

Safety Pays

The Economics of Prevention



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issa | mining

INTERNATIONAL SOCIAL SECURITY ASSOCIATION

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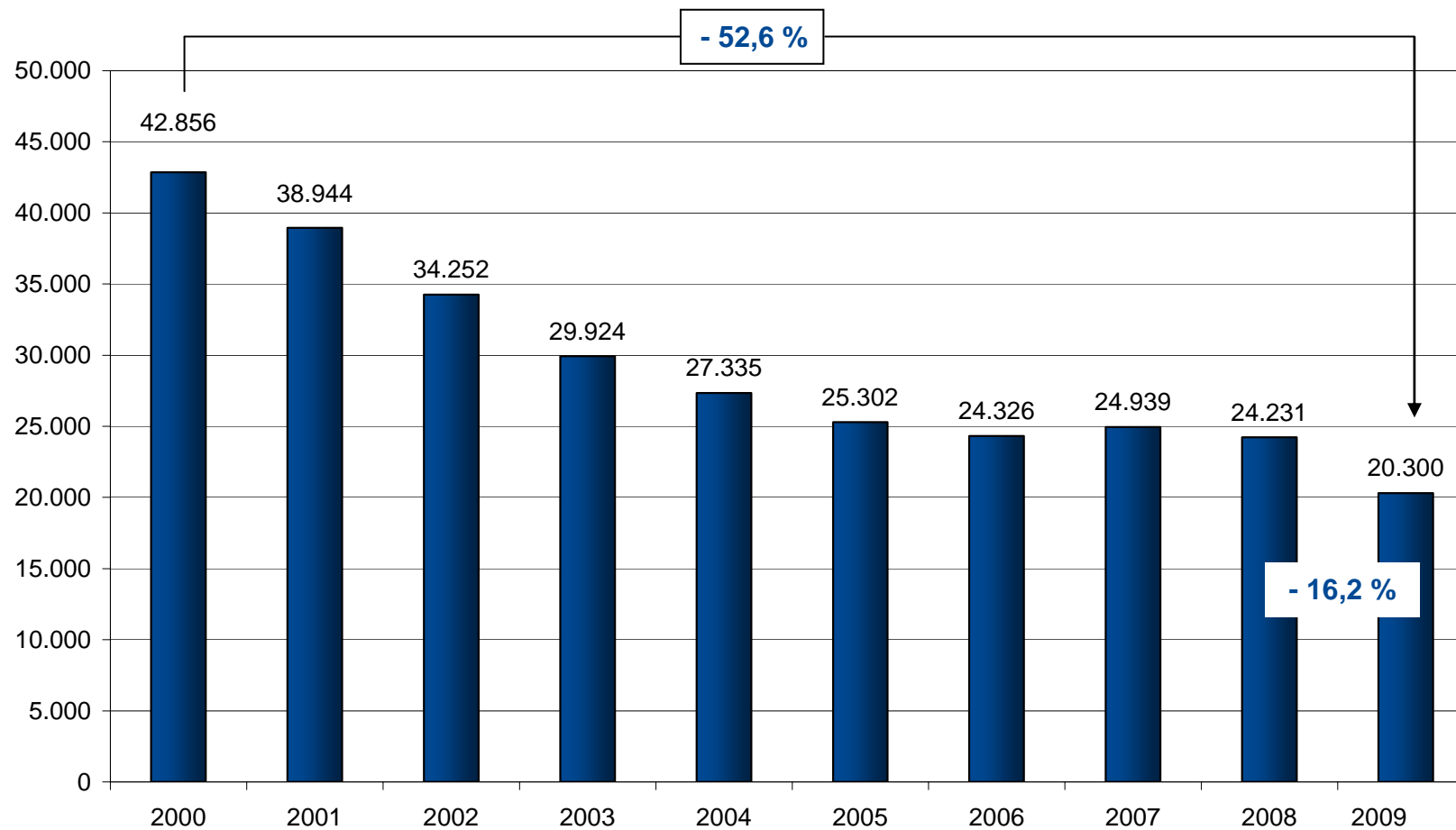
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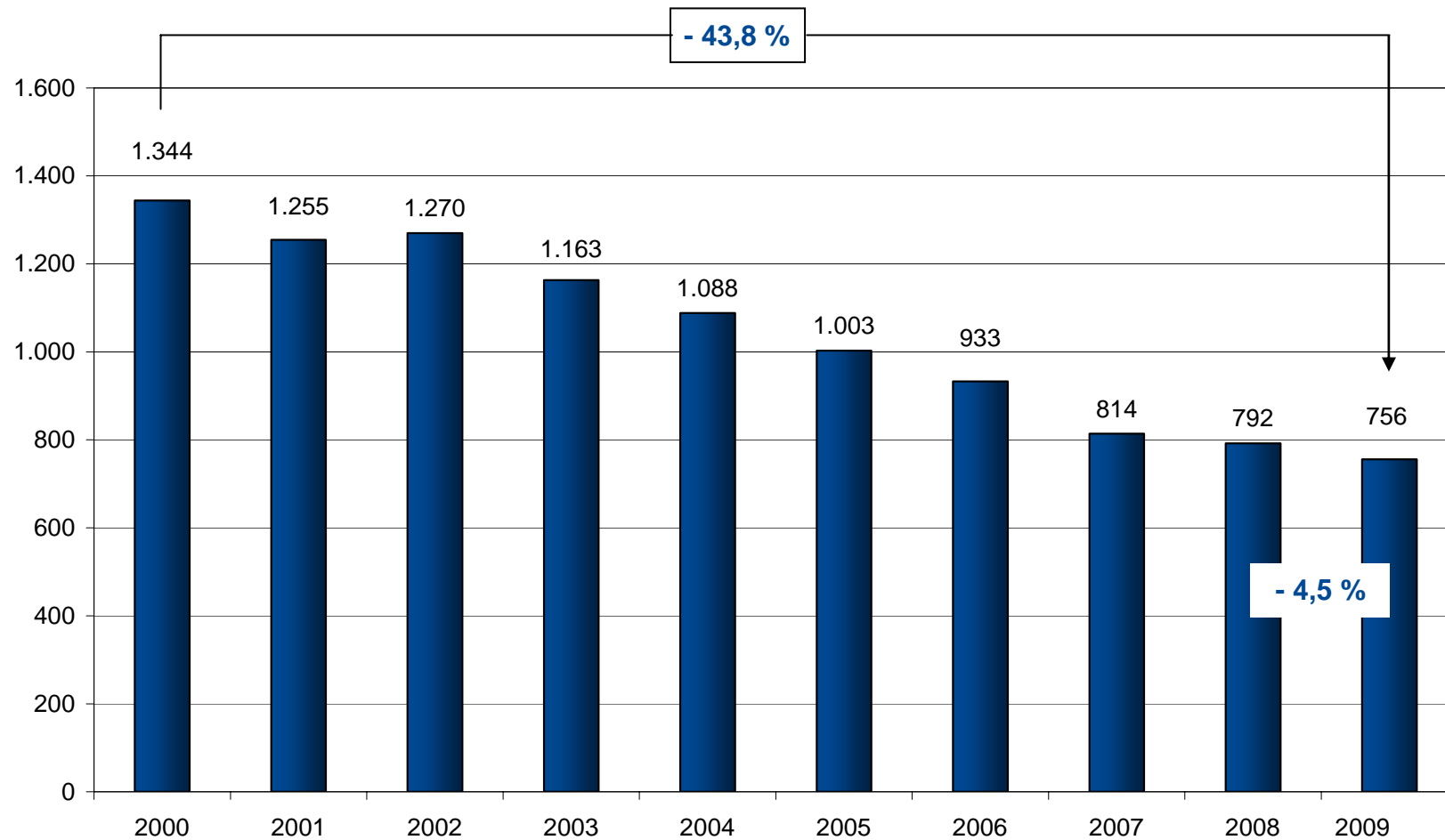


