



International Water
Management Institute

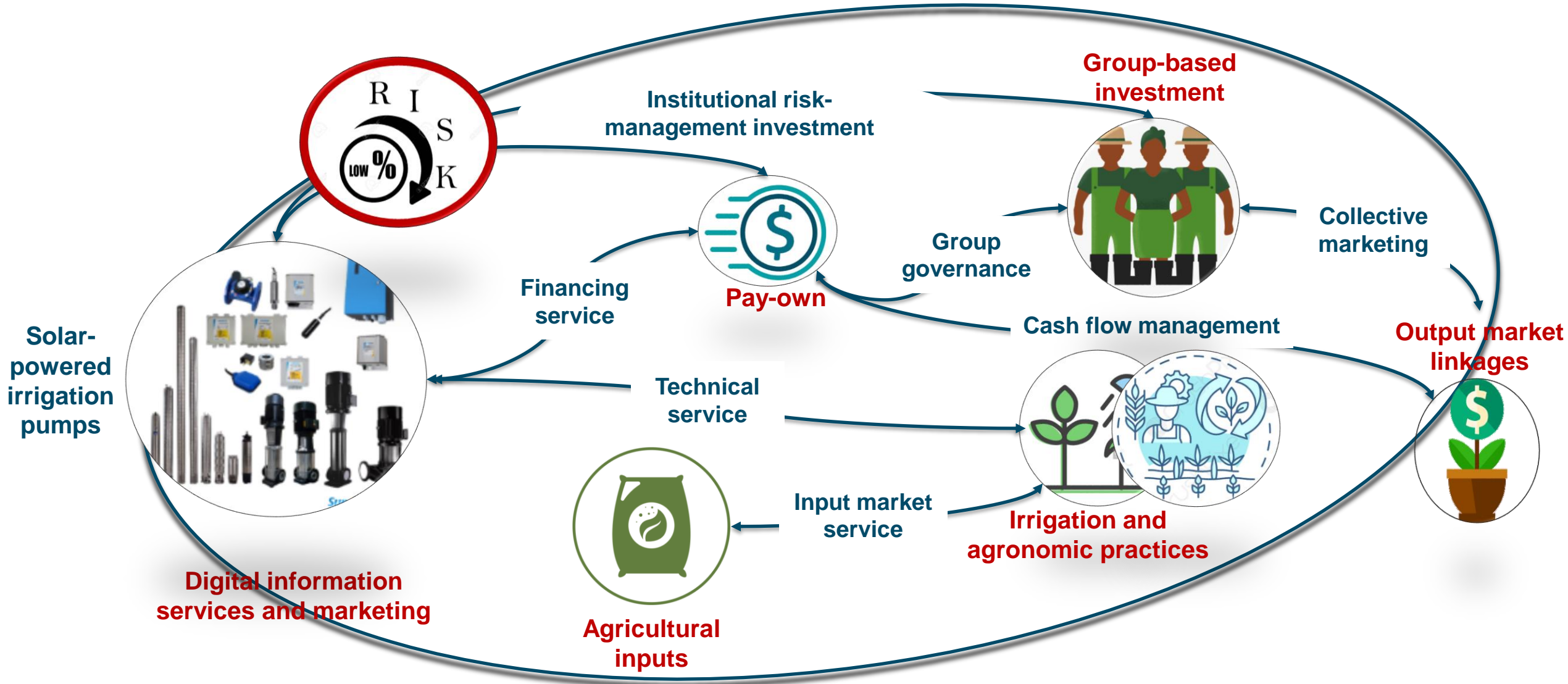


Data-driven tools to facilitate scaling solar-based irrigation

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Innovative water solutions for sustainable development
Food · Climate · Growth

Scaling solar-based irrigation: Bundling innovations and collective actions



Pathways to scaling solar-based irrigation

Acceleration

THROUGH
AN ACCELERATOR
GRANT MECHANISM

Individual and
collective investment



Adaptive capacity



Multi-actor partnership



Multi-stakeholder
dialogue



Data-driven tools for sustainable development: *Systemic analysis*



3. Analytical scope and framework

To achieve the above objectives and expected outcomes, the analysis covers four major areas (Figure 3):

- Reviewing the policy/regulatory framework
- Studying policy implementation and interventions on the ground
- Analyzing the informal institutional context
- Synthesizing the results as a basis for making recommendations

