



# DAB+ im Kabel



Bayreuth, 05.02.2019

## Einleitung:

- Aktueller Stand zu DAB+ (EU, D, BY)
- Zielsetzung von DAB im Kabel

Reiner Müller, BLM / Bereichsleiter Technik / [reiner.mueller@blm.de](mailto:reiner.mueller@blm.de)

Today: DAB established across the continent



- Established
- On the move
- Trials



# First countries are switching off FM



Norway: 2017



Switzerland: 2020-24

## world dab DAB DIGITAL RADIO | EUROPE AND ASIA PACIFIC

### Government policy status

Norway – the digital switchover completed for all national radio Dec 2017 | Switzerland – DSO planned for 2020-2024<sup>1</sup> | United Kingdom – Future UK policy on digital radio to be addressed in Government review, details to be confirmed, now that digital listening accounts for 50% of platform share | Denmark – timing of DSO to be decided when 50% of listening is digital | Germany – Digital Radio roadmap published by authorities Feb 2017 | Netherlands – fastest DAB+ launch, backed by Government support | Italy – From 2020 it will be mandatory for all radios sold to have DAB+ | France – all receivers will have to be DAB+ capable as 20% coverage should be recognized in 2018<sup>2</sup>; metropolitan (main roads) tender closes Nov 21st 2018 | Belgium<sup>3</sup> – Flemish and French speaking governments committed to a digital radio future with DAB+ at its core | Australia – DAB+ in 5 metropolitan areas 65% population coverage; planning underway for other markets

<sup>1</sup> Commitment of the industry; communication of DSO-Date planned for Q1 2019 | <sup>2</sup> Regular DAB+ services in Nice, Marseille, Paris and Lille, Lyon and Strasbourg should bring coverage above 20% by end 2018 | <sup>3</sup> Belgium FI: DAB+ official launch: 1/9/2018, Belgium Fr: estimated official start of DAB+ June 2019

### CUMULATIVE DAB/DAB+ RECEIVER SALES (INCLUDING LINE FIT AUTOMOTIVE) 2008 – H1 2018



\* including pre 2008 sales | 4 As of Q2 2018, including sales starting from 2013 | 5 Feb 2018 | 6 including sales starting from 2009 | 7 automotive line-fit sales up to Q4 2017 | 8 contains only DAB+ sales starting from 2013 | 9 including sales starting from 2011

### % NEW CARS W/DAB/DAB+



>50%  
Ende 2018



### TOTAL DAB/DAB+ NETWORK COVERAGE (% OF POPULATION) 2013 VS 2018



### DAB/DAB+ 1st LEVEL ROAD COVERAGE\*



\*KM 1st level road coverage (motorways, autobahns, autostrade, autostradas, autoroutes). However most countries also have equivalent coverage on 2nd level routes. | <sup>10</sup> Goal for 2019: All 1st level tunnels longer than 300m with DAB+ | <sup>11</sup> National mux only, regional muxs provide further coverage | <sup>12</sup> Road coverage of DAB+ area covered Flanders and Wallonia | <sup>13</sup> Road coverage of DAB+ area covered in five metropolitan capital cities | <sup>14</sup> National and local muxs, no data on 2nd level routes | <sup>15</sup> BBC National

### DAB/DAB+ HOUSEHOLD RECEIVER PENETRATION



<sup>16</sup> Total digital penetration: 99% (DAB, IP or digital TV) as of Feb 2018 | <sup>17</sup> Refers to % of people who have access to a DAB+ digital radio at home, at work or in the car in the five major metropolitan areas | <sup>18</sup> As of Q2 2018, including sales starting from 2013 | <sup>19</sup> 77.8% of individuals have access to a DAB+ receiver

>24% in Bayern

## EU support for digital radio



### European Electronic Communications Code (EECC):

- All new car radios in EU able to receive digital terrestrial radio
- Expected to be adopted end of Q1 2019
- Member States have two years to transpose into national legislation

## Radio plays key role in lives of Europeans



1. 85% of Europeans listen to radio each week
2. Radio: the medium most trusted by European citizens

