How might we ensure that (digital) startups and local innovators benefit from the potential in the green hydrogen (GH2) sector in South Africa?

Summary of results of the ii2030 Green Hydrogen Edition
July 2023
Green hydrogen can be transformative for Africa. The sector will create green jobs and new opportunities for local startups and innovators.

Now is the time to create the fertile ground for entrepreneurs, who often lack access to adequate finance, skills, or even awareness of opportunities in the GH2 sector.

ii2030 is a catalytic process that begins with a problem and an opportunity and ends with a prototype of a systemic solution that can be implemented to strengthen the GH2 support ecosystem for local startups and innovators in South Africa, Kenya and Namibia.
Guiding Question for the ii2030 GH2 in Africa Edition

How might we ensure that (digital) startups and local innovators benefit from the potential in the green hydrogen sector?
ii2030 Journey in South Africa

BILATERAL INTERVIEWS
December 2022 – February 2023
60 min interviews
Identify inhibitors and enablers in the system

SYSTEM CHALLENGE WEBINAR
9 March 2023
120 minute webinar
Understand system dynamics

SYSTEM OPPORTUNITY WEBINAR
23 March 2023
120 minute webinar
Identify levers for change

PAN-AFRICAN WEBINAR
20 April 2023
120 minute webinar
Continent-wide peer exchange

CO-CREATION EVENT
8 June 2023
1 day workshop
Co-create solution to positively disrupt the system

CELEBRATION WEBINAR
September 2023
60 minute online event
Pitch solutions and seal commitment for implementation

IMPLEMENTATION PREPARATION
July – December 2023
Develop project documents with main stakeholders
Understanding the System: Status of the GH2 Sector in South Africa and Levers for Change
As of 29 November 2022, per Minister of Public Works and Infrastructure Patricia de Lille at the South African Green Hydrogen Summit.
South Africa has a relatively more advanced GH2 ecosystem (PGM industry for electrolysers and fuel cells) and more GH2 application experiences with the HySA.

Yet, we still have a system that is currently optimized to benefit larger players.

The system excludes smaller players and startups who are faced with limited access to finance for their scale-up activities, limited, affordable skill base, and a risk of exclusion from GH2 projects developed by larger players (lack of collaboration).

This all severely limits their market access and commercialization.
Solutions for Skills and Inclusivity

- Create opportunities & skills for students in the industry; train people internally
- Develop VC platforms to are comfortable assuming GH2 risk to provide startups with capital to hire staff
- As the sector will develop, it will attract more people

Underdeveloped local skills limit inclusivity of the local GH2 sector

- Fund internships/entry level employees to train entry level staff on the job

- (Gov.) Funded internship programme for SMEs and HySA
- Development of GH2 TVET programmes
- Link networks to help people find jobs with the industry; make job market more transparent
Solutions for Inclusive Value Chain

- Widen the market for startups regionally; expand into neighbouring countries (AfCFTA)
  - Exports of green ammonia/GH2 mainly to Europe

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- Comply with European procurement rules
  - Quotas for local procurement
  - Offer sth that nobody has or at a competitive price

- Many startups and innovators cannot build critical mass

- There are few GH2 startups and innovators relevant in the market

- Large companies integrate vertically, bypassing startups

- Large companies either bypass the involvement of startups entirely or buy them to integrate vertically

- Market place to make people aware of what exists (private sector led)
  - Awareness campaigns for startups
  - Incentive programmes

- Improve collaboration readiness and negotiation skills on both sides
  - Buy-out of startups as a way to collaborate with innovators; prepare startups for this.
  - Invest in a GH2 R&D cluster (e.g. tax reductions)
  - Unconditional seed money to incentivize innovation in the sector (like in Chile)
  - Engage philanthropic people who like to give back to society

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Solutions for Access to Finance

- Awareness of the different funding lines that TIA has: SME funding, VC funds etc.
  - Government could de-risk some funding; so far the sources are limited
  - A unit to help fund seekers to improve the quality of their applications

- Research can play a role to identify niches for startups
  - Linkage between research institutions and startups; they spin off from the research institutions
  - Bring other players on board in research and the energy department to make startups better prepared for the market; thus less risky.

- Would be good to have different kinds of tools: Funding for feasibility studies, production cost, technology, securing off-take agreements etc.
  - Esp. feasibility studies would help to develop bankable projects.

- Interactive portal and directory to inform the various options and processes involved (based on study GIZ is already doing on financing landscape)
Co-creating and integrating solutions into the GH2 Innovation Hub
GH2 Innovation Hub

Integrated Prototype – GH2 Innovation Hub

Developers/Group participants: RIIS, Saldanha Bay Innovation Campus, Technology Innovation Agency, Hyena Energy, Inspiring African Women, Stellenbosch University, CSIR, the Innovation Hub, SeaH4, GIZ, Hydrofuel Solutions, SANEDI, Atlantia Green Hydrogen

A one-stop-shop for GH2 innovation: an epicenter and hub for innovation with all the necessary actors and resources that make innovation ecosystems work, including mechanisms for information sharing, matching and mentorship.

Featuring:
1) Incubator and accelerator programs
2) Mechanism matching startups with private companies, private investors and offtakers
3) Research development and innovation lab
4) Enabling infrastructure supporting email addresses, pitch training, business model canvases, design support, co-creation spaces, etc.
5) Resident knowledge and expertise to support startups, including an information desk and support centre as well as mentorship and training
6) Thought partnership and ideation capability
7) Finance
8) Positioned near a port, likely within an SEZ
Thank You!

For more information, feedback or comments, please contact

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