Programme and Qualification Mix (PQM) viability and prioritising

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Background

- The dynamic and competitive higher education environment requires continuous evaluation of the PQM.
- Particularly with the implementation of the Higher Education Qualification Sub-framework (HEQSF), it is critical to revitalise the PQM and teaching and learning with a strategy for simplification and streamlining.
- Internationally higher education institutions are constantly reviewing the relevance of their PQMs.
- Unisa has historically, and in particular in recent years, embarked on a process to determine the viability of its programme offerings with recently in particular the primary intention to streamline and/or rationalise its PQM.

Background (Continued)

- In an attempt to streamline and reconsider the PQM of Unisa, the Bureau for Market Research (BMR) and Directorate Information and Analysis (DIA) have been commissioned by the Office of the Vice Chancellor on behalf of Senate to conduct a **PQM viability analysis**.
- The analysis is based on a **PQM viability instrument**, with eight distinctive viability criteria, developed by the Executive Director: Academic Planner, in collaboration with the BMR, DIA and the Department of Strategy, Planning & Quality Assurance (DPSQA), prior to 2014.
- The viability instrument was approved by the Unisa Senate.

INSTRUMENT, CAPTURING AND VERIFICATION

Overview / Identification of criteria

- Previous PQM rationalisation somewhat successful
  - Qualifications down from 1 200 to 617
  - Courses/modules down from 7 400 to 3 200
- Still some unviable options remaining
- Ongoing process
- Under guidance and leadership of Academic Planner identified eight criteria for PQM viability and developed transparent process for collection of data and sharing of results

PQM viability criteria instrument

- **Alignment** with vision and mission (qualitative)
- External **demand** (HEMIS enrolments) per HEQSF level
- **Cost** (per funding group and level)
- **Course success** (HEMIS degree credit success rate)
- **Market share** (HEMIS, Unisa compared to national)
- **Quality** of teaching input and research (combination)

  Academic profile (staff with M & D and research outputs)
- **Strategic importance** in **national** context (qualitative)
- **Opportunity** analysis (qualitative)

Relative weights were determined using Analytical Hierarchical Process

PQM viability instrument
Measurement scale

5-point rating scale

2,5 points ---- 12,5 points

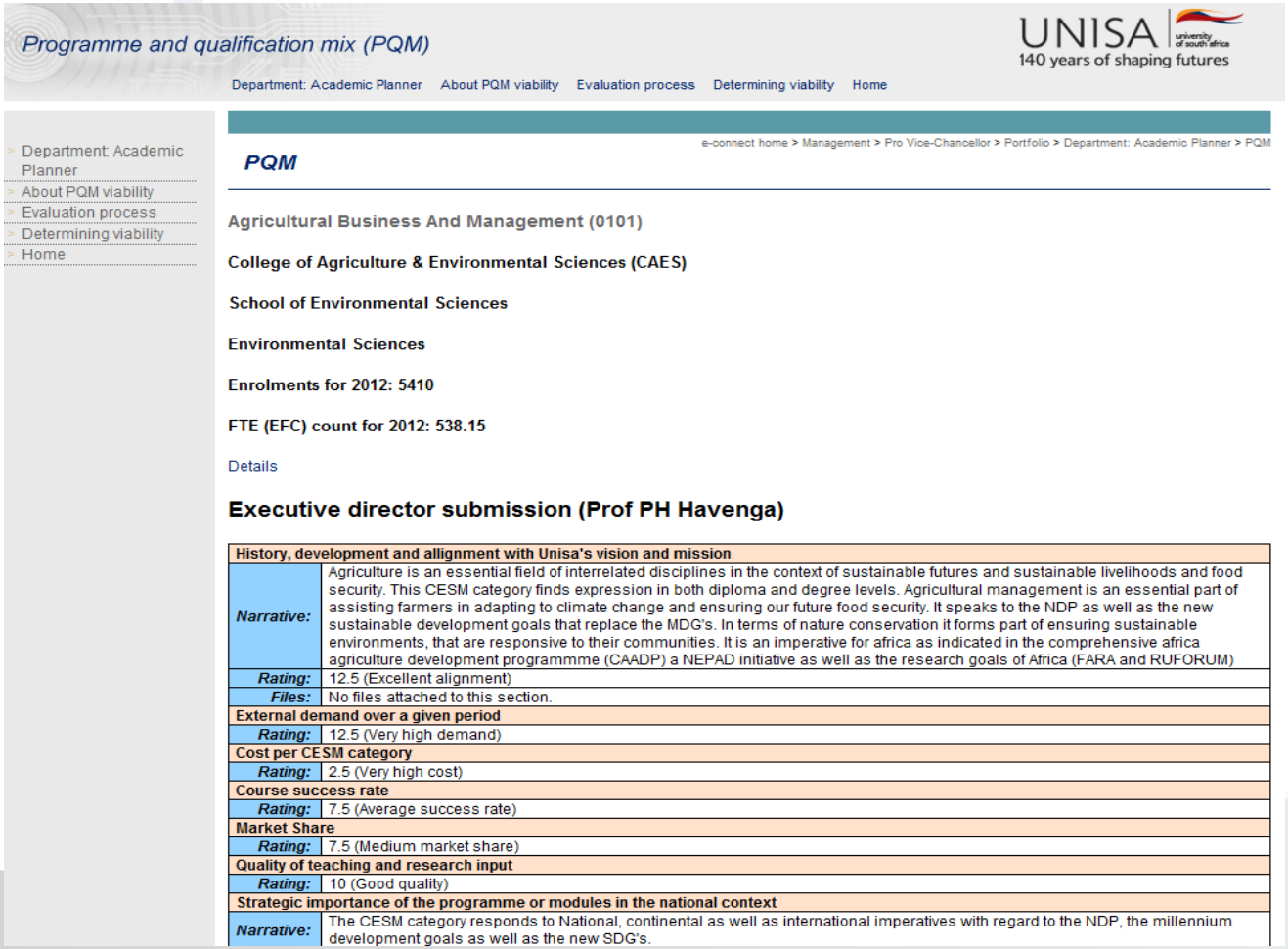
Alignment with vision/ mission	Poor alignment	Excellent alignment
External demand	Very low demand	Very high demand
Cost per CESM	Very high cost	Very low cost
Course success	Poor success rate	Excellent success rate
Market share	Very low share	Very high share
Quality	Very low quality	Very high quality
Strategic importance	Very low strategic importance	Very high strategic importance
Opportunity analysis	Very poor	Very strong

