DEVELOPING DEVELOPERS
LIVE WEBINARS

THE ECONOMIC DEVELOPMENT IMPACT

10 DECEMBER 2020 – 14:00pm

WEBINAR SPONSOR ED PLATFORM

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Ntombifuthi Ntuli
SAWEA
Chief Executive Officer

WELCOME

Welcome to the "The Economic Development Impact " Live Webinar 2020

SOCIAL MEDIA HASHTAGS

#DDwebinars2020
#buildbackbetter with **#renewableenergy**
#localforglobal
#sapvia
#sawea
#energytransformation
#projectdevelopment

LOCAL RESOURCES – GLOBAL COMPETENCE

SAPVIA and SAWEA, in partnership with BEPA, IPPO and REEF(SA) present the fourth webinar as part of the seven-part series of workshops to address key areas that aspiring developers need to understand.

Economic Development (ED) is one of the key requirements of REIPPPP programme. In this session we will unpack the economic development requirements in relation to Socio-economic Development, Enterprise Development and Local Content. The session covers the ED requirements and exposes opportunities that are created by these requirements particularly in local value chain development and communities within which renewable energy projects are built.

As the representative voices of the solar PV and Wind industries we are constantly working towards collaborating with stakeholders across the renewable energy sector to share knowledge and drive effective change. Developing South African developers to build local competence of global standard, is key in accelerating the local renewable energy market.

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IN PARTNERSHIP WITH BEPA Black Energy Professionals Association

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AGENDA

SPEAKERS

JOSHUA GOLDIN
ED Platform
Head of Strategy and Growth

YUMNAA FIRFIREY
Scatec Solar
Head of Sustainability

HLENGIWE RADEBE
Globeleq
Economic Development Director

FRANCIS JACKSON
GreenCape
Special Advisor

AGENDA: *14h00 – 16h00*

- Introduction and Welcome **SAWEA**
- REIPPPP SED/ED Scorecard and status update **ED PLATFORM**
- Presentation 1: Enabling high impact Socio-Economic Development Projects **SCATEC SOLAR**
- Presentation 2: Enabling high impact Enterprise Development Initiatives **GLOBALEQ**
- Presentation 3: “Localisation of renewable energy value chains – Opportunities for local investors” **GREENCAPE**
- Q & A **SAPVIA**
- Closing Remarks **SAPVIA**

SAPVIA SAWEA

JOSHUA GOLDIN
ED Platform
Head of Strategy and Growth

Joshua is the Head of Reporting at ED Platform, being involved primarily in managing the Economic Development Reporting Unit. This involves the compilation of ED Reports that are sent to the IPP Office every quarter. He has also been involved in bidding projects in the IPP Programme.

Prior to joining EDP Joshua was a researcher at the Financial and Fiscal Commission. His research focus was primarily on Education, Health and Housing.

He has a Masters Degree in Economic Science from the University of the Witwatersrand. Joshua is interested in data management and manipulation and creating models to better formulate and understand the implications contained in the data. He is also interested in the developmental impacts of the REIPPP Programme on people and businesses.

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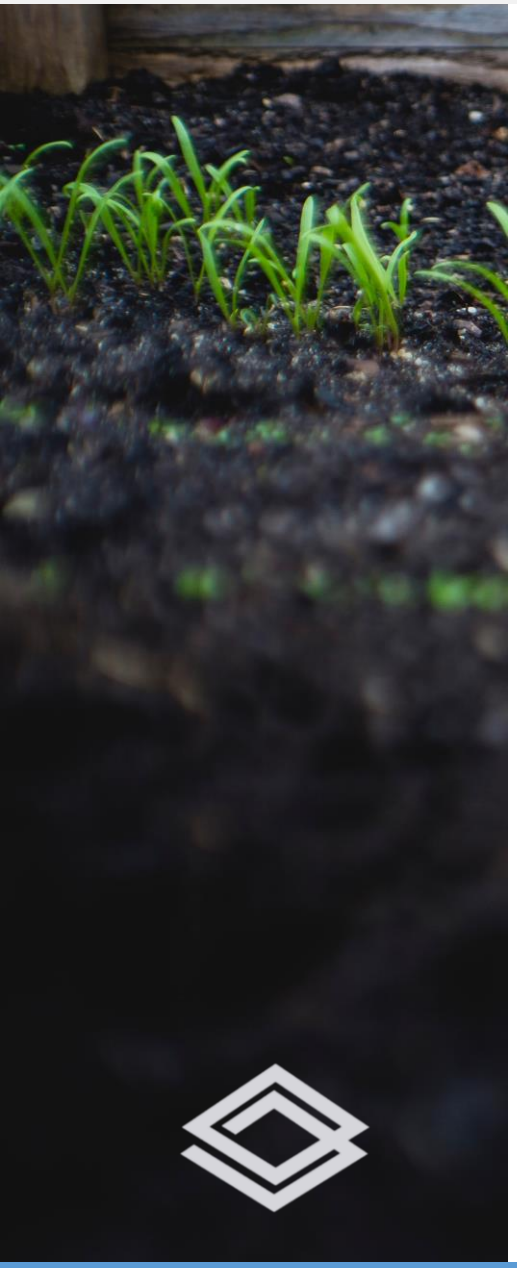
Economic Development
In the REIPPPP

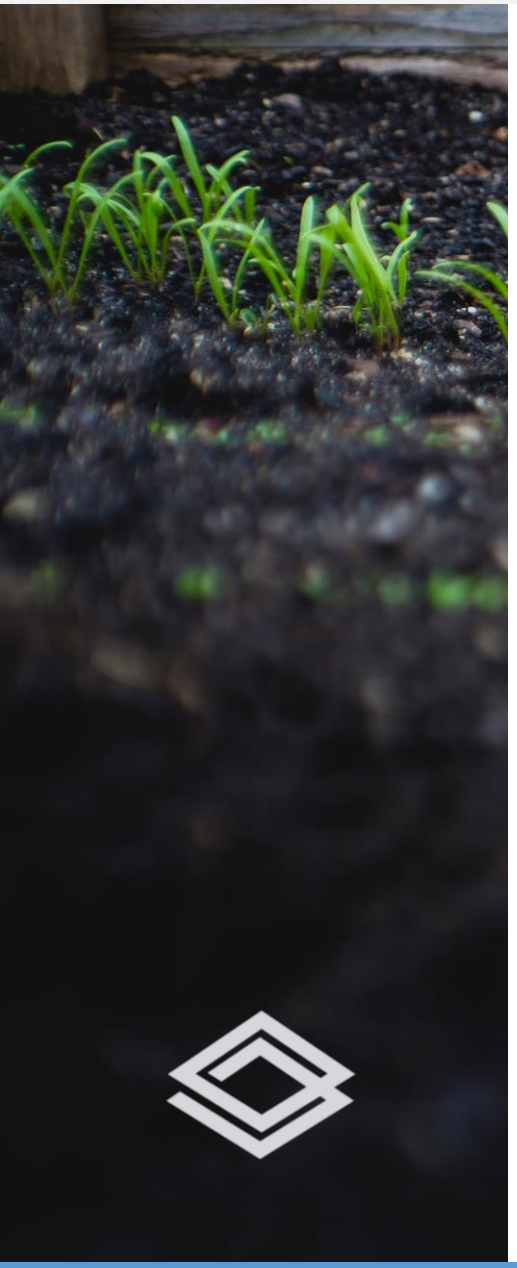
Presented at the Developing Developers virtual event



