

Exploring the Digital Technology Adoption Landscape of Niche Tourism Small, Medium and Micro Enterprises in South Africa

Dr PPS Sifolo, Dr LC Welthagen, Dr R Naudé-Potgieter, Mr M Londani
Centre for Sustainable Tourism & Innovation
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Introduction & Background

- Digital technology (DT) in the tourism industry is proactively using AI-based technology to transform the industry by improving operational efficiency, customer experience and engagement (Avula & Sithole, 2025).
- Limited understanding of the benefits associated with digital technology adoption among niche tourism SMMEs may constrain their capacity to optimise operational efficiency and competitiveness (Mosweunyane, 2016).
- Literature reveals that SMMEs often lack the necessary financial resources, technical expertise, and human capital to invest in and effectively utilise digital tools (Botha, Smulders, Combrink & Meiring, 2021).
- A significant portion of SMMEs may have limited digital literacy, hindering their ability to adopt and utilise digital technologies effectively.
- Infrastructure constraints such as inadequate internet connectivity and digital infrastructure in certain regions can pose barriers to digital technology adoption (Akpan et al. (2020).
- SMMEs may require specific support and guidance to navigate the complexities of digital technology adoption and overcome challenges. There is a lack of tailored support and guidance.

Niche tourism SMMES in South Africa

Events and Limited Pay-out Machines (LPM)

- Event Management Industry in South Africa contributed R74.9bn to the national economy
- South Africa's gambling revenue was reported as ZAR75 billion (\$4.3 billion) for the financial year 2024-25 (National Gambling Board, 2025)

Wildlife Tourism

- Supports conservation efforts and generates revenue through wildlife-related activities
- In 2023, the average wildlife tourist spent R31,200 per person, nearly three times the average tourist expenditure in South Africa (R11,800) (South African Tourism, 2024). There is room for SMMEs to play a role.

Cultural, Township and Rural Tourism

- This sector fosters local community development and preserves cultural heritage
- Promoting geographic diversity in tourism the District Development Model by advancing equitable tourism growth across South Africa's districts and metropolitan areas.

Adventure and Ecotourism

- Ecotourism in South Africa offers a rare combination of adventure, luxury, and sustainability.
- These niches are crucial for promoting South Africa's natural and cultural assets while contributing to environmental sustainability.

Generate significant revenue, making major tax contributions,

Stimulate the economy

Create multitudes of employment opportunities

Research Objectives

- Describe the niche tourism SMME digital technology adoption landscape in South Africa.
- Examine potential benefits and challenges related to digital technology adoption by niche tourism SMMEs.
- Determine digital technologies and applications that may be leveraged to enhance niche SMME business processes for them to thrive.
- Determine the digital technology infrastructure requirements that may enable the development, growth and sustainability of niche tourism SMMEs.
- Assess and outline clear innovation opportunities and potential partnerships to be fostered for niche tourism SMME growth and sustainability.
- Provide practical recommendations on enablers of digital technology adoption for SMME sustainability.

Conceptual Framework for Digital Technology Adoption in Tourism SMMEs

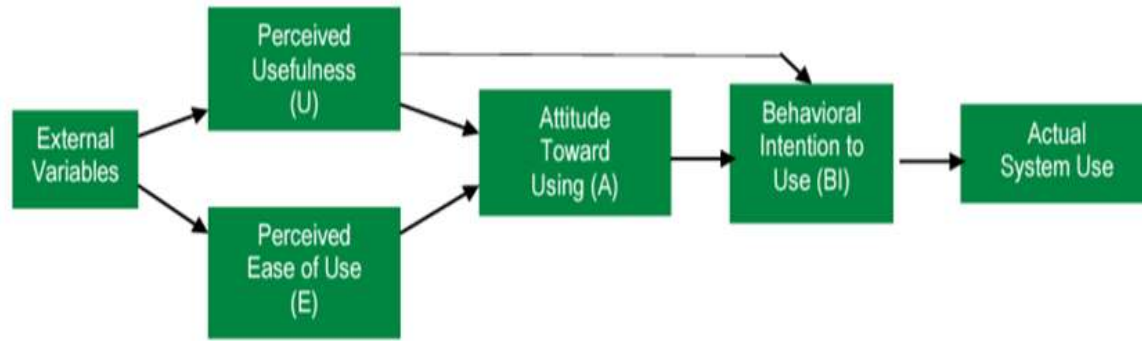


Figure 1: Technology Acceptance Model (TAM).
Source: Davis (1989)

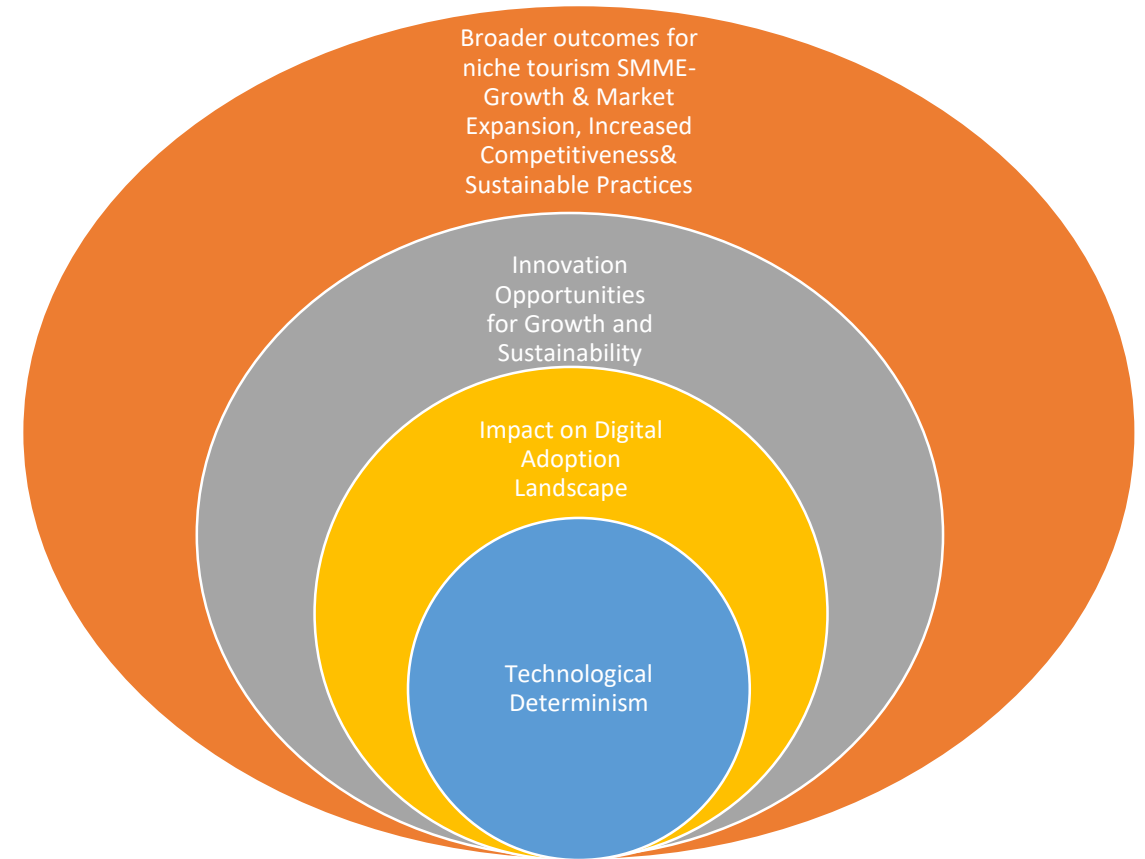
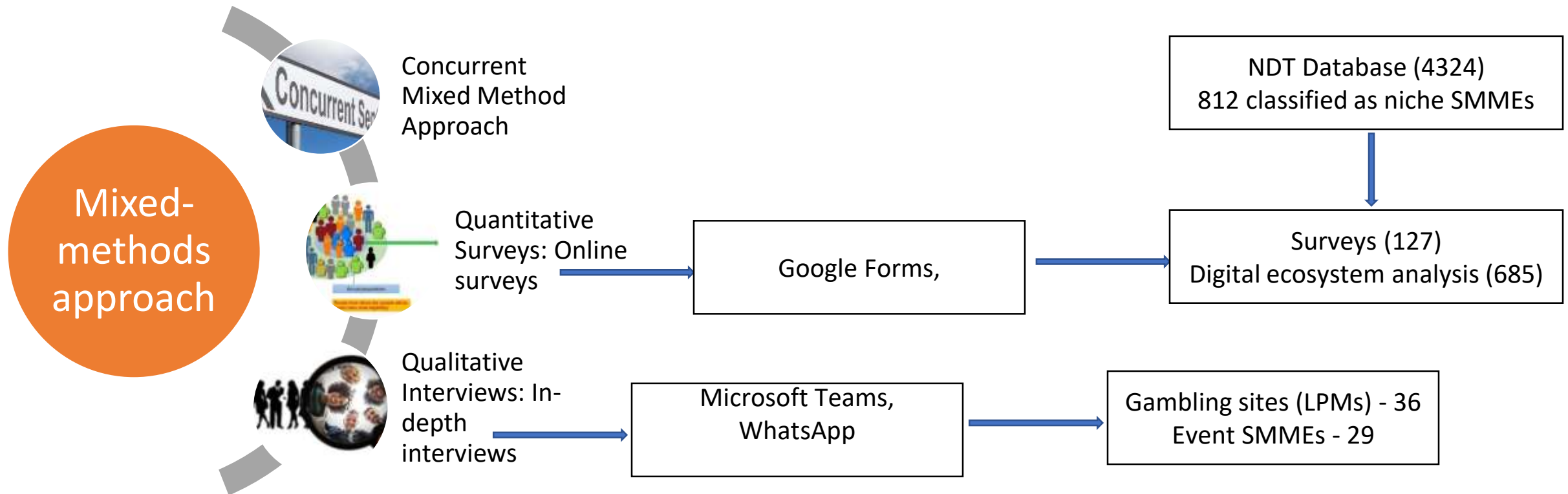


Figure 2: Technological Determinism in Digital Technology Adoption of Niche Tourism SMMEs
Source: Developed for this study

Research Methodology

The integration of real-time consumer intelligence, dynamic big data mining, artificial intelligence, and contextualisation can transform service co-creation by mobilising resources in the ecosystem (Buhalis & Sinarta, 2019).



