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Tenje - Narrowcasting customized audio to businesses in Kenya

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ABSTRACT

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This thesis studies the product development of an audio streaming solution for businesses in Kenya. The concept was driven by exploits by Forester Media Limited, a Kenyan media firm, to expand its product portfolio. The company conceived the idea of an automated system that would transmit tailor-made audio content for customers and staff.

The main purpose of the study was to establish what technical features, music and content are ideal for a distinctive instore entertainment package for Kenya. The case applied qualitative research and semi-structured interviews to ascertain how to customize a Finnish music service for deployment in the East African country.

The findings were used to design Tenje, a customized streaming service built on the infrastructure that runs DjOnline, an instore music platform that is used widely in Finland. Tenje was launched in April 2022 as a custom-built business radio service that combines practices of background music with modern radio, to enable enterprises to narrowcast inhouse messages, promotions, brand advertisements, and tailor-made entertainment. The streams depict the Kenyan local-radio styling which is grouped by language and genres of music playlists.

The ultimate value of this study is to give an overall understanding of the customization of business audio entertainment and adoption of technology in emerging markets. Customer survey and product performance should be undertaken as future research and applied in further product improvement.

Keywords: narrowcasting, audio streaming, automation, Tenje, DjOnline, customization

CONTENTS

ABBREVIATIONS AND TERMS

AI	Artificial Intelligence
BMC	Business Modelling Canvas
CA	Communications Authority of Kenya
CEO	Chief Executive Officer
CM	Commercial Media
CMO	Collective Management Organisations
FML	Forester Media Limited
HTML	Hypertext Markup Language
HTTP	HyperText Transfer Protocol
ICT	Information Communication Technology
ID	Identity
IP	Intellectual Property
ISM	In-store Media
KAMP	Kenya Association of Music Producers
LTD	Limited
MCSK	Music Copyright Society of Kenya
PRISK	Performers Rights Society of Kenya
TAMK	Tampere University of Applied Sciences
UI	User Interface
URL	Uniform Resource Locator
USP	Unique Selling Proposition

1 INTRODUCTION

Narrowcasting in audio content distribution refers to the packaging and transmission of matter that is targeted at specific audiences (Foti et al. 2020). In application, this method of transmission is acclaimed to be instrumental in encouraging message sources to share content that is in most instances deemed to be considerably useful to the target recipients (Barasch & Berger 2014).

While the coinage of the term 'narrowcasting' is attributed to psychologist and computer scientist J.C.R Licklider back in 1967 (Licklider 1967, 213) in a report on public broadcasting, the concept has recently become more popular as entertainment evolves into more specialization (Foti et al. 2020). A few years ago, Tom Vernon argued that the term was coined to explicitly serve meaning in instances when the goal is to reach small audiences or subsets of the large audiences that are targeted by broadcasting (Vernon 2018).

Narrowcasting combines personalized delivery with user-driven on-demand approach to content consumption. These qualities owe existence to the rapid development of information and communication technologies, and in some instances, the rise in popularity of social media networks (Gorgulu 2019). Narrowcasting is also credited with affording opportunities for organizations to tailor-make content that is unique to their marketing needs. This in return creates potential opportunities to increase their brand relevance and generate new sources of revenue.

This study will explore the product development and launch of a new audio streaming solution for businesses in Kenya. This customized retail radio service has been designed to narrowcast tailor-made advertising and entertainment for business premises in the geographical region of Eastern Africa.

The concept to develop an instore entertainment system for the Kenyan market began at the onset of Covid-19 in March 2020. The scourge led the researcher to think of how to develop a solution for businesses to run public messages aimed at the control of Covid in their premises.

At the onset, the thinking largely orbited on finding a solution for use by the huge number of bars in the country to run public service audio announcements to remind patrons to observe social distancing in a bid to curb the spread of the virus. It had been observed in the Kenyan capital city of Nairobi, that whereas most social joints offered music videos as the preferred source of entertainment, there was no focus on any public awareness messaging about the new disease both in video and audio. Alcohol consuming clientele who patronised the entertainment places in Nairobi were considered likely to engage in risky behaviours, such as poor sanitation and non-adherence to social distancing, as the nights wore on and the party goers became inebriated.

The researcher had also made a disturbing observation at business premises such as supermarkets, banks, and restaurants. He was concerned that most of these places would always broadcast one of the various local radio or TV stations. It followed that in instances, competitors' commercial adverts placed in these stations, would inadvertently play in these premises. To a man who had over 20 years' experience in media management and advertising, this was akin to delivering one's attentive audience directly to their competition!

The researcher is the proprietor of Forester Media Ltd, a Kenyan media consultancy firm. The enterprise entered a business partnership agreement with Kutalab Oy, a Tampere based company that is involved in research and development of technology in audio distribution, for the product development and testing of a customized business radio concept for Kenya. The service was built on the ICT backbone that is used by DjOnline, a dynamic restaurants/shops entertainment service in Finland. The product was customized for the Kenyan market based on research and industry feedback obtained from interviews that were conducted in November 2021.

The trading name for the service is Tenje. This term is an old Kenyan slang word for radio. However, the phrase has more recently evolved to mean mobile phone. The name was adopted in this business venture to denote mobility and represent the widely popular culture of radio consumption amongst Kenyans.

The Tenje case delves into the realm of emerging media through its enhanced focus on the application of technology and expertise in innovative and new ways of delivering content. The objective of the project is to introduce to business enterprises in Eastern Africa, a system that applies the best possible medium for the distribution of customized audio content, combined with precision in scheduling of awareness messages and advertising.

The main research question for this study seeks to establish what technical features, music and content are ideal for a distinctive instore entertainment package for Kenya and how to customize a Finnish music service for deployment in this Eastern Africa country.

The research resulted in the development of a professional tailor-made audio solution package, designed to entertain, and inform customers and staff alike, by creating better atmospheres that positively affected their auditory moods. This new product was based on the research findings that included views that the target enterprises desired to enhance the overall client patronage experiences and wanted to encourage customers to stay longer in their premises. Additionally, the research revealed that entrepreneurs had a need to regularly remind consumers of new products and hoped to induce certain actions or reactions by patrons while at their premises. Also important was a need to provide dynamic entertainment that would motivate business employees to enhance their output.

Tenje was launched in April 2022 as a custom-built business radio service targeting business enterprises in Kenya. The service enables businesses to narrowcast inhouse messages, promotions, brand advertisements, and tailor-made entertainment in their premises. The product was developed by merging practices used by DjOnline to provide background music services in Finland with those of the radio industry in Kenya. Alongside the deployment of an automated system to select music moods for use in different day parts, Tenje will also create music playlists based on programming trends of local radio stations in Kenya. These radio-style playlists are based on language, positioning, and music genres categorization.

2 BACKGROUND

This chapter will delve into relevant background information that enables a better understanding of this study. Some of the areas explored include narrowcasting, customization, instore entertainment, background music in stores and customization.

Gaps in literature have been studied to satisfy the academic requirement to justify the value of the study. Relevant literature has been reviewed to provide grounded insights into the use of audio with special relevance to its application in business entertainment. The chapter will also discuss the case study companies.

2.1 Background music in stores

Background music in stores is usually applied as an element that is meant to create a suitable atmosphere and fill the silence. It enables the creation of special atmospheres that generate different feelings for the clients. Public shopping and consumption places have become increasingly common places for targeted music play (D'Amato 2014).

According to an academic study focussing on the effect of music in retail (Milliman 1986), the behaviour of customers was found to be affected by the melody, volume, mode, and even tempo of the background entertainment. This study by Ronald E. Milliman reported findings that shoppers in a supermarket moved slowly between two points when soft music was relayed in the premises. Conversely, an increase in shoppers' speeds was registered when the music was made louder.

Other scholars have demonstrated the existence of a direct link between the speeds at which customers shop, dine, or drink relative to the volume or tempo of background music (North & Hargreaves 2010). Specifically, slow music in restaurants resulted in diners consuming their meals more slowly than happened when fast music was played (Milliman 1986). Conclusively, it has been argued

that this response to music is not necessarily about individual preferences, but that it proves that properties in music that affect general human arousal led to consumers behaving in ways consistent with the injected levels of stimulation (North & Hargreaves 2010).

However, while acknowledging that music is not the only factor that influences the choices that customers make, Srinivasan and Mukherjee (2012) note that it is nevertheless a very significant feature and plays a fundamental role. Today, in the face of cut-throat competition amongst retail players seeking to attract, motivate, and retain customers, businesses are highly advised to make investments in ensuring that their background-audio components embellish their premises' attractiveness by contributing to the improvement of the general ambience of commercial spaces.

2.2   Business audio entertainment

Business audio entertainment refers to the use of a domesticated circuit audio system mainly for narrowcasting brand-specific audio content. Charles S. Areni & Rohan Miller (2012) illustrate business audio entertainment as a phenomenon that has largely been driven by "the development of cable, satellite, and, more recently, internet-based technology" which has allowed enterprises to "develop their own radio stations".

