



UNITED NATIONS  
INDUSTRIAL DEVELOPMENT ORGANIZATION

## Capacity building on the demonstration of the “Transfer of Environmentally Sound Technology (TEST)” methodology

### Call for Applications of for Service Providers, Consultants, and Professionals

#### 1. Background

The “Private Sector Transition to a Green and Circular Economy” project or “2Circular” is funded by the European Union as part of the ENI - European Neighborhood Initiative that emerged from the 2020 Annual Action Program (part II) adopted by the European Union in December 2020 to contribute to Lebanon’s reform, recovery, and reconstruction framework.

New business models, new technologies and short-term low-risk innovations, particularly those that allow reduction in costs, have revealed to be a very important key for countries to emerge from economic downturns and for getting back on a path of sustainable and smarter growth. Through the project, the European Union, and the United Nations Industrial Development Organization (UNIDO) collaborate and provide Technical Assistance and grants in equipment to SMEs for scaling up accelerating the uptake of resource efficiency and innovative circular economy solutions as business opportunities, for reducing production costs and fostering resilience and sustainable growth of the food and beverage industry (F&B) in Lebanon.

The project is implemented in partnership with the Ministry of Industry, the Ministry of Environment, the Ministry of Economy and Trade and the Ministry of Finance, and in cooperation with the Association of Lebanese Industrialists (ALI) and the Federation of the Chambers of Commerce, Industry and Agriculture, as well as national and international financing institutions, development organizations, service and technology providers, and academia.

#### 2. The role of service providers to scale up resource efficiency

The 2Circular project targets to extend the national capacity to adopt cost-cutting environmentally sound technologies in industries, adopting resource efficient and cleaner production technologies. Service providers play an important role in the promotion and acceleration of resource efficiency upscale as they provide company formation and back-office support to private clients (corporates and SMEs) to improve areas that require specific expertise. The project will build on existing service capacities in the field of energy efficiency, renewable energy, environment audits, etc. to mainstream the comprehensive approach of resource efficiency for greener industries, by training national experts. By using the Transfer of Environmentally Sound Technologies (TEST) methodology developed by UNIDO for the industry, manufacturing companies advised by the group of trained experts, will be able to reduce costs but also incorporate managerial practices that ensure adoption of a more efficient and sustainable production model.



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### 3. Service providers are invited to apply as beneficiaries of the project

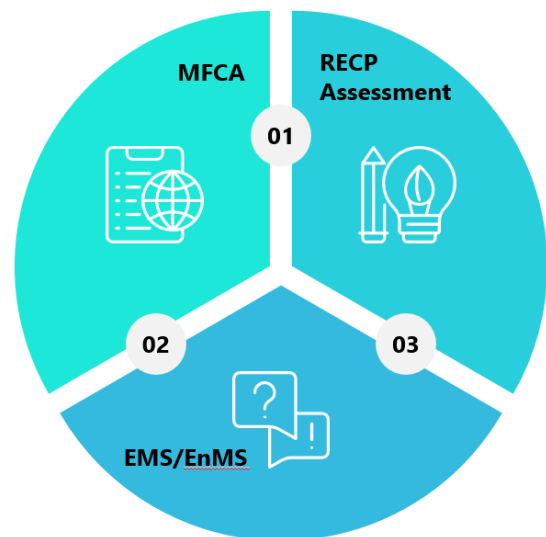
2Circular invites professionals in the field of engineering, members of consultancy firms or service centers, or individual consultants and professionals with minimum experience in delivering services to businesses, to apply as project beneficiaries.

Applicants will receive a free-of-charge theoretical and on-the-job training on the application of the “Transfer of Environmentally Sound Technologies” (TEST) methodology promoted by UNIDO, with the purpose of increasing their participation in the service market related to green and circular economy solutions in the Lebanese industry. Selected service providers that successfully complete the theoretical and on-the-job training will be invited to offer their services to assist companies supported by the project in the adoption of resource-efficient practices and technologies. The project will also provide companies with in-kind grants to implement recommendations identified by the service providers. Thirty (30) service providers will be selected.

