

Management Capability & Workforce Skill Level

DEFINITIONS – QUALITATIVE BENCHMARK FACTORS

Management Capability

This factor addresses the education, skill level and management sophistication of executives/owners in each benchmark area, as evidenced both by achievement of advanced management education and ability to develop the functional competences (eg. marketing, finance, operations, logistics, IT, HR, etc.) needed to be competitive in a specific industry or market segment.

It is of critical importance because perhaps more than any other qualitative dimension, management capability is a key determinant of the ability of both individual enterprises and an industry to adapt to and take advantage of opportunities that emerge in changing markets, business and technological environments.

Skill Level

This factor addresses the skills, experience, technical knowledge and expertise of the industry/segment workforce, as well as the ready availability of skilled support trades and professionals, (eg. machining, layout, maintenance, computer skills). This dimension is an important determinant of flexibility and adaptability within industries, especially as they adapt to rapidly changing environments.

Human Factor Opportunities

Human Performance is highly correlated with explaining variation in Profitability (EBITDA) – in the same comparison, factors such as asset quality and other mill gate cash costs (raw materials, furnish) were found to be less important predictors.

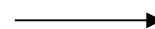
Human Performance was measured in terms of: ‘the way we work’ (efficiency) and productivity. These are high level indicators in JPMC’s HF performance matrix. JPMC uses the following classification for measuring HF performance:

Capability – the skill set

Motivation – the energy

Alignment (with Strategy) – the purpose

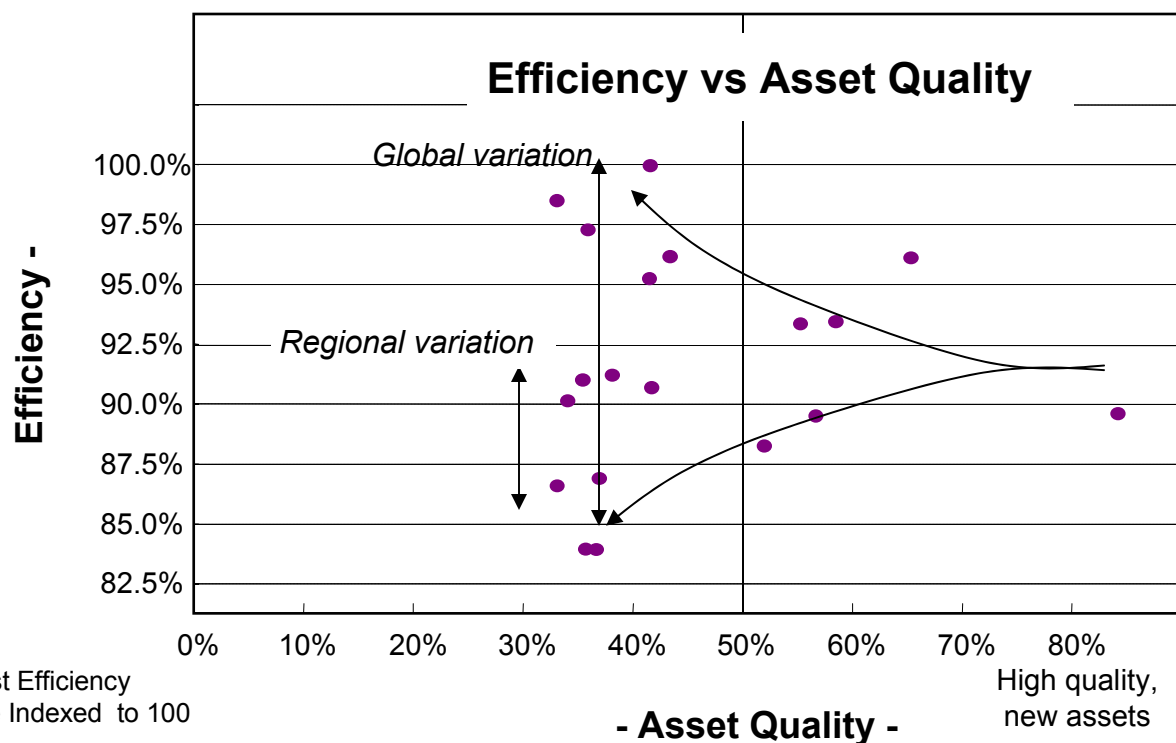
Organisational Efficiency – the effective team



