



ITU Asia-Pacific Regional Development Forum Session 1: Harnessing Digital Opportunity through Broadband

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Agenda

- Objective: Spectrum availability and efficiency for wireless broadband and digital dividend
- Challenges
- Comments

Mobile broadband market

3G Investment
~ 2 Bil. USD
4 operators

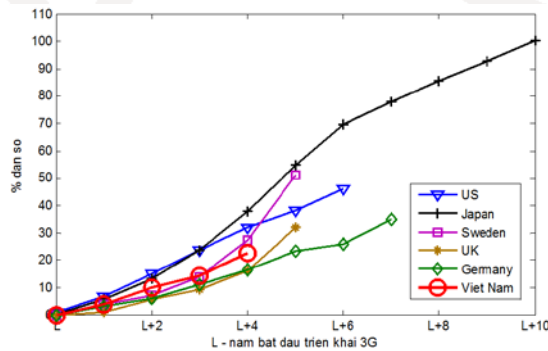
*Ve lai theo
phong cach GE*



42%
use daily



*Takes around 24
months to gain
momentum*



*2013 is expected
the booming year*

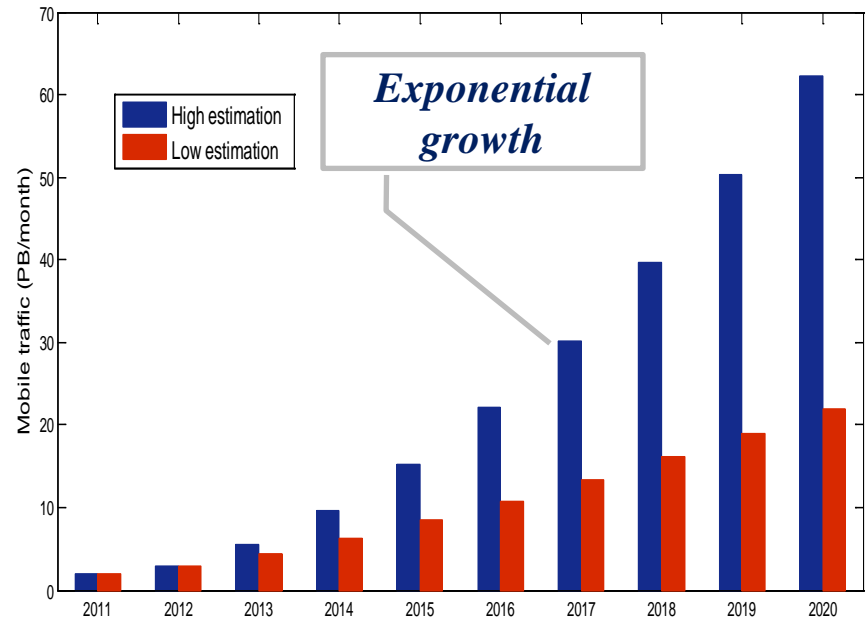
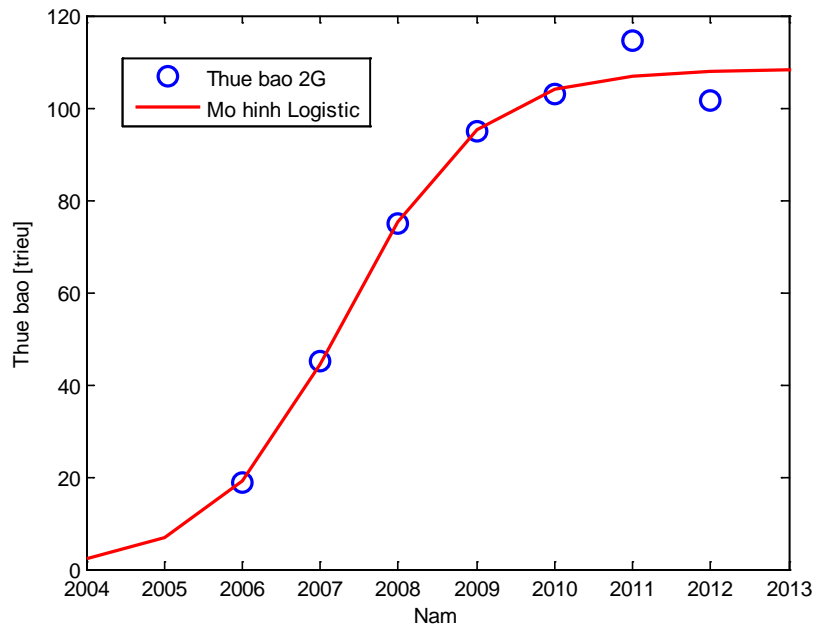
**~ 44,000
NodeBs installed**