QUANTITATIVE RESULTS

Digital Technology in South Africa's Niche Tourism: Survey vs Ecosystem Insights

Variable	Description	Percentage %
Owner/Manager/Employee	Owner	67.7
	Manager	15.0
	Employee	17.3
Age Group	18 – 25	9.4
	26 – 35	16.5
	36 – 45	28.3
	46 – 55	19.7
	56 and Above	26.0
Highest level of Education	Less than Grade 12	3.9
	Grade 12/Matric NQF4	30.7
	N6 Certificate/NQF5	5.5
	National Diploma/Diploma	24.4
	Bachelor's Degree/BTech NQF7/Advanced Diploma	24.4
	Honours Degree/PGD/NQF8	3.9
	Master's Degree/NQF9	7.1
Size of Business	1 - 5 Employees (Micro)	56.7
	6 - 20 Employees (Very Small)	25.2
	21 - 50 Employees (Small)	11.0
	51 - 200 (Medium)	7.1

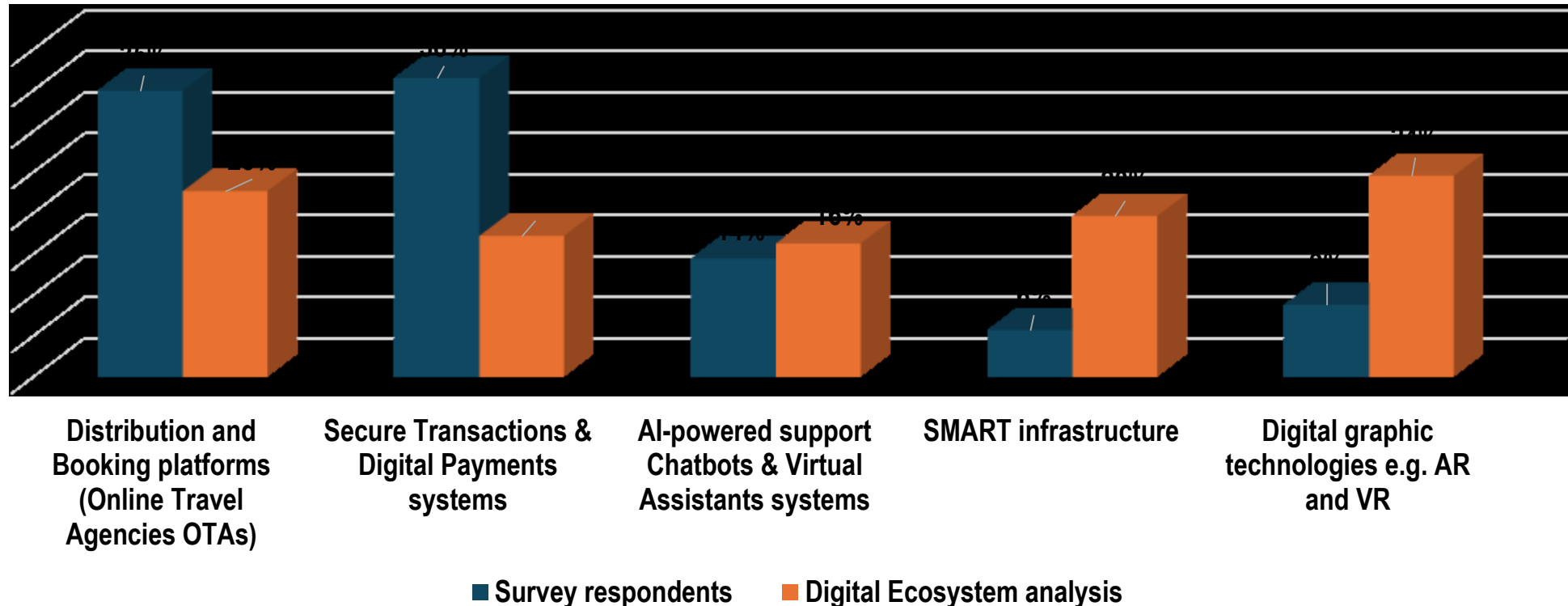
Province	Gauteng	19.7
	Limpopo	25.2
	North West	3.9
	Mpumalanga	5.5
	Free State	3.9
	KwaZulu-Natal	14.2
	Northern Cape	1.6
	Western Cape	17.3
	Eastern Cape	8.7
Primary Niche Tourism	Adventure/outdoor/hostelling/caravan/camping/ Backpacker	21.3
	Ecotourism/wildlife/nature tourism/ Nature /game lodge	20.5
	Township and rural tourism SMMEs/ country house	20.5
	Historical tours and indigenous cultural/traditional experience/tour operators and guides	34.6
Years of Operating	Less than a year	5.5
	2–3 years	17.3
	4–5 years	11.0
	6–10 years	22.0
	11–15 years	18.9
	16–20 years	11.0
	21 years and more	14.2

DIGITAL ECOSYSTEM ANALYSIS DEMOGRAPHIC CHARACTERISTICS

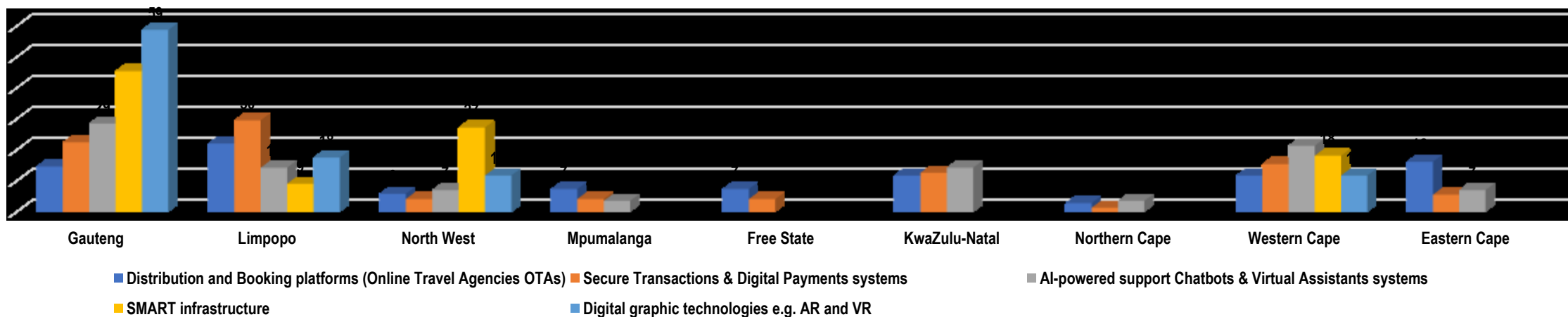
Variable	Description	Percentage %
Owner/Manager/Employee	Owner	35.9
	Manager	30.2
	Employee	33.9
Age Group	18 – 25	1.6
	26 – 35	22.5
	36 – 45	23.4
	46 – 55	29.2
	56 and Above	23.4
Highest level of Education	Less than Grade 12	0.6
	Grade 12/Matric NQF4	23.8
	N6 Certificate/NQF5	0.9
	National Diploma/Diploma	27.6
	Bachelor's Degree/BTech NQF7/Advanced Diploma	22.3
	Honours Degree/PGD/NQF8	22.8
	Master's Degree/NQF9	1.3
	Doctoral Degree/NQF10	0.7
Size of Business	1-5 Employees (Micro)	47.2
	6-20 Employees (Very Small)	47.9
	21-50 Employees (Small)	2.3
	51-200 (Medium)	2.6

Province	Gauteng	8.0
	Limpopo	17.7
	North West	5.0
	Mpumalanga	11.5
	Free State	3.5
	KwaZulu-Natal	9.9
	Northern Cape	3.4
	Western Cape	28.3
	Eastern Cape	12.7
Primary Niche Tourism	Adventure/Outdoor/Hostelling/Caravan/Camping/Backpacker	2.7
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	Township & Rural Tourism SMMEs/Country house	25.0
	Historical Tours & Indigenous Cultural/	
	Traditional experience/Tour operators & Guides	52.2
Years of Operating	Less than a year	0.7
	2 -3 years	18.7
	4 – 5 years	17.7
	6 – 10 years	20.4
	11 – 15 years	20.4
	16 – 20 years	1.6
	21 years & more	20.4

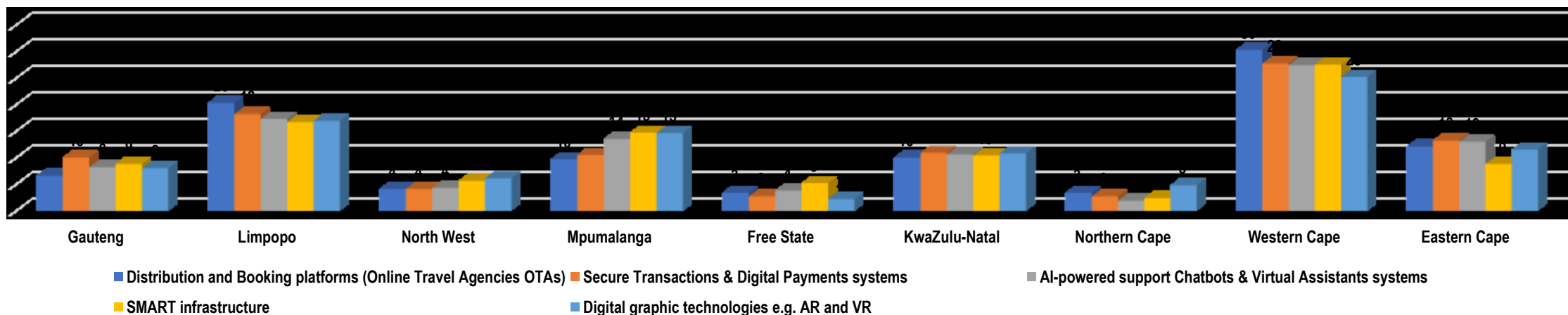
Sector or company specific digital technologies used currently used in niche SMMEs: Comparison between survey and digital ecosystem



Differences in how digital technology is adopted by Provinces (%)

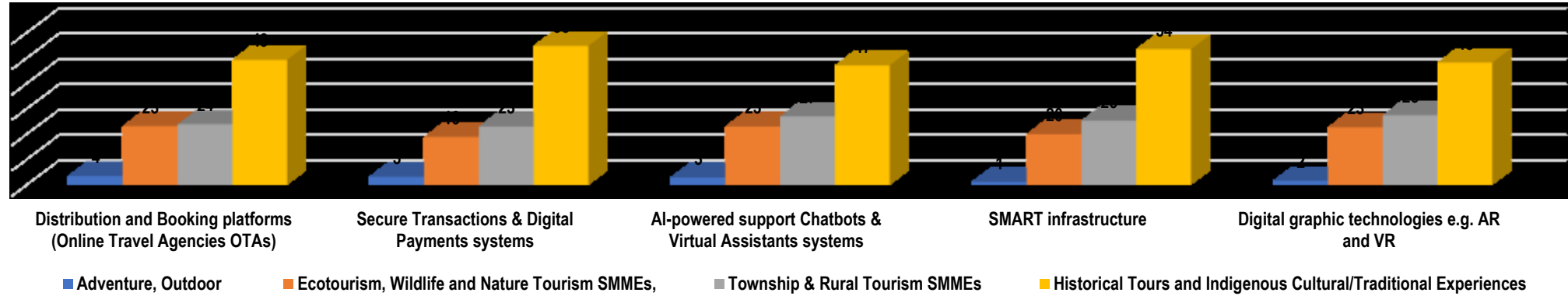


Survey respondents' dataset (D): Data technology effectiveness

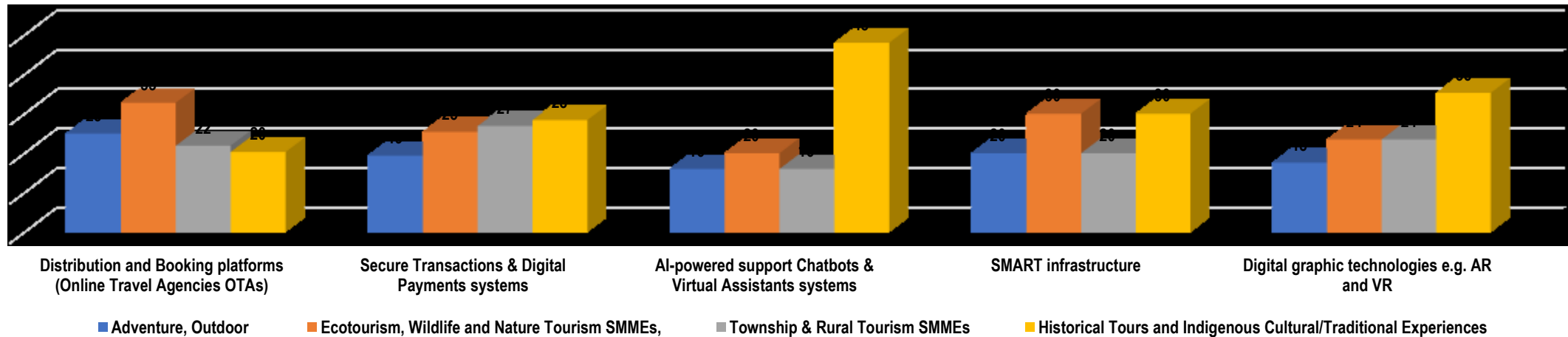


Digital ecosystem analysis (D): Data technology effectiveness

Differences in how digital technology is adopted by primary niche tourism SMMEs (%)

