



CertifHy - Developing the 1st EU-wide Guarantee of Origin scheme for Premium Hydrogen

Project co-finance by the FCH JU
under FP7:



The research leading to these results has received funding from the European Union's Seventh Framework Programme (FP7/2007-2013) for the Fuel Cells and Hydrogen Joint Technology Initiative under grant agreement n° 633107 - Duration: 24 months (Nov 1st 2014 to October 30th 2016)

Objective:

- Developing consensus on a definition for Premium Hydrogen, including a definition for Green Hydrogen and (non-renewable) Low-carbon Hydrogen.
- Detailed proposal for the 1st EU-wide Guarantee of Origin (GO) scheme
- Roadmap for implementation of the first GO scheme for Premium Hydrogen

Project coordinator



Consortium Partners



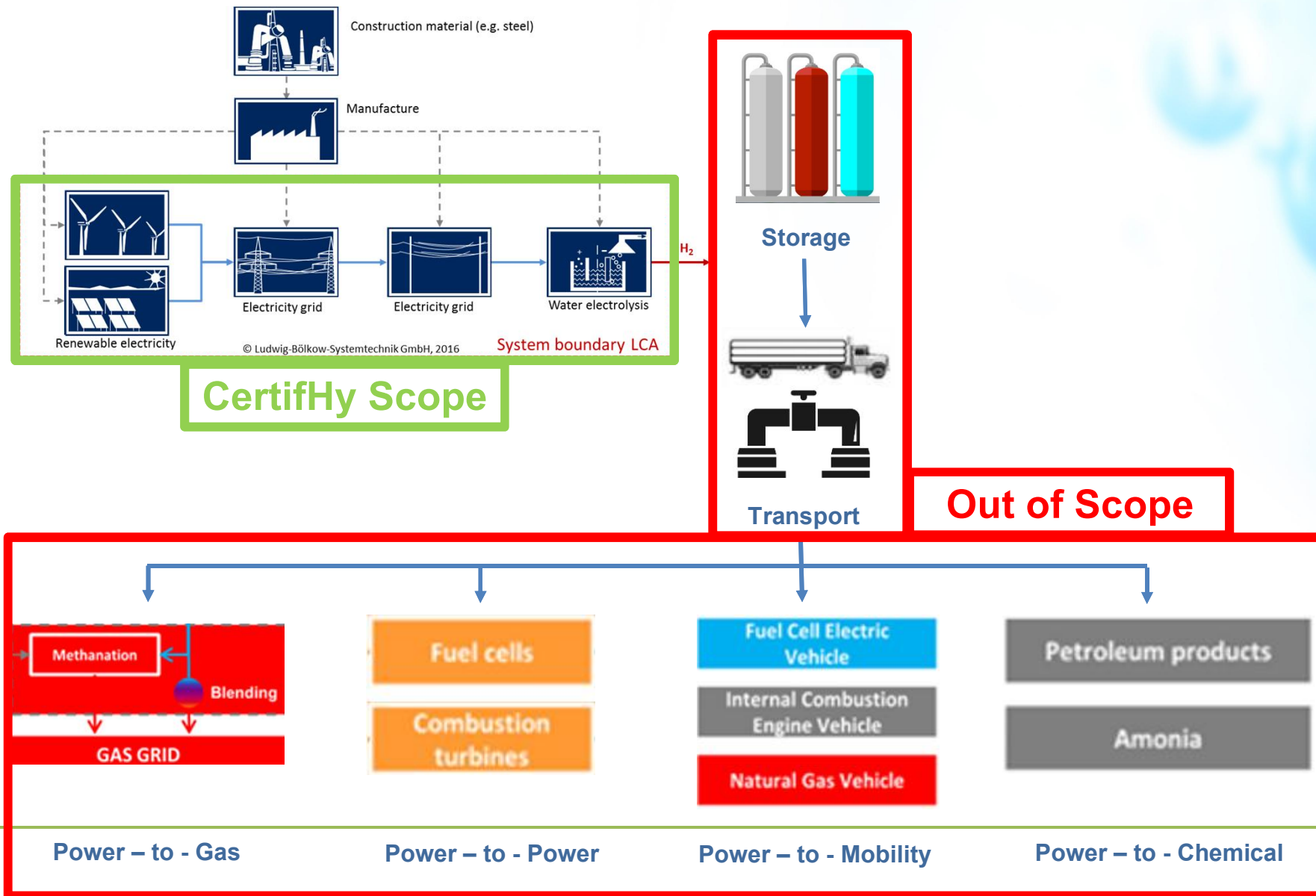
Affiliated Partners

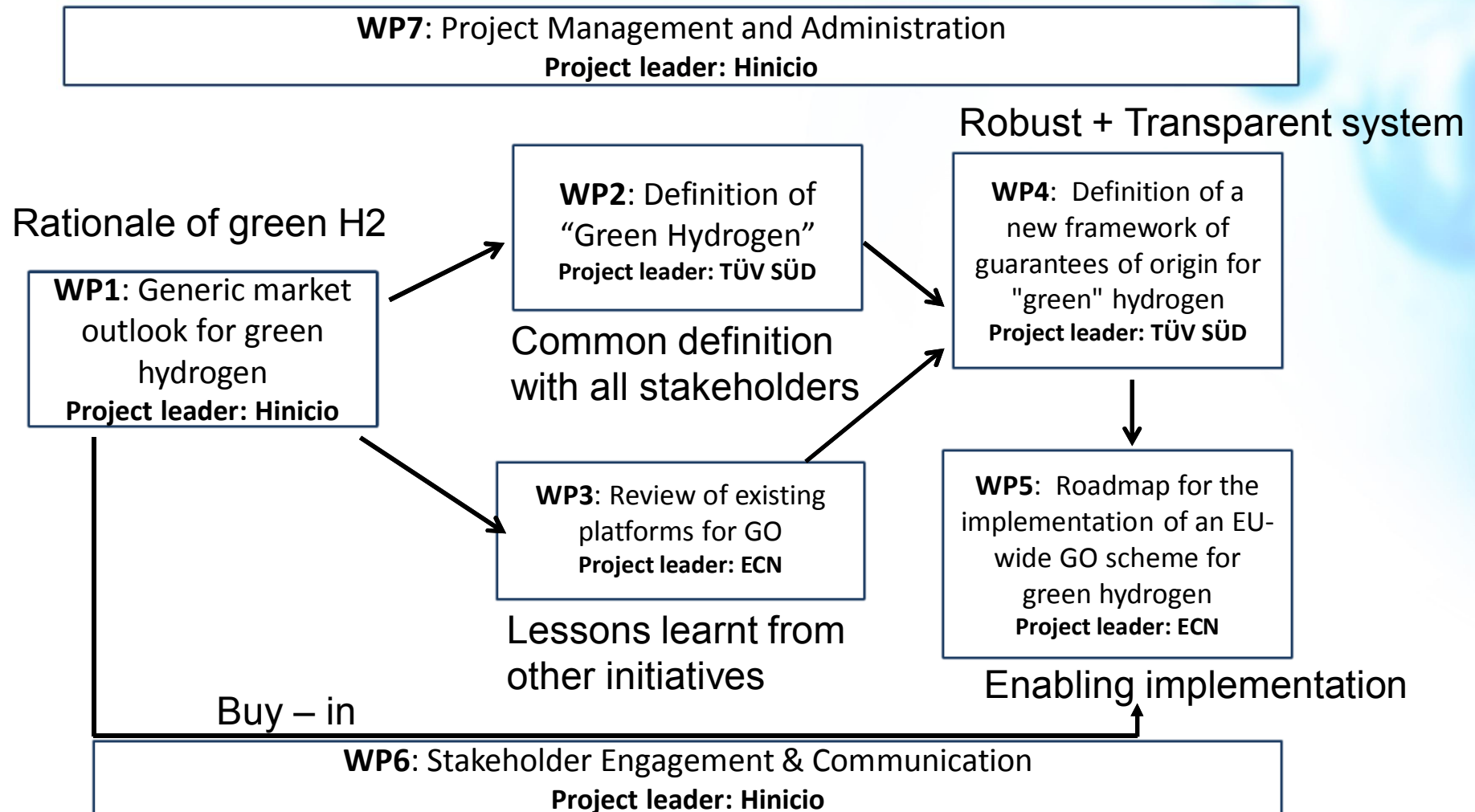


And many other stakeholders...



