

2001 INTERNATIONAL TELECOMMUNICATIONS SAFETY CONFERENCE

International Round Table Ergonomics

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Norway is a little (but beautiful) country in the north part of Europe - with 4.5 million inhabitants

- * Second highest penetration of mobile users in the world
- * Most PC's per capita
- * Highest number of Internet accesses per capita next to Finland
- * "the laboratory" of the world «if it works here it works anywhere»

- ✓ **Telenor** is the leading telecommunications and media company in Norway
- ✓ **Telenor** has 20 000 employees and is owned partly by the Norwegian state and partly private



Telenor has one of the world's most modern ground-based telecommunications network

- fully digital network with the highest ISDN penetration in the world

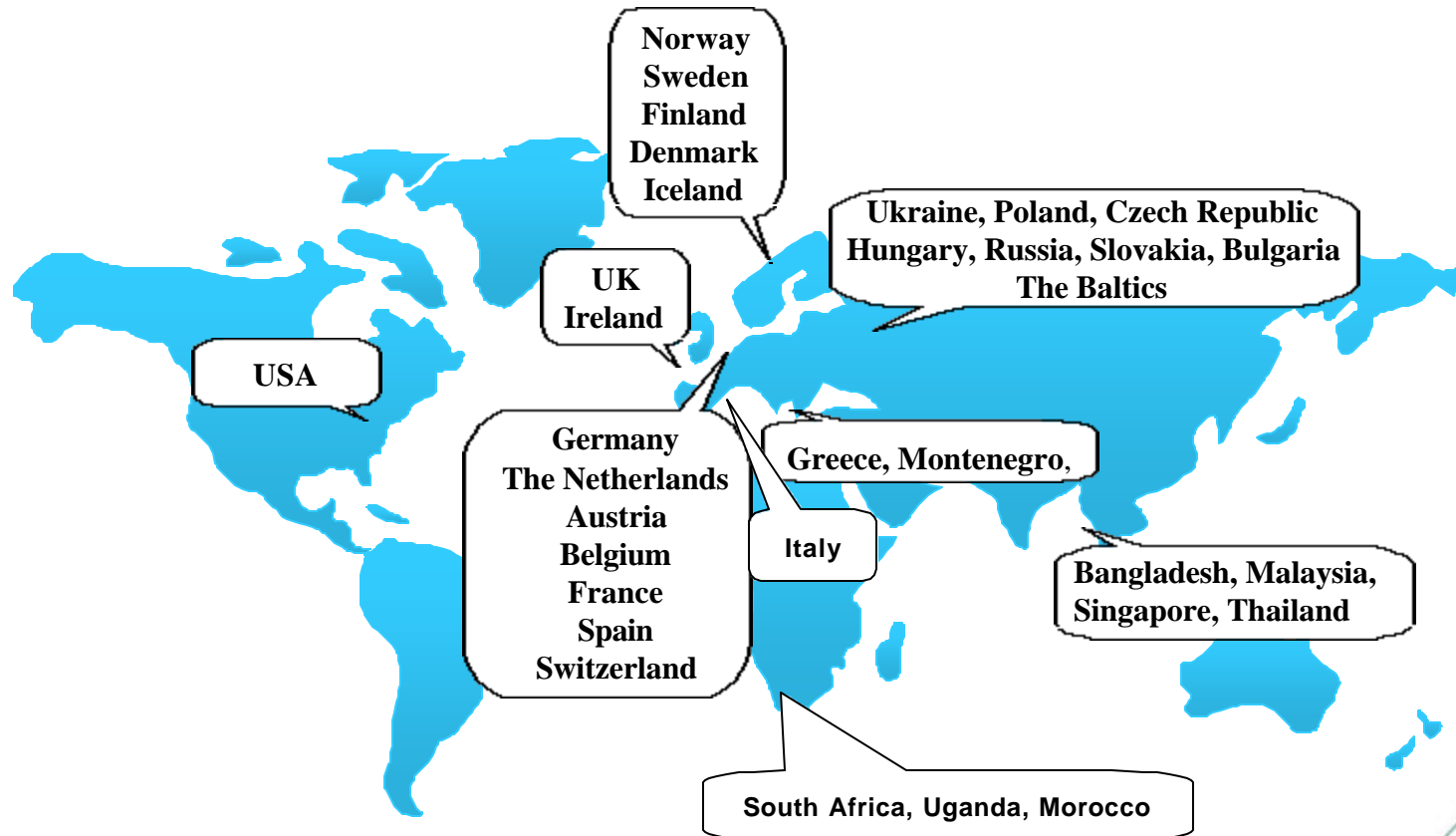
Telenor is a leader in the application for IP technology

Telenor is a pioneer in satellite communication

Telenor invests internationally in areas where we have special expertise (Mobile, Internet, Broadband)



International activities



Continuous improvement

Through the ability to :

- ◆ Achieve good financial and business results
- ◆ Attract and keep customers
- ◆ Attract and keep employees

Based on:

Quality work in general, and: improving the working environment



**From the Norwegian Labour Inspection
Authorities:**

Regulations and guidelines

**covering all aspects of Physical and Psychosocial
Working environment,**

**incl. safety work, organizing of work, VDU-
workplace.**



Annual management HSE review focusing on:

- ◆ Ongoing surveys and action plans based upon objectives
- ◆ Sickness absence & Rehabilitation in the work-place
- ◆ Occupational injuries, near accidents and occupational diseases
- ◆ **Ergonomics**
- ◆ Crisis management
- ◆ Alcohol and substance abuse
- ◆ HSE-training
- ◆ Health assessments
- ◆ HSE-audits
- ◆ External environment and fire safety

The discipline of ergonomics – definitions

ergon: work - nomos: laws

Earlier: only the physical approach

The definition today:

**A discipline including physical, technological,
social, organizational and psychological factors =**

Macroergonomics
(psychology and physiology)

Macroergonomics

As a part of the HSE Quality System, it is a clearly defined management responsibility

- to carry through working place surveys and planning ergonomic activities in order to improve the working conditions and prevent physical and psychological strain
- to order support from HSE-experts (Occupational health service/physiotherapists)
- to cooperate with every employee based on individual requirements and qualifications

Expert support I:

Teaching every employee to organize his/her working conditions and computer equipment:

Let every employee take in consideration:

The office chair

- * height: support under the thighs, feet touching the floor**
- * seat: deep enough to make room for a fist behind the knee**
- * back rest: should give support to the small of the back, and be adjustable**
- * arm rest: should be adjustable up and down, and in with**

Expert support I:

The desk and computer equipment

- * desk adjust in height to just beneath the elbow
- * sit near enough to give support to elbows and wrists on the desk top
- * keep elbows near to the body
- * place VDU in front of you at a minimum of 50 cm with enough room for keyboard and mouse
- * place mouse beside the keyboard and vary by using left and right hand
- * remove hard disc from under VDU – under the desk will minimise irritating noise

Additional equipment

- * use a headphone when working with intensive telephone work
- * place manuscript between keyboard and VDU or at the side of VDU

Expert support I:

Lighting

- * less light is required around the VDU than otherwise in the room
- * a desk lamp may be required
- * use curtains or venetian blinds to prevent reflections

Visual ergonomics

- * take small breaks, look out of the window
- * avoid flickering on VDU
- * adjust contrast on VDU so that it feels comfortable for the eyes

Variation

- * vary working position, vary work tasks, stand up and exercise your body

Psychosocial environment

- * cooperation
- * HSE training
- * flexibility
- * job control

Expert support II:

Discuss and teach managers the importance of giving each employee own control and flexibility in their daily work.

Support managers in surveys, planning, activities, documentation and reporting.

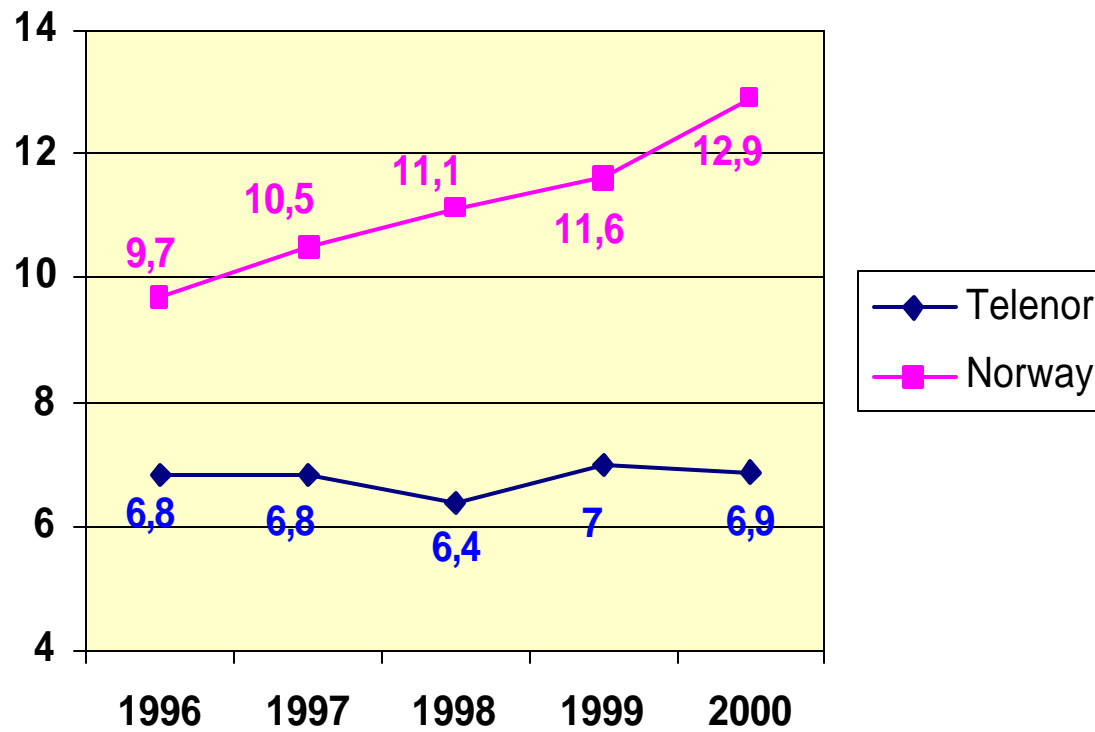
(Management HSE Quality System)

Consequence:

Physiotherapists and other ergonomic experts must have a broad professional competence – according to the content of the macroergonomic discipline.

Sick absence – lost days/year

Telenor vs average of Norwegian industry



Telenors Environmental Report 2000:

- * External environment**
- * Working environment**
- * Ethics**

<http://www.telenor.com/reports/2000/environment>