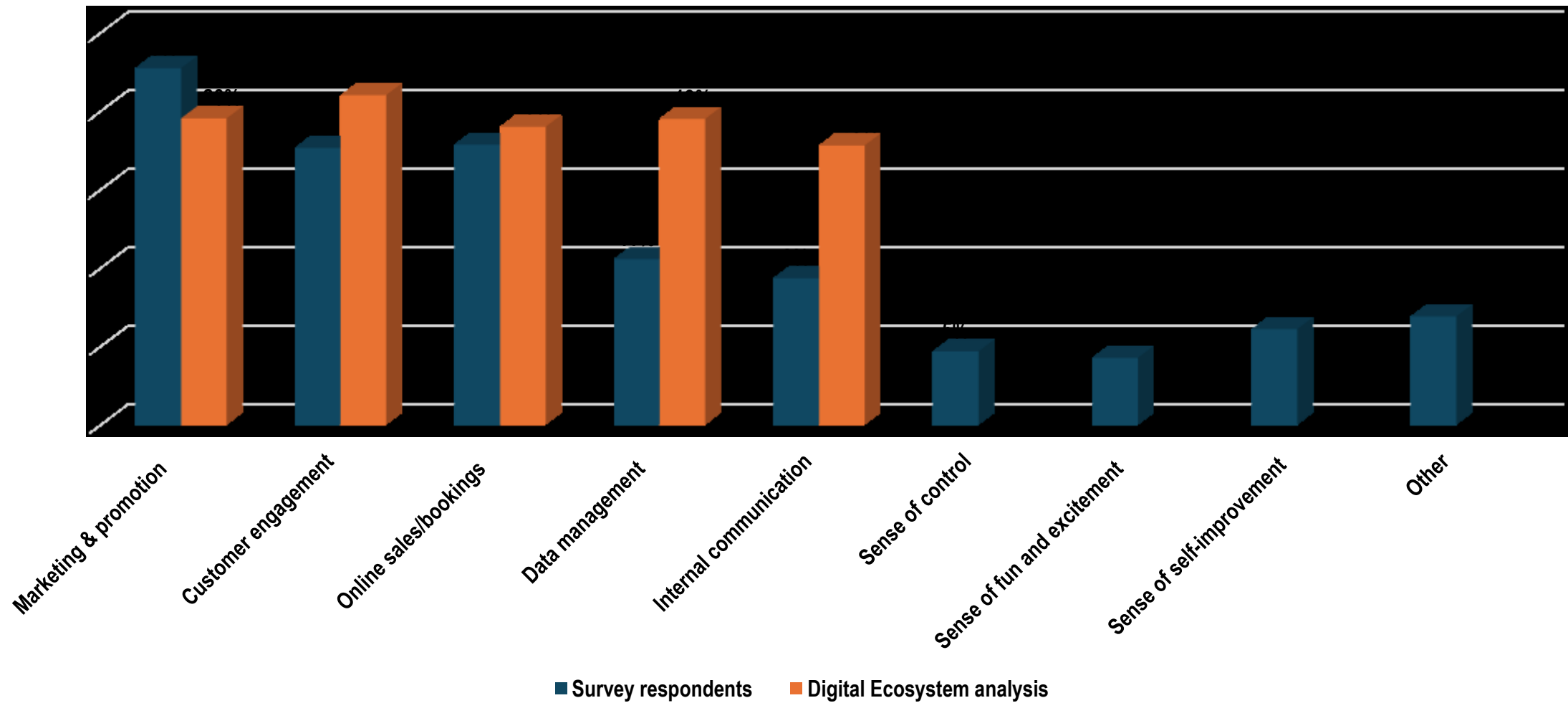


Survey respondents' dataset (E): Data technology effectiveness

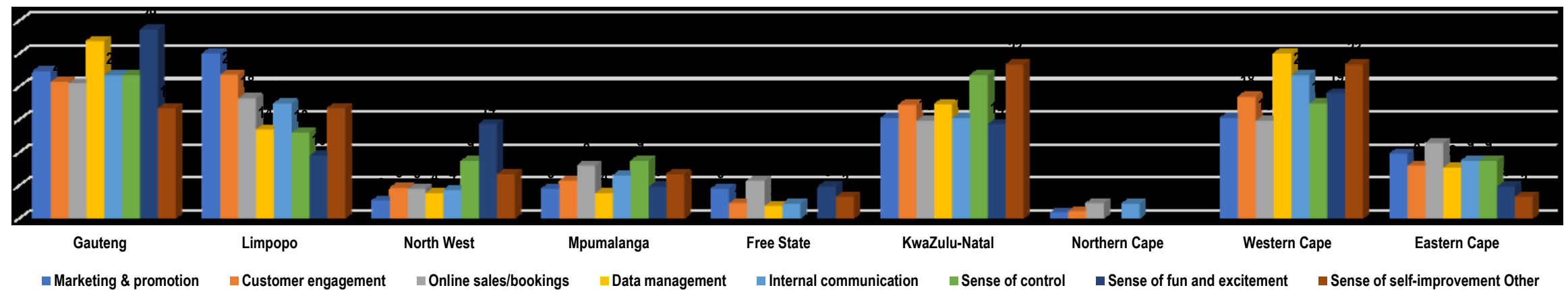


Digital ecosystem analysis (E): Data technology effectiveness

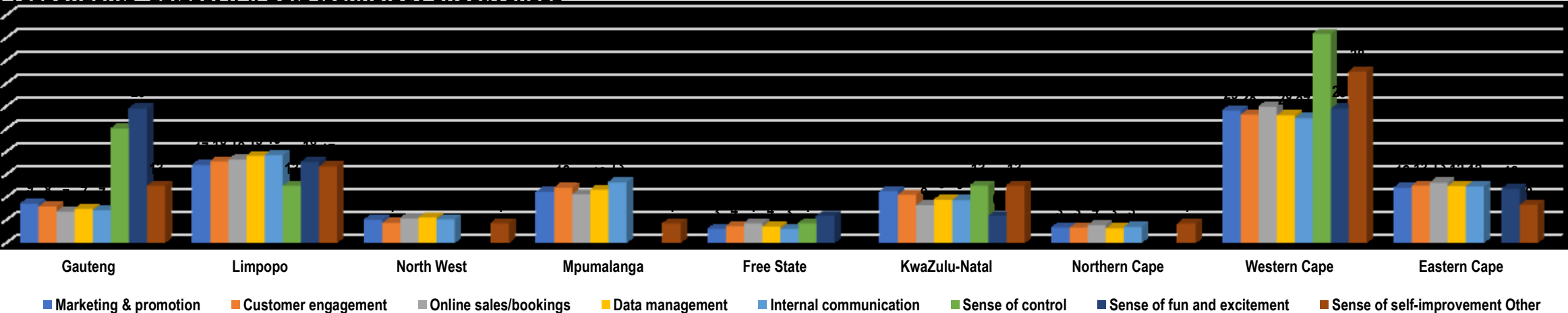
Primary drivers of digital technology engagement and related business practices



Primary drivers of digital technology engagement and related business practices by Provinces (%)

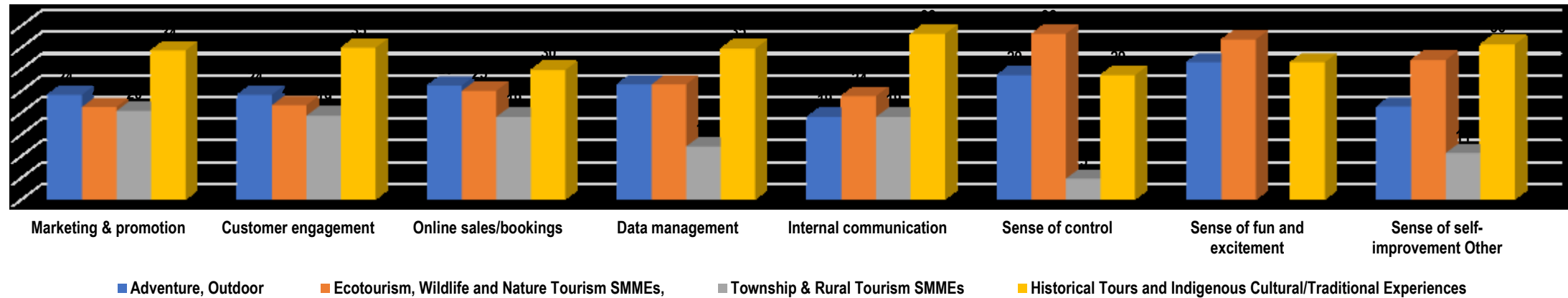


Survey respondents' dataset (F): Data technology effectiveness

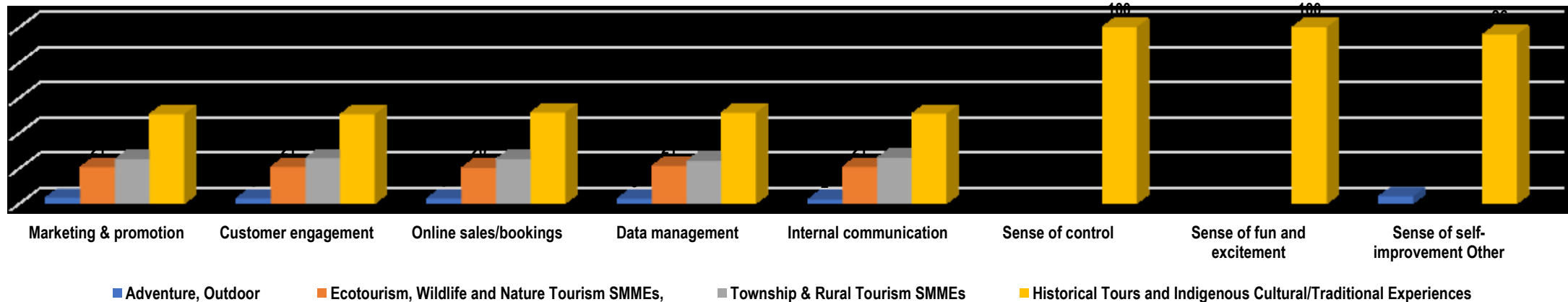


Digital ecosystem analysis (F): Data technology effectiveness

Primary drivers of digital technology engagement and related business practices by primary niche tourism SMMEs (%)

