

Wisconsin Timber Product Output

March 15, 2018

**Collin Buntrock
Forest Products Specialist
Wisconsin Department of Natural Resources**



- Industry Snapshot

- Primary wood-using industry consumption

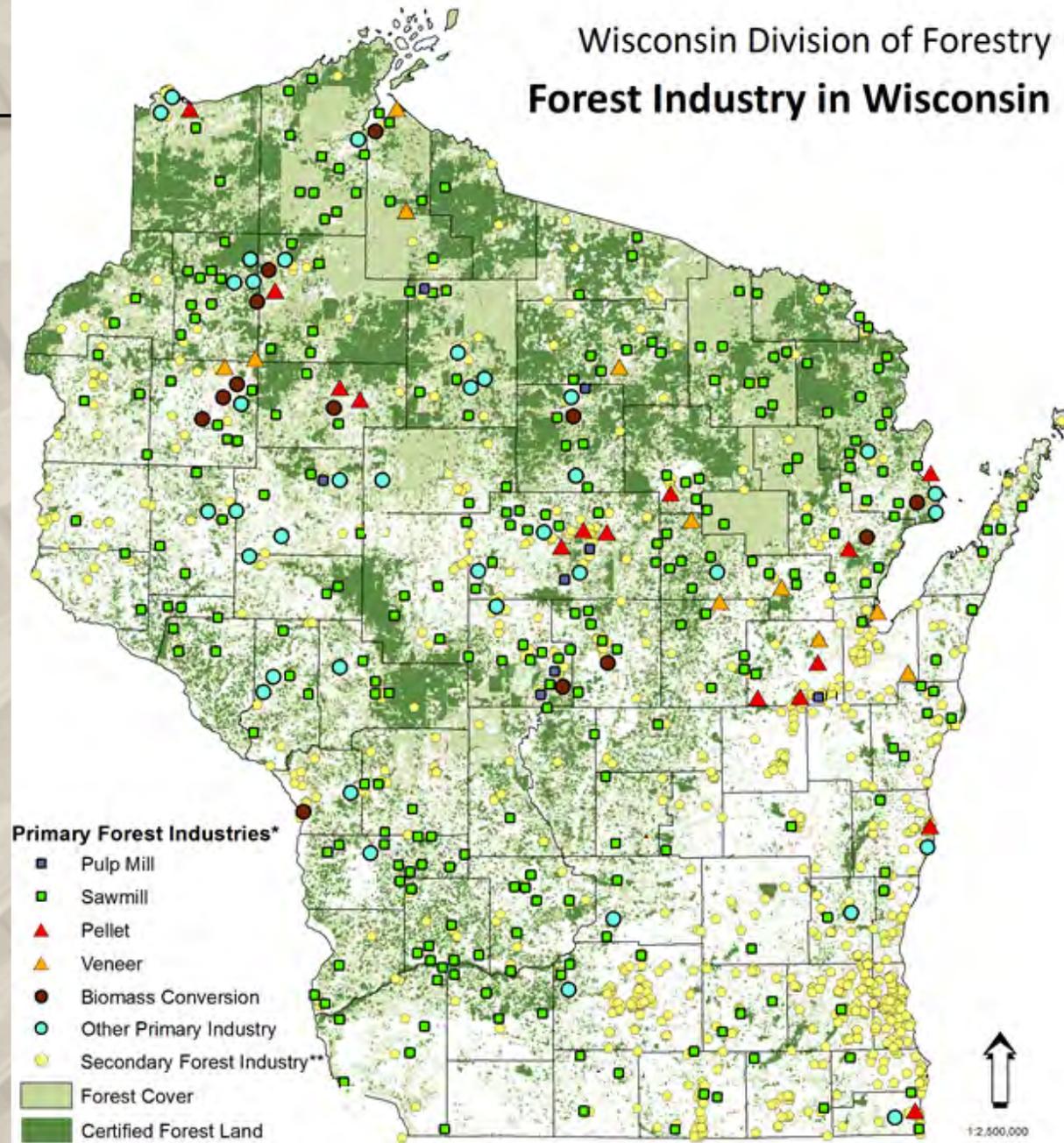
- Emerging markets in the spotlight

Wisconsin's Primary



Wood-Using Industries

Wisconsin Division of Forestry Forest Industry in Wisconsin



Primary Mill Type	2003	2008	2013
Sawmills	227	179	205
Veneer mills	9	8	4
Pulp mills	13	12	9
Composite mills	5	4	4
Other mills	21	24	16
ALL MILLS	275	227	238

Wisconsin timber industry (2013), Resource Update FS-125

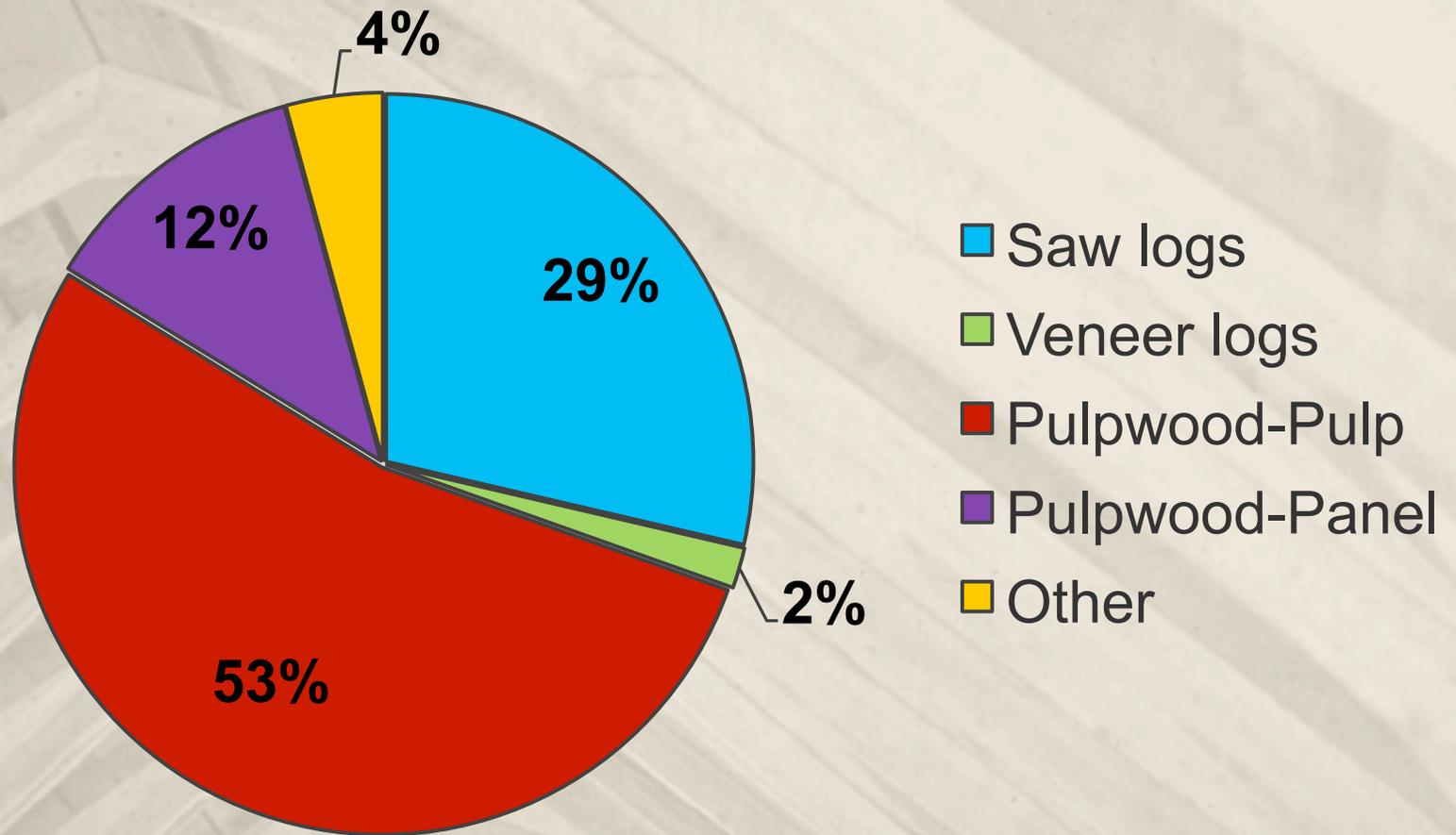
Mill Receipts	2003	2008	2013	% Change
Saw logs	95	74	93	25.7
Veneer logs	7	5	6	20.0
Pulp mills	196	175	163	6.8
Composite mills	40	30	33	10.0
Other mills	7	10	13	30.0
ALL MILLS	346	295	307	4.1

