qcontact

Delivering local language support for South Africa

A comprehensive look at the languages of South Africa, how widely they're spoken and how technology can help the underserved population.

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Audience	Contact Centres, BPO Providers, GBS Providers, Enterprises, Public Sector Providers, Telecoms Companies, System Integrators, IT Solution Providers
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Abstract

South Africa is one of the world's most linguistically diverse countries. While English is the language of business and government, it is not the most common language spoken at home, creating friction in customer service, healthcare, public services and online access.

The most recent Census shows both isiZulu at 24.4% and isiXhosa at 16.3% dominate as the most common languages spoken at home, while English is fifth at just 8.7%.[1]

This whitepaper outlines (1) South Africa's unique language landscape, (2) the challenges created by language barriers, and (3) the technical requirements for accurate, real-time Automatic Speech Recognition (ASR) across all of South Africa's official languages – especially in noisy, code-switched, telephony-based environments. Finally, it introduces QContact's significant investment into building a state-of-the-art 11-language ASR capability.

[1] https://census.statssa.gov.za/assets/documents/2022/P03014_Census_2022_Statistical_Release.pdf

Executive Summary

- The reality in South Africa is not "English-first". While the de-facto language of business is English, Census 2022 reports home language usage is dominated by isiZulu (24.4%), isiXhosa (16.3%), Afrikaans (10.6%) and Sepedi (10.0%). English is the mother tongue in just 8.7% of the population.[2]

- There are now 12 official languages including South African Sign Language (SASL). SASL was signed into law as the twelfth official language in July 2023[3]. In this whitepaper, we will focus on the eleven official spoken languages as SASL is primarily visual and brings a different set of technology requirements.

- Multilingualism is rising, and the service sector must keep up. Stats SA reports an increase in households speaking more than one language (up from 3.5% in 1996 to 9.4% in 2022). [4]

- While internet usage continues to rise, many households continue to have no access to internet, meaning they rely on phone calls as not only their primary tool, but their only method to contact government and businesses. [5]

- Language barriers have a real impact on service quality. Research across public services (including healthcare) shows a lack of language doesn't just complicate interactions but leads to poorer outcomes and erodes trust – especially where professional interpretation is limited. [6] [7]

- South African speech has unique technical requirements – code-switching between languages, dialectal variations, rich morphology (especially in Nguni languages), named entities, noisy environments and low-quality telephone audio.

QContact's 11-language Automatic Speech Recognition (ASR) is designed precisely to handle real-world South African calls and customer interactions where speed, accuracy, and analysis matter.

[2] https://census.statssa.gov.za/assets/documents/2022/P03014_Census_2022_Statistical_Release.pdf
[3] https://www.gov.za/speeches/president-cyril-ramaphosa-enact-sign-language-12th-official-langauge
[4] https://www.statssa.gov.za/?p=18173
[5] https://census.statssa.gov.za/assets/documents/2022/P03014_Census_2022_Statistical_Release.pdf
[6] https://pmc.ncbi.nlm.nih.gov/articles/PMC10428555/
[7] https://www.sciencedirect.com/org/science/article/pii/S1548771720000081

1) South Africa's Linguistic Landscape

1.1 Official languages

South Africa's Constitution recognises 11 official languages (as originally written): Sepedi, Sesotho, Setswana, siSwati, Tshivenda, Xitsonga, Afrikaans, English, isiNdebele, isiXhosa and isiZulu. [8]

In July 2023, South African Sign Language (SASL) was enacted as the 12th official language[9]. SASL is crucial for accessibility, and many surveys have shown deaf users prefer visual language over written language[10] [11]. This whitepaper acknowledges the need for additional work on allowing visual models to help interpret those individuals who rely on or prefer to use SASL to communicate.

