

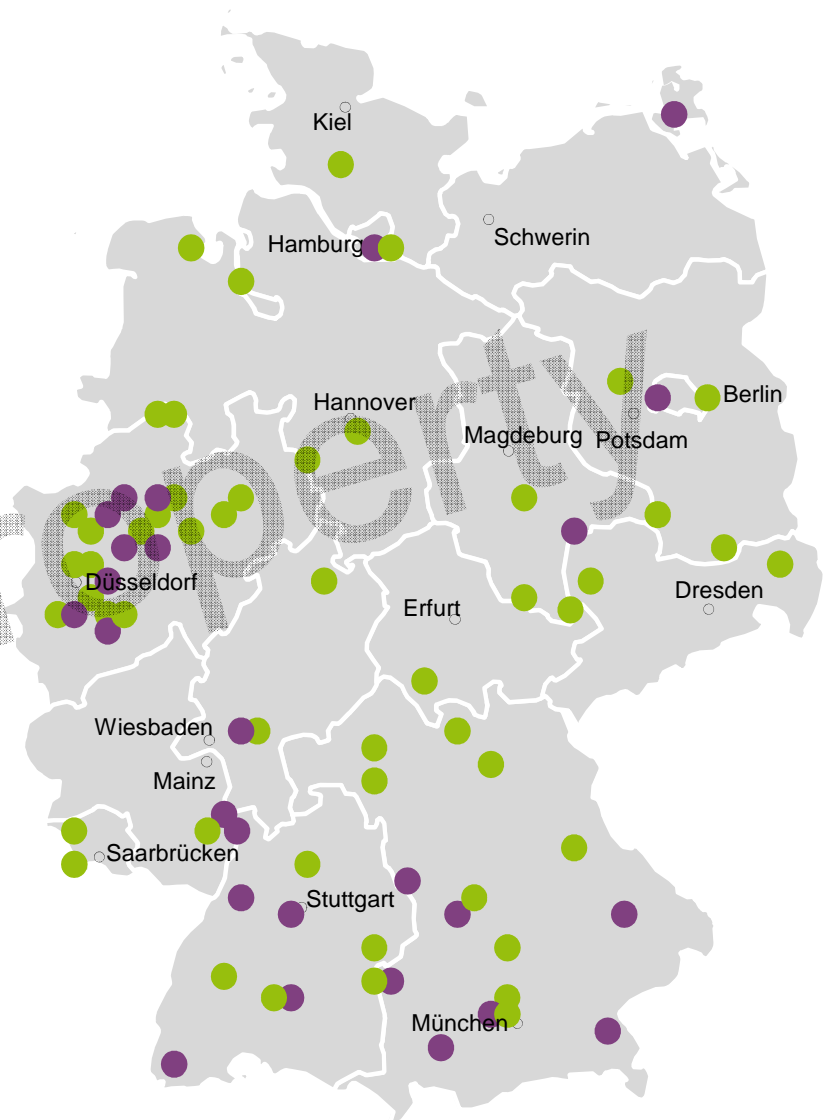
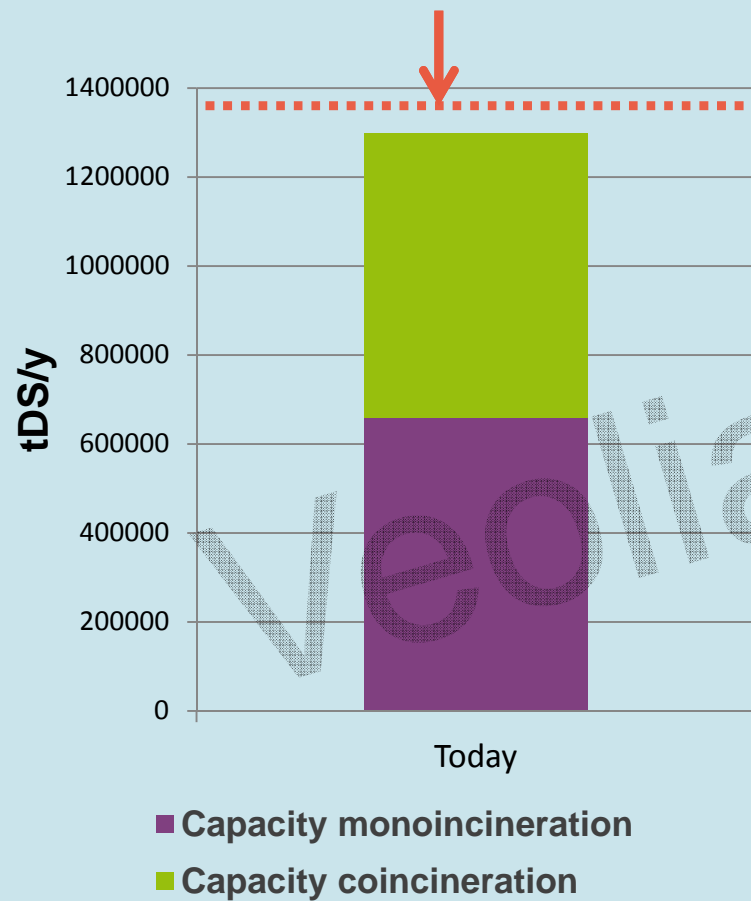
Local strategy for WWTPs in the context of Phosphorus Recovery and sludge incineration

