REPUBLIC OF KENYA

Kenya National Innovation Agency

Kenya National Innovation Cluster Framework

A National Framework for the Identification, Establishment, Operationalisation and Scaling of Innovation Clusters in Kenya

Commissioned by

Kenya National Innovation Agency (KeNIA)

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Executive Summary

Kenya's innovation ecosystem has grown considerably over the past decade, with innovation hubs, research institutions, technology parks and sector-specific clusters emerging across the country. However, this growth has been largely fragmented, geographically concentrated in Nairobi, and has lacked the coordinating architecture needed to translate innovation activity into sustained economic transformation at scale.

The Kenya National Innovation Cluster Framework has been developed to address this gap. It provides a structured national guide for the identification, establishment, operationalisation and scaling of innovation clusters in Kenya, in alignment with Vision 2030, the Fourth Medium Term Plan 2023 to 2027 (MTP IV), and the Kenya 10-Year Innovation Masterplan. The framework is designed to reduce duplication and fragmentation, mobilise public and private investment, and connect Kenya's innovation clusters to regional and global markets.

The framework's strategic goal is to accelerate Kenya's transition to a knowledge-based, innovation-led economy by building a nationally coordinated cluster ecosystem that delivers industrial competitiveness, job creation, inclusive regional development and measurable contribution to GDP. It targets contributing at least 2 per cent of GDP through cluster-linked enterprises by 2033, creating one million new decent jobs, commercialising 1,000 inventions, and establishing at least 47 county-level innovation nodes as envisaged in the Innovation Masterplan.

The framework is organised into ten sections. Sections 1 to 5 establish the contextual foundation: the policy and institutional landscape, existing cluster architectures, identified gaps, framework objectives and priority cluster sectors, and the institutional governance arrangements. Sections 6 to 10 operationalise these foundations through detailed guidance on stakeholder coordination,

intellectual property and regulatory frameworks, financing logic, monitoring and evaluation architecture, and validation and accreditation structures.

The framework is accompanied by nine operational annexes covering tools, templates and reference materials to support immediate implementation by KeNIA, NACOSTI, the National Research Fund, county governments, private sector partners and development partners.

1. Introduction

1.1 Policy and Institutional Context

Kenya's development trajectory is anchored in Vision 2030, which sets the ambition of transforming the country into a globally competitive, middle-income economy delivering a high quality of life to all citizens. Vision 2030 is implemented through successive five-year Medium Term Plans (MTPs). The Fourth MTP (2023 to 2027) applies the Bottom-up Economic Transformation Agenda (BETA), which prioritises inclusive growth through targeted investment in agriculture, MSMEs, housing, healthcare and the digital and creative economy.

Science, technology and innovation (STI) are designated cross-cutting enablers across all BETA pillars. The ST&I Act 2013 established the principal national STI institutions: the Kenya National Innovation Agency (KeNIA), which coordinates and manages the national innovation ecosystem; the National Commission for Science, Technology and Innovation (NACOSTI), which oversees research permitting and ethics; and the National Research Fund (NRF), which manages public research and innovation financing.

The Kenya 10-Year Innovation Masterplan (2023), led by KeNIA, provides the strategic roadmap for the innovation ecosystem. It identifies five pillars for ecosystem development: human capital, access to markets, access to finance, infrastructure and policy. It sets a national vision to build a globally competitive knowledge economy contributing at least 2 per cent of GDP and creating one million new decent jobs by 2033. Four foundational principles underpin the Masterplan's implementation: collaboration across the ecosystem, adaptation to global competitiveness and national

priorities, piloting and experimentation, and inclusive participation of citizens.

1.2 The Case for Innovation Clustering in Kenya

Innovation clustering involves the purposeful grouping and connection of complementary actors (firms, research institutions, investors, regulators and communities) working within the same sector or geographic area, to share resources, generate and apply knowledge, and collectively compete in domestic and international markets. Clusters reduce the transaction costs of collaboration, accelerate knowledge transfer, attract investment and create the critical mass needed for sustainable innovation activity.

Kenya already has the foundations for effective clustering. These include Vision 2030-driven policy commitment to innovation-led growth; active cluster development programmes such as the Kenya Industry and Entrepreneurship Project (KIEP), which strengthens SME linkages and ecosystem intermediaries; a growing network of innovation hubs and technology parks, supported by the Association of Countrywide Innovation Hubs (ACIH); sector-specific clustering initiatives such as the Advanced Bioeconomy Development in Kenya (ABDK) programme; a strong base of knowledge and research institutions including 74 universities and numerous TVETs and research centres; and established international collaboration networks with regional and global partners.

However, Kenya's innovation ecosystem remains fragmented. More than 70 per cent of innovation activity is concentrated in Nairobi and other urban centres, leaving the country's significant regional resources and

talent underutilised. Most clusters operate independently without shared roadmaps, governance structures or performance frameworks, leading to duplication of effort and overlapping mandates. A coordinating national framework is therefore essential to organise, resource and scale Kenya's cluster ecosystem effectively.

1.3 Strategic Goal and Purpose of Innovation Clustering in Kenya

> *The overarching strategic goal of the Kenya National Innovation Cluster Framework is to accelerate Kenya's transition to a knowledge-based, innovation-led economy by establishing a nationally coordinated cluster ecosystem that delivers inclusive economic transformation, industrial competitiveness, job creation and equitable regional development.*

Innovation clusters are established in Kenya to achieve the following strategic purposes:

i. **Economic transformation:** to shift Kenya's economic base from factor-driven to innovation-driven growth, contributing at least 2 per cent of GDP through cluster-linked enterprise activity by 2033, in line with the Innovation Masterplan target.
ii. **Industrial competitiveness:** to build globally competitive industrial capabilities in priority sectors, enabling Kenyan enterprises to compete in EAC, COMESA, AfCFTA and global markets through differentiated, knowledge-intensive products and services.
iii. **Job creation and human capital development**: to create one million new decent jobs by 2033, with particular emphasis on youth employment, women-led enterprise, and skills development in priority cluster sectors aligned to the Masterplan's human capital pillar.

iv. **Inclusive regional development:** to distribute innovation activity across Kenya's 47 counties, leveraging each county's comparative advantage in resources, talent and markets, reducing the current urban concentration of innovation and contributing to bottom-up economic transformation as envisaged under BETA.

v. **Knowledge commercialisation:** to bridge the gap between research and the market by providing the institutional structures, IP support, financing mechanisms and regulatory pathways needed to translate knowledge into commercialised products, services and enterprises. The Masterplan targets the commercialisation of 1,000 inventions and the emergence of at least 10 innovation-driven unicorns by 2033.

vi. **Ecosystem resilience:** to build an adaptive, interconnected innovation ecosystem capable of responding to global technological change, climate challenges and shifting market dynamics, ensuring Kenya's long-term competitiveness on the African continent and beyond.

This framework provides the institutional architecture, operational guidance and performance framework through which these strategic purposes shall be pursued systematically and accountably.

2. Existing Cluster Architectures

This section describes the principal architectural models used to organise innovation clusters and maps Kenya's existing cluster development experience against these models. Understanding the current architecture of Kenya's clusters is essential for identifying the gaps this framework is designed to address and for selecting appropriate models for future cluster development.

A cluster architecture is the structural framework that integrates innovation actors, physical and digital infrastructure, governance bodies,

knowledge and collaboration networks, and market linkages into a functional, coherent system. Three principal architecture models are relevant to Kenya's context, each with distinct strengths and limitations as set out in Table 1.

Table 1. Principal architecture models for innovation clusters

Architecture	Components	Role	Advantages	Challenges
Hub and spoke model	Research institutions/major companies	Hub/central role	-Effective resources utilization (no duplication of resource allocation) -No horizontal risks (small firms can be innovated independently) -The cluster can be grown without affecting existing firms	-Reliance on hub efficiency -Poor communication or networking between spokes -Growing the number of spokes need complex management
	Smaller firms/actors (spin-off, startups, labs or centers)	Serve as spoke for rapid prototyping, local knowledge development, or market testing		
	Connections	Knowledge transfer, talent exchange, collaboration		
Networked ecosystem	Core innovation actors (companies, investors, startups & SMEs, research institutions, government bodies, support organizations,	Create ideas and transfer knowledge, provide resources and market access, driving innovations and niche technologies, provide	-Multiple actors collaborate to accelerate innovation. -Strong collaboration between actors can foster fast data sharing and reduce duplication	-Difficult to manage many actors. -Internal conflicts between actors for intellectual property rights. -Large actors may

	digital collaboration platforms)	regulations and policy, provide infrastructure	-Efficient resources sharing can lead to lower innovation cost	dominate smaller actors. -The success of the ecosystem depends on the trust between actors. -Possibilities for fragmentation and needs strong leadership
Triple helix	University	Knowledge creation	-Strong & fast knowledge flow -Cross-sector collaboration can increase innovation capacity -Up-to-date innovations and economic development -Effective sharing of infrastructures and resources -Government support (standardization, funding, & policy)	-Large institutional sectors coordination complexity (slow decision, bureaucratic procedures, conflicting goals, etc.) -Dominance by large sectors -Intellectual properties conflict -Over-institutionalization (policy-driven rather than market driven)
	Industry	Product development, commercialization, and marketing		
	Government	Policy, regulations, funding and infrastructure creation		

Kenya has accumulated practical experience with all three architecture models. Table 2 illustrates how current flagship clusters and programmes apply these models in different sectors and locations. This experience provides a valuable foundation for the national framework, while also revealing the gaps that the framework must address: the absence of explicit architecture documentation, the concentration of clusters in Nairobi, and the lack of shared governance and performance frameworks across existing initiatives.

