



# Evolution of regulatory policies for industrial spectrum and for gigabit economy

CEPT workshop on new spectrum solutions for industry sectors  
Scandic Hotel, Copenhagen, 2-3 May 2019

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# Agenda

- 1. Spectrum access policy for industrial use cases**
- 2. Evolution of regulation for gigabit networks**

# Spectrum access policy for industrial use cases

## Different solutions based on industrial requirements and market situation

- MNO spectrum (network slicing or local leasing to industrial user)
- Dedicated local licensing directly to industrial user
- Unlicensed spectrum

## Balanced approach to satisfy MNOs' and local/regional industrial usage

- Consider main global 5G tuning ranges (e.g. 3.3-4.2 GHz) to facilitate economies of scale also for local industrial usage  
→ allow locally flexible adaption of the tuning ranges
- Enable spectrum access  
→ within the same timeframe for both nationwide MNOs' and local industrial usage
- Provide light and efficient regulatory process for dedicated spectrum for industrial usage based on locally specific requirements of those users  
→ no complex and lengthy award/auction processes

# Towards the Gigabit Economy

With all-IP, the fixed and mobile networks converged to  
→ **one, giant computer network called the INTERNET**

Radio became just a wireless extension of fixed networks  
→ **5G is coming**

Meanwhile the bandwidth demand is higher than offer  
→ **optical fiber everywhere is urgent**

Ultrafast broadband in the last mile is the key  
→ **how to attract investors and avoid subsidies?**

**What could be the next step of the EECC reforms?**

# Evolution of the (De-)Regulation

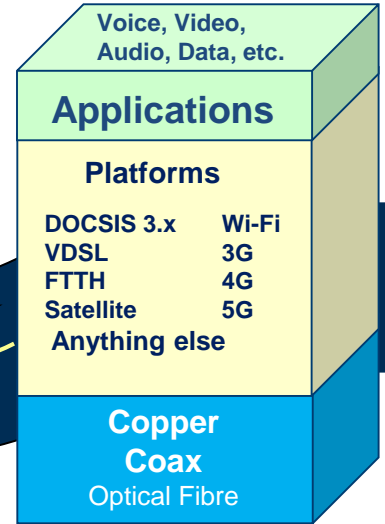
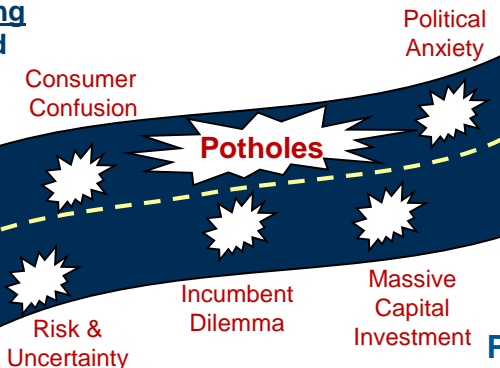
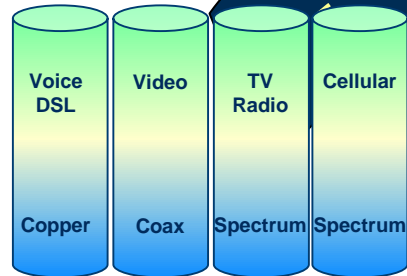
Analogue World ~1998

Digital World ~2010

Gigabit Society ~2025

## 1998 reform objective

- Transformation of state owned telecommunication companies into private entrepreneurs
- De-monopolisation – enabling of competition on the existing telephone (twisted pair) and TV (coax cable) copper networks, therefore
- LLU obligation invented (Local Loop Unbundling)



Next step: **Business Reporting Evolution**

**Applications & Services**  
Depreciation ~1 year

Transparent financing interfaces

**Active Infrastructure**  
Depreciation ~5 years

Transparent financing interfaces

**Passive Infrastructure**  
Depreciation ~20 years

Allianz bid for optical fibre network of Altice (Nov'18)  
<https://www.reuters.com/article/us-altice-europe-stocks/altice-europe-gets-about-ten-bids-for-french-fibre-stake-sources-idUSKCN1MD0YE>

