



**COURSE OVERVIEW RE0930**  
**Professional Turnaround Manager**

*Process Plant Shutdown, Turnaround & Troubleshooting*

**Course Title**

Professional Turnaround Manager: *Process Plant Shutdown, Turnaround & Troubleshooting*

**Course Date/Venue**

Session 1: April 27- May 01, 2025/ Al Khobar Meeting Room, Hilton Garden Inn, Al Khobar, KSA

Session 2: November 16-20, 2025/Boardroom 1, Elite Byblos Hotel Al Barsha, Sheikh Zayed Road, Dubai, UAE



**Course Reference**

RE0930

**Course Duration/Credits**

Five days/3.0 CEUs/30 PDHs



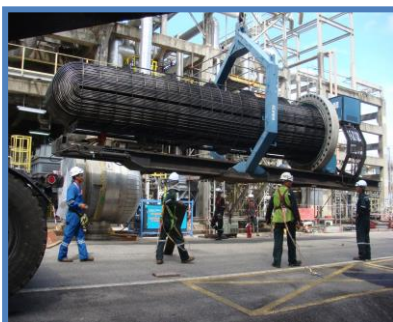
**Course Description**



***This practical and highly-interactive course includes various practical sessions and exercises. Theory learnt will be applied using our state-of-the-art simulators.***



The process industry is losing over half a billion dollars of profits a year due to poor turnaround results and missed opportunities. The majority of turnarounds lacked strategic focus and front-end planning. In addition, turnaround teams lacked leadership and were understaffed. The major negative factor is the growing gap between higher turnaround performance expectations and rapidly shrinking qualified resources to manage the turnarounds. As a result, the planning effort not only starts late, but it is also ineffective, and typically does not contribute in the turnaround success.



This course is designed to bridge the above-mentioned gap. It will provide turnaround managers and engineers with enough knowledge and skills to understand the purpose of the turnaround, to properly plan and manage the turnaround, and to achieve exponential results of their turnaround project. The course will teach participants how to establish a systematic turnaround management processes and procedures that incorporate the best turnaround practices, planning techniques and execution strategies.





Turnaround results have a long-term effect on the facility's operational reliability and it dictates the plant's operational efficiency and business survival in the competitive global market. The turnaround performance can be dramatically improved if companies focus on key issues such as strategic planning, selection of qualified contractors, synergistic and innovative organizations, and tactical initiative to improve field productivity.

The course will cover the emerging industry trends, turnaround benchmarking and the challenges faced by plant executives to consistently achieve pacesetter results on plant shutdowns and turnarounds. We will teach you how to fairly balance your business, marketing and financial goals with your plant needs for mechanical integrity and operational reliability. We will show you how to focus on risk areas, early work scope definition, high-performance initiatives, the assignment of qualified staff and the best practice contracting strategy. Upon the completion of this course, you will have good knowledge to perform World-Class turn arounds.

### **Course Objectives**

Upon the successful completion of this course, each participant will be able to: -

- Get a certificate as a “*Professional Turnaround Manager*”
- Apply systematic techniques in the shutdown, turnaround and troubleshooting of process plants
- Implement the special needs of time constrained projects (24/7)
- Identify the work to be accomplished for the shutdown project
- Plan to meet deadlines & complete turnaround projects on time within budget
- Apply shutdown best practices
- Plan, lead, organize, control and co-ordinate shutdown type projects
- Schedule the work effectively
- Manage resources effectively
- Implement feedback systems
- Identify risks and manage these effectively
- Reporting and documenting the shutdown activity
- Recognize the use of software packages

### **Exclusive Smart Training Kit - H-STK®**



Participants of this course will receive the exclusive “Howard Smart Training Kit” (H-STK®). The H-STK® consists of a comprehensive set of technical content which includes **electronic version** of the course materials conveniently saved in a **Tablet PC**.

### **Who Should Attend**

This course is intended for those involved directly or indirectly in the plant shutdown and turnaround operations. This includes maintenance and project staff such as managers, engineers, planners, supervisors and other technical people.



**Course Certificate(s)**

(1) Internationally recognized Competency Certificates and Plastic Wallet Cards will be issued to participants who completed a minimum of 80% of the total tuition hours and successfully passed the exam at the end of the course. Certificates are valid for 5 years.

