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#### WOOD PROCESSING SIDE STREAMS -A SOURCE OF NEW PRODUCTS

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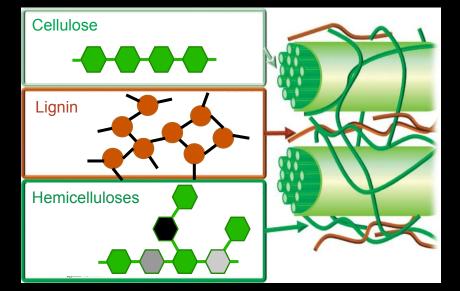
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#### WOOD PROCESSING SIDE STREAMS

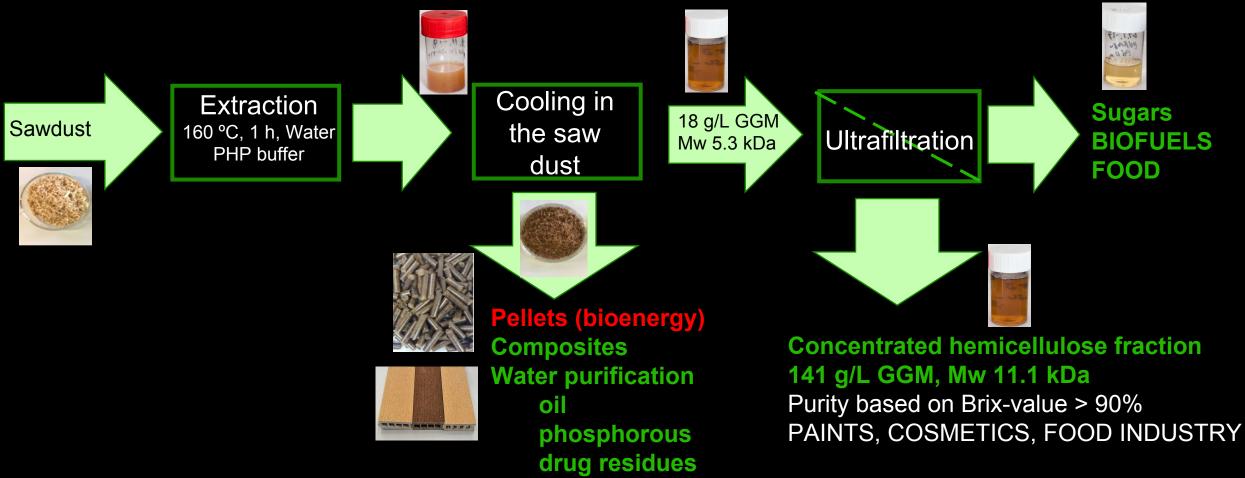
- Both solid and liquid streams in big volumes at the mill sites
- Contain cellulose, hemicelluloses, lignin, wood extractives, organic acids
- Raw materials for many applications, for instance for biofuels, food or pharmaceuticals
- Materials to replace oil-based compounds
- Additives to give special characteristics, for instance antioxidativity
- Typically still today underutilized resources



The main components in Wood Structure

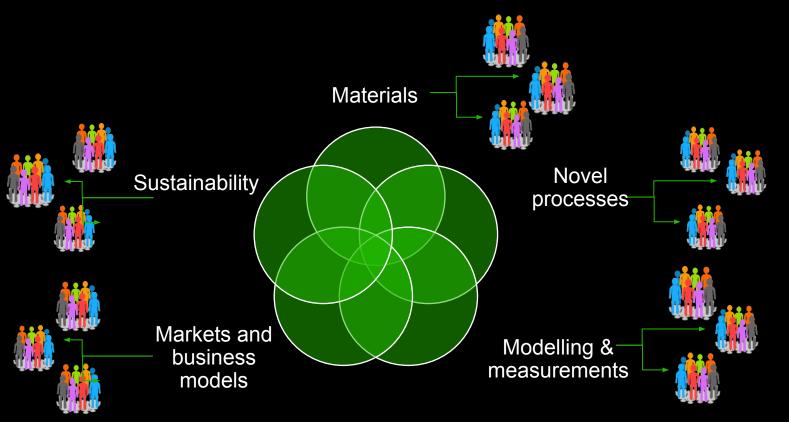


#### **PRODUCTS FROM SAW DUST**





## COST-EFFICIENT & SUSTAINABLE UTILIZATION OF SIDE STREAMS



- Scalable processes possible to utilize all over the world
- Choosing of the side streams available in big volumes with the interesting content
- Understanding on industrial symbiosis and future markets
- Multidisciplinary collaboration is in key role

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