Broadband Deployment

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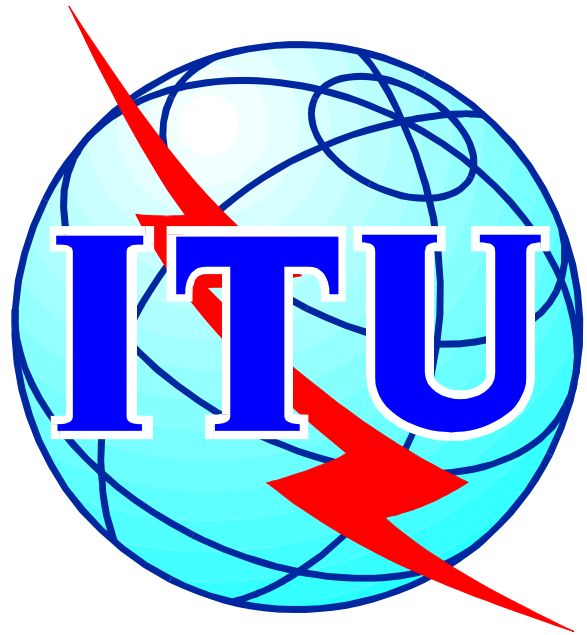

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Broadband Deployment

- ITU New Initiatives Programme
- Definitions
- Market analysis
- Demand drivers and barriers to deployment
- National strategies for broadband
  - ⇨ "Light touch" regulatory strategies
  - ⇨ "Extending access" roll-out strategies
  - ⇨ "Comprehensive national plans"
- City-wide strategies for broadband
- Regulatory issues

