



INDUSTRIAL RESEARCH INSTITUTE

**IRI in Brief**

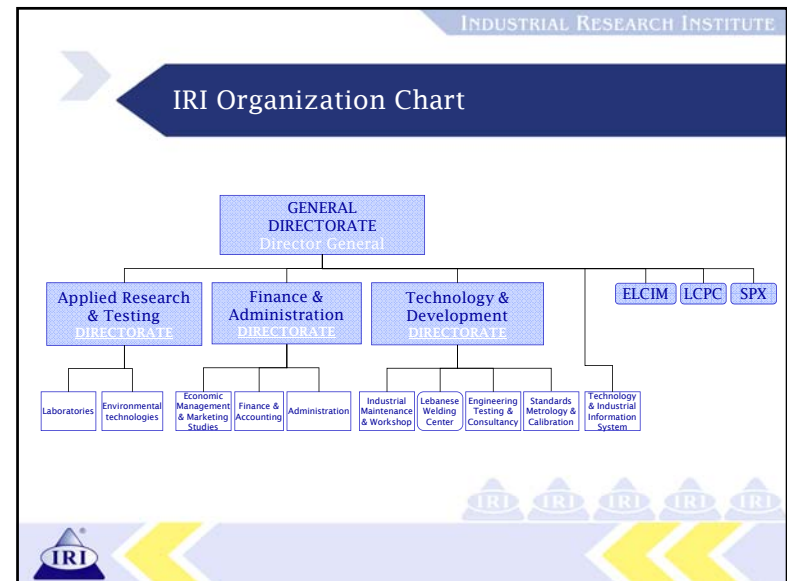
- The Industrial Research Institute was established in 1953.
- It is a Lebanese, not-for-profit institution, for industrial studies and research and scientific material testing and analysis.
- It is deemed, under the Decree No. 10059 dated August 17th 1955, to possess public utility status.
- It is related to the Ministry of Industry and it is totally independent administratively and financially.

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**IRI Role And Activities**

The activities and services of the Institute are organized to realize the following:

- Conduct studies and research relevant to the establishment of new industries.
- Investigate and disseminate information about available raw materials with a view to defining their use and establishing the best means for their exploitation.
- Provide, on an international scientific level, reliable services in testing and analysis and to grant certificates of quality or conformity with standards and purchase specifications.
- Provide specialized technological, management and economic consulting services to existing industries and industrial development schemes.
- Maintain close co-operation with official institutions, industrial organizations, and development boards both on the national and international levels in matters relating to the industrial development of the country.



## The Essential Resources (1)

### The essential resources that enable IRI to realize the above aims are:

- A reliable body of experts, specialists, and engineers in many fields
  - 120 permanent employees
  - 20 contractual experts
- Laboratories and scientific equipment in numerous fields
- A documentation center with scientific and technical publications including international Standards & Norms. The updating of which is a continuous process.
- Lecture rooms, Exhibition Halls and a 300-seat conference room



## The Essential Resources (2)

- Fully Equipped Workshops
- Pilot Plant - for applied research and initiating pilot industries
- Lebanese Welding Center for training and certification of welders, and inspection and control of various types of welding
- Inspection and Control Unit
- Certification Unit
- Sub-Contracting and Partnership Exchange (SPX)
- European-Lebanese Center for Industrial Modernization (ELCIM)
- Lebanese Cleaner Production Center (LCPC)
- External resources under sub-contracting such as BIVAC, SGS, TUV etc.



