

PTB project “Metrology for Digital Transformation – International Cooperation” CABUREK Global Program

Working Group:

Digital Process Management WG3

National project title: **Development of an Electronic Contracts Review Form**

National Metrology Institute: Namibian Standards Institution (NSI)

Coach: PTB

Project Overview

Objectives: To develop a digitised contract review form with auto-fill and digital signature integration compliant with ISO/IEC 17025 Clause 7.1

Content: This initiative supports Namibia's strategic push toward Digital Transformation through the NSI Strategic Plan and modernization initiatives. The system aims to improve contract handling efficiency, accuracy, and compliance while reducing turnaround time and paperwork

Main Messages

🧠 Digital transformation in Metrology needs collaboration between IT, QA & Management

📅 Early Strategic planning is critical for successful implementation.

💡 Communicating long-term value (efficiency, compliance, traceability) builds buy-in.

Challenges

⚠️ Limited digital infrastructure and technical capacity

⚠️ Budget limitations and lack of alignment with the current organizational strategy

⚠️ Legal and technical alignment is still ongoing

Lessons Learned

✅ Early stakeholder engagement reduces rework and misalignment.

✅ Visualizing processes helps communication and clarity.

✅ Continuous learning, mentorship, and collaboration drive success.

Next Steps

◆ Finalize digital signature integration and pilot the electronic contract review form

◆ Document legal & security requirements.

◆ Begin prototype design for digital form.

Digital Contract Review Workflow



Customer submits request online

The customer accesses the digital form, enters details, and submits the request.



Auto-fill client & instrument data from database

The system retrieves existing client and instrument information automatically for faster



Laboratory Personnel approves (Digital Signature)

Authorized laboratory personnel review the request, verify technical feasibility, and approve using a secure digital signature.



Quality Officer verifies ISO/IEC 17025 Clause 7.1 compliance

The Quality Officer confirms all requirements, traceability, and compliance before acceptance.



Final electronic contract is signed and locked from editing

Once all signatures are completed, the contract is automatically locked to prevent unauthorized changes.

Achievements

Digital Transformation is recognized as a strategic priority in the NSI Strategic Plan (SO12) and Business Plan 2025/2026

Table 13: Strategic objectives and their descriptions (continued)

CODE	STRATEGIC THEME (ST)	SO CODE	STRATEGIC OBJECTIVE	STRATEGIC OBJECTIVE DESCRIPTION
ST3	Strategic Partnership	SO6	Enhanced corporate image	Increased brand equity and recognition for improved conformity. This would be realized through the development and implementation of a branding management plan.
		SO7	Enhanced strategic partnerships and collaboration with other NCBs and regulators	The NSI shall strive to ensure that Namibia gets required recognition for its quality solutions to support industry to access local, regional and international markets while pursuing public policy objectives. This will require the NSI to enter into Mutual Recognition Agreements with National Standards Bodies (NSBs) and/or Regulators with Namibia's key trading partners.
		SO8	Improved stakeholder relations	Effective stakeholder engagement increases confidence and adoption. This in turn will lead to a growth in the market share for commercial services and consumer confidence in NSI as far as its regulatory function. The NSI will develop a Marketing Plan aimed at increasing uptake of NSI services as well as stakeholder participation and ensure satisfaction of stakeholders.
ST4	Standardisation and Quality Excellence	SO9	Improved standards development to meet stakeholders needs	Develop, promote and maintain Namibian standards, including services, which are aligned to Government's education strategy or plans. This will be achieved through the development and implementation of the National Standardisation Strategy (NSS) that is informed by the need of industry and regulatory bodies.
		SO10	Improved regulatory and provision	The NSI will ensure increased coverage of regulated products and ensure full compliance with its regulatory mandate as provided for in the Standards Act and Metrology Act. In addition diversification of commercial service offering will be achieved based on their commercial viability.
		SO11	Improved infrastructure capability	Under the objective, NSI will ensure increased equipment availability in terms of equipment uptime in relation to total available time through a development of an asset maintenance plan based on international standards.
		SO12	Improved operational efficiency and effectiveness	The NSI will ensure a robust and effective management of its operational activities through the development of a four-purpose digital platform.

Strategic Theme	Strategic Objective	Weight	Key Performance Indicator	Baseline	Target for 2024/25	Strategic Initiatives		Responsible
						Programme	Project	
			agreed planned					
	SO11: Improved infrastructure capability	20%	KPI14: % of equipment availability	None	80%	P11: Asset maintenance and replacement plan	P11.1: Develop and implement asset maintenance and replacement plan	Finance assisted by all Business Units
	SO12: Improved operational efficiency and effectiveness	20%	KPI24: % of Business Process Re-engineering KPI26: % implementation of identified digitalisation solutions	30%	60%	P12: Business process re-engineering and digital transformation	P12.1: Develop and implement Quality Management System P12.3: Develop and implement digital transformation & cyber security strategy	All Business Units

Requirements Analysis

Stakeholder	Role & Responsibility
Staffs	Primary users that Review, complete and approves contract
Customers	Complete and sign the contract (external signatories)
IT Department	Develop and integrate the system
Quality Assurance Officer	Ensure compliance with ISO/IEC 17025 clause 7.1
Management	Budget approval

3. Functional Requirements

- The system must allow auto-fill using client database
- The system shall allow user to edit auto field data before submission
- The form must include signature section for staffs and customers
- The form shall validate all mandatory field before submission
- The system must send notification emails when a contract ready for completing signature
- Completed and signed contract form must be lock for editing

4. Technical Requirements

- The system should support desktop and mobile browsers
- Digital signatures must comply with recognised e-signature standards (eIDAS, ESIGN)
- All data should be encrypted for security at rest and in transit

5. Compliance requirements

- Contracts must be reviewed for clarity, feasibility, and agreement before acceptance
- All changes must be documented and traceable
- Only authorized staff personnel may apply acceptance digital signature

6. Risk Assessment & Mitigation

Risk	Impact (High/Medium/Low)	Mitigation Plan
Lack of technical expertise	High	Hire consultants, train internal team
Budget constraints	High	Prioritize essential features, seek cost-effective solutions
User resistance	Medium	Provide training and ensure user-friendly interface
Inaccurate autofill leads to wrong contracts	High	Add validation rules and presummit review process

"Although visible results are still emerging, we have built a strong foundation for a compliant, efficient, and secure digital solution. Each challenge has been a learning milestone toward sustainable transformation."