Bundesnetzagentur

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BNetzA as an independent multi-sector NRA – the evolutionary approach

Energy, Telcommunications, Post and Railway

Dr. Annegret Groebel, BNetzA
Head of Department International Relations / Postal Regulation

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Agenda

- Introductory remarks on economic regulation

- Bundesnetzagentur as an independent multi-sector regulator
  - Remit and organisation: Bundesnetzagentur as a multi-sector network regulator
  - Responsibilities and independence
  - Mission and regulatory objectives
  - Bundesnetzagentur (NRA) and Bundeskartellamt (National Competition Authority)
  - Bundesnetzagentur and the EU

- Modernization of networks
  - Similar challenges for energy, telecommunications and railway infrastructure
  - Upgrade fixed and mobile networks into broadband networks (NGN/NGA)
  - Expand electricity transmission networks to integrate renewables
  - Modernize railway networks to cope with increasing freight and passenger traffic

- Multi-level regulatory governance in Europe

- Fit to deal with new challenges and Conclusions

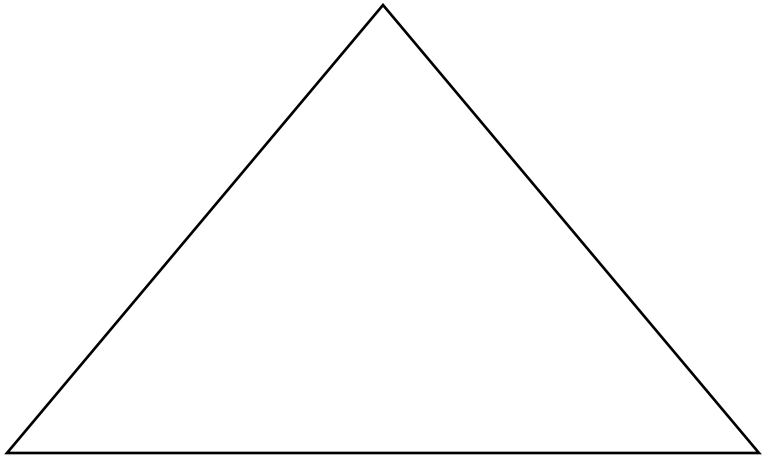
Regulatory governance: ensuring effective regulation

- Effective regulation is based on professional expertise (analysis) and delivers on the **objectives** set out in the law following the overall agenda of the government, i.e. the regulatory body must have a clear mandate and **ex-ante powers** (incl. enforcement/sanctioning powers to enforce compliance)
- This requires a strong legal basis and an **independent** regulator (otherwise regulation will not be effective)
- Institutional design: independence and accountability
- Organisational design: sector-specific regulator, multi-sector regulator
- Procedural principles: sound administrative procedures in place to perform effectively
- Fundamental principles: predictability, forward looking and long term commitment (credibility)
- Judicial review: on the merits of the decision
- Overall approach: **pro-competitive regulation** as competition delivers benefits for consumers and results in competitiveness as well as driving efficient investment in infrastructure
- No micromanagement, but setting conditions prevailing in a competitive market in order to drive rational (undistorted) economic decisions of market players, i.e. simulate competition to stimulate competition, it is up to the operators to decide on investments acc. to their business models
- This includes accepting market outcomes, i.e. no corrections, no interference

Delegation of power to a professional **independent** body

Control that powers are not overstretched

Accountability



Judicial review **Governance rules**

Ensure that powers are used in line with the law and **regulation** is implemented **effectively**

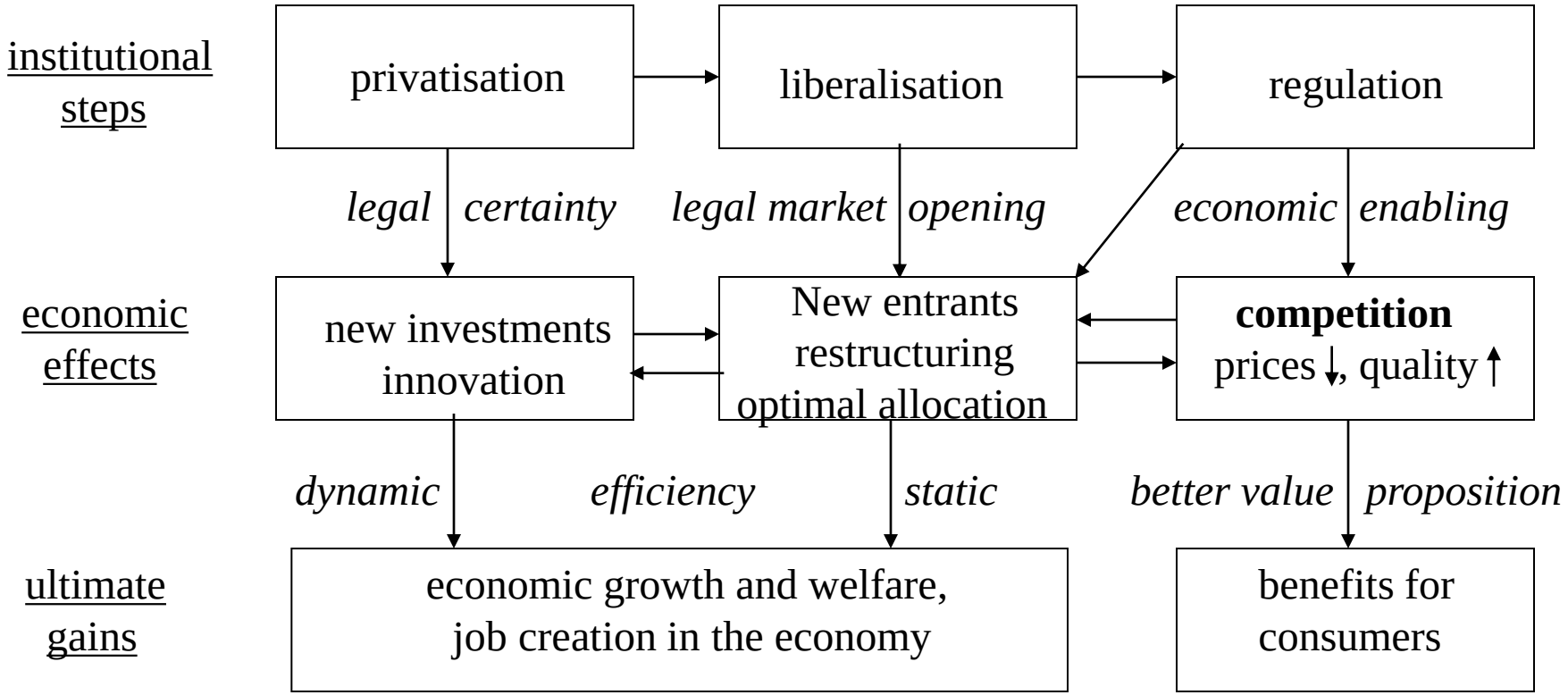
Introductory Remarks – the German experience

In Germany:

- **Network industries** traditionally were (legal) monopolies owned by the state or regional/local municipalities or at least enterprises under huge state influence.
- Deficits resulting from the monopolistic structures led to the desire for more dynamics, higher efficiency and lower prices.
- Process of liberalisation was initiated by the European directives in order to open up markets for competition while the state influence was restricted to regulation in order to promote and safeguard competition.
- Process of legal market opening (liberalisation) will not work without economic regulation to ensure new entrants (competitors) can make use of new possibilities and compete effectively: regulation guarantees a level playing field!
- For effective regulation the NRA needs to be independent and has regulatory **discretion** to impose **ex-ante** sector-specific obligations
- **Multi-sector** regulator was built up **gradually** by adding further responsibilities to RegTP, change of names in 2005: Bundesnetzagentur (or BNetzA)

Liberalisation and Regulation

Stable, transparent, consistent and predictable framework



Advantages for the whole economy in the long run through an increase in static and dynamic efficiency and spill-over effects

Implementing sector-specific regulation sucessfully

- Fundamental regulatory principles are the same for all network industries
- If these principles are in place and an independent regulator is properly set up, regulation can be effective, i.e. will have the right level of regulatory intervention, and neither overregulation nor underregulation occurs
- A **pro-competitive regulation** leads to competitiveness via 2 effects:
  - As a result of more competition in the market, operators become more efficient and robust, i.e. gain individually more competitiveness and the sector as a whole becomes gradually more competitive
  - As a result of a more efficient infrastructure in telecommunications, energy, post and transportation, the productivity in other sectors increases, i.e. the competitiveness of the economy as a whole improves
- As the regulatory principles, instruments and the regulatory challenges, i.e. the restructuring and migration of a formerly monopolized sector towards a competitive market are the same, regulators gain from the exchange of experiences in implementing regulation. This can happen either **within a multi-sector regulator** such as BNetzA or via setting up a forum of regulators and academia such as the Club des Régulateurs to discuss cross-sectoral regulatory issues or **internationally** with **regulatory networks**

I. Multi-sector Regulation

Multi-sector regulation (1)

BNetzA (formerly RegTP) became a multi-sector regulator in an evolutionary way, i.e. more sectors were added over time

Is a multi-sector regulatory approach as it has been implemented in Germany preferable to a uni-sectoral one?

Clear answer: YES!

If regulation is to be implemented effectively, the NRA must be independent and adequately resourced

Independence is increased in the case of a multi-sector regulator (e.g. independence strengthened in both the 2009 Energy internal market package as well as the revised 2009 Telecoms package, 2012 Recast directive for railway)

Multi-sector regulation (2)

General Advantages of a multi-sector approach:

- Regulatory capture can be avoided with a stronger body.
- Regulator can take its decisions based on a wider perspective.
- Broad expertise strengthens the regulator's role as professional policy adviser.
- Multi-sector competences strengthen the regulator's independence.
- Different levels of regulatory powers are levelled up to the strictest one!
- Advantages both in terms of professional decision-making as well as in organisational terms: realizing synergies and saving administrative costs
- Discussions on how to best implement regulation are internalized.
- Similar challenges can be dealt with consistently, in particular giving incentives for infrastructure investment, i.e. grid expansion and upgrade of networks

Multi-sector regulation (3)

Advantages with regard to regulatory decisions

Reflection of market realities

- Networks are increasingly converging.
- Struggling over competences between different authorities can be avoided.

Synergies

- Similar questions arise in all sectors.
- Broad expertise can be used and shared/transferred.
- Expertise and experiences from other sectors can easily pour in regulatory decisions.

Regulatory Consistency

- Close co-operation of experts from different sectors allows consistent regulatory approaches and measures.

