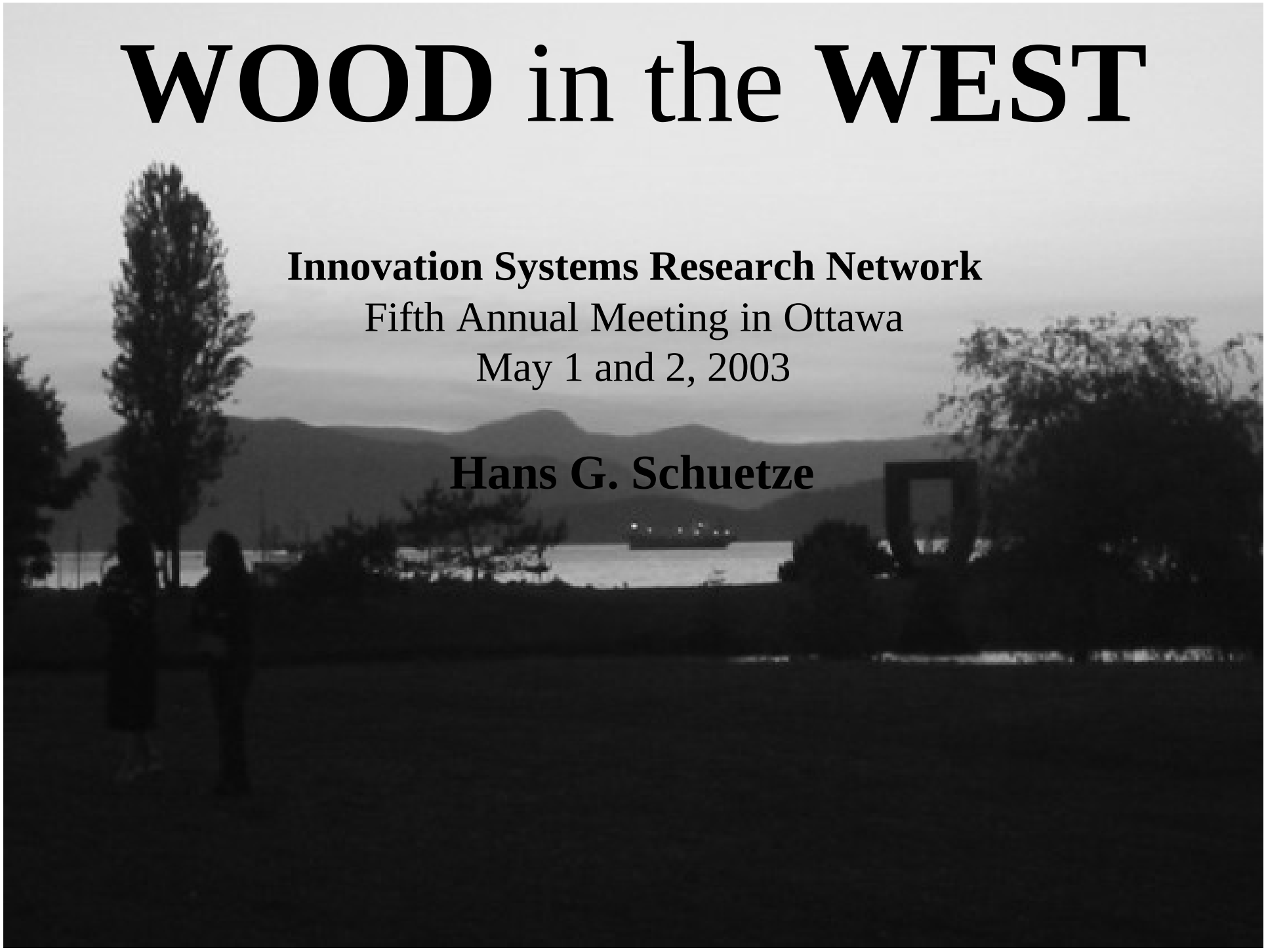
WOOD in the **WEST**



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The Secondary Wood Industry

(alternatively 'Wood Manufacturing' or 'Value Added' Industry)

Statistical definition:

- **Sawmills and Wood Preservation (3211)**: manufacturing boards, dimension lumber, timber, poles and ties from logs and bolts; producing lumber that may be rough or dressed by a planing machine but generally not further worked or shaped; preserving wood.
- **Veneer, Plywood and Engineered Wood Products Manufacturing (3212)**: manufacture softwood and hardwood veneer and plywood; structural wood members, except lumber; and reconstituted wood products.

