APPOINTMENT OF A SERVICE PROVIDER TO SUPPLY CONTENT, HARDWARE, SOFTWARE, AND INTEGRATION SERVICES FOR IMMERSIVE XR (EXTENDED REALITY) EXPERIENCES ACROSS SANPARKS' DIGITAL AND PHYSICAL PLATFORMS OVER A FIVE-YEAR PERIOD

Bid Number	**GNP-012a-25**
Advert Date	**31 March 2026**
Issuer	**South African National Parks**
Closing date and time	**30 April 2026 at 11H00**

Bidders should ensure that bids are delivered timeously to the correct address. If the bid is late, it will not be accepted for consideration.

The bid box is generally open 24 hours a day, 7 days a week at the below delivery address.

643 LEYDS STREET, MUCKLENEUK, PRETORIA **(MAIN GATE: TENDER BOX)**

ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS – (NOT TO BE RE-TYPED)

THIS BID IS SUBJECT TO THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT, PREFERENTIAL PROCUREMENT REGULATIONS 2022, THE GENERAL CONDITIONS OF CONTRACT (GCC) AND, IF APPLICABLE, ANY OTHER SPECIAL CONDITIONS OF CONTRACT

Table of Contents

INTRODUCTION TO SANPARKS

SANParks was initially established in terms of the now repealed National Parks Act, 57 of 1976 and continue to exist in terms of the National Environmental Management: Protected Areas Act, 57 of 2003; with the mandate to conserve; protect; control; and manage national parks and other defined protected areas and their biological diversity (Biodiversity). As a public entity, SANParks is also governed by the Public Finance Management Act, Act 1 of 1999 (as amended by Act 29 of 1999), and it is listed as Schedule 3 Part A: 25 public entities.

Our **vision** is to have a world class system of sustainable National Parks reconnecting and inspiring society.

Our **mandate** is the delivery of Conservation Mandate by Excelling in the Management of a National Park System.

Our **mission** is to develop, protect, expand, manage, and promote a system of sustainable national parks that represent natural and cultural heritage assets, through innovation, excellence, responsible tourism and just socio-economic benefit for current and future generations.

The Parks under the management of SANParks are divided into 6 regions:

Region	Regional Office	Parks managed
Arid	Upington	lAi-lAis/Richtersveld and Kgalagadi Transfrontier Parks, Augrabies Falls, Namaqua, Mokala, Meerkat National Parks
Cape	Cape Town	Table Mountain, Agulhas, West Coast, Tankwa Karoo, Bontebok, Grasslands (under development)
Garden Route	Knysna	Garden Route National Park comprising of three sections – Wilderness, Knysna, and Tsitsikamma
Frontier	Port Elizabeth	Addo Elephant, Camdeboo, Mountain Zebra, Karoo
North	Pretoria, Head Office	Golden Gate Highlands, Marakele, Mapungubwe,

Kruger National Park	Skukuza	Kruger
Administrative	Pretoria, Head Office	Groenkloof (Head Office)

Furthermore, SANParks oversees the management of the parks and provide strategic guidance and support from its Head Office in Pretoria.

BUSINESS UNIT RESPONSIBLE FOR THE BID

The Information and Communications Technology (ICT) department of SANParks is responsible for managing and maintaining the organization's technology infrastructure, including hardware, software, networking, and telecommunications systems. These responsibilities are delivered through two operational units which are: Information Technology Operations (IT OPS) and Enterprise Applications Development (EAD).

IT Operations focuses on infrastructure components such as the management of networks, servers, security, and telecommunications systems. The Enterprise Applications Development unit focuses on the development and management of business systems (Finance, SCM, HCM, ECM, Tourism, e-commerce/website etc.), software quality assurance and technical support.

The appointment of an accredited service provider to supply immersive XR hardware, content, software and associated support over a period of five (5) years will be managed by the Enterprise Applications Development unit of the ICT department.

CONTEXT OF THIS PROCUREMENT

SANParks seeks proposals from qualified local suppliers to design, develop, and implement a suite of immersive XR (eXtended Reality) technologies including Virtual Reality (VR), Augmented Reality (AR), Projection Mapping, Interactive Displays and other web/app/solutions to drive digital engagement across all sectors of SANParks business needs over a five-year roll-out period.

The framework will present a clear, strategic approach that addresses business objectives which solve real business challenges and provide a brief that sources practical and achievable applications using proven technologies.

CONTRACT PERIOD

The contract duration is five (5) years.

TERMS OF REFERENCE – APPOINTMENT OF A SERVICE PROVIDER TO SUPPLY CONTENT, HARDWARE, SOFTWARE, AND INTEGRATION SERVICES FOR IMMERSIVE XR (EXTENDED REALITY) EXPERIENCES ACROSS SANPARKS' DIGITAL AND PHYSICAL PLATFORMS OVER A FIVE-YEAR PERIOD

SECTION 1: EXTENDED REALITY (XR) TECHNOLOGIES – DEFINITIONS

For the purposes of this procurement, the following XR technologies are defined:

1.1 Virtual Reality (VR)

Fully immersive digital environments experienced through head-mounted displays (HMDs) or similar devices. Users are completely immersed in real-world, nature-driven, digital 3D environments. VR content may include 360° video experiences or fully rendered 3D environments.

1.2 Augmented Reality (AR)

Digital content overlaid onto the real-world environment, typically experienced through mobile devices or AR glasses. Users see both the physical world and digital enhancements simultaneously.

1.3 Mixed Reality (MR)

MR combines elements of both VR and AR, allowing digital and physical objects to interact in real-time.

1.4 360° Content

Spherical video or photo content that allows users to look in any direction within a captured environment. May be viewed on standard screens (with pan controls), mobile devices, or VR headsets.

1.5 Interactive Displays

Physical installations featuring touchscreens, projection mapping, gesture controls, or other interactive elements that respond to visitor engagement.

1.6 Specialized Imaging

Specialized display technologies for 3D or holographic imaging using dedicated hardware and spatially enabled 3D models.

1.7 Standard Multimedia Content

High-quality video, audio, and image content created for consumption across digital platforms including websites, mobile applications, social media, and video platforms. Display channels are not restricted to immersive formats and include standard video, images, and audio content.

1.8 Content Framework and Planning Definitions

Content Framework

The Content Framework, submitted with the bid, establishes the overarching structure for content creation. It defines content types, complexity tiers (simple/standard/complex), unit rates per content type, and the service provider's annual production capacity.

Content Plan

The Content Plan, to be collaboratively developed with SANParks and finalised within three months of contract award and will be reviewed annually. The plan will guide all content production and deployment and must define the overarching content principles, narrative approach, style guidelines, and quality standards, while ensuring integration across platforms and user journeys. It shall confirm the final quantities, formats, platforms, themes, and levels of complexity for all deliverables, and identify specific stories, locations, and SANParks-specific content, together with the associated production requirements, workflows, and asset needs.

A key component of the Content Plan shall be a Data Storage and Management Plan, outlining the approach to storage, hosting, backup, and long-term management of all digital content and assets. This must include projected data volumes and growth over the contract period.

Roll-out Framework

The Roll-out Framework outlines overarching sequencing, dependencies, production phases, and the service provider's annual production capacity.

Roll-out Plan

Roll-out Plan in alignment with the approved Content Plan, detailing the full implementation approach for the production and deployment of all content deliverables. The Roll-out Plan must clearly define the implementation timeline, sequencing, and delivery schedule across all platforms and sites, ensuring a coordinated and efficient execution of activities over the contract period. It shall outline when and how content and associated solutions will be delivered, including key phases, milestones, and prioritisation of deployments across parks, platforms, and visitor touchpoints.

The Roll-out Plan must further identify dependencies, resource requirements, and critical paths, including integration points with SANParks systems, infrastructure readiness, and stakeholder inputs. It should demonstrate a practical and phased implementation approach, including pilot deployments where appropriate, and provide clear mechanisms for monitoring progress, managing risks, and adapting delivery schedules.

1.9 Classification Tiers

Two independent classification systems are used throughout this document to categorise content deliverables and hardware deployments respectively. These systems are independent and any content complexity tier may be deployed on any hardware format tier.

Content Complexity Tiers

All content deliverables are classified into three complexity tiers that determine production effort, technical sophistication, and unit pricing:

- **Simple**: Single-format, linear content with limited interactivity. Examples: 360° photo spheres, basic AR overlays triggered by QR codes, static informational displays, audio narration content, simple digital signage loops.
- **Standard**: Multi-element content combining two or more media formats with moderate interactivity or user-driven navigation. Examples: guided VR walkthroughs with hotspots, interactive touchscreen experiences with branching content, AR applications with object recognition and contextual overlays, multimedia storytelling packages combining video, audio, and graphics.
- **Complex**: Highly interactive, multi-sensory experiences requiring advanced production techniques such as photogrammetry, real-time rendering, spatial audio, or adaptive content systems. Examples: fully immersive VR experiences with real-time interaction, multi-user shared experiences, gamified conservation education modules, environmental reconstruction experiences with dynamic elements.

Hardware Format Tiers

Display and experience hardware is classified into three format tiers based on physical footprint, installation requirements, and deployment complexity:

- **Portable**: Handheld or easily relocatable devices requiring no permanent installation or structural modification. Examples: VR headsets, tablets with AR capabilities, portable display stands, audio guide devices, mobile projection units.
- **Mid-Scale**: Fixed or semi-permanent installations requiring mounting, power supply, and basic site preparation but no major structural modifications. Examples: interactive touchscreen displays, wall-mounted projection systems, AR-enhanced signage panels, digital kiosk stations.
- **Large-Scale**: Significant installations requiring dedicated space, structural considerations, and specialist installation. Examples: 360° projection domes, immersive projection rooms, large-format interactive walls, multi-screen immersive environments.

SECTION 2: SERVICE PROVIDER TECHNICAL CAPABILITIES

The service provider must demonstrate the following technical capabilities across all XR technologies defined in Section 1:

2.1. Immersive & Spatial Content Creation Capabilities (VR/AR/MR/XR)

Bidders must demonstrate capability to create content across the full spectrum of immersive formats, recognising that technology is evolving from discrete VR/AR categories toward unified XR experiences. While current deployment may emphasize traditional VR headsets, content architecture must support future device evolution including mixed reality, lightweight wearables, and spatial computing platforms.

- Creation of VR content viewable on industry-standard headsets (Meta Quest series, similar devices)
- 360° video capture, editing, and production
- Fully rendered 3D immersive experiences
- VR experiences must be device-agnostic and compatible with industry-standard platforms

2.2. AR Content Creation Capabilities

Mobile-based AR experiences (iOS and Android compatible)

- QR code-triggered AR content
- Location-based AR experiences
- Web-based AR (WebAR) requiring no app downloads or plugins
- AR content that enhances physical interpretation boards, signage, and exhibits

2.3. *Mixed Reality Capabilities*

Ability to deploy appropriate technology for each use case

- Cross-platform compatibility ensuring content works across multiple device types
- Solutions that do not require proprietary plugins or software installations

2.4. Interactive Display Capabilities

Design and installation of robust, public-facing interactive displays

- Content management systems allowing remote updates
- Hardware suitable for high-traffic, potentially outdoor or semi-outdoor environments

2.5. Specialized Imaging Capabilities

- Creation and setup of specialized imaging content using dedicated displays for 3D or holographic imaging
- Integration of existing spatially enabled 3D models into applicable content without recreating models

2.6. Standard Multimedia Production Capabilities

- High-quality, immersive, content-rich and accurate multimedia production
- Video, audio, imaging and interactive visual content creation
- Content optimized for SANParks website, mobile applications, social media and video platforms
- Park-specific and location-relevant content production
- NOTE: All content must authentically represent actual park experiences. For AI use restrictions, see Section 7.3.

2.7. Site Assessment and Deployment Consultation

The service provider is expected to provide expert recommendations on the most suitable deployment options for various sites based on factors including physical infrastructure, environmental conditions, visitor flow patterns, connectivity availability, content objectives, and operational constraints specific to each park location

SECTION 3: OBJECTIVES AND STRATEGIC ALIGNMENT

3.1. Project Objectives

SANParks seeks to transform visitor engagement through immersive XR technologies that enhance conservation awareness, improve visitor experiences, and modernize interpretation and communication methods across all parks. The successful service provider will deliver an integrated solution encompassing:

- Content creation and curation aligned with SANParks' conservation mandate
- Hardware supply and maintenance for XR experiences across diverse environments
- Software development and integration with existing SANParks platforms (mobile app, website)
- Offline-capable solutions suitable for remote park locations with limited connectivity
- Support and training for SANParks staff

3.2. Strategic Objectives

Visitor Engagement & Experience

- Create immersive, memorable experiences that deepen visitor connection to parks
- Enhance pre-visit planning and post-visit engagement through digital storytelling
- Provide accessible content serving diverse visitor demographics
- Enhance the visitor experience at park entry gates by delivering engaging digital content that informs and entertains
- Offer virtual experiences to visitors unable to access remote park areas

Conservation Messaging & Education

- Communicate SANParks' conservation work through compelling immersive narratives
- Educate visitors on biodiversity, ecosystem services, and climate resilience
- Showcase restoration interventions and scientific research
- Promote responsible visitor behaviour and environmental stewardship
- Highlight indigenous knowledge and cultural heritage connections to conservation

Digital Transformation & Innovation

- Modernize interpretation infrastructure across all parks
- Integrate XR technologies with existing digital platforms (mobile app, website, booking system)
- Future-proof content and hardware for emerging technologies
- Enable remote content management and updates
- Generate analytics on visitor engagement and content performance

Accessibility & Inclusivity

- Ensure XR experiences are accessible and inclusive of visitors of all abilities, including those with visual, hearing, or cognitive impairments
- Provide content in multiple languages reflecting South Africa's linguistic diversity
- Design solutions that do not require visitors to own expensive personal devices
- Create experiences suitable for all age groups and education levels

Socio-Economic Transformation

- Showcase community-led tourism initiatives and local enterprises
- Highlight SET (Socio-Economic Transformation) success stories
- Promote inclusive economic growth through immersive storytelling
- Feature community voices, indigenous knowledge, and cultural heritage
- Drive youth engagement and environmental education

Revenue Generation & Sustainability

- Explore monetization opportunities for premium immersive content
- Support booking conversions through virtual accommodation tours
- Enhance SANParks' competitive position in international tourism markets
- Create licensable content for third-party distribution
- Drive social media growth and digital audience engagement

SECTION 4: DELIVERABLES OVERVIEW

4.1. Content Deliverables

The service provider must deliver the following content over the five-year contract period:

Content Framework: To be submitted with the bid. Must include content type and complexity tier (simple/standard/complex) and demonstrate annual production capacity.

Content Plan: To be workshopped with SANParks and finalised within three months of contract award, defining final quantities, formats, and complexity levels for all content deliverables. The content plan is to be reviewed on an annual basis.

4.1.1 Content Themes

Content must address the following thematic areas aligned with SANParks objectives:

- Conservation education and biodiversity storytelling (immersive narratives about ecosystems, species, and conservation efforts)
- Park rules, regulations, and visitor safety information (engaging, educational content)
- Accommodation experiences (virtual tours showcasing different accommodation types)
- Activity promotion (highlighting visitor activities such as hiking, wildlife viewing, cultural experiences)
- Cultural and heritage narratives (stories connecting parks to South African heritage)
- Accessibility and inclusivity content (e.g. audio descriptions, captions)

4.1.2 Deployment Formats and Platforms

Content must be deliverable across the following platforms and formats, with the service provider ensuring themes are effectively deployed via appropriate channels and are usable across multiple platforms wherever possible.

