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# STATE AID FOR BROADBAND INFRASTRUCTURE IN EUROPE

## ASSESSMENT & POLICY RECOMMENDATIONS

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Improving network and digital industries regulation

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# STRUCTURE OF THE REPORT

- ▶ **1 | AIM OF THE STUDY**
- ▶ **2 | RATIONALE FOR BROADBAND STATE AID**
- ▶ **3 | SOURCES AND SIZE OF FUNDS**
- ▶ **4 | EVOLUTION OF THE BROADBAND STATE AID RULES**
- ▶ **5 | ANALYSIS OF NOTIFICATIONS TO DATE**
- ▶ **6 | KEY FINDINGS AND RECOMMENDATIONS**

# Broadband State Aid expands coverage and accelerates upgrades

Broadband is important for economic and social inclusion across Europe

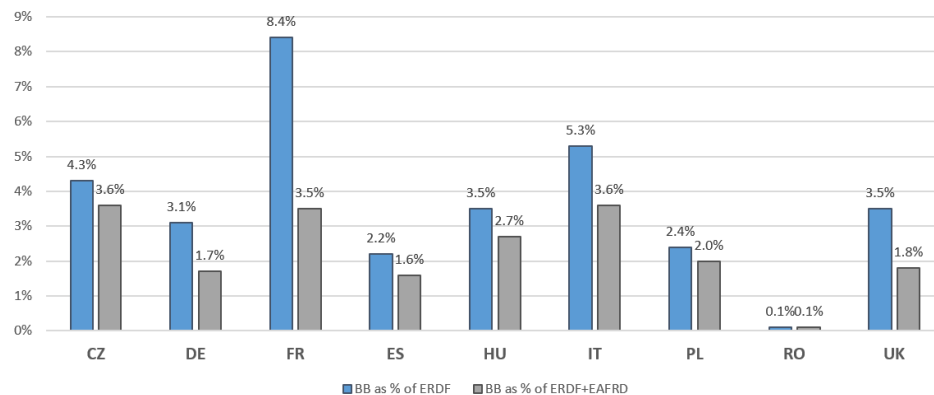
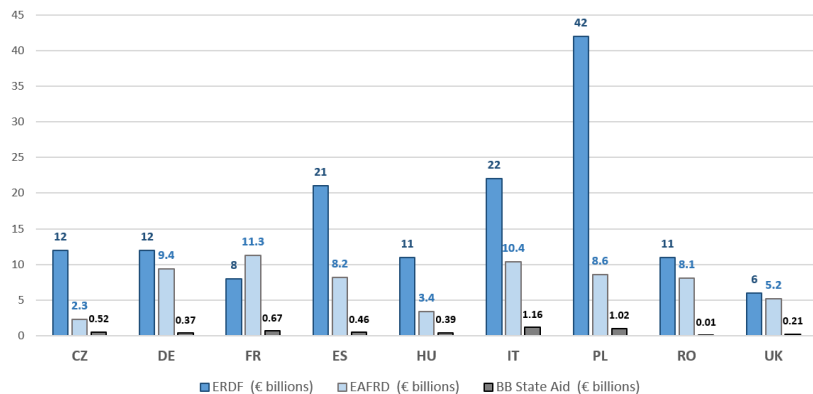
Broadband generates positive externalities (and private benefits can be difficult to value)

Deployment costs vary by geography, leading to under provision in high cost/low density areas

Incentives to upgrade vary by competitive conditions, leading to delayed provision in non-competitive areas

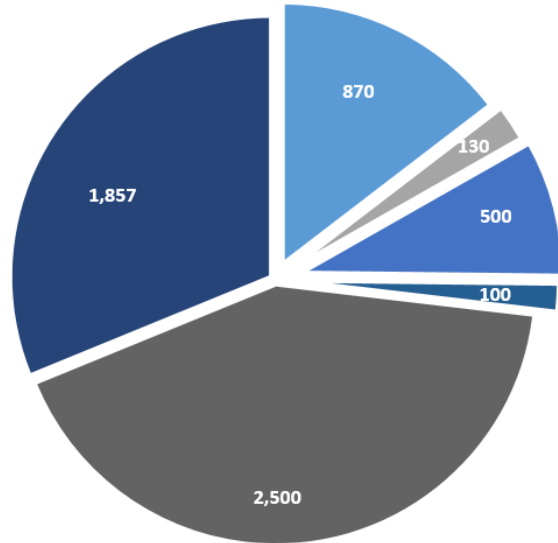
- Use of European funds to reduce disparities
- Role for public funds
- State Aid targeted at 'white' areas
- State Aid targeted at 'grey' areas

# Europe spends less than 5% of its budget on broadband



Smaller European funds like EFSI allocated around 1.7%, CEBF is *de minimis*, and EIB lent 3-4% on broadband

# Europe currently spends ~€6bn p.a. on broadband, 65% comes from national funds



- European Regional Development Fund contribution
- European Agricultural Fund for Regional Development
- European Fund for Strategic Investments\*
- Connecting Europe Broadband Fund (with co-funding)
- EIB lending
- Member State contributions (assuming 35/65)\*\*



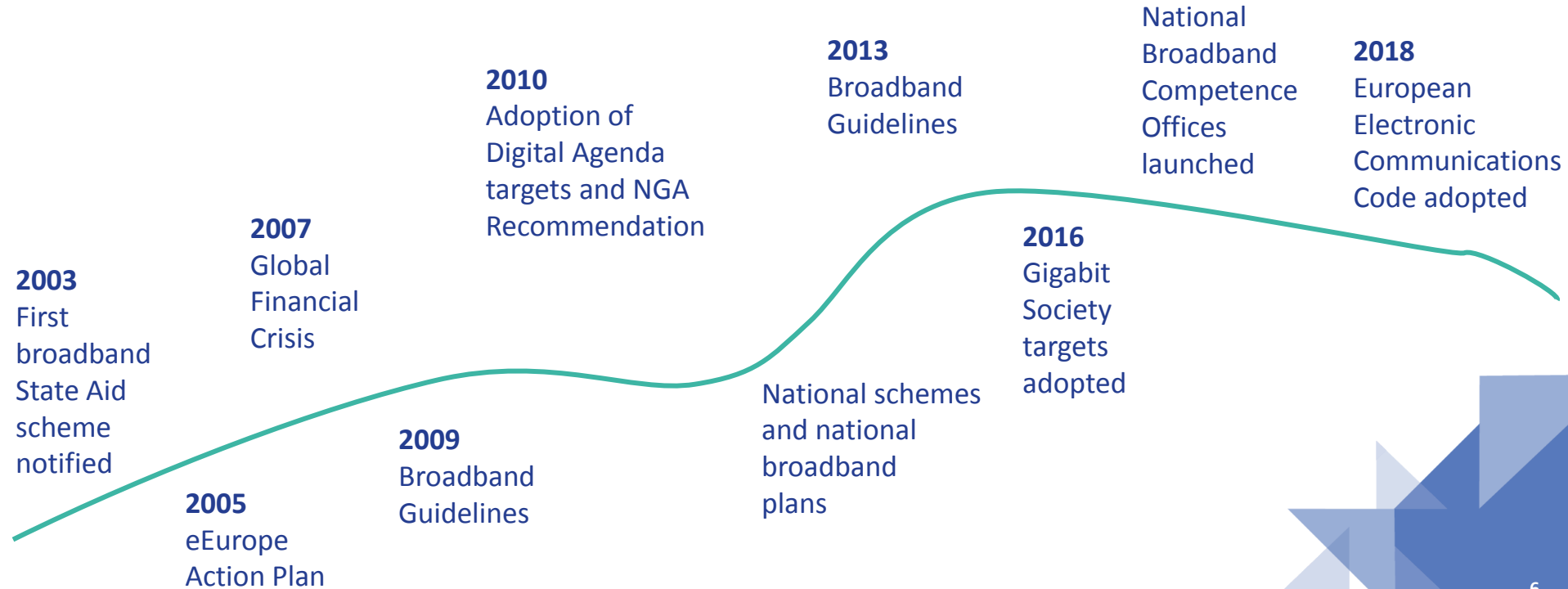
Total: 5,957 €m

\*EC contribution only, before multiplier applied

\*\* 35% of notified State Aid (ERDF+EAFRD) excluding EIB, EFSI and other non-notified sources