Sources: EBU, Eurobarometer

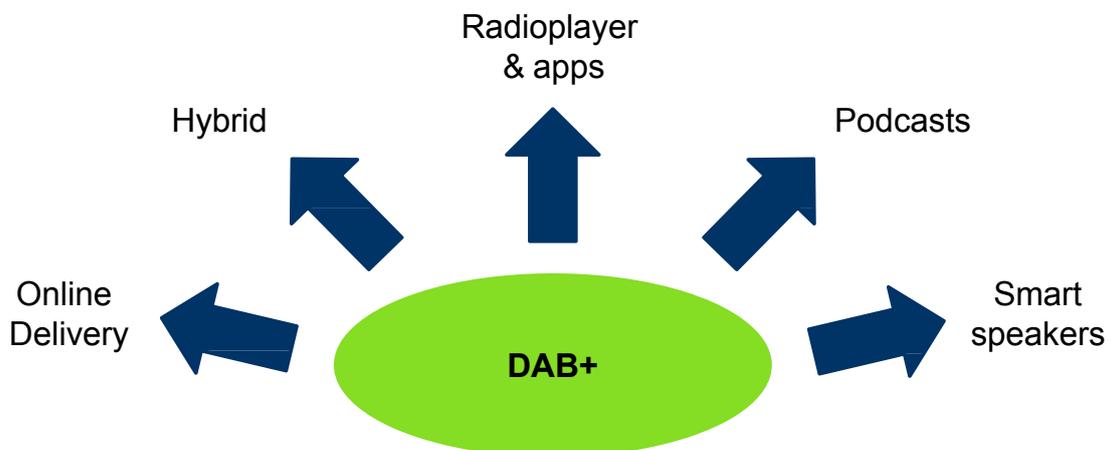
Tech giants ...

... are invading radio's space

... bringing their own devices

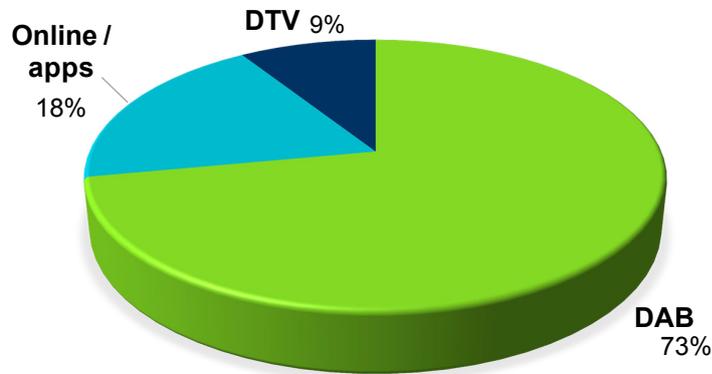


Radio needs a multiplatform strategy  
– with digital broadcast at its heart



# DAB: the key platform for digital listening

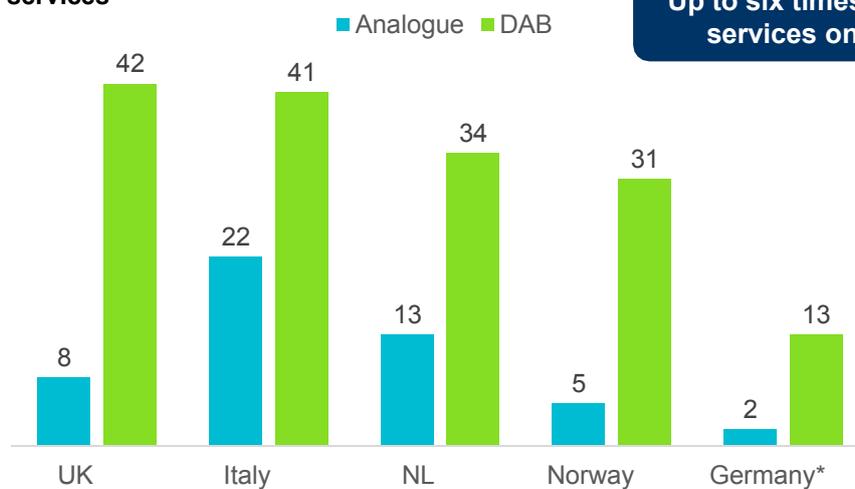
UK digital radio listening by platform



Source: RAJAR Q3 2018; compared to Q3 2013: DAB 68%

# Digital radio: greater choice

National radio services



Up to six times as many services on DAB+

\* Will double with launch of second national multiplex – date to be confirmed Source: WorldDAB