1.2 How widely are languages spoken at home?

Census 2022[12] reports the most common language spoken in the household is

Language (home)	% (Census 2022)
isiZulu	24.4%
isiXhosa	16.3%
Afrikaans	10.6%
Sepedi	10.0%
English	8.7%
Setswana	8.3%
Sesotho	7.8%
siSwati	2.8%
Tshivenda	2.5%
isiNdebele	1.7%
Sign Language	0.02%
Other	2.1%

[8] https://www.justice.gov.za/constitution/chp01.html
[9] https://www.gov.za/speeches/president-cyril-ramaphosa-enact-sign-language-12th-official-langauge
[10] https://academic.oup.com/jdsde/article/13/1/92/500521
[11] https://www.microsoft.com/en-us/research/wp-content/uploads/2020/08/Social-App-Accessibility-for-Deaf-Signers.pdf
[12] https://census.statssa.gov.za/assets/documents/2022/P03014_Census_2022_Statistical_Release.pdf

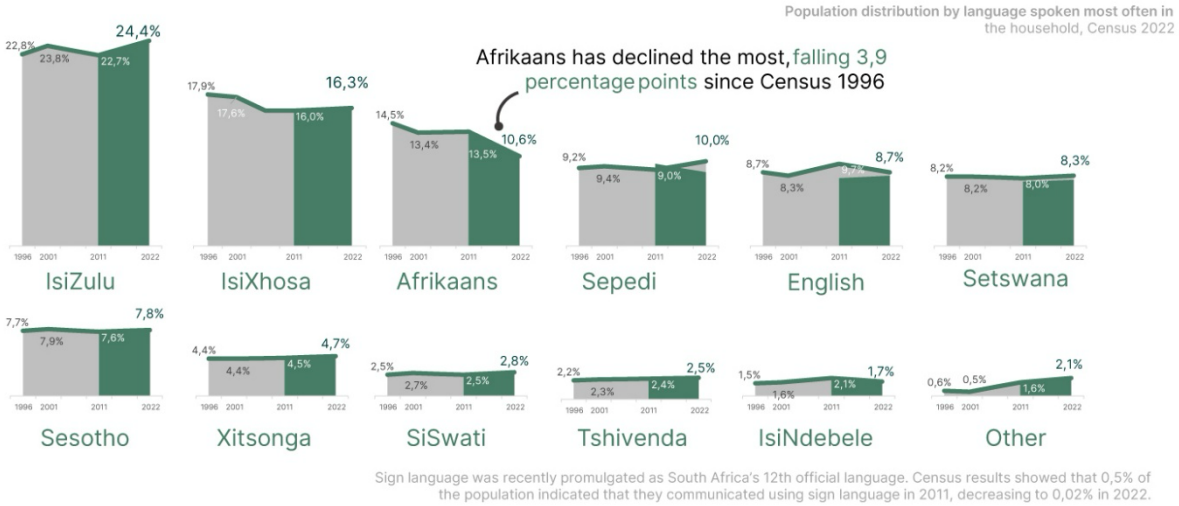

Figure 1
https://census.statssa.gov.za/assets/documents/2022/Census_2022_SG_Presentation_10102023.pdf

Key finding: In service environments, "English-only" journeys will systematically exclude or disadvantage a large share of customers – especially when conversations are complex, such as billing, complaints and healthcare.

1.3 Provincial concentration

The most common language spoken varies significantly by province, for example isiZulu dominates in KwaZulu-Natal while isiXhosa leads in Eastern Cape. Census 2022 [13] showed clear geographical patterns in primary language.