Table 2. Existing innovation clustering approaches in Kenya

Cluster	Location	Architecture Model	Pillars
Konza Technopolis (Part of Silicon Savannah)	Near Machakos County	Triple helix (extended quadruple helix)	Academic (KAIST)
			Industry (life science, ICT and smart city solutions, engineering & robotics)
			Government (Konza authority, special economic zone incentives)
Advance Bio-economy Development in Kenya (ABDK)	Nairobi	Multi-layer hub and spoke model (actor clusters are serving as spoke)	i. Academic (Kenya-Sweden partner universities). ii. Industry (actor clusters such as circular food system cluster, bio-based agricultural inputs cluster, bio-based industry cluster, and sustainable bio-energy cluster). iii. Government (strategic roadmaps for each cluster; harmonized regulations from the ministry of energy, agriculture, and industry; institutional support from KeNIA and NACOSTI)

Nairobi Technology hub (Silicon Savannah)	Nairobi	Multi-layer and hybrid quadruple helix- hub and spoke	i. Education institutions & research (University of Nairobi C4D Lab, Kenyatta University, JKUAT, Strathmore iLab Africa, Moringa School, Jenga School). ii. Innovation community hubs (Nairobi Garage, Nailab, Gearbox) iii. Incubators and Accelerators (Antler, Villgro Africa, Pangea Accelerator, Chandaria BIIC) iv. Key Tech Corporates & Multinationals (Safaricom, Microsoft ADC, Google, Oracle, Liquid intelligent technologies, IBM research Africa) v. Financiers & Investors (Venture Capital, DFI development partners, Angel investors, TLcom capital) vi. Government and supportive infrastructure (Ministry of ICT, ICT Authority, Tier III Data Centers) vii. Specialized Vertical Clusters (Fintech, Agritech, Health tech, E-commerce & logistics, Edtech)
Health and Biomedical Innovation Clusters	Different Locations in Kenya	Multi-layer and Mixed Quadruple-Networked Ecosystem	i. Clusters (Nairobi Metro Innovation, Kisumu/Western Biomed, Coast Health Biomed, Coast Health Innovation) ii. Innovation actors (Academic Institutions such as UoN, AKU, KEMRI; Research & Development Institutions; Health Care

			Providers such as KNU and Private Hospitals; Private Sectors such as Pharma; Tech; Startups) iii. Government & Policy Framework (Ministry of Health, Ministry of Education, Regulatory Bodies, NACOSTI) iv. Supporting Infrastructure (Science Parks, Accelerators, Investors, Incubators, Digital Health Platforms) v. Key Impact & Domains (Digital Health, NCDs, Biotech, Infection Diseases)
Industrial and Manufacturing	Nairobi Hub	Multi-layer hub and spoke	i. Key Manufacturing Hub (Nairobi) ii. Spoke Clusters (Eldoret, Kisumu, Nairobi, Thika-Ruiru Corridor, Mombasa, Athi River) iii. Enablers (Infrastructure Development such Railway, Power Grid, Road Networks; Market Access and Trade Agreement such as AFCFTA, World Bank, EAC; Human Capital and Skills Training) iv. Government Policy & Incentives (Tax Holidays, SEZs & EP2s Framework)

Table 2 demonstrates that Kenya has diverse and growing clustering experience across biosciences, digital technology, health innovation and manufacturing. However, most existing clusters have not explicitly documented their architecture model, governance structure or performance milestones. Many operate in isolation without connectivity to

national frameworks or each other. The national cluster framework addresses this by providing standard architecture guidance, governance requirements and a coordinating national platform.

3. Gap Analysis

Kenya's innovation clustering ecosystem is at an early but promising stage of development. The country has the policy commitment, institutional infrastructure and sectoral assets needed to build world-class clusters. However, several structural gaps currently limit the maturity, scalability and sustainability of clustering efforts. The following gaps are identified as the primary constraints that this framework is designed to address.

i. ***Absence of a national cluster framework.*** No overarching national framework has existed to guide the identification, establishment, governance and performance management of innovation clusters. This has led to fragmented, project-based cluster initiatives without shared standards, roadmaps or accountability mechanisms.

ii. ***Geographic concentration***. More than 70 per cent of innovation activity is concentrated in Nairobi and a small number of other urban centres. This concentration creates resource scarcity, coordination complexity and missed opportunities in regions with significant natural, agricultural or human capital assets. The framework directly addresses this through county-level cluster development tied to the MTP IV's County Aggregation and Industrial Parks (CAIPs) programme.

iii. ***Lack of defined cluster architectures and roadmaps.*** Most existing clusters have not documented their architecture model, governance structure, stakeholder roles or performance milestones. Without these, clusters cannot be held accountable, cannot attract sustained investment, and cannot learn systematically from their experience.

iv. ***Unclear institutional mandates and overlapping responsibilities.*** While KeNIA and NACOSTI are present in most cluster initiatives, their specific mandates, responsibilities and accountability within each cluster are rarely defined. This creates coordination gaps, duplication of effort and conflicting governance signals.

v. ***Weak research-industry linkages***. The demand-driven connection between research institutions and industry remains underdeveloped. Universities and TVETs are engaged in clusters primarily as knowledge creators, but their specific curriculum, skills supply and research focus are not systematically aligned to cluster demand. The framework addresses this through Technology Transfer Office requirements and sector-specific working groups.

vi. ***Absence of IP regulatory frameworks for collaborative innovation***. The lack of clear intellectual property rules for cluster environments discourages knowledge sharing and deters private sector engagement. Without enforceable IP frameworks, innovators cannot confidently collaborate or attract investment. The National IP Policy and Kenya Startup Bill, both currently unenacted, are critical legislative priorities.

vii. ***Inadequate and fragmented financing***. Cluster enterprises face a USD 19.3 billion MSME finance gap and limited access to risk-tolerant, patient capital. Conventional financial institutions use collateral-based assessment tools that do not value innovation assets such as IP portfolios or technology readiness. No dedicated national cluster financing facility has existed until this framework.

viii. ***Slow and bureaucratic regulatory processes***. SME-led cluster enterprises are disproportionately affected by slow business registration, product certification and export regulatory processes. Weak regulatory engagement within clusters and the absence of regulatory sandboxes for testing novel products and services have constrained commercialisation.

In aggregate, these gaps reflect the absence of a coordinating national framework rather than a shortage of innovation talent, resources or ambition. This framework directly addresses each of these gaps through the operational structures, financing mechanisms, regulatory pathways and governance arrangements set out in Sections 6 to 10.

4. Framework Objectives

This section sets out the framework's core objectives, the priority cluster sectors selected for initial implementation, and the cluster identification and selection methodology that governs how new clusters will be designated as the framework matures.

4.1 Priority Cluster Sectors

KeNIA, in alignment with the Innovation Masterplan and the MTP IV, has identified four priority sectors for initial cluster development and piloting. These sectors are selected on the basis of their strategic alignment with national development priorities, Kenya's existing knowledge and resource base, market potential, and the presence of anchor institutions capable of sustaining cluster development. They represent Kenya's most promising opportunities for knowledge-driven economic growth at this stage of ecosystem development.

4.1.1 Biosciences and Bioeconomy

Kenya has significant untapped potential in biosciences, biotechnology and the bioeconomy. The Advanced Bioeconomy Development in Kenya (ABDK) programme, implemented in partnership with the Stockholm Environment Institute (SEI) and supported by Sida, has established a foundation for collaborative innovation in bio-based products, technologies and value chains. The priority activities for this cluster cover biotechnology, biomedical sciences, agricultural biotechnology and industrial biotechnology. The cluster shall focus on generating the scientific knowledge base needed to support a productive bioeconomy sector, while simultaneously applying biological resources to produce goods, services, energy and industrial materials aligned to MTP IV value chain priorities in livestock, crops and construction materials.

4.1.2 Sports Innovation

Kenya is among Africa's leading nations in athletics, football, rugby, volleyball, basketball and motorsports. The sports innovation cluster shall leverage Kenya's competitive advantage by connecting clubs and

federations, knowledge institutions, sport academies, digital technology companies, sports equipment manufacturers and startups into a coordinated innovation ecosystem. The cluster will drive job creation, economic diversification and international competitiveness in the sports industry, including emerging areas such as e-sports, sports analytics and performance technology.

4.1.3 Emerging Technologies

Kenya's Silicon Savannah positions it as Africa's leading digital innovation hub. The emerging technologies cluster shall build on this foundation by reorganising existing innovation hubs, incubators and startups around a coordinated architecture focused on artificial intelligence, robotics, industry 4.0 and 5.0 applications, semiconductor technologies, data centres, cybersecurity and clean energy technology. This cluster serves as the backbone for the advancement of all other cluster sectors and for Kenya's long-term global technological competitiveness.

4.1.4 Energy and Climate

Kenya has one of Africa's most diversified renewable energy portfolios, with major assets in geothermal, hydropower, wind, solar and biomass. The energy and climate cluster shall consolidate and expand the work of existing initiatives including the Kenya Climate and Innovation Center, DREEM Hub, GreenTech Hub and Kenya Power Innovation Hub. It shall leverage Kenya's climate action plan and strong partnerships with international climate technology financing organisations to develop commercially viable clean energy solutions for domestic and export markets.

These four priority sectors are operationalised through the Sector-Specific Working Groups (SWGs) described in Section 6.3.2. As the framework matures and the cluster identification and selection framework in Section 4.2 is applied, additional sectors may be designated for national cluster support.

4.2 Cluster Identification and Selection Framework

> *The cluster identification and selection framework provides the structured methodology and institutional process through which innovation clusters are assessed, designated and prioritised for national support. All cluster designations shall follow this framework, ensuring that public investment is directed to clusters with the greatest potential for sustainable, inclusive economic impact.*

4.2.1 Selection Criteria

Proposed clusters shall be assessed against the following criteria. Each criterion shall be weighted and scored by the assessment panel as set out in the Cluster Designation Guidelines published by KeNIA.

i. ***Alignment with national priorities***. The proposed cluster shall demonstrably align with one or more of Vision 2030, MTP IV BETA pillars, the Innovation Masterplan priority sectors, or specific county CIDP priorities. Clusters with cross-cutting alignment across multiple planning instruments shall receive higher weighting.

ii. ***Regional comparative advantage***. The cluster's proposed location shall have a demonstrable comparative advantage in resources, skills, infrastructure or market access relevant to the cluster's sector. This includes natural resource endowments, proximity to anchor institutions, existing industrial infrastructure and access to regional or export markets.

iii. ***Market potential and commercial viability***. The cluster shall demonstrate credible domestic and export market demand for its products or services, supported by market analysis, value chain assessment or evidence of existing commercial activity. The cluster shall have a realistic pathway to financial sustainability within a defined timeframe.

iv. ***Stakeholder readiness and triple helix partnership***. The cluster application shall demonstrate committed participation from at least one government institution, one university or research institution, and one private sector entity. The quality and depth of these partnerships, including evidence of prior collaboration, shall be assessed.

v. ***Inclusion and equity***. The cluster shall demonstrate a credible approach to inclusive participation, with particular attention to women, youth, persons with disabilities and communities in ASAL counties. Clusters with strong inclusion design shall receive additional weighting.

vi. ***Innovation potential and knowledge base***. The cluster shall demonstrate access to the research, technology or knowledge assets needed to generate commercially relevant innovations, including links to universities, TTOs or research institutions with relevant expertise.

4.2.2 Identification Process and Institutional Responsibility

The cluster identification and designation process shall operate as follows, with KeNIA holding overall institutional responsibility for coordination and decision-making:

i. KeNIA shall coordinate a systematic mapping exercise, updated at least every three years, to identify the distribution of innovation actors, sector resources, knowledge institutions and market linkages across Kenya's 47 counties. This mapping shall draw on value chain analysis,

ecosystem assessments and economic impact data to provide the evidence base for cluster identification.

ii. Prospective clusters may be identified through KeNIA-initiated mapping or through open expressions of interest submitted by county governments, anchor institutions, industry associations or other stakeholders via the National Innovation Cluster Platform.

iii. KeNIA shall commission a feasibility assessment for each candidate cluster, covering market analysis, stakeholder mapping, resource assessment and preliminary governance design. Assessments shall be conducted by independent technical reviewers nominated by the relevant Sector Working Group.

iv. The National Innovation Cluster Steering Committee (NICSC) shall review feasibility assessments and make formal cluster designation decisions. Designated clusters shall be registered on the National Cluster Registry and shall become eligible for NICF Window 1 support.

v. Designated clusters shall be subject to periodic review against their performance milestones. Clusters that consistently fail to meet performance expectations may be reclassified or de-designated following a structured review process.

