

國立臺北大學自然資源與環境管理研究所

102 學年度第二學期『環境災害與風險管理』

課程講義 (13)：職安衛管理系統與風險管理國際標準
Occupational Health and Safety Management System; Risk Management System

http://www.iaw.rwth-aachen.de/index.php?article_id=510&clang=1

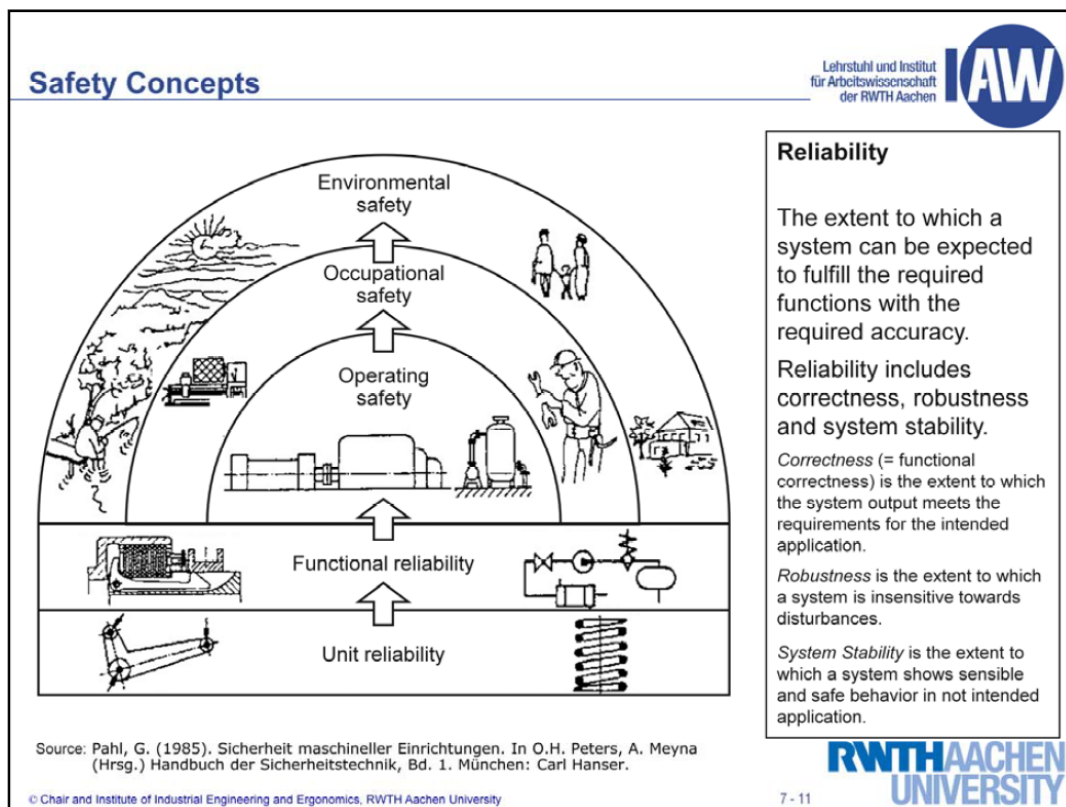
Industrial Engineering and Ergonomics

<http://www.toshms.org.tw/Intro.aspx>

TOSHMS台灣職業安全衛生管理系統資訊網

● INTRODUCTION

- Occupational Health and Safety => Occupational Risks
- Occupational Safety => Safety Engineering and Ergonomics
- Ethical Responsibility, Legal Obligation, and Economical Effects of Occupational Safety for the Company => Social Responsibility
- [勞動部勞動及職業安全衛生研究所](#)
- Safety Concepts: Industrial Engineering and Ergonomics (Unit 6 -- Occupational risk prevention) http://www.iaw.rwth-aachen.de/files/iee_le06_wise13_slides+comments.pdf