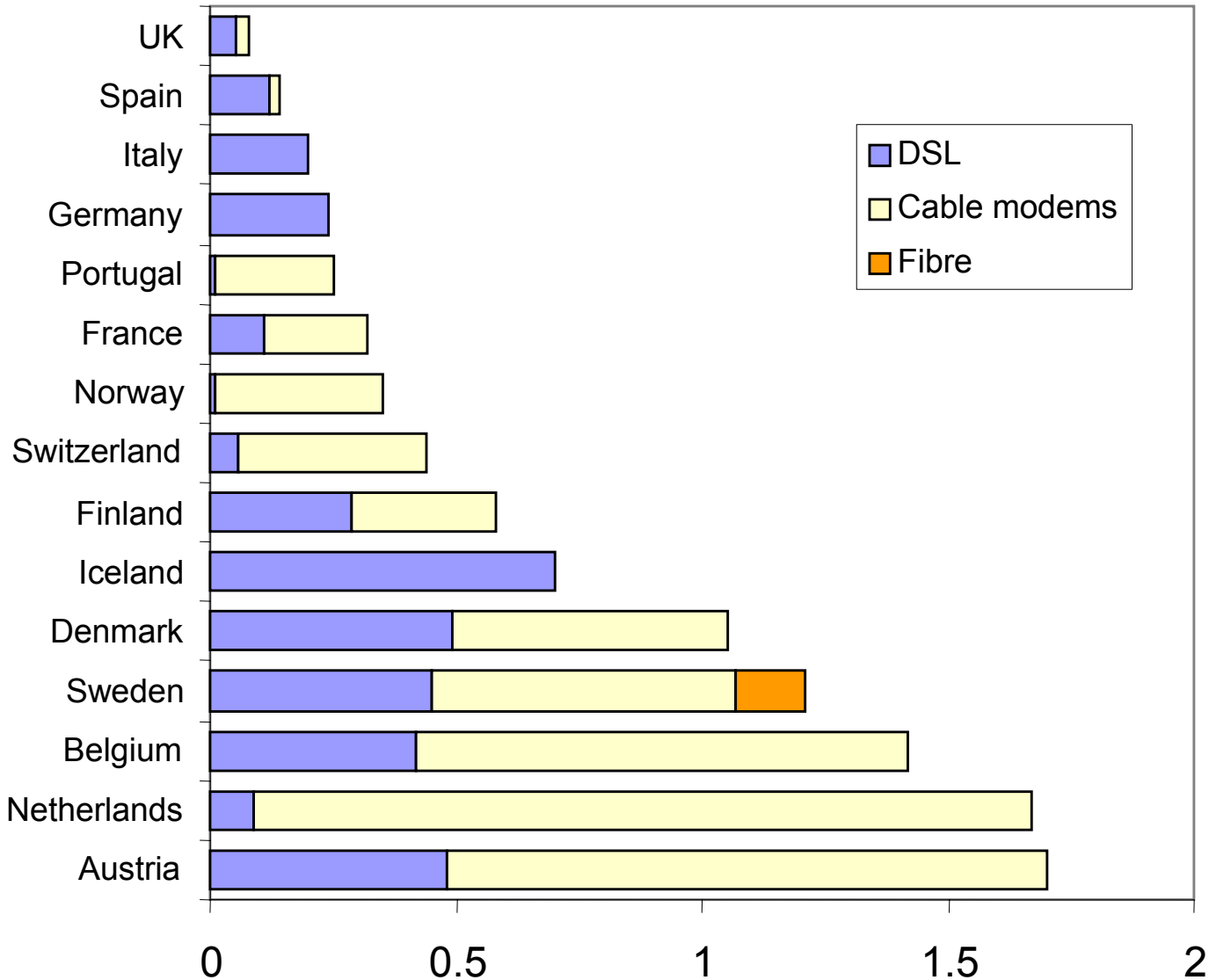
ITU New Initiatives Programme

- **Regulatory implications of broadband**
  - ⇨ May 2-4 2001, Geneva
  - ⇨ Experts from regulatory agencies, policy-making bodies, PTOs, academic institutes etc
  - ⇨ Case studies of Australia, Italy, Malaysia and South Africa
  - ⇨ Briefing paper and list of issues
  - ⇨ For more information: www.itu.int/broadband
- **Other new initiatives workshops**
  - ⇨ Fixed-mobile call termination (Sept. 00)
  - ⇨ IP Telephony (June 00)
  - ⇨ Electronic Signatures and certification authorities (Dec. 99)

What is broadband?

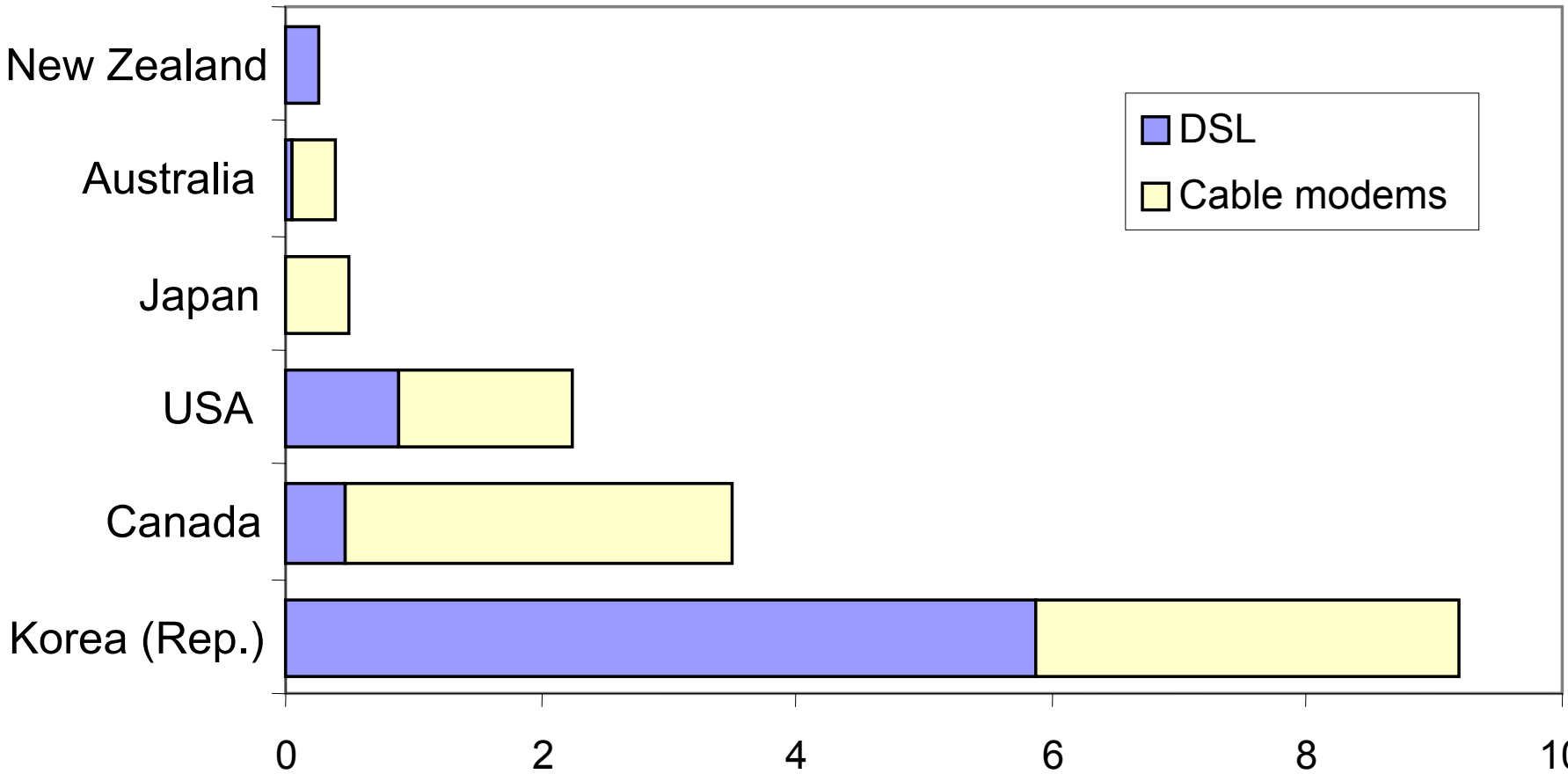
- **Technical definitions:**
  - ⇨ ITU Recommendation I.113: Any network with a capacity greater than primary rate ISDN (>1.5 Mbit/s)
  - ⇨ Individual countries have definitions which range from 200 kbit/s to 30 Mbit/s
- **Functional definitions:**
  - ⇨ Networks capable of carrying full-motion video with some degree of interactivity
- **Market definitions:**
  - ⇨ Now: ADSL (asymmetric digital subscriber line) or cable modems
  - ⇨ Soon: Broadband services delivered by wireless, satellite and fibre optics

