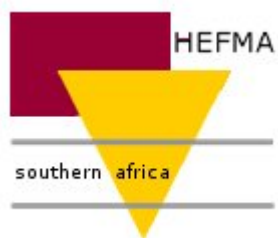


HEFMA Benchmark Report



2011



Higher Education Facilities Management Association of Southern Africa

Dear HEFMA Colleagues

2011 Benchmark Report (Revised)

Please find herewith the revised 2011 HEFMA Benchmark report, the sixth report of its kind to be published for the benefit of all HEFMA members, colleagues and interested parties. While only 4 institutions returned their surveys in time for report by the due date we have since received a fifth survey. I thus again extend a word of thanks to the 5 institutions who took the time and effort to complete the survey questionnaire.

Similarly, the HEFMA Executive decided to expand the criteria as requested at the 2012 midyear Institutional Forum but maintains the focus on the original 5 operational areas. These areas are based on the reduced but valuable TEFMA benchmark reports and cover;

- building maintenance,
- grounds maintenance,
- cleaning and waste management,
- energy and
- security.

The expanded areas now give the 5 main areas as a percentage of the asset replacement value (ARV) at the end of the report so as to be able to extract the individual areas given that many international norms reference these individual areas.

Regards,

André Theys
Executive Member: Information Services
HEFMA
November 2012

2011 HEFMA Benchmark Report (Revised)

Copyright © 2012 by HEFMA: Higher Education Facilities Management Association (Southern Africa)

All rights reserved.

Except as permitted under current copyright laws, no part of this publication may be reproduced, stored in a retrieval system, distributed or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of HEFMA: Higher Education Facilities Management Association (Southern Africa)

The publisher makes no representation, express or implied, with regard to the accuracy of the information contained in this report and cannot accept legal responsibility or liability in whole or in part for any errors or omission that may be made.

Editors: André Theys, University of Cape Town, andre.theys@uct.ac.za
Publisher: HEFMA: Higher Education Facilities Management Association (Southern Africa)

HEFMA Executive

(2012 post the Annual Conference)

President

Mxolisi Dube *WITS University*
mxolisi.dube@wits.ac.za
Tel: +27 11 717 9014

Immediate Past-President

Phillip Nel, *University of Pretoria*
phillip.nel@up.ac.za
Tel: +27 12 420 2155

President-Elect

Craig Henry, *University of Johannesburg*
chenry@uj.ac.za
Tel: +27 11 559 1403

Secretary

Cedric Achilles, *University of the Western Cape*
cachilles@uwc.ac.za
Tel: +27 21 959 3383

Treasurer

Charmaine Keet, *University of Johannesburg*
ckeet@uj.ac.za
Tel: +27 11 559 1403

Executive Member: Information Services

André Theys, *University of Cape Town*
andre.theys@uct.ac.za
Tel: +27 21 650 3834

Director: Professional Development

Marcel Theron, *University of Pretoria*
marcel.theron@up.ac.za
Tel: +27 12 420 4087

Contents

Introduction by HEFMA Executive Member: Information Services	1
HEFMA Executive (2012)	2
Participating Institutions	4
General Notes and Qualifications	4
Statistical Data (Tabulated)	5
Statistical Data (Graphical)	8
Guidelines for completing the 2011 HEFMA benchmark survey	12

List of Participating HEFMA Institutions (5)

University of Pretoria
Durban University of Technology
University of Johannesburg
University of Cape Town
University of Stellenbosch

General Notes and Qualifications:

Schedule of respondents. Your institutional representative has been issued with a “*Cheat Sheet*” that identifies survey participants, the names of which have been excluded from the main body of the report for confidentiality reasons.

Survey Guidelines. Guidelines and definitions for completing the survey are provided on pages 16/17. Note that additional explanatory notes were embedded into the actual 2011 survey questionnaire/spread sheet.

Survey Errors and Improvements. As the HEFMA benchmark survey is in its early years some inconsistencies in the way participants interpret the survey definitions and collect and compile data is expected. If you find any errors in this report, or wish to submit suggestions for improving future surveys, please contact André Theys at andre.theys@uct.ac.za

Institution	General Statistical Data							
	Residences Included/Excluded	Gross Floor Area Total Campus (GFA)	Assignable Floor Area Total Campus (AFA)	AFA/GFA	ARV Buildings	Replacement Cost of Buildings	Total EFTS	GFA provided per EFTS
	2	3	4	5	6	7	8	9
	Type	m²GFA	m²AFA	%	R	R/m²GFA	No.	m²/EFTS
1	Included	339 925	191 728	56.4%	R 3 694 101 083	R 10 867	18 534	18.3
2	Excluded	399 393	233 684	58.5%	R 6 140 437 200	R 15 374	24 800	16.1
3	Excluded	704 844	457 670	64.9%	R 7 679 615 189	R 10 895	35 038	20.1
4	Excluded	474 940	281 480	59.3%	R 4 866 863 075	R 10 247	22 200	21.4
5	Included	616 391	369 824	60.0%	R 6 250 725 908	R 10 141	38 557	16.0
Mean		2 535 493	1 534 386	60.5%	R 28 631 742 455	R 11 292	139 129	18.2

Institution	Maintenance								
	Preventive & Corrective Expenditure								
	Admin & Prof Staff Salaries	Trade Staff Wages	Total Staff Salaries/Wages	Materials & Contracts	Maintenance Projects on Capital Budget	Total Maintenance Expenditure	Area Maintained from Central Funds	Cost of Maintenance per m² (GFA)	Cost of Maintenance per EFTS
	10	11	12	13	14	15	16	17	18
R	R	R	R	R	R	m²GFA	R/m²GFA	R/EFTS	
1	R 12 409 500	R 0	R 12 409 500	R 8 500 000	R 2 500 000	R 23 409 500	260 000	R 90.04	R 1 263
2	R 1 784 038	R 4 801 961	R 6 585 999	R 38 178 978	R 6 305 392	R 51 070 369	399 393	R 127.87	R 2 059
3	R 6 244 298	R 6 290 244	R 12 534 542	R 43 635 430	R 62 705 000	R 118 874 972	704 844	R 168.65	R 3 393
4	R 13 127 300	R 3 003 700	R 16 131 000	R 36 062 450	R 23 468 200	R 75 661 650	474 940	R 159.31	R 3 408
5	R 67 225 000	R 40 375 000	R 107 600 000	R 28 585 000	R 12 932 765	R 149 117 765	616 391	R 241.92	R 3 867
Mean	R 100 790 136	R 54 470 905	R 155 261 041	R 154 961 858	R 107 911 357	R 418 134 256	2 455 568	R 170.28	R 3 005

