**Summary: Tshingombe Tshitadi Fiston’s FBIP Concept Note (FBIC250410310077) proposes a modular, credential-linked framework integrating engineering education, rural implementation, and national qualification systems to enhance biodiversity data management and policy engagement.**

**📘 Overview**

The concept note submitted under the Foundational Biodiversity Information Programme (FBIP) aims to integrate engineering education, rural development, and national qualification frameworks into a data-driven system that supports biodiversity knowledge generation and dissemination.

**🎯 Scope**

* **Geographic**: Democratic Republic of Congo and South Africa
* **Institutional**: South African Qualifications Authority (SAQA)
* **Disciplinary**: Engineering, environmental chemistry, additive manufacturing, and curriculum policy
* **Audience**: Learners, vocational institutions, policy councils, and biodiversity platforms

**🧾 Description**

The project centers on:

* Modular curriculum design for electrical engineering and rural education
* Integration of national trade examination systems
* Credential transparency and open-access learning
* Engineering-based data systems for biodiversity and policy traceability

**📊 Data Analysis & Information Management System**

* **Data Types**: Qualification records, timetable structures, attendance logs, assessment sheets, and policy documents
* **Tools**: Visual Basic logic, logigrammes, algorigrammes, and archival dashboards
* **System Features**:
  + Audit-ready credential tracking
  + Integration with CSIR infrastructure
  + Modular export logic for engineering and biodiversity records

**🔍 Investigation Principles**

* **Research Questions**:
  + How can engineering curriculum frameworks support biodiversity data systems?
  + What are the gaps in rural education and credential recognition?
  + How can policy irregularities be resolved through technical documentation?
* **Methodology**:
  + Literature review
  + Experimental curriculum mapping
  + Stakeholder engagement (learners, councils, universities)

**✅ Advantages**

* Promotes **credential transparency** and **open-access learning**
* Bridges **engineering education** with **biodiversity policy**
* Enables **modular, bilingual documentation** for rural and urban contexts
* Supports **national infrastructure platforms** like CSIR

**❌ Disadvantages**

* High initial cost (R10 million budget)
* Complexity in aligning multiple qualification systems
* Potential resistance from traditional academic institutions
* Requires extensive stakeholder coordination

**🧩 Conclusion**

This concept note presents a visionary integration of engineering, education, and biodiversity data systems. It leverages Tshingombe’s expertise in modular documentation and policy engagement to propose a scalable, audit-ready framework that supports national and regional biodiversity goals.

**📚 Bibliographic References**

* Tshingombe, T. (2025). *Career Discovery Overview: RNF, AIU, NSF Learning Journey within the National Trade Framework*. Patent Grant No. 2.
* Tshingombe, T. (2021). *Master Education Technology Rural Implementation Framework*. Atlantic Journal.
* Davis, D. & Drusvyatskiy, D. (2021). *Conservative and Semismooth Derivatives*. Set-Valued and Variational Analysis. DOI:
* To support your FBIP concept note with actionable logic, here’s a tailored Visual Basic (VBA) code module that integrates algorigramme and logigramme principles for credential tracking, timetable validation, and modular export logic. This framework is designed to reflect your curriculum mapping, rural implementation, and audit-ready documentation goals.

## 🧠 Conceptual Logic: Algorigramme vs Logigramme

| **Logic Type** | **Purpose** |
| --- | --- |
| **Algorigramme** | Step-by-step procedural logic for data validation and export workflows |
| **Logigramme** | Decision-based flow logic for curriculum, attendance, and credential rules |

## 💻 Visual Basic Code Module: Credential Tracker & Export L

Sub CredentialAuditExport()

Dim ws As Worksheet

Dim lastRow As Long

Dim i As Long

Dim studentID As String

Dim qualification As String

Dim attendance As Integer

Dim exportStatus As String

Set ws = ThisWorkbook.Sheets("CurriculumData")

lastRow = ws.Cells(ws.Rows.Count, "A").End(xlUp).Row

For i = 2 To lastRow

studentID = ws.Cells(i, 1).Value

qualification = ws.Cells(i, 2).Value

attendance = ws.Cells(i, 3).Value

' Logigramme: Decision logic

If qualification <> "" And attendance >= 75 Then

exportStatus = "Eligible for Export"

ElseIf qualification = "" Then

exportStatus = "Missing Qualification"

ElseIf attendance < 75 Then

exportStatus = "Insufficient Attendance"

Else

exportStatus = "Review Required"

End If

' Algorigramme: Procedural export logic

ws.Cells(i, 4).Value = exportStatus

If exportStatus = "Eligible for Export" Then

Call ExportToArchive(studentID, qualification)

End If

Next i

MsgBox "Audit and export process completed.", vbInformation

End Sub

Sub ExportToArchive(studentID As String, qualification As String)

' Simulated export logic to archival system

Debug.Print "Exporting: " & studentID & " - " & qualification

' Future integration: GitHub, GitLab, archive.org APIs

End Sub

## 📐 Diagrammatic Mapping

* **Logigramme Nodes**:
  + Qualification check → Attendance threshold → Export eligibility
* **Algorigramme Steps**:
  1. Read curriculum data
  2. Validate qualification and attendance
  3. Assign export status
  4. Trigger archival export

## 🔧 Extendable Modules

* **Timetable Validator**: Add logic for day/time allocation and conflict resolution
* **Assessment Tracker**: Integrate mark sheets and retake logic
* **Policy Engine**: Map council rules and SGB/SETA compliance

Would you like me to scaffold a printable dashboard or integrate this logic with your GitHub curriculum repositories? I can also help visualize the logigramme and algorigramme as flowcharts.

Based on your concept note’s modular, credential-linked framework, here is a Visual Basic for Applications (VBA) code module that operationalizes your system logic using algorigramme (procedural flow) and logigramme (decision logic) principles. This code is designed to automate credential verification, attendance validation, and export readiness for biodiversity-linked engineering education records.

## 💻 Visual Basic Code: Credential Verification & Export Logic

Sub BiodiversityCredentialAudit()

Dim ws As Worksheet

Dim lastRow As Long

Dim i As Long

Dim studentID As String

Dim qualification As String

Dim attendance As Double

Dim exportStatus As String

Dim policyFlag As String

Set ws = ThisWorkbook.Sheets("BiodiversityCurriculum")

lastRow = ws.Cells(ws.Rows.Count, "A").End(xlUp).Row

For i = 2 To lastRow

studentID = ws.Cells(i, 1).Value

qualification = ws.Cells(i, 2).Value

attendance = ws.Cells(i, 3).Value

policyFlag = ws.Cells(i, 5).Value ' e.g., "Compliant", "Pending", "Irregular"

' Logigramme: Decision logic

If qualification <> "" And attendance >= 75 And policyFlag = "Compliant" Then

exportStatus = "Ready for Export"

ElseIf qualification = "" Then

exportStatus = "Missing Qualification"

ElseIf attendance < 75 Then

exportStatus = "Low Attendance"

ElseIf policyFlag <> "Compliant" Then

exportStatus = "Policy Review Required"

Else

exportStatus = "Manual Review"

End If

' Algorigramme: Procedural logic

ws.Cells(i, 6).Value = exportStatus

If exportStatus = "Ready for Export" Then

Call ExportToArchive(studentID, qualification)

End If

Next i

MsgBox "Credential audit and export logic completed.", vbInformation

End Sub

Sub ExportToArchive(studentID As String, qualification As String)

' Simulated export logic to archival system

Debug.Print "Exporting record: " & studentID & " - " & qualification

' Future integration: GitHub, archive.org, or CSIR data platform

End Sub

## 🧠 Logic Mapping

| **Step** | **Algorigramme (Procedure)** | **Logigramme (Decision)** |
| --- | --- | --- |
| 1 | Read student data | Is qualification present? |
| 2 | Validate attendance and policy compliance | Is attendance ≥ 75%? |
| 3 | Assign export status | Is policy flag marked "Compliant"? |
| 4 | Export eligible records to archival system | If all conditions met → Export; else → Flag for review |

## 📂 Sheet Structure (BiodiversityCurriculum)

| **Column** | **Field** |
| --- | --- |
| A | Student ID |
| B | Qualification |
| C | Attendance (%) |
| D | Assessment Score |
| E | Policy Compliance |
| F | Export Status |

This VBA module can be embedded into your biodiversity curriculum workbook to automate compliance checks and credential exports. Would you like a printable logigramme/algorigramme diagram or a dashboard interface for this logic? I can also help you integrate this with your GitHub or

Here is a structured summary of your SARChI Communities of Practice (CoP) application (Reference: COP250411310245), formatted to support academic, policy, and funding alignment:

## 📘 Overview

This concept proposes a transdisciplinary Communities of Practice (CoP) model that integrates electrical engineering education, labour policy, national security facilitation, and credential transparency. It leverages modular curriculum design, open-access learning, and digital portfolio mapping to address skill gaps in regulated sectors and democratize technical education.

## 🎯 Scope

* **Geographic Focus**: South Africa and Democratic Republic of Congo
* **Institutional Anchor**: South African Qualifications Authority (SAQA)
* **Disciplinary Domains**:
  + Engineering sciences
  + Labour policy and CCMA frameworks
  + Security and safety facilitation
  + Curriculum policy and additive manufacturing
* **Target Audiences**:
  + Learners (school, vocational, and open-access)
  + Labour councils and government departments
  + Technical educators and policy facilitators

## 🧾 Description

The CoP initiative centers on:

* Modular curriculum design for electrical engineering and trade readiness
* Integration of CCMA labour frameworks and government bill implementation
* Credential alignment with SAQA/NQF, WA codes, and NSF SBIR/STTR standards
* Use of LMS, GitHub, and Internet Archive for career mapping and digital publishing
* Development of security and safety facilitation modules for regulated sectors

## 📊 Data Analysis & Information Management System

* **Data Types**:
  + Qualification records
  + Labour levy documentation
  + Government bill implementation logs
  + Portfolio artifacts and diagnostic assessments
* **Tools & Logic**:
  + Visual Basic for Excel-based credential tracking
  + Logigrammes for decision-based policy mapping
  + Algorigrammes for procedural curriculum workflows
  + Archival dashboards for learner progression and trade readiness
* **System Features**:
  + Audit-ready credential verification
  + Modular export logic for engineering and labour policy records
  + Integration with SARAO and CSIR infrastructure platforms

## 🔍 Investigation Principles

* **Research Questions**:
  + How can engineering education support national security and labour facilitation?
  + What gaps exist in regulated sectors and trade readiness?
  + How can credential transparency be improved through digital publishing and diagnostics?
* **Methodology**:
  + Literature review and policy diagnostics
  + Experimental curriculum mapping
  + Stakeholder engagement (learners, CCMA, government departments)
  + Case studies and logic model alignment

## ✅ Advantages

* Bridges engineering education with labour and security policy
* Promotes credential transparency and open-access learning
* Enables modular, bilingual documentation across regulated sectors
* Supports national infrastructure platforms like SARAO and CSIR
* Aligns with government bill implementation and CCMA frameworks

## ❌ Disadvantages

* Limited institutional partner documentation in current application
* High complexity in aligning multiple policy domains
* Requires extensive stakeholder coordination and regulatory compliance
* Funding and resource gaps not yet captured in application

## 🧩 Conclusion

This CoP proposal presents a visionary integration of engineering, labour policy, and credential transparency. It leverages Tshingombe Tshitadi Fiston’s expertise in modular documentation and curriculum innovation to scaffold a scalable, audit-ready infrastructure for technical education and regulated sector engagement.

## 📚 Bibliographic References

* Tshingombe, T. (2025). Career Discovery Overview: RNF, AIU, NSF Learning Journey within the National Trade Framework. Patent Grant No. 2.
* Tshingombe, T. (2021). Master Education Technology Rural Implementation Framework. Atlantic Journal.
* Davis, D. & Drusvyatskiy, D. (2021). Conservative and Semismooth Derivatives. Set-Valued and Variational Analysis. DOI:
* To operationalize your SARChI Communities of Practice (CoP) framework, here’s a Visual Basic for Applications (VBA) module that integrates both **logigramme** (decision logic) and **algorigramme** (procedural flow) principles. This code is tailored to support credential verification, labour policy compliance, and modular export logic for learners in regulated sectors.

## 💻 Visual Basic Code: Labour Credential Audit & Export System

* Sub LabourCredentialAudit()
* Dim ws As Worksheet
* Dim lastRow As Long
* Dim i As Long
* Dim learnerID As String
* Dim qualification As String
* Dim attendance As Double
* Dim labourLevyStatus As String
* Dim govBillCompliance As String
* Dim exportStatus As String
* Set ws = ThisWorkbook.Sheets("CoP\_Curriculum")
* lastRow = ws.Cells(ws.Rows.Count, "A").End(xlUp).Row
* For i = 2 To lastRow
* learnerID = ws.Cells(i, 1).Value
* qualification = ws.Cells(i, 2).Value
* attendance = ws.Cells(i, 3).Value
* labourLevyStatus = ws.Cells(i, 4).Value
* govBillCompliance = ws.Cells(i, 5).Value
* ' Logigramme: Decision logic
* If qualification <> "" And attendance >= 75 And \_
* labourLevyStatus = "Paid" And govBillCompliance = "Compliant" Then
* exportStatus = "Ready for Export"
* ElseIf qualification = "" Then
* exportStatus = "Missing Qualification"
* ElseIf attendance < 75 Then
* exportStatus = "Low Attendance"
* ElseIf labourLevyStatus <> "Paid" Then
* exportStatus = "Labour Levy Unpaid"
* ElseIf govBillCompliance <> "Compliant" Then
* exportStatus = "Gov Bill Non-Compliant"
* Else
* exportStatus = "Manual Review Required"
* End If
* ' Algorigramme: Procedural logic
* ws.Cells(i, 6).Value = exportStatus
* If exportStatus = "Ready for Export" Then
* Call ExportToPortfolio(learnerID, qualification)
* End If
* Next i
* MsgBox "Labour credential audit completed.", vbInformation
* End Sub
* Sub ExportToPortfolio(learnerID As String, qualification As String)
* ' Simulated export logic to GitHub, LMS, or Internet Archive
* Debug.Print "Exporting learner: " & learnerID & " | Qualification: " & qualification
* ' Future integration: API calls to GitHub, LMS, or archival platforms
* End Sub

## 🧠 Logic Mapping

| **Step** | **Algorigramme (Procedure)** | **Logigramme (Decision)** |
| --- | --- | --- |
| 1 | Read learner data | Is qualification present? |
| 2 | Validate attendance, levy, and compliance | Is attendance ≥ 75%? |
| 3 | Assign export status | Is labour levy paid and gov bill compliant? |
| 4 | Export eligible records to digital portfolio | If all conditions met → Export; else → Flag for review |

## 📂 Sheet Structure (CoP\_Curriculum)

| **Column** | **Field** |
| --- | --- |
| A | Learner ID |
| B | Qualification |
| C | Attendance (%) |
| D | Labour Levy Status |
| E | Government Bill Compliance |
| F | Export Status |

* This VBA module can be embedded into your CoP workbook to automate compliance checks, credential verification, and export readiness. Would you like a printable logigramme/algorigramme diagram or a dashboard interface for this logic? I can also help scaffold the GitHub or LMS integration logic next.

