



For Education. For Work. For Life.

**MOUNTAIN REACH
TECHNOLOGIES**

COMPANY PROFILE

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MOUNTAIN REACH TECHNOLOGIES

Mountain Reach Technologies (MRT) pioneers social change through its innovative SET Framework, which leverages technology to catalyze socio-economic transformation. Central to this framework is the SET Process, a series of Core Offerings guiding communities from potential to prosperity.

VISION

Our **VISION** is to see an Africa unleashed to sovereignty and excellent talent supremacy.

MISSION

Our mission is to empower leaders from all backgrounds, unlocking human potential for the benefit of individuals, teams and communities. With a pan-African focus, we drive growth and development across the continent.

OUR TEAM



TSHELINZIMA GEORGE XOLO

Executive

An independent entrepreneur, founded IFM Holdings Pty Ltd, pioneering as one of the first African-owned healthcare companies in South Africa. He also established Hyway Technologies PTY Ltd, focusing on road safety and electronic security software, and leads Body Strength clinic, offering natural healthcare with a focus on diabetes and its connection to gender-based violence.



BUYANI ZWANE

Executive

A master strategist in HR and leadership development, believing in unlocking individual and team potential. With roots in rural KwaZulu Natal and leadership roles across Southern Africa, he leverages his experience for diverse organisations and as a keynote speaker and educator at Pretoria's GIBS, focusing on strategy, leadership, and change management.



ASNATH MAHAPA

Non-Executive

The first African woman to qualify as a commercial pilot and acquire an airline transport pilot's license, founded the Asnath Matsobane Mahapa Foundation. She empowers disadvantaged youth through STEM programs and mentorship. Recognised globally, she champions safety and security for women and advocates against gender-based violence.



Wikus van Vuuren

Executive

A passionate leadership and 30-year veteran with multi-industry organisational development experience, from factory floor to Board of Directors. Expertise with working with diverse leaders in Africa, Europe and the Middle East. His calling is to create sustainable transformation by designing and implementing solutions that impact individuals, businesses and communities.



Patrick Shields

Executive

A seasoned business technology executive with over 38 years of industry experience and a decade in international executive roles, he excels in global and regional technology go-to-market initiatives. His extensive expertise spans strategy, solution sales, and multiple technology domains. Based in South Africa, he is also an influential public speaker, coach and advisor.

THE CHALLENGE AS WE SEE IT

THE AFRICAN CONTINENTAL CHALLENGE

A large majority of people in South Africa grow up and live in underdeveloped communities, which are reeling from the effects of prolonged **abject poverty** and **unemployability**. Their biggest daily struggle is **hunger**; the most basic of human needs.

Abject poverty means living in very poor conditions, with “no hope of improvement”. Abject poverty has two main causes. The first is **learned helplessness**. The second is the **loss of dignity**.

Learned helplessness means that people think they cannot change their situation. They get used to being poor and do not try to improve their lives.

Loss of dignity means that people do not feel proud or respected. They do not have the ability to support themselves or control their own destiny. They depend on others for their survival and feel ashamed of their poverty. They need opportunities to escape from poverty and regain their dignity.

Unemployability has two main causes. The first is skills irrelevance. The second is illiteracy.

Skills irrelevance means that people do not have the skills that match the jobs available.

Illiteracy means that people cannot read or write well. This makes it hard for them to learn new skills or get good jobs. Many people drop out of primary and secondary school before they finish. And the coronavirus pandemic caused many learners to lose their education opportunities.

FURTHERING THE CHALLENGE

At first glance the solution to poverty seems clear. Through education, we can enable people to earn money, through which they are able to attain what they need most, like food, clean water and toilets. This will make people **feel good about themselves, have self-respect and claim back their dignity**.

Yet, before any socio-economis transformation can take place in such communities, the “**Right Now**” **Dilemma** forces us to consider the immediate basic needs of people first. We need to **fill the stomach first**. After that, the minds can be filled. This is also known as the “**politics of the stomach**”.

FURTHERING THE CHALLENGE

- 1. Prioritize Immediate Needs:**
Focus on providing essential resources like food, water, and sanitation to instill dignity and self-respect in communities.
- 2. Address Unemployability:**
Invest in skills development and education programs tailored to local job market demands to enhance employability.
- 3. Combat Abject Poverty:**
Empower individuals to break the cycle of poverty by fostering a sense of agency and self-sufficiency through targeted interventions.



