

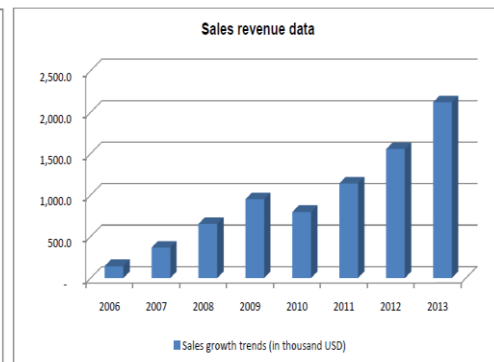
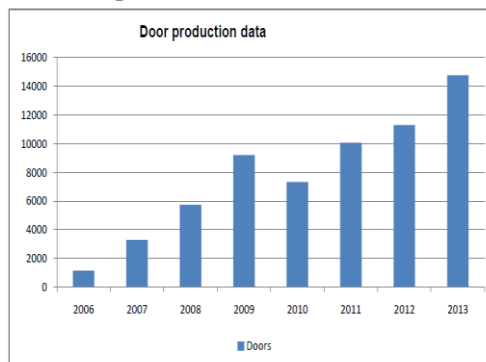
**INNOVATION PROJECT OF PRODUCTION OF WOOD-BASED PANELS BY PROCESSING SECONDARY RAW MATERIALS**

**Investment highlights**

- ✓ Megawood LLC is focusing on meeting 100% of the national demand on timber product and promoting elimination of imports by utilizing unused forest wastes.
- ✓ The project is extremely environment-friendly and highly supported by the Ministry of Environment, Green Development and Tourism (use of forest wastes will: reduce consumption of natural forest trees, thus the forest reserves will be enhanced; drastically decrease the risk of wildfire mainly caused by dry tree debris such as branches, fallen trees, stumps; sequester Carbon-dioxide as proven by research)
- ✓ Particleboard, MDF and OSB use carbonide resins, and hence the finished products made with the boards are not hazardous to human health.
- ✓ All the necessary legal paperwork has been completed (including certificate for land possession for factory property (60 HA) as well as for storage and loading/unloading raw materials and finished goods, permission to build railway branch line, special license of professional forest agency)

**Company overview**

- ✓ Megawood LLC is the largest manufacturer of MDF-based interior doors in Mongolia since 2005, by importing MDFs from China. Based on the imported MDF, the company also produces furniture. The company factory employs 72 people to produce furniture and interior doors using a German and Italian technology. Megawood LLC presently owns roughly 50% of the market share on interior doors.
- ✓ The factory operates with a capacity to produce 2,500 finished doors and roughly 400 units of furniture per month. Currently the company has started exporting interior doors and furniture parts to Russia



- ✓ Using its own funds, Megawood LLC purchased a 3 HA property with factory building, steam boiler, well, green house, storage, and garages.



- ✓ Equipment and technology upgrades were made every year, by acquiring over 30 computer-controlled equipments manufactured in Germany and China, and manufacturing products using German and Italian technologies.
- ✓ The rapid growth of the construction sector in Mongolia is increasing the demand on interior doors, timber workpieces, and furniture. Statistical data show that Mongolia 100% dependent on wood-based panels the imports of which are worth roughly USD 43 million per year. Yet, Mongolia has enough human and raw materials resources to produce wood-based panels domestically.
- ✓ Due to recent rapid economic development and increased population and urbanization, construction of apartments, service and other types of buildings has been increasingly rising. Consequently, the demand on the main raw material – particleboard and MDF – for interior doors, various types of furniture, laminate flooring, and polished panels has been growing every year.
- ✓ The key factor in increased construction is the fact that, nationwide, 60% of households live in suburban districts, and the demand on apartment buildings is very high (table below shows increase in volume of constructions in Ulaanbaatar city).

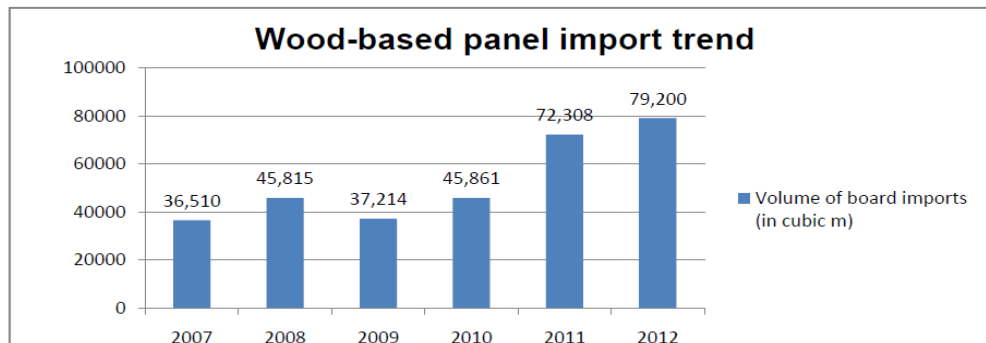
*Urbanization trends in Ulaanbaatar city*