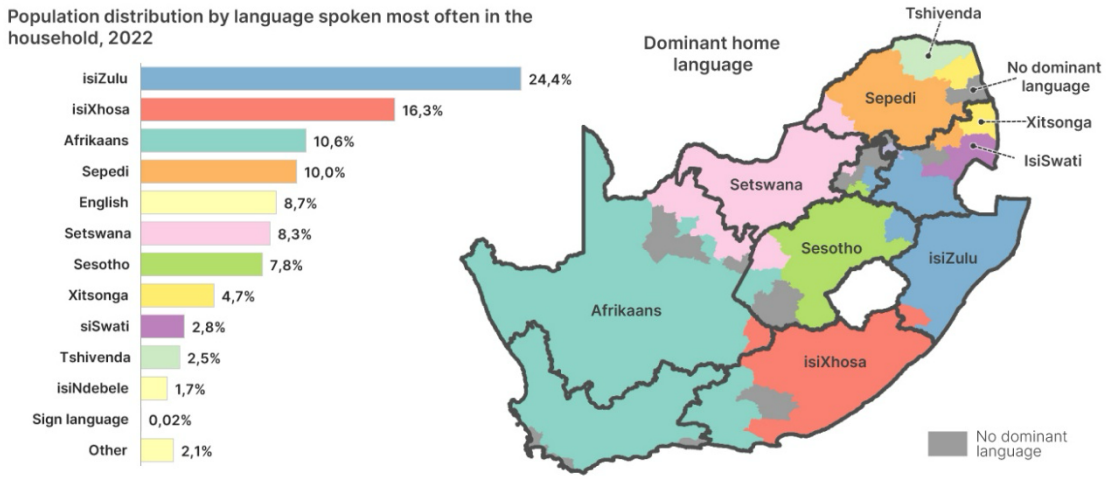

Figure 2
https://census.statssa.gov.za/assets/documents/2022/Census_2022_SG_Presentation_10102023.pdf

Key finding: A national helpline or enterprise contact centre needs both

- coverage across all major languages; and
- smart routing / language identification to match callers to native speakers quickly

1.4 Multilingualism is increasing

Stats SA reports [14] households speaking more than one language rose from just 3.5% in 1996 to 9.4% in 2022.

Even in single language households, a large amount of speech is code-switched. A research paper[15] into 182,000 user questions on the national MomConnect health

[13] https://census.statssa.gov.za/assets/documents/2022/P03014_Census_2022_Statistical_Release.pdf
[14] https://www.statssa.gov.za/?p=18173
[15] https://arxiv.org/abs/1911.05636

service found around 10% of entries were mixed, code-switched language even in semi-formal written communication.

You also have a large amount of borrowed or loaned words appearing in all languages. A study [16] that compared Afrikaans, English, isiZulu and isiXhosa found that all four languages have a significant proportion of borrowed words in speech. It found borrowed words were more common in isiZulu and isiXhosa than they were in either Afrikaans or English, highlighting loan words are a substantial feature in Bantu languages.

Key finding: It's not just enough to support isolate "single language" speech. Real-world interactions increasingly contain code-switching, mixed-language phrases and loan words borrowed from multiple different languages.

[16] https://www.researchgate.net/figure/Prevalence-of-borrowed-words-in-each-language_tbl3_233622858

2. Accessibility – Why Language Support Matters

2.1 Language barriers reduce service quality and trust

In public services like healthcare, language barriers are repeatedly associated with communication breakdowns, added burden, and poor user experience. [17]

In contact centres, these same patterns show up as:

- longer handle times,
- repeat calls,
- lower first-call resolution,
- poorer compliance (for example misunderstood disclosure or terms), and
- lower customer satisfaction.

Key Finding – the lack of multilingualism in contact centres can have significant cost implications as well as hurting customer satisfaction and customer experience.

2.2 Literacy and digital access

While South Africa has made great strides in improving citizen's digital access, many households (21.1%) still have no internet access, and many users primarily rely on phone calls as their primary method of communication (92.1% of households own at least one mobile phone).[18]

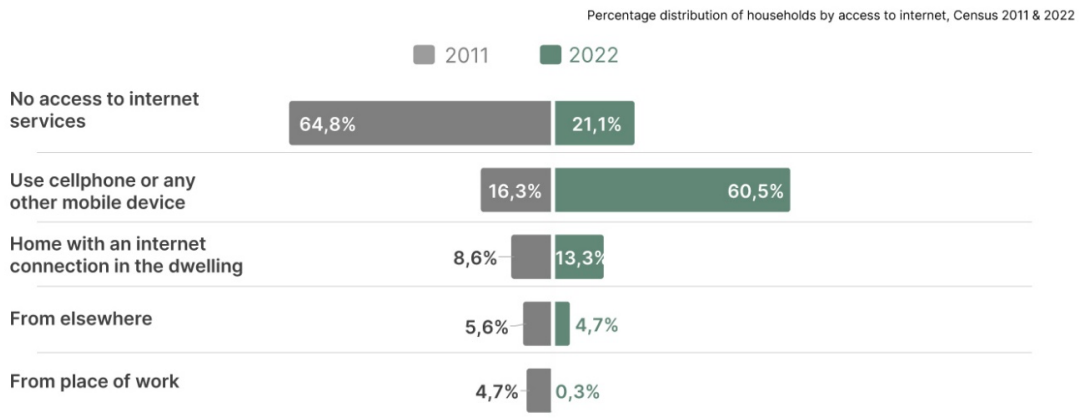

Figure 3
https://census.statssa.gov.za/assets/documents/2022/Census_2022_SG_Presentation_10102023.pdf

