

## Support low-carbon practices and technology



<https://www.mutah.edu.jo/ar/enterprise/Home.aspx>



<https://www.mutah.edu.jo/en/pfc/Home.aspx>

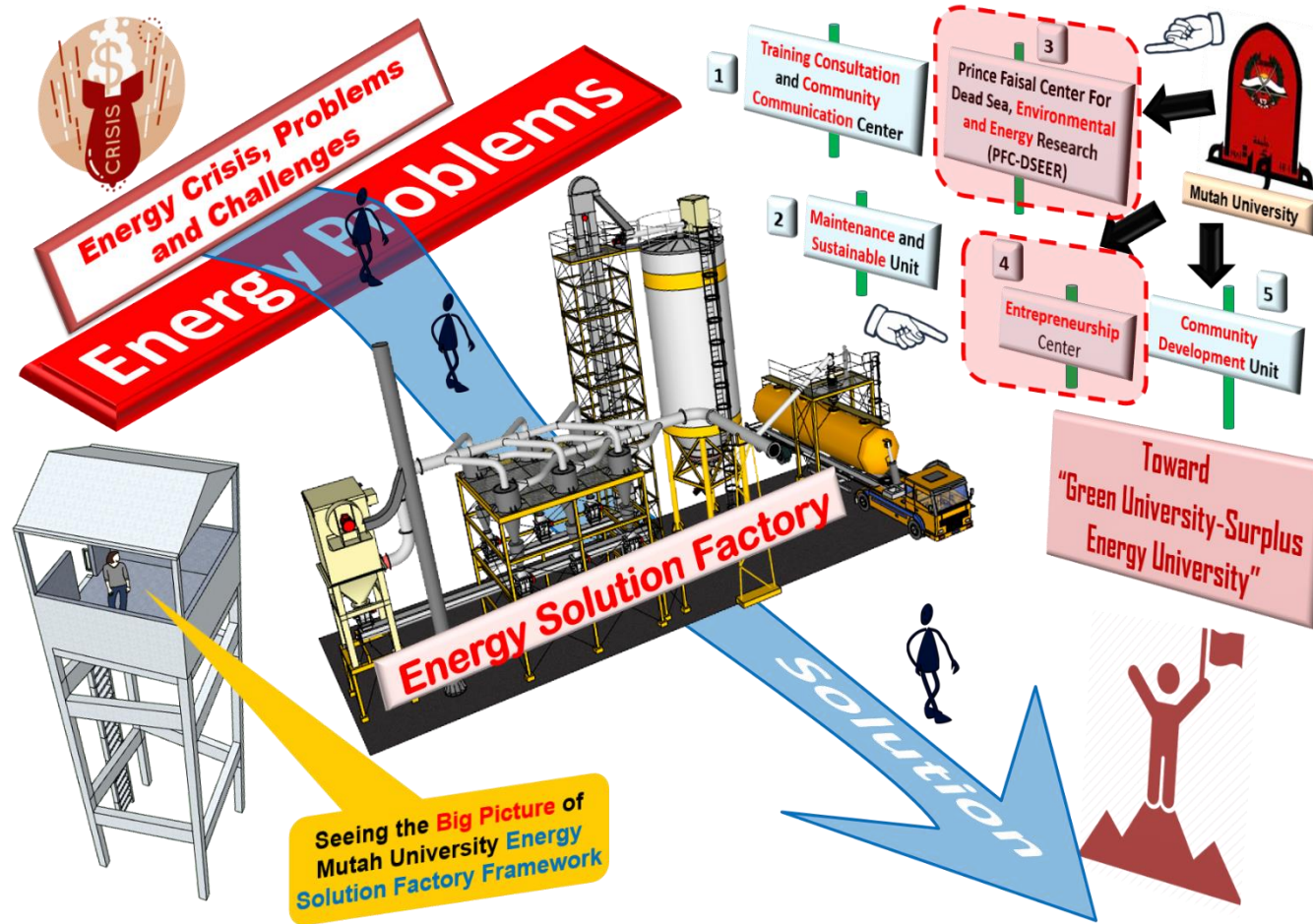


## Toward "Green University-Surplus Energy University"

### **Building Mutah University 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 see **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*

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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 considers 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 important 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.

