Manufacturing Works Strategy

• Strategy for operating in a high cost environment

• Compete on value for money, not solely on cost.

• Outlines programs and initiatives to support innovation in an increasingly competitive global environment.

• Currently has four commercially focused applied R&D programs which support or could provide inputs into the development of medical and assistive devices.

- Medical Technologies Program
- Innovation Voucher Program
- Photonics Catalyst Program
- NanoConnect
Medical Technologies Program (MTP)

• Supports the development of medical and assistive devices

• Delivered through the MDPP

• MTP participants will receive:
  • up to 250 hours of research assistance from a range of research areas
  • commercial viability assistance
Examples of MTP supported projects

Ex Crow, now orthopaedic surgeon, Dr Matthew Liptak’s Post-Operative Rehabilitation Device

• Commercializing a device that shows the progress of rehabilitation exercises by measuring a patient’s range of movement

ITEK Ventures’ *Hand Held Magnetometer Probe*

• Ultrasensitive magnetic probe which detects small amounts of clinically introduced magnetic material in lymph nodes.
• The probe accurately identifies the physical location of the sentinel lymph node and is used to determine the extent of cancer in the body.
Innovation Voucher Program

• Encourages collaboration between SMEs and public and private R&D organisations

• Vouchers are awarded to R&D providers to help SMEs, solve technical problems and to encourage greater innovation within the manufacturing sector.

• Vouchers of up to $50,000 are awarded on a competitive basis
SMR, the R&D provider, will develop and manufacture an electronic infusion pump to administer intravenous medications and treatments for CPIE Pharmacy Services.

CPIE is a South Australian owned and operated company that produces intravenous medications.
Photonics Catalyst Program & NanoConnect

• Programs to help SA manufacturers explore new manufacturing technologies

• These programs are designed to:
  • raise awareness and understanding of new manufacturing technologies
  • provide opportunities for SA manufacturers to experiment with new technology
  • encourage scale and application
Photonics Catalyst Program

• Supports the development of innovative photonic products such as sensors, lasers and optical fibres

• Delivered through IPAS

• Participants in the PCP will receive:
  • a commercial and technical project feasibility assessment
  • up to $45,000 worth of research and development services
NanoConnect

Supports opportunities to experiment with advanced nanotechnologies

Facilitates engagement with key South Australian technology researchers in the area of nanotechnologies

Delivered through the Centre for Nanoscale Science and Technology

NanoConnect participants receive a technical feasibility assessment of their project and a two month laboratory based 'proof of concept' project.
Nanotechnology Example - Sensors

**Challenge**: Highly accurate sensors are required in all areas of medicine from breath testing to insulin level monitoring.

**Nano Solution**: To use nanoparticles as highly reactive sensors. For example implantable glucose sensors for diabetics, could also be used to monitor signs of dehydration in athletes and troops.
Coatings

Challenge: Bacterial Biofilms form on virtually any surface, such biofilms are highly resistant to antibiotics, which can lead to major infections when working with in vivo devices.

Nano Solution: To design anti-bacterial coatings to prevent bio-fouling and in turn reduce infection rates.
Thank You

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