Capturing and verification of information

- Responsible for coordination, evaluation, capturing and verification of information.
- Sharing of information and information sessions.
- Additional supporting analyses.
- Capturing of information by Coordinators.
- Verification at School, College and Academic Planner level.

Viewing of results

Documentation and captured information can be viewed using the PQM system, including attachments



Programme and qualification mix (PQM)

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PQM

Agricultural Business And Management (0101)

College of Agriculture & Environmental Sciences (CAES)

School of Environmental Sciences

Environmental Sciences

Enrolments for 2012: 5410

FTE (EFC) count for 2012: 538.15

Details

Executive director submission (Prof PH Havenga)

History, development and allignment with Unisa's vision and mission	
Narrative:	Agriculture is an essential field of interrelated disciplines in the context of sustainable futures and sustainable livelihoods and food security. This CESM category finds expression in both diploma and degree levels. Agricultural management is an essential part of assisting farmers in adapting to climate change and ensuring our future food security. It speaks to the NDP as well as the new sustainable development goals that replace the MDG's. In terms of nature conservation it forms part of ensuring sustainable environments, that are responsive to their communities. It is an imperative for africa as indicated in the comprehensive africa agriculture development programmme (CAADP) a NEPAD initiative as well as the research goals of Africa (FARA and RUFORUM)
Rating:	12.5 (Excellent alignment)
Files:	No files attached to this section.
External demand over a given period	
Rating:	12.5 (Very high demand)
Cost per CESM category	
Rating:	2.5 (Very high cost)
Course success rate	
Rating:	7.5 (Average success rate)
Market Share	
Rating:	7.5 (Medium market share)
Quality of teaching and research input	
Rating:	10 (Good quality)
Strategic importance of the programme or modules in the national context	
Narrative:	The CESM category responds to National, continental as well as international imperatives with regard to the NDP, the millennium development goals as well as the new SDG's.

DIAGNOSTIC AND INFERENTIAL RESULTS FROM DATA ANALYSIS AND SUMMARY OF FINDINGS

Analytical Hierarchical Process modelling
Derived weights

- Strategic importance : 0,280
- Quality : 0,175
- Opportunity : 0,134
- Demand : 0,095
- Success rate : 0,095
- Alignment : 0,090
- Market : 0,078
- Cost : 0,053

Distribution of data by variable
Examples

Alignment	Frequency	Percent	Valid percent	Cumulative percent
7,5	5	3,5	3,5	3,5
10,0	45	31,3	31,3	34,7
12,5	94	**65,3**	65,3	100,0
Total	144	100,0	100,0	

