

**ULTIMATE – CS 8**  
**SUEZ RR IWS CHEMICALS FRANCE,**  
**CHEMICAL PLATFORM OF ROUSSILLON**

**CS Meeting on « Heat Recovery »**

26/02/2021



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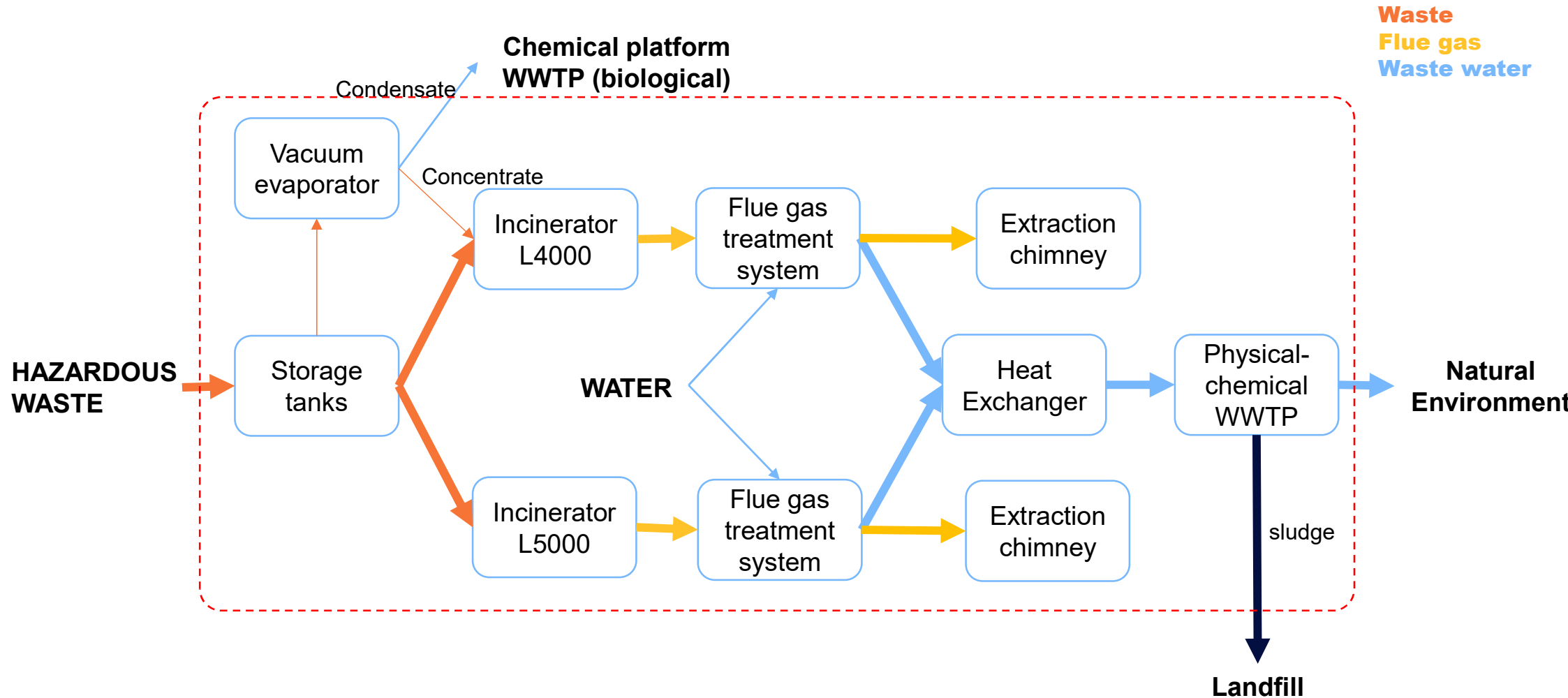
# 1.