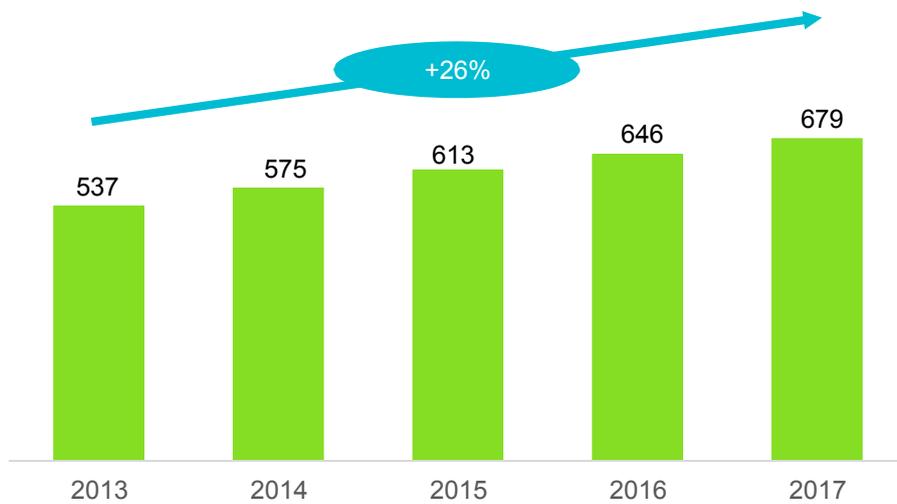
# Brand extensions play key role



# National stations are driving commercial revenues



UK radio advertising revenues, £ million

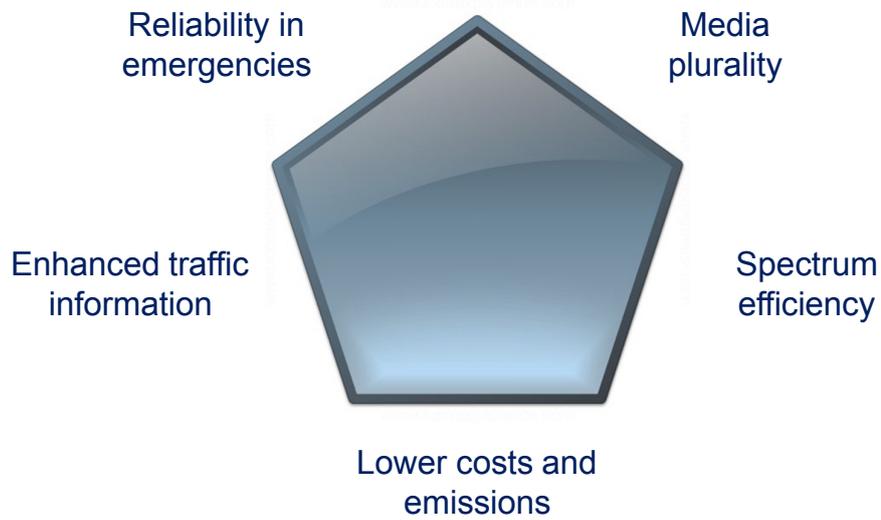


Source: Radiocentre

## DAB delivers benefits for society

world **dab**

Free to air / no gatekeeper



## Conclusions

world **dab**

- 1 The future of radio is digital and multiplatform
- 2 DAB provides the essential foundation
- 3 Collaboration is the key to success