\*\*\* Non-commercial funds for FTTH to all HHs, per Analysys Mason 2016 for EC

# Evolution of broadband State Aid



# The scope of the rules have expanded significantly to support broadband targets

Period and focus	% of HH who might qualify	Potential cost of serving all qualifying households	Approximate funds spent
<b>Pre-2010</b> Extension of basic broadband infrastructure to 'white' areas	5-10%	~ €5 bn*	~€1-2 billion**
<b>2009 Guidelines</b> Extension of NGA infrastructure in 'white NGA' areas/'grey' basic broadband areas	~50%	~€ 40 bn***	Less than €15 billion to date (mid 2018)
<b>2013 Guidelines</b> Extension of 'ultra fast' infrastructure in NGA 'grey' and 'white' areas, and exceptionally in NGA 'black' areas	>60%	> €150 billion****	Less than €15 billion by 2020



# Other rules have remained largely the same

- Measures to promote competition
  - Competitive tendering
  - Wholesale access, including passive infrastructure
- Measures to minimise cost
  - Competitive tendering
  - 'Technology neutrality'
  - Re-use of infrastructure
  - Clawback provisions

# Analysis of notifications to date

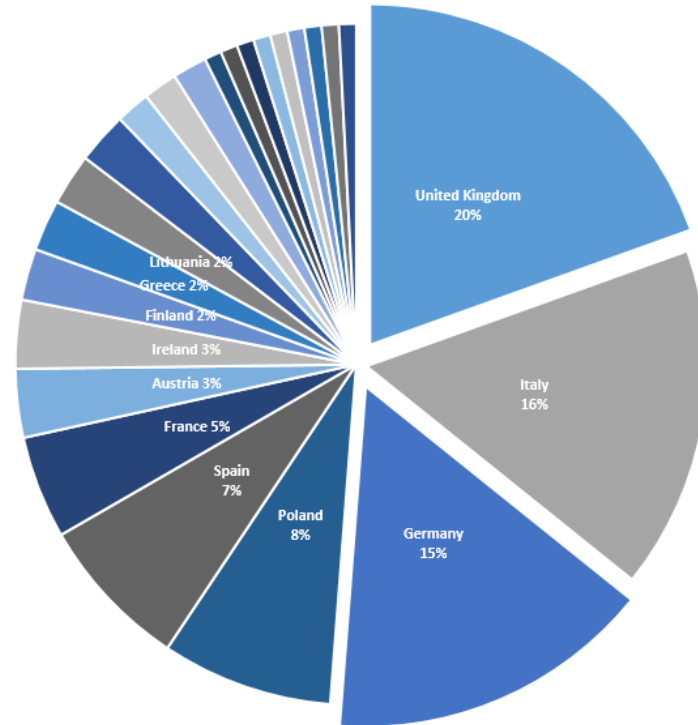
- We analysed **157 State Aid cases** for broadband notified to the European Commission between 2003 and August 2018.
- We have derived data from three sources:
  - ✓ the European Commission website;
  - ✓ the Official Journal of the European Union;
  - ✓ the individual decision letters the Commission issues for each notification.

**157 letters** from which we dropped 2 cases which are repetitive.

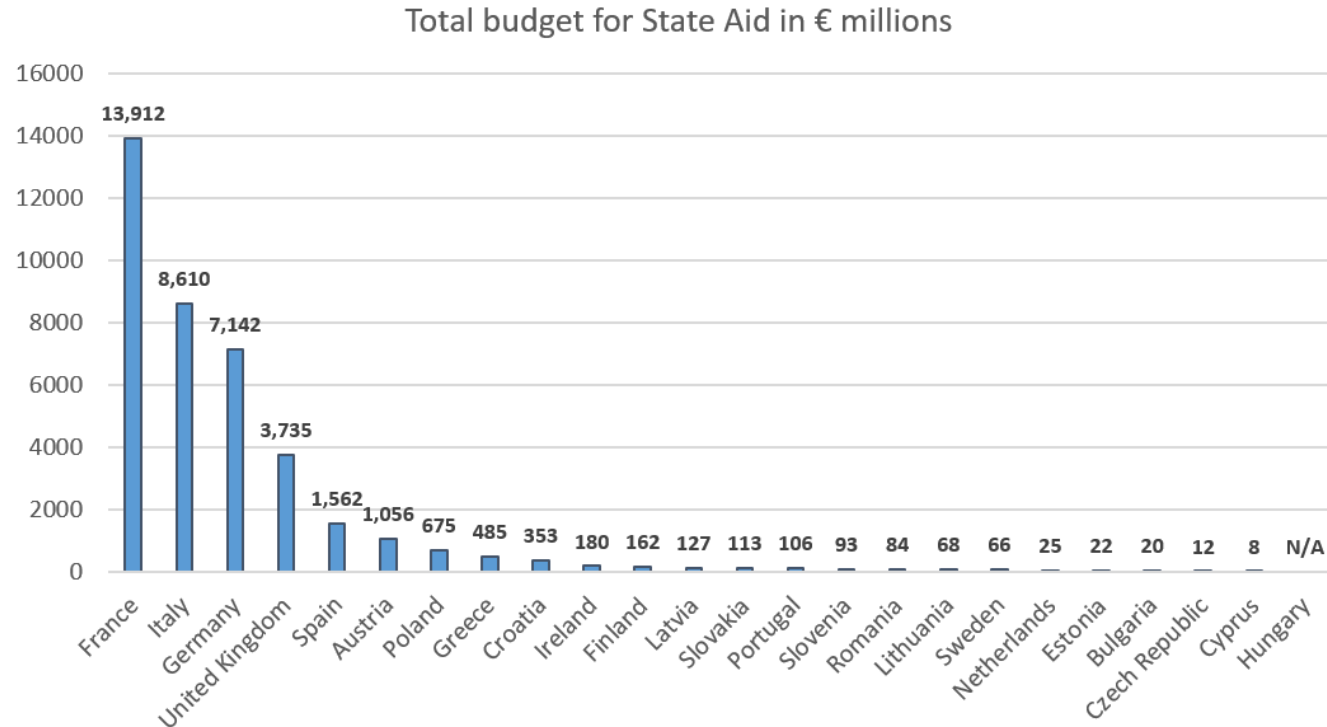
- 123 **original cases** (2003-2018)
- 27 **modifications** of existing cases (2005-2016)
- 3 **individual notifications** within schemes (2011)
- 2 **evaluation plans** (2015, 2016)