Cont'd:

- **Other Wood Products Manufacturing (3219)**: not classified elsewhere: millwork, wood windows/doors, containers, prefabricated wood buildings, mobile homes, all other, generally using woodworking machinery; includes seasoning and planing of purchased lumber (baseboards, flooring, panelling, handles, toothpicks, clothespins etc.)

- **Furniture and Related Product Manufacturing (337)**: includes wood, metal and other materials.

Descriptive definition

The seven subcategories:

- Remanufactured products
- Engineered building components
- Millwork
- Cabinets
- Furniture
- Pallets and containers
- Other

Functional definition (and distinctions from primary and ‘tertiary’ wood industries)

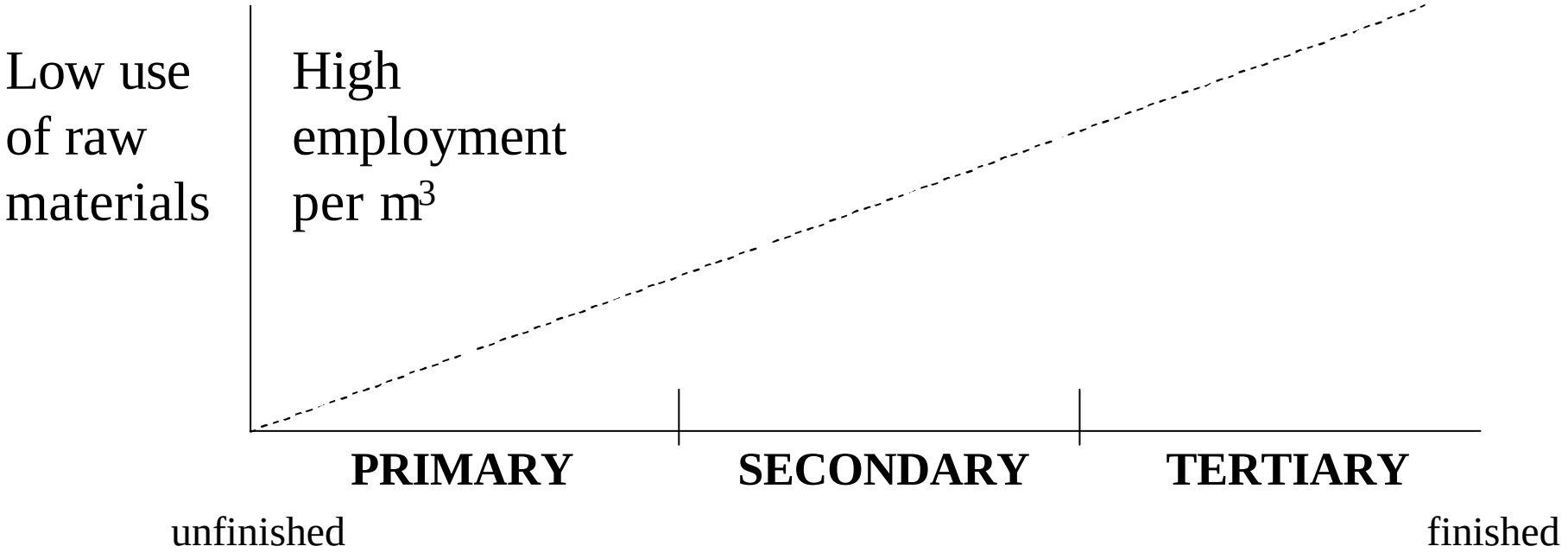
