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PCDE STANDALONE & INTEGRATION STRATEGY

A MODULAR, SAFEGUARDS-COMPLIANT ARCHITECTURE THAT CAN OPERATE AS A SELF-CONTAINED DIGITALISATION MANDATE OR INTERLOCK SEAMLESSLY WITH REC AND NATIONAL PROGRAMMES

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PCDE Standalone & Integration Strategy

Introduction

This Strategy demonstrates that the Pan-Continental Digital Enablement (PCDE) mandate is both self-sufficient and integrable. It sets out the legal sufficiency and operating model for a standalone configuration—a contiguous fiber corridor, a commissioned DEIC node, and a public MEL dashboard—and it describes how the same stack interlocks with existing regional programmes (COMESA IDEA, EAC EA-RDIP/EARDIP, SADC DTS/Digital SADC 2027) and national ICT/PPP frameworks. The compliance canon is preserved across all modes: environmental and social risk management under the AfDB Integrated Safeguards System (ISS, effective 31 May 2024) and the World Bank Environmental and Social Framework (ESF); open-data publication under OCDS planning→tender→award→contract→implementation and IATI (organisation/activity/results); information security and privacy under ISO/IEC 27001 (ISMS), NIST SP 800-207 (Zero Trust Architecture), and ISO/IEC 27701 (PIMS); integrity and AML/CFT under ISO 37001 and the FATF Recommendations. These normative anchors ensure fiduciary neutrality and co-financing readiness whether PCDE stands alone or complements REC/national programmes.

PCDE's modularity also supports asset stewardship and long-term revenue models. Where host-country and PPP frameworks permit, fiber corridors commissioned under PCDE may be vested post-completion into DESA entity ownership or stewardship contracts, enabling lawful, tariff-based monthly revenues from wholesale capacity, dark-fiber leases, and service-level arrangements—subject to safeguards and open-data disclosures on procurement and performance. REC instruments provide the enabling environment for corridor harmonisation, spectrum and rights-of-way coordination, and cross-border policy coherence.

Chapter 1. Executive Summary

PCDE's flexibility is a policy necessity for Agenda for Social Equity 2074: countries and RECs progress at different speeds, yet all require lawful, secure digital public infrastructure. A standalone PCDE deploys the minimum viable stack—fiber corridor + DEIC node + MEL dashboard—rapidly and with full compliance; an integrated PCDE harmonises with REC initiatives and national ICT/PPP frameworks to reduce transaction costs and accelerate scale.

This dual capability strengthens adoption in three ways. First, time-to-impact: a corridor-first design with a commissioned DEIC node brings telemedicine, adaptive learning, and interoperable payments online within a predictable latency budget, evidencing social dividends quickly through IATI results and OCDS contracting lineages. Second, co-financing confidence: safeguards, disclosure timeframes, and grievance systems required by AfDB ISS and World Bank ESF are embedded from day one, enabling sovereign and PPP financing without derogation; publication under OCDS/IATI makes evidence auditable in real time. Third, policy coherence: REC instruments—COMESA IDEA's harmonisation and planning platform, SADC's Digital Transformation Strategy and Digital SADC 2027 ICT blueprint, and EAC's EA-RDIP/EARDIP—provide templates for corridor interconnection, stakeholder engagement, data governance, and cybersecurity cooperation, allowing PCDE to slot in as a standards-aligned layer.

Flexibility also supports asset ownership and long-term revenues. Where contracts and law permit, PCDE corridors may be transferred post-completion into DESA stewardship with regulated monthly revenues from capacity sales and service fees; all such arrangements are subject to OCDS transparency and ESF/ISS safeguards for communities and ecosystems. Security, privacy, and integrity regimes—

ISO/IEC 27001, NIST SP 800-207, ISO/IEC 27701, ISO 37001, FATF—ensure lawful, resilient operations and market trust across standalone and integrated modes.

