



ASBU-WorldDAB DAB+ Workshop

Bassil Zoubi, Technical Director, ASBU

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Contents

- **Background**
- **What is DAB?**
- **Objectives Of The Workshop**
- **Advantages & Benefits o DAB+**
- **DAB+ in the Arab World**
- **The Purpose of the DAB+ Trial in Jordan**
- **Why Now?**
- **Next Steps**

Background

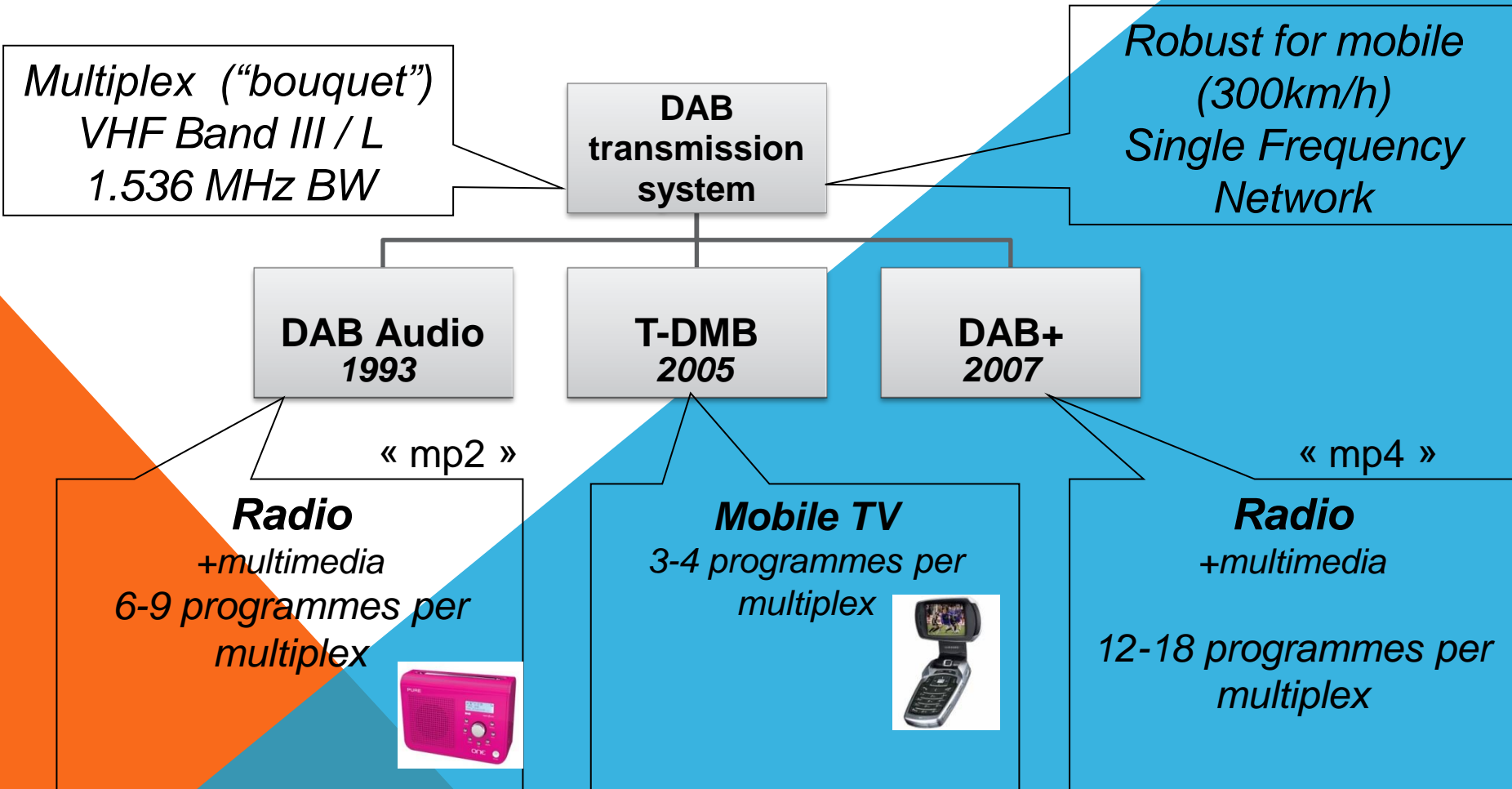
In many counties, the FM Spectrum is full, As a result:



- Interference and poor quality signal reception
- No room for new radio stations
- Difficult to innovate

DAB+ provides a fresh start to radio broadcasting

What is DAB?: DAB family (eureka 147)