Here is a structured summary of your NRF Awards application (Reference: NONF250411310281), formatted to support academic, policy, and funding alignment:

## 📘 Overview

This nomination for the NRF Research Excellence Award for Early Career/Emerging Researchers highlights Tshingombe Tshitadi Fiston’s pioneering work in electrical engineering education, credential transparency, and modular curriculum innovation. The submission integrates national and international frameworks (RNF, AIU, NSF) to scaffold a transdisciplinary learning journey aligned with South Africa’s National Trade Framework.

## 🎯 Scope

* **Geographic Focus**: South Africa and Democratic Republic of Congo
* **Institutional Anchor**: South African Qualifications Authority (SAQA)
* **Disciplinary Domains**:
  + Electrical engineering and energy studies
  + Curriculum policy and management
  + Defence and security systems
  + Additive manufacturing and industrial sociology
* **Target Audiences**:
  + Vocational learners and educators
  + Policy councils and regulatory bodies
  + Defence and security research platforms

## 🧾 Description

The nomination centers on:

* Modular curriculum design for electrical engineering and trade readiness
* Credential alignment with SAQA/NQF, WA codes, and NSF SBIR/STTR standards
* Integration of AIU guest modules and LMS platforms for open-access learning
* Use of GitHub, Excel VBA, and Internet Archive for portfolio documentation
* Development of security and safety facilitation modules for regulated sectors

## 📊 Data Analysis & Information Management System

* **Data Types**:
  + Qualification records
  + Timetable allocation and job costing
  + Labour levy and government bill documentation
  + Diagnostic assessments and career portfolios
* **Tools & Logic**:
  + Visual Basic for Excel-based credential tracking
  + Logigrammes for decision-based curriculum mapping
  + Algorigrammes for procedural learning workflows
  + Archival dashboards for learner progression and trade readiness
* **System Features**:
  + Audit-ready credential verification
  + Modular export logic for engineering and policy records
  + Integration with SARAO and CSIR infrastructure platforms

## 🔍 Investigation Principles

* **Research Questions**:
  + How can modular engineering education support national trade and security frameworks?
  + What gaps exist in credential transparency and regulated sector readiness?
  + How can digital publishing and diagnostics improve learner outcomes?
* **Methodology**:
  + Literature review and policy diagnostics
  + Experimental curriculum mapping
  + Stakeholder engagement (learners, councils, government departments)
  + Case studies and logic model alignment

## ✅ Advantages

* Bridges engineering education with national policy and defence systems
* Promotes credential transparency and open-access learning
* Enables modular, bilingual documentation across regulated sectors
* Supports national infrastructure platforms like SARAO and CSIR
* Aligns with government bill implementation and labour policy frameworks

## ❌ Disadvantages

* High complexity in aligning multiple policy domains
* Requires extensive stakeholder coordination and regulatory compliance
* Funding and resource gaps not yet captured in application
* Limited institutional partner documentation in current submission

## 🧩 Conclusion

This NRF nomination showcases Tshingombe Tshitadi Fiston’s visionary integration of engineering education, policy engagement, and credential transparency. His work scaffolds a scalable, audit-ready infrastructure for technical education and regulated sector development, positioning him as a leading early-career researcher in Africa’s engineering and policy landscape.

## 📚 Bibliographic References

* Tshingombe, T. (2025). Career Discovery Overview: RNF, AIU, NSF Learning Journey within the National Trade Framework. Patent Grant No. 2.
* Tshingombe, T. (2021). Master Education Technology Rural Implementation Framework. Atlantic Journal.
* Davis, D. & Drusvyatskiy, D. (2021). Conservative and Semismooth Derivatives. Set-Valued and Variational Analysis. DOI:
* To support your NRF Awards application and modular curriculum logic, here’s a Visual Basic for Applications (VBA) code module that integrates both **algorigramme** (procedural flow) and **logigramme** (decision logic) principles. This code is designed to automate credential verification, labour policy compliance, and export readiness for learners in regulated sectors such as defence, security, and electrical engineering.

## 💻 Visual Basic Code: NRF Credential Audit & Export Logic

* Sub NRF\_CredentialAudit()
* Dim ws As Worksheet
* Dim lastRow As Long
* Dim i As Long
* Dim learnerID As String
* Dim qualification As String
* Dim attendance As Double
* Dim levyStatus As String
* Dim govCompliance As String
* Dim exportStatus As String
* Set ws = ThisWorkbook.Sheets("NRF\_Curriculum")
* lastRow = ws.Cells(ws.Rows.Count, "A").End(xlUp).Row
* For i = 2 To lastRow
* learnerID = ws.Cells(i, 1).Value
* qualification = ws.Cells(i, 2).Value
* attendance = ws.Cells(i, 3).Value
* levyStatus = ws.Cells(i, 4).Value
* govCompliance = ws.Cells(i, 5).Value
* ' Logigramme: Decision logic
* If qualification <> "" And attendance >= 75 And \_
* levyStatus = "Paid" And govCompliance = "Compliant" Then
* exportStatus = "Eligible for NRF Export"
* ElseIf qualification = "" Then
* exportStatus = "Missing Qualification"
* ElseIf attendance < 75 Then
* exportStatus = "Low Attendance"
* ElseIf levyStatus <> "Paid" Then
* exportStatus = "Levy Unpaid"
* ElseIf govCompliance <> "Compliant" Then
* exportStatus = "Non-Compliant with Policy"
* Else
* exportStatus = "Manual Review Required"
* End If
* ' Algorigramme: Procedural logic
* ws.Cells(i, 6).Value = exportStatus
* If exportStatus = "Eligible for NRF Export" Then
* Call ExportToArchive(learnerID, qualification)
* End If
* Next i
* MsgBox "NRF credential audit completed.", vbInformation
* End Sub
* Sub ExportToArchive(learnerID As String, qualification As String)
* ' Simulated export logic to GitHub, LMS, or Internet Archive
* Debug.Print "Exporting learner: " & learnerID & " | Qualification: " & qualification
* ' Future integration: API calls to GitHub, LMS, or archival platforms
* End Sub

## 🧠 Logic Mapping

## 🧠 Logic Mapping

| **Step** | **Algorigramme (Procedure)** | **Logigramme (Decision)** |
| --- | --- | --- |
| 1 | Read learner data | Is qualification present? |
| 2 | Validate attendance, levy, and compliance | Is attendance ≥ 75%? |
| 3 | Assign export status | Is levy paid and policy compliant? |
| 4 | Export eligible records to digital portfolio | If all conditions met → Export; else → Flag for review |

## 📂 Sheet Structure (NRF\_Curriculum)

| **Column** | **Field** |
| --- | --- |
| A | Learner ID |
| B | Qualification |
| C | Attendance (%) |
| D | Labour Levy Status |
| E | Government Bill Compliance |
| F | Export Status |

This VBA module can be embedded into your NRF workbook to automate compliance checks, credential verification, and export readiness. Would you like a printable logigramme/algorigramme diagram or a dashboard interface for this logic? I can also scaffold integration with GitHub or LMS platforms next.

Here is a structured summary of your SARAO Honours application (Reference: SHON250915364778), formatted to support academic, technical, and funding alignment:

## 📘 Overview

This SARAO Honours application highlights Tshingombe Tshitadi Fiston’s commitment to modular engineering education, credential transparency, and open-access learning. The submission integrates national and international frameworks (RNF, AIU, NSF) to scaffold a transdisciplinary learning journey aligned with South Africa’s National Trade Framework and the strategic goals of SARAO.

## 🎯 Scope

* **Geographic Focus**: South Africa and Democratic Republic of Congo
* **Institutional Anchor**: South African Qualifications Authority (SAQA)
* **Disciplinary Domains**:
  + Electrical engineering and energy studies
  + Curriculum policy and management
  + Open-access education and credential systems
* **Target Audiences**:
  + Honours-level learners
  + Technical educators and curriculum developers
  + SARAO-aligned research platforms

## 🧾 Description

The SARAO Honours initiative centers on:

* Modular curriculum design for electrical engineering and trade readiness
* Credential alignment with SAQA/NQF, WA codes, and NSF SBIR/STTR standards
* Integration of AIU guest modules and LMS platforms for open-access learning
* Use of GitHub, Excel VBA, and Internet Archive for career mapping and portfolio documentation
* Development of diagnostic tools and credential-linked dashboards for honours-level learners

## 📊 Data Analysis & Information Management System

* **Data Types**:
  + Qualification records
  + Timetable allocation and job costing
  + Diagnostic assessments and career portfolios
* **Tools & Logic**:
  + Visual Basic for Excel-based credential tracking
  + Logigrammes for decision-based curriculum mapping
  + Algorigrammes for procedural learning workflows
  + Archival dashboards for learner progression and trade readiness
* **System Features**:
  + Audit-ready credential verification
  + Modular export logic for engineering and policy records
  + Integration with SARAO infrastructure platforms

## 🔍 Investigation Principles

* **Research Questions**:
  + How can modular engineering education support SARAO’s honours-level goals?
  + What gaps exist in credential transparency and trade readiness?
  + How can digital publishing and diagnostics improve learner outcomes?
* **Methodology**:
  + Literature review and curriculum diagnostics
  + Experimental mapping of trade and honours-level modules
  + Stakeholder engagement (learners, councils, SARAO)
  + Case studies and logic model alignment

## ✅ Advantages

* Bridges engineering education with SARAO’s strategic research goals
* Promotes credential transparency and open-access learning
* Enables modular, bilingual documentation across regulated sectors
* Supports national infrastructure platforms and honours-level development
* Aligns with government and institutional frameworks for technical education

## ❌ Disadvantages

* Limited geographic data captured in current application
* Requires extensive stakeholder coordination and regulatory compliance
* Funding and resource gaps not yet captured in application
* Institutional partner documentation may need expansion

## 🧩 Conclusion

This SARAO Honours application showcases Tshingombe Tshitadi Fiston’s visionary integration of engineering education, credential transparency, and modular curriculum innovation. His work scaffolds a scalable, audit-ready infrastructure for honours-level learners and technical education aligned with SARAO’s national objectives.

## 📚 Bibliographic References

* Tshingombe, T. (2025). Career Discovery Overview: RNF, AIU, NSF Learning Journey within the National Trade Framework. Patent Grant No. 2.
* Tshingombe, T. (2021). Master Education Technology Rural Implementation Framework. Atlantic Journal.
* Davis, D. & Drusvyatskiy, D. (2021). Conservative and Semismooth Derivatives. Set-Valued and Variational Analysis. DOI:
* To support your SARAO Honours application with actionable system logic, here’s a tailored Visual Basic for Applications (VBA) code module that integrates both **logigramme** (decision-based logic) and **algorigramme** (procedural flow) principles. This module automates credential verification, diagnostic readiness, and export eligibility for honours-level learners aligned with SARAO’s strategic goals.

## 💻 Visual Basic Code: SARAO Honours Credential Audit & Export Logic

* vb
* Sub SARAO\_HonoursAudit()
* Dim ws As Worksheet
* Dim lastRow As Long
* Dim i As Long
* Dim learnerID As String
* Dim qualification As String
* Dim attendance As Double
* Dim diagnosticScore As Double
* Dim exportStatus As String
* Set ws = ThisWorkbook.Sheets("SARAO\_Honours")
* lastRow = ws.Cells(ws.Rows.Count, "A").End(xlUp).Row
* For i = 2 To lastRow
* learnerID = ws.Cells(i, 1).Value
* qualification = ws.Cells(i, 2).Value
* attendance = ws.Cells(i, 3).Value
* diagnosticScore = ws.Cells(i, 4).Value
* ' Logigramme: Decision logic
* If qualification <> "" And attendance >= 80 And diagnosticScore >= 70 Then
* exportStatus = "Eligible for SARAO Honours Export"
* ElseIf qualification = "" Then
* exportStatus = "Missing Qualification"
* ElseIf attendance < 80 Then
* exportStatus = "Low Attendance"
* ElseIf diagnosticScore < 70 Then
* exportStatus = "Diagnostic Score Below Threshold"
* Else
* exportStatus = "Manual Review Required"
* End If
* ' Algorigramme: Procedural logic
* ws.Cells(i, 5).Value = exportStatus
* If exportStatus = "Eligible for SARAO Honours Export" Then
* Call ExportToPortfolio(learnerID, qualification)
* End If
* Next i
* MsgBox "SARAO Honours audit completed.", vbInformation
* End Sub
* Sub ExportToPortfolio(learnerID As String, qualification As String)
* ' Simulated export logic to GitHub, LMS, or Internet Archive
* Debug.Print "Exporting learner: " & learnerID & " | Qualification: " & qualification
* ' Future integration: API calls to GitHub, LMS, or archival platforms
* End Sub

## 🧠 Logic Mapping

| **Step** | **Algorigramme (Procedure)** | **Logigramme (Decision)** |
| --- | --- | --- |
| 1 | Read learner data | Is qualification present? |
| 2 | Validate attendance and diagnostic score | Is attendance ≥ 80% and score ≥ 70? |
| 3 | Assign export status | If all conditions met → Eligible; else → Flag for review |
| 4 | Export eligible records to digital portfolio | Trigger archival export for qualified learners |

## 📂 Sheet Structure (SARAO\_Honours)

| **Column** | **Field** |
| --- | --- |
| A | Learner ID |
| B | Qualification |
| C | Attendance (%) |
| D | Diagnostic Score (%) |
| E | Export Status |

Here is a structured summary of your NRF Extension Support application (Reference: PMDS250721346062), formatted to support academic, technical, and funding alignment:

## 📘 Overview

This application for Extension Support under the NRF Masters and Doctoral Scholarships highlights Tshingombe Tshitadi Fiston’s advanced research in electrical engineering, curriculum policy, and AGI ethics. The submission integrates national and international frameworks (RNF, AIU, NSF) and proposes a modular, credential-linked system to complete doctoral research aligned with South Africa’s industrial and educational transformation goals.

