



water & sanitation

Department:
Water and Sanitation
REPUBLIC OF SOUTH AFRICA

RECEIVED
CENTRAL POINT

14.2
2023-07-10

OFFICE OF THE DG

FINALISED

DBAC
SUBMISSION

Tracking no **D35025**

ROUTE FORM

BRANCH: FINANCE

Reference No: **WD397**

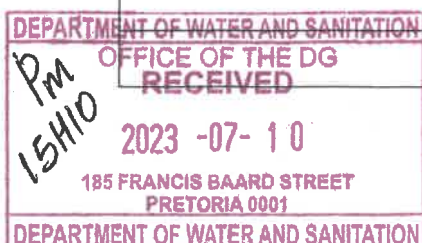
SUBJECT: REQUEST FOR APPROVAL OF THE QUOTATION FOR THE DEVELOPMENT OF GUIDELINES FOR FINANCIAL MECHANISMS AND ECONOMIC MODELS TO FACILITATE THE CIRCULAR ECONOMY IN THE PROVISION OF FAECAL SLUDGE MANAGEMENT

DBAC SECRETARIAT		SUPERVISOR	
Name: Ms Hester van der Merwe/ Marcia Batayi Ext : 7725 / 7474 Office : 522 ZWA		Name: Ms N Khubana Extension: 8926 Office No.: ZWA	
Rank: SPAO	Date:	Rank: Director	Date:

Rank	Date	Name and Surname	Signature	Office No
CD: Operational Support (DEPUTY CHAIRPERSON)	10 July 2023	Ms Petunia Ramunenyiwa		N 377

11/7/23 DG

INSTRUCTIONS/REMARKS TO AUTHOR BY ACTING DIRECTOR-GENERAL



10/07/2023



water & sanitation

Department:
Water and Sanitation
REPUBLIC OF SOUTH AFRICA

Enquiries: L Agbasi
Telephone: 012 336 8996
Reference: 7/2/790/3 7/2/790/4

DIRECTOR-GENERAL

CHAIRPERSON: DEPARTMENTAL BID ADJUDICATION COMMITTEE

REQUEST FOR APPROVAL OF THE QUOTATION FOR THE DEVELOPMENT OF THE GUIDELINES FOR FINANCIAL MECHANISMS AND ECONOMIC MODELS TO FACILITATE THE CIRCULAR ECONOMY IN THE PROVISION OF FAECAL SLUDGE MANAGEMENT

1. PURPOSE

- 1.1 To request the Director-General to approve the quotation submitted by the University of KwaZulu Natal (UKZN) for the development of the Guidelines for Financial Mechanisms and Economic Models to facilitate the Circular Economy in the provision of Faecal Sludge Management Services (**Annexure A: Quotation**).

2. BACKGROUND AND DISCUSSION

- 2.1 The Department of Water and Sanitation (DWS) has approved the terms of reference and the deviation from normal procurement processes for the appointment of UKZN as the preferred service provider for the development of the Guidelines for Financial Mechanisms and Economic Models to facilitate the Circular Economy in the provision of Faecal Sludge Management services as per National Treasurer Regulations (**Annexure B: Approval to appoint UKZN**).
- 2.2 UKZN was informed of their appointment by the DWS to develop Guidelines for financial mechanisms and economic models to facilitate the circular economy in the provision of faecal sludge management services. The DWS requested UKZN to submit a quotation indicating the costing per deliverable, the total of all costs, state the timeframe, and the completion of SBD1 and SBD4 forms.
- 2.3 The quotation together with completed forms SBD1 and SBD4 were received and is being submitted for consideration in the approval process (**Annexure A: Quotation**).

3. IMPLICATIONS

3.1 Personnel

- 3.1.1 None

3.2 Financial

- 3.2.1 Funds are made available under the Directorate: Sanitation Operational and Capacity Support budget for 2023/24 financial year. A rough estimate of R4 000 000 was initially approved, however the detailed quotation with costs per deliverable for the Development

Received 25/05/2023

of Guidelines for Financial Mechanisms and Economic Models for Faecal Sludge Management is R9 400 000 for a period of 36 months. The budget allocation in the financial year 2023/24 is R2 449 996 as per the signed Demand Management Plan (DMP) (**Annexure C: DMP**).

Due to the quotation and schedule of deliverables that were submitted after the approval of the DMP, the revised funds allocation over the MTEF period is as follows:

Financial Year	Funds allocated
2023/24	R 2 000 000,00
2024/25	R 3 700 000,00
2025/26	R 3 700 000,00

3.3 Legal

3.3.1 The contract between DWS and UKZN will be signed by both parties prior commencement of the project.

3.3.2 Regulatory Compliance

The compliance with section 217 (ii) Appointment through any other deviation in the DWS Delegation of Powers in terms of the Public Finance Management Act (Act No. 1 of 1999) as Amended by Public Finance Management Act (Act No. 29 of 1999) (**Annexure D: Delegation of Powers**).

Delegation of Powers are read together with Instruction No.3 4(4.2) (b) Procurement by other means (**Annexure E: SCM Instruction No.3**). The compliance with procurement through any other deviation in terms of Preferential Procurement Policy Framework Act (Act No.5 of 2000) (**Annexure F: Preferential Procurement Policy Framework Act**).

3.4 Communication

3.4.1 Communicated with UKZN informing about the approvals and requesting quotation.

4. OTHER COMPONENTS CONSULTED

4.1 Supply Chain Management was consulted for guidance.

5. RECOMMENDATION

It is recommended that:

5.1 The Director-General approves the quotation from the University of KwaZulu Natal for the development of the Guidelines for Financial Mechanisms and Economic Models to facilitate the Circular Economy in the provision of Faecal Sludge Management Services (**Annexure A: Quotation**).



NAME: IRIS MATHYE
CHIEF DIRECTOR: SANITATION SERVICES SUPPORT
DATE: 08/05/2023

5. RECOMMENDATION

It is recommended that:

- 5.1 The Director-General approves the quotation from the University of KwaZulu Natal for the development of the Guidelines for Financial Mechanisms and Economic Models to facilitate the Circular Economy in the provision of Faecal Sludge Management Services (Annexure A: Quotation)

RECOMMENDATION IN PAR 5.1 SUPPORTED / ~~NOT APPROVED~~
RECOMMENDATION IN PAR 5.2 SUPPORTED / NOT SUPPORTED



NAME: ANDRE VAN DER WALT
CHIEF DIRECTOR: SANITATION SERVICES SUPPORT
DATE: 9 May 2023

RECOMMENDATION IN PAR 5.1 SUPPORTED / ~~NOT APPROVED~~
RECOMMENDATION IN PAR 5.2 SUPPORTED / NOT SUPPORTED



NAME: RISHMATI MKHIZE
DEPUTY DIRECTOR-GENERAL: WATER AND SANITATION SERVICES MANAGEMENT
DATE 17/05/23

RECOMMENDATION IN PAR 5.1 SUPPORTED / NOT SUPPORTED
RECOMMENDATION IN PAR 5.2 SUPPORTED / NOT SUPPORTED

FUNDS AVAILABLE/ NOT AVAILABLE



NAME: Engeats Le
CHIEF FINANCIAL OFFICER
DATE 2023/05/20

5. RECOMMENDATION

It is recommended that:

- 5.1 The Director-General approves the quotation from the University of KwaZulu Natal for the development of the Guidelines for Financial Mechanisms and Economic Models to facilitate the Circular Economy in the provision of Faecal Sludge Management Services (Annexure A: Quotation)

RECOMMENDATION IN PAR 5.1 ~~SUPPORTED~~ / NOT SUPPORTED
RECOMMENDATION IN PAR 5.2 ~~SUPPORTED~~ / NOT SUPPORTED



All the issues raised by DBAC on 6 July have been resolved

NAME: Petunia Ramunenyiwa

CHAIRPERSON: DEPARTMENTAL BID ADJUDICATION COMMITTEE

DATE: 10 July 2023

RECOMMENDATION IN PAR 5.1 ~~APPROVED~~ / NOT APPROVED
RECOMMENDATION IN PAR 5.2 ~~APPROVED~~ / NOT APPROVED



NAME: DR SEAN PHILLIPS
DIRECTOR-GENERAL

DATE:





CHAIRPERSON: DEPARTMENTAL BID ADJUDICATION COMMITTEE

JUSTIFICATION OF THE ESTIMATED R4 MILLION BUDGET IN COMPARISON TO THE QUOTATION RECEIVED FROM UKZN FOR THE DEVELOPMENT OF THE GUIDELINES FOR FINANCIAL MECHANISMS AND ECONOMIC MODELS TO FACILITATE THE CIRCULAR ECONOMY IN THE PROVISION OF FAECAL SLUDGE MANAGEMENT

1. PURPOSE

- 1.1 To provide response to the Departmental Bid Adjudication Committee (DBAC) justifying the initial estimated budget of R4 million in comparison to the R9,4 million quotation received from the University of KwaZulu Natal (UKZN) for the development of the Guidelines for Financial Mechanisms and Economic Models to facilitate the Circular Economy in the provision of Faecal Sludge Management Services.

2. BACKGROUND AND DISCUSSION

- 2.1 The Department of Water and Sanitation (DWS) has approved the Terms of Reference and the deviation from normal procurement processes for the appointment of UKZN as the preferred service provider for the development of the Guidelines for Financial Mechanisms and Economic Models to facilitate the Circular Economy in the provision of Faecal Sludge Management services as per National Treasurer Regulations.
- 2.2 UKZN was informed of their appointment by the DWS to develop Guidelines for financial mechanisms and economic models to facilitate the circular economy in the provision of faecal sludge management services. The DWS requested UKZN to submit a quotation indicating the costing per deliverable, the total of all costs, timeframes, and the completion of SBD1 and SBD4 forms.
- 2.3 The project was allocated R4 million based on the Mid Term Expenditure Framework (MTEF) 2022/23 – 2024/25. The Chief Directorate had to share the available funds for the projects amongst two Directorates. The project value was incorporated in the Demand Management Plan (DMP) 2022/23 as R4 million. Upon approval of the DMP the Terms of Reference were developed and submitted for approval.
- 2.3 The quotation together with completed forms SBD1 and SBD4 were received from UKZN with the detailed cost per deliverable with the total amount of R9,4million.

3. IMPLICATIONS

3.1 Personnel

- 3.1.1 None

3.2 Financial

- 3.2.1 Funds are made available under the Directorate: Sanitation Operational and Capacity Support budget for 2023/24 financial year. A rough estimate of R4 000 000 was initially approved, however the detailed quotation with costs per deliverable for the Development of Guidelines for Financial Mechanisms and Economic Models for Faecal Sludge Management is R9 400 000 for a period of 36 months. The budget allocation in the financial year 2023/24 is R2 449 996 as per the signed Demand Management Plan (DMP).

Due to the quotation and schedule of deliverables that were submitted after the approval of the DMP, the revised funds allocation over the MTEF period is as follows:

Financial Year	Funds allocated
2023/24	R 2 000 000,00
2024/25	R 3 700 000,00
2025/26	R 3 700 000,00

3.3 Legal

- 3.3.1 The contract between DWS and UKZN will be signed by both parties prior commencement of the project.

3.3.2 Regulatory Compliance

None

3.4 Communication

- 3.4.1 Communicated with UKZN informing about the approvals and requesting quotation.

4. OTHER COMPONENTS CONSULTED

- 4.1 Supply Chain Management was consulted for guidance.

5. RECOMMENDATION

It is recommended that:

- 5.1 The DBAC notes the justification of the initial estimated budget of R4 million in comparison to the R9,4million quotation received from the University of KwaZulu Natal (UKZN) for the development of the Guidelines for Financial Mechanisms and Economic Models to facilitate the Circular Economy in the provision of Faecal Sludge Management Services


NAME: LUSANDA MFENQA-AGBASI
DEPUTY DIRECTOR: SANITATION OPERATIONAL SUPPORT
DATE: 10/07/2023

5. RECOMMENDATION

It is recommended that:

- 5.1 The DBAC notes the justification of the initial estimated budget of R4million in comparison to the R9,4million quotation received from the UKZN for the development of the Guidelines for Financial Mechanisms and Economic Models to facilitate the Circular Economy in the provision of Faecal Sludge Management Services

RECOMMENDATION IN PAR 5.1 SUPPORTED / ~~NOT SUPPORTED~~



NAME: IRIS MATHYE

DIRECTOR: SANITATION OPERATIONAL & CAPACITY SUPPORT

DATE: 10/07/2023

RECOMMENDATION IN PAR 5.1 NOTED / NOT ACCEPTED



NAME: Petunia Ramunenyiwa

CHAIRPERSON: DEPARTMENTAL BID ADJUDICATION COMMITTEE

DATE: 10 July 2023



water & sanitation

Department:
Water and Sanitation
REPUBLIC OF SOUTH AFRICA

Enquiries: Muhashela T

Telephone: 012 336 7166

Reference: /2/790/3 7/2/790/4

CHIEF FINANCIAL OFFICER
REQUEST FOR THE APPROVAL OF QUOTATION FOR THE DEVELOPMENT OF THE GUIDELINES FOR FINANCIAL MECHANISMS AND ECONOMIC MODELS TO FACILITATE THE CIRCULAR ECONOMY IN THE PROVISION OF FAECAL SLUDGE MANAGEMENT
1. Purpose

- 1.1 To recommend to the Chief Financial Officer to support or / not to support the attached submission based on the availability or none availability of funds.

2. Motivation / Analysis**2.1 Funding Requirements and Analysis of funds**

The estimated cost is R9.4 million as reflected on the submission. In terms of the 2023/24 ENE inputs provision has been made as indicated below (copy attached herewith):

Table 1: 2023/2024 Analysis of expenditure

Item / Project name	2023/24 R'000	2024/25 R'000	2025/26 R'000
Consultants: Business and advisory services	20,970	21,625	13,258

Based on Table 1 above, it is hereby confirmed that funds are available within Chief Directorate Sanitation Services support, R9.4 million has been provided in the current financial year and over the MTEF period. The total estimated cost required in the Project is R2 million and for the 2023/24 financial year and the outer year will require R3.7 million per each financial year over the MTEF period.

2.2 Applicable Prescripts, Regulations, Circular, Policy and/or Delegations of Authority

The Proper processes and procedure should be complied with in terms of the financial delegations, Cost Containment and SCM prescripts.

2.3 Implications over the Medium-Term Expenditure Framework

A provision has been made over the MTEF period. (Copy of the MTEF indicative allocation is attached)

3. Recommendation

- 3.1 It is recommended that the Chief Financial Officer should support the attached submission in line with the analysis / motivation in 2 above.

TG CHAUKE
DIRECTOR: MANAGEMENT ACCOUNTING

DATE: 22/05/2023

RECOMMENDATION 3: SUPPORTED / ~~NOT SUPPORTED~~

N JIYANE
CHIEF DIRECTOR: FINANCIAL MANAGEMENT

DATE: 23/05/2023

REQUEST FOR THE APPROVAL OF QUOTATION FOR THE DEVELOPMENT OF THE
GUIDELINES FOR FINANCIAL MECHANISMS AND ECONOMIC MODELS TO FACILITATE THE
CIRCULAR ECONOMY IN THE PROVISION OF FAECAL SLUDGE MANAGEMENT

RECOMMENDATION 3: SUPPORTED / NOT SUPPORTED ☒

F MOATSHE
CHIEF FINANCIAL OFFICER
DATE: 2024/05/23

Summary	2023/24	2024/25	2025/26
Water Services Infrastructure Grant	Budget	Reduced Baseline	Reduced Baseline
	'000	'000	'000
Water Services Infrastructure Grant (Sanitation & Nat Transfers)	47,106	48,760	52,359
Total	47,106	48,760	52,359
Current Payments	46,111	48,080	51,691
Compensation of Employees	13,953	14,569	15,302
Salaries and wages	13,953	14,569	15,302
Social contributions	-	-	-
Goods and Services	32,158	33,511	36,389
Administrative fees	283	306	400
Advertising	2,665	1,948	4,034
Minor Assets	48	355	309
Audit costs: External	-	-	-
Bursaries: Employees	-	-	-
Catering: Departmental activities	20	23	116
Communication (G&S)	141	147	1,345
Computer services	-	-	619
Consultants: Business and advisory services	20,970	21,625	13,258
Infrastructure and planning services	-	-	-
Laboratory services	-	-	-
Legal services (G&S)	-	-	-
Science and technological services	-	-	-
Contractors	73	15	110
Agency and support/outsourced services	-	-	-
Entertainment	32	10	33
Fleet services (including government motor transport)	-	-	796
Consumable supplies	1,238	1,318	2,225
Consumables: Stationery, printing and office supplies	1,284	1,000	1,635
Operating leases	49	51	60
Rental and hiring	500	1,895	3,048
Property payments	-	-	-
Transport provided: Departmental activity	-	-	267
Travel and subsistence	4,040	3,802	5,155
Training and development	305	518	947
Operating payments	180	141	774
Venues and facilities	330	357	1,258
Interest and rent on land	-	-	-
Payments for capital assets	995	680	668
Buildings and other fixed structures	-	-	-
Buildings	-	-	-
Other fixed structures	-	-	-
Machinery and equipment	995	680	668
Transport equipment	-	-	181
Other machinery and equipment	995	680	487
Payments for financial assets	-	-	-
Total	47,106	48,760	52,359

SELECTION CRITERIA : TYPE
DETAIL
FUND ALL
RESPONSIBILITY ALL
REGIONAL IDENTIFIER NAT FUNCTION:WHOLE COUNTRY DOM
OBJECTIVE SANITATION PROGRAMME MAN UNIT
INFRASTRUCTURE ALL
ASSETS ALL
PROJECT ALL
ITEM ALL

Sort Criteria : F R M O S A P I

TOTALS : F0001 F0007 I0003 I0004

PAGE BREAK : NONE

PROFILE : SECURITY

ECONOMIC CLASS : ALL

TOT ON ECON CLASS : NO

LAST CLOSED MONTH : 04/2023

TYPE LEVEL	DESCRIPTION	EXPENSES	COMMITMENTS	BUDGET	AVAILABLE BUDGET
F 001	EXPENDITURE:VOTED				
F 005	VOTED FUNDS				
I 003	COMPENSATION OF EMPLOYEES				
I 004	SALARIES AND WAGES	754,018.91	0.00	13,953,000.00	13,198,981.09
I 004	SOCIAL CONTRIBUTIONS	102,367.09	0.00	0.00	102,367.09-
I 003	COMPENSATION OF EMPLOYEES	856,386.00	0.00	13,953,000.00	13,096,614.00
I 003	GOODS AND SERVICES				
I 004	ADMINISTRATIVE FEES: PAYMENTS	4,027.50	0.00	283,000.00	278,972.50
I 004	ADVERTISING	0.00	0.00	2,665,000.00	2,665,000.00
I 004	MINOR ASSETS	0.00	0.00	48,000.00	48,000.00
I 004	CATERING:DEPARTML ACTIVITIES	0.00	0.00	20,000.00	20,000.00
I 004	COMMUNICATION	2,950.00	0.00	141,000.00	138,050.00
I 004	CONSULT:BUSINESS&ADVISORY SERV	0.00	0.00	20,970,000.00	20,970,000.00
I 004	CONTRACTORS	0.00	0.00	73,000.00	73,000.00
I 004	ENTERTAINMENT	557.90	0.00	32,000.00	31,442.10
I 004	CONS SUPPLIES	0.00	0.00	1,238,000.00	1,053,673.40
I 004	CONS:STA,PRINT&OFF SUP	0.00	0.00	1,284,000.00	1,284,000.00
I 004	OPERATING LEASES	0.00	0.00	49,000.00	49,000.00
I 004	RENTAL & HIRING	0.00	0.00	500,000.00	500,000.00
I 004	TRAVEL AND SUBSISTENCE	29,535.65	144.46	4,040,000.00	4,010,319.89
I 004	TRAINING & DEVELOPMENT	0.00	0.00	305,000.00	305,000.00

TYPE LEVEL		DESCRIPTION	EXPENSES	COMMITMENTS	BUDGET	AVAILABLE BUDGET
TOTAL	I 004	OPERATING PAYMENTS				
TOTAL	I 004	VENUES AND FACILITIES	0.00	0.00	180,000.00	180,000.00
TOTAL	I 003	GOODS AND SERVICES	44,250.00	0.00	330,000.00	285,750.00
	I 003	MACHINERY AND EQUIPMENT	81,321.05	184,471.06	32,158,000.00	31,892,207.89
TOTAL	I 004	OTHER MACHINERY & EQUIPMENT	1,699.99	0.00	995,000.00	993,300.01
TOTAL	I 003	MACHINERY AND EQUIPMENT	1,699.99	0.00	995,000.00	993,300.01
TOTAL	F 005	VOTED FUNDS	939,407.04	184,471.06	47,106,000.00	45,982,121.90
TOTAL	F 001	EXPENDITURE: VOTED	939,407.04	184,471.06	47,106,000.00	45,982,121.90

**** END OF REPORT RP0203BS ****



CSD REGISTRATION REPORT

SUPPLIER IDENTIFICATION

CSD cannot electronically verify the identity of a supplier other than a South African Individual / Sole Proprietor (through Home Affairs) or a company registered at the Companies and Intellectual Property Commission (CIPC). It is the responsibility of an organ of state supply chain practitioner to obtain supporting documentation to verify the identity and legitimacy of this supplier.