### 4. About the TEST methodology

The TEST methodology, developed by UNIDO, offers a systematic approach to identifying and exploiting the most feasible opportunities for resource efficiency and continuous improvement in the use of materials, water and energy within a company. This methodology combines essential tools for sustainable production, namely, Resource-efficient and Cleaner Production Assessment (RECPA), Material Flow Cost Accounting (MFCA) and Environmental and Energy Management Systems (EMS/EnMS). As a result of the customized integration and implementation of these tools, best practices, new skills and an innovative management culture are adopted. TEST enables any company to transition towards more sustainable production business models.

- At the core of the TEST methodology lies the **RECP tool**, a step-by-step assessment for improving production systems' resource efficiency and environmental performance. **The core output of this tool is a portfolio of financially feasible solutions, including good housekeeping, operational control improvements, process and product modifications, and eco-innovative technologies.**
- Within the TEST methodology, **elements of MFCA** are employed to strengthen priority-setting based on **non-product output costs and to establish ad hoc information systems for critical material and energy flows, as well as key processes.** This step is essential to monitoring significant resource losses and consumption.
- The core elements of the **Environmental Management System (EMS)** and Energy Management System (EnMS) are used in TEST to **integrate resource efficiency into the company's overall management systems.** This provides operating criteria, Standard Operational Procedures (SOPs) and the internal resource structure for ensuring that resource efficiency programmes are implemented, sustained and further developed.



## 5. Benefits and Duties of Selected Service Providers

### Benefits:

- Enrolment on a free-of-charge specialized training on the TEST methodology. The training has two compulsory components:
  - ✓ Theoretical component: One-week training workshop delivered by UNIDO's international experts on the full set of the TEST tools and the systematic application of a TEST audit. The training will bring real life experiences from the application of TEST in Lebanon and other countries in the Mediterranean Region.
  - ✓ On-the-job training: Practical implementation through deploying a TEST audit cycle in one industrial company of the Food and Beverage sector (calculated to 20-22 working days per person). Trainees will have the great opportunity to assess a real production process and support companies in identifying practices and strategies to become greener. During this process, trainees will receive technical support and supervision from TEST national experts and coaching from the international trainers. Each trainee will conduct the TEST assessment in one company working with another fellow trainee to promote technical exchange, networking and collaboration. A company report will be prepared by trainees as part of the capacity building process in service provision, for which proper documentation is crucial to present results to client companies
- After successfully completing the theoretical and practical training and delivering the corresponding reports, service providers will receive a certificate from UNIDO and the EU in the framework of the 2Circular project, verifying their capacity as TEST experts.
- Selected service providers becoming trainees will receive a special allowance to partially recognize their work during the on-the-job training. This allowance will be USD 3000 per person.
- Service providers that finalize the capacity-building program (theoretical and on-the-job) will be part of UNIDO's database of trained national experts to deliver technical assistance services to Food and Beverage industries within this project's framework and beyond.

### Duties:

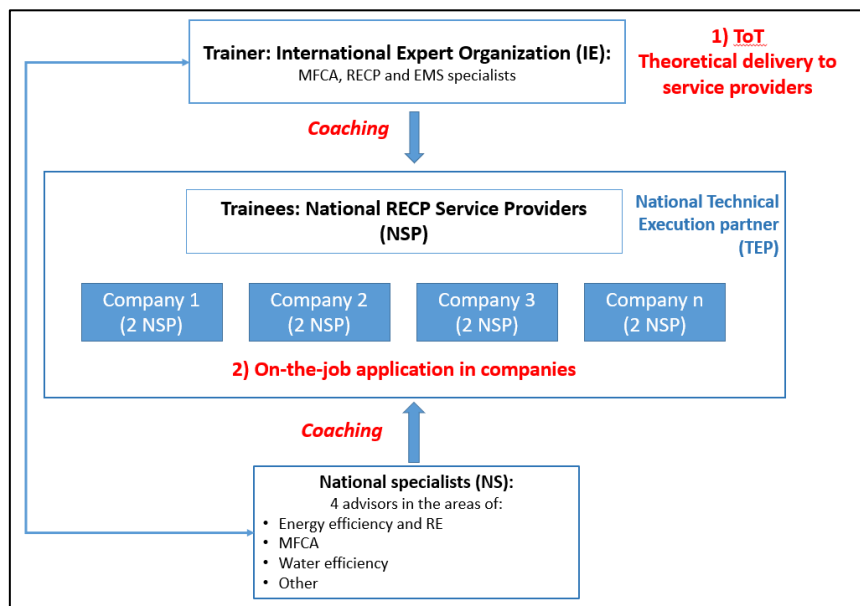
The main duty of selected service providers is to complete the theoretical and on-the-job training. For the 5-day theoretical training, a minimum assistance of **90 % of scheduled time** is required; the service providers must also pass the final exam of the course. For the on-the-job training, the service providers **must complete the TEST assessment in one industrial company and deliver the company report** following the guidance received in the training and from the coaching process. Only those service providers that have complied with the previous requirements will receive the graduation certificate.