Values in million cubic feet

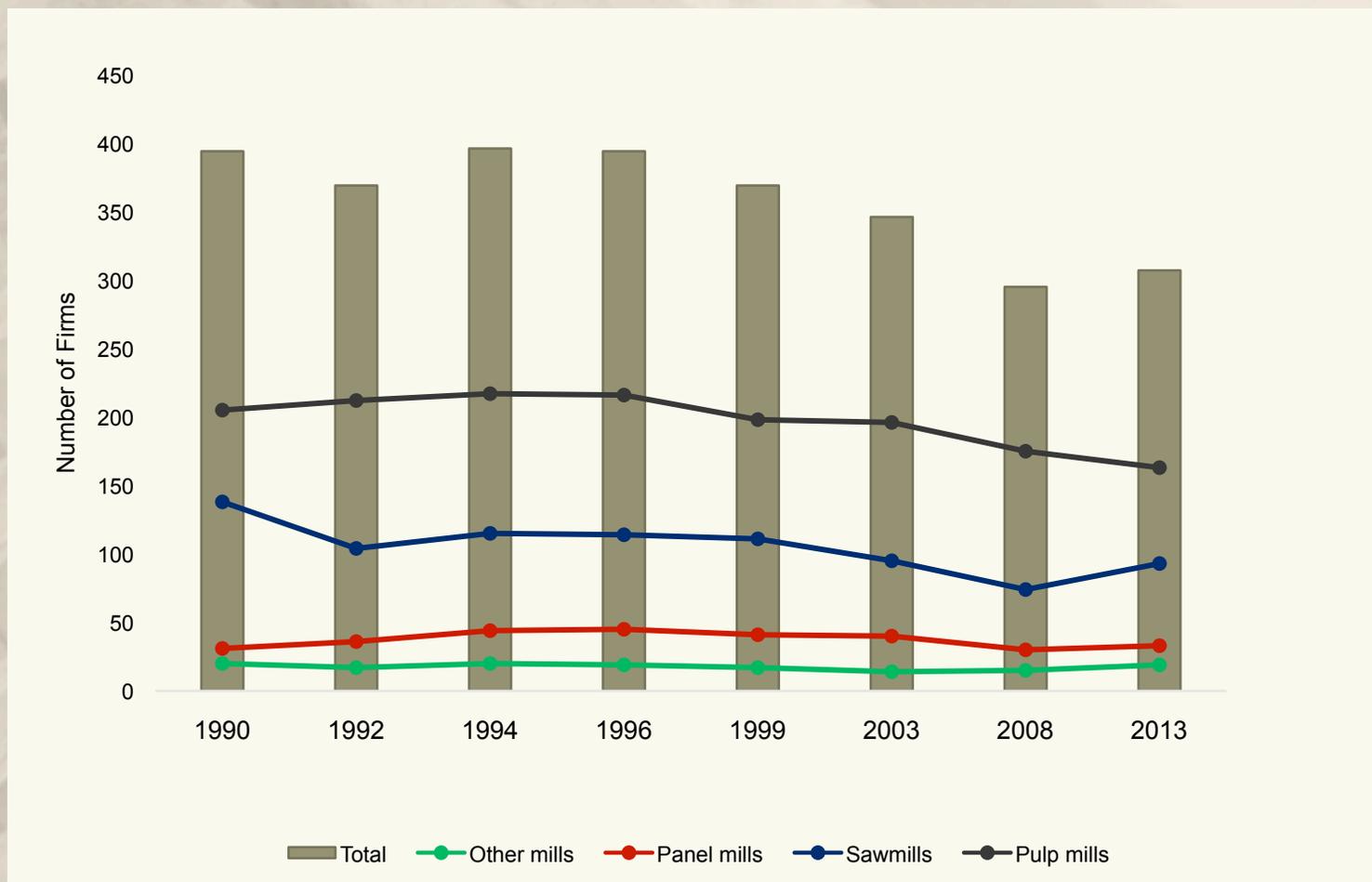
Wisconsin timber industry (2013), Resource Update FS-125

What products are harvested?

Roundwood Harvested in Wisconsin, 2013



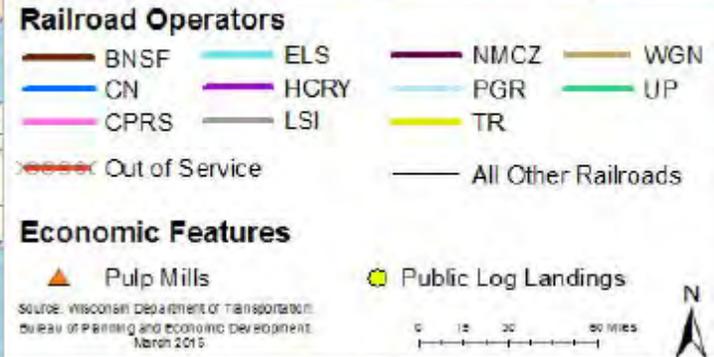
Roundwood receipts, Wisconsin



Wisconsin timber industry (2013), Resource Update FS-125

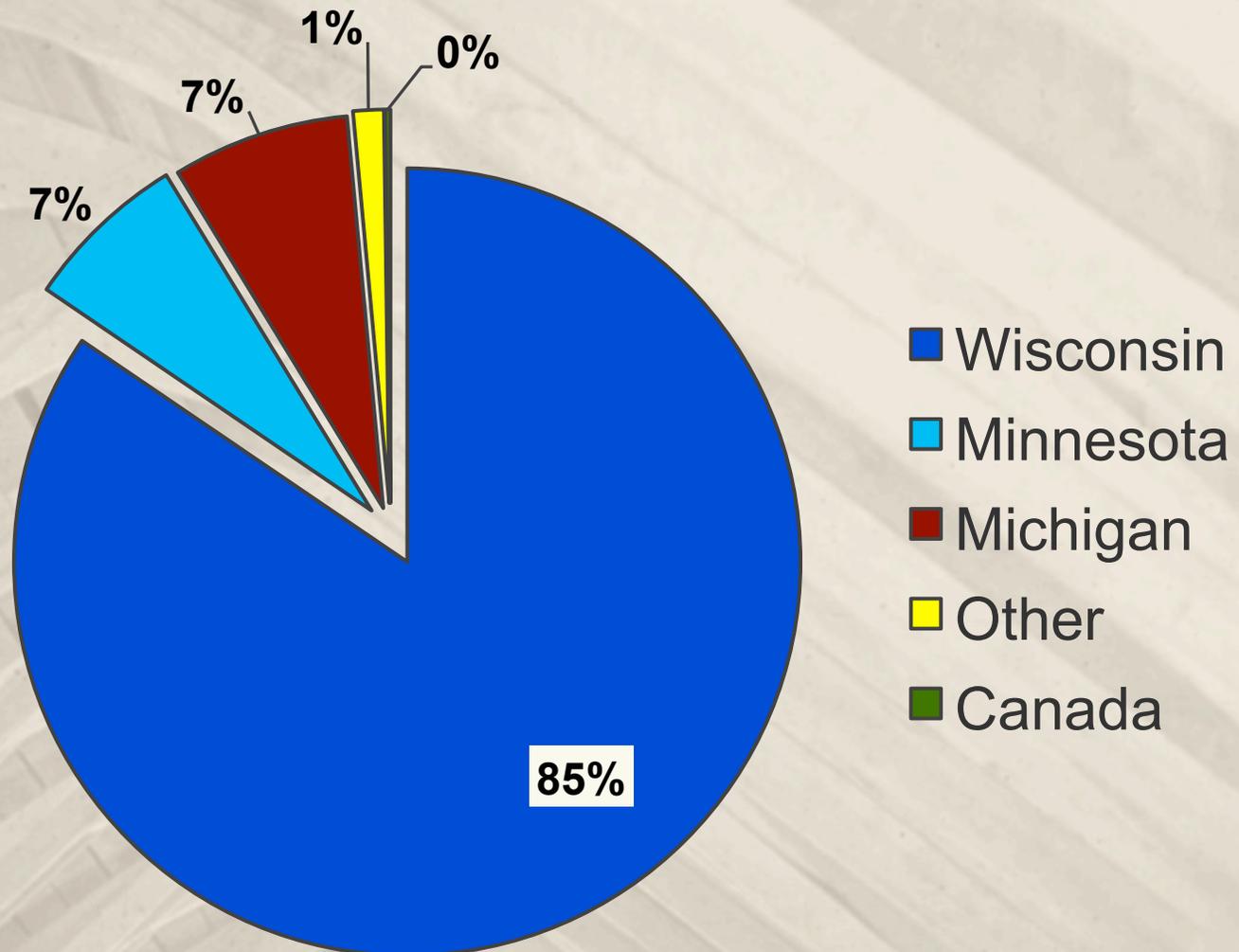
Where does wood come from?