THE MRT SET PHILOSOPHY

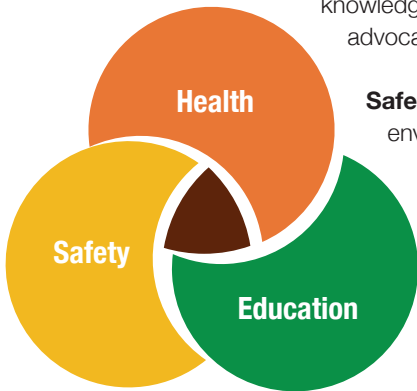
THE MRT PHILOSOPHY is anchored in addressing the 'whole human experience', which is fundamental to socio-economic transformation. This holistic approach, interwoven with Maslow's hierarchy of needs, encompasses health, education, and safety, which are indispensable to human (flourishing).

In the digital age, the MRT SET Framework presents an innovative extension to Maslow's hierarchy by introducing internet connectivity as a foundational layer. Recognizing the internet as an essential utility, this layer acknowledges that digital access is a prerequisite for participating in the modern economy, accessing information and fostering communication.

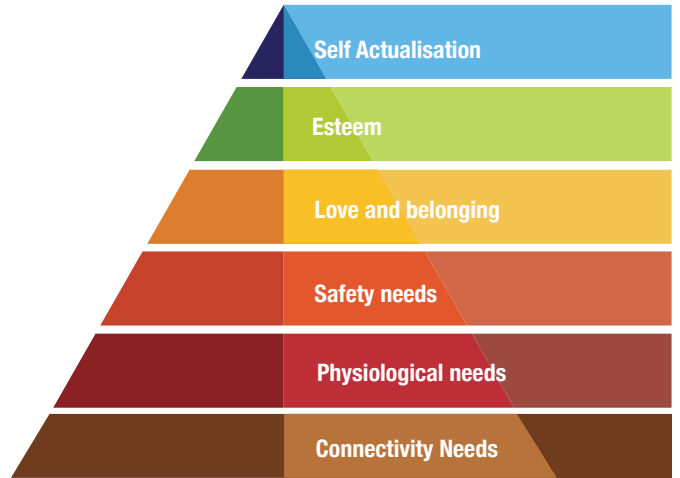
Treating any single component of the human experience in isolation is not only ineffectual but also neglects the interconnectedness of human needs.

Health is the bedrock of the human life; without it, one cannot engage in education or feel safe. Good health enables individuals to pursue the second step.

Education, which is crucial for personal development and empowerment. With health and knowledge, individuals can advocate for their own safety.



Safety ensures a stable environment in which to apply their skills and knowledge. It is a gatekeeper for higher-order needs; a necessary condition for community engagement and the pursuit of well-being.



Finally, once these **foundational** needs are met, internet connectivity emerges as a catalyst, amplifying the benefits of health, education, and safety, and enabling individuals to reach self-sufficiency in a modern South Africa.

In addressing the challenge of adject poverty and unemployment, the logical sequence of addressing these needs follows the transition on Maslow's hierarchy of needs, beginning with health, followed by education, then safety, and underpinned by internet connectivity. MRT has carefully studied these needs and are poised to deliver innovative solutions to bring lasting improvements and transformation to underdeveloped and underserved communities.

In this scaffolded approach to socio-economic development, each step supports the next, creating a ladder that lifts individuals and communities from basic survival to the highest reaches of their potential. This ordered progression is vital for MRT's vision to foster resilient, self-sustaining communities that can thrive in an ever-evolving global landscape.

