHET subsidies (and fees)	• Third stream income represents ~25% of revenue.
Rapid expansion of the sector post 1994 (elite to mass)	• Student headcounts increased from ~300K in 1994 to ~1 M in 2016
Institutional autonomy (HEA)	• Own their buildings and equipment • Set the curriculum • Set staff salaries • [until 2015] set students fee increases
Strong steering from DHET (quality, funding, and policy)	• Quality (PQM & HEQSF alignment) • Funding (ear-marked grants) • Policy (NDP, policy **framework on differentiation**, transformation, etc)

4IR: CHALLENGES AND OPPORTUNITIES

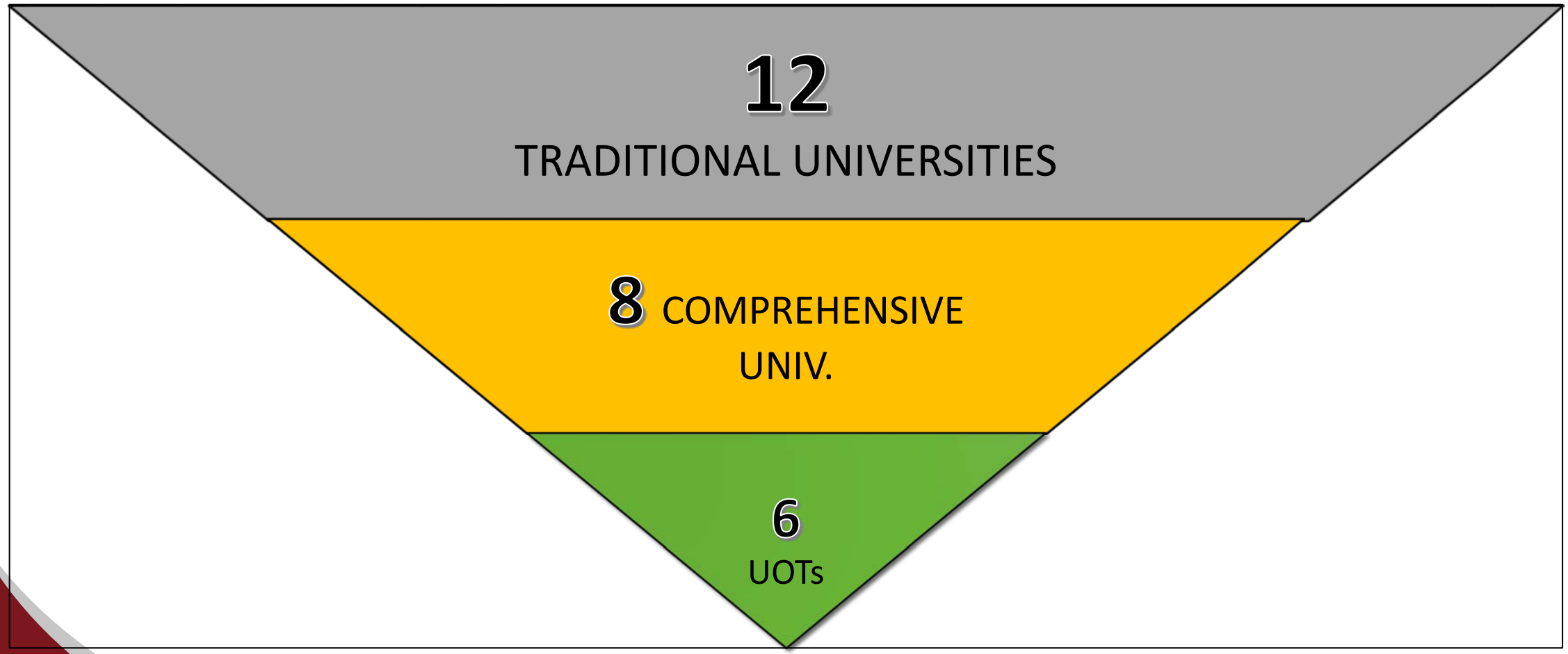
CHALLENGES

a. Changing nature of work: either entire job functions or proportion of constituent occupational activities are being automated.
b. Fast pace at which technological advances is influencing how knowledge is being produced and the nature of the work environment
c. Employability: People will work alongside machines – repetitive tasks will be automated.
d. Skills and competencies: Need for soft skills, adapting to with change (context is VUCA), relationship management, etc

OPPORTUNITIES FOR HE

a) Examine curricula (structure, content pedagogy). Consider Digital literacy as a key competence in curricula
b) Reimaging the duration of educational achievement. Pay attention to, articulating pathways for students. How long will a degree of the future be?
c) Teach for career flexibility – Employable graduates.
d) Competencies and skills - Rethink policies about education and training

