Welcome and introduction

How and why

• Then Industry and Innovation Minister requested AiG to design a CRC to provide strategic research outputs to directly support future manufacturing
• Industry-led and a driver for implementation of manufacturing policy initiatives
• Not expected to be affected by federal election.

Timelines

• June: initial bid submitted for a Manufacturing Industry Innovation CRC (MIICRC)
• August: MIICRC selected to compete in second round
• September: Selected research project proposals (greater detail) for second round assessment and peer review
• November: presentation to CRC Committee. Must include companies
• Decision: end 2013
• CRC commences: 1 July 2014.
Who is involved?

- The AiG, CSIRO, University of Melbourne, Queensland University of Technology, University of Technology Sydney, Royal Melbourne Institute of Technology, Swinburne University of Technology, the University of Adelaide, and the Association of Superannuation Funds of Aust.
- Only bid supported by Ai Group.
Why Manufacturing?

- Critical to advanced economies
- Driver of productivity and innovation
- Biggest spender on R&D and knowledge intensive services
- Largest component of world trade
- Driver of jobs across economy
  - Strong links to agriculture, resources and services
- Underpins higher net incomes and employment
  - Builds social cohesion
- Key to the ‘knowledge economy’
- Manufacturing and services: interdependent not independent
Manufacturing today

- Manufacturing is just as important to developed countries
  - Post GFC re-evaluation internationally
  - Post mining boom re-evaluation in Australia
- Direct manufacturing employment declines common to all OECD countries
- In successful ones, the manufacturing share of value added has been maintained or declined by much less than jobs
  - This = productivity gain
- But in countries like the UK, USA and Australia manufacturing’s share of GDP has fallen sharply
Why the MIICRC?

• How can the CRC make a difference to you?

• The CRC value proposition
  – Access to new market opportunities and innovations
  – Taking costs out
  – Rapidity to market
  – New technologies and business models
  – Anticipating and exploiting opportunities for short-run flexible production
  – Critical information (markets, technologies, investor relationships), reducing transactions costs and risk
  – Flexible approach to collaboration and clustering reinforces agility, rapidity and accelerated capability development
  – Access to shared infrastructure and strong research capability - targeted at solving problems.
What is a CRC, and what makes an effective one?

• Run for 5-7 years
• User-driven, collaborative model, requiring industry partnerships
• 38 CRCs operating currently
• Diverse: Seafood, dairy, wound management, water, cancer therapeutics, deep exploration technologies for mining....

• **What does ‘good’ look like?**
• Clear objectives and targets; strong communication between partners; business-like management (=accountability and milestones); leveraging bright people
The MIICRC Bid

The MIICRC bid is for 7 years commencing July 2014.

Substantial resources are sought over the life of the project, comprising cash and in-kind contributions from:

- Commonwealth CRC Program
- Research Organisations
- Industry
At a glance, the MIICRC is.....

Four Programs, 13 Projects
1. Foresights on sector disruptions
2. Agile manufacturing
3. Rapid productisation
4. Driving sector sustainability
• Industry driven and demand-led to support effective economic development
• Not only technology, but also business models, building collaboration in high growth industries and value chains, investment and innovation
• Multi-disciplinary, integrating technological excellence with industry development expertise
• Around 65% of funds go to the technical programs (2&3); 35% to ‘business model’ programs (1&4)
• Contrasts with Advanced Manufacturing CRC (competitor, rebid).
‘Fit’ with other initiatives

Industry Innovation Precincts
• CRC complements the national industry statement, including
  – Industry Innovation Precincts (defence, food, medical devices), and
  – Local industry participation in major projects.
• CRC will provide research outputs to help make the IIPs effective.

Alignment to SA programs
• Strong strategic fit with ‘Manufacturing Works’, e.g., value chain and industry capability mapping, clustering, additive manufacturing, upgrading manufacturing leadership, design, simulation and prototyping, building innovation precincts (Tonsley Park and Techport), building defence and resources value chains, the transition of the automotive supplier base.....

The future
• CRC could become a permanent high-calibre, internationally networked industry extension institution, Australia’s Fraunhofer, VTT or Economic Development Board (Singapore).
Objectives of today’s workshop
Workshop objectives

• Information on MIICRC programs and projects, and the value proposition (next session, 4)
• Build industry support
• Identify common problems or opportunities for CRC action and research (session 5, Industry Plenary)
• Refine and calibrate CRC approaches for maximum industry benefit (session 5, Industry Plenary)
• Feedback on governance and membership (session 6)
• Recruit participants and active industry champions (session 7)
• Provide high value industry leads for potential follow-up and further engagement; next steps (session 7)

• Are there others?
• What else would you like to come away from the workshop with?
MIICRC
Pathways
MIICRC Pathways

• Maximum industry involvement critical
• Industry must see value in participating
• CRC’s value proposition must grow over time
• Flexible ways in to the CRC - companies can start small, and increase commitment, as the CRC demonstrates and delivers value
• Access to spectrum of CRC programs and projects according to their needs
• A spectrum of flexible collaborations ranging from networking, to Communities of Interest, to clusters in some instances
• Your financial support is vital, but so is your moral support.
Programs and Projects
MIICRC Programs and Projects

• Four Programs, 13 Projects - described in the ‘Project on a Page’ sheets
• High interdependency and integration between and across the programs and projects
• Interdisciplinary economic and industry development project
• Contrasts with Advanced Manufacturing CRC (competitor, rebid)
Foresights on Sector Disruptions

*Instead of being its victim, how do we benefit from technological disruptions?*

**Sector transitions and expansion opportunities (targeting high growth value chains)**
- Analyse international manufacturing trends to 2040
- Understand and leverage opportunities in Australia in assistive technologies, medical devices, defence, resources and energy, clean tech, etc. Reduce information asymmetries, transactions costs and risk

**Benefiting from disruptive innovation**
- Assist early adoption by reducing risk through a decision support tool

**Design Led innovation**
- Build agility into business models to meet changing market needs and technological disruption through design led innovation
Agile manufacturing

High performance worker (assistive devices)
• ICT enabled technology to assist workers with lightweight guidance, support, and robotics. Real time and remote problem solving, reduced set-up times, better supply chain management.