Who is ED Platform

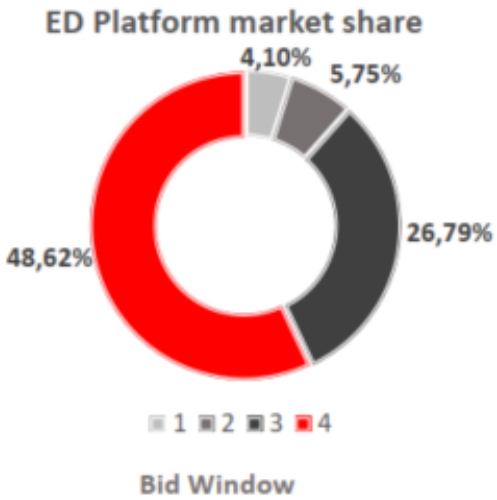
Economic Development advisory

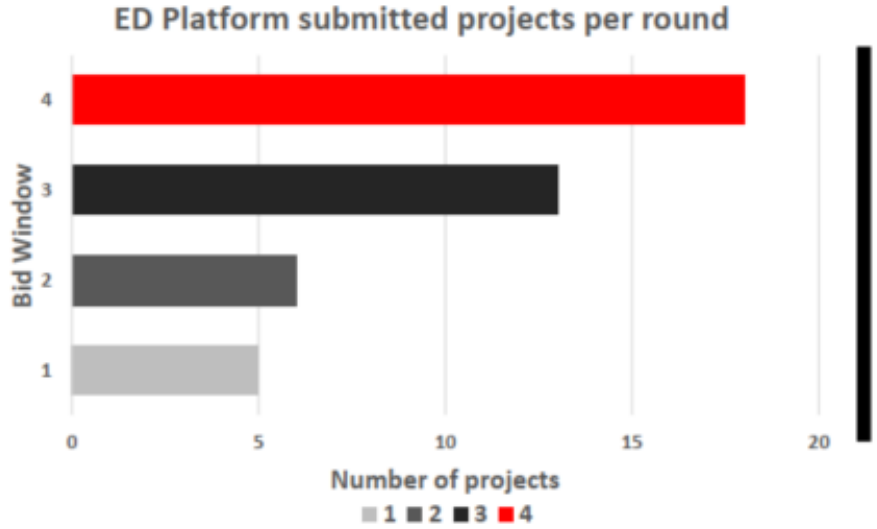
- Traditionally, large scale RE infrastructure
- Involved more broadly now – sustainable infrastructure
- Bid process support → Financial Close → Reporting
- Bid Window 1 to Bid Window 4.5 (expedited)
- RMIPPPP involvement (ongoing)



Who is ED Platform

Track record:

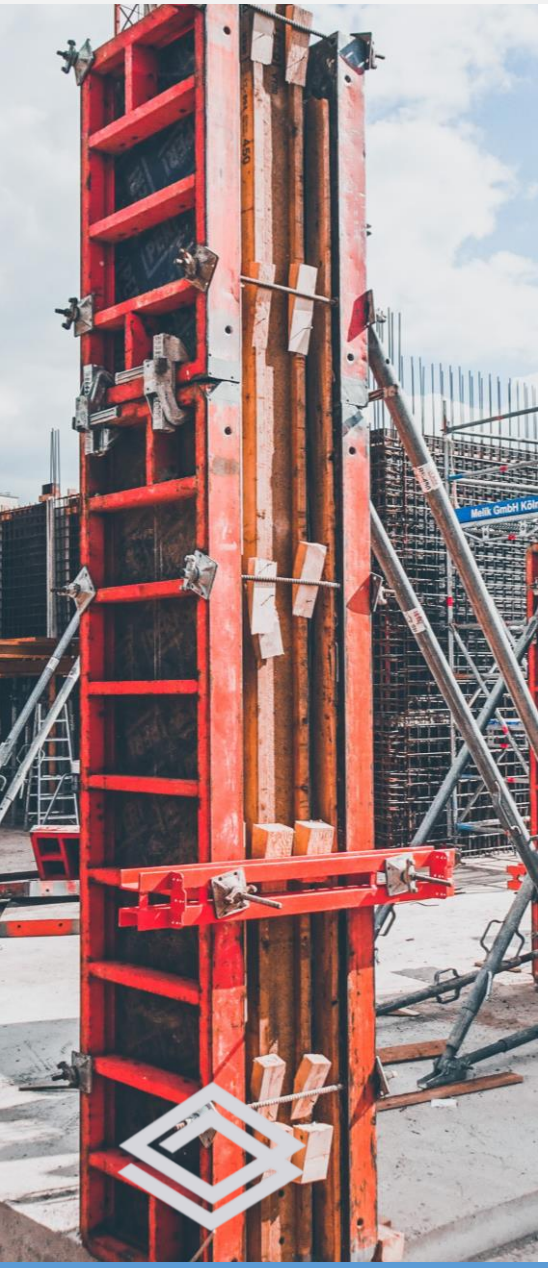




Total project bids submission in South African REIPPP Programme (incl. Expedited Round):

63

… and counting.



What is Economic Development?

Seven (7) element of "ED":

Job Creation

Local Content

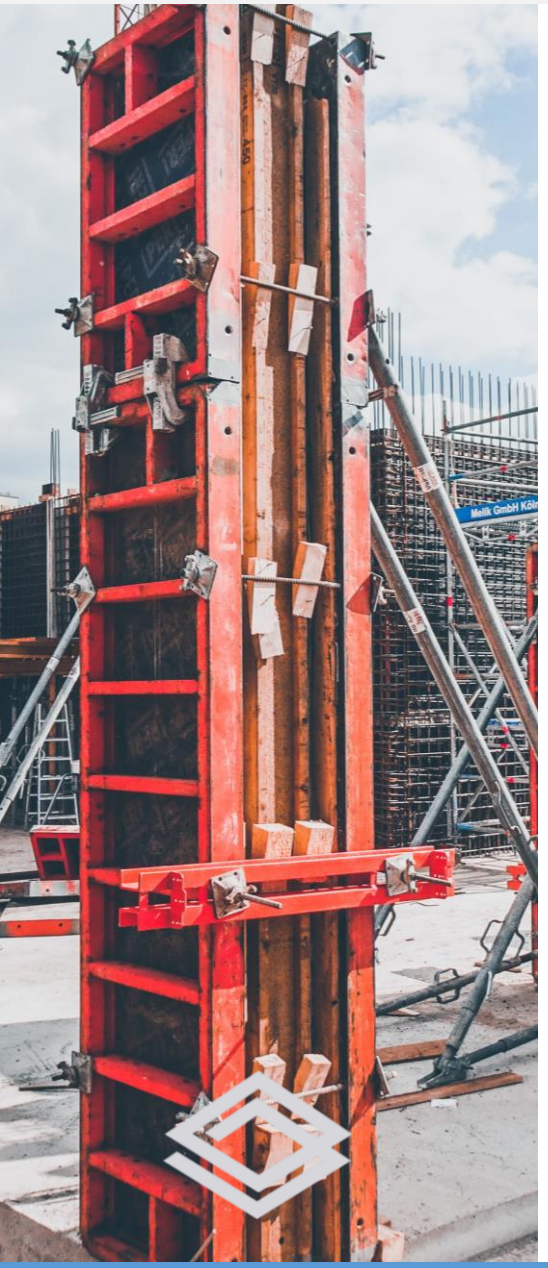
Ownership

Management Control

Preferential Procurement

Enterprise Development

Socio-Economic Development



What is Economic Development?

