Forestry Sector Development and Industry Opportunities

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Paul Orser
Saskatchewan Fibre Manager

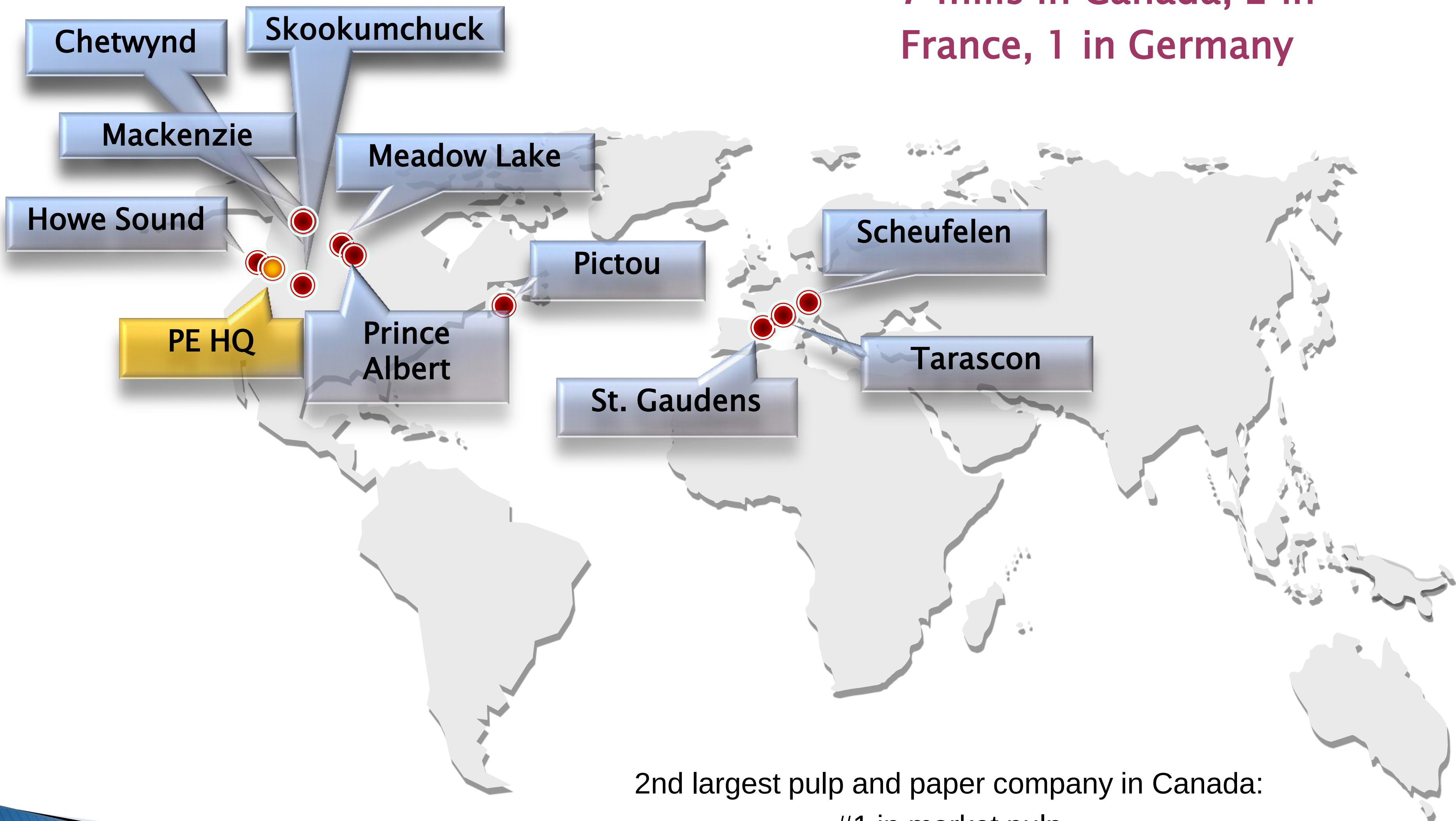
Presentation Flow

1. **Overview of Paper Excellence Canada**
2. **Forestry versus other manufacturing sectors**
3. **Meadow Lake Mechanical Pulp Details**
4. **Re-Started Prince Albert Pulp Details**
5. **Employment/Business Opportunities**
6. **Summary**

1. Overview of Paper Excellence

Paper Excellence is a Canadian Pulp & Paper Company in what we view as a 'Sunrise Industry'

