

# NGN – Next Generation Network

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Stephan Berg, Deutsche Telekom Headquarters

# Agenda.

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- Principles of telecommunication networks
  - Existing networks
  - Drivers and motivation for Next Generation Network
  - Basic concept of Next Generation Network
    - requirements
    - functions and structures
  - Next Generation Network benefits
  - Transition to Next Generation Network
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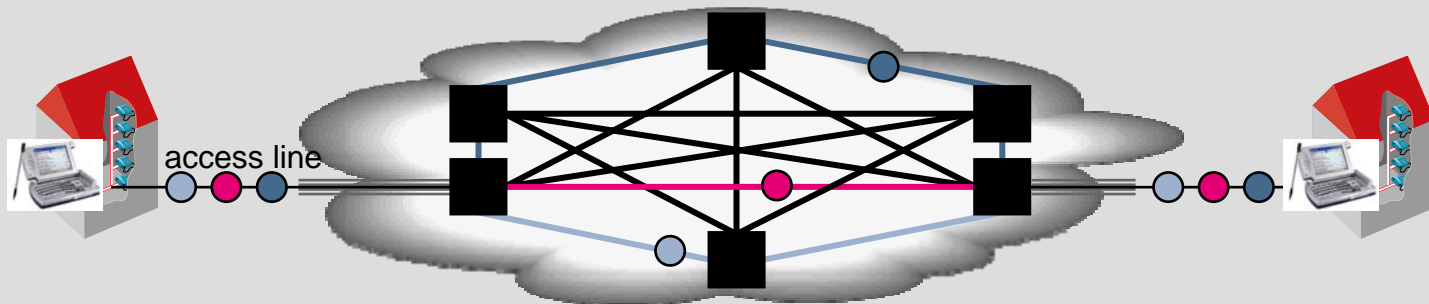
# Principles of telecommunication networks.

Using the same access line, circuit and packet networks utilize different mechanism to provide services and to share resources

Circuit switched network (schematic)



Packet switched network (schematic)

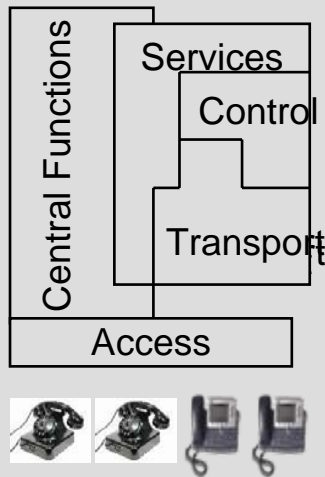


# Existing networks.

Today operators run different networks which are interconnected.

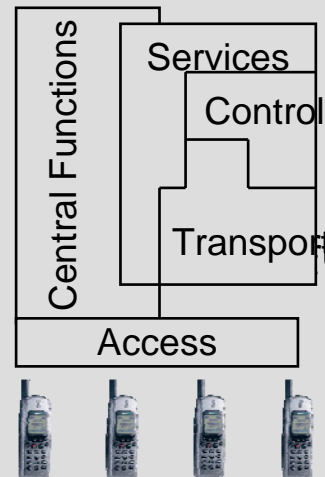
## Variety of networks

- e.g. PSTN



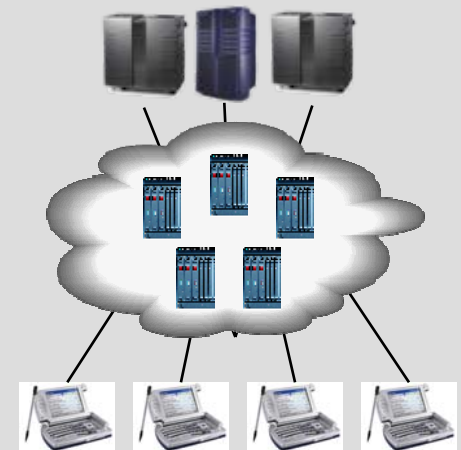
- fixed voice
- circuit switched
- monolithic structure

