

Water Tech Week

February 14-17 2011

San Jose CA

Turning Whey into Alcohol at Dubliner Cheese

O₂ Environmental

Water Technology Market Experts

Paul O'Callaghan

Details on BlueTech Tracker™ & Webinars

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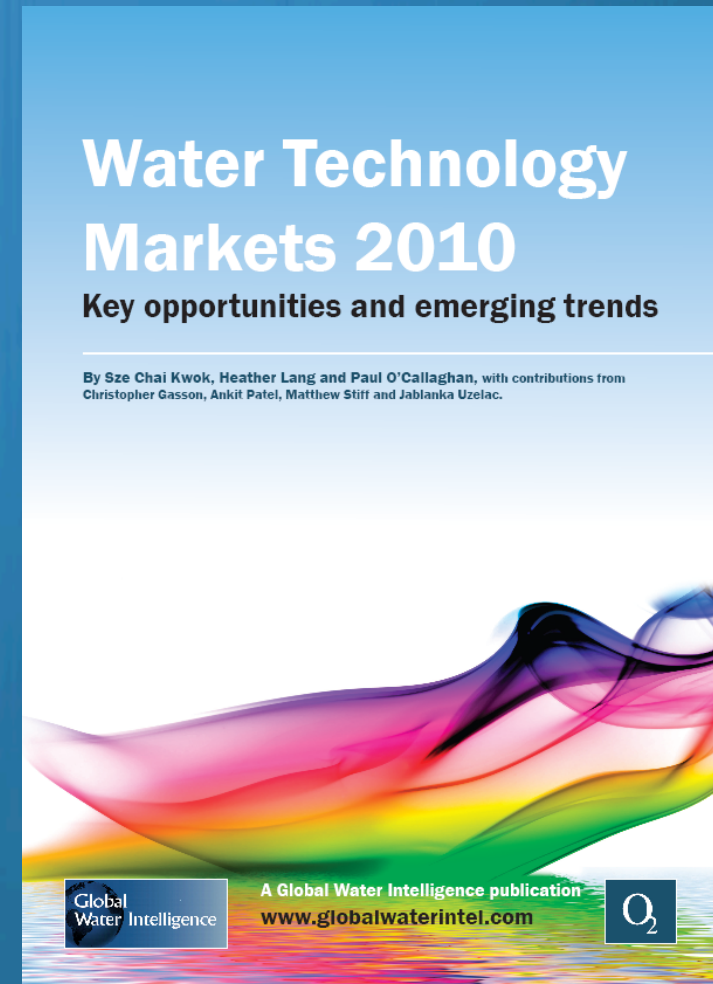
Dairy Industry

- Large global industry worth \$296Bn worldwide
- In the US there are
 - 485 Fluid milk manufacturing plants
 - 481 Cheese manufacturing plants
 - 196 Dry, condensed, and evaporated dairy product manufacturing.
- It is water & energy intensive

O₂ Environmental

Water Technology Market Experts

- We work with
 - Emerging Technology Companies
 - Investors and Corporations
 - Larger Water Companies
- Technology Assessment Group (TAG)
- BlueTech Tracker™

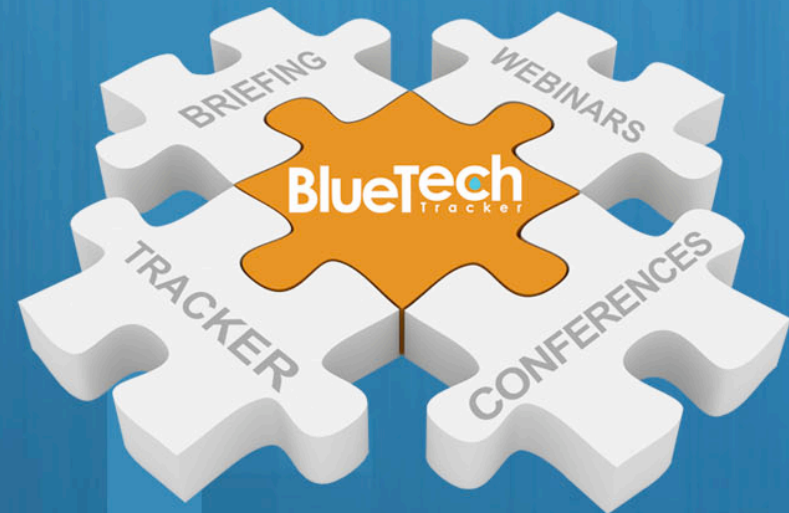




Real intelligence.
Real experts.
Real time.