**Recertification is FOC for a Lifetime.**

**Sample of Certificates**

The following are samples of the certificates that will be awarded to course participants:-





- (2) Official Transcript of Records will be provided to the successful delegates with the equivalent number of ANSI/IACET accredited Continuing Education Units (CEUs)

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## Haward Technology Middle East

Continuing Professional Development (HTME-CPD)

# CEUs

### CEU Official Transcript of Records

**TOR Issuance Date:** 14-Nov-21  
**HTME No.** 8667-2014-9020-2555  
**Participant Name:** Abdulsatar Al Otaibi

Program Ref.	Program Title	Program Date	No. of Contact Hours	CEU's
RE0930	Process Plant Shutdown, Turnaround & Troubleshooting	10 Nov-14 Nov, 2021	30	3.0

**Total No. of CEU's Earned as of TOR Issuance Date** **3.0**

**TRUE COPY**

  
**Jaryl Castillo**  
 Academic Director

Haward Technology has been approved as an Authorized Provider by the International Association for Continuing Education and Training (IACET), 2201 Cooperative Way, Suite 600, Herndon, VA 20171, USA. In obtaining this approval, Haward Technology has demonstrated that it complies with the ANSI/IACET 1-2013 Standard which is widely recognized as the standard of good practice internationally. As a result of their Authorized Provider membership status, Haward Technology is authorized to offer IACET CEUs for programs that qualify under the ANSI/IACET 1-2013 Standard.

Haward Technology's courses meet the professional certification and continuing education requirements for participants seeking Continuing Education Units (CEUs) in accordance with the rules & regulations of the International Association for Continuing Education & Training (IACET). IACET is an international authority that evaluates programs according to strict, research-based criteria and guidelines. The CEU is an internationally accepted uniform unit of measurement in qualified courses of continuing education.

Haward Technology is accredited by



P.O. Box 26070, Abu Dhabi, United Arab Emirates | Tel.: +971 2 3091 714 | Fax: +971 2 3091 716 | E-mail: info@haward.org | Website: www.haward.org


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**Certificate Accreditations**

Certificates are accredited by the following international accreditation organizations: -

- 
British Accreditation Council (BAC)

Haward Technology is accredited by the **British Accreditation Council** for **Independent Further and Higher Education** as an **International Centre**. BAC is the British accrediting body responsible for setting standards within independent further and higher education sector in the UK and overseas. As a BAC-accredited international centre, Haward Technology meets all of the international higher education criteria and standards set by BAC.

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The International Accreditors for Continuing Education and Training (IACET - USA)

Haward Technology is an Authorized Training Provider by the International Accreditors for Continuing Education and Training (IACET), 2201 Cooperative Way, Suite 600, Herndon, VA 20171, USA. In obtaining this authority, Haward Technology has demonstrated that it complies with the **ANSI/IACET 2018-1 Standard** which is widely recognized as the standard of good practice internationally. As a result of our Authorized Provider membership status, Haward Technology is authorized to offer IACET CEUs for its programs that qualify under the **ANSI/IACET 2018-1 Standard**.

Haward Technology’s courses meet the professional certification and continuing education requirements for participants seeking **Continuing Education Units** (CEUs) in accordance with the rules & regulations of the International Accreditors for Continuing Education & Training (IACET). IACET is an international authority that evaluates programs according to strict, research-based criteria and guidelines. The CEU is an internationally accepted uniform unit of measurement in qualified courses of continuing education.

Haward Technology Middle East will award **3.0 CEUs** (Continuing Education Units) or **30 PDHs** (Professional Development Hours) for participants who completed the total tuition hours of this program. One CEU is equivalent to ten Professional Development Hours (PDHs) or ten contact hours of the participation in and completion of Haward Technology programs. A permanent record of a participant’s involvement and awarding of CEU will be maintained by Haward Technology. Haward Technology will provide a copy of the participant’s CEU and PDH Transcript of Records upon request.

**Course Fee**

**US\$ 5,500** per Delegate + **VAT**. This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

**Accommodation**

Accommodation is not included in the course fees. However, any accommodation required can be arranged at the time of booking.