- e.g. GSM



- mobile voice
- circuit switched
- monolithic structure

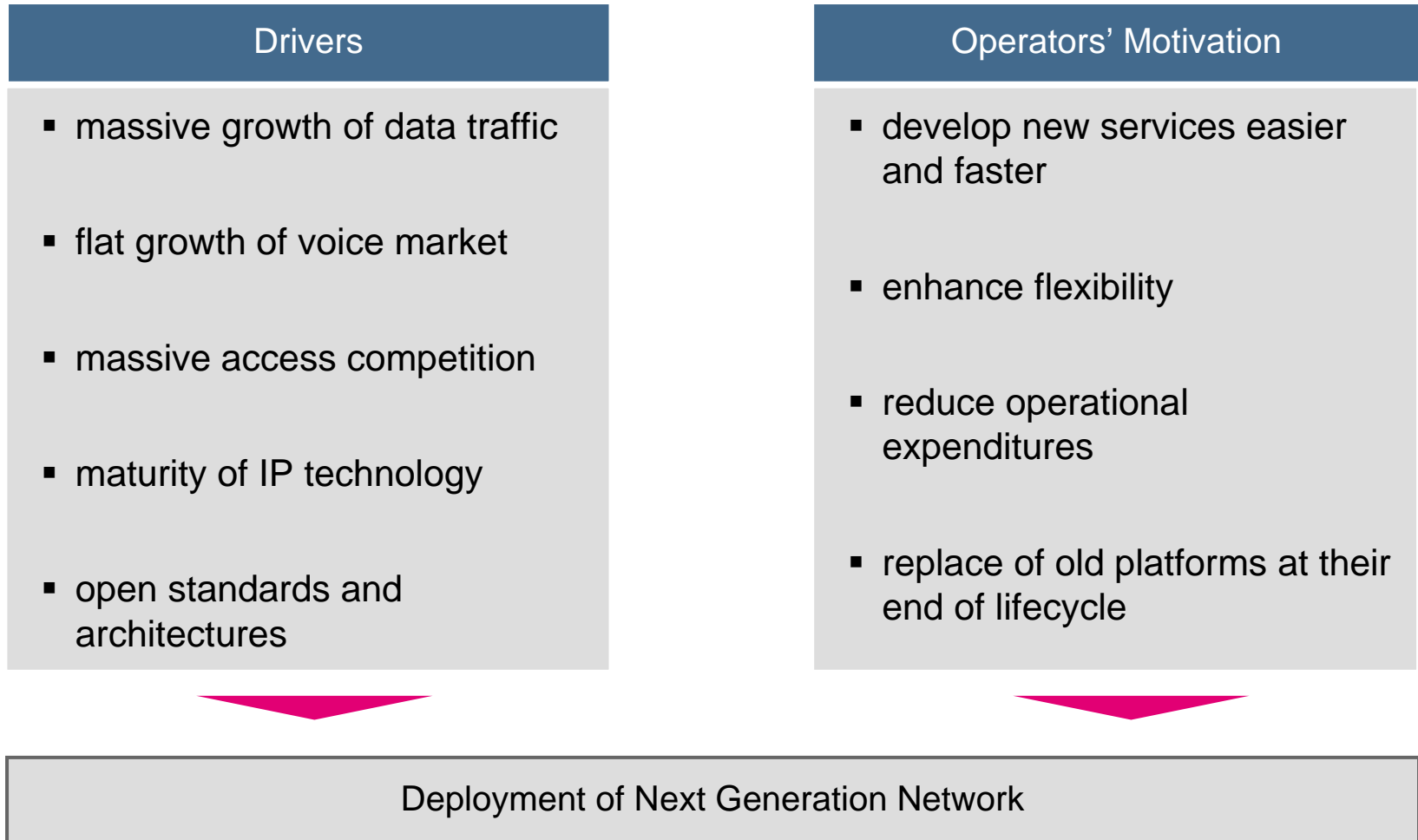
- e.g. Internet



- different services
- packet switched
- modular structure

