

#### **Consultation services to local industry, 2022**



Revised June 2022

Mutah University

Maintenance and sustainable unit

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https://www.mutah.edu.jo/ar/coc/Home.aspx

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#### **Energy Management Vision based on the Energy Solutions Factory Framework**

In this decade, the world is hardly pushed towards adopting more *stringent and innovative practices* to conserve and manage existing university energy resources. In response to these *global and local Energy Crisis conditions*, Mutah University's *Energy Management Vision* increasingly occupies a significant portion of the university management and technical staff concern. Multiple university units and centers collaborate to put this vision into practice, such as Figure 1:

- **1. Training, Consultation, and Communication Center**
- 2. Maintenance and Sustainable Unit
- 3. Prince Faisal Center for Dead Sea, Environmental and Energy Research
- 4. Entrepreneurship Center
- 5. Community and Development Center

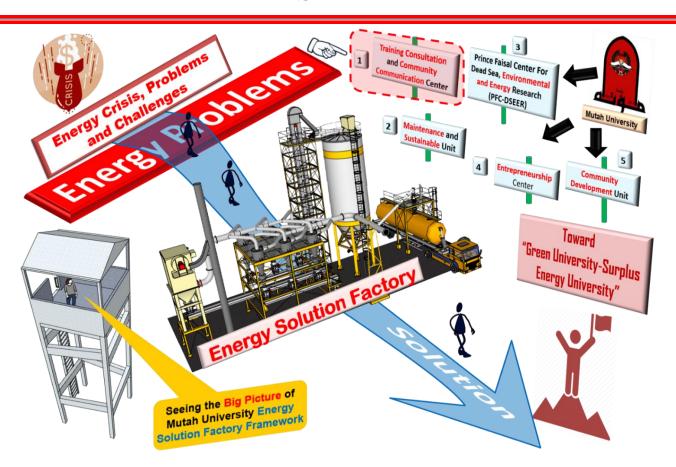


Figure 1: A Visual big picture of Mutah University Energy Management vision based on the Energy Solutions Factory Framework

Energy management activities are paralyzed by *fragmentation and the absence of an integrated vision* to accommodate multiple activities of multiple units and centers at Mutah University. *Energy Solution Factory Framework* is the most important framework that can unify energy management efforts under one umbrella, which can be moved easily to serve many contexts, as illustrated in Figure 1. Academic institutions are globally considered policies, technologies, and know-how generation environments that can be incubated to fruit developments in all fields. The philosophy looks to university centers and units as factories that can convert challenges into opportunities to transfer know-how and technologies and produce solutions. Mutah University's energy management vision is mainly based on this vital Factory Solution Perspective, as illustrated in Figure 1.

Integrated Picture of Mutah University Energy Management Activities

Energy Management Practices integration is one of the most important added values to the developed *Energy Management Vision*. This vision is based on gathering the Energy Management Practices offered by the five main university centers and units listed above as one continuum that aims to achieve the big goal of these efforts of converting Mutah University into a green Energy Surplus University, as illustrated in Figure 2. The importance of combating the negatives of fragmentation of these diverse efforts is reflected in constructing an integrated picture of the whole University's energy

management activities, as illustrated in Figure 2. Seeing the big picture of these collaborative practices is paramount to Energy Management Integration.

Constructing Far Reaching Road Map of Mutah University Energy Management Activities based on Seed to Fruit Framework

Solution Factory Framework adopted before helped create a generic template that helped put all energy management efforts in a generic solution production form that can be easily moved to be implemented in all contexts, as illustrated in Figure 1. The construction of an integrated picture was a second critical step in shifting our thinking in Energy Management from the fragmented mode to the integrated and continuum mode, as illustrated in Figure 2. It is time now to go deep into *micro integration* by deeply looking at energy management activities from a seed growth perspective that classifies these activities as one of four types, see Figure 3:

- 1. Seed Activities
- 2. Root Activities
- 3. Branches Activities
- 4. Fruit Activities

