

Characterisation of poultry litter ash in view of its valorisation

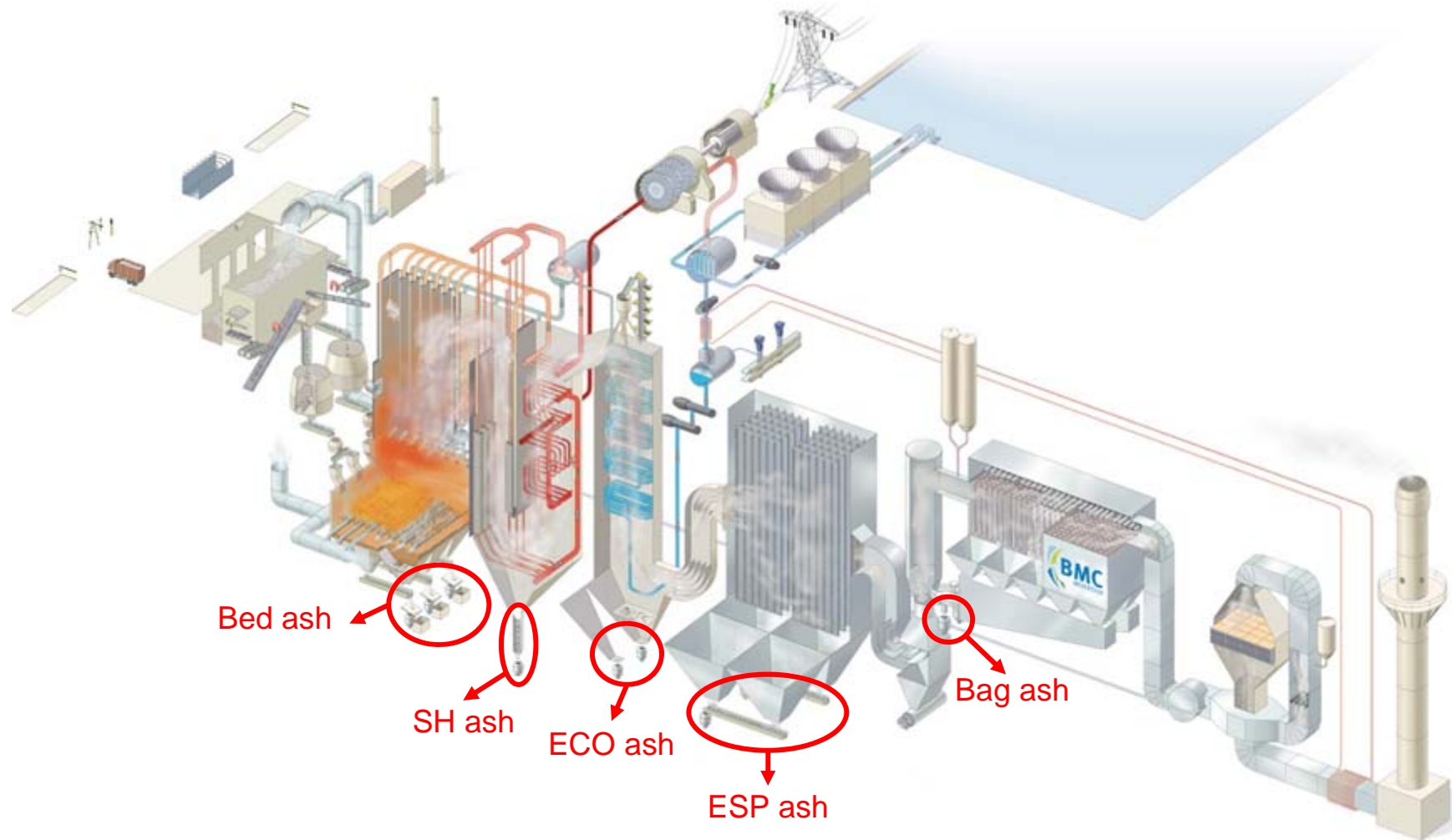
