

Creating Value Through Water, Energy and Chemical Integration in Textile Processing

Learnings from SWAR



Goal of this conversation

Viewing water as a carrier or medium (and not water as a resource) puts water in a new light.

It uncovers unique opportunities to work with water.

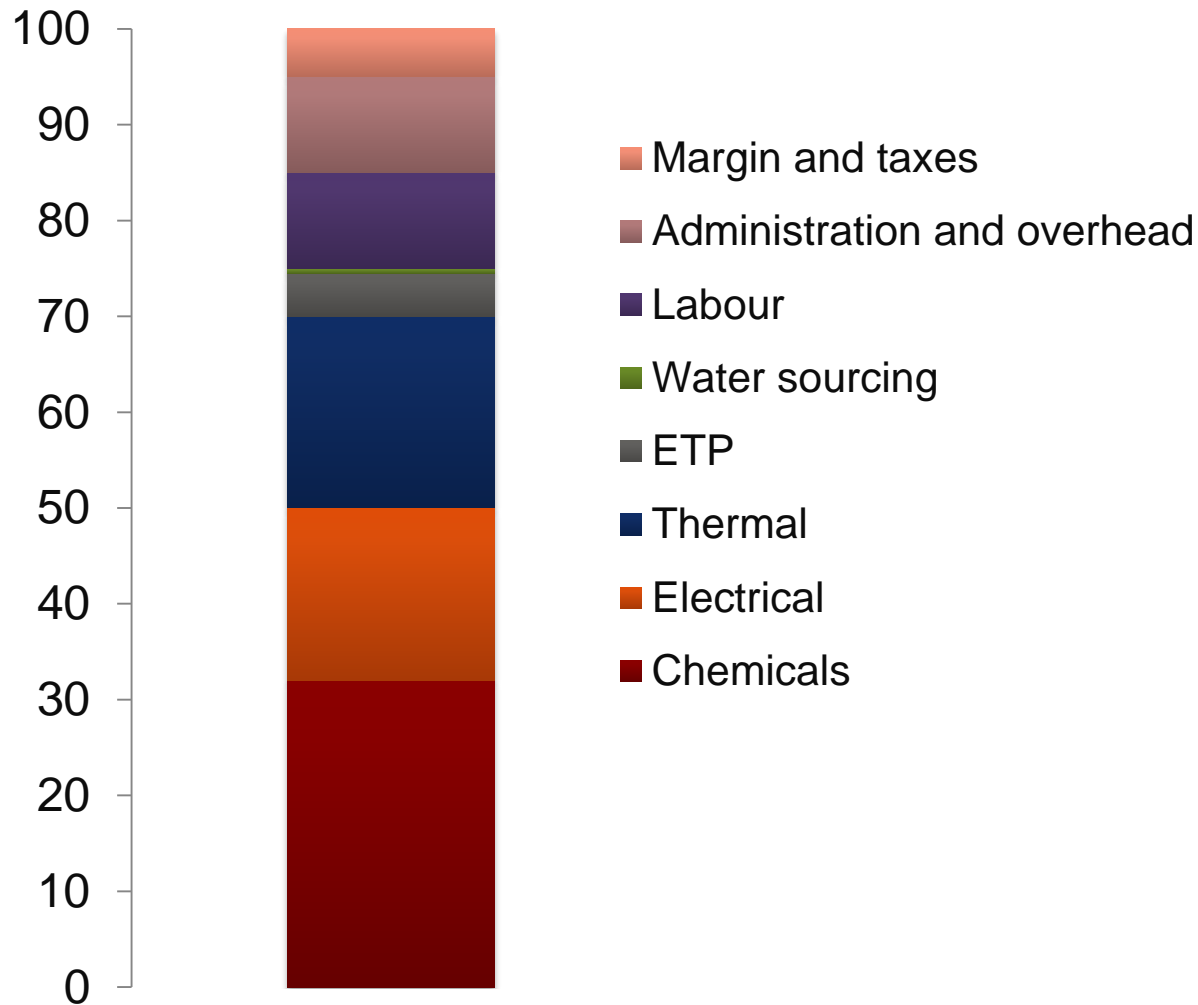
It also reveals the 'value of the nexus' between