The Great Lakes Forests Region



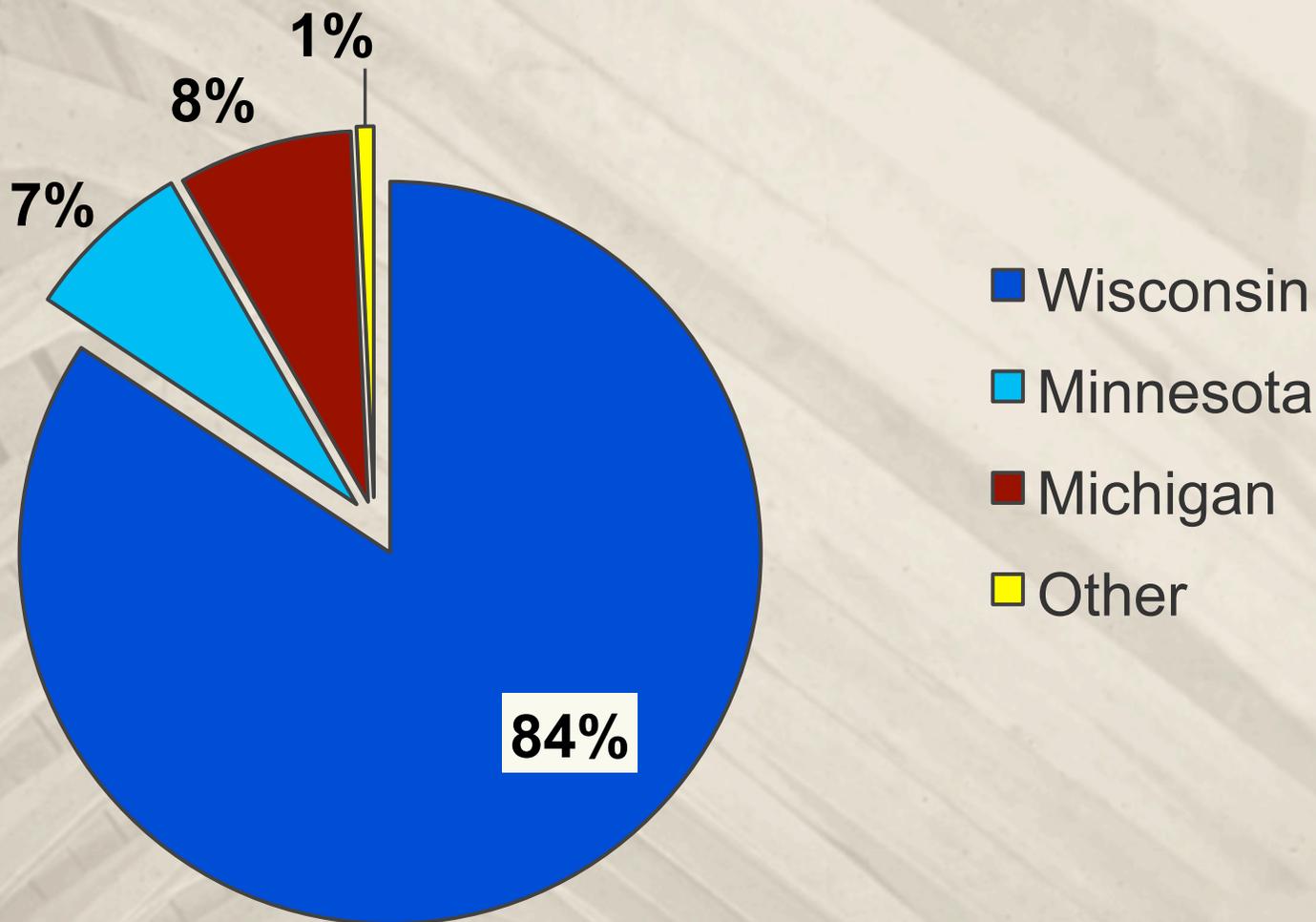
Where does wood come from?

Origin of Roundwood, Wisconsin Mills

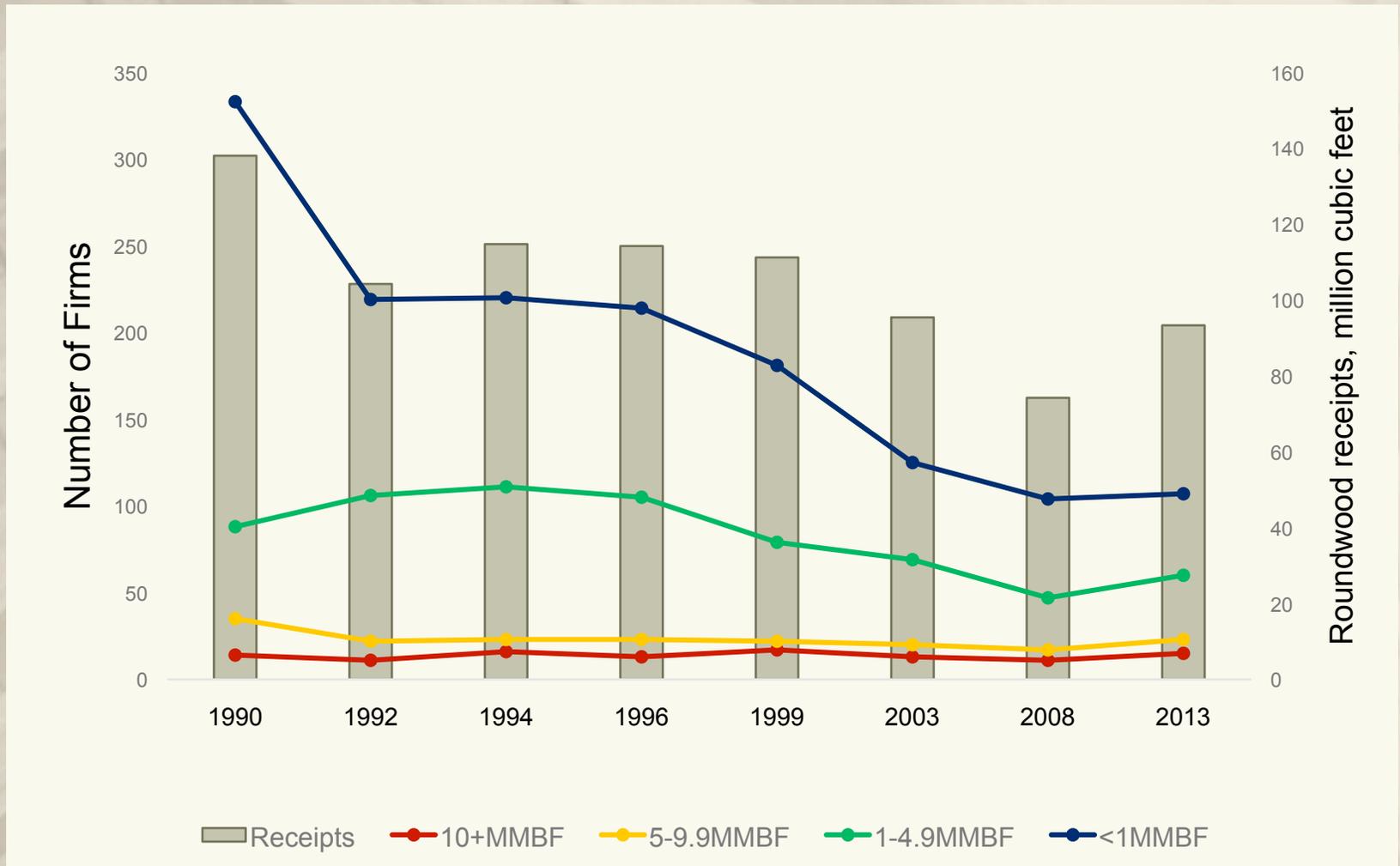


Where does our wood go?