At least 30% of variation in profitability can be explained by human performance

*Note. In an industrial study undertaken by a large paper group, capability*motivation*working conditions (alone) explained 25% of variation in profitability between operations*

Human Performance Drives Profitability



Real Case
- Single Product,
Actual Mills

Note. Highest Efficiency
Performance Indexed to 100

- Achieving high efficiency - ‘the way we work’ - is often found associated with older assets.
- Efficiency is better correlated to profitability than is asset quality
- Local teams can form themselves into highly effective profit centres – compensating for asset disadvantages.
- Global variation exceeded regional variation – additional leverage available through globalisation

Key Issues – The HR Director's Survey

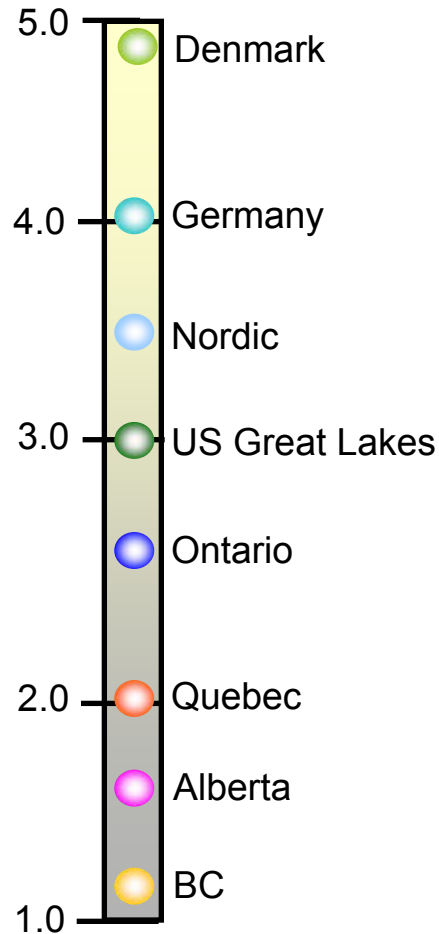
Corporate Leadership

- There is a need for executive mentoring/coaching to accelerate the right leadership qualities and prepare management teams for leveraging HF and globalisation
- Succession planning is a key issue, with ageing profile
- Knowledge Management is not yet established – therefore knowledge is not well leveraged.

HR Capability

- Business skills profiles narrowly focused (lean heavily to engineering); need external breadth to support industry development

MANAGEMENT CAPABILITY



- The German and Danish organizations have long recognized secondary manufacturing as a sophisticated business and employ business school graduates to run their businesses.
- Nordic countries, with heavy emphasis on higher education, are employing more and more business school graduates,
- In US States, trend evident towards more professionally educated management, even in private/family held businesses. (eg. New generation of management.) Also, number of secondary producers have become successful, national/international businesses, (eg. Andersen Windows), fostering awareness of value of professional management education.
- Similar trend towards more professionally trained management evident in both Ontario and Québec, though does not appear to be as strong as in US States.
- Western Provinces appear to rely more on technical expertise of owner managers.

Outline of Management Capability

- Strategy & Planning
- Marketing
- Sales
- Market research
- Communications
- Organization
- Supervision
- Business Administration
- Determination/Commitment
- Creativity/innovation
- Managerial (cost) accounting
- Resourcefulness/inventiveness
- Finance
- Business practices
- Laws and regulations
- Import/Export

STRATEGIC PROCESS



Recognise Performance Trends



Identify problems/causes or opportunities/vulnerabilities



Strategic Analysis:

- current strategy
- analyse
 - environment - market, competitors and influencers
 - resources, capabilities and organisation
- effect of no change