4.2.3 Framework Objectives

The following objectives guide the design and implementation of the national innovation cluster framework across all priority sectors:

i. To establish a clear governance framework for cluster establishment, leadership, coordination and financing, led by KeNIA with defined mandates for NACOSTI, NRF and relevant ministries.

ii. To maintain well-organised, regularly updated mapping data on cluster actors, resources and architecture across Kenya's regions, enabling evidence-based designation and investment decisions.

iii. To develop standard guiding strategies and roadmap templates for each cluster type and sector, specifying architecture models, governance arrangements and financing mechanisms.

iv. To establish an IP regulatory framework within the cluster ecosystem, coordinated by NACOSTI, that protects innovators, enables knowledge sharing and builds trust between cluster actors.

v. To mobilise adequate, transparent and accountable financing through the National Innovation Cluster Fund, ensuring clusters have access to stage-appropriate capital from inception through growth to commercial sustainability.

Achievement of these objectives will provide the foundation for a sustainable, inclusive and globally competitive innovation cluster ecosystem in Kenya. The responsible agencies shall coordinate implementation teams and report progress to the NICSC every quarter.

5. Institutions and Governance

This section describes the responsibilities of the key national institutions in the establishment and operationalisation of innovation clusters. It should be read alongside Section 6 (Stakeholders and Coordination), which provides the full governance architecture of the National Innovation Cluster Steering Committee and the broader multi-stakeholder coordination system. The institutional roles set out here represent the minimum national-level coordination arrangements; county governments, research institutions, private sector actors and development partners play equally important roles as described in Section 6.

In this framework, primary coordination and management responsibility is assigned to KeNIA, given its statutory mandate under the ST&I Act 2013 to develop, coordinate and manage the national innovation ecosystem. KeNIA is responsible for assigning, tracking and reporting on the

activities of all partner institutions to ensure coherent implementation of framework objectives. Table 3 summarises the core institutional responsibilities.

Table 3. Core institutional responsibilities in the innovation cluster ecosystem

Institution	Responsibilities
KeNIA	Innovation clusters management and coordination: i. Establishment, leadership, coordination, and financing policy guide development and management. ii. Innovation cluster actors mapping, strategies development and mapping data management. iii. Innovation clusters roadmap strategies development and management. iv. Requesting consultation and coordination support from relevant ministries and agencies.
NACOSTI	IP regulations and knowledge development coordination: i. Regulation policy guide development and IP right management. ii. Managing curriculum development, university-industry linkage, and knowledge transfer. iii. Consulting KeNIA on funding mechanisms, coordination, and mapping of research institutions.
NRF	Innovation clusters funding and financing management: i. Develop innovation clusters funding and financing platforms in consultation with KeNIA.

	ii. Deliver funding and financing modalities, annual training to innovation clusters in collaboration with KeNIA. iii. Manage and create awareness on business-to-business collaborations, product certification and export regulations to new innovation clusters.

Beyond these three core institutions, the framework requires active engagement from sector ministries (Health, Agriculture, Trade and Industry, ICT and others), relevant regulatory bodies (PPB, KEBS, KIPI, EPRA and others), county governments, universities and research institutions, private sector associations and development partners. The detailed roles of each of these actors are set out in the Stakeholder Roles and Responsibilities Matrix in Annex A and in the governance architecture described in Section 6.

Sections 1 to 5 have established the strategic rationale for innovation clustering in Kenya, the relevant architecture models, the key gaps the framework addresses, the priority cluster sectors, and the institutional governance arrangements. Sections 6 to 10 operationalise these foundations, providing the coordination structures, IP and regulatory frameworks, financing logic, monitoring and evaluation architecture, and validation structures through which the framework will be implemented.

6. Stakeholders and Coordination

6.1 Introduction

Stakeholder engagement and coordinated action are crucial for a thriving innovation cluster ecosystem. The framework establishes a structured approach to identify all relevant stakeholders, including government ministries, agencies, county governments, academia, industry partners, investors, and civil society, and to facilitate their effective collaboration. A formal coordination mechanism will ensure that these diverse actors work in synergy, avoid duplicating efforts, and align their activities with national innovation goals. Clear roles and communication channels are defined to promote accountability and joint ownership of cluster initiatives.

Kenya's Innovation Masterplan is explicit that successful implementation depends on synergy and the open exchange of ideas and values across the innovation ecosystem, recognising that no single actor can own responsibility for generating sustained innovation. At the same time, UNDP's mapping of Kenya's innovation ecosystem identified coordination gaps - not a shortage of talent or ideas - as a primary constraint on ecosystem performance. Kenya has over 200 innovation centres across 47 counties, a growing VC community, 74 universities, and active county innovation hubs. The challenge is not the absence of stakeholders but the absence of structured mechanisms to align their efforts.

This section outlines the mechanisms, bodies, and protocols necessary to establish a functional, sustained, and accountable multi-stakeholder coordination within the national cluster framework.

6.2 Objectives

The stakeholder coordination component pursues five core objectives, directly addressing the fragmentation and coordination gaps identified in Kenya's innovation ecosystem:

i. To establish a comprehensive multi-stakeholder coordination structure that brings together all key actors in the innovation clusters spanning national government, county governments, academia, private sector, civil society, and development partners within a coherent, mandated governance architecture.
ii. To clarify roles and responsibilities for each stakeholder group, ensuring accountability in cluster development and management, and eliminating the institutional overlap and mandate ambiguity that currently characterise Kenya's innovation landscape.
iii. To foster regular communication and collaboration among stakeholders through structured forums, working groups, and digital platforms, enabling information sharing, resource pooling, and joint problem-solving across cluster boundaries.
iv. To prevent fragmentation and duplication of efforts by aligning all stakeholder initiatives with the national innovation cluster agenda, the Innovation Masterplan, and the MTP IV, ensuring coherent use of limited public and private resources.
v. To engage county-level stakeholders meaningfully, ensuring that regional innovation needs, comparative advantages, and the MTP IV's CAIP programme are fully incorporated into the national cluster framework.

6.3 Strategic Interventions

To achieve the above objectives, the following strategic interventions shall be implemented:

6.3.1 Constitute a National Innovation Cluster Steering Committee (NICSC)

A National Innovation Cluster Steering Committee (NICSC) shall be constituted as the apex multi-stakeholder coordination body, chaired by KeNIA in its capacity as the agency mandated under the ST&I Act 2013 to coordinate the national innovation ecosystem. The NICSC shall comprise representatives from:

i. *National Government*. KeNIA (Chair), NACOSTI, National Research Fund, and the Ministries responsible for STI, Education, Trade and Industry, Finance, and Devolution
ii. *County Governments*. A rotating panel of County Executive Committee members responsible for economic planning, representing the seven economic blocs
iii. *Academia*. Kenya Network of Entrepreneurial Institution Leaders (KNEIL), public research institutions (KEMRI, KALRO), and university associations
iv. *Private Sector.* Kenya Private Sector Alliance (KEPSA), East Africa Venture Capital Association (EAVCA), and sector-specific industry associations
v. *Development Partners.* FCDO Kenya and active bilateral and multilateral partners
vi. *Civil Society.* enterprise support organisations, women's innovation networks, and youth innovation bodies

The NICSC shall meet quarterly, with an expanded annual session coinciding with the National Innovation Cluster Forum. Its mandate includes approving cluster designations, resolving inter-institutional disputes, endorsing national cluster policy updates, and reviewing the annual State of Kenya's Innovation Clusters report.

6.3.1(a) Steering Committee Governance

The NICSC shall operate under the following governance rules, which shall be formalised in the Governance and Coordination Manual issued by KeNIA within three months of framework adoption.

i. Meetings shall be quorate when at least 60 per cent of voting members are present, including the Chair or an authorised deputy.
ii. Routine decisions shall be by simple majority of members present. Major fund allocations above a delegated threshold, changes to national cluster standards, and cluster de-designations shall require a two-thirds majority.
iii. All voting members shall submit an annual COI declaration and shall declare any relevant interest at the start of each meeting. Members with a material interest in a decision under consideration shall withdraw from that discussion and vote.
iv. The Secretariat shall circulate draft minutes within ten working days of each meeting and publish approved minutes on the National Innovation Cluster Platform, subject to any confidentiality requirements.

6.3.2 Establish Sector-Specific Cluster Working Groups (SWGs)

Sector-Specific Working Groups (SWGs) shall be established for each priority cluster sector, convening the specialised stakeholders most relevant to a given domain. Each SWG will plan and implement cluster initiatives in their sector, reporting to the NICSC. Each SWG shall submit biannual progress reports to the NICSC and maintain a shared action register. SWG convenorship shall be assigned to KeNIA or a designated anchor institution with relevant sectoral expertise. Sub-groups at county or regional level may be constituted as clusters develop.

6.3.3 Develop a Stakeholder Engagement Framework

A dedicated Stakeholder Engagement Framework (SEF) shall be developed in Year 1 of framework operationalisation. The SEF will outline standard procedures for communication, decision-making, and conflict resolution among innovation cluster participants. It shall include: a stakeholder mapping registry; tiered engagement protocols (consultation, collaboration, co-governance) appropriate to each stakeholder category; a complaints and grievance mechanism; and protocols for integrating indigenous and community knowledge consistent with the ST&I Act 2013. The framework shall include regular consultative forums and information-sharing platforms and shall be adaptive to the continuously evolving ecosystem.

6.3.4 Implement an Annual National Innovation Cluster Forum

An Annual National Innovation Cluster Forum shall be convened by KeNIA, building on the existing Kenya Innovation Week platform. The Forum shall gather all stakeholders to review progress, share best practices, forge new partnerships, and showcase commercialised innovations. Forum outcomes shall include: an updated national cluster performance scorecard; new cluster designations or reclassifications; revised sector priorities where warranted; and partnership commitments between clusters, investors, and development partners. Proceedings shall be published and submitted to relevant parliamentary committees, ensuring public accountability.

6.3.5 Designate Coordination Officers or Units at National and County Levels

Dedicated cluster coordination officers shall be designated at both national and county levels to act as liaisons among stakeholders. At the

national level, KeNIA shall establish a Cluster Coordination Unit with officers responsible for each priority sector. At the county level, each county government shall designate a County Cluster Liaison Officer within its relevant department, responsible for:

i. Aligning county CIDP activities with national cluster priorities
ii. Facilitating county participation in the NICSC and relevant SWGs
iii. Coordinating the county's CAIP participation with the national cluster registry
iv. Reporting quarterly on county cluster activities using standardised M&E templates
v. Ensuring feedback from local innovators and community actors informs national decisions

County Liaison Officers shall be supported through a capacity building programme co-designed by KeNIA and the Council of Governors, with initial training funded through the National Innovation Cluster Financing Programme.