- SANParks mobile app integrations (interactive modules, narratives, guided experiences)
- SANParks website immersive content (web-based immersive experiences accessible via standard browsers)
- Permanent installations (interpretation centres, museums, visitor centres, including facilities such as the Golden Gate Highlands Dinosaur Centre)
- QR code-triggered experiences (AR, video, audio content activated via QR codes on interpretation boards or signage)

- Digital signage systems (for gates, receptions, visitor nodes)
- Audio guide systems (structured audio guides for self-guided interpretation)
- Social media and YouTube (short-form, platform-optimized content)
- VR experiences for events (portable, showcase content for exhibitions and promotional events)

NOTE: All final quantities, formats, and deployment priorities, and site-specific allocations will be defined in the approved Content Plan developed collaboratively post-contract award.

4.2 Hardware Deliverables

On-Site Hardware

- Interactive touchscreen displays (various sizes and performance tiers aligned to site requirements)
- Active digital signage systems (electronic displays for gates, receptions, and visitor nodes with dynamic content capability)
- Projection systems (for interpretation centres, including projectors, screens, control units, and installation components)
- Audio guide devices and systems (enabling visitor self-guided interpretation, including charging stations and management tools)
- Supporting infrastructure (servers, network equipment, mounting systems, cabling, and related peripherals)
- Hardware maintenance and upgrades per Maintenance Schedule
- Spare parts inventory management (covering stock levels, replenishment processes, and turnaround expectations)
- Media servers (where required)

QR Code and AR-Enabled Signage

The service provider is responsible for:

- Digital content creation (QR codes, AR triggers, linked digital experiences)
- Technical integration (hosting, content management, analytics tracking)
- Digital asset delivery (providing print-ready QR codes and design specifications to SANParks)

SANParks retains responsibility for:

- Physical signage production (printing, fabrication, materials)
- Physical installation (mounting, placement, maintenance of physical signs)
- Integration with existing interpretation infrastructure (incorporating QR codes into broader visitor interpretation signage programs)

Compatibility Requirements:

- All QR codes and AR triggers must be compatible with SANParks' existing and future signage initiatives
- The service provider must provide technical specifications enabling SANParks to independently deploy additional QR codes linking to the same content platform

NOTE: Detailed deployment site requirements are provided in Annexure B: Deployment Sites.

Events Hardware (VR Sets)

- VR headsets and accessories (supplied per-event basis with quantities determined by event requirements)
- Controllers, charging units, protective cases, hygiene/cleaning solutions
- Supporting infrastructure for events (servers, network equipment, mounting systems, cabling, and peripherals)

4.3 Software Deliverables

Cross-platform content delivery application (web, iOS, Android, VR)

- Device Management System for remote monitoring and updates
- API integration with SANParks mobile app (Flutter/Dart/Java)
- API integration with SANParks website
- Offline-capable solutions with intelligent caching and synchronisation

4.4 Integration Deliverables

SANParks mobile app integration (technical implementation per specifications in Section 5.1)

- SANParks website integration (seamless content embedding)
- Social media platform integration (e.g. YouTube, Facebook, Instagram, TikTok)

4.5 Support Deliverables

- Five-year phased rollout plan outlining deployment, enhancement, and operationalisation over time
- Support and maintenance framework with defined SLAs, escalation paths, and scheduled maintenance
- Documentation (technical documentation, API documentation)
- Regular reporting (project progress reports, content performance analytics, system health monitoring)

4.6 Training Deliverables

ICT Staff (Technical Training):

- System architecture and integration points
- Basic hardware modules and troubleshooting

Park Staff (Operational Training):

- First-line support and basic troubleshooting
- Physical inspection and maintenance
- Visitor assistance and FAQ responses
- Issue reporting and escalation
- Device cleaning and hygiene protocols
- Safety procedures for hardware

Training Delivery:

- Initial training within 30 days of hardware installation
- On-site training at deployment locations
- Virtual training sessions for remote participants
- Train-the-trainer programs for ongoing knowledge transfer
- Refresher training annually or when systems are upgraded
- Just-in-time training materials (quick reference cards, video tutorials)

Training Documentation:

- User manuals for all systems
- Quick reference guides for common tasks
- Video tutorials for complex procedures
- Troubleshooting flowcharts
- FAQ documents
- Contact information and escalation paths

4.7 Technology Evolution Deliverables

In addition to immediate deployment deliverables, the service provider must deliver:

Technology Evolution Roadmap

- Annual recommendations for technology refresh or content format updates
- Clear triggers for when technology migration should occur

4.8 Summary of Requirements

The following tables provides a high-level summary of minimum requirements, anchored to confirmed deployment sites as detailed in Annexure B. Detailed specifications for each category are provided in the referenced sections.

4.8.1 Content & Experience Deployment Requirements

Overarching Content and Immersive Experience Requirements

All digital content and platform deployments must incorporate immersive and interactive elements where appropriate, including Augmented Reality (AR), Virtual Reality (VR), Mixed Reality (MR), 360° video, and gamified or interactive storytelling formats.

Solutions must:

- Be accessible across devices (mobile, web, and on-site installations), with preference for no-download or low-barrier access (e.g. WebAR, QR-triggered content)
- Follow an offline-first approach where feasible
- Enable content reuse and adaptation across platforms (app, web, social media, and on-site experiences)
- Support inclusive access and a wide range of user abilities
- Align with SANParks' conservation, education, and socio-economic transformation objectives
- Ensure all content is SANParks-specific, location-relevant, and authentically represents actual park experiences

Strategic Priority Themes:

1. **Inclusive Conservation & Communities:**
    a. Capture community-led cultural heritage and indigenous knowledge for visitor interpretation and online platforms
2. **Climate Resilience:**
    a. Showcase the impact of climate change and restoration interventions in SANParks landscapes
3. **Regenerative Tourism:**
    a. Create immersive tourism experiences and interactive storytelling tools to diversify visitor offerings
4. **Strategic Story-Driven Content**
    a. Immersive content aligned with SANParks Strategic Plan 2025-2030
    b. Consider new content distribution channels and revenue-generating licensing opportunities

Area	Minimum Requirement	Considerations
SANParks Mobile App	Minimum 2 immersive app integrations per year (10 total over 5 years), covering different parks and SANParks tourism products.	Content Focus Areas: • Youth engagement • Inclusive conservation and socio-economic transformation • Features that drive app downloads and sustained usage Requirements: • Demonstrate clear integration with the existing SANParks mobile application • Provide offline-first functionality • Present a practical, creative and technical rollout plan
SANParks Website	Minimum 2 immersive website content pieces per year (10 total over 5 years), ensuring coverage across different parks and regions.	Content Focus Areas: • Travel and tourism planning • Conservation initiatives (e.g., wetland restoration, climate resilience work) • Socio-Economic Transformation (SET) and community enterprise showcases Requirements: • Reflect SANParks' commitment to regenerative tourism and community inclusion • Enhance the online user journey, including booking experience • Use responsive design across desktop and mobile

		• Implement progressive web capabilities, including offline access where applicable
Virtual Accommodation Tours	Virtual tour solution for a minimum of 3 different accommodation types drawn from the 11 main rest camps confirmed in Annexure B. Note: SANParks will confirm specific accommodation types/units to be featured after contract award.	Content Focus Areas: • Rich, interactive accommodation previews beyond traditional 2D photos and video (e.g., 360° tours, VR walkthroughs) Requirements: • API integration with SANParks' booking system Be easy to update and maintain Enhance accessibility and decision-making for visitors
YouTube/Social Media	Minimum 12 immersive content integrations per year (60 total over 5 years) with cross-platform adaptation capabilities.	Content Focus Areas: • Wildlife encounters • Community-led tourism initiatives • Conservation operations and climate adaptation, • Youth programmes Requirements: • Enable adaptation of content across formats (short-form, long-form, interactive) • Support audience growth, accessibility, and potential monetisation • Align with SANParks branding and messaging
Gate and Reception Visitor Experience	Content and interactive display solutions deployed at identified park gates / main reception / visitor centre sites (total 24 sites), as listed in Annexure B	Content Focus Areas: • Park rules, safety and responsible behaviour, delivered in engaging and entertaining formats

		• Information-seeking and visitor orientation Requirements: • Align with SANParks' Integrated Safety & Security Strategy • Utilise SANParks mobile app, digital signage, interactive displays, or immersive technologies • Create central, smart, updatable, and interactive content and display solutions • Enable remote content deployment capability • Include QR code integration for accessing additional content on personal devices • Use robust hardware suitable for constant use by all ages and abilities • Be scalable and cost-effective for deployment across multiple sites with varying infrastructure • Include a device management strategy and staff training plan • Focus on positive emotional response, improved visitor understanding of responsible park behaviour, reduced frustration, and increased awareness of park protocols
Interpretation Centres	Full XR deployment solutions across a minimum of 1 large interpretation centre and 4 small interpretation centres over the contract period, as listed in Annexure B. Provision for future expansion opportunities.	Content Focus Areas: • Site specific content • Conservation and heritage interpretation • Interactive and educational exhibit experiences • Environmental and historical storytelling Requirements: • Provide appropriate hardware and content solutions • Enable flexible, modular, and updatable installations that include non-permanent or semi-permanent installation approaches • Include maintenance, support, and hygiene protocols

		• Avoid major structural modifications • Ensure energy efficiency and environmental alignment • Address operational risks (e.g. theft, environmental damage, wildlife interaction) • Follow a phased deployment approach (pilot to scale)
Interpretation Sites & Boards	QR code-triggered and augmented signage (AR) solutions deployed at minimum of 20 interpretation sites/boards per annum, as listed in Annexure B. Total Interpretation Sites over the five year period: 100.	Content Focus Areas: • Inclusive Conservation & Communities • Climate Resilience: • Regenerative Tourism • Education & Youth Development: Requirements: • Enable QR-based access to digital content via personal devices • Avoid mandatory app downloads (WebAR preferred) • Integrate with SANParks mobile app where appropriate • Ensure accessibility across all user groups
Mobile Hubs — Shows, Exhibitions & Events	• One Immersive XR showcase mobile hub to be used at identified events across the regional offices and parks. Minimum 2 fully developed showcase concepts per year (10 total over 5 years) with portable, deployable hardware for temporary exhibitions. Average event size; 50 - 60 attendees	Content Focus Areas: • Strategic Story-Driven Content Requirements: • Integration of immersive experiences (content + hardware) into portable exhibition stands • On-site technical support plans • Content deployment, staffing, and risk mitigation strategies • Alignment with SANParks' conservation messaging and branding • Provide and set up hardware at event venues • Logistics, transport, and risk mitigation for exhibition materials

Note: This table provides minimum requirements only, anchored to confirmed deployment sites in Annexure B. Bidders are encouraged to exceed these minimums where it adds demonstrable value to SANParks' objectives.

4.8.2 Operational, Technical and Sustainability Requirements

Area	Basic Requirement
Cross-Platform & Offline-First	Offline-first capability is mandatory for all sites listed in Annexure B, the majority of which are in remote locations with limited or no connectivity.
VR Hardware Support	Must support industry-standard VR platforms (Meta Quest series, HTC Vive, or equivalent)
Local Content Hosting	Infrastructure for local content hosting at all deployment sites in Annexure B where offline capability is required, with particular priority given to Phase 1 remote sites.
YouTube Platform Compliance	All content published to YouTube must comply with YouTube age verification policies, content restrictions, and platform guidelines.
Legal & Compliance	Full POPIA compliance across all digital deployments. IP ownership retained by SANParks unless otherwise licensed. Electrical safety certification required (Electrical Conformance Board or equivalent recognised certification body) for all hardware installations.
Environmental Impact	Environmental impact statement required, including carbon footprint assessment and sustainable practices implementation across all deployment sites.
Staff Training & Knowledge Transfer	Comprehensive training programme for SANParks staff covering hardware maintenance, and troubleshooting, covering all parks and regional offices in Annexure B.
Support & Maintenance	Defined SLAs with clear response times, preventative maintenance schedules, spare parts management, and hardware refresh/replacement planning across all confirmed deployment sites in Annexure B.
Content Lifecycle & Sustainability	Ongoing programme for updating, refreshing, and maintaining hardware and content throughout the full 5-year contract period, across all sites listed in Annexure B.

SECTION 5: TECHNICAL SPECIFICATIONS

5.1. Platform Integration Requirements

SANParks Mobile App Integration

Technical Framework:

- The SANParks mobile app is built using Flutter, Dart, and Java
- XR features must integrate with these frameworks without requiring complete app redevelopment
- Support for both iOS and Android platforms is mandatory
- Solutions must consider device fragmentation across diverse mobile devices

Size and Performance Constraints:

- APK size management: Maximum 1.8GB per app store package
- Additional content must be delivered via modular downloads (separate packages for maps, accommodation tours, AR/VR components)
- Submissions should propose WebAR and embedded streaming to reduce deployment payload sizes

Offline-First Design:

- Mandatory offline-first architecture (see Section 5.3 for detailed requirements)
- Local caching and content download capabilities
- Consideration of platform-specific limitations (iOS vs. Android differences in offline storage and background sync)

SANParks Website Integration

Integration of immersive content into the SANParks website

- Web-based XR experiences (WebAR, 360° viewers) requiring no plugins
- Progressive Web App (PWA) capabilities for offline access
- Responsive design for desktop and mobile browsers

Booking System

Seamless user experience without disrupting existing booking processes.

5.2. Software Architecture & APIs

Content Delivery Platform

- Offline-first architecture with intelligent caching and synchronisation
- Service Worker strategies for WebAR and web content
- Update/versioning system for content management

Device Management System

- Remote monitoring and management of all deployed hardware where connectivity permits, with manual monitoring and management protocols for devices in limited/no connectivity areas. Automated health checks and performance monitoring
- Remote troubleshooting and diagnostics
- Content deployment and update capabilities across all devices

API & Integration Layer

- RESTful APIs for integration with SANParks systems
- Proposals must address integration with SANParks' existing APIs for maps, booking data, and other systems
- All APIs must be well-documented and secure
- Authentication and authorization protocols must comply with SANParks IT security standards
- Documentation for all APIs and integration points

5.3. Offline-First Design Requirements

Given that national parks often have unstable or no network connectivity, the solution must prioritize offline-first design.

Offline Content Delivery Solution

The service provider must provide a comprehensive solution for addressing offline capability for each deliverable category:

Mobile App:

- Designed using an offline-first approach, whereby core content types (including maps, rules, and interpretive content) are fully accessible without connectivity, with defined elements requiring only periodic synchronisation. Caching strategies per content type, storage budgets, and cache eviction handling
- Platform limitations (iOS/Android differences in offline storage and background sync)

Interactive Displays:

- Local content storage and update mechanisms
- Solutions that allow local content servers or storage for display content
- Local backup content options (USB Flash Drive, USB SSD, Raspberry Pi or other small SBC)
- Content hosted locally where displays are deployed/streamed

VR Headsets:

- Standalone content delivery vs. streaming requirements

Update Mechanisms:

- Develop mechanisms for content updates in low-connectivity environments
- Opportunistic sync and scheduled downloads at locations with connectivity

User Journey Design:

- Prompts for downloading content at checkpoints with connectivity
- User notifications for content availability and update status

Technical Requirements

- Progressive Web App (PWA) with robust service workers
- Local database storage (SQLite, IndexedDB, or similar)
- Content versioning to manage updates without full re-downloads
- Graceful degradation when connectivity is unavailable
- Which content types must work fully offline
- Storage budgets and cache eviction handling
- Update/versioning approach for content

5.4 360° and VR Content Quality Standards

Experience Quality Standards

The primary objective for all immersive content is to deliver a smooth, comfortable, and high-quality viewing experience that allows visitors to feel genuinely present in SANParks environments. Technical specifications should be understood as minimum baselines to achieve this experience rather than targets in themselves, as technology evolves rapidly, bidders are encouraged to leverage emerging capabilities that enhance quality while maintaining broad accessibility.