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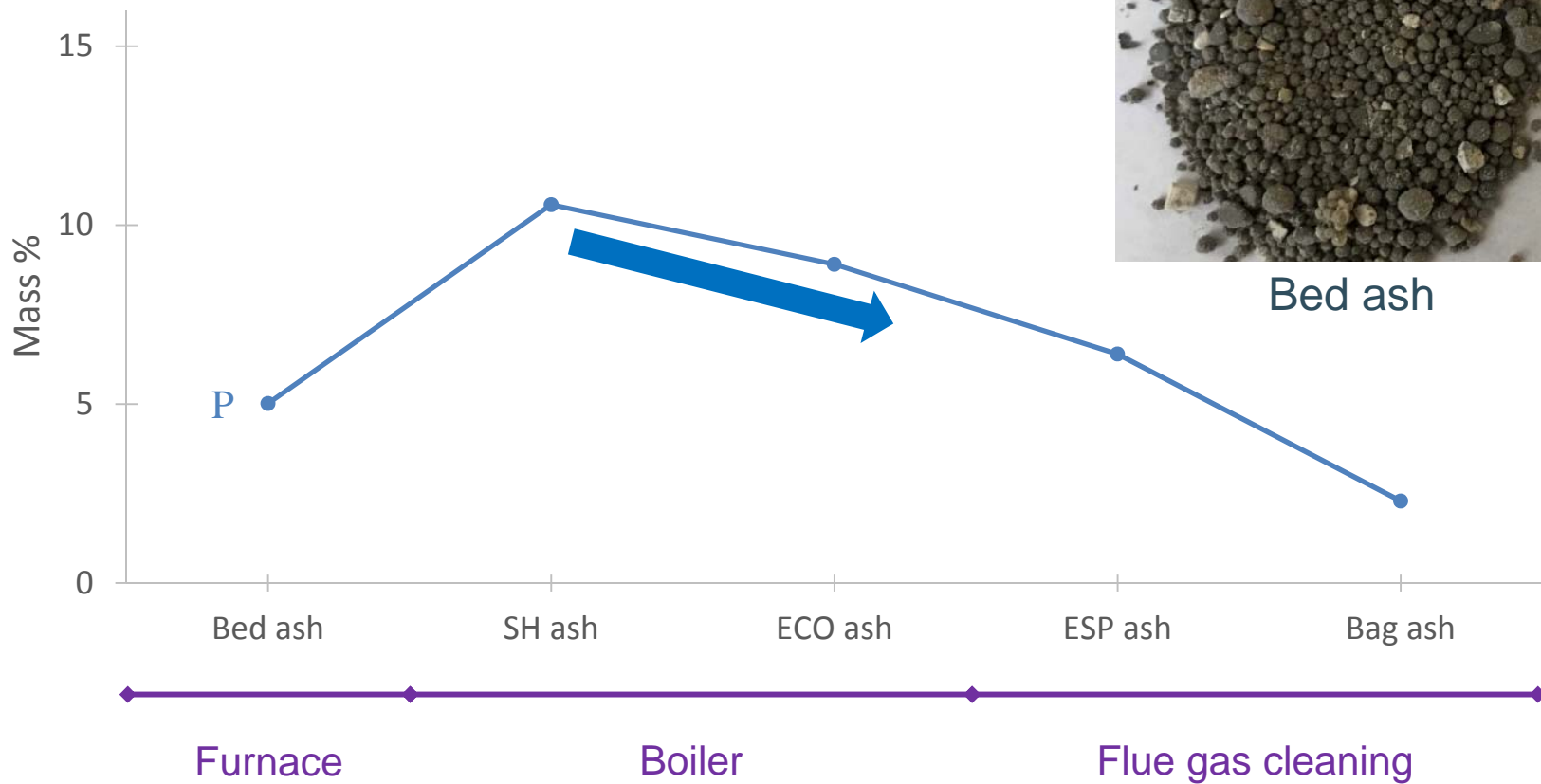
Biomass power plant BMC Moerdijk