● OHSAS 18000 SERIES

- OHSAS 18000 (Occupational Health and Safety Assessment Series 18000) 由英國標準協會協同 SGS 等全球主要標準制定機構、驗證機構與專業組織整合諸多安衛管理系統標準（如 BS 8800、ISA 2000、AS/NZ4801 等）共同發展而成。
- ⇒ Management Systems: QMS, EMS, OHSMS, FSMS and ISMS

- ⇒ OHSAS Standard for OHSMS implementation and auditing => Not ISO Standard
- ⇒ P.D.C.A Management Cycle
- OHSAS 18001:2007 Occupational Health and Safety Management System -- Specification (職業安全衛生管理系統—規格) 驗證用之標準
- OHSAS 18002:2008 Guidelines for the implementation of OHSAS 18001 (OHSAS 18001 之實施指導綱要) 提供組織建置及實施 OHSAS 18001 之指導綱要
- TOSHMS (臺灣職業安全衛生管理系統 <http://www.toshms.org.tw/>)
 - TOSHMS (Taiwan Occupational Safety and Health Management System) :
 - ⇒ 勞動部 (前身：行政院勞工委員會) ...於 2007 年修正相關法規，規定高風險且大型的事業單位 (一類勞工人數 300 人以上者) 需優先推動職業安全衛生管理系統，並以創新的「聯集」概念整併 ILO-OSH:2001 與 OHSAS 18001:2007 之要項及要求，...訂頒...「臺灣職業安全衛生管理系統 (Taiwan Occupational Safety and Health Management System, 簡稱為 TOSHMS)」相關規範，作為事業單位推動職業安全衛生管理系統之參考準則，其中「臺灣職業安全衛生管理系統驗證規範」及「臺灣職業安全衛生管理系統指導綱領」,已...於 2011 年 11 月 29 日公告為「職業安全衛生管理系統--要求」及「職業安全衛生管理系統--指導綱要」國家標準(分別為 CNS 15506 與 CNS 15507), ...2013 年修正公布之職業安全衛生法，更明定達一定規模以上者、從事石油裂解之石化工業工作場所或從事製造、處置或使用危害性之化學品數量達一定數量之工作場所，該等事業單位均應建置職業安全衛生管理系統。
 - ⇒ 職業安全衛生管理系統(TOSHMS)相關技術指引
(<http://www.iosh.gov.tw/Law/LawPublish.aspx?LID=40>)
 - [危害辨識及風險評估技術指引](#)
 - ⇒ 危害辨識及風險評估作業流程
 - ⇒ 風險評估方法：
 - 初步危害分析 (Preliminary Hazard Analysis)； 檢核表 (Checklist)
 - 如果—結果分析 (What-If)； 故障樹分析 (Fault Tree Analysis, FTA)
 - 危害及可操作性分析(Hazard and Operability Studies, HazOp)
 - 失誤模式與影響分析 (Failure Modes and Effects Analysis, FMEA)
 - ⇒ 危害辨識：物理性、化學性、生物性、人因工程、心理性等五大類危害
 - ⇒ 簡易風險等級分類

風險等級		嚴重性		
		嚴重傷害	中度傷害	輕度傷害
可能性	可能	高度風險	高度風險	中度風險
	不太可能	高度風險	中度風險	輕度風險
	極不可能	中度風險	輕度風險	輕度風險