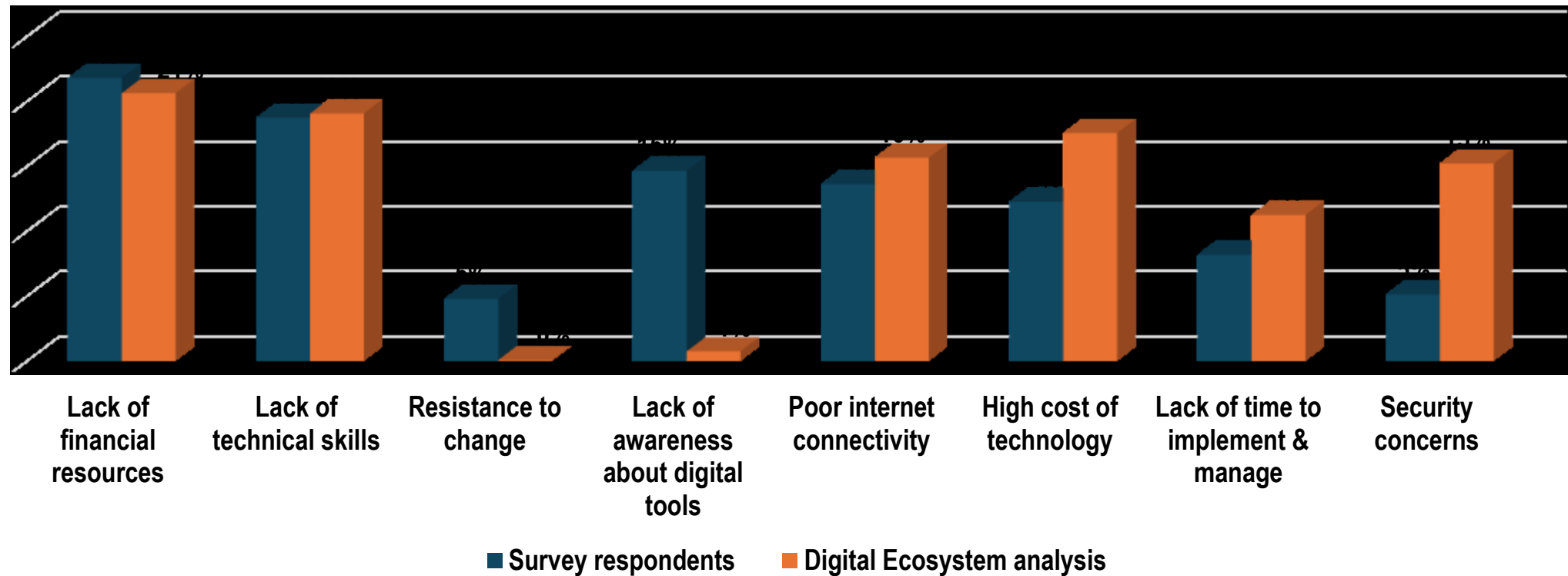


Survey respondents' dataset (G): Data technology effectiveness

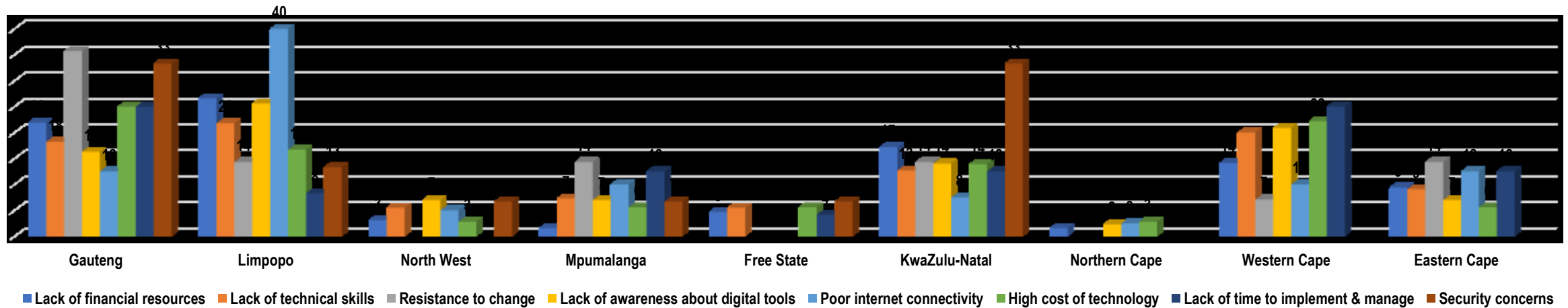


Digital ecosystem analysis (G): Data technology effectiveness

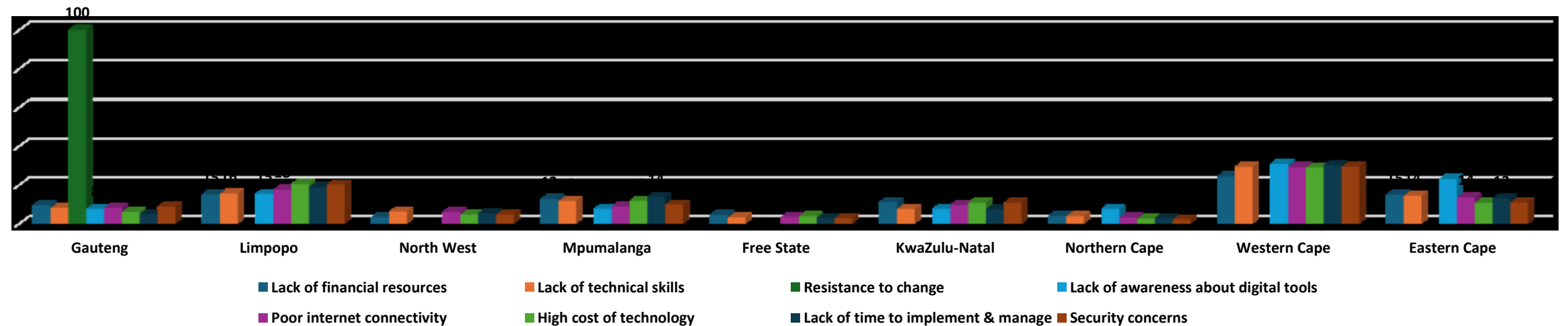
Barriers to digital adoption among niche tourism SMMEs in South Africa



Barriers to digital adoption among niche tourism SMMEs in South Africa by Provinces (%)

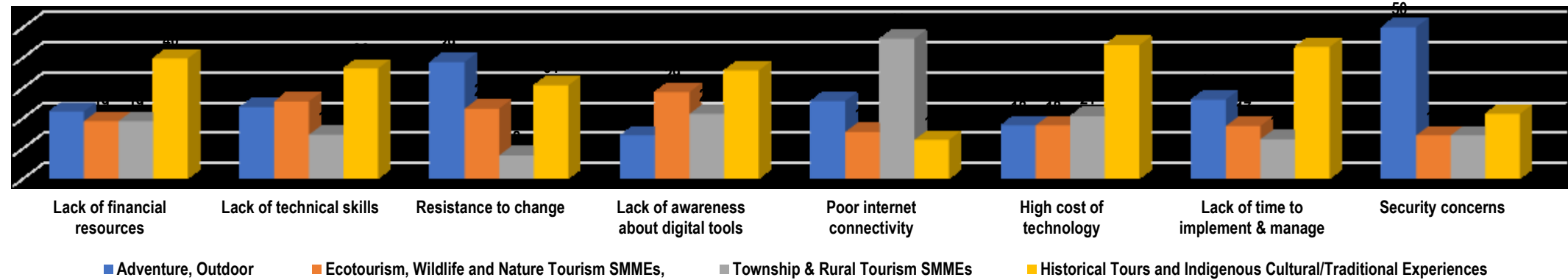


Survey respondents' dataset (H): Data technology effectiveness

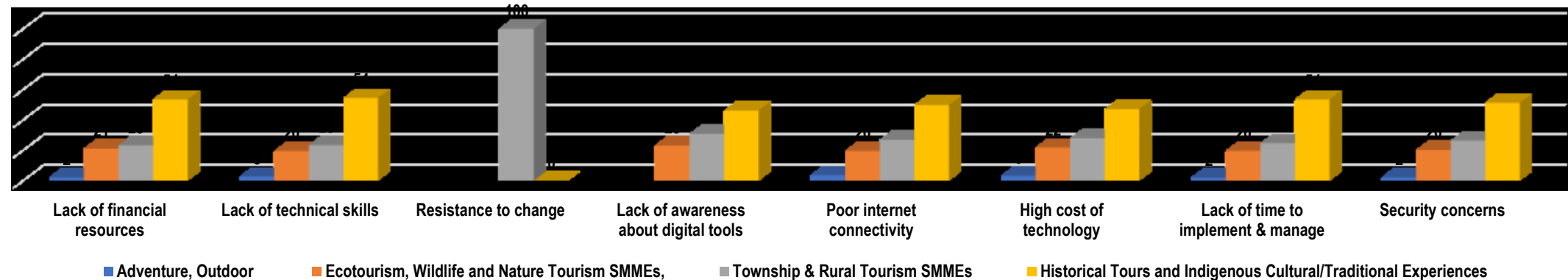


Digital ecosystem analysis (H): Data technology effectiveness

Barriers to digital adoption among niche tourism SMMEs in South Africa by primary niche tourism SMMEs (%)