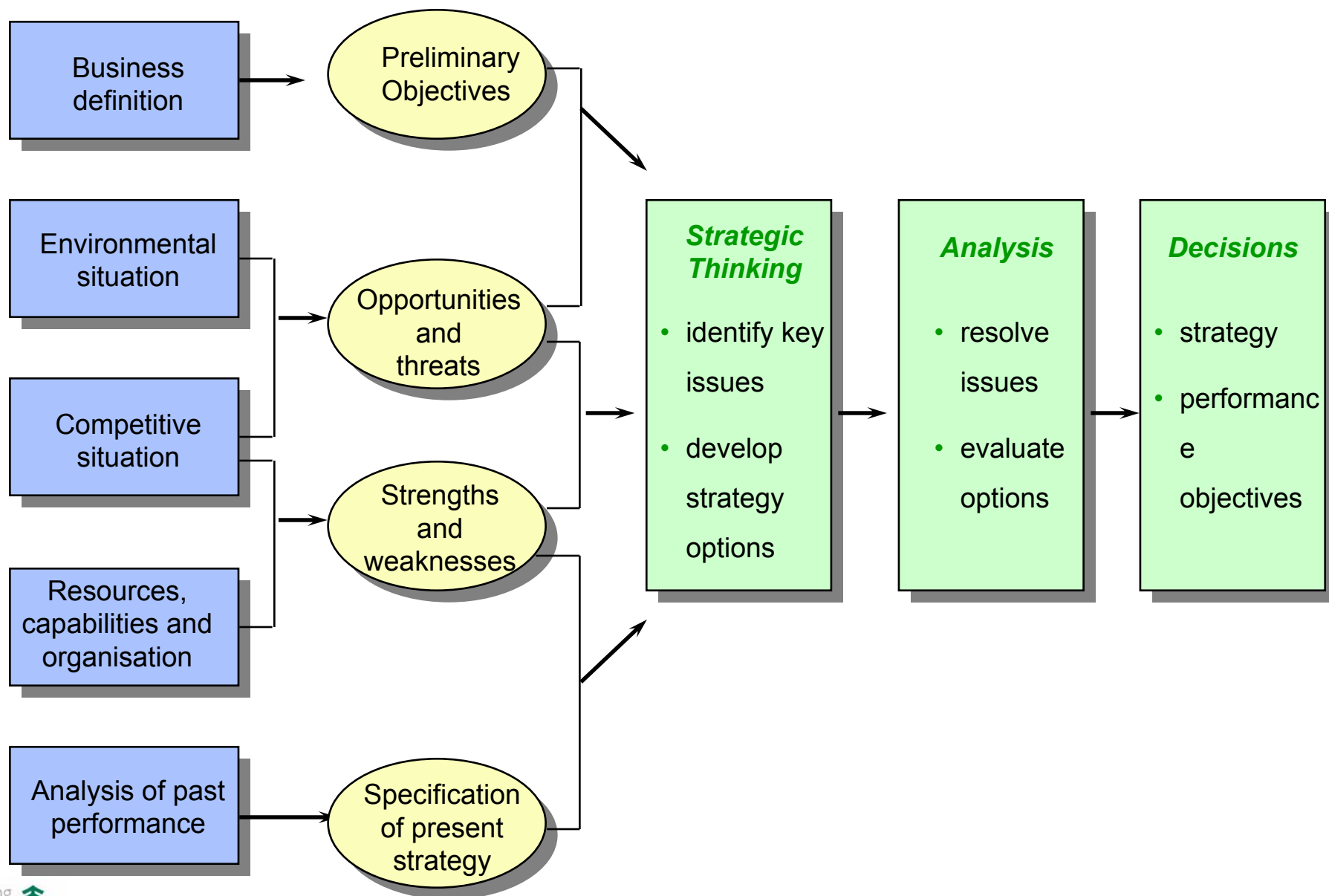
Develop Strategic Options:

- restructure
- improve execution
- new direction

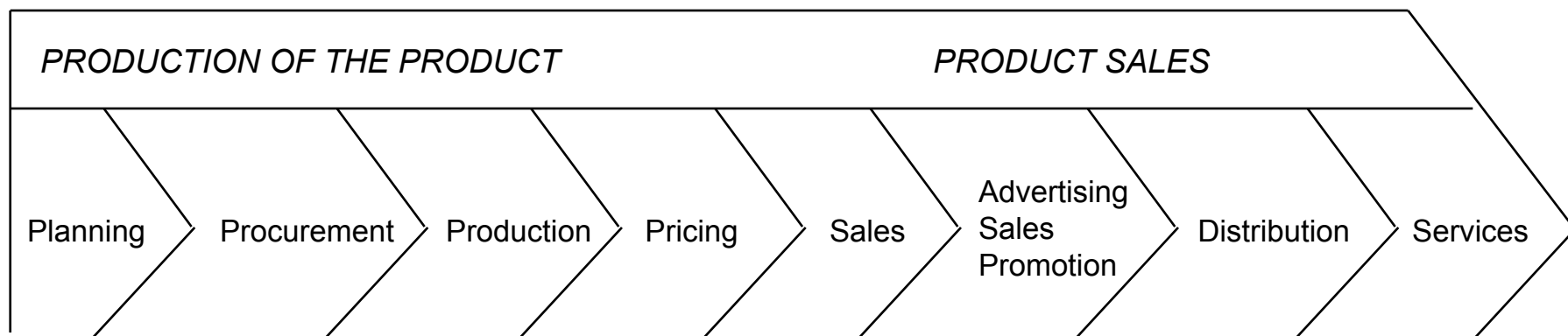


Choose Option and Implement

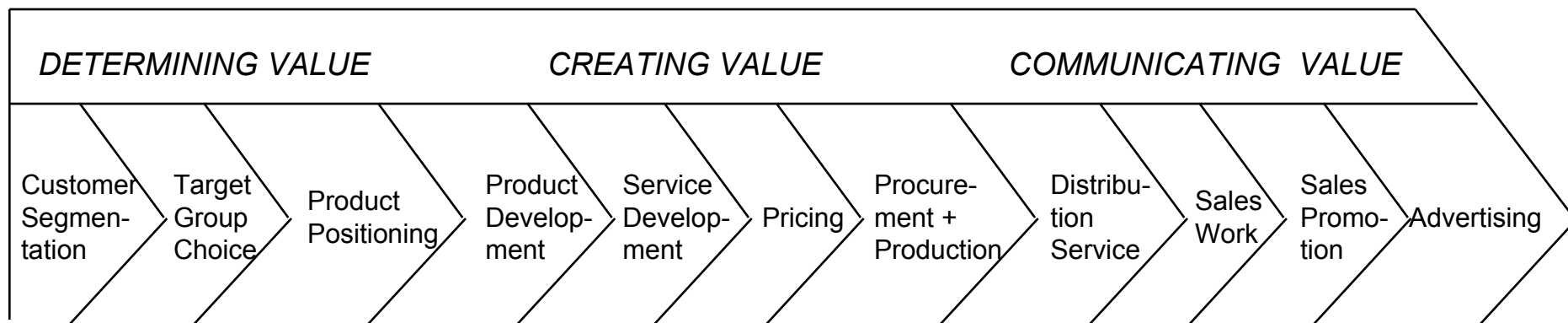
STRATEGY FORMULATION PROCESS



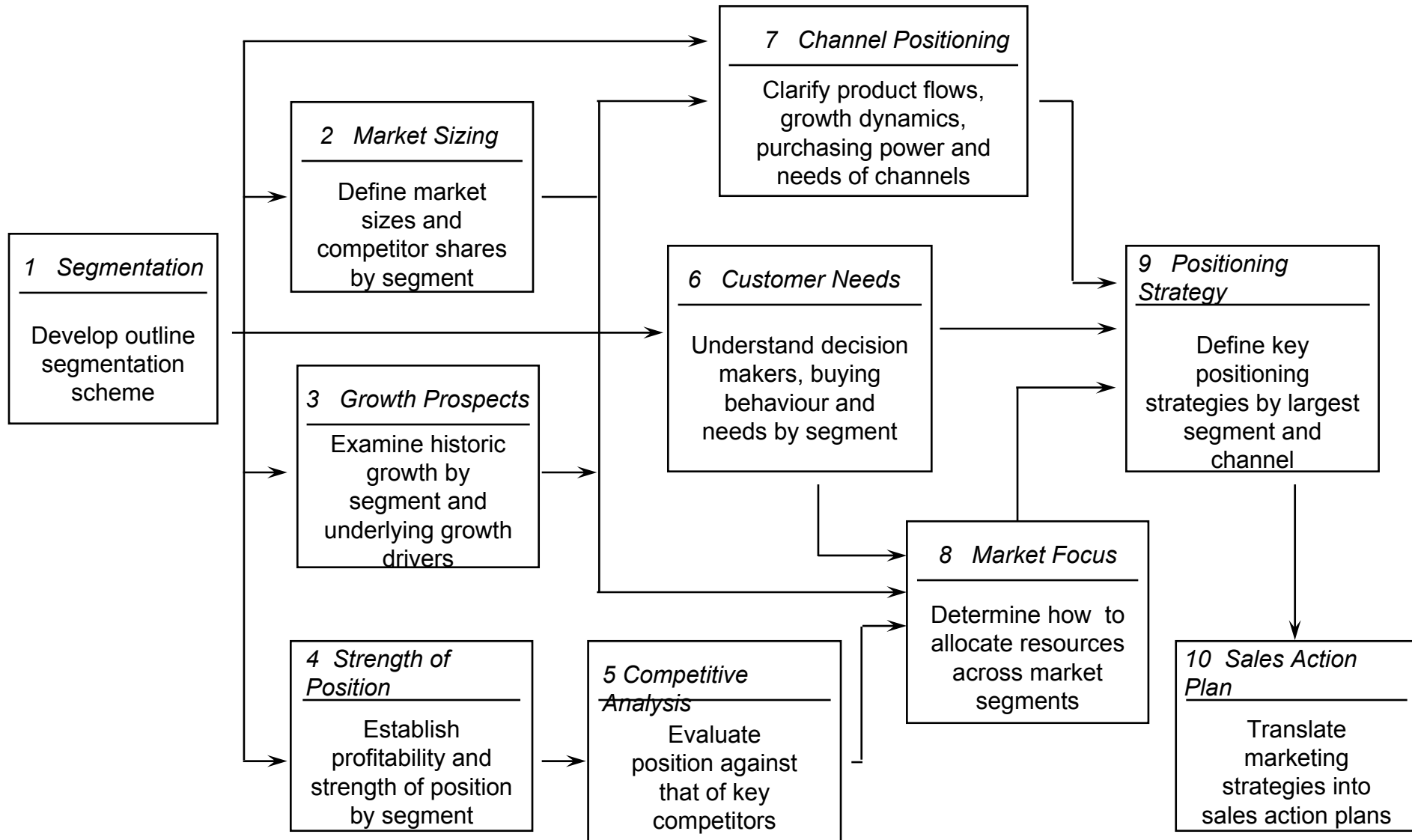
A PRODUCTION DRIVEN MARKETING PROCESS



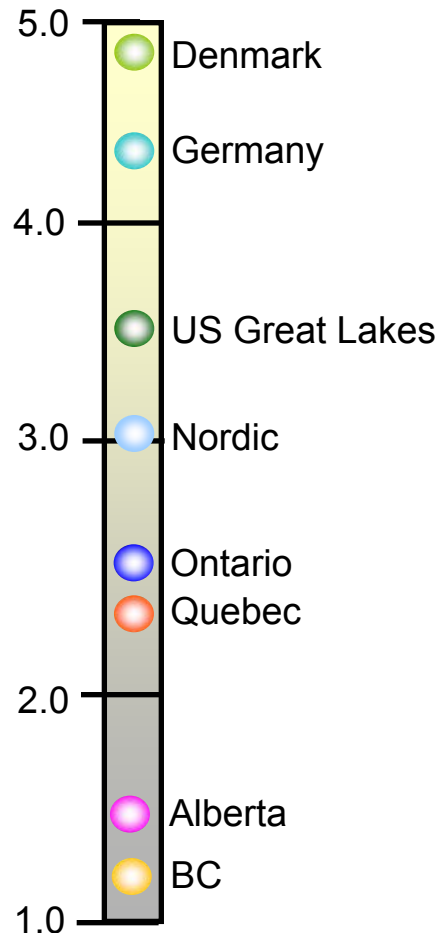
A MARKETING PROCESS BUILT ON PRODUCT VALUE



MARKETING STRATEGY - Schematic Methodology -



WORKERS SKILL LEVEL



- Through long standing apprenticeship programs and heavy emphasis on trades training the Europeans have obtained a very high level of skilled worker.
- The US Great Lakes has access to large numbers of skilled workers employed in manufacturing industries; however, manufacturers are facing labour shortages in some areas, which is driving investment in more advanced technology.
- Central Canada is attracting more skilled workers as the secondary products manufacturing grows and competes with the other manufacturing industries in the area.
- Western Canada with most emphasis on trades training for the primary has left the secondary producers to train for the needed skills, on the job.

Outline of Workplace Skills

General Skills

- Basic reading, writing and math
- Work ethics, honesty, dependability
- Interpersonal skills
- Personal organization
- Ability to work under supervision