Occupational Accident Trend

■ Notifiable Occupational Accidents



■ New Occupational Accident Pensions



Germany 2008:

nearly

1.000.000

**notifiable
occupational
accidents**

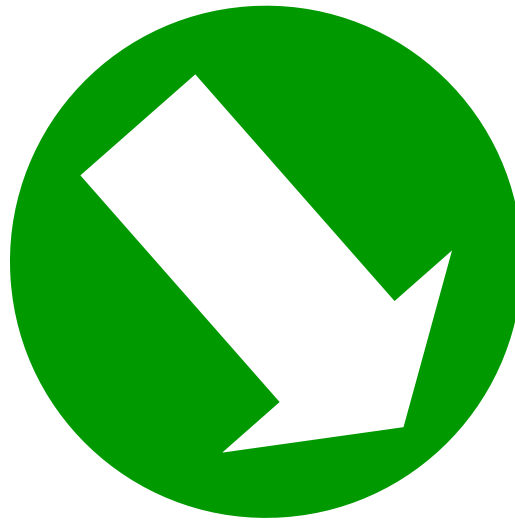


Consequences

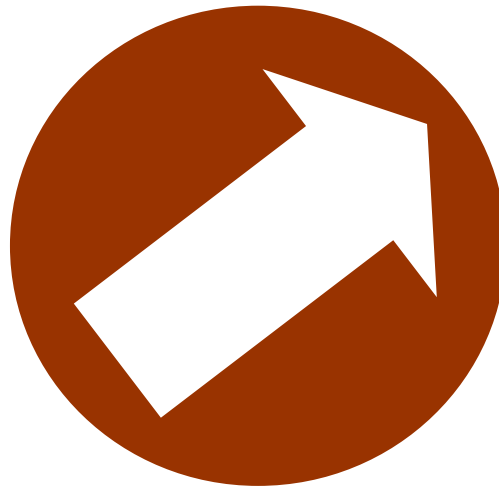


Leadership

Technical Faults

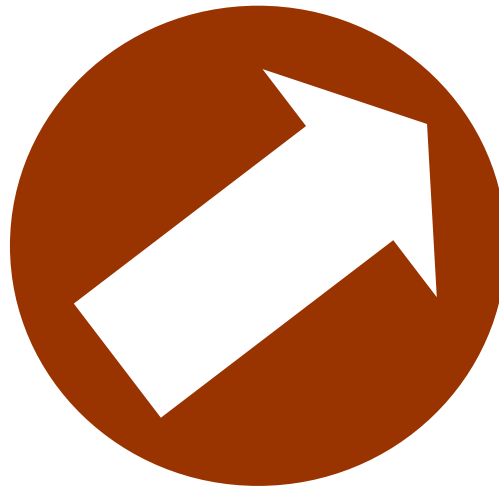


Behavioral Faults





Organizational Faults







Image



Drama an der Baustelle
 Feuerwehrleute netzten am Donnerstag vor der Fassade der Baustelle ein Netz aus Sicherheitsnetzen, das sich nur noch mit Mühe in seinen Köben festhalten konnte. Zuvor hatte ein Lastwagen den Hubwagen der Baustelle in die Höhe geschleudert und in Schwingungen versetzt. Der Kollege des Hubwagenführers, ein 46-jähriger Familienvater aus Rommelspurg, stürzte 26 Meter in die Tiefe und starb. Seite 10

Arbeiter durch Betonteil verletzt

Bei einem Arbeitsunfall auf dem Gelände der Zementfabrik in ... an der Grenze zu ... ist am Sonntagvormittag ein 46-jähriger Arbeiter schwer verletzt worden. Gegen 12 Uhr befand sich der Mann auf einem etwa drei Meter hohen Gerüst, als sich von einem mobilen Kran ein zwölf Tonnen schweres Betonteil löste. Die Last fiel auf das Gerüst und anschließend zu Boden. Der Arbeiter wurde durch den Aufprall in die Tiefe gerissen. Er zog sich schwere Kopfverletzungen zu. Das Gewerbeaufsichtsamt hat mit den Ermittlungen begonnen. Die Mitarbeiter sollen klären, warum sich das Betonteil vom Kran lösen konnte. tm

14 ...

Flex durchtrennt Halsschlagader

20-jähriger Lehrling stirbt auf der Baustelle / Geselle erleidet Schock und kommt in Klinik

Von ...
 Wie tragischer Unfall hat sich gestern ereignet. Bei der Arbeit hat ein 20-jähriger Lehrling eine Axt in die Halschlagader eines 30-jährigen Arbeiters geschlagen. Der Arbeiter ist schwer verletzt und muss im Krankenhaus behandelt werden. Die Axt wurde sofort entfernt. Die Ärzte hoffen, dass der Arbeiter überleben wird.

...
 ...
 ...

...
 ...
 ...

...
 ...
 ...



Der Mann trägt die Wasserflasche in einer Tasche an dem Rücken.

Bevers Riese

Tübingen

...
 ...
 ...

Benzintransporter brennt in Mielke

...
 ...
 ...