*Phosphorus Special IFAT 2018
Munich, 17th May 2018*

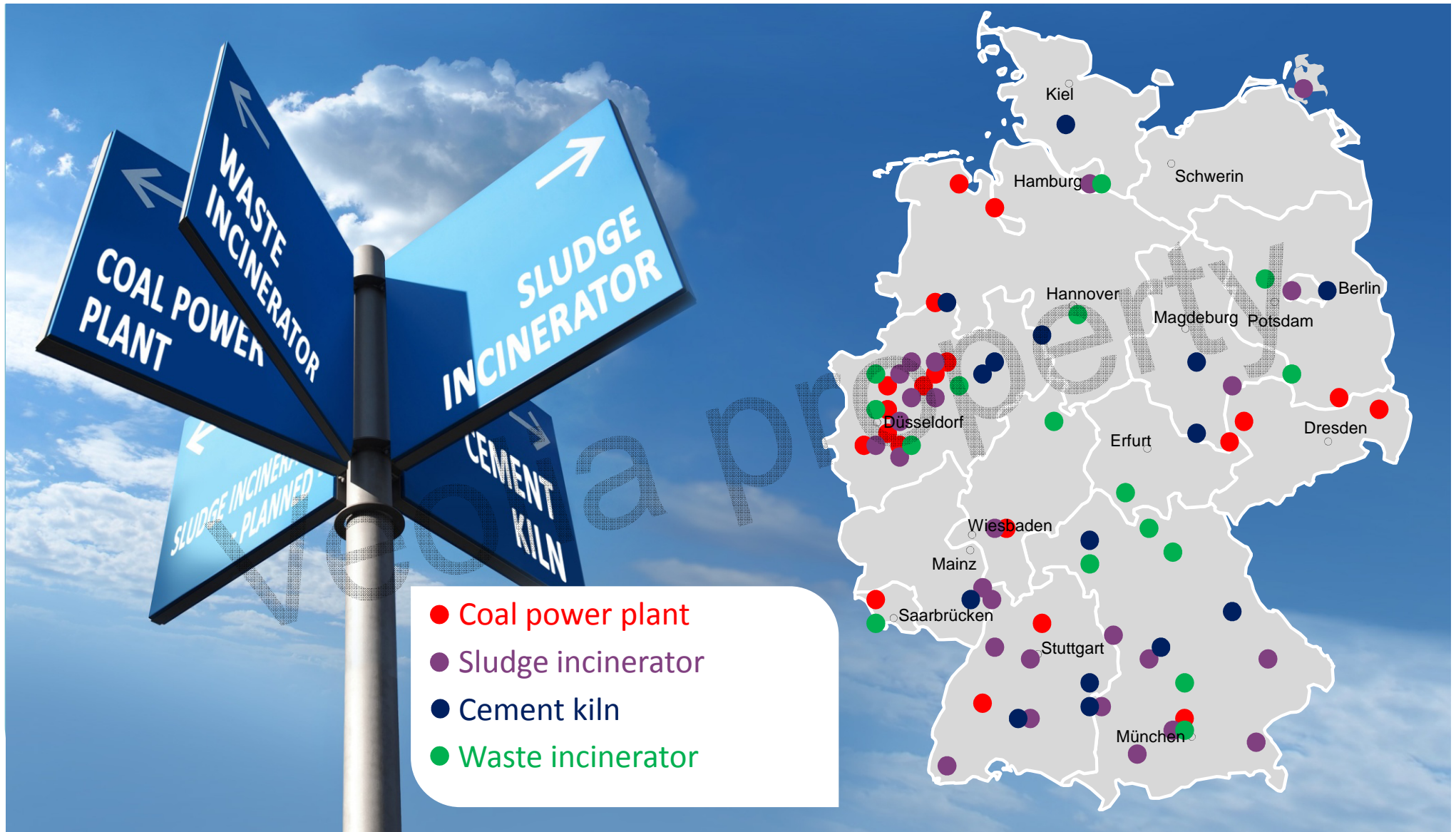
Céline Bouchereau, Christophe Sardet, Dr. Matthias Staub