All 360° and VR content must meet the following experiential benchmarks:

- Visual clarity: Sufficient resolution to read interpretive signage, identify individual animals at reasonable distances, and appreciate landscape detail without pixelation or blur during normal viewing
- Motion comfort: Frame rates and encoding quality that eliminate judder, stuttering, or latency that could cause discomfort or motion sickness
- Stereoscopic depth (where applicable): Natural depth perception that enhances immersion without causing eye strain or convergence issues
- Temporal smoothness: Consistent playback across the entire experience with no dropped frames or buffering interruptions

- Audio-visual synchronization: Perfect alignment between spatial audio and visual elements to maintain presence

Minimum Technical Baselines

To achieve these quality standards across currently available consumer VR headsets, content should meet or exceed the following minimum specifications:

- Resolution: Stereoscopic content should be captured and delivered at no less than 7680 x 7680 to ensure clarity on devices with display resolutions up to 11520 x 11520 total.
- Frame rate: Minimum 30 frames per second for static or slow-movement scenes; 60+ fps strongly recommended for dynamic content or experiences involving user-controlled movement
- Bitrate: Sufficient encoding bitrate to prevent compression artifacts—typically 100mbps minimum for high-resolution stereoscopic content, scaling higher for more complex scenes
- Codec efficiency: Use modern codecs (H.265/HEVC or successor standards) that balance quality with file size and processing requirements

Hardware-Agnostic Approach

Content must be delivered in formats compatible with current and emerging VR platforms, not optimized exclusively for specific hardware. Bidders' content pipeline should accommodate:

- Multiple resolution outputs for different device capabilities
- Both stereoscopic (3D depth) and monoscopic (360° flat) viewing modes
- Graceful quality scaling for devices with varying processing power
- Future format compatibility as new codecs and delivery methods emerge

Rationale

The VR landscape evolves rapidly; headsets available at contract end will likely far exceed today's capabilities. By focusing on experience quality rather than hardware specifications, we ensure content remains relevant and impressive throughout the contract period. Content that delivers exceptional experiences on today's baseline devices will look even better on tomorrow's hardware, while content merely meeting minimum technical specs may appear dated within months.

Bidders should propose content creation workflows that future-proof deliverables through high-quality source capture, flexible encoding pipelines, and delivery systems that can adapt to emerging standards without requiring complete content recreation.

5.5 Content File Optimisation

- Video files must be compressed for efficient delivery while maintaining quality
- Multiple resolution/bitrate versions should be available for adaptive streaming where connectivity permits
- For offline delivery, file sizes must be balanced between quality and storage/download constraints
- Audio files must be optimized for mobile devices and interpretation centre audio systems
- Images must be responsive and appropriately sized for different display contexts

5.6 Cross-Platform Compatibility

- All solutions must, where possible, be device-agnostic and compatible with industry-standard platforms
- No proprietary plugins or software should be required for users to access content
- Content must be viewable on standard web browsers, mobile devices, and VR headsets without specialized installations
- Hardware must comply with industry standards for interoperability
- Content must render correctly across different screen sizes and aspect ratios
- Touch, mouse, keyboard, and VR controller inputs must all be supported where applicable
- Browser-based experiences must function without plugins (WebGL, WebXR where supported)

5.7 Hardware Specifications Summary

Hardware must be suitable for SANParks' diverse environments:

- Outdoor/semi-outdoor locations: Weather-resistant, dust-proof, temperature-tolerant
- High-traffic public areas: Vandal-resistant, robust construction, easy to clean
- Remote locations: Low power consumption, solar-compatible where possible, minimal maintenance requirements
- Compliance: All hardware must comply with Electrical Conformance Board (ECB) standards or equivalent international certification (CE, UL). Certificates of compliance required for all electrical work. Grounding, surge protection, and electrical safety measures are required.

- Energy Efficiency: Proposals must address carbon footprint and energy consumption for all hardware. Preference for energy-efficient solutions with Energy Star or equivalent certification. Solutions aligned with SANParks' conservation mandate.

5.8 Scalability & Future Proofing

- Solutions must be scalable from pilot deployments to full rollout across 21+ parks
- Architecture must accommodate future technologies and content types
- Hardware must be upgradeable or replaceable without requiring complete system redesign
- Software must be modular, allowing components to be updated independently

The goal is not to lock SANParks into today's hardware, but to build content and systems that remain valuable as the industry evolves from VR headsets toward broader immersive computing experiences.

5.9 Security & Data Protection

- All systems must comply with POPIA (Protection of Personal Information Act) requirements
- Visitor analytics must be anonymized and aggregated
- Data transmission must be encrypted (HTTPS, secure APIs)
- Hardware must have physical security measures (locks, tamper-evident seals) where appropriate
- Industry-standard data protection protocols at onsite premises including data back-up and redundancy and data theft mitigation

Data Storage Responsibilities:

Service Provider Responsibilities:

- Provide and maintain all server infrastructure required for content storage and delivery
- Implement redundant storage systems with backup and disaster recovery capabilities
- Report on storage capacity usage and communicate anticipated changes to storage needs
- Scale storage infrastructure as content library grows throughout the contract period
- Ensure all stored data is encrypted at rest and in transit
- Maintain storage systems in compliance with POPIA requirements
- Provide 99.9% uptime for all cloud-based storage systems
- Retain content backups for minimum of 1 year with version control
- Archive historical content as per agreed retention policies

SANParks Responsibilities:

- Approve Data Storage and Management Plan before deployment
- Provide timely decisions on content archival and deletion
- Approve budget allocations for storage capacity upgrades when required
- Ensure internal compliance with POPIA for visitor data collected through XR systems
- Approve data backup and disaster recovery procedures
- Participate in annual storage capacity planning reviews

SECTION 6: IMPLEMENTATION & OPERATIONS

6.1. Content Development Process

The service provider must work in partnership with SANParks specialists to develop high-quality, authentic, and engaging immersive content that serves multiple purposes: tourism promotion, conservation education, cultural heritage preservation, and community storytelling.

SANParks retains full ownership of all content created under this contract (unless licensed)

Content Co-Creation Approach

SANParks will provide foundational content:

- Park rules and regulations
- All SANParks-specific content including conservation principles, biodiversity, environmental, cultural, and tourism-related information
- Brand guidelines and visual identity standards
- Existing media assets (photos, videos, documents) where applicable
- Access to parks, facilities, staff, and subject matter experts for content capture

Service Provider will develop:

- Immersive content concepts aligned with SANParks' strategic priorities
- Original multimedia content (video, audio, photography, 3D models, animations)
- Interactive experiences and gamified elements
- Content narratives and storytelling frameworks
- Accessibility features

Content Themes and Priorities

All content must align with at least one of SANParks' strategic priorities:

1. Inclusive Conservation & Communities

- Community-led tourism initiatives and local enterprises
- Indigenous knowledge and cultural heritage
- Oral histories and community voices
- Co-creation with communities for authentic representation

2. Climate Resilience

- Climate change impacts on ecosystems
- Restoration interventions and regenerative practices
- Scientific research and monitoring programs
- Adaptation strategies and conservation outcomes

3. Regenerative Tourism

- Sustainable visitor experiences
- Responsible behaviour and environmental stewardship
- Activity-based content (hiking, birdwatching, wildlife viewing)
- Virtual experiences for accessibility and promotion

4. Education & Youth Development

- Environmental education and citizen science
- Youth engagement programs
- Interactive learning experiences
- Schools and educational outreach content

5. Biodiversity & Heritage Interpretation

- Species profiles and ecosystem dynamics
- Geological and paleontological heritage
- Historical sites and cultural landscapes
- Conservation success stories

Content Quality Standards

All content must meet the following quality standards:

Authenticity:

- Based on real park experiences, actual wildlife, genuine landscapes
- No AI-generated visual or audio content (see Section 7.3 for full guidelines)
- Accurate scientific and cultural information
- Proper attribution for community voices and indigenous knowledge

Production Quality:

- Professional-grade video, audio, and photography
- Consistent branding and visual identity
- Accessibility features (captions, audio descriptions)

Engagement:

- Compelling narratives and storytelling techniques
- Interactive elements that encourage exploration
- Age-appropriate content for diverse audiences
- Emotional connection to conservation and cultural themes

Technical Excellence:

- Optimised for target platforms and devices
- Offline-capable where required
- Fast load times and smooth performance
- Cross-platform compatibility

6.2. Roles & Responsibilities

6.2.1. Service Provider Responsibilities

The service provider shall be responsible for:

Content Creation & Production:

- Develop all immersive XR content in accordance with the approved Content Plan
- Conduct all filming, photography, audio recording, and content capture activities
- Ensure content authenticity and compliance with AI use guidelines (Section 7.3)
- Provide accessibility features as specified
- Deliver content in required formats optimized for all target platforms
- Obtain necessary permissions, releases, and licenses for all content

Hardware Supply & Installation:

- Supply all hardware
- Install, configure, and test all hardware at deployment sites
- Ensure hardware meets all durability and environmental requirements
- Provide all supporting infrastructure (servers, network equipment, cabling)
- Obtain all necessary electrical certifications and compliance documentation
- Conduct site assessments and risk mitigation for all installations

Software Development & Integration:

- Develop all software deliverables
- Integrate XR experiences with SANParks mobile app (Flutter/Dart/Java)
- Integrate content into SANParks website with PWA capabilities
- Ensure all software is secure, scalable, and maintainable
- Provide comprehensive technical documentation for all software systems

Maintenance & Support:

- Provide ongoing maintenance for all hardware and software
- Respond to support requests within defined SLA timeframes
- Conduct regular preventive maintenance site visits
- Monitor system health and performance remotely
- Manage spare parts inventory and replacement components
- Provide emergency support for critical system failures

Training & Capacity Building:

- Deliver comprehensive training to SANParks staff
- Provide technical training for ICT staff
- Train park staff on first-line support and basic troubleshooting
- Deliver train-the-trainer programs for ongoing knowledge transfer
- Provide refresher training as needed throughout contract period

Project Management & Reporting:

- Appoint a dedicated Project Manager as primary SANParks liaison
- Conduct regular project meetings and progress reviews
- Submit regular reports on project progress, content performance, and system health
- Maintain audit trails for content creation, approvals, and deployments
- Comply with SANParks' branding and communication guidelines
- Manage subcontractors and ensure quality across all deliverables

Event & Exhibition Support:

- Provide portable exhibition solutions for SANParks events
- Deliver and set up hardware at event venues
- Provide on-site technical support during events
- Manage logistics, transport, and risk mitigation for exhibition materials
- Ensure events align with SANParks' conservation messaging and branding

Compliance & Quality Assurance:

- Ensure compliance with all legal and regulatory requirements
- Maintain all required certifications and licenses
- Conduct quality assurance testing for all deliverables
- Implement feedback from SANParks and visitors
- Continuously improve content and systems based on performance data
- Ensure accessibility and inclusivity standards are met

6.2.2 SANParks Responsibilities

SANParks shall be responsible for:

Content Governance:

- Assign SANParks specialists (conservation, tourism, heritage, SET) to collaborate with the service provider on content development
- Review and approve all content before deployment, ensuring accuracy, authenticity, and alignment with SANParks' mandate
- Provide foundational content (park rules, regulations, brand guidelines, existing media assets etc)
- Grant access to parks, facilities, staff, and subject matter experts for content capture
- Provide timely feedback on content submissions to avoid project delays (target: 10 business days)

Platform & System Access:

- Provide access to SANParks mobile app codebase, development environments, and technical documentation
- Provide access to SANParks website CMS and hosting environments
- Provide API documentation and technical support for integration with SANParks systems
- Facilitate testing environments for development and quality assurance

Site Readiness:

- Ensure deployment sites (gates, receptions, interpretation centres) are ready for hardware installation
- Provide electrical power, network connectivity (where available), and physical space for installations
- Coordinate access to parks and facilities for installation teams
- Provide security and environmental protection for installed hardware

Project Coordination:

- Appoint a SANParks Project Manager as primary liaison with the service provider
- Participate in project meetings, workshops, and co-creation sessions
- Provide timely decisions on content, design, and deployment priorities
- Coordinate internal stakeholders across parks, regions, and departments
- Facilitate permissions, permits, and regulatory approvals for installations

User Acceptance Testing:

- Conduct user acceptance testing (UAT) for all deliverables before final sign-off
- Provide feedback on usability, functionality, and alignment with requirements
- Approve content, hardware, and software deployments

Staff Training & Adoption:

- Nominate SANParks staff to participate in training sessions and ensure that these trained staff are available on-site
- Promote adoption of XR technologies among park staff and visitors
- Provide feedback on training effectiveness and identify additional training needs

Operational Support:

- Perform basic troubleshooting and first-line support using training provided by the service provider
- Report hardware failures, software issues, and content problems via agreed channels
- Conduct routine inspections of hardware (cleanliness, physical condition) between service provider maintenance visits
- Monitor content performance and visitor engagement, sharing insights with the service provider

Budget & Payment:

- Provide timely payment for delivered milestones and invoices as per contract terms
- Approve budget allocations for hardware upgrades, additional content, or scope changes
- Manage internal financial processes and procurement compliance

Communication & Marketing:

- Promote XR experiences to visitors through SANParks' communication channels
- Incorporate XR features into marketing materials, social media, and visitor information
- Gather visitor feedback and share with the service provider for continuous improvement

Data & Privacy Compliance:

- Monitor and periodically audit the service provider's handling of visitor data collected through XR systems (analytics, user interactions) to ensure compliance with POPIA.
- Provide legal guidance on data protection and privacy requirements
- Approve data collection and usage practices

Intellectual Property:

- Define IP ownership and licensing terms for all deliverables
- Ensure service provider respects SANParks' branding and IP rights

SECTION 7: COMPLIANCE & STANDARDS

7.1. Legal and Compliance Requirements

The service provider must ensure full compliance with:

7.1.1 Data Protection

Protection of Personal Information Act (POPIA):

- All visitor data, analytics, and personal information must be collected, stored, and processed in compliance with POPIA
- Data minimization: Collect only necessary data for system operation and improvement
- Visitor consent: Clear opt-in mechanisms for data collection
- Data security: Encryption, access controls, and secure storage
- Data retention: Policies for how long data is stored and when it is deleted
- Data breach protocols: Notification procedures in the event of a security incident

7.1.2 Intellectual Property

- Content Ownership: SANParks retains full ownership of all content created under this contract
- Licensing: Any third-party content used must be properly licensed, with licenses valid for minimum 5 years
- SANParks Branding: Service provider must respect SANParks' trademarks, logos, and brand guidelines
- Software IP: Clear definition of IP ownership for custom software developed (typically owned by SANParks)
- Open Source: Any open-source components must be disclosed, with licenses that permit commercial use

7.1.3 Occupational Health and Safety

- All hardware installations must comply with Occupational Health and Safety Act (OHSA)
- Risk assessments for all installation sites
- Safe working procedures for installation and maintenance teams
- Public safety: Hardware must not pose hazards to visitors (sharp edges, electrical exposure, trip hazards)
- VR safety: Content must avoid inducing motion sickness; usage time limits and warnings for VR headsets
- Hygiene protocols: Cleaning procedures for shared devices (VR headsets, touchscreens, audio guides)

7.1.4 Electrical Compliance

- All electrical installations and equipment must comply with Electrical Conformance Board (ECB) standards or equivalent international certification (CE, UL)
- Certificates of compliance for all electrical work
- Grounding, surge protection, and electrical safety measures

7.1.5 Environmental Compliance

- Environmental impact assessments for hardware production, installation, and disposal
- E-waste management: Responsible disposal and recycling of end-of-life hardware
- Energy efficiency certifications (Energy Star or equivalent)
- Compliance with SANParks' environmental policies

7.2 Accessibility and Inclusivity Requirements

All XR solutions must be designed with universal accessibility and inclusivity as core principles, not afterthoughts. The service provider must ensure that content and hardware accommodate the widest possible range of users, including visitors with disabilities, diverse linguistic backgrounds, and varying levels of technical literacy.

