



# Implications of innovation in NGAN for national broadband strategies

Presentation for the 3rd International Conference on Broadband Internet  
"Innovation in Broadband Networks and Services"  
Athens, 7 June 2008

A decorative banner at the bottom of the slide features a semi-transparent, reddish-brown background. It contains a faint, circular compass rose with degree markings (260, 280, 300, 320, 340) and a map of a region, possibly the Mediterranean or Eastern Europe, with various geographical features and text.

RETHINKING | communications

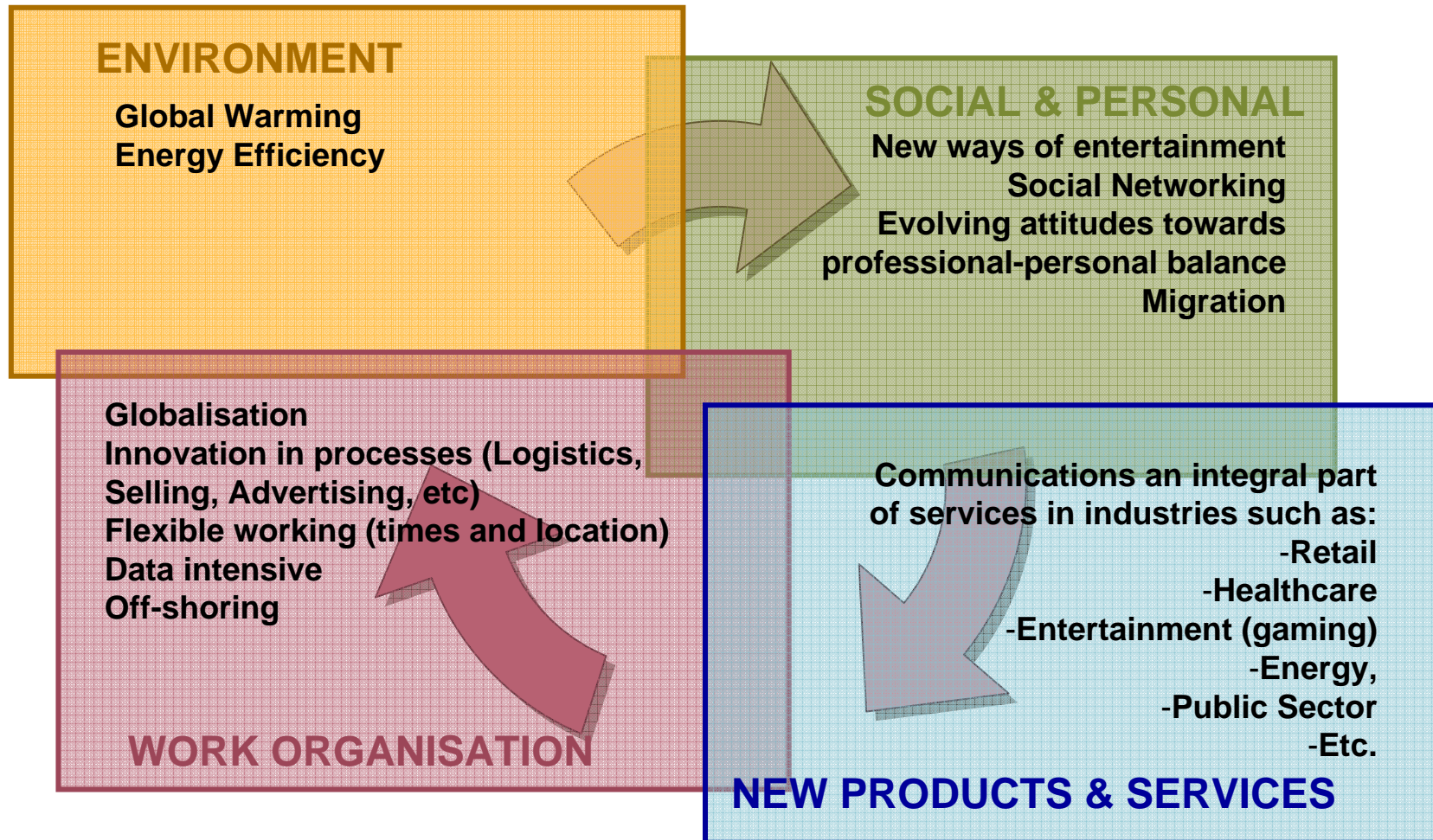
## About SVP Advisors

- SVP Advisors is a management consulting firm for the Telecommunications, Internet and Media industries, specialized in Business, Financial and Regulatory Strategy.
- **Our Mission** is to “**Rethink Communications**”, targeting innovative best practice solutions at a worldwide level and enhancing the intellectual leadership of our workforce.
- Fast market and technology transformation on a global stage demand **innovative thinking** to be always a step ahead of competitors and external threats.
- **Our Team** is formed by seasoned and independent professionals, with an **outstanding international track-record** in management consulting and industry leadership roles within the electronic communications sector.
- Our highly motivated multidisciplinary experts offer a unique 360° approach.