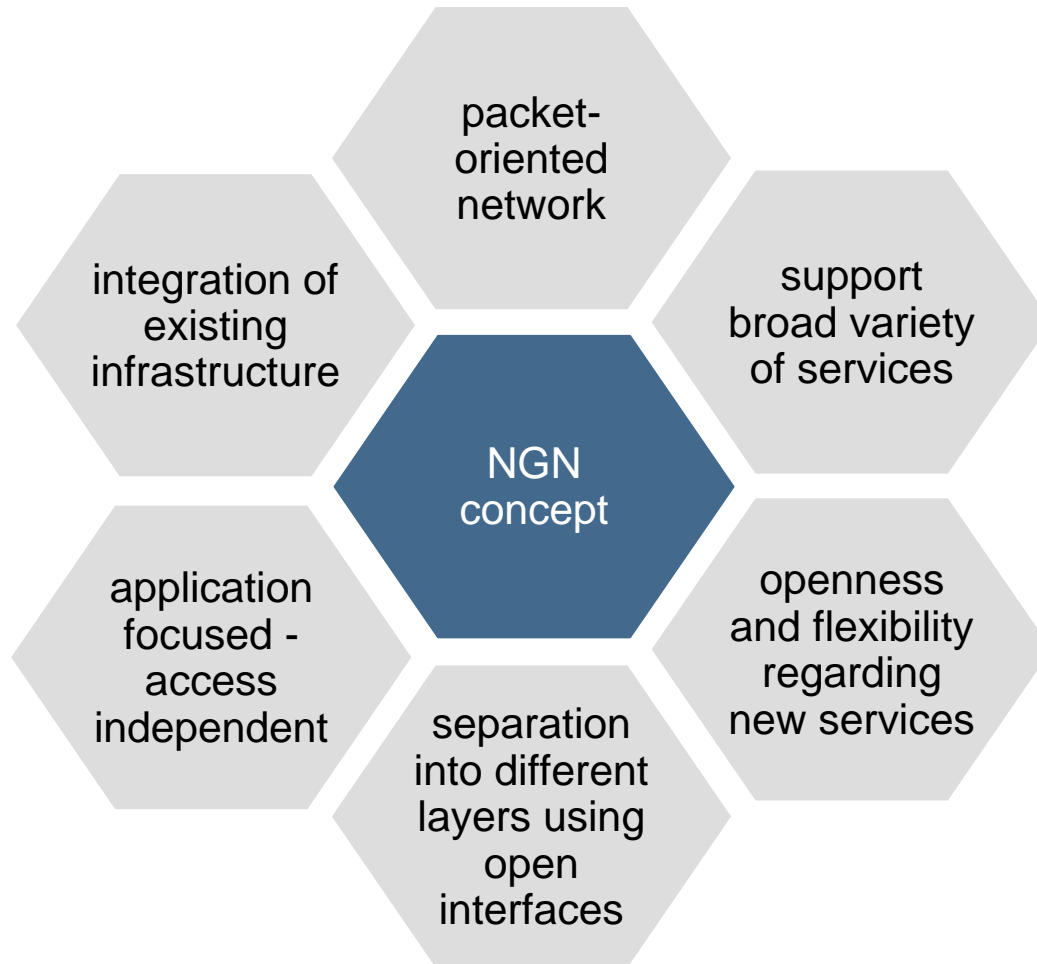
# Drivers and motivation for NGN deployment.

External drivers and internal motivation put pressure on operators' NGN deployments.