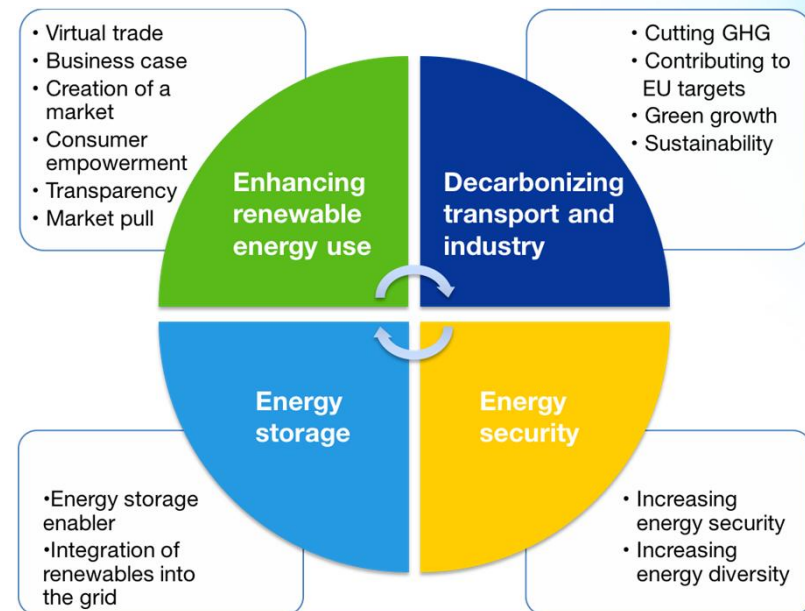
Step-by-step
consulting
process





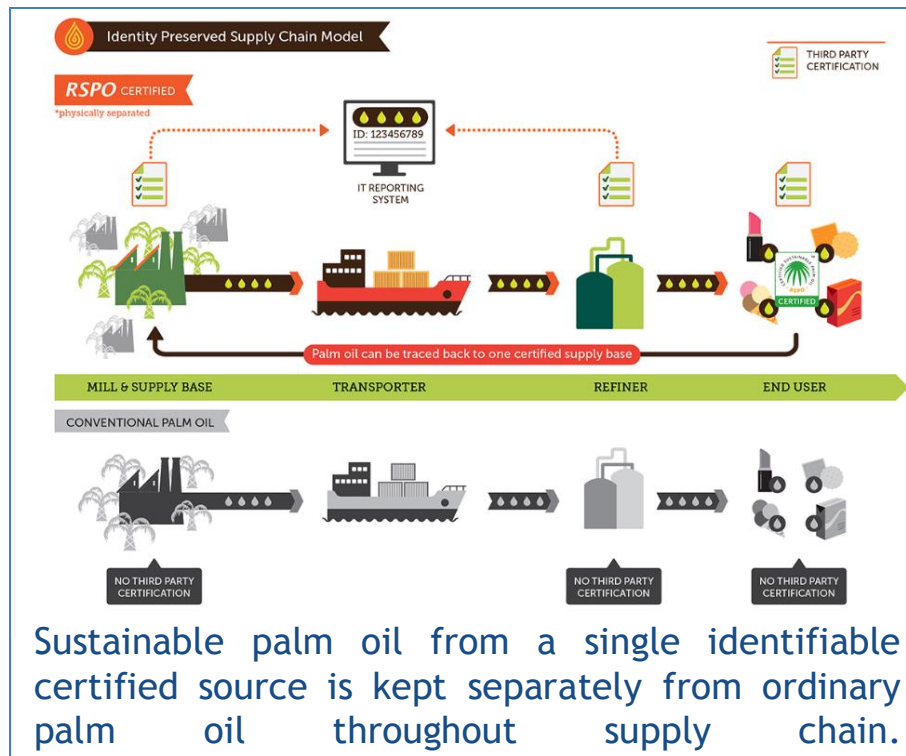
- CertifHy will boost demand and supply of Premium Hydrogen throughout Europe by the creation of a market for Premium Hydrogen
- Premium Hydrogen can help Europe become the number one in renewables and reach EU targets of cutting 80- 95% of greenhouse gas emissions by 2050.
- Global demand for hydrogen = 50 Million tons by 2025
- 3,5% hydrogen market growth per year
- 50 - 60% of all hydrogen for the growing market of transportation will originate from renewable or low-carbon sources by 2030.

Benefits of an EU-wide GO scheme for Premium Hydrogen



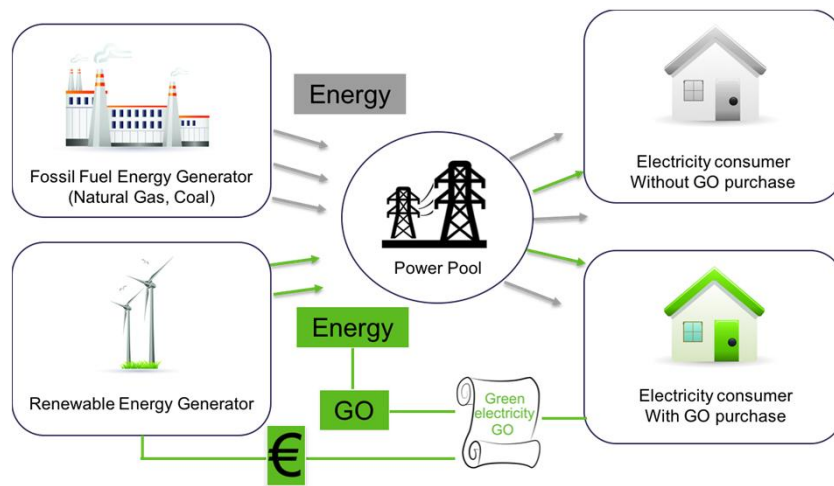
- A **Guarantee of Origin (GO)** guarantees the origin of a product and provides information to customers on the source of their products.
- **Examples:** Fair trade (coffee, oranges), Palm oil, green electricity etc.