6.3.6 Establish a Digital Collaboration and Knowledge Platform

A National Innovation Cluster Platform shall be established as a module within KeNIA's proposed National Innovation Repository. The platform will serve as the primary digital coordination infrastructure for the cluster ecosystem, providing: a real-time national cluster registry; a collaboration workspace for SWGs; an innovation showcase and matchmaking function connecting cluster enterprises with investors and markets; a reporting interface for quarterly and annual performance data; and a knowledge library of cluster best practices. Its design shall build on

the *MakeItKenya* digital export portal model and shall be interoperable with Kenya's national ICT infrastructure.

6.3.7 Key Performance Indicators for Coordination

> *The Secretariat and Steering Committee shall track the following governance KPIs. Baseline values shall be established in Month 1 and published in the first quarterly report.*

i. Steering Committee and Secretariat established and meeting quarterly by Month 3.
ii. Percentage of counties with an active County Cluster Liaison Officer. Target: 40 per cent by Year 2; 100 per cent by Year 5.
iii. Percentage of cluster projects with confirmed private sector co-funding. Target: 40 per cent by Year 2.
iv. Percentage of cluster-supported enterprises that are female-led. Target: 30 per cent by Year 3.
v. Average fund decision turnaround from complete application to first disbursement. Target: under 60 days.
vi. Annual publication of audited NICF financials within 120 days of fiscal year end (binary).

6.3.8 Six-month Implementation Roadmap

The following tasks shall be completed within the first six months of framework adoption. The Secretariat shall maintain a progress tracker against these milestones and report to the Steering Committee at each quarterly meeting.

i. Weeks 1 to 4: KeNIA convenes an Interim Steering Committee meeting; Steering Committee TOR and COI policy adopted; Secretariat Head appointed.
ii. Months 1 to 2: Steering Committee TOR and COI policy published on the National Cluster Portal; portal launched for pipeline submissions; County MoU template issued.

iii. Months 1 to 3: MoUs signed with ten pilot counties; County Cluster Liaison Officers onboarded and initial training completed.

iv. Months 2 to 4: SWGs constituted for priority sectors; regulator liaisons nominated and introduced to relevant SWG chairs.

v. Months 3 to 6: NICF first call for seed grants launched using harmonised application templates; pilot accreditation of two to three clusters initiated.

6.4 Guidelines to be Disseminated

The following guidelines shall be developed by KeNIA and distributed to all stakeholders by the end of Year 1:

National Innovation Cluster Coordination Guidelines
A comprehensive operational document detailing the terms of reference for the NICSC and all SWGs, including meeting schedules and quorum requirements, decision-making procedures and escalation protocols, reporting requirements for cluster management entities, communication protocols between national and county levels, and conflict resolution procedures. The guidelines shall also specify how development partner activities are coordinated to avoid duplication and ensure alignment with national priorities.
Stakeholder Engagement Handbook
A practical guide on roles, responsibilities, and expected contributions of each stakeholder category (government, academia, industry, civil society) within innovation clusters, including codes of conduct and partnership principles. The Handbook shall include guidance on inclusive engagement of women, youth, persons with disabilities, and ASAL community innovators, and protocols for engaging informal sector actors and indigenous knowledge holders consistent with the ST&I Act.
Communication and Information Sharing Protocols
Standardised procedures for how stakeholders share data, research findings, and project updates within and across clusters, including use of

the National Innovation Cluster Platform. Protocols shall address data classification (public, restricted, confidential), media and public communication guidelines, and procedures for communicating sensitive IP or commercial information in collaborative settings.

County Integration Guidelines

Instructions for county governments and local innovation hubs on how to align with and participate in national innovation cluster initiatives, ensuring local context is respected while contributing to national objectives. Guidelines shall cover aligning CIDPs with cluster priorities; CAIP-cluster integration procedures; county-level innovation policy development; and reporting requirements for County Cluster Liaison Officers.

Monitoring and Feedback Template

A standardised template for all cluster stakeholders including CMEs, county liaison officers, and SWG members, to provide regular feedback and progress reports on cluster activities. Available in English and Kiswahili, the template feeds directly into the M&E architecture described in Section 9 and aligns with the overall monitoring and evaluation system.

7. IP and Regulatory Frameworks

7.1 Introduction

A robust intellectual property (IP) regime and supportive regulatory environment are fundamental to drive innovation within clusters. This section outlines how existing IP laws and related regulations will be strengthened and harmonised to encourage creativity, protect innovators, and facilitate commercialisation of new ideas. It also addresses the need for clear policies to remove regulatory barriers, ensuring that innovators and entrepreneurs in clusters can operate within an enabling legal framework. By aligning IP and regulatory frameworks with international best practices, the framework safeguards innovators' rights and fosters confidence among local and international investors.

The Innovation Masterplan found that engagement among ecosystem stakeholders has been severely limited by a lack of policies and regulation protecting innovators' intellectual property, and that innovation producers consequently lack the confidence to share ideas openly, the very openness that collaborative cluster innovation requires. Two critical legislative instruments remain unenacted: the National IP Policy and the Kenya Startup Bill. This section provides both an interim operational framework for clusters and a roadmap for the legislative reforms needed to fully enable cluster IP management.

7.2 Objectives

The IP and regulatory component pursues five objectives aligned with the Innovation Masterplan's policy pillar and the MTP IV's STI regulatory reform commitments:

i. To strengthen intellectual property protection mechanisms for innovations emerging from clusters, ensuring inventors and creators can securely patent, copyright, or otherwise protect their works before and during collaborative development.

ii. To harmonise and update relevant laws and regulations to support innovation, including the Industrial Property Act, the proposed National IP Policy, and the Startup Bill; removing outdated provisions that hinder agile development of new technologies.

iii. To enhance regulatory support for startups and SMEs by streamlining processes (such as business registration, product certification, and licensing) that affect cluster-based innovators.

iv. To ensure compliance and ethical standards by embedding guidelines for quality, safety, data protection, and ethics in innovation development and deployment, aligned with national and international frameworks.

v. To promote awareness of IP rights and regulations among cluster stakeholders through accessible training, dedicated IP support offices, and ongoing engagement with KIPI and relevant regulatory bodies.

7.3 Strategic Interventions

Key strategic interventions to strengthen the IP and regulatory environment include:

7.3.1 Review and Reform IP Legislation

KeNIA, in collaboration with the Kenya Industrial Property Institute (KIPI) and NACOSTI, shall lead a structured review of the Industrial Property Act 2001 and related legislation to ensure fitness for the cluster context. Reform priorities include provisions for joint ownership and revenue-sharing from IP co-developed by multiple cluster parties; protections for indigenous and traditional knowledge aligned with Kenya's Nagoya Protocol obligations; faster-track processing pathways for cluster-affiliated applications; and provisions for open and collaborative innovation models prevalent in digital and green technology clusters. This review shall be completed within 18 months of framework adoption.

7.3.2 Enact Supportive Innovation Policies

The framework prioritises two pending legislative instruments whose absence directly constrains cluster development:

> **Startup Bill:** *The Kenya Startup Bill shall be accelerated through parliamentary processes. Its enactment will provide simplified registration for cluster enterprises, R&D tax incentives, and legal recognition for innovation clusters as a distinct economic entity category. KeNIA shall lead stakeholder engagement with the parliamentary committee to ensure the Bill reflects cluster framework requirements.*
>
> **National IP Policy:** *The National IP Policy, currently at draft stage, shall be finalised and gazetted as a matter of priority. Its enactment is essential to resolve the IP confidence gap identified in the Masterplan*

> *and to provide cluster members with a clear, enforceable framework for protecting and sharing knowledge assets, aligned with WIPO standards.*

7.3.3 Establish an IP Support Office Within Each Major Cluster

Each designated cluster operating at Growth stage or above shall establish a dedicated IP Support Office or designate an IP focal point within its Cluster Management Entity. These offices shall provide advisory services including patent searches and filing support; coordinate with KIPI and the Kenya Copyright Board; manage the cluster's collective IP portfolio; deliver IP training to cluster members prioritising early-stage startups; and connect to the national network of Technology Transfer Offices at universities, aligned with the MTP IV's TTO establishment programme. For Stage 1 clusters, shared IP advisory services shall be provided through KeNIA's national Cluster Coordination Unit.

7.3.4 Implement Regulatory Sandboxes and Piloting Regimes

In collaboration with sector regulators, regulatory 'sandbox' environments shall be created where innovators can test new products or services under relaxed regulatory conditions with supervisory oversight. Building on the Capital Markets Authority's existing sandbox model, KeNIA shall coordinate sector-specific sandbox regimes with the Communications Authority, Pharmacy and Poisons Board, EPRA, and KEBS. Sandbox terms shall specify duration (typically 12 to 24 months), permitted scope of activities, monitoring requirements, conditions for graduation to full regulatory compliance, and criteria for early termination if safety concerns arise.

Insights from sandbox trials will inform permanent regulatory adjustments and standards development.

7.3.5 Strengthen Enforcement of IP Rights

Coordinate with law enforcement, the Judiciary, and the Kenya Anti-Counterfeit Agency to strengthen IP enforcement. This includes capacity building for enforcement agencies on IP issues arising in cluster contexts, including digital IP and bio-innovation; fast-tracking of IP dispute resolution through KIPI's mediation services and the Commercial Division of the High Court; and public awareness campaigns targeting cluster communities on the social and economic costs of IP infringement, particularly for health and food innovation clusters where safety implications are direct.

7.3.6 Align Standards and Quality Assurance

Working collaboratively with the Kenya Bureau of Standards (KEBS) and other regulatory agencies, the framework shall develop or update standards for novel products and services emerging from clusters. Innovators will be involved in standards development to ensure that compliance requirements are practical and support market entry. This shall include standards development working groups within each SWG; cluster-specific quality assurance roadmaps; and alignment with EAC, COMESA, and AfCFTA mutual recognition frameworks to reduce non-tariff barriers for cluster products entering regional and continental markets.

7.3.7 Establish a Biennial Regulatory Review Forum

A Biennial Cluster Regulatory Review Forum shall be established and convened jointly by KeNIA, NACOSTI, and relevant sector regulators. This forum will gather innovators, policymakers, cluster managers, and

regulators to review the effectiveness of policies and regulations affecting innovation, identify regulatory bottlenecks, and recommend amendments or new regulations to keep the legal framework adaptive to technological advancement. Recommendations shall be formally submitted to the NICSC and, where legislative change is required, to the relevant parliamentary committees.