	2004	2005	2006	2007	2008	2009	2010	2011
Population	915,531	952,400	987,192	1,025,174	1,067,472	1,106,719	1,161,785	1,206,610
Number of construction companies	646	833	1,342	1,638	1,854	2,045	2,418	3,509
Household capacity of newly constructed buildings	2,756	2,716	5,819	3,566	4,543	5,331	9,488	10,747
% of households living in constructed buildings	42%	42%	41%	40%	39%	40%	41%	41%

*Source: Ulaanbaatar city statistical office*

**Sector and industry overview**

- ✓ In addition, the booming economy increased the government budget, keeping the construction sector busy building kindergartens and schools and apartments. Education sector accounts for the largest share of the government budget (over 20%). Increased apartment and school construction will further increase demand on all types of furniture and doors.
- ✓ However, in order to meet the demand on timber products, Mongolian companies – including our company – purchase their raw materials (particleboard and MDF) solely via imports. Excluding the finished timber products, import data of particleboards and MDFs reveals the following:



(source: General Customs Office)

- ✓ Resource: Forest tree wastes, tree stumps, branches, tree remains destroyed by wildfire and pest insects
    - Current situation:
      - 1190 thousand HA of forest land destroyed by wildfire (130 million m<sup>3</sup> or **2000-year reserves**)
      - 95.6 thousand HA of forest land destroyed by pest insects (6.6 million m<sup>3</sup> or **170-year reserves**)
      - 18.5 million m<sup>3</sup> of fallen trees that act as natural “fuel” to instigate wildfire (equivalent to **300 years of reserves**)
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- ✓ The environment sector is in urgent need to organize cleaning in 1,475.5 thousand HA of land that contain 32,564.6 thousand m<sup>3</sup> of dry wood and 18,453.9 thousand m<sup>3</sup> of fallen and dead trees which not only undermines forest restoration but also becomes the source to aggravate forest fires and pest infestation. Utilizing such abundant resources which remain unused, will positively affect the environment and provide the necessary raw materials to produce particleboards, MDFs, and OSB.
  - ✓ Product: Unpolished and polished particleboard, MDF, and OSB; Laminate flooring-75,000m<sup>3</sup> annually
  - ✓ Since 2011, Megawood LLC had completed a feasibility study and has accomplished the following key milestones for the establishment of Particleboard, MDF and OSB production factories in Mongolia.

*Milestones for the establishment of MDF and OSB factory*

**Project introduction**

<b>Milestones</b>	<b>Progress</b>	<b>Note</b>
Approval from the Ministry of Food, Agriculture and Light Industry supporting our company	Accomplished	
Endorsement of cadastral map	Accomplished	
Certificate of land possession for storage and loading/unloading (via railway branch line) of raw materials and finished goods	Accomplished	8 HA land
Certificate of land possession for factory operations	Accomplished	60 HA land
Special License of professional forest agency	Accomplished	
Certificate of forest land possession for raw material resources	Accomplished	
Agreement from a power provider to establish a feeder line from a power station	Accomplished	
Research on raw material preparation system	Accomplished	
Research on technology; equipment price quotations and draft contract	Accomplished	
Order and act by the Railway Authority of Mongolia to build a railway branch line for the transportation of raw materials and finished goods	Accomplished	
Building the railway branch line	Not accomplished	
Construction of factory building, including establishment of power lines and heating system	Not accomplished	
Procurement and installation of factory equipment's	Not accomplished	

- ✓ The identified project site is located in Batsumbersoum, Tuv aimag, which is roughly 65 km from the Ulaanbaatar city. Megawood LLC was able to acquire possession of 8 HA of land for the railway branch line, and 60 HA of land for the factory operations.
- ✓ Presently, Megawood LLC seeks funding resources to establish the first ever factory in Mongolia to produce Particleboard, MDF/HDFs and OSB. Given the local demand on wood-based panels, Megawood LLC will be able to fully utilize the capacity of the production lines, and eliminate imports of panels by offering goods at much lower prices.

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**Financial  
Snapshot**

- ✓ **Total required funding - 20,395,064US dollars**
  - Construction of the factory – USD 3,435,000
  - Purchase of equipments – USD 14,412,655 (from **Dieffenbacher group, one of the leading manufacturers in the world**)
  - Running costs – USD 2,547,409
    - o 3-month salary – USD 398,832
    - o 3-month raw materials– USD1,967,705
    - o 1st quarter operating expenses – USD 180,872
- ✓ **Expected sales revenue** USD 20million annually (on average)
- ✓ **Projected profit** USD 6 million annually (on average)
- ✓ **NPV (at 8%, 10 years)** USD 26 million
- ✓ **IRR** 28%
- ✓ **Number of employees** 221

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