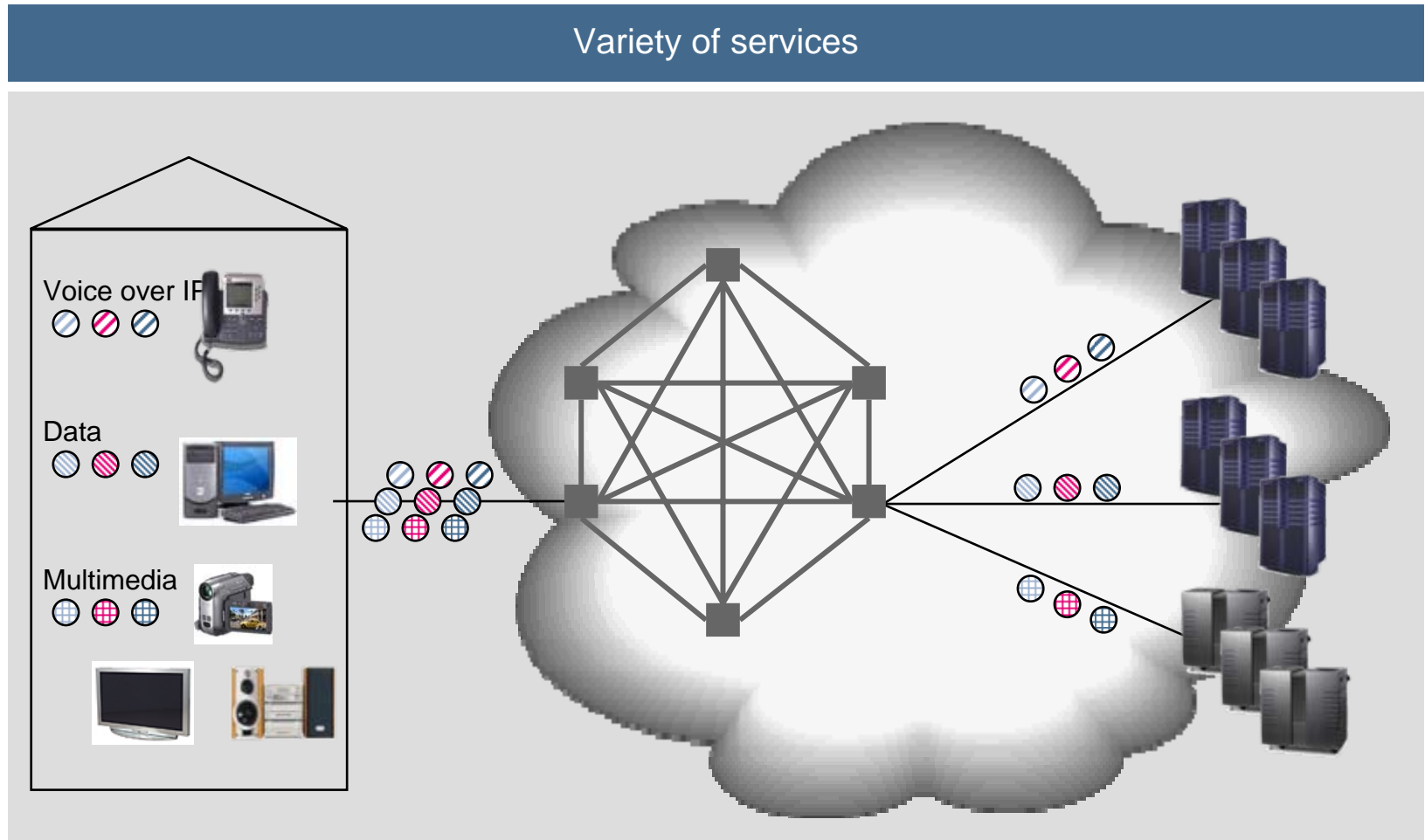
# Basic concept of Next Generation Network.

A Next Generation Network can be defined by six key criteria.