7.3.8 Data Governance, Material Transfer Agreements and Data Sharing Agreements

Collaborative cluster research involves the movement of biological materials, datasets and research outputs between institutions. Without clear, standardised agreements, ownership disputes and data misuse can stall projects and deter partners. The framework therefore establishes a suite of standard legal instruments, available through the National Innovation Cluster Platform from Month 2 of framework adoption.

i. *Material Transfer Agreements (MTAs).* NACOSTI and KeNIA shall jointly issue a standard MTA template governing the transfer of physical research materials between cluster members. The template shall address ownership, permitted uses, IP arising from transferred materials, and benefit-sharing obligations consistent with Kenya's obligations under the Nagoya Protocol.
ii. *Data Sharing Agreements (DSAs).* A standard DSA template shall govern access to, and use of, research data generated within clusters. The template shall specify data classification levels, permitted secondary uses, publication embargo periods, and the obligations of data recipients. All personal data shall be handled in compliance with the Data Protection Act 2019.
iii. Where cluster research involves human subjects, standardised informed consent forms shall be issued to ensure compliance with

research ethics requirements under NACOSTI's Research Ethics Framework.

iv. *FAIR Data Principles*. Cluster research data shall, where not subject to IP or confidentiality restrictions, be made Findable, Accessible, Interoperable and Reusable. A registry of aggregated, de-identified project datasets shall be maintained on the national portal for approved secondary analysis, supporting Kenya's research evidence base.

v. Standard agreements (MTA and DSA) shall be available on the portal within 30 days of framework adoption. IP Helpdesk requests shall be acknowledged within five working days and a preliminary search delivered within 20 working days.

7.3.9 Key performance indicators for IP and regulation

The following KPIs shall be tracked by the Secretariat and reviewed at each SWG meeting. Baseline values shall be published in the national M&E Framework within two months of framework adoption.

i. At least 12 IP clinic sessions held per year across priority cluster sectors.

ii. Average time from sandbox application submission to initial regulator acknowledgement. Target: under ten working days.

iii. Percentage reduction in average regulator review time for sandboxed pilots. Target: 50 per cent reduction within 12 months of sandbox SOP adoption.

iv. Percentage of cluster research projects using standard MTA or DSA templates. Target: 80 per cent of all cluster research projects.

v. Number of patents, utility model and trademark applications filed by cluster-affiliated enterprises and researchers per year (tracked by KIPI).

7.4 Guidelines to be Disseminated

The following guidelines shall be prepared and distributed to ensure clarity and compliance across the innovation ecosystem:

Innovation IP Rights Guide

A user-friendly guide for innovators and entrepreneurs on how to protect different forms of intellectual property in Kenya - patents, utility models, trademarks, copyrights, trade secrets, and community knowledge rights - including step-by-step processes, indicative costs, timelines, and points of contact at KIPI, the Kenya Copyright Board, and the Kenya Plant Health Inspectorate Service. Available in English and Kiswahili through cluster IP Support Offices and the National Innovation Cluster Platform.

Regulatory Compliance Checklist for Innovators

A comprehensive, sector-specific checklist outlining the necessary regulatory steps for starting and scaling an innovation-driven enterprise within a cluster, covering business registration, product approvals, quality certifications, sector-specific licences, environmental compliance, and export certification requirements for EAC, COMESA, and AfCFTA markets. Separate variants shall be produced for each priority cluster sector.

Ethical Research and Innovation Guidelines

Standards and ethical considerations for R&D and innovation within clusters covering ethical review requirements for research involving human subjects; data protection obligations under Kenya's Data Protection Act 2019; environmental impact assessment requirements; biosafety requirements for biosciences clusters; and responsible AI principles for digital economy clusters. Aligned with international frameworks including the Helsinki Declaration and WIPO's ethical guidelines.

IP Collaboration Framework (Template Agreements)

A set of template legal agreements for common IP scenarios in cluster environments, including multi-party joint development agreements with background and foreground IP provisions; non-disclosure agreements for pre-commercialisation collaboration; licensing agreements (exclusive and non-exclusive); consortium agreements for multi-institution research projects; and benefit-sharing agreements for commercialisation of

community knowledge assets. All templates reviewed by legal counsel and available through the National Innovation Cluster Platform.

Regulatory Sandbox Operating Manual

Detailed instructions for both innovators and regulators participating in cluster-specific sandbox programmes: for innovators, covering application procedures, eligibility, permitted activities, reporting obligations, and graduation pathways; for regulators, covering supervisory procedures, intervention thresholds, evaluation criteria, and processes for converting sandbox learnings into permanent regulatory adjustments. To be reviewed annually in collaboration with each sector regulator.

8. Financing Logic

8.1 Introduction

Sustainable financing is the backbone of the innovation cluster framework. This section delineates the financing logic of how resources will be mobilised, allocated, and managed to support innovation clusters from inception through growth. It recognises the necessity of blending public funding with private investment and donor support to ensure clusters have adequate capital at each stage of development. The framework promotes a transparent and strategic approach to funding, where investments are tied to clear performance metrics and national priorities. By outlining financing mechanisms, incentives, and accountability measures, this section ensures that innovation clusters can thrive financially and deliver long-term socio-economic returns.

The Innovation Masterplan identifies Access to Finance as one of its five core ecosystem pillars and recognises Kenya's USD 19.3 billion formal MSME finance gap as one of the most significant structural constraints on innovation-led growth. For clusters specifically, this challenge is compounded by the use of conventional collateral-based assessment tools that, as the Masterplan notes, are unfairly skewed against innovation, failing to value IP portfolios, technology readiness, market potential, or the strength of cluster partnerships. The cluster financing architecture is therefore designed from the ground up to be fit-for-purpose for innovation-intensive, often early-stage, collaborative enterprise.

8.2 Objectives

The financing logic of this framework is guided by five objectives, directly responding to the finance gaps and opportunities identified in the Innovation Masterplan and MTP IV:

i. To mobilise adequate funding for innovation clusters from diverse sources including government, private sector, development partners, venture capital, and research institutions, to cover R&D, incubation, and scale-up activities across all cluster development stages.
ii. To ensure strategic allocation of funds aligned with national innovation priorities and the specific needs of each cluster, so that resources are invested where they have the greatest impact on GDP contribution, job creation, and knowledge economy development.
iii. To encourage private sector investment and public-private partnerships (PPPs) by structuring incentives such as matching funds, tax breaks, or equity co-investment that attract corporate investors and venture capital into cluster initiatives.
iv. To maintain transparency and accountability in the use of funds, with clear criteria for funding decisions and rigorous monitoring of expenditures and outcomes, aligned with the Public Finance Management Act 2012.
v. To achieve financial sustainability for clusters by planning long-term funding models including revenue-generating activities and a gradual reduction of public subsidies as clusters mature through the development stage classification.

8.3 Strategic Interventions

To realise these objectives, the following strategic financing interventions shall be executed:

8.3.1 Establish a Dedicated National Innovation Cluster Fund (NICF)

A National Innovation Cluster Fund (NICF) shall be established as the primary public financing vehicle, managed jointly by KeNIA and the National Research Fund with a governance board inclusive of KeNIA, NACOSTI, National Treasury, private sector, and development partner representatives. The NICF shall be structured into three windows corresponding to the cluster development stages:

Table 4. National Innovation Cluster Fund (MICF) window structure

Window	Target Stage	Instrument	Allocation	Key Criteria
Window 1: Establishment	Stage 1 (Emerging)	Non-repayable grants	15% of NICF	Feasibility quality; governance readiness; sectoral alignment
Window 2: Growth Finance	Stages 2 to 3 (Growth/Established)	Blended finance (grants, concessional loans, equity)	55% of NICF	Commercial potential; triple helix quality; IP portfolio; job creation trajectory
Window 3: Excellence & Export	Stage 4 (Excellence)	Market-rate investment + export finance	30% of NICF	International competitiveness; export revenue; IP commercialisation; replicability

NICF disbursements shall be tied to defined performance milestones, with quarterly financial reporting and annual independent audits. The NICF

directly operationalises the Masterplan's ambition to raise a minimum of USD 100 million for a national innovation funding programme, structured specifically for the cluster development lifecycle.

8.3.2 Operationalise the 2% GDP Funding Commitment for R&D and Innovation

The ST&I Act 2013 mandated that the National Research Fund receive at least 2 per cent of Kenya's GDP annually for research and innovation. Current R&D investment stands at approximately 0.8 per cent of GDP, leaving significant headroom. The framework shall advocate for a phased pathway: 1.0 per cent by 2027 (MTP IV mid-term), 1.5 per cent by 2029, and 2.0 per cent by 2033. These funds shall be channelled through the National Research Fund with cluster-specific allocations ring-fenced in proportion to clusters demonstrated research-to-commercialisation pipeline. Achieving this target would generate approximately KSh 150 to 200 billion annually at current GDP levels which is a transformative resource for cluster development.

8.3.3 Introduce Matching Grant and Co-Funding Schemes

Matching grant programmes significantly amplify public investment by crowding in private finance. The NICF shall operate a 1:1 matching grant scheme under Window 2, whereby each shilling of private or county government investment in a cluster project is matched from the NICF. Industry-funded R&D partnerships, for example, between a pharmaceutical company and a biosciences cluster university shall be eligible, building on the MTP IV's objective to incentivise the private sector to contribute to R&D financing. This mechanism directly responds to the Masterplan's finding that

'risk aversion by investors, especially in early-stage ventures' is among the top constraints on innovation finance in Kenya.

8.3.4 Facilitate Access to Venture Capital and Angel Networks

Kenya attracted 69 per cent of EAC region PE and DFI investments between 2013 and 2023. The cluster framework shall build on this foundation by: organising quarterly investor pitch days within each major cluster; maintaining an Innovation Cluster Investment Portal on the National Platform; providing first-loss guarantees funded through the NICF to reduce perceived early-stage investment risk; and connecting diaspora investors, particularly the Kenyan technology diaspora in the US, UK, and UAE with cluster opportunities. The framework shall link clusters with local and international investors and potentially provide credit guarantees or first-loss insurance to make early-stage investments more attractive to private financiers.

8.3.5 Provide Fiscal Incentives

Working with the National Treasury, the framework shall advocate for a package of fiscal incentives for cluster-affiliated enterprises and investors, to be formalised through the Startup Bill and Finance Acts. Proposed incentives include:

i. R&D tax credits with 150 per cent deduction on qualifying R&D expenditure for cluster-affiliated enterprises
ii. Import duty waivers on specialist research equipment, laboratory materials, and clean technology hardware for cluster-designated projects
iii. Capital gains tax relief on returns from qualifying investments in cluster enterprises held for a minimum period, encouraging patient capital

iv. Preferential public procurement: a set-aside for cluster-originated products and services in government procurement, implementing the Masterplan's proposed preferential market access for knowledge economy outputs

v. Tax holidays for startups in recognised clusters, reducing the financial burden on innovators and encouraging greater investment

8.3.6 Strengthen Financial Management and Oversight

All clusters receiving NICF funding shall operate under a Financial Management Framework specifying: budgeting and procurement standards aligned with the Public Finance Management Act 2012; quarterly financial reporting using standardised templates submitted through the National Innovation Cluster Platform; annual independent financial audits with published reports; and a financial oversight sub-committee under the NICSC, comprising independent financial experts with authority to flag misuse of funds and recommend corrective action. Anti-corruption safeguards, including conflict of interest declarations from all CME board members, shall be mandatory.

