Innovative strategies, methods and tools for occupational risks management of manufactured nanomaterials (MNMs) in the construction industry

GUIDE FOR THE IMPLEMENTATION AND THE AUDIT OF SCAFFOLD’S RISK MANAGEMENT MODEL FOR SMES IN RELATION WITH MANUFACTURED NANOMATERIALS (MNMs) IN THE CONSTRUCTION SECTOR

Soledad Contreras Malavé, Lucía Ortiz Arroyo, Sonia Fernández González, Jesús López de Ipiña

17.10.2014

The Scaffold research has received funding from the European Community’s Seventh Framework Programme (FP7/20072013) under grant agreement number 280535.
INDEX

1  EXECUTIVE SUMMARY ........................................................................................................................................... 3
2  OBJECTIVES ............................................................................................................................................................ 5
3  SCOPE ........................................................................................................................................................................ 6
4  GUIDANCE SHEETS FOR MNMs RMM IMPLEMENTATION IN SMEs ...................................................... 7
   4.1  Context. Scope determination and requirements for the MNMs RMM .................................................. 8
   4.2  MNM risk management policy and management commitment .......................................................... 9
   4.3  Planning .............................................................................................................................................................. 10
          a) MNMs risk assessment .......................................................................................................................... 10
          b) MNMs risk treatment ............................................................................................................................ 12
          c) Legal and other requirements .............................................................................................................. 13
          d) Objectives and programmes ............................................................................................................... 14
   4.4  Implementation and operation ......................................................................................................................... 15
          a) Resources, roles, responsibility, accountability and authority .......................................................... 15
          b) Competence, training and awareness .................................................................................................. 16
          c) Communication, participation and consultation .............................................................................. 17
          d) Documentation ....................................................................................................................................... 18
          e) Control of documents .......................................................................................................................... 19
          f) MNMs operational control ................................................................................................................. 20
          g) MNMs emergencies preparedness and response .............................................................................. 21
   4.5  Checking ................................................................................................................................................................ 22
          a) Monitoring and measurement of MNMs risk management activities ............................................. 22
          b) Legal Compliance Evaluation ........................................................................................................... 23
          c) Incident investigation, non-conformity, corrective action and preventive action ....................... 24
          d) Control of records ............................................................................................................................... 25
          e) Internal Audits ....................................................................................................................................... 26
   4.6  Management review ......................................................................................................................................... 27
5  CONCLUSIONS .......................................................................................................................................................... 28
6  CHECK LIST QUESTIONS FOR INITIAL DIAGNOSTIC, IMPLEMENTATION AND AUDIT .................................................................................................................................................................................. 29
   6.1  Questions for initial diagnostic/review ......................................................................................................... 30
   6.2  Questions for RRM implementation in SMEs ............................................................................................... 33
   6.3  Questions for RMM audit in SMEs .................................................................................................................... 40
7  REFERENCES OF KNOWLEDGE ........................................................................................................................... 47
1 EXECUTIVE SUMMARY

In SMEs the implementation of a management model/system is complex due to lack of resources, costs of establishment and maintenance of the model and sometimes the difficulty in understanding and applying the model.

Furthermore, the characteristics of SMEs influence the management philosophy taking into account the number of workers involved. In general, it could be stated that communications are simple, each worker performs several tasks, and the decision making concerns very few persons.

SME practices usually attempt to minimize the time and money in these issues so that SME investment in improving OSH management focused on MNM Risks must remain low.

This guide has been developed to implement the SCAFFOLD MNMs RMM effectively and with fewer resources as possible. For the success in this implementation, the obvious first step is to understand the model and its requirements.

Since the purpose of the model is not to impose a new way of working in case the company has a previous management system implemented, the next step is to examine the current situation through an initial diagnosis. The SME should examine what is being done already, and if no documentation exists to change the activities of the organization and introduce more bureaucracy and management documents.

The company will need to know the resources available (staff and time) and the necessary help, in this case, will be determined by the use of specific Toolkit for SMEs developed by as part of SCAFFOLD/WP 5 with many resources, formats, documents, examples, practical check lists and information to implement and finally audit the designed MNMs RMM in each company.

Taking into account AENOR experience in management systems audits, the main causes of possible failures are:

- The top management is not involved (for lack of will, time or means);
- Employees not actively participate due to lack of communication and motivation.

The use of the Toolkit will significantly facilitate the implementation of the RMM and the achievement of objectives. The Toolkit design and functionalities are deeply developed in other SCAFFOLD RMM reports but from the implementation and audit point of view the key elements are:

- Review and preliminary evaluation;
- Training;
- Implementation help;
- Verification of compliance through Key questions.
This guide elaborated in sheet format will also be included in future version of this software tool to provide specifically for SMEs set up the needed help to implement the MNMs RMM associated with the negative answers in the SMEs battery of questions in implementation.
2 OBJECTIVES

This guide is drafted to establish criteria for interpreting the MNMs RMM included in SCAFFOLD’s Guide for RMM implementation in the construction sector (SPD14) to facilitate implementation in the SME construction companies in to the entire life cycle of the construction sector.

Additionally to model requirements brief and practical explanation this guide includes examples of registers/procedures/formats to use in order to document and in general implement the RMM and also demonstrate compliance.
3 SCOPE

The scope of this guide is present an easy and attractive format guide for any SME organization that belongs to the construction sector and its activity that has MNM Risks and wants to implement the RMM described in SCAFFOLD’s *Guide for RMM implementation* (SPD14).

This guidance document specifies the requirements that SMEs-organizations need to include (from SPD14) and how they should implement them in order to update their management systems or introduce a new systematic approach in the consideration of this risks if no previous management system is implemented.

This means that it is not necessary to write up all the documentation if there is already a management system implemented (e.g. OHSAS 18001, ISO 31000, etc.) and also that the formats/documents included in each requirement sheet should be produce in case of no management system implemented by the company.
4 GUIDANCE SHEETS FOR MNMs RMM IMPLEMENTATION IN SMEs

This section includes in a friendly format and grouped in concepts the implementation and audit guide for RMM in SMEs. This is conceptually design in terms of information simplicity as with a clear reference structure as FIEC OSHAS Guide for SMEs included in knowledge reference, taking into account that the present SCAFFOLD Guide is conceived to be use by the same sector with the same interest and particularities.

The information is present as ‘sheets’ with the requirement, the more simple implementation guidance as ‘help’ section and examples of registers/procedures to be use.

These registers and procedures are included in the Toolkit that will be available for training, diagnostic, implementation and audit and are listed totally in the Annex 4 of the intermediary SCAFFOLD report D 5.8.

This section is complemented by the questions in the SMEs check list included as section 6 in this guide as simplification of the general check list included in SCAFFOLD’s Guide for RMM initial review, monitoring and audit.
4.1 Context. Scope determination and requirements for the MNMs RMM

**Requirements**

**Context**
The organization shall identify the internal and external context in which the organization performs its activity.

**Necessities and expectations for stakeholders**
When defining the MNMs RMM necessities and expectations of stakeholders must be taken into account.

**Scope determination and requirements for the MNMs RMM**
The scope of the RMM shall be documented as well as exclusions to it.

**Help**

**Context**
The context defines the basic parameters in which MNMs Risk shall be managed.

Key areas of internal context include: culture, Internal stakeholders, structure, resources, objectives and goals, etc...

Whereas the external context involves: business environment, social concerns, threats to the organization, external stakeholder, technological progress, clients demands, regulations, etc.

**Necessities and expectations for stakeholders**
Once the stakeholders have been defined, they shall be categorized by their expectations and necessities, geographical areas, and their impact to the company. This helps to establish priorities to face, as well as that allows a global vision of other possible interactions.