[17] https://pmc.ncbi.nlm.nih.gov/articles/PMC10428555/
[18] https://census.statssa.gov.za/assets/documents/2022/Census_2022_SG_Presentation_10102023.pdf

In ContactBabel's latest South African contact centre survey [19] sponsored by QContact, they highlighted that phone calls remain the number one channel in 2025, with over 59% of all conversations occurring via phone calls, more than double the nearest other channel (e-mail).

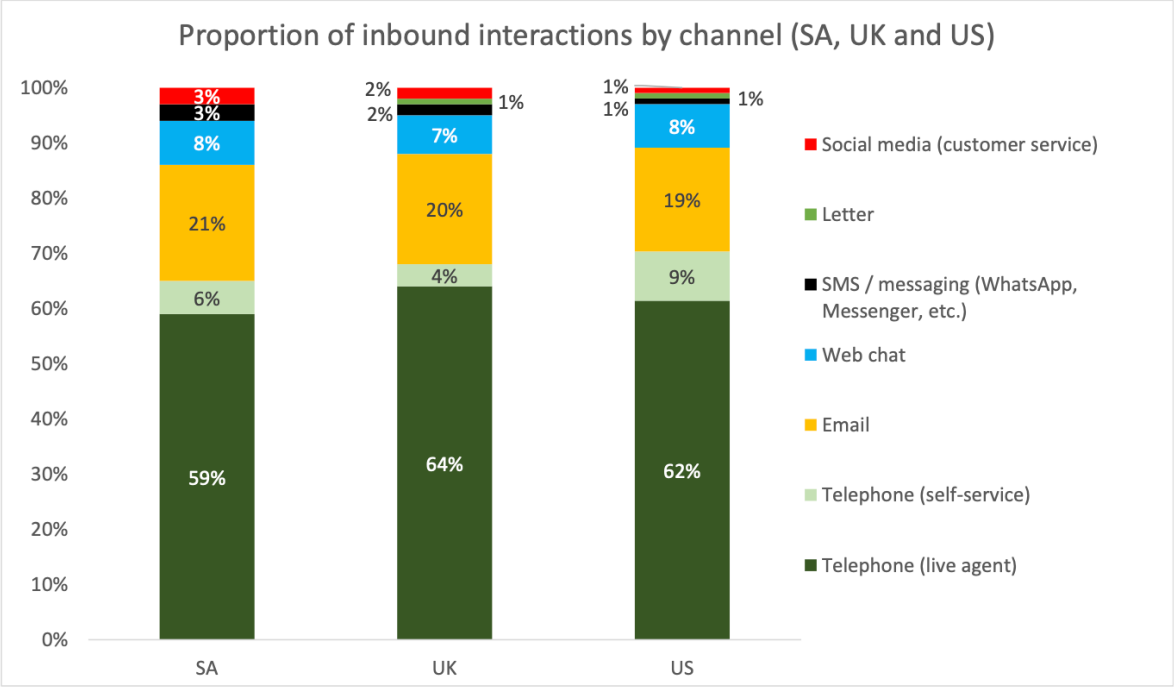

Figure 4
https://www.contactbabel.com/downloads/the-inner-circle-guide-to-south-african-contact-centres/

At the same time, adult literacy limits accessibility for any "text-only" self-service strategy; for example, a DHET reports[20] an adult illiteracy rate of 10.2% in 2022.

Key Finding: Telephone calls dominate South African customer service, and restricting multilingual conversations to text-based channels cannot just remove accessibility, but create unequal access based on factors such as economic, geographic or social factors.