1. Water and Energy

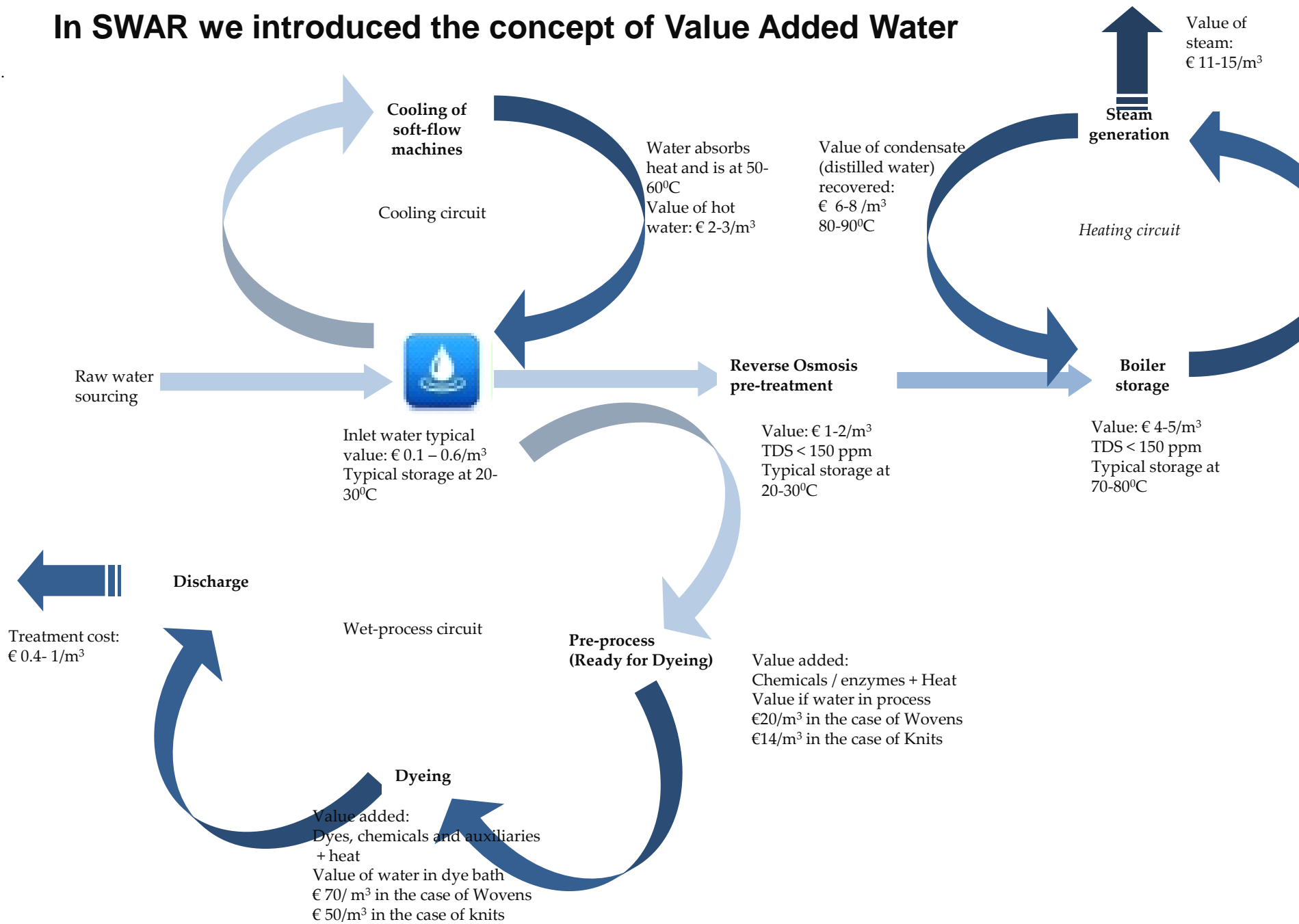
2. Water, Chemicals and Waste

**Why is it hard to
convince factory
owners to work