### **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



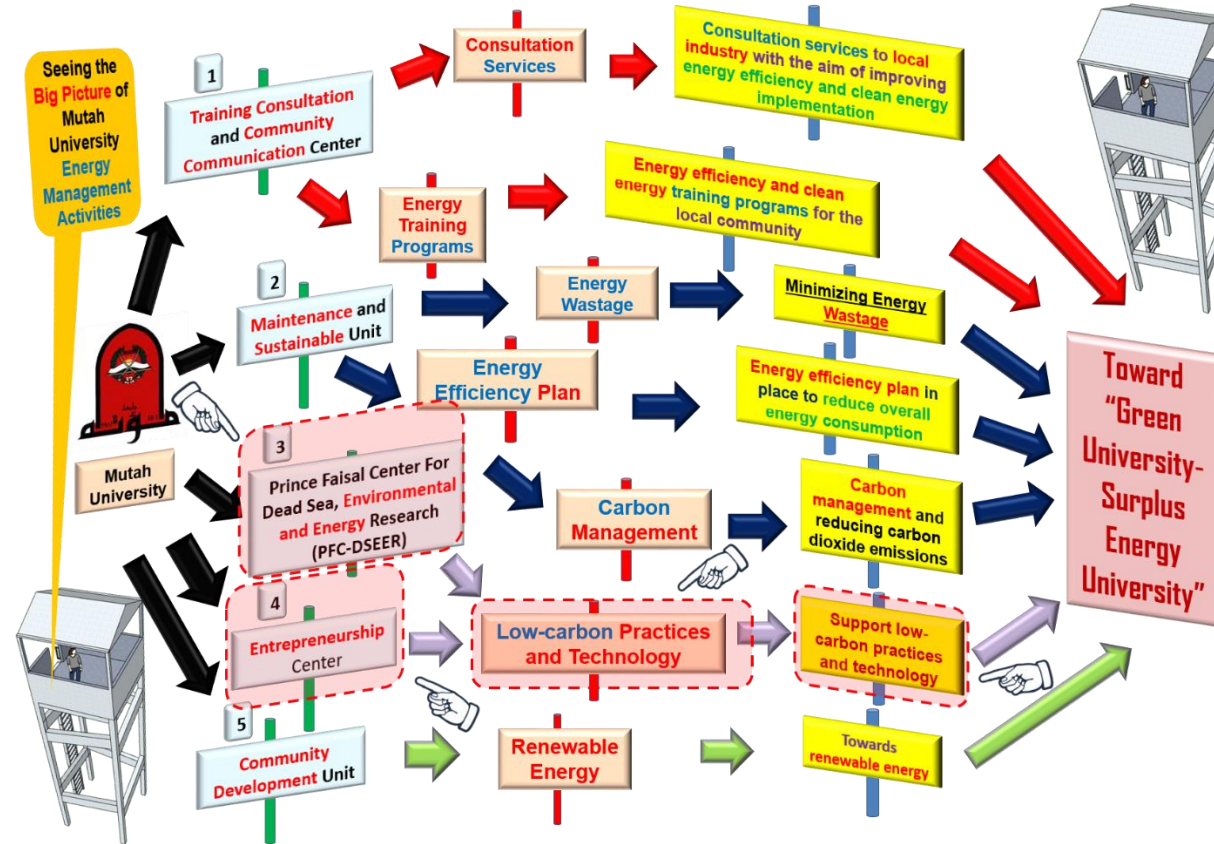


Figure 2: A Visual Big Picture of Mutah University Energy Management Activities

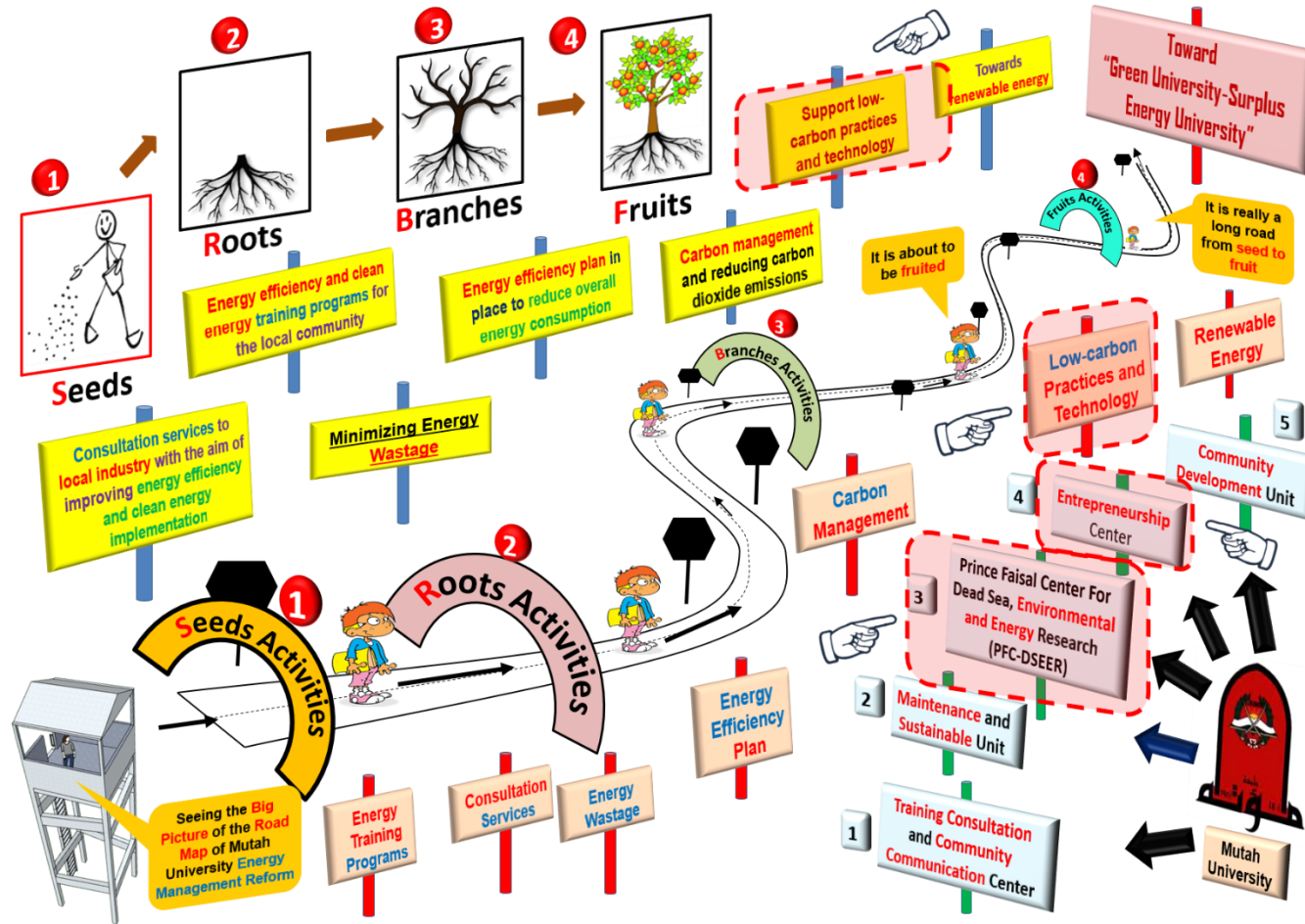


Figure 3: A Visual road map of Mutah University Energy Management Activities based on seed to fruit framework



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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**.

### **Entrepreneurship Center and Prince Faisal Center For Dead Sea, Environmental and Energy Research (PFC-DSEER)**

The Entrepreneurship Center at Mutah University is dedicated to nurturing entrepreneurial ideas that drive project development across all scales - small, medium, and large enterprises - and in various productive sectors such as industry, agriculture, and services. This is achieved by equipping beneficiaries with essential skills for individual capacity development. The Center offers opportunities for the target group to participate in training programs, receive ongoing guidance, and engage with donors and industry experts. These interactions aim to steer beneficiaries toward successfully realizing pilot projects and their competitive positioning in the market.

The mission of the PFC-DSEER (Dead Sea, Environmental, Water, and Energy Research) is to promote, coordinate, and conduct research activities related to the Dead Sea's geological, industrial, and touristic challenges. While the primary focus is on the Dead Sea's specific issues, the PFC-DSEER's programs extend to address broader national and international concerns encompassing water resources, environmental preservation, energy, and climate change. The overarching goal of the PFC-DSEER is to establish itself as a nationally and internationally renowned center of excellence, offering research, educational, and advisory services to tackle challenges associated with the Dead Sea, the environment, and energy in various domains.

Furthermore, the PFC-DSEER is a regional and national educational institution with research facilities supporting ambient-related studies. Although the PFC-DSEER does not confer degrees, its affiliated faculty members and researchers are essential mentors and advisors to undergraduate and graduate students who eventually obtain their degrees from their respective departments and faculties at Mutah University.

### **Entrepreneurship Center and PFC-DSEER Strategies**

Their mission involves cultivating a culture of innovation and fostering pioneering endeavors. They achieve this by incubating innovative projects through specialized programs, turning promising creative ideas into sustainable entrepreneurial ventures that generate tangible job opportunities for the local community.

The strategic goals and objectives include:



- We are raising awareness about the significance of initiating and developing projects.
- We establish business incubators and small-scale enterprises to promote job creation and enhance business practices.
- It empowers community members to establish and manage pioneering projects in collaboration with relevant authorities.
- We are building and enhancing the skills of entrepreneurs through tailor-made educational and training initiatives.
- We support the transition from conventional to renewable energy and advocate for using low-carbon alternatives.
- Mutah University, through its various centers, has also undertaken the responsibility of providing consultancy programs related to the low-carbon economy in the energy sector. These programs aim to raise awareness about optimal energy utilization practices and promote sustainable energy choices.