7.2.1 Physical Accessibility

- VR headsets and interactive displays must accommodate users of different heights, mobility levels, and physical abilities
- Installation heights and reach ranges must comply with universal design standards (typically 90-120cm from floor for interactive elements)
- Alternative input methods for users with limited fine motor control
- Wheelchair-accessible installations where applicable
- Sufficient clearance space around interactive stations to accommodate wheelchairs, mobility devices, and service animals
- Seating options for VR/AR experiences where standing may be challenging
- Interactive touchscreens positioned for both seated and standing access
- Mounting systems and hardware placement that do not create trip hazards or obstacles in visitor pathways

7.2.2 Visual Accessibility

- Audio descriptions for all visual content (VR experiences, videos, AR overlays)
- High-contrast modes and adjustable text sizes for screen-based content
- Screen reader compatibility for web and app-based experiences
- Tactile elements or alternative sensory experiences where possible

7.2.3 Hearing Accessibility

- Captions and subtitles for all audio and video content
- Visual indicators for audio cues (vibrations, on-screen alerts)
- Sign language interpretation for key content where feasible
- Adjustable volume controls and compatibility with hearing aids

7.2.4 Socioeconomic Inclusivity

- Solutions that do not require visitors to own expensive personal devices (VR headsets, tablets provided on-site)
- Data-free or low-data options for mobile app features to avoid excluding users with limited data plans
- Pricing-free experiences (no additional costs beyond park entry fees to access XR content)

7.2.5 Cultural Sensitivity

- Content that respectfully represents diverse communities, languages, and cultural heritage
- Co-creation with communities for content featuring indigenous knowledge or cultural practices
- Avoidance of stereotypes or misrepresentation

7.2.6 Compliance Standards

The Service Provider shall ensure that all content and installations delivered under this Agreement comply with:

- Web Content Accessibility Guidelines (WCAG) 2.1 Level AA (minimum)
- South African national accessibility standards
- Universal Design principles
- Any additional standards specified in Annexure C

7.3 Prohibited Content Generation Methods – AI Use Guidelines

7.3.1 Guiding Principles

SANParks recognizes that artificial intelligence tools are rapidly evolving and can offer legitimate benefits in certain applications while presenting risks in others. Our approach balances innovation with the fundamental need for authenticity, cultural sensitivity, and conservation integrity that defines our mission.

All content created for SANParks must prioritize authentic representation of our parks, wildlife, landscapes, and the communities connected to them. AI should serve as a tool to enhance, refine, or augment human-created content rooted in real experiences—not as a replacement

for genuine capture and creative work. The distinction lies in whether AI is being used to improve something real or to fabricate something that never existed.

7.3.2 Appropriate AI Applications

AI tools may be used where they enhance quality, accessibility, or efficiency without compromising authenticity:

Enhancement and post-production:

- Colour correction, noise reduction, image stabilization, and similar refinements of real captured content

Accessibility features:

- Automated captioning, text-to-speech for screen readers, audio descriptions for visually impaired users

Supplementary creative elements:

- Generated textures, backgrounds, or extinct species (e.g., dinosaurs for paleontological interpretation) where the synthetic nature is contextually appropriate

Operational tools:

- Data analytics, content management systems, recommendation algorithms, and reporting functions

Augmentation of real content:

- AI may assist in completing or extending real flora and fauna imagery—for example, filling in partially obscured foliage or extending a landscape—provided the foundation is authentic photographic or video content

7.3.3 Restricted AI Applications

AI should not be used to create primary visual or audio content from scratch, particularly where it would misrepresent reality:

Fabricated wildlife or ecosystems:

- AI-generated images or videos of animals, plants, or landscapes presented as if real

Generated cultural or heritage content:

- Indigenous knowledge, cultural practices, and community representations require genuine documentation and cannot be replicated by AI

Deepfakes or manipulated footage:

- Any content that misrepresents actual events, behaviours, or conditions in our parks

AI-composed primary soundscapes:

- While AI may assist in mixing or editing, the core sounds of nature and parks should be genuine field recordings

7.3.4 The Flora and Fauna Standard

As a practical example: if creating content featuring vegetation or wildlife, the primary subject matter must be captured from real specimens in real environments. AI may be used to enhance image quality, remove temporary distractions (e.g., a fence post), or fill in partially obscured areas—but the essential character and biological accuracy must derive from authentic source material. Creating entire animals, plants, or ecosystems through AI generation, no matter how realistic, does not meet our authenticity standard.

7.3.5 Transparency and Verification

Bidders must clearly disclose their AI use methodology in proposals, specifying which tools will be used and for what purposes. Throughout the contract period, SANParks reserves the right to request documentation proving content authenticity, including:

- Raw footage and original captures
- Production notes and process documentation
- Location data and timestamps
- EXIF metadata from cameras
- Photographer/videographer credits
- Equipment specifications

Any misrepresentation of AI-generated content as authentic, or use of AI in ways that contradict these guidelines, may result in content rejection, financial penalties, or contract termination depending on severity.

7.3.6 Rationale Summary

These guidelines protect what makes SANParks content valuable:

- Visitor trust depends on knowing they're seeing real places and real wildlife
- Conservation messaging must be grounded in actual science and ecosystems
- Cultural sensitivity requires genuine engagement that AI cannot replicate
- Authenticity ensures that our content serves as a true window into South Africa's natural heritage rather than a simulation of it

7.3.7 Enforcement

During the bidding process and throughout the contract period:

- SANParks reserves the right to request proof of content authenticity at any time
- Discovery of prohibited AI-generated content may result in:
- Content rejection and requirement to recreate with authentic methods
- Financial penalties as specified in contract terms
- Contract termination for severe or repeated violations

SECTION 8: CONTRACT CONCLUSION AND EXIT MANAGEMENT

8.1 Exit Planning and Transition Preparation

No later than six (6) months prior to the expiry of the contract period, the Service Provider shall submit a formal Exit and Transition Plan to SANParks for review and approval. This plan shall detail all handover activities, timelines, responsibilities, and risk mitigation measures to ensure continuity of services and a structured transition to a successor service provider or in-house operation.

8.2 Data Handover

All data generated, collected, or maintained under this contract — including but not limited to content assets, visitor analytics, system configurations, user accounts, and operational records — shall be transferred to SANParks in agreed formats no later than the contract expiry date. The specific formats, transfer methods, and acceptance criteria for data handover shall be agreed upon in writing between SANParks and the Service Provider no later than six (6) months prior to contract expiry.

8.3 Prevention of Vendor Lock-In

The Service Provider shall ensure, throughout the contract period, that all systems, platforms, content, and integrations are designed and maintained in a manner that avoids proprietary dependency that would restrict SANParks' ability to transition to an alternative provider. Specifically:

a) All custom software, code, and integrations shall be documented and handed over in full upon contract expiry;

b) No proprietary file formats, encoding methods, or access controls may be applied to SANParks content assets without SANParks' prior written consent;

c) All platform licences, API access credentials, and third-party service accounts procured on SANParks' behalf shall be transferable or reassignable to SANParks or a nominated successor.

8.4 Asset and Knowledge Transfer

All physical assets, documentation, and institutional knowledge accumulated during the contract period shall be formally transferred to SANParks or its nominated successor at contract conclusion. This includes:

a) All content production files, raw footage, source files, and final rendered assets;

b) System architecture documentation, technical specifications, and integration guides;

c) Hardware asset registers, maintenance histories, warranty records, and user manuals;

d) Login credentials, licence keys, and access rights for all systems operated on SANParks' behalf.

8.5 Equipment Purchase Option

Upon expiry of the contract period, SANParks shall have the right, but not the obligation, to purchase any or all hardware and equipment supplied under this contract. The Service Provider shall not be compelled to sell, but must notify SANParks in writing no later than six (6) months prior to contract expiry of its willingness to make equipment available for purchase. Where the Service Provider confirms willingness to sell, the purchase price shall be calculated using straight-line depreciation over the contract period, applied to the original acquisition cost as supported by documentary proof. The parties shall have sixty (60) days following such notification to finalise and agree on the purchase price and terms of transfer, failing which the option shall lapse.

8.6 Intellectual Property Confirmation

Prior to contract conclusion, the Service Provider shall provide SANParks with a written confirmation that all intellectual property obligations have been fulfilled, including the transfer of ownership of all custom-developed content and software as set out in Section 7.1.2. Any outstanding IP matters shall be resolved before the final payment milestone is released.

8.7 Final Performance Review

Within thirty (30) days of contract expiry, SANParks shall conduct a formal close-out review with the Service Provider to assess overall contract performance, document lessons learned, and confirm that all handover obligations have been met. Completion of this review shall be a condition for the release of any retention amount or final payment held by SANParks.

THE BIDDING SELECTION PROCESS

Phase 1: Mandatory evaluation criteria

The bidder must indicate its compliance / non-compliance to the requirements and should substantiate its response/s with supporting evidence when indicating that they comply. If more space is required to justify compliance, please ensure that the substantiation is clearly cross-referenced to the relevant requirement.

All bidders must meet the mandatory compliance criteria. Failure to comply will result in disqualification, and disqualified bidders will not be considered for further evaluation on the Functionality/Presentation/Price evaluation requirements. **MANDATORY CRITERIAS**	**YES**	**NO**	**COMMENTS**
Requirement: Bidder must have a physical operational presence in South Africa to ensure local production capacity, support, maintenance, and project management capability. **Evidence Required:** • Proof of physical office/operational facility in South Africa, provided as one of the following: o A current and valid lease agreement signed by both parties, or o A utility bill dated within the last 3 months, or o A property deed with confirmation dated within last 3 months Declaration of local operational capacity including staff complement based in South Africa • Declaration that the Director of the company is based in South Africa			
Requirement: Bidder must show Financial & Operational Strength - o Bank letter of good standing			

Requirement: Bidder must prove Extended Reality (XR) Project Delivery Experience
 	
Bidder must demonstrate proven experience in the delivery of Extended Reality (XR) solutions (including Virtual Reality (VR), Augmented Reality (AR), and Mixed Reality (MR)) through a track record of successfully completed client projects.
 	
Evidence Required:
 	
• Bidders must submit evidence of a minimum of three (3) client-delivered XR projects completed within the past three (3) years (equivalent to a minimum average delivery rate of one (1) project per year), demonstrating that XR forms a core part of the bidder's operational capability.
• For each project, bidders must provide:
  ○ Project name
  ○ Client name
  ○ Project completion date
  ○ Scope of work delivered
  ○ Technologies/platforms utilised
  ○ Contract value band
• Signed reference letter for each project issued on the client's official letterhead, signed by an authorised representative and including client contact details for verification.
 	
This mandatory requirement establishes the minimum threshold for recent XR project delivery experience. Bidders must meet this requirement to be considered responsive.
 	
Projects submitted under this requirement may also be included in the functionality portfolio for further evaluation of the depth, relevance, and quality of the submitted project experience.			

Phase 2: Technical/Functional Evaluation Criteria

In this phase all bids that met all the requirements in terms of the submitted proposal per the above set of mandatory requirements will be evaluated as follows:

Proposals will be evaluated against functional requirements. A minimum qualifying

threshold of 75% (75 points out of 100) must be achieved to proceed further. **Criteria**	**Evidence Required**	**Points**	**Scoring**
1. Technical Solution & Feasibility Demonstrate the overall XR technical solution, showing technical understanding of XR technologies and its feasibility for SANParks' operational environment.	**A structured technical proposal that explicitly addresses the following components:** 1. **Proposed Architecture** • Overall system architecture, including components and interactions • Architecture diagrams clearly illustrating the solution 2. **Hardware & Software Approach** • Proposed hardware (e.g. XR devices, supporting infrastructure)	25	0 Point Evidence minimal or mostly absent Submission is incomplete with four (4) or more required components missing Or components unclear and largely generic No meaningful demonstration of feasibility 5 Points - Evidence is basic descriptions with limited technical detail 3 required components fully addressed Remaining components missing or only briefly mentioned. 15 Points - Evidence is presented as a structured explanation, but not comprehensive. 4–5 required components addressed

	• Software platforms, tools, and development approach • Justification for technology choices 3. **Offline-First Implementation** • Approach to operating in low/no connectivity environments • Data storage, synchronisation, and update mechanisms • Handling of data conflicts, failures, and recovery 4. **Integration Approach** • Approach to integrating with existing or future systems • Interfaces, APIs, middleware, or data exchange mechanisms 5. **Content Development Workflow & Quality Assurance** • End-to-end content creation, management, and deployment workflow • Quality assurance processes (e.g. testing,		Submission includes some structured technical detail. Some components only briefly / partially explained. 20 Points - Evidence is detailed and structured, largely complete All 6 required components addressed Minor gaps in depth, optimisation, or contextualisation 25 Points – Comprehensive, detailed, and practically demonstrable All proposal criteria comprehensively addressed and shows some tailoring to the SANParks environment includes strong supporting evidence such as diagrams, workflows, or real examples

	validation, version control) **6. Scalability & Environmental Suitability** • Suitability for remote, rugged, or resource-constrained environments • Scalability across multiple SANParks sites • Consideration of operational constraints (e.g. power, connectivity, maintenance)		
2. Implementation & Roll-out Capability Demonstrate the ability to deliver a phased, multi-site implementation over the contract period.	**Submit a high-level implementation and roll-out framework that explicitly addresses:** 1. **Sequencing & Phasing** • Logical sequencing of implementation activities • Defined phases (e.g. pilot, rollout, scale-up) 2. **Dependencies** • Identification of technical, operational, and external dependencies	20	0 Point – Evidence minimal or mostly absent Submission is incomplete Four (4) or more required components missing), or components unclear, and largely generic 5 Points – Evidence is basic descriptions with limited technical detail 3 required components fully addressed Remaining components missing or only briefly mentioned. 10 Points – Evidence is presented as a structured methodology, but not comprehensive