Business audio entertainment belongs to the wider realm of in-store media (ISM), a trend in modern retailing in which business owners establish content distribution channels dedicated to their premises. These platforms have been argued to have recently been accelerated by advancements in communication technology. This advancement makes it practical and feasible for retailers to establish and manage in-house channels of advertisements (Anthony & Liu 2010) easily, effectively, and cheaply.

A major difference that sets in-store entertainment apart from commercial media, is the structure of ownership. While commercial media will ordinarily be owned by independent third parties in relationship to the business enterprise, the in-store

platform is a platform that is started and operated by the retail outlet. "This ownership structure means that retailers who use ISM profit from the additional ad revenue that would otherwise end up with commercial media" (Anthony & Liu 2010).

The content featured in business audio entertainment will usually consist of self-curated music and/or entertainment, business-specific advertisements, and announcements. The radios may come "complete with music, news, live broadcasts and any other programming found in free-to-air radio stations" (Aremi 2012).

The service aims at broadcasting messages to clients within the business premise (Aremi 2012). Enterprises use this approach to share their brand message and create a pleasant atmosphere for both staff and customers. This not only enhances the working environments for staff, but it also encourages repeat patronage. Businesses also use the forum to advertise deals, and in some cases, provide information about the business operations.

In-store radio is an incredibly effective way for entities to deliver tailor-made messages to their patrons right at the points of sale. These channels have been known to affect product sales and mitigate supplier competition (Anthony & Liu 2010). The narrowcasting approach presents opportunities for organizations to push specific content unique to their marketing needs. This in return creates potential opportunities to increase their brand relevance and generate new sources of revenue.

2.3   Narrowcasting

Narrowcasting can be described as the intentional dissemination of information to a restricted audience that secludes the wider mass market. The term was officially coined by J.C.R. Licklider in 1967 who used it to "suggest more efficient procedures than broadcasting … to reach a small select audience … but also that the distribution channels are so far arranged as to carry each program or service to its proper audience" (Licklider 1967, 213).

Narrowcasting involves aiming media content to a specific group of people. The selected audience in each case consists of target segments that are identified through their shared values. The shared values usually consist of preferences and demographic factors. Like applied in the study of Tenje, subscription has been identified as one unique identifier of a narrowcasting audience although it is in most instances manifested as choice borne by the consumers.

Narrowcasting also applies to localized dissemination of content from a shared source to a group of audience that is geographically limited. This is the application employed by business entertainment and is the subject of this study. Scholars have identified that narrowcasting delivers better persuasive messaging when compared to broadcasting (Foti et al. 2020). This has been attributed to the findings that affective framing occurs with narrowcasting platforms while cognitive messaging is more apparent in broadcasting programs.

Narrowcasting has in instances been interchanged to mean niche or target marketing. Using this approach, marketers and advertisers identify target markets and aim to produce messages that are specific and effective for the identified cluster of clients (Carroll 2016). Barasch and Berger noted that broadcast platforms disseminate their content over large geographical areas and carry substance that does not differentiate between target and non-targeted receivers. This is unlike the structure of narrowcasting platforms whose subject is sent directly to targeted recipients (2014).

Barasch and Barger (2014) further demonstrate that due to the connected relationship between the senders and receivers in narrowcasting platforms, the shared content tends to be of considerable usefulness within the circles in which it is shared. The duo also points to a penchant behaviour of self-focus amongst those involved in broadcasting. This they observe leads to the presence of self-presenting subject matter within the broadcast content (Barasch & Berger 2014). They instead recommend the use of narrowcasting when one is intent to effectively engage a passionate, notwithstanding smaller, number of customers (Barasch & Berger 2014).

Tenje will be availed as a subscription-based tool offering streaming services for tailor-made audio entertainment, promotional messages, announcements, and background ambience for businesses in Kenya. This mode of content delivery and the grouping of the intended audiences – business specific clientele – falls under narrowcasting, a practice under which a channel is arranged as to carry each program or service to its proper audience (Licklider 1967).

2.4 Customization

Customization entails the act of changing a product to fit to the user's needs. It has been credited with enabling customers to obtain products that perfectly match their unique likings (Klesse et al. 2019). It refers to a process through which an existing system is reformatted to create a novel tailored format, usually without compromising the integrity of the original set.

The growth of widespread customization has been attributed by scholars to a shift in thinking by enterprises in which product users are viewed as active participants in the co-creation process rather than passive consumers (Bendapudi & Leone 2003). In media distribution, customization is credited with the creation of improved channel coordination. This has been achieved through the internalization of advertising and promotional decisions, an action that resonates with similar practices in commercial media (Anthony & Liu 2010).

In customization, the customer guides the changes. These modifications are concentrated on changing an existing product, service, or experience to meet the demands of a specified consumer group. By so doing, customers are provided with products made to suit their specifications and requirements. The specifications cover various aspects of the product but mainly relate to application and access (Mikkola 2007).

Like in the case of Tenje, customization has been widely used to enable entities to penetrate new markets. This market expansion is achieved through product reconfiguration to cater for new demands that enable ease of use by the new target clientele. In some cases, customization is achieved through the process of complete re-assembly (Gilmore & Pine II 1997).

Product customization has proven to be essential in the delivery of personalized client experiences in different customers' groups. It has also been used to shore up client satisfaction leading to increased sales and brand loyalty (Mikkola 2007). Customization is especially a common practice in business-to-business markets in which products are modified to serve specific customers' needs (Klein 2007).

2.5   Case study companies

One key benefit of using case study companies in research is that it enables a researcher to utilize insights and knowledge related to the research topics in real-life operator environments (Yin 2014). In the study of Tenje, two commercial entities have entered a business partnership agreement for the product development of a customized audio narrowcasting solution for businesses in Kenya. Forester Media Ltd is a Kenyan media consultancy firm, while Kutalab Oy is a Tampere based company that is involved audio distribution.

Kutalab Oy

Kutalab Oy is a Tampere based company that is involved in the research and development of technology in audio distribution. The company prides itself in the mastery of emerging media technology with a special emphasis on narrowcasting audio content (Harju 2022). The company is the proprietor and creator of DjOnline, a patented intelligent music distribution service.

Kutalab was founded as a media development company in 1998. It started the DjOnline development project in 2004, and the first usable version was completed in 2006. Patent for an intelligent metadata-based music distribution system was filed in 2003 and granted in Finland in 2008.

DjOnline has for over 15 years represented what a modern way of digital music distribution for public spaces looks like. DjOnline is based on a system that manages an extensive music database that includes specified metadata of each audio item. The system makes the playback of personalized music styles easy and sound.

Kutalab has also ventured into the creation of a radio automation systems where DjOnline has been deployed in professional radio in Finland. Some of the clients that use DjOnline system for the background music service include the S-group restaurants and Hilton hotels, S-group supermarkets, and shopping malls such as Redi in Helsinki. The radio software is used in the broadcasts of Radio Helsinki.

Kutalab is led by CEO and DjOnline inventor Pablo Harju.

Forester Media Ltd

Forester Media Ltd is a Kenyan Media & Communication firm offering full-service spectrum in multimedia production, communication and advertising, media, and broadcast systems. The company was founded in 2011.

Since its inception, forester Media Ltd has formed working partnerships with leading supply, engineering, and service companies to offer the best turn-key solutions in broadcast engineering & systems, content generation, events management, public relations and corporate communication, media relations and training, and advertising.

3 THEORITICAL FRAMEWORK

The development and implementation of Tenje as a service to narrowcast customized audio to businesses in Kenya was explored through the lenses of how emerging media contributes to the deployment of new ways to transmit content as envisioned by Russel Neuman (1991).

Author and scholar Russel Neuman forecasted that emerging media would increase the volume and speed of communications, alter the influence of distance, enable interactive communications, and sanction the merging of media forms (Neuman 1991). This categorisation is arguably still relevant and has been used to evaluate how Tenje, which will narrowcast customized audio for businesses in Kenya, qualifies as an emerging media platform.

Above defining emerging media as those undertakings that would among others seek to quash the influence of physical distance and raise the speed, volume, and availability of channels of communication, Neuman brought forth the thinking that new media introduces overlaps of hitherto independent forms (1991). As a result, he added, emerging media allows enhanced participation and increased control by the users.

While emerging media has commonly been used to refer to futuristic approaches such as augmented and virtual realities (Sinclair 2017), in practice it can be used to describe the dynamic application of technology in innovative ways to exchange information, especially when applied in traditional media such as radio and television. It is fair to note that definitions of emerging media remain fluid and are evolving. Most definitions seem to exclusively focus on computer technologies and digital content production. Still, others stress the cultural forms and contexts in which technologies are used (Dewdney & Ride 2006).