### Course Instructor(s)

This course will be conducted by the following instructor(s). However, we have the right to change the course instructor(s) prior to the course date and inform participants accordingly:



**Mr. Andrew Ladwig** is a **Senior Process & Mechanical Engineer** with over **25 years** of extensive experience within the **Oil & Gas, Refinery, Petrochemical & Power** industries. His expertise widely covers in the areas of **Ammonia Manufacturing & Process Troubleshooting, Distillation Towers, Crude Oil Distillation, Fundamentals of Distillation** for Engineers, **Distillation Operation and Troubleshooting, Advanced Distillation Troubleshooting, Distillation Technology, Vacuum Distillation, Ammonia Storage & Loading Systems, Ammonia Plant Operation, Troubleshooting & Optimization, Ammonia Recovery, Ammonia Plant Safety, Hazard of Ammonia Handling, Storage & Shipping, Operational Excellence in Ammonia Plants, Fertilizer Storage Management**

(Ammonia & Urea), **Fertilizer Manufacturing Process Technology, Sulphur Recovery, Phenol Recovery & Extraction, Wax Sweating & Blending, Petrochemical & Fertilizer Plants, Nitrogen Fertilizer Production, Petroleum Industry Process Engineering, Refining Process & Petroleum Products, Refinery Planning & Economics, Safe Refinery Operations, Hydrotreating & Hydro-processing, Separators in Oil & Gas Industry, Gas Testing & Energy Isolations, Gas Liquor Separation, Industrial Liquid Mixing, Wax Bleachers, Extractors, Fractionation, Operation & Control of Distillation, Process of Crude ATM & Vacuum Distillation Unit, Water Purification, Water Transport & Distribution, Steam & Electricity, Flame Arrestors, Coal Processing, Environmental Emission Control, R&D of Wax Blending, Wax Molding/Slabbing, Industrial Drying, Principles, Selection & Design, Process Safety Design, Certified Process Plant Operations, Control & Troubleshooting, Operator Responsibilities, Storage Tanks Operations & Measurements, Tank Design, Construction, Inspection & Maintenance, Atmospheric Tanks, Process Plant Troubleshooting & Engineering Problem Solving, Process Plant Performance, Efficiency & Optimization, Continuous Improvement & Benchmarking, Process Troubleshooting Techniques, Oil & Gas Operation/Introduction to **Surface Facilities, Pressure Vessel Operation, Plant & Equipment Integrity, Process Equipment Performance & Troubleshooting, Plant Startup & Shutdown, Startup & Shutdown the Plant While Handling Abnormal Conditions, Flare & Relief System, Process Gas Plant Start-up, Commissioning & Problem Solving, Process Liquid and Process Handling & Measuring Equipment.** Further, he is also well-versed in **Compressors & Turbines Operation, Maintenance & Troubleshooting, Heat Exchanger Overhaul & Testing Techniques, Balancing of Rotating Machinery (BRM), Pipe Stress Analysis, Valves & Actuators Technology, Inspect & Maintain Safeguarding Vent & Relief System, Certified Inspectors for Vehicle & Equipment, Optimizing Equipment Maintenance & Replacement Decisions, Certified Maintenance Planner (CMP), Certified Planning and Scheduling Professional (AACE-PSP), Material Cataloguing, Specifications, Handling & Storage, Steam Trap Design, Operation, Maintenance & Troubleshooting, Steam Trapping & Control, Column, Pump Technology, Pump Selection & Installation, Centrifugal Pumps Troubleshooting, Pumps Design, Selection & Operation, Pump & Exchangers, Troubleshooting & Design, Rotating Equipment Operation & Troubleshooting, Control & ESD System, Detailed Engineering Drawings, Codes & Standards, Budget Preparation, Allocation & Cost Control, Root Cause Analysis (RCA), Production Optimization, Permit to Work (PTW), Project Engineering, Data Analysis, Process Hazard Analysis (PHA), HAZOP Study, Sampling & Analysis, Training Analysis, Job Analysis Techniques, Storage & Handling of Toxic Chemicals & Hazardous Materials, Hazardous Material Classification & Storage/Disposal, Dangerous Goods, Environmental Management System (EMS), Supply Chain, Purchasing, Procurement, Logistics Management & Transport & Warehousing & Inventory, Risk Monitoring Authorized Gas Tester (AGT), Confined Space Entry (CSE), Personal Protective Equipment (PPE), Fire & Gas, First Aid and Occupational Health & Safety.****