Chapter 2. Mandate for Standalone Operations

Legal sufficiency under DESA Charter. PCDE's standalone mandate is constituted within DESA's chartered authority to plan, procure, and operate digital-public-infrastructure assets under safeguards and open-data obligations. This includes: (i) environmental and social compliance under AfDB ISS and World Bank ESF (ESCPs, SEPs, stakeholder engagement, grievance mechanisms, disclosure timeframes for high-risk operations); (ii) end-to-end OCDS publication of contracting and implementation data with unique OCIDs; (iii) IATI publication of organisation/activity/results with persistent identifiers; (iv) enterprise security/privacy and integrity systems demonstrable to third-party auditors (ISO/IEC 27001, NIST SP 800-207, ISO/IEC 27701, ISO 37001, FATF). This set of instruments is widely recognised by MDBs and donors, rendering PCDE legally self-sufficient and co-financing-ready in standalone mode.

Minimum viable configuration (MVC). The MVC is deliberately compact and bankable:

1. **Fiber corridor** — contiguous, rights-of-way-cleared route with ring topology where feasible, cross-border interconnection aligned to REC frameworks, and neutral IXPs enumerated and/or upgraded to lift peering density and cache performance. REC instruments provide the enabling environment: COMESA IDEA for harmonisation and planning, SADC DTS/Digital SADC 2027 for infrastructure and policy pillars, EAC EA-RDIP/EARDIP for digital-market functions and stakeholder templates.

2. **DEIC node** — sovereign-grade data, AI, cybersecurity, and TVET services under an ISO/IEC 27001 ISMS, NIST SP 800-207 Zero Trust, and ISO/IEC 27701 PIMS, with lawful baselines referencing Malabo Convention (African jurisdictions) and GDPR (EU data subjects). The DEIC catalog and SLAs are publicly disclosed; procurement and implementation events are published via OCDS and cross-referenced to IATI activities/results.

3. **MEL dashboard** — a public dashboard rendering versioned indicator definitions (access, adoption, governance, market activation; gender, climate, accessibility), time-series results, and assurance statements. The dashboard ingests OCDS releases/records and IATI activities/results; safeguards instruments and grievance statistics are disclosed per ESF/ISS timeframes; integrity and AML/CFT assurance under ISO 37001/FATF is summarised lawfully.

Ownership and revenue arrangements. In standalone deployments, fiber and associated passive assets may be vested post-completion in DESA ownership or long-term stewardship concessions, generating monthly revenues from wholesale capacity, dark-fiber leases, and co-location fees. Tariffs and service-level agreements are published, and contractual performance is monitored via the MEL dashboard. All arrangements are subject to safeguards and open-data obligations and may be structured within national PPP laws in line with REC guidance on corridor harmonisation.

Chapter 3. Integration with Existing Frameworks

PCDE is engineered to interlock, without derogation, with regional and national instruments that govern digital markets, infrastructure, and public–private collaboration. In COMESA, the Inclusive Digitalisation of Eastern and Southern Africa (IDEA) programme—structured as a World Bank Multiphase Programmatic Approach (MPA)—establishes a regional harmonisation and planning platform, a knowledge and capacity-building component, and a Program Coordination Unit (PCU).

These elements offer corridor harmonisation, spectrum and rights-of-way coordination, and cross-border policy coherence that PCDE can adopt as an operational scaffold for fiber builds, neutral IXP augmentation, and DEIC service activation, with safeguards documentation (ESCP/SEP) disclosed on required timeframes.

In **EAC**, PCDE aligns with the Eastern Africa Regional Digital Integration Project (EA-RDIP/EARDIP), integrating stakeholder engagement, data-governance, and cybersecurity co-operation mechanisms. The EA-RDIP Stakeholder Engagement Plans (SEPs) provide standardised templates for borrower-side disclosure, grievance handling, and adaptive management under the ESF, enabling PCDE to synchronise corridor-level consultations and DEIC governance with the region's single-digital-market functions.

In **SADC**, PCDE is mapped to the SADC Digital Transformation Strategy (DTS) and the "Digital SADC 2027" ICT blueprint. These frameworks articulate strategic interventions for universal affordable access, regionally harmonised legal and regulatory environments, digital skills, e-government, and research/innovation—precisely the pillars that PCDE corridors, IXPs, and DEIC nodes operationalise. Ministerial communiqués and DTS support papers further describe the institutional arrangements and resource mobilisation pathways that PCDE can leverage to reduce transaction costs and accelerate corridor activation while maintaining safeguards.

