

H2Uppp LATAM Impact

Driving the Green Hydrogen Industry in Latin America:
The Key Role of the H2Uppp Programme



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Understanding the challenge

- i. Global hydrogen outlook towards 2030
- i. Key challenges behind cancelled hydrogen projects
- i. Public support across the hydrogen project lifecycle

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The H2Uppp approach in Latin America

- i. H2Uppp programme overview
- i. Hydrogen development context in Latin America
- i. Key challenges and thematic responses in LATAM

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Evidence from the PPP portfolio

- i. PPP portfolio insights across the hydrogen value chain

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Key Takeaways

The International Hydrogen Ramp-up Programme (H2Uppp) supports entrepreneurial engagement in the ramp-up of hydrogen in the Global South. It is a funding programme of the Federal Ministry for Economic Affairs and Energy (BMWE), implemented by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH.

Understanding the Challenge



Hydrogen Goals Overview

Green hydrogen is crucial for the energy transition, addressing one of its greatest challenges: decarbonizing hard-to-abate sectors.

Hard-to-abate Sectors



Existing Industry use



New Industry Feedstock



Building & Industry Heat



Transport



Power generation

2025



We are here

- 1% of the global H₂ production is considered low-emission (0,8Mton in total).
- 9% of the announced production capacity has reached FID.
- 4.3 BUSD were invested in 2024 and an 80% increase is expected in 2025.

2030



Decarbonization targets

- 45% of hydrogen produced will be low-emission. >80% from **new applications in industry, energy, and transport.**
- Reach **70 Mt** of low-emission hydrogen per year.
- Install **590 GW** of global electrolyzer capacity.

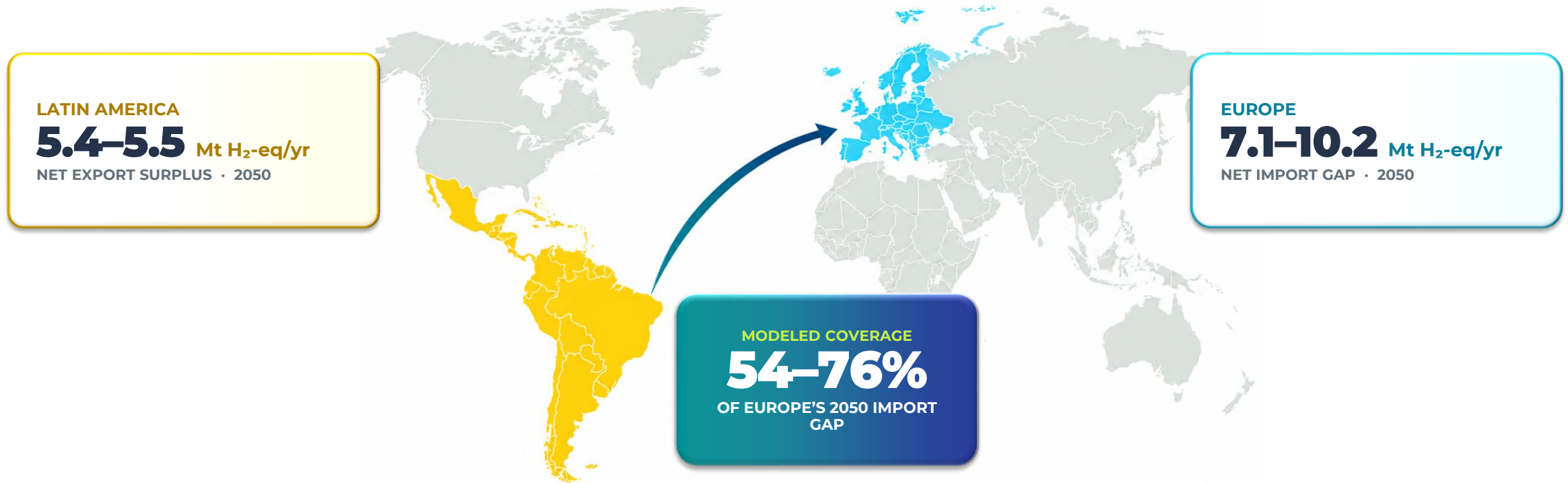
2050



- Hydrogen is expected to account for **10% of global final energy consumption.**
- Establish a global and sustainable production of **420 Mt per year.**
- Operate a global infrastructure with **3.300 GW** of electrolyzer capacity.

Europe needs hydrogen molecules. Latin America can supply them.