Supplier number	MAAA0128726	Total annual turnover	More than R50 million
Is supplier active?	Yes	Financial year start date	01 Mar 2017 00:00:00:000
Allow associates?	Yes	Created by	nkambules@nra.co.za
Supplier type	State Owned Entity	Created date	17 May 2016 19:11:09:000
Supplier sub-type	Tertiary Institution	Edit by	nkambules@nra.co.za
Legal name	University of KwaZulu Natal	Edit date	23 Jan 2023 08:40:31:410
Identification type	Organ Of State ID Number	Restricted Supplier	No
Government breakdown	Tertiary Institution	Restricted Director	No
Country of origin	South Africa	Government Employee	No
Have Bank Account	Yes		

SUPPLIER INDUSTRY CLASSIFICATION INFORMATION

INDUSTRY CLASSIFICATION 1			
Main group	Education		
		Core industry	Education
Division	Education	% share of annual turnover	100.00

SUPPLIER CONTACT INFORMATION

CONTACT 1			
Contact type	Bid Office	Cellphone number	072 170 2050
Is this your preferred Contact?	No	Do you want this contact to also be a CSD user ?	No
Name(s)	Smangele Khanyisile	Created by	nkambules@nra.co.za
Surname	Nkambule	Created date	17 May 2016 19:11:10:273
Identification type	South African Identification Number	Edit by	ngwenyat4@ukzn.ac.za
Prefer communication via email	Yes	Edit date	16 Nov 2022 12:17:07:767
Email address	nkambules@ukzn.ac.za		





CSD REGISTRATION REPORT

CONTACT 2

Contact type	Bid Office	Telephone number	031 260 7962
Is this your preferred Contact?	Yes	Cellphone number	082 834 7350
Name(s)	Ronnie	Do you want this contact to also be a CSD user ?	No
Surname	Lutchmipersadh	Created by	nkambules@nra.co.za
Identification type	South African Identification Number	Created date	17 May 2016 19:11:10:367
Prefer communication via email	Yes	Edit by	ngwenyat4@ukzn.ac.za
Email address	lutchmipersadhr@ukzn.ac.za	Edit date	16 Aug 2022 10:13:33:923

CONTACT 3

Contact type	Administration	Telephone number	031 260 2036
Is this your preferred Contact?	Yes	Cellphone number	082 965 6656
Name(s)	Thandeka	Do you want this contact to also be a CSD user ?	Yes
Surname	Ngwenya	Created by	nkambules@nra.co.za
Identification type	South African Identification Number	Created date	27 Oct 2017 13:28:28:737
Prefer communication via email	Yes	Edit by	ngwenyat4@ukzn.ac.za
Email address	ngwenyat4@ukzn.ac.za	Edit date	16 Nov 2022 12:17:07:477

CONTACT 4

Contact type	Administration, Finance	Telephone number	0312608878
Is this your preferred Contact?	No	Cellphone number	083 272 4173
Name(s)	Siphehile Nonsikelelo	Do you want this contact to also be a CSD user ?	Yes
Surname	Mpembe	Created by	nkambules@nra.co.za
Identification type	South African Identification Number	Created date	27 Oct 2017 13:28:28:767
Prefer communication via email	Yes	Edit by	nkambules@nra.co.za
Email address	mpembes@ukzn.ac.za	Edit date	27 Oct 2017 13:28:28:767

SUPPLIER ADDRESS INFORMATION



CSD REGISTRATION REPORT

ADDRESS 1

Is this a preferred address?	Yes	Ward Number	18
Address line 1	Private Bag X54001	Country	South Africa
Address line 2	Durban	This address S/A delivery	Yes
Suburb	Chiltern Hills	This address S/A payment	Yes
Province	KwaZulu-Natal	Created by	nkambules@nra.co.za
Municipality	eThekweni	Created date	09 May 2016 15:55:25:000
City	Westville	Edit by	nkambules@nra.co.za
Postal code	3630	Edit date	17 May 2016 19:11:10:147

ADDRESS 2

Is this a preferred address?	No	Ward Number	18
Address line 1	University of KwaZulu Natala	Country	South Africa
Address line 2	Westville Campus	This address S/A delivery	Yes
Suburb	Chiltern Hills	Created by	nkambules@nra.co.za
Province	KwaZulu-Natal	Created date	09 May 2016 16:19:42:000
Municipality	eThekweni	Edit by	nkambules@nra.co.za
City	Westville	Edit date	17 May 2016 19:11:10:180
Postal code	3630		

SUPPLIER BANK ACCOUNT

The "Bank Verification Status" field indicates that the bank account details submitted by the supplier exist at the bank and that the bank account details are valid. However, as this supplier does not have an identifying number (like a South African ID number, or Company Registration number, or NPO number or Trust number) linked to their bank account details at their respective bank, the CSD system cannot electronically verify that the bank account belongs to the specific supplier. The supply chain practitioner is therefore responsible to obtain supporting documentation to verify that this bank account belongs to this supplier.

BANK ACCOUNT 1

Account type	Transmission Accounts	Created by	nkambules@nra.co.za
Bank	STANDARD BANK OF SOUTH AFRICA	Created date	12 Sep 2016 13:05:15:423
Branch number	051001	Edit by	csd.safetynetbatch@treasury.gov.za
Branch name	STANDARD BANK SOUTH AFRICA	Edit date	15 Sep 2016 16:17:56:743
Account number	053080998	Bank Verification Status	Verification Succeeded
Account holder	UNIVERSITY OF KWAZULU NATAL	Foreign Bank Account	No





CSD REGISTRATION REPORT

Is this a preferred account?	Yes	Is the identifier linked at the bank	No
Active start date	05 Sep 2016 14:42:08:000	Is this a Shared Funding Account	No

TAX INFORMATION

The "Overall Tax Status" field indicates the compliance status of the tax information submitted. However, as this supplier does not have an identifying number (like a South African ID number, or Company Registration number, or NPO number or Trust number) linked to their tax details at SARS, the CSD system cannot electronically verify that the tax reference numbers belongs to the specific supplier. The supply chain practitioner is therefore responsible to obtain supporting documentation to verify that the tax reference numbers belongs to this supplier.

Income tax number	9063151162	Would you like to receive notifications?	Yes
VAT number	4860209305	Overall Tax Status	Tax Compliant
Is this supplier a VAT vendor?	Yes	Created by	nkambules@nra.co.za
PAYE number	7400749323	Created date	17 May 2016 19:11:09:000
Are you Registered with SARS?	Yes	Edit by	csd.reverifybatch@treasury.gov.za
Last validation date	10 Jul 2023 12:52:00:000	Edit date	23 Jan 2023 08:40:31:000

B-BEE INFORMATION

B-BBEE verification regulator	Verification agency accredited by SANAS	SANAS accredited agency	AAA BEE Verification Agency CC
Sector charter	Other	% Owned by black people	0.00
Subsector charter	NOT APPLICABLE	% Owned by black people who are women	0.00
B-BBEE certificate number	AAA 1508/0119 Rev 0	% Owned by black people who are youth	0.00
B-BBEE certificate issue date	16 Nov 2022 00:00:00:000	% Owned by black people with disabilities	0.00
B-BBEE certificate issue expiry date	15 Nov 2023 00:00:00:000	% Owned by black who are unemployed	0.00
B-BBEE status level of contributor	Level 8 Contributor	% Owned by black people who are military veteran	0.00
B-BBEE procurement recognition	10%	% Owned by black people living in rural or underdeveloped areas	0.00





CSD REGISTRATION REPORT

Value adding supplier or empowering supplier	Yes	Verification Status	Manual Verification Required
Skills Development Score	12.75	Created by	nkambules@nra.co.za
Socio-Economic Development Score	5.00	Created date	17 May 2016 19:11:19:633
Management Control Score	15.33	Edit by	ngwenyat4@ukzn.ac.za
Enterprise Supplier Development Score	25.58	Edit date	16 Nov 2022 12:17:07:903
Total Score	58.66	Status	Active

DIRECTORS/MEMBERS/OWNERS INFORMATION

DIRECTOR/MEMBER 1

Director type	Director, Officer	Created date	12 Oct 2017 16:19:27:000
Director status	Active	Edit by	nkambules@nra.co.za
Name(s)	THANDEKA BRENDA MARCIA	Edit date	17 Oct 2017 08:58:56:000
Surname	NGWENYA	Restricted Director	No
Country	South Africa	Restriction Last Verification Date	10 Jul 2023 12:51:55:917
Identification type	South African Identification Number	Government Employee	No
South African identification number	8206100410088	Government Employee Last Verification Date	10 Jul 2023 12:51:54:727
Appointment date	17 Oct 2017 00:00:00:000	SA identification number Verified	Yes
Owner	No	SA identification number verification date	09 Jul 2023 11:39:31:907
Created by	nkambules@nra.co.za	Companies involved in	MAAA0041888;

The CSD does not automatically verify foreign company registration number, international securities identification number, foreign identification numbers, foreign passport numbers, work permit numbers, foreign bank accounts, B-BBEE, demographic and accreditation information. Organs of State are required to manually verify this information with the applicable verification institutions as per their current policies and procedures.



CSD REGISTRATION REPORT

Tips and Frequently Asked Questions (FAQ)

Identifier

CSD cannot electronically verify the identity of a supplier other than a South African Individual / Sole Proprietor (through Home Affairs) or a company registered at the Companies and Intellectual Property Commission (CIPC). For this reason, a disclaimer is displayed for supply chain practitioners to obtain supporting documentation to verify the identity and legitimacy of a supplier in these cases.

Bank

For help on how to resolve bank failures click here: [I received an email stating the bank information I captured on the CSD was sent for bank account validation and could not be validated. The response received from the bank contains an error message.](#)

The various possible error messages received from the bank are highSemiBolded in red. Search for the applicable message and follow the detailed steps associated with that error message.

Tax

Tax Compliance Status

For help on how to deal with tax status differences between CSD and the tax clearance certificate click here: [What should a supplier do if the tax status on CSD difference from the tax clearance certificate?](#)

Tax Compliance Expiry Date

For help on how to deal with tax status differences between CSD and the tax clearance certificate click here: [How does CSD determine the tax compliance expiry date?](#)

CIPC

Should the director/member information reflected on the CIPC registration report differs to that reflected on CSD for help click here: [The active Directors/Members are not being populated on the CSD Directors/Members screen as they appear at CIPC. how can I rectify this?](#)

State Employee

For more information pertaining to government employment status click here: [Will there be verification done to identify if a supplier is a government employee?](#)

BBBEE

CSD does not automatically verify all certificate information with the various accreditation bodies. Organs of State are required, where not automatically verified by CSD, to manually verify this information with the applicable accreditation body as per current policies and procedures. Expired certificate information do not reflect on the report.

RESTRICTION

Restricted Supplier - A supplier is restricted by using the identification number of the entity e.g. CIPC registration -, trust -, Social Development non-profit -, South African ID -, Foreign company registration number or ID number. If there is more than one CSD Supplier profile registered on CSD with the same entity identification number, all those related supplier profiles will be restricted.

Restricted Director - A director/owner is an individual person and is restricted by using the South African ID or Foreign ID number. If a director belongs to different companies and has been restricted, the director will reflect as restricted in all companies where identification number is detected.

Restricted Suppliers & Directors are listed on CSD under Help - [Am I restricted?](#)





CSD REGISTRATION REPORT

26 June 2023

To: **Water and Sanitation Services Management**
Chief Directorate: Sanitation Services Support
Directorate: Sanitation Operational and Capacity Support
Department of Water and Sanitation
Private Bag X313
Pretoria
001

Att: Ms Lusanda Mfenqa-Agbasi

RE: WD397: DEVIATION FOR THE APPOINTMENT OF THE UNIVERSITY OF KWAZULU NATAL AS THE PREFERRED SERVICE PROVIDER FOR THE DEVELOPMENT OF FINANCIAL MECHANISMS AND ECONOMIC MODELS TO FACILITATE THE CIRCULAR ECONOMY IN THE PROVISION OF FAECAL SLUDGE MANAGEMENT.

Dear Sir/Madam

Reference is made to the DBAC communication seeking further clarification on several issues concerning the appointment of UKZN as the preferred service provider for developing guidelines for financial mechanisms and economic models to facilitate the circular economy in providing faecal sludge management services. The attached revised motivation contains detailed responses to the DBAC from the UKZN.

The quotation has been revised following the DBAC recommendations and a revised quotation is available on pages 15 and 16. The human resources costs are now based on the UKZN rates, and have been recalculated and split into the expertise, rates and the number of work-days necessary to complete each deliverable. The cost of piloting the guidelines (Deliverable 5.12.) was calculated based on the experience of the team from piloting circular economy innovations in the RUNRES project. The exact cost of piloting was therefore provided as an estimate and the actual cost will be based on the document and procurement or the bill of quantities that will be provided by the professional architectural and planning services during project execution. All other costs may remain unchanged during the course of the project.

The time frame provided in the revised quotation indicates the estimated duration of executing each deliverable. Some deliverables may occur within the same period, and this detailed schedule of the phases of the project will be provided in a Gantt chart on submission of the final proposal and the schedule will be further readjusted and realigned following the feedback from the inception report.

The UKZN is VAT-registered, and VAT is included in the revised quotation. The UKZN charges 17.5% as overheads for its support to the project with administration, Local Area Network (LAN) facilities and computers, telephones, office space, printing, laboratory facilities, contract administration, and other ancillary services which are not individually cost on the quotation.

Please let me know if you need any further information.

Yours faithfully



Professor Alfred O. Odindo

Principal Investigator: The Rural-Urban Nexus: Closing the nutrient loop for city-region food system resilience (RUNRES)

School of Agricultural, Earth and Environmental Sciences
ISikole seSayensi yeZolimo, eZomhlaba kanye Nemvelo

Postal Address: University of KwaZulu-Natal, Pietermaritzburg Campus, Life Sciences Campus, Carbis Road, Scottsville, 3209, South Africa
Telephone: +27 (0)33 260 5515 **Facsimile:** +27 (0)33 261 6094 **Email:** saees@ukzn.ac.za **Website:** www.ukzn.ac.za

MOTIVATION FOR THE APPOINTMENT OF THE UNIVERSITY OF KWAZULU-NATAL AS THE PREFERRED SERVICE PROVIDER FOR THE DEVELOPMENT OF FINANCIAL MECHANISMS AND ECONOMIC MODELS TO FACILITATE THE CIRCULAR ECONOMY IN THE PROVISION OF FAECAL SLUDGE MANAGEMENT.

PURPOSE

This document aims to motivate the appointment of the University of KwaZulu Natal as the preferred service provider for developing Financial Mechanisms and Economic Models to facilitate the circular economy in providing Fecal Sludge Management services.

PROJECT OBJECTIVES

The Department of Water and Sanitation seeks to provide guidance on translating sanitation benefits into viable economic opportunities and build partnerships to drive investment in service delivery. There is an urgent need to develop financial mechanisms and economic models to support the circular economy transition in the sanitation value chain and to ensure economically and financially sustainable sanitation services under the 2016 National Sanitation Policy. The proposed project aims to co-design and pilot scalable options for delivering sustainable fecal sludge management services and to stimulate cross-sectoral thinking in the water and sanitation, waste management, and agricultural sectors. The outcome would be to build capacity for a more integrated and inclusive approach to the fecal sludge management service delivery and to provide opportunities for sustainable local business models. Where the public sector may face constraints to finance closed-loop processes through cost recovery, including household taxes and fees, opportunities for start-ups are provided in the form of an emerging enabling environment based on local, regional, and international experiences. SDG goal number 6 aims to ensure the universal availability and sustainable management of water and sanitation (UN, 2015). South Africa as a member of the United Nations and a committed signatory to achieving the Sustainable Development Goals (SDGs). One of its targets SDG 6.2, states that (By 2030, it will achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying particular attention to the needs of women and girls and those in vulnerable situations).

The Constitution of the Republic of South Africa (Act 108 of 1996) also provides the right of all people in South Africa to dignity and access to an environment that is not harmful to health and well-being and is sustainable and protected from pollution and degradation through legislative measures. Access to adequate sanitation services is essential to achieve the goals of improved health, safety, environmental standards, and dignity for all South Africans. The Water Services Act (Act 108 of 1997) section 3 (1) provides everyone a fundamental right to basic water supply and sanitation. The National Sanitation Policy (2016) acknowledges that sanitation has economic value. It also recognizes that the demand for resources derived from human excreta, such as plant nutrients and using treated sludge in the construction industry, can create self-sustaining sanitation businesses and encourage investment in sanitation. Thus, finding equitable, cost-effective, and sustainable solutions to improve agriculture, water and sanitation, and economic opportunities across the rural-urban nexus is critical to stabilizing rapid and unsustainable urbanization rates. Designing and implementing sustainable economic models may help to mobilize cross-sectoral financial mechanisms because of the cross-sectoral impact of sanitation value chains on agriculture, health, and the environment.

As a sector leader, the Department of Water and Sanitation (DWS) guides the sector toward transitioning into the circular economy and unlocking potential sanitation economic opportunities. DWS intends to mitigate the risks that may come with economic opportunities in a circular economy. The circular economy is a system that keeps sanitation products, components, and materials such as fecal sludge always at their highest utility and value. If human excreta is not safely managed, it may cause sanitation-related diseases and increase the nutrient load to water bodies, which makes water quality unfit for various uses while negatively affecting the environment. The move into a circular economy encompasses managing the stock of finite resources and the flows of renewable resources into economic benefits. The Department of Forestry, Fisheries, and the Environment (DFFE), in its Operation Phakisa Programme on waste management, focusing on the Bulk Industrial Waste Workstream, has developed an action plan which set targets for treating waste, including sewage sludge for beneficiation and diversion from disposing in landfill sites. At the bilateral meetings between DWS and DFFE regarding fecal sludge management, DFFE committed to supporting the DWS on initiatives to treat wastewater and fecal sludge to avoid disposing of these sludges in landfill sites due to limited space. Both fecal and wastewater sludges can be treated for beneficial use to recover resources utilized in various sectors. Collaborating with the WSAs, DWS, DFFE, Department of Agriculture, Department of Education, and research and academic institutions through revitalizing the sanitation task team is a step in the right direction.

The specific project objectives are as follows:

- To develop consolidated guidelines with financial mechanisms and economic models to facilitate a circular economy in Water Service Authorities (WSAs)
- To pilot a sustainable business model in a WSA environment to create opportunities for upscaling and replication.
- To develop strategic approaches for community buy-in, social acceptance, and payment for fecal sludge management services.

CHALLENGES WITHIN THE SANITATION, WASTE MANAGEMENT, AND AGRICULTURE SECTORS

Urbanization is a complex societal issue mainly driven by the evolving global economy and increasingly erratic climate, with nutrient mining also playing a pivotal role in eroding the main livelihood asset in rural communities-land. The demand for infrastructure, services, and basic needs such as housing, sanitation, and food security is growing, and state agencies are struggling to meet this demand. Informal settlements marked by unclear property rights are growing rapidly with increasing urbanization. In rural South Africa, farmers face challenges of sanitation where approximately three million ventilated improved pit latrines constructed by the government in response to the millennium development goals for universal sanitation in the last 15 years are currently filled-up. Most local authorities have neither a policy, plan, nor budget for fecal sludge management (FSM). While most Water Service Authorities (WSAs) commonly struggle with meeting the service delivery gap, the recovery and reuse of waste are often postponed as a task for the future, with service delivery gaps contributing to half of the municipal budget in many low-income countries. Sanitation improvement is often neglected in rural schools with facilities consisting of filthy, unhygienic, old, dry, and unimproved pit latrines. The current practices result in persistent pollution of air, underground water sources, and the environment in general. In instances where emptying is being implemented by the Water Service Authorities (WSA), considerable environmental impacts and space constraints are associated with the dumping of waste in hazardous landfills. The situation is worsened by a lack of guidelines, norms, and standards in the disposal of fecal sludge, with the disposal into central sewer systems overwhelming the wastewater treatment systems. The farmers also face considerable soil nutrient depletion and low fertilizer application rates, failing to meet the soil nutrient depletion rates or crop requirements. As a result, farmers face productivity loss, food insecurity, and poverty, further pushing them into urban communities for a better life.

