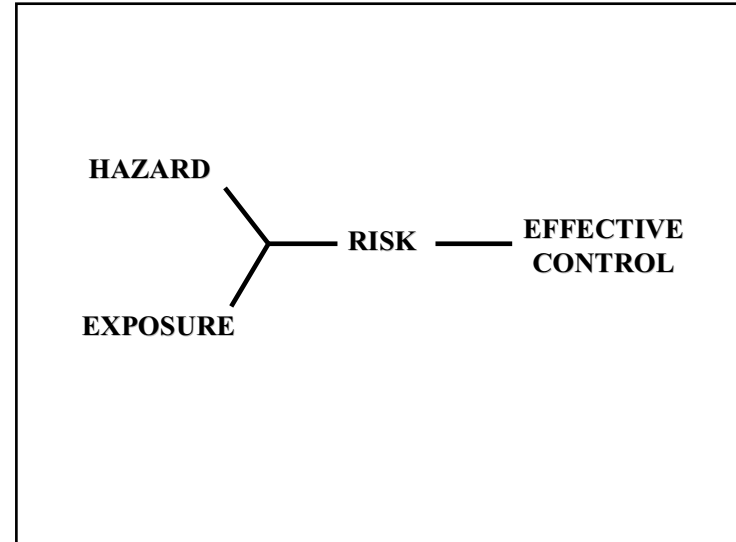


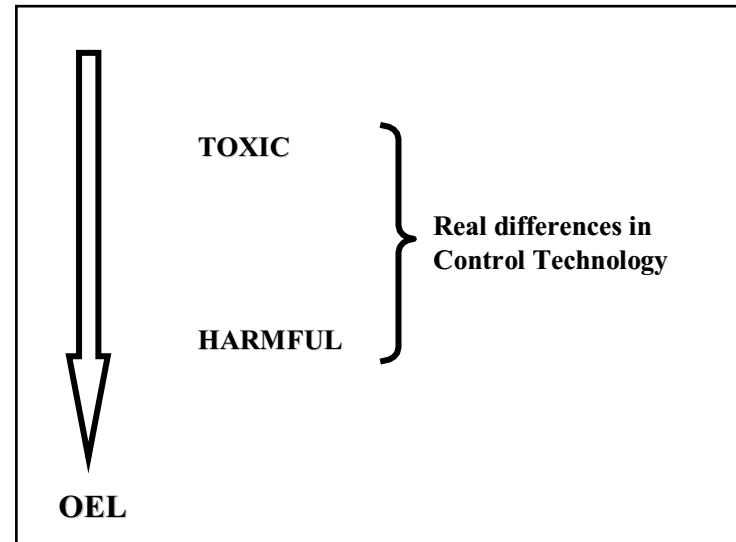
CONTROL BANDING

AN OVERVIEW

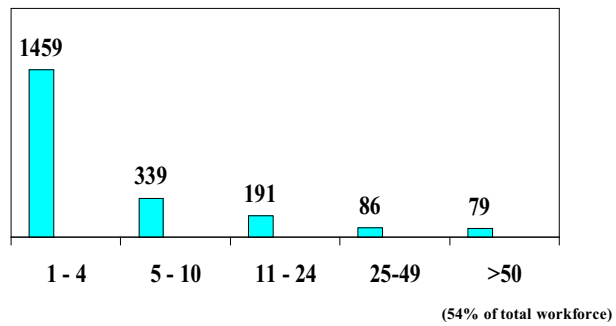
Dr Paul Oldershaw
HSE



- SKILLS AVAILABILITY**
- Moving from hazard to risk is difficult
 - Addressing risk by controls is difficult
 - Training is scarce over much of the world

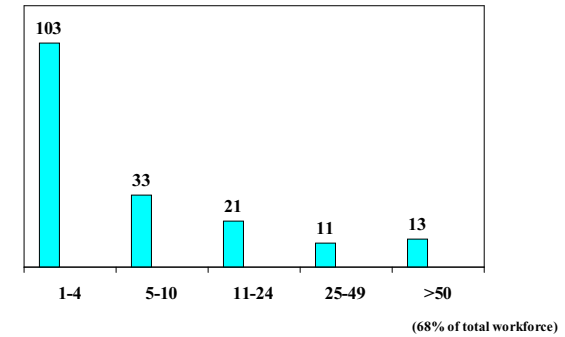


ALL INDUSTRIES
Number of workplaces (x1000)
by size (employees)