Example: Palm Oil - Identity preserved vs. Book & Claim Supply Chain Model

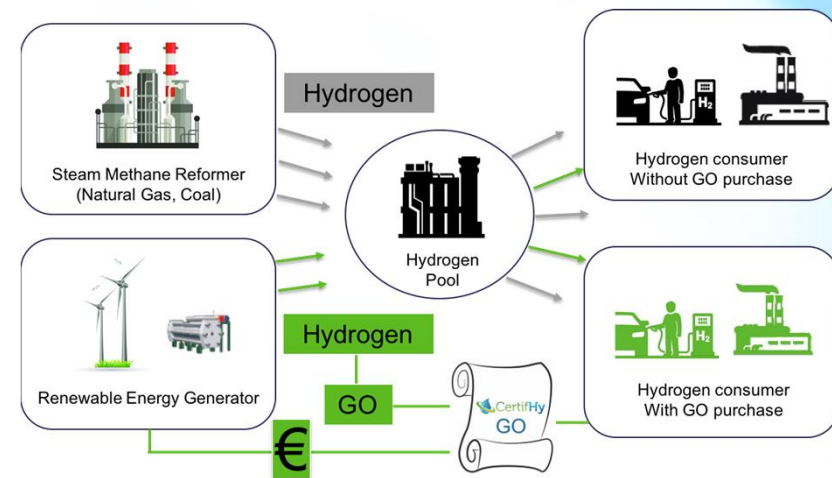


What is a Guarantee of Origin scheme? – other examples

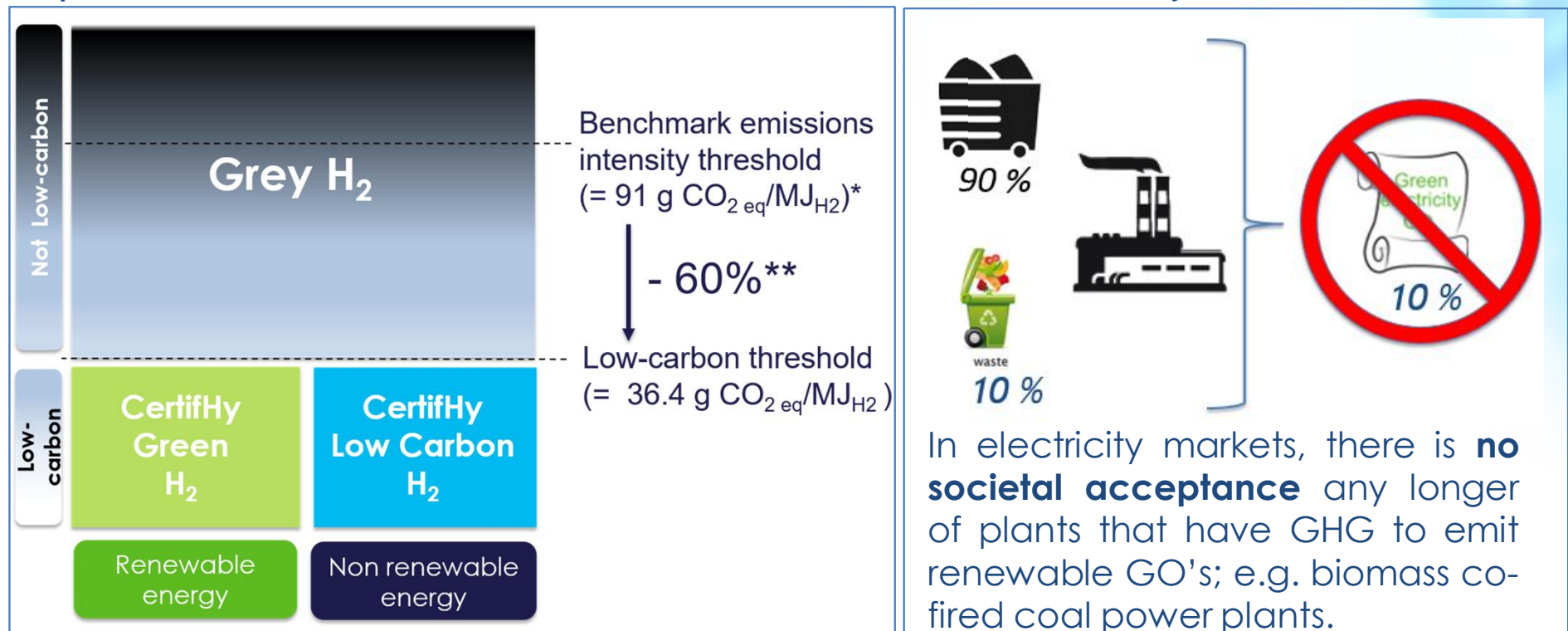
Renewable electricity GO scheme



Green hydrogen GO scheme



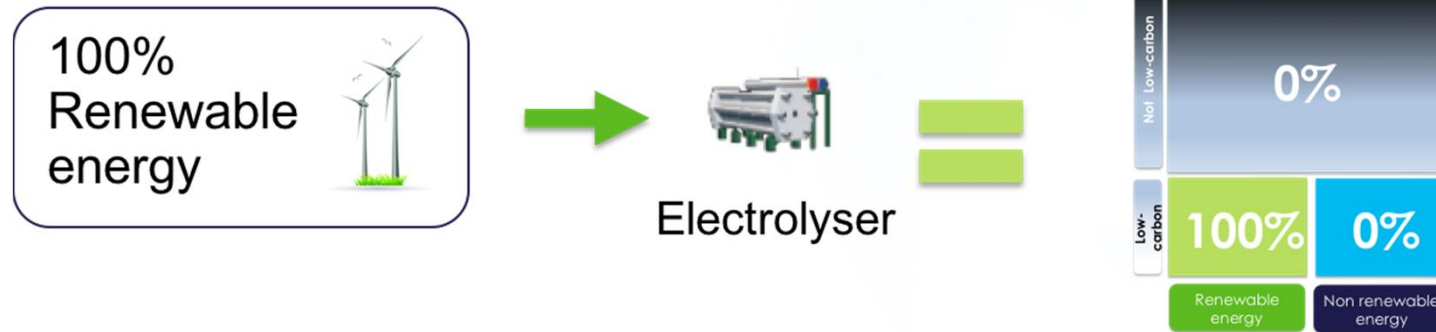