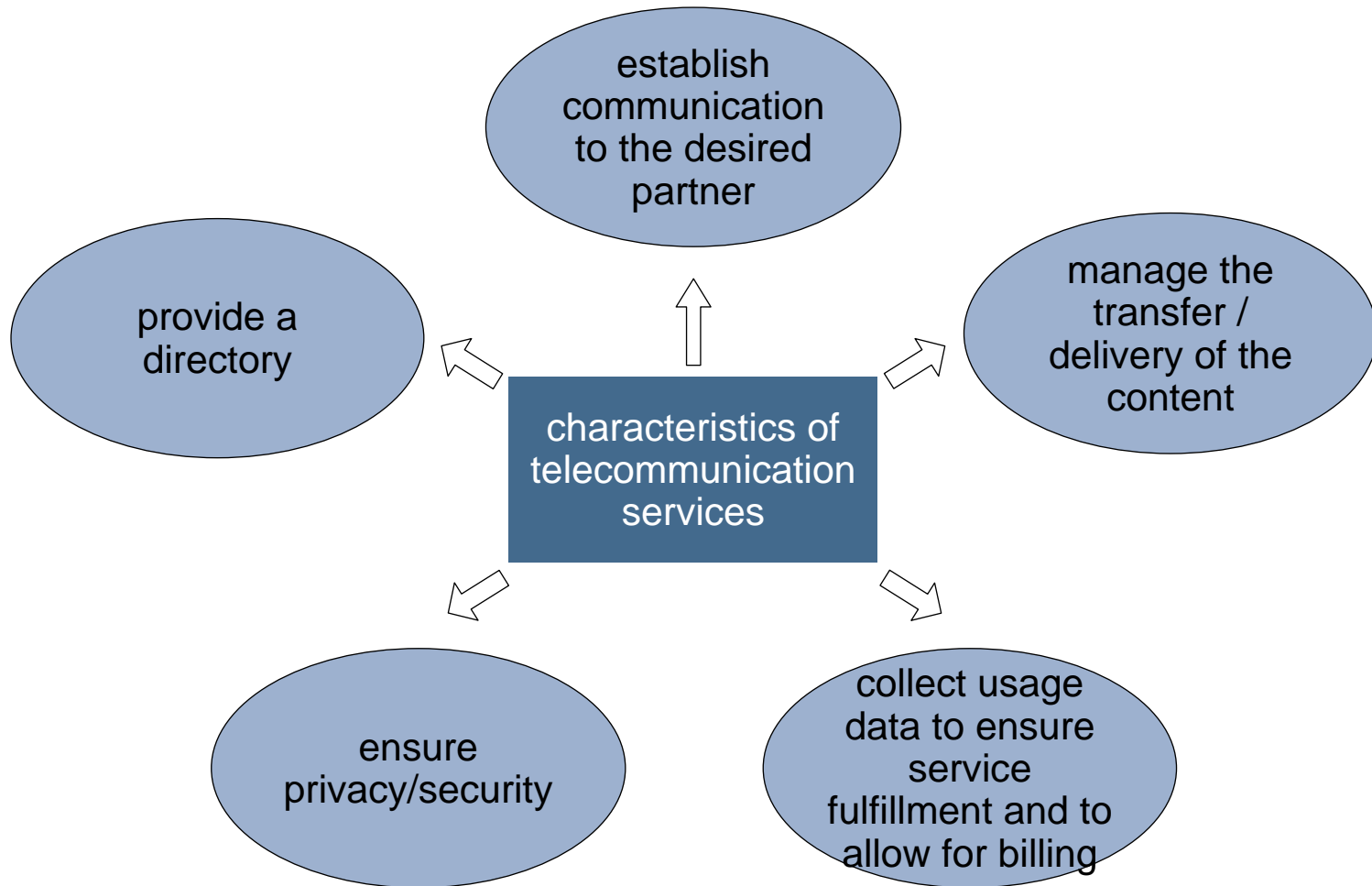
# Basic concept of Next Generation Network.

An IP-based NGN is able to support a broad variety of services.



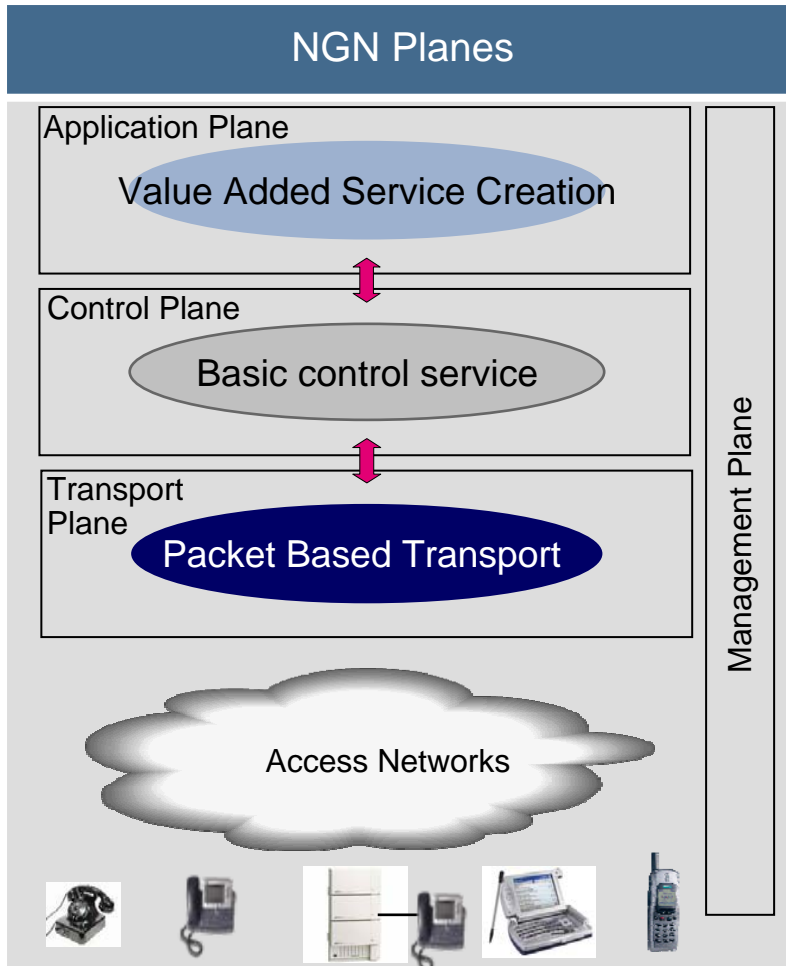
# Basic concept of Next Generation Network.