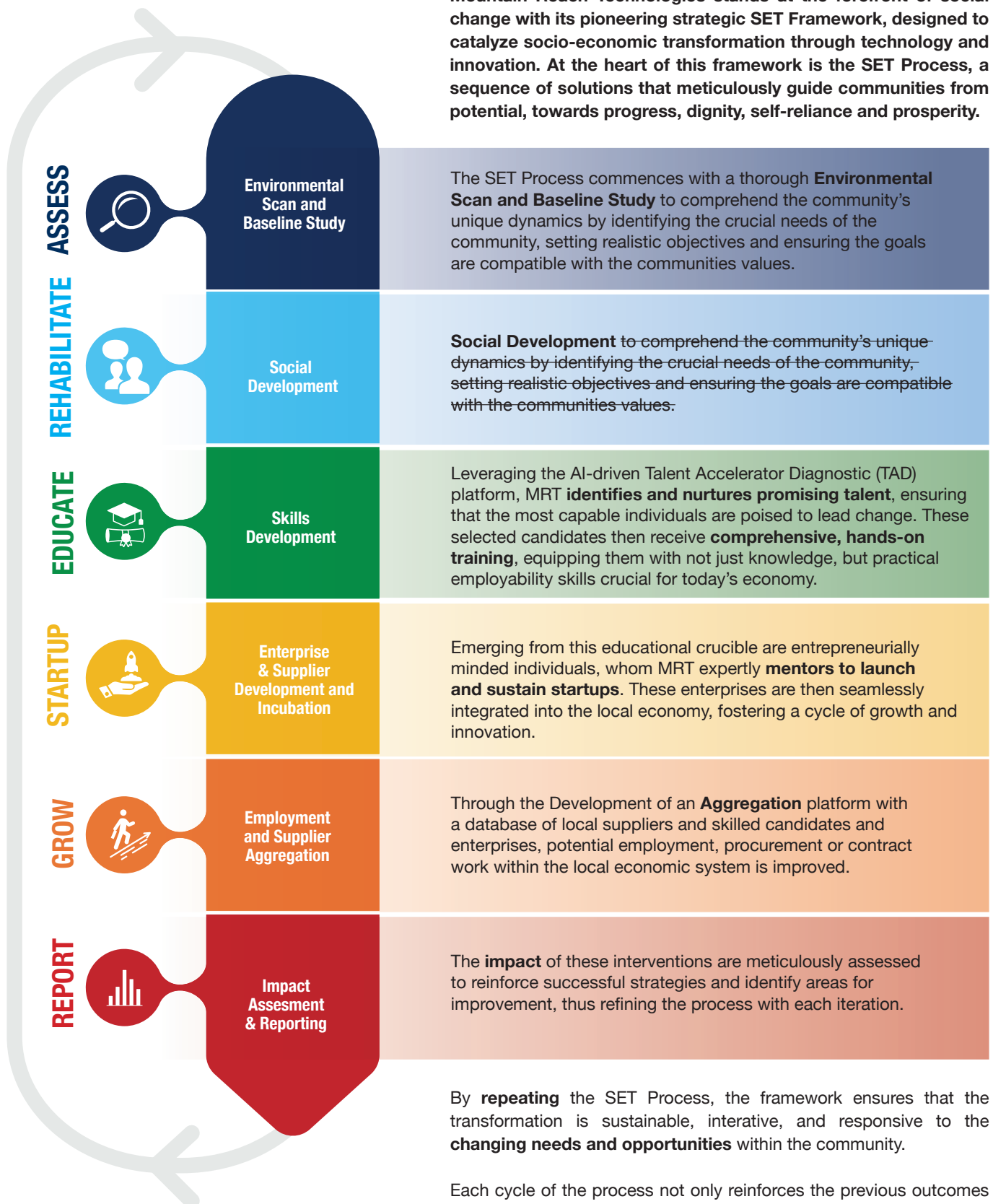
OUR GOAL

Mountain Reach Technologies pioneers social change through its innovative SET Framework, which leverages technology to catalyze socio economic transformation.

Central to this framework is the SET Process, a series of Core Offerings guiding communities from potential to prosperity.

OUR INNOVATIVE SET MODEL

Mountain Reach Technologies stands at the forefront of social change with its pioneering strategic SET Framework, designed to catalyze socio-economic transformation through technology and innovation. At the heart of this framework is the SET Process, a sequence of solutions that meticulously guide communities from potential, towards progress, dignity, self-reliance and prosperity.



By **repeating** the SET Process, the framework ensures that the transformation is sustainable, iterative, and responsive to the **changing needs and opportunities** within the community.

Each cycle of the process not only reinforces the previous outcomes but also lays the foundation for new ones, leading to a robust cycle of growth, empowerment, and socio-economic transformation.

OUR INNOVATIVE SET MODEL PHASES

PHASE 1: ASSESS



The initial phase, an Environmental Scan and Baseline Study, lays the groundwork by mapping the socio-economic landscape and identifying the unique needs and assets of the community. This informed perspective is critical for tailoring the subsequent steps of the SET Process to acknowledging their current state and potential for growth.