Water Technology Market Intelligence

BlueTech Tracker provides intelligence on water technology innovation. We are focused on what is changing, how new approaches, new technologies, and new needs, are re-shaping the water technology market.



For Plans & Pricing visit: **www.BlueTechTracker.com**

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Sample Reference Clients



US Dairy Water Use

- Potable water use: 80-160 MGD
- Organic Loading equivalent of more than 16 Million people per day.

Carbery Milk Products



DUBLINER®

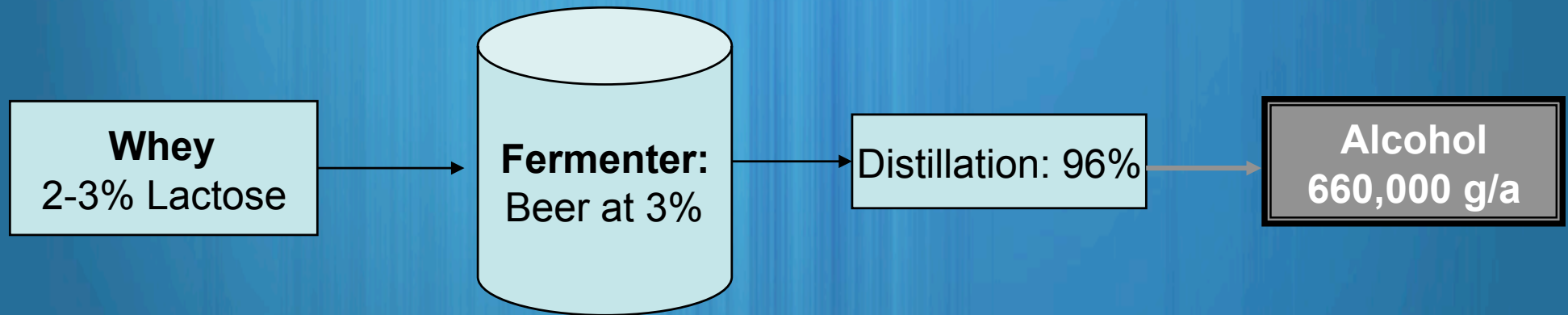
Irish Cheese



Whey

- 90.5 Billion pounds of whey produced,
- about 45% of this can be accounted for in whey products.
- But ...65% is unaccounted for and much of that may be treated as a wastewater, but could be fermented into alcohol.
- Potential in US
 - 203 Million gallons of ethanol