Neuman put across the argument that emerging media will profoundly impact social interactions and communications (Neuman 1991). This is mainly seen in reference to new digital technologies that facilitate innovative ways of how we communicate in society. Barry Smith referenced Neuman's insights with a

particularly interesting interpretation that emerging media would in the long run displace mass media with a more specialized narrow-media (2015). He then added his interpretation of what further effects of emerging media on communication would be. To him, they would include the development of new digital forms and the ability to influence human behaviour through such channels (Smith 2015).

Emerging media brings with it a mighty tool that can be used to craft new kinds of experiences as well as advance accessibility (Geroimenko 2014). This means that content creators and aggregators have more varied ways to deliver their products. Their target consumers are also advantaged in that more people have gadgets that allow enhanced access to digital content and are built on technologies that are compatible with emerging media forms.

The Tenje case study will be evaluated against the concept of emerging media largely focussing on conformity to the application of technology and expertise in narrowcasting customized audio content to enterprises in Kenya.

4 METHODOLOGY

This chapter outlines the various aspects of research methodology that includes the research design used, the research method applied, as well as the data collection and analysis approaches that were used and guided the conduct of this study.

The case study methodology was used in this thesis as the logical plan for the researcher to move from the 'known' to the 'unknown' (Yin 2014). The 'known' stands for the research questions that are set at the beginning and the 'unknown' denotes the research findings.

4.1 Defining a case study

Case study research is one of the various forms of research in social sciences. This approach is most ideal when the research questions seek to establish the 'why' and 'how', when the subject of study is contemporary, and instances where the research person has limited control over the behavioural events (Yin 2014, 240).

It is particularly useful to employ the use of case study in research when one is faced with a need to obtain an in-depth understanding of a phenomenon of interest, event or issue especially as pertains to application in real-life context (Crowe & Sheppard 2011). This was deemed to aptly apply in this study because whereas the researcher has a long breadth of experience in broadcast and content creation, he has not interacted widely with technology and the art of narrowcasting.

Case study allows researchers to focus on the subject and retain a real-world perspective throughout the study. This makes it the most ideal approach in studies in areas such as managerial and institutional processes, individuals' life cycles, social changes, international relations, and evolution in technology (Yin 2014).

Notes from Yin's book 'Case Study Research Design and methods', explain that case studies are useful in describing, exploring, or explaining things as they happen in our everyday lives. This contextualization of phenomenon can be put to good use when a researcher seeks to explain links and pathways to developmental issues (Crowe & Sheppard 2011), a clear objective that a newly developed product such as Tenje seeks to address.

4.2 Research design, method, and question

Research design refers to a plan that logically links the research questions to the evidence to be collected and analysed in the study. The main goal of the chosen design is to provide an effective path to achieve the intended findings. (Yin 2014, 240). In this study that sought to establish what technical features, music and content are ideal for a distinctive instore entertainment package for Kenya, the researcher followed a six-stages process of the case study research design as advocated by Yin Young (2014). The process kick-started with the creation of a plan on how to conduct the research. Once the plan was set, the researcher would then move to use another five interlinked procedures. These are design, preparation, data collection, data analysis and the sharing of findings.

It is imperative to note that the process is non-linear, but it instead constituted multi-directional movements between the five processes as demonstrated in Figure 1.
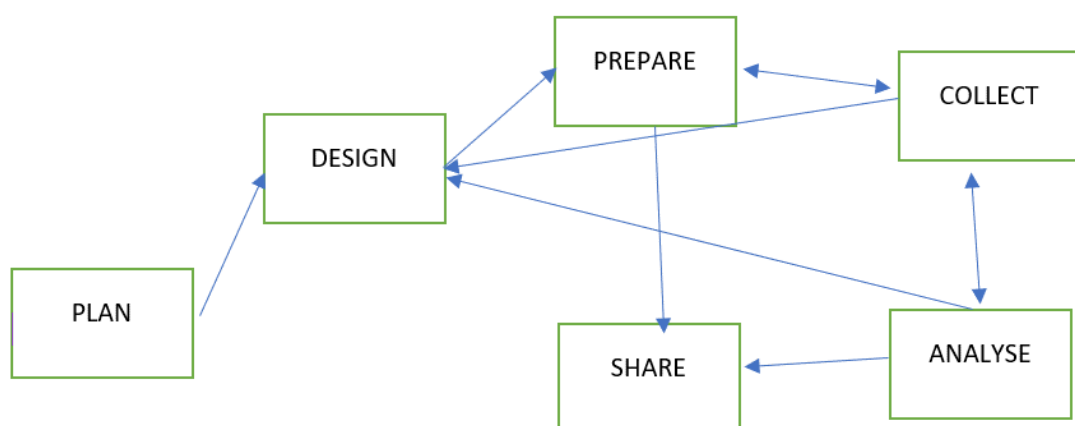

FIGURE 1. Case study design (reproduced from Yin 2014).

This study relied on qualitative research to develop a deeper understanding of the Kenyan market regarding background music and in-store entertainment. The approach was chosen mainly because it has been proven to be more effective and best applied when the researcher commences the study with some prior level of understanding of the subject matter and may have an existing hypothesis that they wish to test (Warren 2020). This applies to this study about narrowcasting customized audio content for businesses in Kenya, because the researcher has extensive work experience in the field of media in this East African nation.

Qualitative research incorporates multiple realities that are informed by real-life experiences and behaviours which enables man make sense of the universe (Warren 2020). The main guiding principle to use qualitative research approach in this study was the need to access the most comprehensive information possible, while remaining flexible in exploring the commercial feasibility of a business concept to narrowcast customized audio content for enterprises in Kenya.

The research question of this thesis was how to determine what technical features, music and content are ideal for a distinctive audio instore entertainment package for Kenya. The case also sought to determined how to customize DjOnline, a Finnish music service, for deployment in this East African country.

4.3   Data collection

Data collection in case studies has been described as potentially complex undertakings (Yin 2014, 71). If not well executed, data collection has the potential to risk all the efforts done in the earlier stages of research questions formulation and case design. Yin lists the five important perquisites for data collection to include desired skills and values, training for the case in question, developing a procedure for the project, screening candidates, and conducting a pilot study.

Data collection for this thesis involved the use of semi-structured interviews to obtain primary data from the study participants. The interviews were conducted in the month of November 2021. There were 11 interviews, and all were done using a hybrid model approach. Nine of the respondents were Kenyan nationals.

The 10th respondent was Mr. Pablo Harju who is the CEO of Kutalab Oy and a Finnish national while one respondent was a Dane living in Kenya. The participants were selected based on their link to the project as potential clients, their understanding of the entertainment market in Kenya and the working knowledge of DjOnline in the case of the founder of Kutalab Oy. One of the respondents was a Kenyan lawyer who specializes in intellectual property laws.

It is to be noted that Mr. Harju's interview was expressly designed as a source of information for this study.

A summary of the 11 respondents featured in this study is provided (Table 1).

TABLE 1. Summary of study respondents

Participant	Nationality	Designation	Gender
A	Finnish	CEO, Kutalab Oy	Male
B	Kenyan	IP Lawyer	Female
C	Danish	CEO, Content Company	Male
D	Kenyan	Legendary Kenyan DJ	Male
E	Kenyan	Marketing Manager	Male
F	Kenyan	ICT Director	Female
G	Kenyan	Sound producer	Male
H	Kenyan	Hotel Director	Female
I	Kenyan	Hotel Director	Male
J	Kenyan	Restaurant Manager	Male
K	Kenyan	Hotel Manager	Male

The methods applied for the interviews were face-to-face and online phone meetings. In some instances, both face-to-face and online approaches were combined. In each of the case, the approach was mainly dictated by the interviewee's schedules during the visit to Nairobi by the researcher. The interviews were conducted amidst the global Covid-19 restrictions of 2020 and 2021 which hindered ease of face-to-face meetings.

The researcher used the following guiding questions that were used in the semi-structured interviews.

1. What is your understanding of audio business entertainment?
2. How is audio business entertainment in Kenya today?
3. What factors affect audio business entertainment in Kenya?
4. What is lacking in audio business entertainment in Kenya?
5. What audio content is ideal for audio business entertainment in Kenya?
6. How best would audio content be delivered to businesses in Kenya?
7. What features on DjOnline would you change for the system to work in the Kenyan market?
8. Do you have anything else to add?

The author applied delicate judgement capability in this project as demanded of researchers in case studies (Yin 2014). This is especially so because of a need to mediate the interactions between the studied theoretical framework and the data being collected. According to Yin, one needs to have the ability to ask good questions, be a good listener, stay adaptive, have a good grasp of the subject and be objective if they are to ethically conduct a good case-study (Yin 2014, 73).

4.4   Data analysis

Data analysis comprises the examination, categorization, tabulation, and testing of evidence to produce empirical findings on a subject matter (Yin 2014, 132). A good starting point is to search for patterns and insights to define priorities for what to analyse. This is followed by subjecting the collected data to a guidance by the chosen theoretical proposals, an evaluation of the collected data, development of a case description, and finally an examination against any opposing accounts.