**Scope determination and requirements for the MNMs RMM**
Defining the scope consist on the description of process, products (and/or services), facilities, departments, divisions, etc., of the company where the MNM is going to be applied, so it is important to document the exclusions of the model. Those exclusions shall not affect the ability of the organization to fulfill their objectives and comply with the legal and other requirements.

**Examples**

- A procedure explaining the method of internal stakeholders (employees, owner, contractors, etc.) and external stakeholders (Public Administration, neighbors, clients, etc.).
- Manufactured product Information to users, promoters, etc.
- Context Report: this may include: Company objectives, Company activities, locations where the organization develops the activities, applicable regulations, etc.
### 4.2 MNM risk management policy and management commitment

#### Requirements

**Management commitment**
The Chairman shall express his commitment to the effective implementation of the MNMs RMM, to do so, shall provide the necessary resources (humans, financial and technical) to ensure the effective implementation of the MNM RMM.

**MNM risk management policy**
Top management of the organization is responsible for developing and approving a policy consistent with the MNMs risk presents along the different processes.

This policy shall express the commitment of the company to the compliance with the legal requirements and others, the prevention of injury and ill health, and the continual improvement in MNMs RMM and MNMs risk management performance.

#### Help

**Management commitment**
Chairman, is key for the success of the MNMs RMM, thus, the allocation of human means, financial and technical resources. Roles, functions and responsibilities shall be defined, documented and communicated. An OHS responsible shall be appointed as chairman representative for the MNMs RMM.

**MNM risk management policy**
MNM risk management policy is the key element for the development of the MNMs RMM, and, therefore, shall be kept updated, in order to give a framework for establishing and reviewing MNMs RMM objectives and goals.

Due to its importance, must be documented and approved by the Chairman.

The full content of the policy shall be available to public and communicated to all employees.

#### Examples

- MNM risk management policy.
- Letter of commitment of the Chairman to workers.
- Disseminate information through notices, web site, intranet, etc...
4.3 Planning

a) MNMs risk assessment

**Requirements**

OHS Department will be responsible for the development and the upgrade of the MnMs risk assessments, based on the identification of hazards, with the participation of the representatives of the workers.

Results obtained from the risk assessment and inspections, shall be the inputs for planning and establishing protective and corrective actions.

Procedures for the monitoring of the required actions will be necessary in order to ensure the success of such measures.

**MnMs Identification**

The OHS technicians are responsible for identifying hazards and assessing risks applying the appropriate methodology. This methodology shall be described in MNMS-Risk Assessment procedure. Likewise, the criteria will be defined to assess the significance of the risk of MNMS. These activities shall be documented and the records shall be kept.

**MnMs Risk Evaluation**

All risks of MNMs should be analyzed and evaluated considering the likelihood of occurrence and its consequences, obtaining a level of risk comparable with the risk criteria levels.

Accordingly to these levels of risk appropriate measures shall be established in order to reduce or eliminate these risks.

**Help**

The risk assessment is the process which covers identification of risks, analysis and risk evaluation, this will lead to eliminate, or reduce them to an acceptable risk level.

**Risk Identification**

Risk identification is the process of finding, recognizing and recording risks.

The MNMs identification shall take into account:

- material (physicochemical, toxicity and ecotoxicity characteristics);
- potential routes for human exposure;
- human dose response and safety aspects
- routine and no routine situations
- works having access to the workplace, hazards originated out of the workplace, etc.
Risk Evaluation
The analysis of the information gathered during the identification of MNM risk, can be approached by quantitative or qualitative methods.

For the qualitative evaluation the organization must define a methodology that ensures to the analysis in terms of likelihood and consequences. The risk level must be determined and also the controls that will lead to the elimination or the acceptable level of risk.

In terms of risk evaluation, must be included also the consultation and proper participation of workers.

**EXAMPLES**

- Initial risk evaluation of company.
- Risk evaluation by workers.
- Risk evaluation by workplace.
b) MNMs risk treatment

**Requirements**

**Treatment MNMs risk**

The organization shall define systematic controls for treating those MNMs risk considered as unacceptable for the organization. This treatment can be approached by avoiding the risk, eliminate the source of the risk, lower the probability or consequence, risk sharing or assuming the risk.

The treatment decision shall be taken considering technical options, resource requirements, performance measures, etc.

**Help**

MNM risk treatment plan must be prepared and implemented.

There are three basic options for the risk treatment:

- Avoidance of the MNM risk.
- Transfer the MNM risk (e.g. Outsourcing contract).
- Management of the MNM risk.

The MNM risk treatment plan shall be documented.

The organization must include these treatments in the management plans and regularly review the performance and establish, monitor and review the MNMs risk management processes.

**Examples**

- Annual preventive action program for the company with economic and human resources defined.
- Annual prevention report with the evaluation of the annual program, their activities and application and their efficiency.
c) Legal and other requirements

**Requirements**

The organization shall establish a procedure, that guarantees the access and the identification of the legal requirements, including those related to licenses and authorizations, contractual conditions, etc. as well as voluntary requirements which the organization subscribes.

Besides this identification, the organization shall ensure not only the continual update of the legal and other requirements, but the information to employees about the legal requirements related to the MNM risk of their concern.

**Help**

In order to ensure the legal commitment, the organization shall have a broad knowledge of the legal requirements and others, and refresh the information periodically.

At the present time the EU legislation is working on specific regulations concerning to MNM.

The access to proposals of new regulation, of future requirements, whose force of entry it is not immediate, allows the organization a progressive and planned adaptation.

**Examples**

- Registration of statutory and other requirements.
### Objectives and programmes

**Requirements**

**Objectives, goals and programs of MNMs RMM**
Consistent to the MNM risk policy, and the continual improvement, the organization shall establish objectives.

**MNMs risk management planning**
These objectives shall be documented and identified in the RMM management programme, which should be revised at regular planned intervals, and adjusted or modified if it is found necessary.

**Help**

**Objectives and programs**
Sources of information for defining objectives:
- MNM risk assessment,
- incident investigation,
- internal audits results,
- management review,
- workers opinions,
- technological options,
- financial, operational and business requirements,
- legal requirements and other requirements,
- internal and external context.

Objectives must be reasonable and reachable, measurable and if possible, quantified.

**MNMs risk management planning**
Objectives shall be described in a MNMs risk management program, establishing goals that will lead for the achievement of the objectives. For each both goals and objectives shall be provided clear accountability allocation, responsibility and authority for each task, resources and time-frames.

**Examples**
- Management objectives broken down into the necessary goals.
- Management program establishing time-frames for the achievement of objectives, responsible for the consecution of the objective, etc.
4.4 Implementation and operation

a) Resources, roles, responsibility, accountability and authority

**Requirements**

The Chairman must provide the necessary resources for the effectiveness of the Occupational, Health and Safety and the MNMs RMM, defining and establishing roles, responsibilities, accountabilities and authorities.

**Responsibility and authority**

The chairman shall assign the responsibilities and the authority for each person within the company. Responsibilities and authority of all person of the company related to the MNMs RMM must be documented and communicated.

**Management representative**

The chairman should appointee a representative for the OHS MNM risk management.

**Infrastructure**

Accordingly to the provision of resources, the Chairman has to ensure a proper infrastructure for the success of the MNMs RMM.

**Help**

The organization must make an effort and identify those functions relevant to the Occupational, Health and Safety and the MNMs Risk management. It is also important to establish responsibilities and accountabilities and the level of authority.

**Responsibility and authority**

Some roles will require organizational capability to make decision related to the management of the MNMs risk.

**Management representative**

The Chairman must designate an OHS MNMs RMM responsible, and has to be a member of the Top Management. The appointee OHS MNMs RMM responsible must be made available for all the employees.

**Infrastructure**

Infrastructure involves: workplaces, facilities, equipment (including hardware and software) and supporting services (Transport, communication, etc.).

