Creating Economic Development Linkages with the Ottawa Technology Cluster

Presented
by
Doyletech Corporation

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Agenda

Part I – ***Technology Cluster Development***

Part II – ***A Needs Analysis of Ottawa-Carleton's High Technology Industry***

Part III – ***Developing Supply Linkages with the OTC***

- Requirements

- Strategies for Municipalities

- Strategies for Individual Firms

Part IV – ***The Next Steps***

PART I

Technology Cluster Development

Economic Development Strategies

- ***Import***
  - campaigns to attract branch plants

- ***Grow-Your-Own***
  - assistance to local entrepreneurs
    (business planning, accessing seed capital, etc.)

- ***Linkages***
  - informing local companies about opportunities
    in a major technology cluster
  - also technology linkages

Influences

- ***Research / Academic*** *– Waterloo, Research Triangle Park, Ottawa*
- ***Manufacturing*** *– Ireland, Scotland, Mexico*
- ***Local Entrepreneurship*** *– Boston, San Jose, Ottawa, Vancouver*
- ***Large Government Hi-Tech Presence*** *– Houston, Huntsville*

Linkages

The Irish experience suggests that it should be possible to accelerate the creation and growth of a technology industry in a given community by encouraging local firms, both low technology and high technology, to supply products and services to the nearest high technology cluster that has reached a size where it has broad purchasing powers. Such a strategy is referred to as a linkages strategy.

This will ensure that communities are exporting products and services rather than young people.

Roles For the EDO

Importation *- focused on salesmanship, development of marketing strategies*

Grow-your-own *- requires assessment of the larger economic and social infrastructure of the area*

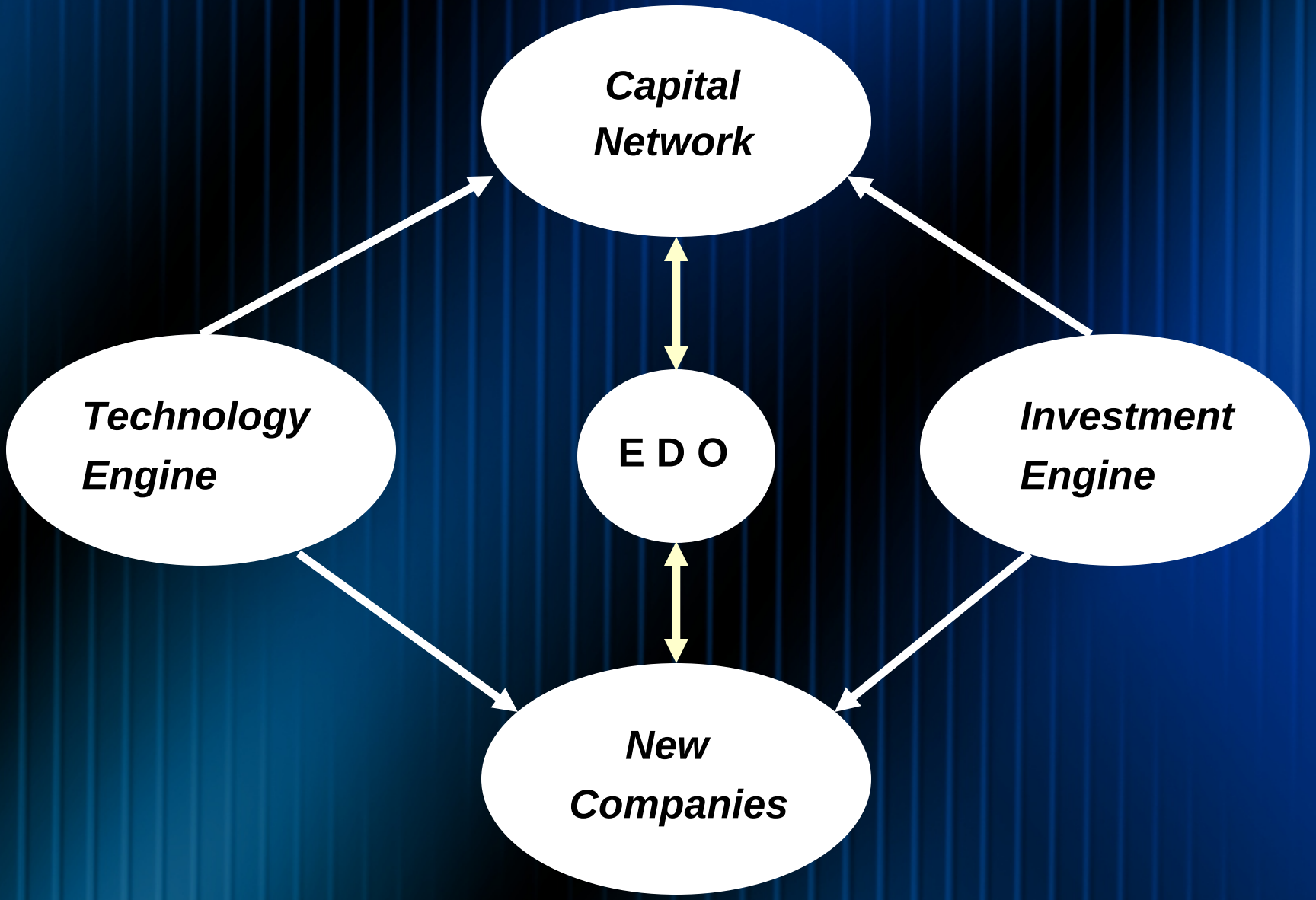
- must be a facilitator between the technology and investment engines.