## Situation before ULTIMATE



# Situation before ULTIMATE

## THERMAL TREATMENT OF INDUSTRIAL HAZARDOUS WASTE



# Situation before ULTIMATE

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## VALORISATION

**No steam production, due to the high ash content of waste**

**Heat recovery from water used for flue gas treatment to evapo-concentrate a few part of aqueous waste**

**No material recovery**

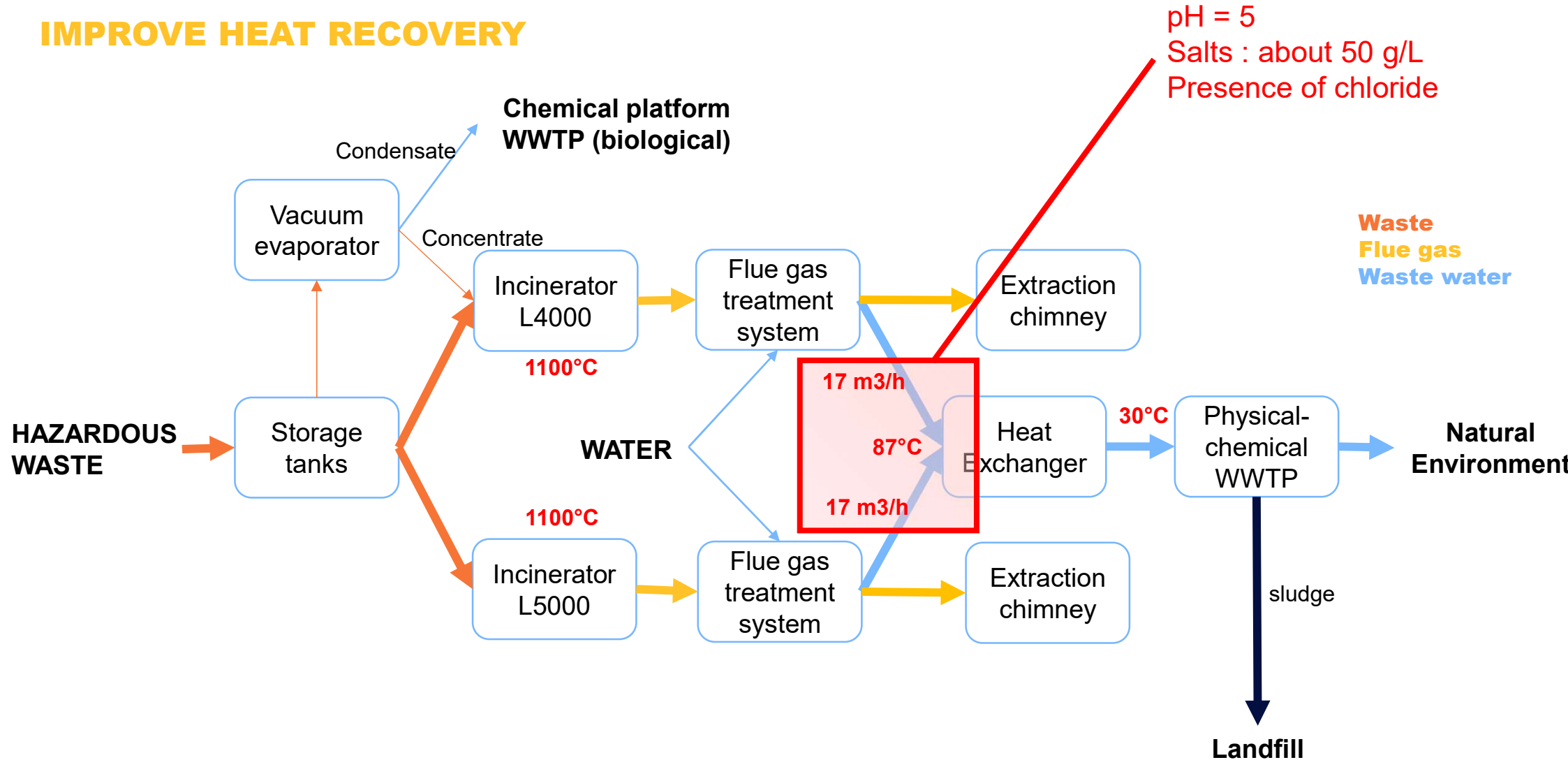
# 2.

## Objectives of ULTIMATE



# Objectives of ULTIMATE

## IMPROVE HEAT RECOVERY



# Objectives of ULTIMATE

## ENERGY USE ON SITE

### Electricity

- For equipment : pumps, agitators...**
- For instrumentation : valves, sensors...**
- For electric tracing of pipes**
- For lighting...**

### Vapor

- To preheat combustion air**
- Pipe cleaning**
- ...**



## FORM OF ENERGY RECOVERED

### Electricity

### Vapor

### Heat



# Objectives of ULTIMATE

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## **SOME IDEAS :**

**Combustion air preheating (via heat exchanger)**

**Sludge preheating to improve dryness of the pressed sludge at the filter press outlet**

**Power generation by the mean of :**

- **Organic Rankine Cycle**
- **Stirling engine**
- **Thermoelectric generators**
- **...**

# Objectives of ULTIMATE

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## EVALUATE THE POTENTIAL RECOVERY OF THERMAL ENERGY :

### Feasibility study report including :

- **a technical solution (or advantages and disadvantages matrix)**
- **investment cost and operating cost (€)**
- **recovery form (electricity, steam, heat) and use**
- **energy recovery rate (%)**
- **reduction of energy consumption (%) and resulting profits (€)**

**THANKS FOR YOUR ATTENTION**

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