"Economic Development Beyond Compliance"

- *NDP*
- *Social + economic challenges*
- *Disparities*

What we have seen over the years

From Round 1 to present

Increasing Obligations – **achieved!**
(Jobs, Ownership, Man. Control + Pref. Proc)

Impacts of delays in programme – **adverse.**

Shifts in types of obligations – **significant.**
(Quantum vs Percentage)

Market signals

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YUMNAA FIRFIREY
Scatec Solar
Head of Sustainability

Yumnaa Firfirey is currently the Head of Sustainability of Scatec Solar in South Africa. She has had a diverse career in business, government, partnership organisations and as an entrepreneur, in South Africa and abroad. She has worked in the areas of enterprise development, tourism, design, sustainability and renewable energy, with partnership building and economic development as the common thread throughout. She is responsible for the establishment of the Western Cape Economic Development Partnership and has won various awards in business and in government. Yumnaa is chair of the Table Mountain Fund and has been board member and Audit Committee chair of Green Cape, a sector development agency set up to further the renewable energy industry in South Africa.


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Why before **How**

Why is ***impactful*** SED Important?

- Is there a business reason for why to do SED. Beyond it just being the ***right thing to do***?
- Risk mitigation `as well as being good for the industry – let's discuss as part of Q&A

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How do we Enable High Impact?

1. Be Strategic
2. Collaborate | Communicate | Integrate
3. Think Big

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17 PARTNERSHIPS FOR THE GOALS

Be Strategic

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Sustainability

20-Year Integrated Community Development Strategy

Objectives

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Education

- Strong pipeline of qualified teachers/ ECD practitioners
- Improved academic performance of learners
- Improved levels of parental and guardians involvement
- Improved technical skills for SGB/SMT

4 QUALITY EDUCATION

Youth Development

- Develop well-rounded youth leadership capacity
- Increase youth wellness (physical and mental)
- Increase access to youth focussed opportunities
- Nurture a sense of agency

8 DECENT WORK AND ECONOMIC GROWTH

Local Economy

- Creating a strong pipeline of SMMEs to cater to the basic needs of the community
- Upskilling community members to support a strong local economy
- Creating a platform for SMMEs to integrate into the supply chain of large businesses

1 NO POVERTY

Well- Being

- Increase access to nutrition
- Increase healthy and active programmes
- Decrease FASD
- Improve awareness around first 1000 days of a child's life
- Support mental well-being
- Reduce substance abuse

3 GOOD HEALTH AND WELL-BEING

Community Visioning

- Develop local capacity to lead development
- Increase social cohesion
- Increase access to opportunities for
- Nurture a sense of agency

16 PEACE, JUSTICE AND STRONG INSTITUTIONS

11 SUSTAINABLE CITIES AND COMMUNITIES

Five Strategic Themes

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Sustainability

20-Year Integrated Community Development Strategy

Programmes

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Education

- Early Childhood Development
- Educational infrastructure
- Primary education
- Secondary education
- Research chair for post graduate studies in renewable energy

4 QUALITY EDUCATION

Youth Development

- Positive and healthy recreation options
- Responsible youth and future leaders
- Skills development and access to work opportunities
- Internships

8 DECENT WORK AND ECONOMIC GROWTH

Local Economy

- Local import substitution
- Local enterprise and supplier development
- Enhancing local export potential
- Enhancing employability

1 NO POVERTY

Well- Being

- Supporting foetal alcohol spectrum disorder initiatives
- Self defence classes and women support groups
- Supporting first 1000 days (of a child's life) initiatives
- Improved nutrition
- Physically health population

3 GOOD HEALTH AND WELL-BEING

Community Visioning

- Facilitating local stakeholder engagement forums
- Local capacity building
- Increasing social cohesion and creating local leaders
- Promoting agency

16 PEACE, JUSTICE AND STRONG INSTITUTIONS

11 SUSTAINABLE CITIES AND COMMUNITIES

Five Strategic Themes

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17 PARTNERSHIPS FOR THE GOALS

Collaborate | Communicate | Integrate

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Scatec Solar has a strong culture and ethos of **Partnership in Sustainability**. The following slides look at the Sustainability work of Scatec Solar through the lens of SDG 17, Partnership for the Goals.

Partnership with Communities & Local Authorities
Partnering within Scatec Solar for Local Skills, Jobs, Entrepreneurship
Partnership with other IPPs and Corporates
Partnership for Education
Partnership with the Industry and Regulatory Authority (IPP Office)

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Partnering with Communities

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Collaborate | Communicate | Integrate: Stakeholder Engagement Forums

- Addresses community needs
- Involves community members in decision making and vision building.
- Makes decisions on projects to be proposed to trustees and SED Committee
- Robust and Relevant Socio-Economic Programmes
- A potential vehicle through which the community members can learn project management, cash flow management and accountability skills.
- Convenors offered Free to Grow programme
- Social Cohesion | Culture of Partnership | Agency
- Local Leadership | Stronger Institutions
- Appreciation and Realisation of Democracy
- Future: plenary for overarching challenges

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17 PARTNERSHIPS FOR THE GOALS

Partnering within Scatec and the Industry:
For Local Skills, Jobs & Entrepreneurship

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2. CIDP: Construction Industry Development Prog: Targeted Industry-Specific Support

Supply-side analysis
- Comprehensive SMME interview
- Benchmarking
- Identification of gaps
- Support interventions

Demand-side
- Assess economic environment and market outlook
- Evaluate public and private sector opportunities

Training
- Personal development (SCDP)
- Tailored modules – How to Tender, Executing a Construction Project
- Group session format

Mentorship
- Unique SMME needs
- On-the-job assistance while working on a construction project

M&E
- Milestones
- Quarterly output
- Long-term impact

Phase I | Phase II | Phase III | Continuous

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Collaborate | Integrate: Deepening & Widening Participation in Construction Sector

- Understand the construction smmes better
- Understand the market demand more clearly
- Develop construction smmes to participate meaningfully in the construction industry value chain.
- Collaborate externally with larger construction companies, public works, other IPPs
- Collaborate internally with O&M, Supply Chain
- Integrate with education through projects such as educational infrastructure development
- Integrate with community visioning by upgrading community assets – Petrusville Youth Centre
- Community benefits while our local smmes benefit as well and hopefully improve their CIDB grading

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Economic & Social Integration

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Integrate: Social & Economic – Face Mask Production and Hospital Linen

- Simultaneously protect the community with face masks – school going youth and the vulnerable – while also creating jobs and upskilling the community
- Two personal examples
- Can transition towards school uniform production – started in 2 of our communities

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Integrate: Social & Economic – Assistant Teachers and School Cleaners

Assistant Teachers

- Simultaneously further educational outcomes and assist teachers and learners bridge the wide chasm left by COVID, while also creating jobs and developing career paths.