Agile production systems
• Moving additive manufacturing and other flexible technologies from prototyping into production.
• Accelerated diffusion through key value chains.
• On-line analytics and digital fingerprints for compliance.
Rapid productisation

Plug and play for manufacturing systems
• Introduce new products and processes rapidly without disruption to existing production

Manufacturing in the cloud
• Track and test rapid productisation processes, monitor performance of flexibly manufactured items
• Cloud-enabled manufacturing facilities - design despatch and simultaneous production across sites

Critical components and platforms
• Implantable bionic devices

Testing and compliance
• Reduce standards compliance costs and time to market through digital fingerprinting
• Collaboration with Standards Aust.
Driving sector sustainability

Building industrial competitiveness
• Identifying competitiveness gaps and barriers for SMEs
• Enablers for performance improvement and dynamic capability

Addressing challenges of SMEs through cooperation
• Effective collaboration to build competitive advantage (scale with agility), with cluster formation tool

Making change for productive workplaces
• Focus on skills, leadership and culture for agility and absorptive capacity of firms, trialling in sectors targeted in ‘Agile’ and ‘Foresight’.

Investing in sustainable industrial futures
• New investment models drawing on international experience, to recalibrate risk and reward for investors (links to ‘Foresight’).
Spectrum of Collaborations

- CRC will facilitate a flexible range of collaborations
- Collaboration can accelerate learning and innovation
- But one size does not fit all
- Spectrum of collaborations from
  - Informal networking
  - To intensive project based and specialised collaboration
  - To communities of interest
  - To sector based and formal clusters
- MIICRC will facilitate ‘fit for purpose’ industry-led collaboration
- Focus on practical problem-solving and commercial opportunities along defined value chains – benefits to all involved
Spectrum of Collaborations (example)

- Aust. Mathematical Sciences Institute Intern Program
- PhD and Masters into industry research internships – fulltime, 4-5 months, mentored by senior academic
- Builds collaboration around high value mission oriented projects
- Mature program that solves problems
- All IP remains with company
Industry Plenary – your say
Industry Plenary

CRC value proposition:

- New market opportunities and innovations
- Taking costs out
- Rapidity to market
- New technologies and business models
- Anticipating and exploiting opportunities for short-run flexible production
- Critical information (markets, technologies, investor relationships), reducing transactions costs and risk
- Flexible approach to collaboration and clustering to reinforce agility, rapidity and accelerated capability development
- Infrastructure and strong research capability.
Industry Plenary

**Critical Questions:**

- Which projects could be of most use to you?
- Could they solve a problem (or realise an opportunity) for you?
- Which problems, which opportunities?
- If you fixed this problem, or captured that opportunity, what would the impact be, for you, for the sector?
- Are there broader economic development opportunities (spin-offs)?
- Do any help solve a problem for any of your customers, or any of your suppliers?
- Are any the basis, potentially, for collaborative and clustering arrangements?
- Which ones?
- What are the top three problem/opportunity areas the CRC could address for you?
Industry Plenary (cont.)

• Breakout groups
• Plenary
  – Groups’ report
  – Summary of key issues for further development
    • More on problems and opportunities
      – Distilled priorities
• Summary
Membership Structure And Governance
Membership Structure

**TIER 1 – Product/Service focus**

- Intensive collaboration in research projects focused on leveraging CRC IP to deliver competitive advantage to an *individual or small group* of companies
  - Join projects individually or as part of a cluster
  - Share in Open Access and relevant Project IP
  - Direct representation on the Participants Forum Committee
  - Direct input into strategic CRC Project identification
  - Invitation to key MIICRC events including board room dinners and the annual conference

**TIER 2 – Market /cluster focus**

- Collective collaboration in research projects focused on leveraging CRC IP to deliver competitive advantage to a *cluster of organisations* with common interest or challenges
  - Join projects as part of a cluster
  - Share in Open Access and relevant Project IP
  - Cluster representation on the Participants Forum Committee
  - Invitation to selected MIICRC events such as the annual MIICRC conference

**TIER 3 – Open/Sector wide**

- Broad participation in projects focused on solutions to industry-wide challenges
  - Knowledge transfer from CRC projects
  - Access to Open Access IP with sector wide relevance
  - 2-4 representatives on Participants Forum Committee act as voice on behalf of all Tier 3 members

All membership levels receive:
- Access to newsletters, technical reports and whitepapers
- Invitations to seminars and networking events
Governance (simplified)

Skills-based Board
- Independent chair
- Ai Group Representative
- ASFA Representative
- University of Melbourne Representative
- CSIRO Representative
- Independent
- CEO MIICRC (ex-officio)

Manufacturing Industry Innovation Australia Pty Ltd (company limited by guarantee)

Program Leaders:
1. Foresights
2. Agile Manufacturing
3. Rapid Productisation
4. Sustainability

CEO

Participants’ Forum Committee

Research, Skills, and Education Committee
NEXT STEPS
From now to November...

- Want this workshop to build momentum and recruitment of companies
- Sign up of companies
- Further definition of project opportunities
- Recruit champions to promote the CRC publicly and in industry recruitment drive; some to present to CRC Committee in November
- Interim Board and Chair (Robin Batterham) being established
- Report on proceedings and outcomes to you in a week
- AiG and MIICRC Coordinator will handle follow up communications with individual companies and with the group

Any questions or comments?