- Supervisory skills
- Basic safety
- Industrial first aid

Technical, Occupational & Creative Skills

- Materials properties and characteristics
- Machines and tools
- Technologies (air, hydraulics, etc.)
- Woodworking
- Engineering
- Manufacturing concepts
- Production organization
- Processing techniques
- Design
- Quality Control
- Computer-based production (CAD, CNC)

Fastest Growing Specialty Wood Products Companies in USA

- Casegoods for offices, labs and schools
- Kitchen and bathroom cabinets
- Architectural millwork (I.e., schools, churches, libraries, hospitals, hotels and bars)
- Coat and hat racks
- Wooden literature display racks
- Store fixtures, custom display cases
- Corporate and commercial interior doors
- Furniture components (I.e., drawers, table legs)

Fastest Growing Specialty Wood Products Companies in USA – cont'd

- Residential, baby and children's furniture
- Custom office and home office furniture
- Wooden boxes, desk items and flooring from specialty woods (I.e. character wood)
- Organizational systems for closets, pantries
- Ergonomic wooden office chairs
- Hand rails, stair parts, louver components, mouldings
- Home entertainment centres

Remanufacturing Processes - Products & Market Opportunities

<u>Plant Type/Processes</u>	<u>Typical Products</u>	<u>Main Markets</u>