Today's situation

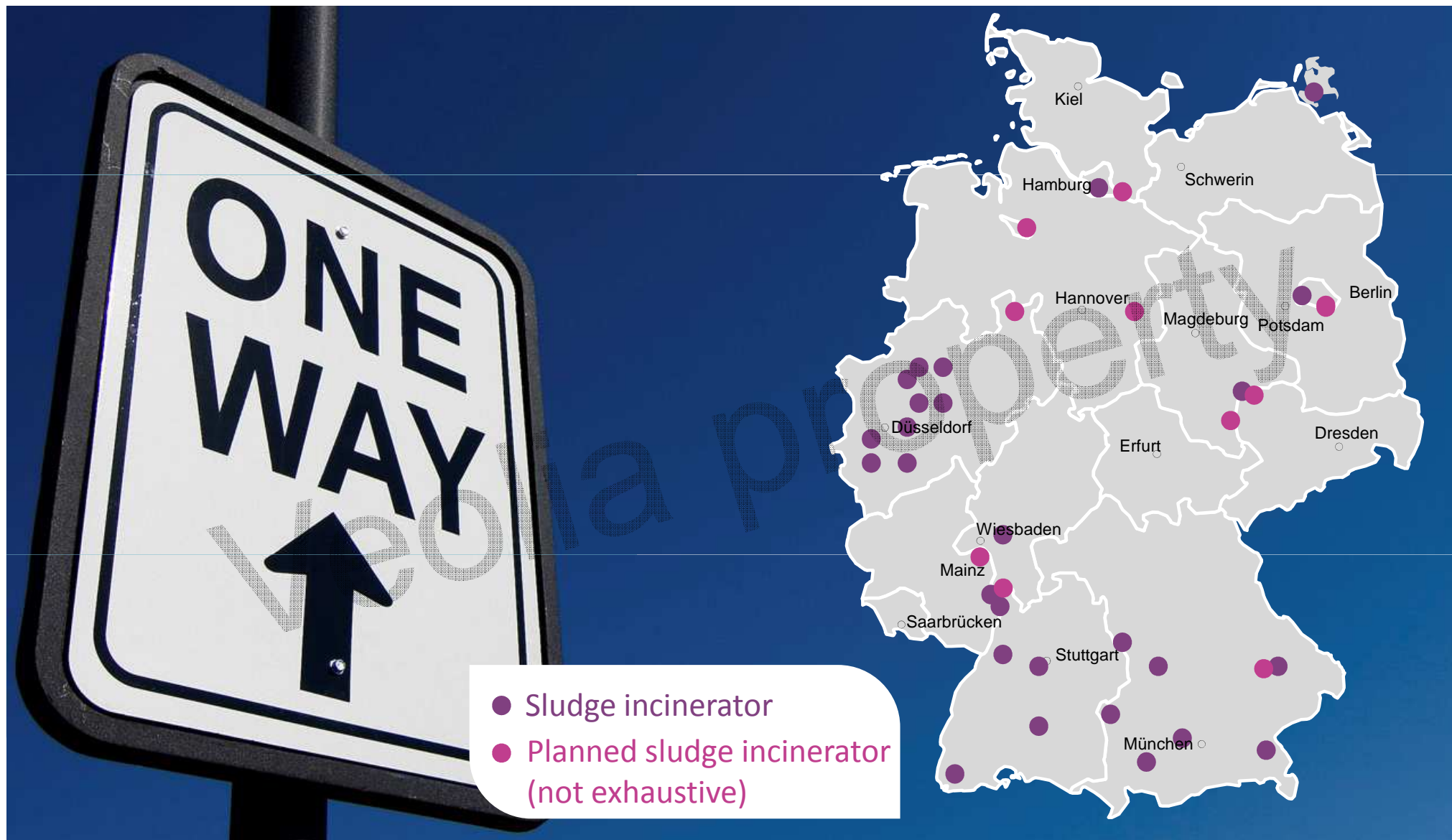
Required incineration capacity by 2032:



Today's situation



The „green“ future?



What would be a sludge incineration world?