TRANSITIONING TOWARDS REUSE AND THE CIRCULAR ECONOMY

A paradigm shift in thinking is required to transition from treating waste for safe disposal to designing for reuse while mitigating the challenges faced in the water and sanitation, waste management, and agricultural sectors. A circular bioeconomy approach could solve the sanitation, environmental pollution, and soil nutrient depletion challenges while creating new business cases in waste-based systems. Circular bioeconomy business models focused on reuse can shift the sanitation service chain from a cost-based to a value-driven service chain. If the current extract, produce, and dispose model continues, farmers will continue to mine valuable crop nutrients and organic matter, and the inevitable decline in yields will be insufficient to feed the burgeoning urban population from nutrient-depleted soils. Identifying and evaluating potential value propositions from waste resources could allow for cost recovery or cost savings in the sanitation sector, reduce municipal waste volumes, and extend landfills' lifetime with potential net emission and cost recovery benefits. To provide some statistics, globally, the potential revenues generated from the biomass value chain were estimated to exceed 295 billion by 2020, according to the World Economic Forum. Developing countries alone are estimated to spend over USD 46 billion yearly on conventional/unsustainable waste management technologies that do not facilitate nutrient recovery and reuse and would need to pay an extra USD 40 billion to meet the current service delivery targets (Le Courtois, 2012). The total costs are expected to surpass USD 150 billion by 2025 (Otoo et al. 2018). In addition, the annual capital investments needed for safe fecal waste management (SDG 6.2) are estimated at USD 49 billion (Hutton and Varughese, 2016). Developing sustainable business models for the circular economy to link waste management and sanitation with agriculture can offer opportunities to meet SDGs in water reuse (SDG 6), clean energy (SDG 7) and waste recovery and reuse (SDG 12), replenishing degraded soils (SDG 15) for sustainable production (SDG 2) and to build resilient cities (SDG 11). Recovering plant nutrients from human excreta and reuse in agriculture could capture 28% of the current N, P, and K consumption (Ellen MacArthur Foundation, 2013, 2017; ISWA, 2015). However, this approach faces limited awareness, uncertain public perceptions, few business opportunities, and limited municipal budget allocation to make the required investments.

It has been suggested that the limitations of the public sector in certain activities in the service chain could present an opportunity to leverage private capital in fecal sludge management services. Such sanitation systems could offer

opportunities for innovative and shared financial incentives for financing sanitation between households or 'front-end users' and new waste-based businesses or 'back-end users' that build on the demand for the products of sanitation and waste management to motivate a combined finance model and more robust operation and maintenance of complete sanitation systems. Significant regulatory and institutional shifts will be necessary to create an 'enabling' business environment and well-designed partnership agreements and financial mechanisms to facilitate this transition. Significant investments in market research, sustainable business models for cost savings and recovery, service chain actor buy-in, and innovative partnerships are necessary for scaling and sustaining such innovations. The public and emerging private sectors across most low- and middle-income countries face several bottlenecks, including financial, regulatory (slow approval processes, incomplete, unharmonized, and unclear regulations), and limited capacity to present viable business plans in the reuse market. The sanitation market includes relationships, transactions, and service providers of services that range from facility construction and maintenance to emptying and transportation, treatment, and reuse. Potential users have pay-and-go, landlords, homemakers, and tenants. Given this complexity, it is essential to unpack the following themes:

- Raising demand through sanitation marketing and financing mechanisms, including access to credit, subsidies, taxes, incentives, and other financing options.
- Finding mechanisms for private sector support to meet household-level sanitation demand (toilet construction, emptying transport services, treatment and reuse, disposal, and responsible waste management).

SCOPE AND APPROACH

The answer to these objectives revolves around business models and financing mechanisms or options embedded in the government's role in supporting sanitation business development, including appropriate regulation for small and medium enterprises. Sanitation businesses aim to increase their profits by selling their services to more customers or households, thus helping to end open defecation. Therefore, the government needs to provide financing opportunities, marketing support, and capacity-building opportunities. Where the cost of providing services to remote, hard to reach, and sparsely populated areas outweigh the revenue, the government may promote small businesses to provide services in those communities. Public support should be designed to not skew or distort the long-term viability of private businesses that may want to meet their profit goals by servicing fewer people with higher profit margin services. Incentive mechanisms should target small businesses that may shy away from working with governments due to prohibitive registration requirements and perceived regulatory restrictions. Learning from existing knowledge, various approaches could be used to encourage the adoption of improved sanitation while incorporating behaviour change communication. Such strategies include community approaches to total sanitation, marketing, and community-led total sanitation in rural and urban environments. While some of these models are doing well in other countries, others may require intensive literature review, and piloting will have to justify and validate their applicability in South Africa. A particular focus on sanitation marketing could encourage businesses to participate and adopt easy-to-access, socially acceptable, technically feasible, affordable, financially viable, and environmentally sustainable services. On financial viability, there is emerging consensus that sludge treatment plants should be built by the WSA or development partners and left to be run (O&M) by the private sector, which is regulated to protect public health and the environment. However, again, the literature review and the piloting will have to justify this assertion.

Solid partnerships and coordination of various government departments, development partners, the private sector, and research organizations are imperative to catalyze a demand-driven response from entrepreneurs and financiers to the needs of households and end users. End users should be well-represented and informed in such a partnership to enhance awareness and the ability to identify and verify product quality. The objective would be to create a community movement and sustain a new social norm that achieves an open defecation-free status for South Africa. Building on the RUNRES project experiences in the rural context, it is important to note that households in dispersed settlements, such as the Vulindlela rural community in KwaZulu-Natal, do not prioritize building improved sanitation facilities. Emerging knowledge in behavior change communication tailored to encourage the uptake of sanitation services requires a clear understanding of the demand elements and targeted messaging, including the co-creation of knowledge recognizing that practitioners may know less than poor households. It may also be important to realize that the drivers of ending open defecation may differ from the drivers of moving up the sanitation ladder. Therefore, the dissemination strategies used to address them should be different. Private players may implement context-specific digital sanitation tools to replace traditional marketing approaches and ensure effective service delivery. Sanitation marketing requires an understanding of the willingness and ability of households to pay for sanitation services and recovered resources such as agricultural products. Awareness creation and promotion may be effective for households with low willingness but high ability to pay for sanitation services.

Given the impact of sanitation on public health and its potential impact on groundwater contamination, transparent regulatory enforcements on containment, transportation, treatment, reuse, and disposal should be informed by practical experiences to strike a balance between business promotion and compliance. For instance, implementing new standards of licensing vehicles for emptying and transport should promote health and safety standards while supporting registration service providers. The government could also use tax exemptions and grants to support private businesses contributing to rural sanitation and circular economy. Financial mechanisms such as guarantees, lease-to-buy schemes, matching grants, and subsidized loans may be required to cover long-distance transportation costs in rural areas and start-up equipment for small businesses. Otherwise, small businesses may pass the costs on to households. To avoid market distortions, the subsidies should be designed to reduce the costs of services to the end user eventually. Validating the technical feasibility of deep-row entrenchment and alternative use of registered static stations or mobile secondary transfer vehicles may reduce transport costs and unregulated disposal in undesignated sites to reduce transport costs. Quality standards in ecological sanitation design (supporting emptying and reuse) should be reviewed to minimize dissatisfaction and enhance consistency. The experience in the WASH R&D center (formerly Pollution Research Group) provides lessons on the complexity of financing options in contracting emptying and treatment services in eThekweni WSA.

There are also challenges to assessing the impact and sustainability of the business models on society, the economy, and the environment relative to the counterfactual or 'business as usual.' Internalizing social, economic, and environmental externalities may justify public support through subsidies, tax incentives, grants, and venture capital financing to boost revenue flows and the financial viability of sanitation businesses (ADB, 2011). While on the one hand, some positive externalities may not be easily captured and monetized for a private company (Muspratt, 2016a), on the other hand, private businesses may face increasing pressure to contribute to corporate social responsibility (CSR) and to account for negative externalities, associated with their economic activities. SDG 12.6 encourages companies to adopt sustainable practices and to integrate sustainability information into their reporting cycle. The potential of CSR to support a circular economy transition will depend on both the private sector and, importantly, the government's desire to encourage business actors to achieve the SDGs (Fogelberg, 2015). An economic evaluation of business models to include externalities is important in CSR to support integrating financial values into corporate accounting. The local and international experiences will inform the development of the guidelines on financial mechanisms and business models, with specific guidelines on emptying, transportation, treatment, reuse, and disposal. Emphasis will be placed on the benefit to society, the economy, and the environment in evaluating the most sustainable business models.

MOTIVATION

The University of KwaZulu-Natal (UKZN) has the prerequisite qualifications to address the project objectives. UKZN is a top-ranked institution of higher learning in Africa that boasts a world-class beacon of excellence, the Water, Sanitation, and Hygiene Research and Development Center (WASH R&D), which lead research in the water and sanitation, waste management, and agriculture. The UKZN is an active member of the National and the Provincial Sanitation Task Team and has participated in several workshops and summits hosted by the Department to support the development of water and sanitation policies. The university leads several local projects through the WASH R&D based in Durban and the Centre for Transformative Agricultural and Food Systems (CTAFS) based in Pietermaritzburg. () The UKZN is the **ONLY** institution of higher learning in South Africa that is implementing cross-sectoral and multi-country research for a development project that facilitates Public Private Partnership and community-based approaches in fecal sludge management and beneficiation. The UKZN is participating in the international research project called Rural-Urban Nexus: Establishing a closed nutrient loop for city-region food systems (RUNRES). The project aims to close the nutrient cycle by safely recovering nutrients from organic waste, such as municipal organic waste and fecal and wastewater sludge, back to the soil to enhance sanitation, waste management, and food systems resilience. In South Africa, the project works with stakeholders involved in urban and peri-urban waste management, sanitation, and locally important crop value chain actors through a transdisciplinary innovation platform seeking practical solutions to environmental pollution, nutrient mining, and food security.

The RUNRES project is implemented in five partner countries: Switzerland, Ethiopia, Rwanda, the Democratic Republic of Congo, and South Africa. The UKZN projects include a partnership between uMsunduzi Municipality and Duzi Turf private company, where wastewater sludge, fecal sludge, and green waste from gardens are co-composted to produce compost used to fertilize lawns. The RUNRES project is also piloting the construction of a Decentralized Wastewater System (DEWATS), with pour-flush toilets and urine-diverting systems in a rural school located in Umgeni municipality. Currently, the school uses ventilated pit latrines. At Bishopstowe, the RUNRES project is piloting a community-based agroecology living laboratory and training center to raise awareness and

training in fecal sludge management, agroecology principles, and value addition. Through the transdisciplinary innovation system approach, the UKZN has already developed a strong network of stakeholders in the sanitation, waste management, and agriculture sectors, which fortifies its ability to deliver the proposed research. However, given the limitations in the administration of the Water Services Authority, the RUNRES project has not been able to implement a public sector-led business model.

Given that the DWS is pursuing the development of guidelines for financial mechanisms and economic models to build business cases that will sustain fecal sludge management initiatives in WSAs, the experiences and lessons learned from RUNRES projects locally and internationally will form science-based evidence in formulating the guidelines. An opportunity to pilot a fecal sludge management business model in a WSA environment that has arisen could help provide concrete evidence to support scalable public sector-led business models in fecal sludge management. The existing government grants framework targets low-income people; conversely, sanitation services are expected to be equitable, sustainable, efficient, and transparent. The guidelines are rooted in the sanitation policy user-pay principle. The guidelines will acknowledge the Free Basic Sanitation Strategy, which targets indigent households regarding access to free operation and maintenance of sanitation facilities through the Equitable Share grant. Although this motivation does not provide the details of how the project will be executed, the proposal will provide such details, including how the guidelines may look.

PROPOSED COLLABORATING ORGANIZATIONS

Institution	Contribution Details:
1. University of KwaZulu-Natal (UKZN) Center for Transformative Agricultural and Food Systems (CTAFS)	• Office space, internet access, communication, and other overheads, • Project administration • Library information services for systematic literature review, • Project coordination and institutional engagements • On-station and on-farm experimental and community-based demonstration trials on reusing recovered circular economy innovation products. • Capacity building and dissemination strategies on reusing recovered circular economy innovation products. • Project co-financing and technical support through the RUNRES project testing, piloting, and scaling pathways in the circular economy
2. University of KwaZulu-Natal Water, Sanitation, and Hygiene Research and Development (WASH R&D) Center (Formally Pollution Research Group)	• Laboratory and analytical support • Scientific experimentation and related equipment • Research for development support • Provision of technical support to the UKZN IPP and BORDA in the designing, testing, evaluation, and piloting of the guidelines on fecal sludge treatment systems
3. Msunduzi and Umngeni Municipalities in KZN	• Supply of feedstock such as the organic waste from the landfill for fecal sludge treatment • Supply of land to set up the testing and piloting of the fecal sludge treatment plant. • Support the implementation of the proposed fecal sludge treatment plant
4. University of KwaZulu-Natal Infrastructure Planning & Projects	• Support the appointment of professional architectural services, including concept and viability; document and procurement (and bill of quantities); and contract administration. • Support with land (geotechnical) surveys, waste management fees, and environmental impact assessments,
5. BORDA (Bremen Overseas Research and Development Agency)	• The UKZN has an existing memorandum of agreement with BORDA which will provide technical support to the UKZN IPP in designing, testing, evaluating, and piloting the guidelines on fecal sludge treatment. • With 45 years of experience in the field, BORDA has promoted innovative wastewater management systems such as Decentralized Wastewater Treatment Systems (DEWATS) and Faecal Sludge Treatment Plants (FSTPs). • BORDA has worked with various stakeholders in Africa, Asia, and Latin America to provide access to basic sanitation services and improve public health outcomes. • The organization's expertise in WASH, Faecal Sludge Management, and decentralized sanitation have been recognized globally, and its work has contributed significantly to achieving the United Nations' Sustainable Development Goal 6: Clean Water and Sanitation.
6. Umngeni Water PMB	• The UKZN, through the RUNRES project, has an existing memorandum of agreement with uMngeni Water to co-finance and support the piloting, evaluation, and scaling of sewage sludge and faecal sludge treatment and reuse. • UW has submitted the proposal for the piloting to the EXCO for review for budgetary support • Provision of land and infrastructural support for piloting the project • Supporting the operation and maintenance of the pilot project
7. ETH Zurich, Switzerland	• A technical and scientific support with the technical feasibility, financial viability, environmental assessment, and socioeconomic impact evaluations • Support with laboratory testing and evaluation of the recovered nutrients for international quality assurance • Co-financing the implementation of the project through the Swiss-funded RUNRES project
8. Department of Forestry Fisheries and Environment	• Support with the provision of organic waste for faecal sludge treatment and nutrient recovery
9. Department of Agriculture, Land Reform, and Rural	• Support with the incentives, dissemination or capacity building, and institutionalization of the nutrient recovery and reuse into the public

Development	extension system
10. Community-based organizations and Agricultural Cooperatives, including KwaZulu-Natal Christian Council and National Christian Economic Development Agency)	• Provides a provincial network of farmers as beneficiaries of the use of circular economy innovation products. • Support economic development, social acceptance, and adoption of circular economy products by beneficiaries.

PROJECT TEAM

Contact Person	Professor Alfred Odindo
Institution:	University of KwaZulu-Natal (UKZN), Pietermaritzburg
Division/(s)	The UKZN Center for Transformative Agricultural and Food Systems (CTAFS) and Water, Sanitation, and Hygiene Research and Development (WASH R&D) Center (Formerly Pollution Research Group)

RESEARCH EXPERTISE

1. Prof. Alfred Odindo (UKZN)	Prof. Odindo is an Associate Professor (Crop Scientist/Agronomist) in the School of Agricultural, Earth and Environmental Sciences (SAEES), University of KwaZulu-Natal (UKZN) in South Africa, and lead researcher at the Water, Sanitation & Hygiene Research & Development Centre (WASH R&D). He leads the Circular Economy cluster in The WASH R&D. Odindo has led several Water Research Commission projects focusing on nutrient recovery/reuse and the establishment of circular nutrient economies, including projects focusing on the integration of sanitation technologies with agricultural production (K5/2777), decentralized sanitation technologies for agricultural use (K5/2220), and managing human waste and wastewater by reframing nutrient recovery from innovative sanitation technologies (WRC/C2021/2022/00603). In 2019, Professor Odindo received the "Human Capital Development in the Water and Science Sector; Emerging Researcher Award" from the WRC, an award presented to recipients whose research and innovations have impacted and uplifted the water and sanitation sector in a variety of ways including transformation and redress, sustainable development solutions, empowerment of communities, informing policy and human capital development. Prof Odindo is the principal investigator of the RUNRES project in South Africa. His project implements a transdisciplinary innovation platform approach in engaging communities in co-designing and piloting safe, cost-effective, and sociably acceptable waste management and sanitation innovations to establish a circular economy.
2. Dr. Simon Gwara (UKZN)	Dr. Gwara is an early-stage researcher in the discipline of agricultural (resource) economics. He has professional experience in the dissemination and impact assessment of agricultural technologies and innovation systems in cross-sectoral environments, including sanitation, waste management, and agriculture. Before pursuing his doctoral research, he worked as a research associate for the International Maize and Wheat Improvement Center and the International Crops Research Institute for Semi-Arid Tropics. As the resource economist in the RUNRES-SA project, Simon has helped set up successful business models around ecological sanitation, co-composting, decentralized wastewater treatment systems, and community-based circular sanitation economy initiatives in agriculture. His doctoral research focused on the demand assessment of human excreta material in agriculture, focusing on social acceptance, ecological attitudes, and willingness to pay in rural communities of KwaZulu-Natal, South Africa. His research interest is implementing quantitative approaches in the sustainability assessment of circular bioeconomy systems, including the social, economic, and environmental impact assessment. He has received several awards, including the most recent ETH4D Doctoral Mentorship Program (ETH Zurich, Switzerland) early this year, the Norwegian State Educational Loan Fund (Bergen University, Norway), the African Doctoral Program (Stellenbosch University), Bill and Melinda Gates Foundation (UKZN doctoral fellow), and the African Economic Research Consortium (AERC MSc Fellow). He is currently implementing the financial evaluation of the RUNRES innovations in the South with mentorship from Dr. Konlambigue Matieyedou (IITA).
3. Prof. Stuart Ferrer (UKZN)	Prof. Ferrer is an Associate Professor (Agricultural Economics) at the School of Agricultural, Earth, and Environmental Sciences (SAEES), University of KwaZulu-Natal (UKZN) in South Africa. He has over twenty years of progressively responsible undergraduate and postgraduate teaching experience at UKZN. His expertise includes agribusiness finance, econometrics, agricultural policy analysis, operations research methods, and development economics. He has served as a consultant to the World Bank, USAID, the International Labour Organization (ILO), the Department of Land Affairs, the Department of Water Affairs, the Maruleng and Bushbuckridge Economic Development Initiative,

	Kwanalu, and the Agricultural Business Chamber, amongst others. He will support the financial modeling component of the project.
4. Prof. Johan Six	Prof Johan Six is a Full Professor Department of Environmental System Sciences ETH- Zurich, Switzerland; Assistant, Associate, Full, and Adjunct Professor at, the Department of Plant Sciences, University of California, Davis, the USA; and an Affiliated Professor Department of Soil and Crop Sciences, Colorado State University. He is the principal investigator of the RUNRES project in all five participating countries. He is a world-class researcher, ranked first in Switzerland and 24 globally in environmental sciences https://research.com/u/johan-six . Through his Sustainable Agroecosystems Group, he is currently leading several projects, including the Tropical Soil Erosion Dynamics (TropSEDs): Unraveling the roles of climate and land-use on the erosional transfer of carbon from source to sink through time in the Kasai Basin in DRC, the integrated soil fertility management for climate-smart intensification of maize-based cropping systems in Kenya, and Towards nutritional security through organic control of soil fertility in Mozambique. He is a member of several international committees and task forces, including the Biochar Research Advisory Board USA, Global Agriculture Climate Assessment, and President's Council of Advisors on Science and Technology (PCAST) Carbon Offsets Working Group, to name a few.
5. Dr. Ben Wilde	Dr. Benjamin Wilde is an ETH Zurich scientist who coordinates the RUNRES on-the-ground activities in South Africa and ensures that the project benefits from world-class research themes and cross-country experiences. He helps to implement research plans, research and project monitoring and evaluation tools, material flow analysis, and stakeholder engagements. He supports implementing a quality assurance program in the RUNRES project to ensure that the projects' agricultural products meet local and international quality standards. He also supports the evaluation of the regulatory context to inform policy on pathways of circular bioeconomy and agroecology transitions. He completed his doctoral research under Professor Six at ETH Zurich and has a background in natural resource planning.
6. Ndoda Zondo (UKZN):	Mr. Ndoda Zondo is the project coordinator for the RUNRES project in South Africa. He has an academic background in politics, philosophy, and law, including an honors degree in political science and a master's in development studies. Ndoda has much experience in stakeholder engagement, understanding local dynamics, and navigating social challenges. He has also supported the establishment of successful circular bioeconomy innovations in sanitation, waste management, and agriculture in South Africa.
7. Mr. Jacob Woelk (BORDA)	Jacob Woelki is the Country Director of BORDA in South Africa, a German non-profit organization that focuses on the development and implementation of sustainable sanitation solutions around the world. With a master's degree in international Land and Water Management from Wageningen University (NL), Jacob Woelki worked as a researcher with the United Nations University before joining BORDA as Country Director. He has extensive experience in sustainable development, implementing multi-level multi-stakeholder programs, executing and operationalizing fecal sludge treatment plants, wastewater, and greywater systems, and establishing training programs for pit emptiers. Additionally, he has worked on large-scale agricultural projects."