School Cleaners

- Simultaneously ensure hygienic school environment – for school going youth and educators – assisting educational outcomes, while also creating jobs.

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Integrate: Social & Economic – Self Defence Classes

- Initially proposed as a once off Women's Day Event
- Further conceptualised into a weekly programme running for the whole year
- Address GBV from a self defence and protection angle
- Create jobs for local trainers
- Transfers skills
- Creates support group for women outside of lockdown.

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Think Big!

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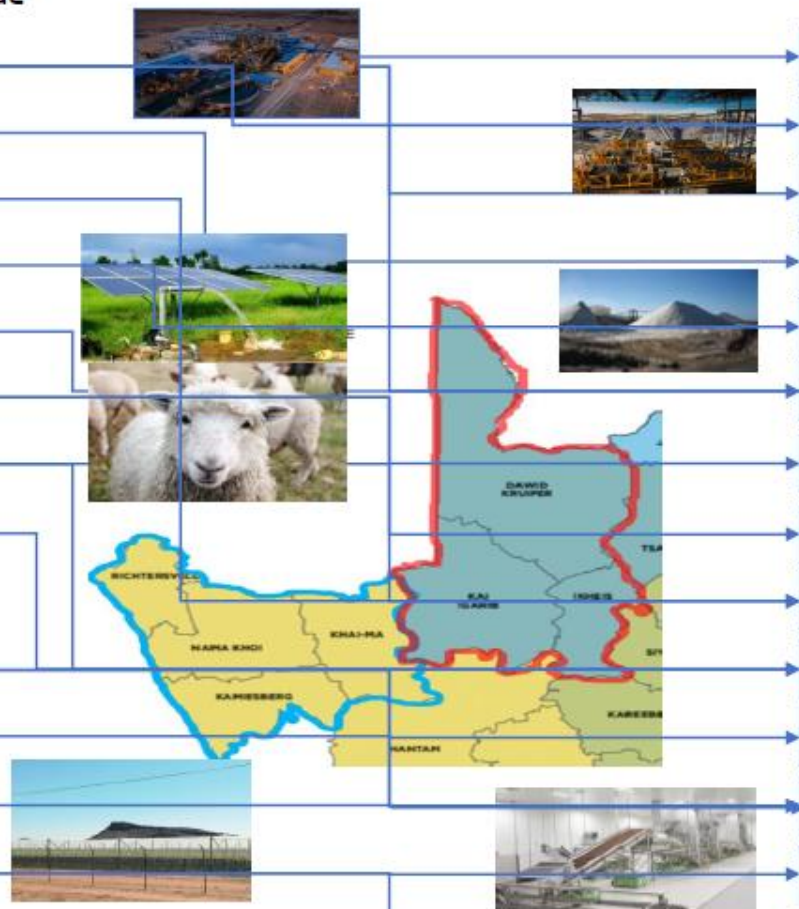
The catchment areas have the resources and an established base for building up major economic activities

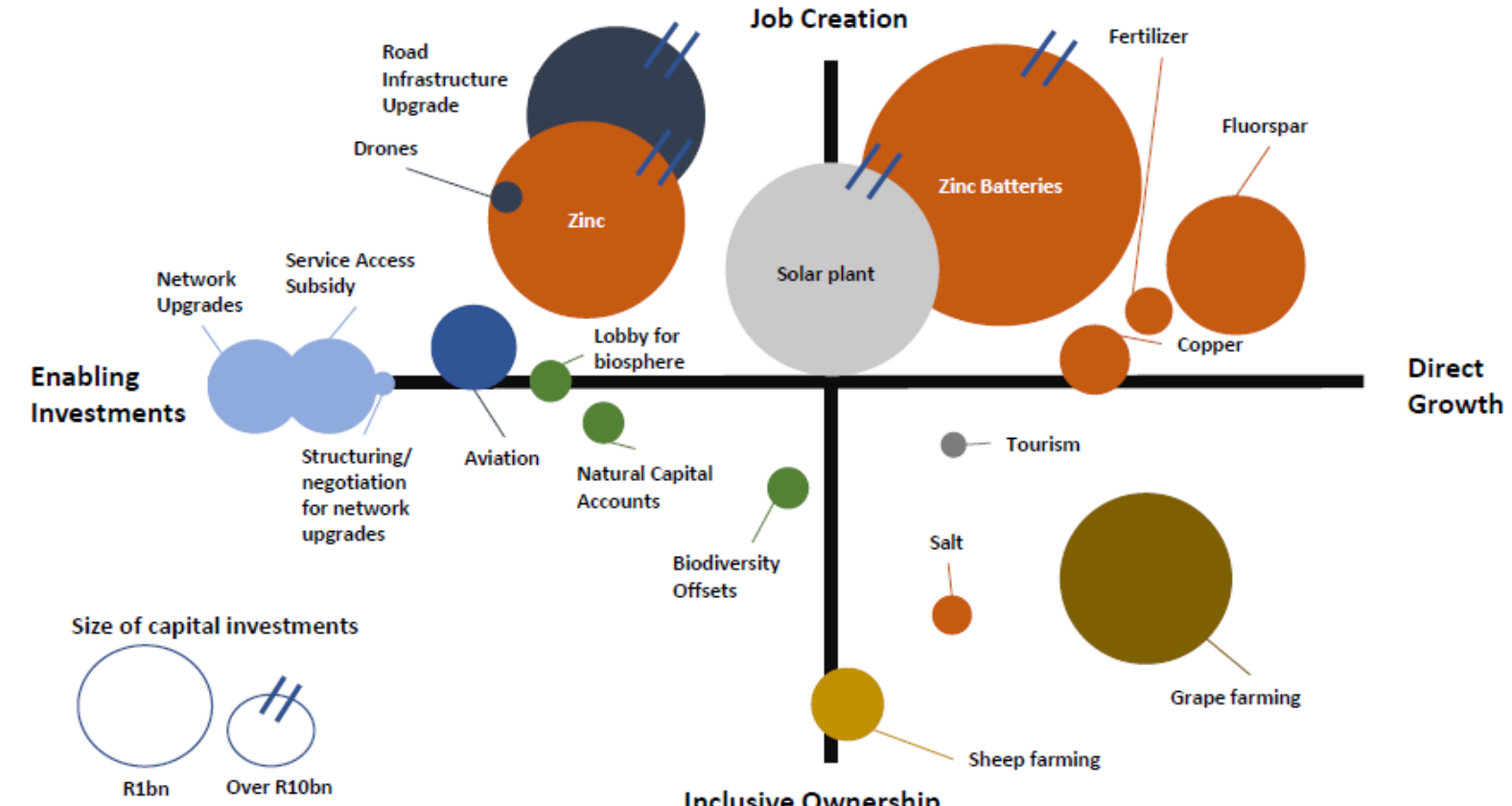
Sources of regional economic value	Economic applications
Largest zinc reserve in the world	Zinc mining
Historical copper mining region	Zinc air batteries
Orange river irrigation regions (2)	Zinc alloys
Extensive salt pans and production	Copper cables
Fluorspar - 80% of world reserves	Salt mining (at scale & artisanal)
Livestock farming (sheep)	Solar panel manufacturing plant
Major grape farming region	Regenerative farming
No. 2 raisin location worldwide	Structured meat markets
Solar and wind power corridor	Table and wine grapes
Global bio-diversity hotspot	Raisin processing
Diverse tourism offering	Carbon and bio-diversity offsets
High natural value coastline	Eco-tourism
Dry, hot, arid climate	Aviation storage / recycling
	Auto industry testing