on water?**

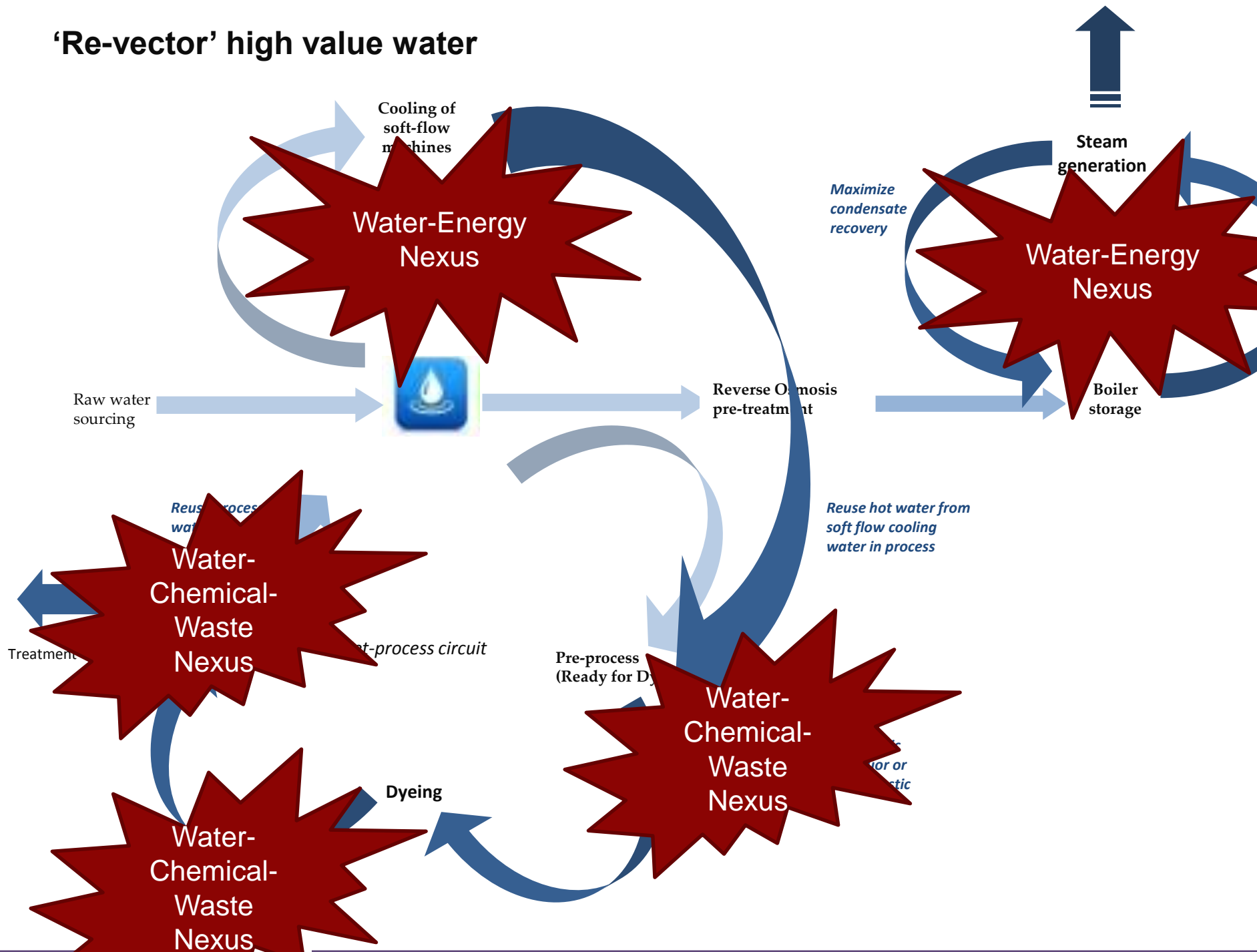
Traditionally water is seen as <math><0.5\%</math> of the 'cost' in a typical dyeing house