Step 1: Environmental Scan & Baseline Study

Through a **Competitor Analysis** we examine the successful strategies of similarly sized corporations, drawing insightful comparisons. When setting inferred and explicit **objectives**, a Monitoring and Evaluation Process is established to evaluate the short-term, medium-term, and long-term **impacts** on intended beneficiaries. This assessment also ensures that the **set goals** are compatible with community **values**, emphasizing sustainability and positive impact. We revisit the client's needs to **assess the gaps** they aim to address and their ultimate desired **outcomes**. **Engaging** with the beneficiaries in the community is paramount. We interact with community members, leaders, and key organizations through interviews, surveys, and discussions with police, social workers, and other stakeholders. This comprehensive engagement helps us understand community needs and perspectives.

The Environmental Scan and Baseline Study ensures that the **proposal** and subsequent solutions addresses substantive and verifiable community challenges. By integrating these components, MRT ensures a thorough and strategic approach to achieving client goals while fostering community sustainability and growth.

Keeping in mind the challenge of poverty that African communities face, the immediate, basic needs of people need to be prioritized. Based on the outcomes of the environmental scan and baseline study, MRT will propose **social development solutions** that are aligned with these **basic needs** of the community, focusing on improving their health, living conditions and safety, ultimately **restoring self-respect and dignity**. Within these solutions, many new employment opportunities arise (phase 4), which together with our education solutions (phase 3), **reduces illiteracy and unemployability**.

Step 2: Social Development Solutions

Health products



Re-usable sanitary towels

Period Poverty is a very real challenge that the average African girl child faces. It refers to lack of education regarding a woman's menstrual health and hygiene, the inadequate access to menstrual hygiene products and unsuitable methods to dispose of menstrual waste. MRT has created the **Body Strength washable, reusable sanitary towels** with the goal in mind to give every African girl child the opportunity to uninterrupted schooling and improved sanitary health practices. MRT further empowers these girls through educating them about menstrual health and hygiene.



Water purification

One Drop is a scientifically tested liquid that contain natural mineral ions that works by destroying microscopic bacteria and algae in untreated borehole, reservoir or river water. It is the ideal solution for use in communities lacking water treatment systems, and in use for farming and mining industries where basic infrastructure is lacking. The availability of safe drinking water does not only meet people's basic needs, but also creates supports the overall health and wellness of communities.

PHASE 2: REHABILITATE



OUR INNOVATIVE SET MODEL PHASES

Waste & Recycling

MRT Waste Recovery Stream

MRT offers solutions for the harnessing of the total waste stream in a manner that creates safe, hygienic, sustainable employment opportunities at all levels. Our vision is to provide a complete diversion from landfill within the next five to ten years.



Step 1: Waste collection and sorting

The waste recovery process starts with efficient collection and sorting of waste. The goal is to separate the wet and dry waste. Dry waste goes directly to a Material Recovery Facility (MRF), while the wet stream follows several alternative treatment solutions. MRFs are the largest job creators.

Step 2: Recycling of dry materials

MRT prioritizes the recycling of plastic in underrepresented regions, for maximum job creation and a healthier environment. At recycling

facilities the various types of plastic are processed into reusable materials.

Step 3: Recycled products

MRT is at the forefront of turning recyclates into innovative, durable products. Recyclates are used to produce homeware such as bowls and buckets, as well as plastic timber profiles, from which tables, chairs, school benches and pallets are produced.

Step 4: Energy solutions

MRT makes use of the following capabilities in treating unrecyclable waste:

- a) Gasification is a thermal treatment process of unrecyclable waste, thereby providing energy in the form of heating/cooling and electricity.
- b) Medical Health Care Risk Waste (HCRW) is either sterilized and used in plastic timber profiles, or gasified to produce heating/cooling or electricity.
- c) Tyres are suited to thermal treatment via pyrolysis for production of diesel or energy



Bio-toilets

BioLoo toilet systems are innovative sewage treatment systems equipped with flush toilets and integrated waste water treatment plants, that uses natural processes to treat waste. They are designed to conserve water and promote responsible waste water management by treating the waste and producing clean and odorless water that can be reused. This is particularly important in mining communities, rural schools, building sites and temporary installations where traditional bucket systems are not only unpleasant but also pose a serious health hazard. BioLoo toilet systems are cost effective, sustainable, hygienic and environmentally friendly.



