SUPPORTING AND DRIVING MEDICAL DEVICE INNOVATIONS IN SOUTH AFRICA - ROLE OF SAMRC AND PARTNERS

AFRICA HEALTH 2019
GALLAGHER CONVENTION CENTRE
MIDRAND

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technology innovation AGENCY
MDMSA
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THE SAMRC

SAMRC Mission:

- *To improve the nation's health and quality of life by conducting and funding relevant and responsive health research, development, innovation and research translation*

……but since 2013

A key focus is the translation of research into new or improved policies, practices, processes and products to ensure health impact

CORE SAMRC FUNCTIONS

865 peer reviewed articles in 2017/18

~660 employees
- 380 baseline vs 280 contract funded
- 366 researchers (includes 158 research support staff)

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SAMRC FUNDING

The SAMRC is the largest local funder of health research in Southern Africa

Total revenue in 2016/17 – R938 M (includes government grants and contract income)

– about 40% now focussed on innovation and product development

SAMRC IN THE GLOBAL RESEARCH AGENDA

Partnership with the BGI to establish a genomics sequencing facility in Africa

Network to promote and increase the use of evidence-based healthcare and policy making

For the global development and delivery of antibiotic treatments for drug-resistant bacterial infections

Collaborative research program with Sudan on drug R&D from natural products and diagnostic development

Healthy Life Trajectories Initiative

Collaboration with Canada, China, India and Brazil to test new interventions for NCDs

26 countries funding R&D on new and existing antibiotics, and control of the spread of antibiotic resistance

MoU with Novartis & DST for joint research programmes in communicable & non-communicable diseases

South Africa-US Program for Collaborative Biomedical Research

Public research funding agencies addressing prevention and treatment of non-communicable diseases

Research partnership with India on HIV and TB

Partnership with Sweden on inequalities in health, health systems and health systems policies

BRICS TB Research network

Grand Challenges

GHIA UPDATE

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GLOBAL HEALTH INNOVATION ACCELERATOR

- Primary function of GHIA is to drive and support the commercialization of health technologies for low resource settings
- Secondary function is broader health innovation ecosystem development
- Currently SA-focused but looking at expansion into Africa with African Academy of Sciences / Grand Challenges Africa

For PATH:

GHIA is a South African embodiment of the PATH Innovation Hubs

For SAMRC:

GHIA is a focused initiative to translate its investments into impact

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- Leveraging its core strengths, SAMRC and PATH - together through the GHIA partnership - can achieve greater impact for the local innovation ecosystem.

- Vast experience in **driving PD through the full value chain** from R&D and validation/testing to commercialization/market shaping - while linking learnings to decision making
- Extensive expertise in **new product implementation** in LMICs
- Strong **global networks** in product development

- **Strong relationships** with NDOH, DST, and other South African government agencies
- **Excellent local networks** in health innovation space
- Exceptional knowledge of the **local context,** including end users

- **Strong relationship** between PATH and MRC
- **Complementary capabilities** to discover, grow, and catalyze the local innovation ecosystem, facilitating access to technologies in South Africa and beyond

