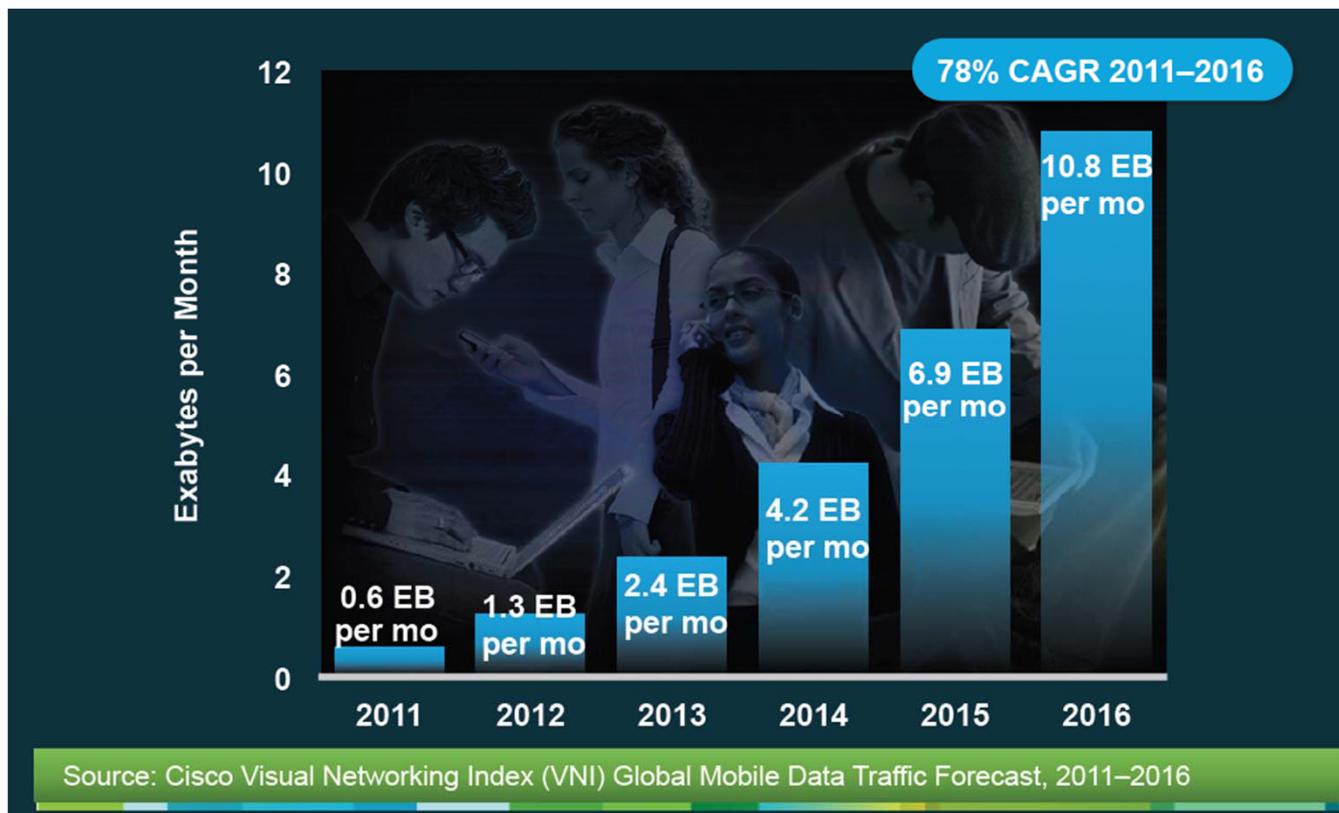


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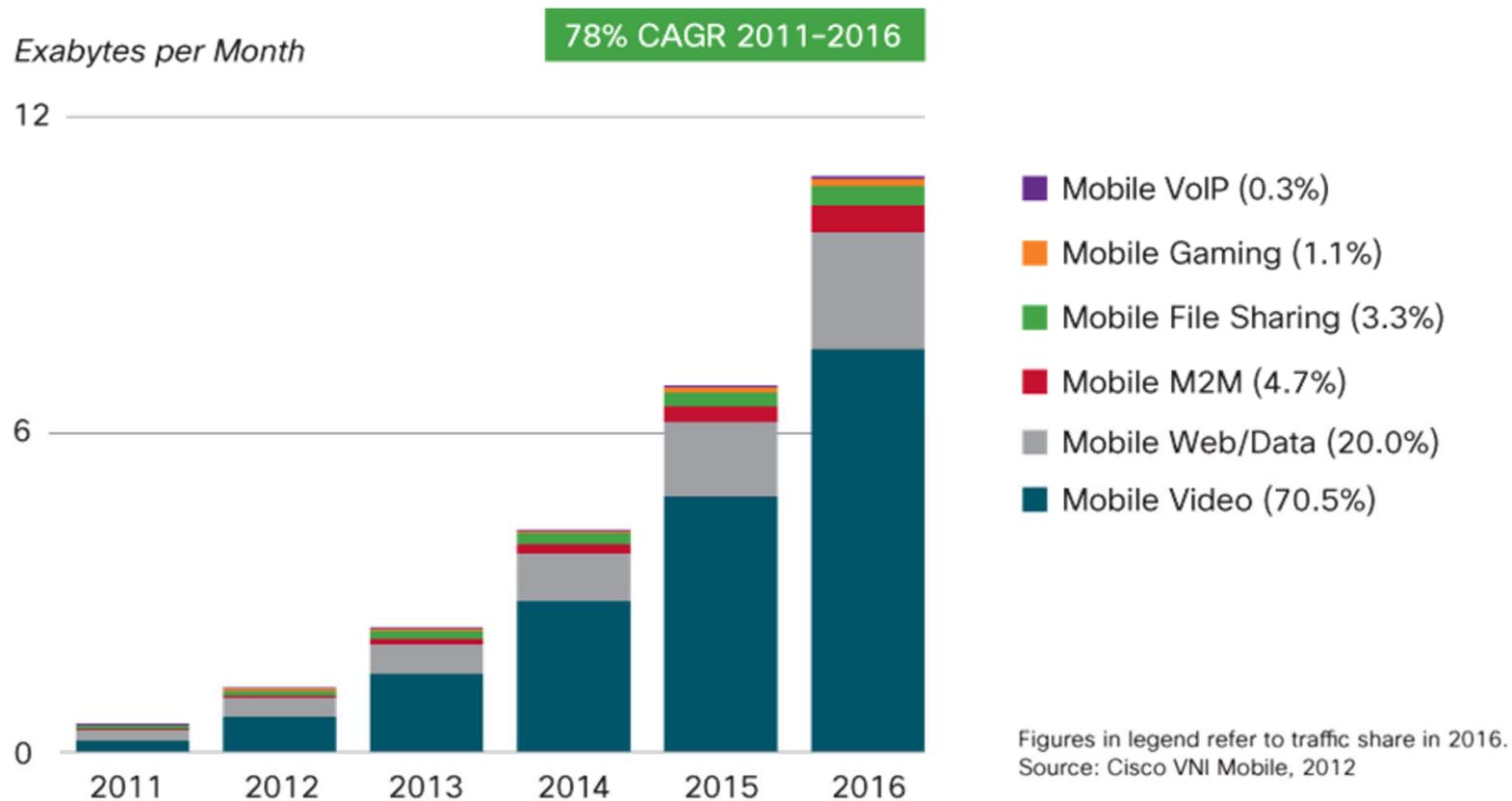
# Future Band Plans

FCC Band Plan Forum  
July 16, 2012

# Global Data Growth Forecast



# Mobile Application Growth Predictions



# Future Band Plan Considerations

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## ❑ LTE standard advantages

- Flexible and asymmetric bands
- Supplemental downlink only to be augmented with existing paired spectrum
- Carrier aggregation to increase peak throughputs

## ❑ Challenges

- Device complexity increasing, consumer asking for versatile devices
  - Carrier aggregation, MIMO, other interference avoidance techniques
  - RF Front end continues to be challenge
- Uplink coverage and capacity for voice and video telephony

## ❑ New spectrum needed to meet customer usage growth

- Paired and supplemental downlink options should be made available
- Flexibility to address capacity needs