## 🎯 Scope

* **Geographic Focus**: Gauteng, South Africa and Democratic Republic of Congo
* **Institutional Anchor**: South African Qualifications Authority (SAQA)
* **Disciplinary Domains**:
  + Electrical engineering and energy studies
  + Curriculum policy and management
  + AGI ethics and public policy
  + E-commerce in renewable energy
* **Target Audiences**:
  + Doctoral candidates and supervisors
  + Policy councils and industrial education platforms
  + NRF and extension support reviewers

## 🧾 Description

The doctoral research centers on:

* Modular curriculum design for engineering and trade readiness
* Credential alignment with SAQA/NQF, WA codes, and NSF frameworks
* Integration of AGI ethics, mediation, and labour policy into technical education
* Use of GitHub, Excel VBA, and Internet Archive for career mapping and portfolio documentation
* Development of diagnostic tools and credential-linked dashboards for doctoral learners

## 📊 Data Analysis & Information Management System

* **Data Types**:
  + Qualification records
  + Timetable allocation and job costing
  + AGI policy diagnostics and mediation records
  + E-commerce and renewable energy market data
* **Tools & Logic**:
  + Visual Basic for Excel-based credential tracking
  + Logigrammes for decision-based curriculum mapping
  + Algorigrammes for procedural learning workflows
  + Archival dashboards for learner progression and trade readiness
* **System Features**:
  + Audit-ready credential verification
  + Modular export logic for engineering and policy records
  + Integration with NRF and SAQA infrastructure platforms

## 🔍 Investigation Principles

* **Research Questions**:
  + How can modular engineering education support AGI ethics and labour policy?
  + What gaps exist in credential transparency and doctoral readiness?
  + How can digital publishing and diagnostics improve doctoral outcomes?
* **Methodology**:
  + Literature review and curriculum diagnostics
  + Experimental mapping of trade and doctoral modules
  + Stakeholder engagement (learners, councils, NRF)
  + Case studies and logic model alignment

## ✅ Advantages

* Bridges engineering education with AGI ethics and labour policy
* Promotes credential transparency and open-access learning
* Enables modular, bilingual documentation across regulated sectors
* Supports national infrastructure platforms and doctoral-level development
* Aligns with NRF and SAQA frameworks for technical education

## ❌ Disadvantages

* High complexity in aligning multiple policy domains
* Requires extensive stakeholder coordination and regulatory compliance
* Funding and resource gaps not yet captured in application
* Institutional partner documentation may need expansion

## 🧩 Conclusion

This NRF Extension Support application showcases Tshingombe Tshitadi Fiston’s visionary integration of engineering education, AGI ethics, and credential transparency. His work scaffolds a scalable, audit-ready infrastructure for doctoral learners and technical education aligned with South Africa’s national objectives.

## 📚 Bibliographic References

* Tshingombe, T. (2025). Career Discovery Overview: RNF, AIU, NSF Learning Journey within the National Trade Framework. Patent Grant No. 2.
* Tshingombe, T. (2021). Master Education Technology Rural Implementation Framework. Atlantic Journal.
* Davis, D. & Drusvyatskiy, D. (2021). Conservative and Semismooth Derivatives. Set-Valued and Variational Analysis. DOI:

## 🎯 Purpose

To secure NRF Extension Support for completing doctoral research in electrical engineering, AGI ethics, and modular curriculum innovation.

## 🔑 Keywords

NRF Extension Support, doctoral research, electrical engineering, curriculum policy, credential transparency, AGI ethics, labour policy, renewable energy, SAQA, RNF, AIU, NSF, logigramme, algorigramme, Visual Basic, audit-ready documentation.

Would you like me to scaffold a Visual Basic module for doctoral credential tracking or generate a printable dashboard for NRF reviewers? I can also help visualize your logigramme and algorigramme logic.

Absolutely, Tshingombe. Here's a tailored Visual Basic for Applications (VBA) module that integrates both **logigramme** (decision logic) and **algorigramme** (procedural flow) principles to support your doctoral credential tracking and diagnostic export logic. This code is designed to automate verification, readiness assessment, and archival export for learners aligned with NRF and SAQA frameworks.

## 💻 Visual Basic Code: Doctoral Credential Audit & Export Logic

Sub NRF\_DoctoralAudit()

Dim ws As Worksheet

Dim lastRow As Long

Dim i As Long

Dim learnerID As String

Dim qualification As String

Dim attendance As Double

Dim diagnosticScore As Double

Dim agiEthicsFlag As String

Dim exportStatus As String

Set ws = ThisWorkbook.Sheets("DoctoralDashboard")

lastRow = ws.Cells(ws.Rows.Count, "A").End(xlUp).Row

For i = 2 To lastRow

learnerID = ws.Cells(i, 1).Value

qualification = ws.Cells(i, 2).Value

attendance = ws.Cells(i, 3).Value

diagnosticScore = ws.Cells(i, 4).Value

agiEthicsFlag = ws.Cells(i, 5).Value ' e.g., "Aligned", "Pending", "Non-Compliant"

' Logigramme: Decision logic

If qualification <> "" And attendance >= 80 And diagnosticScore >= 70 And agiEthicsFlag = "Aligned" Then

exportStatus = "Eligible for NRF Extension Export"

ElseIf qualification = "" Then

exportStatus = "Missing Qualification"

ElseIf attendance < 80 Then

exportStatus = "Low Attendance"

ElseIf diagnosticScore < 70 Then

exportStatus = "Diagnostic Score Below Threshold"

ElseIf agiEthicsFlag <> "Aligned" Then

exportStatus = "AGI Ethics Misalignment"

Else

exportStatus = "Manual Review Required"

End If

' Algorigramme: Procedural logic

ws.Cells(i, 6).Value = exportStatus

If exportStatus = "Eligible for NRF Extension Export" Then

Call ExportToArchive(learnerID, qualification)

End If

Next i

MsgBox "Doctoral credential audit completed.", vbInformation

End Sub

Sub ExportToArchive(learnerID As String, qualification As String)

' Simulated export logic to GitHub, LMS, or Internet Archive

Debug.Print "Exporting learner: " & learnerID & " | Qualification: " & qualification

' Future integration: API calls to GitHub, LMS, or archival platforms

End Sub

## 🧠 Logic Mapping

| **Step** | **Algorigramme (Procedure)** | **Logigramme (Decision)** |
| --- | --- | --- |
| 1 | Read learner data | Is qualification present? |
| 2 | Validate attendance and diagnostic score | Is attendance ≥ 80% and score ≥ 70? |
| 3 | Check AGI ethics alignment | Is AGI ethics flag marked "Aligned"? |
| 4 | Assign export status | If all conditions met → Eligible; else → Flag for review |
| 5 | Export eligible records to digital portfolio | Trigger archival export for qualified learners |

## 📂 Sheet Structure (DoctoralDashboard)

| **Column** | **Field** |
| --- | --- |
| A | Learner ID |
| B | Qualification |
| C | Attendance (%) |
| D | Diagnostic Score (%) |
| E | AGI Ethics Alignment |
| F | Export Status |

This module can be embedded into your doctoral workbook to automate compliance checks and export readiness. If you'd like, I can also scaffold a printable logigramme/algorigramme diagram or help you integrate this logic into your GitHub or Internet Archive repositories. Let’s make your NRF reviewers’ dashboard modular and audit-ready.

Here is a structured summary of your NRF Postdoctoral Grant application (Reference: PSTD250411310291), formatted to support academic, technical, and funding alignment:

## 📘 Overview

This NRF Postdoctoral Grant application highlights Tshingombe Tshitadi Fiston’s advanced research in electrical engineering, curriculum policy, and modular credential systems. The proposal builds on prior doctoral work and integrates national and international frameworks (RNF, AIU, NSF) to scaffold a transdisciplinary postdoctoral research agenda aligned with South Africa’s manufacturing and education transformation goals.

To support your NRF Postdoctoral Grant framework, here’s a tailored Visual Basic for Applications (VBA) module that integrates both **algorigramme** (procedural logic) and **logigramme** (decision logic) principles. This code automates credential verification, manufacturing readiness, and export eligibility for postdoctoral learners aligned with CSIR and NRF standards.

## 💻 Visual Basic Code: Postdoctoral Credential Audit & Export Logic

Sub PostdocCredentialAudit()

Dim ws As Worksheet

Dim lastRow As Long

Dim i As Long

Dim researcherID As String

Dim qualification As String

Dim attendance As Double

Dim diagnosticScore As Double

Dim manufacturingFlag As String

Dim exportStatus As String

Set ws = ThisWorkbook.Sheets("PostdocDashboard")

lastRow = ws.Cells(ws.Rows.Count, "A").End(xlUp).Row

For i = 2 To lastRow

researcherID = ws.Cells(i, 1).Value

qualification = ws.Cells(i, 2).Value

attendance = ws.Cells(i, 3).Value

diagnosticScore = ws.Cells(i, 4).Value

manufacturingFlag = ws.Cells(i, 5).Value ' e.g., "Ready", "Pending", "Incomplete"

' Logigramme: Decision logic

If qualification <> "" And attendance >= 85 And diagnosticScore >= 75 And manufacturingFlag = "Ready" Then

exportStatus = "Eligible for Postdoc Export"

ElseIf qualification = "" Then

exportStatus = "Missing Qualification"

ElseIf attendance < 85 Then

exportStatus = "Low Attendance"

ElseIf diagnosticScore < 75 Then

exportStatus = "Diagnostic Score Below Threshold"

ElseIf manufacturingFlag <> "Ready" Then

exportStatus = "Manufacturing Readiness Incomplete"

Else

exportStatus = "Manual Review Required"

End If

' Algorigramme: Procedural logic

ws.Cells(i, 6).Value = exportStatus

If exportStatus = "Eligible for Postdoc Export" Then

Call ExportToArchive(researcherID, qualification)

End If

Next i

MsgBox "Postdoctoral credential audit completed.", vbInformation

End Sub

Sub ExportToArchive(researcherID As String, qualification As String)

' Simulated export logic to GitHub, LMS, or Internet Archive

Debug.Print "Exporting researcher: " & researcherID & " | Qualification: " & qualification

' Future integration: API calls to GitHub, LMS, or archival platforms

End Sub

## 🧠 Logic Mapping

| **Step** | **Algorigramme (Procedure)** | **Logigramme (Decision)** |
| --- | --- | --- |
| 1 | Read researcher data | Is qualification present? |
| 2 | Validate attendance and diagnostic score | Is attendance ≥ 85% and score ≥ 75? |
| 3 | Check manufacturing readiness | Is flag marked "Ready"? |
| 4 | Assign export status | If all conditions met → Eligible; else → Flag for review |
| 5 | Export eligible records to digital portfolio | Trigger archival export for qualified researchers |

## 📂 Sheet Structure (PostdocDashboard)

| **Column** | **Field** |
| --- | --- |
| A | Researcher ID |
| B | Qualification |
| C | Attendance (%) |
| D | Diagnostic Score (%) |
| E | Manufacturing Readiness |
| F | Export Status |

This module can be embedded into your postdoctoral workbook to automate compliance checks and export readiness. If you’d like, I can also scaffold a printable logigramme/algorigramme diagram or help you integrate this logic into your GitHub or Internet Archive repositories. Let’s make your NRF reviewers’ dashboard modular, bilingual, and audit-ready.

## 🎯 Scope

* **Geographic Focus**: South Africa (Gauteng) and Democratic Republic of Congo
* **Institutional Anchor**: South African Qualifications Authority (SAQA)
* **Host Institution**: CSIR – Future Production: Manufacturing
* **Disciplinary Domains**:
  + Electrical engineering and energy studies
  + Curriculum policy and management
  + Nanostructured materials and packaging
  + Industrial sociology and additive manufacturing
* **Target Audiences**:
  + Postdoctoral researchers and supervisors
  + Technical educators and policy councils
  + NRF reviewers and CSIR innovation platforms

## 🧾 Description

The postdoctoral research centers on:

* Modular curriculum design for engineering and manufacturing readiness
* Credential alignment with SAQA/NQF, WA codes, and NSF frameworks
* Integration of trade theory, labour legislation, and skill development into technical education
* Use of GitHub, Excel VBA, and Internet Archive for career mapping and portfolio documentation
* Development of diagnostic tools and credential-linked dashboards for postdoctoral learners

## 📊 Data Analysis & Information Management System

* **Data Types**:
  + Qualification records
  + Timetable allocation and job costing
  + Trade theory and policy diagnostics
  + Nanomaterials and manufacturing process data
* **Tools & Logic**:
  + Visual Basic for Excel-based credential tracking
  + Logigrammes for decision-based curriculum mapping
  + Algorigrammes for procedural learning workflows
  + Archival dashboards for learner progression and trade readiness
* **System Features**:
  + Audit-ready credential verification
  + Modular export logic for engineering and policy records
  + Integration with CSIR and NRF infrastructure platforms

## 🔍 Investigation Principles

* **Research Questions**:
  + How can modular engineering education support manufacturing innovation and labour policy?
  + What gaps exist in credential transparency and postdoctoral readiness?
  + How can digital publishing and diagnostics improve postdoctoral outcomes?
* **Methodology**:
  + Literature review and curriculum diagnostics
  + Experimental mapping of trade and postdoctoral modules
  + Stakeholder engagement (learners, councils, CSIR, NRF)
  + Case studies and logic model alignment

## ✅ Advantages

* Bridges engineering education with manufacturing and labour policy
* Promotes credential transparency and open-access learning
* Enables modular, bilingual documentation across regulated sectors
* Supports national infrastructure platforms and postdoctoral-level development
* Aligns with NRF and CSIR frameworks for technical education and innovation

## ❌ Disadvantages

* High complexity in aligning multiple policy domains
* Requires extensive stakeholder coordination and regulatory compliance
* Funding and resource gaps not yet captured in application
* Institutional partner documentation may need expansion

## 🧩 Conclusion

This NRF Postdoctoral Grant application showcases Tshingombe Tshitadi Fiston’s visionary integration of engineering education, manufacturing innovation, and credential transparency. His work scaffolds a scalable, audit-ready infrastructure for postdoctoral learners and technical education aligned with South Africa’s national objectives.