## DAB+ bundesweit



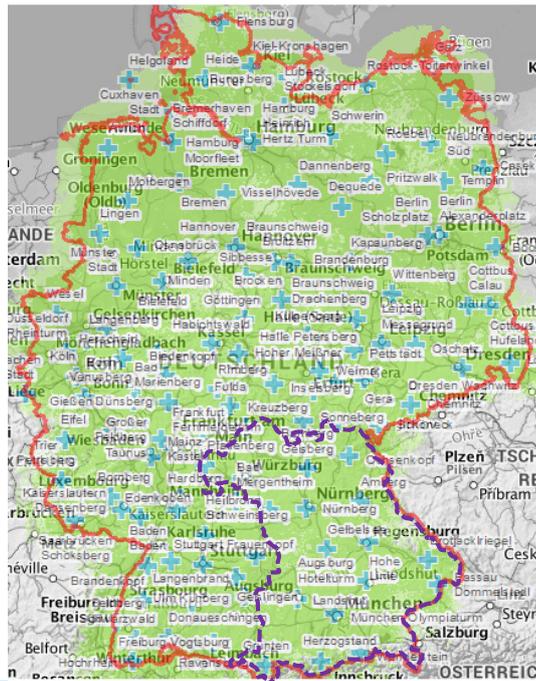
Bundesland: Deutschland

#	Programm	Kanal
1	Absolut Relax	5C
2	Deutschlandfunk	5C
3	Deutschlandfunk Kultur	5C
4	Deutschlandfunk Nova	5C
5	DRadio DokDeb	5C
6	ENERGY	5C
7	ERF Plus	5C
8	Klassik Radio	5C
9	Radio BOB!	5C
10	Radio Horeb	5C
11	SCHLAGERPARADIES	5C
12	Schwarzwaldradio	5C
13	sunshine live	5C

## DAB+ in Deutschland

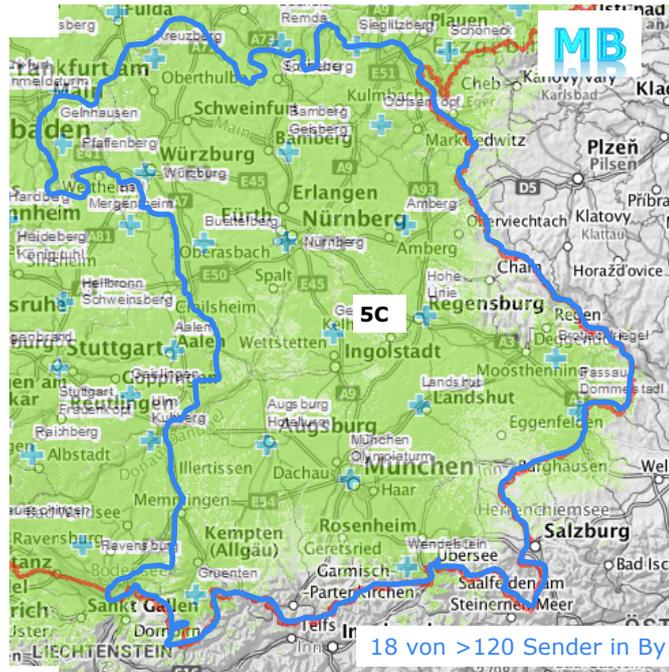


- >98% der Bevölkerung versorgt
- >12 Mio DAB+-Geräte verkauft
- >50% der Neuwagen mit DAB+
- >100% der **öff.rechtl.** UKW-Programme in DAB+
- >45% der **privaten** UKW-Programme in DAB+



# Bundesweiter Hörfunk digital terrestrisch

#	Programm
1	Absolut Relax
2	Deutschlandfunk
3	Deutschlandfunk Kultur
4	Deutschlandfunk Nova
5	DRadio DokDeb
6	ENERGY
7	ERF Plus
8	Klassik Radio
9	Radio BOB!
10	Radio Horeb
11	SCHLAGERPARADIES
12	Schwarzwaldradio
13	sunshine live



# Niedersachsen: NDR vs. priv. NDS-Hörfunk



Bundesland / Multiplex: Niedersachsen

#	Programm	Kanal
1	Absolut Relax	5C
2	Deutschlandfunk	5C
3	Deutschlandfunk Kultur	5C
4	Deutschlandfunk Nova	5C
5	DRadio DokDeb	5C
6	ENERGY	5C
7	ERF Plus	5C
8	Klassik Radio	5C
9	Radio BOB!	5C
10	Radio Horeb	5C
11	SCHLAGERPARADIES	5C
12	Schwarzwaldradio	5C
13	sunshine live	5C