Linkages *- a regional approach to economic development*

- complementary to a grow-your-own strategy

- "cost of doing business" factors less relevant

Roles For the EDO



PART II

A Needs Analysis of Ottawa-Carleton's High Technology Industry

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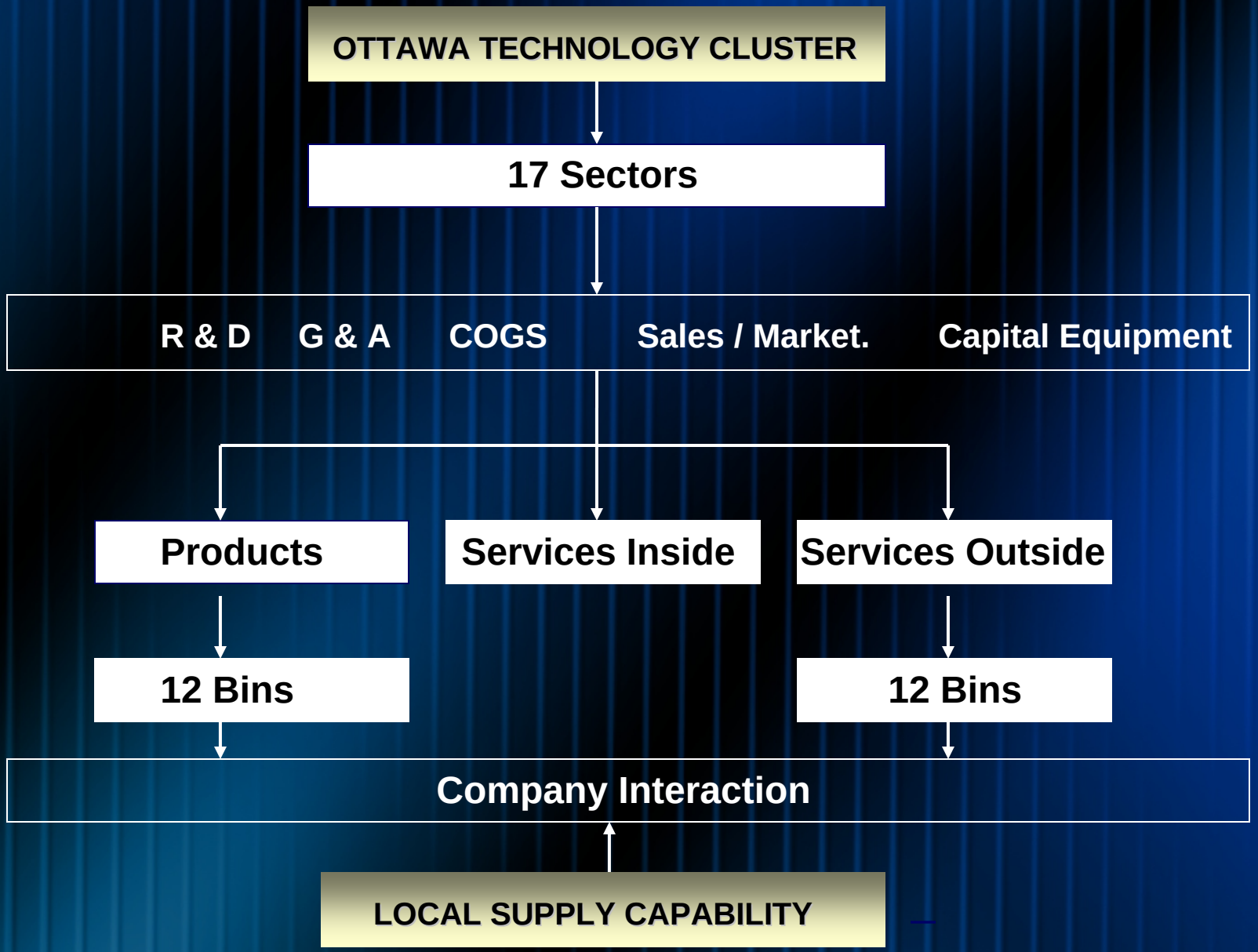
A Guide to Selling Products and Services to One of North America's Fastest Growing Technology Markets


OTTAWA TECHNOLOGY CLUSTER
17 Sectors
R & D
G & A
COGS
Sales / Market.
Capital Equipment
Products
Services Inside
Services Outside
12 Bins
12 Bins
Company Interaction
LOCAL SUPPLY CAPABILITY

High Technology firms buy products and services for various purposes:

- Sales & marketing
- R & D
- Administration
- Capital equipment
- Cost of goods sold (COGS)

What is COGS?