7 mills in Canada, 2 in France, 1 in Germany



2nd largest pulp and paper company in Canada:
#1 in market pulp

Paper Excellence –Global Markets

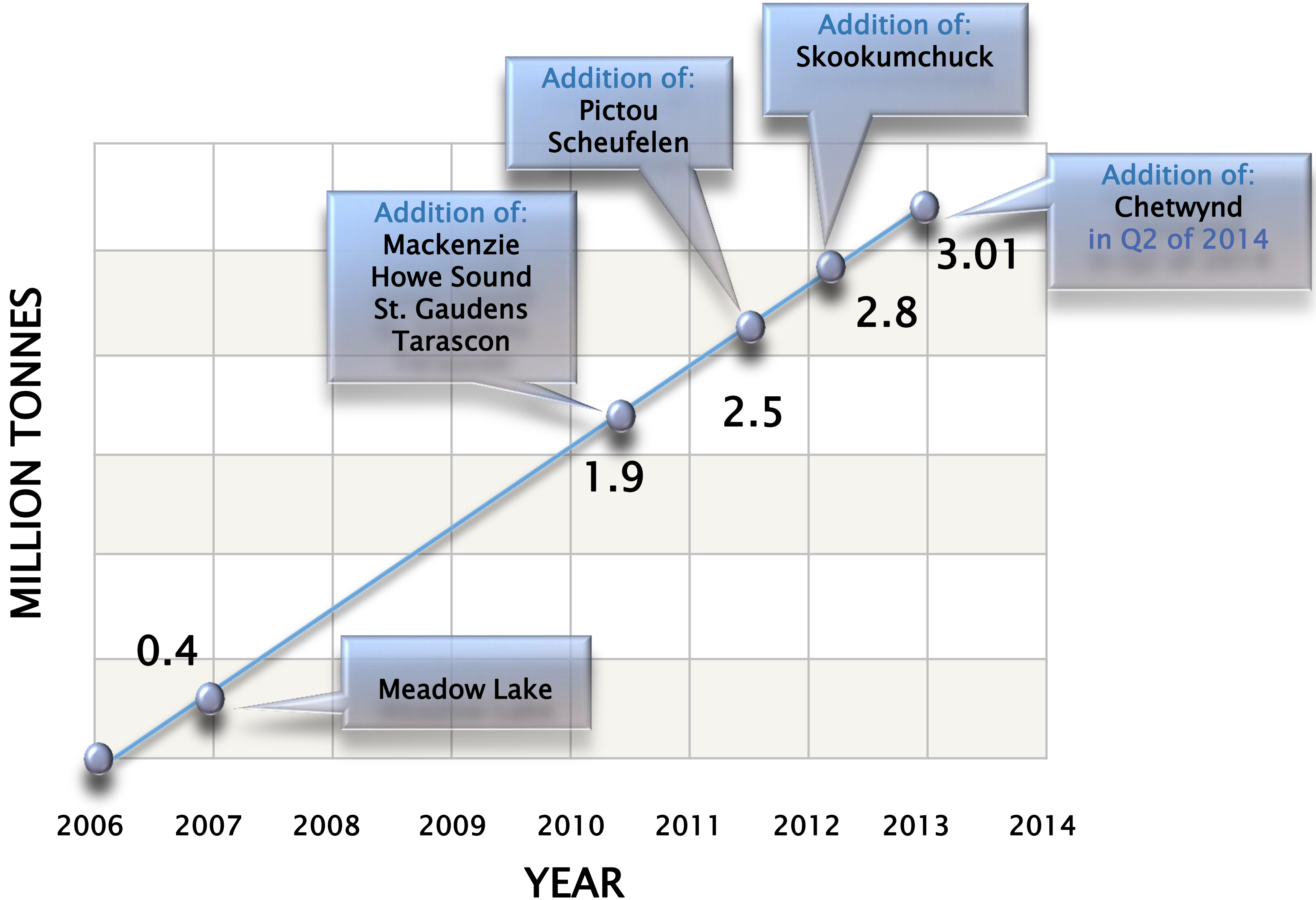
Annual Production Capacity 2.45 Million tonnes, Pulp and Paper

Annual Sales Revenues about C$2.5 Billion

Diversified Markets & Customers

- **55% Asia - (China, Indonesia, Korea, India)**
- **20% North America - (Canada , USA)**
- **25% Europe – (France, Germany, Austria)**

Paper Excellence Growth & Current Production



Paper Excellence – Positive Impacts

Green Energy Production:

Approximately **250** MW green power produced
50MW sold to grid
80 MW under contract for new development

Large Employer:

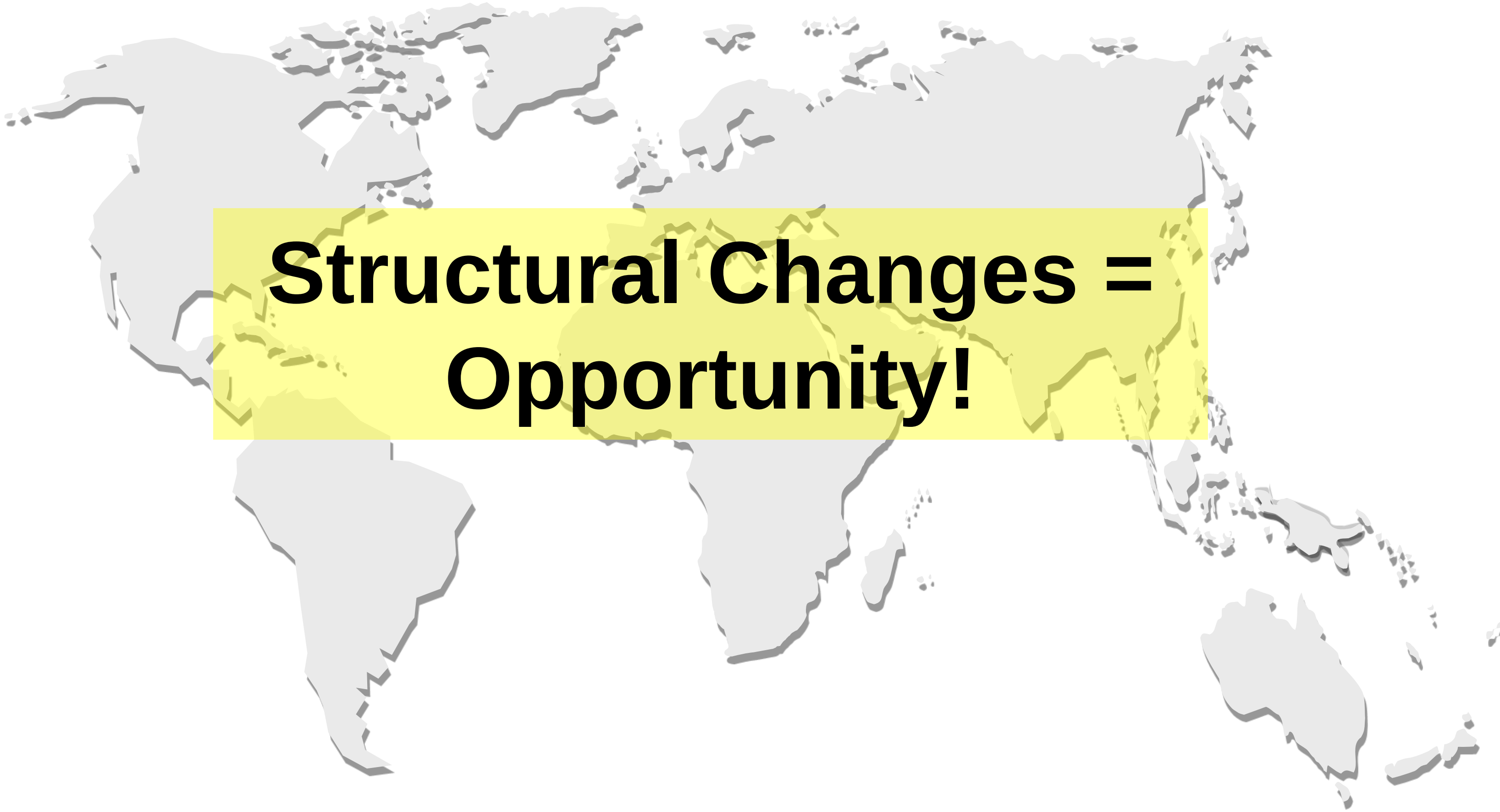
Direct Jobs
~**2,800 employees worldwide**
(1,700 In Canada) = >60%

