



**Analysis on Digital Radio Service Deployment in Thailand  
TIME Consulting, 13 December 2017**

# Contents

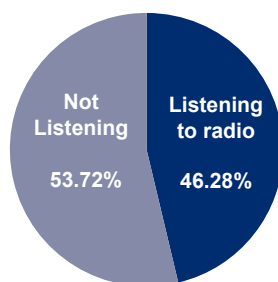
**1** Radio Development Plan and Digital Switch Over

**2** Regulatory Impact Assessment

**About 46% of population listening to radio. Most audiences listen to radio more than 3 days a week. Key problems are interference signal and poor audio quality.**

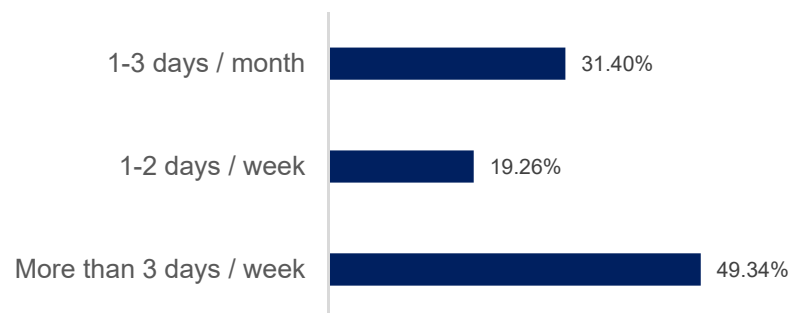
## Radio Listening of Thai People

Proportion of people who listen to radio vs. those who don't



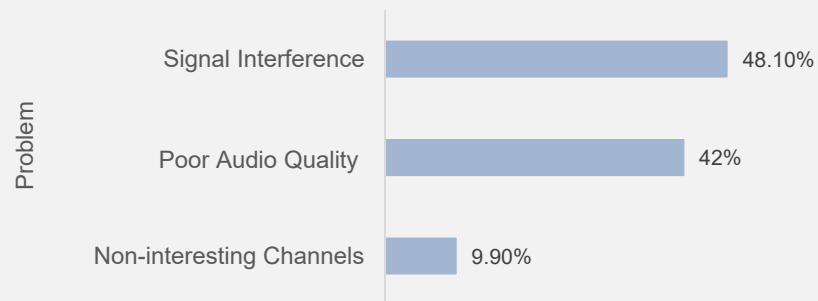
**46% of Thai population listening to radio broadcast**

Frequency of Radio Listening (Percentage)



People are listening to radio more than 3 days a week.

Key Problems Found in Analogue Radio Service (Percentage)



Key problems that most Audiences found in analogue radio service:

1. Signal Interference
2. Poor audio quality

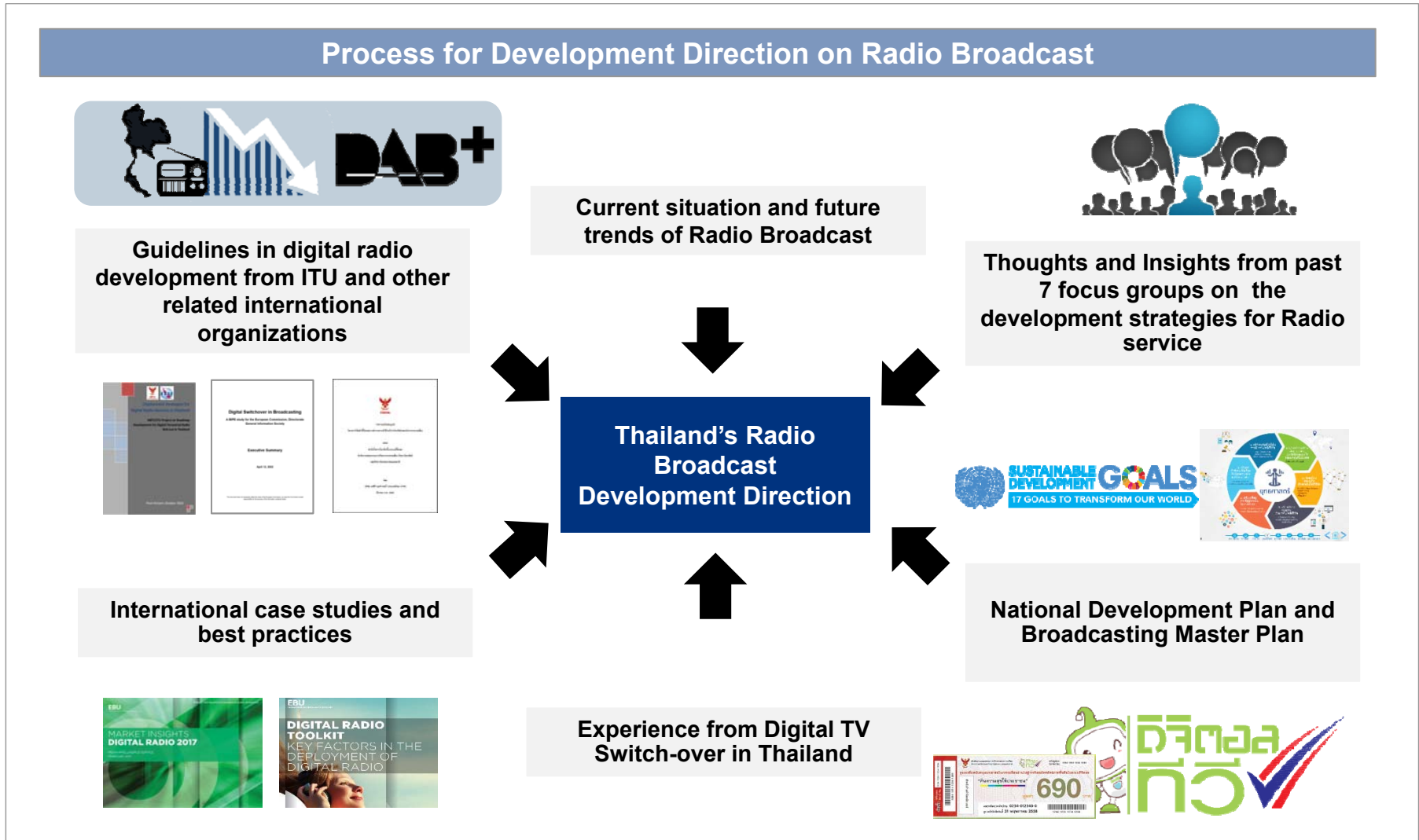
Source: NBTC., 2017

**SWOT Analysis is an important element to help setting the direction of the draft of broadcasting development plan.**

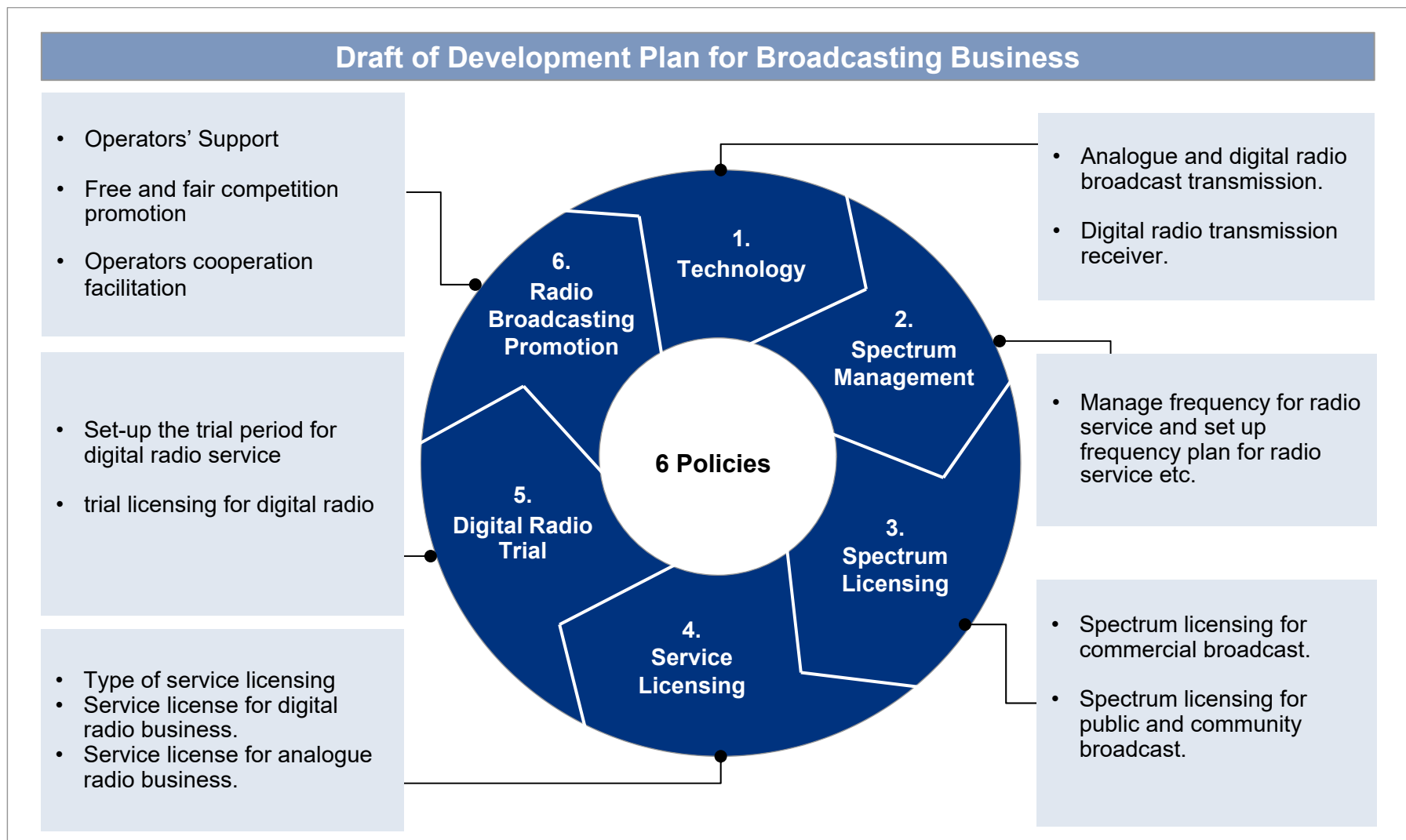
### SWOT Analysis of Radio Industry in Thailand

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>• Radio service is the basic service in Thailand which is easily accessed and provided in the form of Free-to-Air to everyone in the country.</li> <li>• Radio service has a wide coverage area and can widely broadcast news and content to reach large numbers of audiences.</li> <li>• Radio service has long been used as the media by public sector to convey message to people.</li> <li>• Radio equipment cost are relatively low and affordable to most of the Thai people.</li> </ul>	<ul style="list-style-type: none"> <li>• Interference of signal occurs in many area in Thailand.</li> <li>• Poor audio quality on analogue radio service.</li> <li>• Limited to voice-only service.</li> </ul>
Opportunities	Threats
<ul style="list-style-type: none"> <li>• DAB+ technology ,which provides better quality of audio and able to support more radio channels, has added value to radio service and improves efficiency of spectrum usage.</li> <li>• VHF Band III which is suitable for DAB+ technology will be vacant in the near future, enabling the country to utilize this spectrum for digital radio service.</li> <li>• DAB+ technology enables radio to provide both voice and data service.</li> </ul>	<ul style="list-style-type: none"> <li>• Radio broadcast providers may opt to Over-the-Top (OTT) services that can deliver contents in the form of image and voice to their targets through Streaming Technology over internet broadband network.</li> <li>• Consumers can choose to listening to radio / music services through many available platform such as Internet Radio, Music Streaming, Podcast etc. and these can be seen as substitute services for radio service among the consumers.</li> </ul>

Master plan, development plan, international case studies, guidelines, and related insights are considered for the draft of radio broadcast development direction.



