

Successful focussing of their technical skills on international markets will require an enhancement of their marketing skills and/or marketing assistance.

The industry needs to develop more strength in the fields of oil and gas, and certain manufacturing and process engineering areas. While the educational formation of Canadian engineers is fully adequate and the requisite skills base appears present, the industry suffers from the lack of a track record in these fields due to: high foreign ownership in the client sectors which are prone to hire home-based consultants; the existing track record of U.S. engineering firms giving them an edge in the contract awarding process; and client use of in-house engineering.

To maintain and extend its competitiveness and restore profitability levels, the following actions should be taken by the industry:

- increased intensity and aggressiveness of marketing activity and provision of a more complete range of services;
- faster adoption of computer technologies and improved management information systems;
- mergers, joint ventures, and other cooperative endeavours among smaller firms to increase the range and depth of capabilities;
- acquisitions/mergers among larger firms, combined with a streamlining of operations, to broaden capabilities while increasing efficiency;
- instilling in client groups the importance of criteria other than price in non-standard projects to avoid growth of the "minimal engineering" phenomenon.\*
- more direct assistance to increase R&D activity in the sector;
- assistance to improve productivity through adoption of computer technology;
- increased support for front-end market development costs; quicker turnaround mechanisms to respond to project financing requests; and more competitive project financing.

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\* The practice encouraged by reliance on the lowest price selection criterion whereby safe design is provided with the least amount of engineering. This practice may not yield the lowest possible life-cycle costs for the project. As it discourages innovative activity by consulting engineers, it can jeopardize their competitiveness.

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