8.3.7 Build Capacity in Fundraising and Financial Planning

Many cluster enterprises particularly early-stage startups, university spinouts, and MSME-led clusters lack the skills to prepare bankable proposals, manage project finances, and develop sustainable revenue models. The framework shall address this through: a Cluster Financial Literacy Programme delivered in partnership with KEPSA and the Kenya Bankers Association; an Investor Readiness Clinic embedded within the Annual Forum; and a Cluster Revenue Diversification Advisory Service helping established clusters develop commercial income streams,

including laboratory services, IP licensing, consultancy, and training, to progressively reduce dependence on public funding.

8.3.8 Technical Assistance Window

Technical assistance (TA) is a form of investment, not an overhead cost. Many cluster enterprises fail at the financing stage not because their ideas lack merit but because their proposals, financial models and IP valuations are not investor-ready. The NICF shall therefore operate a dedicated TA window alongside its three grant and investment windows.

i. The TA window shall fund proposal development, business plan preparation, financial modelling, IP valuation, regulatory preparedness assessments, and investor readiness support for qualifying applicants.
ii. Any cluster enterprise, CME or research institution that has submitted an expression of interest for NICF Window 1 or Window 2 funding shall be eligible to apply for matched TA support. Pre-application TA shall also be available for high-potential pipeline proposals identified by SWGs.
iii. TA shall be delivered through a roster of pre-qualified service providers procured by the Secretariat. Providers shall be assessed for technical competence, Kenya-market experience, and value for money.
iv. Applicants shall contribute at least 20 per cent of TA costs in cash or in-kind contributions, except for Stage 1 clusters and MSME-led proposals where the Secretariat may waive this requirement on documented grounds.
v. Volume of matched TA delivered per year, measured in shilling value and number of enterprises supported. Annual targets shall be defined in the NICF Operational Manual.

8.3.9 Key Performance Indicators for Financing

The Fund Investment Committee shall report the following KPIs to the Steering Committee at each quarterly meeting. NICF financials shall be audited annually and published within 120 days of fiscal year end.

i. Ratio of private or development partner co-finance to public NICF investment. Target: 2:1 within Year 2 for Window 2 investments.
ii. Percentage of NICF-funded projects still active at 24 months post-disbursement. Target: 70 per cent.
iii. Average time from complete application to first disbursement for the seed window. Target: under 60 days.
iv. A first-loss facility or guarantee instrument shall be operational within 12 months of framework adoption (binary).

8.3.10 Financial Sanctions and Compliance

Public confidence in the NICF depends on credible consequences for misuse of funds. The following sanctions framework shall be embedded in all NICF grant and investment agreements and enforced by the Fund Investment Committee.

i. Where a grant recipient is found to have misused funds, provided false information in its application, or materially breached grant conditions, the full amount disbursed shall be recoverable by KeNIA or NRF as a civil debt.
ii. For repayable instruments, any material breach of financial reporting obligations or diversion of funds from their stated purpose shall trigger immediate acceleration of the full outstanding balance.
iii. Clusters or enterprises under active investigation for fund misuse shall be suspended from applying for further NICF support until the investigation is concluded.
iv. Credible evidence of fraudulent applications or corruption in the fund management process shall be referred to the Ethics and Anti-

Corruption Commission and, where applicable, to the Director of Public Prosecutions.

v. The Secretariat shall maintain a risk register for all active NICF investments, reviewed quarterly by the Fund Investment Committee and presented in summary to the Steering Committee at each annual meeting.

8.4 Guidelines to be Disseminated

The following financing-related guidelines shall be developed and shared with all cluster stakeholders:

Innovation Cluster Fund Access Guidelines
Documentation explaining the criteria, application process, and evaluation procedure for obtaining support from the National Innovation Cluster Fund (NICF) across all three windows. Details eligibility requirements for each window, how proposals are scored (including innovation potential, triple helix quality, IP readiness, and job creation potential), the due diligence process, obligations of beneficiaries, disbursement procedures, and consequences of non-compliance. A simplified version shall be available for MSME-led and community innovation clusters.
Public-Private Partnership Framework for Innovation
Guidelines for structuring PPPs between government, county governments, private investors, and cluster CMEs. It includes standard PPP agreement templates covering risk allocation, revenue sharing, and exit provisions; definitions of each party's roles and decision-making rights; guidance on structuring blended finance arrangements; and provisions for transitioning from public-funded to privately sustained cluster operations. Aligned with the PPP Act 2021 and MTP IV investment facilitation objectives.
Financial Management Handbook for Clusters
A guide outlining best practices in budgeting, accounting, and financial reporting for cluster initiatives, especially those utilising public funds. Covers approved procurement procedures, acceptable expense categories, financial reporting templates and schedules, audit

preparation, and compliance with public financial management regulations. Also provides guidance on maintaining financial records that can withstand independent scrutiny and demonstrate value for money to funders.

Investor Engagement Toolkit

Resource materials for cluster coordinators and CMEs on how to engage venture capitalists, angel investors, development finance institutions, and strategic corporate partners. Covers preparing compelling investment pitch decks, understanding investor due diligence processes, valuing cluster IP portfolios for investment purposes, structuring term sheets, and maintaining investor relationships post-investment. Includes case studies from successful East African innovation investment deals.

Sustainability and Exit Strategy Guidelines

Guidance for clusters on planning financial sustainability beyond initial grant or public funding. Covers: mapping potential revenue streams appropriate to each cluster sector; developing a five-year financial sustainability plan; diversifying from public to mixed to predominantly private financing; and planning a responsible transition when public funding is phased out. Includes modelling tools for projecting the financial trajectory of clusters at each development stage.

9. Monitoring and Evaluation Architecture

9.1 Introduction

A robust Monitoring and Evaluation (M&E) architecture is essential to measure the performance and impact of innovation clusters and to ensure the cluster framework remains accountable to its stated objectives. The Innovation Masterplan commits to a continuous monitoring and evaluation process to track the progress on the implementation of this masterplan, treating it as a living document. The M&E architecture operationalises this commitment at the cluster, portfolio, and national framework levels.

The architecture is built on four principles. It must be proportionate, not creating a reporting burden that outweighs its value for small clusters. It must be integrated, feeding into national development monitoring systems including the MTP IV Results Framework and Kenya's GII tracking process. It must be participatory; engaging cluster members in measurement, not merely imposing top-down data collection. And it must be adaptive, using evidence to continuously improve the framework, not simply to report on it. The M&E architecture integrates with national development monitoring systems and promotes regular reporting and analysis so that successes can be scaled up and challenges addressed promptly.

9.2 Objectives

The M&E architecture aims to achieve five objectives that respond to the accountability, learning, and alignment requirements of the cluster framework:

i. To define clear performance indicators for innovation clusters, covering input metrics (funding, human resources), output metrics (patents filed, startups launched, prototypes developed), and outcome and impact metrics (jobs created, revenue generated, GDP contribution, social and environmental benefits).
ii. To establish efficient, digital-first data collection and reporting systems so that accurate information on cluster activities and results is gathered consistently from all stakeholders and projects with minimal administrative burden.
iii. To facilitate continuous learning and adaptation by regularly analysing M&E data to identify what works and what does not, allowing timely adjustments in strategy or implementation, central to the Masterplan's Experimentation principle.
iv. To ensure accountability to funders and beneficiaries by transparently reporting progress and outcomes, thus building trust in the governance of the innovation cluster framework among government, private sector, development partners, and the public.
v. To align with national and global benchmarks by mapping cluster performance against Kenya's MTP IV Results Framework, Vision 2030 targets, SDG indicators, and the Global Innovation Index, enabling Kenya's cluster ecosystem to be positioned in its international context.
vi. To support performance tracking across the full cluster lifecycle (from establishment and proof of concept through growth, commercialisation and scaling to maturity) ensuring that M&E instruments and reporting requirements are proportionate to each development stage and that evidence generated at each stage informs transition decisions, including progression through the accreditation levels described in Section 10.

9.3 Strategic Interventions

The following strategic interventions shall build a comprehensive M&E system for the innovation clusters:

9.3.1 Develop a National Innovation Cluster M&E Framework

A National Innovation Cluster M&E Framework shall be developed collaboratively by KeNIA, NACOSTI, and cluster stakeholders within Year 1. The Framework shall specify a comprehensive indicator set across input, output, outcome, and impact levels, as illustrated in the performance indicator table below:

Table 5. National Innovation Cluster M&E performance indicator framework

Level	Domain	Indicator	Source	Frequency
Input	Finance	Total NICF and co-funding mobilised (KSh, by source)	NICF financial reports	Quarterly
Input	Human Capital	Researchers, entrepreneurs, and staff active in clusters	CME rosters	Annual
Output	Innovation	IP registrations (patents, trademarks, copyrights) by cluster enterprises	KIPI / Copyright Board	Annual
Output	Commercialisation	New products and services reaching market from clusters	CME reports	Annual
Output	Enterprise	New startups registered within designated clusters	Business Registration Service	Annual
Outcome	Employment	Jobs created disaggregated by gender, age, and county	CME reports + KNBS	Annual
Outcome	Markets	Revenue generated by	KRA / CME reports	Annual

		cluster enterprises (domestic and export)		
Outcome	Ecosystem	Kenya GII ranking improvement (relevant sub-indicators)	WIPO GII annual report	Annual
Impact	Economic	Cluster contribution to national GDP (%)	KNBS National Accounts	Biennial
Impact	Inclusion	Proportion of cluster enterprises led by women, youth, or ASAL residents	CME reports + surveys	Biennial

The Framework shall also specify baseline data sources, reporting frequency and responsible parties at each level, analytical methodologies, and links to the MTP IV STI monitoring framework and Kenya's biennial GII submission process.

9.3.2 Set Up a Centralised M&E Unit

A dedicated M&E Unit shall be established within KeNIA's Cluster Coordination Unit, staffed with qualified M&E specialists and tasked with overseeing all monitoring and evaluation activities. The unit shall maintain the innovation cluster database and real-time online performance dashboard; collect, validate, and analyse data submitted by cluster CMEs, county officers, and SWGs; produce quarterly M&E bulletins and an annual State of Kenya's Innovation Clusters report; commission and oversee independent evaluations; and identify high-performing clusters for replication and underperforming clusters for targeted support.

9.3.3 Train Cluster Implementers on M&E

M&E quality depends entirely on the capacity of those collecting and reporting data. The framework shall provide an M&E induction training for all newly designated cluster CMEs; annual refresher workshops with sector-specific modules for each SWG domain; designation of an M&E Focal Point within each cluster CME; and peer learning networks between cluster M&E Focal Points facilitated through the National Innovation Cluster Platform. Each cluster project should designate an M&E focal point to liaise with the central unit and ensure data quality.