# Next-generation access networks are required because of growing demands for bandwidth

- Jakob Nielsen's Law (1998): User bandwidth increases by 50% every year (other estimates vary)



## There are relevant differences between the previous deployment of ADSL and the roll-out of NGAN

|   | ADSL  | NGAN (FTTH)   |
|---|---|---|
| <b>Bandwidth increase with the new technology</b> | x10 to x100   | x10 to x100   |
| <b>How much it costs?</b>                         | ~ 100 EUR per customer  | ~ 1000 EUR per customer   |
| <b>What is the money spent in?</b>                | Access Equipment<br>Upgrading backbone  | Civil works (~45%)<br>Cables (~20%)<br>Customer connection (~10%)<br>Equipment (~25%) |
| <b>What is the expected life of investments?</b>  | ~5 years  | ~ 10 to 30 years  |
| <b>Who invests?</b>                               | Incumbent operator<br>Alternative operators<br>(using the physical infrastructure of the incumbent) | Incumbent<br>Municipalities<br>Utilities<br>New operators<br>New types of investors   |

# Policy makers emphasize the impact in economic growth when making the case for next generation networks

Investing in NGAN consists mainly in building ducts, laying cable and similar civil-work activities



If the right conditions apply, these investments fuel economic growth in knowledge and high-tech industries



## Does this mean that the case is clear for pushing fast NGAN?

---

- Threat of a bandwidth collapse if no NGAN investment
- NGAN take long to build, the sooner we start the better
- Being among the first to deploy NGAN will give my companies and citizens an edge in the global economy

### **BUT**

- NGAN deployment still expensive, economics not clear in many areas
- Access not necessarily the bottleneck in today's broadband networks
  - Although the most relevant for the long-term
- Technological choices still uncertain

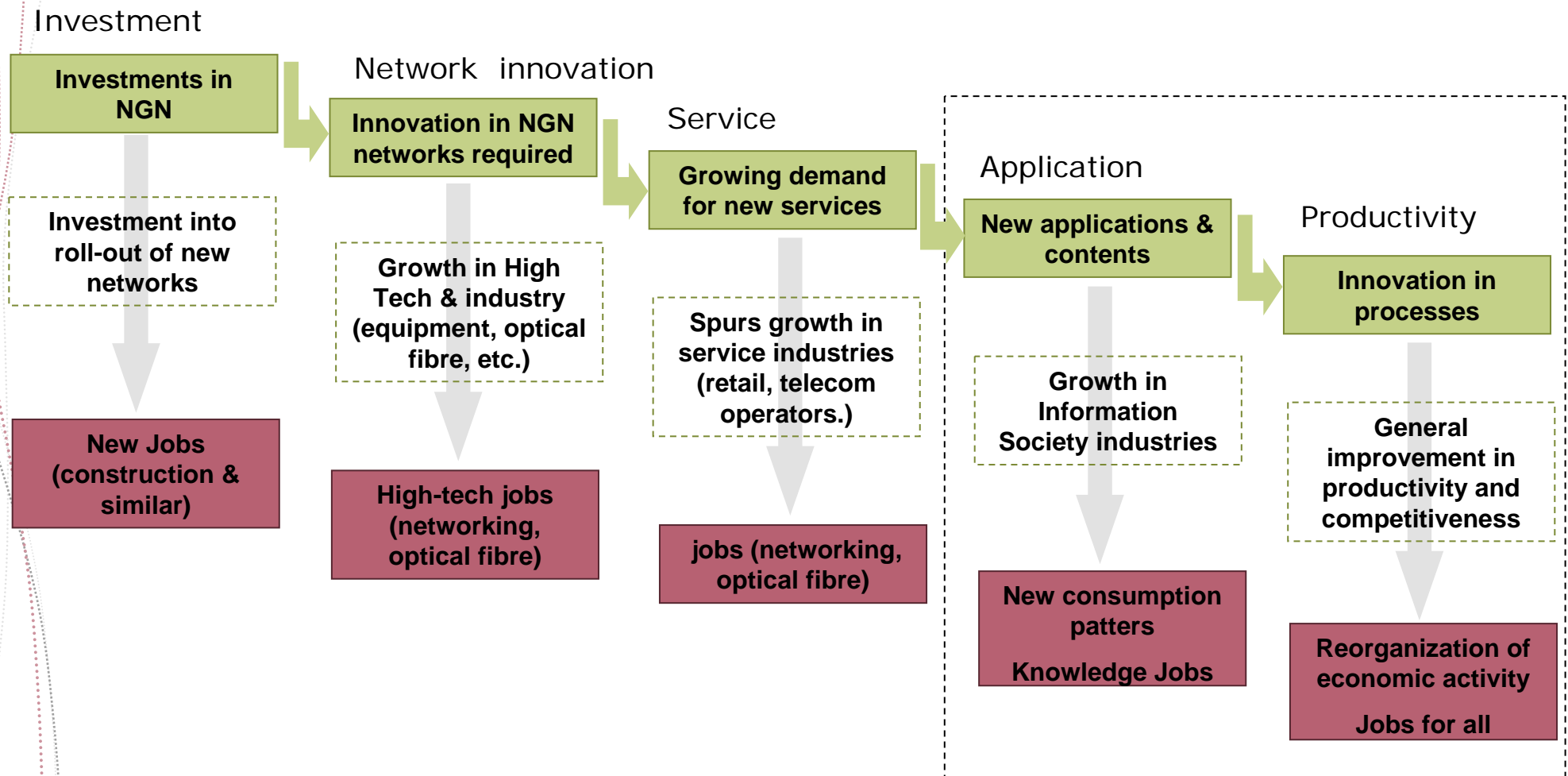
# NGAN innovation's mission is producing cheaper (and faster) networks, thus removing economic barriers for NGAN deployment