**Examples**

- Organization chart.
- Job description with the functions and responsibilities in the organization.
- Definition of the task, working procedures and instructions.
**b) Competence, training and awareness**

**Requirements**

Competence of employees shall be ensured. This can be achieved by providing the necessary training and awareness regarding to the MNMs risk, taking into considering the education, training or adequate experience.

**Help**

The required competence for the different functions (legal requirements shall be taken into account) shall be defined.

Once competence has been established, the organization shall identify the training needs and provide the necessary means to acquire it. The organization shall keep records of the effectiveness of this training.

Besides the training it is important to aware all employees about MNM risk and consequences of their behavior.

**Examples**

- Job description with qualifications (education level, courses, experiences, training, etc.).
- Training procedure to identify qualifications needs, especially those related to MNMs risks.
- Annual Training Plan (list of training including the activities for the employees).
- Training Sheet for every job description: Curriculum vitae of each employee or staff in the organization that evidences the fulfillment of the job description previously defined.
- Assessment courses for the evaluation of effectiveness of the training activities.
c) **Communication, participation and consultation**

### REQUIREMENTS

**Communication and information**
The company shall determine mechanisms for receiving, documenting and answering relevant internal and external communication.

Information regarding MNMs used in the company shall be disclosed to every person exposed to the MNMs, this shall include not only workers but also subcontractors.

**Participation and consultation**
Employees shall participate and be consulted along the process of MNMs risk management.

### HELP

**Communication and information**
An effective internal communication shall be ascendant, descendant, and cross sectional, accordingly the employees should be consulted about Occupational, Health and Safety related to MNMs risks issues at the work place, and related issues.

Regarding external communication and consultation this, shall involve not only contractors and visitors, but also State Members and other external interested parties.

OSH responsible shall ensure the information regarding to the identification of hazards, risk assessment, exposure control, etc.

**Participation and consultation**
Regarding to employees’ participation usually is channeled through the Representative of Workers, and may include:

- New processes.
- New procedures.
- New preventive equipment, etc.

### EXAMPLES

#### Internal Communication:
- Specific meeting, Management Committee minutes.
- Communicate through the corporative intranet.
- Communicate through website about OHS culture and MNM risks in the organization).
- Risk communication to workers.
- Risk Communication to contractors.

#### External communication:
- Communicate for clients.
- Reports or newsletters.
- Local administration, etc.
**d) Documentation**

**REQUIREMENTS**

The organization shall develop and maintain several documents in order to ensure the proper application of the MNMs RMM.

**MNMs Risk Manual**

A MNMS Risk Manual shall be developed as a supporting instrument for the implementation of the MNMs RMM.

**HELP**

The MNMs RMM must include the following documents:

- MNM risk management Policy.
- MNM RMM Manual.
- Procedures.
- Objectives.
- MNMs risk criteria.
- Records.

The MNMs RMM documentation shall be as specific as possible and suitable for the complexity of the organization.

**MNMs Risk Manual**

The content of the MNM risk Manual shall include:

a) The scope of the MNMs RMM.

b) The description of the main elements of the MNMs RMM and their interaction, and reference to related documents.

c) The main types of MNMs risks and MNMs risk criteria.

d) The documented procedures established for the MNMs RMM, or reference to them.

**EXAMPLES**

- Management Manual of MNMs.
- MNM risk management Policy.
- Specific worksite procedures, Safety manual prevention procedures, specific instructions, etc.
e) *Control of documents*

**Requirements**

The organization shall establish a procedure in order to control of the integrity of MNMs RMM documentation.

**Help**

The procedure shall ensure the legibility and availability of all documents of the MNMs RMM.

The control of the documents must be extended to the external documentation, such as contractors procedures, etc.

**Examples**

- List of documents and formats related to OH&S system and MNMs RMM.
- List of External Documentation: such as MNMs RMM standard, contractors procedures, etc.
- List of controlled records.
f) MNMs operational control

**Requirements**

Once MNMs risks have been assessed, necessary measures aimed to damage control and to the prevention of ill health shall be implemented.

All these controls shall be applied not only to employees but also for contractors, and other external parties such as public or visitors.

**Help**

MNMs exposure control measures shall be technical, organizational and personal protection:

- Technical measures: such as replacing substances, processes and equipment, process isolation or enclosure, changes of design, ventilation, etc.
- Organizational measures implementing safe work practices.
- Personal protection mainly respiratory and dermic protection.

**Examples**

- MNMs Risk management planning.
- Operational Control Procedures for potentially risky specific task.
- Procedure for choosing and use of PPE.
- Procedure chemicals management.
- Management contracts.
- Records of operational controls such as: checklists of operation and maintenance, checklist of measurement, work permits, Operation Manuals, allocation and supply of PPEs to workers, etc.
**g) MNMs emergencies preparedness and response**

<table>
<thead>
<tr>
<th>REQUIREMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MNMS incidents preparedness and response</strong></td>
</tr>
<tr>
<td>The organization shall define procedure for the preparedness and response in case of emergency.</td>
</tr>
<tr>
<td><strong>Recuperation from an organization activity interruption</strong></td>
</tr>
<tr>
<td>The organization shall establish mechanisms for restoring the usual activities, in case an emergency happens.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HELP</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MNMS incidents preparedness and response</strong></td>
</tr>
<tr>
<td>The organization shall identify the potential emergency situations, and establish an Emergency Response Plan.</td>
</tr>
<tr>
<td>For the development of this Plan applicable regulation and legislation must be considered, as well as external interested parties such as contractors, visitors, emergency services, etc...</td>
</tr>
<tr>
<td>All employees must know this Plan and be able to perform it in case of emergency, so it is important a periodical test involving, if it possible, all interested parties.</td>
</tr>
<tr>
<td>The Plan shall be review especially after an emergency situation or periodical testing.</td>
</tr>
<tr>
<td><strong>Recuperation from an organization activity interruption</strong></td>
</tr>
<tr>
<td>For an effective recuperation from an organization activity interruption, procedures for recovery of activity shall be established. These procedures must take into consideration, not only not only natural calamities but also in the event of smaller disruptions including illness or departure of key staffers, supply chain partner problems or other challenges.</td>
</tr>
<tr>
<td>These procedures shall periodically be reviewed in order to confirm its suitability.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EXAMPLES</th>
</tr>
</thead>
<tbody>
<tr>
<td>☒ Emergency procedures about to general requirements of the company related with the incident response.</td>
</tr>
<tr>
<td>☒ Emergency Plan for each worksite.</td>
</tr>
<tr>
<td>☒ Emergency Records.</td>
</tr>
<tr>
<td>☒ Emergency recovery procedures.</td>
</tr>
</tbody>
</table>
4.5 Checking

a) Monitoring and measurement of MNMs risk management activities

**Requirements**

The organization shall define a procedure that guarantee the systematic and regular monitoring and/or measurement of MNMs risk management activities.

Records of the result of monitoring and measurement of MNMs risk management activities must be kept.

If the organization use for this purpose measurement equipment, evidence of the verification and/or calibration shall be kept.

**Help**

The organization must check the implementation of prevention measures derived MNMs risk assessment. Should be considered:

- Measurements:
  - Measurement of the occupational exposure to MNMs.
  - Health and Safety performance indicators (related to the exposure to MNMs).
  - Employees health surveillance.
  - Systematic workplace inspections.
  - Effectiveness of control measurements.
  - Effectiveness of awareness and training.
  - Compliance with legal and other requirements.

- Monitoring
  - Periodic inspections of workplaces to ensure the prevention of MnMs Risk and obtain data for continuous improvement.