<p>Softwood Remanufacturing plant Sort, resaw, precision end trim (PET), planing, moulding, kiln, drying, chop line, grade, grain/colour sorting</p>	Paneling, flooring, planking, finger joint blocks, door stock, housing components, window stock, cut stock, clear components, clear & knotty blanks, toy stock, moulding, turning blanks.	Can. USA, Japan, EU
<p>Chop plants Grading, multi-rip, chop line, optimiser, planing, package</p>	Pallet lumber, dunnage, bedframe, studs, boards, pattern stock, stakes, lath, mfg. Housing components, furring strips, modular home components	Can. USA
<p>Fingerjoint plants Chopline, block optimizer, grade line, fingerjoint line, planing, trim saws.</p>	Finger jointed dimension lumber, finger jointed mouldings, door casings, boards	USA
<p>Panel product plant Panel saws, CNC routers and paint to point, overlay machines</p>	Plastic/vinyl laminates, melamine overlay, cabinet and furniture parts, door core, stiles and rails	Can. USA
<p>Millwork plants Tenoner-double end/mortiser, drilling/boring line, sander, shaper, CNC machinery</p>	Doors, windows, mouldings, custom cabinets	Can. USA
<p>House Factories Panel cutters, nailing machine, drilling/ boring, component saws, assembly tables/jigs</p>	Factory built homes, pre-cut structures	Can. USA Jap.