Demand	Frequency	Percent	Valid percent	Cumulative percent
2,5	18	12,5	12,5	12,5
5,0	6	4,2	4,2	16,7
7,5	7	4,9	4,9	21,5
10,0	11	7,6	7,6	29,2
12,5	102	**70,8**	70,8	100,0
Total	144	100,0	100,0	

Descriptive results

Variables	Minimum	Maximum	Mean
Alignment	7,5	12,5	11,545
Demand	2,5	12,5	10,503
Cost	2,5	12,5	7,778
Success	2,5	12,5	7,465
Market share	2,5	12,5	7,569
Quality	5,0	12,5	8,767
Strategic importance	5,0	12,5	11,007
Opportunity	2,5	12,5	11,059

Principal Component Analysis results

Variables	Initial	Extraction
Strategic importance	1,000	0,618
Quality	1,000	0,672
Opportunity	1,000	0,717
Demand	1,000	0,733
Success	1,000	0,582
Alignment	1,000	0,635
Market share	1,000	0,739
Cost	1,000	0,695

Percentage variance explained

Component	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
Strategic importance	2,532	31,653	31,653
Quality	1,657	20,707	52,361
Opportunity	1,202	15,020	67,381
Demand	0,778	9,721	77,102
Success	0,588	7,349	84,450
Alignment	0,534	6,677	91,128
Market share	0,376	4,694	95,822
Cost	0,334	4,178	100,000

Comparison of AHP and Total variance explained results

Variable	AHP results	Variance explained
Strategic importance	0,280	0,31653
Quality	0,175	0,20707
Opportunity	0,134	0,15020
Demand	0,095	0,09721
Success	0,095	0,07349
Alignment	0,090	0,06677
Markets	0,078	0,04694
Costs	0,053	0,04178

Principal Component Analysis of seven PQM variables

Variables	Initial	Extraction
Strategic importance	1,000	0,650
Quality	1,000	0,951
Opportunity	1,000	0,718
Demand	1,000	0,742
Alignment	1,000	0,647
Market share	1,000	0,740
Cost	1,000	0,713

Comparison of AHP and Total variance explained results

Variable	AHP weights	Variance explained (eight variables)	Variance explained (seven variables)
Strategic importance	0,280	0,31653	0,35721
Quality	0,175	0,20707	0,23552
Opportunity	0,134	0,15020	0,14474
Demand	0,095	0,09721	0,08398
Success	0,095	0,07349	
Alignment	0,090	0,06677	0,07631
Market share	0,078	0,04694	0,05391
Costs	0,053	0,04178	0,04832

PQM viability index equation

A final PQM viability index was compiled by means of the following equation:

$$\mathbf{P = (S.B_1 + Q.B_2 + O.B_3 + D.B_4 + A.B_5 + M.B_6 + C.B_{7)} \times (100/12{,}5)}$$

Where:

P = PQM viability index
S = Strategic importance
Q = Quality
O = Opportunity
D = Demand
A = Alignment
M = Market share
C = Cost
$B_1 – B_7$: Variable weights derived by means of principal component analysis

Clustering of PQM viability index scores into eight categories

- **Extremely high viability** (T-scores of 1 to 2);
- **Very high viability** (T-scores of 0 to 1);
- **High viability** (T-scores of -0,5 to 0);
- **Moderate viability** (T-scores of -1 to -0,5);
- **Low viability** (T-scores of -2 to -1); and
- **Very low viability** (T-scores of lower than -2).

