



# engineered efficiency

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## “Efficiency Through Analysis”

**Helping Australian companies streamline their processes and drive down costs.**

### Case Study - More Beer, Less Effort

Tunnel pasteurisers are commonly used by breweries to pasteurise beer after bottling to reduce microbiological contamination and inactivate enzymes to improve storage characteristics. Tunnel pasteurisers operate by spraying hot, followed by cold water over the bottles to heat them to pasteurising temperature, then cool them down prior to final packing.

A craft brewery needed to increase the capacity of their bottle pasteuriser to keep up with demand. To minimise cost and disruption, they were keen to utilise the existing system as much as possible.

Engaged by the brewery’s material handling contractor, we were able to build an accurate process model



from SCADA and manually acquired data, and determine how the upgrade could be achieved.

We developed three scenarios for meeting the design brief, involving installation of holding zones, improved heat recovery and optimising the water to beer temperature differential through the pasteuriser. In consultation with the client and the material handling contractor, we reviewed the upgrade cost and space considerations of the various options to arrive at an optimised design.

We succeeded in designing a solution to modify the existing pasteuriser which resulted in a lift in throughput of 50% while energy input per unit production was reduced, all at a cost significantly less than installing a new unit.

### About Us

*Engineered Efficiency* is a Western Australian business focussed on helping small to medium companies streamline their production and maintenance processes, and reduce input costs from utilities and reagents. We do this through working closely with our customers to understand their business needs and processes, and apply our experience and knowledge to build practical and achievable programs to improve efficiency and drive down costs.

Our Managing Director, Jon Langford, has over 20 years experience in design, construction and maintenance of process plants and commercial buildings. Jon started Altrum Pty Ltd in 2002, providing process engineering, chemical manufacturing and storage, and heat transfer solutions across Australia. Between 2010 and 2015, Jon worked outside of Altrum in process plant maintenance and utility asset management fields. He recommenced work with Altrum at the end of 2015, trading as *Engineered Efficiency*, integrating this recent experience with the innovative process solutions he provided previously through Altrum.