- It is the labour, material and overhead that goes into the company's products
- Differs from company to company
- Largest component of an income statement
- Purchases are made on a regular basis and not just sporadically

Income Models:

	Hardware	*Service*	*Software*
Sales Revenue	100	100	100
Cost of Goods	45	60	20
Gross Profit	55	40	80
Operating Expenses			
Selling	5	2	10
Marketing	10	10	20
Engineering	10	5	15
Warranty Costs	5	2	10
General & Admin	8	8	6
Total Operating	38	27	61
Operating Profit	*17*	*13*	*19*

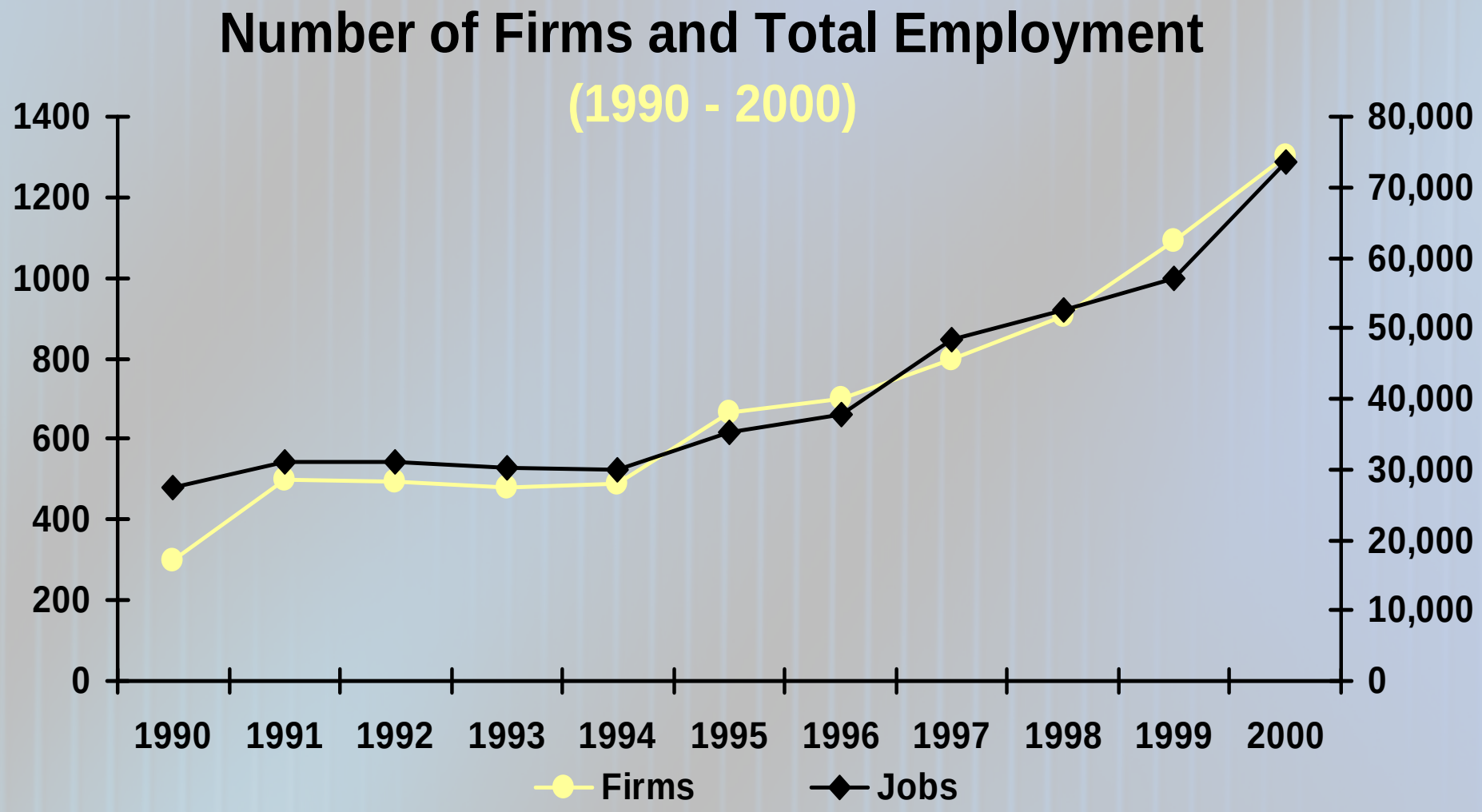
The Ottawa Technology Cluster (OTC):

- The Ottawa High Technology industry has sales of $12 billion and COGS of $6.5 billion
- The $6.5 billion includes $2.4 billion for product purchases and $1.5 billion for services purchases
- The remaining $2.5 billion is spent internally on services such as assembly and testing

The Ottawa Technology Cluster:

- High technology companies are broken down into 17 sectors (e.g. Telecom., Software, Computer Hardware, etc.)
- A COGS figure was established for each sector
- The outside purchases were broken down into 12 product “bins” and 12 service “bins”

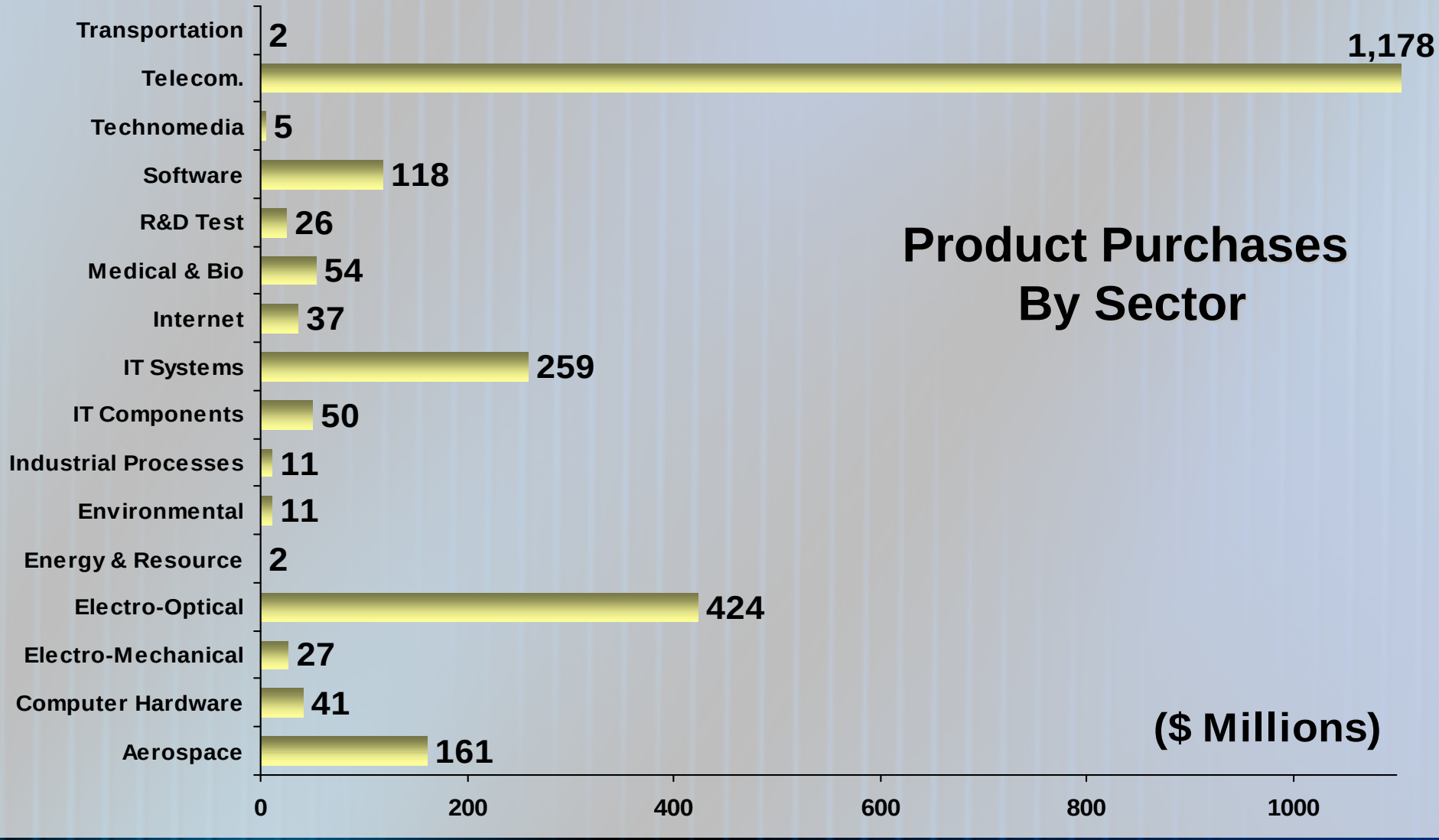
The Ottawa Technology Cluster:



Sector	Employment	Sales Per Employee (000's)	Sales ($ Millions)
Aerospace, Defence	2,823	190	536.4
Computer Hardware	764	180	137.5
Electro-Mechanical	361	150	54.2
Electro-Optical	6,279	225	1,412.8
Energy & Resource	74	150	11.1
Environmental & Geos.	353	150	53.0
Industrial Processes	759	150	113.9
IT Components	2,496	200	499.2
IT Systems	12,051	215	2,591.0
Internet & E-Commerce	2,450	150	367.5
Medical & Biotech.	1,489	120	178.7
R&D Labs, Testing	427	200	85.4
Software	5,035	235	1,183.2
Technomedia	362	150	54.3
Telecom & Satellite	20,945	225	4,712.6
Transportation	226	120	27.1
Other	55	120	6.6
Total	**56,949**	**Average - 211**	**12,024.5**