## Radio development direction has 6 policies: technology, spectrum management, spectrum licensing, service licensing, digital radio trial and radio service promotion



**Digital radio service trial will begin at the national level before going further to local level by considering the desire to use digital radio and readiness of local people.**

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## **Digital Radio Service Trial Policy**

### **5.1 Set-up the trial period for digital radio service**

Digital radio trial period has the main objectives for testing network equipment and transmission equipment and /or the business operation according to the conditions imposed by the NBTC

- (1) Trial period of digital radio service will start at the national level before going further to local level as the next step, following rules, processes, time period, and conditions imposed by the NBTC.

**Guidelines: Set up model and conditions in the trial phase for digital radio service at the national level and local level as follow:**



- Service providers who get the trial license are required to renew the license every 6 months, according to the NBTC notification on the use of spectrum for a short term TV or radio service trial\*, and cannot be used for commercial purpose.
- Facility and network providers that provide the network and facility in this period must be the network and facility licensee

\*unofficial translation

**Model of national and local network trial will include the number of MUX and numbers of trial areas. Operators must follow criteria and rules imposed by NBTC.**

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## Digital Radio Service Trial Policy

### (2) Model of national and local network trial for digital radio service

#### Guidelines:

Numbers of MUX	➔	2 National MUX
Trial Areas	➔	At least 5 areas nationwide
Evaluation	➔	Conduct survey about satisfaction of both operators and audiences

#### Guidelines:

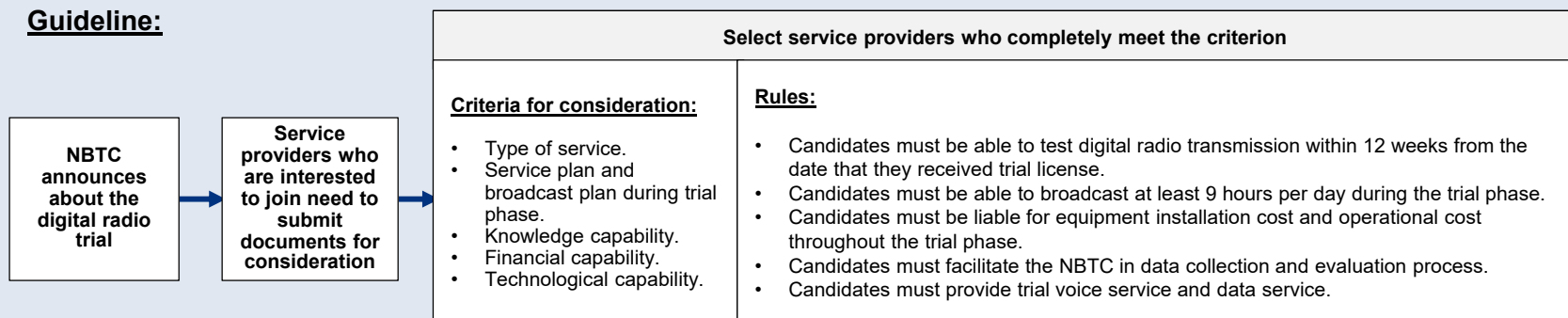
Numbers of MUX	➔	1 Local MUX per area
Trial Areas	➔	Areas that has national MUX by sharing basic infrastructure and facilities.
Evaluation	➔	Conduct survey about satisfaction of both operators and audiences

### (3) Simulcast

Guidelines: Service providers can choose to simulcast their contents in the trial period

## 5.2 Trial License for Digital Radio Broadcast Transmission

#### Guideline:





**National and local trial for digital radio broadcast transmission will be ended when there is sufficient network coverage and number of audiences or up to 5 years.**

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## Digital Radio Service Trial Policy

### 5.3 Condition for Ending The Digital Radio Trial Period

- (1) The end of national digital radio service trial period will be considered when there is sufficient coverage of digital radio broadcast network and readiness of audiences to switch to digital radio service, according to the conditions set by the NBTC.
- (2) The end of local digital radio service trial period will be considered when there is sufficient coverage of digital radio broadcast network and readiness of audiences to switch to digital radio broadcast, according to the conditions set by the NBTC.