Source: Scaled Impact

The eight sectors have balanced growth, job creation and inclusion effects across the sector opportunities

Evaluation of projects according to growth and employment impacts



Source: Scaled Impact

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HLENGIWE RADEBE
Globeleq
Economic Development Director

Hlengiwe Radebe is the Economic Development Director for Globeleq South Africa Management Services - the Asset and Operations & Maintenance Management Company. Hlengiwe is responsible for the social and economic development programmes for all of the South African assets. Whilst overseeing Globeleq's development vision within the local communities of its eight power-producing plants, she remains passionate about building sustainable partnerships with stakeholders. She is the deputy chairperson of the SAWEA ED Working group, holds Board Directorship positions in three of the Globeleq assets and Trusteeship in three Community Trusts. She has worked in the NGO, Government and Mining sectors prior to joining the renewable managing Mining Charter Compliance and Transformation Strategies. "I have a strong belief in building and maintaining good and sustainable relationships based on a win-win philosophy in my interaction with people. I believe all parties can find what works for them in any situation."

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Enterprise and Supplier Development Case Study

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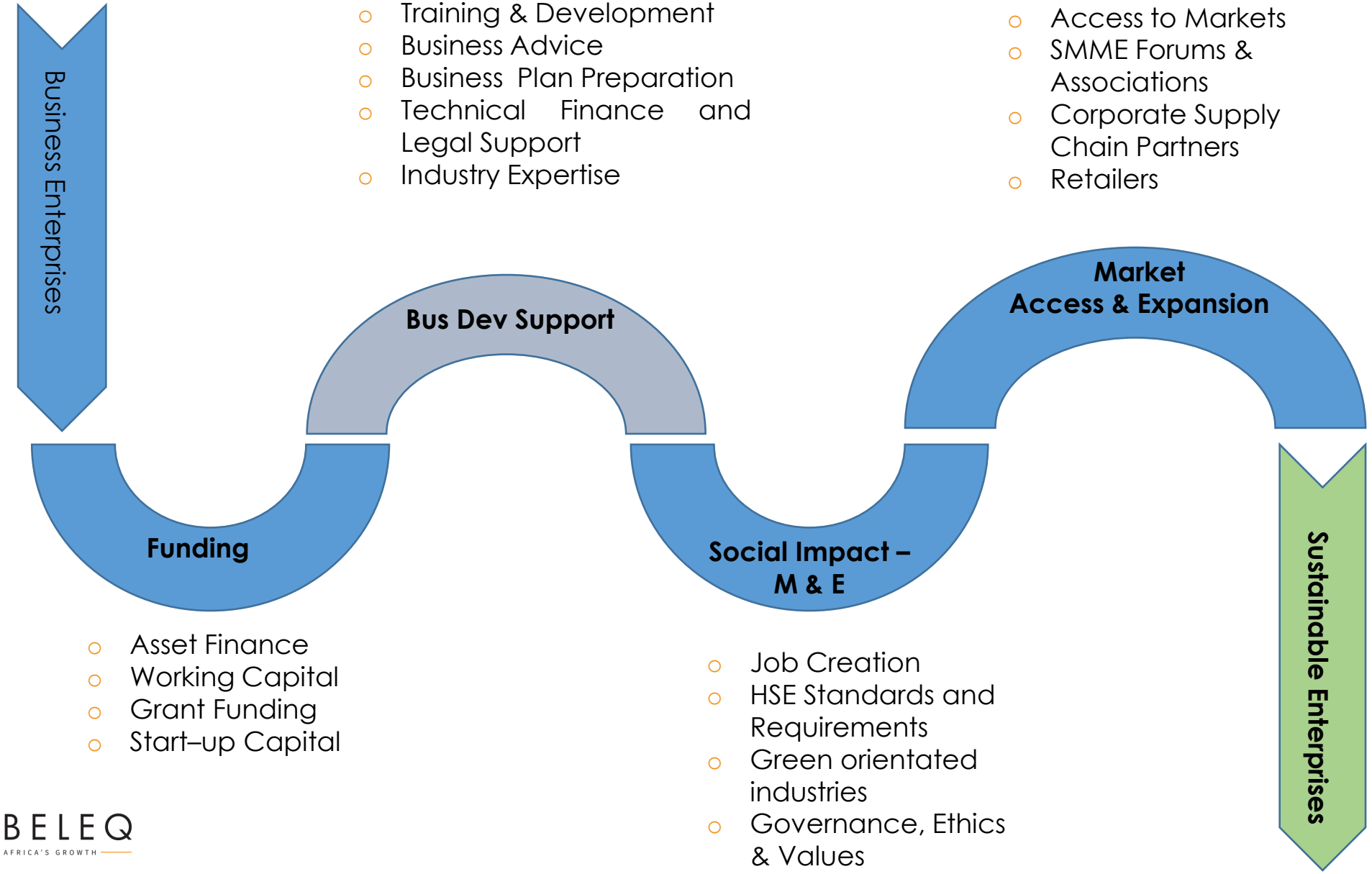
Introduction and background

- Our focus is on the engagement with black owned SMME's and this further drilled to focus our attention on Women and Youth Owned Enterprises.