[19] https://www.contactbabel.com/downloads/the-inner-circle-guide-to-south-african-contact-centres/
[20] https://lmi-research.org.za/wp-content/uploads/2024/07/DHET-FACTSHEET-7-7-3b-Adult-Literacy-2024-WEB.pdf

3) Why “English-only” Customer Experience breaks in South Africa

Even when callers can speak a fair level of conversational English, high-stakes or emotionally charged calls often revert to:

- the speaker’s strongest language,
- a mixed-language register,
- or community-specific phrasing or slang.

This is intensified in:

- complaints and escalations,
- medical and insurance discussions,
- financial hardship, debt counselling, or fraud,
- identity verification where spelling matters,
- rural service delivery.

This means the types of conversations that have the highest impact to customer experience and the biggest risk to the business or government entity, are the most likely to suffer from the lack of native language handling.

4) Why is South African Speech Recognition technically hard

4.1 Code-switching is the norm, not the edge case

South African speech frequently mixes English with another language, sometimes more than one other language. A 2022 publication [21] on South African code-switched ASR highlights this as one of the core challenges with any Automatic Speech Recognition (ASR) solution, not just an edge-case scenario.

A good ASR system must:

- detect and transcribe mixed-language utterances without collapsing into a dominant language (such as English),
- preserve named entities across languages, and
- avoid hallucinating similar sounding words in other languages.

4.2 Under-resourced languages and lack of training data

While English has hundreds of thousands of available hours of training material, South African languages remain "under-resourced" relative to global high-resource languages. A lot of work has been done to help change this – for example the NCHLT project was created explicitly to help build reliable ASR for South Africa. However, the number of hours of training material available still fall far short of what is required to build an accurate ASR model.

Production-grade performance typically requires

- multilingual transfer learning,
- careful text normalisation,
- domain adaptation (especially for the contact centre),
- robust augmentation for telephony artifacts and noisy backgrounds,
- and ongoing feedback loops.

[21] https://dl.acm.org/doi/10.1016/j.csl.2021.101262

4.3 Telephone audio

There is a large difference in the quality of the audio between a YouTube video or a radio show compared to that of a telephone call. Most real-world conversations happen over

- narrowband phone channels,
- mobile networks with voice compression and jitter,
- happen on speakerphone or with high levels of background noise,
- overlapping speech where both the customer and agent are speaking at the same time,
- with variable mic quality and handset quality.

A good ASR must

- remain stable on narrowband audio,
- handle real-world noise,
- maintain low latency without sacrificing accuracy,
- and know who said what (diarisation).

4.4 Morphology, spelling and named entities

Nguni languages can be morphologically rich, and everyday spelling can vary between speakers and regions. Names, brands, locations, and product terms can also appear in mixed forms and languages.

Afrikaans as another example loves to compound words – what may be four or five words in English, may be compressed into a single word in Afrikaans adding an extra challenge of word boundaries.

A good ASR must

- be tolerant to orthographic variation,
- support custom vocabulary training,
- keep stable formatting for IDs, numbers, and addresses

4.5 Data security & POPIA

South Africa has very strict data protection legislation in place. It's therefore important that any processing of speech happens in full compliance with POPIA. Any transfers to third countries must ensure that the destination country has adequate safeguards in place to ensure the security of the user's data.

It also requires that any transmitting of data over the network or internet is encrypted and secure.

5) Introducing QContact's South African ASR

QContact already offered native transcription in over 25 languages, covering over 3 billion speakers. However, our support for South African vernacular languages was limited.

QContact is proud to announce the release of our brand-new South African ASR platform. Built using the latest technology from NVIDIA and forming part of our multi-million-rand investment into South Africa, QContact delivers market leading accuracy across all eleven languages.

What's more, QContact offers this functionality to our customers at **no additional cost** – every call, every language, automatically transcribed, for free.

5.1 Design goals

QContact's ASR capability for the South African market is designed to:

1. Inclusive language coverage across all 11 of South Africa's official spoken languages.
2. Contact-centre readiness – reliable transcripts for low quality audio
3. Code-switched robustness – mixed language speech
4. Ease-of-use – should work without any complex deployment or configuration
5. Continuous improvement – should gradually improve over time
6. Ecosystem integration – should allow existing AI analytics and tools to work across languages

5.2 Supported Languages

- Afrikaans
- English
- isiNdebele
- isiXhosa
- isiZulu
- Sepedi
- Sesotho
- Setswana
- siSwati
- Tshivenda
- Xitsonga

5.3 Consistent Experience

Whatever the language of the call, all the existing functionality should remain – from AI summaries, natural language key topic detection to automated Quality Assurance – these should be able to be written once in English and automatically work with a call in any of the eleven languages.

