

# **Problems and Solutions with Australian Innovation**

## **Problems**

- Poor Commercialization record for Australian Innovation
- Low expenditure on R&D in business
- Geographical Isolation
- Trading often in deficit
- Government supporting industries without a future like the car industry and the TCF industry
- Government not understanding the link between process innovation and product development
- Research grants aligned with a researchers interest and specialty which may not be in the national interest
- Overseas ownership and control of most of the large manufacturers
- Poor supply chain management into and out of and within the country and the underutilization of rail.
- Little ability to manufacture defence equipment.
- Poor alignment with industry and each other of the CSIRO's CRC's and the Universities research efforts

## **Solution**

- A Long term Strategic plan focusing on those industries here we have a natural comparative advantage, ie
  1. The Food industry,
  2. Industries linked to Health and Medical devices,
  3. Aluminium,
  4. Energy intensive industries using natural gas, solar, uranium, adding downstream processes and service support industries to mining,
  5. Manufacturing mining equipment
  6. Digital businesses that can service the world
  7. Medical and prosthetic device and medical equipment design and manufacture linked to our excellent medical research teams
  8. Uranium added value industries
- Incentives for Australian owned businesses to carry out R&D on product development and process innovation
- A clear operational plan to support the strategic plan which concentrates on worker and skill flexibility and breadth.
- A CSIRO and University applied science and engineering strategy based on process innovation in

the food industry, Aluminium, solar, and natural gas, hydrogen fuel, defence equipment, the nuclear industry and downstream processing and adding value to the mining industry.

- Working closely with the world leaders in defence industries and those industries at the forefront of the digital economy.
- Establishing arms of the best research establishments and universities in the world and encouraging them to assist and train young scientists and engineers
- Manufacturing simple independent products that can be self powered by wind, solar, with battery reserves for the undeveloped nations at our doorstep.

### **Policies**

- Focus on those industries where we have a comparative advantage
- Rewards for SME's when they approach 5% of sales spent on product development and process innovation
- Supporting the employment of applied science and engineering post graduates in Australian owned small businesses in manufacturing fully funded by the Federal Government.
- Rewarding business schools for application rather than theoretical papers which are of little practical value.
- Teaching the basics of process innovation.
- Offering incentives to venture capitalists to submit proposals for grants for process innovation and product development in new digital industries or those linked to our comparative advantages.
- Encourage large successful overseas companies to set up research establishments here linked to multi function prototype development science and engineering schools.
- Setup a multifunction business school to develop a new flexible economic model that melds the best of the Keynesian, Adam Smith, David Ricardo and liberal market economic models. This should define a new way for governments and industry to work together and reflect the need for Australia to have a greater scientific but humanistic approach.