## Some Member States are much more active than others in notifying the EC

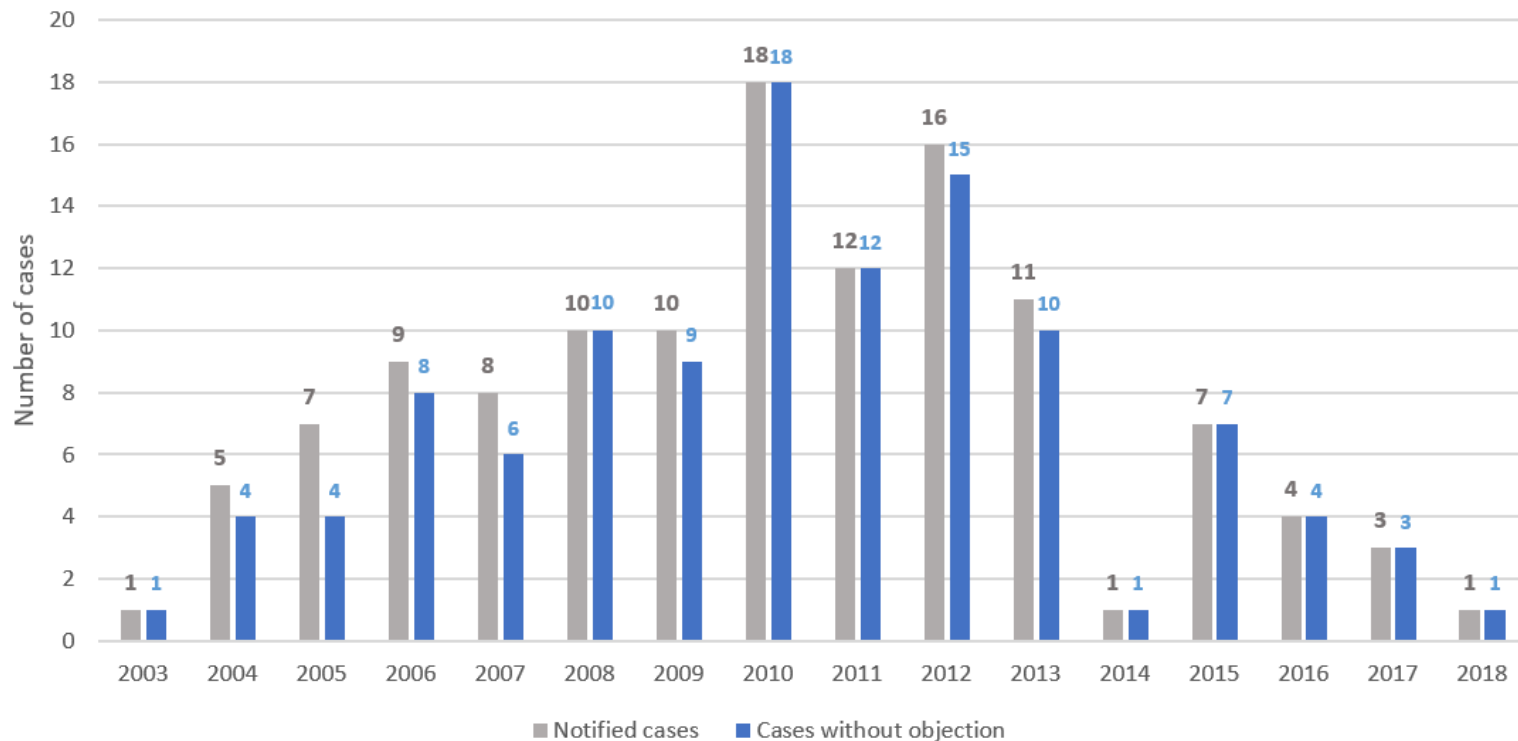
123 original cases 2003-2018



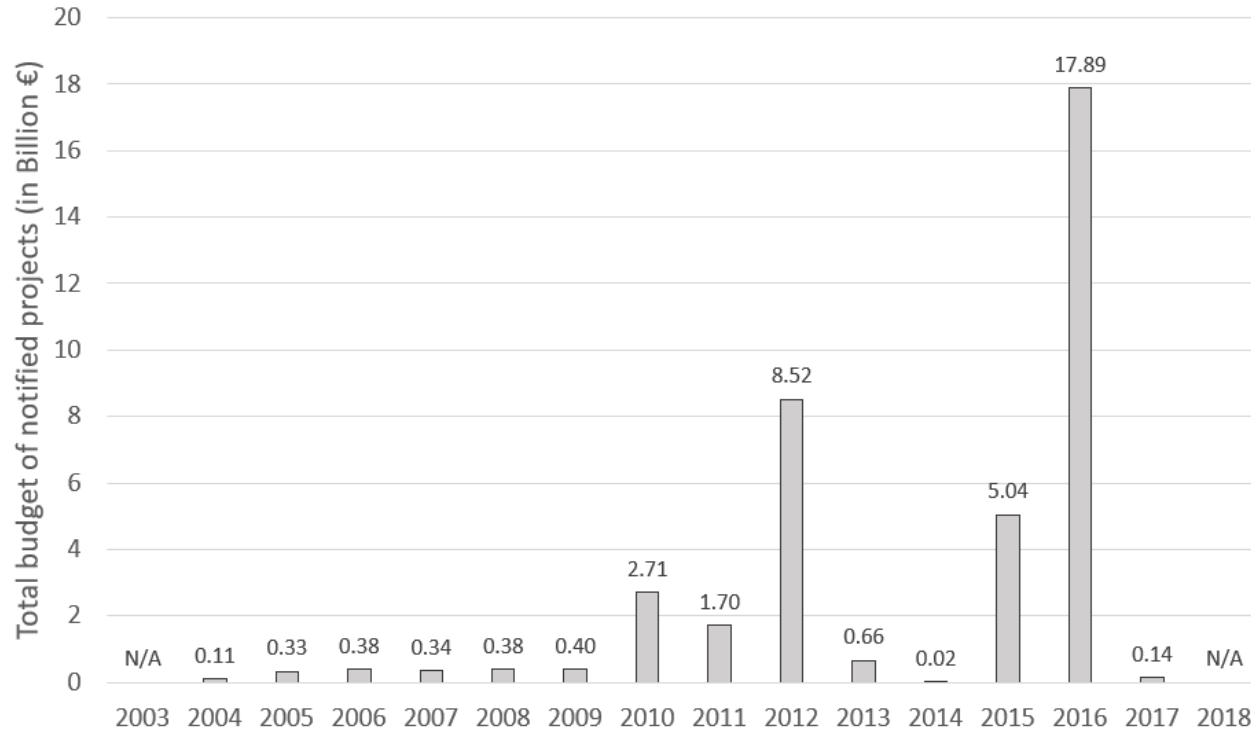
## But total expenditure is unrelated to this...



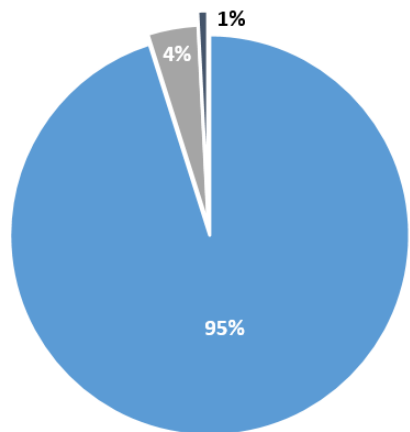
## Notifications peaked in 2010-2012



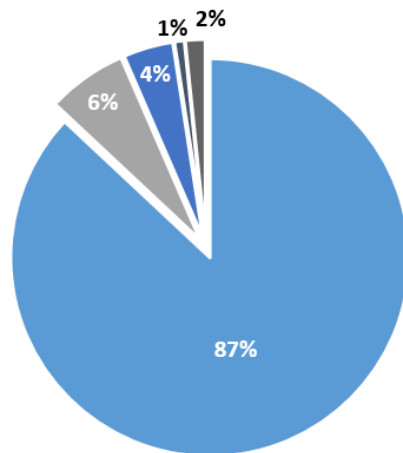
## Notified expenditure peaked in 2016 (France), but otherwise in 2012