Indirect Job Impacts: Approx. 9,800 indirect and induced jobs (e.g. contract workers in forestry, trucking, maintenance).

Major employer in most communities in which we operate

Major regional economic benefits

Paper Excellence Growth is Based on Industry Restructuring



Structural Changes = Opportunity!

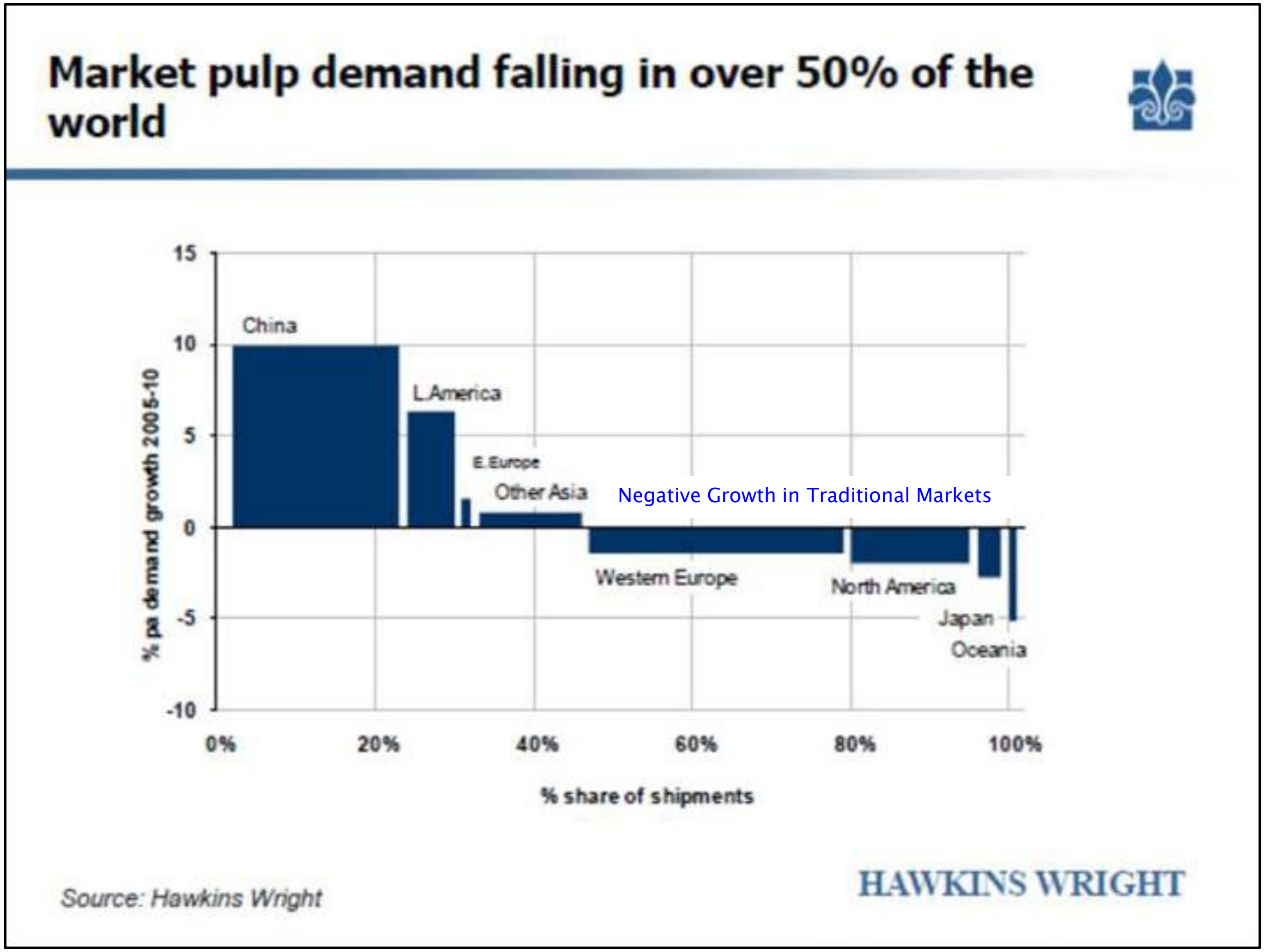
Paper Excellence Growth is Based on Industry Restructuring