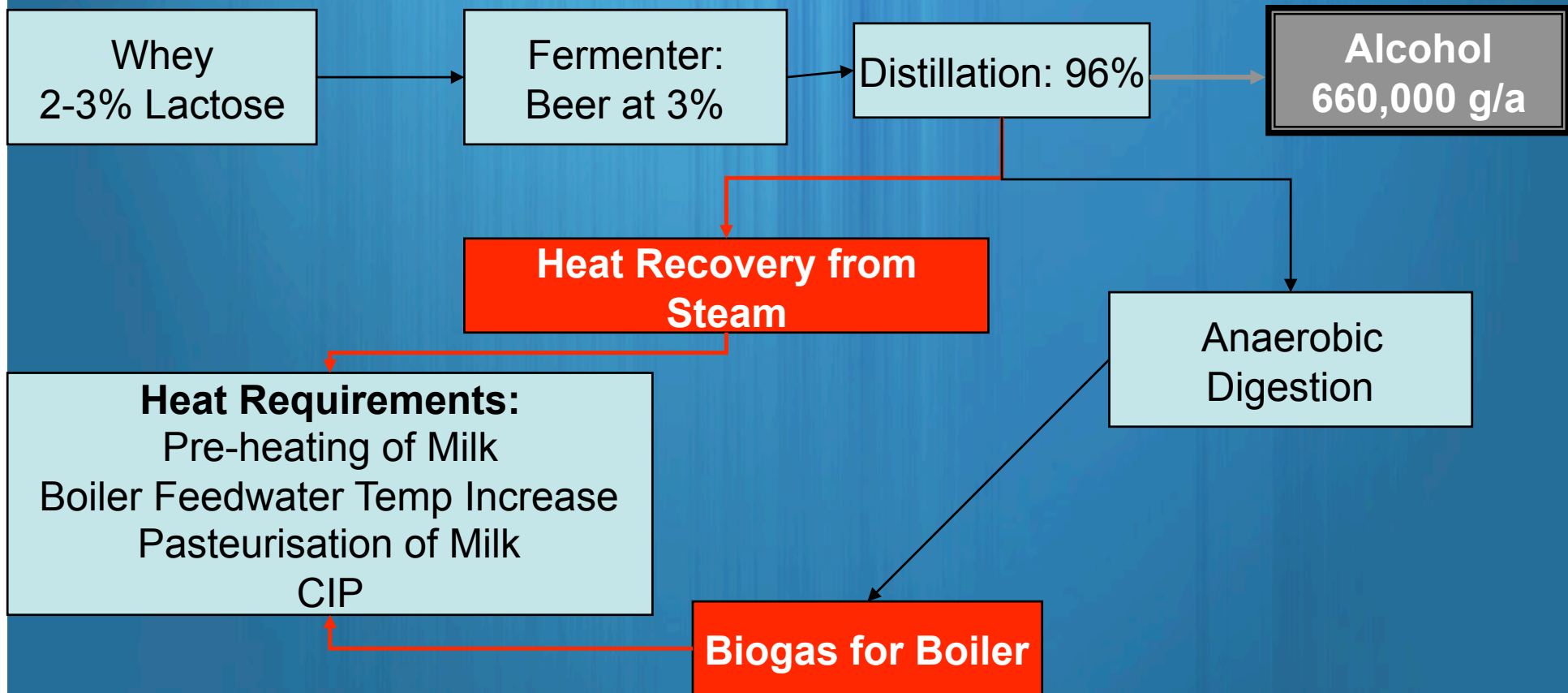




Whey Ethanol



E85
85% Ethanol

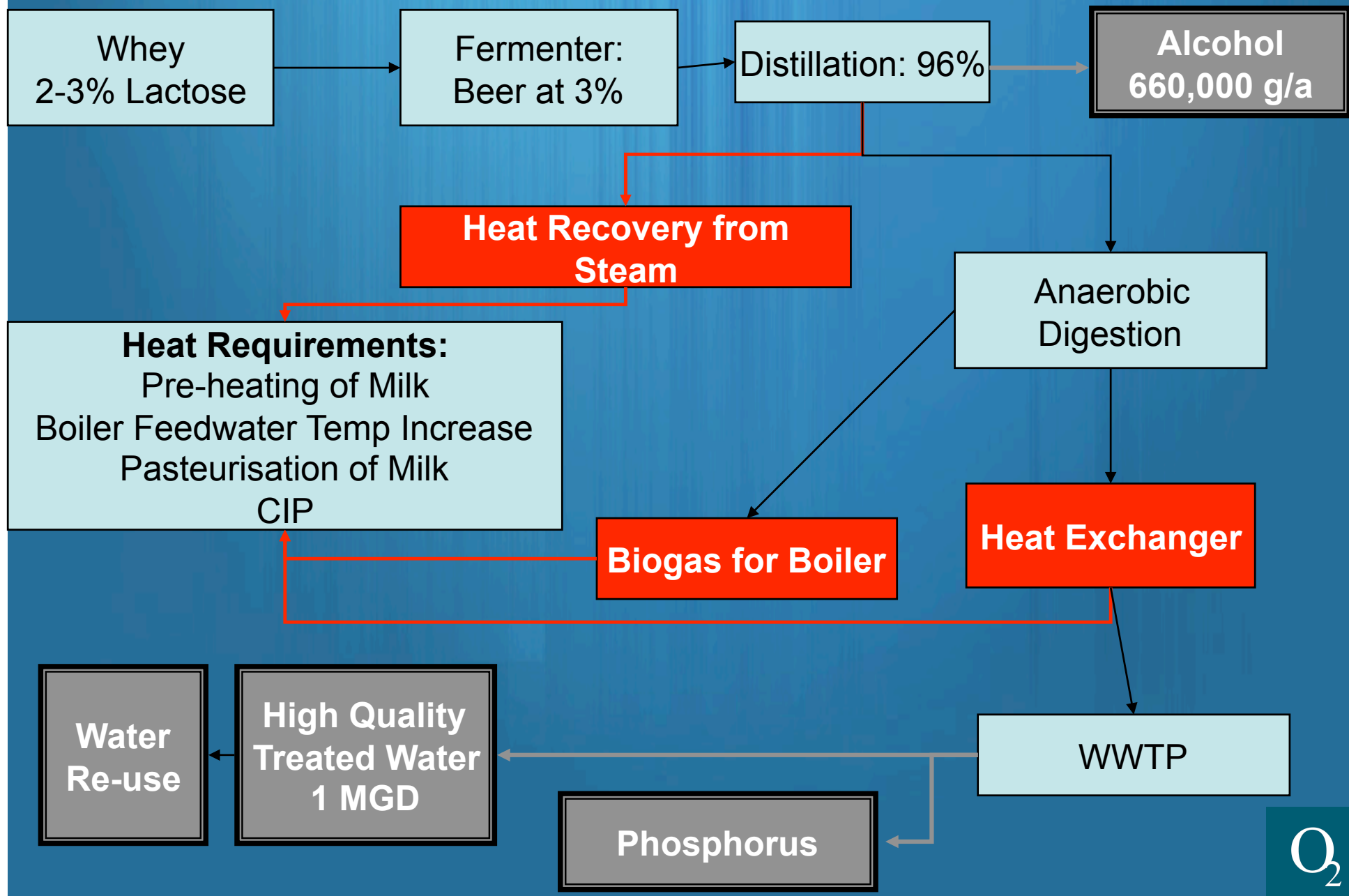


Anaerobic Treatment