- In order to drive consistency in our approach with the assessment of SMME's to be involved in we have an established set criteria to assess and fund our SMME's - **do not deviate**

ENABLING HIGH IMPACT ENTERPRISE DEVELOPMENT INITIATIVES

OUR MODEL



- Training & Development
- Business Advice
- Business Plan Preparation
- Technical Finance and Legal Support
- Industry Expertise

- Access to Markets
- SMME Forums & Associations
- Corporate Supply Chain Partners
- Retailers

WE OPERATE A FULLY INTERGRATED ED MODEL

- Asset Finance
- Working Capital
- Grant Funding
- Start–up Capital

- Job Creation
- HSE Standards and Requirements
- Green orientated industries
- Governance, Ethics & Values

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Supplier Development Case Study

Phambili

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Case Study – Supplier Development

- **Phambili –** Black Women Owned Entity focused on providing a vegetation clearing service and panel cleaning service at the De Aar and Droogfontein plants
- Why both plants – Need the economies of scale in order to drive financial sustainability and thus create sustainable employment. Less is more.
- The company currently employs a total of 23 people from within the local community.
- The intervention covers Capital investment of over R1.5m in the last two years, Business Development and mentorship by BD Consultant, Market access
- Their turnover is over R6.5m a year with a three-year contract from the two plants a marked growth from R1.2m a year with no contract after 4 years of operating in Postmansburg

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Lessons

- Applying the funding and stepping away is not the answer –
  - Support is critical in order to ensure success
  - Finding the right support partner is just as important.
  - Engaging with the business directly as a funder on at least a quarterly basis is required.

- Non - alignment with operations which affects performance and delivery.
  - Operations is integral to the success of the enterprise
  - Communication mechanism to ensure a feedback loop and performance is necessary
  - Taking a balanced view on the need for transformation and development and at the same ensuring that the financial justification for awarding the contract.

Lessons (continued)

- Non - commitment from the Entrepreneur
  - Our first step was to undertake an assessment of the entrepreneur to determine whether the entrepreneur is the right fit for the business and a partner for the DASP and SSP
  - An agreement is established with the entrepreneur to ensure commitment to sharing information, attendance at training and development sessions and continuous development
  - Regular engagement with the entrepreneurs is critical for ensuring long term success

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Enterprise Development Case Study Bling Bling

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Enterprise Development – Case Study Bling Bling

- Qualifying communities within 50Km's radius being the guide.
- Financially viable either through historical trading or potential future growth
- The business must have the ability to sustain its existing jobs and create new employment through the deployed funding
- Assessment was undertaken through a panel presentation and assessment (NYDA, SEDA, NEF & IDC)
- Bling Bling was one of 6 successful business that received funding from DFSP

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Enterprise Development – Case Study Bling Bling

- Bling Bling is a Pet Grooming Business in Kimberley
- The business is 100% black owned and managed by a youth member from the community.
- Bling Bling needed investment to unlock further potential value through a pick- up and drop service
- The company employed 3 people people at the time of requesting our assistance for funding; 2 additional jobs have been created with additional capacity to pick-up and drop off pets
- New market opportunities being explored to grow the business into kernels
- 12-month target is net profit margin of 20% from 8% currently

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Lessons

- Keep the recruitment process open and transparent
- Collaborate and partner with organizations in the SMME development space to enhance the offerings to the entities (access to loan funding form SEFA, business development services form SEDA, seed funding from NYDA)
- Focus on the entrepreneur and not the product as long the market and sustainability can be proven
- Allow for opportunity for entities to network and build linkages with each other to learn and grow.

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THANK YOU

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FRANCIS JACKSON
GreenCape
Special Advisor

Francis Jackson (BASc Mechanical Engineering, University of Toronto, Auckland University, Executive MBA, UCT Graduate School of Business).

Starting off in wind turbine design and manufacturing in 2002, Francis has a background in infrastructure development, financing, asset management and governance. He developed the Amakhala Emoyeni and West Coast One wind farms and pioneered a portfolio of wind development assets in East Africa as Head of Development for Africa for Windlab. As an Investment Principal at AIIM, he dealt with ESG and asset management on several wind farm boards.

His contributions to market development in South Africa began with chairing the technical working group of the nascent SA Wind Energy Association and lecturing on wind energy at Stellenbosch University. At GreenCape, he led the operationalising of the Atlantis Special Economic Zone. His special interest is in working practically through system dynamics in complex and uncertain contexts which sees him presently leading the South African Renewable Energy Masterplan (SAREM) project team and replicating the GreenCape model in a new cluster organisation in Mpumalanga.

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Localisation of renewable energy value chains

Opportunities for local investors

10 Dec 2020

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Localisation of renewable energy value chains

Opportunities for local investors

- Value chain and manufacturing: some definitions
- IRP: the peg in the ground for scale of opportunity
- What are we learning?
- What appear to be likely prospects for local manufacturing?
- Developing manufacturers – how would you do it?

With thanks to the input of the **GreenCape** team on energy and the South African Renewable Energy Masterplan (SAREM)












Value chain elements

Localisation and industrialisation

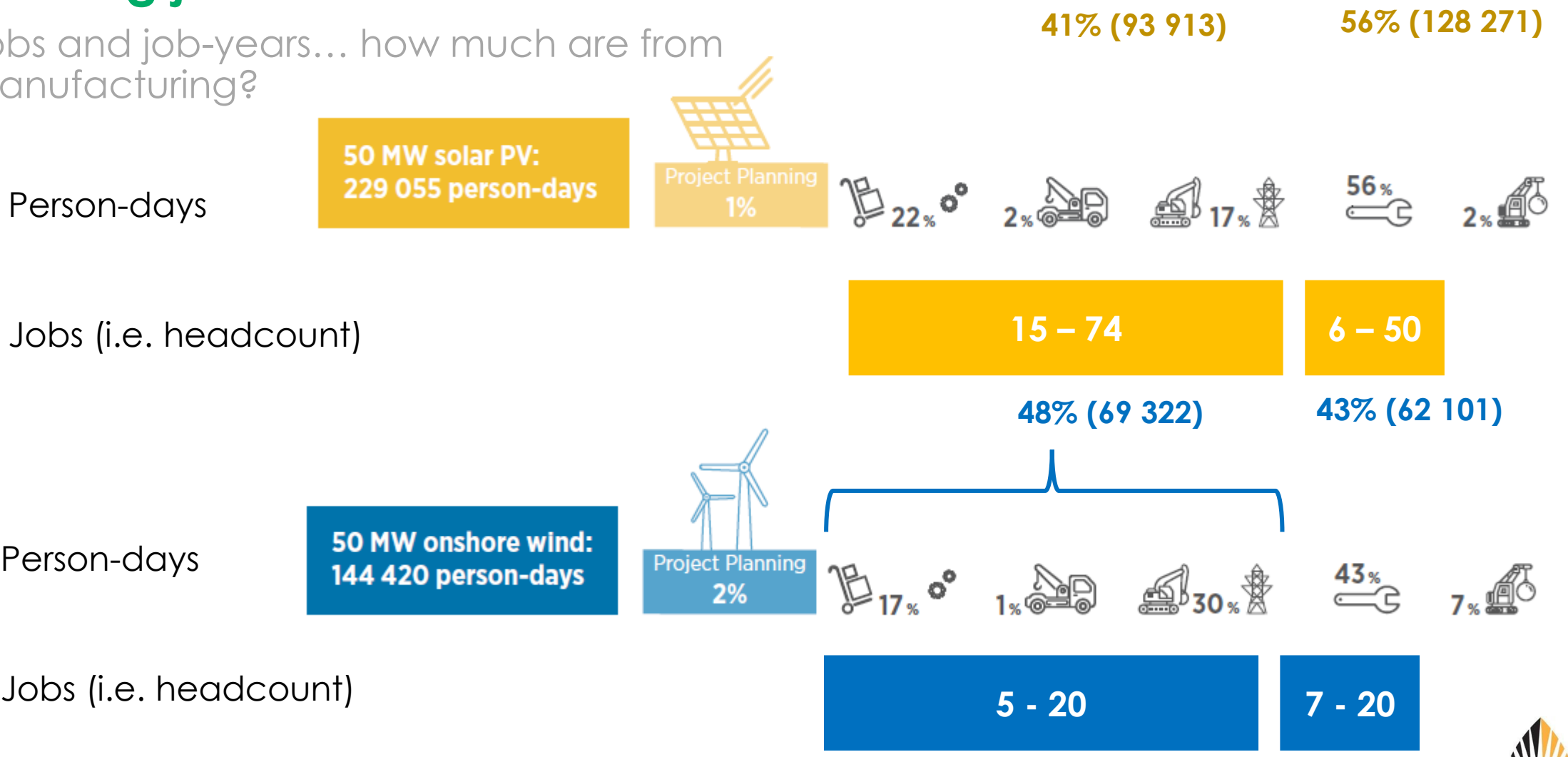
- Industrialisation refers to the core elements of the value chain related to the design, manufacturing and servicing of renewable energy products.
- Localisation refers to the wider set of activities that are required to enable renewable energy to be deployed.
- Core value chain components are specific to renewable energy products, wider value chain components can be more generic (e.g. project management, civil works, transportation, environmental analysis, legal services)
- I am going to focus here on Industrialisation for wind and solar.