Remanufacturing & Specialty Processes - Products & Market Opportunities

<u>Plant Type/Processes</u>	<u>Typical Products</u>	<u>Main Markets</u>
<p>Edge-glue Laminating plants Resaw, multi-rip, trim, sort, kiln, planing, grade, optimising chip saw, fingerjoint, mould, glueline, edge-glue, curing, sanding, inspection and testing</p>	Edge-glue panels, shelving, DIY stock, furniture stock, clear and knotty components, table tops, door components, fascia	USA, EU,
<p>Face-glue Laminating plants Sort, resaw, multi-rip, grade, kiln, optimising chap saw, fingerjoint, mould, glueline, laminator cure, inspection and testing</p>	Laminated posts, beams Laminated window blanks, handrails Laminated headers	USA, Jap. EU USA
<p>Furniture Component Plant Sort, rip, plane, edge-glue, mould, machine, precision trim, dand, finish, package</p>	Cut to size and machined furniture components	USA
<p>Furniture Plants Veneering, CNC router, point to point, tenoner-double end/mortiser shaper, lacquer line, sanding, finishing</p>	RTA furniture, office furniture, upholstered furniture, garden furniture, bedroom furniture, household furniture	USA Can
<p>Window plant Rip sawing, planing, moulding, jigs</p>	Windows, skylights, trim	USA Can
<p>Door Plant Rip sawing, planing, moulding, jigs</p>	Interior, exterior, cabinet doors, trim	USA Can

Successful Value Added Plants

<u>Plant Type</u>	<u>Processing Equipment</u>	<u>Main Success Factors</u>
Remanufacturing plant & edge-glue line	Resaw, moulder, cut/chop line, edge-glue line	<ul style="list-style-type: none"> ▪ Strong business skills ▪ Strong customer & market knowledge ▪ Specialty products line ▪ Low Overhead/low costs ▪ Low labour costs ▪ Good connections to wood supply
Cut & rip line for pine boards & pallet stock	Multi-rip, chop line, planer	<ul style="list-style-type: none"> ▪ Low overhead/low costs ▪ Low labour costs ▪ Simple product line
Softwood mouldings plant	Kilns, rip saws, cut lines, chop lines, finger-jointer. Moulders, resaws	<ul style="list-style-type: none"> ▪ Strong customer & market knowledge ▪ Flexible processing ▪ High technology & low costs ▪ Good connection to wood supply
Glue-lam plant	Sort line, resaw, multi-rip, kiln, chop line, fingerjointer, glue line, press operation, planer	<ul style="list-style-type: none"> ▪ Strong customer & market knowledge ▪ Specialty products ▪ Good connections to wood supply
Hardwood edge-glue plant	Resaw, multi-rip, kiln, planer, chop line, fingerjointer, moulder, glueline/laminator, dander	<ul style="list-style-type: none"> ▪ Strong customer & market knowledge ▪ Specialty products line ▪ Moderate to high technology ▪ Good connections to wood supply

Successful Value Added Plants

<u>Plant Type</u>	<u>Processing Equipment</u>	<u>Main Success Factors</u>
Custom kiln, softwood	Sort line, sticker, kilns, planer, resaw	<ul style="list-style-type: none"> ▪ Low overhead ▪ Simple production process ▪ High quality ▪ Good service ▪ Market connections
Pallet plant	Multi-rip, chop line, planer, resaw, nail/notching machine	<ul style="list-style-type: none"> ▪ Strong customer knowledge ▪ Low overhead, costs & technology ▪ Low labour costs ▪ Simple product line ▪ Good supply relationship
Turned wood products plant	Planer, edge-glue line, rip saws, lathes, sander, finishing line	<ul style="list-style-type: none"> ▪ Strong customer & market knowledge ▪ Moderate technology ▪ Good supply relationship
Store fixtures plant	Rip saws, chop saws, laminating line, CNC equipment, sanders, finishing line	<ul style="list-style-type: none"> ▪ Strong customer & market knowledge ▪ Specialty products ▪ Design ▪ Moderated technology
Solidwood RTA furniture plant	Rip saws, chop saws, laminating press, CNC equipment, sanders, finishing line & kilns	<ul style="list-style-type: none"> ▪ Strong customer & market knowledge ▪ Specialty products line ▪ High technology ▪ Design