The process of data analysis seeks to comprehensively synchronise different information sources. One of the key efforts in this process is to demonstrate the roles of different stakeholders and the influence they have on the research subject (Govaert 2009). In this study, data analysis provided an insight into the

views of the respondents about entertainment and business entertainment in Kenya. On the other hand, competition analysis was used to evaluate what other players were offering in business entertainment in Kenya. This aspect was best brought out in the conversation with one respondent who runs an in-store entertainment outfit that was established four years ago.

The data that was collected in this study was reviewed using the content analysis approach. This is a research tool that examines the presence of certain concepts, themes or words within text data that was gathered through qualitative research. The choice of this method was based on the breadth and lengths of materials collected in this study (Kondracki & Wellman 2002). This approach gives the study a deep understanding of the issues surrounding the theme areas of entertainment, music, technical requirements, legal requirements, and market demands for instore entertainment. The method was favoured because it is a popular qualitative technique that enables a multi-prong approach to analysis and brings together summative, directed, and conventional approaches to content assessment (Hsieh & Shanon 2005). The combined approach of competition and content analysis provides this thesis with a comprehensive perspective.

The hybrid interviews in this study were recorded and then transcribed for analysis. Scholars agree that data whether in verbal, print or electronic form, and that which was obtained from open-ended questions, interviews, focus group discussions, narrative responses, and observations can be evaluated using the content analysis approach (Kondracki & Wellman 2002).

This study used open-ended questions in the interviews. This resulted in the collection of vast amounts of data. Subsequently, it was necessary that the material be generalized to create a good understanding of the sought-after areas in the wider subject of customized audio content to businesses. The analysis of the data was guided by Abayomi Alase who recommends that a researcher should review their findings in three cycles. The first round of review helps to identify common themes and condense the transcripts. The second aids the researcher to gain clarity, and in the third evaluation, the themes are confirmed (Alase 2017).

5   RESEARCH FINDINGS

This section presents the outcomes of the interviews in this study.

Informed consent, security, and anonymity are some of the basic moral practices that the study ensured to uphold. Identifiable information was expunged from the transcriptions and reporting of the data in a bid to uphold anonymity. Respondents were informed that the data collected in the interviews would be used for academic research. Consent for this application was granted by all the participants. The respondents were given an assurance of the safety of their data by an undertaking not to share the information with any third parties.

General requirements for business audio content

Speaking about the general requirements for the Kenyan market, most of the interviewees agreed on the need for businesses to create ideal atmospheres that would positively affect the moods of clients. This is in line with an academic study focussing on the effect of music in retail that reported that the behaviour of customers is affected by the melody, volume, mode, and even tempo of the background entertainment (Milliman 1986).

Respondents shared their experiences with entertainment in businesses in Kenya noting that while some enterprises had good audio content in their outlets, most places did not have significant presence of in-store entertainment and relied on local radio and television channels. This was considered a big turn off for clients especially if the station played was not the patron's favourite.

> I have been in the music business in Kenya for a long time. I also know the practice in other parts of the world. I wonder why businesses haven't exploited this field.
>
> (CEO, Content Company)

> It is very annoying to have the business owner force me to watch or listen to their favourite radio or television station. I particularly hate the obsession most shops have with X TV (*name of Kenyan television channel redacted*) and Y (*name of a Kenyan radio channel*

redacted). It is as if the whole country is on their pay. It is quite bad in my case because I work as a radio host and I'm a musician. I feel like I'm being forced to listen to and watch the competition or other people's music!

(Kenyan IP Lawyer)

Respondents, especially those in ownership and/or management, spoke of a need to have a unique service that spoke to their loyal clients but decried lack of quality products in the market. In the case of Tenje, this finding was comparable to the publication by Charles S. Areni (2012) who postulated that enterprises that invest in business entertainment and use them to share their brand messages, created pleasant atmospheres for their customers.

This market requires a solution that would speak to my clients at the purchase points. This would allow me to control the messaging and brand the outlets.

(Marketing Manager)

I know of similar services in South Africa. I have been wondering why we don't have it here in Kenya. But I think we have been good at just playing anything.

(ICT Director)

I have been looking for a service that will help me have different moods throughout the day and vary the music in different sections of the hotel.

(Hotel General Manager)

We have inhouse DJs who play during the theme nights and provide music for use throughout the day. The music works ok although I think we could upgrade. The music needs to be refreshed more regularly.

(Restaurant Manager)

Additionally, the respondents rooted for the introduction of a narrowcasting system that had the option for remote control. This they said would enable business owners to access the audio system even while away from the premises. This they said would be useful to ensure that they maintained a level of control in determining what audio content is always disseminated in their outlets.

In my opinion the problem is not providing the audio content to the outlets. I have been in music for ages, and we have been making mixes since the days of cassettes. As I have told you I have been trying to get this automation kit from Israel for X (*name of restaurant*

chain in Nairobi redacted). What we need is to get an automated system and the music masters will provide the curated playlists.

(Legendary Kenyan DJ)

Give me a system that I will plug in and make with selection and let it play, and we are in business! I've had it with unreliable DJs. In some instances, they just don't seem to understand the crowd and play whatever they want. They will also dump you as soon as a newer club opens.

(Hotel Director-Female)

When probed about customization of audio content to create unique brand sounds, the responses were mixed. While some were excited and supported the novelty of the concept and fully aware that this would result in a narrowcasting solution that perfectly matched their unique likings (Klesse et al. 2019), some were sceptical. This they attributed to the likelihood of the service being expensively priced. The cynics opined that the new platform may not have any major impacts on their clientele's behaviour.

I think that right there is your unique selling proposition.

(Kenyan IP Lawyer)

I think it is a great idea. Nobody else is doing it and thus you will be leap handsomely should you crack it. The only challenge with this market is that it might take you a while to get the buy-in. You can also be sure that others will copy it and probably cheaply at that.

(CEO, Content Company)

Now we are talking. I can see those of us in marketing buying into the idea of unique branding. We already have clear brand attributes in print and video and having identifiable audio jingles for my brands will be a welcome addition. I hope you won't charge me those crazy fees that ad agencies have been charging for commercials production, will you?

(Marketing Manager)

I'm not sure that the regulars at our pub would want that. They love simplicity and this has worked well. But let me not discourage you.

(Hotel Director – Male)

One of the areas that seemed to bring out the least convergence of opinions in the interviews was the question of incorporating creative production services in the menu offering. Those in entrepreneurship did not seem to appreciate nor acknowledge what value this would bring to them. However, respondents who had a marketing background welcomed the idea and were hopeful to find an

alternative to the current system that is dominated by large multinational advertising agencies who are claimed to charge exorbitant prices for any creative and production work.

> You try it and see how it goes.
>
> (CEO, Content Company)

> You have the relevant qualifications as a radio creative. This should be easy to do. But you need to be wary of the cheer number of audio producers who have set up in the market recently.
>
> (Kenyan IP Lawyer)

> Our adverts are centrally produced from our head office.
>
> (ICT Director)

> We have never advertised. I think we don't need to.
>
> (Hotel Director - Female)

> Our regulars don't require any advertisement. But maybe we can try some classifieds down the line. But they need not cost us much. Budgets are low.
>
> (Hotel Director-Male)

> I'm very happy to hear that. It has been a major problem having to pay 18% agency commission on all productions.
>
> (Marketing Manager)

Database and music content

The research participants were unanimous in the need for the provision of localized audio content. Interestingly, it turned out that local content did not necessarily mean content produced by Kenyan artistes but largely encompassed wide ranging materials that the population had over time become used to. One of the key findings was that genres such as country, soul, RnB, pop, and religious music had a great appeal to the local population.

> Our patrons are mainly older male drawn from central and western Kenya. They mostly enjoy classics, Lingala, Mugithi, old rock, bongo and have recently shown a great liking for Amapiano (South African music).
>
> (Hotel General Manager)

I would say play more local music. It helps grow the industry. But it is quite complicated navigating the commercial aspect of local content.

(CEO, Content company)

The proposal to customize the audio content was discovered to be a potential competitive edge. One of the respondents who was running an in-store entertainment company, described a stark difference between the competition and Tenje's approach to content scheduling. The main competing service offered generic streams for the market and whose music selection was based on background music selections used in other parts of the world.

We run a service as provided by the system owner in Denmark. They own the software and use AI to generate the playlists. We are now thinking of including Kenyan music, but this has been slow.

(Senior Sound Producer)

Based on the respondents there was a clear demonstration of a direct link between the preferred audio content and the profile of the target clientele for each outlet. This was a positive affirmation of the suitability of the approach by Tenje to offer narrowcasting of customized audio to Kenyan businesses based on general radio programming practices. This approach seeks to implement strategies that deliver the best outcome for the target market and chosen format (Norberg 1996).