At the **national** level, PCDE integrates with ICT policy, regulatory, and PPP frameworks by adopting best-practice constructs for enabling environments and bankable delivery. The ITU's policy and regulatory frameworks and harmonisation initiatives (including HIPSSA and AU reference frameworks) provide guidance for transposition of regional policies and regulatory modernisation, while the World Bank's PPP Resource Center sets out model law, risk allocation, procurement, and asset-recycling references that PCDE uses to structure DEIC PPPs and post-completion stewardship of fiber assets. This approach ensures that contractual vesting into DESA entities or concessions is lawful, transparent, and suited to tariff-based monthly revenue models (wholesale capacity, dark-fiber leases, colocation), with publication under OCDS and results under IATI.

Safeguards and publication baselines are uniform across integrations. PCDE adopts AfDB ISS (effective 31 May 2024) and World Bank ESF as default environmental and social frameworks, and treats OCDS/IATI disclosure as a normative obligation. This harmonisation guarantees fiduciary neutrality in co-financing contexts with MDBs and bilateral donors, while enabling synchronization with Creativa's legacies—PPDE, PCGG, and PCPP—so that corridor assets and DEIC service stacks can be placed within DESA stewardship and monetised in compliance with safeguards and procurement transparency.

Chapter 4. Scenarios for Deployment

PCDE's modular design is expressed through three deployment scenarios, each preserving the compliance canon and supporting asset ownership and revenue capture within DESA structures.

Scenario A: Independent activation in a single country or corridor. PCDE deploys a minimum viable configuration—contiguous fiber corridor with ring topology where feasible, neutral IXP(s) upgraded or commissioned, one DEIC node under ISO/IEC 27001 ISMS, NIST SP 800-207 Zero Trust, and ISO/IEC 27701 PIMS, and a public MEL dashboard ingesting OCDS/IATI datasets. National ICT policy alignment follows ITU guidance on policy/regulatory frameworks and harmonisation; PPP structuring follows World Bank PPP references for model agreements, risk allocation, and procurement. Post-completion vesting into DESA ownership or stewardship concessions enables monthly revenue streams (capacity sales, dark-fiber leases, colocation), with tariff and SLA disclosure under OCDS and safeguards monitoring under ESF/ISS.

Scenario B: Embedded within REC-level programmes (COMESA, EAC, SADC). PCDE operates as a standards-aligned layer inside REC initiatives. In COMESA, corridors and DEIC nodes are coordinated through IDEA's harmonisation and planning platform and PCU, enabling cross-border interconnection decisions and shared capacity planning; safeguards instruments and program documents define disclosure and oversight mechanics. In EAC, PCDE synchronises corridor activation and DEIC governance with EA-RDIP stakeholder engagement and data-governance templates. In SADC, PCDE mirrors DTS strategic interventions and Digital SADC 2027 monitoring, ensuring policy/regulatory convergence and infrastructure sequencing. Across all RECs, asset placement into DESA entities is structured in PPP terms consistent with REC guidance, with co-financing readiness evidenced through ESF/ISS compliance and OCDS/IATI publication.

Scenario C: Linked to sectoral initiatives (agriculture, health, education). PCDE functions as the enabling layer for sector programmes—e.g., SFPSEI in agriculture, telemedicine and e-health in health, AI-enabled learning and TVET in education. Sector deployments rely on fiber corridors and DEIC services for lawful data platforms and AI pipelines, with interoperable payments (RPC/LCT and FRPS) reducing transaction friction for fees, stipends, and micro-grants. National PPP frameworks are used to structure DEIC-adjacent facilities (including ECHO green utilities) and their O&M, and ITU policy/regulatory references guide accessible, rights-respecting service design. Ownership and revenues from corridor assets placed in DESA are managed under published tariffs and SLAs, with safeguards reports and grievance statistics disclosed per ESF/ISS timeframes.