**Examples**

- Procedures for monitoring and measurement of MNM risk management.
- Planning for inspections and measurement of the organization.
- Records of monitoring and measurement of MNM risk management (such as: indicators of occupational exposure, effectiveness of control systems, periodic results from inspections, key performance indicators, etc.).
b) Legal Compliance Evaluation

**Requirements**

The organization shall identify legal and other requirements related to the use of MNMs (See 4.3.3), accordingly, the organization has to evaluate, periodically, its compliance with these requirements.

**Help**

The organization must develop a procedure for the evaluation of the legal and other requirements. The periodicity of the legal compliance evaluation should be set up in agreement with the MNMs risk, size of the organization, interested parties concern, etc...

It must be taken into account that the organization has express its commitment to fulfilling the legal and other requirements.

**Examples**

- Record of periodical legal and other requirements evaluation.
- Activities to verify continued compliance with legislation, eg procedure of maintenance of fire protection equipment, reviews of machines and equipment, etc.
c) *Incident investigation, non-conformity, corrective action and preventive action*

### REQUIREMENTS

#### Event and incident investigation
The organization must determine a procedure for event and incident investigation, that allows the organization to determine the trigger for occurrence of incident, identify the need of corrective actions, and to identify the opportunities for improvement.

#### Non-conformity, corrective action and preventive action
The organization shall establish a procedure for identifying and treating non-conformities both actual and potential, and adopt actions for solving them and prevent its recurrence.

### HELP

#### Event and incident investigation
The procedure for event and incident investigation, shall establish the person(s) responsible for incident notification and reporting, perform the investigation, cause analysis and result communication. The MNMs Risk assessment should be revised in several cases.

#### Non-conformity, corrective action and preventive action
Non-conformity is non-fulfillment of a specified MNMs RMM or legal and other requirements.

When non-conformities are detected, an analysis of causes is needed. As the result of the analysis of causes, corrective or preventive action shall be taken. All actions shall pursue the elimination of causes that leaded to the non-conformity.

### EXAMPLES

- Procedure for the Investigation of accidents, incidents and diseases.
- Non-conformances and corrective and preventive action procedure.
- Records of accidents, incidents and diseases.
- Accidents, incidents and disease research Report.
- Changes in the procedures, monitoring or measurement after an accident or incident.
d) Control of records

**Requirements**

The organization must define a procedure for the control of records.

Records shall be maintained in a manner that they are readily retrievable and contained in a suitable environment to prevent damage or deterioration.

**Help**

Records are evidence supporting the fulfillment of the implementation of the MNMs RMM, so its integrity shall be protected.

The procedure shall include the period of conservation of record. When defining this period, legal and other requirements should be taken into account.

**Examples**

- Record control procedure that include a methodology for ensuring the storage, integrity and traceability of records.

- Records related to the MNMs risk management (e.g.: MNMs risk assessment, communication records, etc.).
**e) Internal Audits**

<table>
<thead>
<tr>
<th>REQUIREMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>The organization must develop a procedure for conducting internal audits at planned intervals.</td>
</tr>
<tr>
<td>Responsibilities, competences of the audit team, requirements of reporting, audit criteria and methods, and periodicity shall be determined.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HELP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal audits at planned intervals, to determine the compliance of the organization with the MNMs RMM, shall be performed.</td>
</tr>
<tr>
<td>When planning internal audits, the size of the organization, interested parties concern, and the results of MNMs risk assessments, and previous audits shall be taken into consideration.</td>
</tr>
<tr>
<td>Internal audit should cover all areas and activities included in the scope of the MNMs RMM.</td>
</tr>
<tr>
<td>Auditors must be competent, impartial and objective.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EXAMPLES</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Internal audit procedure.</td>
</tr>
<tr>
<td>- Internal audit plan (note that internal audit shall be performed at planned intervals).</td>
</tr>
<tr>
<td>- Internal audits report. (Shall include references to the effective management of MNMs risk).</td>
</tr>
</tbody>
</table>
4.6 Management review

**Requirements**

**Management Model Review**
Top management shall review the MNMs RMM, at planned intervals, sufficient for assuring its adequacy and continual efficacy.

**Data Analysis and continual improvement**
Data gathered during the implementation of the MNM RMM shall be analyzed, in order to take actions for the continual improvement of the RMM.

**Help**

**Management Model Review**
This management review should consist on the data analysis, and will end up into a report that will include opportunities of improvement, the need of changes in the MNMs RMM, need of resources, in order to fulfill with the commitments stated on the policy and demonstrate its commitment with the continual improvement.

The results of this review must be communicated to employees.

The periodicity of the management review shall be consistent with other cycles of the model.

**Data Analysis and Continual improvement**
During the stages of implementation and checking of the MNMs RMM, several data have been acquired. It is important the analysis of these data in order to evaluate the ability of the RMM to achieve the expected results and to establish action that will lead to the continual improvement.

**Examples**

- Management review procedure (establishing the intervals of performance)
- System Review Report: evaluation of MNMs RMM report in the annual evaluation meeting with the data analysis related.
- New documents, modified procedures and changes of MNMs RMM to increase the prevention of MNMs risk.
5 CONCLUSIONS

This guide provides in practical requirements 'sheets' some help for the implementation and audit of the MNMs RMM described in SCAFFOLD's Guide for RMM implementation (SPD14), including the extracted requirement, a brief explanation/help and formats/registers/documents to use so as to implement and demonstrate compliance with the RMM.

This guide should be principally used as essential help by the SMEs identified IUC in the implementation and audit work to be developed in SCAFFOLD's case studies.

The presented diagnosis, implementation and audit questions as a check list in section 6 is a key element to help the SMEs in the implementation work of the RMM.

The inclusion of these questions in the Toolkit is one of the core elements for the functionality of the software tool and its practice application to be an extremely useful mean to implement and audit the MNMs RMM and also the posterior treatment of the information for internal reports and statistics.

This guide elaborated in sheet format also should be included in future version of the software tool to provide specifically for SMEs set up the needed help to implement the MNMs RMM associated with the negative answers in the SMEs battery of questions in implementation crossing directly this answered no questions with the correspondent sheet.
6  CHECK LIST QUESTIONS FOR INITIAL DIAGNOSTIC, IMPLEMENTATION AND AUDIT

This section includes selected questions from the general and more complete check list in SCAFFOLD’s Guide for RMM initial review, monitoring and audit (SPD15) taking into account SMEs particularities. They are divided in:

- questions for initial diagnostic/review, that could be use in the training and diagnostic phase in SCAFFOLD case studies,
- questions for RMM implementation to be use by the IC on SMEs,
- questions for RMM audit to be answer in the audit process of RMM that will be part of the demonstrations in SCAFFOLD case studies.

The inclusion of these questions in the Toolkit is one of the core elements for the functionality of the software tool and its practice application to be an extremely useful mean to implement and audit the MNMs RMM and also the posterior treatment of the information for internal reports and statistics.
### 6.1 Questions for initial diagnostic/review

#### 4.1 Requirements for the Occupational Health and Safety MNMs Risk Management Model

<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is the scope of the MNMs RMM?</td>
<td></td>
</tr>
<tr>
<td>Has your organization identified the external and internal context?</td>
<td></td>
</tr>
<tr>
<td>Has your organisation identified the internal and external stakeholders affected to MNMs RMM?</td>
<td></td>
</tr>
</tbody>
</table>

#### 4.2 MNMs risk management policy and management commitment

**4.2.1 Management commitment**

<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Has your organization defined the roles, responsibilities and authority?</td>
<td></td>
</tr>
</tbody>
</table>

**4.2.2 MNMs risk management policy**

<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Has your organization defined a MNMs RMM policy?</td>
<td></td>
</tr>
<tr>
<td>Has top management defined and authorised your organisation’s MNMs RMM policy?</td>
<td></td>
</tr>
</tbody>
</table>

#### 4.3 PLANNING

**4.3.1 MNMs risk assessment**

**4.3.1.1 MNMs risk identification**

<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Has your organization defined a MNMS risk identification procedure?</td>
<td></td>
</tr>
</tbody>
</table>