# The vast majority of measures promote basic broadband coverage in white areas

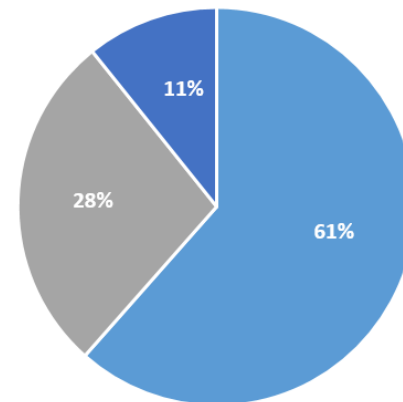


■ Coverage ■ Coverage and Take-up ■ Take-up



■ White ■ Grey ■ White and Grey ■ Black ■ N/A

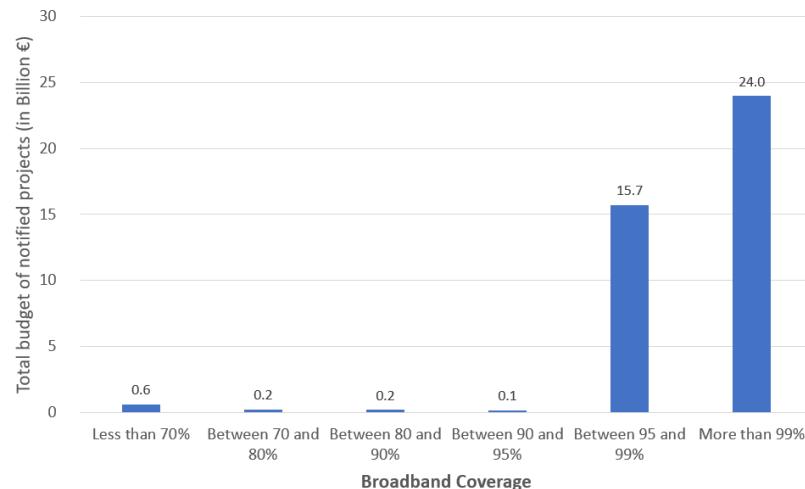
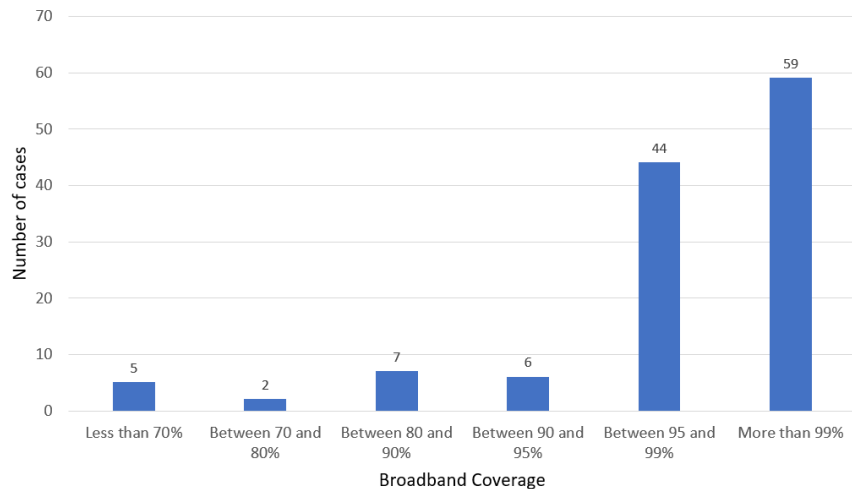
Type of area targeted



■ Basic Broadband ■ Fast Broadband ■ Superfast Broadband

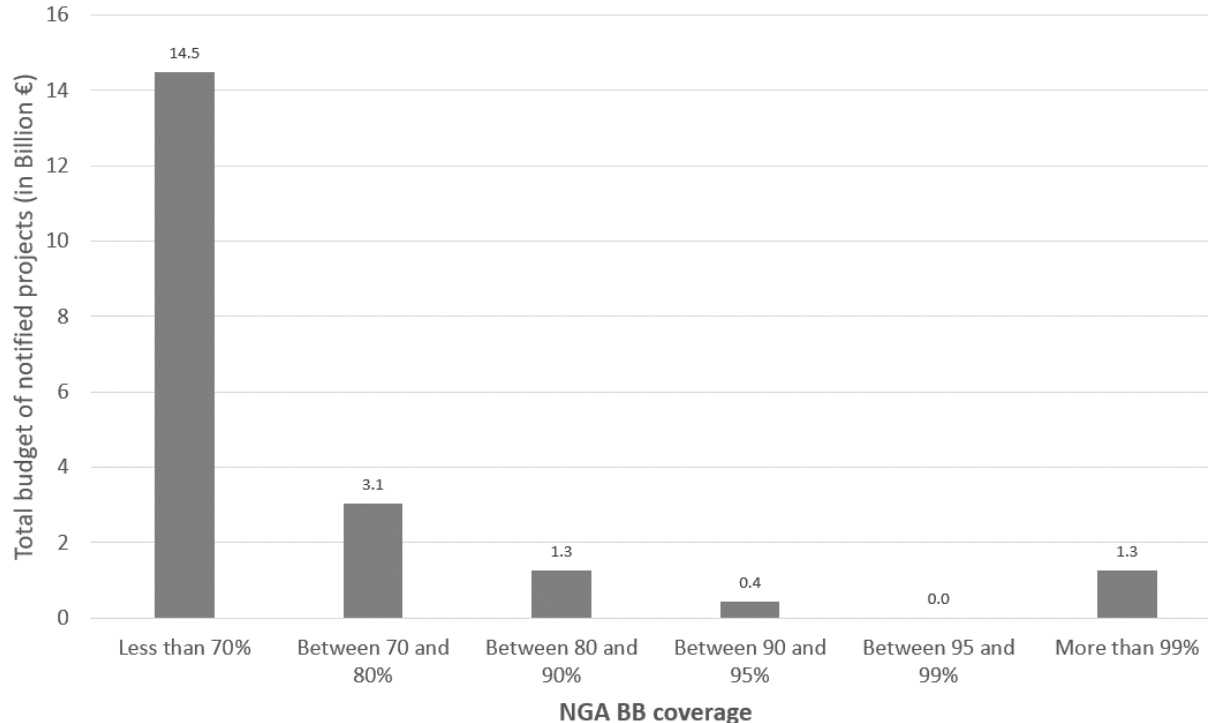
Technology

## Most measures for basic broadband were notified and funds allocated once coverage was already very extensive

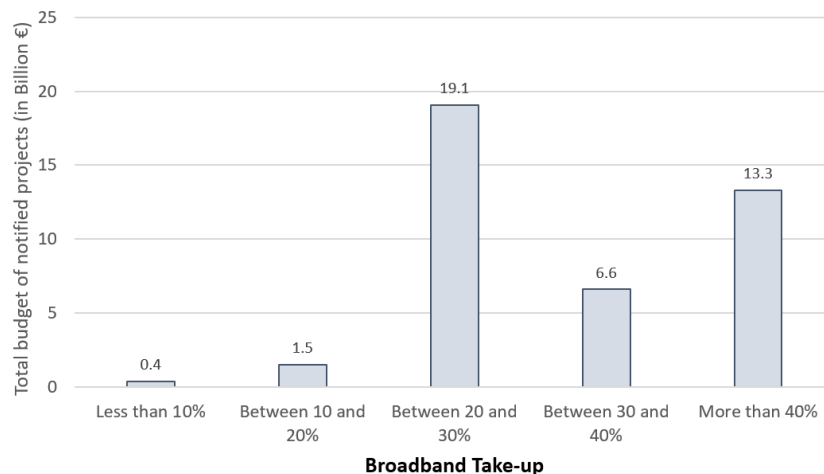
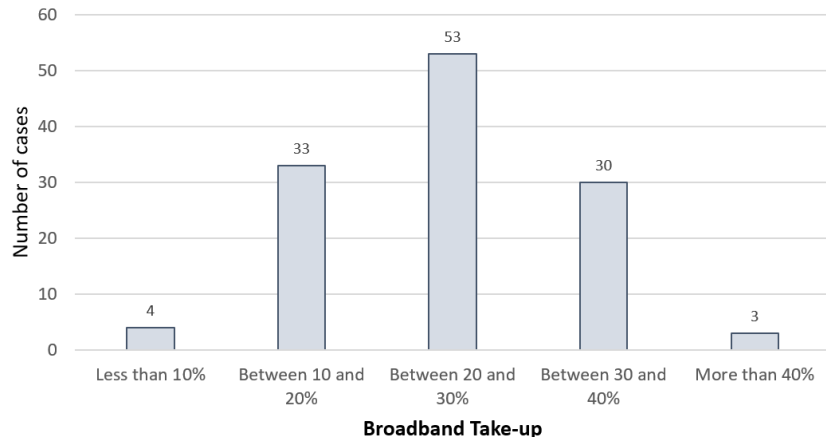