**Guideline: The condition for ending the national digital radio service trial period are set as below:**

- 1** Digital radio network must cover **at least 50% of total population.**
- 2** **At least 10% of all radio listener nationwide** use DAB+ platform
- 3** There is sufficient spectrum to support digital radio service.

National trial phase for digital radio service will not be longer than 5 years or different time frame that NBTC deem appropriate.

**Guideline: The condition for ending the local digital radio service trial period are set as below:**

- 1** **At least 15% of all radio listener** in each local area use DAB+ platform

Local trial phase for digital radio service will not be longer than 5 years or different time frame that NBTC deem appropriate.



# Contents

**1** Radio Development Plan and Digital Switch On

**2** Regulatory Impact Assessment

**Enforcement of the draft of radio broadcasting development plan will have an impact on economy and radio business, operators, regulator and consumers.**

**Impact Assessment on Enforcement of Broadcasting Business Development Plan**

**Broadcasting Business Development Plan**

**Broadcasting Business Development Plan**






- 1 Technology
- 2 Spectrum Management
- 3 Spectrum Licensing
- 4 Service Licensing
- 5 Digital Radio Trial
- 6 Radio Broadcasting Promotion

**Impact of Enforcement**

- Overall economy and overview of radio business



- Operators  
Operators in relevant industries include:

-  Analogue radio and digital radio operators
-  Content Producers
-  Network and facility providers
-  Equipment and software manufacturers
-  Automotive manufacturers

- Regulator



- Consumers



**The enforcement of the draft of radio broadcasting development plan has positive impact in the form of monetize value and non-monetize value.**

**Positive Impact from Enforcement of the draft of Radio Broadcast Development Plan**

	<b>Monetize</b>	<b>Non-monetize</b>
<b>Positive Impact</b>	<ul style="list-style-type: none"> <li>• By shifting from analogue radio service to digital radio service, Thailand can reduce energy consumption by approximately 32 times per year.</li> <li>• Thailand can increase GDP around 25,240 million Baht from having digital radio broadcast service.</li> <li>• Operators can reduce the investment cost by 11 times in providing digital radio service comparing to providing analogue radio service</li> </ul>	<ul style="list-style-type: none"> <li>• Thailand can utilize spectrum in an efficient manner.</li> <li>• Operators involved in the broadcasting business will find new business opportunity from receive the license that suits their business expertise and business nature.</li> <li>• Service providers will find revenue generating opportunities from new form of services on digital radio service, also have potential in expanding audience base by providing service at the national level and local level.</li> <li>• Audiences will get diversity of news and information from increasing number of radio channels. Moreover, setting the minimum requirement for digital radio receiver will enable audiences to enjoy better audio quality.</li> <li>• Research and development in broadcasting business will be improved from radio broadcasting promotion policy.</li> <li>• Regulator can generate incomes from spectrum auction and from collecting license fees.</li> </ul>

**The enforcement of the draft of radio broadcasting development plan has negative impact in the form of monetize value and non-monetize value.**

**Negative Impact from Enforcement of the draft of Radio Broadcast Development Plan**

	<b>Monetize</b>	<b>Non-monetize</b>
<b>Negative Impact</b>	<ul style="list-style-type: none"> <li>• National and local channel providers are required to invest around 930,000 Baht per channel within the 15-year timeframe.</li> <li>• Network and facility providers have to put relatively high investment. Based on initial assessment, it is predicted that investment cost will be around 3,906 million Baht in order to reach coverage of 80% of populations.</li> <li>• Audiences need to bear the cost of digital radio receiver between 600 – 2,990 Baht.</li> <li>• Negative Net Present Value (NPV) of broadcasting industry.</li> </ul>	<ul style="list-style-type: none"> <li>• Network operators face with risk from high investment cost while there is no guarantee for numbers of digital radio audiences and amount of revenues gained.</li> <li>• Existing radio operators may experience the decrease in revenues due to an increasing radio channels in digital radio service.</li> <li>• Regulator has to find the measurement to support and push for the efficient digital radio service.</li> <li>• In the initial stage of digital radio broadcast service in Thailand, there could be small numbers of people who are expertise in digital radio service.</li> </ul>

# Increasing numbers of broadband infrastructure, streaming technology, and online radio service have impact on consumer behavior and radio broadcasting business.