SHAPE OF PUBLIC UNIVERSITIES
(in 2016…)



UNIVERSITY DIFFERENTIATION

a) History of differentiation debate:
   i. Apartheid (prior 1994)– race (B/W), geographical location (rural/urban) and language (E/A)
   ii. Democracy (post 1994) – NCHE, NPHE, restructuring of the HE system (transformation, diversity, increased access)

b) White paper on expanded PSET (2013) outlined **differentiation** as a ***process in which the diversity of the system is increased***

ACADEMIC DRIFT?

a) However, one major concern of the restructuring exercise (mergers and de-mergers) would result in academic mission drift and lead to homogenisation of the system rather than a differentiated one.
b) This means that…
c) Therefore…**Policy framework on differentiation (2014)** –
    a) mission Dx (institutional purpose),
    b) performance-based Dx (ranking instruments),
    c) self-differentiation (autonomy to embark on distinct development path), and
    d) programme Dx (programme offerrings is the primary differentiator: traditional and professional),
d) 3 types of universities – TRAD, COMP, UOT

WHAT DO THE DATA SAY?

Mission differentiation– perusing university websites shows that:

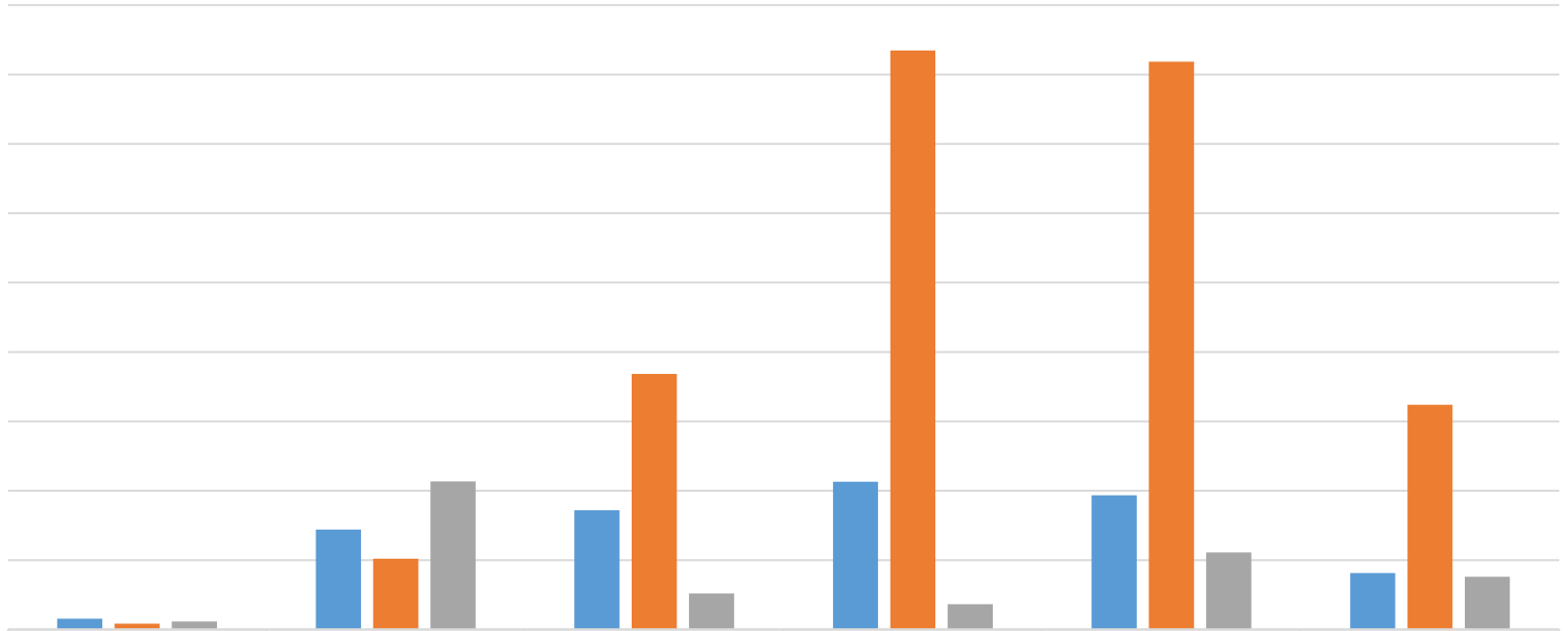
a) mission and vision statements are strikingly similar (excellence in T, R, CE)
b) organisational structures –College structure (UKZN, UNISA, UJ) or Faculty structure (all others). Here too not much variety.