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73–80%

of interregional H₂ trade
moves as commodities
20–27% moves as pure H₂

SHARE OF EACH CARRIER'S OWN 2050 DEMAND TRADED INTERNATIONALLY

AMMONIA

30–35%

e-METHANOL

14–18%

DRI

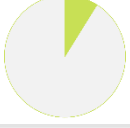
14–21%

GASEOUS H₂*

9–14%

Separate denominators — these percentages do not sum to 100%. Ranges reflect IRENA's two WACC scenarios. *Includes other end uses.

Critical Development Challenges Worldwide Identified in Cancelled Projects *

Challenge Area	Occurrence in Cancelled Projects	Typical Manifestations / Examples
 Regulatory Framework	44% 	• Lengthy and complex permitting processes • Unclear or evolving hydrogen definitions and certification • Delays and uncertainty in public support frameworks
 Economic Viability	28% 	• Cost gap versus fossil alternatives • CAPEX inflation and high cost of capital • Uncertainty around subsidies and support timelines
 Technological Maturity	12% 	• Limited availability of bankable electrolyser suppliers • Scale-up, performance, and supply-chain risk
 Market Uncertainty	9% 	• Lack of long-term bankable offtake agreements • Slow demand ramp-up and unclear price signals
 Others	31% 	• Over-optimistic cost and market assumptions • Projects cancelled before feasibility maturity • Strategic reprioritisation by sponsors

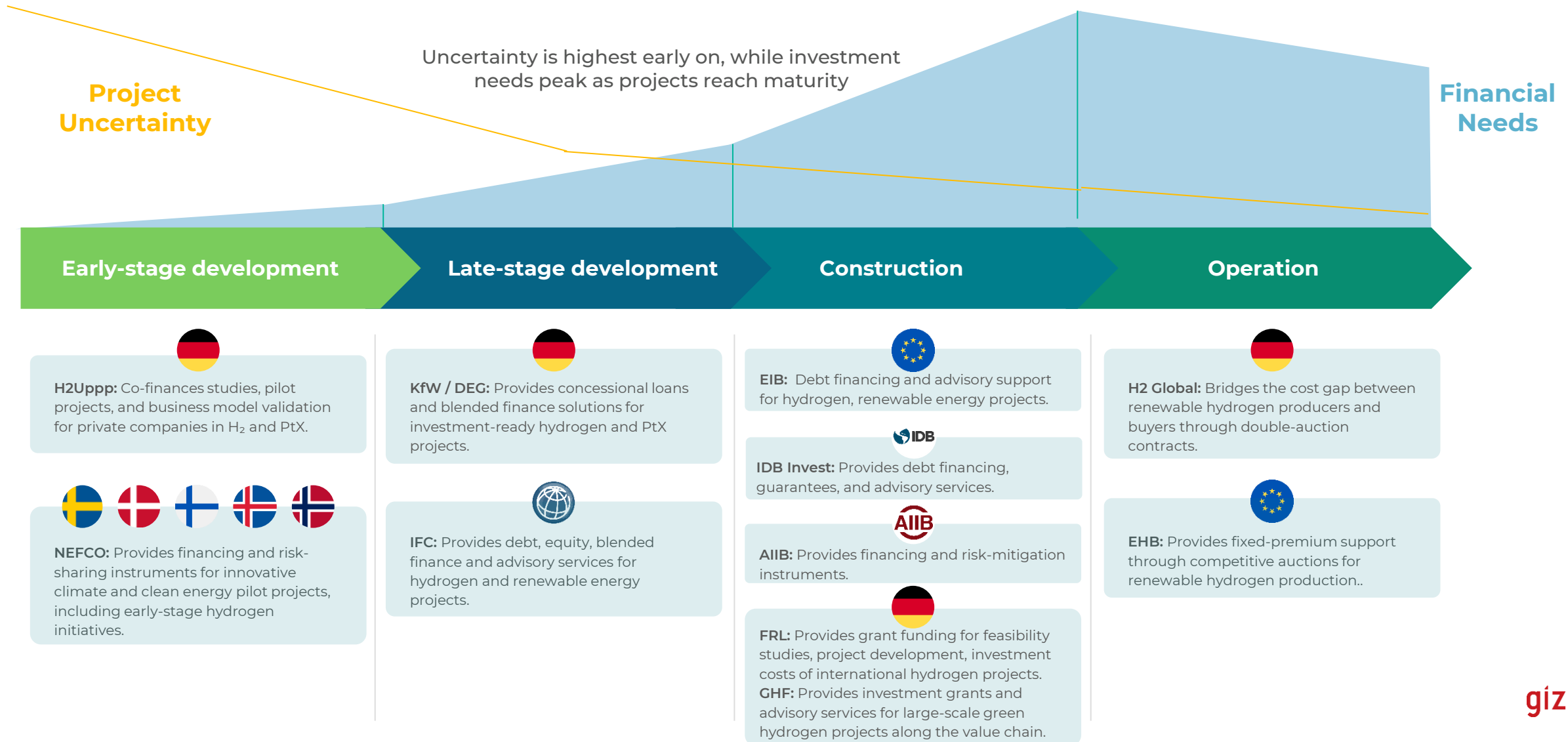
(*) The percentages indicate how frequently each challenge appears among cancelled projects. In many cases, a single project faces several of these barriers simultaneously.

