



**AECENAR**

Association for **Economical and Technological Cooperation**  
in the **Euro-Asian and North-African Region**

**AECENAR Middle East**

Ras Nhache, Main Road, District: Batroun – North Lebanon, **Lebanon**

رأسنحاش – قضاء البترون – لبنان الشمالية - لبنان

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## Content

Short history of AECENAR

The planned center for applied research and technological infrastructure building


Short introduction to technology policy

The strategy: main projects in key technology area – laboratories foundation – team building

Actual Projects (content + financial needs)

Ressources required for 2014

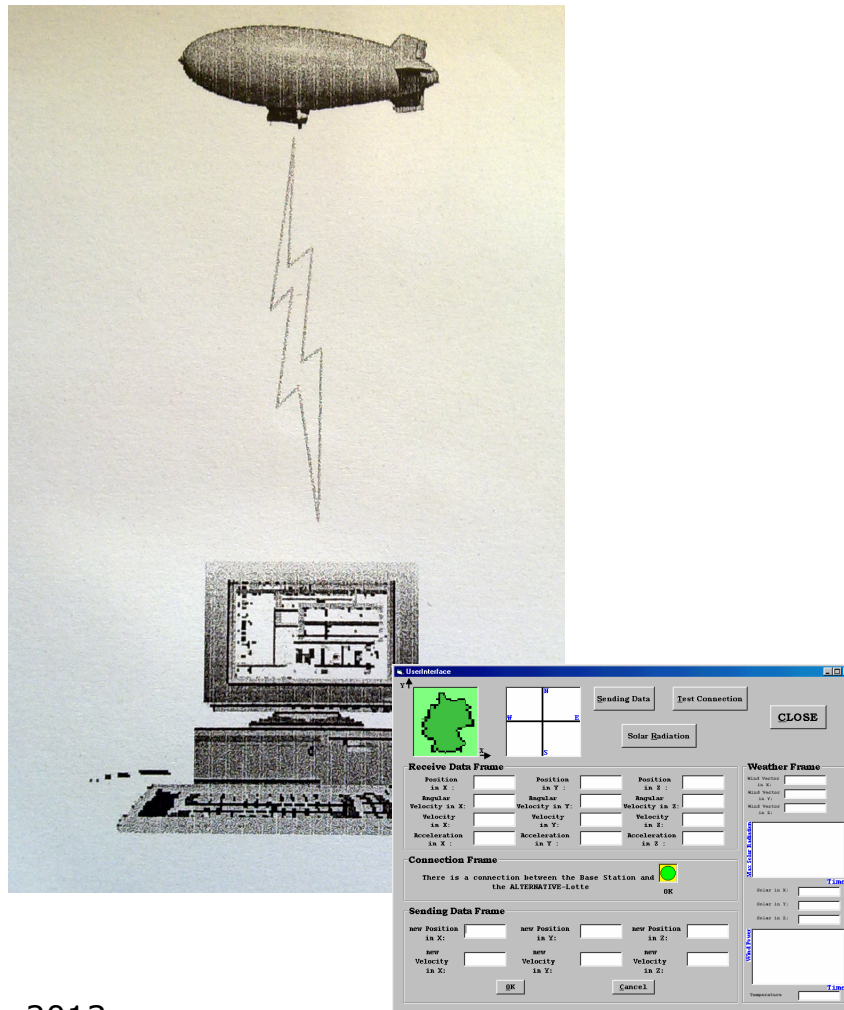
# Short history of AECENAR

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- 1999 Foundation of *VaEf* (*Association for alternative Energy Research*) by Muslim Student Association Karlsruhe (MSVK)/Germany
  - 2000 Main Project (until 2005): Airship „alternative Lotte“ for wind data
  - 2001 ...(projects mainly with students of German Universities)
  - 2002 Foundation of company TEMO Consulting e.K. (for Financing *VaEf*)
  - 2003 ...
  - 2004 Symposium at Jinan University (Cooperation *VaEf*-JinanUniv.)
  - 2004 Foundation of Institute for Genetic Engineering Ecology and Health (VGÖG/IGEEH)