Projected Growth by Sector	Employment 1999 Doyletech Nos.	Projected CAGR (%)	Projected Employment in 2030
Aerospace, Defence	2,823	3	6,852
Computer Hardware	764	6	4,388
Electro-Mechanical	361	4	1,170
Electro-Optical	6,279	8	63,183
Energy & Resource	74	4	2,400
Environmental & Geos.	353	3	857
Industrial Processes	759	4	2,462
IT Components	2,496	8	25,116
IT Systems	12,051	6	69,215
Internet & E-Commerce	2,450	10	42,751
Medical & Biotech.	1,489	9	19,755
R&D Labs, Testing	427	6	2,452
Software	5,035	7	38,327
Technomedia	362	10	6,317
Telecom & Satellite	20,945	6.5	138,446
Transportation	226	6	1,298
Other	55	6	315
Total	**56,949**		**425,304**

The Ottawa Technology Cluster:



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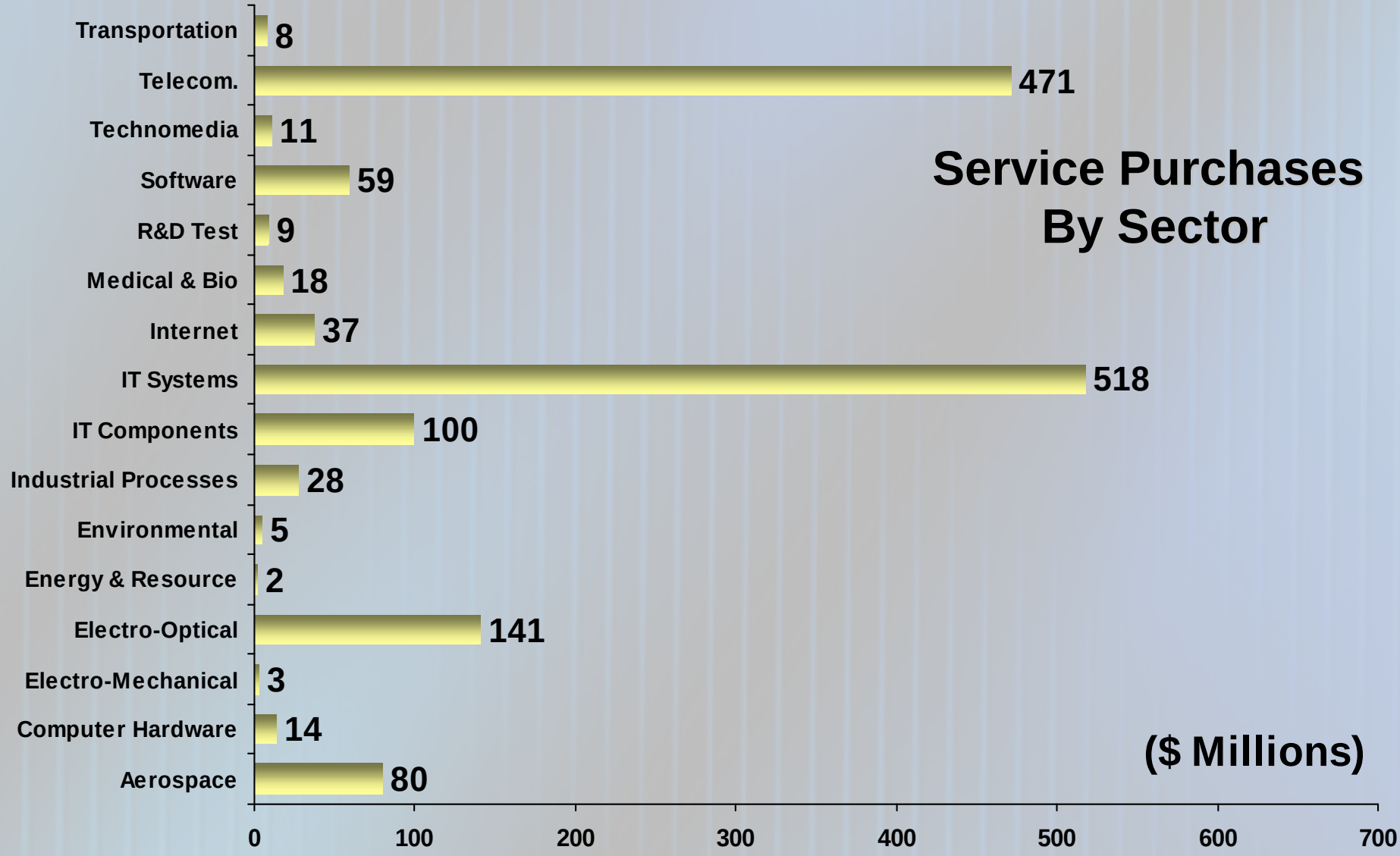

