A Full Coverage, WiFi Offload, Carrier Grade Broadband Radio Network Operators

using exclusively the

5G Alternative Small Cell Solution from KI-EC Ltd.
for the provision of massive
bandwidth for smart phones

in Africa and South East Asia



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Content List

1	What opportunity we see ?	3		
2	Market & Competition	4	-	8
3	The solution	9	-	10
4	Revenue Model and Marketing Plan	11		
5	Legal Impact	12		
6	Team	13		
7	ROI & Investment	14		
8	Summary	15		

Pages

1. What opportunity we see ?

The demand for mobile bandwidth for smart phones is ever increasing. More and more small cells have to be deployed to keep up with the demand for bandwidth in 5G and lower networks. More and more capital has to be invested into the network and more and more cell sites have to be installed. Smart Phones and Youtube traffic are killing all existing network technologies.

KI-EC Ltd. has developed a solution that is inexpensive, needs no time consuming frequency approval process, no expensive frequencies and provides breathtaking bandwidth for consumers. It fits perfectly for emerging markets with low ARPU – Average Return per User Countries in Africa and South East Asia. The network is open and heavy data traffic like caused by “youtube” can be seamlessly and easily offloaded into it from different network providers.

1. End use of technology by consumer

The end user will use a smartphone.

We will push an application onto that smartphone that will detect the new type of network automatically.

For example if the user is using youtube, we will switch her automatically into the new network.

This can be decided with a policy server, which can be programmed accordingly.

2. Market & Competition

The global volume of the 5G market has an estimated volume of

5 Trillion USD.

Only four competitors are able to deliver 5G at the moment :

Huawei
Ericsson
Nokia
ZTE

KI-EC Ltd. delivers exclusively an alternative solution with a better price based on Wifi for the new operator.
This advantage can be played out especially in countries with low ARPU – Average Return Per User, since pure 5G solutions will struggle to reach their break even compared with the solution provided by KI-EC Ltd.