	• Interdependencies between implementation phases 3. **Resource Allocation** • Allocation of human, technical, and logistical resources • Alignment of resources to phases and activities 4. **Risk Identification & Mitigation** • Identification of key risks (technical, environmental, operational) • Proposed mitigation strategies 5. **Governance & Stakeholder Engagement** • Governance structure and reporting approach • Stakeholder engagement strategy across SANParks 6. **Adaptability for Multi-Site Roll-out** • Approach to handling varying levels of site readiness		4–5 required components fully addressed Some components only briefly / partially explained. 15 Points – Evidence is detailed and structured, largely complete All required components addressed. Minor gaps in integration or practical detail20 Points – Comprehensive, detailed, and practically demonstrable All required components comprehensively addressed with detailed evidence Includes strong supporting evidence such as diagrams, workflows, or real examples

	• Consideration of remote or resource-constrained environments		
3. Exhibition and Installation Experience Demonstrate practical experience with physical immersive digital content displays, including permanent or semi-permanent installations, partially outdoor deployments, and temporary/mobile VR/XR hubs for events or exhibitions. Projects submitted under the mandatory criteria may be included in this portfolio. The functionality evaluation will assess the depth, relevance, and quality of the submitted project experience.	**Submit a portfolio of three (3) projects delivered within the past 3 years, including for each project:** **1. Project Overview** • Project name, location, and date • Client or commissioning entity 2. **Scope of Work** • Description of immersive solution delivered • Hardware and digital integration components 3. **Deployment Context** Nature of installation: • Permanent or semi-permanent • Outdoor or semi-outdoor • Temporary/mobile XR hubs **4. Durability & Environmental Considerations**	20	0 Points - P Experience demonstrated is very limited or not relevant to the required scope. Projects reflect minimal complexity and little alignment with immersive exhibition or installation environments. **OR** If any of the submitted projects are missing the required client reference letter in the specified format of relevant alignment with the required scope 5 Points – Experience demonstrated is partially relevant but limited in depth. Projects show some exposure to immersive solutions, but overall capability appears basic or inconsistent. . 10 Points –Experience demonstrated is relevant and credible , but lacks depth and consistency across all required components: 15 Points – Experience demonstrated is strong and consistently relevant. Projects reflect good depth, complexity, and practical implementation in immersive exhibition and installation environments. 20 Points – Experience demonstrated is highly relevant, extensive, and of a consistently high standard. Projects reflect significant depth, innovation, and complexity, indicating a strong capability to deliver high-quality immersive solutions in varied environments.

	• Measures taken for durability, weatherproofing, or environmental resilience **5. Interactive & Visitor Engagement Elements** • Use of QR codes, triggers, or interactive digital content **6. Supporting Evidence** • Photographic evidence (minimum 8 images per project) • Signed reference letter for each project issued on the client's official letterhead, signed by an authorised representative and including client contact details for verification.		
4. Team Capability and Composition Demonstrate an adequately resourced and experienced team to deliver complex, multi-year project.	**Evidence required:** 1. **Team Structure** Demonstrate the ability to sustain a long term project of this scope by provide a comprehensive organogram that clearly demonstrates a structured team, including	15	0 points: No organogram is submitted. Or Not all three CVs of key personnel are submitted, or the CVs are missing required qualifications, or they show less than 5 years of directly relevant experience in XR, digital, or multi-site projects. Or less than 5 supporting team members are listed, or the submission does not include their roles, qualifications, and relevant project experience.

	defined roles, responsibilities, and reporting lines, with alignment to project delivery requirements. 2. **Key Personnel** CVs showing relevant qualifications and directly relevant experience (minimum of 5 year experience each) and a proven track record in similar XR, digital, or multi-site projects. Evidence should clearly show delivery of XR or immersive technology and implementation of complex and/or multi-site projects. CV's to be (2–3 pages max) for: Project Manager A relevant tertiary qualification at NQF Level 7 or higher (e.g. Bachelor's degree or Advanced Diploma) in: ○ Project Management ○ Engineering / ICT / Information Systems		5 points: Team is defined but insufficiently evidenced and lacks relevant depth. • Basic organogram provided, but the roles and responsibilities are unclear or incomplete • Key personnel CVs provided but shows limited relevance to proposed roles Or missing required experience or qualifications Supporting team capacity mentioned but lacks detail. Minimum number of permanent technical staff CV's submitted but lacks link to delivery capability. 10 points: Team is credible and adequately structured but lacks depth or strong specialisation. Clear organogram with defined roles and responsibilities Key Personnel CVs provided for all required roles that demonstrates relevant qualifications but demonstrates experience showing only partial involvement, low complexity, or limited relevance to the required AR/XR project scope. Additional team CV's provided with basic indication of relevant skills or functions 12 points: Well-structured and capable team with relevant experience, with minor gaps in depth or scale. Well-defined organogram with clear reporting lines and project responsibilities

	○ Business / Commerce / Management ○ Or equivalent And Project management certification or accreditation, such as: ○ PMP (Project Management Professional) ○ PRINCE2 (Foundation or Practitioner) ○ Agile / Scrum certification Technical Lead A relevant tertiary qualification at NQF Level 7 or higher in: ○ Computer Science ○ Software Engineering ○ Information Technology ○ Multimedia / Interactive Media ○ Digital Systems / Game Development ○ Or equivalent Demonstrated technical capability in:		Key personnel CVs demonstrates strong alignment to roles and relevant project experience and required qualifications Supporting team of more than 5 permanent technical staff with CVs that clearly describe roles, skills, and functional coverage 15 points: Demonstrates a highly capable, experienced, and well-resourced team, with strong evidence of capacity to deliver and sustain the project over time. Comprehensive and clearly structured organogram with defined roles, responsibilities, and reporting lines that alignment to project delivery requirements Key personnel CVs demonstrate proven track record in similar XR, digital, or multi-site projects as well as the required qualifications Strong organisational base with more than 10 relevant permanent technical staff CV's submitted thus demonstrating the ability to scale resources if required

	○ XR technologies (VR/AR/MR) ○ Systems integration ○ Software/platform development Creative/Content Lead A relevant tertiary qualification at NQF Level 7 or higher in: ○ Multimedia Design ○ Digital Media ○ Animation / Game Design ○ Visual Communication / Graphic Design ○ Film / Interactive Media ○ Or equivalent Demonstrated experience in: ○ Immersive content development ○ User experience / storytelling ○ Digital or exhibition *NB: CVs should include contactable references and qualifications must be certified within the last six months and*		

	certifications and accreditations need to be valid at the time the bid submissions closed. 3. **Supporting Team Capacity** Provide summary CV's (1page) of a minimum of 5 permanent technical staff that will be part of the supporting team, showing the qualification and appropriate technical and content experience. *NB: CVs should include contactable references and qualifications must be certified within the last six months and certifications and accreditations need to be valid at the time the bid submissions closed.* **Note**: SANParks reserves the right to verify the availability of proposed key personnel.		
5. Support, Maintenance & Lifecycle Management Demonstrate approach to technical	**Support framework document:** 1. Support Model & Availability	10	**0 points:** Submission is incomplete Three (3) or more required components missing) OR components unclear and largely generic .

support, preventive maintenance, incident management, hardware/software lifecycle, updates, and long-term sustainability.	• Support structure (e.g. helpdesk, escalation tiers) • Availability (hours, response coverage) • Remote support capability 2. Incident Management & Response • Process for logging, tracking, and resolving incidents • Response and resolution approach 3. Preventive Maintenance • Planned maintenance activities • Frequency and scope of maintenance 4. Hardware Support & Lifecycle Management • Approach to managing hardware over its lifecycle • Replacement, repair, or upgrade strategy 5. Technology Updates & Obsolescence Management • Approach to software updates and upgrades		**4 points:** Basic intent shown, but lacks structure, detail, and practical applicability. One (1) or two (2) required components missing, unclear or only briefly mentioned as general statements. **6 points:** Structured and credible approach, but limited depth and maturity. All required components addressed. **8 points:** Well-structured and operationally viable support approach, with minor gaps in long-term strategy **10 points:** Demonstrates a mature, proactive, and sustainable support model, with strong alignment to long-term operational requirements

	• Strategy to prevent solution obsolescence over time Note: Detailed Service Level Agreements (SLAs) and performance standards will be finalised during contract negotiations with the appointed service provider and are not required at bid stage.		
6. Training and Knowledge Transfer Demonstrate approach to training SANParks staff to effectively operate and support the proposed solution.	**Submit a training and knowledge transfer approach that explicitly addresses:** **1.User and Technical Training Approach** • Approach to training different user groups (e.g. end users, administrators, technical staff) • Scope and structure of training **2.Training Delivery Methods** • Methods of delivery (e.g. on-site, virtual, blended learning) • Practical or hands-on training components **3.Training Materials** • Types of materials to be provided (e.g. manuals, guides, videos)	5	**0 points:** Submission is incomplete (3 or more required components missing) OR components are unclear and largely generic **2 points:** Basic intent shown, but lacks structure, clarity, and practical detail. One (1) or two (2) required components missing Or unclear and only briefly mentioned as general statements. **3 points:** All required components addressed and a structured and credible approach given. But limited depth and enablement of long-term independence. **4 points:** All required components are addressed. Well-structured and practically implementable training approach, with minor gaps in depth. **5 points:** All required components are addressed. Demonstrates a comprehensive and sustainable capability development approach, enabling long-term independence

	• Format and accessibility of materials **4.Post-Implementation Support & Knowledge Transfer** • Approach to ongoing support after training • Mechanisms to enable SANParks staff to operate independently • Knowledge transfer processes (e.g. documentation, mentoring, handover)		
7. Environmental & Social Responsibility Demonstrate responsible and sustainable operation in alignment with SANParks' conservation mandate	**Provide a clear and solution-specific description addressing:** **1.Conservation Alignment Approach** • How the solution supports or enhances conservation objectives • Alignment with SANParks' environmental mandate **2.Energy Efficiency Measures** • Measures to minimise energy consumption • Consideration of energy use in hardware, infrastructure, and operations	5	**0 point:** Submission is incomplete three (3) or more required components missing OR components unclear and largely generic with no meaningful consideration of environmental or social responsibility. **2 points:** Basic intent shown, but generic and not solution specific. One (1) or two (2) required components missing or only briefly mentioned as general statements. **3 points:** All required components addressed and demonstrates some practical alignment, but lacks depth and specificity. Or Some components only partially explained.

	3.Environmental / Conservation Considerations • Measures to minimise environmental impact (e.g. footprint, materials, installation impact) • Suitability for sensitive or protected environments **4.Inclusive Access** • Consideration of accessibility for diverse user groups • Measures to support inclusive visitor experiences **5.Responsible Technology Use** • Approach to ethical and responsible use of technology • Consideration of long-term sustainability and appropriateness of technology choices		**4 points:** Well-considered and practically applicable environmental and social approach, with minor gaps in depth. **5 points:** Demonstrates a comprehensive, practical, and solution-integrated approach to environmental sustainability and social responsibility, strongly aligned to SANParks' mandate
TOTAL POINTS		**100**	

Note: Hardware demonstration and creative content quality will be evaluated in Phase 3: Live Demonstration (see separate criteria).

Minimum Qualifying Score: 75 points out of 100 required to proceed to Phase 3.

Phase 3: Demonstration / Presentation Evaluation Criteria

Live Demonstration Evaluation Criteria

The final evaluation stage will consist of in-person site visits to shortlisted bidders. At this stage, bidders must demonstrate examples of cross-disciplinary immersive work they have successfully delivered to date. This includes but is not limited to Virtual Reality (VR), Augmented Reality (AR), or other immersive technologies.

It is vital that bidders demonstrate their capabilities with specialised equipment, as immersive technologies and the quality of production will be assessed through direct experience. The demonstration will allow SANParks' evaluation committee to verify the bidder's technical expertise, creative quality, hardware integration, and ability to deliver sustainable immersive solutions at the required scale.

Important Notes:

- Demonstrations are scheduled for 90 minutes per bidder. All equipment must be ready and set up by the bidder beforehand.
- Bidders may only include support staff employed by the bidder to assist with the demonstration.

Bidders will be required to achieve a **minimum qualifying score of 75 out of 100 points (75%)** in Phase 3: Demonstration / Presentation Evaluation to be eligible to proceed to the next stage of evaluation.

Criteria	Evidence Required	Points	Scoring
A. Content Quality & Storytelling To assess the bidder's creative capability,	**Bidders must present a portfolio of at least five (5) live immersive projects previously delivered that cannot be demonstrated practically (as per B. below but are relevant to the bid). These may include:** - Virtual Reality (VR) experiences	**20**	**0 points:** No portfolio provided, or examples do not demonstrate immersive technologies relevant to the project. Demonstration does not meet minimum requirements.

production quality, and ability to deliver impactful immersive storytelling aligned with conservation objectives.	- Augmented Reality (AR) applications - Interactive installations or displays - Experiential demonstration component. **The portfolio must demonstrate:** - High production quality (visuals, sound, and user interaction) - Strong storytelling with clear educational or interpretive value - Integration of conservation or environmental messaging - Cultural sensitivity and authenticity where applicable - Creativity and innovation in the use of immersive technology		**5 points:** Portfolio shows limited immersive work with basic production quality. Storytelling is weak or unclear, with minimal educational or conservation value. Limited evidence of innovation or technical depth. **10 points:** Portfolio demonstrates relevant immersive projects with satisfactory production quality and clear storytelling. Some educational or conservation messaging evident. Demonstrates basic technical capability and creative execution. **15 points:** Portfolio demonstrates high-quality immersive experiences with strong storytelling, good production value, and clear conservation or educational impact. Demonstrates creativity, technical competence, and experience delivering similar projects. **20 points:** Portfolio demonstrates outstanding immersive work with exceptional production quality, compelling storytelling, and strong conservation impact. Clear evidence of innovation, technical excellence, cultural sensitivity, and the ability to deliver complex immersive experiences at scale. Demonstrates mature capability and industry-leading standards.
B. Immersive Experience Quality & Hardware Demonstration	Experiential demonstration component. All solutions must be demonstrated live on fully functional hardware during the site visit. Video recordings, screenshots, or simulations will not be accepted.	**20**	**0 points:** Required live demonstrations not provided, hardware not functional, or bidder fails to demonstrate the minimum required immersive formats. **5 points:** Limited formats demonstrated or demonstrations show usability challenges. Visitor interaction is not intuitive, limited accessibility

Evaluate the quality of the end-to-end visitor experience across immersive platforms, including usability, accessibility, intuitive design, and overall experience quality.	**Bidders must demonstrate live experiences across the following formats:** - VR headset experience (fully interactive, minimum 5-minute experience) - AR or mobile experience (working AR experience with interactive elements) - Large-format or interactive display (touchscreen, projection mapping, or similar) - QR-triggered WebAR experience (QR scan launching content on a mobile device without requiring an app download) - At least one additional immersive format proposed in the bidder's solution **During the live demonstrations, bidders must show:** - Ease of use and intuitive visitor interaction - Clear user instructions and navigation guidance - Suitability for diverse audiences (different ages, abilities, and languages) - Accessibility features (such as captions, audio guidance, or similar) - Quality of visual and interaction design (user interface, layout, animation, and overall finish)		considerations, and overall experience quality is basic. Hardware integration appears immature or unreliable. **10 points:** Required formats demonstrated with functional hardware. Visitor experience is generally usable with clear navigation. Some consideration given to accessibility and user experience design. Demonstrates adequate capability to deliver functional immersive experiences. **15 points:** Strong demonstrations across required formats with intuitive interaction, clear guidance, and good accessibility considerations. Demonstrates good visual design, stable hardware integration, and the ability to deliver engaging multi-audience experiences. **20 points:** Exceptional visitor experiences demonstrated across all required formats with seamless hardware integration, highly intuitive interaction, strong accessibility design, and outstanding visual and interaction quality. Demonstrates mature capability to deliver inclusive, scalable, and high-quality immersive visitor experiences.
C. Cross-Platform Integration Evaluate the bidder's ability to	Bidders must demonstrate **at least one example** of immersive content that has been successfully deployed across multiple platforms, demonstrated live where possible.	**20**	**0 points:** No relevant example provided or bidder fails to demonstrate cross-platform integration.