5.4 Secure and compliant

QContact operates from within South Africa – you deal with a South African company, hosting your data within South African datacentres. We ensure your data is processed in compliance with POPIA, and where transfers are required, are only ever transferred to the UK or the European Union where GDPR gives equivalent protections to POPIA.

5.5 Cost effective

A core premise of QContact is to include all functionality to all users without additional licensing. This requires the solution to be fast and cost effective to ensure no additional costs are passed on to the customer.

6) Quality and Benchmarking

6.1 Single letter mistakes

One of the challenges of the vernacular languages of South Africa is the complex grammar and compounding of words that aren't as prevalent in European languages. Measures such as Word Error Rate (WER) while great for languages like English, don't necessarily accurately reflect transcription accuracy in Bantu languages or Afrikaans.

Let's take an example – in Xitsonga, imagine a transcription

Actual: ndziyavulavula

Heard: ndziyavulavla

To any Tsonga speaker they'd understand exactly what the word means (I am speaking), but it is one letter short, meaning 100% WER failure, when it is only a single letter wrong.

Or take another example – to say "I am being helped" in English you'd use four words, in Sesotho you use a single compound word of keabetswa. So now again imagine your transcription was one letter off, and heard "keabetswe" with an e rather than an a. In English your WER would be 25% for a single letter error, but in Sesotho you're at 100% WER just for a single letter difference.

6.2 Compound words

For another example of why transcribing these languages can be so hard, let's look at compound words. We have these in English – for example a word like checkout – is it "check out", "check-out" or "checkout" – while all of them have identical meaning, choosing the wrong one would lead to 100% WER and yet to a human, they are identical.

And one language that loves to compound words is Afrikaans. Let's translate "customer service call centre scheduling problem" to Afrikaans – klantediensoproepsentrumskeduleringsprobleem. Yep, that's a single word in Afrikaans that won't appear in any dictionary but is both spelt correctly and grammatically correct. So, while a single letter in English would mean 16% WER, a single letter wrong in that word would lead to 100% WER for the phrase.

6.3 Accuracy

You can start to see why WER isn't the best measure of accuracy in these languages. The industry generally measures these languages not in WER but Character Error Rate (CER). That is measuring how many individual letters are wrong rather than how many words are wrong. Let's look at our accuracy on these languages

Language	CER	Character Accuracy
Afrikaans	0.033	96.6%
English	0.018	98.2%
isiNdebele	0.033	96.6%
Sepedi	0.031	96.9%
Sesotho	0.045	95.6%
siSwati	0.033	96.3%
Setswana	0.034	96.9%
Xitsonga	0.045	95.6%
Tshivenda	0.046	95.4%
isiXhosa	0.048	95.4%
isiZulu	0.048	95.0%

As you can see, we offer 95%+ character accuracy in every single official language.

6.4 Industry Benchmarks – Language Coverage

We are one of only two providers in the marketplace to cover all eleven official spoken languages.

Language	Mother Tongue	Azure	Google	Amazon	Callbi	Lelapa	Botlhale	QContact
Afrikaans	6.9m	✅	✅	✅	✅	✅	✅	✅
English	5.1m	✅	✅	✅	✅	✅	✅	✅
isiNdebele	1.1m						✅	✅
Sepedi	4.6m		✅				✅	✅
Sesotho	3.9m				✅	✅	✅	✅
siSwati	1.3m						✅	✅
Setswana	4.1m				✅		✅	✅
Xitsonga	2.3m						✅	✅
Tshivenda	1.3m						✅	✅
isiXhosa	8.2m		✅				✅	✅
isiZulu	12m	✅	✅	✅	✅	✅	✅	✅
Mother Tongue Coverage		47%	72%	47%	63%	59%	100%	100%

6.5 Industry Benchmarks – Accuracy

In terms of accuracy, most vendors chose to not publish their accuracy levels. Although most publicly available benchmarks use WER rather than our preferred metric of CER, you would expect the levels of improvement in WER for a single language to be reflected similarly in improvements to CER for that language. As of writing, these are the most recently available benchmarks against our most recent release of the QContact model.