We have been around since the 80's. We are a heritage brand. We are also family oriented. Our music mix must reflect these values. We do not play any of these new and vulgar artists.

(Restaurant Manager)

We are trying to make our bank appear younger but without losing the sense of class that is our heritage. We can play local music, but we must be very picky of which artists we pick. Some of the content…(*makes a dismissive gesture*)..

(ICT Director)

I would like to have a mix of international playlists of jazz and other genres playing in some of the upmarket outlets in the city. These ones are usually patronized by high-end clients to whom business entertainment is characterised by jazz and instrumentals. We need a balance.

(Marketing Manager)

Legal requirements

The study relied on the guidance of a renowned intellectual property lawyer in Kenya and the shared experiences by the Chief Executive Officer of a top local content aggregator in the East African region to understand the legal outlay for audio entertainment providers in Kenya. Some very useful guidelines came from a respondent who operates a start-up streaming company in the country as well as legendary local DJ.

> The prerequisite when launching a radio station in Kenya is a frequency and license from CA (Communication Authority of Kenya). The entity then pays the annual Music Copyright of Kenya (MCSK license). The radio broadcast license fees are fixed. The entities do not seek for nor pay master rights for the music they use on air.
>
> (Kenyan IP Lawyer)

The lawyer and the respondent running an aggregation company, further guided on the mandates and requirements by various bodies that represent artists in Kenya.

> Oh yeah, it can be tricky to understand the CMOs. We have three main ones in Kenya. MCSK or Music Copyright Society of Kenya registers music writers/authors. KAMP or Kenya Association of Music Producers on the other hand is an organization for music producers in Kenya. PRISK or Performers Rights Society of Kenya, targets performers and singers. These collective management organizations (CMOs) have been obligated by the ministry of Information to operate a single digital platform to centrally capture and store the metadata for submitted content. This is unlike before when artistes had to deliver hard copies of music to each of the organizations.
>
> (Kenyan IP Lawyer)

> This shift is bound to bring about transparency and curtail the earlier avenues of exploitation. A case in point is the reported case in which MCSK would collect more than Ksh.430 million annually but end up paying a paltry Ksh.30 million to artists.
>
> (CEO, Content Company)

This position helped Tenje understand the licencing regime. The study probed on the requirement for revenue share and was advised that this did not expressly apply.

> If Tenje was to be fashioned as a 'licensed broadcaster' of sorts, then there would be no requirement nor expectation for any revenue share plan with rights owners. Payment of the annual MCSK fees would suffice.
>
> (Kenyan IP Lawyer)

This response was in concurrence with Tenje's proposed operational and business model. The users on the platform will not download any content and the service will not be publicly available. Instead, clients would have access to an online account. Tenje would be a platform, it is a technology solution that enables businesses to select and play customized playlists.

> CA (Communication Authority of Kenya) does not have an express business category to classify your service. The category closest to your service would be 'subscription broadcasting services'. One can argue that Tenje is like Uber. They offer taxi services but are considered a 'technology company'.
>
> (CEO, Content Company)

When asked if Tenje would be in any way be exposed to litigation if it was to proceed without registering with the Communications Authority of Kenya, the respondent who runs a streaming service in Kenya had the following to say:

> We are not broadcasters. We design and brand streams for businesses, and the content is only available within their premises.
>
> (Senior Sound Producer)

Features and functionalities

This study also explored the use of the DjOnline user interface (UI). This was to gauge interest in the new technology offered and determine what features the interviewees would like to see in a customized audio system for Kenyan businesses. This inquiry was guided by past studies that while customization should cover various aspects of the product, the pivotal focus must be on the application and access (Mikkola 2007). All the respondents expressed strong preference to change the operational language of DjOnline from Finnish to English. This feature was included in the final version.

> Ensure that the instructions are in English.

(Kenyan IP Lawyer)

Wait, what is that language? Did you say it is Finnish? Looks like some difficult form of Kiswahili….hehehe… Just make sure it is changed.

(Hotel Director -Male)

I like the look and feel. But let the language of instruction be in English.

(ICT Director)

Most of the respondents suggested that the system should be simplified to make it appeal to the majority people and asked that the system should have fewer sections.

Does it have to have all these features? I want a simple system that does not seem to have been made for intellectuals. We are simple businesspeople and do not have technical backgrounds.

(Hotel Director - Female)

You said it is a business radio, so let it look like an actual radio.

(Hotel Director - Male)

One of the most insightful responses was a need to consider the use of decoders. The suggestion was based on a need to ensure uninterrupted entertainment especially due to internet and power interruptions and for ease of application in remote areas located far away from the main cities/towns. When launched in April 2022, Tenje customers would have the option to choose between a web based or physical player as explained in the products details section of this thesis.

Please ensure you have a redundancy system.

(CEO, Content Company)

Our system uses decoders. I have found that most Kenyans already identify with this concept since they have interacted with pay television and internet service providers. It also tends to give the customer a sense of having paid out money for areal thing
when they have a tangible piece of hardware in their shops.

(Senior sound producer)

The question on whether the interviewees had anything to add, seemed to elicit free expressions about narrowcasting, customized audio, and new technologies. Many lauded the idea and were keen to try it. Others were in support of Tenje's

expressed efforts to grow the local creative industry by including Kenyan music in the customized content availed to the businesses. There was also caution that many clients may not pay too much attention to the background audio content as they patronised business premises. Additionally, the respondent who worked in a bank reported that they were working on reducing the time spent within their premises by clients by encouraging their clients to use the available online services. This was supposedly as way to reduce business costs and improve efficiency. Ultimately, there was a close cutting agreement that it was a good idea to tap into new media to develop new solutions.

6 TENJE PRODUCT DESCRIPTION

Based on the findings from the interviews, the team at Forester Media Ltd worked in collaboration with Kutalab Oy to develop Tenje. Tenje was created as a customized audio streaming service for business entities in Kenya.

Tenje was built through the infusion of two content distribution systems that have been developed and used by Kutalab Oy in Finland. The first is a background music software used by DjOnline for in-store entertainment (Harju 2022). The second is a radio automation system that was developed for the specific needs of Radio Helsinki and Radio Classic (Kutalab Oy 2022). Beyond the software, Tenje uses the procedures of modern radio content planning (Norberg 1996), as practiced in Kenya today, in the design of programming content.

Tenje was launched in April 2022. It was created to narrowcast inhouse messages, promotions, brand advertisements, and tailor-made entertainment (Aremi 2012). The customized audio streams depict the Kenyan local-radio styling which is grouped by language and genres of the music featured.

This professional tailor-made audio solution package was designed to primarily entertain and inform business patrons. Tenje would achieve this by providing customized audio content that would enhance the overall client experience, encourage them to stay longer in the premises, and remind them of the enterprise products and services with the aim to increase uptake. Above all, it would also motivate the employees by providing a non-stop dynamic entertainment menu created to suit each day day part.

The clients will benefit from the technical proficiency of the partnering companies who will deliver the expertise and infrastructure required to provide a world-class customized audio solution for any business. Tenje is a bouquet comprising a comprehensive package of professional radio management and creative services, a broad database of local and international music, bound together by an incredible technical system.

6.1   Product overview

Tenje was developed as a professional tailor-made audio solution package for business entities. This customized audio content narrowcasting tool comprises the provision of professional management and creative services, a broad database of local and international content and is supported by a proven business background entertainment engine.

During the development of Tenje, the flowchart was an essential tool used to outline the linkages between the constituent components. According to Sangwon Suh and Gjalt Huppes (2015), a product flowchart shows the interconnectivity between the processes in a product cycle. Flowcharts usually adopt the use of boxes to denote processes while arrows are used to show the flow of the commodity. The deployment of this tool helped to ensure an effective management of the development phase and an evaluation of the resultant product.