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  - 2005 ...
  - 2006 Foundation of AECENAR (*VaEf*+IGEEH)
  - 2007 Main Project (until 2013): Solar thermal power plant TEMO-STPP
  - 2008 Starting activities in Lebanon (meetings with scientists in Tripoli)
  - 2009 Founding of AECENAR Bureau and MEGBI Genetic Engineering Laboratory in Ras Nhache/Batroun (Training of Students of Lebanese University)
  - 2010 Main Project: MEGBI H5N1 Vaccine Research (with students of Lebanese university)
  - 2011 Main Project: Test rig for power plant TEMO-STPP
  - 2012 Starting main activities for Institute for Astrophysics (IAP)
  - 2013 Projects
    - IAP: Emergency Communication System (later planned to be integrated into IAP\_SRWDA-SAT),
    - MEGBI: biotechnological upstream and downstream processing plant,
    - MEAE: Test rig for power plant TEMO-STPP

# Airship alternative Lotte project 2000-2006

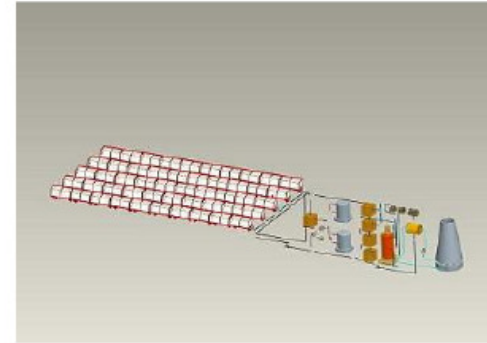


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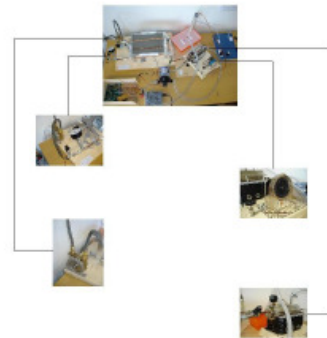
# Solar thermal power plant project TEMO-STPP 2006-2013



Abb. 1.1-1: Luftbild der solarthermischen Parabolrinnen-Kraftwerke bei Kramer Junction in der Mojave-Wüste in Kalifornien, USA



Modeling of a STPP with ProE



Small STPP model



STPP test plant

Dipl.-Ing. Dipl.-Inform. Samir Mourad, Dipl.-Ing. Said Toumi, cand. mach. Erkan Arslan, cand. mach. Sinan Topcu, cand. inform. (now Dipl.-Inform.(FH)) Said Elmsaadi, cand. mach. Mhanna Mhanna, cand. mach. Zuheir Baalbaki, cand. mach. Sebastian Lutz, cand. mach. Wael Eljammal, cand. mechatronic (FH) Patrick Weiss