2. Market & Competition

Data Volume in fixed networks

The demand for data in fixed network is growing linear

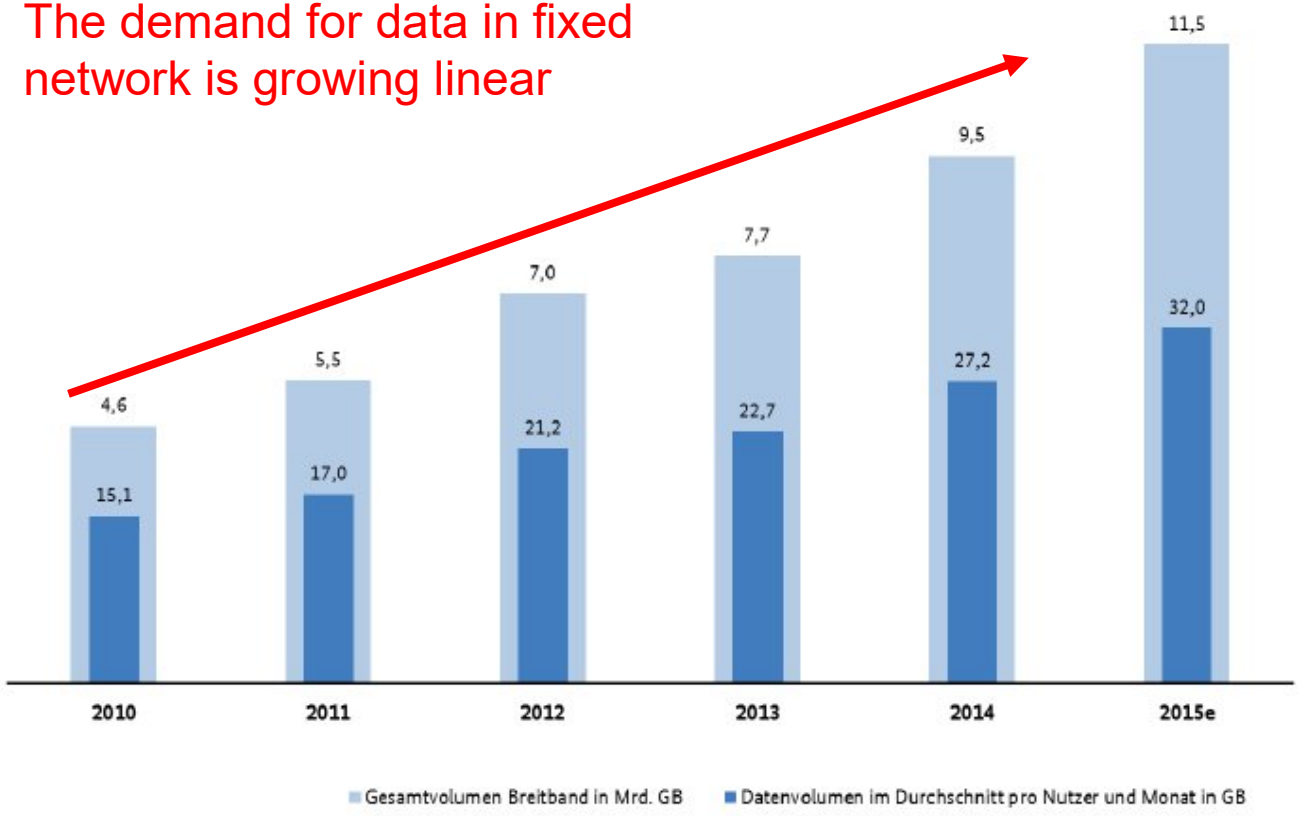


Abbildung 13: Datenvolumen Breitband in Festnetzen

2. Market & Competition