Objectives Of The Workshop

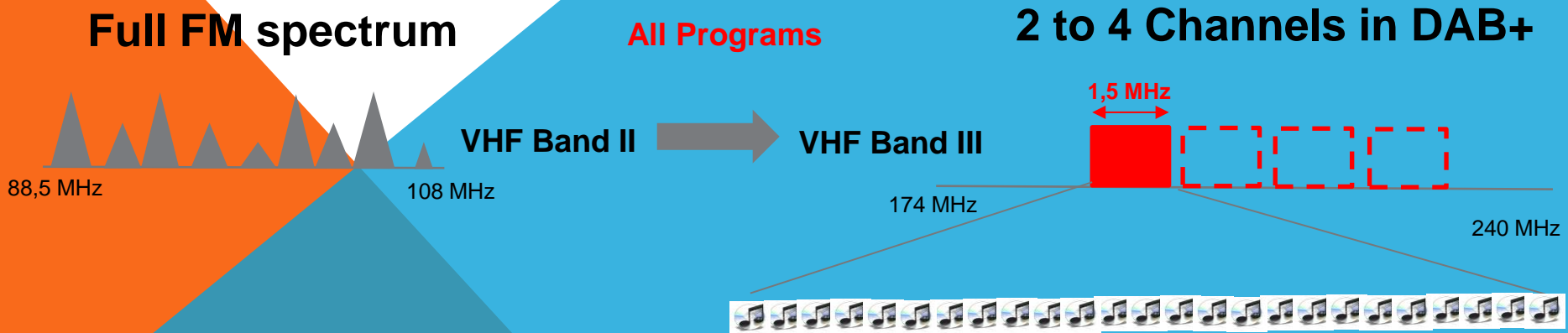
- Promote Digital Radio in the Arab Countries
- To conduct an assessment of the feasibility of Jordan for Digital Audio Broadcasting
- Identify the policy, legal and regulatory pre-requisites to facilitate the transition from analogue to DAB+
- The network infrastructure and other technical pre-requisites for the introduction of DAB+
- Assess market readiness and structure required, including business development, the investment incentives and other support required
- Review various approaches taken in other countries for the implementation of DAB+

Technology Advantages of DAB+

- Efficient use of frequency spectrum, Multiple channel capability (up to 20 Channels)
- Economical - Lower transmitter power per audio service
- Advanced Audio Quality
- Consistent quality of Reception
- Improves capability of Portable and Mobile coverage
- Enhanced service offerings, including data (Visual radio with information displayed on screens)

Advantages of DAB+: Spectrum Efficiency

- 2 to 4 DAB+ Channels can replace a complete full FM Band
- Up to 24 Programs of good audio quality per DAB+ Channel
- Consider capacity for new programs & data services
- Very cost efficient infrastructure per program



Economical advantages of DAB+

Drastic cost reductions (CAPEX & OPEX) using DAB+ compared to FM

- ✚ Equipment
- ✚ Distribution
- ✚ Energy
- ✚ Cooling
- ✚ Space
- ✚ Service & Maintenance
- ✚ RF transmission License Fees

Benefits of DAB+

Support For Features and services

Traffic Information



Program Associated Data: DLS -Text delivery
-weather reports
-Program Line-up
-Sports results

PAD -Slide shows
-Adverts
-Community events
-stock Markets



-Choosing station from list
-No need to remember station frequency



Benefits of DAB+

New Revenue Opportunities



Advertising (New stations and services)



Taxation (Media houses, broadcasting equipment, PAYE)



Licensing Fees (spectrum, transmission and distribution)

Benefits of DAB+

Employment Opportunities



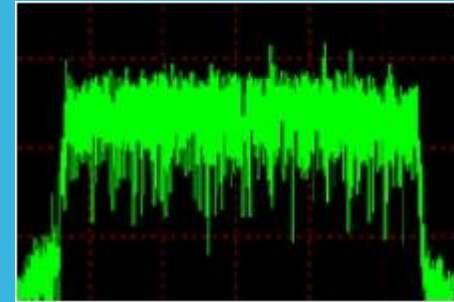
Signal
Distribution

Content Generation



JOBS

Policy &
Regulation



Maintenance and
Technical support

Research
& Innovation



DAB+ in the Arab World



Country	Koweit
Status:	Regular since 2014
Population:	4,4 million
Services:	15 DAB+
Current Coverage	90% (SFN mode)
Coverage Extension	2017 (to 95%)
Receiver	DAB+



Country	UAE
Status:	trial since 2014
Population:	9.3 million
Services:	4 DAB+
Current Coverage	1,8 million
Commercial Launch	2018
Receiver	Specs Prepared and distributed

DAB+ in the Arab World



Country	Jordan
Status:	trial ongoing
Population:	10 million
Services:	5 DAB+
Receiver	Under Study



Country	Qatar
Status:	trial
Population:	2,6 million
Services:	
Receiver	Under Study

DAB+ in the Arab World



Country	Bahrein
Status:	trial since 2016
Population:	1,4 million
Services:	4 DAB+
Coverage	40%
Receiver	DAB+ in cars



Country	Tunisia
Status:	trial since 2008
Population:	11 million
Services:	12 DAB+
Current Coverage	20% (Great Tunis)
Coverage Extension	2017-2020 (45 to 95%)
Receiver	Under Study

The Purpose of the DAB+ Trial in Jordan

- ❑ **To test and evaluate DAB+ technology against the following criteria:**
 - End to end technical functionality (studio to receiver)
 - Portable and mobile coverage (moving vehicle)
 - Interference and clutter on coverage (high rise buildings)
 - Field testing typical professional and consumer equipment
 - Testing Audio quality at different bit rates
 - Demonstrate value added services

- ❑ **To start cooperation between main stakeholders: Public and Private broadcasters, Regulator, manufacturer, Audience**

Why Now?