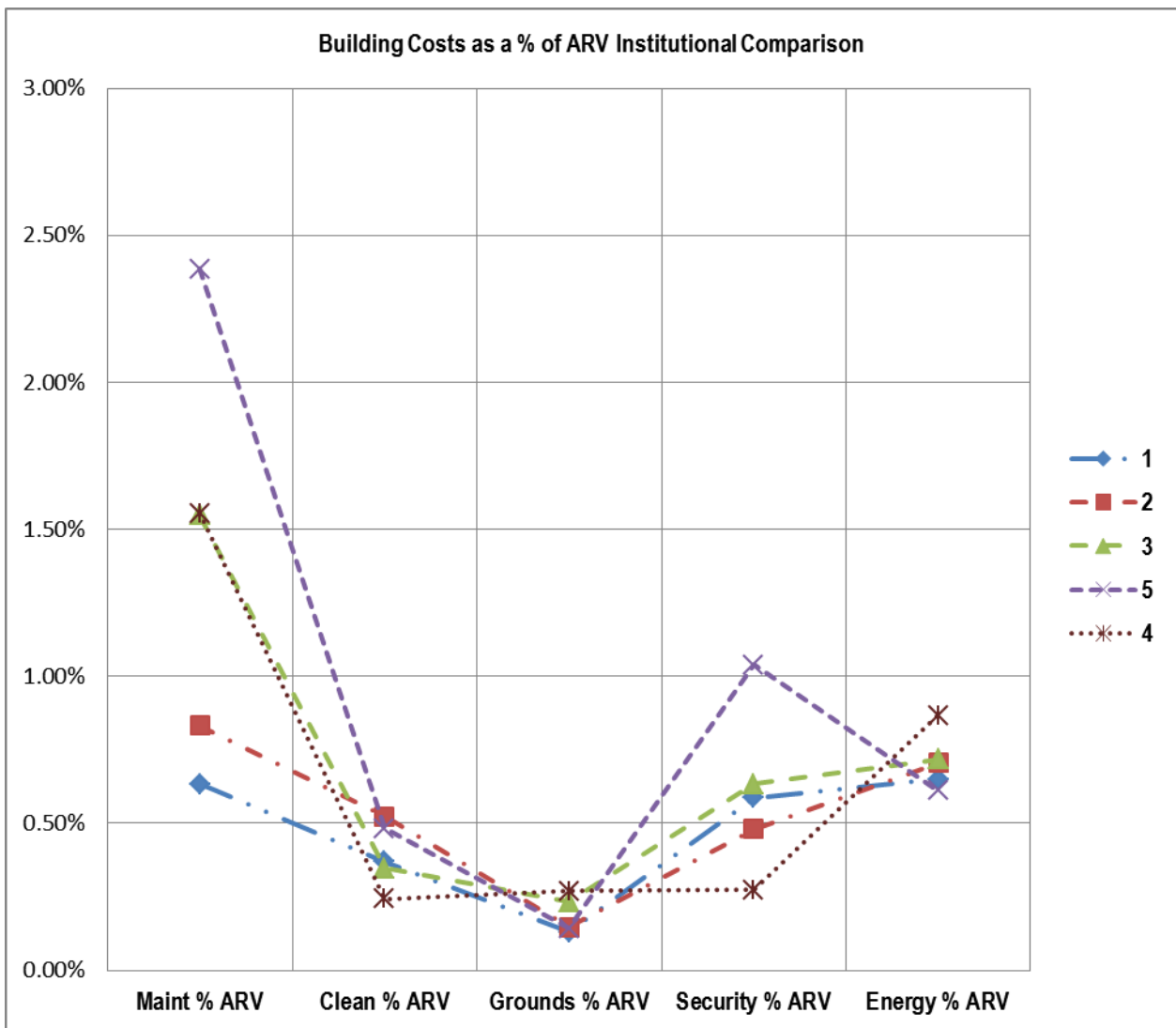
Institution	Cleaning & Waste Management Services									
	In-house Wages & On-costs	Cleaning Materials	Cleaning Contracts			Total Cleaning Expenditure	Area Cleaned	Cost of Cleaning Buildings	Total Cost Cleaning R/GFA	Total Cost Cleaning R/EFTS
			Building	Non-Building						
				Gen Waste	Contaminated					
19	20	21	22	23	24	25	26	27	28	
R	R	R	R	R	R	m²GFA	R/m²GFA	R/m²GFA	R/EFTS	
1	R 0	R 0	R 13 390 560	R 100 000	R 200 000	R 13 690 560	339 925	R 39.39	R 40.28	R 739
2	R 882 218	R 1 258 260	R 29 246 789	R 793 012	R 0	R 32 180 279	399 393	R 78.59	R 80.57	R 1 298
3	R 2 153 356	R 2 136 339	R 16 979 471	R 3 589 300	R 1 805 543	R 26 664 009	417 205	R 50.98	R 63.91	R 761
4	R 0	R 3 286 900	R 3 351 500	R 1 803 300	R 3 422 700	R 11 864 400	198 758	R 33.40	R 59.69	R 534
5	R 6 572 319	R 1 800 004	R 17 105 020	R 4 158 037	R 480 063	R 30 115 443	616 391	R 41.33	R 48.86	R 781
Mean	R 9 607 893	R 8 481 503	R 80 073 340	R 10 443 649	R 5 908 306	R 114 514 691	1 971 672	R 49.79	R 58.08	R 823