## Pre-2018 EU telecoms framework

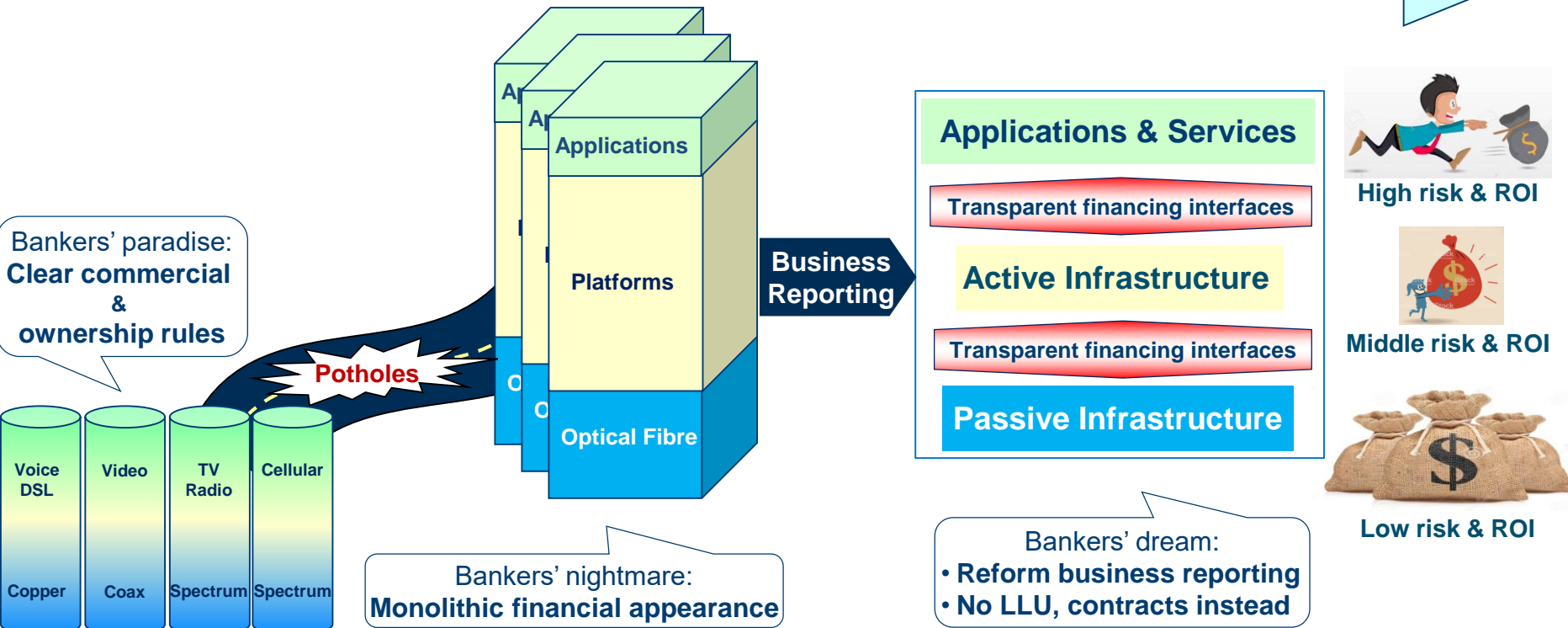
- Successful in bringing competition to the market
- Less successful in promoting investments in ultrafast broadband infrastructures

# Evolution of Investors

**Governmental <1998**  
Analogue

**Incumbent telcos ~2010**  
Digital

**Specialised investors >2025**  
Internet

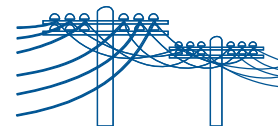




**Automobile industry**  
1886 – first motor car



**Telecommunication**  
1844 – first telegraph line



# Conclusions

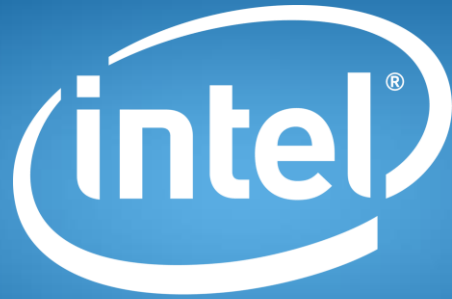
**Gigabit economy of 21<sup>st</sup> century need new rules:**

- 1. Enable easy access to local spectrum to address industrial requirements**
- 2. Continue improving the EECC to encourage investors financing the gigabit network infrastructures**
  - foster financial transparency and preference of contractual not regulatory obligations**

# Many thanks!

## Q&A





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