The interconnectivity of the processes between the front and back ends of Tenje is illustrated in Figure 2.
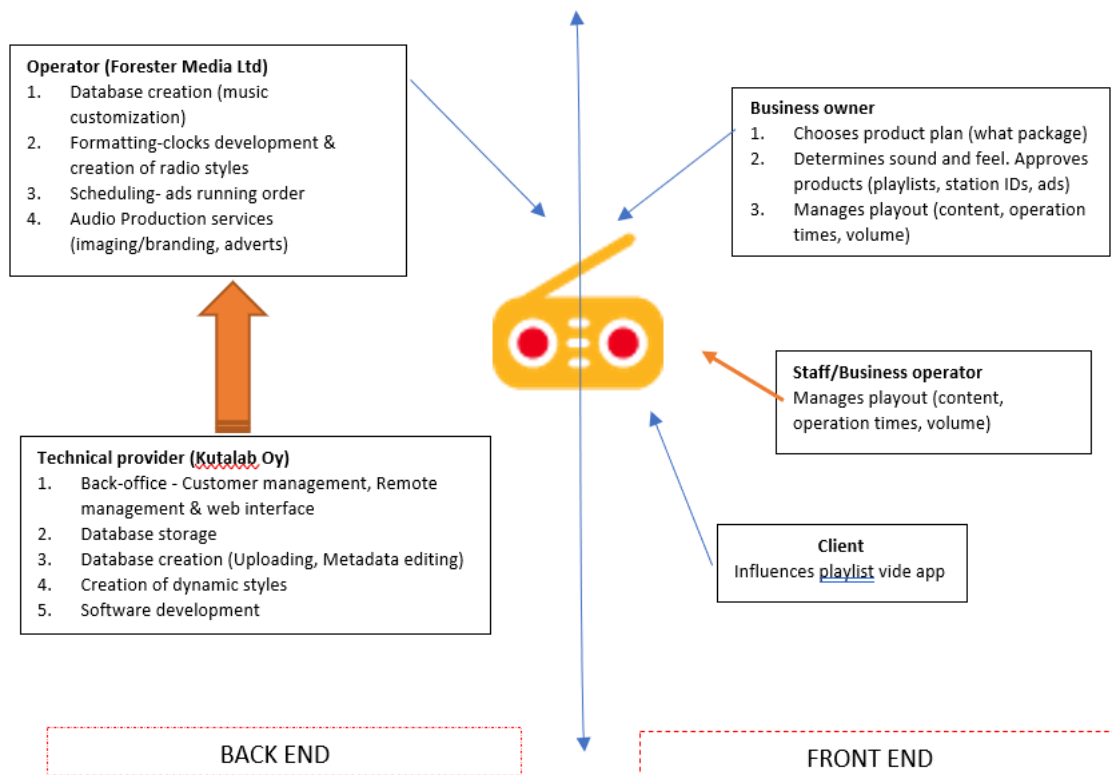

FIGURE 2. Tenje product flow chart

In general terms, Tenje was designed to provide the following four broad, multiprong yet complimentary services to enterprises in Kenya.

1. Professional radio management and creative services.
2. A mode to influence client extended patronage to increase product uptake.
3. Ability to narrowcast awareness messages and undertake direct advertising through in-house audio adverts.
4. Provision of non-stop tailor-made entertainment for both customers and staff.

Table 2 shows the clustering of the main services that are offered by Tenje.

TABLE 2. Tenje product clusters

Service	Description
Customized playlists	Customized radio format-styled playlists
Business-specific audio imaging	Expertise to produce brand jingles, promos, and drops
Audio creative services	Dedicated audio production services
Dynamic music selection	Music content is regularly updated
Wide selection of music	Provides a huge database of local and international music
Tenje Radio Box	Provides a decoder that caches local files

6.2   Product variation

This section discusses in detail the two formats that Tenje's narrowcasting customized audio services shall be availed to clients in Kenya. The two variations are either a web-based player or a physical audio player option.

In the web-based option, clients will be provided with dedicated links to access their customized audio streams. The Tenje web-based streams shall be accessed over network connections that communicate to the DjOnline servers via HTTP (Hypertext Transfer Protocol) and are not domiciled in the memories of the customers' servers (Beal 1996, updated 2021). These streams can be accessible from any web enabled device.

The technical set-up of Tenje's web-player is shown in Figure 3.
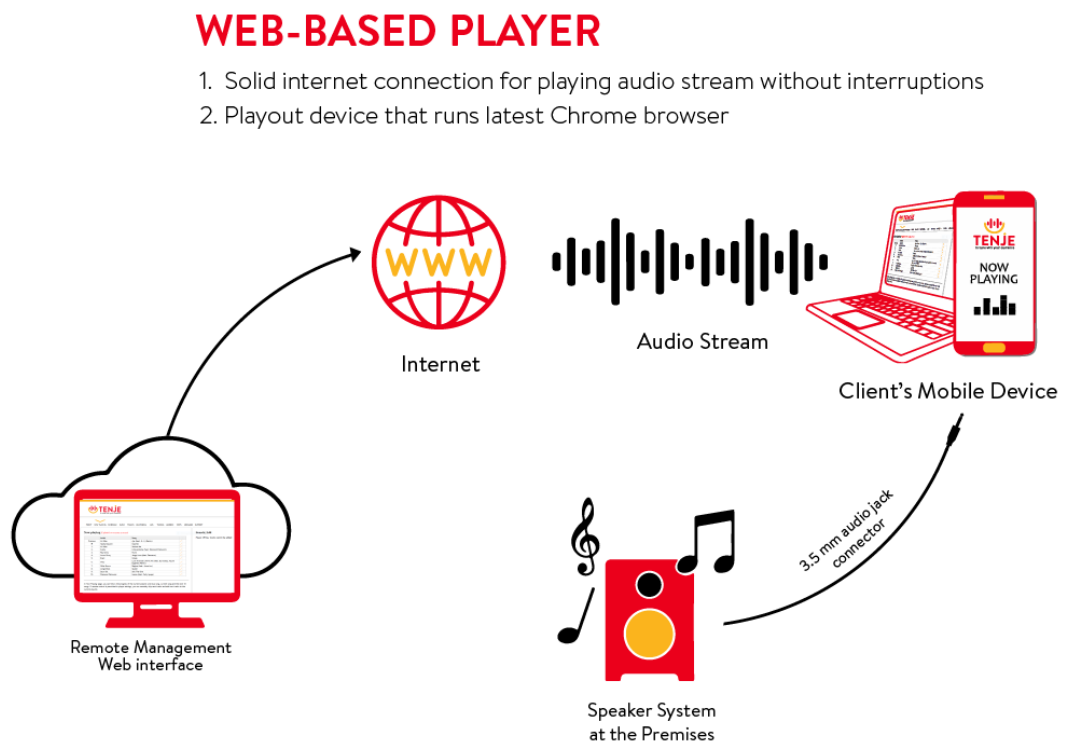

FIGURE 3. Tenje web-based player

Customers who opt for Tenje's web-based player option, will choose between a chain-wide or localized stream. In the first product, each client will be serviced using a single audio stream. This means that one stream, made up of the client's chosen music mix, audio imaging and adverts, shall be distributed to multiple locations of the same business. In practice, the client will have a universal sound in all their outlets.

The localized stream on its part offers clients the ability to have dedicated customized links specifically formulated for each of their outlets. This means that different outlets within one client's business shall stream different selection of music mix, audio imaging and adverts. The customization of the streams shall be based on factors such as the profile of the patrons, geographical location, the local language(s), the local culture(s), amongst other influencing conditions as may apply for each business premise.

Subscribers to the web version of Tenje will be provided with a dedicated URL (Uniform Resource Locator). The link is based on their specific details as captured during the establishment of the client's account. When launched, the web page automatically activates a HTML <audio> element media player.

The player is equipped with audio manipulation controls of 'play' and 'pause'. Also included are two audio output level management controls, 'mute' and 'volume', for users to manage the loudness of music in their outlets.

Tenje's HTML <audio> element media player is shown in Figure 4.

FIGURE 4. Tenje HTML <audio> element media player

The inclusion of the physical audio player stream was one of the main areas of customization of DjOnline for use by Tenje in the Kenyan market. It entails the deployment of an electronic unit to compress and decompress audio signals in each of the locations. This was particularly brought about by a need to cache local files to guarantee continued playback even in regions that are prone to power and internet interruptions.

The technical set-up of Tenje's physical audio player is shown Figure 5.
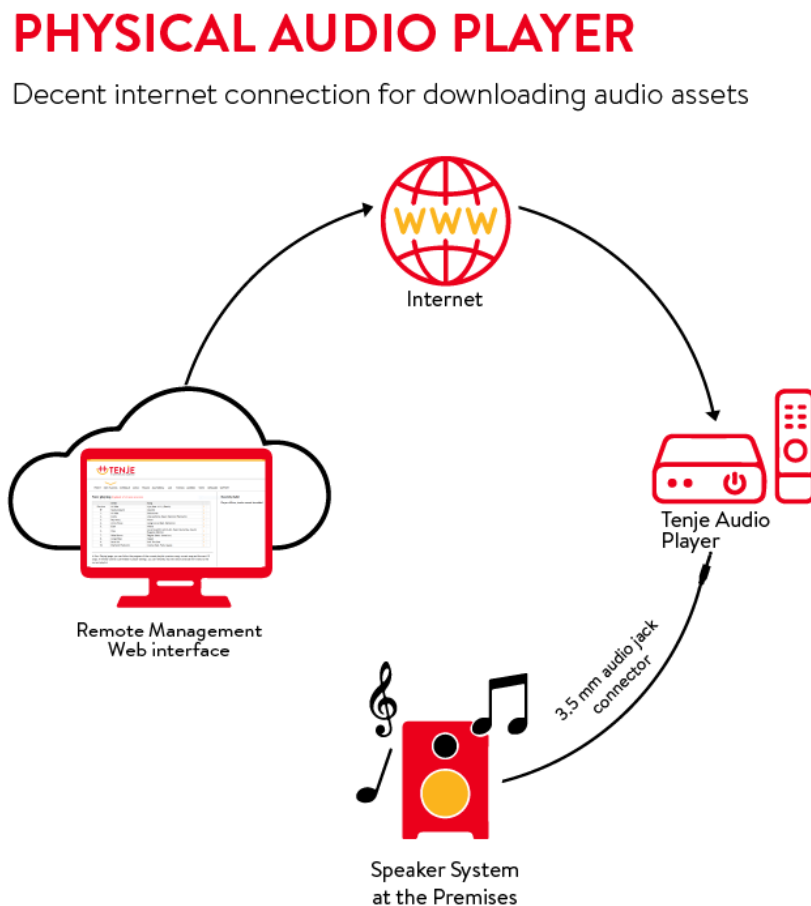

FIGURE 5. Tenje physical audio player

The Tenje system is currently configured to use the **AOpen DE 3250-S desktop PC**. This robust media player was chosen because of its design to cope with challenges of extreme operational environments such as heat, dust, and erratic power supply.