Wisconsin Roundwood Production by Destination, 2013



Wisconsin sawmill trends



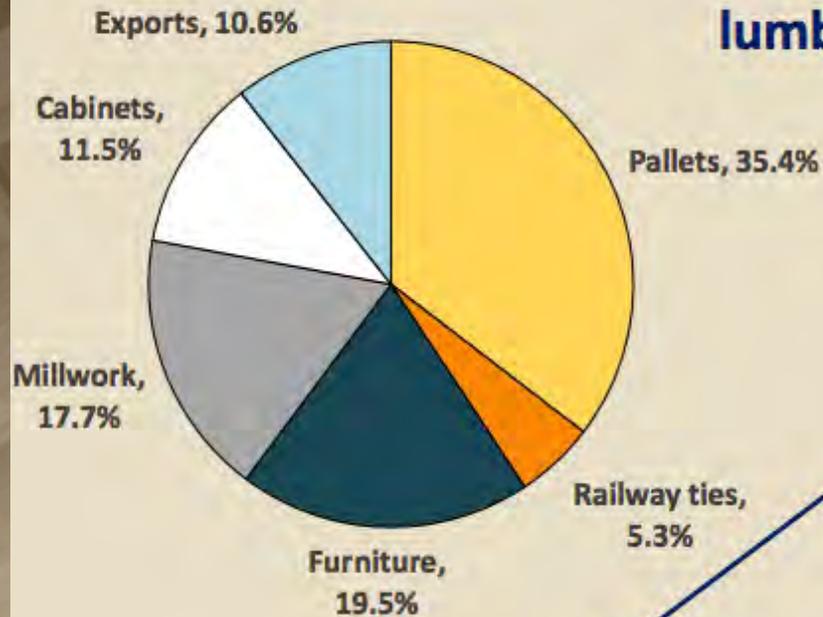
Wisconsin timber industry (2013), Resource Update FS-125

Sawmills

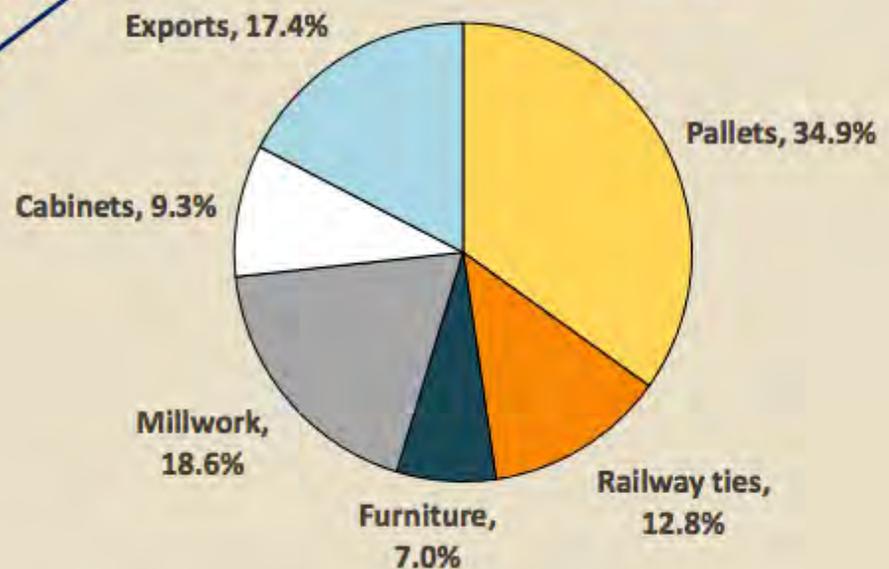
- Value-added investments/vertical integration
- Growing importance of exports
 - 1 in 4 U.S. hardwood grade boards goes to China
- Industrial product markets
 - *Pallets and railroads move the world*
- Residue markets a concern

Sawmills (con't)

**Where the hardwood
lumber volume went,
1999**



**Where the hardwood
lumber volume went,
2015**



Source: Luppold and Bumgardner

Sawmills (con't)

Market share estimates of imports in the U.S.



Consumption = value of shipments + imports - exports
Import share = imports/consumption

Data sources: U.S. Census Bureau; International Trade Admin

Sawmills (con't)

- Across the wood industry, labor recruitment an ongoing challenge
- Images of the past still linger....



Positive stories in Wisconsin...



Careers in the Wood Industry



Come make a career with us! The wood industry is looking for the next generation of skilled workers. See the following information to learn more about these rewarding opportunities in your community.



Lumber Inspector

Log Scaler



[Career Exploration Video
Lumber Inspector Profile](#)

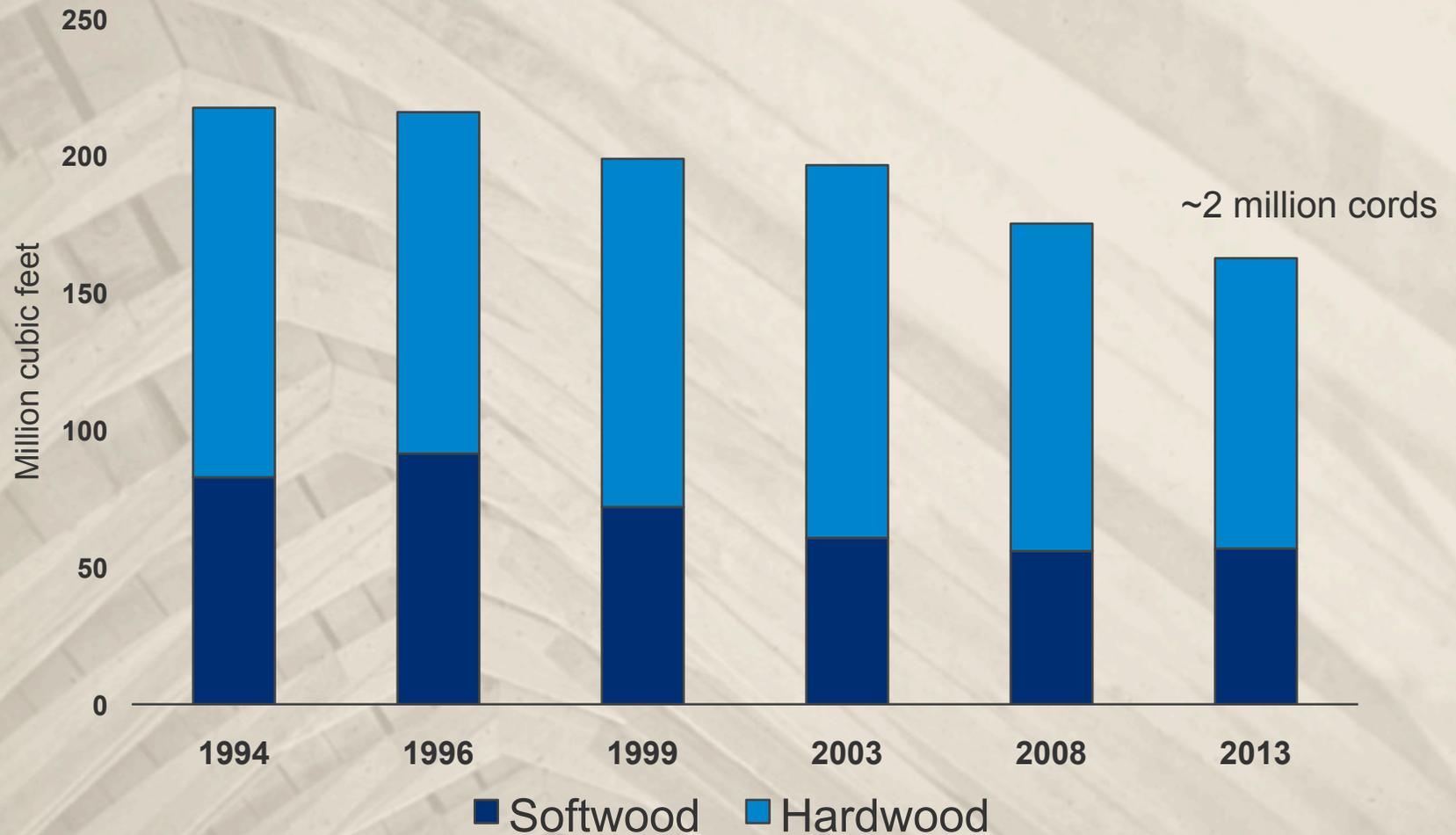
[Career Exploration Video
Log Scaler Profile](#)

