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Industry Institute in Lebanon Serves Region

By Louay Katkhouda, Industrial Development Officer, UNIDO

When the Industry Institute, Beirut, Lebanon, began work in 1953, the administrative and general service sections rented the third floor of an office building and the laboratory and physical facilities were in part of the basement of the chemistry building in the American University of Beirut. Today the Institute's five-building complex—offices, laboratories, drafting rooms, pilot plant and workshops—covers a two-block area overlooking the Mediterranean Sea.

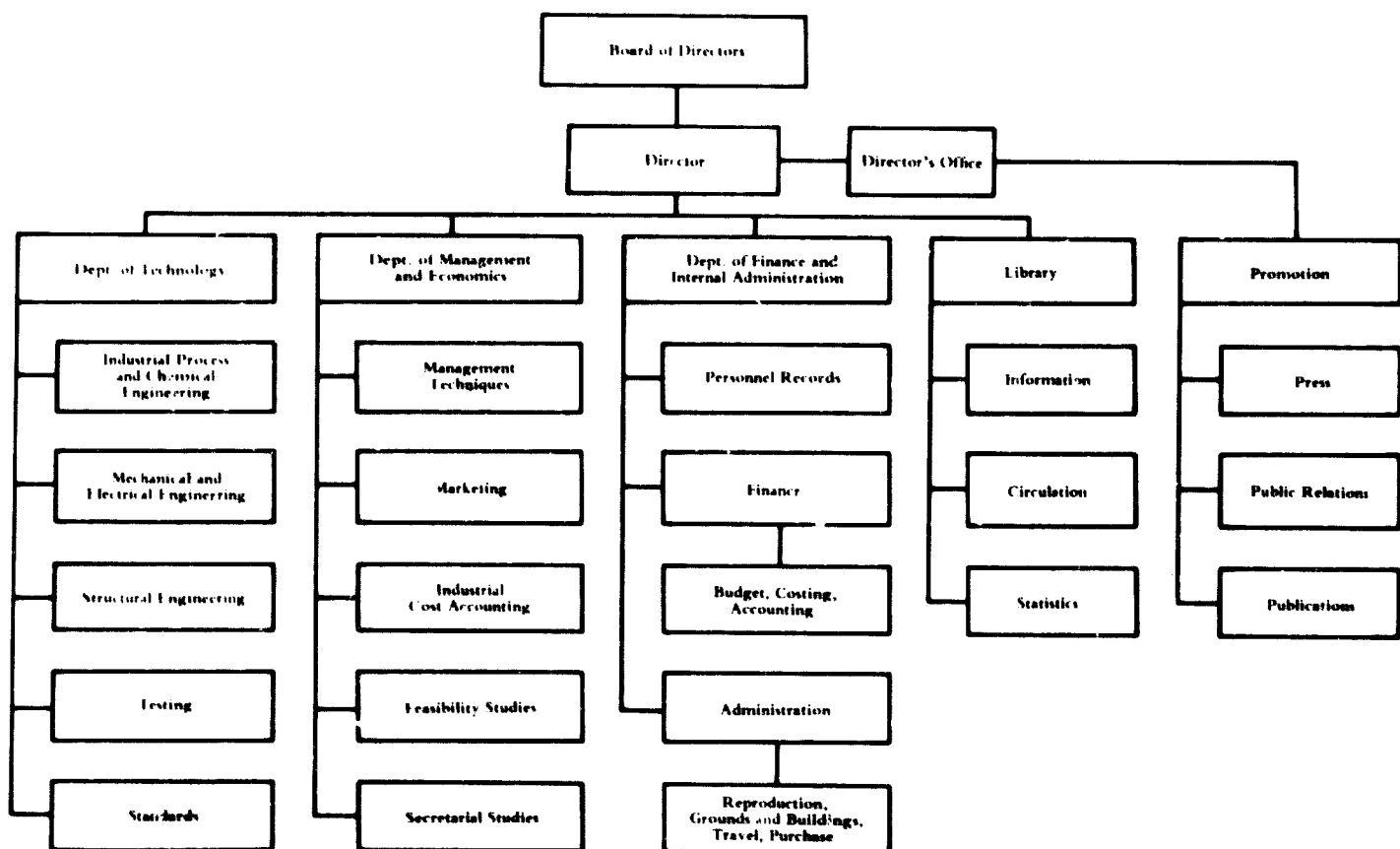
The improvement in physical facilities is just one manifestation of the Institute's growth since it was established as a nonprofit institution under the sponsorship of the Ministry of National Economy, the Association of Lebanese Industrialists and the United States Operation Mission to Lebanon. Among other indications of its success is that research and consulting activities now produce about three fourths of the Institute's total income. Another sign of the Institute's growth is the wide geographic distribution of its clientele; it now serves not only Lebanon but neighbouring countries and some as far away as Somalia and Sierra Leone.