The analysis considers 32 cancelled projects with publicly available information regarding the causes of their cancellation.

Public Support Instruments

Across the Hydrogen Project Lifecycle

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The H2Uppp approach in Latin America



International Hydrogen Ramp-Up Programme (H2Uppp)

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The International Hydrogen Ramp-Up Programme (H2Uppp) supports business participation in promoting hydrogen through the formation of public-private partnerships (PPPs) to **finance studies and activities that accelerate the sector's learning curve.**

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PPPs worldwide with 50+ partner companies



Initiative of the German
Federal Ministry for Economic
Affairs and Energy

giz

Implemented by GIZ



Partner: German Chambers
of Commerce and Industry
(AHKs)



H2Uppp LATAM PPPs

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Since 2022, H2Uppp has supported the matchmaking between European and Latin American companies, as well as studies on knowledge transfer, market analyses, and insights into regulation and emissions certification in Europe and Latin America. Through these activities, the programme has strengthened its regional presence while fostering knowledge exchange and collaboration across the hydrogen ecosystem.



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PARTNER COUNTRIES

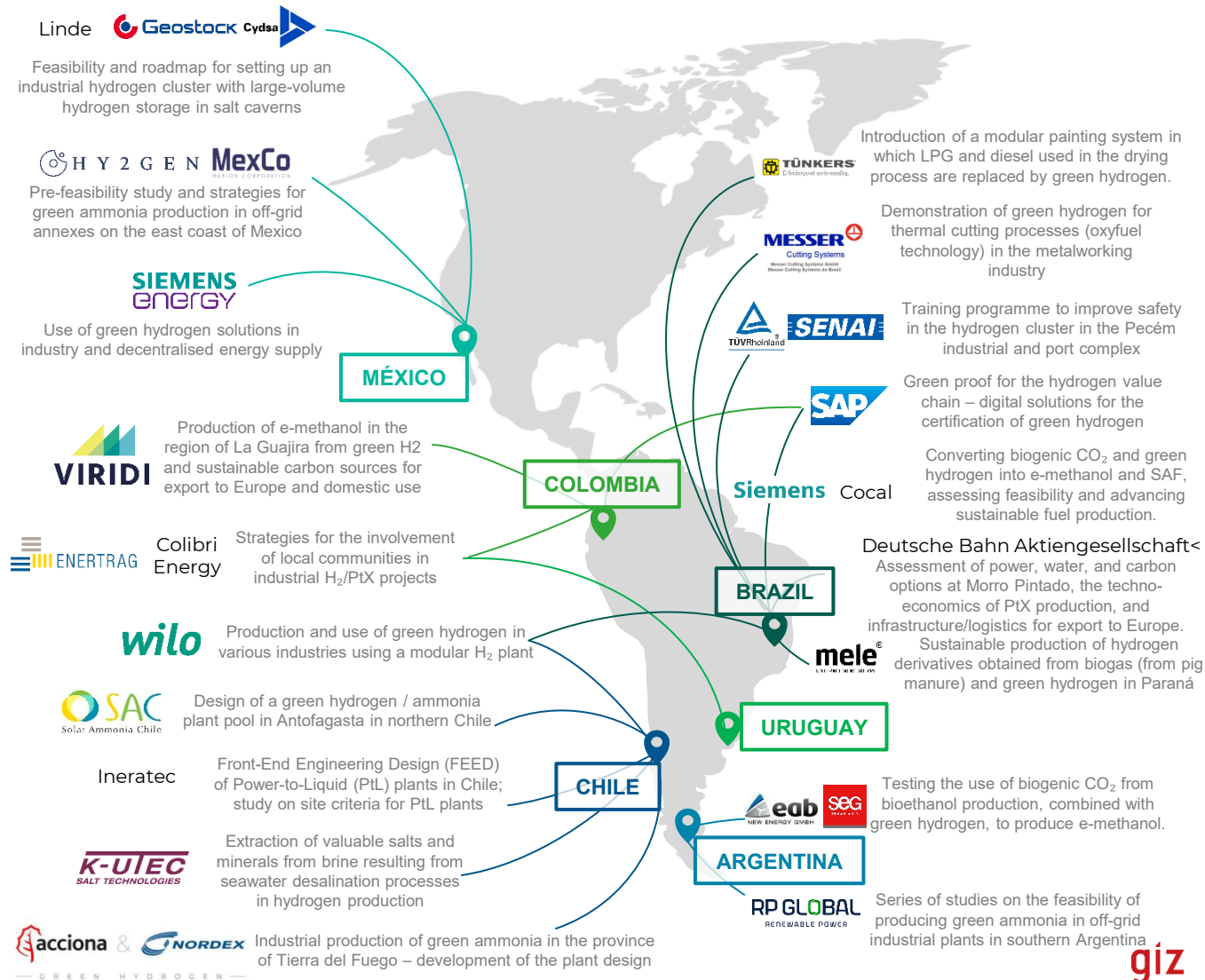
Chile, Brazil, Uruguay, Colombia, Argentina, Mexico