- Premium Hydrogen is hydrogen produced with low carbon emissions and includes CertifHy Green Hydrogen and CertifHy Low Carbon Hydrogen.
- For **Green Hydrogen**, renewable Feedstock and GHG Emissions of hydrogen producers are addressed: similar trend in renewable electricity GOs.



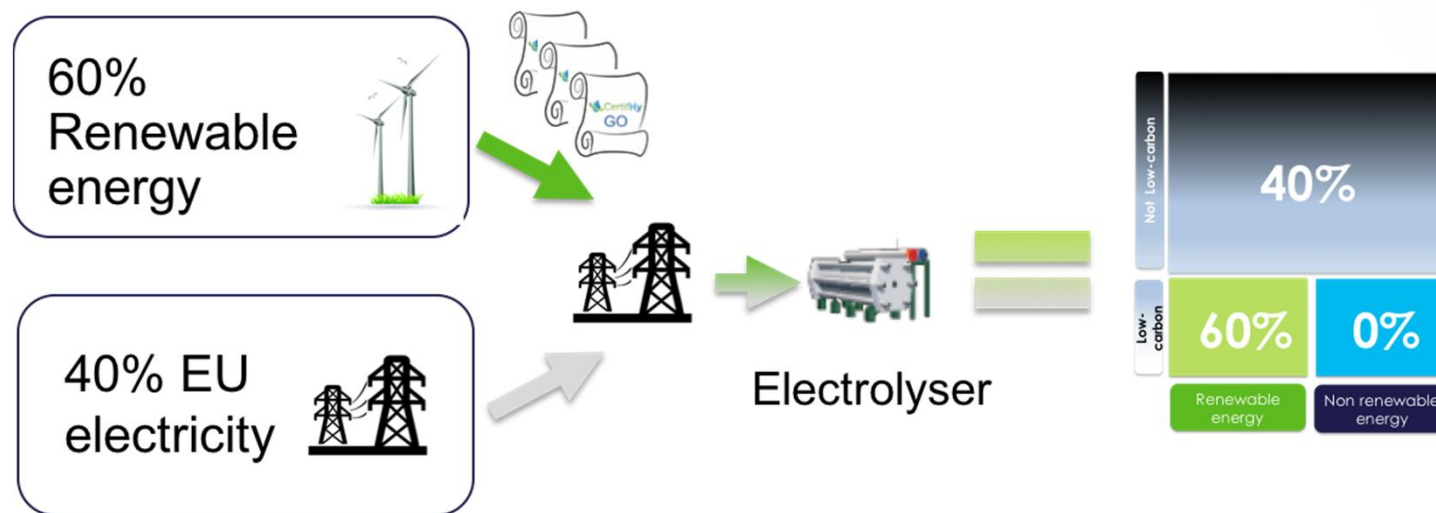
* Best Available Technology = Natural gas steam methane reforming >95% of H₂ merchant market⁸