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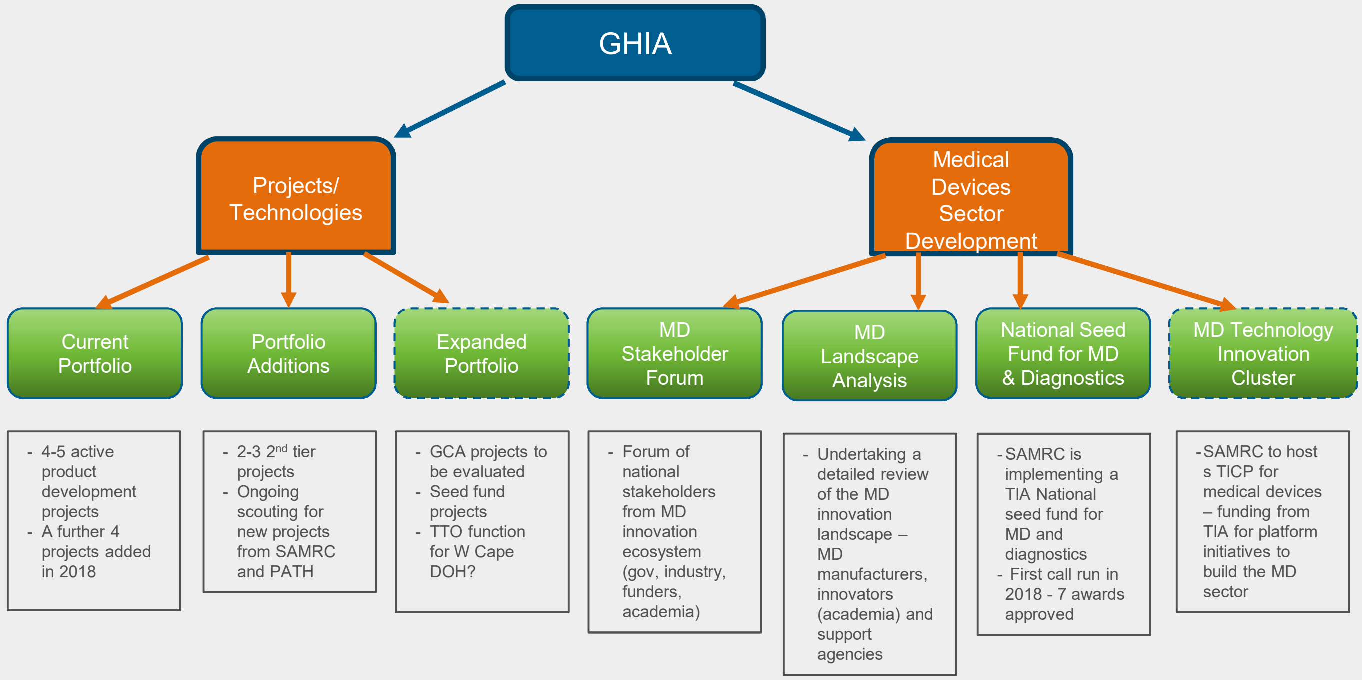
GHIA ACTIVITIES



GHIA PORTFOLIO

1

2

Genital InFlammation Test

3

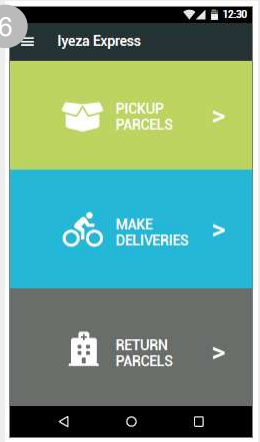
HealthConnect

4

5

bismuth
83
Bi
208.98

6



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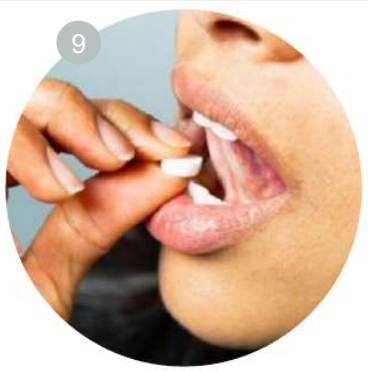
Early Markers for Diabetes

8

9



(1) Uterine balloon tamponade, (2) Genital inflammation diagnostic test, (3) Health Connect digital solution, (4) Umbiflow, (5) Bismuth based microbicide,
(6) Iyeza health (social enterprise), (7) Early diabetes marker diagnostic, (8) Protein to creatinine ratio diagnostic,
(9) Fast dissolving and heat stable oxytocin

