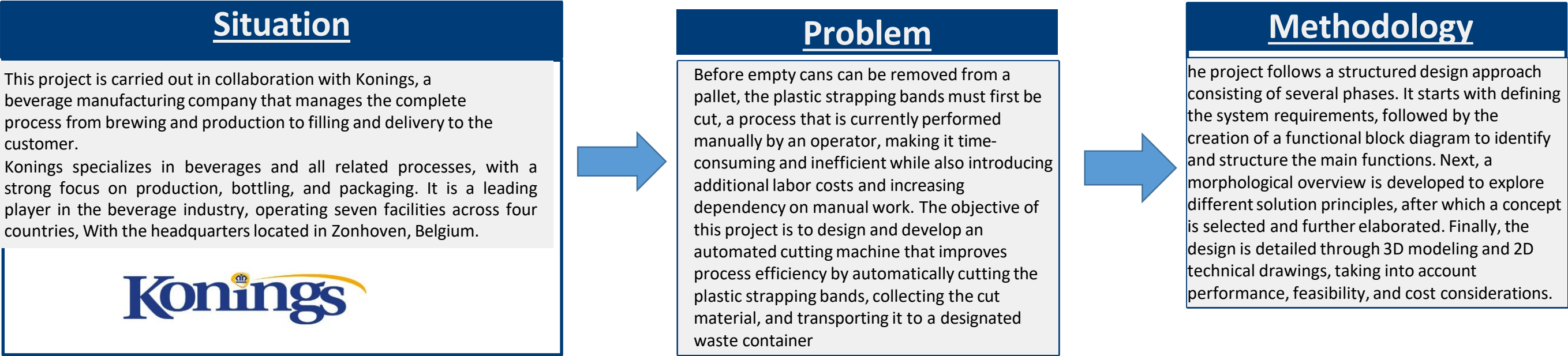


Design of an automatic pallet destrapping machine

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Main Components

Gantry

The gantry system is responsible for the positioning of the cutting unit above the pallet. It is designed to provide accurate and repeatable motion using linear guidance and controlled actuation, allowing the system to reach each strap location efficiently. This ensures consistent operation across different pallet configurations.

Cutting unit

The cutting unit is mounted on the gantry and is designed to safely cut the plastic strapping bands. The design focuses on reliability and precision, ensuring that the straps are fully cut without damaging the underlying products. The unit is optimized for repeated operation under industrial conditions.

Strap removal system

the strap removal system is responsible for handling the cut straps after the cutting process. It uses a guided mechanism to capture and transport the straps away from the pallet towards a designated waste container. This prevents accumulation of material and ensures a

Conclusion

full model in AR

The developed system successfully automates the cutting and removal of plastic strapping bands, reducing manual labor and increasing process efficiency. The integration of a gantry, cutting unit, and waste handling system results in a reliable and scalable solution that can be implemented in an industrial environment.

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