During his career life, Mr. Ladwig has gained his practical experience through his various significant positions and dedication as the **Mechanical Engineer, Project Engineer, Reliability & Maintenance Engineer, Maintenance Support Engineer, Process Engineer, HSE Supervisor, Warehouse Manager, Quality Manager, Business Analyst, Senior Process Controller, Process Controller, Safety Officer, Mechanical Technician, Senior Lecturer and Senior Consultant/Trainer** for various companies such as the Sasol Ltd., Sasol Wax, Sasol Synfuels, just to name a few.

Mr. Ladwig has a **Bachelor's degree in Chemical Engineering** and a **Diploma in Mechanical Engineering.** Further, he is a **Certified Instructor/Trainer, a Certified Internal Verifier/Assessor/Trainer** by the **Institute of Leadership & Management (ILM)** and has delivered various trainings, workshops, seminars, courses and conferences internationally.





**Training Methodology**

All our Courses are including **Hands-on Practical Sessions** using equipment, State-of-the-Art Simulators, Drawings, Case Studies, Videos and Exercises. The courses include the following training methodologies as a percentage of the total tuition hours:-

- 30% Lectures
- 20% Practical Workshops & Work Presentations
- 30% Hands-on Practical Exercises & Case Studies
- 20% Simulators (Hardware & Software) & Videos

In an unlikely event, the course instructor may modify the above training methodology before or during the course for technical reasons.

**Course Program**

The following program is planned for this course. However, the course instructor(s) may modify this program before or during the course for technical reasons with no prior notice to participants. Nevertheless, the course objectives will always be met:

**Day 1**

0730 – 0800	Registration & Coffee
0800 – 0815	Welcome & Introduction
0815 – 0830	<b>PRE-TEST</b>
0830 – 0900	<b>Introduction &amp; Fundamentals</b> Introduction to PM: What is a Project? • PM Associations & Body of Knowledge • Project Management Body of Knowledge (PMBOK) • Project Management Elements • Projects Environment • Project Life Cycle Phases • Project Managers Job profile • Project Manager Job Description • Project Management Skills • Project Management Toolkit
0900 – 0915	<b>Planning the Shutdown</b> Identifying the Work • Starting Your Project • Project Charter/Project Document • Defining & Limiting the Scope • Constraints of the Shutdown
0915 - 0945	<b>Prioritizing the Proposed Work</b> Identifying the Work • Review the Maintenance Backlog • Jobs Not Requiring a Shutdown • Equipment History • Predictive Maintenance (PDM) Records • Preliminary Work of Shutdown • Walk-downs & Check Lists • Solicit the Input of Others • Reviewing Shutdown Files • Identify Start-up Activity • Compiling Identified Work
0945 – 1000	Break
1000 – 1030	<b>Sources of Shutdown Work &amp; Shutdown Project Parameters</b> Class Task
1030 – 1100	<b>Risk Management</b> Staffing Assumptions • Estimate Risks • Commercial Data • Procurement Problems • Project Risk Management - Model
1100 – 1200	<b>Risk Management Plan</b> Identify Risks Throughout the Project • Develop Risk Assessment Criteria • Tabulate The Risks • Prepare Standby Plans or Alternatives
1200 - 1230	<b>The Project Managers Role</b>
1230 – 1245	Break
1245 – 1330	<b>Quality Control Plan &amp; Project Quality Management</b>



1330 - 1400	<b>Quality Management</b> Group Task
1400 - 1420	<b>Shutdown Manager's Skills</b>
1420 - 1430	<b>Recap</b> Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow
1430	Lunch & End of Day One