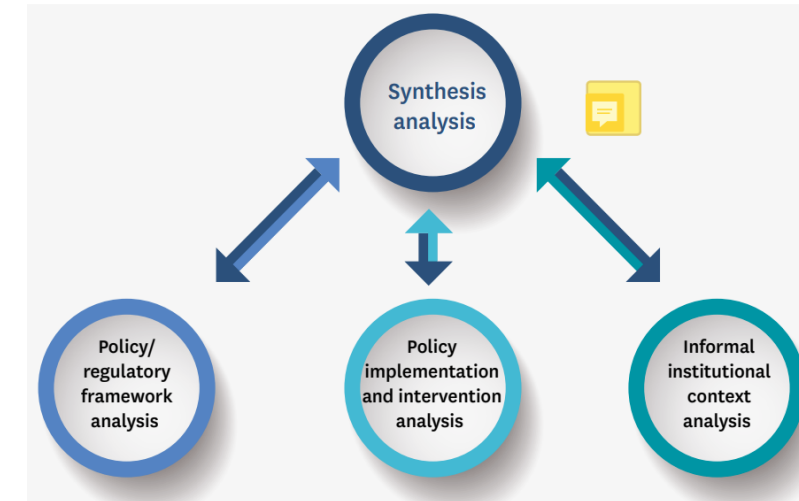
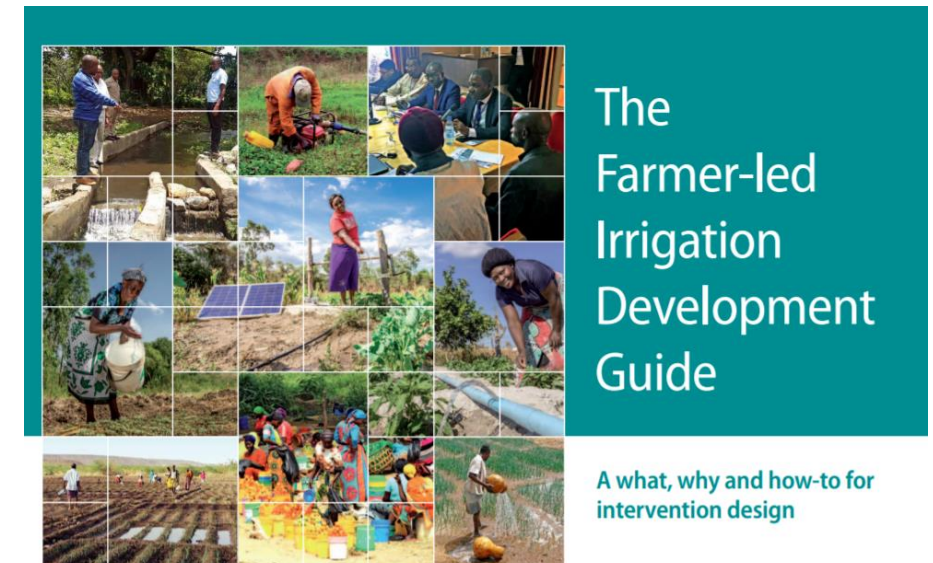


Figure 3. Enabling environment analysis to enhance the scaling of irrigation and water management technologies.