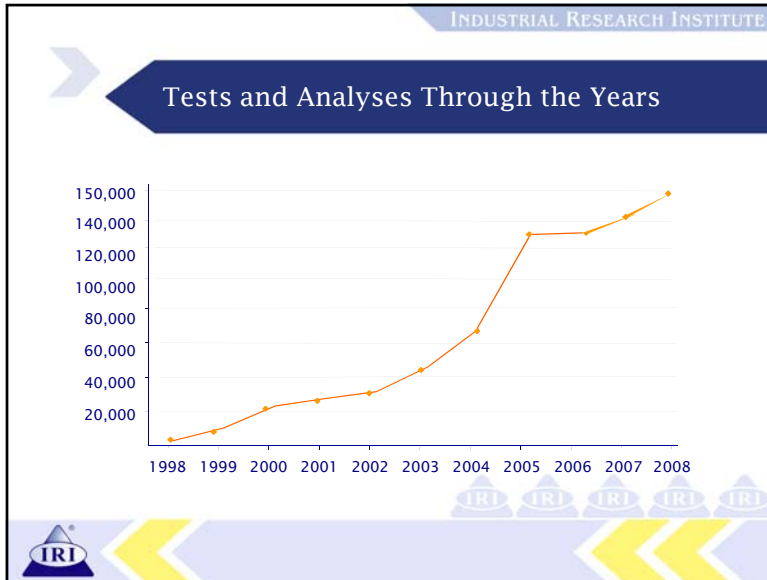
## Our Laboratories

1. Wet Chemistry (DAR Accreditation)
2. Physical Chemistry (DAR Accreditation)
3. Petroleum and Petroleum Products
4. Central Laboratory for Bread and Wheat (DAR Accreditation)
5. Microbiology (DAR Accreditation)
6. Paint
7. Textile, Leather and Rubber
8. Soil mechanics and Civil Engineering
9. Mechanical Engineering
10. Water Lab
11. Electrical (DAR Accreditation)
12. Metrology and Calibration (DAR pre-Accreditation)



## Accreditation





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## Certification (1)

### Product Certification

The recognition of the quality of a product could be done through the marking by one of the marks offered by IRI. Besides its own mark, IRI proposes international marks like the NF for a variety of products or CSTB for construction materials.

For IRI mark, procedures of control and inspection are applied for all products manufactured in Lebanon or imported. Inspection and control are conducted according to international standards in use.

For the other marks offered by IRI, the procedures of the corresponding international bodies are applied; some tests and controls are conducted by IRI staff in order to reduce the cost of certification.



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## Certification (2)

### Quality System Certification

In collaboration with our European partners, IRI offers the following certifications:

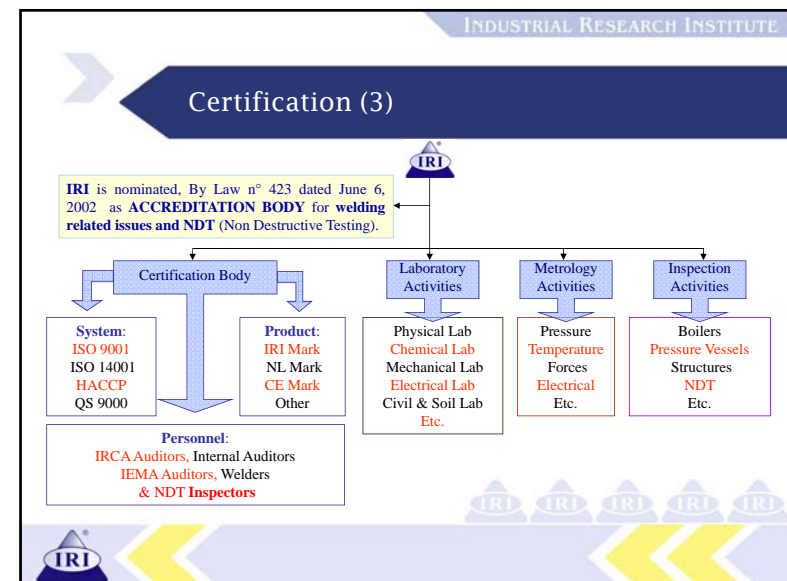
- ISO 9000 for the certification of quality systems
- ISO 14000 for environmental systems certification
- ISO 22000 for Food Safety Management Systems
- QS 9000 for the automobile sector
- ISO EN 13485 for the quality system of medical devices manufacturers
- HACCP for the quality systems of agro-food industries

### Personnel Certification

IRI offers different types of certification of persons:

- IRCA auditors' lead Auditor certification
- Internal auditors' certification;
- IEMA Auditor for Environmental Management System Auditor
- Certification of inspectors in non-destructive testing - NDT
- Certification of qualified welders

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## Lebanese Welding Center (1)

Application of the Lebanese Law 423 dated 6 June, 2002 that nominates IRI as the accreditation body and the only organization authorized to issue certificates of conformity in all welding and non-destructive testing in Lebanon.

### A - Theoretical and practical training:

- All welding processes: Shield Metal Arc Welding (SMAW), Metal Active Inert Gas (MIG/MAG), Tungsten Inert Gas (TIG), Oxy-Acetylene (OA) and Metallurgy (before, during and after welding).