SEGMENT OF THE VALUE CHAIN PHASE	ACTIVITIES
Project planning	1.1. Site selection
	1.2. Technical and financial feasibility studies
	1.3. Engineering design
	1.4. Project development
Procurement	2.1. Identification of specifications
	2.2. Assessment of the local availability of materials
Manufacturing	3.1. Nacelle manufacturing and assembly
	3.2. Blades manufacturing
	3.3. Tower manufacturing and assembly
	3.4. Monitor and control system manufacturing
Transport	4.1. Transport of equipment
Installation	5.1. Site preparation and civil works
	5.2. Assembling equipment
Grid connection and commissioning	6.1. Cabling and grid connection
	6.2. Commissioning
Operation and maintenance	7.1. Operation
	7.2. Maintenance
Decommissioning	8.1. Planning the decommissioning
	8.2. Dismantling the project
	8.3. Disposing/recycling the equipment
	8.4. Clearing the site

IRENA 2017

Defining job creation

Jobs and job-years… how much are from manufacturing?



IRENA (2017 & 2019) for person-days & Szewczuk et al. (2010) for jobs in construction, installation and manufacturing (CIM) and operations and maintenance (O&M)

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IRP: the peg in the ground

Scale and certainty are enablers in themselves

- By 2015, we had made progress based on market confidence and regular REIPPPP rounds
  - Much of Balance of Plant (BoP) already localised
  - Established manufacturing capacity in wind turbine towers, inverters, PV module assembly

- The hiatus in procurement saw several of these investments pull out or close, e.g. DCD Towers

- We are not picking up where we left off
  - Have to rebuild up to 2015 levels first
  - Lead time may be required for the previously established core manufacturing and balance of plant (BOP) capacity to ramp up again.
  - Continuity (i.e. demand every year with no gap years) is important if the potential is to be realised.

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IRP: the peg in the ground

Existing capacity and ramp-up are considerations across value chain

- South Africa has well established manufacturing capability in lower tech utility scale wind energy components.
  - Not enough capacity to serve the full annual build in the IRP2019.
  - With a need for 400 MW/year/OEM, there is potential for 2-3 new wind tower manufacturers within the scope of the IRP2019, depending on the size of turbines and the split between steel and concrete towers.

- Current manufacturing capacity for crystalline silicon solar PV modules matches the annual demand in the IRP2019.
  - However, 50% of this is for one original equipment manufacturer (OEM), while the other is a toll manufacturer that could accommodate more than one OEM.
  - I.e. some additional potential for module manufacturing, but business case may not be strong based on local demand only (possibly <300 MW/year/OEM after existing capacity)

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The status quo

South Africa vs. other markets

- Renewable energy value chains are highly competitive, led by a number of lead firms.
- Expectations regarding export opportunities globally and into Africa in order to provide sustainable business for local manufacturers need to be realistic.
- Many countries globally have established renewable energy manufacturing capability, the majority with better access to large renewable energy markets (Asia, North America, Europe)
- Our “hiatus” period unfortunately overlapped considerable growth in the supply side internationally – some missed opportunity
- South Africa is strong on installation and maintenance of commercial/industrial and residential scale solar PV. There is potential for export of these services to the African market. This market may be a key point of leverage for local manufacturing of solar PV components.

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Comparator countries

5 common factors where successfully established local manufacturing

- Size of local market and longer term visibility of / certainty in local market
  - Wind: 400 MW/OEM/year for 5 years; Solar PV : 300 MW/OEM/year for 5 years
  - Can be smaller for countries close to large export markets (e.g. Morocco, Tunisia, Turkey)
- “Local content requirements“ (LCRs)
  - To (initially) protect “infant industries” and attract foreign investment
  - Local renewable energy manufacturing can be established without local content requirements. Market certainty is the key determinant of success under these circumstances[1]
- Industry support mechanisms and government investment
  - Includes (a) training; (b) diffusion of best practice (e.g. through clustering); (c) standards and means of testing and certification; (d) R&D (financial support & public programmes)
- Export aid
  - Includes trade promotion, export credits, and binding commitments for export as part of LCRs
  - Successful countries export 60-80% of production (e.g. Morocco local market = 30% of production of blades)
- Consistency with the industrial strengths of the country
  - Existing capabilities: leveraging local strengths in existing or related industries
  - New capabilities: initially leveraging off foreign companies through a range of mechanisms (local subsidiaries, joint-venture, licenced production)

1. (Kuntze and Moerenhout, 2013).

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Emerging insights

Comments from industry

- Regional and international export markets are important for successful local manufacturing
  - Local supply chains
  - Labour costs (either cheap labour or very efficient factories)
  - Location - reach to main markets (Africa’s potential as a regional export market TBC)

- Local nacelle assembly can unlock opportunities for other nacelle components to be localised
- There are major gaps in skills and staff in contractors (civil and electrical BOP) likely only solved by certainty in the market.
- Support to move from value based local content to points based system (as long as it isn't over complicated)

Opportunities

Based on research and
emerging insights from industry

Opportunities (1)

Localisation

- Export revenue through strong specialised services (e.g. environmental studies, legal services, structuring financials deals, engineering design, site assessment)

Industrialisation

- Expansion of local steel and aluminium manufacture, provided cost can be reduced to be cost competitive with imports.
  E.g. IRP2019 potential for 5% (Wind: 4%, Solar PV 1%) increase in annual local steel production, contributing ~2.2 billion to GDP and over 700 jobs.[1]
- Toll manufacturing facilities that allow production for more than one project/OEM – allows for the current uncertain nature of procurement

1. Estimate based on IRENA (2017a, 2017b) and South African Iron and Steel Institute factors per 1000 tonne steel (Engineering News, 2020)

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Opportunities (2)

Wind:

- Additional wind tower and tower internals manufacturing
- Local nacelle assembly (even if initially largely from imported components) is an important enabler of higher value local turbine component manufacturing.
  Local nacelle assembly could enable expansion in existing casting, forging and transformer production if capacitated for renewable energy component production. (Potential of these components: Medium)

Solar PV

- Additional module manufacturing, but the business case may not be strong based on local demand only (possibly <300 MW/year remaining capacity given currently established (dedicated OEM and toll) module manufacturing capacity).
- Expansion of aluminium module frame and junction box manufacturing facilities, provided cost of aluminium can be reduced to be cost competitive with imports. .