DISCUSSION OF POSSIBLE ACTIONS

Remanufacturing Development Program – Primary Sawmills

Constraint	Potential Remedy	Remaining Gap	Issues
Marketing, downstream product and customer knowledge	Consultants	Market intelligence; targeted trade missions and shows	End use/ customer knowledge
Labour costs	Plant automation; engineering consultants	Technological know how	Identifying fit for purpose operations
Viewing in-plant technology	Plant visits USA/EU		What product/market focus to take
Technology transfer	Forintek Technology Transfer Program; Equipment suppliers, industry experts & consultants; Equipment shows; BCWSG		
Networking between stakeholders & industry players	Customer Visits		
Historical commodity business focus	Customer Visits		Long term oversupply of commodities

Remanufacturing Development Program – Panel Plants

Constraint	Potential Remedy	Remaining Gap	Issues
Marketing, downstream product and customer knowledge	Consultants	Market intelligence; targeted trade missions and shows	End use/customer knowledge
Labour costs	Plant automation; engineering consultants	Technological know how	Fit for purpose equipment
Viewing in-plant technology	Plant tours – USA/EU		
Technology transfer	Forintek Technology Transfer Program; Equipment suppliers, industry experts & consultants; Equipment shows;		
Networking between stakeholders & industry players	Customer Visits		
Historical commodity business focus	Customer Visits		Long term over supply of commodities

Value Added Development Program – Small/Medium Sawmills

Constraint	Potential Remedy	Remaining Gap	Issues
Marketing knowledge-specific product/market information	PEMD, Consultants, Conferences	Networking, Trade Missions	End use/customer knowledge
Market intelligence	Commercially available reports, publications, brokers; consultants	In house customer & market knowledge, in-market field visits and conferences	Lack of connections to value chain
Fibre supply	OMNR Access to underutilized species	Willingness of majors to sort and supply high grade logs	Continuous supply of appropriate raw material
Technology Transfer	Forintek technology transfer program; equipment shows, BCWSG		
Networking		Associations, cluster	Lack of value chain connections
Finance		Viable plans to attract investment	Business planning

Value Added Development Program – Remanufacturers

Constraint	Potential Remedy	Remaining Gap	Issues
CVD	Changing product mix	Commodity items produced by remaners	Unresolved position on secondary products
Marketing/Product development	Consultants	In house customer knowledge	Lack of marketing culture
Technology	Forintek, BCWSG		Understanding how/what technology can reduce costs
Financing		Viable plans to attract investment	Business planning
Fibre supply – volume & cost	Clustering with lumber and panel suppliers	Sufficient high value raw material of right dimension and dryness	
Training	Regional colleges	Fit for purpose programs	Development of a fit for purpose workforce
Networking	Trade shows, conferences, customer visits	Associations, cluster	Lack of value chain connections
Quality Control	ISO, CSA, ASA, DIN, JAS		

Value Added Development Program – Specialty Wood Products

Constraint	Potential Remedy	Remaining Gap	Issues
Market Development	Consultants	Access to market experts or skilled resources;selected field visits and trade shows	Marketing expertise
Market Intelligence	Consultants	Targeted research on specific opportunities;customized market research	Real vs. perceived opportunities
Design Skills		Wood products design initiatives	Design leadership
Financing		Viable plans to attract investment	Business planning
Technology	Forintek tech transfer		
Specialized Training			
Raw Material Supply	Lumber and panel suppliers	Sufficient component or high value material of right dimensions and dryness	
Infrastructure			
Networking	AWMAC	Associations, cluster	
Product Quality	ISO, CSA, ASA, DIN, JAS		

Qualitative Value Added Development Program

Qualitative Input	Existing Programs	Remaining Gap	Issues
Management Capability	CAWP, Connestoga College		Raising the level of managerial competence in SME's
Workforce skill level	BC Wood Specialties	Ontario Program	People vs machines
Clustering		Industry specific cluster	
Policy		Policies to fit with Ontario Vision	
Industry and market structure		Attract large final product companies	
Technology	Forintek		
Raw material		High value raw material in right dimensions	