** cfr RED reduction requirement for biofuels in 2018

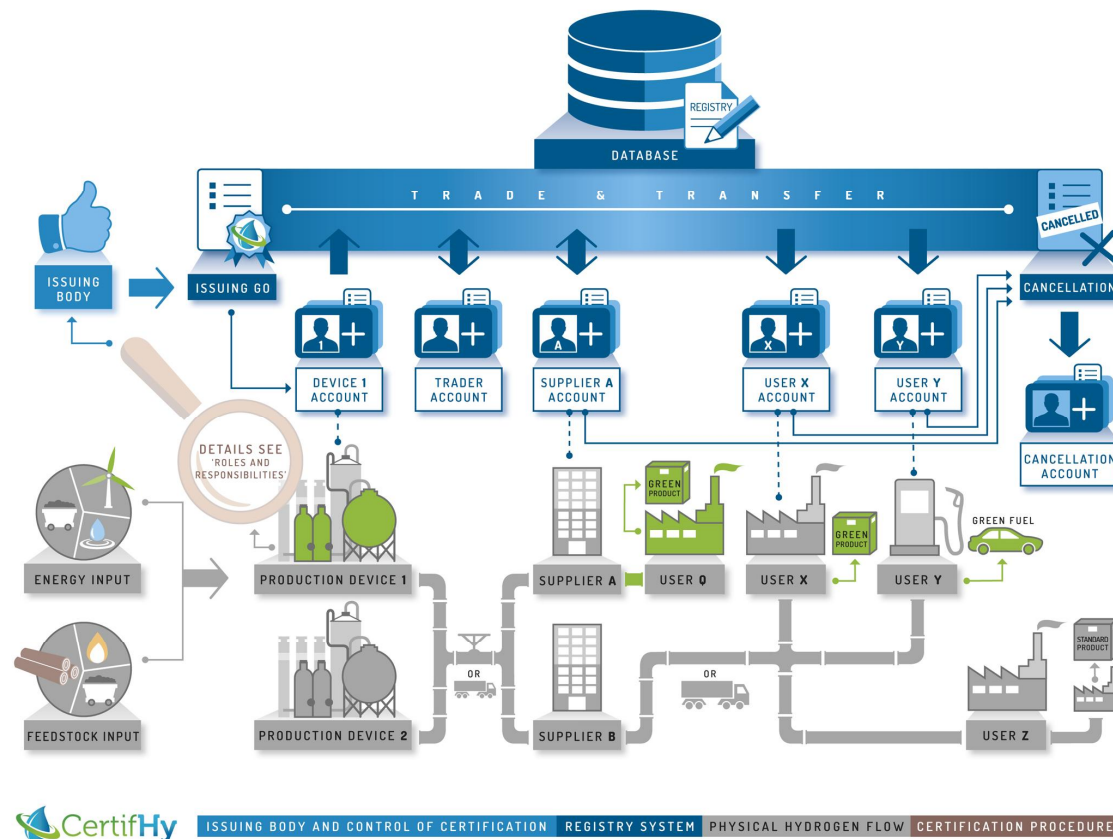
Example 1: 100% CertifHy Green Hydrogen



Example 2: 60% CertifHy Green Hydrogen

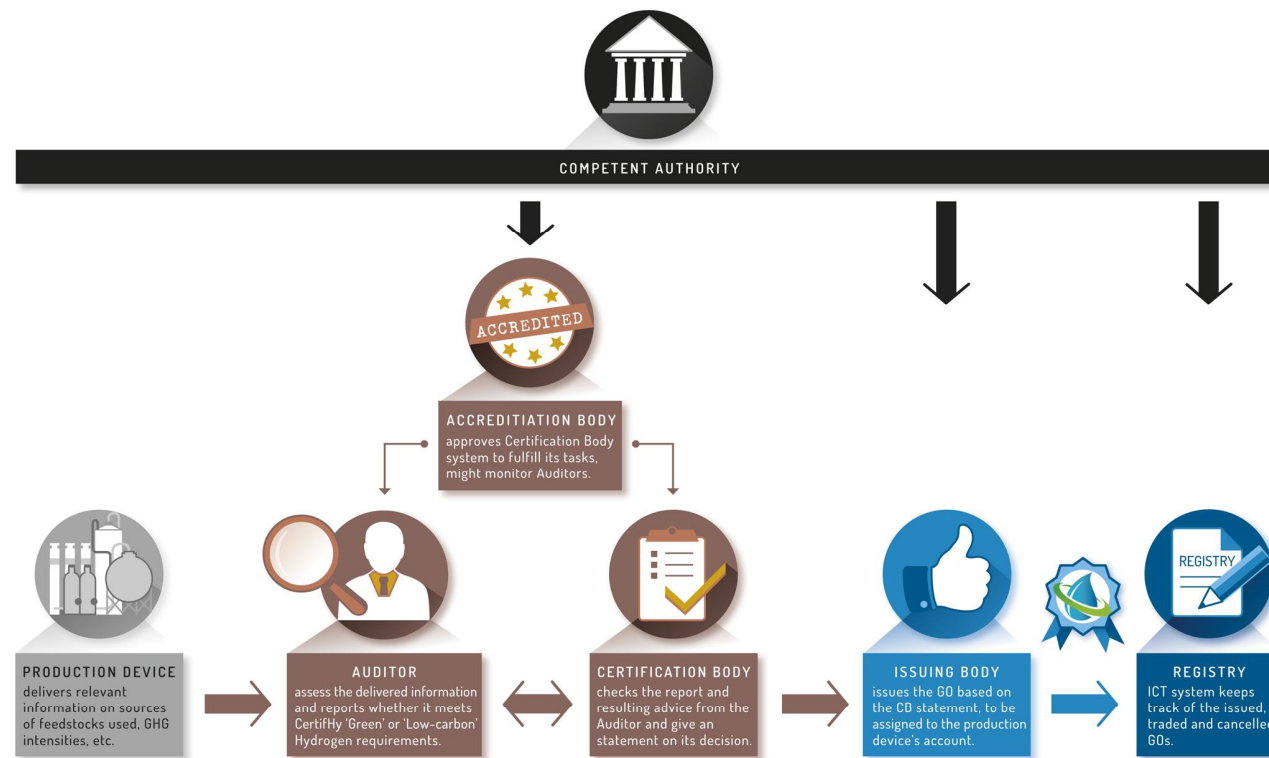


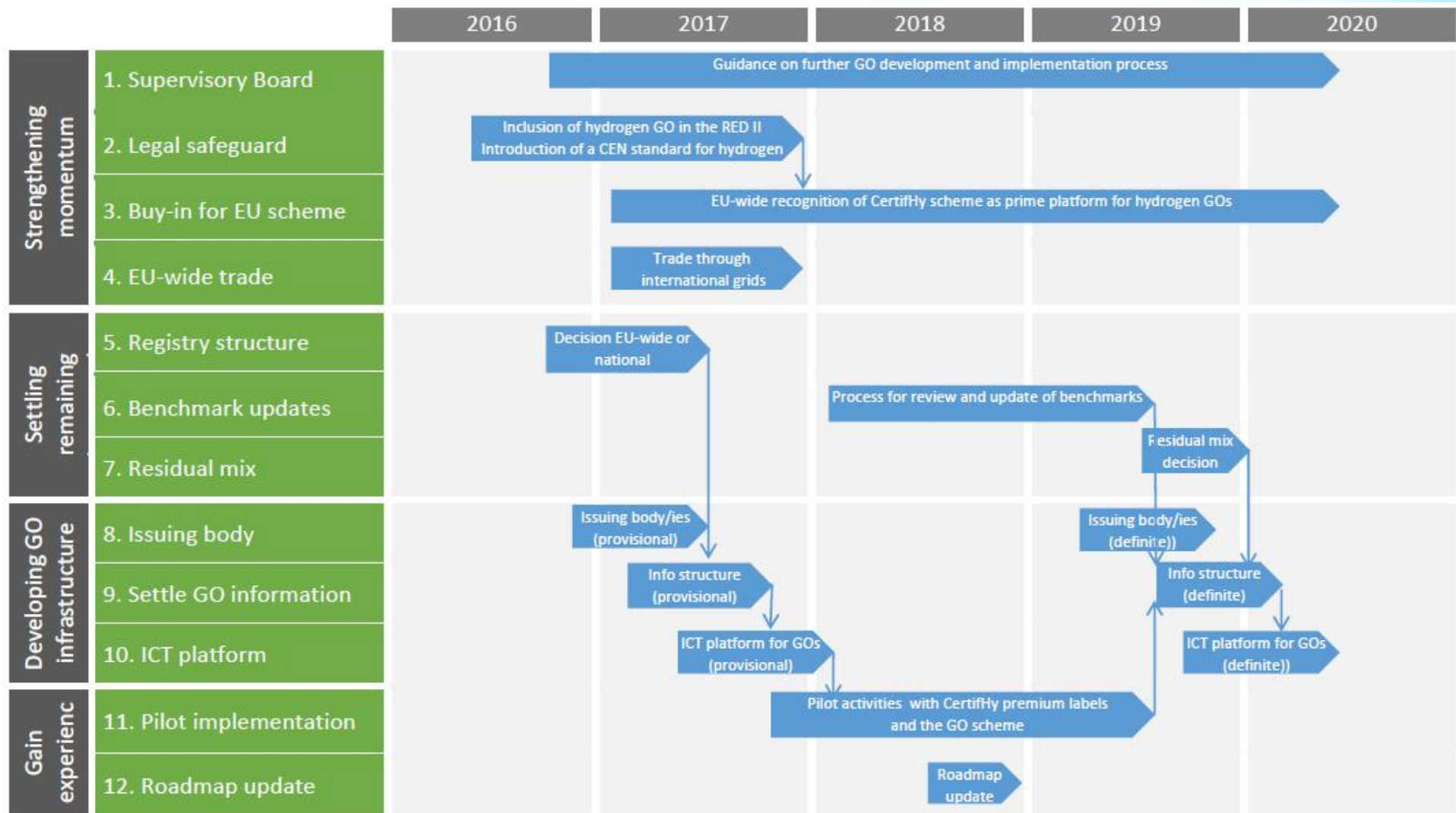
The proposed Premium Hydrogen GO scheme decouples the premium attribute from the physical flow of the product and makes Premium Hydrogen available EU-wide, independently from its production sites, just like renewable electricity or sustainable palm oil GO's.