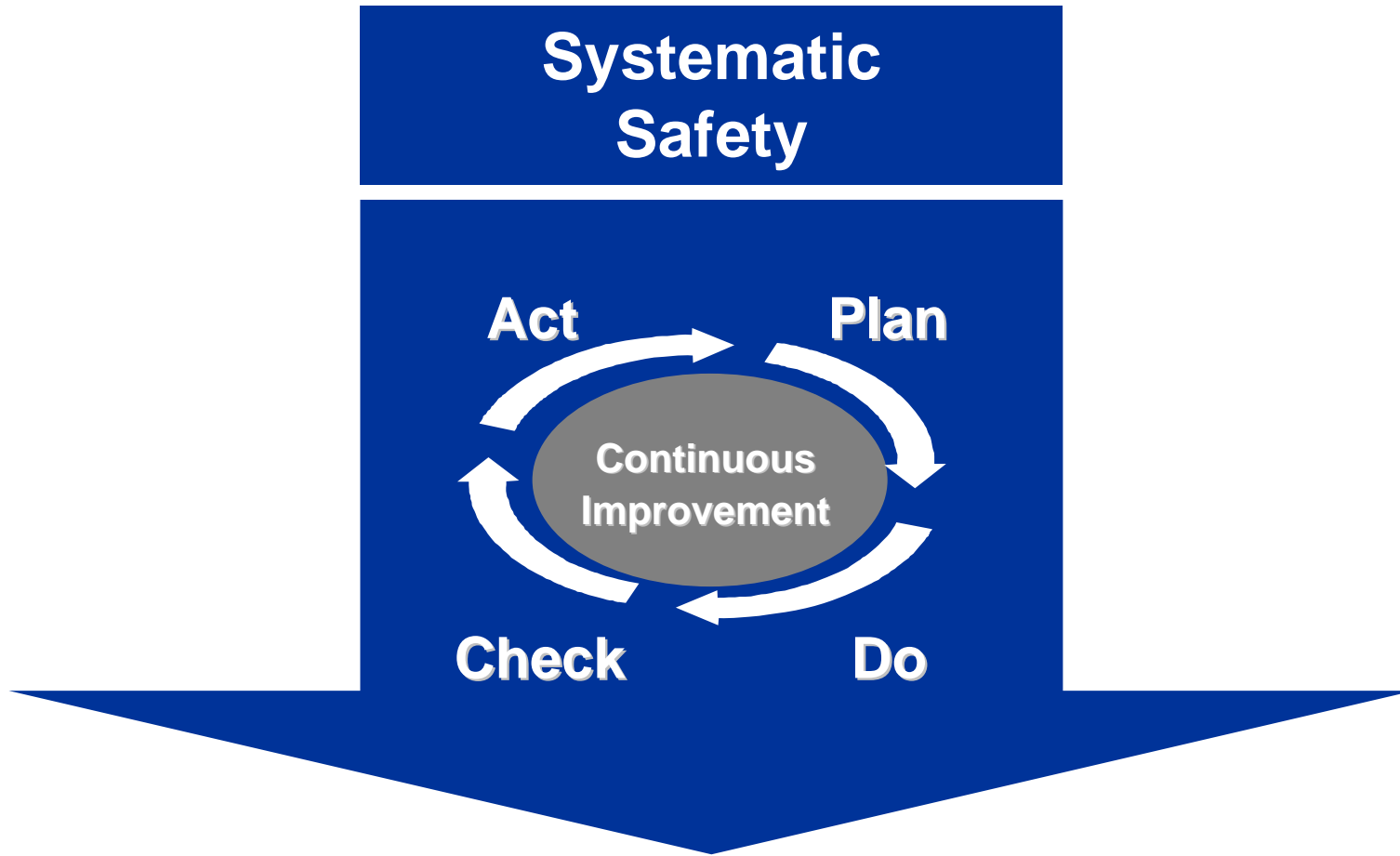




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Quality

Systematic Safety



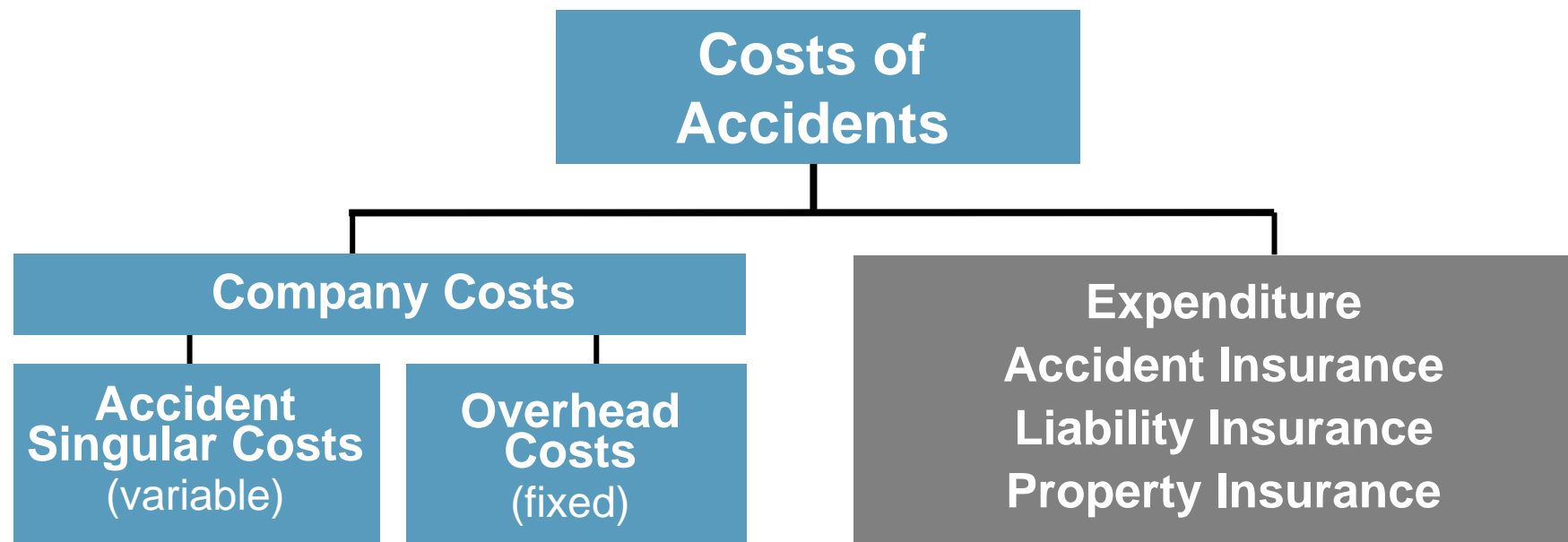
Production without Interruption



4

Costs

■ Costs of Accidents



■ Costs of Accidents – Singular Costs

- wages
- material costs
- measures against loss of production
- loss in sales
- medical care and transport of injured
- administrative costs
- contributions to statutory accident insurance
- ...

■ Overhead Costs

Insurance Contributions

- statutory accident insurance
- liability insurance
- property insurance
- ...

Costs of Provision

- standby staff
- standby materials
- first aid facilities
- ...

■ Accident Example

In 1996 Enrico J. (23 years old) squeezed his neck while cleaning a finishing machine for concrete stones.

Consequences:

- Fracture of the Spinal Column
- Tearing of the Spinal Cord
- Paralysis

Total Costs to Date:
aprox. 6,2 Mio. Euro



- # Annual Compensatory Payment of the Statutory Accident Insurance (DGUV) in Germany

8.7 Billion Euro




Annual Loss of Gross National Product within European Union

2.6 - 3.8%



Annual Loss Worldwide:

1.25 trillion US-Dollar
(4.0%)



What Can Each Company Do?



7 Golden Rules for Safe and Economical Production



- **7 Golden Rules for Safe and Economical Production**

1.

Leadership and Commitment



■ 7 Golden Rules for Safe and Economical Production

2.

Identify Hazards and Risks

■ 7 Golden Rules for Safe and Economical Production

3.

**Set Safety and
Health Targets**

■ 7 Golden Rules for Safe and Economical Production

4.

**Ensure
a Safe System**

■ 7 Golden Rules for Safe and Economical Production

5.

**Use
Safe and Healthy
Technology**

■ 7 Golden Rules for Safe and Economical Production

6.

**Improve
the Qualification
of your Staff**

- **7 Golden Rules for Safe and Economical Production**

7.