Mature Markets: Sharp Declines in Demand and Manufacturing Capacity ‘Sunset Industry’ syndrome.
….. Traditional investors divest!

Emerging Markets: Rapid Growth in Demand and Regional Capacity.
…. New global players emerge

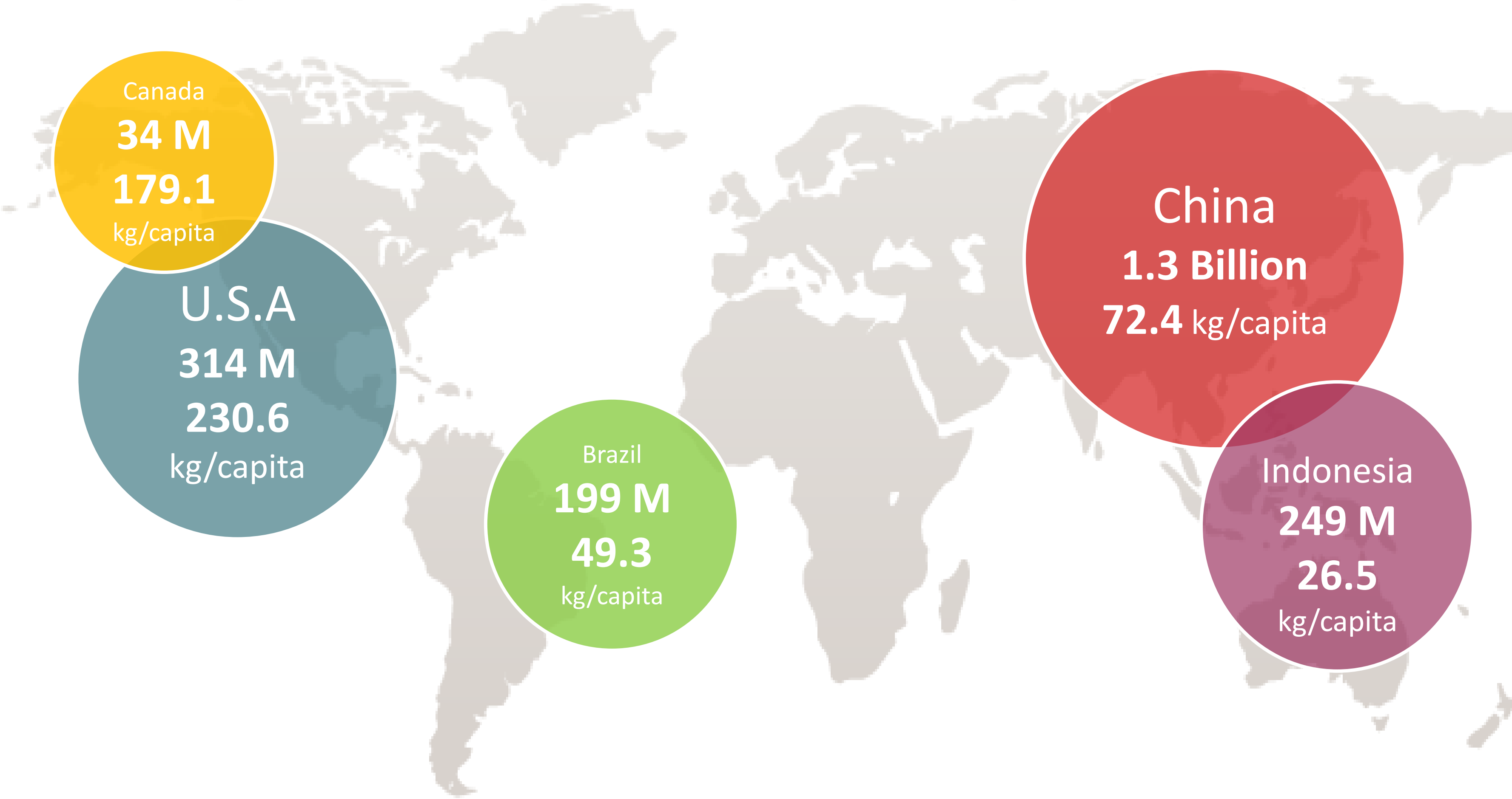
The 'Old Business Model' of the Pulp & Paper Manufacturing Sector, in Traditional Supply Areas (North America & Western Europe), is Broken

Demand Growth Has Shifted to Offshore Emerging Markets, Mills have Closed



A Focus Primarily on Emerging Growth Markets

World Population and Paper & Board Demand/Capita



Note: Population is July 2012 est. Total consumption data in million tonnes.
Data Source : RISI

Tissue Papers Typically Consumed in China … Rising Per Capita Use

http://www.asiadailywire.com/2012/07/chinas-toilet-paper-use-reflects-public-morality/

Sources: InterNet

Summary of the PEC Business Model

Paper Excellence is in the business of providing "long fibre" to supply paper machines in areas of the world where paper and tissue use continues to grow.