Wisconsin Pulp Industry



Pulp mill trends

Pulp Mill Roundwood Receipts (Wisconsin)



Wisconsin pulp/paper industry

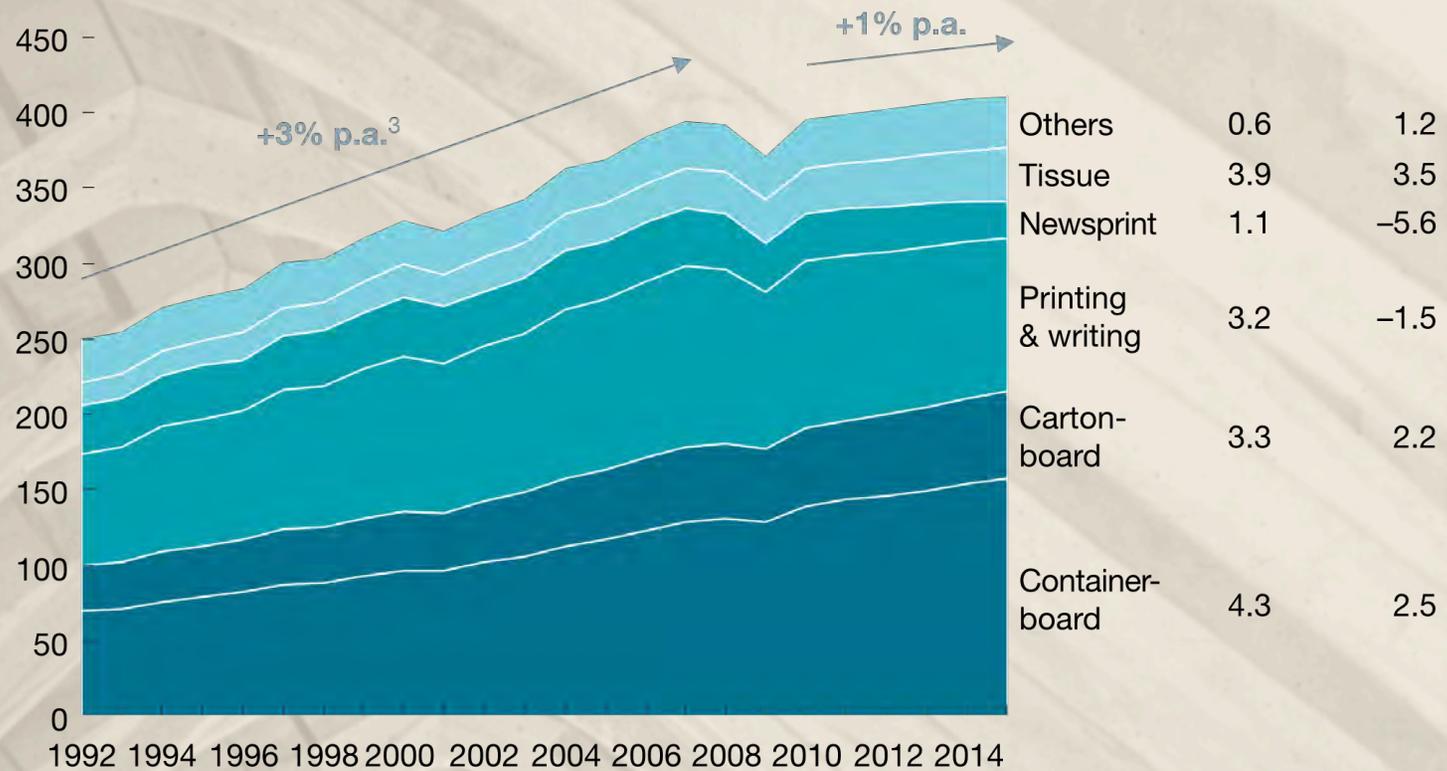
- Wisconsin has been the number one papermaking state in the US for over 60 years
- The pulp and paper industry serves diverse markets/uses, majority of the industry is stable
 - Printing & Writing
 - Packaging
 - Hygienic papers
 - Specialty



Global paper and paperboard market,
million metric tons¹

CAGR,²
1992–2007,
%

CAGR,
2010–15,
%



¹Metric tons: 1 metric ton = 2,205 pounds.

²Compound annual growth rate.

³Per annum.