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PUBLIC-PRIVATE PARTNERSHIPS

With 24 different Companies



H2 Governmental Support Measures and Efforts in LATAM

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MEXICO

National Hydrogen Strategy to be formulated



- Current efforts: Hydrogen Roadmap of 2022 & Clean Hydrogen Industrial Strategy of 2024
- Focus: Domestic demand
- By 2030: 4 GW Electrolysis Capacity

Government efforts:

- Laws of 2012 (updated 2024), 2015 and Hydrogen guideline of 2024

COLOMBIA

Colombia's hydrogen roadmap of 2021



- Focus: Domestic demand and export
- By 2030 1-3 GW Electrolysis capacity

Government efforts

- Law of 2021, Decrees of 2022, 2023 and 2024

CHILE

National Green Hydrogen Strategy of 2020



- Focus: Export with local integration
- By 2030: 25 GW Electrolysis capacity

Government efforts

- Laws of 2021, 2022 and proposed Bill of 2025
- Green Hydrogen Strategy Committee
- CORFO as a public development agency



BRAZIL

National Hydrogen Programme of 2022 (PNH2)



- Focus: Domestic market development and export scenarios
- Updates through three-year work plans (last update: 2023)

Government efforts

- Laws of 2024 (14.948 & 14.990) and Complementary Law of 2025
- National Hydrogen Programme Management Committee (Coges-PNH2)

URUGUAY

Uruguay's Roadmap for Green Hydrogen and Derivatives of 2023



- Focus: Export with local integration
- By 2040 9 GW Electrolysis capacity

Government efforts

- Laws of 2021, 2022, Presidential Resolution of 2022, Decree of 2024 and 2026
- H2U Programme (Interinstitutional)