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Opportunities (3)

Solar PV (cont.)

- Inverters
  - System assembly with core imported products and some local components; or
  - Manufacturing under licence, (meet quality standards and get access to testing and certification locally)
  - Expanding magnetics production and support through additional milling capacity
  - Expanding transformer production through reductions in input material costs (especially steel), and support for improvement in efficiencies to meet required standards
  - Expanding of enclosure and packaging production.

- Mounting structures
  - More readily localised due to high cost of transport, relatively lower value components
  - Steel, aluminium (if costs of tooling, inputs, reduced to be competitive with imports)
  - Expansion of cable production by expanding local production of conductors, insulation, and armour, provided input material costs (steel, aluminium and polymers) are addressed.
    Local aluminium rod production could boost to local cable production.

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Developing Manufacturers

How would you do it? What to consider?

Getting into a value chain

What does it take for an EPC or OEM to change a supplier?

- *Follower-sourcing* is the dominant means whereby local component manufacturing is established
  - An international lead firm establishes in a country
  - They attract their existing suppliers to set up there too

- Even where local supply exists, switching cost is high, requiring time and trust
  - It can take over a year to get a new supplier onto their database; and
  - Several years before they are comfortable with the quality of the supplier
  - Certification (e.g. IEC) updates may be triggered for supplier/component changes

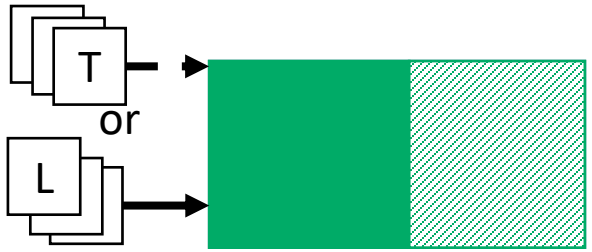
Local manufacturing typologies

Ownership key
- Foreign
- Black SA
- Other SA

Local Subsidiary of Foreign Company
OEM or supplier to OEM
IP: OEM / supplier to OEM

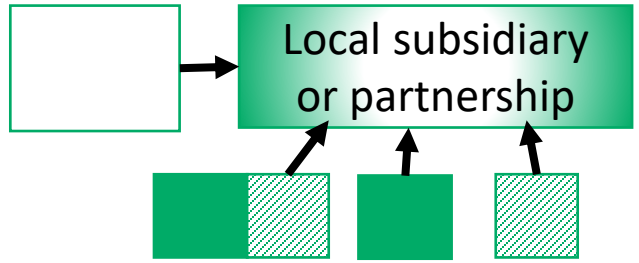
Examples:
- GRI Towers (Steel Towers)
- Seraphim (PV modules)

Local Manufacturer: Toll OR licensee
Set up equipment to manufacture
uses OEM / supplier IP under licence
or produces on contract to spec



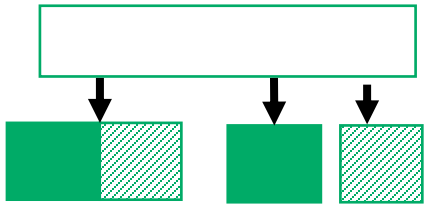
Examples:
- Toll (T): ArtSolar (toll PV modules)
- Licensee (L): TUB (when active) (inverters)

Local Assembler
OEM combines imported and
locally made components
IP: OEM & supplier / component



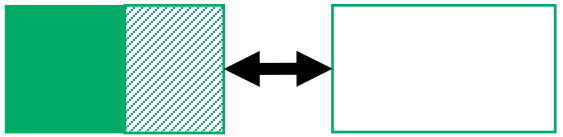
Examples:
- SMA proposal for units

Local Partner Manufacturer
OEM / supplier to OEM provides
manufacturing support (e.g. tooling, expertise)
IP: OEM / supplier, build local capability



Examples:
- STI Norland (PV Mounting & Trackers)

Local Manufacturing Partnership
OEM / supplier to OEM
Installs local production line in partner
company / scales-up & down as required
IP: OEM / supplier



Examples:
- GPTech (inverters)

Local Manufacturer
supplier to OEM / balance of plant

IP: Own

Examples:
- Ver-bolt (fasteners, nuts & bolts))

Price premiums

- Price premiums for local production of components
  - Estimates of the price premium for local content across the full value chain and individual components vary widely making it difficult to assess the likely impact.
  - Wind: 5% for blades, 10-20% for nacelles, 20% for other components
  - 5 – 60% for utility scale solar PV components.
  - A research study funded by the South African Wind Energy Programme (SAWEP) has been commissioned to provide better estimates.

- There may be ways in which procurement could be structured to minimise the impact of price premiums.

Developing manufacturers

Considering local manufacturing?

- Finance and risk
  - Manufacturers typically are required to put up significant bonds and guarantees.
  - Beyond the balance sheet of many developing industry players.
  - Equity and debt providers will evaluate project risk taking to account EPC, OEM and value chain participants.
- Setup time
  - Is supplier going to make their business case for setting up shop on the back of one project or one REIPPPP round?
  - If so, consider timing carefully:
    - How long will factory build and kit-out take?
    - What is the trigger for investment into facilities – Preferred Bidder / Financial Close / Notice to Proceed?

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“LOCALISATION OF RENEWABLE ENERGY VALUE CHAINS – OPPORTUNITIES FOR LOCAL INVESTORS”

Roll-out of substantial renewable energy capacity such as envisaged in the IRP presents a remarkable opportunity for industrialisation and associated economic recovery.

It is seen by many as an imperative for widespread embracing of the opportunity, for it to come with commensurate growth in local value chain industrial capacity.

Thank You

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Chief Operating Officer

QUESTIONS AND ANSWERS SESSION

Please type your questions in the message box and we will respond

Niveshen Govender
SAPVIA
Chief Operating Officer

CLOSING REMARKS

Thank you for joining our fourth webinar of the 'Developing Developers' series

DATE	WEBINAR TOPIC
10th December 2020	The Economic Development Impact
28th January 2021	Fundamentals of RE Project Development
25th February 2021	Commissioning Projects: Engineering Procurement Construction
25th March 2021	Operating Projects: Operations & Maintenance and Asset Management

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