Next Generation Network has to fulfill the specific characteristics of telecommunication services.



# Basic concept of Next Generation Network.

Monolithic networks evolve towards a layered NGN architecture with open interfaces.

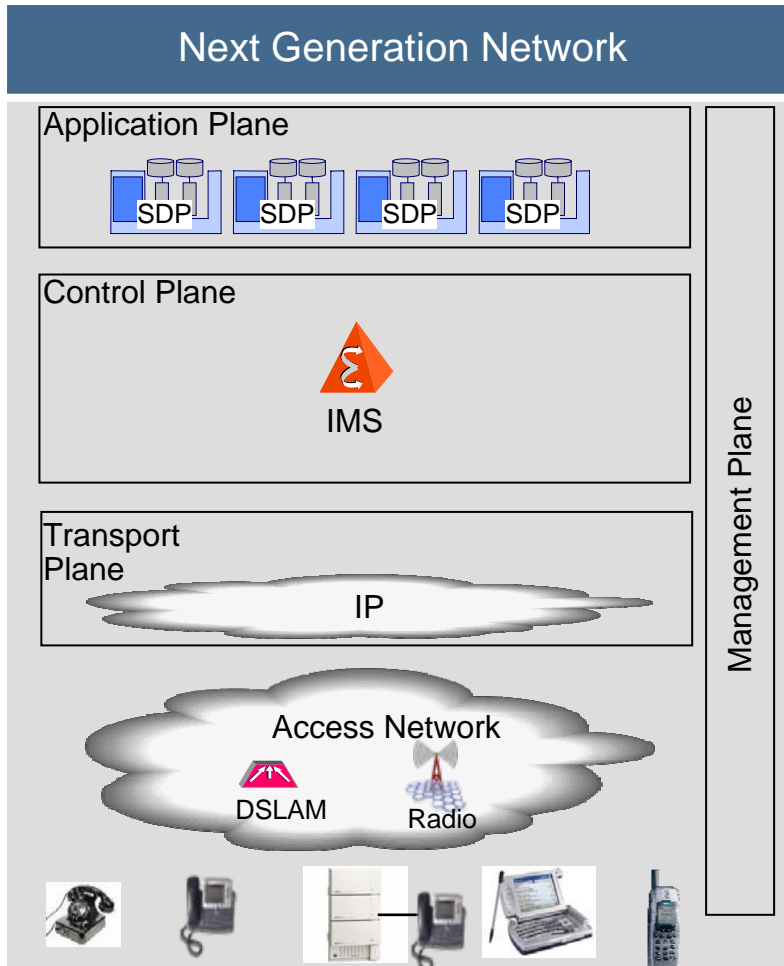


## Planes and functions

- Application Plane enables the provisioning of services and provides the control and logic for the execution of services
- Control Plane controls the elements of the network, establishes and tears down media connections
- Transport Plane is responsible for the transport of media and signaling messages
- Management Plane covers network management ensuring service fulfillment, service assurance and billing
- Access Networks connect customer networks or terminals with the components of the NGN network and aggregate the dedicated traffic type

# Next Generation Network benefits.

NGN has the potential to become the communication network of the future.