**Day 2**

0730 - 0930	<b>Planning Processes</b> Doing the Right Work • Doing The Work Right • Doing The Work at the Right Time
0930 - 0945	Break
0945 - 1015	<b>What is the Difference Between Planning &amp; Scheduling?</b> What is Scheduling? • Planning Objectives • Planning Tools Cycle
1015 - 1045	<b>Project Management Toolkit</b> Project Plan • Shutdown Plan
1045 - 1115	<b>Shutdown Definition</b> The Shutdown Work Breakdown Structure • The Project WBS - It's Uses • The Project Work Breakdown Structure • The Shutdown Budget • The Project OBS • The Shutdown OBS • The Shutdown WBS
1115 - 1130	<b>The Shutdown WBS &amp; SOW</b> Group Task
1130 - 1200	<b>Planning Thought Process</b> What Must Happen First on the Job? • Who Must Do This Step? • How Many People Are Required? • What Parts, Materials, or Supplies Will Be Needed? • Is Any Support Equipment Required? • How Long Will It Take? • What Must Happen Next on this Job? • Documentation
1200 - 1215	<b>Determining Contract Work</b> Technical Support • Non-technical Support • Work That Can Be Performed Off-site • Work Requiring Special Equipment • Activities from WBS • Activities Data • Task Duration - PERT Method • Activity Work Content & Costing/Pricing
1215 - 1230	Break
1230 - 1330	<b>Base Line Plan with Budget Approval</b> Networks For Activity Logic - Overview & Convention • Shutdown- Early Start Calculations - Forward • Project Plan - Late Start Calculations-backwards, Float Calculations - Subtract & Network to Gantt Chart • Common Network Errors • Schedules • Milestones
1330 - 1420	<b>Base Line Plan with Budget Approval (cont'd)</b> Resource Utilization • Milestone Plan & Chart • Resource Utilization • Resource Loading & Leveling • Schedules: Resource Requirements • Manual Load Leveling
1420 - 1430	<b>Recap</b> Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow
1430	Lunch & End of Day Two





**Day 3**

0730 – 0900	<b>Base Line Plan with Budget Approval (cont'd)</b> Leveling Other Resources • Resource Utilization • Budgets & Committed Cash Flow • Tracking Project Costs • The Basic Principle • Base Line Plan
0900 – 0930	<b>Shutdown – Network Logic, Schedules: Committed Cash Flow &amp; Schedules: Actual Projected Cash Flow</b> Group Task
0930 - 0945	Break
0945 - 1015	<b>Organizing &amp; People Management</b> Shutdown Toolkit • The Shutdown Organisation • Organizing Tools & Techniques • Most Important Communications • Tender / Contract Clause Coverage • Parts, Material & Equipment • Material & Equipment Responsibility
1015 - 1115	<b>Organizing &amp; People Management (cont'd)</b> Tracking Long Delivery Items • Accounting • Reporting Structure • Assigning Responsibility • Shutting Down Meeting • Organization Breakdown Structure (OBS)
1115 - 1145	<b>Organizing</b> Group Task
1145 – 1215	<b>The Matrix Organisation</b> Administration • Communication • Forms, Formats & Files • Project File • Shut Down Toolkit- Resource Utilization
1215 – 1230	Break
1230 – 1330	<b>Leadership Tools &amp; Techniques</b> Team Selection – Organisation • - Motivation • - Shutdown Sponsor Role
1330 – 1420	<b>Execution &amp; Feedback</b> The Execution Phase • Shutdown Practical Execution Issues • Feedback on Project Status • Job Status Update • Feedback on Project Status • Feedback on Project Status: Costs
1420 – 1430	<b>Recap</b> Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow
1430	Lunch & End of Day Three

**Day 4**

0730 – 0930	<b>Execution &amp; Feedback (cont'd)</b> Project Practical Control • Project Review Meeting • Materials Management • Staging/Rigging • Shutdown Safety • OSHA Requirements
0930 - 0945	Break
0945 – 1015	<b>Quality Control Plan (QCP) Information</b> Cost of Quality • Inspection Reports • Activity Inspection Results • Quality Control Sheet
1015 – 1100	<b>Quality</b> Group Task