**Annex 1** below describes the detailed terms of reference (TOR) of service providers to be selected as trainees; these TOR define the step-by-step approach followed to conduct a TEST assessment in a company, as expected to be done by the service providers as their on-the-job training, as well as report delivery needs.

## 6. Organizational arrangements

The 2Circular project is implemented by UNIDO and a project management unit is located in Beirut, UN House/ESCWA Building, under oversight of the UNIDO project manager based in Vienna headquarter. The PMU in Beirut is led by an Industrial Development Officer and a project team of specialists to coordinate the project implementation.

The implementation of the capacity building process for service providers is supported by a Technical Execution Partner (TEP). The TEP will be in charge of the formalization of participation agreements with selected service providers, payment of allowances, organization of training logistics, supervising progress and following up on the delivery of company reports. The following graphic describes the coordination scheme among participants of the capacity-building process.



*Training of Trainers model (NSP: national service providers)*

## 7. Duration

- ✓ **Theoretical training:** 5-day training course developed in consecutive days (one week).
- ✓ **On-the-job training:** TEST assessment to be conducted on ad-hoc basis over a calendar period of maximum 8 months (November 2023 - June 2023). During this period, service providers will participate in coaching sessions with their national advisor and international trainers, and in one intermediate group session to present/discuss progress with their pairs through an online session.

## 8. Application data and deadline

The applications from service providers are open from the 15 of July to 15 of August 2023. Documents should be sent to the [2circular@unido.org](mailto:2circular@unido.org), with the subject “**Service Providers Application- Name of the candidate**”.

## 9. Application requirements

To apply as Service Providers beneficiaries of the 2Circular project, individuals must submit the following:

- Application form (annex 2 in the list of documents).
- Motivation Letter
- Curriculum vitae in the attached template (annex 3 in the list of documents).
- If working in a consultancy firm or any company, letter of the employer confirming their permission to the candidate to become a beneficiary service provider, and therefore, to attend the 5-day training course and conduct the TEST assessment on an ad-hoc basis.
- Scanned copy of passport's first page or of an official national ID.

## 10. Selection Criteria

Applicants will be evaluated through a score-based methodology applying the following criteria. Interviews will be held to those better scored candidates that also comply with all "Yes" criteria, until completing selection of 30 professionals.

	Criteria	Description	Evaluation
1	<b>Experience on one of the follow areas</b>	Resource efficiency, cleaner production, Environment or/and Energy related services (including environmental and energy management systems), provided on a commercial basis (at a cost)	✓ Yes/No
2	<b>Type of Service Provider</b>	Service providers are individual consultants; they can be either freelance consultants, or consultant members of a registered legal entity: i.e. consulting company; or service center.	✓ Freelance Consultants: 3 points  ✓ Members of Legal Entity: 5 points
3	<b>Professional experience of the Service Provider</b>	At least 3 years working experience in an engineering field (mechanical, chemical, electrical, industrial or other relevant fields).	✓ Yes/No
		Number of documented years of working experience matured with manufacturing companies.	✓ <1 year: 0 points ✓ 1-2 years: 2 points ✓ More than 2 years: 5 points
		Documented number of industrial or commercial clients (reference) in the past 3 years for any of the following services: Resource efficiency and cleaner production (RECP); energy audits (EA), energy management system implementation (EMS) or related.	✓ 5 points (1-3 clients in RECP/EA/EMS) ✓ 10 points (4-6 clients RECP/EA/EMS) ✓ 15 points (more than 7 in RECP/EA/EMS)
		Services to industrial or commercial clients in Energy Management system implementation (EnMS), environmental audits (EnA) or environmental inspections (EnI) is a plus.	