This model views pulp production as a "sunrise" industry as opposed to a "sunset" industry.

2. **Why is forestry, in this part of the world, a different type of manufacturing business?**

Why is SK forest-based manufacturing different than other manufacturing?

- In most manufacturing you buy the various components in the exact amount you need.
- You then put them together to build a product.
- You then sell the product.
- Your inputs are in balance with your output.

Why is SK forest-based manufacturing different than other manufacturing?

- **In SK forestry you have to figure out how best to take something apart to manufacture the products.**
- **First you take the forest "apart". Softwood trees and hardwood trees are usually together.**

In other parts of the world plantation forestry means one species and one product….pulpwood

SK forests have mixed species of hardwood and softwood

Why is SK forest-based manufacturing different than other manufacturing?

- **Then you have to take the softwood trees "apart" into logs for sawmills and pulpwood for pulp mills.**

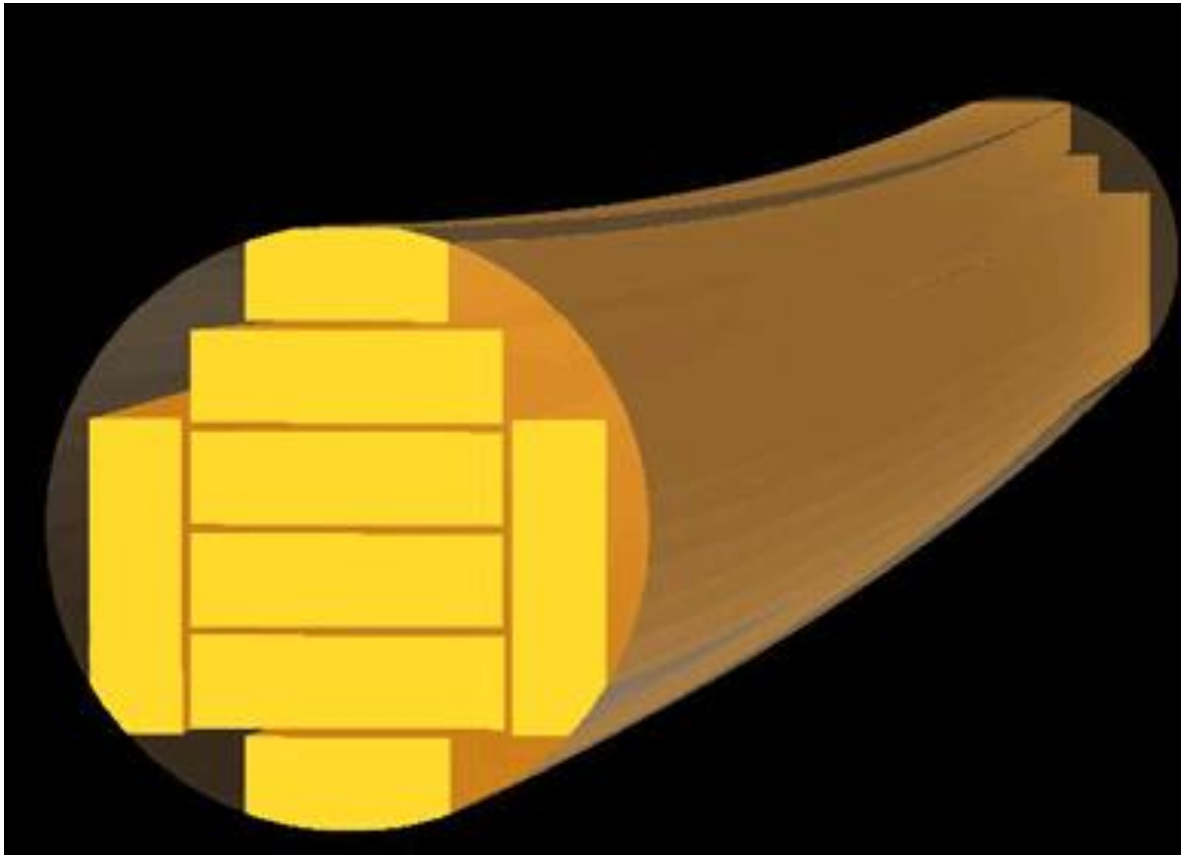
Taking the tree "apart" into logs and pulpwood

Why is SK forest-based manufacturing different than other manufacturing?

- **Then you have to take the logs apart into the right "profiles" of lumber and chips.**
- **Doing this right is absolutely critical to sawmill economics.**

This illustration on "taking the log apart" is for high value hardwood logs

This slide better represents a softwood log. The part that does not make lumber becomes chips – up to 40% of the volume.



Why is SK forest-based manufacturing different than other manufacturing?

- In good (and cost efficient) forest management, when you go to cut a stand of wood, there needs to be a "home" or market for all the products to be generated.
- This includes sawlogs, pulpwood, chips and hog fuel (bark, sawdust and shavings).
- Presently in Saskatchewan, supply ≠ demand as it relates to forest management.