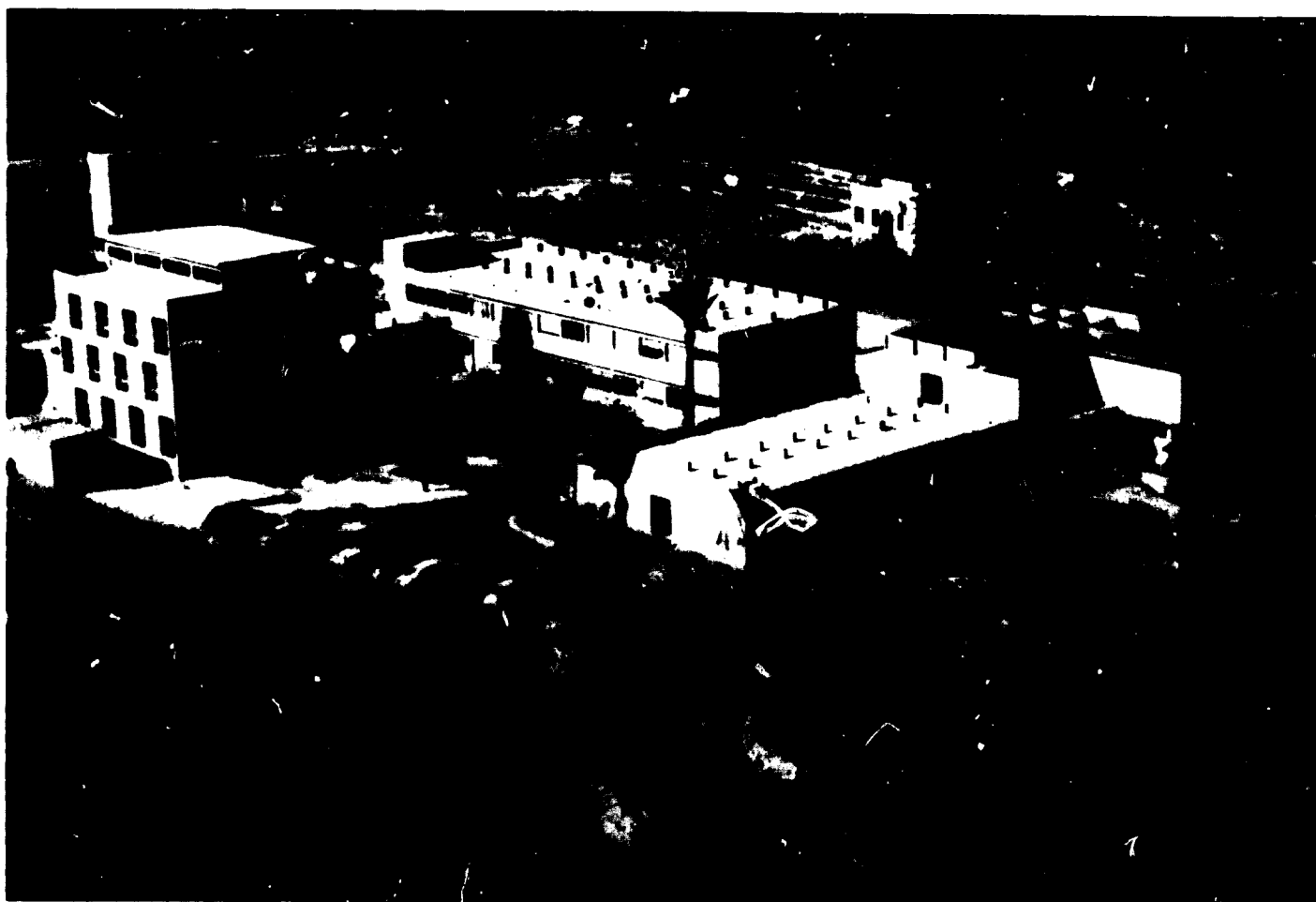
Organization

The Institute, which was granted public utility (tax free) status by presidential decree in 1955, is governed by an independent Board of Directors. The Board consists of a president, who is the Minister of National Economy (*ex officio*); a vice-president, who is the president of the Association of Lebanese Industrialists (*ex officio*); and six members, who are the representatives of the Lebanese Order of Engineers (*ex officio*), the president of the Chamber of Commerce and Industry (*ex officio*), the director of the Department of Industry of the Ministry of National Economy (*ex officio*), a representative of the four universities in Lebanon, a representative of a specialized international mission and a representative of a banking or finance institution.