Capitalizing on synergies

- BNetzA‘s competence to regulate different infrastructure based sectors (network industries) allows for the creation of synergies and a broad discussion of regulatory issues as problems and tools to solve them are the same: pro-competitive market regulation that needs to be enforced with ex-ante access and price regulation
- Examples:
  - BNetzA’s telecommunications and energy experts have substantially contributed to the discussion about the determination of adequate *capital costs* in the railways sector (project team).
  - BNetzA’s experts for telecommunications standardisation are deeply involved in the work and discussion to develop *smart grids* in the energy sector.
  - Rotating of staff members ensures *knowledge transfer*, particularly important where networks, services and markets converge

- Some departments are responsible for the authority as a whole: e.g. HR for all recruitments of BNetzA, IT for all IT services (synergies, cost saving), litigation office for all court cases, international relations for all sectors

Synergies - Example

Legal Basis of the 2012 Telecommunications Act enables synergies:

- Infrastructure mapping
- Possibility to oblige an operator with SMP to give access to its non-active network components
- Possibility to order the joint usage of inhouse cabling or up to the first concentration point (even for non-SMP operators)
- Obligation of companies and public law bodies to open their infrastructures for public network operators
- Permission of joint usage of Federal highways, Federal waterways and railway infrastructure

Infrastructure Map

- **Capitalising on synergies of other infrastructure projects:**
  - Up to 70 percent of the costs of deploying broadband infrastructure in the fixed network are civil engineering (digging) costs.
  - Significant cost reduction by co-operation between providers and third party access of different passive infrastructures (infrastructure sharing)
  - Cost reduction makes a faster roll-out also in rural or remoter areas possible

II. The Multi-sector Regulator in Germany - Federal Network Agency

Bundesnetzagentur: National German regulator

- Independent higher federal authority in the scope of business of the Federal Ministry of Economics and Energy
- Sector-specific authority tasked with promoting effective competition in 5 network industries by means of ex-ante regulation
  - Telecoms (incl. spectrum) and Post (since 1998),
  - Electricity and Gas (since 2005), and
  - Railways (since 2006)
  - Electricity + gas grid development plan (since 2011)

HQ in Bonn

- BNetzA employs ar. 200 staff in energy regulation, up to 240 staff are being recruited for electricity grid expansion planning and (nationwide) permitting (2013)

Overall headcount for all sectors: ar. 2900 staff, 196.3 mio € tax-funded budget (2014), besides sector-specific legislation, there is one act containing all BNetzA governance rules

- BNetzA is member of CEER/ACER, IRG/BEREC, ERG-P and IRG Rail

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Overall Mission of Bundesnetzagentur…

… to promote ***sustainable competition*** in the markets for electricity, gas, telecommunications, postal services and railways...

…via regulating these markets, i.e. market regulation by a regulatory body with **ex-ante powers** (to impose sector specific obligations)

administrative body whose decisions are **administrative acts** (subject to juridical control)

no micromanagement of markets, but **pro-competitive regulation**: setting conditions by implementing the rules and giving price signals in order to steer market forces towards a competitive market development as competition is the best driver for efficient investment and delivering benefits to consumers (more choice and more value for money)

Overall Mission of Bundesnetzagentur and mission in detail

- … to promote ***sustainable competition*** in the markets for electricity, gas, telecommunications, postal services and railways...
- Provide and safeguard *user interests*, e.g. low-priced, efficient & eco-friendly supply of energy
- Establish and secure *fair competition*
- Encourage efficient *investment in infrastructure* and promote *innovation* (telecoms)
- Promote development of the *internal market* of the European Union
- Ensure provision of *universal* telecoms and postal services throughout Germany, but no responsibility for energy and railway retail markets
- Besides market regulation BNetzA is entrusted with other tasks, such as administration of frequencies and numbers, standardisation, consumer protection.

Regulatory Responsibilities Broadcasting/Media

- BNetzA has **no responsibilities** with regard to broadcasting, AV services, but is responsible for spectrum

- Content

a) Broadcast transmissions fall under States (Bundesländer) responsibility: capacity management by the media regulator
   - There is no federal level media regulator, but 16 State Media Authorities responsible for audiovisual/media regulation

b) Non-broadcast transmissions: assignment holder sells capacity without further regulation

- BNetzA is a multi-sector, but not a convergent regulator

- BNetzA has no concurrent powers, NCA is a separate body

Organisational Chart of BNetzA

President

Vice President Vice President

Litigation Office

Management Office

Press Office

President's Chamber
(Ruling Chamber 1)

Ruling Chambers
2
3
4
5
6
7
8
9

Human Resource & Accounting Department

Information Technology and Security

Department for Economic Regulation Telecoms incl. numbering

Department for Legal Telecoms Regulation, Frequency Manage.

Department for Technical Telecoms Regulation incl. standardization

Department for International Relations & Postal Regulation

Department for Energy Regulation

Department for Grid Planning (NABEG)

Department for Railway Regulation

30 Regional Offices of BNetzA

Organisational Chart – Governance

- BNetzA headed by **President** and **two Vice-Presidents**
  - nominated by government upon proposal of Advisory Council
  - appointed by the President of Germany
- **Advisory Council**
  - members of Upper House of Parliament & Lower House of Parliament (democratic control)
  - advise BNetzA on various issues
- **Ruling Chambers**
  - key regulatory decisions taken by Ruling Chambers
  - one chairperson and two vice chairs (civil servants with a university degree)
  - clear rules for ruling chamber proceedings
    - hearings and oral proceedings ensure transparency
    - participation in proceedings of all affected parties
    - investigation rights
  - independent rulings, strict administrative procedures
  - Short timelines, decision stays effective even while challenged in court
- **Departments**: Economic, Legal and Technical Department for telecommunications,
  departments for each of the other sectors,
  plus HR/accounting and IT department for all five sectors (synergies)
  litigation office and press office responsible for all sectors

Institutional Set-Up – Independence and Accountability

- BNetzA is a **higher federal authority** in the scope of business of the **Ministry of Economics and Technology**

  → Independence?

An Independent Regulator?

- What does "*independent*" mean?
  - no influence by market players (no regulatory capture)
  - no influence on daily business by ministry (no political interference)

- Regulator has to be *impartial*, i.e. take neutral decisions

- Problem: how to guarantee it?
  - clear separation of functions / clear mandate
  - rules that clearly define the roles / competencies
  - clear assignment of powers (incl. enforcement)
  - institutional set-up (organisational structure / governance rules)

An Independent Regulator !

- Institutional set-up and rules, transparency:
  - consultations
  - oral hearings
  - publication of docs

- Ruling chambers' decisions independent (consistency requirement), no overruling by Ministry (additional layer of independence)

- No control at all?
  - Democratic oversight via the Advisory Council and accountability rules
  - Ministry can give general directives, but they have to be published
  - BNetzA's decisions are subject to juridical review by independent courts, but stay in force while challenged

Accountability

- **Activity Report** on status and development of telecoms and postal sector as well as for energy and railway sector to be submitted to the legislative bodies of Germany every two years ensures *accountability*

- **Principles of administration** to be published at regular intervals (*transparency and predictability*)

- **Report of the Monopolies Commission** to be submitted every two years to report whether there is effective competition in the *telecoms + postal markets as well as in the energy and the railway markets* (assessment of whether objectives have been reached)

III. Interaction with the Federal Cartel Office (Bundeskartellamt, NCA)

Regulation vs. Application of competition law (1)

Regulation: general competition law is not sufficient, regulatory instruments must go beyond competition law interventions

- Natural monopolies (energy/railway networks) and dominance (telecoms/postal networks) are the trigger for regulation

- Incumbents = vertically integrated companies
  - own essential facilities (or enduring bottlenecks)
  - incumbent = competitor to entrants on the retail level

- Incumbent would be able to maintain its dominant position after market opening (liberalisation) unless **ex-ante regulation** acts as a counterpart and ensures a **level playing field** through non-discrimination, access and cost-oriented price regulation where the price is set at the level of the efficient costs as this is the price prevailing in a competitive market (as well as different forms of separation/unbundling)

Regulation vs. Application of competition law (2)

- Competition law intervention:
  - abuse of dominance (i.e. anti competitive behaviour) by dominant firms (ex- post intervention)
  - ban on cartels (incl. some exceptions) (ex-post)
  - merger control (ex ante/ ex post)

- No ex-ante price approval, but ex-post price examination by BKartA (NCA):
  - usually prices of comparable competitive markets (benchmarking) as market is functioning,i.e. returning to the equilibrium after abuse of market power whereas in a liberalised market with structural barriers it is assumed that there is a structural imbalance and the market would not tend towards competition after an abuse of market power which must therefore prevented before it can happen: ex-ante regulation required
  - checking for margin squeeze

- Ex-ante powers of the national regulator BNetzA when applying regulatory law: ex-ante price control: prices based on costs of efficient service provision (stricter standard) and ex-ante margin squeeze test, but: competition law applies as a safety net!

BNetzA & BKartA (1)

- BNetzA: Regulatory body for sector regulation:
  - economic (and technical) regulation
  - economic regulation: ex-ante regulation: access and price control obligations, ex-post control of abusive practices
  - technical regulation: frequency allocation, technical standards, radio monitoring etc.
- Cartel office (BKartA) for competition law intervention
- Clear line between regulator and cartel office:
  - definition of regulated services laid down in:
  - separate laws (e.g. Telecommunications Act, Energy Industry Act, Postal Act)
  - legal provision for information exchange to ensure legal certainty and avoid misunderstanding and double work
  - no concurrent powers (i.e. no application of general competition law by BNetzA, but elements of the general competition law are directly incorporated provisions in the Telecommunications Act and the Energy Industry Act)

BNetzA & BKartA (2)

- Umbrella approach:
  - BKartA alone handles merger control, but coordinating function regarding definition of relevant markets by NRA (telecoms, post)
  - BNetzA obliged to seek agreement on definition of relevant market as well as determination of an operator with significant market power. BKartA has the right to give its opinion on planned remedies. (telecoms, post)
  - Same threshold & criteria for dominance applied to all sectors to guarantee a close link between general competition law and sector-specific regulation

BNetzA & BKartA (3)

- Cooperation between regulator and cartel office:
  - comments by cartel office prior to publishing decisions
  - agreements on defining relevant markets & determining SMP
  - facilitates investigating for both authorities

- Applying same standards:
  - same threshold for dominance applied to all sectors to ensure close link between general competition law intervention and sector regulation

- **Practical realisation:**

  - In market analysis procedures, BKartA is involved from the beginning (sending out of the questionnaires to the operators).
  - Open discussion of the first results and also of problems that may arise in the market definition and/or market analysis before publication of the national consultation.
  - All relevant data is shared with BKartA for an assessment of the decisions taken by BNetzA
  - Generally the draft decision is sent to BKartA.
  - Opportunity to comment must be provided with sufficient time left to the completion of the proceeding
  - Participation of BKartA is documented in the administrative file and the final decision

Bundesnetzagentur and Bundeskartellamt (5)

Co-operation with the Federal Cartel Office in the Telecommunications sector

Market Definition and Analysis (Decision taken by the President‘s chamber)	Imposition of regulatory obligations	Regulatory decisions (such as price approval, order to grant access)
↓	↓	↓
Decision must be taken in agreement	Cartel Office has right to comment	Cartel Office has right to comment

Opportunity to comment must be provided with sufficient time left to the completion of the proceedings.