Performance-based differentiation – using funding as a proxy:

a) Historical legacy continues.
b) HAI's accrue the benefits (better positioned), HDIs despite additional investments continue to lag behind – staff qualifications, staff skills, student class etc
c) Size does matter! Bigger universities more funding…

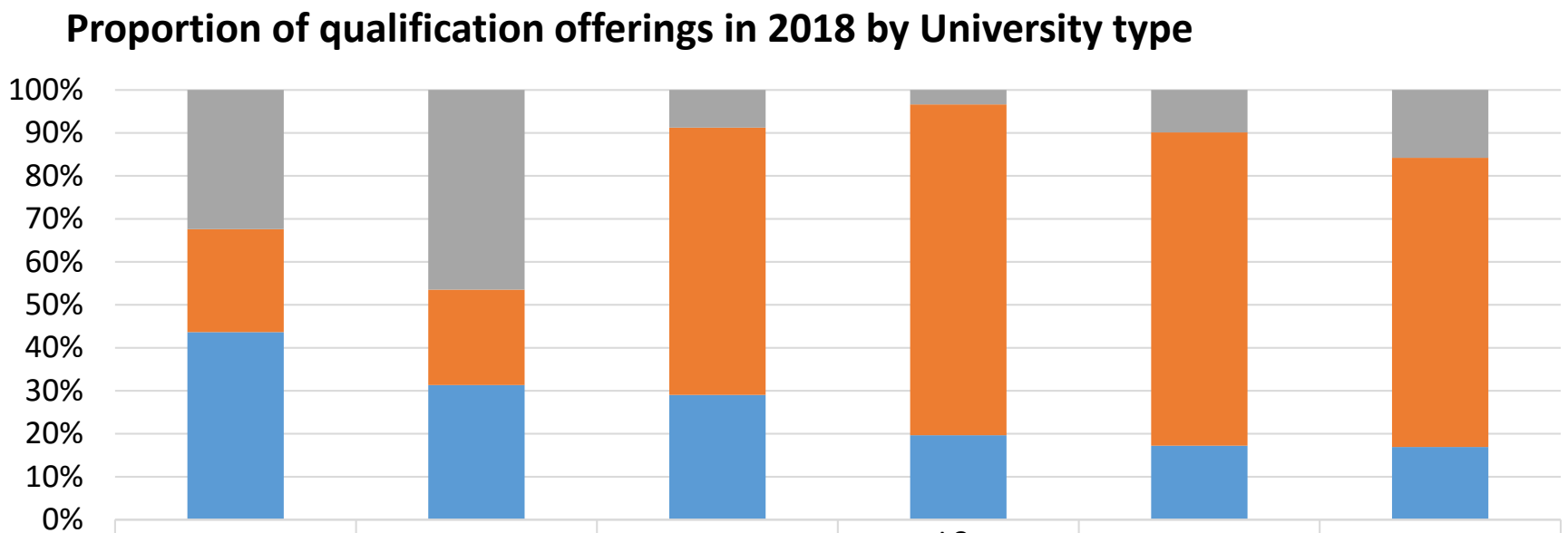
PROGRAMME QUALIFICATION MIX

Number of qualification types by university type in 2018



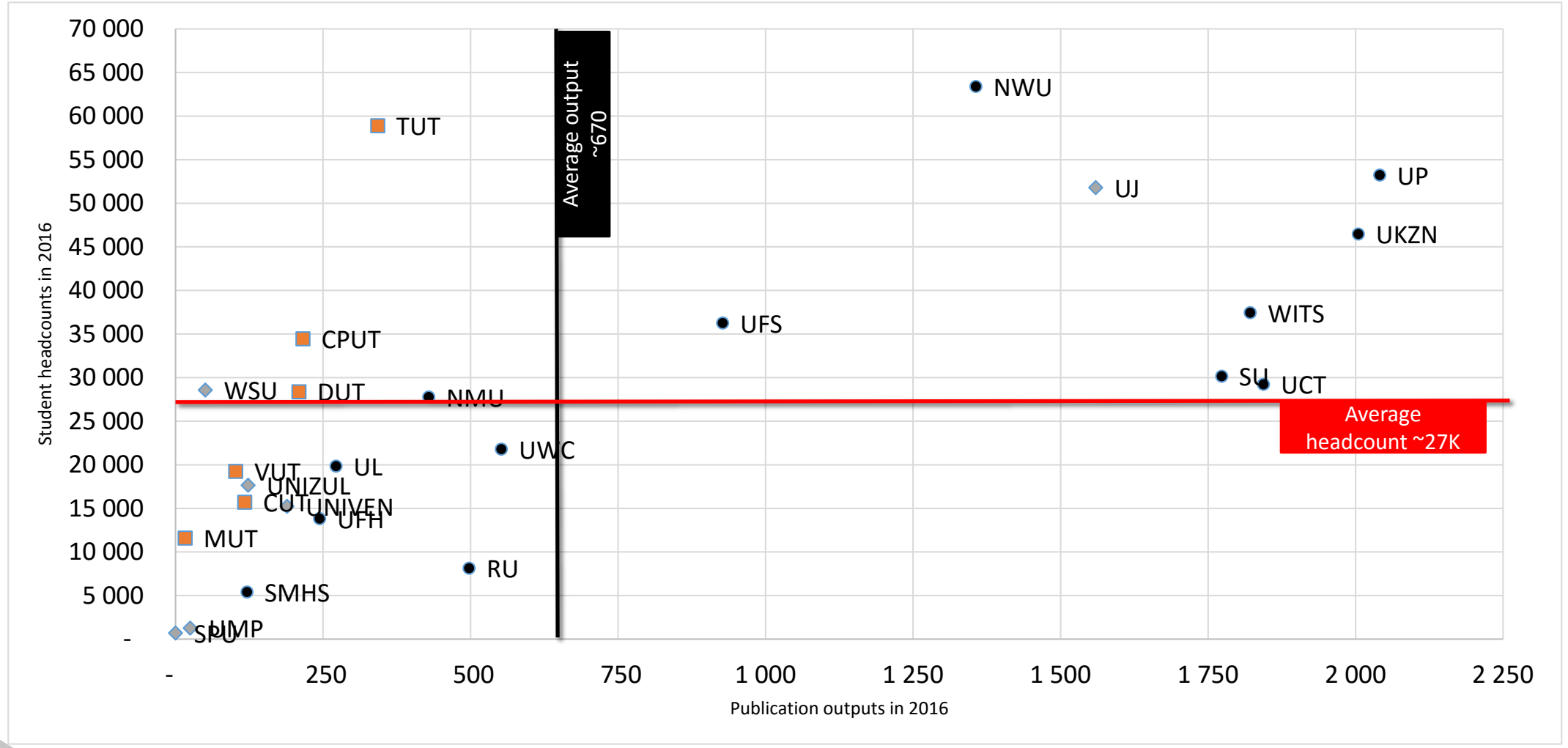
	L5: Higher certificates	L6: Diploma or advanced certificates	L7: Advanced diploma and Bachelors degrees (3yr)	L8: Postgraduate diploma, Honours and Bachelors (>3yr)	Masters	Doctoral
Comprehensive university	31	288	344	426	387	163
Traditional university	17	204	737	1669	1637	648
University of technology	23	427	104	73	222	152

PROGRAMME QUALIFICATION MIX



	L5: Higher certificates	L6: Diploma or advanced certificates	L7: Advanced diploma and Bachelors degrees (3yr)	L8: Postgraduate diploma, Honours and Bachelors (>3yr)	Masters	Doctoral
University of technology	32%	46%	9%	3%	10%	16%
Traditional university	24%	22%	62%	77%	73%	67%
Comprehensive university	44%	31%	29%	20%	17%	17%

STUDENT HEADCOUNTS vs PUBLICATION OUTPUTS



WHAT DOES THIS MEAN FOR PUBLIC UNIVESITIES IN SA?

a) DHET policy steering through the PQM and HEQSF is differentiating the sector.
b) But there is an unintended consequence … of academic drift

Example of Engineering and employability (source DHET presentation on enrolment planning, Oct 2018).