PROPOSED IMPLEMENTATION PLAN

Item	Deliverable	Implementation plan	Responsibility
1	Proposal	The proposal will provide full details of how the project will be executed, including the implementation strategy, theory of change, and monitoring and evaluation methodology. This will also include a detailed plan of achieving each deliverable and the detailed costs per deliverable.	This activity will be led by Dr. Simon Gwara (UKZN) under the tutelage of DWS project Manager(.), Prof. Alfred Odindo (UKZN), Prof. Stuart Ferrer (UKZN) and Prof. Johan Six (ETH Zurich) who are the senior scientists in the projects.
2	Project Inception Report	An inception report will follow the recommendations of the first reference group meeting. It will include the scope of the project, goals to be achieved, potential interventions, a detailed understanding of on-site sanitation service systems, tariff or billing mechanisms, and consumer recommendation domains. This living document will be refined through reference group meetings and implementation data. The detailed roles and responsibilities of the project team will be clarified, and refinement of the Gantt chart, milestones, and project timeframe.	This activity will be led by Dr. Simon Gwara (UKZN) under the guidance of Prof. Alfred Odindo (UKZN), Prof. Stuart Ferrer (UKZN), and Prof. Johan Six (ETH Zurich), who are the senior scientists in the projects. The DWS Project Manager will also guide the development of this deliverable. Some technical and engineering components of the project design, including architectural layouts and plans, implementation strategy, and

Item	Deliverable	Implementation plan	Responsibility
			evaluation framework, will be provided by Jacob Woelki from BORDA.
3	Literature Review Report	A literature review will be conducted to scope the global, regional, and local status of sanitation service provision and cost recovery mechanisms in rural and urban communities. The review will include lessons learned from global, regional, and models in similar contexts and from the USAID Resilience Waters project. The review will also synthesise frameworks for evaluating the sustainability of alternative models for society, the economy, and the environment. The literature review will also include financial mechanisms and inclusive and demand-led sanitation approaches such as sanitation marketing, community-led total sanitation, and behaviour change communication approaches. Other review components will include social acceptance and approaches for raising awareness on providing sanitation services and cost recovery mechanisms.	Dr. Simon Gwara, who has recently published two systematic literature reviews on the social acceptance and willingness to pay for circular economy innovation products, will lead this activity under the supervision of Prof. Alfred Odindo (UKZN), Prof. Stuart Ferrer (UKZN) and Prof. Johan Six (ETH Zurich) who are the senior scientists in the projects. The DWS Project Manager will also guide the development of this deliverable.
4	Identified faecal sludge management opportunities that can be translated into cashflows	This activity will include a draft chapter or report on sector opportunities that can be translated into financial models or cashflows in the sanitation service chain related to WSAs. This should consist of circular economy opportunities aimed at resource recovery and reuse and assessment of the investment climate using the existing global and regional frameworks such as the World Bank's 'Doing Business' ranking indicators and business regulations, the World Economic Forum (WEF) Global Competitive Index (GCI) tools and the OECD Entrepreneurship Measurement Framework (EMF). The process will be incorporated into the final guidelines.	This activity will be led by Dr. Simon Gwara (UKZN), who is a scientist in the RUNRES project and will be guided with the research support of Prof. Alfred Odindo (UKZN), Prof. Stuart Ferrer (UKZN) and Prof. Johan Six (ETH Zurich) who are the senior scientists in the projects. The DWS Project Manager will also guide the development of this deliverable.
5	Skills Transfer Plan for DWS Officials	This activity will involve the development of a detailed Skills Transfer Plan with tangible outputs for DWS officials responsible for faecal sludge management. The execution of a skills transfer plan will include implementation of a blended learning or capacity building approach. The approach will use a mix of face-face and online workshops to build the capacity of policymakers to design, test, pilot, evaluate and scale the proposed innovations beyond this project.	This activity will be led by Dr. Simon Gwara (UKZN), who is a scientist in the RUNRES project and will be guided by the research support of Prof. Alfred Odindo (UKZN), Dr. Ben Wilde (ETH Zurich) and Prof. Johan Six (ETH Zurich) who are the senior scientists in the projects. The DWS Project Manager will also guide the development of this deliverable.
6	Incentive mechanisms	This activity will develop incentive mechanisms for WSAs, households, the private sector, community-based organizations, and public institutions to facilitate faecal sludge management. The results of the investment climate analysis using frameworks described in deliverable five above will provide a framework for the possible interventions that could support cost recovery and business investments to support the transition towards a circular economy. Incentive mechanisms include reviewing government subsidies or concessional loans, low-interest loans, viability gap financing, sanitation tax, disposal incentives, tipping fees, syndicated loans, and revolving funds.	This activity will be led by Dr. Simon Gwara (UKZN), and Profwho is a scientist in the RUNRES project and will be guided with the research support of Prof. Alfred Odindo (UKZN), Prof. Stuart Ferrer (UKZN) and Prof. Johan Six (ETH Zurich) who are the senior scientists in the projects. The DWS Project Manager will also guide the development of this deliverable. The activity will also be supported by the RUNRES project international, regional, and local scientists, as described in the expertise section above.
7	Guide participation of Civil Society Organisations in circular	Community-Based Organizations (CBOs) and social enterprises have been seen to occupy a significant role in circular economy businesses. A review of existing social enterprise models such as the X-RUNNER in Peru, SOIL in Haiti, and SANERGY in	This activity will be led by Dr. Simon Gwara (UKZN), who is a scientist, and Mr. Ndoda Zondo, who is the project coordinator in the RUNRES project and will be guided with the research support

Item	Deliverable	Implementation plan	Responsibility
	economy and create viable enterprises.	Kenya will provide an important framework for a detailed guideline on the participation and sustainability of civil society organizations in circular economy businesses. The role of private truck-emptying companies and associations will be explored. Their roles in lobbying, co-learning from peers, demarcating operational boundaries (licensing), co-developing rules for plying trucks and emptying fees, and in collaborating with local government to regulate tariffs and peer-monitoring to mitigate indiscriminate disposal of sludge and barriers will also be fully explored in this activity.	of Prof. Alfred Odindo (UKZN), Prof. Stuart Ferrer (UKZN) and Prof. Johan Six (ETH Zurich) who are the senior scientists in the projects. The DWS Project Manager will also guide the development of this deliverable. The activity will also be supported by the RUNRES project international, regional, and local scientists, as described in the expertise section above.
8	Develop approaches that will or could entice partnerships promoting Public Private Partnerships (PPP), Corporate Social Investment, Government to Government Partnerships, and Community-Based Organisations in faecal sludge management.	The project is already working with the Department of Water and Sanitation (DWS) through the national and provisional structures, including the national sanitation task team (NSTT) and the provincial sanitation task team (PSTT) implemented by the DWS for inclusive and evidence-based policymaking. The has been supporting the development of the national Faecal Sludge Management Strategy. Through inter-sectoral engagements, the RUNRES project has developed a relationship with the Department of Forestry Fisheries and Environment (DFFE), Department of Agriculture, Lands and Rural Development (DALRD), the DWS and Umngeni Water, the Umngeni Municipality, and other Water Service Authorities (WSAs). These relationships are essential for creating harmonized regulatory frameworks and blended financial mechanisms required to de-risk investments in the circular economy. Through the RUNRES TdIP (PDIA or soft systems methodologies), various approaches will be proposed to achieve synergies through cross-sectoral investment	This activity will be led by Dr. Simon Gwara (UKZN), who is a scientist in the RUNRES project and will be guided with the research support of Prof. Stuart Ferrer (UKZN), Prof. Alfred Odindo (UKZN), and Prof. Johan Six (ETH Zurich) who are the senior scientists in the projects. The DWS Project Manager will also guide the development of this deliverable. The activity will also be supported by the RUNRES project international, regional, and local scientists, as described in the expertise section above.
9.	Innovative approaches for billing consumers who are not indigent beneficiaries	Innovative cost recovery mechanisms will be explored to enhance self-sustenance and the sustainability of the sanitation service chain. Tariff or billing principles based on, for instance, the polluter or user-pay principle, will be explored for piloting, including transfer systems and subsidy mechanisms to de-risk investment in the sanitation service chain.	This activity will be led by Dr. Simon Gwara (UKZN), who is a scientist in the RUNRES project and will be guided with the research support of Prof. Stuart Ferrer (UKZN), Prof. Alfred Odindo (UKZN), and Prof. Johan Six (ETH Zurich) who are the senior scientists in the projects. The DWS Project Manager will also guide the development of this deliverable. The activity will also be supported by the RUNRES project international, regional, and local scientists, as described in the expertise section above.
11.	The economic model for each faecal sludge treatment option	The World Bank Water and Sanitation Program Evaluation methodology, material flow analysis, techno-economic analysis, and socioeconomic surveys are among the methods that will be used to evaluate the viability of each identified business model. Other methods, such as life cycle assessment, may be employed to assess the environmental performance of each model. Financial transactions such as infrastructure and capital expenditure, sanitation tax, collection fees, license fees, disposal fees, disposal incentives, O&M, and budget support will be evaluated using economic and financial analysis methods. This activity will include the analysis of the potential key stakeholders, business	This activity will be led by Dr. Simon Gwara (UKZN), who is a scientist in the RUNRES project and will be guided with the research support of Prof. Stuart Ferrer (UKZN), Prof. Alfred Odindo (UKZN), and Prof. Johan Six (ETH Zurich) who are the senior scientists in the projects. The DWS Project Manager will also guide the development of this deliverable. The activity will also be supported by the RUNRES project international, regional, and local scientists, as described in the expertise section above.

Item	Deliverable	Implementation plan	Responsibility
		cases, and models in the FSM service chain. Individual households, businesses, and public institutions are the three key stakeholders in the provision (access), operation, and maintenance of sanitation facilities for end-users. The provision, emptying, treatment, and disposal of on-site sanitation in South Africa, like most regions, is the mandate of the local government public utilities. Private companies may be contracted to construct toilet facilities in rural communities to provide desludging or emptying services. Opportunities for tipping fees to improve revenue flows for the operation and maintenance of faecal sludge treatment plants will be explored. Various models exist in the literature, including the private emptying and transportation model; transfer station model; non-profit (social enterprise or NGO) model; FSM by the public sector for collection, transportation, and treatment; licensing or permit model; call center or a customer help center model; scheduled desludging sanitation tax model; incentivized disposal model; private sector model, farmer + truck operator partnership model; co-composting model; and the town cluster approach model. These will be fully explored, including their logistical variations and feasible transportation radius, e.g., 25 to 30 km, for the viability of the plant.	
12.	Social Acceptability Approaches.	This study may include synthesis of demand assessment, willingness to pay and affordability studies, social acceptance (for instance, using the theory of planned behaviour, dissemination strategies and awareness creation using participatory video methodology and most significant change stories and exploration of innovative approaches to improve social acceptance of the recovered products and sanitation systems for instance, pelletization, certification, and fortification.	This activity will be led by Dr. Simon Gwara (UKZN), who is a scientist in the RUNRES project and will be guided with the research support of Prof. Stuart Ferrer (UKZN), Prof. Alfred Odindo (UKZN), and Prof. Johan Six (ETH Zurich) who are the senior scientists in the projects. The DWS Project Manager will also guide the development of this deliverable. The activity will also be supported by the RUNRES project international, regional, and local scientists, as described in the expertise section above.
13.	Decision-making matrix for treating faecal sludge for beneficial use	Based on deliverables 1 to 12, the RUNRES monitoring, evaluation, and learning (MEL) and quality assurance program (QUAP), the multicriteria decision assessment (MCDA) will be used to evaluate the suitability of each faecal sludge treatment option for beneficial use. Other approaches such as the pathway identification protocol, innovation scalability matrix, scaling readiness, scaling scan and the scaling pathway decision tree (USAID, 2018), and sustainability assessment (CBA, LCA, TEA) will be integrated into the decision-making matrix to assess the suitability of each treatment approach. Financial implications. Benefits for emptying operations. Reduces emptying cost to households. Requires subsidy. Improve cost recovery of FSM. The proposed key indicators may include financial, regulatory and monitoring, environmental and health, and institutional implications, which will be integrated into the multicriteria decision-making matrix. Most of the templates have been tested in the RUNRES project evaluation strategy.	This activity will be led by Dr. Simon Gwara (UKZN), who is a scientist in the RUNRES project and will be guided with the research support of Prof. Stuart Ferrer (UKZN), Prof. Alfred Odindo (UKZN), and Prof. Johan Six (ETH Zurich) who are the senior scientists in the projects. The DWS Project Manager will also guide the development of this deliverable. The activity will also be supported by the RUNRES project international, regional, and local scientists, as described in the expertise section above.

Item	Deliverable	Implementation plan	Responsibility
13.	Draft guidelines with financial mechanisms and economic models to facilitate a circular economy in Water Services Authorities.	This deliverable will provide the first draft guidelines for developing financial mechanisms and economic models to facilitate a circular economy in Water Services Authorities. Inputs from deliverables 1 to 6 will be synthesised into this first draft, including comments from the reference group and project management meetings. The draft guideline will be piloted for practical implementation in the next deliverable 8.	This activity will be led by Dr. Simon Gwara (UKZN) and Prof. Stuart Ferrer (UKZN). However, the activity will be guided by the research support of Prof. Alfred Odindo (UKZN) and Prof. Johan Six (ETH Zurich), the project's senior scientists. The DWS project manager will also guide the development of this deliverable. The activity will also be supported by the RUNRES project international, regional, and local scientists, as described in the expertise section above. Some technical and engineering components of the project design, including architectural layouts and plans, implementation strategy, and evaluation framework, will be provided by Jacob Woelki from BORDA.
14.	Pilot guidelines in a WSA context	The activity will implement a viable sludge treatment technology to determine the effectiveness of the financial mechanisms and business model in a WSA environment. This activity will build on the RUNRES project, which in phase I, focused on piloting various circular bioeconomy led by the UKZN, uMngeni Water, and a private company (Duzi Turf). The deliverable will use lessons from the sewage sludge management plant to design a pilot faecal sludge management innovation currently proposed to be taking place at uMngeni Municipality at Mpophomeni WWTP. uMngeni Water has already submitted a proposal to the EXCO for review to co-finance this initiative. Phase II of the RUNRES project uses this opportunity to implement scaling pathways in WSA to achieve cross-sectoral synergies in waste management, water and sanitation, and agriculture, including the private sector. The RUNRES project will offer scientific support and make funding available for co-financing the implementation of the FSTP. BORDA, which has an MoU with UKZN, is working with the RUNRES project in implementing the DEWATS plant in uMngeni Municipality. BORDA is also working with the RUNRES project to design and test an FSTP at Bishopstowe Farm in KZN. This will provide further scientific evidence for optimizing the proposed pilot plant at Mpophomeni WWTP.	The project team will lead this activity with the guidance of Prof. Odindo and the DWS project manager. The team will include the RUNRES project coordinator Mr. Ndoda Zondo. RUNRES scientist Dr. Simon Gwara. BORDA country director Mr. Jacob Woelki; uMngeni Water operations manager Mr. Eric Nene; Prof. Johan Six and Dr. Ben Wilder (ETH Zurich) and other participating teams in the private sector, including the selected service provider.
15.	Reference Group and Project Management meetings	A project reference group will be established to examine the content and track the direction of the project. The quarterly reference group meetings will include invited experts or content matter specialists to provide guidance on the direction of the project. Project management meetings may will discuss operational issues from their areas to the reference group meetings, look for collaborative solutions, disseminate needed information and actions resulting from the reference group meetings to their areas, and act as a team for the sake of the project, among other issues. The project is proposed to have 12 (eight) reference group and 12 (twelve) project management meetings	The project team will lead this activity with the guidance of Prof. Odindo and the DWS project manager. The team may include the RUNRES project coordinator Mr. Ndoda Zondo. RUNRES scientist Dr. Simon Gwara. BORDA country director Mr. Jacob Woelki; uMngeni Water operations manager Mr. Eric Nene. Prof. Johan Six, Dr. Ben Wilder (ETH Zurich), and other participating teams in the private sector, including the selected service provider. The team may also include cross-sectoral actors from DFFE, DALRRD, and members of the WSAs.

Item	Deliverable	Implementation plan	Responsibility
16	Final Draft guidelines with financial mechanisms and economic models to facilitate a circular economy	Based on the outcome of the reference group and project management meetings, the final guidelines will be submitted to DWS for adoption	This activity will be led by Dr. Simon Gwara (UKZN) and Prof. Stuart Ferrer (UKZN). However, the activity will be guided by the research support of Prof. Alfred Odindo (UKZN) and Prof. Johan Six (ETH Zurich), the project's senior scientists. The DWS project manager will also guide the development of this deliverable. The RUNRES project international, regional, and local scientist Mr. Jacob Woelki from BORDA will also support the activity.
17.	Close out report	Upon completion of the project team will submit a close-out report alluding to achievements, challenges, and proposals for improvement of ongoing implementation and future initiatives.	UKZN

Item	Additional deliverable	Implementation plan	Responsibility
18	Processes regulating emptying services	This activity will synthesize deliverables 1 to 4 to develop processes guiding the sanitation service chain, including regulating containment, emptying, transportation, treatment and recovery, and reuse and safe disposal in a WSA area of jurisdiction. The process will be incorporated into the final guidelines. This may include licensing pit emptiers and transportation and enabling institutional support for faecal sludge management services.	This activity will be led by Dr. Simon Gwara (UKZN), who is a scientist in the RUNRES project and will be guided with the research support of Prof. Stuart Ferrer (UKZN), Prof. Alfred Odindo (UKZN), and Prof. Johan Six (ETH Zurich) who are the senior scientists in the projects. The DWS Project Manager will also guide the development of this deliverable. The activity will also be supported by the RUNRES project international, regional, and local scientists, as described in the expertise section above.



