REGIONAL MUNICIPALITY OF OTTAWA-CARLETON REPORT
MUNICIPALITÉ RÉGIONALE D'OTTAWA-CARLETON RAPPORT

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DATE 25 June 1997

TO/DEST. Committee Co-ordinator
Corporate Services and Economic Development Committee

FROM/EXP. President and General Manager
Ottawa-Carleton Economic Development Corporation

Regional Chair

SUBJECT/OBJET **SEMICONDUCTOR MANUFACTURING FACILITY PURSUIT**

REPORT RECOMMENDATION

That the Corporate Services and Economic Development Committee recommend Council approve the Regional Municipality of Ottawa Carleton invest $196,000 towards the Semiconductor Manufacturing Facility Pursuit project, with the expectation that the Ottawa-Carleton Economic Development Corporation (OCEDCO) will pursue additional industrial investments and applicable Provincial and Federal government programs in addition to the revenues received to date.

BACKGROUND

The purpose of this document is to briefly describe progress of the Region's **Semiconductor Manufacturing Facility Pursuit** to date, plans for the future, and secure financing to proceed.

According to Dick Foss, Chairman and co-founder of Mosaid Technologies, "Ottawa must work to create a broader base of jobs in the (...semiconductor and microelectronics) industry through manufacturing, or risk being left behind in the global hunt for talent and ideas. A microchip factory would broaden the spectrum of jobs created by Ottawa's advanced technology industry to include not just highly educated thinkers, but doers as well." He added that "if we're not careful, we'll have an entire economy that only hinges around post-graduate level people, while the rest are out of a job." He frequently uses Mosaid as an example of how the lack of a major chip plant hurts the region: Mosaid's licencing work stimulated an estimated $1 billion in sales and 40,000 jobs last year -- virtually all in other countries.

At one time Ottawa was a leader in semiconductor design and manufacturing. It is ironic that in the early 1970's, Ottawa-based Microsystems International (MIL) saved Intel from bankruptcy. Intel has since grown into a $20 billion a year corporation generating tens of thousands of jobs throughout the US, whereas MIL closed its doors in 1975. Quoting Intel's CEO Andy Grove, "to see what can happen in the next ten years, look at what has happened in the last ten years." Worldwide semiconductor sales passed the $150 billion mark in 1995, three times what they were ten years earlier. The semiconductor revenue forecast for 1996 was $183 billion and is expected to swell to $331 billion by the year 2000.

Responding to the opportunities and the threats, Ottawa leaders initiated a semiconductor manufacturing facility pursuit in 1995.

Progress to Date:

Since the launch of the semiconductor manufacturing initiative, OCEDCO and its partners have:

- Hosted a senior manager from OKI Electric Industry (Japan), which was followed by a detailed proposal and comparison of Silicon Valley North to Silicon Valley South;

- Formed partnerships with key government stakeholders (Industry Canada, DFAIT, MEDTT) which have been effectively leveraged to place Ottawa as a leading contender for Canada;

- Via Mosaid and the TechnoNet Group, made high level presentations to LG Semicon in December 1995, which helped pave the way for the Team Canada/Ottawa visit later on. (note: LG Semicon has announced a planned North American investment in new plant facilities of approx $2 billion);

- Presented the case for Ottawa to the President and CEO of a U.S. company in February 96. (The company was contemplating plans to build a wafer fabrication facility producing 30 to 40K, 8" wafers per month in the .5 to .35 sub-micron range);

- Contracted with KPMG/Stormont to produce an external marketing package, elements of which were used by OCEDCO to produce the high-level package used in Korea, Japan and Taiwan (see below);

- Funded a special site evaluation study. As a result, a number of sites have been "cleared" and meet all major site-selection criteria;

- Established an overall project steering committee which meets regularly to manage this initiative. The Steering Committee is supported by special committees/individuals focused on R&D, infrastructure, resources, marketing, sites, workforce/training, financing, and other issues associated with attracting this type of investment;

- Contracted with the Industrial Design Corporation (IDC) to help with a dry run presentation in preparation for a planned visit by a U.S. semiconductor company (which was postponed -- not cancelled), and to help provide OCEDCO with a framework to develop our business case. IDC's recommendations were reflected in the presentation package used in Korea, Japan and Taiwan;

- Conducted ongoing strategic planning meetings with over 40 semiconductor and advanced technology executives in Ottawa: the net result has been strong business endorsement of this initiative;