9.3.4 Implement Periodic Reporting and Review Cycles

A structured, tiered reporting calendar shall govern all cluster M&E activities:

Table 6. Cluster M&E reporting calendar & review cycle

Reporting Level	Frequency	Content	Audience
Cluster activity report	Quarterly	Activities, outputs, expenditure, challenges, next steps	KeNIA M&E Unit
Cluster annual performance report	Annual	Full indicator data; financial accounts; strategic review	NICSC; public via platform
National M&E bulletin	Quarterly	Aggregated cross-cluster trends; investment flows; emerging issues	NICSC; development partners
State of Kenya's Innovation Clusters	Annual	Comprehensive performance assessment; GII benchmarking; policy recommendations	Public; Parliament; Government
Independent mid-term evaluation	Year 3	Effectiveness, efficiency, and relevance assessment	NICSC; FCDO; KeNIA Board

Independent end-term evaluation	Year 5	Impact, sustainability, and framework revision recommendations	Government; development partners

The M&E Unit shall compile quarterly and annual reports and convene bi-annual performance review meetings where results are discussed with the NICSC, corrective actions are agreed, and strategic adjustments are documented.

9.3.5 Conduct Independent Evaluations

Mid-term and end-term evaluations of the overall innovation cluster programme shall be commissioned from independent experts, procured through a transparent competitive process. Evaluations shall apply the OECD-DAC criteria of relevance, coherence, effectiveness, efficiency, impact, and sustainability, supplemented by gender analysis and benchmarking against comparable cluster programmes in Sub-Saharan Africa and globally. Evaluation reports shall be publicly disclosed, and KeNIA shall issue a formal Management Response within 60 days of receiving each report.

9.3.6 Integrate ICT Tools for Data Collection

The M&E system shall be fully digitised, leveraging Kenya's ICT infrastructure of 48 million internet subscribers and an extensive fibre optic network. The National Innovation Cluster Platform shall include a mobile-compatible data reporting interface; automated data validation algorithms that flag incomplete or inconsistent submissions; a real-time public performance dashboard; and API integration with KIPI's registry, the Business Registration Service, KEPROBA's export data, and KNBS economic statistics.

Automation and digital tools will reduce manual errors and allow timely visualisation of progress against targets.

9.3.7 Establish a Feedback and Adaptation Mechanism

M&E data has value only when it drives improvement. The framework therefore establishes a formal Feedback and Adaptation Mechanism: after each quarterly bulletin, the NICSC Chair issues a formal response identifying performance concerns; after each annual report, the NICSC convenes an Annual Performance Review at the National Forum where strategic adjustments are agreed; after each independent evaluation, KeNIA develops a formal Management Response; and all adaptations are documented in a public Adaptation Log on the National Cluster Platform. This creates formal channels to use M&E findings for learning and continuous improvement, ensuring the Steering Committee adjusts strategies and resource allocation in response to evidence from the field.

9.3.8 Key Performance Indicators for M&E

i. *The M&E Unit shall report the following KPIs to the Steering Committee quarterly and include them in the annual State of Kenya's Innovation Clusters report.*

ii. Percentage of funded cluster projects submitting quarterly reports on time. Target: 90 per cent compliance within 12 months of portal launch.

iii. Percentage of submitted reports verified with no major discrepancies in the quarterly sample-based desk review. Target: above 85 per cent.

iv. Baseline data collected for all pilot clusters. Target: completed by Month 3 after cluster designation.

v. Timely publication of the annual consolidated national report. Target: within 120 days of the end of each fiscal year.

vi. First independent mid-term evaluation of pilot clusters commissioned and completed by Month 18 of framework implementation.

9.3.9 Six-month M&E Roadmap

i. Months 0 to 1: finalise the indicator set and publish the National Cluster M&E Framework and Indicator Handbook.

ii. Months 1 to 2: publish the portal data specification and user manual; configure M&E dashboard modules.

iii. Months 1 to 3: onboard pilot clusters to the portal; conduct M&E induction training for all pilot cluster CMEs and County Cluster Liaison Officers.

iv. Months 3 to 6: conduct baseline data collection for all pilot clusters; commence quarterly reporting cycle; publish verification protocols and evaluation TOR templates.

9.4 Guidelines to be Disseminated

To support the M&E process, the following guidelines shall be issued to stakeholders:

M&E Indicator Reference Sheet
A detailed description of each performance indicator in the National Cluster M&E Framework, including precise operational definitions, data sources, collection methods, baseline values and 2033 target values aligned with the Innovation Masterplan, frequency of measurement, responsible parties, and known data quality risks. The Reference Sheet shall be updated annually to reflect any indicator revisions agreed by the NICSC.

Standard Reporting Templates and Instructions
Standardised templates for quarterly and annual cluster performance reports, available through the National Innovation Cluster Platform in digital (web-based form) and offline (Excel) formats. Templates include clear instructions on each data field, definitions of output and outcome categories, guidance on quantifying economic and social impacts, and a narrative section for qualitative insights, lessons, and success stories. Available in English and Kiswahili.

Data Quality Assurance Guidelines

Procedures to ensure that data reported by cluster CMEs, county liaison officers, and SWGs is accurate, reliable, and verifiable. Specifies acceptable primary data sources, validation procedures including spot-check protocols, procedures for handling data discrepancies, and consequences of persistent data quality failures for cluster funding eligibility. The M&E Unit shall conduct at least four spot-checks per year, sampling 20 per cent of active clusters.

Evaluation Terms of Reference (ToR) Framework

A guide for commissioning external evaluations at mid-term and end-term, specifying key evaluation questions aligned with the OECD-DAC criteria; required methodological approaches (field visits, key informant interviews, focus groups, secondary data analysis); deliverables and timelines; ethical considerations; and requirements for evaluator qualifications and independence. To be published and open for public comment before each evaluation is commissioned.

Learning and Adaptation Practice Guide

Guidance for cluster managers, the M&E Unit, SWGs, and the NICSC on how to conduct structured learning using M&E findings. Covers after-action review methodologies, how to document lessons learned in usable formats, Feedback and Adaptation Mechanism procedures, how to run learning workshops that produce actionable insights, and how to disseminate learnings across the cluster ecosystem through the National Innovation Cluster Platform and the Annual Forum.

10. Validation Structures

10.1 Introduction

Validation structures are the mechanisms put in place to verify and endorse the effectiveness and impact of innovation clusters. This section describes how the innovation cluster framework will employ oversight bodies and evaluative processes to validate that cluster initiatives meet their objectives and adhere to defined quality standards. By instituting formal validation steps, the framework ensures credibility and continuous improvement. Validation not only involves checking compliance and performance against set criteria but also recognising and certifying successful innovations or cluster models. Through transparent validation structures, stakeholders gain confidence that the cluster approach is delivering tangible value, and any insights gained can be fed back into policy refinement.

The Innovation Masterplan's principle of Experimentation, encouraging the open generation and implementation of ideas and quick learning from failure, requires that validation mechanisms be constructive and learning-oriented, not purely punitive. Validation structures must therefore reward improvement and effort alongside outcomes, and use findings as inputs to learning rather than merely triggers for sanctions. This approach protects the experimental culture that cluster innovation depends on while ensuring rigorous accountability for public investment.

10.2 Objectives

The objectives of establishing validation structures provide both accountability and developmental support to Kenya's innovation cluster ecosystem:

i. To provide independent oversight of innovation cluster activities, ensuring they are implemented according to the framework and design, applicable legal requirements, and the governance standards established in Section 3.
ii. To verify outcomes and impact by assessing whether clusters are achieving their stated goals and contributing to the broader socio-economic targets of the Innovation Masterplan and MTP IV.
iii. To certify and recognise high-performing clusters and innovations through a tiered accreditation system and annual recognition programme, creating reputational capital that attracts investment, partnerships, and talent.
iv. To identify gaps and areas for improvement through critical review, providing clusters with actionable recommendations and structured support pathways rather than simply documenting deficiencies.
v. To enhance stakeholder trust and buy-in via transparent validation processes that demonstrate accountability and the value of investments in the clusters, building investor confidence in the national cluster ecosystem.

10.3 Strategic Interventions

To operationalise these objectives, the following strategic interventions shall be undertaken:

10.3.1 Establish a National Innovation Cluster Advisory Board (NICAB)

A National Innovation Cluster Advisory Board (NICAB) shall be constituted as the apex independent validation body, operating at arm's

length from KeNIA and the NICSC to maintain credibility. NICAB membership shall comprise five to seven independent experts serving three-year terms, drawn from diverse disciplines (innovation economics, cluster management, IP law, biotechnology, green economy, digital economy, and development finance). At least 40 per cent shall be women, at least two members shall have deep East Africa regional expertise, and all shall be appointed through a transparent public nominations process overseen by NACOSTI.

This high-level body of independent experts from academia, industry, and development partners shall periodically review cluster performance, validate whether each cluster is on track, provide strategic advice, and endorse major decisions or needed pivots. NICAB proceedings and recommendations shall be publicly disclosed.

10.3.2 Institute Milestone-Based Validation Reviews

Each cluster's progression through the development stage classification (Emerging, Growth, Established, Excellence) shall be subject to a formal Milestone Validation Review conducted by a panel of independent experts convened by the NICAB. Key milestones include prototype development, market entry, and scaling phases. Review panels shall comprise at least three independent reviewers with relevant sectoral expertise, including at least one with international cluster management experience. At these milestones, a panel of experts shall evaluate progress and results against predefined criteria and decide if the project may advance to the next stage or requires course correction. Panel findings shall be formally communicated to the cluster CME within 30 days of the review,

with specific recommendations for advancement or required improvements.

10.3.3 Develop a Cluster Accreditation System

A tiered cluster accreditation system shall be created to recognise cluster quality and maturity, operating alongside the development stage classification. Accreditation reflects governance and management quality, not just developmental progress. Accreditation levels shall be:

Table 7. Cluster accreditation levels, criteria and recognition benefits

Accreditation Level	Criteria Summary	Recognition and Benefits
Registered	Formal designation criteria met; CME constituted; on National Cluster Registry	Official national recognition; NICF Window 1 funding eligibility
Accredited - Bronze	Stage 2 milestone passed; M&E compliant for 12+ months; triple helix fully operational; IP support in place	NICF Window 2 funding; national showcase inclusion; NICAB endorsement letter
Accredited - Silver	Stage 3 milestone passed; clean audits for 2 consecutive years; 3+ commercialised innovations; export revenues demonstrated	NICF Window 3 funding; priority on Investor Portal; international partnership brokering
Accredited - Gold (Centre of Excellence)	Stage 4 milestone passed; GII-relevant metrics demonstrated; actively providing knowledge transfer to other clusters	National Centre of Excellence designation; direct international investment access; presidential recognition

Accreditation shall be reviewed every three years, with clusters required to demonstrate continued compliance to retain their status. Accreditation assessments shall use a published scoring rubric, and the Accreditation Criteria Document shall be made publicly available so all cluster managers are aware of standards they must meet for each level.