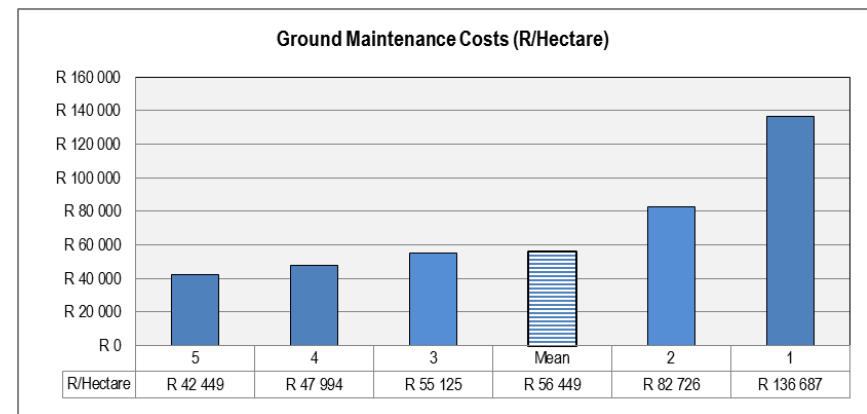
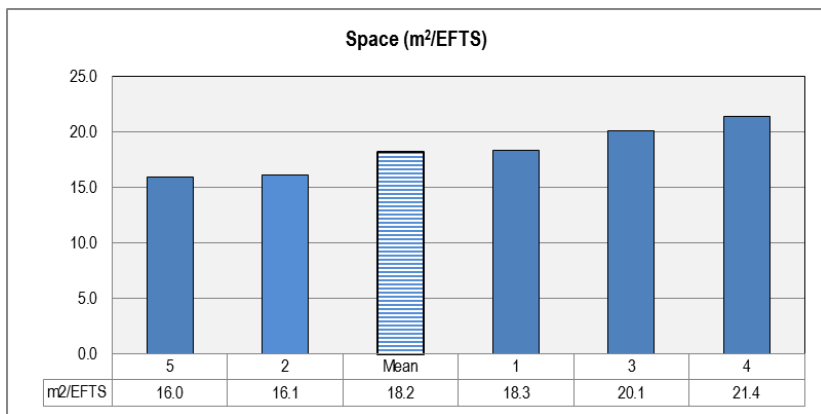
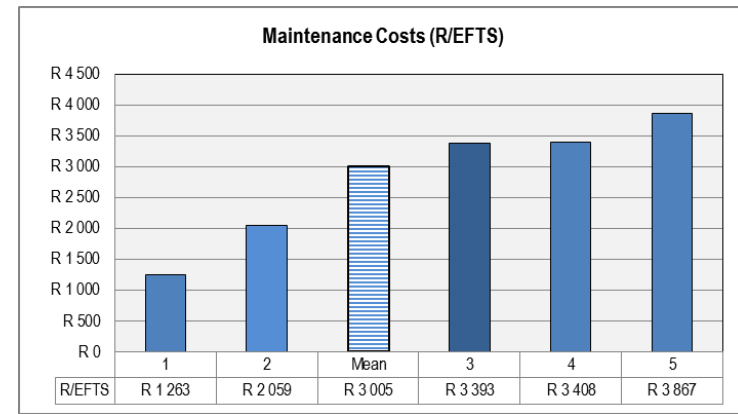
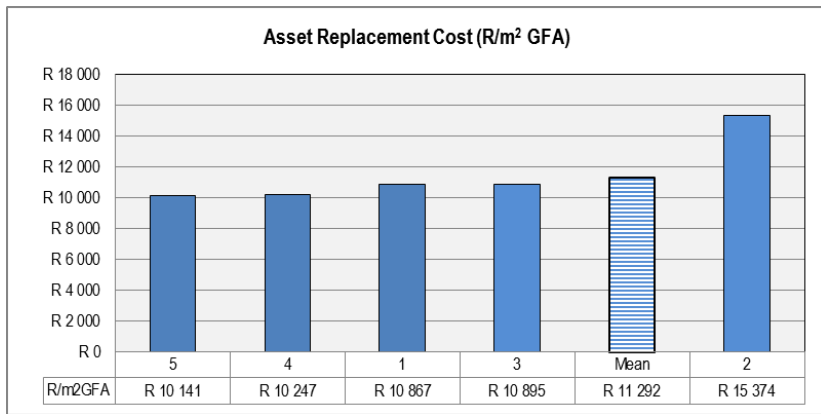
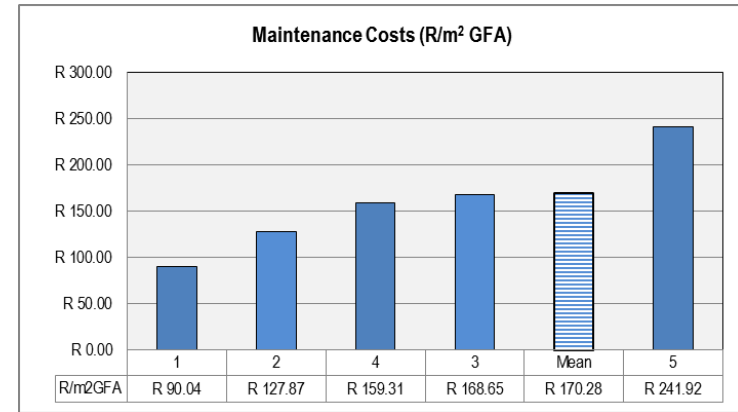
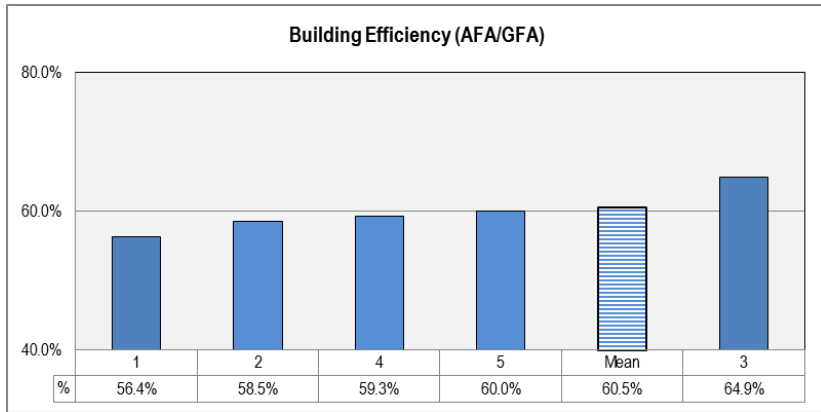
Institution	Energy Consumption/Expenditure							
	Annual Consumption in Gigajoules	Annual Cost of Energy Purchased	Total GFA services with energy	Energy Consumption per m ²	Energy Consumption per EFTS	Energy Cost per m ² (GFA)	Energy Cost per EFTS	Average Cost per kWhr
	29	30	31	32	33	34	35	36
	GJ	R	m ² GFA	GJ/m ² GFA	GJ/EFTS	R/m ² GFA	R/EFTS	cents/kWhr
1	230 000	R 24 000 000	200 000	1.15	12.4	R 120.00	R 1 295	37.6
2	198 447	R 43 281 236	399 393	0.50	8.0	R 108.37	R 1 745	78.5
3	271 298	R 55 122 649	704 844	0.38	7.7	R 78.21	R 1 573	73.1
4	178 200	R 42 217 400	418 540	0.43	8.0	R 100.87	R 1 902	85.3
5	247 559	R 38 175 699	616 391	0.40	6.4	R 61.93	R 990	55.5
Mean	1 125 504	R 202 796 984	2 339 168	0.48	8.1	R 86.70	R 1 458	64.9