**4.3.1.3 MNMs risk evaluation**

<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Has your organisation established, implemented and maintained a procedure for MNMs risk evaluation?</td>
<td></td>
</tr>
<tr>
<td>Has your organization defined criteria to be used to evaluate the significance of risk?</td>
<td></td>
</tr>
<tr>
<td>Has your organization documented and communicated the MNMs Risk criteria?</td>
<td></td>
</tr>
</tbody>
</table>

**4.3.2 MNMs risk treatment**

<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Has your organisation established, implemented and maintained a procedure for selecting one or more options for modifying risks, and implementing those options?</td>
<td></td>
</tr>
</tbody>
</table>

**4.3.3 Legal and other requirements**

<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Has your organization established, implemented and maintained a procedure for identifying and accessing the legal and other requirements applicable MnMs RMM?</td>
<td></td>
</tr>
</tbody>
</table>

**4.3.4 Objectives and programme(s)**

**4.3.4.1 Objectives, goals and programmes of MNMs RMM for**

<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Has the organization established implemented and maintained documented objectives, goals and programmes of MNMs RMM at relevant functions and levels within the organization?</td>
<td></td>
</tr>
</tbody>
</table>

**4.3.4.2 MNMs risk management planning**

<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### 4.4 IMPLEMENTATION AND OPERATION

#### 4.4.1 Resources, roles, responsibility, accountability and authority. General.

How does your organization demonstrate that the ultimate responsibility for Occupational, Health and Safety and the MNMs RMM lies with the Top Management?

Has your organization determined, provided and maintained the infrastructure (buildings, workspace and associated utilities) needed to achieve conformity to MNMs RMM requirements?

Are the roles, responsibility, accountabilities and authorities defined, documented and communicated?

#### 4.4.2 Competence, training and awareness

Has your organization defined the job profiles related with MNMs RMM?

Has a procedure(s) been established, implemented and maintained to ensure that the people working for, or under the control of your organization are aware with the MNMS RMM requirements?

#### 4.4.3 Communication, participation and consultation

##### 4.4.3.1 Communication

Has your organization established, implemented and maintained procedure(s) for internal and external communication?

##### 4.4.3.2 Participation and consultation

Are the workers informed about the arrangement of their participation and who is their representative(s) on Occupational, Health and Safety matters related to MNMs risks?

#### 4.4.4 Documentation

Does your organization’s MNMs RMM documentation include:

a) the MNMs risk management policy and objectives;

b) description of the scope of the MNMs RMM;

c) description of the main elements of the MNMs RMM and their interaction, and reference to related documents;

d) documents, including records, required by the model; and

e) documents, including records, determined by the organization to be necessary to ensure the effective planning, operation and control of processes that relate to the management of its MNMs risks.

#### 4.4.5 Control of documents

Has your organization established, implemented and maintained a procedure(s) for controlling all documents required by this MNMs RMM?

#### 4.4.6 MNMs Operational control

Has your organization determined the operations and activities that are associated with the identified risk(s) and implementation of controls are necessary to manage the MNMs risk(s)?

#### 4.4.7 MNMs emergencies preparedness and response

Has your organization established, implemented and maintained a procedure(s) to identify the potential emergency situations related to MNMs risks? and to response to such emergency situations?
Has your organization established a procedure (s) that ensures the continuity of the activities of the organization to events that are likely to interrupt them?

### 4.5 CHECKING

#### 4.5.1 Monitoring and measurements of MNMs risk management activities

Has your organization established, implemented and maintained a procedure(s) to monitor and measure MNMs RMM performance?

#### 4.5.2 Legal compliance evaluation

Has your organization established, implemented and maintained a procedure(s) for periodically evaluating its compliance with the applicable legal and other requirements identified in clause 4.3.2 of this standard?

#### 4.5.3 Incident investigation, nonconformity, corrective action and preventive action

##### 4.5.3.1 Event and Incident investigation

Has your organization established, implemented and maintained a procedure(s) to record, investigate and analyze incidents?

##### 4.5.3.2 Nonconformity, corrective action and preventive action

Has your organization established, implemented and maintained a procedure(s) for dealing with actual and potential non-conformities, and corrective and preventive action?

#### 4.5.4 Control of records

Has your organization established, implemented and maintained procedures for the identification, storage, protection, retrieval, retention and disposal of MNMs RMM records?

#### 4.5.5 Internal Audit

Has your organization planned, established, implemented and maintained a programme and procedure(s) for periodic internal audits to be conducted?

### 4.6 MANAGEMENT REVIEW

Has your organization’s top management (at planned intervals) reviewed the MNMs RMM, to ensure its continuing suitability, adequacy and effectiveness?

#### 4.6.2 Data analysis

Has your organization determined, collected and analyzed appropriate data to demonstrate the suitable and effectiveness of the MNMs RMM and evaluated where continual improvement of the effectiveness of the MNMs RMM can be made?

#### 4.6.3 Continual improvement

Has your organization continually improved the effectiveness of the MNMs RMM through the use of the MNMs risk management policy, objectives, goals and programmes, audit results, analysis of data, corrective and preventive actions and management review?
6.2 Questions for RRM implementation in SMEs

### 4.1 Requirements for the Occupational Health and Safety MNMs Risk Management Model

<table>
<thead>
<tr>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is the scope of the MNMs RMM?</td>
</tr>
<tr>
<td>Has your organisation identified the internal and external stakeholders affected to MNMs RMM and establish the requirements related to Occupational Health and Safety matters for them?</td>
</tr>
</tbody>
</table>

### 4.2 MNMs risk management policy and management commitment

#### 4.2.1 Management commitment

<table>
<thead>
<tr>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>Has your organization defined the roles, responsibilities and authority?</td>
</tr>
<tr>
<td>Has your organization reviewed the conformity of roles, responsibilities and authority into the organization, as well as accountability for managing Occupational, Health and Safety matters related to MNMs risk?</td>
</tr>
</tbody>
</table>

#### 4.2.2 MNMs risk management policy

<table>
<thead>
<tr>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>Has top management defined and authorised your organisation’s MNMs RMM policy?</td>
</tr>
<tr>
<td>Is the policy appropriate to the nature, scale and MNMs risks in your activities, products or services?</td>
</tr>
<tr>
<td>What commitment does your policy make to continual improvement?</td>
</tr>
<tr>
<td>What commitment does your policy make to the prevention of injury and ill heath in the workplace?</td>
</tr>
<tr>
<td>Does the MNMs Risk Management policy include a commitment to comply with applicable legislation and regulations, and with other requirements to which you subscribe that relate to your Occupational, Health and Safety hazards (e.g. Industry sector guidelines)?</td>
</tr>
<tr>
<td>How is the policy communicated to all persons working under the control of the organization and the interested parties?</td>
</tr>
</tbody>
</table>

### 4.3 PLANNING

#### 4.3.1 MNMs risk assessment

##### 4.3.1.1 MNMs risk identification

<table>
<thead>
<tr>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>How the procedures for MNMS risk identification have taken into account the identification sources of risk, areas of impacts, events (including changes in circumstances) and their causes and their potential consequences the routine and non-routine activities of the organisation?</td>
</tr>
<tr>
<td>How the procedures for MNMS risk identification have taken into account the activities of all persons having access to the workplace (including contractors and visitors)?</td>
</tr>
<tr>
<td>How the procedures for MNMS risk identification have taken into account the human behaviour, capabilities and other human factors?</td>
</tr>
<tr>
<td>How the procedures for MNMS risk identification have taken into account the identified risks originating outside the workplace capable of adversely affecting the health and safety of persons under the control of the organization within the workplace?</td>
</tr>
</tbody>
</table>
How the procedures for MNMS risk identification have taken into account the risks created in the vicinity of the workplace by work-related activities under the control of the organization?