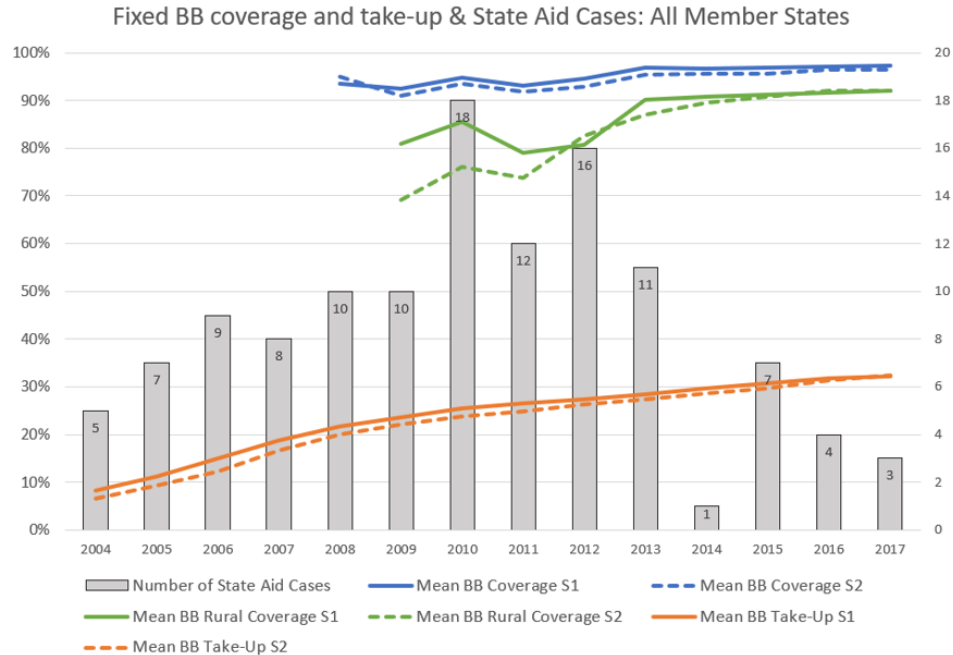
**Whereas for NGA, coverage was much less extensive and often below 70%**



## And broadband take up in commercial areas is often low when State Aid is used



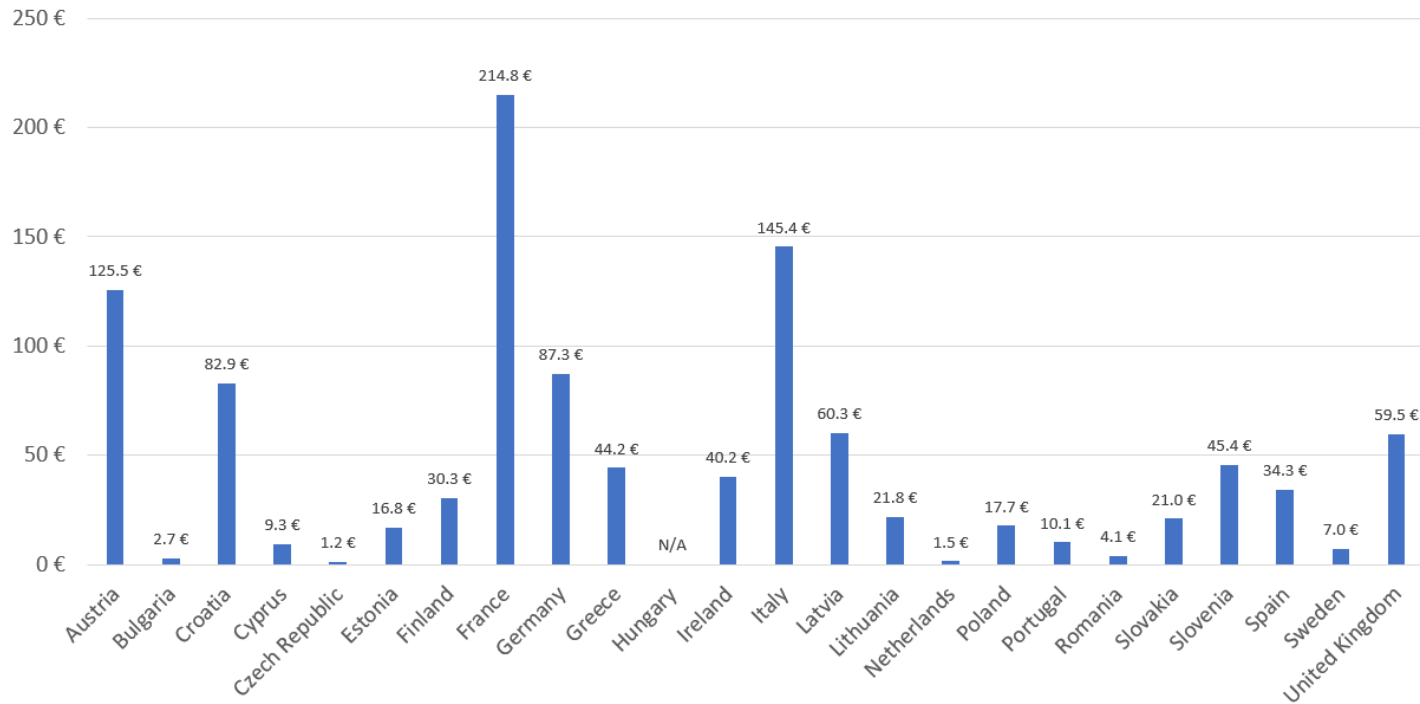
# No casual relationship between broadband coverage and State Aid measures, but more research required



**Note:** S1 includes the 15 Member States which notified at least two cases over the period 2004-2017. S2 includes the 13 Member States which notified 0 or 1 case over the same period.