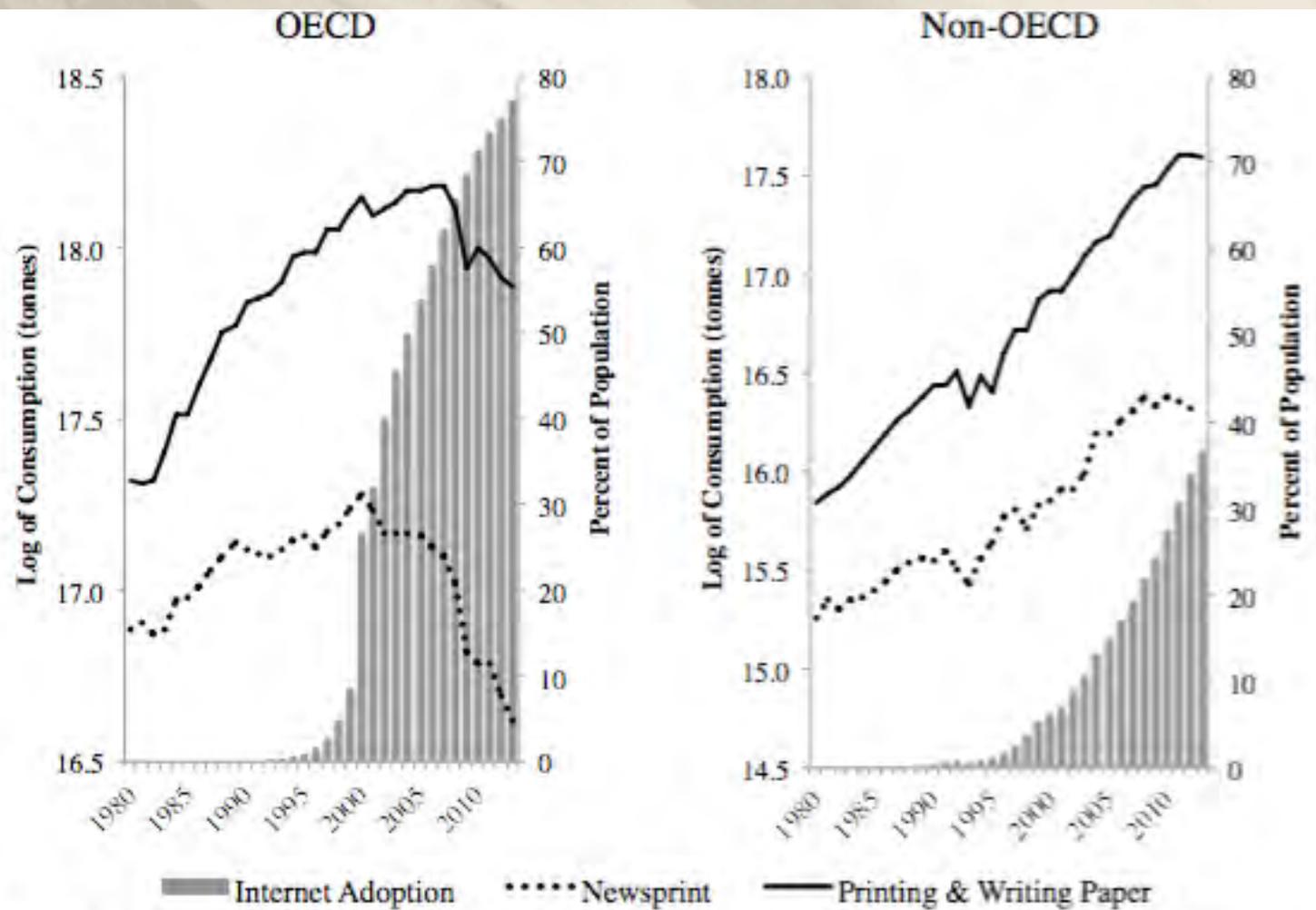
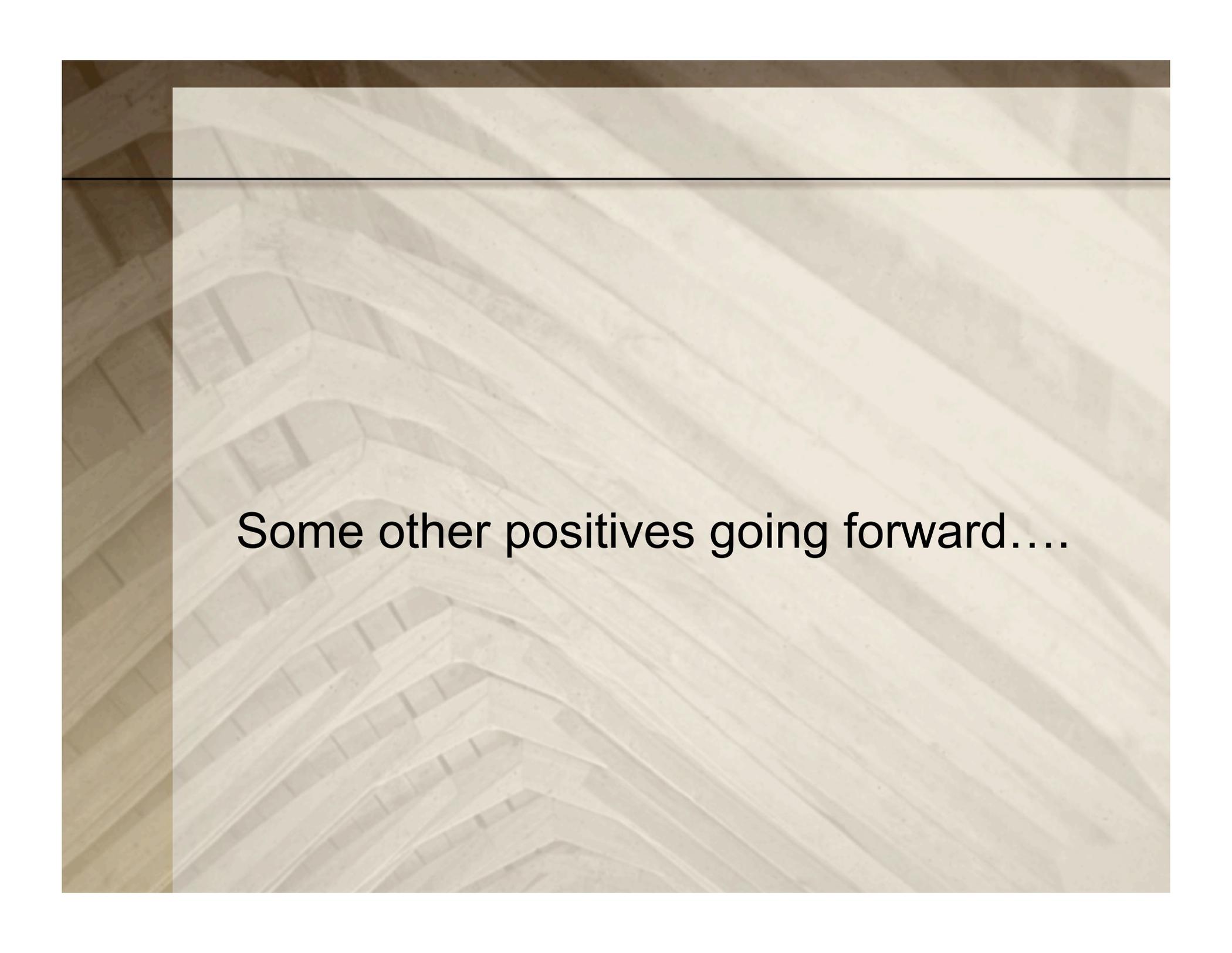


Fig. 1 – Observed newsprint consumption, printing and writing paper consumption, and Internet adoption for OECD and non-OECD regions, 1980-2013.

- In general, pulpwood markets are tight
- Changes in species needs and demand
 - Softwood example
- Reductions in capacity impact entire supply chain
- Companies positioning into stable grades (Maine example)
- Wisconsin is faring better than other states



Some other positives going forward....

Mass Timber

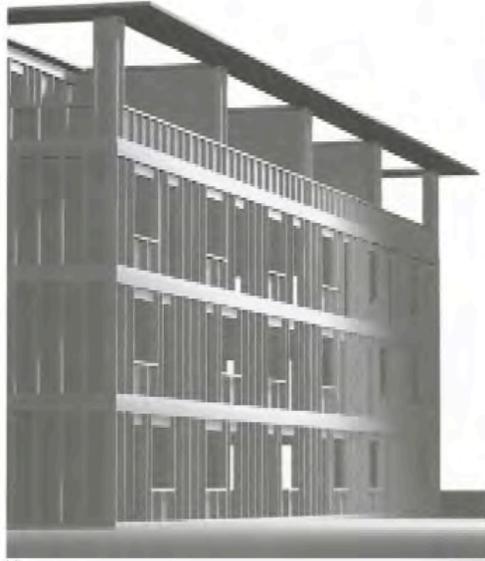


Photo: USDA Forest Service Forest Products Lab

Mass timber

- Mass timber is a building system that uses panelized solid wood construction
- Examples
 - Glued-Laminated Timber (Glulam)
 - Nail-Laminated Timber (NLT)
 - Cross-Laminated Timber (CLT)

LIGHT WOOD-FRAME



POST + BEAM



MASS TIMBER

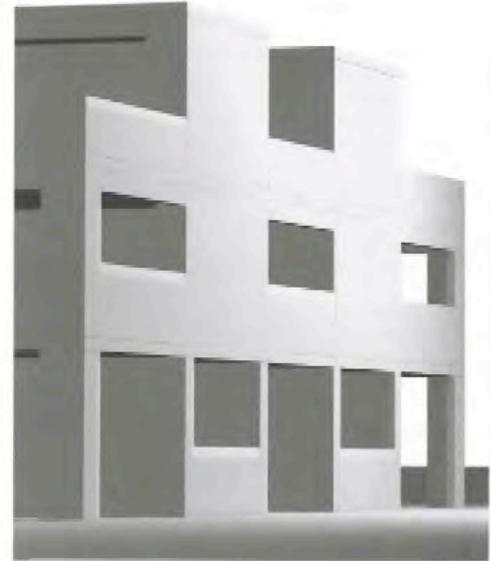


Photo: ReThink Wood

■ Glue-Laminated Timber (Glulam)