Sold bandwidth for fixed network access in millions in Germany

10 Mbit/s

2 Mbit/s

100 Mbit/s

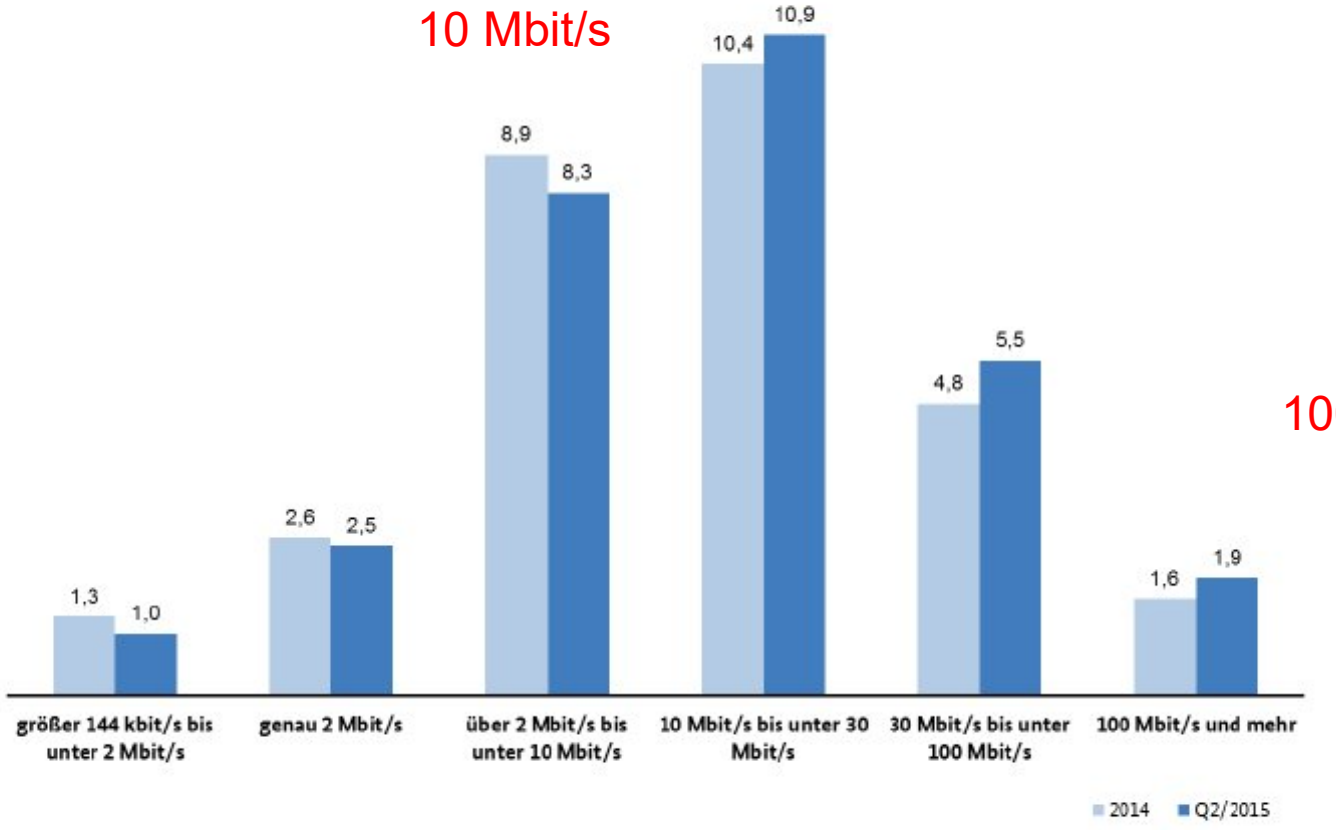


Abbildung 9: Verteilung der vermarkteten Bandbreiten bei Festnetz-Breitbandanschlüssen