~ 20% penetration

Real traffic growth

Subs. growth

Mobile traffic growth



Vietnam's contribution to ITU-R 5D model

Exponential model is recommended

Challenge

Social factors



Commuting

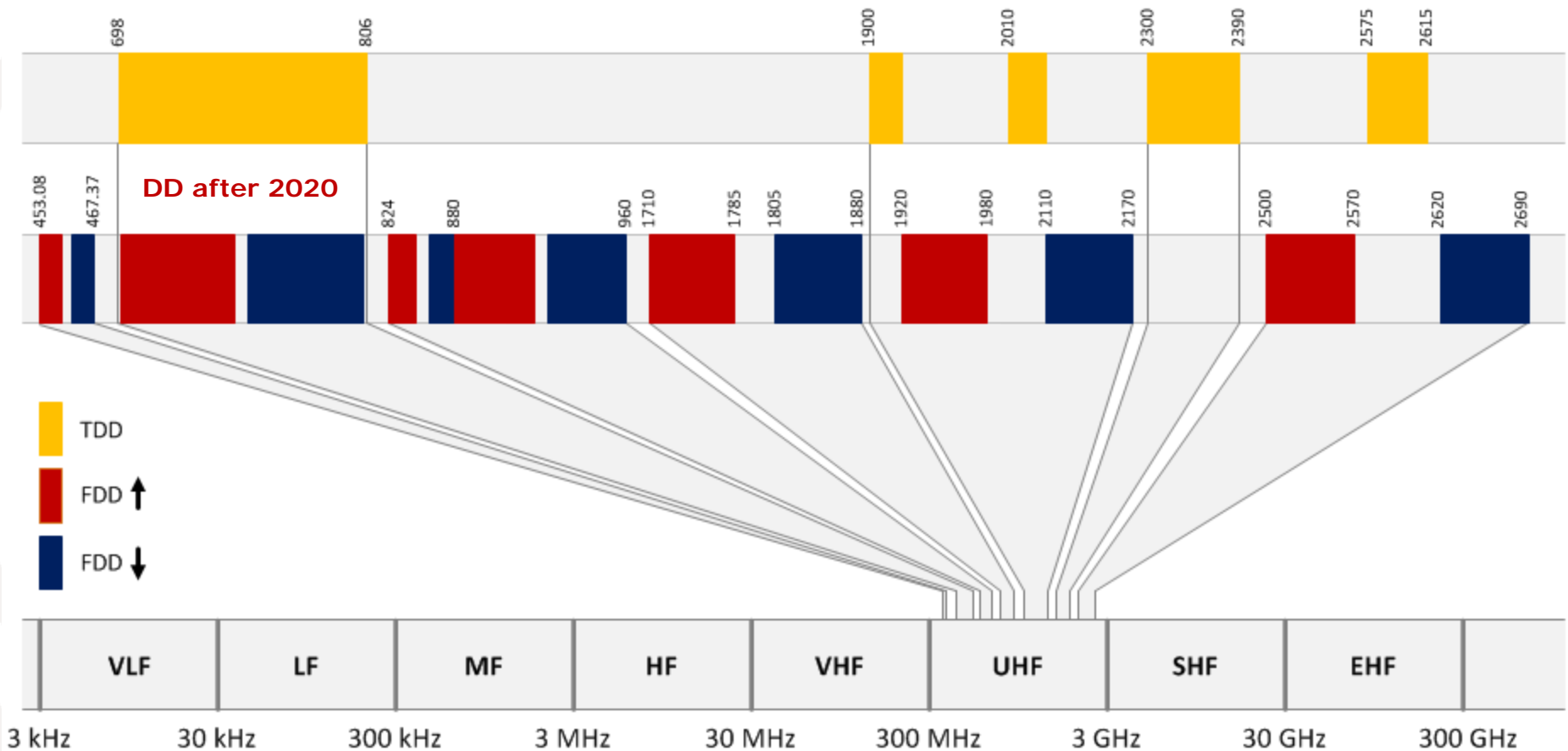


- Highly competitive markets
 - ARPU: VN < \$5; Japan ~ \$58.46; Korea ~ \$34.20;
 - Transportation characteristic.
- GDP below average
 - Low demand on devices (smart phones, services).
- User's behavior is adapting gradually
 - E-banking, E-business,... are still not widely used.
- Lack of local contents