For plant owners

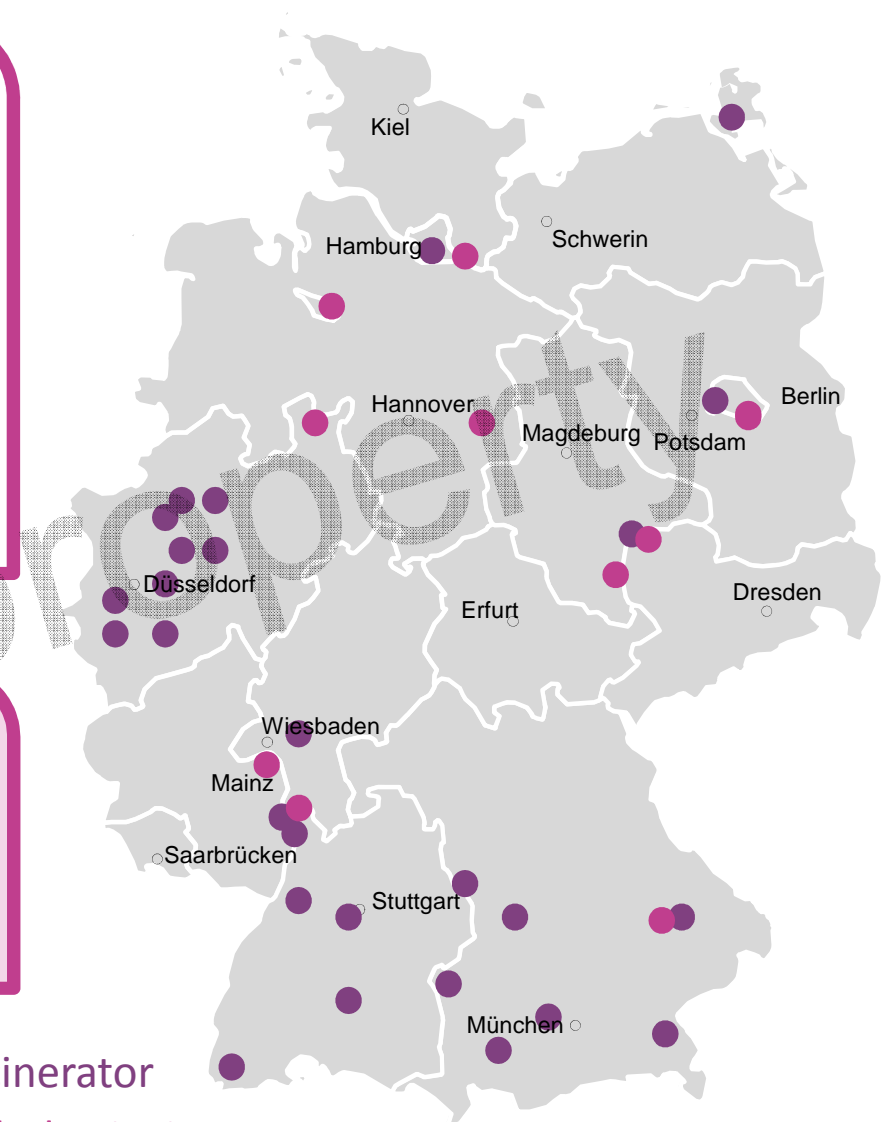
- „Independence“
- Authorization procedures
- Only rentable at large scale

For other users

- No need to worry about P-recovery ...
- Disposal costs increasing!