QUOTATION

The development of the guidelines for financial mechanisms and economic models to facilitate circular economy in the provision of faecal sludge management services

Item No.	Deliverable	Name of Team Member	Position in Team Specialty	Days or Quantity	Rate	Total Cost	Timeframe/Months
5.1	Proposal	Prof. Alfred Odindo	Principal Investigator	10	2'000.00	20'000.00	
		Dr. Simon Gwara	Project Resource Economist/Social Scientist	50	1'500.00	75'000.00	
		Mr. Ndoda Zondo	Project Cordinantor/Social Scientist	10	1'000.00	10'000.00	
		Prof. Stuart Ferrer	Project Economist	10	2'000.00	20'000.00	
		Mr. Jacob Woelki	Project Engineer	5	1'500.00	7'500.00	
		Prof. Johan Six	Project Scientist	2	2'000.00	4'000.00	
		Dr. Ben Wilde	Project Scientist	2	1'500.00	3'000.00	
		Subtotal		89		139'500.00	3
5.2	Project Inception Report	Prof. Alfred Odindo	Principal Investigator	10	2'000.00	20'000.00	
		Dr. Simon Gwara	Project Resource Economist/Social Scientist	30	1'500.00	45'000.00	
		Mr. Ndoda Zondo	Project Cordinantor/Social Scientist	10	1'000.00	10'000.00	
		Prof. Stuart Ferrer	Project Economist	4	2'000.00	8'000.00	
		Mr. Jacob Woelki	Project Engineer	4	1'500.00	6'000.00	
		Subtotal		58		89'000.00	3
5.3	Literature Review Report	Prof. Alfred Odindo	Principal Investigator	10	2'000.00	20'000.00	
		Dr. Simon Gwara	Project Resource Economist/Social Scientist	60	1'500.00	90'000.00	
		Prof. Stuart Ferrer	Project Economist	10	2'000.00	20'000.00	
		Mr. Jacob Woelki	Project Engineer	5	1'500.00	7'500.00	
		Prof. Johan Six	Project Scientist	3	2'000.00	6'000.00	
		Dr. Ben Wilde	Project Scientist	3	1'500.00	4'500.00	
		Subtotal		91		148'000.00	3
5.4	Skills Transfer Plan for DWS Officials	Prof. Alfred Odindo	Principal Investigator	5	2'000.00	10'000.00	
		Dr. Simon Gwara	Project Resource Economist/Social Scientist	30	1'500.00	45'000.00	
		Mr. Ndoda Zondo	Project Cordinantor	5	1'000.00	5'000.00	
		Subtotal		40		60'000.00	3
5.4.1.	Excusion of the plan including blended capacity building workshops to improve the capacity of policymakers to design, test, pilot, evaluate and scale the proposed innovations.	Prof. Alfred Odindo	Principal Investigator	10	2'000.00	20'000.00	
		Prof. Stuart Ferrer	Project Economist	10	2'000.00	20'000.00	
		Mr. Jacob Woelki	Project Engineer	10	1'500.00	15'000.00	
		Dr. Simon Gwara	Project Resource Economist/Social Scientist	40	1'500.00	60'000.00	
		Mr. Ndoda Zondo	Project Cordinantor/Social Scientist	10	1'000.00	10'000.00	
		Subtotal		160		125'000.00	3
5.5	Identified faecal sludge management opportunities that can be translated into cashflows	Prof. Alfred Odindo	Principal Investigator	10	2'000.00	20'000.00	
		Dr. Simon Gwara	Project Resource Economist/Social Scientist	80	1'500.00	120'000.00	
		Prof. Stuart Ferrer	Project Economist	80	2'000.00	160'000.00	
		Mr. Jacob Woelki	Project Engineer	20	1'500.00	30'000.00	
		Prof. Johan Six	Project Scientist	2	2'000.00	4'000.00	
		Dr. Ben Wilde	Project Scientist	2	1'500.00	3'000.00	
		Subtotal		194		337'000.00	6
5.6	Incentive mechanisms	Prof. Alfred Odindo	Principal Investigator	10	2'000.00	20'000.00	
		Dr. Simon Gwara	Project Resource Economist/Social Scientist	40	1'500.00	60'000.00	
		Prof. Stuart Ferrer	Project Economist	15	2'000.00	30'000.00	
		Mr. Jacob Woelki	Project Engineer	5	1'500.00	7'500.00	
		Mr. Ndoda Zondo	Project Cordinantor/Social Scientist	10	1'000.00	10'000.00	
		Subtotal		70		127'500.00	3
5.7	Guide participation of civil society organisations in circular economy and create viable enterprises.	Prof. Alfred Odindo	Principal Investigator	10	2'000.00	20'000.00	
		Dr. Simon Gwara	Project Resource Economist/Social Scientist	40	1'500.00	60'000.00	
		Prof. Stuart Ferrer	Project Economist	10	2'000.00	20'000.00	
		Mr. Ndoda Zondo	Project Cordinantor/Social Scientist	20	1'000.00	20'000.00	
		Subtotal		60		120'000.00	2
5.8	Develop approaches that to promote partnerships in faecal sludge management.	Prof. Alfred Odindo	Principal Investigator	10	2'000.00	20'000.00	
		Dr. Simon Gwara	Project Resource Economist/Social Scientist	40	1'500.00	60'000.00	
		Prof. Stuart Ferrer	Project Economist	15	2'000.00	30'000.00	
		Mr. Jacob Woelki	Project Engineer	10	1'500.00	15'000.00	
		Mr. Ndoda Zondo	Project Cordinantor/Social Scientist	20	1'000.00	20'000.00	
		Subtotal		75		145'000.00	3
5.9	Innovative approaches for billing consumers who are not indigent beneficiaries	Prof. Alfred Odindo	Principal Investigator	10	2'000.00	20'000.00	
		Dr. Simon Gwara	Project Resource Economist/Social Scientist	60	1'500.00	90'000.00	
		Prof. Stuart Ferrer	Project Economist	70	2'000.00	140'000.00	
		Mr. Jacob Woelki	Project Engineer	20	1'500.00	30'000.00	
		Prof. Johan Six	Project Scientist	2	2'000.00	4'000.00	
		Dr. Ben Wilde	Project Scientist	2	1'500.00	3'000.00	
		Subtotal		164		287'000.00	5
5.10.	Decision-making matrix for treating faecal sludge for beneficial use	Prof. Alfred Odindo	Principal Investigator	10	2'000.00	20'000.00	
		Dr. Simon Gwara	Project Resource Economist/Social Scientist	30	1'500.00	45'000.00	
		Prof. Stuart Ferrer	Project Economist	30	2'000.00	60'000.00	
		Mr. Jacob Woelki	Project Engineer	20	1'500.00	30'000.00	
		Subtotal		90		155'000.00	4

**School of Agricultural, Earth and Environmental Sciences
ISikole seSayensi yeZolimo, eZomhlaba kanye Nemvelo**

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Item No.	Deliverable	Name of Team Member	Position in Team	Specialty	Days or Quantity	Rate	Total Cost	Timeframe/Months
5.11	The economic model for each faecal sludge treatment option	Prof. Alfred Odindo Dr. Simon Gwara Prof. Stuart Ferrer Mr. Jacob Woelki Subtotal	Principal Investigator Project Resource Economist/Social Scientist Project Economist Project Engineer		10 95 95 20 220	2'000.00 1'500.00 2'000.00 1'500.00	20'000.00 142'500.00 190'000.00 30'000.00 382'500.00	8
5.12	Pilot guidelines in a WSA context in KZN province.	Prof. Alfred Odindo Mr. Ndoda Zondo Dr. Simon Gwara Prof. Stuart Ferrer Mr. Jacob Woelki Subtotal	Principal Investigator Project Coordinator/Social Scientist Project Resource Economist/Social Scientist Project Economist Project Engineer		40 40 40 40 200	2'000.00 1'000.00 1'500.00 2'000.00 1'500.00	80'000.00 40'000.00 60'000.00 80'000.00 60'000.00 320'000.00	
5.12.1.	Professional Architectural Service Fees for built drawings and construction of proposed the pilot facility including the six stages as per SACAP Act 44 of 2000 namely inception, concept viability, bill of quantities/document and procurement), contract administration, and close out including costs associated with geotechnical/land survey and waste management licensing.		Professional Architectural Services and Planning Fees (10%) Construction costs		1 1	360'000.00 3'240'000.00	360'000.00 3'240'000.00	
	Subtotal				402		3'920'000.00	12
5.13	Updated Guidelines with financial mechanisms and economic models to facilitate circular economy in WSAs.	Prof. Alfred Odindo Dr. Simon Gwara Prof. Stuart Ferrer Mr. Jacob Woelki Subtotal	Principal Investigator Project Economist Project Economist Project Engineer		5 40 40 20 105	2'000.00 1'500.00 2'000.00 1'500.00	10'000.00 60'000.00 80'000.00 30'000.00 180'000.00	3
5.14	Reference Group and Project Management meetings.	Prof. Alfred Odindo Mr. Ndoda Zondo Dr. Simon Gwara Prof. Stuart Ferrer Mr. Jacob Woelki Incentives and reimbursements Subtotal	Principal Investigator Project Coordinator/Social Scientist Project Resource Economist/Social Scientist Project Economist Project Engineer External members of the reference group		36 39 36 36 36 36 147	2'000.00 1'000.00 1'500.00 2'000.00 1'500.00 5'000.00	72'000.00 39'000.00 54'000.00 72'000.00 54'000.00 180'000.00 471'000.00	4
5.15	Final Consolidated guidelines with financial mechanisms and economic models to facilitate circular economy	Prof. Alfred Odindo Dr. Simon Gwara Prof. Stuart Ferrer Mr. Jacob Woelki Subtotal	Principal Investigator Project Resource Economist/Social Scientist Project Economist Project Engineer		10 50 50 20 130	2'000.00 1'500.00 2'000.00 1'500.00	20'000.00 75'000.00 100'000.00 30'000.00 225'000.00	4
5.16	Close out report	Prof. Alfred Odindo Dr. Simon Gwara Prof. Stuart Ferrer Mr. Jacob Woelki Mr. Ndoda Zondo Subtotal	Principal Investigator Project Economist Project Economist Project Engineer Project Coordinator		10 20 20 10 20 70	2'000.00 1'500.00 2'000.00 1'500.00 1'000.00	20'000.00 30'000.00 40'000.00 15'000.00 20'000.00 105'000.00	3
	Total project costs						6'956'500.00	
	UKZN overheads (17.5%)						1'217'387.50	
	Subtotal						8'173'887.50	
	Value Added Tax (VAT 15%)						1'226'083.13	
	Total costs						9'399'970.63	

Budget Notes

- Human resources figures are based on the UKZN rates
- The cost of piloting the innovation plan in the WSA setting is based on the RUNRES co-financing model and given as an estimate. The exact cost will be based mainly on the document and procurement or the bill of quantities that will be provided by the architectural and planning services during project execution. The budget item for piloting the guidelines was calculated based on the experience from piloting circular economy innovations in the RUNRES project to mitigate the adverse effect of potential deviations on the success of the project. All other costs may remain constant during the course of the project.
- The time frame indicates the estimated duration of executing each deliverable. Some deliverables may occur within the same period, and this detailed schedule of the phases of the project will be provided in a Gantt chart on submission of the final proposal. The detailed schedule will be further readjusted and realigned following the recommendations from the inception report.
- The UKZN charges 17.5% as overheads for its support to the project with administrative support, Local Area Network (LAN) facilities and computers, telephone calls, office space, printing services, laboratory facilities, contract administration, and other ancillary services which are not individually cost on the project.

School of Agricultural, Earth and Environmental Sciences
ISikole seSayensi yeZolimo, eZomhlaba kanye Nemvelo

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Page 16 of 16

PART A INVITATION TO BID

YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF THE (NAME OF DEPARTMENT/ PUBLIC ENTITY)							
BID NUMBER:		CLOSING DATE:			CLOSING TIME:		
DESCRIPTION		THE DEVELOPMENT OF THE GUIDELINES FOR FINANCIAL MECHANISMS AND ECONOMIC MODELS TO FACILITATE CIRCULAR ECONOMY IN THE PROVISION OF FAECAL SLUDGE MANAGEMENT SERVICES					
BID RESPONSE DOCUMENTS MAY BE DEPOSITED IN THE BID BOX SITUATED AT (STREET ADDRESS)							
BIDDING PROCEDURE ENQUIRIES MAY BE DIRECTED TO				TECHNICAL ENQUIRIES MAY BE DIRECTED TO:			
CONTACT PERSON		Alfred Odindo		CONTACT PERSON		Alfred Odindo	
TELEPHONE NUMBER				TELEPHONE NUMBER			
FACSIMILE NUMBER				FACSIMILE NUMBER			
E-MAIL ADDRESS		Odindoa@ukzn.ac.za		E-MAIL ADDRESS		Odindoa@ukzn.ac.za	
SUPPLIER INFORMATION							
NAME OF BIDDER		University of KwaZulu-Natal					
POSTAL ADDRESS		University Road, Chiltern Hills, Westville, 3269					
STREET ADDRESS		King George V Avenue, Glenwood, Durban, 4041					
TELEPHONE NUMBER		CODE		NUMBER			
CELLPHONE NUMBER							
FACSIMILE NUMBER		CODE		NUMBER			
E-MAIL ADDRESS							
VAT REGISTRATION NUMBER		4860209305					
SUPPLIER COMPLIANCE STATUS		TAX COMPLIANCE SYSTEM PIN:		OR	CENTRAL SUPPLIER DATABASE No:		
			96881425GM			MAAA 0128726	
B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE		TICK APPLICABLE BOX]		B-BBEE STATUS LEVEL SWORN AFFIDAVIT		[TICK APPLICABLE BOX]	
		x ☐ Yes ☐ No				☐ Yes ☐ No	
[A B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE/ SWORN AFFIDAVIT (FOR EMES & QSEs) MUST BE SUBMITTED IN ORDER TO QUALIFY FOR PREFERENCE POINTS FOR B-BBEE]							
ARE YOU THE ACCREDITED REPRESENTATIVE IN SOUTH AFRICA FOR THE GOODS /SERVICES /WORKS OFFERED?		x ☐ Yes ☐ No [IF YES ENCLOSE PROOF]		ARE YOU A FOREIGN BASED SUPPLIER FOR THE GOODS /SERVICES /WORKS OFFERED?		☐ Yes x ☐ No [IF YES, ANSWER THE QUESTIONNAIRE BELOW]	
QUESTIONNAIRE TO BIDDING FOREIGN SUPPLIERS							
IS THE ENTITY A RESIDENT OF THE REPUBLIC OF SOUTH AFRICA (RSA)?						☐ YES ☐ NO	
DOES THE ENTITY HAVE A BRANCH IN THE RSA?						☐ YES ☐ NO	
DOES THE ENTITY HAVE A PERMANENT ESTABLISHMENT IN THE RSA?						☐ YES ☐ NO	
DOES THE ENTITY HAVE ANY SOURCE OF INCOME IN THE RSA?						☐ YES ☐ NO	
IS THE ENTITY LIABLE IN THE RSA FOR ANY FORM OF TAXATION?						☐ YES ☐ NO	
IF THE ANSWER IS "NO" TO ALL OF THE ABOVE, THEN IT IS NOT A REQUIREMENT TO REGISTER FOR A TAX COMPLIANCE STATUS							

PART B

TERMS AND CONDITIONS FOR BIDDING

1. BID SUBMISSION:

- 1.1. BIDS MUST BE DELIVERED BY THE STIPULATED TIME TO THE CORRECT ADDRESS. LATE BIDS WILL NOT BE ACCEPTED FOR CONSIDERATION.
- 1.2. **ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS PROVIDED (NOT TO BE RE-TYPED) OR IN THE MANNER PRESCRIBED IN THE BID DOCUMENT.**
- 1.3. THIS BID IS SUBJECT TO THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT, 2000 AND THE PREFERENTIAL PROCUREMENT REGULATIONS, 2017, THE GENERAL CONDITIONS OF CONTRACT (GCC) AND, IF APPLICABLE, ANY OTHER SPECIAL CONDITIONS OF CONTRACT.
- 1.4. **THE SUCCESSFUL BIDDER WILL BE REQUIRED TO FILL IN AND SIGN A WRITTEN CONTRACT FORM (SBD7).**

2. TAX COMPLIANCE REQUIREMENTS

- 2.1 BIDDERS MUST ENSURE COMPLIANCE WITH THEIR TAX OBLIGATIONS.
- 2.2 BIDDERS ARE REQUIRED TO SUBMIT THEIR UNIQUE PERSONAL IDENTIFICATION NUMBER (PIN) ISSUED BY SARS TO ENABLE THE ORGAN OF STATE TO VERIFY THE TAXPAYER'S PROFILE AND TAX STATUS.
- 2.3 APPLICATION FOR TAX COMPLIANCE STATUS (TCS) PIN MAY BE MADE VIA E-FILING THROUGH THE SARS WEBSITE WWW.SARS.GOV.ZA.
- 2.4 BIDDERS MAY ALSO SUBMIT A PRINTED TCS CERTIFICATE TOGETHER WITH THE BID.
- 2.5 IN BIDS WHERE CONSORTIA / JOINT VENTURES / SUB-CONTRACTORS ARE INVOLVED, EACH PARTY MUST SUBMIT A SEPARATE TCS CERTIFICATE / PIN / CSD NUMBER.
- 2.6 WHERE NO TCS PIN IS AVAILABLE BUT THE BIDDER IS REGISTERED ON THE CENTRAL SUPPLIER DATABASE (CSD), A CSD NUMBER MUST BE PROVIDED.
- 2.7 NO BIDS WILL BE CONSIDERED FROM PERSONS IN THE SERVICE OF THE STATE, COMPANIES WITH DIRECTORS WHO ARE PERSONS IN THE SERVICE OF THE STATE, OR CLOSE CORPORATIONS WITH MEMBERS PERSONS IN THE SERVICE OF THE STATE."

NB: FAILURE TO PROVIDE / OR COMPLY WITH ANY OF THE ABOVE PARTICULARS MAY RENDER THE BID INVALID.

SIGNATURE OF BIDDER:


.....

CAPACITY UNDER WHICH THIS BID IS SIGNED:
(Proof of authority must be submitted e.g. company resolution)

...Deputy Vice Chancellor ...

DATE:

17 April 2023
.....

BIDDER'S DISCLOSURE

1. PURPOSE OF THE FORM

Any person (natural or juristic) may make an offer or offers in terms of this invitation to bid. In line with the principles of transparency, accountability, impartiality, and ethics as enshrined in the Constitution of the Republic of South Africa and further expressed in various pieces of legislation, it is required for the bidder to make this declaration in respect of the details required hereunder.

Where a person/s are listed in the Register for Tender Defaulters and / or the List of Restricted Suppliers, that person will automatically be disqualified from the bid process.

2. Bidder's declaration

- 2.1 Is the bidder, or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest¹ in the enterprise, employed by the state? **YES/NO✓**

- 2.1.1 If so, furnish particulars of the names, individual identity numbers, and, if applicable, state employee numbers of sole proprietor/ directors / trustees / shareholders / members/ partners or any person having a controlling interest in the enterprise, in table below. N/A

Full Name	Identity Number	Name of institution	State

- 2.2 Do you, or any person connected with the bidder, have a relationship

¹ the power, by one person or a group of persons holding the majority of the equity of an enterprise, alternatively, the person/s having the deciding vote or power to influence or to direct the course and decisions of the enterprise.

with any person who is employed by the procuring institution? **YES/NO**✓

2.2.1 If so, furnish particulars:

.....

2.3 Does the bidder or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest in the enterprise have any interest in any other related enterprise whether or not they are bidding for this contract? **YES/NO**✓

2.3.1 If so, furnish particulars:

.....

3 DECLARATION

I, the undersigned, (name)...Mosa Moshabela.....in submitting the accompanying bid, do hereby make the following statements that I certify to be true and complete in every respect:

- 3.1 I have read and I understand the contents of this disclosure;
- 3.2 I understand that the accompanying bid will be disqualified if this disclosure is found not to be true and complete in every respect;
- 3.3 The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However, communication between partners in a joint venture or consortium² will not be construed as collusive bidding.
- 3.4 In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications, prices, including methods, factors or formulas used to calculate prices, market allocation, the intention or decision to submit or not to submit the bid, bidding with the intention not to win the bid and conditions or delivery particulars of the products or services to which this bid invitation relates.
- 3.4 The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.
- 3.5 There have been no consultations, communications, agreements or arrangements made by the bidder with any official of the procuring

² Joint venture or Consortium means an association of persons for the purpose of combining their expertise, property, capital, efforts, skill and knowledge in an activity for the execution of a contract.

SBD4

institution in relation to this procurement process prior to and during the bidding process except to provide clarification on the bid submitted where so required by the institution; and the bidder was not involved in the drafting of the specifications or terms of reference for this bid.

- 3.6 I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to bids and contracts, bids that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted from conducting business with the public sector for a period not exceeding ten (10) years in terms of the Prevention and Combating of Corrupt Activities Act No 12 of 2004 or any other applicable legislation.

I CERTIFY THAT THE INFORMATION FURNISHED IN PARAGRAPHS 1, 2 and 3 ABOVE IS CORRECT.

I ACCEPT THAT THE STATE MAY REJECT THE BID OR ACT AGAINST ME IN TERMS OF PARAGRAPH 6 OF PFMA SCM INSTRUCTION 03 OF 2021/22 ON PREVENTING AND COMBATING ABUSE IN THE SUPPLY CHAIN MANAGEMENT SYSTEM SHOULD THIS DECLARATION PROVE TO BE FALSE.