The front panel of the decoder used by Tenje is shown in Figure 6.

FIGURE 6. The front panel of Tenje decoder (AOpen DE 3250-S)

The rear panel of the decoder has two HDMI pots and one 3.5mm stereo jack audio input. Additionally, it has a DC power input, a LAN connection pot and a 3.5mm stereo jack for audio output.

6.3   Management user interface

Tenje's back-end system allows the creation of different levels of access dependent on the clearance and roles of each user. Permission levels will differ per client based on the amount of control they will granted for the manipulation of the play-out system. It is anticipated that most Tenje clients will not have any access to the back end since content scheduling and account administrative roles will be executed by the teams at Forester Media Limited and Kutalab Oy.

In this section, this paper will discuss the different pages of Tenje's management interface in more details.

Landing page

The landing page (Figure 7) in Tenje is named 'Front'. On the left side of the page are displayed the client's details comprising of name and a system-generated identity number (ID). The page also shows the menu for access to all the sections of the system. The top right edge of the front page shows the name of the logged in user and a drop-down menu to select the client. Below this is a list of the top 10 tracks plus the sales and technical support contacts.
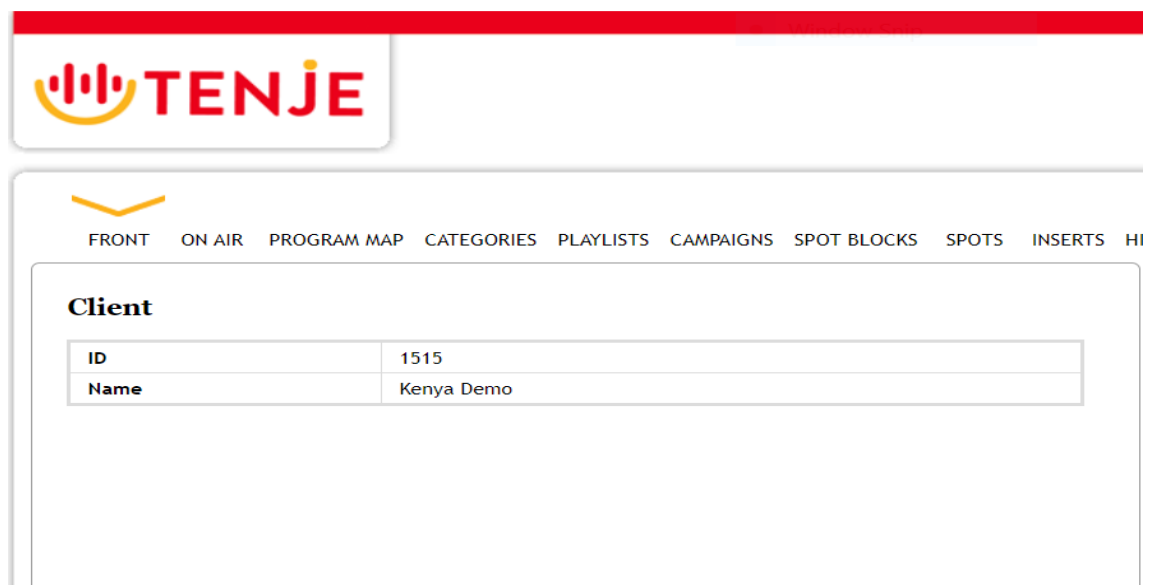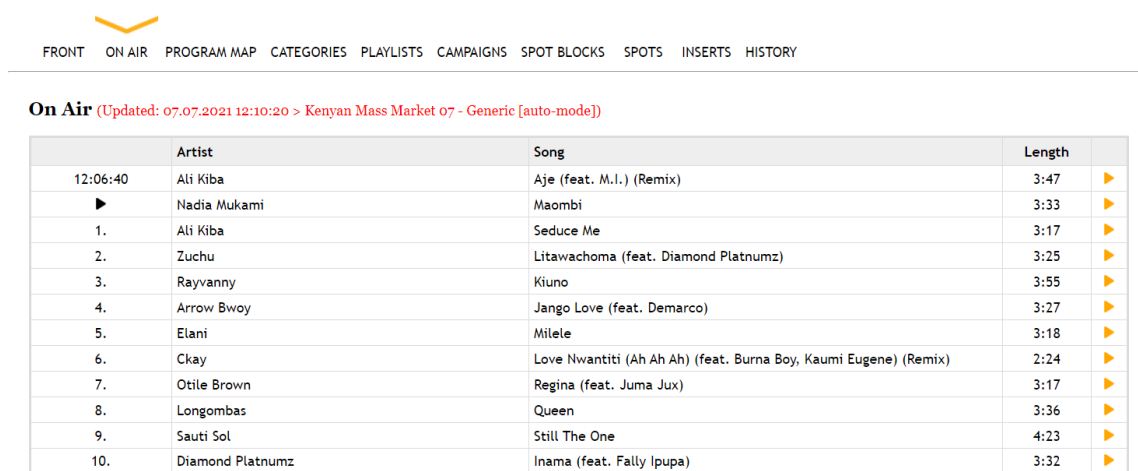

FIGURE 7. Tenje management interface, landing page

On air page

This page displays the content that is cued to play in the active hour (Figure 8). On the top left is a time stamp detailing the last update of the content schedule. Below this information is the listing of the cued items. These are provided detailing the name of artist, the name of audio item, and the length of the item. The page also shows advert breaks. However, this display only happens if the adverts' breaks are amongst the first two scheduled items at the time of access. If not, the system will only show the other audio items.

FRONT   ON AIR   PROGRAM MAP   CATEGORIES   PLAYLISTS   CAMPAIGNS   SPOT BLOCKS   SPOTS   INSERTS   HISTORY

On Air (Updated: 07.07.2021 12:10:20 > Kenyan Mass Market 07 - Generic [auto-mode])

	Artist	Song	Length	
12:06:40	Ali Kiba	Aje (feat. M.I.) (Remix)	3:47	▶
▶	Nadia Mukami	Maombi	3:33	▶
1.	Ali Kiba	Seduce Me	3:17	▶
2.	Zuchu	Litawachoma (feat. Diamond Platnumz)	3:25	▶
3.	Rayvanny	Kiuno	3:55	▶
4.	Arrow Bwoy	Jango Love (feat. Demarco)	3:27	▶
5.	Elani	Milele	3:18	▶
6.	Ckay	Love Nwantiti (Ah Ah Ah) (feat. Burna Boy, Kaumi Eugene) (Remix)	2:24	▶
7.	Otile Brown	Regina (feat. Juma Jux)	3:17	▶
8.	Longombas	Queen	3:36	▶
9.	Sauti Sol	Still The One	4:23	▶
10.	Diamond Platnumz	Inama (feat. Fally Ipupa)	3:32	▶

FIGURE 8. Tenje management interface, on air page

Program Map/Schedule page

This page shows the hourly schedule of content cued to play for the week. Seeing that Tenje's programming basic unit of division is set at one hour, the program map displays 24 hours programming schedule for each day. The schedule is arranged for the week beginning Monday running through to Sunday, and for the hours of 4am at the top to 3pm at the bottom.

An image of Tenje's empty program map is shown in Figure 9.

Clock	Monday	Tuesday	Wednesday
04:00-05:00	OFF	OFF	OFF
05:00-06:00	OFF	OFF	OFF
06:00-07:00	OFF	OFF	OFF
07:00-08:00	OFF	OFF	OFF
08:00-09:00	OFF	OFF	OFF
09:00-10:00	OFF	OFF	OFF

FIGURE 9. Tenje management interface, empty program schedule

To load content, users will drag the cursor over the period of interest and select the specified segments by the left mouse click (Figure 10).

FIGURE 10. Tenje Management interface, selecting a loading period.

By left mouse click on the drop-down menu, the interface lists the playlists available to the client and can be scheduled (Figure 11).