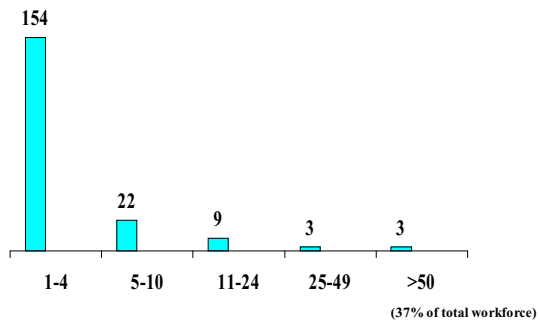
Annual Business Enquiry 2000

MANUFACTURING
Number of workplaces (x1000) by size (employees)



Annual Business Enquiry 2000

CONSTRUCTION
Number of workplaces (x1000) by size (employees)



Annual Business Enquiry 2000

Five Key Sectors Studied

- Hairdressing
- Electro-plating
- Dry cleaning
- Car repair garages
- Wood treatment plants

Very small businesses

- Non-hierarchical
- Stable
- Oral not written
- Dependent on suppliers for information
- Literacy poor but
- Belief that their chemicals aren't dangerous
- Poor knowledge of health effects
 - Better for acute than long term
- Controls decided by custom and practice, not risk assessment

In Summary

- **Micro businesses are not big business only smaller**
- **The tools developed for big companies may not be adequate in controlling chemical risks**
- **Need to adapt to different cultures**
- **Specific control action not limits / measurement / risk assessment**
- **Measurement is very costly**

MEASUREMENT

- **Needs an infrastructure**
 - **Hardware**
 - **Standards**
 - **Software (people)**
- **A single simple personal sample may cost > \$400**
- **Three-quarters of the Member States of WHO spend less than this per capita on their health systems**

Exposure Limit → Measurement Method

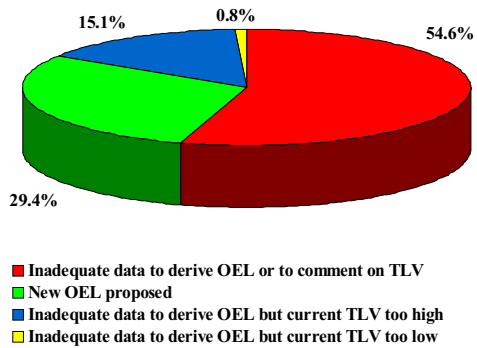
Capability - Hardware
- People

Legal - Compliance
- Responsibility on State

Structure

Cost is Great / Benefit
Uncertain

Dutch-led Committee on TLVs



VALUE JUDGEMENTS

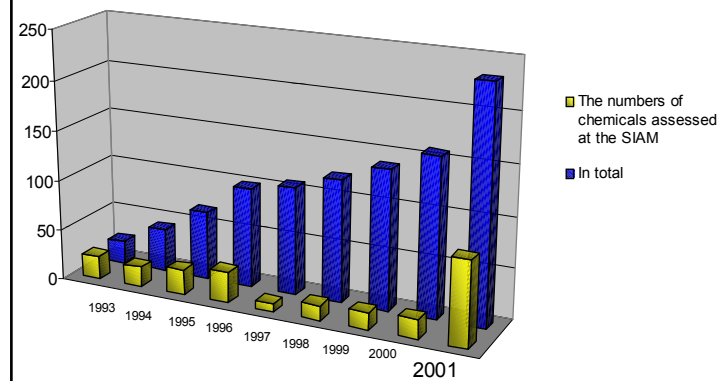
- What is the **HAZARD**
- What is **UNACCEPTABLE ILL HEALTH OR RISK**
- What is the **EXPOSURE**
- What is the **ASSURANCE SOUGHT**
- What are the **CAPABILITIES**
- What are the **OPTIONS**
- What is competing for the **RESOURCE**