## Customer benefits

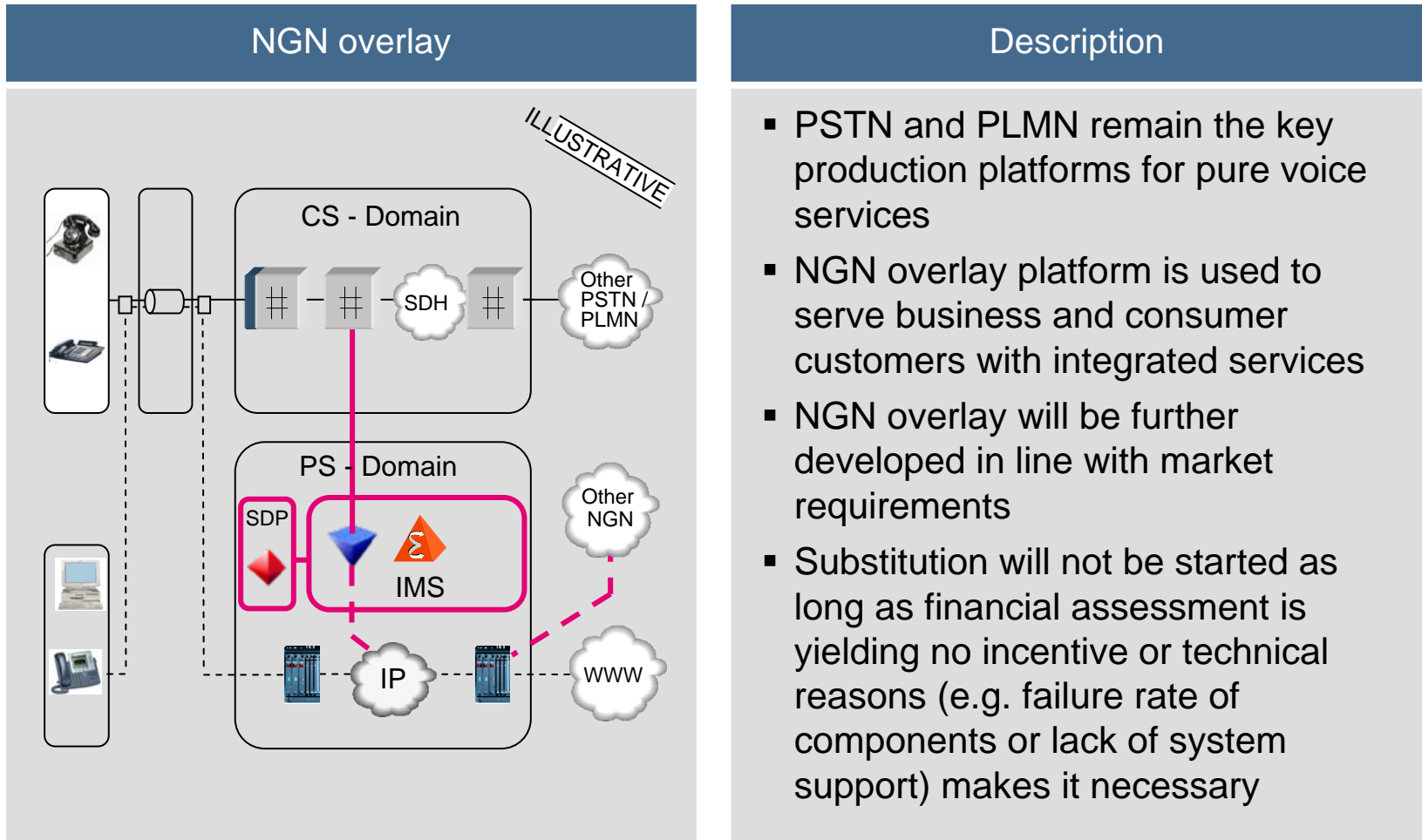
- device independence
- access independence
- service variety
- enhanced usability
- ...

## Operator / provider benefits

- new revenue potential
- improves time-to-market
- easy integration of 3rd party services
- one platform for voice, data and multimedia
- ...

# Transition to Next Generation Network.

Overlay approach is an option that allows for a smooth and flexible transition to NGN .



# Contact.



**Deutsche Telekom**

**Stephan Berg**  
Technology and Platform Strategies, Networks

Group Headquarters  
Friedrich-Ebert-Allee 140, 53113 Bonn, Germany

Postal address Postfach 2000, 53105 Bonn, Germany

Office nos. Phone +49 228 181-18111  
Fax +49 228 181-18130  
Mobile +49 170 5707478  
E-mail [stephan.berg@telekom.de](mailto:stephan.berg@telekom.de)