The primary duties of the Board are to appoint the Institute's director, solicit and accept aid, approve internal regulations for operations, approve internal budgets and appoint auditors, lay down a basis for the Institute's scales of fees and control, safeguard and develop facilities.

Organization Chart of the Industry Institute, Lebanon





The Institute's five-building complex by the Mediterranean includes pilot plants, laboratories and a library.

The director of the Institute is responsible for the over-all supervision of the three departments. The Department of Finance and Administrative Affairs handles all matters related to budget, finance and administration, general services, transport and grounds and buildings.

The two operative departments are the Department of Economics and Management and the Department of Technology. The latter has five divisions: Industrial Process and Chemical Engineering, Mechanical and Electrical Engineering, Structural Engineering, Testing, and Standards.

Activities

The Organization of the operative departments reflects the Institute's primary objective—supplying professional services in the field of industrial development to countries throughout the Middle East.

Management and economic services include marketing research and market surveys, economic feasibility and commercial profitability studies, general management studies, financial management surveys and accounting controls, manufacturing and operating equipment, and personnel management and industrial legislation.

The Institute supplies the following consulting services in engineering and technology: technical feasibility studies, preliminary design and evaluation of tenders, foundation investigations and studies, technical and management services for plant operation and control testing of erected plants.

Another aspect of the Institute's activities is testing and calibration. The laboratories which conduct this work contain over \$US 600 000 worth of installed equipment and have been approved by the Air Registration Board of the United Kingdom and the Air Material Force, European Area, United States Air Force. The work includes physical and chemical testing of a large variety of products, development of new production processes, study of raw materials, and process and plant design. In addition, the pilot plant experiments to determine optimum process design on a semi-industrial scale.

The laboratories and pilot plant conduct tests on a variety of structural elements, equipment and material, such as cements, aggregates, concrete, soils, steel, ceramic products, foundry products, building and sanitary materials, electrical and electronic products, wood products, fibres, plastics, textiles, leather and rubber. Each year the Institute receives about 900 samples for physical and/or chemical testing. It performs as many as ten determinations on some samples; five to six is the average.

The Institute also undertakes calibration of meters and of electrical, electronic, hydraulic and thermodynamic instruments.

The Industry Institute acts as Secretariat General for the Lebanese Standards Institution LIBNOR. The Standards Division is entrusted with the activities of the Institute in this field. This division had prepared and published—after approval by the Board of LIBNOR—44 standards in

Arabic, French and English by mid 1966, and the committee and subcommittees were actively working on 30 more.

Published standards cover a variety of products important to the Lebanese economy, including, food-stuffs, asbestos-erient products, petroleum products, fertilizers, metallic and wood products, textiles and chemicals.

Working in a very different research area, the Institute's Central Research Laboratory for Cereals, Flour and Bread is pioneering in the development of a technology for assessing the flour used in the local type of flat bread and of a specialized baking test for this bread. Lebanon's Wheat Office, which controls the quality of wheat, flour and bread produced in or imported into Lebanon, has entrusted its design, establishment, selection of equipment, management and technical operation to the Cereals Laboratory.

Other major activities in Lebanon include participation as technical consultants in the elaboration of the Five-Year Plan for Economic Development, a project study for the Beirut Water Supply System and design and specification of industrial and vocational training schools and flour mills and silos.

Financing

In the Institute's early days, the bulk of its income originated from yearly grants-in-aid by the Ministry of National

Economy and the United States Operation Mission. When the Institute emerged as an important local research and consulting organization, the earned income became a sizeable percentage of total income. Currently, about 75 per cent of the total yearly income of \$US 300 000 to \$350 000 stems from fees for services rendered and studies and investigations for private, commercial and industrial concerns or government agencies.

Projects outside Lebanon

The Institute has furnished services in Syria, Iran, Iraq, Jordan, Saudi Arabia, Kuwait, Abu Dhabi, Libya, Somali Republic, Sierra Leone and the United Arab Republic. Some of the major projects have been: organization and project studies for the Industrial Development Fund and the elaboration of the standards programme, Jordan; participation in the elaboration of plans for the Aswan Industrial Research Centre, United Arab Republic; preparation of work plans and assistance in the organization of the Industrial Research Centre, Iran.

One of the Institute's most vital work areas has been the design and specifications of industrial projects. Among these are: industrial vocational schools, Jordan; laboratories, Iran, Jordan and Saudi Arabia; flour mills and silos, Kuwait; liquefied petroleum gas, Kuwait; confectionery, Jordan.

A drum is being tested in the tanning section of a pilot plant.





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