deliver a seamless immersive experience across multiple digital platforms.	**The example should show integration across platforms such as:** - Mobile applications (iOS or Android) - Web platforms - VR hardware - Social media platforms **Bidders must demonstrate:** - Consistency of the user experience across platforms - How certain content can adapt to different devices - Ease of use and intuitive design - Accessibility considerations - Overall quality and continuity of the visitor experience		**5 points:** Example provided but limited evidence of integration across platforms. Experience appears inconsistent with usability or design gaps. **10 points:** Demonstrates a relevant example with acceptable integration across at least two platforms. Shows basic consistency of user experience and functionality. **15 points:** Strong example demonstrating good integration across multiple platforms with consistent user experience, good usability, and clear design considerations. **20 points:** Exceptional example demonstrating seamless cross-platform integration, consistent and high-quality user experience, strong usability, and clear technical maturity.
D. Operational Readiness Evaluate whether the proposed solution can operate reliably in SANParks' real-world environments, including remote locations, outdoor conditions, limited	Bidders must demonstrate and explain how their solution addresses the following: **Hardware durability** - Suitability for high-traffic environments - Outdoor or semi-outdoor capability - Power management Offline functionality (live demonstration required) - Demonstrate functionality without internet connectivity - Show how content can be accessed offline	**20**	**0 points:** No demonstration provided or solution does not address operational requirements such as durability, offline capability, or scalability. **5 points:** Limited consideration of SANParks' operating environments. Weak evidence of hardware durability, offline capability, or deployment readiness. Significant risks identified in reliability or scalability. **10 points:** Solution demonstrates acceptable durability and basic offline functionality. Some consideration given to deployment and support. Demonstrates capability to

connectivity, and high visitor volumes.	- Explain how data or content is managed when connectivity is restored Scalability and deployment - Approach to standardised deployment across multiple parks - Production readiness of the solution - Support and maintenance model		operate in controlled environments but limited evidence of readiness for complex or remote conditions. **15 points:** Strong evidence of solution durability, offline functionality, and operational readiness. Demonstrates good understanding of SANParks environments, with a clear deployment and support approach for multiple sites. Risks appear manageable. **20 points:** Exceptional demonstration of a robust, scalable, and production-ready solution. Strong evidence of durability for high-traffic and outdoor environments, seamless offline capability, clear scalability across multiple parks, and a mature support and lifecycle management approach. Demonstrates low implementation risk.
E. SANParks Concept Proposals Evaluate the bidder's understanding of SANParks' mandate, conservation objectives, and visitor experience requirements.	Bidders must present **one original immersive concept** tailored to a SANParks environment, demonstrating how immersive technology can enhance visitor engagement and conservation awareness. **The concept must include:** - A clear description of the proposed experience - Visual mock-ups, storyboards, or concept designs - Integration of conservation or environmental messaging - User interaction approach - Consideration of accessibility and diverse visitor groups	**20**	**0 points:** No concept presented or concept does not address SANParks' environment, conservation mandate, or visitor experience requirements. **5 points:** Concept shows limited understanding of SANParks' context. Proposal lacks creativity, conservation alignment, or practical implementation considerations. Minimal detail provided. **10 points:** Concept demonstrates a basic understanding of SANParks' context and visitor needs. Some conservation messaging and user experience considerations included. Concept appears feasible but lacks innovation or depth.

			15 points: Well-developed concept demonstrating strong understanding of SANParks' mandate, visitor experience, and conservation objectives. Good creativity, clear user interaction design, and practical implementation considerations evident. **20 points:** Exceptional concept demonstrating deep understanding of SANParks' environment, conservation mission, and visitor profiles. Highly creative, practical, and well-structured proposal with strong conservation messaging, accessibility considerations, and clear potential to enhance visitor engagement.
	TOTAL POINTS	**100**	

PRICING — SBD 3.3 (Professional Fees)

Provide pricing for the full 5-year project as set out in the tables below.

Bidders must complete all applicable sections of the pricing schedule. Pricing must be aligned to the scope of work and include all costs necessary to deliver the full solution as specified in the Terms of Reference.

Pricing must:

- Be quoted in South African Rand (ZAR) and exclude VAT (VAT must be shown separately).
- Include all costs.
- Remain valid for at least 180 days
- Clearly state escalation percentages where applicable

Note: Failure to price mandatory items will result in disqualification.
Travel and Logistics:
All travel costs must be claimed in accordance with the following policies:

- Service providers must use the AA rates for kilometre claims and must adopt the SANParks subsistence policy for daily allowance claims.
- Accommodation at parks will be arranged by SANParks. Where park accommodation is not available, the service provider must arrange own accommodation in close proximity to the relevant park, reimbursed at no greater than the National Treasury approved rates.
- International travel, where required and pre-approved by SANParks, will be reimbursed in accordance with SANParks travel and subsistence policy.

Hardware pricing must include:

- Supply
- Delivery
- Installation
- Configuration
- Testing
- Warranty

Deployment pricing must include:

- Installation
- Configuration
- Testing
- Commissioning
- Staff training

The quantities in the pricing schedules are for evaluation purposes only and do not represent a commitment to procure. The pricing estimates need to follow the minimum requirements given in Section 4.8.1. SANParks will use these quantities to calculate a notional total price for fair comparison across bidders, but actual work will be determined by operational requirements, approved budgets, and annual work plans.

SANParks reserves the right to negotiate unit rates with the preferred bidder prior to contract award.

The final evaluation of qualifying bids will be conducted based on price and Specific Goals.

SECTION A: CONTENT PRODUCTION (MANDATORY)

Category	Item Description	Unit	Unit Price (ZAR)	Quantity (Estimated)	Total Price (ZAR)
3D VR Content	Simple	Per experience			
	Standard	Per experience			
	Complex	Per experience			
AR Content	Simple	Per experience			
	Standard	Per experience			
	Complex	Per experience			
360-degree Content	10 MIN	Per production			
Interactive Display Content		Per production			
Multimedia Content	Video Editing	Day Rate			
	2D/3D Motion Graphics	Day Rate			

	3D Modelling/Animation	Day Rate			
	Photography	Day Rate			
	Videography	Day Rate			
Audio Content	Simple	Per experience			
	Standard	Per experience			
	Complex	Per experience			
Virtual Accommodation		Per accommodation type			
TOTAL (ZAR):					

Note: Unit rates are inclusive of content planning and development.

SECTION B: HARDWARE SUPPLY (MANDATORY)

Category	Item Description	Unit	Unit Price (ZAR)	Quantity (Estimated)	Total Price (ZAR)
Interactive Display Screen	Small (include specifications)	Per unit			
	Large (include specifications)	Per unit			
	Touchscreen (include specifications)	Per unit			
Projection System	Standard HD (include specifications)	Per system			
	High End/Laser 4K (include specifications)	Per system			
VR Headset	(include specifications)	Per unit			
AR-Capable Device	(include specifications)	Per unit			
Audio Guide Device	(include specifications)	Per system			
Media Server	(include specifications)	Per site			
Mounting and Infrastructure		Per site			
Additional Hardware Options	(include description and specifications)	Per unit			
Additional Hardware Options	(include description and specifications)	Per unit			
Additional Hardware Options	(include description and specifications)	Per unit			
TOTAL (ZAR):					

SECTION C: DEPLOYMENT & IMPLEMENTATION (MANDATORY)

Category	Item Description	Unit	Unit Price (ZAR)	Quantity (Estimated)	Total Price (ZAR)
Deployment and Implementation	Gate	Per Gate			
	Reception	Per Site			
	Large Interpretation Centre	Per Site			
	Small Interpretation Centre	Per Site			
	AR signboard deployment	Per Site			
	Event XR	Per Event			
	Mobile App Integration	Per integration			
	Website Integration	Per Integration			
	Virtual Accommodation	Per unit			
TOTAL Deployment and Implementation (ZAR):					

SECTION D: ANNUAL SERVICE FEE (MANDATORY)

Service Component	Included (Yes/No)	Year 1 (ZAR)	Year 2 (ZAR)	Year 3 (ZAR)	Year 4 (ZAR)	Year 5 (ZAR)
Account Management						
Platform Management						
Content Management						
Hosting and Storage						
Monitoring						
Maintenance						
Technical Support						
Training						
Software Updates						
Reporting						
Escalation %						
Total 5-year service cost:						

SECTION E: TOTAL BID SUMMARY

Cost Category	Total Price (ZAR) excl. VAT	Total Price (ZAR) incl. VAT
Content Production		
Hardware		
Deployment		
5-Year Service Fees		
Total Bid Price (Excl VAT)		
VAT @ 15%		
Total Bid Price (Incl VAT)		

ANNEXURE A

USE CASES AND APPLICATION SCENARIOS

Use Case 1: Event Exhibition VR Experience

User Group: Delegates, government officials, conference attendees, media representatives

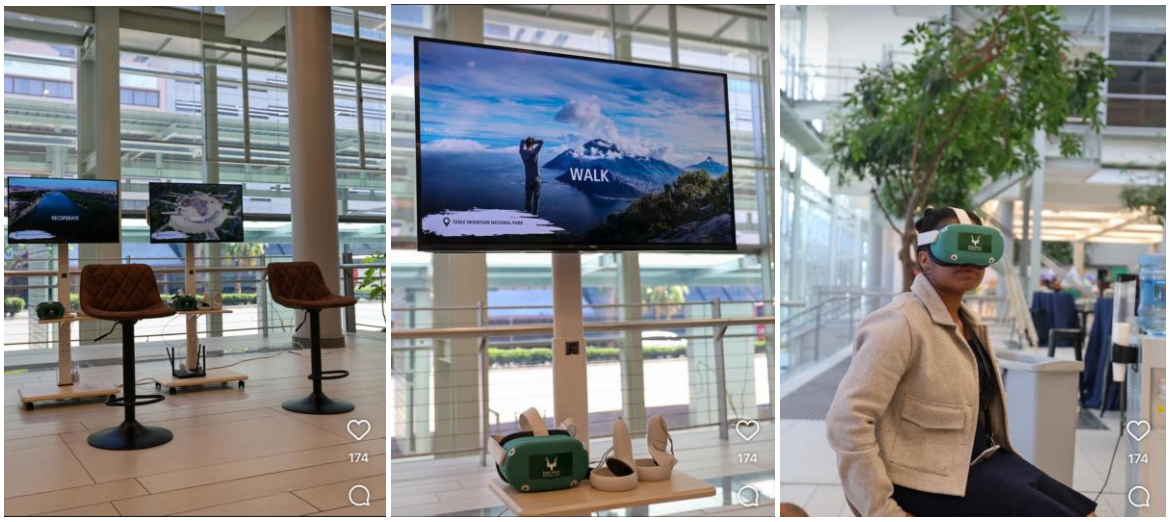
Context: Exhibition booths at conferences (G20, COP meetings, tourism expos, diplomatic gatherings)

Objectives:

- Enable remote, immersive exploration of SANParks destinations for audiences who cannot visit in person
- Promote South Africa's natural heritage and conservation efforts internationally
- Create memorable experiences that increase brand awareness and conservation support
- Provide accessible "virtual visits" to multiple park landscapes within confined exhibition spaces

Key Requirements:

- Portable, exhibition-ready VR hardware for high-traffic environments
- High-quality, photorealistic 360° content of national park landscapes
- Intuitive UX requiring minimal instruction for diverse international audiences
- Reliable equipment for extended daily operation during multi-day events
- Professional booth setup, technical support, and on-site troubleshooting
- Content sessions of 3-5 minutes to accommodate event flow



Use Case 2: SANParks Mobile App AR/VR Integration

User Group: Park visitors using personal smartphones/tablets

Context: Before, during (for AR), and after park visits; at home for trip planning

Objectives:

- Drive mobile app downloads and active usage
- Enhance pre-visit planning with immersive previews of parks and activities
- Provide in-park AR overlays for enhanced interpretation and wayfinding
- Enable post-visit engagement and sharing of experiences

Key Requirements:

- Flutter/Dart/Java integration without full app redevelopment (or support for on device AR tools (Google etc in browser AR viewing)
- iOS and Android compatibility across diverse device specifications
- Offline-first functionality for areas with poor connectivity
- APK size management (max 1.8GB with modular downloads for additional content)
- WebAR options to reduce app payload
- AR features triggered by QR codes or geolocation

Use Case 3: Virtual Accommodation Tours

User Group: Prospective visitors researching and booking accommodation

Context: SANParks website booking platform, accessed from home/office

Objectives:

- Increase accommodation bookings through enhanced previews
- Set accurate visitor expectations of accommodation facilities
- Showcase unique features and views of different accommodation types
- Reduce booking-related queries and disappointment

Key Requirements:

- 360° virtual tours of popular accommodation units
- Integration with existing booking system without disruption
- Interactive hotspots highlighting amenities and features
- Fast loading times and cross-browser compatibility
- Easy content updates when accommodation is renovated
- Mobile-responsive design for smartphone browsers

Use Case 4: Gate Visitor Engagement & Pre-Entry Experience

User Group: Visitors waiting at park entry gates during peak periods

Context: Vehicle queues at park gates, particularly during holidays and weekends

Objectives:

- Transform waiting time into an engaging, enjoyable experience — XR technology cannot resolve gate queues, but it can make them feel shorter and more worthwhile.
- Deliver Park rules, safety guidelines, and conservation messages through entertaining formats visitors actually want to engage with.
- Build visitor awareness and positive attitudes before entry.

Key Requirements:

- Entertainment-first approach — rules and safety messaging embedded in animation, storytelling, wildlife previews, or gamification rather than presented as instructions.
- Content accessible via QR codes (no app download required), digital signage, or the SANParks mobile app — must work for visitors stationary in vehicles.
- Deployable across all 5 confirmed gate sites in Annexure B, accommodating varying infrastructure from Phase 1 (Skukuza Airport) through to future development gates.
- Reliable performance in outdoor/semi-outdoor conditions — heat, dust, direct sunlight, and intermittent power.
- Short-form, looping content suited to variable waiting times.
- Low maintenance for remote locations with limited on-site support.