Broadband in Europe, installed lines, per 100 inhabs, Dec. 2000



Source: OECD, ITU.

Broadband outside Europe, installed lines, per 100 inhabs, Dec. 2000



Source: OECD, ITU.

Broadband demand drivers

- **Flat-rate pricing**
  - ⇨ In Korea, broadband is economic relative to dial-up access for three or more hours use per day
- **Entertainment**
  - ⇨ Games
  - ⇨ Interactive TV
  - ⇨ Swapping MP3 music files
- **Education**
  - ⇨ Perceived as being a “family investment”
- **Voice over DSL (IP Telephony)**
  - ⇨ Exploiting flat-rate tariffs

Barriers to broadband deployment

- **Technical barriers**
  - ⇨ Technical constraints on DSL technologies and cable modems on older cable TV networks.
- **Regulatory barriers**
  - ⇨ Where infrastructure competition is not permitted, roll-out had been slower and prices higher.
  - ⇨ Where there is cross-ownership between cable TV operators and incumbent telcos, roll-out is slower.
- **Economic barriers**
  - ⇨ High costs for network roll-out = high prices
  - ⇨ Financial crisis is slowing down deployment
  - ⇨ Perceived lack of “killer applications”

National strategies (1)
"Light touch" regulation

- Let the market do the work
- Focus on creating right environment and removing regulatory obstacles
- Generally open market with a minimum of licensing requirements
- E-government initiatives
- No direct central government funding of access
  - ⇨ Examples include New Zealand, Switzerland

National strategies (2) "Extending access"

- Government generally stands back but steps in to assist in specific areas where private sector might not deliver:
  - ⇨ Access to schools, hospital, libraries, museums
  - ⇨ Access in regional or urban development zones
  - ⇨ "Digital divide" initiatives to encourage access among disadvantaged or minority groups
- Government initiatives to support education, training, awareness raising, applications development etc.
  - ⇨ Examples include UK, Germany, USA

National strategies (3)
"Comprehensive national plans"

- Government positions itself as a technology champion
- Combines large-scale public funding with governmental "guidance" of private market
- Often associated with Asian countries
- Sees broadband as critical to international competitiveness
  - ⇨ Examples include Japan, Rep. Of Korea, Malaysia, Singapore

City/local government initiatives
Example of Stokab, Stockholm

"The aim of Stokab's activities is to exploit the dynamics of the telecom market in order to stimulate growth in the Stockholm region and thus create opportunities for increased employment. Additional benefits will include improved working conditions in the public schools, public service and easier access to culture. The expansion of the fibre-optic network shall contribute to further, positive social development in the Stockholm region"

<www.stokab.se>

Malaysia's Multimedia Super Corridor

"Malaysia has created the Multimedia Super Corridor - a world-first, world-class act - to help companies of the world test the limits of technology and prepare themselves for the future. The MSC will also accelerate Malaysia's entry into the Information Age, and through it, help actualise Vision 2020.

The MSC will bring together, for the first time ever, an integrated environment with all the unique elements and attributes necessary to create the perfect global multimedia climate."

<www.mdc.com.my/msc>

Regulatory issues

- Controlling access to the market
  - ⇨ Technology-neutral licensing
- Controlling market behaviour
  - ⇨ Effective and equitable interconnection
  - ⇨ Avoiding unfair cross-subsidisation
  - ⇨ Unbundling of the local loop
- Regulatory issues specific to broadband
  - ⇨ Creation of new bottlenecks (e.g., set-top boxes)
  - ⇨ Potential resurgence of natural monopoly tendencies

Could they, would they, should they? Questions for policy-makers

- **How important will broadband be for the competitiveness of national, regional and urban economies?**
- **Can a government reconcile supply-side intervention with a pro-market stance?**
- **What demand-side stimulation policies work best?**
- **Does the economic slowdown and slump in venture capital investment in ICTs change the picture?**

For more information ….
www.itu.int/broadband