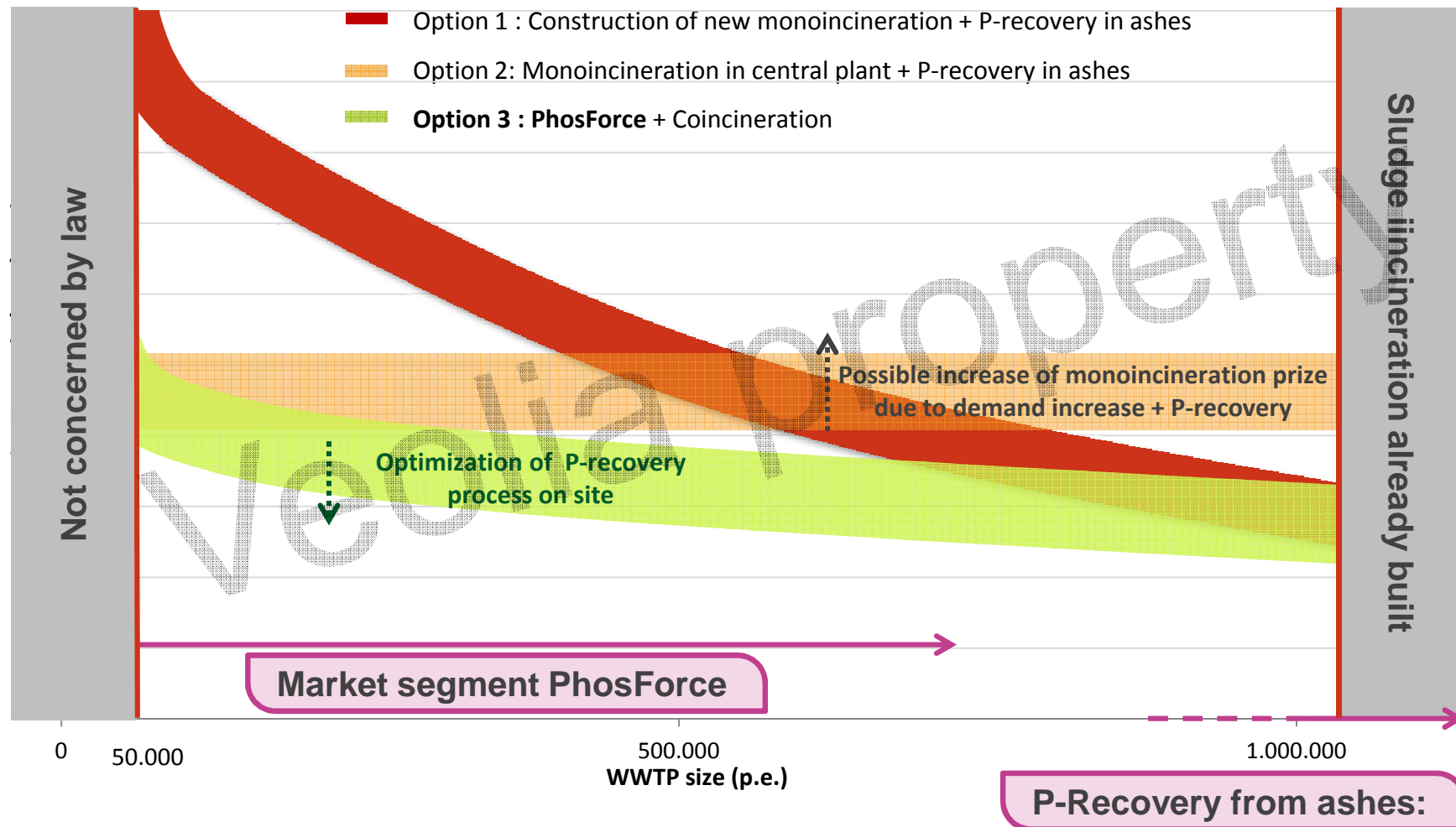
- Requires agreements & partnerships
- Not the best ecological option? (Don't forget other resources, N etc.)
- P problem solved?