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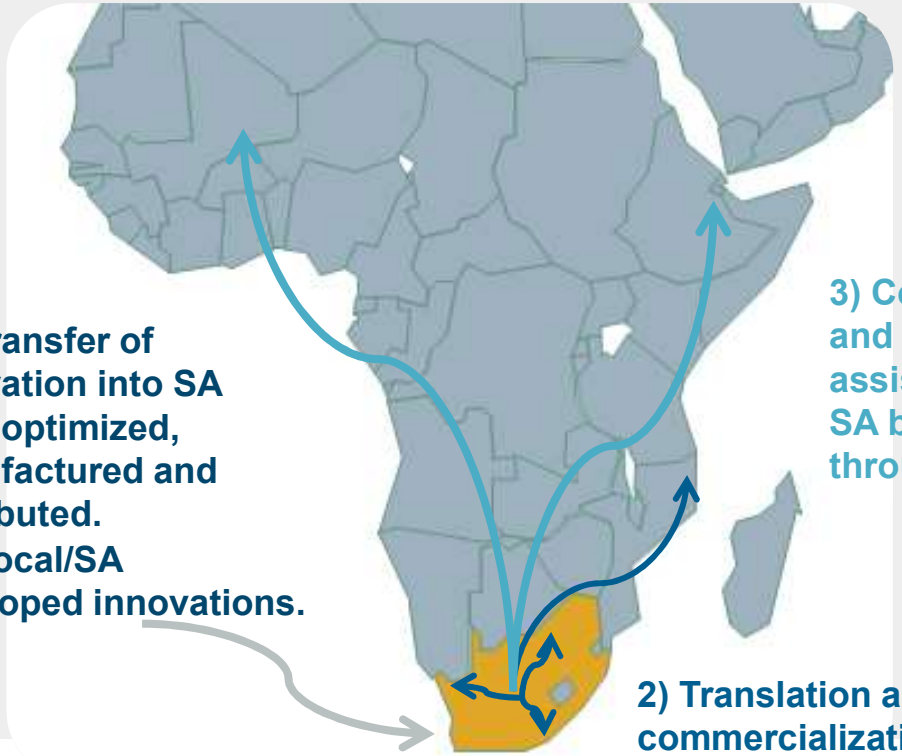
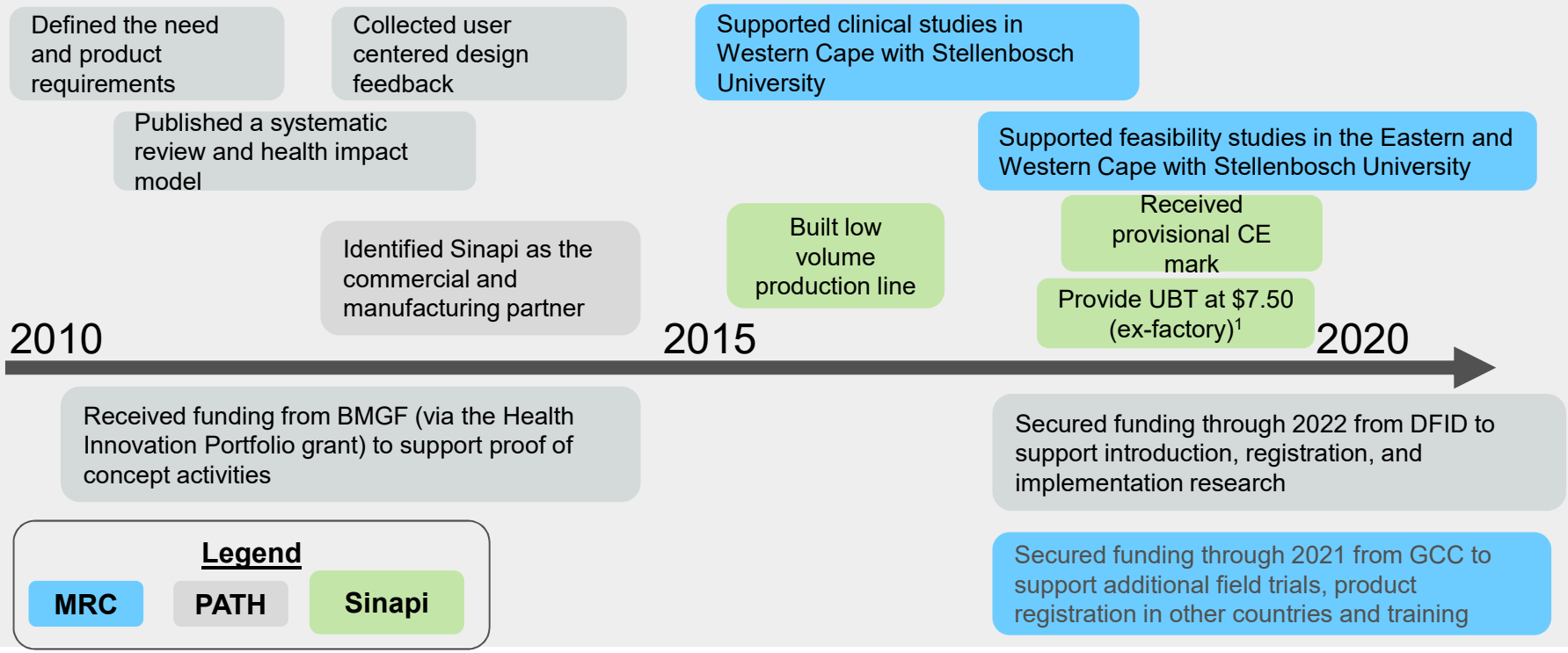
- By supporting the local innovation ecosystem, GHIA has the potential to improve access to promising global health technologies in South Africa and beyond.