Bundesnetzagentur and Bundeskartellamt (6)

- **In addition:**
  - BNetzA has right to comment on planned decisions of BKartA in the telecommunications sector.
  - BKartA and BNetzA are obliged to inform each other about observations and findings which may be relevant for carrying out their tasks

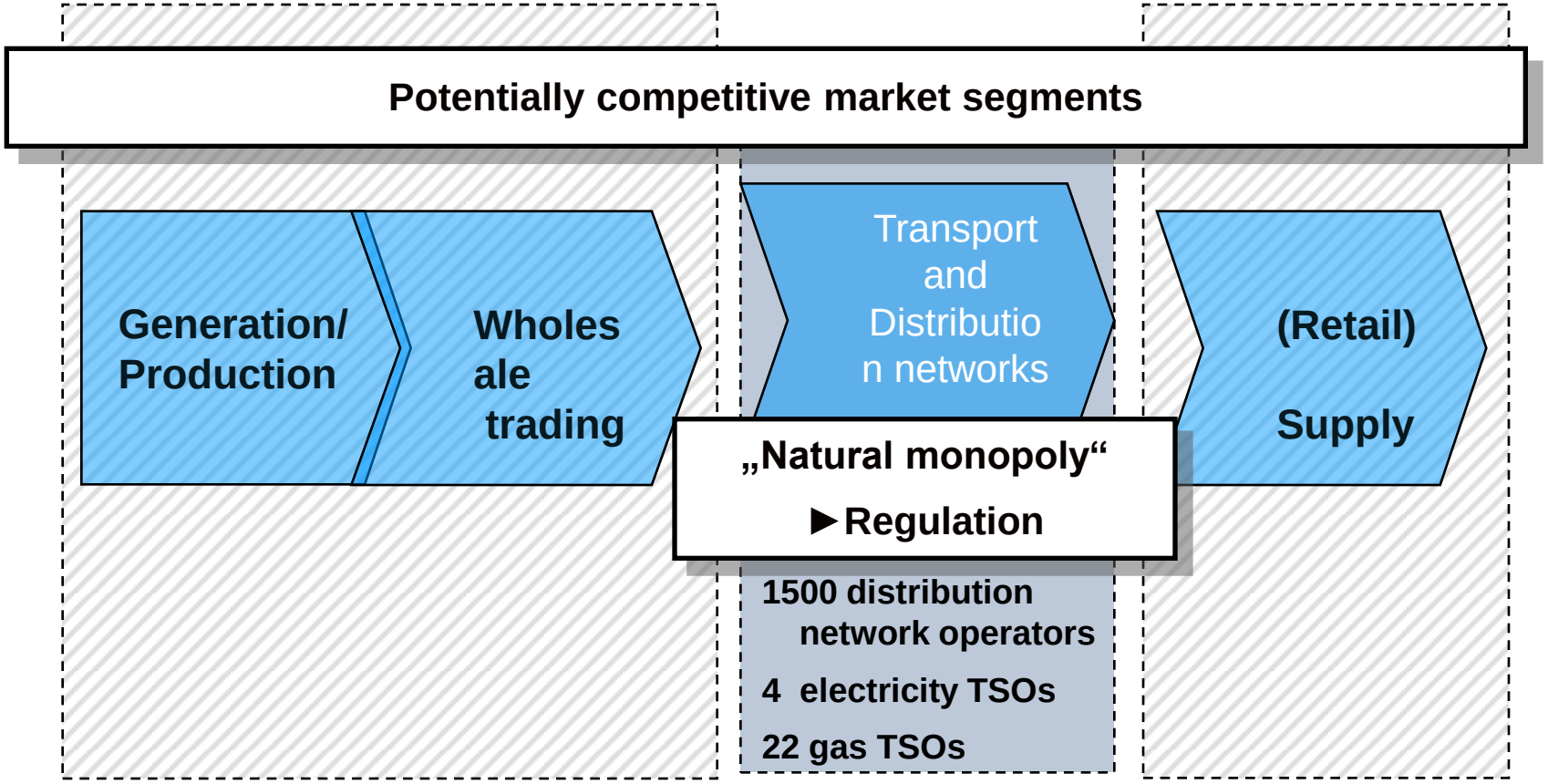
In the other sectors within BNetzA‘s competence (energy, post and railways) the law also provides for a close co-operation of BNetzA and BKartA.

Division of labour

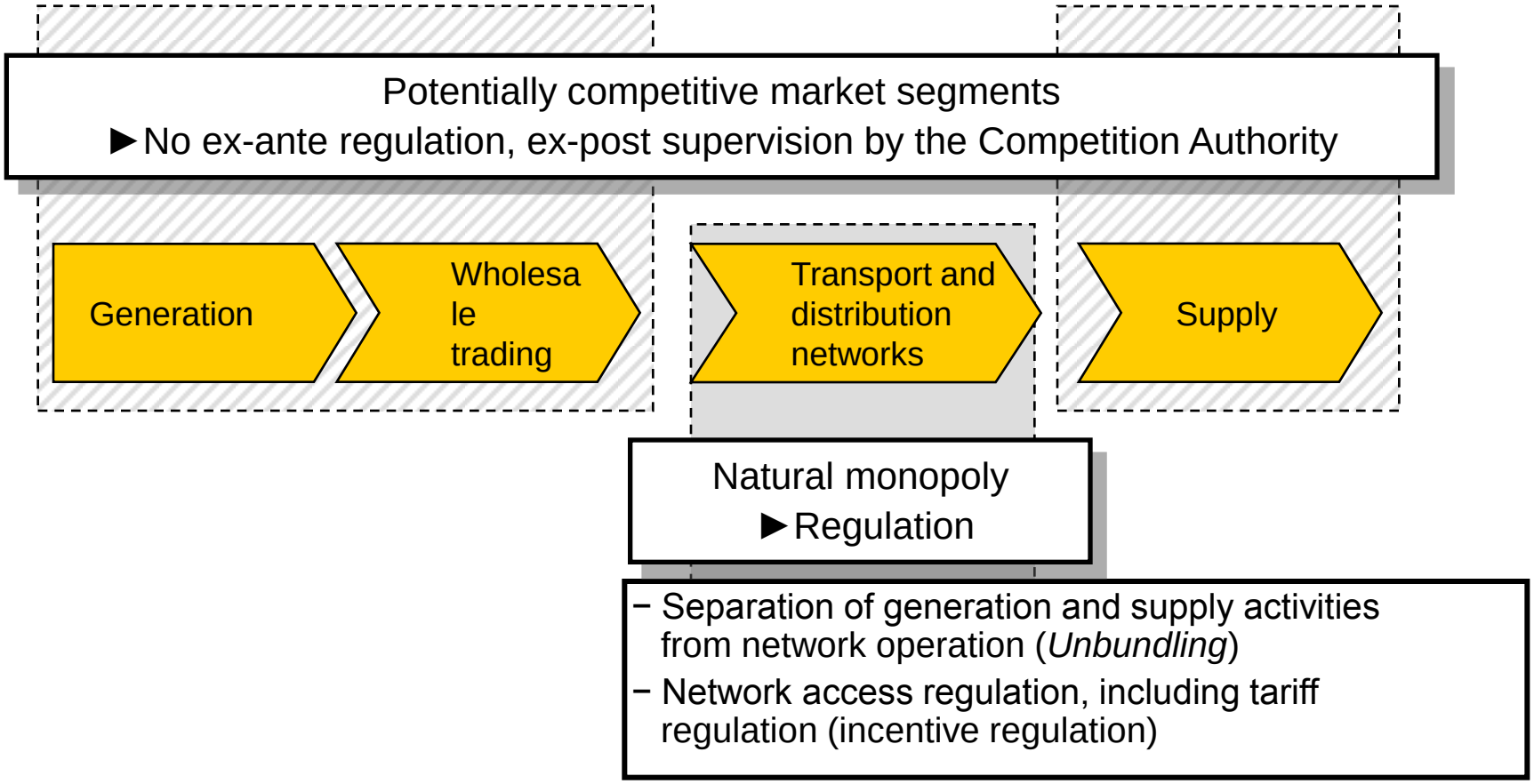
Sector specific regulation vs. competition law (1)

- **Energy Industry Act** aims at a secure, low-priced, consumer-friendly, efficient, and environmentally compatible supply of electricity and gas (§ 1 (1))
- **Competition and security of supply** are equal aims of regulation (§ 1 (2))
- Electricity and gas networks have to be neutralised in order to create competition

Energy regulation: division of work

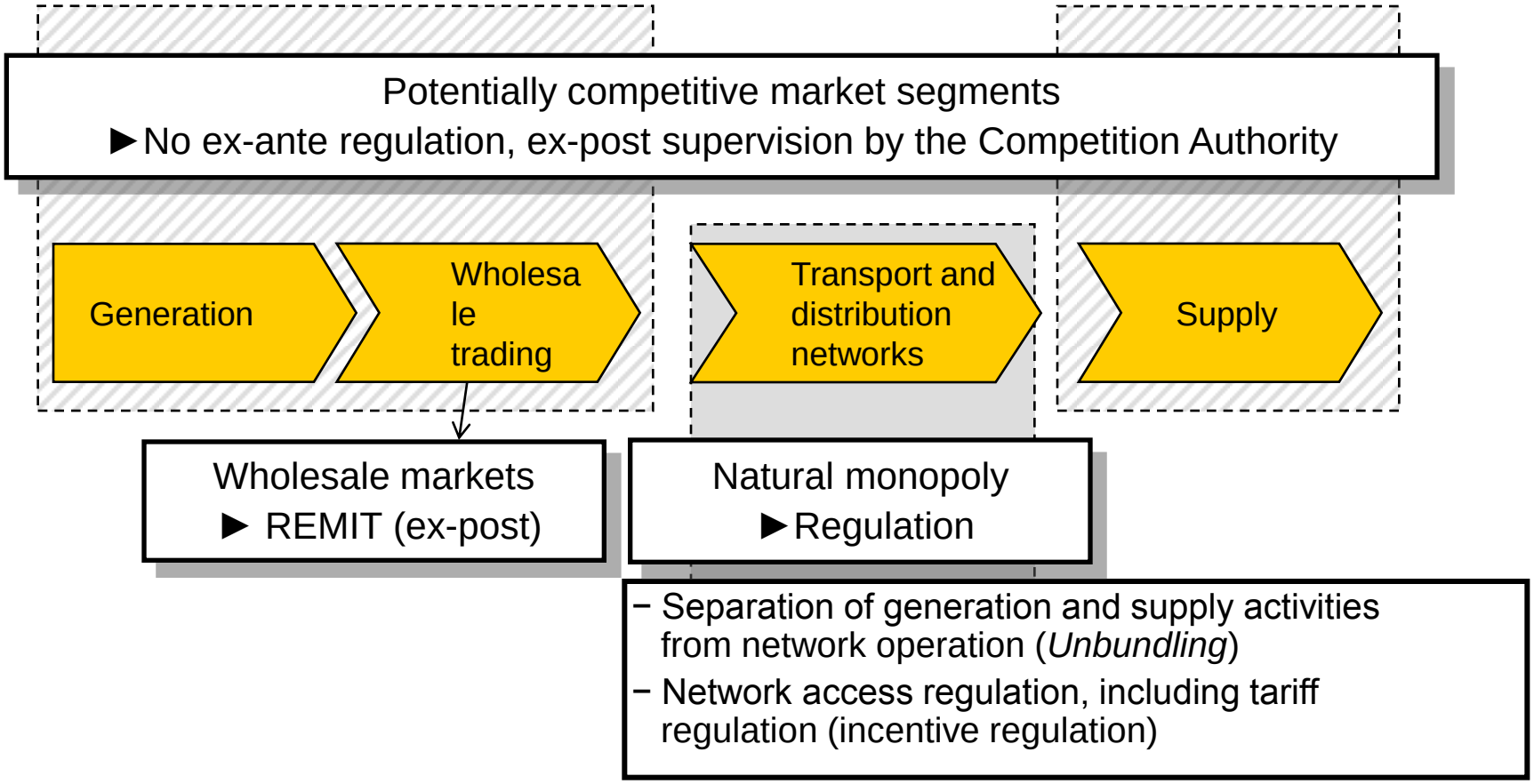


Network regulation in the energy market value chain



Limited responsibility of Bundesnetzagentur in comparison with other national energy regulators − More recently, however, rapidly growing fields of activity linked to the *Energiewende*: grid planning + permit.

Network regulation in the energy market value chain



Limited responsibility of Bundesnetzagentur in comparison with other national energy regulators − More recently, however, rapidly growing fields of activity linked to the *Energiewende*: grid planning + permit.