FIGURE 11 – Tenje Management interface, picking the playlists to load

The user picked the playlist 'Kenya Hits 01-Mornings 06-10' 02-Club Hits' (Figure 12). This playlist will be populated on the selected section.

Clock	Monday	Tuesday	Wednesday	
04:00-05:00	OFF	OFF	OFF	
05:00-06:00	OFF	OFF	OFF	
06:00-07:00	Kenya Hits 01 - Mornings 06-10	Kenya Hits 01 - Mornings 06-10	Kenya Hits 01 - Mornings 06-10	
07:00-08:00	Kenya Hits 01 - Mornings 06-10	Kenya Hits 01 - Mornings 06-10	Kenya Hits 01 - Mornings 06-10	
08:00-09:00	Kenya Hits 01 - Mornings 06-10	Kenya Hits 01 - Mornings 06-10	Kenya Hits 01 - Mornings 06-10	
09:00-10:00	Kenya Hits 01 - Mornings 06-10	Kenya Hits 01 - Mornings 06-10	Kenya Hits 01 - Mornings 06-10	
10:00-11:00	Kenya Hits 01 - Mornings 06-10	Kenya Hits 01 - Mornings 06-10	Kenya Hits 01 - Mornings 06-10	
11:00-12:00	Kenya Hits 01 - Mornings 06-10	Kenya Hits 01 - Mornings 06-10	Kenya Hits 01 - Mornings 06-10	
12:00-13:00	OFF	OFF	OFF	
13:00-14:00	OFF	OFF	OFF	
14:00-15:00	OFF	OFF	OFF	

FIGURE 12. Tenje Management interface, playlist loaded.

Other pages

There are an additional five pages on Tenje's management user interface. These are the Campaigns, Spot Blocks, Spots, Inserts and History.

The Campaigns, Spots, and Spot Blocks pages are all related to the advertising function of the system. The Campaigns page is used to display information of the active advertising promotions. The Spot Blocks page displays the distribution and scheduling of advertorial content while the Spots provides the details (titles, durations) of the advertising audio content specific for each client.

The Inserts page displays details of the non-musical and non-advertorial audio content while the History page is a logger of the transmitted content and is used for the generation of file reports.

6.4   Details on playlists

In Tenje, playlists can be described as the audio properties that have been customized for the business entities in Kenya. They denote clusters of songs that have been curated and available for use by each client. The selection and customization of the songs is based on specific requirements for each client.

Initial playlists

The initial playlists that were customized for the Kenyan market were specifically developed as tailor-made entertainment for customers and staff. The clustering was built alongside the concept of the Kenyan local radio market. The three main categories of radio stations in Kenya are explained here below.

1. English language radio stations. These are radio stations whose main language of broadcast is English. In this category, the stations are classified as oldies stations that feature soul and classic hits, and whose targets are the older generation. The second category are the number one hits stations whose music feature is the top ten hits and targeted at younger audiences.

2. Kiswahili Language radio station. These are radio stations whose language of broadcast is the Kenyan national language of Kiswahili/Swahili. They play a mix of African hits and are targeted at the mass market.

3. Vernacular language stations on the other hand are outlets that target specific geographical regions. Their languages of broadcast are dictated by the language(s) of the target communities. The main vernacular stations in Kenya are in Kikuyu, Luo, Luhya, and Kamba languages.

The playlists were also customized in accordance with general radio programming that is concerned with how one can implement strategies that delivers the best outcome for the target market and chosen format (Norberg 1996). In this approach, music content is scheduled to fit into specific time slots. For its positioning as a customized audio entertainment for businesses, Tenje's music selection will also be considerate of customers flows in the target premises as well as major annual calendar events such as Christmas, Easter, and Kenyan national holidays.

There were 39 playlists (Figure 13) that were customized for the Kenyan market and available on the Tenje's platform upon launch in April 2022.

Kenyan Mass Market 07 - Generic	🔗	100
Kenyan Oldies 01 - Morning 06-10	🔗	83
Kenyan Oldies 02 - Mid Morning 10-14	🔗	145
Kenyan Oldies 03 - Afternoon 14-19	🔗	122
Kenyan Oldies 04 - Evening 19-24	🔗	117
Kenyan Oldies 05 - Overnight Loop version 2	🔗	216
Kenyan Oldies 06 - Generic	🔗	209
Lounge covers etc	🔗	86
Overnight Loop	🔗	96
Special Class 01 Rhumba	🔗	247
Special Class 02 Gospel	🔗	202
Special Class 03 Lingala and Benga	🔗	50
Special Class 04 Kikuyu Secular	🔗	0
Special Class 05 Kikuyu Gospel	🔗	1
Special Class 06 Luo Music Secular	🔗	45
Special class 07 - Kapuka	🔗	30
Special Class 08 - Rhumba	🔗	28
Special class 09 - New releases 20-21	🔗	84
Special class 10 - South African	🔗	30
	39 pcs	

FIGURE 13. Tenje's customized playlists for Kenyan market

Music curation

Tenje's music curation is done using the infusion of tools used in in-store entertainment, radio automation and procedures of modern radio programming (Norberg 1996). Tenje's clients will have access to audio products that have been generated in any of the four approaches explained here below.

1. **Style -** Playlists are automatically generated by the music engine using metadata information. This only works with tracks that have all the metadata captured in the system. The system will generate clusters that contain unique selections governed by limitations such as rotations for each track among others. Some of the metadata parameters for the system are release years, language, artist home country, genres, song energy, melody, and popularity.

2. **List -** Playlists contain items that are handpicked. It can contain any number of tracks in specified order or marked to be shuffled. It can also include a limitless repetition of any items.

3. **Composite lists -** These are complex system-generated playlists that use a combination of styles and lists, blended by fractions. The cumulative fractions are in percentages and must compute to 100% total for the full list. An example is a combination 20% of reggae, 50% of current hits, 10% of classic hits together with 20% of jazz.

4. **Dynamic DjOnline styles -** These are styles that have over the years been developed by the team at Kutalab Oy. They contain large amounts of different kinds of content that can be quickly deployed especially when customization is not a major requirement. The creation of these dynamic playlists is based on many years of experience in the music industry.

7   CONCLUSIONS AND DISCUSSION

The purpose and objective of this thesis was to find out what technical features, music and content are ideal for use with a distinctive instore entertainment package for Kenya and ascertain how to customize a Finnish music service for deployment in the East African country.

The achievement of this aim was evidenced in the research findings that were used to design a customized audio streaming service for Kenyan enterprises. The service named Tenje was launched in April 2022 as a custom-built business radio service that combines practices of background music with modern radio, to enable enterprises to narrowcast inhouse messages, promotions, brand advertisements, and tailor-made entertainment for patrons and staff alike.

The ultimate value of this study which was to give an overall understanding of how to create a customized audio service for businesses in Kenya and the adoption of technology in emerging markets, was well achieved. A few weeks upon introduction, a fuel distribution firm commenced negotiations with Forester Media Limited to enter a three year's trade contract for the provision of Tenje services to 180 of their branded gas stations in Kenya. This was alongside two top-tier banks, two hotels and a supermarket chain who were undertaking product trials during the time of this study in May 2022.

Undoubtedly, the research came up with very useful findings on how to narrowcast customized audio content to businesses in Kenya and resulted in the creation of Tenje. However, the study experienced some limitations that were directly linked to the research process. One such drawback was a compromise on the generalization of the outcomes that was attributable to the sample size. In the study, only 11 participants were interviewed. This number is considerably small. Luckily, this risk was mitigated by broadening the desk research to review more content in the fields of the study. Ultimately, the study resulted in the development and launch of an actual trading product.

The study was also notably limited by reduced willingness by most interviewees to freely discuss elements that they considered to be trading secrets that would expose their brand marketing strategies. Additionally, most of the interviews were conducted remotely and were subject to communications barriers that are common in non-personal interactions.

On the positive, the researcher was well known to the respondents and commands a wealth of experience in content creation and dissemination. These factors contributed to an effective management of the semi-structured interviews. In addition, a well-rounded knowledge of the Kenyan media market and an extensive professional network, enabled the researcher easily access information and data on brands that would compete with Tenje in the field of audio for businesses in Kenya. Additionally, the competition analysis done in the study did not reveal of any other company that was offering the business-specific imaging as a complimentary service to the customized audio content.

As a practice of good research and as attributed to the title 'Disposable People: New Slavery in the Global Economy', there is no means by which this study could be declared as exhaustive (Kevin 1999). Based on the outcomes of the study, several new areas will require further investigations. Future research will explore the same topic by focusing on a wider scope to provide insights into customized audio services and narrowcasting in Kenya.

Another probable area for future research could be an immersive study of some of the complimentary commercial streams that were bundled alongside the customized audio services. These include provision of creative production services as well as radio programming and management services.

A major recommendation is a research study focused on Tenje's customer survey and product performance. These would be important areas to research because the resultant findings would be instrumental in undertaking future product improvements on Tenje.

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