Photo: John Stamets

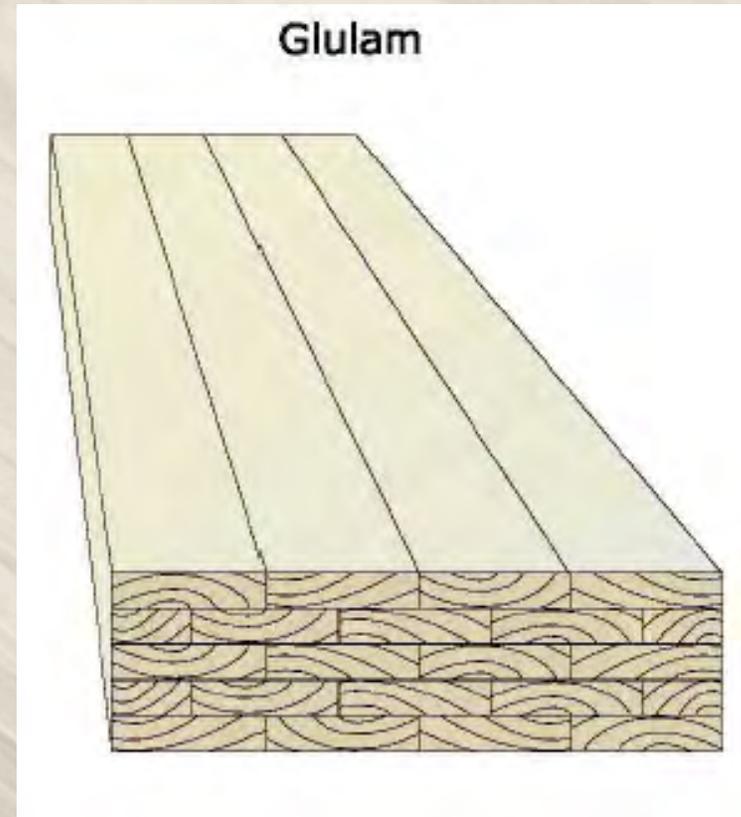


Photo: CLT Handbook

■ Nail-Laminated Timber (NLT)

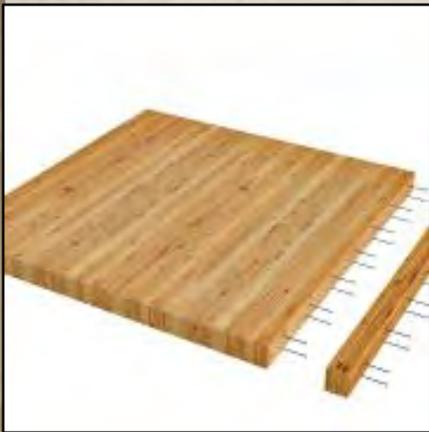


Photo: ReThink Wood



Photo: StructureCraft

■ Cross-Laminated Timber (CLT)

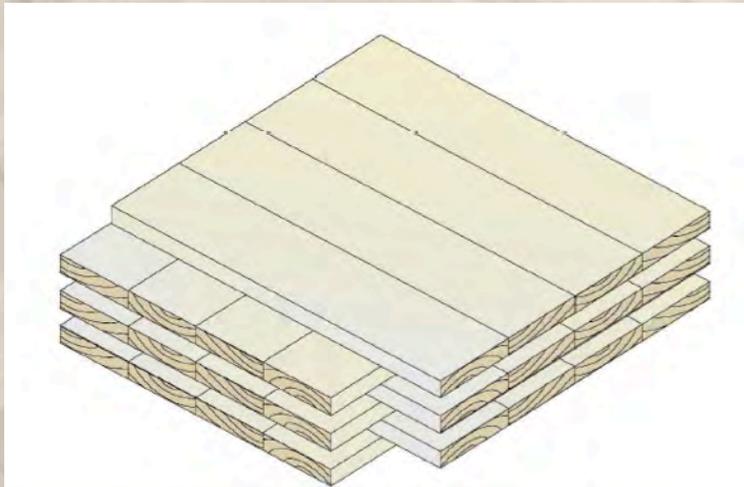


Photo: CLT Handbook



Photo: LEVER Arcitecture

First CLT Structure in US



Franklin, West Virginia



Photo: MSES Architects, City Construction Company

Promega Corporation—Madison, WI



Why the push for mass timber?

- Wood is strong and durable



Why the push for mass timber?

- Efficiency in construction
- Cost-competitive
- Less energy/resource intensive to manufacture
- Fire/seismic tolerance
- Energy efficiency
- Aesthetics and health benefits
- Renewable!

CLT Manufacturing

■ North American Manufacturers:

- Nordic Structures—Quebec
- Structurelam—British Columbia
- SmartLam—Whitefish, MT
- SmartLam—Columbia Falls, MT
- D.R. Johnson—Riddle, OR
- Sterling Lumber—Phoenix, IL
- *International Beams—Alabama*
- *SmartLam—Maine*
- *LignaTerra—Maine*

A local project... "DLT"



Products Resembling Mass Timber



Photo: Sentinel Structures, River Road Bridge, Lake Tomahawk



Photo: Smart Lam



Photo: Bell Lumber & Pole

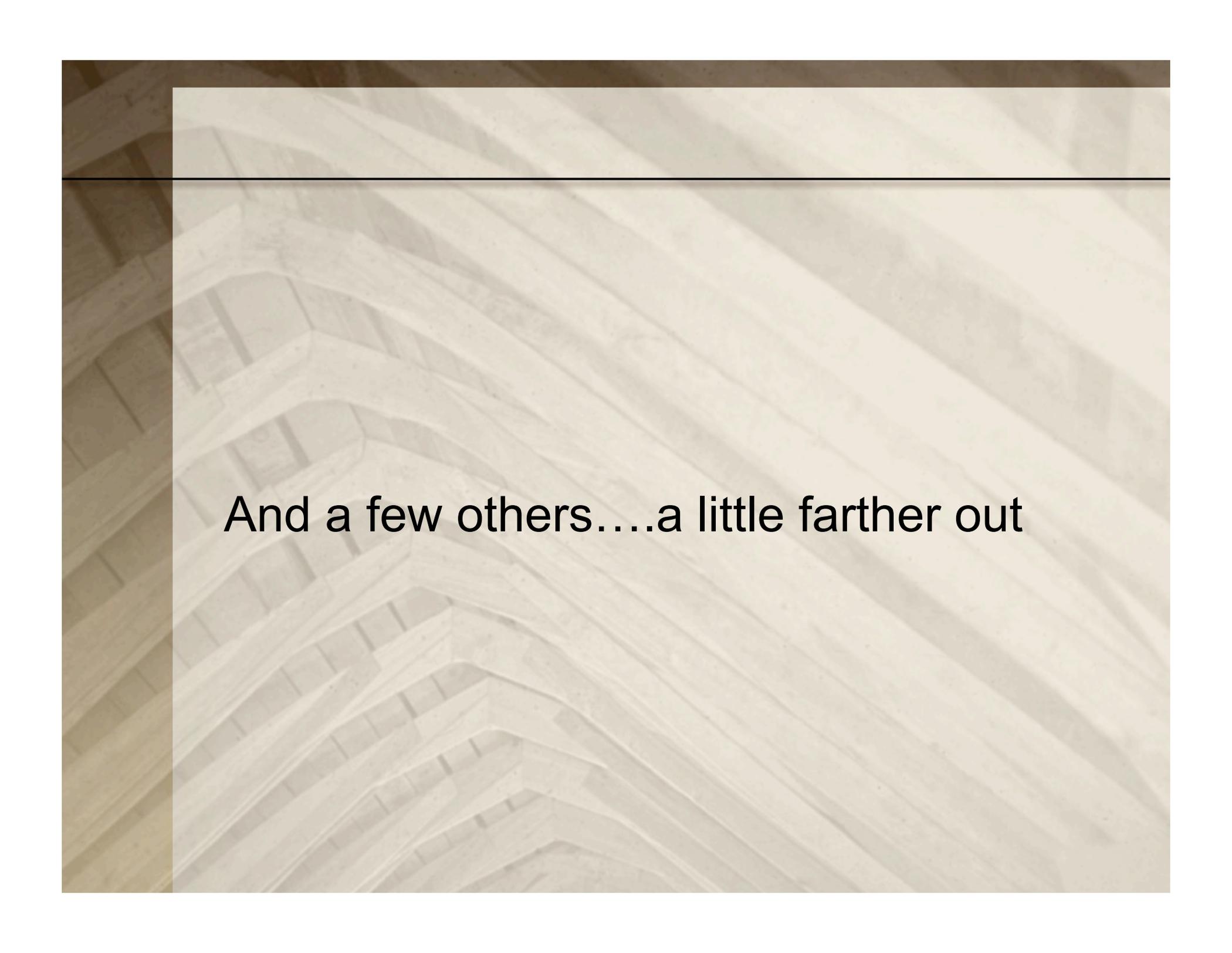
Timber bridges



Photo: James Wacker, USDA FPL.