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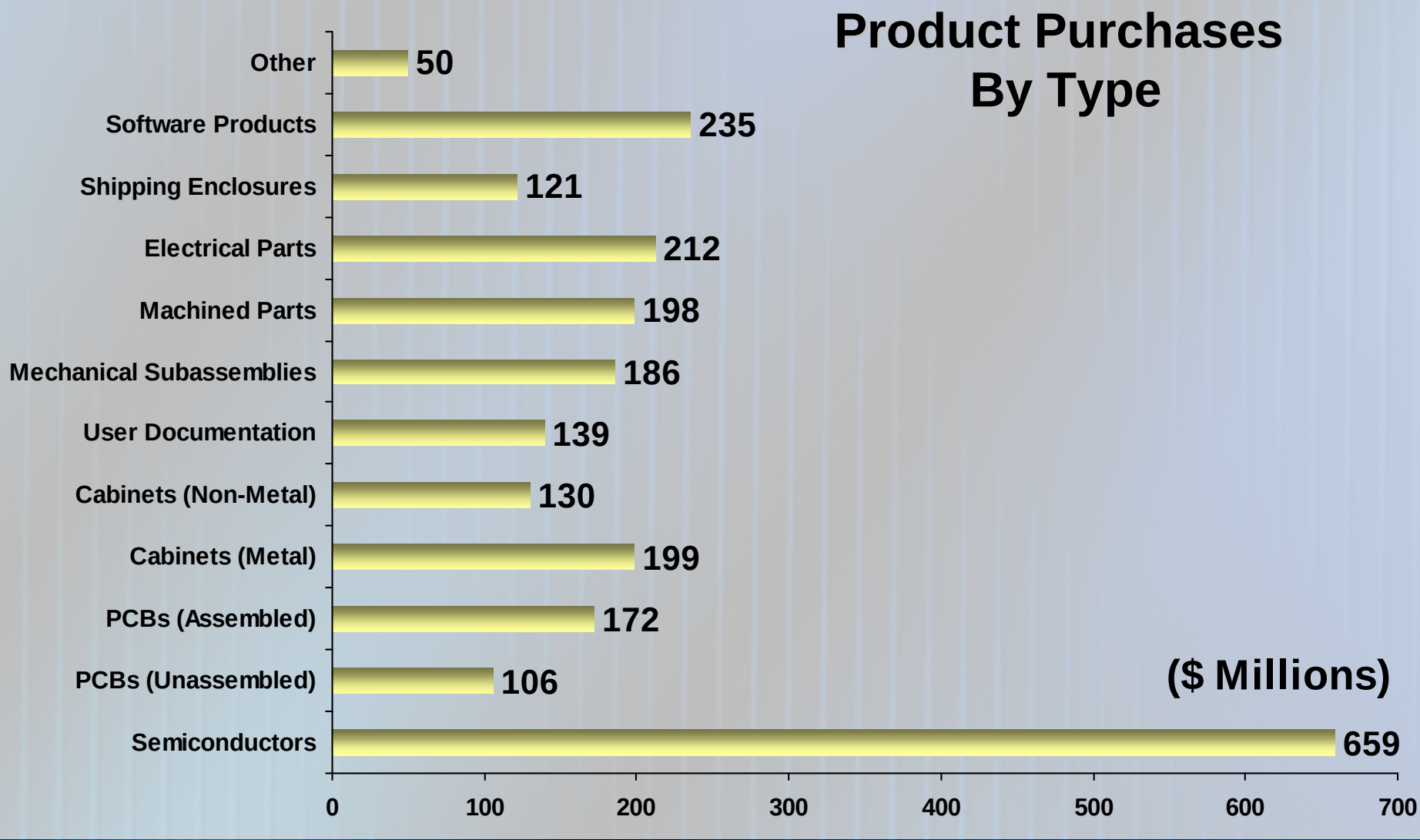