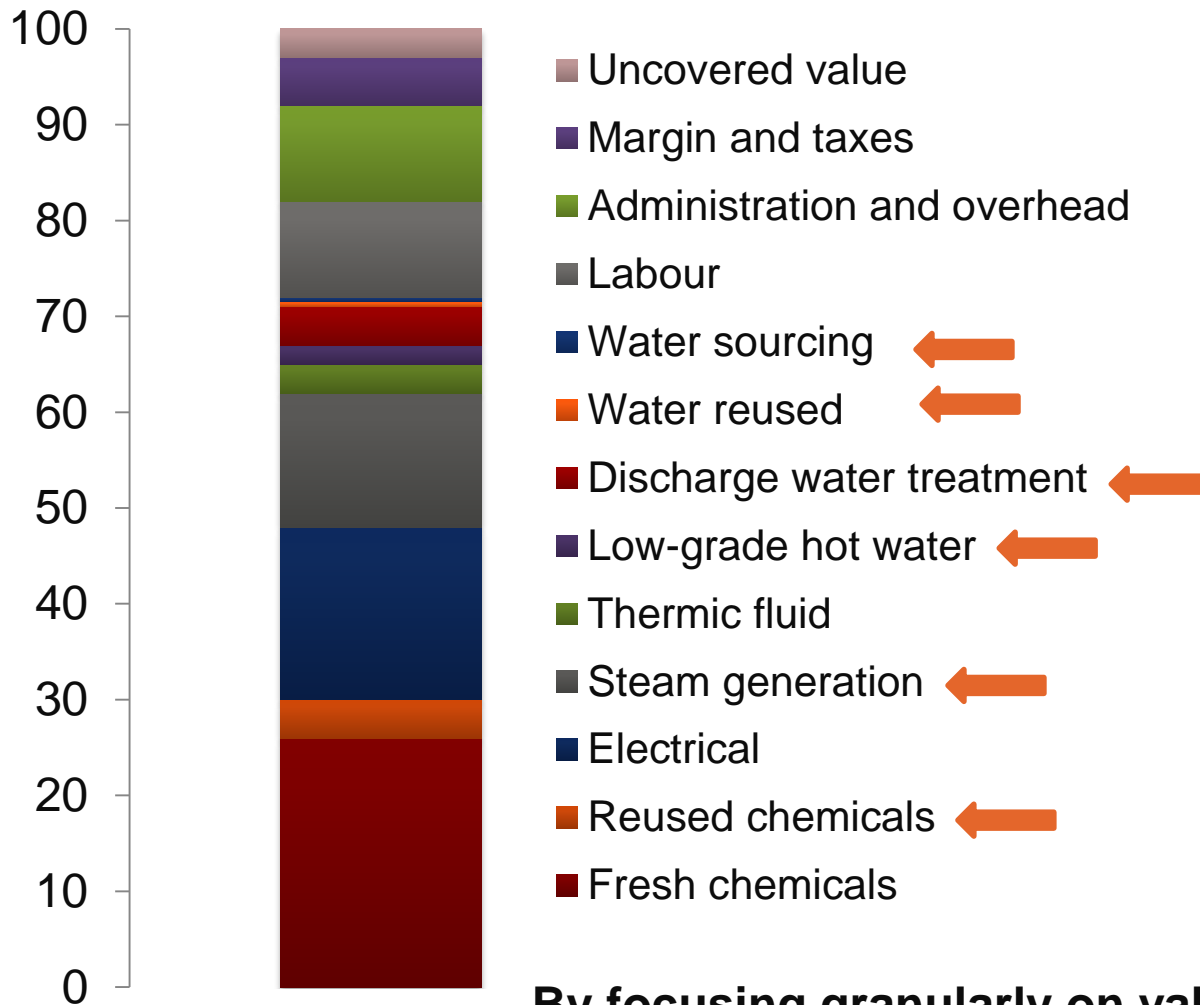
In SWAR we introduced the concept of Value Added Water



'Re-vector' high value water



By looking at water as carrier, uncovers that >70% of the expenses are spent in moving water around...



By focusing granularly on value-added water, a dyeing factory can look at its cost structure differently

Illustrating how thinking can change using this approach

Reusing chemicals is not just about reducing chemical cost...	But also about reducing ETP load (and costs there-on) Reducing the amount of water being pumped around
Condensate recovery is not just about recovering heat...	But also about lowering pre-treatment cost of water that goes into the boiler, which also increases membrane life
Thermal efficiency is not just about focusing on the boiler...	But also about asking why hot water is needed in the first place, and if it can be met from other low cost means
Expenditure on Waste-Water (ETP) is not an 'expense'...	You have half treated it! And decide to treat it further if cost of 'value added' water is comparable (segregating lines)

This thinking helps create a better case for the interventions.

The other significant impact is that it brings in the utilities teams and the production teams on the same page. We have 2 factories in SWAR that have started department wise costing using this approach and given targets to their utilities and production