In all scenarios, the compliance canon is invariant: AfDB **ISS** and World Bank **ESF** govern environmental and social risk; OCDS provides contracting lineage; IATI publishes programme activities and results; ISO/IEC 27001, NIST SP 800-207, and ISO/IEC 27701 govern ISMS/ZTA/PIMS; ISO 37001 and FATF ensure integrity and AML/CFT. This uniformity allows PPDE—and, by synchronisation, PCGG and PCPP—to "stand on their own legs" while inter-operating with REC and national systems, and to capture lawful monthly revenues from DESA-held fiber assets without compromising safeguards or transparency

Chapter 5. Governance and Compliance Interlocks

PCDE's governance model is designed to be fiduciary-neutral and co-financing-ready, irrespective of whether the initiative stands alone or integrates with REC or national programmes. The governance core is an interlock of safeguards, open-data publication, lawful security and privacy, and market-integrity systems that meet multilateral development bank expectations and enable independent verification. Environmental and social risk management is anchored in the African Development Bank's Integrated Safeguards System (ISS, updated and effective 31 May 2024) and the World Bank Environmental and Social Framework (ESF); both require borrower-side instruments (e.g., ESCPs, SEPs), stakeholder engagement, grievance access, and time-bound disclosure for high-risk operations, which PCDE treats as non-derogable across corridors, IXPs, and DEIC nodes.

Transparency is a constitutive condition of eligibility rather than a discretionary practice. PCDE mandates end-to-end publication of contracting and implementation data under the Open Contracting Data Standard (OCDS)—planning, tender, award, contract, and implementation—linked by persistent OCIDs; programme activities, budgets, and results are published under the International Aid Transparency Initiative (IATI) with versioned methodologies to support independent replication. These publication duties are hard-coded into financing and contract conditions and remain invariant whether PCDE operates standalone or within REC frameworks.

Lawful operations are enforced through enterprise-grade security, privacy, and integrity systems. PCDE's DEIC governance requires an ISO/IEC 27001 Information Security Management System, NIST SP 800-207 Zero Trust Architecture, and an ISO/IEC 27701 Privacy Information Management System. Legal baselines for personal-data processing reference the AU Malabo Convention in African jurisdictions and GDPR where EU-resident data subjects or cross-border flows are implicated. Integrity and AML/CFT compliance is implemented under ISO 37001 and the FATF Recommendations (customer due diligence, beneficial-ownership transparency, suspicious-activity reporting, and targeted-sanctions compliance). These attestations are summarised lawfully and cross-referenced to OCIDs and IATI identifiers to preserve audit trails.

Interlocking with REC and national instruments is straightforward because PCDE adopts the region's enabling frameworks as operational scaffolds. In COMESA, the IDEA MPA establishes a harmonisation and planning platform, a capacity-building function, and a PCU, which PCDE uses for corridor coordination and safeguards disclosure alignment. In EAC, EA-RDIP/EARDIP supplies standardised stakeholder-engagement templates and data-governance guidelines; in SADC, the Digital Transformation Strategy (DTS) and Digital SADC 2027 (ICT chapter) define policy pillars that PCDE mirrors in corridor activation, IXPs, and DEIC service catalogues. These interlocks allow PCDE to synchronize with regional processes while retaining a uniform compliance baseline for co-financing with MDBs and bilateral donors.

Within Creativa's canon, PPDE, PCGG, and PCPP must "stand on their own legs" while remaining interoperable. The compliance interlocks described above are deliberately portfolio-wide: one governance template applies to all legacies, ensuring that ownership of corridor assets placed in DESA and monthly revenue models (e.g., wholesale capacity, dark-fiber leases) are implemented under safeguards and open-data publication. The result is a modular yet uniform operating posture that is legally sufficient in standalone mode and readily compatible with REC and national systems.

Chapter 6. Financing Architecture for Flexible Deployment

PCDE's financing architecture allows sovereign and non-sovereign windows, PPP structures for DEIC nodes and ECHO modules, and seamless co-financing with MDBs and bilateral donors, while preserving the option to vest corridor assets into DESA for regulated monthly revenue models. The approach is predicated on recognised PPP best practice and on programme-level envelopes that support harmonisation and scaling.