Division of labour

Sector specific regulation vs. competition law (2)

- Basic **split of energy competences** between the Federal level authorities:
- **Federal Network Agency**:
  Network regulation under the Energy Industry Act, inter alia:
  - approving network access charges ex-ante
  - setting-up an incentive regulation scheme
  - ensuring non-discriminatory network access and set conditions
  - taking steps against abuse of market position by network operators
  - monitoring unbundling provisions
  - setting fines, where appropriate
- **Federal Cartel Office**:
  Application of competition law in generation/production and supply:
  - Abuse of market power in wholesale markets,
  - control of end-user prices,
  - merger control

IV. Modernisation of Networks

Need to expand and upgrade infrastructure

- Challenges are similar: expand and upgrade infrastructure:
  - Energy networks need to be expanded and upgraded in order to integrate renewables
  - Telecoms networks need to be expanded and upgraded to highspeed broadband networks (NGA)
  - Railway networks need to be modernized to cope with increasing traffic and ensure climate/environmental friendly traffic handling
  - Postal networks need to be modernized to ensure logistics are matching the needs of industry (just in time delivery) and consumers (increasing e-commerce ordering)
  - All of these modernized infrastructures will generate spill-over effects to other sectors in form of increased productivity, i.e. are an enabler of economic growth and well-being for users
  - They will also increase competitiveness of the industry as a whole

Convergence of networks

The convergence between electricity and telecommunications networks is already there:

- Electricity networks need the Know-How of the ICT industry and the use of telecommunications infrastructure
  - to realize a **Smart Grid** to integrate the amount of produced energy by renewables
  - to realize **Smart Market** including **Smart Metering** for a two-way digital communication between producers and consumers
- Telecommunications networks need to be expanded to promote broadband
  - Synergies with the existing infrastructure owned by telco- and energy network operators
  - Joint roll-out of new electricity and telecommunications networks to create synergies and to reduce the costs

Political Agenda - Telecommunications

- **The Federal Government's Broadband Strategy of February 2009**
  - Broadband access shall be available nationwide by the end of 2010 (achieved)
  - A total of 75 percent of households shall be provided with access with transmission rates of 50 MBit/s by 2014 and nationwide as soon as possible
  - Updated in August 2014: 50 Mbit/s by 2018 for all households

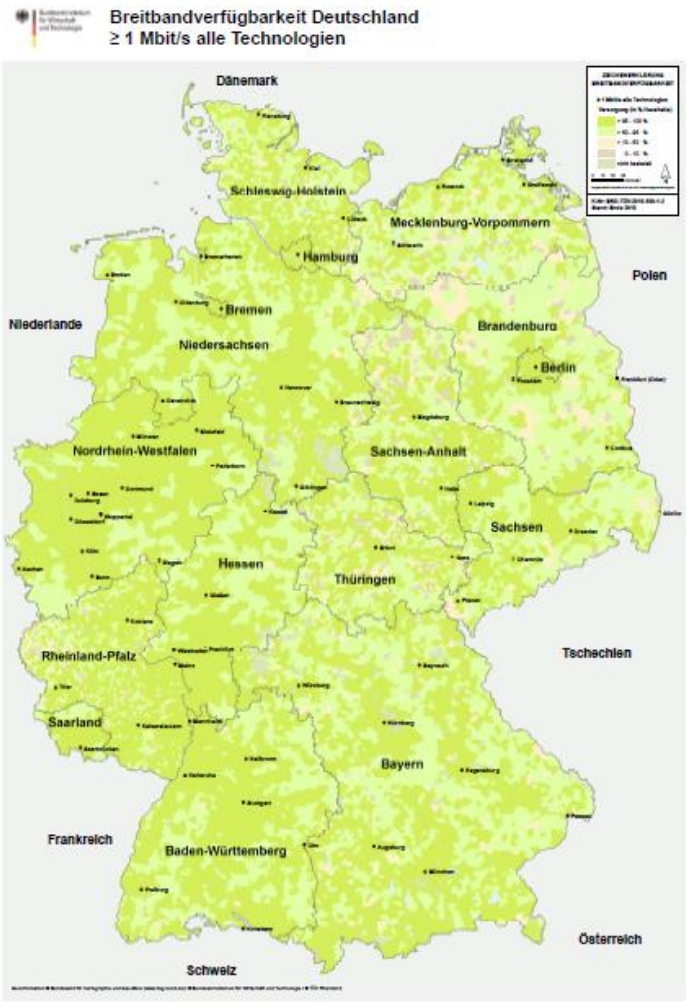
- **Digital Agenda of the European Commission of August 2010**
  - 100% coverage of broadband access of EU citizens by 2013
  - Provision of all EU citizens with broadband access with at least 30 MBit/s and 50% of European households with at least 100 MBit/s by 2020

BNetzA‘s tasks according to Federal Government‘s Broadband Strategy

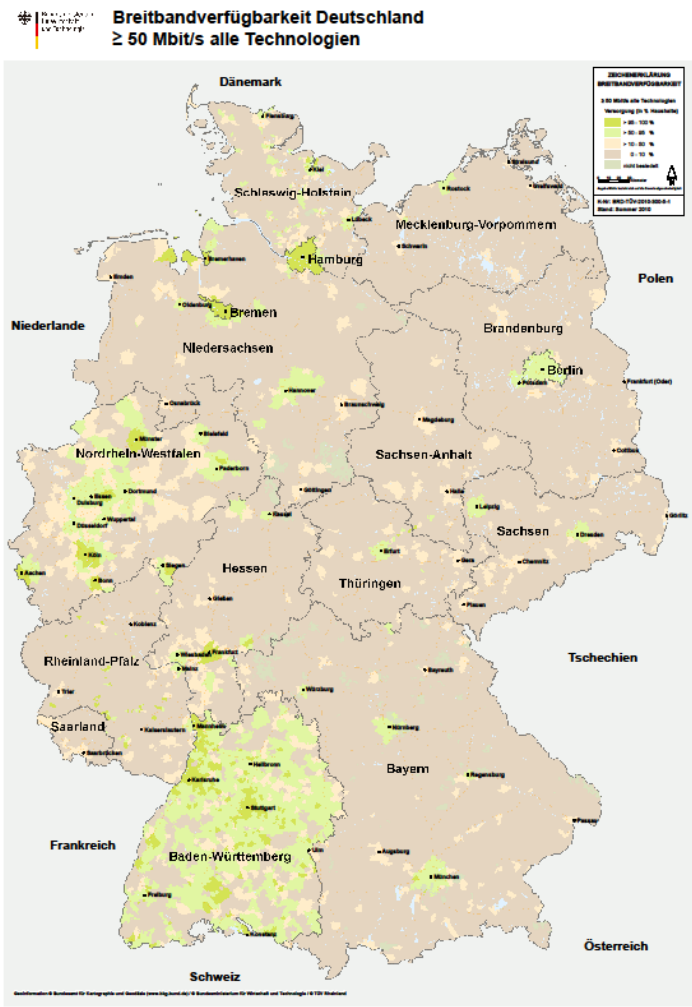
- Growth and innovation oriented regulation
  - **Key elements on the regulatory framework** for the development of modern telecommunications networks and the creation of high speed broadband infrastructures (published in March 2010)
  - Clarification of the fundamental regulatory and competition law issues related to **cooperation projects** (together with the Federal Cartel Office)
  - Developing principles for **consistent rates regulation**, with a view also to encouraging efficient infrastructure investment (published in November 2009)
- Setting up of an (passive) **infrastructure map** (data base)
- Supporting spectrum policy/regulation (**auctioning of the digital dividend**)

Status of Broadband Penetration

Broadband Penetration ≥ 1 Mbit/s

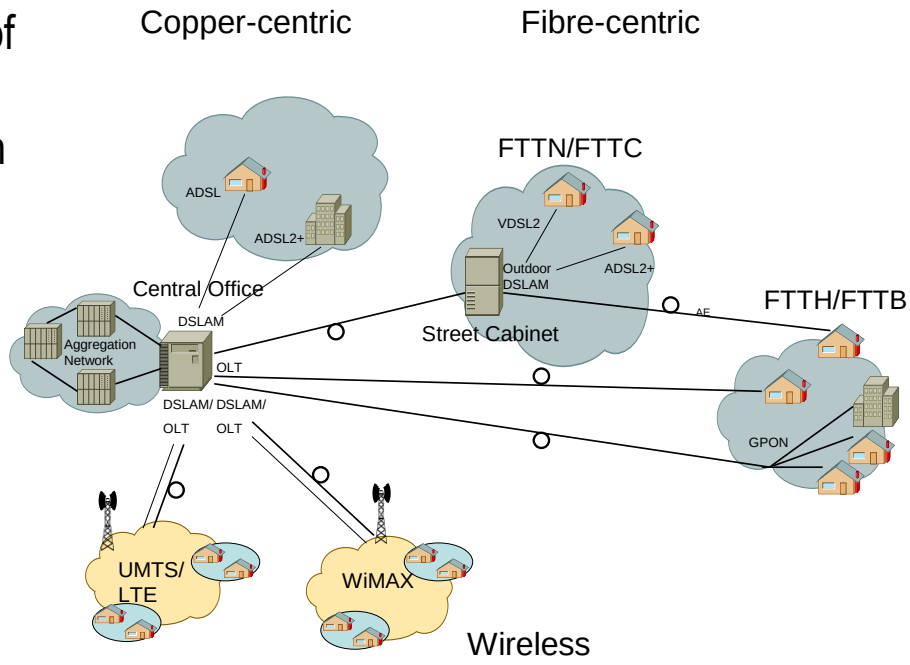


Broadband Penetration ≥ 50 Mbit/s



Key Challenges – Telecommunications (1)

- BNetzA plays a key role in the implementation of the broadband strategy.
- In this context it has initiated several activities in order to achieve the goals, such as



- Development of NGA networks has brought a large variety of access technologies, access networks and operators.
- Regulatory questions resulting from NGA landscape must be addressed, such as:
  - Interoperability
  - Third party access
  - Need for symmetric regulation?

Key Challenges – Telecommunications (2)

- BNetzA plays a key role in the implementation of the broadband strategy.
- High speed broadband networks and the provision of broadband in white spots require huge investments and a regulatory environment that promotes these investments.
- In this context BNetzA has initiated several activities in order to achieve the goals, such as
  - publication of key issues on general regulatory conditions for the further expansion of modern telecommunications networks and the creation of a capable broadband infrastructure.
  - set-up of NGA forum consisting of high level representatives of stakeholders.
  - compilation of an infrastructure map (data base)
  - supportive frequency policy (360 MHz auctioned in 2010, including Digital Dividend spectrum):
  - Resulted in April/May 2010 in the Digital Dividend 1 auction, roll-out obligation to cover “white spots” first, i.e. mobile operators were forced to start network roll-out in rural (less densely populated) areas before they could start in the major cities. This has proven to be an incentive as operators want to fulfil roll-out obligations as fast as possible in order to start the commercially more attractive offerings in major cities, preparation for auctioning of Digital Dividend 2 spectrum planned for 2015

Key Challenges – Telecommunications (3)

Examples for BNetzA's activities:

- Regulatory Decisions:
  - Regulatory decisions concerning collocation in street cabinets, access to ducts and access to dark fibre.
  - Including Deutsche Telekom's FTTH infrastructures in the bitstream and local loop markets.
- Others:
  - Publication of key issues on general regulatory conditions for the further expansion of modern telecommunications networks and the creation of a powerful broadband infrastructure.
  - Set-up of NGA forum consisting of high ranking representatives of stakeholders.
  - Compilation of infrastructure map.
- Frequency Administration
  - Carrying out of frequency auction (Digital Dividend in 2010!)
  - Flexibilisation of usage rights
- Furthermore BNetzA provides advice to the German Ministry of Economics and other decision makers as well as to the legislator with regard to the transposition of the European directives and the amendment of the German Telecommunications Act.