			✓ 2 points (1 or more clients in EnMS/EnA/EnI)
4	<b>Education of allocated professional from the service provider or of consultant</b>	University degree in engineering (mechanical, chemical, electrical, industrial)	✓ Yes/No
		Advanced certified training Course on RECP, EMS or EE is a plus	✓ 2 points for each certified training (max 10 points)
5	<b>Language requirements of allocated professional</b>	Fair communication (oral and written) skills in Arabic and English.	✓ Yes/No
6	<b>Computer skills of allocated professional</b>	Excellent computer and word processing skills (minimum Microsoft word, excel and power point skills)	✓ Yes/No
7	<b>Nationality</b>	Lebanese	Required



## Annex 1. Terms of Reference of Beneficiary Service Providers

The activities requested in these TOR belong to the implementation of project’s output 1.1 **“Extended stakeholders’ capacities for TEST adoption and scale up in the food and beverage sector”**. This output seeks to create capacity in services providers and industries to facilitate the adoption of TEST to enhance efficiency and apply circular economy practices. Service providers will be invited and selected to be trained on the TEST methodology so they can offer these services to industries. UNIDO will select a Technical Execution Partner (TEP) to be also trained and to collaborate with the logistic arrangements and recruitment of service providers, monitoring of the on-the-job training and delivery of reports.

The SPs will work under the overall coordination of the Technical Execution Partner (TEP), and will receive training and coaching by international and national experts to learn about the TEST methodology and undertake an on-the-job training, through which SPs will provide technical assistance to companies to adopt resource efficiency and circular economy-related practices. The theoretical and on-the-job training is considered a Training of Trainers (ToT), which will result in an increased capacity of the service providers to implement the UNIDO TEST methodology in 15 companies from the Food and Beverage industry, in which the SPs will have evaluated the adoption of greener practices and technologies. SPs will submit reports per company to UNIDO, which is part of the trainee’s evaluation to graduate from the ToT.

The overall process of the ToT consists of the following steps and responsibilities. The step-by-step process is also represented in graphic 1 (below):

Main duties	Concrete Output
<b>Step I – Theoretical Training on the TEST methodology</b> <b>Objective:</b> Create technical capacity of 30 service providers to deliver technical assistance services in industrial companies of the food and beverage sector, applying the “Transfer of Environmentally Sound Technology” (TEST) methodology, as a tool to systematically assess the most feasible potentials for resource efficiency and continuous improvement of the use of materials, water and energy within a company	
1.1 Attend at least 90 % of the classroom-based 5-day training workshop. 1.2 Undertake the final exam set by the program at the stipulated date (post training workshops).	✓ Assistance registered in the training complies with the minimum required. ✓ Pass final exam
<b>Step II - On-the-job Training: TEST Audit in F&amp;B companies</b> <b>Objective:</b> ✓ Strengthen capacity of SP by undertaking practical implementation of the TEST methodology through conducting an audit in a company, with supervision and coaching from national and international experts. ✓ Provide technical assistance to increase resource efficiency at companies assessing and applying cost-effective measures to reduce energy, water, material consumption, and/or waste and emission generation to improve the businesses’ resilience and environmental performance, based on the TEST approach.	
<b>Planning and coordination:</b> 2.1 In coordination with the technical supervisor (national expert) appointed to the company case, elaborate a work plan of the TEST audit following the methodology provided during the theoretical training. 2.2 In coordination with the technical supervisor (national expert) appointed to the company case, the SP will facilitate the formation of the company TEST team as counterpart of the TEST	