Organization of the GO scheme

GO structure





Action		Start	Completion	Involved parties	Key results to be delivered
First challenge: Strengthening momentum					
1	Supervisory Board	Late 2016	2020, at scheme implementation	Policy makers (EU and MS), industry (full-chain), NGOs, GO&label experts	Guidance on the further GO development and implementation process
2	Legal safeguard	Mid- 2016	End 2017	CertifHy consortium, EC DG ENER and other relevant DGs	Inclusion of a hydrogen GO in the RED II
3	Buy-in for EU scheme	Early 2017	2020, and beyond	Supervisory Board, active role for all board members	EU-wide recognition of CertifHy scheme as the prime platform for hydrogen GOs
4	International trade	Early 2017	End 2017	EC DG ENER, Supervisory Board	Possibility to trade hydrogen GOs through international grids
Second challenge: Settling remaining issues and open points					
5	Registry structure	End 2016	Mid-2017	Supervisory Board	Decision on EU versus national registries
6	Benchmark updates	Early 2018	Mid-2019	Supervisory Board, issuing body	Process for review and update of benchmarks
7	Residual mix	Mid-2019	End-2019	Supervisory Board	Final decision on the approach on this matter, on the basis of pilot outcomes.
Third challenge: Developing required GO infrastructure					
8	Issuing body	End 2016 (p) Earl. 2019 (d)	Mid-2017 (p) End 2019 (d)	Supervisory Board, AIB	Appointment of a hydrogen GO issuing body
9	Settle GO information	Early 2017(p) Mid-2019 (d)	End 2017 (p) Early 2020 (d)	Issuing body, Supervisory Board	Final GO information structure
10	ICT platform	Mid-2017 (p) Late 2019 (d)	End 2017 (p) Mid-2020 (d)	Issuing body, Supervisory Board	An operating ICT platform for GOs
Fourth challenge: Gaining practical experience					
11	Pilots	End 2017	Mid-2019	Supervisory Board, participants	Lessons on label value, GO scheme, res. mix
12	Roadmap update	Mid-2018	End 2018	Supervisory Board	Actualisation of the roadmap

The implementation of CertifHy is supported by international leading stakeholders of a wide range of industries

	ArevaH2Gen	Air Liquide	BMW	Colruyt	EBA	Hydrogenics	Hygear	Hychico	Linde	NG	Polito	Teesing	Toyota	WaterstofNet
Definitions of the two types of premium hydrogen	x	x	x	x	x	(x)	x	x	x	x	x	x	x	x
Guidelines for the setup of the GO scheme	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Roadmap for the implementation	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Participation of Stakeholder Platform	x	x	x	x	x	x	x		x		x	x		x
Set up pilots in which the GOs scheme can be tested	x	x		x		x	x	x			x			x
Manage / Build ICT system and registry platform														
Act as Issuing body														
Creation of EU-wide buy-in for the GO scheme and the CertifHy labels			x			x	x			x			x	x

THANK YOU FOR YOUR ATTENTION !

Contact us:



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