



# IKEA FACTS – BILLY BOOKCASE FACTORY AUTOMATION

At IKEA we strive to increase our suppliers' competitiveness by efficient industrial production set-ups. Through continuous improvements together with IKEA, our largest BILLY bookcase supplier has more than doubled their efficiency in the last 15 years.

- At IKEA, we see long-term supplier relations, large volumes, and efficient production techniques as the key enablers to make better products at lower cost and to provide good jobs.
- We form long-term partnerships with suppliers – on average 11 years – and work closely together to drive them into larger markets and to increase their competitiveness.
- For instance, our collaborations involve shared investments in new technologies and knowledge sharing to create efficient and sustainable production techniques.
- Together with IKEA our largest BILLY bookcase supplier – Gyllensvaans Möbler – has more than doubled their efficiency the last 15 years. In 2001, each co-worker at Gyllensvaans produced on average 13 000 products per year. Today each co-worker produce on average 33 000 products per year.
- The efficiency increase has been reached through heavy investments in automated production set-ups and through continuous improvements of quality and working conditions at Gyllensvaans. IKEA has supported the development through common action plans and volume commitments that guarantees that the new improved production capacity will be filled.
- In 2006, Gyllensvaans expanded their factory with 7000 m<sup>2</sup>. The new building contains a packaging line that packs BILLY bookcases with folded backs at a speed of up to 18 bookcases per minute.

- In 2009, Gyllensvaans invested 170 million SEK in a completely new production set-up, with high automation and little manual labour. The new production set-up also improved working conditions by removing tasks such as lifting of heavy parts. This investment, in combination with the continuous improvements, allowed Gyllensvaans to increase their annual output from 24 000 to 31 000 products per worker between 2008 and 2010.
- The main challenge in increasing production efficiency has been to optimise the production flow. Gyllensvaans routinely does follow-ups on all the small daily production errors in order to find areas in need of improvement.
- In 2014, IKEA and Gyllensvaans started the quality project, "Open the Box Initiative". The goal was to find a clear common quality improvement agenda. This was done by opening and analysing packages of finished goods in the factory to find the main error types and define actions to eliminate them.
- The project led to numerous findings and improvements. One of the main findings was that dust in the packages led to pressure marks and scratches. Gyllensvaans analysed the cause, and installed rotating brushes with antistatic agents in the machine lines and compressed air cleaning devices to blow sawdust from the drilled holes.
- Another finding was wrinkled foil (foil is the paper glued on the coloured BILLY bookcases). This led to the implementation of a camera system in the machine lines, controlling the quality of edges and their surrounding surfaces.
- Furthermore, scratches were found across the bookcase sides. This problem was solved by changing the surface of the slides that the bookcases run on to a softer material.
- In total, the project made Gyllensvaans reduced quality deviations by 50% and they have now started a continuous internal "Open the Box"-project. IKEA has decided to make a big roll-out of the "Open the Box Initiative" at our suppliers.
- In the future, more flexible production lines are required due to shorter product cycles. Currently, Gyllensvaans is running a pilot test on packaging robots with optical monitoring. This new technology enables a faster and more adaptable packaging line.
- For many years, Gyllensvaans has worked hard to improve working conditions both by investing in machines that remove heavy lifting, as well as through social initiatives. 1995 they invested in a sprinkler system doubling as a swimming pool used by the local school and employees free of charge. Among other things, they also run the local grocery store – despite the fact that it isn't profitable – since they believe it adds value to the village.
- Gyllensvaans is a family-owned company founded in 1946. They became one of our first suppliers in 1952. In 1978, Gyllensvaans started the production of BILLY bookcases. They are now our largest supplier of BILLY bookcases, currently making about 7 million BILLY bookcases each year. Besides BILLY, Gyllensvaans also makes other products like FINNBY bookcases and GNEDBY shelving units.
- The industry is located in Kättilstorp, in southern Sweden, and employs around 210 people.
- In 2004, Gyllensvaans started a subsidiary in the village of Jucu in Romania. Today they have around 650 employees producing ALGOT shelves and the BRIMNES range.