Long-term fire retardant optimization

anr agence nationale de la recherche

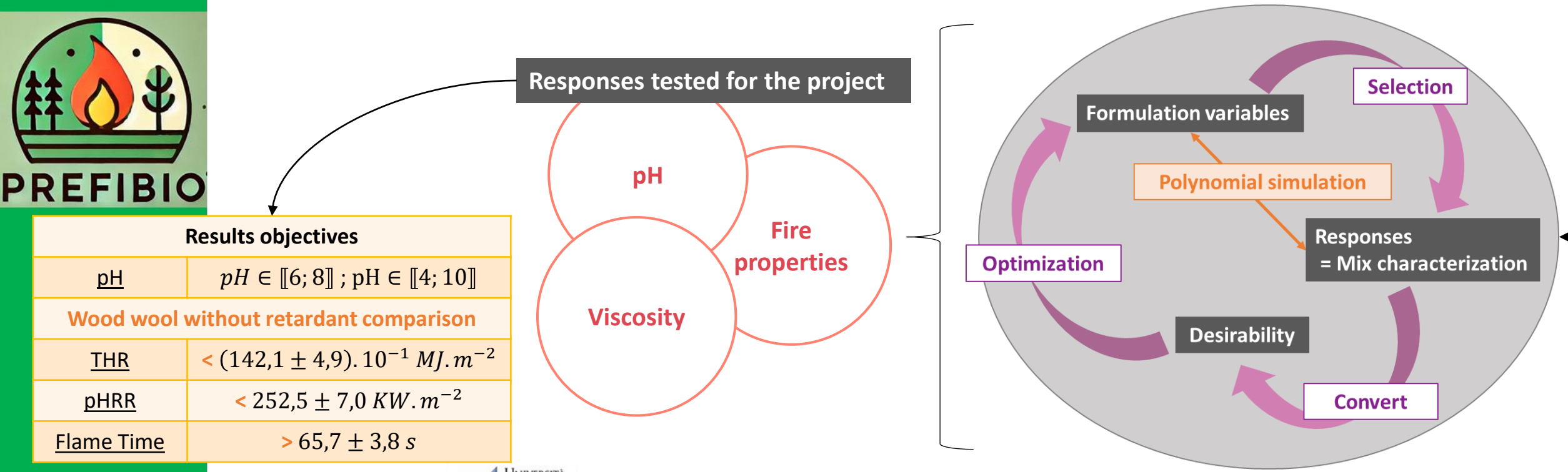
Project objectives

- Prevent fire damages in **sensible areas**
- Obtain better/same fire **retardant properties** than/as commercial products
- Utilization of **biosourced** materials

Sustainable alternative intumescent system

- **Char-formers**
- **Acid source**
- **Fire retardant additives**
- **Blowing agents**

Mixture design



Responses tested for the project

Results objectives	
pH	$pH \in [\![6;8]\!]$; pH $\in [\![4;10]\!]$
Wood wool without retardant comparison	
THR	< $(142{,}1 \pm 4{,}9).10^{-1}\ MJ.m^{-2}$
pHRR	< $252{,}5 \pm 7{,}0\ KW.m^{-2}$
Flame Time	> $65{,}7 \pm 3{,}8\ s$

PREFIBIO

Université de Lille — BIOEX — Università di Corsica Pasquale Paoli — Nantes Université — L'INSTITUT agro Rennes Angers — INRAE Lille et Avignon — EuraMaterials — BIOECONOMY FOR CHANGE