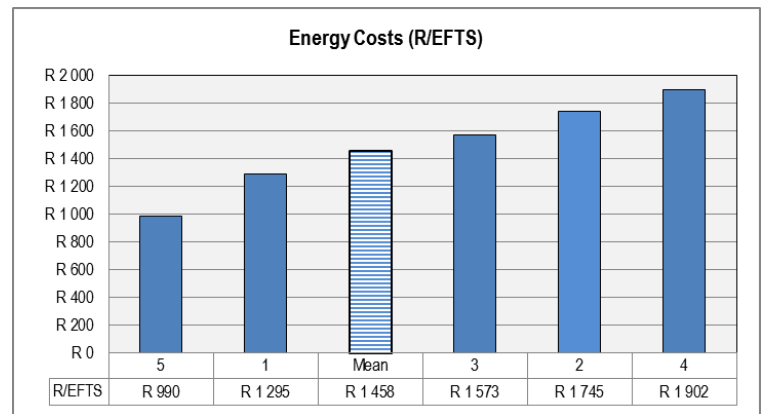
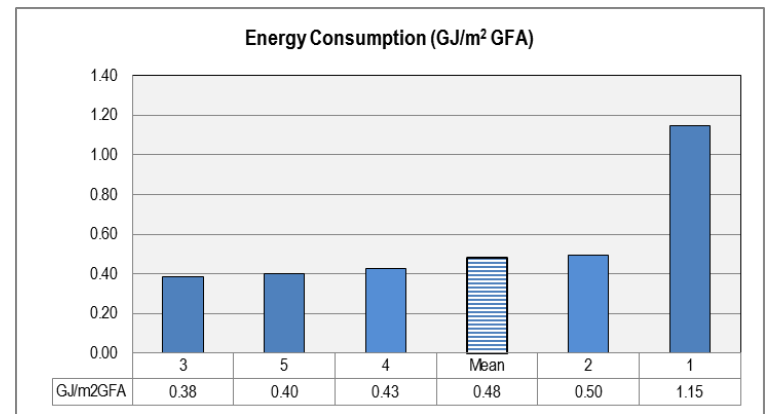
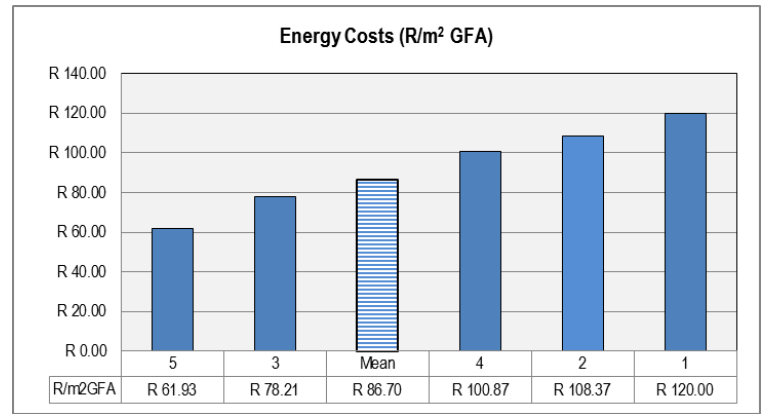
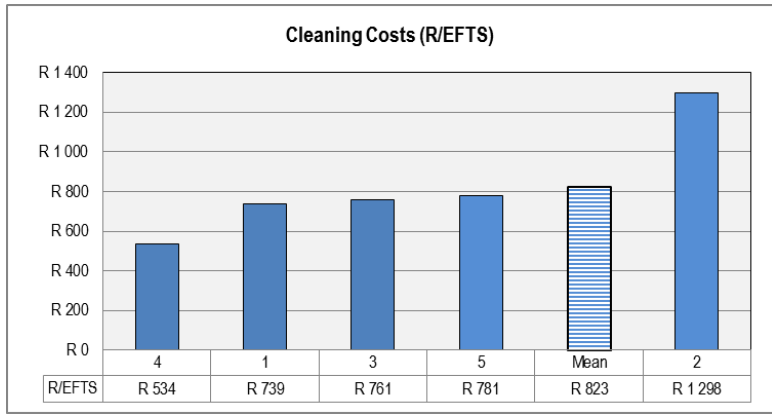
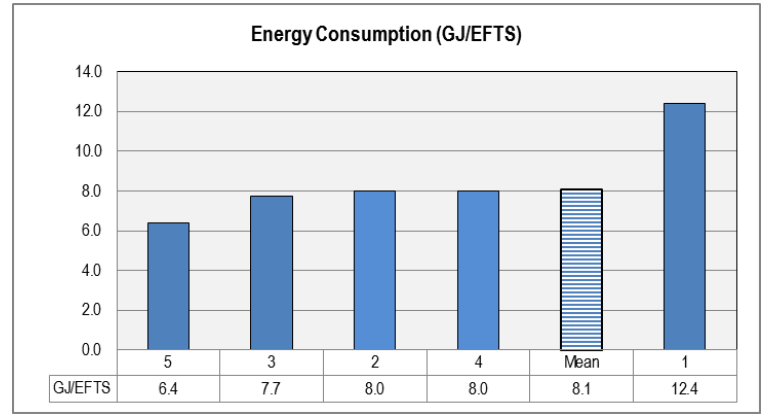
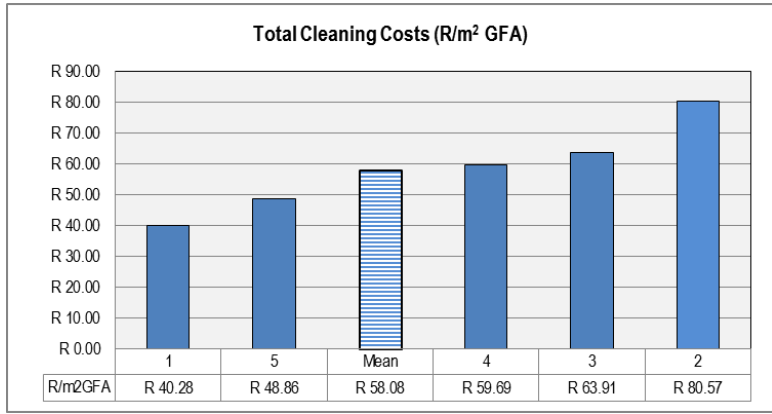
Institution	Security						
	Security Staff Salaries/Wages	Expenditure on Security Contracts	Other Security Costs	Total Security Expenditure	GFA under Security Patrol	Cost of Security per m ² (GFA)	Cost of Security per EFTS
	37	38	39	40	41	42	43
	R	R	R	R	m ² GFA	R/m ² GFA	R/EFTS
1	R 1 335 824	R 20 000 000	R 300 000	R 21 635 824	339 925	R 63.65	R 1 167
2	R 694 377	R 27 633 399	R 1 153 300	R 29 481 076	586 024	R 50.31	R 1 189
3	R 15 456 852	R 33 152 451	R 59 128	R 48 668 431	704 844	R 69.05	R 1 389
4	R 8 564 300	R 4 795 900	R 0	R 13 360 200	474 940	R 28.13	R 602
5	R 31 912 654	R 30 527 091	R 2 458 968	R 64 898 713	616 391	R 105.29	R 1 683
Mean	R 57 964 007	R 116 108 841	R 3 971 396	R 178 044 244	2 722 124	R 65.41	R 1 280