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<p>audit, identifying the appropriate members and coordinating its delegation with the company management.</p> <p>2.3 Keep an active communication and good relationship with the counterparts in the companies to facilitate the TEST audit activities and information exchange.</p> <p>2.4 Organize follow up meetings with the company TEST team, present progress and results to the top management and discuss measures and action plan.</p>	
<p><b>Core implementation of the TEST assessment in the appointed company under supervision of the respective advisor:</b></p> <p>2.5 Conduct a first walkthrough the company facilities to recognize the production process and current conditions of operations, use of resources, machinery and utilities. Identify the environmental impacts, obvious process inefficiencies, and areas of high and easier improvement potential (low-hanging fruits).</p> <p>2.6 Identify the environmental policy of the company (if it exists) and assess its coherence with RECP and circular economy.</p> <p>2.7 Apply the MFCA tool learned in the training to 1) identify inputs and outputs at the company system boundary in physical and monetary terms, 2) record recommendations for the information system from which this data is obtained, and 3) Calculate the total non-products outputs (NPO) costs, NPOs being the resources that have not been converted into products. .</p> <p>2.8 Identify priority flows and set up Key Performance Indicators (KPI) for each priority flow; benchmark the KPI to pre-assess the RECP potentials and set objectives. Establish priority material/energy flows and areas for deeper analysis.</p> <p>2.9 Using the MFCA tool, conduct the breakdown of NPO costs to specific production areas (cost centers). Analyse operational performance indicators (OPI), elaborate material and energy balances of priority flows and evaluate inefficiencies running root-cause analysis.</p> <p>2.10 The SP shall coordinate and assist the company team to obtain the data needed, advising on the most efficient way to collect data for the more detailed analysis. Also, the SP are expected conduct onsite inspections in priority areas/operations/flows (material-waste, water, energy) and conduct data collection to complete the assessment.</p> <p>2.11 Conduct desktop analysis and research best practices applicable to the production process, targeting the reduction of inefficiencies and optimization of resources that can reduce environmental impacts and NPO costs identified in the previous steps.</p> <p>2.12 Identify at least one high-impact resource-efficiency investment measure or project for the company to recommend to the 2Circular project management for further support.</p> <p>2.13 Hold intermediate discussion meetings with the company team as needed to brainstorm or discuss potential RECP measures, motivate changes and get the support of the company team.</p> <p>2.14 Discuss with the company and present an Action Plan reflecting management’s decision. Include monitoring indicators and monitoring plan for resource efficiency in the company.</p>	<ul style="list-style-type: none"> <li>✓ Initial screening report</li> <li>✓ Environmental policy statement proposal or recommendations to improve it.</li> <li>✓ MFCA tool and data collection implemented.</li> </ul>



**Reporting on the TEST Assessment and attendance to coaching sessions**

The audit will be documented through a company report that will consolidate results and provide the company with sound description of the audit analysis, RECP saving catalogue, Action and Monitoring plans. The SP will be accompanied during the audit process by the national and international experts. Hence, the following tasks shall be conducted to support the SP on-the-job training actions:

<p>3.1 Coordinate meetings with and follow up advice from the technical supervisors; the SP will inform and respond to request from the technical supervisors related to the proper implementation of the TEST methodology and technical advice to identify or evaluate RECP options.</p> <p>3.2 Keep up-to-date communication with the TEP coordinator.</p> <p>3.3 Attend 2 company-targeted coaching sessions with the international experts to discuss progress and receive advice.</p> <p>3.4 Attend 1 group workshops for technical exchange with other SPs, addressing challenges, and discuss lesson learned.</p> <p>3.5 Submit progress and final reports of the TEST audit as follows:</p> <ul style="list-style-type: none"> <li>✓ First progress report 1, containing progress on policy setting, I/O analysis, KPI, identification of NPO costs, priority flows and setting up of focus areas using the MFCA tool.</li> <li>✓ Second progress report, containing the detailed analysis conducted for priority flows and areas, options generations and progress of pre-feasibility analysis.</li> <li>✓ Submit final report, containing the entire audit result including the final options' pre-feasibility analysis, action and monitoring plans.</li> </ul> <p>The presentation of progress reports is aimed at supporting SP during the TEST audit development, giving insights to the technical supervisors and international experts about the potential struggles, so that correction actions can be undertaken. Progress and final report templates will be provided.</p>	<ul style="list-style-type: none"> <li>✓ First progress report of the TEST assessment</li> <li>✓ Second progress report of the TEST Audit</li> <li>✓ Final report of the TEST Audit.</li> </ul>
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### TOR's Graphic 1. Training of Trainers – Process and Content

#### Step-by-step process