ARGENTINA

National Strategy for the Development of the H₂ Economy of 2023



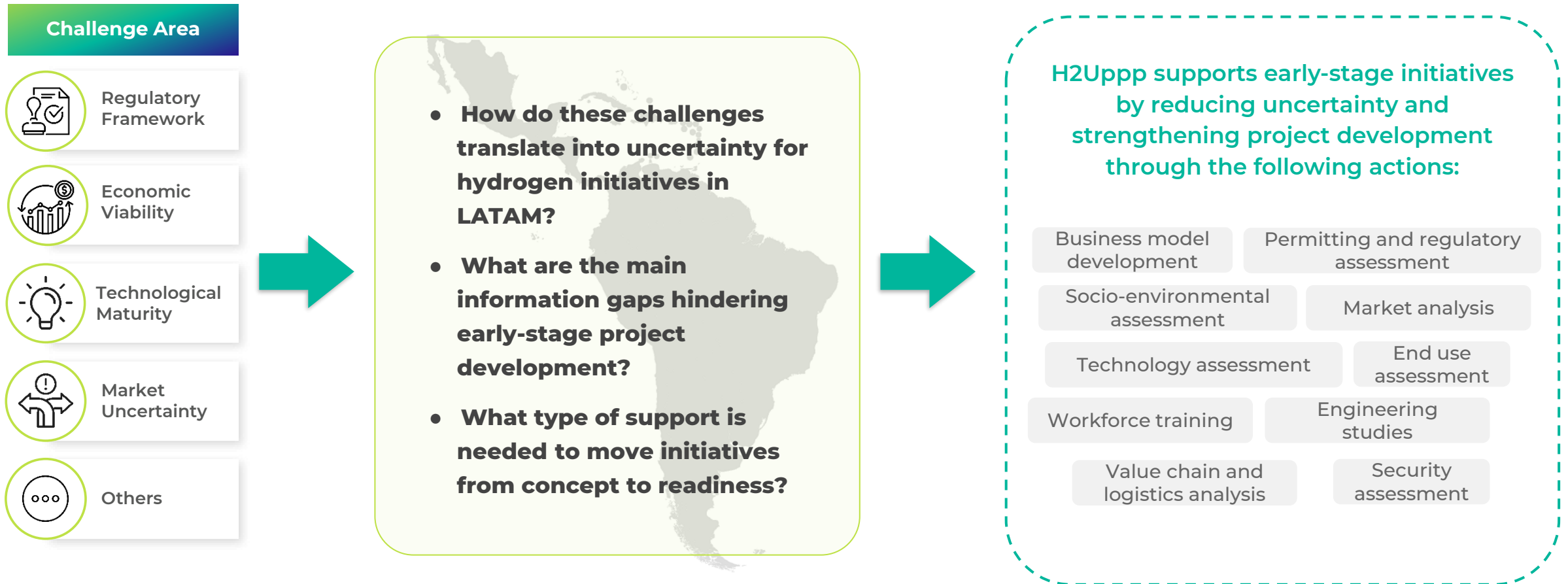
- Focus: Export
- By 2050: 30 GW Electrolysis capacity

Government efforts

- Law of 2006 and Proposed Regulatory Framework of 2025
- Intersectoral Hydrogen Roundtable

Addressing Key Hydrogen Project Challenges In LATAM

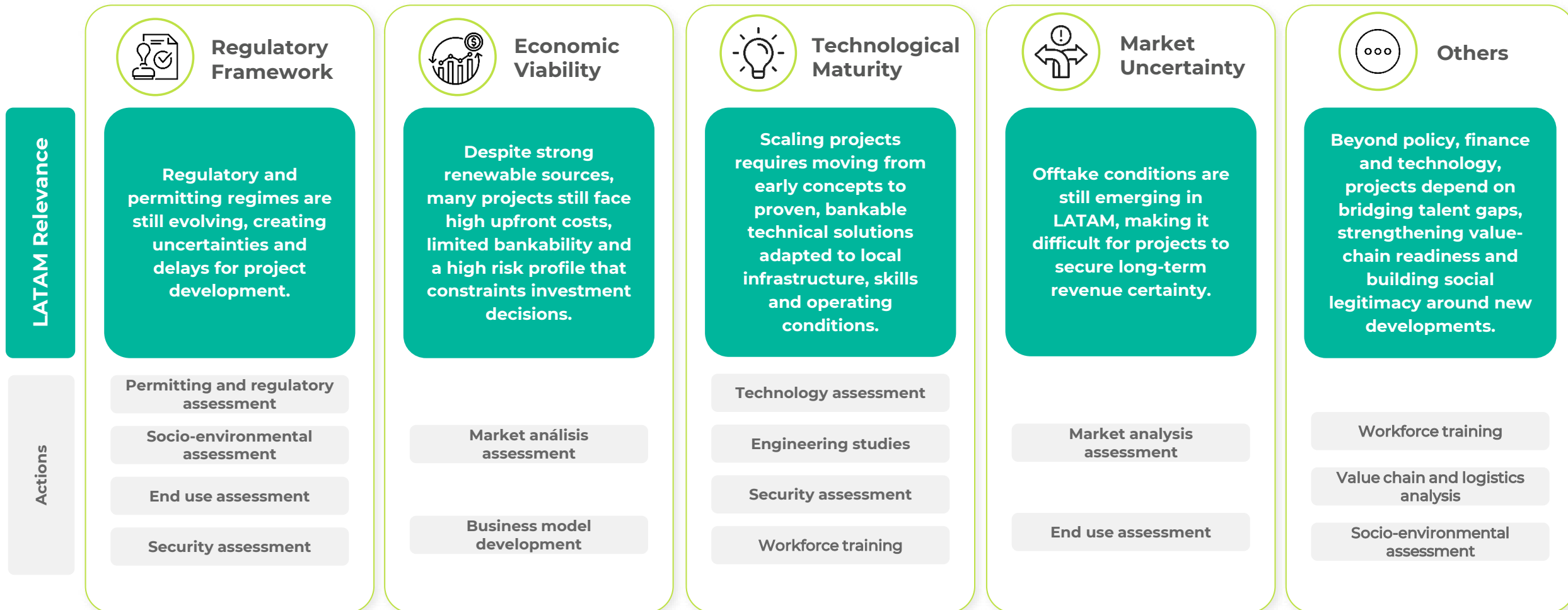
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LATAM Challenges and Mitigation Measures