Political Agenda - Energy

- **Energy Concept** for an environmentally sound, reliable and affordable energy Supply
  - Renewable energies as a cornerstone of future energy supply
  - An efficient grid infrastructure for electricity and integration of renewables
  - Review due to the change of priorities after Fukushima led to new energy policy: phase-out of nuclear power plants until 2022: ***Energiewende*** to speed up the move towards green energy

- **Energy Strategy 2020 of the European Commission of November 2010**
  - Pan-European integrated energy market with infrastructures
  - Europe's leadership in energy technology and innovation
  - Safe, secure and affordable energy through active consumers (smart grids/ smart meters)
  - Communication from the Commission „Smart Grids: from innovation to deployment“, 12 April 2011, COM(2011) 202 final

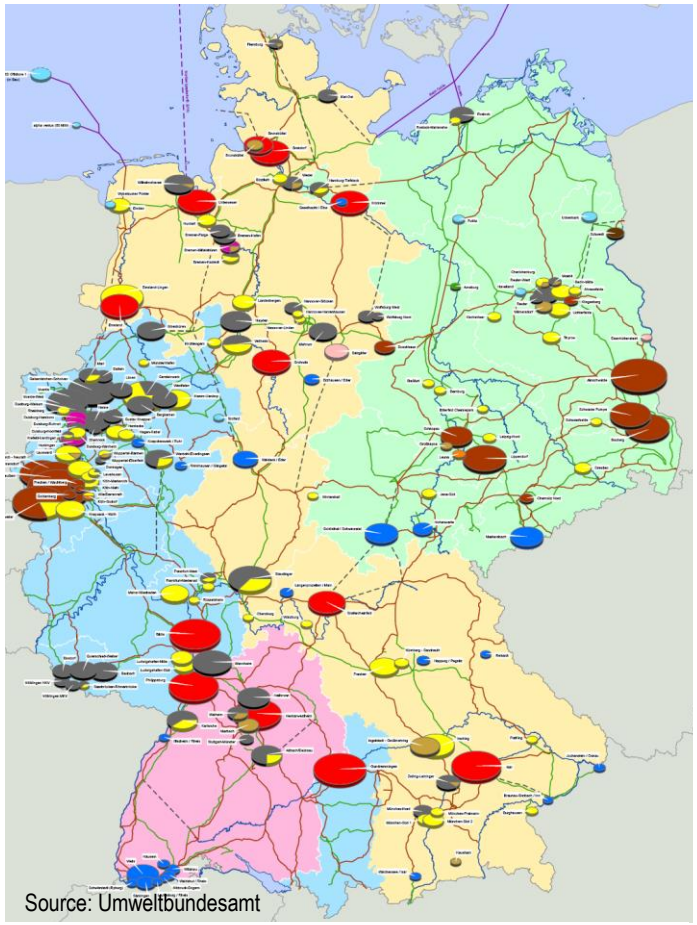
Key Challenges – Energy (1)

Nuclear Moratorium:

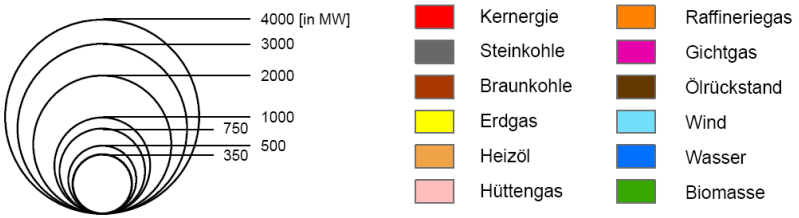
- German government decided to shut down 8 of the 17 German nuclear power plants immediately for a period of three months in March 2011.
- At the beginning of this week: German government decided to permanently shut down the 8 power plants and to phase out the other nuclear power plants until the end of 2022. Decision resulted in the amendment of 8 different legal acts.

- Following the decision in March BNetzA has been highly involved in the evaluation of the effects of the moratorium and issued a report about the relevance of nuclear power plants for the stability in electricity networks.
- BNetzA has been an important adviser to political decision makers and to Ministry officials.
- BNetzA has been highly respected as competent, qualified and neutral adviser.
- After the decisions of 7/8 July (energy switch-over, nuclear phase out) BNetzA has been assigned to new tasks to speed up electricity grid expansion, entered into force on 4/8 Aug. 2011
- In 2013 BNetzA was also given the oversight over electricity grid planning and permitting for nationwide and cross-border transmission lines as it is necessary to speed up grid expansion.

Power Generation in Germany



Power Generation <100 MW

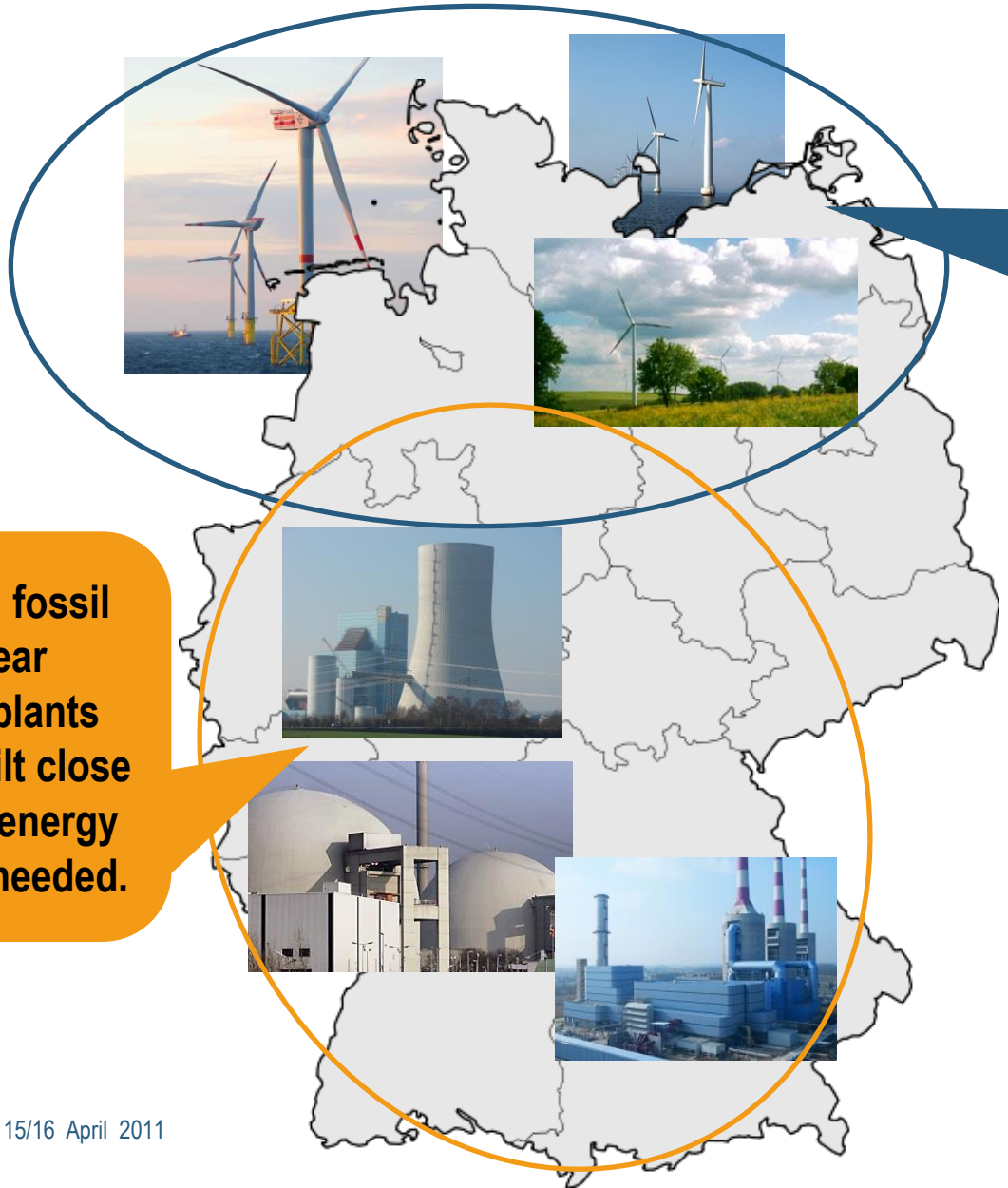


- Existing fossil and nuclear generation capacity are close to the consumption centres in the south and west of Germany.
- Generation capacity will shift to the north due to the development of renewable energy generation (offshore wind farms).

➢ In its report BNetzA examined the effects of the historically singular simultaneous shutdown of power plants and concluded:

- transmission grids are brought to the edge of their resilience
- distinct increase of risk of non-controllable network disturbances
- network risk can still be controlled for the summer but will increase for the winter
- original objective of competition-driven market results is replaced by a more or less centrally controlled planning approach

Changes in Generation Require New Grids



Renewable energy production develops mainly in Northern Germany

Traditionally, fossil and nuclear production plants have been built close to where the energy was actually needed.

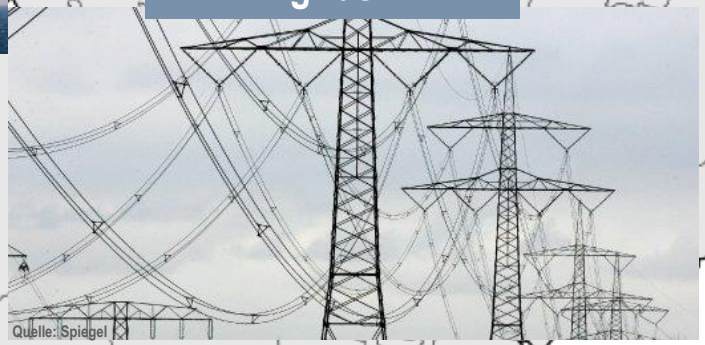
Key Challenges – Energy (2)

Integration of the Renewables:

wind energy

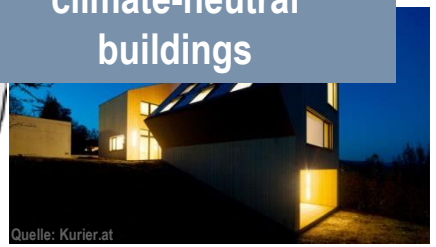
biomass power plants

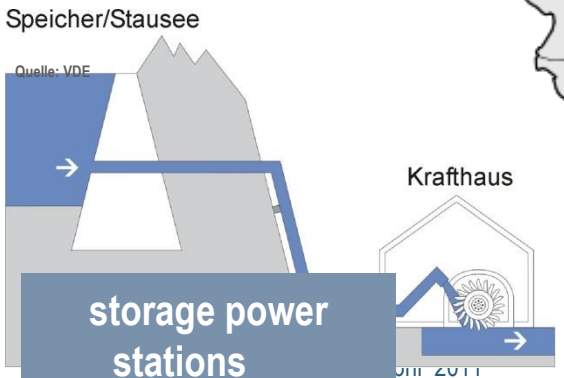
grids



photovoltaics

climate-neutral buildings





storage power stations

Electric mobility

CCS systems

Financing Grid Expansion

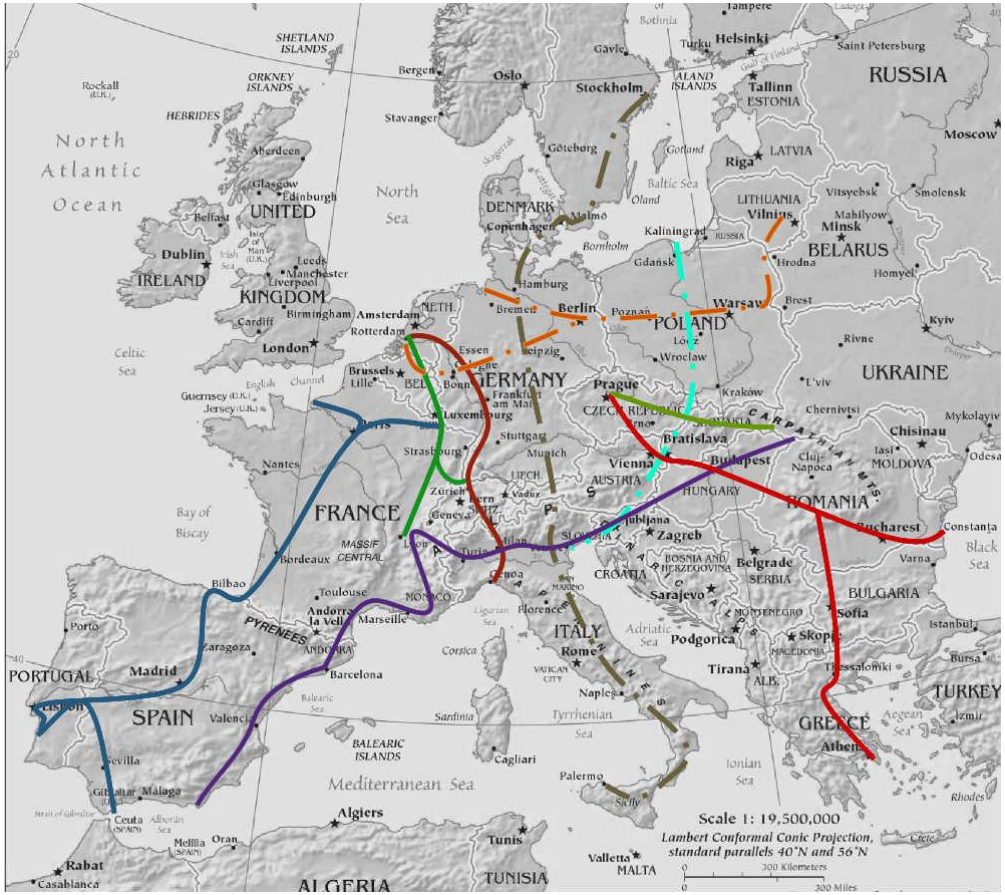
- Capital spending globally cautious… but: **financial capital looks for attractive investments**; stable economic situation in Germany
- Considerable **investment needs** in transmission grid
- **Regulatory framework** in Germany is **economically sound** and **legally stable**
- Bundesnetzagentur has done a lot to **clear up any cases of doubt** regarding the framework conditions and ensure **regulatory predictability** which is key for investors' confidence

Key Challenges – Energy (3)

Examples for BNetzA's activities:

- Approval of investment budget with regard to the connection of offshore wind farms to the transmission networks onshore.
- Guidelines concerning the induction of renewable energy into the transmission networks.
- Assessment of the effects resulting from the plan to take off nuclear power plants from the grid.
- Like in the telecommunications sector BNetzA also provides advice to the German Ministry of Economics and other decision makers as well as the legislator with regard the transposition of the European energy directives (2009 – 3rd energy internal market package) and the amendment of the German Energy Act.
- According to energy package approved on 7/8 July 2011 BNetzA will be responsible for the spatial planning procedures concerning the roll-out of supraregional (interstate) and cross-border transmission lines) in order to accelerate the required extension of the networks.
- Closer coordination with regard to cross-border issues with NRAs of the member states within ACER – Agency for the Cooperation of Energy Regulators

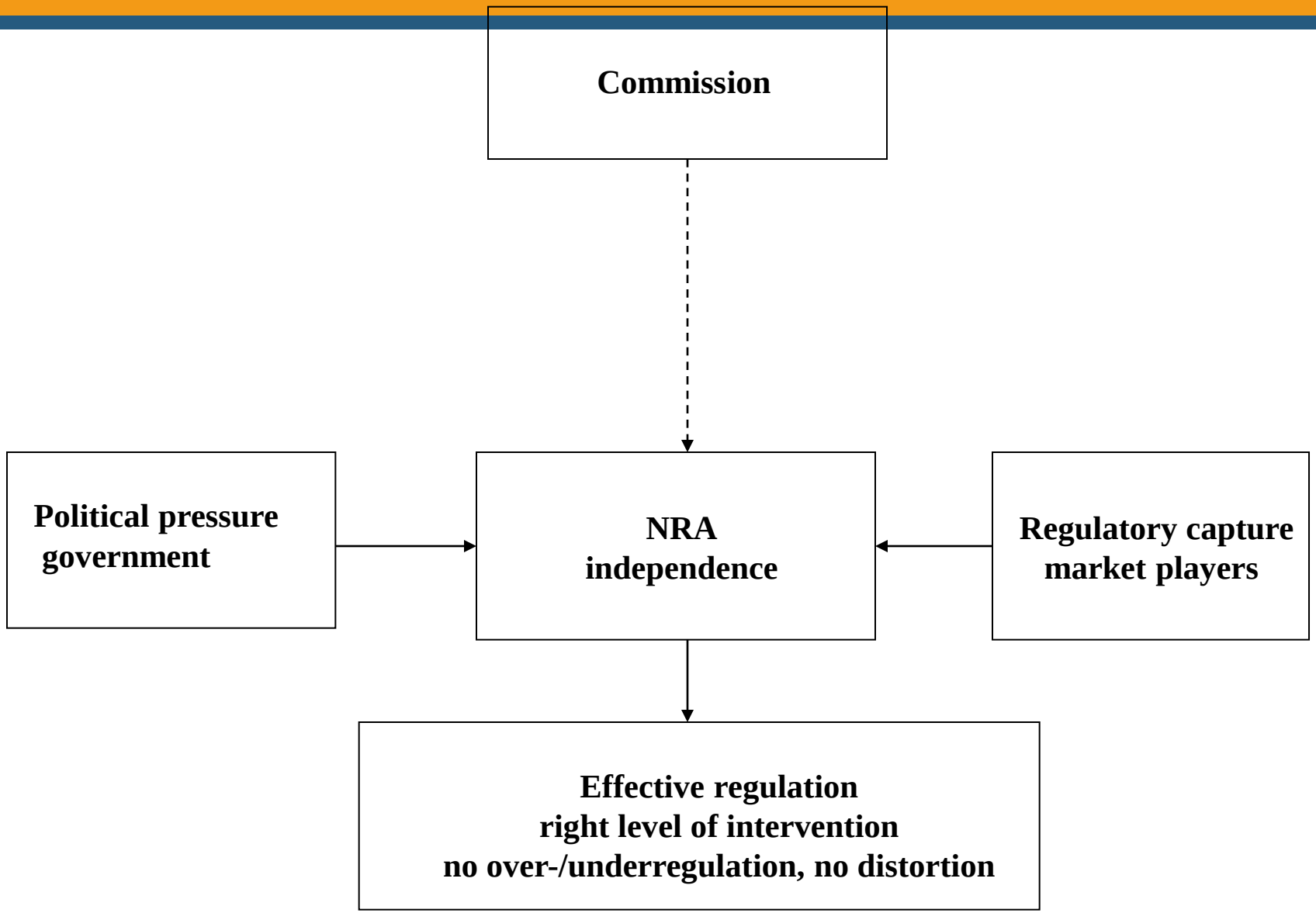
Key Challenges - Railway



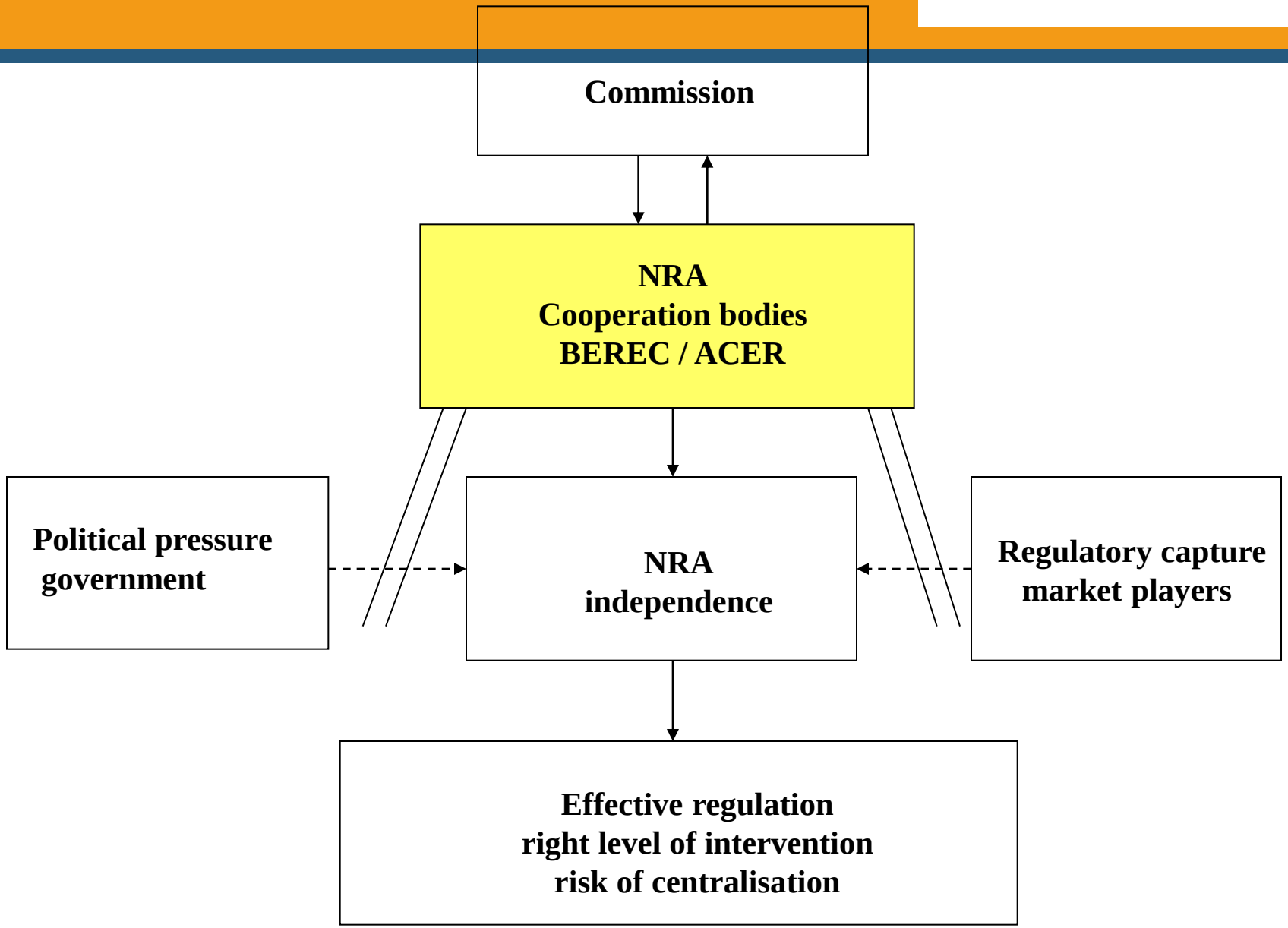
- One of the key challenges in the railway sector is the planned creation of European freight transport corridors until the end of 2013 and 2015 respectively.
- Due to the cross-border nature of the corridors many questions must still be answered, reaching from the question of the competent regulatory authority to the regulatory control of pre-arranged train paths.
- In this context BNetzA is in close contact with other regulatory authorities and political decision makers to address the identified problems at an early stage.
- Yesterday a new group of independent rail regulators across Europe has been established (members: e.g. ARAF, BNetzA)