17 April 2023

.....
Signature

.....
Date

...DVC: Research.....
Position

...University of KwaZulu-Natal.....
Name of bidder



water & sanitation

Department:
Water and Sanitation
REPUBLIC OF SOUTH AFRICA

TERMS OF REFERENCE FOR THE DEVELOPMENT OF THE GUIDELINES FOR FINANCIAL MECHANISMS AND ECONOMIC MODELS TO FACILITATE CIRCULAR ECONOMY IN THE PROVISION OF FAECAL SLUDGE MANAGEMENT SERVICES

Branch: Water and Sanitation Services Management

Chief Directorate: Sanitation Services Support

Directorate: Sanitation Operational and Capacity Support

Department of Water and Sanitation

Private Bag X313

Pretoria

0001

TABLE OF CONTENTS

1. PURPOSE	5
2. BACKGROUND	5
3. PROJECT OBJECTIVES	8
4. PROJECT SCOPE	8
5. PROJECT DELIVERABLES	9
6. METHODOLOGY	13
7. DURATION	13
8. PROJECT MANAGEMENT	13
9. REQUIRED EXPERTISE	13
10. SKILLS DEVELOPMENT	14
11. OWNERSHIP AND CONFIDENTIALITY	14

LIST OF ABBREVIATIONS

COGTA:	Department of Cooperative Governance and Traditional Affairs
CBO:	Community Based Organisation
DFFE:	Department of Forestry, Fisheries and the Environment
DWS:	Department of Water and Sanitation
FSTP:	Faecal Sludge Treatment Plant
MOU:	Memorandum of Understanding
NDP:	National Development Plan
PPP:	Public Private Partnership
SDG:	Sustainable Development Goals
STATS SA:	Statistics South Africa
UKZN:	University of KwaZulu Natal
WRC:	Water Research Commission
WSA:	Water Services Authority
WSP:	Water Services Provider
WSI:	Water Services Institution
WWTW:	Wastewater Treatment Works

TERMINOLOGY

“Financial mechanism” means various funding streams to fund the provision of faecal sludge management services and its terms and conditions for expenditure. It includes incentives, grants, donor funding, revenue recovery etc.

“Economic model” means a simplified description of reality designed to predict economic scenarios towards investment speculation and proving financial viability for various innovations of managing faecal sludge, transitioning from a linear economy towards a circular economy.

1. PURPOSE

The project intends to develop guidelines aiming at transforming faecal sludge management in the Water Services Authorities (WSAs) and public institutions into a commercially viable resource which is safely managed for beneficial use. In doing so the University of KwaZulu Natal (UKZN) is expected to:

- Develop economic models in the sanitation value chain and provide guidance appropriate for various faecal sludge treatment options and categories of WSAs to facilitate circular economy.
- Identify supporting financial mechanisms that can fund faecal sludgement management services as supplements to public grants to facilitate initiatives towards sanitation circular economy.

2. BACKGROUND

- 2.1 South Africa as a member state to the United Nations has committed and are signatory to the achievement of the Sustainable Development Goals (SDGs). One of its targets SDG 6.2 states that “By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations”.
- 2.2 The SDG target for sanitation coincided with the South African National Development Plan (NDP) which also sets a sanitation target for the provision of improved sanitation for all by 2030.
- 2.3 The Constitution of the Republic of South Africa (Act 108 of 1996) provides the right of all people in South Africa to dignity and access to an environment that is not harmful to their health and well-being and is sustainable and protected from pollution and degradation through legislative measures. Access to adequate sanitation services is important to achieve goals of improved health, safety, environmental standards, and dignity for all South Africans. The Water Services Act (Act 108 of 1997) section 3 (1) provides for a basic right of access to basic water supply and basic sanitation to everyone.
- 2.4 The National Sanitation Policy (2016) acknowledges that sanitation has economic value. It also recognises that the demand for the resources that are derived from human excreta such as plant nutrients and use of treated sludge in the construction industry can create self-sustaining sanitation businesses which could attract investment in sanitation, reducing dependence on public sector funding to finance new infrastructure or maintaining such.
- 2.5 The economic models should also help to mobilise cross-sectoral financial mechanisms because of the impact of sanitation value chain on agriculture, health and the environment.

- 2.6 The Department of Water and Sanitation (DWS) as a sector leader has a responsibility to guide the sector in taking steps to transition sanitation into the circular economy and unlock potential sanitation economic opportunities. The intention of DWS is to guide WSAs of potential risks and mitigation measures that may come with economic opportunities towards sanitation circular economy. There is limited data on the quality and quantity of sludge generated in WSAs. The production of certain products such as biogas rely on specific quality and consistent supply. Should there be a risk of lack of supply the production will stop. Social acceptability should be taken into consideration when deciding on the target market. The guidelines need to alert WSAs of the early warnings or risks to avoid when deciding on the options for beneficial use.
- 2.7 In the sanitation context, the circular economy replaces the current linear model of food consumption, excrete of human waste into sanitation facilities (where the sludge accumulates), at a certain time there is a need for emptying faecal sludge in septic tanks or pits for disposal. The "Circular" economy is a system that keeps sanitation products, components, and materials such as faecal sludge at their highest utility and value at all times for resource recovery, recycling and beneficial use. Human excreta which is not safely managed, may cause sanitation related diseases and increase the nutrient load to water bodies and changing the water quality to be unfit for various uses while negatively affecting the environment.
- 2.8 The move into circular economy encompasses managing the stock of finite resources such as carbon based fossil fuels (coal) and replace it with renewable biochar; phosphorus which is mined in the environment and replace it with phosphorus from urine; and recover these resources from human excreta as flows of renewable resources into economic benefits. There is also an opportunity to recycle the final effluent and repurpose it to other uses such as the cooling agents in manufacturing industry which does not need potable water for its operation.
- 2.9 The Department of Forestry, Fisheries and the Environment (DFFE) on its Operation Phakisa Programme focussing on Bulk Industrial Waste Workstream has developed an action plan which set targets for treating waste including sewage sludge for beneficiation and divert from disposing in landfill sites. At the bilateral meetings between DWS and DFFE regarding faecal sludge management, DFFE has committed to support the DWS on initiatives to treat wastewater and faecal sludge to avoid disposing these sludges in landfill sites due to limited space. Both faecal and wastewater sludge can be treated for beneficial use to recover resources that can be utilised in various sectors. To meaningfully contribute to the sustainability challenge, the technical feasibility and financial viability of environmentally sustainable circular economy business models in sanitation need to be fully understood, especially how they impact the three pillars of sustainability which are society, economy and environment. Exploration of science based decision support systems could help to support sustainable options.
- 2.10 The DWS intends to provide guidance on translating sanitation benefits into cashflows which make business solutions viable and drive investment as well as recover costs of providing sanitation services in a sustainable manner.

- 2.11 There is an urgent need to develop financial mechanisms and business models to support circular economy transition in the sanitation value chain and to ensure economically and financially sustainable sanitation services in accordance with National Sanitation Policy (2016).
- 2.12 The existing government grants framework is targeting the poor, and on the other hand the sanitation services are expected to be equitable, sustainable, efficient and transparent. The proposed guidelines are rooted on the sanitation policy user pay principle, therefore users and households who are not indigent are required to pay for services. The guidelines will acknowledge Free Basic Sanitation Strategy which is targeting the indigent households in terms of access to free operation and maintenance of sanitation facilities through the Equitable Share grant.
- 2.13 The proposed guidelines will be developed in consensus with the National Treasury and COGTA for exploring innovative models and mechanisms for disbursement, incentives and use of applicable grants in accordance with National Sanitation Policy (2016) supporting the circular economy.
- 2.14 The DWS had considered several institutions and private sector that can produce practical and implementable guidelines based on their hands-on involvement in sanitation circular economy, various faecal sludge treatment and beneficial use options. The Water Research Commission (WRC) was also considered on this assignment. WRC has been involved in number of faecal sludge management pilot studies through funding the research and also project managing the research studies. It was then decided that the preferred service provider should be identified to work directly with DWS based on hands-on experience in conducting the actual research work and technical expertise.
- 2.15 The DWS decided upon UKZN as the preferred service provider based on its participation in the international research project called Rural-Urban Nexus: Establishing a Closed Nutrient Loop for City-Region Food System (RUNRES). The project is aiming at establishing the nutrient cycle by recovering nutrients from organic waste such as faecal, green waste and wastewater sludge back to the soil as fertiliser thus enhancing food production, achieving a "circular economy" and contributing to livelihoods, food security and environmental protection.
- 2.16 RUNRES programme is implemented in five partner countries namely, Switzerland, Ethiopia, Rwanda, Democratic Republic of Congo and South Africa. Therefore UKZN has experience and expertise in faecal sludge management circular economy projects that involves various approaches such as Public Private Partnerships in Msunduzi Municipality and community based. UKZN is already working with communities in agricultural activities including co-compost in Bishopstowe Learning Centre which is based in Pietermaritzburg. Another advantage is that UKZN will use data from its research studies and make use of international network of scientists and from countries participating in RUNRES to inform the development of the proposed guidelines. UKZN is therefore the most appropriate institutions to produce practical and implementable guidelines.

3. PROJECT OBJECTIVES

The project objectives are as follows:

- 3.1 To develop consolidated guidelines with financial mechanisms and economic models to facilitate circular economy in WSAs.
- 3.2 To pilot an economic model in a WSA environment that will create an opportunity of upscaling and replication.
- 3.3 To develop strategic approaches for achieving community buy in, social acceptance and payment of faecal sludge management services by households.
- 3.4 To develop incentives to facilitate faecal sludge management.
- 3.5 To develop a decision making matrix for faecal sludge treatment innovations aligned with economic models.

4. PROJECT SCOPE

The scope of works include but not limited to:

- 4.1. Conduct literature review on approaches and methods used globally in communities raising awareness of faecal sludge management services to ensure social acceptance and payment of services provided.
- 4.2. Develop decision making matrix for innovative treating faecal sludge for beneficial use such as co treatment in WWTW, co-composting, deep row entrenchment, decentralised wastewater treatment, faecal sludge treatment plant, repurpose WWTW to FSTP, Black Soldier Fly, planted drying beds, thermal drying and pelletizing.
- 4.3. Develop economic models for each faecal sludge treatment option.
- 4.4. Develop strategic approaches for achieving community buy in, social acceptance and payment for faecal sludge management services provided.
- 4.5. Provide guidance on incentive mechanisms for various role players to facilitate faecal sludge management and to support business opportunities in sanitation circular economy.
- 4.6. Provide guidance on possible markets and opportunities that can be translated into cashflows in the sanitation value chain.
- 4.7. Develop approaches that will or could entice partnerships promoting Public Private Partnerships (PPP), Corporate Social Investment, Government to Government Partnerships and Community Based Organisations in faecal sludge management.
- 4.8. Provide guidance in participation of CBO's in circular economy and create viable enterprises.
- 4.9. Provide innovative approaches and options of billing consumers who are not indigent beneficiaries residing in rural and peri urban settlements.
- 4.10. Provide guidelines with financial mechanisms and economic models to facilitate circular economy in WSAs. These are various models and scenarios in respect of different opportunities that can be created in all categories of WSAs.
- 4.11. Develop draft consolidated guidelines financial mechanisms and economic models to facilitate circular economy in the provision of faecal sludge management services.
- 4.12. Pilot guidelines in a WSA context to test their effectiveness and practicality.
- 4.13. Develop final consolidated guidelines for financial mechanisms and economic models to facilitate circular economy in the provision of faecal sludge management services.

- 4.14. Develop and Skills transfer plan and implement this plan through out the rolling out of this project. The skills development plan is targeting the officials in the Chief Directorate: Sanitation Services Support and DWS Regional Sanitation Coordinators.

5. PROJECT DELIVERABLES

The project deliverables are as follows:

ITEM	DELIVERABLE	DESCRIPTION	RESPONSIBILITY
5.1	Proposal	Provide a proposal stating how the project will be executed. The proposal must include costs per deliverable. The costs of this project will include all the deliverables and the timeline (36 months) as outlined in the below.	UKZN
5.2	Project Inception Report	An Inception Report describes the scope of the project, goals to be achieved, potential interventions, understanding of sanitation service for on-site sanitation systems in the entire sanitation value chain and areas requiring payment of service by the consumers. It also includes understanding of establishing reference group as well as consultation and user engagements. Clarify roles and responsibilities of the team. Furthermore it should include project schedule to determine milestones and timeframe for project execution.	UKZN & DWS
5.3	Literature Review Report	A review of literature globally and locally on the provision of services to communities with the intention of collecting payment in both rural and urban communities. This should include lessons from various models implemented internationally. The need to express benefits from the service to society, economy and the environment in other words sustainability assessment. The literature review must consider best practices on methods used globally and locally by other programmes targeting communities in formal settlements in urban and rural settlements who have been served through government grants and subsidies. The acceptable practices should bring the examples that are applicable in a South African context. The considerations	UKZN

ITEM	DELIVERABLE	DESCRIPTION	RESPONSIBILITY
		must be made on recovering operational costs to ensure sustainable sanitation services. The literature review should examine approaches and methods such as sanitation marketing used globally in engaging communities with the intention of raising awareness on provision of sanitation services to ensure social acceptance and payment of services provided.	
5.4	Skills Transfer Plan for DWS officials	Prepare a detailed Skills Transfer Plan with tangible outputs for DWS officials responsible for faecal sludge management. The skills transfer should be from concept to product development. . Skills Transfer Plan will outline the methodology on how this will be done throughout the project implementation	UKZN
5.5	Identified faecal sludge management opportunities that can be translated into cashflows	Draft a chapter which will later be consolidated in the guidelines on faecal sludge management opportunities that can be translated into cashflows in the sanitation service chain by WSAs. The opportunities should aim at producing sanitation products instead of waste and improve revenue.	UKZN
5.6	Incentive mechanisms	Develop incentive mechanisms for WSAs, households, private sector, community based organisations, civil society organisations and public institutions to facilitate faecal sludge management and to support business opportunities in sanitation circular economy. These will include among others a scenario of economic models per opportunity.	UKZN
5.7	Provide guidance in participation of Civil Society Organisations in circular economy and create viable enterprises.	The guide should provide practical approaches to facilitate sustainability and financial viability of community based faecal sludge management initiatives.	UKZN

ITEM	DELIVERABLE	DESCRIPTION	RESPONSIBILITY
5.8	Develop approaches that will or could entice partnerships promoting Public Private Partnerships (PPP), Corporate Social Investment, Government to Government Partnerships and Community Based Organisations in faecal sludge management.	Provide guidance on various institutional arrangements options, and their pros and cons in managing faecal sludge across the sanitation value chain.	UKZN
5.9	Innovative approaches for billing consumers who are not indigent beneficiaries	Guidance should be provided on innovative methods to pay sanitation accounts for consumers who are not indigent to ensure sustainability of faecal sludge management services. In most cases consumers who are not indigent and residing in rural and peri urban settlements do not receive bills.	UKZN
5.10	Decision making matrix for treating faecal sludge for beneficial use	A chronological criteria to be used by WSAs in deciding on the preferred innovation within circular economy and local context. Consider following treatment options co-treatment in WWTW, co-composting, deep row entrenchment, decentralised wastewater treatment, faecal sludge treatment plant, repurpose WWTW to FSTP, Black Soldier Fly, planted drying beds, thermal drying and pelletizing. Highlight activities to be regulated and incorporated into municipal Bylaws.	UKZN
5.11	Economic model for each faecal sludge treatment option	Economic models developed for each treatment options namely; co-treatment in WWTW, co-composting, deep row entrenchment, decentralised wastewater treatment, faecal sludge treatment plant, repurpose WWTW to FSTP, Black Soldier Fly, planted drying beds, thermal drying and pelletizing.	UKZN
5.12	Social Acceptability Approaches.	Strategic approaches for achieving community buy in, social acceptance and payment for faecal sludge management services provided.	UKZN

ITEM	DELIVERABLE	DESCRIPTION	RESPONSIBILITY
5.13	Draft guidelines with financial mechanisms and economic models to facilitate circular economy in WSAs.	Draft guidelines for financial mechanisms and economic models with various scenarios to facilitate circular economy in WSAs.	UKZN
5.14	Pilot guidelines in a WSA context in KZN province.	Pilot an appropriate financial mechanism(s) and the most successful and profitable economic model(s) developed in a WSA environment to test their effectiveness and practicality, and then make necessary refinements. The pilot should be conducted in one WSA in a period not exceeding 12(twelve) months.	UKZN and DWS
5.15	Updated Guidelines with financial mechanisms and economic models to facilitate circular economy in WSAs.	Update the guidelines based on lessons learnt from the pilot. Updated guidelines with financial mechanisms and economic models to facilitate circular economy in WSAs.	UKZN
5.16	Reference Group and Project Management meetings.	Establish a reference group to examine the content and track the direction of the guidelines. Participate in 12 (twelve) Reference Group meetings and 18 (eighteen) Project Management Meetings in a period of 36 months. Present progress and deliverables in all reference group meetings.	DWS UKZN
5.17	Final Consolidated guidelines with financial mechanisms and economic models to facilitate circular economy.	Final Consolidated Guidelines for financial mechanisms and economic models to facilitate circular economy in WSAs. The guidelines should provide various scenarios that are relevant to WSAs, PPP and community based organisations. The guidelines will be regarded as final after adoption by DWS.	UKZN
5.18	Close out report	Upon completion of the project submit a close out report alluding to achievements, challenges and proposals for improvement of on-going implementation and future similar initiatives.	UKZN

6. METHODOLOGY

The UKZN is required to propose a detailed methodology on how to undertake the assignment. A detailed project plan and costs per deliverable will also be required.

7. DURATION

The project is expected to be implemented over a period of 36 months. The date for signing the contract with the UKZN will mark the commencement date of the project.

8. PROJECT MANAGEMENT

All project management and coordination on behalf of the Department shall be through a single point of contact designated as the Project Manager. The UKZN shall designate a Contract Manager who will provide a single point of contact for management and coordination of the work. All work performed pursuant to this contract shall be coordinated between the two project managers. The Chief Directorate: Sanitation Services Support will manage and monitor the project including the administrative and contractual matters.

The UKZN will be required to submit quarterly progress reports. Progress reports should be aligned to the approved implementation plan and terms of reference for this assignment. Upon completion of the project the UKZN will be required to submit a close out report alluding to achievements, challenges and proposals for improvement of on-going implementation and future similar initiatives.

Payment will be based on deliverables instead of time based. All reports should be submitted to the Department in both hard and soft copies. DWS will review all deliverables and allow the UKZN to make amendments where it is necessary. No payment will be made where there is outstanding work not completed satisfactorily by the Service Provider as per the outlined deliverables. Disbursements must be calculated as part of the deliverables in the proposal.

9. REQUIRED EXPERTISE

The project team should have vast knowledge of the water and sanitation services sector throughout the value chain. Have a good understanding of the sanitation sector and municipal legislative framework. Demonstrate knowledge and experience in development of research studies related to safe recovery of nutrients from organic waste; wastewater and faecal sludge management; circular economy; monitoring, evaluation and learning; community development; socio-economic issues within the country and worldwide; and project management. The team should have financial skills and understand the water and sanitation services economics. The team should consist of amongst others, Researcher (minimum qualification - Masters Degree), Institutional and Social Expert (Social Science Degree),

Scientist or Environmentalist (Bachelor of Science or Degree in Environmental Health/ Science/ Management) and Economists (Economic related post graduate Degree).

10. SKILLS DEVELOPMENT

The Department's policy requires that the use of external resources must benefit the human resource within the Department itself. The UKZN will therefore be expected to work in close co-operation with the DWS Project Manager and other DWS officials as part of the skills development and skills transfer. Further to this, the UKZN must in the proposal indicate the methodology to be implemented in skills development and skills transfer. The DWS will review and input into the skills development and Skills Transfer Plan.

11. OWNERSHIP AND CONFIDENTIALITY

The DWS will become the owner of all documents and the deliverables produced within the context of this assignment. All the information should be treated with confidentiality and may not be communicated or made available to any person outside DWS and may not be published, either during the current of the Agreement or thereafter, without the prior consent of DWS.

For further information please contact:

Technical Enquiries:

Ms. Lusanda Mfenqa-Agbasi

Telephone: (012) 336 8996

Email: agbasil@dws.gov.za

**TAX COMPLIANCE STATUS**

PIN Issued

UNIVERSITY OF KWAZULU-NATAL
PRIVATE BAG X54001
WESTVILLE
4000

Enquiries should be addressed to SARS:**Contact Detail**

SARS
Alberton
1528

Contact Centre Tel: 0800 00 SARS (7277)
SARS online: www.sars.gov.za

Details

Taxpayer Reference Number: 9063151162

Always quote this reference]
[number when contacting SARS

Issue Date:

2021/07/27

Dear Taxpayer

TAX COMPLIANCE STATUS PIN ISSUED

The South African Revenue Service (SARS) has issued your tax compliance status (TCS) PIN as indicated below:

TCS Details:	
Taxpayer Name	University Of Kwazulu-Natal
Trading Name	UNIVERSITY OF KWAZULU-NATAL
Tax Reference Number(s)	IT - 9063151162 Vat - 4860209305 PAYE - 7400749323
Purpose of Request	Good Standing
Request Reference Number	0009213444GS2707211519328
PIN	96881425GM
PIN Expiry Date	27/07/2022

You may authorise a third party to view your TCS by providing them the PIN. The PIN only allows the third party access to your TCS. All other tax information remains secure.