Overall aim

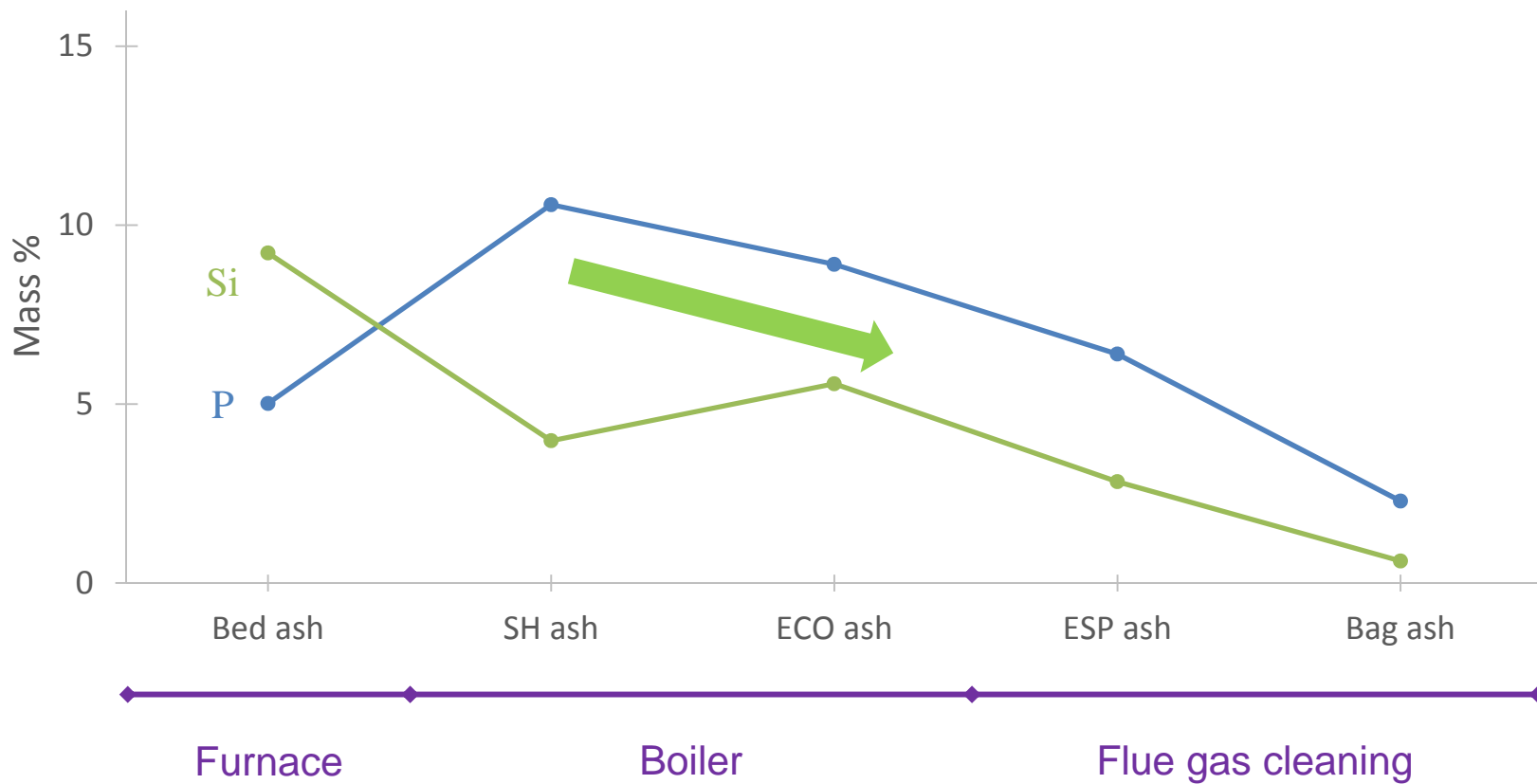
1. Characterisation poultry litter ash
2. Valorisation options
 - a. Fertilizer
 - b. Building material
 - c. Cement production