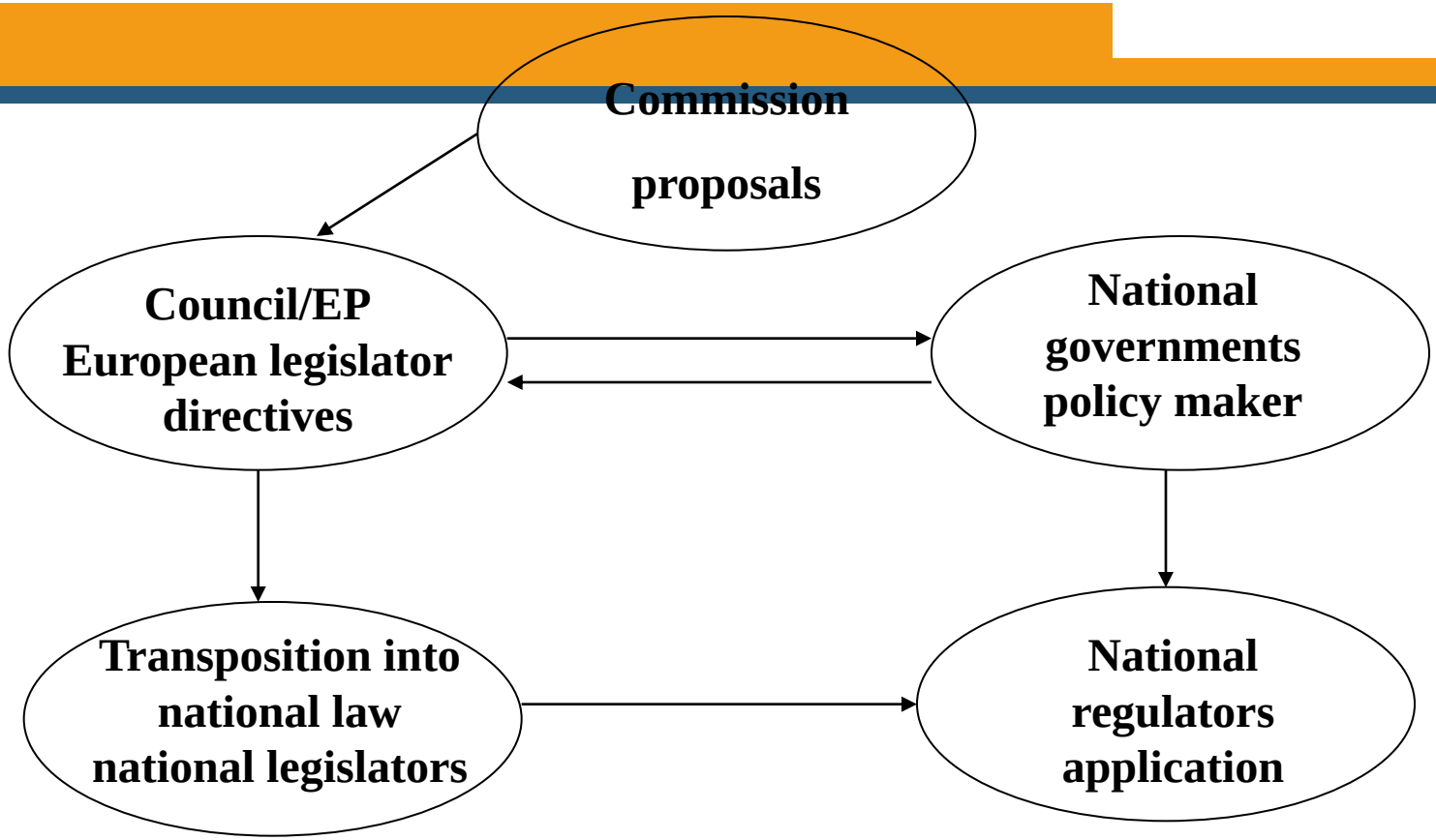
V. Multi-level regulatory governance in Europe

Multi-level regulatory governance in Europe (1)

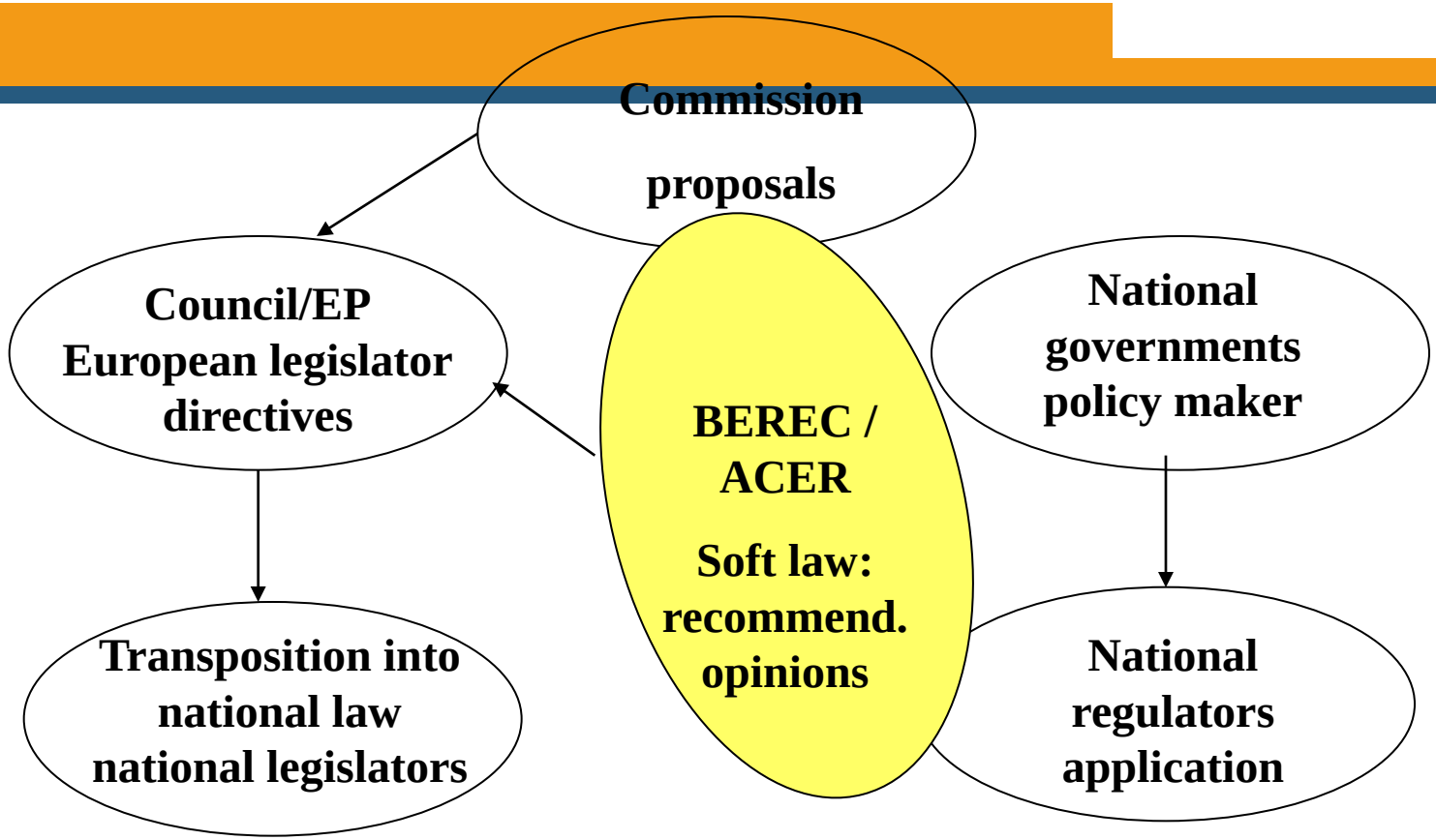


Multi-level regulatory governance in Europe (2)





Multi-level model: European and national level of legislation and implementation (application)



BEREC = Body of European Regulators for Electronic Communications

ACER = Agency for the Cooperation of Energy Regulators

VI. Fit to deal with new challenges and Conclusions

Dealing with the challenges (1)

- In the past 16 years regulation in Germany has provided for a stable and predictable regulatory framework for promoting competition as well as efficient investment for the benefit of users.
- Transparent, reliable and proportionate regulatory decisions are crucial for attracting investors.
- Multi-sector competence and expertise is beneficial in converging markets and environments.
- In case of new challenges a multi-sector regulator is prepared and has the capability to
  - elaborate similarities,
  - transfer experience and knowledge,
  - prevent anti-competitive behavior,
  - maintain flexibility.

Dealing with the challenges (2)

The European dimension:

- Influence of European legislation on national decisions is increasing in all sectors
- Exchange of experiences in implementing regulation is not only important on national level but even more on European level within the networks of NRAs to ensure the development towards the internal market is promoted via consistent application of the European regulatory framework by NRAs
- Is there a need to better reflect the converging landscape of network industries in the regulatory framework at the European level?
- Can we make all groups of European regulators
  - IRG/BEREC
  - CEER/ACER
  - ERG-Post
  - IRG-Rail

  a success story?

Conclusions (1)

- BNetzA became a **multi-sector regulator** in a step-by-step way: new tasks where added over time in an **evolutionary appro**ach (not a „big-bang-scenario“)
- A multi-sector approach has advantages both in professional decision making due to realizing synergies (knowledge transfer) as well as in organizational terms (less administrative costs), the exchange of experiences can also be achieved via creating a Club des Régulateurs
- Full advantages will only realize if the NRA is independent, independence is increased in multi-sector regulators („levelling-up effect“)
- Could such a body be too powerful? Not if controlled properly: democratic oversight, but no political interference in decision making to ensure effective regulation based on professional and thorough economic analysis; juridical review of decisions must be ensured
- BNetzA has created a **predictable** regulatory environment facilitating both competition and investment in high speed broadband networks and provides an incentive regulation supportive of investment in the electricity grid to integrate renewables and manage the energy transition
- Multi-sector regulators can also facilitate European cooperation

Conclusions (2)

- Ensure consistency of regulatory measures in a changing environment through the application of best practice common principles, but leaving sufficient flexibility to NRAs to take account of national market conditions
- While telecoms regulation uses mainly behavioural remedies, energy regulation is also applying structural remedies (e.g. ownership unbundling)
- Postal regulation still to follow the development of telecoms regulation as the market is not so dynamic, but very unbalanced; cost allocation principles between the competitive and the regulated area play an important role (risk of harmful cross-subsidiazation)
- Increased importance of regulatory predictability – in all sectors, i.e. take a longer time horizon into consideration for regulatory periods as network investment and roll-out is the major challenge in all sectors, particularly in telecommunications and energy
- Sectorspecific regulation remains necessary for network industries, but relationship with competition law is changing as sectors are changing and convergence is changing market boundaries
- Regarding „extension“ of bodies such as BEREC / ACER to postal and railway sector: not needed as degree of cooperation with ERGP / IRG-Rail is sufficient

Conclusions (3)

- As in a market economy regulation always requires justification, the analysis of its impact gets more and more important to evaluate the effectiveness of regulatory interventions
- The more effective regulation is, the less is the regulatory burden for market players as well as possible adjustment costs as economic decisions of market players are less distorted
- Effective regulation requires a clear mandate (powers), independence and accountability, governance rules, transparency and credibility (commitment) as well as juridical control
- Adjust energy regulation to cope with a more dynamic energy system, i.e. integration of renewables and development towards the internal market, i.e. increased cross-border trading, changing areas of responsibilities (e.g. REMIT for wholesale markets)
- Ensure consistency of regulatory measures in a very dynamic environment of the telecoms sector with more differentiated and more competitive (retail) markets, also convergence between telecoms and media sector (e.g. net neutrality, offers of so-called Over-the-top players)
- Cross-sectoral as well as cross-border aspects gain increasingly importance requiring closer cooperation among sector-specific national regulators within a country and among NRAs across countries, i.e. within the EU as well as internationally
- New regulatory bodies on the European level for the cooperation of NRAs