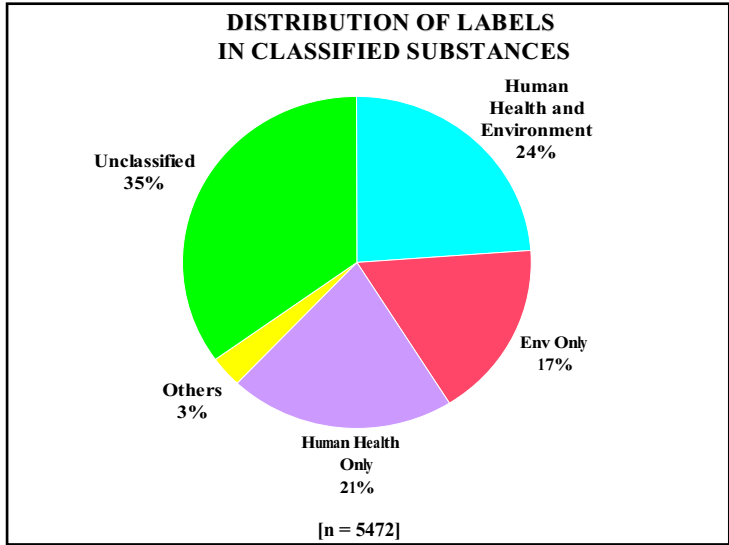
OCCUPATIONAL HEALTH INVESTMENT COMPETES WITH

- **Industrial change**
- **Demographic change**
- **Environmental concerns**
- **Public health concerns**
- **Immediate problems**

The number of chemicals

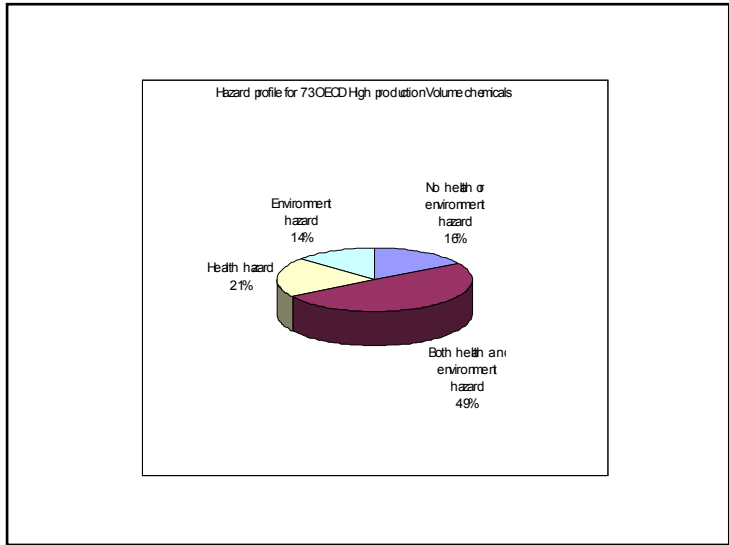
- by years -





**EU NOTIFIED SUBSTANCES
BY CLASSIFICATION (%)**

Toxic and very toxic	3.0
Harmful	20.0
Sensitiser	23.6
Irritant	12.3
CMR	3.4
Environmental	40.5
Corrosive	4.4
Unclassified	35.1



However many variations of hazard and risk computations, there are few control choices

In a practical world, substances must be assigned to one of these

CONTROL BANDING

- One of several tools to help control
- All have limitations
- Choice must be 'Fit for Purpose'

OPTIONS ARE NEEDED

- At the national level
- At the industry level
- In a business

SOLUTIONS

- Must be cost effective for the user
- Must meet national requirements
- Must be 'owned' and understood by user

	<u>OEL</u>	<u>Control Banding</u>	<u>Approval</u>
Hazard Assessment	✓	✓	✓
Risk Assessment	✓	(✓)	-
Measurement	✓	(✓)	-
SME useable	-	✓	✓
Skills need	High	Medium	Low
Cost	High	Low	Medium/High
Practicality	Low	Medium	Medium
Assurance	Medium	Medium	High

A HEALTH WARNING ON BANDING

- **Needs intelligent use**
- **Cannot do everything**
- **Needs teaching**
- **A value is its simplicity**
- **Need to know context of its use**
- **Need to be safeguards**