EU-HCWM

“Developing an EU Standardised Approach to Vocational Educational Training Awards in Healthcare Waste Management”

Project No. 541982-LLP-1-2013-1-UK-LEONARDO-LNW

Vocational Training in Healthcare Waste Management

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Funded by the EACEA
with the support of the Lifelong Learning Programme of the European Union
The EU-HCWM project aims to provide a unified approach to the development of National Occupational Standards and Vocational Educational Training Programmes for Healthcare Waste Management across EU Member States, through the development of a new healthcare waste management qualification framework, and e-learning platform.

The new qualification framework developed during the project duration, will enable the EU labour force in the sector to gain a standardised set of skills regardless of the member state in which they undertook the vocational training programme. This will ensure that future health-care waste managers will have genuine EU educational currency and therefore enabling greater mobility within the EU for this specific labour force.
PROJECT

Healthcare waste management is a dynamic field of the waste sector and technology applications have radically changed over the past decades. As we become more aware of the risks posed by healthcare waste in terms of infection control and broader environmental impacts so our practices and technologies improve.
However, healthcare waste management practices are not always perfect.....
A standardised qualification and associated training package will not solve all the problems – but it has the potential to significantly improve waste management practices, through raising awareness and the provision of a structured capacity building programme to key system stakeholders.
PROJECT PARTNERSHIP

- ICERMS, Scotland, UK
- SINERGIE, Italy
- Regional Environment Centre for Central and Eastern Europe, Slovenia
- SIGMA Consultants Ltd, Greece
- Regional Environment Centre FYROM, FYROM
- NHS Confederation, Belgium
- ET Log, Germany
- European Union of Private Hospitals, Belgium
- Institute of Environmental Protection, Poland
- Club EMAS, Spain
- International Solid Waste Association, Austria
- Regional Environment Centre Albania, Albania
The project has set the following objectives:

1. Conduct & report on an assessment of the healthcare waste management situation in the partner member states in terms of vocational training in the HCW sector; legislation provision; current practices re HCW management and lastly barriers to new qualification implementation.

2. Prepare a comparative analysis report on each of the above findings.

3. Develop a set of National Occupational Standards for the post of healthcare waste manager working in a healthcare facility.

4. Develop a Vocational Educational Qualification and underpinning PowerPoint based Training Programme in line with the requirements of the national occupational standard.

5. Develop an e-learning platform for the NOS.

6. Develop an EU wide professional network for dissemination and support of the project outputs with a view to pan European implementation.
From this point to the end it is pure text and this will be mind numbing for anyone listening to it. I suggest you break the text slides up with photographs.
A survey, in 9 European countries (Albania, FYROM, Germany, Greece, Italy, Poland, Slovenia, Spain and the UK), was carried out among

• healthcare waste managers and healthcare providers,
• respective business associations and authorities and
• training organizations

in order to obtain first-hand data on the work requirements and qualifications as well as the vocational training courses provided to healthcare waste management.
The purpose of the questionnaire was to gather information about
• The role of a healthcare waste manager
• as well as a set of draft NOS which would become the basis of unit titles for an award in healthcare waste management and treatment.

There were two distinct outputs expected from this process:
• to learn from current waste managers what their job roles entailed, how they got those jobs and what qualifications and skills they had or were required.
• to get their collective opinions on a draft list of NOS which would be the basis for qualification units for the new award on healthcare waste management and treatment.
COMPARISON REPORT

Based on the European survey findings, a comparison report was synthesized.

The comparison report examined **three distinct aspects** of the healthcare systems in each of the partner member states:

- Overview of the Healthcare Systems
- Overview of the Healthcare Waste Management Legislation and Practices
- Overview of Skills, Competencies and Training of involved Personnel in Healthcare Waste Management
• Partner member states have a system of healthcare provision which to a greater or lesser extent is a blend between State provision and Private sector provision.

• All of the partner member states are working to national interpretations of EU waste legislation and practices of segregation which share, at least in principle, similar core foundations.