Conclusions (4)

- We have seen that pro-competitive regulation is based on the same principles and requires an independent well-resourced professional regulator
- There are communalities, but also differences between the sectors regulated
- This requires exchange of experiences either within a multi-sector regulator (internalized) or among sector-specific regulators, e.g. with the creation of a Club des Régulateurs or internationally between regional networks of regulators
- Furthermore as all national regulation is embedded in the European regulatory frameworks, it is important to also ensure consistent application of the European regulatory framework on the national level; this can be achieved via networks of regulators and/or regulatory bodies where independent NRAs are members
- It is important to allow NRAs flexibility to take into account national circumstances such as different roll-out strategies and national plans regarding infrastructure modernization, but also different administrative structures in member states
- A common challenge in all network industries is the modernization of the infrastructure, this is particularly important in telecoms (broadband networks) and energy (to integrate renewables)
- Competitive markets and modernized networks increase the overall competitiveness

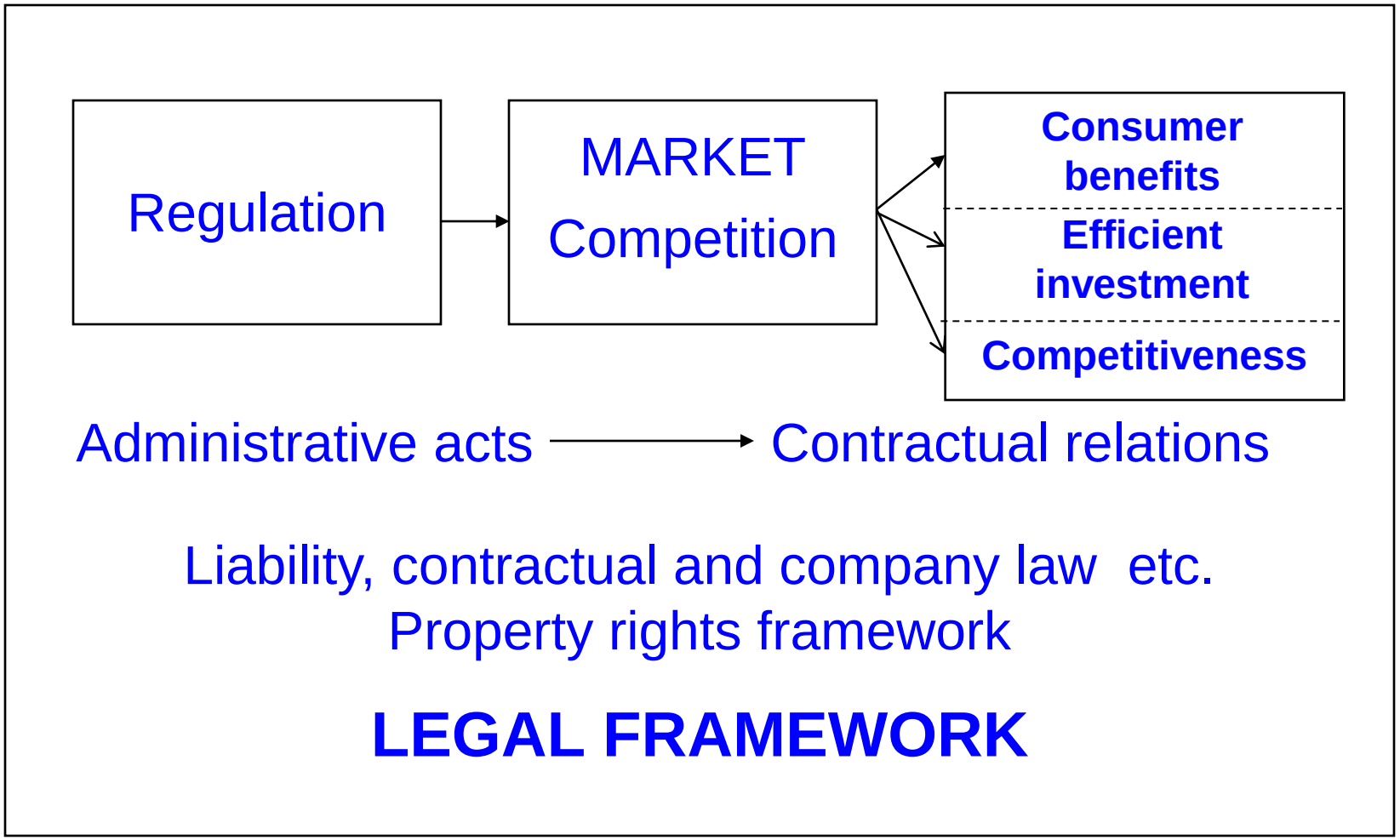
Thank you for your attention

Bundesnetzagentur

www.bundesnetzagentur.de

ANNEX

Regulatory approach and mechanism



⇨ Pro-competitive regulation setting incentives to behave acc. to econ. rationality is in conformity with market mechanisms

Regulatory principles

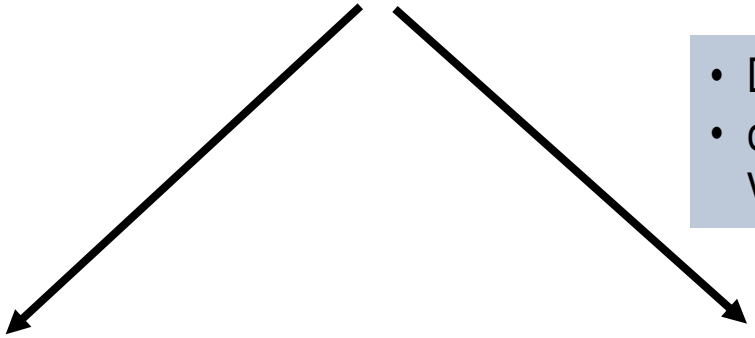
- **Competition** as a means to create economic welfare and in particular consumer benefit (lower prices, better quality and more choice)
- **Regulation** as a means to promote sustainable competition via opening markets in network industries for new entrants and creating a level playing field substituting competitive pressure until market forces take up
- **Network industries** are characterised by market entry barriers resulting from substantial economies of scale and scope requiring regulation to overcome market entry barriers
- **Competition** is the best driver for efficient investment and consumer benefits, but in network industries it can only be achieved with strict access and price control **regulation** applied **ex-ante**, thus competition and regulation are not opposed to each other, but reinforcing each other

Frequency Management (I)

1. **National Table of Frequency Allocations**
   by ordinance of the Federal Government
2. **Frequency Usage Plan**
   drawn up by BNetzA on the basis of the National Table Frequency Allocations
3. **Frequency Assigment**
   by BNetzA

Frequency Management (II)

- Frequencies are typically assigned ex officio by the Regulatory Authority as general assignments for the use of particular frequencies by the general public or a group of persons.
- But BNetzA may order that assignment is preceded by **award proceedings** when frequencies are not available for assignment in sufficient numbers or where more than one application has been made for particular frequencies.



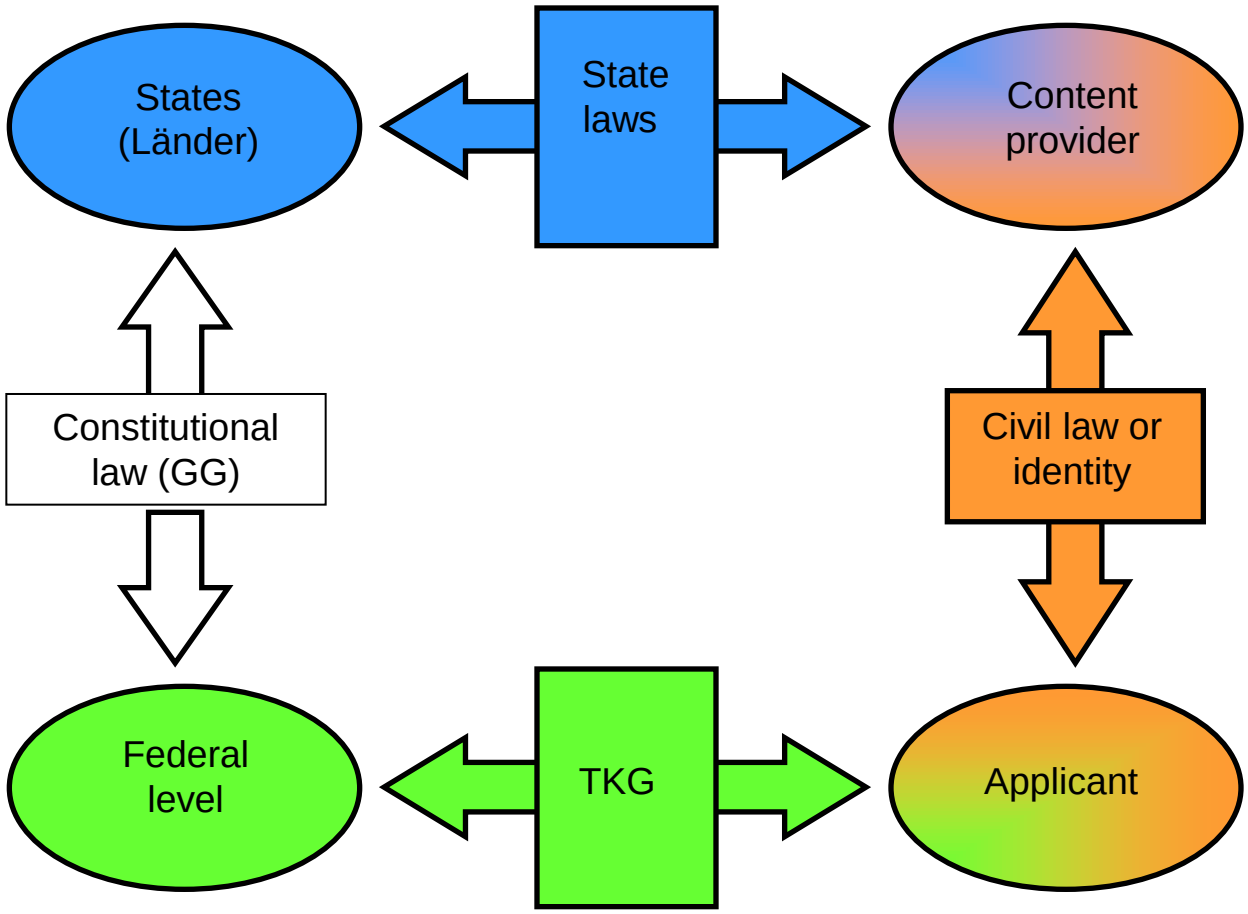
- Decision taken by President's chamber
- composed of President and the two Vice-Presidents

Conduct an auction

Invitation for tenders

- Exclusion of applicant from participation in award proceedings must be in agreement with BKartA.

Regulatory Responsibilities Broadcasting/Media (I)



Regulatory Responsibilities Broadcasting/Media (II)

- Frequency management: **Federal** Network Agency (TKG)
  - Frequency assignments for broadcasting services (broadcast transmissions and other content)

- Section 57(1) sentence 4 TKG:

„Frequencies allocated to the broadcasting service in the National Table of Frequency Allocations and designated in the Frequency Usage Plan may be used for purposes other than broadcasting within the jurisdiction of the federal states where the capacity allocated to broadcasting on the basis of the broadcasting regulations is available. For this purpose the Regulatory Authority shall bring about consultation with the state authorities with competence.“

  - **priority of broadcast transmissions under States (Länder) responsibility in bands allocated to the Broadcasting Service**