Irony is that in 2010 concerns were raised about institutional isomorphism (UOTs and COMP mimicking TRAD) but the opposite seems to be happening through the HEQSF aligment…

SIZE and Shape of UoTs in SA

To summarise…

- UoTs are small to medium size (in terms of headcounts)
- Contribute proportionally small amount of new knowledge (publication outputs)
- Offer more UG than PG programmes (PQM)
- Programme offerings are weighted towards NQF levels 5 – 8
- Programme offerings include work integrated learning (or modalities of WIL (such as service learning, PBL etc)

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HOW CAN UOTs LEVERAGE DIFFERENTIATION IN THE 4IR?

KEY FEATURES OF UOTS

a) career-focussed programmes,
b) problem solving teaching & research (applied),
c) more programmes at the lower NQF levels shorter duration on campus.
d) WIL placements – early exposure to the world of work
e) Close linkages with professional bodies – responsive to industry

CONSIDERATIONS IN 4IR

a) Programme curricula to embed principles of career-flexibility. Don't teach for one career only
b) Teaching & research is STEM focused. Good grounding for robotics, AI, nanotech but Criticality (and complexity) from Humanities is a gap to exploit
c) and d). Articulating pathways for students (dip, adv dip, pg dip, professional masters and professional doctorates) – need to grow in area of professional PG.
d) Traditional notions of industry is changing (disruptive technologies). Role of professional bodies are being questioned. Re-evaluate relationships.

The end…

Thank you for listening…