10.3.4 Organise Annual Innovation Cluster Audits

Independent auditors or evaluators shall be engaged on an annual basis to examine a rotating sample of at least 25 per cent of designated clusters in depth. Auditors shall be procured through a competitive process from a pre-qualified panel of audit firms with STI programme experience. These audits shall verify financial integrity and accuracy of financial records; compliance with NICF grant conditions; governance quality and board effectiveness; and the accuracy of reported outcomes against source evidence. Findings shall be presented to the NICAB and NICSC within 90 days of audit completion. Clusters with significant findings shall be required to develop a time-bound Improvement Action Plan. Patterns of findings across the portfolio shall be analysed by the M&E Unit to identify systemic issues requiring framework-level response.

10.3.5 Facilitate Showcase and Peer Review Events

Peer validation complements formal auditing as a powerful and cost-effective quality mechanism. The framework shall institutionalise peer review through:

i. An Annual Innovation Cluster Showcase at the National Forum, where clusters present innovations and achievements to a jury of cluster peers, investors, and technical experts, with awards in categories including Best Emerging Cluster, Best Commercial Innovation, Best Inclusive Practice, and Best County-Level Cluster
ii. Cross-cluster peer review visits, where CMEs from comparable clusters exchange visits and provide structured feedback reports, matched by the NICSC based on sector, geography, and development stage

iii. Integration with Kenya Innovation Week, ensuring the cluster framework benefits from and contributes to the broadest possible public innovation discourse

iv. International showcase participation for Gold-accredited clusters at AfCFTA business summits, EAC innovation forums, and the WIPO Global Innovation Index consultation process

10.3.6 Integrate Validation with M&E

Validation structures shall be explicitly and formally integrated with the M&E architecture described in Section 9. This integration is bidirectional: M&E data feeds validation, with the NICAB and Milestone Review panels using clusters' M&E reports as primary evidence inputs; and validation findings feed M&E improvement, with insights from NICAB reviews, Milestone assessments, and annual audits systematically informing indicator refinement and data collection improvements. The National Innovation Cluster Platform shall maintain a unified validation and M&E dashboard, ensuring all authorised stakeholders can see both performance data and validation status in one place. This integration guarantees that validation is evidence-based and that improvements are continuously looped back into implementation.

10.3.7 Validator Standards and Conflict of Interest

The credibility of the validation system rests on the independence and technical competence of its validators. The following standards shall apply to all validators, whether serving on SWG technical review panels, the NICAB, or as independent auditors.

i. All validators shall be pre-approved on a national roster maintained by the Secretariat within KeNIA. Roster criteria, minimum qualifications

and standard TORs shall be published within Month 1 of framework adoption.

ii. Validators shall submit a COI declaration before each engagement. Where a material conflict exists, the Secretariat shall assign an alternate validator from the roster. No validator shall review the work of an institution with which they hold a current employment, consultancy or financial relationship.

iii. Standard remuneration rates for validators shall be published alongside the roster criteria, ensuring consistency and preventing improper inducements.

iv. All NICF milestone payments shall require a validated milestone evidence report from an authorised validator before disbursement is triggered.

10.3.8 Appeals and dispute resolution

Clusters and enterprises have a right to challenge validation findings that they consider to be inaccurate or procedurally flawed. The following appeals process shall apply to all milestone validation decisions and accreditation outcomes.

i. Applicants may submit a written appeal within 14 calendar days of receiving a validation decision, setting out the specific findings challenged and the evidence in support of the appeal.

ii. An independent appeal panel, appointed by the Steering Committee and comprising three members with no prior involvement in the original decision, shall adjudicate appeals within 30 calendar days of receipt.

iii. The appeals panel may uphold, vary or overturn the original validation decision. Its determination shall be final and binding on both parties, subject only to recourse through the courts.

iv. Where multiple appeals reveal a pattern of concern about a particular validator or validation process, the NICAB shall review the matter and

make a recommendation to the Steering Committee on any remedial action required.

10.3.9 Key Performance Indicators for Validation

i. *The Secretariat shall report validation KPIs to the Steering Committee quarterly. The NICAB shall include a validation performance summary in its annual report.*

ii. Average time from validation request to report delivered. Target: under 20 working days.

iii. Percentage of NICF milestone payments supported by a validated milestone report before disbursement. Target: 100 per cent.

iv. Number of clusters at each accreditation level. Target for Year 1: two to three clusters at Bronze or Silver; at least one Gold-accredited cluster by Year 3.

v. Percentage of validation decisions that are appealed. A sustained appeal rate above 10 per cent shall trigger a NICAB review of validation quality and consistency.

10.3.10 Six-month Validation Roadmap

i. Month 0 to 1: establish validator roster and publish TORs, COI policy and remuneration rates.

ii. Months 1 to 2: publish validation checklists and milestone evidence templates; publish accreditation criteria and application toolkit.

iii. Months 1 to 3: pilot validation of first cohort of NICF seed grant milestone submissions.

iv. Month 3: publish appeals process SOP.

v. Months 3 to 6: launch accreditation applications and complete initial accreditation decisions for two to three pilot clusters.

10.4 Guidelines to be Disseminated

The following guidelines shall be developed to support the validation structures:

Cluster Review and Validation Protocols
A comprehensive handbook for the NICAB, Milestone Review panels, and cluster CMEs describing how validation reviews are conducted at each level (project-level milestone assessments, annual audits, and NICAB portfolio reviews). It specifies the validation calendar, evidence requirements and documentation standards, panel composition and selection procedures, scoring criteria and weighting, the decision-making process including appeals, communication of findings, and timelines for CME responses. To be published and reviewed annually.
Accreditation Criteria Document
A publicly available document specifying the criteria, indicators, evidence requirements, and scoring system for each accreditation level (Registered, Bronze, Silver, Gold). Ensures all cluster managers are aware of the standards they must meet and can prepare systematically for accreditation progression. Shall include illustrative examples of qualifying evidence for each criterion; a self-assessment tool for cluster CMEs to use before applying for formal accreditation review; and a glossary of key terms used in the accreditation process.
External Evaluator Guidelines
Guidelines for all third-party experts and auditors engaged in validating cluster projects, governance processes, or financial management. Defines scope of work for each type of engagement, required evaluator qualifications and independence standards, ethical considerations including confidentiality and conflict of interest disclosure, methodology standards, and reporting format requirements. All external evaluators shall sign a Code of Conduct before commencing any cluster validation work.
Innovation Recognition and Awards Framework
A guide describing how exceptional innovations and outstanding cluster achievements will be recognised through the Annual Innovation Cluster

Showcase and associated award programme. Covers award categories and specific criteria, the nomination and self-nomination process, selection panel composition and scoring methodology, and benefits conferred to award winners including additional NICF support, international showcase opportunities, and presidential recognition. Includes the communication and media strategy for maximising the impact of awards on cluster motivation and public awareness.

Improvement Action Plan Template

A structured template for cluster CMEs to develop a formal response to validation findings that identify deficiencies or areas for improvement. Guides CMEs through root cause analysis, proposed corrective actions with specific measurable milestones, responsible persons, timelines and resource requirements, and monitoring mechanisms. Completed Plans shall be submitted to the validating body within 60 days of receiving validation findings and monitored in subsequent reviews.

ANNEXES: Supporting Documentation

The following annexes provide operational tools, reference materials and templates that support implementation of Sections 6 to 11. Each annex is a standalone document accessible via the link provided. Links direct to the Kenya National Innovation Cluster Framework shared folder on Google Drive. Please contact the KeNIA Secretariat if you require access permissions.

Annex A: Stakeholder Roles and Responsibilities Matrix

A reference table mapping all stakeholder categories including KeNIA, NACOSTI, NRF, KIPI, county governments, academia, private sector, development partners and civil society, against their specific roles across coordination, IP and regulation, financing, M&E and validation. Supports the Stakeholder Engagement Handbook committed to in Section 6.4.

Open document (Google Drive)

Annex B: Steering Committee Terms of Reference and COI Policy Template

A ready-to-finalise template for the NICSC Terms of Reference and Conflict of Interest Policy, covering mandate, composition, quorum rules, decision-making thresholds, annual and per-meeting COI declaration requirements, a COI register template and consequences for breach. Directly delivers the Month 1 commitment in Section 6.12.

Open document (Google Drive)

Annex C: NICF Application Framework Summary

A structured summary of eligibility criteria, scoring criteria, co-finance requirements and disbursement conditions for all four NICF windows: Window 1 (Establishment), Window 2 (Growth Finance), Window 3 (Excellence and Export) and the Technical Assistance Window. Supports the Innovation Cluster Fund Access Guidelines committed to in Section 8.4.

Open document (Google Drive)

Annex D: Standard MTA and DSA Term Sheet Templates

Standard term sheets for Material Transfer Agreements and Data Sharing Agreements for use by cluster research institutions. Each term sheet covers ownership of materials and data, permitted uses, FAIR data obligations, personal data compliance under the Data Protection Act 2019, publication rights and governing law. Delivers the 30-day commitment in Section 7.3.8.

Open document (Google Drive)

Annex E: National Cluster M&E Indicator Reference Sheet

The full indicator reference for the National Innovation Cluster M&E Framework, including precise definitions, data sources, responsible parties, collection frequency, Year 1 baselines and 2033 targets aligned with the Innovation Masterplan for all 12 core indicators. Delivers the M&E Indicator Reference Sheet committed to in Section 8.4.

Open document (Google Drive)

Annex F: Cluster Accreditation Self-Assessment Tool

A scored checklist enabling Cluster Management Entities to assess readiness for each accreditation level (Registered, Bronze, Silver and Gold) before submitting a formal application to the NICAB. Each criterion is mapped to the accreditation level it gates and includes guidance on qualifying evidence. Supports the Accreditation Criteria Document committed to in Section 9.4.

Open document (Google Drive)

Annex G: Validation Review Schedule and Process Summary

The annual validation calendar, an eight-step Milestone Validation Review process guide with assigned responsibilities and timeframes, and a summary of the appeals process from Section 10.3.8 including the 14-day appeal window, independent panel composition and adjudication timeline. Delivers the Cluster Review and Validation Protocols committed to in Section 9.4.

Open document (Google Drive)

Annex H: Key Legislative and Policy Reference Table

A consolidated reference table covering all 12 legislative instruments, policies and international treaties referenced across Sections 6 to 11, including the ST&I Act 2013, Data Protection Act, PFM Act, PPP Act, Kenya Startup Bill, National IP Policy, Innovation Masterplan, MTP IV, AfCFTA Agreement and the Nagoya Protocol. Each entry shows relevant sections, key provisions and current status.

Open document (Google Drive)

Annex I: Glossary of Key Terms

Definitions for all acronyms and technical terms used across Sections 6 to 11, including NICSC, NICAB, NICF, CME, SWG, CCO, CAIP, CIDP, COI, MTA, DSA, FAIR data, foreground IP, GII, the Nagoya Protocol, regulatory sandbox, triple helix, TTO and all four accreditation levels. Intended for use by county officials, private sector partners and development partners who may not share the same technical vocabulary.

Open document (Google Drive)