1100 – 1230	<p><b>Proven Turnaround Practices</b>  <i>The Nature of Turnaround/Shutdown Project Management • The Environment In Which a Turnaround/Shutdown Takes Place • Turnaround/Shutdown Success Factors • More Success Factors • Similar Planning Approach To Projects • Elements of a Turnaround/Shutdown • Turnaround/Shutdown Toolkit • The Work Breakdown Structure (WBS) &amp; the Organization Breakdown Structure (OBS) • Identifying the Work • General Shutdown/Turnaround Checklist • Planning A Plan • Milestone Plan • Milestone Chart • Work Scope • Budgets &amp; Cost Control • Projects</i></p>
1230 - 1245	Break
1245 - 1400	<p><b>Proven Turnaround Practices (cont'd)</b>  <i>Materials • Process Operations • Pre-shutdown/Pre-turnaround Reviews • Safety • Typical Safety Questions That Should Be Asked • Inspection • Contracting • Quality: What is Required? • Quality Control Plan (QCP) • Quality Control Plan (QCP) Inspection Report • Quality Control Sheet • Risk Management • Shutdown/Turnaround Practices Discussion</i></p>
1400 – 1420	<p><b>Control of Shutdown</b>  <i>Control Tools &amp; Techniques • Tracking Project Costs • Project Practical Control • Controlling • Control – Overview • Control: CSCS = Cost Schedule Control System • Control Cycle –CSCS • CSCS Illustrative Graph • Scope Control</i></p>
1420 – 1430	<p><b>Recap</b>  <i>Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow</i></p>
1430	Lunch & End of Day Four

**Day 5**

0730 - 0930	<p><b>Control of Shutdown (cont'd)</b>  <i>Shutdown &amp; Turnaround • Shutdown Acceleration • Project Acceleration • Contractor Controls • Control Tools &amp; Techniques • Tracking Project Costs • Project Practical Control • Controlling • Control – Overview</i></p>
0930 - 0945	Break
0945 - 1015	<p><b>Control of Shutdown (cont'd)</b>  <i>Control: CSCS = Cost Schedule Control System • Control Cycle –CSCS • CSCS Illustrative Graph • Scope Control • Shutdown &amp; Turnaround • Shutdown Acceleration • Project Acceleration • Contractor Controls</i></p>
1015 - 1030	<p><b>Accelerating a Project &amp; Start-up &amp; Handover</b>  <i>Group Task</i></p>
1030 – 1100	<p><b>Start-up &amp; Handover</b>  <i>Elements of Handover • Contactor Handover • Final Report • Conclusion</i></p>
1100 – 1200	<p><b>Use of Computer &amp; Software</b>  <i>Project Management Software • Sorting &amp; Communicating Information</i></p>
1200 – 1230	<p><b>Using Microsoft Project &amp; Shutdown Workshop</b>  <i>Group Task</i></p>
1230 – 1245	Break



1245 – 1300	<b>Typical Causes of Shutdown Failure</b> <i>Work not Clearly Defined • Risks not Analysed or Managed with Contingency Plans • No Baseline Plan –Poor or Non-existent Planning • Lack of Scope Management • Poor Leadership • Not Taking Environmental needs into the Plan • Focus on Critical Path items only- the Rest Catch up with you</i>
1300 – 1315	<b>Course Conclusion</b> <i>Using this Course Overview, the Instructor(s) will Brief Participants about the Course Topics that were Covered During the Course</i>
1315 – 1415	<b>COMPETENCY EXAM</b>
1415 – 1430	<i>Presentation of Course Certificates</i>
1430	<i>Lunch &amp; End of Course</i>

**Simulator (Hands-on Practical Sessions)**

Practical sessions will be organized during the course for delegates to practice the theory learnt. Delegates will be provided with an opportunity to carryout various exercises using the “MS Project” and “Mindview Software”.





The screenshot displays the Mindview Software interface. The top window shows a mind map titled 'Problem Solving' with a central node and several branches including 'Assessment', 'Planning', 'Measurement', and 'Monitoring'. The bottom window shows a Microsoft Word document with the same 'Problem Solving' content, demonstrating the software's ability to export mind maps to text documents.

**Mindview Software**

**Course Coordinator**

Mari Nakintu, Tel: +971 2 30 91 714, Email: [mari1@haward.org](mailto:mari1@haward.org)