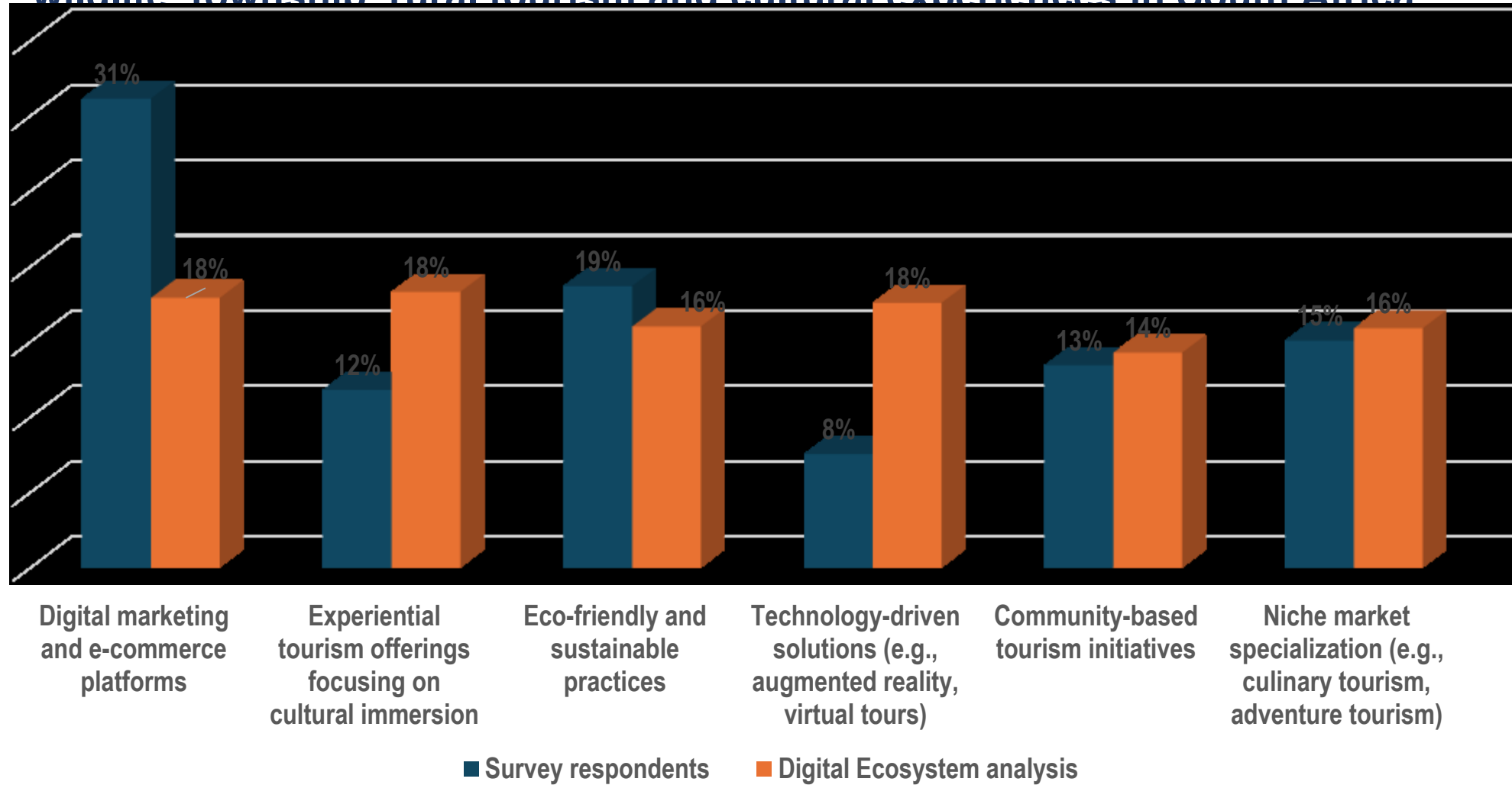


Survey respondents' dataset (I): Data technology effectiveness

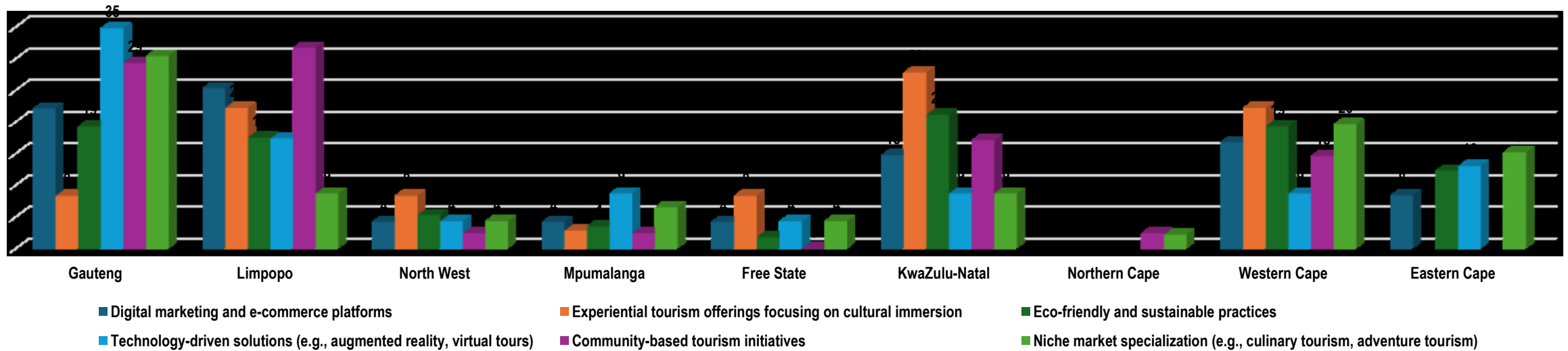


Digital ecosystem analysis (I): Data technology effectiveness

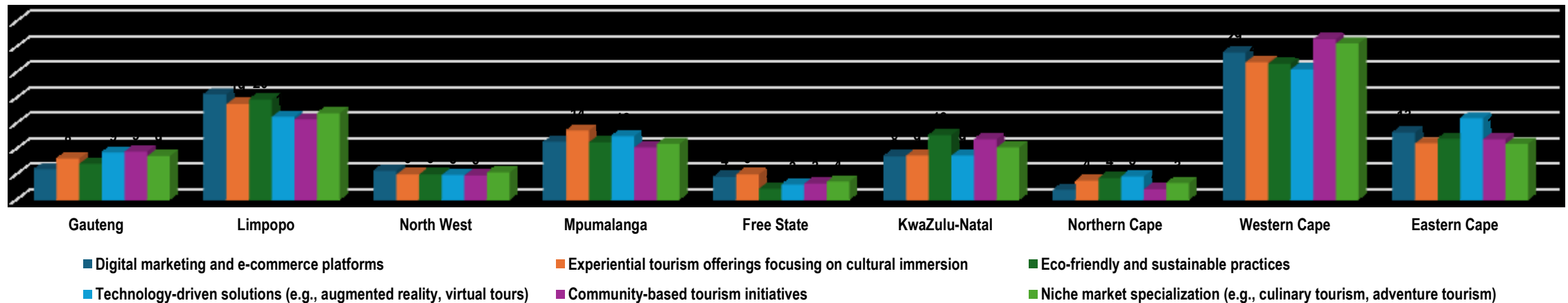
The adoption of innovative tourism practices across adventure and ecotourism, wildlife township rural tourism and cultural experiences in South Africa



The adoption of innovative tourism practices across adventure and ecotourism, wildlife, township, rural tourism and cultural experiences in South Africa by provinces (%)

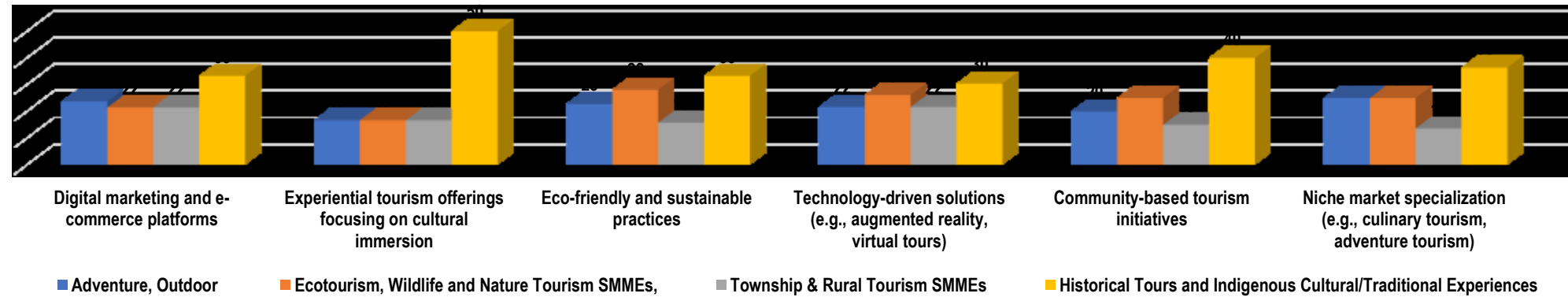


Survey respondents' dataset (J): Data technology effectiveness

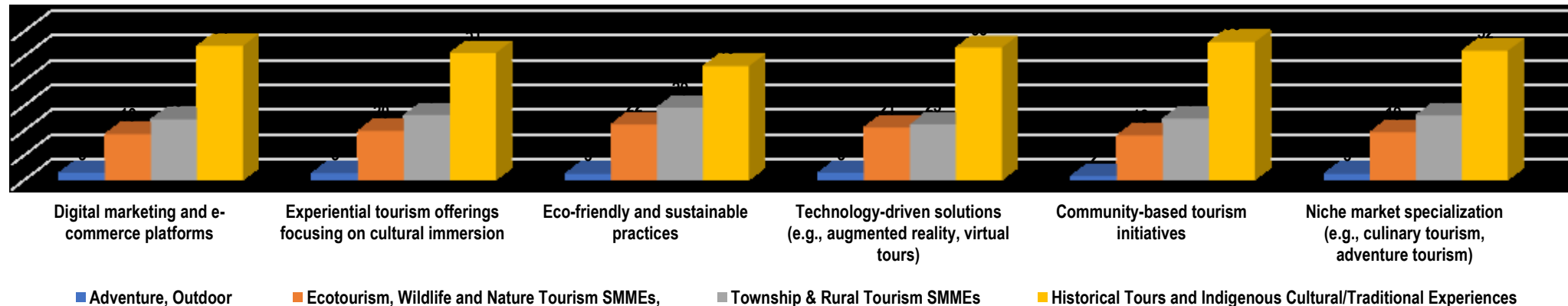


Digital ecosystem analysis (J): Data technology effectiveness

The adoption of innovative tourism practices across adventure and ecotourism, wildlife, township, rural tourism and cultural experiences in South Africa by primary niche sector (%)

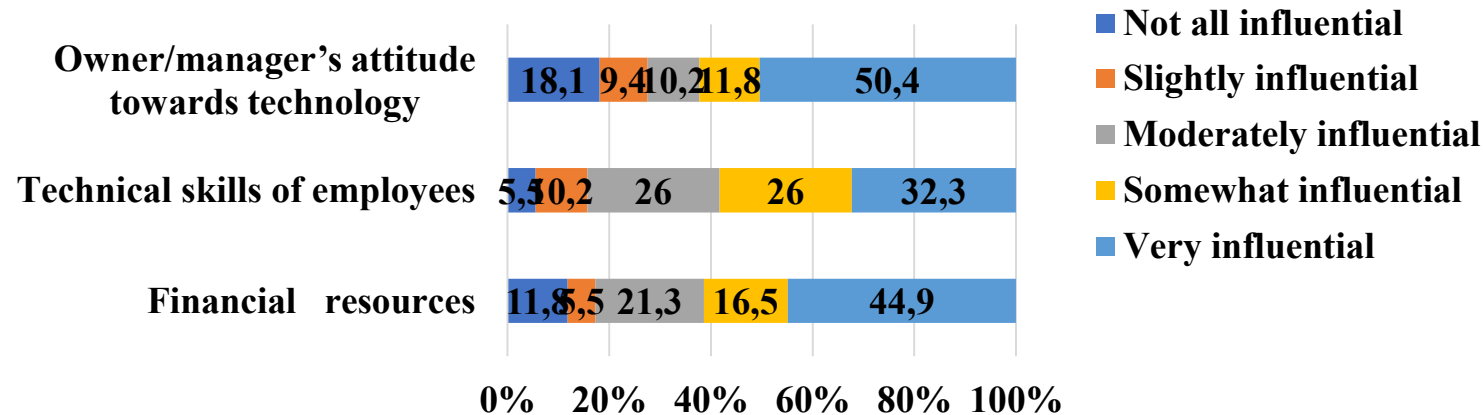


Survey respondents' dataset (K): Data technology effectiveness

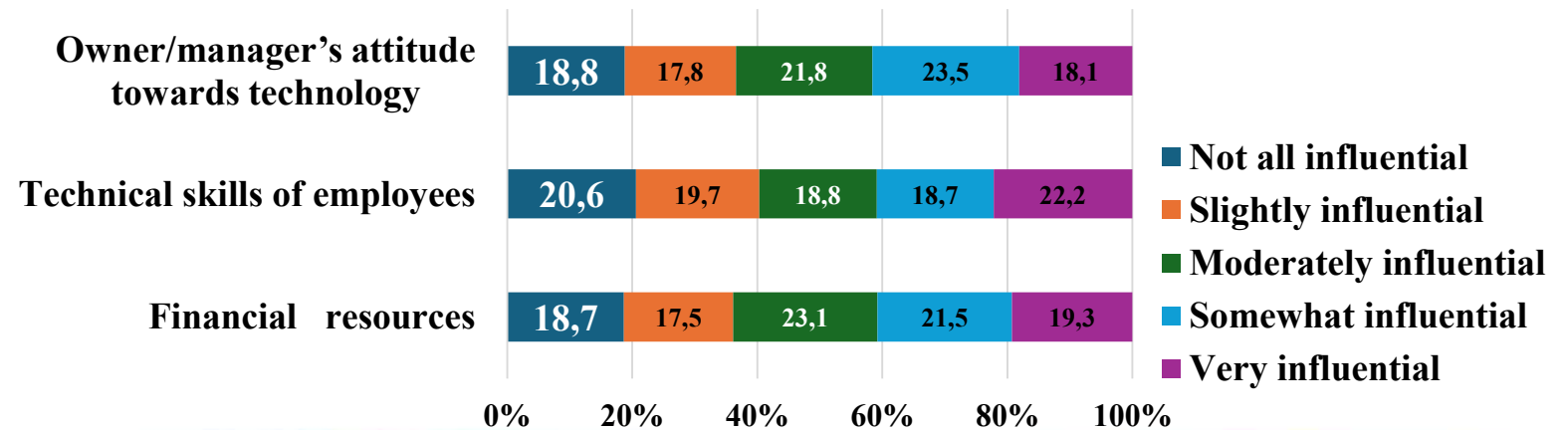


Digital ecosystem analysis (K): Data technology effectiveness

To what extent do the following internal factors influence your decision to adopt digital technologies?