Sovereign windows rely on safeguards and publication as pre-conditions. Under the AfDB **ISS** and World Bank ESF, PCDE publishes borrower-side instruments (ESCPs, SEPs), commits to grievance access and adaptive management, and discloses contracting and implementation data under OCDS with results in IATI. This evidentiary posture underwrites programme loans or investment operations that can fund corridor builds and DEIC commissioning in standalone mode or within REC frameworks. In Eastern and Southern Africa, the World Bank's IDEA MPA has established a multi-phase financing envelope (US$ 2.48 billion) for digitalisation—explicitly targeting harmonisation, market integration, and capacity building—which PCDE can align with to reduce transaction costs and accelerate scale.

Non-sovereign and PPP windows are structured using model frameworks and risk-allocation constructs disseminated by the World Bank PPP Resource Center (formerly the PPP Knowledge Lab). PCDE adopts guidance on legal frameworks, contract structuring, risk allocation, procurement, dispute resolution, and asset recycling to design DEIC PPPs, colocation leases, and O&M agreements for ECHO modules. This enables private capital to participate in DEIC hosting, energy and water resilience, and service

operations while preserving sovereign control over corridor assets and ensuring tariff-based monthly revenues are lawful and transparent once assets are vested into DESA ownership or stewardship.

Co-financing interoperability is supported by regional instruments and standardised evidence. In COMESA, the IDEA programme's harmonisation and planning platform and PCU facilitate corridor policy coherence and investment mobilisation; in SADC, the DTS and Digital SADC 2027 ICT blueprint outline strategic interventions and monitoring constructs for universal access and regulatory convergence; in EAC, EA-RDIP/EARDIP provides templates for stakeholder engagement, data governance, and cybersecurity cooperation. PCDE maps financing proposals to these instruments and attaches OCDS/IATI evidence and ESF/ISS safeguards commitments, enabling MDBs and bilateral donors to join sovereign or PPP structures without duplicative diligence.

Payment-rail and MSME components can draw purpose-built support where relevant. Although PCDE remains infrastructure-led, its MSME rails and adoption programmes may be eligible for co-financing under initiatives focused on fast retail payments (e.g., IDB Pay) and regional payment connectivity (ASEAN RPC/LCT), particularly where interoperable local-currency transactions are indispensable to market activation. These instruments provide governance templates and measurable performance baselines (settlement times, cost compression, usage), which PCDE can embed in MEL dashboards to support results-based disbursement logic where appropriate.

Finally, financing agreements should codify post-completion ownership and revenue arrangements. Where national law and PPP frameworks permit, fiber corridors and passive assets are transferred to DESA entities at commissioning, with tariff schedules and SLAs disclosed under OCDS and monitored via public MEL dashboards. This ensures monthly revenues from wholesale capacity and dark-fiber leases accrue lawfully, transparently, and in compliance with safeguards—synchronised with PPDE, PCGG, and PCPP legacies that rely on DESA as the asset-holding and service-delivery centre

Chapter 7. Operational Advantages of Modularity

PCDE's modular architecture is deliberately designed to operate as a self-contained mandate or as a complementary layer within regional and national programmes, without compromising compliance or future asset stewardship. The corridor-first principle—deploying contiguous fiber with ring topologies and neutral IXPs—creates predictable latency/throughput conditions for sovereign data platforms and public services. When coupled with a DEIC node under ISO/IEC 27001 ISMS, NIST SP 800-207 Zero Trust, and ISO/IEC 27701 PIMS, the stack delivers secure computation and lawful data processing for health, education, payments, and governance, with safeguards and disclosures hard-coded into operations. The result is rapid time-to-service that is verifiable under OCDS (planning→tender→award→contract→implementation) and IATI (organisation/activity/results) and co-finance-ready under AfDB ISS and World Bank ESF.

Modularity materially reduces transaction costs in regional contexts. In COMESA, PCDE can plug into the IDEA MPA harmonisation and planning platform and the Program Coordination Unit (PCU), leveraging established mechanisms for policy convergence, corridor planning, and cross-border coordination. In EAC, EA-RDIP/EARDIP provides standard SEPs and stakeholder-engagement templates that PCDE adopts for corridor consultations and DEIC governance; in SADC, the Digital Transformation Strategy (DTS) and Digital SADC 2027 ICT blueprint furnish policy pillars and monitoring constructs that PCDE mirrors for infrastructure activation and market enablement. Because the compliance canon is uniform—ISS/ESF + OCDS/IATI + ISO/IEC/NIST + ISO 37001/FATF—PCDE can be deployed incrementally and still meet multilateral requirements for sovereign or PPP windows.