## Impact from Technologies

### More Service Choices for Consumers

- New technologies can replace traditional radio broadcast.
- Consumers have more access to mobile broadband, and there is high tendency that people will have more access to other media from smartphones

### New Platforms Choices for Content Producers

- It is easier for content producers to deliver contents to consumers.
- Able to reach more targets through social media.
- Opportunity for content producers in generating incomes from new platforms.

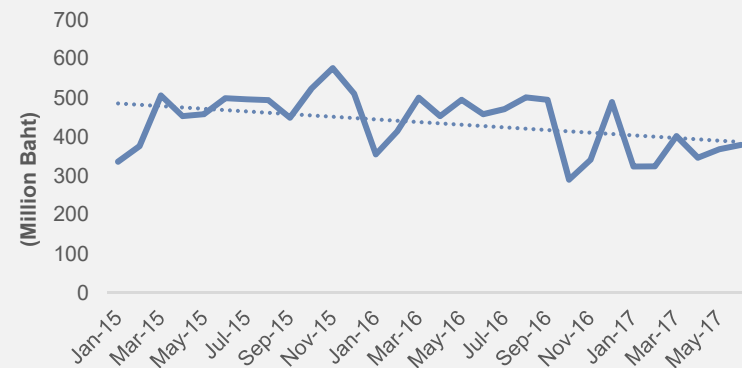
### More Service Choices for Operators

- Operators can provide live broadcast in replacement of traditional radio broadcast.
- Operators can also provide online radio broadcast simultaneously with traditional radio broadcast to reach more audiences.

### Operational Difficulties for Radio Operators

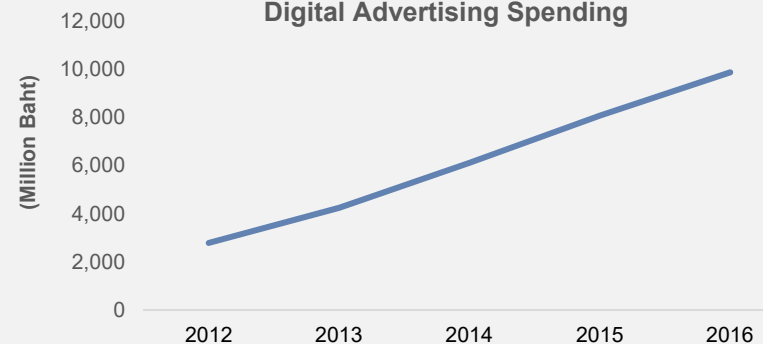
- Advertisement spending on radio service tends to decrease while digital advertisement spending keeps on growing.
- Digital radio broadcast has not yet been initiated in Thailand; therefore, there is no audience base for digital radio operators.
- Digital media and online platforms are growing due to technological improvement, government support on digital infrastructure and improvement of broadband infrastructure.

### Advertising Spending on Radio Stations



Source: NBTC, 2017

### Digital Advertising Spending



Source: DAAT, 2016

**Economic impact may result in negative NPV of broadcasting industry, this requires government subsidies for initial support.**

## Economic Impact and Policy Options

Subsidies on network rental fee for digital radio channel providers in the first 4 years will be a mechanism to support both radio service providers and network providers since the subsidies obtained by digital radio service providers will become a guarantee revenues for network providers. In addition, the subsidy on digital radio receiver production will accelerate the access of digital radio service.

**Subsidies amount to be provided by government/ regulator is approximately 1 Billion Baht for the first 4 years.**

	Base Case	Subsidies Case
NPV of radio industry	-260 Million Baht	13 Million Baht

### Policy Option 1

**Subsidize supply and demand sides, and no restriction on contents' diversity**

- People will receive news and information in the traditional pattern which will make them unable to see the value of digital radio service.

### Policy Option 2

**Subsidize supply and demand sides, and impose mechanism of creating radio contents' diversity**

- People can improve quality of life from receiving diversity of news and information.
- Audiences can access to digital radio channels that fit their interest.
- People can enhance their thoughts and widen their point of views.