Safety & Security



Falcon Rapid Response

Falcon Rapid Response is a technology platform that connects individuals to on-demand security services. Each Falcon panic button and app is connected to the Falcon emergency response system, which is further connected to a wide network of emergency response services. When the panic button or app is activated, the security team nearest to your location is immediately dispatched. The Falcon security system is accessible anywhere, any time.

The panic button is linked to the app, therefore the app user can track the panic button in real time. This system not only improves personal security, but is effective in reducing child trafficking and kidnappings, and as a deterrent of domestic violence against women and children.

Agriculture

Self-sufficient small-scale farming

By equipping individuals in vulnerable communities with agricultural knowledge and skills, and providing them with access to agricultural plant equipment, advisory services and financial solutions, they can harness the potential of unused land to yield fresh produce. Small scale farming makes way for new job opportunities and producing a sustainable food supply, creating self-sufficient communities.

Bio-Organic Fertilizers

Fertilizers are important in supplying plants and crops with necessary nutrients to enhance growth. MRT's Bio Organic Fertilizer is eco-friendly; composed of all natural ingredients. This fertilizer can increase production yields by up to 50%, resulting in higher production outputs.



OUR INNOVATIVE SET MODEL PHASES

PHASE 3: EDUCATE



When basic needs of people are met, they can move on to higher human development such as learning. The next step in the SET process focuses the development of **employability skills** within communities. The **Skills Development Initiative** will apply the **Talent Accelerator Diagnostic (TAD) Tool** to assist in ensuring proper identification of an individuals' ideal subject, study or career choice based on their talent, skills and interests. Based on each individuals' results, they will receive practical, hands-on **training** in different trades, qualifications and skills, which equips them with marketable skills that align with current and future industry demands. This phase directly **creates employability**, enabling community members to move beyond job readiness to job creation.

Step 3: Skills Development Solutions

Our approach for implementing the **Skills Development Initiative** to identify and develop individuals' skills involves eight steps:

Prospective candidates will be **assessed** using the MRT proprietary **Talent Accelerated Diagnostic (TAD) tool**. The application of this tool will assist in providing proper guidance to potential candidates to ensure that they are developed in a direction that will be feasible and sustainable for them.

40%

Percentage out of every 1 000 000 pupils who enter grade 1 finishing matric

5%

Percentage out of 1 000 000 students who enter Varsity graduating after 6 years

WHAT IS TAD

TAD is a digital platform that merges AI algorithms with extensive research which can scientifically determine an individual's potential and their career suitabilities. TAD transcends traditional aptitude tests, by offering an unparalleled solution to the challenges of subject selection and career guidance.

HOW DOES IT WORK?



Interest Score

+



Skills Score

+



Opportunity indicator

= Overall recommendation score

TAD measures three key indicators:

- **Interest Score** directly measures an individual's career interests.
- **Skills Score** directly measures natural skills, relating individuals to tasks and jobs to which they will be more suited.
- **Opportunity Score** directly measures the real world opportunities that each career prospect represent.
- **Overall recommendation Score** takes into consideration the individual's skills, competencies, interests and performance potential, narrowing an individual's results down to their three most applicable career fields.

WHY CHOOSE TAD

- **Unique Web-Based Solution:** The MRT TAD Tool stands alone in its ability to merge AI algorithms with extensive research, delivering unprecedented predictive power in career guidance.
- **Scientific Precision:** Utilizing predictive analytics, TAD scientifically determines an individual's compatibility with specific roles and career fields, transcending traditional aptitude tests by considering a full spectrum of abilities, interests, and personality traits.
- **Unbiased and Automated:** TAD's proprietary AI algorithms ensure transparency and reliability in results, offering immediate, unbiased insights into an individual's potential and career suitability.
- **Comprehensive and Tailored Guidance:** TAD offers personalized recommendations on subject choices and career paths, leveraging a vast integrated task database to match individuals' unique profiles with optimal career fields.

WHO CAN USE TAD



**95%
PROFILE
ACCURACY**



**89%
IMPROVEMENT
IN RETENTION**



**95%
PERFORMANCE
PREDICTABILITY**

TAD guides scholars in subject choice and students with their career path. It helps recruiters in identification and placement of candidates in jobs, and assists companies in development strategies by identifying future leaders.