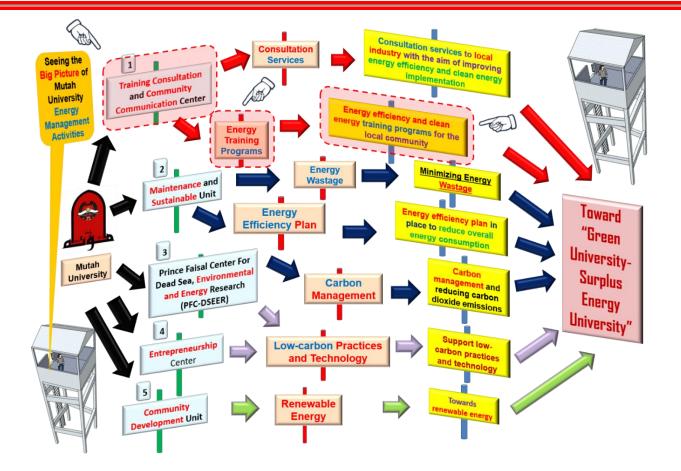


Figure 2: A Visual Big Picture of Mutah University Energy Management Activities

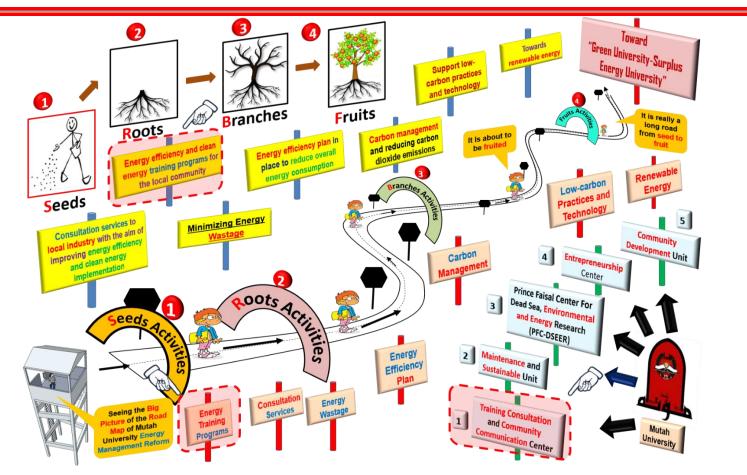


Figure 3: A Visual road map of Mutah University Energy Management Activities based on seed to fruit framework

This seed-to-fruit framework will add an instrumental relationship to the network of these fragments of activities and help shift Energy Management Thinking to the instrumental mode that gives meaning to these series and parallel network of practices, as illustrated in Figure 3.

The Training, Consultation, and Community Communication Center

Vision:

- We envision the Training, Consultation, and Community Communication Center as a distinguished hub for nurturing human talent and equipping them to contribute to the holistic development of the nation and, mainly, the local community through our services.
- The establishment of the Training, Consultation, and Community Communication Center was formalized by the Deans Council Decision No. 606/2014, dated 11/19/2014, marking the legal and administrative successor to what was formerly known as "The South Center for Training and Consultations." The Center's operational guidelines were issued under the authority of Deans Council Decision No. 104/2015, dated 17/3/2015, and serve as the legal, administrative, and technical framework for the Center's operations. The Center operates under the administrative oversight of the University President and is entrusted with the following responsibilities:

- Offering training and advisory services, conducting studies, facilitating software marketing, and providing technical assistance to local community members and institutions within and outside the Kingdom.
- Enhancing the University's capacity to deliver services and motivating its workforce to participate in community service actively.
- Organizing and overseeing seminars, conferences, and training programs aimed at enhancing the skills, expertise, and academic qualifications of participants from the local community, equipping them to contribute effectively to societal development.
- In 2022, the Training, Consultation, and Community Communication Center developed a comprehensive plan to recognize the need to stay abreast of the ever-evolving training and development landscape worldwide. This domain constantly evolves, with regular updates and advancements across various areas, particularly in energy. The Center aligns with these advancements, particularly in energy efficiency, by organizing a series of courses targeting various community segments. These courses are intended to raise awareness among community members regarding high-efficiency energy systems and the best practices for their usage.



Additionally, through the Consulting Department, the Center established a collaborative group to offer consultations, conduct studies, and provide analysis to the local industrial sector. The objective is to promote the adoption of high-efficiency energy systems and facilitate the transition towards renewable energy sources, fulfilling the energy needs of the local industrial sector. As detailed in the table below, several companies have already engaged with the Center in this regard.

Project name	Partners
Wind energy mapping	Al-Mashish Renewable Energy Company
Solar energy mapping	Al-Mashish Renewable Energy Company
Power Quality Assessment and Analysis	Alfaris Energy





Mutah University has adopted consultation programs for the local industry in the field of energy efficiency to help spread awareness about the optimal uses of energy.