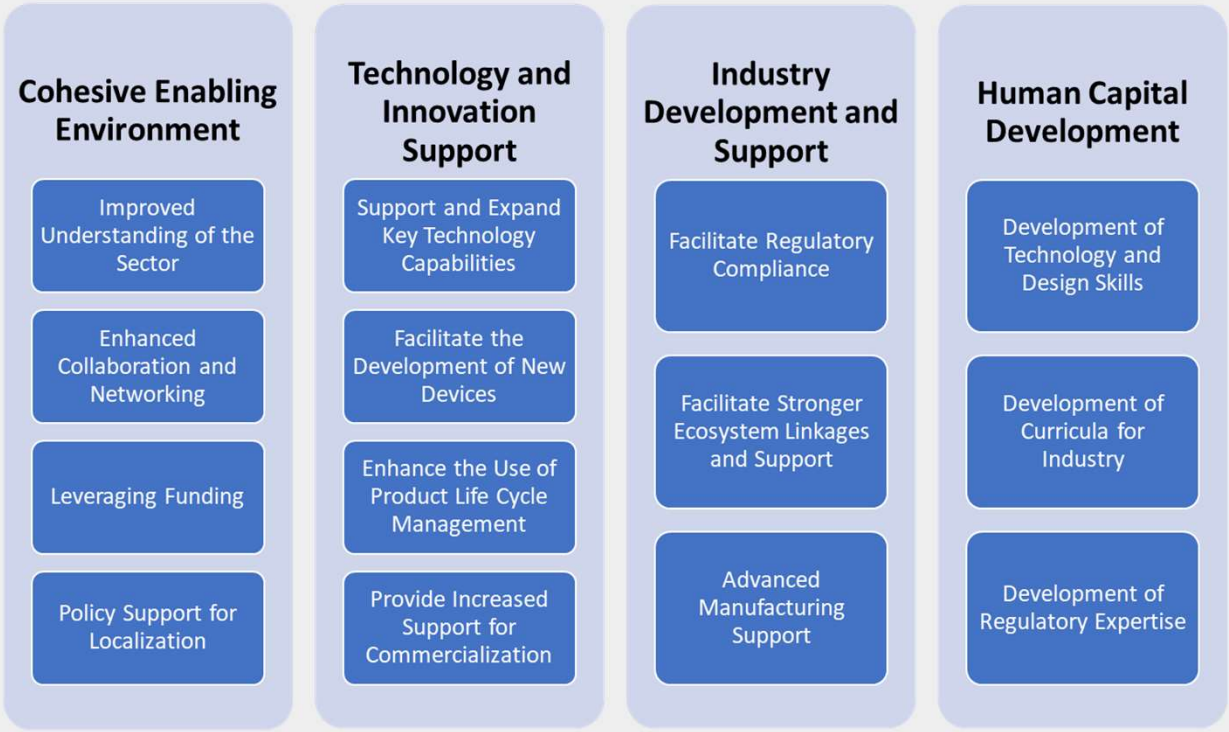


- **Example: SAMRC and PATH are working with Sinapi Biomedical to bring the UBT, a low cost, pre-assembled medical device to treat PPH, to the LMIC market.**



- (1) The ex-factory price does not include costs associated with shipping and import and export. Therefore, the end user price will be higher than US$7.50, which will be significantly less expensive compared to existing UBT medical devices (not condom catheter UBTs) that cost ~$200 each.