-Value added

-Employment per m2 raw material

-Use of raw materials

-Unfinished/Finished products

Determinants and boundaries of the secondary wood industry



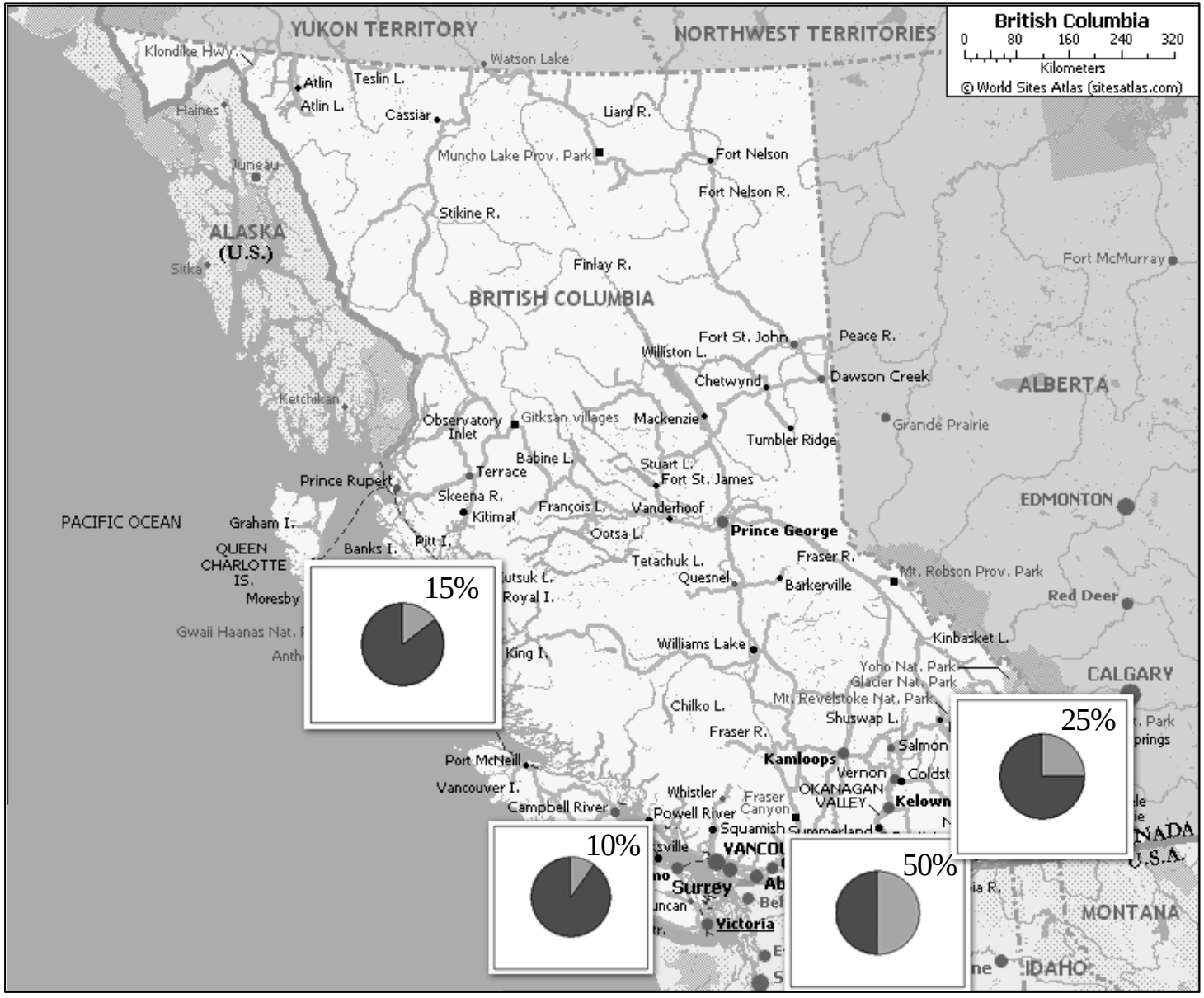
Estimated Raw Material Use and Employment for Various Wood Product Groups in BC

Business Type	% Raw Material Use	Est. cubic meters (000s)	Jobs per 1000 cubic meters	Est. Total Jobs
Remanufacturers	50.50%	6,767	0.5	3,384
Panel board	23.40%	3,136	0.75	2,352
Engineered wood products	6.80%	911	1.84	1,677
Shakes and shingles	8.70%	1,166	0.96	1,119
Millwork	4.00%	536	1.75	938
Cabinets	0.60%	80	10.33	831
Furniture	0.40%	54	7.66	411
Other wood products.	4.30%	576	0.7	403
Pallets and containers	1.40%	188	0.82	154