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Key hydrogen project challenges take specific forms in the LATAM context (shown in green); the actions below highlight the main areas of intervention used to mitigate them



Key Topics Addressed by H2Uppp

PPP Projects in LATAM

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Overview of studies and analyses conducted within H2Uppp PPPs across LATAM countries, broken down by action

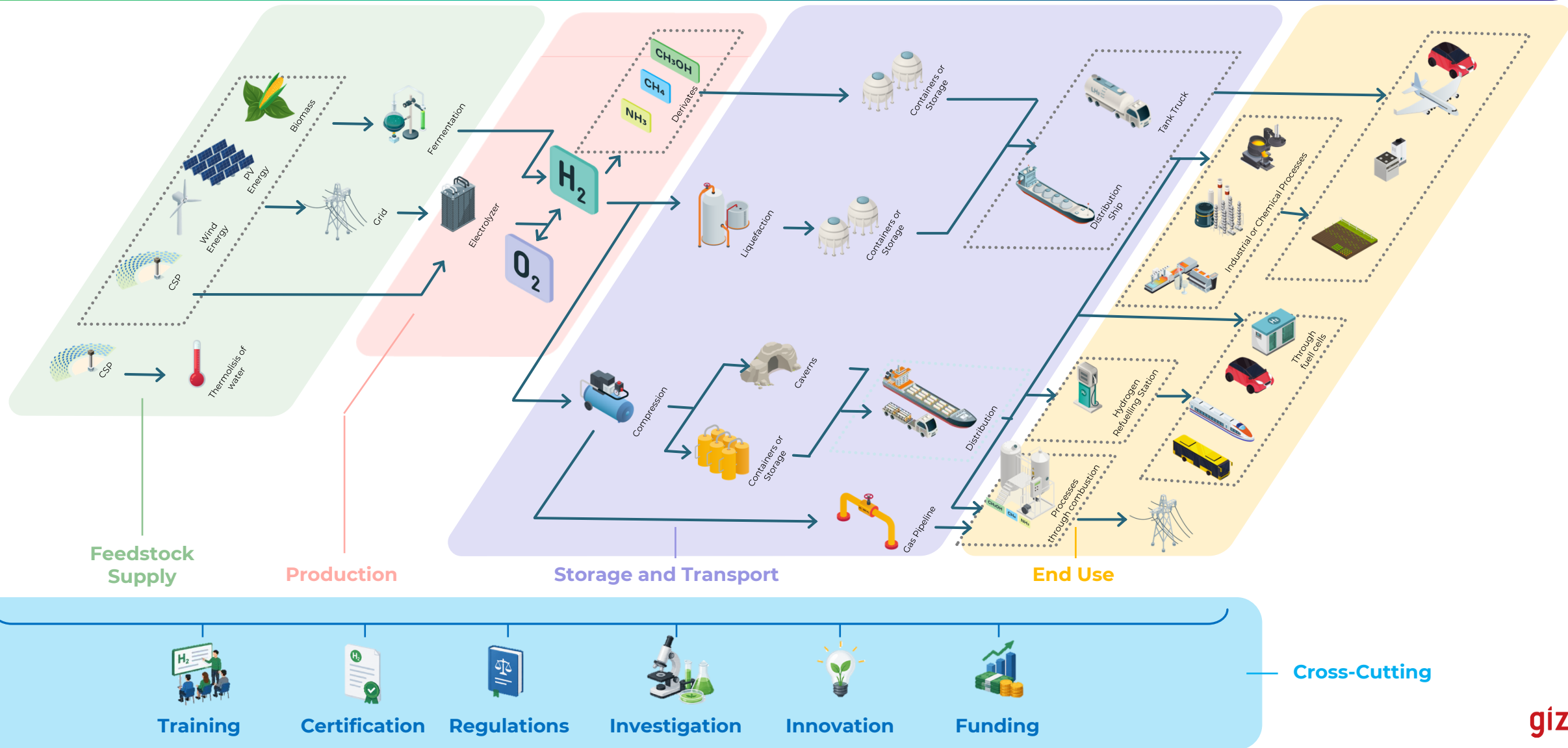
Topic							TOTAL
Market análisis assessment	1	3	1	1	1		7
Workforce training		4	1	2	1		8
Value chain and logistics analysis		2	2	1	1	1	7
Business model development	1	1		1			3
Technology assessment		5	3	3			11
Permitting and regulatory assessment	2	4		3	2	1	12
Socio-environmental assessment	1	2	2	2	1	1	9
Engineering studies	2	3	4	2	1	1	14
End use assessment		2	1		2		5
Security assessment	1	2					3