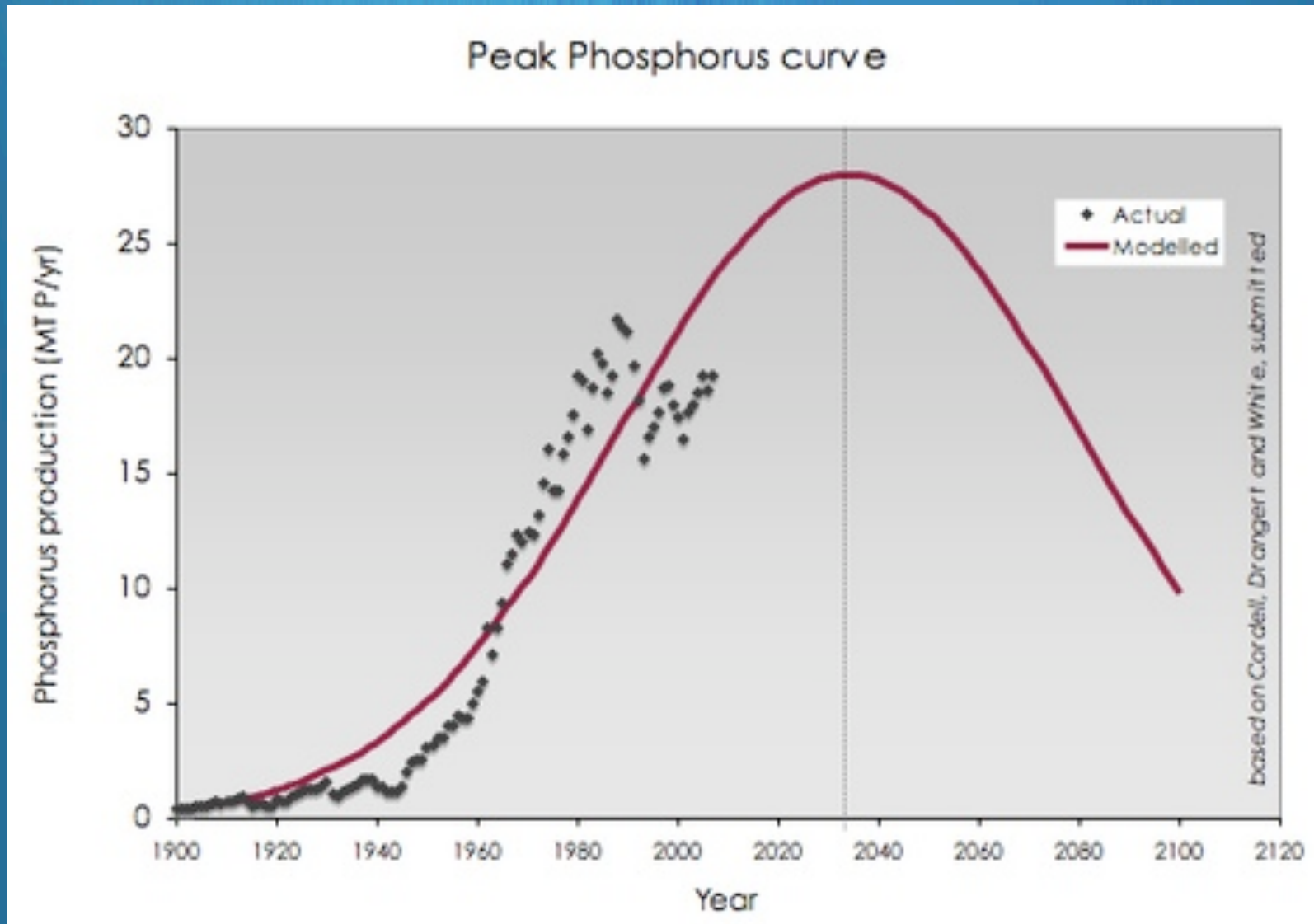


Carbery Milk Products





Phosphorous



D.A.F. System



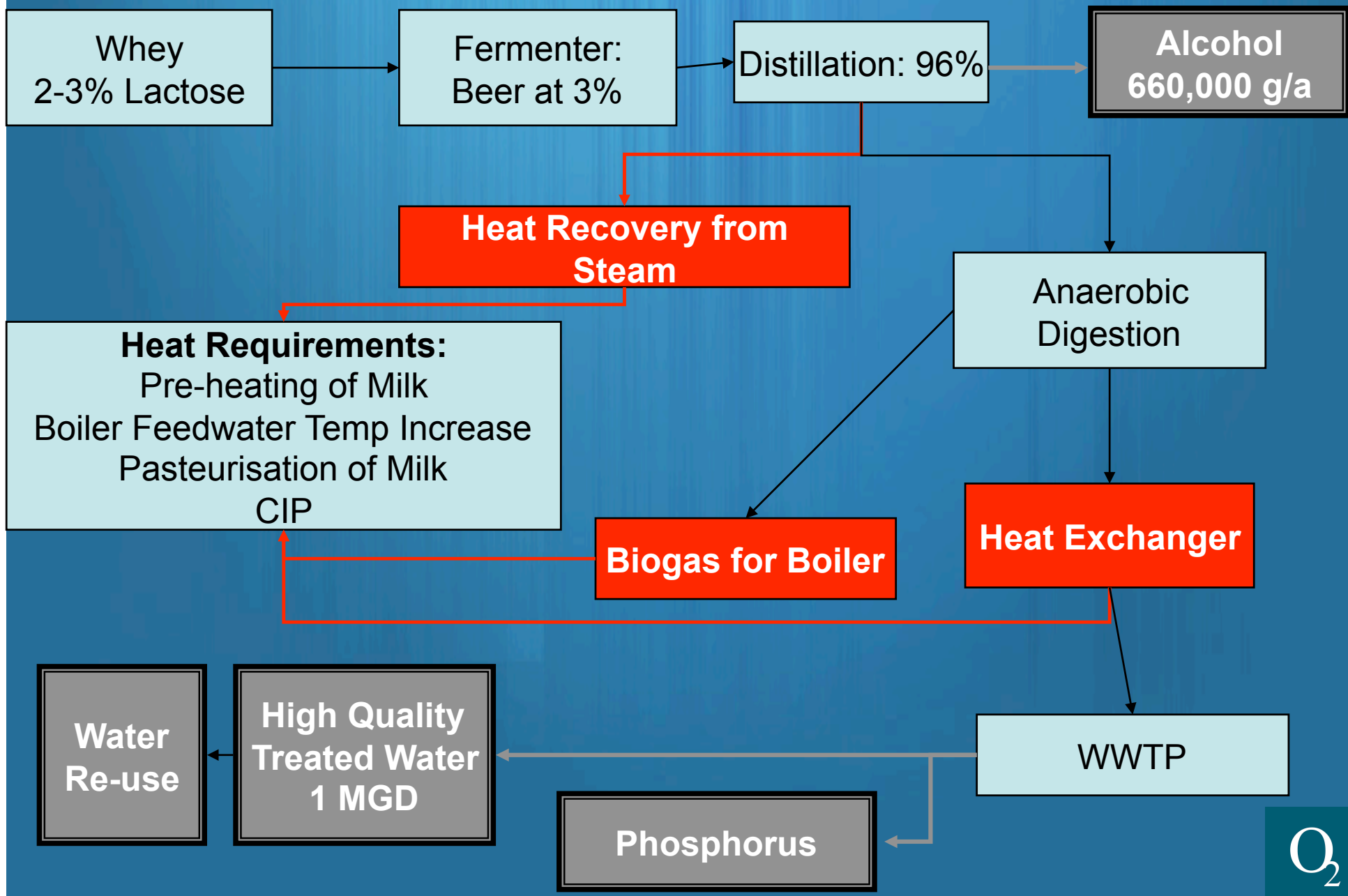
Water Re-use

- APT Water
 - HiPox Advanced Oxidation System



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