Project Manager: Dipl.-Ing. Dipl.-Inform. Samir Mourad

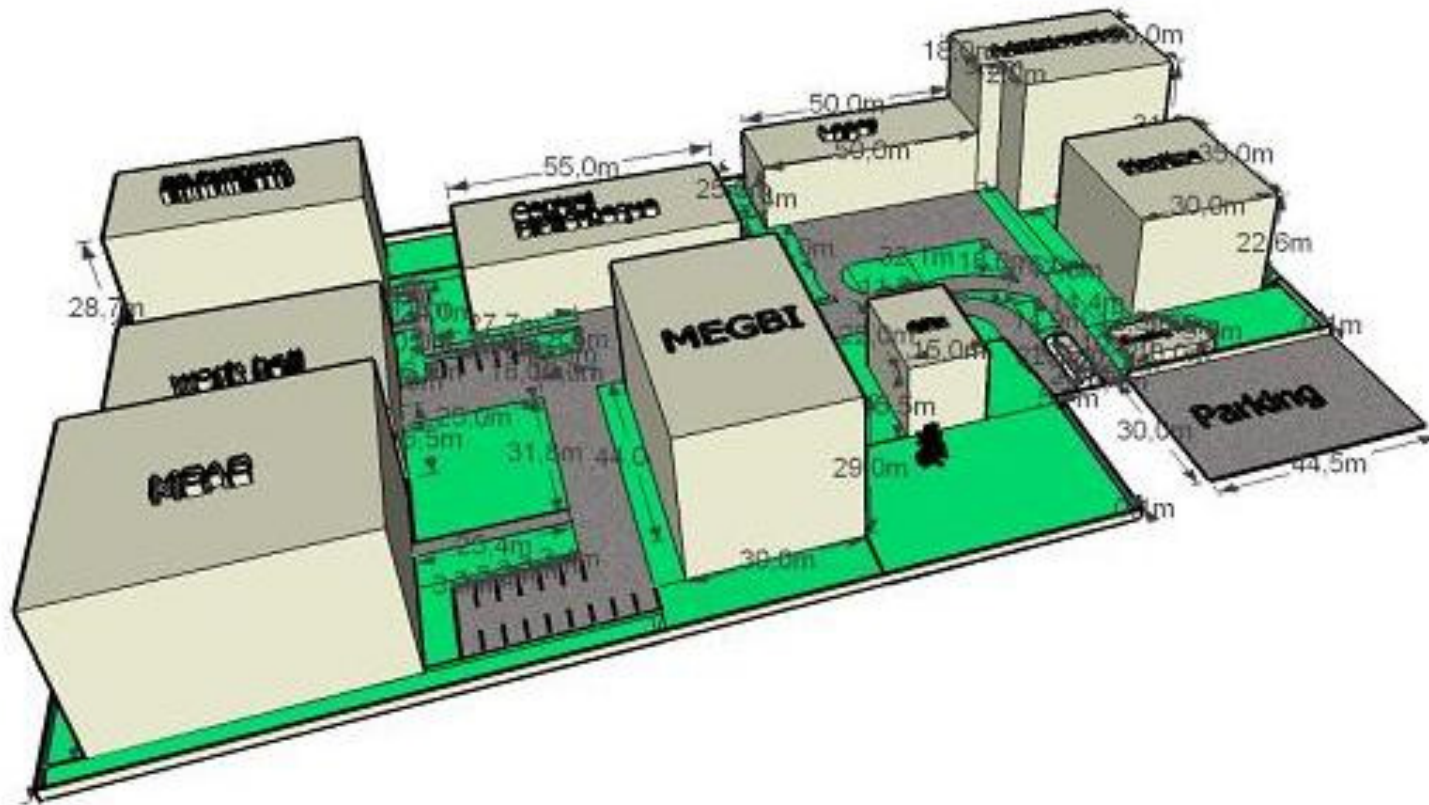
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13. December 2013

# The planned center for applied research and technological infrastructure building in North Lebanon

- وقف الله تعالى -



100m x 250 m areal

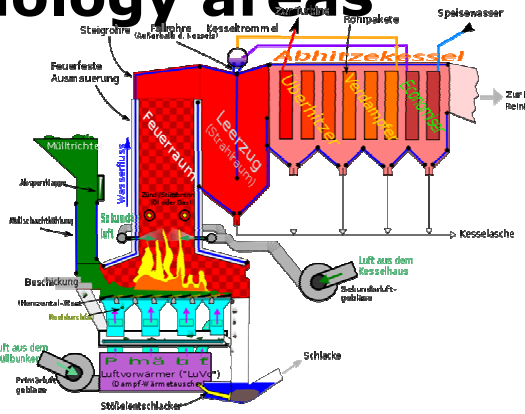
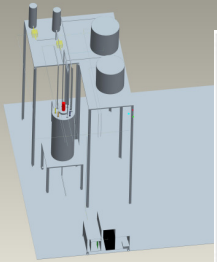