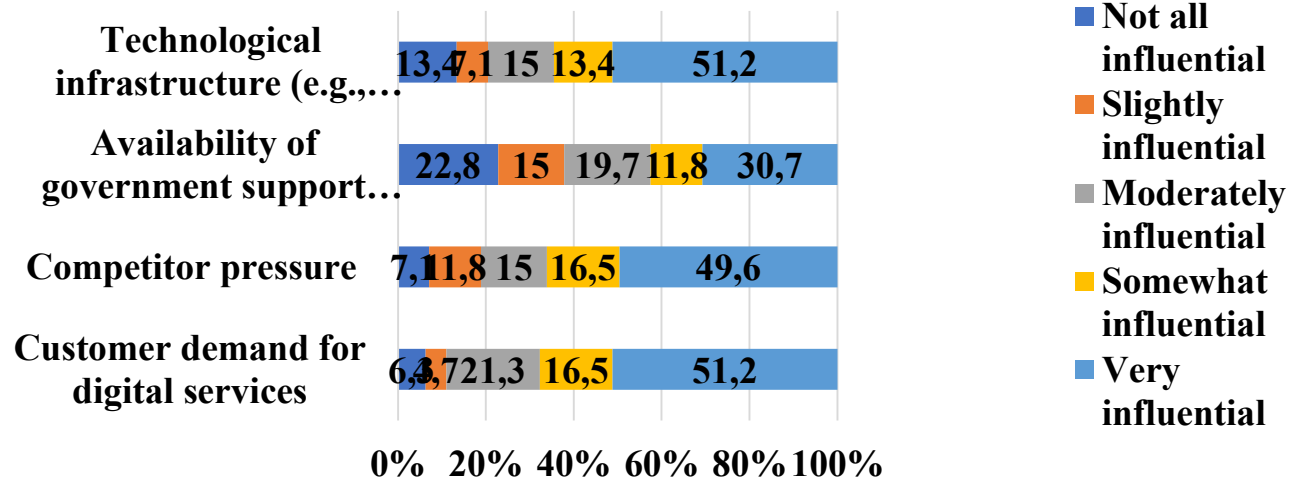


Survey response dataset (A): internal factors influencing digital technology adoption

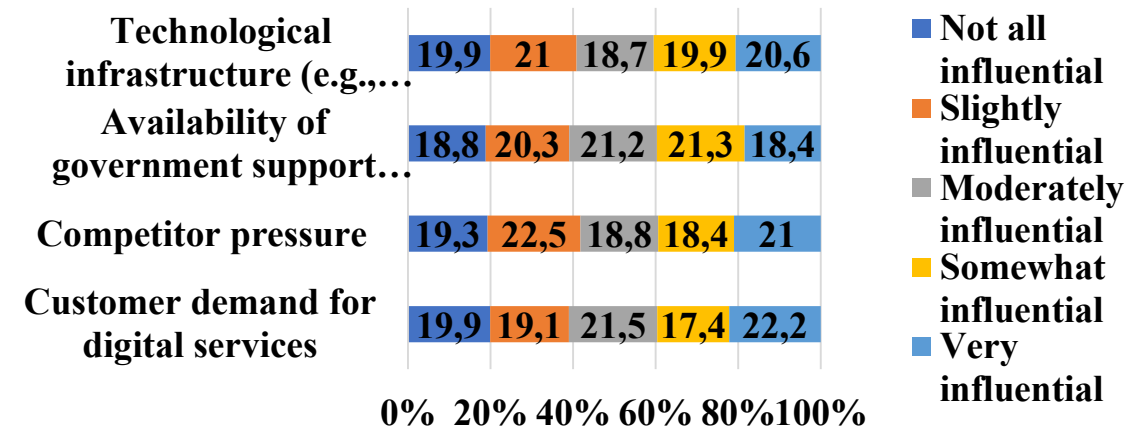


Digital ecosystem analysis (A): internal factors influencing digital technology adoption

To what extent do the following external factors influence your decision to adopt digital technologies?

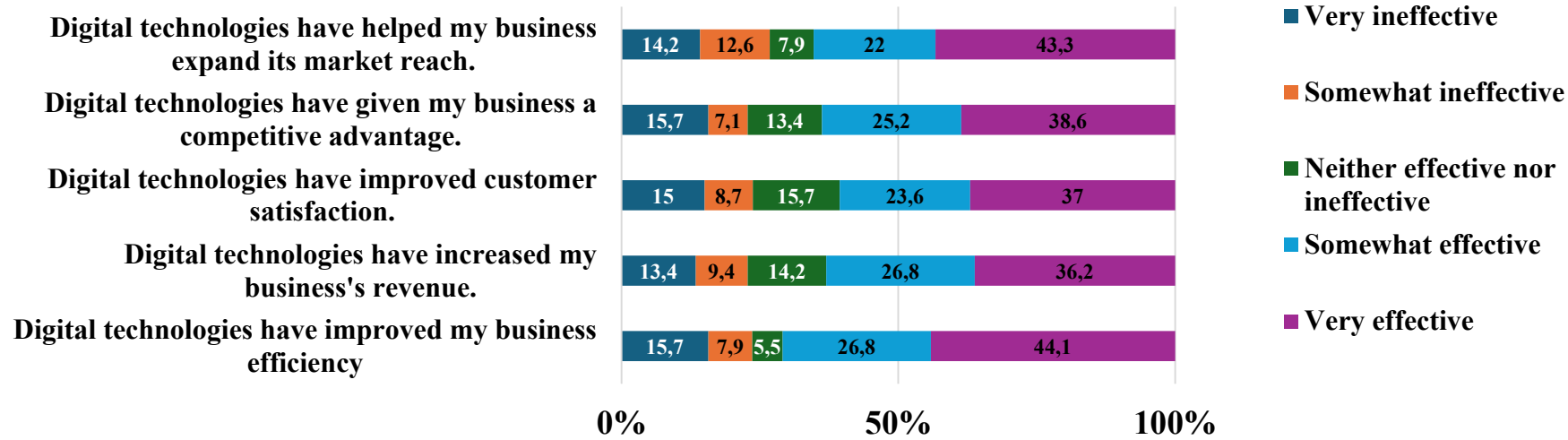


Survey respondents' dataset (B): External factors influencing the decision to adopt digital technologies

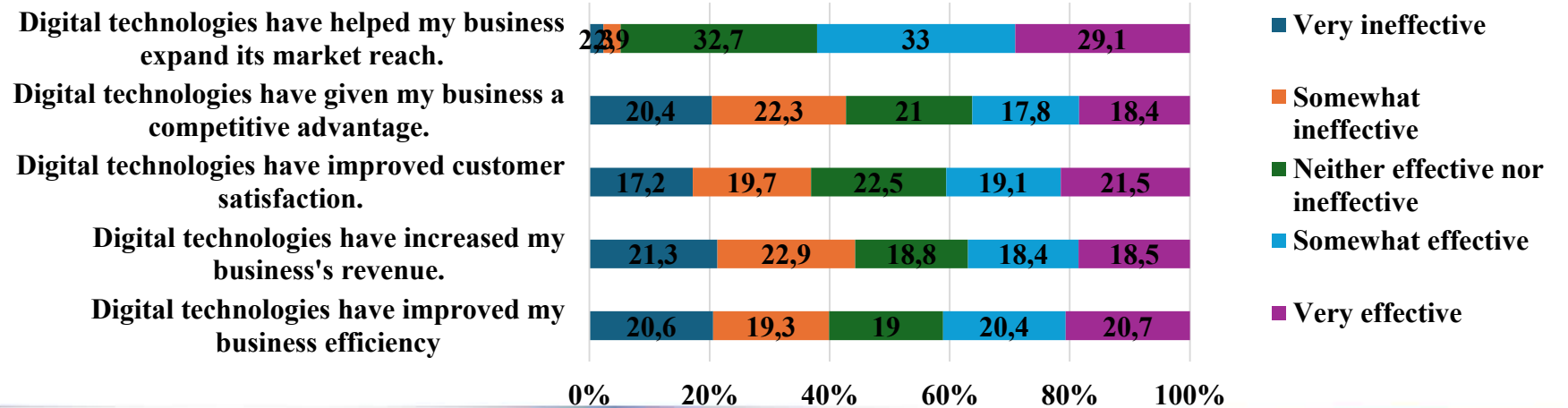


Digital ecosystem analysis (B): External factors influencing the decision to adopt digital technologies

Effectiveness of digital technology adoption



Survey respondents' dataset (C): Data technology effectiveness



Digital ecosystem analysis (C): Data technology effectiveness

QUALITATIVE RESULTS

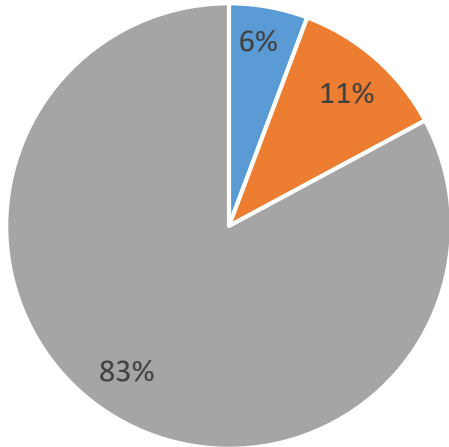
Digital Technology in South Africa's Niche Tourism: Events and Limited Payout Machines