**Invest in Your
Most Valuable Capital:
Motivate your Employees**



Tools for better Safety and Health

■ The Formal Principle of Contributions to Statutory Accident Insurance Institutions

- Jobs of insured companies are classified in danger tariffs
- Employers hand in proof of the considerations paid on each position of danger tariffs annually
- Contributions are assessed retrospectively each year
- Managing board determines base of contributions
- Rate of contribution = base of contributions x positions of danger tariffs

■ Design Principle of Contributions to Accident Insurance



- Basis: Industrial Trade

■ BG-Principle of Bonus / Malus System

Principal of Individual Enterprise:

(Accident Rates, Severity of Accidents, Costs of Accidents)

Better or worse than average

+/- 25%

- Basis: Individual Enterprise

■ The New Procedure of Balancing Out Contributions

- Contributions of companies can be reduced or increased depending on incidences of accidents
- Basis are bonus and minus brackets
(5 bonus brackets – normal contributions – 5 minus brackets)
- Greatest surcharge = greatest discount
(25 % industrial danger classes, 10 % administration)
- Symmetrical brackets (levels and numbers)
- Amount of discounts = amount of surcharges
- Companies can rise one bracket each year and fall six brackets at most

Bonus System for Investments in Health and Safety

Safe Technology

Safety Management Systems

Initiatives and Campaigns

Health Prevention



■ The Bonus System: Results 2005 – 2009

5,200

15 Mio. Euro

2,900 Euro

Bonus Payments

Total Payments

Average Payment

■ Award Work. Safety. Health.