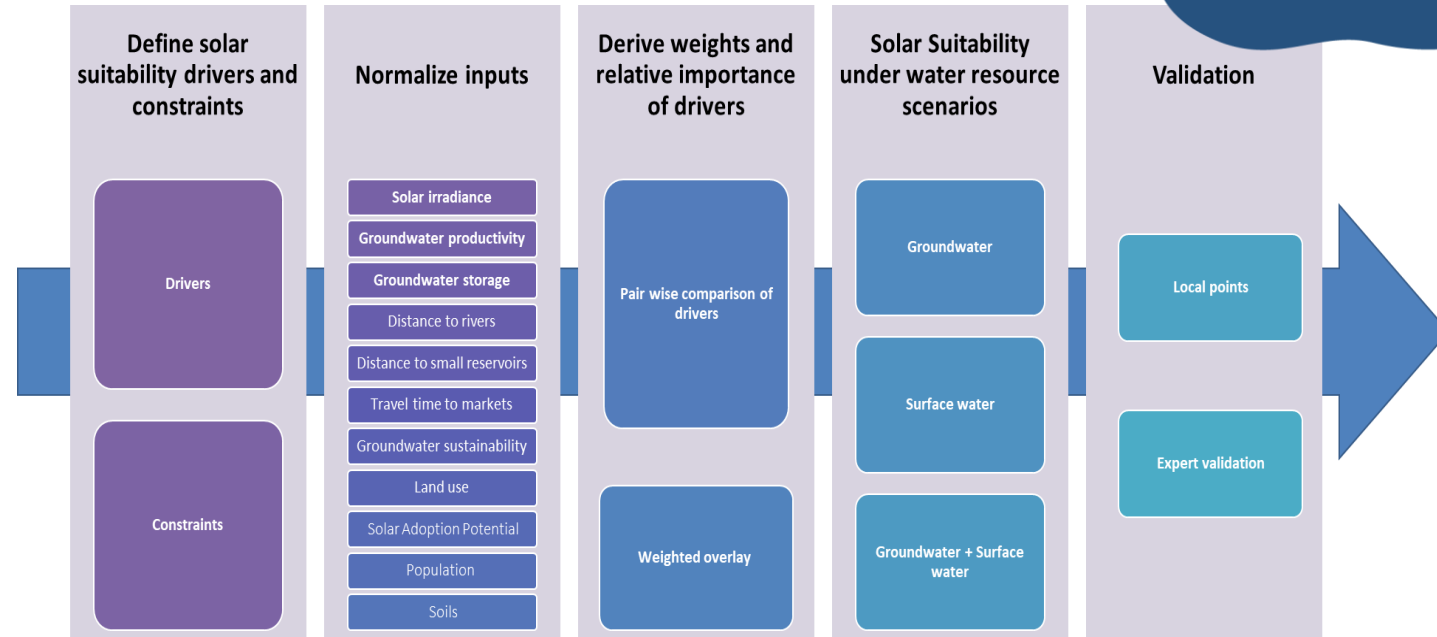


Data-driven tools for sustainable development:

Solar suitability mapping

Solar suitability mapping:

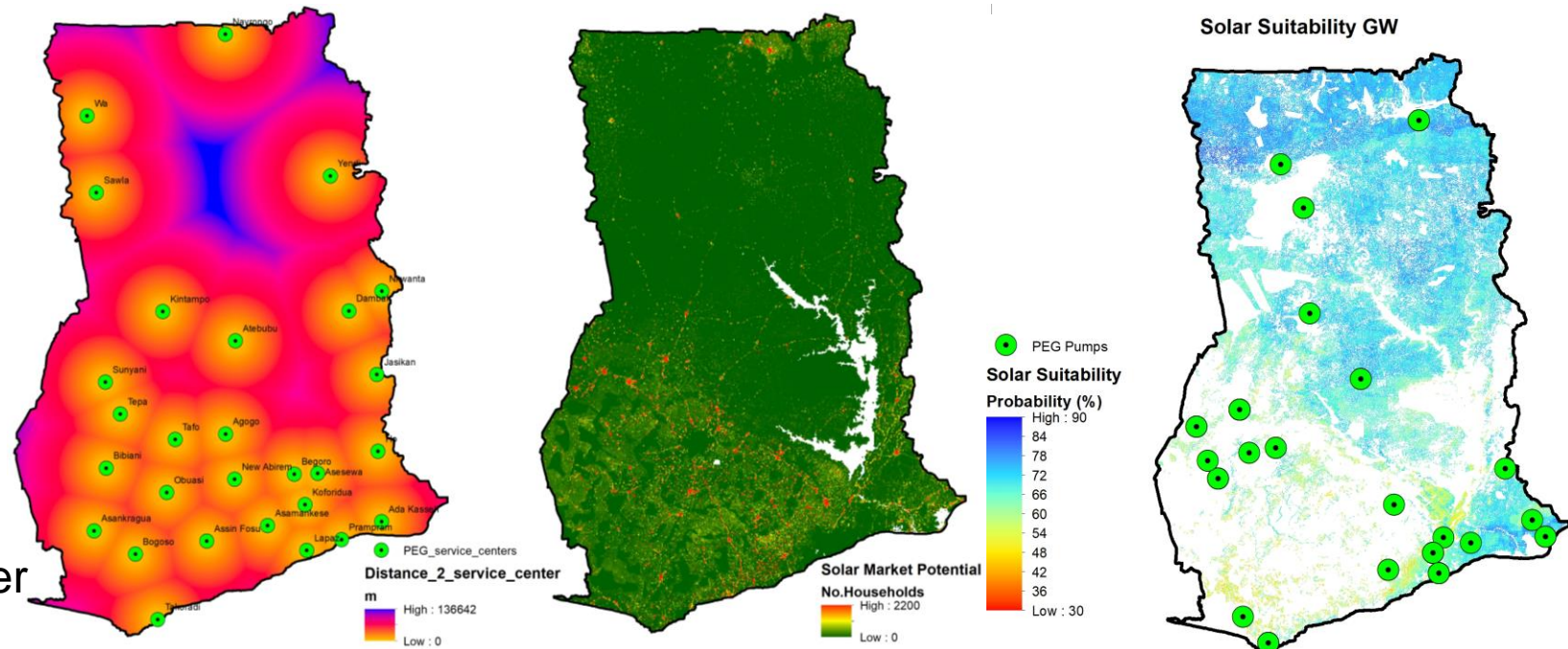
- An interactive online tool to inform and strengthen planning and management of solar-based irrigation whilst reducing the risk for negative consequences
- Basis: groundwater sustainability, soil properties, water resources, land use, socio-economic indicators