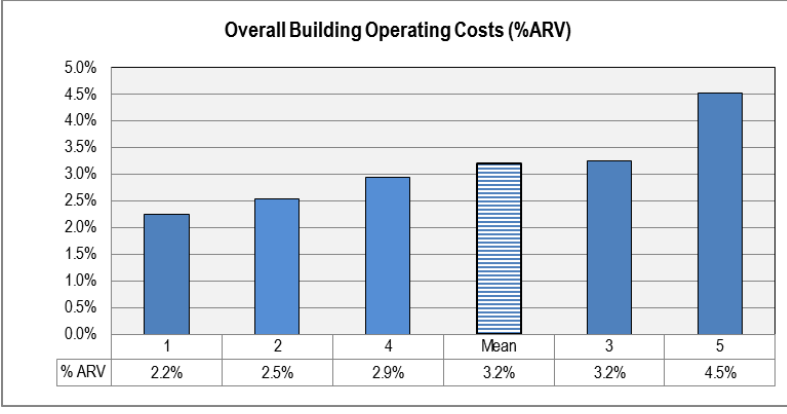
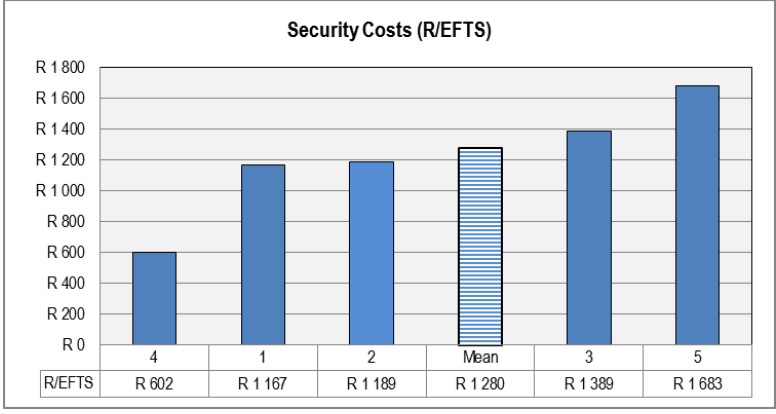
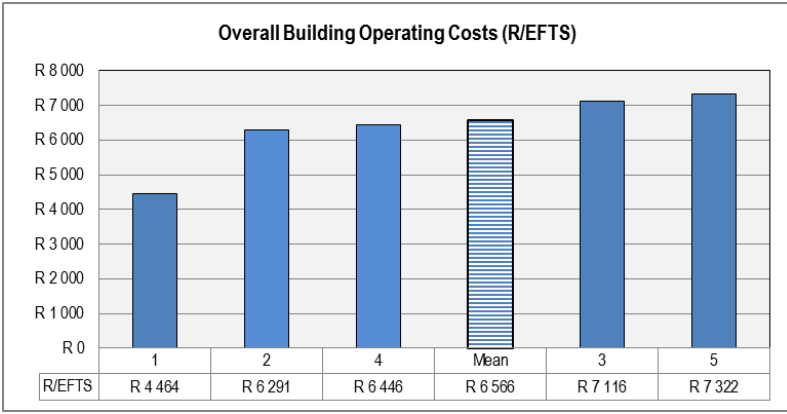
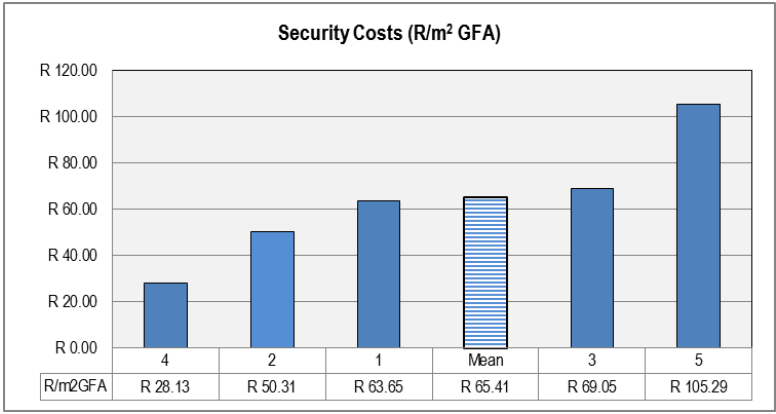
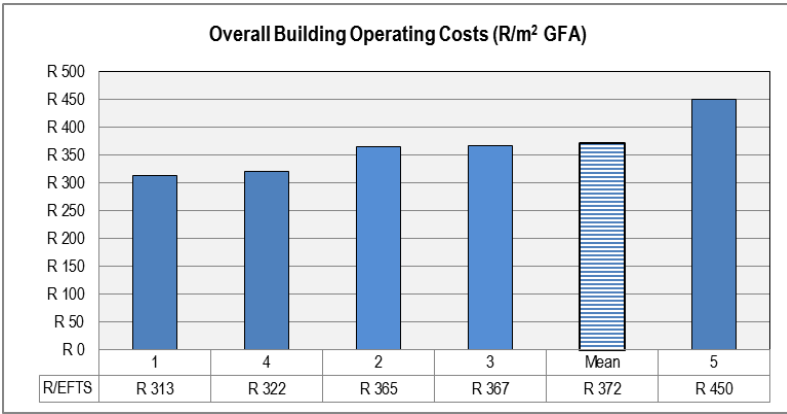
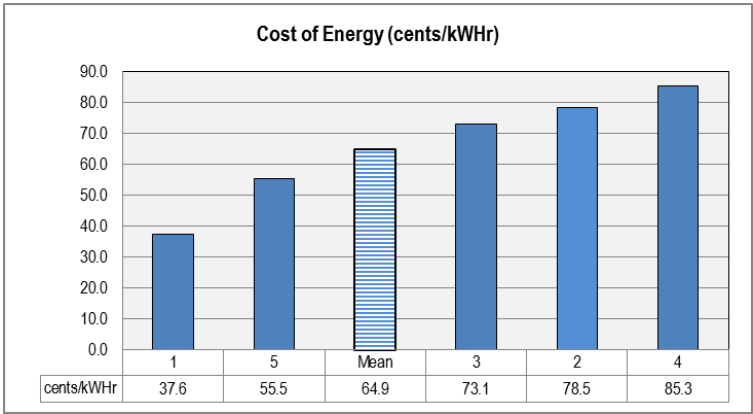
Institution	Grounds Maintenance				
	Staff Salaries/Wages	Materials & Contracts	Total Grounds Maintenance Expenditure	Hectares maintained from Central Funds	Maintenance Expenditure per Hectare
	44	45	46	47	48
	R	R	R	Ha	R/Hectare
1	R 3 600 000	R 1 184 052	R 4 784 052	35	R 136 687
2	R 747 818	R 8 269 306	R 9 017 124	109	R 82 726
3	R 2 037 517	R 15 878 210	R 17 915 727	325	R 55 125
4	R 3 027 300	R 10 123 100	R 13 150 400	274	R 47 994
5	R 1 250 000	R 7 621 786	R 8 871 786	209	R 42 449
Mean	R 10 662 635	R 43 076 454	R 53 739 089	952	R 56 449