Current SK Forest Resource "Imbalance"

- **Driven by increasing the softwood log harvest, in the order of 300,000+ cubic meters of aspen will need to be left standing.**
- **On almost all softwood harvest operations the pulpwood is being left on the ground. It amounts to between 15% and 25% of the volume.**
- **All of Edgewood's chips and 60% of NorSask's chips are being exported outside of Saskatchewan.**
- **The resource and industry demand are out of balance.**

3. Meadow Lake Mechanical Pulp (and its importance).

Meadow Lake Mechanical Pulp Some Key Metrics

- **Mill Site Employs 180 people**
- **In 2013;**
  - **Gross Sales of $208.3 million,**
  - **Bought $35.6 million dollars of roundwood & chips,**
  - **Energy purchases of $42.3 million,**
  - **Payroll of $ $15.6 million.**

It is the Major Industrial Anchor for Meadow Lake

Meadow Lake Mechanical Pulp
Impact on Saskatchewan Forest Industry

- **Uses in the order of 700,000 cubic meters of Aspen.**
- **Purchases of Softwood Chips:**
  - **100% of Big River (Carrier) chips,**
  - **100% of L&M sawmill chips*,**
  - **Significant portion (40%) of NorSask chips.**
- **Total softwood chip demand of 300,000 cubic meters.**

Meadow Lake Mechanical Pulp Impact on Saskatchewan Forest Industry

- **If Meadow Lake was not running the imbalance previously referenced becomes much worse.**
- **The loss of the pulpwood and chip markets which Meadow Lake provides would cause serious consequences to the SK forest sector.**
- **In particular government energy policy should reflect the importance of the Meadow Lake mill to Saskatchewan.**

4. The Prince Albert Pulp Mill Opportunity

Some Key Expected Prince Albert Metrics

Mill Production and Fibre Requirements

- Production of 320,000 ADMT of kraft or fluff pulp,
- Fibre consumption of up to 2 million m^3 of roundwood and chips,
- Green energy production of between 50 and 80 megawatts,
- Biofuel consumption in the order of 800,000 GMT’s,

The incremental fibre flows will have a positive impact on the Saskatchewan Forest Sector.

Some Key Expected Re-start Outcomes

Economic Impact and Fibre Requirements

- Gross pulp sales (delivered customer) of over $250 million,
- Annual Saskatchewan export contribution of over $200 million,
- Capital investment of between $100 and $125 million (mill and forest related),
- Direct job creation (mill, sawmills, chip facilities, harvesting, transportation, forestry and administration) estimated at over 900 people,
- With multiplier of 2 (PWC B.C. forestry sector report), job creation could approach 2,000 individuals.

Where will this Initiative's Benefits Largely Accrue?

Communities or General Areas

1. Rural, largely Aboriginal, communities from Green Lake to Beauval to Buffalo Narrows across to La Ronge to Pelican Narrows and down through Montreal Lake,

2. The City of Prince Albert and its surrounding areas,

3. Other Saskatchewan forest dependent communities including Glaslyn, Meadow Lake, Big River and Nipawin/Carrot River,

Major supplier centers in southern Saskatchewan will see secondary economic benefits.

Who are the People that this Initiative's Benefits will Largely Accrue?

The profile of the jobs this project will create includes; entry level type work, operator jobs, administration, medium to high skilled trade jobs and professional positions.

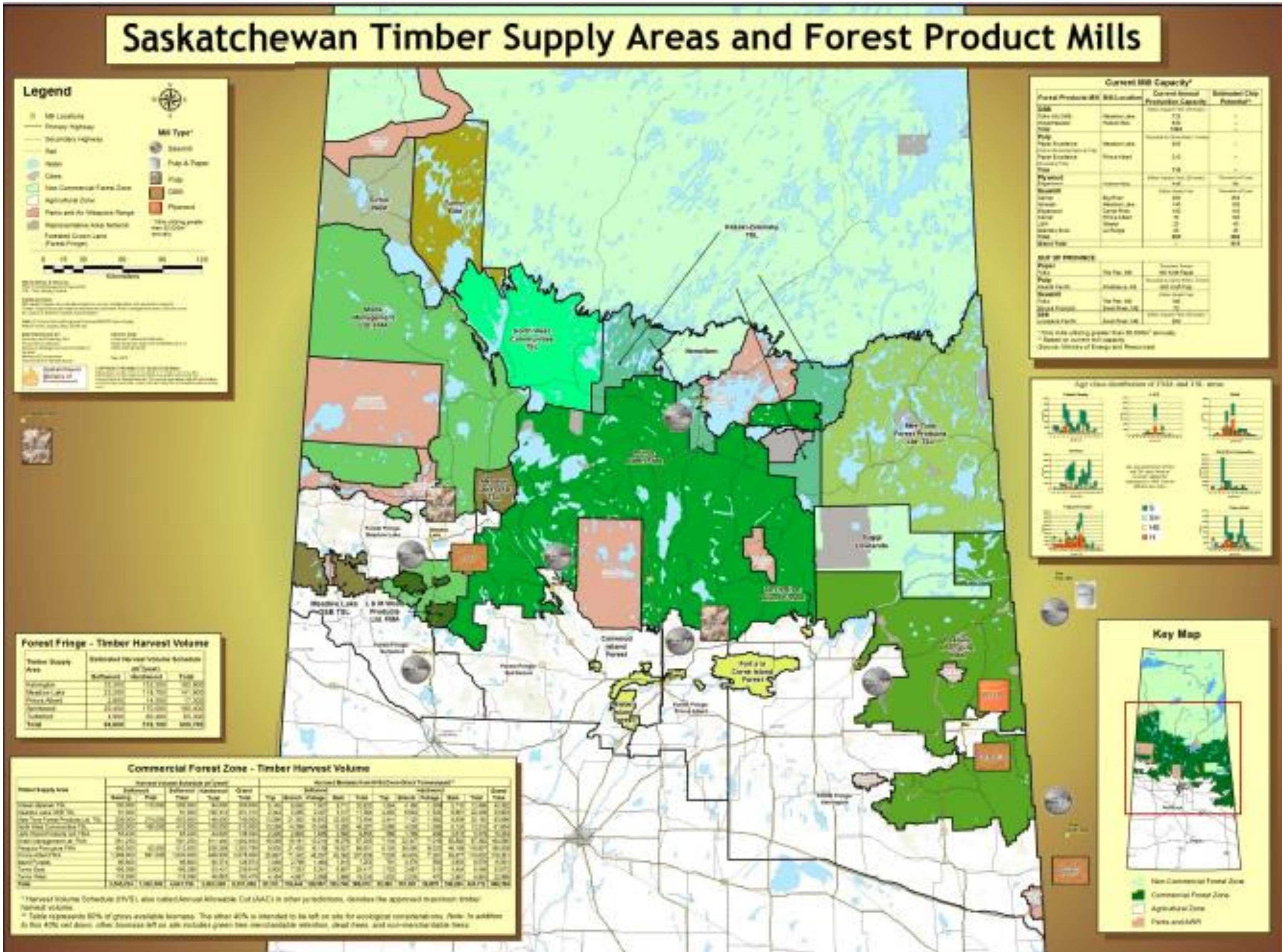
- **The biggest number of beneficiaries are those individuals looking to find long-term, local employment with potential for training opportunities and career advancement. Most of these opportunities will come from the expansion of northern forestry operations.**
- **A smaller group of beneficiaries are skilled or specialized employees presently working elsewhere who prefer to return to their families each evening – as opposed to a commuting employment.**
- **A much smaller pool of beneficiaries are highly skilled individuals coming largely to the pulp mill from other Canadian provinces and new immigrants.**