Evidence from the PPP portfolio



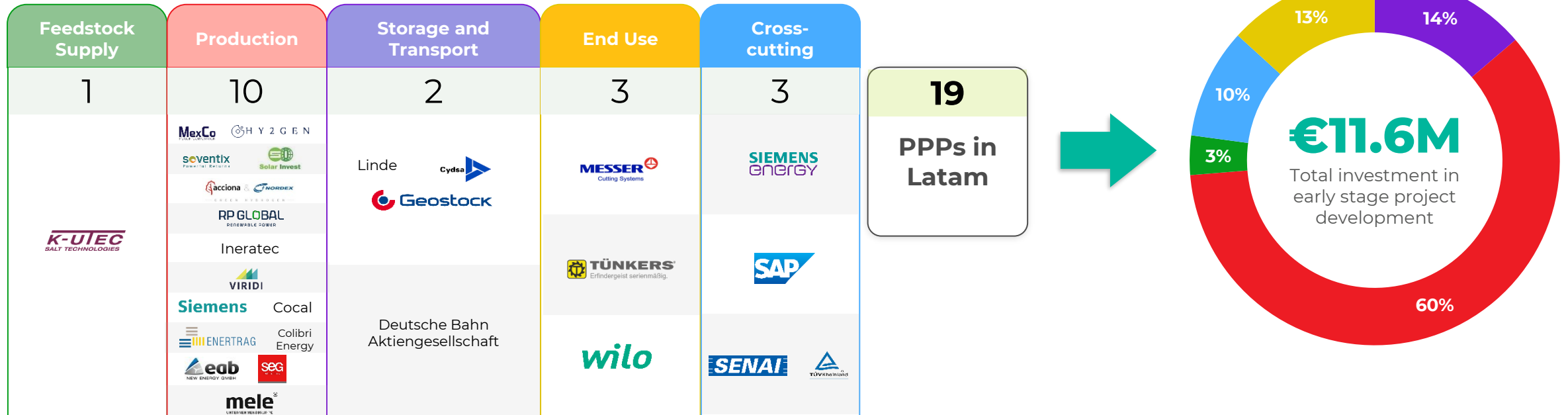
Hydrogen Value chain in LATAM

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H2Uppp Investment across the Hydrogen Value chain in LATAM