- ❑ The technology is tried and tested
- ❑ Since 2004, more than 40 million DAB / DAB+ receivers sold
- ❑ The market is ready - over 400 consumer devices available

Prices
now under
€20



Why Now?

The automotive sector is ready

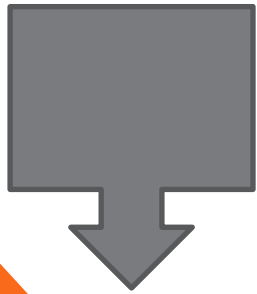


Next Steps

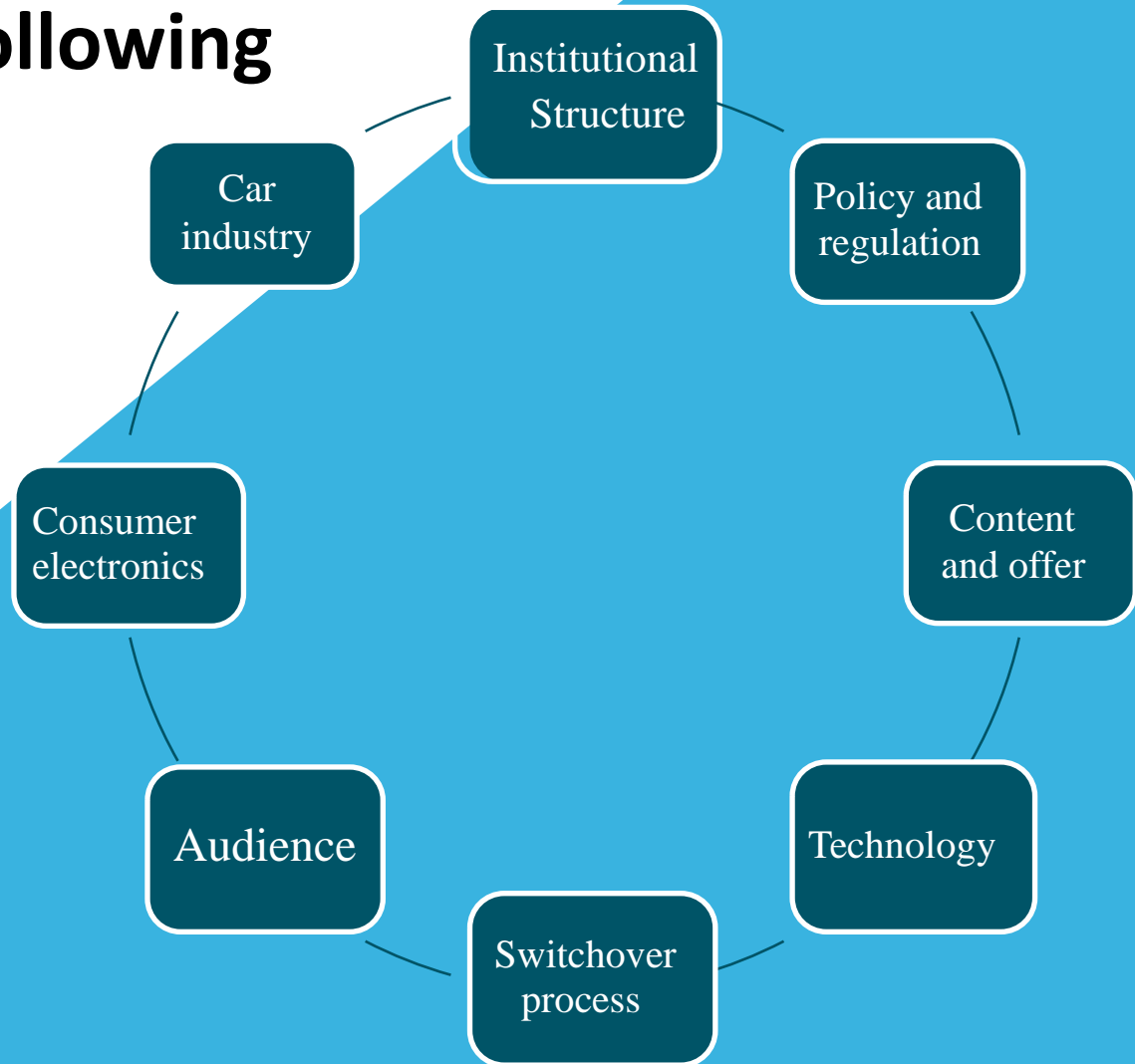
- Compile a report on the findings of the trial
- Fast track framework for the establishment of Digital radio policy and regulation
- Motivate the Regulator to issue an (Invitation to Apply) which will lead to Commercial launch of Digital Radio

Next Steps

To analyse the following factors:



To establish a Road Map for Digital radio switchover and analogue (FM) switchoff



Thank you