Use Case 5: Interactive Reception Displays

User Group: Visitors at park reception areas seeking information or waiting for check-in

Context: Reception buildings at park entrances and main camps

Objectives:

- Provide engaging information during visitor waiting periods
- Showcase Park highlights, activities, and accommodation options
- Reduce staff workload by enabling self-service information access
- Promote lesser-known activities and conservation initiatives

Key Requirements:

- Central, updatable touchscreen displays or interactive kiosks, deployable across the 12 confirmed main camp and reception sites in Annexure B.
- QR code-triggered experiences accessible on personal devices without app downloads (WebAR preferred) — the primary digital engagement method across the majority of these sites, covering both indoor and semi-outdoor environments.
- QR infrastructure must support SANParks-generated codes for future content without service provider intervention per each new code.
- QR-triggered content must cover: park highlights, conservation narratives, park rules, audio guides, and pathways to the SANParks mobile app.
- Offline-first delivery for all QR-triggered and display-based experiences, given limited connectivity at most main camp sites (refer to Annexure D network data).

- Remote content management enabling SANParks to update all 12 sites centrally without on-site intervention.
- Robust, vandal-resistant hardware for high-traffic use across diverse environments including heat, dust, and humidity.
- Audio descriptions and captions for visitors with disabilities.
- Integration with the SANParks mobile app and booking system to support the full visitor journey.
- Device management system with remote health monitoring, diagnostics, and usage analytics across all sites.
- Staff training for first-line troubleshooting, content refresh, and visitor assistance at each site.

Use Case 6: Interpretation Centre Immersive Installations

User Group: Park visitors, school groups, educational tour participants

Context: Permanent interpretation centres within national parks

Objectives:

- Modernize interpretation to appeal to digital-native generations
- Provide deeper educational content about ecosystems, geology, and heritage
- Create memorable learning experiences about conservation
- Enable visitors to "experience" areas they cannot physically access

Key Requirements:

- Three-tier hardware format approach:
- Portable: VR headsets, tablets with AR experiences
- Mid-Scale: Interactive touchscreen displays, projection systems
- Large-Scale: 360° domes, immersive projection rooms
- Content featuring park-specific biodiversity, geological formations, cultural heritage
- Audio guide integration for exhibits (e.g., dinosaur displays with environmental context)
- QR-triggered AR enhancements (e.g., animated prehistoric environments)
- Hygiene protocols for shared devices
- Maintenance framework and content update capabilities

Use Case 7: Augmented Interpretation Boards & Trail Signage

User Group: Hikers, trail users, visitors at viewpoints and interpretation sites

Context: Trails, viewpoints, heritage sites, and outdoor interpretation locations

Objectives:

- Modernize static interpretation boards with digital enhancements
- Provide layered information accessible via personal devices
- Deliver inclusive conservation stories (indigenous knowledge, community voices)
- Visualize climate change impacts and restoration interventions

Key Requirements:

- QR codes on interpretation boards triggering WebAR content (no app download required)
- Content types: 3D models, videos, audio narratives, historical overlays
- Weatherproof QR code installations
- Offline content caching for areas without connectivity
- Accessibility features (audio descriptions)
- Low energy consumption for any powered display components
- SANParks mobile app integration where appropriate

Use Case 8: Website Immersive Storytelling

User Group: Website visitors researching parks, planning trips, learning about conservation

Context: SANParks website accessed via desktop and mobile browsers

Objectives:

- Enhance pre-trip planning with immersive previews
- Tell conservation and SET (Socio-Economic Transformation) stories engagingly
- Showcase restoration projects and community partnerships
- Drive booking conversions through compelling content

Key Requirements:

- Minimum 2 immersive content pieces integrated into website
- Progressive web technologies (PWA) for offline capability
- WebAR and 360° viewers requiring no plugins
- Responsive design for desktop and mobile
- Content themes: conservation successes, community-led tourism, climate resilience
- Fast loading times and SEO optimization

Use Case 9: YouTube & Social Media Content

User Group: Online audiences, social media followers, potential park visitors

Context: SANParks YouTube channel, Facebook, Instagram, other social platforms

Objectives:

- Increase YouTube views and channel growth
- Expand social media reach and engagement
- Drive awareness of parks, conservation efforts, and community initiatives
- Create shareable content that promotes SANParks organically

Key Requirements:

- Minimum 2 content integration proposals for YouTube/social platforms
- Formats: 360° video, short-form social content, long-form documentary
- Park-specific content (no AI-generated material)
- Content themes: wildlife encounters, community tourism, conservation operations, youth programs
- Optimization for each platform's specifications
- Consideration for audience growth and potential monetization

Use Case 10: Educational & School Outreach (Illustrative)

User Group: School learners, educators, educational tour groups

Context: School visits to park education centres, classroom environments, virtual school programs

Objectives:

- Support SANParks' existing youth engagement and environmental education activities through immersive, age-appropriate content.
- Provide access to park ecosystems for schools unable to arrange in-person field trips.
- Foster environmental stewardship among younger generations in an engaging and memorable way.

Key Requirements (illustrative):

- Age-appropriate content with educational narration suitable for Grades 4–12.
- Content that complements — but does not require alignment to — national curriculum standards.
- Short, structured experiences (10–15 minutes) suitable for classroom or education centre use.
- Accessible via the SANParks mobile app, website, or QR-triggered WebAR — no dedicated hardware assumed.

Use Case 11: Accessibility & Inclusive Tourism

User Group: Persons with disabilities, elderly visitors, mobility-limited guests, visually/hearing impaired visitors

Context: Accessible facilities within parks, visitor centres

Objectives:

- Provide inclusive access to natural environments for persons unable to access challenging terrain
- Support SANParks' commitment to universal access

Key Requirements:

- Wheelchair-accessible VR stations with adjustable seating
- Content featuring terrains typically inaccessible to mobility-limited visitors
- Audio descriptions and closed captioning for all visual content
- Simplified, accessible user interfaces with assistive controls
- Longer experience options (10-20 minutes) for therapeutic engagement

These use cases provide clear, practical examples of how the XR solutions will be deployed across SANParks' operations, giving bidders a comprehensive understanding of the real-world applications expected while keeping the documentation concise and focused.

ANNEXURE B

The following table provides an initial draft of the proposed deployment sites and is intended to serve as an indication of the anticipated scope of the tender, both in terms of the types of deployments envisaged and the geographic spread of locations. The final deployment plan will be refined and confirmed during the project implementation phase and will be co-developed with the appointed service provider as part of the project deliverables. This plan may include additional sites not listed below, such as newly proclaimed national parks or locations not yet known at the time of publication. Such sites will be priced using the unit rates established in this tender.

Bidders requiring the full deployment sites spreadsheet may request it from the bid office using the contact details provided in this document.

PRIORITY DEPLOYMENT LOCATIONS

Park	Hub	Name	Infrastructure Type	Priority	Mobile app integrations	Website immersive content	Virtual Accommodation Tours	Social media and YouTube	Gate and Reception Visitor Experience	Interpretation Centres	QR code-triggered experiences	Mobile Hub
HEAD OFFICE	Groenkloof	Mobile Hub for Head Office Marketing & Communication Events	Shows, Exhibitions & Events	High priority - Phase 1		X		X			X	X
|Ai-|Ais/Richtersveld	Sendelingsdrift	Richtersveld Botanic Garden	Interpretation site	Medium priority - Phase 2		X		X			X	
Addo Elephant	Main Camp	Ulwazi Interpretation Centre	Interpretation centre	Medium priority - Phase 2	X	X		X		X	X	

		Addo Main Camp Reception	Main camp	High priority - Phase 1	X	X	X	X	X		X	
Agulhas	Agulhas Lighthouse	Agulhas Interpretation Centre	Interpretation centre	Medium priority - Phase 2	X	X		X		X	X	
		Agulhas Lighthouse	Interpretation site	Medium priority - Phase 2		X		X			X	
Augrabies Falls	Augrabies Falls Rest Camp	Augrabies Falls Reception Interpretation area	Interpretation centre	Medium priority - Phase 2	X	X		X		X	X	
		Augrabies Falls Rest Camp	Main camp	High priority - Phase 1	X	X	X	X	X		X	
Camdeboo		Valley of Desolation Viewing Deck	Interpretation site	Medium priority - Phase 2		X		X			X	
Garden Route - Knysna		Diepwalle Museum	Interpretation site	Medium priority - Phase 2		X		X			X	
Garden Route - Tsitsikamma		N2 Big Tree	Interpretation site	Medium priority - Phase 2		X		X			X	
		Restaurant Complex	Interpretation site	Medium priority - Phase 2		X		X			X	
		Conference Room	Interpretation site	Medium priority - Phase 2		X		X			X	
Garden Route - Wilderness	Ebb & Flow	Reception Complex	Interpretation site	High priority - Phase 1		X		X	X		X	

Golden Gate		Kgodumodumo Dinosaur Centre	Interpretation centre	High priority - Phase 1	X	X		X		X	X	
	Golden Gate Hotel & Chalets	Golden Gate Hotel & Chalets	Main camp	High priority - Phase 1	X	X	X	X	X		X	
		Wilgenhof Environmental Education Centre	Interpretation centre	Medium priority - Phase 2	X	X		X		X	X	
		Basotho Cultural Village	Interpretation centre	Medium priority - Phase 2	X	X		X		X	X	
Groenkloof Head Office	Reservation offices	Reservations Offices	Interpretation site	High priority - Phase 1		X		X	X		X	
Karoo	Karoo NP Rest camp	Karoo NP Rest Camp reception	Main camp	High priority - Phase 1	X	X	X	X	X		X	
		Fossil Trail	Interpretation site	Medium priority - Phase 2		X		X			X	
		Grantham Environmental Centre	Interpretation centre	Medium priority - Phase 2	X	X		X		X	X	
Kgalagadi Transfrontier	Twee Rivieren	Twee Rivieren reception	Main camp	High priority - Phase 1	X	X	X	X	X		X	
		Twee Rivieren IC	Interpretation centre	Medium priority - Phase 2	X	X		X		X	X	
		Twee Rivieren Gate	Interpretation site	High priority - Phase 1		X		X	X		X	

		Nossob	Rest Camp	High priority - Phase 1	X	X		X	X		X	
	Nossob	Nossob Predator Centre	Interpretation centre	Medium priority - Phase 2	X	X		X		X	X	
	Mata Mata	Mata Mata Raptor Centre	Interpretation site	Medium priority - Phase 2		X		X			X	
Kruger		Nombolo Mdhluli Conference Centre	Interpretation site	High priority - Phase 1		X		X	X		X	
		Stevenson-Hamilton Memorial Library & Museum	Interpretation centre	Medium priority - Phase 2	X	X		X		X	X	
		Goldfields Auditorium	Interpretation centre	Medium priority - Phase 2	X	X		X		X	X	
		Skukuza Day Visitor Site	Interpretation site	Medium priority - Phase 2		X		X			X	
		Skukuza Indigenous Nursery	Interpretation centre	Medium priority - Phase 2	X	X		X		X	X	
		Skukuza Airport	Main Access Gate	High priority - Phase 1	X	X		X	X		X	
		Paul Kruger	Main Access Gate	High priority - Phase 1	X	X		X	X		X	
	Berg-en-Dal	Reception Complex	Main camp	High priority - Phase 1	X	X	X	X	X		X	

	Conference Centre	Interpretation site	High priority - Phase 1		X		X	X		X	
	Berg-en-Dal Rhino Centre	Interpretation centre	Medium priority - Phase 2	X	X		X		X	X	
	Letaba Elephant Hall	Interpretation centre	High priority - Phase 1	X	X		X		X	X	
Crocodile Bridge	Greater Reception Precinct	Main camp	High priority - Phase 1	X	X	X	X	X		X	
	Orpen	Main Access Gate	High priority - Phase 1	X	X		X	X		X	
	Mopani Conference Rooms	Interpretation site	High priority - Phase 1		X		X	X		X	
Shingwedzi	Shingwedzi restcamp	Main camp	High priority - Phase 1	X	X	X	X	X		X	
Olifants	Olifants Shop & Restaurant complex	Interpretation site	High priority - Phase 1		X		X	X		X	
	Olifants Audiovisual Room	Interpretation site	Medium priority - Phase 2		X		X			X	
Phabeni	Phabeni Interpretation Site/Albasini Ruins	Interpretation site	Medium priority - Phase 2		X		X			X	
	Masorini Picnic Site	Interpretation site	Medium priority - Phase 2		X		X			X	

Mapungubwe		Mapungubwe Interpretation Centre	Interpretation centre	High priority - Phase 1	X	X		X		X	X	
		Various view points/ outdoor displays	Display boards	Medium priority - Phase 2		X		X			X	
Marakele		Thutong Enviromental Centre	Interpretation centre	Medium priority - Phase 2	X	X		X		X	X	
Mokala		Mokala Interpretation Centre	Interpretation centre	Medium priority - Phase 2	X	X		X		X	X	
		Liliydale	Main camp	High priority - Phase 1	X	X	X	X	X		X	
		Mosu Lodge	Main camp	High priority - Phase 1	X	X	X	X	X		X	
Mountain Zebra		Mountain Zebra Restcamp	Main camp	High priority - Phase 1	X	X	X	X	X		X	
Namaqua		Skilpad Interpretation Centre	Interpretation centre	Medium priority - Phase 2	X	X		X		X	X	
Table Mountain		Buffelsfontein Visitor Centre	Interpretation centre	High priority - Phase 1	X	X		X		X	X	
		Table Mountain	Interpretation site	Medium priority - Phase 2		X		X	X		X	
		Lion's Head	Interpretation site	Medium priority - Phase 2		X		X			X	

	Signal Hill	Interpretation site	Medium priority - Phase 2		X		X			X	
	Woodhead Dam Waterworks Museum	Interpretation centre	Medium priority - Phase 2		X		X		X	X	
	Various view points/ outdoor displays	Display boards	Medium priority - Phase 2		X		X			X	
Cape Point	Cape Point	Interpretation site	Medium priority - Phase 2		X		X			X	
	Boulders Beach Gate 1 (Penguins)	Main Access Gate	Medium priority - Phase 2	X	X		X	X		X	

ANNEXURE C

COMPLIANCE STANDARDS

Digital accessibility

WCAG 2.1 Level AA for all web-based and interactive digital content, at least equivalent to the requirements of ISO/IEC 40500:2012 (WCAG 2.0).

Physical accessibility and building standards

Applicable South African National Standards (SANS), including SANS 10400 (National Building Regulations, including Part S: Facilities for persons with disabilities).

Electrical, safety and installation standards

OHS Act 85 of 1993 and associated regulations; SANS 10142-1 (Wiring of Premises) and relevant SANS/IEC safety standards (including local adoptions of IEC 62368-1); and applicable building and fire safety regulations and standards.

Legal and regulatory requirements

POPIA for any collection or processing of personal information; PEPUDA, the Constitution, and other equality and anti-discrimination laws; applicable IP, copyright and content classification legislation.

User experience and ergonomics for immersive media

Relevant principles from the ISO 9241 series (ergonomics of human-system interaction) and recognised international best practice for VR/XR/AR comfort, safety and accessibility.