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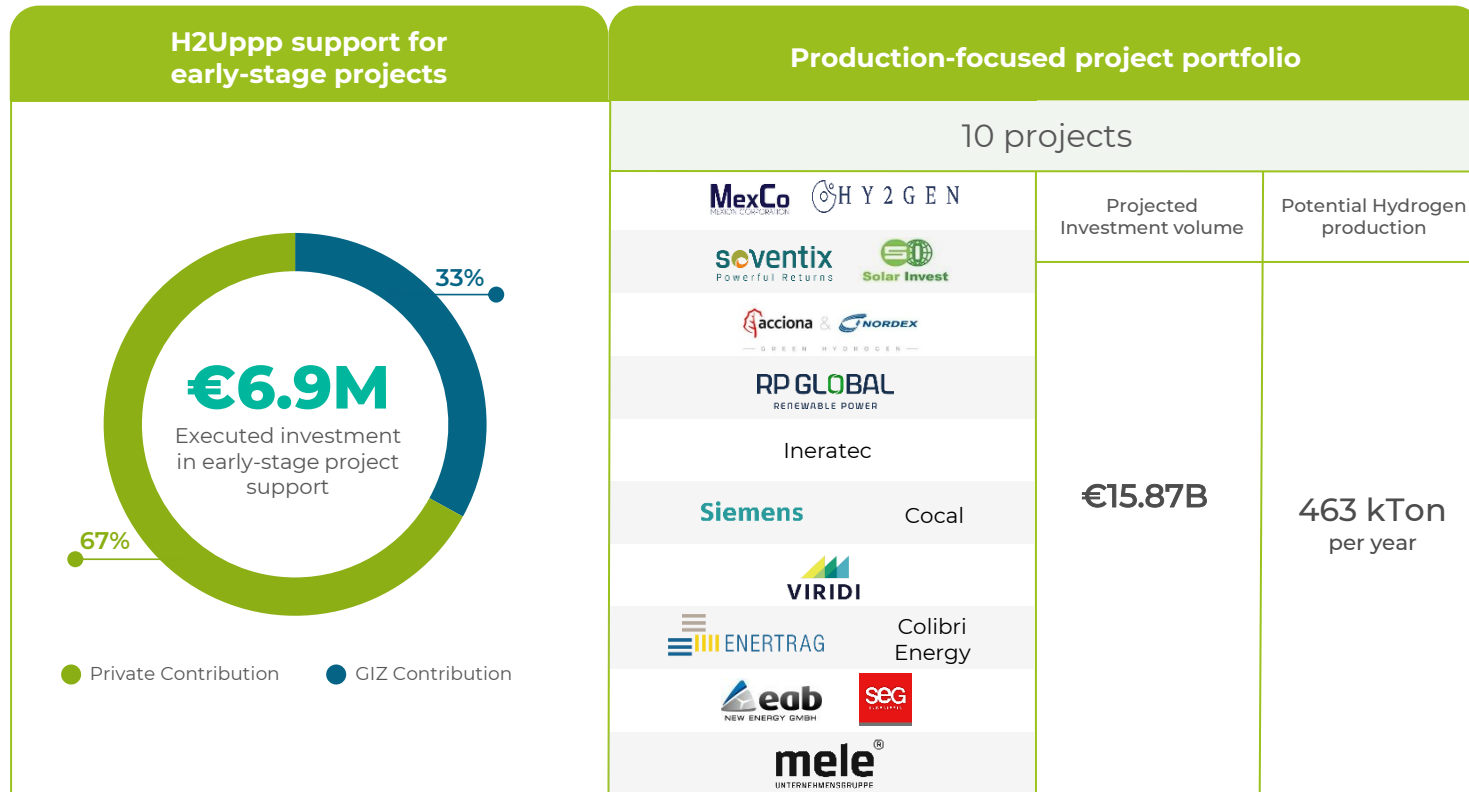


Public funding plays a catalytic role in early-stage initiative development, mobilizing nearly twice its value in private contributions



H2Uppp Investment across the Hydrogen Value chain in LATAM – Production segment

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H2Uppp helps turn early-stage initiatives into future investment opportunities

Based on available CAPEX estimates for the projects that have reached this level of analysis, **every €1 invested by GIZ could enable up to €6,830 in future investment**

The figures reflect the investment potential estimated during the implementation of each PPP. In addition, some projects have continued to advance after PPP completion, progressing into subsequent development stages and, in some cases, accessing or exploring new sources of financing.

Key takeaways



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1. **By 2030, the Americas are expected to account for around 40% of globally traded hydrogen, with Latin America exporting more than half of this share,** largely oriented toward international markets, particularly Europe.
 2. **Multiple challenges exist across the hydrogen value chain,** and their nature and impact vary significantly by region, highlighting the need for **tailored support mechanisms, collaboration, and context-specific solutions.**
 3. **Public investment and financing mechanisms are critical** to enable the development of an emerging industry, particularly in its early stages.
 4. **H2Uppp supports early stage initiatives** through industry engagement, capacity building, support for pre-FID phases, development of new solutions, partnership building, and technical advisory support.
 5. **H2Uppp acts as a catalyst:** the programme has mobilised close to EUR 10 million in early-stage project development, with **public funding accounting for around 30%.** Current project estimates indicate that export-oriented hydrogen projects supported by the programme could be associated with **up to EUR 6,000 in potential future investment for every euro invested.**

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For more information, you can access the [H2Uppp webpage](#), where news, cooperation opportunities are published and fact sheets of the different Public-Private Partnerships (PPPs) are published, offering deeper insights into the programme's work in Latin America and other regions.



For more information about the H2Uppp Programme, scan the QR code or visit the website [H2Uppp - PtX Hub](#)