175

Safety Awards

1 Mio. €

Prize Money

4,250

Ideas

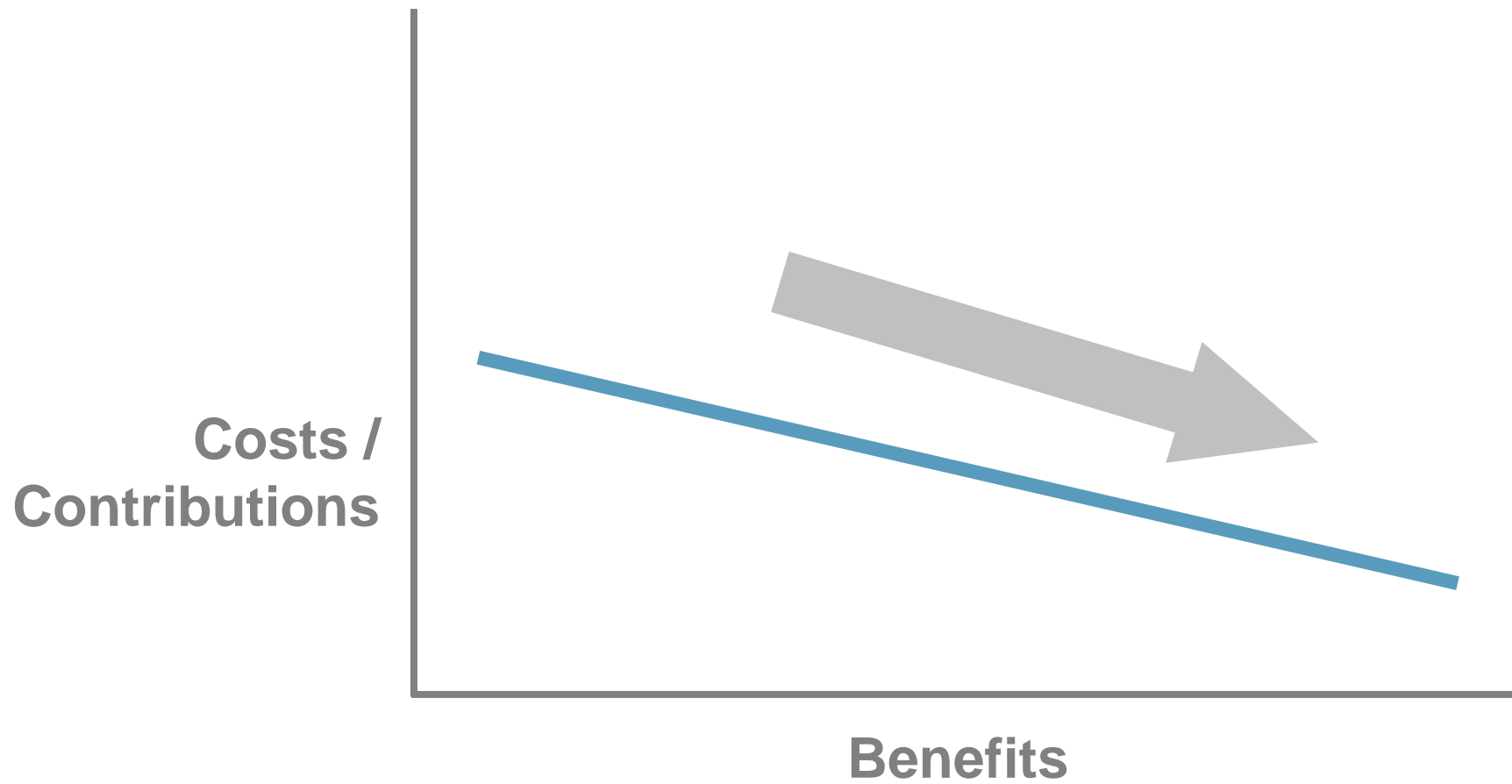
8,000

Participants

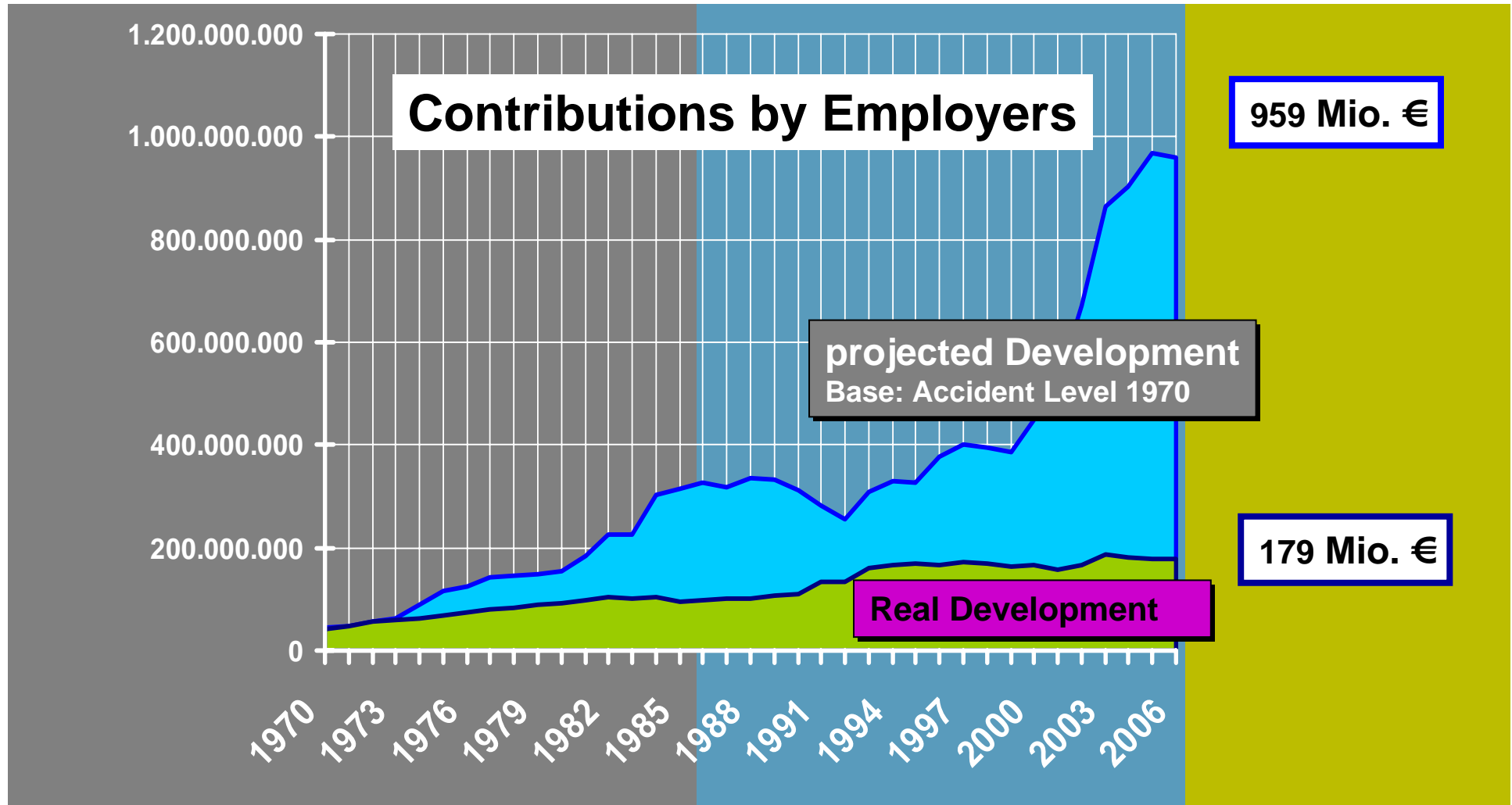


Conclusion

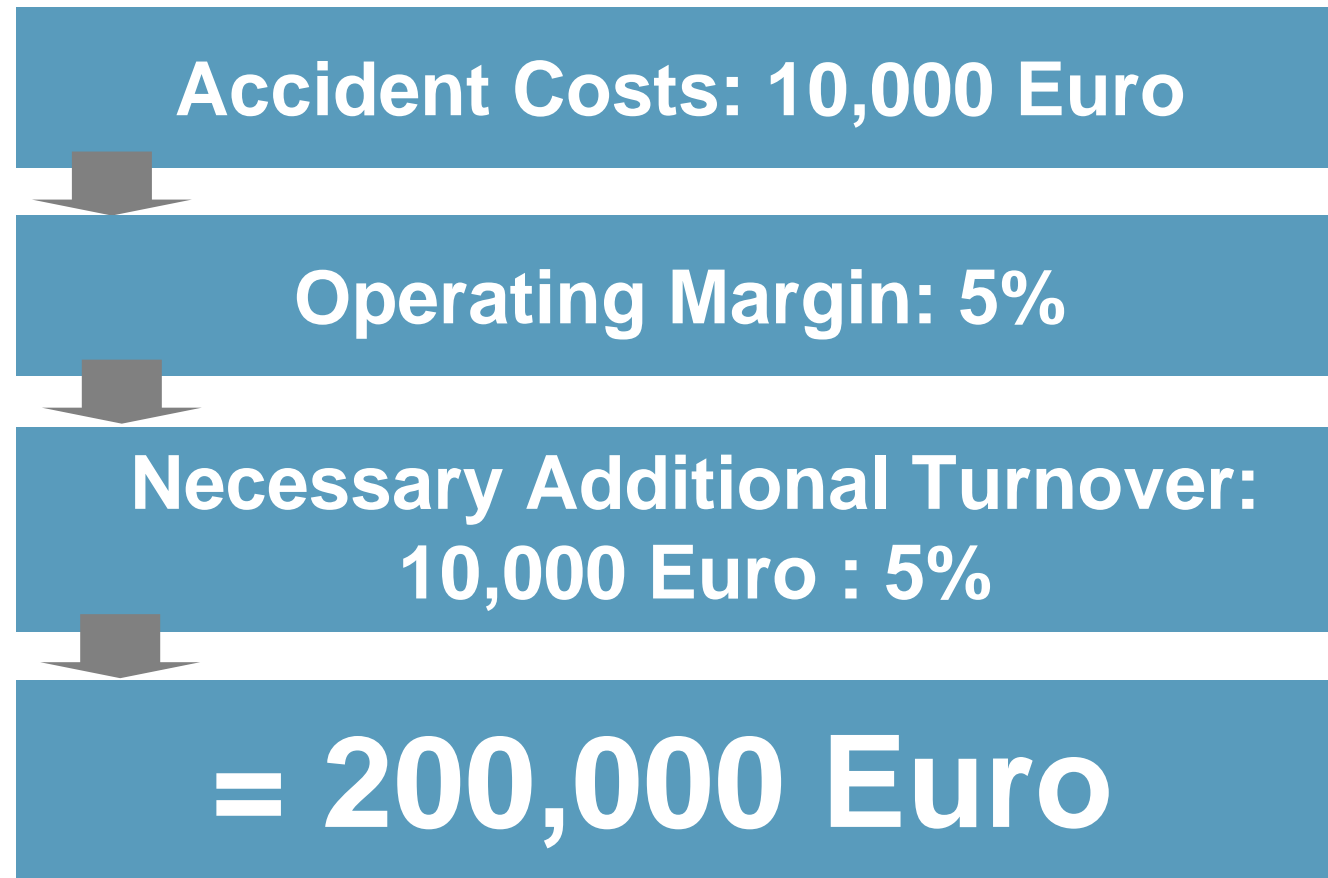
■ Cost Benefit Analysis



■ Effects of Prevention in Euro



■ Economical Calculation (Principle)





$$R o P = 1.6$$

**Each Euro invested in Safety at Work
creates an Economic
Potential of Euro
1.60
(Return on Prevention)**

Source: Prof. Dr. Dietmar Bräunig, University of Giessen,
Project „Balance of Prevention from Theoretical
and Empirical Point of View“, Quality in Prevention



Safety pays !

Thank You for Your Attention

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