Your TCS displayed is based on your compliance as at the date and time the PIN is used.

You may cancel this PIN at any time before the expiry date reflected above. Once cancelled, a third party will not be able to verify your TCS.

SARS reserves the right to cancel this PIN in the event that it was fraudulently issued or obtained.

Should you have any other queries please call the SARS Contact Centre on 0800 00 SARS (7277). Remember to have your taxpayer reference number at hand when you call to enable us to assist you promptly.

Sincerely

ISSUED ON BEHALF OF THE SOUTH AFRICAN REVENUE SERVICE



CSD REGISTRATION REPORT

SUPPLIER IDENTIFICATION

CSD cannot electronically verify the identity of a supplier other than a South African Individual / Sole Proprietor (through Home Affairs) or a company registered at the Companies and Intellectual Property Commission (CIPC). It is the responsibility of an organ of state supply chain practitioner to obtain supporting documentation to verify the identity and legitimacy of this supplier.

Supplier number	MAAA0128726	Have Bank Account	Yes
Is supplier active?	Yes	Total annual turnover	More than R50 million
Allow associates?	Yes	Financial year start date	01 Mar 2017 00:00:00:000
Supplier type	State Owned Entity	Created by	nkambules@nra.co.za
Supplier sub-type	Tertiary Institution	Created date	17 May 2016 19:11:09:000
Legal name	University of KwaZulu Natal	Edit by	nkambules@nra.co.za
Identification type	Organ Of State ID Number	Edit date	19 Oct 2022 15:04:10:430
Government breakdown	Tertiary Institution	Restricted Supplier	No
Country of origin	South Africa		

SUPPLIER INDUSTRY CLASSIFICATION INFORMATION

INDUSTRY CLASSIFICATION 1

Main group	Education		
		Core industry	Education
Division	Education	% share of annual turnover	100.00

SUPPLIER CONTACT INFORMATION

CONTACT 1

Contact type	Bid Office	Cellphone number	072 170 2050
Is this your preferred Contact?	Yes	Do you want this contact to also be a CSD user ?	No
Name(s)	Smangele Khanyisile	Created by	nkambules@nra.co.za
Surname	Nkambule	Created date	17 May 2016 19:11:10:273





CSD REGISTRATION REPORT

Identification type	South African Identification Number	Edit by	csd_datafix@treasury.gov.za
Prefer communication via email	Yes	Edit date	16 Aug 2022 10:16:17:950
Email address	nkambules@ukzn.ac.za		
CONTACT 2			
Contact type	Bid Office	Telephone number	031 260 7962
Is this your preferred Contact?	Yes	Cellphone number	082 834 7350
Name(s)	Ronnie	Do you want this contact to also be a CSD user ?	No
Surname	Lutchmipersadh	Created by	nkambules@nra.co.za
Identification type	South African Identification Number	Created date	17 May 2016 19:11:10:367
Prefer communication via email	Yes	Edit by	ngwenyat4@ukzn.ac.za
Email address	lutchmipersadhr@ukzn.ac.za	Edit date	16 Aug 2022 10:13:33:923
CONTACT 3			
Contact type	Administration	Telephone number	0312602036
Is this your preferred Contact?	No	Cellphone number	082 965 6656
Name(s)	Thandeka	Do you want this contact to also be a CSD user ?	No
Surname	Ngwenya	Created by	nkambules@nra.co.za
Identification type	South African Identification Number	Created date	27 Oct 2017 13:28:28:737
Prefer communication via email	Yes	Edit by	nkambules@nra.co.za
Email address	ngwenyat4@ukzn.ac.za	Edit date	15 Jul 2021 10:13:38:920
CONTACT 4			
Contact type	Administration, Finance	Telephone number	0312608878
Is this your preferred Contact?	No	Cellphone number	083 272 4173
Name(s)	Siphesihle Nonsikelelo	Do you want this contact to also be a CSD user ?	Yes





CSD REGISTRATION REPORT

Surname	Mpembe	Created by	nkambules@nra.co.za
Identification type	South African Identification Number	Created date	27 Oct 2017 13:28:28:767
Prefer communication via email	Yes	Edit by	nkambules@nra.co.za
Email address	mpembes@ukzn.ac.za	Edit date	27 Oct 2017 13:28:28:767

SUPPLIER ADDRESS INFORMATION

ADDRESS 1

Is this a preferred address?	Yes	Ward Number	18
Address line 1	Private Bag X54001	Country	South Africa
Address line 2	Durban	This address S/A delivery	Yes
Suburb	Chiltern Hills	This address S/A payment	Yes
Province	KwaZulu-Natal	Created by	nkambules@nra.co.za
Municipality	eThekweni	Created date	09 May 2016 15:55:25:000
City	Westville	Edit by	nkambules@nra.co.za
Postal code	3630	Edit date	17 May 2016 19:11:10:147

ADDRESS 2

Is this a preferred address?	No	Ward Number	18
Address line 1	University of KwaZulu Natala	Country	South Africa
Address line 2	Westville Campus	This address S/A delivery	Yes
Suburb	Chiltern Hills	Created by	nkambules@nra.co.za
Province	KwaZulu-Natal	Created date	09 May 2016 16:19:42:000
Municipality	eThekweni	Edit by	nkambules@nra.co.za
City	Westville	Edit date	17 May 2016 19:11:10:180
Postal code	3630		

SUPPLIER BANK ACCOUNT





CSD REGISTRATION REPORT

The "Bank Verification Status" field indicates that the bank account details submitted by the supplier exist at the bank and that the bank account details are valid. However, as this supplier does not have an identifying number (like a South African ID number, or Company Registration number, or NPO number or Trust number) linked to their bank account details at their respective bank, the CSD system cannot electronically verify that the bank account belongs to the specific supplier. The supply chain practitioner is therefore responsible to obtain supporting documentation to verify that this bank account belongs to this supplier.

BANK ACCOUNT 1

Account type	Transmission Accounts	Created by	nkambules@nra.co.za
Bank	STANDARD BANK OF SOUTH AFRICA	Created date	12 Sep 2016 13:05:15:423
Branch number	051001	Edit by	csd.safetynetbatch@treasury.gov.za
Branch name	STANDARD BANK SOUTH AFRICA	Edit date	15 Sep 2016 16:17:56:743
Account number	053080998	Bank Verification Status	Verification Succeeded
Account holder	UNIVERSITY OF KWAZULU NATAL	Foreign Bank Account	No
Is this a preferred account?	Yes	Is the identifier linked at the bank	No
Active start date	05 Sep 2016 14:42:08:000	Is this a Shared Funding Account	No

TAX INFORMATION

The "Overall Tax Status" field indicates the compliance status of the tax information submitted. However, as this supplier does not have an identifying number (like a South African ID number, or Company Registration number, or NPO number or Trust number) linked to their tax details at SARS, the CSD system cannot electronically verify that the tax reference numbers belongs to the specific supplier. The supply chain practitioner is therefore responsible to obtain supporting documentation to verify that the tax reference numbers belongs to this supplier.

Income tax number	9063151162	Would you like to receive notifications?	Yes
VAT number	4860203305	Overall Tax Status	Tax Compliant
Is this supplier a VAT vendor?	Yes	Created by	nkambules@nra.co.za
PAYE number	7400749323	Created date	17 May 2016 19:11:09:000
Are you Registered with SARS?	Yes	Edit by	csd.reverifybatch@treasury.gov.za
Last validation date	31 Oct 2022 12:07:00:000	Edit date	19 Oct 2022 15:04:10:000

B-BEEE INFORMATION





CSD REGISTRATION REPORT

B-BBEE verification regulator	Verification agency accredited by SANAS	SANAS accredited agency	Vision Verification (Pty) Ltd
Sector charter	Other	% Owned by black people	0.00
Subsector charter	NOT APPLICABLE	% Owned by black people who are women	0.00
B-BBEE certificate number	AAA 1508/0119 Rev 0	% Owned by black people who are youth	0.00
B-BBEE certificate issue date	20 Aug 2021 00:00:00:000	% Owned by black people with disabilities	0.00
B-BBEE certificate issue expiry date	19 Aug 2022 00:00:00:000	% Owned by black who are unemployed	0.00
B-BBEE status level of contributor	Level 8 Contributor	% Owned by black people who are military veteran	0.00
B-BBEE procurement recognition	10%	% Owned by black people living in rural or underdeveloped areas	0.00
Value adding supplier or empowering supplier	Yes	Verification Status	Manual Verification Required
Skills Development Score	16.45	Created by	nkambules@nra.co.za
Socio-Economic Development Score	5.00	Created date	17 May 2016 19:11:19:633
Management Control Score	15.49	Edit by	csd.reverifibatch@treasury.gov.za
Enterprise Supplier Development Score	30.38	Edit date	19 Aug 2022 00:00:02:177
Total Score	67.32	Status	Expired

DIRECTORS/MEMBERS/OWNERS INFORMATION

DIRECTOR/MEMBER 1

Director type	Director, Officer	Created date	12 Oct 2017 16:19:27:000
Director status	Active	Edit by	nkambules@nra.co.za
Name(s)	THANDEKA BRENDA MARCIA	Edit date	17 Oct 2017 08:58:56:000
Surname	NGWENYA	Restricted Supplier	No





CSD REGISTRATION REPORT

Country	South Africa	Restriction Last Verification Date	31 Oct 2022 12:07:29:213
Identification type	South African Identification Number	Government Employee	No
South African identification number	8206100410088	Government Employee Last Verification Date	31 Oct 2022 12:07:28:103
Appointment date	17 Oct 2017 00:00:00:000	SA identification number Verified	Yes
Owner	No	SA identification number verification date	28 Oct 2022 14:51:07:850
Created by	nkambules@nra.co.za	Companies involved in	MAAA0041888;

The CSD does not automatically verify foreign company registration number, international securities identification number, foreign identification numbers, foreign passport numbers, work permit numbers, foreign bank accounts, 8-BBEE, demographic and accreditation information. Organs of State are required to manually verify this information with the applicable verification institutions as per their current policies and procedures.





CSD REGISTRATION REPORT

Tips and Frequently Asked Questions (FAQ)

Identifier

CSD cannot electronically verify the identity of a supplier other than a South African Individual / Sole Proprietor (through Home Affairs) or a company registered at the Companies and Intellectual Property Commission (CIPC). For this reason, a disclaimer is displayed for supply chain practitioners to obtain supporting documentation to verify the identity and legitimacy of a supplier in these cases.

Bank

For help on how to resolve bank failures click here: [I received an email stating the bank information I captured on the CSD was sent for bank account validation and could not be validated. The response received from the bank contains an error message.](#)
The various possible error messages received from the bank are highSemiBolded in red. Search for the applicable message and follow the detailed steps associated with that error message.

Tax

Tax Compliance Status

For help on how to deal with tax status differences between CSD and the tax clearance certificate click here: [What should a supplier do if the tax status on CSD differs from the tax clearance certificate?](#)

Tax Compliance Expiry Date

For help on how to deal with tax status differences between CSD and the tax clearance certificate click here: [How does CSD determine the tax compliance expiry date?](#)

CIPC

Should the director/member information reflected on the CIPC registration report differs to that reflected on CSD for help click here: [The active Directors/Members are not being populated on the CSD Directors/Members screen as they appear at CIPC, how can I rectify this?](#)

State Employee

For more information pertaining to government employment status click here: [Will there be verification done to identify if a supplier is a government employee?](#)

BBBEE

CSD does not automatically verify all certificate information with the various accreditation bodies. Organs of State are required, where not automatically verified by CSD, to manually verify this information with the applicable accreditation body as per current policies and procedures. Expired certificate information do not reflect on the report.





water & sanitation

Department:
Water and Sanitation
REPUBLIC OF SOUTH AFRICA

DBAC
SUBMISSION

Tracking no D34540



ROUTE FORM

FINALISED
27/03

BRANCH: FINANCE

Reference No: WD397

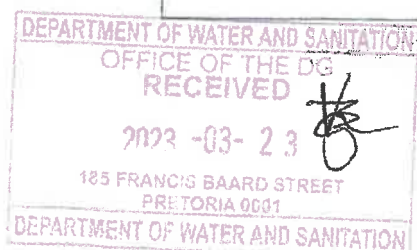
SUBJECT: DEVIATION FROM NORMAL PROCUREMENT PROCESSES FOR THE APPOINTMENT OF UNIVERSITY OF KWAZULU NATAL AS THE PREFERRED SERVICE PROVIDER FOR THE DEVELOPMENT OF FINANCIAL MECHANISMS AND ECONOMIC MODELS TO FACILITATE THE CIRCULAR ECONOMY IN THE PROVISION OF FAECAL SLUDGE MANAGEMENT SERVICES AND APPROVAL OF TOR

DBAC SECRETARIAT		SUPERVISOR		
Name: Ms H van der Merwe Ext : 7725 Office :522 ZWA		Name: Ms N Khubana Extension: 8926 Office No.: ZWA		
Rank: SPAO	Date:	Rank: Director	Date:	
Rank	Date	Name and Surname	Signature	Office No
CD: Operational Support (DEPUTY CHAIRPERSON)	23 March 2023	Ms Petunia Ramunenyiwa		N377

DG (ACTING)

2023/03/27

INSTRUCTIONS/REMARKS TO AUTHOR BY ACTING DIRECTOR-GENERAL



Rec. 27.03.2023

23/03/2023



water & sanitation

Department:
Water and Sanitation
REPUBLIC OF SOUTH AFRICA

Enquiries: L Agbasi
Telephone: 012 336 8996
Reference: 7/2/790/3 7/2/790/4

WD 377

DIRECTOR-GENERAL

CHAIRPERSON: DEPARTMENTAL BID ADJUDICATION COMMITTEE

REQUEST FOR DEVIATION FROM THE NORMAL PROCUREMENT PROCESSES FOR THE APPOINTMENT OF UNIVERSITY OF KWAZULU NATAL AS THE PREFERRED SERVICE PROVIDERS FOR THE DEVELOPMENT OF FINANCIAL MECHANISMS AND ECONOMIC MODELS TO FACILITATE THE CIRCULAR ECONOMY IN THE PROVISION OF FAECAL SLUDGE MANAGEMENT AND APPROVAL OF THE PROPOSED TERMS OF REFERENCE

1. PURPOSE

- 1.1 To request the Director-General to approve the Terms of Reference (ToRs) for the appointment of the University of KwaZulu Natal (UKZN) as the preferred service provider for the development of financial mechanisms and economic models to facilitate the circular economy in the provision of faecal sludge management services (**Annexure A: ToRs**).
- 1.2 To request the Director-General to approve a deviation from normal procurement processes for the appointment of UKZN as the preferred service provider for the development of financial mechanisms and economic models to facilitate the circular economy in the provision of faecal sludge management services as per National Treasurer Regulations (**Annexure B: Delegation of Powers**).

2. BACKGROUND AND DISCUSSION

- 2.1 South Africa as a member state to the United Nations has committed and are signatory to the achievement of the Sustainable Development Goals (SDGs). One of the targets SDG 6.2 states that "By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations".
- 2.2 The Constitution of the Republic of South Africa (Act 108 of 1996) provides the right of all people in South Africa to dignity and access to an environment that is not harmful to health and well-being and is sustainable and protected from pollution and degradation through legislative measures. Access to adequate sanitation services is important to achieve goals of improved health, safety, environmental standards, and dignity for all South Africans. The Water Services Act (Act 108 of 1997) section 3 (1) provides for a basic right of access to basic water supply and basic sanitation to everyone.
- 2.3 The National Sanitation Policy (2016) acknowledges that sanitation has "economic value". It also recognises that the demand for the resources that are derived from human excreta such as plant nutrients and use of treated sludge in the construction industry can create self-sustaining sanitation businesses and encourages investment in sanitation.

22 MAR 2023

- 2.4 The development of economic models for recovery and reuse of sludge should help to mobilise cross-sectoral financial mechanisms because of the impact of sanitation value chain on agriculture, health, and the environment.
- 2.5 The Department of Water and Sanitation (DWS) as a sector leader has a responsibility to guide the sector to take steps to transition into circular economy and unlock potential sanitation economic opportunities. The intention of DWS is to mitigate the risks that may come with economic opportunities towards circular economy.
- 2.6 In the sanitation context, the circular economy replaces the current linear model of food consumption, excretion of human waste into sanitation facilities of which the faecal sludge accumulates. At a certain time, there is a need for emptying faecal sludge from septic tanks, pits or other onsite containments for treatment, reuse or disposal. Faecal sludge is classified as hazardous because it contains biological agents that cause diseases. Therefore, it can only be disposed in hazardous landfill sites which are very far from municipalities. The National Sanitation Policy (2016) indicates that "where economically viable and sustainable, the liquid, solid and gaseous constituents of wastewater and excreta end products should be used, reused and recycled for further environmental benefits particularly in energy generation". Faecal sludge needs to be treated for beneficial use instead of disposal because it has nutrients that can be recovered for plant growth.
- 2.7 The "Circular economy" is a system that keeps sanitation products, components and materials such as faecal sludge always at their highest utility and value. If human excreta are not safely managed, they may cause sanitation related diseases and increase nutrient load to water bodies which changes water quality to be unfit for various uses while negatively affecting the environment. The move into the circular economy encompasses managing the stock of finite resources such as carbon-based fossil fuels (coal) to replace it with renewable biochar; and phosphorus which is mined in the environment to replace it with phosphorous from urine; and recover these resources from human excreta as flows of renewable resources into economic benefits.
- 2.8 The Department of Forestry, Fisheries and the Environment (DFFE) through its Operation Phakisa Programme on waste management focussing on Bulk Industrial Waste Workstream has developed an action plan which sets targets for treating waste including sewage sludge for beneficiation and divert it from disposing in landfill sites. At the bilateral meetings between DWS and DFFE regarding faecal sludge management DFFE has committed to support the DWS on initiatives to treat wastewater and faecal sludge for beneficiation to avoid disposing these sludges in landfill sites due to limited space. Both faecal and wastewater sludges can be treated for beneficial use to recover resources that can be utilised in various sectors such as agriculture, energy, and construction industry.
- 2.9 DWS intends to provide guidance on translating sanitation benefits into cashflows which make solutions economically viable and drive investment as well as recover costs of providing sanitation services in a sustainable manner.
- 2.10 There is an urgent need to develop financial mechanisms which are additional ways in which WSAs can receive funding for providing FSM services to supplement existing grants. In instances where emptying, transporting, and treating human excreta is necessary, the economic models will guide various FSM projects within circular economy

transition in the sanitation value chain in accordance with National Sanitation Policy (2016).

- 2.11 The DWS had considered several institutions and private sector that can produce practical and implementable guidelines based on their hands-on involvement in sanitation circular economy, various faecal sludge treatment and beneficial use options. The Water Research Commission (WRC) was also considered on this assignment. WRC has been involved in number of faecal sludge management pilot studies through funding the research, project managing the research studies and relying on service providers. It was then decided that the preferred service provider should be identified to work directly with DWS based on hands-on experience in conducting the actual research work and available technical expertise within the institution.
- 2.12 The Department would like to approach and appoint the UKZN as the "preferred service provider" (based on procurement regulations – Note 3 of 2006/7) based on the pertinent faecal sludge management research work, field studies and projects the university is involved in.
- 2.13 **EXPERIENCE IN THE SANITATION SECTOR AND CIRCULAR ECONOMY RESEARCH**
- 2.13.1 Importantly to the sector, is the UKZN participation in the international research project called Rural-Urban Nexus: Establishing a Closed Nutrient Loop for City-Region Food System (RUNRES). The project is aiming at establishing the nutrient cycle by recovering nutrients from organic waste such as faecal and wastewater sludge back to the soil as fertiliser thus enhancing food production, achieving a "circular economy" and contributing to livelihoods, food security and environmental protection.
- 2.13.2 RUNRES programme is implemented in five partner countries namely, Switzerland, Ethiopia, Rwanda, Democratic Republic of Congo and South Africa.
- 2.13.3 In South Africa the project works with stakeholders involved in urban and peri-urban waste management, sanitation, and selected crop value chain actors to develop a transdisciplinary innovation platform seeking practical solutions to environmental pollution, nutrient mining and food security.
- 2.13.4 The UKZN projects include a partnership between uMsunduzi Municipality and Duzi Turf private company where wastewater sludge, faecal sludge and green waste from gardens are co-composted to produce compost which is sold in the markets and used to fertilise instant lawn which is sold on markets.
- 2.13.5 Another RUNRES Pilot Project which is at procurement stage in Pietermaritzburg consist of the construction of Decentralised Wastewater System (DEWATS), with pour flush toilets and urine diverting systems in Julukandoda Primary school which will serve 715 learners. Currently the school uses ventilated pit latrines. When the pits get full, faecal sludge is emptied and transported to the nearby village called Bishopstowe which is managed by a Community Cooperatives. When the DEWATS is implemented the wastewater sludge will be co-composted together with faecal sludge from the community's onsite sanitation systems as well as green waste to produce compost which will be the source of nutrients as well as recovering phosphorous from urine to be used as fertiliser for crop production. The community is well organised and has secured land for crop production and borehole for water supply. The RUNRES project is also aiming

to establish Bishopstowe Agricultural Living Laboratory which is a training centre for civil society organisations including other community cooperatives around the country.