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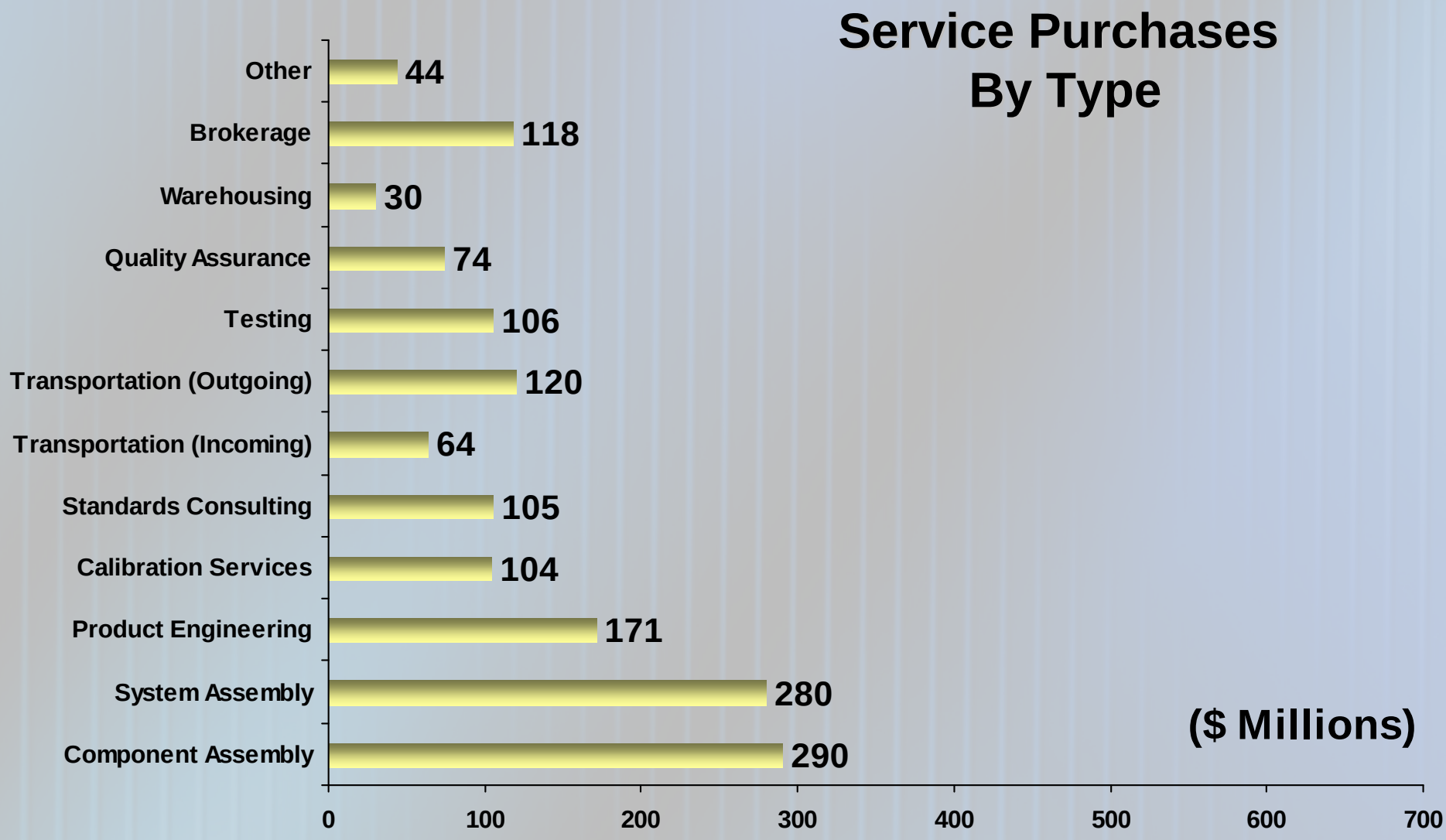


PART III

Developing Supply Linkages with The OTC

A Guide for Local Firms and Municipalities

Requirements:

- Having an existing high technology cluster is not a prerequisite
- The key is to match your industrial infrastructure to current needs
- Determine your community's core competencies
- Close working relationship between firms and economic development authorities
- Strong facilitation e.g. linkages in manufacturing

Strategies for Municipalities:

- key tool is the annually updated OTC needs analysis
- provide a clipping service and e-mail newsletter
- develop a community capabilities brochure
- maintain OTC contact lists and networking calendar
- focus on startups and link them to OTC firms
- arrange OTC networking trips

Strategies for Municipalities:

- disseminate OTC information at local events
  (ie. Chamber of Commerce meetings, conferences, etc.)

- also consider:

  - an Eastern Ontario Linkages Conference;
  - an Eastern Ontario Startups Conference;
  - a local business genealogy poster
  - identifying former residents now employed with OTC firms
  - holding a meeting with local firms to ascertain their views and to discuss ways to overcome the barriers identified in the survey research

Strategies for Individual Firms:

- key tool is the annually updated OTC needs analysis
- develop the business case
- identify opportunities for partnering with existing suppliers (either those based locally or in Ottawa)
- identify previous employees now working in OTC
- identify appropriate networking opportunities

Major Survey Findings:

- *ways to assist local firms:*

1. Provide Information / Research

- *sales contacts, procurement officers, website addresses, VC financing, relevant networking opportunities, etc.*

2. Provide Sales Assistance

- *facilitation, joint sales and marketing*

3. Provide Sales Tools

- *local databases to encourage joint ventures, partnerships for the OTC*
- *industry appreciates “white papers”*

Identifying the Supply Linkages

Eastern Ontario

- machining and fabricating
- prototyping / NPI
- electronics manufacturing services (EMS)
- customs brokerage and freight forwarding
- specialized coatings and finishing