• But there is a significant difference across the member states participating in the assessment process. In some cases there is a defined formal route for VET in HCWM, in others there is a less formal route and lastly there are cases where there is no VET for healthcare waste managers.
Percentage composition of hospital waste in Thessaloniki

- Non hazardous: 78%
- Infectious: 15%
- Infectious - Toxic: 4%
- Chemical - Pharmaceutical: 1%
- Other: 2%
Percentage composition of non infectious hospital waste

- Paper: 45%
- Plastics: 15%
- Metal: 10%
- Food leftovers: 10%
- Other: 10%
- Glass: 7%
- Wood: 3%
COMPARISON REPORT

Solid HC Waste Treatment - Greece

- Incineration: 25%
- Export to EU: 25%
- Health Waste Treatment Plants: 60%
- Sterilization: 15%
EU-HCWM project has developed a suite of 27 vocational training units to cover a range of activities normally associated with delivery of healthcare waste management.

These units are based on a set of 27 National Occupational Standards.

These units can be undertaken in 3 distinct pathways depending on the job role of the candidate.

All of the units are underpinned by PPT training modules which contain, either practical exercises or question and answer sheets, to ensure that the candidate demonstrates competence in the unit being undertaken. The training modules will contain embedded exercises based on activities in the workplace.
THE HCWM QUALIFICATIONS FRAMEWORK

- All of the training materials will be included in a candidate qualification & training manual.
- The manual has four basic sections to assist the trainer in delivering the course programme:
  - Structure of the Awards in a Unit Context
  - Assessment Guidance for the Qualification
  - Methodology for the Delivery of the Awards
  - Course Programme
- It is important to allocate enough time for the award delivery and to ensure that sufficient emphasis is placed on the practical tasks and site visits.
- The qualification delivery is underpinned by an assessment strategy which delivering VET centres must comply with
<table>
<thead>
<tr>
<th>Unit No.</th>
<th>Unit Title</th>
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<tbody>
<tr>
<td>1</td>
<td>Complying with Waste Management Legislation</td>
</tr>
<tr>
<td>2</td>
<td>Understanding Waste Management in the Environmental Management System</td>
</tr>
<tr>
<td>3</td>
<td>Contribute to the selection of personnel for activities</td>
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<td>4</td>
<td>Create effective working relationships</td>
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<td>5</td>
<td>Conducting an Internal waste management audit and pre-acceptance auditing at a healthcare facility</td>
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<td>6</td>
<td>Ensure protection of the environment at healthcare facilities, treatment or transport operations</td>
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<tr>
<td>7</td>
<td>Developing Healthcare Waste Management Policy and Plan Documents</td>
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<td>8</td>
<td>Climate Change Adaptation Auditing &amp; Reporting at a Healthcare Facility</td>
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<tr>
<td>9</td>
<td>Manage a budget to Supporting the efficient use of resources</td>
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<tr>
<td>10</td>
<td>Contribute to the development of tender/bid documentation, selection of, implement and manage, sub contracted services</td>
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<tr>
<td>11</td>
<td>Preparing for and Delivering In-house Healthcare Waste Management Training</td>
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<td>12</td>
<td>Implementing a Waste Management Plan, Record Keeping and Reporting</td>
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<tr>
<td>13</td>
<td>Implementing a Waste Minimisation Programme, including the sorting and storage of recycled materials, at a healthcare facility</td>
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<td>14</td>
<td>Sharps Waste Management and Biosecurity at a Healthcare Facility</td>
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Scott Crossett; 1/7/2015
<table>
<thead>
<tr>
<th>Unit No.</th>
<th>Unit Title</th>
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<tbody>
<tr>
<td>15</td>
<td>Manage the collection of hazardous and non-hazardous waste from a healthcare facility</td>
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<tr>
<td>16</td>
<td>Manage the movement, sorting and storage of hazardous and non-hazardous waste</td>
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<td>17</td>
<td>Manage improvements to waste management operations/practices at a healthcare facility, treatment centre or transport operations</td>
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<td>18</td>
<td>Effectively Manage Environmental Incidents and Emergencies</td>
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<td>19</td>
<td>Monitor the procedures to control risks to health and safety of the waste management function at a healthcare facility/healthcare treatment facility</td>
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<td>20</td>
<td>Managing Waste Transportation operations for the transfer of hazardous and non-hazardous healthcare waste at a healthcare facility (Dangerous Goods Safety Adviser)</td>
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<td>21</td>
<td>Review the performance of teams and individuals</td>
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<td>22</td>
<td>Prepare an Installation with an Environment Permit for an Inspection Visit (Permit Holder)</td>
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<td>23</td>
<td>Manage the reception of infectious wastes at a healthcare waste treatment facility</td>
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<td>24</td>
<td>Manage site operations for the treatment of infectious healthcare waste at a healthcare facility/healthcare waste treatment facility</td>
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<td>25</td>
<td>Manage the disposal of outputs and residues from infectious healthcare waste treatment operations or, healthcare waste transfer operations, at a healthcare facility</td>
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<tr>
<td>26</td>
<td>Manage maintenance and other engineering operations at a healthcare facility, infectious healthcare waste treatment facility or during healthcare waste transport operations</td>
</tr>
<tr>
<td>27</td>
<td>Monitor the procedures to control risks to health and safety during healthcare waste transport operations</td>
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THE HCWM QUALIFICATIONS FRAMEWORK