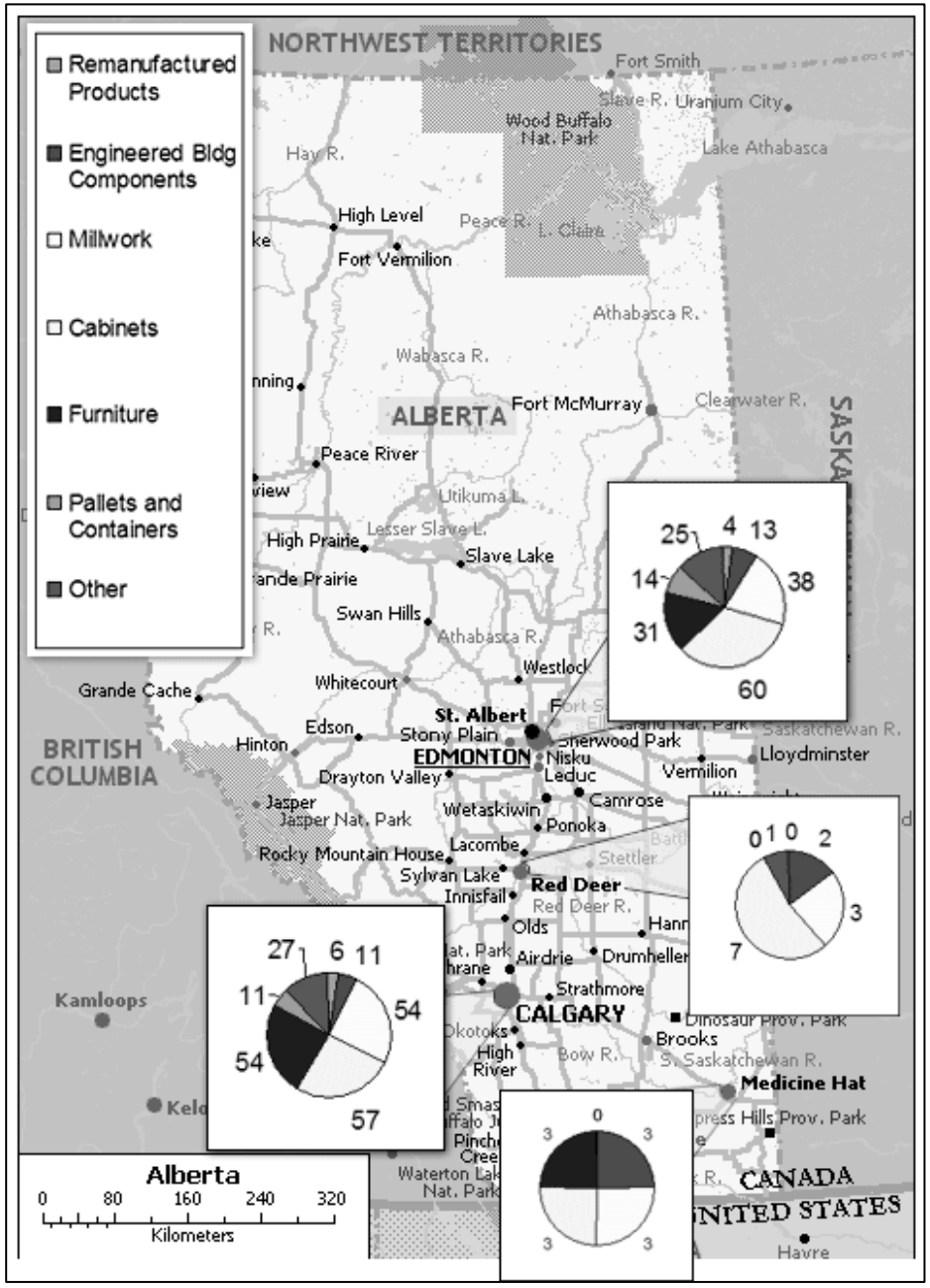
Secondary wood companies (BC) and their distribution

Total (estimates):

- Lower Mainland 50%
- Okanagan/West Kootenays 25%
- Prince George/North/Central 15%
- Vancouver Island 10%



Secondary Wood Cluster Study



Secondary Wood Cluster Study

Clusters and principal factors for clustering

- Proximity to raw material ("fibre," wood – important for re-manufacturers)
- Proximity to clients/the market/convenient transportation routes (important for millwork companies serving primarily the local market)
- Proximity to other companies in the same category
- Proximity to labour pool; training institutions
- Proximity to R & D institutions