Purposive Intensity Sampling



LPM niche SMME's

LPM Sites



■ Hotel ■ Sports betting/tabs ■ Restaurant & Bar



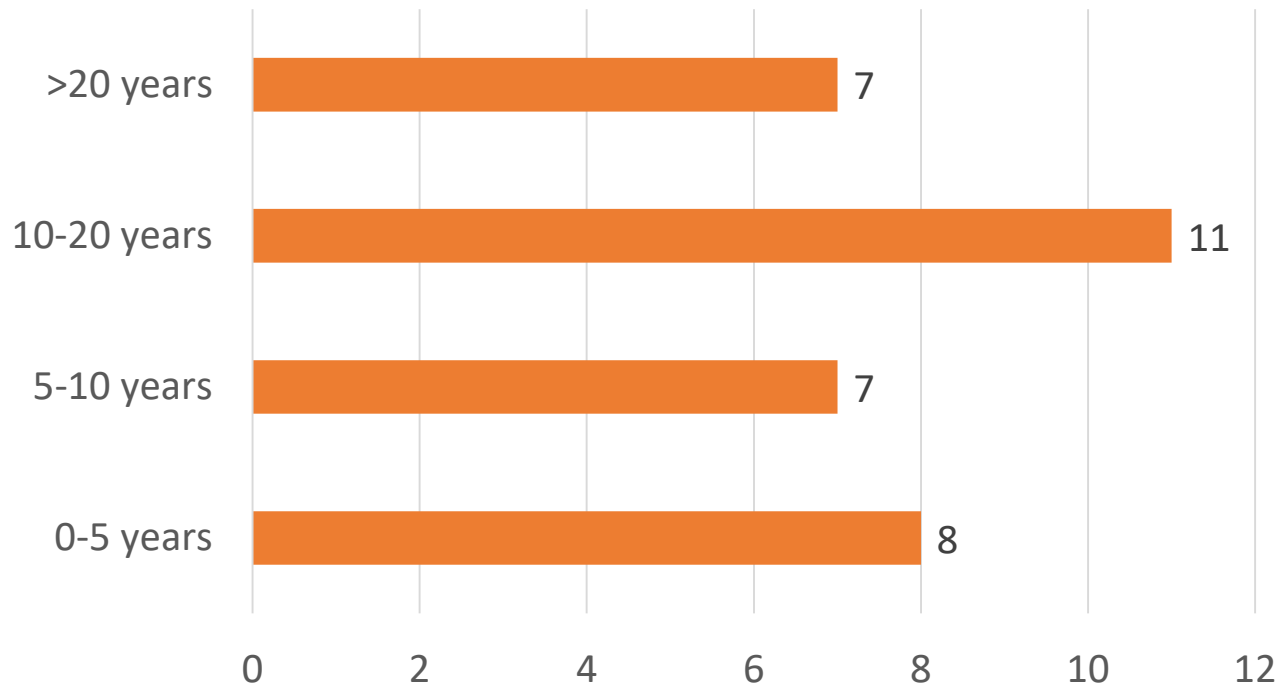
Events niche SMME's



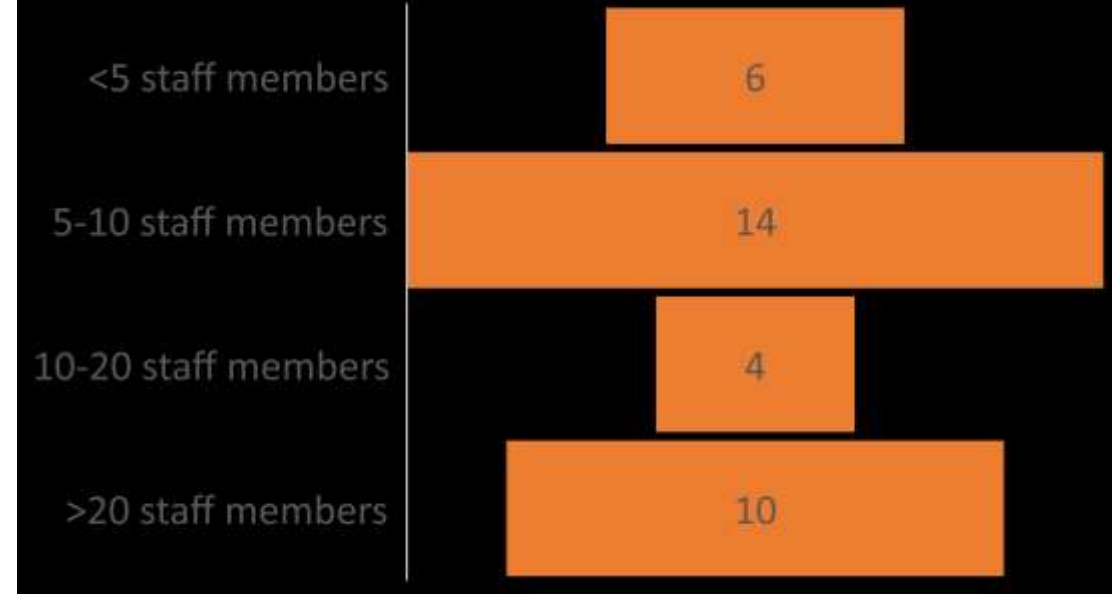
Type of business operation	Yearsof Business Operation	No. of Employees
All events	3 Years	Not Specified
All events	13 Years	8 Permanent
Mobile and virtual events	10 Years	20 Employees
Marketing and consulting	1 Year	1 Employee
Handling of business events- conferences	6 Years	50 - 60 Employees
Trading	13 Years	8 Employees
Exclusive, venue and event operations	7 Years	Not Specified
Marketing, event and safety planning	5 Years	3 Employees
Corporate and private events	3 Years	2- 5 Employees
Meeting, Incentive, Conferences and Events (MICE)	3 Years	2 Part-Time Employees
Event, PCO services, Health and Safety and Risk Assessment	15 Years	4 Permanent and 320 Part Time
Cultural Tourism focusing on Music and Arts	5 and 4 Years	10 Permanent and 20 Part Time
Culinary convenience company	7 Years	4 Permanent and 8 Part Time
Catering company	8 Years	2-3 Employees
Events and Equipment Hire	7 Years	Not Specified
All events	20 Years	2 Employees
Decor and Catering	4 Years	4 Employees
Event Management amd PCO Services	15 Years	4 Permanent and 320 Part Time
Festival organizers (afrobeats)	10 Years	10 Permanent
Tradition food vendor	2 Years	Not Specified
Mobile kitchen fast food	2 Years	5 Employees
Kitchen and Takeaways	4 Months	2 Employees
Fast food	Not Mentioned	2 Employees
Fast food	6 Months	4 Employees
Attraction management (fast paced rides)	19 Years	9 Employees
Braai catering	2 Years	4 Employees

LPM Demographics

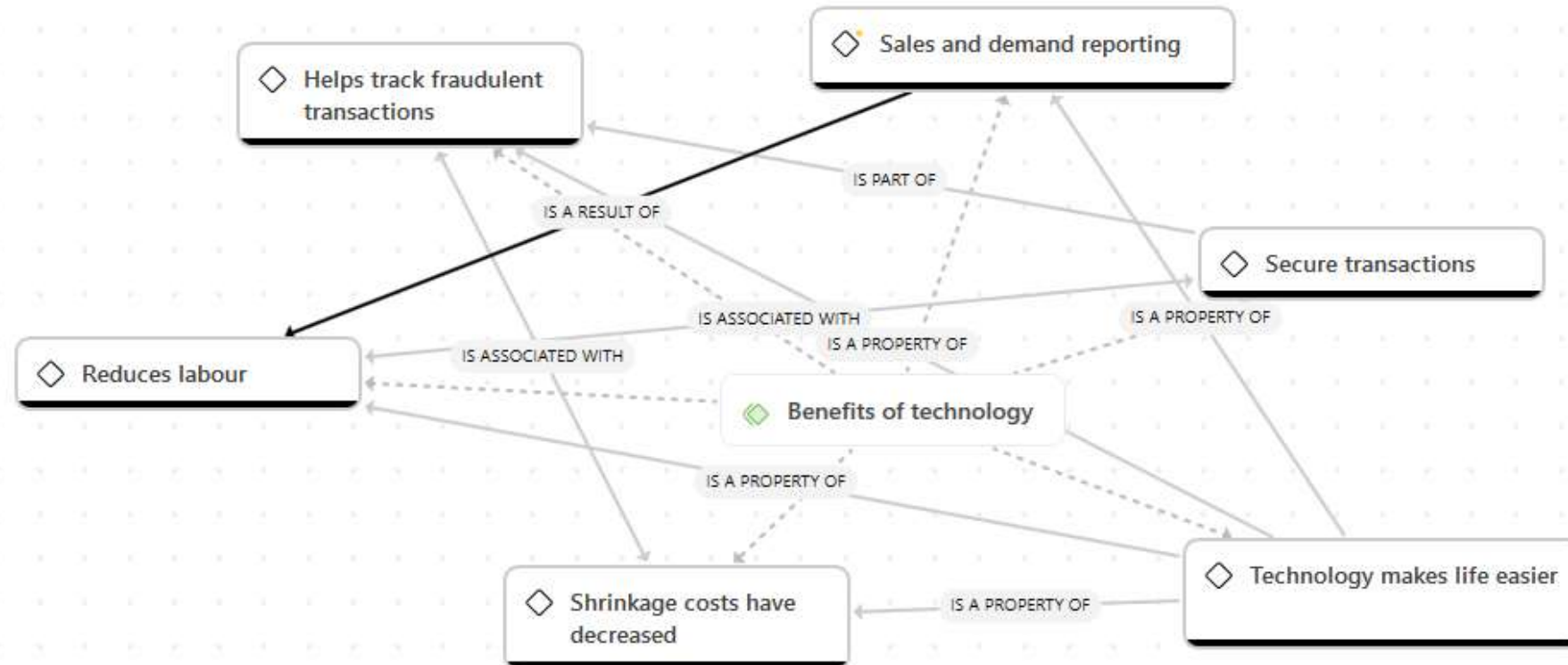
LPM sites years of operation



Staff compliment

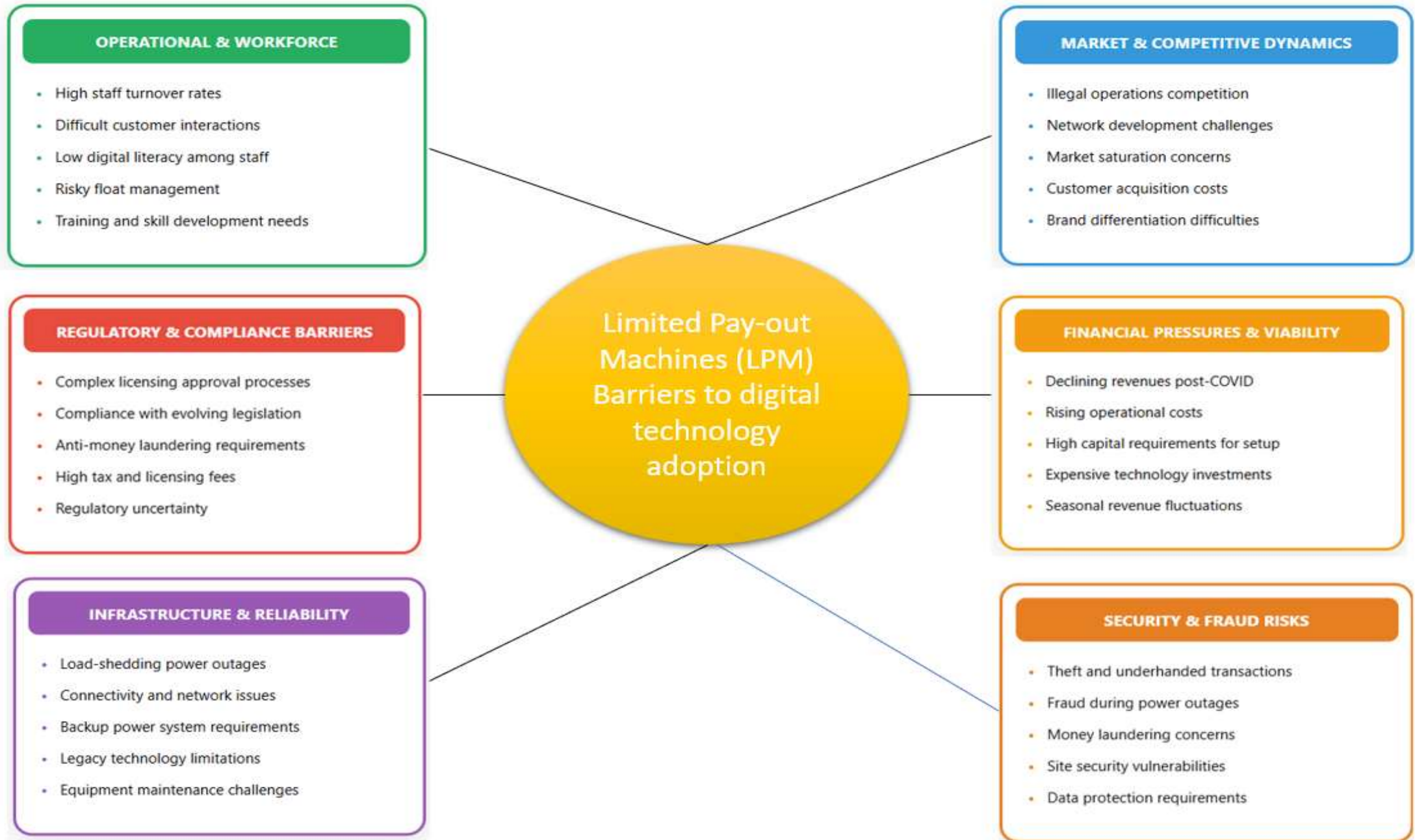


Benefits of digital technology adoption within the Limited payout machines and events niche area in South Africa