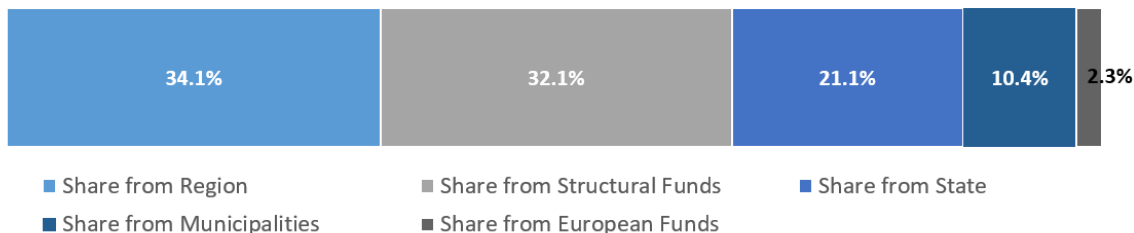
# Expenditure per capita varies significantly

Total Expenditure Per Capita in € (2003-2018)



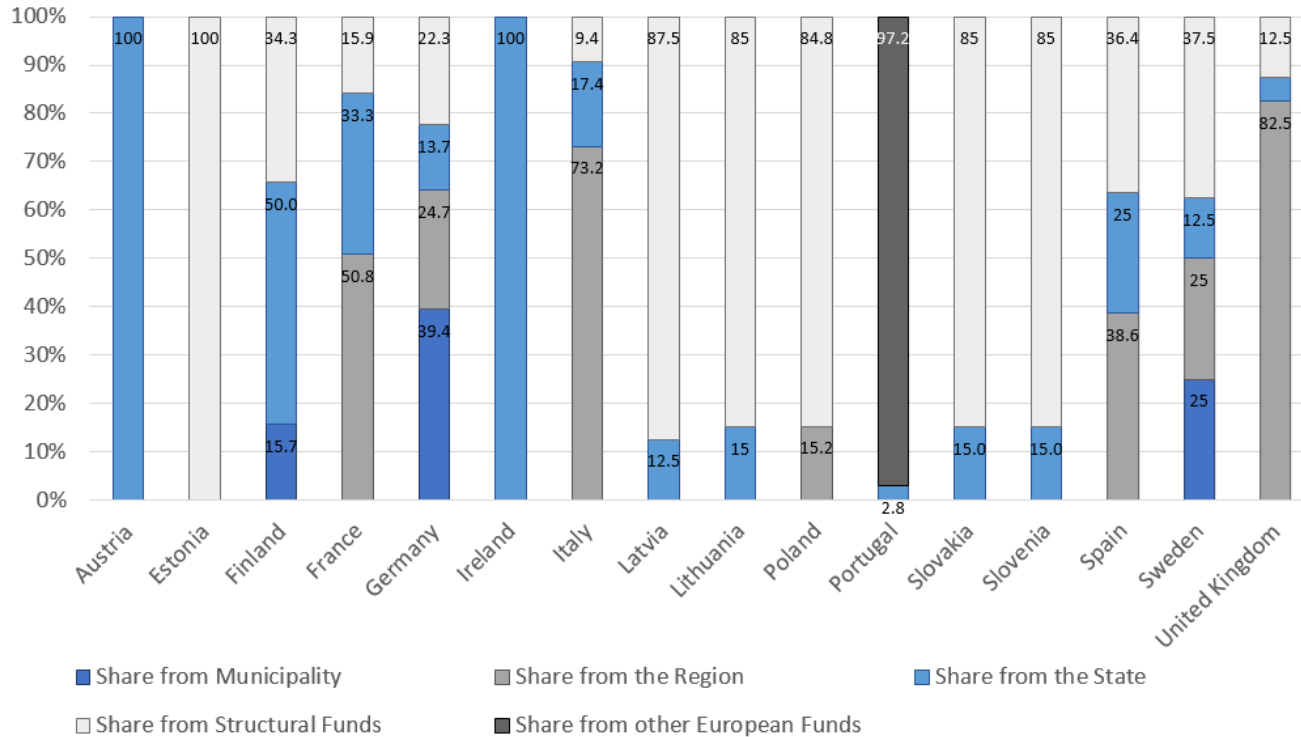
## About 35% of public funds come from the EC and 25% from private investors, on average

Variable	Obs	Mean	Std. Dev.	Min	Max
Overall budget (€millions)	108	357.6	1367.8	0.137	13000
Annual budget (€millions)	10	225.3	625.1	1	2000
Intensity (%)	78	74.0	26.9	0	100

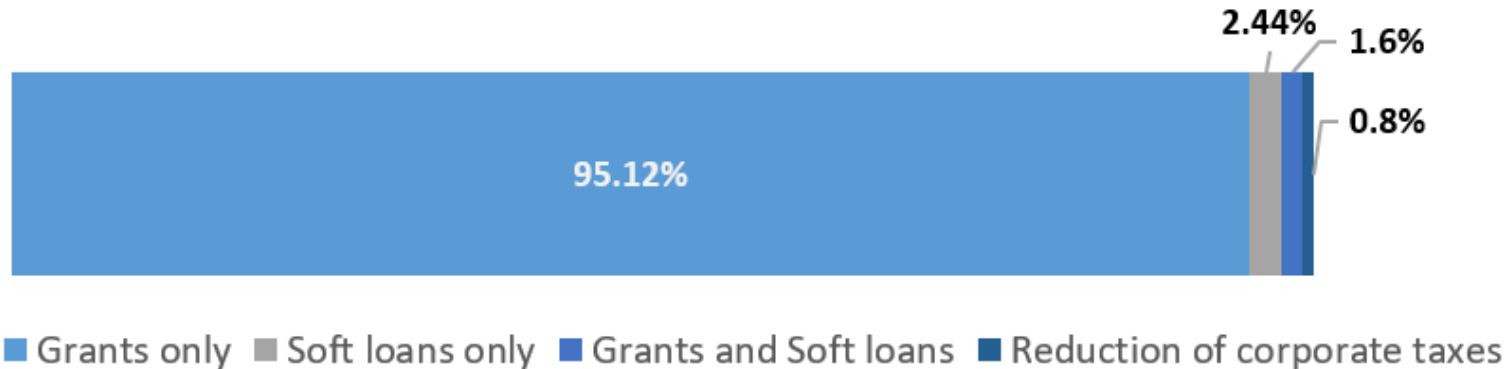


Average budget share (42 cases)

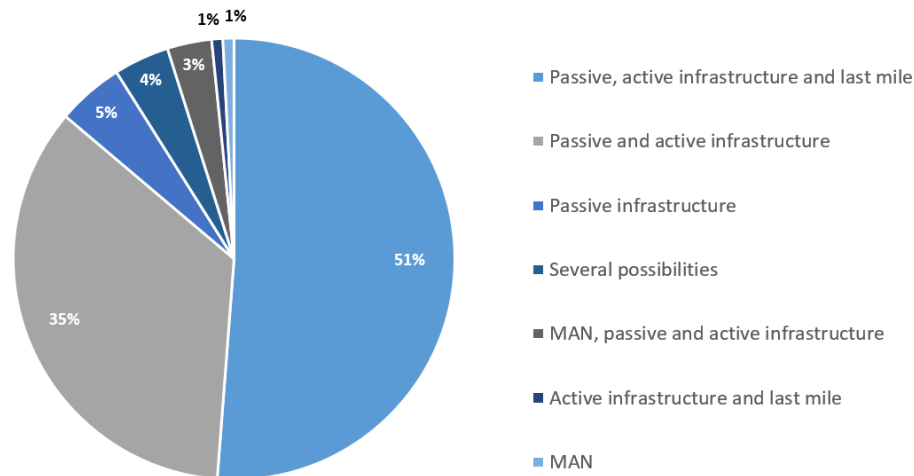
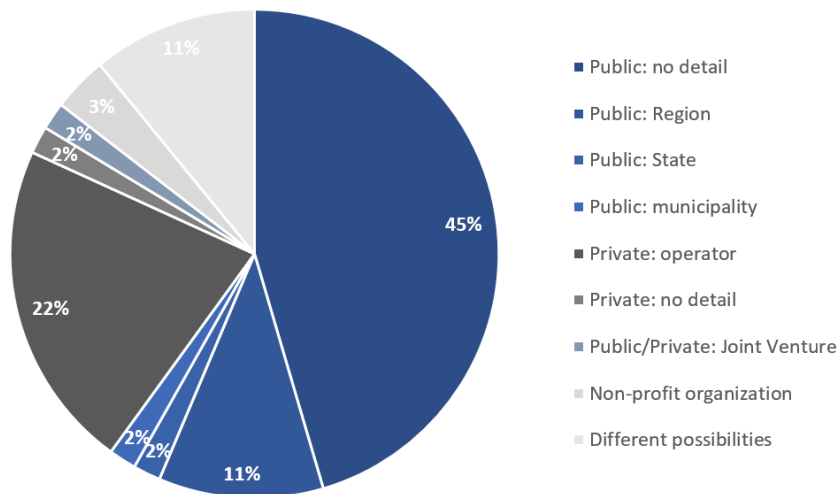
## But this varies between Member States