Structure of the Awards in a Unit Pathway Context

The three suggested pathways are as follows:

- **Pathway 1**: Managing Healthcare Waste at a Healthcare Facility with an optional add on of units where the hospital has its own treatment facility.

- **Pathway 2**: Managing Healthcare Waste treatment Operations – Infectious Waste

- **Pathway 3**: Managing Healthcare Waste Transport Operations
Assessment Guidance

• This award will be a formal qualification and will ONLY be delivered by vocational training centres registered with the National Qualification Authority.

• In this regard the centre must have the appropriate personnel capable of delivering the training programme and operate in line with the requirements of the National Qualification Authority guidelines on vocational training centres and vocational qualification delivery.
Training Course Programme

- There are 27 Units in the suite and these are underpinned by 56 Power Point modules which contain embedded exercises and which also have associated tasks.
- Candidates are expected to provide evidence from their workplace to support their attainment of competence.
- Product evidence provided by the candidate must meet the requirements laid out within the assessment strategy developed for the delivery of the units.
Training Course Programme

The concept of vocational training infers that the candidate is assessed at their place of work that the trainer or assessor delivering the training has a number of options in relation to this assessment process.

In the last column of the table a number of possible assessment methods have been proposed for the assessment of the candidate undertaking the specific unit.
<table>
<thead>
<tr>
<th>UNIT</th>
<th>TOPIC</th>
<th>Power Point Modules</th>
<th>Practical Exercises &amp; Evidence List</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Complying with Waste Management and Environmental Legislation</td>
<td>Mod01 – Unit Overview</td>
<td>PE1 Draft a list environmental legislation relevant to the activities at your facility or for your operations</td>
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<td></td>
<td>Mod02 – Complying with Waste Management Legislation</td>
<td>Questions and Answers</td>
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<td>Practical Exercise</td>
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<td>Product Evidence</td>
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<td>Observation</td>
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<td>Photographic/Film</td>
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<td>Schedule of Environment/Waste Legislation</td>
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<td>Licence or Permits</td>
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<td>Regulatory Inspections</td>
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</table>
| 5 | Manage the movement, sorting and storage of hazardous and non-hazardous waste | **PE5** *Draft a collection schedule for waste collection at your healthcare facility*

**Mod09 – Unit Overview**

Mod10 - Manage the movement, sorting and storage of hazardous and non-hazardous waste

- **Questions and Answers**
- **Practical Exercise**
- **Reflective Account**
- **Product Evidence**
- **Photographic/Film**
  - Site Layout Plan
  - Working Procedures
  - Collection Schedule/Plan
  - Staff List
  - Equipment List
  - Waste Management Contracts
  - Meeting Minutes
  - Segregation Charts
  - Maintenance Records
  - Waste Storage Logs
  - Waste Transfer Notes
  - Waste Consignment Notes
  - Waste Packaging Instructions
The e:learning portal is being developed on Moodle at the moment and it includes two versions as we have a two tier approach to the vocational learning process across the EU.

The majority of partners will use the Moodle platform to provide HCWM training as there is an absence of vocational learning in those member states.
The public page is the only page that will be accessible to users that do not have a valid login. They will be able to view the courses available for their country and nothing else.
E-Learning Portal

Once the user logs in their main screen will be the course page. This page has all the units, showing a progress chart for that unit as a pie chart.

