

People, Planet & Profit

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Illustration by Sophie Allsopp

The mega-brewery of the future isn't just bigger, it's also better, writes Anders Hummer

Brewery optimisation has in recent decades focused on optimising manufacturing efficiencies and increasing financial performance. For all professional brewing groups the low hanging fruits have been picked and they are moving towards second generation brewery optimisation.

Independently of how optimised breweries perform, the end result will be to send a beverage product out through the gate which contains about 90-95% water and is packed in a small, individual container. These facts will always play a decisive role in how a brewery should be optimised. The next generation of development of mega-breweries will be based upon a delicate balance between issues related to People, Planet and Profit.

The Profit concerns are rather conventional but are brought into play together with People and Planet issues. The Brewery of the Future will be increasingly focused on delivering an attractive environment for its workforce, where personal stress is minimised, any kind of hazards are eliminated, leverage of individual's skills will come to fruition, and a multi-talented workforce will find new ways of working together.

A prerequisite of the future will be the ability of mega-breweries to invest back in the local community and support local projects, thereby establishing a harmonious inter-dependency between the community and beer producer.

With the increasing productivity of breweries resulting in fewer people required to produce, say, one million hectolitres, future design should pay increased attention to knowledge sharing. The challenge of the man-to-man interface will be to create a meaningful relationship between fewer colleagues producing a higher volume of beer.

Where optimisation of the brewery network was based traditionally upon

a rather comprehensive but simple financial simulation of COGS by plant, capex and all associated transportation costs, the sizing of the future brewery will also pay respect to a 'NPV calculation' of the carbon footprint by investment scenario.

The less attractive classic footprint simulation can suddenly be attractive from a CO₂-emission point of view and thereby become the preferred scenario in the boardroom.

The carbon footprint from the creation of building materials, the stainless steel tanks, in- and out-bound transportation costs and other high energy consumption activities need to be considered. Based upon this analysis it will be hard to support building mega-breweries in remote places where labour costs are attractive yet the markets which are going to be served are export destinations far away from the plant.

New technologies will deliver the required capability for large breweries to produce a wide portfolio of SKUs without deteriorating the required manufacturing efficiencies. Therefore mega-breweries should not be considered as workhorses for the brewing group only producing the main SKUs, but more as the lead plant where all required know-how and technology is in place to deliver all SKUs.

Product development will also take place at the future lead plants since this is where the highest concentration of know-how will be present. It will also be the best platform to produce the required high quality that is of paramount importance when launching new products for market tests.

Raw material in-take concerns (mainly water and brewing materials) have previously played an important factor to the size and location of a brewery. Such issues are less important since future breweries will

be close to zero-waste plants by deployment of relevant technologies and sustainable energy measures and water will only be found in the final products.

The mega-breweries of the future will be able to deliver to the market a superior quality of product in terms of flavour stability compared to smaller plants due to size, technology, and know-how. The advantages are perhaps not picked up when comparing products leaving the gate, but since all consumers are not standing and waiting at the gate, the actual quality performance is being measured on the shelf in the marketplace. On this battle field products from mega plants will most often win.

Best in class KPIs

Finally, the mega-brewery of the future is characterised as a plant operating with best-in-class KPIs, and delivering an inspiring and sound working environment for its workforce and local community. The sizing, design and location have been masterminded from a variety of sustainable measures including, but not limited to, the carbon footprint.

The capability of the plant is high and production of waste material has been reduced to almost zero: all waste products are converted into energy and consumed by the brewery or the neighbouring environment.

In the name of eternal development, breweries will seek inspiration from other industries. For management of People issues, great inspiration can be extracted from the pharmaceutical industry and for Plant issues the building and transportation industries.

With regard to Profit, brewers have for many years been one of the supply leaders able to maintain its price points to supermarkets. This has been achieved by continuously focusing on manufacturing excellence.