The plug-and-play DEIC service model is a second advantage. Catalogued services—sovereign data platforms, AI laboratories, SOC/SIEM operations, privacy governance, and TVET tracks—can be provisioned and expanded on demand, with lawful access and identity-centric controls enforced at the edge. This enables the "enabler thesis"—*more brains on better rails*: researchers, entrepreneurs, ministries, and MSMEs can experiment and scale in an open market where secure computation, lawful data, and interoperable payments are readily available. Payment-rail interoperability (e.g., ASEAN RPC/LCT; IDB Pay FRPS governance) adds adoption momentum, compressing settlement times and fees while validating supply-side adequacy through demand-side metrics.

Finally, modularity preserves ownership and monthly revenues. Post-completion vesting of corridor assets into DESA entities or stewardship concessions is structured under national PPP frameworks and asset-recycling best practices, with tariff schedules and SLAs disclosed via OCDS and monitored on MEL dashboards. This allows fiber capacity, dark-fiber leases, and colocation to generate lawful, regulated monthly income that sustains operations and synchronises with Creativa legacies (PCGG, PCPP) without weakening compliance. World Bank PPP guidance on legal frameworks, risk allocation, and asset recycling provides model clauses and structures for these arrangements.

Chapter 8. Case Studies and Illustrative Models

Example A — PCDE as a standalone digitalisation step in a fragile state.
A government mandates a minimum viable configuration: one cross-border-ready fiber corridor (diverse routing; ring topology), upgraded/neutral IXPs with published peering policies, a single DEIC node operated under ISO/IEC 27001, NIST SP 800-207, and ISO/IEC 27701, and a public MEL dashboard ingesting OCDS releases and IATI result sets. Safeguards instruments (ESCPs, SEPs) are prepared and disclosed under the ESF/ISS timeframes; grievance mechanisms—including SEA/SH pathways—are instituted and monitored. Stakeholder-engagement templates from EA-RDIP/EARDIP are adopted to structure consultations and dissemination. Financing uses a sovereign window for corridor CAPEX and a PPP for DEIC O&M, drawing on World Bank PPP Resource Center references for risk allocation and procurement. At commissioning, corridor assets are vested into **DESA** ownership with regulated tariffs and SLAs published under OCDS; monthly revenues flow from wholesale capacity and dark-fiber leases, monitored via public dashboards. This pattern achieves lawful activation and asset stewardship while remaining auditable and co-finance-ready.

Example B — PCDE complementing COMESA IDEA corridors.
A REC-coordinated roll-out uses COMESA's IDEA MPA to harmonise corridor decisions and mobilise investment. PCDE deploys fiber segments and DEIC services along IDEA-identified routes, aligning rights-of-way and spectrum coordination through the REC platform and PCU. Program documents and the World Bank press release establish the multi-phase envelope and objectives (access, inclusive use, market integration), reducing bilateral diligence overhead and creating a shared baseline for safeguards and publication. In parallel, national policies adopt SADC DTS and Digital SADC 2027 pillars where applicable, ensuring regionally consistent infrastructure and regulatory convergence. Post-completion, corridor assets are transferred to DESA stewardship under PPP asset-recycling constructs; OCDS/IATI publication provides contracting lineage and outcome series, while MEL dashboards present settlement-time and fee-compression metrics where payment rails (e.g., RPC/LCT; IDB Pay) are integrated. This pattern lets PCDE ride on a REC umbrella while preserving uniform compliance and monthly revenue capture.

Both models demonstrate that PCDE can stand on its own legs or operate as a complementary layer, with identical safeguards, transparency, and integrity baselines. In either posture, ownership and lawful

monetisation of corridor assets through DESA are preserved, and synchronisation with Creativa's legacies is straightforward because compliance is portfolio-wide and publication is continuous.