NOTE. It may be more appropriate for such hazards to be assessed as an environmental aspect.

<table>
<thead>
<tr>
<th>4.3.1.3 MNMs risk evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Has your organization defined criteria to be used to evaluate the significance of risk?</td>
</tr>
<tr>
<td>Has your organization documented and communicated the MNMs Risk criteria?</td>
</tr>
</tbody>
</table>
| Has your organization determining the consequences and their likelihood, and other attributes of the risk? |}

Has your organization included relevant and up-to-date information to identify MNMs risk? and background information where possible?
### 4.3.2 MNMs risk treatment

Are the risk treatment options including the following:

a) avoiding the MNMs risk by deciding not to start or continue with the activity that gives rise to the MNMs risk;

b) taking or increasing the MNMs risk in order to pursue an opportunity;

c) removing the MNMs risk source;

d) changing the likelihood;

e) changing the consequences;

f) sharing the MNMs risk with another party or parties (including contracts and risk financing); and

g) retaining the MNMs risk by informed decision.

Has your organization selecting the most appropriate risk treatment options involves balancing the costs and efforts of implementation against the benefits derived, with regard to legal, regulatory, and other requirements?

Has your organization planned periodically the risk treatment plans evaluation?

Has your organization documented and kept the results of MNMs risks identification, evaluation and treatment assessments and determined controls up-to-date?

### 4.3.3 Legal and other requirements

Has your organization established, implemented and maintained a procedure for identifying and accessing the legal and other requirements applicable MnMs RMM?

Do you ensure that these legal and other requirements which the organization subscribes are taken into account in the implementation and maintenance of MNMs RMM?

Has the organization communicated relevant information about legal requirements and other requirements to persons working under the control and other stakeholders?

### 4.3.4 Objectives and programme(s)

#### 4.3.4.1 Objectives, goals and programmes of MNMs RMM for

Are the objectives and goals measurable?

Has the organization established, implemented and maintained a programme(s) to achieve the objectives MNMs?

Are defined responsibilities and deadlines for achieving the objectives?

Does the program is periodically reviewed at planned intervals and adjusted if necessary to achieve the objectives?

#### 4.3.4.2 MNMs risk management planning

Does the Top Management ensure that the planning of the MNMs RMM is carried out in order to meet the requirements given in 4.1 as well as the objectives, goals and programmes?

Does the Top Management ensure that the integrity of the MNMs RMM is maintained when the changes to the MNMs RMM are planned and implemented?
## 4.4 IMPLEMENTATION AND OPERATION

### 4.4.1 Resources, roles, responsibility, accountability and authority. General.

Does the Top Management demonstrate its commitment ensuring that resources essential to establishing, maintaining and improving the MNMs RMM are available?

How do all those with management responsibility demonstrate their commitment to continual improvement of the MNMs RMM?

### 4.4.2 Competence, training and awareness

How does your organization identify training needs associated with its MNMs risks and its MNMs RMM?

Do the training procedures take into account different levels of

a) responsibility, ability, language skills and literacy; and

b) risk

### 4.4.3 Communication, participation and consultation

#### 4.4.3.1 Communication

Has your organization established, implemented and maintained procedure(s) for internal communication between the various levels and functions of your organization?

Has your organization established, implemented and maintained procedure(s) for communication with contractors and other visitors to the workplace?

Has your organization established, implemented and maintained procedure(s) for receiving, documenting and responding to relevant communication from external interested parties?

#### 4.4.3.2 Participation and consultation

Are the workers informed about the arrangement of their participation and who is their representative(s) on Occupational, Health and Safety matters related to MNMs risks?

Has your organization established, implemented and maintained procedure(s) for the consultation with contractors where there are changes that affect their Occupational, Health and Safety related to MNMs risks?

### 4.4.4 Documentation

Does your organization’s MNMs RMM documentation include:

a) the MNMs risk management policy and objectives;

b) description of the scope of the MNMs RMM;

c) description of the main elements of the MNMs RMM and their interaction, and reference to related documents;

d) documents, including records, required by the model; and

e) documents, including records, determined by the organization to be necessary to ensure the effective planning, operation and control of processes that relate to the management of its MNMs risks.

Documents, including records, necessary for the effective planning, operation and control of processes related to its MNMs risks?
## 4.4.5 Control of documents

Has your organization established, implemented and maintained a procedure(s) for controlling all documents required by this MNMs RMM?

Are the external documents controlled their distribution?

### 4.4.6 MNMs Operational control

How has your organization determined the operations and activities that are associated with the identified risk(s) and implementation of controls are necessary to manage the MNMs risk(s).

Has the management of change been included (see 4.3.1)?

### 4.4.7 MNMs emergencies preparedness and response

Has your organization established, implemented and maintained a procedure(s) to identify the potential emergency situations related to MNMs risks? and to response to such emergency situations?

Does the procedure(s) cover how your organization will respond to actual emergency situations related to MNMs risks?

Is this testing carried out periodically?

Has your organization taken into account especially those activities related to MNMs risk that support the products and / or services of the organization?

Has your organization periodically reviewed and modified, where necessary, procedures for recovery of activity to an interruption of the activity of the organization, taking into account the needs of relevant stakeholders as appropriate?

## 4.5 CHECKING

### 4.5.1 Monitoring and measurements of MNMs risk management activities

Has your organization established, implemented and maintained a procedure(s) to monitor and measure MNMs RMM performance?

Does the procedure(s) provide for monitoring of the extent to which the organization’s MNMs RMM objectives are met?

Does the procedure(s) provide for monitor the effectiveness of the controls (for health as well as for safety related to MNMs risks)?

Does the procedure(s) provide for identifying emerging MNMs risks?

How monitoring and measuring equipment is calibrated or verified and maintained (procedure)? Are calibration or verification records retained?

Does the organization define clearly the responsibilities of performance measurement and monitoring?

### 4.5.2 Legal compliance evaluation

Has your organization established, implemented and maintained a procedure(s) for periodically evaluating its compliance with the applicable legal and other requirements identified in clause 4.3.2 of this standard?

Has your organization evaluated its compliance with other requirements identified in clause 4.3.2 of this standard?
### 4.5.3 Incident investigation, nonconformity, corrective action and preventive action

#### 4.5.3.1 Event and Incident investigation

Has your organization established, implemented and maintained a procedure(s) to record, investigate and analyze incidents?

Does your organization undertake these investigations in a timely manner? (Note: You may also want to define what your organization considers timely).

Does your organization use the Non-conformity, Corrective & Preventive Action system to deal with any actions? (see 4.5.3.2)

Does your organization document and maintain the results of the incident investigations?

#### 4.5.3.2 Nonconformity, corrective action and preventive action

Has your organization established, implemented and maintained a procedure(s) for dealing with actual and potential non-conformities, and corrective and preventive action?

Does the procedure(s) define requirements for evaluating the need for actions to be taken to prevent non-conformities, and implementing appropriate actions?

Does the procedure(s) define requirements for recording the results of corrective and preventive actions taken?

Does the procedure(s) define requirements for reviewing the effectiveness of corrective and preventive actions?

### 4.5.4 Control of records

How are these updated?

Do these records include those that are necessary to demonstrate conformity to the requirements of the standard?

How do you store the MNMs RMM records in order that they are readily retrievable and protected against damage, deterioration or loss?

### 4.5.5 Internal Audit

Has your organization planned, established, implemented and maintained a programme and procedure(s) for periodic internal audits to be conducted?

Do these internal audits determine whether or not the MNMs RMM conforms to planned arrangements for occupational, health and safety matters related to MNMs risks, including the requirements of this model?

Do these internal audits determine whether or not the MNMs RMM has been properly implemented and maintained?