2. Market & Competition

Mobile Subscribers and penetration in Germany

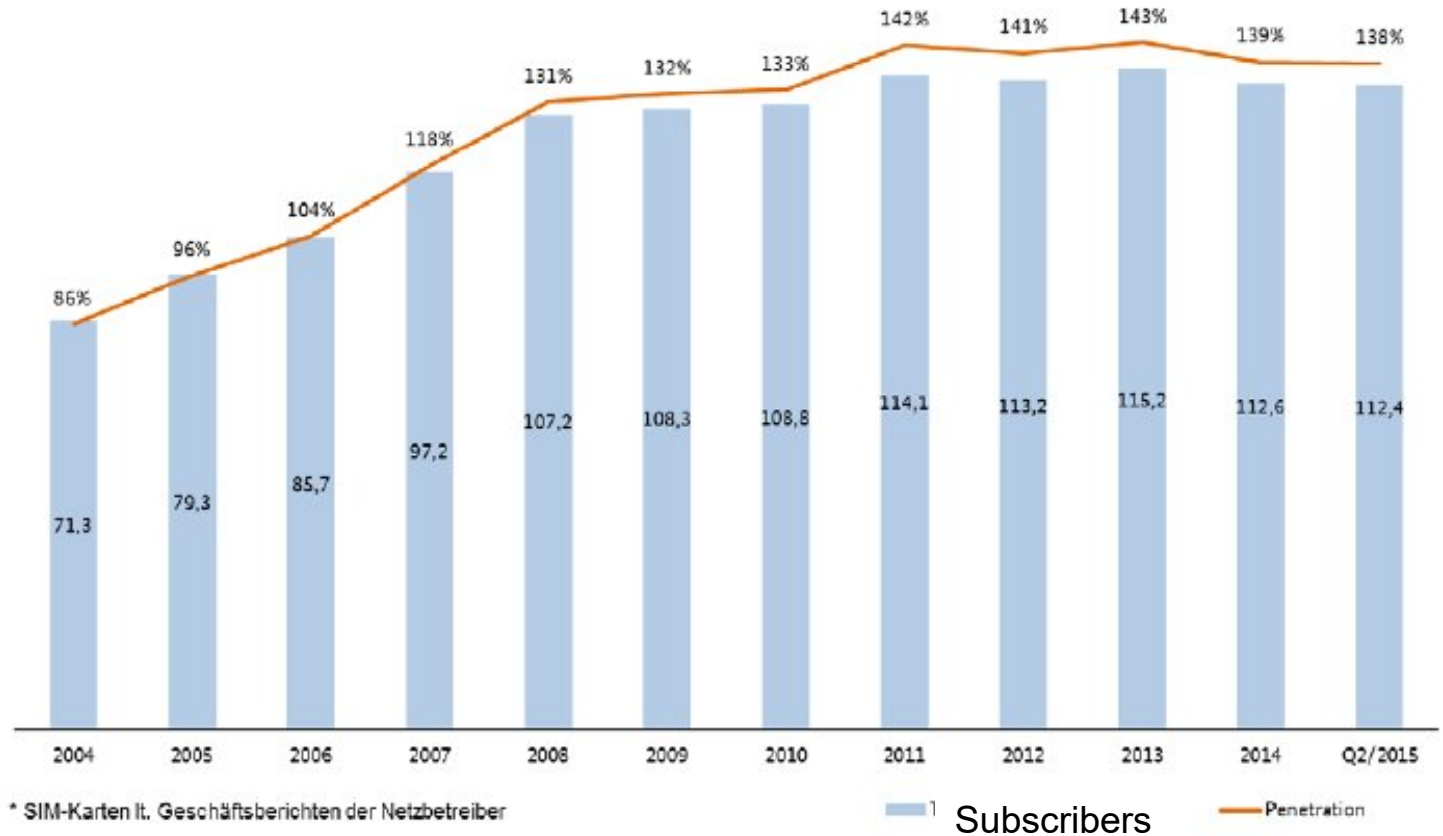


Abbildung 24: Teilnehmer und Penetration in Mobilfunknetzen

Subscribers
In Million

2. Market & Competition

Data Volume for Mobile Networks in Germany in GigaByte

The demand for data in mobile networks is growing exponential

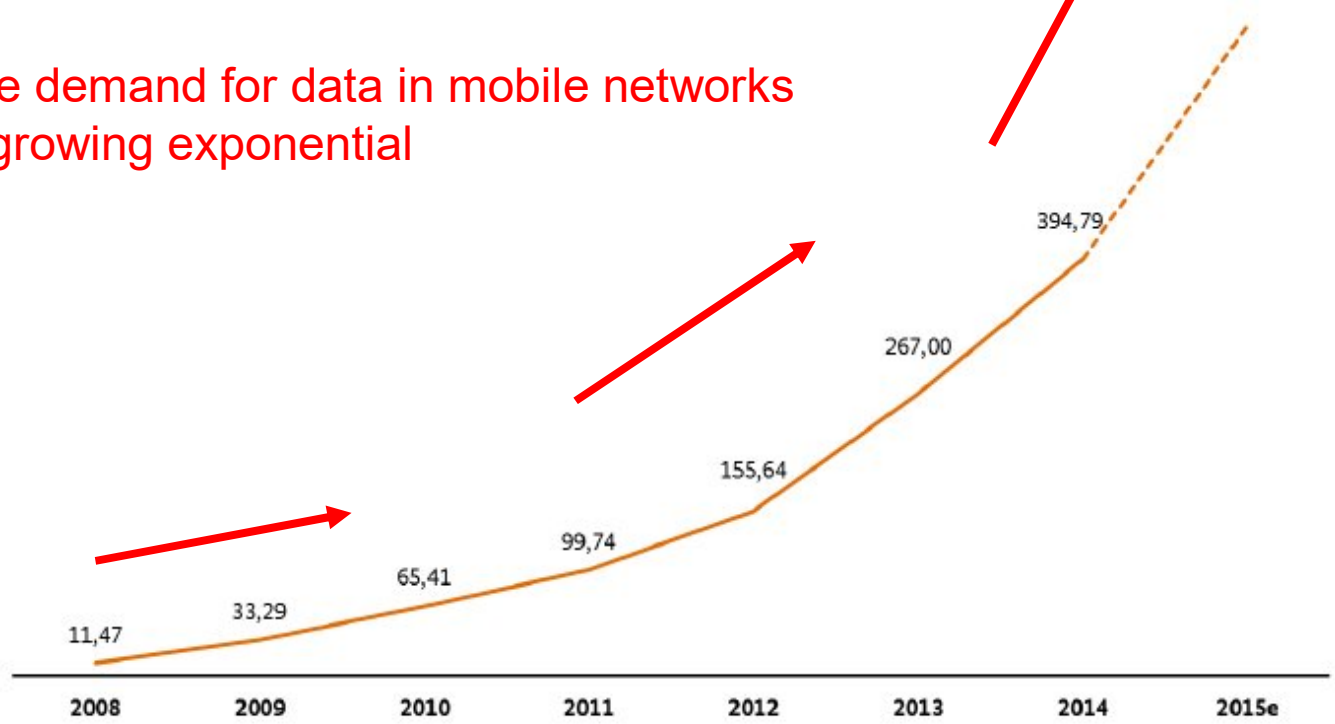


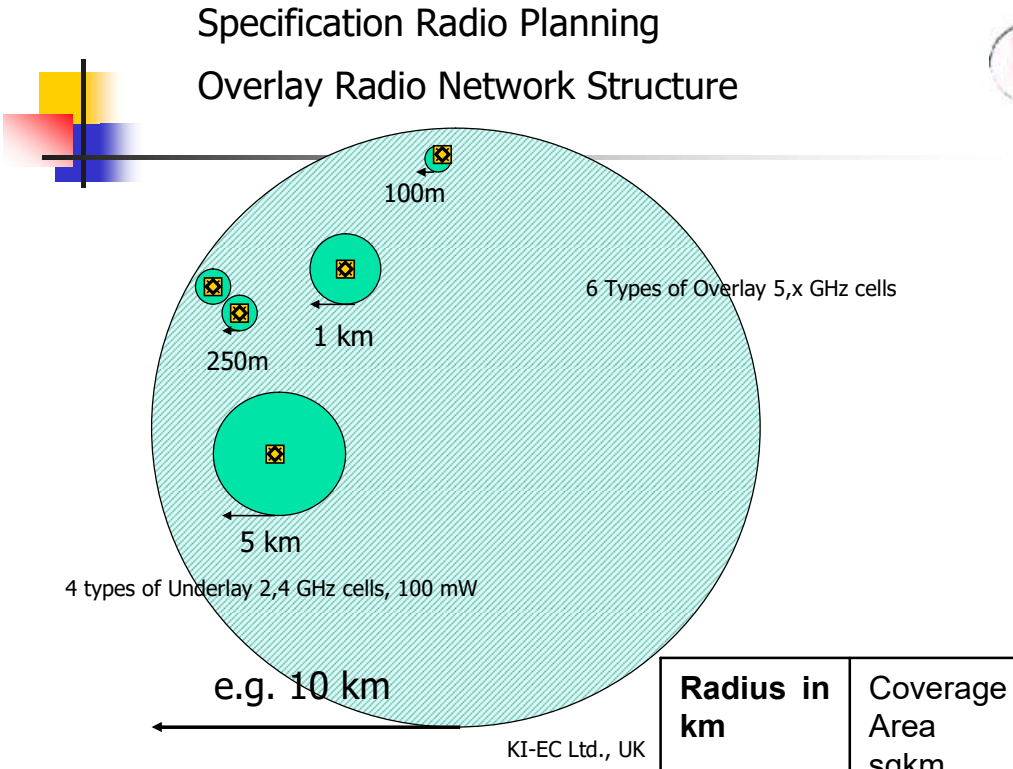
Abbildung 26: Datenvolumen im Mobilfunk

Um mobile Datenübertragungsdienste zu nutzen, wurden 52,6 Mio. SIM-Karten in UMTS- und LTE-fähigen

3. The solution

- The solution from KI-EC Ltd. can in regard to the bandwidth capacity compete with fiber in the local loop and 5G and is less expensive.
- The solution offers a limited mobility, but handover speeds of up to 50 km/h have been approved.
- All worldwide mobile devices and laptops are prepared to work with our 802.11n WiFi air interface.
- All used technologies are in mass production and available on the market.
- Systems are e.g. running in projects in Linz, Austria and Cologne, Germany successfully
- Smart Cities can be supported to provide mobile broadband everywhere.

3. The solution for Rural Areas



A special solution was developed to cover the countryside with Broadband Internet. The cost level as for populated areas is kept also for the countryside, please see table below

Radius in km	Coverage Area in $sqkm^2$	**Citizens per sqkm**	Households per sqkm	Contention Ratio	Active users
2 (H-Offer)	1 (normalized)	**5000**	1250	1/10	125
5	25	**200**	50	1/10	5
10	100	**50**	12	1/10	1

4. Revenue Model & Marketing Plan

- The solution fits best with densely populated suburbs with about 5000 citizens per sqkm
- With 5,- USD charge per month for a flat rate, the investment of the mobile operator will amortize itself in 5 years.
- The solution offers e.g. 40 MBit/s per user with a maximal population density of 5000 citizens per sqkm and a usage ratio of 1/20.
- The network capacity will be sold in wholesale contracts to all available network operators in a parallel. The network is open and can be automatically, seamlessly and easily accessed with a smart phone application or over existing clearing providers.