MD TICP



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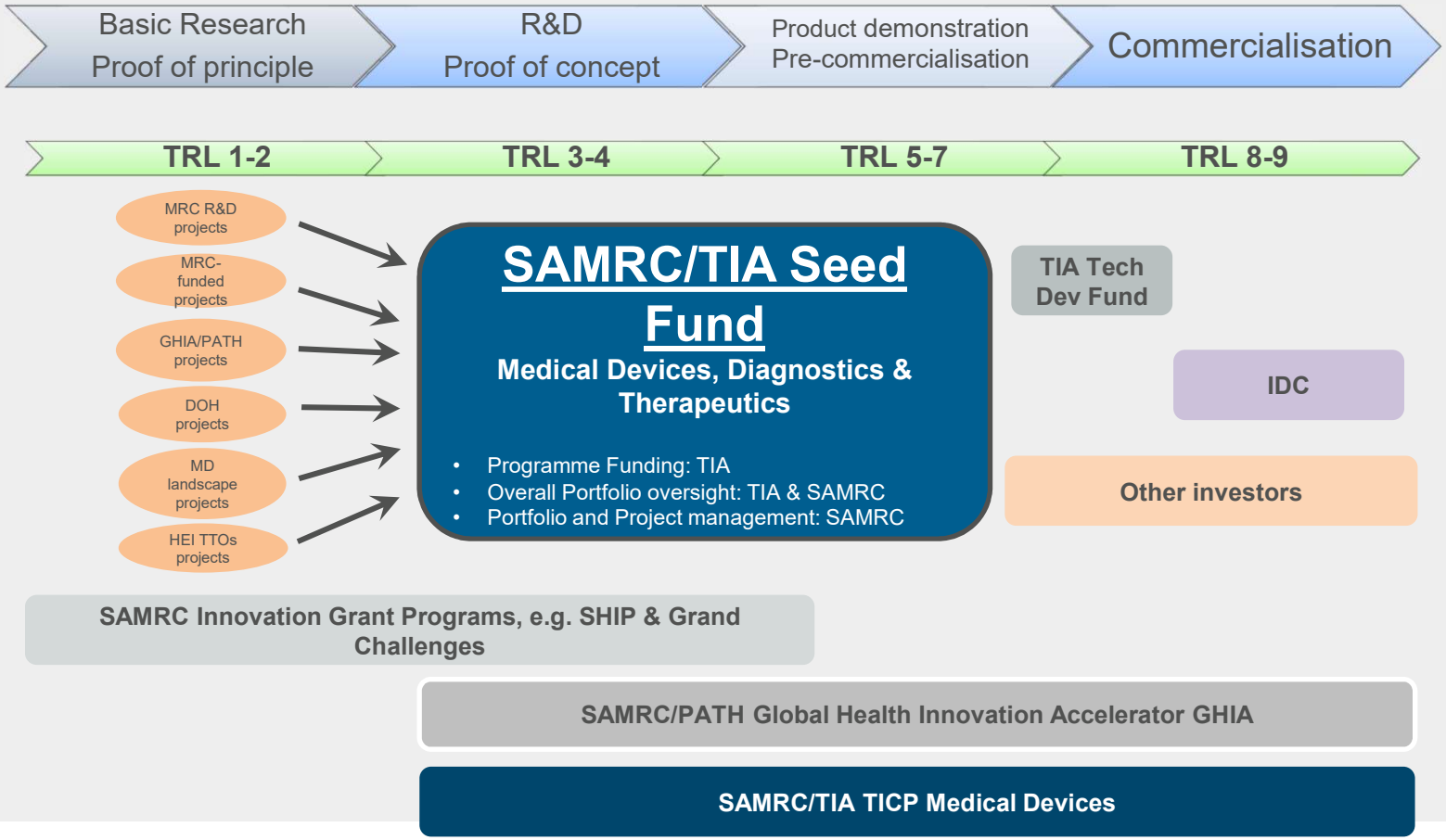
MD Innovation Instruments Summary



MEDICAL DEVICE LANDSCAPE ANALYSIS

Partner logo

BACKGROUND

- GHIA - BMGF funding to support the local development & commercialization of medical devices and diagnostics 2017-2020
- Landscape analysis of the MD Innovation ecosystem in RSA
- Rationale: GHIA needs to ensure all building blocks are in place to take products through the innovation value chain
- Partnered with relevant stakeholders: MDMSA, TIA, DST, DTI, CSIR
- Expected outcome:
  - Published results/analytics
  - Database/portal of stakeholders/players and capabilities (for increased collaboration)
  - Identification of barriers/bottlenecks affecting MD innovation - GHIA will work with the MD sector and Government to design and implement interventions to address these issues

PHASE 1

- Identification of all MD Innovation players (MDMs, MDIs and MD Support companies)
- Drafting of surveys to include needs of stakeholders to grow the sector
  - information on capabilities, areas of expertise, products/ technologies, markets, challenges
- In-person, on-line and telephonic interviews of key players
- Analysis and compilation of reports
- Workshops to discuss barriers/challenges and identification of interventions to address gaps and develop the sector