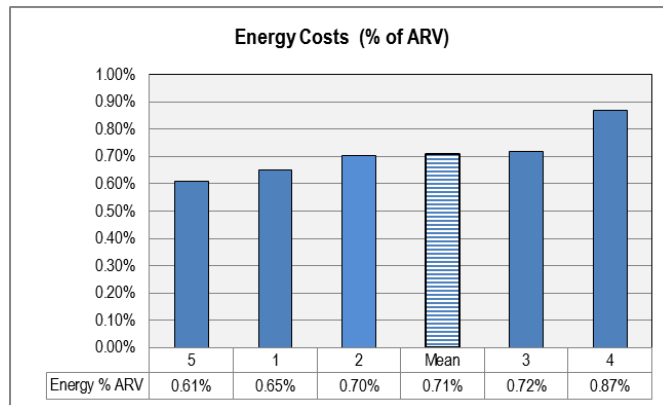
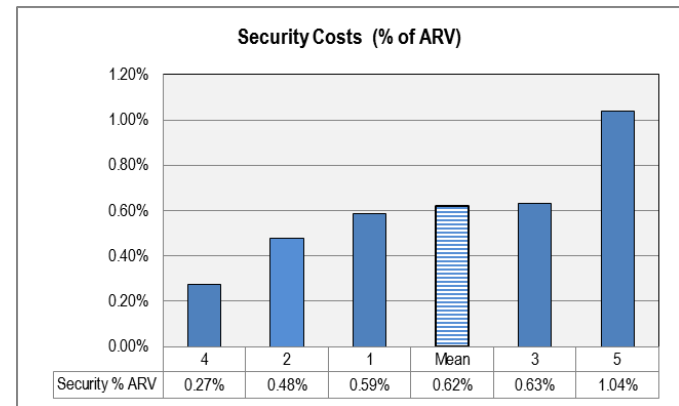
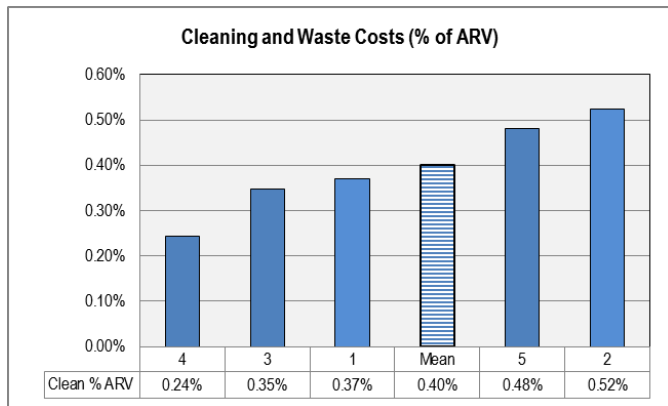
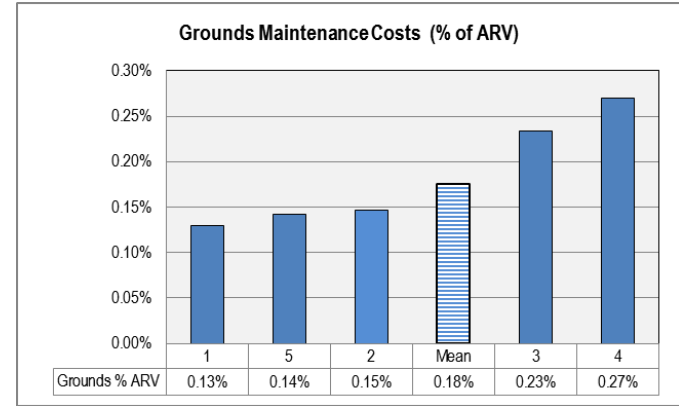
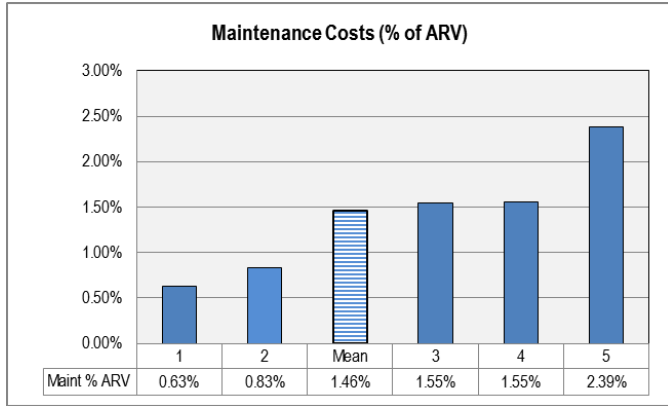
Institution	Building Operating Costs				Overall Operating Factors (% of ARV)				
	Total Operating Costs (Maint, Cleaning, Security & Energy)	Building Operating Costs per m ² (GFA)	Building Operating Costs per EFTS	Building Operating Costs as % of ARV	Maintenance as % of ARV	Cleaning and Waste as % of ARV	Grounds Maintenance as % of ARV	Security as % of ARV	Energy as % of ARV
	49	50	51	52	53	54	55	56	57
	R	R/m ² GFA	R/EFTS	% ARV	% ARV	% ARV	% ARV	% ARV	% ARV
1	R 82 735 884	R 313	R 4 464	2.24%	0.63%	0.37%	0.13%	0.59%	0.65%
2	R 156 012 960	R 365	R 6 291	2.54%	0.83%	0.52%	0.15%	0.48%	0.70%
3	R 249 330 061	R 367	R 7 116	3.25%	1.55%	0.35%	0.23%	0.63%	0.72%
4	R 143 103 650	R 322	R 6 446	2.94%	1.55%	0.24%	0.27%	0.27%	0.87%
5	R 282 307 620	R 450	R 7 322	4.52%	2.39%	0.48%	0.14%	1.04%	0.61%
Mean	R 913 490 175	R 372	R 6 566	3.19%	1.46%	0.40%	0.18%	0.62%	0.71%