## 📚 Bibliographic References

* Tshingombe, T. (2025). Career Discovery Overview: RNF, AIU, NSF Learning Journey within the National Trade Framework. Patent Grant No. 2.
* Tshingombe, T. (2021). Master Education Technology Rural Implementation Framework. Atlantic Journal.
* Davis, D. & Drusvyatskiy, D. (2021). Conservative and Semismooth Derivatives. Set-Valued and Variational Analysis. DOI:

## 🎯 Purpose

To secure NRF Postdoctoral Grant support for advancing modular engineering education, manufacturing innovation, and credential-linked dashboards.

## 🔑 Keywords

NRF Postdoctoral Grant, electrical engineering, curriculum policy, credential transparency, manufacturing, nanostructured materials, SAQA, RNF, AIU, NSF, CSIR, logigramme, algorigramme, Visual Basic, audit-ready documentation.

Would you like me to scaffold a Visual Basic module for postdoctoral credential tracking or generate a printable dashboard for NRF reviewers? I can also help visualize your logigramme and algorigramme logic.

Here is a structured summary of your Knowledge Interchange & Collaboration (KIC) application (Reference: KIC250807352710), formatted to support academic, technical, and funding alignment:

## 📘 Overview

This KIC application highlights Tshingombe Tshitadi Fiston’s transdisciplinary research in electrical engineering, curriculum policy, and credential transparency. It proposes a modular, data-driven framework for career discovery, trade readiness, and global benchmarking. The initiative leverages collaboration across African and international platforms to democratize technical education and integrate vocational diagnostics into national qualification systems.

## 🎯 Scope

* **Geographic Focus**: South Africa and Democratic Republic of Congo
* **Institutional Anchor**: South African Qualifications Authority (SAQA)
* **Disciplinary Domains**:
  + Electrical engineering and energy studies
  + Curriculum policy and management
  + Additive manufacturing and industrial sociology
  + Analytical environmental chemistry and nanostructured materials
* **Target Audiences**:
  + Vocational learners and educators
  + Policy councils and technical institutions
  + KIC reviewers and African collaboration platforms

## 🧾 Description

The KIC initiative centers on:

* Modular curriculum design for trade readiness and engineering education
* Credential alignment with SAQA/NQF, WA codes, and NSF SBIR/STTR frameworks
* Integration of AIU guest modules into national qualification pathways
* Use of LMS, GitHub, and Internet Archive for portfolio documentation and career mapping
* Development of diagnostic tools and credential-linked dashboards for vocational learners
* Collaboration with African and global institutions for knowledge exchange

## 📊 Data Analysis & Information Management System

* **Data Types**:
  + Qualification records
  + Timetable structures and job costing
  + Labour policy and CCMA frameworks
  + Security, safety, and government bill implementation data
* **Tools & Logic**:
  + Visual Basic for Excel-based credential tracking
  + Logigrammes for decision-based curriculum mapping
  + Algorigrammes for procedural learning workflows
  + Archival dashboards for learner progression and trade readiness
* **System Features**:
  + Audit-ready credential verification
  + Modular export logic for engineering and policy records
  + Integration with KIC, SAQA, and international infrastructure platforms

## 🔍 Investigation Principles

* **Research Questions**:
  + How can modular engineering education support trade readiness and policy integration?
  + What gaps exist in credential transparency and vocational diagnostics?
  + How can African collaboration enhance technical education outcomes?
* **Methodology**:
  + Literature review and curriculum diagnostics
  + Experimental mapping of trade and vocational modules
  + Stakeholder engagement (learners, councils, KIC partners)
  + Case studies and logic model alignment

## ✅ Advantages

* Bridges engineering education with labour policy and credential transparency
* Promotes open-access learning and modular documentation
* Enables bilingual, audit-ready systems across African and global platforms
* Supports national infrastructure and vocational development
* Aligns with KIC goals for knowledge exchange and collaboration

## ❌ Disadvantages

* Limited documentation captured in current application (event, funding, hosting details)
* Requires extensive stakeholder coordination and regulatory compliance
* Funding and resource gaps not yet specified
* Institutional partner roles need clearer articulation

## 🧩 Conclusion

This KIC application showcases Tshingombe Tshitadi Fiston’s visionary integration of engineering education, credential transparency, and African collaboration. His work scaffolds a scalable, audit-ready infrastructure for vocational learners and technical education aligned with national and continental development goals.

## 📚 Bibliographic References

* Tshingombe, T. (2025). Career Discovery Overview: RNF, AIU, NSF Learning Journey within the National Trade Framework. Patent Grant No. 2.
* Tshingombe, T. (2021). Master Education Technology Rural Implementation Framework. Atlantic Journal.
* Davis, D. & Drusvyatskiy, D. (2021). Conservative and Semismooth Derivatives. Set-Valued and Variational Analysis. DOI:

## 🎯 Purpose

To secure KIC support for advancing modular engineering education, credential-linked dashboards, and African knowledge collaboration.

## 🔑 Keywords

KIC, electrical engineering, curriculum policy, credential transparency, vocational education, SAQA, RNF, AIU, NSF, CCMA, GitHub, Internet Archive, logigramme, algorigramme, Visual Basic, audit-ready documentation.

Would you like me to scaffold a Visual Basic module for vocational credential tracking or generate a printable dashboard for KIC reviewers? I can also help visualize your logigramme and algorigramme logic. Here is a structured summary of your NRF Extension Support application (Reference: PMDS250721346062), formatted to support technical review, academic planning, and operational execution:

**📘 Overview**

This Extension Support application advances Tshingombe Tshitadi Fiston’s doctoral research in electrical engineering, curriculum policy, and vocational diagnostics. The project integrates modular qualification frameworks, LMS-based learning, and AI-driven assessment systems to address rural development, industrial training, and credential transparency across South Africa’s trade and education sectors.

**🎯 Scope**

* **Geographic Focus**: South Africa and Democratic Republic of Congo
* **Institutional Anchor**: South African Qualifications Authority (SAQA)
* **Domains**:
  + Electrical engineering and energy studies
  + Curriculum policy and management
  + Artificial General Intelligence (AGI) and vocational diagnostics
  + E-commerce and renewable energy systems
* **Target Audiences**:
  + Doctoral candidates and supervisors
  + Technical educators and policy councils
  + NRF reviewers and national qualification bodies

**🧾 Description**

* Modular curriculum design for trade readiness and qualification reform
* Integration of LMS, AI, and machine learning for diagnostics and career mapping
* Use of GitHub, Excel VBA, and Internet Archive for portfolio documentation
* Development of experimental job frameworks and policy-linked training systems
* Case studies from RSA institutions and rural energy systems

**📊 Data Analysis & Information Management System**

* **Data Types**:
  + Qualification records and LMS logs
  + Fault diagnostics and vocational assessments
  + Trade theory, regulatory scripts, and backlog systems
* **Tools & Logic**:
  + Visual Basic for credential tracking and export automation
  + Logigrammes for decision-based curriculum mapping
  + Algorigrammes for procedural diagnostics and learner workflows
* **System Features**:
  + Audit-ready credential verification
  + Modular export logic for NRF reporting
  + Integration with SAQA, DHET, and AIU platforms

**🔍 Investigation Principles**

* **Research Questions**:
  + How can LMS-integrated diagnostics improve trade qualification systems?
  + What gaps exist in rural training and industrial readiness?
  + How can AGI and machine learning support vocational requalification?
* **Methodology**:
  + Literature review and curriculum diagnostics
  + Experimental mapping of trade and qualification modules
  + Stakeholder engagement (SAQA, DHET, NRF, ST Peace College)
  + Logic model alignment and IP licensing

**✅ Advantages**

* Bridges vocational education with AGI and advanced diagnostics
* Promotes credential transparency and modular learning
* Enables bilingual, audit-ready documentation
* Supports rural infrastructure and industrial readiness
* Aligns with NRF Extension Support and SAQA innovation goals

**❌ Disadvantages**

* High complexity in aligning multiple qualification systems
* Requires extensive stakeholder coordination and regulatory compliance
* Funding gaps and budget documentation still pending
* Institutional roles need clearer operational mapping

**🧩 Conclusion**

This NRF Extension Support application showcases Tshingombe Tshitadi Fiston’s integration of electrical engineering, vocational readiness, and modular credential systems. It scaffolds a scalable, audit-ready infrastructure for doctoral learners and technical education aligned with South Africa’s national objectives.

**📚 Bibliographic References**

* Tshingombe, T. (2025). *Career Discovery Overview: RNF, AIU, NSF Learning Journey*. Patent Grant No. 2
* Tshingombe, T. (2021). *Master Education Technology Rural Implementation Framework*. Atlantic Journal
* Davis, D. & Drusvyatskiy, D. (2021). *Conservative and Semismooth Derivatives*. Set-Valued and Variational Analysis. DOI:

Here is a structured summary of your SARAO Bachelor in Engineering Technology and Diploma in Engineering Technology Scholarship application (Reference: SBDET250721346098), formatted to support academic, technical, and funding alignment:

## 📘 Overview

This SARAO scholarship application supports Tshingombe Tshitadi Fiston’s pursuit of a Bachelor in Electrical and Electronic Engineering Technology. The proposal builds on his extensive background in curriculum policy, energy studies, and modular credential systems. It integrates national qualification frameworks with diagnostic assessment and portfolio-based learning to prepare candidates for advanced engineering and security roles.

## 🎯 Scope

* **Geographic Focus**: South Africa (Gauteng) and Democratic Republic of Congo
* **Institutional Anchor**: South African Qualifications Authority (SAQA)
* **Disciplinary Domains**:
  + Electrical and electronic engineering
  + Curriculum policy and management
  + Security engineering and vocational diagnostics
* **Target Audiences**:
  + Undergraduate and doctoral learners
  + Technical educators and scholarship reviewers
  + SARAO and national qualification platforms

## 🧾 Description

The scholarship supports:

* Completion of a Bachelor in Engineering Technology (anticipated July 2025)
* Integration of modular curriculum design and trade readiness
* Credential alignment with SAQA/NQF and international frameworks
* Use of GitHub, LMS, and Internet Archive for career mapping and portfolio documentation
* Development of diagnostic tools and assessment portfolios for engineering learners

## 📊 Data Analysis & Information Management System

* **Data Types**:
  + Qualification records
  + Timetable allocation and job costing
  + Diagnostic assessments and security engineering logs
* **Tools & Logic**:
  + Visual Basic for Excel-based credential tracking
  + Logigrammes for decision-based curriculum mapping
  + Algorigrammes for procedural learning workflows
  + Archival dashboards for learner progression and trade readiness
* **System Features**:
  + Audit-ready credential verification
  + Modular export logic for engineering and policy records
  + Integration with SARAO and SAQA infrastructure platforms

## 🔍 Investigation Principles

* **Research Questions**:
  + How can modular engineering education support trade readiness and security integration?
  + What gaps exist in credential transparency and vocational diagnostics?
  + How can digital publishing and assessment portfolios improve learner outcomes?
* **Methodology**:
  + Literature review and curriculum diagnostics
  + Experimental mapping of trade and engineering modules
  + Stakeholder engagement (learners, councils, SARAO)
  + Case studies and logic model alignment

## ✅ Advantages

* Bridges engineering education with security and vocational policy
* Promotes credential transparency and open-access learning
* Enables modular, bilingual documentation across regulated sectors
* Supports national infrastructure platforms and undergraduate-to-doctoral progression
* Aligns with SARAO and SAQA frameworks for technical education

## ❌ Disadvantages

* High complexity in aligning multiple qualification levels
* Requires extensive stakeholder coordination and regulatory compliance
* Funding and resource gaps not yet captured in application
* Institutional partner documentation may need expansion

## 🧩 Conclusion

This SARAO scholarship application showcases Tshingombe Tshitadi Fiston’s commitment to modular engineering education, credential transparency, and vocational readiness. His work scaffolds a scalable, audit-ready infrastructure for undergraduate learners and technical education aligned with South Africa’s national objectives.

## 📚 Bibliographic References

* Tshingombe, T. (2025). Career Discovery Overview: RNF, AIU, NSF Learning Journey within the National Trade Framework. Patent Grant No. 2.
* Tshingombe, T. (2021). Master Education Technology Rural Implementation Framework. Atlantic Journal.
* Davis, D. & Drusvyatskiy, D. (2021). Conservative and Semismooth Derivatives. Set-Valued and Variational Analysis. DOI:

## 🎯 Purpose

To secure SARAO scholarship support for completing a Bachelor in Engineering Technology and advancing modular, credential-linked education systems.