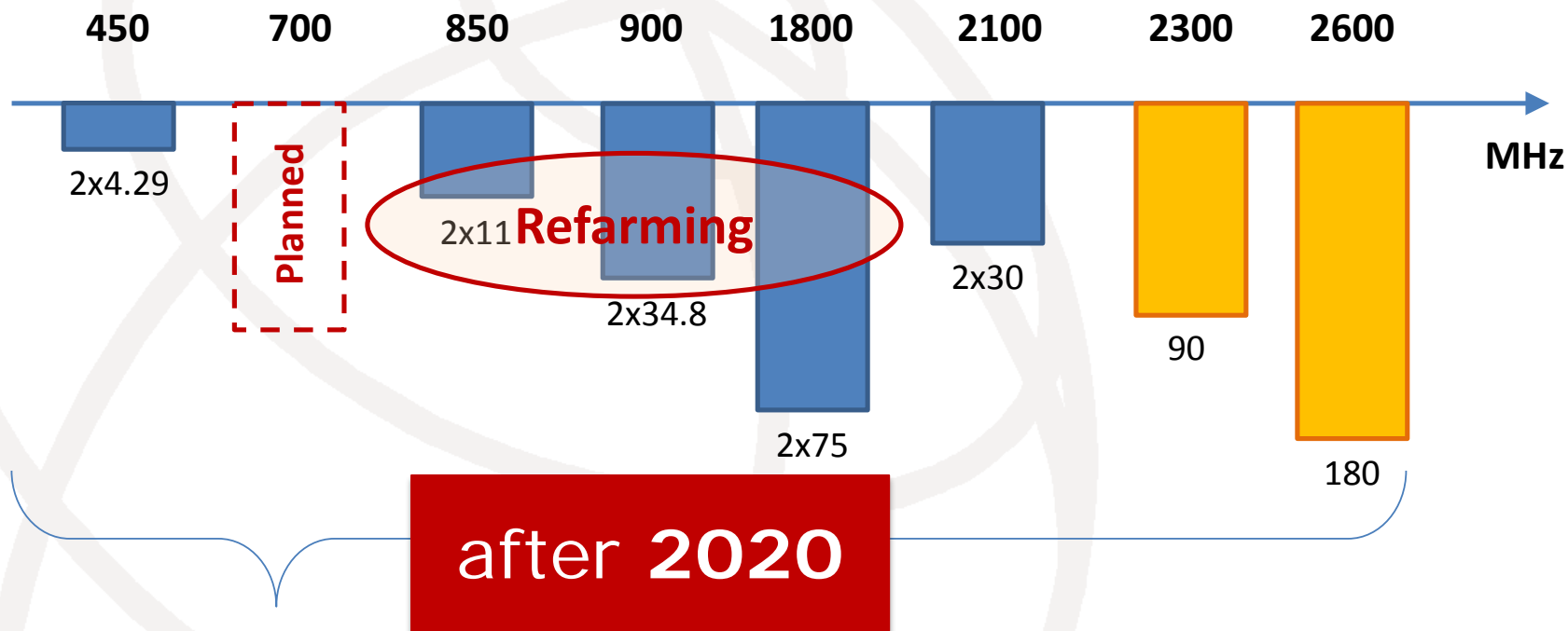
Basic phones are used significantly

Spectrum availability



Sweet Band

Refarming KEY bands

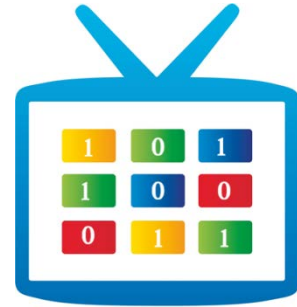


Total bandwidth:
640.18 MHz

	IMT-2000
Lower user density	440 MHz
Higher user density	560 MHz



Digital Dividend



2015

2016

2018

2020



470 MHz

694MHz



790MHz

806 MHz



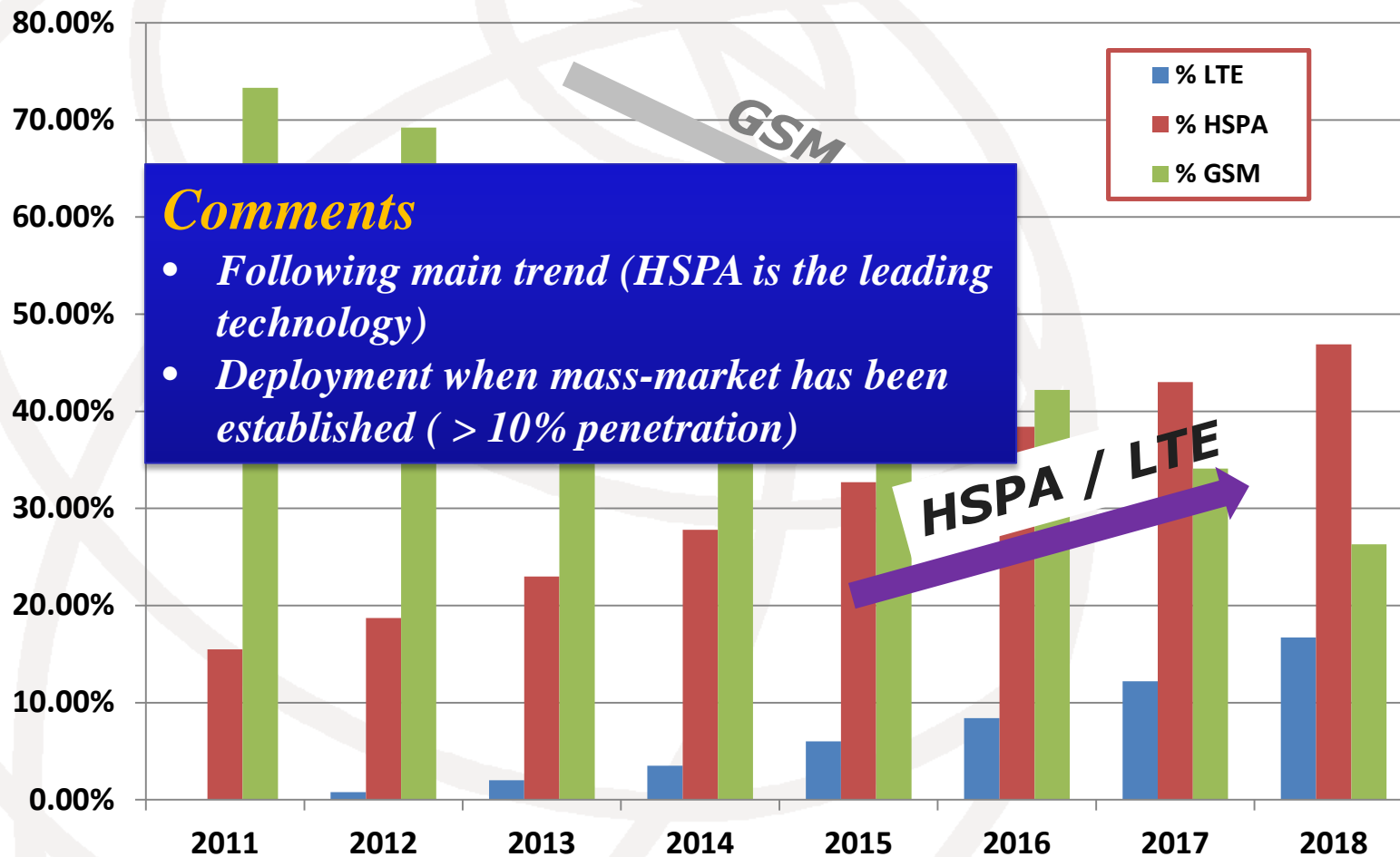
Align with



plan

IMT-Advanced

Technology Trend



When is the right timing for Wireless Broadband in Developing Markets?



Comments on Spectrum Management

- Market forecast is crucial for successful mobile broadband deployment:
 - Mobile traffic growth;
 - Spectrum demand;
 - Time to open spectrum band(s).
- Number of operators should be managed carefully to:
 - To foster healthy competition;
 - To growth market.

Comment on Spectrum Management

- Social factors should be considered seriously:

- User behavior;
- ARPU vs. GNI.

- Global/regional bands plan harmonization:

- Economic of scale;
- Competition to reduce price;
- Greatest economic benefit.