Guidelines for completing the 2011 HEFMA benchmark survey

Welcome to the 2011 HEFMA Benchmark Survey. This survey has been adapted for South African higher education institutions, and is the same version as used for the 2006 survey. Once again, please fill in only the green cells on each tab of the spread sheet. Depending on your screen size, you may be required to scroll through the tabs at the bottom of the spread sheet. Totals are calculated in the yellow cells and carried forward to the front page to show your institution's total building operating costs.

General Instructions:

1. All Higher Education Institutions in South Africa submit an annual HEMIS survey. In this benchmark survey, you are required to use the **HEMIS definitions** as indicated. This will ensure that all participating institutions use the same definitions for calculations. The HEMIS definitions are applicable to **GFA, AFA, ARV and EFTS**.
2. Only fill in the **green** cells. **Yellow** cells are calculated by the computer. **Blue** cells are the RSA 2009 figures (averages or totals) to provide you with an order of magnitude to use as a reference, but participants are advised to consider the escalation since the last survey.
3. You may include or exclude student housing (residences) from your figures, as long as you do it consistently. If you include residences in your GFA, you must also include it in your AFA and ARV, as well as in the relevant data fields associated with providing services to student housing. Thus if you maintain your residences but don't clean them, include the residences in your GFA for Maintenance, but exclude it in your GFA for Cleaning and Waste Removal.
4. Start on the tab "**General Statistical Data**" and work your way through all the tabs. Ensure that you fill in values in all six tabs. While there are only 27 fields to complete, participants are advised to delegate to their sub-ordinates or colleagues responsible for the various areas, thus reducing the size of the task.
5. Save this spread sheet as **YourUniversityBenchmark.xls**. When you are done, please email this spread sheet with your results back to **andre.theys@uct.ac.za**. All questionnaires must be submitted back before **3 September 2012**. On completion of the survey and analysis, the final report (in PDF format), will be distributed electronically to all HEFMA members. If all participants submit the completed questionnaires by the due date then it is hoped to have the analysis and final report available during the running of the annual 2012 conference.
6. As before, the name of your institution will not be revealed to other participants, unless you give your explicit permission. The HEFMA Executive thanks those institutions who have indicated their participation.

Guidelines for each column

Column Guideline

General Statistical Data

- | | |
|---|--|
| 1 | The name of your institution e.g. University of Pretoria |
| 2 | Indicate whether these figures represent the aggregate of all your campuses (preferably) or name of separate campus. If not aggregate, please fill in a survey per campus. |
| 3 | The all-inclusive total floor area of all floors measured over the outer walls of the building. Includes all assignable and non-assignable areas. |
| 4 | AFA = GFA - non-assignable floor area (NFA): NFA includes mechanical floor areas, custodial floor areas, circulation floor areas etc. |
| 5 | Calculated field. Do not fill in. |
| 6 | The total cost to erect a similar building at today's cost. Includes building cost, professional fees, municipal costs and fixed equipment. |
| 7 | Calculated field. Do not fill in. |
| 8 | Use the standard HEMIS definition for Equivalent Full-time Students. Only include contact students and exclude distance students. |
| 9 | Calculated field. Do not fill in. |

Maintenance (Corrective and Preventative)

- | | |
|----|---|
| 10 | Include costs of professional and administrative staff directly and indirectly involved in the maintenance operation. Where a staff member spends only part of his or her time on maintenance activities, please estimate & apportion their time and costs accordingly. Include a provision for FM management overhead. |
| 11 | Include all costs associated with maintenance trades staff working on maintenance activities only. Where maintenance staff also performs "new work", this portion should be excluded from the maintenance costs reported. |
| 12 | Calculated field. Do not fill in. |

- 13 Include the costs of materials (e.g. paint, timber, hardware, lamps, plumbing supplies, etc.) used by your maintenance staff on preventive and corrective maintenance activities plus payments made to external service providers (e.g. air-conditioning, lift, electrical, plumbing contractors, etc.).
- 14 Spent on maintenance projects from capital budget. Exclude budgets spent on new work.
- 15 Calculated field. Do not fill in.
- 16 Cannot exceed the GFA in Col 3.
- 17 Calculated field. Do not fill in.
- 18 Calculated field. Do not fill in.

Cleaning and Waste Management Services

- 19 Include costs of professional and administrative staff directly and indirectly involved in the cleaning and waste management operations. Where a staff member spends only part of his or her time on these activities, please estimate & apportion their time and costs accordingly. Include a provision for FM management overhead.
- 20 Include the costs of cleaning materials used by your cleaning staff on all cleaning related activities plus materials provided to external service providers.
- 21 Payments made to external service providers.
- 22 The total cost of general waste removal, either internally or by waste removal contractor.
- 23 The total cost of contaminated waste removal, either internally or by waste removal contractor. Include pathological and chemical waste removal.
- 24 Calculated field. Do not fill in.
- 25 Cannot exceed the GFA in Col 3.
- 26 Calculated field. Do not fill in.
- 27 Calculated field. Do not fill in.
- 28 Calculated field. Do not fill in.

Energy

- 29 The total annual energy consumption of your Institution that relates to the GFA in column 43. Only include by facilities that are included in GFA in column 43, where $GJ = (kWhrs \times 3600) / (1 \times 10^6)$, i.e. 1 kWhr = 0.0036 GJ
- 30 The total annual cost of energy purchased by your institution that relates to the GFA in column. Only include cost to facilities that are included in GFA in column 43.
- 31 Ensure GFA figure is consistent with definitions provided in Columns 41 and 42. Cannot exceed the GFA in Col 3.
- 32 Calculated field. Do not fill in.
- 33 Calculated field. Do not fill in.
- 34 Calculated field. Do not fill in.
- 35 Calculated field. Do not fill in.
- 36 Calculated field. Do not fill in.

Security

- 37 Include costs of professional and administrative staff directly and indirectly involved in the security operation. Where a staff member spends only part of his or her time on security activities, please estimate & apportion their time and costs accordingly. Include a provision for FM management overhead.
- 38 Indicate whether this figures represent the aggregate of all your campuses (preferably) or name of separate campus
- 39 Payments made to external service providers.
- 40 Calculated field. Do not fill in.
- 41 Only use the Gross Floor Area of the buildings patrolled, not the area of all grounds patrolled. This figure cannot exceed the GFA in Col 3.
- 42 Calculated field. Do not fill in.
- 43 Calculated field. Do not fill in.

Grounds Maintenance

- 44 Include costs of professional and administrative staff directly and indirectly involved in the grounds maintenance operation. Where a staff member spends only part of his or her time on maintenance activities, please estimate & apportion their time and costs accordingly. Include a provision for FM management overhead.
- 45 Include the costs of materials used by your grounds maintenance staff on these activities plus payments made to external service providers.
- 46 Calculated field. Do not fill in.
- 47 Effective area of grounds maintained with these funds. This may include the area of your landscaped gardens and sports fields if applicable.
- 48 Calculated field. Do not fill in.