# The planned center for applied research and technological infrastructure building in North Lebanon

- وقف الله تعالى -

مساعدة انشاء بنية تحتية للصناعة في المنطقة

## Helping of Industrial Growth in the Region by initiating projects in key technology areas

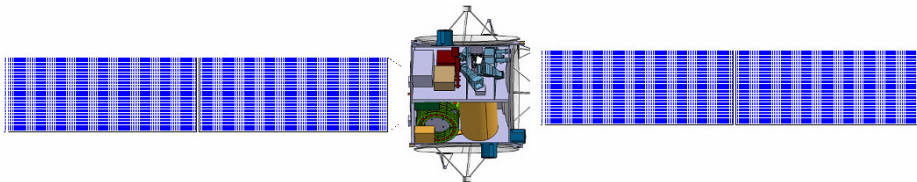


# The planned center for applied research and technological infrastructure building in North Lebanon

- وقف الله تعالى -

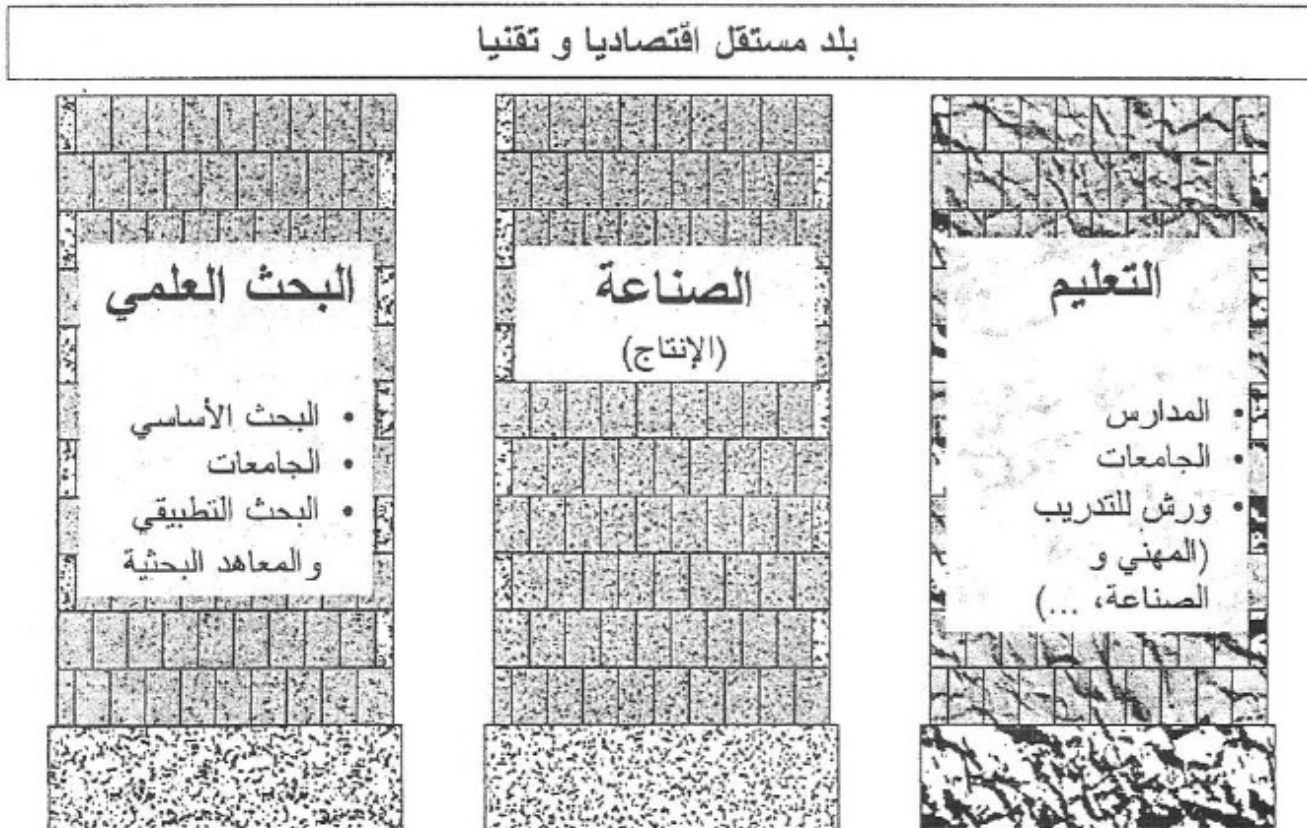
ابحاث تطبيقية ذو مصلحة عامة

## Applied Research of Strategic Public Interest



13. December 2013

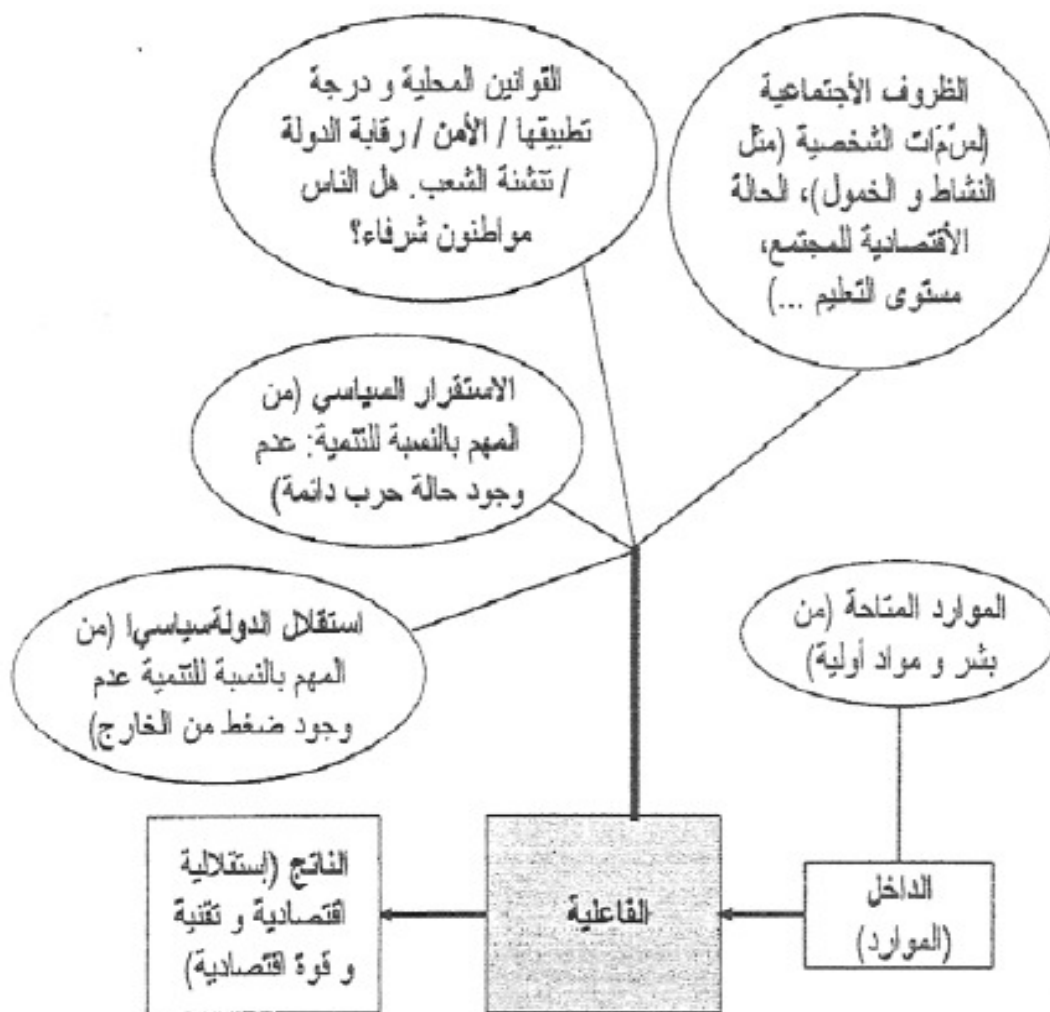
# Short introduction to technology policy



شكل 1 : الأعمدة الثلاثة لنظام تقني - اقتصادي لبلد ما مستقلاً اقتصادياً وتقنياً



# Short introduction to technology policy





# Short introduction to technology policy

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- a. Food supply
- b. Hydrology/water supply
- c. Communication technology (Informatics, Electrical engineering,..)
- d. Energy supply/electricity supply (lighting)
- e. Medical supply (Biology, Chemistry, Medicine, Pharmacy, Informatics, Electrical engineering, mechanical engineering)
- f. Traffic and Transport system
- g. Civil engineering

Fig. 3: Key technologies (non-military sector)



## Short introduction to technology policy

# Problem in Lebanon

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Education: very good

But no production

- > no working possibilities for highly educated people
- > emmigration

Research: yes, e.g. in Doctoral School in Tripoli

But not on Lebanese projects (but on high tech projects from other countries)

- > 1. no really output for the country
- 2. emmigration

الحل: انشاء مشاريع تكنولوجية تقدم فرص عمل و من ثم العمل على تطويرها من خلال الابحاث



The strategy: main projects in key technology area – laboratories foundation – team building – commercialization of projects

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Example in the Biotech sector: MEGBI

August 2009: Beginning of MEGBI Genetic Engineering Lab work

October 2010: Publication of MEGBI Training Courses I-III in Genetic Engineering Techniques

January 2011: Starting of work in MEGBI bioinformatics lab

April 2011: First diagnostic services available at MEGBI partner company LG Biotech

March 2011: Starting H5N1 Peptid Vaccine Research Project by former trained staff

March 2012: Starting of development of Bioreactor production site for research pharmaceuticals





# Actual projects and financial calculation

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- See pdf documents and Excel Sheets