OUR INNOVATIVE SET MODEL PHASES

After assessment, candidates will receive a **Personal Development Plan (PDP)** that will guide their immediate and further development. Candidates will then be **trained** at either current adapted facilities, newly developed facilities or TVET “on wheels”, which will all provide SETA/QSTO-accredited, curriculum-based, practical, high-quality training and development in the areas of vocational, hospitality, agricultural and technology driven skills.

During and after the formal training, candidates will be provided with **practical workplace experience** with companies in the region to assist with practical understanding of the application of their learning and/or the completion of learnerships. Once candidates have met all the requirements for their qualification and been formally **assessed and certified**, they will graduate and received their certificates. MRT will assist with the **placement and absorption** of graduates with companies in the region by making use of a Job Aggregation platform (phase 5), which ensure easy access for graduates to available positions, and for companies to vetted and qualified candidates. MRT will enable ongoing **coaching and mentoring** to graduates to assist in the fulfilment of their PDP and further career growth. All certifications will align with relevant Sector Training Authorities SETA/QCTO to ensure that candidates can **migrate** to areas where there are better opportunities if the local market cannot absorb their skills.



Some examples of the programs that can be offered:

Vocational skills

- Handyman
- Building
- Civil Construction
- Road maintenance
- Textiles & Sewing
- Mining specific skills
- Manufacturing and Engineering
- Production technology

Hospitality

- Cooking and Baking
- Hospitality management
- Event management

Agricultural skills training

- Land and Soil Management
- Poultry farmer

Labour Relations

- Labour Relations in a Workplace
- Implement Discipline Procedure
- Operations Supervision
- Supervisory techniques

IT & Technology

- MS Excel MS Project Management MS PowerPoint
- End User Computing
- Technical Support

OUR INNOVATIVE SET MODEL PHASES

With the introduction of the SET solutions, many new employment opportunities will have been created, and during the Education Phase the necessary skills needed for job availabilities will have been developed. Following skills development, individuals are ready for employment. We take this a step further, taking individuals beyond employment; guiding them in **creating and launching their own businesses**. MRT will provide fully integrated Enterprise & Supplier Development solutions through the **New Venture Creation Programme** which guides venture candidates throughout their business development. These new businesses not only contributes to **reducing unemployment**, but also fosters self-sufficiency, breaking the cycle of **learned helplessness**.



Step 4: Enterprise And Supplier Development, and Incubation Solutions

Our approach for implementing the New Venture Creation Programme to support new and existing businesses involves five major steps:

1. Venture Candidate On-boarding

MRT will utilize TAD to identify New Venture candidates for training, mentoring, and funding. An orientation session to explain the objectives, benefits, and expectations of the programme. We will assist candidates in refining their business ideas and ensuring they align with market demand and feasibility, and accordingly select candidates with promising business ideas, entrepreneurial drive, and compatibility with the local market needs.

2. Identification of Supply Demand in the Local Market

Conduct thorough market research to identify existing and potential demand for products and services in the local area.

3. Creation of Small Business Development Ecosystem and Conducting Startup Training

Incubation facilities for Venture Development will be set-up. MRT will design and deliver comprehensive startup training programs for selected candidates covering topics such as business planning, financial management, marketing, and operations. We will also recruit experienced entrepreneurs, business leaders, and subject matter experts to mentor and guide the venture candidates throughout their development journey. Candidates will be assisted with securing start-up capital through partnerships with microfinance institutions, government grants, or private investors. Opportunities for guidance will be created for venture candidates to gaining access to the local community supply chain and business opportunities. MRT will also invite Department of Small Business/Productivity SA/SEDA/SETA/Business Partners/NYDA to partner in local NVC Support initiatives



4. Post-Training Mentoring and Follow-up System

Ongoing mentoring and support will be provided to venture candidates as they implement their business plans and navigate challenges. **Networking events and partnerships** will be facilitated to connect the ventures with potential customers, suppliers, and distributors. A system for monitoring the progress of the ventures will be implemented to evaluate candidate performance, and to collect feedback from both participants and industry partners. We will help to **identify opportunities for business growth and expansion** and provide additional support to successful ventures seeking to scale up.

5. Monitoring and Evaluation

MRT will set up a system for **collecting and analyzing data** on venture candidates, business development progress, and the programme's impact on employment and poverty reduction. We will also regularly **assess the programme's effectiveness** in supporting new and existing businesses, creating employment opportunities, and contributing to local economic development. Gathering **feedback** from stakeholders, including venture candidates, mentors, industry partners, and the local community is vital to continually improve the programme's offerings and address challenges client goals while fostering community sustainability and growth.