# Almost all are grants only



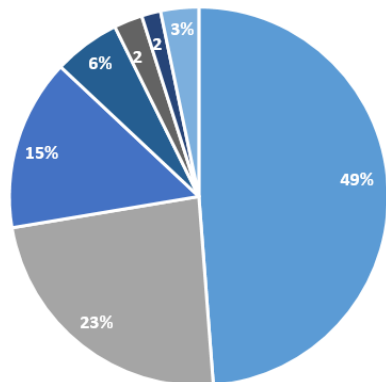
# A significant proportion of funds have gone to public authorities, generally for active and passive infrastructure





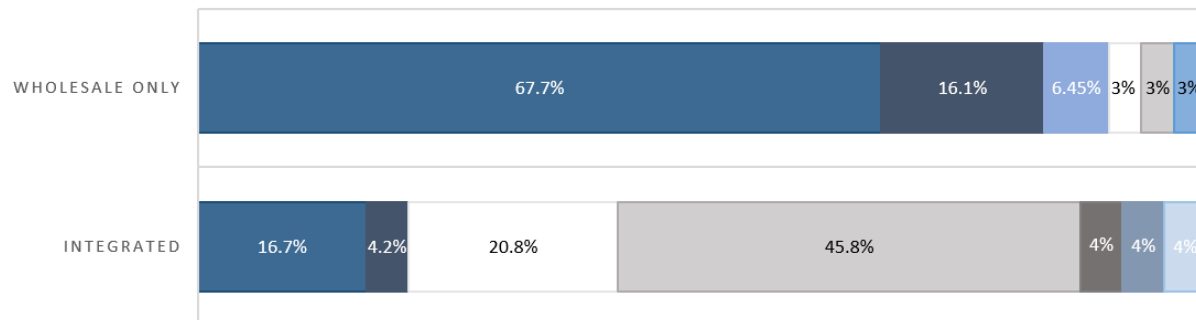
# A minority of schemes are wholesale only, but most of these are publicly owned

## Layers integration



- Full integration
- Partial integration
- Fully disintegration
- Various possibilities
- Partial integration or full integration
- Partial integration or disintegration
- N/A

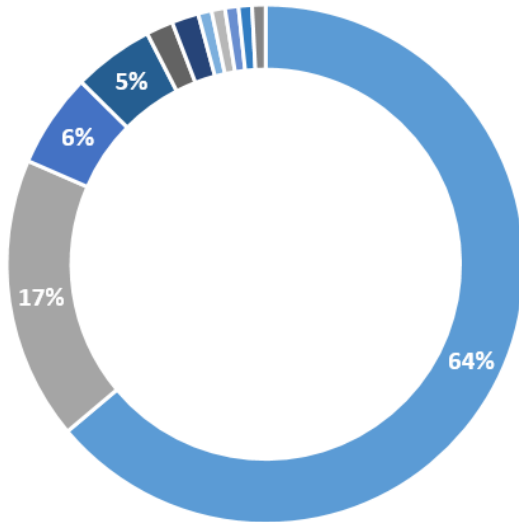
## Ownership infrastructure, by infrastructure type



- Public: no detail
- Public: Region
- Non-profit organization
- Different possibilities
- Private: operator
- Private: no detail
- Public/Private: Joint Venture
- Public: State
- Public: municipality

# Most wholesale access prices align with regulated prices in commercial areas

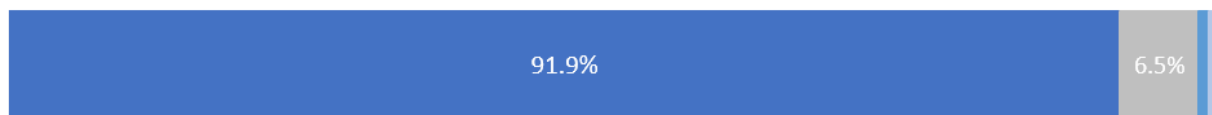
## Wholesale price regulation



- Benchmarks
- No price regulation
- Cost oriented
- Retail minus
- Must follow national regulation
- To be defined during the tender
- Cost Plus + Benchmark
- Cost oriented + Must be equal in all geographical areas
- Negotiated
- Price caps
- Must be equal in all geographical areas

# Most measures are pre-notified and/or require more information, but almost all are approved

	Number of cases (123 cases)	Percentage
Pre-notification	49	39.8%
Simplified procedure	7	5.7%
Commission requested additional information	90	73.2%
Complaint(s)	8	6.5%