## 📂 Task Requirements

* Complete Bachelor in Engineering Technology by July 2025
* Submit diagnostic assessments and modular curriculum portfolio
* Align outputs with SAQA/NQF and SARAO frameworks
* Document learning journey using GitHub, LMS, and archival platforms

## 📝 Assessment Portfolio Components

* Modular curriculum map
* Diagnostic assessment results
* Credential verification logs
* Security engineering project documentation
* Career progression dashboard (Excel VBA or GitHub-based)

## 🔑 Keywords

SARAO scholarship, electrical engineering, curriculum policy, credential transparency, vocational education, SAQA, RNF, AIU, NSF, GitHub, Internet Archive, logigramme, algorigramme, Visual Basic, audit-ready documentation, assessment portfolio, trade readiness.

Would you like help scaffolding your assessment portfolio or generating a Visual Basic module to track your credential progress? I can also help visualize your logigramme and algorigramme logic for submission.

Absolutely, Tshingombe. Based on your SARAO scholarship framework and modular credential strategy, here’s a tailored **Visual Basic for Applications (VBA)** module that integrates both **logigramme** (decision logic) and **algorigramme** (procedural flow) principles. This code is designed to automate credential verification, diagnostic assessment tracking, and export readiness for your engineering and vocational portfolio.

## 💻 Visual Basic Code: SARAO Credential Tracker & Export Logic

vb

Sub SARAO\_CredentialAudit()

Dim ws As Worksheet

Dim lastRow As Long

Dim i As Long

Dim studentID As String

Dim qualification As String

Dim attendance As Double

Dim diagnosticScore As Double

Dim securityProject As String

Dim exportStatus As String

Set ws = ThisWorkbook.Sheets("SARAO\_Portfolio")

lastRow = ws.Cells(ws.Rows.Count, "A").End(xlUp).Row

For i = 2 To lastRow

studentID = ws.Cells(i, 1).Value

qualification = ws.Cells(i, 2).Value

attendance = ws.Cells(i, 3).Value

diagnosticScore = ws.Cells(i, 4).Value

securityProject = ws.Cells(i, 5).Value ' e.g., "Completed", "Pending", "Not Started"

' Logigramme: Decision logic

If qualification <> "" And attendance >= 80 And diagnosticScore >= 70 And securityProject = "Completed" Then

exportStatus = "Eligible for SARAO Portfolio Export"

ElseIf qualification = "" Then

exportStatus = "Missing Qualification"

ElseIf attendance < 80 Then

exportStatus = "Low Attendance"

ElseIf diagnosticScore < 70 Then

exportStatus = "Diagnostic Score Below Threshold"

ElseIf securityProject <> "Completed" Then

exportStatus = "Security Project Incomplete"

Else

exportStatus = "Manual Review Required"

End If

' Algorigramme: Procedural logic

ws.Cells(i, 6).Value = exportStatus

If exportStatus = "Eligible for SARAO Portfolio Export" Then

Call ExportToArchive(studentID, qualification)

End If

Next i

MsgBox "SARAO credential audit completed.", vbInformation

End Sub

Sub ExportToArchive(studentID As String, qualification As String)

' Simulated export logic to GitHub, LMS, or Internet Archive

Debug.Print "Exporting student: " & studentID & " | Qualification: " & qualification

' Future integration: API calls to GitHub, LMS, or archival platforms

End Sub

## 🧠 Logic Mapping

| **Step** | **Algorigramme (Procedure)** | **Logigramme (Decision)** |
| --- | --- | --- |
| 1 | Read student data | Is qualification present? |
| 2 | Validate attendance and diagnostic score | Is attendance ≥ 80% and score ≥ 70? |
| 3 | Check security project completion | Is project marked "Completed"? |
| 4 | Assign export status | If all conditions met → Eligible; else → Flag for review |
| 5 | Export eligible records to digital portfolio | Trigger archival export for qualified learners |

## 📂 Sheet Structure (SARAO\_Portfolio)

| **Column** | **Field** |
| --- | --- |
| A | Student ID |
| B | Qualification |
| C | Attendance (%) |
| D | Diagnostic Score (%) |
| E | Security Project Status |
| F | Export Status |

This module can be embedded into your Excel-based dashboard to automate compliance checks and portfolio readiness. If you’d like, I can also help you visualize this logic as a printable **logigramme/algorigramme diagram** or scaffold GitHub integration for your credential-linked exports. Let’s make your SARAO submission modular, traceable, and audit-ready.

**This SA/Germany (SAG-CORE) collaboration proposal (Reference: SASAG250915364814) outlines a modular, fault-diagnostic framework for engineering education and rural infrastructure. It integrates security, vocational readiness, and digital portfolio systems to support bilateral innovation.**

## 📘 Overview

Tshingombe Tshitadi Fiston’s SAG-CORE proposal builds on his patented modular curriculum and diagnostic systems. It aims to bridge South African and German engineering education through fault detection, compliance modeling, and vocational readiness tools. The initiative leverages bilateral collaboration to enhance rural infrastructure, educational technology, and credential transparency.

## 🎯 Scope

* **Geographic Focus**: South Africa (Gauteng) and Germany
* **Institutional Anchor**: SAQA and Atlantic International University
* **Domains**:
  + Electrical engineering and fault diagnostics
  + Curriculum policy and vocational assessment
  + Security and defence facilitation
  + Educational technology and compliance modeling
* **Target Audiences**:
  + Engineering learners and educators
  + SAQA/NQF and German qualification bodies
  + SAG-CORE reviewers and bilateral funders

## 🧾 Description

* Modular curriculum design for fault diagnostics and trade readiness
* Integration of SAQA/NQF with German vocational frameworks
* Use of Excel VBA, GitHub, and Internet Archive for portfolio documentation
* Development of compliance modeling and calibration logs
* Bilateral workshops on fault detection, rural energy, and vocational tools

## 📊 Data Analysis & Information Management System

* **Data Types**:
  + Fault matrices and calibration logs
  + Trade theory and security engineering records
  + Portfolio assessments and compliance forms
* **Tools & Logic**:
  + Visual Basic for credential tracking and export automation
  + Logigrammes for decision-based curriculum mapping
  + Algorigrammes for procedural diagnostics and learner workflows
* **System Features**:
  + Audit-ready credential verification
  + Modular export logic for bilateral reporting
  + Integration with SAG-CORE, SAQA, and Elektor Magazine archives

## 🔍 Investigation Principles

* **Research Questions**:
  + How can fault diagnostics improve rural infrastructure and vocational training?
  + What gaps exist in bilateral credential alignment?
  + How can compliance modeling enhance engineering education?
* **Methodology**:
  + Literature review and fault matrix comparison
  + Experimental calibration and schematic design
  + Stakeholder engagement (SAQA, German partners, Elektor)
  + Logic model alignment and IP licensing

## ✅ Advantages

* Strengthens SA-Germany engineering collaboration
* Promotes credential transparency and modular learning
* Enables bilingual, audit-ready documentation
* Supports rural infrastructure and vocational readiness
* Aligns with SAG-CORE and NRF innovation goals

## ❌ Disadvantages

* High complexity in bilateral policy harmonization
* Requires extensive stakeholder coordination
* Funding gaps and budget documentation still pending
* Institutional roles need clearer operational mapping

## 🧩 Conclusion

This SAG-CORE proposal showcases Tshingombe’s integration of fault diagnostics, vocational readiness, and modular credential systems. It scaffolds a scalable, audit-ready infrastructure for bilateral engineering education and rural innovation.

## 📚 Bibliographic References

* Tshingombe, T. (2025). Career Discovery Overview: RNF, AIU, NSF Learning Journey. Patent Grant No. 2
* Tshingombe, T. (2021). Master Education Technology Rural Implementation Framework. Atlantic Journal
* Elektor Magazine (2025). Rural Energy Systems by Tshingombe Tshitadi

## 🎯 Purpose

To secure SAG-CORE funding for bilateral engineering education, fault diagnostics, and modular credential systems.

## 📂 Task Requirements

* Submit fault matrices and calibration logs
* Align curriculum with SAQA/NQF and German frameworks
* Document vocational readiness using Excel VBA and GitHub
* Conduct bilateral workshops and publish schematic designs

## 🔧 Operational Steps

1. Collect fault detection data from rural and urban systems
2. Map curriculum using logigramme logic
3. Automate credential tracking via Visual Basic
4. Export learner portfolios to GitHub and Internet Archive
5. Host bilateral workshops and submit compliance reports

## 📝 Assessment Components

* Fault diagnostic matrices
* Calibration logs and schematic drawings
* Credential verification dashboards
* Vocational readiness forms and IP licensing
* Trade theory and security engineering documentation

## 🔑 Keywords

SAG-CORE, fault diagnostics, vocational readiness, curriculum mapping, SAQA, RNF, AIU, NSF, Elektor, GitHub, Internet Archive, logigramme, algorigramme, Visual Basic, audit-ready documentation, bilateral collaboration, rural infrastructure, compliance modeling.

Based on your SAG-CORE proposal, here’s a tailored **Visual Basic for Applications (VBA)** module that integrates both **logigramme** (decision logic) and **algorigramme** (procedural flow) principles. This code automates fault diagnostics, vocational readiness tracking, and export logic for bilateral collaboration between South Africa and Germany.

## 💻 Visual Basic Code: Fault Diagnostic & Credential Export Logic

vb

Sub SAGCORE\_FaultAudit()

Dim ws As Worksheet

Dim lastRow As Long

Dim i As Long

Dim learnerID As String

Dim qualification As String

Dim faultScore As Double

Dim calibrationStatus As String

Dim vocationalReadiness As String

Dim exportStatus As String

Set ws = ThisWorkbook.Sheets("SAGCORE\_Portfolio")

lastRow = ws.Cells(ws.Rows.Count, "A").End(xlUp).Row

For i = 2 To lastRow

learnerID = ws.Cells(i, 1).Value

qualification = ws.Cells(i, 2).Value

faultScore = ws.Cells(i, 3).Value

calibrationStatus = ws.Cells(i, 4).Value ' "Complete", "Pending", "Failed"

vocationalReadiness = ws.Cells(i, 5).Value ' "Ready", "Incomplete", "Not Assessed"

' Logigramme: Decision logic

If qualification <> "" And faultScore >= 75 And calibrationStatus = "Complete" And vocationalReadiness = "Ready" Then

exportStatus = "Eligible for SAG-CORE Export"

ElseIf qualification = "" Then

exportStatus = "Missing Qualification"

ElseIf faultScore < 75 Then

exportStatus = "Fault Score Below Threshold"

ElseIf calibrationStatus <> "Complete" Then

exportStatus = "Calibration Incomplete"

ElseIf vocationalReadiness <> "Ready" Then

exportStatus = "Vocational Readiness Incomplete"

Else

exportStatus = "Manual Review Required"

End If

' Algorigramme: Procedural logic

ws.Cells(i, 6).Value = exportStatus

If exportStatus = "Eligible for SAG-CORE Export" Then

Call ExportToArchive(learnerID, qualification)

End If

Next i

MsgBox "SAG-CORE fault audit and credential export completed.", vbInformation

End Sub

Sub ExportToArchive(learnerID As String, qualification As String)

' Simulated export logic to GitHub, LMS, or Internet Archive

Debug.Print "Exporting learner: " & learnerID & " | Qualification: " & qualification

' Future integration: API calls to GitHub, LMS, or archival platforms

End Sub

## 🧠 Logic Mapping

| **Step** | **Algorigramme (Procedure)** | **Logigramme (Decision)** |
| --- | --- | --- |
| 1 | Read learner data | Is qualification present? |
| 2 | Validate fault score and calibration status | Is fault score ≥ 75 and calibration complete? |
| 3 | Check vocational readiness | Is readiness marked "Ready"? |
| 4 | Assign export status | If all conditions met → Eligible; else → Flag for review |
| 5 | Export eligible records to bilateral archive | Trigger archival export for qualified learners |

## 📂 Sheet Structure (SAGCORE\_Portfolio)

| **Column** | **Field** |
| --- | --- |
| A | Learner ID |
| B | Qualification |
| C | Fault Score (%) |
| D | Calibration Status |
| E | Vocational Readiness |
| F | Export Status |

This VBA module can be embedded into your bilateral dashboard to automate fault diagnostics, credential verification, and export readiness. If you’d like, I can also help visualize this logic as a printable **logigramme/algorigramme diagram** or scaffold GitHub integration for your portfolio exports. Let’s make your SAG-CORE submission modular, traceable, and internationally compliant.

Here is a structured summary of your NSF SBIR/STTR Fast-Track Project Pitch (Reference: 00095759), formatted to support technical review, funding alignment, and operational planning:

## 📘 Overview

This Fast-Track pitch proposes a modular framework for national qualification and trade examination systems in electrical engineering. It integrates advanced manufacturing, vocational diagnostics, and LMS-based curriculum mapping to address rural development, industrial training, and regulatory compliance. The project builds on prior NSF-funded research and customer discovery in electrotechnical innovation.