- Visited Salt Lake City and Portland Oregon where valuable information was collected on workforce and tax incentives;

- Orchestrated a highly productive trip to Korea, Japan and Taiwan in January 1997 (where senior officials and CEO's represented Ottawa's strategic intent to establish microchip fabrication facilities. The leads and industrial connections secured from this visit are now being actively pursued. The presentation developed for this trip will be used as a door-opener for other industrial recruitment initiatives.
  (Companies which received direct presentations for the Ottawa Team included LG Semicon (Korea); Matsushita, OKI, Fujitsu, Hitachi, NEC (Japan); TSMC, UMC, Vanguard, Winbond (Taiwan)

- Hosted visit to Ottawa of Keidanren, Japan's leading industrial economic development corporation comprised of Japan's largest companies, towards developing strategic alliances to foster Japanese investment in local semiconductor manufacturing facilities

- Participated in Canada-Japan Business Council discussions (May 1997) with the intent to further develop alliances with Japanese partners

- Participated in Canada-Taiwan Business Council discussions to foster investment by Taiwan companies in Canada's semiconductor industry

- Created an Economic and Community profile to provide concrete information on Ottawa to prospective investors

- Planners and economic developers in the community visited Digital Equipment Corp. (Boston, Mass.) to learn about the specific building requirements for a semiconductor manufacturing facility

Results to date:

Ottawa (and Canada) are now recognized, in Asia, as a location appropriate to semiconductor manufacturing. LG Semicon is the first company to accept an invitation to take a closer look at Canada. The Ottawa representation to LG Semicon was successful and subsequent more detailed discussions are certain.

The Ottawa based participants in the 'chip fab' pursuit are well assembled as a team, with reasonably deep knowledge about the nature of microchip manufacturing, the requirements of infrastructure, sites, research and development, training, etc.

Extensive contacts and informal alliances have been developed with leaders in Korea, Japan, Taiwan, as well as in the 'posts' of the Department of Foreign Affairs and International Trade. Ottawa is well positioned for investment with major semiconductor manufacturing companies and Venture capital companies from Asia.

Cooperation with the Province of Ontario in the initiative has been developed.

Plan for remainder of 1997:

While a great deal has been accomplished, the Ottawa case for major semiconductor manufacturing operations requires that the research and analysis done to date be assembled into a proposed business deal in order for Ottawa's case to be fully conveyed to prospective partners or investors. The details range from articulation of the region's ability to assemble training programs, to the programs through which, for example, hydro is provided at competitive rates relative to other jurisdictions, to local and regional tax matters, to descriptions of the specific research and development capabilities in the region. One critical aspect of the work to be done is to develop strategic alliances and financing scenarios that complement the needs of semiconductor companies seeking to expand or invest in manufacturing facilities.

The plan to year end is:

a) complete description of the proposed business deal and assemble detailed background information into a stand alone document for partners and investors (contracts to companies with experience in financing major international semiconductor investments). The attached matrix chart illustrates issues to be determined in terms of whether the manufacturing plant is dedicated to one customer or supports many (foundry), the degree of application specific focus vs. memory chips, and the mix of investors, local or out-of-region customers.

b) complete one marketing trip to Asia, building on the results of the January meetings as well as on the identification of new prospects and

c) receive one major company for follow-up discussions on Ottawa as a preferred semiconductor manufacturing site in Canada

FINANCIAL IMPLICATIONS

Budget[1.] - 1997 ($000's)

Expenses to 30 June	133	Revenue to Date	REDO	75
Projected additional	188		OCEDCO	50
	321			125

Total Additional Required investment 321-125= 196

[1.] Includes all direct costs (manpower, supplies, services); excludes significant in kind contributions.

(Budget costs for the Asia marketing trip and receiving of one company to Ottawa are based on actual costs incurred for the marketing trip in January, and the visit of LG Semicon in June. In addition, 55K has been allowed for the completion of the business plan).

Approved by
Dr. Brian Barge

Approved by
Peter Clark

FINANCE DEPARTMENT COMMENT

It is recommended that the funding request of $196,000 in support of the "Semiconductor Manufacturing Facility Pursuit Project" be charged to capital project 912-13408 Economic Planning and Development. Uncommitted funds in the amount of $419,000 are available in this project.

Approved by T. Fedec
on behalf of the Finance Commissioner