<http://sip.africa.iwmi.org/>

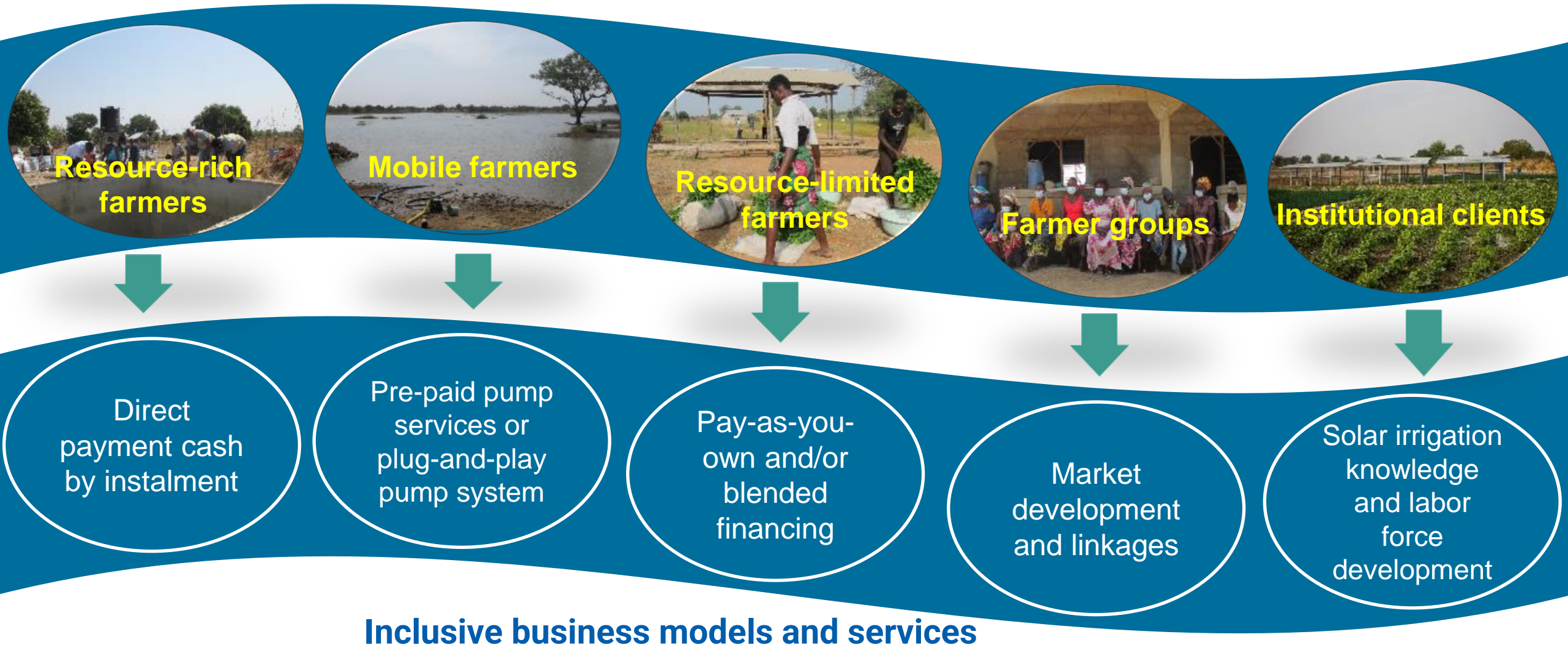
Customization to solar market

- Solar Market Potential
- Solar pump target profile
- Rural/peri-urban residence
- Agricultural land ownership
- Spending power
- Distance to distribution/service center



Data-driven tools: *Client segmentation*

Basis for segmentation: Land and water access, irrigation and production, financial potential and product preferences



Data-driven tools for inclusive business:

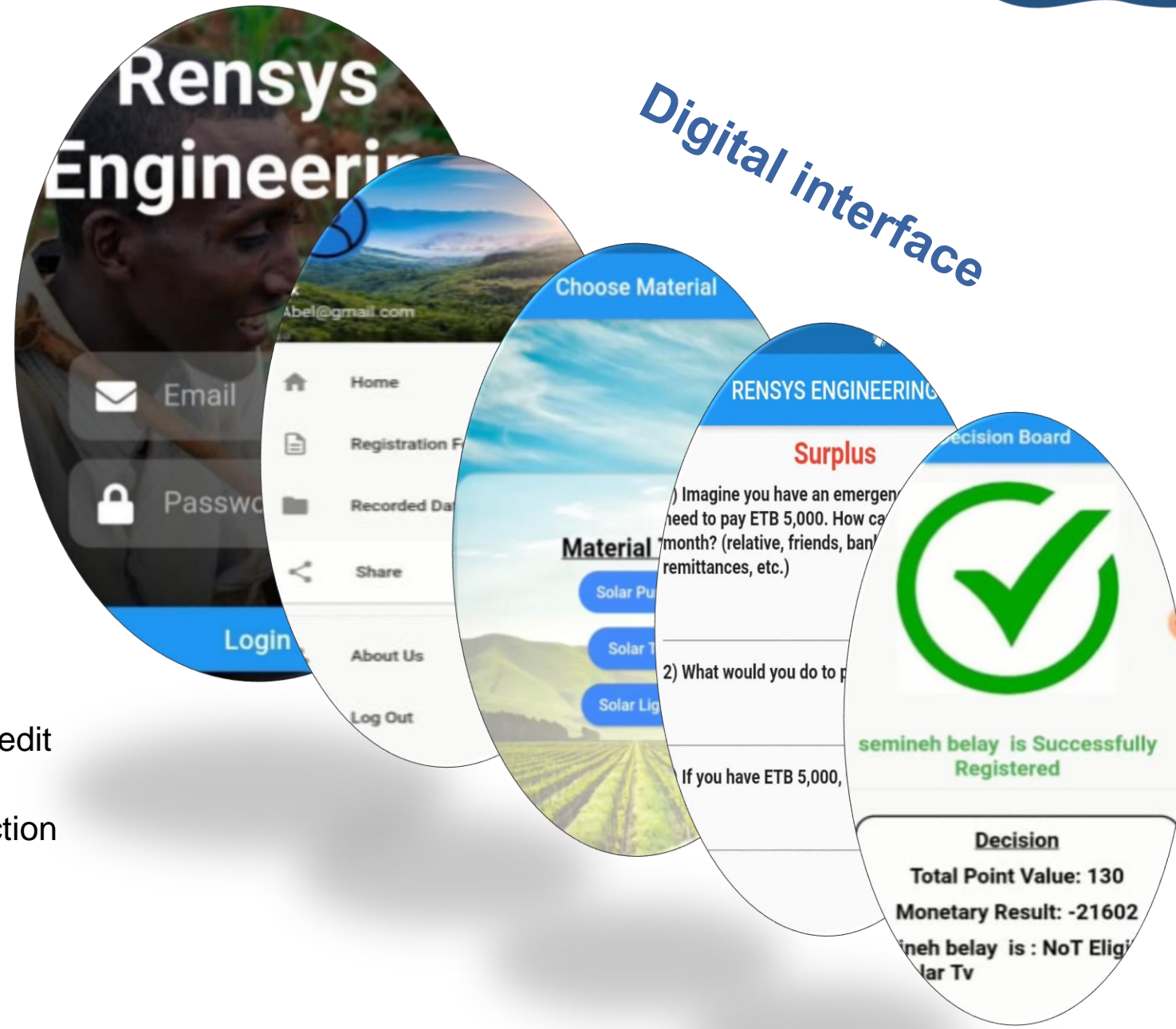
Client assessment

Tool to assess the potential clients' credit eligibility and preferences

- Client's physical, natural and social capitals
- Financial capital and management
- Current and future irrigation practices and investment
- Product and service reference

Digital design

- Login
- Information collection and assessment
- Decision Board:
 - Assessments by the sale, technical and credit agents feed into a decision dashboard
 - Potential clients are evaluated in the reflection to their product and service preferences
 - A decision is made mainly from a financial standpoint reflecting product and service





Knowledge is key.
Applying the knowledge
into specific **context** is
giving it a meaningful life.



Solar-based irrigation is
bundles of innovations
which are contextually relevant.



Scaling solar-based irrigation
requires multi **pathways**
and stakeholder **engagement**.



Data-driven tools are practical
means for **sustainable**
and **inclusive scaling** of
solar-based irrigation.

Thank you