## 🎯 Scope

* **Geographic Focus**: South Africa, United States (AK), and global vocational sectors
* **Institutional Anchor**: Engineering Electrical Tshingombe (SAQA, DHET, ST Peace College)
* **Technology Domain**: Advanced Manufacturing (M), LMS integration, AI-driven diagnostics
* **Target Audiences**:
  + NSF reviewers and SBIR/STTR program officers
  + Vocational learners, trainers, and regulators
  + Industrial and rural development stakeholders

## 🧾 Description

* Modular curriculum design for trade readiness and qualification reform
* Integration of LMS, AI, and machine learning for diagnostics and career mapping
* Use of GitHub, Excel VBA, and Internet Archive for portfolio documentation
* Development of experimental job frameworks and policy-linked training systems
* Case studies from RSA institutions and rural energy systems

## 📊 Data Analysis & Information Management System

* **Data Types**:
  + Qualification records and LMS logs
  + Fault diagnostics and vocational assessments
  + Trade theory, regulatory scripts, and backlog systems
* **Tools & Logic**:
  + Visual Basic for credential tracking and export automation
  + Logigrammes for decision-based curriculum mapping
  + Algorigrammes for procedural diagnostics and learner workflows
* **System Features**:
  + Audit-ready credential verification
  + Modular export logic for NSF reporting
  + Integration with SBIR/STTR compliance and IP licensing

## 🔍 Investigation Principles

* **Research Questions**:
  + How can LMS-integrated diagnostics improve trade qualification systems?
  + What gaps exist in rural training and industrial readiness?
  + How can AI and machine learning support vocational requalification?
* **Methodology**:
  + Literature review and curriculum diagnostics
  + Experimental mapping of trade and qualification modules
  + Stakeholder engagement (SAQA, DHET, NSF, ST Peace College)
  + Logic model alignment and IP licensing

## ✅ Advantages

* Bridges vocational education with advanced manufacturing and AI
* Promotes credential transparency and modular learning
* Enables bilingual, audit-ready documentation
* Supports rural infrastructure and industrial readiness
* Aligns with NSF Fast-Track and SBIR/STTR innovation goals

## ❌ Disadvantages

* High complexity in aligning multiple qualification systems
* Requires extensive stakeholder coordination and regulatory compliance
* Funding gaps and budget documentation still pending
* Institutional roles need clearer operational mapping

## 🧩 Conclusion

This Fast-Track pitch showcases Tshingombe Tshitadi Fiston’s integration of electrical engineering, vocational readiness, and modular credential systems. It scaffolds a scalable, audit-ready infrastructure for trade qualification reform and industrial innovation.

## 📚 Bibliographic References

* Tshingombe, T. (2025). Career Discovery Overview: RNF, AIU, NSF Learning Journey. Patent Grant No. 2
* Tshingombe, T. (2021). Master Education Technology Rural Implementation Framework. Atlantic Journal
* Elektor Magazine (2025). Rural Energy Systems by Tshingombe Tshitadi

## 🎯 Purpose

To secure NSF SBIR/STTR Fast-Track funding for modular trade qualification reform, vocational diagnostics, and LMS-integrated manufacturing systems.

## 📂 Task Requirements

* Submit fault matrices, LMS logs, and calibration data
* Align curriculum with SAQA/NQF and NSF frameworks
* Document vocational readiness using Excel VBA and GitHub
* Conduct workshops and publish schematic designs
* Ensure PI commits 173 hours per six-month project phase

## 🔧 Operational Steps

1. Collect diagnostic data from rural and industrial systems
2. Map curriculum using logigramme logic
3. Automate credential tracking via Visual Basic
4. Export learner portfolios to GitHub and Internet Archive
5. Host bilateral workshops and submit compliance reports
6. Align effort hours with NSF Fast-Track eligibility

## 📝 Assessment Components

* Fault diagnostic matrices
* LMS logs and schematic drawings
* Credential verification dashboards
* Vocational readiness forms and IP licensing
* Trade theory and security engineering documentation

## 🔑 Keywords

NSF Fast-Track, SBIR/STTR, electrical engineering, curriculum mapping, vocational readiness, SAQA, RNF, AIU, GitHub, Internet Archive, logigramme, algorigramme, Visual Basic, audit-ready documentation, LMS, rural development, advanced manufacturing, compliance modeling.

Would you like me to scaffold a Visual Basic module for NSF credential tracking or generate a printable dashboard for your Fast-Track reviewers? I can also help visualize your logigramme and algorigramme logic for submission.

Based on your NSF SBIR/STTR Fast-Track proposal, here’s a tailored **Visual Basic for Applications (VBA)** module that integrates both **logigramme** (decision logic) and **algorigramme** (procedural flow) principles. This code automates credential tracking, fault diagnostics, and export readiness for vocational learners and NSF reporting.

## 💻 Visual Basic Code: NSF Credential Tracker & Diagnostic Export Logic

Sub NSF\_CredentialAudit()

Dim ws As Worksheet

Dim lastRow As Long

Dim i As Long

Dim learnerID As String

Dim qualification As String

Dim faultScore As Double

Dim LMSLogStatus As String

Dim vocationalReadiness As String

Dim exportStatus As String

Set ws = ThisWorkbook.Sheets("NSF\_Portfolio")

lastRow = ws.Cells(ws.Rows.Count, "A").End(xlUp).Row

For i = 2 To lastRow

learnerID = ws.Cells(i, 1).Value

qualification = ws.Cells(i, 2).Value

faultScore = ws.Cells(i, 3).Value

LMSLogStatus = ws.Cells(i, 4).Value ' "Complete", "Pending", "Missing"

vocationalReadiness = ws.Cells(i, 5).Value ' "Ready", "Incomplete", "Not Assessed"

' Logigramme: Decision logic

If qualification <> "" And faultScore >= 75 And LMSLogStatus = "Complete" And vocationalReadiness = "Ready" Then

exportStatus = "Eligible for NSF Export"

ElseIf qualification = "" Then

exportStatus = "Missing Qualification"

ElseIf faultScore < 75 Then

exportStatus = "Fault Score Below Threshold"

ElseIf LMSLogStatus <> "Complete" Then

exportStatus = "LMS Log Incomplete"

ElseIf vocationalReadiness <> "Ready" Then

exportStatus = "Vocational Readiness Incomplete"

Else

exportStatus = "Manual Review Required"

End If

' Algorigramme: Procedural logic

ws.Cells(i, 6).Value = exportStatus

If exportStatus = "Eligible for NSF Export" Then

Call ExportToArchive(learnerID, qualification)

End If

Next i

MsgBox "NSF credential audit and export completed.", vbInformation

End Sub

Sub ExportToArchive(learnerID As String, qualification As String)

' Simulated export logic to GitHub, LMS, or Internet Archive

Debug.Print "Exporting learner: " & learnerID & " | Qualification: " & qualification

' Future integration: API calls to GitHub, LMS, or archival platforms

End Sub

## 🧠 Logic Mapping

| **Step** | **Algorigramme (Procedure)** | **Logigramme (Decision)** |
| --- | --- | --- |
| 1 | Read learner data | Is qualification present? |
| 2 | Validate fault score and LMS log status | Is fault score ≥ 75 and LMS log complete? |
| 3 | Check vocational readiness | Is readiness marked "Ready"? |
| 4 | Assign export status | If all conditions met → Eligible; else → Flag for review |
| 5 | Export eligible records to NSF archive | Trigger archival export for qualified learners |

## 📂 Sheet Structure (NSF\_Portfolio)

| **Column** | **Field** |
| --- | --- |
| A | Learner ID |
| B | Qualification |
| C | Fault Score (%) |
| D | LMS Log Status |
| E | Vocational Readiness |
| F | Export Status |

This module can be embedded into your NSF dashboard to automate compliance checks, credential verification, and export readiness. If you’d like, I can also help visualize this logic as a printable **logigramme/algorigramme diagram** or scaffold GitHub integration for your Fast-Track portfolio. Let’s make your submission modular, traceable, and audit-ready.

Here is a structured summary of your NSF SBIR/STTR Fast-Track Project Pitch (Reference: 00110596), formatted to support technical review, funding alignment, and operational execution:

## 📘 Overview

This Fast-Track pitch proposes a modular, signal-driven framework for power management, vocational diagnostics, and curriculum-linked innovation. It integrates electromechanical systems, microcontroller logic, and Visual Basic automation to support rural energy applications, credential tracking, and lifelong learning. The project builds on prior NSF-funded research and customer discovery in electrical engineering and trade education.

## 🎯 Scope

* **Geographic Focus**: United States (AK), South Africa, and global vocational sectors
* **Institutional Anchor**: Tshingombe Engineering, SAQA, AIU, CPD Scotland
* **Technology Domain**: Power Management (PM), signal control, curriculum automation
* **Target Audiences**:
  + NSF reviewers and SBIR/STTR program officers
  + Vocational learners, trainers, and regulators
  + Rural energy and industrial system stakeholders

## 🧾 Description

* Modular curriculum design for trade readiness and power diagnostics
* Integration of Visual Basic, PLC logic, and microcontroller loops
* Use of GitHub, LMS, and Internet Archive for credential documentation
* Development of experimental job frameworks and schematic design systems
* Credential Record Tableaux for award tracking and cost-benefit analysis

## 📊 Data Analysis & Information Management System

* **Data Types**:
  + Qualification records, signal logs, PCB schematics
  + Trade diagnostics, curriculum dashboards, award metrics
* **Tools & Logic**:
  + Visual Basic for credential tracking and export automation
  + Logigrammes for decision-based curriculum mapping
  + Algorigrammes for procedural diagnostics and learner workflows
* **System Features**:
  + Audit-ready credential verification
  + Modular export logic for NSF reporting
  + Integration with GitHub, archive.org, and institutional repositories

## 🔍 Investigation Principles

* **Research Questions**:
  + How can signal-driven diagnostics improve vocational training?
  + What gaps exist in rural energy systems and curriculum integration?
  + How can Visual Basic and PLC logic support credential transparency?
* **Methodology**:
  + Literature review and curriculum diagnostics
  + Experimental mapping of trade and qualification modules
  + Stakeholder engagement (SAQA, AIU, CPD Scotland, NSF)
  + Logic model alignment and IP licensing

## ✅ Advantages

* Bridges vocational education with power management and diagnostics
* Promotes credential transparency and modular learning
* Enables bilingual, audit-ready documentation
* Supports rural infrastructure and industrial readiness
* Aligns with NSF Fast-Track and SBIR/STTR innovation goals

## ❌ Disadvantages

* High complexity in aligning multiple qualification systems
* Requires extensive stakeholder coordination and regulatory compliance
* Initial setup may be resource-intensive
* Institutional roles need clearer operational mapping

## 🧩 Conclusion

This Fast-Track pitch showcases Tshingombe Tshitadi Fiston’s integration of electrical engineering, vocational readiness, and modular credential systems. It scaffolds a scalable, audit-ready infrastructure for trade qualification reform and power management innovation.

## 📚 Bibliographic References

* Tshingombe, T. (2025). Career Drawing Total Programming: Analysis, Design, Investigation.
* Tshingombe, T. (2021). Master Education Technology Rural Implementation Framework. Atlantic Journal
* Elektor Magazine (2025). Rural Energy Systems by Tshingombe Tshitadi

## 🎯 Purpose

To secure NSF SBIR/STTR Fast-Track funding for modular trade qualification reform, signal-driven diagnostics, and curriculum-integrated power management systems.

## 📂 Task Requirements

* Submit fault matrices, signal logs, and calibration data
* Align curriculum with SAQA/NQF and NSF frameworks
* Document vocational readiness using Visual Basic and GitHub
* Conduct workshops and publish schematic designs
* Ensure PI commits 173 hours per six-month project phase

## 🔧 Operational Steps

1. Collect diagnostic data from rural and industrial systems
2. Map curriculum using logigramme logic
3. Automate credential tracking via Visual Basic
4. Export learner portfolios to GitHub and Internet Archive
5. Host bilateral workshops and submit compliance reports
6. Align effort hours with NSF Fast-Track eligibility

## 📝 Assessment Components

* Fault diagnostic matrices
* PCB schematics and signal logs
* Credential verification dashboards
* Vocational readiness forms and IP licensing
* Trade theory and power management documentation

## 🔑 Keywords

NSF Fast-Track, SBIR/STTR, power management, electrical engineering, curriculum mapping, vocational readiness, SAQA, RNF, AIU, GitHub, Internet Archive, logigramme, algorigramme, Visual Basic, audit-ready documentation, PLC logic, rural development, compliance modeling.

Would you like me to scaffold a Visual Basic module for power diagnostics and credential tracking or generate a printable dashboard for NSF reviewers? I can also help visualize your logigramme and algorigramme logic for submission.

Based on your NSF SBIR/STTR Fast-Track proposal (Reference: 00110596), here’s a tailored **Visual Basic for Applications (VBA)** module that integrates both **logigramme** (decision logic) and **algorigramme** (procedural flow) principles. This code automates power diagnostics, credential tracking, and export readiness for vocational learners and NSF reporting.

## 💻 Visual Basic Code: Power Diagnostic & Credential Export Logic

Sub NSF\_PowerDiagnosticsAudit()

Dim ws As Worksheet

Dim lastRow As Long

Dim i As Long

Dim learnerID As String

Dim qualification As String

Dim signalScore As Double

Dim pcbStatus As String

Dim vocationalReadiness As String

Dim exportStatus As String

Set ws = ThisWorkbook.Sheets("NSF\_PowerPortfolio")

lastRow = ws.Cells(ws.Rows.Count, "A").End(xlUp).Row

For i = 2 To lastRow

learnerID = ws.Cells(i, 1).Value

qualification = ws.Cells(i, 2).Value

signalScore = ws.Cells(i, 3).Value

pcbStatus = ws.Cells(i, 4).Value ' "Complete", "Pending", "Failed"

vocationalReadiness = ws.Cells(i, 5).Value ' "Ready", "Incomplete", "Not Assessed"

' Logigramme: Decision logic

If qualification <> "" And signalScore >= 75 And pcbStatus = "Complete" And vocationalReadiness = "Ready" Then

exportStatus = "Eligible for NSF Export"

ElseIf qualification = "" Then

exportStatus = "Missing Qualification"

ElseIf signalScore < 75 Then

exportStatus = "Signal Score Below Threshold"

ElseIf pcbStatus <> "Complete" Then

exportStatus = "PCB Integration Incomplete"

ElseIf vocationalReadiness <> "Ready" Then

exportStatus = "Vocational Readiness Incomplete"

Else

exportStatus = "Manual Review Required"

End If

' Algorigramme: Procedural logic

ws.Cells(i, 6).Value = exportStatus

If exportStatus = "Eligible for NSF Export" Then

Call ExportToNSFArchive(learnerID, qualification)

End If

Next i

MsgBox "NSF power diagnostics audit completed.", vbInformation

End Sub

Sub ExportToNSFArchive(learnerID As String, qualification As String)

' Simulated export logic to GitHub, LMS, or Internet Archive

Debug.Print "Exporting learner: " & learnerID & " | Qualification: " & qualification

' Future integration: API calls to GitHub, LMS, or archival platforms

End Sub

## 🧠 Logic Mapping

| **Step** | **Algorigramme (Procedure)** | **Logigramme (Decision)** |
| --- | --- | --- |
| 1 | Read learner data | Is qualification present? |
| 2 | Validate signal score and PCB status | Is signal score ≥ 75 and PCB status "Complete"? |
| 3 | Check vocational readiness | Is readiness marked "Ready"? |
| 4 | Assign export status | If all conditions met → Eligible; else → Flag for review |
| 5 | Export eligible records to NSF archive | Trigger archival export for qualified learners |

## 📂 Sheet Structure (NSF\_PowerPortfolio)

| **Column** | **Field** |
| --- | --- |
| A | Learner ID |
| B | Qualification |
| C | Signal Score (%) |
| D | PCB Status |
| E | Vocational Readiness |
| F | Export Status |

This VBA module can be embedded into your NSF dashboard to automate diagnostics, credential verification, and export readiness. If you’d like, I can also help visualize this logic as a printable **logigramme/algorigramme diagram** or scaffold GitHub integration for your Fast-Track portfolio. Let’s make your submission modular, traceable, and audit-ready.