- Sludge incinerator
- Planned sludge incinerator

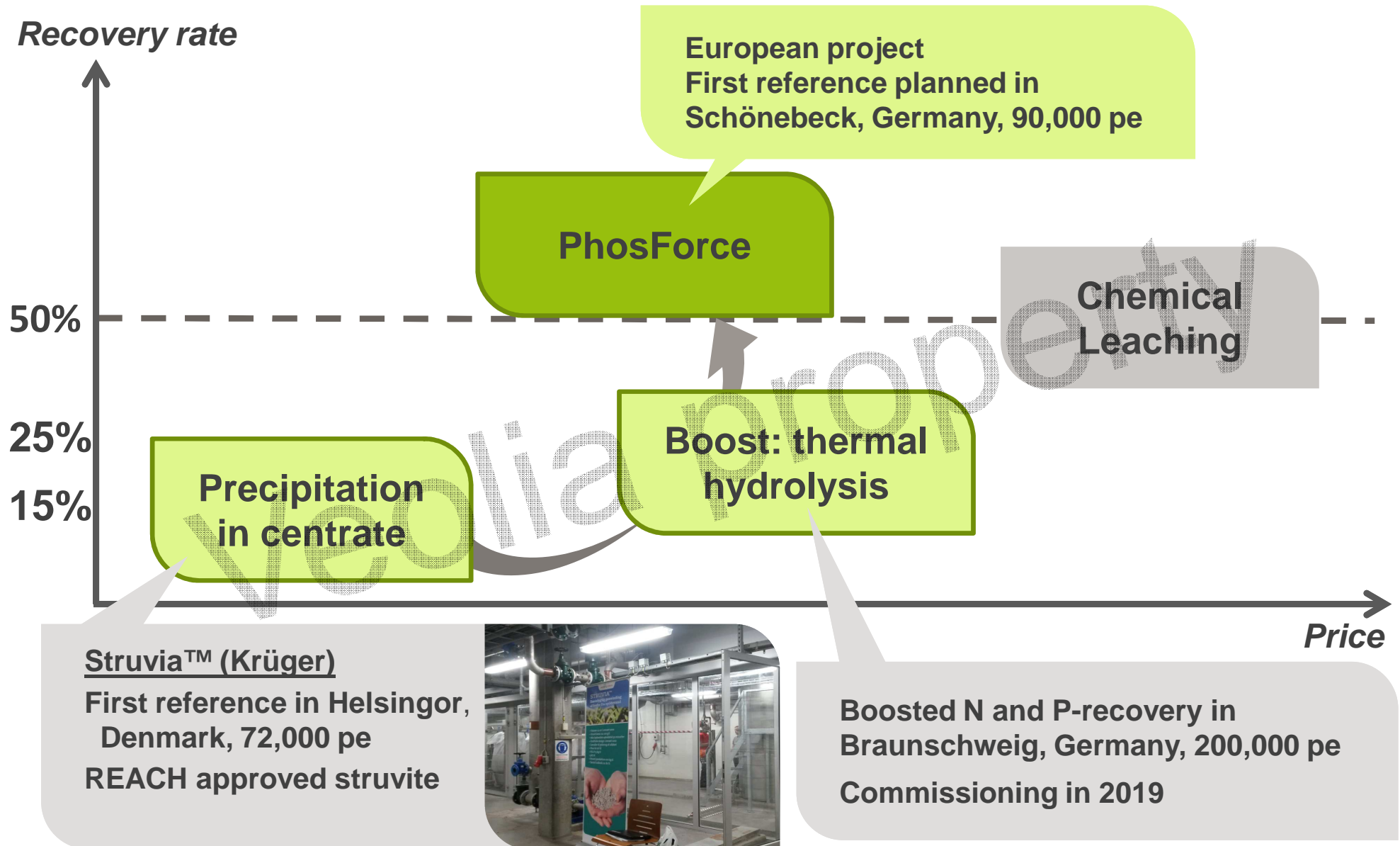


More than 50% recovery AND cost affordable? Veolia local solution = PhosForce

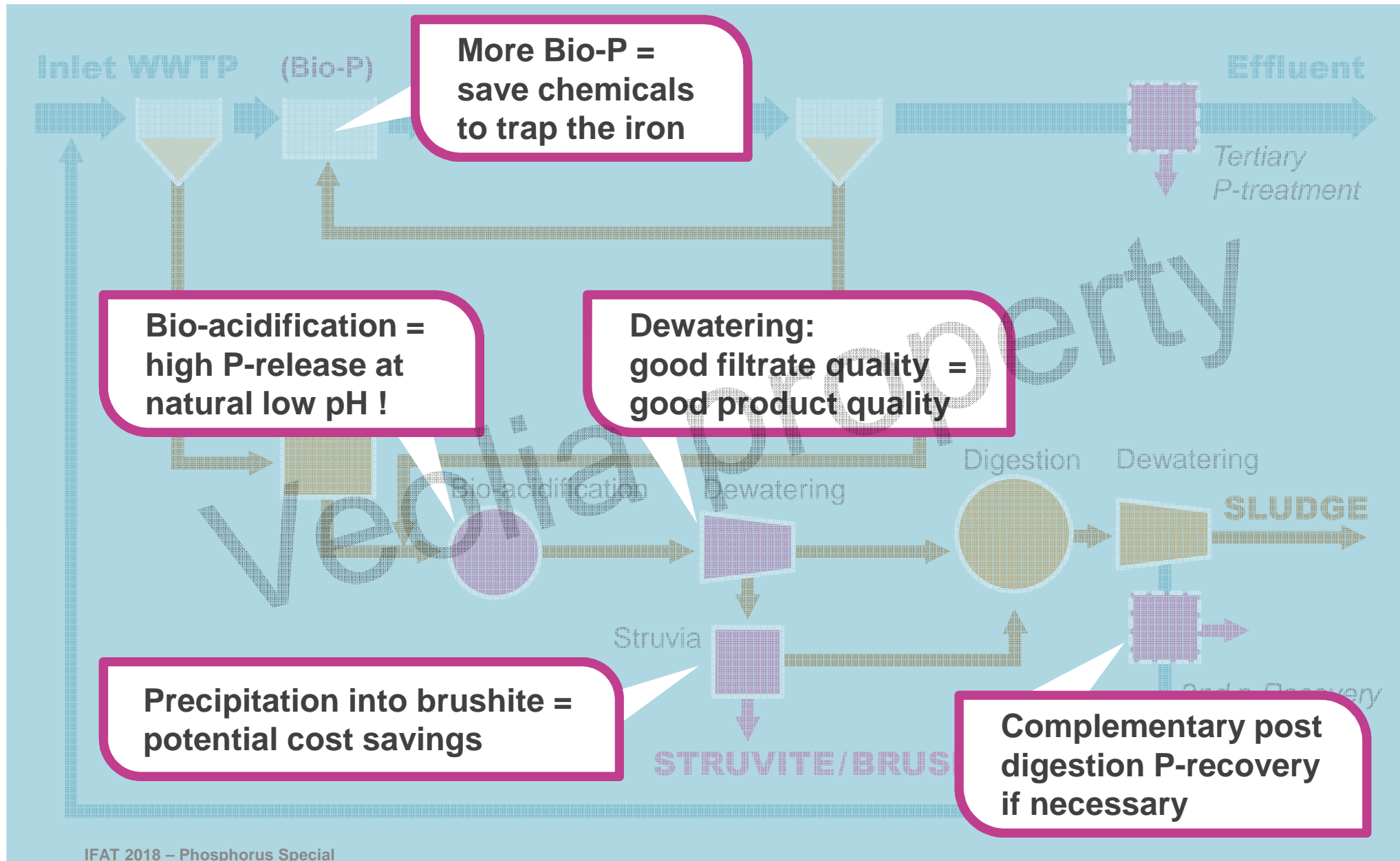
If no sludge incineration on site ...