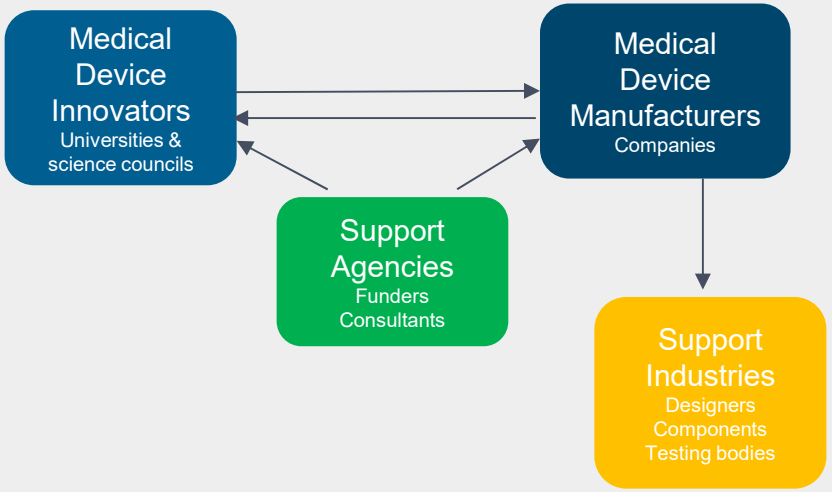
Medical Device Landscaping Exercise

Understand current:
- capabilities, technologies, capacity
- product pipeline
- collaborations

Identify:
- gaps
- challenges
- opportunities

Design interventions to:
- increase alignment
- fill pipeline gaps
- address bottlenecks

➢ Build the sector



KEY TAKEAWAY: ….Time is now right to grow this sector in South Africa.

MDI PROFILING

- 3 main sections:
    - R&D and innovation capacity;
    - current R&D and innovation in the sector;
    - growth and challenges

- Sent to 21 HEIs and 5 Science Councils

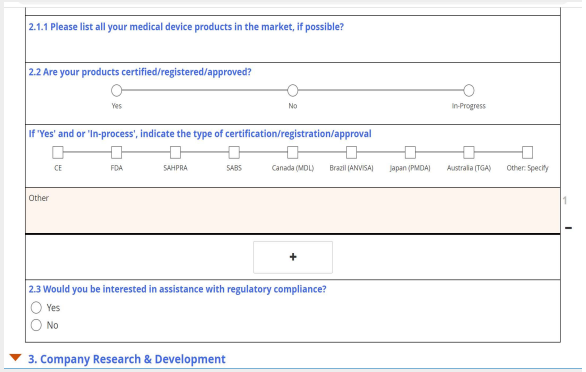
- Responses from 6 HEIs and 4 Science Councils to date

- Possible interviews/visits to get more in-depth information will be done in the coming months

MDM PROFILING

- Approx. 150 MDMs identified (GP:70; WC:50; KZN: 15; EC:10)

- 5 main sections:
    - Product information;
    - Company R&D and innovation;
    - Company Support (funding, business support, etc…)
    - Manufacturing facilities, capabilities and capacity
    - Barriers and risks



- Have interviewed approx. 40 companies (and more over next 3 days at AH2019)

MD SUPPORT PROFILING

- Aimed at funders, incubators, accelerators, consultants, prototype developers, upstream and downstream services…
- What support offerings

NEXT STEPS

- May-Dec 2019:
  - Finish MDM interviews, MDI and Support surveys
  - Consolidate all results
  - Stakeholder workshops to disseminate results and identify barriers

PHASE 2

- Early 2020
- Online portal (Innovation Bridge Portal)
  - role-players,
  - capabilities,
  - expertise,
  - products,
  - technologies

- Linking and Networking role for GHIA

- Maintenance and updating of portal

GHIA ACHIEVEMENTS

Human Capacity Development	Product Development Pipeline	Funding Raised	Ecosystem / Sector Development	Expansion in Africa
In-country up-skilling • 3 new staff members at SAMRC focused on innovation appointed, trained & mentored	• 4/5 GHIA projects progressed substantially towards implementation • 4 new projects added to portfolio	• SHIP funds for 3 projects, PATH Innovation funds 1 • GCC grants for 2 projects • 3 projects invited to apply to IM • DFID grant for MCH projects • ~US$3.4M raised/leveraged for GHIA	• MD Stakeholder Forum in place • MD landscape analysis underway • TICP awarded to SAMRC for sector development	• Engagements with AAS to review African innovation portfolio • Marketing / engagements in West Africa

KEY TAKEAWAY: ….The BMGF grant and SAMRC and PATH investments have yielded a substantial return on investment over the first 2 years

…and what's still missing to grow the MD sector?

Specifically, how to we get the MD start-ups and spin-outs to grow the sector?

Consider

- Family and friends?
- incubate
- VC
- Embed in larger company
- What if?

Thanks