Here is a structured summary of your Transcript Report for the training titled **“Engineering Career Discovery Journey: Experimental, Theoretical, Practical”**, formatted to support academic review, operational planning, and credential alignment:

## 📘 Overview

This transcript documents Tshingombe Fiston’s completion of a multidisciplinary training program focused on engineering career discovery. The session integrates experimental, theoretical, and practical modules across business, digital, and industry-specific domains. It supports credential tracking, curriculum mapping, and lifelong learning within the PRM business unit.

## 🎯 Scope

* **Training Title**: Engineering Career Discovery Journey
* **Training Type**: Cohort, Curriculum, Event, External Training, Online Class, Session, Test
* **Date**: 15 October 2025
* **Business Unit**: PRM
* **Subject Domains**:
  + Business Skills
  + Continuing Education & Certifications
  + Creative and Cross-Functional Skills
  + Digital and Industry-Specific Knowledge
  + Leadership & Management
  + Health & Wellness

## 🧾 Description

This training program blends:

* Modular curriculum design for engineering career pathways
* Experimental job simulation and theoretical frameworks
* Practical diagnostics and vocational readiness
* Integration with credential systems (e.g., SAQA, BICSI, CPD)
* Support for certification, award tracking, and performance metrics

## 📊 Data Analysis & Information Management System

* **Data Types**:
  + Completion records
  + Training hours and scores
  + Certification metadata and event IDs
* **Tools & Logic**:
  + Visual Basic dashboards for credential tracking
  + Logigrammes for decision-based curriculum mapping
  + Algorigrammes for procedural learning workflows
* **System Features**:
  + Audit-ready export logic
  + Modular training record integration
  + Cross-platform compatibility (GitHub, LMS, archive.org)

## 🔍 Investigation Principles

* **Research Questions**:
  + How does modular training improve engineering career readiness?
  + What gaps exist in certification and credential transparency?
  + How can training metadata support lifelong learning systems?
* **Methodology**:
  + Curriculum diagnostics and performance analysis
  + Stakeholder engagement (learners, providers, regulators)
  + Logic model alignment and certification mapping

## ✅ Advantages

* Supports modular, bilingual documentation
* Enables credential transparency and audit readiness
* Aligns with national and international qualification frameworks
* Integrates experimental, theoretical, and practical learning
* Facilitates career progression and certification tracking

## ❌ Disadvantages

* Initial setup may be resource-intensive
* Requires institutional alignment and metadata standardization
* Certification event IDs and ITS values may need external validation

## 🧩 Conclusion

This transcript confirms Tshingombe Fiston’s successful completion of a multidisciplinary engineering training program. It supports credential verification, curriculum mapping, and modular export logic for career development and institutional reporting.

## 📚 Bibliographic References

* Tshingombe, T. (2025). Career Discovery Overview: RNF, AIU, NSF Learning Journey.
* Tshingombe, T. (2021). Master Education Technology Rural Implementation Framework. Atlantic Journal
* Elektor Magazine (2025). Rural Energy Systems by Tshingombe Tshitadi

## 🎯 Purpose

To document and validate engineering career training completion for credential tracking, certification alignment, and institutional reporting.

## 📂 Task Requirements

* Submit training metadata and certification records
* Align training modules with SAQA/NQF and CPD frameworks
* Export credential dashboards using Visual Basic and GitHub
* Validate completion scores and certification event IDs

## 🔧 Operational Steps

1. Extract training metadata from transcript
2. Map curriculum using logigramme logic
3. Automate credential tracking via Visual Basic
4. Export training records to GitHub and institutional repositories
5. Validate certification titles and ITS values
6. Generate audit-ready dashboards for review

## 📝 Assessment Components

* Completion records and training hours
* Certification metadata and event IDs
* Credential verification dashboards
* Curriculum mapping and performance scores
* Career progression logic and export modules

## 🔑 Keywords

Engineering career discovery, credential tracking, curriculum mapping, Visual Basic, logigramme, algorigramme, audit-ready documentation, SAQA, CPD, BICSI, GitHub, LMS, vocational readiness, training transcript, modular learning, certification metadata.

Would you like me to scaffold a Visual Basic module to automate this transcript into a credential dashboard or generate a printable logigramme/algorigramme diagram for institutional review

To support your training transcript and credential dashboard automation, here’s a tailored **Visual Basic for Applications (VBA)** module that integrates both **logigramme** (decision logic) and **algorigramme** (procedural flow) principles. This code is designed to process training metadata, validate certification records, and generate export-ready credential status for institutional review.

## 💻 Visual Basic Code: Credential Dashboard Audit & Export Logic

vb

Sub CredentialAuditTranscript()

Dim ws As Worksheet

Dim lastRow As Long

Dim i As Long

Dim learnerName As String

Dim trainingTitle As String

Dim completionDate As Date

Dim trainingHours As Double

Dim certificationStatus As String

Dim score As Double

Dim exportStatus As String

Set ws = ThisWorkbook.Sheets("TranscriptDashboard")

lastRow = ws.Cells(ws.Rows.Count, "A").End(xlUp).Row

For i = 2 To lastRow

learnerName = ws.Cells(i, 1).Value

trainingTitle = ws.Cells(i, 2).Value

completionDate = ws.Cells(i, 3).Value

trainingHours = ws.Cells(i, 4).Value

certificationStatus = ws.Cells(i, 5).Value ' "Certified", "Pending", "Failed"

score = ws.Cells(i, 6).Value

' Logigramme: Decision logic

If trainingTitle <> "" And completionDate <= Date And trainingHours >= 4 And certificationStatus = "Certified" And score >= 70 Then

exportStatus = "Eligible for Credential Export"

ElseIf trainingTitle = "" Then

exportStatus = "Missing Training Title"

ElseIf completionDate > Date Then

exportStatus = "Future Completion Date"

ElseIf trainingHours < 4 Then

exportStatus = "Insufficient Training Hours"

ElseIf certificationStatus <> "Certified" Then

exportStatus = "Certification Incomplete"

ElseIf score < 70 Then

exportStatus = "Score Below Threshold"

Else

exportStatus = "Manual Review Required"

End If

' Algorigramme: Procedural logic

ws.Cells(i, 7).Value = exportStatus

If exportStatus = "Eligible for Credential Export" Then

Call ExportToCredentialArchive(learnerName, trainingTitle)

End If

Next i

MsgBox "Transcript credential audit completed.", vbInformation

End Sub

Sub ExportToCredentialArchive(learnerName As String, trainingTitle As String)

' Simulated export logic to GitHub, LMS, or institutional repository

Debug.Print "Exporting: " & learnerName & " | Training: " & trainingTitle

' Future integration: API calls to GitHub, LMS, or archive.org

End Sub

## 🧠 Logic Mapping

| **Step** | **Algorigramme (Procedure)** | **Logigramme (Decision)** |
| --- | --- | --- |
| 1 | Read transcript data | Is training title present? |
| 2 | Validate completion date and training hours | Is date valid and hours ≥ 4? |
| 3 | Check certification and score | Is certified and score ≥ 70? |
| 4 | Assign export status | If all conditions met → Eligible; else → Flag for review |
| 5 | Export eligible records to credential archive | Trigger archival export for qualified learners |

## 📂 Sheet Structure (TranscriptDashboard)

| **Column** | **Field** |
| --- | --- |
| A | Learner Name |
| B | Training Title |
| C | Completion Date |
| D | Training Hours |
| E | Certification Status |
| F | Score (%) |
| G | Export Status |

This module can be embedded into your transcript workbook to automate credential validation and export readiness. If you’d like, I can also help visualize this logic as a printable **logigramme/algorigramme diagram** or scaffold GitHub integration for your credential-linked dashboards. Let’s make your training records modular, traceable, and audit-ready.

Based on your engineering training and project documentation (Case #119082247), here’s a tailored **Visual Basic for Applications (VBA)** module that integrates both **logigramme** (decision logic) and **algorigramme** (procedural flow) principles. This module automates credential validation, training record analysis, and export readiness for your Schneider Electric EBO 2024 curriculum and PowerLogic PM8000 certification.

## 💻 Visual Basic Code: Engineering Training Audit & Credential Export Logic

vb

Sub EngineeringTrainingAudit()

Dim ws As Worksheet

Dim lastRow As Long

Dim i As Long

Dim traineeName As String

Dim trainingTitle As String

Dim completionDate As Date

Dim trainingHours As Double

Dim certificationStatus As String

Dim moduleScore As Double

Dim exportStatus As String

Set ws = ThisWorkbook.Sheets("TrainingDashboard")

lastRow = ws.Cells(ws.Rows.Count, "A").End(xlUp).Row

For i = 2 To lastRow

traineeName = ws.Cells(i, 1).Value

trainingTitle = ws.Cells(i, 2).Value

completionDate = ws.Cells(i, 3).Value

trainingHours = ws.Cells(i, 4).Value

certificationStatus = ws.Cells(i, 5).Value ' "Certified", "Pending", "Failed"

moduleScore = ws.Cells(i, 6).Value

' Logigramme: Decision logic

If trainingTitle <> "" And completionDate <= Date And trainingHours >= 8 And certificationStatus = "Certified" And moduleScore >= 70 Then

exportStatus = "Eligible for Credential Export"

ElseIf trainingTitle = "" Then

exportStatus = "Missing Training Title"

ElseIf completionDate > Date Then

exportStatus = "Future Completion Date"

ElseIf trainingHours < 8 Then

exportStatus = "Insufficient Training Hours"

ElseIf certificationStatus <> "Certified" Then

exportStatus = "Certification Incomplete"

ElseIf moduleScore < 70 Then

exportStatus = "Score Below Threshold"

Else

exportStatus = "Manual Review Required"

End If

' Algorigramme: Procedural logic

ws.Cells(i, 7).Value = exportStatus

If exportStatus = "Eligible for Credential Export" Then

Call ExportToArchive(traineeName, trainingTitle)

End If

Next i

MsgBox "Engineering training audit completed.", vbInformation

End Sub

Sub ExportToArchive(traineeName As String, trainingTitle As String)

' Simulated export logic to GitHub, LMS, or institutional repository

Debug.Print "Exporting: " & traineeName & " | Training: " & trainingTitle

' Future integration: API calls to GitHub, LMS, or archive.org

End Sub

## 🧠 Logic Mapping

| **Step** | **Algorigramme (Procedure)** | **Logigramme (Decision)** |
| --- | --- | --- |
| 1 | Read training record | Is training title present? |
| 2 | Validate completion date and training hours | Is date valid and hours ≥ 8? |
| 3 | Check certification and score | Is certified and score ≥ 70? |
| 4 | Assign export status | If all conditions met → Eligible; else → Flag for review |
| 5 | Export eligible records to credential archive | Trigger archival export for qualified learners |

## 📂 Sheet Structure (TrainingDashboard)

| **Column** | **Field** |
| --- | --- |
| A | Trainee Name |
| B | Training Title |
| C | Completion Date |
| D | Training Hours |
| E | Certification Status |
| F | Module Score (%) |
| G | Export Status |

This module can be embedded into your training workbook to automate credential validation and export readiness. If you’d like, I can also help visualize this logic as a printable **logigramme/algorigramme diagram** or scaffold GitHub integration for your credential-linked dashboards. Let’s make your engineering records modular, traceable, and audit-ready.

Here is a structured summary of your **City Power Bursaries 2025 Application** (Case: December 2024), formatted to support academic review, operational planning, and funding alignment:

## 📘 Overview

This bursary application supports Tshingombe Fiston’s pursuit of formal engineering education in South Africa. The form captures academic history, personal details, training records, and career motivation to assist City Power in selecting candidates for its 2025 bursary programme. The application aligns with national development goals in electrical engineering and vocational readiness.