14	NJOY	11B 12A 6A 6D 7A 10A
15	NDR 1 NDS	11B 12A 6A 6D 10A
16	NDR 2	11B 12A 6A 6D 7A 10A
17	NDR Blue	11B 12A 6A 6D 7A 10A
18	NDR Info	11B 12A 6A 6D 7A 10A
19	NDR Info Spezial	11B 12A 6A 6D 7A 10A
20	NDR Kultur	11B 12A 6A 6D 7A 10A
21	NDR Plus	11B 12A 6A 6D 7A 10A



# DAB+ in Bayern

<https://www.dabplus.de/>



## Regionale öffentlich-rechtliche Programme:

- > B5 aktuell
- > B5 plus
- > Bayern 1
- > Bayern 2
- > BAYERN 3
- > Bayern plus
- > BR Heimat
- > BR Verkehr
- > BR-KLASSIK
- > PULS

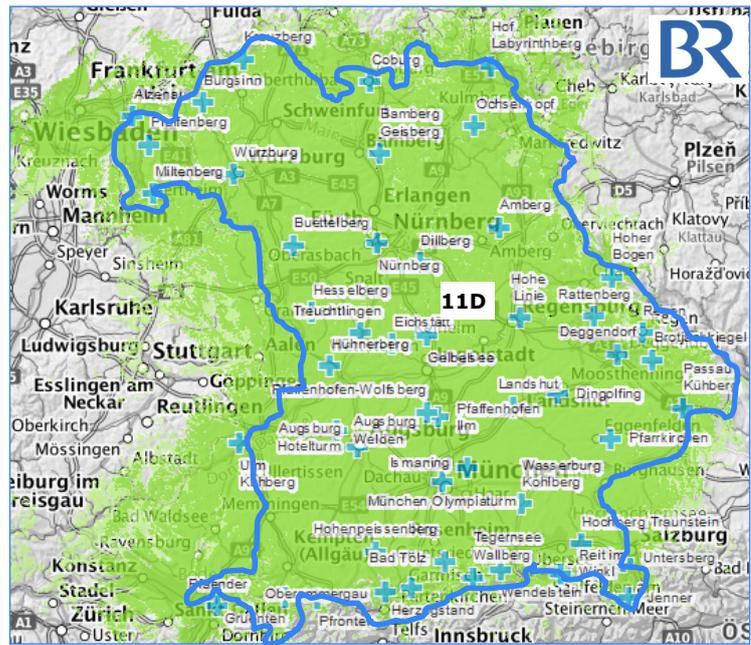
## Nationale Programme (Bundesmux):

- > Absolut relax
- > Deutschlandfunk
- > Deutschlandfunk Kultur
- > Deutschlandfunk Nova
- > DRadio DokDeb
- > ENERGY – HIT MUSIC ONLY!
- > ERF Plus
- > Klassik Radio
- > Radio BOB!
- > Radio Horeb
- > Schlagerparadies
- > Schwarzwaldradio
- > sunshine live