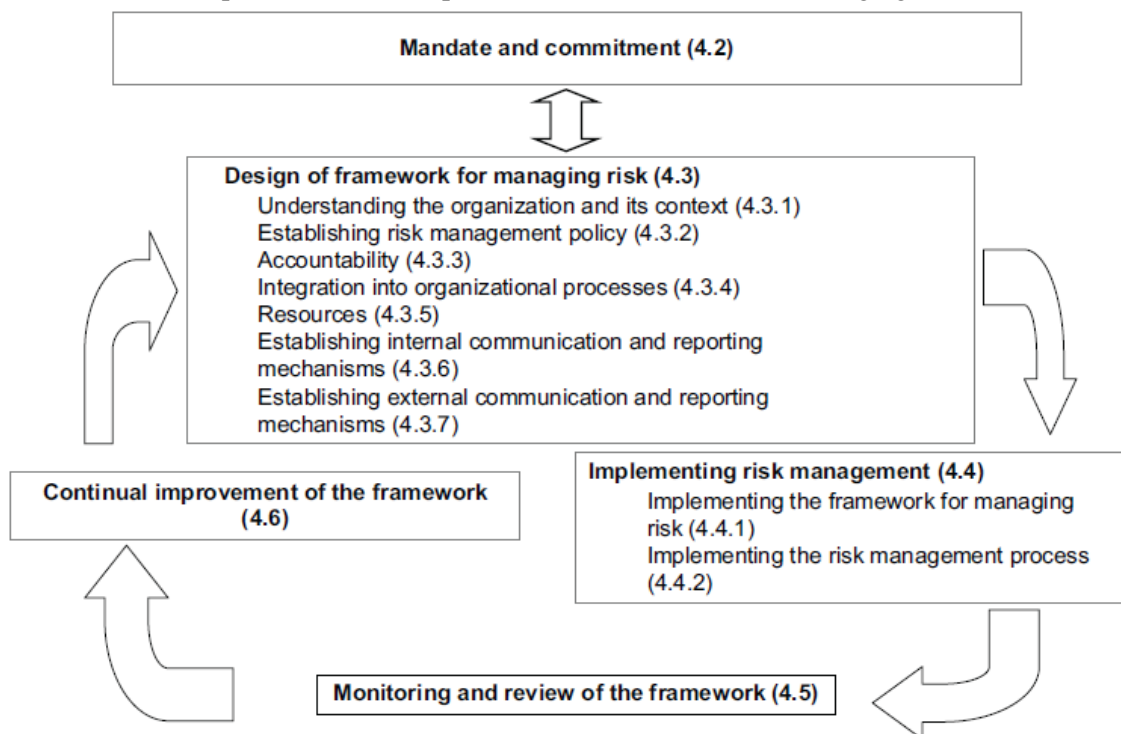
- ISO 31000: RISK MANAGEMENT

- Historical Aspects
 - ⇒ AS/NZS 4360:1999 Risk Management Standard
 - ⇒ JIS Q 2001:2001 Guidelines for Development and Implementation of Risk Management System
 - ⇒ AS/NZS 4360:2004 (Revision) => HB 436 Risk Management Guidelines
 - ⇒ BS 31100:2008 Risk Management – Code of practice

- ⇒ ISO 31000:2009 Risk Management – Principles and guidelines
- ⇒ ISO/IEC 31010:2009 Risk management – Risk assessment techniques

□ Terms and definitions

- ⇒ 2.1 Risk: Effect of uncertainty on objectives
- ⇒ 2.2 Risk Management: Coordinated activities to direct and control an organization with regard to risk
- ⇒ 2.3 Risk Management Framework: Set of components that provide the foundations and organizational arrangements for designing, implementing, monitoring (2.28), reviewing and continually improving risk management (2.2) throughout the organization.
- ⇒ 2.14 Risk Assessment: Overall process of risk identification (2.15), risk analysis (2.21) and risk evaluation (2.24)
- ⇒ 2.15 Risk Identification: Process of finding, recognizing and describing risks
- ⇒ 2.21 Risk Analysis: Process to comprehend the nature of risk (2.1) and to determine the level of risk (2.23)
- ⇒ 2.23 Level of Risk: Magnitude of a risk (2.1) or combination of risks, expressed in terms of the combination of consequences (2.18) and their likelihood (2.19)
- ⇒ 2.24 Risk Evaluation: Process of comparing the results of risk analysis (2.21) with risk criteria (2.22) to determine whether the risk (2.1) and/or its magnitude is acceptable or tolerable
- ⇒ 2.25 Risk Treatment: Process to modify risk (2.1)
 - avoiding the risk by deciding not to start or continue with the activity that gives rise to the risk
 - taking or increasing risk in order to pursue an opportunity
 - removing the risk source (2.16)
 - changing the likelihood (2.19)
 - changing the consequences (2.18)
 - sharing the risk with another party or parties (including contracts and risk financing)
 - retaining the risk by informed decision
- ⇒ Relationship between the components of the framework for managing risk