ANNEXURE D

NETWORK INFRASTRUCTURE AND BANDWIDTH DETAILS FOR SANPARKS SITES

Site Name	Link	Connectivity	Bandwith (Mbps)
Addo BSP	WAN 1	Microwave	10
Addo Camp	WAN 2	LTE	5
Addo Camp	WAN 1	Microwave	10
Addo Gate - Wireless LAN with Addo Camp	WAN 2	LTE	5
Addo Gate - Wireless LAN with Addo Camp	WAN 1	Microwave	5
Addo Marine Rangers - NO TPMS	WAN 1	Microwave	5
Agulhas Admin Offices	WAN 2	LTE	10
Agulhas Admin Offices	WAN 1	Microwave	10
Agulhas Light House - Wireless LAN to Offices	WAN 1	Microwave	LAN
Augrabies Camp	WAN 1	Fibre	20
Augrabies Camp	WAN 2	LTE	20
Bateleur Camp	WAN 1	Microwave	5
Berg-en-dal Camp	WAN 2	LTE	5
Berg-en-dal Camp	WAN 1	Microwave	5
Biyamiti Camp	WAN 1	Microwave	5
Bloukrans Forest Station - NO TPMS	WAN 1	LTE	5
Bontebok (Lang Elsieskraal)	WAN 1	Microwave	5
Bosheuwel - NO TPMS	WAN 1	Microwave	5
Boulders Beach	WAN 1	Fibre	5
Boulders Beach	WAN 2	Microwave	5
Boulders Gate 2 (in place of Orange Kloof)	WAN 1	Microwave	5
Buffelsfontein Visitors Centre (BVC)	WAN 1	Fibre	5
Buffelsfontein Visitors Centre (BVC)	WAN 2	Microwave	5
Camdeboo Offices	WAN 1	Fibre	5
Cape Point Gate	WAN 1	Fibre	5
Cape Point Gate	WAN 2	Microwave	5
Colchester Ranger - NO TPMS	WAN 1	Microwave	5
CPT Technical Offices	WAN 1	Fibre	10
Crocodile Bridge Camp & Gate	WAN 1	Fibre	50
Crocodile Bridge Camp & Gate	WAN 2	LTE	5
Crocodile Bridge Ranger - Wireless from IP Backbone - NO TPMS	WAN 1	Microwave	LAN
Darlington Dam Ranger	WAN 1	Microwave	5
Diepwalle Forest Station	WAN 1	Microwave	5
Dithabaneng Ranger - NO TPMS	WAN 1	VSAT	2
Farleigh Forest Station - NO TPMS	WAN 1	Microwave	5
Frontier Regional Office - NO TPMS	WAN 1	Microwave	5
Game Processing Plant - Wireless LAN from Skukuza - NO TPMS	WAN 1	Microwave	LAN
Geelbek Visitors Centre	WAN 1	Microwave	5

Giriyondo Gate - NO TPMS	WAN 1	Microwave	5
Gladstone Admin Offices	WAN 1	Fibre	5
Glen Reenen Camp	WAN 1	Fibre	5
Glen Reenen Camp	WAN 2	VSAT	2/2
Golden Gate Hotel (Brandwag)	WAN 1	Fibre	10
Golden Gate Hotel (Brandwag)	WAN 2	VSAT	2/2
Goudveld Forest Station	WAN 1	Microwave	5
Groenkloof	WAN 2	Fiber	300
Groenkloof	WAN 1	Fibre	300
Groenrivier Camp	WAN 1	VSAT	2
Harkerville BSP	WAN 1	Microwave	5
Harkerville Forest Station	WAN 1	Microwave	5
Heidelberg Factory - NO TPMS	WAN 1	Microwave	5
Houtboschrand Ranger - NO TPMS	WAN 1	Microwave	5
Kabouga Ranger	WAN 1	Microwave	5
Kamieskroon Offices - NO TPMS	WAN 1	LTE	5
Karoo Camp	WAN 2	LTE	5
Karoo Camp	WAN 1	Microwave	10
Kimberley VWS - NO TPMS	WAN 1	Microwave	5
Kingfisherspruit Ranger - NO TPMS	WAN 1	Microwave	5
Klaasjagersberg Ranger - NO TPMS	WAN 1	Microwave	5
Kloofnek Ranger	WAN 1	Fibre	5
Kloofnek Ranger - NO TPMS	WAN 2	Microwave	5
Knysna Hotel	WAN 1	Fibre	5
Kransvlei, Wilderness - NO TPMS	WAN 1	Microwave	5
Kruger Gate	WAN 1	Fibre	50
Kruger Gate	WAN 2	Microwave	10
Letaba Camp	WAN 1	Microwave	10
Letaba Camp	WAN 2	VSAT	5
Lilydale Camp (Upgraded connectvity)	WAN 1	LTE	10
Lower Sabie Camp	WAN 1	Microwave	5
Lower Sabie Camp	WAN 2	VSAT	5
Lower Sabie Ranger - NO TPMS	WAN 1	Microwave	LAN
Mahlangeni Ranger - NO TPMS	WAN 1	Microwave	5
Malelane Gate	WAN 1	Fibre	50
Malelane Gate	WAN 2	Microwave	10
Malelane Ranger - Wireless from IP Backbone - NO TPMS	WAN 1	Microwave	LAN
Mapungubwe Gate	WAN 1	Microwave	10
Mapungubwe Gate	WAN 2	VSAT	10
Mapungubwe Visitors Centre - Fibre LAN to gate	WAN 1	Fibre	LAN
Marakele Gate	WAN 1	Fibre	15
Marakele Gate	WAN 2	LTE	15
Marine Office, Slangkop Tented Camp - NO TPMS	WAN 1	Microwave	5
Mata Mata Camp	WAN 1	VSAT	2
Mata Mata Camp	WAN 2	VSAT	2/2
Matyholweni Camp & Gate	WAN 2	LTE	5

Matyholweni Camp & Gate	WAN 1	Microwave	5
Mofele Lodge - Wireless LAN to Mosu Lodge	WAN 1	Microwave	LAN
Molapofifi Ranger - NO TPMS	WAN 1	VSAT	2
Mooiplaas Ranger - Wireless LAN from Mopani Camp - NO TPMS	WAN 1	Microwave	LAN
Mopani Camp Reception	WAN 1	Microwave	10
Mopani Camp Reception	WAN 2	VSAT	5
Mopani Conference - Wireless LAN from Mopani Camp - NO TPMS	WAN 1	Microwave	LAN
Mopani Linen Room - Wireless LAN from Mopani Camp - NO TPMS	WAN 1	Microwave	LAN
Moralane Ranger - NO TPMS	WAN 1	VSAT	2
Mosu Lodge	WAN 1	LTE	10
Mosu Lodge	WAN 2	VSAT	2
Mount Pleasant Regional Offices - NO TPMS	WAN 2	LTE	5
Mount Pleasant Regional Offices - NO TPMS	WAN 1	Microwave	5
Mountain Zebra Camp	WAN 2	LTE	5
Mountain Zebra Camp	WAN 1	Microwave	10
Mountain Zebra Ranger - Wireless LAN with MZ Camp - NO TPMS	WAN 1	Microwave	5
Natures Valley Camp	WAN 1	LTE	5
Newlands WfFire	WAN 1	Fibre	5
Newlands WfFire	WAN 2	LTE	5
NMMU -	WAN 1	Fibre	5
Nossob Camp	WAN 1	VSAT	2
Nossob Camp	WAN 2	VSAT	2/2
Numbi Gate	WAN 1	Fibre	50
Numbi Gate	WAN 2	Microwave	10
Nwanetsi Ranger	WAN 1	Microwave	5
Nyathi Rest Camp	WAN 1	Microwave	5
Olifants Camp	WAN 2	LTE	10
Olifants Camp	WAN 1	Microwave	10
Orpen Camp	WAN 2	LTE	10
Orpen Camp	WAN 1	Microwave	10
Orpen Gate	WAN 2	LTE	10
Orpen Gate	WAN 1	Microwave	10
Pafuri Border Camp - Wireless link to Pafuri Ranger	WAN 1	Microwave	10
Pafuri Gate	WAN 1	VSAT	5
Pafuri Ranger - NO TPMS	WAN 1	Microwave	10
Phabeni Gate	WAN 1	Fibre	50
Phabeni Gate	WAN 2	Microwave	10
Phalaborwa Gate	WAN 1	Fibre	10
Phalaborwa Gate	WAN 2	LTE	10
Pretoriuskop Camp	WAN 2	LTE	5
Pretoriuskop Camp	WAN 1	Microwave	5
Pretoriuskop Ranger and Mast - NO TPMS	WAN 1	Microwave	LAN
Punda Maria Camp	WAN 2	LTE	5
Punda Maria Camp	WAN 1	Microwave	10

Punda Maria Gate	WAN 2	LTE	10
Punda Maria Gate	WAN 1	Microwave	10
Punda Maria Ranger - NO TPMS	WAN 1	Microwave	LAN
Qwa Qwa - NO TPMS	WAN 1	VSAT	5
Richtersveld Offices	WAN 1	VSAT	2
Richtersveld Offices	WAN 2	VSAT	2/2
Rondevlei Offices - NO TPMS	WAN 1	Microwave	10
Satara Camp	WAN 1	Microwave	10
Satara Camp	WAN 2	VSAT	5
Shangoni Ranger - NO TPMS	WAN 1	Microwave	5
Shimuwini Camp	WAN 1	Microwave	10
Shingwedzi Camp	WAN 1	Microwave	10
Shingwedzi Camp	WAN 2	VSAT	5
Shingwedzi Ranger - NO TPMS	WAN 1	Microwave	10
Shingwedzi Scientists - NO TPMS	WAN 1	Microwave	LAN
	WAN 1	Microwave	10
Sirheni Camp	WAN 1	Microwave	10
Skilpad Camp	WAN 1	VSAT	2
Skukuza Airport	WAN 2	Microwave	LAN
Skukuza Airport - Fibre to MAJOC	WAN 1	Fibre	LAN
Skukuza Camp	WAN 1	Fibre	100
Skukuza Flight Services - NO TPMS	WAN 2	Microwave	LAN
Skukuza Flight Services - Fibre to MAJOC - NO TPMS	WAN 1	Fibre	LAN
Skukuza Special Operations - NO TPMS	WAN 1	Microwave	LAN
Skukuza Special Operations - Fibre to flight services	WAN 2	Fibre	LAN
Smitswinkel	WAN 1	Microwave	5
Stolsnek Ranger - NO TPMS	WAN 1	Microwave	5
Stormsriver Admin	WAN 1	Microwave	5
Stormsriver Gate	WAN 2	LTE	5
Stormsriver Gate	WAN 1	Microwave	5
Talamati Camp	WAN 1	Microwave	10
Tankwa Karoo Reception	WAN 1	Microwave	5
Tankwa Karoo Reception	WAN 2	VSAT	5
Thesen Island	WAN 1	Fibre	20
Thesen Island - NO TPMS	WAN 2	Microwave	20
Thutong Visitors Centre - NO TPMS	WAN 1	LTE	5
Tokai Cape Research Centre (CRC) (Bosdorp)	WAN 1	Fibre	5
Tokai Manor	WAN 1	Fibre	10
Tokai Manor	WAN 2	LTE	10
Tokai New office Server Room (Upgarded Fibre)	WAN 1	Fibre	20
Tokai New office Server Room (Upgarded LTE) - NO TPMS	WAN 2	LTE	20
Tokai Wild Card Sales	WAN 1	Fibre	5
Tokai Wild Card Sales	WAN 2	LTE	5
Tshokwane Ranger - NO TPMS	WAN 1	Microwave	5
Tsitsikamma Ranger (Storms River Village) - NO TPMS	WAN 1	Microwave	5

Twee Rivieren Camp	WAN 1	Fibre	10
Twee Rivieren Camp	WAN 2	VSAT	2/2
Upington Regional Office	WAN 1	Fibre	5
Vlakteplaas Ranger - NO TPMS	WAN 1	Microwave	10
Wash houses (Platteklip)	WAN 1	Microwave	5
WCNP Gate East	WAN 2	LTE	5
WCNP Gate East	WAN 1	Microwave	5
WCNP Gate North	WAN 2	LTE	5
WCNP Gate North	WAN 1	Microwave	5
WCNP Offices	WAN 2	LTE	5
WCNP Offices	WAN 1	Microwave	10
WCNP Technical Offices (- NO TPMS)	WAN 1	Microwave	5
Wilderness Camp	WAN 2	LTE	5
Wilderness Camp	WAN 1	Microwave	5
Wilgenhof Hostel - NO TPMS	WAN 1	Microwave	LAN
Woodlands Ranger - NO TPMS	WAN 1	Microwave	5
Woody Cape Ranger & BSP	WAN 1	Microwave	5
Zuurberg Ranger	WAN 1	Microwave	5

Parks/Camps with Fibre

Site Name	Link	Connectivity	Bandwith (Mbps)
Augrabies Camp	WAN 1	Fibre	20
Boulders Beach	WAN 1	Fibre	5
Buffelsfontein Visitors Centre (BVC)	WAN 1	Fibre	5
Camdeboo Offices	WAN 1	Fibre	5
Cape Point Gate	WAN 1	Fibre	5
CPT Technical Offices	WAN 1	Fibre	10
Crocodile Bridge Camp & Gate	WAN 1	Fibre	50
Gladstone Admin Offices	WAN 1	Fibre	5
Glen Reenen Camp	WAN 1	Fibre	5
Golden Gate Hotel (Brandwag)	WAN 1	Fibre	10
Groenkloof	WAN 1	Fibre	300
Kloofnek Ranger	WAN 1	Fibre	5
Knysna Hotel	WAN 1	Fibre	5
Kruger Gate	WAN 1	Fibre	50
Malelane Gate	WAN 1	Fibre	50
Mapungubwe Visitors Centre - Fibre LAN to gate	WAN 1	Fibre	LAN
Marakele Gate	WAN 1	Fibre	15
Newlands WfFire	WAN 1	Fibre	5
NMMU -	WAN 1	Fibre	5
Numbi Gate	WAN 1	Fibre	50
Phabeni Gate	WAN 1	Fibre	50
Phalaborwa Gate	WAN 1	Fibre	10
Skukuza Airport - Fibre to MAJOC	WAN 1	Fibre	LAN

Skukuza Camp	WAN 1	Fibre	100
Skukuza Flight Services - Fibre to MAJOC - NO TPMS	WAN 1	Fibre	LAN
Skukuza Special Operations - Fibre to flight services	WAN 2	Fibre	LAN
Thesen Island	WAN 1	Fibre	20
Tokai Cape Research Centre (CRC) (Bosdorp)	WAN 1	Fibre	5
Tokai Manor	WAN 1	Fibre	10
Tokai New office Server Room (Upgarded Fibre)	WAN 1	Fibre	20
Tokai Wild Card Sales	WAN 1	Fibre	5
Twee Rivieren Camp	WAN 1	Fibre	10
Upington Regional Office	WAN 1	Fibre	5

Upgraded Camps:

Site Name	Link	Connectivity	Bandwith (Mbps)	Bandwidth Upgrades Completed (Mbps)
Addo Camp	WAN 1	Microwave	10	**50**
Berg-en-dal Camp	WAN 1	Microwave	5	**10**
Mountain Zebra Camp	WAN 1	Microwave	10	**50**
Matyholweni Camp & Gate	WAN 1	Microwave	5	**10**
Mata Mata Camp	WAN 1	VSAT	2	**20**
Nossob Camp	WAN 1	VSAT	2	**20**
Richtersveld Offices	WAN 1	VSAT	2	**20**
Pretoriuskop Camp	WAN 1	Microwave	5	**10**
Mapungubwe Gate	WAN 1	Microwave	10	**50**
Glen Reenen Camp	WAN 1	Fibre	5	**20**
Golden Gate Hotel (Brandwag)	WAN 1	Fibre	10	**40**
Twee Rivieren Camp	WAN 1	Fibre	10	**50**