There are 5 possible statuses for each individual assessment criteria:
• not yet started,
• draft,
• submitted,
• accepted,
• needs more work.

This chart shows the candidate at a glance how they are doing on each unit. They can then click on the unit to expand and view the detail, and upload or edit their submissions. Each unit will also have links to the Powerpoint slides and unit outline. You can also see on the right the candidate will have a forum search functionality, as well as a module showing info about their training centre.
E-Learning Portal

Course page

General

Unit 1
Complying with Waste Management Legislation

Unit 2
Developing Healthcare Waste Management Policy and Plan Documents
PROFESSIONAL NETWORKS

The task of developing professional networks in all EU member states is being undertaken by the following project:

• European Union of Private Hospitals (EUHP)
• International Solid Waste Association (ISWA)
• NHS Confederation (HOSPEEM & HOPE)
• Regional Environment Centre (REC) network

Each EU Member state would have between 6 and 12 members of the professional network who would act as multipliers within that member state. Examples of professional network core members would be representatives from the following institutions:

• Health Authorities
• Qualification Authorities
• Healthcare Waste Trade Associations
• HCWM Professional Bodies
• Hospital Associations
While the professional networks will consist of a broad range of stakeholders it is hoped that the healthcare waste managers within that group both from the public and private sectors would form a pan European professional body e.g.:

**European Institute of Healthcare Waste Managers (EIHWM)**

This would be a suggested output of the project within the Exploitation Plan and would be an accredited professional body solely for healthcare waste managers.
PROJECT DISSEMINATION

Join our EU-HCWM group on LinkedIn:
www.linkedin.com/groups/euhcwm-7472255
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The EU-HCWM Knowledge Base is a virtual reference library for healthcare waste managers. Each of the partner member states are represented, with articles, papers and guidance etc. pertinent to the healthcare waste management function of that particular member state available to download.

Users of the knowledge base are encouraged to upload information at the knowledge base in order that best practice in the sector can be more widely disseminated. If you have content that you think would improve this resource, please contact us:

**Filter by Country:**

- **Article on Healthcare Waste Management, Including: Policies, Legislations, Principles and Technical Guidelines by Dr. W. K. Townend**
  - Date: 06 July 2015

- **Publications, Fact Sheets and Information Relating to Healthcare Waste Management, Generated by the WHO.**
  - Date: 03 July 2015

- **Raising Public Awareness About the Problem of Medical Waste**
  - Date: 01 July 2015

- **Ebola - New Guidance Developed by WHO Team**
  - Date: 18 June 2015

**Latest Newsletters**

- February 2016
- Summer 2015
- June 2015
- March 2015
- January 2015
- September 2014
EXPLOITATION PLAN

Currently working on the exploitation plan and are looking at ways of addressing the sustainability of the project outputs. At the moment we are trying to focus on building the professional networks; developing an electronic platform to sit alongside Moodle and to allow professional network interaction.

In addition intend to propose the professional body for HCWM and provide a web site and newsletters etc. in this regard. This would be hosted for 5 years beyond the life of the project. More on this at the Final Conference.
CONCLUSION

• Some member states have VET systems or part VET systems in place within the context of a formal vocational qualification framework while others have nothing in place at all.

• It is imperative that the key EU VET and HCW industry stakeholders agree on the importance of the national occupational standards; the vocational qualifications and the underpinning training materials for healthcare waste managers.

• The research undertaken in the process of the development of the new proposed professional qualifications for HCWMs and the promotion of the new proposed VET courses for the training of staff working in the field of Healthcare Waste Management were fully related to the general innovative perspectives and interim results of the EU-HCWM project. The overall aim of the project as it move into its second phase is the creation of new job positions, the improvement in capacities of existing HCW Managers & the strengthening of healthcare waste facilities’ environmental performance and sustainable development.
I would make this two slides not one as there is too much text here

Scott Crossett; 1/7/2015
CONCLUSION

• The project at this point has demonstrated the importance of bringing together the industry users with the service providers was integral, in terms of the approach to the long term sustainability of the project outputs and the multiplier effect of the inclusion of the pan European associations and federations was also a crucial factor in the consideration of the project outputs and their sustainability.

• It has also resulted in the establishment and maintenance of national networks in regard to the project initiatives will no doubt serve to further strengthen those links and promote the project products.