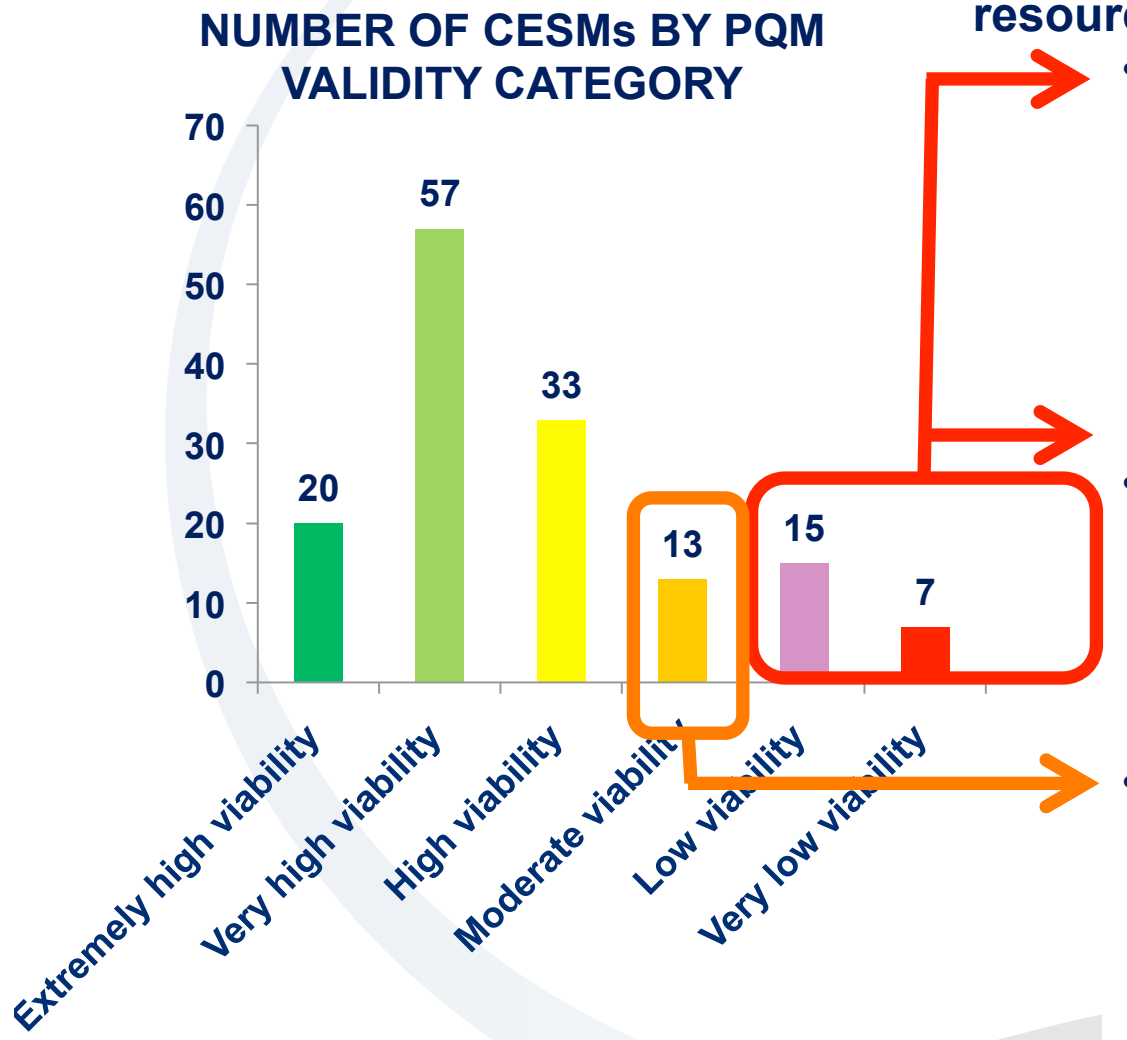
Number of CESM categories per PQM viability index category

Extremely high viability	20 CESM categories
Very high viability	57 CESM categories
High viability	33 CESM categories
Moderate viability	12 CESM categories
Low viability	15 CESM categories
Very low viability	7 CESM categories

110

34

Recommendations



To guide Unisa to rationalise and streamline its PQM and revise future programme resource allocation

- It is recommended that the two groups with low and very low viability need to be the main focus for the streamlined College PQM plans that needs to be approved by June 2015 as stated in the Annual Institutional Compact with Council.
- The PQM viability analysis report provides more detailed information for those CESM categories grouped among lower PQM viability index categories.
- In addition to the proposed focus on the low viability index score categories, colleges are also encouraged to also critically peruse the CESM categories within the moderate viability index range.

Detailed PQM viability analysis

- For each of the PQM categories in the Extremely low viability, Low viability and Moderate viability further analysis were done.
- The individual qualifications and courses were scrutinised to confirm the issues that required attention and these were pointed out also indicating the number of qualifications and courses involved.
- The overall rating and the criteria in each score were listed and colour coded, e.g.
  - Rating of 12,5: Course success;
  - Rating of 10,0: Alignment with vision & mission
  - Rating of 7,5: Quality of teaching & research; Strategic importance of Programmes/Modules in national context; Opportunity analysis of Programmes/Modules
  - Rating of 5,0: Market share
  - Rating of 2,5: External demand; Cost

Conclusion

- The **preparatory work** and **leadership** resulted in **informed decisions based on evidence.**
- The results were **presented widely** at Management Committee, Academic Planning Committee and a number of stakeholder meetings.
- Colleges presented their **action pl**ans in response to the results to the Senate Tuition and Learning Support Committee (STLSC) **for further inputs and discussion** before submitting their **final action plans to Senate** in June as planned.
- Encouraging was that in their action plans Colleges **went beyond the recommendations**.

Thank you

Questions and discussion

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