Who are the People that this Initiative's Benefits will Largely Accrue?

Aboriginal Bands and organizations with fibre allocations on:

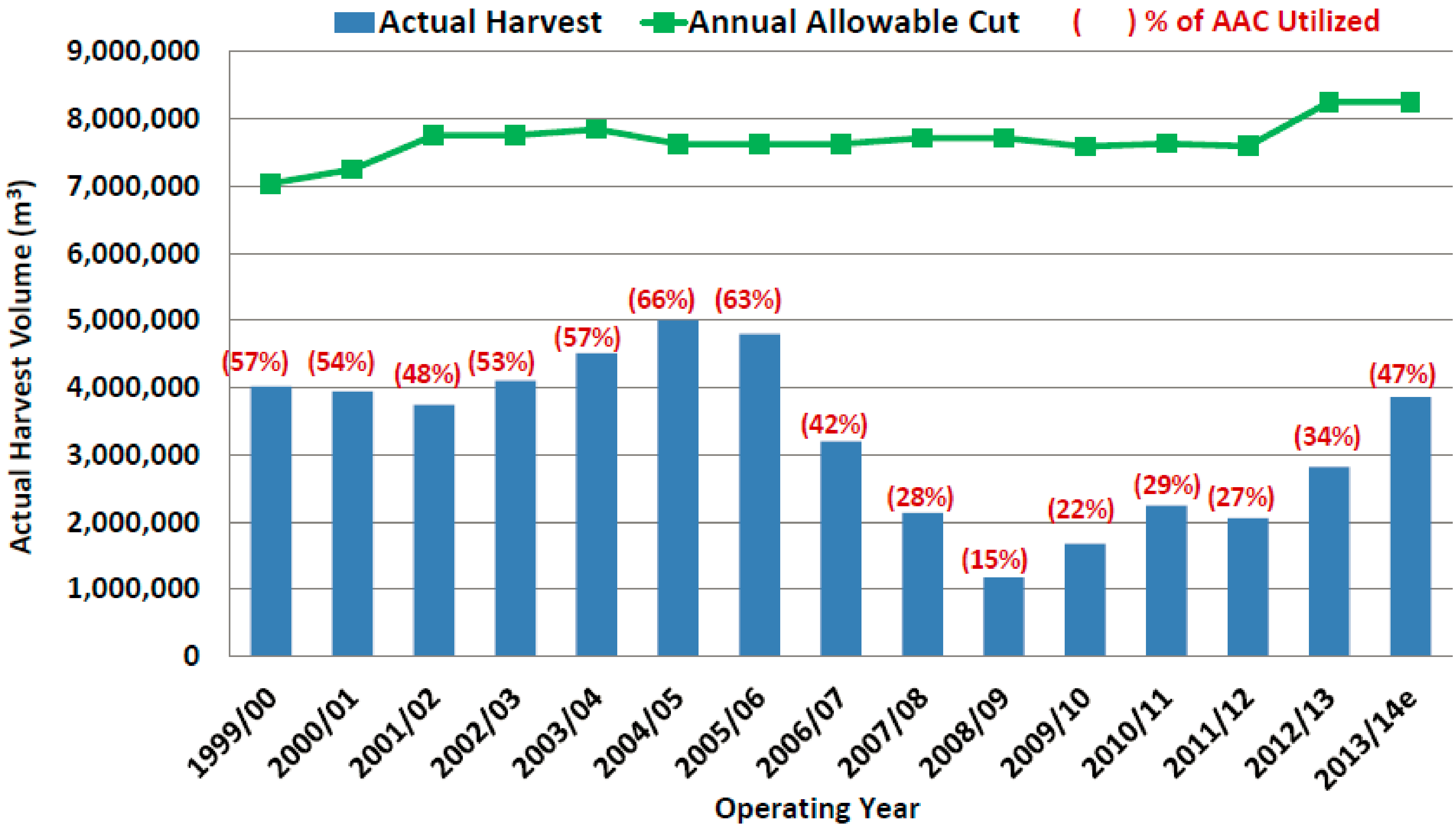
- **North West Communities TSL,**
- **Kitsaki-Zelensky TSL**
- **Mee-Toos Forest Products Ltd. TSL**
- **Prince Albert FMA**
  - **NorSask (Meadow Lake Tribal Council)**
  - **Agency Chiefs Tribal Council**
  - **Montreal Lake Cree Nation**
  - **Carrier**
  - **Tolko**
  - **L &M**
  - **Edgewood Forest Products**
- **Pasquia-Porcupine FMA**

In addition to employment opportunities, the non-mill allocation holders on these land-bases often receive payments for wood they assign annually to end-user mills.