Do these internal audits determine whether or not the MNMs RMM is effective in meeting your organization’s policy and objectives?

Do these internal audits provide information on the results of audits to management?
### 4.6 MANAGEMENT REVIEW

Has your organization’s top management (at planned intervals) reviewed the MNMs RMM, to ensure its continuing suitability, adequacy and effectiveness?

Do the inputs to management review include results from internal audits and evaluations of compliance with legal and other requirements related to occupational, health and safety matters related to MNMs risks?

Do the inputs to management review include the results of participation and consultation?

Do the inputs to management review include relevant communication from external parties, including complaints?

Do the inputs to management review include the MNMs RMM performance of your organization?

Do the inputs to management review include the extent to which the objectives have been met?

Do the inputs to management review include the status of incident investigations, corrective and preventive actions?

Do the inputs to management review include follow-up actions from previous management reviews?

Do the inputs to management review include changing circumstances, including developments in legal and other requirements related to occupational, health and safety matters related to MNMs risks, and changes in other elements of the MNMs RMM?

Do the inputs to management review include recommendations for improvement?

Do the outputs from the management review include decisions and actions related to possible changes to the MNMs RMM policy, objectives, resources, MNMs RMM performance and other elements of the MNMs RMM, and consistent with the commitment to continual improvement?

Are the records of the management reviews retained and made available for communication and consultation?

### 4.6.2 Data analysis

Has your organization determined, collected and analyzed appropriate data to demonstrate the suitable and effectiveness of the MNMs RMM and evaluated where continual improvement of the effectiveness of the MNMs RMM can be made?

Has the data generated as a result of monitoring and measurement and from other relevant sources been included?

### 4.6.3 Continual improvement

Has your organization continually improved the effectiveness of the MNMs RMM through the use of the MNMs risk management policy, objectives, goals and programmes, audit results, analysis of data, corrective and preventive actions and management review?
### 6.3 Questions for RMM audit in SMEs

#### 4.1 Requirements for the Occupational Health and Safety MNMs Risk Management Model

Has your organisation identified the internal and external stakeholders affected to MNMs RMM and establish the requirements related to Occupational Health and Safety matters for them?

#### 4.2 MNMs risk management policy and management commitment

##### 4.2.1 Management commitment

Has your organization reviewed the conformity of roles, responsibilities and authority into the organization, as well as accountability for managing Occupational, Health and Safety matters related to MNMs risk?

##### 4.2.2 MNMs risk management policy

Has top management defined and authorised your organisation’s MNMs RMM policy?

Is the policy appropriate to the nature, scale and MNMs risks in your activities, products or services?

What commitment does your policy make to continual improvement?

What commitment does your policy make to the prevention of injury and ill health in the workplace?

Does the MNMs Risk Management policy include a commitment to comply with applicable legislation and regulations, and with other requirements to which you subscribe that relate to your Occupational, Health and Safety hazards (e.g. Industry sector guidelines)?

How is the policy communicated to all persons working under the control of the organization and the interested parties?

#### 4.3 PLANNING

##### 4.3.1 MNMs risk assessment

##### 4.3.1.1 MNMs risk identification

Does the procedure(s) for MNMS risk identification take into account the activities of all persons having access to the workplace (including contractors and visitors)?

Does the procedure(s) for MNMS risk identification take into account the human behaviour, capabilities and other human factors?

Does the procedure(s) for MNMS risk identification take into account the identified risks originating outside the workplace capable of adversely affecting the health and safety of persons under the control of the organization within the workplace?

Does the procedure(s) for MNMS risk identification take into account the risks created in the vicinity of the workplace by work-related activities under the control of the organization? **NOTE.** It may be more appropriate for such hazards to be assessed as an environmental aspect.

Does the procedures for MNMS risk identification take into account the infrastructure, equipment and materials at the workplace, whether provided by the organization or others?
Does the procedures for MNMS risk identification take account the changes or proposed changes in the organization, its activities, or materials?

Does the procedures for MNMS risk identification take into account the operations, process and activities (routine and non-routine activities) and their workplaces?

Does the procedures for MNMS risk identification take into account the Legal and other requirements to which the organization subscribes that are applicable to it?

Does the procedures for MNMS risk identification take into account the modifications to the MNMs risk management model, including temporary changes, and their impacts on operations, processes, and activities?

Does the procedures for MNMS risk identification take into account the any applicable legal obligations relating to risk assessment and implementation of necessary controls)?

Does the procedures for MNMS risk identification take into account the the design of work areas, processes, installations, machinery/equipment, operating procedures and work organization, including their adaptation to human capabilities?

Has your organisation applied risk identification tools and techniques that are suited to its objectives and capabilities, and to the risks faced?

Has your organization included relevant and up-to-date information to identify MNMs risk? and background information where possible?

### 4.3.1.3 MNMs risk evaluation

Has your organization established, implemented and maintained a procedure for MNMs risk evaluation, so that the nature and level of risk is understood to prioritize the risks to be addressed and to facilitate decision making in the organization?

Has your organization defined criteria to be used to evaluate the significance of risk?

Has your organization determining the consequences and their likelihood, and other attributes of the risk?

Does the level of risk reflect the type of risk, the information available and the purpose for which the risk assessment output is to be used? And is it consistent with the MNMs risk criteria?

### 4.3.2 MNMs risk treatment

Are the risk treatment options including the following:

a) avoiding the MNMs risk by deciding not to start or continue with the activity that gives rise to the MNMs risk;

b) taking or increasing the MNMs risk in order to pursue an opportunity;

c) removing the MNMs risk source;

d) changing the likelihood;

e) changing the consequences;

f) sharing the MNMs risk with another party or parties (including contracts and risk financing); and

g) retaining the MNMs risk by informed decision.
Has your organization selecting the most appropriate risk treatment options involves balancing the costs and efforts of implementation against the benefits derived, with regard to legal, regulatory, and other requirements?

Has your organization planned periodically the risk treatment plans evaluation?

Has your organization verified the conformity of the MNMs risk treatment plans?

Has your organization documented and kept the results of MNMs risks identification, evaluation and treatment assessments and determined controls up-to-date?

**4.3.3 Legal and other requirements**

Do you ensure that these legal and other requirements which the organization subscribes are taken into account in the implementation and maintenance of MNMs RMM?

Do you ensure that the legal and other requirements which the organization subscribes are kept up-to-date?

Has the organization communicated relevant information about legal requirements and other requirements to persons working under the control and other stakeholders?

**4.3.4 Objectives and programme(s)**

**4.3.4.1 Objectives, goals and programmes of MNMs RMM for**

Are the objectives and goals measurable?

Has the organization established, implemented and maintained a programme(s) to achieve the objectives MNMs?

Are defined responsibilities and deadlines for achieving the objectives?

Does the program is periodically reviewed at planned intervals and adjusted if necessary to achieve the objectives?

Has your organization verified the conformity of the programme(s) to achieve the objectives MNMs?

**4.3.4.2 MNMs risk management planning**

Does the Top Management ensure that the planning of the MNMs RMM is carried out in order to meet the requirements given in 4.1 as well as the objectives, goals and programmes?

Does the Top Management ensure that the integrity of the MNMs RMM is maintained when the changes to the MNMs RMM are planned and implemented?

**4.4 IMPLEMENTATION AND OPERATION**

**4.4.1 Resources, roles, responsibility, accountability and authority. General.**

Does the Top Management demonstrate its commitment ensuring that resources essential to establishing; maintaining and improving the MNMs RMM are available?