- Non-destructive testing: Radiographic Testing, Ultrasonic Testing, Liquid Penetrant & Magnetic Particles Testing at levels 1 & 2 according to ISO 9712.

**B - Certification of Personnel:** Examination & certification of welders & non-destructive testing personnel / levels 1 & 2 according to the ISO 9712 standard in Radiographic Testing, Ultrasonic testing, Liquid Penetrant & Magnetic Particles Testing.

### C- Welding Workshop:

- With 20 working cabins
- For all materials: non-alloyed steel, aluminum and alloys, low carbon steel, high carbon steel (stainless), copper and alloys, titanium and alloys, cast iron brass, etc.
- For all types and sizes of joints
- For all interested persons (engineers, technicians, welders and operators)
- Training Location: In our training center, at your site or in your workshop



## Lebanese Welding Center (2) Welding Inspection

The welding inspection activities include inspection and control of all metallic welded constructions and structures such as containers, rod tankers, all kinds of storage vessels...

### *This also includes:*

Destructive testing: bending, tensile, hardness, texture, impact testing, macrographic testing.  
Non-destructive testing (NDT): Radiographic, Ultrasonic, Liquid penetrant, Magnetic particles and visual testing.



## Inspection & Control Unit

The inspection and control activity represents a major part of IRI services. It covers the following fields:

### 1- Industrial field:

- Welded metallic structures: metallic constructions, bridges, all types of pressurized storage tanks and vessels, as well as pressurized and non-pressurized mobile tanks.
- Electrical equipment and apparatus: transformers, circuit breakers, switchgears, motors, etc.

### 2- Application of decree-laws:

- Routine inspection of steam boilers all over Lebanon.
- Inspection of Liquefied Petroleum Gas (LPG) cylinders.
- Control during manufacture of reinforcing steel bars as well as inspection of all imported steel bars.
- Control during manufacture of Aluminum profiles as well as inspection of all imported profiles

All inspection and control activities are conducted in accordance with local and/or international standards.



## Conformity Assessment Subject to Technical Regulations

There are two mechanisms for the Conformity Assessment of products subject to technical regulations

### A. Conformity Assessment at Destination (Lebanon)

- Horizontal standards
- Importer's warehouse
- At borders

### B. Conformity Assessment in exporting country

- Pre-shipment Verification



## Customs Files 2008

· Total registered files:	20,584
· Not subject:	4,939
· Pre-shipment verification:	2,345
· Horizontal standards:	4,855
· Verification at importer's warehouse	7,291
· Verification at borders:	1,154



## Subcontracting & Partnership Exchange - SPX

- Clearing house providing desired information on subcontracting capacities
- Office centralizing the needs of the main contracting enterprises and the possibilities offered by the subcontracting industries
- Operate computerized databank with detailed information on the technical characteristics
- Technical information center for promotion and matchmaking of capacities, processes and particularities of industrial production of services
- Autonomous structure, having its main objective to create links between demand and supply of subcontracting activities.



## SPX - Activities

- Link between large and small industry
- Import substitution
- Expansion or creation of new capacities
- Surveying for scope in subcontracting
- Subcontracting promotion meeting
- Subcontracting exhibition and fairs
- Economic information (raw material used, import and export made by subcontracting units, rate of utilization of machinery and the capacities available)
- Techno managerial consultancy on its own strength or from other sources.



## Euro-Lebanese Center for Industrial Modernization - ELCIM

ELCIM is a program initiated by the European Commission in Lebanon for the support of small and medium sized industrial enterprises in order to develop their performances and promote their products to achieve international standards.

ELCIM is part of the EU's Integrated SME Support Program (ISSP).



## ELCIM - Services

### Business

- Assessment of business strategy and potential.
- Assistance to improve: Production technology, production planning, processing of products; packaging, storing, logistics, quality certification, environmental audits; strategic management, marketing, cost calculation, pricing policy; International co-operation, joint ventures
- Organize joint activities, among them: International fairs, sales missions, technology transfer, product development and joint ventures.

### Finance

- Access to KAFALAT guaranty facilities
- Access to EIB and other commercial loans
- Improve financial reporting of enterprises: qualified financial statement, financial feasibility study targeted to facilitate access to long-term financial resources, and training for companies to improve financial reporting.