P, K and Si concentration in the different ash streams

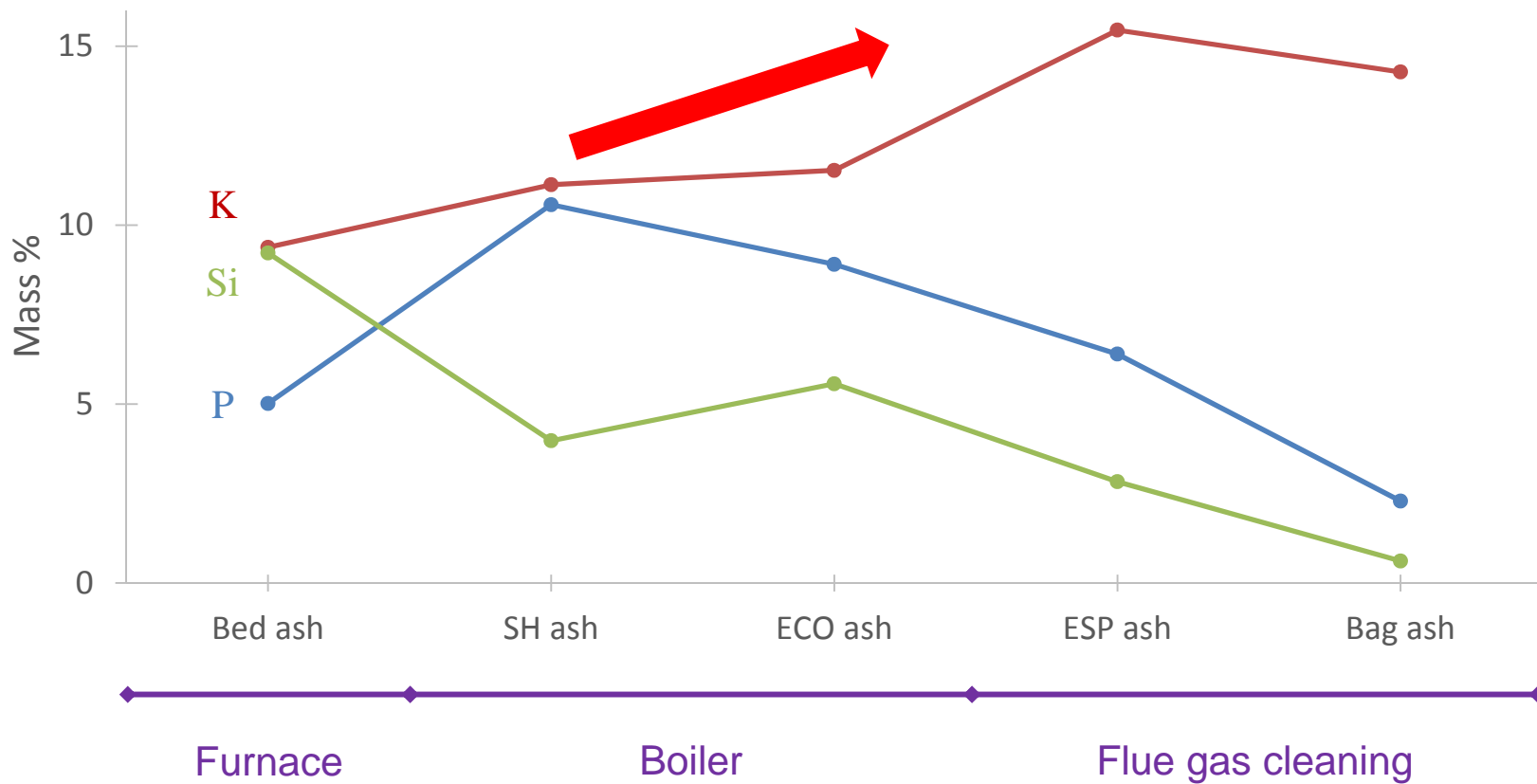


Bed ash

P, K and Si concentration in the different ash streams



P, K and Si concentration in the different ash streams



Valorisation options

Fertilizer

- Valorisation P and K
- Recycling hindered by legislation

Conclusions:

1. Big difference in limits between different European member states
2. Absolute concentrations V.S. dosage
3. No heavy metal limits in manure and in conventional fertilizers

Building material

- Valorisation Ca, Si, Fe, Al and Mg
- Concentration and leaching limits

Conclusions:

1. Conventional treatment of WtE ash
2. P → retards cement hydration

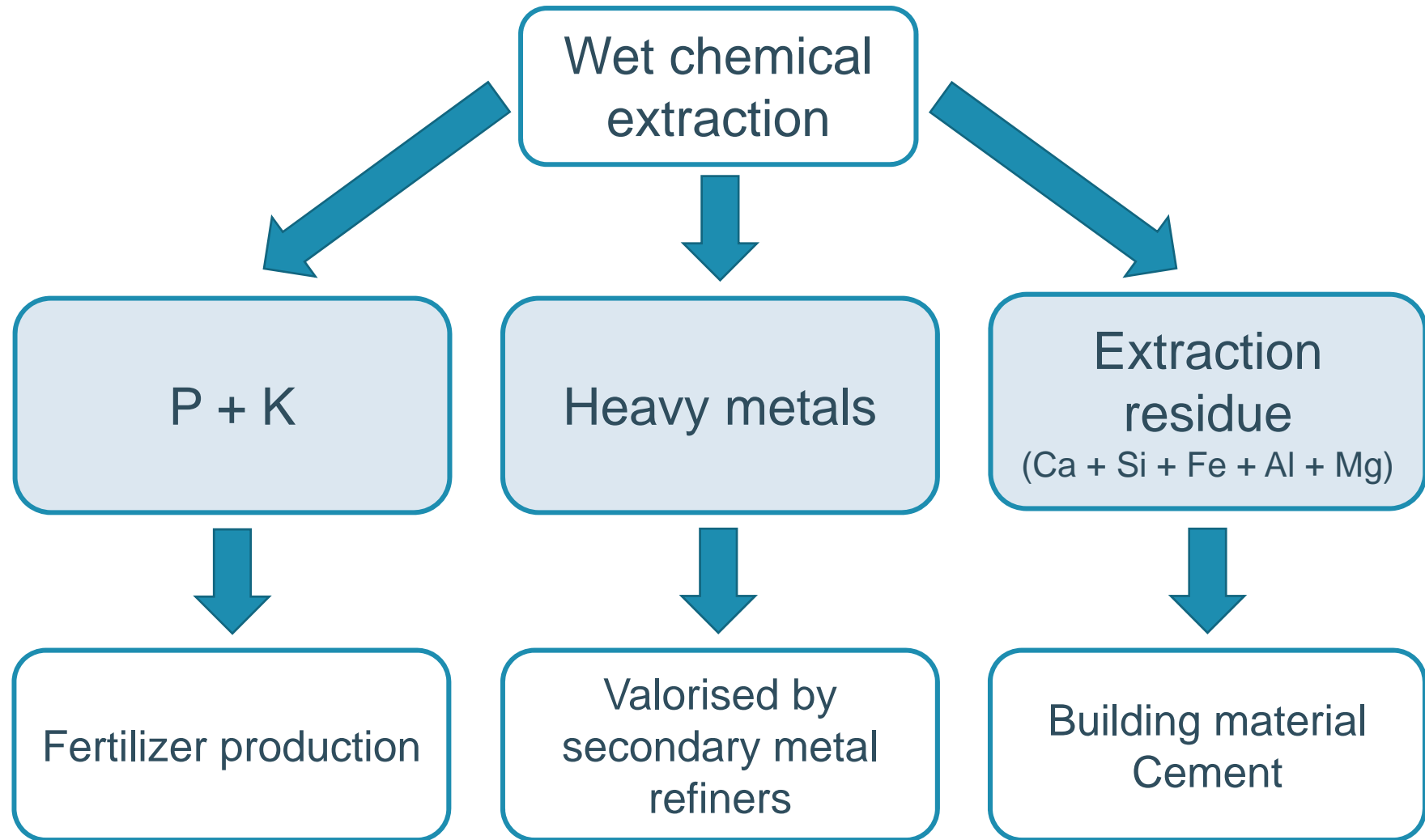
Cement

- Valorisation Ca, Si, Fe, Al and Mg

Conclusions:

1. P → retards cement hydration
2. S → sulphate attack
3. K → alkali-silica gel

Conclusion



Thank you!