## Regionale und lokale private Programme:

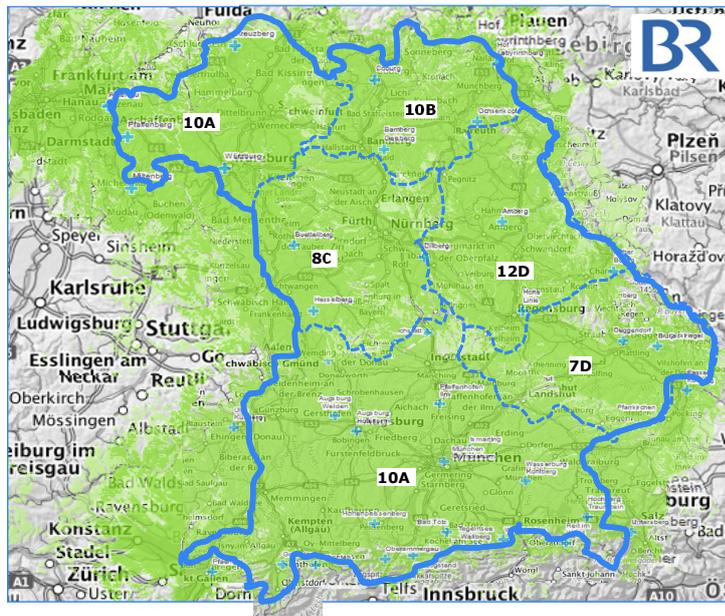
- > 95.5 Charivari
- > Absolut HOT
- > afk M94.5
- > afk max
- > ANTENNE BAYERN
- > AREF
- > Charivari
- > Christliches Radio München
- > DIGITAL CLASSIX
- > egoFM
- > ENERGY München
- > ENERGY Nürnberg
- > extra radio
- > Gong 97,1
- > Hit Radio N1
- > HITRADIO RT.1
- > Ilmwelle 90s
- > Ilmwelle Event
- > Ilmwelle Schlager
- > MEGA 80's
- > MEGA RADIO
- > Münchner Kirchenradio
- > Pirate Gong
- > PN EINS DANCE
- > PN Eins Urban
- > pure fm – bayerns dance radio
- > Radio 2DAY
- > Radio 8
- > Radió Arabella
- > Radio Augsburg
- > Radio Bamberg
- > Radio Charivari Würzburg
- > Radio EINS
- > Radio Euroherz
- > Radio F
- > Radio Fantasy
- > RADIO FANTASY LOUNGE
- > Radio Feuerwerk
- > Radio Galaxy Aschaffenburg
- > Radio Galaxy Ingolstadt
- > Radio Galaxy Mittelfranken
- > Radio Galaxy Oberfranken
- > Radio Gong 96,3
- > Radio Gong Würzburg
- > Radio Ilmwelle
- > Radio IN digital
- > Radio Lora 92,4
- > Radio Mainwelle
- > Radio München
- > Radio Plassenburg
- > Radio Primaton
- > Radio Primavera
- > RADIO SCHWABMÜNCHEN
- > Radio TEDDY
- > Radio TOP FM
- > Radio Z
- > radiohashtag+
- > ROCK ANTENNE
- > RT1 IN THE MIX
- > Smart Radio
- > STAR FM Nürnberg

# Landesweiter Hörfunk digital terrestrisch



# Landesweiter Hörfunk digital terrestrisch

Stand:  
01.07.2018



Coder,  
Leitungen,  
Betrieb,  
SLA  
Billing etc.



26.11.18

# DAB-Regionalnetz: Lokal und landesweit Unterfranken



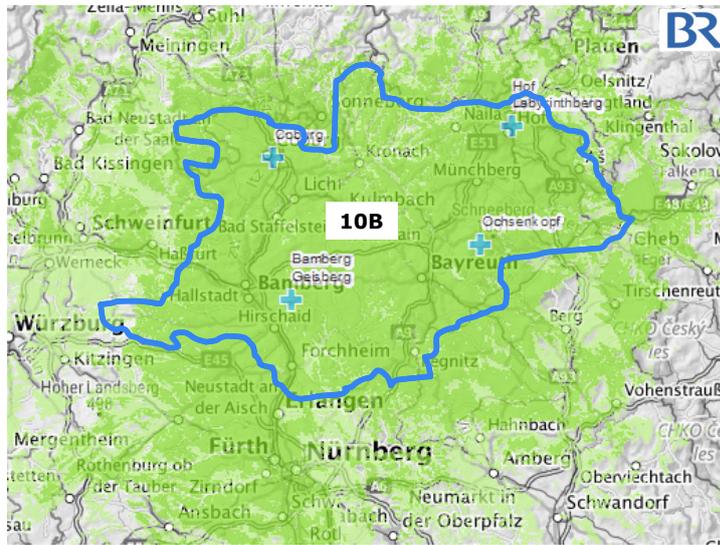
Privat  
Bayernweit:



Privat  
lokal/regional :



# DAB-Regionalnetz: Lokal und landesweit Oberfranken



Privat  
Bayernweit:



Privat  
lokal/regional :



## DAB+ in Bayreuth



#	Programm	Kanal	#	Programm	Kanal
1	Absolut Relax	5C	23	PULS	11D
2	Deutschlandfunk	5C	24	Absolut HOT	10B
3	Deutschlandfunk Kultur	5C	25	BAMBERG	10B
4	Deutschlandfunk Nova	5C	26	BAYERN 1 Franken	10B
5	DRadio DokDeb	5C	27	BAYERN 1 Main	10B
6	ENERGY	5C	28	Bayern 2 Nord	10B
7	ERF Plus	5C	29	BR Verkehr	10B
8	Klassik Radio	5C	30	egoFM	10B
9	Radio BOB!	5C	31	EINS COBURG	10B
10	Radio Horeb	5C	32	EUROHERZ HOF	10B
11	SCHLAGERPARADIES	5C	33	EXTRA-RADIO HOF	10B
12	Schwarzwaldradio	5C	34	GALAXY OBERFR.	10B
13	sunshine live	5C	35	KULMBACH P-BURG	10B
14	ANTENNE BAYERN	11D	36	MAINWELLE	10B
15	B5 aktuell	11D	37	RADIO TEDDY	10B
16	B5 plus	11D	38	ROCK ANTENNE	10B
17	BAYERN 1 Nby/Opf	11D	39	Absolut HOT	12D
18	Bayern 2 Sued	11D	40	BAYERN 1 Franken	12D
19	BAYERN 3	11D	41	BAYERN 1 Obb	12D
20	Bayern plus	11D	42	BAYERN 1 Schw	12D
21	BR-KLASSIK	11D	43	BR Verkehr	12D
22	BR Heimat	11D	44	charivari CHA	12D
			45	charivari KEH	12D
			46	charivari NM	12D
			47	charivari R	12D
			48	charivari SAD	12D
			49	egoFM	12D
			50	GALAXY AM/WEN	12D
			51	RADIO RAMASURI	12D
			52	RADIO TEDDY	12D
			53	ROCK ANTENNE	12D

Stand: 29.01.2019

## DAB-Regionalnetz: **Lokal und landesweit** Mittelfranken



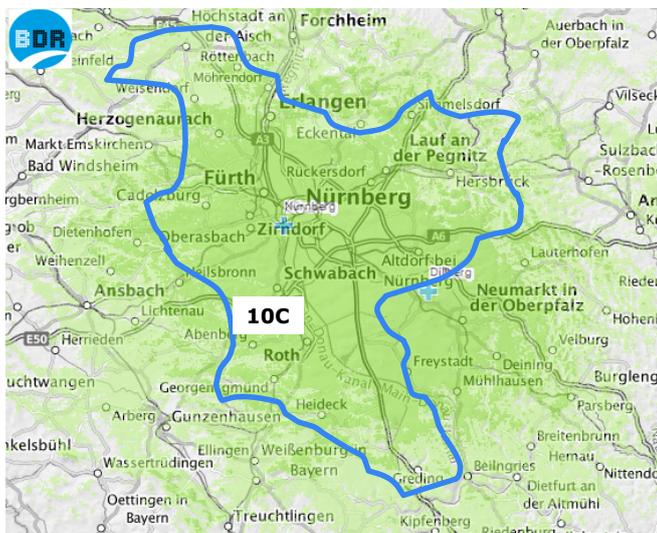
Privat  
Bayernweit:



Privat  
lokal/regional :



## DAB-Lokal-Netz: **Lokal** Nürnberg



lokal/regional :



## DAB-Regionalnetz: Lokal und landesweit Oberpfalz



Privat  
Bayernweit:



Privat  
lokal/regional:



## Privater lokaler/regionaler Hörfunk digital terrestrisch



### Ziel:

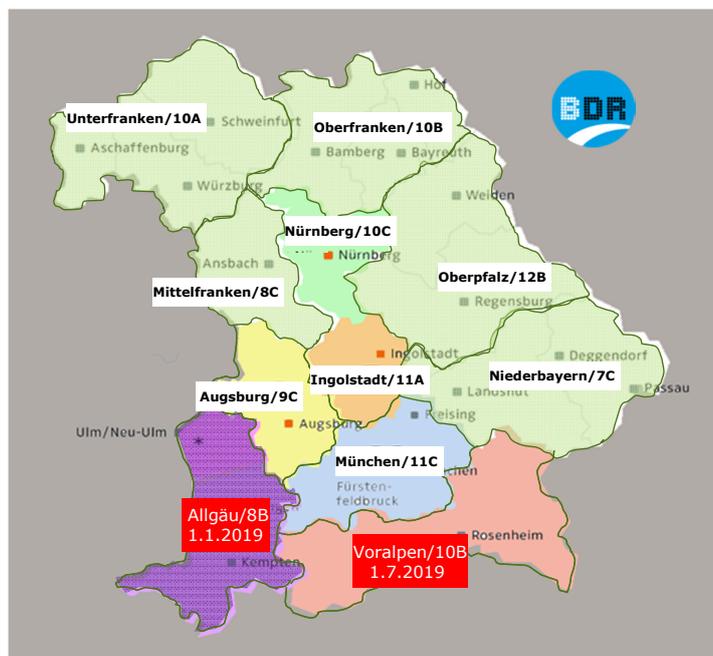
Bis Mitte 2019 alle privaten und öff. rechtl. Hörfunkangebote in Bayern über DAB+ verfügbar machen.

Heute bereits > 2,5 Mio Radiogeräte in Bayern im Markt (vgl. FAB)

### Aktuelle Infos:

<https://www.dabplus.de/empfang/?lang=de>

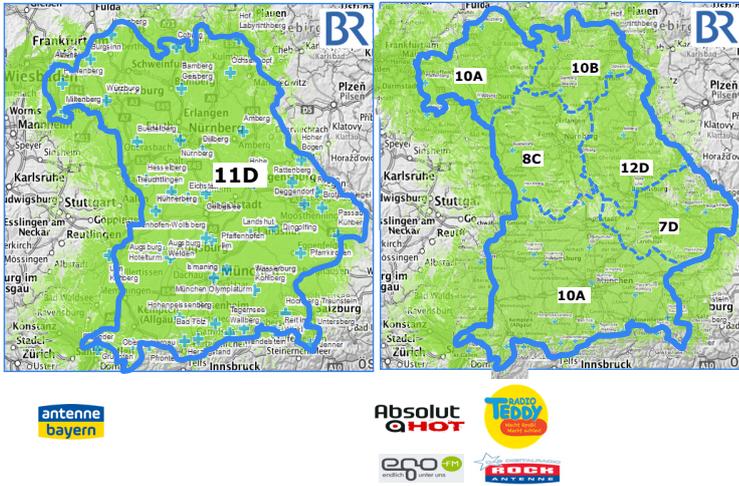
Wellenspiegel S.13 – S.28



# DAB+ -Hörfunk in Bayern



landesweit



lokal



Derzeit: 72 Lokale Hörfunkprogramme  
 Ende 2019: ca. 90 lokale Hfk-Programme

# DAB im Kabel



- Hörfunk ist seit jeher ein fester Bestandteil des Medienangebotes in Kabelanlagen
- UKW-Programme wurden mit Antenne empfangen und in Kabelanlagen eingespeist
- Der Aufwand für Netzbetreiber und Verbraucher war/ist sehr gering
- Der Hauptverbreitungsweg für Radio (Terrestrik) wird mit DAB+ digitalisiert. Internet ergänzt dies, aber ersetzt diese Hauptverbreitung nicht!
- **BayMG untersagt die Verbreitung von UKW im Kabel seit 31.12.2018**

### Fragen:

- Wie kommt künftig Radio aus der Region in die Haushalte?
- Wie kann der Nutzer/Hörer einfach Radio über Kabel hören?
- Gibt es eine einfache Lösung?

### ZIEL:

- Unterscheidung zwischen prof. Kabelnetzbetreibern (>10.000 WE) und GA/GGA
- Radio soll auch in der digitalen Welt genauso einfach ins Kabel kommen und vom Hörer genutzt werden, wie bis dato UKW.
- Welche Lösungen gibt es?