Other factors influencing the decision to locate/stay

- Immigration patterns (especially immigrants from Europe – a background in wood/woodcrafts)
- Local knowledge and networks
- “Quality of life”

The profile of secondary wood firms

- Size
- Workforce and skills/terms of employment
- Customer/markets/competition
- Management/company structure
- Technology
- Innovations
- Links to R & D/training institutions
- Industry associations and other networking

Recent developments

- Globalization and its effects on secondary wood
  - Competition
  - Joint ventures
  - Corporate mergers and strategic agreements
- The US market and effects of “softwood lumber” tariffs
- The potential of IT
  - Rationalization
  - Integration of the production/marketing process
  - Customized mass production
- The new managers

Secondary wood in Western Canada – an industrial cluster

- Preliminary analysis
- Missing pieces

The Secondary Wood Industry

(alternatively 'Wood Manufacturing' or 'Value Added' Industry)

What is it? Statistical definition:

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Four principal elements of clusters:

- Local interactions with other companies and organizations/institutions
- Local knowledge flows
- Innovation in cluster firms
- Dynamics of the cluster as a whole

Local Interaction

- Among the seven sub-sectors (ranging from re-manufacturing to furniture), there is almost no interaction across, and little interaction within.

- The only activity with some degree of interaction across the sector as a whole regards marketing activities for new international markets . This interaction does not occur at the local level; it is organized by the province-wide BC Wood Specialty Group.

Local Interaction

- The majority of companies produce mostly for customers outside of their own local region.
- They buy most of their wood and other supplies from suppliers (or sales agents) located outside their own local region.
- However, companies tend to use local business services (banking, accounting, legal services).

Knowledge Flows

? There are only very few larger, local "champion" companies from which other firms have spun-off. In particular, there are almost no spin-offs from the primary sector.

? With few exceptions, there is no R & D collaboration with universities. Some R & D work is done with/by FORINTEK and some colleges/institutes.

Knowledge Flows (2)

The "talent" factor and knowledge transfer through highly educated/trained personnel.

- Most workers are unskilled. They are recruited locally, receive only basic training, earn low wages, and often move to other local firms.
- Few graduates from college programs specializing in wood-related training programs. These are adequately paid and given career development options. They, therefore, rarely change companies**.**
- No effect yet of engineering program for secondary wood manufacturing at UBC).

Knowledge Flows (3)

- The most important knowledge flows into the industry are specialized trade shows. Most of these take place outside the region (mainly in the US and Europe).

- Technical and related (e.g. design) knowledge flowing from these trade shows originate from two sources:

  - competitors
  - producers of wood working equipment

Innovation

As products are mature, most innovation comes in one of three forms:

- ? product design and quality improvement (mostly incremental product innovation)
- ? rationalization (often radical process innovation)
- • new markets; new materials

Traditional Structures and New Developments

- On the whole, the industry has still low tech equipment, a low-skilled workforce and autocratic management, and is rarely innovative, both with respect to products, processes and markets.

- There are now four new trends clearly discernible which are changing the traditional structures and dynamics of the industry.

New Developments

? Diversification of markets (Southeast Asia, US)

? Globalization of production

? Product specialization

? Professionalization of management and core staff

? Rationalization and full integration of the entire business process through IT.

Clusters or agglomoration of firms?

First Generation - Clusters building around:

? Skilled labour (immigration)

? Proximity to new materials

? Proximity to local markets (clients)

Clusters or agglomoration of firms?

Second Generation - cluster development:

- ? Attraction of new firms
- ? Spin-offs
- ? Some specialization

Clusters or agglomoration of firms?

Third Generation - de-clustering due to:

- ? Move towards new national/international markets
- ? National/international suppliers of raw materials
- ? National/international suppliers of equipment
- ? Professionalization of management
- ? High degree of specialisation

Questions related to the three development phases

1. Why was this firm established here?

2. What factors made the company succeed/grow? Which of these are due to local knowledge flows or interaction with local partners?

3. Have you contemplated a move to another location (where)? What keeps you here?

Clustering and de-clustering in the wood sector

- The industry grew significantly around small local clusters.
- As the sector, and many firms grew, the clusters became both more and less important.
- In the third phase of development, local clusters have little or no importance.

WOOD IN THE WEST

To be continued…

- More case studies in Alberta
- Furniture cluster in Manitoba

Wood in the East?