## Lebanese Cleaner Production Center - LCPC

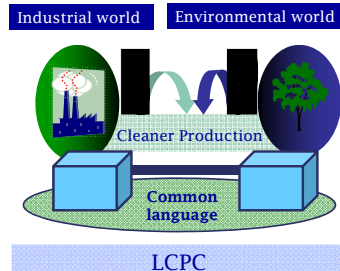
“The continuous application of an integrated preventive environmental strategy applied to processes, products, and services to increase overall efficiency and reduce risks to humans and the environment.” UNEP

- Hosted by the Industrial Research Institute
- Co-funded by IRI, the European Commission, and Austria
- Beneficiaries: Ministry of Environment & Ministry of Industry
- Managed by: Industrial Research Institute and UNIDO



## LCPC - Objectives

Bridging the Gap  
between  
Environment  
& Industry  
through  
Cleaner Production



## Services Provided by IRI to different Ministries and Agencies

- Assistance to the Ministry of Industry, including: Feasibility studies, technical support for application of Decree #8018, industrial license, etc.
- Assistance to the Ministry of Economy & Trade through the Consumer Protection Directorate and the General Directorate of Grains and Sugar Beet
- Assistance to LIBNOR in standardization (950 standards achieved)
- Assistance to the Chambers of Commerce in Added Value studies. (136 studies achieved)
- Conformity Assessment of exported goods by IRI as a Notified Body for major products, with emphasis on safety and security
- International recognition of IRI Certificates.



### Quality Infrastructure Services Provided by IRI

- IRI played an important role in issuing law LL # 572-11/02/2004 for establishing the Lebanese Council for Accreditation (COLIBAC) and is currently a member of its board
- The Industrial Research Institute is designated by law LL # 423-06/06/2002 as the Accreditation Body related to all types of welding in Lebanon
- Represented in board of the Lebanese Standards Organization, LIBNOR and helped complete the majority of National Standards
- Initiated a quality awareness campaign through numerous seminars, workshops, and training sessions held at IRI
- Created the Quality Club in 2003 to further increase quality awareness



### Examples of Feasibility Studies Conducted By IRI For Potential Industrial Investments

- |                          |                      |
|--------------------------|----------------------|
| · Batteries              | · Wallpaper          |
| · Special medical chairs | · Recycling of tires |
| · Pomace olive oil       | · Used oil recycling |
| · Fitted carpet          | · Syringes           |
| · Breeding               | · Kitchen utensils   |

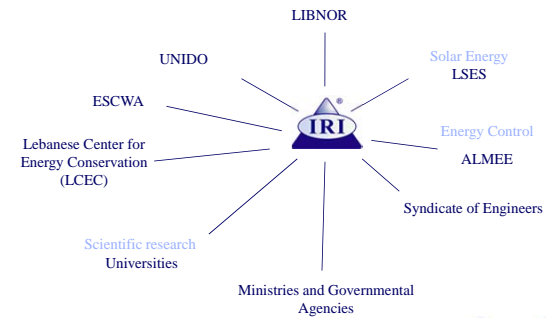


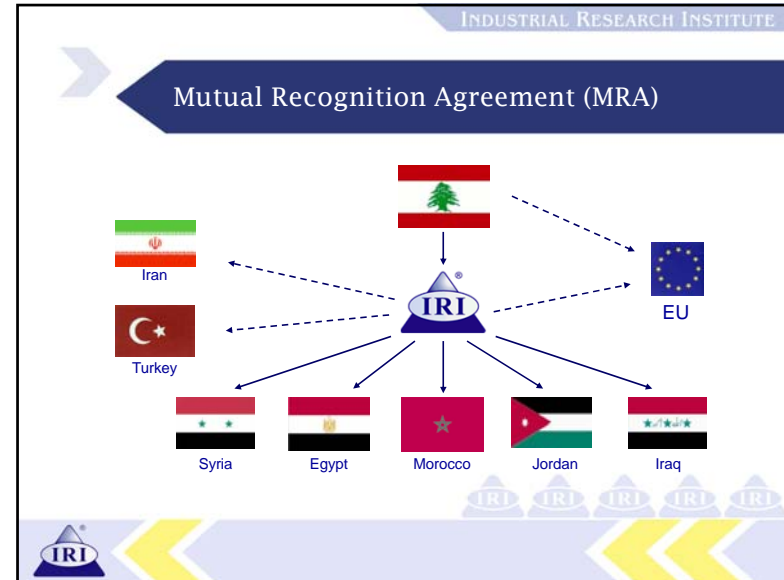
### Research: Scientific Publications in International Journals

- Air Quality Management at urban, regional and global scales, AQM 2005, vol. 1, 2005, 75
- Journal of Materials Science, vol. 41, No. 2006, 1827
- International Journal of Environment and Pollution (IJEP), 39:3 - 4, 2009



### Our National Partners





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## IRI Code of Ethics

In carrying out its functions, the Institute adheres to ethical and professional standards whereby it safeguards the clients best interests and regards as the client's property any information, processes, patents or techniques developed during work for him and safeguards such matters in complete secrecy.