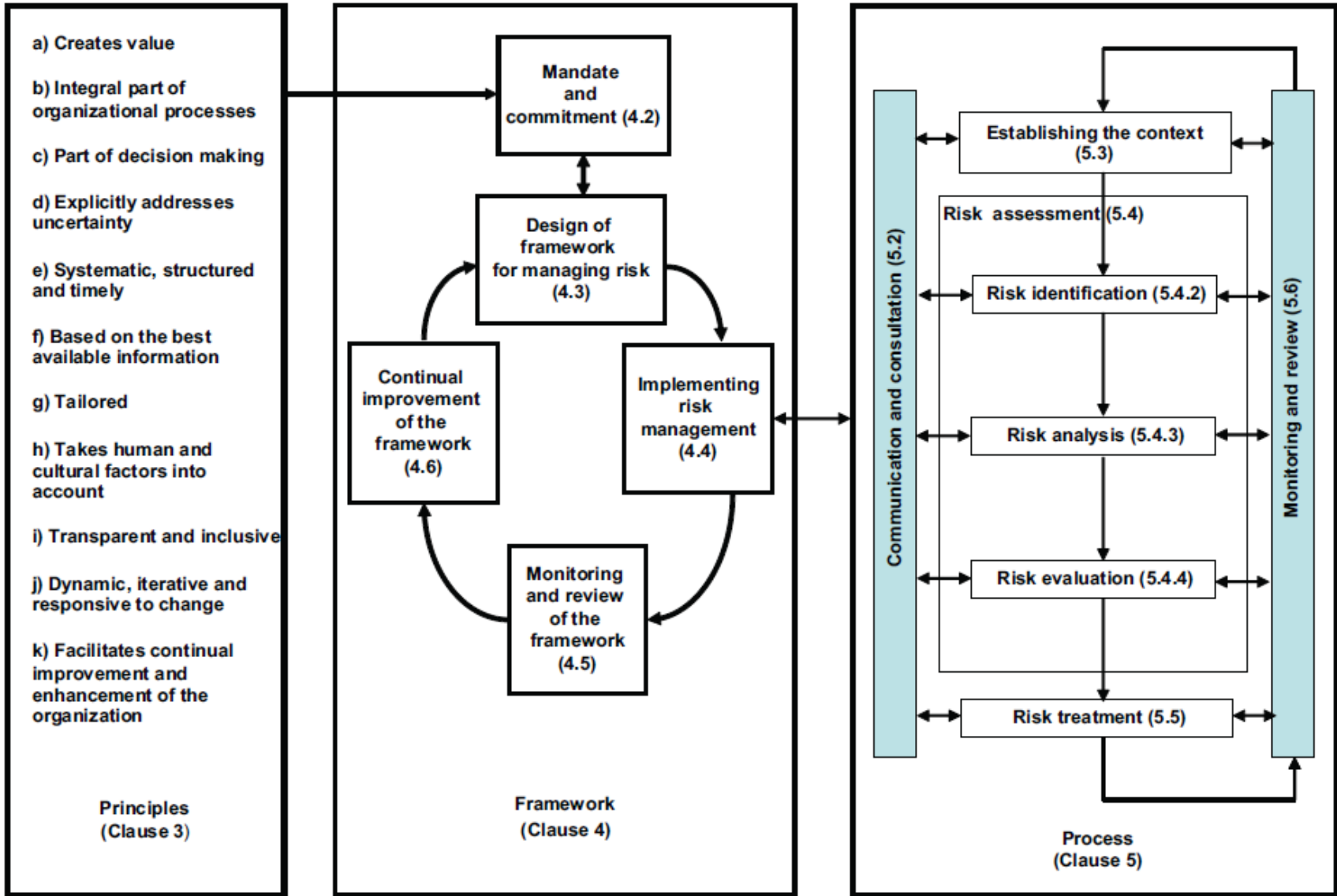


Figure 1: Relationships between the risk management principles, framework and process