Chapter 9. Closing Statement and Policy Recommendations

Closing Statement

PCDE's strength lies in its ability to stand alone as a legally sufficient digitalisation mandate and to interlock seamlessly with REC and national frameworks without diluting compliance or ownership discipline. The corridor-first architecture, neutral IXPs, and DEIC service stack—governed by AfDB ISS and World Bank ESF, published under OCDS/IATI, and assured by ISO/IEC 27001, NIST SP 800-207, ISO/IEC 27701, ISO 37001, and FATF—provide a uniform compliance baseline that multilateral and bilateral financiers recognise and can co-fund across sovereign and PPP windows. REC instruments—COMESA IDEA (harmonisation platform and PCU), EAC EA-RDIP/EARDIP (stakeholder engagement and data governance), and SADC DTS/Digital SADC 2027 (policy, infrastructure, security pillars)—offer the enabling environment to scale corridors, standardise disclosure, and accelerate adoption, while preserving post-completion DESA stewardship and monthly revenue models from wholesale capacity, dark-fiber leases, and colocation.

This Strategy therefore formalises a compact suited to PPDE and synchronised with PCGG and PCPP legacies: deliver corridors and nodes with integrity; disclose end-to-end; protect rights and ecosystems; include women, youth, and persons with disabilities; verify independently; and correct promptly. In practical terms, PCDE is the enabler that multiplies national research capacity, market discovery, and entrepreneurial activation—*more brains on better rails*—and that turns connectivity into capability and capability into public value measurable over the 2026–2074 horizon. The multi-phase envelope and regional coordination evidenced in the World Bank's IDEA MPA press release demonstrate that REC-aligned market integration and harmonisation are feasible pathways to scale PCDE's modular stack lawfully and efficiently.

Policy Recommendations

1. **Codify publication and safeguards as non-derogable clauses.** Sovereigns and implementing agencies should embed OCDS lifecycle publication (planning → tender → award → contract → implementation) with OCIDs and IATI organisation/activity/results as pre-conditions to disbursement. Safeguards instruments under ISS/ESF (ESCPs, SEPs, grievance mechanisms with SEA/SH pathways) must be disclosed on the required timelines and monitored in public MEL dashboards.

2. **Adopt fiber-first technical activation under DEIC governance.** Corridor designs should prioritise diverse routing and ring topologies; IXPs must be neutral with published peering policies; DEIC operations must evidence ISO/IEC 27001 ISMS, NIST SP 800-207 Zero Trust, and ISO/IEC 27701 PIMS, referencing Malabo and GDPR for lawful personal-data processing. Integrity systems under ISO 37001 and FATF controls (beneficial-ownership, sanctions screening, suspicious-activity reporting) should be operational from day one.

3. **Synchronise with REC programmes to reduce transaction costs and accelerate scale.** Execution should leverage COMESA IDEA for corridor harmonisation and PCU coordination; EAC EA-RDIP/EARDIP for stakeholder engagement, data governance, and cybersecurity cooperation; and SADC DTS/Digital SADC 2027 for policy, infrastructure, and monitoring pillars. This alignment shortens diligence cycles and improves co-financing interoperability while keeping PCDE's compliance canon uniform.

4. **Structure financing for flexible deployment, including sovereign, PPP, and results-based elements.** Use sovereign windows for backbone CAPEX and PPP frameworks for DEIC O&M and ECHO modules, drawing on the World Bank PPP Resource Center (model law, risk allocation, asset recycling). Where MSME rails and payment adoption are central, align with ASEAN RPC/LCT and IDB Pay governance to benchmark settlement times, fee compression, and inclusion—supporting results-linked disbursement and demand-side validation.
5. **Codify post-completion DESA ownership and monthly revenue models.** Financing agreements should specify vesting of fiber and passive assets into DESA ownership or long-term stewardship concessions at commissioning, with regulated tariffs, SLAs, and performance disclosure under OCDS and MEL dashboards. This locks in lawful monthly revenues while keeping assets within the Creativa portfolio and synchronised across PPDE, PCGG, and PCPP programmes.
6. **Institutionalise independent verification and remedial governance.** Appoint IVAs to test schema conformance (OCDS/IATI), safeguards compliance (ISS/ESF), and security/privacy/integrity posture (ISO/IEC/NIST/ISO 37001/FATF). Publish assurance statements lawfully; trigger corrective-action plans for non-conformance; escalate to suspension or termination where necessary; and log all remedies in public dashboards.