Benefits of digital technology adoption within the events niche area in South Africa





EVENT SECTOR CHALLENGES

Financial

Financial Constraints

Initial high investment, bank charges, limited funding, training costs, maintenance fees, subscription fees, foreign currency



Infrastructure

Infrastructure

Poor connectivity, loadshedding, cybersecurity, limited expertise, limited data storage, computer, AI tools



Training

Training/HR

Limited expertise, resistance to change, organisational barriers, limited access to training



Operational

Operational Risks

Hacking, reputational damage, seasonal demand, scammers, multiple roles, high turnover of staff



Market

Market Competition

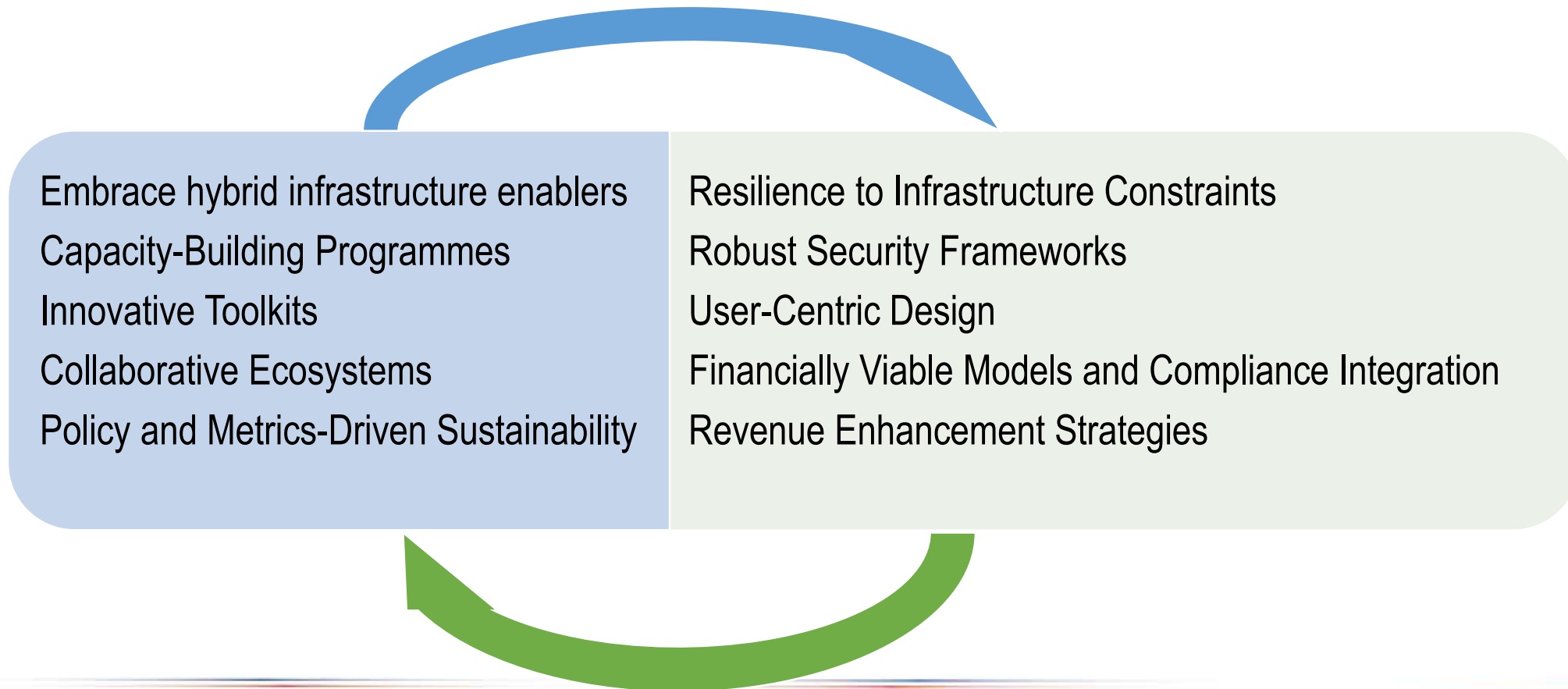
Market saturation, unfair practices for grants, preference to larger event companies



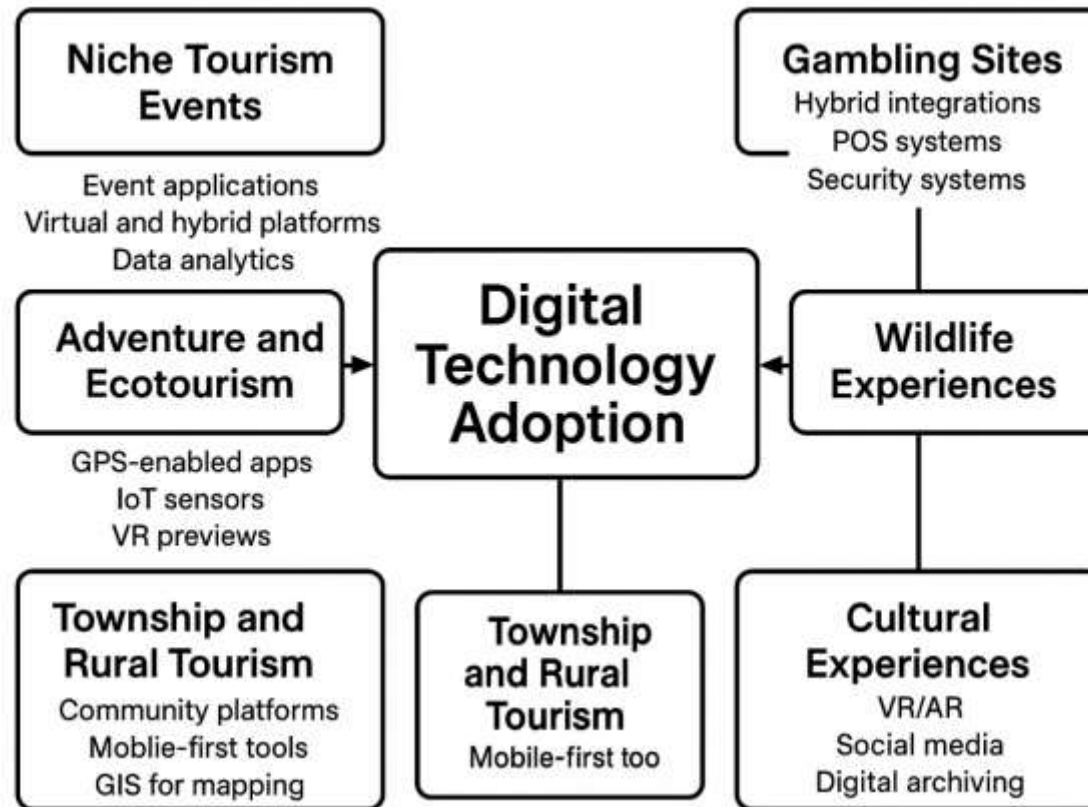
Support or training received on adopting digital technologies

Province	Interview ID(s)	Formal Training / Organisational Support	Informal / Partial Support	No Support Received
Eastern Cape	EOInterviews_EC_SMME1	Local organisations & government initiatives providing training/resources for rural SMEs (Mount Ayliff).	–	–
Gauteng	EOInterviews_GP_SMME1–2, 3, 6, EOInterviews_WP_SMME1	TUT (1–2); NYDA (3) – support with compliance, BizPortal, budgeting, online systems; Statesman Media (6); Paid international training (WP1, Glue Up, David Zimmerman).	In-house/self-taught (4, 10); YouTube (9)	5, 7, 8, 11
KwaZulu-Natal	EOInterviews_KZ_SMME2, 4, 6, 9	SEDA & SETA training/certificates; HACCP workshops; support visits from SEDA/SETA.	Online ticketing system (2); Online learning (4); Self-taught (7)	1, 3, 5, 8, 10, 11
Limpopo	EOInterviews_LP_SMME2	Johannesburg Business School – support on digital accessibility and multi-platform access.	–	–
Mpumalanga	EOInterviews_MP_SMME1–2	–	–	1, 2
North West	EOInterviews_NW_SMME1–2	–	Self-taught online (1)	

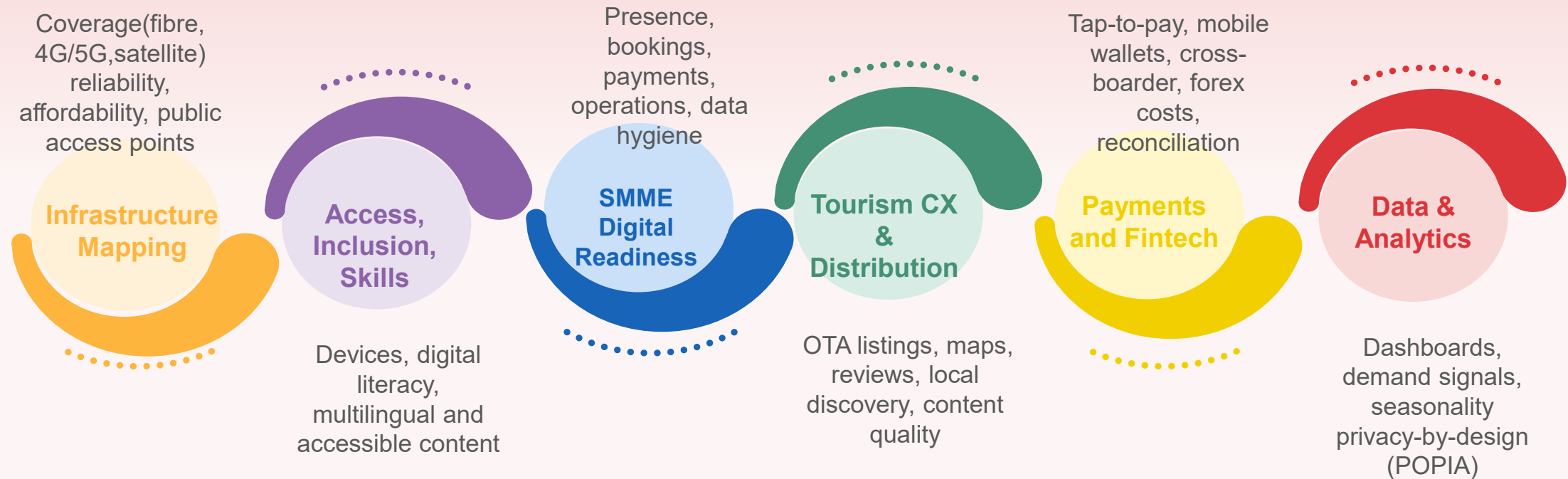
Which practical strategies and enablers can support the successful adoption of digital technology for the sustainability of niche tourism SMMEs



Sector-Specific Focus Areas for Digital Adoption



Digital landscape & network infrastructure framework



Application programming interface (APIs), open data, standards for listings, bookings and events

Platforms & interoperability

Security & Trust

Multi-factor Authentication (MFA), phishing, device hardening, backups, and incident response.

Subsidies, spectrum, WISP enablement, procurement, tax incentives

Policy & Incentives

Training & Support

Curricula, train-the-trainer, helpdesks, certification, cohorts

Fibre backbones, WISP, last-mile, power resilience, shade facilities

Infrastructure Projects

KPIs

Coverage %, price/Mbps, SMME adaptation, conversion, uptime, NPS

Equity lens, climate resilience, vendor lock-in mitigation

Risk & Resilience

24- Month Roadmap

0-3m baseline, 3-6m enablement, 6-12m scale 12-24m advanced

*"Pioneering a vibrant, sustainable tourism future through innovation,
inclusion, and impact!"*

#fromGood2Great