| LEVEL                 | INNOVATION RATE | INNOVATION AREAS (examples)  | CHALLENGES  |
|-----------------------|-----------------|--|---|
| <b>APPLICATIONS</b>   | ✓ ✓             | New & better services  | Producing social and economic transformations   |
| <b>NETWORKING</b>     | ✓               | Quality of Service by traffic types  | Ensuring adequate reliability while sharing networks<br>Supporting functionality for new applications |
| <b>EQUIPMENT</b>      | ✓               | Increased integration & miniaturization<br>Self installation (customer premise)  | Cost reduction<br>Increased capacity  |
| <b>DUCTS / CABLES</b> | ✓               | Cables easier to bend, connect and more resistant<br>Deployment techniques for reuse of existing ducts<br>Financial innovation | Cost reduction<br>Environmental / Social impact   |

## Countries that have successfully promoted NGAN have done so on the basis of favourable local conditions

| COUNTRIES             | CHARACTERISTICS   | APPROACH TO NGAN   |
|-----------------------|---|--|
| Japan<br>Korea        | <p>Very favourable geography</p> <p>Strong role of government in telecoms policy</p> <p>Industrial policy strategic interest</p> <p>Economic stall</p>                        | <p>Incentives from the government (financing, taxation, )</p> <p>Fibre unbundling obligations (Japan)</p> <p>Strong FTTH growth / DSL operators under strain</p> |
| Netherlands<br>Sweden | <p>Relatively favourable geography</p> <p>Strong broadband penetration</p> <p>Sophisticated consumers</p> <p>Welfare state culture</p> <p>Strong role of local government</p> | <p>Open Networks (promoted by municipalities / alternative operators)</p> <p>Incumbents forced to deploy FTTH due to risk of becoming irrelevant</p>             |

# The 'big prize' for pioneers in NGAN is fuelling social and economic transformations due to new applications and processes



- But they are also giving local firms a chance to become world-class leaders in NGAN-related technologies and promoting growth in services and consumer goods

## Other advanced economies need to play catch-up in NGAN

- These countries are making progress, despite concerns about breaking with status quo and which is the best strategy moving forward

| COUNTRIES                                    | CHARACTERISTICS   | APPROACH TO NGAN   |
|--|---|--|
| France<br>United Kingdom<br>Other EU members | <p>Competition based on non-discriminatory access obligations imposed to incumbents</p> <p>Some competition at infrastructure</p> <p>Regulators with strong focus on sector metrics</p> | <p>Focus on infrastructure</p> <p>Enforcing non-discriminatory access (bitstream, fibre, duct)</p> <p>Some countries enforcing functional separation</p> <p>Net neutrality not central issue</p> |
| Unites States                                | <p>Strategic interest in content &amp; applications</p> <p>Strong competition between LECS and cable operators</p> <p>No local loop unbundling (LLU)</p>                                | <p>No regulatory obligations for fibre providers</p> <p>Central debate on the issue of net neutrality</p> <p>FTTH deployment driven by market competition</p>                                    |
| Germany                                      | <p>Troubled, government-participated incumbent</p> <p>Industrial policy interests</p>   | <p>Regulatory holidays to promote investments</p>  |

## Tier-2 countries should account for the effects of innovation in establishing their NGAN strategies

---

- Start with a realistic assessment of the likely impact of NGAN will have in the overall economy
- There are also benefits in being a **follower** in NGAN:
  - Further cost reductions (cost reductions ~ -20% per year)
  - Reducing risk of a wrong technology choice
  - Benefits especially relevant if the country is not in a position to shape innovation in NGAN technology
- But there is always a 'next generation' thing
- Innovation (technological and financial) will make threat of entry more credible
- Prepare the ground: NGAN require certain conditions so that investments in cables and ducts become deep economic transformations
- Finally, is it an opportune time for roll-out?



**THANKS FOR YOUR ATTENTION**

---

[julio.villalobos@svpadvisors.com](mailto:julio.villalobos@svpadvisors.com)