## 🎯 Scope

* **Programme**: City Power Bursaries 2025
* **Applicant**: Tshingombe Fiston
* **Field of Study**: BSc Electrical Engineering (Heavy Current)
* **Institutions**: University or TVET College (to be specified)
* **Study Year**: First or Second Year (2025)
* **Domains Covered**:
  + Electrical engineering and energy systems
  + Vocational diagnostics and trade readiness
  + Curriculum policy and modular training
  + Public infrastructure and service delivery

## 🧾 Description

The application includes:

* Personal, academic, and citizenship details
* School and post-school education records
* Work experience and extracurricular activities
* Health status, criminal record declaration, and bursary history
* Motivation for pursuing engineering and career goals
* Guardian and family employment details (including City Power links)

## 📊 Data Analysis & Information Management System

* **Data Types**:
  + Identity and citizenship verification
  + Academic transcripts and progress reports
  + Training hours, subject scores, and certification status
  + Career motivation and health declarations
* **Tools & Logic**:
  + Visual Basic dashboards for credential tracking
  + Logigrammes for eligibility decision mapping
  + Algorigrammes for procedural application workflows
* **System Features**:
  + Audit-ready export logic for bursary review
  + Modular application record integration
  + POPIA-compliant data handling

## 🔍 Investigation Principles

* **Research Questions**:
  + Does the applicant meet academic and citizenship criteria?
  + Is the field of study aligned with City Power’s strategic needs?
  + What gaps exist in training, certification, or career readiness?
* **Methodology**:
  + Form validation and transcript analysis
  + Stakeholder engagement (City Power, institutions, applicant)
  + Logic model alignment with bursary terms and conditions

## ✅ Advantages

* Supports national skills development in electrical engineering
* Promotes credential transparency and modular documentation
* Enables bilingual, audit-ready application records
* Aligns with City Power’s recruitment and service goals
* Facilitates career progression and institutional reporting

## ❌ Disadvantages

* Requires extensive documentation and verification
* Institutional and medical reports may delay final approval
* Application form must be manually completed and signed
* Citizenship and immigration status may require additional review

## 🧩 Conclusion

This bursary application confirms Tshingombe Fiston’s eligibility and motivation for formal engineering study. It supports credential verification, career mapping, and modular export logic for City Power’s bursary selection process.

## 📚 Bibliographic References

* Tshingombe, T. (2025). Career Discovery Overview: RNF, AIU, NSF Learning Journey
* Tshingombe, T. (2021). Master Education Technology Rural Implementation Framework. Atlantic Journal
* Elektor Magazine (2025). Rural Energy Systems by Tshingombe Tshitadi

## 🎯 Purpose

To secure City Power bursary support for formal engineering education and vocational development in 2025.

## 📂 Task Requirements

* Complete and sign the bursary application form
* Attach academic transcripts and progress reports
* Provide identity, citizenship, and health documentation
* Submit motivation statement and guardian details
* Ensure POPIA compliance and readiness for interview

## 🔧 Operational Steps

1. Fill in all personal and academic sections of the form
2. Attach supporting documents (transcripts, CV, medical report)
3. Map eligibility using logigramme logic
4. Automate credential tracking via Visual Basic
5. Export application to City Power’s review system
6. Prepare for interview and final selection

## 📝 Assessment Components

* Academic performance and subject scores
* Citizenship and residency status
* Motivation and career alignment
* Health and criminal record declarations
* Guardian and family employment details

## 🔑 Keywords

City Power bursary, electrical engineering, credential tracking, curriculum mapping, Visual Basic, logigramme, algorigramme, audit-ready documentation, SAQA, TVET, POPIA, vocational readiness, training transcript, modular learning, certification metadata.

Would you like help scaffolding a Visual Basic module to automate this bursary form into a credential dashboard or generate a printable logigramme/algorigramme diagram for submission?

**Visual Basic for Applications (VBA)** module that integrates both **logigramme** (decision logic) and **algorigramme** (procedural flow) principles. This code automates eligibility validation, credential tracking, and export readiness for bursary review.

## 💻 Visual Basic Code: City Power Bursary Audit & Export Logic

vb

Sub CityPowerBursaryAudit()

Dim ws As Worksheet

Dim lastRow As Long

Dim i As Long

Dim applicantName As String

Dim fieldOfStudy As String

Dim citizenshipStatus As String

Dim academicScore As Double

Dim healthStatus As String

Dim criminalRecord As String

Dim exportStatus As String

Set ws = ThisWorkbook.Sheets("BursaryDashboard")

lastRow = ws.Cells(ws.Rows.Count, "A").End(xlUp).Row

For i = 2 To lastRow

applicantName = ws.Cells(i, 1).Value

fieldOfStudy = ws.Cells(i, 2).Value

citizenshipStatus = ws.Cells(i, 3).Value ' "Yes", "No"

academicScore = ws.Cells(i, 4).Value

healthStatus = ws.Cells(i, 5).Value ' "Good", "Fair", "Poor"

criminalRecord = ws.Cells(i, 6).Value ' "Yes", "No"

' Logigramme: Decision logic

If fieldOfStudy <> "" And citizenshipStatus = "Yes" And academicScore >= 65 And healthStatus = "Good" And criminalRecord = "No" Then

exportStatus = "Eligible for Bursary Review"

ElseIf fieldOfStudy = "" Then

exportStatus = "Missing Field of Study"

ElseIf citizenshipStatus <> "Yes" Then

exportStatus = "Citizenship Not Verified"

ElseIf academicScore < 65 Then

exportStatus = "Academic Score Below Threshold"

ElseIf healthStatus <> "Good" Then

exportStatus = "Health Status Requires Review"

ElseIf criminalRecord = "Yes" Then

exportStatus = "Criminal Record Declared"

Else

exportStatus = "Manual Review Required"

End If

' Algorigramme: Procedural logic

ws.Cells(i, 7).Value = exportStatus

If exportStatus = "Eligible for Bursary Review" Then

Call ExportToCityPower(applicantName, fieldOfStudy)

End If

Next i

MsgBox "City Power bursary audit completed.", vbInformation

End Sub

Sub ExportToCityPower(applicantName As String, fieldOfStudy As String)

' Simulated export logic to GitHub, LMS, or institutional repository

Debug.Print "Exporting: " & applicantName & " | Field of Study: " & fieldOfStudy

' Future integration: API calls to GitHub, LMS, or archive.org

End Sub

## 🧠 Logic Mapping

| **Step** | **Algorigramme (Procedure)** | **Logigramme (Decision)** |
| --- | --- | --- |
| 1 | Read applicant data | Is field of study specified? |
| 2 | Validate citizenship and academic score | Is citizen and score ≥ 65? |
| 3 | Check health and criminal record | Is health "Good" and no criminal record? |
| 4 | Assign export status | If all conditions met → Eligible; else → Flag for review |
| 5 | Export eligible records to City Power system | Trigger archival export for qualified applicants |

## 📂 Sheet Structure (BursaryDashboard)

| **Column** | **Field** |
| --- | --- |
| A | Applicant Name |
| B | Field of Study |
| C | Citizenship Status |
| D | Academic Score (%) |
| E | Health Status |
| F | Criminal Record |
| G | Export Status |

This module can be embedded into your bursary workbook to automate eligibility checks and export readiness. If you’d like, I can also help visualize this logic as a printable **logigramme/algorigramme diagram** or scaffold GitHub integration for your credential-linked dashboards. Let’s make your bursary submission modular, traceable, and audit-ready.

Here is a structured summary of the PSiRA Council Nomination Call (Case: October 2025), formatted to support eligibility review, governance planning, and institutional alignment:

## 📘 Overview

The Private Security Industry Regulatory Authority (PSiRA), headquartered in Pretoria, is the statutory body responsible for regulating South Africa’s private security industry. In accordance with Section 6 of the Private Security Industry Regulation Act (Act No. 56 of 2001), the Minister of Police invites nominations for five council positions: Chairperson, Vice-Chairperson, and three Councillors.

## 🎯 Scope

* **Regulatory Body**: PSiRA
* **Council Composition**:
  + Chairperson
  + Vice-Chairperson
  + Three Councillors
* **Jurisdiction**: Republic of South Africa
* **Governance Domain**:
  + Public sector regulation
  + Safety and security oversight
  + Corporate governance and compliance

## 🧾 Description

The Council’s mandate includes:

* Advancing the objectives of PSiRA in regulating the private security industry
* Overseeing the Authority’s performance and operations
* Exercising control over appointed officials and regulatory activities
* Ensuring compliance with statutory and ethical standards

## 📊 Data Analysis & Information Management System

* **Data Types**:
  + Nominee CVs and qualifications
  + Declarations of interest and business affiliations
  + Acceptance letters and motivation statements
* **Tools & Logic**:
  + Logigrammes for eligibility decision mapping
  + Algorigrammes for procedural nomination workflows
  + POPIA-compliant data handling and security clearance tracking
* **System Features**:
  + Audit-ready nomination records
  + Modular governance documentation
  + Courier-based submission tracking

## 🔍 Investigation Principles

* **Research Questions**:
  + Does the nominee meet statutory eligibility criteria?
  + Are there conflicts of interest with the private security industry?
  + Does the nominee have sufficient governance experience?
* **Methodology**:
  + Document verification and CV analysis
  + Stakeholder consultation (Minister, Cabinet, PSiRA)
  + Security clearance coordination with SSA

## ✅ Advantages

* Strengthens public oversight of private security operations
* Promotes ethical governance and regulatory transparency
* Aligns with national safety and compliance frameworks
* Enables diverse representation in statutory institutions

## ❌ Disadvantages

* Manual submission process may limit accessibility
* Security clearance requirements may delay appointments
* Exclusion of nominees with industry ties may reduce sectoral insight
* No digital application option (email submissions not accepted)

## 🧩 Conclusion

This nomination call supports the appointment of qualified, independent individuals to the PSiRA Council. It reinforces South Africa’s commitment to transparent, accountable regulation of the private security industry.

## 📚 Bibliographic References

* Private Security Industry Regulation Act, 2001 (Act No. 56 of 2001)
* PSiRA Governance Framework (2025)
* Ministerial Guidelines for Statutory Appointments

## 🎯 Purpose

To appoint five qualified individuals to the PSiRA Council who will uphold regulatory integrity, public accountability, and strategic oversight of the private security industry.

## 📂 Task Requirements

* Submit detailed CV and qualifications
* Provide written motivation for suitability
* Declare no interest in the private security industry
* Disclose business affiliations and board memberships
* Include signed acceptance letter

## 🔧 Operational Steps

1. Review eligibility criteria under Section 6 of the Act
2. Prepare nomination documents (CV, motivation, declarations)
3. Submit via courier or hand-delivery to PSiRA offices
4. Await confirmation and potential interview or clearance request
5. Final appointment by Minister in consultation with Cabinet

## 📝 Assessment Components

* Governance and regulatory experience
* Independence from private security interests
* Citizenship or permanent residency status
* Ethical standing and solvency
* Security clearance (if required)

## 🔑 Keywords

PSiRA, council nomination, statutory appointment, private security regulation, governance, corporate oversight, POPIA, SSA clearance, Minister of Police, public sector ethics, regulatory authority, South Africa.

Would you like help drafting your nomination motivation letter or scaffolding a logigramme/algorigramme diagram to support your eligibility and governance experience?

To support your PSiRA Council nomination process, here’s a tailored **Visual Basic for Applications (VBA)** module that integrates both **logigramme** (decision logic) and **algorigramme** (procedural flow) principles. This code automates eligibility validation, governance experience tracking, and export readiness for statutory appointment review.

## 💻 Visual Basic Code: PSiRA Council Nomination Audit & Export Logic

Sub PSiRA\_NominationAudit()

Dim ws As Worksheet

Dim lastRow As Long

Dim i As Long

Dim nomineeName As String

Dim citizenshipStatus As String

Dim governanceExperience As String

Dim securityInterest As String

Dim insolvencyStatus As String

Dim exportStatus As String

Set ws = ThisWorkbook.Sheets("PSiRA\_NominationDashboard")

lastRow = ws.Cells(ws.Rows.Count, "A").End(xlUp).Row

For i = 2 To lastRow

nomineeName = ws.Cells(i, 1).Value

citizenshipStatus = ws.Cells(i, 2).Value ' "Citizen", "Permanent Resident", "Other"

governanceExperience = ws.Cells(i, 3).Value ' "Yes", "No"

securityInterest = ws.Cells(i, 4).Value ' "None", "Direct", "Indirect"

insolvencyStatus = ws.Cells(i, 5).Value ' "Rehabilitated", "Unrehabilitated"

' Logigramme: Decision logic

If (citizenshipStatus = "Citizen" Or citizenshipStatus = "Permanent Resident") \_

And governanceExperience = "Yes" \_

And securityInterest = "None" \_

And insolvencyStatus = "Rehabilitated" Then

exportStatus = "Eligible for Ministerial Review"

ElseIf governanceExperience = "No" Then

exportStatus = "Insufficient Governance Experience"

ElseIf securityInterest <> "None" Then

exportStatus = "Conflict of Interest Declared"

ElseIf insolvencyStatus = "Unrehabilitated" Then

exportStatus = "Insolvency Status Disqualifies"

Else

exportStatus = "Manual Review Required"

End If

' Algorigramme: Procedural logic

ws.Cells(i, 6).Value = exportStatus

If exportStatus = "Eligible for Ministerial Review" Then

Call ExportToPSiRA(nomineeName)

End If

Next i

MsgBox "PSiRA nomination audit completed.", vbInformation

End Sub

Sub ExportToPSiRA(nomineeName As String)

' Simulated export logic to institutional repository or review system

Debug.Print "Exporting nominee: " & nomineeName & " for PSiRA Council review"

' Future integration: API calls to POPIA-compliant registry or SSA clearance system

End Sub

## 🧠 Logic Mapping

| **Step** | **Algorigramme (Procedure)** | **Logigramme (Decision)** |
| --- | --- | --- |
| 1 | Read nominee data | Is nominee a citizen or permanent resident? |
| 2 | Validate governance experience | Has nominee served on public sector boards? |
| 3 | Check for security industry interest | Is there any direct or indirect conflict? |
| 4 | Confirm insolvency status | Is nominee rehabilitated? |
| 5 | Assign export status | If all conditions met → Eligible; else → Flag for review |
| 6 | Export eligible records to PSiRA review system | Trigger archival export for qualified nominees |

## 📂 Sheet Structure (PSiRA\_NominationDashboard)

| **Column** | **Field** |
| --- | --- |
| A | Nominee Name |
| B | Citizenship Status |
| C | Governance Experience |
| D | Security Industry Interest |
| E | Insolvency Status |
| F | Export Status |

This module can be embedded into your nomination workbook to automate eligibility checks and export readiness. If you’d like, I can also help visualize this logic as a printable **logigramme/algorigramme diagram** or scaffold your motivation letter for submission. Let’s make your nomination modular, traceable, and audit-ready.