OUR INNOVATIVE SET MODEL PHASES

Through aggregation and integration of skilled individuals and enterprises into the local economic system, we can ensure that the developed skills are utilized to its' full potential. This integration is key to eliminating skill irrelevancy, as the continuous flow of skilled individuals into the economy keeps the workforce dynamic and adaptable.

Step 5: Employment And Supplier Aggregation Solution

Through the development of an Aggregation Platform, Candidate Aggregation and Supplier Aggregation is captured in a database based on skilled candidates and trade suppliers. This database is available to Clients, from which they can draw potential employees or contract workers.

Advantages of Candidate Aggregation:

- The Client has access to detailed candidate profiles
- Profiles include TAD results to ensure more accurate placement
- Simplifies the recruitment process
- Reduces cost
- Ensures more accurate placement and retention
- Can also be used to access candidates for project based and temporary role

Advantages of Supplier Aggregation:

- The Client has access to detailed profiles for qualified and QA vetted suppliers
- Simplifies the procurement process
- Reduces cost
- Ensures quality of delivery
- Improves BBBEE points for ESD and procurement

PHASE 5: GROW



PHASE 6: REPORT



At the onset of the SET process MRT not only sets specific outcome objectives, but also implements a comprehensive Monitoring & Evaluation process, that will identify the key metrics that measure ongoing impact, and set clear targets to measure these metrics, but also outline the assesment methodology that will be used. When performing the Impact Assessment, the key metrics are measured, showing the progress that has been made and value that has been added to the community throughout the SET process and implementation of SET solutions. At the conclusion of the project, MRT will submit a formal Impact Report that will detail and outline the impact achieved, both quantitatively and qualitatively, that can be used by the Client to showcase the results achieved to all internal and external stakeholders.

Step 6: Impact Assesment and reporting

The Assesment Methodology will make use of both qualitative and quantitave asssement methods to retrieve the data needed to create the Impact Report.

The Impact Report

1. Use graphs and charts to show impact
2. Depict sustainable outcomes
3. Recommendations on project impact and sustainability, how it can be replicated or scaled



BENEFITS FOR ALL

MRT SET solutions create value that extends far beyond the immediate impact on individuals and communities. Companies benefit significantly from a steady influx of skilled workers, strengthening their operations and boosting their financial performance. Additionally, our initiatives alleviate the burden on government resources by reducing the need for socio-economic assistance in disadvantaged communities. Through our comprehensive approach, we create a ripple effect that positively influences various sectors, fostering a stronger, more resilient economy and society.

Individual

- Improved woman's menstrual health
- Improved health through improved hygiene infrastructure
- Higher matric pass rate (improved literacy)
- Skills development (higher employability)
- More job opportunities (skills relevance) Business opportunities through entrepreneurial ventures
- Food availability through self-farming
- Improved personal safety and security
- Restored dignity

Government

- Less pressure to supply social grants and unemployment insurance
- Reduced pressure for social development
- Reduced pressure for electricity and water supply, and waste management
- Higher matric pass rates, graduates, and skills development, leading to better employability
- Reduced urbanization
- More public-private partnership opportunities
- Enhanced safety and security – less robberies, kidnappings and domestic violence
- Improving SA economy

Community

- Food security
- Improved health and hygiene, through improved sanitation systems and better waste management
- Local ventures offers more localized and varied services, and strengthens the local economy
- Improved infrastructure (roads, electricity, sewage, digital communication, etc.)
- Alternative sources of electricity
- Reduction in kidnappings and domestic abuse

Corporate

- Legislation compliance (BBBEE)
- Support Skills Development Act
- Financial rebates and grants
- More accurate job placement and improved retention, by aligning skills with job responsibilities (TAD)
- Build community relationships
- Leaving a legacy

Donor Organisations

- Supporting social development
- Supporting new ventures in communities
- Reputation building
- Leaving a legacy



PARTNERING WITH US



MOUNTAIN REACH TECHNOLOGIES

OUR PARTNERS



BODY STRENGTH



ONE DROP



REPETE IT



FALCON
RAPID RESPONSE



WANT TO JOIN OUR TEAM?



**For Education. For Work.
For Life.**



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