How do all those with management responsibility demonstrate their commitment to continual improvement of the MNMs RMM?
<table>
<thead>
<tr>
<th>Does your organization ensure that persons in the workplace take responsibility for the aspects of Occupational, Health and Safety over which they have control, including adhering to the organization’s applicable MNMs RMM requirements?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>4.4.2 Competence, training and awareness</strong></td>
</tr>
<tr>
<td>Does your organization identify training needs associated with its MNMs risks and its MNMs RMM?</td>
</tr>
<tr>
<td>Has a procedure(s) been established, implemented and maintained to ensure that the people working for, or under the control of your organization are aware with the MNMS RMM requirements?</td>
</tr>
<tr>
<td>Do the training procedures take into account different levels of a) responsibility, ability, language skills and literacy; and b) risk</td>
</tr>
<tr>
<td><strong>4.4.3 Communication, participation and consultation</strong></td>
</tr>
<tr>
<td><strong>4.4.3.1 Communication</strong></td>
</tr>
<tr>
<td>Has your organization established, implemented and maintained procedure(s) for internal communication between the various levels and functions of your organization?</td>
</tr>
<tr>
<td>Has your organization established, implemented and maintained procedure(s) for communication with contractors and other visitors to the workplace?</td>
</tr>
<tr>
<td>Has your organization established, implemented and maintained procedure(s) for receiving, documenting and responding to relevant communication from external interested parties?</td>
</tr>
<tr>
<td><strong>4.4.3.2 Participation and consultation</strong></td>
</tr>
<tr>
<td>Are the workers informed about the arrangement of their participation and who is their representative(s) on Occupational, Health and Safety matters related to MNMs risks?</td>
</tr>
<tr>
<td>Has your organization established, implemented and maintained procedure(s) for the consultation with contractors where there are changes that affect their Occupational, Health and Safety related to MNMs risks?</td>
</tr>
<tr>
<td><strong>4.4.4 Documentation</strong></td>
</tr>
<tr>
<td>Does your organization’s MNMs RMM documentation include: a) the MNMs risk management policy and objectives; b) description of the scope of the MNMs RMM; c) description of the main elements of the MNMs RMM and their interaction, and reference to related documents; d) documents, including records, required by the model; and e) documents, including records, determined by the organization to be necessary to ensure the effective planning, operation and control of processes that relate to the management of its MNMs risks.</td>
</tr>
<tr>
<td>Documents, including records, necessary for the effective planning, operation and control of processes related to its MNMs risks?</td>
</tr>
</tbody>
</table>
### 4.4.5 Control of documents

Has your organization established, implemented and maintained a procedure(s) for controlling all documents required by this MNMs RMM?

Are the external documents controlled their distribution?

### 4.4.6 MNMs Operational control

How has your organization determined the operations and activities that are associated with the identified risk(s) and implementation of controls are necessary to manage the MNMs risk(s).

Has the management of change been included (see 4.3.1)?

### 4.4.7 MNMs emergencies preparedness and response

Has your organization established, implemented and maintained a procedure(s) to identify the potential emergency situations related to MNMs risks? and to response to such emergency situations?

Does the procedure(s) cover how your organization will respond to actual emergency situations related to MNMs risks?

Is this testing carried out periodically?

Has your organization taken into account especially those activities related to MNMs risk that support the products and / or services of the organization?

Has your organization periodically reviewed and modified, where necessary, procedures for recovery of activity to an interruption of the activity of the organization, taking into account the needs of relevant stakeholders as appropriate?

### 4.5 CHECKING

#### 4.5.1 Monitoring and measurements of MNMs risk management activities

Has your organization established, implemented and maintained a procedure(s) to monitor and measure MNMs RMM performance?

Are the equipments calibrated or verified and maintained (procedure)? Are calibration or verification records retained?

Does the organization define clearly the responsibilities of performance measurement and monitoring?

#### 4.5.2 Legal compliance evaluation

Has your organization established, implemented and maintained a procedure(s) for periodically evaluating its compliance with the applicable legal and other requirements identified in clause 4.3.2 of this standard?

Has your organization evaluated its compliance with other requirements identified in clause 4.3.2 of this standard?
### 4.5.3 Incident investigation, nonconformity, corrective action and preventive action

#### 4.5.3.1 Event and Incident investigation

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Has your organization established, implemented and maintained a procedure(s) to record, investigate and analyze incidents?</td>
<td></td>
</tr>
<tr>
<td>Does your organization undertake these investigations in a timely manner? (Note: You may also want to define what your organization considers timely).</td>
<td></td>
</tr>
<tr>
<td>Does your organization use the Non-conformity, Corrective &amp; Preventive Action system to deal with any actions? (see 4.5.3.2)</td>
<td></td>
</tr>
<tr>
<td>Does your organization document and maintain the results of the incident investigations?</td>
<td></td>
</tr>
</tbody>
</table>

#### 4.5.3.2 Nonconformity, corrective action and preventive action

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Has your organization established, implemented and maintained a procedure(s) for dealing with actual and potential non-conformities, and corrective and preventive action?</td>
<td></td>
</tr>
<tr>
<td>Does the procedure(s) define requirements for evaluating the need for actions to be taken to prevent non-conformities, and implementing appropriate actions?</td>
<td></td>
</tr>
<tr>
<td>Does the procedure(s) define requirements for recording the results of corrective and preventive actions taken?</td>
<td></td>
</tr>
<tr>
<td>Does the procedure(s) define requirements for reviewing the effectiveness of corrective and preventive actions?</td>
<td></td>
</tr>
<tr>
<td>Are the action(s) taken to eliminate the causes of actual and potential non-conformities appropriate to the magnitude of the problem(s) and proportional to the MNMs risk(s) encountered?</td>
<td></td>
</tr>
</tbody>
</table>

### 4.5.4 Control of records

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are the records updated?</td>
<td></td>
</tr>
<tr>
<td>Do these records include those that are necessary to demonstrate conformity to the requirements of the standard?</td>
<td></td>
</tr>
<tr>
<td>How do you store the MNMs RMM records in order that they are readily retrievable and protected against damage, deterioration or loss?</td>
<td></td>
</tr>
</tbody>
</table>

### 4.5.5 Internal Audit

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Has your organization planned, established, implemented and maintained a programme and procedure(s) for periodic internal audits to be conducted?</td>
<td></td>
</tr>
<tr>
<td>Do these internal audits determine whether or not the MNMs RMM conforms to planned arrangements for occupational, health and safety matters related to MNMs risks, including the requirements of this model?</td>
<td></td>
</tr>
<tr>
<td>Do these internal audits determine whether or not the MNMs RMM has been properly implemented and maintained?</td>
<td></td>
</tr>
</tbody>
</table>
Do these internal audits determine whether or not the MNMs RMM is effective in meeting your organization’s policy and objectives?

Do these internal audits provide information on the results of audits to management?

### 4.6 MANAGEMENT REVIEW

Has your organization’s top management (at planned intervals) reviewed the MNMs RMM, to ensure its continuing suitability, adequacy and effectiveness?

Has your organization carried out a management review?

### 4.6.2 Data analysis

Has your organization determined, collected and analyzed appropriate data to demonstrate the suitable and effectiveness of the MNMs RMM and evaluated where continual improvement of the effectiveness of the MNMs RMM can be made?

Has the data generated as a result of monitoring and measurement and from other relevant sources been included?

### 4.6.3 Continual improvement

Has your organization continually improved the effectiveness of the MNMs RMM through the use of the MNMs risk management policy, objectives, goals and programmes, audit results, analysis of data, corrective and preventive actions and management review?
7 REFERENCES OF KNOWLEDGE

SCAFFOLD Public Document SPD14 – Guide for the implementation of a Risk Management Model in relation with manufactured nanomaterials (MNMs) in the construction sector. 15.10.2014.


Guide for developing a H&S management system for construction sector (FIEC & EFBWW, 2010)

OHSAS 18002:2008, Occupational health and safety management systems — Guidelines for the implantation of OHSAS 18001

AENOR auditors know how and experience with OSHAS certified SMEs in construction sector

Check list on RMM questions in SPD15.