Please note, not all benchmarks are measured against the same dataset, so exact comparison is difficult, but they give an impression of the approximate levels of accuracy you can expect.

Language	Google WER	Deepgram WER	Elevenlabs WER	Whisper WER	Lelapa WER	QContact WER
Afrikaans	0.133[22]	0.995 [23]	0.170 [24]	0.934 [25]	0.197 [26]	**0.110**
English	0.042 [27]	0.069 [28]	**0.034 [29]**	0.047 [30]	0.087 [31]	0.048
isiNdebele						**0.129**
Sepedi						**0.078**
Sesotho					0.294 [32]	**0.103**
siSwati						**0.132**
Setswana						**0.077**
Xitsonga						**0.110**
Tshivenda						**0.125**
isiXhosa	0.380 [33]	0.999 [34]	0.397 [35]	0.935 [36]		**0.191**
isiZulu	0.275 [37]	1.000 [38]	0.346 [39]	0.934 [40]	0.369 [41]	**0.206**

[22] https://elevenlabs.io/speech-to-text/afrikaans
[23] https://elevenlabs.io/speech-to-text/afrikaans
[24] https://elevenlabs.io/speech-to-text/afrikaans
[25] https://elevenlabs.io/speech-to-text/afrikaans
[26] https://lelapa.ai/wp-content/uploads/2024/04/Lelapa-Model-Card-Lelapa-X-ASR-Afrikaans.pdf
[27] https://elevenlabs.io/speech-to-text/english
[28] https://elevenlabs.io/speech-to-text/english
[29] https://elevenlabs.io/speech-to-text/english
[30] https://elevenlabs.io/speech-to-text/english
[31] https://lelapa.ai/wp-content/uploads/2024/04/Lelapa-Model-Card-Lelapa-X-ASR-ZA-English.pdf
[32] https://lelapa.ai/wp-content/uploads/2024/04/Lelapa-Model-Card-Lelapa-X-ASR-isiZulu-and-seSotho.pdf
[33] https://elevenlabs.io/speech-to-text/xhosa
[34] https://elevenlabs.io/speech-to-text/xhosa
[35] https://elevenlabs.io/speech-to-text/xhosa
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[37] https://elevenlabs.io/speech-to-text/zulu
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[40] https://elevenlabs.io/speech-to-text/zulu
[41] https://lelapa.ai/wp-content/uploads/2024/04/Lelapa-Model-Card-Lelapa-X-ASR-isiZulu-and-seSotho.pdf

Conclusion

South Africa's linguistic diversity is not a technical "localisation" detail – it's a core part of South African culture, accessibility and customer trust. Census 2022 clearly demonstrated that the majority of South Africans speak a language other than English at home.

Businesses and government services that chose to ignore this reality run the risk of both a poor customer experience, lower customer satisfaction and potentially expensive remediation activities where customers didn't fully understand the nature of what they were agreeing to.

QContact's world leading accuracy on understanding, transcribing and analysing all eleven official spoken languages empowers businesses to offer multilingual service while not compromising on their ability to perform quality assurance, topic analysis and understanding.

What's more, by giving this functionality for free to our customers, they don't have to balance outlay versus reward – the benefit instantly from 100% coverage at no additional cost.

About QContact

QContact is a leading contact centre software provider powering communications for some of the largest companies in South Africa. Our customers include over 40% of retail stores, over 50% of quick serve restaurants, and 3 of the top 5 ISPs in the country.

Named the top mid-market contact centre software in 2025 by CXToday, QContact is proud to have invested millions of rand into South Africa and were named by Sunday Times' Best Places to Work 2025 as the top-rated telecoms company, and the 11th best SME in the country to work for.

We are a B-BBEE Level 2 contributor and are employ a diversified and inclusive workforce speaking all 11 official languages, with local presence in Gauteng, KwaZulu-Natal and the Western Cape.

Further information

To learn more visit www.qcontact.com, e-mail info@qcontact.com or call us on 0600 777 123.