Identifying the Supply Linkages

Examples of linkages from the supply communities

- **Kingston** – Finishing / coating
  - machining / fabricating

- **Hawkesbury** - components
  - machining

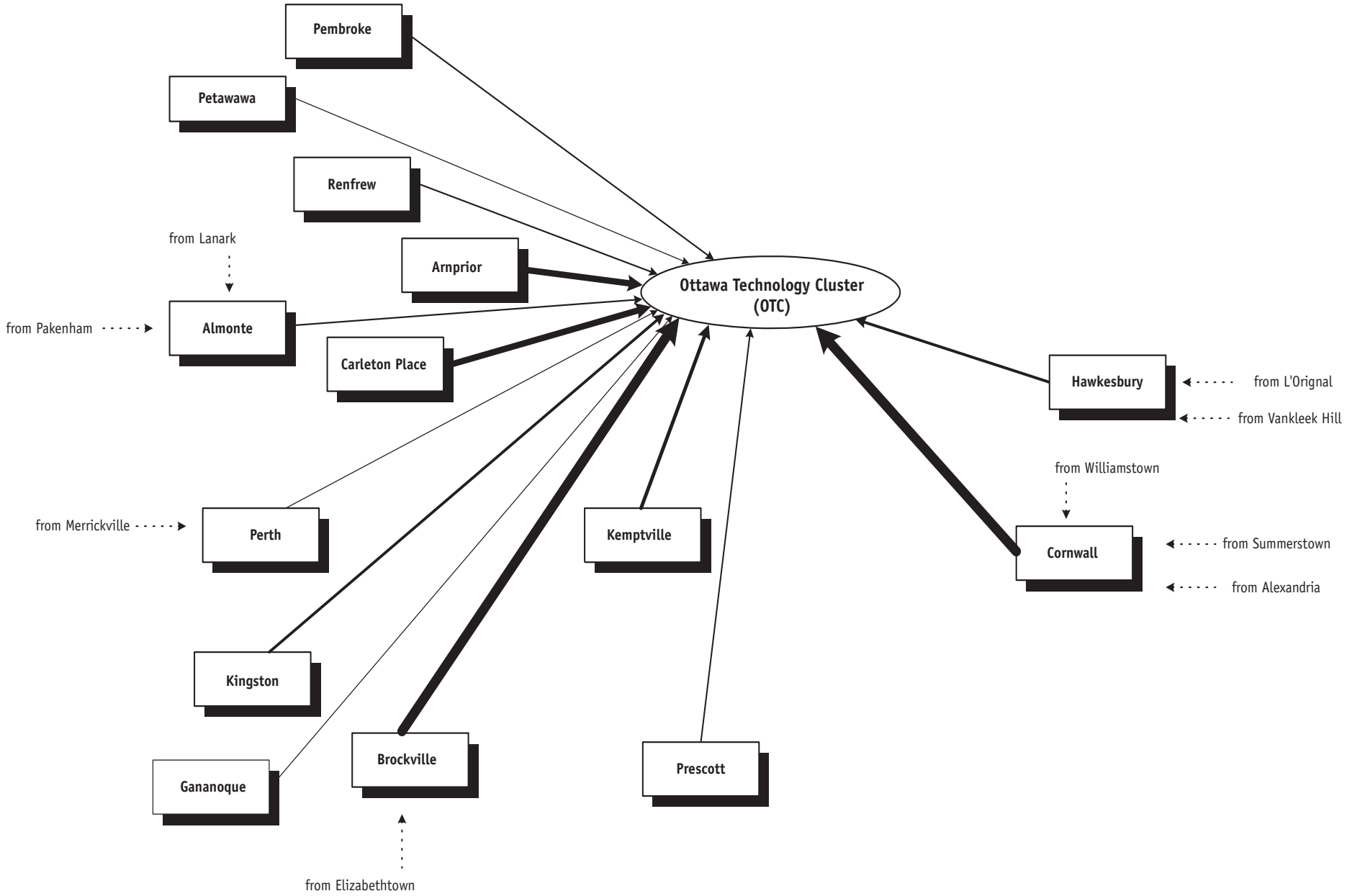
- **Cornwall-** assembly / heavy EMS
  - machining / fabricating
  - testing

- **Brockville -** assembly / heavy EMS
  - telecom equipment / services

PART IV

Current Situation and Next Steps

Eastern Ontario Supply Linkages



Current Situation

- Doyletech's Linkages initiative has been effective and well received
- Its main purpose is to establish B2B relationships between Eastern Ontario firms and the OTC
- Linked to Cost of Goods Sold (COGS)

Initial Assessment of Results

- Increased & new business activity
- Some firms have requested more detailed market maps
- Much better awareness of OTC activities and potential
- Doyletech personnel being asked to give presentations to municipal groups
- Has raised awareness of and enthusiasm for technology as a vehicle for rural economic development
- Opened our first office in rural Eastern Ontario at St. Lawrence College (Cornwall)

Next Steps

- Update and maintain current program
- Establish measurement systems
- Expand beyond COGS to include G&A, Sales and Marketing and R&D
- Improve inter-regional linkages
- Update “Vision 2030” document
- Assist business & municipalities in planning activities as they relate to technology
- Assist in establishment of local capital networks throughout Eastern Ontario

This is a regional program

- Less than 2 % of the 5 Billion dollar OTC opportunity is currently being satisfied by rural Eastern Ontario firms. This could increase to 10% or 500 Million dollars in the future.

- A “Linkages Plus” strategy will increase the 5 Billion dollar opportunity but more significantly increase the number of participating companies in this program

Doyletech Corporation

Making Technology Happen