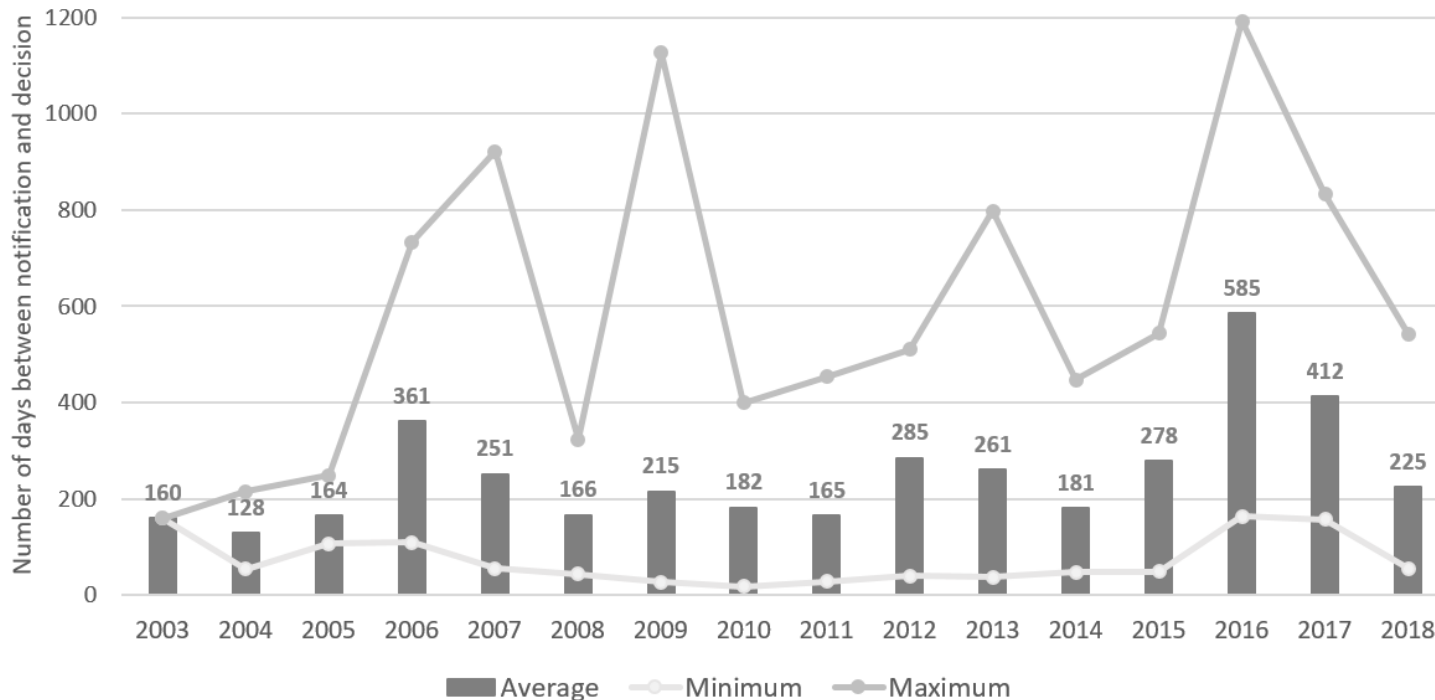
■ No objection

■ Not Aid

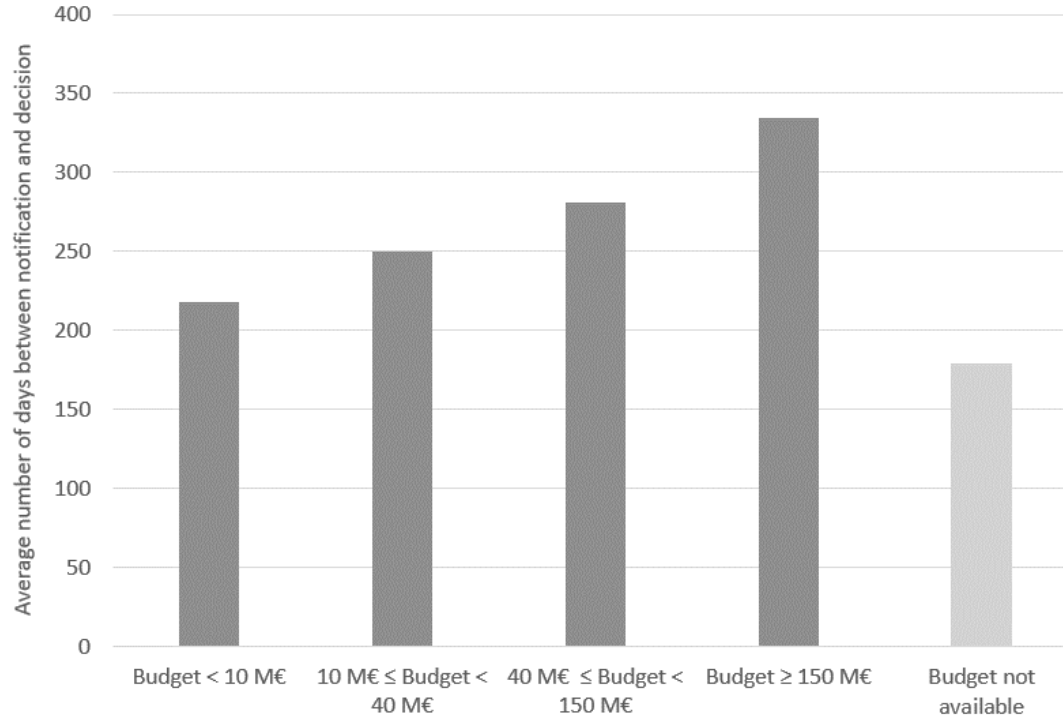
■ Procedure and Stand still obligation

■ Procedure and Withdrawal of notification

## Average time to approve peaked in 2016, but has not changed much

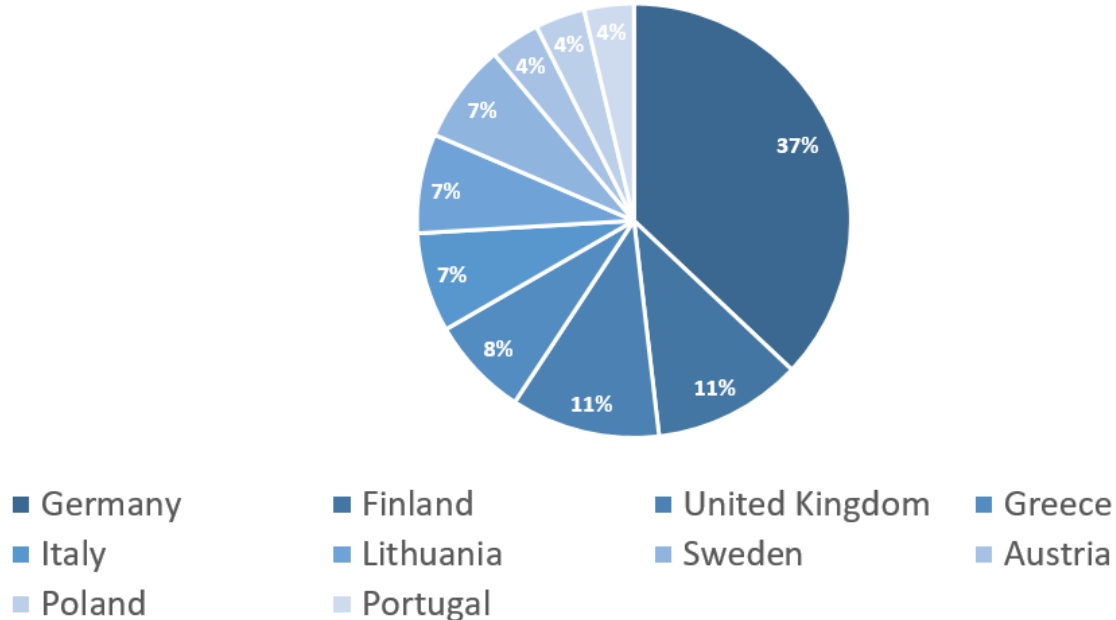


**This reflects the size of the measures being assessed...**



# Germany makes the most modifications

Share of modification notified, by Member State



# Conclusions and recommendations

## Analysis

- Absence of data makes evaluation or sharing of best practices difficult
- Focus on the right questions:
  - Not about how quickly measures are approved...
  - ...or about whether competition is preserved
  - ...but whether outcomes could have been achieved more efficiently using a different measure or by intervening at a different point in the market's development
- **EC should specify a standard report to be published every 2 years detailing, inter alia:**
  - Cost per household passed
  - Adoption rates
  - Firms taking up wholesale offers

# Conclusions and recommendations

## Demand and supply

- Misalignment between public funds committed and European broadband ambitions - costs of meeting broadband targets has increased 30x since 2005, annual public expenditure by only 10x
- Difficult to assess demand but we are concerned about lack of local engagement: **EC should establish a competition amongst municipalities for European funds to stimulate grassroots engagement**
- Difficult to assess supply constraints but other sectors appear better at obtaining funds: **consider whether aspirational broadband targets should be made 'harder' (as with greenhouse emission targets) and mobilise private investors in the sector to lobby for funds**



# Conclusions and recommendations

## Co-ordination

- Public funds for broadband are currently provided through multiple channels, which seem poorly co-ordinated and only some of which are notified as State Aid
- **Better co-ordination between the EIB and DG Competition is required to improve accountability and efficiency**

# Conclusions and recommendations

## Guidelines need to be revised now

- **The EC should clarify:**

- When State Aid for VHC is justified in 'black' areas
- That aid should only be considered when adoption of the technology in existing areas has exceeded [30]% of households
- That State Aid supports coverage and upgrading of infrastructure, but 'affordability' is best addressed by more targeted interventions under broadband universal service arrangements
- That higher wholesale and retail prices in State Aid areas may be appropriate if it reduces the demand on public funds, provided it does not result in exclusion
- That existing SMP wholesale access obligations are sufficient to fulfil the 'balancing test', except in exceptional circumstances
- How, and by whom, wholesale access obligations will be enforced



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