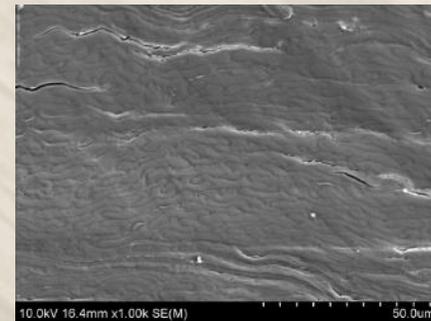
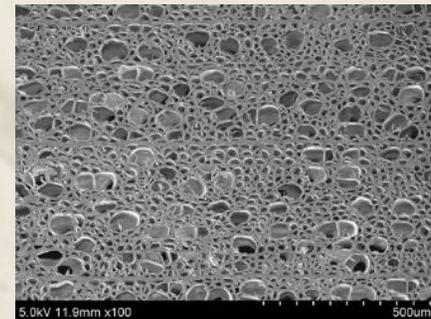
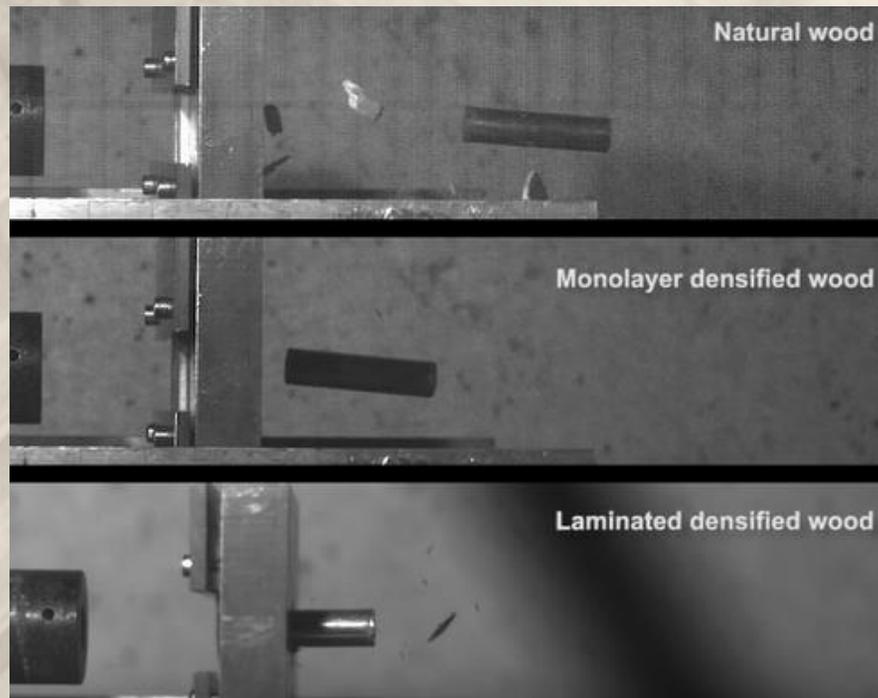
Photo: AASHTOTransportation.org



And a few others....a little farther out

Super Wood

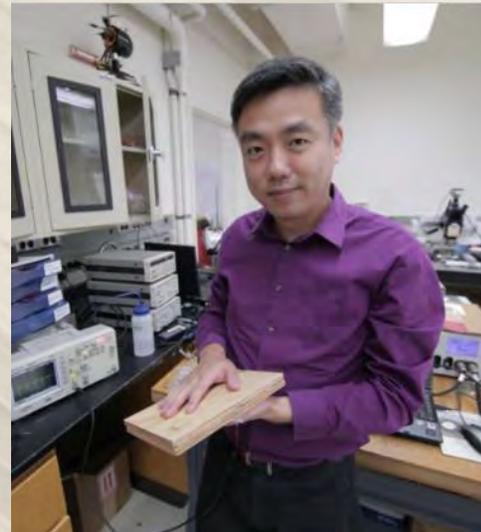
“UMD Researchers Create Super Wood Stronger Than Most Metals”



Energy-Harvesting Wood Floor

Move over, solar: The next big renewable energy source could be at our feet

Revolutionary floors made from waste wood pulp generate clean energy



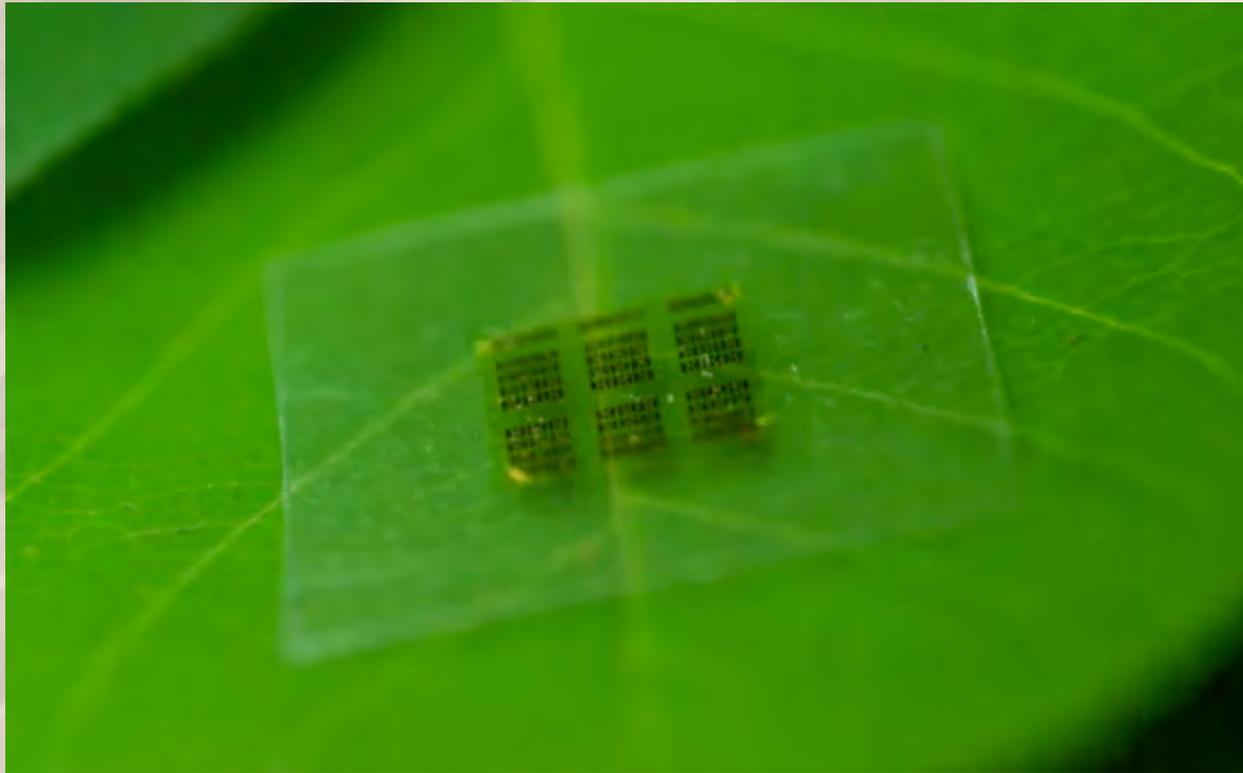


Photo: Yei Hwan Jung, Wisconsin Nano Engineering Device Laboratory)

Biodegradable computer chips made almost entirely from wood



Look out, glass – Scientists develop "transparent wood"



Ben Coxworth | March 30th, 2016



Questions?



Collin Buntrock

Forest Products Services

Wisconsin Department of Natural Resources

Division of Forestry

Email: Collin.Buntrock@wisconsin.gov