- 2.13.6 DWS is pursuing best practices and lessons learnt from RUNRES projects locally and internationally which will form evidence in developing guidelines for financial mechanisms and economic models to build business cases that will sustain faecal sludge management initiatives in WSAs. Faecal sludge management is a new concept in South Africa and globally, therefore lessons learnt in other countries will enrich the quality of these guidelines. DWS would like to produce practical, and evidence based financial mechanisms and economic models that are implementable.
- 2.14 The existing government grants framework is targeting the poor, and on the other hand the sanitation services are expected to be equitable, sustainable, efficient, and transparent. The guidelines are rooted on the sanitation policy user pay principle. The guidelines will acknowledge Free Basic Sanitation Strategy which is targeting the indigent households in terms of access to free operation and maintenance of sanitation facilities through Equitable Share grant.
- 2.15 The proposed guidelines will be developed in consensus with National Treasury and COGTA for exploring innovative models and mechanisms for disbursement, incentives, and use of sanitation subsidy in accordance with National Sanitation Policy (2016).
- 2.16 It is expected that the service provider will develop areas for treating faecal sludge for beneficial use and key parameters to be considered amongst others include:
 - 2.16.1 Provide guidance on the public incentives to support business opportunities in sanitation circular economy. These will include viable tax incentive subsidies.
 - 2.16.2 Develop approaches that are promoting Public Private Partnerships (PPP), Cooperate Social Investment, Government to Government Partnerships, and Community Based Organisations in faecal sludge management services.
 - 2.16.3 Provide approaches and options of billing consumers who are not indigent.
 - 2.16.4 Provide guidance on incentive mechanisms for various role players to facilitate faecal sludge management services.
 - 2.16.5 Develop consolidated guidelines with financial mechanisms and economic models to facilitate circular economy in Water Services Authorities.
 - 2.16.6 Provide guidance to facilitate financial viability models for faecal sludge management community approaches and could include:
 - 2.16.6.1 What are the minimum threshold of sludge required for a particular by-product to be a viable business opportunity, e.g., fertiliser, briskets and building materials?
 - 2.16.6.2 What are the minimum cost input required to run a small-scale operation?
 - 2.16.6.3 What are the return-on-investment projections?
 - 2.16.6.4 Can profits be used to ensure safe sanitation, accelerated sanitation delivery and self-sustaining enterprise?

2.16.6.5 At what point will the resource recovery process arrive at break-even point and profitability?

2.16.6.6 What are the cost drivers in each category of beneficial use?

2.17 MOTIVATION FOR THE APPOINTMENT OF UKZN AS A “PREFERRED SERVICE PROVIDER”

2.17.1 Beneficial use of faecal sludge is a new concept in South Africa with some municipalities resorting to dumping (stockpiling) sludge at Wastewater Treatment Works or not emptying their full onsite sanitation facilities due to a lack of knowledge in treating faecal sludge effectively.

2.17.2 During provincial stakeholders' consultations which involved sector departments, academic institutions, research institutions, private sector and community members, on the development of National Faecal Sludge Management Strategy for Onsite Sanitation Systems, UKZN was the only institution of higher learning directly involved on various pilot projects focusing on faecal sludge management. Considering UKZN's access to faecal sludge management data through pilot projects locally and internationally through RUNRES project, UKZN is the preferred service provider in accordance with section 16 of the Departmental Supply Chain Management Policy.

2.17.3 Maintenance and Operations of sanitation systems is limited to municipal responsibilities. Moreover, this service at most is outsourced to private companies that empty and transport faecal sludge as a service to communities but none of these private companies has explored the beneficial use of sludge for economic benefit.

2.17.4 The eThekweni Metropolitan Municipality has over the years tested and piloted various alternative sanitation and faecal sludge technologies some of which UKZN in collaboration with the WRC are involved in. Therefore, UKZN is best placed to elevate such pilot studies to the development of appropriate economic models.

2.17.5 The University is not a profitable institution, and the cost of the project will cover expertise, time, and management in the development of these models.

2.17.6 UKZN is the only Institution of Higher Learning that is implementing this type of research and projects collaborating with five other countries and facilitates Public Private Partnership (PPP's) and community-based approaches in faecal sludge beneficiation (Annexure C: A letter confirming sole participation of UKZN in RUNRES Project in South Africa).

2.18 The approved BSC members have evaluated and supported the TOR for the development of Guidelines for Financial Mechanisms and Economic Models for Faecal Sludge Management services.

3. IMPLICATIONS

3.1 Personnel

3.1.1 None

3.2 Financial

- 3.2.1 Funds are made available under the Directorate: Sanitation Operational Support budget for 2022/23 allocation and the estimated cost for this Development of Guidelines for Financial Mechanisms and Economic Models for Faecal Sludge Management is R4 000 000 for a period of 36 months as per the signed 2022/23 Demand Management Plan (DMP) (Annexure C: DMP).

The funds are allocated per financial year as follows:

Financial Year	Funds allocated
2022/23	R 600 000
2023/24	R1 400 000
2024/25	R 2 000 000

3.3 Legal

- 3.3.1 The contract between DWS and UKZN will be signed by both parties prior commencement of the project.

3.3.2 Regulatory Compliance

The compliance with section 217 (ii) Appointment through any other deviation in the DWS Delegation of Powers in terms of the Public Finance Management Act (Act No. 1 of 1999) as Amended by Public Finance Management Act (Act No. 29 of 1999) (Annexure B: Delegation of Powers).

Delegation of Powers are read together with Instruction No.3 4(4.2) (b) Procurement by other means (Annexure D: SCM Instruction No.3). The compliance with procurement through any other deviation in terms of Preferential Procurement Policy Framework Act (Act No.5 of 2000) (Annexure E: Preferential Procurement Policy Framework Act).

3.4 Communication

- 3.4.1 None

4. OTHER COMPONENTS CONSULTED

- 4.1 Supply Chain Management was consulted for guidance.

5. RECOMMENDATION

It is recommended that:

- 5.1 The Director-General approves the Terms of Reference for the appointment of the University of KwaZulu Natal as the preferred service providers for the development of Financial Mechanisms and Economic Models to facilitate the Circular Economy in the provision of Faecal Sludge Management services (**Annexure A: ToRs**).
- 5.2 The Director-General approves a deviation from normal procurement processes for the appointment of UKZN as the preferred service provider for the development of financial mechanisms and economic models to facilitate the circular economy in the provision of faecal sludge management services as per National Treasurer Regulations (**Annexure: B**).



NAME: ANDRE VAN DER WALT
CHIEF DIRECTOR: SANITATION SERVICES SUPPORT
DATE: 2023-03-14

RECOMMENDATION IN PAR 5.1 SUPPORTED / NOT APPROVED
RECOMMENDATION IN PAR 5.2 SUPPORTED / NOT SUPPORTED



NAME: RISHMATI MATHYE
DEPUTY DIRECTOR-GENERAL: WATER AND SANITATION SERVICES MANAGEMENT
DATE: 16/03/23

RECOMMENDATION IN PAR 5.1 SUPPORTED / NOT APPROVED
RECOMMENDATION IN PAR 5.2 SUPPORTED / NOT SUPPORTED



NAME: IRIS MATHYE
CHAIRPERSON: DEPARTMENTAL BID SPECIFICATION COMMITTEE
DATE: 22/03/2023

RECOMMENDATION

It is recommended that:

- 5.1 The Director-General approves the Terms of Reference for the appointment of the University of KwaZulu Natal as the preferred service providers for the development of Financial Mechanisms and Economic Models to facilitate the Circular Economy in the provision of Faecal Sludge Management services (Annexure A: ToRs).
- 5.2 The Director-General approves a deviation from normal procurement processes for the appointment of UKZN as the preferred service provider for the development of financial mechanisms and economic models to facilitate the circular economy in the provision of faecal sludge management services as per National Treasurer Regulations (Annexure: B).

RECOMMENDATION IN PAR 5.1 SUPPORTED / NOT SUPPORTED
RECOMMENDATION IN PAR 5.2 SUPPORTED / NOT SUPPORTED

FUNDS AVAILABLE / NOT AVAILABLE

NAME: *[Signature]*
CHIEF FINANCIAL OFFICER
DATE: 10/2/23

RECOMMENDATION IN PAR 5.1 SUPPORTED / NOT SUPPORTED
RECOMMENDATION IN PAR 5.2 SUPPORTED / NOT SUPPORTED

[Signature]

DBAC recommendation held on 9 March have been
complied with
KZN university proof that they are only service provider on RUNRES in SA(Annexure C)
Justifiable reason provided for using single source - 2.17.6A

NAME: Retunia Ramunenyiwa
CHAIRPERSON: DEPARTMENTAL BID ADJUDICATION COMMITTEE
DATE: 23 March 2023

RECOMMENDATION IN PAR 5.1 APPROVED / NOT APPROVED
RECOMMENDATION IN PAR 5.2 APPROVED / NOT APPROVED

[Signature]

NAME: XOLANI ZWANE
DIRECTOR-GENERAL (ACTING)
DATE: 2023/03/27

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Memo confirming availability or/ non-availability of funds
Chief Directorate: Financial Management



water & sanitation

Department:
Water and Sanitation
REPUBLIC OF SOUTH AFRICA

Enquiries: TG Chauke
Telephone: 012 336 7922
Reference: 712/790/3 712/790/4

CHIEF FINANCIAL OFFICER

REQUEST FOR DEVIATION FROM THE NORMAL PROCUREMENT PROCESSES FOR THE APPOINTMENT OF UNIVERSITY OF KWAZULU NATAL AS THE PREFERRED SERVICE PROVIDERS FOR THE DEVELOPMENT OF FINANCIAL MECHANISMS AND ECONOMIC MODELS TO FACILITATE THE CIRCULAR ECONOMY IN THE PROVISION OF FAECAL SLUDGE AND APPROVAL OF THE PROPOSED TERMS OF REFERENCE

1. **Purpose:** To recommend to the Chief Financial Officer to support or / not to support the attached submission based on the availability or none availability of funds.

2. **Motivation / Analysis**

a. **Applicable Prescripts, Regulations, Circular, Policy and/or Delegations of Authority:**

The Proper processes and procedure should be complied with in terms of the above-mentioned subject matter.

b. **Analysis of available funds:**

The Chief Directorate Sanitation Services support has made provision within the goods and services budget to appoint the service provider for the development of financial mechanisms and economic models. In terms of the BAS report dated 15/02/2023 (copy attached herewith), the analysis of expenditure to date is as follows:

Table 1: 2022/2023 Analysis of expenditure

Component:	Item	Current Budget R'000	Expenditure to Date R'000	Commitments (On / Off the system) R'000	Available Funds R'000
Directorate: Sanitation Operational Support	Goods and Services (Consultant Business and Advisory Services)	4 500	2 145	263	2 092

Based on Table 1 above, it is hereby confirmed that funds are available within the Goods and Services(Consultant Business and Advisory Services) budget for the component Directorate: Sanitation Operational Support.

c. **Implications over the Medium-Term Expenditure Framework**

The expenditure for this request will have implications over the MTEF, hence funding for the Chief Directorate Sanitation Services support has been provided over the MTEF period. The Chief Directorate has been allocated R1.500 million baseline (goods and services, Consultant Business and Advisory Services) for the year 2023/24. (Copy of the MTEF indicative allocation is attached)

Table 2: 2022/2023 – 2024/25 Analysis of MTEF Budget

Sanitation Services Management Support	Current Budget Allocation 2022/23 R'000	MTEF Indicative Allocation 2023/24 R'000	MTEF Indicative Allocation 2024/25 R'000
Goods and Services (Consultant Business and Advisory Services)	600	1 500	2 000
Total	600	1 500	2 000

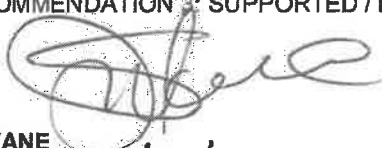
REQUEST FOR DEVIATION FROM THE NORMAL PROCUREMENT PROCESSES FOR THE APPOINTMENT OF UNIVERSITY OF KWAZULU NATAL AS THE PREFERRED SERVICE PROVIDERS FOR THE DEVELOPMENT OF FINANCIAL MECHANISMS AND ECONOMIC MODELS TO FACILITATE THE CIRCULAR ECONOMY IN THE PROVISION OF FAECAL SLUDGE AND APPROVAL OF THE PROPOSED TERMS OF REFERENCE

3. Recommendation: It is recommended that the Chief Financial Officer should support the attached submission in line with the analysis / motivation in 2 above.


TG CHAUKE
DIRECTOR: MANAGEMENT ACCOUNTING

DATE: 15/2/2023

RECOMMENDATION 3: SUPPORTED / NOT SUPPORTED


N JIYANE
CHIEF DIRECTOR: FINANCIAL MANAGEMENT

DATE: 16/02/2023

RECOMMENDATION 3: SUPPORTED / ~~NOT SUPPORTED~~


F MOATSHE
CHIEF FINANCIAL OFFICER

DATE: 17/02/2023

MARKET ANALYSIS REPORT- REQUEST FOR DEVIATION FROM NORMAL PROCUREMENT PROCESSES FOR THE APPOINTMENT OF UNIVERSITY OF KWAZULU NATAL AS THE PREFERRED SERVICE PROVIDERS FOR THE DEVELOPMENT OF FINANCIAL MECHANISMS AND ECONOMIC MODELS TO FACILITATE THE CIRCULAR ECONOMY IN THE PROVISION OF FAECAL SLUDGE MANAGEMENT AND APPROVAL OF THE PROPOSED TERMS OF REFERENCE

2023



water & sanitation

Department
Water and Sanitation
REPUBLIC OF SOUTH AFRICA

MARKET ANALYSIS REPORT

PURPOSE

The aim of this exercise is to determine the number of suppliers available on the market to provide the listed services below.

The analysis is not taking into consideration the broadness of designated groups as per the Preferential Procurement Regulations 2022, but rather the broadness of the market for these requested services, to determine whether there is a sole provider with exclusive distribution rights or if there are other suppliers available in the market.

BACKGROUND

REQUEST FOR DEVIATION FROM NORMAL PROCUREMENT PROCESSES FOR THE APPOINTMENT OF UNIVERSITY OF KWAZULU NATAL AS THE PREFERRED SERVICE PROVIDERS

There is an urgent need to develop financial mechanisms which are additional ways in which WSAs can receive funding for providing FSM services to supplement existing grants. In instances where emptying, transporting and treating human excreta is necessary the economic models will guide various FSM projects within circular economy transition in the sanitation value chain in accordance with National Sanitation Policy (2016).

COMMODITY AND SUPPLIER ANALYSIS/ENGAGEMENT

The Department would like to approach and appoint the University of KwaZulu Natal as the "preferred service provider" (based on procurement regulations – Note 3 of 2006/7) based on the pertinent faecal sludge management research work and field studies the university is involved in.

Business Requirement:

MARKET ANALYSIS REPORT- REQUEST FOR DEVIATION FROM NORMAL PROCUREMENT PROCESSES FOR THE APPOINTMENT OF UNIVERSITY OF KWAZULU NATAL AS THE PREFERRED SERVICE PROVIDERS FOR THE DEVELOPMENT OF FINANCIAL MECHANISMS AND ECONOMIC MODELS TO FACILITATE THE CIRCULAR ECONOMY IN THE PROVISION OF FAECAL SLUDGE MANAGEMENT AND APPROVAL OF THE PROPOSED TERMS OF REFERENCE

2023

The DWS had considered several institutions and private sector that can produce practical and implementable guidelines based on their hands-on involvement in sanitation circular economy, various faecal sludge treatment and beneficial use options. The Water Research Commission (WRC) was also considered on this assignment. WRC has been involved in number of faecal sludge management pilot studies through funding the research, project managing the research studies and relying on service providers. It was then decided that the preferred service provider should be identified to work directly with DWS based on hands-on experience in conducting the actual research work and available technical expertise within the institution.

Faecal sludge for beneficial use is a new concept in South Africa with most municipalities- resorting to dumping (stockpiling) sludge at Waste Water Treatment works due to a lack of knowledge in treating sludge effectively.

Maintenance and Operations of sanitation waste is limited to municipal responsibilities moreover, this service at most is outsourced to private companies that empty and transport waste as a service to communities but none of these private companies has explored the beneficial use of sludge for economic benefit.

The eThekweni Metropolitan Municipality is in abundance with regards to testing and piloting many alternative sanitation technologies some of which the universities in collaboration with the WRC are involved in and are best placed to elevate such pilot studies to the development of appropriate economic models.

The University is not a profitable institution, and the cost of the project will cover expertise, time and management cost in the development of these models.

WRC has done extensive work on piloting faecal sludge management technologies through University of KwaZulu Natal and eThekweni Municipality. Most of the pilot project are based in eThekweni Municipality. University of KwaZulu Natal is preferred because of the involvement on international faecal sludge management research work which is implemented in five different countries that will inform the guidelines. Other private companies that can do the work do not have access to these pilot projects which will inform the guidelines.

University of KwaZulu Natal is the only Institution of Higher Learning that is implementing this type of research collaborating with five other countries and facilitates Public Private Partnership (PPP's) and community-based approaches in faecal sludge beneficiation.



MARKET ANALYSIS REPORT- REQUEST FOR DEVIATION FROM NORMAL PROCUREMENT PROCESSES FOR THE APPOINTMENT OF UNIVERSITY OF KWAZULU NATAL AS THE PREFERRED SERVICE PROVIDERS FOR THE DEVELOPMENT OF FINANCIAL MECHANISMS AND ECONOMIC MODELS TO FACILITATE THE CIRCULAR ECONOMY IN THE PROVISION OF FAECAL SLUDGE MANAGEMENT AND APPROVAL OF THE PROPOSED TERMS OF REFERENCE

2023

The request for this deviation is not a sole service provider requests as this type of services are broadly available in the market and this requirement does therefore not qualify as a sole supplier but is a **"Single Source"** requirement.

The department SCM Policy paragraph 16 provides for consideration of deviation through a single source approach where there is a market but given the circumstances, procurement is limited only to the identified supplier.

University of KwaZulu Natal is registered on the central supplier database and the status is fully tax compliant and the business is also still active for doing business with the state.

RECOMMENDATION

Based on this analysis, it can be concluded that there is availability of the services for the development of financial mechanisms and economic models to facilitate the circular economy in the provision of faecal sludge management in the market in general.

It can be confirmed that on verification of the recommended service provider, we could conclude that University of KwaZulu Natal is accordingly registered in the Central Supplier Database with registration Number (**MAAA0128726**). The company is also fully compliant and fully active as per the CSD status. (See report)

It is therefore on the basis of a single source/preferred service provider that the University of KwaZulu Natal should be considered for appointment as per the SCM policy provision as per paragraph 16 which makes provision of single source/preferred service provider. The single source is supported on the basis of continuity of the services as University of KwaZulu Natal is the only Institution of Higher Learning that is implementing this type of research collaborating with five other countries and facilitates Public Private Partnership (PPP's) and community-based approaches in faecal sludge beneficiation.

It is therefore on the basis of a single source/preferred service provider that the University of KwaZulu Natal should be considered for appointment as per the SCM policy provision as per paragraph 16 which makes provision of single source/preferred service provider. The single source is supported on the basis of continuity of the services given that the service provider was initially appointed by the department to represent it at the disciplinary hearing.

**MARKET ANALYSIS REPORT- REQUEST FOR DEVIATION FROM NORMAL
PROCUREMENT PROCESSES FOR THE APPOINTMENT OF UNIVERSITY OF
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SLUDGE MANAGEMENT AND APPROVAL OF THE PROPOSED TERMS OF
REFERENCE**

2023

Compiler:



Assistant Director: Demand Management

05/03/2023

Recommendation Approved/~~not approved~~



Deputy Director: Demand Management

Date: 06/03/2023

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