Saskatchewan Timber Supply Areas and Forest Product Mills
Legend
Forest Fringe – Timber Harvest Volume
Commercial Forest Zone – Timber Harvest Volume
Key Map

5. Employment & Business Opportunities

Timber Harvest History



* Provincial Forest lands only. Does not include timber harvested from other Crown lands or private lands.

Incremental SK Provincial Harvest

- **It is my feeling that with the Prince Albert mill running the harvest from Saskatchewan forests will rise from the 2013/14 estimate of 3.8 million cubic meters to approximately 5.6 million cubic meters annually.**

- **This incremental harvest level of 1.8 million cubic meters will require hundreds of new forest workers.**

Forestry Employment Calculator (per 100,000 m^3 of harvest)

Modify any text shown in red

C:\Strategic PA\[employment.xlsx]Jobs Calculator

Total Harvest Volume: 1,800,000 m^3 **Total Estimated Full-Time Equivalent Jobs per Year:** 421

Harvest Operations

Equipment	# of pieces	# of months	# days/mo	# of work hrs/day	# of work hrs/yr	# of normal work hrs/yr	# of full time equivalent jobs/yr
Buncher	1	8	25	14	2,800	2,080	1.3
Skidder	2	8	25	14	5,600	2,080	2.7
Processor	2	8	25	14	5,600	2,080	2.7
Dozer	1						0.8
Grader	1						0.8
Mechanic							1.1
Supervision							1.2

# of FTE harvesting-related jobs (10.6

Loading Operations

Equipment	# of pieces	# of full time equivalent jobs/yr
Loader	1	1.3
Mechanic		0.5

# of FTE loading-related jobs (per 1.9

Hauling Operations

Volume (m^3)	# of m^3/load	# of full time equivalent jobs/yr
100,000	45	6.4

Equipment	# of pieces	# of full time equivalent jobs/
Grader	1	0.8
Mechanic		1.3

# of FTE hauling-related jobs (per 8.5

Tree-plant Operations

Volume (m^3)	Vol m^3/ha	rk hrs/yr	ull time equivalent jobs/yr
100,000	175	2,080	1.3

# of FTE tree-plant-related jobs (p 1.3

A 1.8 million m^3 increase in harvest levels, based on Mistik Management experience, will create over 400 harvesting/forestry direct jobs.

This excludes any chipping or mill related employment and other multiplier positions.

Regen Survey Operations (assume mixedwood harvest)

# of ha	# plots/ha	Total # of plots	# of plots/day	# of days	# of work hrs/day	# of work hrs/yr	# of normal work hrs/yr	# of full time equivalent jobs/yr
571	2.3	1,314	50	26	10	263	2,080	0.1

# of FTE regen survey-related jobs (per 100K) 0.1

Planning / Ops / Admin Overhead

of full time equivalent jobs/yr
1.0

# of FTE Overhead jobs (per 100K) 1.0

Total FTE forestry jobs per 100,000 m^3 of harvest	**23.4**

Types of Forest Related Work

- Forest technicians
- Planning foresters
- Road construction operators and workers
- Harvest equipment operators
- Scaling and quality control personnel
- Office and administrative staff
- Operations supervisors across the functions
- Logging truck drivers
- Grader and sand truck operators
- Mechanics
- Chip plant operators
- Millwrights and electricians
- Chip and hog fuel truck drivers
- Tree planters

SK Northerners in this picture:
Planning: Block Recce

SK Northerners in this picture:
Planning: Operating Plan Consultation

SK Northerners in this picture:
Road Construction: Dozer Operators

SK Northerners in this picture: Harvesting: Buncher Operators

SK Northerners in this picture:
Harvesting: Grapple Skidder Operators

SK Northerners in this picture:
Harvesting: Processor Operators

SK Northerners in this picture:
Harvesting: Scalers

Harvest Block Ready for Hauling

SK Northerners in this picture: Hauling: Loader Operators

SK Northerners in this picture: Hauling: Log Truck Drivers

SK Northerners in this picture:
Chip Plants: Operators & Maintenance

SK Northerners in this picture:
Residue Hauling: Chip/Hog Fuel Truck Drivers

Harvesting and Trucking Completed

SK Northerners in this picture:
Reforestation: Tree Planters

SK Northerners in this picture:
Reforestation: Regeneration Surveys

To Summarize

1. **Paper Excellence is in a "sunrise" business – pulp for Asia.**
2. **Forest product supply and mill product demand need to be in balance.**
3. **Meadow Lake plays a critical role in the Saskatchewan forest sector. It should not be taken for granted.**
4. **A re-started Prince Albert pulp mill will provide many benefits. Not least of which is to significantly improve the present supply/demand imbalance.**
5. **The job and business opportunities that a running PA mill can offer is an unprecedented Northern Opportunity.**

Questions?