5. Legal Impact

- Legal Impact

- The new operator using the technology of KI-EC Ltd. can easily be set up like a retail shop in sharp contrast to 5G operators, who have to apply for very expensive frequencies.

- It is not necessary to apply or pay for frequencies, since only free frequencies are used.
- The new operator has only to inform the regulator about the commercial use of free frequencies.
- A few transmission links have to be planned together with the regulator, but impose no fees for the use of frequencies.
- Building Permissions for the erection of towers have to be requested from local authorities.
- No permissions are necessary to install the equipment on the tower, since the nature of the equipment does not make this necessary

6. Team

KI-EC Ltd., Mobile Gaborone PTY LTD, Director, Hanno Kakosch

- A business focused Senior Manager, Programme and Project specialist with over 20 years' experience of delivering or recovering small pilot to large scale projects for Telecommunication, IT and Railway companies but also Public Sector customers.
- Specialized in conflict resolution and mediation in multicultural and international environments
- Reported to the telecom board of Siemens for exactly the business focus of the offered solution for many years
- Experienced in leading multicultural, international teams for the effective radio field design, roll-out, market introduction, marketing, bid preparation and business development. Responsible for P&L-, revenue- and business plans; Managed and led On- and Offshore Software - Developments, Product, Design, Architecture and Service projects (ITIL) and also Roll-Outs / SWAP's. Ensuring special technical and commercial scopes, like new network topologies or business plans.
- A team of freelancers is on standby to support Mr. Kakosch in all core functions

6. Team Members Technology

- John H., Steve J. and Team / special radio link technology for bandwidth accumulation of "hotspots", New Jersey, USA
- Christian S. and team / special enterprise radio networks, Germany
- Carlos B. and team / seamless handover smartphone application to handover calls from 4G / 5G into Wifi network, L.A., USA
- Bloody Maren and team / intelligence leadership chancellery, internal global investigations, banking, Germany
- Heinrich M. and team, Germany / seamless small cell handover technology for public transport, industry and moving vehicles
- Prof. Dr.Ing. Martin B. and team / Saarbrücken, Germany, Feasibility Study, Vendor Acceptance Test for Radio Field Matters
- Alfons W. and team , Belgium, special cable solution for railway radio coverage solution
- Roth D. and team , Switzerland, Global Wifi Roaming Solution
- Dawuda M. and team. UK/USA / special Wifi array antenna solution
- Daniel and team, Estland / special long distance broadband radio link solution
- Peter K. / special amplifier for railway coverage leaking cable solution, Germany

6. Team Members Legal, HR, Core team

Botswana :

Hendrika is my company secretary for Mobile Gaborone

Musaope handles relationships to the local government.

South Africa

In SA Ali handles government relationships.

Nigeria

Ezekiel manages my relationship with the government.

Further people for standard legal matters and HR will be employed.

For more countries a similar structure can be applied.

The est. 20 core team department leader jobs are published on the website www.wifibroadband.org.uk

7. ROI & Investment

- Example Investment and return Figures Lagos Mobile, Nigeria
  - Estimated investment about 5,6 Billion USD within 3 years
  - Estimated active customers about 42 million with a network coverage of “140 million” citizens. I was told Nigeria has now 200 million citizens. This is not reflected in the calculation yet.
  - Net return per customer 5,- USD per month
  - Estimated average profit per year 1.8 Billion USD after 5 years provides an ROI of 33.75 %

7. ROI & Investment

In Africa we have 1,373 billion people and in South East Asia 695,922.537 million people.

This makes a total investment of 54.92 Billion plus 27.8 Billion USD = 82,72 Billion USD necessary.

Some countries like Ethiopia do not yet allow commercial network operators, but are included.

8. Summary

It is planned to set up a new Mobile Network Operators which exclusively use the technology of KI-EC Ltd. in Africa and South East Asia with an 82,72 Billion USD investment. These countries are emerging markets and a sweet spot, where it is extremely difficult for 4G and 5G or even fiber solutions to compete with the provided new technology due to the low ARPU - Average Return per User in these countries.

We are seeking 82,72 Billion USD equity and offer shares in the operator. We start with the Mobile Operator in Botswana Mobile Gaborone PTY LTD and extend in Africa and South East Asia.