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## For additional information: [www.IRI.org.lb](http://www.IRI.org.lb)

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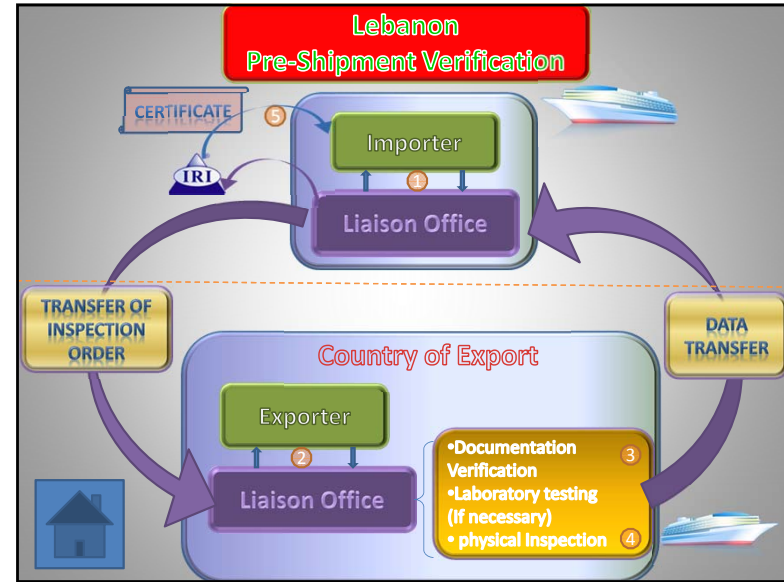
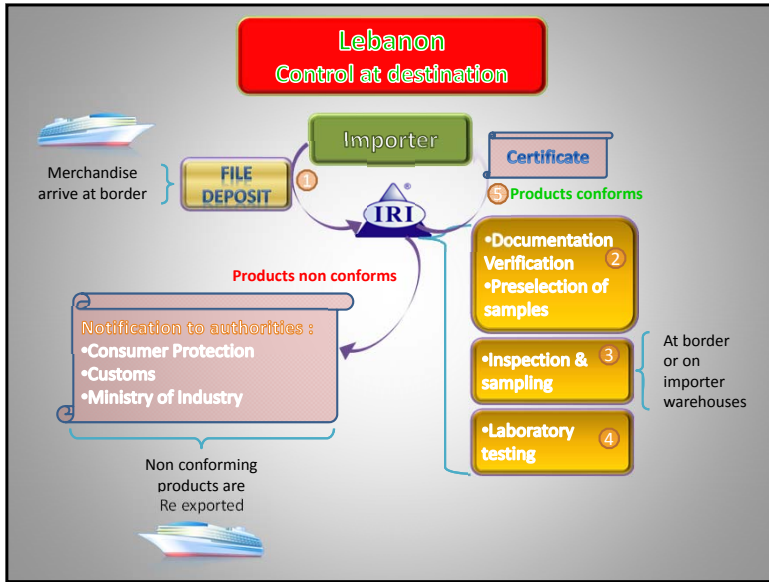
Established in 1953, the Industrial Research Institute (IRI) is a Lebanese institution for studies, industrial research and scientific testing and analysis. IRI is a not-for-profit institution, declared of public utility by Decree No. 10108 dated 17 August 1955, linked to the Ministry of Industry by Law No. 642/1957 with administrative and financial autonomy. IRI is the only accredited body in Lebanon.

RECENT NEWS

**Technical Collaboration Agreement between Lebanon and Qatar**  
On January 6, 2009 Lebanon signed a collaboration agreement with Qatar during an official visit to Doha. [View...](#)

**Accreditation Process**  
New accredited activities at IRI by [View...](#)





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## Thank You