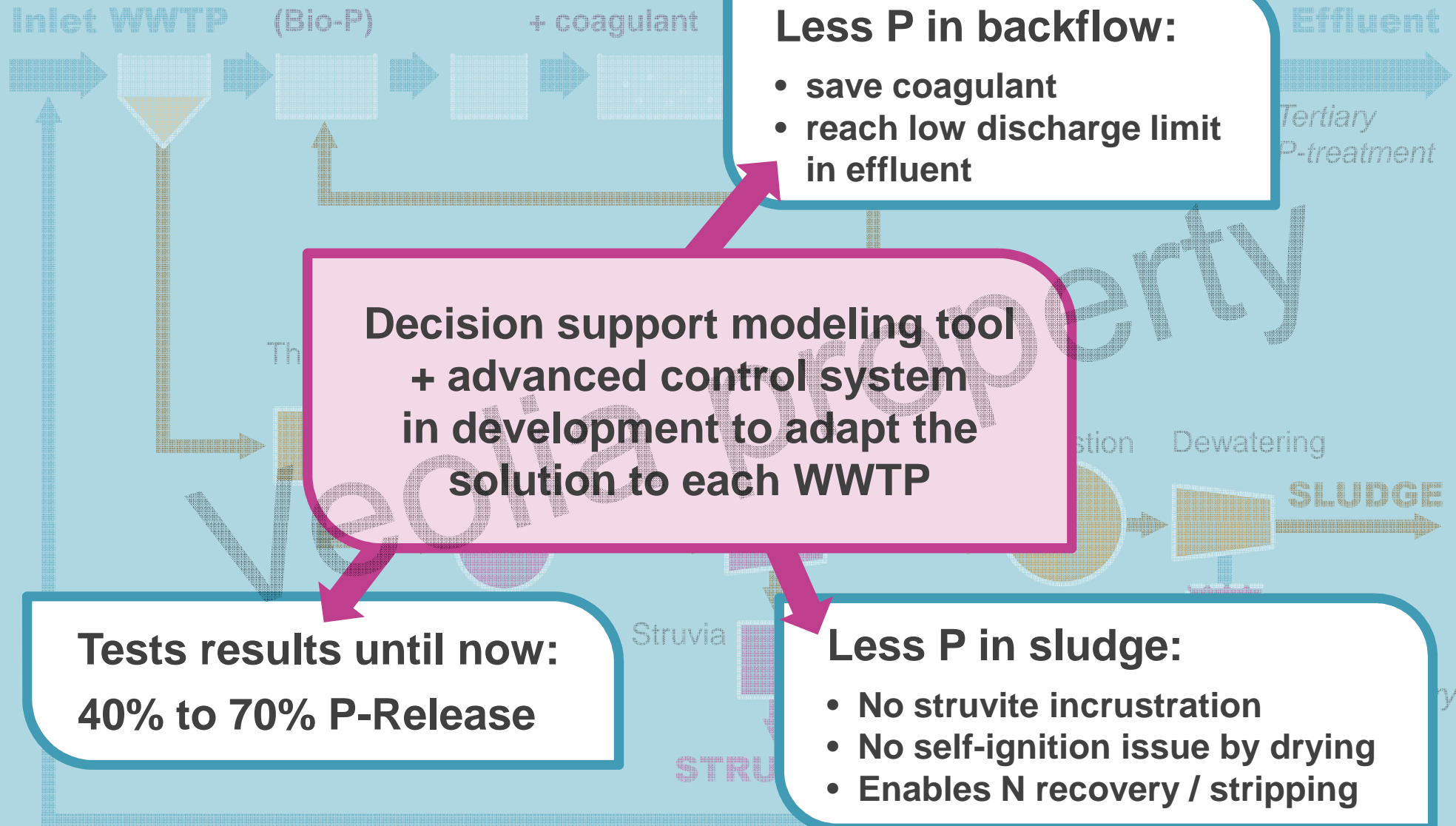
Step by step to PhosForce



The idea: a local solution based on biology

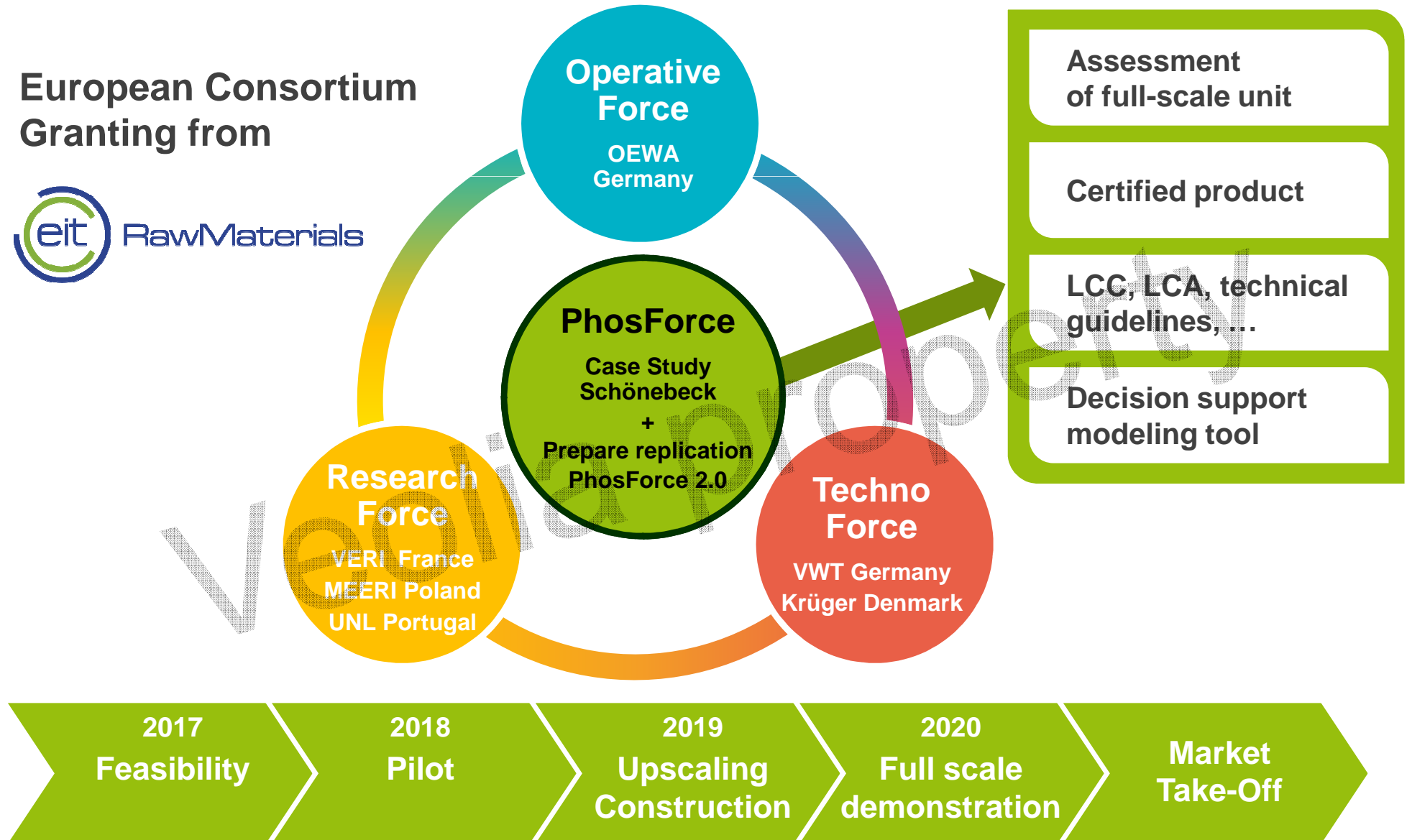


The idea: a local solution based on biology



The PhosForce project

European Consortium
Granting from



From the lab to the field



Conclusions and perspectives

PhosForce:

- from the lab to the field, now in pilot phase
- total costs below sludge (mono) incineration and below other chemical-intensive precipitation solutions

The future sludge market should rely on a mix of solutions:

- dedicated sludge incinerators for large plants and/or very large urban areas
- P-recovery at WWTPs and use of existing/new drying capacities
+ cement kilns or waste/coal firing plants
- We shouldn't „waste“ all the existing incineration capacities but build on them

Dedicated sludge incineration plants should (for sure) be built and are also part of the solution but they are not the only option!



**Think global,
act local !**

Thank You!

Dr. Matthias Staub

matthias.staub@veolia.com

Céline Bouchereau

celine.bouchereau@oewa.de

Christophe Sardet

christophe.sardet@veolia.com

www.veolia.de