



Mahjoub's Eco-Green Building System



UN ESCWA- Cairo
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□ Mahjoub's Eco-Green Building System

- ✓ Economical and Free Energy Low Income Housing System.
- ✓ Economical and Free Heating Low Income Housing System.
- ✓ Free Energy Med and Upper Income Housing System.
- ✓ Free Energy Commercial Building System.

□ Customized Solutions for all Markets' Needs and Requirements.

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☐ We accomplished a comprehensive network solutions that guarantees the following package of conditions:

➤ **First Condition:**

- Total **energy** consumption for housing / building units is better than the **Energy** Star Codes or German **Energy** Building Code. (Extra **energy** saving in raw materials manufacturing and transportation).

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➤ **Second Condition:**

- Cost of Low Income Housing / Apartments without the cost of land:
 - A. **Free Heating** Low Income Housing **€200/sqm.**
 - Under Floor Heating, powered by Solar Panels.
 - B. **Free Energy** Low Income Housing **€295/sqm.**
 - Powered by Hybrid System, Wind+ Photovoltaic+ Solar Panels (lighting, house-hold appliances).

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➤ **Third Condition:**

- **Structured according to the Local and European Codes:**
 - 1- DIN Standards (German).
 - 2- EC2, EC5 (European).
- **Excellent Earthquake Resistant.**
- **Excellent Sever Climate Resistant.**

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➤ **Fourth Condition:**

- **Record construction and finishing time.**

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➤ **Fifth Condition:**

- **The appearance must meet and match the architectural identity of the targeted region.**

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Our Patents

- 1- U.S Patent No. 6595497 - 22/06/2003.
- 2- Syrian Patent No. 7138 - 26/04/2007.
- 3- Syrian Patent No. 7142 - 26/04/2007.
- 4- Syrian Patent No. 7143 - 26/04/2007.
- 5- Syrian Patent No 5643 - 31/05/2000

☐ **Two Patents Pending.**

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□ Mahjoub Eco-Green Building System is an Energy saving Solution for:

- 1- New Construction.**
- 2- Unfinished Building.**
- 3- Remodeling.**

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**Chain of Mahjoub's Accumulative Added Value
Vertical Integration**

- 1- Idea**
- 2- R&D / Engineering and Design**
- 3- State of the Art Tool and Machine Making Facility with our own CAM System.**
- 4- Compounding: Mahjoub's engineered tropical mix is made to endure severe weather conditions in UAE, KSA, USA, and across the world, with our own microprocessor system.**

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5- Extrusion: Our own patented equipment and universal microprocessor control system to ensure online QC and maximize productivity.

6- Surface Treatment: Lamination, Printing, Stamping.

7- Accessories' Manufacturing.

8- Finished Products Fabrication: Mahjoub's CNC machinery is designed especially to guarantee quality and maximize productivity.

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<p>9- QC</p> <p>9-1- Quality Control:</p> <p>Quality Control Process According to American Standards AMAA and German Standards DIN</p>	9- مرحلة البحث عن بارامتر محدد.	1- مرحلة تدقيق المنتج
	10- مرحلة البحث عن معلومات اللصاق.	2- مرحلة طباعة اللصاقات
	11- مرحلة ادخال البيانات الى برنامج مراقبة الجودة.	3- مرحلة التأكد من الأبعاد
	12- مرحلة معرفة نسب المواد ومصدرها في عينة معينة.	4- مرحلة فحص اللون
	13- مرحلة إحضار اللصاقات.	5- مرحلة اختبار الطرق
	14- مرحلة وضع اللصاقات ولصاقات الباركود.	6- مرحلة اختبار ثبات الأبعاد
	15- مرحلة تلبيس البروفيل بورق الحماية.	7- توزيع التقارير وإملائها
	16- مرحلة الاحتفاظ بعينات المقاطع.	8- مرحلة اختبار مقاومة الحرارة

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9-2-The System is built and tested in accordance with the German, American, and Syrian Standards. suitable for harsh and humid environments.

a - المواصفة السورية رقم: 1432

b - المواصفة الأمريكية رقم: AAMA 101-/ IS.2/ A4440-

05

c - المواصفة الألمانية رقم: RAL GZ-716/1

d - المواصفة الفرنسية رقم AFNOR-R126

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9-3- Testing:

- High Thermal Insulation According to NFRC-ASHRAE.
- Air Infiltration Resistance According to ASTM E 283.
- Water Penetration Resistance According to ASTM E 547.
- Structural Endurance to Strong Wind According to ASTM E 330.
- Forced Entry Resistance According to ASTM E 588.

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□ Mahjoub Group Paradigm (Mental Map)

- ✓ Provider for Innovative Dynamic Customized Comprehensive Solutions.
- ✓ Not to marry a Technology.
- ✓ E-RPM Electronic Real-Time Performance management in all Fields (kg/kwh + Cost Centers).
- ✓ Incorporated weekly Bounces for the knowledge worker (assets).

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□ Mahjoub Group Paradigm (Mental Map)- Continue:

- ✓ Culture of value engineering.
- ✓ Reverse Engineering with value chain analysis (Z to A).
- ✓ Faster not Bigger.
- ✓ Pro-active \$ value approach.
- ✓ Life is a Mission not a Carrier.

16 ➤ Products to be made according to DIN Standards and Chinese prices. www.mahjoub.com



Ideas for Policies

A. Can the UN ESCWA formulate policies for pilot project through an attractive SME's competition to provide solutions for Arabs' Socio-Economical challenges (Water- **Energy- Farming- etc...) financed by multi-beneficiaries.**

➤ **Examples for attractive SME's Competitions:**

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Ideas for Policies - continue

- 1- Water treatment housing system.
- 2- Hybrid (Wind + Photovoltaic) for farms water pumps.
- 3- Small Biodiesel manufacturing units for tractors.
- 4- Customized PC units for CNC and PLC solutions to retrofit SME's existing electromechanical control machinery in all fields.
- 5- Specialized SME's portal to empower Arab cluster based industry and out sourcing.
- 6- Arab ASP based on open source software for applications like ERP+E-RPM + etc...

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Ideas for Policies - continue

7- Agricultural Production Solution such as the Innogrow Technology for Closed Greenhouse system within the Low Income Housing Complex.

Benefits:

- Using the local recycled water.
- Empower women and retired individuals in a productive profitable cooperative structure for vegetables and fruits production.

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Ideas for Policies - continue

B. Ideas for Governmental Policies

- 1- Programs to support innovations similar to the Canadian R & D innovation policies and the finance of ANVAR program etc...**
- 2- Accredited labs in universities for label and joint certification programs with European and American bodies like Leed, Energy Star, AMAA, C.S.T.B, etc...(EU/US Passport for Arab made product).**
- 3- Adapt the Japanese rate policy to reduce the cost of money.**
- 4- SME's evaluation and ranking based on innovation and value added.**

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Please

**Let's enlarge the clustered dynamic innovative Arabs
SME's to be the main engine of the middle class
society.**

Life is a Mission Not a Carrier.

➤ **Conclusion: Socio-Economical Solutions are
ESCWA's Response-Ability.**

**Thank
You**

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